PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 – enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT AND COMMERCE

SYLLABI

FOR

B.Com. (General & Hons.)
(Semester System)
For the Examinations 2016-2017

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Please note that students admitted in 2016-17 will also study the paper of "Goods and services Tax (GST)" in 3rd Semester available in the syllabus of B.Com for the session 2017-18.

SCHEME OF B.Com COURSE (General and Hons.)

Semester – I

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 101 A **BCM 101 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 102	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 103	**INTERDISCIPLINARY** PSYCHOLOGY FOR MANAGERS	100	5	1
BCM 104	BUSINESS ECONOMICS-I	100	5	1
BCM 105	PRINCIPLES OF FINANCIAL ACOUNTING**	100	5	1
BCM 106	COMMERCIAL LAWS	100	5	1
BCM 107	PRINCIPLES AND PRACTICES OF MANAGEMENT	100	5	1

Semester – II

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 201 A **BCM 201 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 202	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 203	**INTERDISCIPLINARY** E-COMMERCE	100	5	1
BCM 204	BUSINESS ECONOMICS-II	100	5	1
BCM 205	CORPORATE ACOUNTING**	100	5	1
BCM 206	BUSINESS LAWS	100	5	1
BCM 207	HUMAN RESOURCE MANAGEMENT	100	5	1
	ENVIRONMENT, ROAD	100		

	SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN & CHILDREN*			

Semester – III

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 301	**INTERDISCIPLINARY** ISSUES IN INDIAN COMMERCE	100	5	1
BCM 302	COST ACCOUNTING**	100	5	1
BCM 303	COMPANY LAW	100	5	
BCM 304	BUSINESS MATHEMATICS AND STATISTICS **	100	5	1
BCM 305	BANKING AND INSURANCE	100	5	1
BCM 306	INDIRECT TAX LAWS**	100	5	1

Semester-IV

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 401	**INTERDISCIPLINARY** SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	100	5	1
BCM 402	ADVANCED ACCOUNTING**	100	5	1
BCM 403	AUDITING AND SECRETARIAL PRACTICE	100	5	1
BCM 404	COST MANAGEMENT**	100	5	1
BCM 405	MARKETING MANAGEMENT	100	5	1
BCM 406	QUANTITATIVE TECHNIQUES AND METHODS**	100	5	1

Semester-V

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T)Per Week***
BCM 501	INCOME TAX LAW**	100	5	1
BCM 502	MANAGEMENT ACCOUNTING**	100	5	1
BCM 503	INDIAN ECONOMY	100	5	1
BCM 504	PRODUCTION AND OPERATION MANAGEMENT	100	5	1
BCM 505	ENTREPRENEURSHIP AND SMALL BUSINESS	100	5	1
BCM 506	FINANCIAL MARKETS AND SERVICES	100	5	1

Semester-VI

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 601	DIRECT TAX LAWS**	100	5	1
BCM 602	FINANCIAL MANAGEMENT	100	5	1
BCM 603	ISSUES IN FINANCIAL REPORTING	100	5	1
BCM 604	SOCIAL AND BUSINESS ETHICS	100	5	1
BCM 605	OPERATIONAL RESEARCH**	100	5	1
BCM 606	SECTORAL ASPECTS OF INDIAN ECONOMY	100	5	1

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./BBA 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/ they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

** the strength of B.Com. unit shall be 70. There will be tutorials only in the papers which have been highlighted with asterisk**.

***Each unit of B.com. will be divided into 3-groups for the purpose of Tutorials.

Scheme of Examination

B.Com. Honours

A student can pursue Honours course in B.Com. by taking up one paper each in four semesters beginning with 3rd semester in any one of the following four streams. Option of any stream once exercised cannot be changed subsequently.

1. Accounting & Finance

1. **BCH 307:** Accounting Theory and Reporting Practices	3rd Semester
2. **BCH 407:** Contemporary Issues in Accounting	4th Semester
3. **BCH 507:**Strategic Financial Management	5th Semester
4. **BCH607:**Investment Management	6th Semester

2. Economics

1. **BCH 308:** Development Economics	3rd Semester
2. **BCH 408:** Industrial Economics	4th Semester
3. **BCH 508:** Money and Banking	5th Semester
4. **BCH 608:** International Economics	6th Semester

3. Management Studies

1. **BCH 309:** Advertising & Brand Management	3rd Semester
2. **BCH 409:** Consumer Behaviour	4th Semester
3. **BCH 509:** Compensation Management	5th Semester
4. **BCH 609:** Training & Development	6th Semester

4. Banking

1. **BCH 310:** Bank Management	3rd Semester
2. **BCH 410:** Bank Legislation	4th Semester
3. **BCH 510:** Electronic Banking and Risk Management	5th Semester
4. **BCH 610:** Bank Marketing	6th Semester

SYLLABI FOR B.COM FOR THE EXAMINATION OF 2016-17 ONWARDS

Note :

1. Examination in each subject for B.Com will be of 3 hours duration.
2. There will be no objective type questions.
3. Students are required to have the knowledge of the developments in the subject up to 6 months before the examination.
4. Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University/College to the examinees.
5. Tutorials classes will be held as notified in the Scheme of Examination for the session 2014-15 and 2015 onwards.
6. The following categories of the students shall be entitled to take the option of History and Culture of Punjab in lieu of Punjabi as compulsory subject:
   (a) Students who have not studied Punjabi up to Class 10^{th}.
   (b) Wards of defence personnel and Central government employee/employees, who are transferable on all India basis.
   (c) Foreigners.
7. 20% marks in each paper will be internal assessment based on the following parameters:
   a. Mid-Semester Test : 50%
   b. Academic Activity : 30%
      (Seminar, Project &Assignments)
   c. Attendance : 20%

INSTRUCTIONS FOR THE PAPER SETTERS

Note : The question paper of each subject covering the entire course shall be divided into three sections :

Section A (20 marks)
This section will have 6 short answer questions from the entire syllabus. Students are required to attempt 4 questions from this section. Each question will carry 5 marks; the total weightage being 20 marks.

Section B (30 marks)
This section will consist of essay type/numerical questions from Unit I of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Section C (30 marks)
This section will consist of essay type/numerical questions from Unit II of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Important Note : In all numerical papers the paper setter is required to set numerical questions as follows:

Section A :	Four numerical questions out of six questions.
Section B and C:	At least two numerical questions out of four questions.

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

SEMESTER-I

BCM101 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Essay Writing on National and International Problems.	10 marks
3.	Translation of Business Advertisement from English to Punjabi	05 marks
4.	Correct-Incorrect words	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi,
   Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 1 to 6
2. List of words of Business Vocabulary attached (A to H)

Themes and Units:

1.	Two questions from the book **Galiey Chikkarh Door Ghar** (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2×4=08 marks
3.	Essay (1 out of 4) (National and International Problems)	10 marks
4.	Translation of Business Advertisement from English to Punjabi	05 marks
5.	Correct-Incorrect words (5 words out of 8)	05 marks
6.	Business Vocabulary (5 words out of 8)	05 marks

phHekwH Gkr gfjbk

;w;No gfjbk

Business Vocabulary

1.	Acceptance	**gtkBrh, ;thfesh**
2.	Access	**gju**
3.	Account	**byk**
4.	Accountant	**bykeko**
5.	Account Book	**tjh yksk**
6.	Acknowledgement	**gju o;hd**
7.	Advance	**gôrh**
8.	Alternative Cost	**ftebgh bkrs**
9.	Amalgamation	**;fwôoD**
10.	Amortization of Debts	**eof÷nK dk feôs tko Grskb**
11.	Amortization of fixed Assets	**nub ;gsh dh feôs tko gosh**
12.	Annuity	**tkofôeh**
13.	Anticipated Prices	**nBwkfBs ehwsK**
14.	Arbitration	**;kb;h, ftubrh**
15.	Assessed Tax	**fBoXkos eo**
16.	Assets	**;gsh**
17.	Assets and Liabilities	**bDdkohnK ns dDdkohnK**
18.	Authorized Capital	**nfXekfos gih**
19.	Audit	**byk gVskb**
20.	Audit Staff	**byk gVskb nwbk**
21.	Average	**n;s**
22.	Average Productivity	**n;s Tsgkdesk**
23.	Average Income	**n;s nkwdB**
24.	Back Log	**fgSbk pekfJnk**
25.	Balance Sheet	**ôô ;koDh**
26.	Bankrupt	**fdtkbhnk**
27.	Barter	**t;s tNKdok**
28.	Beneficial	**bkGdkfJe**
29.	Bilateral Agreement	**d fXoh ;wMsk**
30.	Bill of Exchange	**jvh**
31.	Bond	**foDFgso**
32.	Book Value	**feskph wb**
33.	Book Keeping	**tjh yksk**
34.	Break-Even Point	**;wkB fpd**
35.	Breach of Trust	**nwkBs ftu fõnkBs**
36.	Broker	**dbkb**

37.	Capital Account	gihrs yksk
38.	Capital Expenditure	gih og you
39.	Capital Formation	gih fBowkD
40.	Capital Investment	gih fBtô
41.	Capital Gains	gih og bkG
42.	Capital Goods	gih og t;sK
43.	Cash Account	oeV yksk
44.	Cash Balance	Bed pekfJnk
45.	Cash Book	oeV tjh
46.	Census	iBrDBk
47.	Circulating Capital	wkoehN ftu bZrh gih
48.	Commerce	ekwo;, tDi, tgko
49.	Commercial Capital	tDih gih
50.	Commodity	TgGrsk t;s
51.	Company	egBh
52.	Competition	gsh:rsk
53.	Corporation	fBrw
54.	Cost Account	bkrs byk
55.	Cost of Production	TsgkdB dh bkrs
56.	Current Account	ukb yksk
57.	Current Liabilities	ubs dDdkohnK
58.	Debenture	foD gZso
59.	Debt Management	foDFgpX
60.	deduct	eNsh
61.	Deferred Payment	;Efrs Grskb
62.	Deflation	wZdok ft;chsh
63.	Demand for payment	ndkfJrh bJh wr
64.	Demonstration Effect	gdoôBh gGkt
65.	Depreciation	wZb xNkJh
66.	Depression	nkofEe wdk
67.	Devaluation	eo;h dk ntwbD
68.	Discount Rate	eNsh do
69.	Disinvestment	ftfBtô
70.	Dividend	bkGFnô
71.	Distribution	ftsoD
72.	Documentary proof	d;skt÷h ;ps
73.	Double Entry	djok fJdoki
74.	Draftsman	Beôk Bth;
75.	Economic Indicator	nkofEe ;ue

76.	Entrepreneur	**T[dwh**
77.	Excise Duty	**Tsgk dB eo**
78.	Export Tax	**fBo:ks eo**
79.	Expenditure	**you**
80.	Fair Trade	**Tfus tgko**
81.	Finance	**ft[s**
82.	Finance affairs	**ft[sh wkwb[**
83.	Financial Penalty	**ft[sh dv**
84.	Fine Paper	**T[sw j[vh**
85.	Firm	**cow**
86.	Firm Offer	**g[eh gôeô**
87.	Fiscal Policy	**ft[sh Bhsh**
88.	Fiscal Year	**ft[sh ;kb**
89.	Fixed Capital	**;EkJh g[ih**
90.	Fixed Costs	**;EkJh you[**
91.	Floatation	**eo÷k ukb[eoBk**
92.	Foreign Exchange	**ft dôh w[dok**
93.	Fringe Benefits	**Tgob[bkG**
94.	Glut	**Gowko**
95.	Goods Account	**wkb byk**
96.	Gross Profit	**e[b bkG**
97.	Hidden Tax	**b[gs eo**
98.	Hoarding	**÷yhokpk÷h**
99.	Holding Company	**fB:soe egBh**
100.	Human Capital	**wB[yh g[ih**

HISTORY AND CULTURE OF PUNJAB

For B.Sc. /B.Sc. (Hons) Bio-Technology/B.Sc. (Hons) Bio-Informatics/B.Sc. 4 year agriculture /BCA/B.Sc. Fashion Disigning/B.Sc. Microbial and Food Technology / 4 year B.PEd. /BFA/BBA/B.Com B.A Hons. (Education) B.Ed. etc. all courses that take this paper for ONE year only.

6 credit course

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849 INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 05 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks

   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

BCM101 B PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Vedic Age: socio-economic life; development of caste; position of women.
3. Religion: vedic religion; impact of Buddhism and Jainism on the region.

UNIT II

4. Society and Culture c. 1000 A.D.: Socio-economic life; religious life; education
5. Cultural Reorientation: main features of Bhakti; origin and development of Sufism
6. Society and Culture c. 1500A.D: socio-economic life under the Lodhis; religious beliefs and practices- Vainavism, Shaivism, Shaktism, Islam.

UNIT III

7. Sikhism: new ideology of Guru Nanak; evolution of Sikh community-guruship,manji,masand; new institutions-gurdwara, sangat-pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society: social unrest; emergence of new rulers-rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh: social mobility; painting and architecture; literature.
12. MAP: Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989.
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRam Manohar Lal, Delhi, 1966
7. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala.
8. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10^{th}.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

BCM 102: ENGLISH AND BUSINESS COMMUNICATION SKILLS

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens,** ed., K.A. Kalia (Oxford University Press), The relevant sections, however, are as follows:

I.	The Model Millionaire	: *Oscar Wilde*
II.	The Gift of the Magi	: *O. Henry*
III.	The Judgement-seat of Vikramaditya	: *Sister Nivedita*
IV.	Fur	: *Saki*
V.	A. Marriage Proposal	: *Anton Chekhov*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end. Unit II shall consist of the following sub-units:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: Letters of all kinds, tender notices, auction notices, public notices; memos and advertisements relating to sales/marketing.

Practical Work: To impart the skills of Personal Interview and public speaking like Declamation and Debate.

Practical Work:

There will be viva-voce examination of 10 marks which will include Debate, Declamation and Personal Interview.

Note : *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 Marks
Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, be based upon the prescribed text **Ten Mighty Pens.**	10 Marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q. 3.	It shall consist of an Unseen Passage for Comprehension (not more than 300 words), with minimum five questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 Marks
Q. 4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 Marks
Section II *(Based upon Unit II)*		
Q. 5.	This question shall test a students' ability to write business letter of various kinds (in not more than 250 words). There will be Internal Choice in the question.	10 Marks
Q. 6.	This question shall be on Memos, Tender Notices/Auction Notices/Public Notices/ Advertisements.(have to attempt four of 5 marks each)	20 Marks 5x4=20
Q.7.	Two short questions to test the students' understanding of various aspects of business communication.	10 Marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *Textbook of Business Communication,* Anjali Kalkar, R.B. Suryawanshi, Amlanjyoti Sengupta,, Hyderbad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM103: PSYCHOLOGY FOR MANAGERS

Objective: The objective of the paper is to provide broad understanding about basic concepts and techniques of human behaviour to the students.

UNIT- I

Introduction: Concepts, Definitions; Need and Importance of Organisational Behaviour for Managers, Contributing Disciplines of OB. Nature and Scope, Organisational Behaviour Models.

Individual Behaviour: Introduction and Meaning, Factors Affecting Individual Behaviour, Models of Individual Behaviour

Personality: Meaning, Characteristics, Determinants and Theories of Personality

Perception: Nature & Importance, Perception Process, Perceptual Selectivity, Perceptual Organization, Perpetual Errors and Distortions.

Attitudes and Values: Components, Sources and Measurement of Attitudes. Concept, Sources and Types of Values.

UNIT II:

Motivation: Meaning and Importance of Motivation, Theories of Motivation, Morale.

Inter Personal Behaviour and Transactional Analysis (TA).

Leadership: Definition, Importance, Leadership Styles, Models and Theories of Leadership .

Stress Management: Concept, Sources of Stress, Work Stressors, Consequences, Prevention and Management of Stress.

Conflict Management: Traditional vis-a-vis Modern View of Conflict, Types and Causes of Conflict, Conflict Resolution.

Reference books:

1. Robbins, Stephens P., Organisational Behaviour
2. French, W and C. Bell, Organisational Development
3. Davis, Keith, Human Behaviour at Work: Organisational Behaviour
4. Luthans, Fred, Organisational Behaviour
5. Harold Weihrich, Koontz, Essentials of Management
6. Robbins, Stephens P., Organisational Behaviour Concepts, controversies and Applications.

BCM 104: BUSINESS ECONOMICS-I

Objective: To study the basic concepts of microeconomics relevant for Business decision making and helping the students to understand the application of economic principles in business management

UNIT – I

Consumer Behaviour

Utility Approach: Meaning, Types, Relationship between Marginal Utility and Total Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium, Derivation of Demand Curve.

Indifference Curve Approach: Properties, Consumer Equilibrium, Price Effect, Income Effect, Substitution Effect, Price Effect a combination of Income Effect and Substitution Effect.

Law of Demand

Elasticity of Demand: Definitions, Types, Measurement, Factors and Importance.

Demand Forecasting

UNIT-II

Production and Revenue

Production Function : Laws of Returns, Law of Variable Proportion and Returns to Scale.

Cost and Cost Curves : Concept of Nominal Real Economic Implicit, Explicit and Opportunity Cost, Cost Curve under Short-run and Long-run, Relationship between Average Cost and Marginal Cost.

Revenue Curves : Concept of Total Average and Marginal Revenue under different Market Conditions, Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Perfect Competition: Features, Equilibrium of Firm, Equilibrium of Industry, Role of Time element in Price Determination.

Monopoly: Feature, Equilibrium of Firm/Industry, Price Discrimination and Its Types.

Monopolistic Combination: Features, Price-Output Policy of the Firm. Selling Cost, Meaning, Effects, Equilibrium of Firm with respect to Selling Cost.

Oligopoly: Features, Price Leadership, Collusive Oligopoly, Kinky Demand Curve Analysis

Reference books:

1. Dwivedi, D.N. Managerial Economics, 7th Edition, Vikas Publishing House.
2. Salvatore, D. Managerial Economics in a Global Economy, 6th Edition, Oxford University Press.
3. Peterson, L. and Jain Managerial Eco., 4th Edition, Pearson Education.
4. A. Kontsoyianis; Modern Micro-Economics.
5. M. Adhikary ; Business Economics.

BCM 105: PRINCIPLES OF FINANCIAL ACOUNTING

Objective: The objective of this paper is to help students to acquire conceptual knowledge of financial accounting and to impart skills for recording various kinds of business transactions.

UNIT – I

Generally Accepted Accounting Principles (GAAP): Accounting Concepts and Conventions: their Nature, Purposes and Limitations. Financial Accounting Standards: Transition from IAS to IFRS.

Financial Statements of Sole Proprietor and Partnership Firm (with adjustments): Income Statement, Balance Sheet

Branch Accounting: Dependent and Independent Branches (Excluding Foreign Branches).

Departmental Accounting: Meaning, Needs, Advantages, Apportionment of Expenses, Inter Departmental Transfers and Provision for Unrealised Profit.

UNIT – II

Accounting for Consignment.

Accounting for Joint Venture.

Accounting for Dissolution of Partnership Firm; Insolvency of Partners(excluding Sale to a Company) and Piecemeal Distribution.

Royalty Accounts

Practical work:

1 . Preparation of List of Accounting Standards and IFRS.

2. Comparison of US GAPP with Indian Accounting Standards.

Reference books:

1. Shukla and Grewal ï Advanced Accounting, S. Chand Publication, New Delhi.
2. R.L. Gupta and V.K. Gupta - Advanced Accounting, Sultan Chand Publication, New Delhi.
3. T.S. Reddy & A. Murthy ï Financial Accounting, Margham Publications, Chennai.
4. P.C. Tulsian ï Financial Accounting, S.Chand and Sons.

BCM 106: COMMERCIAL LAW

Objective: The main objective of the paper is to acquaint the students with general Commercial Laws.

UNIT I

Indian Contract Act, 1872: Definition & Nature of Contract, Classification; Offer & Acceptance; Consideration; Capacity of Parties; Free Consent; Legality of Objectives; Void Agreements; Performance of Contracts; Discharge of Contract; Contingent Contracts; Quasi Contracts; Remedies for Breach of Contract.

UNIT II

Special Contracts: Indemnity & Guarantee; Bailment & Pledge; Contract of Agency.

Right to Information Act, 2005: Definitions, Right to Information & Obligations of Public Authorities, The Central & State Information Commission, Power & Functions of the Information Commissions, Appeal & Penalties.

The Consumer Protection Act, 1986: Introduction, Objectives Commencement & Application, Definitions, Salient Features, Grievance Redressal Machinery.

Reference books:

1. Avtar Singh : The Principles of Mercantile Law
2. M.C. Kuchhal : Business Law
3. N.D. Kapoor : Business Law
4. P.R. Chandra : Business Law, Galgotia, New Delhi
5. Gogna : Mercantile Law, S. Chand
6. M.S. Shukla : Business Law, Sultan Chand.

BCM 107: PRINCIPLES AND PRACTICES OF MANAGEMENT

Objective: The objective of the paper is to help the students in understanding the process of business management and its functions.

UNIT I

Management: Nature, Definitions, Scope, Levels, Process and Significance of Management. Development of Management Thoughts: Classical, Neo-Classical Systems, Contingency and Contemporary Approaches to Management (Drucker, Porter, Prahalad, Senge and Tom Peters)

Planning: Concept, Process, Nature, Steps in Planning, Significance and Types. Decision Making: Concept and Process, Types of Decisions, Management By Objectives (MBO).

Organization: Concept, Nature, Process, Significance, Types, Organisational Structure, Committees, Span of Control. Authority and Responsibility. Delegation, Decentralization and Departmentation.

UNIT II

Direction: Concept, Features, Importance and Limitations of Direction. Elements of Direction- Supervision, Motivation, Leadership and Communication

Coordination: Concept, Features, Importance and Limitations of Coordination. Internal and External Coordination

Control: Concept, Features, Importance and Limitations of Control. Control Process. Essentials of a Good Control System. Techniques of Control. Relationship between Planning and Control

Reference books:

1. Peter F. Drucker, ôThe Practice of Managementô
2. Weihrich and Koontz, ôEssentials of Managementô
3. Stoner and Freeman, ôManagementô
4. David R Hampton, ôModern Managementô
5. Stephen P Robbins, David A DeCenzo, ôFundamentals of Management, Essential Concepts and Applicationsô

SEMESTER-II

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

BCM201 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Business Correspondence : Letters	10 marks
3.	Punctuation	05 marks
4.	Business Advertisement	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi, Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 7 to 12.
2. List of words of Business Vocabulary attached (I to Z)

Themes and Units:

1.	Two questions from the book Galiey Chikkarh Door Ghar. (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2 x 4=08 marks
3.	Business Correspondence : Letters	10 marks
4.	Punctuation	05 marks
5.	Business Advertisement (Punjabi)	05 marks
6.	Business Vocabulary	05 marks

Suggested Readings
Punjabi Viyakaran by Dr. Harkirat Singh, Punjab State University Text-book Board, Chandigarh.

phHekwH Gkr gfjbk

;w;No dik

Business Vocabulary

1.	Imperfect Market	**ngoD wvh**
2.	Imports	**nk:ks**
3.	Import Duty	**nk:ks eo**
4.	Imputed Income	**nkofgs nkwdB**
5.	Imprest Account	**;oekoh gôrh byk**
6.	Income Statement	**nkwdB fuzmk**
7.	Index of Profit	**bkG ;ue**
8.	Income Tax	**nkwdB eo**
9.	Inflation	**wdok ;chsh**
10.	Intangible Assets	**n;Eb bDdkohnK**
11.	Investment	**fBtô**
12.	Invoice	**phue**
13.	Jobber	**;Nke nkVsh**
14.	Job Casting	**bkrs fBoXkoD**
15.	Joint Venture	**;KMk Tzdw**
16.	Labour	**feos**
17.	Laissez Fair	**yzbh ftt;Ek**
18.	Lease Holding Building and Property	**gzNôs fJwkos ns ikfJdkd**
19.	Ledger	**õksk**
20.	Ledger Folio	**yksk gBk**
21.	Liabilities	**dDdkohnK**
22.	Liquidator	**fBoXkoe**
23.	Market	**wvh**
24.	Marketable Goods	**fteD:rt;sK**
25.	Mechanization	**wôhBheoB**
26.	Mercantilism	**tgkotkd**
27.	Monetary System	**wzdok gpX**
28.	Money of Account	**by dh wzdok**
29.	Monopoly	**JekfXeko**
30.	Mortgage	**ofjD,froth**
31.	Net Investment	**fBob fBtô**
32.	Net Profit	**fBob bkG**
33.	Notice of Stoppage	**oe ;uBk**
34.	Office Expenses Account	**døsoh õou byk**

35.	Open Market Operations	y[bk wvh ft jko
36.	Over Due	fwnkd g[rh
37.	Over Head Cost	p[Mh bkrs
38.	Partnership	fj[;dkoh, ;KMhdkoh
39.	Payable Accounts	dD:r by
40.	Preference Shares	soihjh fj[;
41.	Premium	ghwhnw
42.	Price Control	ehws fB:soD
43.	Production	T[sgkdB
44.	Profit Margin	bkG nô
45.	Proprietor	;gsh wkbe
46.	Quasi Negotiable Instrument	noX ft[eoh:r j[vh
47.	Quotation	w[b ;[uh
48.	Rate of Exchange	tNKdok do
49.	Ready Delivery	fsnko wkb
50.	Real Wages	tk;sfte widoh
51.	Rebate	SN, eNsh
52.	Recession	nkofEe wdh dk do
53.	Receivable Accounts	bD:r by
54.	Redemption of Mortgage	ofjD Sv[kTDk
55.	Receipts and Payment Account	gkgsh ns ndkfJrh byk
56.	Rent	feokfJnk
57.	Rent Account	brkB byk, feokfJnk byk
58.	Reserve Price	oky th ehws
59.	Revenue	nkwdB
60.	Sales Tax	ft[eoh eo
61.	Sales Transfer Order	ft[eoh fJsekb j[ew
62.	Security Bond	iwkBsBkwk
63.	Service Goods	;[tk t;sK
64.	Shares	ôno, fj[;
65.	Share Capital	ôno g[h
66.	Share Holder	fj[;dko
67.	Share Market	ôno pkiko
68.	Short Bills	nbgekbh j[vhnK
69.	Slump	wdk
70.	Sole Proprietorship	Jeb wkbeh
71.	Speculation	;[Nk nB[wkB
72.	Statutory Company	ekB[B nXhB ;Ekfgs egBh
73.	Stipulated	fBôfus ehsk

74.	Stock	Gvko, ;Nke
75.	Stock Exchange	ôno pkiko
76.	Subsidiary Company	;jkfJe egBh
77.	Surety	÷kwB
78.	Tariff	do ;uh
79.	Tax Exemption	eo SN
80.	Tax Base	eo nkXko
81.	Tax Evasion	eo uoh
82.	Tax Equity	eo ;wBhsh
83.	Tender	Nvo
84.	Tender money	Nvo dh oew
85.	Terms of Payment	Gr skB dhnK ôosK
86.	Terms of Trade	tgko dhnK ôosK
87.	Trademark	wkoek
88.	Transactions	;d, bD dD
89.	Transfer Book	fJsekb yksk
90.	Under Value	xÍN wÍbneD
91.	Unproductive Expenditure	nD-TgikT you
92.	Unproductive Labour	nD-TgikT feos
93.	Validity Period	gwkfDs fwnkd
94.	Vertical Integration	;wog ;xNB
95.	Wages	widoh
96.	Wages Account	Tios byk
97.	Wage Goods	widoh t;sK
98.	Wage Book	Tios tjh
99.	Wharf age	TsokJh
100.	Write Off	tÍN yks gkTDk
101.	Working Capital	ubs gih
102.	Yield	Tgi
103.	Zero Rate of Interest	ftnki dh ÷ho do

HISTORY AND CULTURE OF PUNJAB

For B.Sc. /B.Sc. (Hons) Bio-Technology/B.Sc. (Hons) Bio-Informatics/B.Sc. 4 year agriculture /BCA/B.Sc. Fashion Disigning/B.Sc. Microbial and Food Technology / 4 year B.PEd. /BFA/BBA/B.Com etc. all courses that take this paper for ONE year only.

6 credit course

SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks

   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

BCM201 B PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements ï non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.

BCM 202 : ENGLISH AND BUSINESS COMUNICATION

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens** Issues ed. K.A. Kalia (Oxford University Press).

The relevant sections, however, are as follows:

I. Chandalika: *Rabindranath Tagore*
II. A Bachelor's Complaint of the Behaviour of Married People: *Charles Lamb*
III. El Dorado: *R.L. Stevenson*
IV. Bores : *E.V. Lucas*
V. The Art of the Essayist : *A.C. Benson*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end, Unit II shall consist of the following sub-units:

Writing Skills: This section shall focus on business précis-writing, curriculum vitae; short formal reports (not exceeding 200 words).

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of e-mails, Fax Messages, Teleconferencing, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for Group Discussion etc.

Practical Work: To impart skills of Group Discussion.

Practical Work: There will be viva-voce examination of 10 marks which will include Group Discussion. The students will appear in the group of 10 students for viva-voce.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Section I *(It is text-based and corresponds to Unit I in the syllabus)*

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 marks
Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, and be based upon the prescribed text **Ten Mighty Pens.**	10 marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q.3.	It shall consist of **an Unseen Passage for Comprehension** (not more than 300 words), with minimum six questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 marks
Q.4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 marks
Section II *(Based upon Unit II)*		
Q.5.	The students shall be asked to write a short survey report on a situation, incident, business problem, or the possibility of starting a new commercial venture (in about 150-200 words). The students shall be given an internal choice in this question.	10 marks
Q.6.	This will test the students' ability to write a Précis. A passage of about 200 words shall be given and the students shall have to write a précis of about 70 words (including the title).	10 marks

Q.7.	Definition/format of Modern forms of communication to be tested- Listening - Non verbal communication, e-mail, fax, teleconferencing etc.	10 marks
Q.8.	Curriculum Vitae	10 marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM 203: E- COMMERCE

Objective: The objective of this paper is to provide fundamental knowledge to the students about E-Commerce so that they can better perform in any area of operation and can excel in the field of commerce with IT specialization.

UNIT I

Electronic Commerce Framework, History, Basics and Tools of E-Commerce, Comparison of Web-based with Traditional Business; Growth of E-Commerce ï Present and potential.

E-Business : Meaning, Importance, Models Based on the Relationships of Transacting Parties (B2B, B2C, C2C and C2B), Present Status of E-Commerce in India, Regulatory Aspects of E-Commerce.

UNIT II

Changing Structure of Organisation ï The Impact of E-Commerce on Various Business Sectors such as Entertainment, Education, Health Services, Publishing and Financial Services. Socio-Economic Impacts of E-Commerce.

Electronic Payment System: Types of Payment System ð E-Cash and Currency Servers, E-Cheques, Credit Cards, Smart Cards, Electronic Purses and Debit Cards. Electronic Data Interchange, Digital Signatures, Cryptography, Interoperatibility and Intercompatibility.

Reference books:

1. Diwan, Prag and Sushil Sharma: Electronic Commerce, A Managerôs Guide to E,Business Vanity Books International, Delhi.
2. Kalakota, Ravi and Shinston Andrew B: Frontiers of Eletronic Commerce, Addision Wesley.
3. Minoli and Minoli: Web Commerce Technology Handbook, Tata McGraw Hill, New Delhi.
4. Schneider, Gray P.: Electronic Commerce, Course Technology, Delhi.

BCM 204: BUSINESS ECONOMICS-II

Objective: The paper aims at providing the knowledge of basic concepts of the distribution and modern tools of macro-economic analysis.

UNIT-I

Distribution

Wages : Meaning, Types, Marginal Productivity Theory of Wages, Modern Theory of Wages.
Rent: Meaning ,Types, Ricardian Theory of Rent, Modern Theory of Rent, Quasi- Rent.
Interest: Meaning, Types, Classical Theory of Interest, Neo-Classical Theory of Interest, Liquidity Preference Theory of Interest.
Profits: Nature, Types, Dynamic Theory of Profits, Innovation Theory of Profits, Risks Bearing Theory of Profit, Uncertainty Bearing Theory of Profits.
National Income: Meaning, Concepts of National Income, Measurement of National Income, Difficulties in Its Measurements, Its Significance.

UNIT- II

Sayôs Law of Market: Meaning, Implications,
Classical Theory of Income Output and Employment:
Keynesian Theory of Employment.
Effective Demand: Determination, Importance
Consumption Function: Meaning, Factors Influencing Consumption Function, Average and Marginal Propensities to Consume, Propensity to Save, Psychological Law of Consumption and its Importance.
Marginal Efficiency of Capital: Meaning, Determinants, Theory of Secular Stagnation.
Investment: Meaning, Types, Factors Affecting Investment, Importance of Investment, Measures to Raise Private Investment.
Multiplier: Meaning, Keynesian Income or Investment Multiplier, Leakages, Uses, Limitations of Multiplier, Multiplier and Under-Developed Countries.

Reference books:

1.Shapiro. E	Macroeconomic analysis Galotia publications, New Delhi.
2.Eugene Diulio	Macro economics, 4th Edition, Tata McGraw Hills, Publishing Col. Ltd, New Delhi.
3.Dornbusch R, Fisher, S and Startz, R	Macro Economics, 8th Edition, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
4.Ackley,G.	Macroeconomics: Theory and Policy, Macmillan, New York

BCM 205: CORPORATE ACCOUNTING

Objective: To provide knowledge about basic corporate accounting with the relevant accounting standards.

UNIT 1

Issue, Forfeiture, Reissue and Buy-Back of Shares,

Redemption of Preference Shares.

Right Issue and Bonus Shares.

Final Accounts of Companies (including Managerial Remuneration & Profit Prior to Incorporation),

UNIT II

Underwriting of Shares and Debentures.

Issue and Redemption of Debentures.

Accounts of Banking Companies

Accounts of Insurance Companies.

Note : Accounting Standards are to be covered along with topics.

Practical Work:

1. Preparation of Final Accounts of Companies and critical evaluation.
2. Comparison of annual reports of companies and disclosures norms.

Reference books:

1. R.L. Gupta and M. Radhaswamy ï Advanced accounts ï Sultan Chand.
2. Shukla Garewal and Gupta ï Advanced accounts ï S.Chand, New Delhi.
3. D. Chanderbose ï Advanced Accounting, Vol. I, PHI Learning Pvt. Ltd.
4. T.S. Reddy and A. Murthy ï Corporate Accounting, Margham Publications, Chennai.

BCM 206: BUSINESS LAWS

Objective: The main objective of the paper is to acquaint the students about Business Laws.

UNIT– I

Sale of Goods Act, 1930: Contract of Sale of Goods, Conditions & Warranties; Transfer of Ownership; Performance of the Contract: Remedial Measures; Auctionable Claims.

Negotiable Instruments Act, 1881: Definition, Acceptance and Negotiation, Rights and Liabilities of Parties, Dishonor of Negotiable Instrument, Hundis, Bankers and Customers.

UNIT- II

Factories Act, 1948: Objectives; Definitions; Approval; Licensing & Registration of Factories; The Inspecting Staff Health; Safety Welfare; Working Hours of Adults; Employment of Women; Child Labour ï Issues and Challenges; Leave with Wages; Penalties & Procedure Supplemental.

The Industrial Disputes Act, 1947: Scope & Object; Definitions; Authorities; Notice of Change; Reference of Disputes; Procedure; Powers & Duties of Authorities; Award & Settlement; Strikes & Lockouts; Lay-off & Retrenchment etc.

Reference books:

1. Malik, K.L., Industrial Laws and Labour Laws, Eastern Book Company, Lucknow.
2. Kumar, H.L., Digest of Labour Cases, Universal Law Publishing Co P Ltd, New Delhi
3. Srivastava, S.C., Industrial Relations &Labour Laws, Vikas Publishing House (P) Ltd.
4. Sharma, J.P., Simplified Approach to Labour Laws, Bharat Law House (P) Ltd., New Delhi.
5. Sharma, J.P., Industrial Laws, Taxmann, New Delhi.

BCM 207: HUMAN RESOURCE MANAGEMENT

Objective: The objective of the paper is to familiarize the students with the different aspects of managing human resource in the organization.

UNIT – I

Human Resource Management: Introduction, Meaning and Definitions, Brief History, Nature, Functions, Importance and Limitations of HRM. Contemporary Challenges in HRM.

Human Resource Planning; Introduction, Definitions, Features, Need for HR Planning, Objectives, Process, Factors affecting HR Planning, Types, Benefits, Problems in HR Planning and Way for Effective HR Planning.

Job Analysis and Job Design: Introduction, Objectives, Benefits, Process, Techniques and Problems in Job Analysis. Job Design- Meaning, Objectives and Techniques of Job Design.

Recruitment and Selection: Meaning and Definitions, Importance and Purpose, Process, Factors Affecting Recruitment, Sources of Recruitment, Methods, Constraints and Challenges of Recruitment. Recent Trends in Recruitment. Selection: Meaning and Definition, Selection Process and Methods.

Placement and Induction: Meaning and Problems in Placement. Induction: Meaning, Objectives, Contents, Elements, Procedure and Problems in Induction.

UNIT – II

Training and Development: Concepts, Importance, Identification of Training Needs. Types of Training: On the Job and Off the Job Methods of Training. Designing and Evaluation of Training Programmes. Meaning of Development, Difference between Training and Development.

Performance Appraisal: Concept, Objectives, Methods of Performance Appraisal; How to Make it Effective.

Internal Mobility and Transfers: Promotions, Demotions and Other Forms of Separations, Definitions, Purpose, and Basis of Promotions. Transfer: Definitions, Purpose, Types and Transfer Policy.

Compensation Management: Concept, Methods of Wage payments and Incentive Plans, Fringe Benefits.

Reference books:

1. Dessler, Personnel Human Resource Management, Prentice Hall of India.
2. D A DeCenzo and S P Robbins, Personnel/ Human Resource Management, Prentice Hall of India.
3. Ian Beardwell and Len Holden, Human Resource Management, Macmillan.
4. Wendell French, The Personnel Management Process, Houghton Mifflin Co., Boston...
5. M S Saiyadain, Human Resource Management, Tata McGraw

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN AND CHILDREN

UNIT I (Environment)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere ï lithosphere, hydrosphere, atmosphere; Natural resources ï their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil ï a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems ï soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste managementï open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food;

uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering ï Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in
(b) www.punjabpolice.gov.in
(c) www.haryanapolice.gov.in
(d) **www.hppolice.nic.in**

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II
Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women ï domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children ï physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death ï Section 304B;
Rape ï Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty ï Section 498A;
Insult to Modesty ï The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 ï (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions ï Sections 319 to 326;
Acid Attacks ï Sections 326A and 326B;
Female Infanticide ï Section 312, Section 313 of Indian Penal Code (Causing miscarriage without womenôs consent) and section 314;
Sexual Harassment ï For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 ï Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ï Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361

(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/**HRLN**India/a-life-free-from-**violence**
http://hrln.org/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

SEMESTER-III

BCM 301: ISSUES IN INDIAN COMMERCE

Objective: To enable the students to acquire basic knowledge of different issues faced in progress and prospects of commerce in India.

UNIT-I

Foreign Direct Investment: Concept, Historical Perspective, Incentives for Attracting Foreign Capital, Implication for Indian industry, Role of Foreign Investment Promotion Board (FIPB) ï Automatic Route and Sectoral Limits, Difference between FDI and Foreign Portfolio Investment (FPI).

ñMake in Indiaò An Initiative of Government of India, Objectives, Sectors in Focus and Issues & Challenges ahead.

Technology in Commerce: Features, Impact, Management and Status of Technology and Impact of Technology on Commerce in India.

International Finance: Introduction, Need, Importance, Sources-External Commercial (FCCBs) Borrowings (ECB), American Depository Receipt (ADR), Global Depository Receipt (GDR).

UNIT-II

Infrastructure: Growth of Infrastructure- Energy, Transport and Communication. Public-Private Partnership (PPP) in Infrastructure Development in India, Bottlenecks, Models - Built Operate and Transfer (BOT), Built Operate Levy and Transfer (BOLT), Special Economic Zones (SEZs).

Stock Exchanges in India: Organisation, Nature, Functions, Benefits, Growth, Trading in Stock Markets- Electronic Trading, Listing and Role of SEBI, Commodity Exchanges in India.

Corporate Debt Restructuring: Concept, Importance, Methods, Corporate Scams and Regulatory Authorities-Serious Fraud Investigation Office (SFIO), Investors; Protection in India- Importance, Need, and Initiatives by the Central Government.

Recent Trends in Credit Rating Services in India- Role of ICRA and CRISIL.

Reference books:

1. Indian Economy - Datt and Sundharam, S Chand and Co. New Delhi
2. Indian Economy - M.B. Shukla, Taxman Publication, New Delhi
3. India Transport Report, National Transport Development Committee Report, Routledge, Tolstoy Marg, New Delhi
4. Financial Markets Institutions and Financial Services, C Gomez ï Prentice-Hall.
5. Principles of Business Organisation, by Y.K. Bhushan, Sultan Chand & Co, New Delhi
6. Guruswamy. S ï Global Financial Institutions, Tata Mcgraw Hills India.
8. Khan ï my Indian Financial Systems - Tata Mcgraw Hills India.
9. Website of Make in India

BCM 302: COST ACCOUNTING

Objective: The objective of this paper is to help the students to acquire conceptual knowledge of cost accounting and elements of cost.

UNIT – I

Introduction: Nature, Scope and Advantages of Cost Accounting, Installation of Costing System, Difference between Cost and Financial Accounting, Classification of Costs.

Material: Purchase, Storage and Control of Material, Stock Levels, Inventory, Control Techniques. Methods of Pricing Material Issues.

Labour: Meaning and Components of Labour Cost. Concept, Accounting and Control of Idle time and Overtime. Methods of Wage Payment and Incentive Plans, Labour Turnover .

UNIT – II

Overheads: Collection, Classification, Allocation, Apportionment and Absorption of Overheads (Primary and Secondary Distribution), Machine Hour Rate.

Preparation of Cost Sheet, Operation Costing, Service Costing.

Cost Ledger Accounting, Integral Accounting, Reconciliation of Cost and Financial Accounts.

Practical Work:
Use of software package to obtain cost accounting output like: Analysis of Cost- Centre wise and Element wise, Allocation and Apportionment of Overheads, Preparation of Cost Sheet.

Reference books:

1. Banerjee Bhabatosh: Cost Accounting, Phi Learning
2. Saxena and Vashist: Cost Accounting, Sultan Chand and Sons.
3. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
4. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 303: COMPANY LAW

Objective: The objective of this paper is to help the students understand various provisions of Companies Act 2013.

UNIT - I

Introduction: Characteristics of a Company, Concept of Lifting of Corporate Veil, Emerging Types of Companies.

Formation of Company ï Promotion & Registration, Pre-incorporation Contract and Provisional Contracts.

Memorandum of Association, Articles of Association, Doctrine of Constructive Notice, Doctrine of Ultra-Vires, Doctrine of Indoor Management,

Prospectus and Statement in Lieu of Prospectus, Red-Herring Prospectus.

Share Capital ï Kinds of Shares, Book Building Process, Information Memorandum, Dematerlisation of Shares, ASBA System, Transfer & Transmission of Shares, Buyback of Shares.

UNIT- II

Members and Shareholders ï Their Rights and Duties.

Management ï Directors, Classification of Directors, Disqualification, Appointment, Legal Position, Powers and Duties, Disclosures of Interest, Removal of Directors, Board Meetings, Other Managerial Personnel and Remuneration, Digital Signatures of Directors.

Winding Up-Concept and Modes.

Practical Work: Teacher should use Internet and Communication Technology to give students demo regarding procedure of Online Filing of Documents for Registration of Company, obtaining Director Identity Number (DIN), Corporate Identity Number (CIN), etc. Students should be apprised of National Company Law Tribunal (NCLT), Insider Trading, Rating Agencies, etc. Practical Training about Notice of Meeting, Agenda, Quorum, Proxy, Reports, Minutes of Meeting, Resolutions, etc. The teacher should use simulation method and will hold at least One Statutory Meeting, One Annual General Meeting, One Extra-ordinary Meeting and One Board Meeting.

Reference books:

1. Kannal, S., & V.S. Sowrirajan, ñ*Company Law Procedure*ò, Taxmanôs Allied Services (P)Ltd., New Delhi (Latest Edn).
2. Ramaiya, A., ñ*A Ramaiya's Guide to Companies Act*ò, Lexis Nexis ButterworthsWadhwa, Nagpur.
3. Singh, Harpal, ñ*Indian Company Law*ò, Galgotia Publishing, Delhi.
4. Singh, Avtar, ñCompany Lawò, Eastern Book Company, Lucknow

BCM 304: BUSINESS MATHEMATICS AND STATISTICS

Objective: The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions.

UNIT I

Matrices and Determinants: Definition of a Matrix. Types of Matrices; Algebra of Matrices; Properties of Determinants; Calculation of Values of Determinants upto Third Order, Ad-Joint of a Matrix, Elementary Row or Column Operations; Inverse of a Matrix. Solution of a System of Linear Equations having Unique Solution and Involving not More Than Three Variables.

Differentiation ï Idea of Simple Derivative of different Functions (excluding trigonometric function).
Maxima and Minima of Functions of One Variable only

UNIT II

Introduction: Statistics as a Subject; Statistical Data: Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data.

Analysis of Univariate Data: Construction of a Frequency Distribution; Concept of Central Tendency and Dispersion-and Their Measures; Measures of Skewness; Concept of Kurtosis.
Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend
Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate); Tests of Adequacy; Chain-Base Index Numbers; Base Shifting, Splicing, and Deflecting; Problems in Constructing Index Numbers; Consumer Price Index.

Practical work: Collection, Classification and Presentation of data using Microsoft Excel

Reference books:

1. Dowling E.T.: Mathematics for Economics; Shaum Series, McGraw Hill, London.
2. Holden: Mathematics for Business and Economics; Macmillan India, New Delhi.
3. Kapoor, V.K.: Business Mathematics; Sultan Chand & Sons, Delhi.
4. Vohra, N.D.: Quantitative Techniques in Management; Tata McGraw Hill, New Delhi.
5. Aczel, Amir D.: Complete Business Statistics, Irwin.
6. Chou-Ya-Lun: Statistical Analysis, Holt, Rinchart and Winslon.
7. Heinz, Kohler: Statistics for Business & Economics, Harper Collins.
8. Levin, Richard I.& David S Rubin: Statistics for Management, Prentice Hall of India, Delhi.

BCM 305: BANKING AND INSURANCE

Objective: To acquaint the students with Indian Banking and Insurance industry.

UNIT – I

Indian Banking System: Introduction, Concept, Types of Banks and Structure of Banking System, Functions of Commercial Banks, The Reserve Bank of India: Management and Structure, Functions of RBI, Monetary Policies and Techniques of Credit Control.

Reforms in Indian Banking: Overview, Recommendations of Narasimham Committee, Verma Panel Report, Basel II Norms, Capital Adequacy Ratio (CAR), Revised NPA Norms- Grievance Mechanism and Banking Ombudsman, Impact of Reforms.

Emerging Trends in Banking: Concept of E-Banking, Mobile Banking, Electronic Fund Transfer- (RTGS & NEFT) and Core Banking. RBI Guidelines on Internet Banking, Challenges faced by Indian Banking, Cheque Truncation System.

UNIT – II

Insurance: Concept, Nature of Insurance, Functions of Insurance, Types of Insurance (Life and Non-Life), Importance of Insurance, Principles of Insurance Contract-Features of Life and Non-life Insurance.

Insurance and IRDA: IRDA Act 1999, Provisions, Duties, Powers and Functions of IRDA, Composition and Grievance Mechanism and Insurance Ombudsman.

Reference books:

1. M N Mishra, S B Mishra: Insurance Principles & Practice, Sultan Chand and Sons.
2. James L Athearn: Risk and Insurance, West Publication Co.
3. NaliniPravaTripathy and Prabir Pal: Insurance Theory and Practice, Prentice Hall India.
4. PAS Mani: Life Insurance in India, Western Printers and Publication. Insurance & Risk Management ï Dr. P.K.Gupta,Himalaya Publishing House, Delhi.
5. Banking Law and Practice Maheshwari, S.N. and Maheshwari, S.K.,Kalyani Publishers, New Delhi.
6. Emerging Trends in the Banking Sector, Mittal R.K., Saini A.K. &Dhingra Sanjay, Macmillan, New Delhi.
7. MadhuVij: Management of Financial Institutions in India, Anmol Publications.
8. U.C. Patnaik: Rural Banking in India, Anmol Publications.
9. Vasanth Desai: Nature and Problems of Commercial Banking in India, Himalaya Publishing House.
10. V.K. Gupta: Management of Financial Institutions in India, Radha Publications
11. G. Ramesh Babu: Management of Financial Institutions in India, Craft Publishing Company.
12. Vasanth Desai: Indian Banking, Nature and Problems, Himalaya Publications House.

BCM 306: INDIRECT TAX LAWS

Objective: The objective of this paper is to help the students to acquire the knowledge of indirect tax laws prevailing in India.

UNIT – I

Central Sales Tax Act ï Features, Terms, Definitions, Registration of Dealer, Procedure of Assessment, Levy, Sales Tax Authorities- Their Powers & Functions.

Value Added Tax – Basic Concepts and Historical Background, Levy of VAT, Difficulties in Administering VAT, Mode of Operation of VAT System, Variants of VAT and Methods of Computation of VAT Liability, Merits and Demerits of VAT. Set-Off/Input Tax Credit, Carrying over of Tax Credit, Registration, TIN.

Customs Act, 1962 ï Basic Concepts, Provisions, Types of Custom Duty, Levy, Valuation, Customs Procedure, Baggage & Exemptions.

UNIT – II

Central Excise Act, 1944 ï Introduction, Definitions, Valuation of Goods for Central Excise, Types of Duties, Levy, CENVAT Credit Rules.

Service Tax**:** Nature of Service Tax, Meaning of Service, Negative List, Mega Exemption Notification, Registration, Computation of Service Tax Liability, Point of Taxation, Reverse Charge Mechanism, Small Service Provider, Service Tax Procedure.

Note: The paper setter will consider the changes upto 30th September of relevant year.

Practical Work: Fillings of Forms for Registration Returns, Assessment etc.

Reference books:

1. Indirect Tax Laws - Dr. Vinod K. Singhania & Dr. Monica Singhania (Taxmann Publications, New Delhi).

2. Indirect Taxes ï Dr. H. C. Mehrotra & Dr. V.P. Agarwal (Sahitya Bhawan Publications, Agra)

SEMESTER-IV

BCM 401: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: The paper aims at providing the students a comprehensive knowledge about security analysis and portfolio management and equipping for taking profitable investment decisions.

UNIT – I

Investment ï Meaning, Nature, Objectives and Process. Investment Avenues/ Alternatives. Investment Philosophy, Value Investing and Growth Investing, Investment Strategy, Individual and Institutional Investors.

Security Analysis ï Meaning, Risk and Return, Types and Measurement of Risk, Risk and Return Trade Off.

Investment Analysis : Fundamental Analysis ï Economic, Industry and Company Analysis.

Technical Analysis. Fundamental v/s Technical Analysis.

UNIT – II

Portfolio Management ï Concept, Portfolio Management Schemes, Portfolio Theories, Capital Market Line, Marvkowitz Model, Sharpe Model, Jensen and Treynor Model, Capital Asset Pricing Model, Arbitrage Pricing Theory, Efficient Market Theory, Security Market Line.

Portfolio Performance Evaluation and Revision.
Global Investing ï Benefits and Options for Global Investment.

Reference books:

1. Fischer & Jordan, Security Analysis and Portfolio Management, Prentice Hall India.
2. Punithavathy Pandian, Security Analysis and Portfolio Management, Vikas Publishing House Pvt. Ltd.
3. Martin Pring, Technical Analysis Explained, McGraw Hill.
4. V. A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House.
5. French, Don, Security and Portfolio Analysis, Merril Publishing Co.
6. Preeti Singh, Investment Management, Himalaya Publishing.
7. Devin S., Portfolio Management, Prentice Hall.
8. Cheney, Muses, Fundamentals of Investments
9. V. K. Bhalla, Portfolio Analysis and Management, Sultan Chand & Sons

BCM 402: ADVANCED ACCOUNTING

Objective: To provide knowledge to students about advanced accounting problems with the relevant Indian Accounting Standards.

UNIT-I

Valuation of Shares and Goodwill.

Insurance Claims.

Accounting for Hire- Purchase and Instalment System

Investment Accounts.

UNIT-II

Accounting for Amalgamation, Absorption(Excluding Inter-Holding) & External and Internal Reconstructions.

Accounts of Holding Companies-Preparation of CBS, Mutual Owings- Revaluation of Assests - Bonus Issue (Excluding Cross Holdings).

Liquidation of Companies.

Practical work:

1. Designing Scheme of Internal Reconstruction.

2. Case Studies on Mergers and Acquisitions.

Reference books:

1. Sehgal A. and Sehgal D., ñAdvanced Accountingò, Taxman Publications Pvt Ltd., New Delhi.
2. Shukla, M.C., Grewal T.S. and Gupta S.C: ñCorporate Accountingò, S. Chand and Co., New Delhi.
3. Gupta R.L, and Radhaswamy M, ñCorporate Accountingò, Sultan Chand and Sons, New Delhi.
4. Goyal V.K., ñCorporate Accountingò, Excel Books, New Delhi.
5. Maheshwari S.N., and Maheshwari S.K., ñCorporate Accountingò, Vikas Publication,New Delhi.
6. Gupta N.and Sharma C., ñCorporate Accountingò, Ane Books Pvt Ltd,New Delhi

BCM403: AUDITING AND SECRETARIAL PRACTICE

Objective: The objective of the paper is to help the students in understanding concepts and issues in Auditing and Secretarial Practice.

UNIT-I

Auditing: Introduction, Meaning, Objectives, Basic Principles, Classifications, Advantages and Limitations of Audit. Investigation, Difference between Audit and Investigation: Audit Program, Audit Evidence, Internal Control, Internal Check and Internal Audit.

Vouching ï Definition ï Features ï Examining Vouchers - Vouching of Cash book ï Vouching of Trading Transactions.

Verification and Valuation of Assets & Liabilities
Company Auditor - Qualifications and Disqualifications ï Appointment - Removal, Remuneration, Rights, Duties and Liabilities, Auditorôs Report - Contents and Types Company Auditor Report Order (CARO).

UNIT – II

Secretarial Practice: Definition of Company Secretary, Qualification of Company Secretary, Appointment, Dismissal, Duties & Liability for Offences of Company Secretaries. Position and Role of Company Secretaries, Company Secretary in Practice.

Procedure for Statutory Meeting and its fate under New Companies Act 2013, Annual General Meeting, Extra Ordinary General Meeting, Director, Board and Committee Meetings, Meaning and Types of Motions and Resolution, Minutes, Role of Company Secretary before, during and after Meetings.

Practical Work :

a) Practical Work on Vouching and Audit Report Preparation.
b) Preparing of Minutes, Motions and Resolutions, Holding of Meetings.

Reference books:

1. Dinkar, P., ñ*Principles and Practice of Auditing",* Sultan Chand and Sons, New Delhi.
2. Institute of Chartered Accountants of India: óó*Auditing and Assurance Standards*öö, ICAI,
3. Gupta, K., and Arora, A., ñ*Fundamentals of Auditing,*ò, Tata Mc-Graw Hill, Publishing Co. Ltd., New Delhi.
4. Ghatalia, S.V.: ñ*Practical Auditing,*ò, Allied Publishers Private Ltd., New Delhi.
5. Kapoor, N.D., ñSecretarial Practiceò Sultan Chand and sons.
6. Kuchal,M.C., ñSecretarial Practiceò, Vikas Publishing.

BCM 404: COST MANAGEMENT

Objective: The objective of the paper is to acquaint the students with the various methods of cost determination and tools and techniques of cost control.

UNIT – I

Cost Management: Need Significance and Different Areas of Cost Management and Application.

Methods of Cost Determination: Job Costing, Batch Costing, Contract Costing, Uniform Costing and Inter Firm Costing, Process Costing (including joint and by- products).

Contemporary Concepts: Activity Based Costing, Target Costing, Life Cycle Costing, Value Chain Analysis.

UNIT – II

Techniques for Cost Control:

Marginal Costing, Cost, Volume; Profit Analysis and Decision Making; Differential Costing and Absorption Costing.

Budgeting and Budgetary Control: Concepts, Objectives, Limitations, Types of Budgets, Zero Base Budgeting.

Standard Costing, Analysis of Variance.

Practical Work:

Use of software package to obtain cost accounting output like: Fixed and Variable Cost, Break Even Point, P/V Analysis, Preparation of budgets.

Reference books:

1. Edward Blocher, David Stoul-GaryCokins: Cost Management,McGraw Hill
2. Jawahar Lal: Advance Management Accounting, S.Chand and Company Ltd.
3. M. Ravi Kishore: Cost Management, Taxman Publications.
4. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
5. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 405: MARKETING MANAGEMENT

Objective: The paper aims at making students to understand the basic concepts, philosophies, process and techniques of marketing.

UNIT – I

Introduction to Marketing: Meaning, Nature and Scope of Marketing, Marketing Concepts and Philosophies, Marketing Process, Marketing Mix.
Marketing Information System: Meaning and Components, Marketing Research Process.
Consumer Buying Behaviour: Factors Influencing Buying Behaviour, Buying Decision Process.
Market Segmentation: Levels and Patterns of Market Segmentation, Basis, Major Segmentation Variables for Consumer Markets, Concepts of Market Targeting and Positioning.
Product Planning and Market Strategies: Product Life Cycle, New Product Development, Product Concepts and Classification, Branding, Packaging and Labeling.

UNIT – II

Pricing Decision: Pricing Policies and Strategies.
Distribution Decisions: Channel Design Decisions, Major Channel Alternatives, Channels Management Decision, Causes and Managing Channel Conflict, Physical Distribution.
Promotion Decisions: Communication Process.

Promotion Tools: Advertising (Steps Involved in Designing and Advertising Programme), Sales Promotions, Public Relations, Personal Selling.
Issues in Marketing in a Developing Economy, Rural Marketing.

Reference books:

1. Czinkota, M.R. and Kotabe.M., *Marketing Management,* Vikas Publishing, New Delhi.
2. Kotler, P., *Marketing Management: Analysis, Planning, Implementation & Control*, Prentice Hall of India, New Delhi.
3. Perreault, W.D. and Jerome, E.M.., *Basic Marketing*, Tata McGraw Hill, New Delh.
4. Ramaswamy, V.S. and Namakumari, S., *Marketing Management: Planning, Control*, MacMillan Press, New Delhi.
5. Zikmund, A., *Marketing,* Thomson Learning, Mumbai.

BCM 406: QUANTITATIVE TECHNIQUES AND METHODS

Objective: The objective of the paper is to acquaint the student with the various quantitative techniques and methods used in managerial decisions.

UNIT I

Quantitative Techniques: Introduction and Use in Business

Theory of Probability: Introduction, Definitions and Use of Addition and Multiplicative Theorem, Conditional Probability. Probability-Distribution: Binomial-Distribution, Poisson-Distribution, Normal-Distribution

Linear Programming: Meaning, Advantages, Limitations, Basic Terminology, Formulation of Linear Programming Problem, Graphic Solution of Linear Programming Problem; Business Application of Linear Programming.

UNIT II

Interpolation and Extrapolation

Correlation: Meaning, Types, Methods-Scattered Diagram, Karl Pearsonôs Coefficient of Correlation, Rank Correlation and Concurrent Deviation Method.

Regression: Meaning and Significance, Difference Between Correlation and Regression, Simple Linear Regression and Estimation of Parameters (Slope and Intercept).

Practical Work: Use of Microsoft Excel in Solving Simple Data Analysis.

Reference books:

1. Dowling E. Mathematical Methods for Business and Economics, McGraw Hill
2. K. Sydsaeter, P. Hammond Essential Mathematics for Economic Analysis, Pearson
3. Chiang Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill
4. Renshaw, G. Maths for Economics. Oxford: Oxford University Press.
5. Spiegel M. and Stephens L. Schaumôs Outline of Statistics, McGraw Hill
6. Lind D. Basic Statistics for Business and Economics, McGraw Hill
7. Dougherty, C. Introduction to Econometrics. Oxford: Oxford University Press.
8. Vogelvang, B. Econometrics: Theory and Applications with E-Views. London Pearson.

SEMESTER-V

BCM 501: INCOME TAX LAW

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Introduction, Important Definitions: Assessee, Person, Income, Total Income, Assessment Year & Previous Year. Agricultural Income & its assessment. Residence & Tax Liability (Basis of Charge). Capital & Revenue. Exempted Incomes.

Income from Salaries, Income from House Property.

UNIT – II

Profits and Gains of Business and Profession including Depreciation, Capital gains, Income from Other Sources.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Preparation of Form 16 and 16A
2. Preparation and Filling of ITR Forms
3. Preparation of PAN Form

Suggested Readings:

1. Studentsô Guide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts ï Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax ï Dr. Garish Ahuja & Dr. Ravi Gupta

   (Bharat Publications, New Delhi)

BCM 502: MANAGEMENT ACCOUNTING

Objective: To study the basic concepts of Management Accounting relevant in Business and helping the students to understand the usage of Accounting in Financial Management.

Unit-I

Origin Concept, Nature and Scope of Management Accounting, Distinction between Management Accounting and Financial Accounting. Nature, Importance and Limitations of Financial Statements, Tools of Financial Analysis-Trend Analysis, Common Size Financial Statements and Comparative Financial Statements, Ratio Analysis.

Unit-II

Fund Flow Statement, Cash Flow Statement (AS-3). Price Level Accounting, Social Accounting, Human Resource Accounting (Concept only), Responsibility Accounting: Concepts, Steps in Responsibility Accounting and Advantages of Responsibility Accounting.

***Practical*:** Use of various software packages to obtain different Management Accounting outputs like : (i) Fund Flow Statement, (ii) Ratio Analysis, (iii) Cash Forecasting.

Reference books:

1. Anthony Robert, Reece, Principles of Management Accounting; Richard D. Irwin Inc. Illinois.
2. Khan M.Y. and Jain P.K., Management Accounting; Tata McGraw Hill, New Delhi.
3. Kaplan R.S. and Atkinson A.A., Advanced Management Accounting, Prentice India International, New Delhi.
4. Dr. S.N. Maheshwari : Principles of Management Accounting, Sultan Chand & Sons, New Delhi
5. I.M. Pandey : Management Accounting, Vikas Publication
6. Debarshi Bhattachharya : Management Accounting, Pearson Publication

BCM 503: INDIAN ECONOMY

Unit – I

i) State of Indian Economy at the time of Independence.

ii) Nature of Indian Economy.

iii) Features and Appraisal of Economic Reforms Programme.

iv) Comparing Development Experience of Economies of India and China.

v) National Income of India ï Estimates, Inter-regional Variations in National Income.

vi) Demographic Features of Indian Population, Demographic Dividend.

Unit – II

i) Indian Public Finance: The Indian Tax Structure, Public Expenditure, Public Debt.

ii) Capital Market: Growth, Problems and Reforms since 1991.

iii) External Sector: Contemporary Problems of Indiaôs International trade. Balance of Payments Position, Foreign Trade Policy.

iv) Economic Planning in India ï Objectives, Achievements and Failures, Latest Five Year Plan in India, NITI Aayog.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 ï Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy ï Problems and Prospects, Viking, New Delhi.
3. Ahluwalia, I.J. and Little, IMD(eds.) 1998: Indiaôs Economic Reforms and Development. (Essays in Honour of Manmohan Singh), OUP, New Delhi
4. Nagraj, R.2006: Aspects of Indiaôs Economic Growth and Reforms, academic Foundations, New Delhi.
5. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
6. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
7. Dhar, P.K.: Indian Economy ï Its Growing Dimensions (Latest Edition), Kalyani Publishers
8. Economic Survey: Government of India, Latest Issue
9. Economic and Political Weekly: Various Issues

BCM 504: PRODUCTION AND OPERATION MANAGEMENT

Objectives: The objective of this course is to enable the students to understand the concepts of production and operations management of an industrial undertaking.

Unit-I

Introduction of Production and Operational Management: Meaning, Objectives and Scope. Strategic Planning and Demand Forecasting. Production Process and Analysis. Capacity Planning and Management. New Product/ Service Design and Development. Facility Location. Facility Layout. Production Planning and Control Techniques- Sequencing (Processing in Job through Two Machines) and Network Analysis - PERT/CPM (including Crashing).

Unit-II

Work Measurement and Work Study: Methods, Analysis and various Charts, Time Study and Principles of Motion Economy. Purchase Management. Inventory Management Fundamentals : Economic Order Quantity, Quantity Discount, Reorder Level, Lead Time, Safety Stock, JIT. Supply Chain Management: Concept & Components of Supply Chain, Activities in Supply Chain Management, Logistics Management.

Suggested Readings:

1. B. Mahadevan ñOperations Management Theory & Practiceò, Pearson Education.

2. Kanishka Bedi , ñProduction & Operations Managementò, Oxford Higher Education.

3. L.J. Krajewski & L.P. Ritzman ñOperations Management Processes & Value Chainsò, Pearson Education.

4. B.S. Goel ñProduction Operation Managementò.

5. Richard B Chase, F Robert Jacobs, Nicholas J Aquilano and Nitin K Agarwal , ñOperations Management ï For Competitive Advantageò, The McGraw Hill Companies.

BCM 505: ENTREPRENEURSHIP AND SMALL BUSINESS

Objectives:- The basic objective of this course is to help the learners understand various issues involved in setting up a private enterprise and develop required entrepreneurial skills in economic development. It also aims to motivate students to opt for entrepreneurship and self-employment as alternate career options.

UNIT- I

Entrepreneurship- Concept and Theories; Entrepreneur- Meaning and Characteristics: Leadership, Risk taking, Decision making, Motivation, Innovation.

Women Entrepreneurship- Problems Faced, Suggestions, Role of Government to promote Women Entrepreneurship; Socio- economic Environment.

Business Planning; Entrepreneurial Development Programmes- their Relevance and Achievement, Role of Government in Organizing EDPs.

UNIT- II

Small Scale Business-Seed Bed of Entrepreneurship; Business Venture- Its Concept; Setting up a Small Scale Enterprise.

Product Planning and Management; Marketing Management; Growth and Diversification Strategies.

Role of Small Business in the National Economy; Small Business and Modern Technology.

Tax Considerations/ Benefits to Small Scale Units; SSI Exemptions.

Suggested readings

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House, Delhi.
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd., Singapore.
4. Chandra, Ravi (2003). Entrepreneurial Success: A Psychological Study. Sterling Publication Pvt. Ltd., New Delhi.
5. . Balaraju, Theduri (2004). Entrepreneurship Development: An Analytical Study. Akansha Publishing House, Uttam Nagar, New Delhi.
6. David, Otes (2004). A Guide to Entrepreneurship. Jaico Books Publishing House, Delhi.
7. Taneja (2004). Entrepreneurship. Galgotia Publishers

BCM 506: FINANCIAL MARKETS AND SERVICES

Objective: To familiarize the students with the traditional and modern financial and services.

UNIT I

Financial Markets: Meaning, Functions and Types.

Money Market: Meaning, Characteristics, Structure, Participants, Growth of Indian Money Market, Components of Money Market, Call Money Market, Acceptance Market, Bills Market, Commercial Paper Market. Certificates of Deposits Market in India.

Capital Market: Nature and Role, Functions, Distinction between Money market and Capital Market, Primary Market, Secondary market, Operational Mechanism of Capital Market.

UNIT II

Financial Services: Meaning, Characteristics, Importance and Kinds of Financial services, Financial Services and Economic Environment, Players in Financial services. Merchant Banking: Concept, Evolution and Functions of Merchant banks.

Mutual Funds: Concept, Types, Advantages, Problems of Mutual Funds in India, Constitution and Management of Mutual Funds.

Exchange Traded Funds, Factoring.

Suggested readings

1.Financial Markets: A BeginnersôModule, Workbook from NSE
2. Mutual Fund: A BeginnersôModule, Workbook from NSE
3. Gurusamy, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
4.. Saunders, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
5. Thummuluri, Siddaiah, Financial Services, 1st edition, Pearson Education.
6. Khan, Indian Financial Systems, 6th edition, Tata McGraw Hill

BCM 601: DIRECT TAX LAWS

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Deemed Incomes and Clubbing of Incomes (Aggregation of Incomes), Set-off and Carry Forward of Losses, Deductions to be made in Computing the Total Income, Rebate & Relief.

Assessment of Individual.

UNIT – II

Assessments of HUF, Association of Persons & Firm.

Income Tax Authorities, Procedure of Assessment (Practical aspects of Filing of Return to be stressed), Penalties, Deduction & Collection of Tax at Source, Advance Payment of Tax, Appeals & Revision.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Filing of return by an Individual, HUF & Firm.

2. Filling and Submission of TDS Form.

Suggested Readings:

1. StudentsôGuide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts ï Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax ï Dr. Garish Ahuja & Dr. Ravi Gupta (Bharat Publications, New Delhi)

BCM 602: FINANCIAL MANAGEMENT

Objective: The objective of the paper is to familiarize the students with Principles and Practices of Financial Management.

UNIT- I

Financial Management: Meaning, Scope and Objectives of Financial Management, Time Value of Money- Compounding Techniques and Discounting Techniques. Capital Budgeting, Evaluation of Projects (excluding Risk and Uncertainty, Implications of Normal, Initial and Terminal Depreciation and Balancing Charge). Cost of Capital: Determination of Cost of Capital, Components of Cost of Capital.

UNIT- II

Sources of Corporate Finance, SEBI Guidelines for Raising Corporate Finance. Capital Structure, Meaning, Types of Leverage, Determinants of Capital Structure. Theories of Capital Structure. Working Capital Management and Its Estimation (Excluding Cash, Receivable and Inventory Management). Dividend Policy- Relevance and Irrelevance Theories.

Reference books:

1. J C Van Horne, ñFinancial Management and Policyò, 12th Edition, New Delhi, Prentice Hall of India
2. J C Van Horne, J W Wachowicz, Jr. ñFundamentals of Financial Managementò 13th Edition, Prentice Hall of India
3. Prasanna Chandra, ñFinancial Managementô Tata McGraw Hill.
4. Khan and Jain, ñFinancial Management- Text and Problemsò 2nd Edition, Tata McGraw Hillô
5. R A Brealey and S C Myers, ñPrinciples of Corporate Financeò, Tata McGraw Hill, 7th Edition
6. I M Pandey, ñFinancial Managementò, Vikas Publishing House, 9th Edition

BCM 603: ISSUES IN FINANCIAL REPORTING

Objectives: The main objective of this subject is to provide knowledge to the students about developments in financial reporting, and understanding of reporting issues at the national and international level.

Unit I

Financial reporting: Nature and Objectives, Benefits, Users of Financial Reports. General Purpose and Specific Purpose Report. Qualitative Characteristics of Accounting Information.

Conceptual Framework of Financial Reporting: FASB and IASB

International Financial Reporting Standards (IFRS): Role of IASB, Arguments for Global Conversion. Achievements of IASB and Obstacles in Conversion. Required Disclosures as per IFRS.

Unit II

Issues in Corporate Financial Reporting - Accounting for Changing Price Level, Social Reporting, Human Resource Accounting.

Indian Accounting Standard with reference to Segment Reporting, Interim Reporting, Leases and Intangible Assets.

Difference between IFRS and Indian Accounting Standards. US GAAP.

Recent Trends in Financial Reporting in the Indian context

Suggested Readings:

1. E.S. Hendriksen, Accounting Theory, Richard D. Irwin.

2. M.W.E. Glautier and B. Underdown, Accounting Theory and Practice.

3. Ahmed Riahi Belkaoui, Accounting Theory, Thomson Learning.

4. Henry I- Wolk, Jere R. Francis and Michael G- Tearney, Accounting Theory: A Conceptual and Institutional Approach, South Western Publishing Co.

5. Robert Bloom and Pieter T. Elagers, Accounting Theory and Policy, Harcourt Brace Joranovich.

6. L.S. Porwal, Accounting Theory, McGraw Hill Education (India) Ltd.

7. Jawahar Lal, Accounting Theory and Practice, Himalaya Publishing House, New Delhi.

BCM604: SOCIAL AND BUSINESS ETHICS

Objectives: The course aims to educate that how the adoption of Business Ethics by organizations not only discourages corporate wrong-doing, but also contributes substantially in the achievement of corporate excellence.

Unit-I

Business Ethics, Definition, Nature, Purpose, Ethical Issues in Management, Causes of Unethical Behaviour, Ethical Abuse-Values, Morals and Business Ethics-Levels of Business Ethics, Myths of Business Ethics, Relationship between Value, Morals and Ethics., Conflict of Interest.
Ethics at Workplace: Individual in Organisation, Gender Issues, Harassment, Discrimination.
Ethics in Accounting &Finance, Marketing and Consumer Protection- Importance, Problems and Issues.

Unit –II

Whistle Blower Policies-Meaning, Importance and Issues.
Corporate Social Responsibility under Company Act 2013.
Ethical Issues in Corporate Governance.
Environmental Issues-Protection of Natural Environment, Prevention of Pollution, Depletion and Conservation of Natural resources.

Suggested Readings:

1. Chakraborty , S.K. : ,Foundations of management Work - Contributions from Indian Thought: Himalaya Publishing House Delhi
2. Griffiths , B. : Themarriage of East and West , colling London
3. Gandhi , M.K. : The Study of My Experience with Truth, Navjivan Publishing House , Ahmedabad
4. Velasquez , M.G. : Business Ethics 5. Sekhar , R.C. : Ethical Choices in Business .

BCM 605: OPERATIONAL RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operational Researchð Meaning, Significance and Scope. Introduction to Linear Programming, Formulation of Linear Programmingð Problem, Graphical Method, Simplex Method. Duality in Linear Programming, Definition of Dual Problem, General Rules in Converting any Primal into its Dual, Transportation Problem, Assignment Problem.

UNIT-II

Decision Theory: Decision Making under Uncertainty and Risk, Decision Trees. Replacement Problem (Individual and Group replacement Problems both). Games Theory : Two Persons Zero Sum Games, Pure Strategies, Mixed Strategies. Simulation; Meaning, Process, Advantages, Limitations and Applications.

Practical Work :

Use of Linear Programming in Industry.

Suggested Readings:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

BCM 606: SECTORAL ASPECTS OF INDIAN ECONOMY

Objectives: This course will provide insight into the various sectoral aspects of indian economy

Unit – I

i) Agriculture: Features, Agricultural Productivity and Income, Rural Indebtedness, Agricultural Marketing, Agricultural Finance and Agricultural Policy, New Development in Agriculture ï Contract Farming, Organic Farming and Corporate Farming.

ii) Industrial Development during the Planning Period, Industrial Policy of Govt. of India, National manufacturing policy, Small Scale and Cottage industries in India: Importance, problems and Govt. Policy, Large Scale Industries ï Iron & Steel, Cement and Petrochemicals.

Unit – II

i) Services Sector in India: Growth and Contribution of Services in India in Pre and Post Reform Period, Role and Problems of Public and Private Sector in India

ii) Problems of Indian Economy: Poverty, Unemployment, Inflation, Unequal distribution of Income and Wealth, Inter-State disparities in the Pattern of Development.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 ï Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy ï Problems and Prospects, Viking, New Delhi.
3. Nagraj, R.2006: Aspects of Indiaôs Economic Growth and Reforms, academic Foundations, New Delhi.
4. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
5. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
6. Dhar, P.K.: Indian Economy ï Its Growing Dimensions (Latest Edition), Kalyani Publishers
7. Economic Survey: Government of India, Latest Issue
8. Economic and Political Weekly: Various Issues

B.COM. (HONS.) 3rd SEMESTER

BCH 307: ACCOUNTING THEORY AND REPORTING PRACTICES

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding accounting theory.

UNIT-I

The History and Development of Accounting, Nature and Uses of Accounting, Traditional Approaches to the Formulation of An Accounting Theory, Regulatory Approach to the Formulation of An Accounting Theory; The Events, Behavioural and Human Information Processing Approach.

Unit –II

The Predictive and Positive Approaches to the Formulation of Accounting Theory, A Conceptual Framework for Financial Accounting and Reporting. The Structure of Accounting Theory, Alternatives Asset-Valuation and Income Determination Models.

Reference Books:

1. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
2. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
3. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting.
4. Elliott, B. & Elliott, J., Financial Accounting and Reporting. Harlow
5. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. S. Agarwal, Manual of Accounting Standards, Snow White.
8. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.

BCH 308: DEVELOPMENT ECONOMICS

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding economic development and growth.

UNIT-1

Concept of Economic Development, Distinction between Growth and Development, Various Traditional and Modern Criteria to Measure Development, Determinants of Development, Balanced vs. Unbalanced Growth,

Concept of Sustainable Development, Importance, Indices of Development,

Classical Theories of Development-Adam Smith, Karl Marks and Schumpeter, Rostowós Stages of Growth, Kaldor Model of Growth.

UNIT-II

Economic Development Since Independence, Indiaôs Five Years Plans- Objectives, Strategies, Achievements and Constraints,
Models in Economic Planning- Harrod-Domar Model, Mahalanobis Model,
Role of State and Capital Formation in Economic Development, Growth and Distribution Trends and Policies regarding Poverty; Inequality and Unemployment in India,

Reference Books:

1. Agarwala, A.N. and S.P. Singh, Economics of Underdevelopment, Oxford University Press, London.
2. Misra, S. K. and Puri, Economics of Development and Planning, Mumbai: Himalaya Publishers.
3. Meier, Gerald M. and James E. Rauch, Leading Issues in Economic Development, Oxford University Press, New Delhi.
4. Todaro, M.P., Economic Development in the Third World, Longman, New York.
5. Salvatore, D. and E. Dowling: Development Economics, Schaum's, Outline Series in Economics, McGraw Hill, New York.

BCH 309: ADVERTISING AND BRAND MANAGEMENT

Objective: The objective of the paper is to provide an understanding of the principles of advertising and brand management.

UNIT - I

Advertising: Introduction, Scope, Importance in Business : Role of Advertising in Social and Economic Development of India: Ethics in Indian Advertising. Advertising and Consumer Behaviour; Setting Advertising Objectives, DAGMAR; Determining Advertising Budgets; Advertising Planning and Strategy, Creative Strategy Development and Implementation. Role of Integrated Marketing Communication in the Marketing Programme; Process of Marketing Communication; Definition and Scope of Advertising Management; Determination of Target Audience. Media Planning: Setting Media Objectives; Developing Media Strategies, Evaluation of Different Media and Media Selection; Media Buying; Measuring Advertising Effectiveness.

UNIT – II

Brand-Concept: Nature and Importance of Brand; Brand vs. Generics, Brand Life Cycle, Brand Name and Brand Management; Brand Identity: Conceiving, Planning and Executing (Aaker Model), Brand Loyalty, Measures of Loyalty; Brand Equity: Concepts and Measures of Brand Equity-Cost, Price and Consumer Based Methods; Sustaining Brand Equity; Brand Personality: Definition of Brand Personality, Measures of Personality, Formulation of Brand Personality; Brand Image Vs Brand Personality. Brand Positioning: Concepts and Definitions, Repositioning, Celebrity Endorsement, Brand Extension; Differential Advantage: Strategies for Competitive Advantage, Brand Pyramid; Branding in different sectors; Role of Information in Brand Management; Role of e-Communities in Brand Management.

Reference Books:

1. Arens W.A. Contemporary Advertising, Tata Mc Graw Hill, New Delhi

2. Batra. R. Myers, J.G. and Aaker D.A., Advertising management, prentice hall of India, New Delhi

BCH 310: BANK MANAGEMENT

Objectives: The paper aims at acquainting the students, the concepts of Bank Management and relevant aspects.

UNIT – I

Banking Structure in India ï Banks and Regulatory Environment ï Analysis of Balance Sheet and Profit and Loss Account ï Financial Performance Analysis with Ratios ï RBI and its role on Bank Performance ï Banks and Risk Management, Types of Risks in Banking Industries ï Risk and Return ï Profitability ï Liquidity ï Solvency Trace off ï Project Appraisal ï Capital Adequacy Norms ï MIM ï Interest and Non ï Interest Income ï Lending Principles.

UNIT – II

NPA ï Provisions, Types, Impact on Profitability. Warning Signals ï NPA Management ï How to Overcome NPA ï Recent Measures by Regulatory Authority ï Debt Recovery Tribunal ï Provisions of Revenue Recovery Act ï Portfolio Management in Banks ï Allocation of Bank Funds ï Investment Avenues for Banks ï Asset Liability Management ï Models ï Importance ï SARFESI Act ï Information and Communication Technology and Bank Management.

Reference Books:

1. Donald,F., R. Gup Benten E., Kolari, J.W., *Commercial Banking The Management of Risk*, South Western Thomson Learning
2. Justin,P. and Padmalatha, S.,*Management of Banking and Financial Service*s, Pearson Education
3. Timothy,K.W. and MacDonald, *Bank Management*, The Dryden Press, Hascourt College Publisher

B.COM. (HONOURS) 4th SEMESTER

BCH407: CONTEMPORARY ISSUES IN ACCOUNTING

Objective: The paper aims at acquainting students with the contemporary issues in accounting.

UNIT – I

Role of International Accounting Standard Committee in Harmonisation of Divergent Accounting Practices.

Accounting for Human Resources.

Accounting for Price-Level Changes.

Accounting for Financial Instruments.

UNIT – II

Segment Reporting, Interim Reporting.

Forensic Accounting ï Introduction ï Historical Background, Essentials ï Role of Forensic Accountant ï Forensic Accounting in India.

Corporate Accountability Reporting- Basics of Sustainability Reporting- Social Reporting and Performance Reporting.

Accounting for Brand Equity ï Introduction, Types of Brands, Objectives ï Models, Environment Accounting.

Reference Books: -

1. L S Porwal. Tata McGraw-Hill Education, .
2. Hendriksen, Irwin Professional Publishing; 5 Sub edition, .
3. Accounting theory and practice / M.W.E. Glautier, B. Underdown Glautier, M. W.(Michel William Edgard).

BCH 408: INDUSTRIAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about concepts, theories and policies regarding industrial structure and growth.

Unit - I

Industrial Economics - Meaning, Scope, Need and Significance,

Pattern and Phases of Industrial Growth and Changes in Industrial Structure, Role of Industry in Economic Development,

Theories of Industrial Location- Weber, Sargent Florence, Factors Influencing Location of Industries, Localization and Decentralization on Industriesm, Industrial Productivity and Efficiency, Measures Required for Improving Productivity and Efficiency

Unit - II

Role of Industrialization in Economic Development, Factors for and Against Industrial Development, Problems of Industrialization in Developing Countries,

Industrial Finance in India- Scope, Importance and Sources, Industrial Growth in India during Plans, Impact of Economic Reforms on India's Industrial Growth,

Indiaôs Industrial Policies, Role and Performance of Public Sector Enterprises, Privatization of Public Sector Undertakings in India,

Performance and Problems of Micro, Small, Medium Enterprises in India

Reference Books:

1. Ahluwalia I.J., ôIndustrial Growth in India,ô Oxford University Press, New Delhi Barthwal R.R., ôIndustrial Economics,ô Wiley Eastern Ltd., New Delh
2. Cherunilam, F. ,ôIndustrial Economics: Indian Perspectiveô, Himalaya Publishing House, Mumbai.
3. Desai, B. , ôIndustrial Economics in India,ô Himalaya Publishing House, Mumbai
4. Hay, D. and D.J. Morries , Industrial Economy; Theory and Evidence, Oxford University Press, New Delhi
5. Kuchhal, S.C.,ôIndustrial Economy of India,ô Chaitanya Publishing House, Allahabad
6. Thakur, Srinivas V. , ôIndustrialization and Economic Developmentô Popular Parkashan, Mumbai

BCH 409 : CONSUMER BEHAVIOUR

Objective: The paper aims at enabling students to understand the process of consumer behaviour, the various external and internal factors that influence consumer behaviour and to apply the concept to the development of marketing strategy.

UNIT- I

Introduction to Consumer Behavior: Scope and Relevance of Consumer Behavior Studies; Buying Decision Process; Basic Model of Consumer Behavior; Problem Recognition ï Methods of Problem Solving; Information Search, Alternative Evaluation and Selection, Outlet Selection and Purchase, Post Purchase Behavior and Customer Satisfaction, Role of Involvement. Individual Determinants of Consumer Behaviour: Role of Motivation; Personality and Self Concept; Attention and Perception; Consumer Learning; Consumer Attitudes ï Formation and Change; Consumer Values and Lifestyles. External Determinants of Consumer Behavior: Influence of Culture and Subculture; Social Class; Reference Groups and Family Influences; Diffusion of Innovations.

UNIT- II

Consumer Decision Process: Problem Recognition; Search and Evaluation of Alternatives; Purchase Process; Post Purchase Behaviour and Cognitive Dissonance. Models of Consumer Behaviour; Researching Consumer Behaviour; Online Customer Behaviour. Diversity of Consumer Behaviour; Role of Consumer Behaviour in Marketing Strategy.

Reference Books:

1. Schiffman L.G. and Kanuk L.L., Consumer Behaviour, 9th Edition, Prentice Hall of India, New Delhi
2. Assel Henry, Consumer Behaviour, Biztantra, New Delhi.
3. Hawkins, D. I. & Roger, J. B. and Kenneth, A.C. . Consumer Behaviour-Building
4. Satish Batra & S. H. H. Kazmi: Consumer Behavior Text & Cases (Excel)

BCH 410: BANK LEGISLATION

Objective: The paper aims to acquire knowledge about the legal & regulatory framework of the banking system and the various laws and enactments.

UNIT –I

Evolution of Banking Laws in India- Provisions of Banking Regulation Act, 1949 ï Its Amendments. Reserve Bank of India Act, 1934 ï Role and Functions of RBI-Credit Control Techniques- Indian Evidence Act- Negotiable Instruments Act 1881. Payments and Settlements Systems Act 2007 and Amendments.

UNIT-II

Special Features of Recovery of Debts due to Banks and Financial Institutions Act, 1993, The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002, Grievance Mechanism and Banking Ombudsman- Lok-Adalats- Banking Codes and Standard Boards Board- Debts Recovery Tribunals.

Reference Books:

1. Banking Regulation Act, 1949.
2. RBI, Act, 1934.
3. J.N. Jain and R.K. Jain: Modern Banking and Insurance, Deep and Deep Publications.
4. R.K. Mittal, A.K. Sahni and Sanjay Dhingra: Emerging Trends in the Banking Sector, Macmillan.
5. Arundeep Singh and N.S. Toor: Legal and Regulatory Aspects of Banking, Skylark Publications.
6. John C. Hull: Risk Management and Financial Institutions, Pearson Education.

B.COM. HONOURS
5th Semester

BCH 507: STRATEGIC FINANCIAL MANAGEMENT

OBJECTIVE: This Course aims at enabling the students to understand various financial management concepts and to apply financial management theories and techniques for strategic decision making and informed analysis. It aims at enabling students to manage basic corporate finance transactions besides investing more profitably and operate more efficiently.

.UNIT-I

Introduction to Strategic Financial Management. Interface of Financial Policy and Strategic Management. Significant references for Strategic Financial Management. Strategic Business Unit. Financing Choices and Decisions: Differences in Financing of Venture Firm, Mature Companies and Firms in High Growth Stage, Deal Structuring and Pricing, IPOs and their Under-pricing. Asset -stripping. Investment Appraisal Techniques, Capital Rationing, Impact of Inflation on Capital Budgeting Decisions.

UNIT-II

Financial aspects of Corporate Restructuring. Monitoring the Restructuring Process. Leveraged Buyouts (LBOs), Management Buyouts (MBOs), Spin Offs and Asset Divestitures Financial Engineering. Financial Innovation: Relevance, Drivers and Implications. Ethical Aspects of Strategic Financial Management. Financial Aspects of Supply Chain Management and Distribution Chain Management. Innovative Approach to Internal Cost-Profit Analysis. Valuation of a Business Enterprise.

Suggested Readings:

1. Allen, D: An Introduction to Strategic Financial Management, CIMA/Kogan Page, London.
2. Brealey, Richard A. and Myers, Stewart C, Principles of Corporate Finance, Tata McGraw Hill.
3. Chandra, Prasanna: Financial Management, Tata McGraw Hill, Delhi.
4. Damodaran, Aswath, Valuation, John Wiley & Sons.
5. Foster, George, Financial Statement Analysis, Pearson Education Hampton, Jone, Financial Decision Making, PHI, New Delhi.
6. Grinblatt, Mark and Titman, Sheridan, Financial Markets and Corporate Strategy, Tata McGraw Hill.
7. Jakhotiya,Dr.Girish: Strategic Financial Management, Vikas Publishing House Limited.
8. Kaplan, Robert S., and Cooper, Robin: Cost & effect: Using integrated cost systems to drive profitability and performance, Harvard Business Press.

BCH 508: Money and Banking

Objectives: This course exposes students to the theory and functioning of the monetary and banking sectors of the economy.

Unit –I

Money- Concept, Functions, Measures;
Fisherôs Transactions Approach to the Quantity Theory of Money; Cambridge Cash- Balances Approach;
Keynes Demand Theory of Money; Friedmanôs Theory of Demand for Money;
Theory of Money Supply- H- Theory of Money;
Inflation- Concept, Types, Demand-Pull inflation, Cost-Push Inflation, Philips Curve, Structural Inflation in the Less Developed Countries;

Unit-II

Bank- Meaning, Functions, Liabilities and Assets;
Commercial banks; Co-operative banks; Development banks; Non-Bank Financial Intermediaries (NBFIs); Unregulated Credit Markets;
Reserve Bank of India- Goals, Current Monetary Policy;
Banking Sector Reforms in India

Suggested Readings:

1. Suraj B. Gupta, Monetary Economics: Institutions, Theory and Policy, S. Chand & Company Ltd.
2. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
3. Michael R. Baye and Dennis W. Jansen, Money, Banking, and Financial Markets: An Economics Approach, Houghton Mifflin Company, U.S.A.
4. F.S. Mishkin, The Economics of Money Banking and Financial Markets Business School Edition, Pearson India.
5. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill,
6. L. M. Bhole, Collected Papers on Money, Interest and Monetary Policy, Amani International Publishers.
7. Economic Survey, Ministry of Finance, Government of India, Latest edition
8. www.rbi.org.in

BCH 509: COMPENSATION MANAGEMENT

Objective: To enable the students to design and administer a compensation system that rewards employees fairly while satisfying customer demands and permitting the organization to operate profitably.

Unit I

Compensation Management - Concept, Principles and Practices; Theories of Compensation; Compensation in a Knowledge Based World. Foundations of Compensation - Performance Evaluation, Job Evaluation - Job Grading and Job Design; Executive Compensation. Compensation and Organizational Strategy- Monetary and Non-Monetary Rewards; Fringe Benefits, Developing Strategic Compensation Alternatives; Challenges of Compensation Design and Compensation Policies in India.

Unit II

Components of Compensation -Basic Pay, D.A., Incentives Plans, Profit Sharing Schemes, Provident fund, Gratuity and Pension. Payroll Accounting -Tax planning, Tax Efficient Compensation Package. International Compensation Management - Components and Approaches .Compensation Laws- Payment of Wages Act, Payment of Gratuity Act, Employees State Insurance Act, and Workmenôs Compensation Act.

Suggested Readings:

1. Venkataratnam, C.S., and B. K. Srivastava,óPersonnel Management and Human Resourcesô, Tata McGraw Hill.
2. Thomas, J. Bergman, V.G. Scarpllo and F.S. Hills.óCompensation Decision Makingô, Dryden Press.
3. Dunn, J.D. and F. M. Rachal, óWage and Salary Administration: Total Compensation Systemô, McGraw Hill, New York.
4. Armstrong, M. and HellenMurlis,óReward Management-A handbook of Remuneration Strategyô.
5. Henderson, Richard I., óCompensation Management in a Knowledge Based worldô, Pearson Education.
6. Bhattacharya, Mousumi S. and Sengupta, Nilanjai, óCompensation Managementô, Excel Books.

BCH 510: Electronic Banking and Risk Management

Objective: To provide an understanding and an appreciation of Electronic Banking and of Risk Management in order to enable the optimum strategy for the handling of risk in banks.

Unit-I

Electronic Bankingï Core Banking ï Electronic Products, On line Banking ï Facilities provided and Security Issues, Cheque Truncation, Microfiche, Phone and Mobile Banking Electronic Funds Transfer Systems ï Plain Messages (Telex or Data Communication) ï Structured Messages (SWIFT, etc...) ï RTGS, NEFT, Information Technology ï Current Trends ï Bank Net, RBI Net, Data Net, Nicnet, Iï net, Eï mail, etc.ï Role and Uses of Technology Up-gradation ï Global Developments in Banking Technology Impact of Technology on Banks ï Effect on Customers and Service Quality ï Computer Audit ï Information System Audit.

Unit-II

Risk Management: Types of Risks in BANKS, Risk Management Framework in Banks: Enterprise ï wide Risk Management in Banks; Elements of Risk Management Framework; Systematic Risk Management in Banks; Different Measures of Measuring Risks; Risk Management ï Process and Techniques for Assessment and Management. Assetï liability Management in Banks, Role of RBI. Information System Security and Disaster Management.

Suggested Readings:

1. Marrison, Christopher Ian, ñThe fundamentals of risk measurementò, New York: McGrw Hill.

2. Marshall, Christopher Lee, ñMeasuring and Managing Operational Risks in Financial Institutions: Tools, Techniques, and Other Resourcesò, Singapore, New York: John Wiley.

3. MacDonald and Koch, ñManagement of Bankingò, Thomson, London.

4. Bidani, S.N., ñBanking Risksò, Vision Books. 5. Joshi, V.C. and Joshi, V.V., ñManaging Indian Banksò, Sage Publications.88

B.COM. (HONOURS)

6th Semester

BCH607: INVESTMENT MANAGEMENT

Objective and expected outcome of the course: This course provides a broad overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general. It aims at enabling the students to get theoretical and practical background in the field of investments, financial markets, valuation of investment and different investment strategies. Students will know the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.

Unit - I

Introduction to Investment Management

Financial System in India ï Money Market, Capital Market, Debt Market, Need for correlating these ï Bullion Market and Foreign Exchange Market.

Organization and Functioning of Securities Markets in India ï Nature and Function, Organizational Structure, Role and Function of Primary Market and Secondary Markets, Type of Market Transactions based upon ï Long and Short Orders, Size of Order, Price Limit of Orders, Time limit of orders, Special type of orders and order execution. Margin Trading.

Valuation of Securities ï Valuation of Bonds, Valuation of Debentures, Valuation of Preference Shares, Valuation of Equity Shares and Share Valuation: CAPM Model.

UNIT - II

Market Indices ï Concept, Method of Computing Indiaôs Leading Stock Indices, Overview of various Benchmark Indices, Market capitalization Indices, Sectoral Indices and Broad market Indices.

Security Credit Rating ï Introduction, Factors Affecting Assigned Ratings, Credit Rating Agencies in India, Functions, Approaches and Framework Used and Business Models, Benefits of Credit Rating, Regulatory Concerns.

Risk Management Through Derivatives – Introduction to Derivatives Market and Securities, Forward and Future Contracts ï Overview, Hedging, Optimal Hedge Ratio, Valuation, Application and Strategies. Options ï Overview, Valuation Models and Strategies. Swaps.

Investing in Alternative Asset Classes - Hedge Funds, Characteristics of a Hedge Fund, Hedge Fund Strategies, Risk Arbitrage Investing, Hedge Fund Performance, Private Equity and Venture Capital.

Suggested Readings:

1. Babu.Dr.G.Ramesh, Portfolio Management including Security Analysis,Concept Publishing Company.

2. Dr.Raganatham M&Madhumathi R. Investment analysis Portfolio management. Person Education, New Delhi.

3. Dr.BhallaV.K.Investment Management, S.Chand and Company, New Delhi.

4. Fisher & Jordan, Security analysis and portfolio management, Prentice Hall of India, New Delhi.

5. Rustagi R.P, Investments Analysis and Portfolio management, Sultan Chand & Sons, New Delhi.

6. Sharpe, William and Gordon, Investments ï Prentice hall of India, New Delhi.

BCH 608: INTERNATIONAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about International Economics.

Unit-I

Adam Smithôs Absolute Advantage Theory; Ricardoôs Comparative Advantage Theory; Heckscher-Ohlin Theory of Trade; Terms of Trade

Free Trade vs Protection, Rationale of Protection Policy in Developing Countries, Barrier Tarriffs, Quotas to Trade.

Unit-II

Balance of Payments: Definitions and Concepts- Balance of Trade, Balance of Payments on Current Account, Balance of Payments on Capital Account, Autonomous and Accommodating Capital Flows; Causes and Measures to Correct the Disequilibrium

Exchange Rate: Meaning and Its determination; Fixed vs Flexible Exchange Rate, Theories of Exchange Rate: BoPs Theory, PPP Theory.

Suggested Readings:

1. H.G. Mannur, International Economics, Vikas Publishing House Pvt Ltd.
2. Bo Sodersten, International Economics, Macmillan Publishers Ltd.
3. Bo Sodersten and Geoffrey Reed, International Economics, St. Martinôs Press.
4. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
5. Dominic Salvatore, International Economics, John Wiley and Sons Inc.
6. Economic Survey, Ministry of Finance, Government of India, Latest edition.

BCH 609: TRAINING & DEVELOPMENT

Objectives: This Course aims at educating students regarding the concept of training and development in an organization.

UNIT – I

Introduction to Training Concept: Definition, Meaning, Need For Training, Importance Of Training, Objectives Of Training, Process Of Training: Steps In Training

Concept of Training Need; Identification of Training Need, Methods of Training and Techniques of Training, On the Job, Off the Job, Lecture, Role Play , Case Study, Vestibule Training, Simulation Techniques, in Basket Exercise, Syndicate Method, T- Group Training, Psychological Lab, Business Game, Activity Based Training, Programme Instruction Training, Choosing the Right Training Techniques.

UNIT – II

Designing Training and Development Programs: Organisation of Training and Development Programs, Training Design, Kinds of Training and Development Programs- Competence Based and Role Based Training; Orientation and Socialization

Evaluation of Training and Development Effectiveness: Reasons for Evaluating Training and Development Programs, Problems in Evaluation; Methods of Evaluating Effectiveness of Training Efforts.

Suggested Readings:

1. Prior, John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Noe, Raymond A., and Amitabh Deo Kodwani, Employee Training and Development, Tata McGraw Hill.
3. Blanchard, P. N. & Thacker, W. J. (1998). Effective Training: Systems, Strategies and Practices. Prentice Hall, New Jersey.
4. Raymond Noe, A. (2005). Employees Training and Developmentò, McGraw Hill Publication.
5. Bhatia, S.K ñTraining And Developmentò.

BCH 610: BANK MARKETING

Objective: The paper aims at acquainting the students application of marketing functions in banks, being directed at providing services to satisfy customers financial (and other related) needs and wants, more effectively and efficiently.

UNIT–I

Introduction of Marketing and Key Conceptsï Definition Marketing and Market, Four Elements in Marketing Mix and Their inter-relationship. Marketing Planningï Micro and Macro Factors influencing the Market for an Organisation, Bank Marketing and Marketing Mix, Bank Distribution. The art of Customer Service as Applied to Banking. Customer Behaviour in Banking, Banking Consumer and Market Segmentationï Mass Marketing, Multiple Marketing, Steps in Strategy Formulation, Marketing Research in Bankingï Types of Dataï Primary and Secondary, Uses of Marketing Research. Relationship Marketing in Banking, Competitive Analysis in Banking.

UNIT–II

Bankôs Product Strategyï Core, Value Added, Fundamental and Augmented Products, Product Item and Product Line , Difference between Product and Service , The Concept of Product/Service Delivery in Banking, Pricing Strategies and Its Applications in Bankingï ï Elasticity of Demand , Break Even Analysis, Different Types of Products and Key Variables Banking Promotion Strategyï The Communication Process, Goals of Communication, Steps in Developing Effective Communication, Selling and Organising for Sales and Selling to Corporate Clientsï Meaning of Corporate Clients, Relationship and Transaction Banking, Bank Organisation for large Corporate Clients, International Bank Marketing.

Suggested Readings:

1. Chacko, Oommen and Grewal, Rajendra, ñMarketing of Banking Servicesò.
MacMillan India Ltd
2. Bank Marketing Association, ñBank Marketingò, The Association
3. Reidenbach, R. Eric and Pitts, Robert E, ñEffective bank marketing: issues, Techniques and Applicationsò,1987, Bank Administration Institute.

DEPARTMENT OF PHYSICAL EDUCATION

FACULTY OF EDUCATION
(PANJAB UNIVERSITY CHANDIGARH)

SYLLABUS FOR
BACHELOR OF PHYSICAL EDUCATION (B.P.Ed)
Two Year (SEMESTER SYSTEM)

SESSION: 2016-2017

PREAMBLE:

The Bachelor of Physical Education (B.P.Ed) – Two Years (Four Semesters) Programme is meant for preparing quality teacher in Physical Education for Secondary Schools.

VISION

In line with the University mission, the Department has the aim of educating the "whole-person" and to produce quality teachers to serve as administrators in the profession of physical education and sports. Through improving our academic programme and services to the University and local community, we pledge to continually strive for academic excellence and to maintain our leadership role in our profession.

MISSION

1. To produce quality physical education teachers for imparting instructions in the subject of physical education.
2. To make people aware about the benefits of physical activity through extension lectures and demonstrations.
3. To provide excellent research and teaching in Physical Education in order to promote and develop the health and well being of people.
4. To promote health through specific physical activities, prescribed by a specialized physical educationalist.
5. To collaborate with the different organizations which are involved in promoting the quality life of the human beings i.e., educational institutions and NGOs.
6. To provide harmonious and stimulated academic environment for the promotion of quality teaching and research in the department.
7. To provide opportunity to faculty and students of the department for their self evaluations, accountability, autonomy and innovations in the area of physical education and sports.
8. To concentrate on quality research in the area of health, physical education and sports.
9. To introduce consultancy and training programmes for different educational institutions and other organizations for the conduct of sports and fitness events.
10. To update the curriculum and syllabi as per global needs and challenges.

OBJECTIVES:

This programme shall strive to achieve the following objectives:

General Objectives:

1. To enable teacher to understand the nature, purpose and philosophy of physical education at secondary stage.
2. To prepare teachers of physical education with broader educational perspective.
3. To develop for potentialities and organizing physical education programmes and activities.
4. To develop capacity to organized leisure and recreational activities.
5. To empower them to inspire their students to actively participate in physical and yogic exercises.
6. To enable teachers to develop personality, character, willpower, democratic values and positive games and sports.
7. To make teachers capable of imparting basic knowledge about health, hygiene and nutrition
8. To develop skills and competencies to organized school and community games and sports.
9. To cultivate the spirit of sportsmanship, mental and physical alertness, scientific temper and optimism.
10. To promote mental health, power of self- decision and self control, correct judgment and action emotional stability and equanimity, respect for others and acceptance of authority and rules
11. To promote appreciation and interest for indigenous games , sports and yogic exercises
12. To create awareness about health and hygiene in the community.

Specific Objectives

1. To lay down a sound foundation for higher and advance studies in Physical Education in India.
2. To produce quality teachers in physical education.
3. To prepare students for advance coaching Diplomas in disciplines – Athletics, Gymnastics, Hockey, Swimming, Basketball, Football etc.
4. To fulfill the eligibility criteria of Foreign Universities to get admission in post graduate courses abroad since it is a basic and global programme.
5. To generate employment in the fields of Health Fitness and Gym- Management, Physiotherapy, Journalism, Aquatics and Yoga.
6. To provide opportunity to talented students to excel in sports and become outstanding sports persons.
7. To promote mass participation in Physical Education activities (Games, Sports Displays etc) through intra – mural and Extra- mural programmes.

OUTLINES OF TESTS, SYLLABI AND COURSES FOR THE BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.) EXAMINATION (SEMESTER SYSTEM) FOR THE SESSION: 2015-2016

The course of instruction for the B.P.Ed Examination consists of three parts as under:

PART – I	Theory Papers	1600 Marks
PART – II	Practical Course (Skill and Prowess)	800 Marks
PART – III	Practice of Teaching	800 Marks
		Total: 3200

Marks

Note I:

- *Part-I will be evaluated externally.*
- *Part-II will be evaluated by a panel of three internal examiners appointed by the Chairman/Principal of the Department/Institution.*
- *Part-III will be evaluated with one external and one internal examiner.*

Successful candidate shall be classified as follows:

	Pass	Third Division	Second Division	First Division	Distinction
Part-I: Theory	35%	Less than 50% marks in Aggregate	50%	60%	75%
Part-II: Practical Course (Skill and Prowess)	40%	Less than 50% marks in Aggregate	50%	60%	75%
Part-III: Practice of Teaching	40%	Less than 50% marks in Aggregate	50%	60%	75%

Note: Since this is a professional course aimed at improving the standard of games and sports, it is essential that special attention be given to the practical aspect of Track and Field, Games and Sports. Therefore, specified 20 hours per week must be devoted to the practical teaching.

SEMESTER-I
PART–I: THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
I.	CC-101	History, Principles and Foundation of Physical Education	68	4	20	80	100
II.	CC-102	Anatomy and Physiology	68	4	20	80	100
III.	CC-103	Educational Technology and Methods of Teaching in Physical Education	68	4	20	80	100
Elective Course (Any One)							
IV.	EC-101	Olympic Movement	68	4	20	80	100
	EC-102	Officiating and Coaching					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-101	Track and Field (Sprints, Shot-Put, Long Jump, Relays)	68	4	40	-	40
	PC-102	Swimming, Gymnastics	68	4	20+20	-	40
	PC-103	Calisthenics, Dumb-bells, Opening and Closing Ceremonies of Sports Events	68	4	40	-	40
	PC-104	Basketball, Football, Kabaddi, Kho-Kho	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
.	PT-101	Movement Lesson (A) Action Song (B) Motion Story	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons in the movement lesson, preferably in primary schools. The candidate shall prepare a note book covering action song and motion story lessons which shall carry (20+20) 40 marks.

Paper –I (CC-101)
HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT 1: INTRODUCTION
- Meaning, Definition and Scope of Physical Education
- Aims and Objective of Physical Education
- Importance of Physical Education in present era.
- Misconceptions about Physical Education.
- Relationship of Physical Education with General Education.
- Physical Education as an Art and Science.

UNIT- 2 HISTORICAL DEVELOPMENT OF PHYSICAL EDUCATION IN INDIA
- Indus Valley Civilization Period. (3250 BC 2500 BC)
- Vedic Period (2500 BC 600 BC)
- Early Hindu Period (600 BC 320 AD) and Later Hindu Period (320 AD 1000 AD)
- British Period (Before 1947)
- Physical Education in India (After 1947)
- Y.M.C.A. and its contributions.

UNIT- 3 FOUNDATION OF PHYSICAL EDUCATION
- Philosophical foundation:
  - Idealism
  - Pragmatism
  - Naturalism
  - Realism
  - Humanism and Existentialism
- Fitness and wellness movement in the contemporary perspectives
- Sports for all and its role in the maintenance and promotion of fitness.

UNIT-4 PRINCIPLES OF PHYSICAL EDUCATION
- Biological
  - Growth and development
  - Age and gender characteristics
  - Body Types
  - Anthropometric differences
- Psychological
  - Learning types, learning curve
  - Laws and principles of learning
  - Attitude, interest, emotions and sentiments
- Sociological
  - Society and culture
  - Leadership
  - Social integration and cohesiveness

REFERENCES:

1. Barow, H.M. (1971). *Man and His Movement*-Principles of Physical Education, Philadelphia, Lea and Febiger.
2. Bucher, C.A. (1972). *Foundations of Physical Education*, St. Louis; C.V. Mosby Co.
3. Kamlesh, M.L. (2004). *Principles and History of Physical Education and Sports,* Friends Publications (India), New Delhi.
4. Mohan, V. M. (1969). Principles of physical education. Delhi: Metropolitan Book Depot
5. Khan, E.A. (1964). *History of Physical Education,* Scientific Book Company. Patna.
6. Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
7. Obertuffer (1970). Delbert physical education. New York: Harper & Brothers Publisher.
8. Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
9. William, J. F. (1964). The principles of physical education. Philadelphia: W.B. Saunders Co.

Paper –II (CC-102)
ANATOMY AND PHYSIOLOGY

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: ANATOMY AND PHYSIOLOGY

- Introduction of Anatomy and physiology and its importance in the field of physical education and sports.
- Introduction of Cell and Tissue.
- The arrangement of the skeleton Function - of the skeleton Ribs and Vertebral column and the extremities.
- Joints of the body and their types
- Gender differences in the skeleton.

UNIT-II: SYSTEMS OF HUMAN BODY

- **Blood and circulatory system:** Constituents of blood and their function Blood groups and blood transfusion, clotting of blood, the structure of the heart-properties of the heart muscle, circulation of blood, cardiac cycle, blood pressure, Cardiac output.
- **The Respiratory system:** The Respiratory passage the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.
- **The Digestive system:** structure and functions of the digestive system, Digestive organs, Metabolism,
- **Excretory system:** Structure and functions of the kidneys and the skin.
- **The Endocrine glands:** Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.
- **Nervous systems:** Function of the Autonomic nervous system and Central nervous system. Reflex Action,

UNIT-III: NEUROMUSCULAR JUNCTIONS

- Muscles: Types of muscles, Properties and functions.
- Neuromuscular junction
- Fuel for muscular activity
- Role of oxygen- oxygen debt, second wind, vital capacity.
- Fatigue: Meaning and sites of fatigue.

UNIT-IV: EFFECTS OF EXERCISE ON VARIOUS SYSTEMS

- Effect of exercise and training on cardiovascular system.
- Effect of exercise and training on respiratory system.
- Effect of exercise and training on muscular system
- Physiological concept of physical fitness, warming up, conditioning.

REFERENCES:

1. Gupta, A. P. (2010). Anatomy *and physiology.* Agra: SumitPrakashan.
2. Hoeger, Werner W.K, Hoegen,Sharon A. (2004). Principles and Labs for fitness and wellness.
3. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication,1982.
4. Moorthy, A. M. (2014). *Anatomy physiology and health education.*Karaikudi: Madalayam Publications.
5. Pearce. E. (1989). Anatomy and Physiology for Nurses, Delhi, Oxford University Press.
6. Richardson, Seano, Anderson, Mark B. (2008). Overtraining Athletes: Personal Journey in Sports.
7. Wilmore, Jack H and Costill, David L. (1994).Physiology of Sports and Exercise. Human Kinetics.

Paper –III (CC-103)
EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION

- Education and Education Technology: Meaning and Definitions.
- Types of Education: Formal, Informal and Non- Formal education.
- Teaching: Meaning and Principles of teaching.
- Importance of technological devices used for imparting knowledge.

UNIT II TEACHING METHODS AND PRESENTATION TECHNIQUES

- Teaching Methods: Lecture method, Command method, Demonstration method, Imitation method, project method, Whole method, Whole- part- whole method, Part method, , At will method etc.
- Factors affecting teaching methods.
- Presentation Techniques: Personal and technical preparation, Steps of presentation.
- Types of class formations and Methods of classification of students.

UNIT III TEACHING AIDS

- Teaching Aids: Meaning, Importance, types of teaching aids.
- Criteria for selecting teaching aids.
- Team Teaching: Meaning, Principles and advantage of team teaching.
- Difference between Teaching Methods and Teaching Aid.

UNIT IV LESSON PLANNING AND TEACHING INNOVATIONS

- Lesson Planning: Meaning, Importance and Types
- Principles of lesson plans.
- Micro Teaching: Meaning, steps of micro teaching, advantages and principles
- Simulation Teaching: Meaning, Types and steps of simulation teaching.

REFERENCES:

1. Bhardwaj (2003).A *New media of educational planning*.New Delhi:Sarup of Sons.
2. Brar, R.S & Kanwar,S., (2008). Teaching Methodology and Education Technology in Physical Education, Kalyani Publisher, New Delhi.
3. Kochar, S.K. (2014). *Methods and techniques of teaching.* New Delhi: Sterling Publishers.
4. M.L. Kamlesh & Sangral, M..S., (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
5. Walia, J.S. (1999). *Principles and methods of education.*Jullandhar:Paul Publishers.

Paper –IV (EC-101)
OLYMPIC MOVEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I ORIGIN OF OLYMPIC MOVEMENT
- Philosophy of Olympic movement
- The early history of the Olympic movement
- The significant stages in the development of the modern Olympic movement
- Educational and cultural values of Olympic movement

UNIT IIMODERN OLYMPIC GAMES
- Significance of Olympic Ideals, Olympic Rings, Olympic Flag
- Olympic Protocol for member countries
- Olympic Code of Ethics
- Olympism in action
- Sports for All

UNIT III DIFFERENT OLYMPIC GAMES
- Para Olympic Games
- Summer Olympics
- Winter Olympics
- Youth Olympic Games

UNIT IV COMMITTEES OF OLYMPIC GAMES
- International Olympic Committee - Structure and Functions
- National Olympic committees and their role in Olympic movement
- Olympic commission and their functions
- Olympic medal winners of India

REFERENCES:
1. Osborne, M. P. (2004). *Magictree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York:* Random House Books for Young Readers.
2. Burbank, J. M., Andranovich, G. D. &Heying Boulder, C. H. (2001).Olympic dreams: the impact of mega-events on local politics: Lynne Rienner.

Paper –IV (EC-102)
OFFICIATING AND COACHING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION OF OFFICIATING AND COACHING
- Concept of officiating and coaching
- Importance and principles of officiating
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

UNIT- II: COACH AS A MENTOR
- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching

UNIT- III: DUTIES OF OFFICIAL
- Duties of official in general, pre, during and post game.
- Philosophy of officiating
- Mechanics of officiating position, singles and movement etc.
- Ethics of officiating

UNIT- IV: QUALITIES AND QUALIFICATIONS OF COACH AND OFFICIAL
- Qualities and qualification of coach and official
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments, preparation of TA, DA bills
- Integrity and values of sports

REFERENCES:
1. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
2. Dyson, G. H. (1963).*The mechanics of athletics*. London: University of London Press Ltd.
3. Singer, R. N. (1972).*Coaching, athletic & psychology*. New York: M.C. Graw Hill.
4. Brar. T. S. (2002). Officiating techniques in Track and Field, Gwalior. Bhargava Press.
5. De Souza A. J. (1999).Track Geography and Field Sites. Chennai. DBAC Sports Envisions.
6. Mortensen, J. and Cooper J. M. (1963). Track & Field for coach & athlete,. Prentice Hall Inc., Englewood Cliffs.

SEMESTER-II
PART – I THEORY PAPERS

Paper	Course Code	Subject	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
V.	CC-201	Yoga Education	68	4	20	80	100
VI.	CC-202	Health Education and Environmental Studies	68	4	20	80	100
VII.	CC-203	Organization and Administration	68	4	20	80	100
Elective Course (Any One)							
VIII.	EC-201	Contemporary issues in Physical Education, Fitness and Wellness	68	4	20	80	100
	EC-202	Sports Nutrition and Weight Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-201	Track and Field (Middle Distance Races, Hurdles, Discus Throw, High Jump)	68	4	40	-	40
	PC-202	Swimming, Gymnastics	68	4	20+20	-	40
	PC-203	Aerobics, Lezium, Indian Clubs,	68	4	40	-	40
	PC-204	Hockey, Volleyball, Handball, Softball,	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-201	(A) General Lesson (B) Theory Lesson	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (General and Theory Lessons), preferably in Secondary Schools. The candidate shall prepare a note book covering General and Theory Lessons which shall carry (20+20) 40 marks.

Paper –V (CC-201)
YOGA EDUCATION

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION
- Meaning and Definition of Yoga
- Aims and Objectives of Yoga
- Yoga in Early Upanisads
- The Yoga Sutra: General Consideration
- Need and Importance of Yoga in Physical Education and Sports

UNIT II: FOUNDATION OF YOGA
- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga

UNIT - III ASANAS
- Effect of Asanas and Pranayama on various system of the body
- Classification of asanas with special reference to physical education and sports
- Influences of relaxtive, meditative posture on various system of the body
- Types of Bandhas and mudras
- Type of kriyas

UNIT IV YOGA EDUCATION
- Basic, applied and action research in Yoga
- Difference between yogic practices and physical exercises
- Yoga education centers in India and abroad
- Competitions in Yogasanas

REFERENCES:
1. Brown, F. Y.,(2000). *How to use yoga*. Delhi:Sports Publication.
2. Gharote, M. L. & Ganguly, H.(1988). *Teaching methods for yogic practices*. Lonawala: Kaixydahmoe.
3. Rajjan, S. M. (1985). *Yoga strengthening of relaxation for sports man.* New Delhi: Allied Publishers.
4. Shankar,G. (1998) *Holistic approach of yoga.* New Delhi:Aditya Publishers.
5. Shekar,K. C., (2003).*Yoga for health*. Delhi: Khel Sahitya Kendra.

Paper –VI (CC-202)
HEALTH EDUCATION AND ENVIRONMENT STUDIES

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

Unit I Health Education

- Concept, Dimensions, Spectrum and Determinants of Health
- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene

Unit II Health Problems in India

- Communicable and Non Communicable Diseases
- Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive Population,
- Personal and Environmental Hygiene for schools
- Objective of school health service, Role of health education in schools
- Health Services Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

Unit III Environmental Science

- Definition, Scope, Need and Importance of environmental studies.
- Concept of environmental education, Historical background of environmental education,
- Celebration of various days in relation with environment.
- Plastic recycling & probation of plastic bag / cover.
- Role of school in environmental conservation and sustainable development.

Unit IV Natural Resources and related environmental issues:

- Water resources, food resources and Land resources
- Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- Management of environment and Govt. policies , Role of pollution control board.

REFERENCES:

1. Agrawal, K.C. (2001). *Environmental biology*. Bikaner: Nidhi publishers Ltd.
2. Beotra, Alka (2001). Drug Education Handbook on Drug Abuse in Sports. Mumbai: Applied Nutrition Sciences.
3. Frank, H. &Walter, H. (1976). *Turners school health education*. Saint Louis: The C.V. Mosby Company.
4. Odum, E.P. (1971). *Fundamental of ecology*. U.S.A.: W.B. Saunders Co.
5. Pande, P. K. (1987). Outline of Sports Medicine, New Delhi : Jaypee Brothers.
6. Roy, Steven and Richard, Irvin (1983). Sports Medicine ,N.J. : Englewood Cliff.
7. Sharma, N.P.(2005). Sharir Rachna Tatha Sharir Kriya Vigyan . New Delhi : Khel Sahitya Kendra.

Paper –VII (CC-203)
ORGANIZATION AND ADMINISTRATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: ORGANIZATION AND ADMINISTRATION

- Meaning and importance of Organization and Administration in physical education.
- Qualification and Responsibilities of Physical Education teacher and pupil leader.
- Planning and their basic principles,
- Program planning: Meaning, Importance, Principles of program planning in physical education.
- Functions of Management: Planning, organizing, staffing, directing, communicating, co-ordination, controlling, evaluating and innovating.

UNIT II: OFFICE MANAGEMENT, RECORD, REGISTER & BUDGET

- Office Management: Meaning, definition, functions and kinds of office management
- Records and Registers: Maintenance of attendance Register, stock register, cash register, physical efficiency record, Medical examination Record.
- Budget: Meaning, Importance of Budget making,
- Criteria of a good Budget, Sources of Income, Expenditure, Preparation of Budget.

UNITIII: FACILITIES, & TIME-TABLE MANAGEMENT

- Facilities and equipment management: Types of facilities; Infrastructure-indoor, out door.
- Playfields: Area, Location, layout and care
- Equipment: Need, importance, purchase, care and maintenance.
- Time Table Management: Meaning, Need, Importance and Factor affecting time table.

UNITIV: COMPETITION ORGANIZATION

- Tournament and its importance.
- Types of Tournament and its organization structure - Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament, consolation tournaments and challenge Tournament.
- Organization structure of Athletic Meet.
- Sports Event Intramurals & Extramural Tournament planning.

REFERENCES:

1. Bucher, C. A. (1985). *Administration of Physical Education and Athletic programme.*St. Lolis: The C.V. Hosby Co.
2. M.L. Kamlesh and M.S. Sangral (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
3. Sharma, V.M. & Tiwari, R.H. (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
4. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press.
5. Tirunarayan and Hariharan (1985). Methods in Physical education M.S C.T. & S. H. Allagappa College of Physical Education, Karaikuddi U.

Paper –VIII (EC-201)
CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I CONCEPT OF PHYSICAL EDUCATION AND FITNESS
- Definition, Aims and Objectives of Physical Education, fitness and Wellness
- Importance and Scope of fitness and wellness
- Modern concept of Physical fitness and Wellness
- Physical Education and its Relevance in Inter Disciplinary Context.

UNIT II FITNESS, WELLNESS AND LIFESTYLE
- Fitness Types of Fitness and Components of Fitness
- Understanding of Wellness
- Modern Lifestyle and Hypo kinetic Diseases Prevention and Management
- Physical Activity and Health Benefits

UNIT III PRINCIPLES OF EXERCISE PROGRAM
- Means of Fitness development aerobic and anaerobic exercises
- Exercises and Heart rate Zones for various aerobic exercise intensities
- Concept of free weight Vs Machine, Sets and Repetition etc
- Concept of designing different fitness training program for different age group.

UNIT IV SAFETY EDUCATION AND FITNESS PROMOTION
- Health and Safety in Daily Life
- First Aid and Emergency Care
- Common Injuries and their Management

REFERENCES:
1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). Sport *medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G. (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

Paper –VIII (EC-202)
SPORTS NUTRITION AND WEIGHT MANAGEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS NUTRITION

- Meaning and Definition of Sports Nutrition
- Basic Nutrition guidelines
- Role of nutrition in sports
- Factor to consider for developing nutrition plan

UNIT II NUTRIENTS: INGESTION TO ENERGY METABOLISM

- Carbohydrates, Protein, Fat Meaning, classification and its function
- Role of carbohydrates, Fat and protein during exercise
- Vitamins, Minerals, Water Meaning, classification and its function
- Role of hydration during exercise, water balance, Nutrition daily caloric requirement and expenditure.

UNIT III NUTRITION AND WEIGHT MANAGEMENT

- Meaning of weight management Concept of weight management in modern era Factor affecting weight management and values of weight management
- Concept of BMI (Body mass index), Obesity and its hazard, Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss
- Obesity Definition, meaning and types of obesity,
- Health Risks Associated with Obesity, Obesity - Causes and Solutions for Overcoming Obesity.

UNIT IV STEPS OF PLANNING OF WEIGHT MANAGEMENT

- Nutrition Daily calorie intake and expenditure, Determination of desirable body weight
- Balanced diet for Indian School Children, Maintaining a Healthy Lifestyle
- Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss

REFERENCES:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6).
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a keycomponent of successful weight loss maintenance.*Obesity(Silver Spring). 15*(12).
3. Chu, S.Y. & Kim, L. J.(2007). Maternal obesity and risk of stillbirth: a metaanalysis. Am J ObstetGynecol, 197(3).
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. N Engl J Med,356(21).
5. Dixon, J.B., & O'Brien, P.E., Playfair, J. (2006). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized.

SEMESTER-III
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
IX.	CC-301	Computer Application in Physical Education	68	4	20	80	100
X	CC-302	Sports Psychology and Sociology	68	4	20	80	100
XI	CC-303	Sports Training	68	4	20	80	100
Elective Course (Any One)							
XII.	EC-301	Sports Medicine, Physiotherapy, and rehabilitation	68	4	20	80	100
	EC-302	Curriculum Design					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-301	Track and Field (Long Distance Races, Javelin Throw, Triple Jump, Steeple Chase)	68	4	40	-	40
	PC-302	Swimming, Gymnastics	68	4	20+20	-	40
	PC-303	Folk Dances	68	4	40	-	40
	PC-304	Cricket, Badminton, Table-Tennis, Lawn-Tennis	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-301	Teaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (Games, Track & Field), preferably in Secondary/ Senior Secondary Schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –IX (CC-301)
COMPUTER APPLICATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION TO COMPUTER
- Meaning, need and importance of information and communication technology (ICT). Application of Computers in Physical Education
- Components of computer, input and output device
- Application software used in Physical Education and sports

UNIT II: MS WORD
- Introduction to MS Word
- Creating, saving and opening a document
- Formatting Editing features Drawing table
- Page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes

UNIT III: MS EXCEL
- Introduction to MS Excel
- Creating, saving and opening spreadsheet
- Creating formulas
- Format and editing features adjusting columns width and row height understanding charts.

UNIT IV: MS POWER POINT
- Introduction to MS Power Point
- Creating, saving and opening a ppt. file
- Format and editing features slide show, design, inserting slide number
- Picture, graph, table
- Preparation of Power point presentations

REFERANCES:
1. Irtegov, D.(2004). *Operating system fundamentals*. Firewall Media.
2. Milke, M. (2007). *Absolute beginners guide to computer basics*. Pearson Education Asia.
3. Barrett, R. (2007). Administrator's Guide to Microsoft Office 2007 servers.
4. Eric, L. Einspruch (2005). AN Introductory Guide to SPSS for Windows, Sage.
5. Kilman, Shin (1995). *SPSS GUIDE* Mc Graw – Hill Higher Education.
6. Murray, K. (2007). Faster smarter Microsoft office XP: Take charge of your Microsoft office programme.

Paper –X (CC-302)
SPORTS PSYCHOLOGY AND SOCIOLOGY

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT -I: INTRODUCTION
- Meaning, Importance and scope of Educational and Sports Psychology
- General characteristics of Various Stages of growth and development
- Types and nature of individual differences; Factors responsible -Heredity And environment
- Psycho-sociological aspects of Human behavior in relation to physical education and sports

UNIT-II: SPORTS PSYCHOLOGY
- Nature of learning, theories of learning, Laws of learning,
- Plateau in Learning; & transfer of training
- Meaning and definition of personality, characteristics of personality,
- Dimension of personality, Personality and Sports performance
- Nature of motivation: Factors influencing motivation; Motivation and techniques and its impact on sports performance.
- Mental Preparation Strategies: Attention focus, Self- talk, Relaxation, Imaginary.
- Aggression and Sports, Meaning and nature of anxiety, Kinds of anxiety
- Meaning and nature of stress; Types of stress, Anxiety, Stress, Arousal and their effects on sports performance

UNIT-III: RELATION BETWEEN SOCIAL SCIENCE AND PHYSICAL EDUCATION.
- Orthodoxy, customs, Tradition and Physical Education.
- Festivals and Physical Education.
- Socialization through Physical Education.
- Social Group life, Social conglomeration and Social group, Primary group and Remote group.

UNIT-4 CULTURE: MEANING AND IMPORTANCE.
- Features of culture,
- Importance of culture.
- Effects of culture on people life style.
- Different methods of studying Observation/ Inspection method, Questionnaire method, Interview method

REFERENCES:

1. Ball, D. W. & Loy, J. W. (1975). Sport *and social order; Contribution to the sociology of sport.* London: Addison Wesley Publishing Co., Inc.
2. Kamlesh, M.L. (1998). Psychology in physical education and sport. New Delhi: Metropolitan Book Co.
3. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1981). Sports culture and society. Philadelphia: Lea &Febiger.
4. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sport and social system. London: Addison Wesley Publishing Company Inc.
5. Skinnner, C. E.(1984). Education psychology. New Delhi: Prentice Hall of India.
6. William, F. O.& Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt Ltd.

Paper –XI (CC-303)
SPORTS TRAINING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS TRAINING

- Meaning and Definition of Sports Training ○ Aim and Objective of Sports Training
- Principles of Sports Training
- System of Sports Training Basic Performance, Good Performance and High Performance Training

UNIT II TRAINING COMPONENTS

- Strength Mean and Methods of Strength Development
- Speed Mean and Methods of Speed Development
- Endurance - Mean and Methods of Endurance Development
- Coordination Mean and Methods of coordination Development
- Flexibility Mean and Methods of Flexibility Development

UNIT III TRAINING PROCESS

- Training Load- Definition and Types of Training Load
- Principles of Intensity and Volume of stimulus
- Technical Training Meaning and Methods of Technique Training
- Tactical Training Meaning and Methods of Tactical Training

UNIT IV TRAINING PROGRAMMING AND PLANNING

- Periodization Meaning and types of Periodization
- Aim and Content of Periods Preparatory, Competition, Transitional etc.
- Planning Training session
- Talent Identification and Development

REFERENCES:

1. Bompa, Tudor, O. (1999). Periodisations Training for sports: Human Kinetic (U.S.A).
2. Dick, W. F. (1980). *Sports training principles.*London: Lepus Books.
3. Dick. W. Frank. (1980). *Sports Training Principles*, London: Lepus Birks.
4. Harre . Dictrich. (1982). *Principles of Sports Training*. Beslin : Sportulag.
5. Harre, D. (1982). *Principles of sports training.*Berlin: Sporulated.
6. Singh, Hardyal (1991). *Science of Sports Training*. D, V, S Publications. New Delhi.
7. Uppal, A.K. (1999). S*ports Training.*New Delhi: Friends Publication.

Paper –XII (EC-301)
SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: - SPORTS MEDICINE:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education
- Prevention of injuries in sports Common sports injuries Diagnosis
- First Aid - Treatment - Laceration Blisters Contusion - Strain Sprain Fracture Dislocation and Cramps Bandages Types of Bandages trapping and supports.

UNIT-II: PHYSIOTHERAPY

- Definition Guiding principles of physiotherapy, Importance of physiotherapy, Introduction and demonstration of treatments - Electrotherapy infrared rays Ultraviolet rays short wave diathermy ultrasonic rays.

UNIT-III: HYDROTHERAPY:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast Bath, Whirlpool Bath Steam Bath Sauna Bath Hot Water Fomentation Massage: History of Massage Classification of Manipulation (Swedish System) physiological Effect of Massage.

UNIT-IV: THERAPEUTIC EXERCISE:

- Definition and Scope Principles of Therapeutic Exercise Classification, Effects and uses of Therapeutic exercise passive Movements (Relaxed, Forced and passive - stretching) active movements (concentric, Eccentric and static) application of the therapeutic exercise: Free Mobility Exercise Shoulder, Elbow Wrist and Finger Joints Hips, Knee, ankle and Foot joints Trunk. Head and Neck exercises.

REFERENCES:

1. Christine, M. D. (1999). *Physiology of sports and exercise*.USA: Human Kinetics.
2. Conley, M.(2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005). *Drugs in sports,* (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D.(1979). A *dictionary for physical educators.* In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.
5. Jeyaprakash, C. S. (2003). Sports Medicine, J.P. Brothers Pub., New Delhi.
6. Khanna, G.L. (1990). *Exercise physiology & sports medicine*. Delhi:Lucky Enterprises.
7. Pandey, P.K. (1987). Outline *of sports medicine*, New Delhi: J.P. Brothers Pub.,1987.

Paper –XII (EC-302)
CURRICULUM DISIGN

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I MODERN CONCEPT OF THE CURRICULUM

- Need and importance of curriculum, Need and importance of curriculum development, the role of the teacher in curriculum development.
- Factors affecting curriculum - Social factors - Personnel qualifications - Climatic consideration - Equipment and facilities -Time suitability of hours.
- National and Professional policies, Research finding

UNIT II BASIC GUIDE LINE FOR CURRICULUM CONSTRUCTION; CONTEST (SELECTION AND EXPANSION).

- Focalization
- Socialization
- Individualization
- Sequence and operation
- Steps in curriculum construction.

UNIT III CURRICULUM-OLD AND NEW CONCEPTS, MECHANICS OF CURRICULUM PLANNING.

- Basic principles of curriculum construction.
- Curriculum Design, Meaning, Importance and factors affecting curriculum design.
- Principles of Curriculum design according to the needs of the students and state and national level policies.
- Role of Teachers

UNIT IV Under-graduate preparation of professional preparation.

- Areas of Health education, Physical education and Recreation.
- Curriculum design-Experience of Education, Field and Laboratory.
- Teaching practice.
- Professional Competencies to be developed-Facilities and special resources for library, laboratory and other facilities.

REFERENCES:

1. Barrow, H. M. (1983). *Man and movement: principles of physical education*. Philadelphia: Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby & Company.
3. Cassidy, R. (1986). *Curriculum development in physical education*. New York: Harper & Company.

SEMESTER-IV
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
XIII.	CC-401	Measurement and Evaluation in Physical Education	68	4	20	80	100
XIV.	CC-402	Kinesiology and Biomechanics	68	4	20	80	100
XV.	CC-403	Research and Statistics in Physical Education	68	4	20	80	100
Elective Course (Any One)							
XVI.	EC-401	Theory of Sports and Games	68	4	20	80	100
	EC-402	Sports Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-401	Track and Field (Race Walk, Road Race, Hammer throw, Pole Vault)	68	4	40	-	40
	PC-402	Swimming, Gymnastics	68	4	20+20	-	40
	PC-403	Mass Demonstrations	68	4	40	-	40
	PC-404	Wrestling, Judo, Boxing, Kabaddi (circle Style)	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-401	Coaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each trainee will be required to take a minimum of 10 supervised lessons (Games, Track & Field), preferably in Secondary/ Senior Secondary Schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –XIII (CC-401)
MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I INTRODUCTION TO TEST & MEASUREMENT & EVALUATION
- Meaning of Test & Measurement & Evaluation in Physical Education
- Need & Importance of Test & Measurement & Evaluation in Physical Education
- Principles of Evaluation

UNIT-II CRITERIA, CLASSIFICATION AND ADMINISTRATION OF TEST
- Criteria of good Test
- Criteria of tests, scientific authenticity (reliability, objectivity, validity and availability of norms)
- Type and classification of Test
- Administration of test

UNIT- III PHYSICAL FITNESS TESTS
- AAHPER youth fitness test
- National physical Fitness Test
- Indiana Motor Fitness Test
- JCR test

UNIT- IV SPORTS SKILL TESTS
- Lockhart and McPherson badminton test
- Johnson basketball test
- McDonald soccer test
- S.A.I volleyball test

REFERENCES:
1. Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark.
2. Barron, H. M., & Mchee, R. (1997). *A practical approach to measurement in physical education*. Philadelphia: Lea and Febiger.
3. Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi: D.V.S. Publications.
4. Mathews, D.K. (1973). Measurement in physical education, Philadelphia: W.B.Sounders Compnay.

5. Pheasant, S.(1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
6. Phillips, D. A., &Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Willey and Sons.
7. Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

Paper –XIV (CC-402)
KINESIOLOGY AND BIOMECHANICS

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO KINESIOLOGY AND SPORTS BIOMECHANICS
- Meaning and Definition of Kinesiology and Sports Biomechanics
- Importance of Kinesiology and Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- Terminology of Fundamental Movements
- Fundamental concepts of following terms Axes and Planes, Centre of Gravity, Equilibrium, Line of Gravity

UNIT II FUNDAMENTAL CONCEPT OF ANATOMY AND PHYSIOLOGY
- Classification of Joints and Muscles
- Types of Muscle Contractions
- Posture Meaning, Types and Importance of good posture.
- Fundamental concepts of following terms- Angle of Pull, All or None Law, Reciprocal Innovation

UNIT III MECHANICAL CONCEPTS
- Force - Meaning, definition, types and its application to sports activities
- Lever - Meaning, definition, types and its application to human body.
- Newtons Laws of Motion Meaning, definition and its application to sports activities.
- Projectile Factors influencing projectile trajectory.

UNIT IV KINEMATICS AND KINETICS OF HUMAN MOVEMENT
- Linear Kinematics Distance and Displacement, speed and velocity, Acceleration
- Angular kinematics Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.
- Linear Kinetics Inertia, Mass, Momentum, Friction.
- Angular Kinetics Moment of inertia ,Couple, Stability.

REFERENCES:

1. Bunn, J. W. (1972).*Scientific principles of coaching.* Englewood Cliffs, N.J.: Prentice Hall Inc.
2. Hay, J. G. & Reid, J. G.(1982).*The anatomical and mechanical basis of human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
3. Hay, J. G. & Reid, J. G.(1988).*Anatomy, mechanics and human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
4. Hay, J. G. (1970).*The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc. Simonian, C. (1911).*Fundamentalsof sport biomechanics.* Englewood Cliffs, N.J.: Prentice Hall Inc.

Paper –XV (CC-403)
RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO RESEARCH

- Definition of Research
- Need and importance of Research in Physical Education and Sports.
- Scope of Research in Physical Education & Sports.
- Classification of Research
- Research Problem, Meaning of the term, Location and criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations.

UNIT II SURVEY OF RELATED LITERATURE

- Need for surveying related literature.
- Literature Sources, Library Reading
- Research Proposal, Meaning and Significance of Research Proposal.
- Preparation of Research proposal / project.
- Research Report: A group project is to be undertaken by a small batch of students under the supervision of a teacher, wherein it is expected to survey school facilities of physical education, health assessment programme evaluation, fitness status of the students, staff and other stakeholders etc. and submit the report to the institution.

UNIT-III BASICS OF STATISTICAL ANALYSIS

- Statistics: Meaning, Definition, Nature and Importance
- Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables
- Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram

UNIT- IVSTATISTICAL MODELS IN PHYSICAL EDUCATION AND SPORTS

- Measures of Central Tendency: Mean, Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data
- Measures of Variability: Meaning, importance, computing from group and ungroup data
- Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data

REFERENCES:

1. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc. +
2. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
3. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
4. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
5. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
6. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

Paper –XVI (EC-401)
THEORY OF SPORTS AND GAMES

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: GENERAL INTRODUCTION OF SPECIALIZED GAMES AND SPORTS

Athletics, Badminton, Basketball, Cricket, Football, Gymnastic, Hockey, Handball, Kabaddi, Kho-Kho, Tennis, Volleyball and Yoga.

Each game or sports to be dealt under the following heads

○ History and development of the Game and Sports ○ Ground preparation, dimensions and marking ○ Standard equipment and their specifications ○ Ethics of sports and sportsmanship

UNIT-II: SCIENTIFIC PRINCIPLES OF COACHING: (Particular Sports And Game Specific)

○ Motion Types of motion and Displacement, Speed, Velocity, Acceleration, Distance and Newtons Law of motions.
○ Force Friction, Centripetal and Centrifugal force, Principles of force.
○ Equilibrium and its types ○ Lever and its types
○ Sports Training Aims, Principles and characteristics.
○ Training load Components, Principles of load, Over Load (causes and symptoms).

UNIT-III: PHYSICAL FITNESS COMPONENTS: (Particular Sports and Game Specific)

○ Speed and its types
o Strength and its types ○ Endurance and its types
○ Flexibility and its types
○ Coordinative ability and its types
○ Training methods: Development of components of physical fitness and motor fitness through following training methods (continuous method, interval method, circuit method, fartlek /speed play and weight training)

UNIT-IV: CONDITIONING EXERCISES AND WARMING UP

○ Concept of Conditioning and warming up.
○ Role of weight training in games and sports.
○ Teaching of fundamental skill & their mastery (technique, tactic and different phases of skill acquisition).
○ Recreational and Lead up games
○ Strategy Offence and defense, Principles of offence and defense.

REFERENCES:

1. Bunn, J. W. (1968). *The art of officiating sports*. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). *Scientific principles of coaching.* Englewood cliffs N. J. Prentice Hall.
3. Dyson, G. H. (1963). *The mechanics of athletics*. London: University of London Press Ltd.
4. Lawther, J.D. (1965). *Psychology of coaching.* New York: Pre. Hall.
5. Singer, R. N. (1972). *Coaching, athletic & psychology*. New York: M.C. Graw Hill.

Paper –XVI (EC-402)
SPORTS MANAGEMENT

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I

- Nature and Concept of Sports Management.
- Progressive concept of Sports management.
- The purpose and scope of Sports Management.
- Essential skills of Sports Management.
- Qualities and competencies required for the Sports Manager.
- Event Management in physical education and sports.

UNIT-II

- Meaning and Definition of leadership
- Leadership style and method.
- Elements of leadership.
- Forms of Leadership.
    - Autocratic
    - Laissez-faire
    - Democratic
    - Benevolent Dictator
- Qualities of administrative leader.
- Preparation of administrative leader.
- Leadership and Organizational performance.

UNIT-III

- Sports Management in Schools, colleges and Universities.
- Factors affecting planning ○ Planning a school or college sports programme.
- Directing of school or college sports programme.
- Controlling a school, college and university sports programme.
    - Developing performance standard
    - Establishing a reporting system
    - Evaluation
    - The reward/punishment system

UNIT-IV

- Financial management in Physical Education & sports in schools, Colleges and Universities.
- Budget Importance, Criteria of good budget,
- Steps of Budget making
- Principles of budgeting

REFERENCES:

1. Ashton, D. (1968).Administration of physical education for women.New York: The Ronal Press
2. Bucher, C.A. (1978). Administration of physical education and athletic programme. 7th Edition, St. Louis: The C.V. Mosby Co.
3. Daughtrey, G. & Woods, J.B. (1976). Physical education and intramural programmes, organisation and administration. Philadelphia U.S.A. : W.B. Sounders Cp.
4. Earl, F. Z,& Gary, W. B. (1963).Management competency development in sports and physical education. Philadelphia: W. Lea and Febiger.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) FIRST YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2016-2017

(SEMESTER : FIRST AND SECOND)

i.e

First Semester : November/December, 2016
Second Semester : April/May, 2017

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SCHEME FOR OPTING SUBJECTS
B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM)
EXAMINATION, 2016-2017

B.A. (General) 1st Year (Semester System) study programme consists of three compulsory subjects and three elective subjects :

Compulsory subjects :

(a) Punjabi
OR
History & Culture of Punjab

(b) English

(c) Environment, Road Safety Education and Violence against Women & Children ***

Elective Subjects : A student is required to take up 3 elective subjects in all, selecting *not more than one subject* from any of the following sets of combinations. :

1. English, Hindi, Punjabi, ** Bengali, Urdu, Persian, ** Tamil, French,** Arabic, Russian, German, ** Kannada, ** Malayalam, ** Telugu.
2. Economics, Defence & Strategic Studies, Fine Arts, Education, Adult Education, History of Art.
3. History, Mathematics.
4. Public Administration, Home Science, Gandhian Studies, Philosophy.
5. Political Science, * Statistics, Applied Statistics; Indian Classical Dance, Human Rights and Duties.
6. Sanskrit, Physical Education, Ancient Indian History, Culture & Archaeology, Psychology, Geography.
7. Computer Science, Agriculture, Sociology.
8. Music (Instrumental), Women's Studies, Music (Tabla), Environment Conservation, Religious and Sikh Studies
9. Music (Vocal), Police Administration, Journalism & Mass Communication.

Note: *The students can opt. only two elective subjects from the following :*
Music (Instrumental), Music (Vocal), Music (Tabla) and Indian Classical Dance.

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* Statistics can be opted only with Mathematics

** The Syllabus of Tamil, Telugu, Kannada, Malayalam, Arabic & Bengali Languages are **kept in abeyance**

*** This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

10.	** *Elective Vocational Subject (one of the following) :*	*Pre-requisite subject at +2 level*
1.	Mass Communication –Video Production	Any
2.	Functional English	English
3.	Advertising, Sales Promotion & Sales Management	Any
4.	Foreign Trade, Practices and Procedures	Preferably with Economics or Commerce
5.	Office Management & Secretarial Practice	Any
6.	Computer Applications	Preferably Computer
7.	Functional Hindi	Hindi
8.	Tax Procedures & Practices	Accountancy/Business Studies
9.	Principles and Practice of Insurance	Any
10.	Information Technology	Any
11.	Fashion Designing	Any
12.	Early Childhood Care & Education	Any

**A student who opts for Computer Science as an Elective subject shall not take up Computer Applications/Information Technology as Elective Vocational subject and vice-versa.

Note :- Syllabus for the Subject at Sr. No. 1 is not framed.

FOR B.SC. (GENERAL) CANDIDATES :

(Besides the compulsory subject, a student shall offer any three elective subjects)

A	*Elective Vocational Subject*	*Other Two Elective Subjects*	*Pre-requisite subjects at +2 level*
1.	Clinical Nutrition Dietetics	Chemistry, Physics & Botany	PCB*
2.	Bio-Technology	Chemistry, Botany or Zoology	PCB
3.	Seed Technology	Botany, Chemistry	PCB
4.	Industrial Fish & Fishery	Zoology, Chemistry	PCB
5.	Instrumentation	Physics, Mathematics	PCM
6.	Mass Communication Video Production	Any two Science Subjects	Any
7.	Electronic Equipment Maintenance **(Kept In Abeyance)**	Physics, Chemistry/Maths.	PCM
8.	Computer Applications	Any two Science Subjects	Preferably Computer
9.	Industrial Chemistry	Chem., Maths./Botany/Zoology	PCM/B
10.	Industrial Microbiology	Chemistry and Botany or Zoology	PCB
11.	Food Science & Quality Control **(Kept In Abeyance)**	Chemistry and Botany/Zoology	PCB
12.	Information Technology	Any	Any

B			
13.	Bioinformatics, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
14.	Biotechnology, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
15.	Electronics : Physics + Electronics +Mathematics	:	PCM
	OR		
	Chemistry + Electronics + Computer Science		
16.	1. Agriculture, Botany & Zoology	:	PCB
	2. Agriculture, Biotechnology, Botany/Zoology	:	PCB
	3. Agriculture, Microbiology, Chemistry/Botany/Zoology	:	PCB
	4. Agriculture, Chemistry, Physics/Botany/Zoology	:	PCB

* P stands for Physics, C stands for Chemistry, B for Biology and M for Mathematics.
** B for Botany.
*** Z for Zoology

Note :- Syllabus for the Subject at Sr. No. 1, 3, 4, 5 and 6 are not framed.

Guidelines for continuous internal assessment (10%) for regular students of Under-Graduate courses (semester system):

Criteria for Internal Assessment:

(i)	Class test	=	5%
(ii)	Academic Activities (Seminar, Project, Assignment)	=	3%
(iii)	Attendance	=	2%

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be proportionately be increased to maximum marks of the paper in lieu of internal assessment.

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) i.e. FIRST SEMESTER NOVEMBER/DECEMBER 2016 AND SECOND SEMESTER APRIL/MAY 2017, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – I

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Text Prescribed :

English at Work, (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 1-4
Prose Chapters = 1-4

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type questions from Prose in not more than 100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Paragraph Writing (Descriptive and Narrative) ***One*** out of ***three*** to be attempted **05 marks**

Q.5. Comprehension of passage from Prose text **05 marks**

Q.6 Grammar - Voice, Determiners, Modals, Antonyms **10 marks**

Q.7. Translation from Vernacular to English. ***Four*** out of ***Six*** sentences (only tense based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ENGLISH (Compulsory)

SEMESTER – II

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Text Prescribed :

English at Work (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 5-8
Prose Chapters = 5-8

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type question from Prose in not more than100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Letter Writing (Personal only) **05 marks**

Q.5. Grammar : Narration, Preposition, Conjunctions, Synonyms **10 marks**

Q.6 Comprehension of Unseen Passage **05 marks**

Q.7. Translation from Hindi to English. ***Four*** out of ***six*** sentences (only idiom based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ਪੰਜਾਬੀ (ਲਾਜਮੀ)

ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਲੇਖ ਰਚਨਾ — 10 ਅੰਕ
3. ਸੰਖੇਪ ਰਚਨਾ — 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਾਵਿ-ਸੁਮੇਲ**, (ਸੰਪਾਦਕ) ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ ।
(ਹਰਭਜਨ ਸਿੰਘ ਹੁੰਦਲ ਅਤੇ ਹਰਭਜਨ ਸਿੰਘ ਰੈਨੂ ਸਿਲੇਬਸ ਵਿਚ ਨਹੀਂ ਹਨ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਕਾਵਿ-ਸੁਮੇਲ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ

   (ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਂਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋਂ ਇਕ) — 5+5= 10 ਅੰਕ

2. ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਪ੍ਰਸ਼ਨਾ ਵਿਚੋਂ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) — 5×1= 5 ਅੰਕ
3. ਲੇਖ ਰਚਨਾ (500 ਸ਼ਬਦਾਂ ਵਿਚ) ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ (ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
4. ਸੰਖੇਪ ਰਚਨਾ — 5 ਅੰਕ
5. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ

   (i) ਵਿਆਕਰਨ : ਵਿਆਕਰਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹਤੱਵ ਤੇ ਤੱਤ (ਵਾਕ ਪ੍ਰਬੰਧ, ਰੂਪ ਪ੍ਰਬੰਧ, ਧੁਨੀ ਪ੍ਰਬੰਧ ਤੇ ਲਿਖਤ ਪ੍ਰਬੰਧ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ) (ਦੋ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨਾ ਹੈ)

   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ

   ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ) — 2+2= 4 ਅੰਕ

ਨੋਟ:
1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਭਾਗ ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁਲ ਅੰਕ: 50
ਲਿਖਤੀ ਅੰਕ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ — 10 ਅੰਕ
3. ਮੁਹਾਵਰੇ — 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਥਾ ਕਹਾਣੀ**, (ਸੰਪਾਦਕ) ਡਾ. ਧਨਵੰਤ ਕੌਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਕਥਾ ਕਹਾਣੀ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 4+6= 10 ਅੰਕ

   (ਅ) ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚ ਸ਼ਮੂਲਿਤ ਕਹਾਣੀਆਂ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਣ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ

2. ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ।) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 5×1= 5 ਅੰਕ

3 ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ ਲਿਖਣਾ (ਸਾਹਿਤਕ, ਸੱਭਿਆਚਾਰਕ ਤੇ ਖੇਡ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ) — 10 ਅੰਕ

4 ਮੁਹਾਵਰੇ : ਅਰਥ ਦਸ ਕੇ ਵਾਕ ਬਣਾਉਣੇ (ਸੱਤ ਵਿਚੋਂ ਕੋਈ ਪੰਜ ਕਰਨੇ) — 5 ਅੰਕ
(ਮੁਹਾਵਰੇ ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ਵਿਚੋਂ ਹੀ ਪੁੱਛੇ ਜਾਣ)

5 ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ

(i) ਧੁਨੀ ਤੇ ਧੁਨੀ ਗ੍ਰਾਮ : ਧੁਨੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੰਡੀ ਤੇ ਅਖੰਡੀ ਧੁਨੀਆਂ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ)
ਪੰਜਾਬੀ ਸਵਰ ਧੁਨੀਆਂ ਤੇ ਵਿਅੰਜਨ ਧੁਨੀਆਂ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 2+2= 4 ਅੰਕ

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ । (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ , 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ' , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ' , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ' , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3= 9 ਪੀਰੀਅਡ ।

HISTORY AND CULTURE OF PUNJAB
(For B.A. Candidates Only)
B.A. (General) 1st SEMESTER EXAMINATION

Paper: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO PRE-MAURYAN PERIOD

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

Map	:	06 marks
Explanatory Note	:	04 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper I:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives : To introduce the students to the history of the Early History of the region.

Pedagogy : Lectures, library work and discussions.

Unit-I

I. Ancient Punjab : Physical features; impact on history.

II. Historical Sources : Literary; archaeological.

III. Harappan Culture : Extent and town planning.

Unit-II

IV. Harappan Culture : Social, Economic and Religious life; causes of disappearance.

V. Rig Vedic Age : The rise of Indo Aryans; main features of life in the early Vedic Age.

VI. Later Vedic Age : Political, Social, Economic and Religious life of later Vedic Aryans.

Unit-III

VII. Caste System : Origin and evolution.

VIII. The Epics : Historical importance of Ramayan and Mahabharat.

IX. Political Condition on eve of Alexander's invasion.

Unit-IV

X. Impact of Alexander's invasion on social and cultural life.

XI. Position of women : Harappan, early Vedic and later Vedic Age.

XII. Important Historical places of Punjab : Mohenjodaro, Harappa, Kotla Nihang Khan, Sanghol, Banawali, Taxila, Indraprastha, Hastinapur, Kurukshetra, Srinagar, Purusapura, Sakala.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

Note : The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.

(b) Ward of/and Defence Personnel and Central Government Employee/Employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(For B.A. Candidates Only)

B.A. (General) 2nd SEMESTER EXAMINATION

Paper : HISTORY AND CULTURE OF PUNJAB FROM MAURYAN TIMES TO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. One question from Unit IV shall be set on the map.

Explanation :

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

5. The distribution of marks for the map question would be as under :

Map	:	06 marks
Explanatory Note	:	04 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

6. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives : To introduce the students to the history of the early history of the region.

Pedagogy : Lectures, library work and discussions.

Unit-I

I. The Mauryan Empire : Social, Economic and religious life.

II. Buddhism and Jainism : Impact on Punjab with special reference to 4th Buddhist Council.

III. The Kushanas : Impact of Kanishka's rule on Punjab.

Unit-II

IV. Gandhara School of Art : Salient features..

V. The Guptas : Cultural and scientific developments.

VI. Position of Women : Under the Mauryas, the Guptas and the Vardhanas.

Unit-III

VII. Depiction of Punjab in the accounts of Chinese travelers. Fahien and Hwen Tsang.

VIII. Main developments in literature.

IX. Education : Significant developments; Taxila.

Unit-IV

X. Society and Culture on the eve of the Turkish invasion of Punjab.

XI. Punjab in the Kitab-ul-Hind of Alberuni.

XII. Important Historical places : Lahore, Multan Bathinda, Uchh, Jalandhar, Thanesar, Kangra, Taxila, Kundalvana, Pehowa, Thatta.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

Note : The following categories of the students shall be entitled to take the option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

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(b) Ward of/and Defence Personnel and Central Government employee/employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(All Candidates other than B.A.)

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Vedic Age: socio-economic life; development of caste; position of women.
3. Religion: vedic religion; impact of Buddhism and Jainism on the region.

UNIT II

4. Society and Culture c. 1000 A.D.: Socio-economic life; religious life; education
5. Cultural Reorientation: main features of Bhakti; origin and development of Sufism
6. Society and Culture c. 1500A.D: socio-economic life under the Lodhis; religious beliefs and practices- Vainavism, Shaivism, Shaktism, Islam.

UNIT III

7. Sikhism: new ideology of Guru Nanak; evolution of Sikh community-guruship, manji, masand; new institutions-gurdwara, sangat-pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society: social unrest; emergence of new rulers-rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh: social mobility; painting and architecture; literature.
12. MAP: Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRam Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. And Das,M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, Delhi 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

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A. That the students who have not studied Punjabi upto class 10th.
B. Ward of/and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

…….

HISTORY AND CULTURE OF PUNJAB
(All Candidates other than B.A.)
SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES
INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

1. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
2. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
3. Development of Press & literature: growth of press; development in literature

UNIT III

1. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
2. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
3. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

1. Partition and its Aftermath: resettlement; rehabilitation
2. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
3. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, oxford University Press, Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das, M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN & CHILDREN

SEMESTER II

UNIT I (ENVIRONMENT)

Note: *The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.*

1. **Environment Concept :**
Introduction, concept of biosphere—lithosphere, hydrosphere, atmosphere; Natural resources—their need and types; principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. **Atmosphere :**
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. **Hydrosphere :**
Types of aquatic systems. Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. **Lithosphere :**
Earth crust, Soil—a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. **Forests :**
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. **Conservation of Environment :**
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems—soil, water, air, wildlife, forests.

7. **Management of Solid Waste :**
Merits and demerits of different ways of solid waste management—open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. **Indoor Environment :**
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. **Global Environmental Issues :**
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. **Indian Laws on Environment :**
Indian laws pertaining to Environmental protection : Environment (Protection) Act, 1986; General information about Laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. **Biodiversity :**
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. **Noise and Microbial Pollution :**
Pollution due to noise and microbes and their effects.

13. **Human Population and Environment :**
Population growth and family welfare programme, Human Health, HIV/AIDS, Human rights.

14. **Social Issues :**
Environmental Ethics : Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. **Local Environmental Issues :**
Environmental problems in rural and urban areas, Problem of Congress grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practicals:

Depending on the available facility in the college, a visit to Vermicomposting units or any other such non-poluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern :

A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deducation for wrong answer or unattempted question), and of 1 hour duration.

The students have to obtain 33% marks to quality the paper. The marks are not added/included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination : 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) **www.chandigarhpolice.nic.in**

(b) **www.punjabpolice.gov.in**

(c) **www.haryanapolice.gov.in**

(d) **www.hppolice.nic.in**

UNIT III (VIOLENCE AGAINST WOMEN & CHILDREN)

1. **Concept and Types of Violence:** Meaning and Definiton of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. **Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:**

Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376(A), 376B, 376C, 376D and 376E;
Cruelty - Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve- teasing. These are Sections 294, 354 and 509 of Indian Penal Code. Section 509 of the Indian Penal Code defines (Word, gesture or act intended to insult the modesty of a women), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty).
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. **Protective Laws for Women:**

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. **Protective Provisions of IPC regarding Sexual Violence against Children:**

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305(abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 **The Protection of Children from Sexual Offences Act, 2012:** An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women*, New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/HRLNIndia/a-life-free-from-violence
http://hrln.rg/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

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ENGLISH (Elective)

SEMESTER –I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Units from **Fluency in English** Ed., Promodini Verma**,** Mukti Sanyal, Tulika Prasad, New Delhi: Macmillan India, 2009 (**the prescribed text)** are recommended for **First Semester:**

Units: 1, 3, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17

Literary Terms: Ballad, Sonnet, Ode, Lyric, Elegy, Dramatic Monologue, Interior Monologue, Blank Verse, Free Verse, Mock-Epic, Metaphysical Conceit, Negative Capability, Egotistical Sublime, Fancy, Imagination, Irony, Paradox, Ambiguity, Alliteration, Assonance, Imagery.

Testing Pattern:

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do five in not more than 50-60 words. (15 marks)

Q.2. The examiner will set twelve short questions (to be answered in not more than 30-40 words) from **Fluency in English (the prescribed text),** out of which a student shall be expected to attempt any *ten.* (15 marks)

Q.3. The examiner shall give two passages from the anthology **Fluency in English** along with five questions. The students shall be expected to attempt only one passage of the two. In other words, this question shall have internal choice. This question shall test the comprehension, critical acumen and the presentation skills of a student. (15 marks)

Section -B

Q.4. Letter Writing (Official) (10marks)

Q.5. Applied Grammar:

(a) Voice, Direct/Indirect, Transformation of Sentences (simple, complex, compound) (15 marks)

(b) Articles, Preposition, Conjunctions (10 marks)

Q.6. Vocabulary:

Antonyms/Synonyms, Use of words/phrases in sentences (10 marks)

ENGLISH (Elective)

SEMESTER –II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Essays, Stories and Plays from the prescribed book **'A Collection of Essays, Short Stories & One Act Plays,** Ed., R.K Kaushik & S.C. Bhatia, New Delhi, OUP, 2006. (**Included in Section -A**) are recommended for **Second Semester:**

Essays 1-6
Stories 1-6
Plays 1-4

Literary terms/concepts*: Prose, Essay, Expository Essay, Analytical /Argumentative Essay, Lyrical Essay, Descriptive Essay, Imaginative Essay, Philosophical Essay, Short Story, Long Story, Drama, Dramatic Plot, Character, Incident, Setting, Structure, Tragedy, Comedy, Tragi-comedy*

Testing Pattern:

Q. 1. Literary terms/concepts (Five out of Eight) (15 marks)

Q. 2. Ten short questions to be attempted out of fourteen, based on **A Collection of Essays, Short Stories and One Act Plays'** (each to be answered in not more than 30-40 words.) (15 marks)

Q. 3. Long questions *five out of seven*, again based on **A Collection of Essays, Short Stories and One Act Plays' (**each to be answered in not more than 100-120 words) . (15 marks)

Section -B

Q. 4. Paragraph Writing (based on outline, a situation, a string of questions etc.) (15 marks)

Q. 5. Applied Grammar-

(a) Corrections (10 marks)
(b) Use of the same words as different parts of speech (10 marks)

Q. 6. Translation from Vernacular into English (10 sentences only) (10 marks)

OR

(For foreign students, a paragraph on any one of the two given topics, preferably, proverbs or idioms**)**

हिन्दी (ऐच्छिक)
सेमेस्टर-1

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1 कवितालोक :

सं. डॉ. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित।

इन चार कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई है-

कबीर, रैदास, गुरुनानक देव, सूरदास।

(क) 5-5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होंगी। कुल 4 संदर्भ पूछे जाएँगे। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल 2 प्रश्न पूछे जाएँगे। अंक : 06

इस खंड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछे जायेंगे। उत्तरों की शब्द-सीमा 200 होगी।

2 सजीव कहानियाँ :

सं. डॉ. लक्ष्मीचन्द्र खुराना, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित। निम्नलिखित सात कहानियाँ पाठ्यक्रम में हैं :- शतरंज के खिलाड़ी, ममता, अशिक्षित का हृदय, मौत के मुँह में, न्याय मंत्री, गुलाब, सभ्य-असभ्य।

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी। कुल 4 व्याख्याएँ पूछी जाएँगी। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। इस खंड में कथावस्तु, चरित्र-चित्रण एवं उद्देश्य से संबंधित कुल दो प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की शब्द-सीमा 200 तक होगी। अंक : 06

3 तीन-तीन अंकों के तीन लघु-उत्तरापेक्षी प्रश्न करने होंगे। अंक : 09

कुल 6 प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की सीमा 50 शब्दों तक होगी। ये प्रश्न इस पत्र के पूर्वोक्त दो खंडों (कवितालोक एवं सजीव कहानियाँ) पर आधारित होंगे।

4 हिन्दी-साहित्य का इतिहास : अंक : 07

आदिकाल (अपभ्रंश साहित्य को छोड़कर) से निम्नलिखित शीर्षकों पर आधारित प्रश्न पूछे जाएँगे।

आदिकाल का नामकरण, काल-सीमा, परिस्थितियाँ, प्रवृतियाँ और पृथ्वीराज रासो तथा बीसलदेव रासो का परिचय।

7 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगे। (शब्द-सीमा 200)

5 वस्तुनिष्ठ प्रश्न अंक : 10

इस पत्र के पूर्वोक्त तीनों खंडों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगे।

6 समीक्षा सिद्धान्त : अंक : 07

कहानी :- परिभाषा, तत्त्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगे। 7 अंकों का केवल एक प्रश्न करना होगा। (शब्द-सीमा 200)

7 व्यावहारिक व्याकरण : अंक : 20

(क) विपरीतार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ख) समानार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ग) शब्द-शोधन और वाक्य-शोधन (सात में से पाँच करने होगे।) 5 अंक

(घ) वाक्यांश के लिए एक शब्द (सात में से पाँच करने होगे।) 5 अंक

8 परिभाषिक शब्दावली (सलग्न शब्दावली) अंक : 5

कुल आठ में से पाँच के उतर देने होगे।

9 आंतरिक मूल्यांकन : अंक : 10

सहायक पुस्तकें :

हिन्दी साहित्य का इतिहास : कुसुम वर्मा

निर्देश : छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होगे।

पारिभाषिक शब्दावली

	A	
1.	Abbreviation	संक्षिप्ति
2.	Absence	अनुपस्थिति, गैरहाजिरी
3.	Accommodation	आवास
4.	Advice	परामर्श, सलाह, सूचना, संज्ञापन
5.	Allegiance	निष्ठा
6.	Alteration	परिवर्तन, हेर-फेर
7.	Amendation	संशोधन
8.	Appendix	परिशिष्ट
9.	Assistant	सहायक
10.	Attendance	उपस्थिति, हाजिरी
	B	
11.	Basic pay	मूल वेतन
12.	Birth Date	जन्म तिथि, जन्म की तारीख़
13.	Block	खंड, ब्लाक
14.	Board	बोर्ड, मंडल
15.	Break in Service	सेवा में व्यवधान
16.	By Hand	दस्ती
	C	
17.	Cancel	रद्द करना
18.	Clarification	स्पष्टीकरण
19	Closing Balance	अंत-शेष, रोकड़ बाकी
20.	Committee	समिति
21.	Competence	सक्षमता
22	Conference	सम्मेलन
23.	Confirmation	पुष्टि
24.	Consolidated fund	समेकित निधि
25.	Conveyance allowance	वाहन भत्ता
26.	Corruption	भ्रष्टाचार
27.	Covering letter	सहपत्र

	D	
28.	Dealing Assistant	संबंधित सहायक
29.	Dearness Allowance	मंहगाई भत्ता
30.	Department	विभाग
31.	Deputy Secretary	उपसचिव
32.	Dissent	विसम्मति, विमति, (विधि), अहसमति
33.	Duplicate	अनुलिपि, दूसरी प्रति
34.	Duration	अवधि
35.	Duty	ड्यूटी, काम, कार्य, कर्त्तव्य, भार, शुल्क
	E	
36.	Encashment	भुनाना, तुड़ाना
37.	Entry	प्रविष्टि, इंदराज, प्रवेश
38.	Evidence	साक्ष्य, गवाही, प्रमाण
39.	Expert	विशेषज्ञ
40.	Export	निर्यात
41.	Extract	उद्धरण
	F	
42.	Fitness Certificate	स्वस्थता प्रमाणपत्र, योग्यता प्रमाणपत्र
43.	Fresh Receipt (F.R.)	नई आवती
44.	Further Action	आगे की कार्रवाई, अगली कार्यवाही
	G	
45.	General Manager	प्रधान प्रबंधक, महाप्रबंधक
46.	General Meeting	साधारण सभा, साधारण बैठक
47.	Grant-in-aid	सहायता-अनुदान
48.	Guidance	मार्गदर्शन, निर्देशन
	H	
49	Head Clerk	प्रधान लिपिक, हैड कलर्क
50.	Head of Account	लेखा-शीर्ष
51.	Head office	प्रधान कार्यालय
52.	Head Quarter	मुख्यालय
53.	Holiday	अवकाश

I

54.	Immediate officer	आसन्न अधिकारी
55.	Import	आयात
56.	Increment	वेतन-वृद्धि
57.	Inquiry	पूछताछ, जाँच
58.	Inspector	निरीक्षक
59.	Instruction	अनुदेश, हिदायत
60.	Instructor	अनुदेशक
61.	Interpretation	निर्वचन, व्याख्या
62.	Intimation	प्रज्ञापन, सूचना, इत्तिला
63.	Investigation	अन्वेषण, तफतीश, जाँच-पड़ताल
64.	Irrelevant	असंबद्ध, विसंगत
65.	Issue	(संज्ञा) निर्गम, प्रश्न, मसला, (क्रिया) जारी करना, भेजना, देना

J

66.	Job	नौकरी, जाँच, कार्य
67.	Joining Date	कार्यग्रहण-तारीख, कार्यारम्भ-तारीख
68.	Joint Secretary	संयुक्त सचिव

L

69.	Labour Welfare	श्रम-कल्याण
70.	Leave Salary	छुट्टी का वेतन
71.	Leave Vacancy	अवकाश-रिक्ति
72.	Length of Service	सेवाकाल

हिन्दी (ऐच्छिक)
सेमेस्टर-2

पूर्णांक : 90+10 = 100

समय : 3 घण्टे

1. कवितालोक :

सं. डा. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित ।
इन तीन कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई हैं
मीरांबाई, तुलसीदास, गिरिध्र कविराय

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी । कुल 4 व्याख्याएँ पूछी जाएँगी। अंक-10
(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल 2 प्रश्न पूछे जाएँगे। अंक-06

इस खण्ड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछें जायेंगे। उतर की शब्द सीमा 200 होगी।

2. झांसी की रानी- वृंदावनलाल वर्मा, मयूर प्रकाशन, झांसी । अंक-16

नामकरण, कथावस्तु, चरित्र-चित्रण, उद्देश्य के आधर पर चार समीक्षात्मक प्रश्न पूछे जाएँगे, जिनमें से 8 अंको के कोई दो प्रश्न करने होंगे। (शब्द- सीमा 200-250)

3. हिन्दी साहित्य का इतिहास :
भक्तिकाल :- निम्न शीर्षकों पर आधारित 2 प्रश्न पूछें जाएँगें। एक का उतर देना होगा। (शब्द-सीमा 200) अंक-08
भक्तिकाल की परिस्थितियाँ, सन्तकाव्य, प्रेमाख्यानकाव्य, रामकाव्य और कृष्ण काव्य की विशेषताएँ, कबीर, जायसी, तुलसी और सूरदास

4. वस्तुनिष्ठ प्रश्न अंक-10
इस पत्र के पूर्वोक्त तीनों खण्डों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उतर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5. समीक्षा सिद्धान्त
उपन्यास:-परिभाषा, तत्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगें। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200) अंक-07

6. मुहावरे और लोकोक्तियाँ (सात में से पाँच के उतर देने होंगे।) अंक-10

7. निर्धारित विषय पर अनुच्छेद-लेखन (तीन में से एक प्रश्न करना होगा।) अंक-10

8. निजी पत्र-लेखन (दो में से एक प्रश्न करना होगा) अंक-08

9. पारिभाषिक शब्दावली-(संलग्न शब्दावली) अंक-05

आंतरिक मूल्यांकन अंक-10

निर्देश :-छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।

	M	
1..	Management	प्रबंध
2.	Medical	चिकित्सा
3.	Medical Leave	चिकित्सा-छुट्टी
4.	Medical Officer	चिकित्सा-अधिकारी
5.	Messenger	संदेशवाहक
6.	Ministry	मंत्रालय, मंत्रिमंडल
7.	Modification	संशोधन, रूपांतर
8.	Most Immediate	अति-तात्कालिक
	N	
9.	Nationality	राष्ट्रीयता
10.	Necessary Action	आवश्यक कार्रवाई
11.	Negligence	उपेक्षा, प्रमाद, गफलत
12.	No-Objection	अनापत्ति
13.	Non-Official	गैर-सरकारी, अशासकीय
	O	
14.	Obedience	आज्ञापालन, आज्ञानुवर्तन
15.	Objection	आपत्ति
16.	Offence	अपराध
17.	Offer	प्रस्ताव
18.	Office	कार्यालय, दफतर, पद
19.	Office Copy	कार्यालय-प्रति, दफतर की प्रति
20.	Office Hours	कार्यालय-समय
21.	Office Order	कार्यालय-आदेश
22.	Officer	अधिकारी, अफसर
23.	Officer-in-charge	प्रभारी अधिकारी
24.	Officiating	स्थानापन्न
25.	Option	विकल्प
26.	Original Copy	मूल प्रति
27.	Outstanding	बकाया
28.	Overtime	समयोपरि, अतिरिक्त समय
	P	
29.	Part Time	अंशकालिक
30.	Pay	वेतन

31.	Payment	अदायगी
32.	Penalty	दंड, अर्थ–दंड, जुर्माना
33.	Pending	अनिर्णीत पड़ा हुआ, रूका हुआ, लंबित
34.	Pension	पेंशन
35.	Planning	योजना, योजना बनाना
36.	Proceedings	कार्यवाही
37.	Proposal	प्रस्ताव
38.	Publicity	प्रचार
39.	Postpone	स्थगित करना, मुल्तवी करना
	Q	
40.	Qualification	अर्हता, योग्यता
41.	Quarterly	त्रैमासिक
	R	
42.	Rectification	परिशोधन
43.	Reference	संदर्भ, निर्देश, हवाला
44.	Remark	विचार, अभ्युक्ति
45.	Remuneration	पारिश्रमिक, मेहनताना
46.	Renewal	नवीनीकरण
47.	Revenue	राजस्व
	S	
48.	Satisfactory	संतोषजनक
49.	Scrutiny	संवीक्षा
50.	Seal	मुद्रा, मोहर
51.	Secret	गुप्त, गुप्त बात
52.	Security	प्रतिभूति, सुरक्षा
53.	Seniority	वरिष्ठता
54.	State Government	राज्य सरकार
55.	Stores	सामान, सामग्री, भंडार
56.	Summary	सारांश, संक्षेप
57.	Superintendent	अधीक्षक
58.	Supervisor	पर्यवेक्षक
	T	
59.	Target	लक्ष्य
60.	Technical	तकनीकी
61.	Testimonial	शंसापत्र
62.	Tour	दौरा
63.	Training	प्रशिक्षण
64.	Translation	अनुवाद

65.	Travelling Allowance	यात्रा-भत्ता
	U	
66.	Under Secretary	अवर-सचिव
67.	Unemployment	बेकारी, बेरोजगारी
68.	Unofficial Letter	अशासकीय पत्र
69.	Up-to-date	अद्यतन
	V	
70.	Verification	सत्यापन
71.	Violation	अतिक्रमण
	W	
72.	Waiting list	प्रतीक्षा-सूची
73.	Warning	चेतावनी
74.	Working days	कार्य-दिवस, काम के दिन
75.	Working Hours	कार्य-समय, काम के घंटे
76.	Working Knowledge	कार्य-साधक-ज्ञान
77.	Write off	बट्टे-खाते डालना
	Z	
78.	Zone	जोन, अंचल

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਜਨਰਲ ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ : 100
ਲਿਖਤੀ : 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 10
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਇਕਾਂਗੀ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਸ਼ਾ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਦੇ ਰੂਪ — 10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਬਾਵਾ ਬਲਵੰਤ, ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ, ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ, ਡਾ. ਜਗਤਾਰ)
2. **ਛੇ ਦਰਸ਼ਨ**, ਸੰਤ ਸਿੰਘ ਸੇਖੋ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ। ('ਨਿਸ਼ਾਂਤ ਬਾਗ ਵਿੱਚ' ਇਕਾਂਗੀ ਨੂੰ ਛੱਡ ਕੇ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **(ੳ)** '**ਨਕਸ਼ ਨੁਹਾਰ**' ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) 'ਛੇ ਦਰਸ਼ਨ' ਇਕਾਂਗੀ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਇਕਾਂਗੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 2 x 5=10 ਅੰਕ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਕਵਿਤਾ, ਨਾਟਕ ਤੇ ਇਕਾਂਗੀ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਮਹਤੱਵ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
6. ਸਾਹਿਤ ਦੇ ਰੂਪ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਤੱਤ — 10 ਅੰਕ
   ਕਵਿਤਾ, ਗੀਤ, ਗ਼ਜ਼ਲ, ਇਕਾਂਗੀ, ਨਾਵਲ, ਕਹਾਣੀ (ਦੋ ਵਿਚੋਂ ਇਕ)

ਵਿਸ਼ੇਸ਼ **ਨੋਟ** : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਵਲ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਆਲੋਚਨਾ — 10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

   (ਨਿਰਧਾਰਤ ਕਵੀ: ਪਾਸ਼, ਸੰਤ ਰਾਮ ਉਦਾਸੀ, ਸੁਰਜੀਤ ਪਾਤਰ, ਜਸਵੰਤ ਦੀਦ, ਨਵਤੇਜ ਭਾਰਤੀ, ਸੁਖਵਿੰਦਰ ਅੰਮ੍ਰਿਤ, ਦਰਸ਼ਨ ਬੁਲੰਦਵੀ, ਜਸਵਿੰਦਰ, ਸੁਖਪਾਲ)

2. **ਦੁਆਬਾ**,ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਨਕਸ਼ ਨੁਹਾਰ ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਦੁਆਬਾ ਨਾਵਲ ਵਿਚੋਂ ਪ੍ਰਮੁੱਖ ਘਟਨਾਵਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਵਲ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ)
   (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਵਲ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)**: ਨਾਵਲ, ਕਹਾਣੀ ਤੇ ਸਫ਼ਰਨਾਮਾ — 5 x 4=20 ਅੰਕ
   ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : — 10 ਅੰਕ
   (ੳ) ਧੁਨੀ ਸੰਪਰਦਾਇ (ਅ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ)
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)
6. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਤੱਤ — 10 ਅੰਕ
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪੱਤੀ ਤੇ ਵਿਕਾਸ, ਡਾ. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕ੍ਰਿਪਾਲ ਸਿੰਘ ਕਸੇਲ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
5. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.) 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
6. ਜੱਗੀ, ਰਤਨ ਸਿੰਘ (ਡਾ.). ਸਾਹਿਤ ਦੇ ਰੂਪ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
8. ਸ਼ੈਰੀ ਸਿੰਘ ਤੇ ਬ੍ਰਹਮ ਜਗਦੀਸ਼ (ਪ੍ਰੋ.), ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
9. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

संस्कृत (इलैक्टिव)
सेमेस्टर–1

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।
- **अपरीक्षितकारकम्** (1-4 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

- **नीतिशतकम्** (1-25 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

- **व्यावहारिक संस्कृत शब्दावलीः** शरीरांग, फल एवं सब्जियाँ सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. अगूंठा-अङ्गुष्ठः	2. आँख-चक्षुः, लोचनम्, नेत्रम्, नयनम्	3. अंगुली-अङ्गुलिः
4. ओठ-ओष्ठः	5. कमर-श्रोणिः, कटिः	6. कलाई-मणिबन्धः
7. कान-कर्णः, श्रोत्रम्	8. गर्दन-ग्रीवा	9. घुटना-जानुः
10. जीभ-जिह्वा, रसना	11. दाँत-दन्तः, दशनः	12. नाक-घ्राणम्, नासिका
13. पेट-कुक्षिः, उदरम्	14. बांह-बाहुः, भुजः	15. भौं-भ्रूः
16. माथा-ललाटम्	17. शरीर-गात्रम्, शरीरम्	18. अंगूर-द्राक्षा
19. अमरूद-आम्रलम्	20. आम-आम्रम्	21. काजू-काजवम्
22. किशमिश-शुष्कद्राक्षा	23. खजूर-खर्जूरम्	24. जामुन-जम्बूफलम्

25. तरबूज-तारबूजम्	26. खरबूजा-खर्बुजम्	27. नारियल-नारिकेलम्
28. लीची-लीचिका	29. सेव-सेवम्	30. अंजीर-अंजीरम्
31. नारंगी-नारंगम्	32. बेल-बिल्वम्, श्रीफलम्	33. बेर-बदरीफलम्
34. मेवा-शुष्कफलम्	35. आलू-आलुः	36. ककडी-कर्कटी
37. करेला-कारवेल्लम्	38. गोभी-गोजिह्वा	39. टमाटर-रक्ताङ्गम्
40. टिंडा-टिंडिशः	41. धनिया-धान्यकम्	42. पालक-पालकीर्ऋ
43. प्याज-पलाण्डुः	44. वैंगन-वंगनः	45. भिंडी-भिंडकः
46. मिर्च-मरीचम्	47. मूली-मूलकम्	48. लहसून-लशुनम्
49. शलगम-श्वेतकन्दः	50. साग-शाकः	

(घ) वर्णों के उच्चारण स्थान **4x1=4अंक**

(ङ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

अत्र, तत्र, कुत्र, यत्र, अन्यत्र, सर्वत्र एकत्र, इतः, ततः, कुतः, कदा, तदा, यदा, सदा, तथा, यथा

(च) संख्या (गणना) वाची शब्द (1 से 50 तक (पाँच शब्द)) **5x1=5अंक**

(छ) सामान्य- ज्ञान - तिथि, नक्षत्र, योग, करण, वार **5अंक**

(ज) स्वर सन्धि (पाँच सन्धियाँ प्रष्टव्य) **5x1=5अंक**

(झ) शब्दरूप : राम, लता, फल, मुनि, मति, नदी (दो शब्दरूप प्रष्टव्य) **2x4=8अंक**

(ञ) धातुरूप : पत, गम, पठ्, क्रीड, वद्, पा (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में, दो धातुरूप प्रष्टव्य) **2x4=8अंक**

(ट) हिन्दी से संस्कृत में अनुवाद (5 वाक्य) **5x1=5अंक**

सहायक पुस्तकें – 1. अपरीक्षितकारकम्(विष्णुशर्मा)। 2. नीतिशतकम् (भर्तृहरि)। 3. शीघ्रबोध, चौखम्बा, वाराणसी।

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संस्कृत (इलैक्टिव)
सेमेस्टर–2

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) अपरीक्षितकारकम् (5-8 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) नीतिशतकम् (26-50 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

(ग) व्यावहारिक संस्कृत शब्दावली : पशु, पक्षी एवं वनस्पति सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. ऊँट-उष्ट्रः	2. खरगोश-शशकः	3. गधा-गर्दभः, खरः
4. गाय-गौः	5. गीदड़-श्रृगालः	6. गैंडा-गण्डकः
7. घोड़ा-अश्वः, घोटकः	8. चूहा - मूषकः	9. छिपकली-ललन्तिका
10. नेवला-नकुलः	11. बन्दर-वानरः, कपिः	12. बकरा-अजः
13. बिल्ली-मार्जारी	14. बैल-बलदः, बलीवर्दः, वृषभः	15. भैंस-महिषी
16. शेर-सिंहः	17. हाथी-गजः, दन्ती, करी	18. हिरन-मृगः, हरिणः, कुरंगः
19. उल्लू-उलुकः, कौशिकः	20. कबूतर-कपोतः, पारावतः	21. कोयल-कोकिलः

22. कौवा-काकः	23. गीध-गृधः	24. चकवा-चक्रवाकः
25. चिड़िया-चटका	26. तोता - शुकः	27. पपीहा-चातकः
28. बगला-बकः	29. बतख-वर्तकः, वर्तिका	30. बाज-श्येनः
31. मोर-मयूरः	32. मुर्गा-कुक्कुटः	33. हंस-हंसः
34. सारस-सारसः	35. आंवला-आमलकी	36. आम(वृक्ष)-आम्रः
37. जामुन (वृक्ष)-जम्बूः	38. नारियल (वृक्ष)-नारिकेलः	39. नीम-निम्बः
40. पीपल-अश्वत्थः	41. बेल (वृक्ष)-बिल्वः	42. गुलाब-स्थलपद्मम्
43. कमल-कुवलयम्, पुण्डरीकम्, पद्मम्	44. गेंदा-गन्धपुष्पम्	45. चमेली-मालती
46. चम्पा-चम्पकः	47. पराग-मकरन्दः	48. रात की रानी-रजनीगन्धा
49. पत्ता-पत्रम्, पर्णम्	50. लता-व्रततिः, वीरुत्	

(घ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

कथम्, अद्यः, श्वः, ह्यः, परश्वः, सद्यः, पुरतः, पृष्ठतः, वामतः, दक्षिणतः, नीचै, उच्चैः, बहिः, अन्तः

(ङ) संख्या (गणना) वाची शब्द (51 से 100 तक) पाँच शब्द **5x1=5अंक**

(च) सामान्य- ज्ञान (राशि, मास, ग्रह एवं दश दिशाओं के नाम) **5अंक**

(छ) शब्दरूप : गुरु, पितृ, मातृ, भवत्, अस्मद्, युष्मद् (दो शब्दरूप प्रष्टव्य) **2x5=10अंक**

(ज) धातुरूप : लिख्, नी, दृश्, भू, त्यज्, स्मृ धातु (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में दो धातुरूप प्रष्टव्य) **10अंक**

(झ) हिन्दी से संस्कृत में अनुवाद (10 वाक्य) **5x2=10अंक**

सहायक पुस्तकें – अपरीक्षितकारकम् (विष्णुशर्मा)। नीतिशतकम् (भर्तृहरि)। शीघ्रबोध, चौखम्बा वाराणसी।

URDU (Elective)

SEMESTER - I

Essay and Composition:

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Essay 30 marks

Unit-II

Letter/ Application 20 marks

Unit-III

Mutazad Alfaz, Mutaradif Alfaz, Wahid aur Jama, Tazkeer-o-Taanees 20 marks

Unit-IV

Muhaware, Correction of words/ sentences 20 marks

Books Recommended:

1. Guldasta-e- mazameen -Insha pardazi Part II by Dr. Arif Mohd. Khan, published by Educational Book House, AMU Market, Aligarh.
2. Urdu Qaedah-mae- Intekhaab Nasar-o-nazm by Dr. Haroon Ayub.

URDU (Elective)

SEMESTER - II

Prose and Poetry

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Explanation of Prose Passages from : 30 marks
Urdu Zuban Hamari, Mirza Ghalib ki Seerat, Darogha ki Panchon Ghee mein, Nasooh ki Bimari.

Unit-II

Explanation of Ghazal verses from : 20 marks
Muhammed Valiullah Vali, Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Faiz Ahmed Faiz, Raghupati Sahay Firaq Gorakhpuri, Jigar Moradabadi.

Unit-III

Explanation of Nazm verses from : 20 marks
Ajanta, Taj Mahal, Kashmir, Shikast-e-zindan ka khwab, Dastan Shahzade ke ghayab hone ki, Farzi latifa, Ek chehlum par, Clerk.

Unit-IV

Summary of poem or a lesson from prose and poetry (given in Unit I & III) 20 marks

Books Prescribed

Urdu Nisab Part II, published by Educational Book House, A.M.U. Market, Aligarh.

PERSIAN (Elective)

Note : There will be one paper in each Semester i.e. 1st and 2nd Semester of 90 marks each and Internal Assessment 10 marks each Semester for the session of 2016 -17 .

SEMESTER-I

Paper-A – Prose:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Translation of two passages into English, Urdu, Punjabi, Hindi or Persian. (Out of three question 2 have to be attempted)	Marks: 30
2.	Explanation of Hikayat or Intekhab into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the Hikayat from Gulistan-e-Saadi into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the authors.	Marks: 20

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. Complete Prose section.
   Hafiz Maulavi Mohd. Ayyub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Ilahabad.

PERSIAN (Elective)

SEMESTER-II

Paper-B – Poetry:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Explanation of poems into English, Urdu, Punjabi, Hindi or Persian (Out of three poems comprising five Ashaar two have to be attempted)	Marks: 30
2.	Explanation of the theme of the poem into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the poem into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the poets.	Marks: 20

Only the following poems from the book Guldasta-ye-Farsi:

(1) **انتخاب از سعدی**

شنیدم که در وقت نزع روان
شنیدم که دا رای فرخ تبار
مشتاقی وصبوری از حد گزشت یارا

(2) **غزلیات حافظ**

دوش وقت سحرا از غصه نجاتم دادند
دل می رود زدستم صاحب دلان خدار

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. From Hissa-ye-Nazm.
   Hafiz Maulavi Mohd. Ayub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Allahabad.

FRENCH (Elective)

SEMESTER - I

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. — 20 marks

2. Comprehension of an unseen text (easier than the prescribed textbook). Ten questions to be put and answered in French. — 10 marks

3. Translation from English into French and from French into English of a passage or short sentences based on the vocabulary of the prescribed textbook. — 10+10 marks

4. Questions on applied grammar, including conjugation of verbs in applied form, pertaining to the text book. — 30 marks

5. Write a dialogue of 150 words on the topics covered in the syllabus. — 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 1-6) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Semester.

2. All questions are to be asked and answered in French (except questions on translation).

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (Elective)

SEMESTER – II

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 70 marks
Internal Assessment : 10 marks
Viva : 20 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. 20 marks

2. Comprehension of an unseen text. Ten questions to be put and answered in French. 10 marks

3. Questions on applied grammar, including conjugation of verbs in applied form pertaining to the text book. 30 marks

4. Write an essay/composition of 150 words on any topic covered in the syllabus 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 7-8) Version Originale-2 (Units 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie, Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Year.

2. All questions are to be asked and answered in French

Viva:	**20 marks**
Reading	10 marks
Seen	05 marks
Unseen	05 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory**.**
2. The theory paper would be proportionately marked out of 80 as there is no internal assessment.

GERMAN (Elective)

SEMESTER – I

Summary

Max. Marks	:	100 marks(Total)
Paper-A (Theory)	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 1-15 upto page 78 (5 questions) : 50 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1": Chapters 1-15 upto page 78 (3 out of 4 questions to be attempted) : 20 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 20 marks

i. Gefunden (Goethe)
ii. Da ich ein Knabe war (Hölderlin)
iii. Sehnsucht (Eichendorff)

Internal Assessment : 1**0 marks (Total)**

- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 1-15 upto page 78.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary Book:

"Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 1-15.

GERMAN (Elective)

SEMESTER –II

Summary

Max. Marks	:	100 marks(Total)
End-Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) Examination	:	30 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 16-30 (5 questions) : 30 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1" : Chapters 16-30 (3 out of 4 questions to be attempted) : 15 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 15 marks

i. Die Lorelei (Heine)
ii. Sommerbild (Hebbel)
iii. Abendlied (Keller)

Oral (viva-voce) Examination : 30 marks (Total)

i. Easy conversation in German
ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : 10 marks (Total)

i. Continuous Evaluation
ii. Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 16-30.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary book:

i. "Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 16-30.

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RUSSIAN (Elective)

SEMESTER - I

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks	**:**	**100**
Theory	**:**	**90 marks**
Internal Assessment (For regular students)	**:**	**10 marks**
Maximum Time	**:**	**3 hrs.**

1. Translation from simple Russian into English/Hindi/Punjabi (about 120 words) **15 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 100 words). **15 Marks**

3. Simple applied grammar: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

4. Questions on prescribed texts in Russian: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

5. Composition (One out of three) on the following topics: **15 Marks**
   1. My family. 2. My day. 3. Our class. 4. Working day.

6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper: **15 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi.(Lessons 1-15)

Books recommended for additional reading

1. A. K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.

2. S. Khavronina: Russian in Exercise,1978.

3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.

4. Dictionaries : English -Russian dictionary.
   Russian -English dictionary.

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RUSSIAN (Elective)

SEMESTER - II

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks : 70
Theory : 60 marks
Internal Assessment : 10 marks
(For regular students)
Maximum Time : 3 hrs.

1. Translation from simple Russian into English/Hindi/Punjabi (about 80 words) **10 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 75 words). **10 Marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) (Covered in Lessons 16-31, Wagner) **12 Marks**

4. Questions on prescribed texts in Russian: 4 questions out of 6 (2 marks each) (Covered in Lessons 16-31, Wagner) **08 Marks**

5. Composition (One out of three) on the following topics: **10 Marks**
   1. Our city. 2. Our flat. 3. An evening party. 4. Birthday.

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper: **10 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 16-31)

Books recommended for additional reading

1. A.K.Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S. Khavronina: Russian in Exercise,1978.
3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.
4. Dictionaries: English -Russian dictionary.
   Russian -English dictionary.

Oral/ Practical **Maximum Marks: 30**

Reading of text(s) and conversation in simple Russian.

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 6-31)

SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabus for B.A.(GENERAL)
FIRST YEAR (SEMESTER SYSTEM) SYLLABUS has been
KEPT IN ABEYANCE

PHYSICAL EDUCATION

SEMESTER-I

THEORY :

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks, i.e two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Education :

- Meaning and concept of Education

Physical Education :

- Meaning and definition of Physical Education, its aim and objectives.
- Need and importance of Physical Education in the Modern Society and its relationship with other subjects.

History of Physical Education :

- Pre and Post Independence Development of Physical Education in India.

UNIT-III 12 Marks

Olympic Games, Asian Games & Common Wealth Games :

- Ancient Olympic Games.
- Modern Olympic Games.
- Asian Games; and
- Common Wealth Games.

UNIT-IV 12 Marks

Sports Schemes, National Institutions of Sports and National and International Governing Bodies of Olympic Games :

- Raj Kumari Amrit Kaur Coaching Scheme.
- Netaji Subash National Institute of Sports, Patiala (NSNIS, Patiala).
- Sports Authority of India (SAI).
- Indian Olympic Association (IOA).
- International Olympic Committee (IOC).

UNIT-V 12 Marks

Basics of Handball :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna Awardees of the game.

References :

1. Barrow, H. M. (1983) : *"Man and Movements : Principles of Physical Education",* Philadelphia, Lea and Febiger.
2. Brar, R.S. Walia, R., Gill, M., Kanwar, S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of physical education"* Kalyani Publisher, Ludhiana, Punjab.
3. Bucher, C. A. (1979) : *"Foundations of Physical Education,"* St. Louis C.V. Mosby Company.
4. Chauhan, S.S. (1985) : *"Advanced Educational Psychology",* New Print-India Pvt. Ltd., Sahibabad, U.P.
5. Khan, E. A. (1964) : *"History of Physical Education,"* Scientific Book Company.

6. Murti K. & Ram, P. N. (1990) : *"Educational Dimensions of Physical Education",* 2nd Revised Edition, Print India, New Delhi.

7. Moslon (1976) : *"The Olympian",* Olympic House, Canada.

8. Puni, A.T. (1980) : *"Sports Psychology",* An abridged Translated by G.S.Sandhu, NIS, Patiala.

9. Sharma, P.D. (1996) : *"Olympics : Athens to Atlanta, 1896-1996",* Friends Publications (India) Delhi.

10. Sheldon, W.H. (1940) : *"The Varieties of Human Physique",* New York, Harper and Row Publishers.

11. Singh, Ajmer et al (2000) : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana.

12. Skinner, C. E. (1964) : *"Educational Psychology",* 4th edition, Prentice Hall of India Pvt. Ltd.

13. Narayanan T. C. and Hariharan S. (1975) : *"An Analytical History of Physical Education",* South India Press, Karaikudi.

PRACTICAL

Max. Marks : 35
Practical : 30
Internal Assessment : 05

ATHLETICS

Sprints (Types of Start and Finish) :

(a) Crouch start-fixing of starting blocks, getting in and off the block, emphasizing on body position, need of starting blocks in a sprint race.

(b) Practice of starts with starting blocks using proper commands.

(c) Training the students for correct running style.

(d) Practice of Finishing the sprint with different techniques.

(e) Rules and Regulations of Sprint races.

Middle Distance, Long Distance and Walking Events :

(a) Marking of standard tracks, width of lanes and starting points for various races.
(b) Practical of Standing Start.
(c) Correct running and walking style, emphasis on proper body position and foot placement.
(d) Running tactics.
(e) Rules of competition.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under :

Athletics 15 marks, participation and achievement in Athletics 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover, in the absence of proper facilities required for the events mentioned above may prove to be injurious/ fatal to the students.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher /class for each semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

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PHYSICAL EDUCATION

SEMESTER-II

THEORY

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is **compulsory.** It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks i.e., two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Cell:

- Meaning and definition of Anatomy & Physiology, Structure and Functions of a cell.

Skeletal System :

- Meaning and functions of skeletal system.
- Types of Bones and names of various bones of the body.

Muscular System :

- Introduction of Muscular system, structure and function of muscular system.
- Effect of short and long duration physical Exercise on the muscular system.

UNIT-III 12 Marks

Warming up, Cooling down and Physical Fitness :

- Warming up and cooling down in sports and its singnificance
- Meaning, definition and components of Physical Fitness.
- Influence of age, sex, body composition, diet, climate, exercise and training on Physical Fitness.

Kho-kho:

- History of the game
- Basic fundamentals
- Equipment and specifications
- Marking/layout of court
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play); and
- Major tournaments and Arjuna Awardees of the game

UNIT-IV 12 Marks

Health & Health Education :

- Meaning and definition of health.
- Meaning, definition, objectives, scope, principles and importance of Health Education.
- Personal hygiene, its meaning and importance.

First Aid :

- Meaning and importance of First Aid in Physical Education and Sports with special reference to Drowning, Dislocation of a joint, Fracture of bone, Sprain and Strain.

UNIT-V 12 Marks

Biological Basis of Physical Education :

- Growth and Development, Differences between growth and development.
- Factors affecting growth and development.
- Heredity and Environment and its effects on Growth and Development.
- Various stages of growth and development.

References :

1. Brar, R.S. Walia, R., Gill, M., Kanwar,S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of Physical Education"* Kalyani Publisher, Ludhiana Punjab.
2. Chaurasia, B.D. (1981) : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition.
3. Dandiya, P.C., Jafer, Z., Y.K. & Afifa J. (1996) : *"Health Education and Community Pharmacy",* Vallabh Prakashan, Pitampura, New Delhi.
4. Marley, W.P. (1982) : *"Health and Physical Fitness",* CBS College Publishing.
5. Mathews, D.K. and Fox, E.L. (1976) : *"The Physiological Basis of Physical Education & Athletics*", Second Edition, W.B. Saunders Co., Philadelphia.
6. Park, J.E. & Park, K. (1985) : *"Text Book of Preventive and Social Medicine",* 10th Edition, Banarasi Dass Bhanot, Jabalpur, India.
7. Rose & Wilson (1981) : *"Foundations of Anatomy and Physiology",* 5th Edition.
8. Sampath, K. & Maheshwar B.U. (1999) : *"Human Anatomy & Physiology",* First Edition, Birla Publications, Delhi.
9. Dinshaw, S.F. (1997) : *Fighting fit for ever.* The Marine Sports Publishing Division, Bombay.
10. Shaphard, R.J. (1978) : *"The Fit Athlete",* Oxford University Press.
11. Larry, S.G. (1982) : *Essential of exercise physiology.* Surjeet Publications, Delhi, First Indian Print.
12. Singh, Ajmer et. al. (2000) : *Modern text book of physical education, health and sports,* Kalyani Publishers, Ludhiana.
13. Wilmore, J. H. (1997) : *"Athletic Training and Physical Fitness",* Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Messachusetts.

PRACTICAL

Max. Marks : 35
Practical : 30 marks
Internal Assessment : 05 marks

Games :

Note : Volleyball or Kabaddi (NS) and any one game of the choice of the student (other than the two) which should be confined to the list of games approved by the Association of Indian Universities.

Volleyball

(a) Measurements (volleyball court, net, poles, antenna and ball).
(b) Number and position of players and officials.
(c) Types of service (under arm service, side arm service and tennis service).
(d) Types of passes (under hand and over head pass).
(e) Rules of the game.

OR

Kabaddi (NS)

(a) Measurements (Kabaddi court for men and women).
(b) Number of players and officials.
(c) Fundamental offensive skills, touching with hand, leg thrust, front kick, side kick, Mule kick, jump and dive counter.
(d) Defensive Skill (wrist catch, normal grip, ankle catch, knee catch and chain formation).
(e) Tactics : (a) getting bonus point (b) counter to bonus line crossing (c) Delaying tactics for getting lona.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under : Games 15 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. The choice of games by the students shall be confined to the list of games approved by the Association of Indian Universities.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher/class semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

EDUCATION

SEMESTER – I

PAPER : EDUCATION AND SOCIETY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV and; 75 words for each short answer type question in Unit V) for answer.

Objectives :

To enable the students to understand :

1. The Meaning, Nature and Scope of Education along with its types.
2. Functions of Education in light of its aims.
3. Role of Education viz-a-viz present day needs.

Course Contents :

UNIT-I : (a) Meaning and Nature of Education : Education as a Socio-Political Process and Developmental Process.
(b) Informal, Formal and Non-Formal Education.

UNIT-II : (a) Aims of Education – Individual, Social, Vocational and Democratic.
(b) Functions of Education – Individual Development, Transmission of Cultural Heritage and Education for Social Change.

UNIT-III : (a) Education for Democratic Citizenship.
(b) National Integration and International Understanding.

UNIT-IV : (a) Value Education –Meaning of Values, their Development
(b) Transactional Strategies.

Books Recommended :

1. Bhatia, K.K. and Narang, C.L. : *Teacher and Education in Emerging Indian Society,* Tandon Publishers, Ludhiana, 2002.
2. Bhatia, K.K. and Sharma, S. : *Bhartiya Shiksha Ki Adhunik Samasyaein,* Parkash *et al* Bros., Ludhiana, 1986.
3. Bhatnagar, Suresh : *Kothari Commission Recommendations and Evaluation with a Text on National Policy on Education,* Loyal Book Depot, Meerut, 1982.
4. Govt. of India : *National Policy on Education,* Ministry of Human Resource Development, New Delhi, 1986.
5. Govt. of India, Ministry of Education : *Report of Education Commission (1964-66)—Education and National Development.*
6. Govt. of India, Ministry of Education : *Report of Secondary Education Commission* (1952-53), New Delhi.
7. Gupta, S.P. : *Sikhya de Sidhant ate Takneekan,* Hans Book Depot, Faridkot, 1989.
8. Kansal, M.R. : *Sikhya de Sidhant,* Punjab State University Text Book Board, Chandigarh.
9. Mathur, S. S. : *Shiksha Sidhant,* Vinod Pustak Mandir, Agra, 1981.
10. Sharma, T.R. : *Sikhya de Sidhant,* Punjabi University, Patiala.
11. Safaya, R.N. : *Principles and Techniques of Education,* Dhanpat Rai & Sons, Jallandhar.
12. Yadav, H. S. et al : *Adhunik Bhartiya Smaj Mein Shiksha,* Tandon Publishers, Ludhiana, 1995.
13. Yadav & Yadav : *Education in the Emerging Indian Society,* Tandon Publications, Ludhiana.

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EDUCATION
SEMESTER – II

PAPER : EDUCATION AND HUMAN DEVELOPMENT

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV; and 75 words for each short answer type question in Unit V) for answer.

Objectives :

To make the students understand :

1. The meaning, scope and uses of psychology in education.
2. Human growth and development upto the stage of childhood.
3. Meaning, purpose of learning and factors influencing learning.
4. The concept of intelligence - its meaning and measurements.
5. Causes and significance of individual differences.

Course Contents :

UNIT-I : (a) *Educational Psychology :* Meaning, Nature and Scope.
(b) Individual Differences – Causes, Significance and Educational Implications.

UNIT-II : (a) Nature of Human Growth and Development – Physical, Mental, Emotional and Social.
(b) *Stages of Human Development :* Infancy and Childhood, their Needs, Significance and Problems.

UNIT-III : (a) *Learning :* Meaning and Definition.
(b) Theories of Learning - Trial and Error by Thorndike and Classical Conditioning by Pavlov.

UNIT-IV : (a) *Intelligence :* Meaning, Types
(b) Measurement of Intelligence.

Books Recommended :

1. Aggarwal, J.C. : *Essentials of Educational Psychology,* Vikas Publishing House, Private Ltd., New Delhi, 1995.
2. Bhatia, H.R. : *A Textbook of Educational Psychology,* Asia Publishing House, New Delhi, 1977.
3. Bhatnagar, S. : *Shiksha Manovigyan,* International Publishing House, Meerut, 1977.
4. Dhingra, R. : *Educational Psychology and Guidance,* Punjab Katab Ghar, Jallandhar.
5. Kagan, J. and Lang, C. : *Psychology and Education,* Harcourt Brace Jovanovich, Inc., New York, 1978.
6. Kundu, D. : *Modern Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1974.
7. Kuppuswamy, B. : *Advanced Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1994.
8. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
9. Mathur, S.S. : *Educational Psychology,* Vinod Pustak Mandir, Agra, 1998.
10. Sandhu, I.K. and Kaur, A. : *Shikhya Manovigyan,* Punjabi University, Patiala, 1976.
11. Walia, J. S. : *Foundations of Educational Psychology,* Paul Publishers, Jallandhar, 2001.

ADULT EDUCATION

SEMESTER-I

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	03Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 9 marks each. Unit V will consist of **6** short answer type questions which will cover the entire syllabus uniformly and will carry 9 marks in all. Each short question will carry 1½ marks comprising 6 question.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of 8 in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question.

OBJECTIVES OF THE COURSE :

The main objectives of the paper are :

1. To introduce students with meaning, scope and components of adult education.
2. To provide an overview of history of adult education.
3. To equip students with objectives, strategies and implementation of National Literacy Mission's Programs.
4. To acquaint students with structuring of teaching – learning environment for an adult learner.
5. To explain to students the various forms of Adult Education.

THEORY :-

UNIT-I : *Adult Education :* Concept, Meaning, Brief History during Post-Independence Period.

UNIT-II : Scope and Components of Adult Education i.e. Literacy, Numeracy, Awareness and Functionality.

UNIT-III : *National Literacy Mission :* Objectives, Strategies and Implementation.

UNIT-IV : Sakshar Bhart Mission- Objectives Strategies and Implementation.

PRACTICAL/ FIELD WORK:

Participation of the students in the following and preparation of Project Report :

Survey of the Village/Area : General information regarding the village; its Economic, Social and Cultural Activities : Needs and Problems.

The break up of 50 marks allotted to practical is as under :	*External*	*Internal*
(i) Viva-Voce	15 marks	
(ii) Written questions based on the Project	10 marks	5
(iii) Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended:

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*
5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*
6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.
7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.
9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.
10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.
11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.
12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.
13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

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ADULT EDUCATION

SEMESTER-II

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	3 Hours

UNIT-I : *Structuring Teaching Learning Environment for Adult Learners :* Identification of Areas. Survey of the Community, Identification of Learners.

UNIT-II : Campaign for enrolment of Adult Learning, enrolment of the learners and day-to-day functioning of Adult Education Centre, Involvement of Community & Developmental Agencies.

UNIT-III : Various forms of Adult Education i.e. Social Education, Community Education.

UNIT-IV : Basic Education and Life Long Education.

PRACTICAL/FIELD WORK :

Participation of the students in the following and preparation of Project Report :

1. Preparation of profile of the area.
2. Organization of Adult Education Centres for Basic Literacy Development.

The break up of 50 marks allotted to practical is as under :

		External	*Internal*
(i)	Viva-Voce	15 marks	
(ii)	Written questions based on the Project	10 marks	5
(iii)	Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended :

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*

5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*

6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.

7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.

8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.

9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.

10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.

11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.

12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.

13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

MUSIC (Vocal)

SEMESTER – I

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

5. The candidate can take vocal music along with instrumental music.

6. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 02 marks each.

7. The candidate can also take instrumental music with tabla.

8. There would be upto 10 students in one section.

THEORY (3 Hours duration)	45 Marks
PRACTICAL (20 minute's duration)	45 Marks
Internal Assessment (Theory + Practical) (05+05)	10 Marks
Total :	**100 Marks**

THEORY

Unit-I

1. Bhatkhande Notation System in Modern Period.
2. Elementary knowledge of Raga
3. Different Jaties of Ragas of ***the Present Raga System*** of North Indian Music

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words):
   Shruti, Swara (Shudh & Vikrit), Saptak, Alankar
2. Life sketch and contribution of Tansen.
3. Sangeet: (Definition and Importance)

Unit-III

1. Brief description of Tanpura.
2. Definitions and types of Khayal.

Unit-IV

1. Notation & Description of Ragas prescribed in the course with Alap and Taans:- Kafi, Bhopali
2. Notation & Description of Talas prescribed in the course:- Teentala, Dadra (Single & Double)
3. To write Alankars in tala

NOTE :- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas:
   Kafi, Bhopali
2. One Sargamgeet in any of the prescribed ragas
3. Ability to play Dadra Tala on Tabla
4. Ability to recite bols of the tala prescribed in the course in Thah and Dugun by hand:
   Teen taal, Dadra
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swaras and sing alongwith it.
6. Ability to sing national Anthem

Books Recommended:

1.	*Sangeet Bodh*	:	Paranjpe, Shartchandra Shridhar.
2.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
3.	*Sangeet Sar Part (I)*	:	Mrs. Veena Mankaran.
4.	*Raga Vigyan, Part I to IV*	:	Pt. V.N. Patwardhan.
5.	*Hamare Sangeet Ratan*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeetanjali Part I to IV*	:	Pt. Onkar Nath Thakur.
7.	*Kramik Pustak Mallika Part I to III*	:	Pt. V.N. Bhatkhande.
8.	*Raag Parichay Part I,II,III*	:	Sh. H.C. Srivastav.
9.	*Sangeet Kaumudi Part II*	:	V.S. Nigam.
10.	*Sangeet Shastra Darpan Part II*	:	Shanti Goverdhan.

MUSIC (Vocal)

SEMESTER-II

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

5. The candidate can take vocal music along with instrumental music.

6. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 02 marks each.

7. The candidate can also take instrumental music with tabla.

8. There would be upto 10 students in one section.

THEORY (3 Hours duration)			45 Marks
PRACTICAL (20 minutes duration)			45 Marks
(i) Choice & Viva		:	35 Marks
(ii) Harmonium		:	05 Marks
(iii) Tabla		:	05 Marks
Internal Assessment (Theory + Practical)	(05 + 05)	:	10 Marks

THEORY

Unit-I

1. Knowledge of Bhatkhande Thaat Paddhati
2. Study of Naad
3. Various developments (in brief) in the History of North Indian Music of Modern Period.

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words):
   Matra, Avartan, Sam, Tali, Khali, Vibhag
2. Elementary knowledge of the Kanth Sadhna

Unit-III

1. Elementary knowledge of the Laya & Taal in Music
2. Brief life sketch and contributions of : Pt. Vishnu Digambar Paluskar.

Unit-IV

Notation and Description of the prescribed Ragas and Talas :-

1. To write one drut khyal in each of the following ragas:- Yaman, Alhaiya Bilawal with Alap and Taans
2. To write one bada khyal in any raga of the syllabus with Alap and Taans
3. To write the notation of Talas:- Ektal, Kehrwa.
4. To write the description of ragas of the syllabus

NOTE:- Both the questions from this part must contain one notation of Raga along with the notation of Talas/ description of Ragas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas :
   Yaman, Alhaiya Bilawal
2. One Vilambit Khayal in any of the prescribed Ragas.
3. Ability to play Teen Tala on Tabla
4. Ability to recite bols of the talas prescribed in the course in Thah and Dugun by hand:-
   Ek tal, Kehrwa
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swars and sing alongwith it.

Books Recommended:

1.	*Sangeet Bodh*	:	Paranjpe, Shartchandra Shridhar.
2.	*Sangeet Shastra Vigyan* Sangeet Kala ka Itihas	:	Panna Lal Madan.
3.	*Sangeet Sar Part (I)*	:	Mrs. Veena Mankaran.
4.	*Raga Vigyan, Part I to IV*	:	Pt. V.N. Patwardhan.
5.	*Hamare Sangeet Ratan*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeetanjali Part I to IV*	:	Pt. Onkar Nath Thakur.
7.	*Kramik Pustak Mallika Part I to III*	:	Pt. V.N. Bhatkhande.
8.	*Raag Parichay Part I,II,III*	:	Sh. H.C. Srivastav.
9.	*Sangeet Kaumudi Part II*	:	V.S. Nigam.
10.	*Sangeet Shastra Darpan Part II*	:	Shanti Goverdhan.

MUSIC (Instrumental)

SEMESTER-I

GENERAL INSTRUCTIONS :-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium can be used while singing Alankars.

4. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.

5. In Instrumental music the candidates have the option to take any of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.

7. The candidate can take vocal music or Tabla along with instrumental music.

8. There would be upto ten students in one section in practical class.

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i)	Viva	:	35 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla	:	05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit – I

1. Elementary knowledge of Raga
2. Sangeet (Definition & importance)
3. Different Jaties of Ragas of the Present Raga System of North Indian Music.

Unit – II

1. Elementary knowledge of the following terms: (not more than 100 words) :
   Swara, Saptak, Alankar. Aron, Avroh, Pakad, Thaat
2. Elementary knowledge of Bhatkhande Notation System.

Unit – III

1. Brief description of your own instrument.
2. Definition and types of Gat(Razakhani and Maseetkhani).

Unit – IV

Notation and Description of the prescribed Ragas and Talas :

1. Rag Bhopali(one Razakhani gat)
2. To write Alankars in Tala
3. To write the notation of Tala (Dadra & Teental) with dugun layakaries
4. Aroh Avroh Pakar of raga Yaman (non detail raga)

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/description of Ragas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PRACTICAL

1. Demonstration of different Alankars of Shudh & Vikrit Swaras on your instrument.
2. One Razakhani gat of raga Bhopali
3. Knowledge of the non-detailed raga :
   Yaman (only Aroh-Avroh and Pakad).
4. Ability to demonstrate the following taals by hand in Ekgun and Dugun layakaries:
   Dadra, Teen taal
5. Ability to play Shudh-Swaras on Harmonium.
6. Ability to play National Anthem on your own instruments
7. Ability to play Dadra taal on table.

Books Recommended

1.	*Rag Parichaya Part II and III*	:	H.C. Srivastava.
2.	*Sangeet Kaumudi Part-II (Punjabi)*	:	V.S. Nigam
3.	*Sitar Marg, Part-II*	:	S. Bandopadhya.
4.	*Sangeet Sar, Part-I*	:	Mrs. Veena Mankaran.
5.	*Sangeetanjali, Part I & IV*	:	Pt. Onkar Nath Thakur.
6.	*Sangeet Manjusha*	:	Dr. Indrani Chakravarti.
7.	Sangeet Shastra Vigyan		Sh. Panna Lal Madan
	Sangeet Kala ka Itihas	:	

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MUSIC (Instrumental)

SEMESTER-II

GENERAL INSTRUCTIONS

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. **There should not be more than eight students in a batch for practical examination.**

3. Harmonium can be used while singing Alankars.

4. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.

5. In Instrumental Music, the candidates have the option to take any one of the following instruments : Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.

7. The candidate can take vocal music or Tabla along with instrumental music.

8. There would be up to ten students in one section in practical class.

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i) Viva : 35 Marks

(ii) Harmonium : 05 Marks

(iii) Tabla : 05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit-I

1. Various developments (in brief) in the History of Indian Music of Modern Period.
2. Knowledge of Bhatkhande That Paddhati.
3. Study of Nada

Unit-II

1. Elementary knowledge of the following terms (not more than 100 words) :
   Matra, Avartan, Sam, Tali, Khali and Vibhag
2. Study of various bols of Mizrab,Tora , Jhala

Unit-III

1. Elementary knowledge of Laya and Taal in Music
2. Brief life sketches and their contributions to Indian Music of the following
   great masters :-
   (i) Pt. Ravi Shanker
   (ii) Pt. V.N. Bhatkhande

Unit-IV

Definition and description of the prescribed Ragas and Tala :- Yaman , Kafi

1. One Maseetkhani Gat in any prescribed raga and talas :-Yaman , Kafi
2. To write the notation of Razakhani Gat of rag Kafi and Yaman with three todas
3. Write in notation Jhaptala, Keharva Tala with dugan layakaries.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PRACTICAL

1. One Maseetkhani Gat in any raga of your syllabus.
2. Razakhani gats with toras & Jhala in the following ragas :-Kafi, Yaman
3. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries :Talas Dadra & Keharva
4. Ability to play Teen tala on Tabla
5. Ability to play Aroh, Avron of Raag Yaman & Kafi on Harmonium.

Books Recommended:

1.	Rag Parichaya Part II and III	:	H.C. Srivastava
2.	Sangeet Kaumudi Part-II (Punjabi)	:	V.S. Nigam
3.	Sitar Marg Part-II	:	S. Bandopadhya
4.	Sangeet Sar, Part-I	:	Mrs. Veena Mankaran
5.	Sangeetanjali, Part I & IV	:	Pt. Onkar Nath Thakur
6.	Sangeet Manjusha	:	Dr. Indrani Chakravarti
7.	Sangeet Shastra Vigyan Sangeet Kala ka Itihas	:	Sh. Panna La Madan

PRACTICAL

1. One Maseetkhani gat in any rag of your course.
2. Razakhani gats with toras & Jhala in the following ragas :-
   Kafi, Yaman
3. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries: Talas :
   Dadra & keherwa
4. Ability to play Teen taal on Tabla
5. Ability to play Aroh, Avron of Rag Yaman & Kafi on Harmonium.

Books Recommended:

1.	*Rag Parichaya Part II and III*	:	H.C. Srivastava.
2.	*Sangeet Kaumudi Part-II (Punjabi)*	:	V.S. Nigam
3.	*Sitar Marg, Part-II*	:	S. Bandopadhya.
4.	*Sangeet Sar, Part-I*	:	Mrs. Veena Mankaran.
5.	*Sangeetanjali, Part I & IV*	:	Pt. Onkar Nath Thakur.
6.	*Sangeet Manjusha*	:	Dr. Indrani Chakravarti.
7.	*Sangeet Shastra Vigyan*	:	Sh. Panna La Madan

TABLA (Instrumental)

SEMESTER – I

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, *nine* questions will be set from the whole syllabus of Semester-I. The question paper will be divided into five Units. First four units will contain two questions each, out of which the candidates are to attempt one question from each Unit, fifth based on notation will be compulsory. Thus in all, the candidates are required to attempt five questions.
3. Harmonium/ Sarangee will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

THEORY (Time duration-3 Hours) 45 Marks

PRACTICAL (20 minutes duration). 45 Marks

(i)	Viva	30 Marks
(ii)	Harmonium	05 Marks
(iii)	Tabla (Tuning)	05 Marks
(iv)	Padhant on Hand	05 Marks

Internal Assessment (Theory+Practical) (05+05) 10 Marks

Total: 100 Marks

THEORY

UNIT-I

(a) Define - : Dahina, Bayan, Palli, Kinar, Syahi
(b) Explain the following:
Laya, Matra, Vibhag, Tali
(c) Brief Introduction of Bhatkhande Tala notation system.

UNIT-II

(a) Description of playing techniques of Ten Varnas.
(b) Definition with example of the following:
Tihai, Mukhra, Mohra and SimpleTukra.
(c) Definition of Thah and Dugun.

UNIT-III

(a) Importance of Taal in Music.
(b) A structural study of the following Instruments:
Dholak, Naal and Pakhawaj.
(c) Definition of Avanaddha Vadyas.

UNIT-IV

(a) Definition of Baaj and Gharana.
(b) Detail playing techniques of Delhi Gharana and its Kayda.
(c) Life sketches and contribution of the following artists:
- Ustad Siddhar Khan
- Ustad Nathoo Khan

UNIT-V

Ability to write in notation the composition prescribed in Teen Taal, Chautaal.(Kayda, Simple Tukra, Tihai).

PRACTICAL

(a) Taals Prescribed Teen Taal, Chautaal, Kehrwa
(b) Laggi in Kehrwa Taal and its variety.
(c) Teen Taal (Peshkara, Two Paltas, Two Kaydas, Two Mukhra)
(d) Chautaal (Theka in Thah and Dugun)
(e) Practice of playing the above Taals with Vocal and Instrumental performances.
(f) Ability to play Nagma/Lehra on Harmonium in Teen Taal.

TABLA (Instrument)

SEMESTER-II

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, *nine* questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five Units. First four units will contain two questions each, out of which the candidates are to attempt one question from each Unit, fifth unit based on notation will be compulsory. Thus in all, the candidates are required to attempt five questions.
3. Harmonium/Sarangee will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).
5. All syllabus included of Semester-I.

THEORY (Time duration-3 Hours) 45 Marks

PRACTICAL (20 minutes duration). 45 Marks

(i)	Viva	30 Marks
(ii)	Harmonium	05 Marks
(iii)	Tabla (Tuning)	05 Marks
(iv)	Padhant on Hand	05 Marks

Internal Assessment (Theory+Practical) (05+05) 10 Marks

Total:100 Marks

Theory

UNIT- I

(a) Define- Lav (maidan), Baddhee, Gatta, Gudri (Yaduri)
(b) Explain the following:
Khali, Sum, Avartan and Theka.
(c) Detail Introduction of Bhatkhande Taal Notation system and writing of Taals in Bhatkhande Notation system.

UNIT- II

(a) Playing techniques of ten Varnas : Sanyukta & Asanyukta Varnas.
(b) Define with examples of the following:
Quaida (Kayda), Rela, Peshkar and Paran.
(c) Definition of Chougun and Athgun.

UNIT- III

(a) Importance of Taal in Music & Dance.
(b) Avanaddha Vadyas and their importance in Music.
(c) A structural study of the following:
Khol, Khanjari, Damru

UNIT- IV

(a) Definition of Gharana and brief history of Delhi and Ajrada Gharana of Tabla Vadan.
(b) Detail playing techniques and characteristics of Delhi and Ajrada Gharana.
(c) Life sketches and contribution of the following artists:
- Ustad Habibuddin Khan
- Pt. Beeroo Mishra

UNIT- V

Ability to write in notation the composition prescribed in Teen Taal and Ektaal (Simple and Chakradar Tukra, Paran, Mukhra.

PRACTICAL

(a) Taals prescribed Dadra, Ektaal, Teen Taal
(b) Laggi in Dadra and Kehrwa Taal.
(c) Ektaal (One Qaida, Two Tukra, Two Tihai, One Paran)
(d) Teen Taal (One Rela, one chakradar Paran, One Tukra, One Mohra)
(e) Practice of Dholak playing in Kehrwa Taal.
(f) Ability to play Nagma/Lehra on Harmonium in Ektaal.
(g) Tuning of Tabla.

Books Recommended:

1. Taal Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadya : M.P. Sharma
5. Hamare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Shukla
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Taal Parichay Part-1 : G.C. Srivastava.

INDIAN CLASSICAL DANCE

SEMESTER-I

GENERAL INSTRUCTIONS:

1 In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2 In all, *nine* questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five Units. First four units will contain two questions each, out of which the candidates are to attempt one question from each Unit, fifth unit based on notation will be compulsory. Thus in all, the candidates are required to attempt five questions.

3 No electronic Instruments will be allowed for practical examination.

4 Practical Paper shall be set from the syllabus for Paper-B (Practical).

5 There would be upto 10 students in one section

THEORY (Time duration 3 hours.) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

Internal assessment (Theory and Practical) (5 + 5) 10 Marks

Theory

Unit –I

(a) Origin of Tandava
(b) Four Neck movements
(c) Eight eye glances

Unit-II

(a) Define Mudra. Just name Asamyukta Mudras based on Abhinaya Darpan.
(b) Definition of Folk Dance.
(c) Brief study of Kathak Dance in ancient period .

Unit-III

(a) Definition of the following terms:
Tora, Salami, Thaat, Tehai, Amad,
(b) Advantages of dance
(c) Life sketch of Pt. Uday Shankar

Unit-IV

(a) A study of two Folk Dances of Panjab, their costumes and background music.
(b) A study of two Folk Dances of Haryana, their costumes and background music.

Unit- V

(a) Notation of Nagma in Teen Taal
(b) Notation of Tatkar and Theka in Ekgun, Dugun and Chaugun laykaries
(c) Notation of Salami, Tora, Amad and Tihai in Teen taal.

Practical

(a) Teen Taal:

I	Tatkar in Ekgun, Dugun and Chaugun laykaries		
II	Salami	-	1
III	Amad	-	1
IV	Tora	-	4
V	Tihai	-	1

(b) Practice on hand of above mentioned material in Teen Taal – prescribed in Part-A.

(c) Theka of Teentaal on hand in Ekgun & Dugun laykaries

(d) Theka of Teentaal on table

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INDIAN CLASSICAL DANCE

SEMESTER –II

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, *nine* questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five Units. First four units will contain two questions each, out of which the candidates are to attempt one question from each Unit, fifth unit based on notation will be compulsory. Thus in all, the candidates are required to attempt five questions.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).
5. All syllabi including Semester-I.

THEORY (Time duration 3 hours.) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

Internal assessment (Theory and Practical) (5 + 5) 10 Marks

Theory

Unit –I

(a) Study of Lasya Dance.
(b) Six Eyebrow movements.
(c) Nine Head movements.

Unit-II

(a) Detail knowledge of Samyukta Mudras based on Abhinaya Darpan.
(b) Definition of Classical Dance.
(c) Detailed study of Kathak in mughal period.

Unit-III

(a) A study of four Folk Dances of Punjab.
(b) A study of four Folk Dances of Haryana.
(c) Knowledge of costumes and background music of Punjabi and Haryanvi Folk Dances.

Unit IV

(a) Brief study of Abhinaya and its various parts.
(b) Life sketch of Pt. Narayan Prasad.
(c) Definition of Nritta and Nritya.

Unit V

(a) Notation of Theka of Jhaptaal in Ekgun, Dugun and Chougun laykaries.
(b) Notation of Tatkar, Tora and Amad in Jhaptaal.
(c) Notation of Thaat, Tora, Tehai and Kavit in Teen Taal.

Practical

(a) Teen Taal:

i. Tatkar in Teentaal in Ekgu, Dugun and Chougun laykaries.
ii. Thaat - 1
iii. Tora - 2
iv. Kavitt - 1
v. Tihai

(b) Jhaptaal:-

i. Tatkar in Ekgun, Dugun and Chaugun laykaries.
ii. Tora - 2
iii. Amad - 1

(c) Practice of prescribed material in both the taals on hand

(d) Practical knowledge of Asamyukta Mudras.

(e) Ability to play nagma in teen taal on Harmonium.

(f) Ability to play theka of Jhaptaal on Tabla

FINE ARTS

SEMESTER – I

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

Instruction to paper-setters

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Pre-historic paintings from Bhim–Betka .
- Ajanta Cave Painting: Shaddanta Jataka, Padmapani, Avalokitesvara, Dying Princess, Mahajanaka Jataka, Decorative ceiling panels from Cave No. 2.

Unit-II : History of Indian Sculpture

- Indus Valley Civilization - Seals, Metal Dancing Girl, Red Sandstone Torso, Bust of Priest from Mohenjodaro.
- Mauryan Art: Rampurva Bull Capital, Lion Capital from Sarnath, Didarganj Yakshi.

Unit-III : History of Western Art

- Pre-historic Art - Wounded Bison (Altamira), Venus of Willendorf.
- Egyptian Art - Palette of King Narmer, Seated Scribe.
- Greek Art - Standing Youth, Discobolus, Laocoon Group.

Unit-IV : Definition of Key Terms and General Concepts

- Colour: Colour Theory, Colour wheel, Colour terminology and meaning of colour, Line - different types of lines and its meaning, Perspective: Linear and Aerial, Foreshortening.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks: 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects and to study the proportion, volume and rhythmic relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Pencil, charcoal or Pastel colours.
4. Size : ½ Imperial sheet

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Pencil Shading, charcoal
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

1. Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
2. Medium : Pencil Sketching or Pastel, Pencil colours.
3. Size : ½ Imperial sheet

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).

Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.

2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

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FINE ARTS

SEMESTER – II

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

INSTRUCTIONS TO PAPER-SETTERS

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Sittanavasal - Lotus Pond.
- Eastern Indian Miniature Painting with special reference to Ashtasahasrika Prajnaparamita.
- Western Indian Miniature Painting with special reference to Nativity of Mahavira from Palm-leaf manuscripts.

Unit-II : History of Indian Sculpture

- Bharhut - Dream of Queen Maya, Yakshas and Yakshini figures.
- Amravati - The Great Departure, Subjugation of Nalagiri.

Unit-III : History of Western Art

- Roman Art - Augustus of Primaporta, Arch of Titus.
- Byzantine Art – Mosaic: Emperor Justinian and his Attendants in S. Vitale.
- Gothic Art - Madonna Enthroned by Duccio, The Lamentation by Giotto.

Unit-IV : Definition of Key Terms and General Concepts

Mural - Fresco and Tempera techniques, Miniature, Chiaroscuro (light-shade), Sculpture in round and in relief.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitons and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks : 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects to study proportion, volume and rhythmic : relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Oil, acrylic or water colours.
4. Size : ½ Imperial sheet or Canvas Pad

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Charcoal or Pastels (Monochrome)
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.

1. Medium : Oil, acrylic or water colours.
2. Size : ½ Imperial sheet or Canvas pad

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).
Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.

2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

HISTORY OF ART

SEMESTER – I

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

HISTORY OF INDIAN PAINTING AND SCULPTURE Max. Marks : 100
Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Study of Indian Painting :

Unit-I

(a) Pre-historic Painting.

(b) *Ajanta :* Early Period, Classical Period and Post-Classical Period.

Unit-II

(a) Bagh

(b) Badami.

(c) Sittanavasal.

(d) Ellora.

Study of Indian Sculpture :

Unit-III

(a) Indus Valley Civilization.

(b) Mauryan Period.

(c) Bharhut.

(d) Sanchi.

Unit-IV

(a) Amaravati.

(b) Nagarjunikonda.

(c) Mathura under the Kushanas.

(d) Gandharan Art.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Reprint Corporation, New Delhi, 1983.

2. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

3. Gupte and Mahajan : *Ajanta, Ellora and Aurangabad Caves,* D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.

4. Rowland, Benjamin : *The Art and Architecture of India,* Penguin Books, Great Britain, 1959.

5. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.

6. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.

7. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.

8. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART

SEMESTER – II

Max. Marks : 100
Time : 3 Hours

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

STUDY OF WESTERN PAINTING AND SCULPTURE (from the earliest times to ca. 1400 A.D.) and Theory and Principles of Art Appreciation

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Western Art :

Unit-I

(a) Pre-historic Painting.

(b) Egyptian Art.

Unit-II

(a) Greek Art.

(b) Roman Art.

Unit-III

(a) Art of Early Christian Period.

(b) Byzantine Period.

(c) Gothic Period.

Unit-IV

Explanation through illustrations of the concept of :

(a) Space, Line, Colour, Form, Texture, Light and Shade, Design, Balance, Harmony, Composition, Perspective, Foreshortening.

(b) Mural, Fresco and Tempera techniques.

Pedagogy :

The students are expected to familiarize themselves with the art form as seen from the books, slides and related films.

Suggested Readings :

1. Read, Herbert : *Meaning of Art,* Faber & Faber, London, 1972.
2. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
3. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
4. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – I

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-A : HISTORY AND CULTURE OF INDIA FROM THE INDUS VALLEY CIVILIZATION TO 321 B.C.

Objectives :

The paper is a survey of the proto-historic and historic background to Indian history from the Harappan Civilization to the time of the Iranian and Macedonian invasions.

Pedagogy of the Course Work :

Students are expected to familiarize themselves with sources and with methods of reconstructing ancient political history. Further, an attempt is made to view the political events in their situational context, locating the interconnection of social, economic and political developments, as far as their sources permit.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hours duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of the Harappan Civilization.

   (b) Location of the 16 Mahajanapadas.

   (c) Alexander's Indian campaign.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I

Sources of Ancient Indian history: Harappan Civilization: origin; extent; urban features and decline.

UNIT-II

Vedic Civilization (Rig Vedic and Later Vedic Period): society; polity; economy; culture and religion.

UNIT-III

The Sixteen Mahajanapadas with special reference to the rise of Magadha (from Bimbisara to the fall of the Nandas); The rise of Buddhism and Jainism.

UNIT-IV

The Iranian and Macedonian invasions: political and cultural impact on the Indian subcontinent.

Essential Readings :

1. Basham, A.L. : *The Wonder that was India,* Rupa, Mumbai, 1971.
2. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
3. Majumdar, R.C. et al : *The Vedic Age,Vol.I, Bombay;* Bhartiya Vidya Bhavan, Mumbai, 1971.
4. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
5. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed. University of Calcutta, Delhi, 1996.
6. Sharma, R.S. *Material Culture and Social Formation in Ancient India*, Machmillan, Delhi, 1983
7. Singh, Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century),* Pearson Education, Delhi, 2009
8. Thapar, R. : *A History of India,* Vol. I, Pelican Books, New Delhi, 1966.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER – II

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper : HISTORY AND CULTURE OF INDIA FROM THE MAURYAS TO 319 A.D.

Objectives :

This course deals with the political and cultural history of India from Mauryas to 319 A.D. It also acquaints the students about the foreign invasions which took place during the time span as mentioned above and their impact on the Indian Culture.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs, topographical maps, political maps etc. In addition to it, lectures, workshops and seminars may be arranged to facilitate the students to understand the subject in a better way.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.
4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
5. The map question shall have the following topics :
   (a) Extent of the Mauryan empire.
   (b) Location of Ashokan inscriptions.
   (c) Extent of Kanishka's empire.
6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I :

The Mauryan empire: sources; political and cultural relations; administrative organization; society and economy; Ashoka's dhamma; downfall of the Mauryan Empire.

UNIT-II:

Sungas, Kanvas and Satvahanas: Survey of the sources; political overview; society and economy; culture and religion.

UNIT-III:

The Indo Greeks, Shakas and Parthians: Survey of the sources; polity; society and economy.

UNIT-IV:

Kushana and Post-Kushana Period: Survey of the sources; Political; socio-economic; cultural and religious conditions.

Essential Readings :

1. Bongard Levin, G. : *Mauryan India,* Sterling, Delhi, 1985.
2. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
3. Majumdar, R.C. et al, eds. : *The History and Culture of the Indian People,* Bhartiya Vidya Bhawan, Mumbai, 1951.
4. Mukherjee, B.N. : *The Rise and Fall of the Kushana Empire,* Firma KLM, Calcutta, 1988.
5. Narain, A.K. : *The Indo–Greeks,* Chaerendon Press, Oxford, 1957.
6. Nilakantha Sastri, K.A. (ed.) : *The Age of the Nandas and Mauryas,* Varanasi, 1952.
8. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed., University of Calcutta, Delhi, 1996.
7. Shastri, A.M. : *Early History of the Deccan, Sandeep Prakashan,* New Delhi, 1987.
8. Shrimali, K.N. : *Prachin Bharat Ka Itihas,* Karyanvaya Nideshalay, Delhi University , Delhi 2009.
9. Singh Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century*), Pearson Education, Delhi, 2009.
10. Thapar, R. : *Ashoka and the Decline of the Mauryas, 2nd ed.* Oxford University Press, Delhi, 1997.
11. Thapar Romila : *The Penguin History of Early India from the origin to AD 1300,* Penguin Books, New Delhi, 2002.

DEFENCE & STRATEGIC STUDIES

SEMESTER – I

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

PAPER : CONCEPT OF WARFARE

M. Marks : 70
Time : 3 Hrs.

Objective : This paper deals with the conceptual aspects of warfare focuses on the various aspects of warfare from conventional to Nuclear age.

SECTION-I

1. War : Its definition concept and evolution.
2. Principles of War, Historical Development, Meaning & Importance.

SECTION-II

3. Modern War : Meaning, Historical Development, Features and Humanization of War.
4. Non-Conventional Warfare with reference to Guerrilla War : Its Origin, Principles and Techniques.
5. Asymmetric Warfare

SECTION-III

6. Nuclear War, Beginning of Nuclear Era, Effects of Nuclear explosions, Nuclear strategy, Deterrence, Missiles and their classification.

SECTION-IV

7. Psychological aspects of war, Leadership, Motivation, Morale, Discipline, Panic and Fear.
8. Information Warfare.

Books Recommended :

1. Bernard, Brodie, Strategy in the Missile Age Rand Corp., Santa Monica, 2007.
2. Boring, E., Psychology in the Armed Services, National Academics, Washington 1945.
3. Clausewitz Von Carl, On War, Wilder Publications, United States, 2008.
4. Fuller, J.F.C, Armament and History, Da Press, New York,1998 .
5. Fuller, J.F.C., The Conduct of War, N.J. Rutgers University Press, New Brunswick, 1961.
6. Gerald, J., Defence Psychology, Pergamon Press, Michigan, 2008.
7. Harkabi Y., Nuclear War and Nuclear Peace, Transaction Publishers,Piscataway, New Jersey, 2008.
8. Hart, Liddle, Strategy of Indirect Approach, BiblioBazaar, 2011 Washington, 1945.
9. JFR Jacob, Surrender at Dacca, Birth of a Nation, Manohar Publishers & Distributors, New Delhi, 1997.
10. Malkasian Carter, A History of Modern Wars of Attrition, Greenwood Publishing Group, 2002.
11. May Larry, Emily Crookston, War: Eassy in Political Philosophy, Cambridge University Press, 2008.
12. Montgomery, A History of Warfare, Cleveland world Publishers,1968.
13. Palit, D.K., War in the Deterrent Age, Gardners Books, Delhi 2006.
14. Tripathi, K.S., Evolution of Nuclear Strategy, Vikas Publication, Delhi,1970.
15. Waelder Robert, Psychological aspects of war and peace, Geneva research Centre, Geneva, 1939.

Paper : <u>PRACTICAL</u> Total Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.

2. Practical exercise should be carried out on drawing sheets with explanatory notes or on Computer.

SECTION-A, Practical Test

Marks: 10

Note :

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Conventional Signs*:* Military and Geographical.
2. Introduction to Topographical Maps*:* Definition, features, classification, enlargement and reduction of maps.
3. Grid System*:* Four figure, six figure and eight figure map, references.

SECTION-B

Marks: 10

1. Practical Record	5 marks
2. Viva-Voce	5 marks

(Students be asked to prepare on current topics of general interest)

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DEFENCE & STRATEGIC STUDIES

SEMESTER – II

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : INTERNATIONAL RELATIONS, STRATEGIC ASPECTS

M. Marks : 70
Time : 3 Hrs.

Objective : This paper focuses on the various attributes of international relations and its role in maintaining peace & security.

SECTION-I

1. International Relations: Meaning, concept and its relationship with strategic aspects.
2. National interest and war: Definition of national interest & its relationship with security; War as an instrument of National Policy.

SECTION-II

3. Balance of Power: Meaning, Historical Development, Evaluation and its functioning.
4. Cold War: Definition, Cause and Means, Diplomatic, Psychological, Economic effects and Perspective.

SECTION-III

5. Collective Security: Meaning and Concept, Role of United Nations Organization in maintaining Collective Security.

SECTION-IV

6. Disarmament and Arms Control, Meaning and Concept, Efforts by UNO towards its achievement.

Books Recommended:

1. Flemming, D.F., *The Cold War and its Origin,* Doubleday, University of Michigan, United States, 1961.
2. Gaddis Lewis John, *The Cold War,* Penguin, UK, 2011.
3. Goldblat Jozef, *Arms Control: The New Guide to Negotiations and Agreements with New CD-ROM Supplement,* SAGE, London, 2002.
4. Griffiths Martin, *International Relations: The Key Concepts,* Psychology Press, 2002.
5. Joseph , Frankel , *The Making of Foreign Policy,* Oxford University Press, Oxford, 1963.
6. Knapp, W., *A History of War and Peace,* Oxford University Press, Oxford, 1967.
7. Kumar, Mahendra, *Theoretical Aspects of International Politics,* University of Notre Dame Press, Notre Dame, Ind., 1959
8. Lawrence Robert M., *Arms Control and Disarmament,* Burgers, 1973.
9. Lucas, *A History of Cold War,* Bloomsbury Publishing London, 2008.
10. Morgenthau, H., *Politics Among Nations,* McGraw-Hill New York, 1993.
11. Morton, Halperin , *Limited War in the Nuclear Age,* Greenwood Press, Michigan, 1978.
12. Orakhelashvili Alexander, *Collective Security,* Oxford University Press, UK, 2011.
13. Sarooshi Dan, *The United Nations and the Development of Collective Security: The Delegation by the UN Security Council of Its Chapter VII Powers,* Oxford University Press, UK, 1999.
14. Sheehan Michael J., *The Balance of Power: History and Theory,* Taylor & Francis, 1996.
15. Qamar, Hasanan, *Psychology for the Fighting Man,* Penguin Books, U.K, 1943.

Paper-B: PRACTICAL Total Marks : 20
Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A, Practical Test

Marks: 10

Note:

1. There will be three questions in all and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Distance and Scale*:* Definition, types, methods of representing scale, inters conversion of statement, into representative fraction, construction of simple scale line and comparative scale lines.

2. Directions*:* Types of North, finding out True North, direction by equal altitude method, Watch method, Map method and Compass method.

3. Service Protector: Its type and uses.

SECTION-B

Marks: 10

1. Practical Record 5 marks
2. Viva-Voce 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER – I

PAPER : HISTORY OF INDIA UPTO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit– IV in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of the Ancient period in Indian History.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Major Sources of History : Literary, Archaeological findings; inscriptions, coins and travel accounts.

II. Harappan Civilization : Extent, town planning; social economic and religious life.

III. Vedic Age: Political and Economic Life; social and religious life.

UNIT II

IV. Republics and Kingdoms 600-321 B.C.: Mahajanpadas; the rise of Magadha.

V. Jainism and Buddhism : Life and teachings of Mahavir Swami; Life and teachings of Gautam Buddha.

VI The Mauryan Empire : Central and Provinicial Administration; revenue, judicial and local administration; Ashoka's Dhamma.

UNIT III

VII Post Mauryan Period : Decline of Mauryas and Kanishka and his achievements.

VIII. The Gupta Empire : The rise of Guptas and social, economic, cultural and scientific Developments under Guptas.

IX. The Rise of Southern Kingdoms: Administration Under Pallavas; Rashtrakutas; Chalukyas.

UNIT IV

X. Regional Kingdoms in the North : Administration under Harsh Vardhana; origin of Rajputs.

XI South Indian States: administration under Cholas; Taxation and trade under Pandayas.

XII Map :

(i) Map on important Historical places: Ajanta, Arikamedu, Bodhgaya, Ellora, Harrappa, Hastinapur, Indraprastha, Kalibangan, Kalinga , Kanchipuram, Kannauj, Lothal, Nalanda, Patliputra, Sanchi , Shravenbelagola , Sopara, Tanjore, Texila, Ujjain, Varanasi.

(ii) Extent of Harappan Civilization.

(iii) Mauryan Kingdom under Ashoka.

Reading List :

1. Basham, A.L. : *The Wonder That Was India,* Calcutta : Rupa & Co., 1992.
2. Jha, D.N. : *Ancient India : An Historical Outline,* Delhi : Manohar, 2nd Rev. Ed., 2005.
3. Sharma, R.S. : *India's Ancient Past,* Delhi : OUP, 2005.
4. Sharma, R.S. : *Parambhik Bharat Ka Parichay,* Delhi : Orient Black Swan, 2007 (Hindi Medium).
5. Thapar, Romila : *Early India from the Origin to A.D. 1300,* Penguin, 2002.
6. Noboru, Karashima : *Concise History of South India, OUP, Delhi.*

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HISTORY

SEMESTER – II

PAPER : HISTORY OF INDIA 1200-1750 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit– IV in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of Medieval India.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Establishment of Turkish rule under Muizuddin of Ghor; Consolidation under Iltutmish and Balban.

II. The Khaljis : Administration; agrarian and market reforms of Alauddin Khailji.

III. The Tughlaqs : Muhammad Bin Tughlaq's administrative experiments and its impact, Feroz Shah Tughluq's administrative and economic reforms.

UNIT II

IV. Vijaynagar Kingdom : Establishment; Administration and Economy.

V. Formation of the Mughal Empire : Political condition of India on the eve of Babur's invasions; conquests and causes of his success.

VI. The Afghans : Establishment of Afghan power under Sher Shah Suri; administrative reforms.

UNIT III

VII. The Mughal Empire : Central and Provincial administration; Land revenue system.

VIII. The Mughal Empire : Mansabdari system; Jagirdari System.

IX. Debates on the Decline of the Mughal Empire.

UNIT IV

X. The Rise of the Marathas : conquests of Shivaji; administration.

XI. Evolution and main features : Bhakti movement; Sufism.

XII. MAP :

(i) Important Historical places : Agra, Ahmednagar, Bijapur, Chittor, Daulatabad, Delhi, Fatehpur Sikri, Golkonda, Jaipur, Lahore, Lucknow, Mathura, Panipat, Poona, Surat, Udaipur.

(ii) Extent of Empire under Allauddin Khalji.

(iii) Mughal Empire in 1707.

Reading List :

1. Alam, Muzaffar and Sanjay Subrahmanyam : The Mughal State 1526-1750, New Delhi : Oxford University Press, 1998.

2. Chandra, Satish : Medieval India from Sultanate to the Mughals (1206-1526), New Delhi : Har-Anand Publications Pvt. Ltd., 1997.

3. Chandra, Satish : Medieval India from Sultanate to the Mughals, Part -II Mughal Empire (1526-1748).

4. Chandra, Satish : Essays on Medieval Indian History, New Delhi : Oxford University Press, 1987.

5. Chandra, Satish : History of Medieval India, Delhi : Orient Black Swan, 2007 (Hindi Medium).

6. Habib, Irfan : Medieval India : The Study of Civilization, New Delhi : National Book Trust, India, 2008.

7. Ray Chaudhri Tapan and Irfan Habib : The Cambridge Economic History of India, Vol. I., c. 1200-c.1750, New Delhi : Orient Longman, 2007.

8. Rizvi, S.A.A. : The Wonder That Was India, Vol. II, 1200-1700, New Delhi : Rupa & Co., 1996.

9. Singh, Navtej : Madhkalin Bharat, National Book Trust (Punjabi)

POLITICAL SCIENCE

SEMESTER – I

POLITICAL THEORY-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The objective of this paper is to introduce first year undergraduate students to some of the basic aspects, concepts and themes in the discipline of Political Science.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Political Sciene :* Meaning, Definition and Scope.

2. Relationship of Political Science with Economics, History and Sociology.

Unit-II

1. *The State :* Definition, Elements and its Distinction from Government and Society.

2. *Theories of the Origin of State :* Social Contract, Historical/Evolutionary.

Unit-III

1. *State :* Liberal, Marxian and Gandhian View.
2. *Welfare State :* Liberal and Socialist Perspective.

Unit-IV

1. *Sovereignty :* Definition, Attributes/ Characteristics and Types.
2. *Theories of Sovereignty :* Monistic and Pluralistic.
3. *Political System : a)* Meaning & Characteristics.
   Political System : b) Functions according to David Easton & Almond & Powell.

Books Recommended :

1.	J.C. Johri	:	*Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2.	A.C. Kapoor	:	*Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3.	O.P. Gauba	:	*An Introduction to Political Theory,* Macmillan India Ltd., New Delhi, 2009.
4.	Andrew Heywood	:	*Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5.	Robert A. Dahl & Bruce S. Finebric Kner	:	*Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6.	Frank Bealey, Richard Chapman and Michael Sheehan	:	*Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7.	Andrew Heywood	:	*Political Theory : An Introduction,* MacMillan Press, London, 1999.
8.	Aron I. Skoble & Fiber R. Maclian (eds.)	:	*Political Philosophy : Essential Selections,* Pearson Education, 1999.
9.	Andrew Heywood	:	*Politics,* Macmillan, London, 1997.
10.	M.P. Jain	:	*Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11.	S.P. Verma	:	Modern *Political Theory,* General Publishing House, New Delhi. 1983.

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POLITICAL SCIENCE

SEMESTER – II

POLITICAL THEORY-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The aim of this paper is to deepen and expand the knowledge of the student in Political Science. It introduces higher level concepts and themes in political theory. It will provide students with the tools to engage with some key political issues of our times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Power, Authority, Legitimacy :* Meaning and Characteristics.
2. *Political Culture :* Meaning, Characteristics and Types.
3. *Political Socialisation :* Meaning, Characteristics and Agencies.

Unit-II

1. *Rights & Duties :* Meaning, Types and Co-relation between the two.
2. *Universal Declaration of Human Rights:* Meaning of Human Rights, Nature and Characteristics.

Unit-III

1. *Liberty :* Meaning, Types & its Safeguards.
2. *Equality :* Meaning, Types and Relationship between Liberty and Equality.
3. *Justice :* Meaning and its various Dimensions.

Unit-IV

1. *Social Change :* Meaning, Characteristics and Factors.
2. *Democracy :* Meaning, types, necessary conditions for the success of Democracy.
3. *Theories of Democracy:* Elite and Marxian.

Books Recommended :

1.	J.C. Johri	:	*Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2.	A.C. Kapoor	:	*Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3.	O.P. Gauba	:	*An Introduction to Political Theory,* MacMillan India Ltd., New Delhi, 2009.
4.	Andrew Heywood	:	*Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5.	Robert A. Dahl & Bruce S. Finebric Kner	:	*Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6.	Frank Bealey, Richard Chapman and Michael Sheehan	:	*Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7.	Andrew Heywood	:	*Political Theory : An Introduction,* MacMillan Press, London, 1999.
8.	Aron I. Skoble & Fiber R. Maclian (eds.)	:	*Political Philosophy, Essential Selections,* Pearson Education, 1999.
9.	Andrew Heywood	:	*Politics,* Macmillan, London, 1997.
10.	M.P. Jain	:	*Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11.	S.P. Verma	:	*Modern Political Theory,* General Publishing House, New Delhi, 1983.

ECONOMICS

SEMESTER – I

Paper : MICRO ECONOMICS

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objective :

Microeconomics is concerned with the analysis of economic phenomena from the perspective of the individual. The course covers the basic concepts and tools needed to undertake the analysis of such problems that arise due to the law of scarcity. The course also aims at introduction of the functioning of competitive and noncompetitive product markets and performance of the markets for resources. The students are expected to develop rudimentary understanding of how and why consumers, firms, and markets in the economy function the way they do.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction : Definition, Meaning, Nature and Scope of Economics.

Theory of Demand and consumer Behaviuor : Utility Analysis and Indifference Curve Analysis. Law of Demand and its Exceptions, Elasticity of Demand and its measurement, Consumer Surplus and its measurement.

Unit-II

Theory of Production and Costs: Concept, Law of Variable Proportions and Laws of Returns to Scale, Cost Concepts and Cost Curves in Short and Long periods (Traditional Theory of Costs).

Market Forms and Revenue: Behaviour of Average Revenue and Marginal Revenue under Perfect Competition and Imperfect Competition. Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Unit-III

Price and Output Determination: Price and Output Determination of the Firm and Industry under Perfect Competition, Monopoly and Monopolistic Competition in Short and Long run, Concept of Discriminating Monopoly.

Unit-IV

Distribution: Marginal Productivity and Modern Theories of Wage Determination, Ricardian and Modern Theories of Rent. Classical and Loanable Funds Theory of Interest, Risk and Uncertainty Theories of Profit.

Recommended Readings:

1. Chaudhary, Kalyanjit Roy(2012) : Modern Micro Economics, Vol. I & II Bookland Publishers, New Delhi.
2. Chopra, P.N., Singh, Joginder & Grewal, P.S. (Punjabi Medium) (Latest Edition) : Price Theory and Distrubution, Kalyani Publishers, Ludhiana.
3. Lipsey, R.G. & Crystal, K.A.(2011) : Principles of Economics, Oxford University Press, New Delhi.
4. Samuelson, P.A. (trans. Piar Singh) (1972) : Arth-Shastar Ek Prarmbhik Vishleshan, Punjabi University, Patiala
5. Stonier, A.W.. & Hague, D.C. (2005) : A Text Book of Economic Theory.

Supplementary Readings:

1. Ahuja, H.. (2012) : Advanced Economic Theory, S.Chand & Co., New Delhi.
2. Chopra, P.N.(2012) : Micro Economics Theory and Welfare Economics, Kalyani Publishers, New Delhi.
3. Dwivedi, D.N. (2012) : Microeconomics-Theory and Applications, Pearson Education Delhi.
4. Pindyck, Robert, S., Rubinfeld Dainel, L. and Mehta, P.L. (2013) : Microeconomics, Prentice Hall of India, New Delhi.
5. Ray, N.C. (1980) : An Introduction to Microeconomics, The Macmillan, New Delhi.
6. Robinson, John (Trans.) (Latest Edition) : Apuran Prityogita Di Arhiki, Punjabi University, Patiala.
7. Salvatore, D (2009) : Micro Economics: Theory & Applications, Oxford University Press, New York.
8. Singh, H.K. Manmohan (Trans Vashisht, Om Parkash) (1971) : Mang Sidhant Ate Mishrat Arth-Vivstha Vich Arthik Ganana, Punjabi University, Patiala.

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ECONOMICS

SEMESTER – II

Paper : MACRO ECONOMICS

Max. Marks	: 100
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 hours

Course Objective:

This paper aims to familiarize the student with the generally accepted principles of macroeconomics. It deals with aggregates i.e. consumers as a whole, producers as a whole, exporters and importers as a whole, the effects of government spending and taxation, and the monetary policy of the central bank. The course includes the basic theories of determination of income, consumption, investment, employment, money and interest, inflation, Monetary and Fiscal policies, and business cycles.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type question i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidate shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction: Nature, Meaning and Scope of Macro-Economics.

Consumption Function:
Average and Marginal Propensity to Consume, Keynes' Psychological Law of Consumption.
Investment Function:
Types of Investment, Investment Demand Schedule and Factors Affecting Investment Decisions, Marginal Efficiency of Capital, Static and Dynamic Multiplier.

Unit-II

Determination of Income and Employment:
Classical and Keynesian Theories of Income, Output and Employment, Say's Law of Markets. Principle of Effective Demand.

Unit-III

Money and Banking:
Money : Definition, Functions and Role
Quantity Theory of Money: Fisher's Equation and Cambridge Equation, Keynesian Liquidity Preference Theory.
Banking: Major Functions of Commercial Banks and Process of Credit Creation.

Unit-IV

Inflation and Macro-Economic Policies:
Cost-push and Demand-pull Theories of Inflation, Measures to Control Inflation. Monetary and Fiscal Policies for Stabilization.

Trade Cycle: Meaning and Phases.

Recommended Readings:

1. Dernburg, T.F. & McDougal, D.M.(1983) : Macro Economics, McGraw Hill, New York.
2. Ghuman, Ranjit Singh (latest edition) : Antar-Rashtriya Arth Vigyan, Punjabi University, Patiala.
3. Shapiro, E. (1996) : Macroeconomic Analysis, Galgotia Pub.(P) Ltd., New Delhi.
4. Sharma, O.P. (Punjabi Medium) (latest edition) : Macro Economics, Punjabi University, Patiala.
5. Vaish, M.C. (2010) : Macro Economic Theory, Oxford Unversity, Press, New Delhi.

Supplementary Readings:

1. Ackley, Gardner (1985) : Macro Economic Theory, McMillan, New York.
2. Ahuja, H.L. (2004) : Macroeconomics Theory and Policy, S.Chand Pub. New Delhi.
3. Baird, C.W. (1982) : Elements of Modern Economics, West Publishing Company.
4. Dwivedi, D.N. (2012) : Macroeconomics-Theory and Policy, Tata McGraw Hill Publication House, New Delhi.

SOCIOLOGY

SEMESTER - I

FUNDAMENTALS OF SOCIOLOGY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper aims at introducing Fundamentals of Sociology to the beginners of the subject,the basic understanding about Sociology as a discipline. Study of various terms, concepts and processes will help students in formulating a Sociological Viewpoint and an easy comprehension of the discipline at later stages.

Course Content :

Unit-I

Introduction to Sociology: Origin and Development; Nature and Significance.

Relationship of Sociology with other Social Sciences –Anthropology, History and Psychology.

Unit-II

Understanding Society: Meaning, Characteristics, Theories of Origin of Society – Organic and Social-Contract. Relationship between Individual and Society.

Social Groups - Meaning, Characteristics and Classification with special focus on Primary and Secondary Groups.

Unit-III

Culture: Meaning and Features, Culture and Civilization, Cultural Lag, Acculturation, Assimilation, Cultural Pluralism.

Dimensions of Culture: Cultural Trait, Cultural Patterns, Cultural Complexes, Cultural Relativism.

Unit-IV

Socialization: Meaning, Stages, Agencies and Theories of Mead and Cooley.
Social Control: Meaning, Types and Agencies – Formal and Informal

Essential Readings:

1. Bottomore, T.B. (1975) : *Introduction to Sociology,* Bombay : Blackie and Sons.
2. Bottomore, T.B. (1975) : *Sociology : A Guide to Problems and Literature* (Hindi and English), Bombay : Blackie and Sons.
3. Davis, Kingsley (1978) : *Human Society,* London : MacMillan Company.
4. Dube, S.C. (1990) : *Understanding Society - A Text Book*, NCERT.
5. Maciver, R.M. and C.H. Page (1983) : *Society,* London : MacMillan Company.
6. Macionis, John, J. (2005) : *Society: The Basics,* New York : Prentice Hall.
7. Madhurima (2009) : *Readings in Sociology – Part-I,* Jalandhar : New Academic Publishing House (All Mediums).
8. Rao, Shankar, C.N. (2005) : *Sociology—Primary Principles*, S.C. Chand and Company Ltd.
9. Sharma, R.N. (2001) : *Samajshastra Ke Sidhant,* New Delhi: Atlantic Publishers.

Further Readings :

1. Broom, L. and P. Selznick (1968) : *Sociology,* New York : Harper and Row.
2. Berger, Peter L. (1998) : *Invitation to Sociology : A Humanistic Perspective,* U.S.A. : Pelican Books.
3. Giddens, Anthony (2001) : *Sociology : A Textbook for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes & Perspectives,* New Delhi : Oxford University Press.
5. Schaefer, Richard, T. and Robert P. Lamm (1999) : *Sociology*, New Delhi : Tata-McGraw Hill.

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SOCIOLOGY

SEMESTER - II

SOCIOLOGY STRATIFICATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

All over the world, social groups are differentiated from one another and often ranked in terms of certain criteria. In this paper, students are exposed to the theoretical understanding of social stratification. In the Indian context, it is pertinent to apprise the students of the concept of social mobility and various factors that contribute to it. The major purpose of this course is to prepare the students to understand the hierarchical structure of groups in various societies and help them understand the social mobility.

Course Content

Unit-I

Social Stratification – Meaning, feature and functions; Inequalities – Social and Natural.
Elements : Differentiation, Hierarchy, Ranking, Reward, Evaluation.

Unit-II

Theories of Social Stratification :
Functionalist – Davis and Moore.

Conflict – Marx.
Class, Status, Party – Weber.

Unit-III

Forms of Social stratification: Caste, Class, Race and Gender. Interface between caste and class.

Unit-IV

Social Mobility – Meaning, types, factors.
Indicators – Education, Occupation, Income.

Essential Readings :

1. Bendix, R. & Lipset, S.M. (1974) : *Class, Status & Power : Social Stratification in Comparative Perspective,* London : Routledge & Kegan Paul.
2. Ghurye, G.S. (1983) : *Caste, Class and Occupation,* Bombay : Popular Prakashan.
3. Giddens, Anthony (2001) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Johnson, Harry, M. (1998) : *Sociology : A Systematic Introduction*, Delhi : Allied Publishers.
6. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
7. Sharma, K.L. (1980) : *Essays in Social Stratification*, Jaipur : Rawat.
8. Tumin, M. (1987) : *Social Stratification,* New Delhi : Prentice Hall.

Further Readings :

1. Beteille, Andre (ed.) (1978) : *Social Inequality,* Auckland : Penguin Books.
2. Beteille, Andre (1996) : "Varna & Jati", *Sociological Bulletin,* Vol. 45, No. 1 (March) Pages 15-27.
3. Culvert (1982) : *The Concept of Class*, London : Hutchinson.
4. Gupta, Dipankar (1991) : *Social Stratification*, New Delhi : Oxford University Press.
5. Hughes, John *et al* (1995) : *Understanding Classical Sociology,* Marx, Weber & Durkheim, London : Sage.
6. Richardson, C.J. (1977) : *Contemporary Social Mobility*, L and Francies Printer.
7. Inglis David & John Bone (ed) (2006) : Social Stratification Dimensions of Social Stratification Caste ethnicity & Gender Taylor & Francis
8. Levine, Rhona (ed) (2006) : Social class & Stratification Rowman & Littlefield Publishers.
9. Samdna Peter (1990) : Social class & Stratification Routledge, N.Y.
10. Giddens, Anthony & Sutton W.Philip (2007) : Sociology: Introductory Readings Polity Press, Malden: M.A.
11. Schaefer, Richard, T. (2010) : Sociology: A brief Introductions Tata Mcgraw Hill., N.Y.

PUBLIC ADMINISTRATION

SEMESTER - I

PAPER : ADMINISTRATIVE THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	03 Hours

Objective of the Paper :

The objective of this paper is to acquaint the student with the basic concepts and principles of public administration. In addition, the paper would trace the evolution of public administration and its relationship with other social sciences.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning, Nature, Scope and Significance of Public Administration; Public and Private Administration; Public Administration as a Science or an Art; Relationship of Public Administration with other Social Sciences; Evolution of Public Administration since 1887.

Unit-II

Organization: Meaning, Types: Formal and Informal Organization
Forms of Organization: Department, Public Corporation, Government Company.
Principles of Organization: Hierarchy, Span of Control, Unity of Command, Authority and Responsibility.

Unit-III

Chief Executive, Line and Staff Agencies, Centralisation and Decentralisation, Decision Making

Unit-IV

Coordination: Concept, Methods and Hindrances
Communication: Concept, Process and Barriers
Supervison: Concept and Methods
Leadership: Concept, Styles, Qualities of a Good Administrator

Essential Readings :

1. Avasti and Maheswari : *Public Administration* (Agra, Laxminarayan Aggarwal Publication, 2011).
2. Chander Mohan Mahajan : *Elements of Public Administration* (Patiala : Publication Bureau (Panjabi) Punjabi University).
3. Fadia B.L. and Fadia Kuldeep : *Public Administration: Administrative Theories and* Concepts (Agra: Sahitya Bhawan Publication, 2011).
4. Felix A. Nigro and Llyod G. Nigro : *Modern Public Administration* (New York : Harper and Row, 1970).
5. K.K. Puri and G.S. Barara : *Elements of Public Administration*
6. M.P. Sharma and Sadana : *Public Administration in Theory and Practice* (Allahabad : Kitab Mahal, 2009).
7. Mohit Bhattacharya : *Public Administration : Structure, Process and Behaviour* (Calcutta : World Press, 2002).
8. Mohit Bhattacharya : *New Horizons of Public Administration,* Jawahar Publishers & Distributers, New Delhi 2012.
9. Pundrik Ojha and Kiran Sharma : *Public Administration: Theory and Practice* (Jalandhar: Raj Publishers, 2009).
10. R. K. Sapru : *Administrative Theories and Management Thought* (New Delhi, Prentice-Hall of India, 2008).
11. Rumki Basu : *Public Administration: Theory and Concept* (New Delhi: Sterling Publishers, 2008).
12. Rumki Basu : *Introduction to Public Administration* (New Delhi: Sterling Publishers, 1990).
13. S.L. Goel : *Public Administration: Theory and Practice* (New Delhi: Deep & Deep Publishers, 2003)
14. Sahib Singh and Swinder Singh : *Public Administration: Theory and Practice* (Jalandhar: New Academic, 2007)

Further Readings :

1. A.T. Phillip and K.H. Sivaji Rao : *Indian Government and Politics* (New Delhi : Sterling Publishers, 1989).
2. E. N. Gladden : *An Introduction to Public Administration* (London : Staples Press, 1964).
3. H. Koontz and Cyril O'Donnel : *Principles of Management: An Analysis of Managerial Functions* (New York : McGraw Hill, 1972).
4. John, M. Pfiffner and R. Vance Presthus : *Public Administration* (New York : Ronald Press, 1953).
5. John M. Pfiffner and Frank P. Sherwood : *Admininstrative Organization* (New Delhi : Prentice Hall, 1960).
6. Nicholas Henry : *Public Administration and Public Affairs* (New Jersey: Prentice Hall, 2008).
7. Peter Self : *Administrative Theories and Politics* (London: George Allen and Unwin, 1972).
8. Pundrik Ojha and Kiran Sharma : *Public Administration: Theory and Practice* (Jalandhar : Raj Publishers, 2012).
9. Robert T. Golembiewski : *Public Administration as a Developing Discipline* (New York : Marcel Dekker, 1977).
10. S.P. Naidu : *Public Administration: Concept and Theories* (New Delhi, New Age International Publication).

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PUBLIC ADMINISTRATION

SEMESTER - II

PAPER : : INDIAN ADMINISTRATION

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of Indian administration particularly the functioning of executive, legislature and judiciary at the union and state levels. It would also make them aware of the bureaucratic set up at these levels.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Features of Indian Administration
Union Executive: President; Prime Minister, and Council of Ministers
Union Legislature: Lok Sabha – Composition, Functions and Role: Rajya Sabha – Composition, Functions and Role

Unit-II

State Executive: Governor, Chief Minister and State Council of Ministers
State-Legislature: Legislative Assembly and Legislative Council – Composition, Functions and Role
Centre-State Relations: Administrative and Legislative

Unit-III

Union and State Judiciary: Supreme Court – Composition, Functions and Role
High Court – Composition, Functions and Role
Control over Administration: Legislative and Judicial
Delegated Legislation: Meaning, Reasons and Safeguards

Unit-IV

Cabinet Secretary – Powers, Functions and Role
Chief Secretary – Powers, Functions and Role
District Administration: Structure and Functions

Essential Readings

1. A. Avasthi : *Central Administration* (New Delhi: Tata McGraw Hill, 1980)
2. Arora, Ramesh. K and Chaturvedi Geeta : *Indian Public Administration: Institution and Issues,* (New Delhi, Wishwas Prakashan, 2000)
3. Fadia, B.L. and Fadia Kuldeep : *Indian Administration:* (Agra: Sahitya Bhawan Publication, 2011)
4. K.K.Puri : Indian Administration (Jalandhar : Bharat Prakashan, 2006)
5. P.D. Sharma, B.M. Sharma : *Indian Administraion Retrospect and Prospect* (Jaipur: Rawat Publication, 2009)
6. R.K. Sapru : *Indian Administration* (Ludhiana: Kalyani Publishers, 2001)
7. Sahib Singh and Swinder Singh : *Public Administration: Theory and Practice*, (Jalandhar: New Academic, 2007)
8. S.R. Maheshwari : *State Government in India* (New Delhi: Mc. Millan, 1979)
9. S.R. Maheshwari : *Indian Administration* (New Delhi, Orient Longman, 2001)

Further Readings

1. M.V.Pylee : Constitutional Government in India (Bombay: Asia, 1965)
2. Government of India, 2nd ARC : 13th Report-Organisational Structure of GOI
   15th Report-State and District Administration

PHILOSOPHY

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

Paper : ELEMENTS OF PHILOSOPHY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS & OBJECTIVES :

The aim of this paper is to familiarize the students with the subject, its branches, problems and methods. The contents of this paper provide the students with a wider canvas about tackling day-to-day problems from a larger perspective.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be 9 questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidates shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature of Philosophy (Introduction).
2. Problems of Philosophy with special focus on social equality, self knowledge and rationality.
3. Methods of Philosophy : Critical and Reflective approach.

Unit-II

4. Introduction to main branches of Philosophy : Metaphysics, Epistemology, Ethics, Social Philosophy and Aesthetics (The interrelation between the branches will be focused).
5. Relation of Philosophy with Science and Religion.
6. Nature of Art and Aesthetic Experience

Unit-III

7. Ethics and Social Philosophy : Good life and Good Society.
8. Morality in Public and Private life.
9. Individual and Society.

Unit-IV

11. Justice : Virtue, Fairness, Equality.
12. Tolerance : Respect for Cultural Pluralism and Social diversities.
13. Caste System in India : Jyoti Ba Phule, Gandhi, Ambedkar.

Essential Readings :

1.	G.L. Chandramani	:	Hitopadesa, Jaico Publishing House, 1995.
2.	Mandukya Upanisad, Yamuna Prasad Tripathi	:	Varanasi Bhartiya Vidya Prakashan, 1966.
3.	Narvane, V.S.	:	Modern Indian Thought, Orient Longman Publishers, 1978.
4.	Titus, H.H.	:	Living Issues in Philosophy, Oxford University, 1993.
5.	Amartya Sen	:	The Idea of Justice, The Belknap Press of Harvard University Press Cambridge, Massachusetts, 2009.
6.	Calvin Lewis Pinchin	:	Issues in Philosophy, Palgrave Macmillan, London, 2nd Ed. December, 2004.
7.	Morris Weitz (ed.)	:	Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

Suggested Readings :

1.	Aesop's Fables	:	Penguin Books, Harmondsworth, 1998.
2.	Dr. B.R. Ambedkar	:	Annihilation of Caste, Navayana Publishers, New Delhi, 1936.
3.	Jyotiba Phule	:	Gulamgiri (The Slavery), Hindi Translator S. Murti, Cultural Publishers, Lucknow, 3rd Ed. 1994.
4.	Narayana Hitopadesa	:	Translated from Sanskrit by A.B.D. Haksar, Penguin Books, 1998.

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PHILOSOPHY

SEMESTER-II

Paper : LOGIC

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS AND OBJECTIVES :

This paper aims at a systematic study of the Science of Logic which is the most effective means of developing logical abstract thinking in us. It tries to provide students with a mastery of Logic so that they can think in clearer terms and be less prone to error.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be **9** questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidate shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature, Scope and Utility of Logic.
2. Terms and Propositions : Kinds of Terms, Connotation and Denotation of Terms. Aristotle's classification of proposition (Square of Opposition—Contradictories), Contraries, Sub-Contraries and Sub-Alterns.

Unit-II

3. Laws of Thought : Identity, Contradiction, Excluded Middle and Sufficient Reason.
4. Argument : Immediate Inference and Mediate Inference. Some kinds of immediate inference : Conversion, Obversion, Contraposition, Inversion.

Unit-III

5. Categorical Syllogism : The Structure and Rules of validity of Pure Categorical Syllogism, Figures and moods, Fallacies of Syllogism.
6. Introduction to Truth-Tables, Negation, Conjunction, Disjunction, Implications and Equivalences.

Unit-IV

7. Nature of Induction : Distinction between Deduction and Induction.
8. Kinds of Induction.
9. Causation : Nature of Cause, Plurality of Causes.

Essential Readings :

1. Copi, I. M. : Introduction to Logic (N.Y., Macmillan, 1972, Hindi Translation available); London : Routledge and Kegan Paul.
2. Copi, Irvin M. : Introduction to Symbolic Logic (Prentice Hall of India), New Delhi, 1998.
3. Cohen and Nagel : Introduction to Logic and Scientific Method (Allied Publishers), New Delhi, 2000.

Suggested Readings :

1. Alice Ambrose, Morris Lazerowitz : Fundamentals of Symbolic Logic, revised ed., Holt, Rinehart and Winston, New York, 1962.
2. F.H. Bradley : The Principles of Logic, Oxford University Press, London, 1950.
3. John Dewey : Logic, Henry Holt and Company, New York, 1938.

PSYCHOLOGY

SEMESTER –I

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-I

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Nature of Psychology, Goals and Branches of Psychology.

Schools of Psychology:

a) Brief Introduction: Associationism, Functionalism, Structuralism
b) Psychoanalysis, Behaviourism, Gestalt

Unit II

Emotions : Definitions and Concept of Emotions, Types of Emotions, Measurement of Emotions.
Theories of Emotions (James–Lange, Cannon Bard)

Unit III

Method of Psychology: Experimental Method, Observational Method.
Sampling Techniques, Survey Method.

Unit IV

Motivation: Definition, Nature, Concept. Types of Motivation: Extrinsic and Intrinsic, Theories of Motivation: Humanistic (Maslow). Need Theories (McClelland and Murray).

Note: The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Level of Aspiration.
2. Facial Expressions in Emotions
3. Public Opinion Survey.
4. Measurement of Motivation
5. Zeigarnik Effect
6. Familiarization of any five apparatuses

Books Recommended :

Essential Readings :

1. Ciccarelli, D. (2008): Introduction to Psychology, Delhi: Pearson.
2. Garrett, H.E. (1966) : Statistics in Psychology and Education, New Delhi : Vakils, Feffer and Simons.
3. Kerlinger, F. N. (1964) : Foundations of Behavioural Research, New York Rinehart and Winston.
4. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology, Singapore : McGraw Hill.

Reference Books :

1. Baron, R.A. (2003) : Psychology, New Delhi : Pearson Education.
2. Das, J.P. (1998) : The Working Mind: An Introduction to Psychology New Delhi: Sage.
3. Feldman, R.S. (1998) : Understanding Psychology, New Delhi : Tata McGraw Hill.
4. Guilford, J.P. and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education, Singapore : McGraw Hill.

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PSYCHOLOGY

SEMESTER –II

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-II

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Personality – Concept, Trait Theories (Eysenck Costa and MCrae) Psychoanalytic Theory – (Freud).

Humanistic Theory (Rogers) Measurement of Personality (Self Report Measures, Projective Techniques and Behavioural Assessment)

Unit II

Statistics: Graphical Representation of Data; Measures of Central Tendency and Variability.

Correlation : Meaning of Correlation, Rank Order and Product Moment-Calculation and Interpretation.

Unit III

Development: Concept, Heredity and Environmental Influences. Theories of Development: Erickson and Piaget's theory of Cognitive Development.

Unit IV

Intelligence : Concept, Theories of Intelligence: Spearman, Thurstone, Cattell, Guilford. Measurement of Intelligence (Verbal and Non Verbal Test; Individual and Group Tests).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Verbal Test of Intelligence
2. Non Verbal Test of Intelligence
3. Performance Test of Intelligence.
4. Eysenck Personality Questionnaire- Revised
5. Interest Inventory
6. Familiarization of any five apparatuses

Books Recommended :

Essential Readings :

1. Ciccarelli, D. (2008) : Introduction to Psychology, Delhi: Pearson.
2. Jain, S. (2000) : Introduction to Psychology, New Delhi: Kalyani
3. Kerlinger, F.N. (1964) : Foundations of Behavioural Research, New York Holy, Tinvhsty snf Eindyon.
4. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology, Singapore: McGraw Hill

Reference Books :

1. Baron, R.A. (2002) : *Psychology,* New Delhi : Pearson Education.
2. Das, J.P. (1998) : The Working Mind: An Introduction to Psychology, New Delhi: Sage.
3. Feldman, R.S. (1996) : Understanding Psychology, New Delhi: Tata McGraw Hill.
4. Guilford, J.P., and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
5. Garrett, H.E. (1966) : Statistics in Psychology and Education, New Delhi Vakils, Feffer and Simons.

GEOGRAPHY

SEMESTER - I

Paper-I : PHYSICAL GEOGRAPHY-I : Geomorphology

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

The course aims to familiarize the students with the fundamental concepts in physical geography, essentially geomorphology.

Course Content:

UNIT-I

Nature & Scope of Geography: Place of Physical Geography within the discipline of Geography, Divisions of Physical Geography (Geomorphology, Climatology Oceanography and Biogeography). (8 lectures)

Interior of the Earth: Constitution, Isostasy, Continental Drift (with special reference to Wegener's Theory and Plate Tectonics). (12 lectures)

UNIT-II

Movements of the Earth : Orogenic and Epeirogenic (with special reference to Geosyncline theory); landforms resulting from forces of Compression and Tension; Earthquakes and Volcanoes (causes, types and distribution) (20 lectures)

UNIT-III

Rocks: Origin, classification and characteristics. (8 lectures)

Major Land Forms: Mountains, plateaus and plains in the world. (10 lectures)

UNIT-IV

Geomorphic Agents and Landscapes: Fluvial, Glacial, Aeolian, Coastal and Karst. (22 lectures)

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).

2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.

3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.

4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.
The paper-setter must put note (5) in the question paper

List of Readings :

Essential Readings:

1. Blij, H.J. De & Petor O. Muller : *Physical Geography of the Global Environment,* John Wiley & Sons, Inc., New York, 1996.

2 Bryant, R.H. : *Physical Geography*, Rupa Publications India Pvt. Ltd., New Delhi, 2011.

3. Hussain, Majid : *Fundamentals of Physical Geography (3rd Edition),* Rawat Publication, Jaipur, 2011.

4. Hyndman, D. and D. Hyndman : *Natural Hazards and Disasters (2nd Edition),* Brooks/Cole Cengage Learning, Belmont, USA, 2009.

5. Khan, Nizamuddin : *An Introduction to Physical Geography*, Concept Publishing Company, New Delhi, 2001.

6. Lal, D.S. : *Physical Geography,* Sharda Pustak Bhawan, Allahabad, 2012.

7. Monkhouse, F.J. : *Principles of Physical Geography (8th Edition),* Hodder & Stoughton, London, UK, 1975

8. Pal, Saroj K. : *Physical Geography of India : A Study in Regional Earth Sciences,* Orient Longman, Calcutta, 1998.

9. Petersen, J.F., D. Sack and R.E. Gabler : *Physical Geography (10th Edition)*, Brooks/Cole Cengage Learning, Belmont, USA, 2011

10. Singh, Savindra : *Physical Geography,* Gyanodya Prakashan, Gorakhpur, 2012.

11. Strahler, Alan H. and Arthur N. Strahler : *Modern Physical Geography,* John Wiley, New York, 2003.

Further Readings:

1.	Bunnett, R.B.	:	*Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
2.	Dayal, P.	:	*A Text Book of Geomorphology*, Shukla Book Depot, Patna, 1995.
3.	Dury, G.H.	:	*The Face of the Earth,* Penguin, England, 1973.
4.	Gass, I.G.	:	*Understanding the Earth,* The Artemis Press, Sussex, 1973.
5.	Gautam, Alka		*Geomorphology,* Sharda Pustak Bhawan, Allahabad, 2012.
6.	Kaur, Dhian	:	*The Earth,* Kalyani Publishers, Ludhiana, 2000.
7.	Kale, V. and Gupta, A.	:	*Elements of Geomorphology,* Oxford University Press, Calcutta, 2001.
8.	Mamoria, C.P. and Niati, J.L.	:	*Bhautic Bhoogol Ke Tatwa* (in Hindi), Agra, 1976.
9.	Singh, Savindra	:	*Geomorphology,* Prayag Pustak Bhawan, Allahabad, 2004.
10.	Sparks, B.W.	:	*Geomorphology,* Longman, London, 1986.
11.	Thornbury, W.D.	:	*Principles of Geomorphology,* Second Edition, Wiley Eastern Ltd., New Delhi, 1993.

Pedagogy:

- Use of Audio-visual aids, maps, diagrams and other forms of illustrations especially in the Indian context are recommended.
- Relevant educational field trips must be arranged to illustrate the theory being taught.

Paper-II: CARTOGRAPHY-I Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (5+5)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography.
- To explain the elements of Map (Scale and Orientation) and steps in Map making.
- To introduce relief representation.

Course Content:

UNIT-I

Maps: Brief history of map making and types of maps.

Geometry of the Earth: Latitude, Longitude (Time Zones and International Date Line), Size and Shape of the Earth. (3 lectures, 6 lab sessions)

UNIT-II

Scales: Methods of representing scale;
Methods of construction of Graphic scales: Plain, Comparative, Time and Diagonal.
(6 lectures, 12 Lab. sessions)

UNIT-III

Directions and Bearings: Plotting of a course, True North, Magnetic North, finding True North with the Pole star, a watch and a rod; Bearing and its conversion. (6 lectures, 12 Lab. sessions)

UNIT-IV

Representation of Relief: Hill-shading, Hachures, and Layer Tints, Spot heights, Benchmarks, Contours.
(6 lectures, 12 Lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be in about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL.They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper.

List of Readings

Essential Readings:

1. Dink, Phyllis: *Map Work*, Atma Ram & Sons, 1962.
2. Khullar, D.R.: *Essentials of Practical Geography*, New Academic Publishing Company, Jalandhar, 2003.
3. Mishra, R.P. & Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
4. Sarkar, Asish: Practical Geography: A Systematic Approach (2nd Edition), Orient BlackSwan, Hyderabad, 2011.
5. Singh, Gopal: *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
6. Singh, R.L. & P.B. Singh: *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Bagulia, A.M.: *Practical Geography*, Anmol Publications Pvt. Limited, New Delhi, 2006.
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
3. Rather, G.M.: *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011.
4. Robinson et al.: *Elements of Cartography (6th Edition)*, Wiley India Pvt. Ltd., New Delhi, 2009.

Pedagogy:

- The use of topographical sheets of Survey of India
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

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GEOGRAPHY

SEMESTER - II

Paper-III: PHYSICAL GEOGRAPHY-II: Climatology & Oceanography

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To acquaint the students with the elements and attributes of climatology and oceanography
- To underscore the role of climate in human life
- To emphasize the significance of oceans within the global environmental system

Course Content:

UNIT-I

Definition of Climatology: Concepts of Climate and Weather, Nature and Scope of Climatology. (2 Lectures)
Climate: Elements and Controls. (4 Lectures)
Physical Structure of the Atmosphere: Troposphere, Tropopause, Stratosphere, Ozonosphere, Mesosphere, Thermosphere and Exosphere (attributes of these layers). (6 Lectures)
Physical and Chemical Composition of the Atmosphere: Dust particles, Vapour Particles, Active gases, Inert gases. (2 Lectures)
Insolation and Temperature: Distribution of Insolation (horizontal); Distribution of Temperature (vertical, horizontal, annual, seasonal and diurnal) (6 Lectures)

UNIT-II

Atmospheric Pressure and Wind Distribution: Atmospheric disturbances: Tropical Cyclones, Temperate Cyclones and Anticyclones. (8 Lectures)
Atmospheric Moisture: Condensation forms: cloud, dew, fog, frost and snow. (8 Lectures)
Precipitation: forms and types, world patterns (spatial and seasonal).
Introduction to Koppen's classification of world climate (4 lectures)
Role of Climate in Human Life : Atmospheric pollution and global warming: causes, consequences and measures of control (4 lectures)

UNIT-III

Oceanography : Definition, Nature and Scope (5 lectures)
Topography of the Ocean Basins; Continental Shelf, Continental Slope, Abyssal Plain, Ridges, Deeps and Trenches (5 lectures)
Temperature and Salinity of ocean waters: World patterns and controlling factors (6 lectures)

UNIT-IV

Movements of Oceanic Waters: Waves, Tides and Currents; Surface currents of the oceans;
Role of Ocean Currents in heat distribution over the globe. (10 lectures)
Marine Deposits and Corals: Origin and types. (10 lectures)

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be about 25 words. Each part will carry 2 marks (Total 20 marks).

2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks. These will be in addition to the compulsory question I.

3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.

4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (5) in the question paper.

Essential Readings :

1. Critchfield, H.J. : *General Climatology,* Prentice Hall of India Private Ltd., New Delhi, 1975
2. Frederick K. and Edward J. Tarbuck : The Atmosphere: An Introduction to Meteorology, Prentice Hall of India Pvt. Ltd., New Delhi, 1995.
3. Hess Darrel, Dennis G Tasa : Mcknight's Physical Geography: A Landscape Appreciation (2011).
4. Khan, N. : *An Introduction to Physical Geography,* Concept, New Delhi, 2001.
5. Lal, D.S. : *Climatology,* Chaitanya Publishing House, Allahabad, 2009.
6. Sharma, R.C and Vatal, M : *Oceanography for Geographers*, Chetnya, Allahabad, 2005.
7. Singh, Malkit : Dimensions in Physical Geography, Rasmeet Parkashan, Jalandhar 2012.
8. Singh, Savindra : *Climatology,* Prayag Pustak Bhavan, Allahabad, 2004.
9. Trewartha, G.T. Delhi, : *An Introduction to Climate,* McGraw Hill Book Co., New International Student Edition, 1980.

Further Readings :

1. Bhutani, Smita : *Our Atmosphere,* Edited by R.C. Chandna, Kalyani Publishers, Ludhiana, Delhi, 2000.
2. Bunnett, R.B. *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
3. Gross, Grant M. : *Oceanography : A View of the Earth*, Prentice Hall, New Jersey, 1975.
4. Monkhouse, F.J. : *The Principles of Physical Geography*, University of London Press, London, 1959.
5. Pattersen, S. : *Introduction to Meteorology,* McGraw Hill Book Co., London, 2011
6. Stringer, E.T. : *Foundations of Climatology*, Surjeet Publications, Delhi, 1982.

Pedagogy:

- Conscious effort be made to make the students aware of the significance of climate and oceans to human life.
- Use of Slides, photographs and documentaries on climates and oceans strongly recommended.

Paper-IV: CARTOGRAPHY-II Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (10+10)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography
- To explain the elements of Map (Scale and Orientation) and steps in Map making
- To introduce relief representation and weather symbolization on maps

COURSE CONTENT

UNIT-I

Brief History of Cartography
Elements of Map Design (6 lectures, 12lab sessions)

UNIT-II

Enlargement and Reduction of Maps: Graphic methods – Square and Similar Triangles.
Introduction to concept of Global Positioning System (GPS).

(6 lectures, 12 Lab. sessions)

UNIT-III

Interpretation of Indian Weather Maps: General introduction to the study of weather maps, the scheme of weather symbols including Beaufort's scale employed in Indian Daily Weather Maps.

(6 lectures, 12 lab. sessions)

UNIT-IV

Weather in India: Summer season (period of summer monsoon), winter season, Weather Forecasting through the study of weather maps and recent advances in weather forecasting.

(6 lectures, 12 lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question I.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper

Essential Readings :

1. Mishra, R.P. & Ramesh, A. : *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
2. Singh, Gopal : *Mapwork and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 1995.
3. Singh, R.L. & Singh : *Mapwork and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.
4. Dink, Phyllis : *Mapwork*, Atma Ram & Sons, Latest Edition, 1962.
5. Anderle, R : *The Global Positioning System, Royal* Society of London, 1998.
6. Kulkarni, M.N : *The GPS and Its Applications, Training,* Volume GPS Training Course, Civil Engg. Dept., I.I.T. Bombay, 9-19 May, 2000.
7. Hoffman-Wellenhof, B. et. al.: *GPS Theory and Practice,* $4^{th\ Rev}$. Edition, Springer Wien, New York.

Further Readings:

1. Monkhouse, F.J. & Wilkinson, H.R. : *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
2. Robinson, A.H. & Randall, D. Sale: *Elements of Cartography*, John Wiley & Sons, New York (Sixth Edition), 1995.
3. Colombo, O.L. & Watkins, M.M.: *Satellite Positioning in US National Report to IUGG,* on Geodesy, 1991.
4. King, R.W. & Others: *Surveying with GPS,* University of New South Wales, Australia,1985.
5. Kulkarni, M.N.: *GPS from an Indian Perspective,* GIM International Journal, GITC Publication, The Netherlands, Vol. 14, Oct., pp. 43-45. (2000a).
6. Mueller, I.I.: *Global and Regional Geodynamics,* IAG Symposia 101, Springer Verlag, 1989.
7. Wells, D.E.: *Guideto GPS Positioning, Canadian* GPS Association, New Brunswick, Canada, 1988.

Pedagogy :

- The use of topographical sheets of Survey of India and weather maps.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

GANDHIAN STUDIES
SEMESTER –I

MAHATMA GANDHI: FAMILY AND EARLY LIFE (INDIA, ENGLAND AND SOUTH AFRICA)

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives :

The paper is designed to acquaint the students with the early life of Mahatma Gandhi in India and in London.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Family and Schooling

a) Family Background – Parents, Rambha & others
b) Neighbourhood and Early Impact
c) Schooling
d) Influence of Indian Scriptures

UNIT-II

As a Law Student in London

a) Dilemma Before Going to London
b) As a Law Student
c) Vegetarianism
d) Self-transformation and Home Coming

UNIT-III

Gandhi in South Africa

a) Journey to South Africa
b) Encounter with Racial Discrimination/Apartheid
c) Conditions of Indians in South Africa
d) Birth of Satyagraha

UNIT-IV

Satyagraha in Practice

a) Disfranchisement of Indians
b) Establishment of Natal Indian Congress
c) Asiatic Law Amendment Ordinance
d) Home Coming

ESSENTIAL READINGS:

1 Bhattacharyya, Buddhadeva : *Evolution of the Political Philosophy of Gandhi* (Calcutta: Calcutta Book House), 1969.

2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.

3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 1986, 1995, 2004 editions.

4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1987.

5. Gandhi, M.K. : *Hind Swaraj (*Ahmedabad: Navajivan Publishing House), 1992.

6. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi : Deep & Deep Publication), 2001.

7. Mishra, Anil Dutta : *Reading Gandhi* (New Delhi: Dorling Kindersley Pearson), 2012.

8. Nanda, B.R. : *Mahatma Gandhi - A Biography* (London: George Allen and Unwin), 1976.

FURTHER READINGS:

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.

2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.

3. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.

4. Nanda, B.R. : *Making of a Nation: India's Road to Independence* (New Delhi: Harper Collins), 1998.

5. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997 edition.

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GANDHIAN STUDIES

SEMESTER –II

GANDHI IN FREEDOM STRUGGLE - SOUTH AFRICA AND INDIA

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives:

The paper is designed to acquaint the students with life in South Africa and struggle against racial discrimination.

Pedagogy of the Course Work :

90% Lectures (including expert lectures).
10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Struggle for Human Rights in South Africa

a) Green Pamphlet
b) Indian Opinion
c) Visit to London
d) Interaction and Confrontation : Race & Caste

UNIT-II

Establishing Ashrams

a) Experience of Community Life in South Africa
b) Phoenix Settlement
c) Tolstoy Farm
d) Return to India

UNIT-III

Western Influences-I

a) Influence of John Ruskin
b) Influence of Henry David Thoreau
c) Influence of Leo Tolstoy
d) Influence of Emerson

UNIT-IV

Gandhi's entry into Indian Politics

a) Early Political Activities
b) Champaran Satyagrah
c) Kheda Satyagrah
d) Ahmadabad Mill Strike

Essential Readings:

1. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
3. Fischer, Louis : *Life of Mahatma Gandhi* (New York: Harper and Row), 1983.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001.
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992.
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999.
7. Kripalani, J.B. : *Mahatma Gandhi, His Life and Thought* (New Delhi: Publications Division, Ministry of Information and Broadcasting), 1971.
8. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi: Deep & Deep Publication), 2001.
9. Nanda, B.R. : *Making of a Nation : India's Road to Independence(New Delhi: Harper Collins), 1998.*
10. Parekh, Bhikhu : *Gandhi's Political Philosophy: A Critical Examination* (Delhi: Ajanta), 1989.

Further Readings :

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.
2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.
3. Bondurant, John V. : *Conquest of Violence: The Gandhian Philosophy of Conflict* (Bombay : Oxford University Press), 1959.
4. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
5. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.
6. Ganguly, Debjani & Docker, John (eds.). : *Rethinking Gandhi and Non-violence Relationlity Global Perspective* (New Delhi: Orient Blackswan Pvt.,), 2009.
7. Nanda, B.R. : *Mahatma Gandhi- A Biography (London :George Allen and Unwin), 1976.*
8. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997, edition.

JOURNALISM & MASS COMMUNICATION

SEMESTER –I

PAPER : INTRODUCTION TO MASS COMMUNICATION - I

Max. Marks	:	100
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will introduce to the students the general concepts and historical viewpoints in communication and media. The students would also get an understanding of the basic models communication and gain an understanding of the current scenario of media industry in India.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Definition, nature and concept of communication; types of communication: intra; inter; group and mass.

Unit-II : Basic models of mass communication : S-R model; Schramm's Model; Model based on Lasswell formula; Mathematical Model.

Unit-III : Brief overview of early Indian, American, British newspapers, The Tribune, The Times of India, The Times of London, The Daily Courant, NY World, NY Journal.

Unit-IV : Overview of the current status of the media industry in India.

PRACTICALS

Max. Marks : 20 Marks

1. Project on any one aspect of communication : 1 0 Marks
2. Case study of any one early newspaper : 1 0 Marks

Books Recommended:

Essential Reading :

1. Wilbur Schramm, (1960), *Mass Communication*, 2nd ed. Urbana, University of Illinois Pr.
2. Wilbur Schramm, (1953), *Process & Effects of Mass Communication*, Urbana, University of Illinois Press.
3. Lee Richardson, (1969), *Dimensions of Communication*, N.Y. Appleton- Century-Croft.
4. Kenneth K. Anderson, 1972, *Introduction of Communication: Theory and Practice*. Menlo Park, Cummings Pub. Co.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd..
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading:

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, N.Y.
3. Blumler, Jay G. & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- II

PAPER : INTRODUCTION TO MASS COMMUNICATION-II

Max. Marks	**:**	**100**
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives:

This course will introduce students to the basic terminology of various forms of mass media as well as folk and new media. They will also be apprised with application areas such as Advertising & Public Relations.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Basic terms, concepts, definitions and nature of Print, TV and Radio Journalism.

Unit-II : Folk Media: Types, reach and relevance.

Unit-III : New Media: Cyberspace as a source of information, communication and entertainment.

Unit-IV : Definition, role of Advertising and Public Relations.

PRACTICALS

Max. Marks : 20 Marks

1.	Case study of any one newspaper, radio station or TV channel	:	10 Marks
2.	Project on either folk or new media	:	10 Marks

Books Recommended:

Essential Reading :

1. Luthra, H.P., 1984, *Indian Broadcasting*. Publications Division, Min. of I & B.
2. Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi.
3. Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd., New Delhi.
4. Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth Publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading :

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, N.Y.
3. Blumler, Jay G. & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.
5. Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London.
6. Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher.
7. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York.
8. Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

POLICE ADMINISTRATION

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

PAPER : POLICE ADMINISTRATION IN INDIA

(A) Course Objectives :

The principal objective of this paper is to acquaint the students with the features of Indian Police Administration along with its history and growth. Considerable attention has been paid to the concept and significance of reforms in Police Administration with special reference to reform initiatives after independence. The endeavor of the course would be to familiarize the students with the Police Administration at the Union Level with special focus on the Union Ministry of Home Affairs and Central Armed Police Forces .The powers functions and role of Police at Union, State, District and Police Station level will also be discussed.

(B) Pedagogy of the Course Work :

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words . The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 =18 marks).
- Rest of the paper shall contain 4 Units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit-I

Concept, Role and Significance of Police; Origin and development of Police in Ancient, Medieval and British Period. Police Reforms in India after Independence.

Unit-II

Organization and Working of Union Ministry of Home Affairs; Organization and Working of Central Police Organizations with special reference to Central Bureau of Investigation (CBI); Intelligence Bureau (IB); Bureau of Police Research and Development (BPR & D); and National Crime Records Bureau (NCRB).

Unit-III

Origin, Structure and Working of Central Armed Police Forces (CAPFs) with Special Reference to BSF, CRPF, ITBP , CISF and SSB.

Unit-IV

Organization and Working of Police Administration at the State Level, District Level and Police Station Level. Commissionerate System of Policing.

Essential Readings:

1. Gupta, Anandswarup : The Police in British India: 1861-1947, Bureau of Police Research & Development, New Delhi, 2007.
2. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
3. Sharma, P. D. : Indian Police – A Developmental Approach, Research Publications, New Delhi, 1977.
4. Sen, Shankar : Indian Police Today, Ashish Publishing House, New Delhi, 1994.
5. K.P Singh : Police Gyan Vigyan, Bright Law House, New Delhi, 2004.

Further Readings:

1. Vadackumchery, James : National Police Commission: Issues for Rethinking, APH Publishing Corporation, New Delhi, 1998.
2. Saxena, Anil K. : Professionalism in Indian Police, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Chaturvedi, J.C. : Police Administration and Investigation of Crime, Isha Books, Delhi, 2006.
4. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.

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POLICE ADMINISTRATION

SEMESTER – II

Paper : CONSTITUTION OF INDIA

(A) Course Objectives:

The objective of this course is to give an overview to the students the basic information about the Constitution of India. The students would be taught concepts such as Preamble, Citizenship, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties. They are made to understand the political executive at the union and state level; the union and state legislature and judiciary at the Union and in the state. In addition, efforts would be made to discuss the mechanism available for ensuring police accountability.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :
(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit – I

Preamble, Citizenship, Fundamental Rights, Restrictions of Police Rights, Directive Principles of State Policy & Fundamental Duties.

Unit – II

Executive at the Union Level; President, Prime Minister and Council of Ministers; Union Legislature: Lok Sabha and Rajya Sabha; Judiciary at the Union Level: Supreme Court.

Unit-III

Executive at the State Level; Governor, Chief Minister and Council of Ministers. State Legislature: Vidhan Sabha and Vidhan Parishad. Judiciary in the State : High Court and Subordinate Courts.

Unit – IV

Public Accountability of Police through Constitutional and statutory bodies: National Commission for Schedule Caste, National Commission for Schedule Tribes, National Commission for Women, National Human Rights Commission. National Commission on Protection of Child Rights.

Essential Readings:

1.	Ramesh K. Arora and Rajni Goyal	:	Indian Public Administration: Institutions and Issues, Wishwa Prakashan, New Delhi, 1997.
2.	Avasthi and Avasthi	:	Indian Administration, Lakshmi Narain Agarwal, Agra, 1995.
3.	Norman D. Palmer	:	The Indian Political System, Houghton Hiffin, New York, 1975.
4.	Iqbal Narain (Ed.)	:	State Politics in India, Meenakshi Publications, Meerut, 1976.
5.	Granville Austin	:	The Indian Constitution : Cornerstone of a Nation, Oxford University Press, London, 1966.
6.	Sriram Maheshwari	:	State Government in India, Macmillan, New Delhi, 2000.

Further Readings :

1.	Bambri, C. P.	:	The Indian State – 50 Years, Shipra Publications, Delhi, 1977.
2.	Singh, Hoshiar (Ed.)	:	Indian Administration, Aalekh Publishers, Jaipur, 1990.
3.	Pye, Lucian W. and Sidney Verba (Eds.)	:	Political Culture and Political Development, Princeton University Press, New Jersey, USA, 1965.

WOMEN'S STUDIES

SEMESTER–I

Paper- : FOUNDATIONAL CONCEPTS IN WOMEN'S STUDIES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : The objective of this course is to conscientise the students about some of the key concepts in women's studies, their meaning from a feminist and gender perspective with special reference to India.

Course Contents :

Unit I: Gender

- Sex and Gender : Definition and Difference
- Gender Stereotypes: Genesis and Persistence through Family, School and Peer Group
- Social Construction of Gender: From infancy to Adulthood to Old age

Unit II: Patriarchy

- Definition and Origin of Patriarchy
- Manifestations of Patriarchy:
  - (a) Preference for Male Child
  - (b) Discrimination against girl-child and women in the family
  - (c) Violence against Women
  - (d) Discrimination against Women at the Workplace

Unit III: Empowerment

- Definition
- Types of Empowerment:
  - (a) Social – with reference to women's role in marriage and family
  - (b) Political – 73rd and 74th Constitutional Amendment Acts
  - (c) Economic – Employment and Property Rights

Unit IV: Women's Studies

- (a) Definition,
- (b) Rationale for Women's Studies,
- (c) Evolution of Women's Studies,
- (d) Women's Studies as a discipline.

NOTE:

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

1. Anderson, Margaret : *Thinking About Women,* Macmillan, New York, 1993.
2. Bhasin, Kamla : *What is Patriarchy?,* Kali for Women, New Delhi, 1994.
3. Bhasin, Kamla : *Understanding Gender,* Kali for Women, New Delhi, 2000.
4. Connel, R.W. : *Gender,* Polity, Cambridge, 2002.
5. Jain, Devaki and Rajput, Pam (eds.) : *Narratives from the Women's Studies Family,* Sage, New Delhi, 2003.
6. Poonacha, Veena : *Understanding Women's Studies*, RCWS, SNDT University, Mumbai, 1999.
7. Singh, Umesh Pratap, Garg, Rajesh Kumar and Nigam, Vivek Kumar : *Women Empowerment : Dimension and Direction,* Adhyayan Publishers and Distributors, New Delhi, 2012.
8. Woodward, Kath : *The Short Guide of Gender,* Rawat Publications, Jaipur, 2012.
9. Viz. M., Bhatia, M. and S.(eds) : *Women Studies in India: A Journey of 25 Years*, Rawat Publications, Jaipur, 2014

Further Readings :

1. Aravamudan, Gita : *Disappearing Daughters : The Tragedy of Female Foeticide,* Penguin, New Delhi, 2007.
2. Lerner, Gerda : *The Creation of Patriarchy,* Oxford University Press, New Delhi, 1986.
3. Lorber, Judith and Farell, Susan A. (ed.) : *The Social Construction of Gender,* Sage, New Delhi, 1991.
4. Makwana Ramesh H. : *Women Empowerment through Panchayati Raj,* ABD Publishers, Jaipur, New Delhi, 2012
5. Mies, Maria : *Indian Women and Patriarchy,* Concept Publishing Company, New Delhi, 1980.
6. Rajput, Pam & Kaur, Manvinder : "Women's Studies in Higher Education in India: Some Reflections", *Samyukta,* Vol. III, No.1, January, 2003.

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WOMEN'S STUDIES

SEMESTER -II

Paper : STATUS OF WOMEN IN INDIA-I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: The status of women in India has changed over time in relation to historical and cultural realities, levels of consciousness, perceptions and actions of individual women, women's groups and finally State initiatives. This course first aims to acquaint the student with women in the Indian tradition from ancient times to the present, a tradition which has arisen out of the heterogeneity of experience. Further it aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Course Contents

Unit I : Status of women in India in a historical perspective:

(a) Ancient India
(b) Medieval India
(c) Modern India

Unit II: Women and Family

(a) Origin of the family
(b) Types of family
(c) Gender Division of labour in family
(d) Female headed households

Unit III: Women, Religion and Caste

(a) Religion: Women's Status in major Indian religions - Hinduism, Islam, Sikhism, Christianity
(b) Caste: Introduction to caste system in India; Caste and Gender

Unit IV: Violence against Women

(a) Violence against Women: Definition as given by the United Nations

(b) Prevalent forms of violence against Women :

- Domestic violence
- Rape and Molestation
- Sexual Harassment
- Dowry Related Violence

NOTE:

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal, Banarsidass, Delhi, 1959.
2. Bader, Clarisse : *Women in Ancient India: Moral and Literary Studies,* Anmol Pub., Delhi, 1987.
3. Chatterjee, Meera : *A Report on Indian Women from Birth to Twenty*, NIPCCD, New Delhi, 1999.
4. Gopalan, Sarala and Shiva, Mira : *National Profile on Women, Health and Development,* VHAI, & WHO, 2000.
5. Gopalan, Sarala : *Towards Equality – The Unfinished Agenda : Status of Women in India-2001,* National Commission for Women, New Delhi, 2002.
6. Menon-Sen, Kalayani and Shiva Kumar, A.K. : *Women in India! How Free? How Equal?,* Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.
7. *National Human Development Report, 2001,* Planning Commission, Govt. of India, March, 2002.
8. Pruthi, Raj Kumar, Devi, Rameshwari and Pruthi, Romila, (eds.) : *Status and Position of Women: In Ancient, Medieval and Modern India,* Mangal Deep, Jaipur, 2001.
9. Sagade, J. : *Child marriage in India: Socio-Legal and Human Rights Dimensions,* Oxford University Press, New Delhi, 2012.

Further Readings :

1. Ali, Azra Asghar : *The Emergence of Feminism Among Indian Muslim Women,* 1920-1947, Oxford, Karachi, 2000.
2. Anand, Meena : *Dalit Women : Fear and Discrimination,* Isha Books, Delhi, 2005.
3. Bhattacharya, Rinki (eds.) : *Behind Closed Doors: Domestic Violence in India,* Sage, New Delhi 2004.
4. Choudhary, Prem : *Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India,* OUP, New Delhi, 2007.
5. Desai, Neera and Krishnaraj, Maithreyi (eds.) : *Women and Society in India,* Ajanta Publication, New Delhi, 1987.
6. Goodman, Jacqueline : *Global Perspectives on Gender and Work : Readings and Interpretations Reprint,* Rowman and Little Field Publishers, New York, Toronto Plymouth, UK, 2012.
7. Jacobson, Doranne and Wadley, Susan S. : *Women in India: Two Perspectives,* Manohar, New Delhi, 1986.
8. Kumar, Hajira (ed.) : *Status of Muslim Women in India,* Aakar Books, Delhi, 2002.
9. Mohanti, Bedabati : *Violence Against Women : An Analysis of Contemporary Realities,* Kanishka Publications, New Delhi, 2005.
10. Mohini Giri, V. : *Deprived Devis : Women's Unequal Status in Society,* Gyan, New Delhi, 2006.
11. Nagar, N.S. : *Changing Status of Indian Women,* Vista International Pub., Delhi, 2008.
12. Rajawat, Mamta : *Dalit Women: Issues and Perspectives,* Anmol Pub., New Delhi, 2005.
13. Thomas, P. : *Indian Women Through the Ages,* Asia Publishing House, Bombay, 1964.
14. Yadav, Ravi Prakash and Barsa Kumar Chandradeep : *Women Workers in India,* New Century Publications, New Delhi, India, 2012.

HUMAN RIGHTS AND DUTIES

SEMESTER-I

Paper : HUMAN RIGHTS AND DUTIES : CONCEPTUAL UNDERSTANDING

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

The course is designed to provide adequate theoretical understanding about humans rights and duties. It purports to develop a broad understanding of human rights and duties, awareness about the theoretical origins of human rights and their correlation with governance issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72

UNIT-I

THE CONCEPT OF HUMAN RIGHTS:

- Meaning and nature of Human Rights
- Classification of Rights
- The Concept of Human Rights

UNIT-II

CONCEPT OF HUMAN DUTIES:

- Meaning and nature of Human Duties; Moral, ethical, social, economic, political and cultural universal
- Classification of Human Duties: Individual, family, Community, Nation-State, Human kind and Mother Earth.
- Relationship between Rights and Duties.

UNIT-III

INTRODUCTION TO THEORIES OF HUMAN RIGHTS:

- Natural Rights Theory
- Liberal Theory of Rights,
- Legal/ positivist Theory of Rights
- Marxist Theory of Rights.
- Feminist Theory of Rights

UNIT-IV

DEMOCRATIC GOVERNANCE:

- Democracy and People's participation.
- Rule of Law: Non-arbitraries.
- Role of Civil Society

Essential Readings:

1. Brundlad Report : *Our Common future,* (1986) Oxford.
2. David Robert son : *A Dictionary of Human Rights,* (2004) Europa Publications, London.
3. Darren, J.O. Byrne : *Human Rights: An Introduction*, Pearson, (2005) Education Pvt. Ltd., Singapore.
4. Ian Brownlie, et al. (eds.): *Basic Documents on Human Rights,* (2006) Oxford
5. Jayapalan, N. : *Human Rights,* Atlantic Publishers, (2000) New Delhi.
6. Kalpana Kammabiran : C*rafting Human Rights Cultures* (2006), NALSAR University of Law, Hyderabad.
7. Gandhi, P.R. (ed.) : *Blackstone's International Human Rights Documents,* (2001) University, Delhi.

Further Readings

1. Baxi Upendra (ed.) : *The Right to be Human ,* (1987) *Lancer International,* New Delhi.
2. Sanajaoba, N. : *Human Rights in the New Millennium,* (2000) Manas Publications, New Delhi
3. Tripathi, Mani B.N. : *Jurisprudence,* (2008) *Faridabad*: Allahbad Law Agency
4. Lakhani, M.V. : *Studies in Juris Prudence*, (2013), Tech Publications New Delhi: Cyber

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HUMAN RIGHTS AND DUTIES

SEMESTER-II

Paper : HUMAN RIGHTS : INTERNATIONAL DIMENSIONS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

This paper purports to deal with promotion and protection of human rights in the international context, particularly in the UN bodies. It aims to create awareness regarding the Universal Declaration of Human Rights, 1948, significant Covenants along with the Optional Protocols.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e. 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72 marks

UNIT-I

INTERNATIONAL NORMS AND MECHANISMS:

- League of Nations
- The United Nations Charter and the development of Human Rights.

UNIT-II

INTERNATIONAL BILL OF RIGHTS:

- Universal Declaration of Human Rights (UDHR), 1948
- International Covenant on Civil and Political Rights (ICCPR), 1966; Optional Protocol
- International Covenant on Economic Social and Cultural Rights (ICESCR), 1966; Optional Protocol

UNIT-III

HUMAN RIGHTS AND UNITED NATIONS BODIES (I):

- UN General Assembly
- Economic and Social Council (ECOSOC)
- UN Human Rights Council

UNIT-IV

HUMAN RIGHTS AND UNITED NATIONS BODIES (II):

- International Labour Organization (ILO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Health Organization (WHO)

Essential Readings:

1. Philip (ed.) : *United Nations and Human Rights* (1966), Clearndon Press, Oxford.
2. Henry Steiner J. et al (eds.) : *International Human Rights in Context* (1966), Chapter 10, Clarendon Press, Oxford.
3. Saxena, J.N. et al (ed.) : *United Nations for Better World* (1986), Lancers Books, New Delhi.
4. Henkin Louis : *International Bill of Rights: The Covenant on Civil and Political Rights* (1981), Columbia University Press, New York.
5. Krasno Jean A. : *The United Nations* (2005), Viva books, New Delhi.
6. Lauterpacht, Hersch : *An International Bill of the Right of Man* (1945), Columbia University Press, New York.
7. Morsink, Johannes : *The Universal Declaration of Human Rights : Origins, Drafting and Intent* (1999), University of Pennsylania Press, Philadelphia

Further Readings

8. UN Centre for Human Rights : *International Human Rights Standards for Law Enforcement*(1966), World Campaign for Human Rights, Geneva.
9. Kapoor, S.K. : *Human Rights,* (2005) Allahabad Central Law Agency:
10. Aggarwal, H.O : *International Law and Human Rights*, (2008) Central Allahabad Law Agency:

RELIGIOUS AND SIKH STUDIES

SEMESTER- I

PAPER-I, HINDU RELIGIONS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious and Sikh Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course as one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9x2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4x18).

Course Contents

Unit. I. Vaishnavism : origin, development; features and institutions

Unit. II. Shaivism: origin, development; features and institutions

Unit. III. Shaktism: origin, development; features and institutions

Unit. IV. Bhakti Movement in India: growth and development; with special reference to Ramanuj and Chaitanya

Essential Readings

- ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: 'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2005-ਅੰਕ ਦੂਜਾ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਸਰਬਜਿੰਦਰ ਸਿੰਘ ਡ਼ਾ (ਸੰਪਾ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ ਭਾਗ ਤੀਜਾ,

- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ(ਸੰਪਾ) ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਵਿਸ਼ੇਸ਼ ਅੰਕ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪਤ੍ਰਿਕਾ
- ਬਲਦੇਵ ਉਪਾਧਿਆਏ, ਭਾਰਤੀ ਦਰਸ਼ਨ ਕੀ ਰੂਪਰੇਖਾ (ਹਿੰਦੀ)
- ਦੱਤਾ ਅਤੇ ਚੈਟਰਜੀ, ਭਾਰਤੀ ਦਰਸ਼ਨ (ਹਿੰਦੀ)
- Bhandarkar, R.G., *Vaishnavism, Shaivism and Minor Religious Systems*, Varanasi , 1965.
- Majumdar, A.K., Chaitanya, *His Life and Doctrine: A Study in Vaishnaism,* Bombay: Bhartiya Vidya Bhavan, 1969.
- Sharma, Krishna, *Bhakti and the Bhakti Movement: A New Perspective*, New Delhi: Munshiram Manoharlal, 1987.

Further readings

Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

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RELIGIOUS AND SIKH STUDIES

SEMESTER- II

PAPER-II NEW FAITHS AND SAINTS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit I. Jainism: Life and Teachings of Mahavira ; origin and development of Jainism

Unit. II. Buddhism: Life and Teachings of Lord Buddha; origin and development of Buddhism

Unit. III. Sant Kabir: Life, Teachings and Contribution

Unit. IV. Sant Ravidas: Life, Teachings and Contribution

Essential Readings

- ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: 'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2005-ਅੰਕ ਦੂਜਾ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਬ੍ਰਹਮਜਗਦੀਸ਼ ਸਿੰਘ, ਸੰਤ ਕਬੀਰ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਬਾਣੀ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

- ਡਾ. ਧਰਮ ਪਾਲ ਸਿੰਗਲ, ਗੁਰੂ ਰਵਿਦਾਸ, ਜੀਵਨ ਤੇ ਵਿਚਾਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ
- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ (ਸੰਪਾ) ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਲਾਲ ਬਸੰਤ ਕੁਮਾਰ, ਸਮਕਾਲੀ ਭਾਰਤੀ ਦਰਸ਼ਨ, ਮੋਤੀ ਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ 2006 (ਹਿੰਦੀ)
- Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.
- Dutt R.C., *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983.
- Chatterjee, Asim Kumar, *A Comprehensive History of Jainism,* Delhi: Munshilal Manoharlal Publishers, 2000.
- Vandeville, Charlotte, *A Weaver Named Kabir*, Oxford: India Paperbacks, 1997.

Further readings

- Vandeville, Charlotte, *Myths, Saints and Legends in Medieval India*, Delhi: Oxford University Press, 1999.
- Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

HOME SCIENCE

SEMESTER- I

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	40	10	1	3	40	10	100

Total : 100

Note : 1. Each Practical group will have 12-15 students.

PAPER : FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I (a) Meaning & Importance of Home Science.
(b) Functions of Home.

II (a) Home Scientist as an Entrepreneur.
(b) Agencies promoting Entrepreneurship- Commercial Banks, District Industries, Co-operative Societes.

Section B

III Interior Decoration

(a) Elements of Art - Line, Form, Pattern, Texture, Colour, Light and Space.
(b) Principles of Art in relation to interior decoration - Harmony, Balance, Rhythm, Proportion & Emphasis.

IV Colour

(a) Characteristics of colour
(b) Colour wheel
(c) Colour schemes

Section C

V Hygiene & Health

(a) Definition of Hygiene, Health
(b) Definition of infection, sources, carrier and control
(c) Definition and types of immunity.
(d) Immunization schedule

VI Causes & Spread of following diseases.

(a) Caused by insects – Malaria & Dengue
(b) Conveyed by ingestion – Enteric Fever, Cholera, Dysentery & Diarrhea
(c) Spread by droplet infection- chickenpox, measles, mumps & TB.
(d) Sexually transmitted diseases -AIDS.

Section D

VII Food Hygiene

(a) Definition
(b) Hygiene during preparation, service and storage of food.
(c) Domestic purification of water-
- Aquaguard
- Reverse Osmosis

VIII Food Adulteration

(a) Definition
(b) Common food adulterants and their effects on health.
(c) Household Methods of testing food adulteration.

PRACTICAL

Max. Marks : 50 Marks
Practical Theory : 40 Marks
Inter. Asses. : 10 Marks
Time : 3 hours per week.

1. Floor Decoration - Making of Alpana and Rangoli for different occasions.
2. Methods of detecting adulteration in any five foods such as ghee, castor sugar, milk, honey, red chili powder, tea leaves, turmeric powder etc.
3. Table setting, Table manners and Napkin foldings.
4. Making of a Chart/Model/Poster of Colour Wheel or Colour Schemes.
5. Survey of 5 households to study Immunisation schedule.

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HOME SCIENCE
SEMESTER- II

Scheme of Examination

Sr. No.	Theory: Name of Paper	Theory: No. of Papers	Theory: Time in hrs.	Theory: Marks allotted	Theory: Int. Ass.	Practical: No. of Papers	Practical: Time in hrs.	Practical: Marks Allotted	Practical: Int. Ass.	Total Marks
1.	Family Resource Management, Hygiene & Health	1	3	40	10	1	3	40	10	100
									Total :	**100**

Note: 1. Each Practical group will have 12-15 students.

PAPER: FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I. Resources

(a) Introduction
(b) Classification

II. Time Management

(a) Steps in making time plans.
(b) Tools in time management- peak loads, work curves and rest periods.

III. Money Management
(a) Types of Income
(b) Budget- Types, Advantages and limitations of budgeting, factors affecting budget, basic steps in planning of budget.
(c) Means of supplementing family income.

IV. Energy Management

(a) Fatigue – Types, Symptoms & Effects.
(b) Work Simplification (Mundel)

Section B

V. Furniture

(a) Factors affecting selection of furniture.
(b) Furniture requirement and arrangement for different rooms.
(1) Master Bedroom
(2) Drawing Room
(3) Dining Room
(4) Children's Room

VI. Flower Arrangement
(a) Definition and Types
(b) Principles of art in flower arrangement
(c) Material and Essential equipment used in Flower Arrangement.

Section C

VII. The Home maker as a Consumer
(a) Concept and objectives of Consumer Education.
(b) Rights and responsibilities of a Consumer.
(c) Malpractices in the production of consumer goods.
(d) Consumer guides- Standardized marks, labels, packaging, media and consumer redressal forum.

VII. Health Education
(a) Aims and Objectives
(b) Scope
(c) Importance

Section D

IX. Digestive System
(a) Diagram of Alimentary Canal
(b) Functions of mouth, stomach, intestines (Small and Large)
(c) Digestion of Carbohydrates, proteins and fats.

X. Simple first aid for burns, poisoning, electric shock, bleeding, drowning, fainting, fractures, insect bite, snake bite, nose bleeding, sunstroke, sprain, heart attack.

PRACTICAL

Max. Marks : 50 Marks
Practical : 40 Marks
Inter. Asses. : 10 Marks
Time : 3 hours per week.

1. Making of fresh flower arrangement for a corner and centre table.
2. Introduction to basic first aid techniques.
3. Cleaning & Polishing of household metals: brass, copper, silver, iron, aluminium, plastic and nonstick ware.
4. Cleaning and polishing of Wooden Furniture.
5. Cleaning of Glass windowpanes.

References

1. Anna Hong Rutt : *Home Furnishing,* Wiley Eastern Ltd., New Delhi, 1973.
2. Hazel Thompson, Criag old Day Rush : *Home with character,* Univesal Book Stall, Delhi, Kanpur 1969.
3. Betty Pepis : *Interior Decoration A to Z,* Doubleday & Co., Inc. New York, 1965.
4. Ray Faulkiner, Sarah Faulkner : *Inside Today's Home,* Holt, Rinehart & Winston, 1973.
5. R.S. Deshpandae : *Modern Ideal Home for India,* United Book Corporation, Poona, 1983.
6. R.S. Deshpandae : *Build your own Home,* United Book Corporation, Poon, 1983.
7. M.A. Varghese, N.M. Ogale, K. Srinivisan : *Home Management,* Wiley Eastern Ltd., 1985.
8. The Educational Planning Group, Delhi : *Home Management,* Arya Publishing House, New Delhi, 1986.
9. Stella Sournderaj : *A text book of Household Arts,* Orient Longman Ltd., 1974.
10. A Margaret Kaye : *A Student Hand Book of Housewifery,* J.M. Dent and Sons Ltd., London, 1958.
11. Ball, Vetrio Kloss : *Art of Interior Design,* The Macmillan Co., New York, 1962.
12. Goldstein H.I. and Goldstein V. : *Art in Everyday Life,* Macmillan, New York, 1964.
13. Swanson, Betty : *Introduction to Home Management,* Macmillan Co., New York, 1981.
14. Julia Elements : *101 ideas for flower arrangement,* C. Arthur Persons Ltd., London, 1963.
15. Halse A.O. : *The Use of Colour in Interior,* Mcgraw Hill Book Co., New York, 1961.
16. Walter Ian Fischman, Richerd Demsbe, William Bernard: *Basic Home Repairs,* A Grosset Super Good Life Book Publishers, New York, 1975.
17. Saxena, R. R. (1990) *Social and Preventive Medicine,* CBS Publishers and Distributors, Delhi.
18. Selman, A. C. (1992) *Health & Longevity,* Oriental watchman Publishing house, Park, Poona, India.
19. Bedi, Y. P. : *Hygiene and Public Health.*
20. Pearce Evelyn. C., Anatomy and Physiology for Nurses, Oxford University.
21. Best, Charles, H.and Taylor, N.B., The Living Body – A Text in Human Physiology, Asia Publishing House.
22. Phadke : Aids to Hygiene
23. Bhatia, B.C. and Sri P.N. (1968), Elementary Hygiene, Oriental Longman.
24. Seetharam, (2005) *An Introduction to Family Resource Management*, CBS Publishers and Distributors, Delhi.
25. Kaur and Macneil, (1994), *Theory and Practice of Home Science*, Subject Publication, New Delhi.

Journals

1. Indian Journal of Home Science, Home Science Association of India, Sri Avinashilingam Home Science College for Women, Coimbatore.
2. Inside Outside, Edited and Published by Malika Sarabhai, Wadia Building, 19/21 Dalal Street, Bombay.
3. Journal of Home Economics, American Home, A Venue, NW Wahington.

AGRICULTURE

SEMESTER-I

Paper-A : Basics of Agricultural Botany & Forestry

(THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week : 1. Theory - Six of 45 minutes duration each.

2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall have five sections.
3. Section A shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Sections B, C, D and E shall have two questions each from respective sections, out of which one question from each section is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Plant Morphology - Root, Stem, Leaf - Their types and modifications.

Inflorescence - Types and classification.

Flower - Parts and their functions.

Fruit - Types and classification.

Unit-II

Pollination - Type, Significance, Emasculation, Techniques, mode of Reproduction and their significance. Life cycle of a typical angiosperm. Concept of Plant Bleeding, introduction to self – Incompatability.

Unit-III

Cultivation practices including soil requirements, Water requirements, Improved varieties of the region for :

Cereals - Wheat, Rice, Maize.

Fibres – Cotton, Jute.

Oil Crops - Sarson, Soyabean.

Fruits - Mango, Grapes, Citrus, Sapota.

Unit-IV

Importance of forests, Important forest trees of India and status of forestry in Punjab, its significance.

Raising of Nurseries for forestry.

Social forestry : Definition, concept & its significance.

PRACTICAL

Max. Marks	:	25
Practical	:	20 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Study of root, stem, leaf modifications.

Raising of crops/visit to farms/fields to have knowledge of various agricultural tools, implements, and methods of crop producton of related area.

Visit to Fruit and Forest nurseries.

Performance of emasculation techniques.

Books Recommended :

1. ICAR : *Hand Book of Agriculture,* New Delhi (2008).
2. S.S. Sinha, P. Gupta and A.K. Gupta : *Hand Book of Agricultural Science,* Kalyani Publishers, Ludhiana (2009).
3. P.A.U., Ludhiana (2010). : Rabi Crops *Package of Practices.*
4. P.A.U., Ludhiana (2010). : Kharif Crops *Package of Practices.*
5. Bhatia : *Elementary Biology,* Trumen Publishers, Jalandhar (2010).
6. Alan Stephens : *Dictionary of Agriculture,* Universal Book Stall, New Delhi (1998).
7. Chidda Singh, Prem Singh and Rajbir Singh : *Modern Techniques of Raising Field Crops,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2009).
8. B.S. Chundawat and S.K. Gautam : *Text Book of Agroforestry,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2006).

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AGRICULTURE

SEMESTER-II

Paper-B : Agricultural Economics and Agronomy
(THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week : 1. Theory - Six of 45 minutes duration each.
2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1. The syllabus of this paper has been divided into four Units.
2. Question paper shall have five sections.
3. Section A shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Sections B, C, D and E shall have two questions each from respective sections, out of which one from each section is to be permitted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural Banking, Agricultural Loans – Its various types, repayment mode, form filling for agricultural loans.

National policy for agricultural loans.

Agriculture credit cards.

Fundamentals of land measurements and land revenue

Unit-II

Various legal aspects of import and export of raw crop and crop products.

Quarantine laws.

Fundamentals of agricultural economics.

Psycological pressure on farmer and villagers of different classes.

Unit-III

Storage of vegetables, Fruits, Grains at local and large level.

Vegetable and fruit preservation.

Unit-IV

Soil types, Management, Improvement and Amendments.

Soil Testing.

Fundamental of fertilizers and manures.

Important fertilizers and their uses.

Nitrogen fixation.

PRACTICAL

Max. Marks	:	25
Practical	:	20 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Visit to Agricultural, Rural Banks to have basic knowledge of loan processing and recovery.

Identification of financial problems of a village.

Identification and collection of fertilizers.

Preservation of fruits and vegetables in Pickle, Jam, Jellies, Squash and Sauce forms.

Books Recommended :

1. K.T. Acharya : *Every Day Indian Processed Foods,* National Book Trust, New Delhi (2008).
2. Malkit Nagi and Satinder Bajaj : *Home Preservation of Fruit and Vegetables,* P.A.U., Ludhiana (2008).
3. ICAR : *Hand Book of Agriculture,* New Delhi.
4. T.D. Biswas and S.K. Mukherjee : *Text Book of Soil Sciences,* Kalyani Publishers, Ludhiana (2008).
5. Girdhari Lal, G.S. Siddappa and G.L. Tandon : *Preservation of Fruit and Vegetables,* ICAR Publication, New Delhi (2008).
6. Das and Gupta : *Manures and Fertilizers,* Kalyani Publishers, Ludhiana (1999).

ENVIRONMENT CONSERVATION

SEMESTER – I

Paper : ENVIRONMENT AND FORESTRY

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	65	10	25	-	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:
There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : ENVIRONMENT AND FORESTRY

Section-I

Environment: Definition, Scope & importance of Environment. A brief introduction of Physical & biological environment.

Ecosystem: Concept of Ecosystem, Biotic & abiotic components, food chain, food web trophic levels, types of ecosystems, terrestrial and aquatic. Biogeochemical cycles - nitrogen, carbon, phosphorous and sulphur cycle.

Section-II

Natural Resources: Definition, type of natural resources (Renewable and nonrenewable natural resources) and the policies of their conservation. Energy resources; Fossil fuel, Alternative source of energy (Solar energy, wind power, geothermal energy, dung energy and wood energy.

Section-III

Forestry: Forestry, Concept, types of forests in India & the world. Deforestation, reforestation and afforestation. Major and minor forest products. Reasons of forest destruction and its impact on Environment. Community forestry, Farm forestry, Social forestry and Agroforestry.

Section-IV

Indoor Environment: Pollution of the in house environment pollutants in the offices, workplaces (School, Bus stand, College and Kitchens). Environmental problems linked to urban and rural lifestyle, Adulterants; Food adulterants (Wheat flour, milk, red chili powder, mustard oil, desi ghee, sweets, artificial sweetness, dyes, food allergens).

PRACTICAL

(*Based on theory paper*)

Laboratory work: Tests of food adulterants.

Study the forest products with help of charts and specimens.

Survey reports of indoor environmental pollutants and local forests.

A visit to forest to study different components of these ecosystems.

Books Recommended :

1. Purochit, S.S., Shammi, Q.J. & Agarwal, A.K. : Text Book of Environment Sciences, Saraswati Pub., Jodhpur, 2007.
2. Dhaliwal, G.S & Kukul, S.S. : Essentials of Environmental Sciences, Kalyani Pub., Ludhiana, 2008.
3. Chundawat, B.S. & Gautam, S.K : Text Book of Agroforestry, Raju Primalai, New Delhi. 2006.
4. Chandna, R.C. : Environmental Geography, Kalyani Pub., Ludhiana, 2006.
5. Sagreiya, K.P. : Forests and Forestry, National Book Trust, New Delhi, 2007.
6. Ralhon, P.K., Dhaliwal, G.S. & Avtar Singh : The Forests-Production and Management, Kalyani Pub., Ludhiana.
7. Arora, S. : Fundamentals of Environmental Biology, Kalyani Pub., Ludhiana, 2008.
8. Dwivedi, A.P. : Forestry in India, Surya Publications, Dehradun, 1993.

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ENVIRONMENT CONSERVATION

SEMESTER – II

PAPER : SOIL AND WATER POLLUTION

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	68	7	22	3	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:

There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : SOIL AND WATER POLLUTION

Section-I

Lithosphere: Meaning of Soil profile, its components, types of soil, physical-chemical properties of soil.

Soil Fertility: Micro-and macro-nutrients, technique of testing soil sample. Methods of increasing soil fertility, merits and demerits of fertilizers, role of soil microorganisms.

Section-II

Degradation of soil: Soil erosion (Water and Wind erosion) causes of effect of erosion. Soil pollution: Different types of soil pollutants (Chemicals, Pesticides, Fertilizers & manure, discarded material. Pollution and control measures.

Section-III

Hydrosphere: Major sources and uses of water. Overutilization of surface & ground water, floods, drought. Conflicts over water. Potable water, its characteristics. Water cycle (Global and Biological)

Section-IV

Water pollution: Definition, Types & Sources of water pollution, its consequences and control measures. Different types of diseases due to water pollution. Treatment of wastewater by green method (Root-zone technology), Marine pollution - a brief account.

PRACTICAL

Determination of soil pH

Use of Portable Kit

Determination of organic matter in soil

Determination of $CaCO_3$ in soil.

Determination of available Nitrogen in soil.

Identification of different fertilizers.

Determination of pH of water.

Determination of organic carbon.

Determination of microbial carbon.

Determination of available Nitrogen.

Determination of dissolved Oxygen, BOD.

Determination of hardness and alkalinity of water.

Survey reports of different water samples in local and adjoining areas and interpretation of water test report.

Books Recommended

1. Singh, R.A. : Soil Physical Analysis, Kalyani Publishers, Delhi, India, 1989.
2. Rao, Sitaram : Introduction to Soil Forestry, Oxford and IBH, New Delhi, 1979.
3. Gupta, P.K. : A Handbook of Soil Fertilizer and Manure, Agrobios, Jodhpur, India, 2003.
4. Miller, R.W. and Donahue, R.L. : Soils in our Environment , Prentice Hall, USA, 1995.
5. Mahajan, S.P. : Air Pollution, Control, TERI Press, Delhi, India, 2009
6. Kudeshia, V.P. : Water Pollution, Prgati Parkashan, New Delhi, India, 2009
7. Hooja, R. : Management of water for Agriculture: Irrigation, Watersheds, and Drainage, Rawat Publications, India, 2009.
8. Goel, P.K. : Water Pollution: Causes, Effects and Control, New Age International Publishers, New Delhi, 2006
9. Ramachandra, T.V. : Soil and Groundwater Production from Agricultural Activities, TERI Press, New Delhi, India, 2006

MATHEMATICS

SEMESTER – I

Paper-I : PLANE GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes in two dimensions: Shifting of origin, rotation of axes, invariants.

Pair of Straight Lines :
Joint equation of pair of straight lines and angle between them, Condition of parallelism and perpendicularity, Joint equation of the angle bisectors, Joint equation of lines joining origin to the intersection of a line and a curve.

Circle :
General equation of circle, Circle through intersection of two lines, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, angle of intersection and orthogonality, power of a point w.r.t. circle, radical axis, co-axial family of circles, limiting points.

Unit-II

Conic :
General equation of a conic, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, diameter. Conjugate diameters of ellipse and hyperbola, special properties of parabola, ellipse and hyperbola, conjugate hyperbola, asymptotes of hyperbola, rectangular hyperbola. Indentification of conic in general second degree equations.

References :

1. S. L. Loney : *The Elements of Coordinate Geometry,* Macmillan and Company, London, 2nd Edition 2007.
2. P.K. Jain and Khalil Ahmad : *A Text Book of Analytical Geometry of Two Dimensions, Wiley Eastern Ltd., 1999.*
3. Erwin Kreyszig : *Advanced Engineering Mathematics, John Wiley & Sons,1999.*
4. Gorakh Prasad and H.C. Gupta : *Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahabad, 1955.*

Paper-II : CALCULUS - I

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Properties of real numbers :
Order property of real numbers, bounds, l.u.b. and g.l.b. order completeness property of real numbers, archimedian property of real numbers.

Limits:
ε - δ definition of the limit of a function, basic properties of limits, infinite limits, indeterminate forms.

Continuity:
Continuous functions, types of discontinuities, continuity of composite functions, continuity of $|f(x)|$, sign of a function in a neighborhood of a point of continuity, intermediate value theorem, maximum and minimum value theorem.

Unit-II

Mean value theorems:
Rolle's Theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, their geometric interpretation and applications, Taylor's theorem, Maclaurin's theorem with various form of remainders and their applications.

Hyperbolic, inverse hyperbolic functions of a real variable and their derivatives, successive differentiations, Leibnitz's theorem.

References :

1. J. D. Murray & M . R. Spiegel : *Theory and Problems of Advanced Calculus,* Schaum's Outline Series, Schaum Publishing Co., New York.
2. P.K. Jain and S. K. Kaushik : *An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.*
3. Gorakh Prasad : *Differential Calculus, Pothishala Private Ltd., Allahabad.*
4. G.B. Thomas & R.L. Finney : *Calculus and Analytic Geometry (Ninth Edition), Pearson Publication.*
5. Shanti Narayan and P.K. Mittal : *Differential Calculus, Edition 2006, S. Chand & Co., New Delhi.*

Paper III: TRIGONOMETRY AND MATRICES

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

D'Moivre's theorem, application of D'Moivre's theorem including primitive n^{th} root of unity. Expansions of $\sin n\theta$, $\cos n\theta$, $\sin^n \theta$, $\cos^n \theta$ ($n \in N$). The exponential, logarithmic, direct and inverse circular and hyperbolic functions of a complex variable. Summation of series including Gregory Series.

Unit-II

Hermitian and skew-hermitian matrices, linear dependence of row and column vectors, row rank, column rank and rank of a matrix and their equivalence. Theorems on consistency of a system of linear equations (both homogeneous and non-homogeneous). Eigen-values, eigen-vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix. Diagonalization.

References:

1. K.B. Datta : *Matrix and Linear Algebra*, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.

2. S. R. Knight and H.S. Hall : *Higher Algebra, H.M. Publications, 1994.*

3. R.S. Verma and K.S. Shukla : *Text Book on Trigonometry, Pothishala Pvt. Ltd., Allahabad.*

4. Shanti Narayan and P.K. Mittal : *A Text Book of Matrices, S. Chand & Co., New Delhi, Revised Edition, 2007.*

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MATHEMATICS

SEMESTER – II

Paper-I : SOLID GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes:
Shifting of origin and rotation of axes.

Sphere:
Section of a sphere and a plane, spheres through a given circle, intersection of a line and a sphere, tangent line, tangent plane, angle of intersection of two spheres and condition of orthogonality, power of a point w.r.t. a sphere, radical axis, radical center, co-axial family of spheres, limiting points.

Cylinder:
Cylinder as a surface generated by a line moving parallel to a fixed line and through a fixed curve, different kinds of cylinders such as right circular, elliptic, parabolic and hyperbolic cylinders in standard forms, enveloping cylinders.

Unit-II

Cone:
Cone with a vertex at the origin as the graph of a homogeneous equation of second degree in x,y,z, cone as a surface generated by a line passing through a fixed curve and a fixed point outside the plane of the curve, reciprocal cones, right circular and elliptic cones, right circular cone as a surface of revolution obtained by rotating the curve in a plane about an axis, enveloping cones.

Conicoid:
Equations of ellipsoid, hyperboloid and paraboloid in standard form. Reduction of second degree equation in three variables in standard form.

References:

1. P.K.Jain and Khalil Ahmad : A Text Book of Analytical Geometry of Three Dimensions, Wiley Eastern Ltd., 1999.
2. Shanti Narayan and P. K. Mittal : Analytical Solid Geometry, Seventeenth Revised Edition, S. Chand & Co., New Delhi, 2006.
3. R.J.T. Bill : Elementary Treatise on Coordinate Geometry of Three Dimensions, Macmillan India Ltd., 1994.

Paper-II : CALCULUS - II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Concavity, convexity and points of inflexion, Multiple points, Asymptotes, Tracing of curves (Cartesian and parametric co-ordinates only).

Curvature:
Curvature of a curve at a point, radius of curvature of cartesian, parametric, polar curves and for implicit functions , evolute and involute, chord of curvature.

Unit-II

Integral calculus:
Integration of hyperbolic and inverse hyperbolic functions. Reduction Formulae.

Numerical Integration: Trapezoidal, Prismoidal and Simpson Rules.

Application of definite integral: Summation of Series, Quadrature, rectification, volumes and surfaces of solids of revolution (Cartesian co-ordinates only)

References:

1. G. B. Thomas & R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
2. Gabriel Klambauer : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
3. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.
4. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co. New Delhi, 2000.

Paper III: THEORY OF EQUATIONS

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Euclid's algorithm, synthetic division, roots and their multiplicity. Complex roots of real polynomials occur in conjugate pairs with same multiplicity. Relation between roots and co-efficients. Transformation of equations. Descartes' Rule of Signs.

Unit-II

Newton's method of divisors, Solution of cubic and bi-quadratic equations, Cardan's method of solving a cubic, discriminant and nature of roots of real cubic, trigonometric solutions of a real cubic with real roots. Descarte's and Ferrari's method for a bi-quadratic.

References:

1. S.R. Knight and H.S. Hall : Higher Algebra, H. M. Publications, 1994.

2. Chandrika Prasad : Text Book on Algebra and Theory of Equations, Pothishala Private Ltd., Allahabad.

COMPUTER SCIENCE

Note : A student who has passed the + 2 examination under 10+2+3 system of education of a recognised University/Board/Council or any other examination recognised by the Panjab University as equivalent thereto shall be eligible to offer the subject of Computer Science/Commerce/Economics/Mathematics as his/her subjects.

Only such colleges as have all necessary infrastructure or equipment and staff shall admit students to the subject of Computer Science. The infrastructure must be approved by the University as per practice.

Paper Code	Theory/ Practical	Subject	Lt/Wk	Ext.	Int.	Max Marks
SEMESTER – I						
CS01	Theory	Computer Fundamentals	5	30	5	35
CS02	Theory	PC Software	5	30	5	35
PCS01	Practical	Practical Based on-CS02	5	30	-	30
SEMESTER – II						
CS03	Theory	Operating System Concepts	5	30	5	35
CS04	Theory	C Programming	5	30	5	35
PCS02	Practical	Practical Based on-CS04	5	30	-	30

Computer Science
SEMESTER-I

SCHEME OF EXAMINATION

FIRST SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS01	**Theory-A**	**Computer Fundamentals**	**3**	**30**	**5**	**35**
Paper –CS02	**Theory-B**	**PC Software**	**3**	**30**	**5**	**35**
Paper – PCS01	**Practical-C**	**Practical Based on Paper – CS01**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record

Paper-CS01 : Computer Fundamentals

Note : (i) The question paper will consist of Four sections.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each section and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each section and the compulsory question.

(iv) All questions carry equal marks unless specified.

SECTION-A

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

SECTION-B

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card.

SECTION-C

Types of software: System and Application software; **Programming Languages**: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison. **Range of Applications**: Scientific, Word Processing, Spread Sheets, E-commerce, Business, Educational, Industrial, National level weather forecasting, Remote Sensing, Planning Multilingual Applications.

SECTION-D

Operating Systems : Components of Operating System; Functions of Operating System; Types of Operating System; Linux/Dos/Windows. **Computers and Communication**: Single user, multi-user, workstation, and client server systems. Computer networks, Network protocols. LAN, WAN, Services offered by Internet.

References:

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications

Paper-CS02: PC Software

Note : (i) The question paper will consist of Four sections.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each section and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each section and the compulsory question.

(iv) All questions carry equal marks unless specified.

SECTION-A

Concept of files and directories; Disk Operating System: DOS, System Files, types of DOS commands: Internal and External commands: Introduction to AUTOEXEC.BAT, Directory commands: XCOPY, DEL, RENAME, ATTRIB, BACKUP, RESTORE, FIND, SYS; General commands: TYPE, DATE, TIME, PROMPT; Batch Files, Wild Cards, Line Editor.

SECTION-B

Introduction to graphical user interface, window operating system, Anatomy of windows, organizing folders and files, recycle bin, my computer, windows explorer, control panel.

SECTION-C

Word Processing : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement; Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Sorting blocks, Adjusting Margins and Hyphenating Documents, Creating Master Documents, Creating Data Source, Merging Documents, Using Mail merge feature for labels and envelops; Inserting Pictures, Tables, Working with equations.

SECTION-D

Spread Sheet : Worksheet overview, Row, Column, Cells, Menus, Creating Worksheet, Opening, Saving, Printing Worksheets; Calculations, Auto fill, working with Formulae, Data Formatting (number formatting, date formatting), Working with Ranges, Establishing Worksheet links; Creating, Sorting and Filtering Data Base; Creating chart, Adding Titles, Legends etc. to charts, Printing Charts, Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons, Functions (Statistical, Financial, Mathematical, String, Date and Time).

MS-Power Point: Creating, Saving, Printing Presentation; Selecting Design Templates, Animations and Transitions, Auto Content Wizard.

Books Recommeded:

1.	Ludd Robbins	:	*Mastering DOS.*
2.	Alan R. Miller	:	*The ABC's of DOS-6.2.*
3.	Richard Allen King	:	*MS-DOS H. B.*
4.	Gilbert Held	:	*IBM PC and PCXT User's Reference Manual*
5.	Cowart, Robert	:	*Using Microsoft Windows 2000 Professional,* Que Publishing, 2000.
6.	Taxali, Ravikant	:	*PC Software Made Simple,* New Delhi.
7.	Mansfield, Ron	:	*Compact Guide to Windows, Word & Excel.*

Paper – PCS01 : Practical : Practicals Based on Paper CS02

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Computer Science
SEMESTER-II

SCHEME OF EXAMINATION

SECOND SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS03	**Theory-A**	**Operating System Concepts**	**3**	**30**	**5**	**35**
Paper –CS04	**Theory-B**	**C Programming**	**3**	**30**	**5**	**35**
Paper – PCS02	**Practical-C**	**Practical Based on Paper – CS04**	**3**	**30**	**--**	**30**

Paper-CS03: Operating System Concepts

Note : (i) The question paper will consist of Four sections.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each section and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each section and the compulsory question.

(iv) All questions carry equal marks unless specified.

SECTION-A

Operating Systems (OS): Introduction, need of operating system and functions of operating system, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems; Structure of Operating System

SECTION-B

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling

SECTION-C

Deadlocks: Introduction, Necessary and sufficient conditions for Deadlocks, Resource allocation graph, Introduction to methods for handling deadlocks, deadlock prevention, deadlock avoidance: Banker Algorithm, deadlock detection and recovery.

SECTION-D

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

References :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.
2. Brinch, Hansen, Operating System Principles, Prentice Hall of India
3. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delhi

Paper-CS04 :C Programming

SECTION A

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.

Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.

SECTION B

Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.

Loop Control Structure: While and do-while, for loop and Nested for loop.

Case Control Structure: Decision using switch, The goto statement.

SECTION C

Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function.

SECTION D

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).

Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Union, Difference between Structure and Union .

References:

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.
2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

Paper – PCS02 : Practical : Practical Based on Paper CS04.

STATISTICS

SEMESTER - I

Note :
1. A candidate shall offer this subject in B.A./B .Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. There are two papers code named papers 101 and 102 in the subject of Statistics in B.A./B.Sc. 1st Semester. These are to be taught simultaneously throughout the Semester.
3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 101: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-I

Max. Marks	:	75
Theory	:	65
Internal Assessment	:	10
Time	:	3 Hours

Notes :
1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

SECTION-I

Important Concepts in Probability : Random experiment, trial, sample point and sample space, definition of an event, mutually exclusive, exhaustive, independent and equally likely events. Definition of probability – classical and relative frequency approach to probability, their demerits and axiomatic approach to probability. Properties of probability based on axiomatic approach, conditional probability, Bayes' theorem and its applications (concepts and simple applications).

Random Variables : Definition of discrete random variables, probability mass function, continuous random variable, probability density function, illustrations of random variables and their properties, distribution function and its properties, expectation of a random variable and its properties – moments (only definition), moment generating function. Two dimensional random variables—joint, marginal and conditional distributions. Distribution of random variables.

SECTION-II

Collection of Data : Primary data – designing a questionnaire and a schedule. Secondary data—Its major sources including some government publications. Concept of a Statistical Population and samples from a population; qualitative and quantitative data; discrete and continuous data.

Presentation of Data : Diagrammatic representations of data, frequency distribution, graphical representation, histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display, Box and whisker plot.

Analysis of Quantitative Data : Univariate data concepts of central tendency, dispersion and relative dispersion, skewness and kurtosis and their measures including those based on quartiles and moments. Sheppard's correction for moments (without derivation).

References :

1. Meyer P.L. (1971) : *Introductory Probability and Statistical applications* Addison Wesley
2. Goon, A.M., Gupta, M.K., Das Gupta, B. (2005) : *Fundamentals of Statistics,* Vol. I, World Press, Calcutta.
3. Daniel, W.W. (1999) : *Biostatistics* (7^{th} Edition), Wiley.

Additional References :

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.
2. Miller, I. and Miller, M. (2002) : John E. Frends's *Mathematical Statistics* (6^{th} addition, low price edition). Prentice Hall of India.
3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.
4. Croxton, F.E., Cowden, D. J. and Kelin, S. (1973) : *Applied General Statistics,* Prentice Hall of India.
5. Spiegel, M.R. (1967) : *Theory & Problems of Statistics,* Schaum's Publishing Series.

Paper-102 : PRACTICAL (SEMESTER-I)

Maximum Marks : 25
Time Allowed : 3 Hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Presentation of data by Frequency tables
2. Diagrams: Bar, Multiple Bar, Stacked Bar, Line and Pie
3. Graphs: histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display
4. Measures of central tendency
5. Measures of dispersion
6. Measures of Skewness
7. Box and Whisker Plot
8. Measures of Kurtosis.

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STATISTICS

SEMESTER-II

Note : 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. There are two papers code named papers 103 and 104 in the subject of Statistics in B.A./B.Sc. 2nd Semester. These are to be taught simultaneously throughout the Semester.

3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper – 103 : PROBABILITY THEORY and DESCRIPTIVE STATISTICS-II

Max. Marks : 75
Theory : 65
Internal Assessment : 10
Time : 3 Hours

Note : 1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section.

2. Simple non-programmable calculator is allowed.

3. Statistical **tables** and log tables will be provided on request.

SECTION-I

Standard Univariate Distributions and their Properties: Discrete uniform, Binominal, Poisson, Hyper geometric, Geometric and negative binomial distributions, uniform, normal, exponential, gamma, beta distributions.

Bivariate normal distribution and associated marginal and conditional probability distributions (without derivation).

Chebyshev's inequality and its applications, statements and applications of week law of large numbers, and Central Limit Theorems (De-moivre's – Laplace and Lindeberg -Levy).

SECTION-II

Bivariate Data: Scatter diagram, product moment correlation coefficient, properties and coefficient of determination. Spearman's rank correlation coefficient. Simple linear regression and its properties, principle of least square, fitting of linear regression and related results.

Multivariate Data: multiple and partial correlation in three variables. (only results no derivations).

Analysis of Categorical Data (using 2x2 contingency table): consistency of categorical data independence and association of attributes. Various measures of association:-Yule coefficient, coefficient of colligation & coefficient $V_{AB.}$

References:

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications.* Addison Wesley.
2. Goon A.M., Gupta M.K., Das Gupta.B. (2005) : *Fundamentals of Statistics*, Vol. I, World Press, Calcutta.
3. Daniel, W.W. (1999) : *Biostatistics* (7th edition) Wiley.

Additional References:

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.
2. Miller, I. and Miller, M. (2002) : John E. Frends's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.
3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.
4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.
5. Spiegel, M.R.(1967) : *Theory & Problems of Statistics*, Schaum's Publishing Series.

Paper - 104: PRACTICAL (Semester-II)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Product Moment Correlation.
2. Spearman's rank correlation
3. Linear Regression of two variables.
4. Fitting of Curves (reducible to linear form) by the least square method.
5. Multiple and Partial correlations
6. Fitting of Binomial, Poisson and Normal distributions

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APPLIED STATISTICS

SEMESTER - I

Notes : 1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./B.Sc. Statistics.

2. The candidate opted for this course will not be eligible for admission to M.A./M.Sc. Statistics.

3. There is one paper code named paper A in B.A./B.Sc.. Semester-I having a total of 100 marks.

4. 9 Lectures (45 minutes each) per week shall be allotted for the teaching.

Paper-A : MATHEMATICAL METHODS-I

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Notes : 1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section.

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

SECTION-I (CALCULUS AND TRIGONOMETRY)

Limits and continuity of functions, derivatives and their geometrical interpretations. Applications of derivatives to maxima and minima, exponential and logarithmic functions, integrals of functions of one variable, geometrical interpretation of integral as area, integration of standard functions, integration by substitution and parts.

Trigonometry : Definition of an angle, its various measures and relations between them, graphs, circular functions.

SECTION-II (ALGEBRA AND GEOMETRY)

The solution of linear and quadratic equations in one variable, arithmetic, geometric and harmonic progressions, permutations and combinations, principle of induction, binomial theorem for positive integral index.

Elementary Analytical Geometry : Equations of straight line, parabola, and hyperbola.

Books Recommended :

1. Allen, R.G.D.(2006) : *Mathematical Analysis for Economists,* Chapter-II (Sections 2.1, 2.2, 2.8), Chapter-III (Sections 3.1, 3.6), Chapter-IV (Sections 4.1, 4.7), Chapter-VI (Sections 6.1-6.8), Chapter VII, Chapter VIII (Section 8.2), Chapter IX (Sections 9.1-9.4), Macmillan Delhi.
2. Gurhard Tintner (1970) : *Mathematics and Statistics for Economists,* Chapter-VI, Rinchart : New York.
3. Loney, S.L. (2010) : *Plane Trigonometry, Part-I, Chapter-I* (Sections 1 to 22), Part-II, Chapter V (Sections 61, 65), Aitbs Publishers, India.

Additional Reference:

4. Arye, F. Jr. (1999) : *First Year College Mathematics* (Schaum's Series), Mc Graw Hill, New York.

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APPLIED STATISTICS

SEMESTER – II

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opted for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper code named paper B in B.A./B.Sc.. Semester-I having a total of 100
4. 9 Lectures (45 minutes each) per week shall be allotted for the teaching.

Paper-B : PROBABILITY

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Notes : 1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section.

2. Simple non-programmable calculators are allowed.

3. Statistical tables and log tables will be provided on request.

SECTION-I

Random experiments, sample space, events probability, Finite sample spaces, equally likely outcomes, conditional probability, Bayes theorem; independent events, random variables, discrete and continuous probability density functions.

SECTION-II

Expectation and variance of random variable.
Binomial, Poisson, geometric, hypergeometric, uniform, exponential and normal distribution.

Books Prescribed:

1. Meyer, P.L. (1971) : *Introductory Probability and Statistical Applications*, Addison Wesley, chapters 1, 2, 3, 4, 5, 8 and 9.
2. Goon, A.M., Gupta, M.K. & Das Gupta, B. (2005) : *Fundamentals of Statistics*, Vol. I. The world press private limited
3. Spiegel M., Schiller J. & Srinivasan, G. A. (2002) : Schaum's Easy Outline of Probability and Statistics, Mc Graw Hill, New York.

Additional Reference:

1. Sheldon M. Ross (2009) : Introduction to Probability Models Academic Press: San Diego.

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PHYSICS

B.Sc. (GENERAL) FIRST YEAR (1st and 2nd Semester) EXAMINATION, 2016-17

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the papers is allocated 25 marks including 3 (three) marks for the Internal assessment.
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper as well as practical paper will be three hours.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems/exercises in the question paper should be 25-30%.
6. Student will attempt two questions from each Unit (I-II) and any six parts of question seven.
7. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

Papers, marks and teaching hours allocation :

Paper A :	Mechanics	Total Teaching hrs. 30
Paper B :	Vibrations, Waves and EM Theory	Total Teaching hrs. 30
Paper C :	Electricity and Magnetism	Total Teaching hrs. 30
	Physics Practicals	Total Teaching hrs. 45

* marks allotted for internal assessment.

PHYSICS

SEMESTER – I

Paper A: MECHANICS-I (30 Hrs.)

UNIT-I

Cartesian and spherical polar co-ordinate systems, Two- and three-dimensional coordinate systems, area, volume, displacement, velocity, and acceleration in these systems, solid angle.
Centre of mass, linear momentum, angular momentum, torque, potential energy and kinetic energy of a system of particles.
Relationship of conservation laws of linear momentum, angular momentum and energy, and symmetries of space and time.

UNIT-II

Various forces in nature, relative strengths and spatial dependence,
Motion under force obeying inverse square law, equivalent one body problem.
Motion under central forces, equation of motion under central force, equation of orbit and turning points, Kepler's Laws.
Elastic collision in Lab. and C.M. systems, relationships of velocities, angles, and kinetic energies in these two systems, cross section of elastic scattering, Rutherford scattering.

Books Suggested :

Essential Readings :

1. Mechanics, H.S. Hans & S.P. Puri.
2. Mechanics, Berkeley, Vol. I, C. Kittle.

Further Readings :

1. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
2. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-I (30 Hrs.)

UNIT-I

Simple harmonic motion, energy of a SHM, Compound Pendulum, Torsional Pendulum, Electrical Oscillations, Transverse Vibrations of a mass on a string, composition of two perpendicular SHM of same period and of period in ratio 1: 2. Decay of free vibrations due to damping, differential equation of motion, types of damping, determination of damping co-efficient; Logarithmic decrement, relaxation time and Q- Factor. Electromagnetic damping (Electrical oscillator).

UNIT-II

Differential equation for forced mechanical and electrical oscillators, Transient and steady state behaviour. Displacement and velocity variation with driving force frequency, variation of phase with frequency, resonance. Power supplied to an oscillator and its variation with frequency. Q-value and band width. Q-value as an amplification factor. Stiffness, coupled oscillators, Normal co-ordinates and normal modes of vibration, Inductance coupling of electrical oscillators.

Books Suggested :

Essential Readings :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper–C : ELECTRICITY AND MAGNETISM-I (30 Hrs.)

UNIT-I

Basic ideas of Vector Calculus, Gradient, Divergence, curl and their physical significance, Laplacian in rectangular, coordinates. Stoke's theorem, Gauss's divergence theorem, Coulomb's Law for point charges and continuous distribution of charges, electric field due to dipole, line charge and sheet of charge, Gauss's Law and its differential form.

Work and potential difference, Potential difference as line integral of field, Electric potential due to dipole and quadrupole and its applications in Electrostatic field

UNIT-II

Electric field as gradient of scalar potential, curl $\mathbf{E} = 0$. Calculation of $\mathbf{E}$ due to a point charge and dipole from potential. Poisson and Laplace's equation, Concept of electrical images. Calculation of electric potential and field due to a point charge placed near an infinitely conducting sheet.

Polarisation of matter, atomic and molecular dipoles, induced dipole moment and atomic polarizability. Electric susceptibility and polarization vector. Relation $K = 1 + \chi$, Gauss's law for dielectrics. Displacement vector, Div. $\mathbf{D} = 0$, Energy stored in dielectric medium.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism* by A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The activities given in the section "Analysis of Experimental Data" are compulsory for all the students in the First semester.

The students are required to perform all the Nine experiments choosing either of the Units I or Unit II in each semester. The unit of experiments allocated in the first semester cannot be repeated in second semester. The college must keep a record of the Unit allocated to each student. In the second semester examination, the students are expected to bring their Practical note books of both the semesters.

General Guidelines for Physics Practical Examinations :

Total : 25 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	10
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	4
(iii)	Viva-Voce	5
(iv)	Record (Practical file)	3
(v)	Internal Assessment	3

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section-A will consist of 4 experiments from each of Unit I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section–A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment to be allotted to more than three examinees in the group.

Analysis of Experimental Data (Compulsory for all students in first semester):

Objectives :

(i) Knowledge of propagation of errors.
(ii) Knowledge of significant figures, Determination of standard deviation and probable error and their use in interpretation of the experimental result.
(iii) Familiarity with the method of least square fitting of experimental data to a curve.

LIST OF EXPERIMENTS :

UNIT-I

MECHANICS

I. Measurements :

Objectives :

(i) Measurements of time, length, thickness and curvature, pressure, humidity
(ii) Concepts of least count, horizontal, vertical and angular alignments

Activities :

(i) To measure internal/external diameter of a hollow cylinder using Vernier calipers
(ii) To measure thickness of wire
(iii) To measure curvature of a lens
(iv) To measure pressure using Barometer
(v) To measure humidity using dry and wet thermometer

II. Rotation :

Objectives :

(i) Study of rotational motion.
(ii) Establishing relationship between different quantities.

Activities :

(i) To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).

(ii) To establish relationship between torque and angular acceleration using fly wheel.

III. One-Dimensional Collisions :

Objectives :

(i) Conservation of linear momentum and kinetic energy in elastic collisions.
(ii) Dependence of fraction of kinetic energy transferred on the masses of colliding bodies.
(iii) Idea of coefficient of restitution.

Activities :

To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.

IV. Compound Pendulum :

Objectives :

(i) Idea of equivalent simple pendulum.
(ii) Concepts of centre of suspension and oscillation.
(iii) Dependence of time period on moment of Inertia .
(iv) Radius of gyration.
(v) Determination of g.

Activities :

(i) Measure time period as a function of distance of centre of suspension (oscillation) from centre of mass, plot relevant graphs, determine radius of gyration and acceleration due to gravity.
(ii) Find the value of g by Katers' or Bar pendulum.

V. Torsion Pendulum :

Objectives :

(i) Idea of torsional vibration, dependence of time period on M.O.I. and restoring torque.
(ii) Modulus of rigidity.

Activity :

Measure time period of oscillation of a Maxwell needle and determine modulus of rigidity of the material of a given wire.

VI. Damped Oscillator :

Objectives :

(i) Study damped oscillations.
(ii) Coefficient of damping, quality factor etc.

Activities :

To measure/obtain logarithmic decrement, coefficient of damping, relaxation time, and quality factor of a damped simple pendulum.

VII. Elasticity :

Objective :

Knowledge of elastic constants and related quantities.

Activities :

(i) Study of bending of beams and determination of Young's Modulus.
(ii) Determination of Poisson's ratio for rubber/plastic.

VIII. Standing waves :

Objective :

Standing waves on a string and in air.

Activities :

(i) Melde's experiment.
(ii) Kundt's tube.

IX. Viscosity :

Objective :

Knowledge of viscosity of liquids.

Activity :

Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.

Computer based activities : Elementary C language programs, flowcharts and their interpretation.

1. To print out all natural even/odd numbers from a given series of natural numbers.
2. Numerical solution of equations of motion.
3. To calculate first ten prime numbers.

UNIT-II

ELECTRICITY AND MAGNETISM

I. Objective :

Measurement of resistance, voltage, current and electric energy.

Activities :

(i) To use a multimeter for measuring AC and DC voltage and resistance.
(ii) Measurement of resistance of LDR - To study inverse-square law (concept of solid angle and inverse square law) using linear LDR and light source.
(iii) Observations and measurements using an Electric energy meter. To find wattage of given bulb or heater.
(iv) To study the efficiency of an electric kettle or heater element with varying input voltage.

II. Low Resistance Measurements :

Objectives :

(i) Inadequacy of Wheatstone bridge to measure low resistances.
(ii) Acquaintance with a method of measuring low resistances.

Activity :

To determine low resistance with Carey Fosters Bridge.

III. Magnetic Field :

Objectives :

(i) Familiarity with the magnetic field produced by a solenoid.
(ii) Dependence of solenoidal field on number of turns and current.
(iii) Permeability of air.

Activities :

To study the magnetic field produced by a current carrying solenoid using a search coil and calculate permeability of air.

IV. Electromagnetic Induction :

Objective :

Verification of laws of electromagnetic induction.

Activity :

To study the induced e.m.f. as function of the velocity of the magnet.

V. Magnetism and current :
Objectives and Activities :

Force on a conductor carrying current in a magnetic field.

VI. LCR Circuits :

Objective :

Study of phase relationship between currents and voltages in ac circuits.

Activity :

Study of phase relationships using impedance triangle for LCR circuit and calculate impedance.

VII. Resonant Circuits :

Objective :

Concepts of resonance and Q-value.

Activities :

(i) Resonance in a series LCR circuits for different R-value and calculate Q-value.
(ii) Resonance in a parallel LCR circuits for different R-value and calculate Q-value.
(iii) To determine the dielectric constant of a solid by resonance method.

VIII. Capacitance :

Objectives :

(i) Measurement of capacitance, dielectric constant.
(ii) Concept of time constant and time base circuit.
(iii) Knowledge of a-c Bridges.

Activities :

(i) Capacitance by flashing and quenching of a neon lamp.
(ii) Measurement of capacitance, determination of permittivity of a medium, air and relative permittivity by De-Sauty's bridge.

IX. Self Inductance :

Objectives :

(i) Knowledge of a-c bridges.
(ii) Concept of self-inductance.

Activities :

(i) To determine L using Anderson Bridge.

Computer based activities: Elementary C language programs, flowchart and their interpretation.

1. To rearrange a list of numbers in ascending and descending orders.
2. To compile a frequency distribution and evaluate moments such as mean; standard deviation etc.
3. To evaluate sum of finite series and the area under a curve.

Texts and Reference Books :

1. *"B.Sc. Practical Physics by C.L. Arora, S.Chand & Co. (2014).*
2. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
3. *"Programming with C, Schaum series"* by Byron Gottfried & Jitender Chhabra

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PHYSICS

SEMESTER–II

Paper A : MECHANICS – II

UNIT-I

Rigid Body motion; Rotational motion, principal moments and Axes, Euler's equations, precession and elementary gyroscope.
Galilean transformations and Invariance, Transformation equations for inertial frames inclined to each other, Non-Inertial frames. Fictitious forces in a rotating frames of reference, Centrifugal and Coriolis forces due to rotation of earth, Foucault's pendulum.
Concept of stationery universal frame of reference and ether, Michelson-Morley experiment and its results.

UNIT-II

Postulates of special theory of relativity, Lorentz transformations, Kinematical consequences of Lorentz transformations – length contraction and time dilation, Twin paradox, Transformation of velocities, Simultaneity of relativity, Velocity of light in moving fluid, Relativistic Doppler effect.
Variation of mass with velocity, mass-energy equivalence, rest mass in an inelastic collision, relativistic momentum & energy, their transformation, concepts of Minkowski space, four vector formulation.

Books Suggested :

Essential Readings :

1. Mechanics, Berkeley, Vol. I, C. Kittle.
2. Mechanics, H.S. Hans & S.P. Puri.

Further Readings :

1. *Mechanics & Relativity (3rd Edition)*, Vidwan Singh Soni (PHI Learning, New Delhi, 2013)
2. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
3. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).
4. *Basic Concepts of Relativity,* R.H. Good (East-West Press, New Delhi, 1974).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-II (30 Hrs.)

UNIT-I

Waves in physical media, Wave equation and its solution, Types of waves, particle velocity, acceleration and energy in progressive waves. Longitudinal waves on a rod.
Transverse waves on a string, characteristic impedance of a string, Waves in absorbing media.
Reflection and Transmission of transverse waves on a string at discontinuity, Reflection and transmission of energy.
Reflection and transmission of longitudinal waves at a boundary.
Standing wave ratio, Impedance matching, Energy of vibrating string. Wave and group velocity.

UNIT-II

Physical interpretation of Maxwell's equations, E.M. waves and wave equation in a medium having finite permeability, permittivity and conductivity. Energy flow due to EM wave - Poynting vector, Impedance of a dielectric to EM waves. EM waves in a conducting medium and skin depth. Impedance and Refractive index of a dielectric and a conductor.
Reflection and transmission of EM waves at a boundary of two dielectric media for normal and oblique incidence.
Reflection of EM waves from the surface of a conductor at normal incidence.

Essential Readings :

Books Suggested :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.
3. *EM Waves and Radiating Systems* by Edward C. Jordan and K.G. Balmain, Prentice Hall.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper-C: ELECTRICITY AND MAGNETISM-II (30 Hrs.)

UNIT-I

Current and current density, equation of continuity. Microscopic form of Ohm's Law ($\mathbf{J} = \sigma\mathbf{E}$) and conductivity. Failure of Ohm's Law. Invariance of charge. **E** in different frames of reference. Field of a point charge moving with constant velocity. Force between parallel currents.
Behaviour of various substances in magnetic field. Definition of M and H and their relation to free and bound currents. Permeability and susceptibility and their interrelationship. B-H curve and energy loss in hysteresis, Langevin theory of diamagnetism.

UNIT-II

Lorentz's force. Definition of **B**. Biot Savart's Law and its application to long straight wire, circular current loop and solenoid. Ampere's Circuital law and its application. Divergence and curl of **B**. Hall effect, expression and co-efficient. Vector potential, Definition and derivation, current density— definition, its use in calculation of change in magnetic field at a current sheet. Energy stored in magnetic field, Faraday's Law of EM induction, Displacement current, Mutual inductance and reciprocity theorem. Self inductance for solenoid.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism,* A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The activities given in the section "Analysis of Experimental Data" are compulsory for all the students in the First semester.

The students are required to perform all the nine experiments choosing either of the Units I or Unit II in each semester. The experiments performed in the first semester cannot be repeated in second semester. The college must keep a record of the Unit allocated to each student. In the second semester examination, the students are expected to bring their Practical note books of both the semesters.

General Guidelines for Physics Practical Examinations :

Total : 25 marks

1. The distribution of marks is as follows :

(i) One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	10
(ii) One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	4
(iii) Viva-Voce	5
(iv) Record (Practical file)	3
(v) Internal Assessment	3

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section-A will consist of 4 experiments from each of Unit I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section–A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment to be allotted to more than three examinees in the group.

Analysis of Experimental Data (Compulsory for all students in first semester):

Objectives :

(i) Knowledge of propagation of errors.
(ii) Knowledge of significant figures, Determination of standard deviation and probable error and their use in interpretation of the experimental result.
(iii) Familiarity with the method of least square fitting of experimental data to a curve.

LIST OF EXPERIMENTS :

UNIT-I

MECHANICS

I. Measurements :

Objectives :
(i) Measurements of time, length, thickness and curvature, pressure, humidity
(ii) Concepts of least count, horizontal, vertical and angular alignments

Activities :
(i) To measure internal/external diameter of a hollow cylinder using Vernier calipers
(ii) To measure thickness of wire
(iii) To measure curvature of a lens
(iv) To measure pressure using Barometer
(v) To measure humidity using dry and wet thermometer

II. Rotation :

Objectives :

(i) Study of rotational motion.
(ii) Establishing relationship between different quantities.

Activities :

(i) To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).

(ii) To establish relationship between torque and angular acceleration using fly wheel.

III. One-Dimensional Collisions :

Objectives :

(i) Conservation of linear momentum and kinetic energy in elastic collisions.
(ii) Dependence of fraction of kinetic energy transferred on the masses of colliding bodies.
(iii) Idea of coefficient of restitution.

Activities :

To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.

IV. Compound Pendulum :

Objectives :

(i) Idea of equivalent simple pendulum.
(ii) Concepts of centre of suspension and oscillation.
(iii) Dependence of time period on moment of Inertia .
(iv) Radius of gyration.
(iv) Determination of g.

Activities :

(i) Measure time period as a function of distance of centre of suspension (oscillation) from centre of mass, plot relevant graphs, determine radius of gyration and acceleration due to gravity.
(ii) Find the value of g by Katers' or Bar pendulum.

V. Torsion Pendulum :

Objectives :

(i) Idea of torsional vibration, dependence of time period on M.O.I. and restoring torque.
(ii) Modulus of rigidity.

Activity :

Measure time period of oscillation of a Maxwell needle and determine modulus of rigidity of the material of a given wire.

VI. Damped Oscillator :

Objectives :

(i) Study damped oscillations.
(ii) Coefficient of damping, quality factor etc.

Activities :

To measure/obtain logarithmic decrement, coefficient of damping, relaxation time, and quality factor of a damped simple pendulum.

VII. Elasticity :

Objective :

Knowledge of elastic constants and related quantities.

Activities :

(i) Study of bending of beams and determination of Young’s Modulus.
(ii) Determination of Poisson’s ratio for rubber/plastic.

VIII. Standing waves :

Objective :

Standing waves on a string and in air.

Activities :

(i) Melde's experiment.
(ii) Kundt's tube.

IX. Viscosity :

Objective :

Knowledge of viscosity of liquids.

Activity :

Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.

Computer based activities : Elementary C language programs, flowcharts and their interpretation.

1. To print out all natural even/odd numbers from a given series of natural numbers.
2. Numerical solution of equations of motion.
3. To calculate first ten prime numbers.

UNIT-II

ELECTRICITY AND MAGNETISM

I. Electric measurements:

Objective :

Measurement of resistance, voltage, current and electric energy.

Activities :

(i) To use a multimeter for measuring AC and DC voltage and resistance.

(ii) Measurement of resistance of LDR - To study inverse-square law (concept of solid angle and inverse square law) using linear LDR and light source.

(iii) Observations and measurements using an Electric energy meter. To find wattage of given bulb or heater.

(iv) To study the efficiency of an electric kettle or heater element with varying input voltage.

II. Low Resistance Measurements :

Objectives :

(i) Inadequacy of Wheatstone bridge to measure low resistances.
(ii) Acquaintance with a method of measuring low resistances.

Activity :

To determine low resistance with Carey Fosters Bridge.

III. Magnetic Field :

Objectives :

(i) Familiarity with the magnetic field produced by a solenoid.
(ii) Dependence of solenoidal field on number of turns and current.
(iii) Permeability of air.

Activities :

To study the magnetic field produced by a current carrying solenoid using a search coil and calculate permeability of air.

IV. Electromagnetic Induction :

Objective :

Verification of laws of electromagnetic induction.

Activity :

To study the induced e.m.f. as function of the velocity of the magnet.

V. Objectives and Activities :

Force on a conductor carrying current in a magnetic field.

VI. LCR Circuits :

Objective :

Study of phase relationship between currents and voltages in ac circuits.

Activity :

Study of phase relationships using impedance triangle for LCR circuit and calculate impedance.

VII. Resonant Circuits :

Objective :

Concepts of resonance and Q-value.

Activities :

(i) Resonance in a series LCR circuits for different R-value and calculate Q-value.
(ii) Resonance in a parallel LCR circuits for different R-value and calculate Q-value.
(iii) To determine the dielectric constant of a solid by resonance method.

VIII. Capacitance :

Objectives :

(i) Measurement of capacitance, dielectric constant.
(ii) Concept of time constant and time base circuit.
(iii) Knowledge of a-c Bridges.

Activities :

(i) Capacitance by flashing and quenching of a neon lamp.
(ii) Measurement of capacitance, determination of permittivity of a medium, air and relative permittivity by De-Sauty's bridge.

IX. Self Inductance :

Objectives :

(i) Knowledge of a-c bridges.
(ii) Concept of self-inductance.

Activity :

To determine L using Anderson Bridge.

Computer based activities: Elementary C language programs, flowchart and their interpretation.

1. To rearrange a list of numbers in ascending and descending orders.
2. To compile a frequency distribution and evaluate moments such as mean; standard deviation etc.
3. To evaluate sum of finite series and the area under a curve.

Texts and Reference Books :

1. *"B.Sc. Practical Physics" by C.L. Arora ,S.Chand & Co. (2014).*
2. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
3. *"Programming with C, Schaum series"* by Byron Gottfried & Jitender Chhabra

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CHEMISTRY
SEMESTER – I

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
I	Inorganic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
II	Organic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
III	Physical Chemistry-A	30	3 periods per week	22 + 3 internal assessment
IV	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper- I : INORGANIC CHEMISTRY-A

Max. Marks : 22 Marks
Internal Assessment : 03 Marks
Time : 03 Hours
30 hours (2 Hrs./week)
3 Periods/week

OBJECTIVE OF THE COURSE :

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged Unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Atomic Structure :

Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, Schrodinger wave equation, significance of Ψ and Ψ^2, quantum numbers, radial and angular wave functions and probability distribution curves, shapes of *s, p, d* orbitals. Aufbau and Pauli exclusion principles, Hund's multiplicity rule. Electronic configurations of the elements and ions.

UNIT-II **(7 Hrs.)**

Periodic Properties :

Position of elements in the periodic table; effective nuclear charge and its calculations. Atomic and ionic radii, ionization energy, electron affinity and electronegativity—definition, methods of determination or evaluation, trends in periodic table and applications in predicting and explaining the chemical behaviour.

UNIT-III **(7 Hrs.)**

Chemistry of Noble Gases and *s*-Block Elements :
Chemical properties of the noble gases, chemistry of xenon, structure and bonding in xenon compounds. Comparative study, diagonal relationships, salient features of hydrides, solvation and complexation tendencies including their function in biosystems, an introduction to alkyls and aryls.

UNIT-IV **(8 Hrs.)**

Chemical Bonding-I :

Covalent Bond – Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions. BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, $SnCl_2$, XeF_4, BF_4^-, PF_6^-, $SnCl_6^{2-}$. Valence shell electron pair repulsion (VSEPR) theory to NH_3, H_3O^+, SF_4, ClF_3, ICl_2^- and H_2O. MO theory, homonuclear (elements and ions of 1st and 2nd row), and heteronuclear (BO, CN, CO^+, NO^+, CO, CN^-), diatomic molecules. Percentage ionic character from dipole moment and electronegativity difference.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) Examiner will set total of ***Nine*** questions comprising ***Two*** questions from each unit and ***One*** compulsory question of short answer type covering the whole syllabi.

(ii) The students are required to attempt ***Five*** questions in all, ***One*** question from each unit and the Compulsory question.

(iii) Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested :

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., *Basic Inorganic Chemistry;* 2nd edition, Pubs: John Wiley and Sons, 1995.

2. Lee, J.D., *Concise Inorganic Chemistry;* 4th edition, Pubs: Chapman & Hall Ltd., 1991.

3. Shriver, D.E., Atkins, P.W., *Inorganic Chemistry;* 4th edition, Pubs: Oxford University Press, 2006.

4. Douglas, B., Medaniel, D., Atenander, J., *Concepts and Models of Inorganic Chemistry;* 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfeild, W.W., Wesky, A., *Inorganic Chemistry;* Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Tarr, D.A., *Inorganic Chemistry;* 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., *Modern Inorganic Chemistry;* 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., *Inorganic Chemistry;* Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.K., *Principles of Inorganic Chemistry;* 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-II : ORGANIC CHEMISTRY-A

Max. Marks : 22 Marks
Internal Assessment : 03 Marks
Time : 03 Hours
30 hours (2 Hrs./week)
3 Periods/week

OBJECTIVE OF THE COURSE :

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Structure and Bonding :

Hybridization, bond lengths and bond angles, bond energy, localized and delocalized chemical bond, Van der Waals interactions, resonance, hyperconjugation, aromaticity, inductive and field effects, hydrogen bonding.

Mechanism of Organic Reactions :

Curved arrow notation, drawing electron movements with arrows, half-headed and double- headed arrows, homolytic and heterolytic bond breaking. Types of reagents—electrophiles and nucleophiles. Types of organic reactions. Energy considerations.

Reactive intermediates—Carbocations, carbanions, free radicals, carbenes, arynes and nitrenes (with examples). Assigning formal charges on intermediates and other ionic species.

Methods of determination of reaction mechanism (product analysis, intermediates, isotope effects, kinetic and stereochemical studies).

UNIT –II (7 Hrs.)

Electromagnetic Spectrum : Absorption Spectra :

Ultraviolet (UV) absorption spectroscopy – Absorption laws (Beer – Lambert Law), molar absorptivity, presentation and analysis of UV spectra, types of electronic transitions, effect of conjugation. Concept of chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. UV spectra of conjugated enes and enones.

Woodward Fieser Rules and their applications in calculating maximum values of conjugated alkenes (cyclic as well as acyclic) and conjugated carbonyl compounds.

UNIT-III **(8 Hrs.)**

Stereochemistry of Organic Compounds I:

Concept of isomerism, Types of isomerism.

Optical isomerism – Elements of symmetry, molecular chirality, enantiomers, stereogenic center, optical activity, properties of enantiomers, chiral and achiral molecules with two stereogenic centers, diastereomers, threo and erythro diastereomers, meso compounds, resolution of enantiomers, inversion, retention and racemization.

Relative and absolute configuration, sequence rules, D & L and R & S systems of nomenclature.

UNIT-IV **(7 Hrs.)**

Stereochemistry of Organic Compounds II :

Geometric isomerism: Determination of configuration of geometric isomers. E & Z system of nomenclature, geometric isomerism in oximes and alicyclic compounds.

Conformational isomerism—Conformational analysis of ethane and n-butane; conformations of cyclohexane, axial and equatorial bonds, conformation of mono and disubstituted cyclohexane derivatives. Newman projection and Sawhorse formulae, Fischer and flying wedge formulae.
Difference between configuration and conformation.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) Examiner will set total of ***Nine*** questions comprising ***Two*** questions from each unit and ***One*** compulsory question of short answer type covering the whole syllabi.

(ii) The students are required to attempt ***Five*** questions in all, ***One*** question from each unit and the Compulsory question.

(iii) Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested :

1. Morrison, R.T., Boyd, R.N., *Organic Chemistry,* 6th Edition, Pubs : Prentice-Hall, 1992.

2. Solomons, T.W., Fryhle, C.B., *Organic Chemistry,* 9th Edition, Pubs : Wiley India, 2007.

3. Wade Jr., L.G., Singh, M.S., *Organic Chemistry*, 6th Edition, Pubs : Pearson Education, 2008.

4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., *Organic Chemistry,* Pubs : New Age International, 1985.

5. Carey, F.A., Sundberg, R.J., *Advanced Organic Chemistry Part B: Reactions and Synthesis,* 5th Edition, Pubs : Springer, 2007.

Paper–III : PHYSICAL CHEMISTRY–A

Max. Marks : 22 Marks
Internal Assessment : 03 Marks
Time : 03 Hours
30 hours (2 Hrs./week)
3 Periods/week

OBJECTIVE OF THE COURSE :

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Mathematical Concepts and Evaluation of Analytical Data :

Logarithmic relations, curve sketching, linear graphs and calculation of slopes, differentiation and integration of functions like e^x, x^n, sin x, log x; maxima and minima, partial differentiation and reciprocity relations.

Terms of mean and median, precision and accuracy in chemical analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, linear least squares curve fitting, types of errors, standard deviation.

UNIT-II (7 Hrs.)

Gaseous States:

Postulates of kinetic theory of gases, deviation from ideal behavior, Van der Waal's equation of state.

Critical Phenomena : PV isotherms of real gases, continuity of states, the isotherms of Van der Waal's equation, relationship between critical constants and Van der Waal's constants, the law of corresponding states, reduced equation of state.

Molecular Velocities : Root mean square, average and most probable velocities. Qualitative discussion of the Maxwell's distribution of molecular velocities, collision number, mean free path and collision diameter. Liquification of gases (based on Joule-Thomson effect).

UNIT-III (8 Hrs.)

Chemical Kinetics-I :

Chemical kinetics and its scope, rate of a reaction, factors influencing the rate of a reaction- concentration, temperature, pressure, solvent, light, catalyst. Concentration dependence of rates, mathematical characteristics of simple chemical reactions – zero order, first order, second order, pseudo order, half life and mean life. Determination of the order of reaction – differential method, method of integration, method of half life period and isolation method.

Radioactive decay as a first order phenomenon.

UNIT-IV **(7 Hrs.)**

Chemical Kinetics-II :

Theories of Chemical Kinetics: Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

Simple collision theory based on hard sphere model, transition state theory (equilibrium hypothesis). Expression for the rate constant based on equilibrium constant and thermodynamic aspects.

Catalysis and general characteristics of catalytic reactions, Homogeneous catalysis, acid-base catalysis and enzyme catalysis including their mechanisms, Michaelis Menten equation for enzyme catalysis and its mechanism.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) Examiner will set total of ***Nine*** questions comprising ***Two*** questions from each unit and ***One*** compulsory question of short answer type covering the whole syllabi.

(ii) The students are required to attempt ***Five*** questions in all, ***One*** question from each unit and the Compulsory question.

(iii) Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested :

1. Atkins, P., Paula, J.de, *Atkins Physical Chemistry;* 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., *Principles of Physical Chemistry;* 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., *Physical Chemistry;* 6th edition, Pubs: McGraw Hill Inc., 1996.
4. Rao, C.N.R., *University General Chemistry;* Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., *Physical Chemistry,* 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., *Physical Chemistry;* 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., *Physical Chemistry Through Problems;* Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., *Physical Chemistry;* 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., *Basic Physical Chemistry;* Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10. Metz, C.R., *Theory and Problems of Physical Chemistry;* Schaum's Outline Series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-IV : LABORATORY PRACTICALS

Max. Marks : 22+3
6 Periods/week

INORGANIC CHEMISTRY :

(a) **Qualitative Analysis :**

Semimicro Analysis, cation analysis, separation and identification of ions from groups I, II, III, IV, V and VI. Anion analysis (4 ions).

Instruction to Examiners : Four ions with no interference (anions such as PO_4^{3-}, BO_3^{3-} and similar anions like $C1^-$, Br^-, I^- etc. and cattons from the same group) may not be given.

(b) **Quantitative Analysis :**
Volumetric titration involving acid-base, $KMnO_4$ and $K_2Cr_2O_7$.

There are three experiments – one involving acid-base titrations, one involving $KMnO_4$ and one involving $K_2Cr_2O_7$.

1. Determination of strength of Na_2Co_3 solution by titrating it against a standard solution of HCl.
2. Determination of molarity of $KMnO_4$ solution by titrating it against a standard solution of Oxalic acid.
3. Standardise the given $K_2Cr_2O_7$ solution by titrating it against a standard solution of Mohr's Salt.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Qualitative Analysis	10 marks
Q.No. II Quantitative Analysis	06 marks
Q.No. III Viva-Voce	03 marks
Ask three questions (1 marks each) related to chemistry practicals	03 marks
Q.No.IV Note Book	

Books Suggested (Laboratory Courses)

1. Svehla, *Vogel's Qualitative Inorganic Analysis* (revised); 7th edition Pubs: Orient Longman, 1996.
2. Bassett, J., Denney, R.C., Jeffery, G.H., Mendham, J., *Vogel's Textbook of Quantitative Inorganic Analysis* (revised); 4th edition, 1978.
3. Palmer, W.G., *Experimental Inorganic Chemistry;* 1st edition, Pubs: Cambridge, 1954.
4. Brauer, *Handbook of Preparative Inorganic Chemistry;* 2nd edition, Pubs: Academic Press, 1963, Vol. I & 1965, Vol. II.
5. Audrieth, L.F., *Inorganic Synthesis;* Pubs: McGraw Hill, 1950, Vol. 3rd; E.G. Rochow, 1960 Vol. VI; J. Kleinberg, 1963, Vol. 7; S.Y. Tyree, 1967 ,Vol. 9; E.L. Muetterties, 1967, Vol.10; W.L. Jolly 1986, Vol 11; R.W. Parry 1970, Vol. 12; F.A. Cotton 1972, Vol. 13; A.G. Mac Diarmid, 1977, Vol. 17.
6. Bansal, R.K., *Laboratory Manual of Organic Chemistry;* 3rd edition, Pubs: Wiley Eastern Limited, 1994.

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CHEMISTRY
SEMESTER – II

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
V	Inorganic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VI	Organic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VII	Physical Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VIII	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper- V : INORGANIC CHEMISTRY-B

Max. Marks : 22 Marks
Internal Assessment : 03 Marks
Time : 03 Hours
30 hours (2Hrs./Week)
3 Periods/week

OBJECTIVE OF THE COURSE :

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Chemical Bonding-II

Ionic Solids – Concept of close packing., Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF_2 and antifluorite), radius ratio rule and coordination number, limitation of radius ratio rule, lattice defects, semiconductors.

UNIT-II **(8 Hrs.)**

Chemical Bonding-III

Lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids, polarizing power and polarisability of ions, Fajan's rule. Metallic bond-free electron, valence bond and band theories. Weak Interactions – Hydrogen bonding, Van der Waals forces.

UNIT-III **(7 Hrs.)**

***p*-Block Elements-I**

Comparative study (including diagonal relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane and higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.

UNIT-IV **(8 Hrs.)**

***p*-Block Elements-II**

Comparative study of groups 15-17 elements, compounds like hydrides, oxides, oxyacids and halides of groups 15-17, silicates (structural principle), tetrasulphur tetranitride, basic properties of halogens, interhalogens and polyhalides.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) Examiner will set total of ***Nine*** questions comprising ***Two*** questions from each unit and ***One*** compulsory question of short answer type covering the whole syllabi.

(ii) The students are required to attempt ***Five*** questions in all, ***One*** question from each unit and the Compulsory question.

(iii) Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested :

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic *Inorganic Chemistry;* 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., *Concise Inorganic Chemistry;* 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., *Inorganic Chemistry;* 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., *Concepts and Models of Inorganic Chemistry;* 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., *Inorganic Chemistry;* Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., *Inorganic Chemistry;* 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., *Modern Inorganic Chemistry;* 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., *Inorganic Chemistry;* Pubs: W.B. Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., *Principles of Inorganic Chemistry;* 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper- VI : ORGANIC CHEMISTRY-B

Max. Marks : 22 Marks
Internal Assessment : 03 Marks
Time : 03 Hours
30 hours (2Hrs./Week)
3 Periods/week

OBJECTIVE OF THE COURSE :

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Alkanes and Cycloalkanes :

Isomerism in alkanes, sources, methods of formation (with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acids), physical properties and chemical reactions of alkanes.

Mechanism of free radical halogenation of alkanes : Orientation, reactivity and selectivity. Cycloalkanes—nomenclature, methods of formation, chemical reactions, Baeyer's strain theory and its limitations. Ring strain in small rings (cyclopropane and cyclobutane), theory of stainless rings. The case of cyclopropane ring : banana bonds.

UNIT-II (8 Hrs.)

Alkenes, Cycloalkenes :

Nomenclature of alkenes, methods of formation, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides, regioselectivity in alcohol dehydration. The Saytzeff's Rule, Hofmann elimination, physical properties and relative stabilities of alkenes.

Chemical reactions of alkenes – mechanisms involved in hydrogenation, electrophilic and free radical additions, Markownikoff's rule, hydroboration – oxidation, oxymercuration-reduction. Epoxidation, ozonolysis, hydration, hydroxylation and oxidation with $KMnO_4$. Polymerization of alkenes. Substitution at the allylic and vinylic positions of alkenes. Industrial applications of ethylene and propene.

UNIT-III (7 Hrs.)

Dienes and Alkynes :

Methods of formation, conformation and chemical reactions of cycloalkenes.
Nomenclature and classification of dienes : Isolated, conjugated and cumulated dienes. Structure of allenes and butadiene, methods of formation, polymerization. Chemical reactions – 1,2 and 1,4 additions, Diels-Alder reaction.

Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation, metal-ammonia reductions, oxidation and polymerization.

UNIT-IV **(8 Hrs.)**

Arenes and Aromaticity:

Nomenclature of benzene derivatives. The aryl group, Aromatic nucleus and side chain, Structure of benzene : Molecular formula and Kekule structure. Stability and carbon-carbon bond lengths of benzene, resonance structure, MO picture.

Aromaticity : The Huckel rule, aromatic ions.

Aromatic electrophilic substitution—General pattern of the mechanism, role of σ and π – complexes. Mechanism of nitration, halogenation, sulphonation, mercuration and Friedel-Crafts reaction. Energy profile diagrams. Activating and deactivating substituents, orientation and ortho/para ratio. Side chain reactions of benzene derivatives. Methods of formation and chemical reactions of alkylbenzenes, alkynyl benzenes and biphenyl.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) Examiner will set total of ***Nine*** questions comprising ***Two*** questions from each unit and ***One*** compulsory question of short answer type covering the whole syllabi.

(ii) The students are required to attempt ***Five*** questions in all, ***One*** question from each unit and the Compulsory question.

(iii) Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested :

1. Morrison, R.T., Boyd, R.N., *Organic Chemistry,* 6th Edition, Pubs : Prentice-Hall, 1992.

2. Solomons, T.W., Fryhle, C.B., *Organic Chemistry,* 9th Edition, Pubs : Wiley India, 2007.

3. Wade Jr., L.G., Singh, M.S., *Organic Chemistry*, 6th Edition, Pubs : Pearson Education, 2008.

4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., *Organic Chemistry,* Pubs : New Age International, 1985.

5. Carey, F.A., Sundberg, R.J., *Advanced Organic Chemistry Part B: Reactions and Synthesis,* 5th Edition, Pubs : Springer, 2007.

Paper–VII : PHYSICAL CHEMISTRY–B

Max. Marks : 22 Marks
Internal Assessment : 03Marks
Time : 03 Hours
30 hours (2Hrs./Week)
3 Periods/week

OBJECTIVE OF THE COURSE :

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Thermodynamics-I:

Definition of Thermodynamic Terms: System, surroundings etc. Types of systems, intensive and extensive properties. State and path functions and their differentials. Thermodynamic process. Concept of heat and work.

First Law of Thermodynamics: Statement, definition of internal energy and enthalpy, Heat capacity, heat capacities at constant volume and pressure and their relationship. Joule's Law-Joule-Thomson coefficient and inversion temperature. Calculations of w, q, dU & dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process.

UNIT-II **(7 Hrs.)**

Thermochemistry:

Standard state, standard enthalpy of formation-Hess's Law of constant Heat Summation and its applications. Heat of reaction at constant pressure and at constant volume. Enthalpy of neutralization. Bond dissociation energy and its calculation from thermo-chemical data, temperature dependence of enthalpy. Kirchoff's equation.

UNIT- III **(7 Hrs.)**

Colloidal State:

Definition of colloids, classification of colloids.
Solids in liquids (sols): Properties –kinetic, optical and electrical; stability of colloids, protective action, Hardy-Schulze rules, gold number.
Liquids in liquids (emulsions) : Types of emulsions, preparation. Emulsifier.
Liquids in solids (gels): Classification, preparation and properties, inhibition, general applications of colloids.

UNIT-IV **(8 Hrs.)**

Solutions, Dilute Solutions and Colligative Properties:

Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

Dilute solution, colligative properties, Raoult's law, relative lowering of vapour pressure, molecular weight determination. Osmosis, law of osmotic pressure and its measurement, determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point. Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression of freezing point. Experimental methods for determining various colligative properties.

Abnormal molar mass, degree of dissociation and association of solutes.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) Examiner will set total of ***Nine*** questions comprising ***Two*** questions from each unit and ***One*** compulsory question of short answer type covering the whole syllabi.

(ii) The students are required to attempt ***Five*** questions in all, ***One*** question from each unit and the Compulsory question.

(iii) Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested :

1. Atkins, P., Paula, J.de, *Atkins Physical Chemistry;* 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., *Principles of Physical Chemistry;* 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., *Physical Chemistry;* 6th edition, Pubs: McGraw Hill Inc., 1996.

4. Rao, C.N.R., *University General Chemistry;* Pubs: Macmillan India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., *Physical Chemistry;* 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., *Physical Chemistry;* 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., *Physical Chemistry Through Problems;* Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., *Physical Chemistry;* 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.

9. Moore, W. J., *Basic Physical Chemistry;* Pubs: Prentice Hall of India Pvt. Ltd., 1983.

10. Metz, C.R., *Theory and Problems of Physical Chemistry;* Schaum's Outline Series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-VIII : LABORATORY PRACTICALS

Max. Marks : 22 Marks
Internal Assessment : 03 Marks
6 Periods/week

ORGANIC CHEMISTRY AND GREEN CHEMISTRY PRACTICALS :

Crystallization and determination of melting points

Concept of induction of Crystallization

1. Phthalic acid from hot water (using fluted filter paper and stemless funnel).
2. Acetanilide from boiling water.
3. Benzoic acid from water

PHYSICAL CHEMISTRY

1. Refractive indices

   Determine the Refractive indices of given liquids (water, acetone, methanol, ethylacetate, cyclohexane) by Abbe's, refractometer & calculate their specific refractions.

2. Viscosity

   To determine the viscosity of Brine Solution (20%), n-Butyl alcohol, cyclohexane

3. Surface Tension

   To determine the surface tension of Brine Solution (20%), n-Butyl alcohol, Cyclohexane

General Instruction to the Examiners:

Note : Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Physical Chemistry : 10 marks

Q.No. II. Organic Chemistry : 06 marks

Q.No. III. Viva-Voce : 03 marks
Ask three questions (1 marks each) related to chemistry practicals.

Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Khosla, B.D., Garg, V.C., Gulati, A., *Senior Practical Physical Chemistry;* 11th edition, Pubs: R. Chand & Co., New Delhi, 2002.

2. Das, R.C., Behra, B., *Experimental Physical Chemistry;* Pubs: Tata McGraw Hill Publishing Co. Ltd., 1998.

3. Levitt, B.P., *Findlays Practical Physical Chemistry;* 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

SEMESTER-I

First Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A	Plant Diversity-I	3 hrs.	36	04	40
Theory Paper-B	Cell Biology	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Second Semester					
Theory Paper –A	Plant Diversity-II	3hrs	36	04	40
Theory Paper-B	Genetics	3hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3hrs.	18	02	20
		Total			**200**

Note: 1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

Paper-A: PLANT DIVERSITY-I

Objective: The basic objective of this paper is to make students aware about the diversity in various life forms of plant kingdom. It gives an idea about the most simple group of plants. A systematic study of algae and fungi included in this group would familiarize students not only with structural differentiation but also provide an insight about the heterotrophic and autotrophic modes of nutrition in the plant kingdom. This paper in fact forms the basis of any advance study in Botany.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bacteria: Salient features, types and cell structure.

Algae: General Characters; systematic position, structure and life history of *Oscillatoria* (Cyanophyceae) *Volvox*, *Cladophora* (Chlorophyceae); *Vaucheria* (Xanthophyceae).

UNIT-II

Systematic position, structure and life history of *Dictyota* (Phaeophyceae); *Batrachospermum* (Rhodophyceae) and economic importance of algae.

UNIT-III

Fungi: General characters; systematic position, structure and life history of *Albugo* (White rust of crucifers: *Albugo candida*), *Rhizopus* and *Saccharomyces*.

UNIT-IV

Systematic position, structure and life history of *Agaricus*, *Ustilago* (Loose smut of wheat: *Ustilago tritici*), *Puccinia* (Black rust of wheat: *Puccinia graminis tritici*), *Colletotrichum* (Red rot of sugarcane: *Colletotrichum falcatum*); general account of Lichens and their economic importance.

Suggested Readings :

1. Alexopoulos, C. J. Mims, C. W`. and Blackwell, M. 1996. Introductory Mycology. John Wiley and Sons, Inc. USA.
2. Dube, H.C. 1990. An Introduction to Fungi. Vikas Publishing House Pvt. Ltd., Delhi.
3. Goyal, J. P. Dhand, Neelam and Saini, Aruna. 2011. Foundations of Botany. Trueman Book Company Jalandhar.
4. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi.
5. Sharma, O.P. 1992. Text Book of Thallophytes, McMillan India Ltd., New Delhi.
6. Sharma, P.D. 1991. The Fungi. Rastogi & Co., Meerut.
7. Smith, G.M. 1971. Cryptogamic Botany. Vol. 1, Algae & Fungi, Tata McGraw Hill Publishing Co. New Delhi.
8. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
9. Srivastava, H.N. 2013. Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
10. Vishishta, B. R. 1999. Botany for Degree Students. Algae. S. Chand and Company Ltd., New Delhi.
11. Vishishta, B. R. 1999. Botany for Degree Students. Fungi. S. Chand and Company Ltd., New Delhi.

Paper-B: Cell Biology

Objective: This paper deals with the basic structural unit of life i.e. Cell & its organelles. It provides an insight into structural and cytological basis of functional differentiation in plants. Coupled with the study of prokaryotic and eukaryotic diversity of life forms included in Paper-A, the course material of this paper gives an idea about cellular, molecular and biochemical basis of such differentiation.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Ultrastructure and functions of a typical plant cell and its organelles: Nucleus, Mitochondrion, Plastids, Ribosome, Endoplasmic reticulum, Golgi apparatus, Lysosomes; Structure and functions of cell wall and plasma membrane: fluid mosaic model only.

UNIT-II

Physical structure of chromosome; Giant chromosomes: Polytene and Lampbrush chromosomes; Chromosomal alterations (deletion, duplication, inversion, translocation) and their importance; Variations in chromosome number, (aneuploidy and polyploidy) introduction and their importance.

UNIT-III

Cell divisions: Mitosis and Meiosis in plants and their significance, Synaptonemal complex, DNA: Structure (Watson and Crick model), Nucleosome, types of DNA and role of DNA, Replication of DNA.

UNIT-IV

Structure and concept of gene: One gene-one enzyme hypothesis; Genetic Code: Characteristics, exceptions, Wobble hypothesis; RNA: Structure and types; Transcription and translation; Regulation of gene expression in prokaryotes (Lac operon and Tryptophan operon) and in eukaryotes (a brief account).

Suggested Readings :

1. Alberts, B., Gray, D. Lewis, J. Raff, M., Roberts, K. and Watson, I.D. 1999. Molecular Biology of Cell. Garland Publishing Co., Inc., New York, USA.
2. Bhatia, K.N. and Dhand Neelam. 2013. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. A Text-book of Cell and Molecular Biology. Rastogi Publications, Meerut, India.
4. Kleinsmith, L.J. and Kish, V.M. 1995. Principles of Cell and Molecular Biology (2^{nd} edition). Harper Collins College Publishers, New York, USA.
5. Lodish, H., Berk, A., Zipursky, S.L. Matsudaira, P., Baltimor, D. and Darnell, J. 2000. Molecular Cell Biology. W.H. Freeman & Co., New York, USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Wolfe, S.L. 1993. Molecular and Cell Biology. Wadsworth Publishing Co., California, USA.

Suggested laboratory exercises for First Semester :

1. Study of morphology of various genera included in algae and fungi.
2. Study of Crustose, Foliose and Fructicose types of Lichen thalli.
3. Histopathological study of White rust of crucifers, Loose smut of wheat, Black rust of wheat and Red rot of sugarcane.
4. To study cell structure from onion leaf peels; demonostration of staining and mounting method.
5. Preparation of temporary slides to show different stages of mitosis from root tips of *Allium cepa* and *A. sativum*.
6. Preparation of temporary slides to show different stages of meiosis from floral buds of *Allium/Brassica*.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1.	Identify and write illustrated morphological note on specimens A and B.	05
2.	Prepare a squash mount of specimen C to show the stage of cell division visible in the slide and show it to the examiner. Identify it giving at least one reason. Draw the stage of cell division and show it to the examiner.	05
3.	Identify and the slides D and E giving at least two reasons for each.	04
4.	Practical Note-book	02
5.	Viva-voce	02

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BOTANY

SEMESTER – II

Paper-A: Plant Diversity-II

Objective: The basic objective of this paper is to make the students aware about the diversity in various life forms of plant kingdom. It gives an idea about how different life forms have evolved from simpler to complex ones. A sequential study ranging from Bryophytes (the amphibians of plant kingdom) and then to Pteridophytes -the first vascular land plants, would enable students to have a broad prospective of evolutionary trends in plant kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bryophyta: General characters; systematic position, structure, reproduction and life cycle of *Marchantia* and *Riccia* (Hepaticopsida) excluding developmental stages.

UNIT-II

Systematic position, structure, reproduction and life cycle of *Anthoceros* (Anthocerotopsida) and *Funaria* (Bryopsida) excluding developmental stages.

UNIT – III

Pteridophyta: General characters; systematic position, structure, reproduction and life cycle of *Rhynia* (Psilophytopsida) and *Selaginella* (Lycopsida) excluding developmental stages.

UNIT-IV

Systematic position, structure, reproduction and life cycle of *Equisetum* (Sphenopsida) and *Pteris* (Pteropsida) excluding developmental stages.

Suggested Readings

1. Goyal, J. P. Dhand, Neelam and Saini, Aruna 2011. Foundations of Botany. Trueman Book Company Jalandhar.
2. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi
3. Puri, P. 1980. Bryophyta. Atma Ram & Sons, Delhi.
4. Sharma, O.P. 1990. Text Book of Pteridophyta, McGraw Hill Publishing Co., New Delhi.
5. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
6. Smith, G.M. 1971. Cryptogamic Botany. Vol. II, Bryophytes and Pteridophytes, Tata McGraw Hill Publishing Co., New Delhi.
7. Srivastava, H.N. 2013.Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
8. Vishishta, B. R. 1999. Botany for Degree Students. Bryophyta. S. Chand and Company Ltd., New Delhi.

Paper-B : Genetics

Objective: This paper deals with various aspects of hereditary trends observed in successive generations. It provides an insight into genetic basis of such evolutionary trends in plants. Coupled with the study of variations in life forms included in Paper A, the course material of Paper B provides an idea about the important role that genetics plays in structural and functional differentiation of plants.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Mendelism : Mendel's experiments and results, Mendel's Laws of Dominance, Segregation and Independent assortment; Linkage: complete and incomplete linkage, linkage groups, linkage maps, importance of linkage, cytological interpretation of Mendelism.

UNIT-II

Non-allelic Gene Interactions: Dominant and recessive epistasis, supplementary genes, complementary genes, quantitative or polygenic inheritance, duplicate genes. Allelic gene interactions: Incomplete dominance, codominance, multiple alleles, pleiotropic genes.

UNIT-III

Chromosome theory of heredity, parallelism between chromosome and Mendelian factors, Sex linked inheritance; Characteristics and examples (Haemophilia, colour-blindness); Cytoplasmic or extranuclear inheritance: mitochondrial and plastid DNA; plastid inheritance in *Mirabilis*, mitochondrial inheritance in Yeast.

UNIT – IV

Genetic variations: Continuous and Discontinuous; Mutations: characteristics, types, importance, factors affecting mutations; Mutagens: Physical and chemical, mechanism of gene mutations; DNA damage and repair: Types of damage (Single base change and structural distortion), types of repair system in prokaryotes and eukaryotes.

Suggested Readings :

1. Atherly, A.G., Girton, J.R. and McDonald, J.F. 1999. The Science of Genetics. Saunders College Publishing, Fort Worth, USA.
2. Bhatia, K. N. and Dhand Neelam 2013.. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. Genetics. Rastogi Publications, Meerut, India.
4. Russel, P.J. 1998. Genetics. The Benjamin/Cummings. Publishing Co. Inc., USA.
5. Snustad, D.P. and Simmons, M.J. 2000. Principles of Genetics, John Wiley & Sons, Inc., USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Stent, G.S. 1986. Molecular Genetics. CBS Publications.

Suggested laboratory exercises for Second Semester:

1. Study of morphology of various genera mentioned in Bryophyta and Pteridophyta.

2. I. Preparation of permanent stained slides of :

Marchantia	(V.S. Thallus)	*Selaginella*	(T.S. Stem)
Riccia	(V.S. Thallus)		
Anthoceros	(V.S. Thallus)	*Equisetum*	(T.S. Aerial stem passing through internode)
Funaria	(T.S. Stem)	*Pteris*	(T.S. Petiole and leaflet)

II. Study through permanent slides:

Marchantia

i) L.S. Antheridiophore
ii) L.S. Archegoniophore
iii) L.S. Mature sporogonium

Riccia

L.S. Mature sporogonium

Anthoceros

i) T.S. Thallus passing through antheridia
ii) T.S. Thallus passing through archegonia
iii) L.S. Mature sporogonium.

Funaria

i) L.S. Male receptacle
ii) L.S. Female receptacle
iii) L.S. Capsule
iv) Primary protonema

Selaginella

L.S. Sporangiferous spike

Equisetum

i) L.S. Strobilus
ii) T.S. Strobilus

Pteris

Mature prothallus

3. Problems related to Mendalism and gene interactions.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1.	Cut T.S., stain and make a permanent mount of specimen A. Identify, draw its labelled diagram and show the slide to the examiner.	06
2.	Problem related to Mendalism or gene interaction (to be announced by the examiner).	04
3.	Identify the slides B and C giving at least two reasons for each.	04
4.	*Viva-voce* & Practical Note-book.	2+2= 04

ZOOLOGY

FIRST SEMESTER

	Time	Theory	Internal Assessment	Marks
Paper-I : Biodiversity & Cell Biology – I	3 hrs.	36	4	40
Paper-II: Biodiversity & Cell Biology – II	3 hrs.	36	4	40
Practical: One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
			Total marks :	100

SECOND SEMESTER

	Time	Theory	Internal Assessment	Marks
Paper-I : Biodiversity & Ecology - I	3 hrs.	36	4	40
Paper-II: Biodiversity & Ecology - II	3 hrs.	36	4	40
Practical: One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
			Total marks :	100

Note : The number of hours for Theory and Practical per week shall be 6 and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Semester-I and Semester-II in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

ZOOLOGY

FIRST SEMESTER

PAPER–I : BIODIVERSITY & CELL BIOLOGY-I (ZOO. 101)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following protozoan types :
Amoeba, Paramecium and Plasmodium.

Classification up to orders with ecological notes and economic importance (if any) of the following :
Entamoeba, Trypanosoma, Giardia, Noctiluca, Eimeria, Opalina,Vorticella, Balantidium and Nyctotherus.

UNIT – II

Detailed study of the following animal types :

Parazoa (Porifera) : Sycon (*Scypha*)
Cnidaria (Coelenterata) : *Obelia*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Parazoa (Porifera) : *Grantia, Euplectella, Hyalonema and Spongilla*

Cnidaria (Coelenterata) : *Hydra, Sertularia, Plumularia, Obelia, Tubularia, Bougainvillea, Porpita, Velella, Physalia, Rhizostoma Millipora, Aurelia, Alcyonium, Tubipora, Zoanthus, Metridium, Madrepora, Favia, Fungia and Astrangia.*

UNIT – III

Methods in Cell Biology : Principles and applications of light (simple, compound & phase contrast) and electron (SEM & TEM) microscopes
Fixation & fixatives, staining techniques. (simple and double staining)

Organisation of Cell : Concept of Prokaryotic and Eukaryotic cell, extra nuclear and nuclear organization of cell.

Plasma membrane : Structure with particular references to Fluid Mosaic Model, Osmosis, active and passive transport, endocytosis and exocytosis.

UNIT – IV

Endoplasmic reticulum	:	Structure, types, associated enzymes and functions.
Mitochondria	:	Structure, mitochondrial enzymes and the role of mitochondria in respiration. Mitochondrial DNA.
Golgi complex	:	Structure, associated enzymes and functions.

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A molecular approach – G. M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PAPER–II : BIODIVERSITY & CELL BIOLOGY - II (ZOO. 102)

Max. Marks	:	40 marks
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

UNIT – I

Detailed study of the following animal types :

Platyhelminthes	:	*Fasciola,Taenia*
Aschelminthes	:	*Ascaris*
		Parasitic adaptations in Helminths

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Platyhelminthes	:	*Dugesia, Schistosoma and Echinococcus.*
Aschelminthes	:	*Ascaris, Oxyuris, Wuchereria.*

UNIT – II

Detailed study of the following animal type :

Annelida	:	*Pheretima*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Annelida	:	*Nereis, Polynoe, Eunice, Arenicola, Aphrodite, Amphitrite, Chaetopterus, Tubifex and Pontobdella.*

UNIT – III

Lysosomes	:	Lysosomal enzymes, Polymorphism and functions.
Ribosomes	:	Types of ribosomes, their structure and functions.
Centrosome	:	Structure and functions.

UNIT-IV

Nucleus	:	Structure and functions of nuclear membrane, nucleolus and chromosomes. Euchromatin & Heterochromatin
An elementary idea of cell transformation in Cancer	:	Introduction, difference between normal and Cancer cells, types of cancer, basic idea of transformation.
An elementary idea of cellular basis of immunity	:	Cellular & Humoral immunity. Elementary idea of cells & organs of immune system .

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A Molecular approach – G.M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PRACTICALS : Practical based on Theory Papers ZOO-101 & ZOO-102 (ZOO-151)

1. Examination of cultures of *Euglena* and *Paramecium.*
2. Classification upto orders with ecological notes and economic importance, if any, of the following animals :
   Slides : *Amoeba, Euglena, Trypanosoma, Noctiluca, Eimeria, Monocystis, Paramoecium* (Binary fission and conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus & Polystomella.*

   Parazoa (Porifera) : Specimens: *Sycon, Grantia, Euplectella, Hyalonema, Spongilla, Euspongia.*

   Cnidaria (Coelenterata) (a) Specimens : *Porpita, Velella, Physalia, Aurelia, Rhizostoma Metridium, Millipora, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia and Astrangia.*

   (b) Slides : *Hydra* (W.M.) *Hydra* with buds. *Obelia* (colony and medusa). *Sertularia, Plumularia, Tubularia, Bougainvillea* and *Aurelia larva.*

   Aschelminthes : *Ascaris* (male and female), *Trichinella, Ancylostoma.*

   Platyhelminthes (a) Specimens : *Dugesia, Fasciola, Taenia, Echinococcus.*

   (b) Slides : Miracidium, Sporocyst, Redia, Cercaria of *Fasciola*, Scolex and Proglottids of *Taenia* (mature and gravid).

   Annelida : *Pheretima, Nereis, Heteronereis, Polynoe, Eunice, Aphrodite, Chaetopterus, Arenicola, Tubifex* and *Pontobdella.*

3. Study of the following permanent stained preparations :
   - L.S. and T.S. *Sycon,* gemmules, spicules and spongin fibres of a sponge.
   - T.S. *Hydra* (Testis and ovary region).
   - T.S. *Pheretima* (Pharyngeal and typhlosolar regions); setae, septal nephridia, spermathecae and ovary of *Pheretima*
   - T.S. *Fasciola* (Different regions).
   - T.S. *Ascaris* (Male & female).

4. Preparation of the following slides :
   Temporary preparation of *Paramecium*, Euglena and vorticella.

5. Demonstration of dissection of earthworm through video clipping/models/charts ets.

6. Make a preparation of sex-chromatin from buccal smear.

7 . Introduction to the following through photographs/lab. visits :
   - Gel electrophoresis, TEM & SEM, ultrastructure of cell organelles.

8. Study of slide of striated muscle fibre and Animal cell.

Note : . Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labelled sketch of the any given system and show to examiner/Spot any four parts of anatomy in given models/charts. 2 marks

2. Make a temporary mount of the material "A". Identify and draw its labelled sketch and show it to the examiner. 1 marks

3. Identify the slides (B-C) and give two important reasons for each identification. 3 marks

4. Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks

5. Identify the cell organelle through photograph and give two important reasons for Identification/Buccal smear/striated muscle fibre/paper chromatography. 2 marks

6. Viva voce 2 marks

7. Practical records and chart 2 marks

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ZOOLOGY
SECOND SEMESTER

Paper- I : BIODIVERSITY & ECOLOGY - I (ZOO-201)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type Questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Detailed study of the following animal types :

Arthropoda : *Periplaneata*
Social organizations in insects (honey bee and termite).

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Arthropoda : *Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper) *Gryllus* (Cricket), *Mantis* (Preying Mantis), *Cicada, Forficula* (Earwig), *Cimex*, *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth).

UNIT –II

Detailed study of the following animal types :

Arthropoda : Prawn (*Palaemon*)
Life cycle of *Anopheles* and *Culex*.

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Peripatus, Prawn, Lobster, *Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

UNIT – III

Ecology	:	Subdivisions and Scope of ecology.
Ecosystem	:	Components, ecological energetics, food web, introduction to major ecosystems of the world.
Ecological factors	:	Temperature, light and soil as ecological factors.

UNIT – IV

Nutrients	:	Biogeochemical cycles & concept of limiting factors.
Ecological Adaptations	:	Morphological, physiological and behavioural adaptations in animals in different habitats.
Population	:	Characteristics and regulation of population.

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

Paper-II BIODIVERSITY & ECOLOGY - II (ZOO-202)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following animal type :

Mollusca : *Pila*

Classification up to orders with ecological notes and economic importance (if any)

Mollusca : *Chiton, Anodonta, Mytilus, Ostrea, Cardium, Pholas, Solen* (Razor Fish), *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus and Dentalium*

UNIT – II

Detailed study of the following animal types :

Echinodermata : *Asterias*, Echinoderm Larvae.
Hemichordata : *Balanoglossus*, External characters and affinities.

Classification up to orders with ecological notes and economic importance (if any)

Echinodermata : *Echinus, Cucumaria, Ophiothrix, Antedon and Asterias.*
Hemichordata : *Balanoglossus.*

UNIT – III

Inter and intra ecological relationships : Competition, predation, parasitism, commensalism, ammensalism & mutualism

Biotic community : Characteristics, ecological succession, ecological niche.

UNIT – IV

Natural resources : Renewable and nonrenewable natural resources and their conservations.

Environmental Degradation : Causes, impact and control of environmental pollution. (Air, Water, Land, Noise)

Wildlife conservation : Basic concepts

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

PRACTICALS : Practical based on Theory Papers ZOO-201 & ZOO-202 (ZOO 152)

1. Classification upto orders with ecological notes and economic importance, if any, of the following animals :

   Arthropoda : *Peripatus, Palaemon, Lobster, Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper), *Gryllus* (Cricket), *Mantis* (Praying Mantis) *Cicada, Forficula* (Earwig), *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth), *Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

   Mollusca : *Anodonta, Mytilus, Ostrea, Cardium,Pholas, Solen* (Razorfish) *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus shell* (Complete and T.S.), *Chiton and Dentalium.*

   Echinodermata : *Asterias, Echinus, Ophiothrix* and *Antedon Cucumaria*

   Hemichordata : *Balanoglossus*.

2. Study of the following permanent stained preparations :
   Trachea, mouth parts of *Periplaneta*
   Radula and osphradium of *Pila*.
   T.S. Star fish (Arm).

3. Demonstration of dissection of the following animals through video clippings/charts/models:
   Periplaneta : Digestive and nervous systems; mouth parts and trachea.
   Pila : Pallial complex, digestive and nervous systems, Radula.
4. Study of animal adaptations with the help of specimens, charts and models.
5. Study of Zoogeographical regions and their fauna.
6. Study of biotic components of an ecosystem.
7. Study of different types of nests in birds.
8. Study & preparation of zoogeographical charts/maps.

Note: Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1.	Draw a labeled diagram of any given system of an animal and explain it to the examiner Sketch and demonstrate it to the examiner.	2 marks
2.	Identify the slides (A-C) and give two important reasons for each identification.	3 marks
3.	Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance.	6 marks
4.	Identify the type of adaptation/type of nest/biotic components with a short note.	1 marks
5.	Mark Zoogeographical region on the given physical map along with endemic fauna and climate.	2 marks
6.	Viva voce	2 marks
7.	Practical record, charts/maps and project report of excursion to a place of zoological interest	2 marks

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BIOCHEMISTRY

Note : 1. A student who has passed the +2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Biochemistry at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics/ Biology as his/her subjects.

2. Only such colleges as have all necessary infrastructure of equipment and staff shall admit students to the subject of Biochemistry. The infrastructure must be approved by the University as per usual practice.

Semester-I

Scheme of Examination	*Duration*	*Marks+Internal Assessment*
Theory Paper- A : Carbohydrates and Lipids	3 hrs.	45 +5
Theory Paper-B : Nitrogen containing Biomolecules	3 hrs.	45 +5
One Practical examination pertaining to the entire syllabus included in Theory Papers A & B.	3 hrs.	22 +3
	Total marks :	**125**

Semester-II

Scheme of Examination	*Duration*	*Marks+Internal Assessment*
Theory Paper- A : Biochemical Techniques	3 hrs.	45 +5
Theory Paper-B : Bioenergetics and Enzymes	3 hrs.	45 +5
One Practical examination pertaining to the entire syllabus included in Theory Papers A & B.	3 hrs.	22 +3
	Total marks :	**125**

BIOCHEMISTRY

SEMESTER - I

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS :

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question No. 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No.1 and at least one question from each of the 4 sections.

Paper- A : CARBOHYDRATES AND LIPIDS **Marks: 45+5**

(*Three periods per week*)

Objective : To learn about Biomolecules, their structure and functional significance.

SECTION-I **(Lectures: 6)**

Introduction to Biochemistry and its scope. Water: Physical properties, as a biological solvent and structure of water, Dissociation of water. pH and pOH, Buffer solution. Henderson Hasselbalch equation, Acid-base indicators, Buffers and physiologically important buffers, dialysis and osmosis.

SECTION-II **(Lectures: 8)**

Definition and classification of carbohydrates. Fischer and Haworth structures of carbohydrates. Stereoisomerism, and mutarotation. Anomeric forms of monosaccharides. Derivatives of monosaccharides (glycosides, deoxysugars, amino sugars and other derivatives of biological importance). Oligosaccharides of biological importance (structure of maltose, lactose, sucrose, cellobiose, trehalose, raffinose). Characteristic reactions of monosaccharides: Reactions with hydrazine, hydrogen cyanide, hydroxylamine; reduction and oxidation of sugars; periodic acid oxidation; action of alkali upon sugars; acylation and methylation of sugars. Homo-and hetero-polysaccharides (structures of amylose, amylopectin, starch, inulin, pectins, dextrins, glycogen, cellulose, chitin). GAGs as components of connective tissue. Polysaccharides of bacterial cell wall, & Glycoproteins

SECTION-III **(Lectrure: 8)**

Definition and classification of fatty acids (saturated and unsaturated). Essential fatty acids. Important reactions of functional groups present in fatty acids. Characteristics of fatty acids and fats (saponification, iodine, acid, acetyl and peroxide values). Refractive index, m. p., b.p. and their relation to molecular size. Properties of glycerol. Fats as source of energy. Waxes. Structures, characteristics and functions of lipids: Triacylglycerols, phospholipids: lecithins (Phosphotidyl cholines), lysolecithins, cephalins (Phosphotidylethanolamine), Phosphatidylserine, Phosphatidyl-inositol, sphingomyelins, plasmalogens), cerebrosides, gangliosides, sulfatides.

SECTION-IV **(Lectures: 6)**

Lipoproteins– Composition, classification and biological functions. Liposomes.
Terpenes and Steroids – Terpenes of biological significance e.g. carotenes, phytol. Cholesterol and other animal sterols. Colour reactions of sterols. Sterols of yeast and fungi (Mycosterols). Phytosterols. Steroidal hormones. Bile acids.
Structure and properties of Eicosanoids-Prostaglandins, Leukotrienes, Thromboxanes, Prostacyclins

Suggested Books:

1. Nelson D.L.Cox M M : Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K. : Outlines of Biochemistry, John Wiley & Sons, U.S.A. (5th edition)
3. G.Zubay : Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th Edition, 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell : Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

1. Qualitative tests for Carbohydrates.
2. Estimation of Carbohydrate by anthrone method.
3. Estimation of ascorbic acid by dye method.
4. Verification of Beer-Lambert Law for nitrophenol or cobalt chloride.
5. Qualitative tests for Cholesterol and lipids
6. Determination of saponification value of fats
7. Determination of iodine value of fats.
8. Estimation of phospholipids by vanillin method.

Paper-B : NITROGEN CONTAINING BIOMOLECULES **Marks: 45+5**

SECTION–I **(Lectures:7)**

Amino Acids: Common structural features. Stereoisomerism and RS system of designating optical isomers. Classification based on the nature of "R" groups. Amino acids present in proteins and non-protein amino acids. Specialized role of amino acids. Physical and Chemical properties of amino acids. Titration of amino acids. *Peptide Bonds*: Nature of a peptide bond. Chemical synthesis of polypeptides. Biologically active peptides.

SECTION–II (Lectures: 8)

Proteins: Levels of protein structure. Determination of primary structure of proteins. Forces stabilizing structure and shape of proteins. Native proteins and their conformations. Behaviour of proteins in solutions. Salting in & salting out of proteins. Denaturation of proteins. Structural and functional diversity of proteins, fibrous proteins (keratins, collagen & elastin), globular proteins (hemoglobin, myoglobin) and conjugated proteins.

SECTION-III (Lectures: 8)

Nucleic Acids: Structure and properties of purine and pyrimidine bases. Nucleosides and nucleotides. Biologically important nucleotides. Double helical model of DNA and forces responsible for it. Different forms of DNA (A,B and Z type), Denaturation of DNA. Physical and chemical properties of nucleic acids. Chemical and enzymatic hydrolysis of nucleic acids. Sequencing of polynucleotides. Types of RNA and ribozyme.

SECTION-IV (Lectures: 6)

Porphyrins:Porphyrin nucleus and classification of porphyrins. Heme and other metalloporphyrins occurring in nature. Detection of Porphyrins spectrophotometrically and by fluorescence. Chemical nature and physiological significance of bile pigments.

Suggested Books:

1. Nelson D.L.Cox M M : Biochemistry, Worth Publishers Inc., New York.(4th Edition, 2005)
2. Conn E.E & Stumpf. P.K. : Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay : Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th Edition, 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell : Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

1. Qualitative tests for Amino acids and proteins
2. Titration curve for amino acids and determination of pKa value.
3. Estimation of:
   (a) Amino acids by ninhydrin method.
   (b) Protein by biuret and Lowry's method
   (c) DNA by diphenylamine method
   (d) RNA by orcinol method
4. Spectrophotometic measurements of DNA and RNA solutions

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BIOCHEMISTRY

SEMESTER-II

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS :

1. Total No. of questions will be nine. All question carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question No. 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No.1 and at least one question from each of the 4 sections.

Paper- A : BIOCHEMICAL TECHNIQUES **Marks: 45+5**

Credit: 3+0+0
Objective: To learn various biochemical techniques

Section-I **(Lectures: 7)**

Beer-Lambert's Law. Light absorption and its transmittance. Determination and application of extinction coefficient. Applications of following spectroscopic techniques in elucidating structure of Biomolecules-Visible, U.V., infra-red and fluorescence spectroscopy

Section-II **(Lectures: 8)**

Chromatography: General principles, distribution coefficient, Partition chromatography-normal phase and reverse phase liquid chromatography. Modes of chromatography-column, thin layer and paper chromatography. Principles, matrices and applications of gel permeation, adsorption, ion exchange and affinity chromatography. TLC, GLC, HPLC.

Section-III **(Lectures: 7)**

Various centrifugation techniques and their applications in Biochemistry. Preparative and analytical ultra-centrifugation procedures. Application of partial specific volume, diffusion coefficient and viscosity measurements in the study of macromolecules of biochemical importance

Section-IV **(Lectures: 8)**

Electrophoresis: General principle, support media, types of electrophoresis.

Electrophoresis of proteins: Native and SDS-PAGE. Iso electric focusing, 2D-PAGE, detection and recovery of proteins. Molecular weight determination. Immuno electrophoresis. Electrophoresis of nucleic acid: Agarose-gel electrophoresis of DNA and RNA, pulsed-field gel electrophoresis, northern and Southern transfer procedure.

SUGGESTED BOOKS :

1. Biochemical Techniques: Theory and practice by Robyt, J.F. and White, B.J, 1987, Brooke/Cole Publishing Company, California.
2. Principles and techniques of Biochemistry & Molecular biology by K Wilson & J Walker 6th Ed.Cambridge University Press
3. Fundamentals of analytical chemistry by skoog /west/Holter/Crouch Thompson/Brooks/Cole

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

Paper-B:

ENZYMES AND BIOENERGETICS **Marks: 45+5**

Objective : To learn principles of thermodynamics & nature of enzymes, their mode of action and Enzyme Kinetics

SECTION-I **(Lecture: 7)**

Introduction to enzymes. General characteristics of enzymes. IUB system of nomenclature and classification of enzymes. Prosthetic group. Holoenzyme, apoenzyme, cofactors, isozymes and zymogens, Coenzymes (NAD/NADP,FMN/FAD, coenzyme A,TPP, pyridoxal phosphate, tetrahydrofolate) and their biochemical functions, Assay of enzyme activity, units of enzyme activity. Active site(s) of enzymes.

SECTION-II **(Lectures: 8)**

Enzymes as catalysts. Theories of enzymes catalysis: Proximity and orientation effects, acid base catalysis, covalent catalysis. Role of metals in enzyme catalysis
Monomeric enzymes, oligomeric enzymes & multienzyme complexes. Mechanism of action of chymotrypsin and pyruvate dehydrogenase

SECTION-III **(Lectures: 8)**

Factors affecting velocity of enzyme catalysed reactions: Enzyme concentration, pH and temperature. Michaelis-Menten equation. Determination of Km and its significance.
Enzyme inhibition. Various types of enzyme inhibitions. Determination of Ki value. Enzyme inhibitors and their importance. Introduction to multisubstrate enzymes. Allosteric enzymes and enzyme regulation. Isoenzymes and their clinical significance.

SECTION-IV **(Lectures: 8)**

Concepts of bioenergetics, principles of thermodynamics & their application in Biochemistry, concept of free energy. Biological oxidations. Redox potential. ATP and High energy phosphate compounds: introduction, phosphate group transfer potential Enzymes and co-enzymes involved in oxidations and reductions. Mitochondrial electron transport chain and oxidative phosphorylation. Substrate level phosphorylation, Mechanism of oxidative phosphorylation.

Books Recommended:

1. J.R. Whitaker : Principles of Enzymology for the Food Sciences, Marcel Dekker, Inc., New York.
2. J.E. Bell and E.T. Bell : Protein and Enzymes, Prentice Hall Inc, New Jersey.
3. Berg J. M, LubertStryer : Bio-chemistry, W.F. Freeman and Co., New York, Edition 5th, 2002.
4. Nelson D.L & Cox M. M. : Principles of Bio-chemistry, Worth Publishers, Inc., New York, edition 4th 2005.
5. Conn E.E &Stumpf P.K. : Outlines of Bio-chemistry, Bruening & Doi John Wiley & Sons.
6. T. Palmer : Enzymes, 2004.

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

I. Preparation of casein from milk

II. Determination of achromatic point of saliva

III. (a) Assay of serum alkaline phosphatase activity.
(b) Effect of pH on enzyme activity.
(c) Effect of temperature on enzyme activity and determination of energy of activation.
(d) Effect of substrate concentration on enzyme activity and determination of Km.

IV. Inhibition of alkaline phosphatase by EDTA.

V. Demonstration of potato polyphenoloxidase activity.

Books Suggested:

1. Berg JM, Tymoczko JL, Stryer L. Biochemistry. 6th Edition, W. H. Freeman and Co., 2007.
2. Jain MK. Introduction to Biological membranes, John Wiley and sons New York, 1988.
3. Vance DE & Vance JE, Biochemistry of lipids and Biomembranes, Benzamin Cummings, 1985.
4. Jones MN & Chapman D. Micelles monolayers and biomembranes Wiley-Lis New York, 1995.
5. Lodish H. Molecular Cell biology of cell, WH Freeman, 2004.

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INTRODUCTION TO COMPUTER SCIENCE
(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module I while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III.

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lecturers per week	Max. Marks			Exam Hours
	First Semester			Ext.	Int.		
1	A	Fundamentals of Information Technology	6	25	5	30	3
2	C	Practical on Paper – A	6	-	-	20	3
	Second Semester			Ext.	Int.		
3	B	Computer Programming Using C	6	25	5	30	3
4	D	Practical on Paper – B	6	-	-	20	3

SEMESTER I

Paper A
Paper Title: Fundamentals Of Information Technology
Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

i. The Question Paper will consist of Four Sections.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Section and the Compulsory question.

iv. All questions carry equal marks unless specified.

SECTION – A

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation. Input/Output devices.

SECTION – B

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
Comparison of main features of DOS, LINUX and Windows Operating Systems.

SECTION – C

6. **Word Processing Software**:
Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.
Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
Clipart: Using clip art, Creating Word Art
Mail merge: Creating merged envelops, creating merged mailing labels

SECTION - D

7. **Spreadsheet Software:**
Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range
Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking
Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions
Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. **Presentation Software**:
Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References:

1.	Basandra, S.K.	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K.	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K.	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M.	Computers Todays by McGraw Hill, New York, 3rd ed., N.Y. Int. ed.
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron.	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper – C : Practical on Paper - A

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

INTRODUCTION TO COMPUTER SCIENCE

SEMESTER II

Paper B
Paper Title: Computer Programming Using C

Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

i. The Question Paper will consist of Four Sections.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Section and the Compulsory question.

iv. All questions carry equal marks unless specified.

SECTION – A

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Input/Output, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes:** automatic, external, static, register
5. **Preprocessor:** #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

SECTION - B

6. **Functions:** library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions

SECTION - C

8. **Strings**: Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
9. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures

SECTION – D

10. **Console Input/Output**: Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
11. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File, Text Files and Binary Files.

References:

1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi, 8th Edition.
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series, N.D., TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications.
4.	Salaria, R.S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper – D : Practical on Paper - B

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

MICROBIOLOGY

B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) EXAMINATION, 2016-17

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

Semester-I

Scheme of Examination	*Duration*	*Marks*
Theory	6 hrs.	75 (60+15*)
MIC 101 : Fundamentals of Microbiology-I	3 hrs.	37.5 (30+7.5*)
MIC 102 : Microbial Physiology—Metabolism-I	3 hrs.	37.5 (30+7.5*)
Practical		
One Practical pertaining to the entire syllabus included in Theory Papers MIC 101 and MIC 102	6 hrs.	25 (20+5*)

Semester-II

Theory	6 hrs.	75 (60+15*)
MIC 201 : Fundamentals of Microbiology-II	3 hrs.	37.5 (30+7.5*)
MIC 202 : Microbial Physiology—Metabolism-II	3 hrs.	37.5 (30+7.5*)
Practical		
One Practical pertaining to the entire syllabus included in Theory Papers MIC 201 and MIC 202	6 hrs.	25 (20+5*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

SEMESTER-I

OUTLINES OF TESTS AND SYLLABI

MIC 101 : FUNDAMENTALS OF MICROBIOLOGY-I

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. History, development, scope and applications of Microbiology.
2. Methods of Microbiology isolation of pure cultures, theory and practice of sterilization.
3. Nature of Microbial World : Prokaryotes and eukaryotes, growth pattern in microbes.

SECTION-B

1. Morphology and fine structure of bacteria, fungi, actinomycetes and algae.
2. Organization of cell wall, cell membrane, flagella and capsules in bacteria.
3. Morphogenesis in bacteria, formation of spores and cysts.

SECTION-C

1. Recombinant DNA technology: genetic engineering and gene cloning in micro-organisms.
2. Strategies of genetic engineering: Restriction enzymes, vectors and plasmids.

SECTION-D

1. Microorganism Association with Vascular Plants : Rhizosphere and Rhizoplane microorganisms and Mycorrhizae.
2. Nitrogen fixation : Symbiotic and nonsymbiotic and biofertilizers.
3. Biopesticides.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M. Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008).

MIC 102 : MICROBIAL PHYSIOLOGY—METABOLISM-I

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objectives :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth and enzymes.

SECTION-A

1. Microbial Nutrition : Requirements for Growth. Physical requirement (temperature, pH, osmotic pressure), chemical requirements (C, N, S, P, O).
2. Culture Media : Chemically defined media, complex media, anaerobic growth media, selective & differential media, and enrichment culture. Cultivation of Aerobes and Anaerobes.

SECTION-B

1. Enzymes : Chemical and physical properties of enzymes.
2. Classification and nomenclature of Enzymes.
3. Factors affecting enzyme activity.

SECTION-C

Microbial Metabolism :

1. Respiration and fermentation.
2. Glycolysis.
3. Pentose Phosphate pathway
4. The Entner Doudoroff pathway.
5. Tricarboxylic acid cycle.
6. Glyoxylate cycle.

SECTION-D

Bacterial Genetics:

1. Conjugation.
2. Transformation.
3. Transduction (generalized transduction, specialized transduction).
4. The Regulation of Gene Expression : Lac operon, tryptophan operon. Recommended

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Text Book of Microbiology, S. Chand and Company.

PRACTICALS

MAX. MARKS	**:**	**25 MARKS**
THEORY	**:**	**20 MARKS**
INTERNAL ASSESSMENT	**:**	**5 MARKS**
TIME	**:**	**3 HOURS**

1. Preparation of culture media, spread plates, pour plates, selective media, differential media.
2. Separation of pure cultures and study the effect of selective nutrients on prokaryotes.
3. Isolation of Soil Bacteria, Soil Fungi, Soil Actinomycetes.
4. Selective media for Soil microflora and use of growth factors, Study of Rhizosphere interactions, Quantitative measurements of Soil nutrients and Rhizosphere microflora and preparation of starter cultures of Rhizobium, Azotobacter.
5. Measurement of Soil Enzymes.
6. Use of ultraviolet light for its germicidal effect.
7. The replica plating technique.
8. Effect of temperature, Osmotic pressure, energy source etc. on growth of prokaryotes.

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MICROBIOLOGY

SEMESTER-II

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

MIC 201 : FUNDAMENTALS OF MICROBIOLOGY-II

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objectives :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. Microscopic examination of micro-organism, bright field microscopy, dark field microscopy, phase contrast microscopy and electron microscopy.
2. Staining of microbes, theory of Gram staining.

SECTION-B

1. Animal Viruses : Morphology, cultivation and viral disease cycle.
2. Bacteriophages : Morphology, multiplication, detection and enumeration.
3. Biotransformation of
   (a) D-Sorbitol to L-Sorbose. (b) Antibiotics. (c) Steroids.

SECTION-C

Genetic engineering for human welfare :

1. Production of pharmaceuticals.
2. Insect pest control.
3. Use of Genetically Engineered Microorganisms (GEMs) for control of pollution.

SECTION-D

1. Biogeochemical Cycling—Carbon cycle, Nitrogen cycle, Phosphorus and Sulphur cycle with role of microorganisms.

2. Sewage (waste-water) treatment, chemical characteristics, microbiological characteristics, waste water treatment processes.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M. Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008).

MIC 202 : MICROBIAL PHYSIOLOGY—METABOLISM-II

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth and enzymes.

SECTION-A

1. Microbial Growth : Growth in population, bacterial growth curve, mathematical nature and expression.
2. Factors affecting growth in microorganisms.
3. Methods for measurement of growth in microorganisms.

SECTION-B

1. Mechanisms of enzymes action.
2. Inhibition, control and regulation of enzyme activity.
3. Enzyme kinetics : Michaelis-Menten equation.

SECTION-C

Microbial Metabolism :

1. Catabolism of lipids and proteins.
2. Beta oxidation.
3. Electron transport chain.
4. Biochemical mechanisms of generation of ATP.

SECTION-D

Microbial Utilization of Energy & Biosynthesis :

1. Transport of nutrient by bacteria.
2. Synthesis of Amino Acids : Glutamate, lysine, glutamine, serine, arginine family.
3. Structures and biosynthesis of cell wall peptidoglycan.
4. Biosynthesis of Carbohydrates (gluconeogenesis) & Phospholipids.
   Replication of DNA molecules, Transcription & Translation (process of protein synthesis).

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), *Microbes and Man,* Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), *A Text Book of Microbiology,* S. Chand and Company.

PRACTICALS

MAX. MARKS	**:**	**25 MARKS**
THEORY	**:**	**20 MARKS**
INTERNAL ASSESSMENT	**:**	**5 MARKS**
TIME	**:**	**3 HOURS**

1. Use of microscope in examination of unstained bacteria, fungi, algae, parasites and stained cell preparations including simple staining, Gram's staining, acid fast staining, capsule staining, spore staining using prokaryotic and eukaryotic cells, hanging drop preparation.
2. Presumptive, confirmed and completed tests for safety of water supplies.
3. Relation of free oxygen to microbial growth, monitoring of dissolved oxygen in various effluents.
4. Determination of COD in Industrial effluents.
5. Effects of antimetabolites on Microbial culture (Inhibition by Sulfanilamide).
6. Determination of Water Activity of various substrates and assay of surface active agents.
7. Turbidimetric/spectrophotometric monitoring of growth using liquid cultures.
8. Efficiency of photosynthesis in photoautotrophs.

ELECTRONICS

(KEPT IN ABEYANCE FOR THE EXAMINATION, 2016-17)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) SECOND YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2016-2017

(SEMESTER : THIRD AND FOURTH)

i.e

Third Semester : November/December, 2016
Fourth Semester : April/May, 2017

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2016 AND FORTH SEMESTER APRIL/MAY 2017, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – III

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Objective:

- To teach finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G Damodar, D Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Ode to Autumn

ii. The Road Not Taken

iii. Money Madness

iv. I, Too

Prose Section:

i. Mr. Know All

ii. Film Making

iii. Not Just Oranges

iv. A Tale on Advertising

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section-B

Q.4. Note making (**one** out of **two** is to be attempted) 4 marks
(The examiner will set **two** paragraphs based on the prescribed text for note making. The students be asked to attempt any **one** of the **two**).

Q.5. Grammer:

i. Non finite verbs 5 marks
ii. Punctuation (A short paragraph) 5 marks
iii. Do as directed (based on transformation of sentences) 10 marks

(The examiner will set **three** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities, students have done in the class are adequately covered.)

ENGLISH (Compulsory)

SEMESTER – IV

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Objective:

- To Teach Finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill.
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G. Damodar, D. Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Goodbye Party for Miss Pushpa T.S.

ii. I Will Embrace Only the Sun

iii. Refugee Mother and Child

iv. This is a Photograph of Me

Prose Section:

i. On Shaking Hands

ii. No Man is an Island

iii. Freedom of the Press

iv. An Except From Decolonizing the Mind

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section – B

Q.4. Paragraph writing (based on post-reading activities suggested in the prescribed texts)
One out of **three** is to attempted. 5 marks
(The examiner will set **three** topics for paragraphs writing from the post reading activities suggested in the prescribed texts. While selecting this question, special care must be taken to borrow ideas from the text or suitably modify them so as to identify viable topics that the students of B.A.(compulsory)can easily handle.)

Q.5. Report writing (with internal choice) 4 marks
(The examiner will give information about some social issue, an event/incident, some topic of current affairs etc. and will ask the students to write a report in about 100 words on the given topic. The information can also be given in form of a dialogue on some issue of general interest. The examiner will set this question with an internal choice).

Q.6. Grammer:
i. Using nouns as verbs or vice-versa 5 marks
ii. Combining pairs of sentences using words given in the brackets 5 marks
iii. Text-based Idioms and Phrases 5 marks
(The examiner will set **four** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities students have done in the class are adequately covered.)

****

ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-III

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 1-4
Drama : Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical work:-

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and one from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5. Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6. One short question to test the students' understanding of various aspects of Business Communication.

5 marks

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ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-IV

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 5-8
Drama : Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae, short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations.Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication. How to Prepare for an Interview & Group Discussion etc.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any four, **Two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and **one** from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. Short Survey Report (150-200 words) with internal choice. **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6. Definition/Format of modern forms of communication to be tested.
(e-mail, fax, videoconferencing) **5 marks**

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ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਬਾਰੇ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਚਿੱਠੀ ਪੱਤਰ	8 ਅੰਕ
3.	ਪੰਜਾਬੀ ਭਾਸ਼ਾ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਪੰਜ-ਆਬ, (ਸੰਪਾ.) ਪ੍ਰੋ. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ)	‘ਪੰਜ -ਆਬ’ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ)	4+6=10 ਅੰਕ
	(ਅ)	ਨਿਬੰਧਾਂ ਦੀ ਪੁਸਤਕ ਵਿਚ ਆਏ ਸਭਿਆਚਾਰਕ ਸੰਕਲਪਾਂ (ਇਸ਼ਟ, ਅਖਾਣ, ਲੋਕਗੀਤ, ਵਿਰਾਸਤੀ ਖੇਡਾਂ, ਲੋਕ ਵਿਸ਼ਵਾਸ, ਮੇਲੇ, ਤਿਉਹਾਰ, ਗਿੱਧਾ, ਲੋਕ ਚਿਕਿਤਸਾ ਤੇ ਲੋਕਧਾਰਾ) ਬਾਰੇ ਪ੍ਰਸ਼ਨ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	5 ਅੰਕ
2.		‘ਪੰਜ-ਆਬ’ ਪੁਸਤਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	1 x 5= 5 ਅੰਕ
3.		ਚਿੱਠੀ ਪੱਤਰ (ਦਫ਼ਤਰੀ, ਵਪਾਰਕ, ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਮਸਲਿਆਂ ਬਾਰੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ) (ਦੋ ਵਿਚੋਂ ਇਕ)	8 ਅੰਕ
4.		ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਜਨਮ , ਵਿਕਾਸ ਤੇ ਵਰਤਮਾਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	7 ਅੰਕ
5.		ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	6 ਅੰਕ
	(i)	ਸ਼ਬਦ ਤੇ ਸ਼ਬਦ ਰਚਨਾ:ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ, ਭਾਵੰਸ਼: ਬੰਦ ਤੇ ਖੁੱਲ੍ਹੇ ਭਾਵੰਸ਼, ਧਾਤੂ ਤੇ ਵਧੇਤਰ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)	
	(ii)	ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	2+2= 4 ਅੰਕ

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਇਕਾਂਗੀ ਤੇ ਨਾਟਕ — 20 ਅੰਕ
2. ਪੈਰ੍ਹੇ ਦਾ ਅਨੁਵਾਦ (ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ) — 8 ਅੰਕ
3. ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ — 7 ਅੰਕ
4. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. ਛੇ ਛੱਲਾਂ (ਸੰਪਾ.) ਡਾ.ਆਤਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਕੱਲਰ, ਸਵਰਾਜਬੀਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ‘ਛੇ ਛੱਲਾਂ’ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 4+6 =10 ਅੰਕ
   (ਅ) ‘ਛੇ ਛੱਲਾਂ’ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਨ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ
2. ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ ਕਰਨੇ) — 1 x 5=5 ਅੰਕ
3. ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ (ਲਗਭਗ 100 ਸ਼ਬਦਾਂ ਵਿਚ) — 8 ਅੰਕ
4. ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ — 7 ਅੰਕ
   ਨੋਟ: ਉਪਭਾਸ਼ਾਵਾਂ ਉਪਰ ਸਵਾਲ ਸਿਰਫ ਪੂਰਬੀ ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ (ਮਾਝੀ, ਮਲਵਈ, ਦੁਆਬੀ ਤੇ ਪੁਆਧੀ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਪੁੱਛਿਆ ਜਾਵੇ। (ਦੋ ਵਿਚੋਂ ਇਕ)
5. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ
   (i) ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਕੋਸ਼ਗਤ ਤੇ ਵਿਆਕਰਨਕ ਸ਼ਬਦ, ਵਿਕਾਰੀ ਤੇ ਅਵਿਕਾਰੀ ਸ਼ਬਦ, ਸਧਾਰਨ,ਸਮਾਸੀ ਤੇ ਮਿਸ਼ਰਤ, ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨੇਮ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)
   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
   ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ।(ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ:
1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

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HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-III

INSTRUCTIONS FOR THE PAPER–SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER 3 AND 4)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 mark each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **HISTORY AND CULTURE OF PUNJAB 1200-C- 1700 A.D**

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the region during medieval times.
Pedagogy: Lectures, library work and discussions.

Unit-I

1. Society and Culture in Punjab during the Turko-Afghan rule
2. The Punjab under the Great Mughals
3. Guru Nanak : His teachings, concept of Langar and Sangat

Unit-II

4. Salient features of the Bhakti movement
5. Main Features of Sufism in Punjab
6 Development of Sikhism (1539-1581): Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das for the development of Sikhism

Unit III

7. Transformation of Sikhism : Compilation of Adi-Granth; Martyrdom of Guru Arjan Dev
8. Guru Hargobind's New policy
9. Martyrdom of Guru Tegh Bahadur

Unit IV

10. Foundation of the Khalsa
11. Post Khalsa activities of Guru Gobind Singh
12. MAP: Important Historical Places Delhi; Lahore; Sarhind; Multan; Kartarpur; Amritsar; Kiratpur; Tarn Taran; Anandpur Sahib; Fatehgarh Sahib; Paonta Sahib; Machhiwara; Muktsar

Suggested Readings:

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER 3 AND 4)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

5. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

6. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: HISTORY AND CULTURE OF PUNJAB 18TH AND EARLY 19TH CENTURIES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the region in the later medieval period.
Pedagogy: Lectures, library work and discussions.

Unit I

1. Banda Bahadur and his achievements
2. Sikh Struggle for Sovereignity from 1716-1765
3. Role of Dal Khalsa, Rakhi, Gurmata and Misls

Unit II

4. Ranjit Singh's rise to Power
5. Civil and Military administration
6. Relations with the British

Unit-III

7. Political Developments 1839-1845
8. Anglo-Sikh Wars
9. Annexation of the Punjab

Unit-IV

10. New Developments in literature, art and architecture in the Punjab region
11. Social life with special reference to the position of women, fairs, festivals, folk music, dance and games in the Punjab.
12. MAP Important Historical Places Lohgarh; Sarhind; Gujranwala; Lahore; Amritsar; Multan; Peshawar; Sialkot; Ferozepore; Ambala; Gujrat; Mudki; Ludhiana.

Suggested Readings :

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

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ENGLISH (Elective)

SEMESTER-III

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

William Shakespeare: *The Merchant of Venice*

LITERARY TERMS:

Drama, Myth of Dionysus, Liturgical Drama, Miracle Plays, Mystery Plays, Interlude, Mimesis, Catharsis, Tragic Hero, Organic Unity, Revenge Tragedy, Poetic Drama, Verse Drama, Myth & Drama, Ritual & Drama, Yaksgana, Theory, Indian Theory of Drama, Puppetry, Ardhnarishwra.

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks
2. Reference to the Context from the prescribed play. 15 marks
   (*The examiner will set three passages/stanzas from the prescribed play. The students will attempt any two out of these three.*)
3. Long answer type question in about 300-350 words form the prescribed text. One out of two is to be attempted. 15 marks

Section - B

4. Dialogue writing
   (*The examiner will set one descriptive passage of about 300-400 words and ask the students to re-write the same in dialogue form. The examiner, however, must ensure that the passage can easily be converted into dialogue form.*) 10 marks

5. Identifying figures of speech in sentences (unseen):
   Simile, Metaphor, Alliteration, Assonance. 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Idioms and Phrases 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

ENGLISH (Elective)

SEMESTER IV

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

An Anthology of English Verse
Ed. Department of English, Deen Dayal Upadhayaya, Gorakhpur University. New Delhi: OUP, 2004

Prescribed poems:

i. John Donne: *The Sun Rising*
ii. Alexander Pope: *From Essay on Man*
iii. Thomas Gray: *Elegy Written in the Country Churchyard*
iv. William Blake: *The Tiger*
v. William Wordsworth: *Tintern Abbey*
vi. John Keats: *Ode to a Nightingale*
vii. Tennyson: *Ulysses*
viii. Browning: *My Last Duchess*
ix. Matthew Arnold: *To Marguerite*
x. Hopkins: *Pied Beauty*
xi. A. K. Ramanujan: *History*
xii. W.B. Yeats: *A Prayer for my Daughter*
xiii. T.S. Eliot: *Journey of the Magi*
xiv. Thomas Hardy: *The Darkling Thrush*
xv. Philip Larkin: *The Trees*

LITERARY TERMS:

Allegory, Allusion, Antithesis, Epic, Epithet, Hyperbole, Internal Rhyme, Rhyme Royal, Terza Rima Metaphor, Metonymy, Medias Res, Oxymoron, Mood, Tone, Personification, Stanza, Spenserian Stanza, Satire, Free paragraph

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks

2. Short answer type question in about 50-60 words from the prescribed text. Five out of seven are to be attempted. 15 marks

3. Long answer type of questions in about 100-120 words from the prescribed text. Three out of five are to be attempted. 15 marks

Section – B

4. Precis Writing 10 marks

5. Identifying figures of speech in sentences (unseen)
   Metonymy, Epithet, Oxymoron, Epigram, Metonymy 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Choose the correct meaning of the word 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

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हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–3

पूर्णांक : 90+10=100
समय : 3 घण्टे

1. **तरंगिणी– मनोहर लाल आनन्द, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो, चण्डीगढ़।**
निम्नलिखित कवि पाठ्यक्रम में निधरित हैः–
मैथिलीशरण गुप्त, जयशंकर प्रसाद, सूर्यकान्त त्रिपाठी निराला, सुमित्रानन्दन पन्त

   क) 5–5 अंकों की दो सन्दर्भ–सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाऐंगी। अंक–10

   ख) कवि–परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जायेंगे। 8 अंकों का एक ही प्रश्न करना होगा। प्रत्येक उत्तर की शब्द सीमा 200 होगी। अंक–08

2. **एक सत्य हरिश्चन्द्र– डॉ0 लक्ष्मीनारायण लाल, राजपाल एण्ड सन्ज, नई दिल्ली।**

   क) संदर्भ सहित व्याख्या के लिए दो प्रश्न पूछे जाएँगे; उत्तर एक का ही देना होगा। अंक–05

   ख) पात्रों के चरित्र–चित्रण, तत्वों के आधार पर नाटक की समीक्षा तथा समस्या संबंधी दो प्रश्न पूछे जायेंगें। 8 अंकों का एक ही प्रश्न करना होगा। (शब्द–सीमा 200) अंक–08

3. **इस खण्ड में 3–3 अंकों के तीन लघुत्तरी प्रश्नों के उत्तर देने होंगे। कुल 6 प्रश्न पूछे जायेंगे। ये प्रश्न इस पत्र के पूर्वोक्त दो खण्डों (तरंगिणी व एक सत्य हरिश्चन्द्र) पर आधारित होंगे। (शब्द–सीमा 50) अंक–09**

4. **हिन्दी साहित्य का इतिहास– रीतिकाल : (केवल काव्य–खंड) रीतिकाल की परिस्थितियाँ, नामकरण, सीमा–निर्धारण, प्रवृतियाँ रीतिबद्ध और रीतिमुक्त काव्य की प्रमुख विशेषताएँ, प्रमुख कवि– केशव, बिहारी, घनानंद, के संबंध में 8 अंकों का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगें। (शब्द–सीमा 200–250) अंक–08**

5. वस्तुनिष्ठ प्रश्न **अंक–10**

इस पत्र के पूर्वोक्त तीनों खण्डों के आधर पर 1–1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

6. समीक्षा सिद्धान्त– केवल 'नाटक' **अंक–07**

परिभाषा, तत्व और वर्गीकरण पर आधरित नाटक से संबंध्ति दो प्रश्न पूछे जायेंगे। जिनमें से 7 अंकों का एक प्रश्न करना होगा। (शब्द सीमा 200)

7. व्यावहारिक व्याकरण– **अंक–15**

क)	**समाकृति, भिन्नार्थक शब्द–युग्म**	**3)**	**(चार में से तीन)**
ख)	**स्वर–सन्धि एवं व्यंजन–संधि**	**3)**	
ग)	**सन्धि–विच्छेद(केवल व्यावहारिक)**	**3)**	**(चार में से तीन)**
घ)	**वाक्य–शोध्न**	**3)**	**(चार में से तीन)**
ड.)	**विराम–चिह्न**	**3)**	

8. तकनीकी शब्दावली (केवल प्रशासकीय शब्दावली) **अंक–10**

(सलंग्न शब्दावली)

15 में से 10 का उत्तर देना होगा।

आंतरिक मूल्यांकन– **अंक–10**

निर्देश :–छह लेक्चर Text **के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।**

प्रशासनिक शब्दावली

1.	Acceptance	**स्वीकृति**
2.	Account	**लेखा, खाता, हिसाब**
3.	Accuse	**अभियोग लगाना**
4.	Acknowledge (fact etc.)	**अभिस्वीकार करना, मानना कबूल करना**
5.	Acknowledgement due	**रसीद, पावती सहित**
6.	Addressee	**पाने वाला**
7.	Adjournment	**स्थगन**
8.	Administration	**प्रशासन**
9.	Admissible	**ग्राह्य, स्वीकार्य**

10.	Affidavit	शपथ लेना, हलफनामा
11.	Agent	अभिकर्ता, एजेन्ट
12.	Agitation	आन्दोलन
13.	Agreement	करार, अनुबंध,सहमति
14.	Allowance	भत्ता
15.	Amenity	सुख-सुविधा
16.	Anti-Corruption Officer	भ्रष्टाचार निरोध अध्किारी
17.	Appeal	अपील, अपील करना
18.	Appointment	नियुक्ति
19.	Appoint	नियुक्ति करना
20.	Approval	अनुमोदन
21.	Article	अनुच्छेद, नियम,वस्तु
22.	Association	संघ, समाज, संगम
23.	At Par	सममूल्य पर
24.	Attendant	परिचर
25.	Attestation	साक्ष्यांकन, अनुप्रमाणन
26.	Audit	लेखा परीक्षा
27.	Ballot Paper	मतपत्र, मतपर्ची
28.	Ban	प्रतिबंध, रोक, पाबंदी
29.	Bonafide	सद्भावी, वास्तविक, असली
30.	Book –Fair	पुस्तक मेला
31.	Bureau	कार्यालय, ब्यूरो
32.	Cabinet	मंत्री मंडल
33.	Candidate	अभ्य ार्थी, प्रार्थी, उम्मीदवार
34.	Care-taker	रखवाला, अवधायक
35.	Cashier	रोकड़िया
36.	Censure	निंदा प्रस्ताव, परिनिंदा
37.	Certificate of Medical Fitness	आरोग्य प्रमाण-पत्र
38.	Character Certificate	चरित्र प्रमाण-पत्र
39.	Charge Sheet	आरोप पत्र, फर्द, जुर्म
40.	Circular	परिपत्र, गशती-चिट्ठी
41.	Circulation of Traffic	यातायात परिचालन
42.	Circus	क्रीड़ा रंग, रंगमंडप
43.	Citation	प्रशास्ति, उद्धरण, अनुलेखन
44.	City Booking Office	नगर टिकट घर, नगर बुकिंग-कार्यालय

45.	City Compensatory Allowance	नगर भत्ता
46.	Civil	नागरिक
47.	Civil Pole	नगर निर्वाचन
48.	Civil Sense	नागरिक भावना
49.	Civil-air-craft	असैनिक वायुयान
50.	Claimant	दावेदार, दावी
51.	Collector	समाहर्ता, संग्रहक, संकलनकर्ता,कलेक्टर
52.	Colony	बस्ती, उपनिवेश
53.	Colosal	विशाल, वृहत्काय
54.	Colour Blindness	वर्णान्धता
55.	Communique	विज्ञप्ति
56.	Complaint	शिकायत
57.	Complementary	पूरक
58.	Completion Report	समापन रिपोर्ट
59.	Certified Copy	प्रमाणित प्रतिलिपि
60.	Complementary Copy	उपहार प्रति,मानार्थ प्रति
61.	Composite	मिला जुला, सम्मिश्रण संशिष्ट
62.	Comprehension	व्यापक कार्य बोध
63.	Contingencies	आकस्मिक व्यय
64.	Contractor	ठेकदार, संविदाकार
65.	Confiscate	जब्त करना, अधिहरण करना
66.	Corporation	निगम
67.	Custody	अभिरक्षा
68.	Decorum	शिष्टता, शालीनता
69.	Defacto	वस्तुतः
70.	Defaulter	त्रुटिकारी, चूक करने वाला,बाकीदार
71.	Defendant	प्रतिवादी
72.	Depreciation Charge	मूल्यह्रास प्रभार,अवक्षय प्रभार
73.	Design	अभिकल्प, अभिकल्पना,रूपांकन, डिज़ाइन
74.	Dispatch	प्रेषण,रवानगी, प्रेषित करना, रवाना करना
75.	Dignitary	उच्च पदधरी, महिमन्वित
76.	Director	निदेशक
77.	Disbursement	संवितरण
78.	Discipline	अनुशासन
79.	Discrepancy	विसंगति, गलती
80.	Discretion	विवेक, विवेकाधिकार

81.	Dissent	विसम्मति, असहमति
82.	Disqualified	अयोग्य
83.	Division	विभाजन, मंडल, श्रेणी, प्रभाग, डिवीजन
84.	Eligible	पात्रता, प्राप्त,पात्र
85.	Emergency	आपात, आपात्–स्थिति, आपतिक
86.	Emigrant	उत्प्रवासी
87.	Employment	रोजगार, नौकरी, नियोजन
88.	Employment Exchange	रोजगार कार्यालय, रोजगार दफतर
89.	Employment Officer	रोजगार अधि कारी
90.	Enquiry	पूछताछ,जाँच
91.	Enrolment Number	नामांकन संख्या
92.	Enrolled	नामांकित
93.	Evacuee	निष्क्रान्त
94.	Executive Engineer	कार्यपालक अभियन्ता, कार्यपाल इंजीनियर
95.	Faculty	संकाय
96.	Finance	वित्त, रूपया लगाना
97.	Gazetted Officer	राजपत्रित अधिकारी
98.	Gazetteer	राजविवरणिका
99.	Gazetted post	राजपत्रित पद
100.	Grant	अनुदान, स्वीकार करना
101.	Incentive	प्रोत्साहन
102.	Index	सूचक, अनुक्रमणी
103.	Initials	आद्यक्षर
104.	Insured Letter	बीमा किया हुआ पत्रा
105.	Interim	अन्तरिम
106.	Intelligence	गुप्तवार्ता, आसूचना
107.	Intelligentia	प्रबुद्ध वर्ग, बुद्धिजीवी वर्ग
108.	Intensive reading	गहन पठन
109.	Intention	अभिप्राय, आशय
110.	Judgment	निर्णय
111.	Jurisdiction	अधिकार- क्षेत्र
112.	Ledger	खाता
113.	Lessee	पट्टेदार
114.	Liaision Officer	संपर्क अधिकारी
115.	Maintenance	अनुरक्षण, भरण–पोषण, रख–रखाव
116.	Major	व्यस्क, बालिग, मेजर,प्राप्तत्य

117.	Manager	प्रबंधक, व्यवस्थापक, मैनेजर
118.	Minor	अवस्यक, नाबालिग, अप्राप्तव्य
119.	Monopoly	एकाधिकारी, एकाधिपत्य
120.	Motion	प्रस्ताव
121.	Nationalization	राष्ट्रीयकरण
122.	Negotiation	संधिवार्ता, समझौते की बातचीत
123.	Note of Dissent	ंविसन्मति लेख, असहमति लेख
124.	Notification	अधिसूचना
125.	Oath Commissioner	शपथ आयुक्त
126.	Offender	अपराधी
127.	Permissible	अनुभेय, अनुज्ञेय,क्षम्य
128.	Planning Commission	योजना आयोग
129.	Precedence	पूर्वता, अग्रता
130.	Procedure	कार्यविधि
131.	Public	सार्वजनिक,आम,सरकारी,लोक
132.	Quorum	गणपूर्ति, कोरम
133.	Receipt	पावती, प्राप्ति रसीद
134.	Recruitment	भर्ती
135.	Receiver	पानेवाला
136.	Reminder	स्मरण–पत्र
137.	Representative	प्रतिनिधि
138.	Senior	वरिष्ठ, ज्येष्ठ
139.	Sine die	अनिश्चित काल के लिए
140.	Statutory	कानुनी, विधिक,संविधिक
141.	Stenographer	आशुलिपिक
142.	Subordinate	अधीन, अधीनस्थ
143.	Tender	निविदा,टेंडर
144.	Transfer	बदली, स्थानांतरण, अंतरण
145.	Treasurer	कोषपाल
146.	Unofficial	अशासकीय
147.	Vacancy	रिक्ति
148.	Vigilance Officer	सतर्कता अधिकारी, निगरानी अधिकारी
149.	Warrant	अधिपत्र, वारंट

हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–4

पूर्णांक : 90+10=100
समय : 3 घण्टे

1. तंरगिणी–मनोहर लाल आनन्द, पंजाब विश्व विद्यालय, पब्लिकेशन ब्यूरो, चण्डीगढ़ से प्रकाशित निम्न कवि पाठ्यक्रम में निध ारित हैः–
महादेवी वर्मा, अज्ञेय, धर्मवीर भारती।

   क) 5–5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होगी। अंक–10
   कुल चार व्याख्याएँ पूछी जाएंगी।

   ख) कवि परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जाएंगे। 8 अंको का एक प्रश्न करना होगा। उत्तर सीमा 200 शब्दों की होगी। अंक–08

2. आदर्श एकांकी संग्रह – सं. डॉ0 संसार चन्द्र, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो चण्डीगढ़ द्वारा प्रकाशित

   क) एकांकी के तत्वों के आधार पर समीक्षात्मक प्रश्न (सार–लेखन, चरित्र–चित्रण, उद्देश्य संबंधी) दो प्रश्न पूछे जायेंगे। 8 अंकों का एक प्रश्न करना होगा। अंक–08

   ख) संदर्भ सहित व्याख्या नहीं पूछी जाएगी।

3. हिन्दी साहित्य का इतिहास : आधुनिक काल (केवल काव्य–खण्ड)
आधुनिक काल के भारतेन्दु–युग, द्विवेदी युग,छायावाद, प्रगतिवाद, प्रयोगवाद और नई कविता की केवल प्रमुख प्रवृतियों से संबंधित 10 अंको का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगें। अंक–10
(शब्द सीमा–सीमा 250)

4. वस्तुनिष्ठ प्रश्न अंक–10
इस पत्रा के पूर्वोक्त तीन खण्डों के आधार पर एक–एक अंक के दस वस्तुनिष्ठ प्रश्न करने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5.	**संलग्न 50 टिप्पणियों का अभ्यास :** **पूछी गई दस टिप्पणियों में से पाँच का उत्तर देना होगा।**	**अंक–10**
6.	**समीक्षा सिद्धान्त : केवल 'एंकाकी'** **एकांकी के तत्व, परिभाषा और वर्गीकरण से संबंधित दो प्रश्न पूछे जाएँगें। 10 अंको का केवल एक प्रश्न करना होगा। शब्द–सीमा 250)**	**अंक–10**
7.	**सार लेखन**	**अंक–8**
8.	**शासकीय पत्र लेखन (दो में से एक)**	**अंक–8**
9.	**विस्तारण**	**अंक–8**
	आंतरिक मूल्यांकन	**अंक–10**

निर्देश : 6 लेक्चर Text **के और 3 लेक्चर व्याकरण के अनिवार्य होंगे।**

50 टिप्पणियाँ

1.	A brief note is placed below	**संक्षिप्त टिप्पणी नीचे प्रस्तुत है ।**
2.	Acknowledge receipt of this	**इसकी पावती भेजिए ।**
3.	Action as proposed may be taken	**यथा प्रस्तावित कार्यवाही की जाए।**
4.	Agenda of the meeting is put up	**बैठक की कार्यसूची प्रस्तुत है ।**
5.	Application may be rejected	**आवेदन अस्वीकार कर दिया जाए ।**
6.	Approved as proposed	**प्रस्ताव के अनुसार अनुमोदित**
7.	Administrative approval may be obtained	**प्रशासनिक अनुमोदन प्राप्त किया जाए ।**
8.	Await reply	**उत्तर की प्रतीक्षा करें ।**
9.	Await further report	**और विवरण की प्रतीक्षा करें ।**
10.	Ascertain this position please	**कृपया स्थिति का पता लगायें ।**
11.	Amended draft is submitted for approval	**संशोधित प्रारूप अवलोकनार्थ प्रस्तुत हैं ।**
12.	Brief resume of the case is given below	**मामले का संक्षिप्त सार नीचे दिया गया है।**
13.	Call for explanation	**स्पष्टीकरण माँगे**
14.	Call for report	**रिपोर्ट मँगवाए ।**
15.	Comply with the orders	**आदेशों का पालन करें ।**
16.	Clarify the position please	**कृपया स्थिति का स्पष्ट करें ।**
17-	Copy enclosed for ready reference	**सुलभ संदर्भ के लिए प्रतिलिपि संलग्न है ।**
18.	Copy is enclosed	**प्रतिलिपि संलग्न है ।**

19.	Copy forwarded for information and Necessary action	प्रतिलिपि सूचनार्थ एवं आवश्यक कार्यवाही के लिए प्रषित है ।
20.	Case may be kept pending	मामले को अभी अनिर्णीत रखा जाए ।
21.	Delay should be avoided	विलम्ब न किया जाए।
22.	Disciplinary proceedings may be initiated	आनुशासनिक कार्यवाही शुरू की जाए ।
23.	Draft reply is put up	उत्तर का मसौदा प्रस्तुत है
24.	Enquiry may be conducted	जाँच की जाएं
25.	Expedite action	शीघ्र कार्यवाही करें ।
26.	Explanation may be called for	स्पष्टीकरण माँगा जाए ।
27.	Facts for the case may be put up	मामलों के तथ्य प्रस्तुत करें ।
28.	For perusal and return	देखकर लौटाने के लिए
29.	For comments please	कृपया टिप्पणी दें ।
30.	For sympathetic consideration	सहानुभुतिपूर्ण विचार के लिए।
31.	Forwarded and recommended	प्रेषित और संस्तुत।
32.	I concur with the proposal	मैं इस प्रस्ताव से अपनी सहमति प्रकट करता हूँ।
33.	I have no remarks to offer	मुझे कोई टिप्पणी नहीं करनी हैं ।
34.	Inform all concerned	सभी संबंधित व्यक्तियों को सूचित करें ।
35.	Issue a circular	परिपत्र जारी करें ।
36.	Keep pending	निर्णय के लिए रोक रखें ।
37.	Kindly accord sanction	कृपया स्वीकृति दीजिए ।
38.	Kindly confirm	कृपया पुष्टि करें।
39.	Matter is under consideration	मामला विचाराधीन है ।
40.	No action is necessary	कोई कार्यवाही अपेक्षित नहीं है
41.	Needful has been done	आवश्यक कार्यवाही की गई है ।
42.	Order may be issued	आदेश जारी किया जाए ।
43.	Please see the proceeding notes	कृपया पिछली टिप्पणियाँ देख लें ।
44.	Put up the relevant papers	संबधित कागज प्रस्तुत करें ।
45.	Reminder may be sent	अनुस्मारक भेजा जाए ।
46.	Report compliance immediately	अनुपालन करके तुरन्त सूचित करें ।
47.	Specific reason may be given	विशिष्ट कारण दिया जाए ।
48.	Submitted for information	सूचना के लिए प्रस्तुत है ।
49.	This may be treated as confident	इसे गोपनीय समझा जाए ।
50.	Verified and found correct	जाँचा और सही पाया ।

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਦੂਜਾ ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ — 25 ਅੰਕ
2. ਸਫ਼ਰਨਾਮੇ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਬਾਬਾ ਵਜੀਦ, ਅਲੀ ਹੈਦਰ, ਸੱਯਦ ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਸੱਯਦ ਵਾਰਿਸ ਸ਼ਾਹ, ਨਜਾਬਤ ਅਤੇ ਪੀਰ ਮੁਹੰਮਦ)
2. ਸੱਚੋ ਸੱਚ , ਅਮਰੀਕਾ ਦਾ ਸਫ਼ਰਨਾਮਾ, ਨਰਿੰਦਰ ਸਿੰਘ ਕਪੂਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ‘ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ’ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ –ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ‘ਸੱਚੋ ਸੱਚ’ ਅਮਰੀਕਾ ਦਾ ਸਫ਼ਰਨਾਮਾ ਪੁਸਤਕ ਦੇ ਆਧਾਰ ਉੱਤੇ ਪ੍ਰਮੁੱਖ ਥਾਵਾਂ ਤੇ ਘਟਨਾਵਾਂ ਦੇ ਵੇਰਵੇ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਸਫ਼ਰਨਾਮੇ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਸਫ਼ਰਨਾਮੇ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ: ਤੱਕ ਸੂਫ਼ੀ ਕਾਵਿ-ਧਾਰਾ ਤੇ ਕਿੱਸਾ – ਕਾਵਿ ਧਾਰਾ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਚਾਰ – ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ), ਰਸ ਸੰਪ੍ਰਦਾਇ, ਵਕ੍ਰੋਕਤੀ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ: ਟਕਸਾਲੀ ਭਾਸ਼ਾ, ਵਿਅਕਤੀ ਭਾਸ਼ਾ, ਅਪਭਾਸ਼ਾ, ਗੁਪਤ ਭਾਸ਼ਾ, ਰਜਿਸਟਰ, ਪਿਜ਼ਨ ਤੇ ਕ੍ਰਿਓਲ (ਚਾਰ ਵਿਚੋਂ ਦੋ) — 10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਦੂਜਾ ਅਪ੍ਰੈਲ/ ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ 25 ਅੰਕ
2. ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) 20 ਅੰਕ
4. ਸਾਹਿਤ ਆਲੋਚਨਾ 10 ਅੰਕ
5. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਹਾਸ਼ਮ ਸ਼ਾਹ, ਕਵੀ ਸੋਂਧਾ, ਕਾਦਰਯਾਰ, ਸ਼ਾਹ ਮੁਹੰਮਦ ਅਤੇ ਭਗਵਾਨ ਸਿੰਘ)
2. ਕਥਾ –ਪ੍ਰਵਾਹ (ਸੰਪਾ.) ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਨਿਰਧਾਰਤ ਕਾਵਿ-ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ- ਬੰਦ ਦੀ ਵਿਹਾਰਕ ਸਮੀਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
2. (ੳ) ਕਥਾ-ਪ੍ਰਵਾਹ ਪੁਸਤਕ ਵਿਚੋਂ ਘਟਨਾਵਾਂ , ਥੀਮ, ਪਾਤਰ ਚਿਤਰਨ ਤੇ ਕਥਾ ਜੁਗਤਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ:) ਵਾਰ ਕਾਵਿ, ਜੰਗਨਾਮਾ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) 5 x 4=20 ਅੰਕ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਤੇ ਸਮਾਜ, ਸਾਹਿਤ ਤੇ ਸਖ਼ਸ਼ੀਅਤ, ਸਾਹਿਤ ਤੇ ਸ਼ੈਲੀ, ਸਾਹਿਤ ਤੇ ਮਨੋਵਿਗਿਆਨ, ਸਾਹਿਤ ਤੇ ਵਿਗਿਆਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
6. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਉਪਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਭਾਸ਼ਾ ਤੇ ਉਪਭਾਸ਼ਾ, ਉਪਭਾਸ਼ਾ ਦੀਆਂ ਪਛਾਣ ਵਿਧੀਆਂ। 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
5. ਸੰਘਾ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿੱਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਉਹੀ, 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
10. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

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संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष, 2016

SEMESTER-III

Paper - Sanskrit : **श्रीमद्भगवद्गीता एवं व्याकरण** पूर्णांकः **90+10=100**

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को भारतीय दर्शन के अद्वितीय ग्रन्थ रत्न श्रीमद्भगवद्गीता (चतुर्थ अध्याय) में प्रतिपादित निष्काम कर्मयोग, समत्व योग में स्थित योगी पुरुषों का आचरण एवं उनकी महिमा, विभिन्न प्रकार के ज्ञानयज्ञ तथा ज्ञान का महत्त्व इत्यादि विषयों का अध्ययन करवाना ।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) गीता (चतुर्थ - अध्याय) (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **3x10= 30 अंक**

(ख) गीता (चतुर्थ अध्याय) पर आधारित समीक्षात्मक लघुप्रश्न **05 अंक**

(ग) व्यावहारिक संस्कृत शब्दावली : वस्त्र, आभूषण एवं श्रृंगारपरक (15 में से 10 शब्दों की संस्कृत) **10x 1= 10 अंक**

1. कंबल-कम्बलः	2. कुरता-कञ्चुकः	3. कोट-प्रावारः
4. चादर-प्रच्छदः, शय्याच्छादनम्	5. जूता-उपानत्	6. तकिया-उपधानम्
7. दरी-आस्तरणम्	8. दुपट्टा-उत्तरीयम्	9. धोती-अधोवस्त्रम्,
10. पगड़ी-शिरस्त्रम् उष्णीकम्	11. परदा-यवनिका	12. पायजामा-पादयामः
13. पैंट-आप्रपदीनम्	14. रुमाल-करवस्त्रम्	15. शेरवानी-प्रावारकम्
16. साड़ी-साटिका	17. स्वेटर-उर्णावरकम्	18. कपड़ा-वस्त्रम्, वसनम्, चीरम्
19. अंगूठी-अङ्गुलीयकम्, मुद्रिका	20. कंगना-कंकणः	21. कान की बाली-कुण्डलम्
22. गहना-अलङ्कारः, आभरणम्	23. घुंघरू -किंकिणी	24. चूड़ी-काचवलयः, काचवलयम्
25. नथ-छोलिका	26. पाजेब-नूपुरः, नूपुरम्	27. बाजूबंद (ब्रेस लेट)-केयूरम्
28. हार-हारः	29. सोने का कड़ा-कटकः	30. आयना (शीशा)-दर्पणः, आदर्शः

31. इत्र (सैंट)-गन्धतैलम्	32. उबटन - उद्वर्तनम्	33. कंघी-प्रसाधनी
34. काजल-अञ्जनम्, कज्जलम्	35. क्रीम-शरः	36. ड्रेसिंग टेबल-शृंगारफलकम्
37. तिलक-तिलकम्	38. दाँत का ब्रुश-दन्तधावनम्,दन्तकूर्चः	39. नेल पोलिश-नखरंजनम्
40. बिन्दी-बिन्दुकः	41. पाउडर-चूर्णकम्	42. मंजन-दन्तचूर्णम्
43. मेहदी-मञ्जिष्ठा	44. लिपस्टिक-ओष्ठरंजनम्	45. साबुन-फेनिलम्, फेनकम्
46.. सिंदूर-सिन्दूरम्	47. दांत कूरेदने की सूई-दन्तशोधनी	48. महावर-अलक्तका
49. रूज-कपोलरंजनम्	50. सिंगारदान-शृंगारधानम्, शृंगारपिटकम्	

(घ) व्यञ्जन सन्धि **5x1=05अंक**

(ङ) द्वन्द्व- समास **5x1=05अंक**

(च) तद्धित प्रत्यय : अण्, मतुप्, तरप्, तमप् - केवल उदाहरण ही प्रष्टव्य हैं) **5x1=05अंक**

(छ) शब्दरूप : तत्, एतत्, यत्(तीनों लिंगों में) राजन् तथा चन्द्रमस् **2x5=10अंक**

(ज) धातुरूप : अस्, दा, कृप्, शक्, प्रच्छ्, मिल् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(झ) छन्द : अनुष्टुप्, वंशस्थ, इन्द्रवज्रा, उपेन्द्रवज्रा, उपजाति (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **2x5=10अंक**

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष, 2016

SEMESTER-IV

Paper - Sanskrit : **नाटक एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- संस्कृत नाट्यविद्या के स्वरूप और प्रवृत्तियों से परिचित कराना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) दूतवाक्यम् - भास (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **3x10=30 अंक**

(ख) समीक्षात्मक लघु प्रश्न, पात्र चरित्र चित्रण, लेखक परिचय, रचनाएँ व दूतवाक्यम् की विषयवस्तु **5 अंक**

(ग) व्यावहारिक संस्कृत शब्दावली : अन्न, भोजन एवं तत्सम्बद्ध पात्र (15 में से 10 शब्दों की संस्कृत) **10x1=10 अंक**

1. अरहर-आढकी
2. उडद-माषः
3. गेहूँ-गोधूम:
4. गेहूँ का आटा - गोधूमचूर्णः
5. चना-चणकः
6. जौ-यवः
7. चावल-तण्डुलः, व्रीहिः
8. ज्वार-यवनालः
9. तिल-तिलः
10. दाल-द्विदलम्
11. धान-धान्यम्, शालिः
12. बाजरा-प्रियङ्गुः
13. बेसन-चणकचूर्णम्
14. मसूर-मसूरः
15. मूंग-मुद्गः
16. सत्तु-सक्तुः
17. सरसों-सर्षपः
18. हल्दी-हरिद्रा
19. अचार-सन्धितम्
20. गरम भोजन-उष्णभोजनम्
21. खिचडी-कृशरः
22. चटनी-अवलेहः
23. चिकना-चिक्कणम्
24. ठंडाभोजन-शीतभोजनम्
25. भरता-भर्ता
26. भात-ओदनः, ओदनम्
27. मट्ठा-तक्रम्
28. रसोई-रसवती, पाकशाला, महानस
29. रायता-राज्यक्तम्
30. रोटी-रोटिका
31. शक्कर-शर्करा
32. समोसा-समोषः
33. सौंफ-मधुरः
34. हींग-हिंगुः
35. अंगीठी-हसन्ती
36. कटोरा-कटोरम्
37. कडाही-कटाहः, स्वेदनी
38. कांच का गिलास - काचकंसम्, काचचषकः
39. गिलास-कंसम्, चषकः
40. घडा-घटः, कुम्भः
41. चम्मच-चमसः
42. चीमठा-सन्दंशः
43. टब-द्रोणी
44. थाली-स्थालिका, थालिका
45. प्लेट - शरावः
46. बाल्टी-उदञ्चनम्
47. लोटा-करकः
48. स्टोव-उच्चानम्
49. बेलन-वेलनम्
50. चाकू-छुरिका

(घ) तत्पुरुष - समास **5x1=05अंक**

(ङ) कृदन्त प्रत्यय : क्त, क्तवतु, त्त्वा तथा तुमुन् प्रत्यय **5x1=05अंक**

(गम्, पठ्, पत्, क्रीड्, वद्, पा, लिख्, नी, दृश्, भू, त्यज्, स्मृ, अस्, दा, कुप्, शक्, प्रच्छ्,
मिल्, कृ, क्री, ग्रह्, ज्ञा, श्रु, कथ् - इन धातुओं के योग में)

(च) शब्दरूप : किम् व सर्व (तीनों लिंगों में), महत् व बलवत् (पुलिङ्ग में) एवं कति **2x5=10अंक**

(छ) धातुरूप : कृ, क्रीञ्, ग्रह्, ज्ञा, श्रु तथा कथ् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(ज) कारक (केवल सामान्य नियम-अशुद्ध वाक्यों को शुद्ध करना) **5x1=05अंक**

(छ) छन्द : शिखरिणी, मन्दाक्रान्ता, मालिनी, वसन्ततिलका तथा भुजंगप्रयात (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **10अंक**

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

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URDU (Elective)

SEMESTER-III

Prose and Poetry

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

i. Explanation of Verses(Ghazaliat) :
Mir Taqi Mir, Khwaja Mir Dard, Ibrahim Zauq, Mirza Asadullah Khan Ghalib, Momin Khan Momin, Hasrat Mohani, Raghupati Sahay Firaq Gorakhpuri.

20 marks

ii. Explanation of Nazms:
Search Results

Allama Iqbal	-	Chand aur Tare, Mulla aur Bahisht
Nazir Akbrabadi	-	Mele ki Sair
Brij Narayan Chakbast	-	Ramayan ka ek Scene

10 marks

Unit-II

Explanation of prose:

Mir Amman	-	Sair Pehle Darvesh Ki	
Sir Syed Ahmed Khan	-	Sarab-e-hayat	
Farahatullah Baig	-	Murda Badast Zinda Ast	
Munshi Prem Chand	-	Roshni	
Rashid-ul-Kheri	-	Toonfan-e-Hayat Ka Ek warq	30 marks

Unit-III

Central idea of a lesson or nazm (from Unit I & II above) 15 marks

Unit-IV

Introduction and literary contribution of the poets & prose writers
Poets: Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Nazir Akbarabadi
Prose writers : Sir Syed Ahmed Khan, Altaf Hussain Hali, Munshi Prem Chand 15 marks

Books Prescribed:

1. Khyaban-e-Adab by, Azimul Haq Junedi, Educational BookHouse, AMU Market, Aligarh.

URDU (Elective)

SEMESTER-IV

Novel: Ek Chadar Maili Si

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

Novel - One question each on its Plot and Characters 30 marks

Unit-II

Explanation of Paragraph from Novel 30 marks

Unit-III

Rajinder Singh Bedi Ki Novel Nigari Ki Khususiyat

Or

Novel Ke Ajza-e-Tarkibi 15 marks

Unit-IV

Unseen paragraph (candidate will be asked three questions from it) 15 marks

Books Prescribed :

1. Ek Chadar Maili Si, by Rajinder Singh Bedi.

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PERSIAN (Elective)

SEMESTER-III

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2016-17.

Paper-A : Prose

Marks : 90
Internal Assessment : 10
Time : 3 hours

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye-Kutah.	20 marks
4.	Simple direct questions on the life and works of the authors.	30 marks

Books prescribed

Nisabe Jadide Farsi
(Published By Jayyad Press Ballimaran Delhi)
Only following portions from Prose Section.

i. Intekhab-e-Sarzamin-e-Hind-Ali Asghar Hikmat.

ii. Dastan-e-Kutah by Mohammad Hejazi.

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PERSIAN (Elective)

SEMESTER-IV

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2016-17.

Paper-B : Poetry

Marks : 90
Internal Assessment : 10
Time : 3 hours

Distribution of marks :

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Central idea of the poem.	20 marks
4.	Simple direct questions on the life and works of the poets as prescribed in the text.	30 marks

Books prescribed

Nisab-e-Jadeed-e-Farsi(Published by Jayyad Press Ballimaran, Delhi). Only following portions from Prose Section.

Az Gzalliyat-e-Hafiz

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.

Saaqi Benur Badah Bar Afrooz Jam-e- Maa.

Doosh deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:

Jan Ze Tan Burdi-o- Dar Jaani Hunooz.

Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

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FRENCH(ELECTIVE)

SEMESTER-III

EXAMINATION:- WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

French Civilization & Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 marks

II (a) Questions (including General and based on Civilisation) from the prescribed Text book (of 3 marks each). 15 marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 20 marks

(c) Composition based on the subject or theme from the text. 10 marks

(d) Comprehension of an unseen text (easier than the prescribed textbook).
Ten questions to be put in French and to be answered in French. 10 marks

III Prose:
Direct simple questions based on the prescribed text to be asked and answered in French,
Questions should be of 5 marks each. 20 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Version Originale-2 (Units 5-8) Version Originale-3 (Units 1-2) Méthode de Français/Livre de I' élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) Livre de I' éléve
(b) Cahier d' exercices

Poetry:

To be studied: Comprehension, explanation, literary, appreciation and criticism of the poems.

The following 5 poems to be studied:

1. **Pierre De RONSARD (1524-1585)**
   Sonnet a Marie

2. **Alphonse De LAMARTINE 1790-1869- Harmonie poétique et religieuse**
   Au rossignol

3. **Alfred De MUSSET (1810-1857)-Poésies nouvelles**

   Tristesse

4. **Theodore De BANVILLE (1823-1891)**

   Le Verger du roi Louis

5. **Paul ELUARD (1895-1952)**

   Le Sourd et l'aveugle

Prose:- Tintin au Tibet, Casterman

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. 3rd Semester.

2. All questions are to be asked and answered in French.

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH(ELECTIVE)

SEMESTER-IV

EXAMINATION:- CREATIVE WRITING AND EXPRESSION, GRAMMAR IN CONTEXT

Max. Marks	:	100
Theory	:	60 marks
Internal Assessment	:	10 marks
Viva	:	30 marks
Time	:	3 Hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 marks

II Prose:
Direct simple questions based on the prescribed text to be asked and answered in French, Questions should be of 5 marks each. 15 marks

III (a) Questions (including General and based on Civilisation) from the prescribed Text book (of 3 marks each). 15 marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 15 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Version Originale-3 (Units 3-8) Méthode de Français/Livre de I' élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) Livre de I' éléve
(b) Cahier d' exercices

Poetry:

To be studied: Comprehension, explanation, literary, appreciation of the poems.

The following 5 poems to be studied:

1. **Victor Hugo 1802-1885- Les contemplations**
   La coccinelle

   Théophile GAUTIER (1811-1872)- Emaux et camées

   Noél

2. Charles BAUDELAIRE (1821-1867) Les fleurs du mal

La vie antérieure

3. Paul VERLAINE (1844-1896) Sagesse

D'une prison

4. Georges BRASSENS – (1921-1981)

Le vent

Prose:- Guy de Maupassant, La Parure

All questions are to be asked and answered in French

Viva:	30 marks
Reading :	
Seen	10 marks
Unseen	10 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory
2. The theory paper would be proportionately marked out of 70 as there is no internal assessment.

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GERMAN (Elective)

SEMESTER-III

Summary

Max. Marks	:	100 marks (Total)
Paper-A(Theory)	:	90 marks
Internal Assessment	:	10 marks

Paper A-Theory: 90 marks
Time: 3 hours
Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks) conforming to prescribed text-book "Lagune-2": Chapters1-17 upto page 87 50 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-2": Chapters 1-17 upto page 87 20 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book "Texte zum Lesen und Nacherzählen", from pages 1-12 20 marks

Internal Assessment **10 marks(Total)**

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 1-17 upto page 87.
ii. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, upto page 12.

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters1-17

GERMAN (Elective)

SEMESTER-IV

Summary

Max. Marks	:	100marks(Total)
End Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) examination	:	30 marks
Internal Assessment	:	10 marks

Paper B-Theory : 60 marks(Total)

Time : 3 hours

Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks)confirming to prescribed text-book "Lagune-2": Chapters 18-34 30 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed text-book "Lagune-2": Chapters 18-34 15 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book " Texte zum Lesen und Nacherzählen", from pages 12-21 15 marks

Oral (viva-voce) Examination : 30 marks(Total)

i. Conversation in German
ii. Reading of a simple unseen text and answering questions there-on

Internal Assessment : 10 marks(Total)

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

iii. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 18-34.
iv. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, page 12-21.

Supplementary book:

ii. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 18-34

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RUSSIAN (Elective)

SEMESTER-III

Paper-A (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 100**
			Theory	**: 90 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) **15 marks**
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) **15 marks**
3. Simple applied grammar: 3 question out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
4. Question on prescribed texts in Russian : 3 questions out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
5. Composition (One out of three) on the following topics: **15 marks**
   1. My friend 2. My Country 3. My favorite writer 4. Our Library
6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper **15 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 31-37)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary
   Russian-English dictionary

RUSSIAN (Elective)
SEMESTER-IV

Paper-B (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 70**
			Theory	**: 60 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 80 words) **10 marks**

2. Translation from simple English/Hindi/Punjabi into Russian (about 75 words) **10 marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) **12 marks**
(Covered in Lessons 38-45, Wagner)

4. Questions on prescribed texts in Russian : 4 questions out of 6 **08 marks**
(2 marks each)
(Covered in Lessons 38-45, Wagner)

5. Composition (One out of three) on the following topics: **10 marks**
1. Our City 2. Our University 3. A Cultural evening 4. Journey/Excursion

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper **10 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 38-45)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary.
Russian-English dictionary.

(iii) **Oral/Practical** **Maximum Marks:30**

Reading of text(s) and conversation in simple Russian

1. V. N. Wagner: Russian, PPH, New Delhi.(Lessons 31-45)

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SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabi for B.A.(GENERAL)
SECOND YEAR (SEMESTER SYSTEM) has been
KEPT IN ABEYANCE

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PHYSICAL EDUCATION

B.A. (GENERAL) THIRD SEMESTER EXAMINATION, 2016

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Psychological Basis of Physical Education :

- Meaning of Psychology and Sports Psychology.
- Psychological factors effecting physical performance.
- Meaning of Learning.
- Laws of Learning.
- Learning curve, its types, characteristics and implications in Physical Education and Sports.
- Psychological characteristics and problems of an adolescent.
- The role of Physical Education and Sports in solving the problems of an adolescent.

UNIT-III 12 Marks

Motivation:

- Meaning, definitions, types and methods of motivation.
- Importance of motivation in Physical Education and Sports.

Transfer of Training:

- Meaning, definitions, types and factors affecting transfer of training.

UNIT-IV 12 Marks

Personality:

- Meaning, definitions, characteristics, dimensions and traits of personality.
- Factors affecting development of personality (Heredity and Environment).
- Role of physical activities in Personality Development.

Sports and Socialization:

- Meaning and definitions of socialization, socialization through sports.

UNIT-V 12 Marks

Politics, Economy, Media and Sports Performance :

- Role of politics and economy in the promotion of games and sports.
- Role of media in promotion of sports.
- Causes of deterioration and suggestions for the improvement of Sports Performance.

Softball:

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of field.
- Rules and regulations (number of players, number of officials required and general rules of play).
- Major tournaments of the game.

References :

1. Blair Jones & Simpson :*"Educational Psychology ",* The MacMillan Co., New York, 1962.
2. Brown, R. : *"Social Psychology",* Free Press, New York, 1965.
3. Bucher, Charles A. : *"Foundations of Physical Education",* St. Louis, 1979, The C.V. Mosby Company.
4. Conger, J.J.: "*Adolescence and Youth : Psychological Development in a Changing World,"* 22nd Edition, 1977, Harper and Row, New York.

5. Cratty, B.J.: *" Psychology and Physical Activity"*, Englewood Cliffs, N.J., Prentice Hall, 1968

6. Hollander, E.P.: *" Principles and Methods of Social Psychology"*, New York, 1971, Oxford University Press.
7. Linsa, M.I., *"Child-Adults, Peers : Patterns Communication",* Progress Publishers, Moscow, 1985.
8. Linggren, H.E.: *" Educational Psychology in the Class Room"*, John Wiley & Sons, New York, 1962.

9. Loy, John W. and Kenyon Gerald, S. *: "Sport, Cultural and Society : A Reader on the Sociology of Sport",* London, 1969, The MacMillan Co.
10. Hurlock, E.B. : *"Adolescent Development",* Appleton Century Crofts, New York,1956.

11. Rushall, Brent S. and Siedentop : *"The Development and Control of Behaviour in Sport and Physical Daryl Education"*, Philadelphia, 1972, Lea and Febiger.
12. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

13. Singh, Ajmer et. al. : *Modern Text Books of Physical Education, Health and Sports,* Kalyani Publishers, Ludhiana, 2000.
14. Talamini, John T. and Page & Charles, H. : *"Sport & Society – An Anthology",* Boston, 1973, Little Brown Co.
15. Walia, J.S. : *"Foundations of Educational Psychology",* Paul Publishers, Jalandhar City, 1992.

16. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Massachusetts.

PRACTICAL

Max.Marks : 35
Practical : 30
Internal assessment: 5

ATHLETICS

a) History of athletics
b) List of track and field events
c) Marking of standard track, width of lanes and starting points for various races.

LONG JUMP:

(a) Approach run (b) Take off (c) Flight (d) Landing (e) Brief information of various styles and practice of any one style depending upon the facilities available (f) Rules and regulations of the long jump.

PHYSICAL FITNESS TESTS:

More emphasis shall be given on physical fitness with regard to specific physical fitness components (Endurance and Strength).

Test 1 : ENDURANCE : 9/12 min. run and walk test.
Test 2 : STRENGTH : Standing broad jump test.

Division of Practical Marks*:* Marks for each activity shall be divided as under:

Athletics 10 Marks, Participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory and practical papers shall consist of 65 and 35 marks each.
5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students :***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods :***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. ***Teaching Work Load :***

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. ***Division of Marks (Theory and Practical) :***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

PHYSICAL EDUCATION
B.A. (GENERAL) FOURTH SEMESTER EXAMINATION,2017

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Respiratory System :

- Meaning of Respiration, types of Respiration, Organs of the Respiratory System.
- Functions of the Respiratory System. Vital capacity and its measurement.
- Mechanism and Neural Control of Respiration.

Digestive System :

- Meaning, Importance and Organs of Digestive System.
- Functions, processes, mechanism and nerve regulators of Digestive System.

UNIT-III 12 Marks

Circulatory System :

- Meaning of the circulatory system.
- Heart, its structure, functions and control of the heart rate.
- Various types of blood vessels and their functions.
- Cardiac Cycle.

Blood :

- Meaning, functions and composition of blood.
- Maintenance of blood supply.
- Blood groups and their importance.
- Blood Clotting.

UNIT-IV 12 Marks

Communicable Diseases :

Meaning of a communicable disease. Communicable diseases such as HIV/AIDS, Viral Hepatitis—A, B & C and Tetanus, their modes of transmission and methods of prevention.

Yoga:

- Meaning and aim of Yoga.
- Meaning, Principles and Importance of Asanas.
- Meditative poses (Padamasna, Vajrasana, and Sukhasana), their technique, precautions and effects/advantages.
- Cultural poses (Savasna, Halasana, Bhujangasana Sarvangasana, and Dhanurasana), their technique, precautions and effects/advantages.

Basics of Tennis :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking / layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna awardees of the game.

UNIT-V 12 Marks

Sports Injuries :

- Basis of Sports Injuries.
- Common Sports Injuries, such as sprains, strains, fracture, dislocation, abrasions, contusion, bruise, tennis elbow. Their causes, preventive and remedial measures.
- Treatment and care (RICE) of sports injuries.

Disability and Rehabilitation :

- Meaning, types, causes and preventive measures of disability.
- Problems of the disabled. Physical Activity and health for disabled.
- Meaning and scope of Rehabilitation.

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.
2. Dandiya, P.C., Jafer, Z.Y. K. and Jafer Afifa: *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.
3. Govt. of India : *"Occupational Diseases : A Guide to Recognition and Notification",* Chief Adviser Factories, Ministry of Labour and Employment, New Delhi, 1955.
4. Park, J.E. & Park, K. : *"Text Book of Preventive and Social Medicine",* 10th Edition, 1985, Banarsi Dass Bhanot, Jabalpur, India.
5. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Assistant Professors",* Lend : Edward Arnold Ltd., 1983.
6. Rao, M.N. and Lundgren, N.P.V. : *"A Review of Occupational Health Research in India",* ICMR, New Delhi, 1955.
7. Rose & Wilson : *"Foundations of Anatomy and Physiology",* 5th Edition, 1981, Reprinted in 1985.
8. Winter Griffith, H. : *"Complete Guide to Sports Injuries",* First Indian Edition, 1989, Metropolitan Book Co. Pvt. Ltd., New Delhi.
9. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999- 2000, Birla Publications, Delhi.
10. Singh, Ajmer et. al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.
11. Smith, Olive and F. Guthrie : *"Rehabilitation and Remedial Exercise",* Bailliere, Tindall and Cox Limited, London, 1949.
12. Sri Anand : *"The Complete Book of Yoga : Harmony of Body and Minds",* Orient Paper Back, New Delhi, 1980.
13. Staford, T. & Ellen Davis Kelly : *"Preventive and Corrective Physical Education",* Third Edition, 1958, Ronald Press Co., New York.
14. Swami Kuvalyananda : *"Kaivalyadhama",* Lonavala, Bombay, 1933.
15. Vijayendra Pratap : *"A Teacher's Guide for Beginning Yoga",* First Edition, 1987, Sky Foundations, Philadelphia, Pennsylavania, U.S.A.
16. World Health Organisation : *"Health Hazards of the Human Environment",* Geneva,1962.

PRACTICAL

Max. Marks	:	35
Practical	:	30
Internal Assessment	:	05

GAMES

Basketball or Ball badminton and any other one game of the choice of the student.

Basketball

(a) Measurements (Basket ball ground).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental and basic skills.

Football

(a) Measurements (Field & ball).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental Skills.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.
(ii) This subject should be offered to the normal students (not to disabled one).
(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.
(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students:***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. ***Infrastructure/facilities and Supporting personnel:***

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods:***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6.Teaching Work Load:

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. ***Division of Marks (Theory and Practical):***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper-III : FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer type question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from Units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV; and 75 words for each short answer type in Unit V.

Objectives :

1. To acquaint the students with major foundations underlying Education.
2. To enable the students to understand the concept of Philosophy of Education.
3. To enable the students to understand the concept of Educational Sociology and Educational Technology.
4. To enable the students to understand major Philosophies and their Educational implications.

COURSE CONTENTS :

UNIT-I

Philosophical, Sociological, and Technological Foundations of Education—Concept and their Role in Education.

UNIT-II

Philosophy of Education – Definition, Nature and Scope.

Difference between Educational Philosophy and Philosophy of Education.

UNIT-III

Educational Sociology – Definition, Nature and Scope.

Information and Communication Technology—Role in Education.

UNIT-IV

Major Philosophies of the World—Idealism, Naturalism and Pragmatism—Main Features and their Contribution to Education.

Books Recommended :

1. Aggarwal, J.C. : *Theory and Principles of Education,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

2. Bhatia, K.K. and Narang, C.L. : *Philosophical and Sociological Bases of Education,* Tondon Publications, Ludhiana, 2002.

3. Sataya, R.N. and Shaida, B.D. : *Development of Educational Thought and Practice,* Dhanpat Rai Publishing Company (P.), New Delhi, 1996.

4. Taneja, V.R. : *Foundations of Education,* Mohindra Capital Publishers, Panchkula, 1998.

5. Singh, K. : *Vidiyak Manovigian,* Gujral Book Depot, Patiala, 1999.

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Paper-IV : PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in Unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for Units I, II, III, IV and 75 words for each short answer question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV and 75 words for short answer type question in Unit V.

Objectives :

1. To enable the students to understand the perspective roles of heredity and environment in educational development of a child.

2. To enable the students to understand the concept of personality and its place in Education.

3. To make the students familiar with the concept of Special Education; the special needs of the Gifted, Backward and Delinquent Children and their Educational implications.

4. To make the students familiar with the concepts of Emotions, Stress and Stress management among adolescents.

COURSE CONTENTS :

UNIT-I

Difference between Psychology and Educational Psychology, Significance of Educational Psychology.

Heredity and Environment – Concepts and their role in Educational development.

UNIT-II

Personality : Concept, Assessment and its Educational Implications.

UNIT-III

Special Education : Meaning and Concept.

Types of Exceptional Children with special reference to the Gifted, Backward and Delinquents (Their Characteristics and Educational Implications).

UNIT-IV

Emotions and Stress – Concept, Types of Stress (Physical, Psychological and Social), Stress Management with Special Reference to Adolescents.

Books Recommended :

1. Batra, Promod : *Simple Ways to Manage Stress,* Think Inc., Delhi, 1997.

2. Carewell, M., Clark, L. & Meldrum, C. : *Psychology,* Harper Collins Publishers Ltd., London, 2000.

3. Clare, Sylvia : *Emotions –Releasing Your Child's Potential,* UBS Publishers and Distributors, New Delhi, 2003.

4. Chauhan, S.S. : *Advanced Educational Psychology,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

5. Dhaliwal, A.S. : *Vidyak Mnovigian,* Punjabi University, Patiala, 2001.

6. Dutt, Sunil & Sodhi, G.S. : *Teaching Learning – A Process Approach,* Samir Publications, Chandigarh, 1995.

7. Goleman Daniel : *Emotional Intelligence,* Baanam Books, New York, 1995.

8. Kirk, Semual : *Educating the Exceptional Child,* I.B.H. Publishing Co., Calcutta, 1992.

9. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.

10. Panda, K.C. : *Education of Exceptional Children,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

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ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-2017

Semester –III

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To acquaint students with the psychology of adult learner and the strategies employed to motivate them.

2. To impart knowledge to students on adult characteristics and their psychology.

3. To impart knowledge on suitability of teaching – learning material and audio visual material used by new – literates, preraks and Nodal Prerakes.

4. To acquaint students with various agencies involved in adult education program.

5. To provide knowledge to students regarding concept, need, methods and procedures involved in monitoring process.

6. To impart knowledge to students on the concept, meaning, scope and significance of Adult Education.

7. To acquaint students with the knowledge, how adult education play an important role in social and economic development.

THEORY

UNIT I

(i) Characteristics of Adult and Psychology of Adult Learners involved in Adult Literacy Program.

(ii) Roll of Motivational Strategies in Adult Educational Program.

UNIT II

(i) Suitability of Teaching – Learning and Audio – Visual Material used for Neo-Literates.

(ii) Suitability of Training Material for Preraks and Nodal Preraks.

UNIT III

(i) Agencies of Adult Education: Government, Private.

(ii) Monitoring of Adult Education Program: The Paradigm Content, General Consideration, Need for Monitoring.

UNIT IV

(i) Meaning of Adult Education, its Scope, Aims and Significance.

(ii) Role of Adult Education in Social and Economic Development.

Practical/Field Work:

Max Marks : 50 Marks
External : 45 Marks
Internal : 5 Marks

Participation of the Students in the following:

1. Survey of the Area - A brief report.
2. Planning and Organization of Awareness Generating Activities for Adults.

ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-2017
Semester –IV

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To provide an overview on History of Adult Education in India.
2. To impart knowledge to students on various Target Groups involved Under Adult Literacy Programs.
3. To expose students with the Teaching Learning Methodologies for teaching Adults.
4. To acquaint students with the Role and Responsibilities assumed by Preraks and Nodal Preraks.
5. To expose students with Concepts and Strategies involved under Total Literacy Campaign.
6. To acquaint students with the knowledge of various agencies involved in Adult Education Programs.
7. To expose students with the Preparation and Planning of Continuing Education and Awareness Generating Programs.
8. To impart knowledge to students on Linkage of Adult Education with Development.

THEORY

UNIT-I

(i) History of Adult Education in India.

(ii) Target Groups involved under Adult Education Programs.

UNIT-II

(i) Methodology of Teaching Adults in Adult Literacy Programs

(ii) Role of Preraks and Nodal Preraks in Adult Education.

UINIT-III

(i) Total Literacy Campaign : Its Concept and Strategies.

(ii) Agencies Involved under Adult Education : Government and Non-Government.

UNIT-IV

(i) Preparation and Planning of Adult Education Programs : Continuing Education and Awareness Generating Programs.

(ii) Adult Education and its Linkage with Development.

Practical/Field Work:

Max Marks	:	50 Marks
External	:	45 Marks
Internal	:	5 Marks

Participation of the Students in the following:

1. Visits to the 5 Government and Non-Government Agencies – A brief Report in the form of file to be submitted in the practical exam.

2. Preparation of Teaching – Learning Aids used for Teaching Adults.

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MUSIC (Vocal)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. The candidate can take vocal music along with instrumental music.

5. The candidate can also take instrumental music with tabla.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

7. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit**. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

8. There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: Practical (20 minutes duration)			: 45 marks
(i) Viva		: 35 marks	
(ii) Harmonium		: 05 marks	
(iii) Tabla		: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Brief knowledge of Gram.
2. Gun and Dosh of Gayak.
3. Gharana: definition and importance

Unit–II

1 Knowledge of Alap, and its various forms.
2 Explain the following: - Upaj, Mukhda, Bol-Baant, Khatka.
3 Knowledge of Ten Lakshans of Raga

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.

(i) Ustad Alladiya Khan
(ii) Pt. Bhimsen Joshi
(iii) Sh. Krishan Rao Shankar Pandit.

Unit–IV

1 Description and Notations of the prescribed Ragas and Talas : -

(i) To write drut khyal in any one of the prescribed ragas :-Malkauns, Bhairav with Alap and Taans
(ii) To write one bada khyal in any prescribed ragas of the syllabus with Alap and Taans
(iii) To write the notation of Tala :- Tilwada, Chartala (single & double)
(iv) To write the description of detailed and non detailed Ragas: Chandrakauns, Kalingda.

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas:Malkauns, Bhairav.
2. One Dhrupad in any prescribed raga
3. One lakshana geet/ Sargam geet in any prescribed ragas
4. Ability to play Jhaptala on Tabla
5. Ability to recite following talas by hand: Tilwada, Chartala
6. Ability to play on Harmonium at least three alankaras based on Shudh swaras and sing alongwith it.
7. Ability to recognize the prescribed ragas sung by the examiner
8. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Chandrakauns, Kalingda.
9. Ability to sing one Drut khayal of your course with harmonium.

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan* Sangeet Kala ka Itihas	:	Panna Lal Madan

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MUSIC (Vocal)

SEMESTER-IV

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. The candidate can take vocal music along with instrumental music.

5. The candidate can also take instrumental music with Tabla.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	:	45 marks
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
	(i) Viva	:	35 marks
	(ii) Harmonium	:	05 marks
	(iii) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical development (in brief) of North Indian Music during the Medieval Period.
2. Brief knowledge of Murchhana.
3. Importance of Notation system.

Unit-II

1. Importance of Tanpura and Sahayak Nada
2. Knowledge of Tanas and its various forms
3. Explain the following :- Meend, Bol-Alap, Gamak, Murki

Unit-III

1. Brief life sketches of great masters of music and their contributions:
   i) Ustad Amir Khan Sahib
   ii) Ustad Faiyaz Khan Sahib
   iii) Pt. Onkar Nath Thakur

Unit-IV

1. Description and Notations of the prescribed Ragas and Talas :-
   i) To write in notation a drut khyal in any one of the prescribed Raga of the syllabus:- Bhimplasi, Bageshwari
   ii) To write in notation a vilambit khyal in any prescribed raga of the syllabus.
   iii) To write the notations of Talas: Roopak, Jhaptala (Single & Double)
   iv) To write the description of Ragas :- Non detailed: Patdeep, Rageshwari

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: Bhimplasi and Bageshwari
2. One vilambit Khayal in any of the detailed ragas prescribed in the course with extempore alaps and tanas.
3. Ability to play Ek taal on Tabla
4. Ability to recite following talas by hand: Jhaptala, Roopak
5. Ability to play on Harmonium at least three Alankaras based on komal and Teevra Swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Patdeep, Rageshwari
8. Ability to sing one Drut khayal of your course with harmonium

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan* *Sangeet Kala ka Itihas*	:	Panna Lal Madan

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MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17
SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. **There should not be more than eight students in a batch for practical examination.**

3. Harmonium can be used while singing Alankars.

4. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

5. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

7. The candidate can take vocal music or Tabla along with instrumental music.

8. There would be up to ten students in one section in practical class.

Paper A : THEORY (3 Hours duration) **(Duration 45 minutes 06 practical + 02 Theory periods per week)**		:	45 marks
Paper-B: PRACTICAL (20 minutes duration)		:	45 marks
(i) Viva	: 35 marks		
(ii) Harmonium	: 05 marks		
(iii) Tabla	: 05 marks		
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1 Ghamak and its varieties.
2 Brief knowledge of Gram.
3 Gun and Dosh of Vadak.

Unit–II

1. Gharana (definition and importance)
2 Knowledge of Alap, and its various forms.
3. Knowledge of Avirbhav and Tirobhav, Alaptav- Bahutav

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.
(i) Ustad Inayat Khan
(ii) Ustad Allaudin Khan
(iii) Pt. Vishnu Digambar Pluskar

Unit–IV

Description and Notation of the prescribed Ragas of Syllabus: -

1. To write one Maseetkhani Gat (in any prescribed raga of your course with Toras)
2. To write the notation of Raga:- Bihag, Bhimplasi with todas
3. Notation of Ektal and Rupak tala with dugun layakaries
4. Description of non detail raga :- Bilawal, Patdeep

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas :
Bihag, Bhimplasi
2. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad : Bilawal, Patdeep
3. Use of one swara meend and kan.
4. Ability to play teen tala on Tabla
5. Ability to sing three alankras of Shudh swaras with the help of harmonium.
6. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Ektala, Rupak

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan* *Sangeet Kala ka Itihas*	:	Panna Lal Madan

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MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium can be used while singing Alankars.

4. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

5. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

7. The candidate can take vocal music or Tabla along with instrumental music.

8. There would be up to ten students in one section in practical class.

Paper-A: THEORY (3 Hours duration) : 45 marks
(Duration 45 minutes 06 practical+ 02 Theory periods per week)

Paper-B: PRACTICAL (20 minutes duration) : 45 marks
(i) Viva : 35 marks
(ii) Harmonium : 05 marks
(iii) Tabla : 05 marks
Internal Assessment (Theory + Practical) (05 +05) : 10 marks

Total : 100 marks

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical developments in North Indian Music during Medieval period.
2. Brief knowledge of Murchhana system
3. Classification of Indian Musical Instruments

Unit-II

1. A Study of Shuddh, Chhaya Lag and Sankiran Ragas
2. Time theory of Indian Ragas
3. Definitions and explanations of the musical terms (not more than 100 words):-
   Kampan, Meend, Ghaseet, Zamzama, Krintan

Unit–III

1. Brief life sketches of great masters of music and their contributions:
   - i) Ustad Vilayat Khan
   - ii) Ustad Abdul Halim Zafar Khan
   - iii) Smt. Annapurna Devi Ji

Unit–IV

Description and Notation of the prescribed Raga of syllabus :-

- i) To write one Maseetkhani Gat (in any prescribed raga of your course.
- ii) To write the notation of Razakhani Gat of with Toras: Raga Madhuwanti, Hamir
- iii) To write the notation of Tivra and Jhaptal with dugun
- iv) To write the description of non detailed ragas: Multani, Kedar

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Maseetkhani Gat in any raga from your course
2. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas:- Hamir, Madhuwanti.
3. One Madhya laya gat with alap and todas in any prescribed raga other than teentala.
4. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad : Multani, Kedar
5. Use of two swara meend and kan.
6. Ability to play Jhaptala on Tabla
7. Ability to sing three alankars of komal and teevra swaras with the help of harmonium.
8. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Tivra, Jhaptal

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan* *Sangeet Kala ka Itihas*	:	Panna Lal Madan

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TABLA (Instrumental Music)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

General Instructions

1. In the case of private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. The candidate can take vocal music along with instrumental music or Tabla.
3. The candidate can also take instrumental music with table.
4. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
2. **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation and question no. 8 will be based on objective type questions.**
   Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.
3. There should not be more than eight students in a batch for practical examination.
4. There would be upto ten students in one section in practical class.

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	30	marks
(ii)	Harmonium	:	05	marks
(iii)	Tabla	:	05	marks
(iv)	Padhant on Hand	:	05	marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

(a) Origin of Tala

(b) Definition of Tisra, Chatasra, Khand, Mishar and Sankeeran jati

(c) Define Uthan, Rau, Chakradar, Gat & Nagma with example

(d) Knowledge of playing techniques of the following bol Dhaghe Tirkit, Ghe-Ghe, Gadigan Kdaan.

UNIT-II

(a) Knowledge of Uttar Bhartiya Tala system.

(b) Introduction of V.D. Paluskar Tala notation system.

(c) Importance of Gharana of Table

(d) Life sketch of the following:

- Ustad Allah Rakkha Khan
- Ustad Ahemadjan Thirakuwa

UNIT-III

(a) Ability to write in notation of Uthan, Peshkar, Kayda, Palta in the following Talas – Jhaptal, Roopak, Sultal.

(b) Nine objective type question (covering entire syllabus)

Paper-B: PRACTICAL

(a) Proper Badhat of following Talas on Tabla Jhaptal, Sultal, Rupak

(b) Improvisaon of laggi in Kaharawa

(c) Jhaptal- Peshkar, Two Palatas, Two Kaydas and Two Palatas, One simple Tukra

(d) Sultal – Thah, Dugun & Chaugun

(e) Practical Knowledge of Khemta Taal

(f) Ability to play Nagma on Harmonium in Jhaptal

(g) Tuning of Tabla

TABLA (Instrumental Music)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

General Instructions

1. In the case of private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. The candidate can take vocal music along with instrumental music or Tabla.
3. The candidate can also take instrumental music with table.
4. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
5. **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation and question no. 8 will be based on objective type questions.**
   Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	30 marks
(ii)	Harmonium	:	05 marks
(iii)	Tabla	:	05 marks
(iv)	Padhant on Hand	:	05 marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

(a) Origin & Evolution of table.

(b) Detail study of ten Pranas of Tabla.

(c) Write notation in Dugun, Tigun & Chaugun of the following talas :- Teental, Ektal, Jhaptal & Sooltal.

(d) Playing technique of Delhi, Ajarada, Lucknow, Farrukhabad, Punjab and Banaras Gharana.

UNIT-II

(a) Knowledge of Karnataka taal system.

(b) Comparative study of Ultari & Dakshni Bhartiya Tala System.

(c) Ability to write V.D. Paluskar tal notation system of the following Taalas:-
Teental, Ektal, Jhaptal, Sooltal.

(d) Life Sketch & Contribution of the following:-
(i) Amir Hussain Khan
(ii) Bhai Bahadur Singh

UNIT-III

(a) Ability to write in notation of Gat, Chakradar, Rela & Laggi in following Taalas:-
Roopak, Tivra, Ada-Chartaal

(b) Nine objective type question (covering entire syllabus)

Paper-B : PRACTICAL

(a) Proper Badhat of the following Talas on Tabla: Rupak, Tivra, Ada-chartaal.

(b) Improvisation of laggi in Dadra

(c) Rupak- Peshkar, Two Palatas, One Kayada and Two Paltas, One Mohra.

(d) Teental – Two Rela with Two Paltas, Two Charkradaar Paran, One Charkrdaar Tukra

(e) Practical Knowledge of Playing above taalas with vocal & instrumental music performance

(f) Ability to play Nagma on Harmonium in Rupak

(g) Tuning of Tabla.

Note:- It is understood that candidate must have knowledge of tala of Semester 3rd also.

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-1	:	G.C. Srivastava

Ten Books recommended other than already recommended

Aakrosh By : G.C. Srivastava

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INDIAN CLASSICAL DANCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-2017

SEMESTER-III

General Instructions

1. In the case of private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
3. **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation which should not contain more than three technical terms and question no. 8 will be based on objective type questions.**
   Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.
4. **Separate Practial paper shall be set for each semester from the syllabus prescribed for Practical Paper-B.**
5. There should not be more than eight students in a batch for practical examination.
6. There would be upto ten students in one section in practical class.
7. No electronic instruments will be allowed for lehra in practical examination.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following :
   Kasak-Masak, Bharramri, Chari, Astooti
2. History of Kathak in detail.
3. Survey and essential characteristics of Bharta Natyam.
4. Survey of 13 Samyukta Mudras based on Abinaya Darpan

Unit-II

1 . Life Sketch of Pt. Shambhu Maharaj
2. Importance of Gayan and Vadan in Kathak Dance
3. Guru Shishya Prampra
4. Definition of Bhava

Unit-III

1 . Theka and Bol tatkar in Ekgun, Dwigun and Chaugun Layakar of Ada Chautal.

2. Notation of Salami, Amad and Tora in adachautaal.

3. Notation of Amad, Tora and Paran in Teentaal.

4. Write Nagma in Teen taal and Adachautaal.

Paper-B : PRACTICAL

I. Adachautal

1. Tatkar with Ekgun, Dwigun and Chaugun Layakari
2. Salami : 1
3. Tora : 2
4. Amad : 1
5. Nagma : 1
6. Tihai

II. Teentaal

1. Tatkar with Ekgun, Dwigun and Chaugun Layakari
2. Amad : 1
3. Tora : 2
4. Paran : 2
5. Nagma : 1

III. One Gat of Ghunghat

IV. Padhant of above mentioned material on hand in teen taal and Adachautaal

V. Ability of play Nagma in teentaal

VI. Tneka of Ektaal in Ekgun Layakari on hand

VII. Practical Demonstration of Gidha.

INDIAN CLASSICAL DANCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

General Instructions

1. In the case of private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
3. **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation which should not contain more than three technical terms and question no. 8 will be based on objective type questions.**
   Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.
4. **Separate Practial paper shall be set for each semester from the syllabus prescribed for Practical Paper-B.**
5. There should not be more than eight students in a batch for practical examination.
6. There would be upto ten students in one section in practical class.
7. No electronic instruments will be allowed for lehra in practical examination.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following :
   Gati, Paran, Tisarjati Paran, Chatusrajati Paran.
2. Brief knowledge of Mohini Attam
3. Importance of Ghungroo in Kathak Dance
4. Knowledge of folk dance of Himachal Prades

Unit-II

1. Gharanas and their comparison
2. Merits and demerits of Kathak Dance
3. Contribution of Pt. Rajender Gangani ji in the field of Kathak Dance
4. Knowledge of Thumri

Unit-III

1. Notation of Theka and Bol-tatkar in Ekgun, Dugun and Chaugun Layakaries in Adachautaal and Teen Taal.
2. Notation of Paran, Chakardar Paran and Thaat in Adachautaal
3. Notation of Chakardar Tora and Kavit in Teen Taal and Nagma
4. Write Tihai in Teen Taal and Adachautaal
5. Theka of Ektaal in Ekgun and Dwigun Layakari

Paper-B: PRACTICAL

I. Adachautal

1. Tatkar with Ekgun, Dwigun and Chaugun Layakari
2. Paran : 1
3. Chakardar Paran : 1
4. Thaat : 1
5. Tihai : 1

II. Teentaal

1. Tatkar with Ekgun, Dwigun, Chaugun and Athgun
2. Kavit : 1
3. Chakardar Tora : 1
4. Tihai : 1
5. Nagma : 1

III. One Gat Nikas of Mataki

IV. Padhant of above mention material in teen taal and Ada Chautaal on hand

V. Ability to play Nagma in Ada Chautaal

VI. Theka in Ekgun and Dwigun Layakari of Ektal on hand

VII. Practical Demonstration of a Bhangra steps.

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FINE ARTS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper A : Theory (History of Art) **Max. Marks : 54**

Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions. Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Western Indian Minitaure Painting -- Decorative Designs and Paintings of the 1439 Kalpasutra Manuscript.
- Pre Mughal Paingting -- Chaurapanchashika and Nimat Nama Manuscript Paintings

Unit-II : History of Indian Sculpture

- Gandhara –Fasting Buddha and Mahaparinirvana of Buddha
- Mathura –Portraits of the Kushana Kings.
- Sarnath –Seated Buddha.
- Sultanganj –Bronze Buddha.

Unit-III : History of Western Art

- Early Renaissance : Masaccio-Expulsion; Holy Trinity.
- High Renaissance: Leonardo Da Vinci – Last Supper; Michelangelo—Creation of Adam from the Sistine ceiling; Pieta.
- Northern Renaissance : Durer – Knight, Death and the Devil.

Unit-IV : Definition of Key Terms and General Concepts

- Composition – Volume, Texture, Space, Unity, Harmony, Rhythm, Proportion.
- Six Limbs of Indian Painting.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

		Max. Marks	*Max. Time*
1.	Landscape Painting (on the spot)	30	5 hours
2.	Life Sketching	30	5 hours
3.	Poster & Book Cover Design or Clay Modelling	30	5 hours
		Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

FINE ARTS

SEMESTER-IV

Paper A : Theory (History of Art) **Max. Marks : 54**
Time : 3 Hours

Objectives :
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus. Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions.
   Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Mughal Paintings of Hamza-Nama ; South Kensington Akbar Nama ; Jahangiri Portraits and illustrations of birds and animals.
- Deccani Paintings –Tarif-i-Hussain-Shahi from Ahmednagar ; Najam-ul-Ulum from Bijapur.

Unit-II : History of Indian Sculpture

- Deogarh –Vishnu Anantashayana.
- Ellora—Ravana Shaking Mount Kailasha.
- Mahabalipuram –Descent of Ganges (Kiratarjuniyam panel).

Unit-III : History of Western Art

- Baroque : Rubens –Garden of Love.
- Neo-Classicism and Romanticism : David –The Death of Socrates; Constable-The Haywain.
- Realism : Courbet –Artist's Studio.

Unit-IV : Definition of Key Terms and General Concepts

- Art and Craft ; Design ; Mosaic ; Tribal Art ; Folk Art ; Piece-mould ; Waste-mould.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

		Max. Marks	*Max. Time*
1.	Landscape Painting (on the spot)	30	5 hours
2.	Life Sketching	30	5 hours
3.	Poster & Book Cover Design or Clay Modelling	30	5 hours
		Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

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HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF INDIAN PAINTING (from ca. 9th century to ca. 1800 A.D.) AND SCULPTURE (from ca. 4th century A.D. to ca. 6th century A.D.)

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I

Development of Miniature Painting :

(a) Eastern Indian.

(b) Western Indian.

Unit-II

Painting under the Mughals :

(a) Akbar.

(b) Jahangir.

(c) Shahjahan.

Unit-III

Indian Miniature Painting :

(a) Rajasthani Schools—Mewar, Bundi, Kishangarh.

(b) Pahari Schools—Basohli, Guler, Kangra.

Unit-IV

Indian Sculpture in the Classical Phase :

Sculpture under the Guptas – Mathura, Sarnath, Deogarh, Ajanta.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : *The History and Culture of Indian People, Vols. I, II and III* (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Goswamy, B.N. & E. Fischer : *Pahari Masters : Court Painters of Northern India,* Museum Reitberg, Zurich Switzerland, 1992.
4. Khandalvala, Karl : *Pahari Miniature Painting,* The New Book Co. Pvt. Ltd., Bombay, 1958.
5. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
6. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
7. Barrett, D. and Gray, B. : *Painting of India,* The World Publishing Co., Ohio, 1963.
8. Brown, Percy : *Indian Painting under the Mughals,* Cosmo Publications, New Delhi, 1981.
9. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF EUROPEAN PAINTING AND SCULPTURE (from 1300 A.D. to ca. 1850 A.D.) and THEORY AND PRINCIPLES OF ART APPRECIATION

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of European Painting and Sculpture

(a) Early Renaissance–Masaccio, Donatello.

(b) High Renaissance–Lenoardo Da Vinci, Michelangelo, Raphael, Titian.

Unit-II: Baroque Period

Caravaggio, Rubens, Rembrandt, Bernini, Claude Lorrain.

Unit-III:

(a) Neo-Classicism and Romanticism–David, Ingres, John Constable, W. Turner.

(b) Realism–Courbet.

Unit-IV : Theory and Principles of Art Appreciation

(a) Definition of the term Miniature Painting

(b) Six limbs of Indian Painting (Shadanga) and their manifestations in actual works.

(c) Indian concept of primary colours and their symbolic meaning.

(d) Indian theory of Rasa, Bhava and Beauty.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
2. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
3. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.
4. Turner, Jane (ed.) : *The Dictionary of Art,* Macmillan Publishers Limited, New York, 1996.
5. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
6. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
7. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
8. Murray, Peter and Linda Murray : *A Dictionary of Art & Artists,* Penguin Reference Book, Great Britain, 1959.
9. Rowland Benjamin (Jr.) : *Art in East and West,* Beacon Press, Toronto, 1964.
10. Ray, Niharanjan : *An Approach to Indian Art,* Publication Bureau, P.U., Chandigarh, 1974.
11. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper-III : HISTORY AND CULTURE OF INDIA FROM 320 A.D. TO 650 A.D.

Objectives :

The main objective of this paper is to make students do a detailed study of the political history and cultural development starting from the Gupta period till the death of Harsha.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of Chandragupta II's empire.

   (b) Extent of Harsha's empire.

   (c) Distribution of monuments of the Gupta-Vakataka period.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper-setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

UNIT-I

1. (a) Political condition of Northern India on the eve of the rise of the Guptas.

   (b) Foundation of the Gupta Empire.

2. The Imperial Gupta rulers.

UNIT-II

1. Decline of the Gupta Empire.
2. The Gupta administration.
3. Cultural and Economic achievements during the Gupta period.

UNIT-III

1. The Vakatakas of the Deccan.
2. The Huna Invasions and their impact.

UNIT-IV

1. The Aulikaras of Daspura, the Maukharis and the Later Guptas, Pallavas & Chalukyas of Badami, Vatapi.
2. The Pushyabhutis of Thanesar : Political and Cultural survey.

Pedagogy of the Course Work :
The students are expected to have an idea of the original sources for the reconstruction of the history of the period. Maps and transparencies should be put to use for better understanding by the students.

Essential Readings :

1. Agrawal, Ashvini : *Rise & Fall of the Imperial Guptas,* Motilal Banarsidass, Delhi, 1989.
2. Altekar, A.S. & Majumdar, R.C. : *The Vakataka-Gupta Age,* rpt., Motilal Banarsidass, Delhi, 1967.
3. Majumdar, R.C. & Dasgupta, K.K. (Eds.) : *The Comprehensive History of India, Vol. III,* Pt. 1, People Publishing House, Delhi 1981, (Chapters Dealing with the Gupta and the Post Gupta History).
4. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
5. Mookerji, R.K. : *The Gupta Empire,* Motilal Banarsidass, Delhi, 1989.
6. Tripathi, R.S. : *History of Ancient India,* rpt., Delhi, 1977.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Paper-IV : HISTORY AND CULTURE OF INDIA FROM 650 A.D. TO 1200 A.D.

Objectives :

The primary objective of this paper is to acquaint the students about the political development in India after the death of Harsha. A detailed study of the various dynasties ruling in the different parts of our country will be made.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of Pratihara Empire.

   (b) Distribution of Temples—Lingaraja, Konark, Jagannath, Kandariya Mahadev, Parsvanath, Lakshman, Osian, Mahabalipuram.

   (c) Important Centres of Education—Nalanda, Ujjain, Pushpagiri, Nagarjunakonda.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper- setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

UNIT-I :

1. Pratiharas
2. Palas

UNIT-II :

1. Paramaras
2. Chahamanas

UNIT-III :

1. Gahadavalas
2. Chandellas

UNIT-IV :

1. Rashtrakutas
2. Cholas.

Pedagogy of the Course Work :

The students should be given an outline of the original sources that help to reconstruct the political history of the dynasties and the kings. Slides and transparencies should be used in the class room lectures.

Essential Readings :

1. Altekar, A.S. : *Rastrakutas and Their Times,* 2nd ed. Oriental Book Agency, Poona, 1967.
2. Bhatia, Pratipal : *The Paramaras,* Munshiram Manoharlal,New Delhi, 1970.
3. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
4. Majumdar, R.C. : *History & Culture of Indian People,* Vol. IV, *The Age of Imperial Kanauj,* Bhartiya Vidya Bhawan, Bombay, 1955 (Relevant Chapters) Vol. V, *The Struggle for Empire,* Bombay 1957 (Relevant Chapters).
5. Puri, B.N. : *The History of the Gurjara-Pratiharas, Manohar,* Delhi, 1986.
6. Ray, H.C. : *Dynastic History of India,* 2 Vols, Calcutta 1931,1936.
7. Sastri, K.A.N. : *A History of South India, 4th ed.* Oxford University Press, Madras, 1976.
8. Tripathi, R.S. : *History of Kanauj,* Motilal Banarsidass, Delhi, 1964.

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DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE IN INDIA

M. Marks : 70
Time : 3 Hrs.

Objective :

This paper deals with the salient features of Indian warfare with emphasis on Military Organization, Battle techniques and Leadership.

SECTION-I

1. Battle of Hydaspes and Alexander's Art of War.
2. Kautilya's Philosophy of War.

SECTION-II

3. Military Organizations and Battle Techniques of Rajputs and Turks with particular reference to Battle of Tarrain, 1192 A.D.
4. Military Organizations and Battle Techniques of Mughals and Afghans with particular reference to First Battle of Panipat, 1526 A.D.

SECTION-III

5. Battle techniques of Southern Muslim Sultans with particular reference to Battle of Talikota, 1565 A.D.
6. Military Organization and Battle Techniques of Marathas under Shivaji.

SECTION-IV

1. Military organization and Battle Techniques of Sikh Army under Maharaja Ranjit Singh.
2. Warfare under East India Company with particular reference to Battle of Assaye 1803 A.D. and Chilianwala 1849 A.D.
3. Indian Armed Forces 1858 to 1947: General Evolution and Development (A Broad Perspective).

Books Recommended :

1. Bajwa, F.S., The Military Systems of Sikhs, Motilal Banarsidas Delhi, 1964.
2. Dass, S.T., An Introduction to the Art of War, Sagar Publications, Delhi, 1970.
3. Erskin, Memories of Babur, Biblio Bazaar, 2012.
4. JFC, Fuller, Generalship of Alexander, The Great, Eyre and Spottiswoode, 1958.
5. Kangle, K.P., Kautilya's Arthshastra, Motilal Banarsidas Publishers Pvt. Ltd., Delhi, 1986.
6. Majumdar, B.K., Military Systems in Ancient India, Firma K.L. Mukopadhayay Publishers, Delhi, 1960.
7. Mallesan, Decisive Battle of India, Read Books Design, 2010.
8. Nath, Rajendra, Military Leadership in India, Vedic Period to Indo-Pak Wars, Lancers Books, California, 1990.
9. Sarkar, J.N., Military History of India, Orient Longmans, Virginia, 1960.
10. Sen., S.N., Military System of the Marathas, Orient Longmans, Michigan, 1958.
11. Sharma, Gautam, Indian Army through the Ages, Allied Publishers, University of Michigan, 1966.
12. Singh, Gurcharan, Battles of Panipat, Army Educational Stores, 1966.
13. William, Irvin, Army of the Indian Mughals, Low Price Publishers, 1994.

Paper: **PRACTICAL**

Max. Marks : 20
Time: 1 hrs

Note:

1. There will be of 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A Practical Test

Marks : 10

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Bearing: Definition, Types and Inter conversion of Bearing in detail.
2. Liquid Prismatic Compass: Features and Funcitons of its various parts.
3. Determination of Individual Compass Error

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva Voce Marks : 5

DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question form each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students.. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE

M. Marks : 70
Time : 3 Hours

SECTION-I

1. Military Organizations and Battle techniques of Macedonians and Persians with particular reference to Battles of Arbella, 331 B.C.
2. Military Organization and Battle Technique of Romans and Carthagenians with particular reference to the Battles of Cannae, 216 B.C.
3. Military Organizations and Battle Techniques of Barbarians with particular reference to Battle of Adrianople, 378 A.D.

SECTION-II

4. Military Organizations and Battle Techniques of the English and French with reference to the Battle of Hastings, 1066 A.D.
5. The Mongol Art of War under Changez Khan and his successors.

SECTION-III

6. Industrial revolution and its Impact on Weapons, Communications and Tactics.
7. Elements and Principles of Napoleonic Warfare.

SECTION-IV

8. Naval Warfare with particular reference to the Battle of Trafalgar, 1805.
9. American Civil War (1861-65) : Causes and Events.

Books Recommended :

1. Barrie and Rackett, The Ancient Art of War Vols. I & II., Barrie and Rockliff, 1957.
2. Bullock, H., Military History of the Western World,Vol. 1, Da Capo Press, 1978.
3. Fuller, JFC, Armament and History, Da Capo Press, New York, 1998.
4. Fuller, JFC, Conduct of War, Eyre & Spottiswoode (Publisher) Ltd., Great Britain, 1962.
5. Fuller, JFC, Machine Warfare, the Infantry Journal, University of Michigan, 1943.
6. Fuller, JFC, Military History of the Western World, Da Capo Press, New York, 1987.
7. Montgomery, F.M., A History of Warfare, World Publication Co. The University of Michigan, 1968.
8. Montress, L., War through the Ages, Harper & Brothers, Indiana University, New York, 1987.

Paper : PRACTICAL

Max. Marks : 20

Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical.For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A : Practical Test

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Setting of Map: With Compass and without Compass.
2. Marching by Compass: To set the Compas in a particular direction for Night March.
3. Finding position on the Maps: Determine One's and Enemy's position on the Map by Resection and Intersection method.

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva-Voce Marks : 5

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HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) One question from Unit IV shall be set on the map.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (iii) in the question paper.

Explanation :

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

Map	:	10 marks
Explanatory Note	:	08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper-setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF INDIA, 1750-1964 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : To introduce the students to the broad developments in the history of India in Modern times.

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Foundation of British Rule : Circumstances leading to the battles of Plassey and Buxar and their significance; Reforms of Warren Hastings.
2. Administrative Reforms : Reforms of Cornwallis, William Bentinck and Dalhousie.
3. The Uprising of 1857 : Political, socio-religious, economic and immediate causes; failure; results.

Unit-II

4. Economic Changes : British Agrarian policies; commercialization of agriculture; rural indebtedness; deindustrialization and growth of modern industry; theory of economic drain.
5. Socio-Religious Reform Movements : Brahmo Samaj; Aligarh Movement; Arya Samaj; Ramakrishna Mission.
6. Depressed Classes Movement : Contribution of Jyotiba Phule, B.R. Ambedkar and Mahatma Gandhi.

Unit-III

7. Growth of Political Consciousness : Causes for the growth of political consciousness/nationalism; foundation of the Indian National Congress; national movement upto 1919.
8. Indian National Movement : Gandhi's emergence; circumstances leading to the non-cooperation movement and its significance; demand for complete independence; the civil disobedience movement.
9. Rise of Communal Politics : Factors responsible for the growth of communal politics; Separate electorate; Muslim League and Pakistan Resolution.

Unit-IV

10. Towards Partition and Independence : Quit India Movement; British proposals for independence; Indian Independence Act of 1947.
11. Significant Developments after Independence,1947- 64 : Making of the constitution; integration of princely states; the reorganisation of states.
12. Map:
    (a) Important Historical Places – Delhi, Calcutta, Madras, Bombay, Goa, Pondicherry, Surat, Plassey, Buxar, Gwalior , Jhansi, Hyderabad, Sabarmati, Amritsar, Lucknow, Lahore and Aligarh.
    (b) Extent of the British Empire in 1856.
    (c) Republic of India in 1950.

Books Recommended :

1. Abdul Kalam Azad, *Azadi Ki Kahani* (Hindi Medium), Delhi : Orient Black Swan, 2007.
2. Bandyopadhyay, Sekhar, *From Plassey to Partition : A History of Modern India,* Delhi : Orient Black Swan, 2007 (Also available in Hindi Medium).
3. Chandra, Bipan, *Communalism in Modern India,* Delhi : Vikas Publishers, 1987.
4. Chandra, Bipan *et al., India's Struggle for Independence, 1875-1947,* Delhi : Viking/Penguin Books,1989.
5. Chandra, Bipan, *Aitihasik Sangharsh – EPIC Struggle* (Hindi Medium), Delhi : Orient Black Swan, 2007.
6. Nanda, B.R., *Making of a Nation : India's Road to Independence,* New Delhi : Harper-Collins, 1998.
7. Gopal, S, (Pbi)

HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-2017

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(i) One question from Unit IV shall be set on the map.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Explanation:

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under :
Map : 10 marks
Explanatory Note : 08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF THE PUNJAB, 1469-1849 A.D.

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objectives : To introduce the students to the broad developments in the history of the Punjab from the mid 15^{th} to the mid 19^{th} century i.e. the medieval period

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Teachings of Guru Nanak, Development of Sikh Institutions : langar, manji, masand, gurdwara
2. Compilation of the Adi Granth; causes and significance of the martyrdom of Guru Arjan Dev.
3. Guru Hargobind's new policy and its justification; martyrdom of Guru Tegh Bahadur and its significance.

Unit-II

4. Circumstances leading to the creation of Khalsa and its significance; the new injunctions and symbols of the Khalsa.
5. Establishment of independent rule under Banda Bahadur; socio-economic transformation.
6. Role of Rakhi, Gurmata and Dal Khalsa in 18th century polity; emergence of autonomous chiefs.

Unit-III

7. Unification under Ranjit Singh; expansion of the Kingdom of Lahore
8. Civil & Provincial administration;Land Revenue system under Maharaja Ranjit Singh
9. Social Structure in the early 19th century Punjab

Unit-IV

10. Anglo-Sikh relations upto 1839; political developments 1839-1849.
11. First Anglo-Sikh war; second Anglo-Sikh war and the annexation of the Punjab.
12. Map :
    (a) Important Historical Places – Amritsar, Goindwal, Anandpur Sahib, Chamkaur Sahib, Kiratpur, Kartarpur, Paonta Sahib, Sirhind, Muktsar, Tarn Taran, Lahore, Machhiwara, Ropar, Multan and Peshawar.
    (b) Battles of Banda Bahadur. (location)
    (c) Kingdom of Lahore(Boundaries)

Note : In case, a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

Books Recommended :

1. Banerjee, I.B., *Evolution of the Khalsa,* 2 Vols., Calcutta : A Mukherjee & Co., 1979 (2nd edn.).
2. Banga, Indu (ed.), *Five Punjabi Centuries : Polity, Economy, Society and Culture c. 1500-1900,* New Delhi : Manohar, 1997.
3. Fauja Singh, *State and Society under Maharaja Ranjit Singh,*Master Publishers, Delhi.
4. Grewal, J.S., *The Sikhs of the Punjab : The New Cambridge History of India,* New Delhi : Cambridge University Press, 1999 (2nd edn.).
5. Khushwant singh*, A History of the Sikhs* Volume I and II
6. McLeod, W.H., *Sikhs and Sikhism,* New Delhi : Oxford University Press, 2000.
7. Sinha, N.K., *Rise of the Sikh Power,* Calcutta : A Mukherjee & Co., 1973
8. Teja Singh and Ganda Singh, *A Short History of the Sikhs,1469-1765* ,Vol.I, Patiala : Punjabi University, 1983.

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POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

INDIAN GOVERNMENT AND POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives: This paper provides students with a basic knowledge of the fundamental elements and institutions of government, politics and processes in India at both the centre and state levels.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Basic Features of Indian Constitution.
2. Preamble and its perceptions.
3. Indian Federalism- Meaning & its features.
4. Centre State Relations (Legislative, Administrative & Financial)

Unit-II

1. Fundamental Rights (Art14-Art 32)- Meaning, Explanation, Criticism & Importance.
2. Fundamental Duties- Meaning, Explanation, Evaluation (Criticism & Importance).
3. Directive Principals of State Policy (Art 36- Art 51)- Liberal, Socialist, International, Gandhian- Meaning, Explanation, Sanctions, Criticism & Importance

Unit-III

1. President : Election, powers, position and changing role.
2. Parliament : Composition, powers and role.
3. Cabinet –
   a) Parliamentary features
   b) Prime Minister : Election, powers, position and changing role.
4. Supreme Court : Composition, powers & Judicial Review.

Unit-IV

1. Governor : Appointment, powers and role.
2. State Legislature : Composition, powers and role of Legislative Assembly/Vidhan Sabha.
3. Council of Ministers and Chief Minister : Election, powers, position and role.
4. High Court : Composition, powers and its role.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.
20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.
21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.
22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.
23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.
24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.
25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.
26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

INDIAN POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours.

Objectives :

The aim of this paper is to enrich the student's understanding of the working of the Indian political system with reference to political parties, the party system, elections and voting behaviour. Units III and IV of the paper examine in detail certain key issues and debates in contemporary India.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Nature of party system in India : A critical evaluation.
2. National Political Parties [Indian National Congress, BJP, CPI, CPI(M), BSP] : Ideology, Policy and Programmes
3. Regional Political Parties (SAD, DMK, AIDMK) : Ideology, Policy and Programmes.

Unit-II

1. The Election Commission : A critical evaluation and electoral reforms in India.
2. Pressure Groups in Indian Politics- Types & Role
3. Voting Behaviour in India – its Determinants.

Unit-III

1. Emerging Trends in Indian Politics.
2. Role of Caste, Religion in Indian Politics.
3. Regionalism in Indian Politics-its causes & impact.

Unit-IV

1. Basic principles and determinants of Indian Foreign Policy.
2. Non-alignment : Meaning and Nature.
3. Non-alignment Movement- its Relevance.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.

20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.

21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.

22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.

23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.

24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.

25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.

26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

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ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper : PUBLIC FINANCE AND INTERNATIONAL ECONOMICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective : The primary course objective is to introduce the students to the basics of public finance and international trade. The first two units aim to introduce students to the primary functions of government to generate resources from the people and to spend money improving their lives. The last two units are concerned with basic theories of international trade and commercial policies, balance of payments, determination of exchange rates and role of international financial institutions.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Introduction to Public Finance : Nature, Scope and its Importance.

Public Expenditure: Canons, Principle of Maximum Social Advantage, Wagner's Law, Wiseman Peacock Hypothesis. Causes for the Recent Growth of Public Expenditure in India.

Taxation : Classification and Canons, Characteristics of a Good Tax System.

Unit-II

Incidence and Impact of Taxation : Demand and Supply Theory.

Taxable Capacity : Absolute and Relative Capacity, Determinants of Taxable Capacity.

Public Debt : Its types and Role, Burden of debt and Methods of its Redemption.

Deficit Financing : Objectives and Limitations.

Unit-III

Pure Theory of International Trade : Classical and Heckscher - Ohlin Theories, The Theory of Reciprocal Demand.

Terms of Trade : Concept and Types

Commercial Policy : Free Trade Vs. Protection, Regional Blocks: ASEAN, SAFTA Problems and prospects. Impact of W.T.O. on Less Developed Countries.

Unit-IV

Balance of Payments: Meaning, Concept and Components of Balance of Payments. Disequilibrium in the Balance of Payments : Causes and Measures to corret the disequilibrium

Exchange Rate : Meaning and its Determination, Fixed Vs. Flexible Rate of Exchange and Purchasing Power Parity Theory.

IMF and IBRD : Objectives, Working and Achievements.

Recommended Readings :

1. Musgrave, A.R. & Musgrave, P.B. (2011) : *Public Finance in Theory and Practice,* McGraw Hills, International Students' Edition.
2. Kindleberger, C.P. (1987) : *International Economics,* Richard Irwin Homewood, Illiois, Indian Edition
3. Sharma, O.P. (latest edition) : *Sarvjnik Vit,* Punjabi University, Patiala.
4. Ghuman, Ranjit Singh (latest edition) : *Antar-Rashtriya Arth Vigyan,* Punjabi University, Patiala.
5. Soderston B.O. (1994) : *International Economics,* McMillan Press Ltd.

Supplementary Reading :

1. Bhatia, H.L. (2008) : *Public Finance*, Vikas Publishing House Pvt. Ltd.
2. Dalton, H. (1978) : *Principles of Public Finance,* Routledge and Kegan Paul, London.
3. Tyagi, B.P. (1994) : *Public Finance,* Jai Prakash Math & Co, Meerut.

ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

Semester-IV

Paper : QUANTITATIVE METHODS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective :

The objective of the course is to train the students in the use of basic mathematical and statistical tools in analyzing various economic phenomenons. It deals with the design of how data is presented, the analysis of the data, and the drawing of conclusions from the data. The course aims to improve decision-making accuracy of the students and enabling them to test new ideas.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

1. There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 09 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.
2. Use of simple calculator is allowed.
3. The paper setter may in general stick to the distribution of marks of 1/3 to theory and 2/3 to numericals.

Unit-I

Elementary Idea of Sets and Functions : Simple and Partial Derivatives, Differentiation of Simple functions – Polynomial (x) and Exponential functions. Maxima and Minima of functions of one variable only. Their Applications of Micro and Macro Economics.

Unit-II

Matrices : Definition and Types, Operations (Sum, Difference, Product and Transpose), Adjoint and Inverse of a matrix (upto $3 \cdot 3$), Solution of Equations (upto 3) by Matrix Methods and Crammer's rule.
Measures of Central Tendency : Mean, Median, Partition Values, Mode, Measures of Dispersion, Skewness.

Unit-III

Correlation Analysis—Karl Pearson's (except grouped data) and Spearman's formula, Simple Regression Analysis.
Interpolation – Binomial, Expansion, Newton's (Advancing Difference Method) and Lagrange's Method.

Unit-IV

Index Numbers : Concepts, Problems and Importance, Simple Index Number, Lespeyre's and Fisher's Index Numbers only (among weighted index numbers), Reversibility Tests.
Time Series Analysis : Components of Time Series, Determination of Trend, Least Square and Moving Average Method.

Books Recommended

1. Archibald, G. C. and Lipsey, R. G. (1977) : *An Introduction to a Mathematical Treatment of Economics,* English Language Book Society, Weidenfeld and Nicolson.

2. Gupta, S.C. (1992) : Fundamentals of Statics, Mumbai, Himalaya Publishing House.

3. Kandoi, Balwant (2011) : Mathematics for Business and Economics with Applications, in 2 Vol., Himalaya, Mumbai.

4. Sanchati, D. C. & Kapoor, V. K. (1987) : *Business Mathematics,* Sultan Chand & Sons, New Delhi.

5. Yamane, Taro (1972) : Economists, Prentice Hall, New Delhi.

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

SOCIAL STRUCTURE AND SOCIAL CHANGE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper basically introduces students both to conceptual and some theoretical understanding of social structure and social change. Students are introduced to characteristics and elements of social structure and to understand the meaning, process and factors of social change.

Course Content

Unit-I

Social Structure : Meaning, Characteristics, Elements – Status, Role, Power and Prestige. Norms and Values.

Unit-II

Social Change : Meaning and Features.
Types of Social Change : Evolution (Comte), Revolution (Marx), Development – Changing Connotations.

Unit-III

Factors of Social Change: Economic, Demographic, Education, Legislative, Scientific and Technological

Unit-IV

Processes of Social Change : Sanskritization, Westernization, Modernization and Secularization, Globalization and its impact on Society.

Essential Readings :

1. Bierstedt, Robert (1970) : *Social Order,* New York : McGraw Hill.
2. Haferkand, H. and Smelser, N.J. (1992) : *Social Change and Modernity,* Berkeley : University of California Press.
3. Macionis, John, J. (2005) : *Society : The Basics,* New York : Prentice Hall.
4. Madhurima (2009) : *Readings in Sociology – Part-2,* Jalandhar : New Academic Publishing House (All Mediums).
5. Moore, Wilbert (1965) : *Social Change*, New Delhi, Prentice Hall.
6. Singh, Yogendra (1993) : *Social Change in India,* New Delhi : Haranand Publications.
7. Srinivas, M.N. (1963) : *Social Change in Modern India,* Berkeley : University of California Press.

Further Readings :

1. Radcliffe-Brown, A.R. (1979) : *Structure and Function in Primitive Society*, London : Routledge and Kegan paul.
2. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
3. Talcott, Parsons (1959) : *Social System*, London : Tavistock Publications.
4. Singh, Yogendra (1996) : "Sociology and the Emerging Challenge of Change", *Sociological Bulletin,* Volume 45, No. 1, March, Page 1-14.
5. Singer, M. (1972) : *When a Great Tradition Modernizes : An Anthropological Approach to Indian Civilization,* New York : Praeger Publishers.

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER IV

SOCIAL INSTITUTIONS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective:

In this paper, social institution as a concept is introduced to the students. Study of various institutions which are foundations of human society, will help students to look at society in an objective and analytical way.

Course Work

Unit-I

Institutions – Meaning, Features; Normative and Relational aspects of Institutions.
Types – Social, Political, Economic and Cultural.
Difference of Institutions with Society Community and Association

Unit-II

Social Institutions :
Marriage –Types : Monogamy and Polygamy; Rules of Mate Selection, Changing Trends.
Family – Meaning, Types, Structure, Function; Development Cycle and Changing Trends.
Kinship – Meaning, Significance and a Brief Understanding of Incest, Consanguinity, Affinity, Clan, Lineage.

Unit-III

Political Institutions – State, Government and Political Parties – Features and Functions.
Economic Institutions – Features and Functions, Property, Division of Labour (Emile Durkheim).

Unit-IV

Cultural Institutions – Religion : Meaning, Types, Functions (Emile Durkheim & Max Weber).

Essential Readings :

1. Christensen, H.(ed.) (1964) : *Handbook of Marriage & Family,* New Delhi: Allyn and Bacon.
2. Fox, Robin (1967) : *Kinship and Marriage : An Anthropological Perspective; Baltimore : Penguin Books.*
3. Giddens, Anthony (2001) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Johnson, Harry, M. (1998) : *Sociology : A Systematic Introduction*, Delhi : Allied Publishers.
6. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
7. Giddens, Anthony & Sutton W. Philip (2010) : *Sociology : Introductory Readings,* U.K.: Polity Press.
8. Schacfer, Richard, T.(2010) : *Sociology : A Brief Introductions,* N.Y.: Tata McGraw Hill.

Further Readings :

1. K.M. Kapadia (1996) : *Marriage & Family in India, Delhi, Oxford University Press*
2. Bronislaw Malinowski (1944) : *A Scientific Theory of Culture & other Essay (ed.) Huntington Cairns, C Hapel Hall,* The University of North Caroliva Press.
3. Particia Uberoi (1997) : *Family, Kinship & Marriage in India, New Delhi, Oxford University Press*
4. Max Weber (1968) : *The Protestant Ethic and the Spirit of Capitalism-R.H. Tawney (ed.) Unvwin University, Book London.*
5. Radcliff Brown, A.R. (1979) : *Structure and Functions in Primitive Society, London: Routledge and Kegan Paul.*

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PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER – III

PAPER : PERSONNEL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of this paper is to give the student an in-depth understanding of various aspects of public personnel administration particularly recruitment, training and promotion. Contemporary issues like grievance redressal machinery, corruption, morale etc. concerning administration of human resources in government will also be examined.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

For Private/University School of Open Learning (USOL) students who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.
The paper-setter must put note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Personnel Administration – Meaning and Significance.
Civil Service: Meaning, Features, Classification and Functions.
Bureaucracy: Meaning, Characteristics, Demerits and Remedies.

Unit-II

Recruitment: Meaning, Methods and Problems.
Recruitment System of Higher Civil Services in India.
UPSC: Composition, Functions and Role.
SPSC: Composition, Functions and Role.

Unit-III

Training – Meaning, Types, Methods, Training of Higher Civil Services in India.
Conduct, Discipline and Ethics in Public Services.
Promotion: Meaning, Significance and Principles.

Unit-IV

Morale, Causes of Low Morale and Measures for Improvement.
Corruption in Administration - Causes and Remedies.
Administrative Tribunals: Meaning, Types, Advantages and Disadvantages.

Essential Readings :

1. A. R. Tyagi : *Public Administration: Principles and Practice* (Delhi: Atma Ram and Sons Publishers, 2001)
2. O. Glenn Stahl : *Public Personnel Administration* (New Delhi : Oxford and IBH Publications, 1975).
3. Rustom S. Davar : *Personnel Management and Industrial Relations* (New Delhi : Vikas Publishers, 1976).
4. S.L. Goel : *Public Personnel Administration* (New Delhi : Sterling Publishers, 2008)

Further Readings :

1. Government of India, Administrative Reforms Commission : *Report on Personnel Administration* (New Delhi : Manager of Publication, 1967).
2. Indian Institute of Public Administration : Personnel Adminstration (New Delhi : IIPA, 1970).
3. Paul Pigors and C.A. Myers : *Personnel Administration : A Point of View and Method* (New York, McGraw Hill, 1973).
4. V.M. Sinha : *Personnel Administration* (Jaipur : RBSA, 1986).
5. Government of India 2nd ARC : 10th Report (Refurbishing of Personal Administration – Scaling New Height)

PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

PAPER : FINANCIAL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of financial administration like budgeting, auditing, centre-state financial relations etc. It would also make them aware of: institutions like ministry of finance, union finance commission, parliamentary committees; and concepts like direct taxes, indirect taxes, deficit financing, public debt.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Financial Administration: Meaning and Significance .
Budget: Meaning, Types and Principles.
Budget: Preparation and Enactment.

Unit-II

Union Ministry of Finance: Organisation, Functions and Role.
Centre-State Financial Relations.
Union Finance Commission: Composition and Functions.

Unit-III

Audit: Concept, Objectives and Types.
Comptroller and Auditor General of India(CAGI) : Appointment, Functions and Role.
Concepts: Deficit Financing, Fiscal Deficit, Public Debt and Public Expenditure.

Unit-IV

Legislative Control over Finance.
Public Accounts Committee.
Estimates Committee.

Essential Readings

1. G.S. Lall : *Financial Administration in India* (Delhi: H.P.J.Kapoor, 4th ed.).
2. M.J.K. Thavaraj : *Financial Administration of India* (New Delhi: Sultan Chand Publications, 1978).
3. S.L. Goel : *Financial Management and Administration* (New Delhi: Sterling Publication, 1993).
4. Sahib Singh and Swinder Singh : *Public Personnel and Financial Administration* (Jalandhar: New Academic Publishers, 2007).
5. S.S. Mookerjee : *Indian Public Finance and Financial Administration* (New Delhi).

Further Readings

1. Government of India 2nd ARC : 14th Report-Strengthening Financial Management System.
2. Government of India, Administrative Reforms Commission : *Report on Financial Administration* (New Delhi : Manager of Publications, 1967).
3. Government of India, Administrative Reforms Commission : *Report on Financial Accounts and Audit* (New Delhi : Manager of Publications, 1967).
4. Government of India, Administrative Reforms Commission : *Report on Centre-State Relations* (New Delhi : Manager of Publications, 1967).
5. R.K.Sinha : *Centre-State Financial Relations in India: Various Aspects, Irritants, Framework for Action* (New Delhi: Deep & Deep Publications, 1986).
6. Sanjeev Mahajan nad Anupama Mahajan : Financial Administration in India (Delhi : PHI Learning Private Limited : 2014)

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

Outlines of tests, syllabi and courses of reading

SEMESTER-III

Paper : INDIAN ETHICS (Theory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper highlights the ethical philosophies propounded in the different Indian Philosophical Systems. It exposes the students to the main tenets of Buddhism, Sikhism, Gandhism, Gita and Vedic Culture.

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical Philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

1. Salient Features of Indian Ethics with reference to Purusartha : Yuga Dharma and Sanatan Dharma.
2. Varna Vyastha and Ashrama Dharma : A Contemporary Analysis.
3. Concept of Sreyas and Preyas.

Unit-II

4. Buddhist Ethics : Four Noble Truths, Eight Noble Paths, Ahimsa and Karma Bhava Chakra, Sila.
5. Jaina Ethics : Triratnas.
6. Sikh Ethics : Hukum, Nirbhau, Nirvair, Parupkar, Sewa and Sahaj.

Unit-III

7. Gandhi : Ahimsa, Satyagraha and Antyodaya.
8. Gita : Anasakta Karma, Lok Samgraha, Sva-Dharma.

Unit-IV

9. Yoga and Stress Management : Definition of Yoga, Ashtanga Yoga.
10. Yoga : Yama, Niyama, Asana, Pranayama, Pratyahara, Dharna, Dhyan, Samadhi.

Essential Readings :

1. Avtar Singh : Ethics of the Sikhs, Punjabi University, Patiala, 1970.
2. I. C. Sharma : Ethical Philosophies of India, George Allen and Unwin, London, 1965.
3. S. K. Maitra : The Ethics of the Hindus, Asian Publication Services, New Delhi, 1956.
4. Vivekananda : Raj Yoga, Advaita Ashram., 1896.

Suggested Readings :

1. Surama Dasgupta : Development of Moral Philosophy in India, Munshi Ram Manoharlal Pub., New Delhi, 1994.
2. Four chapters on Freedom, Commentary on the Yoga Sutras of Patanjali, Swami Satyananda Saraswati Yoga Publications Trust, Munger, Bihar-Chapter II Section 29 onwards, Chapter III—Sections 1 to 6.

PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER – IV

Paper: WESTERN ETHICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

1. The Nature of Ethics : Virtues and Goodness, its concerns, Relation of Ethics with Aesthetics, Psychology and Religion.
2. The notion of Truth, Beauty & Goodness, Reflective Customary Morality.
3. Object of Moral Judgement : Actions, Intentions, Situations and Character.

Unit-II

4. Virtue Ethics : Aristotle.
5. Categorical Ethics : Kant.
6. Concepts of love, sin and freedom in Christian Tradition.

Unit-III

7. Teleological Ethics :
   - (i) Hedonism
   - (ii) Utilitarianism :
     - (a) Mill
     - (b) Bentham

Unit-IV

8. Moral Rights of Foetus and Female Foeticide.
9. Sexual harassment and Gender Justice.
10. Environmental Ethics : Pollution, Land Degradation and Organic Farming and Global Warming.

Essential Readings :

1.	Aristotle	:	Nicomachean Ethics, Dordrecht : D. Reidel, Penguin Harmondsworth, 2001.
2.	Peter Singer	:	Practical Ethics (Second Edition), Cambridge University Press, 1995.
3.	Ved Parkash Verma	:	Neeti Shastra (in Hindi), Allied Publishers (New Delhi, 1987).
4.	William Lillie	:	An Introduction to Ethics (London, Matheun, 1957).

Suggested Readings :

1.	J.D. Mcbbott	:	An Introduction to Ethics, London : Hutchinson, 1966.
2.	John Hospers	:	Human Conduct : An Introduction to the Problems of Ethics, N.Y., Harcourt, 1961.
3.	Rosaline Hursthome	:	Virtue Ethics, New York, Harcourt, 1961.
4.	W. Frankena	:	Ethics, Englewood Cliffs, Prentice Hall, New Delhi, India, 1994.

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PSYCHOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the Nervous System, Psychophysics, Learning and Memory. This course will also give an insight into psychophysics, statistics and cognitive aspects of Psychology.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper: EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

The Nervous System: Structure and functioning of the neuron; division of nervous system – Central Nervous System and Peripheral Nervous System; Structure and functioning of the brain.

Unit II

Psychophysics
Thresholds; Psychophysical Methods of Limits, Constant stimuli and Average Error.

Unit III

Learning
Concept, Classical Conditioning, Operant Conditioning, Observational Learning.

Unit IV

Memory
Sensory Register; Short-Term and Long-Term Memory; Levels of Processing; Measurement of Memory; Forgetting with special reference to retro-active and pro-active inhibition.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Two Point Threshold
2. Muller Lyer Illusion
3. Maze Learning
4. Comparing Recall and Recognition as Measures of Memory
5. Retroactive Interference
6. Bilateral Transfer of Training

Books Recommended :

Essential Readings :

1. Ciccarelli, D. (2008) : Introduction to Psychology. Delhi: Pearson.
2. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
3. Kerlinger, F. N. (1964) : Foundations of Behavioural Research. New York: Rinehart and Winston.
4. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology. Singapore : McGraw Hill.

Reference Books :

1. Baron, R.A. (2003): Psychology. New Delhi : Pearson Education.
2. Das, J.P. (1998): The Working Mind: An Introduction to Psychology. New Delhi: Sage.
3. Feldman, R.S. (1998) : Understanding Psychology. New Delhi : Tata McGraw Hill.
4. Guilford, J.P. and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education. Singapore: McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education. New Delhi: Vakils, Feffer and Simons.

PSYCHOLOGY

SEMESTER-IV

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like Sensation, Perception and Thinking. The course also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Sensation
Concept and types; Vision – The Visual Stimulus, Structure and Functioning of the Eye, Theories of Colour Vision; Audition: The Auditory Stimulus, Structure and Functioning of the Ear, Theories of Hearing.

Unit II

Perception
Attentional Processes: Perception of Form, Space and Movement.

Unit III

Thinking and Problem Solving: Concept formation and Processes.
Creativity: Concept; Torrance's Theory of Creativity.

Unit IV

Statistics
Normal Probability Distribution: Properties and Applications: Hypothesis Testing – Type I and Type II Errors; Chi-square Test Application to one – way and Two-way classifications.

Note : The use of non-programmable calculators and statistical tables are allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Division of Attention
2. Span of Attention
3. Effect of Mental set on Perception
4. Problem Solving
5. Familiarization with Passi's Creativity Test
6. Concept Formation.

Books Recommended :

Essential Readings :

1. Ciccarelli, D. (2008): Introduction to Psychology, Delhi: Pearson.

2. Jain, S. (2000) : Introduction to Psychology, New Delhi: Kalyani

3. Kerlinger, F.N. (1964): Foundations of Behavioural Research, New York Holy, Tinvhsty snf Eindyon.

4. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987): Introduction to Psychology, Singapore: McGraw Hill

Reference Books :

1. Baron, R.A. (2002): *Psychology,* New Delhi : Pearson Education.

2. Das , J.P. (1998):The Working Mind: An Introduction to Psychology, New Delhi: Sage.

3. Feldman, R.S. (1996) :Understanding Psychology, New Delhi: Tata McGraw Hill.

4. Guilford, J.P., and Fruchter, B. (1981):Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.

5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer And Simons.

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GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper –V: GEOGRAPHY OF INDIA

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

To foster an understanding of the physical and cultural landscape of India and its spatial diversity

Course Content

Unit-I

Introduction: India in the context of South Asia, Asia and the World. (05 lectures)
Physiography: Relief, drainage, climate, vegetation, soils. (15 lectures)

Unit-II

Agriculture: Characteristics and problems of Indian agriculture; irrigation, major crops (rice, wheat, maize, sugarcane, cotton, jute and tea), Food security with special reference to India. (15 lectures)
Natural hazards in India: Flood, Drought and Earthquake. (05 lectures)

Unit III

Population: Distribution and density, Growth, Migration, Urbanization (05 lectures)
Mineral and Power Resources: Iron ore, manganese, mica, copper and gold; Coal, Petroleum, Hydroelectricity and Non- conventional Power resources. (15 lectures)

Unit IV

Industries: Distribution and localization factors of major industries (Iron and Steel, Cotton Textiles, Sugar, Fertilizers, Automobile). (15 lectures)
Trade &Transport: Rail, Road, Airways and Waterways; International Trade (05 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests,(5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance(2%).
6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings:

Essential Reading:

1. Deshpande, C.D. : *India: A Regional Interpretation,* Indian Council of Social Science Research, New Delhi, 1992.
2. Johnson, B.L.C. : *India: Resources and Development,* Arnold Heinemann, London, 1980.
3. Johnson, B.L.C. : *South Asia,* Heinemann, London, 1981.
4. Khullar, D.R. : *India: A Comprehensive Geography,* Kalyani Publishers, New Delhi, 2011.
5. Majid Hussain : *Geography of India*, Tata McGraw-Hill, Delhi, 2013.
6. Spate, O.H.K. and ATA : *India & Pakistan*: *Land, People and Economy,* Methuen, London, Learmonth, 1967.
7. Tiwari, R.C : *Geography of India,* Pravalika Publications, Allahabad, 2013.

Further Readings :

1. Singh, Gopal : *A Geography of India,* Atma Ram & Sons, New Delhi, 1995
2. Singh, Jagdish : *India: A Comprehensive Systematic Geography,* Gyanodaya Prakashan, Gorakhpur, 2nd Edition, 2003.
3. Singh, R.L. : *India: A Regional Geography (Ed.),* National Geographical Society of India, Varanasi, 1971.
4. Singh, Savindra : *Environmental Geography,* Pravalika Publications, Allahabad, 2014
5. Sharma, T.C. and O. : *Economic and Commercial Geography of India,* Vikas Publishing, House, New Delhi, 2005.
6. Tirtha, Ranjit & Gopal Krishan : *Emerging India,* Conpub Ann Arbour Publishers, Michigan, 1992.

Pedagogy:

- Use of visual aids especially maps.
- Students should be encouraged to use an atlas in the classrooms.
- Audio-video shows on different parts of India.

Paper-VI: CARTOGRAPHY-III

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives:

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Nature of Geographic Data: Spatial and Attribute (Climatic, Population, Agriculture and Industrial)
Symbolization & Scaling of Geographical Data: Point, Line and Area

(4 lectures, 4 lab sessions)

UNIT-II

Choice, Use and Representation of Data using Point Symbols: Columnar Diagrams (Simple, Multiple, Compound, Percentage); Dot, Circle and Sphere

(6 lectures, 12 lab sessions)

UNIT-III

Choice, Use and Representation of the following Point Symbols: Graphs (Line Graph, Climograph, Hythergraph, Ergograph, Wind Rose, Combined and Bar Graph)

(8 lectures, 20 lab sessions)

UNIT-IV

Choice, Use and Representation of Data using: Line Symbols (Isopleth and Flow Lines); and Area Symbols (Choropleth)

(6 lectures, 12 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.

2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.

3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.

6. Three hours Practical Classes in a week are compulsory.

7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.

10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.

11. For practical classes, the number of students in one group shall not exceed fifteen.

12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Khullar, D.R. : *Essentials of Practical Geography, New Academic Publishig Co.*, Jalandhar, 2009.
2. Robinson, A.H. : *Elements of Cartography, 6th Edition*, John Wiley, New York, 2009.
3. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
4. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
5. Singh, R.L. & P.B. Singh : *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
4. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- The students need to be trained in the use of symbols to depict various geographic data.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17
SEMESTER-IV

Paper-VII: GEOGRAPHY OF PUNJAB

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To understand the regional setting of Punjab state in detail through physical and political maps.
- To examine the cultural patterns of the regions.
- To study the distribution of major crops, industries and transport links in the state.
- To understand the intra regional variations in select aspects.

Course Content:

Unit –I

Introduction: Location, Evolution, Cultural Regions (Majha, Doaba & Malwa) and Administrative Divisions of the State. (15 lectures)

Unit –II

Physical Base: Relief, Drainage, Climate, Soils and Vegetation (12 lectures)
Resources: Mineral and Power; Water with special reference to river water sharing. (8 lectures)

Unit-III

Agriculture: Main Characteristics and Problems; Agro-climatic Regions; Green Revolution & its Ecological Implications; Irrigation; Main crops (wheat, rice, cotton, sugarcane) and their distribution, Livestock and dairying. (20 lectures)

Unit –IV

Population: Distribution, Density, Growth, Migration, Sex Ratio, Urbanization. (7 lectures)
Industries: Main characteristics, Distribution Patterns of Major Industries (Cotton Textile, Sugar, Hosiery Engineering) Industrial Concentration, Problems of Industrialization. (15 lectures)
Trade &Transport: Road, Rail and Air Transport; Inter-State Trade. (3 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests, (5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance (2%).

6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings

Essential Readings:

1. Mankoo, Darshan Singh : *Geography of Punjab, 4th Edition,* Kalyani Publishers, Ludhaina 2009.
2. Mavi, H.S. & Tiwana, D.S. : *Geography of Punjab*, National Book Trust, Delhi, 1993.
3. Singh, Jaspal : *Geography of Punjab,* Twenty First Century Publications, Patiala, 2014
4. Singh, Malkit : *Geography of Punjab*, Rashmeet Parkashan, Jalandhar, 2004

Further Readings:

1. Deshpande ,C.D. : *India: A Regional Interpretation* , Indian Council of Social Science Research, New Delhi, 1992.
2. Economic and Statistical Organization of Punjab : *Statistical Abstract of Punjab*, Economic and Statistical Organization of Punjab, Chandigarh, 2014
3. Gosal, G.S. & Gopal Krishan : *Regional Disparities in Level of Socio-Economic Development in Punjab*, Vishal Publications, Kurukshetra , 1984.
4. Gupta S.P. : *The Punjab: An Overview*, ESS PEE Publications, Chandigarh, 2004.
5. Kahlon, Simrit : *Punjab: regional reflections,* Man and Development, 29 (2), 2007.
6. Singh Pritam : *Punjab Economy: The Emerging Patterns*, Enkay Publishers, New Delhi, 1995.
7. Singh, R.L. : *India: A Regional Geography (Ed)*, National Geographical Society of India, 1990, Reprint.
8. Spate, O.H.K. & Learmonth A.T.A. : *India and Pakistan: A General and Regional Geography*, Methuen, London, 1967

Pedagogy

- Extensive and intensive use of maps to understand the regional setting.
- A component of field visit to some areas of each region may be planned for effective understanding of the region.

Paper-VIII: CARTOGRAPHY-IV

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives :

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Topographical Maps: Nomenclature (Classification), Study and Interpretation; Significance and Application in Geographical Studies

(4 lectures, 4 lab sessions)

UNIT-II

Profiles: Serial, Composite, Superimposed and Projected
Longitudinal and Transverse; Profiles of rivers

(8 lectures, 16 lab sessions)

UNIT-III

Elementary Remote Sensing : Definition, Concept, History, Application Areas and Types of platforms

(10 lectures, 8 lab sessions)

UNIT-IV

Introduction to Concept of GIS and Computer Cartography.
Definition, Development, Database (Spatial and Non Spatial) GIS Components (Hardware & Software) and Application.
Preparation of Line Graphs, Bars and Pie Charts using Computers.

(10 lectures, 10 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. For college students, a separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.

2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.

3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared by the University for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Three hours Practical Classes in a week are compulsory.
7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.
11. For practical classes, the number of students in one group shall not exceed fifteen.
12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Bhatta, Basudeb : *Remote Sensing and GIS,* Oxford, 2nd Edition, New Delhi, 2011
2. Guha, P.K. : *Remote Sensing For The Beginner,* East-West Press, 3rd Edition, New Delhi, 2013..
3. Khullar, D.R. : Essentials of Practical Geography, New Academic Publishing Co., Jalandhar, 2009.
4. Robinson, A.H. : *Elements of Cartography, 6th Edition,* John Wiley, New York, 2009.
5. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
6. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
7. Singh, R.L. & Singh, P.B. : *Map Work and Practical Geography, Central Book Depot, Raghunandan Allahabad, 2007.*

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Joseph, George : *Fundamentals of Remote Sensing,* Universities Press (India) Private Limited, 2nd Edition, Hyderabad, 2005
4. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
5. Panda, B.C. : *Remote Sensing: Principles and Applications,* Viva Books, New Delhi, 2008
6. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- They should learn to comprehend the topographical maps by deriving slopes and drawing profiles.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

SOCIAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Social Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Social Thought

1. Truth
2. Non-violence
3. Sarvodaya

UNIT-II

Man and State

4. Human Rights
5. Ideal Society, State and Rama Rajya

UNIT-III

Gandhi and Ethics

6. Education
7. Theory of Civilization
8. Morality and Religion

UNIT-IV

Gandhi and Social Justice

9. Drive against Untouchability :
   (a) Caste System
   (b) Communal Award
   (c) Poona Pact

10. Women Empowerment

Essential Readings :

1. Bandyopadhyaya, J. : *Social and Political Thought of Mahatma Gandhi,* (Bombay : Allied Publisher) 1969.
2. Bharathi, K.S. : *Social and Political Thought of Mahatma Gandhi* (New Delhi : Concept) 1995.
3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navjivan Publishing House), 2001
4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
5. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
6. Mishra, Anil Dutta : *Reading Gandhi,* (New Delhi : Pearson), 2012
7. Varma, V.P. : *Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1998.

Further Readings :

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.
3.	Suda, J.P.	:	*Main Currents of Social and Political Thought of Modern India,* Vol. II, Meerut (K. Nath & Co.) 1973.
4.	Unnithan, T.K.N.	:	*Gandhi and Social Change,* New Delhi (Arnold Heinemann India), 1973.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

POLITICAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Political Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Political Thought

1. Truth & Non-violence
2. Theory of Ends & Means
3. State : Ideal Society and State

UNIT-II

Democracy & Decentralization

4. Panchayat Raj/Gram Swaraj
5. Freedom & Equality
6. Rights and Duties

UNIT-III

Religion and Politics

7. Satyagraha : Meaning, Essentials, Forms & Significance
8. Satyagraha & Passive Resistance
9. Spiritualization of Politics

UNIT-IV

Contemporary Relevance

10. Communal Harmony
11. Assessment and Contemporary Relevance

Essential Readings

1. Bhattacharyya, Buddhadeva : *Evolution of Political Thought of Gandhi,* Calcutta: Calcutta Book House, 1969.
2. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
3. Dhawan, G.N. : *Political Philosophy of Mahatma Gandhi,* Ahmedabad (Navajivan Publishing House) 1990, 4th Edition.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
7. Mishra, Anil Dutta : *Reading Gandhi,* New Delhi (Dorling Kindersley, Pearson), 2012
8. Varma, V.P. : *The Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1981.

Further Readings:

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Iyer, Raghaavan N.	:	*The Moral & Political Thought of Mahatma Gandhi, London,* Oxford University Press, 1973.
3.	Mishra, Anil Dutta (ed.)	:	Perspectives on Human Rights (New Delhi, Radha Publications)2002.
4.	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

PRINT JOURNALISM

Max. Marks: 100

Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives:

This course will introduce students to the basic techniques of sourcing news stairs and features. They will also be trained in the art and science of writing and presenting print media content.

B. Pedagogy of the Course Work:

80 % Lectures (including expert lectures).

20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Definition, nature and types of news and features; sourcing news and features.

Unit-II: Writing techniques and styles of news reports and features.

Unit-III: Role and responsibility of a sub-editor; basic editing techniques for copy and pictures; importance and writing of headlines.

Unit-IV: Introduction to typography and design principles; page make up using publishing software

PRACTICALS

Max. Marks : 20

1. Prepare a file of different types of news & features : 10 Marks
2. Design a page dummy of either a daily newspaper or a Sunday paper : 10 Marks

Books Recommended :

ESSENTIAL READING

1 Mencher, Melvin, , (1989), *Basic News Writing: W.M.C*. Brown Publishers, New York

2 Metz, William, (1990), *News Writing: From Lead to 30*. 3rd Edition, Prentice-Hall Inc., New Jersey

3 Rivers, William. L , (1991), *Freelancer and Staff Writer: Newspaper Features and Magazine Articles*, Wadsworth Publishing Co.

4 Alexander Louis , (1987), *Beyond the Facts: A Guide to the Art of Feature Writing*. Gulf Publishing Co.

5 Garrison, B, (1999), *Profession of Feature Writing.* New Jersey: Lawrence Erlbaum Assoc

6 Aamidor, A., (1999), *Real Feature Writing*. New Jersey: Lawrence Erlbaum Assoc

7 Blundell, William. E , (1998), *The Art and Craft of Feature Writing*, Plume Inc.

8 Garrison, Bruce , (1998), *Professional Feature Writing*, Laurence Eribaum Assoc

9 Bean, Erik , (1999) , *Writing for Publication*, Deadline Communications

10 Krantz, Marshall , (1996), *Ideas and Research*, Writers' Digest Books

11 Bruce D. Itule, Dougles A Anderson,, (2006), *News Writing and Reporting for Today's Media*, Mc Graw Hill

12 Melvin Mencher,, (2007), *News Reporting & Writing*, McGraw Hill

13 Tim Harrower, (2006), *Inside Reporting, A Practical guide to the Craft of Journalism*, McGraw Hill.

14 Stephen G. Bloom, (2002), *Writing Narrative Journalism : Inside the Writers mind*, Iowa Sate University Press.

ADDITIONAL READING

1 Kennedy, A , (1992), *Beyond the Inverted Pyramid*, Bradford Books

2 Bowles, D., & Borden, (2000), *Creative Editing*, (3rd ed.) Belmont, CA: Wadsworth

3 Elbow Peter, (1998), Writing *with Power*. Oxford University Press. N.Y

4 Johnson, C., (2005), *21st Century: Feature Writing*. New York: Allyn and Bacon

5 Wray, Cheryl Sloan , (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group

6 Wilbur, R., (1995), *Magazine feature writing*. New York: St. Martin's Press

7 Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books

8 Greene, B., (1988), *Handbook of Magazine Article Writing*. Cincinnati, OH: Writer's Digest

9 Wray, C., (2005), *Writing for Magazines*, (2nd ed.). Boston: McGraw Hill.

10 Ward, H., (1993), *Magazine and Feature Writing*. Mountain View, CA: Mayfield Publishing.

11 Wells, Gordon , (1997), *The Craft of Writing Articles*, Allison and Burby Inc.

12 Hennessey, Brendan, (1997), *Writing Feature Articles: A Practical Guide to Methods and Markets*, Focal Press.

13 Friedlander, Edward. J , (1999), *Feature Writing for Newspapers and Magazines: The Pursuit of Excellence*, Addison-Wesley Publishing Co.

14 Bell, James Scott,(2008), *Revision and Self Editing (Write great Fiction),* Writers Digest Books, New York,

15 Anaa McKane, (2006), *News Writing*, Sage.

16 Rajan, Nalin (Eds), (2007), *21st Century Reporting in India*, Indiana, New Delhi.

17 K.Tim Walkmeyer,(2009), *Online News Writing*, Wiley Blackwell,

18 Bak Baker, (1981), *News thinking: The Secret of Great News gathering*, Writers Digist Books

19 Rachel Bard, (2005), *News Writing Guide*, Universe.

20 George A Hongh, (1995), *News Writing*, Honghton Mifflin, 5th Edition.

21 Metzler Ken, (1987), *News Writing Exercises*, 2nd Edition, Prentice Hall New Jersey.

22 Gerald C. Store, (1992), *News Writing*, Harper Collins.

JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER- IV

RADIO & TV JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives :
The course will introduce students to the basic techniques of writing & presenting for the radio and TV medium.

B. Pedagogy of the Course Work :
80 % lectures (including expert lectures).
20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Basic principles of gathering, treatment and presentation of news for Radio; Basic principles of gathering, treatment and presentation of news for Television

Unit-II: Reporting and writing for Radio and TV; Pronunciation and modulation in Radio/TV reporting: Pitch, volume, tempo, vitality.

Unit-III: Basic introduction to audio/video production & its stages (pre-production, production, post production).

Unit-IV: Basic camera shots and language of camera movements.

PRACTICALS

Max. Marks : 20

1. Compilation of 5-minute weekly TV news bulletins 10 Marks
2. Compilation of 10-minute weekly radio bulletins. 10 Marks

ESSENTIAL READING

1 Chatterji,P.C. , (1991), *Broadcasting in India*. SAGE, New Delhi

2 Luthra, H.P., 1984, *Indian Broadcasting.* Publications Division, Min. of I & B.

3 Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi,

4 Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd.., New Delhi,

5 Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey

6 Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice,* Routledge, New York

7 Shrivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publishers, New Delhi.

8 Cohler, David Keith, (1985), *Broadcast Journalism*. Prentice-Hall, New Jersey.

9 Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*. Rajat Publications, New Delhi.

10 Fedler, Fred, bender, John R., Davenport, huanda, Drager, Michael W., (2005), *Reporting for the media.* Oxford University Press, New York.

11 Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi,

12 Cohen, Akilia A, (1987), *The Television News Interview.* SAGE, New Delhi,

13 Shrivastava, K.M., (2005), *Broadcast Journalism in the 21st century* new Dawn Press Group, New Delhi,

14 Fulding, Ken, (1990), Introduction *to Television Production*, Longman, New York,

ADDITIONAL READING

1 Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London

2 Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher

3 Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York,

4 Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

5 Fulding, Ken, (1990), Introduction to Television Production, Longman, New York.

6 Cohen,Akiba N., (1987), The Television News Interview, SAGE, Beverly Hills.

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POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Police Personnel Administration

(A) Course Objectives:

The objective of this course is to give inputs to the students on the various aspects of personnel relevant to police administration. Effort is made to impart knowledge to the candidates about the meaning, nature, scope and significance of Police Personnel Administration in India. In addition, job analysis, job description, pay policy, compensation and fringe benefits have been discussed. Further, the recruitment, training and promotion system in Police Service in India has been included in the syllabus. The students are also taught about the performance appraisal, police ethics, corruption in police, code of conduct and discipline along with doctrine of pleasure.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Police Personnel Administration; Significance of Police Personnel Administration in India; Career System in Police Administration.

Unit-II

Job Analysis and Job Description of Police Personnel – Concept and Significance; Pay Policy, Compensation and Fringe Benefits.

Unit-III

Recruitment: Meaning and Methods; Recruitment of Police Personnel in India; Training: Meaning and Types; Training of IPS Officers and State Police Services in India; Promotion: Meaning and Principles; Promotion of Police Personnel in India.

Unit-IV

Performance Appraisal; Police Ethics and Code of Conduct; Corruption – Meaning and Causes; Corruption in Police Force; Disciplinary Actions; Doctrine of Pleasure – Safeguards against Arbitrary Punishment.

Essential Readings:

1. Administrative Reforms Commission : Report on Personnel Administration, 11th Report, Government of India, New Delhi.
2. Goel, S.L. : Public Personnel Administration, Deep & Deep Publication Pvt. Ltd., New Delhi, 2006.
3. Mamoria, C.B. : Personnel Management, Himalaya Publishing House, Mumbai, 2007.
4. Zehra, Kaneez : Training of I.P.S., Ashish Publishing House, New Delhi, 1993.
5. Muthuswamy, P. : Swamy's Manual on Disciplinary Proceedings, Swamy Publishers (p) Ltd., Madras, 1986.

Further Readings

1. Saxena, A.P. : Training and Development in Government, The Indian Institute of Public Administration, New Delhi, 1974.
2. Singh, Sahib Bhayana, Singh, Swinder and Dogra, R.K. : Public Personnel and Financial Administration, New Academics, Jalandhar, 1990.
3. Ghosh, P. : Personnel Administration in India, Sudha Publications Private Limited, New Delhi, 1973.

POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Law and Order Administration

(A) Course Objectives:

The principal objective of the syllabi is to acquaint the students with the basics of Law and Order Administration in India. Specifically, the students will be imparted the knowledge about the meaning, nature, scope and significance of Law and Order Administration in India along with some basic issues and emerging patterns. The endeavour is to discuss in detail the role and significance of Primary and Auxiliary Agencies of Law and Order Administration. Further, the role of Law and Order Administration in crowd management, communal riots, agrarian and industrial conflicts has also been discussed. The students are also taught about the challenges before Law and Order Administration. In addition, the concept of National Security along with challenges to it, in contemporary terms have been included in the syllabus.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Law and Order Administration; Significance of Law and Order Administration in India; Law and Order Administration – Some Basic Issues and Emerging Patterns.

Unit-II

Role, Significance and interrelationships of Law and Order Administration Agencies at the District level : The Police; Civil Administration; Court of Law; Prisons; and Health.

Unit-III

Role of Law and Order Administration in Crowd Management, Communal Riots and Industrial & Agrarian Conflicts. Challenges before Law and Order Administration.

Unit-IV

National Security: Concept and Significance. Challenges to National Security in India – Contemporary Issues.

Essential Readings:

1. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.
2. Sharma, K.K. : Law and Order Administration, National Book Organization, New Delhi, 1985.
3. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
4. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume - I, Ashish Publishing House, New Delhi, 1993.
5. Bharti, Dalbir : *Police Evam Log: Donon ke Adhikar Va Zimmedarian,* A.P.H. Publishing Corporation, New Delhi, 2007.
6. Singh, Yogendra : Social Change in India: Crisis and Resilience, Har-Anand Publications Pvt. Ltd., New Delhi, 2007.

Further Readings

1. Mayhall, Pamela D.et.al. : Police-Community Relations and the Administration of Justice, Prentice-Hall Inc., New Jersey, 1995.
2. Ghosh, S.K. : Keeping the Peace: For Whom the Bell Tolls (Police Then and Now), Ashish Publishing House, New Delhi, 1989.
3. Vadackumchery, James & Kattakayam, John : Human Behaviour and Law Enforcement, Ashish Publishing House, New Delhi, 1995.
4. Owens, R.Glynn and Ashcraft, J. Barrie : Violence: A Guide for the Caring Professions, Croom Helm, New Hampshire, USA, 1985.
5. Singh, K.P. ` : Police Gyan Vigyan, The Bright Law House Delhi, 2003.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper : FEMINIST THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :
This course offers the prominent theories that feminists have formulated to explain the matrix of gender inequality from the nineteenth century to the present. It further seeks to introduce the student to the key debates within feminist theories as well as the shifts in feminism.

Note : The students are expected to have a general understanding of the various strands of feminism and not of any specific feminist thinker in this course.

Course Contents :

Unit-I : Feminism

(a) Definition,

(b) Emergence of Feminism with special focus on

- Women in French Revolution,
- Suffrage Movement in the U.S.A. (with reference to Seneca Falls Convention and Declaration of Sentiments),
- Suffrage Movement in the U.K.

(c) Three waves of Feminism.

Unit-II : Strands of Feminism-I

(a) Liberal Feminism,

(b) Socialist Feminism,

(c) Marxist Feminism.

Unit-III : Strands of Feminism-II

(a) Radical Feminism

(b) Post modern Feminism

(c) Psycho-analytic Feminism (Freudian).

Unit-IV : Strands of Feminism-III

(a) Black Feminism

(b) Cultural Feminism

(c) Eco-Feminism.

NOTE :

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

Agarwal, Bina, **The Gender and Environment Debate: Lessons from India, Feminist Studies,** Vol. 18, No.1, Spring 1992, pp 119-158.

Anderson, Margaret, **Thinking About Women,** Macmillan, New York, 1993.

Beasley, Chris, **What is Feminism?,** Sage, London, 1999.

Bell Hooks, **Ain't I a Woman: Black Women and Feminism,** Pluto Press, London, 1982.

Bhasin, K. and Khan, N.S., **Feminism and its Relevance in South Asia, Women Unlimited**, New Delhi, 2013

Chatterjee, Mohini, **Feminism and Gender Equality,** Aavishkar, Jaipur, 2005.

Collins, Patricia Hill, **Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment,** Routledge, New York, 1999.

Desai, Leela, **Issues in Feminism,** Pointer Pub., Jaipur, 2004.

Geetha, V., **Theorizing Feminism,** Stree, Kolkata, 2012.

Molyneux, Maxinne and Steiberg, Deborah Lynn, **Mies and Shiva's Ecofeminism: A New Testament, Feminist Review,** No. 49, Spring 1995, pp 86-107.

Further Readings :

1. Banks, Olive, **Faces of Feminism: A Study of Feminism as a Social Movement,** St. Martin's Press, New York, 1981.

2. Freeman, Jo (ed.), **Women: A Feminist Perspective,** Palo Alto, California : Mayfield, 1975.

3. Kosambi, Meera, **Crossing Thresholds: Feminist Essays in Social History**, Permanent Black, New Delhi, 2007.

4. Mishra, Binod (ed.), **Critical Responses to Feminism,** Sapru & Sons, New Delhi, 2006.

5. Shukla, Bhaskar A., **Feminism : From Mary Wollstonecraft to Betty Friedan,** Sapru & Sons, New Delhi, 2007.

6. Spender, Dale, **Feminist Theorists: Three Centuries of Women's Intellectual Traditions,** The Women's Press, London, 1982.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Paper : Status of Women in India – II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective : This course aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Unit-I : Demographic Trends

(a) Sex Ratio, Age Specific Sex Ratio : Trends

(b) Change in Sex Ratio : Causes and Consequences

(c) Fertility Rates

(d) Definitions: Infant Mortality Rate, Child Mortality Rate, Total Mortality Rate, Maternal Mortality Rate, Causes of Gender Differentials in Mortality Rates

Unit-II : Women and Education

(a) Gender Gaps in Literacy Rates, School Enrolment and Dropout Rates

(b) Women in Higher Education : Gender Gaps

(c) Obstacles to Women's Education : Socio Cultural, Economic and Infrastructural

Unit-III : Women and Health

(a) Definition : Health & Reproductive Health

(b) Factors affecting Women's Health Status

(c) Issues relating to women's health status : Nutritional health status of women and girl child in India.

Unit-IV : Women and Work :

(a) Changing definition

(b) Gender differential in Work Participation Rates

(c) Sexual Division of Labour

(d) Sexual Harassment at the Workplace

(e) Obstacles to Women's Workforce Participation : Cultural, Skill development etc.

NOTE :

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

1. Chatterjee, Meera , **A Report on Indian Women from Birth to Twenty,** NIPCCD, New Delhi, 1999.

2. Gopalan, Sarala and Shiva, Mira, **National Profile on Women, Health and Development,** VHAI & WHO, 2000.

3. Gopalan, Sarala, **Towards Equality - The Unfinished Agenda : Status of Women in India -2001,** National Commission for Women, New Delhi, 2002.

4. Menon-Sen, Kalayani and Shiva Kumar, A.K., **Women in India ! How Free?, How Equal?** Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.

5. **National Human Development Report, 2001**, Planning Commission, Govt. of India, March, 2002.

Further Readings :

1. Ali, Aruna Asaf, **Resurgence of Indian Women,** Nehru Memorial Museum and Library, New Delhi, Radiant ,1991.

2. Ali, Azra Asghar, **The Emergence of Feminism Among Indian Muslim Women,** 1920-1947, Oxford, Karachi, 2000.

3. Anand, Meena **Dalit Women : Fear and Discrimination,** Isha Books, Delhi, 2005.

4. Bhattacharya, Rinki (ed.), **Behind Closed Doors : Domestic Violence in India,** Sage, New Delhi, 2004.

5. Choudhary, Prem, **Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India**, OUP, New Delhi, 2007.

6. Desai, Neera and Krishnaraj, Maithreyi (ed.), **Women and Society in India**, Ajanta Publication, New Delhi, 1987.

7. Kumar, Hajira (ed.), **Status of Muslim Women in India**, Aakar Books, Delhi, 2002.

8. Mohanti, Bedabati, **Violence Against Women: An Analysis of Contemporary Realities**, Kanishka Publication, New Delhi, 2005.

9. Mohini, Giri, V., **Deprived Devis : Women's Unequal Status in Society Gyan**, New Delhi, 2006.

10. Rajawat, Mamta, **Dalit Women : Issues and Perspectives**, Anmol Pub, New Delhi, 2006.

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HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

PAPER : HUMAN RIGHTS & DUTIES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:
The course is designed to make students aware about the human rights and duties framework in India. An attempt has been made to deal the issue within the ambit of evolution of the concepts of human rights and duties; Constitutional structure and Implementation mechanisms.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: EVOLUTIONARY PHASE

(i) Evolution of the concept of Human Rights in India
(ii) The notion and significance of Duties in India
(iii) Values and relevance of composite culture of India: non-violence; secularism and fraternity

UNIT II: CONSTITUTIONAL FRAMEWORK

(i) The Preamble
(ii) Fundamental Rights
(iii) Directive Principles of State Policy
(iv) Fundamental Duties

UNIT III: KEY AREAS IN THE CONTEMPORARY PHASE

(i) Right to food security
(ii) Right to Education
(iii) Right to Information
(iv) Right to clear environment

UNIT IV: IMPLEMENTATION OF HUMAN RIGHTS

(i) Constitutional Machinery: Role of Judiciary
(ii) Statuary Machinery: National Human Rights Commission and State Human Rights Commissions

Essential Readings:

1. Brownlie Ian, et al.(eds), *Basic Documents on Human Rights*, (2006) Oxford.

2. Gandhi, P.R. (ed), *Blackstone's International Human Rights Documents* (2001),Universal, Delhi.

3. David Robertson, *A Dictionary of Human Rights*, Europa Publications, (2004), London.

4. Basu, D.D., *Introduction to the Constitution of India,* (1997), New Delhi: Prentice Hall of India.

5. Henry J. Steiner, et al., (eds.), *International Human Rights in Context*, Chapter 10, (1996) Clarendon Press, Oxford.

6. Brundland Report, *Our Common Future,* (1986), Oxford.

Further Readings:

1. Kapoor, S.K:, *Human Rights under International Law and Indian Law*, (2014) Central Law Publications, Allahabad.

2. Kapoor, S.K:, *Human Rights under International Law*, (2009) Central Law Publications, Allahabad.

3. Paul, R.C., *Situation of Human Rights in India,* (2000) Commonwealth New Delhi: Publishers.

4. Rao, Ashiwini, *Status of Human Rights in India*, (2010) New Delhi, Pacific.

5. South Asian Human Rights Documentation Centre : *Human Rights and Humanitarian Law,* (2008) South Asian Human Rights Documentation Centre, New Delhi.

6. South Asian Human Rights Documentation Centre: *Introducing Human Rights,* New Delhi, (2006) South Asian Human Rights Documentation Centre, New Delhi.

HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

PAPER : HUMAN RIGHTS ISSUES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:

The Paper deals with a few specific issues in India along with some key responses emerging from the Indian society for the protection and Promotion of human rights.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: HUMAN RIGHTS & LABOUR

(i) Bonded Labour
(ii) Unorganized labour
(iii) Child Labour

UNIT II: STRUCTURAL PROBLEMS AND IMPACT ON HUMAN RIGHTS

(i) Poverty
(ii) Illiteracy
(iii) Unemployment

UNIT II: HUMAN RIGHTS & CRIMINAL JUSTICE

(i) Concept of Criminal Justice System in India
(ii) Rights of the accused
(iii) Rights of the victim

UNIT IV: SOCIAL AUDITING FOR HUMAN RIGHTS

(i) Definition, significance of social auditing
(ii) Agent of Social Auditing including Human Rights Defenders
(iii) Role of Media in social auditing
(iv) Role of Civil Society in social auditing

Essential Readings:

1. Amita Agarwal, *Human Rights for Survival of Civilization*, (2004), Kalinga Publications, Delhi.

2. V.R.Krishna lyer, *Human rights – A judge's Miscellany,* (1995) B. R. Publishing Corporation, Delhi.

3. Satish C. Shastri(ed), *Human Rights, Development and Environmental Law: An Anthology,* (2007), Jain Book Agency, Delhi.

4. Kalpana Kannabiran, *Crafting Human Rights Cultures*, (2006), NALSAR University of Law.

5. Upendra Baxi (ed.), *The Right to be Human*, (1987), Lancer International, New Delhi.

6. R.C.Mishra, *Human Rights and Policing*, Authors Press, (2005), New Delhi.

Further Readings:

1. K.I. Vibhute, *Criminal Justice A Human Rights Perspective of the Criminal Justice Process in India*, (2004), Eastern Book Company, Lucknow.

2. Khanna, S.K., *Children and the Human Rights,* (1998), Commonwealth, New Delhi.

3. Pandit Kamalkar, Human Rights and Criminal Justice, (2010), Asia Law House, Hyderbad.

4. Pachauri, S.K., *Children and Human Rights,* (1999), APH Publications, Delhi.

5. Pachauri, S.K. *Women and Human Rights,* (1999), APH Publications, New Delhi.

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ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper : Air Pollution and Climate Change

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Paper : AIR POLLUTION AND CLIMATE CHANGE

Section-I

Atmosphere: Composition of atmosphere, Air Pollution: Sources, Classification (Natural and anthropogenic sources; primary and secondary pollutants), Smoke, Smog, Particulate Matter and Acid rain. Effects of air pollution on human health, plants, animals and material. Air (Prevention and Control of Pollution) Act, 1981.

Section-II

Green House Effect: Definition, Green house gases, Sources of green house effect, Global Warming.

Stratospheric ozone layer depletion. Role of agriculture to green house effect (paddy and livestock, biomass burning) in GHE.

Section-III

Noise pollution: Definition, Sources, Noise standards, Silence Zones, Consequences of noise pollution.

Radioactive Pollution: Definition**,** Sources, effect on human health.

Mineral Resources: Types and Importance of minerals; Mineral extraction and environmental problems (limestone mining in Moussourie hills, coal mining in Jharkhand).

Section-IV

Control: Measures and techniques to control air pollution in vehicles and industries, Green building concept, CDM (Clean Development Mechanism), Carbon sequestration. Control of noise pollution.

PRACTICAL

To monitor the level of Dust fall, SPM in surrounding atmosphere.

To monitor the level of NOx and SO_2 in surrounding atmosphere.

To prepare a survey report on different sources causing air pollution in local area.

To prepare a survey report on noise pollution in your locality.

To visit, collect data and prepare report regarding air and water pollution from sugar mill, thermal plant, cement factory in the adjoining area like Nawanshahr, Ropar, and Hoshiarpur.

ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Paper : SOLID WASTE AND DISASTER MANAGEMENT

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Section-I

Solid waste: Sources, nature and characteristics; categories of solid waste, Biodegradable and non-biodegradable waste; Plastic nuisance. Solid waste disposal: Sanitary landfills, Composting, optimum conditions for composting, Pyrolysis, Incineration and Refuse Derived Fuels. Fly Ash utilization, MSW Handling Rules, 2000.

Section-II

Disaster management: Natural disasters: floods, earthquakes, Tsunami, land slides, drought, forest fire and Tropical cyclones.

Disaster management: pre-disaster phase, actual disaster phase, post- disaster phase.

Section-III

Bioenergy and waste water treatment: Biogas plant: Construction and working of biogas plants, its advantages and disadvantages. Vermi-culture and Vermi-composting, Biofertilisers, Biofuels.

Waste water treatment (STP and ETP), A brief account of primary, secondary and tertiary treatment.

Section-IV

Organic farming: Definition, Need of Organic Farming, Methods: Soil management, weed management, control of pests. Its advantages. Organic Food, its benefits.

Waste lands: Definition, Categories of waste lands, Desertification, ways of reclamation.

PRACTICAL

A visit to Composting/Vermicomposting Unit.

To prepare a survey report of municipal waste of your city (Generation to disposal).

Classify the waste of your municipality waste (Source based and Waste based)

To visit any landfill site and prepare a tour report.

To prepare a list of herbicides / pesticides / insecticides commonly used in this area

To make a list of various botanical pesticides available in the market

Assignments/project as assigned by the teacher

Books Recommended

1. Critchfield, Howard J., General Climatology, Second Edition, Prentice-Hall, Inc., 1982.
2. Houghton, J., Global Warming, The Complete Briefing, 3rd Edition, Cambridge Univ. Press, 2006.
3. Hill, M. K., Understanding Environmental Pollution, Cambridge Univ. Press, 2008.
4. Malsin, M., Global Warming, A Very Short Introduction, Oxford Univ. Press, 2009
5. Tchobanogloas, G., Integrated Solid Waste Management: Engineering, Principle and Management. McGraw Hill, USA. 1993.
6. Singh, H.M., Solid Waste Management. Alfa Publications, Delhi. 2010.
7. Bhatnagar R.K. & Palta R.K., Earthworm Vermin Culture & Vermi Composting, Kalyani, Pub. 2007.
8. Ranganathan L.S, Vermi biotechnology: From Soil Health to Human Health, Updesh Purodit Pub. Jodhpur, 2006.
9. Aggarwal, A. K., Water Pollution, APH Publications, New Delhi, 2008.
10. American Public Health Association, Standard Methods for Examination of Water and Wastewater, APHA, New York, 2003.
11. Sengupta, B., John, S. & Abraham, T. Forth Estate, A Handbook on Air, Water and Land Pollution. IDMA Foundation for Sustainable Development and BR Publications Corporation, Delhi. 2006.
12. Aggarwal, A. K., Noise Pollution. APH Publications, New Delhi, 2008.
13. Veeresh, G. K., Organic Farming. Foundation Books, Delhi, 2006.
14. Gehlot, D., Organic Farming: Components and Management, Agrobios, Jodhpur, 2010.
15. Singh, K. K. & Aleyer, L., Disaster Management: Manmade Disasters. APH Publications. 2010.
16. Dhunna, M., Disaster Management, Vayu Education of India, Delhi, 2009.
16. Sharma & Sharma, Natural Disasters, APH Publications, 2009.
17. Dara, S.S., A Textbook of Environmental Chemistry. 2nd Edition. S. Chand & Company Ltd., Ram Nagar, New Delhi, 2010.

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HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17
SEMESTER- III

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	6	40	10	1	6	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-III

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Equipment & supplies used for Clothing construction - their use & care
2. Sewing Machine :
   (a) Parts of Sewing Machine and its accessories.
   (b) Common defects in sewing machine & their remedies.
   (c) Care of Sewing Machine.

SECTION-B

1. Recording of body measurements & care to be taken while taking body measurements.
2. Preparation of fabric for construction- shrinking and straightening.
3. Tools of Drafting, Steps involved in drafting from measurement to garment construction, points to be kept in mind while making a draft.
4. Terms used in construction i.e. Seam Allowance, Ease, Selvedge, Dart, Grain line, Stay stitching.

SECTION-C

1. Classification of textile fibres
2. Manufacture and Properties of fibres:
   Cotton, Silk, Wool, Nylon.

SECTION-D

1. Different types of yarns:

   Simple, Novelty and Textured Yarns.

2. Fabric Construction –
   (A) Weaving - Parts of a loom, Process of weaving & Types
      a. Simple weaves – Plain, Rib, Basket
      b. Twill weaves
      c. Satin weave & Sateen weave

   (B) Knitting, Felting and Bonding.

(SEMESTER-III)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 40
Internal Assessment : 10
Time : 6 periods/week

1. Make samples of the following :

(a) Tacking, running stitch, hemming, Back Stitch, Fasteners using buttonhole stitch

(b) Seams—Flat seam, Counter hem, Mantua maker, French Seam & Run & Fell seam.

(c) Processes—Continuous wrap, two piece placket opening, pleats, gathers into a band, tucks.

(d) Joining- shaped facing on V neck line & piping on round neck.

2. Embroidery—any "10" fancy stitches.

3. Drafting of the following:

(a) Jangia
(b) Bloomer
(c) Child's bodice block
(d) Sleeve- Plain sleeve, Puff sleeve
(e) Collars- Baby, Cape & Peter Pan

4. Construction of following :

(a) Jangia
(b) Bloomer
(c) Gathered frock with any sleeve and collar.

HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION,2016-17
SEMESTER- IV

SEMESTER-IV

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	6	40	10	1	6	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-IV

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of 8 objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Elements of art such as colour, form, texture, shape and line
2. Principles of design such as Harmony, Balance, Rhythm, Emphasis, Proportion in relation to clothing

SECTION-B

1. Introduction to Fashion, Fad and Style.
2. Selection of suitable clothes for following age groups :
   Infants, Toddlers, School going children, Adolescents, Adults, Elderly.
3. Care & Storage of garments of cotton, wool, silk.

SECTION-C

1. Bleaches- Oxidising, reducing bleaches & their suitability to different fabrics.
2. Finishing- types & importance. Different Finishes- Sizing, Desizing, Calendering, Sanforising, Mercerization, Crease resistant, Water proof & Water repellent, Flame resistant & Flame proof.

SECTION-D

1. Application of colour on fabrics
   (a) Dyeing-Simple dyeing of cotton
   (b) Resist-Tie, Dye and Batik
2. Printing-Block printing, screen printing, roller printing
3. Methods of Laundry/Washing.

(SEMESTER-IV)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 40
Internal Assessment : 10
Time : 6 periods/week

1. Laundry :

   (a) Testing of cotton, wool silk and nylon by burning test.
   (b) Stain Removal : Rust, Coffee, Tea, Paint, Nail Polish, Lipstick, Perfume, Blood, Boot Polish, Ink (Ball Pen), Curry and Juice.

2. Laundry & finishing of following garments :

   *Cotton : Salwar, Kameez.

   *Synthetic : Gathered Frock/Pleated Skirt.

   *Woollen : Cardigan/Pullovers.

   * Spot cleaning of a Shawl.

3. Preparation of samples of Tie and Dye & Block Printing.
4. Drafting and construction of the following garments:
   a. Petticoat
   b. Lady's kameez and salwar

5. Project on Care Labels of Garments or Market survey of Laundry Products.

Reference Books :

1. Singer Sewing Book, Mary Brocks Bichen, McGraw Hill Book Company, Inc., New York, Toronto, London, 1953.

2. Basic Processes & Clothing Construction, Sherie Doongaji & Raushni Deshpande, Raaj Prakashan, New Delhi (Fourth Revised edition).

3. Pattern Drafting Vol. III, Dress Making, Kamakura—Shobo Publishing Co. Ltd., Tokyo, Japan, 1972 (Fifth Edition).

4. A Manual of Children Clothing, Savitri Pandit, Orient Longmans Ltd., Bombay, 1967.

5. Practical Dress Design, Principles of Fitting and Pattern Making, Mabel D. Erwin, The Macmillan Company, New York, Ninth Printing, 1966.

6. Indian Embroidery, Its Variegated Charms, Savitri Pandit, Faculty of Home Sciences, Baroda, 1976, First Edition.

7. The Basic Book of Sewing, Eve Harlow Pub. Octopids Books Ltd., London.

8. Simple Dress Making 2, Maureen Guddsworthy Pub. Mills & Boon Ltd., London.

9. Encyclopaedia of Dress Making, Pub. Marshall Caven Dish Books Ltd., London.

10. Textile Fabrics and their Selection, Isable B. Wingate Prentice Hall, Inc., Englewood Cliffs, N.J., 1970.

11. Fundamentals of Textiles and their Care, Susheela Dantyagi, Orient Longmans, Bombay, Calcutta, Madras, New Delhi, Reprinted, 1968.

12. Household Textiles and Laundry Work, Durga Deulkar, Atma Ram & Sons, New Delhi, 1973.

13. Ideas for Fabric Printing and Dyeing Gooch, Peter H. Charles Cribner's, New York, 1974.

14. Encyclopaedia of Textiles, Fabrics, Grayson Martin, John Wiley, New York, 1984.

15. Tie-Dyed Textiles of India—Veronica Murphy & Rosemary Crill, Pub. Mapiu Publishing Pvt. Ltd., Ahmedabad.

16. Fashion and Textile Design, Neelima.

17. Printing and Washing of Textile, Neelima

18. Handbook of Fashion and Textile Designing, R. K. Sahu.

19. Traditional Embroidery of India, Shailajan D. Naik.

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AGRICULTURE (ELECTIVE)

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2016-17

SEMESTER-III

Paper – A : Agricultural Diversification and Machinery

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students :

1. The syllabus of this paper has been diveided into four Units.
2. Question paper shall have five sections.
3. Section A shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.
4. Section B, C, D and E shall have two questions each from respective Units, out of which one from each section is to be permitted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural aid on works :
Dairy
Poultry
Fishery
Mushroom Cultivation
Animal Husbandry
Bee Keeping

Unit-II

Maintenance of grassy lawns and flower beds
Raising of winter and summer ornamental flowers (rose, gladioli, dahlias, dianthus, foliage plants)
Fundamentals of landscape of an educational institute, factory, panchayat lands and office buildings

Unit-III

Introduction to medicinal, aromatic and spice plants
Growing of non-conventional plants
Basic idea of Gentically Modified crops
Fundamentals of land measurements and land revenue

Unit-IV

Important parts of the tractor, combine, thresher and their maintenance.
Study of various agricultural tools and implements.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Poultry Farms, Fish Ponds, Apiary, Dairy Farms
Raising various ornamental flowers of different seasons
Maintenance of grassy lawns
Study the parts of engines, tractor and combine

Books :

1. Agriculture Engineering Vol.I and Vol. II, A. M. Michae, T.P. Ojha, 2006, Jain Brothers, New Delhi.
2. Mushroom Growing, 1997, H. S. Garcha, P. A. U., Ludhiana.
3. Hand Book of Agriculture, 2008, ICAR, New Delhi.
4. Farm Machinery, An Approach, S.C. Jain and Grace Philips, 2006, Standard Publishers, Distributors, New Delhi.
5. Fundamentals of Dairy Chemistry, Wong, Jenness, Keeney and Marth, 1998, CBS Publishers and Distributors, New Delhi.
6. Milk and Milk Products, Clarence Henry Eckles, Willes Barnes Combs and Harold Macy, Delhi, 2006, Tata McGraw Hill Publishing Company Limited, New Delhi.
7. Introduction to Plant Biotechnology, H. S. Chawla, 2008, Oxford and IBH Publishing Company Pvt. Ltd., New Delhi 2.
8. Plant Biotechnology, B. D. Singh, 2009, Kalyani Publishers, Ludhiana.
9. Aquarium and Fish Keeping, C. B. L. Srivastava, 2006, Kitab Mahal Allahabad.
10. Medicinal Plants of India, R. Zafar, 2006, CBS Publishers and Distributors, New Delhi.
11. Spices and Condiments, J. S. Pruthi, 2008, National Book Trust, New Delhi.

AGRICULTURE (ELECTIVE)

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2016-17
SEMESTER-IV

Paper – B : Cultivation Practices of Vegetables, Timber and basic statistical methods

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. THEORY – Six of 45 minutes duration.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students :

1 The syllabus of this paper has been divided into four units.

2 Question paper shall have five sections.

3 Section A shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.

4 Section B, C, D and E shall have two questions each from respective Units, out of which one from each section is to be permitted. Each question will be of 15 (fifteen) marks.

5 Total five questions are to be attempted.

Unit – I

Tillage, Fundamentals and Principles of Tillage, Zero Tillage, Tillage Implements.

Unit – II

Cultivation Practices of Potato, Tomato; Bhindi, Cabbage; Onion and Asparagus

Unit – III

Timbers and Lumbers
Raising of Dalbergia; Tectona; Poplar; and Eucalyptus

Unit- IV

Statistical Methods for Agricultural workers including Mean, Mode, Median, Chi-Square, Standard Deviation.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Agricultural Farms for Fundamental Aspects of Tillage
Raising Forest Nursery
Cultivation of Seasonal Vegetables
Numerical Problems of Statistics

Books :

1. Principles of Agronomy**,** T. Yellamanda Reddy and G. H. Sankara Reddy, 2008, Kalyani Publishers, Ludhiana.

2. Statistical Methods for Agricultural Workers, V.G. Panse and P.V. Sukhatme, 1997, ICAR, New Delhi.

3. Modern Techniques for Raising Field Crops, Chidda Singh, Prem Singh and Rajbir Singh, 2009, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

4. Vegetable Crops of India, P.C. Das, 1998, Kalyani Publishers, Ludhiana.

5. Potato Cultivation, 1998, Nandpuri and Kumar, P.A.U., Ludhiana.

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MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper-I : ADVANCED CALCULUS-I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note :

1. The syllabus has been split into two Units : Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions in all selecting at least two questions from each unit. Each question will be of 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorials.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Limit and continuity of functions of two and three variables. Partial differentiation. Change of variables. Partial derivation and differentiability of real-valued functions of two and three variables. Schwarz and Young's theorem. Statements of Inverse and implicit function theorems and applications.

Vector differentiation, Gradient, Divergence and Curl with their properties and applications.

Unit-II

Euler's theorem on homogeneous functions. Taylor's theorem for functions of two and three variables. Jacobians. Envelopes. Evolutes. Maxima, minima and saddle points of functions of two and three variables. Lagrange's multiplier method.

References

1. Gabriel Klaumber : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
2. T.M. Apostol : Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
3. R.R.Goldberg : Real Analysis, Oxford & I.B.H. Publishing Co., New Delhi, 1970.
4. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.
5. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6. Gorakh Prasad : Differential Calculus, Pothishala Pvt.Ltd., Allahabad.

7.	J. D. Murray & M. R. Spiegel	:	Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
8.	S.C.Malik	:	Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
9.	Shanti Narayan	:	A Course of Mathematical Analysis, S. Chand and Company, New Delhi
10.	J. D. Murray & M.R. Spiegel	:	Vector Analysis, Schaum Publishing Company, New York.
11.	N.Saram and S.N. Nigam	:	Introduction to Vector Analysis, Pothishala Pvt. Ltd., Allahabad.
12.	Shanti Narayan	:	A Text Book of Vector Calculus, S. Chand & Co., New Delhi.

Paper II : DIFFERENTIAL EQUATIONS- I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Exact differential equations. First order and higher degree equations solvable for x, y, p. Clairaut's form. Singular solution as an envelope of general solutions. Geometrical meaning of a differential equation. Orthogonal trajectories. Linear differential equations with constant coefficients.

Unit-II

Linear differential equations with variable coefficients- Cauchy and Legendre Equations. Linear differential equations of second order- transformation of the equation by changing the dependent variable/the independent variable, methods of variation of parameters and reduction of order. Simultaneous Differential Equations

References

1.	Erwin Kreyszig	:	Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2.	D.A. Murray	:	Introductory Course on Differential Equations, Orient Longmen, (India), 1967.
3.	A.R. Forsyth	:	A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4.	Ross, S.L.	:	Differential Equations, John Willey & Sons, 2004.

Paper III : STATICS

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Basic notions. Composition and resolution of concurrent forces – Parallelogram law of forces, Components of a force in given directions, Resolved parts of a force, Resultant of any number of coplanar concurrent forces, Equilibrium conditions for coplanar concurrent forces, equilbrium of a body resting on a smooth inclined plane. Equilibrium of three forces acting at a point – Triangle law of forces, $\lambda - \mu$ theorem, Lami's theorem. Parallel Forces.

Unit-II

Moments and Couples – Moment of a force about a point and a line, Centre of Parallel forces, theorems on moment of a couple, Equivalent couples, Varignon's theorem, generalized theorem of moments, resultant of a force and a couple, resolution of a force into a force and a couple, reduction of a system of coplanar forces to a force and a couple. Equilibrium conditions for any number of coplanar non-concurrent forces.

Friction: Definition and nature of friction, laws of friction, equilibrium of a particle on a rough plane, Problems on ladders, rods, spheres and circles.

References

1. S.L. Loney : Statics, Macmillan and Company, London.
2. R.S. Verma : A Text Book on Statics, Pothishala Pvt. Ltd., Allahabad.
3. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics, S. Chand and Company
4. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.

MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

Paper I: ADVANCED CALCULUS II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

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Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Definition of a sequence, Bounds of a sequence, Convergent, divergent and oscillatory sequences, Algebra of limits, Monotonic Sequences, Cauchy's theorems on limits, Subsequences, Bolzano-Weirstrass Theorem, Cauchy's convergence criterion.

Sequential continuity and Uniform continuity of functions of single variable.

Unit-II

Series of non-negative terms, P-Test, Comparison tests, Cauchy's integral test, Cauchy's Root test, Ratio tests, Kummer's Test, D'Alembert's test, Raabe's test, De Morgan and Bertrand's test, Gauss Test, Logarithmic test, Alternating series, Leibnitz's theorem, Absolute and conditional convergence, Rearrangement of absolutely convergent series, Riemann's rearrangement theorem.

References

1. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi 1997.
2. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi 2000.
3. J. D. Murray & M.R. Spiegel : Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
4. S.C.Malik : Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
5. O.E.Stanaitis : An Introduction to Sequences, Series and Improper Integrals, Holden – Dey, Inc., San Francisco, California.
6. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.
7. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper II : DIFFERENTIAL EQUATIONS- II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Series solution of differential equations-Power Series method, Bessel and Legendre equations.

Bessel functions of First and Second kind. Legendre function. Generating function. Recurrence relation and orthogonality of Bessel and Legendre function.

Partial Differential Equations: Origin of first order Partial Differential Equations, Linear Equation of first order, Integral surfaces passing through a given curve, surfaces orthogonal to a given system of surfaces.

Unit-II

Inverse Laplace transforms- Linearity property, Shifting properties, Change of Scale Property. Inverse Laplace transforms of derivatives and integrals, Convolution theorem.

Applications of Laplace Transforms - Solution of differential equations with constant coefficients, Solution of differential equations with variable coefficients, Solution of simultaneous differential equations.

Laplace Transformation-Linearity of the Laplace transformation. Existence theorem for Laplace transformations, Shifting Theorems, Laplace transforms of derivatives and integrals, Multiplication of t^n, Division by t.

References

1. Erwin Kreyszig : Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2. D.A. Murray : Introductory Course on Differential Equations, Orient Longmen, (India) 1967.
3. A.R. Forsyth : A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4. Sneddon, I.N. : Elements of Partial Differential Equations, McGraw Hill, 1957.
5. J. D. Murray & M. R. Spiegel : Schaum Series, Laplace Transforms.
6. Ross, S.L. : Differential Equations, John Willey & Sons, 2004.

Paper III : DYNAMICS

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

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Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Motion of a particle with constant acceleration, acceleration of falling bodies, motion under gravity, motion of a body projected vertically upwards: Newton's Laws of Motion, Motion of two particles connected by a string, motion along a smooth inclined plane, constrained motion along a smooth inclined plane. Variable acceleration: Simple harmonic motion, elastic string.

Unit-II

Curvilinear motion of a particle in a plane: Definition of velocity and acceleration, projectiles, motion in a circle.

Work, power, conservative fields and the potential energy, work done against gravity, potential energy of a gravitational field.

Relative motion, relative displacement, velocity and acceleration, motion relative to a rotating frame of reference.

Linear momentum, angular momentum, conservation of angular momentum, impulsive forces, principle of impulse and momentum, motion with respect to centre of mass of a system of particles, collisions of elastic bodies, loss of energy during impact.

References

1.	S.L. Loney	:	An Elementary Treatise on the Dynamics of a Particle and of Rigid bodies, Cambridge University Press, 1956.
2.	K.R.Chaudhery and A.C.Aggarwal	:	Elements of Mechanics, Statics and Dynamics. S Chand and Company
3.	S. L. Loney	:	The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.
4.	Donald T. GreenWood	:	Principles of Dynamics, Second Edition, Prentice Hall of India.
5.	M . Ray	:	A Text Book on Dynamics , S. Chand and Company- 1989

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COMPUTER SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Scheme of Examination

		THIRD SEMESTER	Exam Hrs.	Ext.	Int.	Max. Marks	Lectures per week
Paper-A03	Theory	Object Oriented Programming (Using C++)	3	65	10	75	6
Paper-PA03	Practical	Practical Based on Paper-A03	3	25	--	25	6

Note : Practical marks will include the appropriate weightage for proper maintenance of lab. record.

Paper-A03 : Object Oriented Programmin(Using C ++)

Objective :

This course enables students to appreciate the concepts of OOP using C++ and to understand linear & non linear DS.

Note : (i) The question paper will consist of four sections & a compulsory questions

(ii) Examiner will set total of *nine* questions comprising *two* questions from each section and *one* compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt *one* question from each section and the compulsory question.

(iv) All questions carry equal marks unless specified.

SECTION-A

1. *Concepts of Object Oriented Programming* : Object, Class, Encapsulation, Data Hiding, Inheritance, Polymorphism. Analysis and design of system using Object Oriented Approach.

2. *Structure of a C++ Program :* Include files, Declaration of an object, Main function, I/O streams.

3. *Classes :* Class Declaration : Data Members, Member Functions, Private and Public members, data hiding and encapsulation, arrays within a class.

   Objects : Creating Objects, Accessing class data members, Accessing member functions, Arrays of Objects, Objects as function arguments: Pass by value, Pass by Reference, Pointers to Objects.

SECTION-B

4. *Functions in C++ :* Member function definition inside the class declartation and outside the class declaration, scope resolution operator, Private and Public member function, Nesting of member functions, Static and Friend functions.

5. *Constructors and Destructors :* Constructors : Declaration and Definition, Default Constructors, Parameterized Constructors, Copy Constructors. *Destructors* : Definition and use.

SECTION-C

6. *Function Overloading :* Function Overloading : Declaration and definition.

7. *Inheritance – Extending Classes :* Concept of inheritance, base class, derived class, defining derived classes, visibility modes, private, public, protected; single inheritance : privately derived, publicly derived; making a protected member inheritable, access control to private and protected members by member functions of a derived class, multilevel inheritance, nesting of classes.

SECTION-D

8. *Polymorphism :* Definition, early binding, virtual functions, late binding, pure virtual functions.

9. *File handling :* Opening and closing a file, stream state member function, binary file operations, structures and file operators.

References :

1. Stroustrup : *The C ++ Programming Language,* Addison Wesley.
2. Robert Lafore : *OOP in Turbo C++,* Galgotia.
3. E. Balaguruswamy : *Object Oriented Programming with C++,* TMH.
4. Herbert Schildt : *Schildt's Advanced Win 95 Prog. in C & C++,* TMH.
5. Herbert Schildt : *C++ The Complete Reference,* TMH.

Paper-PA03 : Practical : Practical based on Paper-A03

COMPUTER SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17
SEMESTER-IV

Scheme of Examination

		FOURTH SEMESTER	Exam Hrs.	Ext.	Int.	Max. Marks	Lectures per week
Paper-A04	Theory	Computer Organization & Architecture	3	65	10	75	6
Paper-PA04	Practical	Practical Based on Paper-A04	3	25	--	25	6

Note : Practical marks will include the appropriate weightage for proper maintenance of lab. record.

Paper-A04 : Computer Organization & Architecture

Objective : The course is designed to provide inside details of computer system including processor, memory card & I/O devices and to solve problems using Assembly Language Programming.

Note : (i) The question paper will consist of four sections & a compulsory questions.

(ii) Examiner will set total of *nine* questions comprising *two* questions from each section and *one* compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt *one* question from each section and the compulsory question.

(iv) All questions carry equal marks unless specified.

SECTION-A

1. *Representation of Information :* Number system: Binary, Decimal, Hexadecimal, Octal; Conversions; integer and floating point representation, character codes (ASCII, EBCDIC), error detection and correction codes: Parity bit method, Hamming code.

SECTION-B

2. *Basic Building Blocks :* Boolean algebra, combinatorial logic design : Gates, Half Adder, Full Adder, Encoder, Decoder, Multiplexer : Sequential Building Block : Flip-Flops, Registers, Counters: Synchronous and Asyanchronous Coutners, Bus.

3. *Microinstructions :* Register Transfer, Arithmetic, Logical and Shift Operations; Instruction : Instruction Format, Instruction Cycle; Interrrupt: Interrupt types, Interrupt Cycle.

SECTION-C

4. *Micrprocessor :* Architecture of 8086/8088 Processor Model; Instruction Set; Addressing Modes: Registgers used in Mircoprocessor.

5. *Assembly Language :* Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/Output.

SECTION-D

6. *System Maintenance :* Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, types of displays and other peripheral devices, installing software; Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection of Viruses, Protection from Viruses.

References :

1. Mano, M.M. : *Computer System Architecture,* 3rd Ed., Dec., 1998, PHI.
2. Tannenbaum, A.S. : *Structured Computer Organization,* 3rd Ed., Oct., 1993, PHI.
3. Gear, C.W. : *Computer Organisation and Programming,* McGraw Hill, 1975.
4. Langholz, G., Grancioni, J. & Kandel, A. : *Elements of Computer Organization,* Prentice Hall International, 1988.
5. Hayes : *Computer Architecture and Organization,* McGraw Hill, International Edition.
6. Sloan, M.E. : *Computer Hardware and Organization,* 2nd Edition, Galgotia Pvt. Ltd.

Paper-PA04 : Practical : Practical based on Paper-A04.

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STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Note :

1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer this subject in B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers with codes 201 and 202 in the subject of Statistics in B.A./B.Sc. 3rd Semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (of 45 minutes each) for theory per week and 4 lectures (of 45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper–201 : STATISTICAL INFERENCE

Max. Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time Allowed	**:**	**3 hours**

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

SECTION-I

Concept of a statistic and its sampling distribution. Point estimate of a parameter, concept of unbiasedness, consistency, efficiency and sufficiency (only the definitions and examples). Maximum likelihood estimation (standard distributions). Standard errors of sample mean and sample proportion. Sampling distribution of sum of independent Binomial and Poisson random variables. Independence of sample mean and variance in random sampling from a Normal distribution (without derivation).

Statements and sampling distributions of chi-square, t & F distributions and their relationships.

SECTION-II

Statistical Tests and Interval Estimation : Null and alternative hypothesis, two types of errors, level of significance and p-value. Testing for the mean and variance of a normal distribution, testing of equality of means and variances of two univariate normal distributions, and their related confidence intervals. Testing the significance of sample correlation coefficient.

Large Sample Tests : Use of central limit theorem for testing and interval estimation of a single mean and a single proportion, difference of two means and two proportions. Fisher's Z-transformation and its uses. Chi-square test for goodness of fit and testing of independence of attributes, Yates' correction.

References :

1. Goon, A.M., Gupta, M.K., Dass Gupta, B. (2005) : Fundamentals of Statistics, Vol. I, World Press, Calcutta.
2. Miller, I. and Miller, M. (2002) : John E. Freund's Mathematical Statistics (6^{th} Edition, Low Price Edition), Prentice Hall of India.

Additional References :

1. Mood, A.M., Graybill, F.A. and Boes, D.C. (1974) : Introduction to the Theory of Statistics, McGraw Hill.
2. Bhat, B.R., Srivenkatramana, T. and Rao Madhava, K.S. (1997) : Statistics : A Beginner's Text, Vol. I, New Age International (P.) Ltd.
3. Snedecor, G.W. and Cochran, W.G. (1967) : Statistical Methods, Iowa State University Press.

Paper-202: PRACTICAL (Semester-III)

Maximum Marks : 25
Time allowed : 3 hours

(Viva-Voce : 5 marks; Record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks in three hours' duration.

1. Drawing random samples from standard distributions : Uniform, Exponential and Normal.
2. Tests of significance based on t, chi-square and F for one sample, two samples and paired sample problems; significance of correlation coefficient. Use of Z-Transformation for testing $p = p_0$.
3. Large sample tests for means and proportions, tests of goodness of fit and independence of attributes in contingency tables.
4. Confidence intervals for one and two sample problems (mean, variance and proportion).

STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17
SEMESTER-IV

Note :

1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer this subject in B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers code named 203 and 204 in the subject of Statistics in B.A./B.Sc. 4th Semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper–203 : SAMPLE SURVEYS, DESIGN AND ANALYSIS OF EXPERIMENTS

Max. Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time Allowed	**:**	**3 hours**

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

SECTION-I

Concepts of population and sample, need for sampling, census and sample surveys, basic concepts in sampling. Sample selection and sample size. Sampling and non-sampling errors.

Some basic sampling methods for estimation of population mean, variance and standard error of estimates : Simple Random Sampling (SRS) with and without replacement, stratified random sampling under various allocations and systematic sampling.

SECTION-II

Linear Models : Concepts of fixed effect, random effect and mixed effect models. Analysis of variance for one-way, two-way (with one observation per cell and with multiple but equal observations per cell) classifications under the fixed effect models.

Need for design of experiment, three fundamental principles of design, basic designs—CRD, RBD, LSD and their analysis.

References:

1. Goon, A.M., Gupta, M.K., Das Gupta, B. (2005). : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Singh, D. and Chaudhary, F.S. (1986). : Theory and Analysis of Sample Survey Designs, John Wiley and sons.

Additional References:

1. Sukhatme, B.V. (1984) : Sample Survey Methods and Its Applications, Indian Society of Agricultural Statistics.
2. Murthy, M.N. (1967) : Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
3. Sampath, S. (2000) : Sampling Theory and Methods, Narosa Publishing House.
4. Dass, M.N. and Giri (1986) : Design and Analysis of Experiments, Springer Verlag.
5. Cochran, W.G. and Cox, G.M. (1992) : Experimental Designs, John Wiley and Sons.
6. Montgomery, D. C. (2000) : Design and Analysis of Experiment John Wiley, New York.

Paper-204: PRACTICAL (Semester-IV)

Maximum Marks : 25
Time allowed : 3 hours

(Viva-Voce : 5 marks; Record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks in three hours duration.

1. Selection of sample and determination of sample size : Simple Random Sampling (SRS), stratified SRS, allocation problems in stratified SRS and systematic sampling.
2. Analysis of variance for one-way and two-way classifications. Analysis of CRD, RBD and LSD.

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APPLIED STATISTICS

SEMESTER-III

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There are two papers code named Papers A and B in the subject of Applied Statistics in B.A./B.Sc., each of one credit and having a total of 100 marks. These are to be taught simultaneously throughout the year.
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

Paper-A : MATHEMATICAL METHODS-II

Max. Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 Hours**

Note : There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each section. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each section.

SECTION-I

Coordinate Geometry of 3 Dimensions : Cartesian, spherical coordinates, equations of line, plane, sphere and ellipsoid.

Matrices and Linear Algebra : Determinants, algebra of matrices, rank of a matrix, inverse of a matrix, symmetric matrices (upto 4×4 matrices only).

SECTION-II

Matrices and Linear Algebra : Systems of Linear equations and their solutions.

Calculus of Several Variables : Functions of two variables, Partial derivatives and double integrals. Applications to evaluation of area.

Books Prescribed :

1. Ayres, F. (1999) : First Year College Mathematics, Schaum Series, Mc Graw Hill, New York.

2. Ayres, F. (1980) : Matrices, Schaum Series, Mc Graw Hill, New York.

Books Suggested for Supplementary Reading :

1. Kindle, J.H. (1990) : Analytical Geometry, Schaum Series, Mc Graw Hill, New York.

2. Ayres, F. (1999) : Calculus, Schaum Series, Mc Graw Hill, New York.

3. Spiegel, M.R. (2002) : Advanced Calculus, Schaum Series, Mc Graw Hill, New York.

APPLIED STATISTICS

SEMESTER-IV

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There are two papers code named Papers A and B in the subject of Applied Statistics in B.A./B.Sc., each of one credit and having a total of 100 marks. These are to be taught simultaneously throughout the year.
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

Paper-B : STATISTICAL METHODS

Max. Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 Hours**

Notes :
1. There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each section. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each section.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

SECTION-I

Compilation, classification, tabulation and diagrammatic representation of statistical data. Concepts of Statistical population, random sample and frequency curve, measures of location, dispersion, skewness and kurtosis.

Two dimensional random variable, joint probability distributions, marginal and conditional probability distributions, conditional expectation, covariance and correlation coefficient.

SECTION-II

Measures of association and contingency, correlation and linear-regression involving two variables. Bivariate normal distributions.

Statement of weak law of large numbers and central limit theorem for independent and identical random variables. Sampling distributions of means, chi-square, t and F in sampling from normal populations (without proof).

Books Recommended :

1. Goon, A.M., Gupta, M.K. and Dasgupta, B. (2005) : Fundamentals of Statistics, Vol.1 Chapter 1 to 6, 9, 10, 13 (only the relevant portion from these chapters as suggested by the body of the syllabus).

2. Meyer, P.L. (1971) : Introductory Probability and Statistical Applications, Addison Wesley. American Pub. Co.

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PHYSICS

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2016-17

General Instructions for teachers, students and paper setters:

1. There will be three papers of theory and one laboratory (practical course). Each of the papers is allocated 25 marks including 3 marks for the Internal Assessment.

2. The number of lectures per week will be three for each theory paper and six for practicals.

3. The examination time for each theory paper as well as practical paper will be three hours.

4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set be 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory questions. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – I	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –I	Total Teaching hrs. 30
Paper C	:	Quantum Physics-I	Total Teaching hrs. 30
		Physics Practical	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-I (30 Hrs.)

UNIT-I

Basic ideas of Statistical Physics, Scope of Statistical Physics, basic ideas about probability, distribution of four distinguishable particles in two compartments of equal size. Concept of macrostates, microstates, thermodynamic probability, effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability, equilibrium state of dynamic system, distribution of distinguishable n particles in k compartments of unequal sizes.

UNIT-II

Phase space and its division into elementary cells, three kinds of statistics. The basic approach in the three statistics. Maxwell-Boltzman statistics applied to an ideal gas in equilibrium, experimental verification of Maxwell-Boltzman's law of distribution of molecular speeds.
Need of quantum statistics--B.E. statistics, derivation of Planck's law of radiation, deduction of Wien's displacement law and Stefan's law from Planck's law, F.D. statistics, Comparison of M.B., B.E. and F.D. statistics.

Books Suggested :

Essential Readings :

1. "*Statistical Physics and Thermodynamics*", V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar).
2. "*A Treatise on Heat*" Saha and Srivastava (Indian Press, Ahmedabad, 1972).

Further Readings:

1. *Thermal Physics* by C. Kittel & H. Kroemer, CBS Pub., 1987.
2. *Thermal Physics*, S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-I (30 Hrs.)

UNIT-I

Interference : Concept of coherence, spatial and temporal coherence, coherence time, coherence length, area of coherence. Conditions for observing interference fringes. Interference by wavefront division and amplitude division. Young's double slit experiment. Lloyd's mirror and Fresnel's biprism, phase change on reflection. Michelson interferometer—working, principle and nature of fringes. Interference in thin films, Role of interference in anti-reflection and high reflection dielectric coatings. Multiple beam interference, Fabry-Perot interferometer, nature of fringes, finesse.

UNIT-II

Diffraction : Huygen-Fresnal theory half period zones, zone plates. Distinction between Fresnel and Fraunhofer diffraction. Fraunhofer diffraction at rectangular and circular apertures. Effects of diffraction in optical imaging, resolving power of microscope, telescope, Fabry-Perot interferometer. The diffraction grating, its use as a spectroscopic element, resolving power, Moire's fringes.

Polarization : Concept and analytical treatment of unpolarised, plane polarized and elliptically polarized light. Double refraction, Nicol prism, sheet polarisers, retardation plates. Production and analysis of polarized light (quarter and half wave plates).

Books Suggested :

Essential Readings:

1. *Optics*, Jenkins and White, McGraw Hill.
2. *Optics*, Ajoy Ghatak, McMillan India.
3. *Physics for Degree Students,* C. L. Arora and P .S. Hemns, S. Chand & Co., 2014

Further Readings:

1. *Optics*, Born and Wolf, Pergamon.

Paper-C : QUANTUM PHYSICS-I **(30 Hrs.)**

UNIT-I

Formalism of Wave Mechanics :

(i) Plancks's formula of Black body radiation and energy quantization.
Wave-particle duality – Photoelectric effect, X-ray diffraction, Compton effect, Pair production, Photon and gravity.
De Brogile waves, wave pocket, Phase velocity and Group velocity, Electron microscope, Particle in a box, Particle diffraction, Davisson-Germer experiment, Interferferometry with particles.
Uncertainty principle with illustrations, Principle of complementarity.
(Chapters 2 and 3 of book 1 or Chapters 1-3 of book 2)

(ii) Quantum mechanics, Wave equation, Plausible arguments leading to time-dependent Schrodinger equations, Born's interpretation of Wave function, complex character, continuity and boundary conditions, probability interpretation, normalization, Probabilty current, Probability conservation equation, Principle of superposition.

(iii) Fundamental postulates of quantum mechanics. Eigenvalues and eigenfunctions. Operator formalism, Position, momentum and energy operators, expectation values, Ehrenfest theorem, Hermitian operators.
(Chapter 5 of book 1 and book 2)

UNIT-II

Problems in One and Three Dimensions :

(i) Steady-state Schrodinger equation, Appliction to stationary states for one dimension, Potential step. Potential barrier, Tunnel effect examples, Scanning Tunneling microscope, rectangular potential well, Linear harmonic oscillator.

(ii) Schrödinger equation for spherically symmetric potential, spherical harmonics, hydrogen atom energy levels and eigenfunctions, Principal, Orbital and Magnetic quantum numbers, Electron probability density.

(Chapter 6 of book 1 and book 2)

Books Suggested :

Essential Readings :

1. *Concept of Modern Physics, A. Beiser, S. Mahajan and S. R. Choudhury, Tata McGraw Hill, 6th Edition.*
2. *Quantum Physics of Atoms, Molecular, R. Eisberg & R.Resnick, Second Edition, John Wiley, 2002.*
3. *Physics for Degree Students, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014*

Further Readings :

1. *Modern Physics,* J. Bernstein, P.M. Fishbane, S.G. Gasiorowicz, Pearson, 2000.
2. *Elements of Modern Physics*, S.H. Patil, McGraw Hill, 1998.
3. *Quantum Mechanics*, E. Merzbacaher, II Ed., John Wiley.

PHYSICS PRACTICALS

The students are required to perform Nine experiments choosing either of the Units I or Unit II in each semester. The unit of experiments allocated in the third semester cannot be repeated in fourth semester. The college must keep a record of the unit allocated to each student. In the fourth semester examination, the students are expected to bring their Practical Note books of both the semesters.

General Guidelines for Physics Practical Examinations :

Total : 25 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	10
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	4
(iii)	Viva-Voce	5
(iv)	Record (Practical file)	3
(v)	Internal Assessment	3

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

UNIT-I

A. Statistical Physics and Thermodynamics :

I. To study adiabatic expansion of a gas.

II. To measure thermal expansion of crystal using interference fringes.

III. To measure thermal conductivity in poor conductor by Lee's method.

IV. Thermo emf calibration, comparison.

V. Total radiation law, temperature dependence of radiation.

VI. To study Probability distribution using coloured dice, coins.

B. Optics and Lasers :

VII. To determine the refractive index of a liquid using spectrometer.

VIII. To determine the Cauchy's constants.

IX. To study the refractive index of a doubly refracting prism.

X. Study of rotation of plane of polarization with a polarimeter.

XI. To determine the wave length of a given light using biprism.

Exercises :

1. To measure the thermo e.m.f.
2. To determine the heating efficiency of an electric kettle with varying voltages.
3. To measure the angle of rotation of plane of polarization for the given liquid.
4. To determine the least count and setup the spectrometer for minimum deviation position of the prism.

Computer Based Activities : Elementary C language programs.

1. Motion of particle in a central force field.
2. Calculation of days between two dates of a year.
3. To check if triangle exists and the type of the triangle.

UNIT-II

C. Optics and Lasers :

I. To determine the wave length and dispersive power using plane diffraction grating (use Hg source).

II. To determine the resolving power of a telescope.

III. To determine the resolving power of a grating.

IV. Set up Newton's rings to determine wave length of sodium light.

V. To measure an inaccessible height using sextant.

VI. To determine the principal points of a lens system.

VII. To determine the divergence and wave length of a given laser source.

D. Quantum Physics:

VIII. To study the Photoelectric effect and determine the value of Planck's constant.

IX. To study the gas discharge spectrum of hydrogen.

X. To study the absorption spectra of iodine vapours.

XI. To determine the ionization potential of mercury.

Exercises :

1. To measure the diameter of Newton's rings.
2. Study of variation of light intensity using photovoltaic cell/inverse square law.
3. To determine the angle of wedge using interference method.
4. To measure the angle of elevation of a tall building.

Computer Based Activities : Elementary C language programs.

1. To find the sum of the sine and cosine series and print out the curve.
2. To find Sum and Product of Matrices
3. Motion of a projectile using computer simulation.

Text and Reference Books :

1. *A Laboratory Manual of Physics for Undergraduate Classes,* D.P. Khandelwal.
2. *B.Sc. Practical Physics, C.L.* Arora (S. Chand) & Co. (2014)
3. *Numerical Analysis* by C. Dixon.
4. *Programming with C, Schaum series* by Byron Gottfried & Jitender Chhabra.

PHYSICS

SEMESTER – IV

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – II	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –II	Total Teaching hrs. 30
Paper C	:	Quantum Physics-II	Total Teaching hrs. 30
		Physics Practical	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-II (30 Hrs.)

UNIT-I

Statistical definition of entropy, change of entropy of a system, additive nature of entropy, law of increase of entropy, reversible and irreversible processes with examples. Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder.
Brief review of the terms and Laws of Thermodynamics, Carnot's Cycle. Entropy changes in Carnot's Cycle. Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path in a P.V. diagram, entropy of a perfect gas. Equation of state of ideal gas from simple statistical consideration. Heat death of the universe.

UNIT-II

Derivation of Maxwell's thermodynamical relations, cooling produced by adiabatic stretching, adiabatic compression, change of internal energy with volume. Expression for (C_p-C_v), change of state and Clayperon Equation. Thermodynamical treatment of Joule-Thomson effect. Use of Joule-Thomson effect for liquification of helium. Production of very low temperature by adiabatic demagnetisation.

Books Suggested :

Essential Readings:

1. *"Statistical Physics and Thermodynamics",* V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar)
2. *"A Treatise on Heat"* Saha and Srivastava (Indian Press, Ahmedabad, 1972.)

Further Readings :

1. *Thermal Physics by C.* Kittel & H. Kroemer, CBS Pub., 1987
2. *Thermal Physics,* S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-II (30 Hrs.)

UNIT-I

Laser Fundamentals : Mechanism of light emission, Wave mechanical explanation, Concept of spontaneous and stimulated emission, Properties of Spectral lines, Temporal and spatial coherence, Qualitative account of Collisional broadening, Doppler broadening & Natural broadening, Mechanism of Luminescence.

Interacation of light with matter : Absorption, spontaneous emission, stimulated emission, Charatertistics of stimulated emission, Einstein coefficients and their relations, Light amplification, Population inversion, Lasing action, Components of Laser, Elementary theory of optical cavity, longitudinal and transverse modes, Principal pumping schemes, Three level and four level laser schemes.

UNIT-II

Laser Systems : Types of lasers, Ruby and Nd : YAG lasers. He–Ne, N_2, Dye and CO_2 lasers – construction, mode of creating population inversion and output characteristics. Semiconductor lasers, Applications of lasers—a general outline, Holography. Principle, recording of hologram and reconstruction of image, Theory of holography.

Fiber Optics : Photonics, Optical fibre, Construction, Numerical aperature, acceptance angle, skip distance, Step index fibre – single mode and multimode, Graded index fibre, Losses in optical fibre, Material losses and Rayleigh scattering, bending losses, Intermodal and intramodal dispersion.

Splicing techniques, Optical fibre based communication system, Medical applications, Displacement sensor temperature sensor, force sensor, Humidity sensor.

Books Suggested :

Essential Readings :

1. *Laser Fundamentals,* W.T. Silfvast, Foundation Books.
2. *Lasers and Non-linear Optics,* B.B. Laud, Wiley Eastern Limited.
3. *A text book of Optics,* Subtahmanyam N., Lal B. and Avadhanulu, M. N., S. Chand & Co., 2012.
4. *Optical Fiber Communication,* Keiser, MH.

Further Readings :

1. *Lasers,* Svelto Pergmon.

Paper-C : QUANTUM PHYSICS-II **(30 Hrs.)**

UNIT-I

Radiative transitions, selection rules and life times, Spectrum of hydrogen atom.
Normal Neeman effect and experiment, Degeneracy of H-atom energy levels, fine structure, Electron angular momentum, Larmor's frequency, electron spin angular momentum, Exclusive principle, Stern-Gerlach experiment, spin-orbit coupling, electron magnetic moment, total angular momentum, Hyperfine structure, examples of one electron systems, Anomalous Zeeman effect, Lande-g factor (sodium D-lines). Paschen-Back Effect, Stark Effect.

(Chapters 6 & 7 of Book 1, Chapters 8-10 of Book 2)

UNIT-II

Symmetric and Antisymmetric wave functions, exclusion principle, Many electron atoms, Slater determinant, Electronic configurations, Hund's rule, Spin-Orbit coupling, L-S coupling, J-J couplings, term symbols. Atomic spectra of H, Na, He and Hg, selection rules.

X-ray spectra, nomenclature, Selection rules, Mosley law, Auger effect.

Molecular bonding, H_2^+ ion afnd H_2 molecules, Complex molecules, molecular spectra, selection rules, symmetric structures, rotational vibrational levels and spectra of diatomic molecules,vibration-rotation spectra, electronic spectra of molecules, Franck Condon principle, fluorescence and phosphorescence, Raman Effect, Magnetic resonance experiments.

(Chapters 7 & 8 of Book 1, Chapter 12 of Book 2)

Books Suggested :

Essential Readings :

1. *Concepts of Modern Physics,* A. Beiser, S. Mahajan and S. R. Choudhary, Tata McGraw Hill, 6th Edition.
2. *Quantum Physics of Atoms, Molecular,* R. Eisberg & R. Resnick, Second Edition, John Wiley, 2002.
3. *Physics for Degree Students,* C.L. Arora and P.S. Hemne, S.Chand & Co., 2014.
4. *Elements of Modern Physics,* S.H. Patil, McGraw Hill, 1998.

Further Readings :

1. *Fundamentals of Molecular Spectroscopy,* C.N . Banwell, T.M.H., 1972
2. *Atomic and Molecular Spectra*, Rajkumar (Kedarnath Ramnath Prakashan, Meerut).
3. *Atomic Spectra,* H.G. Kuhn, Academic Press, N.Y.

PHYSICS PRACTICALS

The students are required to perform Nine experiments choosing either of the Units I or Unit II in each semester. The unit of experiments allocated in the third semester cannot be repeated in fourth semester. The college must keep a record of the Unit allocated to each student. In the fourth semester examination, the students are expected to bring their Practical note books of both the semesters.

General Guidelines for Physics Practical Examinations :

Total : 25 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	10
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	4
(iii)	Viva-Voce	5
(iv)	Record (Practical file)	3
(vi)	Internal Assessment	3

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

UNIT-I

A. Statistical Physics and Thermodynamics :

I. To study adiabatic expansion of a gas.

II. To measure thermal expansion of crystal using interference fringes.

III. To measure thermal conductivity in poor conductor by Lee's method.

IV. Thermo emf calibration, comparison.

V. Total radiation law, temperature dependence of radiation.

VI. To study Probability distribution using coloured dice, coins.

B. Optics and Lasers :

VII. To determine the refractive index of a liquid using spectrometer.

VIII. To determine the Cauchy's constants.

IX. To study the refractive index of a doubly refracting prism.

X. Study of rotation of plane of polarization with a polarimeter.

XII. To determine the wave length of a given light using biprism.

Exercises :

1. To measure the thermo e.m.f.
2. To determine the heating efficiency of an electric kettle with varying voltages.
3. To measure the angle of rotation of plane of polarization for the given liquid.
4. To determine the least count and setup the spectrometer for minimum deviation position of the prism.

Computer Based Activities : Elementary C language programs.

1. Motion of particle in a central force field.
2. Calculation of days between two dates of a year.
3. To check if triangle exists and the type of the triangle.

UNIT-II

C. Optics and Lasers :

I. To determine the wave length and dispersive power using plane diffraction grating (use Hg source).

II. To determine the resolving power of a telescope.

III. To determine the resolving power of a grating.

IV. Set up Newton's rings to determine wave length of sodium light.

V. To measure an inaccessible height using sextant.

VI. To determine the principal points of a lens system.

VII. To determine the divergence and wave length of a given laser source.

D. Quantum Physics:

VIII. To study the Photoelectric effect and determine the value of Planck's constant.

IX. To study the gas discharge spectrum of hydrogen.

X. To study the absorption spectra of iodine vapours.

XI. To determine the ionization potential of mercury.

Exercises :

1. To measure the diameter of Newton's rings.
2. Study of variation of light intensity using photovoltaic cell/inverse square law.
3. To determine the angle of wedge using interference method.
4. To measure the angle of elevation of a tall building.

Computer Based Activities : Elementary C language programs.

1. To find the sum of the sine and cosine series and print out the curve.
2. Motion of a projective using computer simulation.

Text and Reference Books :

1. *A Laboratory Manual of Physics for Undergraduate Classes,* D.P. Khandelwal.
2. *B.Sc. Practical Physics,* C.L. Arora (S. Chand) & Co. (2014)
3. *Numerical Analysis* by C. Dixon.
4. *Programming with C, Schaum series* by Byron Gottfried & Jitender Chhabra

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CHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

Scheme of Teaching and Examination

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Total Marks

SEMESTER-III-	**100**
SEMESTER-IV-	**100**
	200

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-IX: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Chemistry of Elements of First Transition Series:
Characteristic properties of *d*-block elements.

Properties of the elements of the first transition series, their simple compounds and complexes, illustrating relative stability of their oxidation states, coordination number and geometry.

UNIT-II (7 Hrs.)

Chemistry of Elements of Second and Third Transition Series:
General characteristics, comparative treatment with their 3*d*-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and stereochemistry.

UNIT-III (8 Hrs.)

Chemistry of Coordination Compounds-I
Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds

UNIT-IV (7 Hrs.)

Chemistry of Coordination Compounds-II
Valence bond theory of transition metal complexes. Properties of Coordination compounds i.e. magenetic properties, colours (Qualitative approach only), use of coordination compounds.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-X: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7Hrs.)

Alkyl and Aryl Halides

Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms of nucleophilic substitution reactions of alkyl halides, S_N2 and S_N1 reactions with energy profile diagrams.

Polyhalogen compounds : chloroform, carbon tetrachloride.

Methods of formation of aryl halides, nuclear and side chain reactions. The addition-elimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions.

Relative relativities of alkyl halides vs. allyl, vinyl and aryl halides.

UNIT-II (8 Hrs.)

Alcohols and Phenols:

Classification and nomenclature

Monohydric alcohols-Nomenclature, methods of formation by reduction of aldehydes, ketones, carboxylic acids and esters. Hydrogen bonding. Acidic nature. Reactions of alcohols. Dihydric and Trihydric alcohols-Nomenclature, methods of formation, chemical reactions of vicinal glycols and glycerol.

Preparation of phenols, physical properties and acidic character. Comparative acidic strengths of alcohols and phenols, resonance stabilization of phenoxide ion. Reactions of phenols-electrophilic aromatic substitution, acylation and carboxylation. Mechanisms of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, and Reimer-Tiemann reaction.

UNIT-III (8 Hrs.)

Aldehydes and Ketones I

Nomenclature and structure of the carbonyl group. Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids. Physical properties.

UNIT-IV (7 Hrs.)

Aldehydes and Ketones-II

Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol, Perkin and Knoevenagel condensations. Condensation with ammonia and its derivatives. Wittig reaction, Mannich reaction.

Use of acetals as protecting group. Oxidation of aldehydes, Baeyer-Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen, Wolff-Kishner, $LiAlH_4$ and $NaBH_4$ reductions.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.
4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XI: PHYSICAL CHEMISTRY-A

Time : 3 Hrs.
Max. Marks:22+3
60 Hrs. (2 Hrs./Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Liquid State:
Intermolecular forces, structure of liquids (a qualitative description).
Structural differences between solids, liquids and gases.
Liquid Crystals : Difference between liquid crystal, solid and liquid. Classification, structure of nematic and cholestric phases. Thermography and seven segment cell.

UNIT-II **(7 Hrs.)**

Chemical Equilibrium:
Equilibrium constant and free energy. Thermodynamic derivation of law of mass of mass action. Le - Chatelier's principle.
Reaction isotherm and Reaction isochore-Clapeyron equation and Clausius –Clapeyron equation, applications.

UNIT-III **(8 Hrs.)**

Thermodynamics-II:
Second Law of Thermodynamics: Need for the law, different statements of the law, Carnot cycle and its efficiency, Carnot theorem. Thermodynamic scale of temperature.

Concept of Entropy: Entropy as a state function, entropy as a function of V & T, entropy as a function of P & T, entropy change in physical change, Clausius inequality, entropy as a criteria of spontaneity and equilibrium. Entropy change in ideal gases and mixing of gases.

UNIT-IV (7 Hrs.)

Thermodynamics-III:
Third Law of Thermodynamics: Nernst heat theorem, statement and concept of residual entropy, evaluation of absolute entropy from heat capacity data. Gibbs and Helmholtz functions; Gibbs function (G) and Helmholtz functions (A) as thermodynamic quantities, A & G as criteria for thermodynamic equilibrium and spontaneity, their advantage over entropy change. Variation of G and A with P, V and T.

Instructions for paper setters and candidates:

i. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*

ii. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*

iii. *Compulsory question carries six marks and remaining all questions carry four marks each.*

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XII: LABORATORY PRACTICALS

Max. Marks:22+3

Inorganic Chemistry **6 Periods/week**

Quantitative Analysis

Volumetric Analysis:

a) Estimation of calcium content in chalk as calcium oxalate by permanganometry.
b) Estimation of hardness of water by EDTA.
c) Estimation of ferrous and ferric by dichromate method.
d) Estimation of copper using sodium thiosulphate

Gravimetric Analysis

Analysis of Cu as CuSCN and Ni as Ni (dimethylgyoxime)$_2$.

Physical Chemistry

Thermochemistry:

a) To determine the solubility of benzoic acid at different temperatures and to determine ΔH of the dissolution process.
b) To determine the enthalpy of neutralization of a weak acid/weak base versus strong base/strong acid and determine the enthalpy of ionization of the weak acid/weak base. pH of a Buffer solution, Determination of ionization constant of a weak acid.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Inorganic Chemistry	: 09 marks
Q.No. II. Physical Chemistry	: 06 marks
Q.No. III. Viva-Voce	: 04 marks
Ask four questions (2 marks each) related to chemistry practicals.	
Q.No. IV. Note Book	: 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs:Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R. Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-XIII: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Chemistry of Lanthanide Elements:
Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

Chemistry of Actinides:
General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from U, similarities between the later actinides and the later lanthanides.

UNIT-II (7 Hrs.)

Acids and Bases:
Arrhenius, Bronsted-Lowry, the Lux-Flood, solvent system and Lewis concepts of acids and bases.

UNIT-III (8 Hrs.)

Oxidation and Reduction:
Use of redox potential data – analysis of redox cycle, redox stability in water – Frost, Latimer and Pourbaix diagrams. Principles involved in the extraction of the elements.

UNIT-IV (7 Hrs.)

Non-aqueous Solvents:
Physical properties of a solvent, types of solvents and their general characteristics, reactions in non-aqueous solvents with reference to liquid NH_3 and liquid SO_2.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

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7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-XIV: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Carboxylic Acids:
Nomenclature, structure and bonding, physical properties, acidity of carboxylic acids, effects of substitutions on acid strength. Preparations of carboxylic acids. Reactions of carboxylic acids. Hell-Volhard-Zelinsky reaction. Synthesis of acid chlorides, esters and amides, Reduction of carboxylic acids. Mechanism of decarboxylation. Methods of formation and chemical reactions of halo acids. Hydroxyl acids: Malic, tartaric and citric acid (structural features only).

Method of formation and chemical reactions of unsaturated monocarboxylic acids.
Dicarboxylic Acids: Methods of formation and effect of heat and hydrating agents.

UNIT-II (7 Hrs.)

Carboxylic Acid Derivatives:
Structure and nomenclature of acid chlorides, esters, amides and acid anhydrides. Relative stability & reactivity of acyl derivatives. Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution.

Preparation of carboxylic acid derivatives, chemical reactions. Mechanisms of esterification and hydrolysis (acidic and basic).

UNIT-III (8 Hrs.)

Ethers , Epoxides Fats, Oils and Detergents:
Nomenclature of ether and methods of their formation, physical properties. Chemical reaction-cleavage and autoxidation, Ziesel's method.

Synthesis of epoxides. Acid and base-catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides.

Natural fats, edible and industrial oils of vegetable origin, common fatty acids, glycerides, hydrogenation of unsaturated oils. Saponification value, iodine value, acid value. Soaps, synthetic detergents; alkyl and aryl sulphonates.

UNIT-IV **(7 Hrs.)**

Organic Compounds of Nitrogen:
Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanisms of nucleophilic substitution in nitroarenes and their reductions in acidic, neutral and alkaline media. Picric acid.

Structure and nomenclature of amines, physical properties. Stereochemistry of amines, Separation of a mixture of primary, secondary and tertiary amines. Structural features effecting basicity of amines. Amine salts as phase-transfer catalysis. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel-phthalimide reaction, Hofmann bromamide reaction.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.

4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.

5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XV: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Phase equilibrium:

Statement and meaning of the terms – phase, component and degree of freedom, derivation of Gibbs phase rule, phase equilibria of one component system—water, CO_2 and S systems.

Phase equilibria of two component system –solid –liquid equilibria, simple eutectic – Bi-Cd system, desiliverisation of lead.

Solid solutions—compound formation with congruent melting point (Mg-Zn) and incongruent melting point, (NaCl-H_2O) system. Freezing mixtures, acetone-dry ice.

Partially Miscible Liquids –Phenol-water, trimethylamine – water, nicotine –water systems.

Lower and upper consolute temperature. Effect of impurity on consolute temperature, immiscible liquids, steam distillation. Nernst distribution law-thermodynamic derivation, applications.

UNIT-II (7 Hrs.)

Electrochemistry –I:

Electrical transport –Conduction in metals and in electrolyte solutions, specific conductance and equivalent conductance, measurement of equivalent conductance, variation of equivalent and specific conductance with dilution.

Migration of ions and Kohlrausch Law, Arrhennius theory of electrolyte dissociation and its limitations, weak and strong electrolytes, Ostwald's dilution law, its uses and limitations. Debye-Huckel-Onsager's equation for strong electrolytes (elementary treatment only). Transport number, definition and determination by Hittorf method and moving boundary method.

UNIT-III (8 Hrs.)

Electrochemistry-II:

Types of reversible electrodes – gas metal – ion, metal –insoluble salt – anion and redox electrodes. Electrode reactions, Nernst equation, derivation of cell E.M.F. and single electrode potential, standard hydrogen electrode – reference electrodes – standard electrode potential, sign conventions, electrochemical series and its significance.

UNIT-IV **(7 Hrs.)**

Electrolytic and Galvanic cells – reversible and irreversible cells, conventional representation of electrochemical cells.

E.M.F. of a cell and its measurements. Computation of cell E.M.F. Calculation of thermodynamic quantities of cell reactions (ΔG, ΔH and K), Polarization, over potential and hydrogen overvoltage.
Concentration cell with and without transport, liquid junction potential, application of concentration cells, valency of ions, solubility product and activity coefficient, potentiometric titrations.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each..

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XVI LABORATORY PRACTICALS

Max. Marks: 22+3
6 Periods/week

Organic Chemistry

Laboratory Techniques:

a) Determination of R_f values and identification of organic compounds. Separation of isometric mixture of Ortho and paranitroaniline using hexane and ethyl acetate (8.5 : 1.5) by thin layer chromatography.

b) Extraction of caffeine from tea leaves.

Qualitative Analysis:

Detection of elements (N, S and halogens) and functional groups (phenolic, carboxylic, carbonyl, esters, carbohydrates, amines, amides, nitro and anilide), in simple organic compounds.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Organic Chemistry: (analysis of organic compound) : 09 marks
Q.No II. TLC experiment, Extraction of caffeine) : 06 marks
Q.No. III. Viva-Voce : 04 marks
Ask four questions (2 marks each) related to chemistry practicals.
Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs : Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2016-17

Third Semester		**Time**	**Theory**	**Int Assess.**	**Max Marks**
Theory Paper-A:	Diversity of Seed Plants and their Systematics-I	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-I	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Fourth Semester					
Theory Paper-A:	Diversity of Seed Plants and their Systematics-II	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-II	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY
SEMESTER-III

THEORY PAPER- A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS- I

Objective: This paper deals with highly advance and evolved group of plants with naked seeds i.e. Gymnosperms. The course work of this paper gives a fair idea about the general features, economic importance and study of fossil as well as living gymnosperms.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various plant forms.

UNIT-I

General characteristics and economic importance of gymnosperms; differences between gymnosperms and angiosperms; differences between manoxylic and pycnoxylic wood.

UNIT-II

Fossil gymnosperms : Brief account of fossils , their formation and types (excluding details).
Lyginopteris: Introduction, external structure of stem; internal structure of primary stem, root and leaf; reproduction.
Williamsonia: Introduction, external morphology; internal structure; reproductive organs, male and female flowers.

UNIT-III

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of *Cycas*.

UNIT-IV

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of:

a) *Pinus*
b) *Ephedra*

Suggested Reading:

1. Bhatnagar, S.P. and Moitra, A. Gymnosperms, New Age International Limited, New Delhi, 1996.

2. Chopra, G.L. Text book of Gymnosperms, S. Nagin, Delhi, 1976.

3. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012

4. Gifford, E.M. and Foster, A.S., Morphology and Evolution of Vascular Plants., W.H. Freeman & Company, New York, 1988.

5. Pandey, B.P. College Botany, Vol. II., S. Chand & Company Ltd., New Delhi, 1994.

6. Singh, V., Pande, P.C. and Jain, D.K., A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.

7. Sporne, K.R. The Morphology of Gymnosperms, Hutchinson & Co (Publishers) Ltd., London, 1965.

8. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III., Pradeep Publications, Jalandhar, 2014.

9. Stewart, W.M. Paleobotany and the Evolution of Plants, Cambridge University Press, Cambridge, 1983.

PAPER –B: STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-I

Objective: This paper deals with the basic body plan and diversity in flowering plant forms. The course work of this paper covers vegetative and reproductive morphology of these plants and will familiarize the students with plants bearing the enclosed seeds.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

The basic body plan of a flowering plant.
Diversity in plant form in annuals, biennials and perennials.
Root system: Tap root and adventitious root system and their various types; structural and anatomical modifications for storage, respiration and reproduction.

UNIT-II

Stem : Modifications of aerial and underground stem.
Leaf: Venation, phyllotaxy, simple and compound leaves, functions and modifications; internal structure (dicot and monocot leaves).

UNIT-III

Flower : As a modified shoot, functions; structure of anther and pistil; structure and development of male and female gametophytes.

UNIT-IV

Double fertilization and its significance; different types of ovules and embryo-sacs.

Suggested Reading:

1. Bhojwani, S.S. and Bhatnagar, S.P., The Embryology of Angiosperms, 5th edition. Vikas Publishing House Pvt. Ltd., Delhi, 2009.

2. Goyal J.P. and Saini, A., Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

3. Pandey, S.N., Chadha, A., Plant Anatomy and Embryology, Vikas Publishing House Pvt. Ltd., Delhi, 1996.

4. Pullaiah, T., Lakshminarayana, K., Rao, B.H. Text book of Embryology of Angiosperms, Regency Publications, New Delhi, 2001.

5. Rudall, P.J., Anatomy of Flowering Plants - An Introduction to Structure and Development, Cambridge University Press, USA, 2007

6. Singh, V., Plant Anatomy and Embryology of Angiosperms, Global Media Publications, Delhi 2010.

7. Singh, V., Pande, P.C. and Jain, D.K., A Text Book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

8. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.

Suggested laboratory exercises:

1. *Cycas*:
   - i) Habit, armour of leaf bases on the stem, young and old foliage leaves, scale leaves, male cone, megasporophyll, seed.
   - ii) Preparation of permanent stained slides of *Cycas* (T.S. leaflet, rachis and coralloid root).

2. *Pinus*:
   - i) Dwarf shoot; Male cone; Female cones (first year, second year and third year); Seed.
   - ii) Preparation of permanent slide of T.S. needle and pollen grains.
   - iii) Study through permanent slides :
     - a) L.S. male cone
     - b) L.S. female cone
     - c) L.S. ovule

3. *Ephedra*:
   - i) Habit and structure of male and female cones
   - ii) Preparation of permanent slide of T.S. stem (young).
   - iii) Study through permanent slides:
     - a) L.S. female cone
     - b) L.S. male cone

4. Modifications of underground stem and leaf modifications.

5. Study through permanent slides :
   i) V.S. dicot leaf
   ii) V.S. monocot leaf

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify, draw its well labeled diagram and show it to the examiner. 6

2. Identify, write illustrated morphological note on specimen B (from gymnosperms) and C from underground stem/leaf modifications. 4

3. Identify slides D and E giving at least two identifying features. 4

4. Practical note book and *Viva-voce* 2+2=4

BOTANY

SEMESTER-IV

PAPER-A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS-II

Objectives: This paper deals with highly advanced and evolved group of plants i.e. Angiosperms. The study of gradual transition from seedless plants to seed plants would make students familiar with origin of structural and functional complexity in plant kingdom. The systematics part of this paper is the backbone of study of Botany. Without having knowledge of taxonomy and species concept, no further research work can be pursued. The identification, nomenclature and classification of the concerned plants make the first step of any research work in Botany.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various families of flowering plants.

UNIT-I

General characters of Angiosperms. Plant nomenclature and International Code of Botanical Nomenclature : Common names and scientific names, principles and rules; taxonomic ranks; type concept (Holotype, Isotype, Syntype, Paratype, Lectotype, Neotype and Topotype); principle of priority, aims and objectives of plant taxonomy.

A brief account of Bentham and Hooker's System of classification, its merits and demerits.

UNIT-II

Terminology pertaining to floral description.

General account and diagnostic features of the following families (excluding economic importance) :

Liliaceae	:	*Asphodelus/Asparagus*
Gramineae (Poaceae)	:	*Triticum*
Ranunculaceae	:	*Ranunculus* and *Delphinium*
Brassicaceae	:	*Brassica*

UNIT-III

General account and diagnostic features of the following families (excluding economic importance):

Rutaceae	:	*Citrus* and *Murraya*
Malvaceae	:	*Hibiscus*
Fabaceae	:	*Lathyrus, Cassia* and *Acacia*
Umbelliferae (Apiaceae)	:	*Coriandrum*

UNIT-IV

General account and diagnostic features of the following families (excluding economic importance) :

Compositae (Asteraceae)	:	*Helianthus/Ageratum*
Asclepiadaceae	:	*Calotropis*
Solanaceae	:	*Solanum* and *Petunia*
Labiatae (Lamiaceae)	:	*Ocimum*
Chenopodiaceae	:	*Chenopodium*

Suggested Readings:

1. Chopra, G.L. Angiosperms: Systematic and Life Cycle, Pradeep Publications, Jalandhar, 1987.

2. Davis, P.H. and Heywood, V.H. Principles of Angiosperm Taxonomy, Oliver and Boyd, London, 1963.

3. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012.

4. Heywood, V.H. and Moore, D.M. (eds.) Current Concepts in Plant Taxonomy, Academic Press, London, 1984.

5. Jeffrey, C. An Introduction to Plant Taxonomy, Cambridge University Press, London, 1982.

6. Jones, S.B., Jr. and Luchsinger, A.E. Plant Systematics (2nd edition), McGraw-Hill Book Co., New York, 1986.

7. Maheshwari, J.K. Flora of Delhi, CSIR, New Delhi, 1963.

8. Naik, V.N. Taxonomy of Angiosperms, Tata McGraw Hill Education, 1984.

9. Radford, A.E. Fundamentals of Plant Systematics, Harper and Row, New York, 1986.

10. Singh, G. Plant Systematics: Theory and Practice, Oxford and IBH Pvt. Ltd., New Delhi, 1999.

11. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.

12. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III, Pradeep Publications, Jalandhar, 2006.

13. Stace, C.A. Plant Taxonomy and Biosystematics (2nd edition). Edward Arnold, London, 1989.

14. Vasishta, P.C. Taxonomy of Angiosperms. R. Chand & Co., New Delhi, 1997.

PAPER-B: **STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-II**

Objectives: This paper deals with structure development and reproduction in flowering plants – the most fascinating group of plants on earth. The course material of this paper deals with internal structure of various plant parts, their growth patterns and abnormalities in structural development. The vast range of variation found in this group of plants provides a platform to students for acquiring basic knowledge of flowering plants which makes a foundation of applied branches like horticulture, floriculture, olericulture and arboriculture.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Tissue systems: Meristematic, shoot apex, root apex; simple and complex permanent tissues, special tissues; internal structure of primary dicot stem & root (*Helianthus*); secondary growth in dicot stem & root (*Helianthus*); internal structure of monocot stem & root (*Zea mays*); differences between dicot stem and monocot stem; differences between dicot root and monocot root.

UNIT-II

Anomalous stem structure in *Boerhaavia*, *Nyctanthes*, *Mirabilis* and *Dracaena*.
Various methods of vegetative propagation; micropropagation, basic technique and its importance.

UNIT-III

Types of pollination, advantages and disadvantages of self and cross-pollination; contrivances for self and cross-pollination, various agencies to bring about cross-pollination, characters of flowers pollinated by different agencies.

UNIT-IV

Seed formation: Development of endosperm and embryo. Fruit development, maturation and parthenocarpy. Significance of seed: Suspended animation; ecological adaptation and dispersal strategies.

Suggested Readings:

1. Cutter, E.G. Part. I. Cells and Tissues, Edward Arnold, London, 1969.

2. Cutter, E.G. Plant Anatomy: Experiment and Interpretation. Part II, Organs. Edward Arnold, London, 1971.

3. Esau, K. Anatomy of Seed Plants, 2nd edition, John Wiley & Sons, New York, 1977.

4. Fageri, K. and Van der Pijl. The Principles of Pollination Ecology, Pergamon Press, Oxford, 1979.

5. Fahn, A., Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.

6. Goyal J.P. and Saini, A., Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

7. Hartmann, H.T. and Kestler, D.E. Plant Propagation: Principles and Practices, 3rd edition. Prentice-Hall of India Pvt. Ltd. New Delhi, 1976.

8. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California. U.S.A, 1988.

9. Proctor, M. and Yeo, P., The Pollination of Flowers, William Collins Sons, London, 1973.

10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants, 5th edition, W.H. Freeman and Co., Worth Publishers, New York, 1999.

11. Singh, V. Pande, P.C. and Jain, D.K. A Text book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

12. Srivastava, H.N.. Structure, Development and Reproduction in Flowering Plants, Vol. IV., Pradeep Publications, Jalandhar, 2014.

13. Vasishta, P.C. A Text book of Plant Anatomy, S. Nagin & Co., Delhi, 1979.

Suggested Laboratory Exercises:

1. Preparation of permanent stained slides to show:

    a. Anomalous internal structure of stem in *Boerhaavia, Nyctanthes, Mirabilis* and *Dracaena*.
    b. T.S. dicot stem & root (*Helianthus*)
    c. T.S. monocot stem & root (*Zea mays*)

2. Description of flowers in technical terms, drawing Floral Diagram, V.S. flower, T.S. ovary, writing Floral Formula with reference to the respective families of the genera mentioned in different families in theory syllabus.

Note: To make the students familiar with plants, (preferably pertaining to syllabus) the teachers are required to organize excursions to forests and hills.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A., Make its permanent stained slide. Identify and draw its well labeled diagram and show it to the examiner. 5

2. Describe specimen B or C in technical terms and proper sequence. Draw Floral Diagram and V.S. of flower B or C. Cut T.S. of ovary and V.S. of flower and show them to the examiner. Write Floral Formula also. Refer specimen B or C to its respective family. 5

3. Identify slides D and E giving at least one reason. 2

4. Practical note book 2

5. Plant Album 2

6. *Viva-voce* 2

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ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper-I	:	Biodiversity (Chordates) & Evolution-I	40	(36+ 4 marks)
Paper-II	:	Biochemistry & Animal Physiology-I	40	(36 + 4 marks)
Practical		(Covering the entire syllabus) of 4 hours duration	20	(18+ 2 marks)
		Total :	**100 marks**	

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE :

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER–I : BIODIVERSITY (CHORDATES) & EVOLUTION-I (ZOO 301)

Max. Marks	:	40
Theory Exam.	:	36 Marks
Internal Assessment	:	4 Marks
Time	:	3 Hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Concept and evidences of organic evolution.
Theories of organic evolution.
Origin of life.

UNIT-II

Chordates – Origin, Parental care and migration.
Protochordates –Urochordata-Type Study – *Herdmania* except development,
Cephalochordata- Type Study – *Amphioxus* (except development)

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Protochordates	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa, Oikopleura & Amphioxus (*excluding development*).*

UNIT-III

Cyclostomata – External Characters of *Petromyzon* & affinities of Cyclostomata
Pisces-Type study-*Labeo*, Scales & fins.

Cyclostomata	:	*Myxine, Petromyzon* & *Ammocoetes* larva.
Chondrichthyes	:	*Zygaena*(Hammer headed shark), *Pristis* (saw fish), *Narcine* (electric ray), *Trygon*, *Rhinobatus* and *Chimaera*(rabbit fish).
Actinopterygii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus* (lung fish)

UNIT-IV

Amphibia – Type study-Frog.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Amphibia	:	*Uraeotyphlus, Necturus, Ambhiuma, Amblystoma* and its Axolotl Larva, *Triton, Salamandra, Hyla, Rhacophorus.*

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.

4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.

5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt. Ltd., 1993.

PAPER II : BIOCHEMISTRY AND ANIMAL PHYSIOLOGY-I (ZOO 302)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Biochemistry and its scope;
Carbohydrates, proteins, lipids and nucleic acids: their classifications and functions.

UNIT-II

Enzymes : Nature, their classification and coenzymes.

Carbohydrate metabolism : The Embden Meyerhoff, Parnas pathway,(glycolysis), the tricarboxylic acid cycle, the hexose monophosphate shunt**,** glycogenesis and glycogenolysis.

UNIT-III

Digestion : Digestion of dietary constituents, regulation of digestive processes and absorption. extra and intra cellular digestion, enzymatic digestion and symbiotic digestion.

Respiration : Transport of O_2 and CO_2, Oxygen dissociation curve of haemoglobin, Bohr effect, chloride(-) shift, Haldane effect and control of breathing.

UNIT-IV

Blood : Composition and functions of blood and lymph. Function of hemoglobin, blood clotting. Blood groups including Rh. Factor.

Heart : Origin and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, blood pressure and micro-circulation.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.
2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.
3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990
4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 301 & 302 (ZOO 251)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Urochordata	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa & Oikopleura.*
Cephalochordata	:	*Amphioxus.*
Cyclostomata	:	*Myxine, Petromyzon & Ammocoetes* Larva.
Chondrinchthyes	:	*Zygaena* (Hammer headed shark), *Pristis* (Saw fish), *Narcine* (Electric ray), *Trygon*, *Rhinobatus* and *Chimaera* (Rabbit fish).
Actinoptergii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus*
Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva, *Triton, Salamandra, Hyla, Rhacophorus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Herdmania	:	General anatomy
Labeo	:	Digestive**,** reproductive systems, heart, afferent and efferent branchial arteries and cranial nerves.

3. Study of the skeleton of *Labeo, Rana* (frog)
4. Study of the following prepared slides :
   T.S. *Amphioxus* through various regions.
   Spicules & pharynx of *Herdmania* & pharynx of *Amphioxus.*
5. Study of the following prepared slides :
   Histology of frog (compound tissues).
6. Recording of blood pressure of man
7. Demonstration of equipment used for estimating haemoglobin content.
8. Demonstrate the presence of amylase in saliva, denaturation by pH and temperature.
9. Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides F-H giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17
SEMESTER-IV

Paper I: Biodiversity (Chordates) & Evolution – II	40 (36 + 4) marks
Paper II : Biochemistry & Animal Physiology-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER – I : BIODIVERSITY (CHORDATES) & EVOLUTION- II (ZOO 401)

UNIT-I

Reptilia- Type study-*Uromastix*, Poisonous and non-poisonous snakes, Poison apparatus.
Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Reptilia : *Chelone*(turtle) and *Testudo*(Tortoise), *Hemidactylus* (wall lizard), *Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis* and Alligator.

UNIT-II

Aves-Type study-Pigeon, Flight adaptations.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Aves : *Ardea, Milvus, Pavo, Tyto, Alcedo, Eudynamis* and *Casuarius*.

UNIT- III

Mammals-Type study-Rat, Dentition.

Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus* (Kangaroo), *Loris, Macaca, Manis* (Scaly ant eater), *Hystrix* (porcupine), *Funambulus* (Squirrel) *Panthera, Canis,Herpestes* (Mongoose), *Capra, Pteropus*.

UNIT-IV

Concept of micro, macro and mega-evolution.
Biological concept of species.
Fossils and evolutionary rate.
Evolution of man.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.
4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.
5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt.Ltd., 1993.

PAPER II : BIOCHEMISTRY AND ANIMAL PHYSIOLOGY-II (ZOO 402)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Lipid metabolism : B-oxidation of fatty acids, fate of glycerol and gluconeogenesis, interaction of carbohydrates and lipids, lipogenesis in tissues, ketosis.

UNIT-II

Protein metabolism : Protein metabolism of amino acids (Oxidative deamination, transamination and decarboxylation**;** hydrolysis of proteins and Ornithine cycle).

UNIT-III

Excretion : Urine formation, osmoregulation and counter current mechanism.

Muscles : Ultrastructure, chemical and physiological basis of skeletal muscle contraction.

UNIT-IV

Neural Integration : Structure of neuron, resting membrane potential, origin and propagation of impulse along the axon, synapse and myoneural junction.

Endocrine System : Structure, hormones and functions of thyroid, parathyroid, adrenal, pineal, hypothalamus, pituitary, pancreas, gonads, thymus, hormones of alimentary canal and kidney.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.

2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.

3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990

4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 401 & 402 (ZOO 252)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Reptilia	:	*Chelone*(Turtle) and *Testudo* (Tortoise), *Hemidactylus, Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera,Crocodilus, Gavialis.*
Aves	:	*Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
Mammalia	:	*Ornithorhynchus, Echidna, Didelphis, Macropus,Loris, Macaca, Manis, Hystrix, Funambulus,Panthera, Canis, Herpestes,Capra,Pteropus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Chick	:	Digestive, arterial, venous and urinogenital systems.
White Rat	:	Digestive, arterial, venous and urinogenital systems.

3. Study of the skeleton of *Varanus, Gallus* and Rat/ *Oryctolagus* (Rabbit).
4. Study of the following prepared slides :
   Histology of rat/rabbit (compound tissues)
5. Make temporary preparations of the following:
   Blood smear of a mammal.
6. Identification of food stuffs:starch, glucose, proteins and fats in solution.
7. Demonstration of osmosis and diffusion.
8. Analysis of urine for urea, chloride, glucose and uric acid.
9. An idea of location of endocrine glands in mammals through charts / models/ video clippings

   Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	4 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides D & E giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

****

BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

Scheme of Examination

SEMESTER-III

Paper	Duration	Marks + internal assessment
Theory Paper-A: Carbohydrates and Lipid Metabolism	3 hrs.	45 + 5
Theory Paper B: Protein & Nucleic acid metabolism	3 hrs.	45 + 5
One Practical examination pertaining to the entire syllabus included in Theory Papers A and B	3 hrs.	22 + 3
	Total marks:	**125**

Semester-IV

Paper	Duration	Marks + internal assessment
Theory Paper-A: Advanced Biochemical Techniques	3 hrs.	45 + 5
Theory Paper-B: Membrane Biochemistry	3 hrs.	45 + 5
One Practical examination pertaining to the entire syllabus included in Theory Papers A and B	3 hrs.	22 + 3
	Total marks:	**125**

SEMESTER-III

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Carbohydrate & Lipid metabolism **Marks: 45+5**

Objective: To learn about digestion and absorption of carbohydrates and lipids and major metabolic pathways pertaining to them.

SECTION-I

(Lectures 8)

Digestion & Absorption of Carbohydrates:
Metabolic Pathways of Carbohydrates, Glycolysis and alcoholic fermentation, The Pentose Phosphate Pathway, Glucuronate and glyoxylate pathway, TCA cycle, Glycogenolysis & Glycogenesis, Gluconeogenesis, Biosynthesis of starch, Biosynthesis of Ascorbic acid.

SECTION-II

(Lectures 8)

Digestion & transport of lipids:
β-Oxidation of fatty acids including odd chain fatty acids. α and ω oxidation of fatty acids. Degradation of triglycerides and phospholipids. Formation and utilization of ketone bodies.

SECTION-III

(Lectures 7)

Lipid biosynthesis
Biosynthesis of saturated and unsaturated fatty acids.Biosyntheis of triglycerides and phospholipids

SECTION-IV

(Lectures 7)

Biosynthesis of Cholesterol and other lipids
Cholesterol biosynthetic pathway. Biosynthesis of cerebrosides; sulfatides and gangliosides. Biosynthesis of Prostaglandins, Thromboxanes, Leukotrienes, Lipooxins and Prostacyclins.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.

2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey& D.R. Ferrier, Indian Edition, 2005.

3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Grannerand V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).

4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

Paper B: Protein & Nucleic acid metabolism **Marks: 45+5**

Objective: To learn about digestion and absorption of protein & nucleic acid and major metabolic pathways pertaining to them.

SECTION-I

(Lectures 6)

Digestion of Proteins
General Reactions of Amino Acids: Deamination, transamination and decarboxylation. Urea cycle.

SECTION-II

(Lectures 8)

Catabolism of Carbon skeletons of Amino acids
Glycine and alanine, Serine and threonine, Phenylalanine and Tyrosine, Tryptophan, Histidine, Leucine, Valine and Isoleucine, Cysteine and Methionine, Lysine, Glutamic acid and glutamine, Aspartic acid and asparagine.

SECTION-III

(Lectures7)

Biosynthesis of Nutritionally non-essential amino acids and polyamines
Glutamate and Glutamine, Aspartate and Asparagine, Proline, Alanine, Cysteine & Selenocysteine, Tyrosine, Serine, Glycine. Biosynthesis of glutathione, creatinine, nitric oxide and polyamines

SECTION-IV

(Lectures 9)

Nucleic Acids

Degradation of purines and pyrimidines.Biosynthesis of purines, pyrimidines and nucleotides. Catabolism of Heme & Formation of Bile pigments. Biosynthesis of porphyrinsand heme. Conjugation of bilirubin and its clinical significance.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.

2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey & D.R. Ferrier, Indian Edition, 2005.

3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).

4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Estimation of blood glucose by the methods of (i) Folin Wu (ii) Nelson Somogyi.
2. Isolation and assay of glycogen from rat liver.
3. Separation and identification of amino acids by

   (i) Paper chromatography (ii) Thin layer chromatography.
4. Estimation of Ca^{2+} in serum.
5. Estimation of total and free cholesterol in serum.
6. Estimation of total lipids in serum by Vanillin method.

BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Advanced Biochemical Techniques **Marks: 45+5**

Objective: To understand the principles and applications of cell biology techniques, spectroscopic, radioisotopic & spectrometry techniques.

SECTION-I

(Lectures: 8)

General Laboratory Techniques:

Membrane/Ultra filtration, dialysis, diffusion, surface tension, viscosity and their applications to biological systems. Cell Biology techniques: Microbial, animal and plant cell/tissue culture, cell disruption/homogenization/sonication, cell sorting, cell counting, cryopreservation.

SECTION-II

(Lectures: 6)

Fluorescence spectroscopy: Principle, applications of Fluorescence activated Cell Sorting (FACS), Fluorescence in situ hybridization (FISH), Fluorescence immunoassay.

SECTION-III

Radio isotopic Techniques: **(Lectures: 10)**

Nature of isotopes and radioisotopes. Radioactive decay. Properties of radioactive emissions. Units of radioactivity. Techniques used to measure radioactivity; GM counter and liquid scintillation counting and gamma counter. Labelling of Biochemical compounds and autoradiography. Use of radioactive tracers in the study of enzyme reaction mechanisms and metabolic pathways. Radioimmuno assay. Biological hazards of radiation and safety measures in handling radioisotopes.

SECTION-IV

(Lectures: 6)

Nuclear magnetic resonance (NMR) and Electron spin resonance (ESR) : Theory, applications. Atomic spectrometry; Mass spectrometry: Matrix assisted desorption ionization (MALDI)

Books Suggested:

1. Biochemical Techniques – Theory and Practice by John. F. Robyt and Bernard J. White Cole Publishing Co. (U.S.A.).
2. Physical Biochemistry: Application to Biochemistry and Molecular Biology by David Freifelder W.H. Freeman and Company (U.S.A.).

3. A Biologist's Guide to Principles and Techniques of Practical Biochemistry by K.H. Goulding and Keith Wilson, Edward Arnold (U.K.), Ltd.

Paper B: Membrane Biochemistry **Marks: 50**

Objective: To make students aware of structural and functional aspects of membranes. Highlighting the significance of their compositional heterogeneity and to various cell functions.

SECTION-I

(Lectures 7)

Introduction: Membrane structure and organization: Physical and biological models of membranes structure. Protein- lipid interactions in membranes, Fluid mosaic model of membrane structure, its merits and demerits. Constituents of biological membranes in prokaryotes and eukaryotes.Asymmetry of biomembranes.Structure of RBC membrane.

SECTION –II

(Lectures 7)

Membrane dynamics: Physical properties of membrane lipids, membrane fluidity, Phase transitions, cytological biochemical probes and methods to study membrane fluids. Membrane transport: Typical properties of membrane transport, passive diffusion, facilitative diffusion, Carrier mediated active transport. Role of Na, K- ATPase.Ca-ATPase & H^+-ATPase. Ionophores and siderophores, structure and functions.

SECTION –III

(Lectures 8)

Membrane analysis: Isolation and characterization of cell membrane, criteria of membrane purity. Solubilization of membranes and their reconstitution.Labeling of membrane probes and determination of transbilayer distribution of membrane components. Liposomes: Unilamelar and multilamelar vesicles. Methods of their preparation, characterization and their applications in targeting drugs and gene therapy.

SECTION –IV

(Lectures 8)

Biogenesis and turnover of membranes: Synthesis of membrane components and their trafficking, signal hypothesis, coated vesicles. Regulation and coordination of membrane component synthesis. Membrane disorders: Erythrocyte deformities, transport disorders. Disorders of membrane lipids

Books Suggested

1. Jain, MK. Introduction to Biological membranes, John Wiley and sons New York, 1988
2. Vance, DE & Vance JE, Biochemistry of lipids and Biomembranes, Benzamin Cummings, 1985
3. Jones MN & Chapman D. Micelles monolayers and biomembranes, Wiley-Lis New York, 1995
4. Lodish H. Molecular Cell biology, WH Freeman and Company, 2013
5. Various review articles.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Electrophoresis of nucleic acids.
2. Gram staining of cells.
3. Estimation of Lipoproteins in plasma.
4. Colorimetric estimation of inorganic phosphate.
5. Separation of phospholipids by thin layer chromatography.
6. Estimation of lactic acid in blood before and after exercise.
7. Preparation of starch from potato and its hydrolysis by salivary amylase.

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MICROBIOLOGY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2016-17

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

SEMESTER-III

Scheme of Examination			Duration	Marks
THEORY			**6 hrs.**	**75(33+33+9*)**
MIC 301	**:**	**Introduction to Medical Microbiology-I**	**3 hrs.**	**37.5(33+4.5*)**
MIC 302	**:**	**Introductory Immunology-I**	**3 hrs.**	**37.5(33+4.5*)**
PRACTICAL				
One Practical pertaining to the entire syllabus included in Theory Papers MIC 301 and MIC 302			**3 hrs.**	**25(20+5*)**

Semester-IV

THEORY			**6 hrs.**	**75(33+33+9*)**
MIC 401	**:**	**Introduction to Medical Microbiology-II**	**3 hrs.**	**37.5(33+4.5*)**
MIC 402	**:**	**Introductory Immunology-II**	**3 hrs.**	**37.5(33+4.5*)**
PRACTICAL				
One Practical pertaining to the entire syllabus included in Theory Papers MIC 401 and MIC 402			**3 hrs.**	**25(20+5*)**

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY
SEMESTER-III

MIC 301 : INTRODUCTION TO MEDICAL MICROBIOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Brief introduction to terminology of infectious diseases, Frequency of disease, Recognition of infectious disease, Infectious disease cycle.

Section B

Nomenclature and classification of microbes of medical importance, criteria of classification

Section C

Microbial adherence, Active penetration into body, Passive penetration into body, Microbial production of enzymes in the body.

Section D

Development of chemotherapy, General characteristics of antimicrobial drugs, Determining level of antimicrobial activity, Mechanism of action of antimicrobial drugs, Factors influencing the effectiveness of antimicrobial drugs.

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 302 : INTRODUCTORY IMMUNOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction and history of immunology, Non-specific defence; Physical barriers, Chemical barriers, Cellular, Phagocytosis, Inflammatory barriers, Inflammation, Fever, Types of Immunity, Active and Passive Immunity, Immunological memory

Section B

Humoral Immune Response, Antibodies/ Immunoglobulins, Structure, function and type of antibodies

Section C

Cell Mediated Immune System (CMI), Mechanism of CMI, Types of effector T cells, Helper T cells, Suppressor T cells, Cytotoxic T cells, Killer T cells, Interactions between T and B lymphocytes

Section D

Antigen-antibody interactions,: Precipitation reaction, Immunodiffusion test, Counter current Immuno electrophoresis, Complement fixation tests

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

PRACTICAL

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Staining- Gram staining, Albert and ZNCF staining
2. Isolation and maintenance of pure cultures
3. Physiological characteristics of bacteria and its use for their identification
4. Assay of antimicrobials
5. Preparation of serum/plasma

MICROBIOLOGY

SEMESTER IV

MIC 401 : INTRODUCTION TO MEDICAL MICROBIOLOGY-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Virulence and mode of transmission, Emerging and reemerging infectious diseases, Global travel and health considerations, Nosocomial infections

Section B

Origin of normal flora, Germ free and gnotobiotic life, Distribution and occurrence of Normal flora of skin, eye, respiratory tract, mouth, intestinal tract and genitourinary tract

Section C

Events in infection following penetration, Microbial virulence factors

Section D

Antibacterial drugs viz. sulphonamides, Quinolones, Penicillins, Cephalosporins, Tetracyclines, Erythromycin, and Chloramphenicol, Drug resistance, Antifungal and antiviral drugs

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 402 : INTRODUCTORY IMMUNOLOGY-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Primary and secondary lymphoid organs, Mucosa associated lymphoid tissues (MALT), Cutaneous associated lymphoid tissues (CALT), Lymphocyte traffic, Cells of Immune system, Antigens; Factors affecting Immunogenicity, Epitopes, Haptens

Section B

Antigenic combining regions of antibodies, Factors influencing antibody production, Genetic model, Multigene organisation, Generation of antibody diversity

Section C

Cytokines, Lymphokines, Colony stimulating factors, Tumour necrosis factors, Interferons, Accessory cells (Macrophages), the complement system, Classical and alternate pathway, HLA, Monoclonal antibody technology and its applications

Section D

Antigen-antibody Interactions: Widal test, Wasserman's test, Weil-Felix reaction, Western blotting, Types of Vaccines

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

PRACTICAL

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Sterilization- Introduction to autoclave, hot air oven, filter sterilization
2. Demonstration of Immune organs in dissected animals
3. Demonstration of Immune cells in smears prepared from Immune organs
4. Complement fixation
5. Antigen-antibody interactions:
   -Agglutination
   -Precipitation
   -Blood grouping
   -Immunodiffusion

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ELECTRONICS

(KEPT IN ABEYANCE)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATIONS, 2016-2017

(SEMESTER : FIFTH AND SIX)

i.e

Fifth Semester : November/December, 2016
Sixth Semester : April/May, 2017

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) i.e. FIFTH SEMESTER NOVEMBER/DECEMBER 2016 AND SIXTH SEMESTER APRIL/MAY 2017, EXAMINATIONS.

ENGLISH (Compulsory)

(For B.A. Candidates Only)

SEMESTER V

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

Note:

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.

(ii) Section A shall deal with the text and Section B with composition and grammar.

(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan), **Panjab University Edition.**

Unit I to III (Unit II- Chapter 'Emotional Intelligence' deleted)

Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five** selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting, at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4. Write an essay (in not more than 500 words), choosing one topic out of the given **four**. A wide range of topics should be given and in this respect ideas may be drawn from the prescribed text. **10Marks**

Q.5. (a) Antonyms –***ten*** out of ***fifteen .*** **5 Marks**

(b) Correct the sentences- ***ten*** out of ***fifteen.*** **5 Marks**

……..

ENGLISH (Compulsory)

(For B.A. Candidates Only)

SEMESTER VI

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.
(ii) Section A shall deal with the text and Section B with composition and grammar.
(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan) , **Panjab University Edition.**

Unit IV-VI
Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas. **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five**, selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4.A question on Précis writing shall be set, without any internal choice. For this purpose, the passage chosen should be simple, lucid and coherent and must not exceed 240-250 words. **10 Marks**

Q.5 (a) Idioms and Phrases to be used in sentences. ***ten*** out of ***fifteen*** **5 marks**

(b) One word substitution – ***ten*** out of ***fifteen*** **5 Marks**

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
(ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ)
(ਬੀਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਪੈਰ੍ਹਾ ਰਚਨਾ — 8 ਅੰਕ
3. ਲਿਪੀ — 7 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ (ਸੰਪਾ) ਅਤਰ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

   (ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋ ਇਕ) 5+5=10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5+1 = 5 ਅੰਕ

3. ਪੈਰ੍ਹਾ ਰਚਨਾ (ਲਗਪਗ 250 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
(ਮਨੁੱਖੀ ਸੁਭਾਅ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਜੀਵਨ ਦੇ ਹਲਕੇ ਫ਼ੁਲਕੇ ਵਿਸ਼ਿਆ ਨਾਲ ਸੰਬੰਧਤ)
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7ਅੰਕ
ਲਿਪੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਜਨਮ ਤੇ ਵਿਕਾਸ,

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ

   (i) ਵਾਕੰਸ਼, ਨਾਂਵ ਵਾਕੰਸ਼ ਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪਛਾਣ 6 ਅੰਕ

   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

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ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਨਾਵਲ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਅਖ਼ਬਾਰ ਲਈ ਪ੍ਰੈਸ ਨੋਟ	10 ਅੰਕ
3.	ਗੁਰਮੁਖੀ ਲਿਪੀ	5 ਅੰਕ
4.	ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. **ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ**, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

(ਅ) ਨਾਵਲ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ ਤੇ ਪਾਤਰ ਚਿਤਰਨ (ਦੋ ਵਿਚੋ ਇਕ) 10 ਅੰਕ

2 ਨਾਵਲ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1 = 5 ਅੰਕ

3. ਅਖ਼ਬਾਰਾਂ ਲਈ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨੇ : ਕਾਲਜ ਦੀਆਂ ਸਾਹਿਤਕ, ਸਭਿਆਚਾਰਕ, ਖੇਡਾਂ ਅਤੇ ਅਕਾਦਮਿਕ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ ਸਰਗਰਮੀਆਂ ਬਾਰੇ। (ਲਗਪਗ 200 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
ਨੋਟ : ਸਿਰਫ਼ ਇਕ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨ ਲਈ ਹੀ ਕਿਹਾ ਜਾਵੇ

4. ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7 ਅੰਕ

ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਨਾਮਕਰਣ, ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਲਈ ਅਨੁਕੂਲਤਾ, ਪ੍ਰਮੁੱਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਲਿਖਣ ਵਿਧੀ (ਆਰਥੋਗ੍ਰਾਫ਼ੀ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਸਵਾਲ)

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ
(i) ਵਾਕ ਤੇ ਉਪਵਾਕ ਦੀ ਪਰਿਭਾਸ਼ਾ: ਵਾਕ ਬਣਤਰ ਤੇ ਕਾਰਜ
ਬਣਤਰ: ਸਧਾਰਨ, ਸੰਯੁਕਤ ਤੇ ਮਿਸ਼ਰਤ ਵਾਕ
ਕਾਰਜ: ਪ੍ਰਸ਼ਨਵਾਚੀ, ਆਗਿਆਵਾਚੀ ਤੇ ਬਿਆਨੀਆ ਵਾਕ 6 ਅੰਕ

(ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), 'ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ', ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜ੍ਹ ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ , 1999.
2. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ(ਡਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997
3. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ', ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ,ਅੰਮ੍ਰਿਤਸਰ,2012.
4. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. ਬਰਾੜ ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ', ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ,2008.
6. ਧਾਲੀਵਾਲ ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
7. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER V

PAPER: HISTORY AND CULTURE OF PUNJAB: COLONIAL PERIOD
INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

Objectives: To introduce the students to the history of the history of the region and the impact of colonial rule.

Pedagogy: Lectures, library work and discussions.

UNIT 1

1. Early British Administration: Board of Administration 1849-1853; Reforms under John Lawrence
2. Colonial Policy: Agriculture; Trade & Industry
3. Spread of Modern Education

UNIT II

4. Impact of Socio-Religious Reform Movements: Namdharis; Singh Sabha
5. Impact of Socio-Religious Reform Movements: Arya Samaj; Ahmediyas
6. Uprising of 1907: Causes and Consequences

UNIT III

7. Ghadar Movement: Origin and Activities
8. Jallianwala Bagh: Circumstances and Consequences
9. Gurudwara Reform Movement: Causes and Consequences

UNIT IV

10. Response to Non Co-operation ; Civil Disobedience
11. Partition : Circumstances; Impact
12. Map:, Delhi, Amritsar, Lahore, Lyallpur, Montgomery, Jaito, Nankana Sahib, Khemkaran, Tarn Taran, Jalandhar, Sargodha, Sialkot, Ambala,

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	Khushwant Singh	*A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi,1991.
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991.

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER VI

PAPER: HISTORY AND CULTURE OF PUNJAB: POST INDEPENDENCE PERIOD

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

Objectives: To introduce the students to the history of the history of the region in the post 1947 period.

Pedagogy: Lectures, library work and discussions.

UNIT 1

1. Migration and its Socio-Economic impact
2. Rehabilitation and Resettlement
3. Demand for Punjabi Suba; Reorganization Act 1966

UNIT II

4. Green Revolution and its impact
5. Development of Education
6. Political and Economic Development post 1966

UNIT III

7. Issues of Boundary; water; Chandigarh
8. Socio-Economic Development in the 1980's
9. Operation Bluestar and its impact

UNIT IV

10. New Social issues-gender discrimination, drug menace, farmer suicide
11. Development of Punjabi literature :Bhai Vir Singh; Shiv Kumar Batalvi;Amrita Pritam
12. Map: Delhi,Amritsar,Khemkaran,TarnTaran,Jalandhar, Ambala,Ludhiana,Panipat, Karnal,Qadian, Gurdaspur,Hissar, Chandigarh.

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	R.S. Johar, and J.S. Khanna	*Studies in Punjab Economy,* GNDU, Amritsar, 1983
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy,Chandigarh, 1991.

ENGLISH (ELECTIVE)

SEMESTER V

Max.Marks	**100**
Written	**90**
Int. Assessment	**10**

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding.The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II .**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

1.Modern Indian Literature: Poems and Short Stories, Edited by the Dept. of , University of Delhi, OUP , 2007 New Delhi.

Section I

(Literary terms/Concepts: *Literatures Indian Languages, Colonialism, Post-colonial, Multicultural Society: Orientalism, Hybridity, Ideology, Gender, Race, Class, Caste, Nation, Importance of Translation in India, Methods of Translation)*

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do *five.* 15 marks

Q.2 The examiner will set seven short questions (each to be answered in 60-80 words) based on Modern Indian Literature: Poems and Short stories out of which the students shall be required to attempt only *five.* 15 marks

Q.3. There will be three long questions, out of which two long questions are to be answered each in about 180-200 words. These questions shall be based on *Modern Indian Literature: Poems and Short Stories.* 15 marks

Section II

Q.4 Note-making (A passage of about 1000 words is to be given for this Purpose) 15 marks

Q.5. An unseen passage for Comprehension (about 1000 words again) With ten multiple choice questions is to be given. 15 marks

Q.6 Applied Grammar:

(a) 5 Pairs of words to be used in sentences. (altar/alter/compliment/complement etc.) (1x5=5 marks)

(b) First find one word for many and then use it in a sentence. 5 marks

(c) First change the form of nouns/verbs/adjectives and then make sentences. (1x5=5 marks)

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ENGLISH (ELECTIVE)

SEMESTER VI

Max.Marks	**100**
Written	**90**
Int. Assessment	**10**

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding. The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II .**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

R.K.Narayan's Novel: The Guide

SECTION I

(Literary Concepts/Terms: *Fiction, Non-fiction, Narrative, Bildungsroman, Picaresque Novel, Novel of Sensibility, Historical Romance, Gothic Novel, Realistic Novel, Psychological Novel, Political Novel, Regional Novel, Point of View, Omniscient Author, First Person Narrator, Stream of Consciousness, Protagonist/ antagonist, Plot/Story, Character, Structure)*

Q.1	Literary terms/concepts (*five out of eight*)	15 marks
Q.2.	Short question based on the prescribed novel, *Five out of Seven* (each in 60-80 words).	15 marks
Q.3	Long questions based on the novel *three out of five* dealing with the incidents, theme(s) Character(s), symbols etc.(each in 180-200 words)	15 marks

SECTION II

Q.4	Essay on any one (out of the given four) topic of international importance (in about 700 words)	20 marks
Q.5.	Report-writing (in about 300 words) on an incident/situation , conference/seminar, problem/state of education/poverty /unemployment or similar issues.	10 marks
Q.6.	Translation from Hindi/Punjabi into English (Passage of about 400 words)	
	OR	
	Paragraph on any *one* out of the *two* given topics (for foreign students only)	15 marks

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हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य तृतीय वर्ष) सेमेस्टर-5

पूर्णांक **90+10=100**
समय- 3 घंटे

1. **कुरुक्षेत्र**

रामधारी सिंह 'दिनकर' प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।

(क) 6-6 अंकों की दो संदर्भ सहित व्याख्याएं करनी होगी। कुल चार काव्यांश दिए जायेंगे।

(ख) 15 अंकों का एक आलोचनात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगे। अंक-27

2. **समीक्षा सिद्धांत :**

क. काव्य की परिभाषा तथा भेद, महाकाव्य, खंडकाव्य, गीतिकाव्य की परिभाषा तथा विशेषताएँ

ख. गद्य विधाएं-निबंध, संस्मरण, जीवनी तथा आत्मकथा के स्वरूप और तत्वों का सामान्य परिचय। अंक-30

उपर्युक्त खंडों क ख में से संबंधित 15-15 अंकों के चार प्रश्न पूछे जाएंगे इनमें से केवल दो के उत्तर देने होंगे ।

3 **अलंकार :**

केवल निम्नलिखित अलंकार निर्धारित हैं।
अनुप्रास, यमक, श्लेष, वकोक्ति, उपमा, रूपक, अतिशयोक्ति, विरोधभास, उत्प्रेक्षा, प्रतीप । 6 X 3=18

4 **लघूत्तरापेक्षी :**

प्रथम दो खंडों (कुरुक्षेत्र एवं समीक्षा सिद्धांत) में से पांच-पांच अंक के तीन प्रश्न करने होंगे, 6 प्रश्न पूछे जाएंगे । (शब्द सीमा - 50 शब्द) अंक-15

5. **आंतरिक मूल्यांकन** अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य) (तृतीय वर्ष) सेमेस्टर-6

पूर्णांक 90+10=100
समय- 3 घंटे

1. निबंध लेखन (केवल साहित्यिक और सामाजिक विषयों पर) अंक-20
कुल आठ निबंधों में से किसी एक विषय पर लिखने के लिए कहा जाएगा।

2. गद्य फुलवारी, सम्पादक डॉ0 शहाबुद्दीन शेख, प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।
केवल निम्नलिखित पाठ निर्धारित है । अंक-16

'आसुओं की होली' (प्रेमचंद), 'अकेली' (मन्नु भंडारी), 'चीफ की दावत' (भीष्म साहनी)
'सुभान खाँ' (रामवृक्ष बेनीपुरी) 'भाभी' (महादेवी वर्मा), 'सदाचार का ताबीज (हरिशंकर परसाई), महात्मा गांधी' (रामकुमार वर्मा), 'मैं धोबी हू¡' शिवपूजन सहाय), 'गप-शप' (नामवर सिंह), 'जमनोत्री की यात्रा' (विष्णु प्रभाकर)

(क) 6 अंकों की एक सन्दर्भ सहित व्याख्या करनी होगी । कुल दो व्याख्याँए पूछी जाएंगी ।

(ख) 10 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल दो प्रश्न पूछे जाएंगे ।

3. हिन्दी साहित्य का इतिहास अंक-24
केवल निम्नलिखित गद्य-विधाओं का उद्भव और विकास : उपन्यास, कहानी, नाटक, निबंध, आत्मकथा, जीवनी, संस्मरण, रेखाचित्र ।
इन गद्य- विधाओं में से 12-12 अंकों के कम से कम चार प्रश्न पूछे जाएंगे, छात्रों को केवल दो प्रश्नों के उत्तर लिखने होंगे ।

4. छन्द-परिचय- निम्नलिखित छन्द निर्धारित हैं । अंक-15
दोहा, सोरठा, चौपाई, रोला, कुण्डलियां, सवैया, द्रुतविलम्बित, हरिगीतिका, उपेन्द्रवज्रा, इन्द्रवज्रा ।
पाँच छन्दों के लक्षण और उदाहरण पूछे जाएंगे, जिनमें से तीन का उत्तर देना होगा ।

5. हिन्दी भाषा और उसकी लिपि अंक-10
देवनागरी लिपि : विकास, गुण दोष, सुधार के उपाय 10 अंकों के कुल दो प्रश्न पूछे जाएंगे, जिनमें से केवल एक प्रश्न का उत्तर देना होगा ।

6. निमन्त्रण पत्र, प्रेस, विज्ञप्ति, विज्ञापन का प्रारूप तैयार करना । अंक-5
दो प्रश्न पूछे जाएंगे, छात्रों को एक प्रश्न का उत्तर देना होगा।

आंतरिक मूल्यांकन अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

संस्कृत (इलैक्टिव)
5th Semester

Paper - Sanskrit : **उपनिषद्, रामायण, शब्दावली व व्याकरण** पूर्णांकः 90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।-
- ईश्वर, त्याग, कर्म, विद्या, अविद्या, सम्भूति, असम्भूति आदि औपनिषदिक विषयों का अध्ययन कराना।
- आदि काव्य वाल्मीकि रामायण तथा लौकिक काव्य के सौन्दर्य का दिग्दर्शन कराना ।
- संस्कृत के समृद्ध शब्दभण्डार द्वारा छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

ईशोपनिषद्

(1) मन्त्र/मन्त्रांश का अनुवाद एवं व्याख्या 1x10=10अंक

(2) समीक्षात्मक प्रश्न सूक्ति व्याख्या 1x10=10अंक

(ख) वाल्मीकिरामायण (सुन्दरकाण्ड, सर्ग-15, गीता प्रैस गोरखपुर) श्लोक व्याख्या 2x7½=15अंक

(ग) व्यावहारिक संस्कृत शब्दावली :वाद्य, खेल एवं युद्ध सम्बन्धी (15 में से 10 शब्दों की संस्कृत) 1x10=10अंक

1. उतार – अवरोहः	2. चढ़ाव-आरोह	3. जलतरंग-जलतरङ्गः
4. ढिंढोरा - डिण्डिमः	5. ढोल - पटहः	6. ढोलकः - ढोलक
7. तवला - मुरजः	8. तानपुरा - तानपुराः	9. तुरही (शहनाई) - तूर्यम्
10. नगाड़ा - दुन्दुभिः	11. पियानो - तन्त्रीवाद्यम्	12. बांसुरी - मुरली
13. मंजीरा-मञ्जीरम्	14. सारंगी (वायलिन)-सारंगी	15. सितार-वीणा
16. हारमोनियम-मनोहारिवाद्यम्	17. गेंद-कन्दुकः	18. टेनिस का खेल-टेनिस-क्रीडा
19. नेट-जालम्	20. फुटबाल-पादकन्दुकः	21. बैड मिंटन-पत्रिक्रीडा
22. मैच-क्रीडाप्रतियोगिता	23. रेफरी-निर्णायकः	24. रैकेट-काष्ठपरिष्करः
25. बालीबालक्षेपकन्दुकः	26. हाकी का खेल-यष्टिक्रीडा	27. बिगुल-संज्ञाशंखः
28. कोमलस्वर-मन्द्रः स्वरः	29. तीव्रस्वर-तारःस्वरः	30. मध्यमस्वर- मध्यः, मध्यस्वरः
31.एटमबम-परमाणु अस्त्रम्	32. कवच-वर्मन्	33.कृपाण-असिः
34. गण्डासा-तोमरः	35. गदा- गदा	36. गोली-गुलिका
37. छावनी-शिविरम्	38. टीयर गैस-धूम्रास्त्रम्	39. तेप-शतघ्नी

40. जल सेनापति-भूसेनाध्यक्षः 41. थल सेनापति- भूसेनाध्यक्षः 42. वायुसेनापति-वायुसेनाध्यक्षः

43. धनुष- धनुः, कोदण्डः, चापम्, कार्मुकम् 44. पिस्तौल-लघुभुशुण्डिः 45. बन्दूक-भूशुण्डिः

46. बम-आग्नेयास्त्रम् 47. हाइड्रोजन बम-जलपरमाण्वस्त्रम् 48. बारूद-अग्निचूर्णम्

49. लड़ाई का जहाज-युद्धपोतः 50.लड़ाई का विमान-युद्धविमानम्

(घ) विसर्ग सन्धि 5x1=5अंक

(ङ) अव्ययीभाव समास 5x1=5अंक

(च) अलंकार : उपमा, उत्प्रेक्षा, रूपक, विभावना, विशेषोक्ति तथा विरोधाभास 2x7½=15 अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

(छ) वैदिक इतिहास (लघु प्रश्न/टिप्पणी) 2x5=10अंक

(i) वेदों का सामान्य परचिय

(ii) वेदांग साहित्य का सामान्य परिचय

(ज) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

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संस्कृत (इलैक्टिव)

6th Semester

Paper - Sanskrit : **लौकिक काव्य, इतिहास, निबन्ध व व्याकरण** पूर्णांकः90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- लौकिक काव्य के रचनासौष्ठव से परिचय कराना।
- संस्कृत के समृद्ध शब्दभण्डार से छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

(क) रघुवंश (प्रथम सर्ग) - कालिदास

i) श्लोकों का सप्रसंग अनुवाद व व्याख्या 2x10=20अंक

ii) सूक्ति-सप्रंसग व्याख्या (तीन में से एक) 1x10=10अंक

(क) संस्कृत शब्दावली : सम्बन्धसूचक एवं प्रशासनिक शब्द 10x1=10अंक

1.पिता/माता - जनकः, /जननी	2. चाचा, चाची-पितृव्यः, पितृव्या
3. पति, पत्नी-पतिः, पत्नी (भार्या, जाया)	4. नाना, नानी-मातामहः, मातामही
5. छोटा भाई, बड़ा भाई-अनुजः, अग्रजः	6. दादा, दादी-पितामहः, पितामही
7. पुत्र, पुत्री-पुत्रः/आत्मजः, पुत्री/आत्मजा	8. जीजा-भगिनीपतिः
9. जंवाई (दामाद)-जामाता	10. देवर, देवरानी-देवरः, याता
11. मामा, मामी-मातुलः, मातुली	12. साला, साली-श्यालः (स्यालः), श्याली (स्याली)
13. सास, ससुर-श्वश्रूः, श्वशुरः	14. समधी (कुडम), समधिन (कुडमनी) -सम्बन्धी, सम्बन्धिनी
15. पोता, पोती-पौत्रः, पौत्री	16. भतीजा, भतीजी-भ्रातृपुत्रः /भ्रातृव्यः, भ्रातृपुत्री /भ्रातृव्या
17. भानजा, भानजी-भागिनेयः, भागिनेयी	18. चचेरा भाई, चचेरी बहिन-पितृव्यपुत्रः, पितृव्यपुत्री
19. भाभी-भ्रातृजाया	20. Administration-प्रशासनम्
21.Appeal-निवेदनम्	22. Approval-अनुमोदनम्
23. Ban-प्रतिबन्धः	24. Cabinet-मन्त्रिमण्डलम्
25. Corporation-निगमः	26. Director-निदेशकः

27. Employment-आजीविका, वृत्तिः
28. Initials-आद्यक्षरम्
29. Judgement-निर्णयः
30. Gazetted Officer-राजपत्रिताधिकारी
31. Notification-अधिसूचना
32. Procedure-कार्यविधिः
33. Receipt-प्राप्तिः
34. Senior-वरिष्ठः
35. Subordinate-अधीनस्थः
36. Transfer-स्थानान्तरणम्
37. Vacancy-रिक्तिः
38. Character Certificate-चरित्रप्रमाणपत्रम्
39. Civic-नागरिकः

(ii) पंजाबी में प्रयुक्त संस्कृत के तत्सम तथा तद्भव शब्दों की सूची 10x1=10अंक

संस्कृत शब्द	पंजाबी शब्द	संस्कृत शब्द	पंजाबी शब्द
1. चिरम्-(विलम्ब, देरी, दीर्घकाल)	चिर	21. रटितम् (रटा हुआ)	रटंत
2. वेला (समय, अवसर)	बेला	22. लोहितम् (खून)	लहू
3. शाकः (हरि सब्जी)	साग	23. वसितम्, वसितिः (वस्ती)	वसूं, वसों
4. कर्करम् (ढेला, कंकर)	कंकर	24. हृदयम् (हृदय, दिल)	हिउं, हियां
5. चतुष्कम् (चौंक)	चौंक, चौंका	25. श्वश्रूः (सास)	सस्सू
6. द्वयम् (दो, जोड़ा)	दोह	26. वधूः (बहू)	वहू
7. धावनम् (धोना)	धावण	27. अद्य (आज)	अज्ज
8. नखम् (नाखून)	नउंह, नहुं, नौंह	28. अर्ध (आधा)	अद्धा
9. निषिद्धम् (बुरा, अपवित्र)	नखिंध	29. उच्चैः (ऊँचा)	उच्चा
10. नीलम् (एक रत्न)	नीलम, लीलम	30. कदा (कब)	कद
11. पदम् (पैर)	पउं	31. तदा (तब)	तद
12. नयनम् (नेत्र)	नैणूं	32. यदा (जब)	जद
13. पुच्छम् (पूंछ)	पूंछ	33. कृतः (किया)	कीत्ता
14. बाल्यम् (बचपन)	बालम	34. चन्द्रः (चांद)	चन्द
15. बीजम् (बीज)	बीं, बीउं	35. त्वम् (तुम)	तूं
16. भयम् (डर)	भैं, भउं, भंऊ	36. निम्बः (नीम)	निम्म
17. माषम् (उड़द)	मांह, महां	37. पिप्पलः (पीप	पिप्पल
18. मनःघटितम् (स्वकल्पित)	मनघड़ंत	38. बलदः (बैल)	बलद, बौलद
19. मुखम् (मुंह)	मूंह, मूं	39. हस्तः (हाथ)	हत्थ
20. युगलम् (जोड़ा)	जुगलां	40. सर्वः (सब)	सब्भ

(ख) बहुव्रीहि समास 5x1= 5 अंक

(ग) अंलकार : अनुप्रास, यमक, अर्थान्तरन्यास, श्लेष, अतिशयोक्ति व दृष्टान्त 2x5=10 अंक
(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

(घ) लौकिक संस्कृत साहित्य के निम्नलिखित लेखकों की कृतियों का परिचय 2x5= 10 अंक
(भास, कालिदास, भवभूति, बाणभट्ट, माघ, भर्तृहरि व दण्डी)

(ङ) संस्कृत निबन्ध (तीन में से एक विषय पर दस पंक्तयों में) 1x10=10अंक

विषय – संस्कृतभाषाया महत्त्वम्, मम प्रियः कविः, मम प्रियं पुस्तकम्, दीपावली, सत्संगतिः तथा पर्यावरणसुरक्षा)

(च) णिजन्त व सन्नन्त प्रयोग (प्रथम पुरुष का एकवचन ही प्रष्टव्य है।) 5x1= 5 अंक

(i) णिच् प्रत्यय केवल भू, पठ्, हस्, गम्, कृ, अधिइङ्, खाद्, चल्, नश्, व नम् धातु से ही प्रष्टव्य हैं।

(ii) सन् प्रत्यय केवल स्वप्, घ्रा, पठ्, कृ, गम्, मृ, मुच्, दा, तृ तथा भू धातु से ही प्रष्टव्य हैं।

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਥੀਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਦੇ ਰੂਪ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

(ਨਿਰਧਾਰਤ ਕਵੀ : ਸ਼ੇਖ ਫਰੀਦ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ, ਗਰੂ ਅਰਜਨ ਦੇਵ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ, ਭਾਈ ਗੁਰਦਾਸ)

2. ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ, ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) 'ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ' ਨਾਟਕ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਟਕ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) (ਦੋ ਵਿਚੋ ਇੱਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2x5 = 10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)

4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ)** : — 5 x 4 =20 ਅੰਕ
   ਗੁਰਮਤਿ, ਵਾਰ ਕਾਵਿ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: ਰੀਤੀ ਸੰਪ੍ਰਦਾਇ, ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਸਾਹਿਤ ਦੇ ਰੂਪ : ਜਨਮਸਾਖੀ, ਸ਼ਲੋਕ, ਕਾਫ਼ੀ, ਕਿੱਸਾ, ਵਾਰ, ਸੀਹਰਫ਼ੀ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ) **ਬੀਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ**		
ਸਮੈਸਟਰ ਛੇਵਾਂ		
		ਕੁੱਲ ਅੰਕ: 100 ਲਿਖਤੀ: 90 ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10 ਸਮਾਂ: 3 ਘੰਟੇ
ਪਾਠਕ੍ਰਮ		
1.	ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ	25 ਅੰਕ
2.	ਪੰਜਾਬੀ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ	25 ਅੰਕ
3.	ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ)	20 ਅੰਕ
4.	ਪੱਛਮੀਂ ਕਾਵਿ ਸ਼ਾਸਤਰ	10 ਅੰਕ
5.	ਭਾਸ਼ਾ ਵਿਗਿਆਨ	10 ਅੰਕ
	ਕੋਰਸ	
1.	ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਖ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ (ਨਿਰਧਾਰਤ ਕਵੀ: ਸ਼ਾਹ ਹੁਸੈਨ, ਦਮੋਦਰ, ਹਾਫਿਜ਼ ਬਰਖੁਰਦਾਰ, ਮਿਰਜ਼ਾ ਸਾਹਿਬਾ	
2.	ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼, (ਸੰਪਾ) ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ, ਚੰਡੀਗੜ੍ਹ।	
	ਯੂਨਿਟ ਅਤੇ ਥੀਮ	
1.	(ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ 10 ਅੰਕ
2.	(ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਤੇ ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼ ਪਾਠ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ-ਬੰਦ / ਵਾਰਤਕ ਅੰਸ਼ਾਂ ਦੀ ਵਿਹਾਰਕ ਆਲੋਚਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਅ) ਨਿਬੰਧ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ 10 ਅੰਕ
3.	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਿਬੰਧ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)	2x5 = 10 ਅੰਕ
4.	**ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ)** : ਸੂਫੀ, ਕਿੱਸਾ ਤੇ ਜੰਗਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)	5x4 = 20 ਅੰਕ
5.	ਪੱਛਮੀਂ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ੳ) ਅਰਸਤੂ ਦਕ ਅਨੁਕਰਣ ਸਿਧਾਂਤ (ਅ) ਮਨੋਵਿਸ਼ਲੇਸ਼ਣੀ ਵਿਧੀ (ਏ) ਮਾਰਕਸਵਾਦ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	10 ਅੰਕ
6.	ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਦੀ ਪਰਿਭਾਸ਼ਾ,ਖੇਤਰ ਤੇ ਹੋਰ ਵਿਗਿਆਨਾਂ ਨਾਲ ਸੰਬੰਧ (ਮਨੋ ਵਿਗਿਆਨ, ਸਮਾਜ ਵਿਗਿਆਨ ਤੇ ਮਾਨਵ ਵਿਗਿਆਨ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਈਸ਼ਰ ਸਿੰਘ ਤਾਂਘ, ਪੱਛਮੀਂ ਸਮੀਖਿਆ ਦੇ ਸਿਧਾਂਤ, ਦੀਪ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਸ਼ਹਿਰ।
5. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), 'ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
6. ਹਰਿਭਜਨ ਸਿੰਘ, ਅਧਿਅਨ ਤੇ ਅਧਿਆਪਨ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਧਾਲੀਵਾਲ,ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ' ,ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

URDU (ELECTIVE)

SEMESTER-V

Theory **90 Marks**
Internal Assessment **10 Marks**
Time: 3 Hours

Paper-A

Unit-I

Explanation of prose passage from following lessons: 30 Marks

1.
- Ek khuda parast shahzadi (Meer Amman)
- Shahzade ke pahle safar ka aaghaz (Rajab Ali Baig Suroor)
- Guzra hua zamana (Sir Syed Ahmed Khan)
- Qatil ki maa (Prem Chand)

Unit-II

2. (i) Explanation of Verses from following ghazals 30 Marks
- Jo is shor se Meer rota rahega (Meer Taqi Meer)
- Maqdur nahin uski tajalli ke bayan ka (Sauda)
- Tohmaten chand apne zimme dhar chale (Khawaja Mir Dard)
- Dil-e-nadan tujhe hua kya hai (Mirza Asdullah Khan Ghalib)
- Tamannaon mein uljhaya gaya hun (Shad Azimabadi)
- Duniya meri bala jane, mahngi ya sasti hai (Fani Badayuni)
- Na jane ashk se aankhon mein kyon hain aaye hue (Firaq Gorakhpuri)
- Mauje gul, mauje saba, mauje sehar lagti hai (Jam Nisar Akhtar)

(ii) Explanation of verses from following nazams
- Daastan shehzade ke ghayab hone ki (Meer Hassan)
- Aadmi Nama (Nazeer Akbar Abadi)
- Badli Ka Chand (Josh Malihabadi)
- Raat aur rail (Asrar-ul Haq Majaz)
- Kutte (Faiz Ahmed Faiz)

Unit-III

3. Summary of a lesson or a poem from Unit I and II 15 Marks

Unit-IV

4. Question on the basis of the following forms of prose and poetry 15 Marks

1. Ghazal 2. Nazam 3.Qasida 4.Novel 5.Afsana

Books Prescribed:
Shaoore Adab: Intikhab Nasar-o-nazam,Maktaba Jamia,New Delhi

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URDU (ELECTIVE)
SEMESTER-VI

Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Paper-B

Short story and literary history of Urdu literature

Unit-I

1. Urdu adab ki ibtida aur irtiqa 30 Marks
2. Fort William College Ki adabi khidmaat

Unit-II

Contribution of Urdu Poetry with special reference to: 30 Marks

- Asadullah Khan Ghalib
- Brij Narayan Chakbast
- Allama Iqbal
- Faiz Ahmad Faiz

Unit-III

Contribution of Urdu prose with special reference to: 15 Marks

- Sir Syed Ahmed Khan
- Altaf Husain Hali
- Quratulain Haider
- Ismat Chughtai

Unit-IV

Urdu Afsane Inshaiye 15 Marks

- Bhola
- Hajj e Akbar
- Manzoor
- Election

Book Prescribed:
Tarikh-e-Adab Urdu by, Dr.Ram Babu Saxena
Afsane Inshaiye aur drame, compiled by Mohammad Qasim Siddiqui,
Education Book House Aligarh

Books Recommended:
Tarikh-e-Adab Urdu, by Dr. Aijaz Hussain

PERSIAN (ELECTIVE)
SEMESTER-V

There will be two Paper Setters/Examiner.

PAPER-A : PROSE

Marks: 90
TIME : 3 Hrs
Internal Assessment : 10

1.	Translation of text pieces into English,Hindi,Urdu, Panjabi or Persian.	20 Marks
2.	Explanation of text pieces into English,Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye- Kuath	20 Marks
4.	Simple direct questions on the life works of the authors	20 Marks
5.	Short notes.	10 Marks
	Total:-	90 marks

Books prescribed:

Nisabe Jadide Farsi (Published By Jayyad Ballimaran, Delhi) Only following portion from Prose Section.

(i) Intekhab Sarzamin-e-Hindi-Ali Asghar Hikmat,P.33-60
(ii) Dastanha-ye-Kutah:-
  (a) Azzan-e- Maghrib by Saeed Nafisi.
  (b) Khukushi By Mohd. Hijazi.

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PERSIAN (ELECTIVE)
SEMESTER-VI

Paper-B POETRY

Marks 90
Time 3 Hours
Internal Assessment 10

1.	Translation of text pieces into English, Hindi,Urdu, Panjabi Or Persian.	20 Marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Central idea of the poem	20 Marks
4.	Simple direct questions on the life works of the Poets	20 Marks
5.	Short notes.	10 Marks
	Total:	90 Marks

Books Prescribed:

Nisabe Jadide Farsi(Published by Jayyad Ballimaran, Delhi). Only following portions form poetry section:-

Az Gzalliyat-e-Hafiz:

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.
Saaqi Benur Badah Bar Afrooz Jam-e-Maa.
Doosh Deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:
Jan Ze Tan Burdi-o-Dar Jaani Hunooz.
Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

Masanaviy-e-Maulana Rum:
Deed Musa Yek Shabani Rah Be Rah.
Wahi Aamad Suy-e-Musa Az Khusa

Wassayad-e-Urfi
Dar Wasf-e-Kashmir

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FRENCH (ELECTIVE)
SEMESTER-5TH

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3Hours

INTRODUCTION TO FRENCH DRAMA, POETRY AND PROSE

I Literary Master Pieces Drama, La Femme du Boulanger by Marcel Pagnol. 25 Marks

Questions on character sketches and Critical appreciation of the drama to be asked and answered in French.

II Selected Reading-Poetry 25 Marks
Questions, explanations of stanzas of poems and central ideas, critical appreciation and summaries of the poems to be asked and answered in French.

III Text Book : Version Originale-3 (Units 8-9) Version Originale-4 (Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) General questions to be based on the prescribed text.(4 questions of 5 marks each) 20 Marks

(b) Questions on French civilization in the form of fill in the blanks, multiple choice multiple choice and short answers of 1-2 sentences. 20 Marks

I Courses of Reading :

Drama :Marcel Pagnol La Femme du Boulanger, Presses, Pocket

II Poetry :

1.	Le Pont Mirabeau	Apollinaire (Alcools)
2.	Horloge	Baudelaire (Fleurs du mal)
3.	Les animaux malades de la peste	La Fontaine
4.	La jeune Veuve ;	La Fontaine
5.	Le Vase brisé	Sully Prudhomme.

Text Books for Reference :

1. French Poetry for students by - A.W. Bains.
2. Paroles Edition Folio by Jacques Prevert.
3. Le Français et la Vie-Tome III G. Mauger/M.Bruezier e.
4. Collection Littéraire XIX & XX Siècle-Nouveaux classique Larousse.
5. Poèmes choisis-A de. Musset-Edition-Nouveaux classique Larousse.
6. Les Textes français -XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

CHOICE TO BE GIVEN IN ALL QUESTIONS

Note for Private Candidates: -The theory paper would be marked proportionately out of 100 as there is no internal assessment.

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FRENCH (ELECTIVE)

SEMESTER-6

FRENCH POETRY, APPLIED GRAMMAR, CREATIVE WRITING AND VIVA-VOCE

Max. Marks	: 100
Theory	: 60 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

1.	Summary, explanation and analysis of prescribed poems	20 Marks
2.	A composition on a topic with in the textbook of about 200-300 words	15 Marks
3.	Questions on applied grammar [Questions to be based on grammar section of Prose - Version Originale-3 Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil Pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.	25 Marks
4.	**Viva-Voce:**	
1.	Dictation of an unseen passage of about 100 words.	10 Marks
2.	Conversation (general)	10 Marks
3.	Reading (Unseen passage)	10 Marks

Courses of Reading:

Poetry: The following five poems are to be studied:

1.	Le Lac	Lamartine
2.	La Grasse matinée	Jacques Prévert
3.	Le colloque sentimental	P. Verlaine
4.	Le manteau impérial	V. Hugo
5.	Le Déjeuner du Matin	J. Prévert

Comprehension, explanation, literary, appreciation and criticism of the poems to be studied.

Note : 1. The latest syllabus should be strictly followed.

2. Choice should be given in questions.

Text Books for Reference:

1. French Poetry for students by - A.W. Bains.
2. Paroles édition Folio by Jacques Prevert.
3. Le francais et la Vie-Tome III G. Mauger/M.Bruezier.
4. Collection Litteraire XIX & XX Siecle-Nouveaux classique Larousse.
5. Poèmes choisis-A de. Musset-edition-Nouveaux classique Larousse.
6. Les Textes français - XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

Courses of Reading :

Prose - Version Originale-3 Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

N.B. : (1) The latest syllabus to be followed strictly and the question paper should be of B.A.III level.

(2) Choice in questions must be given.

(3) Eight periods of one hour weekly – Six hours for text and two hours for composition.

(4) The composition and the unseen passages should be based on the vocabulary and grammar Covered till B.A. III.

(5) The paper will be set and answered in French (except Translation).

Note for Private Candidates: - The theory paper would be marked proportionately out of 70 as there is no internal assessment.

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GERMAN (Elective)
Semester - V

Summary

Max. Marks :100 marks(Total)
Paper – A (Theory) : 90 marks
Internal Assessment: 10 marks

Paper A - Theory : **90 marks**

Time: 3 hours

Note: Use of dictionary is allowed

i. Explanation and interpretation of any **two** poems or **three** stanzas from the prescribed book "German Verse" (Kulkarni & Chapekar) : 30 marks

- i. Hyperions Schicksalslied (Hölderlin)
- ii. Der Karussel (Rilke)
- iii. Des Schiffers Traum (Arndt)
- iv. Der Zauberlehrling (Goethe)
- v. Ganymed (Goethe)
- vi. Einkehr (Uhland)

ii. Characterization / Literary questions (2) on the prescribed drama "Andorra" (Max Frisch) : 30 marks

iii. Translation of unseen text/s from German into English : 30 marks

5.2 **Internal Assessment** : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "German Verse" (Kulkarni & Chapekar)

ii. "Andorra" (Max Frisch)

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GERMAN (Elective)

Semester - VI

Summary

Max. Marks: 100 marks (Total)
End-semester Exam Paper-B (Theory) : 60 marks
Oral (viva-voce) examination : 30 marks
Internal Assessment : 10 marks

Paper B - Theory		:	**60 marks (Total)**
	Time Note: Use of dictionary is allowed	:	3 hours
i.	Translation of unseen text/s from German into English	:	20 marks
ii.	Translation of unseen text/s from English into German	:	10 marks
iii.	Characterization / Literary questions (2 out of 3) on the prescribed novel "Der Verdacht" (Dürrenmatt)	:	30 marks

Oral (viva-voce) Examination : 30 marks (Total)

i. Conversation in German

ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbooks:

i. "Deutsche Texte zum Übersetzen", Max Hueber Verlag.
ii. "Der Verdacht" (Dürrenmatt)

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Russian (Elective)
SEMESTER -V

Paper –Option (i) (General Translation & Grammar): Written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) Cases(Nouns, Pronouns, Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes). 20 Marks

Note: Use of dictionaries is allowed.

OR

Paper: Option(ii) (Scientific & technical Translation & Grammar): written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian (Scientific & technical material) into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) 20 Marks

   Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes).

Note: Use of dictionaries is allowed.

Extra material to be provided by the department.

Russian (Elective)
SEMESTER -VI

Paper : Written (Literature)
Maximum Time : 3 hrs.

Maximum Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Biographies of Russian writers from prescribed text books **20 marks**
Biographies 2 out of 4 (10 marks each)

A.S.Pushkin
N.V.Gogol
A.P.Chekhov
M.Gorky
Leo Tolstoy
Chigiz Aitmatov
Konstantin Paustovsky

2. Literary works
(2 Question out of 4(10 marks each) on the following works: **20 marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

3.a/ Reference to the context (Poetry): **10 marks**

a) Nyane	A.S.Pushkin
b) V Sibri	A.S.Pushkin
c) Parus	M.V.Lermontov

Poetry paragraph from the text studied (1 out of 2)

b/ Reference to the context (Prose): **10 Marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

Prose paragraph from the text studied (1 out of 2)

iii) Oral/Practical **30 marks**

Practical (Dissertation : Independent translation of about 2500 words from Russian literary, socio-political, popular science texts into English/Hindi/Punjabi) **15 marks**

OR

Verbal Narration in Russian on any two of the following topics:

1.Biography of any Indian/Russian personality 2. Native state 3. My favorite Russian Literary work.
4. Russia 5. India 6. Sport, 7. India-Russia commercial/Trade Relation.

General Conversation **15 marks**

Books Recommended for additional reading

N.S.Burlakov & C.N. Chakravarti : A Cherstomathy of Russian Literature. 1970
Nikolai Bannikov; Three centuries of Russian Literature. Progress Publishers, Moscow,1980.
A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
T.E. Pecherista : DOROGI – Stories by Soviet writers Russian language,Moscow,1979.
S Khavronnia: Russian in Exercise, 1978.
I Pulkina: RUSSIAN A Practical Grammar with Exercise. Russky Yazik. Pub. H.Moscow.
Dictionaries: English-Russian dictionary.
Russian-English dictionary
B.I.Balin and R.M.Bakaya: An Introductory Russian course for students of Science and technology, Asia publishing house, Delhi (For Scientific & technical Translation group)

Note: Extra materials to be provided by the department.

Following Subjects are Kept in Abeyance

1. **Arabic (Elective)**
2. **Bengali (Elective)**
3. **Tamil (Elective)**
4. **Kannada (Elective)**
5. **Malayalam (Elective)**
6. **Telugu (Elective)**

PHYSICAL EDUCATION

B.A. (GENERAL) FIFTH SEMESTER EXAMINATION (2016-17)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I — **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II — **12** Marks

Play:

– Meaning and Definition of Play.
– Various theories of play and their significance in Physical Education and Sports.

Recreation:

– Meaning, definition, characteristics, aim, objectives and types of recreation and recreational activities.
– Significance of recreation in the modern society.
– Recreation providing agencies.

UNIT-III — **12** Marks

Competitions:

– Meaning, importance and conduct of intramural and extramural competitions.
– Meaning and types of tournament and their merits and demerits.
– Draw of fixtures of various tournaments.

Camps:

– Meaning, aim and objectives of the camp.
– Advantages of camping/outdoor education.
– Types and agencies promoting camping.
– Organization of camps and factors affecting its organization.
– Educative values of a camp.

Athletic Meet:

– Organization of an athletic meet.
– Importance/significance of an athletic meet.

UNIT-IV **12** Marks

Posture:

– Meaning, types and importance of a good posture.
– Causes, preventive and remedial measures of a poor posture.

Postural Deformities:

– Postural deformities (Kyphosis, lordosis, scoliosis and flat foot), their causes, preventive and remedial measures.

Physical Activities and their effects on various physical parameters and vice versa:

– Physical activities/training and their effects on aging, body composition, and obesity.
– General problems of obesity.
– Health related risk factors of obesity.
– Obesity and physical activity.
– Causes, preventive and remedial measures of obesity.

UNIT-V **12** Marks

Massage:

– Brief history of massage.
– Meaning and definition of massage.
– Principles/guidelines for massage.
– Types of massage and their benefits.
– Effects of massage on skin, blood circulation, nervous system and muscles.

Basics of Cricket:

History of the game
Basic fundamentals
Equipment and specifications
Marking / layout of field
Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
Major tournaments and Arjuna awardees of the game.

References :

1. Bell, A.J. : *"Massage and the Physiotherapist : Physiotherapy",* 1964.

2. Butler, G.D. : *"Introduction to Community Recreation",* McGraw Hill Book Company, Inc. New York, 1959.

3. Garinder, M. Dena : *"The Principles of Exercise Therapy",* Fourth Edition, 1985, CBS Publishers and Distributors, Delhi.

4. Gladys Scott, M. : *"Analysis of Human Motion",* 2nd Edition, 1970, Eurasia Publishing House Pvt. Ltd., New Delhi.

5. Lee Joseph : *"Play in Education, National Recreation Association",* New York, 1942.

6. Meyer, Herold D., and Charles K. Brightbill : *"Recreation Administration : A Guide to its Practices",* Prentice Hall Inc., Englewood Cliffs, N.J., 1956.

7. Mitchell, Elmer D., and Bernard S. Mason : *"Theory of Play",* The Ronald Press Co., New York, 1948.

8. Nash, Jay B. : *"Philosophy of Recreation and Leisure",* The C.V. Mosby Co., St. Louis, 1953.

9. Parameswara Ram, N. : *"Kinesiology – Physical Education and Sports",* Parkash Brothers – Educational Publishers, 1988.

10. Piscopo, John and Baley, James A. : *"Kinesiology : The Science of Movement",* John Wiley & Sons, Inc., 1981.

11. Singh, Ajmer *et.al.* : *Modern Text Book of Physical Education, Health and Sports* Kalyani Publishers, Ludhiana, 2000.

12. Struna, Monika and Church, Connie : *"Self Massage : Touch Techniques of Relax, Soothe and Stimulate your Body",* Hutchinson & Co. Ltd., London, 1983.

13. Tirunarayanan, C. Hariharasarma, S. : *"Methods in Physical Education",* The South India Press, Karaikudi.

14. Wilmore, Jack H. : *"Atheltic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc. 470, Atlantic Avenue, Boston Massachusetts.

15. Wood, Elizabeth C. and Becker, Paul D. : *"Beard's Massage",* Third Edition, 1981, W.B. Saunders Company, Philadelphia, P.A.

PRACTICAL

Max. Marks : 35 Marks
Practical : 30 Marks
Internal assessment : 5 Marks

ATHLETICS

(a) History of athletics

(b) List of track and field events

(c) Marking of standard track, width of lanes and starting points for various races.

1. THROWS:

Throws (Shot-put or Discuss Throw or Javelin Throw) and one event of the choice of the student.

(a) **Shot-put** (The holding the stance, the glide, the delivery and the reverse or the recovery).

OR

Discuss Throw (The handhold, the initial stance, the preliminary swings, turn the delivery and the reverse or the recovery).

OR

Javelin Throw (The grip, the carry, the run way approach, the last five strides, the delivery, the reverse or the recovery).

(b) Measurements of equipment and the throwing circles or the approach run, the arc and the throwing area/the sectors.

2. PHYSICAL FITNESS TESTS: More emphasis shall be given on variety of physical exercises for the development of Flexibility and strength components of physical fitness.

Test 1- Flexibility: Sit and reach test

Test 2- Strength: Medicine Ball Throw.

Division of Practical Marks: Marks for each activity shall be divided as under:

Athletics and Physical fitness 15 marks, Participation and achievement in sports/games 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.

3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.

4. The theory and practical papers shall consist of 65 and 35 marks each.

5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.

6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.

7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections:*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students :*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods :*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load :*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. *Division of Marks (Theory and Practical) :*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

PHYSICAL EDUCATION

B.A. (GENERAL) SIXTH SEMESTER EXAMINATION

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(a) There shall be nine questions in all, spread over Five Units.
(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.
(c) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.
(d) All questions/units will carry equal marks.
(e) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Nervous System:

– Meaning of Nervous System.
– Main organs of Nervous System and their functions.
– Reflex action and Reciprocal Innervations.
– Functional classification of Nervous System.

Excretory System:

– Meaning of Excretory System.
– Main organs of Excretory System and their structure and functions.

Endocrine System:

– Meaning of **Endocrine System**.
– Meaning of Glands, their location and functions/Harmones produced by them.

UNIT-III **12** Marks

Sports Training,

– Meaning, definition, aim, objective, characteristics and principles of sports training.

General Physiological concept:

– Physiological concepts such as vital capacity, second wind, stitch in the side and its causes.
– Definition of oxygen debt/excess post exercise oxygen consumption (EPOC) and its implication.
– Meaning definition and types of fatigue.
– Muscular contractions such as isotonic, isometric, eccentric and isokinetic.
– Meaning of Blood pressure, Hypertension: Its causes, effects and treatment, exercise and Hypertension.

Effects of Physical Exercise / Training on body systems:

– Effects of Physical exercise/Training on muscular, respiratory and circulatory systems of the body.

UNIT-IV **12** Marks

Carrier aspects in Physical Education:

– Carrier options in Physical Education.
– Different avenues in Physical Education.
– Self assessment for carrier choices.
– Courses and institutions available for Physical Education profession.

UNIT-V **12** Marks

Coach:

– Coaching, coaching philosophy, definition of a coach.
– Qualification and characteristics of a coach.
– Responsibilities of a coach.

Basics of Table Tennis:

– History of the game
– Basic fundamentals
– Equipment and specifications
– Marking / layout of T.T Table
– Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
– Major tournaments and Arjuna awardees of the game

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.

2. Dandiya, P.C., Jafer, Z.Y.K. and Jafer Afifa : *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.

3. Dick, Frank, W. : *"Sports Training Principles",* Lepus Books, London, 1980.

4. Jensen, C.R. and Fisher, A.G. : *"Scientific Basis of Athletic Conditioning",* Lea and Febiger, Philadelphia, 1979.

5. Matveyer, L. : *"Fundamentals of Sports Training",* Mir Publication, Moscow, 1981.

6. Mathews, D.K. and Fox, E.L. : *"The Physiological Basis of Physical Education & Athletics",* Second Edition, W.B. Saunders Co., Philadelphia, 1976.

7. McArdle, William D., Katch Frank I., and Katch, Victor, L.

: *"Exercise Physiology : Energy, Nutrition and Human Performance",* Lea and Febiger, Philadelphia, 1981.

8. Morgan, R.E. and Adamson, G.T. : *"Circuit Training",* Bell and Sons, London, 1958.

9. Morehouse, L.E. and Miller, A.T. : *"Physiology of Exercise",* The C.V. Mosby Co., St. Louis, 1965.

10. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Teachers",* Lend Edward Arnolod Ltd., 1983.

11. Rose & Wilson : *"Foundations of Anatomy and Physiology*, 5th Edition,1981, Reprinted in 1985.

12. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999-2000, Birla Publications, Delhi.

13. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

14. Shaver, Larry G. : *"Essential of Exercise Physiology",* Surjeet Publications, Delhi First Indian Print, 1982.

15. Singh, Ajmer, Et.al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.

16. Singh, Hardyal : *"Sports Training-General Theory and Methods",* Netaji Subhash National Institute of Sports, Patiala, 1984.

17. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",*1977, Allyn and Bacon, Incl., 470, Atlantic Avenue Boston, Massachusetts.

PRACTICAL

Max Marks : 35
Practical : 30
Internal assessment : 5

GAMES

(Badminton or Hockey and any other one game of the choice of the student).

Badminton:

(a) Measurement (Badminton Court, Net, Racket and Shuttle cock) for singles and doubles.
(b) Number of players and officials.
(c) Holding the racket and shuttle cock.
(d) Types of Service: High and Low.
(e) Types of Strokes: fore hand, back hand, over head.
(f) Shots: Smash, Lob shot, net shot, dive shot.
(g) Rules and regulations of the game.

Hockey :

(a) Measurements (Hockey ground, goalpost, hockey stick, ball and flags) for men and women.
(b) Number and position of players and officials.
(c) Fundamental skills (grip, hitting, stopping dribbling, push, scoop and flick).
(d) Rules and regulations of the game.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections :*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students:*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods:*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load:*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. *Division of Marks (Theory and Practical):*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

EDUCATION
B.A. (GENERAL) THIRD YEAR EXAMINATION, 2016
SEMESTER –V

Paper- : INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. The students are required to attempt **6** short answer type questions out of **8** in Unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To enable the students to know about History of Indian Education.
2. To enable the students to understand the problems of pre-primary Education.
3. To make the students familiar with the concept of Universalization of Elementary Education and its problems.
4. To make the students familiar with the constitutional provisions of Education and role of different agencies in Education.

Course Contents :

UNIT-I : Education in the ancient and medieval period of Indian History.

UNIT-II : Current status and problems of pre-primary education. Public schools and their future.

UNIT-III : Importance of Elementary Education.
Universalization of Elementary Education. Problems of Elementary Education and Role of the State in Elementary Education.
Sarav Sikhiya Abhiyan – Concept, Objectives & Implementation.

UNIT-IV : Constitutional Provisions of Education.
Provisions for Education of Weaker Sections of Society.

Books Recommended :

1. Kaur, Kuldip : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh Centre for Research in Rural and Industrial Development, 1985.
2. Narula and Naik, J.I. : *Bharat Wich Vidyak Sikhya Da Itihas,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi 1953.
4. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-65), New Delhi, 1966.
5. Kochhar, S.K. : *Pivotal Issue of Education,* New Delhi, Sterling Publisher, 1984.
6. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* New Delhi, 1986.
7. Govt. of India : *Seventh Five Year Plan,* New Delhi.
8. Govt. of India : *Challenges of Education, A Policy Perspective,* New Delhi, 1986.
9. Sodhi, T.S. : *Bharti Sikhya Ate Us Diyan Samasiyavan,* Bawa Publications, Patiala.
10. Govt. of India, Ministry of Human Resource Development : *National Policy on Education, Programme of Action*, New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.

EDUCATION
B.A. (GENERAL) THIRD YEAR EXAMINATION, 2016
SEMESTER –VI

PAPER : MODERN INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To make the students familiar with the structure of Secondary Education in India.
2. To enable the students to know about different policies of education.
3. To make the students familiar with the problems of education for 21st century.
4. To enable the students to know about the need and importance of vocationalisation of education.
5. To enable the students to know about Adult, Continuing and Environmental Education.

Course Contents :

UNIT-I : Secondary Education – Structure, Recommendations of Kothari Education Commission and National Policy of Education.

RMSA(Rashtriya Madhmik Shiksha Abhiyan) – Concept Objectives and Implementation.

UNIT-II: Implementation of National Policy of Education of 1986 and 1992.

Education in the Twelveth Five Year Plan.

Problems and Prospects of Education for the 21st century.

UNIT-III : Vocationalisation of Education – Meaning, Need and Importance.

Aims, Objectives and Problems of Secondary Education.

Role of different Agencies – NCERT, NCTE AND DIET.

UNIT-IV : Adult, Continuing and Distance Education.

Environmental Education, ICT in Education.

Books Recommended :

1. Narula & Naik, J.P. : *Bharat Wich Vidyak Sikhya Da Ithas,* Patiala, Punjabi University.
2. Sharma, T.R. : *Bharti Sikhya Dian Samasiyan,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.
4. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi, 1953.
5. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-66), New Delhi, 1966.
6. Kochhar, S.K. : *Pivotal Issues in Education,* New Delhi, Sterling Publishers, 1984.
7. Kaur, K. : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh : Centre for Research in Rural and Industrial Development, 1985.
8. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* New Delhi, 1986.
9. Govt. of India : *Seventh Five Year Plan,* New Delhi.
10. Govt. of India : *Challenge of Education : A Policy Perspective,* New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992

ADULT EDUCATION

B.A. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2016-2017

Max. Marks	:	100
Theory	:	40 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND FOR THE CANDIDATE:

The question paper will consist of five Units : I, II, III, IV and V. Units II, III, IV and V will have two questions from the respective units of the syllabus and will carry 8 marks each. The students are requested to attempt **one** question from each Unit i.e. (II, III, IV and V). Unit I will consist of **eight** short answer type questions which will cover the entire syllabus and is compulsory and carrying one mark for each question.

OBJECTIVES OF THE COURSE :

The objectives of the paper are :

1. To expose students to the concept, importance and scope of continuing education.
2. To acquaint students with the basis of life skills education, its concept, meaning and its various forms.
3. To expose students with life long learning and its future perspectives.
4. To equip students with role of universities in adult and continuing education programs.
5. To explain students extension as third dimension.

ADULT EDUCATION
SEMESTER-V

THEORY :

UNIT-I

Adult and Continuing E ducation:

(a) Adult Literacy in reference to National Literacy Mission 1985, its objectives.
(b) Continuing Education : Concept, Importance, Scope and Objectives

UNIT-II

Saakhshar Bharat Mission 2009.

(a) Saakhshar Bharat Mission 2009, its targets and specific objectives.

(b) Flexi Approach to Saakhshar Bharat Mission 2009 and Continuing Education.

UNIT-III

Life Long Learning

(a) Life Long Learning - Concept, Needs, Scope, Strategies.

(b) Its Implications and Future Perspectives.

UNIT-IV

Extension Education

(a) Extension Education – The Third Dimension.

(b) Its Major Thrust Areas, Programs and Activities.

PRACTICAL/FIELD WORK **50 marks**

1. Organisation of T wo Awareness Generating Programs and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

ADULT EDUCATION
SEMESTER-VI

UNIT-I

Adult and Continuing Education:

(a) Different types of Programes in Continuing Education

(b) Role of Universities in Adult & Continuing Education.

UNIT-II

Life Skills

(a) Life skill Education – its meaning and Concept.

(b) NCERT CORE LIFE SKILLS
Problem-Solving, Decision-Making, Empathy, Creative-Thinking, Critical-Thinking, Stress Management, Time Management, Emotional Security, Communication Skills, Recreation Skills

UNIT-III

National Policy on Skill Development 2015.

(a) National Policy on Skill and Entrepreneurial Development 2015, its objectives and targets.

(b) Its Policy Frame Work, Governance and Financing.

UNIT-IV

Extension Education

(a) Swachh Bharat Mission-Objectives, Targets.

(b) Women Empowerment Challenges and Issues, Its Need and Importance.

PRACTICAL/FIELD WORK **50 marks**

1. Organization of Two Extension Lectures in Slum/Village and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

Books Recommended

1. Singh, Madan: Companion to Adult Educators
National Literacy Mission
Director of Adult Education
Ministry of Human Resource
Development,
Dept. of Adult Education, New
Delhi, 1999
2. Suriakanthi, A. : Perspectives of Continuing
Education, Dept. of Adult,
Continuing Education &
Extension,
Gandhi Gram Rural University,
Gandhi Gram, 2007
3. Parthasarathy, K. : Facets of Adult and Continuing
Education, School of Education,
Centre for Adult, Continuing
Education & Extension,
Bharathidasan University
Trichirappatti, 2006
4. Parthasarathy, K. : Population Education and Youth
Development, School of Education,
Centre for Adult, Continuing
Education and Extionsion,
Barathidasan University,
Trichirappatti, 2007
5. Alan Rogers : Teaching Adults, Sterling Publishers
Pvt. Ltd., New Delhi, 1989
6. Mohanty J. : Adult & Non formal Education,
Deep Publications, New Delhi, 1993
7.U.G.C. Guidelines. (X and XI Plan) : University Grants Commission,
for Adult, Continuing Education and Extension New Delhi

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MUSIC (Vocal)

SEMESTER-V

General Instructions :

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent**.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	: 45 marks
Paper-B:	**Practical** (20 minutes duration)	: 45 marks
	(i) Viva	: 35 marks
	(ii) Harmonium	: 05 marks
	(iii) Tabla	: 05 marks
Internal Assessment (Theory + Practical)	(05 +05)	: 10 marks
	Total :	**100 marks**

Paper-A : THEORY (Duration 45 minutes 02 Theory per week)

UNIT-I

1. Explain the following Gayan Shaillies:-Tappa, Thumri, Tarana.
2. Special features of time Theory of Indian Ragas
3. Raganga Paddhti

UNIT-II

Detailed study of the following:-

1. Manch- Pradarshan
2. Professions in Music
3. Lok Sangeet of Punjab

UNIT-III

Contribution in detail and life sketches in brief of the following: -

1. Pt. Kumar Gandharv
2. Smt. Gangu Bai Hangal
3. Ustad Bade Gulam Ali Khan Sahib

UNIT-IV

Description and Notation of the prescribed Ragas:-

1. To write notation of Vilambit Gat / Drut khyal in the prescribed Ragas with Alaps and Taans : -Vrindavani Sarang, Asavari
2. To write notations of Talas in Ekgun & Dugun of :- Jhumra, Sultala
3. To write the description of Ragas:- Non-detailed Ragas:Des, Jaunpuri

NOTE: Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: -Vrindavani Sarang & Asavari
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dhamar in proper style.
4. One Tarana in any of the detailed Ragas prescribed in the course.
5. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
6. Ability to play Jhaptal on Tabla.
7. Ability to recite the following Talas in Thah, Dugun by hand:-Jhumra, Sultala
8. Ability to sing any two Drut Khayals of your course on Harmonium.
9. Knowledge of non-detailed Ragas:
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Des, Jaunpuri.
10. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
	Sangeet Kala Ka Itihas		

MUSIC (Vocal)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration)	:	45 marks
	(Duration 45 minutes 06 practical+ 02 Theory periods per week)		
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
	(iv) Viva	:	35 marks
	(v) Harmonium	:	05 marks
	(vi) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

Paper-A: THEORY (Duration 45 minutes 02 Theory per week)

UNIT –I

1. General History of Indian Music i.e. from Bharat to Sharangdev
2. Explain the following Gayan Shaillies: - Dhamar, Bhajan , Shabad, Thumri
3. Varieties of Taanas/ Toras

UNIT –II

Contribution in detail and life sketches in brief of the following great masters:-

1. Ustad Vilayat Hussain Khan
2. Smt. Siddheshwari Devi
3. Pt. V. N. Patvardhan

UNIT-III

Detailed study of the following:-

1. Role of Akashwani and Doordarshan towards the popularisation of Indian Classical Music
2. Role of Electronic mediums (Basic Instruments)
3. Sansthagat Sangeet Shikshan Pranali

UNIT-IV

Description and Notations of the prescribed Ragas and Talas :-

1. To write in notation of Vilambit gat / drut khyal in the prescribed Ragas with Alap & Taans:-- Madhuwanti & Darbari- kanada.
2. To write in notations of talas:-Deepchandi, Dhamar (Single + Double)
3. To write the description of Ragas:- Non detailed Ragas: Multani, Adana

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

Paper-B : PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: Madhuwanti & Darbari Kanhada
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dhamar in proper style.
4. One Tarana in any of the detailed Ragas prescribed in the course.
5. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
6. Ability to play Chartala on Tabla.
7. Ability to recite the following Talas in Thah, Dugun by hand: Deepchandi & hamar
8. Ability to sing any two Drut Khayals of your course on Harmonium.
9. Knowledge of non-detailed Ragas :
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Multani & Adana
10. Tuning of Tanpura.

MUSIC (Instrumental)

SEMESTER-V

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. **There should not be more than eight students in a batch for practical examination.**
3. Harmonium can be used while singing Alankars.
4. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
5. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. The candidate can take vocal music or Tabla along with instrumental music.
8. There would be up to ten students in one section in practical class.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	: 35 marks
(ii)	Gayan	: 05 marks
(iii)	Tabla	: 05 marks
Internal Assessment (Theory + Practical)		: 05+05 = 10 marks
		Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. Explain & define the different Vadan Shaillies (Styles) of your own instrument.
2. Historical development of Indian Musical Scale.
3. Varieties of Tana / Tora

UNIT-II

1. Importance of Laya and Tala in Music
2. Folk Instruments of Punjab.
3. Future of Instrumental Music.

UNIT-III

Brief life sketches and their contributions:-

1. Ustad Bismillah Khan
2. Ustad Hafiz Ali Khan
3. Pt. Panna Lal Ghosh

UNIT-IV

Notations and Description of ragas and Talas:- Multani, Jai Jaiwanti

1. To write one Maseetkhani Gat with Todas
2. To write Razakhani Gat with Todas of ragas Multani, Jaijaiwanti
3. To write single and double of Tala :- Dhamar, Tilwada
4. Non- detailed raga:- Madhuwanti, Chhayanat

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ Description of Ragas.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas : Multani, Jaijaiwanti
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:-Madhuwanti, Chhayanat
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Dhamar, Tilwada,
5. Ability to play Dhamar on Tabla.
6. One Dhun.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan,Ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	Sangeet Kala Ka Itihas SangeetShastra Vigyan	:	Panna Lal Madan
2.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
4.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
5.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
6.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla

MUSIC (Instrumental)
SEMESTER-VI

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium can be used while singing Alankars.
4. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
5. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. The candidate can take vocal music or Tabla along with instrumental music.
8. There would be up to ten students in one section in practical class.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45marks

(i) Viva	:	35 marks
(ii) Gayan	:	05 marks
(iii) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	:	05+05 = 10 marks
		Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. General History of Indian Music i.e. from Bharata to Sharangdeva
2. Notational System, origin and development
3. Knowledge of Uttari and Dakshani Sangeet Paddhati

UNIT-II

1. The life Sketches and contributions of the following great musicians :-
   (i) Pt. Nikhil Banerji
   (ii) Pt. Uma Shankar Mishra
   (iii) Smt. Sharan Rani

UNIT-III

Essays:-

(i) Chitrpat Sangeet Mein Vadyon Ki Bhoomika.
(ii) Role of the Akashvani and Doordarshan in popularizing Instrumental Music.
(iii) Manch Pradarshan (Music & Finearts)

UNIT-IV

Notation and Description of the prescribed Ragas and Talas:-

1. Ragas:- Mian-Ki-Todi, ,Mian Malhar.
2. Talas :- Sultal, Adachartal
3. Non detail Raga :- Gujri -Todi, Bahar

- To write one maseetkhnai Gat with todas in any prescribed rag
- To write a Razakhani Gat with Todas
- To write single and double of prescribed Talas
- To write the description of detailed and non detailed raga

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas: Mian-Ki-Todi, Mian- Malhar
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:Gujri-Todi, Bahar
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Adachautal, Sultal.
5. Ability to play Tilwada on Tabla.
6. One gat in Madhya laya other than teen tala with toras in any prescribed ragas.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan, ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
2.	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
3.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
4.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla
5.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran

TABLA (Instrumental Music)

SEMESTER-V

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There will be upto eight students in one secton.
3) Candidate can take any other instruments alongwith Tabla i.e. Sitar, Sarangi Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shehnai.
4) The candidate can take Vocal Music along with Instrumental Music
5) The candidate can also take Instrumental Music with Tabla
6) In all, 9 questions will be set. The question paper will be divided into five units. Four units contain 2 questions each. The candidates are required to attempt 4 questions selecting at least one question from each unit. The 5th unit based on the notation shall be compulsory.

Paper-A: THEORY (3 Hours duration)	:	45 marks
Paper-B: PRACTICAL (20 minute's duration)	:	45 marks
(i) Viva	:	30 marks
(ii) Harmonium	:	05 marks
(iii) Tabla	:	05 marks
(iv) Padhant on Hand	:	05 marks
Internal Assessment (Theory & Practical) (5+5)	:	10 marks
Total	:	**100 marks**

Paper-A Theory

UNIT-I

(a) Classification of Musical Instruments.
(b) Brief study of following south Indian Instruments:-
Mridangam , Ghatam, Tabil

UNIT-II

(a) Origin and development of Tabla Instrument.
(b) Playing techniques of Tabla

UNIT-III

(a) Comparison between Uttari and Dakshini Tala System.
(b) Comparative study of different talas having equal matras:
(i) Teental –Punjabi Tala (Addha Tala)
(ii) Roopak – Tivra

UNIT-IV

(a) Development & Importance of Tabla Gharana.
(b) Life sketches and contributions of the following:
(i) Mian Kadar Baksh
(ii) Pt. Ram Sahai

UNIT-V

Ability to write in notation of Quaida, Paran, Gat, Tihais & Peshkar in Teentala, Jhaptal, Roopak Talas

Paper-B: PRACTICAL

a) Playing of Talas prescribed in the course:- Ada Chautal, Tilwara and Punjabi Tala
b) Playing proper Badhat of Ada-Chautal, Teentala
c) Playing all the prescribed Talas with Vocal and Instrumental performances as well as solo items.
d) Tuning of Tabla/Pakhawaj
e) Practical knowledge of the following in the prescribed Talas:
   (i) Ada chartala:- simple Paran, Mukhra, Mohra, Uthan
   (ii) Rupak /Teevra:- Peshkar, Quaida, Palta, Rela, Paran.

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

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TABLA (Instrumental Music)

SEMESTER-VI

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There will be upto eight students in one secton.
3) Candidate can take any other instruments alongwith Tabla i.e. Sitar, Sarangi Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shehnai.
4) The candidate can take Vocal Music along with Instrumental Music
5) The candidate can also take Instrumental Music with Tabla
6) In all, 9 questions will be set. The question paper will be divided into five units. Four units contain 2 questions each. The candidates are required to attempt 4 questions selecting at least one question from each unit. The 5th unit based on the notation shall be compulsory.

Paper-A: THEORY (3 Hours duration) : 45 marks

Paper-B: PRACTICAL (20 minute's duration) : 45 marks

i)	Viva	:	30 marks
ii)	Harmonium	:	05 marks
iii)	Tabla	:	05 marks
iv)	Padhant on Hand	:	05 marks

Internal Assessment (Theory & Practical) (5+5) : 10 marks

Total : **100 marks**

Paper-A Theory

UNIT-I

a) Folk Tala Instruments of Punjab.
b) Brief study of following south Indian Instruments:-
Morchang, Kanjeera, Manjeera.

UNIT-II

a) Origin and development of Pakhawaj
b) Playing technique of Pakhawaj
c) Basic principle of Tabla / Pakhawaj accompaniment

UNIT-III

a) Comparative study of Bhatkhande and Paluskar Tala Notation System.
b) Comparative study of different talas having equal matras:
(i) Deepchandi –Jhoomra
(ii) Jhaptal – Sooltal
(iii) Ektal-Chautal

UNIT-IV

a) History of Delhi, Punjabi & Banars Gharana of Tabla
b) Life sketches and contributions of the following:-
   (i) Ustad Allarakha Khan
   (ii) Pt. Kishan Maharaj
   (iii) Pt. Anokhe Lal Mishra

UNIT-V

Ability to write in notation of Quaida, Paran, Gat, Tihais & Peshkar in Pancham, Sawari & Adachautal

Paper-B: PRACTICAL

a) Playing of Talas prescribed in the course:- Dhamar, Pancham- Sawari, Vilambit Ektala
b) Playing proper Badhat of Dhamar:- Pancham,- Sawari Talas
c) Playing all the prescribed Talas with Vocal and Instrumental performance as well as solo item.
d) Tuning of Tabla/Pakhawaj
e) Practical knowledge of the following in the prescribed Talas:
   (i) Dhamar:-Chakardar Paran, Farmaishi Paran, Tukra
   (ii) Tilwara:-Vilambit, Theka with accompaniment in Vocal

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

INDIAN CLASSICAL DANCE

SEMESTER –V

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. In all, nine questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, fifth unit based on notation will be compulsory. Thus in all, the candidates are required to attempt five questions.

3. No electronic instruments will be allowed for practical examination.

4. Practical paper shall be set from the syllabus prescribed for Practical Paper- B.

5. There would be upto ten students in one section in practical class.

Paper-A: **THEORY** (3 hours. duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

PAPER-A THEORY

Unit –I

1. Origin of Dance and its development up to Mughal period.
2. Study of Rasas and its importance in dance
3. Origin of Taal and its various aspects.
4. Important characteristics of Kathakali Dance

Unit-II

1. Dance and Religion
2. Brief study of Natya Shastra
3. Brief study of Natak Bheda
4. Life sketch of Birju Maharaj ji

Unit-III

1. Description of Teen Taal and Sawari
2. Notation of Bol, Tatkar, thaat, aamad, Chakkardar, Tora in Teen Taal.
3. Notation of Bol, Tatkar, tihai, aamad, paran and Chakardar Paran in Sawari Taal
4. Nagma, Thekaa in Teen Taal and Sawari

PAPER-B PRACTICAL (Duration 45 minutes 06 periods per week)

Unit -I

I. Swari Taal (Matra 15)
- a) Theka
- b) Bol Tatkar
- c) Thaat-1
- d) Aamad-1
- e) Chakkardar Paran-1
- f) Tihai-1
- g) Paran-1
- h) Nagma-1

II. Tentaal (Matra 16)
- a) Theka
- b) Bol Tatkar
- c) Thaat-1
- d) Aamad-1
- e) Chakardar Tora-1
- f) Nagma-1

III.
- a) Knowledge of Rajasthani Folk Dance practically
- b) Play Theka of Swari on Tabla
- c) Gat Nikas of Ghungat and Matki
- d) All the practical work on Hand

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INDIAN CLASSICAL DANCE

SEMESTER –VI

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. In all, nine questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, fifth unit based on notation will be compulsory. Thus in all, the candidates are required to attempt five questions.

3. No electronic instruments will be allowed for practical examination.

4. Practical paper shall be set from the syllabus prescribed for Practical Paper- B.

5. There would be upto ten students in one section in practical class.

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

Paper-A Theory

Unit- I

1. Development of Dance after Independence
2. Brief study of Nayika Bheda
3. Knowledge of Dakshini Taal System
4. Essential characteristics of Manipuri Dance

Unit-II

1. Dance and other Fine Arts
2. Loka Dharmi and Natya Dharmi
3. Life sketch of Achhan Maharaj Ji
4. Essay on “Nritya and Roopsaundarya

Unit III

1. Description of Dhamar with Theka and two Toras
2. Notation of Theka, Aamad, Tihai, Tora, Kavittin Teentaal
3. Notation of Theka, Paran, Chakkardar Paran, Tisarjati Paran, Kavittin Swari Taal
4. Nagma, Bol Tatkar in Dhamar, Teen Taal and Sawari

PAPER-B PRACTICAL (Duration 45 minutes, 06 periods per week)

UNIT-I

I. Dhamar (Matra 14)
- a) Bol Tatkar
- b) Theka
- c) Toras-2
- d) Tihai-1

II. Swari taal (Matra 15)
- a) Theka
- b) Bol Tatkar
- c) Paran-1
- d) Chakardar Paran-1
- e) Tisarjati Paran-1
- f) Kavit-1

III. Teen Taal (Matra 16)
- a) Theka
- b) Bol Tatkar
- c) Aamad-1
- d) Tihai-1
- e) Tora-2
- f) Kavit-1

IV.
- a) Knowledge of Sammi Dance practically
- b) Play Theka of Dhamar on Tabla
- c) Gat Nikas of Murli and Ghungat
- d) All the practical work on Hand

FINE ARTS

SEMESTER V

Paper-A : Theory (History of Art) **Max. Marks : 60**

Written Paper	:	54 marks
Internal Assessment	:	06 marks
TOTAL	**:**	**60 marks**

Paper-B : Practical

This paper consists of three sections :

		Max. Marks	*Max. Time*
1.	Landscape Composition	30	5 hours
2.	Life Sketching	30	5 hours
3.	Illustration in Advertising or Clay Modelling	30	5 hours

SESSIONAL MARKS : **50**

(Based on work related equally to 3 sections)

TOTAL : 140

Note :- Minimum of 9 hours teaching per week be assigned and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week).

THEORY

Paper A : History of Art **Max. Marks : 54**
Max.time: 3 hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

Instructions for the paper-setters and candidates:-

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Rajasthani Painting – Chavand Raagmala from Mewar, Raag-Raagini from Bundi and Naika from Kishangarh
- Pahari Painting – Ramayana from Basohli, Gita-Govinda from Kangra

Unit II : History of Indian Sculpture

- Mahabalipuram – Maheshasuramardini
- Elephanta – Ardhanarishwara
- Chola Bronzes – Nataraja and Parvati Images

Unit III : History of Western Art

- Beginning of Modern Painting – Manet
- Impressionism – Monet

Unit IV : Definition of Key terms, General Concepts and Techniques

- Form and Content, Art and Religion, Art and Society, Tradition, Modernity

Pedagogy:

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

PRACTICAL

Paper-B : Practical

This paper consists of three sections :

	Max. Marks	*Max. Time*
1. Landscape Composition	30	5 hours
2. Life Sketching	30	5 hours
3. Illustration in Advertising or Clay Modelling	30	5 hours
	Total : 90	

Note: The same paper setter will be requested to set papers in all the options in Section-III.

SECTION-I

Landscape Composition

Landscape Composition: By Imagination or on the spot. Emphasis should be on linear perspective, aerial perspective, colour, tones and textures as visible.

Medium : Oil, Water or Pastel colours
Size : ½ Imperial sheet

SECTION-II

Life Sketching

Life Sketching : From live model, coloured in any medium on ½ Imperial Sheet.
Approach to work should be academic relating to proportion, structure, tonal values, volume and perspective and Individuality of the model.

SECTION-III

Illustration in Advertising or Clay Modelling

Illustration in Advertising : To launch and promote a product and campaign advertisement, understanding of modern technique.

Concept of lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design. book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Poster & Ink
Size : Half Imperial sheet

OR

CLAY MODELLING:

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. size of slab minimum 30 cms. × 25 cms. Creative Pottery – Creative pot making in clay – any size.

SESSIONAL MARKS: 50 (based on work related equally to 3 sections)

Sessional marks will be given on the basis of work done during the session in all the three sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

Note: 1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week).

FINE ARTS
SEMESTER VI

Paper-A : Theory (History of Art) **Max. Marks : 60**

Written Paper	:	54 marks
Internal Assessment	:	06 marks
TOTAL	**:**	**60 marks**

Paper-B : Practical

This paper consists of three sections :

		Max. Marks	*Max. Time*
1.	Landscape Composition	30	5 hours
2.	Life Sketching	30	5 hours
3.	Illustration in Advertising or Clay Modelling	30	5 hours

SESSIONAL MARKS : **50**

(Based on work related equally to 3 sections)

TOTAL : 140

Note :- Minimum of 9 hours teaching per week be assigned and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week).

THEORY

Paper A : History of Art **Max. Marks : 54**
Max.Time 3hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS TO THE PAPER-SETTERS

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Company Painting
- Folk Style – Kalighat and Maithili

Unit II : History of Indian Sculpture

- Khajuraho – Mother and Child
- Konark – Musician Figures
- Sravanbelgola – Bahubali

Unit III : History of Western Art

- Neo Impressionism – Seurat
- Post Impressionism – Van Gogh
- Expressionism – Edvard Munch

Unit IV : Definition of Key terms, General Concepts and Techniques

- Beauty, Rasa and Bhava, Gestures, Postures and Movements, Stained Glass, Cire-perdue (lost-wax casting)

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

PRACTICAL
Paper-B : Practical

This paper consists of three sections :

	Max. Marks	*Max. Time*
1. Landscape Composition	30	5 hours
2. Life Sketching	30	5 hours
3. Illustration in Advertising or Clay Modelling	30	5 hours
	Total : 90	

Note: The same paper setter will be requested to set papers in all the options in Section-III.

SECTION-I
Landscape Composition

Landscape Composition: By Imagination or on the spot. Emphasis should be on linear perspective, aerial perspective, colour, tones and textures as visible.

Medium : Oil, Water or Pastel colours
Size : ½ Imperial sheet

SECTION-II
Life Sketching

Life Sketching : From live model, coloured in any medium on ½ Imperial Sheet.
Approach to work should be academic relating to proportion, structure, tonal values, volume and perspective and Individuality of the model.

SECTION-III
Illustration in Advertising or Clay Modelling

Illustration in Advertising : To launch and promote a product and campaign advertisement, understanding of modern technique.

Concept of lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design. book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Poster & Ink
Size : Half Imperial sheet

OR

CLAY MODELLING:

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. size of slab minimum 30 cms. × 25 cms. Creative Pottery – Creative pot making in clay – any size.

SESSIONAL MARKS: 50 (based on work related equally to 3 sections)

Sessional marks will be given on the basis of work done during the session in all the three sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

Note:
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week).

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HISTORY OF ART

SEMESTER-V

History of Indian Painting (from ca. 1800 to the present times) and Sculpture (from ca. 600 to 1300 A.D.)

Max.Marks: 100
Time: 3 Hr

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Indian Painting

Unit-I

- Company painting.
- Early oil painters - Raja Ravi Verma.
- Bengal School with special reference to Abanindranath Tagore

Unit-II

- New Trends: Nandlal Bose, Rabindranath Tagore, Gaganendranath Tagore, Jamini Roy, Amrita Shergil, D.P. Roy Chowdhury, Sobha Singh, M.F.Hussain, Satish Gujral.

History of Indian Sculpture

Unit-III

- Sculptures of Pala and Sena Period - Bengal, Bihar, Orissa

Unit-IV

- Pratihara Sculpture of Central and Western India.
- Chola Sculpture in Stone & Bronze

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Archer, W.G : India and Modern Art, George Allen & Unwin Limited, London, 1959.
- Archer, M. & Archer W.G. : Indian Painting for the British, 1770-1880, Oxford University Press, London, 1955.
- Chaitanya, Krishna : A History of Indian Painting, The Modern Period, Abhinav Publications, New Delhi, 1994.
- Appasamy, Jaya : Abanindranath Tagore and the Art of his Times, Lalit Kala Akademi, New Delhi, 1968.
- Mago, P.N. : Contemporary Art in India, A Perspective, National Book Trust of India, New Delhi, 2000.
- ..... : Lalit Kala Monographs, Lalit Kala **Akademi, Delhi.**
- Journals and Periodicals : Lalit Kala Contemporary, Roopa-lekha, Marg.
- Parimoo, Ratan : The Paintings of the Three Tagores, Maharaja Sayajirao University, Baroda, 1973.
- Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
- Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
- Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART

SEMESTER-VI

History of European Painting and Sculpture (from ca. 1850 A.D. onwards), and Theory and Principles of Art Appreciation.

Max.Marks: 100
Time: 3 Hrs

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of European Painting and Sculpture

Unit-I

- Impressionism - Monet, Degas, Renoir.
- Post-impressionism - Van Gogh, Cezanne, Gauguin.

Unit-II

- Cubism - Picasso, Braque
- Expressionism - Munch, Nolde.
- Abstract Art - Kandinsky
- Abstract Expressionism - Jackson Pollock.

Theory and Principles of Art Appreciation

Unit-III

- Function of Art.
- A brief study of Indian and Western approaches to Art.

Unit-IV

Explanation of the term

- Form, Content, Abstraction, Modernity, Contemporaneity, Pointillism, Collage, Lithograph, Etching and Ready-made with the help of relevant examples.

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
- Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
- Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
- Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.
- Ray, Niharanjan : An Approach to Indian Art, Publication Bureau, P.U., Chandigarh, 1974.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
- Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.

ANCIENT INDIAN HISTORY, CULTURE AND ARCHAEOLOGY

SEMESTER V

Paper-V (VOCATIONAL) : EXCAVATIONS, MONUMENTS AND SCULPTURES IN STONE AND BRONZE

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Objectives :

The primary objective of this paper is to prepare the students to become professional archaeologists through the study of various excavated archaeological sites, monuments and antiquities such as stone and bronze sculptures. The study of this paper is also designed for preparing students to take higher and advanced study in the subject.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
3. The map question shall have the following topics :
   (a) Location of important archaeological sites mentioned in Unit I.
   (b) Location of important monuments mentioned in Unit II.
   (c) Location/Provenance of important sculptures mentioned in Units III and IV.
4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice, i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.
5. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I:

Excavations : (Note : Instructions will be confined only to the location of the site and important results obtained). Kalibangan, Lothal Mitathal, Sugh, Sanghol, Inamgaon, Atranjikhera, Sisupalgarh, Nagarjunkonda.

UNIT-II:

Monuments : Asokan Pillars, Stupa of Sanchi, Rock-cut-architecture of Ajanta and Ellora, Temples: Kandariya, Mahadev, Lingaraja, Jagannath, Konark, Hoyasalesvara and Brihadesvara.

UNIT-III:

Sculptures : Stone-Harappan, Rampurva Ashokan Bull, Didarganj Yakshi, Katra Buddha, Sarnath Seated Buddha, Gomatesvara at Sravanavelagola, Maheshamurti, (Elephanta), Krishna holding Govardhana (Halebid), Sun Image of Konark, Kasia reclining Buddha (Mahaparinirvana).

UNIT-IV:

Bronze : Sultanganj Buddha, Nalanda Image of Balarama and Buddha, Kurkihar Avalokitesvara, Indra and Padmapani from Nepal, Tanjore (Chola), Nataraja, Balakrishna Kaliyadamana and Somaskanda Murti,

Pedagogy of the Course Work :

It is expected to familiarize students with brief outline of the topics with the help of visual aids like slides and transparencies. Field work trips to museums and sites may also be undertaken.

Essential Readings :

1. Agrawala, P.K. : *Bharitya Kala Avam Vastu,*Prithvi Prakashan, Varanasi.
2. Agrawala, V.S. : *Indian Art,* Prithvi Prakashan , Varanasi, 1965.
3. Allchin, B. and Allchin, F.R. : *The Rise of Civilization in India and Pakistan,* Cambridge University, Cambridge, 1982.
4. Bajpai, K.D. : *Five Phases of Indian Art,* Vidya Prakashan Jodhpur, 1991.
5. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* Vol-1, rpt. D.B. Tara Gorevala sons, Bombay, 1971
6. Grover, Satish : *The Architecture of India : Buddhist and Hindu,* Delhi, 1980.
7. Lal, B.B. : *The Early Civilization of South Asia,* Aryan Books, *New* Delhi, 1997.
8. Saraswati, S.K. : *A Survey of Indian Sculpture,* 2nd ed. Munshiram Manoharlal, New Delhi 1975.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER VI

Paper-VI : EPIGRAPHY AND NUMISMATICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives :

This course makes the students aware of major scripts of Ancient India and their origin and development upto 6^{th} century A.D. Antiquity and art treasure laws are also taught. It also provides knowledge about the origin and antiquity of Punchmarked coins; tribal coins; Yaudheyas, Kunindas, Agra, Audumbaras and Malavas; Kushana and Gupta coins.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The question on map shall consist of the location of the sites of important inscriptions of Asoka.
3. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate will attempt one question from each unit. Each question shall carry 18 marks.
4. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (4) in the question paper.

UNIT-I:

(a) Epigraphy : Major scripts of Ancient India.

(b) Their origin and development up to 6^{th} century A.D.

UNIT-II:

Rock and pillar edicts of Asoka.

UNIT-III:

(a) Origin and Antiquity of Punchmarked coins.

(b) Origin and date of Tribal coins : Yaudheyas, Kunindas, Agra, Audumbaras and Malavas.

UNIT-IV:

(a) Kushana Coins.
(b) Gupta Coins.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs and maps. In addition to it, special lectures, workshops, seminars, written assignments, class discussions, and term papers, should be included in the teaching work.

Essential Readings :

1 Allan, John : *Catalogue of Coins of Ancient India,* Vol.I, rpt., Delhi, 1974.

2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, BHU, Varanasi, 1957.

3. Chattopadhya, B. : *The Age of Kushanas,* A Numismatic Study, Calcutta, 1970.

4. Gupta, P.L. : *Coins,* rpt., National Book Trust, New Delhi, 2006.

5 Hultzsch, E. : *Corpus Inscriptionum Indicarum,* Vol.I, rpt. Archaeological Survey of India, Delhi, 1991.

6. Pandey, R.B. : *Indian Palaeography,* Munshiram Manoharlal, Banaras, 1952.

DEFENCE & STRATEGIC STUDIES

SEMESTER –V

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper - NATIONAL SECURITY: CONCEPTIONAL ASPECTS

M. Marks: 70
Time: 3 hours

Objective :

This paper deals with the conceptual aspects of national security and the role of economy & military organizations in furthering national pursuits.

SECTION -I

1. National Security: Definition and Concept.
2. Elements of National Security: Geography, Mineral Resources, Economic Stability, Military preparedness, Socio-Political Factors, Science and Technology.

SECTION -II

3. Collective Security Arrangements: Security Relevance of UN in the modern context, Role of NATO in the Post Cold War era.

SECTION -III

4. Regional groupings: SAARC, ASEAN and BIMSTEC (Aims and Objectives of the three Alliances to be discussed).

SECTION -IV

5. Non-Aligned Movement and National Security: History, Features, Problems and Achievements.

Books Recommended

1. Abhyankar, M.G., Defence Principles and Organisation, Usha Publications, Longmans, Michigan, 1966.

2. Aditya, Chibber , National Security Doctrine, Lancers International, New Delhi, 1990.
3. Alva, Myrdal , The Game of Disarmament, Pantheon Books, New York ,1982.
4. Bandhyopadhyay, J., India's Foreign Policy Making, Allied Publishers Private Ltd., Mumbai, 1970.
5. Choudhary, Subrata Roy, Military Alliances and Neutrality in War and Peace, Orient Longmans, Bombay, 1966.
6. Hadley Arthur T., The Nation's Safety and Arms Control, Viking Press, University of Michigan, 1961.
7. Hans, J. Margenthau , Politics Among Nations, McGraw-Hill, New York, 1993.
8. Misra, K.P., Studies in Indian Foreign Policy, Vikas Publications, Delhi, 1969.
9. Rana, A.P., The Imperative of Non-Alignment, McMillan Cop. of India, 1976.
10. Shah, A.B., India's Defence and Foreign Policies, Manaktalas , 1966.
11. Singh, Jasbir, Indian Defence Year Book 2012-13, Natraj Publishers, Dehradun, 2001.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of Students number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Relief features and their representation on Map.
2. Degree of Slopes, Gradients and Inter-visibility of Points.
3. Study of Field Craft with reference to the following:

   (a) Ground

   (b) Cover

   (c) Camouflage

   (d) Observation

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

DEFENCE & STRATEGIC STUDIES

SEMESTER –VI

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper: NATIONAL SECURITY OF INDIA

M. Marks: 70
Time : 3 hours

Objective - This paper covers the various factors related to National Security in India.

SECTION -I

1. India's Security Problems since 1947:
   (a) Geo-political effects of Partition: Boundaries and Frontiers.
   (b) Integration of States: J & K, Junagarh, Hyderabad and Goa.
   (c) An overview of India's Security problems related to Pakistan and China.

SECTION -II

2. Indian Ocean and India's Maritime Security.
3. Nuclear Policy of India: History, Evolution and Policy options.

SECTION -III

4. Internal Dimensions of India's National Security with particular reference to Insurgency, Terrorism and Low Intensity Conflict.
5. Disaster Management in India and the role of Civil Defence.

SECTION -IV

6. Economic Mobilization for National Defence.
7. Planning and Production for National Defence with particular reference to India's Defence Production and DRDO.
8. Higher Defence Organization in India

Books Recommended

1. Barnawal, S.P., Military Year Book, A Guide Publication, New Delhi, 2012.
2. Chopra, Maharaj, K., India the Search for Power: India and the Indian Ocean, Lalwani Publication House, Delhi, 1969.
3. Cohen Stephen, P. , The Indian Army, Oxford University Press, New Delhi,1990.
4. Kaul, Ravi, India's Strategic Spectrum, Chanakya Publishing House, Delhi, 1969.
5. Kavic, L.J., India's Quest for Security, Cambridge University Press, London,1967.
6. Klaus, Knorr, War Potential of the Nation, Greenwood Press, Northwestern University, 1979.
7. Khera, S.S. , India's Defence Problem, Orient Longmans, University of California,1968.
8. Kohli, S.N., Sea Power in the Indian Ocean, Tata McGraw Hill, Delhi, 1978.
9. Misra, R.N., Indian Ocean and India's Security, Mittal Publications, Delhi, 1986.
10. Pathak, K.K., Nuclear Policy of India, Gitanjali Prakashan, Delhi, 1980.
11. Panikkar, K.M.
    (i) Defence Problems of India.
    (ii) India and the Indian Ocean, G.Allen & Unwin, Ltd., 1945.
12. Rao, PVR, Defence Without Drift, Popular Prakashan, Delhi, 1970.
13. Rao, Rama, (i) Self Reliance and Security, Radiant , University of Michigan,1984.
    (ii) Role of Defence Production, Radiant, University of Michigan, 1984.
14. Singh, Bhupinder, Textbook of Defence Studies (Part III Punjabi), B.C. Publishers, Patiala,1983.
15. Singh, Jasbir, Defence Year Book, 2012-13, Natraj Publication, Dehradun, 2001.
16. Singh, Jasjit , Nuclear India, Knowledge World, Delhi, 1998.
17. Singh, Jaswant , Defending Indian Hemisphere , McMillan, Basingstoke, 1998.
18. Thomas, Raju G.C., The Defence of India (A Budgetary Perspectives), McMillan, Delhi, 1970.
19. Subrahmanyam, K.
    (i) Indian Security Perspectives, ABC Publishing House, New Delhi,1982
    (ii) Planning for Defence.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Tactical Formations: Section and Platoon.
2. Application of Fire: Fire Control, Fire Control Orders and Sequence of Fire Control Orders.
3. Military Messages: Verbal and Written.

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER- V

PAPER: HISTORY OF PUNJAB 1849-1966

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the impact of the colonial period on the region

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. British Administration: new structure; formation and achievements of Board of Administration
2. British Agrarian Policy; commercialisation of agriculture
3. Developments in Irrigation; transport and communication

UNIT-II:

4. Growth of Modern Education
5. Socio-Religious Reform- main ideas of Namdharis; Singh Sabha; Arya Samaj;Ad Dharam Movement.
6. Political awakening: agitation of 1907; Ghadar Movement

UNIT-III:

7. Growth of Political consciousness: Jallian wala bagh; Gurudwara Reform Movement
8. Circumstance leading to partition.
9. Rehabilitation and resettlement

UNIT –IV:

10. Punjabi Suba Movement and Reorganisation Act 1966
11. Agricultural development: Green Revolution; Land reforms
12. Map : Ambala, Amritsar, Delhi, Hissar , Jaito, Jalandhar, Khem Karan, Kurukshetra, Ludhiana, Lahore, Lyallpur, Nankana Sahib, Sargodha, Tarn Taran

Reading List:

1. Fauja Singh (ed.) : *History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. It would also form the basis for one to two sentence answer questions.

2. Fauja Singh : *Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3. J.S. Grewal : *The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4. Khushwant Singh : *A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi, 1991.
5. Satya, M. Rai : *Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6. P.N. Chopra, B.N. Puri and M.N. Das : *A Social,Cultural & Economic History of India,* Vol. III, Macmillan, Delhi, 1974.
7. K.C. Yadav and S.M. Fogat : *Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991.
8. R.S. Johar, and J.S Khanna : *Studies in Punjab Economy,* GNDU, Amritsar, 1983.
9. Monica Das Gupta, T.N. Krishna & Lincon C. Chen : *Women's Health in India, Risk and Vulnerability*, Oxford, OUP, 1998.

HISTORY

SEMESTER-VI

PAPER: WORLD HISTORY 18TH-20TH CENTURY

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **World History 1761-1956**

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the modern period in World history.

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. The American Revolution; causes and consequences
2. The French Revolution-causes and impact; Continental System of Napoleon
3. Congress of Vienna 1815-motives, provisions, significance

UNIT-II:

1. The Industrial Era-causes of origin, new inventions, impact on society
2. Unification of Italy and Germany
3. New Imperialism 1871-1914

UNIT-III:

4. World War I: Division of Europe into two blocks, causes, Paris Peace Conference
5. Russian Revolution 1917- causes and impact
6. Nationalism and Communism in China- causes of revolution of 1911 and its impact; causes and consequences of revolution of 1949

UNIT –IV:

7. Mejie restoration and modernization in Japan
8. World War II; causes and consequences
9. World Map: Beijing, Berlin, Bonn, Boston, Budapest, Cairo, Constantinople, Crimea, Frankfurt, Geneva,Jerusalem, Johannesburg,London, Manchuria, Moscow,Nagasaki, Nanking, Naples, New York, Paris, Phillipines, Rome, Shanghai, Stalingard, Tokyo, Trafalgar, Venice, Vienna, Washington, Waterloo.

Suggested Readings

1. Davis, H.A. : *An Outline History of The World,* OUP, 1964, 4th Edition.
2. Garraty John A. & Peter Gay (ed.) : *The University History of the World,* United Kingdom : New Orchard Edition, 1985.
3. Gupta, P.S. : *Europe Ka Itihas,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1996 (Hindi Medium).
4. Hinsley, F.H. (ed.) : *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.
5. Stavrianos, L.S. : *The World Since 1500,* Delhi : Prentice Hall of India, 1965.
6. Ashworth, W. : *A Short History of the International Economy, 1850-1950,* London : Longmans, 1954.
7. Brecher, Michael : *The Foreign Policy System of Israel, Toronto* : Oxford University Press, 1972.
8. Chabod, Fredrico : *History of Italian Fascism,* London : Weidenfeld, 1961.
9. Gupta, P.S. : *Adhunik Paschim Ka Uday,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1997 (Hindi Medium).
10. Garraty John A. & Peter Gay (ed.) : *The Columbia History of the World,* United Kingdom : New Orchard Edition, 1985.

POLITICAL SCIENCE
SEMESTER-V

COMPARATIVE POLITICAL SYSTEMS (UK AND USA)

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The purpose of this paper is to serve as an introduction to the field of comparative politics. It provides a broad overview of the field of comparative politics and examines some key approaches. The major part of the paper is devoted to understanding and analyzing the origins and working of two political systems, the UK and the USA. The student will not only become familiar with the working of these two political systems but also understand how the concepts of comparative politics can be used to understand real world politics.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit–4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I: Theoretical Framework

(i) Meaning, Nature and Scope of Comparative Government and Politics
(ii) Comparative Method.

Unit-II: U.K.

(i) The British Political System - Salient Features and Conventions.

(ii) Executive
   (a) Monarchy:- Difference b/w King and Crown, Powers of Crown, Nominal and Real position Justification of Monarchy
   (b) Features of Parliamentary/ Cabinet Government
   (c) Prime Minster:- Composition, Powers, Position and Role

   Legislature
   (a) House of Lords:- Composition, Powers, Criticism & Utility
   (b) House of Commons:- Composition, Powers, Mutual relations between House of Lords and House of Commons

(iii) Judiciary
   (a) Organisation of Courts in U.K.
   (b) Rule of Law.

Unit-III : U.S.A.

(i) The Constitutional framework of U.S.

(i) Salient features
(ii) Separation of Powers & Checks & Balances
(iii) Federal System- Meaning, Features, Tendency towards Centralisation and its future.

(ii) Executive

(i) Elections of U.S. President

(ii) Composition, Powers & Position of U.S. President.

Legislature/Congress

(i) House of Representative- Composition, Power, House of Representative is the weakest chamber
(ii) Senate – Composition, Powers, Most Powerful Second Chamber, Mutual relations b/w House of Representative & Senate

Judiciary

(i) Supreme Court - Organisation, Composition, Powers & its Role.

(ii) Power of Judicial review

Unit-IV

(i) Political Parties and Interest/Pressure Groups of U.K- Nature & Role.
(ii) Political Parties and Interest/ Pressure Groups of U.S.A. - Nature & Role.

Books Recommended :

1. Hague and Harrop : *Comparative Government and Politics*, Palgrave, New York, 2001.
2. V.N. Khanna Comp., : *Comparative Study of Government and Politics*, S. Chand and New Delhi 1999.
3. Andrew Heywood : *Politics*, Macmillan Palgrave, New York, 1997.
4. A.C. Kapoor : *Select Constitutions*, S. Chand and Company, New Delhi 1995.
5. Vishnu Bhagwan and Vidya Bhushan : World Constitutions, Sterling Publisher, New Delhi 1993.
6. J.C. Johari : *Major Modern Political Systems*, Vishal Publication, Delhi 1986.
7. J.C. Johari : *Comparative Politics*, Sterling Publishers, New Delhi 1982.
8. K.R. Bombwall Ambala : *Major Contemporary Constitutional Systems*, Modern Publication, Cantt 1978.
9. Mackintosh London, : *The Government and Politics of Britain*, Hutchinson and Comp., 1977.
10. Herman Finer London, : *Theory and Practice of Modern Government*, Theuen and Comp., 1963.

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POLITICAL SCIENCE

SEMESTER-VI

INTERNATIONAL POLITICS : THEORY AND PRACTICE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : This paper provides students with an overview of the broad theories and concepts used to understand international politics. It also examines key issues in contemporary global history from an international politics perspective.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (2) in the question paper.

Unit-I

1. Meaning, Nature and Scope of International Politics.
2. Realist and Idealist approaches to International Politics.

Unit-II

1. National Power : Its Elements and Limitations.
2. Balance of Power - Its critical evaluation.
3. Collective Security –Meaning & Feature, Difference between Balance of Power & Collective Security

Unit-III

1. Cold War and Post Cold War era of International Politics.
2. Bipolar, Unipolar and Nature of Emerging World Order.

Unit-IV

1. Regional Organisations : SAARC and EU.
2. New International Economic Order (NIEO).

Books Recommended :

1. H. Bull, *The Anarchical Society : A Study of Order in World Politics,* London, Macmillan 2002.
2. John Baylis and Steve Smith, *The Globalisation of World Politics,* OUP, Oxford, 2001.
3. A. Roberts, ''The UN and International Security'', *Survival*, Vol. 35, No. 1, Spring 1993.
4. A. Hurell, ''Collective Security and International Order Revision'', *International Relations*, Vol. II,No. 1, April 1992.
5. S.P. Verma, *International System and the Third World,* New Delhi, Vikas, 1988.
6. H.J. Morgenthau, *Politics Among Nations : The Struggle for Power and Peace*, 6th Edn., revised by K.W. Thompson, New York, Alfred Knopf, 1985.
7. S.H. Hoffman (ed.), *Contemporary Theory in International Relations,* Massachusetts, Addison-Wesley, 1979.
8. N.D. Palmer and H. Perkins, *International Relations,* Calcutta Scientific Book Company, 1971.
9. J. Frankel, *The Making of Foreign Policy,* London, Oxford University Press, 1963.
10. E.H. Carr, *Conditions of Peace,* New York, The Macmillan Company, 1944.
11. E.H. Carr, *The Twenty Year Crisis,* London, Macmillan, 1939.

ECONOMICS
SEMESTER - V

ECONOMICS OF DEVELOPMENT

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The primary course objective is to introduce the students to the basic features, determinants, and theories and strategies of development of underdeveloped economies. It also introduces students to the theory of how control and direction of economic activity by a central public authority can be used as an alternative to market by the underdeveloped economies.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Economic Growth and Development- Concept and Measurement. Main Features of an Underdeveloped Economy.
Determinants of Economic Development. Capital Formation:It's Source, Nurkse's Thesis of Disguised Unemployment. Lewis Theory of Unlimited Supply of Labour.

Unit-II

Classical Model of Growth; HarrodDomar Model of EconomicGrowth; One Sector Neo-classical Model of Growth. Solow Model of Growth. *Dualism :* Social and Technological.

Unit-III

Theory of Big Push. Leibenstein's Critical MinimumEffect Thesis. Strategies of Economic Development:Balanced Vs. Unbalanced Growth. Rostow's Theory of Stages of Growth.

Unit-IV

Theory of Planning in Developing Countries:Need, Objectives, Strategies and Problems of Planning. Price Mechanism and Planning. Investment Criteria. Choice of Technique. Emerging Strategies: Export Promotion and Import Substitution Strategy.

Books Recommended :

1 Higgins, Benjamin (1994) : Economic Development : Principles, Problems and Policies, Norton Publisher, New York.

2 Meier, G.M. (1995) : Leading Issues in Economic Development, Oxford University Press, New York.

3 Meier, G. M. and Rauch, James E. (2006) : Leading Issues in Economic Development, Eighth Edition, Oxford University Press

4 Nurkse, R. (1992) : Problems of Capital Formation in Underdeveloped Countries, Oxford University, Press

5 Rostow, W. W. (1960) : Stages of Economic Growth, Cambridge University Press.

6 Thirlwal, A P (2011) : Economics of Development, Palgrave Macmillan Publishers, UK.

Supplementary Readings:

Todaro, Michael. P (1989) : Economic Development in the Third World, Orient Longman, London.PalgraveMacMillan,UK

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ECONOMICS
SEMESTER- VI

INDIAN ECONOMY

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The objective of the paper is to familiarize the students with the features and characteristics of the Indian Economy. It also includes performance and problems of Industrial development, Indian tax structure, external trade and balance of payments, and objectives, strategy and performance of Indian planning. The course aims to develop analytical understanding of the students by exposing them to the basic issues of the Indian economy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Indian Economy on the Eve of Independence.Features and Characteristics of Indian Economy since Independence: Agriculture: Importance of Agriculture; Causes of Backwardness and Low productivity; New Agricultural Strategy, Green Revolution and Critical Evaluation with Special Reference to Environmental Degradation; Land Reforms: Need, Implementation and Evaluation.

Unit-II

Industry: Problems of Industrial Development; Public and Private Sector; Industrial Policy since 1956 with Special Emphasis on Recent Trends of Liberalization; Role and Problems of Small and Large Scale Industries in the era of Globlisation. Major Large Scale Industries: Iron& Steel, Cotton Textile, Petroleum & I.T.

Unit-III

Principal Features of Indian Tax Structure. Division of Financial Recourses between Centre and the States. Direction and Composition of Exports and Imports and Changes there in since Economic Reforms; Balance of Payment problems; Critical Evaluation of the Role of MNCs in India.

Unit-IV

Planning: Importance, Objectives, Strategy and Achievements of Indian Planning; Critical Evaluation of the Latest Five Year Plan (Plan wise details to be excluded); Major Indian Economic Problems: Inflation, Unemployment and Poverty; Introduction to Consumer Education and Consumer Protection (elementary ideas).

Books Recommended :

1	Dhar, P.K (Latest Edition)	: Indian Economy, Kalyani Publishers, Ludhiana.
2	Gill, K	: Evolution of Indian Economy, NCERT, New Delhi.
3	Aggarwal, A N (Latest Edition).	Indian Economy, Wiley Eastern Ltd.
4	Datt, Rudder & Sundram, KPM	: Indian Economy, S. Chand & Co. (Latest Edition)
5	Soni .R. N.	: Leading Issues in Agriculture Economics , Sohan Lal Nagin Chand & Sons.
6	Ghosh .A (Trans. Avtar Narinder Singh)	: Bhartiy Arth Vivshta (Punjabi University, Patiala).
7	Singh, Chander Gupt	: Bharti Arth Shastar (PunjabiUniversity, Patiala).
8	Mishra,S.K.&Puri,V.K. (English & Hindi Medium)	: Indian Economy, Himalaya Publishing House, Mumbai (Latest Edition).
9	Tondon,B.B.&Tondon,K.K	: Indian Economy, Tata McGraw Hills Pub. Co., New Delhi(1998).

Supplementary Readings:

1. Government of India: Five Year Plan (latest).
2. Government of India: Economic Survey (latest).

SOCIOLOGY
SEMESTER - V

SOCIETY IN INDIA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper–setter must put note (iii) in the question paper.

Objective

The objective of this paper is to present a comprehensive view of Indian Society. The students are exposed to the tribal, rural and urban societies and are presented with the social structure and social institutions to understand these segments of Indian Society. Through this paper, the students are also introduced to the problems of the underprivileged in Indian Society.

Course Content

Unit-I

Tribal Society: Meaning, Characteristics; Classification of tribes.

Institutional Features: Family, Marriage, Economy and Changing trends.

Unit-II

Rural Society: Meaning; Characteristics.

Institutional Features : Family, Marriage; Economy and Polity (Village Panchayat); Changing Trends.

Unit-III

Urban Society : Meaning and characteristics, Concepts of urbanization and urbanism;

Institutional features; Urban family - features and changes; Economy; Voluntary associations; Slums.

Unit-IV

Under-privileged Sections—Women, Physically Disabled, Scheduled Castes and Scheduled Tribes: Measures to improve their status.

Essential Readings:

1. Bose, N.K. (1980) : *Tribal Life in India,* National Book Trust.
2. Desai, A.R. (1969) : *Rural Sociology in India,* Bombay : Popular Prakashan.
3. Lal, S.N. & Nahar, U.R. (1992) : *Rural Social Transformations,* Jaipur : Rawat.
4. Madan & Majumdar (1989) : *An Introduction to Social Anthropology,* New Delhi : National Publications (Hindi & English).
5. Madhurima (2009) : *Readings in Sociology-Part-3*, Jalandhar : New Academic Publishing House [All Mediums].
6. Mandelbaum, G. (1970) : *Society in India,* Bombay : Popular Prakashan (Hindi & English).
7. Shah, Ghanshyam (ed.) (2002) : *Caste & Democratic Politics in India,* New Delhi : Permanent Black.
8. Sharma, R.K. (1997) : *Indian Society : Institutions & Change,* New Delhi : Atlantic Publications.
9. Singh, K.S. (2002) : *The Scheduled Castes*, New Delhi: Oxford University Press.

Further Readings :

1. Ahuja, Ram (1981) : *Social Problems in India,* Ghaziabad, Vikas Publications.
2. Mahajan, Sanjeev (2004) : *Gramin Samajshastra,* New Delhi : Arjun Publishing House.
3. Punit, A.E. (1978) : *Social Systems in Rural India,* New Delhi : Sterling Publications.
4 Rao, M.S., Chandrashekar Bhatt, L.N. Kelkar (eds.) (1991) : *A Reader in Urban Sociology,* New Delhi : Orient Longman.
5. Shah, D.S. & Sisodia, Y.S. (ed.) (2004) : *Tribal Issues in India,* Jaipur : Rawat Publications.
6. Singh, K. Suresh (2001) : *The Scheduled Tribes,* New Delhi : Oxford University Press.

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SOCIOLOGY

SEMESTER -VI

DISORGANISATION AND EMERGING PROBLEMS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective

This paper exposes the students to social disorganization, its levels and current problems. It helps students to understand social realities and also equips them to utilize their knowledge in various theoretical and practical exercises.

Course Content

Unit-I

Social Disorganization : Concepts and Levels –Personal, Familial and Societal.

Unit-II

Personal Problems : Problems of Adolescence; Alcoholism; Drug Addiction, Suicide.

Unit-III

Familial Problems : Domestic Violence, Violence against Children; Female Headed Households; Problems of Working Women.

Unit-IV

Societal Problems : Poverty; Corruption; Communal Conflicts, Problems of the Aged.

Essential Readings:

1. Ahuja, Ram (1981) : *Social Problems in India,* Ghaziabad : Vikas Publications.
2. Elliot, H.V. & Merill, F. (1950) : *Social Disorganization,* New York : Harper Brothers.
3. Gill, S.S. (1998) : *Pathology of Corruption,* New Delhi : Harper Collins.
4. Macionis, John J. (2005) : *Social Problems,* New York : Prentice Hall.
5. Madan, G.R. (1978) : *Indian Social Problems,* New Delhi : Allied Publishers.
6. Mitra, S.M. (2005) : *Indian Problems,* New Delhi : Eastern Book Corporation.
7. Mohan, J. & Sehgal, M. (2004) : *Youth & Drugs,* New Delhi : Abhijit Publications.
8. Narasaiah, M.L. (2005) : *Poverty & Environment,* New Delhi : Discovery Publishing House.
9. Rai, Bhartiya (2004) : *Samajik Samasyaein,* New Delhi : Arjun Publishing House.
10. Vardhan, Ranjay (1999) : *Female Headed Households in Patriarchal Society: A Sociological Study,* Delhi: Indian Publishers Distributors.

Further Readings:

1. Chakraborty, Rajgopal Dhar (2004) : *The Greying of India : Population, Ageing in the Context of Asia,* New Delhi : Sage.
2. Mahajan, Amarjit & Madhurima (1994) : *Family Violence and Abuse in India,* New Delhi : Deep and Deep Publications.
3. Natrajan, P.S. (2003) : "A Theory of Indian Communalism" in *Think India Quarterly,* Vol. 6, No. 3, July-Sept.
4. Pavrala, Vinod (1996) : *Interpreting Corruption,* New Delhi : Sage.
5. Phandaris, Urmila (1989) : *Ethnicity and Nation Building in South Asia,* New Delhi : Sage.
6. Shankar Rao, C.N. (2007) : *Indian Society,* Delhi: S. Chand and Company.

PUBLIC ADMINISTRATION

SEMESTER -V

PAPER: LOCAL GOVERNMENT (WITH SPECIAL REFERENCE TO PUNJAB)

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of the concept, significance and evolution of local government in India. It would also acquaint them with the pattern and working of divisional and district administration. The key areas covered are the types, structure, functions, finances and personnel of rural and urban local governments. It would also include the concept of state control over local bodies, provincialisation and rural-urban relationship with reference to Punjab.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and Significance of Local Government
Evolution of Local Government since 1882
Role of Deputy Commissioner
Role of Divisional Commissioner

Unit-II

The 73rd Constitutional Amendment – Provisions and its Impact
Gram Sabha – Composition Functions and Powers
Panchayati Raj Institutions in Punjab – Structure, Functions, Sources of Finances and Personnel

Unit-III

The 74th Constitutional Amendment – Provisions and its Impact
Urban Local Bodies – Structure, Functions and Sources of Finance
Mayor – Position, Functions and Powers
Municipal Commissioner – Position, Functions and Powers

Unit-IV

State Control over Local Bodies
State Finance Commission: Composition, Functions and Role
Provincialisation of Municipal Services
Rural- Urban Relationship – Challenges and Remedies

Essential Readings:

1. K.K.Puri and G.S.Barara : *Local Government in India* (Jalandhar: Bharat Prakashan, 2008)

2. S.R.Maheshwari : *Local Government in India* (Agra: L.N.Aggawal, 2002)

3.. S.L.Goel & Shalini Ramesh : *Panchayati Raj in India* (New Delhi: Deep & Deep Publishers, 2003)

4. Sahib Singh & Swinder Singh : *Local Government in India* (Jalandhar: New Academic Publishers, 2000)

Further Readings:

1. B.S.Khanna : *Rural Developments in South Asia* New Delhi: Deep & Deep Publications, 1991)

2 . Government of India, : 6th Report – Local Governance

3. H.B.Singh : *Revitalised Urban Administration in India* (Delhi: Kalpaz Publishers, 2003)

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PUBLIC ADMINISTRATION

SEMESTER - VI

PAPER: DEVELOPMENT ADMINISTRATION (WITH SPECIAL REFERENCE TO PUNJAB)

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the concept & significance of development administration, features of developed & developing countries, planning machinery at Centre & State level and the emergence of India as a welfare state. The paper would also give an understanding about the concept, forms, role and problems of public enterprises as well as the working of select Union Ministries and agencies in Welfare and Development Administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Development: Meaning, Features and Aspects
Development Administration: Meaning, Nature, Scope and Significance
Features of Developed and Developing Countries

Unit-II

India as a Welfare State.
Planning: Meaning, Objectives and Significance
Evolution of Planning Machinery in India at National, State Level and Local Level

Unit-III

Public Enterprises: Concept and Forms
Role of Public Enterprises in Economic Development
Managerial Problems of Public Enterprises
Public Enterprise Reforms since 1991; Privatisation: Concept

Unit-IV

Union Ministry of Human Resource Development – Organisation, functions and Role
Union Ministry of Rural Development – Organisation, functions and Role
Union Ministry of Health and Family Welfare – Organisation, functions and Role

Essential Readings

1. B.P. Mathur : *Public Enterprise Management* (Macmillan India: New Delhi, 1999)

2. R.K. Sapru : *Development Administration* (New Delhi: Sterling Publishers, 2nd edition, 2003)

3. Sahib Singh & Swinder Singh : *Public Administration: Development and Local Administration* (Jalandhar: New Academic Publishers, 2010)

Further Readings

1. Indian Development Report 2002 Parikh, S. and Radhakrishna, R. (eds.) : *Indira Gandhi Institute of Development Research* (New Delhi: Oxford University Press, 2002)

2. R.B. Jain : *Public Administration in India – 21st Century Challenges for Good Governance* (Delhi: Deep & Deep Publications Pvt. Ltd., 2002)

3. Rao Vasudeva B.S. : Rural Development Strategies & Role of Institutions; Issues Innovations and Initiatives. The Associated Publishers, Ambala 2007

4. S.L. Goel : *Advanced Public Administration*(New Delhi: Deep & Deep Publications, 2003)

5. S.P. Srivastava (ed.) : *The Development Debate: Critical Perspectives* (Jaipur & New Delhi:Rawat Publications, 1998)

6. Vijay Rattan : *Women and Child Development Programme* Administration (New Delhi: S. Chand, 1997)

PHILOSOPHY

SEMESTER – V

Paper : INDIAN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :
This paper discusses the main epistemological and metaphysical issues as discussed in the various Indian Philosophical Systems.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit–I

1. Salient features of Indian Epistemology and Metaphysics.
2. Concept of Prama and Pramana according to Nyaya
   - i) Pratyaksa
   - ii) Anumana
   - iii) Sabda
   - iv) Upamana
   - v) Arthapatti
   - vi) Anuplabdhi

Unit–II

3. Materialism (Swabhava vada) of Charvakas.
4. Anekantavada of Jainism.
5. Aryasatyas, Pratityasamutpada of Buddhism.

Unit–III

6. Concept of Self and Consciousness with special reference to Mandukya Upanishads.
7. Advaita Vedanta : Sankara on Brahman and Maya.

Unit - IV

8. Samkhya. : Theory of Causation. (Satkaryavada)
9. Vaisesika : Nature and kinds of Padartha (Categories)
10. Sikhism : Nature of Ultimate Reality, Mand and the World.

Essential Readings :

1. Chatterjee, S.C. & Datta, D.M. : An Introduction to Indian Philosophy (Calcutta University, Calcutta, 1993).
2. Hiriyanna, M. : Outlines of Indian Philosophy (Allen and Unwin, London, 1999) (Hindi Translation Available), London : Allen.
3. Tarka-Samgraha of Annambhatta (Poona-Bhandarkar Oriental Research Institute, Poone, 1992).

Suggested Readings :

1. Ananikana : A Nyaya Manual, Ed. Sri. Krishna Sarma, Adyar Library and Research, Chennai, 1991.
2. Chatterjee, S.C. : The Nyaya Theory of Knowledge (University of Calcutta, Calcutta, 1995).
3. Panchapagesha Sastri : The Philosophy of Aesthetic Pleasure (Annamalai University, 1999).
4. Complete Works of Swami Vivekananda (relevant portions), (Advaita Ashram, Calcutta), 1957.

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PHILOSOPHY

SEMESTER – VI

Paper : WESTERN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper aims at exposing the students to main epistemological and metaphysical theories and problems of western philosophy. It also deals with basic themes of existentialism, logical positivism and analytical philosophy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I

1. Nature of Philosophy with special reference to Metaphysics and Epistemology (introductory).
2. Materialism : Mechanical and Dialectical.
3. Idealism : Objective (Plato), Subjective (Berkeley).

Unit-II

1. Nature of Knowledge : Knowing subject, Act of knowing and object of Knowledge.
2. Theories of Truth : Coherence, Correspondence and Pragmatic

Unit-III

3. Theories of Knowledge :

   (a) Rationalism.

   (b) Empiricism.

   (c) Transcendentalism of Kant.

Unit-IV

4. Universal and Particulars : Concept of Being (Parmenides) and Becoming (Heraclites).
5. Substance (Spinoza) Causality (Hume).
6. Existentialism : Being in itself; Being for itself; Choice and Freedom.

Essential Readings :

1.	Ewing, A.C.	:	Fundamental Questions of Philosophy (London : Routledge & Kegan Paul, 1999).
2.	Titus, H.H.	:	Living Issues in Philosophy, Prentice Hall Pub. (New Delhi : Eurasia Pub. House, 4th ed., 1999).
3.	Macquire, John		Existentialism, Philosophical Library, New York, 1949.

Suggested Readings :

1.	Ayer, A.J.	:	Twentieth Century Philosophy, Penguin Books, Harmondsworth, 2002.
2.	Ayer, A.J.		Language, Truth and Logic, Soft Cover ISBN 0486200108, Dover Publications, 1969.
3.	Korner, Stephen	:	Fundamental Questions of Philosophy (Penguin), Harmondsworth, 2002.

PSYCHOLOGY

SEMESTER - V

Objectives :

(I) This course will enable the students to get an introductory knowledge about abnormal psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(a) There shall be **9** questions in all. First question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all with 14 marks for each.

(b) The practical will be of 20 marks.

PAPER: ABNORMAL PSYCHOLOGY

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

UNIT-I : *Viewpoints Regarding Abnormality :* Historical, Psychodynamic, Behavioural, Cognitive Behavioural, Humanistic and Interpersonal; Current Classifications of Abnormality as per DSM -V.

UNIT-II : *Stress :* Concept of Stress; Types of Stressors; Etiology of Stress; Coping Strategies: Problem Focussed and Emotion Focussed.

UNIT-III : *Causes of Abnormal Behaviour :* Biological, Psychological and Sociocultural Causes.

UNIT-IV : *Significance of Statistics :* Mean, Standard Deviation, Correlation.

Significance of Difference Between Means (Correlated and Uncorrelated).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. The use of Biofeedback.
2. Presumptive Stressful Life Event Scale.
3. Adjustment Inventory.
4. Mental Health Inventory.
5. Dener's SWB
6. Oxford Happiness Inventory

Books Recommended :

Essential Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003) : *Abnormal Psychology and Modern Life,* New York : Pearson Education.
2. Davison, G.C. and Neale, J.M. (1998) : *Abnormal Psychology,* New York : John Wiley and Sons.
3. Garrett, H. E. (1966) : *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons.

Reference Books

1. Feldman, R.S. 1996) : *Understanding Psychology,* New Delhi : Tata McGraw Hill.2.
2. Guilford, J.P., and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education.* Singapore: McGraw Hill.
3. Sarason, B.R. & Sarason, I.G. : *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_Prentice Hall of India.

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PSYCHOLOGY
SEMESTER - VI

Objectives :

(I) This course will enable the students to get an introductory knowledge about abnormal psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(a) There shall be **9** questions in all. First question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry14 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all with 14 marks for each.

(b) The practical will be of 20 marks.

PAPER: BEHAVIOURAL DISORDERS

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

UNIT-I **:** Anxiety Based Disorders viz. Phobia; OCD; Panic; Generalized Anxiety Disorder. Conversion Disorders,
Dissociative Disorders : Types, Symptoms and Etiology.

UNIT-II **:** *Mood Disorders :* Types, Symptoms and Etiology.

UNIT-III **:** *Schizophrenia Types :* Symptoms and Etiology.

UNIT-IV **:** *Psychotherapies :* Psychodynamic Therapy, Behaviour Therapy, Cognitive- Behaviour Therapy, Humanistic Therapy.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. Clinical Interview.
2. TAT.
3. Depression Inventory (Beck).
4. Spielberger's State Trait Anxiety Inventory
5. Self Efficacy
6. Buss and Durkee's Aggression Scale

Books Recommended:

Essential Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003) : *Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) : *Abnormal Psychology,* New York : John Wiley and Sons.

3. Garrett, H. E. (1966) : *Statistics in Psychology and Education,* New Delhi : Vakils,Feffer, and Simons

Reference Books

1. Feldman, R.S. 1996) : *Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

2. Guilford, J.P., and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education* Singapore: McGraw Hill.

3. Sarason, B.R. & Sarason, I.G. : *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e) Prentice Hall of India.

GEOGRAPHY

SEMESTER-V

Paper-IX: WORLD REGIONAL GEOGRAPHY- I

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:

To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:

Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to Regional Groupings (European Union, North Atlantic Treaty Organization, North American Free Trade Agreement and Commonwealth of Independent States).

UNIT-I

(i) Anglo America (20 lectures)

UNIT-II

(ii) Latin America (20 lectures)

UNIT-III

(iii) Europe (20 lectures)

UNIT-IV

(iv) Russia & Commonwealth of Independent States (30 lectures)
(v) Oceania

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words each. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 Marks) and (iii) attendance (2marks).

7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 7 in the question paper.

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective*. Prentis Hall, New Jersy, 1995.
2. Blij, Harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cairns, G. O. et. al. : *Australia. Macmillan Co.* New York, 1962.
4. Coysh, A. W. and M. E. Tomlinson : *The Southern Continents.* University Tutorial Press, London, 1980.
5. English, Paul Ward & James, A.Miller : *World Regional Geography: A Question of Place, John Wiley*, New York, 1989.
6. Gilbert, Alan : *Latin American Development: A Geographical Perspective.* Hanswoodsworth Penguin, Middlesex, London, 1974.
7. Gottmann, Jean : *A Geography of Europe. Harrape & Co*. London, 1969.
8. Gregory, J. S. ed. : *The Geography of USSR*. Novosti Press Agency, Moscow, 1985.
9. Hudson, F. S. : *North America. Mc. Donald & Evans*, Fly Mouth, 1975.
10. Jackson, Richard H. & Lloyd E.Hudman : *World Regional Geography: Issues for Today, John Wiley*, New York, 1991.
11. Kromm, D. E. : *World Regional Geography, Saunders Publishing*, New York, 1980.
12. Malmstorm, V. H. Englewood Cliffs : *Geography of Europe: A Regional Analysis*. Prentice Hall, New York, 1991.
13. Patterson, J. H. : *North America. Oxford University Press,* New York, 1995.
14. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando, 1998.

Further Readings:

1. Don R. Hoy (Ed.) 1980. : *Essentials of Geography and Development,* Macmillan, New York,
2. Hussain, Majid : *World Regional Geography, Rawat Publications*, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the Wold, Kalyani Publishers,* Ludhiana, 2009.
4. Tikkha, R. N., Bali, P.K. and Sekhon, M. S. : *World Regional Geography,* New Academic Publishers, 2007.
5. Singh, Malkit : *World Regional Geography,* Rasmeet Prakashan, Jalandhar, 2009.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents.Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - X: MAP PROJECTIONS

Max. Marks: 30
Time: 3 hours

Distribution of Marks:

(i) Written paper of three hours covering entire syllabus shall be held for students of USOL. For others it shall be at respective colleges. 20 marks

(ii) Practical Record relating to Map Projections and Viva voce on Practical Record relating to Map Projections. 10 marks

Objective:

- To provide an analytical understanding of use of common map projections.

Course Content:

Unit- I

Map Projections:
General introduction , classification of projections, general principles of identification and choice of projections.
(6 lectures)

Unit- II

Construction, properties and limitations of following projections

Cylindrical : Simple, Equal area, Mercator's (4 lectures, 6 lab. sessions)

Unit- III

Construction, properties and limitations of following projections

Conical : One Standard Parallel, Two Standard Parallel , Bonne's, Polyconic and International
(4 lectures, 6 lab. sessions)

Unit- IV

Construction, properties and limitations of following projections

Zenithals : Gnomonic, Stereographic, Orthographic, Equidistant and Equal Area (Polar cases only)
Conventional : Sinusoidal and Molleweide's (normal cases only) (7 lectures, 7 lab. sessions)

Note:

1. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of geography in the college.

3. Evaluation of Practical Record and Field Report will be done at the time of viva-voce examination.A minimum of 20 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in practical record and field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Practical Record.

6. A fresh practical note book shall be prepared by failed /improvement candidates.

7 For Practical classes, the number of students in one group shall not exceed fifteen.

8. There will be 3 hours of teaching per week for this paper.

9. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 9 in the question paper.

Books Recommended

Essential Readings

1. Kellaway, George P. : *Map Projections*, Methuen and Co., London. Year 1956
2. Steers, J.A. : *Map Projections*, University of London Press, London,1957 Year .
3. Garnett, William : *Map Projections,* George Phillip and Sons, London.

Essential Readings

3. Singh, R.L & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

Basic fundamentals of map projections are introduced by demonstration of construction exercises in class.

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GEOGRAPHY
SEMESTER-VI

Paper-XI: WORLD REGIONAL GEOGRAPHY- II

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 hours

Objectives:
To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:
Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to regional groupings (South Asian Association of Regional Cooperation, Association of South East Asian Nations, Organization of Petroleum Exporting Countries and Organization of African Unity).

UNIT-I

(i) East Asia (20 lectures)

UNIT-II

(ii) South East Asia (iii) South Asia. (30 lectures)

UNIT-III

(iv) Middle East and North Africa (20 lectures)

UNIT-IV

(v) Africa South of Sahara (20 lectures)

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 marks) and (iii) attendance (2 marks).
7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. (**The paper setter must put note 7 in the question paper.)**

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective.* Prentis Hall,New Jersy, 1995.
2. Blij, harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cressy, G. B. : *Asia's Land and People*. McGraw Hill, London, 1963.
4. Dobby, E. H. G. : *South East Asia*. University of London Press, London, 1980.
5. English, Paul Ward & James, A. : *World Regional Geography: A Question of Place*,John Miller Wiley, New York, 1989.
6. Fisher, W. B. : *The Middle East.* Methuen, London, 1978.
7. Ginsburg, Norton. Ed. : *The Pattern of Asia*. Englewood Cliffs, New Jersey, 1958.
8. Hance, William, A. : *The Geography of Modern Africa*. Columbia University Press, London, 1965.
9. Jackson, Richard H. & Lloyd E. Hudman : *World Regional Geography: Issues for Today*, John Wiley, New York, 1991.
10. Kromm, D. E. : *World Regional Geography,* Saunders Publishing, New York, 1980.
11. Prichard, J.M. : *Africa,* Longman, London, 1981.
12. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando,1998.
13. Spencer, J. E. and L. T. William : *Asia, East by South: A Cultural Geography.* John Willey & Sons, New York, 1971.
14. Spate, O. H. K. and A. T. A. Learmonth : *India and Pakistan: A General and Regional Geography*,Methuen, London, 1967.

Further Readings:

1. Don R. Hoy (Ed.) : *Essentials of Geography and Development*, Macmillan, New York, 1980.
2. Hussain, Majid : *World Regional Geography*, Rawat Publications, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the World*, Kalyani Publishers, Ludhiana, 2009.
4. Singh, Malkit : *World Regional Geography*, Rasmeet Prakashan, Jalandhar, 2009.
5. Tikkha, R. N., Bali, P.K. and Sekhon, M. S : *World Regional Geography*, New Academic Publishers, 2007.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents. Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - XII: FIELD SURVEY BASED REPORT

Max. Marks: 30
Time : 3 hours

- To acquaint the students with the importance of field work as one of the methodologies in geography.
- To familiarise the students about pre-field work and post-field work i.e. data processing and analysis and writing of field work report.

Distribution of Marks

i) Viva-Voce : 10 Marks ii) Field Report: 20 Marks

Fieldwork (Theory):

(i) Role of fieldwork in Geography.

(ii) Scale of study and fieldwork methodology.

(iii) Methods of collecting primary data : Observation, Interview and Questionnaire and Measurement.

(iv) Methods of field study of: a farm, a village, and a town. (20 lectures)

Note: The teachers should familiarize the students in the class before collection of primary data for preparation of field work.

Fieldwork (Practical): A field report of minimum 20 pages will be prepared based on primary data on problems such as (a) local market survey, (b) service area of school/ or hospital; (c) traffic flow, and (d) socio-economic characteristics of student's village/ mohalla/ sector.

(25 lab. Sessions)

Note:

1. There will be no written paper for USOL and college students.
2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher the Geography in the college.
3. Evaluation of Field Report will be done at the time of viva-voce examination. There will be no laboratory exercise at that time.
4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Field Report with the University School of Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Field Report will be evaluated by two examiners (including at least one from the USOL).
5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Field Report. .
6. All students are required to submit a practical record based on theoretical component listed as fieldwork (theory)
7. A fresh field report shall be prepared by failed /improvement candidates.
8. For Practical classes, the number of students in one group shall not exceed fifteen.
9. There will be 3 hours of teaching per week for this paper.
10. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 10 in the question paper.

Books Recommended

Essential Readings

1. Jones, P.A. : *Fieldwork in Geography*, Longman, London, 1968.
2. Archer, J.E. & Dalton, T.H. : *Fieldwork in Geography,* E.T. Bastford Ltd., London, 1968.
3. Singh, Gopal : *Mapwork and Practical Geography*, Surjeet Book Depot, Delhi,1993.

Further Readings

1. Hudson, F.S. : *A Geography of Settlements*, MacDonald, London, 1970.
2. Singh, L.R. & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

The students need to be trained to collect primary data, its processing and cartographic representation through taking up field exercises.

GANDHIAN STUDIES
SEMESTER-V
ECONOMIC THOUGHT OF MAHATMA GANDHI

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the Economic Thought of Mahatma Gandhi.

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:
1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Bases of Gandhian Economic Thought

1. Indian Influences on Gandhi's Economic Thought
2. Western Influences on Gandhi's Economic Thought
3. Fundamental Principles of Gandhi's Economic Thought

UNIT-II- Critique of Mechanization

4. Gandhi's Views on Machinery
5. Labour-Capital Relations
6. Theory of Trusteeship
7. Gandhi & Role of Corporate Social Resposibility

UNIT-III-Essence of Gandhian Economy

8. Doctrine of Swadeshi
9. Bread Labour
10. Concept of Wantlessness
11. Concept of Sarvodaya

UNIT-IV-Gandhi and Contemporary Idealogies

12. Gandhi's Views on Communism
13. Gandhi on Capitalism
14. Gandhian Socialism
15. Relevance of Gandhi's views in Globalized World

ESSENTIAL READINGS:

1. Biswas, S.C.(ed.) : *Gandhi: Theory and Practice, Social Impact and Contemporary Relevance* (Shimla: Indian Institute of Advanced Studies), 1960, pp.183-247.

2. Dasgupta, Ajit, K. :*Gandhi's Economic Thought* (London: Routledge), 1996.

3. Diwan, Romesh & Lutz : *Essays in Gandhian Economics* (Delhi: Gandhi Peace Foundation),1985.

4. Kumarappa, J.C. : *Gandhian Economic Thought* (Varanasi: Sarva Seva Sangh), 1962.

5. Mehta, Usha : *The Multi-Dimensional Thought of Mahatma Gandhi* (Mumbai : Mani Bhavan Gandhi Sangrahalaya), 2008.

6. Sethi, J.D. : *International Economic Disorder, A Theory of Economic Darwinism & A Gandhian Solution*, (Shimla: Indian Institute of Advanced Studies), 1996.

FURTHER READINGS

1. Dantwala,M.L. :*Gandhism Reconsidered* (Bombay: Padma Publications Publications), 1945.

2. Gandhi, M.K. : *Hind Swaraj or Indian Home Rule* (Ahmedabad: Navajivan Publishing House), 1982 edition.

3. Mehta, J. K. : *A Philosophical Interpretation of Economics* (London: Oxford University Press), 1956.

4. Schumacher, E.F. : *Small is Beautiful* (London: Abacus), 1989.

5. Sethi, J.D. : *Gandhi Today* (New Delhi: Vikas Publishing House), 1976.

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GANDHIAN STUDIES

SEMESTER-VI

Peace and Conflict Resolution

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the understanding of the concept of Peace and different methods of Conflict Resolution

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:

1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Understanding Peace

1. Meaning & basic components of Peace
2. Approaches to Peace
3. Obstacles to Peace
4. Gandhi's approach to Peace

UNIT-II- Peace Movements

1. Social Movements-Environment, Women, Dalit
2. NGOs
3. Civil Right movements in United States

UNIT-III-Understanding Conflict

1. Concept of Conflict
2. Causes of Conflicts
3. Types of Conflicts

UNIT-IV- Methods and Agencies of Conflict Resolution

1. Pacific methods of Conflict Resolution
2. Peace making
3. U.N. Peace Keeping & Peace Building

ESSENTIAL READINGS:

1. Barash, David, P. : *Approaches to Peace: A Reader in Peace Studies* (New York: Oxford University Press), 2000.
2. Brock, Peter : *Mahatma Gandhi & Mother India, Essay on Gandhi's Non-Violence & Nationalism* (Ahmedabad: Navajivan Publishing House), 1983.
3. Brock, Peter : *Twentieth Century Pacifism* (New York: Van-Nostrand Reinhold Company), 1970.
4. Galtung, Johan : *Peace by Peaceful Means* (New Delhi: Sage Publications), 1996.
5. Gultung, Johan : *The Struggle for Peace* (Ahmedabad: Peace Research Centre, Gujarat Vidyapeeth), 1984.
6. Melasuo, Tuomo (ed.) : *National Movements and World Peace* (U.S.A.: Avebury-Aldershot Brook),
7. Misra, R.P. : *Gandhian Model of Development and World Peace* (New Delhi: Concept Publishers), 1988.
8. Murty, K. S : *Quest for Peace* (Delhi: Ajanta), 1986.
9.. Murty, K. S. and Boughet, A.C. : *Studies in the Problems of Peace* (Bombay: Asia Publishers), 1960.
10. Peter, Wallen Steen (ed.) : *Peace Research: Achievements and Challenges* (London: West View), 1988.
11. Rennie, Linda and Preagar, Forcey (eds.) : *Peace: Meanings, Politics and Strategies* (London: West View),1986.
12. Sethi, J. D. : *Gandhian Critique of Western Peace Movement* (Delhi: Chanakya), 1989.
13. Sharp, Gene : *Politics of Non-Violent Action* (Boston: Sergent Publications), 1973.

14. Bondurant, J.V. : *Conquest of Violence* (Bombay: *O.U.P*), 1959.
15. Burton, J.W. : *Global Conflict* (London: Wheatsheef),1984.
16. Burton, John (ed.) : *Conflict Resolution and Preventive Human Needs Theory* (New York: St. Martin Press), 1990.
17. Chernyak, Yefim : *Ambient Conflicts* (Delhi: Progress Press), 1987.
18. Conlon, D.E. : "The Mediation-Intervention, Discussion-Towards an Integrated Perspective". *Negotiation Journal*, Vol. 4, No.2 of 1988, pp. 143-148.
19. Galtung, Johan : "Institutionalized Conflict Resolution-A Theoretical Paradigm*" Journal of Peace Research*, 1965, pp 348-395
20. Khanna, D.D. & Kueck Gert W. (eds.) : *Conflict Resolution, Human Rights and Democracy* (New Delhi: Shipra Publications), 2003
21. Kriesberg, Louis : *Social Conflicts* (Englewood Cliffs: Prentice Hall), 1982.
22. Kulkarni, V.B. : *Conflict in Indian Society* (Bombay: Bhartiya Vidya Bhavan), 1987
23. Shridharani, K.L. : *War Without Violence* (Bombay: Bhartiya Vidya Bhavan),1962.
24. Thakur, Ramesh : *International Conflict Resolution* (Bombay: West View),1998.
25. Weber, Thomas : *Conflict Resolution & Gandhian Ethics* (New Delhi: Gandhi Peace Foundation), 1991.

FURTHER READINGS:

1.	Danesh, H.B.	:	"Towards on Integrative Theory of Peace Education", *Journal of Peace Education*, Vol. 3, No.1, 2006.
2.	Elsie Boulding	:	"Peace Culture" in *Encyclopedia of Violence, Peace and Conflict* (San Diego: Academic Press), 1999.
3.	Kant , Immaunel	:	*Perpetual Peace: A Philosophical Essay* (London: Swan Sunne), 1902.
4.	UNESCO	:	*From a Culture of Violence to a Culture of Peace* (Paris: UNESCO), 1996.
5.	Azar, E.E. & Buitor J.W. (ed.)	:	*International Conflict Resolution: Theory & Practice (Brighton: Wheatsheef), 1986.*
6.	Burton, J.W.	:	*Conflict Resolution & Prevention (Basingstoke: Macmillan),1990.*
7.	Darby J. & Mac. Ginty R.	:	*Contemporary Peace Making (Palgrave: Macmillan), 2002.*
8.	Juergensmeyer, Mart	:	*Gandhi Way: A Handbook of Conflict Resolution (Berkeley: University of California Press), 2002.*
9.	Kriesbery, Lawis	:	*International Conflict Resolution (New Heven: Yale University Press), 1992.*
10.	Mitchell, C.R.	:	*Handbook of Conflict Resolution: An Problem Solving Approach (London), 1996.*
11.	Ramsbothan D. & Miall, H.	:	*Contemporary Conflict Management (New York : Blackwell), 2005.*
12.	Sustac, Zeno & Claudin Ignet	:	*Alternative Ways of Solving Conflicts (ADR) (New Delhi: Promila and Co. Publishers), 2001.*

JOURNALISM & MASS COMMUNICATION

SEMESTER- V

MEDIA MANAGEMENT, ETHICS AND LAWS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will introduce the students to the basic structure of media organizations and the regulatory framework and laws of the journalistic profession.

B. Pedagogy of the Course Work:
80% Lectures (including expert lectures)
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I : Types of ownership patterns; brief overview of newspapers, radio and television organizations.

Unit II : Basic principles of Management given by Henry Fayol.

Unit III : Freedom of speech and expression [Article 19(1)(a) and 19(2)]
Press Council of India guidelines for Ethical conduct.

Unit IV : Brief overview of: Right to Information Act, Copyright Act, Law of Defamation, Law of Obscenity, Contempt of Court, Contempt of Legislature

PRACTICALS **Max. Marks : 20**

1	Make a presentation regarding the violation and the adherence to the ethical code by the media (the medium of presentation can be a clippings file, posters, photographs, documentary or a street play).	10 Marks
2	Case study of any one ownership pattern of Indian media	10 Marks

Books Recommended

ESSENTIAL READING

1. Kohli Vanita ,(2003), *The Indian Media Business*, Sage.
2. Ganaratne Shelton ,(2000) *Handbook of the media*, Sage
3. Kothari Gulab (1995) *Newspaper Management in India*, DK Publishers, New Delhi
4. Frank Thayer(1954) *Newspaper Business management*, Prentice hall Inc, New York
5. Trilok N Sindhwani (1975), *Newspaper Economics and management*, Ankur publishing House, New Delhi.
6. John Mcmanus (1994), *Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
7. Edward S. Herman and Robert W. McChesney(1997), *The Global media: New missionaries of corporate capitalism* , Madhyam Books, New Delhi
8. Edward S. Herman and Robert W. McChesney(2002) *Manufacturing Consent: The political economy of mass media*, Random House,
9. Bagdikian Ben H,(2004), *The New Media Monopoly*,.Beacon Press
10. Redmond James and Trager Robert, (2004),*Balancing on the Wire: The Art of Managing Media Organizations*, 2nd ed., Atomic Dog
11. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
12. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D
13. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D
14. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey
15. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D
16. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D
17. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
18. Christians, Clifford and Traber, Michael, (1997), Communication Ethics and Universal Values, Sage Publications, N.D
19. Sharma, S.R , (1996), *Democracy and the Press*, Radha Publications, N.D.
20. Padhy, K.S., (1991), *Battle for Freedom of Press in India*, Academic Foundation, N.D

ADDITIONAL READING

1. McManus John (1994),*Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
2. Underwood Doug(1993),*When MBA's Rule the Newsroom: How the Marketers and Managers are Reshaping Today's Media*, Columbia University Press
3. Neuharth Al(1989),*Confessions of an S.O.B.,* Doubleday
4. Mackay Harvey(1988),*Swim With the Sharks without Being Eaten Alive*, Wm. Morrow & Co
5. Adarsh Kumar Varma (2003), *12 ½, Management Mantras of Journalism*, Kanishka Publishers, New Delhi
6. Mehta, Vinod, (1999), *Mr. Editor, How Close are you to the PM*, Konark Publishers, N.D.Shamsi N Afeque, (2006*), Media Organisation And Management*, Anmol Publications Pvt Ltd, New Delhi
7. Aggarwal, S.K., (1993), *Media and Ethics*, Sipra Publications, N.D.Stephen Lacy, George Sylvie, Robert H. Wicks, Jan LeBlanc Wicks, Ardyth Broadrick Sohn, (2003), *Media management: A Casebook Approach, Lea's Communication Series* , Lawrence Erlbaum Associates
8. Chauhan, Swati and Chandra, Navin, (1997), *Journalism Today: Principles, Practices and Challenges,* Kanishka Publishers, N.D.
9. Tharyam, P., (1999), *Good News, Bad News*, Punnoose Tharyam, N.D.
10. Fineman, Martha.A ed, (1997), *Feminism, Media and the Law,* Oxford University Press. N.Y.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- VI

ADVERTISING & PUBLIC RELATIONS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will make students conversant with strategic communication by imparting training in writing advertising copy and press releases amongst other tools.

B. Pedagogy of the Course Work :

80 % lectures (including expert lectures).

20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I

Definition & types of advertising; Place of Advertising in marketing mix; Advertising agency - structure and functions

Unit-II

Concept & definition of advertising copy; Elements of a typical advertisement; Basic principles of writing advertising copy;

Unit –III

Concepts & types of Public in PR; Brief introduction to Public Relations in Public & Private Sector; PR Agency: Structure & Functions

Unit – IV

Brief introduction to PR tools & Media Relations

PRACTICALS

Max. Marks : 20

1	Portfolio of five self-designed advertisements	10 marks
2	Prepare a file of PR tools used by anyone organization	10 marks

Books Recommended

ESSENTIAL READING

1 David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson

2 David Ogilvy, *The Unpublished David Ogilvy*

3 David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman

4 Subroto Sengupta, *Cases in Advertising and Communication Marketing*

5 Subroto Sengupta, (1990), *Positioning* (New Delhi, Tata-Mcgraw Hill

6 Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.

7 J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books

8 Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School

9 Dorothy Cohen, (1972), *Advertising.* NY, Wiley

10 Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956

11 Scott M. Cutlip & A.H. Genter, (1964), *Effective Public Relations*. 3rd ed. ,Englishwood Cliffs, Prentice-hall

12 Fraser P. Seital, (1984), *The Practice of Public Relations*. 2nd ed., Columbus Bell & Howell Co.

13 S.K. Roy, (1974), *Corporate Image of India*. New Delhi, Sh. Ram Center

14 Krishnachander Lehiri, *Publicity: Art and Literature with special reference to India*.

15 John Lee, (1968), *Diplomatic.* Persuaders, N.Y. Wiley.

16 Rajendra, *Lok Sampark* (Haryana Hindi Granth Academy, Chandigarh)

17 Dilgir, H.S., *Lok Sampark-Sanchar Atay Sandhan* (Kala Darpan Prakashan Chandigarh)

18 Mehta, D.S., *Handbook of Public Relations in India*, (Allied Publishers, New Delhi.)

19 Black, Marwin & Harlow, Rex, (1985), *Practical Public Relations*. Harper & Bros.; New York

20 Black, Sam, (1978), *Practical Public Relations Pitman*, London.

ADDITIONAL READING

1 Bajpai, Shailaja & Unikrishnan, Namita, (1996), *The Impact of Television Advertising on children*. SAGE, ND

2 Berelson, Bernard & Janowitz, Morris (Ed.), (1996), *Reader in Public Opinion & Communication*. The Free Press, New York

3 Berman, Ronald, (1981), *Advertising & Social Change*. SAGE, Newbury Park

4 Burke, Kenneth, (1946), *A grammar of motives*. Prentice-hall Englewood Cliffs

5 Burke, Kenneth, (1950), *A Rhetoric of motive*. Prentice-hall Englewood Cliffs

6 Cannon, Tom, (1973), *Advertising Research: Intertext-Books*, London

7 Agarwala-Rogers, Rekha & Rogers, Everett M., (1976), *Communication in Organisations*. The Free Press, Toronto

8 Berelson, Bernard & Janowitz, Morris (Ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York

9 Brembeck Winston & Howell, William, (1976), *Persuasion,* Prentice Hall, New Jersey

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POLICE ADMINISTRATION

SEMESTER - V

Organisational Behaviour With Special Reference to Police Administration

(A) Course Objectives:

The objective of this course is to familiarize the students with the concept, nature and significance of organizational behavior with special reference to police administration. The course also aims to discuss the foundations and models of organisational behavior. In particular, the students would be taught the concepts such as motivation, morale, leadership, communication, decision-making, and transactional analysis. Further, the inputs regarding the concept and rationale of organizational change and organizational development would be imparted to the students.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of:

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Organisational Behaviour: Concept, Nature and Significance. Foundations of Organisational Behaviour – Scientific Management, Human Relations, Systems and Contingency. Models of Organisational Behaviour.

Unit-II

Motivation: Concept; and Theories – Maslow's Need Hierarchy and McGregor's Theory X & Y. Morale: Concept; and Factors to Build-up Morale in India Police. Leadership: Concept, Theories – Trait and Situational; and Qualities.

Unit-III

Communication: Concept, Process, Types and Barriers. Communication Modes in Indian Police. Decision-Making: Concept; Types; and Simon's Rational Comprehensive Theory. Transactional Analysis: Meaning; and Types of Transactions.

Unit-IV

Organizational Change: Concept; Rationale; and Resistance to Change. Organisational Development: Concept and Rationale.

Essential Readings:

1. Prasad, L.M. : Organisation Behaviour, Sultan Chand & Sons, New Delhi, 2008.
2. Aswathappa, K. : Organisational Behaviour, 7th Edition, Himalaya Publishing House, New Delhi, 2007.
3. Moorhead, Gregory & Ricky W. Griffin : Organizational Behaviour: Managing People & Organizations, Biztantra, New Delhi, 2005.
4. Robbins, Stephen P. : Organizational Behaviour, Prentice-Hall of India Private Limited, New Delhi, 2001.
5. Sharma, K.K. & : Organisation Behaviour, Deep & Deep Sahni, Pradeep Publishers, New Delhi,1988.
6. Dubin, Robert : Human Relations in Administration, Prentice-Hall of India Private Limited, New Delhi, 1968.
7. George, C. S. : History of Management Thought, Prentice-Hall of India Private Limited, New Delhi.
8. Simon, Herbert A. : Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation, Macmillan, New York, 1976.
9. Sapru, R. K. : Theories of Administration, S. Chand, New Delhi, 1996.
10. Maheshwari, S. R. : Administrative Thinkers, MacMillan, New Delhi, Latest Edition.
11. Saiyadain, Mirza S. : Organisational Behaviour, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2006.
12. McShane, Steven L.; Glinow, Mary Ann Von; & Sharma, Radha R. : Organisational Behaviour, Tata McGraw-Hill, Publishing Company Ltd., New Delhi, 2006.

Further Readings

1. Argyris, Chris : Personality and Organisation: The Conflict Between System and the Individual, Harper and Row, New York, 1957.
2. Argyris, Chris : Integrating Individual and Organisation, Wiley, New York, 1964.
3. Mayo, Elton : The Social Problems of an Industrial Civilisation, Routledge and Kegan Paul Limited, London, 1957.
4. Hicks, Herbert G. : The Management of Organisation: a system and human resource approach, McGraw Hill, New York,1972.
5. Vadackumchery, James : Police Leadership: The Inside Story, APH Publishing Corporation, New Delhi, 1999.
6. Pugh, D. S. (ed.) : Organisation Theory, Penguin Books, Harmondsworth, 2nd Edition, 1984.

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POLICE ADMINISTRATION
SEMESTER- VI

Law and Police Administration

(A) Course Objectives:

The police system in India has to work within the ambit of legal framework laid down by the Constitution and by the enacted laws. The major responsibility of the police is to ensure the implementation of such laws. The course has been designed to impart knowledge to the students on the laws governing the 'prevention and detection of crime' which is laid down as the primary duty in the Indian Police Act 1861. The endeavour of the course is to familiarize the students with the main provisions of the Indian Penal Code 1860, the offences under it and the offences affecting the human body. In addition, meaning and definition of terms covered under Section 2 relevant to the police administration along with the powers of the police officer have been discussed.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

THE INDIAN PENAL CODE 1860: MAIN PROVISIONS

(i) Jurisdiction (Sections 1-5)
(ii) General Explanations (Sections 6-52-A)
(iii) Punishments (Sections 53, 53A, 54, 55, 60, 63, 73)
(iv) Joint & Constructive Liability Section 34 & Section149

Unit-II

Offences under the Indian Penal Code 1860

(i) Abetment (Section 107 & 108)
(ii) Criminal Conspiracy (Sections 120-A, 120-B)
(iii) Offences against the State (Sections 121, 121-A, 124-A)
(iv) Offences Against Public Tranquility (Sections 141-147)

Unit-III

Offences Affecting Human Body

-Culpable Homicide (Section 299) & Murder (Section 300)
-Causing death by rash and negligent act (Section 304A)
-Dowry Death (Section 304B)
-Hurt (Section 319), Grievous Hurt (Section 320)
-Wrongful Restraint and Wrongful Confinement (Sections 339, 340)
-Assault (Section 351)
-Sexual Harassment (Sections 354 A, 354 B, 354 C & 354 D)
-Kidnapping and Abduction (Sections 359-362)
-Rape (Sections 375, 376 A to D)

Unit-IV

Classification of offences in CRPC:

-Bailable and non-bailable offence;
-Cognizable and non-cognizable offence;
-Compoundable offences;
-Summons Case;
-Warrant Case;

Role of Police Officer:

-Lodging of First Information Report (Section 154) & Effects of Refusal to lodge FIR
-Police investigation
-Arrest (Section 41) & Rights of Arrested Persons
-Search (Section 165)

Essential Readings:

1. Tandon, Mahesh : The Indian Penal Code, Allahabad Law Agency, Prasad & Tandon, Rajesh Latest Edition.
2. Gandhi, B. M. : Indian Penal Code, Eastern Book Company, 2nd Edition.
3. Bhattacharya, T. : Indian Penal Code, Central Law Agency, Allahabad, 2007.
4. Mishra, S.N. : Indian Penal Code, Central Law Publications, Allahabad, 2007.
5. The Indian Penal Code : Bare Act with Short Notes, Universal Law Publishing Co. Pvt. Ltd., Delhi, 2008.

Further Readings

1. Lal, Rattan and Dhiraj Lal : Indian Penal Code
2. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.

WOMEN'S STUDIES

SEMESTER - V

PAPER: NATIONAL AND INTERNATIONAL INITIATIVES FOR WOMEN

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objective: This course aims to conscientise the students about the efforts made by national and international organizations, both governmental and non-governmental, towards women's empowerment and increased participation in social, economic and political life. The course exposes the student particularly to the U.N. initiatives in empowering women, putting an end to age old discrimination against them.

Course Contents

Unit I – Constitution of India and Women's Rights:

a) Fundamental rights and women's rights: de jure and de facto position
b) Directive Principles of State Policy and women's rights with special reference to Articles 39, 42, 43 and 44
c) Factors inhibiting effective implementation of Constitutional provisions

Unit II – Women and Law in India:

a) Dowry Prohibition Act, 1961 (as amended in 1984 & 1986);
b) Protection of Women from Domestic Violence Act, 2005,
c) Women's Rights in Property as Coparcener (as per 2005 Amendment of Hindu Succession Act, 1956)

Unit III – UN Conferences on Women:

a) Mexico (1975)
b) Copenhagen (1980)
c) Nairobi (1985)
d) Beijing (1995)
e) Beijing +5 (2000)
f) Beijing + 10 (2005)

Unit IV – UN Conventions for Women and Children:

a) Convention on the Political Rights of Women 1952
b) Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) 1979
c) Convention on the Rights of the Child (CRC), 1990.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

Aggarwal, Nomita : **Women and Law in India**, New Century Publication, Delhi, 2002.

Basu,D.D. : **Introduction to The Constitution of India**, Wadhwa & Co. Agra, 2001.

Jain, Devaki : **Women Development and the UN: A Sixty Year Quest for Equality and Justice**, Orient Longman, Delhi, 2006.

Shukla, Surinder : **United Nations and Empowerment of Women**, Arun Pub. House, Chandigarh, 2009.

United Nations and The Advancement of Women *(*1945-1996), United Nations Publication, 1996.

Further Readings:

Diwan, Paras : **Dowry and Protection to Married Women**, Deep and Deep Publication, New Delhi, 1987.

Ghosh, S. K. : Women in Changing Society, Ashish Publishing House, New Delhi, 1984.

Ratra, Amiteshwar; Parveen Kaur & Chhikara,Sudha : **Marriage and Family: In Diverse and Changing Scenario,** Deep & Deep, New Delhi, 2006.

Singh, Indu Prakash : Women, law and Social Change in India, Radiant, New Delhi, 1989.

Readings in Hindi:

Anthony,M.J. : **Kanooni Salha**, Hind Pocket Books, New Delhi, 2006.

Bansal, Bandna **Panchayati Raj Mein Mahila Bhagyadari**, Kalpaz Pub., New Delhi, 2004.

Gupta, Kamlesh Kumar : **Bharatiya Mahilayen Shoshan**, Utpidan avam Adhikar, Book Enclave, Jaipur, 2005.

Natani, Prakash : **Mahila Jagriti aur Kanoon**, Aavishkar Pub., Jaipur, Narayan 2005.

Natani, Prakash Narayan : **Manavadhikar avam Mahilayen**, sublime Pub., Delhi, 2005.

Sanyukt Rashtr, Karavahi Hatu Ghushana-Patra Tatha Beijing Ghushana, Campewell Publication, New Delhi, 1995.

Mathew, D.P. : **Hindu Vivaha Aur Talaq**, Indian Social Institute, New Delhi, 1986.

Mathew, D.P. : **Atam Raksha**, New Delhi, 1984.

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WOMEN'S STUDIES

SEMESTER-VI

PAPER : WOMEN'S DEVELOPMENT AND EMPOWERMENT IN INDIA

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objectives: This paper focuses on the issues related to the process of development and its impact on women, particularly in the context of a developing nation like India. The attempt is to equip the student to understand the major aspects of critique of development through a gender lens in its global and local contexts.

Course Contents

Unit I – Concept of Development

- Changing concept from Growth to Development;
- Human Centric Development;
- Why is gender a development issue?
- Indices of development: Human Development Index (HDI), Gender Development Index (GDI), Gender Empowerment Measure (GEM)

Unit II – Strategies for Women's Development

- Women in Development (WID), Women and Development (WAD) and Gender and Development (GAD),
- Empowerment and Sustainable Development;
- Microcredit

Unit III - Policy Initiatives

- Changing approaches from welfare to development to empowerment with special reference to Five Year Plans (First to Eleventh Plan)
- National Policy for Empowerment of Women

Unit IV – Implementation Machinery

- Social Welfare Boards,
- National Commission for Women (NCW),
- Ministry of Women and Child Development (MOWCD),
- National Institute of Public Cooperation and Child Development (NIPCCD)

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units.

  Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

ESSENTIAL READINGS

Ahooja-Patel, Krishna : **Women and Development**, Ashish Publishing House New Delhi, 1995.

Govt. of India, Five Year Plans (1st to 11th), Planning Commission, New Delhi.

Gupte, Shakuntla : **Women Development in India**, Anmol Pub, New Delhi, 2005.

Mathu, Anuradha (ed) : **Facets of Women's Development**, Kalpaz Pub, Delhi, 2006.

South Asia Human Development Reports 2000 and 2004, Mahbub ul Haq Human Development Centre.

UNDP Human Development Reports, 1995-2007.

Further Readings

Heyzer, Noeleen and Gita,(ed.), : **Gender, Economic Growth and Poverty**, Kali for Sen, Women, New Delhi, 1994.

Jain, Devaki : **Development as if Women Mattered**, Monograph, ISS, New Delhi,1983.

Krishanaraj, Maitreyi, Subhada : **Women and Development: The Indian Experience**, Publishers.

Rajput, Pam & Swarup 1994. : **Women and Globalization**, Ashish Pub. House, New, Delhi, Hemlata (ed.),

Reddy, V Narayana et al (eds), : **Women in Development: Challenges and Achievements,** Serials Pub, Delhi, 2005.

Singh, Gopal : **Economic Empowerment of Rural Women in India,** et al (eds) RBSA Pub, Jaipur, 2003.

Verma, S.B, Jiloka, S.K. U.K, Kushwah, K.J, (eds), : **Rural Women Empowerment,** Cambridge Univ Press, & 2005.

Readings in Hindi:

Kumar, Raj (ed.) : **Bhartiya Mahila**, Arjun Publishing, New Delhi, 2003.

Sarawat, Sawapnal : **Mahila Vikas AK Paridrashay**, Nayanprakashan, New Delhi,

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HUMAN RIGHTS & DUTIES
SEMESTER-V
PAPER: HUMAN RIGHTS RESPONSES TO SELECT PROBLEMS INTERNATIONAL AND NATIONAL PERSPECTIVE

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with a few select problems that have been addressed internationally through the UN Conventions to ensure protection of human rights. The objective is to regard to problems such as racial discrimination; custodial violence; and socially vulnerable groups including women, children, Specially-Abled and Internally Displaced Persons.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: (i) for written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9 x 2 = 18 marks. (ii) In addition to it, Question Nos. II to IX will consist of long answer of long answer (easy) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4 x 18 = 72 marks.

UNIT-I

Racial Discrimination: International Convention and Related Mechanism

(a) Convention on the prevention and punishment of the Crime of Genocide, 1948.
(b) International Convention on Elimination of All Forms of Racial Discrimination 1965.
(c) Refugees and the Refugee Convention, 1951

UNIT –II

Custodial Violence and Safeguards:

(a) Custodial Violence a
  (i) Torture and Death in Police Custody
  (ii) Fake Encounters and Enforced Disappearances
  (iii) Human Indignity against Women and Children

(b) Convention against Torture and Other Cruel and Human of Degrading Treatment or Punishment, 1984.

UNIT-III

Social Vulnerability and Protection –I: Women and Children

(a) Understanding Discrimination and Violence against Women and Children
(b) Convention on the Elimination of All Forms of Discrimination against Women, 1979.
(c) Convention on the Rights of the Child, 1989.
(d) Human Trafficking and United Nations Convention against Transnational Organized Crime, 2000

UNIT- IV

Social Vulnerability and Protection- II: Aged, Specially-Abled and Internally Displaced Persons.

(a) Problems of Aged and specially – Abled Persons.
(b) Convention of the Rights of Persons with Disabilities, 2006.
(c) International Mechanism for the Rights of the Aged.
(d) Internally Displaced Persons and Related Mechanism.

References:

Essential Readings:

1. Addlakha, Renu and Blume, Stuart et. Al: Disability and Society: A Reader, orient BlackSwan, Hyderabad, 2009.
2. Aggarwal, H.O: *Human Rights*, Central Law Publications, Allahbad, 2010.
3. Aggarwal, H.O: *International Law and Human Rights,* Central Law Publications, New Delhi, 2010.
4. Ahuja, Ram: *Social Problems in India*, Rawat jaipur, 2009.
5. Biswal, Tapan: *Human Rights*, *Gender and Environment,* New Delhi: Viva, 2006.
6. Kapoor, SK.: *Human Rights under International Law*, Central Law Publications, Allahabad, 2009.
7. Karna, G.N.: *Disability Studies in India: Retrospect and Prospect*, New Delhi: Gyan Publishing House, 2001.
8. Lauterpacht, Hersch: *An International Bill of the Rights of the Man*, New York: Columbia University Press, 1945.
9. South Asian Human Rights Documentation Centre: *Human Rights and Humanitarian Law,* South Asian Human Rights Documentation Centre, New Delhi, 2008.
10. Wolf, Sherry: *Sexuality and Socialism*: History, Politics, Theory of LGBT Liberalization, Chicago: Haymarket Books, 2009.

Further Reading:

1. Langley, Winstore E.: Encyclopedia of Human Rights Issues Since 1945, London: Fitzroy Dearborn Publishers, 1999.
2. Pachauri, S.K. : Children and Human Rigths , New Delhi: APH Publications, 1999.
3. *Pacuhauri, S.K: Women and Human Rights, New Delhi: APH Publications, 1999.*
4. *Rao, Mamta: Law Relating to Women and Children, Eastern Book Company, Lucknow, 2008.*
5. *Verma, R.S.: Human Rights: Burning Issues of the World, Volumes I, II and III. Delhi: Radiant Publishers, 2000.*
6. *Karna, G.N: United Nations and the Rights of Disabled Persons: A Study in Indian Perspective, New Delhi: APH Publishing Co. , 1999.*

HUMAN RIGHTS & DUTIES
SEMESTER-VI

PAPER: REGIONAL HUMAN RIGHTS INSTRUMENTS, STANDARDS AND MECHANISM

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with key features of regional human rights standards and mechanisms. The objectives of the paper are twofold. Firstly, it is familiarize the students that regional initiatives complement the international initiatives in promoting and protecting human rights. Secondly, it is to train students to locate countries of the specific region on an outline map of the world.

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES: Note: (i) for the written appear, the students will be required to attempt five questions in all. Questions No. I will be compulsory comprising of 12 short answers type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9x2 =18 marks. (ii) In addition to it. Questions Nos. II to IX will consist of long answer (essay) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4x18=72 marks per Unit where students will be asked to located countries that are party to the Regional Conventions or have either ratified specific Conventions or have not ratified the given Conventions on the attached world outline map.

UNIT-I

Europe:

(a) European Convention on the Protection of Human Rights (ECHR), 1950.
(b) European Social Charter (ESC), 1961 (Revised 1996)
(c) Charter of Fundamental Rights of the European Union, 2000.

UNIT-II

Americas:

(a) American Convention on Human Rights (ACHR), 1969.
(b) Inter-American Convention to Prevent and Punish Torture,1985
(c) Inter-American Convention on Forced Disappearance of Persons, 1994.

UNIT-III

Africa and Arab

(a) African harter on Human and Peoples' Rights (Banjul Charter), 1981
(b) Convention Regarding the Specific aspects of Refugee Problem in Africa
(c) Arab Charter on Human Rights, 2004

UNIT-IV

South and South-East Asia

(a) SARC Conventions: (i) Conventions on Regional Arrangements for the Promotion of Child Welfare in South Asia and Convention on Preventing and Combating the Trafficking in Women and Children for Prostitution
(b) ASEAN Charter on Rights, 2007.

REFERENCES:

Essential Readings:

1. Aggarwal, H.O.: *Human Rights, Central Law Publications*, Allahabad, 2010.
2. Aggarwal, H.O.: *International Law and Human Rights*, Central Law Publications, New Delhi, 2010.
3. Chodhury, A.R. and Bhuiyan, J.H.: *An introduction to international Human Rights* Law. Brill, 2010
4. Kappor, S.K: *Human Rights Under International Law, Central Law Publications* Allahbad, 2009.
5. Jacobs, Francis G and R.C.A White: *The European Convention on Human Rights*, Oxford: Clarendon University Press, 1996.

Further Readings:

1. Arora, Lalit Kumar: *Major Human Rights Instruments*, Isha Book, New Delhi, 2006.
2 .Vincent O. Orlu Nmehielle: *The African Human Rights System: it's Law Practice and Institutions*, Kluwer Law International, The Netherlands, 2001.
3. South Asia Human Rights Documentation Centre: *Human Rights and Humanitarian Law, South Asian Human Rights Documentation Centre*, New Delhi, 2008.
4. Sarkar, Sukanta: Human Rights Violations of Minorities, Anmol Publications, New Delhi, 2015.

COMPUTER SCIENCE

B.A./B.Sc. (GENERAL) FIFTH SEMESTER

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – A05	**Theory**	**Business Data Processing and Data Base Management Software**	**3**	**65**	**10**	**75**
Paper – A05	**Practical**	**Practical Based on Paper – A05**	**3**	**25**	**--**	**25**

Note : Practical marks will include the appropriate weightage for proper maintenance of lab. record.

Paper-A05 : Business Data Processing and Data Base Management Software

Objective :
The course enables the students to understand the basics of date processing, files, DBMS (concept & design).
Any RDBMS tools such as Oracle/mySQL/MS-SQL may be used.

Note :
(i) The question paper will consist of Four sections & a compulsory questions.
(ii) Examiner will set total of ***nine*** questions comprising ***two*** questions from each Section and ***one*** compulsory question of short answer type covering the whole syllabi.
(iii) The students are required to attempt ***one*** question from each Section and the entire Compulsory question.
(iv) All questions carry equal marks unless specified.

SECTION-A

Introduction: Database vs File Oriented Approach, Advantages and Disadvantages of DBMS, Data models: Hierarchical, Network and Relational models, Entity Relationship model, Client-Server Architecture, Distributed databases, Data Independence, Normalization (1NF, 2NF, 3NF and BCNF)

SECTION-B

Relational Algebra and Calculus : Storage Organization for Relations, Relational Algebra: Operations - union, intersection, difference, Cartesian product, projection, selection, division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations, Database Integrity : Entity Integrity and Referential Integrity; Security: introduction, Granting and revoking Privileges ; Recovery: Transaction Recovery Techniques. (Log Based Recovery and Shadow Paging)

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SECTION-C

SQL I: Data Definition Language(DDL): Create, rename, truncate, alter and drop tables. Data manipulation Language(DML): Insert, update and delete commands. Various forms of SELECT- simple, using special operators, aggregate functions, arithmetic functions, character functions, date functions, group by clause, Nested Queries, Joins.

SECTION-D

SQL II: Introduction to VIEWs, Manipulating the Base table(s) through VIEWs, Rules of DML Statements on Join Views, Dropping a VIEW, Inline Views, Materialized Views. Database Security and Privileges, GRANT Command, REVOKE Command, Application Privileges Management, Sequences, Introduction to INDEXES, Creating simple, unique and composite INDEX, dropping INDEX, COMMIT and ROLLBACK, Backup and Recovery of the database.

References

1. Date, C.J., 1981 : *An Introduction to Data Base Systems,* Vols. I and II, Addison-Wesley.
2. Ullman, Jeffrey D., : *Principles of Data Base Systems,* 2nd Edition, Galgotia Publ. Pvt. Ltd.
3. Whittington, R.P. : *Data Base System Engineering,* Clavendon Press.
4. Pratt, P., 1987 : *Data Base Systems Management and Design,* Boyd and Fraser Publ. Comp.
5. Kroenke, D.M. : *Data Base Processing : Fundamentals, Design, Implementation*, 2nd Edition, Galgotia Publ. Pvt. Ltd.
6. Powell, Gavin : *Beginning Database Design.*
7. Jain, V.K. : *Database Management Systems.*
8. Inmon, W. H., 2002 *: Building the Data Warehouse, John Wiley.*
9. Vieira, Robert : *Beginning SQL Server 2005 Programming.*
10. Black Book : *Oracle 10g Database Administration Little Book.*

PAPER-PA05 : Practical : Practical based on Paper A05.

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COMPUTER SCIENCE

B.A./B.Sc. (GENERAL) SIXTH SEMESTER

SCHEME OF EXAMINATION

SIXTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – A06	**Theory**	**Web Programming**	**3**	**65**	**10**	**75**
Paper – A06	**Practical**	**Practical Based on Paper – A06**	**3**	**25**	**--**	**25**

Note : Practical marks will include the appropriate weightage for proper maintenance of lab. record.

Paper – A06 : Web Programming

Objective : The course provides fundamentals of Internet & Web Programming using HTML. It also focuses Front Page, Java script & Java .

Note :

i. The question paper will consist of four sections & a compulsory questions.
ii. Examiner will set ***nine*** questions comprising of ***two*** questions from each Section and ***one*** compulsory question of short answer type covering the whole syllabi.
iii. The students are required to attempt ***one*** question from each Section and the entire Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION-A

1. ***Internet :*** Evolution of Internet, Future of Internet, Services provided on the Internet, Internet Access Methods.

2. ***World Wide Web :*** Evolution of www, Future of www, Fundamentals of web.

3. **Web Browser and Web Server**: Architecture, Working with Examples.

4. ***Hypertext Markup Language :*** Introduction to HTML, Building Blocks of HTML, HTML Lists, HTML Links, Images in HTML.

SECTION-B

5. ***Advanced HTML :*** HTML Tables, Frames, Forms, Editors.

6. ***Cascading Style Sheets :*** Introduction to CSS, Limitation of HTML, CSS Positioning, Layers.

7. **Developing Simple Website** : Website development using latest website development open source tool.

SECTION-C

8. ***Dynamic HTML :*** Moving elements and images, changing colors and hiding elements, moving between layers, mouse rollovers.

9. ***Java Scripting :*** Features, tokens, data types, variables, operators, control structs, strings, arrays, functions, core language objects, client side objects, event handling, application related to client side from validation.

SECTION-D

10. ***Fundamentals of Java Programming Language :*** Java vs. C++, bytecode, java virtual machine, constants, variables, Data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructors, method overloading, Implementation of following programs in Java:
    1. Program to identify whether entered number is prime or not.
    2. Program to show table of a given number upto given limit.
    3. Program to calculate factorial of a given number.
    4. Program for explaining application of classes and objects.
    5. Program explaining application of various types of constructors in Java.
    6. Overload method area to calculate area of different objects like rectangle, circle, cube and cylinder.

References

1. Kraynak & Hubraken : *Internet 6 in 1,* Prentice Hall of India, 2000
2. Kasser : *Using the Internet,* PHI, 4th ed, 2000
3. WALL : *Using the World Wide Web,* PHI, 2nd ed., 2000
4. Phillips : *Using HTML, PHI,* 4th ed., 2000
5. Randall & Jones : *Special Edition Using Front Page 2000,* PHI, 2000
6. Liang : *An Introduction to Java Programming,* PHI, 2000
7. *DHTML (Any Book).*
8. *Java Script (Any Book).*
9. Duckelt, John : *Beginning Web Programming.*
10. Keogh, Jim : *Java Programming Fundamentals.*
11. Wilton, Paul *: Beginning Java Script, II ed.* Wilby India Pvt. Ltd.

PAPER-PA06 : Practical : Practical based on Paper A06.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER-V

Paper: Biodiversity and Conservation

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and Practia per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks(Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question NO. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Biodiversity and Conservation

Section-I

Biodiversity: Definition, levels, importance, threats to biodiversity, hot spots of biodiversity in India. Environment Protection Act, 1986, Water (Prevention and Control of Pollution Act) 1974, Forest (Conservation) Act, 1980.

Section-II

Conservation: Causes of extinction of biodiversity**,** Strategies of conservation (in-situ and ex-situ). Protected Areas (National Parks, Sanctuaries and Biosphere reserves). Wild Life Protection Act, 1972.
Joint Forest Managemnt (JFM)

Section-III

Environmental Ethics: Role of religion in Environment Protection. Role of Indian tradition in environment conservation, Sustainable agriculture.
Different possible measures to make aware localties about environmental hazards and its remedies. Public Interest Litigation(PIL).

Section-IV

Cultivation Practices: Role of tree & plants in conservation; use of medicinal plants; cultivation methods *(Aloe vera, Calotropis (AK), Mentha, Ocimum*, Neem, *Ricinus, Jatropa, Accacia, Khair* (Katha).

Practical

Collection of local flora and fauna.
Study of vegetation of local area/college campus.
Collection of ten pests.
Identification of weeds.
Study of vegetation density by quadrat method
Plantation of medicinal plants**.**
Adaptation features of plants and animals.
Assignments/project as assigned by the teacher.

SEMESTER -VI

ENVIRONMENT CONSERVATION (ELECTIVE)

Paper: Public Awareness and Environment Issues

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	05	100

The number of hours for theory and Practia per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Public Awareness and Environment Issues

Section-I

Current Environmnet Issues: Climate Change, Global Warming, Population Explosion, Rain water harvesting, relamation of mining areas, impact of green revolution on environment with special referencve to Punab, Tehri Dam, Narmada Project, Bhopa Gas Tragedy, River Cleaning Project of Sant B.S. Seechewal(Punjab).

Section-II

Environmental Protection: Role of Non - Governmental Organizations (NGOs) in environmental protection (Chipko movement, For a Living Ganga by WWF, Transformation DTC fleet to CNG driven transport, Earth Hour, Green Peace (Nitrate Pollution in Punjab), KVM, Jaito). Role of individual in environment protection. Role of environmental education.

Section-III

Environmental Agencies: Role of International & National Agencies: UNEP, UNDP, WWF, MOEF, CPCB, in environment conservation and management.
A brief account on Ramsar convention, CITES (Convention on International Trade in Endangered Species), UNFCC, Montreal Protocol, Kyoto Protocol, Copenhagen Summit.

Section-IV

RS and GIS: Definition, Application in Environment**.**
Biostat: Mean mode, median, standard deviation, co-relation, Regression.

Practical

Public/Mass awareness programmes in different villages and their reports.
Survey report on different diseases based theory.
Visit to a dam to study its construction and working.
To visit any NGO working for environment.
To study various indoor pollutants in houses like LPG, AC, Paints, Polish, Cosmetics, Detergents, Shampoo, Hair dyes.
To study the different tools of stat in data interpretation.
Assignments/project as assigned by the teacher.

Books Recommended:

Jaswal & Jaswal	:	Environmental Law, APH Publications, New Delhi, 2006.
Khitoliya, R. K.	:	Environment Protection and Law, APH Publications, 2009.
Trivedi, R.K.	:	Handbook of Environmental Laws, Acts, Guidelines, Compliance and Standards, Vol. I & II, B.S. Publications, Hyderabad. 2004.
Srivastava, A.K.	:	Environmental Ethics, APH Publications, 2004.
Lillesand, T.M. and Kiefer, R.W.	:	Remote Sensing and Image Interpretation, John Wiley, Cambridge, 1987.
Fazal, S.	:	Remote Sensing Basics, Kalyani Pub. 2008.
Patel, A.N. & Singh, S.	:	Remote Sensing: Principles and Applications, Scientific Books, Jodhpur, 2009.
Jensen, J.	:	Remote Sensing of the Environment, Pearson Education, Prentice Hall, 2007.
CSE, Delhi	:	A Water Harvesting Manual, 2010.
Arora, P.N.	:	Biostatistics, Himalayan Pub. House, 2008.
Spencere, J.	:	Biodiversity: Beginners Guide, One World Publication, Oxford, 2009.
Chaudhari, A. B.	:	Biodiversity Endangered, Scientific Books, 2009.
Singh, Oraon & Prasad.	:	Medicinal Plants, APH Publications, 2009

HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2016-17
SEMESTER- V

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	40	10	1	3	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I. Importance and Functions of Food :

(a) Physiological; (b) Psychological; (c) Social

II. Food Constituents : Carbohydrates, Proteins and Fats—Functions, sources, requirements and deficiency.

III. Methods of Cooking : Boiling, Steaming, Frying, Baking, Roasting and Microwave cooking.

SECTION B

IV. Functions, recommended allowances, deficiency, excess and food sources of the following nutrients:

(a) Vitamins–A, B_1, B_2, B_3 , Vit. C, Vit. D.
(b) Minerals– Calcium, Phosphorous, Iron, Sodium, Iodine.

V. Balanced Diet

(a) Concept
(b) Classification of food based on the five/seven food groups.

SECTION-C

VI. Pregnancy

1. Signs and symptoms of pregnancy.
2. Discomforts and Complications.
3. Care during pregnancy
4. Preparation for delivery
5. Post natal care- Importance of breast feeding, bottle feeding, weaning and different types of weaning foods

VII. Methods of family planning

SECTION D

VIII Definition and importance of Child Development.

(a) Differences between growth and development;
(b) Principles of development.

IX Developmental tasks at various stages of development

PRACTICAL

Max. Marks	:	50
Practical	:	40
Int. Ass.	:	10
Teaching Periods	:	6 Periods/Week

I. Preparation of following dishes using various methods of cooking
   a. Soups- stimulating and nourishing (any two)
   b. Snacks- savory and sweet (two each)
   c. Salads- decorative and nutritious (two each)
   d. Bakery items (any two)
   e. Preparation with cereal pulse combination (any two)
   f. Desserts (any two)

II. Hot and cold beverages (at least two each).

III. Preparation of low cost nutritious recipes (at least two)

IV. Recipes- enhancing nutritive value (at least two)

V. Project

- Survey of Food Labels in order to study their nutritional facts

OR

- Survey of eating habits of five students

Reports to be submitted

List of Equipments for a practical group of 12-15 students :

1.	Gas Burners	15
2.	Cooking Range	01
3.	Ovens	05
4.	Mixers and Grinders	05
5.	Weighing Scales (for food)	05
6.	Gas Lighters	15
7.	Dustbin-Small	15-Big-1
8.	Vegetable Racks	02
9.	Plate Racks	15
10.	Storage Jars and Containers	25
11.	Refrigerator	01
12.	Icing Sets	05

Cooking Utensils

1.	Pressure Cooker	15
2.	Patila with Lid	30
3.	Kadahai	15
4.	Parat	15
5.	Tawa	15
6.	Chakla-Belna	15
7.	Grinding Stone	15
8.	Saucepans	15
9.	Karchhi	15
10.	Palta	15

11.	Poni	15
12.	Soup Strainers	15
13.	Sieves	15
14.	Enamel Bowls	15
15.	Baking Trays and Tins	15
16.	Cookie Trays	15
17.	Serving Trays	15
18.	Cutting Knives	15
19.	Peelers	15
20.	Jelly Moulds	15

Crockery and Cutlery

1.	Full Plates	30
2.	Half Plates	30
3.	Quarter Plates	30
4.	Cups & Saucers	30
5.	Soup Bowls	30
6.	Glasses	36
7.	Katoris (Vegetables Bowls)	30
8.	Dongas	30
9.	Forks	30
10.	Table Knives	30
11.	Table Spoons	48
12.	Tea Spoons	48
13.	Serving Spoons	24
14.	Tea Sets	05
15.	Dinner Sets	05
16.	Borosil Bowls	15
17.	Casseroles	15

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HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2016-17
SEMESTER- VI

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time In hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	40	10	1	3	40	10	100
									Total:	**100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I Food Preservation :
- (a) Definition, Importance & Principles.
- (b) Causes of food spoilage.
- (c) Household methods of food preservation—sun drying, use of salt, oil, spices, sugar & chemical preservatives.

II Meal Planning
- (a) Definition
- (b) Importance
- (c) Principles of meal planning (physiological, psychological and economical)

SECTION-B

III. Therapeutic Diets & Modification of Normal Diet:
- (a) Principles of therapeutic diets.
- (b) Concept of soft, bland, liquid diets with examples.

IV. Therapeutic diets in the following conditions with principles involved :
- (a) Fever
- (b) Diarrhoea
- (c) High blood pressure/ Hypertension
- (d) Diabetes Mellitus.

SECTION-C

VI. Emotional Development of the child from infancy up to 6 years
- (a) Characteristics of children's emotions.
- (b) Common childhood emotions—Fear, angers, jealousy, curiosity love and affection.

VII. Language Development.
- (a) Stages of language development.
- (b) Factors affecting language development

SECTION-D

VIII. Play
- (a) Significance of play.
- (b) Types of play.
- (c) Play materials/equipment required for various age groups.

IX. Common behavioural problems and their remedies—Bed wetting, thumb sucking, nail biting, temper tantrums.

PRACTICAL

Max. Marks	:	50
Practical	:	40
Int. Ass.	:	10
Teaching Periods	:	6 Periods/week

I Planning & Preparation of diets for the following :
- (a) Pre-Schooler;
- (b) School going/packed lunch;
- (c) Adolescent;
- (d) Pregnant and lactating woman.

II Cooking and serving of the following : Soft, liquid, fluid diets (two each)

III Preservation- preparation of pickle, jam, chutney and squash (one each)

IV Project

- Safety measures of play equipment
  OR
- Visit to a nursery school
  OR
- Preparation of any one play item

Reports to be submitted

- **List of Equipments for a practical group of 15 students : SAME AS OF SEMESTER V**

Reference Books :

1. *Applied Nutrition,* R. Rajalakshmi, Oxford & IBH Publishing Co. Pvt. Ltd., N. Delhi.
2. *Principles of Nutrition-Dietetics,* Dr. M. Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 88, Mysore Road, Bangalore.
3. *Food & Nutrition, Educational Planning Group,* Arya Publishing House, Karol Bagh, New Delhi-5.
4. *Normal and Therapeutic Nutrition,* Br Corinne, H. Robinson, Marlya R. Lowler, Macmillan Publishing Co., New York, Collier Macmillan Publishers, London.
5. *Textbook of Nutrition and Dietetics*. Kumud Khanna, Sharda Gupta, Santosh Jain Passi, Rama Seth, Ranjana Mahna, Seema Puri. 2nd Edition. Elite Publishing House Pvt Ltd 2013
6. *Diet Nutrition and Health*. Rakesh Mittal
7. *Diet and Nutrition*. Huma Zaidi
8. *Nutritive Value of Indian Foods,* G. Copalen, B.V. Rama Sastri, and S.C. Balasubramaniam, National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, India.
9. *Human Development,* Graing J. Graig, 5th Edition, 1989/Prentice Hall, Englewood Cliffs, New Jersey, 07632.
10. *The Modern Parents Guide to Baby & Child Care-Violet,* Broadribb, R. N.H.S. & Henry F. Loc. M.E., 1973 Macdonald's and Jane's London.
11. *Good House Keeping's Baby Book V—The Good Housekeeping,* 12th ed., 1959.
12. *Child Psychology.* Dr. Nisha Sharma
13. *These are your children—Dadys,* Gardner Jenkins and Helen Shacter, 4th ed., Scott, Foresman and Co., Glenview Illinios.
    Hurlock, E.B., *Child Development,* 6th ed., McGraw Hill International Book Company, 1978.

AGRICULTURE
B.A/B.Sc. 5th and 6th Semester System

SEMESTER-V

Paper-V: Agrodiversity and Physiology

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into four units.
2. Question paper shall have five sections.
3. Section A shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Section B, C, D and E shall have two questions each from respective Units, out of which one from each section is to be permitted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

History of Agroforestry
Agroecological Zonification
Socioeconomic Aspects of Agroforestry
Agroforestry System for Small Holdings
Arid Land Agroforestry

Unit – II

Establishment of Orchard
Basic Cultural Practices
Elemental Role and Needs of Nutrients
Propagation – Principles and Techniques
Stock –Scion relationship and their incompatibility
Fruit Physiology

Unit – III

Respiration- Glycolysis, Citric Acid Cycle, Photorespiration
Photosynthesis – Light Reaction, Dark Reaction, C_4 – Cycle, CAM Plants
Growth Hormones and their role in Agriculture
Enzymes and Vitamins
Vernalization
Photoperiodism

Unit – IV

Intellectual Property Right
Informatics in Agriculture
Seed Production and Technology
Indigenous Technical Knowledge in Agriculture
Introduction to Crop Biotechnology
Agrobiodiversity

PRACTICAL

Max. Marks	: 25 Marks
Practical	: 20 Marks
Internal Assessment	: 05 Marks

Planning an Orchard
Study of Agroforestry of Local Area
Scion- Stock relationship study
Study the effect of temperature and light duration on various crop plants of an area
Role of computer in Agriculture
GM crops and techniques
Study of Agrobiodiversity of Punjab

BOOKS

Plant Physiology, 2010 – K.N. Bhatia – Trumen Publishers, Jalandhar
Plant Physiology, 2010 – H.N. Srivasava – Pardeep Publishers, Jalandhar
Fruits – Ranjit Singh and S.K. Sexena - National Book Trust, New Delhi, 2008
Fruit Physiology – Amar Singh – Kalyani Publishers, Ludhiana, 1997

SEMESTER-VI

Paper-VI: Insect and Crop Diseases

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 5 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into four units.
2. Question paper shall have five sections.
3. Section A shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Section B, C, D and E shall have two questions each from respective Units, out of which one from each section is to be permitted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

Plant Protection
Crop diseases ? How to control them?
Biological control, chemical control
Systemic fungicides
Weedicides
Compatibility of various fungicides and weedicides
Rodenticides

Unit – II

Diseases of Crop Plants

1. Crop-Wheat

Type of Disease	Name of Disease	Causal Organism
Fungal	Loose smut of Wheat	*Ustilago tritici*
Bacterial	Tundu disease of Wheat	*Corynebacterium tritici*
Viral	Chloris striate mosaic	Chloris striate mosaic virus (CSMV)

2. Crop- Rice

Type of Disease	Name of Disease	Causal Organism
Fungal	Blast of Rice	*Piricularia oryzae*
Bacterial	Bacterial Blight of Rice	*Xanthomonas oryzae*
Viral	Rice Tungro disease	Rice tungro Bacilliform virus (RTBV)

3. Crop- Maize

Type of Disease	Name of Disease	Causal Organism
Fungal	Black kernal rot	*Lasiodiplodia theorbrome*
Bacterial	Stalk rot of Maize	*Erwinia cartovora*
Viral	Maize chlorotic dwarf	Maize chlorotic dwarf virus (MCDV)

4. Crop-Citrus

Type of Disease	Name of Disease	Causal Organism
Fungal	Citrus black spot	*Guignardia citricarpa*
Bacterial	Citrus canker	*Xanthomonas citri*
Viral	Citrus Yellow Mosaic	Badnavirus

5. Crop-Grapes

Type of Disease	Name of Disease	Causal Organism
Fungal	Powdery Mildew of grapevine	*Unicinula nectator*
Bacterial	Crown gall	*Agrobacterium tumifaciens*
Viral	Cork bark	Grapevine virus B

6. Crop-Cotton

Type of Disease	Name of Disease	Causal Organism
Fungal	Cotton Rust	*Puccinia schedonnardii*
Bacterial	Bacterial Blight of Cotton	*Xanthomonas citri*
Viral	Leaf curl	Bigeminivirus or Cotton Leaf curl virus (CLCuV)

7. Vegetables

Type of Disease	Name of Disease	Causal Organism
Fungal	Late Blight of Potato	*Phytopthora infestans*
Bacterial	Bacterial canker of Tomato	*Clavibacter michiganensis*
Viral	Yellow vein mosaic of Bhindi	Yellow vein mosaic virus

8. Oil Crops: Mustard

Type of Disease	Name of Disease	Causal Organism
Fungal	White rust of crucifers	*Albugo candida*
Bacterial	Black rot of crucifers	*Xanthomonas campestris*
Viral	Rai Mosaic virus	Yellow Mosaic Virus

9. Oil Crops: Groundnut

Type of Disease	Name of Disease	Causal Organism
Fungal	Tikka Disease of groundnut	*Cercospora s*p.
Bacterial	Bacterial wilt	*Pseudomonas solanacearum*
Viral	Groundnut crinkle	Groundnut crinkle virus

Unit – III

General account of Insects and pests
Classification of Insects
Parts of Insect body
Control measures of Insect diseases

Unit – IV

Insect and nematode diseases of Cereals crops; Oil crops; Fruit crops
Vegetable crops

Rabi Crops	**Kharif Crops**
Green Peas	Chilli
Chick Peas (Cicer arientinum)	Okra
Onion (Allium cepa)	Bitter Gourd
Tomato (Solanum lycopersicum)	Bottle Gourd
Potato (Solanum tuberosum)	Brinjal

PRACTICAL

Max. Marks : 25 Marks
Practical : 20 Marks
Internal Assessment : 05 Marks

Study of all the diseases mentioned in theory
Symptoms and their control measures

Books

Plant Pathology – R.S. Singh, 2007 – Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi

Plant Pathology – R.S. Malhotra and Aggarwal, 2009 – Tata MacGraw Hill Publishing, New Delhi

Economic and Applied Entomolgy – Kumar and Nigam, 2008 - Emkay Publishing, New Delhi

Fungicides– Y.L. Naine and Thaplial, 2008 – Oxford and IBH Publishing Co. Pvt. Ltd., Calcutta, Bombay

Elements of Entomology – Rajendra Singh, 2007 – Rastogi Publications, Meerut

A Text book of Applied Entomology – Vol I and Vol II – Srivastva, 2007- Kalyani Publishers, Ludhiana

Indian Crop Pests - Kumar and Nigam, 2007 – Emkay Publishers, Allahabad

Integrated Pest Management – G.s. Dhaliwal and R. Arora, 2006 – Kalyani Publishers, Ludhiana

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MATHEMATICS

SEMESTER V

Paper I : ANALYSIS - I

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Countable and uncountable sets.
Riemann integral, Integrability of continuous and monotonic functions, Properties of integrable functions, The fundamental theorem of integral calculus, Mean value theorems of integral calculus.
Beta and Gamma functions.

Unit-II

Improper integrals and their convergence, Comparison tests, Absolute and conditional convergence, Abel's and Dirichlet's tests, Frullani's integral.
Integral as a function of a parameter. Continuity, derivability and integrability of an integral of a function of a parameter.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa New Delhi, 1997.
5. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.
6. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
7. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
8. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry(Ninth edition), Pearson Publication.

Paper II: MODERN ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.

3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.

4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Groups, Subgroups, Lagrange's Theorem, Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems, Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of A_n, $n \geq 5$ (without proof).

Unit-II

Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings, Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings.

References :

1. S. Singh and Q. Zameerudin : *Modern Algebra*, 8th Edition, Vikas Publication, New Delhi.
2. I.N. Herstein : *Topics in Algebra*, Wiley Eastern Ltd., New Delhi.
3. J.A. Gallian : *Contemporary Abstract Algebra*, Narosa Publication House, New Delhi.
4. M. Artin : *Algebra*, Prentice Hall of India, New Delhi, 1994.

Paper III : PROBABILITY THEORY

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Review of notion of Probability, conditional Probability and independence, Bayes' Theorem.

Random Variables : Concept, probability density function, cumulative distribution function, discrete and continuous random variables, expectations, mean, variance, moment generating function, skewness and kurtosis.

Discrete Random Variables : Bernoulli random variable, binomial random variable, negative binomial random variable, geometric random variable, Poisson random variable.

SECTION B

Continuous Random Variables : Uniform random variable, exponential random variable, Beta random variable, Gamma random variable, Chi-square random variable, normal random variable.

Bivariate Random Variables : Joint distribution, joint and conditional distributions, Conditional Expectations, Independent random variables, the correlation coefficient, Bivariate normal distribution.

References

Ross,S.M. : Introduction to Probability Models (Sixth edition) Academic Press, 1997.

Hogg., R.V and Craig, A.T : Introduction to Mathematical Statistics, MacMillan, 2002.

I. Blake : An Introduction to Applied Probability, John Wiley & Sons,1979.

J. Pitman : Probability, Narosa,1993.

P. L. Meyer : Introductory Probability and Statistical Applications, 2nd Edition, Oxford and IBH Publishing Co

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MATHEMATICS
SEMESTER VI

Paper I : ANALYSIS - II

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Double and triple integrals : Double Integral over A Rectangle, Repeated Integrals in $\mathbf{R}^2$, Double Integrals over Bounded Non-rectangular Regions, Area of Bounded Regions in Plane, Double Integrals as Volumes, Change of Variables in Double Integrals, Change to Polar Coordinates, Area in Polar Coordinates, Triple Integral in Rectangular Coordinates, Triple Integrals over General Regions in $\mathbf{R}^3$, Repeated Integrals in $\mathbf{R}^3$, Volume of a Region in $\mathbf{R}^3$, Change of Variables in a Triple Integral to Cylindrical and Spherical Coordinates

Vector Integration : Line, Surface and Volume integration. Gauss divergence theorem, Stokes' theorem, Green's theorem.

Unit-II

Sequences and series of functions : Pointwise and uniform convergence, Cauchy criterion for uniform convergence, Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence, uniform convergence and continuity, uniform convergence and Riemann integration, uniform convergence and differentiation, Weierstrass approximation theorem(Statement only), Abel's and Taylor's theorems for power series.

Fourier series : Fourier expansion of piecewise monotonic functions, Fourier Series for Odd and Even Function, Half Range Series, Fourier Series in the Intervals $[0, 2\pi]$, $[-1, 1]$ and $[a, b]$.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.

5. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
7. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry(Ninth edition), Pearson Publication.
8. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.

Paper II : LINEAR ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Vectror Space : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors, Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements

Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations

Unit-II

Linear transformations and matrices, Change of basis.

Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value, Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix).

References :

1. K. Hoffman and R. Kunze : *Linear Algebra*, 2nd Edition, Prentice Hall, New Jersy, 1971.
2. P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, First Course in Linear Algebra (Wiley Eastern Delhi).
3. J. Gilbert and L. Gilbert: Linear Algebra and Matrix Theory (Academic Press).
4. I.N. Herstein, Topics in Algebra (Delhi Vikas).
5. V.Bist and V. Sahai, Linear Algebra (Narosa, Delhi).

Paper III : NUMERICAL ANALYSIS

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials.
Interpolation: Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation

Formulas using Difference.

Numerical Differentiation.
Numerical Quadrature: Newton-Cote's Formulas, Gauss Quadrature Formulas, Chebychev's Formulas.

SECTION B

Linear Equations: Direct Methods for Solving Systems of Linear Equations (Gauss Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, Gauss-Seidel, Relaxation Methods).
The Algebraic Eigenvalue problem: Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.
Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods.

References

1. C.E. Froberg : *Introduction to Numerical Analysis* (Second Edition),Addison-Wesley, 1979.
2. Melvin J. Maron : *Numerical Analysis : A Practical Approach,* Macmillan Publishing Co., Inc. New York, 1982.
3. M.K. Jain, S.R.K. Iyengar and R.K. Jain : *Numerical Methods for Scientific and Engineering Computation,* New Age International (P.) Ltd., 1999.
4. R.Y. Rubistein : *Simulation and the Monte Carlo Methods,* John Wiley, 1981.
5. D. J. Yakowitz : *Computational Probability and Simulation,* Addison-Wesley, 1977.
6. S.S. Sastry : *Introductory Methods of Numerical Analysis,* 3rd Edition (2000), Prentice Hall of India Pvt. Ltd., New Delhi.

STATISTICS
SEMESTER -V

Note:
1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a Subject in B.A./B.Sc.
2. A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc First and Second years.
3. There are two papers with codes 301 and 302 in the subject of Statistics in B.A./B.Sc. Semester - V. These are to be taught simultaneously throughout the semester.
4. For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lecturers in all per week for theory and practical, shall be allotted for teaching.

Semester- V

Paper 301: DEMOGRAPHY AND ECONOMIC STATISTICS

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

Section-I

Sources of demographic data-census, vital statistical registers, adhoc surveys and hospital records. Measurement of mortality - crude death rate, specific death rates, standardized death rate, infant mortality rate and cause of death rate, complete life Table and its description. Measurement of fertility - crude birth rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate.

Economic time series, its different components, illustrations, additive and multiplicative models, determination of trend, growth curves (exponential and modified exponential), analysis of seasonal fluctuations, construction of seasonal indices.

Section-II

Index numbers**,** definition, Methods to construct price, quantity and value index numbers. Problems involved in the construction of index numbers, use of averages, simple aggregative and weighted average methods. Laspeyre's, Paasche's, Edgeworth - Marshall and Fisher's index numbers. Time and factor reversal tests of

index numbers. Chain Base index numbers, Cost of living index number, interpretation and applications of index numbers.

Static laws of demand and supply, price elasticity of demand, Pareto distribution, log normal distribution and their properties.

References:

1. Goon, A.M., Gupta ,M.K. and Das Gupta, B.(2005) : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Srivastava, O.S. (1983) : A Textbook of Demography, Vikas Publishing.

Additional References:

1. Croxton, F.E and Cowden, D.J. (1969) : Applied General Statistics, Prentice Hall of India.
2. Gupta and Mukhopadhyay, P.P. (1999) : Applied Statistics, Central Book Agency.
3. Gupta,S. C. & Kapoor,V. K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

Paper-302 PRACTICAL

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Computing measures of mortality & fertility, construction of complete life table and examples involving users of life tables.
2. Construction of Index Numbers by Laspeyre's, Paasche's, Edgeworth-Marshall's and Fisher's methods.
3. Determination of trend, construction of seasonal indices in a time series

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STATISTICS
SEMESTER -VI

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc First and Second years.

3. There are two papers with codes 303 and 304 in the subject of Statistics in B.A./B.Sc. Semester -V. These are to be taught simultaneously throughout the semester.

4. For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lecturers in all per week for theory and practical, shall be allotted for teaching.

Semester- VI

Paper 303: STATISTICAL QUALITY CONTROL AND COMPUTATIONAL TECHNIQUES

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

Section-I

Importance of Statistical methods in industrial research and practice, meaning of quality, quality assurance and process control. General theory of control charts, causes of variations in quality, control limits, sub-grouping summery of out of control criteria. Charts for variables - $\overline{X}$ and R charts. Charts for attributes - np, p, c and u - charts.

Principle of acceptance sampling- problem of lot acceptance, stipulation of good and bad lots, concepts of producer's and consumer's risks, AQL, LTPD, AOQL, ATI, ASN and OC functions. Single and double sampling plans and their ATI, ASN and OC functions.

Section-II

Difference tables and methods of interpolation, Newton's and Lagrange's methods of interpolation, divided differences, numerical differentiation and integration. Trapezoidal rule, Simpson's one third formula, iterative solution of linear equations by Gauss – Seidel Method.

Linear Programming: elementary theory of convex sets, definition of general linear programming problems (LPP), formulation of LPP, examples of LPP. Graphical and simplex methods of solving an LPP, artificial variables, duality of LPP ,Transportation problem (non-degenerate and balanced cases), initial basic feasible solution through North-West Corner Rule, Matrix Minima & VAN method.

References:

1. Goon, A.M, Gupta, M.K. and Das Gupta, B. (2005) : Fundamental of Statistics Vol. I. World Press, Calcutta.

2. Goon, A.M, Gupta, M.K. and Das Gupta, B. (2005) : Fundamental of Statistics Vol. II. World Press, Calcutta.

3. Swarup, K, Gupta, P.K. and Manmohan. (2008) : Operation research, Sultan Chand & Sons Educational Publishers New Delhi.

4. Montgomery, D.C (2001) : Introduction to Statistical Quality Control; Wiley

5. Jain, M.K., Iyengar, S.R.K. & Jain, R.K. (2010) : Numerical Methods 5^{th} edition.

Additional References:

1. Grant, E.L. (1964) : Statistical Quality Control, McGraw Hill.

2. Duncan, A.J. (1974) : Quality Control and Industrial Statistics, Taraporewala and Sons.

3. Gass, S.I. (1975) : Linear Programming Methods and Applications, McGraw Hill.

4. Rajaraman, V. (1981) : Computer Oriented Numerical Methods, Prentice Hall.

Paper 304 : PRACTICAL

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Drawing of $\overline{X}$ - R, np, p,c and u – charts, Drawing of OC, AOQ and ATI curves for single and double sampling plans for attributes.
2. Construction of difference tables, use of Newton, Lagrange and divided difference interpolation ormulae, numerical evaluation of integrals using Trapezoidal and Simpson one-third formulae, solution of system of linear equations by Gauss – Seidel iterative method.
3. Formulation of LPP's and their duals. Solving LPP's by graphical and Simplex methods, solution of transportation problem.

APPLIED STATISTICS

FIFTH SEMESTER

Note:

1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/ or B.A./ B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.
3. There is one paper with code 301AS in the subject of Applied Statistics in B.A./B.Sc. Semester-V, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 301AS: ESTIMATION AND TESTING OF HYPOTHESIS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**

SECTION -I

Estimators and estimates, unbiased, consistent, efficient estimators. Methods of moments, maximum likelihood estimators for the parameters of Binomial, Poisson and normal distributions, confidence intervals.

Tests of a statistical hypothesis, two types of errors, power of a test, Tests for the parameters of Binomial, Poisson and normal distributions, Chi-squared tests of goodness of fit. Wilcoxon and sign test.

SECTION -II

Analysis of variance, one and two way classifications. Estimates of main effects, tests of significance for equality of effects.

Principles of design of experiments- Randomization, replication and local control. Completely randomized and randomized block designs.

Multivariate Techniques (upto 4 variables only). Estimators of mean vector and variance-covariance matrix of multivariate (upto 4) normal distribution, multiple regression, multiple correlation and partial correlation.

Book Recommended

1. Goon, A.M., Gupta, M.K. And Das Gupta, B (2005) : Fundamentals of Statistics, Vol. I Chapters: 14 to18 (only the relevant portion from these chapters as suggested in the syllabus)

2. Goon, A.M., Gupta, M.K. And Das Gupta, B (2005) : Fundamentals of Statistics, Vol. II, Chapters: 1, 2 (only the relevant portion from these chapters as suggested in the syllabus)

Additional references:

1. Daniel, W.W. (7^{th} edition) (1998 : Biostatistics. A foundation for analysis in the health Sciences, Wiley India: New Delhi.

2. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

APPLIED STATISTICS

SIXTH SEMESTER

Note:

1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/ or B.A./ B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.
3. There is one paper with code 302AS in the subject of Applied Statistics in B.A./B.Sc. Semester VI, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 302AS: ECONOMICS AND INDUSTRIAL STATISTICS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each section. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each section**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

SECTION-I

Sampling: Simple random and stratified sampling, optimum allocation in stratified sampling. Ratio and regression estimates.

Index Numbers: Index Numbers-as weighted averages, Price Index numbers, Quantity index numbers, Fisher's tests for index numbers.

Time Series: The four components of a time series, moving average, the Slutsky Yule effect, determination of trend by curve fitting and moving average methods.

SECTION –II

Quality Control: Construction, use and interpretation of control charts for mean, range, fraction defective and number of defects. Single sampling inspection plans. Concepts of producer's and consumer's risks, O.C. and A.O.Q. Curves.

Vital Statistics: Rates and ratios, crude death rate, age specific death rate, infant mortality rates, standardized death rates, direct and indirect methods. Measurement of fertility, crude birth rate, general, specific and total fertility rates. Standardized birth rates. Calendar Year rates.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B. (2005) : Fundamentals of Statistics, Vol. II, Ch. 3, 4, 6, 7, 9. (only the relevant portion from these chapters as suggested in the syllabus)

2. Daniel, W.W. (7th edition) (1998) : Biostatistics, A foundation for analysis in the health Sciences, Wiley India: New Delhi.

Additional References:

1. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

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PHYSICS

B.Sc. (GENERAL) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2016-17

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the papers is allocated 25 marks including 3 marks for the Internal assessment.
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper will be three hours and it will be four hours for practicals.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems/exercises in the question paper should be 25-30%.
6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

PHYSICS

SEMESTER – V

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - I	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - I	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - I	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - I **(30 Hrs.)**

UNIT-I

Crystal structure: Symmetry operations for a two dimensional crystal. Two dimensional Bravais lattices, Three dimensional Bravais lattices, Basic primitive cells, Crystal planes and Miller indices, Diamond and NaCl structure. Crystal diffraction : Bragg's Law, Determination of crystal structure, Laue equations, Reciprocal lattices of SC, BCC and FCC, Bragg's law in reciprocal lattice, Brillouin zones and its derivation in two dimensions, structure factor and atomic form factor.

UNIT-II

Band Theory of solids, periodic potential and Bloch theorem, Kronig-Penney model, band gaps, band structures in conductors, direct and indirect semiconductors and insulators.
Free electron theory of metals, effective mass, drift current, mobility and conductivity (carrier concentration and mobility of carriers) and their variation with temperature in semi-conductors, Fermi level positions in intrinsic and extrinsic semiconductors, Wiedemann-Franz law, Hall effect in metals and semiconductors.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition, S.O.* Pillai, *New Age International Publishers.*
4. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - I (30 Hrs.)

UNIT-I

Concepts of current and voltage sources, Thevenin's theorem, Norton's theorem, Source conversion.
CRO, Block diagram, construction and principle of working, Use of CRO for frequency, time period, special features of dual trace, phase measurements.

Energy band diagrams in semiconductors, Direct and indirect semiconductors, Formula to calculate Position of Fermi level in p and n semiconductors, Barrier formation, energy band diagram of p-n junction, Formula for Depletion width, Qualitative ides of current flow mechanism in forward and reverse biased diode, v-i characteristics, static and dynamic resistance, Depletion and diffusion capacitance, zener diode, LED, photodiode and solar cell.

(Book 1, Book 3)

UNIT-II

Diode circuits, Clipping circuits, Rectification: half wave, full wave and bridge rectifiers, filter circuits (C, LC and π filters), rectification efficiency and ripple factor in LC filter, voltage regulation circuit using zener diode, voltage multiplier circuits.
Bipolar Junction transistors : Structure and working, different currents in transistor, switching action. Characteristics of CB, CE and CC configurations, Active, cutoff and saturation regions.
Load line analysis of transistors, Q-point, Transistor biasing and stabilization of operating point, fixed bias, collector to base bias, bias circuit with emitter resistor, voltage divider biasing circuit.
Working ans analysis of CE amplifier using h-parameters, current, voltage and power gain, input and output impedance. Class A, B and C amplifiers.

(Book 1, Book 2)

Recommended Books :

Essential Readings :

1. Electronic Devices and Circuit Theory, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, *7th ed.* McGraw Hill
3. *Solid State Electronic Devices,* 6th Ed., Ben G. Streetman and S. Banerjee, Eastern Economy Edition.

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata Mc Graw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha, and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - I (60 Hrs.)

UNIT-I

General properties of Nuclei : Constituents of nucleus and their intrinsic properties, Quantitative facts about nuclear size, mass, density, binding energy and its variation with mass number, Wave mechanical properties of nucleus, angular momentum, parity; magnetic moment and electric moments of the nucleus. properties of nuclear forces and saturation, meson theory of nuclear forces
Nuclear Models : Liquid drop model, semi-empirical mass formula, most stable isobar.
Evidence for nuclear shell structure, Nuclear shell model, concept of mean field.

UNIT-II

Radioactive decay, Units of radioactivity (Ci and Bq), Successive disintegration, Natural radioactivity, Radioactive series, Carbon dating.
Alpha decay, energetic, alpha spectrum, Gamow's theory of alpha decay, Geiger-Nuttal rule.
Beta decay, Qualitative discussion of beta spectrum, Evidence of existence of Neutrino, Conservation of nuclear energy in Beta minus, Beta plus and Electron capture decays.
Gamma-ray emission, selection rules, Internal conversion.

Nuclear Reactions: Types, Concept of compound and direct (pickup and stripping) reactions, Reaction differential and integral cross section, units, conservation laws and kinematics, Q-value equation, Coulomb (Rutherford) scattering cross section and distance of nearest approach.
Energy classification of neutrons, Nuclear fission in reactors, Reactor facilities available in India, Nuclear fusion in stars.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.
2. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
3. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The students are required to perform Nine experiments choosing either of the Units I or Unit II in each semester. The unit of experiments allocated in the fifth semester cannot be repeated in sixth semester. The college must keep a record of the Unit allocated to each student. In the sixth semester examination, the students are expected to bring their Practical note books of both the semesters.

General Guidelines for Physics Practical Examinations :

Total : 25 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	10
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	4
(iii)	Viva-Voce	5
(iv)	Record (Practical file)	3
(v)	Internal Assessment	3

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 4 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed 12.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

Note : Each student should perform ***at least Nine experiments*** in the laboratory.

UNIT-I

I CONDENSED MATTER PHYSICS:

(i) Measurement of reverse saturation current in p-n junction diode at various temperatures and to find the approximate value of energy gap.
(ii) To draw forward and reverse bias characteristics of a p-n junction diode and draw a load line.
(iii) Study of a diode as a clipping element.
(iv) To measure the magnetic susceptibility of $FeCl_2$ solution by Quincke's method.

II ELECTRONICS AND SOLID STATE DEVICES :

(v) To study the response of RC-circuit to various input voltages (square, sine and triangular).
(vi) To measure the efficiency and ripple factors for (a) Half-wave, (b) Full wave, and (c) Bridge rectifier circuits.
(vii) To study the reduction in the ripples in the rectified output with RC, LC and π-filters.
(viii) To draw the characteristics of a Zener diode and LED using constant current source.
(ix) To study the stabilization of output voltage of a power supply with Zener diode.
(x) To set up an oscillator and study its output on CRO for different V values.
(xi) To study the characteristics of a thermistor and find its parameters.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. Print a 2D array in spiral form.
2. To find determinant of a given matrix.
3. To find inverse of a given matrix.
4. To interpolate the data values from the given set.

UNIT-II

I CONDENSED MATTER PHYSICS:

(i) To trace the B-H curves for different materials using CRO and find the magnetic parameters from these.
(ii) To find the conductivity of a given semi-conductor crystal using four probe method.
(iii) To determine the Hall coefficient for a given semiconductor.

II ELECTRONICS AND SOLID STATE DEVICES :

(iv) To measure and plot Common Emitter Characteristics of a transistor (pnp or npn).
(v) To plot Common Base Characteristics and determine h-parameters of a given transistor.
(vi) To draw output and mutual characteristics of an FET and determine its parameters.
(vii) To study the gain of an amplifier at different frequencies and to find band-width and gain-band-width product.

III NUCLEAR PHYSICS :

(viii) To draw the Plateau of a GM counter and find its dead time.

(ix) To study the statistical fluctuations using GM counter.

(x) To study the absorption of beta-particles and determine the end point energy using GM counter. Also determine the absorption co-efficient (for aluminium) from it.

(xi) Verification of Rutherford Scattering experiment-mechanical analogue.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. To solve simultaneous equations by elimination method.
2. Fitting a straight line or a simple curve of a given data.
3. Convert a given integer into binary and octal/hexadecimal system and vice versa.

Text and Reference Books :

1. *"A Laboratory Manual of Physics for Undergraduate Classes" by D.P.* Khandelwal.
2. *"B.Sc. Practical Physics" by C.L. Arora, S. Chand & Co. (2014)*
3. *"Numerical Analysis" by C. Dixon*
4. *Programming with C,* Byron Gottfried & Jitender Chhabra, *Schaum series*

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PHYSICS

SEMESTER – VI

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - II	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - II	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - II	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - II (30 Hrs.)

UNIT-I

Lattice Dynamics : Lattice vibrations and phonons, Scattering of photons by phonons, Dynamics of a linear chain of similar atoms and chain of two types of atoms, optical and acoustic modes, Density of modes, Einstein and Debye theories of specific heats of solids.

Magnetic classification of materials (Dia, para, ferro, ferri, antiferro), Langevin theory of dia and paramagnetism, Quantum theory, Weiss's theory of Ferromagnetism, temperature dependence, hysteresis of ferromagnetic materials.

UNIT-II

Dielectric constant & polarizability, electric susceptibility, Clausius Mosotti equation, frequency dependence, ferroelectrics and Piezoelectrics.

Liquid crystals, various types and properties. Applications.

Superconductivity: Meisner effect, London's equation and penetration depth, critical magnetic field and temperature, DC and AC Josephson effect, BCS theory (formation of cooper pairs), ground state and energy gap.

Basic ideas of materials at nanoscale: Difference from bulk material properties, Nanoparticles, introduction to fabrication and characterization techniques, Carbon Nanostructures - nanotubes, grapheme. Applications of nanotechnology in various fields.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition,* S.O. Pillai, New Age International Publishers.
4. *Fundamental of Physics, Vol. II,* R.M.P. Jaiswal, S.K. Gupta and A. Rani, R. Chand and Co.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - II (30 Hrs.)

UNIT-I

Structure and working of JEFT, characteristics, drain and transconductance curve, FET amplifier and its voltage gain, Structure and working of MOSFET.

Feed back in amplifiers, voltage gain of negative feedback amplifier, advantages of negative voltage feedback, negative current feedback circuit, emitter follower.

Theory of sinusoidal oscillations, loop gain and phase, Lead-lag RC circuit, Wein bridge oscillator. Barkhausen criterion of sustained oscillations, positive feedback amplifier, LC oscillators, Colpitts and Hartley oscillators. (Book1, Book2)

UNIT-II

Operational amplifier (black box approach) : Characteristics of ideal and practical opamp 741, open-loop and closed-loop gain, characteristics and applications - inverting and non-inverting amplifiers, adder, subtractor, differentiator and integrator, Comparator, Timer IC555, pin diagram and its applications as astable and monostable multivibrator.

(Book1, Book2)

Analog and digital circuits, binary numbers, decimal to binary conversions, AND, OR, NOT gates, NAND NOR gates as universal gates, XOR and XNOR gates.

De Morgan's theorem, Simplification of logic circuit using Boolean algebra, Minterms and Maxterms, Conversion of a truth table into an equivalent logic circuit by Sum of products method. (Book 3)

Analog and digital communication systems, Amplitude and Frequency modulation, Power in AM wave, generation and detection, Brief account of Satellite communication, Sky-wave communication, and mobile communication.

Recommended Books :

Essential Readings :

1. *Electronic Devices and Circuit Theory*, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, 7th *ed.* McGraw Hill
3. Digital Principles and Applications, 7th Ed., A.P. Malvino, D.P. Leach and Saha, 2011, Tata McGraw Hill

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata McGraw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - II (30 Hrs.)

UNIT-I

Interaction of nuclear radiation with matter: Energy loss due to ionization (Bethe Bloch formula), Range and energy straggling, Energy loss of electrons and positrons, radiation loss by fast electrons, Bremsstrahlung, electron-positron annihilation, production of Cerenkov radiation,

Gamma-ray interaction with matter, photoelectric effect, Compton scattering, pair production (qualitative description).

Detectors for nuclear radiation: Gas-filled detectors, Ionization chamber, proportional counter, G.M. counter, Scintillation detector and Photomultiplier tube, Brief account of Semiconductor detectors.

UNIT-II

Particle Physics : Particle interactions : basic features and their exchange particles, Classification of elementary particles, properties, decay modes of leptons and mesons, Antiparticles, charge conjugation
Symmetries and Conservation principles, Lepton number, baryon number, Isospin, Hypercharge, Strangeness and charm, Gell-mann Nishijima formula
Concept of the quark model, color quantum number and gluons.
Origin and composition of Cosmic rays, Secondary cosmic rays, Effect of magnetic field of earth, Van Allen belts.
Particle accelerators: Cockcroft-Walton accelerator, Van-de Graaff generator, Tandem accelerator Linear accelerator, Cyclotron. Brief account of Syncrhrotron, Accelerator facilities available in India.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.
4. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.

Further Readings :

1. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
2. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The students are required to perform Nine experiments choosing either of the Units I or Unit II in each semester. The unit of experiments allocated in the fifth semester cannot be repeated in sixth semester. The college must keep a record of the Unit allocated to each student. In the sixth semester examination, the students are expected to bring their Practical note books of both the semesters.

General Guidelines for Physics Practical Examinations :

Total : 25 marks

1. The distribution of marks is as follows :

(ii) One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	10
(ii) One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	4
(iii) Viva-Voce	5
(iv) Record (Practical file)	3
(vi) Internal Assessment	3

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 4 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed 12.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

Note : Each student should perform ***at least Nine experiments*** in the laboratory.

UNIT-I

I CONDENSED MATTER PHYSICS:

(ix) Measurement of reverse saturation current in p-n junction diode at various temperatures and to find the approximate value of energy gap.
(x) To draw forward and reverse bias characteristics of a p-n junction diode and draw a load line.
(xi) Study of a diode as a clipping element.
(xii) To measure the magnetic susceptibility of $FeCl_2$ solution by Quincke's method.

II ELECTRONICS AND SOLID STATE DEVICES :

(xiii) To study the response of RC-circuit to various input voltages (square, sine and triangular).
(xiv) To measure the efficiency and ripple factors for (a) Half-wave, (b) Full wave, and (c) Bridge rectifier circuits.
(xv) To study the reduction in the ripples in the rectified output with RC, LC and π-filters.
(xvi) To draw the characteristics of a Zener diode and LED using constant current source.
(ix) To study the stabilization of output voltage of a power supply with Zener diode.
(x) To set up an oscillator and study its output on CRO for different V values.
(xi) To study the characteristics of a thermistor and find its parameters.

Exercises :

2. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

3. Print a 2D array in spiral form.
4. To find determinant of a given matrix.
3. To find inverse of a given matrix.
4. To interpolate the data values from the given set.

UNIT-II

I CONDENSED MATTER PHYSICS:

(iv) To trace the B-H curves for different materials using CRO and find the magnetic parameters from these.
(v) To find the conductivity of a given semi-conductor crystal using four probe method.
(vi) To determine the Hall coefficient for a given semiconductor.

II ELECTRONICS AND SOLID STATE DEVICES :

(iv) To measure and plot Common Emitter Characteristics of a transistor (pnp or npn).

(v) To plot Common Base Characteristics and determine h-parameters of a given transistor.

(vi) To draw output and mutual characteristics of an FET and determine its parameters.

(vii) To study the gain of an amplifier at different frequencies and to find band-width and gain-band-width product.

III NUCLEAR PHYSICS :

(x) To draw the Plateau of a GM counter and find its dead time.

(xi) To study the statistical fluctuations using GM counter.

(x) To study the absorption of beta-particles and determine the end point energy using GM counter. Also determine the absorption co-efficient (for aluminium) from it.

(xi) Verification of Rutherford Scattering experiment-mechanical analogue.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. To solve simultaneous equations by elimination method.
2. Fitting a straight line or a simple curve of a given data.
3. Convert a given integer into binary and octal/hexadecimal system and vice versa.

Text and Reference Books :

4. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
5. *"B.Sc. Practical Physics"*.by C.L. Arora, S. Chand & Co. (2014)
6. *"Numerical Analysis"* by *C. Dixon*
7. *Programming with C,* Byron Gottfried & Jitender Chhabra, *Schaum series*

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
	Total	*15 periods/week*		*100*

SEMESTER-6th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
	Total	*15 periods/week*		*100*

Total Marks

SEMESTER-5-100

SEMESTER-6-100

200

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*		*Teaching Hrs.*	*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
			Total *15 periods/week*	*100*

Paper-XVII: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Metal – Ligand Bonding in Transition Metal Complexes:

Limitations of valence bond theory, an elementary idea of crystal – field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal – field parameters, Spectro chemical Series.

UNIT-II (7 Hrs.)

Thermodynamic and Kinetic Aspects of Metal Complexes :

A brief outline of thermodynamic and Kinetic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes.

UNIT-III (8 Hrs.)

Organometallic Chemistry:

Definition, nomenclature and classification of organometallic compounds. Preparation, properties, bonding and applications of alkyls and aryls of Li, Al , Hg, Sn and Ti, a brief account of metal – ethylenic complexes and homogeneous hydrogenation, mononuclear carbonyls and the nature of bonding in metal carbonyls

UNIT-IV (7 Hrs.)

Bioinorganic Chemistry:

Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin. Biological role of alkali and alkaline earth metal ions. Nitrogen fixation.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5. Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6. Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9. Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XVIII: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Spectroscopy:

Nuclear magnetic resonance (NMR) spectroscopy.

Proton magnetic resonance (^{1}H NMR) spectroscopy, nuclear shielding and deshielding, chemical shift and molecular structure, spin-spin splitting and coupling constants, area of signals, interpretation of PMR spectra of simple organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromoethane, ethyl acetate, toluene and acetophenone.

UNIT-II (7 Hrs.)

Electromagnetic Spectrum: Absorption Spectra:

Infrared (IR) absorption spectroscopy – Molecular vibrations, Hooke's law, selection rules, intensity and position of IR bands, measurement of IR spectrum, fingerprint region, characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds.

Problems pertaining to the structure elucidation of simple organic compounds using UV, IR and PMR spectroscopic techniques.

UNIT-III (8 Hrs.)

Carbohydrates:

Classification and nomenclature. Monosaccharides, mechanism of osazone formation, interconversion of glucose and fructose, chain lengthening and chain shortening of aldoses. Configuration of monosaccharides. Erythro and threo diastereomers. Conversion of glucose into mannose. Formation of glycosides, ethers and esters. Determination of ring size of monosaccharides. Cyclic structure of D (+) – glucose. Mechanism of mutarotation.

Structure of ribose and deoxyribose.
An introduction to disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose) without involving structure determination.

UNIT-IV (7 Hrs.)

Heterocyclic Compounds:
Introduction : Molecular orbital picture and aromatic character of pyrrole, furan, thiophene and pyridine. Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution. Mechanism of nucleophilic substitution reactions in pyridine derivatives. Comparison of basicity of pyridine, piperidine and pyrrole.

Introduction to condensed – five and six – membered heterocycles. Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis. Skraup synthesis and Bischler-–Napieralski synthesis. Mechanism of electrophilic substitution reactions of indole, quinoline and isoquinoline.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5. Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XIX: PHYSICAL CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Elementary Quantum Mechanics-I:

Black-body radiation, Planck's radiation law, photoelectric effect, heat capacity of solids, Bohr's model of hydrogen atom (no derivation) and its defects, Compton effect.

De Broglie hypothesis, the Heisenberg's uncertainty principle, Sinusoidal wave equation, Hamiltonian operator, Schrodinger wave equation and its importance, physical interpretation of the wave function, postulates of quantum mechanics, particle in a one dimensional box.

Schrodinger wave equation for H-atom, separation into three equations (without derivation), quantum numbers and their importance, hydrogen like wave functions, radial wave functions, angular wave functions.

UNIT-II (7 Hrs.)

Elementary Quantum Mechanics-II:

Molecular orbital theory, basic ideas – criteria for forming M.O. from A.O., construction of M.O.'s by LCAO – H_2^+ ion. Calculation of energy levels from wave functions, physical picture of bonding and antibonding wave functions, concept of $\sigma, \sigma*, \pi, \pi*$ orbitals and their characteristics. Hybrid orbitals – sp, sp^2, sp^3; calculation of coefficients of A.O.'s used in these hybrid orbitals.

Introduction to valence bond model of H_2, comparison of M.O. and V.B. models.

UNIT-III (8 Hrs.)

Photochemistry-I:

Interaction of radiation with matter, difference between thermal and photochemical processes. Laws of Photochemistry: Grothus – Drapper law, Stark – Einstein law, Jablonski diagram depicting various processes occurring in the excited state.

UNIT-IV (7 Hrs.)

Photochemistry-II:

Qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions – energy transfer processes (simple examples).Photochemistry of carbonyl compounds and alkenes.

Instructions for paper setters and candidates:

i. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
ii. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
iii. *Compulsory question carries six marks and remaining all questions carry four marks each.*

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11. Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12. Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13. Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XX: LABORATORY PRACTICALS Max. Marks: 22+3

INORGANIC CHEMISTRY

Synthesis and Analysis: **6 Periods/ week**

(a) Preparation of sodium trioxalatoferrate (III), $Na_3[Fe(C_2O_4)_3]$ and determination of its composition by permaganometry.
(b) Preparation of copper tetraammine complex $[Cu(NH_3)_4]SO_4$.
(c) Preparation of cis-and trans-bisoxalatodiaqua chromate (III) ion.

Instrumentation
Solvent Extraction
Separation and estimation of Mg(II) and Fe(II).

PHYSICAL CHEMISTRY

Electrochemistry

(a) To determine the strength of the given acid conductometrically using standard alkali solution.
(b) To determine the solubility and solubility product of a sparingly soluble electrolyte conductomertircally.
(c) To study the saponification of ethyl acetate conductometrically.
(d) To determine the ionization constant of a weak acid conductometrically.
(e) To study the distribution of iodine between water and CCl_4.
(f) To study the distribution of benzoic acid between benzene and water.

Molecular Weight Determination

(a) Determination of molecular weight of a non – volatile solute by Rast method.
(b) Determination of the apparent degree of dissociation of an electrolyte (e.g. NaCl) in aqueous solution of the substance.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an inorganic complex : 7 marks

Q.No. 2. Physical Chemistry : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1. Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.
2. Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.
3. Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.
4. Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.
5. Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.
6. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.
7. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.
8. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.
9. Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.
10. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

CHEMISTRY
SEMESTER-6th
Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XXI: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course
To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Silicones and Phosphazenes:

Silicones and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.

UNIT-II (8 Hrs.)

Hard and Soft Acids and Bases (HSAB):

Classification of acids and bases as hard and soft Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, theoretical basis of hardness and softness, electronegativity and hardness and softness.

UNIT-III (8 Hrs.)

Electronic Spectra of Transition Metal Complexes:
Types of electronic transitions, L – S coupling, selection rules for *d-d* transitions, spectroscopic ground states, Orgel – energy level diagram for d^1 and $d^{\square\square}$ states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-IV (7 Hrs.)

Magnetic Properties of Transition Metal Complexes:

Types of magnetic behaviour, methods of determining magnetic susceptibility, spin-only formula. Correlation of μ_s and μ_{eff} values, orbital contribution to magnetic moments, application of magnetic moment data for 3*d*-metal complexes.

Instructions for paper setters and candidates:

iv. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
v. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
vi. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1 Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2 Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3 Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4 Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5 Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6 Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7 Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8 Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9 Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XXII: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Amino Acids, Peptides, Proteins and Nucleic Acids:

Classification, structure and stereochemistry of amino acids. Acid- base behavior, isoelectric point and electrophoresis. Preparation and reactions of □- amino acids.

Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid – phase peptide synthesis. Structures of peptides and proteins. Levels of protein structure. Protein denaturation/renaturation.

Nucleic Acids : Introduction. Constituents of nucleic acids. Ribonucleosides and ribonucleotides. The double helical Structure of DNA.

UNIT-II (7 Hrs.)

Synthetic Polymers:

Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler – Natta polymerization and vinyl polymers.

Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy resins and polyurethanes.

Natural and synthetic rubbers.

UNIT-III (7 Hrs.)

Organic Synthesis via Enolates:

Acidity of ά-hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.

UNIT-IV (8 Hrs.)

Organometallic Compounds:

Organomagnesium Compounds: The Grignard reagents – Formation, structure and chemical reactions.

Organozinc Compounds: Formation and Chemical reactions.

Organolithium Compounds: Formation and Chemical reactions.

Instructions for paper setters and candidates:

iv. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

v. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

vi. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1 Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2 Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3 Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4 Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5 Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6 Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XXIII: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Solid State-I:

Definition of space lattice, unit cell and Miller Indices

Laws of Crystallography – (i) Law of Constancy of Interfacial Angles, (ii) Law of Rationality of Indices, (iii) Law of Symmetry. Symmetry elements in crystals.

UNIT-II (8 Hrs.)

Solid State-II**:**

X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure of NaCl, KCl and CsCl (Laue's method and powder method). Applications of Powder diffraction for structure determination, Thermal and photochemical reaction in solid state

UNIT-III (8 Hrs.)

Spectroscopy :

Introduction : Electromagnetic radiation, regions of the spectrum, basic features of different spectrometers, statement of the Born-Oppenheimer approximation, degrees of freedom.

Rotational Spectrum:

Diatomic molecules. Energy levels of a rigid rotor (semi – classical principles), selection rules, spectral intensity, determination of bond length, qualitative description of non-rigid rotor, isotope effect.

UNIT-IV (7 Hrs.)

Vibrational Spectrum:

Infrared Spectrum : Energy levels of simple harmonic oscillator, selection rules, pure vibrational spectrum intensity, determination of force constant and qualitative relation of force constant and bond energies, effect of anharmonic motion and isotope on the spectrum, idea of vibrational frequencies of different functional groups. Raman Spectrum : Concept of polarizability, pure rotational and pure vibrational, Raman spectra of diatomic molecules, selection rules.

Electronic Spectrum:
Concept of potential energy curves for bonding and antibonding molecular orbitals, qualitative description of selection rules and Franck- Condon principle.

Qualitative description of σ, π – and n M.O., their energy levels and the respective transitions.

Instructions for paper setters and candidates:

i. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
ii. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
iii. *Compulsory question carries six marks and remaining all questions carry four marks each.*

Books suggested

1 Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2 Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3 Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4 Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5 Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6 Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7 Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8 Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9 Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10 Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11 Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12 Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13 Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XXIV: LABORATORY PRACTICALS **Max. Marks: 22+3**

ORGANIC CHEMISTRY

Laboratory Techniques

Column Chromatography

Separation of fluorescein and methylene blue.

Separation of leaf pigments from spinach leaves.

Synthesis of Organic Compounds

(a) Aliphatic electrophilic substitution.
Preparation of iodoform from ethanol and acetone.

(b) Aromatic electrophilic substitution.

Nitration

Preparation of m-dinitrobenzene

Preparation of p-nitroacetanilide
Preparation of p-iodoaniline from aniline.
Preparation of methyl orange from N,N-dimethyl aniline and sulphanilic acid.

Halogenation

Preparation of p-bromoacetanilide

Preparation of 2,4,6 – tribromophenol

(c) Oxidation

Preparation of benzoic acid from toluene.

(d) Reduction

Preparation of aniline from nitrobenzene

Preparation of m-nitroaniline from m - dinitrobenzene

Stereochemical study of Organic Compounds via Models

R and S configuration of optical isomers.

E, Z configuration of geometrical isomers

Conformational analysis of cyclohexanes and substituted cyclohexanes.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an organic compound : 7 marks

Q.No. 2. Experiment based onLaboratory Technique : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1 Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.

2 Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.

3 Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.

4 Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.

5 Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.

6 Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

7 Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

8 Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

9 Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

10 Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

BOTANY

B.Sc. (General) Botany Fifth and Sixth Semester Syllabus (Examinations, 2016-2017)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper-A:	Plant Physiology-I	3 hrs.	36	04	40
Theory Paper-B:	Plant Ecology	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Sixth Semester					
Theory Paper-A:	Plant Physiology-II	3 hrs.	36	04	40
Theory Paper-B:	Economic Botany	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY

SEMESTER -V

THEORY PAPER- A: PLANT PHYSIOLOGY-I

Objectives: The basic aim of this paper is to familiarize the students with various concepts of functions and metabolism of plants. The course material of this paper would enable the students to correlate structural diversity of various plant forms with functional differentiation and its biological aspects including biological nitrogen fixation and mineral nutrition. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

UNIT-I

Plant Water Relations: Importance of water to plant life; physical properties of water; imbibition, diffusion, osmosis, plasmolysis and deplasmolysis, concept of osmotic potential, water potential and pressure potential; absorption of water, active and passive mechanism of water absorption; transport of water, mechanism and theories to explain ascent of sap; transpiration types, mechanism of opening and closing of stomata, mechanism of transpiration, factors affecting transpiration, antitranspirants.

UNIT-II

Mineral nutrition: Hydroponics and its importance; essential macro-and micro elements, essentiality criteria, deficiency symptoms and their role; mineral uptake; mechanism of mineral uptake (active, passive absorption and modern concepts).

UNIT-III

Nitrogen Metabolism: Biological nitrogen fixation; importance of nitrate reductase and its regulation; ammonia assimilation.

Lipid Metabolism: Structure and function of lipids; β – oxidation; saturated and unsaturated fatty acids.

UNIT-IV

Proteins: Classification, role and structure (primary, secondary and tertiary) of proteins.

Basics of enzymology: Discovery and nomenclature; classification, structure, properties, factors affecting enzyme activity, mechanism of enzyme action.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Dennis, D.T., Turpin, D.H. Lefebvre, D.D. and Layzell (eds.) Plant Metabolism (2nd Edition). Longman, Essex. England, 1997.
3. Galston, A.W. Life Processes in Plants. Scientific American Library, Springer-Verlag, New York, U.S.A., 1989.
4. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
5. Mohr, H. and Schopfer, P. Plant Physiology. Springer-Verlag, Berlin, Germany, 1995.
6. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
7. Srivastava, H.N. Plant Physiology, Bio-chemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
8. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
9. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
10. Taiz, L. and Zeiger, E. Plant Physiology (2nd Edition). Sinauer Associates, Inc., Publishers, Massachusetts, USA, 1988.
11. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: PLANT ECOLOGY

Objective: The basic objective of this paper is to make students aware about the role of environment in causing structural and functional variation in plants. Since the present day problems of varied nature like pollution, Global Warming etc. are directly or indirectly related to ecology, it is more than desired to provide the students with knowledge of basic concepts of ecology.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Definition, scope, relationship with other sciences.

Plant Environment: Climatic, edaphic, topographic and biotic factors affecting growth and distribution of plants.

UNIT-II

Ecosystem : Concept, structure; abiotic and biotic components; trophic levels, food chain, food web, ecological pyramids, energy flow, biogeochemical cycles of carbon, nitrogen and water.

UNIT-III

Community Ecology: Community characteristics, frequency, density cover, life forms, biological spectrum; ecological succession – Hydrosere and Xerosere.

UNIT-IV

Applied Ecology :

a) Air, water and soil pollution and their control.

b) Conservation and management of natural resources. (renewable and non-renewable)

Suggested Readings

1. Chapman, J.L. and Reiss, M.J. Ecology: Principles and Applications (2nd Edition), Cambridge University Press, 1998.
2. Kormondy, E.J. Concepts of Ecology. Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.
3. Mackenzie, A. *et al*. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.
4. Odum, E. and Barrett, G.W. Fundamentals of Ecology, Cengage Learning Publisher, 2004.
5. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.
6. Saini A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
7. Sharma, P.D. Ecology and Environment, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To determine osmotic pressure of cell sap by plasmolytic method.
2. To demonstrate imbibition pressure using:
   i) Imbibition pressure apparatus.
   ii) Plaster of Paris cone.
3. To demonstrate osmosis through animal membrane/potato osmoscope.
4. To demonstrate plasmolysis and deplasmolysis.
5. To demonstrate mechanical and electrical adsorption.
6. To demonstrate the measurement of transpiration using simple potometer.
7. To demonstrate transpiration pull.
8. To study the effect of light intensity, and wind velocity on the rate of transpiration using Ganong's potometer.

9. To compare the rate of transpiration from the two sides of a leaf using :

   i) Vaseline method
   ii) Cobalt chloride method

10. To demonstrate the mechanism of opening and closing of stomata.

11. To demonstrate the path of ascent of sap.

Plant Ecology:

1. Study of ecological adaptations in external characters of :

Hydrilla, Potamogeton, Ceratophyllum, Vallisneria, Lemna, Eichhornia Nelumbium, Calotropis, Nerium, Acacia, Zizyphus, Casuarina, Capparis, Asparagus, Ruscus, Opuntia, Euphorbia royleana.

2. To prepare permanent stained slide to show ecological adaptations in the internal structure of the following:

   a) T.S. stem of *Hydrilla*

   b) T.S. leaf of *Potamogeton* and *Vallisneria*

   c) T.S. leaf and petiole of *Eichhornia*

   d) T.S. leaf and petiole of *Nelumbium*

   e) T.S. leaf of *Nerium*

   f) T.S. stem of *Casuarina* and *Capparis*

3. To determine soil pH using pH paper/solution/pH meter.

4. To determine water holding capacity of soil.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and cut T.S. of stem, leaf or petiole (to be announced by the examiner) of specimen B. Make its permanent stained slide and show it to the examiner. Draw its labelled diagram and write its morphological and anatomical characters of ecological importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

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BOTANY

SEMESTER -VI

PAPER-A: PLANT PHYSIOLOGY-II

Objectives: The main objective of this paper is to familiarize the students with growth and metabolic processes of the plants. It also deals with the plant development, differentiation and their regulatory mechanism along with basic concepts in tissue culture.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

UNIT-I

Photosynthesis: Significance, historical aspect; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems, cyclic and non- cyclic photophosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration; factors affecting photosynthesis; transport of organic substances: Mechanism of phloem transport, source-sink relationship, factors affecting translocation.

UNIT-II

Respiration: ATP – The biological energy currency; aerobic and anaerobic respiration; Krebs cycle; electron transport mechanism (Chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway; respiratory quotient.

UNIT-III

Growth and development: Definitions; phases of growth and development; kinetics of growth, factors affecting growth; plant movements; the concept of photoperiodism, physiology of flowering; florigen concept; roles of plant hormones– auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery.

UNIT-IV

Biotechnology: Functional definition; basic aspects of plant tissue culture, its applications and somatic hybridization.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Bhojwani, S.S. Plant Tissue Culture: applications and Limitations. Elsevier Science Publishers, New York, USA, 1990.
3. Dennis, D.T., Turpin, D.H. Lefebvre, D.D. and Layzell (eds.) Plant Metabolism (2nd Edition). Longman, Essex. England, 1997.
4. Galston, A.W. Life Processes in Plants. Scientific American Library, Springer-Verlag, New York, U.S.A., 1989.
5. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
6. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology. John Wiley and Sons, Chichester, England, 1999.
7. Mohr, H. and Schopfer, P. Plant Physiology. Springer-Verlag, Berlin, Germany, 1995.
8. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
9. Srivastava, H.N. Plant Physiology, Biochemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
10. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
11. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
12. Taiz, L. and Zeiger, E. Plant Physiology (2nd Edition). Sinauer Associates, Inc., Publishers, Massachusetts, USA, 1988.
13. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture. Kluwer Academic Publishers, The Netherlands, 1994.
14. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: ECONOMIC BOTANY

Objective: The basic objective of this paper is aimed to give an insight into plant wealth such as medicinal plants; crop plants; beverages; spices; condiments; sugar; fiber; pulp & oil yielding plants of commercial & economic importance. Both the aspects of this paper give a sound basis of ecology and economic botany so that students can venture into fields like Environmental Biology, Conservation Biology, Forestry, Agriculture, Horticulture and Crop production etc.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Cereals (Wheat, Rice and Maize)
ii) Fibres (Cotton)
iii) Vegetables (Potato)

UNIT-II

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Fruits (Mango, Grapes, Lemon)
ii) Sugar-yielding plants (Sugarcane)
iii) Oil-yielding plants (Groundnut, Mustard)

UNIT-III

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Wheat, Maize, Rice, Moong, Gram (Food).
ii) Teak, Shisham, Deodar, Sal (Timbers).
iii) Cotton, Jute, Coir, Flax (Fibres).
iv) Fennel, Coriander, Turmeric, Ginger, Mint, Clove (Spices and Condiments).

UNIT-IV

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Bamboo, Eucalyptus (Pulp plants).
ii) Liquorice, Belladona, Aconite, Ashwagandha, Arjun, Poppy, Amla (Medicinal plants).
iii) Tea and Coffee (Beverages).

Forestry: Forest conservation, wood seasoning and its preservation.

Suggested Readings

1. Kochhar, S.L. Economic Botany in Tropics, (4th edition). Macmillan India Ltd., New Delhi, 2012.
2. Saini, A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S. A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma, O.P. Hill's Economic Botany (Late Dr. A.F. Hill, Adapted by O.P. Sharma). Tata McGraw Hill Co. Ltd., New Delhi, 1996.
5. Simpson B. and Ogorzaly, M. Economic Botany: Plants in our World (3rd edition). McGraw Hill Publisher, 2000.
6. Simpson, B.B. and Conner-Ogorzaly, M. Economic Botany – Plants in Our World. McGraw Hill, New York, 1986.
7. Singh, V., Pande, P.C. and Jain, D.K. Economic Botany, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To demonstrate that chlorophyll is necessary for photosynthesis.
2. To demonstrate that light is necessary for photosynthesis.
3. To demonstrate that CO2 is essential for photosynthesis.
4. To demonstrate evolution of oxygen during photosynthesis in an aquatic plant.
5. To study the effect of light intensity and CO2 concentration on the rate of photosynthesis using an aquatic plant.
6. To demonstrate aerobic respiration using flask method.
7. To demonstrate anaerobic respiration in germinating seeds or yeast.
8. To demonstrate the activity of amylase.
9. To demonstrate the activity of catalase in plant tissue (germinating seeds).
10. To demonstrate phototropism.
11. To demonstrate geotropism using clinostat.
12. To test for the presence of starch, proteins, amino acids, and reducing sugars in plant material.

Economic Botany:

Identification and morphology of economically important part/s of crop plants mentioned below:

Cereals (wheat, rice); Fibres (cotton); Vegetables (potato); Fruits (mango, grapes, lemon); sugar-yielding plants (sugarcane) and oil-yielding plants (groundnut, mustard).

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and write illustrated morphological notes on specimens B & C giving their economic importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

ZOOLOGY
SEMESTER -V

Paper I: Developmental Biology	40 (36 +4) marks
Paper II: Applied Zoology-I	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester V,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: DEVELOPMENTAL BIOLOGY (ZOO-501)

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

UNIT-I

Gametogenesis with particular reference to differentiation of spermatozoa. Vitellogenesis, role of follicle/subtesticular cells in gametogenesis.

Egg maturation : egg membranes : polarity of egg.

UNIT-II

Fertilization, parthenogenesis.

Cleavage : Types of cleavage patterns depending upon amount and distribution of yolk and position of spindle.Blastula and types of blastula.

Fate maps of chick and frog embryos.

UNIT-III

Induction:cell to cell interactions: juxtacrine, paracrine, gap junctions; basic concepts of organizers and inducers and their role.Determination and differentiation.

Development up to three germ layers in *Herdmania, Amphioxus*, frog, chick and rabbit.

UNIT-IV

Foetal membranes, their formation and role.

Mammalian placenta – its formation, types and functions.

Metamorphosis in *Herdmania* and *Rana* (frog)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Ballinsky, B.I. — An Introduction to Embryology, 5th edition, Saunders Co., 1981.
2. Gilbert, S.F. — Developmental Biology,10th ed.,Sinauer Ass.,Inc. Publ., 2014.
3. Urspaung, H. — Major Problems in Developmental Biology, Academic Press, New York, 1966.
4. Gardner, E.J., Simmons, M.J. andSnustad, D.P — Principles of Genetics, 8thed.,John Wiley and Sons, Inc. New York, 2004.
5. Wolport, Lewis — Principles of development, Oxford University press, Oxford, 2007

Practical based on Theory Paper

1. Study of the development of frog from permanent slides.
2. Window preparation and identification of stages of development in chick egg.
3. Study of the development of chick embryo from permanent slides up to 96 hours.
4. Study of the following permanent slides :
    a. Stages of gametogenesis, structure of egg and sperm of a mammal.
    b. Larva of *Herdmania*.

Paper II: APPLIED ZOOLOGY-I

Max. Marks	: 40
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-I
2. Economic Entomology and Pest Management-I
3. Inland Fisheries & Aquaculture-I

OPTION I: MEDICAL ZOOLOGY & MEDICAL LABORATORYTECHNOLOGY-I

(ZOO-502A)

UNIT-I

Introduction to parasitology (pertaining to various terminologies in use).
Brief introduction to pathogenic microbes. Viruses,Rickettsiae, Spirochaetes and Bacteria.
Epidemic diseases, such as typhoid, cholera, small pox; their occurrence and eradication programmes.

UNIT-II

Brief accounts of life history, mode of infection and pathogenicity of the following pathogens with reference to man;prophylaxis and treatment:

Pathogenic protozoans :*Entamoeba,Trypanosoma, Leishmania, Giardia, Trichomonas;* and *Plasmodium.*

UNIT-III

Pathogenic helminthes:*Fasciolopsis, Schistosoma, Echinococcus, Ancylostoma, Trichinella, Wuchereria, Dracunculus* and *Oxyuris*.

UNIT-IV

Life cycle, disease caused and control measures of arthropod vectors : *Anopheles stephensi, A culicifaces,Aedes aegypti A. albopictus*, *Culex fatigans C.tritaeniorhynchus*, *Mansonia* sp., *Xenopsylla cheopis,Pediculus.*

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Chatterjee, K.D.	:	Parasitology, Protozoology and Helminthology, 13th ed., CSB Publishers and Distributors Pvt. Ltd., 2009.
2.	Garcia, L.S.		Diagnostic Medical Parasitology, 4th ed., ASM Press Washington, 2001.
3.	Parija, S.C.		Text book of Medical Parasitology, Protozoology and Helminthology, 1st edition, 2001.

Practicals based on Theory Paper ZOO-502A (ZOO-352A)

1. Demonstration of parts of microscope, its functioning and care.
2. Study of permanent slides and specimens of parasitic protozoans, helminthes and arthropods mentioned in theory syllabus.

OPTION-II:ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-I (ZOO-502B)

UNIT-I

Systematic position, habits and nature of damage of the following pests of crops and vegetables :

I. Sugarcane :

1. Sugarcane leaf hopper (*Pyriliaperpusila*) alongwith life cycle and control measures.
2. Sugarcane top borer (*Scirpophaganivella*)
3. Sugarcane stem borer (*Chilotreainfuscatellus*)

II. Cotton :

1. Pink bollworm (*Pectinophoragossypiella*) alongwith life cycle and control measures.
2. Red cotton bug (*Dysdercuscinglulatus*)
3. Cotton grey weevil (*Myllocerusmaculosus*)
4. Surface grasshopper (*Chrotogonustrachypterus*)
5. Cotton jassid (*Empoascadevastans*)

UNIT-II

III. Paddy :

1. Rice Gundhy Bug (*Leptocorisavaricornis*) alongwith life cycle and control measures.
2. Rice grasshopper (*Hieroglyphyusbanian*)
3. Rice Hispa (*Dicladispaarmigera*)

IV. Wheat :

1. Wheat stem borer (*Sesamiainferens*) alongwith life cycle and control measures.
2. Termites (*Microtermesobesi*)
3. Aphids (*Macrosiphummiscanthi*) Jassids (*Amrasca sp*.)

V. Vegetables :

1. Red pumpkin beetle (*Aulacophorafoveicollis*)
2. Pumpkin fruit fly (*Dacuscucurbitae*) alongwith life cycle and control measures.
3. Hadda beetle (*Epilachnavigintioctopunctata*)

UNIT-III

VI. Pests of Stored Grains : Systematic position, habits and nature of damage of the following pests of stored grains :

1. Pulse Beetle (*Callosobruchus maculates*) alongwith life cycle and control.
2. Rice weevil (*Sitophilus oryzae*)
3. Khapra beetle (*Trogodermagranarium*)
4. Rust red flour beetle (*Tribolumcastaneum*)
5. Lesser grain borer (*Rhizoperthadominica*)
6. Rice moth (*Corcyra cephalonica*)

UNIT-IV

Systematic position, disease caused and control of the following insects of Medical and Veterinary importance :

1. Mosquitoes (Aedes,Anopheles, Culex)
2. Sand fly (*Phlebotomus minutus*)
3. House fly (*Musca domestica*) along with life cycle of house fly.
4. Horse fly (*Tabanus striatus*)
5. Blow fly (*Calliphora erythrocephala*)
6. Warble fly (*Hypoderma lineatum*)
7. Poultry louse(*Menopon gallinae*)
8. Sucking louse/(*Haematopinus surysternus*)
9. Fleas (*Xenopsylla cheopis*)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Attwal, A.S., : Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991.
2. Nair, M.R.G.K. : Insects and Mites of Crops in India, ICAR, New Delhi, 1975.
3. Kumar, A. and Nigam, P.M. : Economic and Applied Entomology, Emkay Publications, 1991.
4. Matheson, R. : Medical Entomology, Comstock Publishing Company, Inc., 1950.
5. Metcalf, R.L. & Metcalf, R.A. : Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-502B (ZOO-352B)

1. External morphology and identification marks of the crops and vegetables pests :P*yrillaperpusilla* (Sugarcane leaf hopper), *Pectinophora gossypiella* (Pink bollworm), *Leptocorisa varicornis* (Gunbdhy bug) *Hieroglyphus banian* (Paddy grass hopper), *Dacus cucurbitae* (Pumpkin fruit fly).
2. External morphology and identification marks of the following stored grain pests :*Sitophilus oryzae* (Rice weevil), *Tribolium castaneum* (Rustred flour beetle), *Rhizopertha dominica* (Lesser grain borer/susri),*Trogoderma granarium* (Khapra beetle), *Callosobruchu smaculatus* (Pulse beetle/Dhora).
3. External morphology and identification marks of the following insects of Medical/Veterinary importance-Mosquitoes (*Culex, Anopheles and Aedes*), house fly (*Musca domestica*), blow fly (*Calliphora erythrocephala*), warble fly (*Hypoderma lineatum*) and horse fly (*Tabanus striatus*).

OPTION III: INLAND FISHERIES & AQUACULTURE-I (ZOO-502C)

UNIT-I

- Components of Aquaculture: Capture, Culture, Intensive, Extensive, Semi-Intensive, Pen Culture, Cage Culture.
- Morphology of a typical fish (Carp, Catfish, Eel, Perch)
- Culturable fishes: Characters of culturable fishes, Indian major carps, saltwater fishes, exotic species and air breathing fishes.

UNIT-II

- Structure of mouth of different fishes in relation to feeding habits
- Bionomics of *Labeorohita, CatlaCatla, Cirrhinusmrigala, Wallago attu.*
- Food value of Fish (Vitamins, Amino acids, Minerals etc.)

UNIT-III

- Exotic fishes: History, their introduction, morphology, their role in fish culture and impact on native fish fauna.
- Induced Breeding : History, technique, chemicals involved in induced breeding and impact on fish culture.

UNIT-IV

- Pond culture: Construction of pond, types of pond, hydrobiological factors of water and soil of a fish pond, fertilization of pond, maintenance of pond.
- Aquatic weeds and their control both biological and chemical.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1.	Jhingran, V.G.,	:	Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2.	Day, F.	:	Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3.	Johal,M.S. &Tandon,	:	Monograph on the Fishes ofReorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4.	Agarwal, S.C. &Johal	:	Fishery Development, Narendra Publishing House, M.S. Delhi, 1997.
5.	Johal, M.S. &Tandon	:	Fishes of Punjab,Res. Bull., Panjab University, Vol. K.K. 32, pp. 143-154, 1981.
6.	Karl, F.L.	:	Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA,1969.
7.	Brian, R.M. &David W.W.(ed.).,	:	Fisheries Techniques : American Fisheries Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO-502C (ZOO-352C)

1. Morphology of a Carp, Cat fish and Perch.
2. Morphometric and meristic characters of a typical fish.
3. Identification of the following fishes using keys to the species :
   Notopterus n*otopterus*. ; *Labeo rohita, L. colbasu, L. bata, Cirrhinus mrigala, Catla catla, Puntius sarana, Tor putitora, Schizothorax richardsonii, Aorichthys seenghala, Wallago attu, Bagarius bagarius, Heterpneustus fossilis, Channamaruluis, C. striatus, Xenentondon cancila, Cyprinus carpio, Hypophthalmichthys molitrix,Ctenopharyngodon idellaus, Colisa fasciatus, Mastacembelus armatus.*

   For the identification of the fishes, the students can use already prepared keys or can prepare their own keys.

4. Determination of maturity stages (both male and female) of any commercial fish (preserved specimens) through slides/charts etc.
5. Preparation of permanant slides of phytoplanktons and zooplanktons which constitute the food of commercial fishes. Their identification and study of important characters.
6. Identification of common aquatic weeds of a fish pond.
7. Study of various exotic fishes (*Hypophthalmichthys molitrix, Ctenopharyngodon idellaus, Cyprinus carpio, Gambusia affinis, Salmo trutta fario, salmo gairdneri, gairdneri*)with respect to the purpose with which they were introduced.
8. Study of endemic culturable fish species *(Catla catla, Labeo rohita, Cirrhinus mrigala)*

Guidelines for the conduct of Practical Examinations:

Max. Marks : 20 marks
Practical Exam : 18 marks
Internal Assessment : 2 marks
Time : 4 hours

1. Identify the developmental stage of chick embryo by window preparation. 2.5
2. Identify the slides A , B& C. Give two reasons for each identification 4.5
3. Viva-Voce 2
4. Practical Note Book and Project Report 2

Option-I

5. To identify the specimens D, E&F. Write the disease caused by each and two reasons for their identification. 4.5
6. Identify the given instrument. Write about its uses and functions. 2.5

Option- II

5 To identify the specimens D, E & F belonging to crop and stored grain pests. Give one outstanding character of each. 4.5

6 Identify specimen/ slide G. Give its one outstanding morphological character and medical/ veterinary importance. 2.5

Option- III

5. Giving two identification features identify specimen D&E. 2

6. Identify specimen 'F'. Give the purpose for which this fish has been introduced. 1

7. Identify the slides G & H. Give one identification features of each. 2

8. Identify the weed 'I' and write its common identification features. 2

ZOOLOGY

SEMESTER -VI

Paper I: GENETICS	40 (36 +4) marks
Paper II: APPLIED ZOOLOGY-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note: The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester VI,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: GENETICS (ZOO-601)

UNIT-I

Modification of Mendelian ratios :

Non-allelic gene interaction, Modified F_2 ratios.

(9:7, 9:3:4, 9:3:3:1, 12:3:1, 13:3,15:1,9:6:1)

Gene modifications due to incomplete dominance, lethal factors (2:1), Pleiotropic genes.

Multiple Alleles : Blood group inheritance,eye colour in *Drosophila*, pseudo-allelism.

Multiple factors : Qualitative and quantitative characters, inheritance of quantitative traits (skin colour in man).

UNIT-II

Linkage, crossing over and recombination : Linkage, sex-linked characters, crossing over, frequency of crossing over, cytological basis of crossing over, synaptonemal complex. Recombination in Fungi, (tetrad analysis).

Gene and Genetic Code : Structure of nucleic acids (DNA & RNA). Replication of DNA and transcription.Expression of gene (protein synthesis in Prokaryotes and Eukaryotes). Properties of genetic code, codon assignment, wobble hypothesis.

Extranuclearinheritance : Kappa particles in *Paramoecium.*

UNIT-III

Mutations : Spontaneous and induced mutations, physical and chemical mutagens. Detection of mutations in *Drosophila*. Inborn errors of metabolism in man (Phenylketonuria, Alcaptonuria, Albinism).Somatic mutations and carcinogenesis.

Regulation of gene expression in prokaryotes (Operon model) and in eukaryotes.

UNIT-IV

Population genetics : Equilibrium of gene frequencies and Hardy Weinberg Law.

Genetic recombination in bacteria (conjugation, transduction and transformation) plasmids.

Applied Genetics : Recombinant DNA,genetic cloning and its applications in medicine and agriculture, DNA finger printing.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. De Robertis, E.D.P. and De Robertis, E.M.F : Cell and Molecular Biology, W.B. Saunders Co., Philadelphia, 1995.
2. Powar, C.B. : Cell Biology, Himalaya Publishing House, Bombay, 1999.
3. Swanson, C.P., Merz, T. and : Cytogenetics – The Chromosome in Young, W.J Division, Inheritance and Evolution, Prentice Hall, 1981.
4. Gupta, P.K. : Cytology, Genetics and Molecular Biology, Rastogi Publishers, Meerut, 1993.
5. Chaudhry, S. and Sharma, A. : PV's Cytology& Ecology, S. Vikas& Co., Jallandhar, 2003.
6. Gardner, E. J., Simmons, M.J. and Snustad, D.P. : Priciples of Genetics, 8th ed., John Wiley and Sons, Inc., New York, 2004.

Practicals based on Theory Paper ZOO-601(ZOO-353)

1. Demonstration of Law of segregation, Independent assortment and epistasis (use of coloured beads or capsules etc.). Numericals for segregation and Independent assortment.
2. Segregation demonstration in preserved material (Maize).
3. Cytoplasmic inheritance in *Mirabilis jalapa*.
4. Inheritance of other human characteristics, ability to taste, PTC, thiourea.
5. Comparison of variance in respect of pod length and number of seeds/pods.
6. Calculation of gene frequencies and random mating (coloured beads or capsules).
7. Study of polytene chromosomes of *Chironomus*/*Drosophila* through photographs.
8. Dermatographics : Palm print taking and finger tip patterns.

Paper II: APPLIED ZOOLOGY-II

Max. Marks	:	40
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-II
2. Economic Entomology and Pest Management-II
3. Inland Fisheries & Aquaculture-II

OPTION I: MEDICAL ZOOLOGY AND MEDICAL LABORATORY TECHNOLOGY-II (ZOO-602A)

UNIT-I

Brief introduction to human defence mechanisms.
Humoral and cell mediated immune-response, Antigens-physical & chemical properties.

UNIT-II

Antibodies - structure and function of immunoglobulin M, G,A,E and D.
Antigen and antibody interactions :Serodiagnostic assays.
Vaccines and their types.

UNIT- III

Laboratory safety rules, hazards and precautions during sample collection and laboratory investigations.

Laboratory techniques: Colorimetry, Microscopy (student's and electron microscope), Autoclaving.,

Centrifugation, Spectrophotometry.

Haematology : Collection of blood (Venous and Capillary), Anticoagulants (merits and demerits),

Romanowsky's stains,

UNIT- IV

Bacteriology : Sterilisation, (dry heat,moist heat, autoclave, filtration), Disinfection, Staining techniques (gram's stain, AFB stain, etc), Culture media (Defined & Synthetic media & routine laboratory media), Bacterial culture (aerobic and anaerobic), Antibiotic sensitivity.

Biochemistry : Protein estimation, Estimation of blood urea, blood sugar and urine analysis.

Histopathology : Common fixatives and staining techniques, Histochemistry : Principle and method : Staining of carbohydrates, proteins and fats with bromo phenol blue, Periodic acid Schiff, Sudan Black blue and Feulgen reaction.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Baker, F.J. and Silverton, R.E. : Introduction to Medical Laboratory Technology, 6th edition, Butterworth and Co. Ltd., 1985.
2. Cheesborough, M. : Medical Laboratory Technology for Tropical countries, 2nd edition, Butterworth and Co. Ltd., 1987.
2. Talib, V.H. : Essential Laboratory Manual, Mehta Publishers, New Delhi,1999.
3. Goldsby, R.A., Kindt, T.J. Kuby, J : Immunology, 6th edition, Freeman, Osborne, B.A. and W.H. & Co., New York, U.S.A., 2007.

Practicals based on Theory Paper ZOO-602A (ZOO-354A)

1. Demonstration of safety rules in laboratory like proper handling of patients specimens and disposal of syringes, needles etc.
2. Demonstration of the use of autoclave, centrifuge and spectrophotometer.
3. Cleaning and sterilization of glassware using hot air oven, autoclave etc.
4. Demonstration of various equipments for the estimation of hemoglobin, WBC, RBC, ESR.
5. Estimation of sugar and protein in a sample.
6. Procedure of Fixation, embedding, cutting of tissue sections and their staining (Routine Haematoxylin and Eosin and special staining with BPB,PAS, SBB and Feulgen reaction) (Theory only).
7. Study of permanent slides-Thymus, spleen & lymph mode.

OPTION-II:ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-II (ZOO-602B)

UNIT-I

Development of Insects : Different types of metamorphosis along with a study of different kinds of larvae and pupae.

Comparative studies of mouth parts in Grasshopper, Honeybee, Butterfly, Red- Cotton bug and Mosquito.

Major modifications in the antennae and legs of insects.

1. Sericulture

(i) Species of silkworm
(ii) Requirements of Sericulture Industry
(iii) Grainage Management
(iv) Pre and Post-cocoon processing (Stifling & Reeling)
(v) Diseases of silkworm.

UNIT-II

2. Apiculture

(i) Species of Honeybees
(ii) Flora for Apiculture
(iii) Methods & Appliances of Bee Keeping
(iv) Products - (a) Honey (b) Bee wax (c) Propolis (d) Pollen (e) Royal Jelly (f) Bee Venom
(v) Diseases of Honey bee

3. Lac Culture

(i) Species and varities of Lac insect
(ii) Host Plants
(iii) Cultivation of Lac
(iv) Processing of Lac
(v) Lac Industry
(vi) Enemies of Lac insect.

UNIT-III

I. **Chemical Control** : Types and Classification of Insecticides (a) Insecticides of plant origin with special reference to vicotine; Pyrethrum; Rotenoneand Azadirachtin (b) Chlorinated Hydrocarbons insecticides with special reference to DDT; Toxaphene; BNC; Chlordane; Aldrin; Endrin and Endosulfan (c) Organophosphorus Insecticides with special reference toMalathion;TEPP; Parathion and DDVP (d) Carbamate Insecticides with reference to Carbaryl and Carbofuran (e) Fumigants with reference to Hydrogen cyanide; Methyl bromide; Ethylene dichloride; Carbon tetrachloride and Aluminium phosphide. Hazards of chemical control.List of banned pesticides.

UNIT-IV

II. **Recent methods of Pest Control**:

- **Biological Control** : History; Techniques in biological control, Agents of biological Control (a) Vertebrates (b) Nemathelminthes (c) Arthropods (d) Protozoan; Microbial control with the help of Bacteria, Virus and Fungi.
- **Integrated Pest Control**: Introduction of IPM: Pre-requisites; Implementation Strategy; Framework of IPM programme and perspectives in IPM.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Attwal, A.S.,	:	Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991
2.	Dent, D.	:	Integrated Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1995.
3.	Howse, P., Stevens, I. & Jones, O	:	Insect Pheromones and their use in Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1998.
4.	Mishra, R.C.	:	Honey Bees and their Management in India, ICAR Publication, New Delhi, 1995.
5.	Kumar, A. and Nigam, P.M.,	:	Economic and Applied Entomology, Emkay Publications, 1991.
6.	Metcalf, R.L. & Metcalf, R.A.	:	Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-602B (ZOO-354B)

1. Study of Mouth parts of honey bee, butterfly and red cotton bug from permanent mounts.
2. Study of different types of antennae, legs and wings through preserved specimens and permanent slides.
3. A study of different types of larvae and pupae of insects through slides, charts etc.
4. A study of life stages of silk worm, honey bees and lac insect.
5. Structure and working of common sprayers : Hand Compression sprayer, Knap sack sprayer.
6. Visit to apiary and godowns for study of infestation and project report.

OPTION III - INLAND FISHERIES & AQUACULTURE-II (ZOO-602C)

UNIT-I

- Fishing gears: Classification of the fishing gears according to the habitats in which they are being used, Electrical fishing.
- Culture systems: Monoculture and polyculture

UNIT-II

- Integrated fish farming: Duck-cum-fish farming, Dairy-cum-fish farming and Poultry-cum-fish farming.
- Pearl culture in India: Species used, implantation procedures, water quality requirements and economics
- Fish seed resources and their transport

UNIT-III

- Prawn culture: Culture of fresh water prawn, culture technology
- Cold water fisheries: Mahseer fisheries and trout fisheries
- Fish Diseases and their control: Viral, bacterial, fungal, protozoan, helminth, crustacean, diseases due to unhygienic conditions, diseases during transportation.

UNIT-IV

- Fish by-products
- Fish marketing
- Fish preservation: Principles of fish preservation, preservation by curing (Drying, Salting and Smoking), Chilling and freezing of fish, Canning of fish and fish products, Spoilage of fish, Rigor mortis

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Books recommended

1. Jhingran, V.G., : Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2. Day, F. : Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3. Johal,M.S. &Tandon, : Monograph on the Fishes ofReorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4. Agarwal, S.C. &Johal M.S. : Fishery Development, Narendra Publishing House, Delhi, 1997.
5. Johal, M.S. &Tandon K.K. : Fishes of Punjab,Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6. Karl, F.L. : Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, Publ., Dubuque, IOWA, USA,1969.
7. Brian, R.M. &David W.W.(ed.)., : Fisheries Techniques : American Fisheries Society, Bethesda Maryland, Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO 602C(ZOO-354C)

1. Determination of food and feeding habits of locally available fishes on the basis of stomach analysis adopting the following methods :
   a. Frequency occurrence method
   b. Feeding intensity
   c. Point method.
2. Estimation of following chemical parameters of the water of a fish pond:
   a. Temperature
   b. pH
   c. Dissolved oxygen
   d. Phosphates
   e. Total dissolved solids
   f. Nitrates
   g. Hardness
   h. Chlorides
3. Visits to various fish ponds and fish market.
4. Study of various fresh water prawn species cultured in India.

Guidelines for the conduct of Practical Examinations

Max. Marks	: 20
Practical Exam	: 18 marks
Internal Assessment	: 2 marks
Time	: 4 hours

1. Demonstrate the law of independent assortment/segregation/epistasis from the material provided. Identify the characters involved showing the dominance/recessiveness of characters.

   OR

   Calculate the gene frequency from a known sample of characteristics using Hardy-Weinberg Law. 3
2. Make a dermatographic print of your finger tips or palm pattern and classify the various visible patterns with the help of diagrams and demonstrate it to the examiner. 3
3. Identification of polytene chromosomes from the photograph provided. 1
4. Viva-Voce 2
5. Practical Note Book and Project Report 2

Option-I

6. Identifythe slide and give two reasons for identification. 2
7. Identify the instrument/apparatus (Autoclave/centrifuge/spectrophotometer/microtome etc.). Write about its uses and working. 2
8. Quantitative estimation of sugar/protein in the given sample 3

Option- II

6. Identification of mouth parts/antennae/legs/wings from charts/slides/specimens 2
7. Mention the type of larva/pupa/stages of life history of silkworm, honeybees, lac insect. Write a note on its external morphology. 2
8. Name the apparatus provided. Draw its well labeled diagram and explain its structure and working. 3

Option- III

6. Identify the gear 'A' and draw its well labeled diagram. 2
7. Identify specimens B & C giving one identification feature of each. 2
8. Determine the Temperature/pH/Dissolved oxygen/Phosphates/Total dissolved Solids/Nitrates/Hardness/Chlorides in given water sample. 1
9. Write the habit and habitat of given specimen (Cold water fish)'D'. 2

BIO-CHEMISTRY
SEMESTER V

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – I **Marks: 45+5**

Objective: To understand Aspects of storage and expression of genetic information. Membrane structure and function.

SECTION-I

(Lectures: 10)

Experimental proof for DNA as genetic material. Watson-Crick model of DNA. A&Z-DNA, Structure of Chromatin Topology of DNA & Topoisomerases. Organization of genes in different genomes. Extra nuclear genomes.

SECTION-II

(Lectures: 10)

Types & Biochemical basis of mutations, DNA replication: semiconservative, semicontinuous, bidirectional & from a unique origin. Enzymes & proteins of DNA replication. Mechanism of DNA repair, DNA recombination.

SECTION-III

(Lectures: 10)

Transcription: Initiation, elongation, termination & processing. Inhibitors of transcription.

SECTION-IV

(Lectures: 10)

Genetic Code, Amino acid activation, initiation, elongation, termination and Inhibitors of translation.

Books Suggested :

1. *Harper's Illustrated Biochemistry,* 27th Edition, 2006.
2. Biochemistry, 5th Ed., 2002., Berg, J. M. & L. Stryer, W.H. Freeman, San Francisco.
3. *Molecular Biology* by David Freifelder, 1987.
4. *Genes XI,* by Benjamin Lewin, 2014.
5. *Molecular Cell Biology* by James Darnell, Harvey Lodish and Davit Baltimore, 5th Edition, 2003.

Paper B: Applied Biochemistry – I **Marks: 45+5**

Objective: To understand General aspects of vitamins, hormones, nutrition, immunology, blood coagulation, muscle contraction and nerve impulse transmission.

SECTION-I

(Lectures: 10)

Vitamins: Water soluble & fat soluble, their sources, structure & biochemical function

SECTION-II

(Lectures: 10)

Essential nutrients. Protein energy malnutrition, starvation and obesity. Respiratory Quotient (R.Q.) of carbohydrates, proteins and lipids. Basic metabolic rate and factors influencing it. Specific dynamic action of foods

SECTION-III

(Lectures: 10)

Biochemical Principles of Toxicology. Phase I reactions and Cytochrome P 450 enzyme systems. Phase II reactions and various conjugation systems. Effects of nutritional status and metabolic induction on xenobiotic toxicity; Importance of Physico–chemical properties of toxic chemicals. Biochemical basis of organophosphate and carbamate pesticides toxicity.

SECTION-IV

(Lectures: 10)

Hormones: Classes, modes of action, endocrine glands & their hormones.

Books Suggested :

1. Berg, J. M., Lubert Stryer *: Bio-chemistry,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. *Harper's Illustrated Biochemistry* by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. *Biochemical Toxicology of Environmental Agents* by A. De Bruin, Elsevier Pub.
4. *Human Nutrition & Dietetics* by R. Passmore & M.A. Eastwood.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Estimation of DNA by diphenylamine method.
2. Effect of temperature on the Viscosity of DNA using Oswald's viscometer.
3. Assays of SGPT and SGOT in serum.
4. Extraction of RNA from yeast and its estimation by Orcinol method.
5. Determination of total protein and A/G ratio in serum.
6. Separation of serum proteins using paper electrophoresis.

BIO-CHEMISTRY

SEMESTER -VI

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – II **Marks: 45+5**

Objective: To understand Aspects of storage and expression of genetic information. Membrane structure and function.

SECTION-I

(Lectures: 10)

Targetting of proteins to different cell organelles. Post & Co-translational modification of protein. DNA binding domains of Protein.
Regulation of procaryotes gene expression. Concept of operon, regulation of lac operon, trp-operon, phage infection (lysogenic & lytic mode)

SECTION-II

(Lectures: 10)

Regulation of encaryotic gene expression. Role of RNA regulators.

SECTION-III

(Lectures: 10)

Gene cloning: Different types of vectors, libraries & isolation of gene. Mechanism of development in Drosophila.

SECTION-IV

(Lectures: 10)

Membranes : Structure and functions of biological membranes, various models of membrane structure.
Transport of solutes across membranes, Sodium-potassium pump.
Elementary aspects of the Molecular Biology of cancer and introduction to stem cells.
Molecular basis of the Origin and Evolution of Life.

Books Suggested :

1. *Harper's Illustrated Biochemistry,* 27th Edition, 2006.
2. Biochemistry, 5th Ed., 2002., Berg, J. M. & L. Stryer, W.H. Freeman, San Francisco.
3. *Molecular Biology* by David Freifelder, 1987.
4. *Genes XI,* by Benjamin Lewin, 2014.
5. *Molecular Cell Biology* by James Darnell, Harvey Lodish and Davit Baltimore, 5th Edition, 2003.

Paper B: Applied Biochemistry – II **Marks: 45+5**

Objective: To understand General aspects of vitamins, hormones, nutrition, immunology, blood coagulation, muscle contraction and nerve impulse transmission.

SECTION-I

(Lectures: 10)

Definition of immune system and antigens. Cells involved in immune response. T-cell and B-cells, Immunoglobulins, chemical structure of the Antibody molecule. Haptens and carrier molecules, cell mediated immune response. Complement system, activation and its role in defense.

Brief discussion of various immunological techniques; Precipitation reactions in gels Haemagglutination, Immuno-fluorescence, radio-immunoassay (RIA), enzyme liked immunosorption assay (ELISA) and immunoblotting.

SECTION-II

(Lectures: 10)

Mechanism of Blood coagulation. Blood buffers and role of the kidneys in Acid Base regulation, Role of liver in detoxification of endogenous and exogenous substances.

Structure of voluntary muscle and mechanism of muscle contraction. Mechanism of nerve impulse transmission

SECTION-III

(Lectures: 10)

Muscle contraction – Various types of muscles, structure, contraction & role of calcium, calcium binding proteins in muscle contraction.

SECTION-IV

(Lectures: 10)

Nerve impulse transmission, Central Nervous System, Peripheral Nervous System, action potential, neurotransmitters, synapses & nerve gases.

Books Suggested :

1. Berg, J. M., Lubert Stryer *: Bio-chemistry,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. *Harper's Illustrated Biochemistry* by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. *Essential Immunology* by Ivan M. Roitt, English Language Book Society (ELBS) 8th Ed.,1994.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Estimation of creatinine in urine.
2. Estimation of haemoglobin in blood.
3. Separation of proteins by SDS-Polyacrylamide Gel Electrophoresis.
4. Identification of Sugars in fruit juice using paper chromatography.
5. Determination of nature of inhibition of alkaline phosphatase by cysteine.
6. Determination of proteins by dye binding assay.

MICROBIOLOGY

SEMESTER -V

THEORY		6 hrs	75 (33+33+9*)
MIC 501:	**Pathogenic Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 502:	**Food and Industrial Microbiology-I**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical pertaining to the entire syllabus included in Theory Papers MIC 501 and MIC 502 — 3 hrs — 25 (20+5*)

SEMESTER -VI

THEORY		6 hrs	75 (33+33+9*)
MIC 601:	**Pathogenic Microbiology-II**	3 hrs	37.5 (33+4.5*)
MIC 602:	**Food and Industrial Microbiology-II**	3 hrs	37.5 (33+4.5*)

PRACTICAL

One Practical pertaining to the entire syllabus included in Theory Papers MIC 601 and MIC 602 — 3 hrs — 25 (20+5*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

MIC 501-PATHOGENIC MICROBIOLOGY-I

SEMESTER- V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Streptococcus, Pneumococcus, Neisseria, Corynebacterium, Bacillus, Clostridium, Proteus*. The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Rabies, Polio, Small pox and Measles.

Section C

Introduction to Human mycotic infections viz Superficial, Cryptococcosis and Dermatophytosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz. amoebiasis, Kala-azar and Toxoplasmosis.

MICROBIOLOGY

MIC502-FOOD AND INDUSTRIAL MICROBIOLOGY-I

SEMESTER -V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Food as substrate for microorganisms, Nutritive value of food stuffs, Effect of Hydrogen ion concentration (pH), moisture requirement on food, Important food borne diseases viz. Staphylococcal intoxication, Botulism, Salmonellosis and Shigillosis.

Section B

Contamination, preservation and spoilage in various foods viz. cereal and cereal products (cereal grains, flour, bread, pasta, macroni), Sugar and sugar products (Maple, Syrup, Honey, Candy).

Section C

Production strains, Isolation and screening techniques, preservation and genetic modification of Industrial microorganisms.

Section D

Yeast (Baker's) and its uses, Fermentation of Beer, Wine and Alcohol.

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.

5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.
6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY

PRACTICAL

SEMESTER- V

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Identification of both Gram positive and Gram negative bacteria on the basis of:
   i) Morphology
   ii) Biochemical characteristics
   iii) Serological reactions
2. Demonstration of pathogens (Viruses, fungi, parasites) in permanent mounted slides
3. Demonstation of cysts/ ovas of Protozoa/ Helminths.
4. Demonstration of Laboratory grown fungi on Sabauraud's agar
5. Germ tube test for *Candida albicans*

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MICROBIOLOGY

MIC601-PATHOGENIC MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Shigella, Salmonella, Vibrio, Yersinia, Hemophilus*and *Mycobacterium.* The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Herpes, Influenza and AIDS

Section C

Introduction to Human mycotic infections viz Blastomycosis, Opportunistic mycosis; Candidiasis and Aspergillosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz.Ascariasis, Filariasis and Hook worm infections

MICROBIOLOGY

MIC602-FOOD AND INDUSTRIAL MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS:37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Qualitative and Quantitative analysis of food components (proteins, lipids, carbohydrates), Microbiological examination of food products including dairy products, food poisoning caused by bacteria and fungi.

Section B

Contamination, preservation and spoilage in various foods viz. Vegetables and fruits, Meat (Fresh meat, fresh beef, hamburger, fish), Milk and milk products (Cheese, butter)

Section C

Fermentation media, Characteristics of Ideal production media, Common substrates used in Ideal fermentations, Batch and continuous fermentations

Section D

Production of organic acids viz. acetic acid, lactic acid, propionic acid, butyric acid and mixed acids. Mass transfer in aerobic fermentations

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.
5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.

6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY
PRACTICAL
SEMESTER- VI

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Demonstration of Fungi through normal saline/KOH preparation
2. Quantitative examination of microbial types in raw processed preserved food stuffs
3. Direct microscopic examination of bacteria in raw, pasteurised milk
4. Methylene reductase test for milk
5. Various biochemical tests and their importance in Food Microbiology

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ELECTRONICS

(Kept in Abeyance)

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
SECOND YEAR
(SEMESTER : THIRD AND FOURTH)
Examination, 2016-2017

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2016 AND FOURTH SEMESTER APRIL/MAY 2017, EXAMINATIONS.

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER -III

16th and 17th Century Literature

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1.	William Shakespeare	*Othello*	
2.	Francis Bacon	(i)	*Of Friendship.*
		(ii)	*Of Studies.*
3.	John Donne	(i)	*The Sun Rising.*
		(ii)	*The Canonization.*
		(iii)	*The Relique.*
		(iv)	*Hymn to God, The Father.*
4.	John Milton	The following poems :	
		(i)	*Of Man's First Disobedience.*
		(ii)	*On the Morning of Christ's Nativity.*
		(iii)	*On his blindness.*

Testing :
There will be **two Units-**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I
There will be one question on the literary movement of 16th & 17th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer with internal choice at Serial No. 1, 3 and 4. Students will attempt one passage from each writer.

(15 Marks)

Unit II
Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER – IV

18th and 19th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	Emily Bronte	Wuthering Heights.
2.	S. T. Coleridge	The following poems : (a) *Kubla Khan.* (b) *The Rime of the Ancient Mariner.*
3.	P.B. Shelley	The following poems : (a) *Ozymandias.* (b) *Ode to the West Wind.* (c) *To A Skylark.*
4.	Thomas Hardy	*Tess of the D'Urbenvilles.*

Testing :
There will be **two Units-**
Unit I will consist of compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I

There will be one question on the literary movement of 18th & 19th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer at serial No. 2 and 3 with internal choice. Students will attempt one passage from each author.

(15 Marks)

Unit II

Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

बी.ए. (संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2016-17

SEMESTER-III

प्रथम पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- उपनिषद् तथा नीति साहित्य द्वारा प्रतिपादित शाश्वत जीवन मूल्यों से छात्र को अवगत कराना तथा व्याकरण की संज्ञाओं का बोध कराना।

(क) केनोपनिषद् (मन्त्र व्याख्या पाँच में से तीन - 30अंक व दो में से एक प्रश्न -9अंक) 39अंक

(ख) नीतिशतकम् (श्लोक 51 से अन्त तक) (श्लोक व्याख्या पाँच में से तीन - 30अंक व सूक्ति व्याख्या तीन में से एक - 9अंक) 39अंक

(ग) संज्ञा प्रकरण (लघुसिद्धान्तकौमुदी) (6 में से 3 सूत्रार्थ) 12अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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बी.ए. (संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2016-17

SEMESTER-IV

द्वितीय पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- विद्यार्थियों को संस्कृत नाट्य साहित्य के प्रमुख नाटककार भास अथवा कालिदास के समय, जीवनचक्र, काव्यसौन्दर्य, प्रकृतिचित्रण, प्रेम एवं सौन्दर्य-बोध, नाट्य-कला, पात्र-चरित्रचित्रण इत्यादि विषयों के विस्तृत अध्ययन के लिए प्रेरित करना।

(इस पत्र में छात्र **विकल्प - I** या **विकल्प - II** ग्रहण करेगा)।

विकल्प - I : भास पूर्णांक - 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

(क) भास 2x15= 30 अंक

(भास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण **सम्बन्धी** दो प्रश्न)

(ख) स्वप्नवासवदत्तम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

अथवा

विकल्प - II : कालिदास पूर्णांक - 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

(क) कालिदास 2x15=30 अंक

(कालिदास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण **सम्बन्धी** दो प्रश्न)

(ख) अभिज्ञान- शाकुन्तलम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

.....

URDU

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER -III

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER I : Poetry and Prose

Unit – I

Diwan-e-Ghalib Radif Alif : 30 Marks
Explanation (Tashrih of first 30 Ghazaliyat)

Unit – II

Critical notes on Ghalib ki Qasida Nigari 15 Marks

Unit – III

Mirza Ghalib ki Khutut Nigari ki Khususiyat 30 Marks

Unit -IV

Mirza Ghalib ki Hayat aur Karname 15 Marks

Books Recommended:

1. Zikr-e-Ghalib, by Malik Ram, Tamal Printing Press, 1976.
2. Afkar-e-Ghalib, by Dr. Khalifa Abdur Rehman, 1973.
3. Ghalib Ki Maktoob Nigari, by Prof. Nazir Ahmad

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URDU

SEMESTER -IV

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER II : Essay (Literary)

Unit – I

Fort William College Ki Adabi Khidmat 25 Marks

Unit – II

Urdu Zaban ki Ibtida aur Irtiqa 20 Marks

Unit – III

Dabistan Luckhnow ki Khusiyat 20 Marks

Unit -IV

Dabistan Delhi ki Khusiyat 25 Marks

Books Recommended:

1. Urdu Adab Ki Tarikh, by Azeem-ul-Haq Junedi.
2. Tareekh-e-Adab-e-Urdu, by Prof. Noor-ul-Hasan Naqvi.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER -III

Paper : I **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

i) Ghaznzvid Period

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER -IV

Paper : II **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

1. Ereteqaye Zaban-o-Adabiyat-e-Farsi be Ahde Moghal dar Hind.

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

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ARABIC

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

(KEPT IN ABEYANCE)

FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

SEMESTER – 3rd : APPLIED GRAMMAR AND DRAMA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

a)Drama

Comprehension, explanation and literary appreciation of the prescribed textbook. 50 Marks

Courses of Reading :

Molière , Le Bourgeois Gentilhomme—(Edition Bordas).

Grammar : 40 Marks

1. Applied Grammer . 15 Marks
2. Essay in French, subject or theme to be taken from the given text. 10 Marks
3. Precis or analysis of a given text. 15 Marks

N.B. 1. The latest syllabus will be followed and question paper should be of B.A.II (Hons.) level.

2. Choice in questions should be given.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

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FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

SEMESTER- 4th : APPLIED GRAMMAR, PROSE & VIVA-VOCE

Max. Marks	: 100
Theory	: 60 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Applied Grammar: 25 Marks

Prose : 35 Marks

La symphonie Pastorale, André Gide

Comprehension, explanation and literary appreciation of the prescribed text.

Course of Reading :
La symphonie Pastorale, Andre Gide(Edition Bordas) on Nouveaux Classiques Larousse.

La Grammaire pour bien écrire, Bescherelle, Hatier, 1987.

Viva-Voce : 30 Marks

(a) Dictation of an unseen passage of about 200 words based on the vocabulary and grammar covered upto B.A.II. 10 Marks

(b) Oral questions and answers on a given text (unseen). 10 Marks

(c) General questions and reading. 10 Marks

N.B. : 1. All unseen passages shall be based on the vocabulary and grammar covered till the end of 3rd and 4th Semester courses.
2. All questions are to be asked and answered in French.
3. The latest syllabus must be followed.
4. Choice in questions must be given.
5. Question paper will be set according to B.A.II (Hons.) level.

For the information of private candidates:

1.Viva is compulsory.

2.The theory paper would be marked proportionately out of 70 as there is no internal assessment.

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HINDI

बी.ए. (आनर्स) 2016–17 (द्वितीय वर्ष)

सेमेस्टर–तीन **पूर्णांक : 90+10=100**

समय : 3 घण्टे

1. **कवितावली : तुलसीदास (केवल सुन्दरकाण्ड)**

2. **भारत–भारती : मैथिलीशरण गुप्त**

   (क) दोनों काव्यकृतियों में से 12–12 अंकों की 4 व्याख्याएँ पूछी जाएँगी जिनमें से 2 व्याख्याएँ करनी होंगी। सन्दर्भ सहित व्याख्या के साथ–साथ काव्य–सौन्दर्य भी स्पष्ट करना होगा। अंक–24

   (ख) दोनों काव्य कृतियों में से 6 समीक्षात्मक प्रश्न पूछे जाएँगें जिनमें से 18–18 अंकों के तीन प्रश्न करने होंगे। अंक–54

   विशेष : प्रत्येक काव्य कृति में से एक प्रश्न करना अनिवार्य होगा।

3. **राष्ट्रीय भाषा हिन्दी : स्वरूप एवं महत्व अंक–12**

4. **आंतरिक मूल्यांकन अंक : 10**

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HINDI

बी.ए. (आनर्स) 2016–17

सेमेस्टर–चार **पूर्णांक : 90+10= 100**

समय : 3 घण्टे

1. लहर : जयशंकर प्रसाद

क) लहर में से 12–12 अंकों की 2 व्याख्याएँ पूछी जाएँगी जिनमें से एक पद्यांश की सप्रसंग व्याख्या करनी होगी। अंक–12

काव्य–सौन्दर्य भी स्पष्ट करना होगा।

ख) लहर काव्य कृति में से दो समीक्षात्मक प्रश्न पूछे जाएँगें। जिनमें से 16 अंक का एक प्रश्न करना होगा। अंक–16

2. अंग्रेजी से हिन्दी अनुवाद अंक–20

3. निबन्ध लेखन अंक–10

4. टिप्पण तथा प्रारूपण सम्बन्धी नियमों का सामान्य ज्ञान अंक–10

5. जन संचार–रेडियो, दूरदर्शन एवं समाचार पत्रों के लिए लेखन की विशिष्ट विधि अंक–10

6. हिन्दी के उपसर्ग–प्रत्यय अर्थ व प्रयोग तथा शब्द शोध अंक–12

आन्तरिक मूल्यांकन अंक–10

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ਪੰਜਾਬੀ
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਦੂਜਾ (2016–17) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – I

ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

ਆਧੁਨਿਕਤਾ, ਆਧੁਨਿਕ ਸੰਵੇਦਨਾ, ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

1. ਆਧੁਨਿਕਤਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਲੱਛਣ
3. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ : ਪ੍ਰਗਤੀਵਾਦੀ ਪ੍ਰਯੋਗਸ਼ੀਲ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ
ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ

ਪੰਜਾਬੀ ਨਾਵਲ, ਕਵਿਤਾ, ਕਹਾਣੀ, ਸਵੈ-ਜੀਵਨੀ, ਨਾਟਕ
(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ
ਮੇਰੀ ਚੋਣਵੀਂ ਕਵਿਤਾ : ਪ੍ਰੋ ਮੋਹਨ ਸਿੰਘ
ਆਰਸੀ ਪਬਲੀਕੇਸ਼ਨ, ਦਿੱਲੀ

(ਵਿਸ਼ਾ– ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿ–ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 10)

ਪੰਜਾਬੀ
B.A. II (SEMESTER III) ਆਨਰਜ਼
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – ।।
ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਮੱਧਕਾਲ – ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਮੱਧਕਾਲੀ ਸੰਵੇਦਨਾ ਤੇ ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ
3. ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ :ਗੁਰਮਤਿ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਵਾਰ ਤੇ ਜੰਗਨਾਮਾ, ਜਨਮਸਾਖੀ, ਕਾਫ਼ੀ, ਬਾਰ੍ਹਮਾਂਹ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਪੂਰਨ ਭਗਤ : ਕਾਦਰਯਾਰ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿਸ਼ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

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B.A. II (SEMESTER IV) ਆਨਰਜ਼
ਅਪ੍ਰੈਲ / ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ –।।।
ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਪੰਜਾਬ ਦਾ ਬਟਵਾਰਾ : ਕਹਾਣੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਸੰਗ ਵਿੱਚ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦੇ ਪ੍ਰਮੁੱਖ ਸਾਹਿਤਕਾਰ : ਰਜਿੰਦਰ ਸਿੰਘ ਬੇਦੀ, ਭੀਸ਼ਮ ਸਾਹਨੀ, ਖੁਸ਼ਵੰਤ ਸਿੰਘ, ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਮੰਟੋ ਦੀਆਂ ਕਹਾਣੀਆਂ : ਸੰਪਾਦਕ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼

ਪ੍ਰਮੁੱਖ ਪੰਜ ਕਹਾਣੀਆਂ :
- ਟੋਭਾ ਟੇਕ ਸਿੰਘ
- ਬੋਅ
- ਬਾਪੂ ਗੋਪੀ ਨਾਥ
- ਟੇਟਵਾਲ ਦਾ ਕੁੱਤਾ
- ਧੂੰਆਂ

(ਵਿਸ਼ਾ ਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਕਹਾਣੀ–ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ–IV
ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਅਤੇ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50
ਪ੍ਰਾਪਤ ਅੰਕ : 45

05 Internal Assessment
Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦੀ ਸਾਹਿਤਕ ਸਿਰਜਣਕਾਰੀ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮੁਨਸ਼ੀ ਪ੍ਰੇਮ ਚੰਦ, ਰਬਿੰਦਰ ਨਾਥ ਟੈਗੋਰ
ਮੁਲਕ ਰਾਜ ਅਨੰਦ, ਗਿਰੀਸ਼ ਕਰਨਾਰਡ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸੰਸਕਾਰ (ਨਾਵਲ) : ਯੂ ਆਰ ਅਨੰਤਮੂਰਤੀ (ਅਨੁਵਾਦਕ)
ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਨਾਵਲ–ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

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GERMAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER –III

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed novel "Der Richter und sein Henker" (Dürrenmatt) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 1-17 upto page 87 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstarße a.o. Chapters 1-17 upto page 87.

ii. "Der Richter und sein Henker" (Dürrenmatt)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 1-17

Summary

Max. Marks : 100 marks(Total)
Paper-2 (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory): 90 marks

Note : Use of dictionary is allowed

i.	Translation of an unseen text/s from German into English.	:	50 marks
ii.	Translation of an unseen text/s from English into German	:	20 Marks
iii.	Essay writing in German (about 250 words)	:	20 Marks

i. Ein Traum
ii. Eine Ferienreise
iii. Essen und Trinken
iv. Heutige Mode und Kleidung
v. Ein Fest (indisch/deutsch)

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessmet will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbook:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

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GERMAN

SEMESTER –IV

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed drama "Biedermann und die Brandstifter" (Max Frisch) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 18-34 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstraße a.o. Chapters 18-34.

ii. "Biedermann und die Brandstifter" (Max Frisch)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 18-34.

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory) : 90 marks

Note : Use of dictionary is allowed

i. Translation of an unseen text/s from German into English. : 50 marks

ii. Translation of an unseen text/s from English into German : 20 Marks

iii. Essay writing in German (about 250 words) : 20 Marks

i. Der Klimawandel
ii. Auf dem Markt
iii. Medien und Netzwerk
iv. Heutige Frau
v. Jugend und Gesellschaft

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch & Arbeitsbuch by Hartmut Aufderstraße a.o.

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DEFENCE & STRATEGIC STUDIES

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN -I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Military Geography of Pakistan : Its strategic importance, economic and industrial resources.
2. People and their characteristics.

SECTION-II

3. Outlines of history leading to the Birth of Pakistan.
4. Political Developments in Pakistan since 1947.
5. Role of Military in Pakistan's Politics.

SECTION-III

6. Foreign Policy of Pakistan (Basic Determinants).
7. Foreign Policy of Pakistan with regard to U.S.A. & Russia.

SECTION-IV

8. Pakistan's Foreign relations with its neighbours with particular reference to Afghanistan, India and Iran.

Books Recommended :

1. Akhtar, Jamna Das, *Political Conspiracies in Pakistan*, Delhi : Punjabi Pustak Bhandar, 1969
2. Britanninca., *The New Encyclopedia Britannica*, Chicago, II : Encyclopedia Britannica, Inc, 2005.
3. Burke, S.M., *Pakistan's Foreign Policy* : An Historical Analysis. [S.I.: s.n. Print]
4. Callerd, Keith B., Pakistan – A Political Study, London : Allen & Unwin, 1957.
5. Chopra, Surendra, *Perspectives on Pakistan's Foreign Policy*, Amritsar: Guru Nanak Dev University Press, 1983.
6. Cohen, Stephen P., *The Pakistan Army*, Berkeley: University of California Press, 1984.
7. Johnson, Allan G., *Privilege, Power, and Difference*, Boston, Mass: McGraw- Hill, 2006.
8. Khaliq, Sheikh Abdul, *Pakistan—Peace and War*, London : Regency Press, 1973.
9. Moon, Penderel, *Divide and Quit*, Delhi: Oxford University Press, 1998.
10. Sahni, Naresh Chander, *Political Struggle In Pakistan*, Jullundur City: New Academic Pub. Co., 1969, Print.
11. Sayeed, Khalid B., *Pakistan, The Formative Phase, 1857-1948*, London: Oxford University Press, 1968.
12. Sidhu, K.S., *Pakistan: Khetri Adhyayan*; Publication Bureau, Punjabi University Patiala, 1987.
13. Stephens, Ian. *Pakistan: New York* : Praeger, 1963.
14. Tayyeb Ali, and A Tayyeb. *Pakistan.* London [etc.] Oxford University Press, 1966.
15. Tinker, Hugh. *India and Pakistan*. New York: Frederick. A. Praeger, 1968.
16. Williams, L.F. Rushbrook. *The State of Pakistan*. London: Faber, 1966.
17. Ziring, Lawrence. *Pakistan In The Twentieth Century*, Karachi [u.a.]: Oxford University Press, 1998.
18. Ziring Lawrence, *The Ayub Khan Era,* Karachi: Paramount Publishing, 2009.

DEFENCE & STRATEGIC STUDIES

SEMESTER-IV

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Jammu and Kashmir Campaign 1947-48 : Causes, operations in brief and effects.
2. Indo-Pak War 1965 : Causes, operations in brief and effects.

SECTION-II

3. Indo-Pak War 1971 : Causes, operations in brief and effects.
4. 1999-Kargil War .

SECTION-III

5. Defence Potential of Pakistan.
6. Armed Forces of Pakistan.

SECTION-IV

7. Nuclear Policy of Pakistan.
8. Terrorism in Pakistan

Books Recommended :

1. Ayoob, Mohammed, and K. Subrahmanyam. *The Liberation War*, The University of Michigan: S.Chand, 1972.

2. Brines, Russell. The Indo-Pakistani Conflict, London: Pall Mall P., 1968.

3. Costa, Benedict. *Dismemberment of Pakistan*, Ludhiana: Kalyani Publisher,: 1972.

4. Dasgupta, C. *War and Diplomacy In Kashmir*, 1947-48. New Delhi: Sage, 2002.

5. Feldman, Herbert. *Revolution In Pakistan*. London: Oxford U.P., 1967, Print.

6. Feldman, Herbert. *The End and The Beginning*. London: Oxford University Press, 1975.

7. Gupta, K.R., *India-Pakistan Relations with Special Refernce to Kashmir*, New Delhi: Atlantic Publishers & Distributors, 2003.

8. Hackett, James T., *The Military Balance 2011*. Oxfordshire: Routledge, 2011.

9. Johri, Sita Ram. The Indo-Pak Conflict of 1965. Luckhnow: Himalaya Publications, 1967.

10. Kaul, Brij Mohan. Confrontation With Pakistan, Delhi: Vikas Publicaitons, 1971.

11. Khaliq, Sheikh Abdul, Pakistan, Peace and War, London: Regency Press, 1973.

12. Lachhman Singh., Indian Sword Strikes In East Pakistan. New Delhi: Vikas, 1979.

13. Mankekar, D. R. Pakistan Cut To Size, New Delhi: Indian Book Co, 1972. Print.

14. Mankekar, D.R. Twenty two Fateful Days. Bombay: Manaktalas, 1967. Print.

15. Nath, Rajendra. Military Leadership In India. New Delhi, India: Lancers Books, 1990.

16. Palit, D.K. The Lightning Campaign. New Delhi: Thomson Press (India), 1972.

17. Sahni, Naresh Chander, *Political Struggle in Pakistan*, Jullundur City: New Academic Pub. Co, 1969.

18. Sen. Lionel Protip. *Slender Was The Thread: Kashmir Confrontations, 1947-48*, Bombay: Orient Longmans, 1969.

19. Sethi, Surinder Singh. *The Decisive War: Emergence of a New Nation*. New Delhi: Sagar Publications, 1972.

20. Sidhu, K.S. *Pakistan: Khetri Adhyayan*: Publication Bureau, Punjabi University Patiala, 1987.

21. Sinha, S.K. *Operations Rescue*, New Delhi: Vision Books, 1977.

22. Ziring, Lawerence. *The Ayub Khan Era*. Karachi: Paramount Publishing, 2009.

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HISTORY

SYLLABUS OF B.A. (HONOURS) SEMESTER III/IV, 2016-17

Note : The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any two papers, one in Semester III and one in Semester IV according to the following :

Semester III

(i) Social and Cultural Trends in Ancient India.

OR

(ii) Social and Cultural Trends in Medieval India.

Semester IV

(ii) Social and Cultural Trends in Medieval India.

OR

(iii) Social and Cultural Trends in Modern India.

Note: Candidates CANNOT OPT FOR PAPER (ii) in BOTH Semesters.

(i) SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The paper-setter would avoid repetition between different types of question within one question paper.

Paper- SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Institutions: Varna, Jati, Ashrama and Samskara
2. Marginalized Sections of the Society: Shudras and slaves.

UNIT II

3. Women: Status and rights
4. Education: system of learning, Principal centres,

UNIT III

3. Early Religions : Harappan and Vedic
4. Protest Movements: Jainism and Buddhism

UNIT IV

5. Puranic Religions: Vaishnavism, Shaivism and Shaktism
6. Significant developments in art and architecture.

   (a) Styles of Temple Architecture: Nagara, Dravida and Vesara
   (b) Sculpture: Mauryan, Mathura, Gandhara and Gupta
   (c) Painting: Ajanta caves.

Recommended readings:

1. P.N.Prabhu, *Hindu Social Organisation*, Popular Prakashan, Bombay, 1979.
2. R.S.Sharma, *Surdas in Ancient India*, Motilal Banarasidas, Delhi, 1980.
3. K.Roy, Ed. *Women in Early Indian Societies*, Manohar, New Delhi,1999.
4. A.S. Altekar, *Education in Ancient India*, The Indian Book shop, Benaras, 1937.
5. S. Ratnagar, *Understanding Haraappa*, Tulika, New Delhi, 2001.
6. A.L. Basham, *The Wonder That Was India*, Rupa, Calcutta, 1992.
7. R.G. Bhandarkar, *Vaishnavism, Shaivism and Minor Religious Systems*, Indological Book House, Varanasi, 1965.
8. P.Brown, *History of Indian Architecture*, Vol. I Taraporevavala, Bombay 1965.
9. S.K. Saraswati, *Survey of Indian Sculpture*, Munshiram Manoharlal, New Delhi, 1975.
10. D.Barrett & B Grey, *Indian Painting* Skira, Lausanne, 1963.

(ii) SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2.Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper II: SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Conditions in the Delhi Sultanate: Nobles, theologians, slaves and other social groups; position of women; social customs and manners.
2. Devotional Movement: Vaishnavism in Bengal, the Gangetic Plain and Rajputana; the teachings and impact of Kabir and Guru Nanak

UNIT II

3. Mystical Dimensions of Islam: Organisation of the Chishti and Suhrawardi orders, with reference to their beliefs and practices.
4. Landmarks in Persian Historiography: The historical works of Ziauddin Barani and Abul Fazl.

UNIT III

5. State Intervention in the Socio-Religious Sphere: Akbar's liberal policy; his *Ibadat Khana* debates, the *mahzar* and breach with orthodox ulama; introduction of *Tauhid-i-Ilahi* and social reforms
6. Muslim Revivalist Movements: Salient features of the Mahdawi movement; socio-religious ideas of Sheikh Ahmad Sirhindi and their impact.

UNIT IV

7. Development of Literature: the devotional writings of Tulsidas, Ravidas and Namdev; the contribution of Malik Muhammad Jaisi; Abdur Rahim Khan-i-Khanan and Ras Khan.
8. Fine Arts in Mughal India: the development of architecture, painting and music during the sixteenth and seventeenth centuries.

Recommended Readings:

1. *K.M. Ashraf: Life and Conditions of the People of Hindustan,* Second Edition, Munshiram Manoharlal, New Delhi, 1970.
2. Satish Chandra*: Medieval India: From Sultanate to the Mughals*, Parts I & II, Haranand Publications (Rep.), New Delhi, 2003.
3. Peter Hardy*: Historians of Medieval India: Studies in Indo-Muslim Historical Writing*, First Indian Edition, Munshiram Manoharlal, New Delhi 1997.
4. Harbans Mukhia *: Historians and Historiography During the Reign of Akbar*, Vikas Publishing House, New Delhi 1976.
5. Khaliq Ahmad Nizami: *Religion and Politics in India During the Thirteenth Century*, New Edition, Oxford University Press, Delhi, 2001.
6. S.A.A. Razvi: *The Wonder That was India*, Part II, Twelfth Impression, Rupa and Company, New Delhi, 2002.
7. Mohammad Yasin: *A Social History of Islamic India*, Second Revised Edition, Munshiram Manoharlal, New Delhi, 1974

III. SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Socio-Cultural Trends in Early 19th Century: Religion, education and literature
2. Women Education: Aligarh Girls School; Kanya Maha Vidyalya.

UNIT II

3. Socio-Religious Reform Movements in Punjab and North- West: The Arya Samaj; Singh Sabhas and the Ahmadiyas
4. Socio-Religious Awakening in the Central Belt and Maharashtra: The Manav Dharma Sabha; the Prathana Samaj: the Rahnumai Mazdayesan Sabha (among Parsis)

UNIT III

5. Cultural Reorientation in the South: Annie Besant and the Theosophical Movement
6. The Marriage Reform Efforts: Legislative measures for the abolition of Sati and Female infanticide; contribution of reformers towards the promotion of widow-remarriage

UNIT IV

7. The Social Protest Movements: Role of Jyotiba Phule in Maharashtra; Swami Narayana Guru in Kerala; Mangoo Ram and the Ad Dharm Movement in Punjab.
8. The Literary Trends: Development of literature in Hindi; Bengali and Marathi languages.

Recommended Readings:

1. Kenneth W., Jones: *The New Cambridge History of India: Socio Religious Reform Movements in British India* (Cambridge, 1989).

2. R.C.Majumdar and Others (ed.): *British Paramountcy and Indian Renaissance*, Part II, Bhartiya Vidya Bhavan Series, Vol. X.

3. Robert D, Baird (ed.*): Religion in Modern India*, Manohar, New Delhi, 1981.

4. Gail Minault*: Secluded Scholars: Women's Education and Muslim Social Reform in Colonial India* New Delhi, O.U.P.1998.

5. Geraldine Forbes: *Women in Modern India* , Foundation Books, New Delhi, 1996.

6. Tara Chand *: History of the Freedom Movement in India*, Vol.II, New Delhi, 1967, Publication Division, G.O.I.

7. Mark Jurgensmeyer: *Religious Rebels in the Punjab*, Delhi, Ajanta, 1988.

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POLITICAL SCIENCE

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

Outlines of Test

Semester-III Option (i) : International Relations 1917-1945

OR

Option (ii) : Colonialism and Nationalism in Modern India

Semester-IV Option (i) : Western Political Thought

OR

Option (ii) : Comparative Politics

Syllabus and Courses of Reading :

Semester-III

OPTION (I) : INTERNATIONAL RELATIONS 1917-1945

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The essential concern of the course is with the period between the Bolshevik Revolution and the end of the Second World War. However, to facilitate better understanding of the developments during this period, it is very essential that the teacher familiarizes the students with the major currents of international politics immediately preceding the First World War as well as during the course of that war. Needless to say, no question will be asked on the period up to the Bolshevik Revolution.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Course Content :

Unit-I : *Nature of International Relations before and after World War-I :*

(a) Imperial confrontation & Concern for peace.
(b) Peace treaties & rise of International Organisation-League of Nation.

Unit-II : *Rise of Nationalism :*

(a) National Upsurge

(b) Search for colonies

Unit-III : *European Politics and the Post-War Settlement :*

(a) French quest for security and the German urge for equality.

(b) Britain and the European power system.

Unit-IV: *Origins of the Second World War, & International Organisation (United Nations) :*

(a) Alliances and counter-alliances.

(b) Failure of the League of Nations & Emergence of U.N.

(d) American Ambivalence.

Note : Questions to be asked on the Genesis itself and not on post-1945 developments related to the United Nations.

Suggested Readings :

1. Carr, E.H. : International Relations Between the Two World Wars (1919-1939), (London : Macmillan Press, 1973).
2. Northedge, F.S. : A Hundred Years of International Relations (London : Duchworth, 1971).
3. William Shirer : The Rise and Fall of the Third Reich, A History of Nazi Germany (London : Secker and Warburg, 1960).
4. Keswani, K.B. : International Relations : 1900 to Present Day (Bombay : Himalaya Publishing House, 2004).
5. Quicky Wright : A Study of War (Chicago : University of Chicago Press, 1942).
6. Goodrich, L.M., and Edward Hambro : Charter of the United Nations-Commentary and Documents (London: London Institute fo World Affairs, 1949).
7. Richard Little and Michael Smith (eds.) : *Perspective in World Politics (London: Routledge, 2006).*
8. Chris Brown : *Understanding International Relations (London, Palgrave, 2001).*

OR

OPTION (ii) COLONIALISM AND NATIONALISM IN MODERN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The paper aims at enabling the students about the nature and evolution of the Indian National Movement and constitutional development in colonial India.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Historical Foundations of National Movement :*

(a) Socio-Religious reform movements.

(i) Arya Samaj
(ii) Brahmo Samaj
(iii) Singh Sabha Movement
(iv) Tama Krishan Mission

Unit-II : (a) Origin and growth of Indian National Congress.

(b) Moderates and Extremists—Debates over objectives, ideology, strategy, social basis.

(c) Revolutionary Terrorism.

Unit-III : *Gandhi and Nationalist Movement in India :*

(a) Gandhi : Political strategy and new techniques of struggle.

(b) Non-Cooperation, Civil Disobedience and Quit India Movements.

Unit-IV : Landmarks in the devolution of power with special reference to Government of India Acts of

(i) 1909
(ii) 1919
(iii) 1935
(iv) Indian Independence Act 1947.

Suggested Readings :

1.	Sumit Sarkar	:	Modern India (Madras : Macmillan, 1995).
2.	Bipan Chandra	:	Essays on Colonialism (Delhi : Orient Longman, 2000).
3.	Thomas Pantham et al (ed.)	:	Modern Indian Political Thought (Delhi : Sage, 1986).
4.	Gail Omvedt	:	Dalit Visions –The Tract of the Times (Delhi : Orient Longman, 2002).
5.	Radha Kumar	:	History of Doing (Delhi : Kali for Women, 1995).
6.	Paul Brass	:	The Politics of India Since Independence (Delhi : Foundation Books, 1992).
7.	V.R. Mehta and Thomas Pantham, ed.	:	Political Ideas in Modern India, Thematic Exploration (Delhi : Sage, 2006).

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POLITICAL SCIENCE
Semester-IV

OPTION (i) WESTERN POLITICAL THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

This paper aims to introduce to the students the major themes of western political thought. This will be done by undertaking an indepth study of the key thinkers of this tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I	**:**	*Plato* : The Republic	-	Justice
			-	Philosopher-King
			-	Educations
			-	Communism of wives & property
Unit-II	**:**	*Plato* : The Statesman and the Laws	-	Ideal State
			-	Second Best State
Unit-III	**:**	*Aristotle* : The Politics	-	Inequality-Slavery, Women
			-	Nature of the State
			-	Classification of Constitutions
			-	Revolution
Unit-IV	**:**	*Machiavelli* : The Prince	-	Machiavelli as a Modern Political Thinker.
			-	Morality and Politics.
			-	Power and Statecraft.

Suggested Readings :

1. Sabine, G.H. : *A History of Political Theory* (Bombay : Oxford & IBH, 1973).
2. Dunning, W.A. : *A History of Political Theories,* 3 Vols. (Allahabad : Central, 1973).
3. Sait, E.M. (ed.) : *Masters of Political Thought*, 3 Vols. (London : George and Harap, 1947).
4. William Ebenstein : *Great Political Thinkers : Plato to Present*, 1966 (New Delhi : OUP, 2000).

Reference Books :

1. Ernest Barker : *Greek Political Theory : Plato and His Predecessors* (London : Methuen, 1978).
2. Mulgan, R. : *Aristotle's Political Theory* (Oxford : Clarendon, 1977).
3. Plamenatz, John *Man and Society,* 2 Vols. (New York : Longman, Latest Edition).
4. Quentin Skinner : *Machiavelli* (Oxford : OUP, 1981).
5. Raphael, D.D. : *Hobbes : Morals and Politics* (London : George Allen, 1978).
6. Hall, J.C. : *Rousseau : Introduction to His Political Philosophy* (London : Macmillan, 1971).
7. David Maclellan : *Marx : Fontana Modern Masters Series* (London : Fontana, 1986).

OR

OPTION (ii) COMPARATIVE POLITICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :
The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial as well as developing societies and this will be undertaken in a comparative framework.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Approaches to Comparative Politics :*

(a) Political Sociology.

(b) Political Economy.

Unit-II : *Theories of Development :*

(a) Modernisation and Development Theories.

(b) Alternative Third World perspective on development.

Unit-III : *Political Participation and Representation :*

(a) Political Parties.

(b) Interest Groups and Pressure Groups.

(c) Political Elite.

Unit-IV : (a) Theories of State : Liberal, Marxist.

(b) Civil Society and New Social Movements.

Suggested Readings :

1. Andrew Heywood : *Politics* (London : Macmillan, 1997).
2. Mary Mank Sworth and Mourice Kogan (ed.) : *The Encyclopaedia of Government and Politics* (London : Routledge, 1992).
3. Rod Hague, Martin Harrop and Shaun Breslin : *Comparative Government and Politics : An Introduction* (London : Macmillan, 1998).
4. Gabriel Almond, G. Bingham Powell, Kaare Strom and Russel J. Dalton : *Comparative Politics Today* (Delhi : Pearson Education, 2005).
5. Ronald H. Chilcote : *Theories of Comparative Politics : The Search for a Paradigm Reconsidered* (Boulder : Westview Press, 1994).

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ECONOMICS

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

The candidates are required to study one paper out of the following three papers :

I Economics of Agriculture.

II History of Economic Thought.

III Economics of Population.

Paper–I : ECONOMICS OF AGRICULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Economics of Agriculture : Its nature and scope, Interdependence between agriculture and industry. Nature and problems of agricultural development in developing countries.

Unit-II

Transforming Traditional Agriculture : Ranis & Fei, Schultz and Meller's Models, Lewis model of unlimited supplies of labour.

Unit-III

Land reforms and system of farming. Farm size and productivity relationship. Agricultural price policy, Agricultural taxation (All these topics should deal with special reference to India).

Unit-IV

New agricultural strategy and Green Revolution. Problems of small farmers and agricultural labourers. Agricultural credit, marketable and marketed surplus. Surplus and its utilization. (All these topics would deal with special reference to India).

Recommended Readings:

1.	Eicher, C. & Witt, L. (1970)	:	Agriculture in Economic Development, Vera & Co., Bombay
2.	Frankel, Francis R. (1971)	:	India's Green Revolution-Economic Gains and Political Costs, Oxford University Press, Bombay
3.	Joshi, P.C. (1975)	:	:Land Reforms in India, Allied, Bombay, Part II, Sections I & II
4.	Khusro, A.M. (1968)	:	Readings in Agricultural Development, Allied, Bombay, Articles by : B.S. Minhas & T.N. Srinivasan, V.M. Dandekar, M.L. Dantwala, A.N. Khusro, T. Bergman, V.K.R.V. Rao.
5.	Meller, J.W. (1966)	:	The Economics of Agricultural Development, Vera & Co., Bombay
6.	Misra, S.K. & Puri, V.K. (2014)	:	Indian Economy, Himalaya Publishing House, Bombay
7.	Schultz, T.W. (1970)	:	Transforming Traditional Agriculture, Lyall Book Depot, Ludhiana
8.	Singh, Amarjit & Sadhu, A.N. (1986)	:	Agricultural Problems in India, Himalaya Publishing House, Bombay
9.	Soni,R.N. (1992)	:	Leading Issues in Agricultural Economics, Vishal Publisher, Jalandhar.
10.	Todaro, Michael P. (1987)	:	Economic Development in the Third World, Orient Longman, New Delhi
11.	Wadhva, Charan D. (1973)	:	Some Problems of India's Economic Policy, Tata McGraw Hills, Bombay, Part II: Articles-B,C,D, F and G

Supplementary Readings:

1.	Sameeksha Trust, Bombay	:	Various Issues : Economic and Political Weekly.
2.	Indian Society of Agricultural Economics, Bombay	:	Various Issues : Indian Journal of Agricultural Economics.

Paper -II : HISTORY OF ECONOMIC THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Pre-Classical Economic Thought : Mercantilism : Mercantilist ideas, regulations of economic life, leading theory of Mercantilist school, Physiocracy : ideas with special reference to Quesnay and Turgot.

Unit-II

Classical and Marxian Political Economy : The classical tradition : Adam Smith, Ricardo, J. S. Mill and Karl Marx on value, distribution and development.

Unit-III

Reaction Against Classicism : Socialist and Nationalist thinkers, Sismondi, Saint-Simon, Robert Brown and Fourier, Subjective School : Menger, Weiser and Bohm Bewark.

Unit-IV

Neo-Classical Economics : Main features.
Marshall : Scope of Economics, theory of firm, time-element, partial equilibrium analysis.
Keynes: Concept of effective demand, consumption, investment, inflationary gap.

Recommned Readings:

1. Blaug , M. (1968) : Economic Theory in Retrospect, Richard D. Irwin Inc. Illinois.
2. Gide & Rist (1964) : A History of Economic Doctrine, George G. Harper & Co. Ltd., London
3. Sweezy , P. M. (1991) : The Theory of Capitalist Development, K. P. Bagchi & Co., Calcutta,
4. Roll, Eric (1993) : History of Economic Thought, Oxford University Press, Calcutta..

Supplementary Readings :

1. Ghosh , B. N. & Ghosh, Rama (1988) : Concise History of Economic Thought, Himalaya Publishing House, Delhi .
2. Paul , R.R. (1979) : Classical Political Economy, Kalyani Publishers, Delhi..
3. Schumpeter , J.A. (1961) : History of Economic Analysis (Selected Portions), George Allen & Unwin, London,

Paper-III: Economics of Population

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT – I

Theories of Population: Malthus, optimum.
Demographic transition theory .
Population and Economic Development.

UNIT – II

Population Structure and Characteristics: Impact of Population growth on the age and gender structure
Fertility: Concepts of fertility transition. Measurement of fertility .
Mortality: Components and Measurement, Infant Mortality in India.

UNIT – III

Migration: Concepts, causes and consequences (economic and demographic) of migration.
Migration in India: Causes and Trends, Rural-Urban, Male-Female.
Urbanization: Concepts, Trends of Urbanization in India.

UNIT – IV

Growth and Structure of Indian Population.
Literacy: Literacy transition in India, pattern of literacy and literacy differentials in India.
Estimation of Population in India: Census, sampling and vital registration methods.
Population Policy in India since Independence.

Essential Readings:

Aggarwal, A. S. N. (1972)	:	India's Population Problem Tata McGraw Hills Co., Bombay.
Becker, G. (1960)	:	An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
Boserup, E. (1981)	:	Population and Technological Change University of Chicago Press, Chicago.
Bouge, D. J. (1971)	:	Principles of Demography, John Wiley, New York.
Bose, Ashish (1978)	:	India's Urbanization, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
Coale, A. and E. Hoover (1958)	:	Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects. Princeton University, Press, Princeton.
Chenery, H. and T.N. Srinivasan (eds.) (1989)	:	Handbook of Development Economics, Vol. 1 & 2, Elsevier, Amsterdam.
Chandna, R. C. (2000)	:	A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
Cox, Peter R. (1979)	:	Demography, Vikas Publishing House, New Delhi
Easterlin, R. A. (1968)	:	Population, Labour Force and Long Swings in Economic Growth: National Bureau of Economic Research, New York.
Ghosh, B. N. (ed.) (1987)	:	Studies in Population and Economic Development, Deep and Deep Publications, New Delhi
John R. Weeks (2002)	:	Population : An Introduction to Concepts and Issues (7^{th} edition), Wadsworth Publishing Company, New York.
Leibenstein, H. (1957)	:	Economic Backwardness and Economic Growth, New York, John Wiley and Sons
Govt. of India	:	Census Report, 2001.

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ECONOMICS

Semester-IV

The candidates are required to study one paper out of the following three papers :

I Industrial Economics.
II Economics of Public Enterprises.
III Theory of Statistics.

Paper-I : INDUSTRIAL ECONOMICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Scope and methods of Industrial Economics; Basic concepts of firm, industry and market; Organisational forms and alternative motives of the firms; Industrial structure and economic development.

Unit-II

Market Structure : Sellers concentration, product differentiation, conditions of entry and economies of scale, market structure and profitability.
Growth of Firms : Vertical integration, diversification, mergers and innovation; constraints on growth-demand, financial and managerial.

Unit-III

Theory of industrial location, contribution of Weber and Sergent Florence, centralized vs. balanced regional development, industrial concentration and dispersal in India.

Unit-IV

Industrial policy since independence, Industrial development under plans and reasons for deceleration of industrial growth, Growth of State industrialization in India.

Recommended Readings :

1. Barthwal, R. R. (2010) : Industrial Economics : An Introductory Text Book, New Age International Publisher (P.) Ltd., New Delhi.
2. Datt , Rudar & Sundharam K. P. M. (2012) : Indian Economy , S. Chand & Company.
3. Devine , P. J. et al. (1974) : An Introduction of Industrial Economics, George Allen & Unwin Ltd.,London.
4. Howe , W. Steward (1978) : Industrial Economics : An Applied Approach, The Macmillan Press Ltd.
5. Kuchhal, S. C. (1989) : Industrial Economy of India , Allahabad, Chaitanya Publishing House.

Supplementary Readings :

1. Ahluwalia , Ishar Judge (1985) : Industrial Growth in India : Stagnation Since Mid Sixties, Oxford University Press, Delhi.
2. Penrose, E. T. (1995) : The Theory of Growth of Firm, Oxford, Basil Blackwell.
3. Richardson, Harry W. (1969) : Elements of Regional Economics, Penguin Education.
4. Sivayya & Das (1978) : Indian Industrial Economy, S. Chand & Co., New Delhi
5. Smith, David M. (1971) : Industrial Location : An Economic Geographical Analysis, John Wiley & Sons Inc.

Paper II : ECONOMICS OF PUBLIC ENTERPRISES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Concepts : Role of public sector in socio-economic development, Rationale of public sector—multiple objectives of public enterprises and clash and complementarity in objectives. Historical perspective of public sector in India. Organisation of public enterprises – various forms and role.

Unit-II

Role of public sector financial institutions in the financing of public enterprises. Problems of management of working capital – Management of inventory, credit and cash financing of working capital.

Unit-III

Pricing in Public Sector : Basis and types of pricing policies, pricing practices, machinery of price fixation. Accountability and profitability of public sector – Causes of poor financial performance of public sector in India.

Unit-IV

Sources of funds of public enterprises – Debt and equity, Industrial relations and its importance, Industrial disputes : causes, effects and their settlements.

Recommended Readings :

1. Narain , Laxmi (1980) : Principles and Practices of Public Enterprises Management, S. Chand & Co.,New Delhi.
2. Narain , Laxmi (1982) : Public Enterprises in India, S. Chand & Co., New Delhi.
3. Institute of Public Enterprises (1967) : Organisation in Public Enterprises, Tripathi, Bombay.
4. Institute of Public Enterprises (latest edition) : Pricing and Investment in Public Enterprises, Oxford and IBH Publishing Co., New Delhi.

Supplementary Readings :

1. Bhalla , G. S. (1968) : Financial Administration of Nationalised Industry in U.K. and India, Meenakshi, Meerut.

2. Gupta, K. R. (1978) : Issues in Public Enterprises, S. Chand & Co., New Delhi.

Paper- III : THEORY OF STATISTICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT - I

*Moments & Expectation***:** Concept of random variables, Moments, Mathematical expectation, Moment Generating Function, Characteristic Function.
*Regression and Correlation***:** Multiple, Partial Regression and Correlation, Fitting of multiple regression by least squares technique
*Growth Curves***:** Properties, methods of estimation and applications of parabolic, geometric, exponential, modified exponential, Gompertz and logistic growth curves.

UNIT - II

Probability: Addition and Multiplication Theorems, Conditional Probability, Bays Theorem, Chebychev's Inequality, Central limit theorem
*Probability Distribution***:** General Characteristics and Applications of Binomial, Poisson and Normal Distribution.

UNIT - III

*Sampling & Sampling Distribution***:** Concept of sampling distribution, Types & Techniques of Sampling, Statistic vs Parameter.
Estimation: Point Estimation and Interval Estimation, Properties of Point Estimates, Maximum Likelihood Estimates.
Statistical Hypothesis: Two -tailed and one-tailed tests, Types I and II Errors, Level of significance, Critical Region.

UNIT - IV

*Large and small samples***:** Tests of significance based on Normal, 't' 'F' and 'Z' distributions. Testing the significance of means, proportions, correlation and regression coefficients and their interpretation. Elementary Knowledge of Analysis of Variance (one-way and two -way classification) and Analysis of Covariance.
*Non-Parametric Tests***:** Chi-square test and sign test.
Quality Control: Elementary Knowledge of quality Control and its simple application.

RECOMMENDED READINGS

1.	Croxton, F.E. & Cowden, D.J. (latest edition)	:	Applied General Statistics, Prentice Hall London and Prentice Hall of India.
2.	Gupta , S.C. &Kapoor, V.K. (1996)	:	Fundamentals of Applied Statistics, Sultan Chand & Sons, New Delhi
3.	Gupta, S.P. (1980)	:	Statistical Methods, Sultan Chand & Sons, New Delhi
4.	Kapoor, J.N. & H.C.Saxena (1976)	:	Mathematical Statistics, S. Chand & Co .Pvt. Ltd., New Delhi
5.	Mills, F.C. (1955)	:	Statistical Methods, Henry Hold & Co, New York
6.	Speigal, M.R. (1961)	:	Theory and Problems of Statistics
7.	Wonnacott , T. & Wonnacott, R. (1977)	:	Introductory Statistics for Business and Economics, John Willey & Sons.
8.	Yule, G.U. & Kendall, M.G. (1950)	:	An Introduction to Theory of Statistics (for theory of attributes)

SUPPLEMENTARY READINGS

1.	Carmal, P.H. (latest edition)	:	Applied Statistics for Economics, Sir Issac Pitman and Sons Ltd., London
2.	Chou, Ya-Lun (1975)	:	Statistical Analysis, Hold, Rinehart and Winston, New York.
3.	Freund, J.E. (1964)	:	Mathematical Statistics, Prentice Hall
4.	Freund,J.E. & William, F.J. (1979)	:	Modern Business Statistics, Prentice Hall, Englewood
5.	Grant, R.L. (1996)	:	Statistical Quality Control, McGraw Hill Book
6.	Hoel, P.G. (2007)	:	Elementary Statistics, John Wiley & Sons.
7.	Mood, A.M. & Graybill, F.A.(1963)	:	Introduction to the Theory of Statistics McGraw Hill.
8.	Yamane, Taro (1970)	:	Statistics: An Introductory Analysis, Harper and Rew, New York.

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SOCIOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER –III

SOCIAL THOUGHT (Compulsory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

Note

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper intends to familiarize the students with the contributions of major thinkers in classical Sociology and their continuing relevance to its contemporary concerns. This paper offers the Honours students with an understanding of the development of Sociology as a discipline, with a focus upon classical thinkers.

Course Content :

UNIT-I

Auguste Comte : Laws of Three Stages, Hierarchy of Sciences, Positivism.

UNIT-II

Emile Durkheim : Social facts and division of labour, social solidarity; suicide and religion.

UNIT-III

Max Weber : Social action, class, status and power, types of authority; Protestant ethic and the spirit of capitalism.

UNIT-IV

Karl Marx : Historical materialism; dialectical materialism; class conflict, capitalism and theory of social change.

Suggested Readings:

1.	Coser, L.A. (1997)	:	*Masters of Sociological Thought*, New York : Harcourt Brace Jovonovich
2.	Collins, Randall (1977)	:	*Theoretical Sociology,* Jaipur : Rawat Publications.
3.	Raymond, Aron (1982)	:	*Main Currents in Sociological Thought, Vols. I & II*, Harmondsworth: Penguin Books.
4.	Timasheff, N.S.(1967)	:	*Sociological Theory : Its Nature and Growth*, New York : Random House.
5.	Zeitlin, I.M.(1987)	:	*Ideology and the Development of Sociological Theory*, New Jersey : Prentice Hall.
6	Stones Reb (ed) (2007)	:	Key Sociological Thinkers Palgrove, NY.: Macmillon
7	John A Hughes, W Sharrock Peter T. Martin(2004)	:	Understanding Classical Sociology Sage, Thousand Oak
8	Bert N Adams & R.A. Sydie (2002)	:	Classical Sociological Theory, Sage, New Delhi
9	Anthony Giddens & Philip W Sutton (2007)	:	Sociology: Introductory Readings Maldon: Polity Press

Further Readings :

1	Harlambos, M. (1984)	:	*Sociology, Themes and Perspectives*, Delhi : Oxford University Press.
2.	Lemert, C. (ed.) (2004)	:	*Social Theory – The Multicultural & Classical Readings,* Jaipur : Rawat Publications.
3.	Marx & Engles(1967)	:	*The Communist Manifesto*, Harmondsworth : Penguin Books.
4.	Morrison, Ken, Marx, Durkheim, Weber (1995)	:	*Formation of Modern Social Thought*, London : Sage,
5.	Sorokin, P. (1978)	:	*Contemporary Sociological Theories*, Ludhiana : Kalyani Publishers.

SOCIOLOGY

SEMESTER-IV

SOCIAL PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper exposes the honours students in Sociology to the related field - Social Psychology. The purpose of this paper is to introduce the basic concepts in Social Psychology, which have a bearing on the Social-Psychological understanding of social interaction, social groups, public opinion and leadership qualities. This course prepares the students to study social phenomena from social-psychological perspectives.

Course Content :

UNIT-I

Introduction – Nature, Scope, Application and Relationship of Social Psychology with Sociology.

UNIT-II

Perception, Motivation, Learning, Attitudes and their Measurement.

UNIT-III

Social Groups – Groups and Classification. Collective Behaviour : Crowd, Audience, Mob and their differences.

UNIT-IV

Propaganda and Public Opinion.
Leadership – Emergence, type and functions of leaders, leadership qualities.

Essential Readings:

1. Curtis, Jack H. (1960) : *Social Psychology*, New York : McGraw Hill.
2. Fraser, C. & Burchell, B. (2001) : *Introducing Social Psychology,* Cambridge : Polity Press.
3. Kuppuswamy, B. (1980 : *Social Psychology*, Bombay, Asia Pub. House.
4. Krech, D. & Cretchfield, Richards (1948) : *Theory & Problems of Social Psychology*, New York : McGraw Hill, 1948.
5. Lindgren, H. Clay (1974) : *An Introduction to Social Psychology,* 2nd ed., New Delhi : Wiley Eastern.
6. Linde Smith, Strauss, A.R., Denzin, A.L. & Norman, D.(1988) : *Social Psychology,* New Jersey : Prentice Hall.
7. Perry, J.B. & Pugh, M.D.(1978) : *Collective Behaviour : Response to Social Stress,* Minnisotta : West Publishing Co.

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PHILOSOPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER – III

Paper : CONTEMPORARY WESTERN PHILOSOPHY & CONTEMPORARY INDIAN THOUGHT AND CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives :

The aim of this paper is to acquaint students with the theories of different western contemporary philosophers and the problems of language, perception, meaning and truth, science and God; and to familiarize the students with Indian thought and culture according to Contemporary Indian thinkers.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

1. Idealism (Bradley).
2. Realism – Common Sense & Critical Realism (Moore, Russell & Putnam)

Unit-II

1. Language, Meaning & Truth.
2. Philosophy, Science & Religion.
3. Existentialism : Theistic and Atheistic Approaches.

Unit-III

1. Mahatma Gandhi & Tilak.
2. Ambedkar & M.N. Roy

Unit-IV

1. Sri Aurobindo
2. Swami Dayanand Saraswati, Swami Vivekananda.
3. Tagore

Essential Readings :

1. Inquiry into Meaning & Truth by Russell, Harper Collins, 1980.

2. Modern Indian Thought by V.S. Narvane, Asia, 1967.

3. Philosophy in the 20th Century by A.J. Ayer, London, Unwin, 1982.

Suggested Readings :

1. Contemporary Philosophy : Studies of Logical Positivism and Existentialism by F.C. Copleston, Continuum Intl. Pub. Group, 2003.

2. Religion of Man by Rabindranath Tagore., Macmillian Publishers, New York, 1931.

3. Srimad Bhagwad Gita Rahasya or Karma Yoga Sastra by B.G. Tilak, Manohar Book Pub., 2002, Delhi.

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PHILOSOPHY

SEMESTER – IV

Paper: STUDY OF A SPECIAL PHILOSOPHER

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives :

The aim of this paper is to make students study a philosopher indepth amongst the options offered.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain **4** units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

One out of the following Philosophers :

Option (i) : PLATO

Unit-I : Virtues : Wisdom, Courage, Temperance and Justice, Justice and Happiness : Is the just life happier than the unjust one

Unit-II : The meaning and purpose of education.

Unit-III : Nature of knowledge and its relation to sensation.

Unit-IV : Language and its relation to the world : Do names picture the objects named ?

OR

Option (ii) : ARISTOTLE

Unit-I : Form and Matter.

Unit-II : Aristotle's Ten Categories.

Unit-III : Four Causes and Change.

Unit-IV : Identity of Thought and Truth in the Active Reason.

OR

Option (iii) : IMMANUEL KANT

Unit-I : A –priori and A –posteriori judgements.

Unit-II : Nature of Space and Time.

Unit-III : Function of Categories and Significance of Antinomies.

Unit-IV : Refutation on the various proofs for the existence of God.

OR

Option (iv) : UPANISHADS

(Chandogya, Mandukya and Isa)

Unit-I : Mandukya's Treatment of 'Aum'. Symbol of Immanent and Transcendent aspects of Atman.

Unit-II : Philosophy of Being as instructed by Uddalaka Aruni in Chandogya Upanishad.

Unit-III : Nature of Atman in Isa Upanishad.

Unit-IV : Views of Upanishads on Brahman, Soul and World.

OR

Option (v) : SARTRE : Being and Nothingness

Unit-I : Being-in-itself and Being-for-itself.

Unit-II : Facticity.

Unit-III : Freedom, responsibility and badfaith.

Unit-IV : Being for Others, Existence of Others, the problem of embodiment.

OR

Option (vi) : NAGARJUNA

Unit-I : Concept of Sunya.

Unit-II : Sunyata and Pratiyasamutpada.

Unit-III : Logic and Reality.

Unit-IV : Dialectical System.

OR

Option (vii) : SAMKARA

Unit-I : Theory of Causation.

Unit-II : Prakriti as a Ultimate Cause.

Unit-III : Parinamavada Vs. Vivartavada.

Unit-IV : Refutation of Prakritikaranavada.

OR

Option (viii) : PATANJALI

Unit-I : Language and meaning.

Unit-II : Word-meaning relationship.

Unit-III : Purpose of grammar.

Unit-IV : Sabda as a Pramana.

Essential Readings :

1. Aristotle-Metaphysics Ed. & Tr. By John Washington and with an introduction by Sir David Ross (London : Dentsons, 1956).
2. Being & Nothingness by J.P. Sartre, Washington Square Press, 1993.
3. Cambridge Companion to Sartre ed. By Christina Howells, Cambridge University Press, 1992.
4. Cratylus in Plato's Dialogues, Plato, D.N. Sedley, Cambridge University Press, 2003, Cambridge, U.K..
5. Kant-Critique of Pure Reason : Norman Kemp Smith (Tr.) (London, Macmillan, 1952).
6. Nagarjuna-Madhyamika Karika, Stcherbatsky Theo : Conception of Buddhist Nirvana Delhi : Bharatiya Vidya Prakashan, 2003.
7. Patanjali : Mahabhasya, Chaps. I & II Gita Press, Gorakhpur, 1927
8. Plato-Republic, Theatetus, Cratylus In : B. Jowett (Tr.) Plato's Dialogues (New York : Random, 1937).
9. Republic, Hackett Publishing Company, Indian Polish, 1992, U.S.A.
10. Samkara, Brahmasutrabhasya : Tarka Pada (First four Sutras, Thibaut, Sacred Books of the East, Delhi, Motilal Banarasi Dass, 1956).
11. Theatetus, Plato, Robin H. Waterfield, Penguine Books, London, 2004.

Suggested Readings :

1. A Critical History of Greek Philosophy by W.T. Stace, Macmillan India Ltd., 1982.
2. PLATO by J.C.B. Gosling, Routledge & Kegan Paul, London, 1973.
3. Sartre, Jean Paul, Between Existentialism and Marxism (Translated by) John Mathews, Verso, New York, 2005.
4. Stephen Priest (Ed.), Jean Paul Sartre, Basic Writings, Routledge, London, 2007.
5. The Philosophy of Plato by Rupert C. Lodge, Routledge & Kegan Paul, London, 1956.
6. The Philosophy of Sankara's Advaita Vedanta, S.K. Chattopadhyaya, Sarop of Sons, 2000.

PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper : SOCIAL PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

I Social Psychology course emphasizes the relationship between society and individuals. It also enables the students in understanding group dynamics, role of attitudes and leadership behaviour in the society.

II Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus, and the students are required to attempt 9 short answer type questions in about 25 to 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be a **compulsory** question. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit –4 in all.

Unit I : *Introduction :* Nature of Social Psychology, Methods of Research in Social Psychology.

Unit II : *Attitudes :* Concepts, Formation of Attitudes, Theories of Attitude Change; Measurement of Attitudes.

Unit III : *Leadership :* Emergence, Functions of Leaders, Theories of Leadership (Trait Theories, Behavioural Theories, Fiedler's Contingency Model).

Unit IV : Applications of Social Psychology in Real life: Life Skills, Violence with special reference to Society; Anger management.

Books Recommended :

Essential Books :

1. Baron, R.A. and Byrne, D. (2003) : Social Psychology : Understanding Human Interaction, New Delhi : Prentice Hall of India.
2. Robbins, S.P. (1998) : Organizational Behaviour, New York : Prentice Hall of India.
3. Luthans, F. (1998) : Organizational Behaviour, New York : McGraw Hill.
4. Taylor, G.E. Peplau, L.A. and Sears, D.O. (2006) : Social Psychology, Delhi; Pearson.

Reference Books :

1. Lindgren, H.C. (1973) : Introduction of Social Psychology, New York : Wiley.

PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER IV

Paper : RECENT PERSPECTIVES OF PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

I This course aims at helping the students to appreciate the basic assumptions, principles and historical roots of modern scientific psychology. It will also help them to understand main theoretical perspective in psychology.

II Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus, and the students are required to attempt 9 short answer type questions in about 25 to 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be a c**ompulsory** question. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit –4 in all.

Unit- I : *Emotional Intelligence* : Concept and Theories (Goleman, Salovey and Meyer).

Unit-II : *Spirituality and Well Being* : Concept, Measurement and Relationship with Well Being.

Unit-III : *Stress and Coronary Heart Disease;* Concept, Symptoms, Role of Stress in Coronary Heart Disease.

Unit-IV : *Positive Emotions and Mental Health:* Forgiveness, Gratitude and Mental Health.

Books Recommended :

Essential Readings

1.	Crompton, W.C. (2005)	:	An Introduction to Positive Psychology. Singapore: Thomson.
2.	Snyder, C.R. and Lopez, S.J. (2005)	:	Handbook of Positive Psychology. New York: Oxford University Press.
3.	Brannon, L. and Feist, J. (2007)	:	Introduction to Health Psychology. New Delhi. Thomson – Wadsworth.
4.	Cohen, L.M., M.C. Chargue, D.E. and Colins, F.J.	:	The Health Psychology Handbook. New Delhi: Sage Publications.
5.	Mohan, J. (2003)	:	Psychosocial Correlates of Coronary Artery Disease: A Monograph. New Delhi: Friends Publishers.
6.	Mohan, J. and Sehgal , M. (2006)	:	Health Psychology. New Delhi: Abhijeet Publications.
7.	Pestonjee, D.M. (2006)	:	Stress and Coping: The Indian Experience. New Delhi: Sage Publications.

Reference Books:

1.	Carr, A.. (2004)	:	Positive Psychology; The Science of Happiness and Human Strengths. New York: Brunner – Routledge.
2.	Linley, P.A. and Joseph, S. (2004)	:	Positive Psychology in Practice. New York: John Wiley and Sons.
3.	Peterson, C. (2006)	:	Positive Psychology. New York: Oxford University Press.
4.	Friedman –Di, Mateo (1989)	:	Health Psychology. New York: Prentice Hall.
5.	Kaplan, R.M., Sallis, J.E. and Patterson, T.L. (1993)	:	Health and Human Behaviour. New York: McGraw Hill.
6.	Sarafino, P.E. (1998)	:	Health Psychology: Biopsychosocial Interactions. New Delhi: John Wiley and Sons
7.	Taylor, S.E. (2006)	:	Health Psychology. New Delhi: John Wiley and Sons.
8.	White, P. (2005)	:	Biopsychosocial Medicine: An Integrated Appraoch to Understanding Illness, New Delhi: Oxford University Press.

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GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

Paper-I : THE NATURE OF GEOGRAPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

1. To introduce the students to the philosophical and methodological foundations of the subject and its place in the world of knowledge.
2. To familiarise them with the major landmarks in development of geographic thought at different periods of time.

Course Content :

UNIT-I

- Nature and Development of Geography as a Discipline.
- Contribution of Eratosthenes, Ptolemy, Humboldt, Ritter and Darwin.

UNIT-II

Concepts in Geography:

(i) Spatial Distribution (ii) Man-Environment Relationship (iii) Areal Differentiation and (iv) Spatial Organisation.

UNIT-III

Approaches:
Empirical/Theoretical, Systematic / Regional, Behavioural.

UNIT-IV

Schools of Thought:
Determinism, Possibilism, Neo Determinism, Humanism, Radicalism.

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.
3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings :

1. Husain, Majid. : *Evolution of Geographical Thought,* Rawat, Jaipur, 2001.
2. Martin, G.J. : *All Possible Worlds – A History of Geographical Ideas*, Oxford University Press, U.K., 2005.

Further Readings :

1. Adhikari, Sudeepta : *Fundamentals of Geographic Thought,* Chaitanya, Allahabad, 2004.
2. Dikshit, R.D. : *Geographical Thought : A Contextual History of Ideas*, Prentice Hall, New Delhi, 2000.
3. Hartshorne, Richard : *Perspectives on the Nature of Geography,* Rand, McNally and Co., Chicago, 1959.
4. Minshull, R. : *The Changing Nature of Geography,* Hutchinson University Library, London, 1970.

Pedagogy :

- Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of the subject.
- The students may be encouraged to collect information on any theme amenable to geographical interpretation.

SEMESTER IV

Any one of the following optional courses :

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

OR

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The course is meant to provide an understanding of spatial and structural dimensions of population and the emerging issues. The course is further aimed at familiarising the students with global and regional level problems and also equip them for comprehending the Indian situation.

Course Content :

UNIT-I

Nature and scope of population geography, factors affecting distribution of population; present world pattern of population distribution. Density of population – various types of densities and their significance; broad spatial patterns of density of population in the world.

UNIT-II

Growth of population – Determinants of population growth; trends of population growth in developed and developing countries of the world.

Migration – Types, causes and consequences.

UNIT-III

Sex composition – Its determinants and world patterns.

Occupational structure – A comparative study of developed and developing countries.
Literacy–its determinants and world patterns.

UNIT-IV

Urbanization – Definition, process of urbanization; comparative study of urbanization in developed and developing countries.

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Special credit will be given to suitable use of maps.

4. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings :

Essential Readings :

1. Chandna, R.C. : *A Geography of Population*, Kalyani Publishers, Delhi, 1996.
2. Clarke, J.I. : *Population Geography,* Pergamon Press, Oxford, Latest Edition.

Further Readings :

1. Chandna, R.C. : *Jansankhya Bhoogol*, Kalyani Publishers, New Delhi, 1996.
2. Crook, N. : *Principles of Population and Development*, Pergamon, New York, 1997.
3. Jones, H.R. : *Population Geography*, Harper and Row, London, 1981.
4. Sundaram, K.V. & Nangia, S. (Eds.) : *Population Geography*, Heritage, New Delhi, 1986.
5. Trewartha, G.T. : *The Less Developed Realm – A Population Geography*, McGraw-Hill, New York, 1972.
6. Trewartha, G.T. : *The More Developed Realm : A Geography of its Population,* Pergamon Press, Oxford, 1979.

Pedagogy :

1. Use maps and atlases.
2. Students should be encouraged to read Population Clock.
3. Consult census publications.
4. Organised field work.
5. Organise discussions on population issues.

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

1. To understand the process of urbanization and origin, growth and classification of urban settlements with relevant theories and models.
2. To examine the changing economic base and structure of the contemporary cities.
3. To relate urbanisation process and the evolution of the urban system.

4. To examine the contemporary urban issues and suggest new urban planning and urban policy

Course Content :

UNIT-I

Definition, nature and scope of urban geography.

Definition of urban places.

Evolution of City through Historical Times : Ancient, medieval, modern.

UNIT-II

Site and situation of cities : Definition, importance, types.

Size and spacing of cities.

Ecological Processes : Centripetal and centrifugal forces, types of ecological processes.

UNIT-III

Internal structure of cities : Theories of internal structure and their evaluation, concentric zone theory, sector theory, multiple nuclei theory.

UNIT-IV

City – Region relations.

Umland of Cities : Definition, bases of demarcation, attributes.

Rural –Urban Fringe : Attributes and demarcation.

Note :

1. The compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each Unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings:

1. Carter, Harold : *The Study of Urban Geography*, Edward Arnold, London, Latest Edition.

2. Krishan, Gopal : *Nagar Bhugol,* Punjab State University Text Book Board, Chandigarh, 1974.

3. Mayer, H.M. and Kohn, L.F. (Eds.) : *Readings in Urban Geography*, University of Chicago Press, Chicago, 1964.

Further Readings :

1. Johnson, H.J. : *Urban Geography : An Introductory Analysis,* Pergamon Press, London, 1972.
2. Knox, Paul : *Urban Social Geography : An Introduction,* Longman, London, 1982.
3. Verma, LN : *Urban Geography :* Rawat Publications
4. Sidhartha K & Mukherjee S : *Cities Urbanization and Urban systems* Kisalaya Publications Pvt. Ltd., 2013.
5. Ramachandran, K : *Urbanisation and Urban Systems in India* Oxford University, Press, 1992.

Pedagogy :

- Awareness of data sources such as from Census of India, Town Planning organizations, and their applications to understand and evaluate the spatial patterns and the processes of urbanization should be highlighted in the class. This needs to be in form of selected case studies.

- Study of urban morphology and urban functions with special reference to selected towns need to be encouraged.

- Atlases and maps of NATMO and Census should be consulted and students should be given opportunity to participate in group discussions.

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PUBLIC ADMINISTRATION

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

Outline of Tests, Syllabi and Courses of Reading

SEMESTER -III

PAPER- I: ADMINISTRATIVE THOUGHT

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of select ancient, classical, neo-classical and modern administrative thinkers.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Kautilya, M.K.Gandhi and Woodrow Wilson

Unit-II

Frederick W. Taylor, Henri Fayol, Luther Gulick and L.B.Urwick

Unit-III

Max Weber, Elton Mayo and M.P.Follet

Unit-IV

Herbert A. Simon, Abraham Maslow and Fred W. Riggs

Essential Readings

1. Bertram, M. Gross : *The Managing of Organisations: The Administrative Struggle* (London: Mac Millan Publishers, 1964)

2. C.S. George : *History of Management Thought* (New Delhi: Prentice Hall, 1974)

3. Fred W. Riggs : *Administration in Developing Countries* (Boston Houghton, 1964)

4. G.S.Sudha : *Management of History Thinkers*(Jaipur :R.B.S.A. Publishers)2004

5. Herbert A. Simon : *Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation* – (New York: Macmillan, 3rd ed., 1976)

6. Prasad and Prasad : *Administrative Thinkers* (New Delhi: Sterling Publishers, (Reprint - 2007)

7. R.K. Sapru : *Theories of Administration* (New Delhi: S. Chand, 1996)

8. S.R. Maheshwari : *Administrative Thinkers* (New Delhi: MacMillan, 2003)

9. Rakesh Hooja, Ramesh K. Arora : *Administrative Theories* (Jaipur: Rawat Publicaion, 2007)

10. Dr. Surender Katariya Publishing : *Administrative Thinkers* (New Delhi: National House Jaipur) 2011

Further Reading

1. Chester Barnard : *The Functions of the Executive* (London: Oxford University Press, 1974)

2. D.S. Pugh (ed.) : *Organisation Theory* (Harmondsworth : Penguin Books, 2nd ed., 1984)

3. David Silverman : *The Theory of Organisation* (London: Heinemann, 1970)

4. Jack Rabin and Others : *Handbook of Public Administration, 3rd ed.* (New York: Marcel Dekker, 2007)

PUBLIC ADMINISTRATION
SEMESTER-IV

PAPER- II: The candidates have to select one out of the following three options:

Option (i) : Agricultural Administration in India
Option (ii) : Industrial Administration in India
Option (iii) : Police Administration
Option (iv) : Public Policy and Analysis

PAPER-II – Option (i): AGRICULTURAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth knowledge about the role of agriculture in the economic development of the country, role of technology in agricultural development, marketing of agricultural produce. It would also give understanding about the agricultural policies of the government and introduce the student to certain related issues like agricultural finance, agricultural education, research, and extension.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Role of Agriculture in Economic Development
Problems of Agricultural Development
Agriculture Policy

Unit-II

Agriculture Development under Five-Year Plans
Centre-State Relations in Agriculture
Agriculture Administration at the Central and State Levels

Unit-III

New Technology for the Development of Agriculture
Marketing of Agriculture Produce
Agriculture Finance and Rural Indebtedness

Unit-IV

Role of NABARD in Agricultural Development
Agricultural Education and Research
World Trade Organisation and Agriculture

Essential Readings

1.	C.H. Hanumantha Rao	:	*Technological Change and Distribution of Gains in Indian Agriculture* (Delhi: Macmillan, 1975)
2.	R.N. Ghosh	:	*Agriculture in Economic Development with Special Reference to Punjab* (New Delhi: Vikas, 1977)
3.	P. Chaudhary	:	*Readings in Indian Agricultural Development* (London: George Allen & Unwin, 1972)
4.	V.S. Mahajan	:	*Agriculture and Rural Economy in India* (New Delhi: Deep & Deep Publications, 1990)

Further Readings

1.	N.C.A.E.R.	:	*Credit Recruitment for Agriculture* (New Delhi: 1974)
2.	Government of India,	:	*Reports* (New Delhi: Manager of Publications, 1976) National Commission on Agriculture
3.	Government of India Ministry of Finance, Economic Division	:	*Economy Survey* (Recent Years)
4.	Government of India, Planning Commission	:	*11th Five Year Plan 2007-2012* *12th Plan Approach Paper*

PAPER-II – Option (ii): INDUSTRIAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper: The objective of the paper is to give the student an insight and rationale into the concept of Industrialization, role of Public Enterprises in industrial development and the concepts of privatization and disinvestment. It would also give an understanding about the industrial policies of the government and introduce the student to certain related issues like industrial pollution, industrial sickness, and industrial dispersal.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Industrialization – Meaning, Objectives and Rationale
Role of Industry in Economic Development
Problems of Industrialization in India

UNIT-II

Industrial Policy Resolution of 1948 and 1956
New Industrial Policy of 1991
Industrial Finance – Sources, Problems and Remedies

UNIT-III

Role of Public Enterprises in Industrial Development of India
Privatization – Meaning, Methods, Merits and Demerits
Disinvestment – Meaning, Methods, Merits and Demerits

UNIT-IV

Industrial Pollution – Meaning, Types and its Impact on Environment
Industrial Sickness – Meaning, Extent and Magnitude, Causes and Remedies
Industrial Dispersal – Meaning and Policy Measures

Essential Readings

1. A.N. Aggarwal : *Indian Economy* (New Delhi : Vikas Publishing House, 2001)
2. S.C. Kuchhal : *Industrial Economy of India* (Allahabad : Chaitnaya Publishing House, 1983)
3. S.S. Marathe : *Regulation and Development: The Indian Policy Experience of Controls over Industry* (New Delhi: Sage Publications, 1986)
4. Rudar Dutt : *Indian Economy* (New Delhi: S.Chand, 2009)

Further Readings

1.	K.V. Sivayya, V.B.M. Dass	:	*Indian Industrial Economy* (New Delhi: S.Chand & Co., 2004)
2.	Govt. of India, Planning Commission	:	*10th Five Year Plan 2002-2007* (New Delhi: Planning Commission, 2002)
3.	P.K. Dhar	:	*Indian Economy – Its Growing Dimensions* (New Delhi: Kalyani Publishers, 2007)
4.	Government of India, Ministry of Finance, Economic Division	:	*Economic Survey* (Recent Years)

PAPER-II – Option (iii): Police Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the evolution of police system in India, need and importance of police in society, personnel aspects of police administration like recruitment, training, promotion, service conditions etc. It would also give an understanding about the expectations of the public from police and introduce the student to certain related issues like community policing, e-governance in police, attitudinal change in police services etc.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and significance of Police Administration
Evolution of Police Administration in India
Police Reforms in India

Unit-II

Organization and functions of Union Ministry of Home Affairs
Police Administration at State level
Police Administration at District level

Unit-III

Police Personnel Administration in India: Recruitment and Training of Police Personnel at Centre (IPS) and State level (SPS)
Service conditions and Discipline in Police Services

Unit-IV

The Concept and Need of Community Policing.
Concept & Importance of E-Governance in Police.
Attitudinal Change in Police: Concept, Significance and Methods.

Essential Readings

1.	Anandswarup Gupta	:	*The Police in British India 1861-1947, Bureau of Police Research and Development* (New Delhi, 2007)
2.	J.C. Chaturvedi,	:	*Police Administration and Investigation of Crime* (Isha Books, Delhi, 2006)
3.	O. Glenn Stahl	:	*Public Personnel Administration* (Oxford & IBH Publishing Co., New Delhi, 1975)
4.	P. Muthuswamy	:	*Swamy's Manual on Disciplinary Proceedings* (Swamy Publishers (P) Ltd., Chennai, 1989)
5.	S.K. Ghosh & K.F.M. Rustamji	:	*Encyclopaedia of Police in India*, Vol. I, II III, 1993, 1994 and 1997
6.	Vdackumchery , James	:	*National Police Commission: Issues For Rethinking*, APH Publishing Corporation, New Delhi, 1998

PAPER-II-Option (iv) : Public Policy and Analysis

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to provide students an understanding of the basic concepts of public policy and the environment in which it operates .It attempts to help students understand and gain insights into the variousstages in policy process with special reference to the social, political and administrative environment prevailing in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Public Policy - Meaning, Significance and Types
Distinction between Policy, Planning , Decision making and Goals;Policy Cycle
Policy Analysis- Meaning, Significance; Approaches to Policy Analysis

Unit-II

Public Policy Formulation:Models of Policy-Making:Incremental,Rational, Institutional
Role of Legislature,Executive, Judiciary, Political Parties in policy formulation

Unit-III

Public Policy Implementation :
Role of Executive, Legislature,Bureaucracy and Judiciary in Policy Implementation
Major problems in policy implementation

Unit IV

Policy Monitoring anf Evaluation ;Criteria for Evaluation;
Problems in Policy Evaluation

Essential Readings

1. Birkland,Thomas A. — An introduction to the Policy Process: Theories , Concepts. And Models of Public Policy Making(M.E.Sharpe , 2005)

2. Dye , Thomas — Understanding Public Policy(New Delhi:Pearson Education Singapore(P)Ltd. .2002)

3. Henry Nicholas — Public Administration and Public Affairs,(New Jersey:Prentice Hall,Twelfth Edition, 2015)

4. Mathur ,Kuldeep — Public Policy and Politics in India:How Institutions Matter?(Oxford, 2013)

5. Manon,Vineetha — Public Policy and Administration,Wisdom Press ,New Delhi, 2014

6. Sapru, R.K. — Public Policy:Art and Craft of Policy Analysis(New Delhi:Prentice Hall of India.learning 2nd Edition)

Furthur Readings

1. Anderson, James E — Public Policy Making (New York:Houghton MifflinCo.,Sixth ed. 2005)

2. Ayyar, Vaidyananthan R.V. — Public Policy Making in India(N.Delhi; Pearson, 2009)

3. Fischer, Frank;Gerald J. Miller Mara S.Sidney (Eds.) — Handbook of public policy and analysis theory,politics and methods,Boca Raton,Fla,:CRC/Taylor& Francis,c2007

4. Nagel . Stuart,S — Public Policy:Goals, Means and Methods(New York:St. Martin Press.1991)

5. Rabin J.,Whildreth& G.Miller — Handbook of Public Administration (Florida:Taylor & Francis Group,Third Edition ,2007)

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND (SEMESTER SYSTEM) YEAR EXAMINATION, 2016-17

SEMESTER-III

Note : **The students shall have to opt for one paper for Semester III examination out of the following two papers :**

OUTLINES OF TEST

Paper I : Social ideas and social life from the earliest times to 1000 A.D.

Paper-II : Economic ideas & economic life from the earliest times to 1000 A.D.

Paper-I : SOCIAL IDEAS AND SOCIAL LIFE FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objective :

1. The primary objective of this paper is to acquaint the students with the origin and development of social institutions and ideas so peculiar to Indian society. It will also made a survey of the social life of the people in ancient India.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology and contents of the sources mentioned above. The changing pattern in social life should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I

1. Sources: Vedic Literature, Epics, *Manu Smriti* and *Kamsutra* of Vatsayayana.
2. Four Purusharthas; Sixteen Samsakaras.

UNIT-II

3. Origin and development of caste system.
4. Slavery in ancient India.
5. Stages of life—four ashramas.

Unit-III

6. Family life, law of inheritance.
7. Development of education in Ancient India.
8. Dress, ornaments, foods and drinks.

Unit-IV

9. Position of women in ancient India.
10. Institution of marriage.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal Banarsidass, Delhi, 1991.
2. Altekar, A.S. : *Education in Ancient India,* rpt. Gyan Publishing House, New Delhi, 2009.
3. Banerji, S.C. : *Society in Ancient India,* D.K. Print World, New Delhi, 1997.
4. Basham, A.L. ed. : *Cultural History of India,* Oxford University Press, New, Delhi, 1957.
5. Chanana, D.R. : *Slavery in Ancient India, as depicted in Pali and Sanskrit Texts,* New Age Printing Press, Delhi, 1960.
6. Ghurye, G.S. : *Caste and Class in India,* Popular Prakashan, Bombay, 1950.
7. Majumdar, B.P. : *Social and Economic History of North India,* Budh Prakashan, Calcutta, 1960.
8. Mookerjee, R.K. : *Ancient Indian Education,* 3rd ed. Cosmo Publiscations, London, 1960.
9. Sharma, B.N. : *Social Life in Northern India,* Munshiram Manoharlal, Delhi, 1966.

Paper-II : ECONOMIC IDEAS & ECONOMIC LIFE FROM THE EARLIEST TIMES TO 1000 A. D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The main objective of this paper is to familiarize the students with economic ideas as contained in the secular and non-secular literature of our country. It will also make a survey of the economic life in ancient India to help the students to understand economic problems of the people.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology, authorship and contents of the sources mentioned above. The changing condition of agriculture, industries, and trade and commerce should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

1. Sources : Vedic literature, Epics, *Arthasastra* of Kautilya and *Nitisara* of Kamandaka.

2. Agriculture in ancient India, ownership of land.

UNIT-II:

3. Taxation.

4. Industries and industrial products in ancient India.

UNIT-III:

5. Types of labour and wages.

6. Introduction and development of coinage.

Unit-IV

7. Trade and Commerce in ancient India.
8. Guild System.
9. Trade routes and transport.

Essential Readings :

1. Chakraborty, S.N. : *A Study of Ancient Indian Numismatics,* Bhartiya Publishing House, Varanasi, 1963.
2. Gopal, Lallanji : *Economic Life in Northern India* (700 to 1200 A.D.) Motilal Banarsidass, Delhi, 1965.
3. Maity, S.K. : *Economic Life in North India in the Gupta Period,* Motilal Banarsidass, Calcutta, 1970.
4. Majumdar, B.P. : *Social and Economic History of North India,* Firma KLM, Calcutta, 1960.
5. Majumdar, R.C. : *Corporate Life in Ancient India,* Firma KLM, Calcutta, 1922.
6 Moti Chandra : *Sarthavaha,* Shakti Malik Abhinav Publishers, Patna, 1953.
7. Moti Chandra : *Trade and Trade Routes in Ancient India,* Shakti Malik Abhinav Publishers, Delhi, 1977.
8. Saletore, R.N. : *Early Indian Economic History,* N.M. Tripathi Publishers, Bombay, 1973.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER-IV

Note : **The students shall have to opt for one paper for Semester - IV examination out of the following two papers :**

OUTLINES OF TEST

Paper-III : Political ideas and institutions from the earliest times to 1000 A.D.

Paper-IV : History of Art and Architecture (Earliest times to C. 1000 A.D.)

Paper-III : POLITICAL IDEAS AND INSTITUTIONS FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The emphasis of this paper will be on the development of political ideas as enshrined in our secular and non-secular literature. It will also make a study of the administrative systems during various periods focusing on the ideologies of the kings.

2. **Pedagogy of the Course Work :**
The students are expected to know the broad rules laid down by the lawgivers and have knowledge of the administrative organization in different periods. They should be familiarized with the changing patterns of administrative set up at different times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

1. Sources *:* Vedic literature, Epics, the *Arthasastra* of Kautilya, *Smritis* of Manu and Yajnavalkya.

2. Political Institutions *:* State, King, Council of Ministers and Foreign Relations.

UNIT-II:

3. Administrative organization during the Vedic period.

4. Administrative Organisation under the Mauryas.

UNIT-III:

5. Administrative Organisation under the Kushanas.
6. Administrative Organisation under the Guptas.

UNIT-IV:

7. Administrative Organisation under the Pushyabhutis.
8. Administrative Organisation under the Cholas.

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Essential Readings :

1. Altekar, A.S. : *State and Government in Ancient India,* Motilal Banarsidass, Delhi, 1958.
2. Devhuti, D. : *Harsha, A Political Study,* Oxford University Press, New Delhi, 2001.
3. Dikshitar, V.R.R. : *Hindu Administrative Institutions,* University of Madras, Madras, 1929.
4. Ghoshal, U.N. : *A History of Indian Political Ideas,* Oxford University Press. London, 1959.
5. Goyal, S.R. : *History of Imperial Guptas,* Central Book Depot, Allahabad, 1968.
6. Jayaswal, K.P. : *Hindu Polity,* Chowkhamba Sanskrit Pratisthan, Banglore, 1967, 2005.
7. Mukherjee, B.N. : *Rise and Fall of the Kushanas,* Firma KLM, Calcutta, 1988.
8. Prasad, Beni : *State in Ancient India,* Central Book Depot, Allahabad, 1974.
9. Satya Shrava : *The Sakas in India,* Motilal Banarsidass, New Delhi, 1981.
10. Sharma, R.S. : *Some Aspects of Political Ideas and Institutions in Ancient India,* Motilal Banarsidass, Delhi, 2001.
11. Shastri K.A.N. : *The Cholas, Madras, 1975; Chola Vansha,* New Delhi, 1979 (In Hindi).
12. Thapar, Romila : *The Mauryas Revisited,* K.P. Bagchi and Company, Calcutta, 1988.
13. Thapar, Romila : *Ashoka and the Decline of the Mauryas,* 2nd ed. Oxford University Press, New Delhi, 1977.

Paper VII: HISTORY OF ART AND ARCHITECTURE (EARLIEST TIMES TO C. 1000 A.D.)

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Total	:	3 Hours

Objectives :

The main objective of the paper is to acquaint the students with the architecture of ancient Buddhist and Hindu monuments, stone and bronze sculptures, that form an integral part of ancient history and heritage, for comprehensive understanding of the subject.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I :

(a) Harappan architecture

(b) Harappan sculptures.

UNIT-II :

(a) Stupa Architecture – Sanchi and Amaravati Stupas
(b) Rock-cut Architecture– Lomas Rishi, Ajanta and Ellora Caves

UNIT-III:

Temple Architecture :

(a) Gupta temples.
(b) *Nagara style temples* – Chandella.
(c) *Dravida style temples* – Chola.
(d) *Vesara style temples* – Chalukya.

UNIT-IV:

Sculpture

(a) Early Period – Mauryan, Sunga and Kushanas.

(b) Gupta and Early Medieval – Gupta, Pala and Chola.

Pedagogy of the Course Work :

Besides giving an outline of the history and salient features of the topics enumerated in the syllabus, students should be thoroughly acquainted with important monuments and images in stone and bronze of each period. Important schools of art should also be taught. Constant help of visual aids like slides and transparencies should form integral part of teaching. Field work trips to museums and sites of monuments should be undertaken.

Essential Readings :

1. Agrawala, P.K. : *Gupta Temple Architecture,* Prithvi Prakashan, Varanasi, 1968.
2. Agrawala, V.S. : *Gupta Art,* U.P Historical Society, Lucknow, 1948.
3. Agrawala, V. S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* D.B. Taraporevala Sons, Bombay, 1971.
5. Dehejia, Vidya : *Early Buddhist Rock Temples : A Chronological Study,*Thomson and Hudson Ltd., London, 1972.
6. Gangoly, O.C. : *South Indian Bronzes,* Nababharat Publishers, Calcutta, 1978.
7. Harle, J.C. : *Gupta Sculpture,* Munshiram Manoharlal, New Delhi, 1996.
8. Huntington, S. : *The Art of Ancient India (Buddhist, Hindu, Jain),* Weather Hill, Tokyo, 1985.
9. Kramrisch, Stella : *Indian Scuplture, 2 Vols.,* Motilal Banarasidas, Delhi, 1981.
10. Krishna Deva : *Temples of North India,* National Book Trust India, New Delhi, 2000
11. Ray, Niharranjan : *Maurya and Sunga Art,* Indian Studies,Calcutta, 1965.
12. Rowland, R. : *The Art and Architecture of India,* Penguin Books, London, 1953.
13. Saraswati, S.K. : *Survey of Indian Sculpture, 2nd ed.,* Munshiram Manoharlal, New Delhi, 1975.
14. Srinivasan, K.R. : *Temples of South India,* National Book Trust, India,New Delhi, 1998.

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POLICE ADMINISTRATION

B.A. (HONOURS) 3rd Semester EXAMINATION, 2016-17

SEMESTER-III

Semester III : Police Administration and Crime

(A) Course Objectives:

The objective of this course is to introduce to the students, the Concept, Characteristics, and Causes of Crime. The endeavour also is to discuss the special forms of crime. Towards the end the students will be imparted knowledge relating to the role of Police in controlling crime.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit – I

Crime: Concept, Characteristics and Classification.
Causative factors of Crime.
Crime Statistics in India: Sources and Problems.

Unit- II

Organized Crime: Meaning, Characteristics and Types.
White Collar Crime: Meaning, Elements and Types.
Cyber Crime: Meaning, Causes and Types.

Unit- III

Crime Against Women: Concept, Incidence and Remedies.
Juvenile Delinquency: Meaning, Causes and Treatment.
Youth and Crime: Meaning, Characteristics and Trends.

Unit- IV

Drug related Crimes: Concept, Extent and Remedial Measures.
Custodial Crime: Concept, Extent and Remedial Measures.
Role of Police in Crime Control.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central law Publication, Allahabad, 2008.
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Siddique, Ahmad : Criminology- Problems and Perspectives, Eastern Books Co., Lucknow, 1993
4. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Gandhirajan, C. K : Organized Crime, A.P.H. Publishing Corp., New Delhi, 2004
2. Venugopal, Rao : Facets of Crime in India, Allied Publishers Private Limited, Bombay, 1967
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003

POLICE ADMINISTRATION

B.A. (HONOURS) 4th Semester EXAMINATION, 2016-17

SEMESTER-IV

Paper : Correctional Administration

(A) Course Objectives:

The Prime objective of this course is to familiarize the students with the meaning, nature , scope and principle of correctional administration. In addition the efforts are made to discuss with the students, Prison administration along with the alternative non-institutional methods of Probation and Parole elaborately.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72marks)

Unit- I

Meaning, Nature and Scope of Correctional Administration.
Punishment: Concept and Theories.
Forms of Punishment.

Unit- II

Probation: Concept and Development.
Parole: Concept and Development.
Prison: Concept and Origin.

Unit- III

Statutory Prisons in India.
Classification of Prisons in India.
Problems of Prisons in India.

Unit-IV

Prison Reforms in India.
Open Prisons: Concept, Origin and Advantages.
Prisons and Human Rights.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central Law Publication, Allahabad, 2008
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003
4. Davies, Martin : Prisoners of Society: Attitudes and After-Care.
5. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A. 2003
2. Hassine, Victor : Life without Parole: Living in Prison Today, Roxbury Publishing Company, California, 2004.
3. Carrbine, Eamonn. et.al. : Criminology: A Sociological Introduction, Routledge, London, 2005.
4. Pollock, Joyceiyn M. : Prisons and Prison Life : Costs and Consequences, Roxbury Publishing Company, California,2004.
5. Pachauri, S.K : Prisoners and Human Rights, A.P.H. Publishing Corporation, New Delhi, 1999.
6. Paluch (Jr.), James A. : A Life for a Life-Life Imprisonment: America's Other Death Penalty, Edited by Bernard, Thomas J. & Johnson, Robert, Roxbury Publishing Company, California, 2004.
7. Sharma, S.D. : Creative Activities and the Law: Human Rights Approach, Deep & Deep Publications, 2007.

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MUSIC (VOCAL AND INSTRUMENTAL)

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

General Instructions

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

3) The candidate can take vocal music along with instrumental music.

4) The candidate can also take instrumental music with tabla.

5) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.

6) **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation and question no. 8 will be based on objective type questions.**
Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.

7) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.

8) There should not be more than eight students in a batch for practical examination.

9) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**		:	45 marks
Paper-B: PRACTICAL (20 minutes duration)		:	45 marks
(i)	Viva	:	35 marks
(ii)	Harmonium	:	05 marks
(iii)	Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05) :		10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

UNIT-I

1. Concept and characteristics of Raga Dhyan.
2. Role of computer to promote Indian Classical Music
3. Brief biographical sketches and contributions towards music of the following Musicians:
   (a) Ustad Mushtaq Ali Khan.
   (b) Ustad Alladiya Khan.
4. Description and Comparative study of Detailed and Non-detailed Ragas
   (a) Detailed Ragas :
   Hamir, Darbari
   (b) Non-detailed Ragas :
   Adana, Kamod

UNIT-II

1. Detailed Study of Ghranas of the following:
   (a) Khayal Gayan
   (b) Sitar Vadan.
2. A study of the following:-
   Thumri, Masitkhani, Razakhani Gat, Trivat
3. Brief Knowledge of the following:-
   Nada, Swara, Shruti, Nyas, Vadi, Laya & Tala,
4. A study of Jati Lakshan

UNIT-III

1. Description & Notation of Detailed & Non-detailed Ragas and Taalas

A) i) Notation of Khayal/Gat
   ii) Notation of Taal prescribed in the syllabus

B) Objective type questions

Paper–II: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(b) One Dhrupad with different Layakaries in any detailed ragas 5 marks

OR

One Vilambit Gat in *Chautala* with different layakaries 5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Darbari.
(ii) Hamir.

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Adana.
(ii) Kamod.

(c) Talas : Dadra, Kaharva, Jhaptal, Ektal and Teental on Tabla.

(i) One slow Khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 5 marks

(iii) Ability to recite Dhamar, Adachautal and Deepchandi talas in single. 2.5 marks.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-IV

General Instructions

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

3) The candidate can take vocal music along with instrumental music.

4) The candidate can also take instrumental music with tabla.

5) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.

6) **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation and question no. 8 will be based on objective type questions.**
Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.

7) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.

8) There should not be more than eight students in a batch for practical examination.

9) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) : 45 marks
(Duration 45 minutes 06 practical+ 02 Theory periods per week)

Paper-B: PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	35 marks
(ii)	Harmonium	:	05 marks
(iii)	Tabla	:	05 marks

Internal Assessment (Theory + Practical) (05 +05) : 10 marks

Total : 100 marks

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

UNIT-I

1. Detailed study of Gram
2. Detailed study of Moorchhna
3. Brief biographical sketches and contributions towards music of the following Musicians :
   (a) Ustad Imdad Khan.
   (b) Ustad Abdul Karim Khan.
4. Role of Electronic Media in Indian Classical Music

UNIT-II

1. Music and Fine Arts
2. A study of the following:-
   Sitarkhani Gat , Dhun, Chaturang, Dadra
3. Brief knowledge of the following:-
   Vadi, Samvadi, Zamzama, Jod Alap. Gat, Avirbhav & Tirobhav.
4. A study of present raga Lakshan

UNIT-III

1. Description & Notation of Detailed & Non-detailed Ragas and Taalas

A) i) Notation of Khayal /Gat
   ii) Notation of Taal prescribed in the syllabus

B) Objective type questions

Paper–B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) One Dhrupad with different Layakaries in any detailed ragas 5 marks

OR

One Vilambit Gat in *Chautala* with different layakaries 5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Kedar
(iii) Alhaiya Bilawal

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Hamir
(iii) Bilawal

(c) Talas : Chartal, Sultal and Tilwada on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

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HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Second year has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2016-17

General Instructions for teachers, students and paper setters:

1. There will be two papers in each of the Semesters III-IV. Each of the papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The teaching hours for each paper are prescribed to be 30 hours and Physics Practical and Computational Physics are prescribed to be 60 hours.

2. The number of lectures per week will be three for each theory paper and six for practicals .

3. The examination time for each theory paper as well as Physics practical paper will be of three hours.The Computational Physics paper will consist of two parts(a)written examination of one hour duration.and (b)Practical examination of two hours duration . Both the parts carry equal marks.

4. Each theory paper will consist of **seven** questions comprising of three sections .First two sections will comprise of **three** questions from each of Units I and II of syllabus,and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus.The question paper will be set for 44 marks-**All the questions in first and second sections will carry 9(nine) marks each and the compulsory question will carry 8 marks**. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question.**After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Paper I : Physics of Vacuum and Low Temperature

Unit I

Basics of Vacuum Techniques: Introduction, classification of vacuum ranges, throughput, Pump speed, speed of exhaust, conductance, ultimate pressure, viscous flow, molecular flow.

Production of Low Pressures: Pump types, Gaede oil-sealed rotating vane pump, Diffusion pump, sputter ion pumps, Gettering, types of getters, Cryogenic pumps.

Measurement of Low Pressures: Types of gauges, Mcleod gauge, Pirani gauge, Measurement of ultrahigh vacuum, penning gauge.

Methodology of Vacuum systems: Vacuum system, Materials for vacuum system, cleaning and sealing of vacuum system, Leak detection and its location.

(Book 1 and Book 2)

Unit II

Production and Measurement of Low Temperatures: Various methods for refrigeration, Coefficient of performance, Liquefaction of gases, Joule-Thomson effect, Principle of regenerative cooling, liquefaction of H_2 and He, Liquefaction of nitrogen, Solidification of He. Liquid He II, Thermodynamics of λ-transition, Adiabatic demagnetization, Linde's method, Temperatures below 0.01K, Low temperature thermometry and techniques, Use of liquid air and other liquefied gases.

(Book 3 and Book 4)

Recommended Books:

1. Vacuum Technology: A. Roth (North Holland, 1990).
2. Vacuum Technology: A. Guthrie (John Wiley, 1963).
3. A Treatise on Heat: M.N. Saha and B.N. Srivastava (Indian Press, 1965).
4. Low Temperature Physics: C. Dewitt, B. Dreyfus and P.G. de Gennes (Gordon & Breach, 1962).

Paper II : Electronics

Unit I

Analog Electronics

Circuit Theory: Voltage sources, Current sources, Capacitors, Inductors, Linear circuits, KCL, KVL, Mesh and Node analysis, Level shifting, Thevenin and Norton equivalent circuits, Power and energy relationships in case of R, L and C, Maximum Power Transfer Theorem, Series and parallel connection of mutually coupled coil, Equivalent circuit of transformer. (Book 1)

Transducers : Electrical transducers, Resistive transducers – Resistive position transducer, Strain gauge, Resistance thermometer, Platinum thermometer, Thermistor. Inductive transducers – Differential output transducers, LVDT, Pressure inductive transducer. Capacitive transducers, Piezo electric load cell, Thermocouple transducers.

(Book 2)

Unit II

Digital Electronics

Number systems: Binary, Hexadecimal and octal number systems, Interconversions and Binary arithmetic, 2's complement arithmetic, Binary fractions and negative binary numbers, floating point representations, Codes, Error detecting and correcting codes.

Digital Principles and Logic: Digital signals, Positive and Negative Logic, Basic digital circuits, Basic Gates – NOT, OR, AND; Universal Logic gates: NOR, NAND; Exclusive-OR gate.

Combinational Logic Circuits – Boolean Laws and De Morgan's theorems, Sum of Product method, Product of sums method, Karnaugh map (up to 4 variables).

Sequential circuits: Flip-flops – RS, JK, D, clocked, race-around conditions in JK flip-flop, master slave JK, Shift registers: serial in serial out, serial in parallel out, parallel in parallel out (only up to 4 bits)

(Book 3 and Book 4)

Recommended Books:

1. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).
2. Electronic Instrumentation, H.S. Kalsi (Tata McGraw-Hill, 2004).
3. Modern Digital Electronics: R.P. Jain (Tata McGraw Hill, 2010).
4. Digital Principles and Applications : Malvino and Leach (Tata McGraw Hill, 2010).

PHYSICS

SEMESTER-IV

Paper III: Statistics and Numerical Techniques

Unit I

Statistics and Probability: Measures of central tendency, Arithmetic mean, median, mode, Geometric mean, Harmonic mean, Quartiles, deciles and percentiles.
Measures of dispersion : Standard deviation, mean deviation, semi-interquartile range, coefficient of variation, Moments, Skewness and Kurtosis.
Linear Correlation and Regression for Two Variables only.
Conditional probability, probability distributions, Mathematical expectation, Probability and Combinatorial analysis

(Book 1)

Counting Statistics and Error Prediction: Characterization of Data, Binomial, Normal and Poisson distributions and their applications, Estimation of the Precision of a Single Measurement, Measure of consistency of observed fluctuations with expected Statistical fluctuation, chi square, Error Propagation, Distribution of time intervals between successive random events.

(Book 2)

Unit II

Numerical Techniques:
Solution of Algebraic and Transcendental Equations: Bisection Method, Secant Method, Newton-Raphson Method.
Interpolation : Finite difference interpolation with equal intervals, Newton' Forward and Backward Interpolation Formulae, Interpolation with unequally spaced points, Lagrange's interpolation formula, Extrapolation.
Numerical integration by Trapezoidal, Weddle's and Simpson's rules, Romberg integration.
Numerical differentiation by Newtons's forward and backward difference formulae, divided difference formula.
Numerical solution of differential equations, Euler's and Runge-Kutta Method.
Method of least-squares fitting of straight line, parabola and exponential curves, least squares fitting for any non-linear function by iterative method.

(Book 3 and Book 4)

Recommended Books:

1. Schaum's Outlines Statistics: Murry R Spiegel and Larry J Stephens (Tata McGraw Hill Education Pvt. Ltd., 2011)
2. Radiation Detection and Measurement: G.F. Knoll (Wiley, New York) (2000).
3. Numerical Mathematical Analysis, J.B. Scarborough (Oxford Book Co. Kolkata) (1961).
4. Introductory *Methods* of *Numerical* Analysis, S.S. *Sastry*. PHI Learning Pvt. Ltd. (2005).
5. A First Course in Computational Physics: P.L. Devries (Wiley, New York) (1994).

Paper IV : Mathematical Physics

Unit I

Differential Equations : Methods of separation of variables; separation of Helmholtz equation in Cartesian, spherical and cylindrical coordinates. Laplace equation in various coordinate systems, Ordinary and singular points; Examples of partial differential equations in physics, Heat Flow in one and two Dimensions.

Series solution of differential equations - Power series solution about ordinary point and regular singular point.

Special Functions in Physics : Dirac delta function, properties of delta function. Gamma function, factorial notation and applications. Beta function.

(Book 1 and Book 2)

Unit II

Special polynomials in Physics :

Bessel's differential equation, Bessel functions of first kind, generating function, recurrence formulae, plots, zeros of Bessel functions and orthogonality.

Legendre's equation, Legendre's polynomials, plots, generating functions, recurrence relations, orthogonality, Series expansion of a function in terms of a complete set of Legendre functions, Rodrigues formula.

(Book 1 and Book 2)

Laplace transforms, Applications of Laplace transforms to derivatives and integrals, s-domain interpretation of passive circuit elements R, L and C; Analysis of simple circuits in s-domain, Transfer function, poles and zeros, Stability of circuit.

Recommended Books:

1. Mathematical Physics: P.K. Chatopadhyay (Wiley Eastern, New Delhi, 2005)
2. Mathematical methods for Physicists : G. Arfken and H.J. Weber (Academic Press, SanDiego, sixth edition, 2005)
3. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).

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CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2016-17
Outlines of Tests

SEMESTER - III

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper I	:	Organic Chemistry-A	20	22	03
Paper II	:	Analytical Chemistry-A	20	22	03

Paper I : ORGANIC CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hoffmann, Curtius, Lossen-similarities, advantages and stereochemistry at the migrating group, effect of migrating group on rate of reaction. Baeyer Villiger Rearrangement.

Unit-II

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hydroperoxide rearrangement–migratory aptitude, Brown, Pinacol, Wolff, Stevens, Wittig and Favorskii rearrangements-participation of groups such as –O–C–R, halogens, Aryl, and sigma bond, nonclassical carbocation.

Unit-III

Stereochemistry I: (05 Lectures)
Enantiomeric relationship, Diastereomeric relationship, Prochiral relationship. Conformational relationship in carbocyclic rings other than 5-membered, conformational effects on reactivity. Relationships between ring size and facility of ring closure.

Unit-IV

Stereochemistry II: (05 Lectures)

Hard Soft Acid Base principles: pka Values. Generation of Carbon Nucleophiles by Deprotonation, Regio selectivity and stereo selectivity in enolate formation, Medium effects, O versus C as site of alkylation, examples of Stork enamine reactions.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper II : ANALYTICAL CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Elementary Concepts I: (05 Lectures)

Qualitative and quantitative analysis, concepts and importance of quantitative analysis, choice of methods for analysis, sampling and theories of sampling, preparation of samples for analysis, calibration standards, solution concentrations in terms of various conventions, simple equilibrium calculations, calibration of analytical weights and glass wares, significance of calibration, role of instrumental methods of analysis in analytical chemistry.

Unit-II

Elementary Concepts II: (05 Lectures)

Terms of mean, medium, precision and accuracy in chemical analysis, types of errors in analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, least square curve fitting, propagation of errors, significant figure convention, standard deviations, confidence limits.

Theory of volumetric and gravimetric methods of analysis, primary and secondary standards, theory of indicators and their selection for titrations, precipitation methods, optimum conditions for precipitation, steps involved in gravimetric analysis, important organic precipitants.

Unit-III

Acid-Base Equilibria : (05 Lectures)

Acids and bases, ionization equilibria for weak monobasic acids, bases and related salts, acid base titration reagents and indicators for neutralization titrations, neutralization titrations for a strong acid with a strong base, polybasic acid with a strong base.

Unit-IV

Oxidation-Reduction Equilibria : (05 Lectures)

Oxidation-reduction reactions, reduction potentials, Nernst equation, oxidation-reduction titrations and curves, oxidation-reduction indicators, applications of oxidation-reduction techniques, determination of water by the Karl Fischer titration method.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2016-17
Outlines of Tests

SEMESTER - IV

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper III	:	Organic Chemistry-B	20	22	03
Paper IV	:	Analytical Chemistry-B	20	22	03

Paper III : Organic Chemistry-B

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Organic Chemistry of Life I: (05 Lectures)

Nucleic Acids : Nucleosides; Pentoses, heterocyclic bases, nucleotide; Purines and phosphate, DNA and RNA Hydrogen bonding and DNA replication (heredity).

Unit-II

Organic Chemistry of Life I: (05 Lectures)

Enzymes, nomenclature of enzymes, characteristics of enzymes, coenzyme A and prosthetic group. Coenzyme derived from niacin and examples of redox reaction with it.

Unit-III

Pericyclic Reactions I : (05 Lectures)

Electrocyclic Reactions: Woodward and Hoffmann rules, correlation diagram for cyclobutene = butadiene interconversion, Frontier orbital theory. Examples of 4, 6 and 8 electron systems, stereochemical modes.

Cycloaddition Reactions : Woodward and Hoffmann rules, Frontier Molecular orbital theory for Dieis-Alder reaction.

Unit-IV

Pericyclic Reactions II: (05 Lectures)

(4+2) and (2+2) cycloadditions, exo and endo isomers, Examples Bicyclo (2, 2, 1) heptane and Bicyclo (2, 2, 2,) octane systems. Intramolecular Diels Alder reaction.

Sigmatropic Rearrangements: Woodward and Hoffmann rules, Frontier Molecular orbital for 1, 3; 1, 5 and 1, 7 shifts. Examples including vitamin D_2 formation from 7-dehydro cholesterol (Provitamin D_3).

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory questions carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper IV : ANALYTICAL CHEMISTRY-B:

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE:

To teach the fundamental concept of Chemistry and their applications, The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit- I

Precipitation Equilibria : (05 Lectures)

Solubility of precipitates, effect of competing equilibria on solubility of precipitates, separation of ions by control of concentration of precipitating reagents, effect of electrolyte concentration on solubility product, theory of precipitation titrations. The Vohlard and the Mohr's methods of analysis, adsorption indicators.

Unit-II

Complexation Equilibria : (05 Lectures)

Complexation, formation constants, EDTA equilibria, effect of pH on EDTA equilibria, complexometric titration curves, selection of indicators for complexometric titrations, applications of complexometric equilibria.

Unit-III

Solvent Extraction and Ion-Exchange Separation : (06 Lectures)

Basic concepts of solvent extraction, relationship between distribution coefficient, distribution ratio and per cent extraction, applications of extraction methods in analytical chemistry, ion-exchange processes, ion-exchange-resins, techniques and applications of ion-exchange separation, basic concepts of column and gas chromatography.

Unit-IV

Radioisotope Methodology and its Applications : (04 Lectures)

Radioactive isotopes, radioactive decay rates and half-life periods of radioactive isotopes, sample preparation in radiochemical measurements, background, dead-time and inefficiency corrections in radioactive measurements, isotope dilution method and its applications, radiometric-titrations, neutron activation analysis.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

BOTANY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

Third Semester

		Time	Theory	Int Assess.	Max Marks
Theory Paper-A :	Plant Physiology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – I	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20

Fourth Semester

Theory Paper-A :	Plant Ecology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – II	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			200

Note : 1. The number of teaching hours for theory and practical per session shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of nine questions. Question No. 1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

SEMESTER –III

Paper -A : PLANT PHYSIOLOGY

Objective :

The main objective of this paper is to make the students aware about various functions and metabolisms of plants. The course material of this paper would enable the students to understand gradual aspects of growth and development in plants along with concept of photoperiodism, role of hormones and photomorphogenesis.

Teaching Methodology :

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

Unit-I

Plant-Water Relations : Water transport processes; diffusion and osmosis; water potential and chemical potential; absorption of water, water transport through xylem; transpiration and its significance; factors affecting transpiration; mechanism of stomatal movement.

Mineral Nutrition : Criteria of essentiality of elements; macro-and micronutrients; role of essential elements; mineral deficiency symptoms and plant disorders; nutrient uptake and transport mechanisms; role of cell membrane, ion pumps and carriers.

Unit-II

Photosynthesis : Historical background and significance; structure of photosynthetic apparatus; photosynthetic pigments; accessory pigments and the photoprotective carotenoids; reaction center complexes; photochemical reactions; electron transport pathways in chloroplast membranes; photophosphorylation; the Calvin cycle; the C_4 carbon cycle; crassulacean acid metabolism; synthesis of starch and sucrose; photorespiration.

Transport of Organic Substances: Transport of photosynthates; source-sink relationships; the mechanism of translocation in the phloem; assimilate partitioning.

UNIT-III

Respiration : Glycolysis; the TCA cycle and its regulation; electron transport in mitochondria; oxidative phosphorylation; pentose phosphate pathway; cyanide-resistant respiration.

Nitrogen Metabolism : Biological nitrogen fixation; reduction of N_2 into ammonia; *nif* genes; regulation of nitrate reductase and nitrogenase; nitrate and ammonium assimilation.

Unit-IV

Growth and Development : General aspects – definitions, phases of growth; kinetics of growth; physiology of seed dormancy and seed germination; concept of photoperiodism; Physiology of flowering; the florigen concept and role of hormones; vernalization; senescence and fruit ripening; importance of respiratory climacteric; discovery, physiological role and mechanism of action of the phytohormones – auxins, cytokinins, gibberellins, abscisic acid and ethylene; photomorphogenesis; discovery of phytochromes and cryptochromes, their role and mechanism of actions; signal transduction – basic concept; plant movements – tropic and nastic; biological clocks.

Suggested Readings :

1. Copleand, R. A. Enzymes: A Practical Introduction to Structure, Mechanism and Data Analysis, VCH Publishers, New York, 1996.

2. Dryer, R.L. and Lata, G.F. Experimental Biochemistry, Oxford University Press, New York, 1989.

3. Galston, A.W. Life Processess In Plants, Scientific American Library, Springer-Verlag, New York USA, 1989.

4. Hooykaas, P.J.J., Hall M.A. and Libbenga, K.R. (eds.) Biochemistry and Molecular Biology of Plant Hormones, Elsevier, Amsterdam, The Netherlands, 1999.

5. Hopkins W.G. Introduction to Plant Physiology : John Wiley and Sons. Inc., New York, USA, 1995.

6. Moore, T.C. Research Experiences in Plant Physiology: A Laboratory Manual, Springer-Verlag, Berlin, 1974.

7. Moore, T.C. Biochemistry and Physiology of Plant Hormones (2^{nd} edition), Springer-Verlag, New York, USA, 1989.

8. Salisbury. F.B. and Ross, C.W. Plant Physiology (4^{th} edition), Wadsworth Pulishing Co., California, USA, 1992.

9. Srivastava, H.N. Plant Physiology, Biochemistry & Biotechnology, Vol. V, Pradeep Publications, Jalandhar, India, 2013.

10. Taiz, L. and Zeiger, E. Plant Physiologyy (5^{th} edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010.

11. Wilson, K. and Goulding, K.H. (eds.). A Biologist's Guide to Principles and Techniques of Practical Biochemistry, Edward Arnold, London, U.K., 1986.

Suggested Labortary exercises for Third Semester

1. To study the permeability of plasma membrane using different concentrations of organic solvents.
2. To study the effect of temperature on permeability of plasma membrane.
3. To extract enzymes and study their activity, e.g. amylase, lipase, acid phosphatase, catalase, peroxidase.
4. Effect of the following factors on enzyme activity :

   pH, temperature, enzyme and substrate concentration, heavy metals.
5. To extract and separate chloroplast pigments by solvent method and demonstrate fluorescence in chloroplast extracts.
6. To determine the osmotic potential of vascular sap by plasmolytic method.

7. To determine the water potential of given tissue (any tuber).
8. To determine stomatal Index, stomatal frequency and percentage of leaf area open through stomata. Also study the effect of ABA on stomatal closure.
9. Effect of carbon dioxide concentration on the rate of photosynthesis.
10. To demonstrate that oxygen is evolved during photosynthesis.

Paper -B: DEVELOPMENT OF PLANTS AND THEIR UTILIZATION-I

Objective:

This paper deals with internal structure of various plant parts, their growth and development patterns. It gives an insight into plant domestication and role of wild plants in ecosystem functioning.

Teaching Methodology:

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Organization of the Higher Plant Body : The shoot and root systems; variation in habit and longevity; environmental influences.

UNIT-II

Meristems and Development : Shoot apical meristem, root apical meristem, lateral meristems and their functions. Range of form and structure of stem, leaf and root; their tissues and functions.

UNIT-III

Secondary Body of the Plant : Vascular cambium; secondary xylem (basic structure of wood); secondary phloem and periderm.

Unit-IV

Role of Wild Plants in Ecosystem Functioning : A general account.
Domestication of Plants : Primary and secondary centres of diversity; plant introduction.

Suggested Readings :

1. Carlquist, S. Comparative Wood Anatomy : Systematic, Ecological and Evolutionary Aspects of Dicotyledonous Wood, Springer-Verlag, Berlin, 1988.
2. Cutter, E.G. Cell and Tissues, Part I, Edward Arnold, London, 1969.

3. Cutter, E.G. Plant Anatomy: Experiment and Interpretation, Part II, Organs, Edward Arnold, London, 1971.
4. Esau, K. Anatomy of Seed Plants, 2nd Edition, John Wiley and Sons, New York, 1977.
5. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.
6. Fuller, K.W. and Gallon, J.R. Plant Products and New Technology, Clarendon Press, Oxford, New York, 1985.
7. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California, USA, 1998.
8. Nair, M.N.B. Wood Anatomy and Major Uses of Wood, Faculty of Forestry, University Putra Malaysia, 43400 Serdang, Selangor D.E. Malaysia, 1988.
9. Raghvan, V. Development Biology of Flowering Plants, Springer-Verlag, New York, 2000.
10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants,5th Edition, W. H. Freeman and Co., Worth Publishers, New York, 1999.
11. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV, Pradeep Publications, Jalandhar, India, 2007.
12. Goyal, J.P., Saini, Aruna. Angiosperms, Structure, Development and Reproduction, Trueman Company, Jalandhar, India, 2006.
13. Singh, V., Pande, P.C and Jain, D.K. Structure, Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, India, 2012.

Suggested Laboratory Exercises :

1. Study in the field of a large variety of herbaceous and perennials, both monocotyledonous and dicotyledonous, aquatic, mesophytic, xeromorphic plants, succulents, climbers, twiners, parasites, and trees with varied canopy architecture. Field diary to be prepared.
2. Morphology and anatomy of stems, roots and leaves using stained hand sections of permanent slides (tapioca, carrot, radish, onion, garlic, turnip, potato, etc.)
3. Study of vascular cambium in stem and root. Secondary growth. Examples of cambial variants and resultant secondary structures.
4. Preparation of world maps to show Vavilov's centres of origin of cultivated plants and Zhukovsky's concept of mega centres.
5. Preparation of maps showing the centres of primary diversity of important economic plants that originated in India and region of cultivation of plants introduced from the New World, Europe, Central Asia, Australia, Malaysia, China.

Guidelines for Botany Practical Examination:

Max. Marks:	**20**
Practical:	**18**
Int. Assessment:	**2**
Time:	**3 hrs.**

Q.1. Write procedure and precautions for Physiology experiment A. Perform the experiment, record observations calculation if any and results. Show the experiment to the examiner. 5

Q.2. Write illustrated morphological note on specimens B & C. 4

Q.3. Idenitfy slides D & E giving at least two identifying features for each. 4

Q.4. Practical Note book. 2

Q.5. Viva-Voce 3

BOTANY
SEMESTER-IV

PAPER-A: PLANT ECOLOGY

Objective: This paper deals with the role of environment in causing structural and functional variations in plants. It provides a broad idea about concept of population, community, ecosystem, ecological succession and role of plant indicators in environment monitoring.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT- I

Introduction : Holocoenotic nature of environment; limiting factors; ecological amplitude triggering factors (soil, water, atmosphere).

Ecological Adaptations: Concept, ecads, ecotypes and ecoclines; adaptations in relation to soil oligotrophy; adaptive significance of photosynthetic pathways.

Population : Concepts; density and pattern; idealized plant life history; population growth; carrying capacity; population regulation; r and k selection; population interactions.

UNIT- II

Community: Community characteristics and their measurement, species diversity (alpha, beta and gamma), niche.

Ecosystem : Concept, components and organisation, energy flow; ecological efficiencies; cycling of C, N and P; characterization and structure of ecosystem; the biotic and abiotic components, their inter-relationship; the processes within ecosystem, the trophic organisation; autotrophy, heterotrophy, parasitism, detritus, decomposition.

Ecological Succession : Mechanism and types; nature of climax; food chains and food webs; ecological pyramids.

UNIT- III

Flow of Energy and Materials : Flow of energy and materials within ecosystem; models of energy flow; ecosystem productivity; biogeochemical cycles; major types of ecosystems.

UNIT- IV

Plant Indicators and their role in Environmental Monitoring.

Phytogeography : General principles, vegetation of India.

Suggested Readings :

1. Barbour, M.G., Burk, J.H. and Pitts, W.D., Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.

2. Hill, M.K., Understanding Environmental Pollution, Cambridge University Press, 1997.

3. Kormondy, E.J., Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.

4. Mackenzie, A. et al., Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.

5. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.

6. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.

7. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.

8. Smith, R.K. Ecology and Field Biology, Harper Collins, New York, 1996.

9. Srivastava, H.N. Ecology and Utilization of Plants, Vol.VI Pradeep Publications, Jalandhar, India, 2012.

Suggested Labortary exercises:

1. To study ecological adaptations (morphological and anatomical) in plants (hydrophytes, xerophytes, epiphytes).

2. To determine minimum area of sampling unit (quadrat) for the study of grassland community.

3. To estimate Importance Value Index for grassland species.

4. To prepare maps of India with respect to (i) Major climate zones, (ii) Forest types, and (iii) Bio-geographical regions and to comment on these.

Paper -B : DEVELOPMENT OF PLANTS AND THEIR UTILIZATION – II

Objective :

The course work of this paper deals with utilization of plants. It would provide the students an idea about importance of various plant parts as well as plant wealth such as medicinal, crops and food plants, fibre and oil yielding plants, timber yielding and firewood species.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT-I

A General account of wheat, rice, maize, sorghum, bajra, potato and sugarcane.
Legumes : Chickpea (Bengal gram), red gram (arhar) – a general account.

UNIT-II

Vegetable Oil Sources : Mustard, groundnut, soyabean and coconut –a brief account.
Plant Fibres : Cotton, jute and coir.
Timber and Firewood Species : A general account of use of following trees:
Tectona, Dalbergia, Albizzia, Eucalyptus, Cedrus, Acacia, Shorea, Terminalia, Mangifera and Azadirachta.

UNIT -III

Medicinal Plants : A brief account of plant drugs and their chief constituents used in indigenous and allopathic systems of medicines viz. *Opium, Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrhiza, Phyllanthus amarus (P. fraternus), Allium sativum, Atropa belladonna and Aloe barbadense.*

Unit-IV

A brief account of the following:
Natual Rubber : *Hevea brasiliensis*
Essential Oils: *Cymbopogon sp., Eucalyptus, Jasminum, Geramium and Vetiveria.*
Insecticides : *Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum).*
Dyes : *Curcuma longa(turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigofera (Indigo) and Lawsonia inermis (mehndi).* Extraction of pigments.
Ornamental Plans : Familarity with seasonal and perennials grown in your locality.

Suggested Reading :

1. Kocchar, S.L., Economic Botany in Tropics, 2nd edition, Macmillan India Ltd., New Delhi, 1988.
2. Lyndon, R.F., Plant Development : The Cellular Basis, Unwin Hyman, London, 1990.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S., A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma O.P. Hill's Economic Botany, Tata McGraw Hill Publishing Company Ltd., New Delhi, India, 1996.
5. Simpson, B.B. and Conner-Ogorzaly, M., Economic Botany –Plants in Our World, McGraw Hill, New York, 1986.
6. Srivastava, H.N. Eology and Utilization of Plants, Vol. VI, Pradeep Publications, Jalandhar, India, 2012.
7. Steevas, T.A. and Sussex, I.M. Patterns in Plant Development, 2nd Edition, Cambridge University Press, Cambridge, 1989.
8. Thoms, P.Trees: Their Natural History Cambridge University Press, Cambridge, 2000.
9. Tippo, O. and Stern, W.L. Humanistic Botany, W.W. Norton, New York, 1977.
10. Vishnu Swarup, Ornatmental Horticulture, Macmillan India, Ltd., Neew Delhi India, 1997.

Suggested Laboratory Exercises

1. Study of vegetative and reproductive morphology and anatomy of wheat, rice, maize, sorghum, bajra, potato and sugarcane. Study of starch grains in these plants (except in sugarcane). Epidermal structure of sugarcane stem and leaves. Tests for sucrose.
2. Study of vegetative and floral morphology, and pod development in chickpea and red gram.
3. Study of structure of oil storing tissues in sectioned seeds of mustard, groundnut and soyabean, and coconut endosperm, using micro-chemical tests.
4. Study of wood anatomy of ring-porous, diffuse porous woods using hand sections or prepared slides. Understanding of wood anatomy using T.S., T.L.S. and R.L.S. in five timber yielding species (*Tectona, Dalbergia, Albizzia, Eucalyptus Cedrus, Acacia, Shorea, Terminalia, Mangifera, Azadirachta,* or any other depending on the location of the institution). Preparation of a list of 10 fire wood species in your region and their properties.
5. Study of 10 whole plants (live or from herbarium specimens) used as resources of drugs : (*Opium*, *Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrrhiza, Phyllanthus amarus (P. fraternus*), *Allium sativum, Atropa belladonna, , Aloe barbadense,* or any other important plants of your area.
6. Study of laticiferous system in the stem of *Hevea brasiliensis,* familiarization with whole plants (fresh or herbarium specimens of *Cymbopogon* sp., *Eucalyptus, Jasminum, Geranium and Vetiveria* (or any other local sources of essential oils).
7. Study of Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum) from live specimens. Sources of dyes : Curcuma longa (turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigo fera (indigo) and Lawsonia inermis (mehndi). Extraction of pigments.
8. Preparation of a list of trees and shrubs used as ornamentals alongwith their popular and scientific names. Seasons of flowering and brief description. Calendar of seasonals grown as bed plants, potted plants, house plants, flowers used for worship or ornamentation. This may be illustrated and presented as a term paper at the time of examination.

Guidelines for Botany Practical Examination

Max. Marks : 20
Practical : 18
Int. Assessment : 2
Time : 3 hrs.

1. Identify specimen A and write note on its ecological adaptations. 3
2. Identify and write illustrated morphological note on specimens B,C & D giving their economic importance. 6
3. Identify & write botanical name and family of specimens E & F. 4
4. Practical note book. 2
5. Vice-Voce . 3

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-III

PAPER I : ENVIRONMENTAL BIOLOGY-I

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Environment :** Introduction and components.
2. **Ecological Concepts :** Ecosystem: Types food chains, food web, energy flow.

UNIT-II

3. **Biogeochemical cycles**
4. **Ecological succession**

UNIT-III

5. **Pollution: Types** - Air, water, land, thermal and noise pollution.

   (a) *Sources of Pollution :* Sewage, industrial wastes, silt, fertilizers, detergents, oils, pesticides, smoke, exhaust gases from automobiles, smog, acid rains, radioactive elements etc.

   (b) *Pollution in India:* Major polluted rivers and their sources of pollution, air pollution in major cities.

   (c) *Hazards of Pollution :* Effects of pollution on plants and animals.

UNIT-IV

6. (a) *Control of Pollution:* Primary, secondary and tertiary treatment, standards for the quality of drinking water.

   (b) Bioremediation

Suggested Readings :

1. Odum, E.P. : *Fundamentals of Ecology,* W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : *The Biology of Pollution : Studies in Biology,* No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3. Louis, K. : *River Pollution,* Butterworths, 1969.
4. Dix, H.M. : *Environmental Pollution, Atmosphere, Land, Water and Noise,* (Institution of Environmental Science) Wiley, 1981.
5. Mani, M.S. : *Ecology and Biogeography of India,* Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6. Kendeigh, S.C. : *Ecology with Special Reference to Animals and Man,* New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-I

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Introduction :** Scope and historical account from molecules to cells, prokaryotes to eukaryotes, unicellular to multicellular.
2. **Biomolecules : Micro and Macro molecules.**Structure and function of carbohydrates, lipids, proteins and nucleic acids.

UNIT-II

3. **Carbohydrates :** Classification, structure of cellulose and glycogen.
4. **Lipids :** Classification, structure of ganglioside and steroids.

UNIT-III

5. **Proteins :** Classification, structure of amino acids, primary, secondary and tertiary structure of proteins, structure of hemoglobin and lysozyme.

UNIT-IV

6. **Nucleic Acids :** DNA. What genes are made of ? Detailed structure of DNA Molecule, replication, RNA - various types, transcription, translation and involvement of RNAs in protein synthesis.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	*Molecular Biology of the Cell,* Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	*Essentials of Cell and Molecular Biology,* Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	*Cell and Molecular Biology,* 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	*Principles of Genetics,* John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	*Cell Biology,* Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	*Genetics and Molecular Biology,* Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	*Biology,* Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	*Molecular Biology of the Gene,* 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	*Molecular Biology, Genes and Chemical Control of Living Cells,* Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-III

Practical's based on both theory papers.

1. Estimation of D.O. of the given water sample (normal and polluted).
2. Estimation of total alkalinity of water sample (normal and polluted).
3. Estimation of chlorine of water sample (normal and polluted).
4. Estimation of Hardness of water sample (normal and polluted).
5. Estimation of NO3 of water sample (normal and polluted).
6. Estimation of PO4 of water sample (normal and polluted).

7. Analysis of the variations in protein contents in different organs of an animal procured from slaughter house.

8. Analysis of the species variations in amino acids requirements.

9. Demonstration of carbohydrate and proteins in a cell (Cytochemically).

10. Prepare a Project on national parks/sanctuaries/biosphere reserves.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) III Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks

I. Analyze the variations in protein contents in the organs of a given specimen. Write the procedure and show the reading to the examiner. (3)

II. Determine the physico-chemical factors (A) in given water sample from a lake. Write the procedures followed. (3)

III. Demonstrate cytochemically carbohydrates/protein in an eukaryotic cell. Write the procedure and show the preparation to the examiner. (3)

IV. Write a note on the project…… (2)

V. Viva-Voce. (3)

VI. Note Book and Charts. (4)

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2016-17

SEMESTER-IV

PAPER I : ENVIRONMENTAL BIOLOGY-II
PAPER II: MOLECULER BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

PAPER I : ENVIRONMENTAL BIOLOGY-II

UNIT-I

1. **Biodiversity Conservation :** (In-situ, Ex-situ)

2. **IUCN Red List Categories :** Critically Endangered, Endangered, Vulnerable, Rare, Least Concern.

UNIT-II

3. **National Conservation Projects**

4. **National Biodiversity Act and Wild life Act**

UNIT-III

5. **Ecology of Conservation :**

   (a) *Conservation of Natural Resources:* Water, land and minerals.

   (b) *Aquaculture:* Pisciculture and management of ponds, extensive & intensive and integrated fish culture.

UNIT-IV

6. (a) *Forest Ecology :* Forest statistics of India, conservation of forests, management of forests for timber productions.

   (b) *Agriculture :*Weed control, crop rotation, green revolution, checking of soil erosion.

   (c) *Dedesertification :* Measures to control the advance of desert.

Suggested Readings :

1. Odum, E.P. : *Fundamentals of Ecology,* W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : *The Biology of Pollution : Studies in Biology,* No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3. Louis, K. : *River Pollution,* Butterworths, 1969.
4. Dix, H.M. : *Environmental Pollution, Atmosphere, Land, Water and Noise,* (Institution of Environmental Science) Wiley, 1981.
5. Mani, M.S. : *Ecology and Biogeography of India,* Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6. Kendeigh, S.C. : *Ecology with Special Reference to Animals and Man,* New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-II

UNIT-I

1. **Mutations :** Types of mutations, physical and chemical mutagens and their mode of action on DNA.
2. **Bioenergetics :** Types of energy and their transformation, first and second law of thermodynamics.

UNIT-II

3. Factors governing chemical reactions, generation and function of ATP, biocatalysts; role of enzymes in cellular reactions. Types of major enzymes, Apoptosis.
4. **Regulation of Gene Expression :** Concept of operon, induction and repression in Prokaryotes, gene regulation in eukaryotes.

UNIT-III

5. **Molecules of Cellular Defence :** Structure and function of antibody, major histocompatibility antigens, HLA system. Genetic basis of antibody diversity.

UNIT-IV

6. **Molecular Basis of Inborn Errors of Metabolism :** Genetic basis of carbohydrates and amino acid metabolism, galactosemia and Phenylketonuria.
7. **Recombinant DNA :** Restriction endonucleases, Plasmids, cloning of DNA, use of recombinant DNA technology.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	*Molecular Biology of the Cell,* Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	*Essentials of Cell and Molecular Biology,* Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	*Cell and Molecular Biology,* 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	*Principles of Genetics,* John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	*Cell Biology,* Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	*Genetics and Molecular Biology,* Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	*Biology,* Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	*Molecular Biology of the Gene,* 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	*Molecular Biology, Genes and Chemical Control of Living Cells,* Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-IV

Practical's based on both theory papers.

1. Biota of pond water and sewage/industrial effluent.
2. Effect of light and gravity on organism.
3. Study of littoral, limnetic, profundal communities.
4. Study of nucleic acids in tissues (Cytochemically).
5. Idea about viruses and bacteria through charts etc.
6. Preparation and study of onion root tip chromosomes.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) IV Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2marks

I. Record biota in the given sewage samples. Draw labeled sketches & demonstrare these to the examiner. (3)

II. Examine water sample for biotic communities from particular zone of lake, sketch and demonstrate. (3)

III. Identify the given chart/diagram. Write a brief note on it. (2)

IV. Study the effect of …… on the given animal. Write the procedure followed. (2)

V. Male a chromosomes preparations of the onion root tip. Draw a label diagram of any stage of mitosis and show it to the Examiner. (3)

VI. Viva-Voce. (2)

VII. Note Book and Charts. (3)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
THIRD YEAR
(SEMESTER : FIFTH AND SIXTH)
Examination, 2016-2017

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE HONOURS SUBJECTS OF THE B.A./B.Sc. THIRD YEAR FOR THE EXAMINATION, 2016-2017

B.A. (HONOURS) ENGLISH

SEMESTER V

PAPER : 20th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	G.B. Shaw	:	*Arms and the Man.*
2.	George Orwell	:	*Nineteen Eighty Four.*
3.	D. H. Lawrence	:	*The Rainbow.*
4.	W.B. Yeats	:	(i) *Among school Children* (ii) *The Second coming* (iii) *Lake of Isle Innisfree*

Testing :

There will be **Two Units.**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three

Unit I
There will be one question on the literary movement of 20th Century with internal choice

(15 marks)

There will be one question with reference to the context from writers at Serial No. 1 and 4. Two passages will be set from each writer with internal choice. Students will attempt one passage from each writer.

(15 Marks)

Unit II
There will be two essay type questions with internal choice on each of the four writers' texts. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

B.A. (HONOURS) ENGLISH

SEMESTER VI

PAPER : INDIAN WRITING IN ENGLISH

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1. Tagore : (i) *The Joureny*, (ii) *Sea Shore.*, (iii) *Maya* — *Selection from Geetanjali*
2. Mulk Raj Anand : *Coolie.*
3. R.K. Narayan : *The Vender of Sweets*
4. Kamla Dass : (i) *An Introduction* (ii) *Forest Fire* (iii) *The Freaks* (iv) *My Grandmother's House*

Testing :

1. There will be one question with reference to context. Two stanzas with internal choice will be set from Tagore and Kamla Dass. Students will attempt one stanza from each Poet.. (10 marks)
2. Four questions (one on each author) of 20 marks each will internal choice. (20 × 4 = 80 marks)

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संस्कृत

बी. ए. (आनर्स) तृतीय वर्ष परीक्षा, 2016-2017

SEMESTER-V

तृतीय प्रश्न-पत्र पूर्णांकः 90+10 = 100 अंक

समय : 3 घण्टे

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90)

उद्देश्यः–

विद्यार्थियों को काव्य के स्वरूप, प्रयोजन इत्यादि से अवगत करना । इसी के साथ ही पाणिनीय सूत्रों के माध्यम से कारक तथा स्त्री प्रत्ययों के अध्ययनोपरान्त संस्कृत लेखन के प्रति उत्साहित करना ।

(i) साहित्यदर्पण-प्रथम परिच्छेद 40 अंक

(ii) लघुसिद्धान्तकौमुदी- 30 अंक

(क) विभक्त्यर्थ (कारक-प्रकरण) 15 अंक

(ख) स्त्री-प्रत्यय 15 अंक

(iii) संस्कृत में निबन्ध (इन विषयों पर- संस्कृतभाषा, परोपकारः, गीता, वेदानां महत्त्वम्, आदर्श-छात्रः)। 20 अंक

नोट - पत्र का अध्यापन समय-नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

संस्कृत

बी. ए. (आनर्स) तृतीय वर्ष परीक्षा, 2016-2017

SEMESTER-VI

चतुर्थ प्रश्न-पत्र पूर्णांकः 90+10 =100 अंक

समय : 3 घण्टे

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90)

उद्देश्यः-

उपनिषद् प्रतिपादित नचिकेता एवं यम के संवाद द्वारा विद्यार्थियों को रहस्यमय परमतत्त्व से परिचित कराना, इसके अतिरिक्त चतुर्वेद, ब्राह्मण तथा उपनिषद् ग्रन्थों के विषय-वस्तु का अध्ययन करवाना।

(क) उपनिषद्-साहित्य 60 अंक

(i) कठोपनिषद्-(प्रथम अध्याय) अनुवाद एवं व्याख्या (6 में से 4 सन्दर्भ) 4×10 = 40 अंक

(ii) कठोपनिषद् से सम्बद्ध प्रश्न (2 में से 1 का उत्तर) 1×20 = 20 अंक

(ख) वैदिक साहित्य का इतिहास 30 अंक

1. सहिंताएँ 2. ब्राह्मणग्रन्थ 3. उपनिषद 2×15 = 30 अंक

(विषय वस्तु से सम्बन्धित चार में से दो के उत्तर पूछे जायेगें) ।

नोट - पत्र का अध्यापन समय-नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

Books Recommended :

1. Sanskrit Drama : A.B. Keith.

2. Classical Sanskrit Literature : A.B. Keith.

3. A History of Sanskrit Literature : A.A. Macdone.

4. A History of Indian Literature, Vol. 1 : M. Vintenitz

5. History of Sanskrit Literature by V. Varadachari.

6. संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय

7. वैदिक साहित्य और संस्कृति : बलदेव उपाध्याय

8. संस्कृत वाङ्मय का इतिहास : वाचस्पति गैरोला

9. संस्कृत साहित्य की रूपरेखा : चन्द्रशेखर पाण्डेय

Note : All books are available at the Chaukhamba Sanskrit Series, Chaukhamba, Varanasi and Motilal Banarasidas, Jawahar Nagar, Bunglow Road, Delhi.

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PERSIAN

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016-2017

SEMESTER V

PAPER-III : HISTORY OF PERSIAN LITERATURE

SAFIVID PERIOD

100 Marks

Time : 3 Hrs.

Books Recommended:

1. History of Persian Literature by Dr. Razazadeh Shafaq.
2. History of Persian Literature by Dr. Brown Vol. III.

PERSIAN
B.A.(HONOURS) THIRD YEAR EXAMINATION, 2016-2017
SEMESTER-VI

Paper-IV MODERN PERSIAN

100 Marks
Time : 3 Hrs

1. PROSE:
   (i) The following three short stories of Saeed-Nafisi
      (a) Azan-E-Maghrib
      (b) Khana-Ye-Pidari.
      (c) Janayat-E-Man

   (ii) The following three short stories of Mohammed Heijazi:
      (a) Khud Khusi.
      (b) Eedi.
      (c) Mah-e-man

Book Prescribed:

Nasib-Jadid-e-farsi, jayyed Press, Ballimaran, Delhi-6

2. POETRY:
   Quasidan
   1. Namund Namah by Bahar.
      "Dar Sher Band Mehro-Wafa Dilbari Namund."
   2. Ghazalliyat-E-Parveen Etisami by Mehdi Hameedi.
   3. Qataat by Mehdi Hameedi.

Books Recommended:

1. Barguzida-Ye-She'r-e-Farsi-Ye-Mu' aasir Part-I by Dr. Muneeb-al-Rehaman.
2. Edara-ye-Ulam-e-Islami, Danish gah-e-Islami,Aligarh.

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ARABIC

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2016-2017

(Kept in Abeyance)

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FRENCH

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016

SEMESTER V

SEMESTER-5th: FRENCH LITERATURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

INTRODUCTION TO HISTORY OF FRENCH LITERATURE FROM 17th– 18th CENTURY

Questions should be asked strictly from the prescribed text book

1. Five questions of 8 marks each based on History of French Literature — 40 Marks
2. Fill in the blanks or multiple choice questions on History of literature with maximum of 2 marks each. — 20 Marks

Poetry: Explanation, central idea, critical appreciation of poems — 30 Marks

1. L'amour et la folie (La Fontaine)
2. Le laboureur et ses enfants (La Fontaine)
3. Le lion et le rat (La Fontaine)
4. Le chêne et le Roseau (La Fontaine)
5. La Jeune veuve (La Fontaine)

Courses of Reading :

Mèmento de Littérature française, by Hèlène, Potelet, Publication Hatier, Profil Littèrature. Only from 17-18 centuries to be studied.

Note : 1. The latest syllabus should be followed.
2. Choice should be given in questions.

Reference Books :

1. Collection littéraire—Moyen age – 20ème siècle -Lagarde et Michard, Bordas.
2. Recueil de Textes litteraires françaises. Moyen Age -20ème siècle-Chassang et Senninger.
3. Moyen age -20ème siècle – Castex et. P. Surer, Hachette.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH

SEMESTER VI

SEMSETER-6th: HISTORY OF LITERATURE,POETRY &VIVA-VOCE

Max. Marks	: 100
Theory	: 70 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours
Viva-Voce	: 20 Marks

History of literature 19th-20thCentury:

Introduction to the History of French Literature 19th – 20th century.
Five questions of 8 marks each based on History of French Literature 40 Marks

Poetry: 30 Marks

Explanation, resume, central idea, critical appreciation of the poems

1. Les feuilles mortes (Jacques Prévert)
2. Chant d'automne (Baudelaire)
3. L'homme et la mer (Baudelaire)
4. Paysage(Baudelaire)
5. L'albatros (Baudelaire)

Viva-Voce 20 Marks

1. Dictation of an unseen passage of about 200 words. 10 Marks
2. Oral questions based on the dictation passage and also general questions 10 Marks

Note: Questions in all the papers shall be asked and answered in French only.

For the information of private candidates:

1 Viva is compulsory

2.The theory paper would be proportionately marked out of 80 as there is no internal assessment.

HINDI
(B.A. HONS. 3rd YEAR 5th SEMESTER 2016)

PAPER-III (A)

तृतीय पाठ्यचर्या **पूर्णांक –** 90 + 10 = 100

समय – तीन घंटे

1. **कहानियाँ : आधार चयन–भीष्म साहनी, आधार पब्लिकेशन, पंचकूला ।**
2. **संस्मरण : अतीत के चलचित्र – महादेवी वर्मा, राधकृष्ण प्रकाशन, नई दिल्ली ।**

(क) प्रस्तुत दोनों कृतियों में से 10/10 अंकों के 4 व्याख्यांश पूछे जाएंगे । छात्रों को केवल दो की संदर्भ एवं काव्य–सौन्दय सहित व्याख्या करनी होगी । 10+10=20

(ख) दोनों कृतियों में से 4 समीक्षात्मक प्रश्न पूछे जाएंगे । जिनमें से छात्रों को 15–15 अंको के दो प्रश्नों के उत्तर देने होंगे । 15+15=30

(प्रत्येक कृति में से एक प्रश्न अवश्य करना होगा)
(चरित्र, मूल संवेदना, तात्त्विक समीक्षा, उद्देश्य, भाषा–शैली)

3. **काव्यशास्त्र** **अंक–30**

(क) शब्द शक्तियाँ – परिभाषा और उदाहरण

(ख) बिम्ब – परिभाषा एवं स्वरुप

(ग) रस – परिचय, प्रकार, लक्षण और उदाहरण

(घ) प्रतीक – परिभाषा एवं स्वरुप

खंड तीन से संबंध्ति चारों उपखंडों (क ख ग घ) में से कुल मिलाकर 20–20 अंकों के चार प्रश्न पूछे जाएंगे जिनमें से छात्रों को किन्हीं दो के उत्तर देने होंगे ।

4. **दो–दो अंकों के 5 वस्तुनिष्ठ प्रश्न करने होंगे ।**
8 प्रश्न पूछे जाएंगे । 5x2=10

5. **आंतरिक मूल्यांकन –** **अंक–10**

सहायक पुस्तकें :

1 **अन्धा युग : एक विवेचन, डॉ0 हरीश्चन्द्र वर्मा. नव भारती शंकर प्रतिष्ठान, नई दिल्ली**
2 **हिन्दी कहानी अन्तरंग परिचय : रामदरश मिश्र, नेशनल पब्लिकेषन, नई दिल्ली ।**
3 **हिन्दी कहानी अपनी जुबानी : डॉ0 इन्द्रनाथ मदान, संभावना पब्लिकेशन, हापुड ।**

HINDI
(B.A. HONS. 3rd YEAR 6th SEMESTER 2017)

PAPER-IV (B)

चतुर्थ पाठ्यचर्या

पूर्णांक–90+10=100

समय – तीन घंटे

1. **काव्य–नाटक : एक कण्ठ विषयायी–दुष्यंत कुमार, लोकभारती**

   (क) इस कृति में से 10–10 अंकों के दो व्याख्यांश पूछे जाएंगे,

   इनमें से एक करना होगा ।

   (ख) इस कृति में से 16–16 अंकों के दो समीक्षात्मक प्रश्न पूछे जाएंगे,

   इनमें से एक करना होगा । अंक–26

2. **छंद : भुजंगप्रयात, मालिनी, मंदाक्रान्ता, शिखरिणी, अहीर**

   मनव, बरवै । अंक–20

3. **अंलकार : अन्योक्ति, तुल्योगिता, उल्लेख, व्याजस्तुति,**
   अनन्वय, विभावना अंक–20

(छात्रों को पाँच–पाँच अंकों के 4 छंदो और पाँच–पाँच अंकों के चार अलंकारों के लक्षण तथा उदाहरण लिखने होंगे । प्राश्निक को दुगना विकल्प देना होगा)

4. **भाषा : अंक–24**

   (i) हिन्दी की प्रमुख बोलियां–क्षेत्र और विशेषताएं
   विशेषतः ब्रज, अवधी का परिचय

(ii) **मानक हिन्दी की संरचना–शब्द संरचना, रूप–सरंचना**
वाक्य संरचना

(iii) **क. राजभाषा हिन्दी का परिचय तथा वर्तमानस्थिति ।**
ख. देवनागरी लिपि का अनुमोदित मानक रूप ।

विशेष : खंड 4 में से 15–15 अंकों के कुल चार प्रश्न पूछे जाएंगे । जिनमें से छात्रों को दो के उत्तर देने होंगे ।

5. आंतरिक मूल्यांकन : अंक–10

सहायक पुस्तकें :–

1. **अन्धा युग : पथ और प्रदर्शन, जयदेव तनेजा, वाणी प्रकाशन, नई दिल्ली ।**
2. **अन्धा युग और भारती के अन्य नाट्य प्रयोग : जयदेव तनेजा, नचिकेता प्रकाशन, नई दिल्ली ।**
3. **काव्य के तत्त्व : आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद ।**

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2016–17) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ

ਪੇਪਰ ਪੰਜਵਾਂ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਕਾਵਿ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪ੍ਰਯੋਜਨ
2. ਕਾਵਿ ਦੀ ਆਤਮਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਨਿਰਧਾਰਨ
3. ਕਾਵਿ ਦੇ ਤੱਤ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

1. ਧੁਨੀ ਸੰਪ੍ਰਦਾਇ
2. ਰਸ ਸੰਪ੍ਰਦਾਇ
3. ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਚੋਣਵੇ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਮਾਲੋਚਨਾ ਦਾ ਆਰੰਭ
2. ਨਾਮਕਰਣ
3. ਕਾਵਿ ਦਾ ਲੱਛਣ ਤੇ ਸਰੂਪ
4. ਕਾਵਿ ਤੇ ਸਾਹਿਤ
5. ਕਾਵਿ ਦੇ ਪ੍ਰਯੋਜਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2016–17) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2016 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਛੇਵਾਂ

ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਉਦੇਸ਼ ਅਤੇ ਖੇਤਰ
2. ਪੰਜਾਬੀ ਆਲੋਚਨਾ – ਆਰੰਭ ਤੇ ਵਿਕਾਸ
3. ਕਾਵਿ ਟਿੱਪਣੀਆਂ ਤੇ ਟੀਕਾਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਬਾਵਾ ਬੁੱਧ ਸਿੰਘ, ਕਿਸ਼ਨ ਸਿੰਘ, ਅਤਰ ਸਿੰਘ, ਹਰਿਭਜਨ ਸਿੰਘ।

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸਾਹਿਤਿਆਰਥ – ਸੰਤ ਸਿੰਘ ਸੇਖੋ (ਪੰਜ ਚੋਣਵੇ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਪੁਰਾਤਨ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
2. ਆਧੁਨਿਕ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
3. ਅਧਿਆਤਮਿਕ ਕਵਿਤਾ
4. ਕਵਿਤਾ ਤੇ ਸਮਾਜਕ ਆਲੋਚਨਾ
5. ਕਵਿਤਾ ਤੇ ਵਿਗਿਆਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2016–17) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ – ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਸੱਤਵਾਂ

ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਪ੍ਰਯੋਜਨ
2. ਅਨੁਕਰਨ, ਵਿਰੇਚਨ ਅਤੇ ਉੱਦਾਤ
3. ਤ੍ਰਾਸਦੀ/ਦੁਖਾਂਤ : ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪਲੈਟੋ, ਅਰਸਤੂ, ਲੌਂਜਾਈਨਸ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ

(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਸ਼ਾਸਤ੍ਰ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ ਤੇ ਜੀਵਨ
2. ਸਾਹਿਤ ਤੇ ਸਮਾਜ
3. ਸਾਹਿਤ ਤੇ ਵਿਅਕਤੀ
4. ਵਾਰਤਕ ਕਲਾ
5. ਨਿਬੰਧ ਤੇ ਸ਼ੈਲੀ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2016–17) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ–ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਅੱਠਵਾਂ

ਪੱਛਮੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ : ਉਦੇਸ਼ ਤੇ ਖੇਤਰ
2. ਪੱਛਮੀ ਆਲੋਚਨਾ : ਪ੍ਰਮੁੱਖ ਸਥਾਪਨਾਵਾਂ
3. ਵਿਚਾਰਧਾਰਾ ਤੇ ਸਾਹਿਤ, ਅਜਨਬੀਕਰਨ ਤੇ ਸਾਹਿਤਕ ਪਾਠ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮਾਰਕਸਵਾਦ, ਰੂਪਵਾਦ, ਮਨੋਵਿਸ਼ਲੇਸ਼ਣ, ਸੰਰਚਨਾਵਾਦ : ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਟੀ ਆਰ਼ ਵਿਨੋਦ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਆਲੋਚਨਾ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ (ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਾਰਜ ਤੇ ਕਰਤੱਵ)
2. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਚਾਰ
3. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਤਿਬੱਧਤਾ
4. ਸਾਹਿਤ ਅਤੇ ਸੁਤੰਤਰਤਾ
5. ਸਾਹਿਤ ਅਤੇ ਚਿਤੰਨ

(ਅੰਕ : 15)

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URDU

B.A.(Honours) **Vth Semester** (2016-17)

Theory 90 Marks

Internal Assesment 10 Marks

Time : 3 Hours

Paper- I Novelette

Unit-I

Novelette-‘ Dilruba’ Ka tanqidi Jayeza 25 marks

Unit-II

Plot aur Character 20 marks

Unit-III

‘Agle Janam Mohe Bitiya na Kijo’ ka tanqidi jayeza 25 marks

Unit –IV

Plot aur character 20 marks

Books Prescribed:-

1. ‘ Char Novelette’by Qurrat-ul-ain Hyder,Educational Book House,Aligarh.
2. ‘Beesveen Sadi mein Urdu Novel’ by Dr. Usuf Sarmast, Education Book House, Aligarh.

URDU

B.A.(Honours) **VIth Semester** 2016-17

Theory 90 Marks

Internal Assesment 10 Marks

Time: 3 Hours

Paper- II Novelette

Unit-I

Ismat Chughtai Ka Novelette 'Ziddi' Ka Plot 25 marks

Unit-II

Character 20 marks

Unit-III

Critical notes on Ismat Chughtai ki novel nigari ki khususiaat 25 marks

Unit –IV

Ismat Chughtai ki life history 20 marks

Books Prescribed:-

1. Novelette'Ziddi' by Ismat Chughtai,Education Book House, Aligarh
2. 'Beesveen Sadi mein Urdu Novel'by Dr. Usuf Sarmast, Education Book House, Aligarh.

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GERMAN

V- Semester

Summary

Max. Marks: 100 marks (Total)
Paper-1 (Theory): 90 marks
Internal Assessment: 10 marks

Paper – 1 (Theory): 90 marks (Total)
Time: 3 hours
Note: Use of dictionary is allowed

i. Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:

i. Aufklärung

ii. Sturm und Drang.

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Geschichte der deutschen Dichtung, Fricke/Klotz.

ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

GERMAN

Summary

Max. Marks: 100 marks (Total)
Paper-2 (Theory): 90 marks
Internal Assessment: 10 marks

Paper - 2 Essay and Translation (Theory): 90 marks

Time: 3 hours
Note: Use of dictionary is allowed

i. Translation of an unseen text/s from German into English : 50 marks

ii. Translation of an unseen text/s from English into German : 20 marks

iii. Essay writing in German (about 250 words) : 20 marks

i. Länder und Leute

ii. Ausbildung und Berufswege (Indien / Deutschland)

iii. Politik (Indien / Deutschland / Europa / Welt)

iv. Umzug und Einrichtung

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:
1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch by Hartmut Aufderstraße a.o.

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GERMAN

VI-Semester

Summary

Max. Marks: 100 marks (Total)
Written Paper (Theory): 90 marks
Internal Assessment: 10 marks

Written Paper (Theory): 90 marks (Total)

Time: 3 hours
Note: Use of dictionary is allowed

Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:
i. Klassik
ii. Romantik

Internal Assessment : 10 marks (Total)
- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:
i. Geschichte der deutschen Dichtung, Fricke/Klotz.
ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:
i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

Viva-voce (Oral exam)

Max. Marks : 100 marks (Total)

i. Reading, comprehension (question/answers) of an unseen text : 40 marks
ii. To speak on one of the given topics : 30 marks
iii. General conversation in German : 30 marks

Suggestions for preparation:
i. Magazine (Der Spiegel), Internet websites, Information on German-speaking countries etc.

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DEFENCE & STRATEGIC STUDIES
SEMESTER - V
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016-17

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Paper : Area Studies China-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hrs.

Total Teaching Periods: 75

SECTION-I

1. Military Geography of China : Location, size and strategic importance.
2. Economic and Industrial resources (in brief).
3. Population, composition and characteristics of major ethnic groups.

SECTION-II

1. History of China in brief from the CH'IN to Manchus Dynasty.
2. Nationalist Revolution in China under Dr. Sun Yet Sen : Events and effects.

SECTION-III

1. Rise of Chiang Kai Shek.
2. The Nanking Government of China, long march in China.
3. The Civil War in brief.

SECTION-IV

1. Party-Army Relationship.
2. Communist party and its relationship with the Armed Forces.
3. Higher Defence Organisation.
4. Cultural Revolution.

BOOKS RECOMMENDED :

1.	Balance, Edger O.	:	The Red Army of China, Russell Square, London.
2.	Chatterji, B.R.	:	Modern China –A Short History, Meenakshi Printing, Meerut.
3.	Encyclopaedia of Britannica.		
4.	Gupta, R.S.	:	History of Modern China, Sterling Pub.
5.	Kapur, Harish	:	China in World Politics, Div. Pub., N.D.
6.	Liu, F.F.	:	A Military History of Modern China, Princeton Uni. Press.
7.	Mao Tse Tung	:	Communist Rule in China.
8.	Mc. Aleavy, Henry	:	The Modern History of China.
9.	Mitchison	:	Chinese Revolution.
10.	Nung Chen Li	:	The Political History of China, Princeton Uni. Press.
11.	Pelissier Roger	:	The Awakening of China, Secker and Warturg, London.
12.	Tregear, T.R.	:	A Geography of China, University of London.
13.	Wilson Dick	:	A Quarter of Mankind, Weidenfeld and Micholson Olson, London.

DEFENCE & STRATEGIC STUDIES
SEMESTER - VI
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016-17

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Max. Marks : 100
Theory : 90 Marks
Int. Ass. : 10 Marks
Time : 3hrs

Total Teaching Periods: 75

Paper : Area Studies China-II

SECTION- I

SINO-INDIAN WAR (1962)

1. Events Leading to the war.
2. Operation in brief.
3. Lessions learnt

SECTION- II

1. Determinants of Chinese Foreign Policy.
2. China's Relations with India.
3. China's Relations with Pakistan and its impact on India.

SECTION–III

1. China's Relations with other neighbouring countries.
2. China's Relations with the U.S.A.
3. China's Relations with Russia.

SECTION-IV

1. Defence Potential of China.
2. China's Modernization Program.
3. China's Nuclear Weapon Development.

Books Recommended:

1. Dalvi, J.P. : Himalyan Blunder, Thackei' and Co., Bombay.
2. Griffith Samoul, B. : The Chinese People's Liberation Anny, Army Pub., N.D.
3. Kapur, Harish : China in World Politics, Div. Pub., N.D.
4. Mao TsiTung : CoIn;m~ist Rule ~Chin~. .
5. Sharma, B.L. : The Paklstan-'-Chma AXIS, Asia Pub., B~mbay.
6. Sinh~; K.K. : Problems of Defence of South and East Asia, Rawat Pub., Jaipur.
7. Tr~er N. Frank and : Twentieth Appraisal Year, Weidenfeld and Nicolson, London, William Genderson
8. Cassell & Company : Guerilla Warfare-Mac Tse- Tung & Guevera, Red Lion Sq.,London.

Journals: -

1. RAUSEN DATA : Problem of Communism.
2. Institute of Defence Studies & Analysis (India)
   i. Strategic Analysis.
   ii. Strategic Digest.
3. The China Quarterly.
4. The Institute of Strategic Studies, London. : Military Balance, IISS London.

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HISTORY

B.A.(HONOURS) SEMESTER V/VI 2016-17

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any one paper from the following:

Semester V

History of China

OR

History of Russia

(i) HISTORY OF CHINA:

Max. Marks:	**100**
Theory:	**90 Marks**
Internal Assessment:	**10 Marks**
Time	**3 hours**

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

CHINA IN THE 18^{TH} CENTURY

1. Political and Economic Institutions
2. Social and Intellectual Conditions
3. Foreign Relations

UNIT-II

'OPENING' OF CHINA AND REBELLIONS

4. Canton Trade System, Opium Wars, Treaty Settlements
5. Taiping Revolution
6. Reform Movement of 1898

UNIT-III

REVOLUTION AND REFORM

7. Boxer Rebellion 1900
8. Intellectual, Social and Economic Change
9. Rise of Sun Yat Sen and Revolution

UNIT-IV

RISE OF THE REPUBLIC

10. Intellectual Revolution and National Unification
11. National Government 1928-37
12. Chinese People's Republic 1945-49

Recommended Readings :

1. Chesneaux, Jean Francoise Le : *China : From the Opium Wars to 1911 Revolution Vol.I.* Delhi : Khosla, 1978.
2. Hsu Immanuel : C.Y., *The Rise of Modern China*, New York : Oxford University Press, 1970.
3. Vinacke, Harold M. : *A History of the Far East in Modern Times*, New York : Appleton Century Crafts, 1961 (6th edn.).
4. Clyde, Paul Hibbert, : *The Far East : A History of the Impact of the West on Eastern Asia*, Englewood Cliffs, N.J. Prentice Hall : 1958 (3rd edn.).

(ii) HISTORY OF RUSSIA:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

1. *Liberalism and Reaction :* Alexander I; Nicholas I.
2. *Modernisation of Russia :* Alexander II; Alexander III & Nicholas II.

UNIT-II

3. *Russia and the Far East :* Interventions in China, Mongolia and Manchuria.

4. *Background of Russian Revolution 1905-1917 :* Revolution of 1905; Russia on the eve of the Revolution of 1917 – Polity, Society, Economy; Lenin's Contribution to the Revolution.

UNIT-III

5. *Causes of the Russian Revolution and its Aftermath :* The February Revolution and the Provisional Government, the Bolshevik (October Revolution), its impact on Russia and the World.

6. *Civil War :* Russian withdrawal from First World War; Peace of Brest Litovisk; Allied Intervention.

UNIT-IV

4. *The Soviet Economy :* War Communism; New Economic Policy and its impact.

5. *Planned Economy :* Weaning from the New Economic Policy and the First Five Year Plan.

Recommended Readings :

1. Barrington Moore (Jr.) :*The Social Origins of Dictatorship and Democracy.*
2. Paul Kennedy : *The Rise & Fall of Great Powers,* Fontana Press London, 1988.
3. Lionel Kochan : *The Making of Modern Russia,* Penguin Books, 1962.
4. Basil, Dymtrystyn :*History of Russia,* Prentice Hall, New Delhi, 1977.
5. E.H. Carr : *The Bolshevik Revolution,* Penguin Books Ltd., Victoria, 1971 (Reprint).
6. M.T. Florinsky : *Russia : A Short History,* Macmillan, London, 1971 (2nd ed.)

HISTORY

Semester VI

Any one paper from the following :

(III) Social Origins of Right And Left Wing Dictatorship Of Modern Times
OR
(IV) USA and the World c.1800-1960's

(III) SOCIAL ORIGINS OF RIGHT AND LEFT WING DICTATORSHIP IN MODERN TIMES:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I:China

1. The Collapse of Imperial System, the emergence of War lords; the Kuomintang interlude; efforts at democracy and Capitalism.
2. The Peasant rebellions; Communist Revolutions; success against the Kuomintang

UNIT II:Russia

3. The Internal Collapse of the Tsarist Regime; Revolution of 1917- Feb/ March and October
4. The Establishment of a Communist Government; Forced industrialization and Collective Agriculture; Stalinist Totalitarianism.

UNIT III:Italy

5. Italy's problems with the Capitalist powers; Failure of Italian Democracy in Economic, Social and Foreign policy
6. The Fascist alternative: Ideology and the corporative state

UNIT IV:Germany

7. Germany's rise as a capitalist powers; Weimar republic and its failure.
8. The fascist stresses with western Europe; Nazi totalitarian programme.

Essential readings:

Barrington Moore : *Social Origins of Dictatorship and Democracy*, Penguin/Peregrine 1977. (reprint)

Reference Reading

Hannah Arendt : *The Origin of Totalitarianism*, Harcourt Brace, New York. 1951

F. Chabad : *A History of Italian Fascism* (Tr. Muricl Grindard) Weidenfeld and Nicolson, London 1961.

(IV) USA AND THE WORLD c.1800-1960's:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I

1. US Foreign Policy 1789-97-Response to French; issues with Britain; Jay's Treaty 1799; Pinckney's Treaty 1797; Peace with France
2. Diplomatic Achievements 1800-1820's-Louisiana Purchase; Settlement with Britain; Acquisition of Florida; non colonization of Alaska; liberation of Latin America; Monroe Doctrine
3. Industrial Revolution in America-expansion of transportation; manufacturing; foreign trade and shipping

UNIT II

4. Expansion to the West in the 1830's –Early settlement in the West; Texas question; migration to Oregon
5. Manifest Destiny –Annexation of Texas; Oregon Treaty; Relations with Mexico; conquest of California
6. USA as a World Power-Expansion in Pacific region; Dispute with Venezuela; Results of War with Spain 1898; Policy in Caribbean and Mexico; Open Door Policy in South East Asia

UNIT III

7. USA and World War I-US attitude to war, entry into the war; 14 point programme, role in Paris peace conference 1919
8. Foreign Policy 1920,s-30's- Washington Treaties, Locarno Treaty, Relations with Mexico, Change in 'Big Stick' Policy, Good Neighbour policy, reaction to Chinese situation
9. USA and World War II- US attitude, US aid to War and War Production, Pearl Harbour

UNIT IV

10. New World Order-US Peace Programme and United Nations, Relations with Soviet Union and Containment, Pan, American Conference 1945, post War Europe
11. US in East Asia-American response to China, Japan, Korea, Vietnam
12. US in Europe and West Asia-US and NATO, issues with Egypt, support to Israelis, Eisenhower Doctrine

Recommended readings:

1. Henry Bamford Parkes : *The United States of America: A History*, 1964 (Reprint), Scientific Book Agency, Calcutta, 1976.
2. Richard Current & Others : *History of United States: A Survey,* Alfred A. Knopf, New York,1965.
3. Julius W. Pratt : *A History of United States Foreign Policy,* Prentice Hall (Second Edition), New Jersey, 1965.
4. Allen, G.C., : *Japan's Economic Recovery*, London Oxford University Press, 1958 (Reprint 1960).
5. Beckman, George H : *The Modernization of China and Japan*, New York : Harper and Row, 1962.

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POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2016-2017

Outlines of Tests, Syllabi and Courses of Reading

V SEMESTER : Option (i) International Relations since 1945.
OR
Option (ii) Modern Indian Political Thought.
OR
Option (iii) Women and Political Process.

VI SEMESTER : Option (i) Research Methods in (Political Science) Social Sciences.
OR
Option (ii) Modern Political Ideologies
OR
Option (iii) Western Political Thought.

V SEMESTER : Option (i) — INTERNATIONAL RELATIONS SINCE 1945

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims at mapping out some of the major transformations that have occurred in the realm of International Relations since 1945.

UNIT-I Post World War-II International Relations :

(a) Post War World Order.
(b) Emergence of Super Powers.

UNIT-II Democracy and Rise of IIIrd World :

(a) Non-Alignment: Meaning and Relevance.
(b) SAARC, European Union.

UNIT-III Transformation in Post World War II International Relations :

(a) Decline of Bipolarity.
(b) Nature of Emerging World Order.

UNIT-IV New Global Scenario and International Relations:

(a) Demand for New International Economic Order (NIEO)
(b) Issue of Global Terrorism.

Suggested Readings :

1. Peter Calvocoressi : *World Politics Since 1945*, London : Longman, 1945.
2. Budhraj, V.S. : *International Relations After Second World War* (in Hindi), Chandigarh, Haryana Sahitya Academy, 2000.
3. Keswani, K. B. : *International Relations in Modern World* (1900-1988), Bombay, Himalaya Publishing House, 1994.
4. Baylis and Steve Smith : *The Globalization of World Politics – An Introduction to International Relations*, Oxford, Oxford University Press, 2001.
5. Alan C. Lamborn and Joseph Lepgold : *World Politics into the Twenty First Century : Unique Context, Enduring Patterns*, New Jersey, Prentice Hall, 2003.

References :

1. Paul Kennedy : *The Rise and Fall of Great Power*, Fontana Press.
2. Henry Kissinger : *Diplomacy*, London, Simon & Soluster, 1994.
3. Paul R. Viotti & Mark V. Kauppi : *International Relations and World Politics : Security, Economy*, Identity Third Edition Pearson Education, 2007.
4. John Baylis and Steve Smith : *The Globalisation of World Politics* : An Introduction to International Relations, Second Edition, OUP, 2001.

OR

V SEMESTER : Option (ii) — MODERN INDIAN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory

question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims at creating understanding about the evolution of political thought in modern India with special reference to the stated philosophers.

UNIT-I **Sir Syed Ahmed Khan :**

(a) As a Nationalist.
(b) Education.
(c) Muslim Nationalism-As a Communalist.

UNIT-II **M.K. Gandhi :**

(a) Satyagraha.
(b) Swaraj.
(c) Non-Violence.

UNIT-III **M.N. Roy :**

(a) Radical Humanism - critique of Marxism
(b) New Humanism

UNIT-IV **B.R. Ambedkar** :

(a) Annihilation of Caste
(b) Social Justice
(c) Democracy : Political and Social

Recommended Readings:-

1. Thomas Pantham & Deutsch (ed.) : *Political Thought in Modern India*, New Delhi, Sage, 1986.
2. Majumdar, B.B. : *History of Indian Social and Political Ideas,* Calcutta: Bookland, 1967.

References :

1. Parekh, Bhikhu : *Colonialism, Tradition, Reform : Analysis of Gandhi's Political Discourse*, New Delhi, Sage, 1989.
2. Iyer, Raghvan (ed.) : *Moral and Political Thought of Mahatma Gandhi*, New York, Oxford, 1973.
3. Appadorai, A : *Indian Political Thinkers in the Twentieth Century*, Delhi, Oxford, 1972.
4. Jatava, D.R. : *The Political Philosophy of B.R. Ambedkar*, Delhi; Arya Phoenix, 1965.
5. Hussain, M. Hadi, Syed Ahmed Khan : *Pioneer of Indian Resurgence Lahore*, Institute of Islamic Culture, 1970.
6. Imam, Zafar, : *Muslims in India*, New Delhi : Orient Longman, 1975.

7.	Chattarjee, Partha	:	*Nationalist Thought and the Colonial World, Delhi* : OUP, 1986.
8.	Lyer, Raghavan	:	*The Moral and Political Thought of Mahatma Gandhi*, Delhi : OUP, 1973.
9.	Pantham, Thomas, Parekh,	:	*Gandhi's Political Philosophy*, London, Macmillan, 1989, Bhikhu.
10.	Ghatak, B.K. (ed.)	:	*Dr. Ambedkar's Thought*, New Delhi : APH, 1997.
11.	Keer, Dhanajayay, Dr. Ambedkar	:	*Life and Mission, Bombay* : Popular Parkashan, 1964.
12.	Zelliot, Eleanor	:	*The Social and Political Thought of B.R. Ambedkar in Pantham and Deutsch*, 1986.
13.	Roy, M.N.	:	*New Humanism,* Calcutta : Renaissance, 1953.
14.	Roy, M.N.	:	*The Philosophy and Practice of Radical Humanism*, New Delhi : Radical Humanist Association, 1970.
15.	Roy, Samaren, M.N. Roy	:	*A Political Biography*, Hyderabad : Orient Longman, 1997.
16.	Ray, Sibnarayan (ed.), M.N. Roy	:	*Philosopher Revolutionary*, Delhi, Ajanta, 1995.
17.	Seth, Sanjay	:	*Marxist Theory and Nationalist Politics, The Case of Colonical India*, New Delhi : Sage, 1995.
18.	B.R. Ambedkar (Author) and Arundhati Roy (Introduction)	:	*Annihilation of Caste: The Annoted Critcial Edition,* Navayana, Delhi, 2014.
19.	Chitkara, MG	:	*Dr. Ambedkar and Social Justice,* APH Publishing Corporation, 2002.
20.	Christophe Jaffrelot	:	*Dr. Ambedkar and Untouchability: Analysing and Fighting Caste,* Columbia University Press, 2015.
21.	Gail Omvedt	:	Ambedkar: Towards An Enlightened India, Penguin India, 2008.

OR

V SEMESTER : Option (iii) — WOMEN AND POLITICAL PROCESS

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims to introduce students to the key approaches of Feminist thought contemporary debates concerning women and politics in India. It will include an analysis of the Indian State, the role of women's movement and the major feminist issues in contemporary Indian politics.

UNIT-I **Theoretical Approaches to Women Studies :**

(a) Liberal Feminism.

(b) Marxist / Socialist Feminism .

UNIT-II **Rise of Women's Movement, its role in Contemporary Societies :**

Historical Legacy :

(a) French Revolution, Civil Rights and Suffrage Movements in the West.

(b) Role and Contribution of Women in Indian National Movement.

UNIT-III **Women and Society in India :**

(a) Evolution of Women's position in India – an historical overview-

- (i) Vedic period
- (ii) Medieval Period (Post Vedic Period)
- (iii) Modern Period

(b) Social Position:

- (i) Demographic pattern- Sex Ratio.
- (ii) Legal, Political and Property Rights.
- (iii) Access to Education.

UNIT-IV **Women's Movement in Contemporary India:**

(a) Women Movement in India- Women Movements against Dowry & Rape

(b) Women and Political Participation in India-Status & Barriers, 73rd & 74th Amendment.

Recommended Readings :

1. Millet, Kate, *Sexual Politics*, New York, Doubleday, 1970.
2. Michele Barrett, *Women's Oppression Today*, London, Verso, 1980.
3. Lenin, V.I., *On the Emancipation of Women*, Moscow, Progress, 1981.
4. Eisenstein, Zillah, *Capitalist Patriarchy and the Case for Socialist Feminism*, New York, Longman, 1981 (also New York, Monthly Review Press, 1979).
5. Boserup, Easter, *Women's Role in Economic Development*, London, George Allen & Unwin, 1975.
6. Altback, E.M. (Ed.), *From Feminism to Liberation*, Cambridge, Massachusetts, Schenkman Hare Revised Ed., 1980.
7. Jayawardhane, Kumari (Ed.), *Feminism and Nationalism in the Third World*, New Delhi, 1987.

8. Phadnis, Urmilla and Malani Indira eds., *Women of the World : Illusion and Reality*, New Delhi, Vikas, 1978.

9. Desai, N., *Women in Modern India*, Bombay, Vora & Co., 1977.

10. Nanda, B.R. ed., *Indian Women from Purdah to Modernity*, New Delhi, Vikas, 1976.

11. *I.C.S.S.R., Status of Women's Committee Report*, New Delhi, ICSSR, 1975.

12. Mazumdar, Vina, *Towards Equality*, ICSSR, Delhi.

13. Desai, Neera and Krishanaraj, M., *Women and Society in India*, Delhi, Ajanta, 1987.

14. Chakaravarty, Shanti, *Rural Women's Claim to Priority*, New Delhi, C.W.D.S., 1986.

15. "Women's Struggles and Movement", Paper of Third National Conference, Chandigarh, IAWS.

16. Kaushik, S. (ed.), *Women's Oppression, Patterns and Perspective*, Vikas, New Delhi, 1984.

17. Kumar, Radha, *A History of Doing*, Kali Publications, New Delhi, 2006.

18. Gandhi, Nandita & Shah, Nandita, *The Issues at State*, New Delhi, Kali Publication, 1992.

19. Menon, Nivedita (ed.), *Gender & Politics in India*, New Delhi, Oxford University Press, 1999.

20. Rao, Anupama (ed.), *Gender & Caste*, Delhi, Sage Publications, 2005.

POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2016-2017

SEMESTER- VI

VI SEMESTER : Option (i) — RESEARCH METHODS IN (POLITICAL SCIENCE) SOCIAL SCIENCES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper endeavors to introduce the students about the tools of research methodology into social sciences. The paper would enable the students to take up research after Master's degree.

UNIT-I Research in Social Science with reference to Political Science—Definition, Nature and Limitations.

UNIT-II Methods – Traditional and Scientific, Survey Research Methods : Observation, Interviews, Questionnaire, Content–Analysis.

UNIT-III
(a) Sample and Sampling Techniques.
(b) Measures of Central Tendency—Mean, Mode and Median.
(c) Data Processing—Coding Tabulation and Analysis.

UNIT-IV Research Design : Formulation of Research problem, Hypotheses, Objective, relevance of study, Literature Review, Methodology Report Writing.

Suggested Readings :

1. Goode and Hatt, *Methods in Social Research*, Auddond (McGraw - Hill), New York, 1952.
2. Pauline Yong, *Scientific Survey and Research*, New Delhi, 1968.
3. Arnold Brecht, *Political Theory*, Times of India Press, 1970.
4. Michael S. Lewis-Beck, ed., *The Encyclopedia of Social Science Research Methods*, New Delhi, Sage, 2004.
5. Keith F. Punch, *Introduction to Social Research*, London, Sage, 2005.

6. Shapiro, Ian, Rogers M. Smith and Tarek E. Masoud, *Problems and Methods in the Study of Politics, Cambridge* : Cambridge University Press, 2004.

7. Van Evera, Stephen, *Guide to Methods for Students of Political Science*, Ithaca : Cornell University Press, 1997.

8. Goertz, Gary, *Social Science Concepts : A User's Guide*, Princeton : Princeton University Press, 2006.

9. Creswell, John W., *Research Design : Qualitative, Quantitative, and Mixed Method Approaches :* Thousand Oaks, Calif : Sage Publications, 2003.

OR

VI SEMESTER : Option (ii) : MODERN POLITICAL IDEOLOGIES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper refers to the basic tenets of modern political ideologies.

UNIT-I **Liberalism :**
a) Classical and Modern Liberalism.
b) Neo Liberalism.

UNIT-II **Socialism :**
a) Marxian Socialism.
b) Democratic Socialism

UNIT-III
a) Anarchism.
b) Fascism

UNIT-IV **Gandhism**
a) Gandhi's Idea of State:
b) Social and Political Ideas of Gandhi.

Suggested Readings :

1. Bandhyopadhya, J., *Political and Social Thought of Gandhi*, Bombay, 1969.
2. George Lichtheim, Marxism : An Historical and Critical Study, Routledge and Kegan Paul, London, 1962.
3. Noel O' Sullivan, Conservation, St. Martin's Press, New York, 1976.
4. Manning, D.J., Liberalism, St. Martin's Press, New York, 1976.

OR

VI SEMESTER : Option (iii) — WESTERN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims to introduce to the students the major themes of Western Political Thought. This will be done by taking an in-depth study of the key thinkers of this tradition.

UNIT-I Hobbes.
- a) Nature of Man, State of Nature, Natural Laws.
- b) Social Contract.
- c) Individualism Vs. Absolutism.

UNIT-II Locke.
- a) Nature of Man, State of Nature, Natural Rights.
- b) Social Contract.
- c) Contribution of Locke to Liberalism.

UNIT-III Rousseau.
- a) State of Nature, Natural Man.
- b) Social Contract.
- c) Theory of General Will.

UNIT-IV Karl Marx.
- a) Historical Materialism, Economic Determinism.
- b) Theory of Surplus Value.
- c) Class Struggle.

Recommended Readings :

1. Sabine, G.H., *A History of Political Theory*, Bombay : Oxford & IBH, 1973.

2. Dunning, W.A., *A History of Political Theories*, 3 Vols., Allahabad : Central, 1973.

3. Sait, E.M. (ed.), *Masters of Political Thought*, 3 Vols., London : George and Harap, 1947.

4. William Ebenstien, *Great Political Thinkers—Plato to the Present*, OUP : New Delhi, 1966.

5. Jen Pike, Nigel Waaburton & Derek Matravers, *Reading Political Philosophy, Machiavelli to Mill*, London, Routledge, Open University, 2000.

6. Andrew Hacker, *Political Theory*, London, OUP, 1961.

7. David Boucher & Paul Kelly, *Political Thinkers, From Socrates to the Present*, Paperback U.K., 2003.

8. David Boucher & Paul Kelly, *The Social Contract*—from Hobbes to Rawls, Paperback, U.K., 1994.

References :

1. Rapheal, D.D., Hobbes, *Morals and Politics*, London, George Allen, 1978.

2. David Macdellan, *Marx*, London, Fontana Modern Masters Series, 1983.

3. Plamenatz, J., *Man and Society*, 2 Vols., New York, Longman, 1984.

4. Hall, J.C., Rousseau : *An Introduction to His Political Philosophy*, London, MacMillan, 1973.

5. John, Dunn, *The Political Thought of John Locke*, Cambridge, Cambridge University Press, 1969.

6. Roger, D. Masters, *The Political Philosophy of Rousseau*, Princeton, Princeton University Press, 1968.

7. Shlomo, Avineri, *The Social and Political Thought of Karl Marx*, New Delhi, S. Chand, 1968.

8. Jon Elster, *Making Sense of Marx*, Cambridge, Cambridge University Press, 1985.

9. Ernest Cassirer, *The Question of Jean Jacques Rousseau*, New Haven and London, Yale University Press, 1989.

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ECONOMICS
BA Honours (Fifth Semester) -2016
Third Year

The candidates are required to study **one of the** following papers:

I Money and Banking.

II International Economics.

III Introduction to Econometrics.

Paper-I : MONEY AND BANKING

Max. Marks	: 100 Marks
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objective: Money and Banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude channels- market, non market, institutes and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutes in the process of growth and development. Accordingly, the paper on 'Economics of Money and banking' is an optimal interaction of monetary theory, banking and non- banking financial institutes, which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

(i) *The syllabus has been divided into four units.*

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions.It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two**questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition of Money, Money and Near Money Assets.
Supply of Money:Components, Determinants- High Powered Money and Money Multiplier, Measures of Supply of Money in India.

UNIT-II

Demand for Money: Classical Theory, Keynes Liquidity Preference Theory, Friedman's Restatement of Quantity Theory of Money.
Central Banking: Main Functions, Techniques of Monetary Management, Monetary Policy of Reserve Bank of India.

UNIT-III

Commercial Banking: Main Functions, Major Developments and Reforms in Indian Banking System since 1991.
Non-Banking Financial Institutions (NBFIs) – Role and Structure NBFIs in India.

UNIT-IV

International Monetary Fund- Features and Role.
World Bank: Features and Role.
Asian Development Bank: Features and Role.

Recommended Readings:

1. Diulio A. Eugene (latest Edition) : Theory and Problems of Money and Banking, International Edition (Schaum's Outline Series)
2. Gupta, S. B (2004) : Monetary Planning in India, S. Chand, New Delhi.
3. Khanna, Perminder (2005) : Advanced Study in Money and Policy : Relevance in the Indian Economy, Atlantic Publishers, New Delhi
4. Kulkarni, G (1999) : Modern Monetary Theory, McMillan, New Delhi
5. Laidler, D. E. W (1977) : The Demand for Money : Theories and Evidence, Allied Publishers, New Delhi.
6. Bofinger Peter (2001) : Monetary Policy: Goals, Institutions, Strategy and Instrument, Oxford University Press.

Supplementary Readings:

1. Reserve Bank of India Publications- (Latest).
2. Government of India: Economic Survey (latest)

Paper-II: INTERNATIONAL ECONOMICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:Objectives: - The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital- both short-term and long-term- at the global level. The contents of the paper spread over the different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both as the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought the students writing assignments, tutorials and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to beof answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Pure Theory of International Trade:Theories of Absolute Advantage, Comparative Advantage andOpportunity Costs. Heckscher-Ohlin Theory. Factor Price Equalisation. Gains from Trade, their Measurement and Distribution. Terms of Trade, Secular Deterioration Hypothesis.

UNIT-II

Commercial Policy:The Theory of Tariffs, Optimum and Effective Rate of Tariff, Inter-relationship betweenTrade, Aid and Economic Development. The Theory of Economic Integration among Nations; Forms of Economic Integration. The Theory of Customs Union.

UNIT-III

Balance of Payments, Exchange Rate and Trade Structures:The Process of Adjustment in the Balance ofPayments. The Concept of Foreign Trade Multiplier. Fixed Vs. Flexible Exchange Rates and their Relative Merits and Demerits. Structure of Trade, Trade between Developing and Developed Countries. Unequal Exchange and its Impact on Balance of Payments. Current Problems of Trade and Finance of Developing Countries. Role of Multinational Corporations in the Developing Countries.

UNIT-IV

International Monetary System:IMF and International Monetary System, Present International Monetary System, problems of International Liquidity. Proposals for International Monetary Reforms. New International Economic Order.

Recommended Readings :

1. Soderston , B. O. (1994) : International Economics, 2nd Edition, Macmillan Press, London,
2. Salvatore, Dominick (latest edition) : International Economics, John Wiley & Sons.
3. Krugman P R &ObstifeldMaurice(latest edition) : International Economics – Theory and Policy, Addison- wesley.
4. Ghuman , Ranjit Singh (latest edition) : Antar-RashtriyaArthVigiyan, (Punjabi Medium) Punjabi University, Patiala.

Supplementary Readings :

1. Kindleberger, C. P. (1987) : International Economics, Richard Irwin, Homes wood, Illinois, Indian Edition.
2. Sir RaiHarrod (Trans. Pritam Singh Gill) : Antar-RashtriyaArthShastar, Punjabi University, Patiala.

Paper-III: - INTRODUCTION TO ECONOMETRICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: Application of economic theory need a reasonable understanding of economic relationship andstatistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant application of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous models.

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, is so far as possible, would be selected from everyday life/experience. The feedback would be sough through the students writing assignments and written examinations.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition and Scope of Econometrics. The Methodology of Economic Research. Specification and Estimation of an Econometric Model.
Single Equation Models*:*Ordinary Least Squares: Estimation and Properties of the Estimators

UNIT-II

Testing of Hypothesis*:*Basic Concepts; Type I and Type II errors. Simple and Composite Hypothesis.t and F tests. Maximum Likelihood Estimation.

UNIT-III

The General Linear Regression Model in Matrix Form: Estimation and Properties of the Estimators.
Tests of Significance of Coefficients. Partial Correlation Coefficients.
Multicollinearity:Its Detection and Solution.
Heteroscedasticity: Its Detection and Solution.

UNIT-IV

Dummy Variables*:*The dummy Variable Trap. Interpretation of Slope and Intercept.
Lagged Variables*:*Uses in Economics. Estimation Problems, Koyck Transformation, Partial and Stock Adjustment Models.

Recommended Readings :

1. Gujarati, Damodar (2007) : Basic Econometrics, McGraw Hill, New Delhi.
2. Ohnson, J. (1977) : Econometrics Methods, 2nd Edition, McGraw Hill, New

Supplementary Readings :

1. Intrilligator, M. D. (1978) : Econometric Models and Applications, Prentice Hall
2. Kendall, M. G. & A. Sturat (eds.) : Advanced Theory of Statistics, Vols. I & II, Griffin and Co., London.
3. Maddala, G. S. (1977) : Econometrics, New Delhi, McGraw Hill.
4. Wallis, K. F. (1973) : Topics in Applied Econometrics, London, Bray Hills

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ECONOMICS
B.A. Honours (Sixth Semester) -2017

The candidates are required to study **one of the** following papers:

IV Environmental Economics
V Economics of Labour
VI Public Finance

Paper-IV : Environmental Economics

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our resources by optimally allocating them for future use.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Introduction to Environmental Economics: Introduction; the Economy and the Environment: Inter-Linkages; First Two Laws of Thermodynamics.
Economic Efficiency and Market Failures: Market Solution and Efficiency; Market Failures; Problem of Externalities; Public goods and Public bads; Common Property Recourse; Non-convexities; Asymmetric Information.

UNIT-II

Economic of Pollution*:* Damage Functions and Abatement Cost Functions; Marginal Decision; Optimal Level of Pollution; Market Solutions and Government Actions; Economic Incentives and least-Cost Solution; Command and Control Policies.

UNIT-III

Valuing the Environment: Economic valuation of Environment Goods: Types of Environmental Values; Monetary Valuation Techniques; Non-Monetary Valuation Techniques; Comparing Methodologies. The Environmental Kuznets Curve

UNIT-IV

Cost-Benefit Analysis and the Environment: The Theory of Cost Benefit Analysis; Idea of Discounting and Choice of Discount Rate; Framework for Cost – Benefit Analysis; Discounting and Future Generation.
International Environmental Issue: Economics of Climate Change: Trade & Environment.

Economic Growth and Sustainable Development: Economic Growth and Development; the Environmental Kuznets Curve; Economics of Sustainable Development.

International Environmental Issues: Economics of Climate Change; Trade and the Environment.

Recommended Readings :

1. Goodstein, E.S. (2002) : Economics and the Environment(3rd ed.) Prentice Hall.
2. Hanley, N., Shogern, J.F and White, B (1977) : Environmental Economics in Theory and Practice, Macmillan
3. Sankar, U. (ed) James, A.J., M.N. : Environmental Economics, Oxford University Press, New Delhi.
4. Murty and Smita Mishra(2006) : Murty and Smita Mishra (1999), Economics of Water Pollution- The Indian Experience, Oxford University Press, New Delhi
5. Varian. Hal R., (2006), : Intermedate Micro-Economics- A Modern Approach, 7th ed., East-West Press.
6. Cherry, S.N. and Vyasual, Vinod (2000), : Environmental Management- an Indian Perspectives, Macmillan, New Delhi.

Paper- V: Economics of Labour

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

COURSE Objective: Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing "joblessness", the importance of issues such as employment and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India. The time–tested method of imparting verbal instructions through lectures would be used

The objective of the course is to provide students with the basic economic tools needed to understand and analyze how earnings are determined, how labour markets work and how various government policies may affect labour market.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit I

Nature and Scope of Labour Economics, Nature and Characteristics of Labour Markets in Developing Countries like India.

Theories of Wages, Concept of Minimum Wage, Living Wage and Fair Wage in Theories and Practice.

Unit II

Wage Determination in various Sectors- Rural, Urban, Organized, Unorganized and Informal Sectors.

Poverty and Unemployment in Developing Countries, Unemployment: Concept, Types and Employment Policy particularly in India.

Unit III

Impact of Rationalization, Technological Change and Modernization on Employment in Organized Private Industry and Public Sector; Employment in Agriculture Sector; Women and Child labour.

Unit IV

Role and Functions of Trade Unions, Growth, Pattern and Structure of Trade Unions in India, Achievements of Labour Unions, Collective Bargaining.
Industrial Disputes: Causes of Industrial Disputes, Their Settlement and Prevention Mechanism.

BOOKS RECOMMENDED

1.	Binswanger, H. P. & M. R. Rosenzweig (eds.) (1984)	:	Contractual Arrangements, Employment, and Wages in Rural Labour Markets in Asia, Yale University Press, New Haven.
2.	Datt, G. (1996)	:	Bargaining Power, Wages and Employment; An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3.	Deshpande, L. K., P. R. Brahmananda and EAG Robinson (eds.) (1983)	:	Employment Policy in a Developing Economy, Vols. I & II, Macmillan, London.
4.	Deshpande, L. K. and J. C. Sandesara (eds.) (1970)	:	Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
5.	Deshpande, S. G. Standing and L. K. Deshpande (1998)	:	Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
6.	Foster, A. D. & M. R. Rosenberg (1993)	:	Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank,Washington D C.
7.	Campbell, R. McConnell and Stanley, L. A. Brue and D. A. Macpherson (2010)	:	Contemporary Labour Economics, 8th Ed. McGraw Hill Book

Supplementary Readings:

1.	Hauseman, S. (1991)	:	Industrial Restructuring with Job Security : The Case of European Steel Harvard University Press,Cambridge, Mass.
2.	Hicks, J. R. (1932)	:	The Theory of Wages, Clarendon Press, Oxford.
3.	Lester, R. A. (1964)	:	Economics of Labour (2nd edition), Macmillan, New York
4.	McConnell, C. R. & S. L. Brue (1986)	:	Contemporary Labour Economics, McGraw- Hill, New York.
5.	McCormick, B. & Smith (eds.) (1968)	:	The Labour Market, Penguin, Harmondsworth
6.	Tyagi,B.P (Latest edition)	:	Labour Economics and Social Welfare, Jai Parkash Nath and Co.
7.	Pant, S C(1965) Publishing	:	Indian Labour Problems,Chaitanya House, Allahabad

Paper-VI: PUBLIC FINANCE

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Objectives: Role and function of the Government in an economy have been changing with the passage of time. The term' Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income etc. there are vast array of fiscal institutions- tax system, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existing of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

The student would be evaluated at the end of each semester through subjective type questions/answer (both short and essay type). The scripts would be evaluated by the examiners having adequate graduate teaching experience in the paper/option concern.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Principle of Public Finance – Subjective and Objective Criteria.
Theory of Public Expenditure*:*Maximum Social Advantage, Theory of Social Goods: Distinction between
Public, Private and Merit Goods. Public Expenditure and Economic Growth. Effects of Public Expenditure on Production, Distribution, Social Over-head Capital, Stability and Innovation. Criteria of Public Expenditure.

UNIT-II

Public Revenue*:*Approaches of Equity in Taxation:Benefits principle Cost of Service Principle, Ability toPay Theory. Effects of Taxation. Analysis of Major Taxes – Income Tax, Expenditure Tax, Corporation Tax, Wealth Tax, Excise Duties, Sales Tax, and Custom Duties. The concept of Taxable Capacity. Taxation in a Developing Economy. Fiscal Incidence: Theories of Tax Shifting, Concepts of Incidence, Measurement of Incidence.

UNIT-III

Public Debt:Role of Public Debt. Different Forms of Public Debt. Burden of Public Debt, Redemption of Public Debt. Debt Management.
Budgetary Policy*:*Functional and Economic Classification of budgets and their Uses. PerformanceBudgets. Budget as an Instrument of Mobilization and Chanalization of Resources and Redistribution of Income and Wealth.

UNIT-IV

Balance and Unbalanced Budgets.
Fiscal Federalism*:*Principles of Federal Finance.
Development Finance*:*Functional Finance vs. Development Finance.
Mobilisation of Financial Resources for Planned Developments.

Suggested Readings:

1. Buchanan J.M. : Public Finance in the Demostic Process (Collected works of James M Buchanan), Library Fund, USA.
2. Musgrave, R. A. (1959) : Theory of Public Finance, McGraw- Hill Publishers.
3. Musgrave R A. & Musgrave P B (5th edition) : Public Finance in Theory and Practice, Mc Hill Publishers
4. Taylor P.E (1949) : The Economics of Public Finance, Macmillan Publishers, New York.

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SOCIOLOGY
B.A. (HONOURS) Fifth Semester

Methods and Techniques of Social Research

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 =18 marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

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The students will be introduced with basic methods and techniques in social research. The objective of this course is to familiarize the students with the basic elements of scientific method, various methods of data collection and social measurement.

Course Content :

UNIT-I

Scientific Method : Features; Concepts; Stages of social research; Hypothesis.

UNIT-II

*Sampling Technique: Meaning P*opulation and Census, Sampling frame
Types of Sampling: Probability: Simple random/stratified random/cluster/multi-stage.
Non–Probability: Accidental/Quota/Purposive; Sampling Error.

UNIT-III

Techniques of Data Collection : Observation, Participant and Non-Participant Observation, Interview Schedule and Questionnaire (Structured/Unstructured); Case study method.

UNIT-IV

Measurement : Levels and Problems, Measures of Central Tendency: Mean, Mode, Median.

Essential Readings :

1. Sellltiz, Claire et.al : *Research Methods in Social Relations* (Revised ed.), New York: Henry Hold & Co. (latest edition).
2. Goode, W.J. & Hatt, P.K. : *Methods in Social Research,* New York: McGraw Hill, Latest Indian Edition, 1952.
3. Young, P.V. : Sc*ientific Social Surveys and Research,* New Delhi: Prentice Hall of India Private Ltd., 1988.
4. Mukerjee, P.N. : *Methodology on Social Research: Dilemmas and Perspectives,* New Delhi: Sage, 2000.

Further Readings :

1. Festinger, L. & Katz, D. : *Research Methods in Behavioural Science,* New York: Dryden Press, 1953.
2. Lindzey, Gardner & Aronson : *The Handbook of Social Psychology* (2nd ed.), Addison: Wesley Pub. Comp., 1968.
3. Robson, Colin : *Real World Research*, Oxford: Blackwell, 2000.

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SOCIOLOGY
B.A. (HONOURS) Sixth Semester

Option (i) Social Demography

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The course exposes students to various components of population growth, data sources and basic theoretical problems of population. Concepts of mortality and fertility are discussed in general and with reference to India in particular. Students are apprised of the latest Population Policy in India.

Course Content :

UNIT-I

Population : Definition, Scope, Nature, Sources of Population Data-Census and Vital Registration.

UNIT-II

Population Theories : Malthusian theory of Population; Biological: Theory of Density Principle and Diet Theory; Social Theories: Social Capillarity and Theory of Diffusion: Theory of Demographic Transition.

UNIT-III

Concepts of Mortality : Causes of Mortality, Infant Mortality, Mortality in India.

Fertility : Concept of Fertility, Factors affecting Fertility–Biological, Socio-Cultural and Psychological Fertility in India.

UNIT-IV

Population Policy in India, Female Foeticide (reference to PNDT Act).

Essential Readings :

1. Bhende, Asha & Kanitkar, Tara : *Principles of Population* (revised ed.), Bombay: Tara Himalaya Publishing House, 1996.
2. Bogue, Donald, J. : *Principles of Demography,* New York: John Willey, 1969.
3. Nam, Charles, P. : *Population and Society, 1968.*
4. Premi, M.K. : *An Introduction to Social Demography,* Delhi: Vikas Publishing House, 1983.
5. Weeks, J.R. : *Population: An Introduction to Concepts & Issues,* London: Wardworth Publishing Co., 1988.

Further Readings :

1. Bose, Ashish : *India & The Asian Perspective,* New Delhi: B.R. Publishing Corporation, 1993.
2. Matras, Juda : *A Sociological Approach,* New Jersey: Prentice Hall, 1977.
3. Government of India : *National Population Policy* (2000), Ministry of Health & Family Welfare, GOI.

   (Latest Census Reports and Sample Registration Bulletins of the Government of India.)
4. Premi, M.K. : *India's Population: Heading towards a Billion,* Delhi: B.R. Publications, 1991.

B.A. (HONOURS) Sixth Semester
SOCIAL DEVIANCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 =18 marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

To understand the contemporary social problems in society, the students are exposed to the basic concept of deviance, its theoretical perspectives and control mechanisms.

Course Content:

UNIT-I

Deviance : Definition, Concept (Relative and Absolute) Distinction between deviant behaviour and deviant role. Pathological theories (Biological and Psychological).

UNIT-II

Sociological Theories : Theories of social disorganization (C.H. Cooley, W.I. Thomas and Florian Znaniecki, W.F. Ogburn).

Structural-Functional Theories : Theory of Anomie (Emile Durkheim, Robert K. Merton), Differential Association (E. Sutherland and D.R. Cressey).

Interactionist Theories : Theory of Labelling (Edwin M. Lemert and Howard S. Becker).-+

UNIT-III

Controlling Deviance : Socialization - means and agencies, Social Control: means and agencies, Social codes and customs; Sympathy: passive and active.

UNIT-IV

Selected Problems of Deviance: Sex Deviance, Delinquency, White Collar Crimes, Cyber Crime.

Essential Readings :

1. Becker, Howard S. : *Outsiders: Studies in the Sociology of Deviance,* Glenco, Free Press, 1987.
2. Ferrell, R. & V.L. Swigert [ed.] : *Social Deviance*, New York: J.B. Lippincott Co. 1975.
3. Haralambos, M. : *Sociology – Themes & Perspectives,* Delhi, Oxford University Press, 1984.
4. Kelly, Delos H. : *Deviant Behaviour: Readings in Sociology of Deviance*, New York: Martin's Press, 1979.
5. Lawson, T & T. Heaton : C*rime & Deviance,* New Delhi : Macmillan, 1999.
6. Metta, Spencer : *Foundations of Modern Sociology*, New Jersey: Prentice Hall Inc., Englewood Cliff, 1979.
7. Michael Mc Kee and Ian Robertson : *Social Problems,* Toronto: Random House Inc., 1976.
8. Thio, Alex : *Deviant Behaviour,* London : Houghton Mifflin, 1978.

Further Readings :

1. Erdwin. H. Pfuhl : *The Deviance Process,* New York: D.Van Nostrand Co., 1980.
2. Ian Robertson : *Sociology,* New York: Publisher Inc. 1977.
3. John, J. Grant : *Social Problems as Human Concern,* San Francisco: Body & Fraser Publishing Company, 1976.
4. Rubington, Weinberg : *Studies of Social Problems,* New York: Oxford University Press, 1977.
5. Rushing, William A. [ed.] : *Deviant Behavior & Social Process:* Rand McNally College Pub. Co., 1985.

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016 – 17
SEMESTER – V

Paper Option (i) : PHILOSOPHY OF SCIENCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The aim of this paper is to analyse the concepts of philosophy and science, Einstein's Theory of Relativity i.e. space, time and relativity; Nature of observational language and theoretical language; causality, prediction and probability; Principle of Complimentarity.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

1. The Nature and Scope of Philosophy of Science. Relation between Philosophy and Science.

2. Einstein's Theory of Relativity : Space, time, reality.

3. Methodological character of theoretical concepts. Observational language, theoretical language, a criterion of significance of theoretical terms. Dispositional concepts, Difference between theoretical terms and pure dispositional terms.

UNIT-II

4. Causality, Prediction and Probability.
5. Principle of Causality.
6. Causality as the existence of Laws.

UNIT-III

7. Causal Law and Statistical Laws.
8. Induction and Probability.
9. Theories of Probability.

UNIT-IV

10. Rationality Debate & Theory Choice.
11. Popper & Kuhn

Essential Readings :

1. Bridgman, P.W. : The Logic of Modern Physics (New York : Macmillan, 1958).
2. Earnest Nagel : Structure of Science (Hackett Pub. Co., 1979).
3. Hans Reichenbac : Rise of Scientific Philosophy (California : University Press, 1994).

Suggested Readings :

1. Minnesota Studies in the Philosophy of Science, Minnesota Centre for Philosophy of Science, 1958.
2. Phillip Frank : *Philosophy of Science : The Link between Science and Philosophy* (Englewood Cliff : Prentice Hall, 1957).

OR

Paper – A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at understanding the nature of social and political philosophy and some of its fundamental concepts; its major social and political theories and Indian political thought.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

1. Nature and Scope of Social and Political Philosophy :

(a) Relation between Social and Political Philosophy and Social Sciences such as Sociology and Political Science with special emphasis on the distinction between Philosophy and Science.

(b) Empirical and Scientific study of society and politics as distinct from philosophical study of society and politics.

UNIT-II

2. Some Fundamental Concepts of Social and Political Philosophy :

(i) Distinction between Natural Facts and Social Facts.

(ii) Normative Aspects of Socio-Political Reality.

(iii) State and Civil Society.

(iv) Liberty, Equality and Fraternity.

(v) Social Change and Social Progress.

(vi) Tradition and Modernisation.

(vii) Power and Authority.

(viii) Reform and Revolution.

(ix) Justice.

UNIT-III

3. Major Social and Political Theories

(a) Liberalism.

(b) Egalitarianism.

(c) Anarchism.

UNIT-IV

4. Indian Political Thought : Chanakya, Vivekananda, Gandhi, Ambedkar.

Essential Readings :

1. Ambedkar, B.R. : *Writings and Speeches,* Government of Maharastra, Bombay., Vol. 18, 19 & 20, 2003/
2. Bhattacharyya, K.C. : Studies in Philosophy, Motilala (U.K.) Books of India, New Delhi, 1983.
3. Gautam, S.P. : *Samaj Darshan,* Haryana Sahitya Akademy, Chandigarh, 1991.
4. Tagore : *Religion of Man,* Rupa Publications, Paperback, New Delhi, 2002
5. Will Kymlica, Kamal Nayan Chaubey : Samkalin Rajniti – Darshan Ek Parichay, 2nd Ed. Pearson Delhi, 2010.
6. Complete Works of Swami Vivekananda (relevant portions) Advaita Ashram, Calcutta, 1957.

Suggested Readings :

1. Menon, Nivedita : Seeing like a Feminist, Zubaan New Delhi, 2013.

2. Miller, David : Political Philosophy, A very short introduction, Oxford University Press, New York, 2003

SEMESTER -VI

PAPER – B, Option (i) : LOGIC

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at training the students in skills of critical reasoning by introducing laws of thought, criteria for validity of arguments, deductive and inductive reasoning.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

1. Nature and Scope of Logic.
2. Deductive Inference.
3. Laws of Thought.

UNIT-II

4. Aristotelian Classification of Propositions.
5. Immediate and Mediate Inference.
6. Syllogism.

UNIT-III

7. Truth Tables.
8. Propositional Calculus.
9. Quantifiers and Propositional Functions.
10. Predicate Calculus.

UNIT-IV

11. Inductive Logic.
12. Probability.
13. Scientific Method.
14. Law and Explanation.

Essential Readings :

1. Irving Copi : *Introduction to Logic,* Prentice Hall, 2004.
2. Irving Copi *Symbolic Logic,* Prentice Hall, 1979.
3. Nagel and Cohen : *Introduction to Logic and Scientific Method,* Simon Publications, 2002.

Suggested Readings :

1. Russell : Principles of Mathematics (Allen & Unwin London), 1970.
2. Jean Necod : Foundations of Geometry and Induction (kegan Paul). 1970

OR

Paper- B Option (ii) : PHILOSOPHY OF CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims to introduce the problems like origin and meaning of culture, civilization, tradition, the role of ideology and Utopia, Indian cultural tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT – I

1. Origin and meaning of Culture.
2. Culture, Civilization and the Individual.

UNIT – II

3. Religion as an Apex of Culture.
4. Culture and Language.

UNIT – III

5. Culture, Tradition and Modernity. The metaphysical loss of Human.
6. Sources of Indian Culture Tradition.

UNIT – IV

7. Role of Science and Technology in Cultural Evolution.
8. Inter – Cultural understanding and Hermeneutic Tradition.

Essential Readings:

1.	Eliot	:	Notes towards definition of Culture, London, Faber & Faber (1962).
2.	Gadamer	:	Truth and method. Continum International, February (2005).
3.	G.C. Pandey	:	Meaning and Process of Culture. Shivlal Aggarwal & Co. Agra (1972).
4.	Sneh Pandit Ed.	:	Perspectives on Philosophy of Culture, Delhi, S. Chand (1980)
5.	Vellassery Sebastian & Geeta Manaktala:	:	Foundations of Indian Social Life: Cultural, Religious and Aesthetics. Booksurge Publishing U.S. (2008).
6.	Wittgenstein	:	Culture and Value. translated by Peter Winch, Oxford Blackwell (1980).

Suggested Readings :

1.	A.J. Toynbee	:	Civilization on Trial, Oxford University Press, 1948.
2.	Paul Ricouer	:	Time and Narrative published by University of Chicago Press, London 1984.

OR

Paper – B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims at familiarizing the students with the meaning and scope of Aesthetics, art and society, aesthetic experience according to the Western and Indian tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

1. Aesthetics, its meaning and scope.
2. Nature and function of art.
3.

UNIT-II

4. The relation of art to society.

UNIT-III

5. Meaning and purpose of art in the Indian Tradition.

UNIT-IV

6. Nature of Aesthetic experience according to the Western and Indian traditions.

Essential Readings :

1. Hiriyanna : *Art Experience,* Karyalaya Publications, Mysore, 1954 .
2. Susan, L. Feagin and Patrick Maynard (ed.) : *Aesthetics,* Oxford University Press, 1997.

Suggested Readings :

1. Meredith : The Critique of Judgement by Immanuel Kant Tr., J.C., Oxford University, Press, 2007.
2. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

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PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016-2017

Semester V

OBJECTIVES :

I Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

II Pedagogy of the Course Work :

80% Lectures (including expert lectures).

20% assignments, discussion and seminars.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the candidate is required to answer 9 short questions in about 25-30 words each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

PAPER: PSYCHOLOGICAL TESTING

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

UNIT-I : *Introduction to Psychological Tests :*

History of Psychological Testing; Nature of Psychological Tests. Classification of Tests; Use of Tests.

UNIT-II : *Item Writing and Item Analysis :*

Characteristics of a Good Item; Various types of Items; Item Difficulty; Item Discrimination.

UNIT-III : *Reliability and Validity :*

Reliability : Concept, Types, Factors Affecting Reliability.

Validity : Concept, Types, Factors Affecting Validity; Relation between Reliability and

Validity.

UNIT-IV : *Interpretation of Test Scores :*

Criterion Referenced Scores : Content Referenced and Outcome Referenced Scores; Norms Referenced Scores; Concept of Norms, Types of Norms (Percentile Scale and T. Scale).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

Books

Recommended : Essential Readings :

1. Anastasi, A. (1998) : *Psychological Testing,* New York : Macmillan.

2. Gregory, R.J. (1996) *Psychological Testing,* Singapore : Allyn and Bacon.

3. Guilford, J.P. and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education,* Singapore : McGraw Hill.

4. Guilford, J.P. (1954) : *Psychometric Methods,* New Delhi : Tata McGraw Hill.

Reference Books :

1. Freeman, F.S. (1962) : *Theory and Practice of Psychological Testing,* New Delhi : Oxford and IBH.
2. Cronbach, L.J. (1990) : *Essentials of Psychological Testing,* New York : Harper and Row.
3. Brown, F.G. (1976) : *Principles of Educational and Psychological Testing,* New York : Holt, Rinehart and Winston.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2016-2017

Semester VI

OBJECTIVES :

I Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

II Pedagogy of the Course Work :

80% Lectures (including expert lectures).

20% assignments, discussion and seminars.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the candidate is required to answer 9 short questions in about 25-30 words each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

PAPER: APPLIED PSYCHOLOGY

Max. Marks : 100
Theory : 90 marks
Marks Internal Assessment : 10 marks
Time : 3 Hours

UNIT-I : Concept of Counselling; Approaches to Counselling; Freudian, Experiential Client Centered, Gestalt, Existential, Cognitive Behaviour Therapy.

UNIT-II : Work Motivation: Early and Contemporary Theories.
Strategies of Organizational Development.

UNIT-III : Concept and Nature of Health Protective Behaviour.

Concept and types of Health Coronary Behaviour (Special reference to nicotine addiction and alcoholism).

UNIT-IV : Psychology of Exceptional Children with special reference to learning disabled and Gifted Children.

Books Recommended :

Essential Readings :

1. Luthans, F. (1998) : *Organizational Behaviour,* New York : Irwin McGraw Hill.

2. Moorhead, G. and Griffin, R.W. (1999) : *Organizational Behaviour,* Delhi : AITBS.

3. Parikh, M.R. & Gupta, R. (2010) : *Organizational Behaviour, Tata McGraw Hill Education Private Limited,* New Delhi : West Patel Nagar.

4. Robbins, S.P. (2000) : *Organizational Behaviour,* New York : Prentice Hall of India.

5. Rao, S.N. (1992) : *Counselling and Guidance,* New Delhi : Tata McGraw Hill.

6. Nystul, M.S. (1999) : *Introduction to Counselling – An Art and Science Perspective,* Boston : Allyn and Bacon.

7. Brannon, L. and Feist, J. (2007): *Introduction to Health Psychology*. New Delhi: Thomson – Wadsworth.

8. Mohan, J. and Sehgal, M. (2006): *Health Psychology*. New Delhi: Abhijeet Publications.

9. Narayan,J.(2003) : *Educating Children with Learning Problems in Regular Schools*, Secunderabad : NIMH.

10. Raj,F. (2010) : Breaking Through: A Hand book for parents and teachers of children with Specific Learning Disabilities, Secunderabad: Vifa Publishers.

Reference Books :

1. Newstrom, J.W. and Davis K. (1998) : *Organizational Behaviour,* New Delhi : Tata McGraw Hill.

2. Woolfe, R., and Dryden, W. (Eds.) (1996) : *Handbook of Counselling Psychology,* New Delhi : Sage Publications.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2016

Semester V

Paper : APPLIED GEOGRAPHY

Max. Marks: 100

(Terminal Exam: 90 Marks)

(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:

To understand the prevalent issues in environment, society and economy and to provide a geographical interpretation with special reference to India

Course Content:

Unit- I

Applied Geography: Meaning and concepts:

Meaning, nature , scope and significance of Applied Geography. Concept of planning region.

Regionalisation scheme with reference to economic regionalization. (20 lectures)

Unit- II

Applied Geography: Methods and techniques:

Cartographic techniques of dot, choropleth, graduated circle; quantitative methods and techniques of crop combination; Quantitative methods and techniques of graduated circles.

(20 lectures)

Unit- III

Applied Geography: Contributions:

Industrial location theory of Weber and its application in industrial planning.

Christaller's Central Place Theory and its application in location of central places.

Von Thunen's Agricultural Location Theory and its application in agricultural location.

Perroux's Growth Pole Theory and its application in regional development planning.

Harris' Functional classification of urban centres. (30 lectures)

UNIT- IV

Land use studies: Rural and Urban.

Rural Land Use: Survey and Classification.

Urban Land Use : Survey and Classification. (20 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

Books Recommended

Essential Readings:

1.	Carter, H.	:	The Study of Urban Geography, Arnold-Heinemann, New Delhi, 1979.
2.	Chorley, R.J. & P. Haggett (Ed.)	:	Models in Geography, Methuen & Co., London, 1967.
3.	Jones, Alun	:	Fieldwork in Geography, Longman, Green Co., London, 1968.
4.	Stamp, L.D.	:	Applied Geography, Penguin Books, England, 1960.
5.	Singh, R.L. (Ed.)	:	Applied Geography, National Geographical Society of India,Department of Geography, B.H.U., Varanasi, India.

Further Readings:

1.	Dawson, J.A.	:	Geography, Teach Yourself Books, Hodder and Stoughton, UK 1983.
2.	Misra, R.P. and others	:	Regional Development Planning in India, Vikas, New Delhi.1974
3.	Misra, V.C. & others	:	Essays in Applied Geography, University of Sagar, India.1976

4. Sen Gupta, P. & Sadasyuk Galina: Economic Regionalization of India, Problems and Approaches, Registrar General Census of India.

5. Singh, Jasbir & Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill, New Delhi, 1998.

6. World Report, World Bank & OUP (Annual Report)

Pedagogy:

- Exposure to media.
- National Five Year Plan documents and publications related to planning.
- Field work related to land –use and other socio-economic issues.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2017

Semester VI

Any one of the following options:

Option (i) : AGRICULTURAL GEOGRAPHY (An Elementary Course)

Option (ii) : POLITICAL GEOGRAPHY (An Elementary Course)

Option (iii) : ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Option (i) AGRICULTURAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100

(Terminal Exam: 90 Marks)

(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:

- To familiarise the students with the concepts and development of agriculture;
- To examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialisation. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objective is also to discuss environmental, technological and social issues in agricultural sector with special reference to India.

Course Content:

Unit- I

Nature, scope and significance of agricultural geography.

General landuse classification.

Physical determinants of agricultural landuse: Relief, climate, soils.

Unit- II

Social and cultural determinants of agricultural landuse, land tenure, size and fragmentation of holdings and labour.

Economic determinants of agricultural landuse: Marketing facilities, transport facilities, tariff and import restrictions, price incentives, credit.

Unit-III

A critical review of Whittlesey's agricultural classification.

Characteristics and world patterns of the following:

Subsistence types of agriculture: Nomadic herding, shifting cultivation, rudimentary sedentary tillage, intensive subsistence tillage, subsistence crop and livestock farming.

Unit- IV

Commercial types of agriculture: livestock ranching, commercial plantation farming, commercial grain farming, mixed farming, commercial dairy farming.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each UNIT. The students will be required to attempt one question from each UNIT. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Alexander, J.W. : *Economic Geography*, Prentice Hall, Englewood Cliffs, latest Edition.

2. Husain, M. : *Systematic Agricultural Geography*, Inter-India Publications, New Delhi, 2000.

3. Singh, J. & Dhillon, S.S. : *Agricultural Geography*, Tata McGraw Hill Publishing New Delhi, 1994.

Further Readings:

1. Morgan, W.B. &: Munton, R.J.C. *Agricultural Geography*, Methuen, London, 1971.

2. Symons, L. : *Agricultural Geography*, G. Bell & Sons, London, 1964.

Pedagogy:

The teacher should impress the students the overall importance of agriculture in the global perspective. The world is fast changing and its impact is felt on agriculture. Population is increasing and demand of agricultural products is also on the increase. Contrary to it, the farm lands are decreasing, that necessitates infusion of technology in agricultural sector. It is causing environmental pollution. The teacher should interact with students on said issues. Examples from neighbouring areas may be given to the students for better perceptions.

Option (ii): POLITICAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the geographical factors which have a bearing on the political/ administrative organisation of space.
- To enhance awareness among the students of multi-dimensional nature of geo-political space.

Course Content:

Unit- I

Nature and scope of political geography, phases in the development of political geography. Physical elements of political geography: Location, size and shape, relief, climate, and seas and oceans.

Unit- II

Economic elements of political geography: Basic natural resources; food and power, minerals, industry, trade and transportation.

Human-cultural elements of political geography: Ethnographic structure of nations, language, religion, population, quantity and quality.

Unit- III

Concepts of frontiers and boundaries: Classification of boundaries.

Global distribution of political power: Views of Mackinder, Mahan and Spykman and their contemporary relevance.

Unit- IV

International tension: Identification of tension areas and factors contributing to tensions in different areas with special examples from Middle East and Indian Ocean.

Political Geography of the Indian Ocean.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. De Blij, H.J. Glassner, M. : *Systematic Political Geography*, John Wiley, New York, 1968.
2. Dikshit, R.D. : *Political Geography*: A Contemporary Perspective, Tata McGraw Hill, New Delhi, 1996.

Further Readings:

1. Adhikari, Sudeepta : *Political Geography*, Rawat, Jaipur, 1997
2. Muir, R. : *Modern Political Geography*, Macmillan, London,1981.
3. Prescott, J.R.V. : *Political Geography*, Methuen, London, 1992.
4. Prescott, J.R.V. : *The Geography of Frontiers & Boundaries*, Aldine Pvt. Ltd., Chicago, 1965.

5. Valkenberg, S.V. New& Stotz, Carl, L. : *Elements of Political Geography*, Prentice Hall of India, Delhi, 1963.

Pedagogy:

- Fieldwork to understand the political/administrative boundary configuration and people's problems and their perceptions.
- Consult political maps (large scale, small scale).
- Atlases and archival records.
- Collect relevant newspaper items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Option (iii): ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To understand the significance of environment and its interrelationship with man.
- To understand the importance of soil and factors responsible for erosion.
- The importance of energy sources, forest and wildlife and their preservation to be studied.

Course Content:

Unit-I

Environment and Geography: Relationship between geography and environment; definition and scope of environmental geography; significance of environmental studies.

The Environment: Characteristics, components and functioning; concept of healthy environment.

(6 + 6 = 12 lectures)

Unit- II

The Soil System: Origin and composition; horizons, texture, chemistry, factors influencing soil types; soil erosion, soil conservation; and soil pollution.

Energy: Energy flow in the ecosystem; environmental impact of both conventional and non-conventional energy sources.

(6 + 4 = 10 lectures)

Unit- III

Forests: Significance; world reserves; deforestation; and conservation strategies.

Wildlife: Wildlife and environment relationship, regional distribution; conservation of wildlife; and wildlife in India. (5 + 5 = 10 lectures)

Unit- IV

Population and Environment: Basic issues, environmental impact of population growth and agenda for action.

Global Environmental Issues: Water contamination; atmospheric pollution; acid rain; noise pollution; and control strategies.

Legislative strategies, environmental issues and the international community; Rio-de-Janeiro Earth Summit of 1992; selected environmental protection laws in India; Environmental Protection Act, National Environmental Tribunal Act, Wildlife Protection Act, Forest Conservation Act, Air Act, Water Act. (6 + 6 + 6 = 18 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Adam, W.M. : *Green Development: Environment & Sustainability in the Third World*, Routledge, London, 1990.
2. Chandna, R.C. : *Environment Awareness*, Kalyani Publishers, New Delhi. Clarendon Press, Oxford, 1998. Also available in Hindi & Punjabi.
3. Chandna, R.C. : *Environmental Geography*, Kalyani Publishers, New Delhi, 2001.
3. Goudie, A.S. : *The Human Impact on Environment*, Blackwell, Oxford, 1993.

Further Readings:

1. Ehrlich, Paul, R. et. al : *Ecoscience – Population, Resources and Environment*, Freeman and Co., San Francisco, 1977.
2. Goudie, A.S. : *Environmental Change, Contemporary Problems in Geography*, Clarendon Press, Oxford, 1992.
3. Pickering, K.T. : *An Introduction to Global Environmental Issues*, Routledge, London, 1994.
4. Singh, Savinder Allahabad, : *Environmental Geography*, Paryag Pustak Bhawan, 1991.
5. Strahler, A.N. & Strahler, L.A. : *Geography and Man's Environment*, John Wiley & Sons, New York.

Pedagogy:

- The interaction of teacher and students is must on issues related to environment, energy resources, forest and soil preservation.
- A field visit to those areas where soil erosion is a serious problem be arranged and methods of conservation be taught.

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PUBLIC ADMINISTRATION
B.A. (HONOURS) SEMESTER -V

Paper- III : RESEARCH METHODS AND STATISTICS

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding about the nature and scope of Social Research, Methods of Social Research, data collection and data processing. It would also acquaint the students with basics of sampling and statistical methods including measures of central tendency, dispersion, correlation and Chi-Squares Test.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first **compulsory** question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Meaning, Nature and Scope of Social Research.

Concepts; Hypotheses : Meaning, Types and Significance.

Research Design : Meaning, Types and Components.

Methods of Social Research : Experimental–Survey and Case Study.

UNIT-II

Methods of Data Collection—Documents, Observation, Interview and Questionnaire.

Data Processing—Editing, Coding and Tabulation, The use of Computer.

Report Writing.

UNIT-III

Sampling—Meaning, Types, Merits and Demerits.

Frequency Distribution – Meaning and Steps.

Measures of Central Tendency – Mean, Median and Mode.

UNIT-IV

Measures of Dispersion –Standard

Deviation.

Correlation – Karl Pearson.

Chi-Square

Essential Readings :

1. C.A. Moser and G. Kalton. : *Survey Methods in Social Investigations* (London : ELBS, 1979).
2. C. Seltiz & Others : *Research Methods in Social Relations* (New York : Rinehart & Winston, 1964).
3. S.P. Gupta : *Statistical Methods* (New Delhi : Sultan Chand, Rev. ed. 1987).
4. W.J. Goode and P.K. Hatt : *Methods in Social Research* (U.S.A. : McGraw Hill, 1990).

Further Readings :

1. Arthur Bowley *Elements of Statistics* (New York : Staples, 6th Ed., 1947).
2. Ghosh and Chowdhry : S*tatistics* (Allahabad : Indian Press, Rev. Enlarg. Ed., 2004).
3. L. Cohen : *Statistical Method for Social Scientists* (New Delhi : Prentice Hall of India Private Ltd.) (1968).

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PUBLIC ADMINISTRATION
B.A. (HONOURS)
SEMESTER-VI

PAPER IV : *The candidates have to select one out of the following four options :*

Option (i) : Organisation Behaviour.
Option (ii) : Cooperative Administration in India.
Option (iii) : Public Enterprise Management (with special reference to India).
Option (iv) : Environment Administration in India.
Option (v) : Emerging Issues in Public Administration

Paper- IV : Option (i) : ORGANISATION BEHAVIOUR

Objective of the paper :

Max. Marks : 100
Theory : 90 Marks Internal Assessment : 10 Marks Time : 3 Hours

The objective of the paper is to give the student an in-depth insight into the various aspects and factors affecting individual, interpersonal and group behaviour in organisations. The key areas include study of human behavior and concepts like Attitudes, Morale, Leadership, Motivation and Organizational Change.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first **compulsory** question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Organisation Behaviour : Concept and significance
Individual Behaviour : Concept; Nature; Individual Factors
Interpersonal Relations : Meaning; Dimensions; Factors

UNIT-II

Team Development : Importance; Types of Teams
Attitudes : Concept, Types
Morale : Concept; Significance; Building up High Morale

UNIT-III

Groups : Concept; Types
Leadership : Styles of Leadership
Motivation : Concept; Determinants

UNIT-IV

Organisational Change : Concept; Resistance to change
Organisational Development : Concept; Need; Techniques
Organisational Effectiveness : Concept; Approaches

Essential Readings :

1. B.J.Kolasa : *Introduction to Behavioural Sciences for Business(* New York, Wiley, 1969)
1. K.K.Sharma & Pardeep Sahni : *Organisational Behaviour* (New Delhi: Deep & Deep, 1988)
3. Keith Davis : *Organizational Behaviour* (NewYork, McGraw Hill, 2001)
4 L.M.Prasad : *Organisational Behaviour* (New Delhi: Sultan Chand, 3rd Rev. and Enlarg. Ed., 2000)
5. Robert Dubin : *Human Relations in Administration,* (New Delhi: Prentice Hall, 3rd ed.,1968)
6. Shashi Gupta, Rosy Joshi : *Organizational Behaviour* (Kalyani Publishers, 2007)

Paper- IV Option (ii) : CO-OPERATIVE ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to acquaint the students with the evolution of cooperatives in India and its Principles. It will also deal with Legislation on Cooperatives, Registration, structures and Administration at the Union and State level. Further the Students will gain an understanding of the forms and Role of Cooperatives, their managerial & personnel aspects.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first **compulsory** question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Co-operation : Meaning, Significance and Evolution.

Co-operative Principles.

Co-operative Legislation : Government of India Act, 1912 and Punjab Co-operative Societies Act, 1961(as amended from time to time).

UNIT-II

Registration of a Co-operative Society.

General Body, Board of Directors and Committees.

Chief-Executive : Appointment, Functions and Role.

Co-operative Administration at Union Level – Organisation and Functions.

UNIT-III

Co-operative Department at State Level – Organisation and Functions.

Registrar Co-operative Societies : Appointment and Role.

Forms of Co-operatives : Role of Apex Federations and Primary Co-operatives.

Co-operative Education.

UNIT-IV

Human Resource Management : Recruitment and Training.

Financial Management.

Essential Readings :

1. B.B.Goel : *Dynamics of Cooperative Administration* (Delhi, Deep and Deep, 1988)
2. B.S. Mathur : *Cooperation in India* (*Agra:* Sahitya Bhawan, 1971)
3. O.R. Krishnaswami : *Fundamentals of Cooperatives* (Delhi: S.Chand and Co., 1978)
4. P.K. Kamra : *Cooperative Management* (Delhi: Deep and Deep, 1986)

5. P.R.Dubhashi : *Principles and Philosophy of Cooperation* (Pune, VMNICM, 1970)

6. S.L.Goel & B.B.Goel : *Principles, Problems and Prospects of Co-operative Administration* (Delhi, Sterling, 1979)

Further Readings :

1. B.S.Bhatia (ed.) : *Encyclopaedia of Cooperative Management* (Set in 5 Vols.) (New Delhi: Deep & Deep Publications Pvt. Ltd., 1994)

2. M.S. Gill : *Agricultural Cooperatives* (Delhi: Vilas, 1983)

3. I.C.A. : *Experts Consultation on Cooperative Member Education* (Delhi, ICA, 1980)

4. I.C.A. : *Readings in Cooperative Management,* (Delhi: ICA, 1977)

5. I.L.O. : *Cooperative Management and Administration* (Geneva, ILO)

6. R.C. Dwivedi : *Democracy in Cooperative Movement.* (National Cooperative Union of India in New Delhi, 1982)

7. S.S. Puri : *Ends and Means of Cooperative Development* (Delhi: NCUI, 1979)

Paper-IV Option (iii) : PUBLIC ENTERPRISE MANAGEMENT (with special reference to India)

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3Hours

Objective of the Paper :

The objective of the paper is to give the student a detailed understanding of the concept, evolution, types, role and problems of public enterprises in India. It would also give an insight into legislative and government control over public enterprises, performance and reforms of the public enterprises and the concept of privatization.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first **compulsory** question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Public Enterprise : Meaning and Evolution.

Public Enterprises in India : Rationale and Role. Administrative and Managerial Problems of Public Enterprises.

UNIT-II

Organisational Patterns : Departmental Undertakings, Public Corporation and Government Company.

Board of Directors : Rationale, Constitution, Types and Functions.

UNIT-III

Legislative Control over Public Enterprises.
Government Control over Public Enterprises.
Performance of Public Enterprises.

UNIT-IV

Public Enterprise Reforms since 1991.
Memorandum of Understanding.
Privatization : Meaning, Rationale, Achievements and Failures.

Essential Readings :

1. B.P. Mathur : *Public Enterprise Management* (Macmillan, New Delhi, 1999).
2. Jagdish Parkash : *Administration of Public Enterprises in India* (Himalaya Publishing House, Mumbai, 2002).
3. Laxmi Narain : *Public Enterprise Management and Privatisation* (S. Chand, New Delhi, 2005).
4. N.K. Sengupta : *Government and Business* (Vikas, New Delhi, 2007).
5. Ruddra Dutt and K.P.M. Sundaram : *Indian Economy* (S. Chand, New Delhi, 2009).
6. S.S. Khera : *Government in Business* (Delhi : National, 1977).

Further Readings :

1. A.H. Hanson : *Public Enterprises and Economic Development* (London : Routledge and Kegan, 1972).
2. Government of India : *Public Enterprises Survey, India Ministry of Heavy Industry & Public Enterprises,* Vol. 1, 2, 3 DPE, New Delhi.
3. K.R. Gupta : *Issues in Public Enterprises* (New Delhi, S. Chand, 1975).
4. Ratnakar Gedam : *Public Sector Management , 1995.*
5. United Nations : Countries (New York : U. N., 1974).
6. V.V. Ramanadham : *The Structure of Public Enterprises and Economics in India* (Bombay, Asia Publishing House).
7. V.V. Ramanadham : *The Working of Public Sector* (Bombay : Allied Publishers, 1988).

Paper- IV Option (iv) : ENVIRONMENT ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding of the concept and components of environment, environment administration and sustainable development. In addition, the students would be made aware of environment problems, threats and impact of development on environment. The student will also gain knowledge regarding the machinery for environment protection at the Union and State levels, Environmental Policy, priorities, global issues and role of NGOs in environment conservation would be dealt with.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first **compulsory** question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Environment – Concept and Components.
Environment Administration – Meaning, Nature and Scope.
Sustainable Development – Concept, Issues and Strategy.

UNIT-II

Environment Problems and Threats–Air, Water, Land, Human Settlements and Forests.
Impact of Development, Urbanization and Industry on Environment.
Organisation and Machinery of the Government at the Union Level for Environment Protection.
Organisation and Machinery of the Government at the State Level for Environment Protection.

UNIT-III

Pollution Control Boards–Organisation, Functions and Role.

Environmental Policy with special reference to Water, Air and Forest; Constitutional Provisions; Legislative Measures.

Environmental Priorities in India—Population Stabilisation; Forest Cover; Deforestation; Wildlife Protection; Recycling of Wastes.

UNIT-IV

Environment and Global Issues—Conventions; Depletion of Ozone Layer; Global Warming.

Environment Education, Awareness and Ethics; Role of NGOs in Environment Protection and Conservation.

Essential Readings :

1. R.C. Chandana : *Environment Awareness* (New Delhi : Kalyani, 1998).
2. R.K. Sapru : *Development Administration* (New Delhi : Sterling, 2002).
3. R.K. Sapru : *Public Policy* (New Delhi : Sterling, 2004).
4. S. Edmunds and J. Latey : *Environmental Administration* (New York : McGraw-Hill, 1973).
5. V.K. Nanda : *Environmental Education* (New Delhi : Anmol, 1997).

Further Readings :

1. India, Centre for Science and Environment : *The State of India's Environment : A Citizen's Report* (Vishal Bhawan, New Delhi, 1982).
2. Naresh Kumar : *Air Pollution and Environment Protection : Legislative Policies, Judicial Trends and Social Perceptions* (New Delhi : Mittal, 1999).
3. Sheo Parkash Agnihotri : *Environment Conservation Management and Planning* (Allahabad : Chugh, 1992.)
4. Radha, S. and Sankhyan, A.S. : *Environmental Challenges of the 21st Century (New Delhi,* Deep, 2004).
5. G.S. Monga : *Environment and Development* (New Delhi : Deep and Deep, 2004).

PAPER- IV: OPTION (V): Emerging Issues in Public Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to familiarize the students with the emerging issues in Indian Administration. At the end of the course the students will have an understanding of the concepts of disaster management, human rights, regulatory administration in India, consumer protection, right to information, new areas of governance in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first **compulsory** question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Good governance – Concept and significance
E- governance – Concept and significance
Regulatory Administration - Concept and significance

Unit II

Transparency and Accountability in Administration – Significance
Mechanism – Social Audit, Results Framework Document (RFD)
Ethics and Integrity in Administration

Unit III

Human Rights - Concept and significance
Women Empowerment with special reference to National Mission for Empowerment of Women (NMEW)
Youth Empowerment with special reference to Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Unit IV

Sustainable Development - Concept and significance
Environment Administration - Concept and significance
Disaster Management - Concept and significance

Suggested Readings :

1. Arora Ramesh K. Ethical Governance in Business and government, Aalekh Publishers Jaipur, 2013

2. Bhandari Sunanda Mahila Sashaktikaran Evam RajkiyaYojanaye, Ritu Publications, Jaipur, 2015

3. Bystydzienski, Jill M., Democratization & Women's Grassroot Movements Joti Sekhon Zubaan, 2008

4. Centre for Good Governance Social Audit Tool Kit, www.cgg.gov.in

5.	Food & Agricultural Organization (F.A.O.)	A handbook for trainers on participatory local development: The Panchayat & Training Module on social Audit
6.	Ganesh Kawadia & Kanhaiya	Ahuja Environmental Issues of Development (AmbalaCantt, India: The Associated Publishers, 2006)
7.	Goel, S.L.	Encyclopedia of Disaster Management, Deep and Deep Publication Pvt. Ltd.2006
8.	Government of India	Guidelines for Results Framework Document (RFD),www.performance.gov.in
9.	Government of India	Second ARC – Third Report (Crises Management: From Despair to Hope) September 2006 Second ARC – First Report (Right to Information- Master Key to Good Governance)) June 2006
10.	Government of India	Second ARC – Eleventh Report (Promoting e-governance: The Smart Way Forward) December, 2008
11.	Government of India	Ministry of Skill Development and Entrepreneurship- www.skilldevelopment.gov.in/pmkvy.html
12.	Government of India	Ministry of Women & Child Development, www.nmew.gov.in
13.	Government of India	E-governance for Citizen Empowerment National Information Centre, www.nic.in
14.	Jagannath Mohanty	Human Rights: New Trends and Innovations (New Delhi: Deep & Deep, 2005)
15.	J.S.Verma	The Universe of Human Rights, (Delhi: Universal Law Publishing Company, 2006)
16.	Kumar Abhishek and Pramod Kumar Tripathy	Skill Development in India – An Overview of Initiatives & Schemes Kanishka Publishers; New Delhi
17.	Mathur, B.P.	Ethics for Governance: Reinventing Public Services, Routledge India, 2014

18. P.S.Jaswal and Jaswal Nishtha — Environmental Law (Pioneer Publications, 2000)

19. Palekar, S.A. — Development Administration PHI Learning Private Limited, New Delhi, 2012

20. Priyam Manisha, Krishna Menon and Madhulika Banerjee — Human Rights, Gender and the Environment, Pearson, 2009

21. Trivedi Priya Ranjan — Encyclopedia of Ecology and Environment Volume 3 Environmental Education, Indian Institute of Ecology and Environment, New Delhi, 1999

22. Vayunandan, E. and Dolly Mathew — Good Governance Initiatives in India, Prentice Hall of India, New Delhi, 2003

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SEMESTER – V EXAMINATION, 2016-17

Note : The students shall have to opt for one paper for Semester - V examination out of the following two papers :

Outlines of Test :

Paper V : Archaeology

Paper VI : Spread of Indian Culture In Central Asia, China And Tibet

Paper - V : Archaeology

Total Marks: :100
Theory: : 90
Internal assessment : 10
Time: 3 Hours

Objectives :

This course is a survey of the pre and proto-historic background to Indian history from the beginning of man to the early historical period. Excavated sites are studied for an insight into the growth of early Indian culture.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I : The Palaeolithic, Mesolithic and Neolithic cultural sequences in various parts of the Indian subcontinent.

UNIT-II : (a) The background and the phenomenon of the Harappan civilization.
(b) The Chalcolithic cultures of western and southern India.

UNIT-III : The beginning of iron technology and the Painted Grey Ware Culture.

UNIT-IV : Excavations of early historic cities of :

(a) Northern India and Gangetic doab : Taxila and Hastinapura.

(b) Eastern India : Sisupalgarh and Chandraketugarh.

(c) Southern India : Arikamedu and Brahmagiri.

Pedagogy of the Course Work :

The students are made familiar with prehistoric, proto historic and historical sites through field visits. Slides, photographs of relevant sites, their significance in establishing chronologies is also discussed in the class. Visits to museums is also an important aspect through which students are made familiar with the material evidence.

Essential Readings :

1. Agrawal, D.P. : *The Archaeology of India,* Select Book Service Syndicate, New Delhi, 1984.
2. Allchin, B. and F.R. : *The Rise of Civilization in India and Pakistan,*Cambridge University Press, New Delhi, 1989.
3. Fagan, Brian M. : *People of the Earth : An Introduction to World Prehistory,* Longman, Singapore, 2004.
4. Possehl, G. : *Ancient Cities of the Indus,* Vikas Publishers, New Delhi, 1979.
5. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
6. Roy, T.N. : *The Ganges Civilization,* Ramanand Vidya Bhawan, New Delhi, 1982
7. Tripathi, V. : *The Painted Grey Ware,* Concept Publisher Corporation, Delhi, 1975.

Paper VI: SPREAD OF INDIAN CULTURE IN CENTRAL ASIA, CHINA AND TIBET

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary aim of this paper is to make the students study the spread of Indian culture and ideas in Central Asia, China and Tibet, generally termed in history as 'Greater India'. This forms an important phase of India's contribution to the world culture.
2. **Pedagogy of the Course Work :**
   It is expected to acquaint the students with the background of Indian culture's spread and the factors responsible for it. While outlining the spread of Indian culture and religion, the spread of art, architecture and literature should also be taken care of. Visual aids wherever required should be used to familiarize students with Indian art and its influence in these countries.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

Spread of Indian Culture in the Central Asian States.

UNIT-II:

Introduction of Buddhism in China and the early contacts.

UNIT-III:

Chinese pilgrims in India – Fahien, Hiuen Tsang and I-Tsing.

UNIT-IV:

(a) Spread of Buddhism in Tibet up to 12^{th} century A.D. with special reference to the missions of Padma Sambhava.
(b) Lamaism.

Essential Readings :

1. Bagchi, P.C. : *India and Central Asia,* National Council of Education Bengal, Calcutta, 1984.
2. Bapat, P.V. : *2500 Years of Buddhism,* South Asian Books, New Delhi, 1977.
3. Dougles, R : *China (The Story of the Nation),* Hesperidis, London, 1900, 2006.
4. Elliot, C. : *Hinduism and Buddhism,* Vols. II and III, Routledge, London, 1962.
5. Puri, B.N. : *Buddhism in Central Asia,* Motilal Banarsidass, Delhi, 1987.
6. Richardson, H.E. : *Tibet and its History,* Shambhara Publishers, London, 1961.
7. Upasak, C.S. : *History of Buddhism in Afghanistan,* Central Institute of Higher Tibetan Studies, Varanasi, 1990.
8. Waddell, A.L. : *Buddhism and Lamaism of Tibet* rpt., Vimar Publishing House, London, 1979.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SEMESTER – VI EXAMINATION, 2016-17

Note : The students shall have to opt for one paper for Semester - VI examination out of the following two papers :

Outlines of Test :

Paper VII : Epigraphy and Numismatics

Paper VIII : Spread of Indian Culture in South-East Asia upto 12th Century A.D.

Paper-II : EPIGRAPHY AND NUMISMATICS

Total Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The paper is aimed to prepare students to handle the original source material – inscriptions and coins, which make the backbone of Ancient Indian History, as without the knowledge of epigraphy and numismatics, the subject cannot be mastered.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I

(a) Origin and antiquity of writing in India with special reference to the origin of Brahmi script.

(b) Origin and antiquity of coinage in India.

UNIT-II

(a) Ashokan inscriptions – Pillar Edicts I to IV; Girnar Rock Edicts I, II and XIII. (Both for study and decipherment).

(b) Besnagar Pillar inscription of Heliodorus; Nasik Cave Inscription of Queen Balasri; Sarnath Buddha Image inscription of Kanishka's year 3; Junagarh Rock inscription of Rudradaman I, Saka year 72 (Study only). Gupta inscriptions—Allahabad P i l l a r inscription of Samudragupta, Mehrauli

Iron Pillar inscription of Chandra, Bhitari Stone Pillar inscription of Skandagupta (Study only).

(c) Post-Gupta inscriptions : Mandasor Stone inscription of Malava Samvat 589, Banskhera Copper-plate of Harshavardhana, Pehowa inscription of Bhojadeva (Study only).

UNIT-III

(a) Coins as source of ancient Indian history.

(b) Study of Punch marked coins.

UNIT-IV

(a) Coins of the Kushanas.

(b) Coins of the Guptas.

Pedagogy of the Course Work :

Students should be familiarized with the details of the topics in the syllabus with stress on the contents of each topic. Visual aids like the photographs/slides of the coins and inscriptions should be used regularly. The decipherment of Asokan inscriptions should be taught with the help of plates and paleographic charts.

Essential Readings :

1. Allan, John : *Catalogue of the Coins of Ancient India,* Trustees of the British Museum, London, 1967.

2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, Varanasi, 1957.

3. Buhler, G. : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 2004.

4. Dani, A.H. : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 1997.

5. Gupta, P.L. : *Coins,* rpt. National Book Trust India, New Delhi, 2006.

6. Hultzsh, E. : *Corpus Inscriptionum Indicarum,* Vol. I, rpt., Archaeological Survey of India, Delhi, 1991.

Paper-VIII : SPREAD OF INDIAN CULTURE IN SOUTH-EAST ASIA UPTO 12TH CENTURY A.D.

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives :

This course enlightens the students about the spread of Indian culture in Burma, Indonesia, Combodia and Champa. In order to teach the students about the elements of Indian Culture, which made its impact

felt in those countries, it is, therefore, necessary to discuss the political history, art, architecture and religion of those regions.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I:

(a) Beginning of Indianisation in Burma.

(b) Art and Religion of Burma.

UNIT-II:

(a) Beginning of Indianisation in Indonesia.

(b) Study of Indo-Javanese Art.

UNIT-III:

(a) Beginning of Indianisation in Cambodia.

(b) Art of Cambodia.

UNIT-IV:

(a) Beginning of Indianisation in Champa.

(b) Study of Art and Archaeological remains of Champa.

Pedagogy of the Course Work :

The students are taught with the help of slides, photographs and maps. In addition to it, lectures, workshops, seminars, written assignments and class discussions, term papers etc. are essential parts of it. The students should be made familiar with the outline of the topics mentioned in above units.

Essential Readings :

1. Chatterji, B.R. : *History of Indonesia,* (Early and Medieval) Meenakshi Prakashan, Meerut,1967.
2. Chatterji, B.R. : *Indian Cultural Influence in Cambodia,* University of Calcutta, Calcutta, 1933.
3. Coedes, C. : *The Making of South East Asia,* University of California Press, London, 1966.
4. Coomaraswamy, A.K. : *History of Indian and Indonesian Art,* Kessinger Publishing, New Delhi, 1972.
5. Harrison, Brian, : *South East Asia, A Short History,* Macmillan Press, New York, 1966.
6. Majumdar, R.C. : *Hindu Colonies in the Far East,* K.L. Mukhopadhaya, Calcutta, 1944.
7. Majumdar, R.C. : *Suvarnadvipa, Ancient Indian Colonies in the Far East,* Modern Publication Syndicate, 1937.
8. Majumdar, R.C. : *Kambuja-Desa, or An Ancient Hindu Colony in Cambodia,* Lighting Source Incorporated, Madras, 1944.
9. Singhal, D.P. : *India and World Civilization,* Vols. I & II, Michigan State University Press, Calcutta, 1972.

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POLICE ADMINISTRATION

B.A (Honours) 5th semester Examination, 2016-2017

Semester V: Police Procedures and Investigation-I

(A) Course Objectives:

The course has been designed to impart students knowledge about the procedures followed and investigation done by the police after the incidence of crime. The students will be taught about the crime scene, its importance, inspection of crime scene and its preservation along with the investigation officer and his/ her role. Further the students would be made aware about investigation, interrogation and interview techniques with a focus on witnesses, women and juvenile offenders.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks)

(D) Course Content:

Unit-I

Investigating Officer: Power of observation and its importance in Investigation; and Qualities of investigating officer.

Unit-II

Crime Scene: importance of crime scene; inspection of crime scene; and preservation of crime scene.

Unit-III

Investigation; interrogation; and interviews.

Unit-IV

Examination of witnesses; interrogation of women accused; and interrogation of juvenile offenders.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 978.
5. International Association: Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, A.P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi,1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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POLICE ADMINISTRATION

B.A (Honours) 6th semester Examination, 2016-2017

Semester VI: Police Procedures and Investigation-II

(A) Course Objectives:

The objective of this course is to introduce to the students about the use of scientific techniques in the field of investigation. After providing knowledge in death, types of death and bodily changes after death, the students would be imparted information on how to preserve finger prints, footprints, knowledge about handling of physical evidences, along with their packing and forwarding. In addition knowledge about the modern tools of investigation would also be provided.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Death; Types of death- death due to suffocation hanging, drowning, accident, suicide and murder. Bodily changes after death.

Unit-II

Preservation of finger prints, footprints, and blood at the scene of crime.

Unit-III

Physical evidence, handling packing and forwarding of physical evidence, and types of opinion to be obtained from physical evidence.

Unit-IV

Photography and its importance in police work; Polygraph; Brain mapping; and Narco Analysis.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 1978.
5. International Association : Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA, 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, P.H. Publishing Corporation, New Delhi,1999.

Further Readings

1.	Singh, S.P.	:	Combating Bio- terrorism with SpeciaL Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2.	Dutta, K.K.	:	Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3.	Ghosh, S.K. and Rustamji, K.F.	:	Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4.	Vadackumchery, James	:	Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5.	Vadackumchery, James	:	Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6.	Sharma, R	:	Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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B.A. (HONOURS) MUSIC (VOCAL AND INSTRUMENTAL), 2016-17

SEMESTER-V

Paper-III :(Theory)

Total Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Note: There will be 10 questions in all and a student will attempt five questions choosing at least one from each unit.

UNIT-I

1. Definition with full explanation of the following :
   Sthai, Antra, Krintan, Badhat, Jod-Alap, Lag Daat, Jugalbandi, Layakaries (Adi, Kaudi, Biadi)

2. Definition of Aesthetics in context of Indian Music

UNIT – II

1. Topics of Essay: - (i) Music and Fine Art
   (ii) Sangeet Sammelan

2. Knowledge of good qualities of a music performer (Vocalist or an Instrumentalist)

UNIT – III

1. Description of Detailed & Non-detailed Ragas:-
   Detailed Raga:- (i) Marwa (ii) Madhmad Sarang
   Non-detailed Raga: - (i) Sohni (ii) Megh
   Talas:- Teevra, Sultal

Practical:-

Part A

a) Candidate has to demonstrate vilambit khyal / drut gat
b) One Dhamar in Gayaki Anga and/one drut gat in ektal
c) One Dhun
d) Tuning of Instruments

Part B

Detailed Ragas**:-**Marwa & Madhang Sarang
Non Detailed: - Sohni Megh
Talas:- Teevra, Sultal

Books Recommended:

1.	Sangeetanjali	:	Pt. Omkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Saras Sangeet	:	Pradeep Kumar Dixit
4.	Aakashvani Evam Hindustani Shastriya Sangeet	:	Dr. Suchismita
5.	Sangeet Visharad	:	Basant
6.	Raag Prichay	:	Harish Chandra Srivastav
7.	Sangeet Swarit	:	Dr. Ramanand Dwivedi
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand

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B.A. (HONOURS) MUSIC (VOCAL AND INSTRUMENTAL), 2016-17

SEMESTER-VI

Paper-:-Theory

Total Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

UNIT – I

1. Definition with full explanation of the following :-
   Ghaseet, Meend, Kan, Khatka, Murki, Kalavant, Vaggeykar
2. Principles of Aesthetics of Music and its importance

UNIT-II

1. Essays:- (i) Role of Music in National Integration
   (ii) Lok Sangeet
2. Knowledge of musical aptitude and musical talent

UNIT-III

1. Description of Detailed & Non-detailed Ragas: -
   Detailed Raga: - (i) Patdeep
   (ii) Mian Ki Malhar
   Non-detailed Ragas: - (i) Bhimpalasi
   (ii) Bahar
   Talas:- Tilwada, Adachautal

PART A

Ability to write notation of the Vilambit and Drut Gat of Ragas prescribed in the course:-
Patdeep, Mian ki Malhar

Part B

1. Ragas – Patdeep, Mian , Malhar
2. Non Detailed : BhimPalasi, Bahar
3. Tala: Tilwada and Ada Char Tala
4. Geet, Ghazal

Books Recommended:

1. Bhatkhande Sangeet Shastra	:	Pt. Bhatkhande
2. Abhinav Geetanjali	:	Pt. Ramashray Jth
3. Sangeetanjali	:	Pt. Omkarnath Thakur
4. Raag Parichay	:	Harishchandra Srivastav
5. Sangeet Visharad	:	Basant
6. Sawars Sangeet	:	Pradeep Kumar Dixit
7. Sangeet Swarit	:	Dr. Ramanand Dwivedi
8. Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand
9.Art Education	:	Janardan Prasad

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HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Third year (SEMESTER SYSTEM) has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2016-17

SEMESTER-V

Paper V: Physics of Semiconductors

Unit I

Crystal Properties and Growth of Semiconductors: Semiconductor materials, Crystal lattices, Ge and Si crystal structure, production of electronic grade Si, Bulk crystal growth, Epitaxial growth.

Bonding forces and energy bands in solids, Metals, semiconductors and insulators, Direct and Indirect semiconductors, intrinsic and extrinsic semiconductors, compensation, Electrons and holes, effective mass, Fermi level, Conductivity and mobility, temperature dependence of Carrier concentration, effect of temperature, doping and field on mobility, Hall effect, Invariance of Fermi level at equilibrium.

Excess carriers in semiconductors: Optical absorption, Photoluminescence, Electroluminescence, Carrier lifetime and photoconductivity, photoconductive devices.

Unit II

Diffusion and drift of carriers: Einstein relation, built-in fields in semiconductors with different doping profiles, energy band diagrams. Steady state carrier injection, diffusion length, Haynes-Shockley experiment (qualitative discussion).

pn junction energy band diagrams, forward and reverse-biased junction, calculation of contact potential and depletion width in abrupt junction, diffusion and drift currents, Reverse-bias breakdown, Zener and Avalanche diode. Diffusion and depletion capacitance of pn junction, varactors.

Metal-semiconductor contacts, energy band diagrams of ohmic and rectifying contacts, Schottky diodes.

Recommended Books:

1. Solid State Electronic Devices: Ben Streetman, Sanjay Banerjee (Prentice Hall India, 2005).

Paper VI: Computational Physics

Note : The Computational Physics paper will consist of two parts (a) written examination of one hour duration and (b) Practical examination of two hours duration. Both the parts carry equal marks.

Unit I

C Programming Language

Types of Computer Systems and Operating Systems.

Introduction to Programming : Algorithms, Structured Programming. Basic idea of Compilers.

Data and Statements : Data Types. Constants and Variables. Mathematical, Relational, Logical and Bitwise Operators. Expressions and Statements. Block, Local and Global variables. Auto, Static and External Variables.

I/O Statements : printf, scanf, getc, getch, getchar, getche, etc.

Manipulators for Data Formatting: setw, width, endl and setprecision etc. ASCII Files I/O.

Preprocessor : #include and #define directives.

Control Statements :- If-statement. If-else Statement. Nested if Structure. Else-if Statement. Ternary Operator. Goto Statement. Switch Statement. Unconditional and Conditional Looping. While Loop. Do-while Loop. For Loop. Break and Continue Statements. Nested Loops.

Arrays and Structures :- One and Two Dimensional Arrays. Idea of Structures, Strings and Pointers

Functions : Standard Library Functions and User-defined Functions.

Functions returning Values. Function Prototypes. Function Call by Value and by Reference. Recursion.

Unit II

Design of algorithm and computer programs based on the numerical techniques read in Paper III "Statistics and Numerical Techniques".

Programs : (a) Data handling: find standard deviation, mean, variance, moments etc., (b) the least squared fitted curve for a data set, (c) roots of quadratic equations, (d) first order derivative at given x for a data set using Lagrange interpolation, (e) numerical integration on 1-D function using Simpson methods, (f) solving a differential equation using Euler/Runge-Kutta method, (g) Sum, Difference and Product of Matrices, (h) determinant of a matrix - its eigenvalues and eigenvectors.

Recommended Books:

1. Schaum's Outline of Programming with C, Byron Gottfried, McGraw-Hill.
2. Computer Programming in C, V. Rajaraman (Prentice Hall of India Pvt. Ltd.) (2006)
3. Computer Applications in Physics: S. Chandra (Narosa) (2008).
4. Computational Physics: R.C.Verma, P.K. Ahluwalia and K.C. Sharma (New Age) (2005).

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PHYSICS
SEMESTER-VI

Paper VII: Nuclear Radiations and Detection

Unit I

Radiation Sources:

Radioactive decays: Alpha decay, β^-, $\beta+$ and EC decays, Radioactivity units, gamma rays, Internal conversion, X-rays, Auger electron, Bremesstrahlung, Annhilation radiation.

Neutron sources- fission, radioisotope based sources and photoneutron sources, Accelerator based sources.

Radiation Interactions : Interaction of light and heavy Charged Particles, Stopping power, energy and range straggling.

Interaction of Fast Electrons - ionsation and radiative loss, backscattering.

Interaction of Gamma rays, photoelectric absorption, Compton scattering and pair production. Attenuation coefficient.

Interaction of Neutrons, Slowing down power, thermal neutrons.

Sources of Background: Natural radioactivity, Air borne radioactivity, Primary and secondary Cosmic rays.

Unit II

General Properties of Radiation Detectors: Modes of detector operation, Current mode, pulse mode, Pulse Height Spectra, Energy Resolution, Detection Efficiency, Dead Time-paralyzable and non-paralyzable models.

Radiation Detectors:

Ionization process in gases, Ion pair formation, fano factor, diffusion, charge transfer and recombination,

Charge Migration and Collection.

Gas-filled detectors: Gas Multiplication, avalanche formation, Regions of detector operation.

Proportional Counters, fill gases and choice of geometry.

Geiger-Mueller counter, Fill Gases and Quenching mechanism, Recovery time and dead time, detection of charged particles, gamma and neutrons rays with G.M. counter.

Scintillation Detectors : Organic and Inorganic Scintillators; Characteristics and parameters associated with Gamma ray spectrum

Semiconductor detectors.

Detection of slow and fast neutrons by neutron-induced reactions.

Recommended Books:

1. Radiation detection and measurement: G.F. Knoll (Wiley, New York) (2000).

Paper VIII: Physics Practical

Note : The students are expected to perform any 6 experiments taking at least 3 from each section.

Unit I

1. Measurement of vacuum using the pirani/thermocouple gauge made using electric bulb filament.
2. To study Poisson and Gaussian distributions using a GM Counter.
3. To study absorption of gamma rays in Pb and Fe absorbers.
4. Strength of Alpha source using Solid state nuclear track detector.
5. To study regulated power supply and voltage multiplier circuits (using breadboard).

Unit II

6. To design an Astable multivibrator of given specifications using 555 Timer IC.
7. To design a monostable multivibrator of given specifications using 555 Timer IC and to measure the pulse-width of its output.
8. To study logic gates and clocked JK Master-Slave flip flops using IC's.
9. Study of photon intensity variation through crossed polariods and diffraction spectrum from diffraction grating using LDR/Photodiode.
10. To measure resistivity of semiconductor at different temperatures using four probe method and the deduce band gap of the semiconductor.

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CHEMISTRY

B.Sc. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2016

SEMESTER- V

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper V	:	Inorganic Chemistry-A	20	45	05
Paper VI	:	Physical Chemistry-A	20	45	05

Paper V: INORGANIC CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Inorganic Chains: (5 lectures)

(a) Chains : Catenation including heterocatenation, silicate minerals, intercalation, One dimensional sulphur-nitrogen conductor.

Unit II

Inorganic Rings and Cages : (5 lectures)

(a) Rings : Borazines, phosphazenes and phosphazene polymers.

(b) Cages : Simple cage molecules; Phosphorus–oxygen and phosphorus-sulphur cages; introduction to carboranes and metallocarboranes

Unit III

Organometallics-I : (5 lectures)

Formation and reactions (i) carbonylate ions (ii) metal-carbonyl hydrides & (iii) metal carbonyl halides.

Unit IV

Organometallics-II : (5 lectures)

Transition metal-carbon multiple bonds : Chemistry of :

Alkylidene Complexes.

Alkylidyne complexes including bridged molecules.

Metallocumulenes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
2. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
3. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
4. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VI: PHYSICAL CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Transport Properties-I *:* (5 Lectures)

Recapitulation of Collision Properties of gases such as collision cross section, collision diameter, collision number, collision frequency and mean free path.

Meaning of transport, Properties of gases, Flux, General equation of transport. Thermal conductivity, kinetic theory of thermal conductivity (derivation of the expression).

Unit-II

Transport Properties-II *:* (5 Lectures)

Viscosity of gases, kinetic theory of gas viscosity, (derivation of the expression). Measurement of gas viscosity, Diffusion Coefficient. Kinetic theory of diffusion in gases. (derivation of the expression).

Diffusion in liquids, theory of diffusion in liquids, diffusion in solutions, laws of diffusion.

Unit-III

Dynamic Electro-Chemistry : (5 Lectures)

Processes at electrodes. The electric double layer (Gouy-Chapman, Helmholtz and Stern models-qualitative ideas. The potential difference, Rate of charge transfer, Bulter Volmer equation, Tafel plot, Overpotential Polarisation, Polarography, Fuel cells, Corrosion, Inhibition of Corrosion.

Unit-IV

Surface Chemistry : (5 Lectures)

Interfacial region, types of interfaces, surface tension, thermodynamics of surfaces, plane interface, curved surfaces, Laplace and Kelvin equations including their derivation.
Gibbs Adsorption Equation and its Thermodynamic derivation, Wetting and adhesion in solid-liquid systems, contact angle, Capillary rise and surface tension. Surface Films on liquids.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. All questions carry equal marks.

Suggested Books:

1. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
3. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
4. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
5. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
6. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

CHEMISTRY

B.Sc. (HONOURS) 6th Semester EXAMINATION, 2016-2017

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
PaperVII	:	Inorganic Chemistry -B	20	45	05
PaperVIII	:	Physical Chemistry -B	20	45	05

Paper VII: INORGANIC CHEMISTRY-B

Total Marks : 50

Theory : 45

Internal Assessment : 5

Total Lectures : 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

(5lectures)

Complexes of aromatic systems with transition metals. M.O. description of bonding in Ferrocene.

Study of coordinative unsaturation, oxidative addition,

Unit-II (5 Lectures)

Insertion reactions in Organometallics.

Phenomenon of Fluxionality in Organometallics and its characterization.

Unit-III

Reaction Mechanism : (5 lectures)

Nature and classification of lignad substitution reactions, application of V.B. & C.F. theories to predict the substitution reactions. Mechanism of ligand replacement reactions, substitution in octahedral complexes acid hydrolysis, base hydrolysis, acid-catalysed, acid hydrolysis and acid hydrolysis for chelates.

Unit-IV (5 lectures)

Substitution in square planar complexes. The trans-effect & its Synthetic applications, M.O. theories and trans-effects. Electron transfer reactions & their mechanism. Molecular rearrangements, mechanistic pathways of substitution.

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

5. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
6. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
7. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
8. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VIII: PHYSICAL CHEMISTRY-B

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Colloids-I : (5 Lectures)

The colloidal state; preparation of colloidal solutions, Methods of purification of colloidal systems, dialysis, electro-dialysis, filtration, Ultra-filtration. Classification of colloidal systems, their typical properties with special reference to optical properties (Tyndall effect).

Unit-II

Colloids-II : (5 Lectures)

The Brownian movement. Electrokinetic phenomena, Stabilization of colloidal systems and theories of stability; zeta potential, Coagulation, Flocculation of colloids by electrolytes and its mechanism. Association Colloids, Micellar system, Emulsions and their types, HLB value of emulsifiers, Introduction to microemulsions.

Unit-III

Quantum Chemistry-I : (5 Lectures)

ATOMS : Schrodinger equation for multi-electron atoms, Need for approximate Solutions. Basic ideas of the Variation theorem and the Perturbation methods. Self-Consistent Field methods (Hertree and Hertree-Fock)- Elementary treatment only. Indistinguishability of Electrons. Pauli exclusion principle, two electron spin functions; Slater determinants and Pauli principle. New Atomic term symbols. Spin-orbit coupling (Total orbital momentum, multiplicity, total angular momentum) vector model of atom, Hund's rules, atomic spectra and Selection rules.

Unit-IV

Quantum Chemistry-II : (5 Lectures)

Molecules :

Schrodinger equation for molecules, Born-Oppenheimer approximation.Valence bond theory and Molecular Orbital theory as two approaches for approximate solution of Schrodinger equation LCAO-MO treatments of H_2 and Valence bond treatment of H_2 (complete solutions not required. Only wave functions to be discussed) Comparison of MO and VB treatments. Brief Introduction to the electronic structure for polyatomic molecules. Metals, Insulators and Semiconductors. Band Theory of Solids (elementary discussion).

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

7. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
8. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
9. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
10. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
11. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
12. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

BOTANY

B.Sc. (Honours) Botany Fifth and Sixth Semester Syllabus

(Examination 2016-2017)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A:	Biology of Cryptogams and Seed Plants	3 hrs.	36	4	40
Theory Paper-B:	Genetics, Plant Breeding, Biochemistry, Molecular Biology and Biotechnology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs	18	2	20
Sixth Semester					
Theory Paper- A:	Microbiology and Plant Pathology	3 hrs.	36	4	40
Theory Paper-B:	Systematics of Angiosperms and Environmental Biology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	2	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY

B.Sc. (Honours) Fifth Semester (Examination December, 2016)

PAPER-A: BIOLOGY OF CRYPTOGAMS AND SEED PLANTS

Max. Marks	:	40
Theory	:	36
Internal Assessment	:	04

Objective : The basic objective of this paper is to make the students understand the diversity in various life forms of plant kingdom. It provides knowledge about evolution of simpler forms to complex ones along with their morphology, anatomy and reproduction.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
BIOLOGY OF CRYPTOGAMS

Algae: Occurrence and distribution; thallus organization and evolutionary tendencies; ultrastructure of algal cell; criteria for classification, structure and life history of *Oedogonium* (Chlorophyceae), *Vaucheria* (Xanthophyceae), *Ectocarpus* (phaeophyceae), *Batrachospermum* (Rhodophyceae) and economic importance of algae.

Fungi: Occurrence and distribution; ultrastructure of fungal cell, cell wall composition, modern concepts in the classification of fungi; nutrition, reproduction, structure and life history of *Rhizopus* (Zygomycetes), *Peziza*, *Saccharomyces* (Ascomycetes), *Alternaria* (Deuteromycetes), *Agaricus* (Basidiomycetes); types of fungal spores and mode of their liberation and economic importance of fungi.

UNIT-II

Bryophytes: Comparative account of morphology, anatomy and reproduction in *Riccia, Marchantia, Anthoceros, Funaria*; evolution of sporophyte and gametophyte; classification, ecological aspects and economic importance.

Pteridophytes: The primary vascular plants; classification, comparative account of morphology, anatomy and reproduction in *Rhynia, Lycopodium, Selaginella, Equisetum, Marsilea, Pteris*; Telome theory; stelar evolution; heterospory and seed habit.

UNIT-III
SEED PLANTS

Phanerogams, the seed bearing plants: General characteristics and types.

The Living Cycads: Distribution; vegetative organography and anatomy; reproductive cycle –sporophytes and sporangia, gametophytes, fertilization, embryogeny and seed development of *Cycas*.

The Coniferales: General organography and anatomy; foliage leaves; storbilli and sporangia; reproductive cycle– sporogenesis, gametophytes, fertilization, embryogeny and seed development of *Pinus*.

The Gnetales: Habit and distribution; vegetative organography and anatomy; reproductive cycle – the storbilli, sporogenesis, male and female gametophytes, pollination, fertilization and embryogeny of *Ephedra*.

UNIT-IV

Alternatives for Reproduction: Vegetative and sexual reproduction.

Flower: Evolution, concept of flower as a modified determinate shoot and functions of flower.

Structure of Anther : Microsporogenesis: formation of pollen grains (male gametophyte); pollen germination; pollen tube growth.

Structure of Pistil**:** Ovules; megasporogenesis; development of embryo sac (female gametophyte).

Mechanisms and Agencies of Pollination: Pollen-stigma interaction; self-incompatibility; double fertilization, apomixis.

Seed and Fruit: Development of endosperm and embryo in monocotyledons and dicotyledons; storage of reserve materials and desiccation in seeds; dormancy and seed germination; fruit maturation; ripening and dispersal.

Suggested Readings

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 4th revised and enlarged edition. Vikas Publishing House, Delhi, India, 2000.
2. Bold, H.C., Alexopoulos, C.J. and Delevoryas, T. Morphology of Plant and Fungi (4th Edition), Harper and Foul Co., New York, 1980.
3. Cronquist, A. The evolution and classification of flowering plants, Thomas Nelson (Printers) Ltd., London and Edinburgh, 1968.
4. Delevoryas, Th. Plant Diversification, Modern Biology Series. Halt, Rinehart and Winston, New York, 1965.
5. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
6. Dube, H.C. An Introduction to Fungi, Vikas Publishing House Pvt. Ltd., Delhi, India, 1990.
7. Foster, A.S. and Gifford, A.E.M., Jr. The Comparative Morphology of Vascular Plants, Vakils, Peffer and Simons Pvt. Ltd, 1967.
8. Gifford, E.M. and Foster, A.S. Morphology and Evolution of Vascular Plants, W.H. Freeman & Co., New York, 1989.

9. Gilbert, M.S. Cryptogamic Botany, Vol. I & II (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1985.
10. Johri, B.M. Embryology of Angiosperms, Springer-Verlag, Berlin, 1984.
11. Kumar, H.D. Introductory Phycology, Affiliated East-West Press Ltd., New York, 1988.
12. Puri, P. Brophytes, Atmaram & Sons, Delhi, India, 1985.
13. Raghvan, V. Molecular Embryology of Flowering Plants, Cambridge University Press, New York, 1997.
14. Rangaswamy, G. and Mahadevan, A. Diseases of Crop Plants in India, Prentice Hall India Pvt. Ltd. New Delhi, India, 1999.
15. Singh, V, Pande, P.C. and Jain, D.K. Diversity of Microbes and Cryptogams, Rastogi Publications, Meerut, India, 2008.
16. Sporne, K.R. The Morphology of Angiosperms. B.I. Publication, Bombay, India, 1977.
17. Srivastava, H.N. Diversity of Microbes & Cryptogams, Vol. I, Pradeep Publications, Jalandhar, India, 2014.
18. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol.III, Pradeep Publications, Jalandhar, India, 2014.
19. Wilson, N.S. and Rothwell, G.W. Palaeobotany and the Evolution of Plants (2nd Edition), Cambridge University Press, UK, 1993.

Suggested Laboratory Exercises (Biology of Cryptogams)

1. Comparative study of algal genera with reference to the classes mentioned in theory.
2. Comparative study of fungal genera with reference to the classes mentioned in theory.
3. Comparative study of morphology, anatomy and reproductive structures in *Riccia, Marchantia, Anthoceros* and *Funaria.*
4. Comparative study of different members of Pteridophytes mentioned in the theory syllabus.
5. Comparative anatomical structure of stem/wood of Cycadales, Coniferales, Ephedrales, Gnetales and angiosperms, from sections and macerations.
6. Comparative structure of the male and female cones of Cycads (*Cycas*), Conifers (*Pinus*) and Ephedrales (*Ephedra*).
7. Comparative structure of leaf, leaf appendages, venation and stomata of gymnosperms and angiosperms.
8. Diversity in pollen grain structure among Cycads, Conifers, Ephedrales and angiosperms with respect to size, exine sculpturing, germ spore number, number of constituent cells and any other features.
9. Microsporogenesis and male gametophyte development in angiosperms through microtome sectioning and acetocarmine squash technique.
10. Pollen grain germination by hanging-drop and sitting-drop techniques in *Impatiens*, *Catharanthus roseus* (= *Vinca rosea*) or any other suitable material.
11. Diversity in the structure of stigma, style, stigmatic papillae and transmitting tissue of style.

BOTANY

SEMESTER – V

PAPER-B: GENETICS AND PLANT BREEDING, BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Objective: The course work of this paper deals with basic concepts of genetics, plant breeding, molecular biology and biotechnology. It deals with various types of plant reproduction and methods of plant improvement. It provides knowledge of molecular and cellular basis that would enable the students to understand the hereditary and evolutionary trends in plants kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
GENETICS

Cell division - Mitosis and Meiosis.

Mendel's Experiments and Principles of Inheritance; Backcross and test cross; gene interactions and modified dihybrid ratios – complementary, supplementary, duplicate and epistatic factors.

Quantitative Genetics: Quantitative traits and quantitative genetics; the multiple factor hypothesis; descriptive statistics.

Linkage and Recombination: Coupling and repulsion phases; two and three point testcrosses with their significance in chromosome mapping; interference and co-efficient of coincidence.

Maternal Influence on Inheritance: Shell coiling in snails and Kappa particles in *Paramecium*; cytoplasmic inheritance in yeast (mitochondria) and *Mirabilis jalapa* (plastids).

Alterations in the Genetic make up – changes at Genetic Level: Spontaneous and induced mutations; mutagens – types and mode of action; transitions, Transversions and frame-shift mutations; detection of mutations.

Alterations in Genetic makeup – changes in Chromosome Structure: Origin, types and effects of duplications, deletions, inversions and translocations; meiosis in structural heterozygotes.

Alterations in Genetic makeup – changes in Chromosome Number : Origin, types and effects of auto and allopolyploidy; origin and meiosis in nullisomics, monosomics and trisomics.

UNIT –II

PLANT BREEDING

Methods of Plant Improvement: Pure line and mass selection; hybridization in self and cross pollinated crops; introduction and acclimatization; hybrid vigour.

Mutations and polyploidy as methods of plant improvement.

UNIT-III

BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Nucleic Acids**:** Composition of nucleic acids and synthesis of nucleotides; DNA structure; A,B and Z forms of DNA; denaturation and renaturation of DNA; chromatin structure; DNA replication and recombination; DNA polymerases; different forms of RNA and their role.

Amino Acid and Protein Metabolism: Structure, characteristics and classification of amino acids; protein and non-protein amino acids; amino acid biosynthesis; GS/GOGAT cycle; transamination; peptide bond and polypeptide chain; primary, secondary, tertiary and quaternary structure of proteins; protein biosynthesis and its regulation; post-translational modification of proteins; protein targeting; protein degradation.

Carbohydrate Metabolism: Classification; structure of some representatives examples of monosaccharides, disaccharides, polysaccharides; stereoisomers, enantiomers and epimers; biosynthesis and degradation of sucrose and starch.

Lipid Metabolism: Saturated and unsaturated fatty acids; fatty acid biosynthesis; oxidation of fatty acids; storage and mobilization of fatty acids and lipids.

UNIT-IV

Gene Structure, Expression and Regulation: Gene organization in prokaryotes and eukaryotes; operon concept; gene regulation in prokaryotes and eukaryotes; inducible, repressible, positive and negative gene regulation; interrupted genes in eukaryotes; RNA splicing; mRNA stability.

Recombinant DNA Technology: Restriction endonucleases: prokaryotic and eukaryotic cloning vectors; genomic and cDNA libraries; southern and northern analysis; various techniques of gene mapping and DNA fingerprinting (RFLP, RAPD, AFLP); chromosome walking; polymerase chain reaction; DNA sequencing.

Plant Biotechnology: Cellular differentiation and totipotency; organogenesis and embryogenesis; protoplast isolation and culture; somatic hybridization; clonal propagation; genetic engineering of plants; vectors for gene delivery; selectable markers and reporter genes; methods of gene delivery; Agrobacterium – the natural genetic engineer; salient achievements in crop biotechnology (with suitable examples) and prospects.

Suggested Readings:

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. Molecular Biology of Cell, Garland Publishing Co., Inc., New York, USA, 1999.
2. Atherly, A.G., Girton, J.R. and McDonald. The Science of Genetics, Saunders College Publishing Co., Fort Worth, USA, 1999.
3. Bhatia, K.N. and Dhand, Neelam. Cell Biology and Genetics, Trueman Book Company, Jalandhar, India, 2013
4. Buchanan, B.B., Gruissem, W. and Jones, R.L. Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists, Maryland, USA, 2000.
5. Dennis, D.T., Turpin, D.H., Lefebvre, D.D. and Layzell, D.B. (eds). Plant Metabolism (2nd Edition), Longman, Essex, England, 1997.
6. Gardener, J., Simmons, H.J. and Snustad, D.P. Principles of Genetics (8th Edition), John Wiley & Sons, New York, 1991.
7. Gupta, P.K. Cytogenetics, Rastogi Publications. Shivaji Road, Meerut, India, 1995.
8. Gupta, P.K. Cytology, Genetics and Molecular Biology, Rastogi Publications. Shivaji Road, Meerut, India, 2009.
9. Gupta, P.K. Genetics, Rastogi Publications. Shivaji Road, Meerut, India, 1994.
10. Hartl, D.L. and Jones, E.W. Genetics: Principles and Analysis (4th Edition), Jones & Bartlett Publishers. Massachusetts, USA, 1998.
11. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology (2nd Edition), John Wiley and Sons, Chichester, England, 1999.
12. Lodish, H., Berk, A., Zipursky, S.L., Matsudaira, P., Baltimore, D. and Darnell, J. Molecular Cell Biology (4th Edition), W.H. Freeman and Co., New York, U.S.A, 2000.
13. Old, R.W. and Primrose, S.B. Principles of Gene Manipulation, Blackwell Scientific Publications, Oxford, UK, 1989.
14. Poehlmann, J.M. and Sleeper, D.R. Breeding Field Crops, Panima Publishing House, New Delhi, India, 1995.
15. Russel, P.J. Genetics (5th Edition), The Benjamin/Cummings Publishing Co., Inc., USA, 1998.
16. Sharma, J.R. Principles and Practice of Plant Breeding, Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1994.
17. Simmonds, N.W. Principles of Crop Improvement, Longman, London and New York, 1979.
18. Snustad, D.P. and Simmons, M.J. Principles of Genetics (2nd Edition), John Wiley & Sons, Inc., USA, 2000.

19. Srivastava, H.N. Cell Biology and Genetics, Vol.II, Pradeep Publications, Jalandhar, India, 2006.
20. Srivastava, H.N. Plant Physiology, Biochemistry and Biotechnology, Vol.V, Pradeep Publications, Jalandhar, India, 2013.
21. Verma, P.S. and Agarwal, V.K. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company (Reprint, 2010).

Suggested Laboratory Exercises:

1. Determination of chromosome count from dividing pollen mother cells and root tips.
2. Preparation of karyotypes from dividing root tip cells and pollen grains.
3. Determination of intraspecific variation in chromosome number from locally available taxa.
4. Correlation of floral structure with pollination system (e.g. *Salvia*, *Sesamum*, pea, *Lathyrus*, wheat, rice, maize).
5. Field exploration for detection of male sterile plants and estimation of their pollen fertility in locally grown crop plants e.g. *Sorghum*, tomato and *Linum*.
6. Estimation of pollen ovule ratio and its bearing on pollination system.
7. Emasculation and bagging of flowers of Brassicaceae, Poaceae, Papilionaceae, Malvaceae and Linaceae, pollinating them manually and estimating fruit and seed set.
8. Chemical tests to demonstrate the presence of starch, sugar, fat and protein in plant material.
9. To identify the amino acids in a mixture by resolving through paper chromatography or TLC.
10. To prepare the standard curve for protein and determine the protein content in unknown samples by Biuret method.
11. Colorimetric estimation of RNA using orcinol.
12. Colorimetric estimation of DNA using diphenyl amine.
13. Isolation of plant genomic DNA and its spooling.
14. Isolation of total RNA from plant tissue and its colorimetric estimation.
15. Preparation of tissue culture media, sterilization and inoculation of plant material.
16. Demonstration of techniques of in vitro culture of various explants.
17. Isolation of plant protoplasts (e.g. Tobacco, *Petunia*) using enzymes available commercially and estimation of their yield.

Note: In the practical classes, emphasis should be given on basic principles of spectro-photometry, chromatography, electrophoresis and rDNA technology and related fundamentals.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1 Identify classify & write illustrated morphological note on specimens A & B (unit I – III of paper A) 4
Q.2 Demonstrate and perform the experiment C (Biochemistry/Biotechnology) and show it to the examiner. 5
Q.3. Identify slides D & E giving at least two reasons for each. 4
Q.4 Practical note book 2
Q.5 Viva-Voce 3

BOTANY

B.Sc. (Honours) Sixth Semester (Examination May, 2017)

PAPER-A: MICROBIOLOGY AND PLANT PATHOLOGY

Objectives: The basic objective of this paper is to make students familiar with the systematic position of microorganisms, their ultrastructure, classification and industrial application. It also deals with the important aspects of plant diseases, their pathogens and disease management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
(MICROBIOLOGY)

General account of Microorganisms and their characteristics features.

Ultrastructure of Microorganisms: Prokaryotic microorganisms; fine structure of prokaryotic cell; eukaryotic microorganisms; viruses – properties and classification; characteristic features of host-virus interaction; bacteriophage T4; tobacco mosaic virus; general account of mycoplasma and actinomycetes.

Industrial Application of Microorganisms: Organic acids, alcohol, food processing, milk products, antibiotics and biopesticides.

UNIT-II

Genetic Recombination in Prokaryotes: Conjugation, transformation and transduction.

Role of Microorganisms in biogeochemical cycling of nitrogen and carbon; Biological N_2 fixation.

UNIT-III

(PLANT PATHOLOGY)

Major Diseases of Plants, their symptoms and Control : Blast and brown spot of rice, rust and smuts of wheat, downy mildew and green ear disease of bajra, white rust of crucifers, late blight of potato, wilt of pigeon pea, damping off seedlings of tomato/mustard/chillies, Tikka or leaf spot of groundnut, citrus die back, powdery mildews of cucurbits and grapes, red rot of sugarcane.

Plant Disease Management: Chemical, biological; IPM systems; development of transgenics; biopesticides; plant disease clinics.

UNIT-IV

Pathogen Attack and Defense Mechanisms: Physical, physiological, biochemical and molecular aspects.

Plant Disease Epidemiology: Transmission and spread of plant pathogens; disease cycles, epidemics; modeling and disease forecasting.

Suggested Readings:

1. Agrios, G.N. Plant Pathology, Academic Press, London, 1997.
2. Albajes, R. Gullino, M.L., Van Lenteren, J.C. and Elad, Y. Integrated Pest and Disease Management in Green house crops, Kluwer Academic Publishers, 2000.
3. Bridge, P. et al. Molecular Variability of Fungal Pathogens, CAB International, UK, 1998.
4. Bridge, P. et al. Application of PCR in Mycology, CAB International, UK, 1999.
5. Bridge, P., Moore, D.R. and Scott, P.R. Informational Technology, Plant Pathology and Biodiversity, CAB International, UK, 1998.
6. Clifton, A. Introduction to the Bacteria, McGraw Hill Co., New York, 1958.
7. Mandahar, C.L. Introduction to Plant Viruses, Chand & Co. Ltd., Delhi, India,1998.
8. Persley, G.J. Biotechnologies and Integrated Pest Management, CAB International, UK, 1996.
9. Skerritt, J.H. and Apples, R. New Diagnostics in Crop Sciences, CAB International, UK, 1995.

Suggested Laboratory Exercises

1. Calibration of microscope: determination of dimensions of microorganisms (suggested model organisms: yeast, lactobacilli, cyanobacteria).
2. Cultivation media for autotrophic and heterotrophic microorganisms (cleaning of glasswares, mineral media, complex media, solid media, sterilization).
3. Isolation of microorganisms: streaking on agar plates/pour plate method, isolation of clones, preservation.
4. Preparation of Winogradsky column using pond bottom mud, observations on temporal sequence of appearance of microbes. (visual appearance, microscopic observations)
5. Observation on virus infected plants (symptoms).
6. Fermentation by yeast (inverted tube method, use of different substrates, e.g. glucose, fructose, cane sugar, starch)
7. Study of histopathology of various plant diseases included in theory.
8. Isolation and culture of plant pathogens (e.g. *Colletotrichum, Fusarium, Alternaria*) and establishment of Koch's postulates and their pathogenicity.
9. Study on antagonism between isolated antagonists and plant pathogens and test of biological control.
10. Demonstration of the assay of prohibitins (phytoalexins).
11. Demonstration of biopesticides (essential oils, neem, turmeric and garlic) against some pathogens.

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BOTANY

SEMESTER – VI

PAPER-B: SYSTEMATICS OF ANGIOSPERMS AND ENVIRONMENTAL BIOLOGY

Objective: This paper deals with taxonomy and species concept of plants. It provides a knowledge about identification, nomenclature and classification which forms the basis of future research work. It also deals with inter-relations of plants and environment as well as various environmental problems, role of national and international organization in environmental management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

ANGIOSPERM SYSTEMATICS

Introduction : Aims and components of systematics, introduction to identification, nomenclature, phylogeny and classification.

Systematics in Practice: Importance of herbarium specimens and their preparation; role of herbaria and botanical gardens; documentation (floras, monographs, manuals, journals, abstracts, indices and dictionaries); keys for identification of plants.

Taxonomic Hierarchy: Taxonomic category, taxonomic groups; concepts of species, genus and family.

Botanical Nomenclature: Principles and rules; ranks and names; type method; principle of priority and its limitations; names of hybrids and cultivars; concept of biocode.

UNIT-II

General characters of Angiosperms.

Systems of Classification: Bentham and Hooker's system. Engler and Prantl's system and Takhtajan's system.

Modern Taxonomy: Supporting evidences/inputs for taxonomy; taxonomy in relation to anatomy, embryology, palynology, ecology, cytology (cytotaxonomy), secondary metabolites in plants (chemotaxonomy).

A brief account of following families : Ranunculaceae, Brassicaceae, Rutaceae, Fabaceae, Cucurbitaceae, Apiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

UNIT-III

ENVIRONMENTAL BIOLOGY

Introduction: Inter-relationship between the living world and the environment; the components and dynamism; homeostasis; relevance to man.

Earth as a System: The biosphere, the hydrosphere, the atmosphere and the lithosphere; components within biosphere (Biomes); parameters delimiting individual biomes.

The Environment: Soil, water and atmosphere – general account and adaptations.

Organismal Ecology/Biotic components: Individuals, species, population communities and their characteristics.

Ecosystems: Concepts of ecosystem; homeostasis; structure of ecosystem; functions of ecosystem; transfer of energy and minerals via grazing and detritus chains and role of micro-organisms; cycles (hydrologic, gaseous); role of humans in maintaining biogeochemical cycles.

Diversity of Ecosystem: Aquatic (fresh water); terrestrial (forest/grassland); man-made ecosystems.

UNIT-IV

Human Ecology and Ecological Management: The human population; renewable and non-renewable natural resources and their management; conservation of biodiversity; endangered species; conventional and non-conventional energy sources.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Suggested Readings

1. Barbour, M.G., Burk, J.H. and Pitts, W.D. Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.
2. Bhojwani, S.S. Plant Tissue Culture: Applications and Limitations, Elsevier Science Publishers, New York, USA, 1990.
3. Collins, H.A., and Edwards, S. Plant Cell Culture, Bios Scientific Publishers, Oxford, UK, 1998.
4. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
5. Hill, M.K. Understanding Environmental Pollution, Cambridge University Press, 1997.
6. Kormondy, E.J. Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, India, 1996.
7. Mackenzie, A. et al. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, India, 1999.
8. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.
9. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.
10. Odum, E.P. Basic Ecology. Saunders, Philadelphia, 1983.
11. Raghavan, V. Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, New York, USA, 1986.
12. Smith R.K. Ecology and Field Biology. Harper Collins, New York, 1996.

13. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol. III, Pradeep Publications, Jalandhar, India, 2014.
14. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture, Kluwer Academic Publishers, The Netherlands, 1994.

Suggested laboratory Exercises

Description of the following flowers belonging to the various families included in theory syllabus:

1. Ranunculaceae : *Ranunculus, Delphinium*
2. Brassicaceae : *Brassica, Iberis*
3. Rutaceae: *Citrus, Murraya*
4. Fabaceae: *Lathyrus, Cassia, Mimosa* and *Acacia*
5. Cucurbitaceae: *Luffa*
6. Apiaceae; *Coriandrum*
7. Asteraceae: *Helianthus, Ageratum, Sonchus.*
8. Asclepiadaceae: *Calotropis.*
9. Solanaceae: *Solanum, Petunia*
10. Lamiaceae: *Ocimum, Salvia*
11. Chenopodiaceae: *Chenopodium*
12. Euphorbiaceae: *Euphorbia, Phyllanthus*
13. Liliaceae: *Asphodelus, Asparagus*
14. Poaceae: *Avena, Triticum.*

Suggested laboratory Exercises (Environmental Biology)

1. Mechanical analysis of soils by sieve method
2. Determination of water holding capacity and field capacity of soil.
3. Determination of permeability (capillarity and percolation) of different types of soils.
4. Determination of species area curve by minimal quadrat size.
5. Analysis of the herbaceous vegetation for frequency, density and abundance.
6. Effect of tree canopy on the distribution of herbaceous vegetation.
7. Field visit: students should be taken for field visits to places of ecological/environmental interest. They should submit detailed report of the visit in the form of project report in the final practical examination for evaluation. The report shall carry marks.

Note to teachers:

The students are to be familiarized with the families listed above in the practical classes with representative's species or any other that may be available locally. However, questions pertaining to these may be asked in the theory examinations.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1	Describe specimen A in technical terms & proper sequence. Draw F.D and V.S of the flower. Cut T.S of ovary and V.S of the flower and show it to the examiner. Write its F.F. as well.	6
Q.2	Identify specimen B and write Histopathological note on it.	3
Q.3.	Identify slides C by giving at least two reasons.	2
Q.4	Field Diary	2
Q.5	Practical note book	2
Q.6	Viva-Voce	3

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ZOOLOGY

B. Sc. (HONOURS) SEMESTER – V

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

PAPER II: AQUATIC BIOLOGY-I

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

Max. Marks	:	40
Theory Exam	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Structure and functions of testis, epididymis, vas deferens.

UNIT-II

Seminal vesicle and prostate gland.
Semen composition, sperm maturation and capacatation.

UNIT -III

Structure and functions of ovary, oviduct, uterus and vagina.

UNIT -IV

Oestrous and menstural cycles.
Fertilization, implantation, gestation, parturition and lactation.

Books Recommended :

1. Milt, J. and Everitt, B.J., *Essential of Reproduction,* Blackwell Scientific Publications,1985.

2. Genong, M., *Reproduction,* Saunders Intern. Publications, 1985.

3. Greep, R.O. and Astwood, E.B. (Eds.), *Handbook of Physiology,* Kluwer Academic/Plenum Publishers, New York, 2002.

4. Balin, H. and Glasser, S. (Eds.), *Reproductive Biology,* Excerpta Media, 1972.

5. Guyton, A.S., *Text Book of Medical Physiology,* 7th edition, Iquakushoinl/Saunders International Publications, 1994.

Paper-II : AQUATIC BIOLOGY

Max. Marks	:	40
Theory Exam	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

Note : Nine questions are to be set. Question No. 1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Physico-chemical characteristics of marine environment

UNIT -II

Zonation in marine habitat : Pelagic and benthic zone and their flora and fauna.

UNIT -III

Freshwater zonation in a lake and stream : Supralittoral, littoral, sublittoral, profundal & limnetic zones of a lake. Pool zone and rapid zone of a stream.

UNIT -IV

Classification of freshwater habitats : Streams ponds, lakes, marshes and swamps.

Suggested Books :

1. Ruttner, F., *Fundamentals of Limnology*, University of Tronto Press, Tronto, 1975.

2. Reid, G.K., and Wood, R.D., *Ecology of Inland Waters and Estuaries*, Van Nostrand Reinhold Publishing Co., New York, 1975.

3. Welch, P.S., *Limnology*, McGraw Hill Book Co., New York, 1952.

4. Jhingran, V.G., *Fish & Fisheries of India*, Hindustan Publications Corporation, Delhi, 1991.

PRACTICALS

Practical based on both theory papers I & II :

I. Demonstration of male and female reproductive systems and their associated glands in rat/rabbit through charts.
II. Histology of testis, epididymis, vas deferens, prostate, seminal vesicle, ovary, uterus and vagina through permanent slides.
III. Study of permanent slides of the vaginal smear of human menstrual cycle and rat/mice oestrous cycle.
IV. Determination of the different phases of the oestrous cycle in living rat through permanent slides.
V. Study of mammalian sperm through slides/charts.
VI. Histological examination of placenta through slides/charts.
VII. Freshwater zonation in lake/stream and study of different communities (plankton, nekton, neuston, benthos and lotic communities).

Scheme for Conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks

Note : 1. Practical will be of 4 hrs. duration.

1. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of given system and show to examiner/Spot parts of system on the charts/models. (3)

II Identification of phases of oestrous cycle. (1)

III Record biota in a given sample from a lake. Make labeled sketches and demonstrate them to the examiner. (2)

IV Examine the water sample for various communities from different zones of a lake and draw labelled sketches. (2)

V Identify the specimens/slides/charts A-D. Give reasons of the identification. (4)

VI. Note book and charts. (3)

VII. Viva-Voce. (3)

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ZOOLOGY

B. Sc. (HONOURS) SEMESTER – VI

PAPER I: REPRODUCTWE BIOLOGY AND HUMAN WELFARE-II

PAPER II: AQUATIC BIOLOGY-II

PAPER I: REPRODUCTWE BIOLOGY AND HUMAN WELFARE-II

Max. Marks : 40
Theory Exam. : 36 marks
Internal Assessment : 4 marks
Time : 3 hrs.

Note : Nine questions are to be set. Question No. 1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT –I

Neuro-Hormonal Regulation of production of Gonadal and Gonadotropic hormones.

UNIT –II

Neuro-Hormonal Regulation of production of Hypothalamic factors and Structural behaviour.

UNIT –III

Fertility Regulation

Contraception and modern contraceptive technology-natural, mechanical, chemical immunological and surgical methods and Fertilization *in vitro* (Test tube baby).

UNIT -IV

Application of fertility regulation in live stock:

i. Artificial insemination in farm animals.
ii. Milk yield.
iii. Egg production in poultry.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Turner, C.P. & Bagnara, J.T., General Endocronology, Saunders Intern. Publications, 1984.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-II

Max. Marks : 40
Theory Exam. : 36 marks
Internal Assessment : 4 marks
Time : 3 hrs.

Note : Nine questions are to be set. Question No. 1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Ecosystem : Study of ecosystem with particular reference to the components of aquatic ecosystem. Food chains and food webs. Flow of energy in a food chain.

UNIT -II

Physico-chemical characteristics of freshwater environment : Temperature, light, current of water, density, pH, dissolved oxygen, carbon dioxide and nutrients.

UNIT -III

Productivity : Concepts of productivity, primary, secondary and tertiary productivity, yield and carrying capacity.

UNIT -IV

Ecological sucession : Succession, kinds of succession, changes in animal life during hydrarch concept of climax. Adaptations of aquatic organisms.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Odum, E.P., Fundamentals of Ecology, Saunders Co., Philadelphia, 2004.

PRACTICALS

Practical based on both theory papers I & II:

I. Study of permanent slides of mammalian ovary and testis.
II. Study of different techniques of contraception through charts/models/video clippings.
III. Study of artificial insemination, egg production through charts/models/video clippings.
IV. Study of components of lake ecosystem and grazing type of food chain.
V. Physico-chemical characteristics of freshwater environment. Temperature, Light, turbidity, current of water, density, pH, dissolved O_2, CO_2 and nutrients.
VI. Ecological succession in an aquatic habitat in the laboratory.

Scheme for Conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of techniques of contraception/artificial insemination. (3)

II Determine the physico-chemical factors in a given sample of fresh water. Write the procedure followed. (4)

III Draw labeled diagram of food chain (in aquatic/terrestrial environment) (2)

IV Identify the cells/part in slides A & B. Give reasons for identification and name the hormone secreted by it. (3)

V. Note book and charts. (3)

VI. Viva-Voce. (3)

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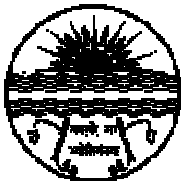

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 — enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

BACHELOR OF COMPUTER APPLICATIONS

(SEMESTER SYSTEM)

FOR

EXAMINATION 2016 - 2017

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Panjab University, Chandigarh

Scheme of Examination and Syllabus of BCA w.e.f. 2016 - 17

Bachelor of Computer Applications Semester – I

Paper Code	Title	L	T		Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-101	English(Compulsory)-A	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-102	Fundamentals of Mathematical Statistics	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-103	Computer Fundamentals and Computing Software	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-104	Problem Solving Through C	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-105	Lab based on BCA-16-103	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-106	Lab based on BCA-16-104	-	-	6	6	-	50	50	4 Hrs	2
	Environment & Road Safety Education									
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – II

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-201	English (Compulsory)-B	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-202	Computer Organization	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-203	Fundamentals of Web Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-204	Object Oriented Programming using C++	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-205	Lab based on BCA-16-203	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-206	Lab based on BCA-16-204	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

*** The Environment, Road Safety Education and Violence Against Women & Children is a compulsory qualifying paper, which the students have to study in the BCA 1st year (2nd Semester). If the student/s failed to qualify the paper during the2nd Semester, he /she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.**

Third Semester						
Sr. No.	**Subject**	**LT/ Week**	**Theory Marks**	**Internal Assessment**	**Exam. Hours**	**Paper Code**
10.	Computer Based Numerical Methods	6	90	10	3	BCA-301
11.	Data Structures	6	90	10	3	BCA-302
12.	Implementation of Object Oriented concept through C++	6	90	10	3	BCA-303
13.	Computer Lab.: Based on BCA – 301, BCA – 302 and BCA – 303	12	45	05	4	BCA-304

Fourth Semester						
14.	Project Management & System Development	6	90	10	3	BCA-401
15.	Client Server Computing using ORACLE	6	90	10	3	BCA-402
16.	Understanding UNIX	6	90	10	3	BCA-403
17.	Computer Lab.: Based on BCA-402 and BCA-403	6	45	05	4	BCA-404

Fifth Semester						
Sr. No.	**Subject**	**LT/ Week**	**Theory Marks**	**Internal Assessment**	**Exam. Hours**	**Paper Code**
18.	Enterpreneurship Development Programme	4	90	10	3	BCA-501
19.	Principles of Computer Graphics & Multimedia Technology	5	90	10	3	BCA-502
20.	Discrete Mathematics in Computer Science	5	90	10	3	BCA-503
21.	Computer Lab.: Based on BCA-502	5	90	10	4	BCA-504
Sixth Semester						
22.	Web Programming	5	90	10	3	BCA-601
23.	Computer Organization	5	90	10	3	BCA-602
24	Computer Networks	5	90	10	3	BCA-603
24.	Minor Project and Seminar Based on BCA-601	5	90	10	4	BCA-604

Bachelor of Computer Applications Semester – I

Paper Code	Title	L	T		Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-101	English(Compulsory)-A	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-102	Fundamentals of Mathematical Statistics	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-103	Computer Fundamentals and Computing Software	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-104	Problem Solving Through C	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-105	Lab based on BCA-16-103	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-106	Lab based on BCA-16-104	-	-	6	6	-	50	50	4 Hrs	2
	Environment & Road Safety Education									
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – II

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-201	English (Compulsory)-B	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-202	Computer Organization	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-203	Fundamentals of Web Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-204	Object Oriented Programming using C++	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-205	Lab based on BCA-16-203	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-206	Lab based on BCA-16-204	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

FIRST SEMESTER

FIRST SEMESTER

English (Compulsory) – A
BCA-16-101

L	T	P	Cr	
6	-	-	3	

External Marks : 65
Internal Marks : 10

Time Duration : 3Hrs. **Number of Lectures : 60**

Semester I

Book Prescribed: **Colours of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (1& 2)
   One essay type question on summary/Character/Incident (one out of two with internal choice)
   10 marks

II) **Prose (1 to 3)**
   Long essay type question on Summary/Theme(one out of two with internal choice)
   10 marks

III) **Poetry** (1 to 6) **15 marks**
   Summary (one out of two with internal choice) **5 marks**
   Short Questions (two out of three) **5 marks**
   Reference to the Context (one out of two with internal choice) **5 marks**

Section B

1) Word formation from Prose and Stories and their use in sentences (5 out of 8) **10 marks**
2) Use of textual words and idioms in sentences (5 out of 8) **10 marks**
3) Translation from Hindi/Punjabi to English **5 marks**
   (a small Paragraph)
   OR
   For Foreign Students (Paraphrase of Poetry Passage)
4) Official, Business and Letters to the Editors **5 marks**

Fundamentals of Mathematical Statistics
BCA-16-102

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the basic techniques of Statistical Methods. After completing this course students will be able to solve various Financial, Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

SECTION-A

Basic Statistics: Types of Statistics, Different Statistical Techniques, Steps in Statistical Investigation, Uses and Limitations of statistics, Collection of Data: Sources of collecting primary and Secondary Data, Limitations of Secondary Data, Criteria of evaluating secondary data, Organization of data, Graphs of Grouped Frequency Distribution, Tabulation of Data, Parts of Table

Measures of Central Tendency: Kinds of measures of central tendency (statistical averages or averages):

Arithmetic Mean: Simple Arithmetic Mean, Methods of calculating Simple Arithmetic Mean, Arithmetic Mean in case of Individual Series, Discrete series and continuous series, Weighted Arithmetic Mean, Combined Arithmetic Mean.

Geometric Mean: Simple Geometric Mean , Methods of calculating Simple Geometric Mean, Geometric Mean in case of Individual Series, Discrete series and continuous series, Weighted Geometric Mean, Combined Geometric Mean.

Harmonic Mean: Simple Harmonic Mean ,Methods of calculating Simple Harmonic Mean, Harmonic Mean in case of Individual, Discrete series and continuous series, Weighted Harmonic Mean, Combined Harmonic Mean.

SECTION-B

Median: Methods of Calculating Median in case of Individual, Discrete series and continuous series

Partition Value: Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles

Mode: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series

Range: Computation of Range, Inter Quartile Range, Computation of Inter Quartile Range, Percentile Range and Computation of Percentile Range.

Mean Deviation, Computation of Mean Deviation, Standard Deviation, Calculation of Standard Deviation, Variance, Calculation of Standard Deviation for individual Series, Discrete Series and Continuous Series, Coefficient of Standard Deviation and coefficient of variation, Combined Standard Deviation, Correcting incorrect Standard Deviation

SECTION-C

Correlation Analysis : Correlation Analysis: Definition, Types of Correlation: Positive, Negative, Simple, Multiple, Partial, Total, Linear and Non-Linear. Need of Correlation Analysis, Correlation and Causation, Techniques for Measuring Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation: Correcting incorrect coefficient of correlation, calculating Karl Pearson's coefficient of correlation in case of grouped series, Probable Error, Coefficient of Determination, Spearman's coefficient of Correlation (Rank correlation): Calculation of Correct Coefficient of rank correlation, Difference between Rank Coefficient and Karl Pearson's coefficient of coefficient, Coefficient of concurrent deviation.

SECTION-D

Regression Analysis (Linear Regression): Definition, Difference between Correlation and Regression, Types of Regression Analysis: Simple, Multiple, Partial, Total, Linear and Non-Linear, Objectives of Regression Analysis, Methods of obtaining regression analysis: Regression Lines, Regression Equations. Methods of obtaining regression equations: Normal Equations and Regression Coefficient, Properties of Regression Coefficient, Standard Error of Estimate, Regression Coefficient in case of Grouped Data, Uses of Regression Analysis and Limitations of Regression Analysis.

Reference Books:

1. Gupta S.C, Kapoor V.K. : Fundamentals of mathematical Statistics, Sultan Chand & Sons.
2. Gupta, S.P., 2003 : Statistical Methods, S. Chand.
3. Affi, A.A, 1979 : Statistical Analysis: A Computer Oriented Approach, Academic Press, Inc.

Computer Fundamentals and Computing Software

BCA-16-103

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: The objective of this course is to familiarize students with computer fundamentals and the commonly used computing software.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: Micro, Mini, Mainframe and super computers, Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware; Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

Types of software: System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.

SECTION – B

Understanding Operating System using DOS : Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. Batch Files: Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

Understanding Graphical User Interface using Windows: Fundamentals of Windows, Types of Windows, Anatomy of windows, Icons, Recycle bin, Operations on Folders, Registry of Windows: Basics, Editing; Control panel.

SECTION-C

Word Processing Package: Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools, word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, auto-formatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge, Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms.

SECTION-D

Spreadsheet Package: Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes, Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, Printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros.

Presentation Packages: Basics of creating a presentation, Parts of main window, workspace views, creating a presentation, Incorporation of Animation.

Note: Any word processing, spreadsheet and presentation package may be used. Focus should be on open source software's.

References :

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications
3. Mathur Rajiv, 1995: DOS 6.2 Quick Reference, Galgotia.
4. OOoAuthors Team : Getting Started with OpenOffice.org 3.3, Friends of OpenDocument
5. Singleton, Roderick G.: OpenOffice.org User Guide.

Problem Solving Through C
BCA-16-104

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to make the student understand programming language concepts using 'C' language, mainly control structures, reading a set of data, stepwise refinement, function and arrays. After completion of this course, the student is expected to analyze the real life problem and write programs in 'C' language to solve problems. The main emphasis of the course is on problem solving aspect.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION A

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.

Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.

Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

SECTION B

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.

Loop Control Structure: While and do-while, for loop and Nested for loop,

Case Control Structure: Decision using switch, goto statement.

Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

SECTION C

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function: Call by value and call by reference, Arrays of characters, Insertion and deletion operations, Searching the elements in an array, Using matrices in arrays, Passing an Entire Array to a Function.

Pointers: Pointer declaration, Address operator "&", Indirection operator "*", Pointer and arrays, Pointers and 2-Dimensional Arrays, Pointer to an Array, Passing 2-D array to a Function, Array of Pointers.
Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions.

SECTION D

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).
Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers, Union.
Files in C: Introduction, Opening and Closing files, Basic I/O operation on files.

References:

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.
2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

SECOND SEMESTER

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN AND CHILDREN (SEMESTER – II)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.

7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361

(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

FIRST SEMESTER

English (Compulsory) – A
BCA-16-201

L	T	P	Cr	
6	-	-	3	

External Marks : 65
Internal Marks : 10

Time Duration : 3Hrs. **Number of Lectures : 60**

Semester II

Book Prescribed: **Colour of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (3-5)
One essay type question on summary/Character/Incident (one out of two with internal choice) **10 marks**

2) **Prose (4-5)**
Long essay type question on Summary/Theme (one out of two with internal choice) **10 marks**

3) Poetry (7-11) **15marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context(one out of two with internal choice) **5 marks**

Section B

1) Paragraph Writing(Descriptive and Narrative) **10 marks**

2). Use of textual words and idioms in sentences
(5 out of 8) **10 marks**

3). Translation from Hindi/Punjabi to English **5 marks**
(isolated sentences)
OR
For Foreign Students (Paraphrase of Poetry Passage)

4) Transformation of all types (5 out of 5) **5 marks**

Computer Organization
BCA-16-202

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to understand the basic organization of computer system and system maintenance.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION-A

Computer Organisation: Evolution of Computers, Von Neumann Architecture, Combinatorial Blocks : Gates, Half Adder, Full Adder, Multiplexers, Decoders, Encoders; Sequential Building blocks : Flip Flops, Registers, Counters,
Information representation: codes, fixed and floating point representation
Arithmetic: Addition and subtraction for sign magnitude and 2's complement numbers, integer multiplication using Booth's algorithms

SECTION-B

Architecture of a Simple Processor: Architecture of 8086/8088 microprocessor, instruction set, Addressing Modes.
Instruction: Microinstructions: Register Transfer, Arithmetic, Logical and Shift, Types of Instructions, Instruction Cycle.
Interrupt: Types, Interrupt Cycle
I/O organization: Strobe based and Handshake based communication, DMA based data transfer;

SECTION-C

Memory Organisation: Memory Hierarchy, RAM (Static and Dynamic), ROM Associative memory, Cache memory organisation, Virtual memory organisation.
Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/ Output.

SECTION-D

System Maintenance: Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection, prevention and protection from Viruses.

References :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,
2. P. Pal Choudhri, 1994. : Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 : Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.

Fundamentals of Web Programming
BCA-16-203

L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to build and publish web sites using HTML, DHTML, CSS, JavaScript and Dreamweaver.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

Basic terminology: Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL

HTML: Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.)

Lists: Unordered List, Ordered Lists, Definition lists

Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes

Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

SECTION – B

Linking Documents: Anchor tag, External Document References, Internal Document References and Image Maps

Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

DHTML: Introduction to cascading style sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External

Forms: Attributes of Form element, Input element, The Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option

SECTION – C

Java Script: Introduction and Features of JavaScript, Writing JavaScript into HTML, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.

Other Built-In Objects in JavaScript: The String Object, The Math Object, The Date Object;

SECTION – D

Introduction to Dreamweaver: Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.

Web Hosting: Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools

References:

1	Wanger & Wyke	:	Java Script Unleased, Pearson Education, New Delhi.
2	Bayross, Ivan :	:	HTML, DHTML, Java Script by BPB, Latest reprint
3	Schildt , Herbert	:	The Complete Reference Java 2, TMH, Latest reprint
4	Thomas Powell	:	HTML & CSS: The Complete Reference
5	John Pollock	:	JavaScript, A Beginner's Guide
6	Janine C. Warner	:	Dreamweaver CS5 For Dummies Paperback Edition
7	Joseph Lowery	:	Adobe Dreamweaver CS5 Bible Paperback Edition
8	David Powers	:	The Essential Guide to Dreamweaver CS4

Object Oriented Programming using C++
BCA-16-204

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: By the end of the course, students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, and exploit advanced C++ techniques.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION-A

Principles of Object Oriented Programming(OOP); Introduction to OOP, Difference between OOP and Procedure Oriented Programming; Concepts: Object, Class, Encapsulation, Abstraction, Polymorphism and
Inheritance, Applications of OOP. Special operators: scope resolution operator, Member Dereferencing operators, Memory management operators, Manipulators and Type cast operator
Structure of a C++ Program and Classes and Objects : Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions; Class Function Definition: Member Function definition inside the class declaration and outside the class declaration.

SECTION-B

Friend function, inline function, Static members, Function Overloading, Arrays within a class. Arrays of Objects; Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects.
Constructors: Declaration and Definition, Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use.
Operator Overloading & Type Conversion: Conversion from basic type to user defined type, User defined to basic type and one user defined conversion to another user defined type.

SECTION-C

Inheritance: Extending Classes Concept of inheritance, Base class, Defining derived classes, Visibility modes : Public, Private, Protected ;Types of Inheritance: Single inheritance :

Privately derived, Publicly derived; Making a protected member inheritable, multilevel inheritance, multiple Inheritance and ambiguity of multiple inheritance, Hierarchal Inheritance, Hybrid, Nesting of classes.

Polymorphism: Definition, Application and demonstration of Data Abstraction, Encapsulation and Polymorphism. Early Binding, Polymorphism with pointers, Virtual Functions, Late binding, pure virtual functions.

SECTION-D

Exception Handling: Definition, Exception Handling Mechanism : Throwing mechanism and Catching Mechanism, Rethrowing an Exception

File Processing : Opening and closing of file, Binary file operations, structures and file operations, classes and file operations, Random file processing.

References :

1. Bjarne Stroustrup, 2009 : The C++ Programming Language, Addison-Wesley Publishing Company.
2. E. Balaguruswamy, 2008 : Object Oriented Programming with C++, TMH.
3. Robert Lafore, 2003 : Object Oriented Programming in Turbo C++, Galgotia Pub.
4. Salaria, R. S. : Object Oriented Programming Using C++, Khanna Book Publishing Co. (P.) Ltd., New Delhi.

Third Semester						
Sr. No.	**Subject**	**LT/ Week**	**Theory Marks**	**Internal Assessment**	**Exam. Hours**	**Paper Code**
10.	Computer Based Numerical Methods	6	90	10	3	BCA-301
11.	Data Structures	6	90	10	3	BCA-302
12.	Implementation of Object Oriented concept through C++	6	90	10	3	BCA-303
13.	Computer Lab.: Based on BCA – 301, BCA – 302 and BCA – 303	12	45	05	4	BCA-304

Fourth Semester						
14.	Project Management & System Development	6	90	10	3	BCA-401
15.	Client Server Computing using ORACLE	6	90	10	3	BCA-402
16.	Understanding UNIX	6	90	10	3	BCA-403
17.	Computer Lab.: Based on BCA-402 and BCA-403	6	45	05	4	BCA-404

THIRD SEMESTER

Paper Code : BCA - 301
Paper Title : Computer Based Numerical & Statistical Methods
Theory Marks : 90 **Number of Lectures: 60**
(45 minutes duration)

Objective : Discuss the basic techniques in Numerical & Statistical Methods

Note :	(i)	The syllabus of this paper has been divided into four sections.
	(ii)	Examiner will set total n i n e questions comprising two questions from each Section and one compulsory question of short answer type covering
	(iii)	The students are required to attempt one question from each Section and the entire Compulsory question.
	(iv)	All questions carry equal marks, unless specified.
	(v)	**The student can use only Non-programmable & Non-storage type**
	(vi)	**Note : Log table may be provided**

SECTION-A

1. Computer Arithmetic :
Floating Point Numbers, operations, normalizations and their consequences, Errors and its types.

2. Iterative Methods :
Bisection, False-Position, Newton - Raphson Methods, Zeros of a polynomial using Birge – Vieta Method.

(No. of Periods : 15)

SECTION-B

3. Simultaneous Linear Equations : Solution of Simultaneous Linear Equations Using Gauss - Elimination, Gauss-Jordan and Gauss-Seidal Methods, Concept of Pivoting.

4 Interpolation: Lagrange, Newton forward, Newton Backward, Divided Difference,
Newton forward difference, Newton Backward difference, Numerical Integration: Trapezoidal, Simpson's 1/3, Simpson's 3/8, Weddle and Runga–Kutta Methods: 2nd order & 4th order.

(No. of Periods : 15)

SECTION-C

5. Measures of Central Tendency:
Preparing Frequency distribution table, Arithmetic mean, Geometric mean, Harmonic mean, Median and Mode.

6. Measures of Dispersion, Skewness and Kurtosis, Range :
Mean deviation, Standard deviation, Coefficient of variation, Moments, Skewness and Kurtosis. Development of Programs for above Statistical Methods using C

(No. of Periods : 15)

SECTION-D

7. Correlation and Regression Analysis :
Least square fit; Polynomial and curve fittings; Linear regression and non linear regression algorithms.

8. Development of Programs for above Statistical Methods using C.

(No. of Periods : 15)

References :

1. Salaria, R.S. : Computer Oriented Numerical Methods, 5th Edition, Khanna Book Publishing Co. (P.) Ltd., New Delhi
2. Rajaraman, V., 2004 : Computer Programming in C, Prentice Hall of India.
3. Krishnanmurthy,E.V.& Sen, S. K., 1984 : Computer Based Numerical Algorithms, East West Press.
4. Rajaraman, V., 1980 : Computer Oriented Numerical Methods, 3rd Ed., Prentice Hall, India.
5. Balaguruswami, E., 2000 : Computer Oriented Statistical and Numerical Methods, Mac Million.
6. Gupta, M. K., Goon, A.M., Dasgupta, B., 1978 : Fundamentals of Statistics, Pub. Calcutta, World Press Kolkatta
7. Affi, A.A, 1979 : Statistical Analysis : A Computer Oriented Approach, Academic Press, Inc.
8. Salaria, R.S. : Simplified Text-cum-Workbook on Computer Oriented Numerical Methods : A Programming Approach, Khanna.
9. Gupta, S.P., 2003 : Statistical Methods, S. Chand.

Paper Code : BCA-302
Paper Title : Data Structures
Theory Marks : 90 **Number of Lectures : 60**
(45 minutes duration)

Objectives: The basic algorithms related to handling data like arrays, stack, lists, queue, trees and graphs are introduced in this subject. The implementation of these algorithms will be done using previously learned C programming language.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type**

SECTION-A

1. Basic Concepts and Notations, Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure. Basic data Structures: Arrays: Introduction, Types of Array, Memory representation, Applications and operations. Stacks and queue: Introduction, memory representation, Applications and operations

(No. of Periods : 15)

SECTION-B

2. Linked List: operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation.

(No. of Periods : 15)

SECTION-C

3. Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree, AVL trees.

(No. of Periods : 15)

SECTION-D

4. Searching: Binary and Linear Search. Sorting: Bubble sort, Insertion sort, Selection sort, Merge Sort, Radix sort, Quick sort, Shell sort, Heap Sort. Comparison of various Searching and Sorting algorithms.

(No. of Periods : 15)

References :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.
2. Tannenbaum, Aaro M., 1990 . : Data Structure Using C, Pearson.
3. Salaria, R. S. : Data Structures & Algorithm Using C, Khanna Book Publishing
4. Salaria, R. S. : Co. (P.) Ltd., New Delhi.
   Test Your Skills in Data Structures, Khanna Book Publishing Co.

   (P.) Ltd., New Delhi.
5. Sofat Sanjeev : Data Structure with C and C++, Khanna Book Publishing Co.
6. Patel, R.B. : Expert Data Structure in C, Khanna Book Publishing Co.

Paper Code : BCA-303
Paper Title : Implementation of Object Oriented Concept through C++

Theory Marks : 90 **Number of Lectures : 60 (45 minutes duration)**

Objectives: By the end of the course, students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, exploit advanced C++ techniques

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type**

SECTION-A

1. Concepts of Object Oriented Programming (OOP): Introduction to OOP, Difference between OOP and Procedure Oriented Programming, Object, Class, Encapsulation, Abstraction, Polymorphism, Inheritance.

   Structure of a C++ Program and I/O streams. Classes and Objects, Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions Class Function Definition: Member Function definition inside the class declaration and outside the class declaration, friend function, inline function, static function.

   (No. of Periods : 15)

SECTION-B

2. Scope resolution operator, Private and Public member function, Nesting of member functions, Arrays within a class. Arrays of Objects, Objects as function arguments : Pass by value, Pass by reference, Pointers to Objects. Constructors and Destructors : Declaration and Definition, Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use. Function Overloading & Operator Overloading

   (No. of Periods : 15)

SECTION-C

3. Inheritance - Concept of inheritance, Base class, Defining derived classes, Visiblity modes :Public, Private, Protected ; Single inheritance : Privately derived, Publicly derived; Making a protected member inheritable, Access Control to private and protected members by member functions of a derived class, Multilevel inheritance, Nesting of classes.

4. Polymorphism : Definition, Application and demonstration of Data Abstraction, Encapsulation nd Polymorphism. Early Binding, Polymorphism with pointers, Virtual Functions, Late binding, pure virtual-functions

(No. of Periods : 15)

SECTION - D

5. Templates: Function Template, class template
   Exception Handling|: using try, throw and catch statements
6. File Processing : Opening and closing of file, Binary file operations, structures and file operations, classes and file operations, Random file processing.

(No. of Periods : 15)

References :

1.	Bjarna Stroustrup,	:	The C++ Programming Language, 3rd Edition, Company.
2.	Robert Lafore,	:	Object Oriented Programming in Turbo C++,4un Edition, Galgotia Pub.
3.	E. Balaguruswamy,	:	Object Oriented Programming with C++, 4th Edition,TMH.
4.	Salaria, R. S.	:	Object Oriented Programming Using C++,4th Edition, Khanna Book Publishing Co. (P.) Ltd., New Delhi.

Paper Code : BCA-304

Paper Title : Computer Lab.-1: Based on BCA-301 ,BCA-302 and BCA-303

Marks : 50

FOURTH SEMESTER

aper Code : BCA -401
Paper Title : Project Management and System Development
Theory Marks : 90 **Number of Lectures: 60**
(45 minutes duration)

Objectives: To explain the need for project management, role of project managers in organizational environments. Further the course aims to describe the systems development cycle.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type**

SECTION-A

1. Concept of a Project, Project Life Cycle Phases, Tools & Techniques of Project Management, Roles & Responsibilities of a Project Manager, Feasibility Report, Types of Feasibility, Financing Arrangements, Preparation of Cost Estimates, Project Implementation Schedule, Evaluation of Project Profitability.

(Total No. of Periods – 15)

SECTION-B

2. Working & Design of Systems, System Design & Execution Plan, Work Breakdown Structure, Project Procedure Manual, Planning, Scheduling & Monitoring, Project Direction & Co- ordination, Communications in a Project, Project Control-Progress, Performance, Schedule & Cost Control, Performance Indicators & Performance Improvement, Project Management Environment.

(Total No. of Periods – 15)

SECTION-C

3. Introduction & Objectives of Software Specification & Requirement Analysis (SRS), Software Specification Documents & Attributes, Software Development Life Cycle, Data Dictionary, Decision Support Tools, Data Flow Diagrams, Mathematical Logic.

(Total No. of Periods – 15)

SECTION – D

4. Report Writing: Characteristics, Types, Structure, Importance & Style of Reports, Case Studies- Designing Illustrative Reports.

Project Management Software Tools : Features, Different components of both licensed and Open Source Software.

(Total No. of Periods – 15)

References :

1.Choudhary, S., 1988 : Project Management, Tata McGraw-Hill Publishing Company Limited, 1988 (Recommended as a text-book for the syllabus contents-6).

2. Sharma, R.C., and Krishna Mohan, 1996 : Business Correspondence and Report Writing, Second Edition, Tata McGraw-Hill Publishing Company Ltd., 1978, Reprinted in 1996 (Pages 129-230).

3. Gopalakrishnan, P. & Rama Moorthy, V.E., 1993. : Text Book of Project Management, Mac Million India Ltd.

4. Harrison, F.L., 1992. : Advanced Project Management, A Structured Approach (Third Edition), Metropolitan

.

5. Srinath, I. S., 1989. : PERT & CPM, Principles and Applications, Third Edition, Affiliated East-West Press Pvt. Ltd.

6. Rodrigues, M.V., 1992 : Effective Business Communication, Concept Publishing Company, 1992 (Pages 411-436).

7. Krishna Mohan & Banerji Meera, 1990. : Develop Communication Skills, MacMillian India Ltd.

8. Behforooz, Ali and Hudson Frederick,1996. : Software Engineering Fundamentals, Oxford University Press.

9. Kanter, J.,1984 : Management Information Systems, PHI.

10. Gill, Nasib Singh : Software Engineering, Khanna.

11. Rajib Mall, 2004 : Fundamentals of Software Engineering, PHI.

12. Pressman, Roger S., 2010 : Software Engineering, Tata McGraw Hill.

13. Jagdeep Singh : System Analysis and Design, Kalyani.
14. Awad, Elias M., 1993 : System Analysis and Design, Galgotia.
15. Kaur, Kirandeep : Project Management and Technical Report Writing, Kalyani

Paper Code **BCA – 402**

Paper Title **:** Client Server Computing using ORACLE

Theory Marks **:** **90** **Number of Lectures : 60**
(45 minutes duration)

Objectives: This course aims at giving the students the insight of Client Server Computing and Creating Applications using Oracle.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

1. Introduction to DBMS, Advantages and disadvantages of DBMS, introduction to RDBMS, Codd's Rule for RDBMS, Difference between DBMS and RDBMS. Normalization. Data Models and their types (Hierarchical, Networking, Relational).

Introduction to Client-Server Computing, Architecture of Client-Server Computing, Advantages of Client-Server Computing.

Introduction to SQL *Plus : Introduction to SQL, Oracle Data types, Starting SQL *Plus, Data Manipulation and Control-I : Data Definition Language (DDL), Creating Tables, Creating a Table with data from another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Ordering the Result of a Query, Aggregate Functions, Grouping the Result of a Query, ROLLUP Operation: Getting Sub Totals, CUBE Operation : Getting Cross Tabs, Command Summary of SQL *Plus Editor.

(No. of Periods : 15)

SECTION-B

2. Functions : Arithmetic Functions, Character Functions, Date Functions, General Functions; Group Functions. Introduction to VIEWs, Manipulating the Base table(s) through VIEWs, Rules of DML Statements on Join Views, Dropping a VIEW, Inline Views, Materialized Views. Querying Multiple Tables : Collating Information: Equi Joins, Cartesian Joins, Outer Joins, Self Joins. ;Set Operator : Union, Intersect, Minus; Nested Queries. Data Manipulation and Control-II : Database Security and Privileges, GRANT Command, REVOKE Command, Application Privileges Management, Enhancing Performance, Sequences,

Maintaining Database Objects, COMMIT and ROLLBACK.

(No. of Periods : 15)

SECTION-C

3. PL/SQL-I : Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Referencing Non- PL/SQL Variables, Built-in-Functions, Conditional and Iterative Control, SQL Within PL/SQL, Writing PL/SQL Code, Composite Datatypes.

(No. of Periods : 15)

SECTION-D

4. PL/SQL-II: Cursor Management in PL/SQL, Cursor Manipulation, Implicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions.

   Advanced PL/SQL: Subprograms in PL/SQL, Advantages of Subprograms, Procedure, Functions, Actual versus Formal Parameters, Argument Modes, Stored Packages, Advantages of Packages, Dropping a Procedure, Dropping a Function, Dropping a Package, Using Stored Function in SQL Statements, Database Trigger, Types of Triggers, Dropping Triggers, Storage for Triggers.

(No. of Periods : 15)

References :

1. James T. Perry, Joseph, G. Lateer, 1989 : Understanding ORACLE, BPB Publications, B-14, Connaught Place, New Delhi - 110001.

2. Mukhi Vijay, 1992 : Mastering Oracle 6.0, BPB Publications.

Paper Code : BCA – 403
Paper Title : Understanding UNIX
Theory Marks : 90 **Number of Lectures : 60**
(45 minutes duration)

Objective: To introduce UNIX environment, edit and manage files and user-level security for UNIX development, Use standard UNIX development tools for C or C++.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

1. Introduction to Operating Systems, its needs and services, Simple batch Systems, Multi- programmed batched systems, Time sharing systems, Parallel systems, Distributed systems and Real-time systems. Introduction to process, Process States . Overview of UNIX : History, Features of UNIX, Comparison between UNIX and Windows.
Structure of UNIX: Kernel, Shell. UNIX Directory system

(No. of Periods : 15)

SECTION-B

2. UNIX Commands : User Access and User ID Commands, Directory commands, Editors Commands, File Manipulation Commands, Security and Protection Commands, Inter-User and Inter-Machine Communication, Process Management Commands, I/O Redirection and Piping Commands, Vi editor, File Handling commands, and Introduction to Regular Expressions and grep.

(No. of Periods : 15)

SECTION-C

3. Administering UNIX System: Introduction to System Administration, Functional activities of System Administration - Starting up the system, Maintaining the Super User Login, Shutting down the system, recovering from system crash, Taking backups, Managing disk space, Mounting and Un-mounting file system, Adding and removing users, Changing groups and password, Maintaining security, Monitoring system activity, Accounting of system usage and billing, Setting up remote communication, Installing printers and peripheral devices.

(No. of Periods : 15)

SECTION - D

4. Shell Programming : Executing a shell program, Study of shell programming as a Language; Wild card characters, Type of statements and Reserved Words, Special Shell parameters. The AWK pattern scanning and processing language: Operators, Control Statements and arrays. String Handling programs (String comparison, substring,string splitting) using AWK:UNIX and Networking : Network Troubleshooting(Commands-ping, ipconfig, nslookup, traceroot).Introduction to IP addresses and classes.

(No. of Periods : 15)

References :

1. Srirengan, K., 1999. : Understanding UNIX, Prentice-Hall of India.

2. Kernighan, B.W. & : The UNIX Programming Environment, Prentice-Hall of India Rob Pike, 1997

Paper Code : BCA-404

Paper Title : Computer Lab.-2: Based on BCA - 402 and BCA - 403

Marks : 50

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FIFTH SEMESTER

Fifth Semester						
Sr. No.	**Subject**	**LT/ Week**	**Theory Marks**	**Internal Assessment**	**Exam. Hours**	**Paper Code**
18.	Enterpreneurship Development Programme	4	90	10	3	BCA-501
19.	Principal of Computer Graphics & Multimedia Technology	5	90	10	3	BCA-502
20.	Discrete Mathematics in Computer Science	5	90	10	3	BCA-503
21.	Computer Lab.: Based on BCA-502	5	90	10	4	BCA-504
Sixth Semester						
22.	Web Programming	5	90	10	3	BCA-601
23.	Computer Organization	5	90	10	3	BCA-602
24	Computer Networks	5	90	10	3	BCA-603
24.	Minor Project and Seminar Based on BCA-601	5	90	10	4	BCA-604

SYLLABI FOR
BACHELOR OF COMPUTER APPLICATIONS

Paper Code : BCA – 501
Paper Title : Enterpreneurship Development Programme
Theory Marks : 90 Number of Lectures : 100
(45 minutes duration)

Objectives : EDP aims at training various target groups in entrepreneurial traits so that they obtain adequate information, motivation and guidance in setting up their own enterprises.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total n i n e questions comprising two questions from each Section and one compulsory question of short answer type covering

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

1. Project Formulation : Need, Scope and approaches for project formulation; structure of project report; study and analysis of sample project report; preparation of a project report; Techno- economic feasibility of the project.

(No. of Periods : 25)

SECTION-B

2. Finance & Accounting : Working capital assessment, its management & exercise thereon; Assessment of fixed capital and exercise thereon; Capital budgeting; Product costing and cost consciousness. Financial ratios and their significance; Break-even analysis; Credit institutions and financing procedures; Books of accounts, financial statements & fund flow analysis.

(No. of Periods : 25)

SECTION-C

3. Managing the Enterprise: Resource management – men, material, money and machines; Personnel management, Office management.

E-Commerce: Introduction to E-Commerce, Benefits, Impact of E-Commerce, Classification of E- Commerce, Application of E-Commerce.

(No. of Periods : 25)

SECTION - D

4. Rules & Regulations: Licensing and Registration procedure; Appreciation of important provisions of Factory Act, Shops & Commercial Establishment Act; Sales of Goods Act, Partnership Act; Contract Act; Income Tax, Sales Tax and Excise rules; Insurance.

(No. of Periods : 25)

References :

1	Sinha, A.K, 1983.	:	Project Engineering & Management, Vikas Publishing House Pvt. Ltd., 1983.
2.	Srivastava, U. K., 1981	:	Project Planning, Financing, Implementation & Evaluation, Indian Institute of Management, Ahmedabad,1981.
3.	Kuchhal, S. C., 1982	:	Financial Management - An Analytical and Conceptual Approach, Chaitanya Pub. House, 1982.
4.	Mohan, 1982	:	Principles of Management Accounting, Mohan & Goyal, Agra Sahitya Bhavan,1982.
5.	Saroja, 1979	:	Management of Small Scale Industries, SethPublishers, Bombay, 1979.
6.	Vepa Ram K., 1984	:	How to Succeed in Small Industry, Vikas Publishing House, New Delhi, 1984.
7.	Bare Acts	:	Central Sales Tax Act, State Sales Tax Act, Central Excise Act and Customs Act.
8.	Bhagwati Prasad, 1972	:	Law and Practice of Income Tax in India, Navman Prakashan.
9.	Gulshan, S. S., 1979	:	A Text Book of Commercial Law, S. Chand & Co.
10.	Gupta, B. P., 1986	:	Industrial Relations, (PHD Chamber of Commerce & Inds.).

Paper Code : BCA - 502
Paper Title : Principles of Computer Graphics & Multimedia Technology
Theory Marks : 90

Number of Lectures :100
1 (45 minutes duration)

Objectives :

- To study the various graphical techniques
- To study the multimedia concepts and various I/O technologies.
- To enable the students to develop creative graphics based programs.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabus.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

Computer Graphics :

1. A Survey of Computer Graphics :
   Computer Aided Design, Presentation Graphics, Computer art, Entertainment, Education and Training, Visualization, Image Pressing, Graphical User Interfaces.
   (No. of Periods : 15)
2. Overview of Graphics Systems :
   Video Display Devices, Raster Scan Systems, Random Scan Systems. Coloring technique : Beam Penetration, Shadow Mask. Graphics Monitors:Plasma Panel, LED,LCD. Properties of Display Devices :
   Persistence , Resolution, Aspect Ratio. and Workstations, Input Devices, Hard-copy devices, Graphics Software. Interactive Graphics, Passive Graphics.
   (No. of Periods : 10)

SECTION-B

3. Studying the Features and Developing Computer Graphics Using Standard Graphics packages like Auto CAD and Photoscape.
   AutoCAD: Features, Workspace, Commands to draw line, Polyline, rectangle, polygon, circle, spline, hatch; Modification Commands: Erase, copy, move, mirror, scale, Pan, Zoom, esc, cl, trim; Layer, Dimension, image rotation, area calculation.
   (No. of Periods : 10)
4. Developing Computer Graphics Using 'C' : Input-output primitives, Setting character and text attributes, Changing line styles, Using fill styles to fill images.

   Use the above primitives to develop programs like drawing concentric circles, Ellipses, Sine surves, Histograms, Pie charts and human face.

(No. of Periods : 15)

SECTION-C

Multimedia Technology :

5. Multimedia in use : Introducing multimedia, uses of multimedia.

6. Technology System Components, Multimedia Platforms, Development Tools, Image, Audio, Video, Storage for multimedia and Communications.

7. Applications :
Multimedia in the Real World, Training and Education, Image Processing.

(No. of Periods : 25)

SECTION-D

8. IMAGE : Introduction, Digital Image, Image Redundancies (Spatial, Spectral, Temporal); Image Compression: lossy and lossless compression Techniques, Run Length Encoding algorithm, Huffman Encoding Algorithm, Discrete Cosine Transform (DCT), Image, video and audio Formats.

9. Studying features and use of Multimedia Image Processing authoring tools like Photoshop and Macromedia Director.

(No. of Periods : 25)

References :

1. Hearn and Backes, 1997 : Computer Graphics, Second Edition, PHI, New Delhi.
2. Kanetkar Yashwant, 2003 : Graphics Under 'C', BPB Publications.
3. Judith Jeffcoate, 2007 : Multimedia in Practice, Technology and Applications, PHI.
4. Foley, Vandom, Fenier, Hughes, 1996 : Computer Graphics, Principles and Practice, IV Edition in 'C'; Addison Wesley Publishers.
5. Ian R. Sinclair, 1994 : Multimedia on the PC (with CDROM), BPB Publications.
6. Hillman, David, 1998 : Multimedia Technology and Applications, ITP.
7. Vaughan, Tay, 2008 : Multimedia Making it Work, Osborne Publishers.
8. Kelly & Bootle, 1989 : Turbo 'C', BPB Publications.

Paper Code : BCA – 503
Paper Title : Discrete Mathematics in Computer Science
Theory Marks : 90 Number of Lectures : 100 (45 minutes duration)

Objectives : Student will learn and revise the knowledge acquired previously. Logic, Relations and Functions, Algebric Functions and Graph Theory will be introduced in this course.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabus.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

1. Set Theory : Relations and Functions : Set Notation and Description, subset, basic set operations, Venn Diagrams, laws of set theory, partitions of sets, min sets, duality principle, basic definitions of relations and functions, graphics of relations, properties of relations: injective, surjective and bijective functions, compositions.

2. Recurrence : Recurrence Relations and Recursive Algorithms – Linear-Recurrence Relations with Constant Coefficients; Homogeneous Solutions : Particular Solution, Total Solution, Solution by the Method of Generating functions.

(No. of Periods : 25)

SECTION - B

3. Graph Theory : Graph and planar graphs – Basic Terminology, Multi-graphs, Weighted Graphs, Paths and Circuits, Shortest Paths, Eulerian Paths and Circuits. Travelling Salesman Problem, Planar Graphs.

(No. of Periods : 25)

SECTION-C

4. Automata Theory : Finite State Machines–Equivalent Machines, Finite State Machines as language Recognizers; Analysis of Algorithms-Time Complexity,Complexity of Problems.
5. Boolean Algebra : Lattices and Algebraic Structures; Duality. Distributive and Complemented Lattices, Boolean Lattices and Boolean Algebra.

(No. of Periods : 25)

SECTION-D

6. Boolean Functions and Expressions, Propositional Calculus, Design and Implementation of Digital Networks, Switching Circuits.

(No. of Periods : 10)

7. Algebra of Logic : Proposition of logic operations, truth tables and propositions generated by set, equivalence and implication laws of logic, mathematical system, propositions over a universe, mathematical induction, quantifiers.

(No. of Periods : 15)

References :

1. Doerr, A. and Kenneth, L., : Applied Discrete Structures for Computer Science, 1989 Galgotia Publications Pvt. Ltd.
2. Liu, C. L., 1985 : Elements of Discrete Mathematics, McGraw Hill.
3. Seymour Lipschutz and Lipson, : 2000 Solved Problems in Discrete Mathematics, McGraw-Hill.1992

Paper Code	:	BCA - 504
Paper Title	:	Computer Lab.-1 : Based on BCA - 502
Theory Marks	:	90

SIXTH SEMESTER

Paper Code : BCA - 601
Paper Title : Web Programming
Theory Marks : 90

Number of Lectures : 100
(45 minutes duration)

Objectives : This course will help the student to design & develop websites using HTML, Javascript and JAVA programming languages

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabus.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type**

SECTION-A

1. Review of forms in HTML, *Introduction to cascading style sheets (CSS), defining and applying CSS.*
Java Script: Features, tokens, data types, variables, operations, control structs, likes, strings arrays, functions, core language, objects, client side objects, event handling. Applications related to client side form validation.

(No. of Periods : 25)

SECTION-B

2. Fundamentals of Java: Java Vs. C++, Byte Code, Java virtual machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructions, method overloading. *String handling.*
Inheritance : Basics, member access, using super to call super class constructors, creating a multi level hierarchy, method overriding, dynamic method dispatch, using abstract classes, using Final.

(No. of Periods : 25)

SECTION-C

3. Packages and Interfaces: Defining a package, understanding CLASSPATH, Access protection: Importing packages, Interfaces, Defining an Interface, Implementing Interfaces, Applying Interfaces, Variables in Interfaces.

Exception Handling: Fundamentals, Exception types, Using Try and Catch, Multiple Try and Catch clauses, Nested Try statements, Built–in exceptions.

(No. of Periods : 25)

SECTION-D

4. Multi-threaded Programming: The Java Thread model, Thread priorities, Synchronizations, Messaging. The thread class and runnable interface, The Main Thread : Creating a Thread, Implementing Runnable, Extending Thread, Creating Multiple Threads, Thread Priorities; Synchronizations : Methods, Statements, Inter Thread Communication, Deadlock, Suspending, Resuming and Stopping Threads.

   I/O Applets : I/O Basics : Streams, The predefined streams; Reading console I/P, Writing console O/P. The print writer class; Reading and Writing files.
   Applet fundamentals, Using AWT controls: AWT Classes, Adding and Removing Controls,Responding to Controls, Controls and their classes, Graphics and Text , Layout Managers: Understanding Layout Manager, FlowLayout, BorderLayout, GridLayout, CardLayout. Menus,-Event handling: Two Event Handling Mechanisms, Delegation Event Model (Events, Event Sources, Event Classes, Event Listeners, Sorces of Events, Event Listener Interfaces, Handling Mouse and Keyboard Events.

(No. of Periods : 25)

References :

1. Schildt Herbert : Java 2: The Complete Reference,4th Edition,TMH, N.Delhi.
2. Daniel Dang, 2010 : An Introduction to Java Programming, PHI, New Delhi.
3. Balaguruswamy, E., 1998 : Programming with Java, A Primer, TMH, New Delhi.
4. Wanger & Wyke, 2000 : Java Script Unleased, Techmedia, New Delhi, 2000.

Paper Code : BCA - 602
Paper Title : Computer Organisation
Theory Marks : 90 **Number of Lectures : 100**
(45 minutes duration)

Objectives : This course will enable the student to understand the basic organization of computer system and system maintenance.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabus.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

1. **Computer Organisation** : Evolution of Computers, Stored program concept and Von Neumann Architecture, Information representation and codes, Combinatorial Blocks : Gates, Multiplexers, Decoders, Encoders, Sequential Building blocks : Flip Flops, Registers, Counters, Arithmetic algorithms : Addition and substraction for signed magnitude and 2's complement numbers, integer multiplication using shift and add, Booth's algorithms, Integer and floating point representation.

(No. of Periods : 25)

SECTION-B

2. **Architecture of a Simple Processor** : An instruction set, Addressing Modes, Instruction formats, Instruction execution in terms of Microinstructions, Concept of interrupt and simple I/O organisation, I/O organization : Strobe based and Handshake based communication, Vector and priority interrupts, DMA based data transfer; CPU organisation with large registers, Stacks and handling of interrupts and subroutines. Concept of Bus, data movement among registers, data movement from/to memory.

(No. of Periods : 25)

SECTION-C

3. **Memory Organisation** : RAM, Basic cell of static and dynamic RAM, Building large memories using chips, Associative memory, Cache memory organisation, Virtual memory organisation. Assembly Language Programming : Machine and assembly language, Pseudo operations, subroutines in assembly language, Assembly language programs:-To add/subtract two numbers, Program to input/output one character, Program to demonstrate the use of subroutines. Register Transfer Language and micro-operations; Language to represent conditional data transfer, Arithmetic and logical operations along with register transfer.

(No. of Periods : 25)

SECTION-D

4. **System Maintenance,** Physical Inspection of a PC and internal cards, Diagnostics on a PC, Functional description of various modules and cards. *PC Doctor, Norton, Simantac,Steps of Diagnostics*. Viruses, Types of viruses. *Detection, Protection and Cure of Viruses on a PC*.

(No. of Periods : 25)

References :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,
2. P. Pal Choudhri, 1994. Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.
5. Rao, P.V.S. 2008 : Computer System Architecture, PHI, 1ST Edition

Paper Code : BCA - 603
Paper Title : Computer Networks
Theory Marks : 90 **Number of Lectures : 60**
(45 minutes duration)

Objectives : As part of this course, students will be introduced to computer networks and data communication paradigms, network models and standards, network protocols and their use and wireless technologies.

Note : (i) The syllabus of this paper has been divided into four sections.

(ii) Examiner will set total nine questions comprising two questions from each Section and one compulsory question of short answer type covering whole syllabus.

(iii) The students are required to attempt one question from each Section and the entire Compulsory question.

(iv) All questions carry equal marks, unless specified.

(v) **The student can use only Non-programmable & Non-storage type Calculator.**

SECTION-A

1. Introduction to Data Communication: Data Communication fundamentals, Simplex, Half-Duplex, Full-Duplex
Network definition, Network Hardware and Software, Network Topologies, Uses of Computer Networks, OSI reference model, TCP/IP Reference Model. Comparison of OSI & TCP/IP reference model.

2. Physical Layer: Transmission Media, Switching, ISDN & its services, Multiplexing, Modems.

(No. of Periods: 15)

SECTION-B

3. Data Link Layer : Design Issue, Error Detection & Correction Codes, Elementary Data Link Protocols, Static & Dynamic Channel Allocation, Introduction to IEEE standards, Sliding Window Protocols: One-bit Sliding Window Protocol, Go Back n, Selective Repeat.

(No. of Periods: 15)

SECTION-C

4. Network Layer : Design issues, Routing Algorithms: Shortest path routing, Flooding, Flow-Based Routing, Distance Vector Routing, Link State Routing, Hierarchical Routing, Broadcast & Multicast routing. Congestion Control Algorithms & internetworking, Network Layer in The Internet: The IP Protocol, IP Addresses, Subnets, IPv4 and IPv6.

(No. of Periods: 15)

SECTION-D

5. Application Layer : Network Security & Privacy, Data Compression & Cryptography, Electronic Mail, Remote Login, File Transfer.

(No. of Periods: 15)

References :

1. Tannenbaum, A.S., 2003 : Computer Networks, Prentice Hall.
2. Stallings, William, 2008 : Local and Metropolution Area Networks : An Introduction, Macmillian Publishing Co.
3. Black : Data Network, Prentice Hall of India.

BCA : 604 Minor Project and Seminar

Paper Code : BCA - 604

Paper Title : Based on BCA- 601

Theory Marks : 90

Project and Seminar must be taken up from the real life problems. Marks for these are to be given on the basis of Programming Style, User friendly I/O, on-line help and documentation (user Manual). This work will carry 100 marks, (90 Marks for Project and Seminar Viva; and 10 Marks for Internal Assessment).

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PANJAB UNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. (HONOURS) BIOTECHNOLOGY

Semester System

EXAMINATIONS 2016-2017

--:O:--

B.Sc. (Hons.) Biotechnology (Semester System) Examinations 2016-2017

B.Sc. (Hons.) 1st year (1st Semester)

Sr. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-I-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-I--II-T	50	-	-
3.	Mathematics / A Life Sciences -B	BIOT-Sem-I-III-TA/TB	75	BIOT-Sem-I-III-PA/PB	25
4.	Chemistry	BIOT-Sem-I-IV-T	75	BIOT- Sem -I-IV-P	25
5	Physics	BIOT-Sem-I-V-T	75	BIOT-Sem-I-V-P	25
6	Introduction to Biotechnology	BIOT-Sem-I-VI-T	75	BIOT-Sem-I-VI- P	25

Total Marks = 500

B.Sc. (Hons.) 1st year (2nd Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

The Environment, Road Safety Education and Violence Against Women & Children is a compulsory qualifying paper, which the students have to study in the B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he /she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

B.Sc. (Hons.) 2nd year (3rd Semester) (July 2016)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Biochemistry	BIOT-Sem-III-I-T	75	BIOT-Sem-III-I-P	25
2.	Genetics	BIOT-Sem-III-II-T	75	BIOT-Sem-III-II-P	25
3.	Immunology-I	BIOT-Sem-III-III-T	75	BIOT-Sem-III-III-P	25
4.	Plant Tissue Culture	BIOT-Sem-III-IV-T	75	BIOT-Sem-III-IV-P	25
5.	Animal Cell Culture	BIOT-Sem-III-V-T	75	BIOT-Sem-III-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester) (January 2017)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 3rd year (5th Semester) (July 2016)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Enzymology	BIOT-Sem-V-II-T	75	BIOT-Sem-V-II-P	25
3.	Environmental Biotechnology	BIOT-Sem-V-III-T	75	BIOT-Sem-V-III-P	25
4.	Tools in Bioinformatics	BIOT-Sem-V-IV-T	75	BIOT-Sem-V-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreseurship	BIOT-Sem-V-V-T	100	--------	

Total Marks = 500

B.Sc. (Hons.) 3rd year (6th Semester) (January 2017)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-VI-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-VI-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-VI-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-VI-IV-P	25
5.	On Job Training	----	--	BIOT-Sem-VI-V-P	100

Total Marks = 500

B.Sc. (Hons.) 1st year (1st Semester)

Sr. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-I-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-I--II-T	50	-	-
3.	Mathematics / A Life Sciences -B	BIOT-Sem-I-III-TA/TB	75	BIOT-Sem-I-III-PA/PB	25
4.	Chemistry	BIOT-Sem-I-IV-T	75	BIOT- Sem -I-IV-P	25
5	Physics	BIOT-Sem-I-V-T	75	BIOT-Sem-I-V-P	25
6	Introduction to Biotechnology	BIOT-Sem-I-VI-T	75	BIOT-Sem-I-VI- P	25

Total Marks = 500

Paper: English
Code No: BIOT-Sem-I-I-T

Semester I
Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I
Prose: Chapters 1-4
Drama: Dramas 1-2
Unit II
Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:
Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which, a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**.

This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. **5 marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5.Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6 One short question to test the students' understanding of various aspects of Business Communication. **5 Marks**

BIOT - Sem-I--II-T

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਦਸੰਬਰ 2●16 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

Course Title : PUNJABI Course Number : 111

ਕੁੱਲ ਅੰਕ : 50
ਲਿਖਤੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ
ਪੱਤਰ-ਵਿਹਾਰ
ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ),
ਸੰਪਾਦਕ : ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਵਿਤਾ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	3+5 = 8 ਅੰਕ
ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਵਿਤਾਵਾਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿੱਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	7 ਅੰਕ
ਵਿਆਕਰਣ:	(3+3+4=10 ਅੰਕ)
ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
ਏ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

BIOT - Sem-I--II-T

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Vedic Age: socio-economic life; development of caste; position of women.
3. Religion: vedic religion; impact of Buddhism and Jainism on the region.

UNIT II

4. Society and Culture c. 1000 A.D.: Socio-economic life; religious life; education
5. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

6. Society and Culture c. 1500A.D: socio-economic life under the Lodhis; religious beliefs and practices- Vainavism, Shaivism, Shaktism, Islam.

UNIT III

7. Sikhism: new ideology of Guru Nanak; evolution of Sikh community-guruship,manji,masand; new institutions-gurdwara, sangat-pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society: social unrest; emergence of new rulers-rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh: social mobility; painting and architecture; literature.
12. MAP: Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRam Manohar Lal, Delhi, 1966
7. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.
12. Hussain ,Yusuf 1973(rep.). : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay,

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Paper: Mathematics / Life Sciences **Theory: 67 Marks**
Code No: BIOT-Sem-I-III-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Mathematics

- To study the different concepts of limits, differentiation, integration and calculus so as to apply these concepts in biotechnology.
- To learn solutions to quadratic, cubic equations, differential equation, linear equation and thus study the applications in biotechnology.

Paper: Mathematics

UNIT – I

Numbers

Different kinds of numbers, integer, rational and irrational, surds and their properties, Fractional indices.

Complex numbers, conjugate, modulus and argument of a complex number.

UNIT – II

Set, relation and function

Set, product sets, relations, functions (polynomials, trignometric, exponential), graphical representation of functions

Limit

Sequences, limits of sequences, series, limits of functions

Unit III

Calculus

Differentiation: Calculating gradients of chords first and higher order derivatives. Applications increasing and decreasing functions, maximum and minimum points, Derivatives as rates of change.

Integration

Finding a function from its derivative, definite integral, indefinite integral, calculating areas for bounded regions.

Differential Equations

Forming differential equations solving first order differential equation and second order differential equation with constant co-efficients, growth equation, applications.

UNIT – IV

Linear Programming
Elementary statistics
Representation of Data: Discrete data, continuous data, histogram, polygons, frequency curves, The Mean, variability of data-The standard deviation, Median, quintiles, percentile
Skewness

Reference Books:
1. Arya J.C, Lardner R.W (1990). Mathematics for the biological sciences(Prentice Hall. International, New Delhi).
2. Mathematics: Text book for class XI & XII (2006) (National Council ofEducation Research and Training, New Delhi).

Mathematics (Practicals)

Practical : 22 Marks
Internal Ass.: 3 Marks

1. Computation of mean, variance and standard deviation using given (preferably biological) data (2 to 3 practicals).
2. Sets (Venn-Diagram, Union, Intersection, Difference of sets, Symmetric Difference of sets, Complement of sets) (2 practicals).
3. Relations (graphical representation of relation from set A to set B or set A to set A) (1 practical).
4. Histogram, frequency polygon, ogives, pie chart, bar diagrams (2 to 3 practical).
5. Solving linear programming problem using graphical methods (2 practical).

Paper: Life Sciences **BIOT-Sem-I-III-TB**
Theory: 67 Marks
Internal Ass.: 8 Marks

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Life Sciences

- To increase scientific vocabulary and understanding of a variety of life science concepts.
- To learn about the anatomy and physiology of animals and animal systems.
- To study ecology and ecosystems.

Unit-I

An introduction to life on earth.
Plant Anatomy and Physiology:-
Structure of land plants.
Nutrition and Transport phenomena in plants.

Plant reproduction and development.
Plant responses to the environment.

Unit-II

Ecology:- Community interactions.
Ecosystems:- Definition and components.
Food chain and food web.
Habitat.
Ecological succession.
Types of succession.
Animal behaviour:-Definition and learning.

Unit-III

Animal Anatomy and Physiology:-
Homeostasis and organization of animal body.
Circulation.
Respiration.
Nutrition and digestion.
Urinary system and homeostasis.
The immune response.

Unit-IV

Animal Anatomy and Physiology:-
The endocrine system.
Nervous system.
The senses.
Action and support by the muscles and skeleton system.
Reproduction.

Reference Books:

1. Life Sciences (2001) by Rastogi and Dubey, S. Chand & Co., New Delhi.
2. Basics of Biotechnology–I: Introduction to Life Sciences (2005) by Sobti& Sharma, Vishal Publishing Co. Jalandhar.
3. Ecology- Principles and applications (2004) by Chapman and Reiss, Cambridge University Press, Cambridge, U.K.
4. Microbial Ecology- fundamentals and applications, (2000) by R. Atlas and R. Bartha, Benjamin / Cummings Science Publishing, California.
5. Animal Physiology (2008) by R. C. Sobti, Narosa publishing house Pvt. ltd, New Delhi.

BIOT-Sem-I-III-PB **Life Sciences (Practical)**

Practical : 22 Marks
Internal Ass.: 3 Marks

1. To study cell structure from onion leaf peels.
2. To study ultra structure of cell organelles through photographs.
3. To study digestive, Respiratory, Circulatory, Endocrine and Reproductive system of Human body through charts/ model.

4. Study of the slides/specimens and identification with reasons – Bacteria, oscillatoria, Spirogyra, Rhizopus, Mushroom, yeast, liverwort, moss, fern, lichen, one monocotyledon and dicotyledon.
5. Study of the slides/specimens and identification with reasons –Amoeba, Hydra, Tapeworm, Roundworm, Earthworm, Cockroach, Pila, Starfish, Shark Labeo, Frog, Lizard, Pigeon and Rabbit.

Paper: Chemistry **Theory: 67 marks**
Code No: BIOT-Sem-I-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn the concepts of chemical thermodynamics, chemical equilibrium and their applications.
- To learn about compounds of carbon , their sources, mechanism of reactions and utility in daily life
- To study concepts of stereochemistry and spectra of organic molecules.

UNIT – I

a) **Chemical bonding:** Elementary treatment of valence bond theory and molecular orbital theory. Ionic bonding, multiple bonds, multi-center bonds, metallic bonding.hydrogen bonding and its significance.

b) **Periodic properties:** Position of elements in the periodic table,effective nuclear charge and its calculation, atomic and ionic radii, ionization energy, electron affinity, electronegativity. Trends in periodic table and application in predicting and explaining the chemical behavior.

c) **Molecular Spectroscopy:** Difference between atomic and molecular spectroscopy, absorption and emission spectroscopy, regions of electromagnetic spectrum. Infrared and Raman spectra, basic principle and information from Infrared and Raman spectra.Principle of NMR, chemical shift values and its applications. Importance of mass spectroscopy in chemistry and biology

UNIT – II

a) **Solutions:** Ideal and non- ideal solutions, method of expression concentrations of solution, activity and activity coefficients, dilute solution, Osmotic pressure, its law and measurements, Elevation of boiling point and depression of freezing points.

b) **Chemical kinetics:** Scope, rate of reaction, influencing factors such as concentration, temperature, pressure, solvent *etc*. theories of chemical kinetics. Arrhenius equation, concept of activation energy.

UNIT – III

a) **Photochemistry:**
Absorption of light, Lambert-Beer Law, Photochemical principles: Stark-Einstein Law of Photochemical equivalence, Quantum yield of photochemical reaction (with example). Fluorescence and Phosphorescence.

b) **Coordination compounds:** Introduction, Wener's coordination theory, naming of coordination compounds, isomerism and stereochemistry in coordination compounds

UNIT – IV

a) **Fundamentals:** inductive effect electromeric effect, resonance, hyperconjugation, types of reagents, electrophiles and nucleophiles, types of organic reaction intermediates, carbocations, free radicals, carbenes (with example). Nomenclature and classification of Alkyl halide, method of formation, chemical reaction, mechanisms and stereochemistry of nucleophillic substitution reaction of Alkyl halides,SN_2, and SN_1 reaction with energy diagram.

b) **Carboxylic Acids and derivatives:** Structure of carboxylic acids and derivatives. Acidity of carboxylic acids, effects of substitution on acidic strengths, chemical properties of carboxylic acids. HVZ reaction with mechanism. Relative stability and reactivity and reactivity of acid chloride, esters, anhydrides, amides, mechanism of esterification.

Reference Books:

1. Bruce H Mahan (1987). University Chemistry Edition 3rd (Narosa Publishers).
2. R. T. Morrison, R. N. Boyd (2001). Organic Chemistry (Prentice-Hall of India Pvt. Ltd).
3. J.D Lee. (2008). Concise Inorganic Chemistry, (Wiley-India).
4. B. R. Puri, L. R. Sharma. (1989). Principles of inorganic chemistry (Shoban Lal Nagin Chand and Co).
5. Walter J Moore (1986). Basic physical chemistry (Prentice Hall of India).

BIOT-Sem-I-IV-P **Chemistry (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Inorganic qualitative analysis
2. Four ions including interfering ions.
3. Iodimetry and Iodometry
4. Redox titrations using ceric sulphate, potassium dichromate and potassium permanganate
5. Complexometric titration using EDTA of Ca^{++}, Mg^{++} and Zn^{++}
6 Analysis of a given organic compound (solid): Elemental Analysis,

Reference Books:

1. L. Saland (1989). Practical chemistry labs: A resource manual (Walch Education).
2. J. Leonard, B. Lygo, G. Procter (1998). Advanced practical organicchemistry. (CRC publications).
3. P. Kelter, M. Mosher, A. Scott (2008). Chemistry: The practical science(Publisher Houghton Mifflin).
4. G. Svehla (1996). Vogel's quantitative inorganic analysis (Prentice Hall)

Paper: Physics **Theory: 67 Marks**
Code No: BIOT-Sem-I-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Physics is one of the important basic sciences and Biotechnology is based upon these. Introduction to basic course of Physics will enhance the grasping of subject.

UNIT – I

Science, Physics and Life Sciences- An introduction to apparent differences and the underlying overlap (atomic nature of matter). Units of measurement and ranges (from the smallest to the largest known) for different physical quantities viz. mass, length, time, current, temperature, luminosity, etc. with suitable examples from bio/physical sciences.

UNIT – II

Coulomb's law for point charges; electric field due to point charge and electric dipole (on axial line and equator line), electric flux; Gauss's theorem and its applications (line of charge and sheet of charge).

Electric potential due to point charge, group of charges and dipole (on axial line and equatorial line), potential difference as line integral of electric field, capacitance; series and parallel arrangements, energy stored in the electric field of capacitor, current, current density, equation of continuity, Ohm's law in vector form.

UNIT - III

Interference of waves, phase and path differences, theory of interference fringes, Young's experiment, coherent sources, Llyod's mirror, Fresnel Biprism, intensities of maxima and minima.

Diffraction of light, rectilinear propagation, Fresnel and Fraunhofer diffraction, Fraunhofer diffraction at single slit, Rayleigh criterion for resolving power, Resolving power of telescope and microscope, Compound Microscope (Principle, construction, ray diagram, formula for magnifying power), fluorescent microscope(concept only), Polarization, introduction.

UNIT – IV

Quantum theory of light, X-rays diffraction, Compton effect, Bragg's law, de Broglie wave equation, phase velocity and group velocity, electron microscope, Uncertainty Principle (statement only), applications of Uncertainty Principle (particle in a box, existence of electron in Nucleus and atom).

Radioactivity and its laws ; half-life and mean life, uses of radioactivity.

Reference Books:
1. H.S. Hans & S.P. Puri : Mechanics (Tata Mcgraw Hill 1984)
2. Electricity and Magnetism : Berkeley physics course vol. II.
3. AjoyGhatak : Optics (Tata Mcgraw Hill 2004)
4. Jenkins &White : Fundamental of optics (Tata Mcgraw Hill 1991)
5. D.P. Khandelwal : Text book of optics and atomic physics (Himalaya Pub. 2005)
6. Arthur Beiser : Modern Physics (Tata Mcgraw Hill 1981)

BIOT-Sem-I-V-P **Physics (Practical)** **Practical : 22 Marks**
Internal Ass.: 3 Marks

Introduction and practice the concepts of proper measurement, data recording, and data presentation; stress to be laid on use of proper units, least count, error & its propagation, graph plotting & least square fitting. (Simple measuring devices available in the lab may be used to create basic data).

1. Resolving power of Telescope/Microscope.
2. Rotation of the plane of polarization of a solution using a Polarimeter.
3. Use of C.R.O. as a display & measuring device.
4. Capacitance by flashing and quenching of a neon lamp.

Reference Books:
1. Laboratory Manual of Physics for Undergraduate classes by D. P. Khandelwal
2. B.Sc. Physics Practicals by C. L. Arora.

Paper: Introduction to Biotechnology **Theory: 67 Marks**
Code No: BIOT-Sem-I-VI-T **Internal Ass.: 8 Marks**
Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -
This course will introduce the basic concepts of biotechnology to the students. They will learn about the history of biotechnology; the foundations of modern biotechnology; the role of biotechnology in fermentation industry, environment and modern medicine and the ethical implications of biotechnology.

Unit-I

Advent, scope and basics of biotechnology
Bacteria as workhorses of biotechnology; *E. coli* as the model bacterium

Yeast and fungi in Biotechnology
Introduction to multicellular organisms as research models: *Drosophila melanogaster*, *Caenorhabditis elegans*, *Daniorerio*, *Musmusculus*
Arabidopsis thaliana as model for plant genetics,
Role of viruses and bacteriophages in biotechnology

Unit-II

Structure and function of the cell: the basic unit of life
Prokaryotic and Eukaryotic cells
Biomolecules in a cell (DNA, RNA and proteins)
Introduction to genomics, transcriptomics, proteomics and metabolomics; bioinformatics and its role in biotechnology.
Introduction to basic techniques like sterilization, centrifugation, electrophoresis, chromatography, sonication.
Fundamentals of recombinant DNA technology: Restriction Enzymes, Vectors and their properties.

Unit-III

Applications of biotechnology: today and tomorrow
Basics of Biotechnology in fermentation and pharmaceutical processes.
Green technology to control pollution.
Role of biotechnology in diagnostics, introduction to gene therapy.

Unit-IV

Biotechnology and society: genetically modified organisms (GMOs) - transgenic plants and animals and their applications in biotechnology.
Public concerns and risks associated with genetic engineering: Bioterrorism and biowarfare.
Ethical, social and legal implications of biotechnology.

Reference Books:

1. Comprehensive Biotechnology, Murray Moo-Young, 2nd edition (2011), Pergamon Press.
2. Introduction to Biotechnology, William J. Thieman& Michael A. Palladino, 3rd edition (2012), Benjamin Cummings.
3. Biotechnology Expanding Horizons, BD Singh, 4th edition (2012), Kalyani Publishers.
4. The Ethics of Biotechnology (Biotechnology in the 21st Century), Jonathan Morris, Chelsea House Pub (L), 1st edition (2005).
5. Biotechnology, Applying the Genetic Revolution, David P. Clark & Nanette J. Pazdernik, 1st edition (2008), Academic Cell.
6. Molecular Biotechnology, Sandy B. Primrose, 2nd edition (1991), Blackwell Scientific Publications, ISBN.
7. Biotechnology: Demystifying the concepts, David Bourgaize, Thomas R. Jewell & Rodolfo G. Buiser, 1stedition(1999), Benjamin Cummings.
8. Ethical Issues in Biotechnology, Richard Sherlock & John D. Morrey, 1st edition (2002), Rowman & Littlefield Publishers.

BIOT-Sem-I-VI-P

Introduction to Biotechnology (Practical) **Practical : 22 Marks**
Internal Ass.: 3 Marks

1. Introduction and use of basic equipments in a biotechnology laboratory (Auto-pipettes, pH meter, centrifuges, light microscope, electrophoretic apparatus, vortex mixer, magnetic stirrer, rocker, laminar hoods, autoclave, sonicator)
2. Handling and disposal of hazardous reagents (acids, carcinogenic chemicals like acrylamide, ethidium bromide) and concept of chemical hoods
3. Good laboratory practices followed in biotechnology laboratory (sterility, DNAse/ RNAse free space, separate area for protein work, possible means of contamination and its control etc)
4. Cell disruption and cell lysis of animal/plant/bacterial cell
5. Separation and estimation of extracellular and intracellular proteins
6. Quantification of nucleic acids by colorimetry (orcinol)
7. Introduction to bioinformatic tools used in biotechnology

Semester – II

B.Sc. (Hons.) 1st year (2nd Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN AND CHILDREN (SEMESTER – II)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A

(kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

Paper: English
Code No: BIOT-Sem-II-I-T

Semester II

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the Internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 5-8
Drama: Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae; short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.,

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for an Interview & Group Discussion etc

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Leaning, the marks obtained by them out of 40 will be proportionately increased out of 50.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which , a student will be expected to attempt any four. **Two** from **Prose** and **two** from

Drama. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. 5 **marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribe (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 Short Survey Report (150-200 words) with internal choice**.** **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6 Definition/Format of modern forms of communication to be tested.

ਸਮੈਸਟਰ ਦੂਜਾ

ਅਪ੍ਰੈਲ / ਮਈ 2●17 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਲਿਖਤੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ
2. ਪੱਤਰ-ਵਿਹਾਰ
3. ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ)
ਸੰਪਾਦਕ : ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

1.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	3+5 = 8 ਅੰਕ
3.	ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਹਾਣੀਆਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿੱਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
4.	ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	7 ਅੰਕ
5.	ਵਿਆਕਰਣ:	(3+3+4=10 ਅੰਕ)
	ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
	ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
	ਏ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
6.	ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਹਾਣੀਕਾਰਾਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Paper: Statistics & Computer Fundamentals **Theory: 67 Marks**
Code No: BIOT-Sem-II-III-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn applications of statistics in the field of biology.
- To study concepts of probability, averages, distributions, tests of deviations, correlation and linear regression.
- To learn to design experiments and analysis of results by tests of significance or analysis of variance.

UNIT – I

An introduction, types of data, collection, classification and tabulation of the primary data, secondary data, discrete data and continuous data, diagramatic and graphical representation of grouped data, frequency distribution {univariate and bivariate},cumulative frequency distribution and their graphical representation, histogram frequency polygon.

Concept of central tendency or location and their measures, partition values: quantiles, deciles and percentiles, dispersion and their measures, relative dispersion.

UNIT – II

Binomial distribution, Poisson distribution as a limiting form of binomial distribution and properties of these distributions, moments, moment generation function, cumulate generating function, geometric distribution and exponential distribution and properties ofthese distributions.
Normal distribution
Correlation and regression analysis
Hypothesis testing
Markov models
Cluster analysis

- Nearest neighbor search
- Search using stem numbers
- Search using text signature

Concepts of Probability.

UNIT – III

Computers: General introduction to computers, organization of computers, digital and analogue computers, computers algorithms.
Introduction to computers and its uses: Milestones in hardware andsoftware-batch oriented/online/real time applications.

Compute as systems: Basic concepts, stored programs, functional units andtheir interrelation-communication with computer.

UNIT – IV

Data storage devices:
Primary storage: Storage address and capacity, type of memory.
Secondary storage devices: Magnetic tape-data representation and R/W; Magnetic disks, fixed and removable, data representation and R/W; Floppy and hard disks, optical disks CD-Rom, mass storage devices.
Input/output devices: Key-tape/diskette devices, light pin Mouse, joystick, source data automation.
Printed outputs: Serial, line, page, printers, plotters, voice response units.

Reference Books:

1. P.N. Arora & P.K. Malhotra (1996).Biostatistics (Himalaya PublishingHouse, Mumbai).
2. Sokal&Rohlf(1973). Introduction to biostatistics (Toppan Co. Japan).
3. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics: Anintroduction (Springer).
4. P.K. Sinha (2004). Computer fundamentals (BPB).
5. Suresh K. Basandra (2008). Computers today (Galgotia Publications Pvt.Ltd., New Delhi).

BIOT-Sem-II-III-T

Statistics and Computer Fundamentals (Practical) **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Presentation of data by frequency tables, diagrams and graphs.
2. Calculation of measures of central tendencies, skewness and Kurtosis.
3. Calculation of dispersion.
4. Fitting of binomial distribution and Poisson distribution.
5. Probability
6. Basics of computer: Basic commands-File creation, copying, moving and deleting in DOS & windows, Using e-mail, browsers, search engines.

Reference Books:

1. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics:An introduction (Springer).
2. P.K. Sinha (2004). Computer fundamentals (BPB).
3. Suresh K. Basandra (2008). Computers today (Galgotia PublicationsPvt. Ltd., New Delhi).

Paper: Basic Biochemistry **Theory: 67 Marks**
Code No: BIOT-Sem-II-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

To make student conversant with the biochemical aspect of cell, chemical structure & function of various biomolecules.

UNIT – I

Water: Physico chemical properties of water, dissociation and association constants. pH and buffers, pI, pka, Henderson Hasselbatch equation and its implications.

Carbohydrates: Structure of important mono, di-, oligo- and polysaccharides, glycoproteins, peptidoglycan, glycolipids and lipopolysaccharides. Reaction of monosaccharides.

UNIT II

Lipids: Classification of lipids and fatty acids, general functions of major lipid subclasses, acylglycerols, phosphoglycerols, phosphoglycerides, sphingolipids, glycosphingolipids and terpenes, sterols, steroids: Prostaglandins.

UNIT – III

Vitamins and hormones: Types of vitamins and their chemistry, vitamins as cofactors, steroids and peptide hormones.

UNIT IV

Proteins: Structure of amino acids, nonprotein and rare amino acids and their chemical reactions. Structural organization of proteins (primary, secondary, tertiary and quaternary domain structure), protein classification and function. Forces stabilizing primary, secondary and tertiary structure.

Reference Books:

1. Lehninger A.L., Nelson D.L. and Cox M.M. (2005).Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson Publishers).
4. G.L. Zubay, W.W. Parson, D.E. Vance. (1995). Principles of biochemistry:Student study art notebook (Wm.C. Brown).
5. Bucke C. (1999). Carbohydrate biotechnology protocols (Humana Press).
6. H.R. Horton, A.J. Scism, L.A. Moran, R.S. Ochs, J.D Rawn, K.G. Scrimgeour. (2006). Principles of biochemistry (Prentice Hall).

BIOT-Sem-II-IV-P **Basic Biochemistry (Practical)** **Practical: 25 Marks**
Internal Ass.: 3 Marks

1. Preparation of physiological buffers.
2. Verification of Beer-Lamberts law for p-nitrophenol.
3. Determination of pKa value of p-nitrophenol.
4. Estimation of carbohydrates in given solution by Anthrone method.
5. The determination of acid value and saponifaction value of a fat.
6. Methods of protein estimation.

Paper: Cell Biology **Theory: 67 Marks**
Code No: BIOT-Sem-II-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

- To understand the detailed overview of eukaryotic cell and its inner components
- To understand the processes of cell transport and cell locomotion
- Introduction to stem cells and their applications

Practical skills will be imparted to the students through critically designed practical related to the subjects.

Unit I

Cell as a basic unit of living systems: the cell theory, pre-cellular evolution, artificial creation of "cells", broad classification and ultrastructure of cell types (PPLOs, Bacteria, eukaryotic microbes, plant and animal cells), tissue, organ and organism at different level of organization of other genetically similar cells; biochemical composition of cells (proteins, lipids, carbohydrates, nucleic acids and metabolic pool).

Ultrastructure of cell membrane and cell organelle: structure and function of cell organelles, ultrastrucure of cell membrane, cytosol, golgi bodies, vacuoles, endoplasmic reticulum (rough and smooth), ribosomes, cytoskeletal structures (actin microtubules etc), mitochondria, chloroplast, lysosomes, peroxisomes, nucleus (nuclear membrane, nucleoplasm, nucleolus)

Unit II

Cellular transport: Passive & active transport, permeases, sodium, potassium, Calcium, ATPase pumps, lysosomal and vacuolar membrane, ATP dependent proton pumps, co-transport, symport, antiport, transport into prokaryotic cells, endocytosis and exocytosis, entry of viruses and toxins into cells.

Unit III

Cell locomotion: Amoeboid, Flagellar and Ciliar.

Chromosomes: discovery, morphology, chemical composition, structural organization of chromatids, centromere, telomere, chromatin, nucleosome organization, euchromatin and heterochromatin, special chromosomes (polytene, lampbrush chromosomes), banding patterns in human chromosomes.

Unit IV

Basics of stem cells: Introduction to concepts in stem cell biology, Cell differentiation in multicellular organisms: (renewal, potency: Totipotent, pleuripotent, multipotent); types of stem cells: early embryonic stem cells, blastocyst embryonic stem cells, fetal stem cells, umbilical cord stem cells, adult stem cells; applications; ethical issues related to stem cells.

Reference Books:

1. The World of the Cell (2008) Becker, Klein Smith & Hardin Pearson education Inc
2. Cell and Molecular Biology (2010) E.D.P De Robertis and E.M.F. De Robertis, Jr.
3. Molecular Cell Biology (2007) Lodish et al. Freeman & Co
4. Molecular Biology of the Cell (2007) Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter.
5. The Cell: A Molecular Approach (2013) Geoffrey M. Cooper and Robert E. Hausman
6. Cells and Cell Function: Advanced Level (2007) Sally Morgan
7. Stem Cells: An Insider's Guide (2013) Paul Knoepfler

BIOT-Sem-II-V-P **Paper: Cell Biology (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. To study the parts and function of a light microscope
2. To prepare a wet mount of onion peel for microscopy
3. Counting of cells using haemocytometer
4. Subcellular fractionation of spinach cells
5. To study cell locomotion of amoeba
6. To study flagellar motility in bacteria by hanging drop technique
7. To study cell transport in cell membrane by following experiments
    1) Diffusion through artificial membrane: transport of albumin and glucose solution through dialysis bag.
    2) To study the effect of membrane disrupting agents in beet root
8. Quantitative analysis of cell membrane lipids by TLC

Paper: General Microbiology **Theory: 67 Marks**
Code No: BIOT-Sem-II-VI-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

Microbes play significant role in understanding medical science and industries so study of microbes from basic to advance level, with understanding of biochemistry, cell structure and application makes this paper significant.

UNIT – I

History of Microbiology: A. Leewenhook, L. Pasteur, R. Koch, J. Lister, J.Tyndall, Koch postulates, discovery of antibiotics.

Principle of microscopy: Bright field, dark field, phase contrast, fluorescent, electron microscopy.

UNIT – II

Microbial classification: Bacteria, fungi

Morphology of bacteria, viruses and fungi with major emphasis on bacterial structure specially cell wall. Gram positive and Gram negative bacteria. Microbial spores, sporulation/ germination process.

UNIT – III

Microbial growth, nutritional biodiversity, phases of growth, generation time, growth rate, monoauxic, diauxic and synchronous growth. Chemostat

Physical and chemical agents to kill microbes, sterilization and pasteurization processes.

UNIT –IV

Normal micro flora in human/ animals. Types of microbial pathogens and diseases caused by them. Microbial interactions like symbiosis and antibiosis. Host defense mechanism against pathogens.

Reference Books:

1. Tortora, G.J., Funke, B.R. and Case, C.L. (2009) Microbiology: An introduction (Benjamin/ Cummings publishing company, Inc).
2. R. Y. Stanier, M. Doudoroff, E. A. Adelberg (1999). General microbiology (MacMillian Press London).
3. M.J. Pelczar, E.C. Sun Chan, N.R. Krieg (2007). Microbiology (Tata McGraw Hill Publication, New Delhi). 5th edition.
4. H.G. Schlegel, C.Zaborosch, M. Kogut (1993).General microbiology (Cambridge University Press).
5. S.C. Prescott, C.G. Dunn (1959). Industrial microbiology (McGraw- Hill).
6. Purohit, S.S. (2003). Microbiology: Fundamentals and applications (Agrobios, India)
7. Postgate, J.R. (2000). Microbes and man (Cambridge University Press).

BIOT-Sem-II-VI-P General Microbiology (Practicals) Practical: 22 Marks
Internal Ass.: 3 Marks

1. Cleaning of glass wares, preparation of media, cotton plugging and sterilization.
2. Isolation of microorganisms from air, water and soil samples.
3. Dilution and pour plating techniques.
4. Gram staining, spore staining, motility
5. Growth curve of microorganisms.
6. Antibiotics sensitivity of microbes using antibiotic discs.
7. Testing of water quality.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual, (Pearson Benjamin Cummings).

SEMESTER 3RD

B.Sc. (Hons.) 2nd year (3rd Semester)

Paper: Biochemistry
Course No.: BIOT-Sem-III-I-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To familiarize the students with the biochemical activities taking place at cellular level, highlighting the enzymatic reactions, metabolic pathways and biochemical aspect.*

Unit- I

Metabolism: Metabolic pathways, biochemical reaction mechanism, energy rich metabolites. Coupled reactions, substrate level phosphorylation. Importance of ATP: Structural basis of high phosphoryl transfer potential of ATP. Sources of cellular energy, activated carriers. Regulation and evolution of metabolic pathways.

Unit- II

Carbohydrate metabolism: Biosynthesis and degradation of glucose; feeder pathways of glycolysis; Kreb cycle, amphibolic nature of the Kreb's cycle; regulation of Krebs cycle, regulation of gluconegenesis. Glycogen metabolism.
Mitochondrial electron transport chain, oxidative phosphorylation; regulation of ATP synthesis.

Unit- III

Lipid Metabolism: Biosynthesis and degradation of fatty acids; β oxidation of saturated, unsaturated and polyunsaturated fatty acids. Formation of ketone bodies, their function and physiological significance. Fatty acid synthesis: multifunctional enzyme complex in eukaryotes, function of citrate. Regulation of fatty acid metabolism.
Cholesterol metabolism: Biosynthesis of cholesterol and its regulation.

Unit- IV

Amino acid metabolism: Biosynthesis of nutritionally non-essential amino acids; catabolism of carbon skeleton of amino acids. Conversion of amino acids to specialized products; amino acids as precursors of porphyrins, bile pigments and biogenic amines.
Nucleic acid metabolism: Biosynthesis of purine and pyrimidine nucleotides; salvage reactions. Catabolism of purines and pyrimidines, urea cycle.

Reference Books:

1. Lehninger A.L., Nelson D.L., Cox M.M. (2005). Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson).
4. Voet D., Voet, J.G. (2004).Biochemistry (John Wiley & Sons).
5. Voet, D., Voet, J.G. and Pratt, C.W. (2008). Fundamentals of biochemistry: Life at the molecular level (John Wiley & Sons).

BIOT-Sem-III-I-P Biochemistry (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Estimation of DNA by the diphenylamine reaction.
2. Determination of reducing sugars using 3, 5-dinitrosalicylic acid and Benedict's test.
3. Determination of iodine number of fat.
4. Determination of extinction coefficient of nucleic acids.
5. Biuret assay for protein estimation.
6. Quantitative estimation of amino acids using ninhydrin reaction.
7. Estimation of RNA by means of orcinol reaction.

Paper: Genetics
Course No.: BIOT-Sem-III-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The focus of this course is on the science of heredity with emphasis on the basics of Mendelian and molecular genetics. It will familiarize students with chromosome organization, linkage, chromosome mapping, chromosome aberrations, mutations and microbial genetics.*

Unit – I

Mendelian laws of inheritance, Sex determination in drosophila, plants and animals, sex linkage, Non-disjunction as a proof of chromosomal theory of inheritance. Numerical chromosome aberration polyploidy, aneuploidy, Chromosomal aberrations: duplications, inversions, translocations, position effects.

Unit – II

Gene interactions, sex linked inheritance. Crossing over: molecular mechanism and cytological proof, Recombination, linkage, gene mapping, Three point testcross, interference, coincidence, recombination frequencies, Tetrad analysis, somatic cell hybridization for gene linkage studies, Hereditary defects.

Unit – III

Population genetics: Hardy-Weinberg equilibrium, gene and genotypic frequencies,Chi- square test, probability, pedigree analysis.

Mutation: Spontaneous versus induced mutations, types of mutations, mutagenic agents: Physical, chemical and radiation, molecular basis of mutations, mechanisms of DNA repair, mutations frequency, correlation between mutagenicity and carcinogenicity,

Unit – IV

Basic microbial genetics: Conjugation, transduction, transformation, isolation of auxotrophs, replica plating techniques, analysis of mutations in biochemical pathway, one gene – one enzyme hypothesis. Extra chromosomal inheritance: mitochondrial and chloroplast genetic systems.

Reference Books:

1. Birge, E.A. (2006). Bacterial and bacteriophage genetics (Springer).
2. Dale J., Park S. (2005) Molecular genetics of bacteria (John Wiley and SonsInc).
3. Freifelder, D. (2005). Molecular biology (Jones and Bartlett).
4. Synder, L., Champness W. (2007). Molecular genetics of bacteria (ASM Press).
5. Turn N.J, Trempy J.E. (2006). Fundamental bacterial genetics (Wiley Blackwell).
6. T.A. Baker, J.D. Watson, S. Bell. (2004). Molecular biology of the gene (Benjamin B. Cummings).
7. A.J.F. Griffiths, S.R. Wessler, R.C. Lewontin, S.B. Carroll (2007). Introduction to genetic analysis (W.H.Freeman & Co Ltd).
8. Strickberger M.W. (2006) 3rd edition. Genetics (Macmillan).
9. Verma P.S (2012)Genetics (S.Chand & Company Ltd.)
10. Sanders M.F. and Bowman J.L.(2012) Genetic Analysis (Pearsons)

BIOT-Sem-III-II-P **Genetics (Practical)**

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Examination of permanent slides of various stages of mitosis and meiosis and different types of chromosomes.
2. Demonstration of law of segregation and independent assortment (use of dried peas, colored peas, capsules *etc*.).
3. Numerical for segregation and independent assortment.

4. Use of Chi-square for prediction of phenotype/genotype frequencies of parents from progeny and vice-versa, epistasis.
5. Detection of blood groups (ABO & Rh factors).
6. Calculation of variance in respect of pod length and number of seeds/pod.
7. Calculation of gene frequencies and random mating (colored beads, capsules).
8. Dermatographics: Palm print taking and finger tip patterns.

Paper: Immunology-I
Course No.: BIOT-Sem-III-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: *To understand general aspects of immune system like different components of the immune system, Generation and functions of these components, Knowledge of basic immunological techniques*.

Unit-I

1. Introduction
i) Overviews of immune system – Historical perspectives
ii) Innate and acquired immunity
iii) Clonal nature of immune response.

2. Cells of the immune system : Hematopoiesis and differentiation, lymphocyte trafficking, B-lymphocytes, T-lymphocytes, macrophages, dendritic cells, Natural killer cells and lymphocyte activated killer cells, eosinophils, neutrophils & mast cells.

Unit-II

3. **Organs of the immune system :** Primary and secondary lymphoid organs, systemic function of immune system.
4. **Lymphocyte Trafficking**: Cell surface proteins, Cell Adhesion molecules (Integrin, Selectin, Cadherin family and Ig Superfamily).
5. **Antigen** – Immunogenicity Vs. antigenicity, factors effecting immunogeneticity, nature of immunogen, epitopes, heptans and antigenicity, pattern recognition receptors.

Unit-III

6. **Immunoglobulins:** Structure of antibody, antibody effector function, antibody classes and biological activities, antigenic determinants on Immunoglobulins, Immunoglobulins superfamilies.
7. **Major histocompatibility complex:** General organization and inheritance, MHC molecules and genes, genetic map, cellular distribution, regulation of MHC expression and disease susceptibility, antigen presentation.

Unit-IV

8. **Hybridoma Technology:** Production of Monoclonal Antibodies, applications of polyclonal and monoclonal antibodies.
9. **Antigen–Antibody interactions** : Strength of interaction, cross reactivity, antibody affinity, avidity. Antigen-antibody interactions as tools for research and diagnosis: precipitation and agglutination reactions, immunodiffusion, immunoelectrophoresis, immunoassays, Enzyme linked immunosorbent assay (ELISA), Radioimmunoassay (RIA), western blot, Immunofluorescence.

Reference Books:

1. Kuby Immunology (2006) by Thomas J. Kindt, Richard A. Goldsby, Barbara A. Osborne, Janis Kuby (W.H. Freeman).
2. Immunology- A short course (2009) by Richard Coico, Geoffrey Sunshine (Wiley Blackwell).
3. Fundamentals of immunology (1999) by William Paul (Lippincott Williams & Wilkins).
4. Immunology (2001) by Ivan Maurice Roitt, Jonathan Brostoff, David K. Male (Mosby).
5. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) WH Freeman & Co. New York; 2006.
6. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley Blackwell; 2011.

BIOT-Sem-III-III-P Basic Immunology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Lymphoid organs and their microscopic organization.
2. Differential leucocytes count.
3. Separation of serum from blood.
4. Separation of plasma from blood.
5. Ouchterlony Double Diffusion
6. Radial immuno diffusion test using specific antibody and antigen.
7. Agglutination (Blood group testing).

Paper: Plant Tissue Culture
Course No.: BIOT-Sem-III-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To introduce the students with fundamentals and applications of plant tissue culture. This course will expose students to the methods of culturing, maintaining and regenerating plants species.*

Unit – I

Cellular totipotency and differentiation in plants.
Plant Culture Media and their composition.
Sterilization techniques for glassware and tissue culture media.
Micropropagation: Establishment of aseptic culture, various stages, advantages and disadvantages.

Unit –II

Organogenesis; somatic embryogenesis; somaclonal variation, its genetic basis and application in crop improvement. Cell/callus line selection for resistance to herbicide, stress and diseases. Role of tissue culture in rapid clonal propagation, production of pathogen - free plants and "synthetic seeds" haploid and Triploid plant production & their application.

Unit – III

Protoplast and somatic hybridization: Isolation, culture and plant regeneration, protoplast fusion, identification and characterization of somatic hybrids, applications of protoplast hybridization technology.

Unit – IV

Secondary metabolites: Secondary Plant products from cultured cells and their industrial applications.
Cryopreservation of germplasm: Short term and long term conservation of plant genetic resources, *In situ* and *Ex situ* conservation of plants

Reference Books:

1. Razdan, M.K. (2007). Introduction to plant tissue culture (India Book House Pvt. Ltd).
2. Narayanaswamy, S (1994). Plant cell and tissue culture (Tata Mc-Graw Hill Publishing Co.Ltd, New Delhi).
3. Rudolf, E. (1994). Plant cell biotechnology (Spinger Verlag).
4. Bhojwani, S.S., Razdan, M.K. (1996), Plant tissue culture: Theory and practice (Elsevier Science, Netherlands).

5. Gamborg, O.L., Phillips, G.C. (1995). Plant cell, tissue and organ culture: Fundamental methods (Illustrated, Publisher Springer).
6. HS Chawla (2003). Plant biotechnology: A practical approach (Science Publishers, USA). Plant Tissue Culture and Biotechnology

BIOT-Sem-III-IV-P Plant Tissue Culture (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Laboratory design set up for a plant tissue culture laboratory.
2. How to clean glass/plastic ware.
3. Preparation of complex nutrient medium (Murashige and Skoog's medium).
4. To select, prune, sterilize and prepare an explant for culture.
5. To culture different explants for raising callus cultures.
6. Significance of growth hormones in culture medium.
7. To demonstrate various steps of micropropagation.

Paper: Animal Cell Culture
Course No.: BIOT-Sem-III-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the field of Animal cell-culturing and its importance to mankind. The students will also learn the techniques involved in animal cell culture.*

Unit – I

History of development of cell cultures, natural surroundings for animal cells, simulating natural conditions for animal cells, metabolic capabilities of animal cells.

Biology of cultured cells : The culture environment, cell adhesion, proliferation, differentiation, signaling, evolution of cell lines. Equipments and materials for animal cell culture technology.

Unit II

Introduction to the balanced salt solutions and simple growth medium. Brief discussion on the chemical, physical and metabolic functions of different constituents of culture medium. Role of carbon dioxide. Role of serum and supplements.

Serum & protein free defined media and their application.

Animal cell culture Techniques: Dispersion and disruption of tissues; primary cultures, anchorage and non-anchorage dependent cells; secondary culture, transformed animal cells.

Unit – III

Established/continuous cell lines, commonly used animal cell lines, their origin and characteristics. Maintenance and growth kinetics of cells in culture, differentiation of cells,
Measurement of growth and viability of cells in culture. Cytotoxicity assays & their applications,

Unit – IV

Characterization of Cell lines and their authentication, Cell fusion and production of monoclonal antibodies.
Transformation and immortalization, cryopreservation.
Bio-Safety & Bioethics.

Reference Books:

1. R. Ian Freshney, (2010) 6th Edition, Wiley-Blackwell. Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications
2. P.R. Yadav and Rajeev Tyagi, Discovery Publishing House, (2006) Biotechnology of Animal Tissues
3. Julio, E., Celis. (2006) Cell Biology. A laboratory handbook, Vol. I-IV (Elsevier Academic)
4. Butler, M (1996) Mammalian cell biotechnology. A practical approach (IRL, Oxford University Press)
5. Gareth, E.J. (Edition Illustrated, Humana Press) (1996) Human cell culture protocols.

BIOT-Sem-III-V-P Animal Cell Culture (Practical)

Practical : 20 marks
Int. assessment : 05marks
Total : 25 marks
Time : 3 hours

1. Fumigation of animal cell culture laboratories.
2. Maintenance of aseptic conditions and sterilization method.
3. Preparation of Minimal Essential Growth medium for cell culture.
4. Isolation of lymphocytes for culturing.
5. Checking availability of cells by Teypan blue
6. Determination of cell count

B.Sc. (Hons.) 2nd year (4th Semester)

Paper: Immunology-II
Course No.: BIOT-Sem-IV-I-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the principles of advanced Immunology, both at the molecular and cellular levels.*

Unit-I

1. **B Cell Activation, Differentiation:** B-Cell Activation and Proliferation, In Vivo Sites for Induction of Humoral Responses, T-dependent and T-independent antigens.
2. **Organization and expression of Immunoglobulins gene:** Genetic model, multigene organization, generation of antibody diversity.

Unit-II

3. **Receptors and Signaling:** T-Cell Receptors: Structure and Roles, T-Cell Receptor Complex.
4. **T-Cell Maturation, Activation, and Differentiation**: Thymic Selection of the T-Cell Repertoire, T_H-Cell Activation, T-Cell Differentiation, Cell Death and T-Cell populations, Peripheral-T-Cells.
5. **Complement system:** Function, Components- Classic, Alternative, Mannose binding proteins, activation, Regulation of the Complement System, Biological Consequences of Complement Activation.

Unit-III

6. **Hypersensitivity:** Type I, Type II, Type III and Type IV Hypersensitivity reactions and their implications.
7. **Autoimmunity:** Organ specific autoimmune diseases : Hashimoto's Thyroditis, Insulin-dependent Diabetes Mellitus, Grave's disease, Mysthenia Gravis.
   Systemic Autoimmune Disease: Systemic lupus Erythematosuns (SLE).

Unit-IV

8. **Transplantation immunology-** Immunologic Basis of Graft Rejection, Clinical Manifestations of Graft Rejection, General Immunosuppressive Therapy, Specific Immunosuppressive Therapy, Immune Tolerance to Allografts, Clinical Transplantation
9. **Vaccines and Vaccination** – principles of vaccination, passive & active immunization, immunization programs, adjuvants, bacterial vaccines, viral vaccines, polysaccharide vaccines, DNA vaccines, recombinant vaccines, vaccines to other infectious agents, tumor vaccines.

Reference Books:

1. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) W.H. Freeman & Co. New York; 2006.
2. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley-Blackwell; 2011
3. Peakman M, Vergani D, Pyne DJ, Woodward M. Basic and clinical immunology. (1st Ed.) Churchill Livingstone; 1997.
4. Roitt I, Brostoff J, Male D. Immunology. (6th Ed.) Harcourt Health Sciences, 2001.
5. Clinical Immunology and serology: A laboratory perspective (1997) by Stevens C.D (F A Dacis Company, Phialadelphia).

BIOT-Sem-IV-I-P Immunology-II (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Performing enzyme linked immunosorbent assay (ELISA).
2. Rocket immuno-electrophoresis for antigen antibody interaction.
3. Isolation of mononuclear cells from peripheral blood and viability test by dye exclusion methods.
4. Total leucocyte count (TLC).
5. Isolation of IgG from serum.

Paper: Biophysical and Biochemical Techniques
Course No.: BIOT-Sem-IV-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To enable the students learn important tools and techniques based on biophysical and biochemical principles so that they can understand application of these techniques in biotechnology*

Unit – I

Principle, working and applications of Spectrophotometry (UV& visible) and spectroflourimetry, Atomic absorption spectrophotometry: Equipment used and applications
Infrared and Raman spectroscopy. ORD and circular dichroism, Nuclear Magnetic Resonance and Electron Spin Resonance spectroscopy, Magnetic Resonance Imaging.
Electrophoresis: Principle, types & applications.

Unit – II

Microscopy: Properties; Light and Bright field Microscopy, Dark field Microscopy; Phase contrast, Fluorescent and Confocal microscopy,
Electron microscopy: Scanning and Transmission Electron Microscopy.
Centrifugation: Principle, types & applications.

Unit – III

Crystallography: Physical basis of crystallization; formation of crystals; Mounting of crystals
X-ray diffraction: Braggs law; Diffraction of x-rays by crystals
Overview of chromatography; Gas chromatography and HPLC

Unit – IV

Radioisotope techniques: Radiotracers; GM counter, proportional and scintillation counters, autoradiography.

Mass spectrometry: Physical basis; Instrument used; ionization modes; Applications
Collaboration of MS with other techniques: GCMS and LCMS.

Reference Books:

1. K Wilson, J Walker (2000) Principles and techniques of biochemistry and Molecular Biology Seventh Edition, (Cambridge University Press).
2. SR Mikkelsen, E Cortin (2004). Bioanalytical Chemistry (2004) (John Wiley & Sons)
3. David Sheehan (2009). Physical Biochemistry: Principles and Applications, Second Edition. (John Wiley & Sons)
4. P. Carmona, R. Navarro, A, Hernanz (1997) Spectroscopy of biological molecules: Modern trends (Illustrated, Publisher Springer)
5. Bernard Valeur (2001). Molecular fluorescence: Principles and application (Wiley-VCH).Plenum USA].
6. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).
7. Bansal, D.D., K Hardori, R & Gupta, M.M. (1985). Practical biochemistry (Standard Publication, Chandigarh).

BIOT-Sem-IV-II-P Biophysical And Biochemical Techniques (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25marks
Time : 3 hours

1. Identification of the provided sample using some of the spectroscopic techniques.
2. Quantitative analysis by UV/Visible spectrophotometry.
3. Use and care of light microscope.
4. Demonstration of radioisotopic techniques
5. Gel filtration chromatography

Paper: Plant Biotechnology
Course No.: BIOT-Sem-IV-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: The objective of this course is to familiarize the students with different aspects of plant molecular biotechnology and techniques for plant genetic manipulations.

Unit – I

Genetic material of plant cells with an introduction to chloroplast and mitochondrial DNA.
Plant Promoter, Plant Selection markers and reporter genes.
Transformation of plant cells; different type of vectors including viral vectors and their benefits.

Unit –II

Modes of gene delivery in plants: Particle bombardment, electroporation, microinjection; Advantages and disadvantages
Agrobacterium mediated gene transfer, natural pathogen mode of infection,
vir gene functions, Ti / Ri plasmids, Screening and selection of transformants, PCR and hybridization methods; Transgene selection and silencing; Generation and maintenance of transgenic plants.

Unit – III

Transgenic plants: Genetic modification of plants for herbicide resistance, Pest resistance, virus resistance Bacterial and fungal resistance. Delayed fruit ripening, improved protein composition. Bt cotton, golden rice and some others as examples.

Unit – IV

Plant cell as factories for production of industrial enzymes, biodegradable plastics, antibodies, edible vaccines; manipulation of metabolic pathways for production of fatty acids, industrial oils, terpenoids, flavanoids.

Reference Books:

1. Draper, J.R., Scott. P., Armitage, R. Walden (1988). Plant Genetic Transformation and Gene Expression – A Laboratory Manual. Blackwell Scientific Publications, Oxford.
2. Ashihara et al. (2011) Plant Metabolism and Biotechnology, John Wiley & Sons, Ltd. ISBN: 978-0- 470-74703-2
3. Old, R.W., and Primrose, S.B. (2004). Principles of Gene Manipulation : An Introduction to Genetic Engineering. Blackwell Scientific Publications, Oxford.
4. Peter J. Lea and Richard C. Leegood, Plant Biochemistry and Molecular Biology, Wiley Publishing.
5. Singh R.P. & Jaiwal P.K. (2003) Plant Genetic Engineering Vol. 1 – 4. SCI Tech Publishing LLC, U.S.A.
6. Gupta, P.K. (1990). An Introduction to Biotechnology, Rastogi Publications, Meerut.

BIOT-Sem-IV-III-P Plant Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Aseptic culture techniques for establishment and maintenance of cultures
2. Preparation of stock solutions of MS basal medium and plant growth regulator stocks.
3. Micropropagation of Tobacco plant by leaf disc culture.
4. Isolation of plant genomic DNA by modified CTAB method.
5. DNA check run by Agarose Electrophoresis.
6. Agrobacterium tumefaciens-mediated plant transformation.

Paper: Animal Biotechnology
Course No.: BIOT-Sem-IV-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the advances in the field of Animal and their importance to mankind.*

Unit-I

Organotypic and histotypic cultures: *Organotypic culture:* Gas and nutrient exchange, structure integrity, growth, differentiation, advantages and applications. Methods, advantages and applications of histotypic culture.
Three dimensional culture and tissue engineering: Concept of tissue engineering, components of tissue engineering, cells imaging in 3D construct.

Unit-II

In vitro **fertilization (IVF)** in Humans and Embryo Transfer in Livestock.
Cell culture based vaccines: Cells as virus host/cell culture based vaccines, cells as protein factory/cell expression system and cells as antigen presenter/personalized vaccine.
Scaling up of the animal cell culture: different methods of scale up at laboratory and industrial level.

Unit-III

Transgenic animals and their applications: Concept of transgenics, Methods of gene transfer, selection of clone containing DNA insert and application of transgenic animals (Food, environment, recombinant proteins, drugs *etc.*). Safety and ethical issues of transgenic animals.

Unit-IV

Production of various products of human use using animal cell culture:
Antibiotics production
Human Growth factors
Insulin and other Hormones

Essential Readings:

1. Culture of animal cells (2009). RI Freshney, Sixth ed. John Willey & Sons.
2. Culture of animal cells: A manual of basic technique and specialized applications. John Wiley & Sons, (2011).
3. Animal cell culture and technology by Michaelis Butler. BIOS Scientific Publisher (2003).
4. Animal cell biotechnology XVI 2nd Edition (2007) by Ralf Partner Humana Press.

5. Textbook of animal biotechnology (2012) by B Singh**,** S K Gautam**,** and M S Chauhan..
7. Principles of tissue engineering by Robert Lanza, Robert Langer, Joseph P. Vacanti. Academic Press, (2011) - Science - 1344 pages.
8. Transgenic animal technology, 2nd Edition: A Laboratory Handbook by Carl A. Pinkert. Academic Press; 2nd edition (2002).

BIOT-Sem-IV-IV-P Animal Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Growing the cell monolayers, *in vitro*.
2. Trypsinization of the monolayers and cell counting using hemocytometer.
3. To check the viability of the cells using Trypan Blue dye exclusion assay.
4. Checking the cytotoxicity of the compounds using MTT Assay.

Paper: Agro & Industrial Biotechnology
Course No.: BIOT-Sem-IV-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the concepts of agriculture as industry. This course will help students to understand the application of fundamental concepts like transgenic approaches to improve crop plants, microbial culture maintenance, and metabolite purification at industrial level.*

Unit I

Basic concept of agriculture as industry: Industrially important microbes, its screening, selection and identification.

Maintenance and preservation of industrially important microbial cultures.

Differences between microbial industrial process and chemical industrial process.

Unit II

Improvement programme of industrial microbes, mutational programme of penicillin producing microorganisms, selection pressure in maintaining the hyper producer, lowering of production due to reversal of mutations, media formulation and process optimization of industrial and agro industrial microbes.

Unit III

Microbes in agro industries and industrial biotechnology: Introduction of primary and secondary metabolites, production of vitamin B12, alcohol, wine, beer, cheese, bread, citric acid, gluconic acid, antibiotics (penicillin), enzymes (amylases, cellulases, lipases and proteases) and their industrial applications.

Unit IV

Emerging technologies in agro industries: production of vermiculture, composting, herbicides and biopesticides, production of biofertilizers: Blue green algae, azolla, fungi, mycorrhiza (VAM), bacteria – *Azospirrilum*, microbial biotransformations, single cell proteins (bacterial, fungal and algal).

Reference Books:

1. Marwaha, S.S., Arora, J.K. (2003). Biotechnological strategies in agro-Processing (Asiatech publishers Inc. New Delhi, India).
2. Stanbury, P.F., Whitaker A. (2011) 2nd edition. Principles of fermentation technology.
3. Singh, BD. (2008). Biotechnology: Expanding horizons (Kalyani Publishers, India).
4. Patel A.H. (2007). Industrial microbiology (New Age International Publishers).
5. Loessner, J. M, Jay J.M, D.A. Golden (2005). Modern food microbiology (Golden Springer).
6. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-IV-V-P Agro & Industrial Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Counting of Microbial cells by serial dilution techniques (Spread plate and pour plate).
2. Measurement of bacterial size.
3. Screening of industrial enzymes (cellulase, protease, amylase *etc.*) from different soil samples.
4. Production of enzymes by submerged and solid state fermentation.

B.Sc. Hons Biotechnology 3rd year (5th Semester)

BIOT-Sem-V-I-T MOLECULAR BIOLOGY

Theory : 67 marks
Int. asset : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks except compulsory question.**
- **Five questions to be attempted.**
- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**

Objective: *This course of Molecular Biology will introduce the students with structure of various nucleic acids and detailed molecular mechanisms of gene expression.*

UNIT-I

1. DNA: Chemical composition of DNA DNA structure-single stranded DNA, detailed account of double stranded DNA, BDNA, Z.DNA and other structural forms and their importance.
2. Genome organization in prokaryotes**:** Molecular nature of the genetic material, Composition and structure of prokaryotic DNA and RNA.
3. Genome organization in eukaryotes: Composition and structure of eukaryotic DNA and RNA. Characteristic features of highly repetitive DNA, Tandem repetitive DNA and Mini and microsatellite DNA and Insertional elements and their role and importance

UNIT-II

4. DNA replication: Prokaryotic DNA replication; replication origin and site and structure and DNA Ter regions and structure. DNA polymerases, composition and features, replication factors and the mechanism of replication, leading strand and lagging strand synthesis, procesessivity and fidelity. Replication of single stranded DNA, M13 viral DNA.
5. Eukaryotic DNA replication; origins, replication initiation complexes and their assembly, licensing factors, DNA polymerases and their composition, telomerase and mode of action, replication factors, disassembly of chromatin components and reassembly during replication.

UNIT-III

6. Gene Expression: Overview of central dogma
7. RNAs: types, rRNAs; Structural features of rRNAs- prokaryotic and eukaryotic. tRNAs: structural features, their anticodon feature. mRNAs- prokaryotic and eukaryotic mRNAs, structural features,

8. Transcription: regulatory elements and mechanism of transcription regulation in prokaryotes and eukaryotes

UNIT IV

9. Translation: Overview and mechanism of translation process in prokaryotes, characteristics of the genetic code, structure and charging of tRNA,

10. Gene Regulation: Regulation of gene expression in response to environmental conditions. Operon concept- the Lactose and the Tryptophan operon.

REFERENCE BOOKS:

Lewin, B., 2004, Genes VIII, Oxford Univ. Press, Noida, India.
Ingraham, John.L.2004, Introduction to Microbiology, 3 Ed., Thomson brocks/Cole Inc.
Malacinski, George M., 2005, Freifelder's. Essentials of Molecular Biology, Narosa Publishing House, ND.
Karp, Gerald, 2005, Cell and Molecular Biology, Wiley International, USA.
Snusted and Simmons, 2006, Principles of genetics, John Wiley and Sons, Inc
Brown, T.A, 2007, Genomes 3, Garland Science.
Weaver R.F., Molecular biology (2005), McGraw

BIOT-Sem-V-I-P: MOLECULAR BIOLOGY (Practical)

Practical : 20 marks
Int. assessment : 05marks
Total : 25 marks
Time : 3 hours

1. Preparation of Reagents for DNA isolation.
2. DNA isolation from plants.
3. Agarose gel electrophoresis of DNA.
4. Plasmid DNA isolation.
5. Isolation of genomic DNA from Bacteria.
6. Restriction digestion of DNA.

Reference Books:

Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbor.

BIOT-Sem-V-II-T Paper: ENZYMOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the world of enzymes, their structure and mode of action at various cellular metabolism and their applications in Biotechnology.*

UNIT – I
Structure and functions of enzymes: Historical background and general properties of enzymes, concept of active centre, binding sites, stereo specificity and ES complex formation, activation energy, Evidences for enzyme-substrate complex; Lock and key, Induced fit and Transition state hypotheses, Coenzymes and Cofactors- Prosthetic group, coenzymes involved in different metabolic pathways.

UNIT – II
Factors Affecting the Enzyme Activity: Concentration, pH and temperature. Kinetics of a single substrate enzyme catalysed reaction, derivation of Michealis-Menten Equation, significance of Km value, Vmax, Turnover number, Kcat. Enzyme activity, international units, specific activity,
Enzymes as thrombolytic agents, Anti-inflammatory agents, streptokinase, Isoenzymes

UNIT-III
Enzyme Regulation: Feedback inhibition, Allosteric Regulation, Covalent Modification and Proteolytic Activation. Organization of enzymes in the cell, localization, enzymes in membranes. Acid-base catalysis, covalent catalysis, Metal ion catalysis, multienzyme complexes and ribozymes, catalytic antibodies, Allosteric enzymes.

UNIT – IV
Applications of Enzymes: Immobilized enzymes, industrial applications of immobilized enzymes, Thermophilic enzymes, amylases, lipases, Proteolytic enzymes in meat and leather industry, enzymes used in fermentation processes, cellulose degrading enzymes, Metal degrading enzymes.

Reference Books:

1. Fundamentals of Enzymology : Nicholas Price & Lewis Stevens
2. Biochemistry text books by Stryer, Voet and Lehninger
3. Methods in enzymology Vol.185 (1990) Gene Expression technology edited by D.V. Goeddel (Academic Press Inc. San Diego).
4. Enzymes: biochemistry, biotechnology and clinical chemistry (2001) by Trevor Palmer (Horwood).
5. Fundamentals of enzymology: The cell and molecular biology of catalytic proteins (2003) by Nicholas C. Price, Lewis Stevens, Lewis Stevens published (Oxford University Press, USA).
6. Principles and reactions of protein extraction, purification, and characterization (2004) edited by Hafiz Ahmed PhD (CRC, Taylor Francis Group).

BIOT-Sem-V-II-P: ENZYMOLOGY (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Estimation of enzyme activity.
2. To study the Effect of pH on activity of enzyme.
3. To study the Effect of temperature on activity of enzyme.
4. To study the effect of substrate concentration on enzyme activity.
5. To estimate Km and Vmax of an enzyme and plot Line-Weaver Burk plot.

Reference Books:

An introduction to practical biochemistry (2004) by Plummer D.T. (Tata McGraw Hill Publishers Co. Ltd., New Delhi).

1. Practical Enzymology (2004) By Hans Bisswanger (Wiley- VCH, Weinheim)
2. Introductory practical biochemistry (2005) by S.K. Sawhney, Randhir Singh (Alpha Science International).

BIOT-Sem-V-III-T : ENVIRONMENTAL BIOTECHNOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The course focuses on an introduction to environment, major threats to environment by various polluting agents and the remedies for the same, incorporating design and monitoring of waste treatment processes. As well as learning environmental technology fundamentals, with special focus on biological treatment processes, environmental management. The course is use of biotechnology to design cleaner manufacturing processes and to solve pollution problems. It is ideal for under graduates just embarking on their career, or scientists and engineers who have been working for a few years and wish to develop their career in this direction.*

UNIT-I

Basics of Environment and Environmental pollution, air, water, soil and noise.
Air – Types, Sources & Effects,
Soil - Physicochemical and bacteriological analysis of soil, soil pollutants (fertilizers, insecticides fungicides, pesticides).
Noise pollution, its control and impact on human health.
Renewable and Non Renewable resources. and their Environmental Impacts.
Modern Fuels (gasohol, hydrogen and solar energy) and their Environmental Impacts.

UNIT-II

Water pollution and its management: Measurement of water, pollution, sources of water pollution. Microbiology of waste water treatment, aerobic processes, activated sludge, oxidation ponds, trickling filters, and rotating biological contactors.

Anaerobic processes: Anaerobic digesters, upward flow anaerobic sludge blanket reactors.

UNIT-III

Bioremediation of contaminated soil and its applications

Degradation of pesticides and other toxic chemicals by microorganism. Integrated Pest management

Biofertilizers for clean environment– Nitrogen fixing microorganism, enrichment of the soil with assimilable nitrogen

UNIT IV

Introduction to solid waste and municipal solid waste management: Sources, types, composition.

Bioabsorption of metals:- Role of Microorganisms in biosorption and bioleaching. ,

Enrichment of ores by microorganisms

Bioindicators for detection of pollution

References Books:

1. Environmental Biotechnology: Principles and applications Bruce, E. Rittmann and Perry L.Mc. Corty, Mc. Graw Hill Publications, New York, 2000.
2. Environmental Biotechnology 2nd Edition, Alan Scragg, 2005, Oxford University Press.
3.Environmental Biotechnology (2007) S.K. Agarwal APH Publishing Corporation.
4. Wastewater engineering–Treatment, disposal and reuse (2009) by Metcalf and Eddy, Inc. (Tata Mc Graw Hill, New Delhi).
5. Comprehensive biotechnology (2004) by Murray Moo Young, Alan T Bull, Howard Dalton, Set 4 Vol (Elsevier India P Ltd).
6. Comprehensive biotechnology: The principles and regulation of biotechnology in industry, agriculture and medicine (1985) by Charles L Cooney, Arthur E Humphrey, Vol.2 (Pergamon Press).
7. Environmental chemistry (2006) by Anil Kumar De (New Age International (P) Ltd).
8. Introduction to biodeterioration (2004) by D. Allsopp, Kenneth J. Seal, Christine C. Gaylarde (Cambridge University Press).

BIOT-Sem-V-III-P ENVIRONMENTAL BIOTECHNOLOGY(Practical)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Detection of coli forms for determination of the purity of potable water.
2. Determination of chlorine in water
3. Determination of total alkalinity of water
4. Determination of dissolved oxygen concentration of water sample.
5. Determination of biological oxygen demand (BOD) of a sewage sample.
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Isolation of phosphate solubilizing microorganisms from soil.

Reference Books:

1. Microbiology: A laboratory manual (2007) by Cappuccino J.G and Sherman N. (Publisher Pearson Benjamin Cummings).
2. Biotechnology Laboratory Manual by Swamy, P.M. Rastogi Publications (2008).
3. Practical Microbiology by Dr R.C. Dubey and D.K. Maheshwari, S.Chand Publications.

BIOT-Sem-V-IV-T TOOLS IN BIOINFORMATICS

Theory : 67 marks
Int. assessment: 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course of introduces the students to an advanced field of biotechnology which will give an insight how to handle the enormous data generated in biology in silico and the in silico tools applied to decipher and analyze the data.*

UNIT – I

Introduction to Bioinformatics, Biological Databases and Sequence analysis
Introduction, overview and needs of bioinformatics technology.
Primary Databases: Primary Sequence database i.e. GenBank & EMBL.
Secondary Databases: SwissProt/TrEMBL, Pfam.
Molecular Structure Databases: Protein Data Bank (PDB), SCOP, CATH. Understanding the structure of each database and using it on the web.

UNIT – II

Sequence Alignment:
Introduction to sequence alignment and its applications.
Pair wise sequence alignment: Concept of global and local alignment, Dot Plot, algorithm for pair wise sequence alignment (Needleman Wunsch, Smith-watterman methods), Introduction to BLAST, types of BLAST, algorithm of BLAST and interpretation of its result.
Substitution matrices: Introduction to substitution matrices: PAM and BLOSUM matrices, concept of log odd ratio.

Multiple sequence alignment: Methods of multiple sequence alignment. Introduction to consensus sequences, motifs and profiles.

UNIT – III

Phylogenetic Analysis: Introduction to phylogenetic analysis and its application, phylogenetic tree topologies, methods of phylogenetic tree construction and tools.

Genome Annotation: Concept of genome annotation, methods of gene identification. Tools of gene identification: GenScan and Glimmer.

UNIT IV

Protein Structure Prediction: Concepts and strategies of protein structure prediction, methods of secondary structure prediction, and methods of protein tertiary structure prediction. Structure visualization tool – RasMol.

BIOT-Sem-V-IV-P: TOOLS IN BIOINFORMATICS (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Searching literatures over PubMed.
2. Performing DOTPLOT on web.
3. Retrieving amino acid and nucleotide sequence from sequence databases using Entrez.
4. Performing BLASTp/n and interpreting its results.
5. Performing PSI-BLAST.
6. Performing multiple sequence alignment using Clustalw.
7. Finding ORF in nucleotide sequence using NCBI ORF FINDER
8. Using GenScan to identify exons in nucleotide sequence.
9. Download protein structure form PDB and visualize it using RasMol.

BIOT-Sem-V-V-T INTELLECTUAL PROPERTY RIGHTS AND ETHICAL ISSUES IN BIOTECHNOLOGY AND ENTERPRENEURSHIP

Theory : 90 marks
Int. assessment : 10 marks
Total : 100marks

Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks except compulsory question.**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**
- **Five questions to be attempted.**
- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**

Objective: *To introduce the students to intellectual rights and how to use the current intellectual property system to protect and commercialize their biotechnological invention. This course also covers the ethical issues, controversies and social-ethical impact of biotechnology on society.*

UNIT – I

IPR: Introduction to Intellectual Property Rights. Tangible and intangible property. Patents: Introduction to patent law and brief history (early GATT and TRIPS), conditions for patentability; procedure for obtaining patents, patent filing through PCT, rights of a patentee; patent infringements and litigation.

Indian patent laws and amendments. Patents from an international perspective.

UNIT- II

Design, copyright and Trademark:

Copyright: Registration procedure and copyright authorities; assignment and transfer of copyright, copyright infringement and exceptions to infringement; software copyright.

Designs: Introduction to the law on industrial designs; registration and piracy; international perspective; commercial exploitation and infringement.

Trademark: Importance, Registration, Trademark infringement and piracy.

UNIT – III

Patenting in biotechnology: Biotechnology patents and its economic, ethical and depository considerations.

Patentable subject matter and legal aspects of transfer of biotechnology in India. Other multilateral treaties & International conventions – Paris convention, CBD, UPOV, PGRFA.

Writing a patent specification.

Information sources in patent literature search.

UNIT – IV

Entrepreneurship:

Entrepreneur and its types, Women Entrepreneurship. Selection of a product, Product line design and development processes, economics on material and energy requirement, stock the product and release the same for making

The basic regulations of excise: Demand for a given product, feasibility of its production under given constraints of raw material, energy input, financial situations export potential.

Reference Books:

1. J.E. Smith (2004). Biotechnology (Cambridge Univ. Press).
2. V. Santaniello (2000). Agriculture and intellectual property rights: economic institutional, and implementation issues in biotechnology (Edition illustrated Publisher CABI).
3. Thackerey, A (ed) (1998). Private science: Biotechnology and the rise of the molecular sciences (Univ. of Pennsylvania Press, Phil).
4. Inderpal Singh and Baljinder Kaur (2006) Patent law and Entrepreneurship. Kalyani Publishers, India

B.Sc. (Hons.)3rd year (6th Semester)

BIOT-Sem-VI-I-T Paper: GENETIC ENGINEERING

Theory: 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours

Objectives: *Genetic engineering refers to the process of manipulating the characteristics and functions of the original genes of an organism. The objective of this process is to introduce new physiological and physical features or characteristics. The students will learn how the genes can be cut and paste from one organism to another and what are its implications.*

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT-I

1. Introduction to genetic engineering. Why gene cloning and DNA analysis is important. . How to clone a gene - What is clone, Overview of the procedure

2. Tools in Recombinant DNA Technology:

Restriction and modifying enzymes, Type I , Type II and Type III enzymes and their characteristic features; restriction sequences, isoschizomers, rare cutting enzymes, enzyme cutting similar sequence in different manner.

DNA Modifying enzymes: Characteristics and applications of Nucleases – DNase and RNase, DNA-Pol I, Klenow fragment, T4DNA polymerase, T7 DNA polymerase, T4 Polynucleotide kinase, Phosphatase, Reverse transcriptase, Taq polymerase and Ligase. Terminal deoxy ribonucleotidyl transferase.

3. **Polymerase Chain Reaction**: Types and applications

UNIT II

Basic biology of plasmids and Phage vectors Basic features of plasmids, plasmid classification, Bacteriophage λ, lytic & lysogeny, Promoter control circuits. linear and circular forms of lambda vector, DNA cloning with single stranded DNA vectors.

DNA cloning vectors Cloning vectors for E. coli- Nomenclature, pBR 322, pBR 327, pUC 8, pGEM3Z. insertion and replacement vectors; Vectors based on M13. Methods of identification of recombinants: Insertional inactivation, blue/white selection. Cloning vectors for yeast- YEp, YIp, YRp.

Advanced Vectors: cosmid, phagemid, Bacterial Artificial Chromosomes (BACs), shuttle vectors, yeast artificial chromosomes.

UNIT-III

Preparation of genomic and cDNA library: Partial digests, Choice of vectors, Construction and Evaluation of a genomic library. cDNA library: mRNA enrichment, cDNA synthesis,Random, arrayed and Ordered library.

Finding The Right Clone: Gene identification, Nucleic acid hybridization,screening Procedure, Probe selection, immuno screening, functional complementation. Southern blotting, northern blotting.

Preparation of nucleic acid probes: DNA and RNA labeling techniques, nick translation , random priming, end labelling, radioactive and non- radioactive labels.

UNIT-IV

Site directed mutagenesis (cassette , primer extension, RT, real time, multiplex, inverse),

DNA sequencing (Maxam-Gilbert, Sanger, pyro).

Production of Protein from Cloned Genes: Special vectors for expression of foreign genes in *E. coli,* General problems with the production of recombinant protein in *E. coli.* Production of recombinant protein by eukaryotic cells.

Suggested readings:

1. Recombinant DNA by Watson, J.D. et.al., 1993, Scientific American Books, New York.
2. Principles of Gene Manipulation by Old., R.W. and Primrose, S.B., 2004, Blackwell Publishing, UK.
3. Methods in Gene Technology by Dale, J.N., 1994, JAI Press Ltd. London, England.
4. Recombinant Principles of gene manipulation and genomics, primrose & Twyman 2006, Blackwell, U.K.
5. Gene cloning and DNA analysis: An introduction by T.A. Brown (5th Ed.) 2006, Blackwell Science Ltd.
6. Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar,

BIOT-Sem-VI-I-P : GENETIC ENGINEERING (PRACTICAL)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Demonstration of PCR.
2. Demonstration of Southern blotting.
3. Preparation of competent cells.
4. Transformation of competent cells and blue/white selection.
5. Spectrophotometer analysis of DNA.

BIOT-Sem-VI-II-T: BIOPROCESS ENGINEERING AND TECHNOLOGY

Theory : 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours
Objectives:

The objective of this course is to make the student conversant with basic concepts of bioprocesses, design of fermenter along with growth and product formation in various types of processes. Important concept of down streaming and waste water will also be discussed as important component of fermentation economics

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.

- **Five questions to be attempted.**

• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Unit – I

Fundamental principles of biochemical engineering
Sterilization of air and media sterilization, design of batch sterilization process.
Del factor, sterilization cycle, continuous sterilization process

Unit – II

Microbial growth kinetics Simple kinetics of microbial growth (Batch and Continuous) yield coefficient, doubling time, specific growth rate, internal and external feedback systems, metabolic and Biomass productivities, effect of temperature and pH on the product formation

Unit – III

Design of fermenter:
Components of Fermenter, Aseptic operation of the fermenters, control and measurement equipment of fermenters, pH and DO probes, impeller and spargers,

Unit – IV

Downstream processing
Removal of microbial cells and other solid materials, foam separations, filtration, industrial filters, centrifugations and industrial centrifuges, cell Disruption, aqueous two phase extraction system, super critical extraction, whole broth process.
Waste water treatment for fermentation process

Reference Books:

1. Madigan, M.T., Martinko, J.M, P.V. Dunlap, T.D. Brock, D.P. Clark (2008). Brock biology of mMicroorganisms (Pearson Benjamin Cummings).
2. Prescott, L.M. Harley, J.P., Klein, D.A. (2001). Microbiology (McGraw-Hill, Boston).
3. Schaechter, M., Ingraham, J.L., Neidhardt, F.C., (2006). Microbe (ASM Press, Washington, DC).
4. Prescott, L.M. (1999). Microbiology with microbes in motion (McGraw-Hill).
5. Bailey J.E., Ollis, D.F. (1986). Biochemical engineering fundamentals (McGraw-Hill).
6. Schuler, M.L., Kargi F. (2002). Bioprocess engineering: Basic concepts (Prentice hall PTR, Upper Saddle River NY).

BIOT-Sem-VI-II-P:

BIOPROCESS ENGINEERING AND TECHNOLOGY (Practicals)

Practical: 20 marks
Int. assessment: 05 marks
Total: 25 marks
Time: 3 hours

1. Demonstration of components and sterilization of fermenters and other accessories.
2. Determination of doubling time, yield coefficient for growth of microorganism.
3. Effect of temperature and pH on growth and product formation.
4. Determination of Specific growth rate and maximum specific growth rate
5. Cell disruption by Sonicator
6. Demonstration of normal flow and cross flow filtration process

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory (Pearson Benjamin Cummings).
2. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).

BIOT-Sem-VI-III-T : FOOD BIOTECHNOLOGY

Theory: 67 marks
Int. assessment: 08 marks
Total: 75 marks
Time: 3 hours

Objective : *To enable the students aware of the various prospects of biotechnology in the development of various food products and to make them conversant with food contamination and preservation techniques*

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT – I

Food and Microorganisms: History and scope of Food biotechnology, food as substrates for microbes, factors affecting growth of microorganisms, Detection of microorganisms in food: procedure for microbial analysis; Qualitative methods to isolate pathogenic microorganisms, and quantitative methods for microbial enumeration: direct, indirect and standard methods, test for

bacterial toxins in foods; Rapid and advanced estimation methods (Immunoassays, nucleic acid probe) for detection of pathogens. Applications of enzymes in food technology.

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UNIT – II

Principles of food preservation: Physical, chemical, and biological methods of preservations.

Contamination, preservation and spoilage of different kind of foods: Milk and milk products (milk, yoghurt and cheese), beverages (beer, wine, tea and coffee), meat and fish products

UNIT – III

Food adulterants and food additives: Major food adulterants, types and their methods of assay, food additives their function and uses, flavoring agents, coloring agents and vitamins as food additives.

Fermented foods and their production: Bakers yeast, Bread, cheese, yoghurt, tofu, and alcoholic beverages (beer and wine)

Production of algal, fungal and other microbial proteins(SCP)

Probiotics, prebiotics,fortified and biofortified foods, functional foods

Genetically modified food (Golden rice, Favr savr tomato, protato, pomato etc)

UNIT –IV

Food and water borne diseases: Shigellosis, Salmonellosis, Cholera.

Food borne intoxications: *Staphylococcal, Bacillus and Clostridium botulinum*

Exotoxins and Endotoxins, their mechanism of action

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Reference Books:

1. Frazier W.C., Westhoff, D.C. (Ed). (1988). Food microbiology (McGraw-Hill).
2. Admas, M.R., Moss, M.O (2005). Food microbiology (Edition 3, Illustrated Publisher Royal Society of Chemistry).
3. SriLakshmi B. (2003) Food science (New Age International Publishers, India).
4. Jay J.M., M.J. Loessner, D.A. Golden. (2005). Modern food microbiology (Edition 7, Illustrated Publisher Springer).
5. B. Sivasankar (2004). Food processing and preservation (PHI Private Ltd, New Delhi).
6. Michael P. Doyle (1989). Food borne bacterial pathogens (Edition illustrated, Publisher Marcel Dekker).

BIOT-Sem-VI-III-P: FOOD BIOTECHNOLOGY (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Isolation and identification of microorganisms in spoiled food (fungi and bacteria).
2. Inhibitory effect of low temperature on microbial growth.
3. Production and estimation of ethanol.
4. Estimation of lactose in milk.
5. Methylene blue reductase test (MBRT) for determination of quality of milk.
6. Plating the milk samples for microbial contamination.
7. Demonstration for the identification of mushrooms by spore prints.
8. Checking the effect of pasteurization of milk by alkaline phosphatase.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-VI-IV-T: GENOMICS AND PROTEOMICS

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course emphasizes on the detail study of genomes, their mapping and sequencing techniques and using various data bases to study their structure and how they can be related to proteome. They will be also introduced to various tools for proteomics and its application.*

UNIT I

Introduction to Genomics, DNA sequencing methods – manual & automated: Maxam & Gilbert and Sangers method. Pyrosequencing, Genome Sequencing: Shotgun & Hierarchical (clone contig) methods, Tools for sequencing projects: Genome sequence assembly software.

UNIT II

Managing and Distributing Genome Data: Web based servers and softwares for genome analysis: ENSEMBL, VISTA, UCSC Genome Browser, NCBI genome. Selected Model Organisms' Genomes and Databases.

UNIT III

Introduction to protein structure, Chemical properties of proteins. Physical interactions that determine the property of proteins. Short-range interactions, electrostatic forces, van der waal interactions, hydrogen bonds, Hydrophobic interactions. Determination of sizes (Sedimentation analysis, gel filteration, SDS-PAGE); Native PAGE, Determination of covalent structures – Edman degradation.

UNIT IV

Introduction to Proteomics, Analysis of proteomes. 2D-PAGE. Sample preparation, solubilization, reduction, resolution. Reproducibility of 2D-PAGE. Mass spectrometry based methods for protein identification. De novo sequencing using mass spectrometric data.

BIOT-Sem-VI-IV-P: GENOMICS AND PROTEOMICS (PRACTICALS)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Use of SNP databases at NCBI and other sites.
2. Use of OMIM database
3. Detection of Open Reading Frames using ORF Finder
4. Proteomics 2D PAGE database
5. Softwares for Protein localization.
6. Hydropathy plots
7. Native PAGE
8. SDS-PAGE

Reference Books:

1. Genes IX by Benjamin Lewin, Johns and Bartlett Publisher, 2006.
2. Modern Biotechnology, 2nd Edition, S.B. Primrose, Blackwell Publishing, 1987.
3. Molecular Biotechnology: Principles and Applications of Recombinant DNA, 4th Edition, B.R. Glick, J.J. Pasternak and C.L. Patten, 2010.
4. Russell, P. J. (2009). iGenetics- A Molecular Approach. III Edition. Benjamin Cummings.
5. Molecular Cloning: A Laboratory Manual (3rd Edition) Sambrook and Russell Vol. I to III, 1989.
6. Principles of Gene Manipulation 6th Edition, S.B.Primrose, R.M.Twyman and R.W. Old. Blackwell Science, 2001.
7. Snustad, D.P., Simmons, M.J. (2009). Principles of Genetics. V Edition. John Wiley and Sons Inc. 3. Klug, W.S., Cummings, M.R., Spencer, C.A. (2009). Concepts of Genetics. IX Edition. Benjamin Cummings.

BIOT-Sem-VI-V-P ON JOB TRAINING MARKS: 100

The students are supposed to undergo four to six weeks practical training in industries/institutes during the summer vacations after 4th semester for which the reports will be submitted by the students in 6th semester and will be evaluated by three teacher evaluating committee.

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Panjab University, Chandigarh-160014(India)
(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI FOR

M. Sc. BOTANY

(TWO YEARS COURSE)

SEMESTER SYSTEM

EXAMINATIONS 2016–17

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M. Sc. BOTANY (TWO- YEAR COURSE) SEMESTER SYSTEM EXAMINATIONS, 2016–17

FIRST SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
I	- Phycology	75 (60A+ 15 HT*)	25 (20+5HT*)
II	- Bryology	75 (60A+ 15 HT *)	25 (20+5HT*)
III	- Mycology and Microbiology	75 (60A+ 15 HT*)	25 (20+5HT*)
IV	- A) Computer Applications & Biostatistics B) Lab. Techniques	75 (60A+ 15 HT*)	25 (20+5HT*)
V-	Anatomy of Angiosperms	75 (60A+ 15 HT *)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 = 500		

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT* : House Test

SECOND SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
VI	- Pteridophytes	75 (60A+ 15 HT)	25 (20+5HT*)
VII	- Gymnosperms	75 (60A+ 15 HT)	25 (20+5HT*)
VIII	- Angiosperm Morphology, Taxonomy and Phylogeny	75 (60A+ 15 HT)	25 (20+5HT*)
IX	- Reproductive Biology of Angiosperms	75 (60A+ 15 HT)	25 (20+5HT*)
X	- Plant Pathology	75 (60A+ 15 HT)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 =		**500**

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT * : House Test.

Second year

THIRD SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XI	- Molecular Biology	75 (60A+ 15 HT*)	25 (20+5HT*)
XII	- Plant Physiology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIII	- Biotechnology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIV	- Genetics and Plant Breeding	75 (60A+ 15 HT*)	25 (20+5HT*)
XV	Ecology and Environment	75 (60A + 15 HT*)	25 (20+5HT*)
Total Marks	**375**	**125**	

GRAND TOTAL OF MARKS: 375 + 125 = 500

TEACHING HOURS: THEORY : 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

Fourth Semester

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XVI	- Plant Biochemistry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVII	- Forestry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVIII	- Cytogenetics	75 (60A+ 15 HT*)	25 (20+5HT*)
XIX	- Plant Resource, Utilization and Conservation	75 (60A+ 15 HT*)	25 (20+5HT*)
XX -	A) Research Project/Field Study Report	---	60
	B) Seminar	---	40
	Total Marks	**300**	**200**

GRAND TOTAL OF MARKS: 300 + 200 = 500

TEACHING HOURS : THEORY : 18 Hours per week

PRACTICAL : 16 Hours per week for a group of 10 students

HT* : House Test.

*** The duration of each paper for the examination is 3 hours**

FIRST YEAR
1st and 2nd SEMESTERS

FIRST SEMESTER

PAPER I: PHYCOLOGY

Objective of the paper is to impart knowledge about Algae on various aspects like Classification, Life cycles, Thallus organization and Reproduction in various groups; Evolution, Habitats and Economic importance of algae.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical, the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Criteria for algal classification (pigments, reserve food, flagella, chloroplasts, pyrenoids, eye spots, endoplasmic reticular membrane etc.); Comparative account of important systems of classification (Fritsch, Round , Chapman and Lee).
2. Salient features : Cell structure, thallus organization, reproduction and broad classification of i) Cyanophyta ii) Xanthophyta iii) Bacillariophyta iv) Dinophyta.

UNIT-II

3. Salient features : Cell structure, thallus organization , reproduction and broad classification of v) Chlorophyta vi) Phaeophyta vii) Cryptophyta and viii) Rhodophyta .

UNIT-III

4. Diversity in algal habitats (terrestrial, freshwater and marine).
5. Thallus organization in algae including evolutionary trends.
6. Reproduction (vegetative, asexual and sexual), origin and evolution of sex, life cycles.
7. Current concepts and relationships of protochlorophycean algae.

UNIT-IV

8. Rhythms and bioluminescence in dinoflagellates.
9. Economic importance of algae (algal biofertilizers , algal blooms, algae as food and feed , uses in industries etc.)
10. Algae in Biotechnology.

PRACTICALS **Max. Marks :20**

1. Algal collections from different habitats and their identification.
2. Morphology and reproductive stages of following genera:

Cyanophyta *: Chroococcus, Microcystis, Oscillatoria, Lyngbya, Nostoc, Anabaena, Gloetrichia, Cylindrospermum, Scytonema.*

Chlorophyta: *Volvox, Hydrodictyon, Chlorella, Pediastrum, Scenedesmus, Oedogonium, Bulbochaete, Cosmarium, Closterium, Zygnema, Sphaeroplea, Cladophora, Pithophora, Spirogyra, Caulerpa, Codium, Valonia, Halimeda, Acetabularia, Chara, Nitella, Coleochaete, Dreparnaldia.*

Xanthophyta *: Vaucheria, Botrydium.*

Bacillariophyta *: Pinnularia, Synedra, Navicula, Cyclotella.*

Phaeophyta : *Ectocarpus, Fucus, Laminaria, Dictyota, Desmortestia, Sporochnus, Sargassum.*

Rhodophyta : *Erythrotrichia, Porphyra, Nemalion, Batrachospermum, Corallina, Gelidium, Polysiphonia*

SUGGESTED READINGS

1. Ahluwalia, A.S. (Ed.). *Phycology: Principles, Processes and Applications.* Daya Publishing House, New Delhi. 2003.
2. Bold, H.C. and M. J. Wynne. *Introduction to the Algae : Structure and Reproduction.* Prentice Hall , Englewood Cliffs, New Jersey. / PHI, New Delhi. 706 pp. 1978 .
3. Carr, N. G. and B.A. Whitton (Eds.). *The Biology of Cyanobacteria.* Blackwell Scientific Publications, Oxford. 1982.
4. Chapman, V.J. and D.J. Chapman. *The Algae.* ELBS and Macmillan , NY. 1977.
5. Fritsch, F.E. *The Structure and Reproduction of Algae (Vol. I and II).* Vikas Publishing House Pvt., Ltd., New Delhi. 1979.
6. Grahm, L.E. and L.W. Wilcox. *Algae.* Prentice Hall, U.S.A. 2000.
7. Grahm,L.J. and L.Wilcox. *Algae.* 2nd Ed. Benjamin Cummings (Pearson), San Francisco, CA. 720 pp. 2009.
8. Kumar, H.D. *Introductory Phycology.* 2nd Ed. Affiliated East-West Press, New Delhi.651 pp. 1999.
9. Lee, R.E. *Phycology*. 4th Ed. Cambridge University Press, London. 2008.
10. Round, F. E. *The Biology of Algae.*2nd Ed. Edward Arnold Ltd., London. 278 pp. 1973.
11. South, G.R. and A. Whittick. *Introduction to Phycology.* Blackwell Scientific Pub, Oxford. 368 pp. 1987.
12. Smith, J. E. *Biotechnology.* 2nd Edition. Edward Arnold, London. 1988.
13. Trainer, F.R. *Introductory Phycology.* John Wiley and Sons, New York. 1978.
14. Van Den Hock, C., D. G. Mann and H. M. Jahns. *Algae: An Introduction to Phycology.* Cambridge University Press, Cambridge. 1995.

PAPER II : BRYOLOGY

Objective of the paper is to impart knowledge about Bryophytes on various aspects like Classification, structural organization and developmental studies of gametophyte and sporophyte in various groups; Ecology, Water relations, Chemistry, Cytology, Fossil bryophytes, Origin and evolution, Experimental studies and Economic Importance.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class room. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25 (20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics of Bryophytes: Systems of classification with salient features of Anthcerotophytina, Hepatophytina and Muscophytina.
2. Structure and development of sex organs in Bryophytes.
3. Economic Importance of Bryophytes.
4. Ecology of Bryophytes: Habitats, Growth forms, Bryophytes as Pollution Indicators.
5. Water Relations: Drought Tolerance ; Dessication and Rehydration ; Ectohydric ,Endohydric and Mixohydric mosses.

UNIT-II

6. Comparative structural organization of gametophyte and sporophyte; Asexual reproductive structures; distribution of sex organs; protective structures associated with archegonia and developing sporogonia; spore and elaters / peristome teeth ; spore dispersal mechanisms and spore germination in
    a) **Hornworts** (Anthocerotales)
    b) **Liverworts** (Calobryales, Jungermanniales, Metzgeriales, Marchantiales, Monocleales and Sphaerocarpales.)

UNIT-III

    c) **Mosses** (Sphagnopsida, Andreaeopsida – *Andreaea* and *Takakia* , Archidiopsida, and Peristomiopsida -- Tetraphidae, Buxbaumidae, Polytrichidae and Bryidae).

7. Experimental studies: Effect of various factors on protonemal differentiation and bud formation; Apogamy and Apospory.

UNIT-IV

8. Chemistry of Bryophytes: A brief account of distribution of various organic compounds in different groups of Bryophytes ; Chemistry in relation to taxonomy.
9. Cytological studies in Bryophytes: Chromosome numbers in major groups of Bryophytes, Polyploidy in brief, m-chromosomes and sex-chromosomes, Cytology in relation to taxonomy.
10. Fossil Bryophytes (A brief account).
11. Origin of Bryophytes.

PRACTICALS **Max. Marks : 20**

1. Structural details of *Marchantia, Asterella, Plagiochasma, Targionia, Pellia, Frullania, Porella, Notothylas, Anthoceros, Sphagnum, Pogonatum, Barbula, Bryum and Entodon* and *Thuidium.*
2. Study of diagnostic features of following genera: *Dumortiera, Athalamia, Conocephalum, Cryptomitrium, Reboulia, Riccia, Riccardia, Metzgeria, Blasia, Sewardiella, Plagiochila, Fissidens , Atrichum* , *Mnium* and *Thuidium.*
3. Field trips to familiarize with natural habitats, growth forms and diversity of bryophytes.
4. To study permanent slides / photographs of m-Chromosomes and Sex- chromosomes.

SUGGESTED READINGS

1. Chopra, R.N. and P. K. Kumra. *Biology of Bryophytes*. Wiley Eastern Ltd., New Delhi. 350 pp.1988.
2. Chopra, R.S. *Taxonomy of Indian mosses.* CSIR, New Delhi. 631 pp. 1975.
3. Chopra, R.S. and S.S. Kumar. *Mosses of Western Himalayas and adjacent Plains*. Chronica Botanica, New Delhi. 142 pp. 1981.
4. Dyer, A. F. and J. G. Duckett.(Eds.). *The Experimental Biology of Bryophytes.* Academic press, London. 281 pp. 1984.
5. Goffinet, B. and A.J. Shaw. *Bryophyte Biology.*2nd Ed. Cambridge Univ. Press, Cambridge. 580 pp. 2009.
6. Kashyap, S.R.. *Liverworts of Western Himalayas and the Punjab plains. Vols I II.* Researchco Publications, New Delhi. 1932
7. Kumar, S.S. *An approach towards Phylogenetic Classification of Mosses*. Jour. Hattori Bot. Lab. Nichinan , Japan. 1984.
8. Rashid, A. *An Introduction to Bryophyta*. Ist Ed. Vikas Publishing House Pvt. Ltd., New Delhi. 298 pp. 1998.
9. Richardson, D.H.S. *Biology of Mosses.* Blackwell Scientific Publications, Oxford. 219 pp.1981.
10. Schofield, W.B. *Introduction to Bryology.* Macmillan Publishing Co., New York.431 pp. 1983.
11. Schuster, R.M. (Ed.). *New Manual of Bryology. Vols. I & II.* Jour. Hattori Bot. Lab.,Nichinan, Japan.1295 pp. 1983-84.
12. Vashishta, B.R., A.K. Sinha and A. Kumar. *Bryophyta.* S. Chand & Co. Ltd., New Delhi. 488 pp. 2003.
13. Watson, E.V. *The Structure and Life of Bryophytes*. Hutchinson UniversityLibrary, London. 192 pp. 1964.

PAPER III : MYCOLOGY AND MICROBIOLOGY

Objective of the paper is to impart knowledge about Classification , Mycelium, Reproduction in various groups of Fungi.; Nomenclature , Classification , Structure, reproduction, importance of Bacteria, Viruses, MLOs, Spiroplasmas, Viroids, Mycoviruses; Translocation and distribution in host plants , infection, replication and transmission of plant viruses.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Recent trends in the classification of Fungi.
2. General account of Myxomycota, Oomycota and Chytidriomycota

UNIT-II

3. General account of Zygomycota, Ascomycota , Basidiomycota and anamorphic fungi.

UNIT-III

4. Tissue systems in Fungi.
5. Types of Centrum development in Ascomycota.
6. Heterokaryosis and Parasexuality.
7. Mycorrhizal application in agriculture and plant growth.

UNIT-IV

8. Nomenclature, classification, morphology, translocation and distribution in host plants, infection, replication and transmission of plant viruses.
9. Nomenclature, classification, structure, reproduction, nutrition and economic importance of Eubacteria ; General account of Archaebacteria.
10. Brief account of MLOs, Spiroplasma, Viroids and Mycoviruses.

PRACTICALS

Max. Marks: 20

1. Study of morphological and reproductive structures of following genera :
   MYXOMYCOTA: *Stemonitis, Physarum.*
   OOMYCOTA: *Saprolegnia, Albugo, Peronospora, Phytophthora***,** *Bremia.*
   CHYTIDRIOMYCOTA: *Synchitrium, Allomyces, Blastocladia.*
   ZYGOMYCOTA: *Mucor, Rhizopus, Pilobolus.*
   ASCOMYCOTA: *Protomyces, Aspergillus, Penicillium, Claviceps, Phyllactinia, Xylaria, Morchella, Peziza*
   BASIDIOMYCOTA: *Puccinia, Melampsora, Agaricus, Ustilago, Polyporus, Ganoderma, Cyathus, Hydnum , Geasterum.*
   ANAMORPHIC FUNGI: *Fusarium, Cercospora, Colletotrichum, Alternaria, Helminthosporium.*
2. Preparation of media to isolate fungi, bacteria and other microbes.
3. Isolation of *Rhizobium* from legume root nodules.
4. Sensitivity tests of bacteria using different antibiotics.

SUGGESTED READINGS

1. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
2. Bilgrami, K.S. and R.N.Verma. *Physiology of Fungi.*2nd Ed. Vikas Publication House, New Delhi.

3. Bos, L.. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1992.
4. Burnett, J.H. *Fundamentals of Mycology.* Edward Arnold, London. 673 pp.1976.
5. Gibbs, A.J. and B.D.Harrison. *Plant Virology:* The Principles. John Wiley and Sons, NY. 1979.
6. Mandahar, C.L. *Introduction to Plant Viruses*. 2nd Ed. S. Chand & Co. Ltd., New Delhi. 1987.
7. Mathews, R.E.F. *Plant Virology.* 2nd Ed., Academic Press, London. 897 pp. 1981.
8. Moore, D., Robson, G.D. and Trinci, A.P.J. 21st Century Guide book of Fungi, Cambridge University Press, N.Y. 2011.
9. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. *Microbiology.*5th Ed. Tata McGraw Hill, New Delhi. 2007.
10. Powar, C.B. and H.F.Daginawala. *General Microbiology , Vols. I & II.* 2nd Ed. Himalaya Publishing House, New Delhi. 1995.
11. Schlegel , H.S. *General Microbiology.*7th Ed. Cambridge University Press, Cambridge. 676 pp. 1993.
12. Sharma, P.D. *The Fungi* . 2nd Ed. Rastogi Publications, Meerut. 2004.
13. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.
14. Sinha, U. and S. Srivastava. *An Introduction to Bacteria.* Vikas Publi House, New Delhi. 1983.
15. Smith, K.M. *Plant Viruses.* 6th Ed. Chapman Hall, London. 251 pp. 1977.
16. Stanier, R.Y. *General Microbiology. 5th Ed.* Macmillan Press Ltd. 704 pp. 2008.
17. Webster, C.J. *Introduction to Fungi. 3rd.*, Cambridge University Press, Cambridge. 841 pp. 2007.

PAPER IV : A) COMPUTER APPLICATIONS AND BIOSTATISTICS

B) LABORATORY TECHNIQUES

Objective: Now-a-days life sciences have become interdisciplinary. The aim of this paper is to converse and train the students with different modern biological and physico-chemical techniques employed in the study of biological materials.

This paper also aims to impart basic knowledge of Computer (Computer Hardware, software and programming languages etc.) and Biostatistics and use the information in analyzing the biological data.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector, LCD projector etc. The students also make group discussions in the class rooms. In practical the students learn the working of different instruments and computer.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

SECTION A : COMPUTER APPLICATIONS AND BIOSTATISTICS

UNIT-I

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.

3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

UNIT-II

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chi square – test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation; Simple & multiple regression.

SUGGESTED READINGS

1. Daniel, W.W. *Biostatistics: A Foundation for analysis in the Health Sciences*.7th Ed. John Wiley and Sons, New York. 2006.
2. Dunn, O.J. and V.A. Clark . *Basic Statistics: A primer for Biomedical Science.* John Wiley and Sons , New York. 255 pp. 2009.
3. Goon, A.M., M.K.Gupta and B.Dasgupta. *Fundamentals of Statistics*.Vol. I. World Press, Kolkotta. 1983.
4. Hunt, R. and J. Shelly. *Computer and Common Sense*.4th Ed. Prentice Hall, India. 224 pp. 2002.
4 Kanetker, Y. *Let us ' C '* . 8th Ed. B.P.B. Publication .474 pp. 2006.
5 Rajaraman,V. *Computer Programming in FORTRAN . 90 and 95.* Prentice Hall, India. 364 pp.2004
6 Rajaraman, V. and T. Radhakrishanan. *An Introduction to Digital Computers.* 5th Ed. Prentice Hall, India.528 pp. 2004.
7 Sinha, P.K. *Computer Fundamentals.* 4th Ed. B.P.B. Publication. 404 pp. 2003.

SECTION B : LABORATORY TECHNIQUES

UNIT-III

1. Principles and applications of Light, Phase Contrast, Fluorescence, Scanning and Transmission Electron Microscopy.
2. Principles and applications of Tracer Techniques in Biology: Radioactive Isotopes and Half Life of isotopes ; Autoradiography.
3. pH metery – Principles and applications.
4. Principles, procedure and application of Paper Chromatography, Thin Layer Chromatography , Gel filtration, Ion Exchange and Affinity Chromatography, High Pressure Liquid Chromatography.

UNIT-IV

5. Electrophoresis and Isoelectric focusing: Principle , working and applications of Electrophoresis.
6. Colorimetery and Spectrophotometery: Lambert Beer Law, Basic components, applications.
7. Centrifugation : Technique and principles; Preparative and Analytical Centrifugation.

PRACTICALS **Max. Marks :20**

1. Data collection, presentation, plots, Chi-square test, Goodness of fit, determination of correlation coefficient.
2. Genomic DNA isolation .
3. DNA and Protein analysis by Gel electrophoresis.
4. To demonstrate Beer's law using different dyes.

5. Preparation of Phosphate Buffers of different pH values.
6. Practicals pertaining to Chromatographic techniques: Column Chromatography (Exclusion and Affinity Chromatography), Paper Chromatography and Thin Layer Chromatography.
7. Practicals pertaining to centrifugation.

SUGGESTED READINGS

1. Plummer, D.T. *An Introduction to Practical Biochemistry*. Tata McGraw Hill Publishing Ltd., New Delhi.352pp. 1994.
2. Potter, G.W.H. *Analysis of Biomolecules : An introduction to Principles, Instrumentation and Techniques*. Chapman and Hall, London.252pp. 1995.
3. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K.390pp. 2001.
4. Sawhney, S.K. and R. Singh. *Introductory Practical Biochemistry.* Narosa Publishing House, New Delhi.470pp. 2002.
5. Wilson, K. and J. Walker. *Principles and Techniques of Practical Biochemistry.* Cambridge University Press, Cambridge.784pp. 2000.

PAPER V : ANATOMY OF ANGIOSPERMS

Objective: This paper deals with the structure, origin, differentiation and phylogeny of meristems cell, tissues and organs of the plant body.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Camera Lucida, Computer and Image Projecting system and permanent glass slides of plant materials

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Shoot Development :**Various theories regarding the organization and activity of shoot apical meristem (SAM) ; Transition to flowering , Floral meristem and Floral development in *Arabidopsis* and *Antirrhinum* .
2. **Root development:** Organization of Root Apical Meristem (RAM) ; Vascular tissue differentiation; lateral roots .

UNIT-II

3. **Leaf growth and differentiation**: Phyllotaxy, Leaf development , differentiation of epidermis (with special reference to stomata and trichomes) and mesophyll , Kranz Anatomy and Leaf abscission.

UNIT-III

4. Structure, differentiation and phylogeny of Xylem; Reaction wood.
5. Structure, differentiation and phylogeny of Phloem

UNIT-IV

6. Transfer Cells.
7. Structure and activity of vascular and cork cambium.
8. Seed coat anatomy with reference to legumes and cereals.

PRACTICALS

Max. Marks : 20

1. Study of anomalous type of secondary growth through transverse sections.
2. Maceration of wood.
3. Study of living shoot apices .
4. Study of cyto-histological zonation in the shoot apical meristem and. examination of shoot apices in both T.S. and L.S. to show the origin and arrangement of leaf primordia.
5. Study of V.S. of various types of leaves.
6. Study of leaf epidermis.
7. Study of T.S. of Seed Coat.

SUGGESTED READINGS

1. Beck, C.D. *An Introduction to Plant Structure and Development: Plant Anatomy for the 21st Century.* Cambridge Univ. Press,. 452 pp. 2009.
2. Burgess, J. *An Introduction to Plant Cell Development.* Cambridge Univ. Press, Cambridge. 266 pp. 1985.
3. Dawes, C.J. *Biological Techniques in Electron Microscopy*. Barnes and Noble, Inc., NY. 193 pp. 1971.
4. Esau, K. *Anatomy of Seed Plants*. John Wiley, New York. 550 pp. 1977.
5. Fahn, A. *Plant Anatomy*. 3rd Ed. Pergamon Press, Oxford. 544 pp. 1989.
6. Howell, S.H. *Molecular Genetics of Plant Development.* Cambridge Univ. Press, Cambridge. 388 pp. 1998.
7. Jane, F.W. *The Structure of Wood.* 2nd Ed. Adam and Charles Black, London. 478 pp. 1970 .
8. Leins, P., S.C.Tucker and P.K.Endress. *Aspects of floral development.*J. Cramer, Germany. 239 pp. 1988.
9. Lyndon, R.F. *Plant Development, the Cellular Basis.* Unwin Hyman, London. 320 pp. 1990.
10. Mauseth, J.D. Plant Anatomy. Ist Ed. Bejamin Cumming
11. Metcalfe, C.R. and L. Chalk. *Anatomy of the Dicotyledons*. *Vol. I : Systematic Anatomy the leaf and stem*. 2nd Ed. Oxford Univ. Press, USA. 304 pp. 1950.
12. Ray, F.E. and S.E.Eichhorn. *Esau's Plant Anatomy : Meristems, Cells and Tissues of the Plant Body: their Structure, Function and Development.* 3rd Ed. Wiley-Lis . 624 pp. 2006.
13. Steeves, T.A. and I. M. Sussex. *Patterns in Plant Development.* 2nd Ed. Cambridge Univ. Press, Cambridge. 408 pp. 1989.
14. Vijayraghwan, M.R. and A.R. Shukla. *Histochemistry- Theory and Practice*. Bishan Singh & Mohinder Pal , Dehradun. 1990.

SECOND SEMESTER

PAPER VI : PTERIDOPHYTES

Objective of the paper is to impart knowledge about Pteridophytes on various aspects like Classification, Structural organization and Developmental studies of sporophyte and gametophyte of extant and extinct Pteridophytes, Economic importance , Cytological and Experimental studies.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In the practical the students make observations and work on the plant materials (including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics, The emerging concepts and Classification of pteridophytes.
2. Geological Time Table ; Fossils- their types , formation and methods of study ;Calculation of age of rocks / fossils.
3. Distribution , habitat , range , organography, external and internal morphology of sporophyte , spores and their mechanism of dispersal , gametophytic generation and sexuality and embryogeny of following classes of Pteridophytes with reference to the genera mentioned :

A: PSILOPSIDA

i) Rhyniales : *Rhynia, Horneophyton, Yarravia, Cooksonia*
ii) Trimerophytales : *Trimerophyton, Psilophyton*
iii) Zosterophyllales : Zosterophyllum , *Kaulangiophyton, Crenaticaulis, Sawdonia*

B: PSILOTOPSIDA

Psilotales : *Psilotum* and *Tmesipteris* ; A discussion on the systematic position of this group in pteridophytes.

UNIT-II

C: LYCOPSIDA

i) Protolepidodendrales : *Drepanophycus, Asteroxylon, Protolepidodendron,*
ii) Lycopodiales : *Lycopodium,* A brief account of *Phylloglossum*
iii) Lepidodendrales : *Stigmaria*
Family Lepidodendraceae , Family Bothrodendraceae,
Family Sigillariaceae, Family Pleuromeiaceae
iv) Isoetales : *Isoetes, Nathorstiana* , Brief account of *Stylites*
v) Selaginellales : *Selaginella* (A brief account)

D: SPHENOPSIDA

i) Hyeniales : *Hyenia*

ii) Sphenophyllales : *Sphenophyllum, Shenophyllostachys, Eviostachya, Cheirostrobus*
iii) Calamitales : *Asterocalamites, Protocalamites, Calamites, Calamostachys,Paleostachys*
iv) Equisetales : *Equisetum* (A brief account)

UNIT-III

E: PTEROPSIDA

a) Primofilices
i) Cladoxylales : *Cladoxylon, Pseudosporochnus*
ii) Coenopteridales : *Stauropteris, Botryopteris, Rhacophyton*

b) Eusporangiatae
i) Marattiales: *Psaronius, Angiopteris, Marattia*
ii) Ophioglossales : *Ophioglossum, Botrychium , Helminthostachys*

c) Osmundidae : Osmundales – *Osmunda*

d) Leptospangiatae
i) Marsileales : A brief account
ii) Salviniales : *Salvinia, Azolla*
iii) Filicales: General account of sporophyte morphology, stellar organization, soral and sporangial characters, gametophytes and embryogeny.

UNIT-IV

4. Apogamy and Apospory
5. Reproductive Biology of ferns.
6. Heterospory and its significance.
7. Cytological evolution and Species Concepts – Cytological evolutionary role of polyploidy in the evolution of pteridophytes.
8. Economic importance of Pteridophytes

PRACTICALS **Max. Marks :20**

1. Study of morphology and anatomy of vegetative and reproductive organs using cleared whole mounts, sections , macerations and permanent preparations of following living genera :
   Psilotum, Lycopodium, Isoetes, Selaginella, Equisetum, Angiopteris, Ophioglossum, Botrychium, Osmunda, Marsilea, Salvinia, Azolla, Lygodium, Hymenophyllum, Cyathea, Pteris, Asplenium, Dryopteris, Polystichum, Adiantum, Polypodium, and *Lepisorus.*
2. Study of some fossil pteridophytes through specimens and permanent slides .
3. Preparation of permanent slides / charts.
4. Field trips to familiarize with the diversity of pteridophytes in their natural habitats.

SUGGESTED READINGS

1. Bierhorst, D.W. *Morphology of Vascular Plants.* The MacMillan, New York. 1971.
2. Bold, H.C., C.J. Alexopolous and T. Delevoryas. *Morphology of Plants and Fungi.*4th Ed. Harper and Row Publishers,Inc., New York. 819 pp. 1980.
3. Chandra, S. and M. Srivastava(Eds.). *Pteridology in the New Millenium.* Kluwer Acad. Publishers, Dordrecht / Boston / London.544 pp. 2003.
4. Dyer, A.F. *The Experimental Biology of Ferns.* Academic Press, London. 1979.
5. Foster, A.S. and E.M. Gifford. *Comparative Morphology of Vascular Plants. 2nd Ed.* W.H. Freeman and Co., San Francisco. 1974.
6. Gifford,E.M. and A.S.Foster. *Morphology and Evolution of Vascular Plants*.3rd Ed. W.H.Freeman & Co., New York. 1989.

7. Khullar, S.P. *An Illustrated fern Flora of West Himalayas. Vols. I & II.* International Book Distributors, Dehradun.506pp & 544 pp. 2000.
8. Kubitzki, K. *The Families and Genera of Vascular Plants, Vol. I. Pteridophytes and Gymnosperms.* Kramer, K.U. and P.S. Green (Ed.). Narcosa Publishing House, New Delhi. 1991.
9. Lovis, J.D. *Evolutionary Patterns and Processes in Ferns* . Advances in Botanical Research 4: 229-415. 1977.
10. Mehra, P.N. and A.Gupta. *Gametophytes of Himalayan Ferns.* Publisher: Mehra, P.N., Botany Department, P.U., Chandigarh. 1986.
11. Nayar, B.K. and S. Kaur. *Gametophytes of homosporous ferns*. Bot. Rev. 37 : 295 – 396. 1971.
12. Parihar, N.S. *An Introduction to Embryophyta Vol. II, Pteridophytes*. Central Book Depot, Allahbad. 1965.
13. Pryer, K.M., H.Schneider, A.R.Smith, R.Cranfill, P.G.Wolf, J.S.Hunt and S.D.Sipes. Horsetails and Ferns are a monophyletic group and the closest living relatives to seed plants. Nature 409: 618-622. 2001.
14. Pryer, K.M., E.Schuettpelz, P.G.Wolf, H.Schneider, A.R.Smith and R.Cranfill. Phylogeny and evolution of Ferns (Monilophytes) with a focus on the early leptosporangiate divergences. American Jour. Of Botany 91 (10) : 1582-1598. 2004.
15. Raghavan, V. *Developmental Biology of Fern Gametophytes (Developmental and Cell Biology Series).* Cambridge Univ. Press, Cambridge. 384 pp. 1989.
16. Ranker, T. and Haufler, C.H. (Eds.). *The Biology and Evolution of Ferns and Lycophytes*. Cambridge Univ. Press, Cambridge, New York. 500 pp. 2008.
17. Rashid, A. *An Introduction to Pteridophyta* . Vikas Publishing House Pvt. Ltd., New Delhi. 426 pp.1999.
18. Sporne, K.R. *The Morphology of Pteridophytes.* Hutchinson University Library , London./ B.I. Publications, Bombay / Delhi / Madras. 192 pp. 1982.

PAPER VII : GYMNOSPERMS

Objective of the paper is to impart knowledge about Gymnosperms on various aspects like classification, structural organization and developmental studies of sporophyte and gametophyte of extant and extinct Gymnosperms, Economic importance , Cytological studies and Phytogeography.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials(including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics and Classification of Gymnosperms (Broad outlines).

2. Detailed study of the vegetative morphology, reproductive organs, structure and evolution of the following orders and families (with reference to the genera mentioned)

I . CLASS : PROGYMNOSPERMOPSIDA

i) ORDER : ANEUROPHYTALES
   Family: Aneurophytaceae : *Aneurophyton, Tetraxylopteris, Triloboxylon, Proteokalon*

ii) ORDER : PROTOPITYALES
   Family : Protopityaceae : *Protopitys*

iii) ORDER : ARCHAEOPTERIDALES
   Family : Archaeopteridaceae : *Archaeopteris*

UNIT-II

II. CLASS : CYCADOPSIDA

i) ORDER : PTERIDOSPERMALES
   a) Family Lyginopteridaceae : *Lyginopteris, Lagenostoma, Telangium, Crossotheca*
   b) Family Glossopteridaceae : *Vertebraria, Glossopteris,*
   c) Family Medullosaceae : *Medullosa, Codonotheca Pachytesta,Whittleseya, Goldenbergia*
   d) Family Caytoniaceae : *Sagenopteris, Caytonia*

ii) ORDER : BENNETTITALES (CYCADEOIDEALES)
   a) Family Bennettitaceae (= Cycadeoideaceae) : *Bennettites* (= *Cycadeoidea*)
   b) Family Williamsoniaceae : *Williamsonia*
   c) Family Wiellandiellaceae : *Wielandiella, Williamsoniella*

iii) ORDER : CYCADALES
   a) Family Cycadaceae : *Macrozamia, Zamia*

iv) ORDER : PENTOXYLALES
   a) Family Pentoxylaceae : *Pentoxylon, Nepanioxylon, Carnoconites, Sahnia*

UNIT-III

III CLASS : CONIFEROPSIDA

i) ORDER : CORDAITALES
   Family Cordaitaceae : *Cordaites, Cordianthus, Mitrospermum*

ii) ORDER : CONIFERALES
   a) General account with reference to the families : Pinaceae, Taxodiaceae, Podocarpaceae, Cephalotaxaceae, Araucariaceae, Sciadopityaceae
   b) Range of form, structure and evolution of Female Cones in Coniferales

iii) ORDER : GINKGOALES
   Family Ginkgoaceae : *Ginkgo*

iv) ORDER : TAXALES
   Family Taxaceae : *Taxus*

IV CLASS : GNETOPSIDA

i) ORDER : GNETALES
   a) Family Gnetaceae : *Gnetum*
   b) Family Welwitschiaceae : *Welwitschia*

UNIT-IV

3. Male gametophytes in Gymnosperms.
4. Distribution of Living Gymnosperms in India.
5. Structure and Evolution of Archegonium in Gymnosperms.
6. General survey of cytology of Gymnosperms .
7. Economic importance of gymnosperms.

PRACTICALS **Max. Marks : 20**

1. Study of morphology and anatomy of vegetative and reproductive parts of *Cycas, Zamia, Cedrus, Abies, Pinus, Picea, Cupressus, Cryptomeria, Agathis, Araucaria, Taxodium Taxus, Cephalotaxus , Ginkgo, Ephedra* and *Gnetum.*
2. Study of some Fossil Gymnosperms through specimens and permanent slides.
3. Field trips to familiarize various gymnosperms in nature and field identification of Indian Gymnosperms.
4. Preparation of permanent slides / charts.

SUGGESTED READINGS

1. Andrews, H.N.Jr.. *Studies in Paleobotany* . John Wiley and Sons, New York.487 pp. 1961.
2. Arnold , C.A. *An Introduction to Paleobotany.* McGraw Hill, New York. 433 pp. 1947.
3. Beck,C.E. *Gymnosperm Phylogeny*. Bot. Rev. 51 : 176-294. 1985.
4. Bhatnagar, D.W. *Morphology of Vascular Plants.* The Macmillan and Co., New York. 1971.
5. Bhatnagar, S.P. and A.Moitra. *Gymnosperms*. New Age International Ltd., New Delhi. 470 pp. 2000..
6. Bierhorst, D.W. *Morphology of Vascular Plants.* The Macmillan and Co., New York. 1971.
7. Chamberlain, C.J. *Gymnosperms : Structure and Evolution* . University of Chicago Press, Chicago. 484 pp. 1935.
8. Coulter, J.M. and C.J. Chamberlain. *Morphology of Gymnosperms*. Univ. of Chicago Press , Chicago. 1917.
9. Dallimore, W. and A.B.Jackson . *A Handbook of Coniferae and Ginkgoaceae . 4th Ed.* Edward Arnold and Co., London. 1966.
10. Delevoryas, T. *Morphology and Evolution of Fossil Plants.* Holt, Rinehart and Winston, New York. 1962.
11. Foster, A.S. and E.M. Gifford. *Comparative Morphology of Vascular Plants. 2nd Ed.* W.H. Freeman and Co. , San Francisco. 1974.
12. Meyen, S.V.. *Basic features of Gymnosperms, Systematics and Phyogeny as evidenced by the Fossil Record.* Bot. Rev. 50 : 1-112. 1984
13. Rothwell, G.W. *The Role of Comparative Morphology and Anatomy in interpreting the Systematics of Fossil Gymnosperms*. Bot. Rev. 51 : 318-327. 1985.
14. Sharma, O.P. and S. Dixit. *Gymnosperms*. Pragti Prakashan, Meerut. 344 pp. 2002.
15. Sporne, K.R. *The Morphology of Gymnosperms.* Hutchinson Univ. Library, London. 216 pp. 1974.

PAPER VIII : ANGIOSPERM MORPHOLOGY, TAXONOMY AND PHYLOGENY

Objective of the paper is to impart knowledge about Angiosperms on various aspects like Taxonomy, Phylogeny, Classification, Botanical gardens, Herbaria, Floras, Manuals, Periodicals and Botanical Survey of India and Biodiversity and structural organization of vegetative and reproductive organs of various groups.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students study flowers of different families.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Principles of Plant Classification with emphasis on modern tools of taxonomy ; Taxonomy as a SYNTHETIC DISCIPLINE , Numerical Taxonomy, Chemotaxonomy, Serology and Taxonomy, Biosystematics.
2. Taxonomic literature, General Indexes, Floras, Manuals, Important periodicals with emphasis on Indian floristics.
3. Important Botanical Gardens and Herbaria.
4. Botanical Survey of India – its organization and role.
5. Botanical Nomenclature and International Code of Botanical Nomenclature.

UNIT-II

6. Phylogenetic systems of classification - Hutchinson , Cronquist , Takhtajan , Dahlgren and Thorne.
7. Phylogeny of Angiosperms : Origin, Evolution and inter-relationship of dicots and monocots.

UNIT-III

8. Salient features of following families:

(a) DICOTYLEDONS

Ranunculaceae, Magnoliaceae , Fumariaceae, Cruciferae, Papaveraceae, Capparidaceae, Caryophyllaceae, Malvaceae, Sterculiaceae, Rutaceae, Meliaceae, Rhamnaceae, Anacardiaceae, Leguminosae, Rosaceae, Combretaceae, Myrtaceae, Solanaceae , Lythraceae, Cucurbitaceae, Cactaceae, Umbelliferae, Compositae, Primulaceae, Oleaceae, Asclepediaceae, Apocynaceae, Boraginaceae, Scrophulariaceae, Bignoniaceae, Acanthaceae, Labiatae Verbenaceae, Amaranthaceae, Polygoniaceae, Nyctaginaceae, Euphorbiaceae, and Cannabinaceae.

UNIT-IV

(b) MONOCOTYLEDONS:

Orchidaceae, Cannaceae, Amaryllidaceae, Liliaceae, Palmae, Araceae, Cyperaceae and Graminae.

9. The Species Concept , Taxonomic hierarchies : Species, Genus, Family and other Categories.
10. Concepts of phytogeography : Endemism, Hotspots and hottest hotspots ; Plant Explorations; Invasions and Introductions.
11. Evolution of Stamen and Carpel.

PRACTICALS **Max. Marks : 20**

1. Study of morphology, primitive and advanced characters of cultivated and wild representatives of various families. Study of basic structure of flower, variations, floral parts in detail, floral symmetry, insertion of floral parts etc.
2. Location of key characters and use of keys to derive families.
3. Field study of angiosperms in different types of habitats and preparation of Plant album.
4. Training in using floras for identification of specimens described in field or class.

SUGGESTED READINGS

1. Benson, L.D. Plant Taxonomy : Methods and Principles. Ronald Press, New York. 1962.
2. Collet, H. *Flora Simalensis*. Thacker and Spink , Calcutta and Simla (reprinted 1971). 652 pp. 1902.
3. Cronquist, A. *The evolution and classification of flowering plants.* Houghton Miffin , Boston. 556 pp. 1968.
4. Cronquist, A. *An integrated system of classification of flowering plants.* Columbia University Press, Columbia. 1262 pp. 1981.
5. Davis, P.H. and V.H. Heywood.. *Principles of Angiosperm Taxonomy*. Van Nostrand Reinhold, New York. 558 pp. 1973.
6. Eames, A.J. *Morphology of Angiosperms*. McGraw – Hill Inc., New York. 518 pp. 1961.
7. Gupta, R.K. *Systematic Botany*. Atma Ram and Sons, New Delhi. 1981.
8. Hutchinson, J. *The families of flowering plants. Vol. I , II*. Clarendon Press, Oxford. 968 pp. 1959.
9. Lawrence, H.M. *Taxonomy of Vascular plants.* MacMillan, New York. 823 pp. 1951.
10. Naik, V.N.. *Taxonomy of Angiosperms.* Tata McGraw Hill, New Delhi. 304 pp. 1984
11. Pandey, S.N. and S.P. Misra. Taxonomy of Angiosperms. Ane Books, India. 620 pp. 2008.
12. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology : A Laboratory Manual*. Springer-Verlag, Berlin. 1992.
13. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen : Structure and Function.* Wiley Eastern Ltd.. New Delhi. 1985.
14. Singh, G. *Plant Systematics : Theoty and Practice.* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi. 359 pp. 1999.
15. Sharma, O.P. Plant Taxonomy. Tata McGraw Hill Publishing Co. Pvt. Ltd., New Delhi.482 pp. 2002.
16. Sneath, P.H.A. and R.R.Sokal. *Numerical Taxonomy.* W.H. Freeman , San Franscisco. 1973.
17. Solbring, O.T. *Principles and Methods of Plant Biosystematics* . The MacMillan Co., New York. 1970.
18. Sporne, K.R. *The Morphology of Angiosperms*. B.I. Publication, Bombay, Calcutta, Delhi. 207 pp. 1986.
19. Stace ,C.A. *Plant Taxonomy and Biosystematics.* Contemporary Biology Series, Edward Arnold, London. 1984.
20. Subramaniam, N.S. Modern Plant Taxonomy. Vikas Publishing House Pvt. Ltd., Delhi.494 pp. 2007.
21. Takhtajan, A.E. *Flowering plants : Origin and dispersal.* Oliver and Boyd Ltd.. , Edinburg. 1969.

PAPER IX : REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

Objective of the paper is to impart knowledge about various biological aspects of reproduction in Angiosperms like structure of male and female Gametophyte, Palynology, Pollination, Pollen-pistil interaction, Self incompatibility, Apomixis, Fertilization, Endosperm, Embryo and Seed formation.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the reproductive parts of the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Apomixis**: Types and evolutionary significance.
2. **Male Gametophyte:** Structure of anthers; Microsporogenesis; Role of tapetum; Pollen development; Sperm dimorphism.
3. **Palynology:** Pollen wall structure; Male sterility; Hybrid seed production; Pollen viability and storage.

UNIT-II

4. **Female Gametophye** : Ovule development ; Megasporogenesis; organization of Embryo sac, structure of embryo sac cells.
5. **Pollination , Pollen-pistil interaction and fertilization :** Floral characteristics; Pollination mechanisms and vectors ; breeding systems; structure of the pistil ; Pollen-stigma interactions and pollen tube growth and guidance.

UNIT-III

6. Sporophytic and gametophytic self – incompatibility(cytological , biochemical and molecular aspects).
7. Double fertilization, *in vitro* fertilization.

UNIT-IV

8. **Endosperm**: Development and types.
9. **Embryo**: Development of embryo in Monocots and Dicots.
10. **Seed**: Structure and formation.

PRACTICALS

Max. Marks: 20

1. Study of microsporogenesis and gametogenesis in sections of anthers.
2. Examination of modes of anther dehiscence and collection of pollen grains for microscopic examination (maize , grasses, *Cannabis sativa, Crotolaria, Tradescantia, Brassica, Petunia, Solanum melongena* etc.

3. Tests for pollen viability using stains and *in vitro* germination . Pollen germination using hanging drop and sitting drop cultures, suspension culture and surface culture.
4. Study of ovules in cleared preparations ; study of monosporic , bisporic and tetrasporic types of embryo sac development and embryos through examination of permanent stained serial sections
5. Field study of several types of flowers with different pollination mechanisms (Wind pollination, Bee / butterfly pollination, Bird pollination).

SUGGESTED READINGS

1. Bhojwani, S.S. and S.P. Bhatnagar. *The Embryology of Angiosperms. 4th ed.* Vikas Publishing House , New Delhi.357 pp. 2000.
2. Johri, B.M. (Ed.) . *Embryology of Angiosperms.* Springer-Verlag, Berlin. 830 pp. 1985.
3. Maheshwari, P. *Recent advances in Embryology of Angiosperms.* Int. Soc. Pl. Morphologists, Delhi. 463 pp. 1963.
4. Raghavan, V. *Embryogenesis in Angiosperms – A Developmental and Experimental Study*. Cambridge University, Cambridge. 303 pp. 1986.
5. Raghvan, V. *Molecular Embryology of flowering plants.* Cambridge Univ. Press, Cambridge.690 pp. 1998.
6. Raghvan, V. *Developmental Biology of Flowoering plants.* Springer- Verlag, New York. 354 pp. 1999.
7. Raven, P.H., R. F. Evert and S.E. Eichhorn. *Biology of plants. 7thEd.* W. H. Freeman & Co., New York. 944 pp. 2004.
8. Sedgely, M. and A.R. Griffin. *Sexual Reproduction of Tree crops.* AP, London. 1989.
9. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen: Structure and Function.* Wiley Eastern Ltd. New Delhi. 337 pp. 1985.
10. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology: A Laboratory Manual*. SV Berlin. 1992.
11. Swamy, B.G.L. and K.Y. Krishnamurthy. *From flower to fruit: Embryology of Flowering plants.* Tata McGraw-Hill, New Delhi. 1980.

PAPER X : PLANT PATHOLOGY

Objective of the paper is to impart knowledge on various aspects of Plant Pathology like Symptomatology, Defence mechanisms, Host Parasite interactions, Role of enzymes and toxins in pathogenesis, Nutrition of fungi and Disease forecasting . It also aims to study the Etiology, Epidemiology and Control of different plant diseases caused by Fungi and other micro-organisms.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and study the diseased specimens using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Symptomatology in Fungal infections of plants.
2. Role of enzymes and toxins in pathogenesis.
3. Defense mechanism.
4. Host-parasite interactions.

UNIT-II

5. Disease forecasting and assessment.
6. Disease control.
7. Nutrition in Fungi.

UNIT-III

8. Etiology , epidemiology and control of following diseases:

   i) Paddy: Paddy Blast, Brown Leaf Spot, Bacterial Blight
   ii) Wheat: Rusts, Bunt and Smuts, Tundu Disease
   iii) Sugarcane: Red Rot, Smut
   iv) Grapes: Downy and Powdry Mildews
   v) Peach: Leaf Curl
   vi) Groundnut: Tikka disease
   vii) Apple: Apple Scab
   viii) Mustard : White Rust, Downy Mildew
   ix) Potato : Early and Late Blight, Wart Disease
   x) Linseed : Rust
   xi) Damping off of the seedlings
   xii) Ergot of Rye

UNIT-IV

9. Diseases caused by plant viruses, MLOs, Spiroplasma, Viroids and Mycoviruses: General symptoms and Principles of Control.

PRACTICALS

Max. Marks: 20

1. Study of plant diseases mentioned in Theory syllabus.
2. Isolation, purification and single spore culture of pathogens.

SUGGESTED READINGS

1. Agrios, G.N. *Plant Pathology.* 5th Ed. Elsevier Acadmic Press, San Diego. 922 pp. 2005.
2. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
3. Bilgrami, K.S. and H.C. Dube. *A Textbook of Modern Plant Pathology.* Vikas Publishing House, New Delhi. 1990.
4. Bilgrami,K.S. and R.N.Verma. *Physiology of Fungi.* 2nd Ed. Vikas Publ House, NewDelhi.1994.
5. Bos, L. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1978.
6. Burnett, J.H. *Fundamentals of Mycology.* 2nd Ed. Edward Arnold, London. 673 pp.1976.
7. Gibbs, A.J. and B.D.Harrison. *Plant Virology:* The Principles. John Wiley and Sons, NY. 292 pp. 1979.
8. Mandahar, C.L. *Introduction to Plant Viruses*. 2nd Ed. S. Chand & Co. Ltd., New Delhi. 568pp. 1987.

9. Mathews, R.E.F. *Plant Virology.* 2nd Ed.,Academic Press, London. 897 pp. 1981.
10. Mehrotra, R.S. and A. Aggarwal. *Plant Pathology.*2nd Ed. Tata McGraw Hill Co. Ltd., New Delhi. 846 pp. 2003.
11. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. 2007. *Microbiology.* 5th Ed. Tata McGraw Hill Co., New Delhi.
12. Powar, C.B. and H.F.Daginawala. *General Microbiology , Vols. I & II.* 2nd Ed. Himalaya Publishing House, New Delhi. 1995.
13. Schlegel , H.S. *General Microbiology*.7th Ed. Cambridge University Press, Cambridge. 676 pp. 1993.
14. Sharma, P.D. *Plant Pathology.* Rastogi Publications, Meerut. 1998.
15. Sharma, P.D. *The Fungi and allied organisms* . Ist Ed. Alpha Science International Ltd. 300 pp. 2005.
16. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.
17. Sinha, U. and S. Srivastava. *An Introduction to Bacteria.* Vikas Publishing House, New Delhi. 1983.
18. Smith, K.M. *Plant Viruses.* 6th Ed. Chapman Hall, London. 251 pp. 1977.
19. Stanier, R.Y. *General Microbiology.* 5th Ed. Macmillan Co., London. 704 pp. 2008.
20. Webster, C.J. *Introduction to Fungi.* 2nd Ed., Cambridge University Press, Cambridge. 424 pp. 1980.

Second Year

THIRD SEMESTER

PAPER XI : MOLECULAR BIOLOGY

Objective of the paper is to impart knowledge about various aspects of Molecular Biology like Chemical nature and Biosynthesis of Genetic material, Mechanism of Translation, Control function of genes, Cancer, Antigens, Cell cycle and Apoptosis.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students learn techniques of histochemical localization, extraction and estimation of DNA, RNA and Protein and Antigen- antibody reaction

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Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Cell cycle and Apoptosis & control mechanisms** : Role of cyclins and cyclin dependent kinases, mechanism of programmed cell death.
2. **Chemical Nature of Genetic Material** : Nomenclature, composition and structure of nucleic acids; three dimensional structure of DNA (Prokaryotes, eukaryotes and viral); shape of DNA studied from various physico-chemical properties *(A-, B- , Z-DNA)* ; Structure and functions of different types of RNA ; Biosynthesis of Nucleotides and Biological importance of the nucleotides.

UNIT-II

3. Mechanism of Nucleic Acid Biosynthesis :

a) Replication of DNA (Double-stranded and single stranded); rolling circle model of replication; types of DNA polymerase, DNA topoisomerase, DNA ligase, DNAase, Reverse transcriptase

b) Biosynthesis of different types of RNA: Transcription factors and machinery, Formation of Initiation complex, Transcription activators and repressors, RNA polymerases, elongation and

termination, RNA Processing : RNA editing, Splicing, Polyadenylation, Capping ; RNA transport.

UNIT-III

4. **Mechanism of Translation :** Structure of ribosomes; initiation, elongation and termination of polypeptide chain; Translational proof reading; post-translational processing of polypeptide chain; Inhibitor of protein synthesis .
5. **Control Functions of the Gene :** Constitutive and induced genes; Regulatory genes, structural genes and repressors; Regulation of gene expression in phages; Regulation of gene expression in Prokaryotes; operon model, Role of cAMP in the transcription of operon, lactose and arabinose operons; Regulation of gene expression in eukaryotes, histone, non-histone proteins; different models of control, translation enzymatic and hormonal control.

UNIT-IV

6. **Cancer :** Biochemistry and molecular biology of cancer, Genetic rearrangements in progenitor cells, Oncogenes and Tumour suppressing genes, Cancer and Cell cycle , Virus induced cancer , Metastasis, Interaction of cancer cells with normal cells, Apoptosis, Therapeutic interventions of uncontrolled cell growth, Chemical carcinogenesis.
7. **Antigen :** Structure and functions of different clauses of immunoglobulins; Primary and Secondary immune response; lymphocytes and accessory cells; Humoral and Cell Mediated Immunity ; MHC; Mechanism of Immune response and generation of immunological diversity; Genetic control of immune response, Effector mechanisms; Application of Immunological principles (Vaccines and
Diagnostics).

PRACTICALS

Max. Marks: 20

1. Histochemical localization of DNA, RNA and Proteins.
2. To draw a standard curve of proteins
3. Estimation of protein content of plant tissues by Lowry's method.
4. Extraction and estimation of DNA contents of plant material.
5. Extraction and estimation of RNA contents of plant material.
6. Demonstration of Antigen – Antibody reactions.

SUGGESTED READINGS

1. Buchnan, B.B., W. Gruissem and R.L. Jones. *Biochemistry and Molecular Biology of Plants.* American Society of Plant Physiologists, Rockville, Maryland. 2000.
2. Grierson, D. & S.N. Covey. *Plant Molecular Biology*. 2nd Ed. Blackie Acedemic and Professionals, London.233 pp. 1988.
3. Gupta, P.K.. *Cell and Molecular Biology*. Rastogi Publication, Meerut.940pp. 2004
4. Karp, G. *Cell and Molecular Biology.* John Wiley & Sons, U.S.A.854pp. 1999.
5. Kindt, T.A., R.A. Goldsby and B.A. *Osborne. Immunology.* W.H. Freeman and Co., NY. 574pp. 2007.
6. Lea, P.& C. R.C. Leegood (ed.). *Plant Biochemistry and Molecular Biology.* 2nd Ed. John Wiley & Sons, New York.384 pp. 1999.
7. Lehninger, A. *Principles of Biochemistry.* Worth Publishers, New York.1013pp. 1993.
8. Lewin, B. *Gene VIII.* Pearson Education International, Philadelphia.1027pp. 2004.
9. Lodish, H., A. Berk, S.L. Zipursky, P. Matsudaira, D. Baltimore and J. Darnell. *Molecular Cell Biology*. 4th Ed.W.H. Freeman & Co., U.S.A.1188 pp. 2000.
10. Nelson, D.L. & M.M. Cox. *Lehninger Principles of Biochemistry*. 5th Ed. W.H.Freeman Publishers. 1100 pp. 2008.
11. Robert, D.D. *Cell Biology – A Molecular Approach.* Allyn and Bacon, Inc. 1978.
12. Robertis de, C.D.P. and E.M.S. de Robertis. *Cell and Molecular Biology.* Lea and Febiger**,** Philadelphia. 733pp.1998.
13. Voet, D. and J.G. Voet. *Biochemistry. 2nd Ed.* John Wiley & Sons Inc.1591pp. 2006.
14. Watson, J.D., T.A.Baker, S.P.Bell, A,Gann, M.Levine and R.Losick. *Molecular Biology of the Gene.* Pearson Education Pvt. Ltd., Delhi.732pp. 2004.
15. Wilson, K. and J. Walker. *Practical Biochemistry : Principles and Techniques*. Cambridge University Press, Cambridge.784pp. 2000.

PAPER XII : PLANT PHYSIOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Physiology like Cellular organelles, Membranes, Water relations of plants, Inorganic nutrition , Photosynthesis, Respiration, Nitrogen metabolism, Phytohormones, Growth, Stress physiology and Role of plant physiology in agriculture.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Structural organization and function of intracellular organelles** : Cell wall, Nucleus, mitochondria, Endoplasmic Reticulum, Golgi bodies, Peroxisomes, Lysosomes, Vacuoles, Plastids, Structure and function of cytoskeleton and its role in motility.
2. **Membrane structure and function** : Structure of model membrane, Lipid bilayer and membrane protein, diffusion, osmosis, ion channels, active transport, ion pumps, mechanism of sorting and regulation of intracellular transport, electrical properties of membranes.
3. **Water Relations of Plants :** Modern thermodynamic concepts of physical state of water in plant cells and tissues, movement of water in the Soil – Plant – Atmosphere Continuum. Transpiration, stomatal control and mechanism of guard cell movement.

UNIT-II

4. **Inorganic Nutrition :** Occurrence, availability and physiological roles of various elements, ion uptake and active and passive transport, Role of calmodulin, phloem transport.
5. **Photosynthesis :** Energy pathways in photosynthesis, Chloroplast as an energy transducing organelle, composition and characterization of photosystems I and II, electron flow through cyclic and non-cyclic photophosphorylation, pathway of CO_2 Fixation, differences between C_3 and C_4 photosynthesis, different kinds of C_4 pathways, CAM pathway – occurrence, biochemical events, and adaptive advantage. Regulation of photorespiration, Factors affecting photosynthesis, photorespiration and photophosphorylation.
6. **Respiration** *:* Glycolysis, Krebs cycle and Electron Transport Chain (Cytochrome System), Gluconeogenesis, Factors affecting respiration.

UNIT-III

7. **Nitrogen Metabolism :** Nitrogen fixation of free living and symbiotic organisms, mechanism of Nitrogen fixation, Soil nitrogen sources, nitrogen uptake and assimilation, nitrate reductase system and induction, Light substrate-controlled induction, interrelationship between photosynthesis and nitrogen metabolism, transport of nitrogen in plants.
8. **Phytohormones :** Auxins, gibberellins, cytokinins, abscissins and ethylene : their transport, biosynthesis, physiological roles and mechanism of action; phenols, synthetic regulators, retardants and inhibitors.

UNIT-IV

9. **Growth :** Process, phases and dynamics of growth. External and internal factors affecting growth, growth and yield analysis, Source – Sink relationship, photoperiodism, phytochrome, endogenous rhythms, tropisms. Seed and bud dormancy and germination.
10. **Stress Physiology :** Mechanism of plant response to water (low and high), temperature (low and high), Salt (Salinity and Alkalinity) and biotic stresses (Pathogens and insects).
11. Applications of Plant Physiology in Agriculture.

PRACTICALS

Max. Marks : 20

1. Experiments pertaining to photosynthesis, respiration and water relations.
2. Determination of water potential by various methods.
3. Determination of Chlorophyll a and Chlrophyll b ratio in C3 and C4 plants.
4. Spectroscopic determination of Chrophyll a , Chlorophyll b , Carotenoids and Anthocyanin under varied environmental conditions.
5. Experimental study of hormonal effects in plant material.
6. Bioassays of hormones.
7. Study of seed germination as effected by different factors.
8. Experimental study of stress physiology.

SUGGESTED READINGS

1. Bidwell, R.G.S. *Plant physiology*.2nd Ed. MacMillan Publishing Co. Inc., New York.633 pp. 1979.
2. Buchanan, B.B., W.Gruissem and R.L. Jones. *Biochemistry and Molecular Biology of Plants.* American Society of Plant Physiologists, Maryland, USA. 2000.
3. Devlin, R.M., and F.H. Witham. *Plant Physiology*. C.B.S. Publishers, New Delhi. 258 pp. 1986.
4. Hopkins, W.G.(ed) *Introduction to Plant Physiology*. C.B.S. John Wiley & Sons Inc. USA. 560 pp. 2003.
6. Kramer, P.J. *Plant and Soil Water Relations.* T.M.H. Publishers. 1980.
7. Lawlor, D.W. *Photosynthesis.* 3rd ed.Viva Books Pvt. Ltd., New Delhi.386 pp. 2001.
8. Levitt, J. *Responses of Plants to Environmental Stresses(Physiological Ecology): Chilling,freezing and high temperature stress*. 2nd Ed. Acad. Press, London.497 pp. 1980.
9. Malik, C.P. *Plant Physiology*. 3rd Ed. Kalyani Publishers India. 2002.
10. Moore, T.S. *Biochemistry and Physiology of Plant Harmones.* Narosa/Springer,Verlag. 350 pp. 1989.
11. Nobel, P.S. *Physiochemical and Environmental Plant Physiology*. 4th Ed. Academic Press, San Diego, USA. 2009.
12. Noggle, G.R. and G.J. Fritz. *Introductory Plant Physiology*. 2nd Ed. Prentice Hall of India Pvt. Ltd., New Delhi. 1991.
13. Salisbury, F.B. and C.Ross. *Plant Physiology.*4th Ed. CBS Publisher and Distributors.682 pp. 1992.

14. Singhal, G.S., G. Renger, S.K. Sopory, K.D. Irrgang & Govindjee. *Concepts in Photobiology : Photosynthesis and Photomorphogenesis.* Narosa Publishing House, New Delhi. 1999.
15. Taiz, L. and E. Zeiger.. *Plant Physiology*. 4th ed. Sinauer Associates Inc. Publishers, Massachusetts, USA.700 pp. 2006.

PAPER XIII : BIOTECHNOLOGY

Objective: of the paper is to impart knowledge about various aspects of Plant Biotechnology like Concept, Scope, Tools, Tissue Culture Techniques, Protoplast Culture and Somatic Hybridization, Anther and Pollen Culture, Recombinant DNA Technology, Biosensors and Application of Biotechnology in Medicines , Agriculture, Transgenic plants , Industry and Pollution control etc.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Concept and Scope of Biotechnology and tools.**
2. **Tissue Culture Techniques**: Types of cultures, sources of material, sterilization, isolation of plant tissues, aseptic preparation of explants, standard nutrient media, Organic growth factors, culture techniques.

UNIT-II

3. **Protoplast Culture and Somatic Hybridization :** Isolation of protoplasts, culture and fusion methods, selection of fusion products, production of hybrids and cybrids.
4. **Anther and Pollen Culture** : Culture procedures for the induction of haploids, media and nutritional requirements, significance of haploids.

UNIT-III

5. **Recombinant DNA Technology :** Isolation and purification of DNA from plant cells, DNA sequencing, DNA engineering through cutting and joining DNA molecules, Restriction Endonucleases, Ligases.

6. **Application of Biotechnology** in Medicines, Agriculture , Transgenic plants and Human Welfare.

UNIT-IV

7. **Scope and applications of Microbes** *in* (a) Agriculture with special reference to Biological N_2 fixation, (b) Industry (Fermentation and Production of small and macromolecules), (c) Food (Sources of food and feed), (d) Pollution (degradation of pesticides and Hydrocarbons) and (e) Biogas Production.
8. **Biosensors** : Principles of detection and Applications.
9. **Transgenics**: Methods of Production and Application (Brief Account).

PRACTICALS

Max. Marks :20

1. Composition and preparation of various culture media :
   (a) Knop's medium, (b) Knudson's medium, (c) Moore's medium
   (d) Murashige & Skoog's medium.
2. Inoculation of Plant Materials.
3. Demonstration and or experimentation to study callus induction, organogenesis, plant regeneration, anther culture, embryo culture, protoplast isolation and fusion *in vitro*.
4. Visit to university/regional laboratories for demonstration of modern instruments employed in recent biotechnological techniques.

SUGGESTED READINGS

1. Bajaj, Y.P.S. *Biotechnology in Agriculture and Forestry Plant Protoplasts and Genetic Engineering I.,* Springer Verlag, Berlin. 1989.
2. Balasubramaniam, D., K.Dharmalingam, C.F.A. Bryce, J.Green and K.Kunthala. *Concepts in Biotechnology.* University Press (India) Ltd., Hyderabad. 1996.
3. Bhojwani, S.S. & M.K. Razdan. *Plant Tissue Culture – Theory and Practices.*5th Ed. Elsevier Science Pub. Co. Inc., New York.776pp. 2005.
4. Bull, A.T., G. Holt & M.D. Lilly. *Biotechnology (International Trends and Perspectives).* Oxford & IBH Puublishing Co. Pvt. Ltd.75pp. 1982.
5. Butcher, D.N. & D.S. Ingram. *Plant Tissue Culture,* Edward Arnold Ltd., U.K. 1976.
6. Evans, D.A., W.R. Sharp, P.V. Ammirato & Y. Yamada(Ed.). *Handbook of Plant Cell Culture.* Vol. I Coolier MacMillan Publishing Co.USA. 970pp. 1983.
7. Gupta, P.K.. *Biotechnology and Genomics.* Rastogi Publication Meerut.796 pp. 2004
8. Ignacimuthu, S.J. *Basic Biotechnology.* Tata McGraw Hill Pub. Co. Ltd., New Delhi.284 pp. 1995.
9. Kumar, H.D. *A Text of Biotechnology.* E.W.P., New Delhi.639 pp. 1998.
10. Murary, David R. (Ed.). *Advanced Methods in Plant Breeding and Biotechnology.* Redwood Press Ltd., Melksham.384pp. 1991.

11. Ratledge, C. and B. Kristiansen.. Basic Biotechnology. Cambridge University Press, Cambridge. 568 pp. 2001
12. Razdan, M.K. *An Introduction to Plant Tissue Culture.* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.397 pp. 2001.
13. Reinert, J. and M.M Yeoman. *Plant Cell and Tissue Culture-A Laboratory Manual,* Springer Verlag, Berlin. 83pp. 1982.
14. Singh, B.D. *Biotechnology.* Kalyani Publishers, New Delhi.574 pp. 2004.
15. Singh, B.D. *Biotechnology: Expanding Horizon.* Kalyani Publishers, New Delhi.860 pp. 2007.
16. Smith, R.H. *Plant Tissue Culture, Technique and Experiments.*2nd Ed. Academic Press, New York.231pp. 2000.
17. Street, H.E. *Plant Tissue and Cell Culture,* Blackwell Scientific Publications, London. 504 pp. 1973.

PAPER XIV : GENETICS AND PLANT BREEDING

Objective of the paper is to impart knowledge about various aspects of Genetics like Linkage, Gene Mapping, Microbial Genetics, Quantitative Genetics, Population Genetics and Human Genetics. The paper also deals with various methods of breeding in plants reproducing sexually and asexually.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. The students make analysis of different problems relating to genetics.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole

syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Allelism and Linkage**: Multiple Allele, Pseudo-alleles, Complementation tests, Pleiotropy, Genomic imprinting, Penetrance and Expressivity, Phenocopy, Linkage and Crossing over, Sex Linkage, Sex limited and Sex influenced characters.

2. **Genetic Recombination and Gene Mapping methods** : Recombination, Molecular Mechanism of Recombination, Role of RecA and RecBCD enzymes, Site-specific recombination, Linkage maps, Tetrad analysis - Centromere mapping in linear tetrads and Analysis of unordered tetrads.

UNIT-II

3. **Extrachromosomal Inheritance** *:* The Genetics of mitochondria and chloroplasts.

4. **Microbial Genetics***:* Mapping the bacteriophage genome; phage phenotypes; genetic recombination in phage; genetic transformation, conjugation and transduction in bacteria

5. **Multigene families:** Multigene families and their evolution.

UNIT-III

6. **Quantitative Genetics :** Polygenic inheritance, Heritability and its measurements, QTL mapping.
7. **Human Genetics :** Pedigree analysis, Lod score for linkage testing, Genetic disorders.

8. **Population Genetics :** Gene pool, Gene frequency, Hardy- Weinberg Law , Concepts and rate of change in gene frequency through mutation, natural selection and migration ; random genetic drift.

UNIT-IV

9. **Principles of Plant Breeding :** Principles and objectives ;important conventional methods of breeding of self and cross pollinated crops, Heterosis and Hybrid vigour, Utility of hybrids in Genetics and Plant Breeding.

10. **Asexual Breeding Systems** : Methods of breeding of vegetatively propagated crops; Non-conventional methods; polyploidy ; gene variability.

11. Male Sterility : Concept, Genetic control and Breeding utility.

PRACTICALS

Max. Marks : 20

1. Study of problems on Mendelian Genetics , Gene Interactions, Multiple alleles and Multiple gene inheritance.
2. To test the Genetic Hypothesis by Chi- Square Test and study goodness of fit.

3. Preparation of Linkage Maps in Diploids using three point test cross method.
4. Tetrad analysis and Centromere mapping in ordered and unordered tetrads.
5. Pedigree analysis.
6. Problems relating to Population genetics.

SUGGESTED READINGS

1. Atherly, A.G., J.R. Girton & J.F. McDonald. *The Science of Genetics.* Saunders College Publishing Fort Worth, U.S.A. 1999.
2. Brooker, R.J. *Genetics.* Addison-Wesley. Longman Publication. U.S.A. 1999.
3. Brown, T.A. *Genetics : A Molecular Approach.*3rd Ed. Chapman & Hall, U.S.A. 469 pp.1999.
4. Griffiths, A.J.F., W.M. Gelbart & J.H. Lewontin. *Modern Genetic Analysis.* 2nd Ed W.H. Freeman & Company, U.S.A. 2002.
5. Gupta, P.K. *Genetics.* Rastogi Publication, Meerut. 611 pp. 1995.
6. Hartl, D.L. & E.W. Jones. *Genetics : Principles and Analysis.* 4th Ed. Jones and Bartlett Publishers, Massachussets, U.S.A. 840 pp.1998.
7. Lewin, B. *Gene VIII.* Pearson Prentice Hall, USA.1027 pp.2004.
8. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K. 390 pp. 2001.
9. Russell, P.J. *Genetics.* 5th Ed. Addison Wesley Longman, California, U.S.A. 805 pp. 1998.
10. Sinnott, E.W., L.C. Dunn & T. Dobzhansky. *Principles of Genetics.* 5th Ed. Tata McGraw Hill Book Co., New Delhi. 459 pp. 1973.
11. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.*5th ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.
12. Stickberger, M.W. *Genetics*, 2nd ed., MacMillan, New York. 842 pp. 1977.
13. Weaver, R.F.& P.W. Hedrick. *Genetics.* 3rd Ed. William C. Brown Publishers, U.S.A. 656 pp. 1997.

PAPER XV : ECOLOGY AND ENVIRONMENT

Objective of the paper is to impart knowledge about various aspects of Ecology and Environment like Plant Communities and Ecosystems, Population Ecology, Biosphere Reserves, Biogeochemical cycles, Biodiversity and its conservation strategies, Pollution, Natural Resources and Non-conventional sources of energy, Climate change, Global Warming, Ozone depletion, Alien plant's invasion and Weed management.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study the soil samples for pH, conductivity, water holding capacity etc. They also study the ecosystems using Quadrat methods.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Environment & Ecosystem:** Concept and Principles.
2. **Population Ecology:** Characteristics of a population, Population growth curve, Population regulation, Life history strategies, Concept of metapopulation – Demes and dispersal, Intrdemic extinctions, Age structured populations.
3. **Plant Communities:** Definition, quantitative characters of Plant Communities. Different sampling techniques to study quantitative characters of plant communities.

UNIT-II

4. **Biosphere Reserve :** The concept, Major functions, Nilgiri Biosphere Reserve (a brief account)
5. **Bio-Geochemical Cycles:** General account types, brief account of the following bio-geochemical cycles: Carbon cycle, Nitrogen cycle, Phosphorus cycle and Sulphur cycle.
6. **Biodiversity:** Concept, level, measuring of biodiversity; significance in terms of economic, spiritual, scientific, educational, ecological and genetical values; reasons for depletion, magnitude, distribution and conservation strategies; diversity loss from monoculture plantations.

UNIT-III

7. **Pollution:** Definition, different types of pollutants. **Air pollution;** different pollutants of air, control of Air pollution; **Water pollution** : different sources of water pollution, control of water pollution; **Land pollution** : sources, control of land pollution ; Bioremediation and Phytoremediation.
8. **Management and Conservation of Natural Resources :** Aims and objectives of conservation; renewable and non-renewable resources; special interest and total ecosystem conservation policy; maintenance of ecological processes; management of agriculture, forest and soil; preservation of plant genetic diversity; conservation strategies required at national and international level, sustainable development.
9. **Non Conventional Sources of Energy:** Solar Energy, Hydro Power, Wind Power, Biogas, Geothermal Energy, Ocean Thermal Energy, Tidal Energy, Wind Energy.

UNIT-IV

10. **Ozone Depletion:** Reasons and its effects on plants, methods to check ozone depletion.
11. **Invasion of Alien Plants;** Concept, ecological impact and management
12. **Global Warming and Climate Change :** Reasons, effects and the techniques used to control global warming.

13. **Weed Management :** The impact, use and ecological role of weeds in agro-ecosystems, weed characteristics related to success; Major weeds of the world; Ecological approach to weed management, Problems of the weeds; Allelopathy, its mode and Exploitation in weed management.

PRACTICALS

Max. Marks : 20

1. Techniques for collection of soil samples. Chemical analysis of soil samples taken from different types of soils and to assess their suitability for healthy plant growth.
2. To determine soil pH, conductivity, soil texture and water holding capacity of soil.
3. Chemical analysis of underground water samples taken from different depths and to assess its suitability for healthy plant growth.
4. To work out the size of the quadrat and number of Quadrats required to study the ecosystem of a given locality.
5. To determine density, abundance and frequency of species by quadrat method.
6. To determine the Importance Value Index (IVI) and Species Diversity Index of grassland ecosystem.
7. To study the stomatal behaviour in response to herbicides and pesticides.

SUGGESTED READINGS

1. Altieri, M.A. & M. Liebman. *Weed Management in Agro-Ecosystems- Ecological Approaches.* CRC Press, Florida, U.S.A. 1988.
2. Begon, M., H. John and C.R.Townsend. *Ecology : Individuals, Populations and Communities.* 2nd Ed. Blackwell Science, USA. 943 pp. 1995.
3. Botkin, O. & E. Keller. *Environmental Science.* John Wiley, New York, USA. 752 pp. 1995.
4. Chapman, J.L.& M.J. Reiss. *Ecology Principles and Applications.* Cambridge Univ. Press. 293 pp. 1995.
5. Dash, M.C. *Fundamentals of Ecology.* Tata McGraw Hill, New Delhi. 525 pp. 1994.
6. Engler, E.D. & B.F. Smith. *Environmental Science.* WCB Publishers, Iowa, U.S.A. 1992.
7. Frankel, O.H., A.H.D. Brown and J.J. Burdon. *The Conservation of Plant Biodiversity.* Cambridge Univ. Press, Cambridge, U.K. 299 pp. 1995.
8. Karmondy, E.J. *Concepts of Ecology. 4th Ed.*. Prentice-Hall of India Pvt. Ltd., New Delhi. 559 pp. 2007.
9. King, L.J. *Biology and Control of weeds.* Wiley Eastern Private Reprints. 526 pp. 1974.
10. Kohli, R.K., O.R. Batish & A.K. Aggarwal (Eds.). *Parthenium hysterophorus* (Congress grass) – An Annotated Book of Abstracts, ESI, Chandigarh. 1993.
11. Kohli, R.K., N. Jerath & Dazy Rani (Eds.). *Some Facets of Biodiversity*. SES Pub. & PSCST Publication, Chandigarh, India. 1996.
12. Kohli, R.K, H.P. Singh and D.R. Batish. *Allelopathy in Agroecosystem.* Haworth Press, NY. 447 pp. 2001.

13. Kohli, R.K., S. Jose, H.P. Singh, D.R. Batish. *Invasive Plants &Forest Ecosystems.* CRC Press NY. 2009.
14. Kohli, R.K., K.S.Arya & Atul (Eds.). *Agroforestry & Environment.* DNAES Pub., Chandigarh. 1996.
15. Kumar, H.D. *Modern Concepts of Ecology*. Vikas Publ. House, New Delhi. 293 pp. 1996.
16. Newman, E.1. *Applied Ecology.* Blackwell, U.K. 1994.
17. Odum, F.P. *Fundamentals of Ecology.* 3rd Ed. W.B. Saunders & Co. Philadephia, U.S.A. 534 pp. 1971.
18. Odum, P.E. and W.G. Barret. *Fundamentals of Ecology.* Thomson Books / Cole, U.S.A. 2007.
19. Pandey, B.N. and G.K. Kulkarni. *Biodiversity and Environment.* APH Publishing Corporation, New Delhi. 2006.
20. Ramakrishanan, P.S. *Ecology of Biological Invasion in the Tropics.* International Scientific Publications, New Delhi. 195 pp. 1991.
21. Rana, S.V.S. *Essentials of Ecology and Environmental Sciences*. Prentice Hall of India Pvt. Ltd., New Delhi. 488 pp. 2007.
22. Rice, E.L. *Allelopathy.* Academic Press Inc., U.S.A. 442 pp. 1987.
23 Smith, K.L. *Ecology and Field Biology.* Harfer Collions, New York. 720 pp. 1996.
24. Shukla, R.S.&P.S. Chandel. *Plant Ecology and Soil Science.* S.Chand & Company Ltd., ND.552 pp. 1993.
25. Sharma, P.D. *Ecology and Environment.* Rastogi Publications, Shivaji Road, Meerut. 660 pp. 1996.
26. Singh, HP, D.R. Batish, R.K. Kohli. *Handbook of Sustainable Weed Management.* Haworth Publishers, NY. 2006.
27. Stiling, P. *Ecology : Theories and Applications.* Prentice Hall of India Pvt. Ltd., New Delhi. 2004.
28. Thakur, C. *Weed Science.* Metropolean Book Co. Ltd. India. 482 pp. 1984.
29. Treshow, M. *Air Pollution and Plant Life.* John Wiley, New York, U.S.A. 486 pp. 1984.
30. Wild, A. *Soil and Environment – An Introduction.* Cambridge University Press, U.K. 308 pp. 1993.

FOURTH SEMESTER

PAPER XVI: PLANT BIOCHEMISTRY

Objective of the paper is to impart knowledge about various aspects of Plant Biochemistry like Bioenergetics, Role of Water, Structure, types, properties and metabolism of Amino acids and Proteins, Enzymes, Carbohydrates and Lipids ; Compounds of energy transfer and Redox reactions, Catabolism and Generation of phosphate bond energy ; Vitamins and Secondary metabolites.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Bioenergetics:** Concept of free energy changes, Laws of Thermodynamics, Exergonic and Endergonic Reactions, Entropy and Energy, Free Energy and Equilibrium Constant, Redox potential.

2. **Water:** Its effects on Dissolved Biomolecules : Weak intereactions in aqueous systems, Ionization of water Weak acids and Weak bases; Buffering against pH changes in biological systems, Henderson-Hassalbach equation. The fitness of the aqueous environment for living organisms.

UNIT-II

3. **Amino acids and Proteins:** Structure types, properties and Metabolism of Amino acids; Primary, Secondary, Tertiary and Quatenary structure of proteins; domains, motif and folds; stability of protein structure ; Classification of proteins based on composition, solubility function; Reverse turns and Ramachandran plot.
4. **Enzymes:** Nomenclature and Classification; Enzyme Kinetics; Mode and Mechanism of Enzyme Action ,Enzyme Regulation, Activators, Inhibitors and Isoenzymes : Allosteric enzymes.

UNIT-III

5. **Carbohydrates:** Classification, composition and structure of Carbohydrates (Polysaccharides, Glycoproteins and Peptidoglycan), Stereoisomerism, Transformation of Carbohydrates, Synthesis and degradation of Sucrose, Starch, Cellulose.

6. **Lipids:** Classification, Structure and functions; Biosynthesis of Fatty Acids.

7. **Compounds of Energy Transfer and Redox Reactions:**

   a. Compounds of Energy Transfer *:* Adenosine Triphosphate, Uridine Triphosphate. Cytidine Triphosphate, Guanosine Triphosphate.

   b. Compounds of Redox Reactions *:* Nicotinamide Adenine Dinucleotide (NAD). Nicotinamide Adenine Dinucleotide Phosphate (NADP), flavin Mononucleotide (FMN), Flavin Adenine Dinucleotide (FAD), Ascorbic Acid, Coenzyme, Cytochromes.

UNIT-IV

8. **Catabolism and Generation of Phosphate Bond Energy:** Sites and mechanism of Oxidative phosphorylation; Processes generating substrates for Oxidative Phosphorylation, Coupled Reactions, Group Transfer, Biological energy Transducers ; Oxidation of Carbohydrates (Regulation and Mechanism of T.C.A. cycle) and Oxidation of fats.

9. **Vitamins:** Structure, and functions of Thiamine, Riboflavin, Nicotinic Acid, Pantothenic Acid, Pyridoxine, Biotin, Folic Acid, Vitamin B12 , Ascorbic Acid, Vitamin A , D , E and K.

10. **Secondary Metabolites:** Biosynthesis of terpenes and phenols and their role.

PRACTICALS

Max. Marks : 20

1. Detection of reducing, non reducing and total sugars: Molisch test, Fehling's test, Benedict's test, Barafoed's test, Saliwnoffs test and Iodine test.

2. Quantitative estimation of total carbohydrates by anthrone reagent. Preparation of potato starch, its microscopic structure and solubility test. Histochemical localization of starch.
3. Qualitative tests of protein like Biuret test, Xanthoproteic test, Ninhydrin test.

4. Quantitative estimation of amino acid and phenols by using Spectrophotometer.

SUGGESTED READINGS

1. Conn, E.E., P.K Stumpf., G.Bruening and R.H.Doi. *Outlines of Biochemistry.* 5th Ed. Wiley, India. 712 pp. 2006.
2. Deb, A.C. *Fundamental of Biochemistry*. 9th ed. New Central Book Agency Pvt. Ltd., Kolkutta. 664 pp. 2008.
3. Dey, P.M. and J.B. Harborne. *Plant Biochemistry.* Academic Press, London. 554 pp. 1997.
4. Hames, D. and Cooper, N. *Biochemistry*. Garland Science Publishers, U.S.A. 2008.
5. Jain, J.L., N. Jain and S. Jain. *Fundamentals of Biochemistry.* S. Chand & Co. Ltd., New Delhi. 1264 pp. 2007.
6. Lehninger, A. *Principles of Biochemistry.* Worth Publishers. 1011 pp. 1982.
7. Malik, C.P. and M.B. Singh. *Plant Enzymology and Histoenzymology.* Kalyani Publishers. 1980.
8. Mathews, K. Vanhold and Ahren. Biochemistry. Pearson Edu. Pvt. Ltd., New Delhi. 2003.
9. Nelson, D.L. & M.M. Cox. *Lehninger's Principles of Biochemistry*. 5th Ed. W.H.Freeman & Co., USA. 1100 pp. 2008.
10. Palmer, T. *Enzymes Biochemistry,Biotechnology ,Clinical Chemistry.* Affiliated East – West Press Pvt. Ltd. 2004.
11. Plummer, D.T. *An Introduction to Practical Biochemistry.*2nd Ed. T.M.H. Publishing Co., New Delhi. 352pp.1979.
12. Prince, N.C and L. Stevens. *Fundamentals of Enzymology.* Oxford University Press, Oxford. 1984.
13. Stumpf, P.K. and E.E. Conn. *The Biochemistry of Plants – A Comprehensive Treatise.* Academic Press, London. 1981.
14. Voet, D. and J.G. Voet. *Biochemistry.* 3rd Ed. John Wiley & Sons_Inc. 1264 pp. 2008.

PAPER XVII: FORESTRY

Objective of the paper is to impart knowledge about various aspects of Forestry like Silviculture, Forest Protection, Social and Urban Forestry, Forest Laws, Conservation of Forests, Types of Forests and Effects of forests.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students measure the diameter and height of trees. They study anatomy, moisture contents and specific gravity of common timber trees of Punjab. They also take an account of the nearest natural forest visited by them.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Silviculture:** Definition, Regeneration : Types, Natural regeneration from seeds (different factors on which regeneration depends, seedlings establishment period), Regeneration from vegetative parts (Coppice, Root suckers, Cuttings, Layering, Grafting, Budding, Pollarding, Lopping and Pruning); Nursery making.

2. **Forest Protection:** Protection, causes and control of forest fires; Major diseases of forest plants.

UNIT-II

3. **Social and Urban Forestry:** Social forestry - Non commercial farm forestry, scope and limitations of Non commercial forestry, community forestry, scope and limitations of community forestry, social land allocation programmes (Taungya system). Economic benefits of social forestry, Urban forestry.

4. **Forest Laws and Forest Conservation:** Salient features of the Indian Forest Act 1972 (preliminary, reserved forests, protected forests), different methods employed for conservation of forests.

UNIT-III

5. **Forests Types:** Climate of India, different climatic regions of India. Central characters and distribution of the different forest types of India.

UNIT-IV

6. **Forest Effects :** General effects of forests on climate, control of runoff, effects on snow, soil erosion, wild life, pollution control, nutrient cycling, social values and ecotourism, economic values, floods, green belts and control of temperature.

PRACTICALS

Max. Marks : 20

1. To measure diameter at breast height (dbh), diameter over bark (dob) and diameter under bark (dub) and girth of trees.
2. To measure height of standing trees by Abney's level. .
3. To determine the moisture content, specific gravity and weight density of common timber trees of Punjab.
4. To compare the anatomy of Hard wood and soft wood .
5. Students should be taken to nearest natural forests and they should prepare a field report regarding the following points :
   Height above Sea level, Mean annual rain fall and temperature, Soil texture, soil pH, Topography Dominant tree species and the general characters of the forest (Distribution of trees in different storeys, ground flora, nature of leaf fall, average height of dominant tree species etc.) The students will submit the field report.
6. Propagation studies on important common forest trees of Punjab regarding Height and diameter increments (under similar soil conditions) at two months intervals under natural conditions of day length and temperature for young tree saplings of known age and represent the results in a graphic form.
7. Visit to the nearby forest nursery.

SUGGESTED READINGS

1. Batish, D.R., R.K. Kohli, S. Jose and H.P. Singh. *Ecological Basis of Agroforestry*. CRC Press NY. 400 pp. 2008.
2. Chaturvedi, A.N. *Forest Mensuration.* International Book Distributors, Dehradun. 403 pp. 1982.
3. Dwivedi, A.P. *A Text Book of Silviculture.* International Book Distributors, Dehradun. 505 pp. 2006.
4. Gopikumar, K., S. Gopakumar and E.V.Anoop. *Forest Nursery and Tree Husbandry*. International Book Distributors, Dehradun. 169 pp. 2003.
5. Jha, L.K. *Forestry for Rural Development.* APH Publishing Corporation, NewDelhi. 669 pp. 1996.
6. Khosla, P.K. and R.K.Kohli. *Social Forestry for Rural Development.* I.S.T.S. Solan, India. 1988.
7. Kohli, R.K., K.S. Arya, H.P. Singh and H.S. Dhillon. *Tree Directory of Chandigarh*. DNAES, Chandigarh, India. 1994.
8. Negi, S.S. *Forest Fires.* International Book Distributors, Dehradun. 164 pp. 2000.
9. Negi, S.S. *Elements of General Silviculture*. International Book Distributors, Dehradun. 316 pp. 2003.
10. Negi, S.S. *Hand Book of Forest Ecology and Biology*. Internat BookDistributors, Dehradun. 268 pp. 2004.
11. Puri, G.S., Gupta, R.K. Mehr-Homji, V.M. and Puri, S. *Forest Ecology.* Vol. 2, Oxford & IBH, New Delhi. 708 pp. 1989.
12. Plant Wealth of India. *Proc. Indian Science Academy,* B-63. 1997.
13. Rangarajan, M. *Fencing the Forest* . Oxford University Press, New Delhi. 1996.
14. Sahni, K.C. *The Book of Indian Trees, 2nd Ed.* Oxford Univ. Press, Mumbai. 2000.
15. Stoddard, C.H. *Essentials of Forestry Practice.* R.P.C., New York, U.S.A. 407 pp. 1959.
16. Teylor, C.J. *Tropical Forestry.* Oxford Univ. Press, Oxford, U.K. 1962.
17. Thakur, C. *Weed Science*. Metropolitan Book Co. Ltd. 495 pp. 1984.

18. Trivedi, P.R. and K.N. Sudarshan. *Forest Management*. Discovery Publi. House, New Delhi. 242 pp. 1996.

PAPER XIII: CYTOGENETICS

Objective of the paper is to impart knowledge about various aspects of Cytogenetics like Chromatin organization, types of chromosomes and karyotype, Structural and numerical changes in chromosomes, Molecular cytogenetics, Restriction mapping, Alien gene transfer, Transposons, Mutations , DNA Damage and DNA Repair mechanisms.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study different types of chromosomes, mitosis and meiosis of diploids. They also study the meiosis of polyploids and translocation heterozygotes.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Chromatin Organization :** Chromosome structure and packaging of DNA; Molecular organization of centromere and telomere; nucleolus and ribosomal RNA genes; Unique and Repetitive DNA ; Euchromatin and heterochromatin.

2. **Karyotype** : Karyotype analysis ; Karyotype evolution; Various banding techniques and their uses ;

3. **Specialized types of chromosome** : polytene, lampbrush, B- chromosomes and sex chromosomes.

UNIT-II

4. **Structural changes in Chromosomes :** Origin, meiosis and breeding behaviour and evolutionary significance of Duplication, Deficiency, Inversion and Translocation heterozygotes; Translocation tester sets; Robertsonian translocations ; B-A translocations.

5. **Numerical Changes in Chromosomes:** Origin, occurrence, production and meiosis of Haploids, Aneuploids and Euploids; origins and production of Autopolyploids; chromosome and chromatid segregation; Allopolyploids; types, genome constitution and analysis; induction and characterization of Trisomics and Monosomics; Use of monosomics and trisomics in chromosome mapping.

UNIT-III

6. **Restriction Maps and Molecular Genetic Maps:** Restriction mapping RFLP as marker for mapping; chromosome walking; *in situ* hybridization as an aid in physical mapping of chromosome, FISH, GISH; chromosome jumping; Random amplified polymorphic DNA and AFLP techniques.

7. **Molecular Cytogenetics :** Nuclear DNA contents; C-value paradox, cot curve and its significance; Southern Northern and Western Blotting Techniques, Polymerase Chain Reaction.

8. **Alien Gene Transfer through Chromosome Manipulations :** Transfer of whole genome, transfer of individual chromosomes and chromosome segments; methods for detecting alien chromatin, production, characterization and utility of alien addition and substitution lines.

UNIT-IV

9. **Transposable Elements in prokaryotes and eukaryotes**: Cut and Paste transposons, Replicative transposons and Retrotransposons ;Mutations induced by transposons.

10. **Mutations :** Spontaneous and induced mutations; physical and chemical mutagens; molecular basis of gene mutations, site-directed mutagenesis.

11. **DNA damage and repair mechanisms**: Sources and types of DNA damage. Light dependent repair, Base Excision repair, Nucleotide Excision repair, Mismatch repair, Double- strand breaks repair and Error-prone repair; Prokaryotic SOS response and Eukaryotic transcriptional response to DNA damage.

PRACTICALS

Max. Marks : 20

1. Study of meiosis through materials *Allium, Phlox, Chrysanthemum, Delphinium, Papaper* etc.
2. Mitotic studies and Karyotype analysis.
3. Linear differentiation of chromosomes through banding techniques, such as G-banding, C-banding and Q-banding (Photographs/Slides).
4. Orcein and Feulgen staining of the salivary gland chromosomes of *Chironomas and Drosophila* (Photographs/Slides).
5. Study of B chromosomes using maize or any other appropriate material.
6. Induction of polyploidy using colchicines, different methods of the application of colchicines.
7. Effect of induced and spontaneous polyploidy on plant phenotype, meiosis, pollen and seed fertility and fruit set.
8. Meiosis of complex translocation heterozygotes.

SUGGESTED READINGS

1. Alberts, B., D. Lewis, M. Raff, K. Roberts & J.D. Watson. *Molecular Biology of the Cell*. 5th Ed. Garland Publishing Inc., New York. 1392 pp. 2007.
2. Brown, T.A. *Genomes.* 3rd Ed. John Wiley & Sons, U.S.A. 750 pp. 2006.
3. Griffiths, A.J.F., W.M. Gelbart and J.H. Lewontin. *Modern Genetic Analysis.* 2nd Ed. W.H. Freeman & Company, U.S.A. 2002.
4. Gupta, P.K. *Genetics.* Rastogi Publication, Meerut.611 pp. 1995.
5. Gupta, P.K. *Cytogenetics*. Rastogi Publication, Meerut.418 pp. 2004.
6. Hayward, M.D., M.O. Basemark and I. Romagosa. *Plant Breeding : Principles and Prospects.* Chapman and Hall, U.K.576 pp. 1993.
7. Khush, G.S. 1974. *Cytogenetics of Aneuploids.* Academic press, New York
8. Lewin, B. *Genes VIII.* Pearson Prentice Hall, U.S.A. 1027 pp. 2004.
9. Poehlman, J.M. & D.A. Sleper. *Breeding field crops.* Iowa State Press, USA.444 pp. 1995.
10. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* 6th Ed. Wiley-Blackwell Publ., U.K. 390 pp. 2002.
11. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.* 5th Ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.
12. Swanson, C.P., W.J. Young & T. Merz. *Cytogenetics : The Chromosomes in Division, Inheritance and Evolution.* Prentice Hall, Englwood Cliffs, New Jersey.577 pp. 1981.
13. Schulz-Schaeffer, J. *Cytogenetics.*2nd Ed. Springer-Verlag, Berlin. 446 pp. 1980.

PAPER XIX : PLANT RESOURCE, UTILIZATION AND CONSERVATION

Objective of the paper is to impart knowledge about various economic aspects of plants like Origin of Agriculture; Origin, Distribution, Types, Botany ,Cultivation, Harvesting and Uses of different Cereals, Fruits, Vegetables, Spices, Beverages and Legumes; Medicinal plants and Insecticides; Uses of important plant products like Gums , Tannins, Vegetable oils and fats, Fibres and Wood ; Unexploited plants of economic value and Genetic resources and their conservation.

Teaching methodology include delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical students study morphology, anatomy and histochemistry of cereals, vegetables, fruits , spices and oil yielding plants.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Origin of Agriculture.

2. World Centres of Primary diversity of domesticated plants: The Indo-Burmese Centre, Plant Introductions and Secondary Centres.
3. Origin, Distribution, Types, Botany, Cultivation, Harvesting and uses of Wheat and Rice.
4. History, Botany, Breeding, Cultivation and uses of following fruits and vegetables: Citrus, Mango, Apple, Banana, Potato, Alliums, Cabbage, Spinach, Tomato, Brinjal and Sweet Potato.

UNIT-II

5. **General Account of the Spices:** Ginger, Turmeric, Cinnamon, Clove, Umbelliferous spices and Peppers.
6. **Beverage Plants:** Source and general account of Tea and Coffee.
7. **Legumes:** Origin, Botany, Cultivation and uses of Pigeon pea, Chick pea, Cluster bean, French bean etc.
8. **Medicinal Plants and Insecticides:** History and classification of drugs, antibiotics, plants as sources of drugs, parts used, composition and uses. Insecticides of plant origin, Pyrethrum and Rotenone.

UNIT-III

9. **Gums:** Important commercial gums and their uses.
10. **Tannins and Dyes:** Sources and their uses.
11. **Vegetable Oils and Fats:** Distinction between fatty and essential oils. Drying (Soyabean and linseed), nondrying (Groundnut and Mustard oil) and Semi drying (cottonseed and Sunflower oil) oils and their uses.
12. **Fibres:** Classification, uses, type of fibres - Soft fibres, Hard fibres, Surface fibres, Brush fibres and Braiding fibres.

UNIT-IV

13. **Wood and its Uses:** Soft woods and hard woods, wood as fuel, construction material (Pilings, Veneers, Plywood), wood containers (cooperage), chemically derived products and wood distillation.
14. Unexploited plants of potential economic value; plants as a source of renewable energy.
15. Genetic Resources and their conservation.

PRACTICALS

Max. Marks : 20

1. Morphology, Anatomy, Microchemical tests of stored food materials of Wheat, Rice, Chick Pea, Potato, Sweet Potato; Comparison of Starch grains of Wheat, Rice, Potato and Mung.
2. Morphology of fruits and vegetables pertaining to theory syllabus.
3. Histochemical tests for cellulose, cutin, suberin, hemicellulose, fat, oils, proteins and starch.

4. Morphology and microscopic structure of umbelliferous fruits, turmeric and clove.
5. Vegetable Oils : Mustard, groundnut, soya bean, coconut, sunflower, castor; Morphology, microscopic structure of the oil yielding tissues, tests for oil.
6. Prepare a list of 10 important sources of firewood and timber in your locality. Give their local names, scientific names and families to which they belong. Mention their properties.
7. The students should be taken to a recognized Botanical Garden or a Museum to show different plants of economic importance.

SUGGESTED READINGS

1. Anonymous. *National Gene Bank*: Indian Heritage on Plant Genetic resources (Booklet). National Bureau of Plant Genetic Resource, New Delhi. 1997.
2. Cobley, L.S. and W.M. Steels. *An Introduction to the Botany of Tropical Crop Plants.3rd Ed.* The English Language Book Society and Longman, London. 1979.
3. Bole, P.V. and Y. Vaghani. *Filed Guide to Common Indian Trees.* Oxford University Press, Mumbai. 125 pp. 1991.
4. Chandel, K.P.S., G. Shukla and N. Sharma. *Biodiversity in Medicinal and Aromatic Plants in India: Conservation and Utilization.* National Bureau of Plant Genetic Resources, New Delhi. 1996.
5. Conway, G. and V.W.Rattan. *The Doubly Green Revolution. Food for all in the 21st Century*. Cornell Univ. Press. 360 pp. 1999.
6. Dastur, J.F. *Medicinal Plants of India and Pakistan.*3rd Ed. Meyerbooks. 1985.
7. Frankel, O.H., A.H.D. Brown and J.J. Burdon. *The Conservation of Plant Diversity.* Cambridge University Press, Cambridge, U.K. 1995.
8. Hill, A.F. *Economic Botany.* McGraw Hill Book Co. Inc., New York. 640 pp. 1986.
9. Kirtikar, K.R. & D.D. Basu. *Indian Medicinal Plants.* Vols. I & II. 2nd Ed. Lalit Mohan Basu, Allahabad. 1953.
10. Kochhar, S.L. *Economic Botany of the Tropics*.2nd Ed. MacMillan India Ltd., Delhi. 476 pp. 1998.
11. Leonard, W.H. & J.H. Martin. *Cereal Crops.* MacMillan Co., New York, USA. 824 pp. 1963.
12. Parry, J.W. *Spices, Morphology, History and Chemistry.* 2nd Ed.Vol. I. Chemical Publishing Co. Inc., New York. London, Food Trade Press. 605pp. 1969.
13. Parry, J.W. *Spices, Morphology, History and Chemistry.* 2nd Ed.Vol. II. Chemical Publishing Co. Inc., New York. London, Food Trade Press. 200 pp. 1969.

14. Council for Scientific & Industrial Research. *The Useful Plants of India.* Publications and Information Directorate, CSIR, New Delhi. 1986.

PAPER-XX: RESEARCH PROJECT / FIELD STUDY REPORT AND SEMINAR

This paper aims at inculcating the aptitude for research in the students so that after completing their postgraduate course they can opt for M. Phil. and / or Ph.D. courses.

Field study provides the students an opportunity to study the plant diversity in their natural habitats.

The purpose of presenting seminar is to train the students to prepare the topic and to deliver it before the students and teachers using the recent tools like Computer, CDs, LCD projector etc. This would instill a sense of confidence in the students to deliver lectures in classrooms and to present any paper before the academicians and scientists.

Max. Marks : 100

A): RESEARCH PROJECT/FIELD STUDY REPORT

Max. Marks: 60

RESEARCH PROJECT

The students will be given a small research project under the guidance of a supervisor which will be evaluated by a panel of two examiners.

OR

FIELD STUDY REPORT

The students will visit the field for study of plants pertaining to Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms. The students will also submit a Field Study Report on the flora of the place visited by them.

A panel of 2-3 examiners will evaluate the field study report.

B): SEMINAR **Max. Marks: 40**

The Seminar will be presented by all the students and it will be compulsory for all the students to attend the seminars.

The break-up of 40 marks will be as under:-

1.	Presentation	30
2.	Contents	10

Every seminar will be evaluated by a team of two examiners individually and the average of marks awarded by these examiners will be considered as the "Marks obtained".

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE SYLLABI FOR

M. Sc. INFORMATION TECHNOLOGY

(SEMESTER SYSTEM)

EXAMINATIONS 2016 - 2017

--:O:--

Paper Code	Paper Name	Theory/ Lectures	Univ.Int. Practical Exam Marks	Exam Marks	Exam Hours
FIRST YEAR					
	FIRST SEMESTER				
MS-66	Linux Administration and Programming	6	80	20	3
MS-61	Software Engineering	6	80	20	3
MS-62	Computer Algorithms	6	80	20	3
MS-42	Operating System Concepts	6	80	20	3
MS-63	Minor Project Based on 66	6	80	20	3
MS-64	Minor Project Based on 62	6	80	20	3
	SECOND SEMESTER				
MS-45	Advance Java and Network Programming	6	80	20	3
MS-65	E- Commerce and Emerging Trends	6	80	20	3
MS-60	Advanced Database System and MySQL	6	80	20	3
MS-67	Artificial Intelligence	6	80	20	3
MS-27	SEMINAR	2	-	50	-
MS-56	Minor Project Based on MS-45& MS-60	6	80	20	3
MS-68	Minor Project Based on MS-67	6	80	20	3
SECOND YEAR					
	THIRD SEMESTER				
MS-32	.NET Framework and C#	6	80	20	3
MS-50	Linux System Administration	6	80	20	3
MS-51	Software Testing and Management	6	80	20	3
MS-14	System Approach to Management and Optimization Techniques	6	80	20	3
MS-18	SEMINAR	2	-	50	-
MS-33	Minor Project Based on MS-32	6	80	20	3
MS-52	Minor Project Based on MS-50	6	80	20	3

FOURTH SEMESTER

MS-21 **Major Project** **320 80**

The project period will be of 6 months duration.

The project will involve development of application/system software in industrial/ commercial/ scientific environment

The report should consist of the following :

- Cover page including Project title, Name of the student, Name of the Department and Names of the Project Guides (both External and Internal).
- Acknowledgements.
- Certificates from company and department duly signed by external guide, Principal and internal guide.
- Contents with page numbers.
- Introduction (includes background and application or importance of the project)
- Objectives
- **System Analysis** System Feasibility study
- Software requirement specifications
- Design with system flowcharts and input/output design.
- Implementation and Testing

- Hardware and software used
- Listing of well commented programs with result/output or detailed algorithms with input and output.

Further scope of the project

- Bibliography
- Appendices (any other information related to project)

Each student should observe the following norms while submitting the synopsis/thesis for the Project :

(a) Use both sides of the paper instead of only single side.
(b) Use one and half interline spacing in the text (instead of double space)
(c) Stop using a blank sheet before the page, carrying figure or table.
(d) Try to insert figure/table in the text page itself (instead of using a fresh page for it, each time.)

Students must consult/inform the internal guides regarding the progress of their work at least once in 20 days. It is the duty of the student to be in touch with his internal guide. The student must prepare 5 copies of the report including one copy for self. The remaining four are to be submitted before 31st May every year as per the following :

1. Main Library
2. Department Library
3. Internal Guide
4. Company

One softcopy of the work is to be submitted to the concerned head of the department/institution along with the report. The student must present his/ her work in 15 minutes mainly focusing on his/her contribution with the help of slides followed by demonstration of the practical work done. The project Viva will be completed before 15th June every year exact dates will be informed before 31st May every year.

An external examiner, internal examiner and the internal guide will conduct project viva.

SEMESTER I

Paper Code: MS - 66
Paper Title: Linux System Administration and Programming
Maximum Marks: 80
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objective: This course enables students to get familiar with Linux system, its commands, files & directories, system, shell programming, PERL programming and system administration. After the completion of this course, student will be able to:

- Work in the Linux environment for Linux server administration
- Write the shell programs, PERL programs and C-program with system calls

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT –I

1. **Introduction to Linux:** Functions of an **o**perating system, Linux's History, different flavors of Linux, Minimum System Requirements for installing Linux: Using LILO; Linux's fdisk.

2. **Using Linux:** Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords; Linux Error Messages, Search Paths, Input and Output Redirection, Man pages, Wildcards: * and ?, Environment Variables, process Commands: ps, kill, su command; GREP pattern searching command, vi text-editor.

UNIT-II

3. **Using the File System** : Files Overview, Common types of files, file and directory management commands, Absolute and relative filenames; pwd, cd, rm, cat, mkdir, mv, cp;, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc.

4. **File and Directory Permissions**: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; Bourne Again Shell (BASH): Command-line Completion, Wildcards, Command History, Aliases, Pipelines, setting shell prompts, Job control, Customizing bash, bash variables.

UNIT-III

5. **Shell Programming:** Creating and Running Shell Programs, Using variables, Positional Parameters and other built-in Shell Variables; importance of quotation marks, test Command, Conditional Statements: if Statement, case Statement; Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions.

6. **Linux for System Administrators:** System Administration Basics, The root Account, Starting and Stopping the System; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, Checking file Systems, Compressing files with gzip and compress: Using tar, Backups, Setting the Login Message,Setting of DNS, Ping, WWW, and e-mail.

UNIT-IV

7. **PERL:** Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless Statements, for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators.

8. **System Calls:** C as System Programming Language, I/O system calls – umask(); create(); open(); read(); write(); lseek(); dup(); link(); access(); chmod(); chown(); Process management system calls; fork(); getpid(); getppid(); exit(); wait(); sleep() ; Signal system calls – kill(); signal().

REFERENCES:

1. Tim Parker: Linux Unleashed, Techmedia Publishing House.
2. Norton, P.: Complete guide to LINUX, Techmedia.
3. Komarinski, M.: LINUX System Administration Handbook, AW.
4. John Goerzen: Linux Programming Bible, IDG Books, New Delhi.
5. Venkateshmurthy, M.G.: Introduction to Unix& Shell Programming, Pearson Education.
6. Linux Network Administration Guide by Tery Dawson, Gregor N. Purdy, Tony Bautts – Oreilly.
7. Stones, Richard and Mathew Neil: Beginning Linux Programming, 3rd Edition, Wrox.
8. Jones, Tim: GNU/Linux Application Programming, Wiley India Pvt. Ltd.

Paper Code: MS - 61
PaperTitle:Software Engineering
Maximum Marks: 80 Number of Lectures: 90 (45 Minutes duration) **L P 6 0**

Objectives: This course enables students to understand Software Configuration Managements Tools and Techniques. After the completion of this paper, student will be able to

- Use principles, concepts, methods, and techniques of the software engineering approach to produce quality software.
- Apply software engineering principles and practices in the planning and development of an actual software product.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and**ONE**compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Introduction to Software Engineering:** Definition, Software Engineering goals, Characteristics of well-engineered software, Software Process Models: Waterfall Model, Prototyping Model, Spiral Model, RAD, AgileModelling.

2. **Software Requirement Specification (SRS):** Software Requirements, Definition of SRS, Characteristics of SRS, Components of SRS, Designing of SRS.

3. **System Analysis:** Principles of Structures Analysis, DFDs, E-R Diagrams, Data Dictionary.

UNIT – II

4. **Software Design:** Design Objectives, Design Principles, Concepts, Design Process, Design Methodologies: Structured Design, Modular Design, Object Oriented Design, User Interface Design and its elements and its Characteristics.

5. **Software Project Planning & Scheduling:** Objectives, Decomposition techniques, Planning and Scheduling Tools: GANTT Chart, PERT Chart, Critical Path Method and Work Breakdown Structure; Cost estimation, Cost estimation Models: Single Variable Model, COCOMO Model; Software Risks, Risk Assessment.

UNIT – III

6. Software Metrics**:** Role of Metrics and Measurement, Types of Software Metrics: Product Metrics, Software Size Metrics: LOC and Function Points, Process Metrics, People Metrics**.**

7. System Maintenance and Reliability**:** Maintenance and its types; Factors Affecting Software Reliability, Software Reliability vs Hardware Reliability, Software Reliability Metrics.

UNIT-IV

8. **Software Testing Techniques:**Introduction to Software Testing Process, Objectives of Software Testing. BBT & its Techniques: Boundary Value Analysis, Equivalence Class Testing, and Cause- Effect Graph,

White-Box Testing and its Techniques: Domain and Boundary Testing, Logic Based Testing, Data Flow Testing and Basic Path Testing.

9. **Software Testing Strategies:** Characteristics, Integration Testing, Functional Testing, Object Oriented Testing, Alpha and Beta Testing.

REFERENCES:

1. Pressman : Software Engineering, Tata-McGraw Hill Publishing House.

2. Sommerville, I: Software Engineering, Pearson Education.

3. Rajib Mall: Fundamentals of Software Engineering, PHI Learning Pvt. Limited.

4. Jalota, Pankaj: An integrated approach to Software Engineering, Narosa Publishing Company.

5. Ali Behforooz : Software Engineering Fundamentals, Oxford University Press. Frederick J.H

6. William E. Perry, WILEY: Effective methods for Software Testing

7. Gill, Nasib Singh: Software Engineering: Software reliability, Testing and Quality Assurance. Khanna Book Publishing

Paper Code: MS – 62
Paper Title: Computer Algorithm
Maximum Marks: 80 **Number of Lectures: 90 (45 Minutes duration)**

L P 6 8

Objective:

The objective of the module is to create skills in students to design and analyze algorithms. After studying this subject students will be able to

- Understand algorithms and give theoretical estimates for the resources needed by any algorithm.
- Analyze Algorithms.
- Have an empirical approach to gauge the comparative performance of a given set of algorithms.

Note:

i. The Question Paper will consist of Five Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Introduction to Data Structures**: Definition, Types of Data Structures, Stacks and its operations(Push, Pop), Queue and its operations (Insert, Delete), Tree (Binary Tree, General Tree and its Traversal), Graph(Types and its Traversal).

2. **Algorithms and Analysis:**Definition; Analysing algorithms; space and time complexity, Asymptotic Notation (O, Ω, θ) practical complexities, Best, average and worst case performance of algorithms, examples, Recursive algorithms, Introduction to recurrence relations.

UNIT – II

3. **Divide and Conquer:** General method, Binary search, Merge sort, Quick sort, Selection problem, Strassen's matrix multiplication and analysis of these problems.

4. **Greedy Method:** General Method, Knapsack problem, Job sequencing with deadlines, Minimum spanning Trees (Prim's Algorithm, Kruskal's Algorithm), Single source shortest paths and analysis of these problems.

UNIT – III

5. **Dynamic Programming:** General method, Optimal binary search trees, 0/1 Knapsack, the traveling salesperson problem, Single Source Shortest Path Problem (Bellman Ford Algorithm), All pair shortest path problem (Floyd's Algorithm).

6. **Back Tracking:** General method, N queen's problem, Graph coloring, Hamiltonian cycles, Analysis of these problems.

UNIT – IV

7. **Branch-And-Bound:** General Method, 0/1 Knapsack, Traveling Salesperson problems.

8. **NP-hard and NP-complete problems:** Basic concepts, Statement of Cook's Theorem, Satisfiability SAT, Examples of NP-hard graph [Clique Decision Problem, Chromatic Number Decision Problem] and NP-scheduling problems [Scheduling Identical Processors, Job Shop Scheduling].

REFERENCES:

1. Lipschutz, Seymour, 1986: Theory & Problems of Data Structures, Schaum Series.
2. Horowitz, Ellis and Sahni, Sartaj: Fundamentals of Computer Algorithms, Galgotia Publications.
3. Aho, A.V., Hopcroft, J.E., Ullman, J.D.: The Design and Analysis of Computer Algorithms, Addison-Wesley.
4. Goodman, S.E. &Hedetniemi: Introduction to the Design and Analysis of Algorithms, McGraw-Hill Book Comp.
5. Knuth, D. E.: Fundamental of Algorithms: The Art of Computer Programming, Vol.-1, NareshPubl.House.
6. Brassad, Gilles and Bartley, Paul: Fundamentals of Algorithms, Prentice Hall of India.

Paper Code: MS - 42
Paper Title: Operating System Concepts
Maximum Marks: 80 **Number of Lectures: 90(45 Minutes duration)**
L P 6 0

Objectives: This course enables students to understand **the concepts of Operating System.** After the completion of this paper, student will be able to

- Manage various processes and use the scheduling algorithms.
- Handle the deadlock conditions.
- Manage the files on the disk with effective outcome.

Note:

i. The Question Paper will consist of Five Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Introduction to Operating System:** History, Structure of OS, Functions/ Operations of OS, Types: Single User, Multi-user, Simple Batch Processing, Multiprogramming, Multitasking, Parallel systems, Distributed system, Real time system.

2. **Process Management:** Process, Process state, Process Control Block; Process scheduling: Scheduling queues, Schedulers, Context switch; Operation on process: Process creation and termination; interrupt mechanism, threads, Scheduling Algorithms: Pre-emptive and non preemptive scheduling, FCFS, SJFS, RRS, priority scheduling, Multilevel queue scheduling, Multilevel feedback queue scheduling, Inter process communication: Shared memory systems, Message passing systems.

UNIT – II

3. **Process Synchronization:** Concurrent Processes, Race condition, Shared data; Critical section problem: Mutual exclusion, Progress, Bounded waiting; Software solution: Busy form of waiting, lock and unlock primitives, Dekker's algorithm, Peterson's solution, Baker's Algorithm; Synchronization: Semaphores, Monitors, Reader Writer Problem, Producer Consumer Problem, Dinning Philosopher Problem.

4. **System Deadlock:** System Model; Deadlock Characterization: Necessary conditions, Resource Allocation graph; Deadlock prevention: Mutual Exclusion, Hold and Wait, No Preemption, Circular wait; Deadlock Avoidance: Safe state, unsafe state, Resource Allocation graph Algorithm, Banker's Algorithm; Deadlock Detection & Recovery from deadlock: Wait-for-graph

UNIT – III

5. **Memory Management:** Hierarchy of memory types, Cache memory: Types: Associative memory, direct mapped, set associative.

6. **Memory Allocation:** Address binding, Address Space, Memory Protection, Contiguous and Non-Contiguous allocation, Swapping, Fragmentation; Paging: Protection, Shared pages, Techniques for structuring of page table; Segmentation: Segmentation with paging; Virtual
   Memory: Demand paging; Page replacement Algorithms: FIFO, Optimal, LRU, LFU, MFU, Working set, Thrashing;

UNIT – IV

7. **Storage Management:** File(s): Attributes, Operations, Types, Structure; Access Methods: Sequential, Direct access, Index; Directory Structure: Single level, Two level, Tree Structured, Acyclic Graph; File System mounting; File sharing; Protection: Types of access, access control.

8. **File system** structure, File system implementation, Directory implementation, Allocation methods: Contiguous Allocation, Linked Allocation, Indexed Allocation; Disk scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Disk management; Swap space management; RAID.

REFERENCES:

1. Galvin P.B., Silberschatz A., Gagne G.: Operating System Concepts, Wiley Publications.
2. Deitel, H.M.: An Introduction to Operating System, Addision-Wesley Publishing Company.
3. Milenkovic, M.: Operating System - Concepts and Design, McGraw-Hill International Editions.
4. Madnick and Donovan: Operating System, McGraw-Hill Publishing Company.
5. Hansen P. Brineh: Operating System Principles, Prentice-Hall India.

SEMESTER II

Paper Code: MS - 45
Paper Title: Advance Java and Network Programming.
Maximum Marks: 80 **Number of Lectures: 90(45 minutes duration)**

L P 6 4

Objectives: This paper enables student to enhance the programming skills using object oriented programming approaches. After the completion of this paper, student will be able to

- To create enterprise and standard applications Java.
- To develop web applications with database support.
- To develop client server based applications.

Note:

i. The Question Paper will consist of Five Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Review of Java Basics:** Applets, Multithreading, AWT Controls, Event Handling.

2. **Swing:** Features, components, Swing vs AWT, swing containers, controls, using Dialogs, sliders, progress bars, tables, creating user interface using swing.

UNIT-II

3. **Java Database Connectivity:** Connectivity model, Java. SQL package, JDBC Exception classes, Database connectivity, Data manipulation and navigation, Using PreparedStatement, creating database applications

4. **Java RMI:** Distributed object technologies, RMI architecture, creating RMI applications.

UNIT-III

5. **Java Servlets:** Servlets vs CGI, Servlet Lifecycle, creating and running servlets.

6. **Networking:** Networking basics, Client / server model, Java and the Net, TCP/IP client sockets, TCP/IP server sockets, Inet Address, URL, Data grams, creating networking applications.

UNIT-IV

7. **Java Beans :** Component architecture, Components, Advantages of Beans, Bean Developer kit (BDK), JAR files, introspection, developing Beans, Using Bound properties, The Java Beans API, Introduction to EJB (Enterprise Java Beans),Types of EJB, Uses of EJB.

8. **Java Server Pages:** Introduction, JSP Architecture, JSP Elements: Implicit Objects, Comments, Directives, Action Elements, Scripting Elements., developing simple Web Applications.

REFERENCES:

1. Schildt, Herbert: The Complete Reference Java 2, TMH.
2. Ivan Bayross: Web Enabled Commercial Application Development using Java 2.0, BPB.
3. Cornell, Gary and Horstmann Cay S.: Core Java, Vol I and Vol II, Sun Microsystems Press.

4. Keogh, James: J2EE: The Complete Reference.
5. Martin Bond, Debbie Law, Andy Longshaw, Dan Haywood, PeterRoxburgh: SAMS: Teach Yourself J2EE in 21 days, Pearson.
6. Java 6 Programming Black Book, Kogent Solution Inc., Dream Tech Press.

Paper Code: MS – 65
Paper Title: E-Commerce and Emerging Trends
Maximum Marks: 80
Number of Lectures: 90 (45 minutes duration)

L P 6 0

Objectives: This course enables students to be familiar with Fundamentals of Electronic Commerce and Emerging Technologies such as Parallel Computing, Cloud Computing, Grid Computing, Mobile Computing, and Concept of Big Data.

Note:

i. The Question Paper will consist of Five Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Electronic Commerce:** Traditional Commerce vs Electronic Commerce, Types of E-Commerce, E-Commerce infrastructure: Hardware and Software requirements, **Electronic Data Interchange (EDI):** EDI enabled procurement process and its benefits; Components of EDI system: EDI standards, EDI software, communication networks; **Electronic Payment Methods:** Types of Electronic Payment Systems, Digital Token Based Electronic Payment Systems, Smart cards and Electronic payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic payment Systems.

2. **Issues in E-commerce:** The legal and policy environment of E-Commerce; Intellectual Property, advertising and consumer protection; Copyright Law; Patent Law; Network Security and Firewalls; Client-Server Network Security Threats; Data and Message Security; Encrypted Documents and E-mail; Digital Signatures.

UNIT-II

4. **Business Intelligence:** Introduction to Business Intelligence, Digital data and its types – structured, semi-structured and unstructured, Introduction to Online Transaction Processing (OLTP), Online Analytical Processing (OLAP), Different OLAP architectures: MOLAP, ROLAP, HOLAP, Comparison of OLTP and OLAP. BI Definitions and need, BI Component Framework, Business Applications of BI.

5. **Case Studies:** Supply Chain management, Banking, Online Reservation Systems, Online Publishing

UNIT-III

6. Parallel Computing: Introduction and use, Flynn's Classical Taxonomy: SISD, SIMD, MISD, MIMD; Parallel Computer Memory Architectures: Shared Memory, Distributed Memory, Hybrid Distributed-Shared Memory; Parallel Programming Models: Shared Memory Model, Threads Model, Distributed Memory/Message Passing Model, Data Parallel Model, Hybrid Model, SPMD and MPMP, Introduction to Parallel Virtual Machine and Message Passing Interface, Supercomputers.

7. Cloud Computing: Introduction and use, Architecture, Service Models: infrastructure as a service, platform as a service, and software as a service;

UNIT-IV

8. Grid computing: Introduction and benefits, virtual organisations, grid Architecture and its relationship to other distributed technologies, grid application areas.

9. Mobile Computing : Definition, Guided Transmission, Unguided Transmission; Mobile computing architecture, Mobile Devices, Mobile System Networks: Cellular, WLAN, Ad hoc networks; Introduction to : GSM,CDMA,GPRS,EDGE; Introduction to Mobile Databases; Mobile Applications; Mobile Application Languages; features of Mobile Operating system: Palm OS , Symbian, Android.

REFERENCES :

1. Ravi KalaKota and Andrew B. Whinston: Frontiers of Electronic Commerce, Addison Wesley 1996
2. Kamlesh K. Bajaj and Debjani Nag: E-Commerce The Cutting Edge of Business, McGraw Hill Education.
3. R. N. Prasad and Seema Acharya , Fundamentals of Business Analytics , Wiley 2011
4. M. Sasikumar, Dinesh Shikhare, P. Ravi Prakash: Introduction to Parallel Processing, PHI.
5. Barry Wilkinson, Michael Allen, Parallel Programming: Techniques and Applications Using Networked Workstations and Parallel Computers, Pearson Education.
6. Joshy Joseph, Craig Fellenstein : Grid Computing, Pearson Education.
7. ZarekNabrzyski, Jennifer M. Schopf, Jan Weglarz: Grid Resource Management - State of the Art and Future Trends, Kluwer Academic Publishers.
8. Kamal, Raj, Mobile Computing, Oxford Higher Education.
9. Perkins, Mobile Computing, Pearson Education.
10. Jochen Schiller: "Mobile Communications", PHI/Pearson Education.

Paper Title : Advanced Database Programming & MySQL
Paper Code: MS-60
Max. Marks: 80
Time : 3 Hrs. Number of Lectures: 90 (45 Minutes duration)

Objectives:
The course aims at providing the students through insight on few DBMS principles and practices. Students will learn and implement the operations for making and using databases with help of SQL and PL/SQL.

Note :

1. The Question Paper will consist of Five Units.
2. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
3. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
4. All questions carry equal marks unless specified.

UNIT I

1. **Database Management Systems**: Definition, Characteristics, Advantages of Using DBMS Approach, Classification of DBMSs, Data Models, Database Schema and Instance, Three Schema Architecture, Data Independence – Physical and Logical data Independence.

2. **Entity- relationship model**: Entities, Relationships, Representation of entities, attributes, Representation of relationship set, Generalization, aggregation.

3. **Normalization**: Functional Dependency, Full Functional Dependency, Partial Dependency, Transitive Dependency, Normal Forms– 1NF, 2NF, 3NF, BCNF, Multi-valued Dependency.

UNIT II

4. **Relational Algebra and Relational Calculus**: Relational Algebra: Operations- Union, Intersection, Difference, Cartesian product, Projection, Selection, Division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

5. **Transaction and Concurrency control**: Concept of transaction, ACID properties, Serializibility, States of transaction, Concurrency control: Locking techniques, Time stamp based protocols, Granularity of data items, Deadlock.

UNIT III

6. **MySQL**: Introduction; Why MySql; Tools provided with MySQL; MySQL Architectural Terminology; Databases:Creating, Selecting, Dropping and Altering Databases; Tables: Creating, dropping, Altering, Indexing Tables; Adding new rows, Retrieving Information, Deleting or Updating Existing rows; Obtaining MySQL Metadata; Joins; Subqueries; Views; Multiple Tables Deletion and Updation; Foriegn Keys and Referential Integrity; MySQL Data Types; Sequences.

UNIT IV

10. **Data Warehousing**: Introduction; Features; Data modeling for Data Warehousing; Building Data warehouse; Comparison between Data Warehouse and DBMS Metadata; Problems and issues in Data Warehouse.

11. **Data Mining**: Overview; Goals of Data Mining; Techniques: Association rules(Market Basket Algorithm, Apriori Algorithm); Classification: Decision Tree, Induction Algorithm; Applications of Data Mining.

References:

1. Elmarsi&Navathe, “Fundamentals of Database Systems” 4th Edition, 2004.
2. Jiawei Han and MichelineKamber,"Data Mining: Concepts and Techniques", Elsvier.
3. William H. Inmon, "Building the Data Warehouse",Fourth Edition, Willey.
4. C.J.Date “Introduction to database system”, 8th Edition, Galgotia Publications, 2004.
5. Paul DuBois, "MySQL Developer's Library", Fourth Edition, Addison Wesley.
6. Bipin C. Desai, An Introduction to Database System
7. Silberschatz, Korth, Sudershan “Database System Concepts” 4th Edition, McGraw Hill Education, 2002.
8. Ivan Bayross, “SQL/PLSQL: The Programming Language of Oracle, 3rd Revised Edition, 2006

Paper Code: MS - 67
Paper Title: Artificial Intelligence
Maximum Marks: 80 **Number of Lectures: 90 (45 minutes duration)**

L P 6 8

Objectives: The paper enables students to understand Artificial Intelligence techniques and the language LISP. After the completion of this paper, student will be able to

- Apply standard AI techniques to solve problems.
- Characterize the Knowledge Acquisition
- Differentiate various expert systems
- Write programs of AI using LISP

Note:

i. The Question Paper will consist of Five Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Artificial Intelligence (AI)** : Introduction and Applications, History of AI from Alan Turing and developments in AI, application areas; Criteria for success; Problem Characteristics; Problem representation-State space representation, problem reduction representation, production system; Introduction to agents, intelligent software systems, Applications, Intelligent architectures, components of intelligent agent based distributed systems.

2. **Search and Control Strategies:** Data driven and goal driven search; Uninformed search- Breadth -first Search and Depth-First Search methods; Heuristic Search Techniques - Hill Climbing, Best first Search, A*, AO*, Constraint satisfaction and means-ends analysis techniques.

UNIT – II

3. **Knowledge Representation** : Information and Knowledge, Knowledge Acquisition and Manipulation, Issues in Knowledge Representation, Knowledge Representation Methods, Propositional Logic and First Order Predicate Logic, Resolution: Definition, Conversion to ClauseForm, Resolution in Propositional and Predicate Logic, Unification and Resolution Principle; Horn's Clauses, Semantic Networks, Partitioned Semantic Nets, Frames, Scripts and Conceptual Dependencies.

4. **Game Playing:**Minimax Search Procedure, Adding Alpha-Beta Cutoffs.

UNIT – III

5. **Expert Systems** : Definition and Applications, Characteristics of Expert systems, Architecture of a typical Expert System, Expert System Shells, Building an Expert System, Case studies of Expert Systems like MYCIN, Specific Application of AI.

6. **Natural Language understandingand Processing**: Complexity of the problem, Syntactic processing: Grammars and Parsers, Augmented Transition Networks; Semantic Analysis: Semantic Grammars, Case Grammars; Discourse and Pragmatic processing:Using Focus in Understanding, Modeling Beliefs;

Introduction to Perception :Vision using Low-Level and High-Level Image Features and Action: Navigation and Manipulation.

UNIT – IV

7. **AI Language PROLOG**: Features of Prolog, Elementary Data Types, Compound objects in Prolog, Writing simple program in Prolog, Understanding Default flow control of the Prolog Program, Controlling Program Flow with cut and fail, List Manipulation, String manipulation, Arithmetic Operators and evaluation of Arithmetic expressions, Input /Output statement. Some simple example problems: Tower of Hanoi, Sorted Tree Dictionary, Sorting, Searching Graphs, Searching aMaze.

REFERENCES:

1. Rich Elaine and Knight Kevin: Artificial Intelligence; Tata-McGraw Hill Company, New Delhi.

2. George F Luger; William A. Stubblefield: Artificial Intelligence; Structures and Strategies for Complex problem solving, Pearson Education.

3. Patterson, Dan W.: Introduction to Artificial Intelligence and Expert Systems, Prentice-Hall of India Pvt. Ltd., New Delhi.

4. W.F. Clofisin and C.S. Mellish, "Programming in PROLOG", Narosa Publishing Co.

5. SanjivaNath, "Turbo PROLOG", Galgotia Publications Pvt. Ltd.

6. Bharti&Chaitany: Natural Language Processing, PHI.

7. Russel, Sturat&Norviig, Peter: Artificial Intelligence; A modern Approach; Person Education Pvt. Ltd.

SEMESTER - III

Paper Code: MS - 32
Paper Title: .NET FRAMEWORK AND C#
Maximum Marks: 80
Number of Lectures: 90
(45 minutes duration)

L	P
6	8

Objectives: This course aims at making a student capable of developing console, windows and web applications using C# on .NET platform.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Introduction to .NET environment:** The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach.
2. **Introduction to C#** :Introducing C#, Overview of C#, Literals, Variables, Data Types, Operators, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, Enumerations, difference between C++ and C#, difference between Java and C#.

UNIT-II

3. **Object Oriented Aspects of C#** : Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Errors and Exceptions.
4. **I/O and Object Serialization:** I/O: System. I/O, Streams, TextWriter, TextReader, BinaryWriter, BinaryReader, FileStream, File; Serialisation: Binary, SOAP, XML and Custom Serialisation.

UNIT-III

5. **Writing Windows Forms Applications and Deploying Windows Forms Applications:** Writing Windows Forms Applications: Understanding Windows Forms, Window form controls, Menus, MDI Forms, Using Inheritance in Windows Forms, Using Common Dialog Controls, Deploying Windows Forms Applications: Introduction to deployment, Click Once deployment, Creating an Installation Package for project.
6. **Writing ASP .NET applications and Deploying ASP .NET Applications:** Introduction to ASP.NET, Using Validation Controls, Managing State in ASP.NET Web Applications, Deploying ASP.NET Applications with Windows Installer.

UNIT-IV

7. **Accessing Data with ADO .NET**: ADO .NET : Architecture, Components, Database, DataReader, DataAdapter, DataSet, Viewing data using DataGridView Control, Creating Applications .

REFERENCES:

1. Jones, Bradley L.: Sams Teach Yourself C# in 21 Days.
2. Balagurusamy, E.: Programming in C#, Tata McGraw-Hill.
3. Liberty, J.: Programming C#, O'Reilly.
4. Schildt, Herbert: The Complete Reference: C#, Tata McGraw-Hill.
5. Robinson: Professional C#, Wrox Press.
6. Jason Beres: SAMS Teach Yourself Visual Studio.Net in 21 days.
7. Watsel, Nagel, Pedersen, Reid, Skinne, White: Beginning Microsoft Visual C#, Wrox Publications.

Paper Code: MS - 50
Paper Title: Linux System Administration
Maximum Marks: 80
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objective: This course enables students to get familiar with Linux system, its commands, files & directories, system, shell programming, PERL programming and system administration. After the completion of this course, student will be able to:

- Work in the Linux environment
- Assign the various permissions on the files and directories
- Write the shell programs
- Work with PERL
- Administrate the Linux machine

Note:

v. The Question Paper will consist of Four Units.
vi. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
vii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
viii. All questions carry equal marks unless specified.

UNIT –I

1. **Introduction to Linux:** What is Linux, Linux's History, Minimum System Requirements; Installing Linux: Working with Linux, Floppy-less Installation, Boot and Root Disks, Choosing Text or Graphics Installation, Setting up your Hard Drive, Formatting the Partitions, Configuration X, Selecting packages to Install, Using LILO; Partitioning the Hard Disk: Linux Swap Space Partitions, Linux's fdisk, Enabling the Swap Space for Installation, Creating the Linux File-system partition, Using LILO
2. **Using Linux:** Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords, Creating a New Login, Logging Out; Linux Error Messages, Search Paths; the who Command.
3. **Basic Linux Commands:** How Linux Commands Work, Command Options, Other Parameters, Input and Output Redirection, Notational conventions used to Describe Linux commands, Online help available in Linux, The Linux Man pages, Finding keywords in Man pages, The bash shell help facility; Wildcards: * and ?, Environment Variables, Process and how to Terminate them, The process status Commands: ps, The process termination command: kill, the su command, the grep command.

UNIT-II

4. **Using the File System** : Files Overview, Common types of files, filenames, Directories, Parent directories and sub-directories, The root directory, The home directory; Navigating the Linux file System: pwd command, Absolute and relative filenames; cd command, Creating and Deleting files: Cat, Creating Directories, Moving and Copying files, Moving and Copying with Wildcards, Moving Directories, Removing files and directories, Fear of Compression: The Zipless file, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc.
5. **File and Directory Permissions**: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; Bash: What is Shell? How the Shell gets Started, The most common Shells; The Bourne Shell: Command-line Completion, Wildcards, Command History, Aliases, Input Redirection, Output Redirection, Pipelines Shell, Prompts, Job control, Customizing bash, bash commands, bash variables.

UNIT-III

6. **Linux - tcsh :** An Introduction to tcsh, Command completion, Wildcards, Command History, Aliases, Input and Output Redirection, Pipelines, Prompts, Job Control; Key Bindings, Correcting Spelling Errors, Pre-commands, Change directory Commands, Monitoring Logins and Logouts, Customizing tcsh, tcsh Command Summary, tcsh variables.

7. **Shell Programming:** Creating and Running Shell Programs, Using variables: Assigning a value to a variable, Accessing the value of a variable, Positional Parameters and other Built-In Shell Variables; The Importance of Quotation Marks: The test Command, The tcsh Equivalent of the test command, Conditional Statements: if Statement, case Statement; Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions.
8. **Editing and Typesetting :** Text Editors vi, The vi Editor, Starting vi, vi modes, Inserting Text, Quitting vi, Moving the Cursor, Deleting Text, Copying and Moving Text, Searching and Replacing Text, Setting Preferences.

UNIT-IV

9. **PERL:** Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless Statements, for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators.
10. **Linux for System Administrators:** System Administration Basics, The root Account, Starting and Stopping the System, Using LILO to Boot, Shutting Down Linux; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, Checking file Systems, Using a file as Swap Space; Compressing files with gzip and compress: Using tar, Backups, Setting up your System: Setting the System Name, Using a Maintenance Disk, Forgetting the root Password, Setting the Login Message.
11. **Networking & Network Services:** Setting of DNS, Ping, WWW, e-mail.

REFERENCES:

1. Tim Parker: Linux Unleashed, Techmedia Publishing House.
2. Norton, P.: Complete guide to LINUX, Techmedia.
3. Komarinski, M.: LINUX System Administration Handbook, AW.
4. John Goerzen: Linux Programming Bible, IDG Books, New Delhi.
5. Venkateshmurthy, M.G.: Introduction to Unix & Shell Programming, Pearson Education.
6. Linux Network Administration Guide by Tery Dawson, Gregor N. Purdy, Tony Bautts, Oreilly.

Paper Code : MS – 51
Paper Title : Software Testing and Management
Maximum Marks : 80
Number of Lectures :90
(45 minutes duration)

L	P
6	0

Objective: This paper enables students to learn software testing process and techniques, concepts of Quality Assurance, reliability and Conf. Management. After the completion of this paper, student will be able to:

- Develop error free and quality software.
- Analyze the risk management
- Differentiate between CMM levels

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Testing Process**: An overview, Software Testing, Objectives of Software Testing, Software Testing Process, Static and Dynamic Analysis, STEP Methodology, Elements of STEP and STEP Architecture.
2. **Metrics for Software**: Importance of Metrics to Software Project, Software Quality Metrics, Software Metrics: Product Metrics: Software Size Metrics, Control Complexity Metrics, Object Oriented Metrics, Software Quality Metrics.

UNIT-II

3. **Software Testing Techniques:** BBT & its Technique, Boundary Value Analysis, Cause- Effect Graph, white-Box Testing and its Techniques: Domain and Boundary Testing, Logic Based Testing, Data Flow Testing.
4. **Software Testing Strategies:** Characteristics, Integration Testing, Functional Testing, Object Oriented Testing, Alpha and Beta Testing.
5. **Software Quality Assurance**: Concepts and Standards, Quality Control, Quality Assurance, SQA Activities, Software Reviews, Formal Technical Reviews, Review Guidelines, Software Safety, CMM, TQM, Six Sigma, SPICE, Software Quality Assurance Metrics.

UNIT-III

6. **Quality Assurance:** Overview of Software Quality, Software Quality Attributes, Factors Affecting Software Quality, Building Software Quality Assurance Plan, Components of SQAP.
7. **Quality Management & Quality Models:** Software Quality System, Quality Management Principles, ISO 9000 Quality Standard, SEI Capability Maturity Model.

UNIT-IV

8. **Software Reliability:** Factors Affecting Software Reliability, Software Reliability vs Hardware Reliability, Software Reliability Metrics.
9. **System Configuration Management (SCM):** Basic requirements for SCM system, SCM principles, Planning and organizing for SCM, Benefits of SCM, Change management, Version and release management.
10. **Risk Management and Change Management:** Software Risks, Risk Identification, Risk Projection, Risk Refinement, The RMMM Plan, Software Configuration Management, Baselines, Software Configuration Items, Configuration Audit, Configuration Management for Web Engineering.

REFERENCES:

1. Doutsch, Wills, Hall: Software Quality Engineering: A total Technique and management Approach,
2. Gill, Nasib Singh: Software Engineering: Softwrae reliability, Testing and Quality Assurance. Khanna Book Publishing.
3. Robert T. Futrell,Donald F. Snafer, Linda I. Shafter: Quality SoftwareProject Management Pearson Education.
4. William E. Perry, WILEY: Effective methods for Software Testing
5. D. Galin: Software Quality Assurance, Pearson Education.
6. MilindLimaye: Software Quality Assurance, McGraw-Hill.
7. A. C. Gillies: Software Quality: Theory & Practice, Cengage Learning.
8. Nina S Godbole: Software Quality Assurance – Principles and Practice, Narosa.

Paper Code: MS – 14
Paper Title: Systems Approach to Management and Optimization Techniques
Maximum Marks: 80
Number of Lectures: 90
(45 minutes duration)

L	P
6	0

Objective: This course enables students to be familiar with different types of Info systems, basics of DR and its practical problems**.**

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Concepts of Computer Based Systems:** Data, Information, Information Systems, Model of computer based information system; Introduction to Management Information System, Decision Support System and Knowledge Based Systems.
2. **Accounting Information System:** Characteristics, sample system, subsystems for filling customer order, order replenishment stock, performing general ledger processes; features and use of Accounting Information System Package-Tally.
3. **Marketing Information System:** Basic concepts, model, subsystems including Marketing Research, Marketing Intelligence, Product, Place, Promotion and Pricing subsystems.

UNIT-II

4. **Manufacturing Information System:** Model and subsystems including Accounting Information, Industrial Engineering, Inventory, Quality and Cost Subsystems.
5. **Financial Information System:** Model and Subsystems including Forecasting, Funds Management and Control Subsystems.
6. **Human Resources Information Systems:** Model and Subsystems including human resources research, human resources intelligence, HRIS Database, HRIS output.

UNIT-III

7. **Basics of Operations Research (OR):** Origin and Development of OR, Characteristics of OR, Models in OR, OR and Decision Making, Role of Computers in OR, Limitations of OR.
8. **Linear Programming**: Mathematical Formulation, Graphical and Simplex method, Duality in Linear programming, Dual Simplex Method, The Revised Simplex Method, Sensitivity Analysis.

UNIT-IV

9. **Special types of Linear Programming problems**: Transportation and Assignment problems.
10. **Integer Programming**: Introduction, Branch and Bound Techniques, Binary Linear Programming, Assignment & Traveling salesman problems.
11. **Dynamic Programming:** Deterministic & Probabilistic Dynamic Programming.

REFERENCES

1. Basandra, Suresh K. : Computer Systems Today, Wheeler Publishing
2. Murdick, R.G. & Ross J.E. & Claggtt J.R.: Information Systems for Modern Management, Prentice Hall
3. Swarup, Kanti, Gupta, P.K. & Manmohan: Operations Research, Sultan Chand & Sons.
4. Gupta, Prem Kumar & Hira, D.S.: Operations Research.
5. Rao, S. S.: Introduction to Optimization: Theory & Applications, Wiley Eastern.
6. Taha, H.A.: Operations Research – An Introduction, McMillan Publishing Company
7. S.D. Sharma: Operation Research, Sultan Chand & Sons.

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PANJAB UNIVERSITY, CHANDIGARH -160014 (INDIA)
(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

SYLLABI

FOR

M.Sc. Microbial Biotechnology

(Semester System)

EXAMINATION 2016-2017

--:O:--

SYLLABUS – 2016-17

M.Sc. Microbial Biotechnology

M.Sc. 1st year (1st Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Microbial Biodiversity and Physiology	MBT-101T	100	MBT-101 P	50	6
2.	Immunology and Immunotechnology	MBT-102T	100	MBT-102 P	50	6
3.	Genetics and Recombinant DNA Technology	MBT-103 T	100	MBT-103 P	50	6
4.	Microbial Biochemistry and Enzymology	MBT-104 T	100	MBT-104 P	50	6
5.	Bioprocess Engineering	MBT-105 T	100	MBT-105 P	50	6

Total Credits= 30

Total Marks = 750

M.Sc. 1st year (2nd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Medical Microbiology	MBT-201 T	100	MBT-201 P	50	6
2.	Molecular Biology	MBT-202 T	100	MBT-202 P	50	6
3.	Industrial Microbiology-1 (Health, Food, Enzymes)	MBT-203 T	100	MBT-203 P	50	6
4.	Bioinformatics & Biostatistics	MBT-204 T	100	MBT-204 P	50	6
5.	Intellectual Property Rights (IPR), Bioethics & Entrepreneurship	MBT-205 T	100	MBT-205 P	50	6

Total Credits= 30

Total Marks = 750

M.Sc. 2nd year (3rd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)	MBT-301 T	100	MBT-301 P	50	6
2.	Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)	MBT-302 T	100	MBT-302 P	50	6
3.	Bioinstruments and their Applications	MBT-303 T	100	MBT-303 P	50	6
4.	Microbial Identification, Diagnostics & Nanobiotechnology	MBT-304 T	100	MBT-304 P	50	6
5.	Tutorials	MBT-305 T	100	MBT-305 P	--	4

Total Credits= 28
Total Marks =700

M.Sc. 2nd year (4th Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Seminar & Tutorials	MBT-401 T	100	MBT-401 P	--	2 + 2
2.	Dissertation	MBT-402 T	350	MBT-402 P	--	14

Total Credits= 18
Total Marks = 450

Consolidation of Marks and Credits

Sr. No.	Class	Total Marks	Total No. of Credits
1.	M.Sc. 1st Yr	1500	60
2.	M.Sc. 2nd Yr	1150	46
Grand Total		**2650**	**106**

Department of Microbial Biotechnology (DMBT)

Syllabus
for
M.Sc. MICROBIAL BIOTECHNOLOGY
2016-2017

Semester I

1. MBT-101: Microbial Biodiversity and Physiology
2. MBT-102: Immunology and Immunotechnology
3. MBT-103: Genetics and Recombinant DNA Technology
4. MBT-104: Microbial Biochemistry and Enzymology
5. MBT-105: Bioprocess Engineering

Semester II

1. MBT-201: Medical Microbiology
2. MBT-202: Molecular Biology
3. MBT-203: Industrial Microbiology-1 (Health, Food, Enzymes)
4. MBT-204: Bioinformatics and Biostatistics
5. MBT-205: Intellectual Property Rights (IPR) Bioethics & Entrepreneurship

Semester III

1. MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)
2. MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)
3. MBT-303: Bioinstruments and their Applications
4. MBT- 304: Microbial Identification, Diagnostics & Nanobiotechnology
5. MBT-305: Tutorials

Semester IV

1. MBT-401: Seminars and Tutorials
2. MBT-402: Dissertation.

MBT-101: Microbial Biodiversity and Physiology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) the diversity of microbes, (ii) growth & nutrient requirements (iii) unique metabolic pathways.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit -I

1. Relevance of microbiology as a field of Biotechnology.
2. Historical milestones in Microbiology and Biotechnology
3. Structures and functions of *Escherichia, Staphylococci & Saccharomyces.*
4. Control of microbes by the use of physical and chemical agents.

Unit – II

5. Biodiversity of
(a) Archaea
(b) Bacteria
(c) Fungi
(d) Algae
(e) Viruses

6. Microbial ecology: Biogeochemical cycling, Microbes in marine & freshwater environments, Microbes in terrestrial environment, Microbial interactions

Unit – III

7. Nutritional requirements of microbes
8. Bacterial growth and its kinetics.
9. Chemostat, Turbidostat, Synchronous growth.
10. Mechanisms involved in transport of nutrients in microbes

Unit - IV

11. Unique pathways of microbial metabolism: ED, PK pathways; Respiration; Fermentations; Amphibolic pathways; Anaplerotic reactions.
12. Bacterial cell wall biosynthesis
13. Photoautotrophy, Chemolithotrophy, Methylotrophy, Calvin cycle

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Use of basic instruments in Microbiology (Light microscope, pH meter, Autoclave, Laminar flow chamber, Centrifuge, Spectrophotometer).
2. Staining of bacteria, yeast and fungi.
3. Purification of mixed cultures by streaking technique
4. Determination of viable count
5. Correlation of viable counting and optical density of cultures
6. Isolation of microbes from environment
7. Bacteriophage screening
8. Preparation of complex and synthetic medium.
9. Sterilization of liquid and solid items.
10. Storage of microbes

Suggested readings:

1. Microbial Biotechnology by A. R. Alagawadi, P. U. Krishnaraj, K. S. Jagadeesh, S. Kannaiyan. (2006) Publisher: Alpha Science Intl Ltd; First edition (2006), ISBN-10: 8173197253 ISBN-13: 978-8173197253.
2. Microbial Diversity: Form and Function in Prokaryotes by Oladele Ogunseitan, (2004) Publisher: Wiley-Blackwell. ISBN-13: 978-0632047086
3. Introduction to Biotechnology by William J. Thieman and Michael A. PalladinPo (2003) Publisher: Benjamin Cummings; First edition ISBN-10: 0805348255 ISBN-13: 978-0805348255
4. Biodiversity of Microbial Life: Foundation of Earth's Biosphere by James T. Staley and Anna-Louise Reysenbach (2001) Publisher: Wiley-Liss; First edition ISBN-10: 0471254339 ISBN-13: 978-0471254331
5. Genetics and Physiology of Microbes by Rajan S. Sundara (2003), Publisher: Anmol Publications Pvt Ltd ISBN-10: 8126113677 , ISBN-13: 978-8126113675
6. Microbial Physiology, 4th Edition by Albert G. Moat, John W. Foster, Michael P. Spector, and Michael P. Sector (2002) Publisher: Wiley-Liss; 4th edition, ISBN-10: 0471394831 ISBN- 13: 978-0471394839
7. Advances in Microbial Physiology by Robert K. Poole (2002), Publisher: Academic Press; 1st edition ISBN-10: 0120277468, ISBN-13: 978-0120277469

MBT-102: Immunology and Immunotechnology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) the basics of immune system (ii) the response of humans to foreign bodies (iii) the techniques involved in immunoassays (iv) vaccines*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Immune cells and immune organs, adaptive and innate immunity.
2. B cell biology: Development, selection, B cells as central players of humoral immunity.
3. T cell biology: Development, thymic education, TCR rearrangement, basic functions of cells during immune response, T cells subsets.
4. Immunoglobulins: Structure and functions of Immunoglobulins, Immunoglobulin rearrangement, molecular genetics of BCR generation
5. Antigens, complement system, haptens, adjuvants.

Unit-II

6. Antigen presenting cells (APCs): Dendritic cell (DC), importance of DCs in adaptive immune response, role of B cells and macrophages as APCs, non-professional APCs, cell biology of antigen processing and presentation.
7. Major Histocompatibility Complex (MHC): Structure, function and immunogenetics of MHC, MHC-TCR interactions.
8. Immune Homeostasis: Homeostasis, migration, tissue redistribution of lymphocytes, site specific immune response.
9. Chemokine, cytokine and cell signaling: Their roles in activation and differentiation of cells of immune system, importance in response to pathogens.
10. Nuclear receptors for macrophage and T cell plasticity, nuclear receptors and antigen processing and presentation, nuclear receptors and immune cell effector repertoire.

Unit-III

11. Antigen-antibody reactions, interaction, cross reactions, precipitation and agglutination.
12. Radioimmunoassay, ELISA, Western blotting.
13. Hybridomas and Monoclonal antibodies.
14. Recent advances in immunological tools for diagnosis of diseases.

Unit-IV

15. Tolerance and autoimmunity, allergy and hypersensitivity-mediated diseases.
16. Immune response to infectious diseases: Responses to different class of pathogens such as intracellular bacteria, viruses and extracellular and intracellular parasites.

17. Vaccines and their types: killed and live, sub unit, recombinant, multivalent, DNA, edible vaccines. Microbe-resistant transgenic plants
18. Antibodies as immunotherapeutic, cytokine therapy
19. Cancer: immune-surveillance, tumor antigens, immunological intervention.

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Animal handling and routes of immunization
2. Drawing blood from animals
3. TLC and DLC for blood samples.
4. Determination of cell number (viable/non-viable).
5. Ficoll density gradient, separation of cell types.
6. Immunoassays

Suggested readings:

1. Kuby Immunology by Thomas J. Kindt, Barbara A. Osborne, and Richard A. Goldsby Publisher: (2006) . W. H. Freeman; 6th edition. ISBN-10: 1429202114, ISBN-13: 978-1429202114
2. Basic Immunology, Abul K. Abbas and Andrew H. Lichtman (2006) Publisher: Saunders; 2nd edition. ISBN-10: 1416029745, ISBN-13: 978-1416029748
3. Roitt's Essential Immunology (Essentials) by Peter Delves, Seamus Martin, Dennis Burton, and Ivan Roitt (2006), Publisher: Wiley-Blackwell; 11th edition ISBN-10: 1405136030, ISBN-13: 978-1405136037
4. Immunobiology by C. Janeway (2004) Publisher: Garland Science; 6th edition. ISBN-10: 0815341016, ISBN-13: 978-0815341017

MBT-103: Genetics and Recombinant DNA Technology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) genetics of microbes (ii) permanent changes in the genetic material (iii) techniques involved in the cloning of genetic elements*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Mendelian principles, concept of allele, multiple alleles, pseudoallele, co-dominance, incomplete dominance, gene interaction, pleiotropy, linkage, crossing over, sex linkage, sex limited and sex influenced characters.
2. Significance of genetic recombination
3. Homologous genetic recombination (Transformation, Transduction, Conjugation) and heterologous genetic recombination (IS, Tn, Mu phage)
4. Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers, mapping by using somatic cell hybrids

Unit - II

5. Mutations: Fluctuation test, Replica plating
6. Physical and chemical mutagens
7. Types of mutations
8. DNA Repair mechanisms

Unit – III

9. Host restriction/modification, Enzymes involved in gene cloning
10. Natural Plasmids and their types, Role of plasmids in transfer of genes
11. Plasmids as gene cloning vectors, Commercial vectors
12. Strategies involved in cloning of gene(s).
13. Construction of genomic, cDNA and meta-genomic libraries

Unit – IV

14. DNA sequencing
15. PCR and its applications and modifications
16. Phage display technology and its applications.
17. Yeast two-hybrid system, Combinatorial library

Practicals:

Total Marks: *50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Isolation of chromosomal DNA
2. Isolation of plasmid
3. Preparation of competent cells
4. Transformation and Electroporation
5. Restriction digestion (complete and partial) of DNA
6. Cloning and expression of a gene in *E.coli*
7. Amplification of DNA by PCR

Suggested readings:

1. Modern Microbial Genetics by Uldis N. Streips and Ronald E. Yasbin. (2002) Publisher: Wiley-Liss; 2nd edition, ISBN-10: 0471386650 ISBN-13: 978-0471386650
2. From Genes to Genomes: Concepts and Applications of DNA Technology by Jeremy W. Dale and Malcolm von Schantz. (2007), Publisher: Wiley-Interscience; 2nd edition ISBN-10: 0470017333, ISBN-13: 978-0470017333
3. Gene and Genome Technology: Principles and Applications of Recombinant DNA and Genomics by Sandy Primrose and Richard Twyman. (2007) Publisher: Blackwell Publishing Limited ISBN-10: 140515666X ISBN-13: 978-1405156660
4. Principles of Gene Manipulation and Genomics by Sandy Primrose, Richard Twyman, Bob Old, and Giuseppe Bertola. (2006) Publisher: Blackwell Publishing, Incorporated; 7th edition ISBN-10: 1405135441 ISBN-13: 978-1405135443
5. Manipulation and Expression of Recombinant DNA, by Sue Carson and Dominique Robertson. (2005) Publisher: Academic Press; 2nd edition, ISBN-10: 0120884186, ISBN-13: 978-0120884186
6. Gene Cloning and DNA Analysis: An Introduction by T. A. Brown. (2001) Publisher: Blackwell Publishing, Incorporated; 4th edition ISBN-10: 063205901X ISBN-13: 978-0632059010
7. Recombinant DNA Technology by O.S. Reddi (2000), Publisher: Allied Publishers Pvt. Ltd. ISBN-10: 8170239958

MBT-104: Microbial Biochemistry and Enzymology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) macromolecular interactions (ii) structure and functions of biomolecules (iii) enzymes: their functions, regulation and industrial applications*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Buffers and physiological buffers.
2. Thermodynamics and Principles of thermodynamics, free energy, enthalpy and entropy.
3. Macromolecular interactions: van-der waal's, hydrogen bonding, ionic, hydrophobic, covalent etc.
4. Structure and functions of Carbohydrates, Proteins, Lipids, Nucleotides, DNA, RNA, and Vitamins
5. Conformation of proteins (secondary, tertiary and quaternary structure; domains; motifs and folds; Ramachandran plot)

Unit – II

6. Metabolism of Carbohydrates (Glycolysis, TCA, HMP, Gluconeogenesis)
7. Metabolism of Lipids (Fatty acid metabolism, Phospholipid metabolism, Cholesterol biosynthesis)

Unit – III

8. Metabolism of protein (Digestion of proteins, General reactions of amino acids, Fate of carbon skeletons of amino acids, Regulation of amino acid biosynthesis)
9. Electron transport chain, Oxidative phosphorylation

Unit – IV

10 Enzymes: General distinctive features, nomenclature and industrial applications
11. Enzyme kinetics
12. Allosteric enzymes
13. Feed back inhibition and Feedback repression mechanisms
14. Multienzyme complexes: advantage and examples
15. Biocatalysis-Definition, chirality, advantages/disadvantages of biocatalysis over chemical catalysis, different types of biocatalysis

Practicals:

Total Marks: *50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Qualitative and quantitative assay of Sugars
2. Qualitative and quantitative assay of Proteins
3. Qualitative and quantitative assay of Lipids
4. Qualitative and quantitative assay of Nucleic acids
5. Assay of enzymes
6. Substrate specificity and efficiency of enzymatic catalysis
7. Kinetics of enzyme catalyzed reactions
8. Effect of pH and temperature on enzyme activity
9. Enzyme immobilization

Suggested readings:

1. Enzyme Kinetics and Mechanism by Paul Cook. (2007) Publisher: Garland Science; 1st edition ISBN-10: 0815341407 ISBN-13: 978-0815341406
2. Enzymatic Reaction Mechanisms by Perry A. Frey and Adrian D. Hegeman (2006), Publisher: Oxford University Press, USA; 1st edition ISBN-10: 0195122585 ISBN-13: 978-0195122589
3. Enzyme Kinetics: A Modern Approach by Alejandro G. Marangoni (2002) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471159859 ISBN-13: 978-0471159858
4. Introduction to Biocatalysis Using Enzymes and Microorganisms by S. M. Roberts, Nicholas J. Turner, Andrew J. Willetts, and Michael K. Turner (1995) Publisher: Cambridge University Press ISBN-10: 0521430704 ISBN-13: 978-0521430708

MBT-105: Bioprocess Engineering

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to the (i) bioreactor and its types (ii) production of bioactive molecules /cells in a bioreactor (iii) purification of bioactive molecules (iv) fermentation processes*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to a bioreactor design. Control panels of a bioreactor. Types of bioreactors. Kinetics of growth product formation and substrate utilization.
2. Operation of bio-reactors.

Unit – II

3. Mass and Heat Transfer in Bioreactors: Aeration and Agitation in Bioreactors, Concept of mass transfer correlation and scale up.

Unit – III

4. Up Stream Process (USP): Inoculum development, Media composition, Sterilization etc.
5. Down Stream Process (DSP): Cell disruptions, Flocculation, Filtration, Ultra filtration, Centrifugation, Ultracentrifugation, Chromatographic methods, two phase aqueous separations, solvent – solvent extraction, centrifugation, pre treatment, crystallization etc.

Unit – IV

6. Fermentations and Fermentative processes like Submerged, Solid state, Batch, Fed Batch, Continuous system etc.
7. Hygiene and safety in fermentation laboratory/processes.

Practicals

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Components and Operation of a Bioreactor
2. Batch fermentation in conical flask
3. Production of the enzyme/s in shake flask
4. Solid state fermentation

Suggested readings:

1. Biotransformations and Bioprocesses (Biotechnology and Bioprocessing Series). Mukesh Doble, Anil Kumar Kruthiventi and Vilas Ganjanan Gaikar (2004). Publisher: CRC; 1st edition, ISBN-10: 0824747755, ISBN-13: 978-0824747756.

2. Bioprocess Engineering Basic Concepts (2002).Publisher: Prentice Hall; 2nd ISBN-10: 8120321103 ISBN-13: 978-8120321106.

3. Principles of Fermentation Technology. P.F. Stanbury, A.Whitaker and S. Hall. (2001)

4. Bioprocess Engineering: Basic Concepts. Michael L, Shuler and Fikret Kargi (2001). Publisher: Prentice Hall PTR; 2nd edition ISBN-10: 0130819085, ISBN-13: 978-0130819086.

5. Solid-State Fermentation Bioreactors: Fundamentals of Design and Operation. David A. Mitchell, Nadia Krieger, and Marin Berovic (June 2006). Publisher: Springer; 1st edition ISBN-10: 3540312854, ISBN-13: 978-3540312857.

6. Bioreactors for Tissue Engineering: Principles, Design and Operation. Julian Chaudhuri and Mohamed Al-Rubeai (2005). Publisher: Springer; 1st edition.

7. Multiphase Bioreactor Design. Joaquim M.S. Cabral, Manuel Mota and Johannes (2001).Publisher: CRC ISBN-10: 0415272092, ISBN-13: 978-0415272094.

MBT-201: Medical Microbiology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) various types of diseases caused by microbial pathogens (ii) pathogenic mechanisms of microbes (iii) antimicrobial chemotherapy (iv) epidemiology of important diseases*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I (Pathogenesis, Chemotherapy)

1. Overview of a) Normal microflora of humans and its importance, b) Specific and Non-specific defense mechanisms.
2. Pathogenesis of microorganisms: Host parasite relationships, pathogenesis of bacterial diseases, pathogenesis of viral diseases, toxigenesis, host defense against microbial invasion, microbial mechanism for escaping host defenses.
3. Antimicrobial chemotherapy: Characteristics of anti microbial drugs, determination of anti microbial activity, anti-bacterial drugs, anti-viral drugs, anti-fungal drugs, anti-protozoon drugs.
4. Development and transfer of drug resistance in microbes.

Unit – II (Bacterial infections)

5. Air-borne bacterial diseases (TB, Diphtheria, Pertussis, Streptococcal, etc.)
6. Food/Water – borne bacterial diseases (Botulism, Gastroenteritis, Cholera, Salmonellosis, Shigellosis, Traveller's diarrhea ; Sepsis and septic shock)
7. Direct - contact diseases (Gas gangrene, GBS, Conjunctivitis, Leprosy, Peptic ulcer, Staphylococcal, STB, Tetanus, Trachoma)
8. Arthropod - borne bacterial diseases (Typhus, Lyme, Plague, Q fever etc.); Zoonotic diseases (Anthrax, Brucellosis); Dental infections (Dental plaque, Dental Decay, Periodontal diseases.

Unit – III (Viral infections)

9. Air-borne viral diseases (Chicken pox, Small pox, Measles, Mumps, Influenza)
10. Direct - contact diseases (AIDS, Sores, Common cold, CMV, Genital herpes, Leukemia, Infectious monoucleosis, Hepatitis, Warts)
11. Food/Water – borne viral diseases (Gastroenteritis, Hepatitis, polio)
12. Zoonotic viral diseases; (Rabies, VHF); Arthropod - borne diseases (Encephalitis, RVF, Yellow fever); Prion diseases.

Unit – IV (Other infections, Epidemiology)

13. Over view of human diseases caused by Fungi and Protists especially Malaria, Leishmaniasis, Amebiasis, Giardiasis.
14. Brief introduction to discomforts caused by Algae
15. Epidemiological terminology, Morbidity rate, Mortality rate, Prevalence rate; Recognition of infectious diseases in a population; Recognition of an epidemic; infectious disease cycle; Virulence and the mode of transmission
16. Emerging and reemerging infectious diseases/pathogens; Control of epidemics; Global travel and health considerations; Nosocomial infections.

PRACTICALS:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Collection, handling and storage of clinical samples
2. Culture identification of bacteria (*E.coli, Salmonella, Shigella, Staphylococcus, Streptococcus)*
3. Culture identification of fungi (*Candida, Aspergillus*)
4. Identification of pathogens by PCR technology
5. Antibiotic sensitivity of clinical pathogens

Suggested Readings:

1. Medical Microbiology, by Geo. F. Brooks. (2007) Publisher: McGraw-Hill Medical; 24th edition. ISBN-10: 0071476660, ISBN-13: 978-0071476669,
2. Medical Microbiology by Patrick R. Murray, Michael A. Pfaller, Ken S. Rosenthal, and Patrick R. Murray (2005). Publisher: Mosby; 5th edition ISBN-10: 0323033032, ISBN-13: 978-0323033039
3. Review of Medical Microbiology by Patrick R. Murray and Ken Rosenthal (2005). Publisher: Mosby; 1st edition ISBN-10: 0323033253 , ISBN-13: 978-0323033251
4. Medical Microbiology & Immunology by Warren E. Levinson (2004) Publisher: McGraw-Hill/Appleton & Lange; 8th edition. ISBN-10: 0071431993, ISBN-13: 978-0071431996

MBT-202: Molecular Biology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to the mechanism of (i) DNA replication (ii) DNA transcription (iii) protein synthesis (iv) regulation of gene expression (v) signal transduction*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. DNA and its various forms, super coiling of DNA, DNA melting, repetitive sequences, cot and rot curves, C value paradox, DNA protein interaction, DNA super coiling.
2. Unit of DNA replication, enzymes involved in replication, origin and replication fork, fidelity of replication.
3. Replication of bacterial chromosome, chromosome structure and organization of genes on chromosome, operon context.
4. Replication of eukaryotic chromosomes, cell division and cell cycle

Unit-II

5. RNA synthesis and processing: transcription factors and machinery, formation of initiation complex, transcription activator and repressor, RNA polymerases, capping, elongation, and termination, RNA processing, RNA editing, splicing, and polyadenylation, structure and function of different types of RNA, non coding RNA, RNA transport.

Unit – III

6. Protein synthesis and processing: Ribosome structure, genetic code, aminoacylation of tRNA, formation of initiation complex, initiation factors and their regulation, elongation and elongation factors, termination, translation proof-reading, translation inhibitors, Post-translational modification of proteins.
7. Control of gene expression at transcription and translation level

Unit – IV

8. Cell signaling: signal transduction pathways and their regulation, bacterial two-component systems, bacterial chemotaxis and quorum sensing.
9. Cancer Biology: Genetic rearrangements in progenitor cells, oncogenes, tumor suppressor genes, cancer and cell cycle, metastasis. Role of microbes in cancer.
10. Gene silencing strategies

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Tm value of DNA
2. Spectrophotometric analysis of DNA
3. Protein purification by Gel exclusion chromatography
4. Protein purification by Ion-Exchange chromatography
5. Protein purification by Affinity chromatography
6. Separation of proteins on non-denaturing gels.
7. Separation of proteins on denaturing gels.

Suggested readings:

1. Molecular Biology of the Gene, by James D. Watson, Tania A. Baker, Stephen P. Bell, and Alexander Gann (2007), Publisher: Benjamin Cummings; 6th edition ISBN-10: 080539592X ISBN-13: 978-0805395921
2. Fundamental Molecular Biology by Lizabeth A. Allison (2007), Publisher: Wiley-Blackwell; 1st edition ISBN-10: 1405103795 ISBN-13: 978-1405103794
3. Molecular Biology by Robert F. Weaver (2007) Publisher: Mcgraw-Hill College; 4th edition ISBN-10: 0072995246 ISBN-13: 978-0072995244
4. Cell and Molecular Biology: Concepts and Experiments by Gerald Karp (2007) Publisher: Wiley; 5th edition ISBN-10: 0470042176 ISBN-13: 978-0470042175
5. Molecular Biology of the Cell by Bruce Alberts, Alexander Johnson, Julian Lewis, and Martin Raff Publisher: Garland Science; 5th edition, ISBN-10: 0815341059 ISBN-13: 978-0815341055

MBT-203: Industrial Microbiology- I (Health, Food, Enzymes)

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) Industrially important metabolites produced by microbes especially in the areas of health, food and enzymes (ii) immobilization of enzymes/cells*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Primary and Secondary metabolites of industrial importance.
2. Techniques involved in screening/detection of industrially important metabolites from microbes.
3. Pyruvate as the hub molecule

Unit - II

4. Biosynthesis and fermentation process involved in

(a) Health & Pharma- Antibiotics (Penicillin, Streptomycin,), Alkaloids (ergot, lysergic acid), Biotransformations (Steroids, chirals), Therapeutic proteins (Interferons, Insulin).

(b) Food and Beverages- Beer, Wine, Whisky, Vinegar, Probiotics, Traditional fermented foods, Food additives: Vitamins, Bioflavors

Unit – III

5. Microbial Enzymes - Pharma related enzymes, Detergent enzymes, Processing of starch and related carbohydrates, Fruit juice production, Textile & leather manufacture, Treatment of wood pulp, Organic synthesis, Diagnostics

Unit – IV

6. Immobilization of enzymes and cells: Parameters for choosing a matrix for immobilization, types of methods for immobilizations. Applications of immobilization techniques.

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Screening of microbes for production of industrially important enzymes.
2. Optimization of conditions for optimal production of enzyme: - Media composition, Incubation temperature, Aeration, Incubation time.
3. Wine fermentation
4. Purification of antimicrobial metabolites from a microbe.

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers. Doyle (2007). Publisher: American Society Microbiology; 3rd edition ISBN-10: 1555814077, ISBN-13: 978-1555814076.
2. Food Microbiology: An Introduction. Montville (2005). Publisher: American Society Microbiology; 1st edition ISBN-10: 1555813089, ISBN-13: 978-1555813086.
3. Environmental Microbiology: A Laboratory Manual. Ian L. Pepper and Charles P. Gerba(2004). Publisher: Academic Press; 2nd edition ISBN-10: 0125506562, ISBN-13: 978-0125506564.
4. Advances in Food & Nutrition Research. Steve Taylor (2003). Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479.
5. Environmental Microbiology. Raina M. Maier, Ian L. Pepper, and Charles P. Gerba(2000). Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705.
6. Applied Dairy Microbiology. Elmer H. Marth and James Steele (2001).Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367.
7. Peter F Drucker. Innovation and Entrepreneurship. Harper & Row, 1985
8. Prasanna Chandra- Projects: Preparation Appraisal and Super implementation. Tata Mc-Graw-Hill Co. Ltd
9. J.D. West & F.K. Levy. A management guide to PERT/CPM, Prentice Hall, India

MBT-204: Bioinformatics and Biostatistics

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) basic understanding of computers (ii) computational tools developed for understanding of genetic material and proteins*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I (Biostatistics)

1. Basic definitions and applications. Data collection and representation. Measure of central tendencies (Mean, Median and Mode) and dispersal; measure of variability (standard deviation, standard error, range, mean deviation, coefficient of variation); probability distributions (Binomial, Poisson and Normal), sampling distribution
2. Difference between parametric and non-parametric statistics, confidence interval, errors, levels of significance
3. Regression and correlation, t-test, analysis of variance, chi-square test
4. Basic introduction to Multivariate statistics

Unit – II (Biological databases)

5. Brief on programming languages commonly used in Biological Sciences
6. Database- introduction, Primary, Secondary and Tertiary databases. Type and kind of databases. Literature search (PUBMED and MEDLINE).
7. Nucleic acid (GenBank, EMBL etc.). Structural databases- PDB, PDBsum, NDB, CATH, SCOP etc. Motifs and Pattern Databases- PROSITE, Pfam, etc.
8. Protein databases (SWISS PROT, UNIPROT etc.). Structural databases- PDB, PDBsum, NDB, CATH, SCOP etc. Motifs and Pattern Databases- PROSITE, Pfam, etc.
9. Sequence retrieval (SRS, Entrez) and Data submission.

Unit – III (Sequence analysis)

10. Sequence alignment- introduction and concepts, Local and Global alignment concepts.
11. Similarity and Percent identity score (open, extended gap penalty). Multiple sequence alignment - introduction and concepts. Types of multiple sequence alignment techniques. Description of major softwares (MSA, CLUSTALW, PILEUP).
12. Database Scanning and Sequence similarity searches. Algorithm of FASTA. Description of BLAST algorithm. Various BLAST programs (BLASTP, BLASTN).
13. Protein Structure: Classification, Structure Analysis, Secondary structure predictions, Comparative modeling.

Unit – IV (Genome analysis)

14. Introduction to genomes. Sequencing techniques. Sequencing of whole genomes
15. Next Gen Sequencing. Assembling of genomes from short reads
16. Concept of Metagenomics. Types of repeats and repeat finding techniques. Structure of genes, Prediction of gene in prokaryotic and eukaryotic genomes. Prediction of promoter in *E.coli* and in eukaryotes
17. Description of major gene prediction methods

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Sequence (DNA & Protein) alignments
2. Genome sequence studies
3. Designing ideal primers for amplification of genetic material
4. Deciphering 3-D structure of proteins.
5. Designing inhibitors of enzymes

Suggested Readings:

1. Understanding Bioinformatics by Marketa Zvelebil and Jeremy Baum (2007) Publisher: Garland Science; 1st edition ISBN-10: 0815340249, ISBN-13: 978-0815340249

2. Essential Bioinformatics by Jin Xiong (2006) Publisher: Cambridge University Press; 1st edition ISBN-10: 0521600820, ISBN-13: 978-0521600828

3. Bioinformatics: Sequence and Genome Analysis by David W. Mount (2004). Publisher: Cold Spring Harbor Laboratory Press; 2nd edition ISBN-10: 0879697121 ISBN-13: 978-0879697129

4. An Introduction to Bioinformatics Algorithms (Computational Molecular Biology) by Neil C. Jones and Pavel A. Pevzner (2004) Publisher: The MIT Press; 1st edition ISBN-10: 0262101068, ISBN-13: 978-0262101066

5. Bioinformatics: A Biologist's Guide to Biocomputing and the Internet by Stuart M. Brown (2000). Publisher: Eaton Publishing Company/Biotechniques Books ISBN-10: 188129918X, ISBN-13: 978-1881299189

MBT-205: Intellectual Property Rights (IPR), Bioethics and Entrepreneurship

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) understanding of patents (ii) filing of patents (iii) ethical and social issues in biotechnology*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Introduction: General Introduction
2. Patent Claims, the legal decision-making process
3. Ownership of Tangible and Intellectual Property.
4. Basic requirements of patentability, patentable subject matter, novelty and the Public Domain; Non-obviousness, Foreign Patents
5. Special issues in Biotechnology Patents: Disclosure Requirements, Ethical issues, Plant Biotechnology- UPOV and plant breeder's rights, Case studies/ experiences from developing and developed countries, IPR issues in the Indian context.

Unit - II

6. Copyright and Patents; International Treaties and Conventions; Business Software Patents
7. Patent Litigation: Substantive and Procedural Aspects
8. IT Act, 2000 : Aims and Objectives; Overview of the Act; Jurisdiction; Role of Certifying Authority; Regulators under IT Act; Cyber Crime-offences and Contraventions; Grey Areas on IT Act.

Unit - III

9. Biotechnology and hunger: Challenges for the Indian Biotechnological research and industries.
10. The Cartagena protocol on biosafety
11. Social and ethical implication of biological weapons

Unit - IV

12. Entrepreneurship: Need, scope, philosophy and classification. Creativity and Entrepreneurship. Entrepreneurship competencies and traits, factors affecting Entrepreneurship development
13. Functions of entrepreneurship, Entrepreneurship with the motive of economic growth, theory of social change, family structure, migration and enterprise.
14. Barriers to entrepreneurship, community and entrepreneurship.

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Searching of Indian Patent databases
2. Drafting and filing of Indian Patent application.
3. Searching of International Patent databases
4. Drafting and filing of International Patent application.

Suggested readings:

1. Intellectual Property Rights in the Global Economy. Maskus, K.E. (2000), Publisher: Peterson Institute, ISBN 0881322822, pp. 1-266.
2. Intellectual property: patents, copyright, trade marks and allied rights. Cornish, W.R. (2003). Universal Law Publishing, Delhi. ISBN-10: 0421781203, pp. 1-895.
3. Intellectual Property Rights: Infringement and Remedies. Padmanabhan A. (2012).Publisher: Lexis Butterworths Wadhwa Inc. ISBN: 9788180387937. pp.1-638.
4. Access to Knowledge in the Age of Intellectual Property. Krikorian G, Kapczynski A. (2010). Publisher: Zone Books Inc. ISBN/ASIN: 9781890951,pp.1-640
5. The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company. Blanck, S and Dorf, B. (2012). K&S Ranch Inc., California, USA ISBN-10: 0984999302 | ISBN-13: 978-0984999309, pp.1-557.
6. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses Ries, E. (2011). Crown Publishing Group, New York, USA, ISBN 978-0-307-88789-4, pp.1-309

MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics & Metabolomics)

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to recent trends in the field of Microbial Genomics, Proteomics & Metabolomics.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to Microbial genomes
2. Genome sequencing of different microbes and their importance
3. Techniques for genome research (chromosome walking, RFLP etc.)
4. Application of microbial genomic variability for utilizing in human welfare (applications)
5. Phylogenetic relationships between various genera of microbes

Unit – II

6. Sequences as Biological Information - Cells obey the Laws of Chemistry and Physics
7. Evolution by Genome Expansion and Reduction
8. Metagenomics
9. Methods to Compare Genomes
10. Archaeal Genomics
11. Microbial Genome Annotation
12. Genomics for pathogenic microbes – Search for better vaccines

Unit – III

13. Introduction to microbial proteomics
14. 2D gel profiling of various microbes
15. Microbial pathogenesis at the proteome level
16. Structural proteomics and computational analysis
17. Proteomics of Archaea
18. Proteome research for novel drug targets
19. Techniques for Proteome research (2 – D gel, MALDI – ToF, Protein purification work station)
20. High throughput proteomic screening for novel enzymes

Unit – IV

21. Techniques for metabolic engineering
22. Gene manipulation of useful microbes
24. Production of valuable products by metabolic engineering

25. Strain improvement by metabolic engineering
26. Applications of metabolic engineering

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Isolation of RNA.
2. Characterization of different types of RNA molecules
3. Construction of cDNA
4. Demonstration of 2-D gel electrophoresis
5. Demonstration of MALDI – ToF
6. Demonstration of DNA/Protein Microarray system
7. Practicals on Microbial Genomics/Proteomics/Metabolomics using computational tools
8. Comparison of genomes. Genome projects and sequence archive databases.

Suggested readings:

1. Microbial Proteomics: Functional Biology of Whole Organisms by Ian Humphery-Smith and Michael Hecker (2006) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471699756, ISBN-13: 978-0471699750
2. Microbial Genomics and Drug Discovery by Thomas J. Dougherty and Steven J. Projan (2003) Publisher: CRC; 1st ed. ISBN-10: 0824740416, ISBN-13: 978-0824740412
3. Metabolic Engineering by Sang Yup Lee and E. Terry Papoutsakis (1999) Publisher: CRC; 1st edition ISBN-10: 082477390X, ISBN-13: 978-0824773908
4. Advances in Microbial Biotechnology by Rajhi Gupta, Jagjit Singh, T.N. Lakhanpal, and J.P. Jewari (1999) Publisher: A.P.H. Pub. Corp. ISBN-10: 8176480789, ISBN-13: 978-8176480789

MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) the benefits of microbes/their products in cleaning the environment (ii) large scale production of useful microbial biomass (iii) production of biofuels and chemicals (iv) useful protocols*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise of objective type/short notes covering the complete syllabus.*

Unit – I (Environment)

1. Waste water and effluent treatment,
2. Biodegradation of Xenobiotics, Bioremediation, Biomining
3. Biodegradable plastics
4. Bioinsecticides
5. Microbes as N and P Biofertilizers

Unit – II (Biomass)

6. Manufacture of Baker's yeast
7. Single cell protein production especially *Spirulina*
8. Mushroom cultivation especially *Agaricus bisporus*
9. Probiotics, Prebiotics, Synbiotics

Unit – III (Biofuels & Chemicals)

10. Biofuel production especially Ethanol, Butanol, Methane, Hydrogen, Electricity, Biodiesel
11. Organic acids especially Amino acids (glutamic acid, lysine), Citric acid, Acetic acid, Lactic acid
12. Microbial exopolysaccharides

Unit – IV (Protocols)

13. Good Lab Practices guidelines
14. Good Manufacturing Processes guidelines
15. Guidelines for use of recombinant microbes
16. Important Biotech companies of India and the World

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Estimation of BOD levels of a water sample
2. Isolation of P-solubilizers from the soil
3. Estimation of P-solubilizing activity of P-solubilizer
4. Isolation of *Lactobacilli* from milk/ curd
5. Production of bacteriocin by probiotics
6. Effect of temperature on the preparation of curd from milk
7. Effect of type of milk on the preparation of curd from milk

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers by Doyle (2007) Publisher: American Society Microbiolgy; 3rd edition ISBN-10: 1555814077 ISBN-13: 978-1555814076
2. Food Microbiology: An Introduction by Montville (2005) Publisher: American Society Microbiolgy; 1st edition. ISBN-10: 1555813089 ISBN-13:978-1555813086
3. Environmental Microbiology: A Laboratory Manual by Ian L. Pepper and Charles P. Gerba (2004) Publisher: Academic Press; 2nd edition ISBN-10: 0125506562 , ISBN-13: 978-0125506564
4. Advances in Food & Nutrition Research by Steve Taylor (2003) Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479
5. Environmental Microbiology by Raina M. Maier, Ian L. Pepper, and Charles P. Gerba (2000) Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705
6. Applied Dairy Microbiology, by Elmer H. Marth and James Steele (2001) Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367

MBT-303: Bioinstruments and their Applications

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to the variety of instruments used in the study of Microbial Biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Microscopy: Light microscope, Field Microscope, Fluorescent microscope, Phase contrast microscope, AFM, SCM, TEM, SEM, STM.
2. Spectrophotometer: UV and Visible
3. Mass spectroscopy, Infrared and Raman spectroscopy. CD spectroscopy, NMR, ESR.

Unit - II

4. Centrifugation: Theory and its applications to biological systems, centrifuges, rotors-fixed angle/swing out, concept of vertical, buoyant density centrifugation.
5. Electrophoresis: Theory, different methods of electrophoresis for proteins and nucleic acids.

Unit – III

6. Chromatography: GC, Paper Chromatography, TLC, HPLC, FPLC,
7. Crystallography and X-Ray diffraction, Electron diffraction, Neutron diffraction.
8. Radioisotope techniques: radiotracers GM Counter, Proportional and Scintillation counters, autoradiography

Unit – IV

9. Protein purification workstation
10. GCMS, LCMS
11. MALDI-ToF

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Operation of Microscopes: TEM, and SEM.
2. Running TLC; R_f value using TLC
3. Operation of Centrifuges (microfuge and high speed centrifuge and ultracentrifuge).
4. Operation of GC, HPLC
5. Operation of MS, LCMS, NMR.

Suggested Readings:

1. Advances in Chromatography. Eli Grushka and Nelu Grinberg (2007). Publisher: CRC: 1st edition. ISBN-10: 1420060252, ISBN-13: 978-1420060256, Volume 46.
2. Understanding NMR Spectroscopy. James Keeler (2005). Publisher: Wiley; 1st edition ISBN-10: 0470017872, ISBN-13: 978-0470017876.
3. Physical Principles of Electron Microscopy: An Introduction to TEM, SEM, and AEM. Ray F. Egerton (2005). Publisher: Springer; 1st ed.. ISBN-10: 0387258000, ISBN-13: 978-0387258003.
4. Fundamentals of Light Microscopy and Electronic Imaging. Douglas B. Murphy (2001). Publisher: Wiley-Liss; 1st edition ISBN-10: 047125391X, ISBN-13: 978-0471253914.
5. Principles and Techniques of Practical Biochemistry. Keith Wilson & John Walker(2000). Cambridge University Press.
6. Introduction to Spectroscopy. Donald L. Pavia, Gary M. Lampman, and George S. Kriz (2000). Publisher: Brooks Cole; 3rd edition. ISBN-10: 0030319617, ISBN-13: 978-0030319617.

MBT-304: Microbial Identification, Diagnostics and Nanobiotechnology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) the various methods used in microbial identification & (ii) applications of nanotechnology for applications in biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Identification of bacteria using classical and molecular tools including BIOLOGS, FAME, DNA sequences. Importance of bioinformatics in the identification and construction of dendrogram
2. Identification of fungi and viruses using classical and molecular techniques
3. Microscopic techniques
4. Radioisotopes in diagnostics

Unit - II

5. PCR based diagnostic techniques. RFLP, Pulse field gel electrophoresis.
6. High throughput techniques – Micro arrays, Flow Cytometry
7. Bioreporter genes
8. DNA probes

Unit – III

9. Basic components of a sensor
10. Types of sensors and their applications.
11. Biosensors in industrial applications
12. Biosensors in research
13. Biosensor in diagnostics
14. Futuristic biosensors

Unit – IV

15. Understanding Nanobiotechnology and its importance to society.
16. Impact of Nanotechnology on biological systems especially microbiology.
17. Microbial nanoparticle production
18. Nanoparticles for biological applications
19. Luminiscent quantum dots for biological labeling

Practicals:

1. Bacterial culture identification using BIOLOGS, FAME and DNA sequences (demonstration)
2. Identification of fungi – *Candida, Aspergillus, Penicillium, Saccharomyces,* and *Pichia*
3. Rapid diagnosis of bacterial infections
4. Practical on biosensors

Suggested readings:

1. Nanobiotechnology. James Golden (2007). Publisher: Crc Press Llc; 1st edition ISBN-10: 1574444956 , ISBN-13: 978-1574444957.
2. Nanomaterials for Biosensors. Challa S. S. R. Kumar (2007). Publisher: Wiley-VCH; 1st edition ISBN-10: 3527313885 , ISBN-13: 978-3527313884.
3. NanoBioTechnology: Bioinspired Devices and Materials of the Future. Oded Shoseyov and Ilan Levy (2007). Publisher: Humana Press; 1st edition ISBN-10: 1588298949, ISBN-13: 978-1588298942.
4. Nanobiotechnology : Concepts, Applications and Perspectives. Christof M. Niemeyer and Chad A. Mirkin (2004). Publisher: Wiley-VCH;1st ednISBN-10: 3527306587.
5. Advances in Biosensors: Perspectives in Biosensors. Bansi Dhar Malhotra and Anthony Turner (2003). Publisher: JAI Press; 1st edition ISBN-10: 044451337X , ISBN-13: 978-0444513373.
6. Bionanotechnology: Lessons from Nature. David S. Goodsell (2004).1st edn. Wiley-Liss.
7. Handbook of Nanotechnology. Bharat Bhushan (2004). (1st Edition) Springer Verlag.

MBT-305: Tutorials

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: To make students aware of the recent advances made in different relevant fields.

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Quantitative PCR : Theory, Practice, Problems and Solutions
2. Myths and misconception about diseases e.g. Tuberculosis, Leprosy, Rabies, Anthrax, Brucellosis
3. Giant viruses and Virophages : Characteristics and evolutionary implications

Unit – II

4. Biosafety, biosecurity and dual use research of concern
5. Biomedical waste management
6. Exception to the classical bacterial definition

Unit - III

7. Diversity of antimicrobial peptides
8. Role of integrons in microbial drug resistance
9. Non-Rhizobium PRPRs and their role in crop productivily

Unit - IV

10. Radiations in diagnostics
11. Phosphorescence, Florescence and Luminescence
12. Application of non-aqueous enzymology

Suggested Readings:

1. Real-time PCR, M. Tevfik Dorak (ed.) (2006), Publisher: Taylor & Francis Group. ISBN: 0-203-96731-3(Master e-book)/0-4153-7734-X(Print Editions). For recent updates on detection, instrumentation and application of quantitative PCR, refer to the websites of the major QPCR reagent and instrument providers.
2. Disease information and advisory websites http://www.who.int/en/; http://www.cdc.gov/; http://www.keelpno.gr/; http://www.ncdc.gov.in/
3. Vasquez M, Hallam SJ, Raoult D and Abrahao J (Eds). (2016). Megaviromes [Special Section]. Current Opinion in Microbiology, 31:1-234 (ISSN 1369-5274)
4. Bio-Medical Waste Management Rules, 2016. Ministry of Environment, Forest and Climate Change, Government of India. [Published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i)]
5. Laboratory Biosafety Manual, 3rd edition. (2004) Publisher: World Health Organization, Geneva. ISBN 92 4 154650 6
6. http://www.Dbtindia.nic.in/(Policies and Regulations regarding Bio-medical Waste Management)
7. Antimicrobial databases: http://aps.unmc.edu/AP/main.php; http://www.camp.bicnirrh.res.in/
8. Journal: Biotechnology Advances; Current opinion in Microbiology, Nature Biotechnology; Analytical chemistry; Critical reviews in Biotechnology; Critical reviews in Microbiology.

MBT-401: Seminars and Tutorials

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *This course will help the students to know the type of research going on in various countries. It will also help the students in preparing, delivering and defending a 'talk'.*

The Internal assessment will be made from the attendance and the interaction of the student during the seminars and tutorials.

Students will be asked to deliver a talk on current issues pertaining to Microbiology, Biotechnology and other important topics. Some guest lectures will be arranged.

MBT-402: Dissertation

Total Marks: 350

Objective: *To prepare the students as how to carry out independent research work*

Each student will be given an independent research project. The evaluation will be based on the presentations, knowledge of the topic of research, quality of the compiled Dissertation.

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM) 2015-2016.

FIRST SEMESTER

		Marks
Paper - I :	Structure and Functions of Invertebrates - I	80
	Practical based on Paper - I	20
Paper - II :	Lower Chordates. Comparative Anatomy of Vertebrates -I	80
	Practical based on Paper-II	20
Paper III :	Animal Physiology	80
	Practical based on Paper III	20
Paper IV :	Ecology and Animal Behaviour	80
	Practical based on Paper IV	20
Paper V :	Biostatistics and Computer Application	80
	Practical based on Paper V	20

SECOND SEMESTER

Paper VI :	Structure and Functions of Invertebrates - II	80
	Practical based on Paper - VI	20
Paper VII :	Comparative Anatomy of Vertebrates -II	80
	Practical based on Paper-VII	20
Paper VIII :	Biosystematics and Evolution	80
	Practical based on Paper-VIII	20
Paper IX :	Endocrinology and Neural Physiology	80
	Practical based on Paper IX	20
Paper X :	Immunology	80
	Practical based on Paper X	20

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM)

THIRD SEMESTER

Paper XI :	Developmental Biology -I	80
	Practical based on paper XI	20
Paper XII :	Biochemistry,	80
	Practical based on Paper XII	20
Paper XIII :	Cell and Molecular Biology	80
	Practical based on Paper-XIII	20
Paper XIV :	Instrumentation and Methodology	80
	Practical based on Paper XIV	20
Paper XV :	Advances in Entomology	80
	Practical based on Paper XV	20

FOUR SEMESTER

Paper XVI :	Developmental Biology -II	80
	Practical based on paper XVI	20
Paper XVII :	Advances in Parasitology	80
	Practical based on Paper XVII	20
Paper XVIII :	Advances in Fish and Fisheries	80
	Practical based on Paper XVIII	20
Paper XIX :	Environmental Biology & Wild life	80
	Practical based on Paper XIX	20
Paper XX :	Cytogenetics and Molecular Genetics	80
	Practical based on Paper-XX	20

PAPER-I : STRUCTURE AND FUNCTIONS OF INVERTEBRATES -I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates.

UNIT-I

1. Phylum Protozoa : General organisation of Protozoa with special reference to feeding, locomotory organelles and locomotion, reproduction, parasitism and pathogenic protozoans.

2. Phylum Porifera : General organisation of phylum Porifera with special reference to canal system, skeleton and development.

3. Phylum Coelenterata : General organisation of phylum Coelenterata with special reference to polymorphism, corals and coral reefs, development and alternation of generation.

UNIT-II

4. Phylum Platyhelminthes : General organisation of phylum Platyhelminthes with special reference to body wall, digestive system, excretory system and reproductive system. Development and life cycles of *Fasciola, Schistosoma, Taenia* and *Echinococcus*.

5. Phylum Aschelminthes : General organisation of phylum Aschelminthes. Life cycle of *Ascaris lumbricoides. Wuchereria bancrofti*, *Dracunculus medinensis.*

Note: Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - I

Classification upto orders and study of the specimens mentioned against each phylum with ecological note.

1. Protozoa.
   a. Permanent stained preparation from the culture of *Amoeba, Euglena Paramecium* and *Vorticella*.

   b. Prepared slides of *Amoeba, Trypanosoma, Euglena, Noctiluca, Eimeria, Monocystis, Paramecium* (binary fission), *Paramecium* (conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus,* Radiolarian oozes and Foraminiferan oozes.

2. Porifera
   a. Specimens : *Scypha, Grantia, Spongilla, Euplectella, Hyalonema, Euspongia.*
   b. Prepared slides : Spicules, Gemmules, *Sycon* (T.S and L.S).
   c. Preparation of permanent slides : Gemmules and Spicules.

3. Coelenterata
   a. Specimens: *Porpita, Velella, Physalia, Aurelia, Metridium, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia, Gorgonia* and *Pennatula*.
   b. Prepared slides : *Hydra* (W.M.), T.S. through regions of testis and ovary, *Obelia* (colony, medusa and polyp), *Sertularia, Plumularia, Tubularia Bougainvillea, Aurelia, Pennaria*.
   c. Preparation of permanent slides : *Hydra, Obelia, Sertularia* and *Plumularia*.

4. Platyhelminthes
   a. Specimens : *Planaria, Dugesia, Fasciola, Taenia*, and *Echinococcus.*
   b. Slides : *Fasciola* (miracidium, sporocyst, redia and cercaria), scolex and proglottids of *Taenia* (Mature and gravid L.S. & T.S.).
   c. Stained preparation of : Amphistome, proglottid of a cestode.

5. Aschelminthes
   a. Specimens : *Ascaris* (Male and female)
   b. Slides : *Ascaris* (T.S. of male and female gravid).

6. Project based on general information on animals, selecting at least one representative from each phylum.

BOOKS RECOMMENDED

1. *Invertebrates* Vols.I, II, III, IV & V by **L.H. Hyman**, Mcgraw Hill, New York; 1940-51.
2. *Text book of Zoology* by **Marshall, A.J. and Williams, W.D**. American Elsevier Pub. Co., New York; 1962.
3. *Invertebrates Structure and function* by **Barrington. E.J.W.** English Language Book Society & Nelson; 1969.
4. *Protozoology* by **Kudo, R.R.**, Books and Periodicals Corp. New Delhi, India.; 1986.

5. *Introduction to Animal Parasitology* by **J.D. Smyth. Hodder & Stoughton**, London; 1976.

PAPER - II : LOWER CHORDATES. COMPARATIVE ANATOMY OF VERTEBRATES - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of protochordates.
To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT - I

Introduction to chordates. *Organisation* and affinities of *Herdmania* and *Amphioxus*.

Comparative account of following systems of the vertebrates with evolutionary trends from Pisces to Mammals.

Integumentary system : Integument and its derivatives.
Skeletal system : Chondrocranium, Splanchnocranium, Dermatocranium, Jaw suspension.

UNIT-II

Digestive system : Alimentary canal and associated glands. (Types of teeth, dental formulae and functions, Types of stomach, small and large intestines, Glands : Salivary, gastric, Pancreas and liver).
Circulatory system : Evolution of heart & aortic arches in different classes of vertebrates.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper II (MZL 6052)

1. Classification upto orders, except Pisces and Aves, where classification upto subclasses is required. Habits, habitats, external characters and economic importance (if any) of the following animals:

Chondrichthyes : *Zygaena, Pristis, Narcine, Trygon, Rhinobatus, Chimaera.*
Actinopterygii : *Polypterus, Acipenser, Lepidosteus, Muraena, Mystus, Catla. Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea*.
Dipneusti (Dipnoi) : *Protopterus* (Lung fish)
Amphibia : *Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva. *Triton, Salamandra, Hyla, Rhacophorus*.
Reptilia : *Hemidactylus,,Calotes, Draco, Varanus, Phrynosoma, Chamaeleon.*
Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis, Chelone and *Testudo*.

2. Demonstration of dissection of *Labeo* through video clipping/models/charts: Digestive and Reproductive systems
Circulatory system: heart, afferent and efferent branchial arteries.
Nervous system: cranial nerves and internal ear.
3. Study of the skeleton of Labeo, *Rana* and *Varanus.*
4. Study of histology of different organs of frog through permanent slides.
5. Study of poison apparatus in snakes through charts.
6. Project based on general information on animals selecting atleast one representative from each class/Parental care.

BOOKS RECOMMENDED

1. *A Text Book of Zoology*, Vol.II Vertebrates by **Marshall, A.J. MacMillan** & Co. Ltd., New York; 1972.
2. *Anatomy of Chordates* by **Weichert, C.K. McGraw** Hill Book Co. Inc. London; 1958.
3. *Biology of Vertebrates* by **Walter, H.E. and Sayles, L.P. McMillan** Co. New York; 1949.
4. *Comparative Anatomy of Vertebrates* by **Kent, G.C. Torpen** Co.Ltd., Tokyo; 1954.
5. *Anatomy of Comparative Vertebrates*. **Hyman, L.H. Satish** serial Pub. House; 2004.

PAPER III : ANIMAL PHYSIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to know about all the physiological processes going on in animal/human body.

UNIT – I

Nutrition : Chemistry, metabolic role and sources of vitamins & deficiency diseases due to them. Biological significance and regulation of minerals and deficiency diseases due to them. Physiology of digestion.

Circulation : Chemistry of blood components and their functional significance; origin, formation, molecular regulation and maturation of RBCs and WBCs; biochemistry of haemoglobin and myoglobin; biochemical interconversions during blood coagulation and homeostasis. Cardiac cycle and its regulatory mechanisms. Cardiac output and the factors that affect cardiac output, micro circulation, blood pressure, factors influencing blood pressure and its regulation.

Respiration : Concept of respiration, mechanism of breathing; biochemistry of respiratory exchange; transport of respiratory gases; regulatory mechanisms (humoral and neural) of respiration, respiratory acidosis, alkalosis and regulation of pH.

UNIT – II

Excretion : Concept of excretion and nitrogenous wastes; functional anatomy of renal unit; biophysical and chemical mechanisms of ultrafiltration, reabsorption and secretion, transport mechanisms, urine formation & regulatory control of sugar, urea, Na^+, K^+ and H^+; role of kidneys in regulation of acid-base balance and osmoregulation, counter current mechanism.

Physiology of Muscles : Types of muscles and their components; Molecular organization of myosin, role of heavy and light meromyosin, molecular organization of actin; interaction of actin and myosin, ATPase activity of myosin, power-stroke, ATP binding and hydrolysis; role of troponin and tropomyosin and Ca^{++} in regulation of muscle contraction. contraction of smooth muscles, role of phosphorylation, Ca^{++} and kinases; role of actin and myosin in eukaryotic cells (microtubles and microfilaments).

Stress Physiology Physiological adaptations in response to high, low ambient temperature, physiological adaptation at high altitude and in deep sea environment.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper III

1. To demonstrate that the optimum activity of salivary amylase is pH dependent.
2. Estimation of Haemoglobin.
3. Determination of TLC, DLC & RBC.
4. Determination of bleeding and clotting time.
5. Determination of blood groups.
6. Measurement of blood pressure.
7. Estimation of ESR.
8. To study the effect of exercise on cardiovascular and respiratory systems.
9. To estimate the glucose level in blood of mammal, Haematocrit.

BOOKS RECOMMENDED

1. *Text Book of Medical Physiology* (7th ed.) by **Guyton, A.X**., Saunders Company; 1986.
2. *Physiological Basis of Medical Practice* (11th ed.) Best, **J.P., Best and Taylor's William and Wilkins**; 1985.
3. *General and Comparative Physiology, Adaptation and Environment,* 3rd ed. **Hoar, W.S.** Cambridge University, Press; 1985.
4. *Human Physiology* , **Vander, A.J., Sherman, J.H. and Luciana, D.S. McGraw** Hill Publ. Co.; 1990.
5. *Human Physiology: The Basis of Medicine* **Gillian P. and Christopher D. R.** Oxford University Press; 2001.

PAPER IV : ECOLOGY AND ANIMAL BEHAVIOUR

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the habitat and interactions of diverse animal groups with their environement.
To acquaint the students with characteristic behavioural aspects of animal life.

UNIT – I : ECOLOGY

1. **Introduction** : Definition, subdivision & scope of ecology.
2. **Abiotic Factors** : Temperature, light and soil as ecological factors.
3. **Principles of limiting factors** : Liebig's law of minimum, Shelfords law of tolerance and the combined concept of limiting factors.
4. **Ecosystem** : Definition, components,food chain & food web, energy flow through ecosystem, ecological pyramids, Major ecosystems of the world.
5. **Biogeochemical Cycles** : Definition, different types of gaseous and sedimentary biogeochemical cycles.
6. **Population** : Characteristics, ecological niche
7. **Biotic community** : Characteristics of biotic community, ecological niche.
8. **Ecological succession** : Definition, types of succession, Xerarch & Hydrarch concept of climax community, theories of succession.
9. **Ecological Adaptations** : Desert, aerial, fusorial and aquatic adaptations in animals.

UNIT – II : ANIMAL BEHAVIOUR

1. Feeding
2. Learning, reasoning, instinctive and motivative behaviour.
3. Social and sexual behavior of animals
4. Circadian rhythms
5. Mimicry and Protective colouration – Definition, types of mimicry with examples.
6. Migration of fishes and birds.
7. Parental care
8. Intra and interspecific relationships.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IV

1. To study the phototactic behaviour of an insect.
2. To study the geotactic behaviour of an insect.
3. To study nesting behaviour in birds.
4. To study the soil fauna.
5. To determine the pH of the soil.
6. To determine the moisture content of soil
7. To determine the salinity of the soil.
8. To study desert adaptations in animals.
9. To study aquatic adaptation in animals.
10. To study aerial adaptation in animals.
11. To study inter specific relationships.
12. To study the biotic components of an ecosystem.

BOOKS RECOMMENDED

1. *Fundamentals of Ecology* by **E.P. Odum**, Saunders College Publishing, Philadelphia; 1971.
2. *Natural Resources Conservation : An Ecological Approach* by **Qwen, O.S.** MacMillan Publ. Co. New York ; 1994.
3. *Ecology* by **Kreb J. C. & Harper**, Row Publ. New York; 1982.
4. *Principles of Animal Behaviour* by **Dugatkin, L. A. & Norton, W.W.** New York; 2004.
5. *Animal Behaviour (Ethology)* by **Aggarwal, V.K. S.** Chand Pub.; 2010.
6. *Handbook of Ethological Methods* 2nd ed. by **Lehner, P. N.** Cambridge University Press, Cambridge; 1996.

PAPER V : BIOSTATISTICS & COMPUTER APPLICATIONS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course

To acquaint the students of basic statistics applicable in biological studies.
To make the students computer literate to be able to use the vast store of knowledge on the internet and to be able to use computers for studies.

UNIT-I (Biostatistics)

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, poisson and normal.
5. Tests of statistical significance (Chi square - test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. coefficient of correlation; simple & multiple regression.

UNIT-II (Computer Applications)

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practical based on theory paper V

1. Calculation of dispersion
2. Calculation of measure of central tendency
3. Fitting of binomial distribution
4. Fitting of poisson distribution
5. Tests of statistical significance
6. Write programme to demonstrate conditional statements using C language.
7. To perform mail merge.

8. Use of Excel and Power point.
9. Use of E-mail and internet.

BOOKS RECOMMENDED

1. *Biostatistics : A Foundation for analysis in the Health Sciences* by **Daniel, W.W.** John Wiley and Sons, New York; 1983.
2. *Basic Statistics : A primer for Biomedical Science* by **Dunn, O.J. and Clark, V.A.** John Wilety and Sons, New York; 2001.
3. *Fundamentals of Statistics.* Vol.I *(*8th ed.) by **Goon, A.M., Gupta , M.K. and Dasgupta, B.** World press Kolkata; 2005.
4. *Computer and Common Sense* by **Hunt, R. and Shelly, J.** Prentice Hall; 1983
5. *Let us 'C'* (13th ed.). **Kanetker, Y.** B PB Publication; 2013
6. *Computer Programming in FORTRAN IV* by **Rajaraman, V.** Prentice Hall; 1974
7. *An Introduction to Digital Computers* by **Rajaraman, V. and Radhakrishanan ,T.** Prentice Hall; 2004.
8. *Computer Fundamentals* (6rd ed) by **Sinha P.K. and Sinha, P.** BPB. Publication; 2007
9. *Introduction to Biostatistics (A Textbook of Biometry)* by **Banerjee, P.K. S.** Chand and company Ltd.; 2007.

SECOND SEMESTER

PAPER-VI : STRUCTURE AND FUNCTIONS OF INVERTEBRATES –II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates including minor phyla.

UNIT-I

1. Phylum Annelida : General organisation of phylum Annelida with special reference to segmentation, digestive, excretory and reproductive systems.

2. Phylum Arthrpoda : General organisation of Arthrpoda. Larval forms of crustaceans. Modifications of mouth parts, wings and legs of insects. Social organisation of insects (Termites, honey bees and ants).

UNIT-II

3. Phylum Mollusca : General organisation of Mollusca with special reference to feeding, respiration and shell diversity, podium or foot in Mollusca, torsion and detorsion in Gastropoda.

4. Phylum Echinodermata : General organisation of Echinodermata, comparative account of water vascular system, haemal and perihaemal systems, larval forms in Echinodermata

5. Minor Phyla : Concept and significance. Organisation and general characters of different minor phyla. Rotifera, Gastrotricha, Kinorhyncha and Nematomorpha.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - VI

1. Annelida
   a. Demonstration of dissection of Earthworm (Digestive, Nervous and Reproductive systems) through video clippings/models/charts

b. Specimens : *Nereis,Heteronereis, Polynoe, Tubifex, Eunice, Aphrodite, Chaetopterus, Arenicola, Pontobdella, Amphitrite* and *Hirudinaria.*

c. Prepared slides : Earthworm (T.S. typhlosolar region, setae, pharyngeal nephridium, septal nephridium, integumentary nephridium). *Nereis* (Parapodium),Leech (T.S. through different regions).

2. Arthropoda
   a. Demonstration of dissection of *Palaemon* (Appendages, Digestive, Nervous and Reproductive systems) through video clippings/ models / charts.
   b. Specimens : *Peripatus, Lepisma*, Cockroach, Grasshopper, Praying mantis, Earwig, Dragonfly, Termite (queen and other castes), Ant, Butterfly, Moth, Beetles, Wasp, Honeybee,Crab, Prawn, *Lepas*, *Balanus, Apus, Limulus,* Scorpion, Spider, Millepede and Centipede.
   c. Prepared slides : Body louse, Bed-bug, Rat flea, *Cypris, Cyclops*, *Daphnia*, trachea of insects, gill and statocyst of Prawn. Trachea of insect, mouthparts of Cockroach, Mosquito, Honeybee, Housefly and Butterfly,
3. Mollusca
   a. Demonstration of dissection of *Anodonta* (Digestive and Nervous systems) through video clippings/models/charts.
   b. Specimens :*Anodonta, Mytilus, Pholas, Pecten, Haliotis, Aplysia, Doris, Limax, Pila, Sepia,Octopus, Nautilus, Chiton* and *Dentalium*.
   c. Prepared Slides : Glochidium larva, radula *of Pila*, gill lamina of *Anodonta*.
4. Echinodermata
   a. Demonstration of anatomy of *Asterias* through charts/model/ video clipping.
   b. Specimens : *Asterias, Echinus, Cucumaria, Antedon, Ophiothrix.*
   c. Prepared slides : T.S. arm of Starfish, tube feet and larval forms of echinodermata

5. Project based on general information on animals selecting atleast one representative from each phylum.

Note : Candidates will be required to submit duly signed note books of practical record.

BOOKS RECOMMENDED

1. *Invertebrates* Vols.I, II, III, IV & V by **L.H. Hyman**, Mcgraw Hill, New York; 1940- 51.
2. *Text book of Zoology* by **Marshall, A.J.,Williams, W.D. and Parker, T.J.** American Elsevier Pub. Co. New York; 1962- 72.
3. *Invertebrates Structure and function* **by Barrington, E.J.W.** English Language Book Society & Nelson, U.K.; 1969.
4. *Imm's Text Book of Entomology* by **Richards and Davies**. Methuen & Co. Ltd. EP Dutton & Co. Inc.New York; 1983.
5. *Principles of Insect Morphology* by **Snodgrass, R.E.**. Mcgraw Hill, New York; 1935.

6. *The Insects : Structure and Function* by **Chapman, R.F.** English Language Book Soc. & Hodder and Sloughton, G. Britain; 1978.

PAPER-VII : COMPARATIVE ANATOMY OF VERTEBRATES – II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT-I

Comparative account of the following systems of the vertebrates with evolutionary trends found Pisces to Mammals :

Respiratory system : Respiratory organs.
Types of respiratory mechanisms (gills, lungs, skin and accessory respiratory organs).

Urinogenital system : Succession of kidney (archinephros, pronephros, mesonephros, and metanephros), osmoregulation, evolution of gonads and urinogenital ducts.

UNIT-II

Nervous system : Comparative account and evolution of brain, spinal cord and cranial nerves.

Sense organs : Chemoreceptors, photoreceptors and mechanoreceptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VII

1. Aves : *Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
2. Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus, Loris, Macaca,Manis, Hystrix, Funambulus, Panthera, Canis, Herpestes, Capra,Pteropus*.
3. To study the skeleton of *Gallus, Oryctolagus*.
4. Demonstration of dissection of chick and white rat through video clipping/models/charts.
   Chick : Digestive, arterial, venous and urinogenital systems.
   White rat : Digestive, arterial, venous and urinogenital systems.
5. Study of the histology of different organs of frog and rat/rabbit through permanent stained slides.
6. Project based on general information on animals selecting atleast one representative from each class/Bird migration.

BOOKS RECOMMENDED

1. *A Text Book of Zoology*, Vol.II Vertebrates by **A.J. Marshall**, MacMillan & Co. Ltd., New York; 1972.
2. *Anatomy of Chordates* by **C.K. Weichert**, McGraw Hill Book Co. Inc. London; 1958.
3. *Biology of Vertebrates* by **H.E. Walter and L.P. Sayles**, McMillan Co. New York; 1949.
4. *Comparative Anatomy of Vertebrates* by **G.C. Kent**, Torpen Co.Ltd., Tokyo; 1954.
5. *Anatomy of Comparative Vertebrates* by **Hyman, L. H.** Satish Serial Pub. House; 2004.

PAPER VIII : BIOSYSTEMATICS AND EVOLUTION

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to identify, classify and name the organisms according to international code of Zoological nomenclature.

To acquaint the students with different type of keys. To make the students understand the concept of speciation, origin of life and evolution.

UNIT-I

1. Definitions and perspectives of systematics, classification and taxonomy, goals and importance of taxonomy.
2. Procedures of taxonomy -identification, classification, nomenclature, phena, taxa, category.
3. Key and its significance.
4. Higher taxa and Linnean hierarchy.
5. Qualitative and quantitative methods of analysis of variations
6. History and theories of classification.
7. International code of Zoological nomenclature-principles, objectives and rules for nomenclature, type system and priority for different taxa.
8. Population structure of species.
9. Polytypic species, race, variety, cline, subspecies, semispecies, super species.
10. Speciation.
11. Species concepts - Typological species concept, nominalistic species concept, biological species concept, evolutionary species concept.
12. Difficulties in applying biological species concept.

UNIT- II

1. Mutation theory of evolution: mutations, variations and natural selection; modern concept and interpretation of evolution and future of evolutionary process, sexual selection and co-evolution.
2. Interrelationship among different phyla of Invertebrates and their evolutionary significance.
3. Origin of Vertebrates: Pisces, Amphibia, Reptilia, Aves and Mammalia.
4. Ancestry of man, horse, camel and elephant.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to

be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VIII

1. Use of key to identify the fishes of the region, representing different families.
2. Methods of describing common insects representing different orders, with particular reference to the recording of taxonomic characters.
3. Study of ancestory of man, horse, camel and elephant through charts/models.
4. Visit to a Fossil park/Geology and Anthropology museums.
5. Study of origin of invertebrate and vertebrate groups through charts.

BOOKS RECOMMENDED

1. *Genetics and the origin of species* by **T. Dobzhansky**, Columbia University Press; 1951.
2. *Principles of Systematic Zoology* by **E. Mayr**, Tata McGraw Hill Publishing Co. Ltd., New Delhi; 1976.
3. *Taxonomy* by **R.E. Blackwelder**, John Wiley & Sons, New York; 1967.
4. *Organic Evolution* by **Lull**, MacMillan Co., New York; 1947.
5. *Time, life and Man* by **R.A. Stirton**, John Wiley and Sons, New York; 1959.
6. *Evolution of the Vertebrates* by **E.H. Colbert**, Willy Eastern Ltd., New Delhi; 1969.

PAPER IX : ENDOCRINOLOGY AND NEURAL PHYSIOLOGY (MZL 7001)

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT- I

Endocrinology : Chemical nature of hormones, steroid hormones, amino acid derived hormones, catecholamines and peptide hormones.

Mechanism of hormone action, steroid hormone-receptor interactions and signal transduction.

Autocrine, paracrine and telocrine regulation of hormones.

Hormonal imbalance.

Pineal-hypothalmo-hypophyseal-gonadal axis.

Hormonal elaborations of pancreas, adrenals, thyroid, parathyroid and their role in regulation of carbohydrate, lipid, protein, calcium and phosphorus metabolism.

Hormones of gastro-intestinal tract.

Prostaglandins, their synthesis and biological functions.

Endocrine control of spermatogenesis and oogenesis in vertebrates.

Endocrine control of folliculogenesis in mammals.

UNIT-II

Nervous system and sense organs : Neuron as the basic unit of nerve physiology; methyl-accepting chemotoxis proteins and chemotactic signals of the plasma membrane; Na^+ and K^+ permeability and action potentials, structure of Na^+ and K^+ channels.

Neurotransmitters : Molecular mechanism of acetylcholine, catecholamine, serotonin, γ-amino butyric and glycine neurotransmitters, acetylcholine receptor channels and their inhibitors; retinal rod cell excitation and molecular biology of visual cycle, colour vision. Power of accommodation, myopia, hypermetropia, astigmatism, cataract, glaucoma. Mechanisms of auditory and olfactory responses. Gustatory receptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IX

1. To identify the stage of oestrous cycle.
2. To show the endocrine glands in rat through charts/models/video clipping.
3. To study the histology of endocrine glands through permanent stained slides.
4. To study the corrective measures for myopia, hypermetropia, astigmatism, cataract.
5. To study the structure of eye, ear and different types of neurons through charts/models.

BOOKS RECOMMENDED

1. *General Endocrinology* by **Turner, C.D. and Bagnars**, W.B. Saunders Company; 1976.
2. *Comparative Endocrinology of Invertebrates* by **Highnam, K.C.** and Hill, L. Enwaral Arnold Ltd., London; 1981.
3. *Endocrinology* by Golds -**Worthy, G.J. Robinson, J. and Mordue**, W. John Wiley and Sons, New York; 1981.
4. *An Introduction to Invertebrates Endocrinology* by **Tombes, A.S.** Academic Press, New York; 1970.
5. *Comparative Vertebrate Endocrinology* by **Bentley, P.J.** Cambridge Univ. Press; 1998.
6. *Endocrinology* (4^{th} ed) by. **Hadley, M. E.** Prentice Hall; 1996.

PAPER X : IMMUNOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the defense mechanisms of animals/bodies.

UNIT-I

1. Organs and cells of the immune system and their functions : primary and secondary lymphoid organs, lymphocytes, mononuclear cells and granulocytic cells.
2. Antigens : Factors affecting immunogenicity, B and T cell epitopes, haptens and adjuvants.
3. Immunoglobulins :Basic and fine structure of Immunoglobulins, biological activities of different classes of Immunoglobulins.
4. Cellular and Humoral immune response -Role of T and B lymphocytes, Primary and secondary immune response.

UNIT-II

5. Major Histocompatibility Complex : MHC molecules and genes,regulation of MHC expression, its relation to immune responsiveness and disease susceptibility.
6. Complement System : Complement activation, regulation and biological effects mediated by complement components.
7. Antigen Antibody Interactions : Precipitation & agglutination reactions, radioimmunoassay, ELISA, Immuno fluorescence, Western blotting, Southern and Northern blotting. Immunoprecipitation and flow cytometry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper X

1. To study the agglutination reaction by typing of human blood into A,B, AB, O and Rh factor.
2. To study the different types of white cells in a stained blood film of a normal individual and compare with that of a diseased individual (allergy, parasitic infection etc.).
3. To study the sections of different lymphoid organs thymus, spleen, lymph node, intestine etc. from prepared slides.
4. To demonstrate Ouchterlony diffusion assay through Kit .

BOOKS RECOMMENDED

1. *Kuby Immunology* (6th ed.) by **Kindt, T.J., Golds, R.A. and Osbome, B.A.** WH Freeman Publishers; 2007.
2. *Essential Immunology* by **Roitt, I.M.** Mosby Harcourt Publishers; 2001.
3. *Immunology : A short course* by **Benjamini, E. Coico, R. and Sunshine, G.** Wiley Liss Publishers; 2000.
5. *Fundamental Immunology* by **Paul, W.E.** Lippincott Raven Publishers; 1998.
6. *Immunology : An Introduction* by **Tizard,I.R.** Thomson Publishers; 1998.
7. *Immnunbiology* (6th ed) **Jameway, C., Travers, P. Walport, M. and shlomchik, M.** Taylor and Francis group; 2004.

PAPER XI : DEVELOPMENTAL BIOLOGY - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the pattern of development at molecular level.

UNIT - I

1. Basic concepts of Development : Potency, commitment, specificiation, induction, instructive and permissive interactions, competence, determination and differentiation.
2. Molecular basis of differentiation, transdifferentiation and dedifferentiation. Pattern formation in *Drosophila*, Amphibian, Chick and *C. elegans*
3. Cleavage patterns and fate maps of Tunicate, *Drosophila*, Amphibia, Chick and *C. elegans*.
4. Gene regulation in Development in *Drosophila*.

UNIT – II

1. Gametogenesis in animals.
2. Molecular events during fertilization.
3. Zygote formation, blastula formation and embryonic fields. Gastrulation and formation of germ layers in animals.
4. Regeneration.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XI

1. To study the different stages of development in frog and chick through permanent slides.
2. To study the spermatogenesis of rat and grasshopper throughslides/charts/photographs.
3. Types of eggs in animals through charts/photographs/models.

BOOKS RECOMMENDED

1. *An Introduction to Embryology* by **Balinsky, B. I.**, Saunders, Philadelphia;1981.
2. *Major Problems in Developmental Biology* by **Urspaung, H.**, Academic Press, New York; 1972.
3. *The Control of Gene Expression in Animal Development* by **Gurdon, J. B.,** Harvard University, Press, Oxford;1974.
4. *Gene activity in Early Development* by **Davdson, E. H.,** Academic Press, London; 1977.
5. *Development Biology*, 8th edition by **Gilbert, S. F.,** Sinauer Associators Inc. Publishers; 2006.
6. *Developmental Biology*, 2nd edition by **Browder, L.W**., Saunders College Publishing, New York;1984.

PAPER XII : BIOCHEMISTRY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of various metabolite in animal body.

UNIT-I

Carbohydrates : General structure, chemical properties & classification. Homo and heteropolysaccharides, bacterial polysaccharides, mucopolysaccharides, biological functions of polysaccharides. Glycolysis, TCA cycle, phosphogluconate pathway and glycogenolysis. Bioenergetics of Carbohydrate matabolism.

Lipids : General structure and chemical properties of simple lipids. Structure and function of phospholipids. Biological functions & structure of cholesterol and steroid hormones. Oxidation of fatty acids; biosynthesis of saturated and unsaturated fatty acids.

UNIT-II

Proteins : Amino acids and their properties, Protein structure and shape. Ramachandran Plot. Nucleic acids and protein interaction. Conjugated proteins: Lipoproteins, glycoproteins, nucleoproteins. Biosynthesis of purines and pyrimidines. miRNA.

Enzymes : Enzyme kinetics, mode of action of enzyme and biochemical role of coenzymes and isoenzymes, effect of enzyme concentration, effect of substrate concentration and pH on enzyme activity, allosteric enzymes, feed back inhibition, covalent modifications, irreversible and reversible. Ribozyme and abzyme.

Electron transport chain : Mechanism of oxidative phosphorylation (Mitochondrial), inhibitors of electron transport chain Inhibitors and uncouplers of mitochondrial oxidative phosphorylation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XII

1. Estimation of alkaline and acid phosphatases in the liver procured from local market.
2. Quantitative estimation of glycogen, cholesterol protein in tissue procured from local market.
3. Qualitative estimation of carbohydrates, lipids and protein in tissue procured from local market.

BOOKS RECOMMENDED

1. *Practical Biochemistry* by **Beckatt, A. H. and Stenlake, J. B.**, the Athlone Press, London; 1988.
2. *Practical Biochemistry* by *Application to Biochemistry and Molecular Biology*; **Freefelder, D.**, W. H. Freeman Company, New York; 1982.
3. *Practical Biochemistry: Principles and techniques*, 5th edition by **Wilson, K. and John W.**, Cambridge University Press; 2000.
4. *Immunology* by **Kuby, J.**, W.H. Freeman and Company, New York; 2000.
5. *Molecular Biology of the Cell* by **Alberts, B. and others**; Garland Science, New York; 2002.
6. *Cells* by **Lewin, B. and others**; Jones and Bartlett Publishers, Canada; 2007.
7. *Lehninger-Principles of Biochemistry*, 4th edition by **Nelson D. & Cox, M.**, W. H. Freeman and Company, New York; 2005.
8. *Outlines of Biochemistry,* 5th edition by **Conn, E. E., Stump, F. and others**; John Wiley and Sons; New York; 2006.
9. *Biochemistry,* 5th edition by **Stryer, L., Berg, J. M., and Tymoczko, J. L., W.H.** Freeman and Company, New York; 2006.
10. *Biochemistry*, 3rd edition by **Voet, D., and Voet, J. G.**, John Wiley and Sons; New York; 2004.

Paper - XIII : CELL AND MOLECULAR BIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

UNIT- I

1. Fixation and staining techniques : Non -chemical and chemical fixatives, chemistry of staining of acidic and basic dyes.
2. Structure and functions of cell and its organelles (nucleus, plasma membrane, mitochondria, golgi bodies, endoplasmic reticulum, ribosomes and lysosomes).
3. Plasma membrane : Structure and organisation of membranes, glycoconjugates and proteins in membrane system, ion transport, Na+/K+ATPase, model membranes, liposomes.
4. Protein sorting in ER, golgi and targeting of proteins to Mitochondria, secretory and endocytotic pathway.

UNIT- II

1. Cell-Cell signalling : Cell surface receptors, Second messenger system, MAP kinase pathways, Signalling from plasma membrane to nucleus.
2. Cytoskeletal elements : Microtubules and microfilaments.
3. Cell division : Cell Cycle, molecular basis of cell division, mitotic apparatus, modification and abnormalities of cell division, chromosome movement (forces of cell division).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIII

1. Study of permanent histological slides of testis and ovaries of insects/ mice/rat.
2. Basis of reaction and demonstration of the sites of proteins, nucleic acids, lipids & carbohydrates in ovaries of insects/rat/mice through slides and photographs.
3. Study of stages of mitosis and meiosis from permanent slides from animal and plant materials through slides/charts/photographs.

BOOKS RECOMMENDED

1. *Cell and Molecular Biology*, 8th edition by **De Robertis, E.D.P. & De Robertis**, Jr. E.M.F; Saunders & Co. Philadelphia; 1995.
2. *Cell Biology*, 3rd edition by **C.B. Powar**, Himalaya Publishing House., Bombay; 1984.
3. *Advances in Cell and Molecular Biology* by **Dupraw, E.J.**, Academic Press, New York & London;1971.
4. *Cell Biology* by **Pollard, T.D., Earnshan, W.C.**, Saunders & Co. Philadelphia; 2002.
5. *The Cell: A Molecular Approach*, 5th edition by **Cooper G.M. and Hausman, R. E.**, Sinauer Associates, Sunderland (MA); 2009.
6. *Molecular Biology of the Cell*, 5th edition by **Alberts B. and others**; Gerald Science, New York; 2008.
7. *Cell and Molecular Biology*: *Concepts and Experiments*, 5th edition by **Karp, G**., John Wiley & Sons, New York; 1996.
8. *Molecular Cell Biology* by **Lodish and others**, W.H. Freeman, New York; 2008.

Paper XIV : INSTRUMENTATION AND METHODOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Microscopy : Principle, structural parts and applications of compound microscope, phase – contrast microscope, fluorescence microscope, interference microscope, polarization microscope, dark field microscope, transmission electron microscope and scanning electron microscope.

Cell fractionation method : Principle of centrifugation and ultracentrifugation, different types of ultracentrifugations (in brief) and their applications, structural parts of an analytical ultracentrifuge, ultracentrifugation and buoyant density.

Spectrophotometry : Principle and structural parts of a colorimeter and a spectrophotometer and their applications.

Chromatography : Principles of chromatography, paper chromatography, thin layer chromatography, gas chromatography, gel permeation chromatography, ion exchange chromatography, high pressure liquid chromatography, affinity chromatography.

UNIT-II

Electrophoresis : Principles of electrophoresis, (brief introduction to paper electrophoresis, polyacrylamide gel electrophoresis, disc gel electrophoresis,) SDS-PAGE, agarose gel electrophoresis, isoelectric focussing, applications of electrophoresis, Phage DNA, detection of plasmids, separation of DNA molecules.

Polymerase chain reaction (PCR) and its application.

Tissue culture techniques : Introduction to basic culture technique in cell culture, organ culture, Aseptic techniques, sterilization technique, specialized culture technique, , Monolayer culture, suspension culture, leucocyte cultures. factors affecting cell growth *in vitro.*

Radioisotopes : Principles and applications of tracer techniques in biology, radiation dosimetry, radioactive isotopes and half life of isotopes, liquid scintillation counter, principles and applications of autoradiography and cerenekov radiation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIV

1. To study the parts of the compound microscope and phase-contrast microscope and their maintenance.
2. To study the living material under the phase contrast microscope.
3. Finding out the diameter, area and circumference with the help of stage micrometer and oculometer.
4. To sketch the diagram of any tissue with the help of camera lucida and to draw its magnification line.
5. Demonstration of section cutting and mounting of sections on the grid for SEM and TEM. Demonstration of SEM & TEM in the CIL lab., P.U., Chandigarh.
6. Demonstration of working of ultracentrifuge.
7. Demonstration of the working of PCR and Western blotting, Deptt. of Zoology, P.U., Chandigarh.
8. To separate a sample of amino acid with the help of paper chromatography.
9. Demonstration of SDS-PAGE, Agarose gel electrophoresis.

BOOKS RECOMMENDED

1. *Fundamentals of Radiography* by **Bacq, Z.M. and Alexender, P.**, Pergamon Press, London; 1989.
2. *Phase Microscopy: Principle and Applications* by **Benett, A.H. and Usterbere, H.**, John Wiley & Sons, London; 1951.
3. *Biological Techniques for Transmission and Scanning Electron Microscopy* by **Dawes, C.J.**, Ladd Research Industries, Burlington; 1981.
4. *Culture of Animal Cell: A manual of basic techniques* by **Freshrey, R.I. and Allen, R.**, Lis Inc., New York; 1983.
5. *The Principles and Practice of Electron Microscopy* by **Watt, I.M.**, Cambridge University Press; 1985.
6. *Flow Cytometry: A Practical Approach,* 3rd edition by **Michael G**.O., Oxford University Press; 2000.
7. *In-vitro Cultivation of Animal Cells* (Biotol) by **Currell B.C.** and others, Elsevier Applied Science Publishers; 2004.

PAPER : XV ADVANCES IN ENTOMOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students aware of various pests of food crops and food products and various insect control methods.
To educate the students about economic importance and techniques of Apiculture and sericulture

UNIT-I

1. Salient features with suitable examples of the various insect orders : Thysanura, Odonata, Isoptera, Orthoptera, Hemiptera, Coleoptera, Lepidoptera, Hymenoptera and Diptera.
2. Strucure and function of the following systems in insects :
   a. Digestive System
   b. Respiratory System
   c. Nervous System
   d. Reproductive System
3. Post embryonic development and types of metamorphosis in insects. Structural modifications in the larvae & pupae.
4. Parthenogenesis in insects.
5. Effect of temperature and photopteriod on the lives of insects, details of onset, termination and significance of diapause.

UNIT-II

1. Plant host-insect interaction.
2. Practices of Sericulture, Apiculture & Lac culture
3. Systematic position, habits, nature of damage and outlines of the life cycles of following pests of crops, vegetables & fruits.

A. CROPS

Cotton :

(i) *Pectinophora gossypiella* (Pink boll worm)
(ii) *Bemisia tabaci* (Cotton white fly)
(iii *Dysdercus cingulatus* (Red cotton bug)

Sugarcane

(i) *Pyrilla perpusilla* (Sugarcane leaf hopper)
(ii) *Scirpophaga nivella* (Sugarcane top borer)

Paddy

(i) *Hieroglyphus banian* (Rice grass hopper)
(ii) *Leptocorisa varicornis* (Gundhi bug)

Wheat
(i) *Tanymecus indicus* (Ghujhia weevil)
(ii) *Sesamia inferens* (Wheat stem borer)

B. VEGETABLES
(i) *Dacus cucurbitae* (Pumpkin fruit fly)
(ii) *Raphidopalpa foveicollis* (Red pumkin beetle)

C. FRUITS
(i) *Drosicha mangifera* (Mango mealy bug)
(ii) *Diaphorina citri* (Citrus psylla)

3. Pests of stored food products with particular reference to their systematic position, habits, nature of damage caused by them along with the outlines of their life cycles :
(i) *Callosobruchus maculatus* (Pulse beetle)
(ii) *Sitophilus oryzae* (Rice weevil)
(iii) *Tribolium castaneum* (Rust red floor beetle)
(iv) *Sitotroga cerealella* (Angoumois grain moth).

4. Insect control :
(a) Chemical control : Categories of pesticides, important examples, their application and mode of action; Insect repellents and attractants.
(b) Biological Control : Principles, History, use of parasites, predators and pathogens.
(c) Integrated Pest Management (IPM).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XV

1. Study of insect biodiversity in natural environment and preparation of project based on the observation.
2. Identification marks and taxonomic status of insect pests of crops vegetables, fruits and stored products mentioned in theory syllabus.
3. Demonstration of dissection of insects for the study of following systems through charts/models/video clippings. :
   a. Digestive System
   b. Nervous System
   c. Reproductive System.
4. Systematic position upto family and ecology of the following medical and veterinary pests :
   a. *Anopheles* b. *Culex* c. *Aedes* d. Blowfly e. Botfly f. Horsefly g. Fleshfly.
5. Introduction to apiculture practices and handling of Beehives.
6. Study of male and female external genitalia of insects through permanent slides.

7. Study of different types of larvae and pupae with the help of charts/ photographs/ diagrams.

BOOKS RECOMMENDED

1. *General Entomology*, by **Mani, M. S.,** Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi; 1990.
2. *The Insects, Structure & Function* by **Chapman, R.F.,** Hodder and Sloughton edication Ltd., Britain; 1978.
3. *Imm's General Text Book of Entomology*, 10th edition by **Richard, O.W. and R.G. Davies**, Chapman and Hall, London, New York; 1997.
4. *Honey bees and their management in India* by **Mishra R.C.**, ICAR Publications; 1995.
5. *Agricultural Pests of India and South East Asia* by **Attwal, A.S.** Kalyani Publishers, New Delhi; 1991.
6. *Insects and Mites of Crops in India* by Nair, M.R.G.K., ICAR, New Delhi; 1975.
7. *Economic and Applied Entomology* by **Kumar and Nigam**, Emkay Publications, Delhi; 2000.
8. *Destructive and Useful Insects: Their Habits and Control* **by Metcalf C.L.** McGraw-Hill Publications, New York; 1951.
9. *Integrated Pest Management* by **Dent, D**., Chapman & Hall Publishers; 1995.
10. *Insect Pheromones and Their Use in Pest Management* by **Sevens H. and Jones**, **J.M.**, Chapman Hall Publishers; 1998.
11. *Beekeeping for Profit and Pleasure* by **Webb, A. and Duncan, F. M.**, Agrobios (India); 2004.
12. *Textbook of Applied Entomology* by **Srivastava, P.**, Vol.1. Kalyani Publishers;, New Delhi; 2005.

FOURTH SEMESTER

PAPER XVI : DEVELOPMENTAL BIOLOGY - II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT – I

1. Organogenesis : Vulva formation in *C. elegans,* Eye lens induction. Epitheliomesenchymal interactions, Differentiation of neuron.
2. Primary and secondary embryonic induction, chemical nature of evocators.
3. Introduction to stem cells, stem cell related disorders, gene therapy.
4. Metamorphosis.

UNIT – II

I Teratogenesis : Critical period dose, classes of cytotoxic teratogens, human teratogenesis.
2. Totipotency & nuclear transfer experiment.
3. Cell surface adhesion, inter cellular adhesion, adhesive molecules - cadherins.
4. Environmental evolution and animal development: Environmental cues and effects, malformations and disruptions, changing evolution through development modularity, developmental constraints.
5. Sex determination.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVI

1. To prepare the permanent stained slides of developing stages from fertilized egg of hen.
2. To study different larvae in invertebrates from permanent slides.
3. To study through PS of larvae of invertebrates (Redia, Cercaria, Arthropod larvae, Glochidium larva).

BOOKS RECOMMENDED

1. *An Introduction to Embryology* by **Balinsky, B.I.**, Saunders, Philadelphia;1981.
2. *Major Problems in Developmental Biology* by **Urspaung, H.**, Academic Press, New York; 1972.
3. *The Control of Gene Expression in Animal Development* by **Gurdon, J.B.,** Harvard University, Press, Oxford;1974.
4. *Gene activity in Early Development* by **Davdson, E.H.,** Academic Press, London; 1977.
5. *Development Biology*, 8th edition by **Gilbert, S.F.,** Sinauer Associators Inc. Publishers; 2006.
6. *Developmental Biology*, 2nd edition by **Browder, L.W**., Saunders College Publishing, New York;1984.

PAPER XVII : ADVANCES IN PARASITOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To introduce the students to various pathogens causing diseases and the reactions of the body against them.

UNIT-I

1. Introduction to Parasitology, different types of animal associations : definitions; Parasitism, Mutualism, Hyperparasitism
2. Parasite Host Specificity : Kinds of parasite host specificity, specificity factors related to infection and growth.
3. Molecular, Cellular and Physiological basis of Host Parasite Relationship in Protozoans, trematode, cestode and nematode parasites.

UNIT-II

1. Immunity to Parasites : Brief account of immunity to malaria, leishmaniasis, trypanosomiasis, schistosomiasis and ascariasis.
2. Vectors - Brief account of various insect vectors of human parasitic infections.
3. Parasite Transmission : Introduction, mechanism, circardian rhythm.
4. Ecology of parasites : Ecological niche, host size, and parasite numbus, biological control, role of metazoan parasites in transmission of microbial infection.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVII

1. To study the protozoans and helminth parasites infecting frog, toad and common household insects through slides/charts.
2. To study the helminth parasites infecting gut of the sheep and goat obtained from slaughter house.
3. To study the parasites from stained blood smears - *Leishmania, Plasmodium* and *Trypanosoma*.
4. To study the vectors of different parasitic infections (Mosquito, ticks, sandfly etc.).

BOOKS RECOMMENDED

1. *Parasitology : The Biology of Animal Parasites,* 5th edition by **Noble, E.R. and Noble, G.A.**, Lea & Febiger, Philadelphia; 1982.
2. *Physiology of Parasites* by **Chapell, L.H.,** Blackie, Glosgow, London; 1979.
3. *Immunology of Infection* by **Kaufmann**, **S.,** Academic Press; 1999.
4. *An Introduction to Animal Parasitology* by **Smyth, J.D.**, Hodder & Stoughton, London; 1976.

PAPER : XVIII : ADVANCES IN FISH AND FISHERIES

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with aquatic animal life and its economic importance.

UNIT-I

1. Introduction: History and scope of aquaculture, Different kinds of aquaculture-traditional, extensive, intensive, semi-intensive, flow through and re-circulatory.
2. Criteria for candidate species selection and criteria for site selection for various culture practices, Farming methods: ponds, lens, cages, raceway, raft, rope, monoculture, polyculture, sewage fed culture and organic aquaculture.
3. Principle of composite fish culture, Composite fish culture of endemic and exotic fishes in India.
4. Limnological parameters: influence of the environmental parameters on fish abundance and distribution, aquaculture and other anthropogenic activities on fish populations.
5. Induced breeding: History, technique, different kinds of hatcheries and advantages of induced breeding in fishes. Use of synthetic chemicals for induced breeding.
6. Ecological classification of aquatic organisms other than fishes.
7. Characteristics of lotic environment (river/stream) as per zonation, major abiotic and biotic factors in a stream/river affecting the body form in hillstream fishes, Body form in hillstream fishes.
8. Productivity: Concept of productivity, estimation of primary productivity by different methods and classification of water bodies on the basis of productivity.

UNIT-II

1. Major and minor constituents of fish including minerals and trace elements in fish. Post mortem changes in fish- rigor mortis, autolysis, auto-oxidation and their significance, biochemical and microbial spoilage of fish.
2. Fish diseases: Fungal, bacterial, protozoan, worm and crustacean diseases of fishes.
3. Principles of fish preservation, Preservation of fish by curing (drying, salting and smoking), Chilling and freezing of fish, canning of fish and fish products. Fish transportation and marketing
4. Biological pollution-algal blooms and their affect on fish production, Biological and chemical control of algal blooms.
5. Concept of Transgenic organisms, GMO's and bio-safety regulations.
6. Concept of stock, DNA markers in stock identification: Allozymes, RFLP, RAPD, AFLP, Microsatellites, EST's, SNPs, Type I and Type II markers, mtDNA and nuclear DNA markers.
7. Age and growth determination in fishes using hard parts such as scales, opercular bones etc.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVIII

1. To estimate the dissolved oxygen in water.
2. To estimate the pH of water.
3. To estimate the phosphate of water.
4. To determine the BOD of water.
5. To study the benthic organisms.
6. To study the different types of fishing gears.
7. To study the Indian culturable fishes.
8. To study the Exotic culturable fishes.

BOOKS RECOMMENDED

1. *Fish and Fisheries of India* by **Jhingran, V.G.**, Hindustan Publishing Corporation, New Delhi; 1991.
2. *Aquaculture Production FAO Fisheries Circular No. 815* by Rev.FAO Rome; 1991.
3. *Aquaculture in Asia* by **Joseph, M.M.,** Asian Fisheries Society, Mangalore; 1990.
4. *Inland Fisheries of India*, Vol.I & II by **Talwar P.K. and Jhingran A.G.**, Oxford & IBH, New Delhi; 1991.
5. *Freshwater Fishery Biology* by **Lagler, K.F.**, Wm. C. Brown Company Dubuque, Iowa; 1969.
6. *Methods for Assessment of Fish Production in Freshwaters* by **Bagenal, T.B.,** IBP Handbook No.3, Blackwell Scientific Publications Ltd., Oxford; 1970.
7. *Fundamentals of Ecology* by **Odum, E.P.**, W.B. Saunders Co. Philadelphia; 1971.
8. *Limnology* by **Welch, P.S.,** McGraw Hill Book Co., New York; 1952.
9. *Limnology* by **Watzel, R.G**., W.B. Saunders Co. Philadelphia; 1983.
10. *The Biology of Polluted Waters* by **Hynes, H.B.N.,** Liverpool University Press, Liverpool; 1978.
11. *Fundamentals of Limnology* by **Ruttner, F.**, University Press Toronto, 1975.
12. *Fishes: An Introduction to Ichthyology* by **Moyle, P.B.** and **Cedh, J.C.**, Prentice Hall Inc. Jersey USA; 1986.
13. *Fishery Development* by **Agarwal, S.C.** and **Johal, M.S.**, Narendra Publishing House, Delhi; 2004.
14. *History of Fishes* by **Norman, J.,** Ernst Brown, London; 1999.
15. *Biology of fishes* by **Kyle H.M.,** Biotech. Books, New Delhi; 2007.
16. *Freshwater Ecology : Concepts and environmental applications* by Dodds, Walter K. Academic Press. USA; 2002.
17. *The Biology of fishes: New Introduction by Dr. Vijay Dev Singh* by M. Hary. Kyle. Biotech. Books, New Delhi; 2007.
18. *Fish Management and Aquatic Environment* by **Kumar, A.** and **Dubey, P.**, Daya Publishing House, New Delhi; 2006.

PAPER XIX : ENVIRONMENTAL BIOLOGY AND WILD LIFE

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To educate the students about the basic environmental phenomena like pollution, ecosystem, biogeochemical cycles, etc.
To educate the students about the importance of wild life conservation.

UNIT-I

1. **Environmental pollution** : Causes impact and control measures of air, water and noise pollution, management of wastes, Environment Protection Act 1986.
2. **Natural resources** : Natural resources and their conservation.
3. **Energy resources** : Study of renewable and non-renewable energy resources. Non conventional energy resources.
4. **Environmental education** : Goals, objectives, and methods of teaching of environmental education.
5. **Ecosystem dynamics and management**: Stability and complexity of ecosystems. Speciation and extinctions, environmental impact assessment, sustainable development.

UNIT-II

1. **Zoogeography** : Zoogeographical regions and their fauna.
2. **Wildlife of India** : Different types with references to animals, causes of depletion, significance and conservation of wildlife.
3. **Sanctuaries and National Parks**: Location and Important fauna of the sanctuaries and national parks of India.
4. **Wildlife Projects**: Tiger Project, Crocodile Breeding Project, Hangul project, Gir lion Sanctuary project.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIX

1. To study the distribution of animals through zoogeographical maps.
2. A visit to a zoological park to study different wild animals and make a report.
3. To estimate the alkalinity of water.
4. To estimate the chlorides of water.
5. To estimate the nitrates of water.
6. To study the different types of phytoplankton.

7. To study the different types of zooplankton.

BOOKS RECOMMENDED

1. *Environment Pollution* by **Dix, H.M.** John Wiley & Sons Publications, New York; 1984.
2. *Environmental Studies* by **Botkin, D.B.** and **Keller, E.A.**, Merill Publ. Co.Toronto, London, 1987.
3. *Wildlife in India* by **Saharia, V.B.,** Natraj Publishers, Deharadun; 1998.
4. *Wildlife Biology* by **Dasmann, R.F.,**Wiley Eastern Ltd., New York; 1982.

Paper XX : CYTOGENETICS AND MOLECULAR GENETICS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students understand the genetic code, structure of chromosome, molecular basis of gene expression and regulation, mutation and genetic engineering.

To clarify the concept of population of genetics to the students through Hardy-weinberg law.

UNIT-I

1. Chromosome structure and function : Law of DNA constancy and C. value paradox. Specialized chromosomes (Salivary gland and Lampbrush chromosomes).
2. Molecular mutation : Molecular basis of mutation, physical and chemical mutagens, radiation mutagenesis, site directed mutagenesis, target theory.
3. Regulation of gene function : Operon hypothesis; Pro and eukaryotic operons; Induction and repression;Complex gene clusters.
4. Hardy Weinberg Law and Calculation of gene frequencies.

UNIT-II

1. Linkage and genetic maps.
2. Dosage compensation.
3. Properties of genetic code, mutations in genetic code, Wobble's hypothesis.
4. Fine structure of gene, Eukaryotic genome organization (structure of chromatin, coding and non-coding sequences, and satellite DNA); DNA damage and repair, DNA replication, amplification and rearrangements.
5. Organization of transcriptional units; Mechanism of transcription of prokaryotes and eukaryotes; RNA processing (capping, polyadenylation, splicing, introns and exons); ribonucleoproteins, structure of mRNA.
6. Protein synthesis.
7. Principles and methods of genetic engineering and gene targeting; applications in agriculture, health and industry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XX

1. Preparation of chromosomes from onion root tip for mitosis by squash method.

2. Study of salivary gland chromosomes of larvae of chironomus/Drosophila from permanent slides.
3. Study of metaphase karyotypes from photographs/permanent slides of Drosophila, grasshopper and man/rat.
3. Study of sex-chromatin Bars body from human buccal mucosa.
4. Demonstration of monohybrid and dihybrid cross, Co-dominance, Incomplete dominance and Epistasis with the help of beads and photographs.
5. Study of genetic disorders with the help of photographs.
6. Study of structural and numerical alteration of chromosomes: deletion, duplication, inversion, translocation and ploidy with the help of photographs.

BOOKS RECOMMENDED

1. *Genetics,* 3rd edition by **Goodenough, U.**, Saunders College Pub., Philadelphia; 1984.
2. *Cytogenetics - The Chromosome in Division, Inheritance and Evolution,* 2nd edition by **Swanson, C.P., Merz, T. and Young, W.J.,** Prentice Hall, Inc., London; 1982.
3. *Principles of Genetics*, 7th edition by **Gardner, E.J. and Shustad, D.P.**, John Wiley, New York; 1984.
4. *Genetics - A survey of the Principles of Heredity*, 3rd edition by **Winchester, A.M.**, Oxford and IBH Publishing Co. Pvt. Ltd.; 1972.
5. *Genetics: A text book for University students,* 3rd edition by **Gupta, P.K.**, Rastogi Publications, Meerut; 1996.
6. *Cytology, Genetics and Molecular Biology* by **Gupta, P.K.**, Rastogi Publications, Meerut, 1991.
7. *Genetics*, 3rd edition by **Strickberger, M.W.**, Macmillan Publishers, New York; 1985.
8. *Eukaryotic Chromosomes* by **Bostock, C.J. and Sumner, A.T.**, Amsterdam North Holland; 1978.
9. *Principles of Genetics*, 3rd edition, by **Sinnott, E.W. and Dunn, L.C.,** McGraw-Hill, New York; 1939.
10. *The Science of Genetics* by **William, H. and Yost, H. T.**, Prentice Hall, Inc., London; 1977.
11. *Handbook of Molecular Cytology* by **Lima-De-Faria**, **A.**, North Holland Publishing Company, Amsterdam, London; 1969.
12. *Principles of Genetics*, 2nd edition by **Snustad, D.P. and Simmons, M.J.** John Wiley & Sons; 2002.
13. *Genetics: A Molecular Approach,* 3rd edition, **Brown, T.A.**, Chapman and Hall, London; 1998.
14. *iGenetics: A Molecular Approach*, 2nd edition, **Russell, P.A.**, Benjamin Cummings; 2006.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT & COMMERCE

SYLLABI

FOR

M.COM. [SEMESTER SYSTEM]
EXAMINATIONS, 2013-2014, 2014-15, 2015-16, 2016-17

(For Regular College/University/USOL Students)

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Please note that students admitted in 2016-17 will also study the changed syllabus (MC 302: Tax Planning and Management) of 3rd Semester available in the syllabus of M.Com (Semester System) for the session 2017-18.

SCHEME, SYLLABI AND COURSES OF READING FOR M. COM. (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2013-2014

Note : 1. The duration of the examination in each subject will be 3 hours.

2. Maximum marks for external/written examination are 80 marks and Internal Assessment is 20 marks.

3. **The marks for Internal Assessment will be divided as Follows:**

For Regular Students

(a) Attendance : 20%

(b) Written Assignments : 30%

(c) Mid Semester Test : 50%

For University School of Open Learning (USOL) Students:

100% Internal Assessment will be based on Written Assignments

N. B.: Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University.

INSTRUCTIONS TO THE PAPER SETTERS :

IF THERE ARE TWO UNITS : Set 10 questions in all. Five questions from each unit. The students are required to answer five questions in all selecting at least 2 questions from each unit.

IF THERE ARE THREE UNITS : Set 10 questions in all. Three or four questions from each unit. The students are required to answer five questions in all selecting at least one question and not more than two from each unit.

IF THERE ARE FOUR UNITS : Set 10 questions in all. Two or three questions from each unit. The students are required to answer five questions in all selecting at least one question from each unit.

IF THERE ARE FIVE UNITS : Set 10 questions in all. Two questions from each unit. The students are required to attempt five questions in all selecting one question from each unit.

SCHEME OF EXAMINATION

SEMESTER-I

Paper 1	**M.C.101**	MANAGERIAL ECONOMICS	100 Marks
Paper 2	**M.C.102**	QUANTITATIVE METHODS FOR BUSINESS	100 Marks
Paper 3	**M.C.103**	MODERN ACCOUNTING THEORY & REPORTING PRACTICES	100 Marks
Paper 4	**M.C.104**	ORGANISATION THEORY AND BEHAVIOUR	100 Marks
Paper 5	**M.C.105**	MARKETING MANAGEMENT	100 Marks
Paper 6	**M.C.106**	MANAGEMENT INFORMATION SYSTEM	100 Marks
Paper 7	**M.C.107**	WORKSHOP ON IT APPLICATIONS IN COMMERCE (For Regular Students Only)	100 Marks
	M.C.107 A	IT APPLICATIONS IN COMMERCE (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-II

Paper 1	**M.C.201**	BUSINESS ENVIRONMENT	100 Marks
Paper 2	**M.C.202**	RESEARCH METHODOLOGY IN COMMERCE	100 Marks
Paper 3	**M.C.203**	FINANCIAL MANAGEMENT AND POLICY	100 Marks
Paper 4	**M.C.204**	PRODUCTION AND MATERIALS MANAGEMENT	100 Marks
Paper 5	**M.C.205**	OPERATIONS RESEARCH	100 Marks
Paper 6	**M.C.206**	BUSINESS POLICY & STRATEGIC MANAGEMENT	100 Marks
Paper 7	**M.C.207**	SUMMER TRAINING REPORT AND VIVA VOCE (For Regular College Students)	100 Marks
	M.C.207 A	ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (For USOL Students Only)	100 Marks
		OR	
	M.C.207 B	FINANCIAL SERVICES (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-III

Paper 1	**M.C.301**	BUSINESS PERFORMANCE MEASUREMENT	100 Marks
Paper 2	**M.C.302**	TAX PLANNING AND MANAGEMENT	100 Marks

For Paper 3, Paper 4, Paper 5, Paper 6 Students has to select two groups from the given groups A to F having two papers each. (MC. 303 to MC. 314)

Paper-3		Select Group from A-F	100 Marks
Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7			
	M.C.315	MC. 315-WORKSHOP ON FINANCIAL MARKETS AND INSTRUMENTS (For Regular Students Only)	100 Marks
	M.C.315 A	FINANCIAL MARKETS AND INSTRUMENTS (Theory paper For USOL Students Only)	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 303	Integrated Marketing Communication & Brand Equity	100 Marks
MC. 304	Marketing Research	100 Marks

Group B: Human Resource Management

MC. 305	Human Resource Development	100 Marks
MC. 306	Industrial Relations	100 Marks

Group C: International Business

MC. 307	Indiaôs Foreign Trade and Investment	100 Marks
MC. 308	Management of International Business Operations	100 Marks

Group D: Accounting & Finance

MC. 309	Strategic Cost Management	100 Marks
MC. 310	International Accounting	100 Marks

Group E: Applied Economics

MC. 311	Industrial Economics	100 Marks

MC. 312	Applied Econometrics	100 Marks

Group F: Banking and Insurance

MC. 313	Bank Management	100 Marks
MC. 314	Insurance Management	100 Marks

SEMESTER-IV

Paper 1	**M.C.401**	PROJECT PLANNING AND CONTROL	100 Marks
Paper 2	**M.C.402**	KNOWLEDGE MANAGEMENT	100 Marks
Paper 3	**M.C.403**	BUSINESS ETHICS AND CORPORATE GOVERNANCE	100 Marks

Every student has to select any one group from the two groups selected in the third semester (Selected group in the 4th semester will be having three papers) (MC. 404 to MC. 421)

Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7	**M.C.422**	COMPREHENSIVE VIVA-VOCE	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 404	Advertising and Sales Management	100 Marks
MC. 405	Services Marketing	100 Marks
MC. 406	Consumer Behavior	100 Marks

Group B: Human Resource Management

MC. 407	Organizational Change and Development	100 Marks
MC. 408	Training and Development	100 Marks
MC. 409	Compensation Management	100 Marks

Group C: International Business

MC. 410	International Business Environment	100 Marks
MC. 411	Global Financial Management	100 Marks
MC. 412	International Marketing Management	100 Marks

Group D: Accounting & Finance

MC. 413	Advanced Corporate Accounting	100 Marks
MC. 414	Security Analysis and Portfolio Management	100 Marks
MC. 415	Advanced Auditing	100 Marks

Group E: Applied Economics

MC. 416	Macro Economic Analysis and Policy	100 Marks
MC. 417	Economics of Services	100 Marks

MC. 418	World Trading System	100 Marks
Group F: Banking and Insurance		
MC. 419	Bank Legislation	100 Marks
MC. 420	Risk Management	100 Marks
MC. 421	Actuarial Practice	100 Marks

SEMESTER-I

PAPER 1: MC. 101- MANAGERIAL ECONOMICS

Objective: The objective of the course is to acquaint students with the concepts of microï economic theory and their use in business decision making. The effort is to make them capable of using various concepts to deal with business problems in a global economic environment.

UNIT-I

Nature and scope of managerial economics, relationship with economic theory, decision sciences, and functional areas of business; Theory of the Firm: Reasons for existence of the firms & their functions, the objective and value of the firm, constraints on the operation of the firms, limitations of the theory of the firm; Nature & Functions of Profits: Business vs. Economic Profits, theories of profit, functions of profit; Tools of Analysis: Marginal Analysis, Optimization, Decision and Game Theory - Concepts; The International Framework of Managerial Economics.

UNIT-II

The demand for a commodity: Individualôs demand, Market demand, and the firm demand; Price, Income & Cross elasticity of demand; Using elasticityôs in managerial decisions; Theories of consumer behavior.

UNIT-III

Pricing Practices and Risk Analysis**:** Price and Output relationship under different market structures; Pricing Theories; Pricing of multiple products; Price discrimination - International price discrimination & Dumping, Transfer Pricing; Risk and Uncertainties in managerial decision making; Measuring risk with probability distribution; Utility Theory and risk aversion.

UNIT-IV

Technological change and the global market economy: Impact of technological change on productivity, labor and market structure; Industrial innovation and technology and technological environmental forecasting.

Reference Books:

1. Koutsyiannis, A., Modern Microeconomics, Macmillan Press Ltd.
2. Varian, Micro-Economic Analysis (ed. 3), Norton.
3. Pindyck Robert S. and Daniel L. Rubinfeld, Micro Economics, Third Edition, Prentice Hall of India, New Delhi.
4. Madala, G.S. and Ellen Miller, Micro Economics, Theory and Applications, McGraw Hill Book Company, New York.

5. Gould, John P., Edward P. Lazear, Micro-Economic Theory, Richard D. Irwin, Inc., Homewood Illinois.

6. Sen Anindya, Micro-Economics: Theory and Applications , Oxford University Press, New Delhi.

7. Tirole J., The Theory of Industrial Organization, Cambridge MIT Press.

PAPER 2: MC. 102 - QUANTITATIVE METHODS FOR BUSINESS

Objective: The objective of the course is to acquaint students with some of the important statistical techniques for managerial decision making. The emphasis will be on their applications to business and economic situations.

UNIT-I

Probability and Probability Distribution: Definitions - Probability Rules ï Application of Probability Rules- Conditional Probability- Bayes theorem- Random Variable and Probability Distributions; Binomial Distribution- Poisson Distribution and Normal Distribution.

UNIT-II

Statistical Estimation and hypothesis testing: Introduction to Hypothesis testing ï Meaning of Population, sample and sampling distribution - parameters and statistics - Central limit theorem - Concept of Standard Error - Confidential limits - Estimation of population parameters - properties of a good estimator - Point and interval estimation ï Hypothesis Formulation and testing procedure - Type I and Type II errors - one tail and two tail tests - Sampling of Attributes - Estimation and testing Number and Proportions of Successes, Difference between two proportions.

UNIT-III

Sampling Variables : Large Samples - Difference between large and small samples - Estimating population mean - testing the significance of Mean - Significance of the difference between means of two samples - Significance between the standard deviations of two samples - Small Samples -âô test - fixing fiducial limits to population mean ï testing the significance of the mean - testing the significance of the difference between two independent means - testing the significance of the difference between two dependent means- F test - meaning - Applications of F test - ANOVA - Assumptions - Procedure - one way and two-way analysis of variance.

UNIT-IV

Statistical Quality Control - Introduction - Chance and Assignable Causes of Variation Uses of SQC - Process Control and Product Control- Control Charts - Control Charts for Variables -X: Chart ï Range chart ï Standard deviation chart - Control charts for attributes - C chart -p chart - np chart. Decision Tree Analysis ï Decision Making under Uncertainties.

Reference Books:

1. Levin, R.I. and D.S. Rubin: Statistics for Management, Prentice-Hall of India.
2. S.C. Gupta : Fundamentals of Statistics, Himalaya Publishing House, New Delhi.
3. Anderson Quantitative Methods for Business Decision, Thomson.

4. Barry Render, Ralph M. Stair Jr., Michael E. Hanna: Quantitative Analysis for Management, Prentice Hall of India.
5. Anderson, Introduction to Management Science: Quantitative Techniques for Decision Making, Thomson.
6. D.C. Sancheti & V.K. Kapoor : Statistics, Sultan Chand & Sons, New Delhi.
7. Sharma, J.K.: Operations Research ï Theory & Applications, Macmillan India Ltd.
8. Gupta, S.P: Statistical Methods, S. Chand & Sons, New Delhi.

PAPER 3: MC. 103 - MODERN ACCOUNTING THEORY & REPORTING PRACTICES

Objective: In view of the convergence of the Indian Accounting Standards with the IFRS, it is desirable to equip the students with the required knowledge of International financial reporting standards and practices. The students are expected to achieve a clear conceptual understanding of the IFRS and possess sufficient knowledge expected out of an expert.

UNIT-I

The Regulatory and Financial Reporting Framework: The International Accounting Standards Board (IASB)-The role and the standard setting process. Progress towards international harmonization. The IASB-Framework for the Preparation and Presentation of Financial Statements; The first time adoption of international financial reporting standards : Objective of financial statements, Qualitative characteristics of financial statements, Elements of financial statements, Recognition and measurement of elements of financial statements, Fair value basis of measurement, Concepts of capital and capital maintenance.

UNIT-II

Elements of financial statements as per International Financial Reporting Standards: (a) Property, plant and equipment (b). Intangible assets inventories (c). Construction contracts (d). Liabilities (e). Financial instruments (f). Provisions and contingencies (g). Employment and post-employment benefits (h). Accounting for tax (i). Accounting for agriculture (j). Share based payment (k). IFRS- 6: Exploration for and evaluation of mineral resources.

UNIT-III

Presentation and additional disclosures as per International Financial Reporting Standards (a). Events after the balance sheet date (b). Earnings per share (c). Related party disclosures (d). Interim financial reporting (e). Effects of changes in foreign exchange rates (f.) Segment reporting.

UNIT-IV

Preparation of external financial reports for single entities as per International Standards (a) Income statements and discontinuing operations (b) Cash flow statements (c) Statement of changes in equity

(d) Preparation of external financial reports for combined entities and joint ventures (e) Definitions of subsidiaries, investments in associates and joint ventures (f) Exclusions from consolidations (g) Preparation of consolidated balance sheets and income statements (h) Equity accounting (i) Proportionate consolidation and joint ventures.

Reference Books:

1. Elliott, B. & Elliott, J. (2008), Financial Accounting and Reporting. 12th ed. Harlow: Pearson/Prentice Hall.
2. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting. London: Bloomsbury.
3. S. Agarwal, Manual of Accounting Standards, Snow White.
4. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.
5. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
8. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.

PAPER 4: MC. 104 - ORGANISATION THEORY AND BEHAVIOUR

Objective: The objective of the course is to develop a theoretical understanding among students about the structure and behavior of organization as it develops over time. The course will also make them capable of realizing the competitiveness for firms.

UNIT-I

Organizational Theories and Behaviour: Classical, Neo - classical and Contemporary. Authority, Power, status, formal and informal structure. Flat and Tall structures. Bureaucratization of organizations. Organizational Behaviour Concepts, determinants, models, challenges and opportunities of OB. Transaction cost and organizational behaviours. Contributing disciplines to the OB. Individual Behaviour: Foundations of individual behaviour, values, attitudes, personality and emotions. Theory X and Theory Y, Chris Argyris behaviour patterns, Perceptual process.

UNIT-II

Group Decision making and Communication: Concept and nature of decision making process, Individual versus group decision making, Nominal group technique and Delphi technique, models of communication, communication effectiveness in organizations. Feedback, TA, Johari Window. Motivation: Need hierarchy, Maslowôs Need Hierarchy, Two factor theory, Contemporary theories of motivation (ERG, Cognitive evaluation, goal setting, and equity) expectancy model. Behaviour modification, Motivation and organizational Effectiveness.

UNIT-III

Leadership, Power and Conflict: Concept and theories, Behavioral approach, Situational approach, Leadership effectiveness, Contemporary issues in leadership. Power and conflict. Bases of Power, power tactics, sources of conflict patterns, levels and conflict resolution strategies. Transactional Analysis (TA) - Work Stress.

UNIT- IV

Organizational Culture, Organizational Development and Stress Management: Concept and determinants of organizational culture, Organizational Development: Concept and intervention techniques. Individual and organizational factors to stress, Consequences of stress on individual and organization, management of stress. Case Studies: Some cases of real business world are required to be discussed.

Reference Books:

1. Stephen Robbins, Organisational Behaviour, Pearson Education.
2. Fred Luthans, Organizational Behavior, McGraw Hill.
3. Wagner, Organizational Behavour, Thomson Learning.
4. S.S. Khanka, Organisational Behaviour, S.Chand & Co., New Delhi .
5. Dr. S. Shajahan & Linu Shajahan, Organisational Behaviour, New Age International Publishers, New Delhi.
6. Hellriegel, D & J.W. Slocam, Organizational Behavior, Thomson Learning.
7. McSchane, Organization Behavior, TMH.
8. New Storm Davis Organisation Behavior, THM, New Delhi.
9. Slocum, Fundamentals of Organizational Behavior, Thompson Press (Indian Edition).

PAPER 5: MC. 105 - MARKETING MANAGEMENT

Objective: The objective of the course is to familiarize the students with the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm.

UNIT-I

Introduction to Marketing Management**;** Marketing - Meaning and approaches, Role of Marketing in Organizations, 4Ps & beyond, Marketing Challenges, Marketing Process and Marketing Planning, Marketing information system.

UNIT –II

Analyzing Market Opportunities ; Analyzing the Marketing Environment- Economic, Demographic, Social, Cultural, Technical, Political & Legal Buying Behaviour- Consumer, Business & Industrial Measuring and Forecasting Market Demand.

UNIT –III

Product management**:** Product - Meaning and Classifications, New Product Development. Managing Product Life Cycles, Brand Strategies and Management. Managing Service - Idea, Institution, Person, Place and Event.

UNIT–IV

Pricing, Distribution and Promotion Pricing- Influencing factors, Approaches, Strategies and Programmes. Channels of Distribution and Logistics. Promotion Strategies - Advertising, Sales Promotion & Public Relations.

Reference Books:

1. Kotler, Philip: Marketing Management Analysis, Planning Implementation and Control (Prentice Hall of India, N. Delhi, 2005).
2. Kotler, Keller, Koshy & Jha: Marketing Management, Pearson Education, N. Delhi.
3. Stone, Marilyn A. & John, Desmond: Fundamentals of Marketing, Routledge, UK.
4. Kumar and Minakshi, Marketing Management, Vikas Publ. House, New Delhi.
5. Kurtz : Principles of Marketing, Cengage Learning India Pvt. Ltd., New Delhi.
6. Stern, Luis W. & El-Ansary, Adel I: Marketing Channels, Prentice Hall of India, N. Delhi.
7. Markin, Ram: Marketing Strategy and Management, John Willey & Sons.
8. Kelly, E.J.& Lazer, William: Managerial Marketing ï Perspectives, Richard D. Irwin Inc, Illinois.

PAPER 6: MC. 106 - MANAGEMENT INFORMATION SYSTEM

Objective: The objective of the paper is to offer a comprehensive overview of Management information systems (MIS). It will explore technical, strategic and tactical issues related to MIS. Basic concepts in analyzing and designing information systems will be presented.

UNIT-I

MIS Definition - Characteristics - Evolution of MIS: Concepts; framework for understanding and designing MIS in an organization; MIS and other related disciplines: MIS and Management Accounting,

MIS and Computer Science, MIS and OR, MIS and Organizational Behavior, MIS and Management. Concept of information : definition, features, types, process of generation and communication; quality of information; information overload; techniques for managing overload; summarizing; filtering; inferences and message routing. System concepts : definition, types and characteristics of system-control in systems: feedback: positive and negative; negative feedback control system, input, process and output control; law of requisite variety.

UNIT-II

Structure of MIS: Basic structural concepts: formal and informal information systems; public and private information systems; multiple approaches to the structure of MIS: Operational elements (physical components, process, outputs for users), activity subsystems, functional subsystems and decision support ï synthesis of multiple approaches into a conceptual structure for MIS.

UNIT-III

Information systems: Transaction Processing Systems, Office Automation Systems, Information Reporting Systems, Decision Support Systems, Executive Support Systems, Expert systems.

UNIT-IV

Systems Development and Implementation: System development methodologies; SDLC approach; prototyping approach and user development approach - Systems Analysis; Systems Design; Concepts of database and database design; system implementation; management of information system projects; system documentation ï information system audit. Security of information resources; threats to information resources; security systems for risk management. Enterprise Resource Planning Systems ï Features-ERP Modules - implementation of ERP.

Reference Books:

1. OôBrien, James A: Management Information Systems, Tata McGraw Hill, New Delhi.
2. George M. Scott: Management Information Systems, McGraw Hill Book Company, New Delhi.
3. Schultheis, Robert and Summer, Mary: Management Information Systems, Tata McGraw Hill, New Delhi.

4. Gordon B Davis, et. El: Management Information Systems, Prentice Hall of India, New Delhi.
5. Kenneth C.Laudon and Jane P. Laudon: Management Information Systems ï Managing the Digital Firm, Pearson Education Asia, New Delhi.
6. Effy Oz, Management Information Systems, Vikas Publishing House, New Delhi.
7. Haag, Cummings and Mccubbrey: Management Information Systems for the Information Age, Tata McGraw Hill, New Delhi.
8. Post, Gerald V and Anderson, David L: Management Information Systems, Tata McGraw Hill, New Delhi.
9. Alex Leon: Enterprise Resource Planning ï Tata McGraw-Hill, New Delhi.

PAPER 7: MC. 107 - WORKSHOP ON IT APPLICATIONS IN COMMERCE

(For Regular Students studying in Colleges/University Department Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas - An Overview of Management Science and Quantitative Analysis: The Management Science Process - Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet- Understanding basic features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios - Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database-features- components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing- Data mining. Features of RDBMS -Database design and application development ï Tables- creation- relationships- Forms designing forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (e) Presentation session of the students on the assigned project.

Reference Books:

1. Hoffer, Jeffrey A, Marry B. Prescott, and Fred R. McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi.
3. Novathe and Elmasri: Fundamentals of Database Systems, Addison Wesley.

4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.
5. Ullmann, Jeffry D, Principles of Database Systems, Galgotia, New Delhi.
6. Post, Gerald V., Database Management Systems, Tata McGraw Hill.
7. Stephan G Powell and Kenneth R Baker Management Science, Art of Modeling with Spread Sheets, Wiley India(p) Ltd., New Delhi.
8. Elmasri and Nawathe- Fundamental of Database Systems, Pearson Education Asia, New Delhi.

PAPER 7: MC. - 107A - IT APPLICATIONS IN COMMERCE

(For USOL Students Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas- An Overview of Management Science and Quantitative Analysis: The Management Science Process-Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet - Understanding Basic Features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios- Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario

management and pivot table applications.

UNIT-IV

Database management systems - Concept of database ï features - components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing-Data mining. Features of RDBMS -Database design and application development ï Tables- creation-relationships- Forms designing, forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Reference Books:

1. Hoffer, Jeffrey A, Marry B.Prescott, and Fred R.McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi .
3. Novathe and Elmasri : Fundamentals of Database Systems, Addison Wesley.
4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.
5. Ullmann, Jeffry D. : Principles of Database Systems, Galgotia, New Delhi.
6. Post, Gerald V. : Database Management Systems, Tata McGraw Hill.
7. Stephan G Powell and Kenneth R Baker : Management Science ï Art of Modeling with Spread Sheets - -, Wiley India (P)Ltd., New Delhi.
8. Elmasri and Nawathe : Fundamental of Database Systems- Pearson Education Asia, New Delhi.

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SEMESTER-II

PAPER 1: MC. 201 - BUSINESS ENVIRONMENT

Objective: The objective of the course is to acquaint students with the concepts of macro ï economics and the macro environment in which a business organization operates. The course would also make the student capable of analyzing and understanding the macro economic policies of the government implemented from time to time and assess their impact on business.

UNIT-I

Business Environment: Cultural, social, political, technological, economic and legal environment - scanning - techniques of environmental forecasting - SWOT ï Internal environment - their impact on policy formulation.

UNIT-II

Economic reforms in India - Liberalization - privatization and globalization ï Competitive Strength of Indian industry - Impact of liberalization policy on different sectors ï Foreign Investments policy in India. Multi-national corporations - Their participation in India ï Their strategies, competitive strengths policies and performance.

UNIT-III

Industrial Policies: A brief review of industrial policies since independence, Industrial policy of 1991 and recent developments, Policy on foreign direct investment in Indian industry. Fiscal Policy: Public revenues, public expenditure, public debt, development activities financed by public expenditure, an evaluation of recent fiscal policy of Government of India ï Monetary Policy: Demand for and supply of money, Objectives of monetary and credit policy, recent trends - Role of Finance Commission. Integration of Worldôs economies and its impact on Indian Business.

UNIT-IV

Money and Capital market: Features and components of Indian Financial system, objectives, features and structure of Money market and capital market, recent developments - Stock Exchanges, Investor Protection

and Role of SEBI. Legal Framework: Consumer Protection Act, 1986, Right to Information and Right to Service Acts and its implications for business.

Reference Books:

1. Wheelen, Concepts of Strategic Management and Business Policy, Pearson Education, New Delhi.
2. William Gluck & L R Jauch, Business Policy & Strategic Management, McGraw-Hill., New Delhi.
3. Kazhmi Azhar , Business Policy, TMH.

4. Gupta, Liberalisation - Its Impact on Indian Economy, Macmillan.
5. K.V.Sivayya and VBM Das: Indian Industrial Economy, Sultan Chand Publishers, Delhi.
6. Suresh Bedi: Business Environment, Excel, New Delhi.
7. Francis Cherunilam: Business Environment - Text & Cases, Himalayan Publishing House, Mumbai.
8. M. Adhikari: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
9. Prof. Laxmi Narain : Globalization , Liberalization and Privatization of Public Enterprises, Sultan Chand & Co., New Delhi.
10. Pandey, G.N., Environmental Management, Vikas Publishing House.

PAPER 2: MC. 202 - RESEARCH METHODOLOGY IN COMMERCE

Objective: The objective of this paper is to impart knowledge about various stages of the research processes and their application in Commerce and Management Education.

UNIT-I

Introduction: - Meaning of the Research ï Qualities of a research worker ï Scientific Method ï Definition ï stages of scientific study ï Different steps in scientific study ï Logical Methods ï Inductive & Deductive Methods ï Nature of the Phenomena & the use of the scientific methods. Approach to a Research Project **:-** Purpose of Research ï Functions in Research ï Research Programme ï Problem solving through research /financial aspects of research ï Research Design (Selective topic, Coverage, Hypothesis) ï Sources of Information ï Nature of study ï Definition of terms ï Techniques of study ï Collection, Analysis & presentation of the data ï Testing hypothesis ï Stating results.

UNIT-II

Use of the Library: - Finding the correct sources of information ï Uses of books, periodicals & encyclopedia ï Taking down notes ï Collection & organization of Material. Research Method :- Sampling Method ï Observation Method ï Case Study Method ï Interview Method ï Survey Method ï Experimental

Method ï Questionnaire Method - Library Method ï Documentary Method ï Suitable Combination & Selection of Method ï advantages, disadvantages & limitations of methods.

UNIT-III

Presentation of Information:-Analysis of information ï Classification, tabulation & interpretation ï Presentation of data & its application ï Pictorial presentation ï Composition of information (quotation, footnotes, bibliography - tables, standards, abbreviations) - style of writing. Coordinating contents :- Front matter (blank sheet, title page, dedication, preface, table of contents, list of tables, list of figures, list of appendices etc.) ï Text proper (Chapter wise information) ï Back matter (appendices, glossary, bibliography, index, blank sheet).

UNIT-IV

Multivariate analysis ï an overview of dependence and interdependence methods (multiple regression, discriminate analysis, conjoint analysis, factor analysis, cluster analysis); research report; ingredients and constructions of research report ï procedure of preparation of reference and bibliography. Research Findings and Preparation and writing of a Research Report: - Benefits of implementation of actual research findings ï carrying forward the studies ï Management of research unit ï Preparation and writing of a ôResearch Reportõ.

Reference Books:

1. Methods of Social Survey and Research, S. R. Bajpai, Kitab Ghar, Kanpur.
2. Zikmund, Millian G., Business Research Methods, Thomson Learning, Bombay.
3. Cooper, Donald R. and Pamels Schindler, Business Research Methods, Tata McGraw Hills, New Delhi.
4. Geode, Millian J. & Paul K. Hatl, Methods in Research Methods, Tata McGraw Hills, New Delhi.
5. Shekhran, Uma, Business Research Method, Miley Education, Singapore.
6. Kothari, C.R., Research Methodology- Methods and Techniques, New Age International Publishers.

PAPER 3: MC. 203 - FINANCIAL MANAGEMENT AND POLICY

Objective: The objective of the course is to acquaint the students with the basic analytical techniques and methods of financial management of business firms. The course also provides students the exposure to certain sophisticated and analytical techniques that are used for taking financial policy decisions.

UNIT-I

Financial management - Scope, finance functions and its organization, objectives of financial management;

time value of money; sources of long term finance. Financial Forecasting: Sales Forecast Preparation of Performa Income Statement and Balance Sheet Growth and External Funds Requirement (EFR).

UNIT- II

Investment decisions; importance, difficulties, determining cash flows, methods of capital budgeting; risk analysis (risk adjusted discount rate methods and certainly equivalent methods) cost of different sources of raising capital; weighted average cost of capital.

UNIT- III

Capital Structure decisions - Leverage: Measuring and analyzing the implications of Leverage Operating Leverage, Financial Leverage and Total Leverage; capital structure theories - NI, NOI, traditional and M-M theories; Capital Structure Policy: Business & Financial Risk, A Total Risk Perspective Business & Financial Risk, A Market Risk Perspective Determinants of Capital Structure Decision Approach to Estimating the Target Capital Structure Variations in Capital Structures, EBIT / EPS Analysis and ROI/ROE Analysis.

UNIT- IV

Determinants of dividend models - Walter, Gordon & M.M. models. Working Capital ï Meaning, need, determinants; estimation of working capital need; management of cash; inventory & receivable.

Reference Books:

1. Pandey, I.M. Financial Management, Vikas Publishing House, New Delhi.
2. Khan M.Y. and Jain P.K. Financial Management, Tata McGraw Hill, New Delhi.
3. Keown, Arthu J., Martin, John D., Petty, J. William and Scott, David F., Financial Management, Pearson Education.
4. Chandra, Prasanna, Financial Management, TMH, New Delhi.
5. Van Horn, James C., Financial Management and Policy, Prentice Hall of India.
6. Brigaham & Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.
7. Kishore, R., Financial Management, Taxmans Publishing House, New Delhi.

PAPER 4: MC. 204 - PRODUCTION AND MATERIALS MANAGEMENT

Objective: To impart knowledge regarding production and management techniques, process, tools, and acquaint the students with the knowledge of marketing functions, techniques and strategies.

UNIT-I

Introduction to Production Management - Nature, Scope, Importance and Functions Materials Management - Evolution, Importance, Scope and Objectives - Interface with other functions. Introduction of Inventory Control, Static Inventory problem under risk. Dynamic Model under risk, policy coordinated, Replacement with discount. Introduction to purchasing, Functions of purchasing, procedure of purchasing, Selection Sources of Supply, Negotiation with Suppliers.

UNIT-II

Price determination; Price Cost Analysis, Quality determination and control value analysis. Scope & functions of operations management, Forecasting of demand. Delphi. Methods, Statistical Quality Control Technique.

UNIT-III

Facilities Location & Layout ï Strategic importance - Factors affecting location & layout - Installation of facilities ï Single location, multi-location decisions. Principles and Types of Facilities Layout. Importance and Functions of Production Planning & Control. Introduction to PERT / CPM - Network Crashing.

UNIT-IV

Productivity - Work Study - Objectives, Scope and Uses - Methods Study ï Flow process chart, Flow diagram & Process mapping - Work Measurement - Elements ï Performance Rating - Allowances - Standard Time - Synthetic Time Standards ï Work Sampling.

Reference Books:

1. Alan Mulemann, John Oakland, Keith Locker, ôProduction and Operations Managementô Macmillan India Ltd.
2. Datta, A.K., Materials Management : Procedures, Text and Cases, Prentice Hall of India.
3. Gaither, Operations Management , Thomas Learning.
4. S.A. ShunwalIa *&* Patel, Production and Operations Management, Himalaya Publishing.
5. R. Panneerselvan, Production and Operations Management, Prentice Hall of India.
6. P. Saravanavel, S. Sumathi, Production and Materials Management, Margham Publication.
7. Mukhoipadhyay, Production Planning and Control, TMH.

PAPER 5: MC. 205 - OPERATIONS RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operations Research: Evolution, methodology and role in decision making; Linear programming: Meaning, assumptions, advantages, scope and limitations: Formulation of Problem and its solution by graphical and simplex methods (Including Big M Method and Two Phase Simplex Method); special cases in simplex method; infeasibility, degeneracy, unboundedness and multiple optimal solutions; duality. Dual Simplex Method.

UNIT-II

Transportation problems including transshipment problems; Special cases in transportation problems; unbalanced problems, degeneracy; maximization objective and multiple optimal solutions; assignment problems including travelling salesmanôs problem. Special cases in assignment problems; unbalanced problems, maximization objective and multiple optimal solutions.

UNIT-III

PERT/CPM: Difference between PERT and CPM, network construction, calculating EST, EFT, LST, LFT and floats, probability considerations in PERT, time cost trade off. Decision theory: decision making under uncertainty and risk, Bayesian analysis, decision trees. Replacement problem (Individual and Group replacement problems both).

UNIT-IV

Game theory, pure and mixed strategy games; principle of dominance; two person zero sum game; Queuing theory: concept, assumptions and applications; analysis of queue system, Poisson distributed arrivals and exponentially distributed service time model (MMI and MMK); simulation; meaning, process, advantages, limitations and applications.

Reference Books:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
3. Vohra, N.D., Quantitative Techniques in Management, Tata McGraw Hills Publishing Company Ltd., New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.

6. Kalavathy, Operations Research, Vikas Publishing House, ND.

PAPER 6: MC. 206 - BUSINESS POLICY & STRATEGIC MANAGEMENT

Objective: The objective of the course is to help the students develop an understanding of the basic inputs in making and implementing corporate strategic decisions and also familiarize them with the issues and practices involved.

UNIT-I

Strategic Management - An Introduction - Evolution of business policy as a discipline - Strategy and the

Quest for Competitive Advantage: Military origins of strategy ï Evolution - Concept and Characteristics of strategic management ï Defining strategy ï Mintzerbgôs 5Ps of strategy ï Corporate, Business and Functional Levels of strategy - Strategic Management Process.

UNIT-II

Strategic Options Porterôs Generic Strategies Integration Strategies, Intensive Strategies. Diversification and Differentiation Strategies, Functional Strategy - Manufacturing, Financial, Marketing, Human Resource, Research & Development. Strategic Intent & Strategy Formulation: Vision, mission and purpose ï Business definition, objectives and goals ï Stakeholders in business and their roles in strategic management ï Corporate Social Responsibility, Ethical and Social Considerations in Strategy Development.

UNIT-III

Strategy implementation - Project implementation ï Procedural implementation ï Resource Allocation ï Organization Structure ï Matching structure and strategy. Behavioral issues in implementation ï Corporate culture ï Mc Kinseyôs 7s Framework - Concepts of Learning Organization. Strategy Evaluation - Importance - Symptoms of malfunctioning of strategy - Organization anarchies - Operations Control and Strategic Control - Measurement of performance - Analyzing variances - Role of organizational systems in evaluation.

UNIT-IV

New Business Models and strategies for Internet Economy: Shaping characteristics of E-Commerce environment ï E-Commerce Business Model and Strategies ï Internet Strategies for Traditional Business ï Key success factors in E-Commerce ï Virtual Value Chain. Cases in strategic management. A minimum of 10 cases encompassing the above topics to be analyzed and discussed in the class. Cases to be incorporated in the Question Paper.

Reference Books:

1. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting & Executing Strategy ï The Quest for Competitive Advantage, Tata McGraw Hill.

2. Ranjan Das, Crafting the Strategy: Concepts and Cases in Strategic Management, Tata McGraw Hill.
3. Henry, Mintzberg, Bruce, Ahlstrand and Joseph, Lampel, Strategy Safari, Free Press, New York.
4. Gary, Hamel and Prahalad, C. K.. Competing for the Future, HBS Press.
5. Ed. C.A. Montgomery, M.E. Porter, Strategy ï Seeking and Securing Competitive Advantage, Harvard Business Review Publications.
6. Peter F. Drucker, Managing in a Time of Great Change, Truman Talley Books/Plume Penguin Group.
7. Kazmi, A, Business Policy and Strategic Management, Tata Mcgraw Hill, New Delhi.
8. Wheelen, T.L. and Hunger, J.D, Strategic Management and Business Policy, Pearson Education, (LPE), New Delhi.

Paper 7: MC. 207- SUMMER TRAINING REPORT AND VIVA VOCE

(For Regular Students Only)

After the Completion of Second Semester Examination the students will go on 6-8 Weeks summer training in various Industrial undertakings, banking and financial services institutions, and Retail Sector organizations, undertake a project there to study a particular problem and file three copies of summer training report within 15 days completion of the training. The student has to file a certificate of completion of training issued by training organization. A VIVA-VOCE Examination will be conducted by the External examiner appointed by the University on the problems undertaken in the summer training report. Principal of the College/Chairperson of the Department must appoint one internal supervisor for the guidance of the student regarding the Summer Training Project. The List of the internal supervisors so appointed must be communicated to the Controller of examination within 10 days from the date of appointment. The Internal supervisor will also be acting as Internal Examiner at the time of Conduct of VIVA-VOCE and sit with External Examiner.

PAPER 7: MC. 207-A - ENTREPRENEURSHIP DEVELOPMENT & PROJECT MANAGEMENT

(For USOL Students Only)

Objective: The purpose of this paper is to prepare a ground where the students view Entrepreneurship as a desirable and feasible career option. In particular the paper seeks to build the necessary competencies and motivation for a career in Entrepreneurship.

UNIT-I

Foundations of Entrepreneurship Development: Concept and Need of Entrepreneurship Development, Definition of Entrepreneur, Entrepreneurship, Innovation, Invention, Creativity, Business Idea, Opportunities through change. Concepts of Entrepreneur, Manager, Intrapreneur / Corporate Entrepreneur

ï comparative study - Roles, Responsibilities, Career opportunities. Entrepreneurship as a career, Entrepreneurship as a style of management, The changing role of the entrepreneur: mid career dilemmas ï Closing the window: Sustaining Competitiveness - Maintaining competitive advantage.

UNIT-II

Theories of Entrepreneurship: Innovation Theory by Schumpeter & Imitating Theory of High Achievement by McClelland ,X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen Influences on development.

UNIT-III

Project Management Technical, Financial, Marketing Personnel and Management feasibility Reports Financial schemes offered by various financial institutions like Commercial Banks, IDBI, ICICI, SIDBI, SFCs, Venture Capital Funding, Angle Capitalist.

UNIT-IV

Entrepreneurship Development and Government Role of Central Government and State Government in promoting Entrepreneurship with various incentives, subsidies, grants etc. ï with special reference to ôExport oriented unitesô Role of the following agencies in the Entrepreneurship Development DIC ï District Industrial Center, SISI ï Small Industries Services Institute, EDII ï Entrepreneurship Development Institute of India NIESBUD ï National Institute of Entrepreneurship and Small Business Development. NEDB ï National Entrepreneurship Development Board.

Recommended Books:-

1. Brandt, Steven C., The 10 Commandments for Building a Growth Company, Macmillan Business Books, Delhi.
2. Bhide, Amar V., The Origin and Evolution of New Business, Oxford University Press, New York.
3. Dollinger M.J., ôEntrepreneurship Strategies and Resourcesô, 3rd edition, Pearson Education, New Delhi.
4. Desai, Vasant Dr., Management of Small Scale Enterprises, Himalaya Publishing House, New Delhi.
5. Taneja, Gupta, Entrepreneur Development New Venture Creation, 2nd ed., Galgotia Publishing Company.
6. Holt, David H., Entrepreneurship: Strategies and Resources, Illinois, Irwin.
7. Panda, Shiba Charan, Entrepreneurship Development, New Delhi, Anmol Publications.
8. Patel, V.G., The Seven Business Crises and How to Beat Them, Tata-Mcgraw, New Delhi.

OR

PAPER 7: MC. 207-B - FINANCIAL SERVICES

(For USOL Students Only)

Objective: To provide insight to the structure, working and problems of financial, system in India as well as to enable students to appreciate and understand the concepts, mechanism and utility of different financial services.

UNIT – I

An overview of Indian financial system: Introduction, structure, components and mechanism of the financial system. Financial Services: An overview. Introduction to SEBI.

UNIT–II

Merchant Banking: Functions and SEBI regulations and Non Fund-based and Fund-based activities including role in mobilization of funds. Depository Services in India (including regulatory aspects).

UNIT–III

Leasing - Introduction, financial evaluation of lease from lessorôs and lesseeôs point of view, lease structuring, Tax, legal and accounting aspects especially in Indian context. Factoring: Features, process and agreement for factoring.

UNIT–IV

Mutual Fund: Introduction, management, regulations, working, and Indian experiences. Credit Rating: Concepts, functions and process of debt rating and SEBI regulations.

REFERENCES:

1.	L.M. Bhole	Financial Institutions and Markets
2.	J.C. Verna	Merchant Banking Organisation and Management
3.	Lalit K. Bansal	Merchant Banking and Financial Services
4.	M.Y.Khan	Financial Services
5.	V.A. Avadhani	Investment and Securities Markets in India.
6.	S. Ramesh & Arun Gupta	Venture Capital and Indian Financial Sector.

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SEMESTER-III

PAPER 1: MC. 301 - BUSINESS PERFORMANCE MEASUREMENT

Objective: The objective of this paper is to make the students familiar with the performance measurement techniques for business.

UNIT-I

Corporate Performance Measurement - Need and Importance; Historical Overview; Product Costing in price estimates and profit management; Techniques to measure and enhance profitability and quality of products and services; Activity Based Management, Target and Kaizen costing; benchmarking and environmental costing; Flexible Budgeting, and Activity Based Budgeting.

UNIT-II

Setting of performance goals and incentives, and the use of diagnostic tools and control; systems to achieve the goals; Strategic Profitability Analysis; Measuring performance using Economic Value Added (EVA) methodology; Comparison between Return on Investment (ROI) and EVA methodology of measuring performance.

UNIT-III

Measurement of Corporate Performance through Balanced Scorecard and its value creation potential;. Rationality behind balance score card; performance dimensions of the balance score card; Throughput Accounting; Comparison of Activity Based Costing.

UNIT-IV

Information Systems aspects of management control; Control-needs of Information flow, and its consolidation in multi-locational setting; Management Control System and its applications; Responsibility Accounting - Meaning and Methodology, types of responsibility centres, organizational structure of responsibility centres; objectives and methods of transfer pricing, pricing corporate services and administration of transfer pricing.

Reference Books:

1. Anthomu, R.N. and Govindrajan, V., Management Control System, Tata McGraw-Hill New

Delhi.
2. Atkinson, A., R.S. Kaplan and S.M. Young, Management Accounting (4th ed). New Jersey: Prentice Hall
3. Friedlob, George T, Lydia, L.F., Essentials of Corporate Performance Measurement, John Wiley and Sons inc.
4. Manzoni, Alex, Islam Sardar, M.N, Performance Measurement in Corporate Governance, Springer
5. Simon, R., Performance Measurement and Control System for Implementing strategy-Text and Cases, Prentice Hall
6. Merchant, K and Van-der-stede, W.A., Management Control System: Performance Evaluation and Incentives, Prentice Hall.
7. Marvin T. Howell, Actionable Performance Measurement - A Key to Success, American Society for Quality, Quality Press, Milwaukee.
8. Merchant, K.A., Modern Management Control System: Text and Cases, Pearson Education Inc.

PAPER 2: MC. 302 - TAX PLANNING AND MANAGEMENT

Objective : The aim of this course is to familiarize the student with major latest provisions of the Indian tax laws and related judicial pronouncements pertaining to corporate enterprises having implications for various aspects of Corporate planning with a view to derive maximum possible tax benefits admissible under the law.

UNIT-I

Structure of Direct and Indirect Taxes in India. Concepts, Significance and Problems of Tax Planning, Tax Avoidance and Tax Evasionï Recognized methods of Tax Planning : Ensuring maximum claims for deduction for companies with special emphasis on depreciation allowance, expenses of scientific research, amortization of preliminary expenses and amounts not claimed otherwise. Taking advantages of available reliefs, rebates and tax free sources of income.

UNIT-II

Definition of various kinds of companies - Meaning of company under IT Act. Residential status of companies and implications for Tax Planning. Assessment of companies including carry forward and set off of losses.

UNIT-III

Tax implications in planning of business unit as Proprietorship, Partnership, Pvt. Ltd. & Public Ltd. Tax planning in the context of exemptions, incentives, export promotions & various deductions under Chapterï VI of Income Tax Act. Setting up of a new Industrial Establishment: location aspects; nature of business; planning for tax holiday benefits. Specific management decisions such as (1) make or buy; (2) own or lease, (3) repair or replace; (4) export vs. local sale; (5) shut down or continue; (6) expand or contract.

UNIT-IV

Indirect Tax Planning: Central Excise Act ï Planning in relation to nature of activity, use of power, commodity to manufacture, method of selling, scale of investment, number of workers, location of units, etc. Exemption from excise duty levy - nature and types of exemption, Special reliefs for exports and SSI units. Set-off of duties - meaning, schemes of set-off VAT / Sales Tax Act ï Method of executing sales through branches, head office and factory; export contracts and implications on penultimate sales, canalized

exports ï implications.

Reference Books:

1. Singhania, V.K.: Direct Taxes: Laws and Practice , Taxman N. Delhi.
2. Singhania, V.K. : Direct Tax planning and Management Taxman N. Delhi.
3. Prasad, Bhagabati: Direct Tax Law & Practice, New Age Publ., N. Delhi.
4. Merhotra, H.C.: Direct Taxes Planning, Sahitya Bhavan, Agra.
5. Srinivas, E.A.: Corporate Tax Planning, TMG, New Delhi.
6. Lakhotia, R.N. Corporate Tax Planning, Vision Publications, N. Delhi
7. Ahuja, Girish & Gupta, Ravi: Systematic Approach to Income Tax; Central Sales Tax, Bharat Law House, N. Delhi.
8. Datey V.S.: Indirect Taxes - Law and Practice, Taxman Publications, New Delhi.

SEMESTER-III (ELECTIVES)
GROUP A: MARKETING

MC. 303 - INTEGRATED MARKETING COMMUNICATION & BRAND EQUITY

Objective: The objective is to introduce the students to the integrated role of promotion techniques with the special emphasis on advertising.

UNIT-I

Marketing communication; functional areas of marketing communication; integrated marketing communication; types of advertising agencies; media partners and their role; compensating the advertising agencies; agency evaluation; brands - its meaning; creating and maintaining the brand; selecting desired brand position; developing brand identification; creating a brand image; creating and maintaining brand relationship with customers; brand-customer touch points; prospects and customers; AIDA model; think/feer/do models; brand decision making process; attitude formation and attitude change; brand likeability.

UNIT-II

Branding concepts; branding challenges and opportunities; brand equity concept; strategic brand management process; customer based equity; building a strong brand and its implications; identifying and establishing brand positioning; defining and establishing brand values; internal branding.

UNIT-III

Campaign planning; IMC planning process; internal marketing; segmenting and targeting; types of segmentation; message and profitability targeting; digitization of brand information; customer database; building relationship through data management; developing creative message strategy; process of developing IMC message strategy; methods of getting creative ideas; brand-message execution; copywriting; writing for point and electronic media; print layout and design; executional and strategic consistency.

UNIT-IV

Media classification; media strength and weakness; wireless communication; e-mail marketing; website marketing; integrating online brand communication; media planning; consumer sales

promotion; sales promotion tools; determining consumer sales promotion strength and limitations of sales promotion; trade promotion; trade promotion for new products and existing brands; trade promotion strategies; objectives of co-marketing communication.

Reference Books:

1. Duncan, Tom; Principles of Advertising and IMC; Tata McGraw Hill, New Delhi.
2. Clow, Kenneth & Baack, Donald; Integrated Advertising, Promotion and Marketing Communication; Pearson Education, New Delhi.
3.Belch, George and Belch, Michael; Advertising and Promotion; Tata McGraw Hill, New Delhi.
4.Wells, William, Burnett, John ad Moriarty, Sandra; Advertising Principles and Practice; Pearson Education; New Delhi.
5. Jethwaney, Jaishree and Jjain, Shruti; Advertising Management; Oxford University Press; New Delhi.

MC. 304 - MARKETING RESEARCH

Objective: The course aims at exposing the students to the concept, tools and techniques of marketing research and developing their skills to be able to apply research techniques to aid marketing decision making.

UNIT I

Introduction : Meaning, nature and importance of marketing research; Marketing research and scientific method; Research reliability and validity; Problems in conducting marketing research; Marketing Information System (MIS); Ways of conducting marketing research; Syndicated research. Marketing Research Process: Steps involved in conducting marketing research; Problem identification; Determining information needs; Developing marketing research proposal.

UNIT II

Research Design : Meaning and importance; Types of research designs ï explorative, descriptive and conclusive researches; Secondary data ï sources, uses and limitations; Primary data collection methods ï questioning techniques and observation methods; Online data sources and research; Questionnaire preparation. Sample Design and Field Work : Defining universe and sampling unit; Determining sampling frame; Probability and non - probability sampling methods; Sample size determination; Field work and data collection ï sampling and non-sampling errors.

UNIT III

Data Analysis and Report Preparation: Data editing, coding tabulation and graphical presentation; Univariate and multivariate data analyses techniques and their applications in marketing research; Report preparation, presentation and follow - up. Marketing Research Applications: Consumer research ï behaviour and motivation research, attitude measurement and scaling techniques.

UNIT IV

Product research; Advertising research; Marketing and sales forecasting; Sales analysis. Marketing Research in India: Status, organization and developments; Ethical issues in marketing research.

Suggested Readings:

1. Harper W. Boyd, Ralph Westfall and Stanley F. Stasch, Marketing Research: Text and Cases.
2. Malhotra, Naresh K., Marketing Research, 5th Ed., Prentice Hall of India.
3. Cooper, Donald R. and Pamela S. Schindler, Marketing Research, Tata McGraw Hill.
4. Paul E. Green, et.al., Research for Marketing Decisions, Prentice-Hall of India Pvt. Ltd, New Delhi.
5. Donald S. Tull and Del I. Hawkins, Marketing Research: Measurement and Methods, Prentice-Hall of India Pvt. Ltd., New Delhi.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 305 – HUMAN RESOURCE DEVELOPMENT

Objective: The objective of the course is to make student aware of the concepts, techniques and practices of human resource development. This course is intended to make students capable of applying the principles and techniques as professionals in organizations they work for.

UNIT I

Human resource development: Concept and evolution, human resource mobilizations, HRD Conceptual base, strategic interventions in HRD sector and target groups, HRD mechanisms, processes and outcomes, HRD instruments, HRD. HRD and Management: Attitude of top management towards HRD, Motivational aspects of HRD, Trends and Practices, Line manager and HRD.

UNIT II

HRD Activities: HRD culture and climate, Elements of HRD climate, measurement of HRD climate, factors to HRD climate, Determinant needs, developmental supervisor, HRD for Workers: HRD mechanisms for workers, Role of trade unions.

UNIT III

HRD in Organizations: Government organizations, educational institutions, armed forces, police and industry, private sectors and public sectors units.

UNIT IV

Emerging Issues in HRD: Creating awareness and commitment to HRD, Industrial relations and HRD, Utilization of HRD efforts, Future of HRD, International comparison of HRD (Commonalities and differences).

Reference Books:

1. Werner, Jon M. and Randy L. Desimone, Human Resource Development, South-Western Educational Publishing.
2. Nadler, L (ed), Corporate Human Resources Development, Van Nostrand Reinhold.
3. Parek V. and T.V. Rao, Designing and Planning Human Resource Systems, Oxford and IBH, New Delhi.
4. Strategic HRM ï Jeffery Mello, Thompson Publication, New Delhi.
5. Strategic HRM- Charles Greer, Pearson Education Asia , New Delhi.
6. Strategic HRM-Michael Armstrong, Kogan Page, London.
7. Strategic HRM- Agrwal, Oxford University Press , New Delhi.
8. Human Resource Management- Garry Dessler, PHI, New Delhi.

MC. 306 – INDUSTRIAL RELATIONS

Objective: The objective of the course is to make student aware of the concept of industrial relations. The course will make them understand the importance of industrial relations for an organization and how these relations provide dynamics to organizations.

UNIT I

Industrial Relations: Concepts and scope, Historical development, Unilatarist, Pluralist and Marxist perspective of IR. Trade Unionism: role of trade unions, trade union in India, national level federations, Goals and objectives of unions and union leadership, weaknesses in trade unions, trade unions, politics and government. Theories of trade unionism. Cross cultural aspects of union management relations.

UNIT II

Trade Union Act 1926: An overview. Union recognition; de-unionization strategies. Union Management Relations: conceptual framework, union management perspectives, organizational factors affecting union management relations. Public policies and union management relations, role of state, constitution and labour policies, ILO, Major events and international issues, changes affecting HR/IR perspectives, perspectives in India.

UNIT III

Industrial Democracy: Concepts and scopes of industrial democracy, Workerôs participation: Strategy, practices, behavioral science input/contribution and models. Rationale for participation, Issues in participation, strategies for making participation work and making participation more effective. Methods of industrial relation machinery in India; Statutory and non-statutory methods of industrial dispute resolution; Conciliation, mediation, arbitration and adjudication.

UNIT IV

Comparative Industrial Relations: Principles of comparative analysis, variables of comparative analysis (culture, values, ideologies, politico-economic structure). Experience of UK, Yugoslavia, West Germany, Scandinavian countries and Japan. Managing Industrial Relations: Regulatory mechanisms, employee discipline, suspension, dismissal and retrenchment, employee grievance handling, Collective bargaining, negotiation skills, industrial conflict resolution. Labour Welfare: Rationale need and requirements.

Reference Books:

1. Katz, Harry, Thomas A. Kochan, & A. J.S. Colvin, An Introduction to Collective Bargaining and Industrial Relations, The McGraw Hill Companies.
2. C.S. Venkat Ratnam, Industrial Relations: Text and Cases, Oxford University Press, Delhi.
3. Michael Salamon, Industrial Relations: Theory & Practice , Pearson Higher Education.
4. Farnham and Limlott, J., Understanding Industrial Relations Cassell.

GROUP C : INTERNATIONAL BUSINESS

MC. 307 - INDIA'S FOREIGN TRADE AND INVESTMENT

Objective: The objective of this course is to acquaint the students with structure and policy framework of Indiaôs foreign trade and investments.

UNIT I

Indiaôs Foreign Trade: Pattern and Structure of Indiaôs foreign trade; Indiaôs trade in service; Terms of trade; India on the world trading map; Analysis of thrust export products and markets. Foreign Trade Policy and Economic Relations: Policy making body and regulatory framework; Trends and developments in Indiaôs foreign trade policy; Bilateralism and multilateralism in Indiaôs trade relations; India and WTO, WTO and emerging trading environment, Indiaôs trade and economic relations with EU and other regional groupings; India and regional economic cooperation in South Asia.

UNIT II

Export Promotion Measures and Facilities: Export promotion measures and schemes; Export and trading houses, Import facilities for exports; Export processing/special economic zones (EPZs/SEZs) and 100% EOUs ï Policy framework and operational aspect. Institutional Arrangements and Infrastructure Support: Export promotion councils, Commodity boards/export development authorities; other service organizations; Infrastructure Support ï Transportation and warehousing infrastructure, Indian ports and shipping system.

UNIT III

Procedural and Documentary Framework ï An Overview: Trade operations and documentation; Procedure for getting started in export ï import business. Trade contract and INCO terms; Export payment terms and UCDPC; quality inspection; Excise and customs clearance. Foreign Trade Finance and Insurance: Pre - shipment and post-shipment finance; Sources and schemes of foreign trade finance; Exim Bank and foreign trade finance; Coverage of Credit, transit, commercial and political risks; ECGC and risk coverage.

UNIT IV

Foreign Exchange facilities and Regulations; Foreign exchange facilities and exchange rate mechanism; Regulatory framework ï FEMA and its objectives and provisions; Other acts and regulations. Foreign Investments: Indiaôs foreign investment policy and flows: Indiaôs investments abroad ï pattern and structure; Indian Joint ventures in foreign countries and their operations. Balance of Payment Account: Indiaôs Balance of Payment account and adjustment policies; foreign reserves and debt situation.

Reference Books:

1. Ministry of Commerce, Export Import Policy, Government of India, New Delhi.
2. Ministry of Commerce, Handbook of Procedures, Vols. I and II, Government of India, New Delhi.
3. Customs and Excise Laws, Various issues.
4. Nayyar Deepak, Foreign Trade Sector, Planning and Industrialisation in India, in Terance J. Byres (ed.), The State Development Planning and Liberalisation in India, Delhi.
5. Nayyar Deepak, Indiaôs Exports and Export Policies in 1960, Cambridge University Press. Meier G.M., Trade Policy and Development in Scott Maurice and Deepak Lal.
6. Public Policy and Economic Development ï Essays in Honour of lan Little, Oxford.
7. Nayyar Deepak, Indiaôs Export Performance 1970-85, Underlying Factors and Constraints, in Robert E.B. Lucas and Gustav F. Pipanek (ed.), Indian Economy Recent Development and Future Prospects, New Delhi.

MC. 308 - MANAGEMENT OF INTERNATIONAL BUSINESS OPERATIONS

Objective: The course intends to acquaint the students with the management of international business operations of a business firm.

UNIT I

International Business Management: Complexities and issues; Approaches to international management; Cross -cultural values and business management; Foreign market entry mode decisions and level of international involvement; International management orientation; International business management -A strategic perspective. International Planning: Environmental scanning and monito ring; Resource allocation and portfolio compositions of a global firm; Linkages and synergies among business units across borders; Locus of decision making; Headquarter ï subsidiary relationships in international business enterprises; International management information system.

UNIT II

Organizational and Control Aspects of International Operations: Organizational design and structure of international companies; Managing communication across cultures; Co-ordinating and controlling international business operations. International Production and Procurement: International production and location decisions; Procurement for international operations ï International sourcing World class manufacturing and international quality standards; Supply chain management and global business operations.

UNIT III

International Marketing Management: International Market segmentation, targeting and positioning; International marketing mix planning ï Product, price, promotion and distribution decisions. Management of International Financial Operations; International capital budgeting and portfolio investment decisions; International capital structure decision, International working capital management, International accounting and taxation issues.

UNIT IV

International Human Resource Management: Selection, training and development of people in international firms; Compensation and reward systems among international firms; Motivation and leadership in international firms. International Business Negotiations: Process and skills; Management of International Collaborative Arrangements.

Reference Books:

1. Danoes, John D. Radebaugh, Lee H., and Daniel P. Sullivan, International Business: Environment and Operations, Prentice Hall.
2. Griffin, Ricky W. and Pustay, Michael W., International Business: A Managerial Perspective, Prentice Hal.
3. Hill, Charles, W.L., International Business, McGraw Hill Company, New York.
4. Ball, Donald, Wendall H. McCulloch, Miachel Geringer, Michael S. Minor and Jeanne M. McNett, International Business: The Challenge of Global Competition, McGraw Hill Co.

GROUP D: ACCOUNTING AND FINANCE

MC. 309 - STRATEGIC COST MANAGEMENT

Objective: This course aims to acquaint the students with concepts and various aspects of cost management from strategic perspective.

UNIT-I

Conceptual framework of SCM, environmental influences in cost management practices, role of SCM in strategic positioning; cost management tools-life cycle costing, target costing, kaizen costing, JIT & theory of constraints, BPR and bench marking.

UNIT-II

Nature of activity-based costing (ABC); benefits and limitations of ABC; limitation of volume-based costing system, indicates of ABC; activity hierarchic; cost drivers; designing an ABC system, Activity-based management; operational and strategic application of ABC; customer profitability analysis, process value analysis, financial measures of activity efficiency; Nature of value-chain analysis; activity analysis an linkage analysis; application of linkage analysis in cost reduction and value addition.

UNIT-III

Functional-based planning and control; budgeting ï nature, administration and effectiveness; budgeting cycle; activity-based budgeting; kaizen approach; ZBB; performance budgeting; human aspects of budgeting; responsibility centers and financial control - nature and role of responsibility centers; accounting and evaluation of responsibility centers, measuring the performance of investment centre ï ROI, RI, EVA; transfer pricing and its applications.

UNIT-IV

Strategic-based performance measurement system: Balanced score card-prospective and limitations; establishing objectives and performance measures in different perspectives of balance score card; productivity measurement and control; productivity efficiency; partial and total productivity measurement; measuring changes in activity and process efficiency; quality cost management and reporting.

Reference Books:

1. Drury, Colin, Management Accounting and Control, Thomson Learning.
2. Horngren, Datar Foster, Cost Accounting, Pearson Education.
3. Hansen and Mowen, Cost Mangement, Thomson Learning.
4. Kaplan, Atkinson and Young, Management Accounting, Pearson Education.
5. Kaplan, Atkinson, Advanced Management Accounting, Pearson Education.
6. Anthony, Robert N., and Vijay, Management Control System, McGraw Hill.

MC. 310 - INTERNATIONAL ACCOUNTING

Objective: The objective of this course is to develop some conceptual knowledge and Understanding of international accounting issues among students. In addition, this course makes students capable of tackling issues in prevailing regulatory environments.

UNIT-I

International Dimensions of accounting and control: Multinational enterprise, Inter-nationalisation of capital markets, Internationalization of accounting profession. Operational and conceptual issue. Foreign currency translations, methods and practices.

UNIT-II

Specific Reporting Issues: Regulatory Disclosure Requirements; Foreign Operations Disclosure; Social Responsibility Disclosures. Managerial Accounting Issues: Strategic Planning; Management Control Systems; Performance Evaluation of foreign operations.

UNIT-III

International Accounting Standard Board and International Financial Reporting Standards (IFRS): Advantages, supporting and deterring forces; International and Regional Efforts in Standard Setting; International Standards setting process, Harmonization; Financial Statement Analysis of companies and countries differences in accounting principles, foreign currency statements and Ratio Analysis.

UNIT-IV

Transfer pricing, methods, objectives, strategies. Emerging issues in International Accounting.

Reference Books:

1. Radebaugh L. H. and S.J. Gray, International Accounting, and Multinational Enterprises, John Wiley & Sons.

2. Sandagaran S.M., International Accounting, South Western.
3. Gray, S.J., International Accounting and Transnational Decisions , Butterworth, London, U.K.
4. Holzer H. Peter, International Accounting, Horper and Row Publishers, New York.
5. Frederick D.S. Choi and Gary K. Meek, International Accounting, Pearson Education.
6. Shirin Rathore, International Accounting, Prentice Hall of India.

GROUP E: APPLIED ECONOMICS

MC. 311 - INDUSTRIAL ECONOMICS

Objective: The objective of the course is to acquaint students of economic concepts as applied to industrial behaviour. The course makes student capable to analyse and take decisions in respect of a firmôs or industryôs operations.

UNIT-I

Scope and Methods of Industrial Economics: Objectives of Industrial Economics, Firms, Industry and Markets. Industrial and Market Structure: Pattern of Industrial Structure, Industrial inter-dependence, Structure and performance, determinants of Market -Structure.

UNIT-II

Economies of size: Economies of size, vertical and horizontal integration, diversification, economies of scale and scope. Merger, acquisition and takeover, innovation, export led industrialization. Economies of location and spatial structure. Economics of ownership structure.

UNIT-III

Economics of Non-Price Decision of firm: Research and Development and Innovation: R & D expenditure decision, Financing R &D, Relationship between R & D and valuation, Economics of R & D, Structure of Market and R & D, Transfer of Technology.

UNIT-IV

Performance measurement: Profitability, Productivity and capacity utilization, Accounting measure and growth. Perfect and workable competition. State intervention in private sector, legal and institutional framework, competition policy, public policy and development of corporate sector.

Reference Books:

1. Divine P.J., N. Lee, R.M. Jones and W.J. Tyson, An Introduction to Industrial Economics, Anmol Publications.
2. Hay, A. Donald and Derek J. Morris, Industrial Economics: Theory and Evidence, Oxford University Press.
3. Scherer F.M. and David Ross, Industrial Market Structure and Economic Performance, Houghton Miffin Company, Boston.
4. Mukherjee, Dilip (Ed.), Indian Industry, Policies and Performance, Oxford University, Calcutta, India.
5. Seth, V.K. and A.K. Seth, Dynamics of Labour Absorption in Industry, Deep and Deep Publication, New Delhi.
6. Koutsoyiannis A., Economics of Non-Price Decision of Firms, Macmillan 1980, London.
7. Seth, V.K., Capacity Utilisation Industrial: Theory and Evidence, Deep and Deep Publisher, New Delhi.
8. Nayyar Deepak (ed.), Industrial Growth and Stagnation: The Debate in India , Sameeksha, Trust, Bombay.

MC. 312 - APPLIED ECONOMETRICS

Objective: The objective of the course is to acquaint students of the methodology of econometrics and make them capable of applying it to business problems. The emphasis will be on application aspects with theoretical understanding.

UNIT-I

Basic Concepts: Definition and scope of econometrics; model specification; desirable qualities of models; evaluating an econometric model; Random variables, stochastic variables and the stochastic error term; probability distributions (review); estimators, desirable qualities of a good estimator; maximum likelihood estimators (definition). The multiple regression model; The 3 variable model; partial regression and correlation coefficients; assumptions of the classical linear model; Derivation of Ordinary Least Squares Estimators; Properties of OLS estimators, OLS AS BLUE; Variances and Standard deviations; Goodness of fit: R -squared and adjusted R-squared; Tests of significance t and F tests; Hypothesis testing involving more than one parameter; Forecasting; Evaluation of Forecasts; Mean Squared error, RMS error.

UNIT-II

Extensions of the basic linear model: 1) Model transformable to linear form: Estimation of elasticity by log-linear models; Growth rates by semi -log models; linear -log models; polynomial regression models (espquadratic). 2) Qualitative variables: Qualitative independent variables and dependent variables (into only); applications of dummy variables; Time dummy, intercept dummy and structural change.

UNIT-III

Relaxing the assumptions of the basic linear model: 1) Multicollinearity: Perfect and imperfect multicollinearity; consequences of multicollinearity, detection and solution. 2) Heteroscedasticity: Nature and Causes; Consequences; Detection by graphical analysis of residuals and Parks test; Solution of Heteroscedasticity: Weighted Lease Squares. 3) Autocorrelation: nature and causes; Consequences; Detection by graphical analysis and D-W Test, Solution for AR. 4) Error in measurement. 5) Specification bias. 6) Simultaneous Equation Bias.

UNIT-IV

Estimation and specifications: Demand, Sales, Cost, Production and Consumption functions. Simultaneous equation system: Identification and Estimation of the model.

Reference Books:

1. Pindyck R.S. and D. Rubinfied, Econometric Theory and Models, McGraw Hill.
2. Gujarati, D.E., Essentials of Econometrics, McGraw Hill.
3. Koutsoyiannis, A., Theory of Econometrics, 3rd ed., Macmillan.
4. Julia Malden, Application of Econometrics, Hartiage Publishers.
5. Johnston, J., Econometric Methods, McGraw Hill Book Company, New Delhi.
6. Judge George G. et. al. Introduction to the Theory Practice of Econometric, John Wiley and Sons, New York.
7. Pesaran M. Hashem and Peter Schmiod (Ed.), Handbook of Applied Econometric, Vol. I & II Blackwell Publishers.
8. Intricigalor Michael D., Ronal G. Bodkin, Cheng Hsiao, Econometric Models, Techniques and Applications, Prentice Hall.

GROUP F: BANKING AND INSURANCE

MC. 313 - BANK MANAGEMENT

UNIT-I

Banking structure in India - banking functions and services - Foreign commercial banks - Private commercial banks - capital adequacy. Principles of lending - financial adequacy assessing the borrower - project appraisal - structural and Infrastructural analysis ï legal formalities - follow up loans, asset management companies.

UNIT-II

Non Performing Assets (NPAs) - Early Warning Signals - Management of NPAs - Remedies Available - Recent Measures - loan recovery tribunals - Provisions of Revenue Recovery Act.

UNIT-III

Investment management - priorities in allocation of bank funds - investment in governments securities - maturity and yield - quality and diversification, profitability management - profit planning.

UNIT-IV

Traditional Banking vs. E-Banking - facets of E-Banking - Internet Procurement - E - Banking Transaction - Electronic Delivery Channels - Truncated Cheque ï Complete Centralized Solution - Features of CCS - Advances of E-Banking - Constraints in E-Banking - Security Measures.

Reference Books :

1. Varshney, PN. Banking Law & Practice, Sultan Chand, New Delhi.
2. S.N.Maheswari, Banking Law & Practice, Ludhiana, Kalyani Publications.
3. Vasant Desai, Principles of Bank Management, Mumbai, Himalaya Publications.
4. K.Subramanian, Banking Reforms in India, TMH, New Delhi.

5. Joseph Sinkey, Commercial Bank Financial Bank Financial Management, Pearson Education (Prentice Hall)
6. E.Gordon and Dr. K. Natarajan, Banking Theory Law and Practice ï Himalaya Publishing House.

MC. 314 - INSURANCE MANAGEMENT

Objective: This course aims at a familiarizing the participants with the concept of insurance, the risk and its management, various insurance policies and their structure along with the legal dimensions involved. This course also aims at providing the knowledge of Insurance Companyôs Management.

UNIT-I

Conceptual Framework: Risk, Peril and hazard, classification and burden of risk. Insurance as a device to hedge risk. Elements of insurable risk. Development life. Functions of Insurer, Government as Insurer and a regular. Structure of Indian Insurance Industry. Principles and Practices of General Insurance: Meaning, Functions and Scope of Fire, Engineering, Accident, Marine and Aviation Insurance. Fire Insurance ï Types of Policies ï Floating Policies and Declaration Policies; Endorsements and Clauses ï Fire Protection System, Discounts ï Special Rating of Large Industrial Risks.

UNIT-II

Industrial Risk Insurance. Consequential Loss Insurance ï Standard Consequential Loss Policy Form ï Conditions. Engineering Insurance: Machinery Breakdown Insurance ï Contractors All risks Insurance and various other policies ï Miscellaneous Annual Policies ï Advance Loss of Profits Insurance. Motor Insurance ï type of: Vehicles and their Policies ï Rules & Regulations ï Policy Forms. Public Liability Policy: Professional Indemnities ï Employersô Liability Insurance. Personal Accident: Scope of Various covers. Miscellaneous (Accident) Insurance: Fidelity Guarantees and Bonds ï Burglary Insurance ï Money-in-transit Insurance, Bankerôs Indemnity Insurance and other important insurance covers.

UNIT-III

Aviation insurance: Special Features ï types of Cover, Marine Insurance including Inland Rail/Road transit insurance. Life and Health Insurance: Life Insurance and annuities broad classification of Life insurances, special purpose policies; Family income, Family maintenance, Family policy, Joint Life Policies, Classes of life insurance, Health Insurance: Medical Insurance Types of Health Insurance Coverages, types of losses covered. Health insurance contract. Buying a health insurance policy.

UNIT-IV

Legal frame work of Insurance: Insurance and Law of Contracts, characteristics of an Insurance Contract, Interpretation of the Contract, Doctrine of informal Warranties and beneficent interpretation, Exclusion of Coverageôs. Organization and Administration of Insurance: Management Organization: Departmentalisation, marketing, Claims, and loss control, underwriting and pricing of insurance, retention and re-insurance; Financial Structure, reserves of property and liabilities of insurer, earned surplus and profitability, Insurerôs Investments, Financial Reporting.

References Books:

1. W.A. Dinsdale, ñElements of Insuranceò, Pitaman, 1971.
2. Dorfman Marks S., ñIntroduction to Risk Management and Insuranceò, 5th Edition, Prentice Hall Inc., Englewood Cliffs N.J .
3. Nicholas Legh ï Jones, John Birds and David Owen, ñMacGillivray on Insurance Lawò, 11th Edition, Sweet & Maxwell, London, 2008.
4. Denis Riley, ñConsequential Loss Insurance and Claimsò, 4th edition, London: Sweet & Maxwell, 1977.

PAPER 7: MC. 315 - WORKSHOP ON FINANCIAL MARKETS & INSTRUMENTS (For Regular Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT – I

Indian Financial System: Constituents, Functions of the Financial System Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System.

UNIT – II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits, Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT – III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT – IV

Innovative Financial Instruments and Financial Services: Bonds, features and innovations : Ex-interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.

2. Bhole, L.M.: Indian Financial System, Tata McGraw, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi
4. Desai, V: Indian Financial System and Development (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services, Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds, (Business Publications Inc.)
7. Dietrich, J.K: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K : Development of Indiaõs Financial System, Sarup & Sons.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (d) Presentation session of the students on the assigned project.

PAPER 7: MC. 315-A - FINANCIAL MARKETS & INSTRUMENTS (For USOL Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT–I

Indian Financial System: Constituents, Functions of the Financial System, Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System

UNIT–II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange Market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT–III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE, Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT–IV

Innovative Financial Instruments and Financial Services: Bonds features and innovations: Ex- interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System , Tata McGraw Hill, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi.
4. Desai, V: Indian Financial System and Development. (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services , Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds (Business Publications Inc.
7. Dietrich, J.K.: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K: Development of Indiaôs Financial System, Sarup & Sons.

SEMESTER-IV

PAPER 1: MC. 401 – PROJECT PLANNING AND CONTROL

Objective: The objective of the course is to provide the student with skills necessary to create, plan and control a new Enterprise.

UNIT – I

Project Identification, Formulation and Planning : Understanding environment for business opportunities Idea generation, short listing and selection of product/service stages in Venture Appraisal- Technical, Financial, Economic and Social Appraisal Location, Factory Design and Layout. Commercial vs. National Profitability Social Cost - Benefit Analysis (broader concept only). Feasibility Report Preparation for new Enterprise - format and contents.

UNIT – II

Market and Financial Appraisal : Market Survey ï Design, Data Sources and Methodology, Market Segmentation and product differentiation, Forecasting Future demand and Distribution Analysis, Preparation of the Sales Plan and Report Estimation of Financial Requirement.

UNIT – III

Application of Capital Budgeting Techniques, Risk and Uncertainty Analysis for the new enterprise, Planning Capital Structure and Financing Project Financial viability Study.

UNIT – IV

Project Implementation and Management : Project Organisation and Control Network Analysis ï PERT & CPM Cost and Time Over-run Project Follow up and Monitoring.

Reference Books:

1. Chandra, Prasanna : Project Prepartation, Appraisal and Implementation, Tata Mc Graw Hill, N. Delhi.
2. Desai, Vasant : Entrepreneurial Development, Vol.II Project Formulation Appraisal and Financing for Small Industry, Himalaya Publ. N. Delhi.

3. Nicholas : Project Management for Business and Technology: Principles and Practice (Prentice Hall of India, N. Delhi.
4. Pitala : Project Appraisal Techniques, Oxford & IBH Publication.
5. Yound, Trevour L. : Planning and Implementing Project, Sterling Publishing Ltd.
6. Krishnan and Moorthy : Text Book of Project Management, Mac Millan India Ltd.
7. Singh, Narendra : Project Management & Control, Himalaya Publ., N. Delhi.

PAPER: 2 MC. 402 - KNOWLEDGE MANAGEMENT

Objective: The main aim of the course is to create awareness amongst the students to know the details of Knowledge Management in the changing scenario and its significance in framing the business strategy.

UNIT-I

Concept of knowledge, Major Philosophical Schools, Knowledge in economic and management theories, Knowledge as competitive resource, Knowledge intensive organization, Knowledge value chain.

UNIT-II

Knowledge management systems, Barriers to knowledge sharing, Expert systems.

UNIT-III

Knowledge creation as a tool of excellence, tacit and explicit knowledge, Models of knowledge creation process, Critical enabling conditions, Cross leveraging knowledge.

UNIT-IV

Knowledge management strategy and business strategy, Knowledge architecture, Organizational design for knowledge management, Role of Top and Middle management, Knowledge based reward systems.

Reference Books:

1. Devenport, T. H. and Prusak, L. : Working Knowledge; How Organizations Manage What They Know; Harvard Business School Process.
2. Dorothy Leonard Barton : Well Springs of Knowledge, Harvard Business Process.
3. John Sparrow : Knowledge in Organisations, Sage Publications..
4. J.W. Cortada, and J. A. Woods : Knowledge Management Year Book 1999-2000, Butterworth.
5. Richard Huseman and Jon Goodman : Leading with Knowledge, Sage.
6. Ikujiro Nonako and Hirotaka Tekeuchi : Knowledge Creating Company, OUP.

7. Madhukan Shukla : Competing Through Knowledge, Response Books.

PAPER 3: MC. 403 – BUSINESS ETHICS AND CORPORATE GOVERNANCE

UNIT-I

Business Ethics: Introduction to Business Ethics, Ethics, Morals & Values, Concepts of Utilitarianism and Universalism ï Theory of rights, theory of Justice ï Virtue ethics ï ethics of care ï Law and Ethics. The Nature of Ethics in Management Business Standards and Values, Value Orientation of the Firm. Typical Problems in Business Ethics: Environmental Pollution & Society, Marketing Ethics (in Products, Pricing, Promotion and Place) and Consumer protection ï Ethics in Human Resources management (Recruitment and promotion policies, Working Conditions,, Down Sizing Workforce), Ethical issues at the top management, Ethics in financial markets and investor protection ï Ethical responsibility towards competitors and business partners.

UNIT-II

Complexity of Ethical Issues: Conflicts in decision making from ethical and economic point of view, Ethical Dilemma, Solving ethical dilemma Managerial integrity and decision making. Ethical Leadership: Personal Integrity and self development ï wisdom based leadership. Corporate Governance: History of Corporate form and models, Corporate Objectives and goals, Ownership pattern ï Issues in managing public limited firms ï Agency problems. Nature & Evolution of Corporate Governance: Global and National Perspectives ï Global Corporate Governance models, Anglo American and Relationship model (Germany, Japan and France) Claims of Various Stakeholders, Why governance ï Changes in eighties Cadbury Report, Hampel Report and OECD Committee Recommendations ï SOX Act.

UNIT-III

Internal Corporate Governance Mechanism: Board of Directorsð Functional Committees of Board; Code of conduct, whistle blowers. External Corporate Governance Mechanism: Regulators, Gate keepers, Institutional Investors, Corporate raiders, Corporate Governance Ratings Corporate Governance in India: corporate form in India 50s to 90s ï developments in Corporate Governance in India in nineties and 2000s ï CII, Kumaramangalam, Narayanamoorthy, Naresh Chandra, JJ Irani Committee reports ï Legal and Regulatory Changes ï introduction and modification of Clause 49, Corporate governance in practice in India .

UNIT-IV

Cases:

1. A Dent in Wal Martôs Public Image - The PR Strategy.
2. China Aviation Oilôs Collapse: Singapore INCôs challenges.
3. Child labor in Coca Industry.

4. Obesity Concerns: Burger Kings Product Revenges.
5. Bhopal Gas Tragedy

Source

(a) Case Studies for Managers, Vol. II, IBSPCD

(b) BECG Main Reference Book

Reference Books:

1. Velasquez, M. G., Business Ethics: Concepts and Cases, Prentice Hall of India.
2. Monks, R. / Minow, N. Corporate Governance, Blackwell.
3. Banks, Eric., Corporate Governance, John Wiley.
4. Fernando, A C., Corporate Governance, Pearson Education.
5. N. Gopalsamy : Corporate Governance : The New Paradigm, Wheeler Pub., New Delhi.
6. Surendar Kumar : Corporate Governance : A Question of Ethics, Galgotia Pub., New Delhi.
7. N. Balasubramanian : Corporate Boards and Governance, Sterling Pub., New Delhi.
8. Harvard Business Review : Harvard Business Review on Corporate Governance, Boston Harvard Business School.

SEMESTER IV (ELECTIVES) GROUP A: MARKETING MANAGEMENT

MC. 404 - ADVERTISING AND SALES MANAGEMENT

Objective: The course aims at enabling the students to develop an in-depth understanding of the modern concepts and latest techniques of advertising and personal selling and sales force Management which constitute a fast -growing area of marketing.

UNIT-I

Advertising: Communication Basics: Role of communication; Communication process and flows; Planning the promotion mix; Advertising: Nature and importance; Advertising and the economy; Advertising and publicity; Advertising management process ï an overview; Determining target audience; Advertising objectives and positioning decisions; Advertising budget decisions. Message Decision: Determining advertising message; Developing advertising copy ï Headline main copy, logo, illustration, appeal, layout, creativity in advertising.

UNIT-II

Advertising through the internet; Media selection; Media scheduling. Organization of Advertising Operations: In -house vs. advertising agency arrangements; Managing advertising agency relations; valuation of advertisement and campaign effectiveness ï Before - and ï after advertising tests and techniques. Advertising in India; Social and regulatory aspects of advertising. Recent developments and issues in advertising.

UNIT-III

Sales Management: Fundamentals of Personal Selling: Nature and importance of Selling; Types of selling; Personal selling, salesmanship and sales management; Process of effective selling; Strategic Sales management. Sales Planning: Setting personal selling objective; Market analysis and sales forecasting; Sales budget; Sales territory; Sales quota.

UNIT-IV

Sales Organization: Organization structure; relationship of sales department with other departments; Distribution networks relationship. Sales Force Management: Recruitment and selection; training and

development; motivating, supervising and compensating sales personnel; Controlling the sales effort; Evaluation of sales personnel; Sales and cost analysis. Ethical and legal aspects of selling.

Reference Books:

1. Aaker, David A., Rajeev Batra and John G. Mayers, Advertising Management, Prentice Hall of India, New Delhi.
2. Belch,. George and Michael Belch, Advertising and Promotion : An Integrated Marketing Communications Perspective , McGraw Hill.
3. Mandell, Maurice, Advertising , Prentice- Hall of India, New Delhi.
4. Still, Richard R. Edward W. Cundiff and Norman A.P.Govoni, Sales Management: Decisions, Strategies and Cases, Prentice Hall of India, New Delhi.
5. Anderson B. Robert, Professional Selling, Prentice-Hall Inc.
6. Spiro, Rosann, William J. Stanton and Greg Richo, Management of a Sales Force, McGraw Hill/Irwin.
7. Pederson Carlton A/, Miburn D. Wright, Barton A., Weitz, Selling Principles and Methods, Richard D. Irwin, Illinois.

MC. 405 - SERVICES MARKETING

Objective: To understand the service product and key elements of services marketing mix. Another objective deals with managing the service delivery process and the implementation of services marketing.

UNIT-I

Introduction to services marketing: role of services marketing; consumer behaviour in service encounters; customer interaction, purchase process, needs and expectations of customers; positioning services in competitive markets; search for competitive advantages; market segmentation, positioning vis-à-vis competitors.

UNIT-II

Creating the service product: Identifying and classifying supplementary services, planning and branding service-products, new service development; designing communication mix; branding and communication; effective pricing objectives and foundations for setting prices; distributing services; options for service delivery, place and time decisions, delivery in cyberspace, role of intermediaries.

UNIT-III

Designing and managing service processes; service process redesign, customer misbehavior; balancing demand and capacity: fluctuations in demand, capacity constrain, planning the service environment; consumer responses to and dimensions of service environment; managing people for service advantage: service leadership and culture.

UNIT-IV

Managing relationship and building loyalty; customer-firm relationship, analyzing and managing customer base; customer management relationship system in services marketing; customer feedback and service recovery; customer complaining behaviour, principles and responses to effective service recovery, service

quality and the gap model, measuring and improving service quality, defining, measuring and improving service productivity; organizing for service leadership; search for synergy in service management, creating a leading service organization.

Reference Books:

1. Lovelock, Christopher, Wirtz, Jocken and Chatterjee, Jayanta; Services Marketing - People, Technology, Strategy; Pearson Education; New Delhi.
2. Zeithaml, Valarie A. & Bitner, Mary Jo, Services Marketing ï Integrating Customer Focus Across the Firm; Tata McGraw Hill, New Delhi.
3. Rao, K., Rama Mohana, Services Marketing, Pearson Education, New Delhi.
4. Hoffman & Bateson, Essentials of Service Marketing; Thomson Asia Ptc. Ltd., New Delhi.
5. Rampal, M.K. & Gupta, S.L., Services Marketing; Galgotia Publications; New Delhi.
6. Shanker Ravi, Services Marketing ï The Indian Perspective, Excel Books, New Delhi.

MC. 406 - CONSUMER BEHAVIOUR

Objective: Knowledge of consumer behaviour is a prerequisite for developing effective marketing strategy. The purpose of the course is to provide an in-depth understanding of the consumer and industrial buying processes and their determinants as relevant for marketing decision making.

UNIT-I

Consumer Behaviour: Importance and nature of consumer behaviour; Types of consumers and their role; Consumer buying process and determinants; Changing profile of Indian consumers.

UNIT-II

Individual Differences in Consumers: Needs and motivation; Perception; Attitude and attitude change; Learning and learning theories; Personality and life style analysis.

UNIT-III

External determinants of Consumer Behaviour: Family and its influence on consumer buying behaviour; Group and their influences; Social class; Culture and sub-culture.

UNIT-IV

Models of consumer behaviour; Business buying behaviour. Cross-cultural dimensions of consumer behaviour; Consumer research ï complexities and issues.

Reference Books:

1. Schiffman, L.G. and L.L. Kanuk, Consumer Behaviour, Pearson, Ltd., New Delhi.
2. Engel, J.F., Roser D. Blackwell and Paul W. Miniard, Consumer Behaviour, Cengage Learning.
3. Peter, J. Paul, and Jerry C. Olson, Consumer Behaviour and Marketing Strategy, McGraw Hill.
4. Assael, H., Consumer Behaviour and Marketing Action, Cengage Learning.

5. Hawkins Dell, Roger J. Best, Kenneth A. Conej, Consumer Behaviour, Building Marketing Strategy.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 407 - ORGANISATIONAL CHANGE AND DEVELOPMENT

Objective: This course is designed to provide I depth understanding of behavioural interventions and enable the students to apply these intervention for building individual, team, system, systems and process related competencies and helping organizational to achieve peak performance and become self sustaining.

UNIT-I

Organizational Change - Meaning, nature, types; theories of planned change; Organizational development ï nature and characteristics; process of organizational development.

UNIT-II

Human Process Interventions - T-group, process consultation, third party interventions, team building; organizational confrontation meeting, coaching and mentoring, role focused interventions.

UNIT-III

Techno structural Interventions - Restructuring organization, reengineering, employee involvement, work design; Strategic Interventions ï Organisation and environment relationships, organization transformation.

UNIT-IV

Contemporary issues and applications ï Organizational development in global context, organizational development in service sector, OD Practioners ï role, competencies requirement, professional ethics and value and experiences; future trends in OD.

Reference Books:

1. Cummings, Thomas G. and Christopher G. Worley, Organisation Development and Change, Thomson Learning.

2. Ramnarayan S., T.V. Rao and Kuldeep Singh, Organisation Development Interventions and Strategies, Response Books, New Delhi.
3. French, Wendell L. and Lecil H. Bell, Organisation Development, PHI, New Delhi.
4. Chowdhury, Subir, Organisation 21C, Pearson Education.

MC. 408 - TRAINING AND DEVELOPMENT

Objective: The objective of the course is to familiarize the students with basic concepts and principles of Training and Development of Human Resource and train them to understand the learning environment of a firm. The knowledge so obtained will make them capable of providing training to Human Resource of a business firm.

UNIT-I

Conceptual Framework: The functions of training, relationship of training to organizational and individual goals, Factors effecting successful training process, Skills of a successful trainer ï Internal and external trainer. Training and Learning: The learning process, learning curve, principles of learning, training guidelines, experience versus training, kinds of training, system approach to training, programmed instruction, transfer of training.

UNIT-II

Training Needs Assessment and Curriculum Development: Identification of Training and Development needs, training needs assessment - various approaches (the job and the Individual), Advantages and disadvantages of basic needs assessment techniques.

UNIT-III

Assessing curriculum needs, curriculum standards, matching organizational training needs, Developing training materials. Training Methods: Three Stages of training (Preparatory, implementation and follow - up stage), On the job and off -the job methods,, experiential versus non-experiential methods.

UNIT-IV

Evaluation of Training and Development, and Emerging Pattern: Reasons of evaluating training, Criteria for evaluation, problems of evaluation, steps involved in evaluation, methods for training evaluation, analysis and costing of training. Emerging Pattern of Training and development in India.

Reference Books:

1. Prior John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Donald F. Michalak and Edwin G. Yager, Making the Training Process Work, Harper and Row, New York.
3. Jack J. Phillips, Handbook of Training Evaluation and Measurement Methods , 3rd Edition,
   Houston, Gulf Publishing Co.
4. Lynton R., Pareek, U., Training for Development, 2nd Edition, New Delhi, Vistaar.

MC. 409 - COMPENSATION MANAGEMENT

Objective: This course is designed to promote understanding in issues related to compensation in corporate sector and impart skills in designing, analyzing and restructuring compensation management system, policies and strategies.

UNIT-I

Role of compensation in organization: Economic and behavioural theories related to compensation; strategic perspectives of compensation; compensation as motivational tool; compensation policy.

UNIT-II

Internal and external equities in compensation system; determining the worth of jobs; understanding inter and intra-industry compensation differentials, designing pay structure and administrating compensation package; understanding different components of compensation package like fringe benefits, incentives and retirement plans; pay for performance plans.

UNIT-III

Compensation of special group: Corporate Directors, Chief Executives, Senior Managers; components of executive compensation package; compensation of professionals and knowledge workers, R&D staff, sales compensation plan, international compensation.

UNIT-IV

Statutory provisions governing different components of reward system; working of different institutions related to reward system like wage boards, pay commissions, role of trade unions in compensation management; tax planning.

Reference Books:

1. Milkovich, George T. and Newman J.M., Compensation, Tata McGraw Hill.

2. Henderson, R.O., Compensation Management, Pearson Education.
3. Martocchio, J.J., Strategic Compensation, Pearson Education.
4. Armstong, M. and Murlis H., Reward Management, Kogan Page, UK.
5. Singh, B.D., Compensation Reward Management, Excel Books, New Delhi.

GROUP C: INTERNATIONAL BUSINESS

MC. 410 - INTERNATIONAL BUSINESS ENVIRONMENT

UNIT-I

An Overview of International Business Environment ï Economic environment ï political and regulatory environment ï demographic environment ï social, cultural and technological environment, International Economic Environment ï Regional integration and trade blocks ï Types of integration ï theory of customs union, European union ï regional groupings ï integration of developing countries ï SAARC, SAPTA, international commodity agreements ï quota agreements ï Cartels ï Bilateral & Multi lateral contracts ï Economic institutions ï International Monetary Funds (IMF) ï World Bank, Asian Development Bank, UNCTAD, UNIDO, International Trade Centre, WTO, GATT, GATS, TRIM, TRIPS.

UNIT-II

International Trade and Investment Theory - Historical developments of Modern Trade theory ï Investment theories ï Theory of capital movements ï Market imperfections ï Internationalisation ï Appropriability ï Location specific advantage ï eclectic. International Trade and Payments: Government Influence on Trade: Trade in merchandise ï Trade in services ï Global sourcing ï degree of dependence ï balance of payments ï trade and BOP of India. Cultural contacts of global management ï Understanding the role of culture ï communicating across cultures ï cross cultural negotiations and decision making.

UNIT-III

International Investment : Types and significance of foreign investments ï factors affecting international investment ï growth and dispersion of FDI ï cross border mergers and acquisitions ï foreign investment in India ï The New Policy ï EURO/ADR issuesï M&Aï Indian companies going global. Multi National Corporation : Definition and Meaning ï Importance and dominance of MNCs ï Code of conduct ï MNCs in India ï Transfer of Technology ï global competitiveness ï indicators of competitiveness - competitive advantage of nations ï Technology and Global competitiveness.

UNIT-IV

International Monetary System and Foreign Exchange Marketing: The Pre- Bretton Woodôs period, Break down of Bretton Wood system and emergence of EMS, EU and EURO. Social Responsibilities and Ethics, MNE Social Responsibilities, Efficiencies, Perspectives, Ethics, Technological Perspective, Foreign Corrupt Practices Act.

Reference Books:

1. The International Business Environment by Anant K. Sundaram / J. Stewart Black-Prentice Hall
2. International Business environments and Operations, John Daniel, Lee H Radebaugh, Daniel P Sulivan- Pearson Education.
3. International Management Managing Across Borders and Cultures, Fourth Edition by Helen Deresky ï PHI
4. Dynamics of Successful International Business Negotiations by Robert T. Moran, William G. Stripp ï JAICO
5. The International Environment of Business by Gerald M. Meierï Oxford Press.

MC. 411 - GLOBAL FINANCIAL MANAGEMENT

UNIT-I

Global Financial Environment : Financial Goal and Corporate Governance - Macro & Micro Intôl. Finance, - Intôl Monetary System & Crisis - Balance of Payment. Foreign Exchange Theory and Market: The Foreign Exchange Market and Problem, The Foregin Exchange Rate Determination.

UNIT-II

Foreign Currency Derivatives: Forward, Future and Option Market, PPP, IRP IFE, and International Parity Condition: International Triangula Arbitrage-Covered Interest Arbitrage.

UNIT-III

Forex Exposure & Risk Management - Transaction, Operating/Economy & Translation/Accounting Exposure - Currency Hedging Strategy. Transaction Exposure Management : - International Financial Engineering; Working Capital Management in Multinational Corporations.

UNIT-IV

Financing the Global Firm : - Global Cost of Capital & Available of Capital ï Sourcing Equity Globally - Financing Structure & International Debt - International Portfolio Theory - FDI Theory & Strategy.

Reference Books:

1. Madura J. : International Corporate Finance, 8th Edition, South Western Publishing Company.
2. Alan C. Shapiro, Multinational Financial Management, 6th Edition, Prentice-Hall International Inc.
3. Solnik, B. McLeavey, D. : Global Investment, 6th edition, Pearson Addison Wesley.
4. Richard M. Levich, International Financial Market, Prices and Polices , McGraw-Hill.

5. Hamdy Hady, Manajemen Keuangan Internasional edisi 3, YAI dan PT. Hecca Mitra Utama.

MC. 412 - INTERNATIONAL MARKETING MANAGEMENT

UNIT-I

Introduction: Basic Concepts of International Marketing, Definition and Dimensions of International Markets, Differences Between Domestic and International Marketing, Benefits of International Marketing, EPRG Framework in International Marketing, Changes of Development into Global Marketing.

UNIT-II

Environment of International Business: Introduction, Political and Legal Environment, Cultural Environment, Financial and Monetary Environment. Indian Foreign Trade: Indian Trade Policy, Recent Transit in Indiaôs Foreign Trade, Export Assistance, Institutional Infrastructure for Export Promotion in India, EXIM Policy of India.

UNIT-III

Identification of Foreign Markets: Product Planning for Exports, Export Pricing, Market Entry and Overseas Distribution System, Promoting Products, Internationally Role of WTO .

UNIT-IV

Overseas Market research, Marketing Plan for Exports, New Techniques in International Marketing, International Sub-Contracting, Joint Ventures, Multinationals Exports Finance, Risk Export Documents and Procedures.

Reference Books :

1. R. Srinivasan, International Marketing, Prentice Hall of India, New Delhi.
2. Onkvisit & Shaw ï International Marketing: Analysis and Strategy. (PHI)
3. Keegan, Global Marketing Management, PHI.

4. Rathore & Rathore, International Marketing, Himalaya Publishing , New Delhi.
5. Gitman, Global Marketing, Pearson.
6. Francis Chernnilam, International Marketing, Himalaya Publishing Home.

GROUP D: ACCOUNTING & FINANCE

MC.413: ADVANCED CORPORATE ACCOUNTING

Objectives: Corporation is the most important part of the economic development of a company. With pace of development of the emerging scenario, the corporate accounting is also becoming little bit tougher. This paper will enable the students to learn the advanced accounting in the field of corporate world.

UNIT-I

Business Acquisition and Conversion of partnership into limited company and Limited Liability Partnership (LLP): Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company ï with and without same set of books Amalgamation of firms, accounting in the books transferor and transferee firm.

Investment Accounts : Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.

UNIT-II

Company Merger and Reconstruction: Amalgamation, Absorption and Reconstructionï Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (both for amalgamation in the nature of Merger and of Purchase); inter-company transactions (including inter-company share holding). Internal reconstruction ï meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction.

UNIT-III

Valuation: Goodwill ï Valuation using different methods i.e., Average Profit, Super Profit, Capitalization and Annuity. Shares ï Valuation using different methods: Intrinsic, Earnings, Dividend Yield, Earnings-Price, Cum-div and Ex-div, Majority and Minority view and Fair Value.

UNIT-IV

Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest ï Basic principles and preparation of CBS; CBS with loss balance of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intergroup Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding).

Reference Books:

1. Sukla, Grewal, Gupta, Advanced Accountancy, Vol. II, S. Chand.
2. R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand.
3. Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing.
4. Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication.
5. Hanif & Mukherjee, Corporate Accounting, TMH.
6. L.S.Porwal, Accounting Theory, Tata Mcgraw Hill.
7. Gokul Sinha, Accounting Theory & Management Accounting.
8. B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
9. Frank Wood, Business Accounting Vol II, Pearson.
10. V.K.Goyal, Corporate Accounting, Excel Books.

MC. 414 - SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: To enable the students to understand various techniques of analysis used in investment decisions, portfolio analysis and efficient portfolio management.

UNIT-I

Security Market Analysis: Investment environment, Types of return and risk; Sources of risk Technical Analysis, Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis.

UNIT-II

Forms of Market Efficiency and Valuation of Securities : Random Walk Theory Form of Market efficiency Analysis of Bond/ Debentures: Valuation of bonds Analysis of risk in bonds-duration and convexity Valuation of Equity and Options.

UNIT-III

Portfolio Analysis : Portfolio Management ï Meaning, Evaluation & Role Risk & Return of a Portfolio, Risk Diversification Markowtiz Risk-Return Optimisation Single Index Model-Portfolio Tufel Risk. Portfolio Market Risk, Portfolio Unique Risk Sharpeôs Optimisation Solution.

UNIT-IV

Portfolio: Theory, Construction & Evaluation : Capital Market Theory - CAPM, Risk Free Lending Borrowing Arbitrage Pricing Theory Techniques of Portfolio Construction Active and Passive portfolio management, Bond portfolio management strategies - passive, semi-active and active along with immunization strategies Portfolio Performance Evaluation.

Reference Books:

1. Fuller & Farrel: Modern Investment & Security Analysis, McGraw Hill.

2. Strong, Robert. A: Portfolio Management Handbook, Jaico Publishing House, Delhi.
3. Singh, Preeti: Investment Analysis, Himalaya Publishing House.
4. Jordan & Fischer: Security Analysis & Portfolio Management, Prentice Hall India, N. Delhi.
5. Avadhani, V.A: Security Analysis & Portfolio Management.(Himalaya Publishing House).

MC. 415 - ADVANCED AUDITING

Objectives: The basic purpose of this paper is to provide in-depth knowledge of the auditing contemporary issues particularly related to the company audit.

UNIT-I

Company Audit: Qualification, Disqualification, Appointment, Removal, Remuneration of Auditors. Audit Ceiling-Status, Power, Duties and Liabilities of auditors. Branch Audit - Joint Audit - Special Audit. Maintenance of Books of Account ï Related Party Disclosures- Segment Reporting. Divisible Profit, Dividend and Depreciation (Companies Act, Standards on Accounting, Legal Decisions and Auditorôs Responsibility). Representations by Management - Contents of Annual Report (A Brief Idea).

UNIT-II

Audit Report and Certificate: Definition - Distinction between Report and Certificate - Types of Reports/Opinion 35 (Clean, Qualified, Disclaimer, Negative and Piecemeal) Contents of Audit Report (As per Companies Act and Standards on auditing). True and Fair View (Concept and Guiding Factors)- Materiality(Concepts and Relevance) - Limited Review- Disclosures. Certificate on Corporate Governance- Cash Flow Statement Reporting.

UNIT-III

Audit of Different Institutions: Banks - Legislation Relevant to Audit of Banks, Approach to Bank Audit, Internal Control Evaluation, Non-Performance Assets (Concept, Provisions), Long Form Audit Report. Insurance Companies - Legislation Relevant to Audit of Insurance Companies (Life and General Insurance), Review of Internal Control, Audit Report (Matters as per IRDA). Educational Institutions and Hospital Features and Basic Principles of Government Audit - Local Bodies and Non-Profit Seeking Organizations (including NGOs). Comptroller and Auditor General and its Constitutional Role. Investigation Meaning, Purpose - Distinction between Investigation and Auditing Approach to Investigation - Types of Investigations. Assessing a Business (Due Diligence Review, Valuation). Investigations to Detect Fraud, Misappropriations and Defalcations - Investigations with respect to Business Combinations.

UNIT-IV

Other Thrust Areas: Cost Audit - Concepts, Objectives, Advantages, Relevant Provisions of Comp. Act. Management Audit - Tax Audit - Systems Audit - Social Audit-Environment Audit Energy Audit - Forensic Audit-Peer review (Concepts, Objectives and Regulatory Requirements). Ethics in Auditing ï Auditorôs Independence. Auditing in CIS Environment. Standards on Auditing (Concepts, Purpose and Present Position as to Number and Title as issued by ICAI).

Note: Topics to be studied with reference to Standards on Auditing and Accounting including Applicable Indian Financial Reporting Standards.

Reference Books :

1. Gupta, Kamal, Contemporary Auditing, TMH.
2. Tandon, B.N., Principles of Auditing, S. Chand & Co.
3. Sharma, T.R., Auditing Principles & Problems, Sahitya Bhavan, Agra.
4. Spicer & Pegler, Practical Auditing.
5. Woolf, Emile, Auditing Today.
6. Basu, Sanjib Kumar, Fundamentals of Auditing, Pearson.
7. Auditing Assurance Standards and Guidelines issued by ICAI.

GROUP E: APPLIED ECONOMICS

MC. 416 - MACRO ECONOMIC ANALYSIS AND POLICY

Objectives: The Course seeks to provide grounding in basic macroeconomic theory and policy, with a focus on applications, especially in context of developing economies like India.

UNIT-I

Basic accounting concepts and tools in closed and open economies: National income accounting, nominal and real exchange rates and balance of payments, Keynesian theory of the short-run : Analysis of fiscal and monetary policies in the closed and open economy IS-LM models, including the Mundell-Fleming model, Interest rates in open and closed economies: Yield curve, covered and uncovered interest parity condition.

UNIT-II

The labour market and policy analysis in the medium and long run : AS-AD analysis, Analysis of inflation and unemployment : The Phillips curve; theories of unemployment conditional convergence.

UNIT-III

Theory of business cycles, Classical theories of economic growth : The Solow model; evidence on convergence and Theories of endogenous growth.

UNIT-IV

Open economy analysis : Models of currency crisis, exchange rate volatility. Expectations theory and financial markets, including rational expectations model.

Reference Books:

1. Blanchard, O. , Macroeconomics, Pearson Education, New Delhi .

2. Abel, A.S. and B.S. Bernanke, Macroeconomics, New Delhi Pearson Education.
3. Barro, R. and X. Sala-i-Martin , Economic Growth, India, Prentice Hall.
4. De Souza, E. , Macroeconomics, Pearson Education, New Delhi.
5. Dornbusch. R., S. Fischer and R. Start, Macroeconomics, Tata Mc Graw Hill, New Delhi .
6. Jones, C., Introduction to Economic Growth, W.W. Norton, New York.
7. Keynes, J., The General Theory of Employment, Interest and Money, New York Harcourt.
8. Krugman, P. and M. Obstfeld, International Economics, New Delhi, Addison Wesley .

MC. 417- ECONOMICS OF SERVICES

Objective: The objective of this paper is to acquint the students with the economics of various kinds of services and its related issues.

UNIT-I

Introduction: Basic concepts of services, trade in services, classification of services (CPC), economic growth and structural shifts in favour of services, cost disease hypothesis and its implications on growth, empirical evidence, service sector in India, causes of growth, implications of the service sector growth for long run growth.

UNIT-II

Economics of education: Micro theories of education, Beckerôs theory, Mincerian equation, over education, measuring micro effects of education, signaling theory of education, new growth theories and macro economic effects of education, human resources and human capital development empirical evidence government policies, government funding and issues, PPP in education, the case for universal, free, primary education, structure of higher education and problems of its financing in India, other issues in education policy; Health: Economic dimensions of health care - demand and supply of health care, Grossmanôs model of health care services, determinants of health - poverty, malnutrition, illiteracy and lack of information, Micro effects of health, health dimensions of macro economics development; health policy, financing of health care and resource constraints, inequalities in health - class and gender perspectives, institutional issues in health care delivery, economics of health insurance, community based health insurance.

UNIT-III

Economics of Infrastructure services : Role of infrastructure in economic development, natural monopoly and economics of infrastructure regulation, rate of return regulation, performance based regulation, pricing for infrastructure sector, role of subsidies, restructuring and privatisation of infrastructure sector with special reference to India, reform acts, competition in infrastructure sector, issues in infrastructure finance, modes of project financing, development of infrastructure projects - BOO, BOOT, BOLT etc.

UNIT-IV

Economics of ICT: ICT industry: An introduction, growth of the global ICT industry, measuring the impact

of ICT, impact of IT on economic performance and trade, Impact of ICT on markets and society at large, direct and indirect macroeconomic impact on growth, theory and empirical evidence, specificities of information markets and network goods, need for specific sectoral regulation (discussions on case studies), familiarity with e-governance. The evolution of the sectoral regulation since the liberalisation of the Telecommunicat ions market in 1998 in India.

Reference Books/Journals:

1. Dasgupta S. and Singh A., Will services be the new engine of economic growth in India, working paper No. 310, Centre for business research, University of Cambridge, UK. Wolff A. (2005): The service economy in OECD countries, STI working paper 2005/3, statistical analysis of science, technology and industry.
2. Gordon J. and Gupta P., Understanding Indiaôs services revolution, working paper, IMF
3. Banga R. , Role of services in the growth Process, a survey, New Delhi, CRIER ÅGovernment of India (2005): Report on the CABE committee on autonomy of higher education institutions, ministry of human resource development
4. NCAER (2006):E readiness report , India

MC. 418 - WORLD TRADING SYSTEM

UNIT-I

Basic economic principles relating to international trade mercantilism, Comparative advantage and gains from trade, Factor endowments and trade patterns, Qualifications to the case for free trade, reciprocity, the optimal tariff, infant industries, strategic trade theory, revenue-raising considerations, and national security considerations.

UNIT-II

Evolution of the multilateral trading system under GATT : Emergence of discriminatory trade policies in the inter-war years leading up to the Bretton Woods Conference in 1944, The formation the GATT ï the Havana Charter and the failed attempt to establish the International Trade Organisation, Core principles of the GATT (MFN and national treatment), GATT and its changing character during the 1950s and 1960s, The emergence of the idea of special and differential treatment for developing countries and non-reciprocity, Exceptions to the GATT rules ï textiles and agriculture ï their implications, maturing of the GATT during the 1970s, GATT and the Uruguay Round.

UNIT-III

Analysis of the covered Agreements of the WTO: Agriculture, non-agricultural market access, rules, anti-dumping, subsidies, safeguards, trade facilitation, services, trips, environment, dispute settlement, attempts to expand the remit of the WTO, investment (MAI), labour standards.

UNIT-IV

Challenges to the Multilateral Trading System: The rise of regional trading agreements and free trade areas (FTAs), Relationship with the multilateral trading system, A ñspaghetti bowlò syndrome?, North-South FTAs and South-South FTAs, US unilateralism, Use of Section.

Reference Books:

1. Das B.L, The World Trade Organisation, A Guide to the Framework for International Trade, London and New York : Zed books and TWN.
2. Hoda A., Developing Countries in the International Trading System, New Delhi: Allied.
3. Aggarwal A., Anti-dumping and Developing Countries, An Introduction, New Delhi, Oxford University Press.
4. Kumar, S. : Trade in Services: Advantage, New Delhi , Bookwell Publications.
5. Marchetti J. and Roy M., Opening Markets for Trade in Services, London, Cambridge University Press.

GROUP F: BANKING AND INSURANCE

MC. 419-BANK LEGISLATION

Objective: The objective of this course is to apprise the students with the banking law and practice and develop an understanding of various laws affecting banks.

UNIT-I

Evolution of banking law : Banking Regulation Act, 1949; Reserve Bank of India Act, Bank Nationalization Act, 1969; A Study of Negotiable Instruments Act, 1881 based on case law.

UNIT-II

Banker and customer relations : Banks as borrowers; cheques - payment of customers cheques: collecting banker and customers accounts.

UNIT-III

Employment of funds; Guarantees; Advances secured by collateral securities; Advances against goods and documents of title to goods; Analysis of banks balance sheet, Electronic funds transfer and other electronic payments; Internet banking.

UNIT-IV

The Foreign exchange Management Act, 1999, Provisions relating to: Preliminary (Sec 1-2), Regulation and Management of Foreign Exchange (Sec 3 to 9). Authorized person (Section 10 to 12) Contravention and penalties (Section 13 to 15) Adjudication and Appeal (Sections 16 to 21 and sections 34-35) Directorate of enforcement (section 36 to 38).

Reference Books :

1. P.N. Varshney : Banking Law and Practice.
2. B.M. Lall Nigam : Banking Law and Practice.
3. Tannan : Banking Law and Practice in India.
4. Tax mann : Bankerôs Manual.
5. Diwan, Prag and Sunil Sharma : Electronic Commerceï A Managerôs Guide to E. Business, Varity Books International, Delhi.
6. V.K. Jain and Hemlata : Electronic and Mobile Commerce, Cyber-tech Pub. New Delhi. Uppal, K.K., Chawla, A.S. & Chawla & Malhotra Keshav : Banking Towards 21st Century, Published by Deep and Deep Publications, New Delhi.

MC.420-RISK MANAGEMENT

Objective: To provide an understanding and an appreciation of the principles and practices of risk management in order to enable production of the optimum strategy for the handling of risk in an organisation.

UNIT-I

Nature and Sources of Financial Risk: Introduction to Financial Risks, definition, including: Business Risk, Operational Risk, Financial Risk (market risk, credit risk, liquidity risk), Legal Risk; Introduction to risk management; Principles, essential features and objectives of risk management; Function and duties of a risk manager and the risk management department of a company; Content and purposes of a companyôs risk management philosophy, statement, manual and report; Location and structure risk management within the organizational structure; Risk and Return.

UNIT-II

Process of Risk Management; Techniques used in identifying sources of risk ; Quantitative and qualitative techniques used to identify and assess potential risks to an organization and the advantages and disadvantages of each technique. Techniques for gathering data. Methods of measuring, representing and comparing data for analysis and the relative advantages of each method. Probability theory, the ways in which probabilities are derived and their uses. Application of probability distribution.

UNIT-III

Risk Measurement and Control: The measurement of risk, Controlling risk: With insurance and without insurance. Objective and techniques of loss control management ï Property, Security, Employee and Liability risk control; Features of a contingency plan. Disaster Recovery, Crisis Management and Business Continuity.

UNIT-IV

Value at Risk (VaR): Meaning, Measuring Value at Risk Monte Carlo Simulatio-, application of VaR,

Hedging- Concepts and Types; Hedging Process - Initiation, Monitoring, closing and roll over. Risk Management Information System (RMIS) - fundamental concepts, Evolution of RMIS, components, potential benefits and limitations of RMIS, Designing RMI, Implementing RMIS

Reference Books :

1. Redja, Principles of Risk Management and Insurance ,Pearson Education, N. Delhi.
2. Marrison The Fundamentals of Risk Mangement, Tata Mc Graw Hill, N. Delhi.
3. John C. Hull, Fundamentals of Futures & Options Markets (Prentice Hall.
4. Jorian, Phillippe Value at Risk: The New Benchmark for Managing Financial Risk McGraw-Hill.
5. Saunders, A. and M. Cornett., Financial Institutions Management: A Risk Management Approach, 6th ed. Boston: McGraw-Hill.
6. Harrington, S. and G. Niehaus. Risk Management and Insurance, McGraw-Hill.
7. Rivai, V., A. Veithzal, and F. Idroes. Bank and Financial Institutions Management: Conventional and Sharia System. Jakarta: Rajawali Pers.

MC. 421-ACTUARIAL SCIENCES

Objective: The purpose of this course is to equip the student with the principles and techniques of actuarial practice. The paper requires at least a prior general knowledge of mathematics and statistics.

UNIT-I

Basic Mathematics: Basic functions, Annuities - certain, Loans repayable by installments, Simple methods of determining the rate of interest in a transaction, Capital redemption assurance, Valuation of simple loans and debentures.

UNIT-II

Life Contingencies: Mortality tables, Elementary functions, the central death rate, Single life annuities and assurances, Commutation columns, Temporary and deferred annuities and assurances, Conversion tables.

UNIT-III

Special annuities and assurances, Periodical payments, Complete annuities, Policy value, Select and other tables.

UNIT-IV

Joint-life Annuities and Assurances: Value of and premiums for joint -life and contingent annuities and assurances.

Reference Books:

1. Donald D.W.A. ñCompound Interest and Annuities ï Certainò, 2nd Ed., Cambridge [Eng.] Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press.
2. R.E. Underwood, ñThe Elements of Actuarial Science ò, 4th Edition, Pitman.
3. Harry Freeman, ñMathematics for Actuarial Students ò, Cambridge at the University Press.

MC. 422- COMPREHENSIVE VIVA-VOCE

The Comprehensive VIVA-VOCE will be conducted at the end of the 4th Semester by the External Examiner appointed by the University. The VIVA-VOCE will be based on the content of the subjects studied by the student during the all four semesters.

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FACULTY OF LANGUAGES

SYLLABI

FOR

M.A. English (Semester System)
Examinations, 2015-2016

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. English (Semester System)
(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %
   (ii) Continuous Assessment : 20 %
   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
	Total :		**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.
4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES :

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

(iii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card (D.M.C.).

OUTLINES OF TESTS, SALLABI AND COURSES OF READING FOR M.A. ENGLISH SEMESTER I AND II FOR THE SESSION 2015-2016

Objectives:

To help the students develop literary sensibility, critical thinking, and sharp, penetrating understanding of a wide range of literary texts, literary history, literary criticism/theory, and English Language/ELT.

General Notes:

1. There will be two semesters in a year with four compulsory papers in each semester.

2. Each paper shall carry 100 marks (80 marks for end-term written examination, 20 for internal assessment). The end term exam. shall be of 3 hours duration.

3. There shall be one question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes shall be context based. Though the nature of notes shall vary from course to course, efforts shall be made to cover a range of terms/concepts/trends/movements specific to the course.

4. There shall be four essay-type questions of 15 marks each (to be answered in about 600 words each), one question with internal choice will be set from each of the four prescribed texts/units.

OUTLINES OF TESTS, SALLABI AND COURSES OF READING FOR M.A. ENGLISH SEMESTER I AND II FOR THE SESSION 2015-2016

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

M.A. PART-I

SEMESTER-I

PAPER-I: LITERARY CRITICISM - I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Mimetic and Expressive theory of Art, Catharsis, Hamartia, Three Unities, Ars Poetica, Sublime, Apologie for Poetry, Decorum, Humanism, Objective Correlative, Dissociation of Sensibility, Fancy and Imagination, Synaesthesia, Disinterestedness, Impersonal Theory of Poetry.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units :

Unit 1.	Aristotle	:	*Poetics* (Chapters i-xvi)
Unit 2.	William Wordsworth	:	Preface to the *Lyrical Ballads* (1800)
Unit 3.	Matthew Arnold	:	"The Study of Poetry"
Unit 4.	T.S. Eliot	:	"Tradition and the Individual Talent"

The texts of Wordsworth, Arnold, and Eliot essays are available in *English Critical Texts* edited by Enright and Chickera.

Suggested Readings :

1. David Daiches: *Critical Approaches to Literature,* 2nd ed., Hyderabad: Orient Longman, 2001.
2. F. L. Lucas: *Tragedy in Relation to Aristotle's Poetics,* New Delhi: Allied Publishers, 1970.
3. Humphrey House: *Aristotle's Poetics,* Ludhiana: Kalyani Publishers, 1970.
4. M. H. Abrams: *A Glossary of Literary Terms,* Singapore: Harcourt Asia Pvt. Ltd., 2000.
5. Rene Wellek: *A History of Modern Criticism: 1750-1950,* Vols. I-IV, London: Jonathan Cape, 1958.
6. M.A.R. Habib: *A History of Literary Criticism: From Plato to the Present,* Oxford: Blackwell, 2005.
7. Boris Ford (ed.): *The Pelican Guide to English Literature,* Vols. 4 & 5, London: Pelican, 1980.
8. Harry Blamires: *A History of Literary Criticism,* Delhi: Macmillan, 2001.
9. Patricia Waugh: *Literary Theory & Criticism: An Oxford Guide,* Delhi: OUP, 2006.
10. M.S. Nagarajan: *English Literary Criticism & Theory : An Introductory History,* Hyderabad : Orient Longman, 2006.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

3PAPER-II: BRITISH POETRY- I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Neo-classicism, Metaphysical Poetry, Victorian Temper, Victorian Compromise, Mock Epic, Heroic Couplet, Negative Capability, Supernaturalism in Romantic Poetry. The French Revolution, The Pre-Raphaelites, Humanism, Romantic Revival, Dramatic Monologue, Dissociation of Sensibility, Pathetic Fallacy.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	John Donne	:	"Satyre: Of Religion". "The Good-Morrow" "The Canonization" "At the Earth's Imagin'd Corners" Batter My Heart, Three Person'd God"
Unit 2.	Alexander Pope	:	"The Rape of the Lock"
Unit 3.	John Keats	:	"Ode to a Nightingale" "Ode on a Grecian Urn" "Ode on Melancholy" "To Autumn" "Ode to Psyche"
Unit 4.	Robert Browning	:	"My Last Duchess" "Andrea del Sarto" "The Last Ride Together" "Rabbi Ben Ezra" "The Grammarian's Funeral"

Suggested Readings:

1. Joan Bennett : *Five Metaphysical Poets,* Cambridge: Cambridge University Press, 1964.
2. Helen Gardner ed. : *John Donne: A Collection of Critical Essays* (*Twentieth Century Views Series)* New Delhi: Prentice Hall India Ltd., 1979.
3. George Williamson : *A Reader's Guide to the Metaphysical Poets,* Yugoslavia: Thomas & Hudson, 1988.
4. Abrams, M.H. : *English Romantic Poets: Modern Essays in Criticism,* 2nd ed., Oxford: Oxford University Press, 1975.
5. Fraser, G.S. ed. : *Keats: The Odes* (*Case Book Series),* London: Macmillan, 1971.
6. Stuart M. Sperry : *Keats: The Poet,* New Jersey: Princeton University Press, 1973.
7. Earl R. Wasserman : *The Finer Tone: Keats' Major Poems,* Baltimore: The John Hopkins Press, 1967.
8. Walter Jackson Bate (ed.) : *Keats: A Collection of Critical Essays,* New Delhi: Prentice Hall India Pvt. Ltd., 1978.
9. Drew, P. (ed.) : *Robert Browning: A Collection of Critical Essays,* New Delhi: Macmillan, 1985.
10. J.R. Watson (ed.) : *Browning: Men and Women and Other Poems* (Case Book Series), New Delhi: Macmillan, 1986.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER III: BRITISH DRAMA-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Liturgical Plays, Mystery and Miracle Plays, Morality Play, Chester Play, Interludes, Shakespearean Tragedy, Tragic Hero, University Wits, Shakespearean Comedy, Blank Verse, Marlowean Hero, Restoration Comedy, Comedy of Humours, Comedy of Manners, Heroic Tragedy.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	Christopher Marlowe	:	*Doctor Faustus*
Unit 2.	William Shakespeare	:	*King Lear*
Unit 3.	Richard Sheridan	:	*The School for Scandal*
Unit 4.	George Bernard Shaw	:	*Pygmalion*

Suggested Readings:

1.	Clifford Leech	:	*Christopher Marlowe: A Collection of Critical Essays* (*Twentieth Century Views Series),* New Delhi: Prentice Hall India, 1978.
2.	Judith O'Neill	:	*Critics on Marlowe,* London: Allen & Unwin, 1969.
3.	Ghanshiam Sharma (ed.)	:	*Reinterpretations of Marlowe's Faustus: A Collection of Critical Essays,* New Delhi: Doaba House, 1984.
4.	A. C. Bradley	:	*Shakespearean Tragedy: Lectures on Hamlet, Othello, King Lear, Macbeth,* New Delhi: Dodo Press, 2009.
5.	Ralph J. Kaufmann	:	*Elizabethan Drama: Modern Essays in Criticism,* Oxford: Oxford University Press, 1970.
6.	Alfred Harbage	:	*Shakespeare: The Tragedies: A Collection of Critical Essays,* New Delhi: Pearson, 2005.
7.	Janet Adelman (ed.)	:	*Twentieth Century Interpretations of King Lear*, New Delhi: Prentice-Hall India, 1980.
8.	James Morwood & David Crane, (Ed.)	:	*Sheridan Studies*, Cambridge: Cambridge University Press, 1996.
9.	Eric Bentley	:	*Bernard Shaw*, London: Limelight Editions, 1985.
10.	Colin Wilson	:	*Bernard Shaw*, *A Reassessment*, Athenum, 1969.
11.	G. E. Brown	:	*George Bernard Shaw*, London: Evans Brothers, 1970.
12.	Christopher Innes (ed.)	:	*Cambridge Companion to George Bernard Shaw,* Cambridge: Cambridge University Press, 2006.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-IV: BRITISH FICTION-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Reform Bill of 1832, Industrialism, Picaresque Novel, Comic Epic in Prose, Realism, Burlesque, Omniscient Author, Flat and Round Characters, Sentimental Novel, Gothic Novel, Utilitariansim, Social Novel, Historical Novel, Epistolary Novel. The Novel of Ideas.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1. Henry Fielding : *Joseph Andrews*

Unit 2. Charles Dickens : *Hard Times*

Unit 3. Charlotte Bronte : *Jane Eyre*

Unit 4. Thomas Hardy : *Jude, the Obscure*

Suggested Readings:

1. Terry Eagleton : *The English Novel: An Introduction*, Oxford: Blackwell, 2005.
2. Martin C. Battestin : *The Moral Basis of Fielding's Art: A Study of Joseph Andrews,* Connecticut: Wesleyan University Press, 1967.
3. R. Paulson : *Henry Fielding: A Collection of Critical Essays* (*Twentieth Century Views Series),* New Delhi: Prentice Hall India, 1976.
4. Alberto J. Rivero : *Critical Essays on Henry Fielding*, London: Barnes & Noble, 1998.
5. Jill Campbell : *Natural Masques Gender and Identity in Fielding's Plays and Novels,* Stanford: Stanford University Press, 1995.
6. Edward Gray (ed.) : *20th Century Interpretations of Hard Times: A Collection of Critical Essays,* New Delhi: Prentice Hall Pvt. Ltd., 1969.
7. Harold Bloom ed., : *Modern Critical Interpretations: Charles Dickens' Hard Times,* New York: Chelsea House, 1987.
8. Philip Collins (ed.) : *Dickens' Hard Times: A Critical Heritage,* London: Routledge & Kegan Paul, 1971.
9. Judith O'Neill (ed.) : *Critics on Charlotte Bronte & Emily Bronte*, Miami: University of Miami Press, 1979.
10. Miriam Allott (ed.) : *Charlotte Bronte: Jane Eyre* (Casebook Series).
11. Jill Karson : *Readings on Jane Eyre*, *Readings on Jane Eyre*, San Diego, CA: Green Haven Press, 2000.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

SEMESTER-II

PAPER-I: LITERARY CRITICISM-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Ontological Criticism, Chicago Critics, Irony and Paradox in New Criticism, Tension, Texture, Point of View, Id/Ego/Superego, Oedipus Complex, Archetypal Motifs, Shadow/Anima/Persona, Collective Unconscious, New Historicism, Ideology, Base and Superstructure, Hegemony.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Formalist Approach

Unit 2. Psychological Approach

Unit 3. Mythological and Archetypal Approach

Unit 4. "Literature and History" (First Chapter of Terry Eagleton's *Marxism & Literary Criticism)*

Units 1, 2 and 3 are based on corresponding sections from Guerin et al, ed., *A Handbook of Critical Approaches to Literature*

Suggested Readings:

1. Wimsatt and Brooks: *Literary Criticism: A Short History,* New Delhi: Oxford & IBH Pub. Co., 1974.
2. David Robey & Ann Jefferson: *Modern Literary Theory,* London: Batsford, 1986.
3. Harry Blamires: *A History of Literary Criticism,* Delhi: Macmillan, 2001.
4. M.A.R. Habib: *A History of Literary Criticism: From Plato to the Present,* Oxford: Blackwell, 2005.
5. M.S. Nagarajan, *English Literary Criticism & Theory: An Introductory History,* Hyderabad: Orient Longman, 2006.
6. Patricia Waugh: *Literary Theory & Criticism: An Oxford Guide,* New Delhi: Oxford University Press, 2006.
7. Frank Lentriccia, *After the New Criticism,* Chicago: Chicago University Press, 1980.
8. Hans Bertens, *Literary Theory: The Basics,* New York: Routledge, 2003.
9. Peter Barry: *Beginning Theory: An Introduction to Literary & Cultural Theories,* 2nd ed., Manchester: Manchester University Press, 2004.
10. Raman Selden: *A Reader's Guide to Contemporary Literary Theory,* New Delhi: Pearson, 2006.
11. John Crowe Ransom, *The New Criticism*, New York: New Directions, 1941.
12. I.A. Richards, *Practical Criticism*, London: Routledge & Paul, 1964.
13. Terry Eagleton, *Marxism and Literary Criticism*, University of California Press: London, 1976.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-II: BRITISH POETRY-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Objective Correlative, Modernism, Post-Modernism, Impact of World Wars on Twentieth-Century Literature, War Poets, Imagism, Dadaism, Surrealism, Impressionism, Expressionism, Naturalism,. Existentialism, Movement Poets, Confessional Poets, Irish Literary Revival.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	W. B. Yeats	:	"Easter 1916" "The Second Coming" "A Prayer for My Daughter" "Sailing to Byzantium" "The Circus Animals' Desertion"
Unit 2.	T. S. Eliot	:	"The Love Song of J. Alfred Prufrock" "The Hollowmen"
Unit 3.	W. H. Auden	:	"In Memory of W. B. Yeats" " Musee des Beaux Arts" "September 1, 1939" "Shield of Achilles" "Funeral Blues"
Unit 4.	Ted Hughes	:	"The Jaguar" "Hawk Roosting" "Thrushes" "Crow Alights' "Crow's Last Stand"

Suggested Readings:

1. David A. Moody: *The Cambridge Companion to T.S. Eliot,* Cambridge: Cambridge University Press, 2003.
2. Bernard Bergonzi: *T. S. Eliot* (Masters of World Literature), London: Macmillan, 1978.
3. Helen Gardner: *The Art of T.S. Eliot,* New Delhi: Penguin, 1988.
4. John Lucas: *Modern English Poetry – from Hardy to Hughes: A Critical Survey,* London, Batsford Ltd., 1986.
5. Edward Maline: *A Preface to Yeats,* London: Longman Group Ltd., 1983.
6. Jon Stallworthy (ed.): *Yeats' Last Poems* (Casebook Series), New Delhi: Macmillan, 1968.
7. Keith Sagar: *The Art of Ted Hughes,* Cambridge: Cambridge University Press, 1975.
8. Stephen Spender: *Eliot* (Fontana Modern Masters), Glasgow: William Collins & Sons Ltd., 1967.
9. Terry Gifford, Neil Roberts: *Ted Hughes: A Critical Study,* London: Faber & Faber, 1981.
10. Edward Mendelson: *Early Auden,* London: Faber & Faber, 1999.
11. Stan Smith, *Cambridge Companion to W.H. Auden,* Cambridge: Cambridge University Press, 2004.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-III: BRITISH DRAMA-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

The Drama of Absurd, The Great depression, Realism in Drama, Drama of Ideas, Impressionism, Poetic Drama, Pastiche, Problem Plays, Thesis Play, Romanticism in Modern Drama, Symbolism in Drama, Theatre of Cruelty, Alienation Effect, Kitchen Sink Drama, Irish Movement.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1. T. S. Eliot : *Murder in the Cathedral*

Unit 2. Samuel Beckett : *Waiting for Godot*

Unit 3. John Osborne : *Look Back in Anger*

Unit 4. Tom Stoppard : *Rosencrantz and Guildenstern are Dead*

Suggested Readings:

1. Christopher Innes, *Modern British Drama: The Twentieth Century*, 2nd edition, Cambridge: Cambridge University Press, 2002.

2. Hugh Kenner: *A Reader's Guide to Samuel Beckett,* New York: Grove Press, 1961.

3. John Fletcher: *Samuel Beckett's Art*, London: Chatto and Windus, 1967.

4. Ruby Cohn, *A Casebook on 'Waiting for Godot'*, New York: Grove Press, 1967.

5. Ronald Hayman, *Samuel Beckett*, London: Heinemann, 1968.

6. John Russell Taylor: *Anger and After: A Guide to the New British Drama*, London: Methuen, 1969.

7. Kenneth Allsop: *The Angry Decade: A Survey of the Cultural Revolt of the 1950s*, London: John Good Child Publishers, 1984.

8. John Russell Brown (ed.): *A Short Guide to Modern British Drama,* London: Barnes & Noble, 1983.

9. Michael Anderson, *Anger and Detachment: A Study of Arden, Osborne and Pinter*, London: Pitman, 1976.

10. Ronald Hayman: *John Osborne* (Contemporary Playwrights Series), London: Heinemann Educational, 1970.

11. Harold Bloom, (ed.): *Tom Stoppard* [Bloom's Major Dramatists], New York: Chelsea House, 2003.

12. Katherine E. Kelly (ed.): *The Cambridge Companion to Tom Stoppard,* Cambridge: Cambridge University Press, 2001.

13. Jenkins, Anthony: *The Theatre of Tom Stoppard,* Austin: University of Texas Press, 2003.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-IV: BRITISH FICTION-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Stream of Consciousness, Modernism, the Bloomsbury Group, Psychological Realism, Anti Hero, Naturalism, Autobiographical Novel, Psychological Novel, Development of evolutionary Sciences, Bildungsroman, Lyrical Novel, Transitional Novel, Metafiction, Twentieth Century Realism, Colonial Consciousness in Twentieth Century Novel.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts:

Unit 1. D. H. Lawrence : *Sons and Lovers*

Unit 2. Virginia Woolf : *Mrs. Dalloway*

Unit 3. Joseph Conrad : *Heart of Darkness*

Unit 4. William Golding : *Lord of the Flies*

Suggested Readings:

1. Bernard Bergonzi, *Reading the Thirties: Texts and Contexts,* Pittsburgh: Pittsburgh University Press, 1978.
2. George M. Johnson, *Dynamic Psychology in Modern British Fiction,* London: Palgrave Macmillan, 2005.
3. Geoff Dyer, *Out of Sheer Rage: Wrestling with D.H. Lawrence,* North Point Press, 1999.
4. Anne Fernihough, *The Cambridge Companion to D.H. Lawrence*, Cambridge University Press, 2001.
5. Keith Sagar, *D.H. Lawrence: Life into Art,* New York: Penguin, 1986.
6. Jeremy Hawthorn, *Virginia Woolf's Mrs. Dalloway: A Study in Alienation*, Sussex University Press, 1975.
7. Harold Bloom, *Virginia Woolf's Mrs. Dalloway* (Bloom's Modern Critical Interpretations), London: Chelsea House Publications, 1988.
8. Richard Adams: *Heart of Darkness*. London: Penguin, 1991.
9. Harold Bloom, (ed.): *Marlow*. New York: Chelsea House, 1992.
10. Robert Burden: *Heart of Darkness*, London: Macmillan Educational, 1991.

M.A. PART-II

SEMESTER-III

PAPER-I: LITERARY THEORY-I

Objectives:

The paper provides an important study of literary theory as an intellectual and critical activity 1960 onwards. Central to this course is the analysis of some of the major critical contributions to this area which form a benchmark in understanding the dynamics of literary/critical methods. The course takes up major strands of modern literary theory and provides a conceptual context for an understanding of the function and practice of modern literary and cultural criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of literary theory 1960 onwards, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Roland Barthes: "The Death of the Author" from Roland Barthes, *Image, Music, Text* (London: Flamingo, 1977): 142-48. Also in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 166-72.

Unit-2 Wolfgang Iser: "The Reading Process: a Phenomenological Approach" from David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988).

Unit-3 M. H. Abrams: "The Deconstructive Angel" (from David Lodge (ed.) *Modern Criticism and Theory: A Reader,* London and New York: Longman, 1988).

Unit-4 Raymond Williams: "Base and Superstructure"; and "Dominant, Residual and Emergent." From Raymond Williams, *Marxism & Literature* (Oxford: Oxford University Press, 1977): 75-82 and 121-27.

Suggested Reading:

1. Peter Barry: *Beginning Theory* (Manchester and New York: Manchester University Press, 1995).
2. Raman Selden: *A Reader's Guide to Contemporary Literary Theory* (New Jersey: Prentice-Hall, 1985).
3. Ann Jefferson & David Robey, eds., : *Modern Literary Theory* (New York: Barnes and Noble, 1982).
4. Terry Eagleton: *Literary Theory: An Introduction* (Minneapolis: University of Minnesota Press, 1983).
5. …. *Marxism and Literary Criticism* (Berkeley and Los Angeles: University of California Press, 1976).
6. Krishnaswamy et al.: *Contemporary Literary Theory: A Student's Companion* (New Delhi: Macmillan, 2000).
7. Jonathan Culler: *Barthes* (Great Britain: Fontana, 1983).
8. Jeremy Hawthorn, *A Concise Glossary of Contemporary Literary Theory* (London: Edward Arnold, 1992).
9. Stuart Sim, ed., *AZ: Guide to Modern Literary and Cultural Theorists* (London: Harvester Wheatsheaf, 1995).
10. John Sturrock: *The Word from Paris: Essays on Modern French Thinkers and Writers* (London: Verso, 1998).

PAPER-II: INDIAN WRITING IN ENGLISH

Objectives:

The focus of this paper is the study of Indian contribution to literature in English, from the early advent of English in India to contemporary writing in English. The history and development of Indian Writing in English is scrutinized with reference to the Indian Nationalist Movement, the philosophical thinking of political and social leaders/activists like Mahatma Gandhi, Pandit Jawahar Lal Nehru, Raja Rammohan Roy and others. The issues raised by diasporic movements across the globe, post coloniality and the emergence of modern India is also a part of the study of this paper.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of Indian writing in English, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Raja Rao **:** *Kanthapura*

Unit II: This unit will have three poets and there will be three poems by each :

(a) Agha Shahid Ali **:** "Farewell", "Ghazal", ("Where are you now ?") and "The Country without a Post Office". Available in *The Country without a Post Office,* Delhi. Ravi Dayal, 2000, Ist Indian Edition.

(b) A. K. Ramanujan **:** "Small-Scale Reflections on a Great House"; "Obituary", "Love Poem for Wife 1." Available in R. Parthasarathy ed., *Ten Twentieth Century Indian Poets* (Delhi: Oxford University Press, 1976).

(c) Imtiaz Dharkar **:** "Purdah I", "Grace" and "Prayer", Available in Imtiaz Dharkar, *Purdah and Other Poems,* Delhi: Oxford University Press, 1989.

Unit III: Amitav Ghosh **:** *The Shadow Lines* (Delhi: Ravi Dayal, 1988).

Unit IV: Mahesh Dattani **:** *Final Solutions* (New Delhi: Penguin, 2005).

Suggested Readings:

1. K. R. S. Iyengar, *Indian Writing in English* (New Delhi: Sterling, 1985).
2. Bruce, King, *Modern Indian Poetry in English* (New Delhi: Oxford University Press, 1987).
3. A. K. Mehrotra ed., *An Illustrated History of Indian Literature in English* (New Delhi: Permanent Black, 2003).
4. Tabish Khair, *Babu Fictions* (Delhi: Oxford University Press, 2006).
5. Meenakshi Mukherjee, *Twice Born Fiction* (New Delhi: Heinemann, 1971).
6 Meenakshi Mukherjee, *The Perishable Empire: Essays on Indian Writing in English* (New Delhi: Oxford University Press, 2000).
7. M. K. Naik ed., *Aspects of Indian Writing in English* (Delhi: Macmillan, 1979).
8. S. Tharu and K. Lalitha, *Women Writing in India: 600BC to the Present*, 2 vols. (New Delhi: Oxford University Press, 1995).
9. V. Raghavan and Nagendra, *An Introduction to Indian Poetics* (Bombay: Macmillan, 1970).
10. G. N. Devy, ed., *Indian Literary Criticism: Theory and Interpretation*. Hyderabad: Orient Longman, 2004.

PAPER- III (Opt. i): POST-COLONIAL STUDIES I (ECS II PCS I)

Objectives: To familiarize the students with theoretical concepts related to the literatures of the 'new' world - Asian, African, Australian, Caribbean, Latin American, Canadian - which have long remained ignored; to foreground issues such as history, class, race, gender, nation, culture, marginality, diasporic consciousness, etc., emphasizing the emergent nature of literary productions from decolonized communities.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt four out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed units :

Prescribed Texts :

Unit-I. ENGLISH LITERARY STUDIES (with reference to English in India)

1. Thomas Babington Macaulay, 'Indian Education: Minute of the 2nd of February, 1835', in G. M. Young (ed.), *Macaulay: Prose and Poetry* (Cambridge, MA: Harvard University Press, 1967), 719-30.
2. Gauri Vishwanathan, Introduction to *Masks of Conquest* (New York: Columbia University Press, 1989): 1-22.

Unit-II. CULTURAL IDENTITY AND THE NATION

1. Ernest Renan, 'What is a Nation?' in Homi K. Bhabha, ed. *Nation and Narration* (London and New York: Routledge, 1990): 8-22.
2. Frantz Fanon, 'On National Culture' from *The Wretched of the Earth* (Harmondsworth: Penguin, 1967): 166-99.

Unit-III. DEFINING FORCES: GENDER AND RACE

1. Chandra Talpade Mohanty, 'Under Western Eyes', in Patrick Williams and Laura Chrisman, eds., *Colonial Discourse/Postcolonial Theory* (New York: Harvester Wheatsheaf, 1993): 196-220.
2. Introducing Gayatri Spivak: Woman as subaltern, subject-positions, postcolonial feminism.
3. Race: Background, classification of races, Social Darwinism and imperial practice, social construction of race; race and ethnicity.

Unit IV. CULTURAL IDENTITY AND DIASPORA

1. Stuart Hall, 'Cultural Identity and Diaspora' in Jonathan Rutherford ed., *Identity: Community, Culture, Difference* (London: Lawrence and Wishart, 1990): 222-37. Also in Padmini Mongia, *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996): 110-21.
2. Introducing Homi Bhabha: Concepts of ambivalence and hybridity.

Suggested Readings :

1. John McLeod, *Beginning Postcolonialism* (Manchester and New York: Manchester University Press, 2000).
2. Ania Loomba, *Colonialism/Postcolonialism* (London and New York: Routledge, 1998).
3. Rumina Sethi, *The Politics of Postcolonialism* (London: Pluto, 2011).
4. Robert J. C. Young, *Postcolonialism*: *A Very Short Introduction* (Oxford: Oxford University Press, 2003).
5. Leela Gandhi, *Postcolonial Theory* (Oxford: Oxford University Press, 1988).
6. Rajeswari Sunder Rajan (ed.), *The Lie of the Land: English Literary Studies in India* (Delhi: Oxford University Press, 1992).
7. Benedict Anderson, *Imagined Communities* (London: Verso, 1983).
8. Rumina Sethi, *Myths of the Nation: National Identity and Literary Representation* (Oxford: Clarendon, 1999).
9. Homi K. Bhabha, *The Location of Culture* (London and New York: Routledge, 1994).
10. Kumkum Sangari and Sudesh Vaid (eds.), *Recasting Women* (New Delhi: Kali, 1989).

PAPER-III (Opt. ii): LINGUISTICS-I (ECS II LIN I)

Objectives :

This paper is aimed to provide an introduction to the studies of language in modern times. Students are made to be aware of developments in the field of Linguistics in the 20th Century, and develop an understanding of the nature of language study through a scientific and analytical approach. An understanding of the concepts in modern Linguistics is an essential objective and the approach to be adopted is that of clear explication of linguistic thought and of the levels of linguistic analysis.

Pattern of examination

There shall be one compulsory question of 20 marks, comprising of short notes from all the units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question with internal choice will be set from each of the four units. The questions from Units 1 & 2 would be Essay Type. The questions from Units 3 & 4 would be exercises (Phonetic Transcription of words with primary stress, and morphological analysis) and short notes.

Content

Unit 1. Language - nature and functions (arbitrariness of sign, speech and writing, animal and human language, conventionality, system of systems). The earlier study of language – historical, comparative approaches, a brief history of linguistics.

Unit 2. The growth of Modern Linguistics:– The descriptive approach, Linguistics as a Science. The early structuralists, anthropologists - Boas, Sapir, Whorf' The contribution of Bloomfield. Ferdinand de Saussure and Dichotomies; Langue and Parole, Syntagmatic and Paradigmatic relationships, synchronic and diachronic approaches. Branches of Linguistics; Psycholinguistics and Neurolinguistics, Sociolinguistics and the study of the variation in language, particularly, dialect, accent and register.

Unit 3. Levels of linguistic analysis I - Phonetics (speech organs, description and classification of sounds, IPA system, phonemes, allophones, minimal pairs); Morphology (free and bound morphemes, allomorphs, zero morphemes, morphophonemics).

Unit 4. The Phonology of English - the description and classification of English Vowels and consonants, syllable structure, word stress. Transcription of English words, marking stress. Weak forms, assimilation and elision in connected speech, basic patterns of intonation.

Word formation in English; derivation, affixation , compounds.

Suggested Readings:

1. Yule, G., *The Study of Language*, Cambridge, Cambridge University Press, 2009.

2. Radford, A., *Linguistics: An Introduction,* Cambridge, Cambridge University Press, 1999.

3. Culler Jonathan, *Saussure*, London Fontna Modern Classics, 1978.

4. Crystal, D., *Linguistics*, Harmondsworth, Penguin, 1980.

5. Sethi, J. and Dhamija, *Course in Phonetics and Spoke English*, New Delhi.

6. Syal and Jindal, *Introduction to Linguistics, Grammer and Semantics,* revised Ed., N. Delhi, Prentice Hall of India, 2007.

7. Lyons, J., *Language and Linguistics,* Cambridge, CUP 1982.

8. Roach, P., *English Phonetic and Phonology,* Prentice Hall of India, 1995.

9. Gimson, A.C., *Introduction to the Pronunciation of English,* London, Arnold, 1988.

10. Fromkin, Rodman and Hyams, *An Introduction to Language* 7th Ed., 11 Thomson Wadworth, Thomsan Asia, Singapore, reprinted in India 2004.

11. Conrad and Leech, *A Student Grammar of Spoken and Written English,* London, Longman.

12. Bauer, L., *Morphology* CUP, 2002.

PAPER-III (opt. iii) AMERICAN LITERATURE I
(AMERICAN FICTION FROM 1800 TO THE PRESENT)

Objective:

The course examines changes in the American narrative from 1800 to the present and considers what might be distinctly "American" about American literature. It focuses on the historical and cultural influences, literary movements, the short story and novel as distinct genres and on major literary figures. It explores literature that reveals and emerges from multiple perspectives such as those of race, gender, ethnicity, socio-economic class and historical period.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of American fiction, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I : (19^{th} Century Short Fiction)

(a) Edgar Allan Poe, "The Fall of the House of Usher" (Norton)
(b) Nathaniel Hawthorne, "Rappaccini's Daughter" (Norton)
(c) Stephen Crane, "The Open Boat" (Doubleday Press)

Unit II : (Twentieth Century Short Fiction)

(a) Ernest Hemingway, "The Snows of Kilimanjaro" (Norton)
(b) William Faulkner, "A Rose for Emily" (Random House)
(c) Joyce Carol Oates, "Scenes of Passion and Despair" (Oxford)

Unit III : Toni Morrison, *The Bluest Eye* (Vintage)

Unit IV : Don DeLillo, *White Noise* (Penguin)

Suggested Readings :

1. Kenneth Silverman, ed., *New Essays on Poe's Major Tales* (Cambridge University Press, 1992).

2. Charles E. May, *Edgar Allan Poe: A Study of the Short Fiction (*Twayne Series,1991).

3. Albert V. Frank, ed., *Critical Essays on Hawthorne's Short Stories (*Twayne, 1993).

4. Chester L. Wolford, *Stephen Crane: A Study of the Short Fiction* (Twayne, 1989).

5. Paul Smith ed., *New Essays on Hemingway's Short Fiction (*Cambridge University Press, 1985).

6. Joseph M. Flora, *Hemingway: A Study of the Short Fiction (*Twayne, 1983).

7. Hans H. Skei, *The Art of Brevity: Excursions in Short Fiction (*South Carolina Press, 2004).

8. Linden Peach ed., *Toni Morrison: Contemporary Critical Essays* (Casebook Series, 1998).

9. Nancy Peterson, *Toni Morrison: Critical Approaches (*John Hopkins University Press, 1997).

10. Tim Engels & Hugh Ruppersbury eds., *Critical Essays on Don DeLillo (*GK Hall, 2000).

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY I

Objective:

This paper shall focus singularly on Indian Poetics - its various schools and theories so as to provide an alternative perspective of Literary Theory from an indigenous perch. The corpus of Indian Poetics is very rich and multivalent; the paper shall however deal with basic concepts and would therefore be introductory in nature and scope. The prescribed texts are available in English translation and there is no dearth of secondary material also. The students would be encouraged to take a critical view of our own 'poetics' and its relevance in the postcolonial contexts.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Text

Unit I

Rasa – Siddhanta with special reference to Bharatmuni, "On Natya and Rasa: Aesthetic of Dramatic experience" from the *Natyashastra,* anthologized in G.N.Devy's edited book *Indian Literary Criticism* (Hyderabad; Orient Longman, 2002).

Unit II

Dhavni –Siddhanta with special reference to Anandvardhana, "Dhavni: Structure of Meaning" from *Dhavanyaloka,* anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002).

Unit III

Vakrokti-Siddhanta with special reference to Kunatak, "Language of Poetry and Metaphor" from *Vakrokti-Jivita*, anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002).

Unit IV

A.K.Ramanujan, "*On Ancient Tamil Poetics*" anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002).

Suggested Readings:

Rajan, P.K., *Indian Literary Criticism in English*: *Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London, OUP, 1992).

Devi, G.N., *In Another Tongue* (Delhi, MacMillan, 1993).

_____ and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).

Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banarsidas, 1993).

Sethuraman, V. Ed., *Indian Aesthetics: An Introduction* (Delhi, MacMillan 1992).

Rao, Raja, *The Meaning of India* (Delhi: Vision Books, 1996).

Mukherjee, Meenakshi, *The Perishable Empire* (Delhi, OUP , 2000).

_____, *Reality and Realism* (Delhi, OUP, 1983).

Suder Rajan, Rajeswari, Ed., *The Lie of the Land* (Delhi, OUP, 1991).

Gauri, Viswanathan, *Masks of Conquest* (New York, Colombia University Press, 1989).

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literature* (Mysore, Dhavanyaloka, 1984).

Rayan, Krishna, *The Burning Bush* (Delhi, B.R. Publishing, 1989).

_____, *Text and Sub-text* (Delhi, Arnold Heinemann, 1989).

_____, *Sahitya, A Theory* (Delhi, Arnold Heinemann, 1991).

Paranjape, Makarand Ed., *Nativism: Essays in Criticism* (Delhi; Sahitya Akademi, 1998).

Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi, OUP 1991).

Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ., 1964).

Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasidass, 1971, 4th ed.)

PAPER IV (Opt.i): CULTURAL STUDIES-I

Objectives:

The course combines a thorough training in critical and cultural studies with a diverse range of advanced options offering you scope to configure and appropriate programme of study that meets your needs. At a historical juncture of incessant theoretical discourse when English Departments are being structurally reconstituted, cultural studies becomes significant as a course that focuses on criticism as a social and cultural practice in the 20th Century. An English education is now less a concern of familiar Western Course and more a confrontation with the diversity of transnational cultural schemes and texts. Such a task sets out to situate literature in relation to culture and within larger cultural formations. The main aim of this course is to examine literary studies as a self conscious pursuit of a 'critical' definition of culture.

The programme is designed to provide grounding in the theoretical debates that inform contemporary investigations in a number of areas, such as society, subjectivity, ethnicity, aesthetics, postmodern experience and cultural history. The insights and analyses of late twentieth-century forms of critique – psychoanalysis, deconstruction, and ideological and political thought – are employed to assess some key concepts of interdisciplinary study. Working within multiple contextual formations in a globalized world, the course explains the need for on going contest and struggle to understand ideology of mass culture and hegemony with the necessity of achieving cultural knowledge of ordinary people vs. the elites, thus drawing the student closer to a bewildering variety of local and trans-cultural politics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words

each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: What is Culture?

1. T.S. Eliot, "The Three Senses of Culture", from *Notes Towards the Definition of Culture*, London: Faber and Faber, 1948. 21-34.
2. Raymond Williams, 'Culture is Ordinary', in *The Routledge Critical and Cultural Theory Reader.* Ed. Neil Badmington and Julia Thomas, London & New York, Routledge.

Unit II: Culture Studies

Richard Johnson, "What is Cultural Studies Anyway?", in *What is Cultural Studies?: A Reader*, Ed. John Storey, London & New York: Arnold, 1976. 75-114.

Unit III: Culture as Discourse

1. Eric Hobsbawm, "Introduction: Inventing Tradition", in *The Invention of Tradition*. Eds. Eric Hobsbawm and Terence Ranger, Cambridge: Cambridge University Press, 1997 rpt. 1-14.
2. Clifford Geertz, "Thick Description: Towards an Interpretive Theory of Culture" from *Interpretation of Cultures: Selected Essays of Clifford Geertz*, Basic Books, 1973. 3-30.

Unit IV: Representation and Ideology

1. Stuart Hall, "The Work of Representation", in *Representation: Cultural Representations and Signifying Practices* Ed. Stuart Hall, London: Sage, 1997, 15-64.
2. Louis Althusser, "From 'Ideology and Ideological State Apparatus'" in Anthony Easthope and Kate McGowan ed., *A Critical and Cultural Theory Reader* (Open University Press).

Suggested Readings:

Ali Rattansi and Sally Westwood Eds., *Racism, Modernity and Identity* (Polity Press, Oxford 1994).

Ashis Nandy, *The Secret Politics of Our Desires: Innocence, Culpability, and Indian Popular Cinema* (Zed, London, 1999).

Donna Haraway, *Simians, Cyborgs and Women* (Free Association Books, London, 1991).

Graeme Turner, *British Cultural Studies* (Routledge, London, 1990).

Hohn Rajchman Ed., *The Identity in Question* (Routledge, London, 1995).

John Storey Ed., *What is Cultural Studies?* (Edward Arnold, London, 1996).

Malcolm Waters, *Globlisation* (Routledge, London, 1995).

Stuart Hall, *Critical Dialogues in Cultural Studies* (Penguin, London, 1996).

Richard Hoggart, *The Uses of Literacy* (Penguin, London, 1958).

Ziauddin Sardar and Jerome Ravetz, *Cyberfutures* : *Culture and Politics on the Information Superhighway* (Pluto Press, London, 1966).

PAPER IV (Opt. ii): APPLIED LINGUISTICS I

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Prescribed Content:

Unit 1: Linguistics and Language Teaching- Behaviourist, mentalist and cognitivist views of language learning. The difference between learning the first and the second language. Second language acquisition. The Monitor model.

Unit 2: The Language Learner: Interlanguage. Learners' errors as strategies of learning, Types of errors, The significance of error analysis. Universal grammar. Acculturation. Individual differences in learning-age, motivation, attitude and aptitude.

Unit 3: The notion of communicative competence. Varieties of language - social and regional dialects, pidgins and creoles, register. The significance of language variation in teaching and learning language.

Unit 4: Application of linguistics to the study of literary style: A few literary texts to be taken as examples to illustrate features of literary language-deviation, foregrounding, parallelism and poetic diction.

Suggested Readings:

1. Yule, George, *The Study of Language* (Cambridge University Press, New Delhi, 2006).
2. Kirkpatrick, Andy, *World Englishes,* (Cambridge University Press, U.K., 2007).
3. Corder, S. Pit, *Introducing Applied Linguistics (*Penguin, U.K., 1993).
4. Krishnaswamy and Sriraman, *Applied Linguistics* (Delhi, OUP, 1998).
5. Long, Michael H. and Doughty, Catherine J., *The Handbook of Second Language Acquisition* (Blackwell, U.K., 2005).
6. Downes, William, *Language and Society* (Cambridge University Press, U.K., 1998).
7. Ellis, Rod, *Understanding Second Language Acquisition* (Oxford University Press, U.K., 1998).
8. Mc Laughlin, Barry, *Theories of Second Language Learning* (Edward Arnold, U.K., 1988).
9. Skehan, Peter, *Individual Differences in Second Language Learning* (Arnold, U.S., 1989).
10. Leech, G.N., *A Linguistic Guide to English Poetry* (Longman London, 1967).

PAPER IV (Opt. iii): WORLD POETRY /NOVEL IN TRANSLATION

Objectives:

The paper provides an interesting study of world poetry and novel with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping students develop ways of approaching, understanding and interpreting classics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1. Dante's *Inferno* (Penguin)
Unit-2. Cervantes *Don Quixote* (Penguin)
Unit-3. Maxim Gorky's *Mother* (Moscow: Popular Publications)
Unit-4. (i) Pablo Neruda: 'A Song of Despair,' 'Enigmas' 'Brown & Agile Child' from *Collected Poems of Pablo Naruda.*
(ii) Octavia Paz: 'A Tree Within,' 'No More Cliches' 'Tomb of Amir Khusru' from *Collected Poems of Octavia Paz.*
(iii) Joseph Brodsky: 'Elegy,' Odysseus to Telemachus,' 'Folk Tune' from *Collected Poems of Joseph Brodsky.*

Suggested Reading:

1. Robert S. Haller, Trans. & Ed., *Literary Criticism of Dante Alighieri* (Lincoln: University of Nebraska Press, 1973).
2. Michael Caesar, *Dante: The Critical Heritage*, Routledge, 1995, pp 288, 383, 412, 631.
3. Peter S. Hawkins and Rachel Jacoff, ed., *The Poet's Dante: Twentieth-Century Responses,* New York: Farrar, 2001.
4. Brooks, Jeffrey, "Readers and Reading at the End of the Tsarist Era," from *Literature and Society in Imperial Russia, 1800-1914,* ed. William Mills Todd III, Stanford: Stanford University Press, 1978.
5. Brooks, Jeffrey, *When Russia Learned to Read: Literacy and Popular Literature, 1861-1917,* Princeton: Princeton University Press, 1985.
6. Brucker, A., *A Literary History of Russia,* ed. Ellis H. Minns, trans. H. Havelock, London: T. Fisher Unwin, 1908.
7. Troyat, Henri, *Gorky*, trans. Lowell Blaw, New York: Crown Publishers, 1989.
8. Levin, Dan, *Stormy Petrel: The Life and Work of Maxim Gorky,* New York: Appleton-Century, 1965, ed.

PAPER-IV (Opt. iv) SHAKESPEARE-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to **Social and Literary aspects of the age of Shakespeare**: The English Renaissance. The Reformation, The Rise of Regular Comedy and Tragedy. Neo-classical Comedy, Shakespearean Comedy, Shakespearean Tragedy, the Sonnets, Globe Theatre, Shakespearean Stage, the Groundlings.

The following texts for detailed study:

1. Sonnet nos.: 12 – "When I do count the clock that tells the time"
   19 – "Devouring Time, blunt thou the lion's paw"
   29 – "When in Disgrace with Fortune and men's eyes"
   32 – "If thou survive my well-contented day"
   46 – "Mine eye and heart are at a mortal War"
   55 --"Nor marble nor the gilded monuments"
   65 – "Since brass, nor stone, nor earth, nor boundless sea"
   71 – "No longer mourn for me when I am dead"
   147 – "My love is a fever, longing still"
   152 – "In loving thee thou knowest I am forsworn"

2. *Henry IV- Part I*
3. *Twelfth Night*
4. *The Taming of The Shrew*

Suggested Readings:

1. B.Ford (Ed.) : *The Age of Shakespeare* (London, Penguin, 1982).

2. H.B.Charlton : *Shakespearean Comedy* (London, Methuen & Co. Ltd., 1959).

3. L.C. Knights : *An Approach to Hamlet* (London: Chatto and Windus, 1960).

4. G.W. Knights : *The Imperial Theme* (London: Methuen & Co. Ltd., 1951).

5. Alfred Harbage (ed.) : *20th Century Views on Shakespearean Tragedies,* Englewood Cliffs, Prentice Hall, 1964.

6. Robert Speight : *Nature in Shakespearean Tragedies,* London : Hollis & Carter, 1955.

7. Sigurd Burckhardt : *Shakespearean Meanings,* New Jersey, Princeton Uni. Press, 1968.

8. S.S. Schoenbaum : *Shakespeare; A Documentary Life.*

9. Ania Loomba & Martin Orkin : *Post-colonial Shakespeare*- London and New York, Routledge, 1998.

10. Stanley Wells : *An Oxford Anthology of Shakespeare.* New York, Oxford University Press, 1989.

11. Gabriel Egan : *Shakespeare,* Edinburgh, Edinburgh University Press, 2007.

12. Sukanta Chaudhuri (ed.) : *Shakespeare without English,* Delhi, Pearson Education, 2006.

13. Thomas Cartelli and Katherine Rowe : *New Wave Shakespeare on Screen* (U.K. : Polity Press, 2007)

14. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England* (Berkeley: Univ. of California Press, 1988).

15. Cristina Malcolmson : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare* (Ithaca: Cornell University Press, 1991)

16. Alexander Legatt : *Shakespeare's Comedy of Love* (London: Methuen, 1974)

17. Jean, Howard and Phyllis Rackin : *Engendering a Nation: A Feminist Account of Shakespeare's English Histories* (London, Routledge, 1997).

18. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two* (Buckingham: Open University Press, 1995).

19. Kenneth Muir : *Shakespeare's Sonnets* (U.K. George Allen & Unwin Ltd., 1982).

20. Richard B. Sewall : *The Vision of Tragedy* (New Haven : Yale University Press, 1959).

SEMESTER-IV

PAPER-I: LITERARY THEORY-II

Objectives:

The paper, which is a continuation of Paper I of semester III, introduces students to some more aspects of Literary Theory. In this semester, students will be introduced to new theorists in the field of New Historicism Postcolonial Theory and Feminist Criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Stephen Greenblatt "Counterhistory and Anecdote" in Catherine Gallagher and Stephen Greenblatt *Practicing New Historicism* (London: University of Chicago Press, 2000): 49-74.

Unit 2. The following three excerpts from The Postcolonial Studies Reader edited by Ashcroft, Griffiths, and Tiffin (Routledge 1995)

i) Gayatri Spivak: "Can the Subaltern Speak", 24-28.
ii) Homi Bhabha: "Signs Taken for Wonders", 29-35.
iii) Edward Said: "Orientalism", 87-91.

Unit 3. Elaine Showalter: "Feminist Literary Criticism in the Wilderness" in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 331-53.

Unit 4. Aijaz Ahmed: "The Politics of Literary Postcoloniality" in Padmini Mongia ed. *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996) 276-93. and New York: Longman, 1988), 399-410.

Suggested Readings:

1. Pam Morris, *Literature and Feminism* (Oxford: Blackwell, 1993).
2. Jorge Larrain: *Ideology and Cultural Identity* (Oxford: Polity, 1994).
3. Moyra Haslett: *Marxist Literary and Cultural Theories* (London: Macmillan, 2000).
4. Arthur Asa Berger: *Cultural Criticism: A Primer of Key Concepts* (California: Sage, 1995).
5. Stevi Jackson and Jackie Jones, *Contemporary Feminist Theories* (New York: New York University Press, 1998).
6. Virginia Woolf, *A Room of One's Own* (London: Harcourt, 1929).
7. Roman De La Campa, E. Ann Kaplan and Michael Sprinker, eds., *Late Imperial Culture* (London and New York: Verso).
8. Neil Lazarus, ed., *The Cambridge Companion to Postcolonial Literary Studies* (Cambridge: Cambridge University Press, 2004).
9. Dirlik, Arif, 'The Postcolonial Aura: Third World Capitalism in the Age of Global Capitalism,' *Critical Inquiry*, Vol. 20 (1994): 328-56.
10. Bill Ashcroft and Pal Ahluwalia, *Edward Said: The Paradox of Identity* (London and New York: Routledge, 1999).

PAPER II: INDIAN WRITING IN TRANSLATION

Objectives:

There is a wealth of literature in various regional languages of India, which of late has been translated into English. The main purpose of the course would be to introduce students to the native varieties of literature. The range of texts, taken from different language-literatures, is enormous, foreclosing the possibilities of forging any essentialized idea of India. The Indianness of Indian writings, more often mapped through Indian English writings, stands questioned and challenged by the emerging corpus of the translated works. Each language-literature has its own specific forms, genres and literary styles to which students would be exposed through a select list of texts/ books.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Novel

Fakir Mohan Senapati, *Six Acres and a Third*, Trans. Rabi Shankar Mishra, Satya P. Mohanty, Jatindra K. Nayak, et al. (Delhi: Penguin, 2006).

Unit II: Short Stories

1. Prem Chand, "The Shroud," Available in *The World of Premchand: Selected Short Stories*, Trans. & Ed. by David Rubin (Delhi: Oxford University Press, 2001): 233-40.

2. Mahasweta Devi, "Draupadi," Available in *Breast Storie*s. Trans. Gayatri Chakravorty Spivak (Calcutta: Seagull, 1997): 19-38.

3. Urmil Pawar. "A Childhood Tale." Trans. Jahnavi Phalkey and Keerti Ramchandra, *Translating Caste,* Ed. Tapan Basu (Delhi: Katha, 2002): 43-55.

Unit III: Drama

Girish Karnad, *Tughlaq* (Delhi: Oxford University Press, 1975).

Unit IV:Poetry

1. Faiz Ahmad Faiz. "Don't Ask Me for that Love Again", "A Prison Evening", "We who were Executed" and "In Search of Vanished Blood." Available in *The Rebel Silhouette*. 3rd Impression. Trans. Agha Shahid Ali (Delhi: Oxford University Press, 2005).

2. Namdeo Dhasal. "Hunger", "I Slew the Seven Horses of the Chariot of the Sun" translated by Dilip Chitre (Delhi:Narayana 2007), from the collection *Namdeo Dhasal: Poet of the Underworld.*

3. Suryakant Tripathi 'Nirala'. "Remembering Saroj." Available in *A Season on the Earth: Selected Poems of Nirala*. Trans. & Ed. David Rubin (Delhi: Oxford University Press, 2003).

Suggested Readings:

1. Meenakshi Mukherjee, *Realism and Reality: The Novel and Society in India*, Delhi: Oxford University Press, 1994 rpt.

2. Sheldon I. Pollock (ed.), *Literary Cultures in History: Reconstructions from South Asia*, California: Univ. of California Press, 2003.

3. K. Satchidanandan, *Indian Literature: Positions and Propositions*, Delhi: Pencraft, 1999.

4. Sisir Kumar Das (ed.), *History of Indian Literature*, Vol I-X, Delhi: Sahitya Akademi, 1995.

5. Priya Joshi, *In Another Country*, Delhi: Oxford University Press, 2002.

6. K.M. George, *Comparative Indian Literature*, Delhi: Macmillan, 1984.

7. Sujit Mukherjee, *A Dictionary of Indian Literature: Beginnings-1850* (Hyderabad: Orient Blackswan, 1999).

8. G.N.Devy, *After Amnesia* (Hyderabad: Orient Longman, 1992).

-------, of Many Heroes (Hyderabad: Orient Longman, 1998).

9. Tutun Mukherjee, ed., *Girish Karnad's Plays: Performance and Critical Perspectives*, Delhi: Pencraft, 2008.

10. Ananda Lal, ed., *Theaters of India: A Concise Companion*, Delhi: Oxford University Press, 2009.

PAPER-III (opt. i): POSTCOLONIAL STUDIES-II

Objectives: The course concerns New Literatures in English which will introduce students to some major issues and problems common to such literatures. After centuries of colonial rule and British Literature, we find that decolonization has shown that there are simply too many writers and writing, new nations and old hegemonies to be scrutinized. This course attempts to familiarize students to literatures of the 'new' world – African, Asian, Caribbean and Canadian – which have remained outside discourse making for a long time. The course is introduced as a revisionary discipline which primarily focuses on interrogating the Western canon.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Chinua Achebe, *Things Fall Apart* (Oxford: Heinemann, 1958).

Unit-2 Salman Rushdie, *Midnight's Children* (New York: Avon, 1980).

Unit-3 Jean Rhys, *Wide Sargasso Sea* (London: Penguin, 1968).

Unit-4 Margaret Atwood, *Surfacing* (Canada: McClelland and Stewart, 1972).

Suggested Readings :

1. Margaret Atwood, *Survival: A Thematic Guide to Canadian Literature* (Southport: McClelland and Stewart, 1972).
2. Bill Ashcroft, et al, eds., *The Post-Colonial Studies Reader* (London and New York: Routledge, 2006).
3. Diana Brydon and Helen Tiffin, *Decolonising Fictions* (Sydney: Dangaroo, 1993).
4. Homi Bhabha, *Nation and Narration* (London and New York: Routledge, 1990).
5. Bill Ashcroft, Gareth Griffiths and Helen Tiffin, *Key Concepts in Post-Colonial Studies* (London and New York: Routledge, 1998).
6. Timonthy Brennan, *Salman Rushdie and the Third World* (New York: St. Martin's Press, 1989).
7. Thomas F. Staley, *Jean Rhys: A Critical Study* (London: Palgrave Macmillan, 1979).
8. Pierrette Frickey, *Critical Perspectives on Jean Rhys* (Washington DC: Three Continents Press, 1990).
9. Bruce King, ed., *The New National and Postcolonial Literatures: An Introduction* (Oxford: Clarendon, 1996).
10. G. D. Killam, *The Novels of Chinua Achebe*. Studies in African Literature Series. (London: Heinemann, 1978).

PAPER-III (opt. ii): LINGUISTICS-II

Objectives:

This course is aimed at an understanding of the development of the English language and structure of modern English. Many of the Latin-based rules and prescriptive approaches to English language have given way to a descriptive account of the language at all levels. The course is expected to familiarize students with the developments in the English language up to the present.

Pattern of examination

One compulsory question of 20 marks comprising of short notes from all units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question each with internal choice will be set from each of the four units.

Content:

Unit 1. Levels of Linguistics Analysis II: The study of grammar-traditional (the latinate fallacy, the semantic fallacy) structural (IC analysis, NP and VP, phrase structure rules, practice of the diagram for analyzing sentence structure) transformational generative grammar with reference to Chomsky's distinction between deep and surface structures, kernel sentences and transformations and familiarity with some important transformational rules, lexical restrictions.

Unit 2. The Grammar of English – Basic sentence patterns in English, Description of the structure of Noun Phrase, Verb Phrase, Adjective and Adverbial Phrase in English (with practical exercises). Some types of complex sentences. Sentence connection and cohesion in English.

Unit 3. Levels of Linguistic Analysis III: Theories of semantics, Synonymy hyponymy, entailment, polysemy, ambiguity (with examples from the semantics of English).

Unit 4. Diachronic changes in English- sound and spelling change and the influence of other languages on English. The development of English grammars and dictionaries. English as global language-varieties of English in Britain and around the world with special reference to Indian English.

Suggested Readings:

1. Palmer, F., *Grammar* (Cambridge , Cambridge Univ. Press, 1983).
2. Lyons, J., *Chomsky* (London, Fontana Modern Classics, 1983).
3. Krishnaswamy and Verma, *Modern Linguistics* (Delhi, OUP,1988).
4. Biber, Conrad and Leech, *A Student Grammar of Spoken and Written English*, London, Longman, 2002.
5. Leech, Svartvik, Quirk and Greenbaum, *A Comprehensive Grammar of English Language* (London, Longman, 1988).
6. Knowles, J., *A Cultural History of English Language (* London , Longman, 1998).
7. Bauer, Laurie, *Watching English Language* (London, Longman, 1994).
8. Crystal, D., *English as a Global Language (*Cambridge, CUP,1997)
9. Kachru, B., *The Indianization of English* (New Delhi, OUP, 1988)
10. Wells, J., *Accents of English , Vol.I The British Isles and Vol. II- Beyond the British Isles* (Cambridge, Cambridge Univ. Press, 1990)

PAPER III (opt. iii): AMERICAN LITERATURE-II

Objectives: The course explores the genres of poetry and drama focusing on major American texts that have left their mark on the culture. The works selected engage with class structures, racial, ethnic, sexual and gender relations as well as questions of national identity. They represent major developments in style, content, focus and language of American Poetry and Drama.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Texts for Study:

Unit I:	Walt Whitman	:	"Song of Myself" "Crossing Brooklyn Ferry" "Out of the Cradle Endlessly Rocking" "Song of the Open Road" (Norton)
Unit II:	Robert Frost	:	"Birches" "Mending Wall" "After Apple Picking" "Stopping by Woods on a Snowy Evening" "Design" "Directive" (Norton)
Unit III:	Eugene O'Neill	:	*The Hairy Ape* (East West Press)
Unit IV:	Arthur Miller	:	*The Crucible* (Allied Press)

Suggested Reading:

Jay Grossman, ed., *Breaking Bounds: Whitman and Cultural Studies (*Oxford University Press,1996).

Robert K. Martin, *The Continuing Presence of Walt Whitman* (Iowa Press, 1992).

Kenneth Price, ed., *Walt Whitman* (Cambridge University Press, 1996).

Philip L. Gerber, *Robert Frost* (Twayne,1982).

Jesse Zuba, *Robert Frost,* (Chelsea House, 2003).

Normand Berlin, *Eugene O'Neill* (Grove Press,1982).

James J. Martine, ed., *The Plays of O'Neill: A New Perspective* (GK Hall, 1985).

James J. Martine, *The Crucible: Politics, Property and Pretense (*Twayne, 1993).

John H. Ferres, ed., *Twentieth Century Interpretations of The Crucible,* 1972.

C.W.E. Bigsby, *A Critical Introduction to Twentieth Century Drama* (Cambridge University Press, 1982).

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY II

Objective:

This paper is an extension of the paper on Indian Literary Criticism introduced in Semester III. Here the focus would be on Twentieth Century texts and Literary Interventions. Right from the days of the Freedom Movement, Indian Literary Criticism has increasingly taken political turns and twists. At one level attempts were made to de-colonize literary theory by way of excavating schools and theories of the ancient past, at another level, the endeavour was to search for critical alternatives from within the historical past. While in the previous paper, the thrust is on well-evolved and taxonomically rich critical frames of *rasa, dhavni* and *vakrokti.* Here the emphasis is on theoretical debate about the possibilities of multiple critical authorizes that exist in Indian Culture.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

The paper consists of four Units:

Unit I:

1. Anand Coomaraswamy, "*The Dance of Shiva"* (Delhi: Munshi Ram Manohar Lal Publishers, 1999 ed).

2. Tagore, "*The True Nature of Literature",* Rabindranath Tagore: *Selected Writings on Literature and Language*, edited by Sisir Kumar Das and Sukanta Chaudhuri (Delhi: Oxford, 2001).

Unit II :

1. G.N.Devy, "After Amnesia", *After Amnesia:Tradition and Change in Indian Literary Criticism* (Hyderabad, Orient Longman,1992)
2. Bhalchandra Nemade, "*Nativism in Literature"*, Translated and Edited by Arvind Dixit and Makarand Paranjape, Nativism: Essays in Criticism *(*Delhi Sahitya Akademi).

Unit III :

1. Bhikhu Parekh, "Indianisation of Autobiography", *Colonialism, Tradition and Reform* (Delhi, Saga, 1989).
2. G.D. Devy, "Two Paradigms of History", *Of Many Heroes* (Hyderabad: Orient Longman, 1998).

Unit IV:

1. Saran Kumar Limbale, "Dalit Literature and Aesthetics" in *Towards an Aesthetics of Dalit Literature* (Delhi: Orient Blackswan, 2004).
2. Kancha Ilaiah, "Towards the Dalitization of Nation" in Wages of Freedom: Fifty Years of Indian Nation-State, edited by Partha Chatterjee (Delhi: OUP, 1998).

Suggested Readings:

Rajan, P.K., *Indian Literary Criticism in English*; *Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London; OUP, 1992).

Devi, G.N., *In Another Tongue* (Delhi, MacMillan, 1993).

_____ and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).

Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banrasidas, 1993).

Sethuraman, V.Ed., *Indian Aesthetics: An Introduction* (Delhi, MacMillan, 1992).

Rao, Raja, *The Meaning of India* (Delhi: Vision Books, 1996).

Dangle Arjun Ed., *Poisoned Bread* (Hyderabad, Orient Longman, 1992).

Mukherjee, Meenakshi, *The Perishable Empire* (Delhi, OUP, 2000)

_____, Reality and Realism (Delhi, OUP, 1983)

Suder Rajan, Rajeswari, Ed., *The Lie of the Land* (Delhi, OUP, 1991).

Gauri, Viswanathan, *Masks of Conquest* (New York, Colombia University Press, 1989)

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literature* (Mysore; Dhavanyaloka, 1984).

Rayan, Krishna, *The Burning Bush* (Delhi; B.R. Publishing, 1989).

_____.*Text and Sub-Text* (Delhi; Arnold Heinemann, 1989).

_____. *Sahitya; A Theory* (Delhi; Arnold Heinemann, 1991).

Paranjape, Makarand, Ed., *Nativism; Essays in Criticism* (Delhi; Sahitya Akademi, 1998).

Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi; OUP, 1991).

Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ. 1964).

Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasi Das, 1971, 4th ed.).

PAPER-IV (Opt. i) CULTURAL STUDIES-II

Objectives:

The multiple nuances of culture would be unfolded through a conceptual study of its emerging configurations. The paper enables us to appreciate the processes of culture as it enters new mediums of films, computer, internet and cybernetics. There would be a pedagogical shift as the students would be taught the prescribed essays through every-day examples. The pedagogic practice would nudge the students towards interdisciplinary studies viewing other subject areas in relation to literature, and for that matter, any text.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Mass Culture

Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction", from *Illuminations*, London: Fontana Press, 1992 ed. 211-244.

Unit II: Culture Industry

1. Adorno, "Free Time", from *The Culture Industry: Selected Essays on Mass Culture*, Ed. J.M.Bernstein, London and New York: Routledge, 1991, 187-197.

2. Habermas, "From a Culture-Debating to a Culture-Consuming Public", in *The Structural Transformation of the Public Sphere*, Polity Press, 1989, 159-175.

Unit III: Virtual Culture

1. Jean Baudrillard, "Simulacra and Simulations", in *Jean Baudrillard: Selected Writings*, Ed. Mark Poster, Polity, 2001, 169-187.

2. Paul Virilio, "Foreword" to *Desert Screen: War at the Speed of Light*, London: Contiuum, 2005, 1-16.

Unit IV: Popular Culture/ Subculture

1. Stuart Hall, "Notes on Deconstructing 'the Popular', from *Popular Culture: A Reader*, Ed. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 64-71.

2. Dick Hebdige, Subculture, from *Popular Culture: A Reader*, Ed. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 355-371.

Suggested Readings:

1. Aijaz Ahmad, *In Theory* (Verso, London 1992).

2. Amartya Sen, *The Argumentative Indian* (Penguin, 2005).

3. Antonio Gramsci, *Selections from the Prison Notebooks* (Lawrence & Wishart, London, 1971).

4. Cornel West, *Beyond Eurocentrism and Multiculturalism* , 2 volumes (Common Courage Press, Monroe, Maine 1993).

5. E.P. Thompson, *The Making of the English Working Class* (Penguin, London 1978).

6. Glenn Jordan and Chris Weedon, *Cultural Politics* (Blackwell, Oxford 1995).

7. Jill Forbes and Michael Kelly Eds., *French Cultural Studies* (Oxford University Press, Oxford 1995).

8. Lawrence Grossberg, Cary Nelson and Paula Treicher Eds., *Cultural Studies* (Routledge, London 1992).

9. Louis Althusser, *Reading Capital* (New Left Books, London, 1970).

10. Manuel Alvarado and John Thompson Eds., *The Media Reader* (BFI, London 1990) .

11. Stanley Aronowitz, Barbara Matinson and Michael Menser Eds., *Techno-Science and Cyber-Culture* (Routledge, London, 1996).

PAPER-IV (Opt. ii): APPLIED LINGUISTICS-II

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Contents:

Unit 1: Approaches and methods in language teaching – Direct, Grammar Translation, Audio-lingual, Structural-situational and Communicative Language Teaching, The Communicative Approach, Brief Historical overview of English Language Teaching with reference to the Problematic of Teaching English in India (Pre and Post Independence, Language Policies, Multilingualism, mother tongue influence, choice of a model for teaching).

Unit 2: Approaches to teaching Skills: LSRW, vocabulary and grammar at primary, secondary and tertiary/ advanced levels. Practical exercises in each of the skill areas. Making a language syllabus: needs analysis. Teaching of English for specific purposes.

Unit 3: Testing Language - Principles, relationship between teaching and testing, wash back effect, purposes and types of tests. Evaluation: Criteria, grading and determining levels of proficiency.

Unit 4: Materials for teaching : Principles of selection, gradation and presentation; course books, work books, teachers' manuals, grammar, dictionaries. The use of a language corpus. The role of literature in language teaching.

Suggested Readings:

1. Tickoo, M.L., *Teaching and Learning English* (Orient Black Swan, New Delhi, 2003).

2. Howatt, A.P.R. and Widdowson, H.G., *A History of English Language Teaching* (Oxford University Press, China, 2004).

3. Larsen-Freeman, Diane*, Techniques and Principles in Language Teaching* (Oxford University Press, New Delhi, 2008).

4. Richards, Jack C. and Rodgers, Theodore S., *Approaches and Methods in Language Teaching* (Cambridge University Press, U.K., 2005)

5. Krishnaswamy, N. and Krishnaswamy, L., *The Story of English in India* (Foundation Books, N. Delhi, 2006)

6. Hughes, Arthur, *Testing for Language Teachers* (Cambridge University Press, U.K., 2003).

7. Norrish, J**.,** *Language Learners and their Errors* (MacMillan Hong Kong, 1983)**.**

8. Agnihotri and Khanna, *Problematising English in India* (New Delhi, Sage, 1995).

PAPER IV (Opt. iii): WORLD DRAMA IN TRANSLATION

Objectives:

The paper provides an interesting study of world drama with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping them develop ways of approaching, understanding and interpreting classics. This paper complements the other paper on *World Poetry/Novel in Translation.*

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 : Sophocles: *King Oedipus* (Penguin)

Unit-2 : Henrik Ibsen: *Ghosts* (Pearson)

Unit-3 : Chekhov: *The Cherry Orchard* (Penguin)

Unit-4 : Pirandello: *Six Characters in Search of an Author* (Collected Works of Pirandello)

Suggested Readings:

1. John Gassner : *Masters of World Drama* (Dover Publications 1954, U.S.A.)

2. Barrett H. Clark & George Freedle : *A History of Modern Drama* (Appleton Century – Crofts, Inc. New York, 1947).

3. Travis Bogard and W.I. Oliver,eds. : *Modern Drama - Essays in Criticism* (OUP, London, 1965).

4. M.C. Bradbrook : *Ibsen: The Norwegian, a Revaluation, (* Chatto and Windus, London, 1966).

5. Rolf Fjelde, ed. : *Ibsen:A Collection of Critical Essays* (Englewood Cliffs, Prentice Hall, 1965).

6. David Magarshack : *Chekhov : The Dramatist* (Pub., 1952).

7. Beyerley Hahn : *Chekhov: A Study of the Major Stories & Plays* (Cambridge Univ. Press, London, 1977).

8. Arnold P. Hinch : *The Absurd* (Methuen London, 1969).

9. James Vinson : *Contemporary Dramatists* (St. James Press, London, 1973).

PAPER-IV (Opt. iv) SHAKESPEARE-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to Social and Literary aspects of the Age of Shakespeare:

History Plays, the Sonnet, tragi-comedies, Shakespeare's longer poems, First Folio, Holinshed's Chronicles, the Fool in Shakespeare's plays, Shakespeare's contemporaries, the University Wits, Marlowe's Mighty Line.

Texts for detailed study:

1. *Hamlet*

2. *Antony and Cleopatra*

3. *Macbeth*

4. *The Winter's Tale*

Suggested Readings:

1. B.Ford (Ed.) : *The Age of Shakespeare,* London, Penguin Books Ltd., 1982
2. A.C.Bradley : *Shakespearean Tragedy,* Macmillian and Co. Limited, London 1950.
3. G.W.Knights : *The Shakespearean's Tempest,* London, Methuen & Co. Ltd. 1953.
4. Harry Levin : *The Question of Hamlet,* London, Oxford Uni. Press, 1978.
5. Alfred Harbage (ed) : *20th Century Views on Shakespearean Tragedies,* Englewood Cliffs, Prentice Hall, 1964.
6. Mathew N. Prose : *The Heroic Image in five Shakespearean Tragedies* (New Jersey: Princeton Univ. Press, 1965).
7. Arthur Sewell : *Character and Society in Shakespeare,* Oxford at the Clarendon Press, 1951.
8. Robert Speight : *Nature in Shakespearean Tragedies,* London, Hollis & Carter, 1955.
9. Sigurd Burckhardt : *Shakespearean Meanings* – New Jersey, Princeton Uni. Press, 1968.
10. Ania Loomba : *Post-colonial Shakespeare,* London and New York, Routledge, 1998.
11. Stanley Wells and Lena Cower Orlin : *Shakespeare: An Oxford Guide.*
12. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England* (Berkeley: Univ. of California Press, 1988).
13. Cristina Malcolmson : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare* (Ithaca: Cornell University Press, 1991).
14. Alexander Legatt : *Shakespeare's Comedy of Love* (London: Methuen, 1974).
15. Jean Howard and Phyllis : *Engendering a Nation: A Feminist Account of Shakespeare's Rackin English Histories* (London, Routledge, 1997).
16. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two* (Buckingham; Open University Press, 1995).

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(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. HISTORY (SEMESTER SYSTEM) EXAMINATIONS, 2016-2017

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES OF HISTORY (Semester System)

(Effective from the First Year Admission for the Academic Session 2007-2008)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %

   (ii) Continuous Assessment : 20 %

   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.

   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test and one snap test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
		Total :	**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall not be **compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 % i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTE :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) In the case of Postgraduate Course in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce (falling under the purview of Academic Council), where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

OUTLINE, AND CONTENTS OF THE SYLLABUS OF M.A. HISTORY FOR I & III SEMESTER (NOVEMBER/DECEMBER 2016 EXAM.) AND II & IVTH (APRIL/MAY 2017 EXAM.)

M.A. Programme at the Department of History
Courses and Syllabus (Semester System)

The M.A. programme at the Department of History is spread over two years divided into four semesters. This programme is governed by the Calendar of the Panjab University and various rules and regulations put in place by the university from time to time.

A candidate has to earn a minimum of 96 credits, with at least 78 credits being through courses offered in the Department of History. In the first semester a candidate has to earn at least 24 credits from courses in the Department of History.

Note: The Syllabus for Semester I to IV below is applicable to candidates admitted in July 2016. Papers kept in abeyance will not be offered in Sessions till further orders.

Course Outline

Semester I		Code	Title of paper	Credits
	Paper I:	HIS 111	The Punjab (mid-fifteenth to seventeenth centuries)	6 credits
	Paper II	HIS 231	Ancient India: An Overview	6 credits
	Paper III	HIS 221	Medieval India: Political Processes	6 credits
	Paper IV	HIS 211	Modern India: Political Processes	6 credits
Semester II		**Code**	**Title of paper**	**Credits**
	Group-I Paper I:	HIS 125	Punjab in the Eighteenth Century (Compulsory)	6 credits
	Group-II Paper II: Any one of the following	HIS 713	Opt. (i) Agrarian Economy of Ancient India	6 credits
		HIS 712	Opt. (ii) Agrarian Economy of Medieval India	6 credits
		HIS 711	Opt. (iii) Agrarian Economy of Modern India	6 credits
		HIS 721	Opt. (iv) Industry, Trade & Urbanization in Medieval India	6 credits
		HIS 730	Opt. (v) Industry and Trade in Modern India	6 credits
		HIS 733	Opt. (vi) Urbanization in Modern India(In abeyance till further orders)	6 credits
	Group-III Paper III: Any one of the following	HIS 831	Opt. (i) Modern World (Mid 15th - 19th Century)	6 credits
		HIS 844	Opt. (ii) China & Japan (1840-1950)	6 credits
		HIS 821	Opt. (iii) History of Canada(In abeyance till further orders)	6 credits
		HIS 811	Opt. (iv) American Imperialism in the Nineteenth and Twentieth Centuries(In abeyance till further orders)	6 credits
	Group-IV Paper IV: Any one of the following	HIS 812	Opt. (i) USA (1820-1973)	6 credits
		HIS 832	Opt. (ii) World in the Twentieth Century	6 credits

Semester III shall consist of the following four papers		**Code**	**Title of paper**	**Credits**
	Paper I:	HIS 123	Punjab in the Nineteenth Century(Compulsory)	6 credits
	Papers II, III & IV : Any three Paper from the List	HIS 212	Opt. (i) National Movement in India 1858-1947	6 credits
		HIS 213	Opt. (ii) Constitutional Development in Modern India, 1773-1947	6 credits
		HIS 214	Opt. (iii) British Policy and Princely States **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 263	Opt. (iv) Contemporary India 1947-1992	6 credits
		HIS 431	Opt. (v) Evolution of Ancient Societies	6 credits
		HIS 421	Opt. (vi) Feudal Society in Western Europe	6 credits
		HIS 411	Opt. (vii) History of Capitalism	6 credits
		HIS 412	Opt. (viii) Rise and Growth of Colonialism in India	6 credits
		HIS 601	Opt. (ix) Gender Relations in Modern India	6 credits
		HIS 604	Opt. (x) Sacred Centres in Indian Civilization	6 credits
		HIS 603	Opt. (xi) Science, Technology & Medicine in Colonial India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 602	Opt (xii) History of Secularism in Modern India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 432	Opt (xiii) Cultural History of Ancient India	6 credits
		HIS 424	Opt (xiv) Medieval Indian Art and Monuments	6 credits

Semester IV		**Code**	**Title of paper**	**Credits**
	Paper I	HIS 126	Punjab in the Twentieth Century (Compulsory)	6 credits
	Paper II : Any one of the following :	HIS 911	Opt.(i) History and Historiography	6 credits
		HIS 912	Opt.(ii) History and Historical Method	6 credits
Papers III & IV Any two paper from the list :				
		HIS 721	Opt. (i) Industry, Trade & Urbanization in Medieval India	6 credits
		HIS 730	Opt. (ii) Industry and Trade in Modern India	6 credits
		HIS 731	Opt. (iii) Working Class Movements in Modern India	6 credits
		HIS 733	Opt. (iv) Urbanization in Modern India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 455	Opt. (v) Diaspora in Colonial India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 467	Opt. (vi) Peasant Movements in Modern India	6 credits
		HIS 471	Opt. (vii) Dalit Movements in Modern India	6 credits
		HIS 462	Opt. (viii) History of Caste and Caste Politics in Modern India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 438	Opt. (ix) Buddhism in India	6 credits
		HIS 426	Opt. (x) Islamic Traditions of Medieval India	6 credits
		HIS 428	Opt. (xi) Religious Developments in Medieval India	6 credits
		HIS 418	Opt. (xii) Socio-Religious Reform Movements in Modern India	6 credits

Semester I

Semester I		Code	Title of paper	Credits
	Paper I:	HIS 111	The Punjab (mid-fifteenth to seventeenth centuries)	6 credits
	Paper II	HIS 231	Ancient India: An Overview	6 credits
	Paper III	HIS 221	Medieval India: Political Processes	6 credits
	Paper IV	HIS 211	Modern India: Political Processes	6 credits

PAPER I : THE PUNJAB (MID-FIFTEENTH TO SEVENTEENTH CENTURIES)

COURSE CODE: HIS 111

Objective: This paper aims to examine the politico-administrative, social and religious milieu of Guru Nanak in order to understand his response to the contemporary environment and the foundation of Sikh movement. It also deals with growth of Sikh movement under his first four successors, the phase of confrontation with Mughal state and its culmination under Guru Gobind Singh. It also attempts to discuss the administrative structure, agrarian and urban economy of the Punjab under the Mughals.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms

Hadith, sangat, pangat, hukm, raza, manji system, Udasis, Udasi sect, Jogis, Minas, Dhirmalias, Ram Rais, miri-piri, shahadat, janam sakhi, Bhai Gurdas varan, literary significance of Adi Granth, Zafarnama, Akal Takht, Babar bani, Guru Nanak's concept of universal brotherhood

Unit I

Political developments and administrative structure under the Afghans; systems of religious beliefs and practices; response of Guru Nanak to contemporary religious systems ; response of Guru Nanak to contemporary social order; response of Guru Nanak to contemporary politics.

Unit II

New Institutions established by Guru Nanak; development of Sikh Panth with special reference to Guruship and Gurdwara; making of the Sikh scripture and its structure; Janam Sakhis as sources of history; **emergence of different sects within the Sikh movement**

Unit III

Martyrdoms of Sikh Gurus; politicization of the Sikh Community under Guru Hargobind;; the new baptism and its implications; historical significance of the Zafarnama and Guru Gobind Singh's relations with Bahadur Shah.

Unit IV

Provincial administration under the Mughals; major crops and commercialization of agriculture; economic base of urban centres; land and riverine transport.

Essential Readings

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, New Delhi: Munshiram Manoharlal, 1979 (2nd ed.)

Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).

Harbans Singh, *Guru Tegh Bahadur*, New Delhi: Manohar, 1994.

Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).

Grewal, J.S., *Guru Nanak in History*, Chandigarh: Panjab University, 1979.

Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: Oxford University Press, 1968.

Singh, Chetan, *Region and Empire: Punjab in the Seventeenth Century*, New Delhi: Manohar, 1991.

Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).

Reference Readings

Bhai Jodh Singh (tr.), *Varan Bhai Gurdas,* 3 vols., Patiala: Vision and Vantura, 1998.

Grewal, J.S., 'Cleavage in the Panth,' *Sikh Ideology, Polity and Social Order*, Manohar, 2007, pp: 78-85

Mcleod, W.H., *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999.

Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

Talib, Gurbachan Singh (tr.), *Sri Guru Granth Sahib*, Patiala: Publication Bureau, Punjabi University, IV Vols., 1999.

PAPER II: Ancient India: An Overview

COURSE CODE: HIS 231

Objective: Building upon a prior basic knowledge of the history of ancient India, this course introduces the student to the major currents in the study of that history. It focusses on the the political processes that underlay the structures of the state and society but also takes the student into the details of social and cultural history.

Pedagogy: Lectures and tutorial discussions are the basic tools used in this course.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(v) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(vi) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(vii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(viii) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mehargarh; Gopati; Bhupati; Vidatha; Janapada; Mahajanapada; Gana-Sangha; Gahapati; Karshapana (Punch marked coins); Ashoka's Dhamma; Saptanga (seven limb's of the state /rajya); Stri-dhana; Silk-route; Sreni; Bali/Bhaga/ Shulka; Vishti; Prasasti; Mahayana; Hinayana; Puranic Hinduism; Agraharas; Devadana; Vanigramma; Samanta; Varnasamkara (Inter-mixing of Varnas); Tirthankara/Arhat; Uttarapatha; Dakshinapatha; Concept of urban decay; Kali Age Crisis; Mandapika; Nagaram.

Unit I:

From Stone Age to Vedic Age: Technological and Cultural Developments in Palaeolithic, Mesolithic and Neolithic Ages; Proto-Historic Age (Theories of the Origin of Indus Valley Civilization, Urban Centres, Society and Economy, Decline- various Debates); Vedic Age (Aryan Homeland debate, Polity, Society and Economy).

Unit II:

Age of Mahajanapadas: Emergence of the State Systems in the Ganga Valley (Monarchy and Ganga-Sanghas); Society (emergence of Buddhism and Jainism) and Economy (Second Urbanization, Trade and Crafts, Formation of Peasant Economy); The Mauryan Empire (Nature of Mauryan Empire, Ashoka's Dhamma, Causes of the Maurya's Decline).

Unit III:

Post Mauryan Period: Non-Indigenous Polities (Indo-Greeks, Shakas, and Kushanas) and Indigenous Polities (Satavahanas, Gana-Sanghas and Sangam Chiefships); Post Mauryan Economy (Indo-Roman Trade, Agriculture and Irrigation, Artisans, Traders and Guilds, Coinage); Indian Feudalism Debate.

Unit IV:

Early Medieval Polity: Regional State Formations (Formation of New Ruling Lineages and Processes of Political Legitimization); Early Medieval Society (Land-Grants, Peasantization of Tribes, and Proliferation of Castes; Untouchability).

Essential Readings

1. Basham, A. L., *The Wonder That Was India (A survey of the history and culture of the Indian sub-continent before the coming of the Muslims)*, Picador an imprint of Pan Macmillan Ltd: London, 2004 reprint.
2. Chattopadhyaya, B. D., *Making of Early Medieval India*, Oxford University Press: New Delhi, second edition 2012.
3. Chakravarti, Ranabir, *Exploring Early India up to c. 1300*, Macmillan: New Delhi, 2013 revised edition.
4. Chauhan, G. C., *Origin and Growth of Feudalism in Early India (from the Mauryas to 650 AD),* Delhi: Munshiram Manoharlal, 2004.

5. Majumdar, R. C. and Altekar, A. S. (ed.) *The Vākāṭka-Gupta Age*. Bhartiya Itihas Parishad: Banaras and Motilal Banarsidass: New Delhi, reprint 1954.
6. Sharma, R. S., *Early Medieval Indian Society: A Study in Feudalization*, Orient Longman India: Calcutta, 2001.
   Sharma, R.S., *Aspects of Political Ideas & Institutions in Ancient India*, Motilal Banarsidass: New Delhi, 1996.
7. Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Pearson Longman: Delhi, 2009.
8. Thapar, Romila, *Asoka and the Decline of the Mauryas*, Oxford University Press: New Delhi, 1997.

REFERENCE READINGS

1. Ali, Daud, *Courtly Culture and Political Life in Early Medieval India*, Cambridge University Press: New Delhi, 2006.

2. Chakravarti, Uma, *The Social Dimensions of Early Buddhism*, Munshiram Manoharlal Publishers: Delhi, 1996.
3. Chauhan, G. C., *Early Indian Feudal Society and Its Culture*, Munshiram Manoharlal: Delhi, 2015.
4. Chakravarti, Ranabir, 'The Mauryas' and 'The Kushanas,' in *History of Ancient India, Vol. IV, Political History and Administration (c. 200 BC- 750 AD), (From the end of the Mauryan Rule to the Beginning of the Dominance of Regional Dynasties),* (ed.) Dilip K. Chakrabarti and M. Lal, Vivekananda International Foundation and Aryan Books International: New Delhi, pp. 35-68, 231-275, 2014.
5. Champakalakshmi, R., *Trade, Ideology and Urbanization: South India 300 BC to AD 1300*, Oxford University Press: New Delhi, reprint 2010.
6. Habib, Irfan and Jha, Vivekanand, *A People's History of India: 5- Mauryan India*. Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, 2011 reprint.
7. Habib, Irfan and Thakur, Vijay Kumar, *A People's History of India: 3- The Vedic Age.* Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, 2011 reprint.
8. Habib, Irfan, *A People's History of India 1- Prehistory*, Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, 2006.
9. Habib, Irfan, *A People's History of India 2- The Indus Civilization*, Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, 2002.
10. Habib, Irfan, *A People's History of India 6- Post-Mauryan India 200 BC- AD 300: A Political and Economic History*, Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, 2012.
11. Gurukkal, Rajan, *Social Formations of Early South India*, Oxford University Press: New Delhi, 2012.
12. Kulke, H., 'Fragmentation and Segmentation Versus Integration ? Reflections on the Concepts of Indian Feudalism and the Segmentary State in Indian History', *Studies in History*, IV, 2, pp. 237-264, Old Series, 1982.
13. Kulke, H., *Kings and Cults: State Formation and Legitimation in India and Southeast Asia.* Manohar: Delhi, 1993.
14. Lahiri, Nayanjot (ed.), *The Decline and Fall of the Indus Civilization*, Permanent Black: New Delhi, 2000.
15. Maity, S. K., *The Imperial Gupta and Their Times*, Motilal Banarsidass: Delhi, 1975.
16. Mukhia, H. (eds.), *The Feudalism Debate*, Manohar: New Delhi, 2000.
17. Nath, Vijay, *Purāṇas and Acculturation: A Historical-Anthropological Perspective*. Munshiram Manoharlal: New Delhi, 2001.
18. Ratnagar, Shereen, *Enquiries into the Political Organization of Harappan Society*, Ravish: Pune, 1991.
19. Sahu, B. P., *The Changing Gaze: Regions and the Constructions of Early India*, Oxford University Press: New Delhi, 2013.
20. Sahu, B. P., (ed.) *Iron and Social Change in Early India*, Oxford University Press: New Delhi, 2006.
21. Sharma, R. S., *Sudras in Ancient India: A Survey of the Position of the Lower Orders Down to circa AD 500.* Motilal Banarsidass: Delhi, 1958.

22. Sharma, R. S., *Material Culture and Social Formations in Ancient India*, Macmillan: New Delhi, 1983, second edition 2007.
23. Shrimali, K. M., *The Age of Iron and the Religious Revolution, c.700-c.350 BC*. (A People's History of India 4), Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, reprint 2011.
24. Thapar, Romila, *Cultural Past: Essays in Early Indian History*, Oxford University Press: New Delhi, reprint 2010.
25. Trautmann, Thomas R., (ed.) *The Aryan Debate*, Oxford University Press: New Delhi, reprint 2011.

PAPER III: MEDIEVAL INDIA: POLITICAL PROCESSES

COURSE CODE: HIS 221

Objective: This paper seeks to examine the major political developments in the Indian subcontinent during a span of nearly five centuries i.e. from the thirteenth to the seventeenth century. It aims at an in-depth analysis of the processes of state formation in the Delhi Sultanate and Mughal Empire. It lays emphasis on (1) the long-term strategies that enabled these two states to establish political control and (2) to explore the functioning of political institutions and the articulation of political ideologies. It pays equal attention to the changing composition of the ruling class as well as the response of the powerful local elements.

Pedagogy: In the teaching of this paper, effort is made to gradually build on the foundation of knowledge laid at the undergraduate level. Discussions on various sub-themes need to be interspersed with critical references to the contemporary sources as well as divergent historiographical approaches.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Nasir Amir ul Mominin; Dar al-harb; Zimmi; *Shaik ul-Islam; wasaya; mawali ; bandagan i khass/ Amir-i-Chahalgani; Tazik;* Balban's Theory of Kingship; *hukm i masahat bafa i biswa; Sera i Adl; Charai* and *Gharai* ; Amir i sada; *Taccavi (Taqavi);Diwan i khairat, Kharaj i Jizya; Patta* and *Qabuliyat; farr i izidi;* Mahzar; *Sulh i kul; Tauhid i- iIlahi;Ibadat Khana,* Mansab; Ain i-Dahsala; *watan jagir;* Satnamis; Jats' revolt in Doab; *chauth*; *sardeshmukhi,* Satnami Revolt

Unit I

Consequences of the Ghorian invasions; political consolidation under Iltutmish; problems and policies of Balban; nobility during the thirteenth century; agrarian reforms of Alauddin Khalji; mechanism of his market regulations and their impact.

Unit II

Political and religious orientation of Muhammad bin Tughluq; rationale, implementation and consequences of his projects; administrative reforms of Firuz Shah Tughluq; nobility under the Tughluqs; the Afghan concept of monarchy; the land revenue system of Sher Shah Sur.

Unit III

Abul Fazl's concept of monarchy; Akbar's relations with the Rajput chiefs; the policy of religious tolerance; evolution of the mansab system; salient features of the jagir system; development of the land revenue system.

Unit IV

Mughal expansion in the Deccan during the first half of the seventeenth century; popular uprisings in northern India during the reign of Aurangzeb; his breach with Mewar and Marwar; his military conflict with the Marathas; his conquest of Bijapur and Golconda.

Essential Readings

Ali, M. Athar, *The Mughal Nobility under Aurangzeb*, New Delhi: Oxford University Press, Revised Edition, 1997.

Chandra, Satish, *Medieval India: From Sultanat to the Mughals,* 2 vols., New Delhi: Har-Anand Publications, (Reprint), 2003.

Habib, Mohammad & Khaliq Ahmad Nizami, (eds.), *A Comprehensive History of India, Vol.V: The Delhi Sultanate 1206-1526*, New Delhi: Peoples Publishing House, (Reprint), 1993.

Jackson, Peter, *The Delhi Sultanate: A Political and Military History*, Cambridge: Cambridge University Press, 1999.

Nigam, S.B.P., *Nobility under the Sultans of Delhi*, New Delhi: Munshiram Manoharlal, 1971.

Nizami, Khaliq Ahmad, *Religion and Politics in India during the Thirteenth Century,* New Delhi: Oxford University Press, New Edition, 2002.

Qureshi, Ishtiaq Husain, *The Administration of the Mughal Empire,* Patna: Janaki Prakashan, (reprint), 1979.

Richards, John F., *The Mughal Empire,* New Delhi: Foundation Books/ Cambridge University Press, 1993.

Singh, Surinder, *Madh Kalin Bharat Da Itihas,* Patiala: Punjabi University, 1997.

Tripathi, R.P., *Some Aspects of Muslim Administration*, Allahabad: Central Book Depot. (reprint), 1976.

Reference Readings

Alam, Muzaffar and Sanjay Subrahmanyam, (eds.), *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Ali, M. Athar, *Mughal India: Studies in Polity, Ideas, Society and Culture*, New Delhi: Oxford University Press, 2006.

Chandra, Satish, *Mughal Religious Policies, the Rajputs and the Deccan,* New Delhi: Vikas Publishing House, 1993.

Chandra, Satish, *Essays on Medieval Indian History,* New Delhi: Oxford University Press, 2003.

Hasan, S. Nurul, *Religion, State and Society in Medieval India*, Edited and Introduced by Satish Chandra, New Delhi: Oxford University Press, 2005.

Husain, Agha Mahdi, *The Rise and Fall of Muhammad bin Tughluq,* Delhi: Idarah-I-Adabiyat-I-Delli, (Reprint), 1972.

Jauhri, R.C., *Firoz Tughluq (1351-1388 AD)*, Jalandhar: ABS Publications, (Reprint), 1990.

Lal, Kishori Saran, *History of the Khaljis*, New Delhi: Munshiram Manoharlal, (Revised Edition), 1980.

Sarkar, Jadunath, *A Short History of Aurangzeb 1618-1707*, New Delhi: Orient Longman, (First OL Edition), 1979.

Siddiqui, Iqtidar Husain, *Some Aspects of Afghan Despotism in India*, Aligarh: Three Men Publications, 1969.

Srivastava, A.L., *Akbar the Great, 3 Vols.,* Agra: Shiva Lal Agarvala & Company, (Second Edition), 1972.

Streusand, Douglas E., *The Formation of the Mughal Empire,* New Delhi: Oxford University Press, 1989.

PAPER IV: MODERN INDIA: POLITICAL PROCESSES

COURSE CODE: HIS 211

Objective: The paper is a study of British colonialism in which India can be studied as a classic case of British Imperialism. The historical context has been undertaken with a holistic interpretation of different approaches and interpretations such as Colonialist, Nationalist, Marxist, Subaltern, and Gandhian. The construction of the colonial state in north and south India followed constitutional changes which further enhanced to establish British control. Indian nationalism responded starting with peasant and tribal revolts, mutiny of 1857, emergence of Indian National Congress, militant movements, Subhas Bose, feminist movements.

Pedagogy: Methodology adopted would include lectures, discussions, review, seminars, and power point presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Colonialist historiography; Nationalist historiography; Marxist historiography; Subalterns; Gandhian historiography; Ahimsa; Civilizing mission; Separate Electorates; Dyarchy; Provincial Autonomy; Board of Control; Court of Directors; Bicameral Legislature; Montagu Declaration; Santhals; Mundas; Moplahs; Lathiyals; First War of Indian Independence; Military Uprising; Safety valve theory; Moderates; Extremists; Revolutionaries; Militant Nationalism; Indan National Army; Swaraj; Non-Cooperation; Civil Disobedience; Quit India.

Unit I

Historiography on the modern Indian state – approaches and interpretation: Colonialist, Nationalist, Marxist, Subaltern, Gandhian.

Unit II

Construction of colonial state policy and programme of expansion in north and south India: Oudh; Punjab; Bengal; Marathas; Deccan; Mysore.

Unit III

Constitutional developments: legislation from 1773 – 1935; Regulating Act, Pitts India Act of 1784; The Indian Councils Act 1909; The Government of India Act 1919; The Government of India Act 1935 and Racial attitude.

Unit IV

Colonial state and Indian response; peasant and tribal movements, nature of the revolt of 1857; Emergence, programme and policies of Indian National Congress; militant movements; Subhas Chandra Bose and INA; women movements.

Essential Readings

Alavi, Seema (ed.), *The Eighteenth Century in India*, New Delhi: Oxford University Press, 2002.

Bayly, C.A., *Indian Society and the Making of the British Empire*, Cambridge, Cambridge University Press, reprint, 1990.

Bipan, Chandra, *Communalism in Modern India*, Vikas Publishers, Delhi, 1987.

Brown, Judith, *Gandhi's Rise to Power: Indian politics 1915-1922*, Cambridge: Cambridge University, Press, 1972.

Chandra, Bipan *et al.*, *India's Struggle for Independence, 1857-1947*, Delhi: Viking/Penguin Books, 1989.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India.* New Delhi: People's Publishing House, 1982 (reprint).

Guha, Ranajit, 'On some aspects of Historiography of Colonial India', in Ranajit Guha ed. *Subaltern Studies I,* Delhi: Oxford University Press, 1986.

Mishra, B.B., *Administrative History of India*, Oxford University Press, Delhi, 1983.

Nanda, B.R., *Making of a nation: India's Road to Independence*, Delhi: Harper-Collins, 1998.

Prasad, Bisheshwar, *Bondage and Freedom*, 2 vols. New Delhi: Rajesh Publishers, 1977.

Sarkar, Sumit, *Modern India, 1885-1947*, Delhi: Macmillan, 1983.

Sen, S.P. ed., *Historians and Historiography in Modern India*, Institute of Historical Studies, Calcutta, 1973.

Shashi, Joshi, *Struggle for Hegemony in India 1920-34*, vol. 1, New Delhi: Sage Publications, 1992.

Reference Readings:

Alam, Muzaffar, *Crisis of Empire in Mughal North India: Awadh and the Punjab, 1707-1748*, Delhi: Oxford University Press, 1986.

Banerjee, A.C., *Constitutional History of India*, Vol. II & III.

Bowring, B. Lenin, *Rulers of India: Haidar Ali and Tipu Sultan*, Bombay: Oxford University Press, 1968.

Brown Judith, *Modern India, The Origins of an Asian Democracy* 2nd ed., Delhi: Oxford University Press, 1994.

Grewal, J.S., *The Sikhs of the Punjab, New Cambridge History of India*, Hyderabad: Orient Longmans, 1991.

Guha, Ranajit, *Elementary Aspects of Peasant Insurgency in Colonial India*, Delhi: Oxford University Press, 1983.

Hasan, Mushirul, *Nationalism and Communal Politics in India*, New Delhi: Manohar, 1992.

J. Krishnamurty, *Women in Colonial India-Essays on Survival, Work & the State*, Oxford University Press, Delhi, 1989.

Josh, Bhagwan, *Struggle for Hegemony in India, 1920-47*, New Delhi: Sage, 1992.

Lee-Warner, W., *Native States of India*, Delhi: Tulsi, , 1979 (reprint).

Marshall, P.J., *Problems of Empire*, London: Unwin, 1968.

Marshall, P.J., *The Eighteenth Century in Indian History*, New Delhi: Oxford University Press, 2003.

Metcalf, Thomas, *Aftermath of Revolt*, Princeton: Princeton University Press, , 1964.

Mukherjee, R.K., *Rise and Fall of the East India Company*, Popular, Bombay, 1973.

Mukhopadhyaya, Subodh K., *Evolution of Historiography in Modern India*, 1900-1960, K.P. Bagchi, Calcutta, 1980.

Nair, Janaki, *Women and Law in Colonial India: a social history*, Kali for Women, New Delhi, 1996.

Nanda, B.R., *Mahatma Gandhi*, Delhi: Allied Publishers , 1968.

Partha, Chatterjee, *The Nation and its Fragments, Colonial and Post Colonial Histories*, New Delhi: Oxford University Press, reprint, 1994.

Sarkar, Sumit., *Swadeshi Movement in Bengal*, Delhi: People's Publishing House, 1973.

Sen, S.N., *Eighteen Fifty-Seven*, Delhi: Publications Division , 1957.

Sen, Surendranath., *Administrative System of the Marathas*, Calcutta: K.K. Baghi & Co., 1925.

Stokes, Eric, *Peasants and the Raj: Studies in Agrarian Society and Peasant Rebellion in Colonial India*, Delhi: Vikas, 1978.

Stokes, Eric, *The English Utilitarians and India*, Delhi: Oxford University Press, 1959.

Talbot, Ian, *Punjab and the Raj, 1849-1947*, Delhi: Manohar, 1988.

Tomlinson, B.R., *The Political Economy of the Raj, 1914-1947*, London: Macmillan.

Semester II

Semester II		Code	Title of paper	Credits
	Group-I Paper I:	HIS 125	Punjab in the Eighteenth Century (Compulsory)	6 credits
	Group-II Paper II: Any one of the following	HIS 713	Opt. (i) Agrarian Economy of Ancient India	6 credits
		HIS 712	Opt. (ii) Agrarian Economy of Medieval India	6 credits
		HIS 711	Opt. (iii) Agrarian Economy of Modern India	6 credits
		HIS 721	Opt. (iv) Industry, Trade & Urbanization in Medieval India	6 credits
		HIS 730	Opt. (v) Industry and Trade in Modern India	6 credits
		HIS 733	Opt. (vi) Urbanization in Modern India(**In abeyance till further orders)**	6 credits
	Group-III Paper III: Any one of the following	HIS 831	Opt. (i) Modern World (Mid 15th - 19th Century)	6 credits
		HIS 844	Opt. (ii) China & Japan (1840-1950)	6 credits
		HIS 821	Opt. (iii) History of Canada(**In abeyance till further orders)**	6 credits
		HIS 811	Opt. (iv) American Imperialism in the Nineteenth and Twentieth Centuries (**In abeyance till further orders)**	6 credits
	Group-IV Paper IV: Any one of the following	HIS 812	Opt. (i) USA (1820-1973)	6 credits
		HIS 832	Opt. (ii) World in the Twentieth Century	6 credits

PAPER I : PUNJAB IN THE EIGHTEENTH CENTURY (COMPULSORY)

COURSE CODE: HIS 125

Objective: This paper challenges the notion of the eighteenth century as a 'dark period' in the Indian history and brings out the political process by which over a hundred new centres of power and not only the 'twelve misaldars' came up in the Punjab after the decline of the Mughal Empire. It deals with all the new rulers, Sikh as well as non-Sikh, in terms of their political organization, administrative arrangements, patterns of state patronage and the main features of urban as well as agrarian economy.

Pedagogy: The classroom teaching is supplemented by familiarizing the students with the maps of the area besides distribution of outlines for greater effectiveness. The evaluation is based on continuous internal assessment which comprises of unit tests, presentation of seminars, classroom participation and attendance.
Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks).The duration of written examination will be 3 hours. In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Gobind Shahi coin; Nanak Shahi coin; Dal Khalsa; Gurmatta; Rakhi; Misl; Batai; Hundi; Kankut; Katra; Suzerainty; Kardar; Pargana; Madad-i-ma'ash; Banjaras; Vassal; Inam jagir; Watan jagir; Bunga; Intermediary zamindar; Paibaqi; Ijaradar; Absentee Jagirdar; Khalsa; Coin of Banda Bahadur; Mukhlispur; Third Battle of Panipat; Tirini; Haq- Buha; Ghiana.

Unit I

Establishment of independent rule under Banda Singh Bahadur and basis of his support; measures of the Mughal State; Impact of the decline of the Mughal Empire on administrative functioning and finances of the Punjab; struggle for power the Mughals, the Afghans and the Marathas; Ahmad Shah Abdali and the Sikhs.

Unit II

Emergence of the new powers in the second half of the eighteenth century: the Rajput chieftains in the hills; the Muslim rulers in the plains; the Sikhs as rulers; role of Gurmatta, Dal Khalsa and Rakhi System in the political process; re-construction of 'eighteenth century as Misaldari period'.

Unit III

Civil and military administration under the new rulers; conception of suzerainty and coinage; Agrarian conditions and land revenue System.

Unit IV

Features of Jagirdari System; working and recepients of dharmarth grants; development of urban centres; trade and manufacture; eighteenth Century debate and the Punjab.

Essential Readings

Alam Muzaffar, *Crisis of Empire in Mughal North India*: *Awadh and the Punjab, 1707-48*, New Delhi: Oxford University Press, 1986.

Chetan Singh, *Region and Empire: Punjab in the Seventeenth Century*, Delhi: Oxford University Press, 1991.

Ganda Singh, *Baba Banda Singh Bahadur*, Sirhind: Sarhind Historical Research Society 1976.

Ganda Singh, *Ahmad Shah Durrani*, Bombay: Asia Publishing House, 1959.

Sachdeva, Veena, *Polity and Economy of the Punjab during the Late Eighteenth Century*, New Delhi: Manohar,1993.

Sachdeva, Veena, *Atharvi Shtabdi ke Antim Charan Mein Punjab Ki Rajnaitik Tatha Arth Vyavastha,* Chandigarh: Unistar, 2014 (Hindi & Punjabi Medium)

Sachdeva, Veena, *Mughal Raj de Patan Uprant da Punjab* (Atharvi Sadi) Chandigarh: Unistar, 2015 (Punjabi Medium)

Reference Readings

Banga, Indu, ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1900*, New Delhi: Manohar, 1997.

Bhagat Singh, *Sikh Polity in the Eighteenth and Nineteenth Centuries*, New Delhi: Oriental Publishers & Distributors, 1978.

Grewal, J.S., *The Sikhs of the Punjab: The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999.

Grewal, Reeta and Sheena Pall, eds., *Pre Colonial and Colonial Punjab*, Delhi: Manohar, 2005 (essays by Irfan Habib, Chetan Singh and Shireen Moosvi).

Gupta, Hari Ram, *History of the Sikh Confederacies (1708-1769),* New Delhi: Munshiram Manoharlal, 1978 (3rd edn.).

Sharma, T.R., *Maharaja Ranjit Singh: Ruler and Warrior*, Chandigarh: Panjab University, 2005.

Sinha, N.K., *Rise of the Sikh Power*, Calcutta: A. Mukherjee & Co., 1973.

Surinder Singh, *Sikh Coinage – Symbol of Sikh Sovereignty,* New Delhi: Manohar, 2004.

PAPER II: OPT. (I) AGRARIAN ECONOMY OF ANCIENT INDIA

COURSE CODE: HIS 713

Objective: This course enlightens the students about the beginning of food production and agriculture system with special reference to bronze and iron ages. The role of agriculture and other allied trades to generate the state revenue. It also acquaints the students with the duties of the state administration to bestow all peasants and other vocational with various facilities and endowments to boost up the production and revenue of the state. It throws light on the origin and evolution of Levy system in ancient India, its determination and mode of collection.

Pedagogy: The students are taught with the help of slides, photographs, topographical maps, political maps etc. In addition to it lectures, workshops, seminars and field trips are arranged to enhance the articulating skill of the students and to understand the subject in a better way.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mehargarh; Gramani/gramika; kutumbika; gahapatis; Das-karmakars; Bali/Bhaga; Paranaya; Sali/Vrihi; Rajuka/Agronomoi; Sitadhyakasha; Sudarshana lake; Vishti; Agrahara; *Deva-agrahara/devagrahara*; *devadana; vaishyagrahara; Kara-shasana*; Samanta; *Bhumicchidra-nyaya*; urban decay; Kosambi's two stage theory of feudalism; Araghatta/ghatiyantra; Kupa/vapi; Damaras; Kali age crisis; tamra-patra/tamra-patta/tamra-sasana; hatta; mandapika; pentha; nagaram; Kaivartas; Kalabharas.

Unit I: Evolution of Agriculture: Neolithic Age (Beginning of Agriculture and Domestication of Animals in India); Bronze Age (Indus Valley Civilization, Agricultural Techniques, Crop Patterns, and Irrigation); Iron Age (Iron Technology and Surplus Production Debate, Cultivation Techniques and Processes, Crop Patterns and Irrigation).

Unit II: State and Land Systems: Land Rights (Communal Rights, Individual Rights, and Royal Rights); State and Private Property (Demarcation of Land, and Boundary Disputes); Land Revenue and Tax Relief Provisions in Literary and Epigraphical Sources.

Unit III: Peasantry: Peasant hierarchy in Early Indian Society; Political and Social Relationships between Peasantry, Donors, and Donees; Peasant Unrests (Causes and Nature of Peasant Unrests; Kaivarta and Kalabhara Uprisings).

Unit IV: Land Grants and Expansion of Agriculture: A Study of *agrahara*, *devadana*, *vaishyagrahara* and *kara-shasana*; Study of the *Krishiparasara* (Agricultural processes and Techniques); Early Medieval Agrarian Changes and Their Theoretical Explanations (Indian Feudalism, and Integrative-Processual Model).

Essential Readings

1. Chakravarti, Ranabir, *Exploring Early India up to c. 1300*, Macmillan: New Delhi, 2013 revised edition.
2. Chattopadhyaya, B. D., *The Making of Early Medieval India*, New Delhi: Oxford University Press, revised edition 2012.
3. Chauhan, G. C., *Economic History of Early Medieval Northern India*, Delhi: Atlantic Publishers, 2003.
4. Gopal, L., *Aspects of the History of Agriculture in Ancient India*, Allahabad: University of Allahabad, 1987.
5. Jha, D. N., *Revenue System in Post-Mauryan and Gupta Times*, Calcutta: Punthi Pustak, 1967.
6. Kulke, H., 'Fragmentation and Segmentation Versus Integration? Reflections on the Concepts of Indian Feudalism and the Segmentary State in Indian History', in *Studies in History*, Vol. 4, No. 2, pp. 237-264, Old Series, 1982.
7. Sahu, B. P., (ed.) *Land System and Rural Society in Early India*, New Delhi: Manohar, 1997.
8. Sharma, R. S., *Early Medieval Indian Society: A Study in Feudalization*, Calcutta: Orient Longman India, 2001.
9. Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Pearson Longman: Delhi, 2009.
10. Sircar, D. C., *Studies in the Political and Administrative Systems in Ancient and Medieval India,* New Delhi: Motilal Banarsidass, 1974.
11. Thakur, V. K., and Aounshaman, Ashok, (eds.), *Peasant in Indian History- I*, Patna: Society for Peasant Studies and Janaki Publishers, 1996.

Reference Readings

1. Chakravarti, Ranabir, 'Agricultural Technology in Early Medieval India (c. AD 500-1300)', in *The Medieval History Journal*, Vol. 11, No. 2, pp. 229-258, 2008.
2. Chakravarti, Ranabir, 'Interacting with Hydraulic Resources: Early Indian Experience', in Amiya Dev (ed.) *Science, Literature and Aesthetics- Vol. 15, Part-3*. (HSPCIC) New Delhi: Munshiram Manoharlal, pp. 343-369, 2009.
3. Chattopadhyaya, B. D. (ed.), *Essays in Ancient Indian Economic History*, New Delhi: Munshiram Manoharlal, 1987.
4. Chattopadhyaya, B. D., *Aspects of Rural Settlements and Rural Society in Early Medieval India*, Calcutta: K.P. Bagchi, 1990.
5. Chauhan, G. C., *Origin and Growth of Feudalism in Early India (from the Mauryas to 650 AD),* Delhi: Munshiram Manoharlal, 2004.
6. Chauhan, G. C., *Early Indian Feudal Society and Its Culture*, Delhi: Munshiram Manoharlal, 2015.
7. Ghosh, Suchandra, 'Understanding Boundary Representations in the Copper-Plate Charters of Early Kamarupa', in *Indian Historical Review*, Vol. 41, No. 2, pp. 207-222, 2014.
8. Gopal, L., *The Economic Life of Northern India*, Delhi: Motilal Banarsidass, 1965.
9. Gopal, L., 'Agriculture', in *History of Technology in India- Vol. I: From Antiquity to c. 1200 AD*, (ed.) A. K. Bag, Indian National Science Academy: New Delhi, pp. 391-436, 1997.
10. Gurukkal, Rajan, *Social Formations of Early South India*, New Delhi: Oxford University Press, 2012.
11. Habib, Irfan, *A People's History of India 1- Prehistory*, Aligarh: Aligarh Historians Society and New Delhi: Tulika Books, 2006.
12. Habib, Irfan, *A People's History of India 2- The Indus Civilization*, Aligarh Historians Society: Aligarh and Tulika Books: New Delhi, 2002.
13. Maity, S. K., *Economic Life in Northern India in the Gupta Period, A.D. 300-550*, Delhi: Motilal Banarsidass, 1970.
14. Mandal, Krishna Kumar, 'Note: Forms of Peasant Protest in the "Jatakas",' in *Social Scientists*, Vol. 35, No. 5/6, , pp. 39-46, 2007.
15. Mukhia, H., (ed.) *The Feudalism Debate*, New Delhi: Manohar, 2000.
16. Mozumdar, G. P., and Banerji, S. C., ed. & tr., *Krisi-Parasara,* Kolkata: The Asiatic Society, reprint 2001 (or Any other suitable translation).
17. Prakash, Om., *Early Indian Land Grants and State Economy*, Allahabad: Excellence Publishers, 1988.
18. Sahu, B. P., (ed.) *Iron and Social Change in Early India*, New Delhi: Oxford University Press, 2006.
19. Sharma, R. S., *Material Culture and Social Formation in Ancient India*, Delhi: Macmillan, 1983.
20. Thapar, Romila, *History and Beyond*, New Delhi: Oxford University Press, 2010. (Particularly, *From Lineage to State*, and *Interpreting Early India*).

PAPER II OPT. (II) AGRARIAN ECONOMY OF MEDIEVAL INDIA

COURSE CODE: HIS 712

Objective: This paper aims at a multi-dimensional picture of the historical changes that occurred in the agrarian economy during the medieval period. For the sake of clarity and convenience, it is divided into two chronological phases, the Delhi Sultanate and Mughal Empire. It seeks to make an in-depth analysis of the social structure, with particular reference to the various classes of peasantry as well as the intermediaries. It pays adequate attention to the technological aspects of agriculture and irrigation, besides the land rights and agrarian revolts. It also examines the mechanism evolved by the state to extract the social surplus.

Pedagogy: Since it is assumed that the student is quite familiar with the political history of medieval India, it is possible to delve into advanced writings of historians like Irfan Habib and Satish Chandra. Changes in the agrarian economy are studied in relation to the social structure and state formation, with stress on interpreting evidence from contemporary documentation.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Village Aristocracy; *Khuts; Chaudhuri; Zayad* crop; *rabi* and *kharif; noria* and *saqiya;* Persian wheel; Khwaja; Kharaj'; *hukm i masahat bafa i biswa;* Iqta; *abwab;* Zamindar ; *jins i- kamil; sair* land; *malikana; Deh kharj; panch mukadamman; khudh ka'sht;* Karori experiment (1574-75); *nasq; kankut; jama* and *hasil;* Jagirdari crisis; *zamindar zortalab;*

Unit I

Structure of the rural society in the Delhi Sultanate; aristocracy, intermediaries and peasantry; methods of cultivation and types of crops; means of irrigation and water lifting devices; projects of agrarian expansion; prices of agricultural produce.

Unit II

Agrarian taxation in the Delhi sultanate; from tribute to a uniform land tax; magnitude of state share and methods of collection; changes in the system under successive rulers; salient features of the iqta system; stages in the evolution of the iqta system.

Unit III

Conditions of peasantry in Mughal India; stratification among the peasantry; the nature of agrarian property; structure of the village community; zamindars and nature of their income; genesis, composition and strength of the zamindars.

Unit IV

Assessment of land tax under the Mughals; magnitude of state share and mechanism of its collection; salient features of the jagirdari system; fiscal rights of jagirdars and management of jagirs; crisis in the jagirdari system; nature of the agrarian revolts.

Essential Readings

Farooqi, M.A., *The Economic Policy of the Sultans of Delhi*, New Delhi: Konark Publishers, 1991.

Habib, Irfan, *The Agrarian System of Mughal India*, New Delhi: Oxford University Press, 2nd Revised Edition, 1999.

Habib, Irfan, *Essays in Indian History: Towards A Marxist Perception*, New Delhi: Tulika, 1995.

Naqvi, H.K., *Agricultural, Industrial and Urban Dynamism under the Sultans of Delhi,* New Delhi: Munshiram Manoharlal, 1986.

Raychaudhuri, Tapan, & Irfan Habib, (Eds.), *The Cambridge Economic History of India, Vol.I*, Hyderabad: Orient Longman, (Reprint), 2004.

Reference Readings

Alam, Muzaffar & Sanjay Subrahmanyam (eds.), *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Chandra, Satish (Ed.), *Essays on Medieval Indian Economic History,* New Delhi: Munshiram Manoharlal, 1987.

Chandra, Satish, *Essays on Medieval Indian History*, New Delhi: Oxford University Press, 2003.

Grover, B.R., "Nature of Land Rights in Mughal India", *The Indian Economic and Social History Review,* Vol.I, 1963.

Habib, Irfan, "Technological Changes and Society: 13th and 14th Centuries", *Proceedings of the Indian History Congress*, Varanasi, 1969.

Habib, Irfan, "Economic History of the Delhi Sultanate: An Essay in Interpretation", *The Indian Historical Review,* Vol. IV, No.2, 1978.

Hasan, S. Nurul, *Thoughts on Agrarian Relations in Mughal India*, New Delhi: Peoples Publishing House, 1973.

Hasan, S. Nurul, *Religion, State and Society in Medieval India,* Edited and Introduced by Satish Chandra, New Delhi: Oxford University Press, 2005.

Moreland, W.H., *The Agrarian System of Moslem India*, New Delhi: Low Price Publications, (Reprint), 1990.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595: A Statistical Study*, New Delhi: Oxford University Press, 1986.

Singh, Surinder, "Dynamics of Statecraft in the Delhi Sultanate: A Reconstruction from the Letters of Ainul Mulk Mahru", *Proceedings of the Indian History Congress,* 61st Session, Calcutta, 2001.

Subrahmanyan, Sanjay (Ed.), *Money and the Market in India 1100-1700*, New Delhi: Oxford University Press, 1998.

PAPER II OPT. (III) AGRARIAN ECONOMY OF MODERN INDIA

COURSE CODE: HIS 711

Objective: This course examines the impact of colonialism on India's agrarian economy in the nineteenth and early twentieth centuries.

Pedagogy: Class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Agrarian; Agrarian society; Ryotwari; Mahalwari; Permanent settlement of Bengal; Classical Theory of Rent; Jajmani system; rural indebtedness; commercialization of agriculture; canalization; colonization; ICAR; Central Banking Enquiry Committee; Royal Commission of Agriculture; Cooperative Movement; 'self sufficient'village economy; Agrarian relations; Famine Relief; Cash crops; Agricultural Labour; Taccavi Loan; Agricultural Technology;Punjab Land Alienation Act;Famine Relief Fund.

Unit I

Agrarian Context: Mid 18^{th} century background and British Agrarian Policy; Agrarian settlement – Permanent ; Ryotwari; Mahalwari, consequences of periodic settlements.

Unit II

Agricultural Trends: Changes in agriculture-North India; Eastern India; Western India; South India; Famine and the Peasantry; Commercialization of agriculture; Indebtedness.

Unit III

Agrarian Relations: Northern and Central India; Eastern India; Western India; South India.

Unit IV

Development of irrigation in Colonial times; Canalization and colonization of Punjab; Agrarian Production and Technology; Trade in Agricultural Produce; Agricultural Labour

Essential Readings

Ali, Imran, *The Punjab under Imperialism (1885-1947)*, Delhi: Oxford University Press, 1989.

Banerjee, Himadri, *Agrarian Society of the Punjab (1849-1901)*, New Delhi: Manohar, 1982.

Bagchi, A.K., *Private Investment in India, 1900-1939*, Cambridge: Cambridge University Press, 1972.

Bhatia, B.M., *Famines in India*

Fox, Richard G., *Lions of the Punjab: Culture in the Making*, Barkeley, 1990.

Gopal, S., *The permanent settlement in Bengal and its Result*, London: Allen and Unwin, 1949.

Ray, Chaudhary and Dharma Kumar(eds), *The Cambridge Economic History of India, 1757-1970, Vol.II*, Hyderabad: Cambridge University Press, 1984.

Singh, V.B. (ed.), *Economic History of India, 1857-1955,* Bombay: Allied Publications, 1965.

Reference Readings

Amin, Shahid, ' Agrarian Bases of Nationalist Agitations in India: An Historiographical Survey,' in D.A. Low, *The Indian National Congress*, Delhi, 1988.

B.B. Choudhuri, 'Trends in the Recent Studies in the Agrarian History of Colonial India' in T. Banerjee (ed.) *Indian Historical Research since Independence*, Calcutta, 1986.

Banerjee, Anil Chandra, *The Agrarian System of Bengal, Vol, 1793-1955,* New Delhi, 1990.

Desai, A.R., *Social Background of Indian Nationalism*, Bombay: Popular Prakashan, 1976.

Dhanagare, *Peasant Movement in India* 1920-1950, New Delhi,. 1989.

Hardiman, David, *Peasant Resistance in India* 1858-1914, Delhi 1992

Mukherjee, Mridula, *Colonializing Agriculture: The Myth of Punjab Excegtionalism*, New Delhi, Sage Publications, 2005

Kumar, Ravinder, *Western India in the Nineteenth Century*, London, 1968.

Mittal, S.K. and Kumar, *Baba Ram Chandra and Peasant Uprising in Oudh: 1920-1921, in Social Scientist*, 6, II, June 1978.

Rothermund, D., *Asian Trade and European Expansion in the Age of Mercantilism*, New Delhi: Manohar Publications, 1981.

Rothermund, D.,*Government Landlord and Peasant in India-Agrarian Relations under British Rule*, 1865-1935, Weisbaden, 1978.

Scott, James, *The Moral Economy of the Peasant Rebellion and Subsistence in Southeast Asia,* Yale, 1976.

Sen, Sunil, K., *Agrarian Relations in India, 1793-1947*, New Delhi: People's Publishing House, 1979.

OPT. (IV) INDUSTRY, TRADE & URBANIZATION IN MEDIEVAL INDIA

COURSE CODE: HIS 721

Objective: This paper focuses on the Urban Economy of the Medieval period and looks with detail at the Urban pattern, Trade and Industry, Administration of towns and Social Classes in towns. It aims to introduce the urban dimension to students of Medieval India to add to their basic understanding of the period.

Pedagogy: Students will be introduced to new readings on the theme and a familiarization with debates on several issues.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Urban centre; qasbah;temple urbanism; urbanization; dynastic towns; mohalla; katra; tripolia; qahwakhana; kotwal; mir-i-mohalla; pol; rach bharmar; talimguru; chikandoz; naqqash; baradari; karkhana; jital; ganj; ahl-i-saif; ahl-i-qalam; hakeem; hunarmardan; balda; urban revolution 13th century; hundi; asharfi; qadam sharif; nakhas; manzil

Unit I

Urban pattern in the early medieval period; urban revolution in the 13th century; urban development upto mid 18th century; types of urban centres; morphology of towns; administration of towns.

Unit II

Major industries – textiles, metal work,; forms of organization; technology and labour; profile of medieval craftsmen; state policy; case studies – Shahjahanabad, Agra, Surat.

Unit III

Major trade routes; organization of trade; items, volume and trade pattern; currency, credit and monetary system; markets; state control; case studies—Chief Trading Centres.

Unit IV

Urban classes; nobility; commercial and trading classes; professional classes; artisans and craftsmen; labouring classes and slaves; courtly and popular culture.

Essential Readings

Abul Khan Muhammad Farooque, *Roads and Communications in Mughal India*, Adab-I-Adabiyat-i-Delhi, Delhi, 1977.

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, Delhi, 1978.

Blake, Stephen, *Shahjahanbad*, Cambridge University Press, 1993.

Chattopadhyaya, B.D., *The Making of Early Medieval India*, Delhi: Oxford University Press, 1994.

Grewal, Reeta, 'Urbanization in Medieval India' in *The State & Society in Medieval India* (ed, J.S. Grewal), Delhi: 2005, Oxford University Press, PHISPC, 396-429.

Gupta, I.P., *Urban glimpses of Mughal India: Agra the Imperial Capital,* Discovery, Delhi, 1986.

Habib, Irfan and Tapan Raychaudhari, eds., *The Cambridge Economic History of India*, Vol.I, Orient Longman, 1984.

Habib, Mohammad, 'Introduction' to *Elliot and Dawson's History of India*, Vol.II, Aligarh reprint, 1-102.

M.P. Singh, *Town, Market, Mint and Ports Towns in the Mughal Empire*, Delhi: Adam, 1985.

Naqvi, H.K., *Urban Centres & Industries in Upper India*, Bombay: Asia, 1968.

Naqvi, H.K., *Urbanization and Urban Centres under the Great Mughals*, Shimla: IIAS, 1971.

T.Chitchern, A.I., *India: Changing Economic Studies in 16th-18th Centuries*, Delhi: Manohar, 1998.

Vanina, Eugenia, *Urban Crafts and Craftsmen in Medieval India*, Delhi: Munshiram Manoharlal, 2004.

Reference Readings

Bayly, C.A., *Rulers, Townsmen and Razaars: North India Society in the Age of British Expansion*, Oxford University Press.

Chenoy, Shama Mitra, *Shahjahanabad: City of Delhi 1638-1857*, Delhi: Munshiram Manoharlal, 1998.

Mallick, B.S., *Money Banking & Trade in Mughal India*, Jaipur: Rawat, 1991.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595*, Delhi: Oxford University Press, 1987.

Moreland, W.H., *India at the death of Akbar: An Economic History*, Atma Ram & Sons, 1962.

Moreland, W.H., *From Akbar to Aurangzeb*, Delhi: Oriental Books, 1972 (reprint).

Naqvi, H.K., *Agriculture, Industry and Urban Dynamism under Sultans of Delhi*, Delhi: Munshiram Manoharlal, 1986.

Richards, J.F. ed., *The Imperial Monetary System of Mughal India*, Delhi: Oxford University Press, 1987.

Subramanyam S., ed., *Money and Markets in India*, Delhi: Oxford University Press, 1998.

OPT. (V) INDUSTRY AND TRADE IN MODERN INDIA

COURSE CODE: HIS 730

Objective: To examine the manner of early trade and industry in India and the evolution of private enterprise.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mercantilism; Imperialism; Nationalism; Balance of Trade;Exchange Banks;De-industrialization; East India Company; Subsidiary Alliance; Public Limited Company; Private Limited Company; Equality; Wootz; Free Trade; Chintz; Scientific temper; Swadeshi; Non –cooperation; Swarajya; Civil Disobedience; Dyarchy; Artisan; Trade Union; Factory Act.

Unit I

Trade and East India Company: Growth; Composition; value of Trade; Balance of Trade; Impact of Presidency banks and Exchange banks on trade.

Unit II

Foreign Trade 1857-1947: Reasons of Trade expansion, Composition; Export and Import; Balance of Trade; Direction; Impact of two world war on Indian foreign trade.

Unit III

The traditional artisanal industries: the de-industrialisation question; Nature of Modern industry under the colonial rule- major industries- Cotton, textile, Jute, Iron and Steel; reasons of industrial expansion; Industrial entrepreneurship.

Unit IV

Industrial Labour under the Colonial rule: Wages and Standard of Wing; Trade union movement; Labour Disputes, Labour Legislation.

Essential Books

Asiya, Siddique, *Trade and Finance in Colonial India*, *1750-1860*, Oxford: Oxford University Press, 1995

Bagchi, A.K., *Private Investment in India, 1900-1939*, Cambridge: Cambridge University Press, 1972.

Buchanan, D.H., *The Development of Capitalistic Enterprise in India,* New York: Macmillan, 1939.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India*, New Delhi: PPH, 1982 (reprint).

Godgil, D.R., *The Industrial Evolution of India in Recent Times, 1860-1939*, Bombay: Oxford University Press, 1975 (reprint).

Mehta, S.D. , *The Cotton Mills of India*, 1854-1954, Bombay: Textile Association, 1954.

Ray Chaudhary and Dharma Kumar (eds)., *The Cambridge Economic History of India, 1757-1970*, Vol.II, Hyderabad, 1984.

Reference Readings

Morris, M.D.*, The Emergence of an Industrial Labour Force in India,* Berkeley: University Press, 1965.

Chaudhari, K.N., *The Economic Development of India under the East India Company, 1814-1858*, Cambridge: Cambridge University Press, 1971.

Sen, S.K., *Studies in Industrial Policy and Development of India, 1858-1914,* Calcutta: Progressive Publishers, 1964.

Singh, V.B.(ed.)*, Economic History of India, 1857-1956*, Bombay: Asia, 1965

Thorner, D., 'De-industrialization in India' in his *Land and Labour in India*, Bombay: Asia, 1962.

Tirthankar, Roy, *Cloth and Commerce: textiles in colonial India*, New Delhi: Sage, 1996.

OPT. (VI) URBANIZATION IN MODERN INDIA**(IN ABEYANCE TILL FURTHER ORDERS)**

COURSE CODE: HIS 733

Objective: The course introduces a new perspective and analyses the process of urbanization in India from the mid 18th to the 20th century. The changing patterns of urban development in the regional context; new urban forms, new social and economic institutions, urban administration and urban problems are examined. Case studies allow for an indepth analysis of the urban dimensions adding to our understanding of history and the impact of urbanization on society.

Pedagogy: The key concepts and context are taken up in class discussion which incorporates urban studies from allied disciplines as well. Maps and diagrams form an integral part of study.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Urban Centre; Urbanization; metropolis; megalopolis; Urban pattern; Mofussil town; qasbah; new urban forms; hill station; cantonement; colony town; civil lines; Brides of the Sea; Black town; municipal committee; octroi; municipal corporation; notified area; civic amenities; pseudo urbanization; over urbanization; ribbon development; economic institutions in towns; slums; circulation of traffic; Leaf plan of Chandigarh; superblock; garden city; million city; maximum city.

Unit I

Urban patterns in the mid 18th century; urban development in the colonial period; factors influencing urbanization; types of urban centers; case study of New Delhi- phases of growth, town planning and society.

Unit II

New Urban Forms: the hill station; cantonement; civil lines; colony town; the port cities; case study- Bombay- growth, morphology and social structure.

Unit III

Early administration in towns; introduction of municipal government; municipal functions and working; resources; nature of urban government in colonial times.

Unit IV

Urbanization in post-independence India; regional patterns; classification of urban places; urban problems- slums, lack of civic amenities, haphazard growth; urbanization policy; case study- Chandigarh- plan, growth and social dimensions.

Essential Readings

1. Avasthi, A. *Municipal Administration in India,* Agra: Lakshmi Narayan, 1972.
2. Banga, Indu (ed.), *The City in Indian History*, Delhi: Manohar, 1994.
3. Banga, Indu (ed.), *Ports and their Hinterlands in India 1700-1950*, Delhi: Manohar, 1991.
4. Banga, Indu and J.S. Grewal (eds), *Studies in Urban History*, Amritsar: GNDU, 1983.
5. Bayly, C.A., *Rulers Townsmen and Bazaars*, Delhi: Oxford University Press, 1992.
6. Frykenberg, R.E. (ed), *Delhi Through the Ages,* Delhi: Oxford University Press, 1993.
7. Gadgil, D.R., *The Industrial Evolution of India in Recent Times*, Delhi: Oxford University Press, 1994.
8. Gupta, Narayani, *Delhi Between Two Empires*, Delhi: Oxford University Press, 1981.
9. Kalia, Ravi; *Chandigarh: The Making of an Indian City*, Delhi: Oxford University Press, 1988.
10. King, Anthony; *Colonial Urban Development*, London: Routledge & Kegan Paul, 1976.
11. Ramachandran, R., *Urbanization and Urban Systems in India*, Delhi: Oxford University Press, 1999 (8th impression, 1st published 1989).
12. Sharma, Kavita et al., *Chandigarh Lifescape: brief social history of a planned city,* Chandigarh: Chandigarh Administration, 1999.

Reference Readings:

1. Bose, Ashish, *India's Urbanization,* Delhi: Tata Mcgraw Hall, 1978.
2. Broeze, Frank (ed), *Brides of the Sea: Port Cities of Asia from the 16th to the 20th centuries*, New South Wales University Press, 1983.
3. D'Souza, Victor S., *Social Structure of a Planned City*: *Chandigarh*: Bombay: Orient Longman, 1968.
4. Didee, Jayamala and Rangaswamy (eds), *Urbanization Trends, Perspectives and Challenges*, Jaipur: Rawat Publications, 1993.
5. Heggade, Odeyar D., *Urban Development in India*, Delhi: Mohit, 1998
6. Prakasa Rao, V.L.S., *Urbanization in India: Spatial Dimensions,* Delhi: Concept, 1983.
7. Mitra, Asok, *Functional Classification of Indian Towns,* : Delhi: Institute of Economic Growth, 1973.
8. Sunderam, K.V., *Urban and Regional Planning in India*, Delhi: Vikas, 1977.

PAPERS III

PAPERS IV OPT. (I) MODERN WORLD (MID 15TH-19TH CENTURY)

COURSE CODE: HIS 831

Objectives: The paper focuses on the Modern phase of World history with particular reference to Modern ideas with emphasis on 'humanism', politics revolving around Europeon State System and colonial and economic developments are highlighted. The social and economic change which took place in Europe from 17th to 19th century effecting the transition from Feudalism to Capitalism and the rise of Nationalism in the 19th century are focused in the course.

Pedagogy: The Course is taught on the basis of lectures, seminars, discussions & tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Rennaisance; humanism; Reformation; Enlightenment;Socialism; utopian; soialists; commercial revolution; price revolution; Bloodless revolution; industrial revolution; scientific revolution; Liberty; Equality; constitutionalism;Nationalism; State building; feudalism; capitalism; parliamentary monarchy;liberalism; democracy;absolutism;

Unit I

Enlightenment and Modern Ideas: Renaissance, its social roots, humanism and its spread in Europe; Reformation, its origins, course and significance; Spread of Enlightenment, outside Europe; Rise of Socialist ideas (to Marx).

Unit II

Origins of Modern Politics: European States System- Spain, France and England; Colonial expansion and economic developments; early colonial empires of Portugals and Spain; shift of economic balance from Mediterranean to the Atlantic, commercial revolution and price revolution.

Unit III

Europe in the 17^{th} and 18^{th} Centuries: Economic, Social and Political dimensions-The English Revolution; Scientific Revolution; American Revolution and the constitution; French Revolution and its aftermath; European political patterns in the 18^{th} century- parliamentary monarchy and patterns of Absolutism in Europe.

Unit IV

Modern Nation State System: English Industrial Revolution, transition from feudalism to capitalism; Rise of Nationalism in the 19^{th} century; state building in Germany and Italy; liberalism and democracy in Britain; Disintegration of Empires through emergence of nationalities; 19^{th} century European revolutions.

Essential Readings

Clark, G., *Early Modern Europe*, Oxford University Press, 1964.

Clough, Shepherd, *Economic Development of the Western World*, London: Macraw Hill Book Company.

Davis, H.A., *Outline History of the World. Ed.5* 1968.

Gay, P and J. Goratty(eds) *Columbia History of the World,* New York: Harper Row, 1972.

Hale, J.R., *Renaissance Europe*, London: Collins Sons & Co.Ltd., 1971.

Hinsley, F.H.(eds) *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.

Hobsbawm, Eric., *Age of Empire 1875-1914*, Delhi: Viking, 1975.

Hobsbawm, Eric., *Age of Revolution 1789-1848,* Delhi: Viking, 1975.

Palmer, R.A., *A History of Modern World,* Macgraw, 1982.

Stavrianos, L.S., *The World Since 1500*, Delhi: Prentice Hall of India, 1965.

Stavrianos., L.S., *Readings in World History*, USA: Allen & Bacon, Inc., 1962.

Reference Readings

Lefebvre, G., *The French Revolution*

Rude, George, *Revolutionary Europe*, Collins, 1964.

Thompson, Davis, *Europe Since Napoleon,* Australia: Penguin, 1966.

PAPER III OPT. (II) CHINA AND JAPAN (1840-1950)

COURSE CODE: HIS 844

Objective: This courses aims to trace the various phases of history of China and Japan in modern times in context of their struggle against invasion of west. Also the present course seeks to evaluate the internal struggle as well as various efforts made within these nations which were directed towards the quest of their identities as important powers of the world.

Pedagogy: The said course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and term given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Opening of China; Cutting of the Chinese Melon; Open Door Policy; Co–hong; Taiping Rebellion; Battle of Concessions; Boxer Society; Li-Ito Convention; Campradores; Warlords; K.M.T.; League of Comman Alliance; C.C.P.; Communism; Communes; Modernization of Japan; Meiji Restoration; Opening of Japan; Perry expedition; Tonghaks' rebellion; Most Favoured Nation Treatment; Right of Extra Territoriality; Treaty of Shimonoseki; Treaty of Portsmouth; 21 Demands; Aims of Washington Conference; Five Power Naval Treaty; Zaibatsu; Japanese militarism; Manchurian Crisis; Fall of Japan.

Unit I

Opening of China w.s.r.t. the First Opium War and the Second Opium War; Taiping rebellion; Battle of Concessions (1895-98); Boxer movement (1900); the Impact of foreigners in China – disintegration of family centered society and the rise of new classes.

Unit II

Sun Yat Sen and the revolution of 1911; May 4th 1919 Movement; C.C.P.'s relations with K.M.T. till 1949 and triumph of communism; the inauguration of first Five Year Plan and land reforms; the role of communes.

Unit III

Opening of Japan w.s.r.t. Perry expedition and its significance; Meiji restoration and reforms for modernisation-end of feudalism, reorganization of central administration, reforms in education, economic progress, industrial and agricultural reforms, the new Japanese Constitution of 1889; the first Sino-Japanese War (1894-95); Anglo-Japanese Alliance (1902); Russo-Japanese War (1905).

Unit IV

Japan's role in World War I and presentation of 21 demands; Washington Conference (1921); Causes and growth of Japanese militarism; Japan from Manchurian Crisis to the Second World War; monetary and banking systems in post-war Japan; the role of Zaibatsu in post-war economy.

Essential Readings

Allen, G.C., *Japan's Economic Recovery*, *Opium Wars to 1911 Revolution Vol.I,* Delhi: Khosla, 1978.

Donnithorne Andrey, *China's Economic Systems,* London, 1969.

Flath David, *The Japanese Economy,* New York: Oxford University Press, 2000.

Hsu Immanuel, C.Y., *The Rise of Modern China,* New York: Oxford University Press, 1970.

Hughes, T.J. & Luard D.E.T., *The Economic Development of Communist China (1949-58),* London: Oxford University Press, 1959.

Vinacke, Harold M., *A History of the Far East in Modern Times*, New York: Appleton Century Crafts, 1961 (6th edn.)

Reference Readings

Clyde, Paul Hibbert, *The Far East: A History of the Impact of the West on Eastern Asia,* Englewood Cliffs, N.J. Prentice Hall, 1958 (3rd edn.).

Kennedy Paul, *The Rise and Fall of the Great Powers- Economic Change and Military Conflict from 1500 to 2000,* London: Unwin and Hyman, 1988.

Latourette, K.S., *A Short History of the Far East*, New York, Macmillan, 1957.

Storry Richard, *A History of Modern Japan,* Penguin Books Ltd., New York, 1960.

PAPERS III OPT. (III) HISTORY OF CANADA (**IN ABEYANCE TILL FURTHER ORDERS**)

COURSE CODE: HIS 821

Objective: An introductory course focusing on the main developments in politics, economy and society of Canada from its inception to recent times. The major changes and its impact on the people is highlighted to understand the kind of transformation taking place in time and the making of a multi-cultural society.

Pedagogy: As the course is being introduced for the first time, basic standard reading would be utilized along with maps and perspectives to help study the country in some detail.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Inuit; First Nations; Runners of the woods;Skraelings; seigneurs; New France; Quebec Act 1774; Canada Bill 1791; Reciprocity Treaty 1854; Dominion Day; Halifax Award 1877; Alien Question;Gold Rush; NEP; Bits and Pieces Programme; conscription; "Rep by Pop"; Staples Theory; baby boom; Dirty Thirties; Parti Canadien; GATT; Parti Quebecois; Two Nationalisms; cultural genocide'; referendum; October Crisis; bilingualism;Hyde"Park Agreement;"ethnic ghetto"; Multiculturism;White Paper ; Meechlake Conference; Gang of Eight; Bill 22/101; CANDU model;

Unit I

First nations and their contact with early European settlers; French and English in Canada in 17th century; Anglo-French activity in 18th century; Canada c.1800.

Unit II

Transformation 1815-40; The Dominion of Canada 1867; Expansion 1867-96; Economic boom 1896-1914; Impact of World War I, Relations with Britain

Unit III

Politics and Economics of the 1920's; Developments in 1930's; Canada and World War II; Post War developments upto 1963, Relations with USA.

Unit IV

Economic Developments 1960-80; Changing Canada; Problems for Government. in 1970s-80s; Multi culturalism.

Essential Readings

Bothwell, Robert, *The Penguin History of Canada*, Penguin, Canada, 2006.

Morton, Desmond, *A Short History of Canada*, McChelland & Stewart, Toronto, 2006 (6th edn., 1st published 1987).

Bumstead, J.M., *A History of the Canadian Peoples*, Oxford University Press, Toronto, 2007 (3rd ed.)

Nelles, H.V., *A Little History of Canada*, Oxford University Press, Toronto, 2005.

Reference Readings

Douglas R. Francis, Richard Jones and Donald B. Smith, *Origins: Canadian History to Confederation*, 6th ed., Nelson, Toronto, 2008.

Douglas R.Francis, Richard Jones and Donald B. Smith, *Destinies: Canadian History since Confederation*, Nelson, Toronto, 2006.

Dickason, Olive Patrica, *A Concise History of Canada's First Nations*, Oxford University Press, Toronto, 2006.

PAPER–II OPT. (IV) (A) AMERICAN IMPERIALISM IN THE NINETEENTH AND TWIENTIETH CENTURIES(**IN ABEYANCE TILL FURTHER ORDERS**)

COURSE CODE: HIS 811

Objective: From an Indian perspective, this course examines the nature of American imperialism and its spread in the nineteenth and twentieth centuries. It presumes a prior knowledge of the broad trends in the history of America, India and the world.

Pedagogy: The course is based on class room discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Imperialism; altruistic-moral; Monroe Doctrine; industrialization; Mahan Doctrine;Americanization; Louisiana Purchase; great powers;League of Nations; 14 points; Cold War; NAM; McCarthy Era; Cultural imperialism;brain drain;

Unit I

Introduction to the Nature of Imperialism: The economic bases of imperialism; the strategic bases of imperialism; the altruistic-moral bases of imperialism; The empires of the eighteenth and nineteenth century: the British Empire in India; the Partition of Africa; the various European imperial interests in the Americas; American independence: the French and Indian War 1754-1763; The British empire in America and colonial grievances; the economic and moral bases for claiming independence for America as expressed in its culture, polity and society during the eighteenth and nineteenth centuries.

Unit II

The Monroe Doctrine: The United States replaces the Spanish Empire in the Americas and the Pacific; various Spanish American wars and their consequences; evolution of a moral basis for imperial expansion in the foreign policy; The American civil war**:** the link between state power and industrialisation; the use of moral positions for war like aggression. US expansion in the nineteenth and early twentieth century: Purchasing territories in America and the Pacific; the Mahan Doctrine and military strength; American interventions outside the western hemisphere in the nineteenth and early twentieth century.

Unit III

"Americanisation of the world" in the early twentieth century: The relative industrial and economic strength of the great powers; President Wilson's interventions before joining the First World War; American role in establishing peace after the First World War and the League of Nations. The growth of American power between the Two Wars: Economic interventions in Europe; the US and Russia; the US and Great Britain. The Cold War and American foreign policy: anti-communism in the US and the McCarthy Era; influence of internal concerns on US foreign policy; economic and human costs of American interventions within the US and outside.

Unit IV:

US and the third world: US hostility to NAM 1950s to 1990s; US and the Muslim World; US and Israel; US as a soft power: "Cultural imperialism"; the brain drain from across the world to the US; Indian opposition to US cultural imperialism, 1960s to 1990s; Impact of American imperialism on south Asia: Indo-US relations before independence; Indo-US relations from 1947 to 1971; Indo-US relations from 1971 to the 1990s.

Essential Readings

Ferguson, Nial, *Colossus: The Rise and Fall of the American Empire*, Penguin books, London, 2005, multiple reprints in Indian edition.

Gilbert, Martin, *A History of the Twentieth Century, 3 volumes*, Harper Collins, London, 2000, multiple reprints in Indian edition.

Handlin, Oscar, *The History of the United States,* Holt, Reinhart and Winston, New York, 1968, multiple reprints.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000,* Fontana Press, New York, 1988, multiple reprints in Indian edition.

Reference Readings

Brecher, Michael, *The Foreign Policy System of Israel*, Oxford University Press, Toronto, 1972.

Chandra, Bipan, *Essays on Colonialism*, Orient Longman, New Delhi, 2000.

Desai, A.R, *The Social Background of Indian Nationalism*, Popular Prakashan, Bombay, 1954, multiple reprints.

Dutt, R.P., *India Today,* PPH, Bombay, 1949, multiple reprints.

Gilbert, Felix, *End of the European Era, 1890 to the Present* Norton, London, 1981.

Huntington, Samuel P., "The Clash of Civilizations?" in Foreign Affairs, 1993 Also, http://history.club.fatih.edu.tr/103%20Huntington%20Clash%20of%20Civilizations%20full%20text.htm

Lenin, V.I., *Imperialism, the Highest Stage of Capitalism: a popular outline***,** various editions, 1916.

Moore, Barrington Jr., *The Social Origins of Dictatorships and Democracies: Lord and Peasant in the Making of the Modern World*, Beacon Press, New York, 1966, also in Indian edition.

Owen, Roger and Bob Suttcliffe, (eds.), *Studies in the Theory of Imperialism*, Longman, London, 1972.

PAPERS IV: OPT. (I) (B) U.S.A. (1820-1973)

COURSE CODE: HIS 812

Objective: The emergence of America as a world leader was substantially based on the transformations taking place in that country as it tries to adjust itself to the post-Napoleonic world order of the nineteenth century. This course traces the main currents in American history to find an understanding of that transformation.

Pedagogy: Class room discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Nation state; freedom; big business; scientific temper; industrial revolution; imperialism; communism; foreign policy based on neutrality; carpet baggers; scallywags; populism; slavery; League of Nations; Free trade; Peace of Paris; progressive movement; Hooverville; New Deal; Economic depression; balance of trade; feminism; social justice; civil rights; foreign policy of appeasement.

Unit I

The new territories in the west: Expansion in Texas, the war with Mexico; Moral and ideological tensions: Growth of sectionalism, causes and consequences of the Civil War, Reconstruction of the South; The new economy: growth of industrialisation and new technologies, Big Business, 1875-1900; Growth of cities.

Unit II

Emergence as a World Power: War with Spain; causes and results; decision for economic imperialism; Overseas Expansion: The Carribean and the Pacific, 1896-1915; World Involvement: Unnatural neutrality; the U.S.A. at World War-I; The Treaty and the League.

Unit III

Populist and Progressive Movements: Leaders and achievements, 1890-1917; The onset of Great Depression: Causes and impact; the Hoover Program; The New Deal: New Deal Legislation; foreign policy during the New Deal period.

Unit IV

The Second World War: Issue of neutrality; the U.S.A. at war, planning a new World order; balance of terror: Colder war: Origins; diplomacy of Cold war; containment of communism; Détente; Social Movements: Movements for Social Justice: The Feminist Movement; Temperance; Suffrage; Civil Rights.

Essential Readings

Faragher, John Mack, Mari Jo Buhle, Daniel Czitrom, Susan H. Armitage *Out of Many: A History of the American People*, Prentice Hall /Longman, New York, 2009.

Tindall, G B and D E Shi. *America: A narrative history*, WW Norton, New York 2009. Also available as ebook from [http://www.wwnorton.com/college/history/america7]

Zinn, Howard, *People's History of the United State, 1492-Present*. Revised edition 2005 (first published 1980).

Reference Readings

Blum, John M., Bruce Cotton, *The National Experience: A History of the United States*, New York: 1970.

Current, Richard, N.T. Williams et al., *American History: A Survey*, Vol.II, Calcutta:Scientific Book Agency, 1975 (4th edition).

Faulkner, H.U., *American Economic History*, London: Harper and Row Publishers, 1954.

Morrison**,** S.E., H.S. Commager and W.E. Leuchtenburg, *The Growth of the American Republic,* New York: Oxford University Press, 1969.

Parkes, Henry Bamford, *The United States of America*, Calcutta: Scientific Book Agency, 1967 (reprint).

Pratt, Julius, W., *A History of United States Foreign Policy*, N.J.: Englewood Cliffs, 1957.

Wittner, Lawrence S., *Cold War America, From Hiroshima to Watergate*, New York: Praeger Publishers, 1974.

OPT. (II) WORLD IN THE TWENTIETH CENTURY

COURSE CODE: HIS 832

Objectives: Structures of international systems in the early twentieth century were drawn on the plank of imperialism, colonialism, nationalism leading to emergence of a bipolar world, organised into military blocks with non military organisations such as United Nations acting as arbiters of international peace. The impact of a bipolar world and its political dynamics were visible, especially in the middle east. New trends in human and civil rights marked contemporary foreign policies while feminism, working class and students movements, gained momentum in the international landscape.

Pedagogy: The methodology will include lectures, discussions, review, seminars and power point presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Imperialism;Neo-imperialism; colonialism; Neo-colonialism; Socialism; Nationalism;Communism;Capitalism; revolution; human rights; feminism; working class; Commonwealth; NAM; United Nations; student movement; Middle East; Military Blocs; Civil rights;foreign policy; Third World; Non-alignment; NATO; Warsaw Pact;Glasnost; Perestroika;Menshevik; Bolshevik;Arab Politics.

Unit I

On the Eve and aftermath of the First World War: Imperialism and Colonialism with reference to the First World War; The Ideology of Nationalism with special reference to India and China; The Russian Revolution of 1905; Causes and impact of the Revolution of 1917, collapse of the Soviet Union.

Unit II

Human and Civil Rights and New Trends: The idea of Civil and Human rights in the Third World; Role of Civil and Human rights in contemporary foreign policy Strategies; Trends within the growth of feminism, working class, and students movement.

Unit III

Military Blocs and Non-Military Organizations: Non-military organizations; U.N. as an arbiter of international peace; Changing facets of Commonwealth and its irrelevance; growth of NAM as a critic of Imperialism and Neo-Colonialism.

Unit IV

Political Dynamics in the Middle East: Regional Arab politics and the conflict with Israel; U.S.S.R. and the Middle East; U.S.A.'s policy towards the Middle East with special reference to Iraq, Israel and Iran.

Essential Readings

Anderson, Eugene N., *Modern Europe in World Perspective*: *1914 to the Present*, Holt, New York: Rinehart and Winston, 1961.

Brar, B.S., *Explaining Communist Crises*, New Delhi: Ajanta, 1994.

Gilbert, Felix, *End of the European Era*, *1890 to the Present* London: Norton, 1981.

Hammond, Paul Y. (ed), *Political Dynamics in the Middle East*, New York: I.N.C., 1972.

Hobsbawn, E.J., *Age of Extremes*, Delhi: Viking, 1995.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*, London: Unwin and Hyman, 1988.

Spanier, John., *Games Nations Play*, Delhi: Macmillan India Ltd., 1990.

Reference Readings

Ashworth, W., *A Short History of the International Economy*, *1850-1950*, London: Longmans, 1954.

Bergson, Abram & H.S., Levine, eds., *Soviet Economy Towards the Year 2000,* London: Unwin, 1983.

Brecher, Michael., *The Foreign Policy System of Israel*, Toronto: Oxford University Press, 1972.

Brezinski Zbignew., *The Soviet Bloc: Unity and Conflict,* Cambridge: The Harvard University Press, Mass, 1960.

Brezinski, Zbignew and S.P. Huntington., *Political Power: USA/USSR*, London: Chatto and Windus, 1964.

Chandra, Bipan, *Essays on Colonialism*, New Delhi: Orient Longman, 2000.

Chesneaux, Jean et. al. (eds.)., *China*, Vols. 1 and 2 Delhi: Khosla, 1978.

Clyde, Paul and Burton Beers., *The Far East: A History of Western Impacts and Eastern Responses, 1830-1975*, New Delhi: Prentice Hall, 1976.

Forsythe, David P., *Human Rights in International Relations*, Cambridge: Cambridge University Press, 2000.

Freeman, Michael., *Human Rights*, Black well Publishers Malden, 2003.

Holland, R.F., *European Decolonization, 1918-1981: An Introductory Survey,* London: Macmillan, 1985.

Horowitz, David., *Imperialism and Revolution,* London: Penguin Press, 1969.

Karsh, Efraim and Rautsi, Irari., *Saddam Hussein: a Political Biography*, Wheaton: B.P.C.C., 1991.

Kennan, George F., *Democracy and the Student Left*, London: Hutchison, 1968.

Kennan, George F., *The Fateful Alliance: France, Russia and the Coming of the First World War,* New York: Pantheon, 1984.

Kochan, Lionel & Richard Abraham., *The Making of Modern Russia*, London: St. Martin, 1984.

Lichteim, George., *Short History of Socialism,* London: Fontana, 1975.

Owen, Roger & Bob Suttchliffe, (eds.)., *Studies in the Theory of Imperialism,* London: Longmans, 1972.

Porter, Bernard., *The Lion's Share, A Short History of British Imperialism, 1850-1970*, London: Oxford University Press, 1976.

Porter, Brian, (ed.)., *International Politics, 1919-69*, London: Oxford University Press, 1972.

Samir, Amin., *Maldevelopment :anatomy of global failure,* London: Zed books, 1990

Singer, Hans W. and Javed Ansari., *Rich and Poor Countries*, London: Unwin, 1982.

Stevens, Georgiana G., *The United States and the Middle East*, Prentice – Hall Inc N.J., 1964.

The Cambridge Modern History, Vol. 12., *The Shifting Balance of Power,* Cambridge: Cambridge University Press, 1958.

Semester III shall consist of the following four papers	Paper I:	Code	Title of paper	Credits
		HIS 123	Punjab in the Nineteenth Century(Compulsory)	6 credits
	Papers II, III & IV : Any three Paper from the List	HIS 212	Opt. (i) National Movement in India 1858-1947	6 credits
		HIS 213	Opt. (ii) Constitutional Development in Modern India, 1773-1947	6 credits
		HIS 214	Opt. (iii) British Policy and Princely States **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 263	Opt. (iv) Contemporary India 1947-1992	6 credits
		HIS 431	Opt. (v) Evolution of Ancient Societies	6 credits
		HIS 421	Opt. (vi) Feudal Society in Western Europe	6 credits
		HIS 411	Opt. (vii) History of Capitalism	6 credits
		HIS 412	Opt. (viii) Rise and Growth of Colonialism in India	6 credits
		HIS 601	Opt. (ix) Gender Relations in Modern India	6 credits
		HIS 604	Opt. (x) Sacred Centres in Indian Civilization	6 credits
		HIS 603	Opt. (xi) Science, Technology & Medicine in Colonial India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 602	Opt (xii) History of Secularism in Modern India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 432	Opt (xiii) Cultural History of Ancient India	6 credits
		HIS 424	Opt (xiv) Medieval Indian Art and Monuments	6 credits

PAPER I: PUNJAB IN THE NINETEENTH CENTURY (COMPULSORY)

COURSE CODE: HIS 123

Objective: The aim of the present course is to make an assessment of British policy and programme in Punjab and study the construction of State. It critically examines and evaluates administrative, social, cultural, economic developments as well as socio-religious resurgence in the province between 1849-1901.

Pedagogy: The present course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Formation of the Kingdom of Lahore; land revenue administration, distribution of land revenue; agricultural production and development; trade, industry and urbanization.

Unit II

Nature of state under Ranjit Singh; political developments 1839-1849; role of the ruling classes in the decline of the kingdom of Lahore; annexation of the Punjab.

Unit III

The early British administration 1849-59; British agrarian policies; application of modern science and technology; canal colonies.

Unit IV

Christian missionaries and their activities; Arya Samaj and Dev Samaj; Muslim Anjumans and Ahmediyas; Nirankaris, Namdharis and Singh Sabhas.

Essential Readings:

Ali, Imran, *The Punjab under Imperialism, 1890-1947,* Delhi: Oxford University Press, 1989.

Bal, S.S., *British Policy towards the Punjab (1844-49)*, Calcutta, 1971.

Banerjee, Himadri, *Agrarian Society in the Punjab, 1849-1901,* New Delhi: Manohar, 1982.

Banga, Indu (ed.), *Five Punjabi Centuries*, Delhi: Manohar, 2000.

Banga, Indu and J.S. Grewal, eds., *Maharaja Ranjit Singh: Society and Economy*, Amritsar: GNDU, 2001.

Banga, Indu, *Agrarian System of the Sikhs,* Manohar, Delhi: 1978.

Barrier, N.G., *The Punjab Alienation of Land Bill of 1900* (Durham: Duke University Program in Comparative study on the Southern Asia, Monograph and Occasional Papers Series, No. 2, 1966).

Fauja Singh, *Some Aspects of State and Society under Ranjit Singh*, New Delhi: Master Publishers, 1982.

Grewal, J.S. and Indu Banga, eds., *Maharaja Ranjit Singh and His Times*, Amritsar: GNDU, 1980.

Grewal, J.S., *The Reign of Maharaja Ranjit Singh: Structure of Power, Economy and Society*, Patiala: Sita Ram Kohli Memorial Lectures, 1981.

Grewal, J.S., *The Sikhs of the Punjab*, New Cambridge History of India, 1994.

Grewal Reeta and Sheena Pall, eds., *Pre-Colonial and Colonial Punjab*, Delhi: Manohar, 2005.

Grewal, Reeta, 'Polity, Economy and Urbanization: Early 19th Century Punjab' *Journal of Regional History*, Vol. IV, 56-72.

Jones, Kenneth W., *Socio-Religious Reform Movements in British India,* New Cambridge History, Delhi: Foundation Books, 1994.

Khushwant Singh, *History of the Sikhs*, Vol.II, Princeton: Princeton University Press, 1966.

Puri, Harish K. and Paramjit S. Judge (eds.), *Social and Political Movements: Readings on Punjab, Delhi:* Rawat Publications, 2000 (relevant articles).

Talbot, Ian, *Punjab and the Raj, 1849-1947,* Delhi: Manohar, 1988.

Reference Readings

Chhabra, G.S., *Social and Economic History of Punjab,* 1849-1901, Jalandhar: S. Nagin & Co., 1962.

Ganda, Singh (ed.), *The Singh Sabha and other Socio-Religious Movements in the Punjab, The Punjab Past and Present,* 2nd end., Patiala: Punjabi University, 1984.

Goswamy, B.N., *Painters at the Sikh Court,* Delhi: Aryan Books, 1999.

Goswamy, B.N., *Piety and Splendour: Sikh Heritage in Art*, Delhi: National Museum, 2000.

Islam, M.M., *Irrigation, Agriculture and the Raj: Punjab 1887-1947,* New Delhi: Manohar, 1997.

Khilani, N.M., *Brithish Power in the Punjab,* Bombay: Asia, 1972.

Mathur, Y.B., *British Administration of Punjab (1849-75),* Delhi: Surjeet Book Depot, 1972.

Sharma, Radha, *Peasantry and the State Early 19th century Punjab,* Delhi: K.K. Publishers, 2000.

Singh, Sukhwnat, *Agricultural Growth under Colonial Constraints: The Punjab, 1849-1947,* Delhi: Manmeet Parkashan, 2000.

Walia, Jagjivan Mohan, *Parties and Politics at the Sikh Court*, Master Publishers, New Delhi, 1982.

Webster, John C.B., *The Christian Community and Social Change in Nineteenth Century North India,* Delhi: Macmillan, 1976.

Webster, John, C.B., *The Nirankari Sikhs,* Delhi: Macmillan, 1979.

Note: Selected articles from Journal of Regional History, Punjab Past and Present, Punjab History Conference and Indian History Congress.

Papers II, III & IV Any three papers from the following:

PAPERS II, III & IV: OPT. (i) NATIONAL MOVEMENT IN INDIA 1858-1947

COURSE CODE: HIS 212

Objective: The course aims to trace the Indian National Movement from 1858 to 1947 focusing on how different historiographic schools view Indian Nationalism. Emphasis of the course is on the role played by INC from 1885 to 1947 and Gandhi in leading the country to freedom in 1947. The other strands of the National Movement particularly the Revolutionary and Left wing and youth organizations along with the communal strands are highlighted.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Indian Nationalism 1859 – 1885: Different historiographic schools of Indian Nationalism; Early associations and peasant uprisings 1859-1880s; theories of Origin and foundation of the Indian National Congress; social basis of the Indian National Congress.

Unit II

National awakening in India in its early phase: National Awakening and Socio-Religious Social Reforms; the Moderate phase of the Indian National Congress; Growth of Extremism; the Indian Council Act of 1909; Home-Rule Movement; Government of India Act of 1919.

Unit III

Nationalism under Gandhi's leadership: Emergence of Gandhi and his ideology of mass participation; critical assessment of Non-cooperation and Khilafat Movement, Civil Disobedience Movement; 1940 Satyagraha and Quit India Movement; Freedom Struggle in the princely states.

Unit IV

Other strands of the National Movement: Revolutionary Movement since 1905; Left wing Politics and Youth Organizations; the Indian National Army; Communal strands; Muslim League and Hindu Mahasabha; last phase of the struggle; freedom and partition- why Congress and Gandhi accept partition.

Essential Readings

Chandra, Bipan, Mridula Mukerjee, Aditya Mukerjee, K.N. Pannikar, Sucheta Mahajan, *India's Struggle for Independence 1857-1947*, New Delhi: Penguin Books, 1989.

Chandra Bipan, *Nationalism and Colonialism in Modern India*, Delhi: Orient Longman, 1979.

Chandra, Bipan, *Communalism in Modern India,* Vikas, New Delhi, 1984.

D.N. Dhanagare, *Agrarian Movements and Gandhian Politics*, Oxford University Press, 1970.

Desai, A.R., *Social Background of Indian Nationalism*, Bombay: Popular Parkashan, 1966.

Guha, Ranjit, *Subaltern Studies, I – IX*, Delhi: Oxford University Press, 1982-86.

Low, D.A. *Britian and Indian Nationalism*: *The Imprint of Antiquity,* 1997.

Mahajan, Sucheta, *Independence and Partition,* New Delhi: Sage, 2000.

Mehrotra, S.R., *Emergence of Indian National Congress*, Delhi: Manohar, 1971.

Mehrotra, S.R., *Towards India's Freedom and Partition,* New Delhi, 1979.

Nanda, B.R., *The Making of Indian Nation*, Collins: Harper, 1998.

Pathak, B.N. (ed.), *History of Indian National Congress*, 3 vols., New Delhi, 1985.

Singh, Anita Inder, *The Origins of Partition of India*, New Delhi: Oxford University Press, 1987.

Reference Readings

AICC, *A Century History of the Indian National Congress*, Vols. II & III.

Aloysius, G., *Nationalism without a Nation in India*, Oxford University Press, 1998.

B.R. Nanda, Mahatma Gandhi: A Biography, Bombay: Allied Publishers, 1978.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India,* New Delhi: People's Publishing House, 1982 (reprint).

Farquhar, J.H., *Modern Religious Movements in India*, Delhi: Munshi Ram, Manohar Lal, 1976.

Gopal, S., *British Policy in India*, Cambridge: Cambridge University Press, 1965.

Joshi, Shashi, and Josh, B., *Struggle or Hegemony in India 1920-47,* Vol.I to III, New Delhi: Sage.

Low, D.A. (ed.), *Congress and the Raj,* New Delhi: Arnold Heinemann, 1977.

Massellos, Jim, *Nationalism on the Indian Subcontinent*, Melbourne: Thomas Nelson, 1972.

Salil Misra, *A Narrative of Communal Politics, UP 1937 -39.* New Delhi: Sage, 2001.

Sumit Sarkar , *The Swadeshi Movement in Bengal, 1903-1908*, New Delhi: Macmillan, 1977.

Tara Chand; *History of the Freedom Movement in India, 2 Vols.,* Delhi: Publication Division, 1963.

Vishalakshi Menon, *From Movement to Government,* Delhi: Sage India, 2005.

PAPERS- II, III & IV: OPT. (ii) CONSTITUTIONAL DEVELOPMENT IN MODERN INDIA, 1773- 1947

COURSE CODE: HIS 213

Objective: To examine the various aspects of constitutional development in India.

Pedagogy: Lectures, tutorials and discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Constitutional Development during East India Company's rule; Govt. of India Act 1858, Significance of Queen Victoria's Declaration; Indian Councils Act.

Unit II

A new constitutional experiment- Act of 1909 (Morley – Minto Act); Significance of Montague- chelmsford Report; The Act of 1919 and Dyarchy System in provinces.

Unit III

Nehru Committee Report; Simon Commission Proposals; the Act of 1935; Provincial Autonomy in operation.

Unit IV

Political Movements and Reform Proposals- Cripps Proposals and Indian reaction; the Wavell Plan; the Cabinet Mission; the constituent Assembly; the Indian Independence Act; the constitution of 1949.

Essential Readings

Banerjee, Anil Chandra, *The Constitutional History of India*, Vol.I 1600-1858, Vol.II. 1858-1919, Vol.III 1919-1977.

Coupland, R. *The Constitutional Problem in India*, Part I, Oxford, 1944.

Keith, A.B., *Constitutional History of India*, Allahabad, 1961.

Lovett, V., *A History of the Indian Nationalist Movement*, London: 1920.

Mehrotra, S.R., *India and Commonwealth,* London, 1965.

Philips, C.H., *Evolution of India and Pakistan 1858-1947*, London: 1962.

Sitaramayya, P. *History of the Indian National Congress,* 2 Vols., Bombay: 1947.

Reference Readings

Chand, Tara, *History of the Freedom Movement in India, 2 Vols.,* New Delhi: 1967.

Curtis, L, *Dyarchy,* Oxford, 1920.

Das, M.N. *India under Morley and Minto*, London, 1964.

Prasad, B. *The Origins of Provincial Autonomy*, Allahabad, 1941.

Robinson, F., *Separatism among Indian Muslims 1860-1929*, New Delhi: 1975.

Roy, S.N., *Indian Politics and Constitutional Development*, New Delhi: 1976.

Seal, Anil*, The Emergence of Indian Nationalism*, Cambridge, 1968.

Singh, Pardaman*, Lord Minto and Indian Nationalism*, Chandigarh: 1904 (reprint).

PAPERS- II, III & IV: OPT. (iii) BRITISH POLICY AND PRINCELY STATES (KEPT IN ABEYANCE FOR 2015-2018)

COURSE CODE: HIS 214

Objective: This paper aims to understand and study the multiple patterns of British policy towards the Princely States of India. It seeks to examine the various facets of British paramountcy in different matters of the Native States and point out the variations and peculiarities thus found. Also the objective of the paper is to evaluate the Princely Chiefs' responses, their sensitiveness and changes in their attitude towards the British policy during the colonial period.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Policy of 'Ring Fence' under Clive, Warren Hastings and Cornwallis; Departure from the policy and Wellesley's Subsidiary Alliance System; Extension of Wellesley's policy under Marquis of Hastings; Dalhousie's policy of annexation of States by the application of 'doctrine of lapse' and other means.

Unit II

Adoption of new policy under the Crown after the revolt of 1857-58 – Queen's Proclamation, Canning's Despatch of April 1860 and Adoption Sanads; Succession matters w.s.r.t. minority administration; Deposition of Gaekwar of Baroda (1875), Rendition of Mysore (1881), the Manipur Case; Growth of Paramountcy under Curzon (1898-1905).

Unit III

The theory of 'one charge' – economic matters w.s.r.t. coinage and currency, salt and opium; means of communications- railways, post and telegraph; military establishment in the States and Organisation of Imperial Service Troops.

Unit IV

Change in the British policy after 1905 under Minto and Hardinge; Organisation of Chamber of Princes (1921) – its constitution and role; Indian States Committee (1927); Independence and integration of States.

Essential Readings

Arora, A.C., *British Policy towards the Punjab States 1858-1905,* Jalandhar: Export India Publications, 1982

Copland, Ian, *The Princes of India in the Endgame of Empire 1917-1947*, Cambridge: Cambridge University Press, 1997.

Fraser, Lovat, *India under Curzon and After,* London: Heinemann, 1921 (Nabu Press, 2006).

Jeffrey, Robin (ed.), *People, Princes and Paramount Power: Society and Politics in the Indian Princely States*, New Delhi: Oxford University Press, 1978.

Lee-Warner, Sir William, *The Protected Princes of India*, London: Macmillan, 1894.

Lee-Warner, Sir William, *The Native States of India*, London: Macmillan, 1910.

Majumdar, R.C. *et al*., *The History and Culture of the Indian People*, Vol.IX: *British Paramountcy and Indian Renaissance*, Part I, Bombay: Bhartiya Vidya Bhavan, 1963.

Mehta, Mohan Sinha, *Lord Hastings and the Indian States*, 1813-1823, Bombay: Allied, 1930.

Menon, V.P., *The Story of the Integration of the Indian States*, London: Longmans, 1956.

Pannikar, K.M., *An Introduction to the Study of Relations of Indian States with the Government of India*, London, 1927.

Pannikar, K.M., *Indian States and the Government of India,* London, 1932 (Delhi: Kaushal, 1985)

Phadnis, Urmila, *Towards the Integration of Indian States 1919-1947,* Bombay: Asia, 1968

Prasad, S.N., *Paramountcy under Dalhousie,* Delhi: Ranjit Publishers, 1964.

Ramasuck, Barbara N., *The Indian Princes and their States,* Cambridge: Cambridge University Press, 2004.

Roberts, P.E., *India under Wellesley*, London: Bell, reprint Gorakhpur, 1961.

Roberts, P.E., *History of British India under the Company and the Crown*, 3rd edition, reprint London: Oxford University Press, 1958.

Verma, S.M., *Chamber of Princes,* New Delhi: National Book Organization, 1990.

Reference Readings

Aitchison, Sir Charles, *Lord Lawrence* (Rulers of India Series), Oxford, 1892.

Chudgar, P.L., *Indian Princes under British Protection*, Reprint Chandigarh, 1976 (Original, London, 1929).

Corefield, Conrad, *The Princely India I knew from Reading to Mountbatten,* Madras, 1975.

Handbook of the Chamber of Princes, Shimla, 1943.

Hunter W.W., *The Marquess of Dalhousie* (Rulers of India Series), Oxford: Oxford University Press, 1895.

Hunter, W.W., *The Earl of Mayo,* Oxford: Clarendon Press, 1892.

Krishnamurthy, Y.G., *Indian States and Fedral Plan*, Bombay, 1939.

Shastry, K.R.R., *Indian States,* Allahabad, 1941.

Singh, Raghubir, *Indian States and the New Regime*, Bombay, 1938.

Tupper, Sir Lewis, *Our Indian Protectorate*, London: Longman, 1893.

PAPERS- II, III & IV: OPT. (iv) CONTEMPORARY INDIA 1947-1992

COURSE CODE: HIS 263

Objective: This course provides an introduction to the major strands in the history of contemporary India.

Pedagogy: The course involves the student in class lectures, discussions and term papers.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

1. Historiographic survey for Contemporary India including the emergence of the sub-discipline of Contemporary Indian History; Various ideological streams with special reference to Ambedkar, Gandhi, Nehru and Vivekananda.
2. Setting up an institutional structure for a new country: the making of the constitution, debates on its nature and changes made to it. The structure of the bureaucracy and the police and changes over time in their relationship with the legislative arm of the state and with civil society.
3. Rehabilitation after Partition: Settling the people, creating new towns and agricultural settlements, creating new opportunities for the displaced.

Unit II

4. Economic growth: Demographic trends. The Planning Process and Five Year Plans.
5. Industrial growth: Debates on the nature and value of the public and the private sector; Labour relations.
6. Land Reforms and agrarian changes: Green Revolution with special reference to the Punjab; Peasant Unrest and its changing forms, especially in Punjab, Bihar, Andhra Pradesh and Maharashtra.

Unit III

7. The States: The continuous reorganization of States since the 1950s. Changing nature of Centre-State relations.
8. The Emergency of 1975: its causes and consequences. Various political responses to the emergency. Emergence of a civil democratic rights movement and the varied responses of the state.
9. Political and economic relations with the World. Changing Patterns of friendship and enmity with neighbouring countries. Relations, political, social and economic with the so-called Great Powers.

Unit IV

10. Depressed classes, tribals, and women.
11. Political and social assertions by different regions: the Northeast, Tamilnadu and Punjab.
12. The emergence and articulation of an Indian identity: The problem of national integration versus adjusting conflicting claims in a democratic space.
13. Social change: Changing patterns of assertion by marginalized groups.

Essential Readings

Consisting of books which give a broad, but essential, overview of various themes in the course and/or set the paradigm for understanding the history of Contemporary India. It is highly recommended that candidates browse through the collection of the AC Joshi Library, Panjab University for more detailed information about various topics.

1. Chandra Bipan, Mridula Mukherjee and Aditya Mukherjee, *India after Independene, 1947-2000,* Delhi: Penguin, 2002.
2. Moore, Barrington M., James C. Scott, Edward Friedman, *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*, New York: Beacon Press, 1993.
3. Spear, Percival*, The Oxford History of Modern India 1740-1975*, New York: Oxford University Press, 1979.

Candidates are also requested to consult various titles from the series New Cambridge History of India, (often listed in libraries and catalogues under the heading New Cambridge History of India) published by the Cambridge University Press and available in Indian editions.

Reference Readings

Austin, Granville*, Working a Democratic Constitution: The Indian Experience*, New York and Delhi: Oxford University Press, 1999.

Bardhan, Pranab*, The Political Economy of Development in India,* Delhi: Oxford University Press, 1998.

Dreze, Jean and Amartya Sen, *India: Economic Development and Social Opportunity*, Delhi: Oxford University Press, 1996.

Karlekar, Hiranmay, ed., *Independent India: the first fifty years*, Delhi: ICCR and Oxford University Press, 1998.

Morris Jones, W.H., *The Government and Politics of India,* Delhi: Oxford University Press, 1987.

Omvedt, Gail, *Dalits and the Democratic Revolution: Dr. Ambedkar and the Dalit Movement in Colonial India*, Thousand Oaks, CA: Sage, 1994.

Raghuramaraju, A., *Debates in Indian Philosophy Classical, Colonial, and Contemporary*, New Delhi: Oxford University Press, 2006.

PAPERS- II, III & IV: OPT. (v) EVOLUTION OF ANCIENT SOCIETIES

COURSE CODE: HIS 431

Objective: This course provides an introduction to the form of existence of the earliest human societies and their relationship with the study of history.

Pedagogy: The course depends on class room discussions and visits to the various museums of history.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Hunting-gathering societies and the beginning of food production; characteristics of Neolithic societies in Western Asia with reference to the beginnings of villages, the importance of storage and the development of crafts like pottery and weaving; Tribal and chiefdom societies with reference to social organization, shamanism and other religious practices.

Unit II

Gift-giving, reciprocity and redistribution; Trade and market exchange; Primitive valuables and the domestic mode of production.

Unit III

Concept of urban Revolution; the process of urbanization with special reference to Mesopotamia; the early Bronze State of Mesopotamia.

Unit IV

The Greek state with reference to democracy, slavery, art; religion; Roman society and economy; Disintegration of the Roman Empire.

Essential Readings

Adams, R.M., 'Patterns of Urbanization in early Southern Mesopotamia' in P J Ucko et al, eds., *Man, Settlement and Urbanism*, London: Duckworth, 1972.

Adams, R.M., 'Water, Land and Life' in *Heartland of Cities*, Chicago: University of Chicago Press, 1981.

Alfody, G., *The Social History of Rome*, London: Routledge, 1988.

Andreev, Y.V., 'Urbanization as a Phenomenon of Social History', *Oxford Journal of Archaeology,* 8(2), 1989.

Andrewes, A., *The Greek Society,* London: Penguin, 1971.

Belshaw, C., *Traditional Exchange and Modern Markets,* Englewood Cliffs: Prentice-Hall, 1965.

Binford, L., ' Post-Pleistocene Adaptation', in S and L Binford, *New Perspectives in Archaeology,* Chicago: Aldine, 1968.

Bohannan, P. & G. Dalton(eds.), *Markets in Africa,* Evanston: Northwestern University Press, 1962.

Childe, V.G., 'The Neolithic Revolution', in V.G. Childe, *Man Makes Himself,* London: Moonraker Press, 1956.

Reference Readings

Adams, R.M., *The Evolution of Urban Society,* London: Weidenfeld & Nicolson, 1966.

Childe, V.G., 'The Urban Revolution in Mesopotamia' in *What Happened in History*, Harmondsworth: Penguin, 1954.

Clark, G. and S. Piggott, *Prehistoric Societies*, London, Hutchinson, 1965.

Earle, T. How., *Chiefs Come to Power*, Stanford: Stanford University Press, 1997.

Ehrenberg, V., *The Greek State*, Oxford: Basil Blackwell, 1960.

Ellen, R., 'Modes of Subsistence: Hunting and Gathering to Agriculture and Pastoralism', in T. Ingold ed., *Companion Encyclopedia of Anthropology*. London/New York: Routledge, 1994.

Finley, M.I., *Ancient Slavery and Modern Ideology*, London: Penguin, 1980.

Finley, M.I., *The Ancient Economy*, London: Chatto & Windus, 1973.

Harris, D.R. (ed)., *The Origins and Spread of Agriculture in Eurasia,* Washington: Smithsonian Institution Press, 1996.

Ingold, T. et al, *Hunter and Gatherers*, Volume One, New York/Oxford: Berg, 1988.

Jones, A.H.M., *The Roman Economy*, Oxford: Basil Blackwell, 1974.

Service, E.R., *The Hunters,* Englewood Cliffs: Prentice Hall, 1966.

Thomas, J., *Understanding the Neolithic*, London/New York: Routledge, 1999.

Wason, P.K., *The Archaeology of Rank,* Cambridge: Cambridge University Press, 1994.

PAPERS- II,III & IV: OPT. (vi) FEUDAL SOCIETY IN WESTERN EUROPE

COURSE CODE: HIS 421

Objectives: This paper is essentially devoted to the social history of medieval western Europe. It traces the transformation of the slave-owning society into the feudal society, besides exploring the institution of vassalage, with reference to the fief and manor. These structural changes are examined in the context of improvements in agricultural and industrial production, besides the expansion of trade and urbanization. This paper aims at understanding the methods of historical analysis that were developed by Marc Bloch, Henri Pirenne and Parry Anderson. It also enables us to sharpen our understanding of parallel developments in medieval India, as it opens the avenues of comparative analysis.

Pedagogy: The teacher is required to exercise considerable patience and diligence, so as to clarify key concepts like modes of production, kinship ties, vassalage, fief and manor. Equal attention is paid to material aspects of human life like agriculture, industry and trade. The study of historical maps, particularly relating to trade routes and urban centres, promises to benefit the young learners.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Political structure and social classes in the Roman empire; the slave mode of production; consequences of the Germanic invasions; the role of kinship ties; practice of vendetta and ownership of property; structure of the family.

Unit II

Origin, development and symbolism of the feudal ties; mutual obligations of lords and vassals; plurality of homage; evolution and types of fiefs; inheritance and sale of fiefs; nature and working of the manorial system.

Unit III

Methods of agricultural production; changes in the agricultural technology and cropping pattern; salient features of textile production; building and mining industries; military and navigational technology.

Unit IV

Emergence of the mercantile class; features of internal trade; international trade and the role of Hanse; emergence of urban centres; the organisation of guilds; the hierarchy of artisans; peasant and artisan revolts.

Essential Readings

Anderson, Perry, *Passages from Antiquity to Feudalism*, London: NLB, 1974.

Bloch, Marc, *Feudal Society,* Vol.I, London: Routledge and Kegan Paul, (Rep.), 1975, Asha Jyoti Booksellers and Publishers, First Indian Edition, New Delhi, 2006.

Bloch, Marc, *Samanti Samaj*, Vol.I, Hindi Translation, Krishnakant Sharma, New Delhi, Granth Shilpi, 2001.

Cipolla, Carlo, (Ed.), *The Fontana Economic History of Europe: The Middle Ages,* London: Collins/Fontana Books, 1976.

Ganshoff, F.L., *Feudalism*, London: Longmans Green and Co. Ltd, 3rd Edition, 1964.

Hodgett, Gerald A.J., *A Social and Economic History of Medieval Europe,* London: Methuen and Co., 1964.

Pirenne, Henri*, Economic and Social History of Medieval Europe*, London: Routledge and Kegan Paul, (Rep.), 1978.

Pounds, N.J.G., *An Economic History of Medieval Europe*, London: Longman, 1974.

PAPERS- II,III & IV: OPT. (vii) HISTORY OF CAPITALISM

COURSE CODE: HIS 411

Objective: To trace the broad patterns in the history of capitalism since its rise in the sixteenth century through its emergence as the most powerful socio-economic system in the late nineteenth and early twentieth centuries.

Pedagogy: Class room lectures and discussions form the basis of instruction in this course.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Transition from feudalism to capitalism: The role of colonial pillage in the emergence of capitalism 1500-1850; Mercantilism and its various forms, various chartered companies and their political and economic activities, the rise of the bourgeoisie, colonial expansion and critics of mercantilism; the emerging link between the generation of wealth and science; the scientific revolution and its relationship with war and the growth of trade in the 16^{th} and 17^{th} centuries.

Unit II

The rise of industrial capital, 1750-1914 with specific reference to Cotton Textile, Coal, Steam, Iron and Steel; the contribution of agriculture to capitalism: the various agricultural revolutions in the 17^{th}, 18^{th} and 19^{th} centuries with special reference to enclosures, animal husbandry, food adequacy and population growth; creation of an infrastructure for economic growth; the factory system, the transport revolution, credit systems, banks, insurance, joint stock companies.

Unit III

Working Class: The Chartist Movement, trade unions, their role and growth, controversies over living conditions; social unrest and the revolutions of the 1840s in England, France, Germany and Italy; the middle classes: spread of education, growth of socialist and liberal ideas; women and public affairs, organization of local government.

Unit IV

Imperialism in the industrial era: great power rivalry in Europe, Asia and Africa; Debates on the nature and origins of 19^{th} century imperialism; the various economic depresses of the 19^{th} and early 20^{th} centuries and their social and political impact; national responses to the crises: the growth of totalitarian and liberal politics in the form of Fascism, Nazism, Stalinism and the liberal welfare state.

Essential Readings

Beaud, Michel, *A History of Capitalism 1500-2000*, New Delhi: Akar, 2004.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*, New York: Random House, 1988.

Landes, David S., *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*, Cambridge: Cambridge University Press, 1969.

Reference Readings

Marx, Karl, *The Capital*, Vol. I, especially the following 6 chapters:

'Bloody Legislation against the Expropriated, from the end of the 15th Century.

'Forcing down of Wages by Act of Parliament'

'Genesis of the Capitalist Farmer'

'Reaction of the Agricultural Revolution on Industry. Creation of the Home-Market for Industrial Capital'

Genesis of the Industrial Capitalist'

'Historical Tendency of Capitalist Accumulation'

'The Modern Theory of Colonisation'

Mendelsohn, K, *Science and Western domination*, London: Thames and Hudson, 1976.

Rostow, W.W., *The Stages of Economic Growth: A Non-Communist Manifesto*, Cambridge: Cambridge University Press, 1960.

PAPERS- II,III & IV: OPT. (viii) RISE AND GROWTH OF COLONIALISM IN INDIA

COURSE CODE: HIS 412

Objective: This course aims to introduce the student to the broad trends in the rise and growth of colonialism and its specific form in India in modern times.

Pedagogy: The course is based on class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Introduction to Colonialism: Colonial Structure and State; Stages of Colonialism; Economics of Colonialism; Historiography of Colonialism; Patterns of Colonialism in Africa, Asia, Latin America.

Unit II

Colonialism in India: East-India Company and Mercantilist Colonialism 1751-1813; 'Free Trade' 1813-1858, Impact on Agriculture; Trade and Industry; Labour Colonialism.

Unit III

Modern India and Imperialism: Theory of Imperialism; Finance Imperialism 1858-1947; The Indian Capitalist Class; The Nationalist Economic Agitation.

Unit IV

Colonialism and Modernization in India; Debates on impact of Colonialism on India; Colonialism and Ethnic Identities in India; British and Indian ideas on Indian Economic Development 1858-1905; Dangers of Neo Colonialism after 1947.

Essential Readings

Alavi Manzoor, "India and the Colonial Mode of Production" in *The Socialist Register,* 1975.

Amin, Samir, *Accumulation on a World Scale*, New York, 1974.

Amin, Samir, *Unequal Development,* New York, 1976.

Cell, John W., *British Colonial Administration in the mid-nineteenth Century, The Policy Making Process,* London, 1970.

Chandra, Bipan, *Essays on Colonialism*, New Delhi: Orient Longman, 2000.

Chandra, Bipan, *Nationalism and Colonialism in Modern India*, Delhi,1987.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India,* New Delhi, People's Publishing House 1978.

Cohen Benjamin J., *The Question of Imperialism, The Political Economy of Dominance and Dependence,* Macmillan, 1973.

Fieldhouse, D.K., *Colonialism 1870-1945: An Introduction,* Weidenfeld and Nicolson, London, 1981.

Habib, Irfan, *Colonialization of the Indian Economy, 1757-1900,* Social Scientists, Vol. 3, No. 8 (March 1975).

Kaisar, A.J. & Verma, S.P. (ed.), *Art and Culture, British Colonialism and Ethnic Identities in India*, Kamlesh Mohan, New Delhi, 1996.

Muriel & Chamberlain, *The Formation of the European Empires 1488-1920,* Great Britain, 2000.

Owen, Roger and Bob Suttcliffe (eds.), *Studies in the Theory of Imperialism*, London: Longman, 1972.

Tomlinson, B.R., *The New Cambridge History of India, The Economy of Modern India 1860-1970*, Cambridge University Press, New Delhi, 1993.

Reference Readings

Bagchi, A.K., *The Political Economy of Under Development,* Cambridge, 1982.

Barrat, Brown, M., *The Economics of Imperialism,* London, 1974.

Bose, Arun, *Modes of Production and Civil Societies in Colonial India*, Delhi (n.d.).

Chandra, Bipan, *Colonialism, Stages of Colonialism and the Colonial State*, Journal of Contemporary Asia, Vol. 10, No. 3, 1980.

Frank, A. Gunder, *Latin America under Development Revolution*, New York, 1967.

PAPERS- II, III & IV: OPT. (ix) GENDER RELATIONS IN MODERN INDIA

COURSE CODE: HIS 601

Objective: The subject of Gender in our era has become a focus of thought and study. There is concern for and discussion of women's roles, rights, economics and womens' studies.

Gender relations in Indian history is a critical understanding of Social reality from the Gender perspective. The crucial insight that while sex is biologically given, gender is socially constructed is the basic premise on which the paper is based. In virtually every area of social change, gender has become a category of analysis, which is to say that political, economic and development issues are thought of in terms of women's participation and their consequences for society.

The aim of the paper is to give an overview of Gender Relations in 19^{th} & 20^{th} Century India. To understand the subject and its structure, the first unit deal with the different perspectives on writings of the subject. A background is given of the position of women in ancient and Medieval India. A unit is devoted to the Colonial period. Two units demarcate the Initiatives and strategies employed post-independence to better the condition of women in every sphere.

Pedagogy: The course is based on class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Introduction: Historiography of Gender Relations, Different Perspective of women in Ancient India; Socio-cultural practices in Medieval India; Women in major religious traditions; structures of Patriarchy.

Unit II

Colonial Period: Impact of Social Reforms, education, personal and customary law, Impact of education; economic position Formation of women's organisation; Women's struggle and participation in the national Movement.

Unit III

Post-Independence Initiative: Role of the state in Empowering Women; Political Participation; Legal Provisions; Development of Women's Movement; Women's struggle for rights; Peasant and Dalit Women's Movement.

Unit IV

Post-Colonial Status : Education and change;; Role of women in economy; Social Position; Violence against Women; Images of Women in the Media; Continuity and Change.

Essential Readings

1. Agarwal, Bina, *Structures of Patriarchy: State Community and Household in Modernising Asia*, New Delhi: Kali for Women, 1988.
2. Altekar A.S., *The Position of Women in Hindu Civilization: Retrospect & Prospect, Delhi 1979.*
3. Calman,Leslie J., *Towards Empowerment, Women and Movement Politics in India*, Oxford: Westview Press, 1992.
4. Desai, Neera & Maithreyi Krishnaraj, *Women and Society in India*, New Delhi: Ajanta Publications, 1987.
5. Gandhi, Nandita & Nandita Shah, *The Issues at Stake Theory and Practice in the Contemporary Womens Movement in India*, New Delhi: Kali for Women, 1992.
6. Kumar, Radha, *The History of Doing: An illustrated Account of Movements for Women's Rights and Feminism in India 1800-1990*, New Delhi: Kali for Women, Lied, 1997.
7. Leela Kasturi, G. & Vina Majumdar (ed)., *Women and Indian Nationalism*, New Delhi: Vikas, 1994.
8. Nair, Janaki, *Women and Law in Colonial India: A Social History*, New Delhi: Kali for Women, 1996.
9. Nanda, B.R. (ed.), *Purdah to Modernity*, Delhi: Vikas Publishing, 1976.
10. Pawar, Kiran (ed.), *Women in Indian History*, Patiala: Vision and Venture, 1996.
11. Ray, Bharati & Aparna Basu (ed.), *From Independence Towards Freedom: Indian Women since 1947*, New Delhi: Oxford University Press, 2000.
12. Sangari, Kumkum and Sudesh Vaid (eds.), *Recasting Women*, New Delhi: Kali for Woman, Reprint, 1993.
13. Siddiqui, M. Mazheruddin, *Women in Islam*, Delhi: 1991.

Reference Readings

Chanana, Karuna, *Socialisation, Education & Women, Exploration in Gender Identity,* Orient Longman, New Delhi, 1988.

Dietrich, Gabriel, *Women's Movement in India: Conceptual and Religious Reflections*, Bangalore, 1988.

Haksar, Nandita, *Demystification of Law for Women*, New Delhi, 1986.

Jacobson and Wadlkey S., *Women in India: Two Persepctives*, New Delhi, Manohar, 1986

Mathur, Kanchan, Countering Gender Violence, Sage, New Delhi, 2004.

Mazumdar, Vina (ed.), *Symbols of Power: Studies on the Political Status of Women in India*, Bombay: 1979.

PAPERS- II,III & IV: OPT. (x) SACRED CENTRES IN INDIAN CIVILIZATION

COURSE CODE: HIS 604

Objective: The aim of this paper is to acquaint the students with the evolutionary, functional and financial aspects of the sacred places of major systems of religious beliefs which served as important centres of pilgrimage. One national level centre of each major religious systems like Vaishnavism, Shaivism, Shaktism, Sufism and Sikhism has been taken as a case study to reflect the multi-cultural character of Indian subcontinent.

Pedagogy: The classroom teaching is supplemented by showing the slides of each sacred centre and power point presentation for greater effectiveness. The continuous evaluation is based on internal assessment which comprises of unit tests, presentation of seminar and classroom participation of the students.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Notion of Sacred and spread of centres; social, cultural and economic functions; resources and patronage; temple functionaries: Priestly class, non-priestly and managerial class; Devadasis.

Unit II

The temple at Tirumala-Tirupati: its resources and patronage; economy of the temple of Jagannath at Puri; its administration; emergence of temple towns in Gokul and Nathdwara; its mode of worship.

Unit III

Emergence of Varanasi as a Shaiva Centre; continuity and change; Shakta centres in Himachal; rituals and practice of religious suicide in Prayag; the Kumbha fair at Prayag.

Unit IV

Emergence of Dargahs in India; Ajmer Sharif - the functionaries and its management; the Urs festival; history and control of the Golden Temple; its mode of worship.

Essential Readings

Currie, P.M., *The Shrine and Cult of Mu 'in-al-Din Chishti of Ajmer,* Delhi: Oxford University Press, 1989.

Dubey, D.P., *Prayaga- The Site of Kumbha Mela*. New Delhi: Aryan Books International, 2001.

Jindal, Rajendra, *Culture of a Sacred Town*, Bombay: Popular Prakashan, 1976.

Kaur, Madanjit, *The Golden Temple: Past and Present*, Amritsar: Guru Nanak Dev University, 1983.

Mishra, K.C., *The Cult of Jagannatha*, Calcutta: K.L. Mukhopadhyay, 1971.

Sachdeva, Veena, 'Emergence of Temple Towns in North India: Gokul and Nathdwara', *Research Journal Social Sciences*, Vol.13, Number 1, 2005, pp.121-31.

Saraswati, Baidyanath, *Kashi: Myth and Reality of a Classical Cultural Tradition,* Shimla: Indian Institute of Advanced Study, 1975.

Sitapati, P. Srivenkateswara, *The Lord of the Seven Hills*, Bombay: Tirupati, Bhartiya Vidya Bhavan, 1989.

Troll, Christian W., *Muslim Shrines in India: Their Character, History and Significance*, Delhi: Oxford University Press, 1989.

Reference Readings

1. E. Hem, 'Temple Town Hintland : The present Network of 'Religious Economy in Puri' in Eschmann, Annsharlot, Hermann Kulke and Gaya Charan Tripathi, *The Cult of Jagannath and the Regional Tradition of Orissa*, Delhi: Manohar Pande, Rekha, The Devidas, in 1978, PP 439-48.
2. Grewal, J.S., *Religious Movements and Institutions in Medieval India,* Vol. VII, Part II, New Delhi: Oxford University Press, 2006 PP 493-504.
3. Jordan, Kay K., *From Sacred Servant to Profane Prostitute*: *A History of Changing Legal Status of the Devadasis in India,* 1857-1947, Delhi: Manohar, 2003 PP 493-504.
4. Nandi, R.N., *Religious Institutions and Cults in the Deccan*, Delhi: Motilal Banarsidass, 1973.
5. Patnaik, N., *Cultural Tradition in Puri*, Shimla: Indian Institute of Advanced Study, 1977.
6. Reddy V. Narayana & A Munirathnam Reddy, "History and Patronage of Tirumala- Tirupati Devasthanam," Social Anthropology of Pilgrimage, (ed Makhan Jha), 140-73.
7. Ramanaiah, J., *Temples of South India*, New Delhi: Concept Publishing Company, 1989.
8. Sachdeva, Veena, 'Sikh Regurgance and Control: The Golden Temple, *Social Transformation in North-Western India During the 20th Century* (ed. Chetan Singh), New Delhi: Manohar, 2010, pp 53-82.
9. Saraswati Baidyanath, *The spectrum of the Sacred*, New Delhi: Concept Publishing Co., 1984.
10. Sharma, Mahesh, *The Realm of Faith, Subversion, Appropriation and Dominance in Western Himalaya*, Shimla, Indian Institute of Advanced Study, 2001.

PAPERS- II, III & IV: OPT. (xi): SCIENCE, TECHNOLOGY AND MEDICINE IN COLONIAL INDIA (KEPT IN ABEYANCE FOR 2015-18)

COURSE CODE: HIS 603

Objective: The course examines a new theme in Indian history and looks at the introduction of science, technology and medicine by the colonial power. The objectives of colonial authorities, the organizational structure and the responses of the people are studied to understand the social impact of these new elements in Indian society.

Pedagogy: The course builds on the basic information of the colonial time and introduces the student to recent works on the theme to understand the larger context of colonial rule.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Science in pre-colonial times; development of colonial scientific policy; exploration and surveys - Rennel, Mackenzie, Lambton, Buchanan; administration of science; science in education and research.

Unit II

Technology and the Raj: Transfer of technology and British perspective; technology and agriculture; technology and railways; introduction of the telegraph; techology and shipping; technical education.

Unit III

Indigenous medicine and folk practices; early initiatives for health and medicine; colonial state and epidemics - smallpox, cholera, plague; nature of British medical policy; health and hegemony.

Unit IV

Response and Resistance to colonial science, technology and medicine; nationalist views; emergence of Indian scientific community; role of scientific leaders; science, state and nation.

Essential Readings

Arnold, David, *Colonizing the Body*, Delhi: Oxford University Press, 1993.

Arnold, David, *Science, Technology and Medicine in Colonial India*, Cambridge University Press, 2000.

Baber, Zaheer, *Science of Empire*, Delhi: Oxford University Press, 1998.

Deepak Kumar, *Science and the Raj*, Delhi: Oxford University Press, 1995.

Roy Macleod and Deepak Kumar, *Technology and the Raj*, Delhi, Sage.

Reference Reading

Kerr, Ian J., *Building the Railways of the Raj 1850-1900*, Delhi: Oxford University Press, 1995.

Sangwan, S., *Science, Technology and Colonization*, Delhi: Anamika, 1990.

Sen, S.N., *Science and Technological Education in India*, Delhi: INSA, 1991.

Stone, Ian, *Canal Irrigation in British India*, Delhi: Oxford University Press, 1986.

PAPERS- II, III & IV: OPT. (xii): HISTORY OF SECULARISM IN MODERN INDIA
(KEPT IN ABEYANCE FOR 2015-18)

COURSE CODE: HIS 602

Objective: Here we examine the idea of secularism, its origins in the west and the dilemmas in implementing this idea in India.

Pedagogy: Class room lectures and discussions form the bases of instruction.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Scope, concepts and method :

1. Secularisation and secularism: Social Science perspectives.

2. The emergence of the nation state and its relationship with secularism and religion.

3. Secularism in the Enlightenment tradition and thereafter in Europe.

Unit II

Efforts to engage diverse traditions and interests :

1. The Sikh traditions and the idea of a secular state: Ranjit Singh.

2. Maulana Mohamed Ali, Maulana Abul Kalam Azad, the idea of a secular state and the conflict between pluralism and fundamentalism within the Islamic traditions.

3. Reform and revivalism in the nineteenth century Hindu tradition, Vivekananda, Arya Samaj and the RSS.

Unit III

Secularism in the formation of an Indian identity :

1. The Gandhian perspective

2. The Nehruvian perspective

3. The Constitution of India and legislating for secularism.

Unit IV

The struggle for ideological space in recent times :

1. The majority-minority conundrum.

2. Communalism and communal riots since independence.

3. The conflicting perspectives of Fundamentalism and Pluralism.

Essential Readings:

Madan, T N., *Modern Myths, Locked Minds: Secularism and Fundamentalism in India,* Oxford University Press, New Delhi, 2003.

Chandra, Bipan, *Communalism in Modern India*, Vikas, New Delhi, 1984.

Saberwal, Satish, *India: the crisis within*, Oxford University Press, 1996.

Smith, Donald Eugene, *India as a Secular State*, Oxford University Press, Oxford, 1968.

Reference Readings:

Ahmed, Akbar S., *Rediscovering Islam: Making Sense of Muslim History and Society*, Routledge and Kegan Paul, London, 1988.

Azad, A. K., *India Wins Freedom,* Bombay, Orient Longman, 1959.

Babb, Lawrence A., *Redemptive Encounters: Three Modern Styles in the Hindu Tradition*, University of California Press, Berkeley, 1986.

Baxi, Upendra and Bhiku Parekh eds., *Crisis and Change in Contemporary India*, Sage, New Delhi, 1995.

Bayly, Chris A., *Indian society and the Making of the British empire***,** Orient Longman, Hyderabad.

Berger, Peter L., *The Social Reality of Religion*, Penguin, London, 1973.

Bhaduri, Amit *et. al.,* **"**A Statement on Scientific Temper", *Mainstream,* 25 July 1981.

CAD., *Constitutent Assembly Debates: 1948-49*, Loksabha Secretariat, New Delhi [also available for download on the website of the Parliament of India].

Chatterjee, Partha., **"**Secularism and toleration", *Economic and Political weekly,* 1994 pp. 1768-77.

Datta, V. N., *Masulana Azad,* Manohar, New Delhi, 1990.

Dube, S. C. and Basilov V. N. eds., *Secularization in Multi-Religious Societies*, Concept, New Delhi, 1988.

Gandhi, Rajmohan., *Understanding the Muslim Mind*, Penguin, New Delhi, 1987.

Glasner, Peter., *The Sociology of Secularization*, Routledge and Kegan Paul, London, 1977.

Goyal, D. R., *Rashtriya Swayamsewak Sangha*, Radhakrishna Prakashan, New Delhi, 1979.

Haq Mushirul., *Islam in secular India*, Indian Institute of Advanced Studies, Simla, 1972.

Hardy, Peter., *The Muslims of British India*, Cambridge University Press, Cambridge, 1971, reissued in 1996.

Hasan, Mushirul, *Mohamed Ali*, Manohar, New Delhi, 1981.

Nehru, Jawaharlal, *The Discovery of India*, The Signet Press, Calcutta, 1946 [many later reprints also available].

O'Connell, Joseph T. *et al.* eds., *Sikh History and Religion in the Twentieth Century,* University of Toronto, Toronto, 1988.

Singh, Mohinder, *The Akali Movement*, Macmillan, New Delhi, 1978.

PAPERS II, III & IV: OPT. (xiii) CULTURAL HISTORY OF ANCIENT INDIA

COURSE CODE: HIS 432

Objective: To examine the cultural history of Ancient India

Pedagogy: Class room lectures, discussions, visits to museums and places of cultural importance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

History of early Indian literature**:** Sanskrit, Buddhist and Sangma; study of original texts: Mriechakattikam and Manimekhali; Panchatantra: Loss of Friends and The Winning of Friends; Jataka Tales: The Great Dream, The Monkey's Heroic Self-sacrifice, the White Six-tusked Elephant; The Three Wise Birds, The Ugly Bridegroom and The Nineteen problems.

Unit II

Architecture and Sculpture**:** Buddhist Architecture; Stupa, Chaitya and Vihara; Hindu temple architecture: Nagar, and Dravida; study of Iconography with special reference to the *Pratimalaksana of Visnudharmottara* Purana; Indian Sculpture Gandhara, Mathura and Chola bronze.

Unit III

Painting and Music**:** Theoretical foundations with special reference to *Chitra-laksana;* The Hindu View of Art-theory of beauty; the Beauty is a State: Indian Painting with special reference to Ajanta, Bagh, Ellora; South Indian Painting traditions like Pannamalai, Kanchipuram and Sittanavasal; Indian Music; Iconography of Indian Music and History of Dance; History of Early Music with special reference to key concepts: Raga, Ragini, Tala and genre like South and North India Music.

Unit IV

Dramaturgy and Dance**:** Study of Natyasastra: an introduction to key concepts; Natyasastra and the regional threatre; Rasa Bhava Hasta abhinaya; Sharira-mudra, Chhanda, Vritti and The Dance of Siva.

Essential Readings:

Basham, A. L., *The Wonder That Was India, Delhi: Rupa, Reprint. 2002.*

Basham, A.L., *A Cultural History of India*, Delhi: Oxford University Press, 1978 (Ch: XVI "Music" by N. Jairozbhoy).

Chatterji, S.C., ed., *The Cultural Heritage of India,* Vol. V., Calcutta: Ramakrishna Mission, 1978. (Part II: Chapters 13-18).

Ram Dhamija, ed. *Sixty Years of Writing on Art and Crafts in India*, Delhi: Sterling, 1988.

Francis and Thomas. tr , *Jataka Tales*, (or any other translation that one may like) Delhi: India Book House, 2004.

Ryder W. Arthur, tr. *Panchantantra,* (or any other translation that one may like), Delhi: India Book House, 2004.

Tomory Edith, *A History of Fine Arts in India and the West*, Bombay: Orient Longman, 1982. rep.1992.

Unni. P.N. ed. & tr., *Natyasastra*: Text with Introduction, Vols. I and II, Delhi, Nag Publishers, 1998 (Vol1: Introduction; Vol.II: Translations). (Chapters, 6,7,9,10,14,15).

Reference Readings:

A.K. Bhattacharya and Srikumara, *Citralaksana: A Treatise on Indian Painting*, Calcutta: Saraswata Publishers, 1974.

Gangoly, O.C., *South Indian Bronzes: A Historical Survey of South Indian Sculpture with Leonographical Notes based on Original Sources*, Calcutta: Nababharat, 1978.

Massey, Rina Singha and Reginald, *Indian Dances: Their History and Growth*, London: Faber, 1967.

Rowland Benjamin, *The Arts and Architecture of India: Buddhist-Hindu-Jain,* Harmondsworth: Penguin, 1967.

S.K. Saraswati, *Survey of Indian Sculpture,* Calcutta: K.L. Mukhopadhyay, 1957.

Sharma, Mahesh, "State Formation and Cultural Complex in Western Himalaya: Chamba Genealogy and Epigraphs-700-1650 CE," *The Indian Economic and Social History Review,* 2004, Vol.43, 4, 487-510.

Sharma, Mahesh, "Puranic Texts from Kashmir: Vitasa and River Ceremonials in the Nilamata Purana", *South Asia Research*, 2008, Vol.28, No.2, 123-145.

Spink, Walter, *Ajanta: History and Development,* Leiden/Boston: Brill, 2005.

PAPER II, III & IV: OPT. (xiv) MEDIEVAL INDIAN ART AND MONUMENTS

COURSE CODE: HIS 424

Objective: The aim of this paper is to acquaint the students with architectural monuments constructed during the medieval period. In fact, each of the Muslim dynasties which established itself in the Indian subcontinent created its own architectural style and bequeathed a wealth of outstanding secular and religious buildings, this paper studies the main features of these buildings. It also discusses the developments in painting, dance & music.

Pedagogy: Lectures, visits to museums and monuments, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Forms of Architecture of the Sultanate period; detailed study of Qutb Complex; the Tughlaq Monuments; Sayyid, Lodhi and Sur Architecture.

Unit II

Deccan Style of Architecture**:** Bidar; Golconda; Bijapur; Vijaynagar.

Unit III

Early phases of Mughal Architecture; Akbar's buildings at Fatehpur Sikri; elements of change under Jahangir; crystallisation of Mughal style under Shah Jahan; Islamization of architecture under Aurangzeb.

Unit IV

Establishment of Shahi Qalam; emergence of new traditions under Jahangir; response to European techniques and themes; paintings at the courts of Rajput rulers of the Punjab hills; Music.

Essential Readings

Asher, Catherine B., *Architecture of Mughal India*, The Cambridge History of India, Part I, Vol. 4, New Delhi: Cambridge University Press, 1995.

Beach, Milo Cleveland, *Mughal and Rajput Painting*, Cambridge: The New Cambridge History of India, 1992.

Brown, Percy, *History of Indian Architecture, (Islamic Period), D.B. Taraporevala Sons & Co. Pvt. Ltd., Mumbai, 1997*.

Juneja Monika (ed.), *Architecture in Medieval India*, Delhi: Permanent Black, 2001.

Koch, Ebba, *Mughal Architecture: An Outline of its History and Development (1526-1858),* New Delhi: Oxford University Press, 2002.

Merklinger, Elizabeth Schotten, *Sultanate Architecture of Pre-Mughal India*, New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd., 2005.

Reference Readings

Ahmed, Aziz, *Studies in Islamic Culture in the Indian Environment*, New Delhi: Oxford University Press, 2000 (first pub.1963).

Chandra, Satish, *Medieval India From Sultanate to the Mughals*, *Delhi Sultanate (1206-1526), Part One*, New Delhi: Har Anand Publications Pvt. Ltd., 1997.

Goswamy, B.N. & B. Fisher, *Wonders of a Golden Age,* Zurich, Museum Rietberg, 1987.

Hussain Yusuf, *Glimpses of Medieval Indian Culture,* Bombay: Asia Publishing House, 1973 (reprint).

Koch, Ebba, *Mughal Art and Imperial Ideology Collected Essays,* New Delhi: Oxford University Press, 2001.

Majumdar, R.C.(ed.), *The History and Culture of the Indian People, Vol.VII*, Bombay: Bhartiya Vidya Bhavan, 1980.

Qaisar, Ahsan Jan and Verma, Som Parkash, (eds.), *Art and Culture: Endeavours in Interpretation*, New Delhi: Abinav Publications, 1996.

Sharma, Sunil, *Painting the Mughal Experience*, New Delhi: Oxford University Press, 2005.

Verma, Som Parkash, *Mughal Painters and Their Work: A Biographical Survey and Comprehensive Catalogue*, New Delhi: Oxford University Press/Centre of Advanced Study in History, Aligarh Muslim University, 1994.

Rizvi, S.A.A., *The Wonder That was India*, Vol.II, Picador India, 2005.

Semester IV shall consist of the following four papers		**Code**	**Title of paper**	**Credits**
	Paper I:	HIS 126	Punjab in the Twentieth Century (Compulsory)	6 Credits
	Paper II: Any one of the following	HIS 911	Opt.(i) History and Historiography	6 credits
		HIS 912	Opt.(ii) History and Historical Method	6 credits
	Papers III & IV: Any two papers from the list	HIS 721	Opt. (i) Industry, Trade & Urbanization in Medieval India	6 credits
		HIS 730	Opt. (ii) Industry and Trade in Modern India	6 credits
		HIS 731	Opt. (iii) Working Class Movements in Modern India	6 credits
		HIS 733	Opt. (iv) Urbanization in Modern India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 455	Opt. (v) Diaspora in Colonial India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 467	Opt. (vi) Peasant Movements in Modern India	6 credits
		HIS 471	Opt. (vii) Dalit Movements in Modern India	6 credits
		HIS 462	Opt. (viii) History of Caste and Caste Politics in Modern India **(KEPT IN ABEYANCE FOR 2015-18)**	6 credits
		HIS 438	Opt. (ix) Buddhism in India	6 credits
		HIS 426	Opt. (x) Islamic Traditions of Medieval India	6 credits
		HIS 428	Opt. (xi) Religious Developments in Medieval India	6 credits
		HIS 418	Opt. (xii) Socio-Religious Reform Movements in Modern India	6 credits

SEMESTER - IV

PAPER I: PUNJAB IN THE TWENTIETH CENTURY (COMPULSORY)

COURSE CODE: HIS 126

Objective: The course traces the history of Punjab from 1901 to 1966 focusing on how the agrarian policies and legislations passed by the British Raj in these years affected the Punjab Peasantry. How the discontentment led the Peasantry to join the National Movement which Gandhi spearheaded. Punjab's participation in the various phases is discussed particularly the phase of partition and how the province was further bifurcated in 1966.

Pedagogy: The course is to be taught through class room lectures and discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Punjab from 1901 to 1920's: Land Alienation Act of 1901- The Agrarian Agitation of 1907, The Ghadar Movement; Rowlatt Satyagraha, Jallianwala Bagh and the marital law; Formation of Punjab National Unionist Party, 1923.

Unit II

Punjab in 1920's: The Akali Agitation or Gurdwara Reform Movement; The Babbar Akalis 1921-22; The Congress Party in Punjab 1920's, Left wing groups of parties-1920's; Peasants Protests -1924-29.

Unit III

Punjab in 1930's-1940's: The Civil Disobedience and Punjab; Agitations Around Land Revenue; Unionists under Provincial Autonomy; Struggle for freedom during World War II (1939-1945);Responses to the demand of Pakistan; Congress and Sikh Politics 1940-1947, partition and its effects on the Punjabis.

Unit IV

Punjab after partition: Towards the Punjabi Province 1947-1966; Reorganization of Punjab 1966; Reorganization Act of 1966.

Essential Readings

Ali, Imran, *The Punjab under Imperialism 1890-1947*, Delhi: Oxford University Press, 1989.

Bal, S.S., *A Brief History of Modern Punjab,* Ludhiana: Lyall Book Depot, 1974

Bal, S.S. *British Administration in the Punjab and its Aftermatch*; Amritsar, Guru Nanak Dev University, 1986.

Banerjee, Himadri, *Agrarian Society in the Punjab, 1849-1901,* New Delhi: Manohar, 1982.

Banga, Indu, (ed.), *Five Punjabi Centuries: Polity, Economy, Society and Culture c.1500,* Delhi: Manohar 1997.

Banga, Indu, *Agrarian System of the Sikhs*, New Delhi, Manohar, 1978.

Barrier, N.G., *The Sikhs and their Literature,* New Delhi: Manohar, 1970.

Dayal, Ravi (ed.) *We fought together for freedom*; Indian Council of Historical Research, Oxford University Press, Delhi, 1995

Mohan, Kamlesh, *Militant Nationalism in the Punjab*, New Delhi: Manohar, 1985.

Mukherjee, Mridula, *Colonializing Agriculture*, Modern Indian History Series, New Delhi: Sage India, 2005.

Mukherjee, Mridula, *Peasants in India's Non-violent Revolution,* Modern Indian History Series, New Delhi: Sage India, 2004.

Ram, Raja, *The Jallianwala Bagh Massacre*, Panjab University, Chandigarh, 1978.

Riar, Sukhmani Bal, *The History and Politics of the Central Sikh League,* Chandigarh : Unistar, 2006.

Riar, Sukhmani Bal, *The Politics of the Sikhs 1940-1947*, Chandigarh: Unistar, 2006.

Singh, Mohinder, *The Akali Movement,* New Delhi: Macmillan, 1985.

Singh Parambakshish and Verma Devinder Kumar, *Punjab and the Freedom Struggle*, Patiala, Punjabi University, 1998.

Talbot, Ian, *Punjab and the Raj, 1849-1947*, Delhi: Manohar, 1988.

Tai Yong Tan and Gyanesh Kudaisya, *The Aftermath of Partition in South Asia,* Routledge Studies in the Modern History of Asia, London: 2000.

Tuteja, K.L., *Sikh Politics, 1920-1940,* Kurukshetra, 1984.

Van den Dungen, P.H.M., *The Punjab Tradition: Influence and Authority in the Nineteenth Century India*, London, 1972.

Reference Readings

Grewal, J.S., *The Sikhs of the Punjab, New Cambridge History of India*, New Delhi: Orient Longman, 1990.

Grewal, J.S., *The Akalis: A Short History,* Chandigarh: Punjab Studies Publications, 1966.

Islam, M.M., *Irrigation, Agriculture and the Raj, Punjab 1887-1947*, New Delhi: Manohar, 1997.

Kirpal Singh, *The Partition of the Punjab,* Patiala: Punjabi University, 1972.

Mahajan Sucheta, *Anti British Agitation in 1907 Punjab*, Punjab History Conference Proceedings fifteenth session, 1981.

Pritam Singh and Shinder S.Thandi (eds.), *Punjabi Identity in a Global Content,* Delhi: Oxford, 1999.

Rai, Satya. M., *Legislative Politics and Freedom Struggle in Punjab 1897-1947,* New Delhi: Peoples Publishing House, 1984.

Singh, Parduman and Joginder Singh Dhanki, eds., *Buried Alive: Autobiography, Speeches and Writings of an Indian Revolutionary*, New Delhi: Sardar Ajit Singh, 1984.

Sukhwant Singh, *Agricultural Growth under Colonial Constraints in the Punjab: 1849-1947,* Delhi: Manmeet Prakashan, 2000.

Talbot Ian, *The Growth of the Muslim League in the Punjab, Journal of Commonwealth and Comparative Politics,* 20-1-1982.

Tanwar, R., *Politics of Sharing Power: The Punjab Unionist Party 1923-1947*: New Delhi: Manohar, 1999.

Paper II: Any one from the followings:

PAPER II: OPT. (i) HISTORY AND HISTORIOGRAPHY

COURSE CODE: HIS 911

Objective: This paper provides an understanding of the meaning and nature of history and emphasizes on the value and interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Definition, historical facts; purpose and scope; value of studying history; categories of historical evidence; questions of genuineness and reliability of evidence; question of bias and objectivity; meaning of causation and handling of causes.

Unit II

History as Literature and as Science; History and Allied Disciplines of Archaeology, Geography; Sociology and Social Anthropology; Psychology and Economics; contribution of "The Annales School".

Unit III

Orientalists with special reference to William Jones; concerns of the Administrator-Historians; Nationalist historiography- its emergence, concerns, assumptions, strengths and limitations.

Unit IV

Marxist historiography- its new perspectives and strength and limitations; treatment of Colonialism and Indian Nationalism; Subaltern historiography – their critique of existing historiography; themes, sources, techniques and strength and limitations; emerging new trends with special reference to feminist history and postmodernism.

Essential Readings

Aymard, Maurice and Harbans Mukhia eds., 'Introduction', *French Studies in History,* New Delhi: Orient Longman, 1989, 2 vols.

Carr, E.H., *What is History*, Penguin Books, 1990 (also available in Hindi translation).

Chandra, Bipan, 'Nationalist Historians' Interpretations of the Indian National Movement', *Situating Indian History for Sarvapalli Gopal*, eds. Sabyasachi Bhattacharya and Romila Thapar, Delhi: Oxford University Press, 1986, 194-238.

Chandra, Bipan and others, 'Introduction', *India's Struggle for Independence, 1857-1947*, Delhi: Viking/Penguin Books, 1989, 13-33.

Das, Veena, 'Subaltern as Perspective', *Subaltern Studies VI*, Delhi: Oxford University Press, 1992, 310-24.

Grewal, J.S., *Medieval India: History and Historians*, Amritsar: Guru Nanak Dev University, 1975.

Guha, Ranjit, 'On Some Aspects of Historiography of Colonial India', *Subaltern Studies I,* Delhi: Oxford University Press, 1986, 1-8.

Habib, Irfan, *Essays in Indian History*, New Delhi: Tulika, 1998.

Marwick, Arthur, *The Nature of History*, New York: Macmillan, 1970.

Mathur, L.P., *Historiography and Historians of Modern India*, New Delhi: Inter-India Publications, 1987.

Mukhopadhyay Subodh Kumar, *Evolution of Historiography in Modern India, 1900-1960,* Calcutta, K.P. Bagchi, 1981.

Philips, C.H.(ed.), *Historians of India, Pakistan and Ceylon*, London: Oxford University Press, 1961.

Sarkar, Sumit, 'The Decline of the Subaltern in Subaltern Studies', *Writing Social History*, New Delhi: Oxford University Press, 1997, 82-108.

Sreedharan, E., *A Textbook of Historiography: 500 B.C. to A.D. 2000,* New Delhi: Orient Longman, 2004.

Stone, Lawrence:, *History and Social Sciences in the Twentieth Century: The Future of History* ed. Charles F. Delzell, Nashville: Vanderbilt Univ. Press, 1997.

Webster, C.B. John:, *Studying History,* New Delhi, 1977.

Reference Readings

Banga, Indu, *Causation in History*, Shimla: Indian Institute of Advanced Study, 1992.

Bhattacharya, Sabyasachi, 'Reflections on Concept of Regional History', *Perspectives on Indian Society and History*, ed. Hetukar Jha, New Delhi: Manohar, 2002, 81-90.

Barzun, Jasques and Graff, Henry F., *The Modern Researcher*, New York: Harcourt Brace Jovanvich, 1977 (3rd edn.)

Chandra, Satish, "Decentring of History", *Essays on Medieval Indian History*, New Delhi: Oxford University Press, 2003.

Elton, G.R., *The Practice of History*, London: Collins-Fontana, 1976.

Gottschalk, Louis, *Understanding History: A Primer of Historical Method,* New Delhi: Alfred A. Knopf, 1968.

Grewal, J.S., *Muslim Rule in India: The Assessment of British Historians*, Calcutta: Oxford University Press, 1970.

Jenkins, Keith, *On What is History?* London, Routledge, 1995.

Sen, S.P. ed., *Historians and Historiography in Modern India,* Calcutta: Institute of Historical Studies, 1973.

Thapar, Romila, 'Ideology and Interpretation on Early Indian History', *Interpreting Early India*, Delhi: Oxford University Press, 1994, 1-22.

PAPERS II: OPT (ii) HISTORY AND HISTORICAL METHOD

COURSE CODE: HIS 912

Objective: This paper provides an understanding of the meaning and nature of history and emphasizes on the value of interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

The historical fact; relationship between the historian and the facts; society and historian; importance of social forces; history as science; history as literature.

Unit II

History as a study of causes; problem of determinism; problem of chance; value judgments in history; objectivity in history.

Unit III

Categories of primary sources; problems of genuineness and reliability of literary sources; oral evidence; evaluation of secondary sources; questions historians ask.

Unit IV

Widening scope of history; history and archeology; history and geography, demography and economics; history and sociology and anthropology; history and literature; the value of history.

Essential Readings:

Carr, E.H., *What is History*?, Penguin: 1990 (also available in Hindi and Punjabi).

Webster, John C.B., *Studying History*, Delhi: Macmillan, 1997.

Reference Readings:

Appleby, Joyce, Lynn Hunt and Margaret Jacob, *Telling the Truth about History*, New York: W.W. Norton, 1994.

Banga, Indu, *Causation in History*, Shimla: Indian Institute of Advanced Study, 1992.

Barzun, Jaques and Henry F. Graff, *The Modern Researcher*, New York: Harcourt Brace Jovanovich, 1992 (5th ed).

Bloch, Mark, *The Historian's Craft*, Manchester: Manchester University Press, 1984 (translated by Peter Putnam).

Elton, G.R., *The Practice of History*, Oxford: Blackwell, 2002.

Gottschalk, Louis, *Understanding History, A Primer of Historical Method*, New Delhi: Alfred A. Knopf, 1968.

Hexter, J.H. *The History Primer*, New York: Basic Books, 1971.

Jenkins, Keith, *On What is History*, London: Routledge, 1995.

Landes, David S. and Charles Tilly (eds.), *History as Social Science*, Englewood Cliffs: Prentice-Hall, 1971.

Marwick, Arthur, *The Nature of History*, Basingstoke: Macmillan Education, 1989.

Rosenau, Pauline Marie, *Post-Modernism and the Social Science: Insights, Inroads and Intrusions*, Princeton: Princeton University Press,1992.

Singh, Surinder and Ishwar Dayal Gaur (eds.), *Popular Literature and Pre- Modern Society in South Asia*, New Delhi: Pearson-Longman, 2007.

Stone, Lawrence, 'History and Social Sciences in the Twentieth Century', *The Future of History,* ed. Charles F. Delzell, Nasville: Vanderbilt University Press, 1997.

Vansina, Jan, *Oral Tradition: A Study in Historical Methodology*, London: Eurospan, 2006 (trs. H. M. Wright).

Papers III & IV: Any two papers from the following:

PAPERS III & IV: OPT. (i) INDUSTRY, TRADE & URBANIZATION IN MEDIEVAL INDIA

COURSE CODE: HIS 721

Objective: This paper focuses on the Urban Economy of the Medieval period and looks with detail at the Urban pattern, Trade and Industry, Administration of towns and Social Classes in towns. It aims to introduce the urban dimension to students of Medieval India to add to their basic understanding of the period.

Pedagogy: Students will be introduced to new readings on the theme and a familiarization with debates on several issues.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Urban pattern in the early medieval period; urban revolution in the 13th century; urban development upto mid 18th century; types of urban centres; morphology of towns; administration of towns.

Unit II

Major industries – textiles, metal work; forms of organization; technology and labour; profile of medieval craftsmen; state policy; case studies – Shahjahanabad, Agra, Surat.

Unit III

Major trade routes; organization of trade; items, volume and trade pattern; currency, credit and monetary system; markets; state control; case studies—Chief Trading Centres.

Unit IV

Urban classes; nobility; commercial and trading classes; professional classes; artisans and craftsmen; labouring classes and slaves; courtly and popular culture.

Essential Readings

Abul Khan Muhammad Farooque, *Roads and Communications in Mughal India*, Adab-I-Adabiyat-i-Delhi, Delhi, 1977.

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, Delhi, 1978.

Blake, Stephen, *Shahjahanbad*, Cambridge University Press, 1993.

Chattopadhyaya, B.D., *The Making of Early Medieval India*, Delhi: Oxford University Press, 1994.

Grewal, Reeta, 'Urbanization in Medieval India' in *The State & Society in Medieval India* (ed, J.S. Grewal), Delhi: 2005, Oxford University Press, PHISPC, 396-429.

Gupta, I.P., *Urban Glimpses of Mughal India: Agra the Imperial Capital,* Discovery, Delhi, 1986.

Habib, Irfan and Tapan Raychaudhari, eds., *The Cambridge Economic History of India*, Vol.I, Orient Longman, 1984.

Habib, Mohammad, 'Introduction' to *Elliot and Dawson's History of India*, Vol.II, Aligarh reprint, 1-102.

M.P. Singh, *Town, Market, Mint and Ports Towns in the Mughal Empire*, Delhi: Adam, 1985.

Naqvi, H.K., *Urban Centres & Industries in Upper India*, Bombay: Asia, 1968.

Naqvi, H.K., *Urbanization and Urban Centres under the Great Mughals*, Shimla: IIAS, 1971.

T.Chitchern, A.I., *India: Changing Economic Studies in 16th-18th Centuries*, Delhi: Manohar, 1998.

Vanina, Eugenia, *Urban Crafts and Craftsmen in Medieval India*, Delhi: Munshiram Manoharlal, 2004.

Reference Readings

Bayly, C.A., *Rulers, Townsmen and Razaars: North India Society in the Age of British Expansion*, Oxford University Press.

Chenoy, Shama Mitra, *Shahjahanabad: City of Delhi 1638-1857*, Delhi: Munshiram Manoharlal, 1998.

Mallick, B.S., *Money Banking & Trade in Mughal India*, Jaipur: Rawat, 1991.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595*, Delhi: Oxford University Press, 1987.

Moreland, W.H., *India at the Death of Akbar: An Economic History*, Atma Ram & Sons, 1962.

Moreland, W.H., *From Akbar to Aurangzeb*, Delhi: Oriental Books, 1972 (reprint).

Naqvi, H.K., *Agriculture, Industry and Urban Dynamism under Sultans of Delhi*, Delhi: Munshiram Manoharlal, 1986.

Richards, J.F. ed., *The Imperial Monetary System of Mughal India*, Delhi: Oxford University Press, 1987.

Subramanyam S., ed., *Money and Markets in India*, Delhi: Oxford University Press, 1998.

PAPERS III & IV: OPT. (ii) INDUSTRY AND TRADE IN MODERN INDIA

COURSE CODE: HIS 730

Objective: To examine the manner of early trade and industry in India and the evolution of private enterprise.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Trade and East India Company: Growth; Composition; value of Trade; Balance of Trade; Impact of Presidency banks and Exchange banks on trade.

Unit II

Foreign Trade 1857-1947: Reasons of Trade expansion, Composition; Export and Import; Balance of Trade; Direction; Impact of two world wars on Indian foreign trade.

Unit III

The traditional artisanal industries: the de-industrialisation question; Nature of modern industry under the colonial rule- major industries- Cotton, Textile, Jute, Iron and Steel; reasons of industrial expansion; Industrial entrepreneurship.

Unit IV

Industrial Labour under the Colonial rule: Wages and Standard of Wing; Trade union movement; Labour Disputes, Labour Legislation.

Essential Books

Asiya, Siddique, *Trade and Finance in Colonial India*, *1750-1860*, Oxford: Oxford University Press, 1995.

Bagchi, A.K., *Private Investment in India, 1900-1939*, Cambridge: Cambridge University Press, 1972.

Buchanan, D.H., *The Development of Capitalistic Enterprise in India,* New York: Macmillan, 1939.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India*, New Delhi: PPH, 1982 (reprint).

Godgil, D.R., *The Industrial Evolution of India in Recent Times, 1860-1939*, Bombay: Oxford University Press, 1975 (reprint).

Mehta, S.D. , *The Cotton Mills of India*, 1854-1954, Bombay: Textile Association, 1954.

Ray Chaudhary and Dharma Kumar (eds)., *The Cambridge Economic History of India, 1757-1970*, Vol.II, Hyderabad, 1984.

Reference Readings

Morris, M.D., *The Emergence of an Industrial Labour Force in India,* Berkeley: University Press, 1965.

Chaudhari, K.N., *The Economic Development of India under the East India Company, 1814-1858*, Cambridge: Cambridge University Press, 1971.

Sen, S.K., *Studies in Industrial Policy and Development of India, 1858-1914,* Calcutta: Progressive Publishers, 1964.

Singh, V.B.(ed.), *Economic History of India, 1857-1956*, Bombay: Asia, 1965

Thorner, D., 'De-industrialization in India' in his *Land and Labour in India*, Bombay: Asia, 1962.

Tirthankar, Roy, *Cloth and Commerce: Textiles in Colonial India*, New Delhi: Sage, 1996.

PAPERS III & IV: OPT. (iii) WORKING CLASS MOVEMENT IN MODERN INDIA

COURSE CODE: HIS 731

Objective: The present paper traces the history of working class movement and studies the formation and working of trade unions in India. It examines the factors facilitating or retarding the growth of the trade union movement. The constitution and functioning of the AITUC and other unions are also analysed.

Pedagogy: Lectures, discussions, tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Rise and growth of plantation industries- indigo, coffee, tea and rubber, railway and coal mining; development of modern factory industries- cotton, jute, iron and steel industries and the rise of industrial labour force; impact of Marxian Socialism w.s.r.t. Karl Marx in India; repercussions of the factory legislations, emergence and working of labour unions of Europe in India.

Unit II

Condition of Indian workers including women and child labour; Factory Legislations - Indian Factory Act of 1881, 1891 and 1911; Outbreak of the First World War and large industrial unrest among workers - their strikes; Russian Revolution of 1917 and its impact.

Unit III

Formation of I.L.O. (1919) and the foundation of All India Trade Union Congress (AITUC, 1920); the constitution of AITUC; the functioning of AITUC; role of communist party of India between 1925-29, organization of Workers' and Peasants' Parties, Split in AITUC (1929).

Unit IV

Role of Left Wing - Congress Socialist Party and CPI; reunion of 1935 and spurt in the activities of Trade Unions (1936-1939); Indian Working Class and the National Movement; Government's attitude towards it; Second World War and its impact, resurgence in Working Class activities (1945-1947).

Essential Readings

Chandra Bipan, *Rise and Growth of Economic Nationalism in India*, New Delhi: People's Publishing House, 1982.

Dange S.A., *On the Indian Trade Union Movement*, Bombay: A Communist Party Publication, 1952.

Dutt Palme, *India Today,* Bombay: People's Publishing House Ltd., 1949 (2nd revised Indian edition).

Dutt Romesh, *The Economic History of India in the Early Age*, Delhi: Routledge, 2000.

Gadgil D.R., *The Industrial Evolution of India in Recent Times,* 1860-1939, Bombay: Oxford University Press, 1971 (5th ed.).

Giri, V.V., *Labour Problems in Indian Industry*, Bombay: Asia Publishing House, Reprint, 1960.

Karnik V.B., *Indian Trade Unions – A Survey,* Bombay: Manaktalas*,* 1966.

Kumar Dharma and Raychaudhri Tapan (ed.), *The Cambridge Economic History of India*, Volume 2: c.1757-c.1970, New Delhi: Orient Longman and Cambridge University Press, 1991.

Mehta, B.L., *Trade Union Movement in India,* Delhi: Kanishka Publishing House, 1991.

Reference Readings

Buchanan D.H., *The Development of Capitalist Enterprise in India*, New York: Macmillan, 1934.

Chandra, Bipan, Mukherjee Mridula and others, *India's Struggle for Independence 1857-1947,* Delhi: Penguin Books.

Desai A.R., *Social Background of Indian Nationalism*, Bombay: Popular Prakashan, (fifth ed. 1976) Bombay, reprint, 1984.

Giri V.V., *My Life and Times*, Volume I, Delhi: Macmillan, 1976.

Sarkar Sumit, *Modern India,* Delhi: Macmillan, 1983.

Sen Sukomal, *Working Class in India: History of Emergence and Movement*, 1830-1970, Calcutta, 1964.

Singh V.B. and Saran A.K., *Industrial Labour in India*, Asia Publishing House, Bombay, 1960.

Forbes, Geraldine, *The New Cambridge History of India, IV.2 Women in Modern India*, Cambridge: Cambridge University Press, 2000 (2nd reprint).

PAPERS III & IV: OPT. (iv) URBANIZATION IN MODERN INDIA
(KEPT IN ABEYANCE FOR 2015-2018)

COURSE CODE: HIS 733

Objective: The course introduces a new perspective and analyses the process of urbanization in India from the mid 18th to the 20th century. The changing patterns of urban development in the regional context; new urban forms, new social and economic institutions, urban administration and urban problems are examined. Case studies allow for an indepth analysis of the urban dimensions adding to our understanding of history and the impact of urbanization on society.

Pedagogy: The key concepts and context are taken up in class discussion which incorporates urban studies from allied disciplines as well. Maps and diagrams form an integral part of study.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Urban patterns in the mid 18th century; urban development in the colonial period; factors influencing urbanization; types of urban centers; case study of New Delhi- phases of growth, town planning and society.

Unit II

New Urban Forms: the hill station; cantonement; civil lines; colony town; the port cities; case study- Bombay- growth, morphology and social structure.

Unit III

Early administration in towns; introduction of municipal government; municipal functions and working; resources; nature of urban government in colonial times.

Unit IV

Urbanization in post-independence India; regional patterns; classification of urban places; urban problems- slums, lack of civic amenities, haphazard growth; urbanization policy; case study- Chandigarh- plan, growth and social dimensions.

Essential Readings

Avasthi, A. *Municipal Administration in India,* Agra: Lakshmi Narayan, 1972.

Banga, Indu (ed.), *The City in Indian History*, Delhi: Manohar, 1994.

Banga, Indu (ed.), *Ports and Their Hinterlands in India 1700-1950*, Delhi: Manohar, 1991.

Banga, Indu and J.S. Grewal (eds), *Studies in Urban History*, Amritsar: GNDU, 1983.

Bayly, C.A., *Rulers Townsmen and Bazaars*, Delhi: Oxford University Press, 1992.

Frykenberg, R.E. (ed), *Delhi Through the Ages,* Delhi: Oxford University Press, 1993.

Gadgil, D.R., *The Industrial Evolution of India in Recent Times*, Delhi: Oxford University Press, 1994.

Gupta, Narayani, *Delhi Between Two Empires*, Delhi: Oxford University Press, 1981.

Kalia, Ravi; *Chandigarh: The Making of an Indian City*, Delhi: Oxford University Press, 1988.

King, Anthony; *Colonial Urban Development*, London: Routledge & Kegan Paul, 1976.

Ramachandran, R., *Urbanization and Urban Systems in India*, Delhi: Oxford University Press, 1999 (8th impression, 1st published 1989).

Sharma, Kavita et al., *Chandigarh Lifescape: Brief Social History of a Planned City,* Chandigarh: Chandigarh Administration, 1999.

Reference Readings

Bose, Ashish, *India's Urbanization,* Delhi: Tata Mcgraw Hall, 1978.

Broeze, Frank (ed), *Brides of the Sea: Port Cities of Asia from the 16th to the 20th Centuries*, New South Wales University Press, 1983.

D'Souza, Victor S., *Social Structure of a Planned City*: *Chandigarh*: Bombay: Orient Longman, 1968.

Didee, Jayamala and Rangaswamy (eds), *Urbanization Trends, Perspectives and Challenges*, Jaipur: Rawat Publications, 1993.

Heggade, Odeyar D., *Urban Development in India*, Delhi: Mohit, 1998.

Prakasa Rao, V.L.S., *Urbanization in India: Spatial Dimensions,* Delhi: Concept, 1983.

Mitra, Asok, *Functional Classification of Indian Towns,* : Delhi: Institute of Economic Growth, 1973.

Sunderam, K.V., *Urban and Regional Planning in India*, Delhi: Vikas, 1977.

PAPERS III & IV: OPT. (v) DIASPORA IN COLONIAL INDIA **(KEPT IN ABEYANCE FOR 2015-2018)**

COURSE CODE: HIS 455

Objectives: The course aims to familiarize the students to the concept of 'Diaspora' and trace the different categories of Indian Diaspora. The different stages of colonial migrations to British plantation colonies are discussed with reference to the nineteenth and twentieth centuries. The course highlights the social and economic position vis-à-vis other ethnic communities and India's policy towards her diaspora.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Diaspora: the concept origin evolution and contemporary usage; Diasporic identities and their nature; categories of Indian Diaspora; People of Indian Origin and NRIs; Regional, linguistic, religious and caste divisions.

Unit II

Different Stages of Colonial Migrations: Emigration to British Plantation colonies Fiji; Surinam; Guyana; Mauritius; Malaysia; Trinidad & South Africa; their economic position and social status.

Unit III

Migrations in the 20th century: Indian Diaspora in Western Countries (USA, UK and Canada); Migration to Canada & the USA in late 19th and 20th centuries; Migration between 1920s to 1947; Migrations of professionals to USA, Canada, Australia and other developed nations; Migrations to Gulf Countries.

Unit IV

Indian Diaspora, Social and Economic Position: Indian Diaspora with reference to their social status (Race and Ethnicity); Economic position vis-à-vis other ethnic communities; participation and cultural activities; India's policy towards her Diaspora.

Essential Readings:

Arasaratnam, Sinnappah; *Indians in Malaysia and Singapore*, 1970, Reprint, Bombay: Oxford University Press, 1979.

Aurora, Gurdip Singh, *The New Frontiersmen: A Sociological Study of Indian Immigrants in the United Kingdom*, Bombay: Popular, 1967.

Barrier, N. Gerald, and Verne A. Dusenbery, ed; *The Sikh Diaspora: Migration and Experience Beyond Punjab*, Columbia: Modern South Asian Books, 1989.

Bachu, P.K., *Twice Emigrants: East African Sikh Settlers in Britain*, New York: Tavistock Publications, 1985.

Buchignani, Norman., *Immigration and Adaptation and the Management of Ethnic Identity: An Examination of Fijian East Indians in British Columbia*, Ph.D. thesis, Simon Fraser University, 1977.

Buchinani, Norman and Doreen M. Indra; *Continuous Journey: A Social History of South Asian in Canada:* Toronto, Mcclelland and Stewart, 1985.

Desai, Rashmi, *Indian Immigrants in Britain*, London: Oxford University Press, 1963.

Gillion, K.L., *Fiji Indian Migrants: A History of the End of Indenture in 1920,* Melbourne: Oxford University Press, 1962.

Hardwick, Francis C. (ed), *From Beyond the Western Horizon: Canadians from the Sub-Continent of India*, Vancover: Tantalus Research, 1974.

Helweg, A.W, *The Sikhs in England: The Development of a Migrant Community, 1979* (ed), Delhi: Oxford University Press, 1986.

Hirabyashi, Gordon and K. Victor Ujimoto, *Visible Minorities and Multiculturalism: Asians in Canada,* Toronto: Bullerworth, 1980.

Jain, Sushil K., *East Indians in Canada*, Windsor Canadian Bibliographic Centre, 1970.

Jane Singh, et al. eds., *South Asians in North America*, Berkeley: Centre for South and Southeast Asia Studies, University of California, 1988.

Jensen, Joan M, *Passage from India: Asian Indian Immigrants in North America*, Yale University Press, 1988.

Johnston, Hugh, *The Voyage of Kama Gata Maru: The Sikh Challenge to Canada's Colour Bar*, Delhi: Oxford University Press, 1979.

Lepervanche, Marie, M.De; *Indians in White Australia*, London: George Allen and Univin, 1984.

Mangat, J.S., *A History of the Asians in East Africa*, Oxford: Claredon Press, 1970.

Mcleod, W.H., *Punjabis in New Zealand*, Amritsar: GNDU Press, 1986.

Robinson, Vaughn, *Transients, Settlers and Refugees,* Oxford: Clarendon Press, 1986.

Sandhu, K.S., *Indians in Malaya,* Cambridge University Press, 1969.

Watson, J.L. ed., *Between Two Cultures*, Oxford: Basil Blackwell, 1977.

Reference Readings

Agnihotri, *For Migratory Patterns with Punjab to Canal Colonies*, 1987.

Bains, Tara Singh and Hugh Johston, *The Four Quarters of Night: The Life Journey of the Emigiant Sikh,* Montereal: Mc-Gill dueens University Press.

Ballantyne, Tony, *B/W Colonialism and Diaspora Sikh Cultural Formation in an Imperial World*.

Bali, Judith & Manohar S. Bal (ed), *Sikh in Ontario*, Toronto: Ontario Council of Sikhs, 1993.

Basran, Gurcharan S. and B. Singh Bolaria, *The Sikhs in Canada – Migration, Race, Class and Gender*, New Delhi: Oxford University Press, 2003.

Basch, Glick Schiller & Szanton Blanc, *Nations Unbound: Transnational Projects Post-colonial Predicaments & Detenitoulization Nations States*, Amsterdam: Gordon and Breech, 1993.

Dogra, Ravi, *Indo-Canadian*, Tantallon: N.S. Yeast Publications, 1987.

Ghosh, Ratna & Rabindra Kanungo, *South-Asian Canadians: Current Issues in Politics of Culture*, Calgary: Shastri Indo-Canadian Institute, 1992.

Gundara, Jaswinder, *Splinkered Dreams: Sikhs in Southern Albata*, Calgary: Awsha International Development Resources Centre, 1985.

Hall, Patricia Wong & Victor M. Hwang (eds), *Anti Asian Violence in North America: Asian American & Asian Canadian rejection on Hate, Healing & Resistance*, Walnut Greek: Altanica Press, 2001.

Heather, C. Hudak, *Sikhs in Canada,* Weigh Educational Publishers (distributed by Saunders books, 2005).

Jagpal Sarjeet Singh, *Decomong Canadian: Pioneer Sikhs in their own words*, Columbia: Harbour Publishing Vancouver, 1994.

Mc Leod W.H., *Who is a Sikh? The Problem of Sikh Identity*, Oxford University Press, 1989.

Mukherjee, Miridula, *Peasant Rebellion*

Minhas, Manmohan Singh (Moni), *The Sikh Canadians* , Edmonton Alberta: Reidmore Books Inc., 1994.

Ralston, Helen, *The Lived Experiences of South Asian Immigrant Women on Atlantic Canada: The Interconnections of Race, Class and Gender*, Lewiston, N.Y.: Edwin Mellon Press, 1996.

Sandeep S. Brar, *Century of Struggle and Success: The Sikhs Canadians Experience.*

Singh, Kesar, *Canadian Sikh (Part I) & Kamaghata Maru Massacre*, British Columbia: Kesar Singh, Suney, 1989.

PAPERS III & IV: OPT. (vi) PEASANT MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 467

Objectives: This course introduces the student to the complex issue of peasant movements in India in the twentieth century.

Pedagogy: The course is based on lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Historiography of the Peasant Movements in India; Definition of Peasants; Class consciousness; Family and kinship ties, caste and peasantry in India.

Unit II

Classification of peasants, Growth of modern landlordism- commercialisation of agriculture & its impact on land relations.

Unit III

Agrarian Conditions(1900-1947): Movements of prices, rent & revenue, british policies towards the landlords; Impact of First World War on Peasantry, Great Depression & Peasantry, The intensification after struggle for rent, relief & land; Peasant Movements- Champaran Satyagraha, Kheda Movement, Kisan Sabha , Moplah uprising.

Unit IV

Peasant Movements (1928-1947): Baradoli agitation (1928), Peasant movements during the Civil Disobedience Movement (1930-1934), Formation of the first All India Kisan Sabha (1938), Peasant investment (1946-47), Telangana uprising, The National Movement and the Indian Peasantry.

Essential Readings:

Chandra, Bipan, *The Rise and Growth of Economic Nationalism*, Bombay, 1976.

Chaudhury, B.B., *History of Peasant Movements in British India: Some New Perspectives*, Indian Historical Review, July 1983-84, New Delhi.

Desai, A.R., *Social Background of Indian Nationalism*, Bombay, 1976.

Dhanagare, D.N., *Peasant Movements in India 1920-1950,* New Delhi, 1989.

Guha, Ranjit, *Elementary Aspects of Peasant Insurgency in Colonial India*, Oxford, 1983.

Hardiman, David, *Peasant Resistance in India, 1858-1914,* New Delhi: 1992.

Henringham, Stephen, *Peasant Movements in Colonial India*: North Bihar 1917-1942, Canberra, 1982.

Mukherjee, Mridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism*, New Delhi: Sage Publications, 2005.

Mukherjee, Mridula, *Peasant in India's Non-violent Revolution: Practice and Theory,* New Delhi, 2003.

Ray Chaudhary and Dharma Kumar (eds.). *The Cambridge Economic History of India, 1757-1970*, Vol.II, Hyderabad, 1984.

Reference Readings

Dhanagare, D.N., *Agrarian Conflict, Religion and Politics: The Moplah Rebellions in Malabar in the 19th and early 20th centuries, Past and Present*, No.74, February 1977, pp.112-41.

Dutt, R.C., *The Economic History of India*, Vol.II, New Delhi, 1972 (Reprint).

Dutt, R.P., *India Today,* Bombay, 1949.

Sarkar, Sumit, *Modern India, 1885-1947,* New Delhi, 1983, reprint 2005.

Singh, V.B. (ed.), *Economic History of India*, 1857-1936, Bombay, 1965.

Stokes, Eric, *The Peasant and the Raj: Studies in Agrarian Society and Peasant Rebellion in Colonial India*, Cambridge: 1978.

Teodor, Shanin, *Peasant and Peasant Societies,* England, 1971.

Max Harcourt, *Kishan Populism and Revolution in Rural India: The 1942 Disturbances in Bihar and East United Provinces*, Indian Historical Review, July 1983 – January 1984.Habib, Irfan, *Peasant in Indian History,* Presidential

Address delivered at the 43rd Session of the I.H.C., 1992.

Rothermund, D., *Government Landlord and Peasant in Indian Agrarian Relations under British Rule, 1865-1935,* Weisbaden, 1978.

PAPERS III & IV: OPT. (vii) DALIT MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 471

Objective: The paper accounts for and interprets the phenomena of caste in India as a stratified social hierarchy prevalent from ancient times. Academic debates on the evolvement of caste, and the concept of jati and varna, reaction to Brahmanical strategies as arbiters of moral order and the rise of Bhakti saints , give an understanding on the emergence of the Dalit identity in the Indian context. The paper also discusses caste and gender and the movement for social justice, political participation and autonomy for dalits. Recent political parties have generated a new consciousness of equality in society among the dalits.

Pedagogy: Method would include lectures, discussions, review, seminars, powerpoint presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Historical origins and Development of Caste; Bhakti modes of legitimacy for modern change; Chokhamela; Eknath; Ravidas; The context of Dalit revolt.

Unit II

Nineteenth Century background of Mahar and Non-Brahman movement in Maharashtra; Emergence of Dalit Movement 1900-1930, Nagpur; Hyderabad; Mysore and Punjab; Western 'Orientalists' and the colonial perception of caste; Caste and Gender.

Unit III

Ideology of Ambedkar; The American experience of Ambedkar; 'Ambedkarism' the Theory of Dalit Liberation; A Study in Leadership of Gandhi: Ambedkar; Revival of Buddhism.

Unit IV

Constitutional Safeguards; Caste based reservations; Non Political activism between 1970s-1990s; Political Parties-B.S.P., S.P.; Dalit Identity in Contemporary India.

Essential Readings

Ambedkar, B.R. ,*The Untouchables,* Bombay: Thacker & Company, 1948.

Bayly, Susan, *Caste Society and Politics in India from the Eighteenth Century to the Modern Age*, Cambridge: Cambridge University Press, 1999.

Brass, Paul.R., *Caste, Faction and Party in Indian Politics* Vol.I, New Delhi: Chanakya Publications, 1983.

Chalam, K.S., *Caste Based Reservations and Human Development in India*, New Delhi: Sage, 2007.

Dhaka, S. & Dhaka, R., *Behind the Veil: Dalit Women in Panchayati Raj*, New Delhi: Abhijeet, 2005.

Kothari, Rajni ed., *Caste in Indian Politics*, New Delhi: 1970.

Mohanty, Monoranjan*, Class Caste Gender*, New Delhi, Sage: 2007.

Omvedt, Gail, *Dalits and the Democratic Revolution*, New Delhi: Sage, 1992

Report of the Backward Class Commission, *Also known as the Mandal Commission Report,* available in soft format at http://www.socialjustice.in/documents/, 1980.

Shah, Ghanshyam (Ed). *Dalit Identity and Politics,* New Delhi: Saga Publications, 2001.

Zelliot, Eleanor*, From Untouchable to Dalit*, New Delhi: Manohar Publishers.

Reference Readings

Ambedkar, B.R., *What Congress and Gandhi have done to the Untouchables*, Bombay: Thacker & Company, 1945.

Chandel, K. *Social and Cultural Development of Indian Dalits.,* New Delhi: A.B.P. Publishers, 2007.

Ghurye, G.S., *Indian Sadhus,* Bombay: Popular Parkashan, 1964.

Gupta, Depankar, *Caste in Question Identity or Hierarchy*, New Delhi: Sage, 2007.

Gupta, S.K., *The Scheduled Castes in Modern Indian Politics; Their Emergence as a Political Power*, New Delhi, 1985.

Hutton, J.H. *Caste in India: Its Nature, Function and Origin*, London: Oxford University Press, 1963.

Kamble, N.D., *Atrocities on Scheduled Castes: In Post Independence India*, New Delhi: Ashish Publications House, 1981.

Khare R.S. *The Untouchable as Himself: Ideology, Identity and Pragmatism among the Lucknow Chamars*, Cambridge: Cambridge University Press, 1984.

Michael, S.M. (Ed.).*Dalits in Modern India*, New Delhi: Vistar Publications, 1999.

Michael, S.M., *Dalit in Modern India*, New Delhi: Sage, 2007.

Omvedt, Gail, *The Anti Caste Movement and the Construction of an Indian Identity*, New Delhi: Orient Longman, 2006.

Rai, Sudha*., Dalit Assertion and the Unfinished Democratic Revolution: The Bahajuna Samaj Party in Uttar Pradesh Cultural Subordination and the Dalit Challenge.* New Delhi: Sage, 2002.

Rao, V., *Dr. B.R. Ambedkar: Champion of Human Rights in India*, Delhi: Manak, 2006.

Satyanaryana, A*., Dalits and Upper Caste: Essays in Social History*, New Delhi: Kanishka, 2005.

Shah, Ghanshyam, *Dalit Identity and Politics: Cultural Subordination and the Dalit Challenge*, New Delhi: Sage, 2001.

Singh, Rajendra, *The Depressed Classes of India*, New Delhi: B.R. Publishing House, 1986.

PAPERS III & IV: OPT. (viii) HISTORY OF CASTE AND CASTE POLITICS IN MODERN INDIA (KEPT IN ABEYANCE FOR 2015-2018)

COURSE CODE: HIS 462

Objective: To trace the evolution of caste and caste politics in modern India.

Pedagogy: Class lectures, tutorials, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Scope, concepts and method

An introduction to the debates about caste; its historiography and the nature of power in society; The debate on the nature of hierarchies in society in India and the west; the caste-class conundrum; Presence of caste in the historiography of the national movement.

Unit II

The period of the anti-colonial movements

The "Indian renaissance" of the nineteenth century and the issue of caste; Manifestations of caste based exclusion; and protest against caste discrimination in the 19th and early 20th century; Efforts and inclusions based on caste during the national movement.

Unit III

Creation of a formal infrastructure for social inclusion and its working

Caste and the constitution of 1950; Antinomies in operationalising the constitutional provisions; and State sponsored social and economic welfare schemes for the upliftment of the people in a plural society; The Mandal Commission of 1979, an analysis of its recommendations; and the social and political impact on politics in modern India.

Unit IV

The democratisation of India's polity since the 1960s

Politicisation of caste in the electoral arena, 1950-1967; the rise to power of regional parties; and their caste based successes; The politics of inclusion and its impact on national integration.

Essential Readings

It is recommended that the extensive collection with the A C Joshi library at Panjab University, the British Council Library, Sector 9 Chandigarh and the Central State Library, Sector 34, Chandigarh be consulted for a more extended reading list.

Bayly, Susan , *Caste, Society and Politics in India from the Eighteenth Century to the Modern Age*, Cambridge University Press, Cambridge, 1999.

Dirks, Nicholas , *Castes of Mind*, Princeton University Press, Princeton, 2001.

Guha, Ramchandra, *India after Gandhi: the History of the World's Largest Democracy***,** Picador, New Delhi, 2007.

Kothari, Rajni ed., *Caste in Indian Politics*, New Delhi 1970.

Quigley, Declan, *The Interpretation of Caste*, Oxford University Press, Delhi, 1999.

Report of the Backward Classes Commission, *Also known as the Mandal Commission Report***,** available in soft format at http://www.socialjustice.in/documents/, 1980.

Reference Readings

Jaffrelot , Christophe , *India's Silent Revolution*, Columbia University Press, New York, 2003.

Khilnani, Sunil, *The Idea of India***,** Farrar, Straus and Giroux**,** London 1999.

Report of the National Commission to Review the Working of the Constitution (Venkatachaliah report), "Pace of social change" available at http://lawmin.nic.in/ncrwc/finalreport/v1ch10.htm, 2002.

Satyanarayana, A, *Dalits and Upper Caste: Essays in Social History*, Kanishka, New Delhi, 2005.

Srinivas, M.N. , "The Social System of a Mysore Village", in McKim Marriot, ed, *Village India***,** Chicago University Press, Chicago, 1955, pp. 1-35.

PAPER III & IV: OPT. (ix) BUDDHISM IN INDIA

COURSE CODE: HIS 438

Objective: To trace the origins of Buddhism in India since ancient times.

Pedagogy: Class room lectures, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Development in Brahmanical religion during the post-Vedic period; State formation and the rise of Mahajanapadas; second Urbanization; new religious ideologies and the principal contemporary sects of Buddhism.

Unit II

Buddhist metaphysics- Four Noble Truth; Noble Eight-fold path; Ahimsa; social dimensions, Gender; the Councils and their significance.

Unit III

Background of the origin and growth of Buddhist arts; Architecture of the Stupas and the Chaityas; a case study of Sanchi stupa; sculptural arts of Gandhara and Mathura; foreign influence on sculptures; Ajanta paintings.

Unit IV

Explaining Buddhist decline in the context of Brahmanical revival, Vajrayana, etc.; B.R. Ambedkar and its Revival; Ambedkar's interpretation of the origin of Shudras; Future of Buddhism in India.

Essential Readings

Bapat, P.V. (ed.), *2500 Years of Buddhism*, Mahabodhi Int. Meditation Centre, Leh-Ladakh, 1996.

Chakravarti, Uma, *The Social Dimensions of Early Buddhism,* Delhi, Oxford University Press, 1987.

Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.

Horner, I.B., *Women under Primitive Buddhism*, Delhi: Motilal Banarsidas, 1995.

Mitra, R.C., *The Decline of Buddhism in India*, Vishna Bharati Studies, 1954.

Omvedt, Gail, *Buddhism in India Challenging Brahmanism and Caste*, Sage Pub., New Delhi, 2003.

Paul, Diana, *Women in Buddhism,* California, Asian Humanities Press, 1979.

R.C. Dutt, *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983.

Sarao, K.T.S., *Origin and Nature of Ancient Indian Buddhism*, Taiwan, Buddha Educational Foundation (4th ed.), 2004.

Reference Readings

Conze, E., *Buddhist Thought in India*, George Allen & Unwin Ltd., London, 1967.

Dube, S.N., *Cross Current in Early Buddhism*, Manohar Pub., 1980.

Duerlinger, *Indian Buddhist Theories of Persons,* Routledge Curzon, London, 2005.

Dutt, N., *The Spread of Buddhism and Buddhist Schools*, Rajesh Publication, Delhi, 1980.

Lee-Kwangsu, *Buddhist Ideas and Rituals in Early India and Korea*, Manohar, Delhi, 1998.

Murti, T.R.V., *Buddhism*, Harper Coelins, Noida, 1998.

Nakamura, H., *Indian Buddhism: A Survey*, Motilal Banarsidas, Delhi, 1980.

Oldenberg, H., *Buddha: His Life and Doctrines*, Aravati Book, Delhi, 1997.

Pande, G.C., *Studies in the Origin of Buddhism*, Univ. of Allahabad, 1957.

Pande, G.C., *Buddhist Studies in India*, Motilal Banarsidas, Delhi, 1975.

Paul, Gronen, *A History of Indian Buddhism*, Motilal Banarsidas, Delhi, 1993.

Pathak, R.K., *Historical Survey of Indian Buddhism*, Ramanand Vidhya Bhawan, Delhi, 1989.

Sengupta, Sudha, *Buddhism in the Classical Age (400-750 AD)*, Sandeep Prakashan, Delhi, 1985.

PAPERS III & IV: OPT. (x) ISLAMIC TRADITIONS OF MEDIEVAL INDIA

COURSE CODE: HIS 426

Objectives: This paper places the Islamic traditions of medieval India in the larger context of the rise of Islam in West Asia. Apart from the theological and mystical dimensions of Islam in medieval India, it highlights the emergence of the popular syncretic culture that grew around the major sufi shrines. It also seeks to study the process of Islamization in three regions viz. Punjab, Kashmir and Bengal. This paper assumes significance in the light of the crisis that seems to afflict the Islamic societies in different parts of the world, besides serving as an intellectual response to the growing misunderstanding regarding Islam and its historical role.

Pedagogy: The teaching of this paper is based on the pioneer works of stalwarts like Khaliq Ahmad Nizami and Saiyid Athar Abbas Rizvi. In a large measure, it relies on the contributions of Richard M. Eaton that have fundamentally changed our understanding of the subject. While discarding monolithic explanations and unscientific stereotypes, this paper opens the mind to a complex and multi-layered past.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I (Theology and Mysticism)

Rise and expansion of Islam in West Asia and its significance in the world history; political, legal and theological structure of Islam; Muslim religious life and ulama in India during the thirteenth century; features of the mystic ideology; organization of the Chishti and Suhrawardi orders.

Unit II (Cult of Shrines)

The role of saints in Islam; rituals and management of the Ajmer shrine; the legend of Salar Masud Ghazi, structure, festivities and practices at the Bahraich shrine; the shrine of Shaikh Farid at Pakpattan, its linkages with state, society and God.

Unit III (Liberal and Revivalist Trends)

The socio-religious outlook of Abul Fazl. The mission of Shaikh Ahmad Sirhindi and its impact; the works of Dara Shukoh on mysticism, comparative religion and Hinduism.

Unit IV (Process of Islamization)

Conventional theories of religious conversion; rooting of Islam in Bengal; Islamization in south-west Punjab and the Pakpattan shrine; the role of sufi folk literature in the diffusion of Islam.

Essential Readings

Ahmad, Aziz, *Studies in Islamic Culture in the Indian Environment*, New Delhi: Oxford University Press, (Reprint), 2003.

Alavi, Azra, *Socio-Religious Outlook of Abul Fazl,* Delhi: Idarah-I-Adabiyat-I-Delli*,* (Reprint), 1983.

Currie, P.M., *The Shrine and Cult of Muinuddin Chishti of Ajmer*, New Delhi: Oxford University Press, (Reprint), 2006.

Eaton, Richard M., *The Rise of Islam and the Bengal Frontier 1204-1760*, New Delhi; Oxford University Press, (Reprint), 1997.

Eaton, Richard M., *Essays on Islam and Indian History*, New Delhi: Oxford University Press, 2000.

Friedmann, Yohanan., *Shaykh Ahmad Sirhindi: An Outline of His Thought and a Study of His Image in the Eyes of Posterity,* New Delhi: Oxford University Press, (Reprint), 2000.

Nizami, Khaliq Ahmad, *Religion and Politics in India During the Thirteenth Century*, New Delhi: Oxford University Press, (New Edition), 2002.

Rizvi, Saiyid Athar Abbas*, Muslim Revivalist Movements in Northern India in the Sixteenth and Seventeenth Centuries,* New Delhi: Munshiram Manoharlal, (Reprint), 1990.

Singh, Surinder and Ishwar Dayal Gaur (ed.) *Sufism in Punjab: Mystic Literature and shrines,* Delhi: Akar, 2009.

Troll, Christian W., (Ed.), *Muslim Shrines in India: Their Character, History and Significance,* New Delhi: Oxford University Press, 2003.

Vanina, Euginia*, Ideas and Society in India from 16th to 18th Century*, New Delhi: Oxford University Press, 1996.

Yasin, Mohammad, *A Social History of Islamic India*, New Delhi: Munshiram Manoharlal, (Reprint), 1974.

Reference Readings

Amin, Shahid, "On Retelling the Muslim Conquest of North India", in *History and the Present*, Ed., Partha Chatterjee & Anjan Ghosh, New Delhi: Permanent Black, 2002.

Eaton, Richard M., (Ed.), *India's Islamic Traditions 711-1750*, New Delhi: Oxford University Press, 2003.

Ernest, Carl W., *Eternal Garden: Mysticism, History and Politics at a South Asian Sufi Centre,* New Delhi: Oxford University Press (Second Edition), 2004.

Hasrat Bikramjit, *Dara Shukoh: Life and Works*, New Delhi: Munshiram Manoharlal, (Reprint), 1982.

Islam, Riazul*, Sufism in South Asia: Impact on Fourteenth Century Muslim Society,* Karachi: Oxford University Press, 2003.

Jafri, S.Z.H. & Helmut Reifeld, (Eds.), *The Islamic Path: Sufism, Society and Politics in India*, New Delhi: Conrad Adenauer Stiftung & Rainbow Publishers, 2006.

Khan, M. Ishaq, *Kashmirs Transition to Islam: The Role of Muslim Rishis,* New Delhi: Manohar Publishers & Distributors, 1994.

Nizami, Khaliq Ahmad*, The Life and Times of Shaikh Nizamuddin Auliya*, New Delhi: Idarah-i-Adabiyat-i-Delli, 1991.

Qureshi, Ishtiaq Husain*, The Muslim Community of the Indo-Pakistan Subcontinent 610-1947,* The Hague, 1962.

Rizvi, Saiyid Athar Abbas*, Shah Wali Allah and His Times*, New Delhi: Munshiram Manoharlal, 1980.

Schimmel, Annemarie, *Islam in the Indian Subcontinent*, Leiden: E.J. Brill, 1980; Lahore: Sang-e-Meel Publications, (Reprint), 2003.

PAPERS III & IV: OPT. (xi) RELIGIOUS DEVELOPMENTS IN MEDIEVAL INDIA

COURSE CODE: HIS 428

Objective: The aim of this paper is to examine the developments in different religious systems during the medieval period of Indian history. It focuses on the continuity and change within Shaiva, Shakta and Vaishnava systems. It also deals with Krishna bhakti and its regional manifestations in Maharashtra, Bengla, Assam, Rajasthan and Gujarat. The objective of this paper is also to discuss Islam in its various forms and monotheistic movement started by Kabir, Ravidas, Dadu and Guru Nanak.

Pedagogy: Class room teaching, evaluation based on continuous internal assessment comprising of unit tests, presentation of seminars, classroom participation and attendance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Early Movements: Shaivism: Shaiv Sidhanta; Shaktism; Sri Vaishnavism and Rama Bhakti.

Unit II

The Cults of Krishna: The Varkaris in Maharashtra; Gaudhiya Vaishnavism in Bengal; Vaishnavism in Assam, the Vallabhacharya in Rajasthan and Gujrat; Mirabai.

Unit III

Islam in Medieval India: The Sunnis; the Shias; the Ismailies, Mahdavis and Raushanyas; Sufis orders': Chishtis, Suhrawardis, Qadaris, Naqashbandis.

Unit IV

The Saints and the Sikhs: Kabir, his social outlook, formation and development of Kabir-Panth; Sant Ravidas; Dadu and Dadu-Panth; The Sikh Movement: Guru Nanak to Guru Gobind Singh.

Essential Readings

Bhandarkar, R.G., *Vaishnavism, Shaivism and Minor Religious Systems*, Varanasi , 1965.
Burz Richard, *The Bhakti Sect of Vallabhacharya*, Faridabad: Thomson Press, 1965.
Deberry, William Theodore et.al. (comp.), *Sources of Indian Tradition*, Delhi: Munshiram Manoharlal, 1963.
Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

Majumdar, A.K., Chaitnya, *His Life and Doctrine: A Study in Vaishnaism,* Bombay: Bhartiya Vidya Bhavan, 1969.

Mishra, Neeru, *Sufis and Sufism: Some Reflections*, New Delhi: Manohar, 2004.

Rizvi, S.A.A., *Muslim Revivalist Movements in Northern India in the Sixteenth and Seventeenth Centuries*, New Delhi: Munshiram Manoharlal, 1990.

Rizvi, S.A.A., *A History of Sufism in India*, Vol.1, New Delhi: Munshiram Manoharlal, 1997.

Sharma, Krishna, *Bhakti and the Bhakti Movement: A New Perspective*, New Delhi: Munshiram Manoharlal, 1987.

Vandenille Charlotte, *Myths, Saints legends in Medieval India*, Delhi: Oxford University Press, 1999.

Vandenille Charlotte, *A Weaver Named Kabir*, Oxford: India Paperbacks, 1997.

Reference Readings

Ahmad Tarique, *Religio-Political Forment in the North-West Frontier during the Mughal Period (The Raushanya Movement)*, Delhi: Idarah-I-Adabiyat-Dilli, 1982.

Grewal, J.S., *The Sikhs of the Punjab*, Cambridge: Cambridge University Press, 1993.

Nandi, R.N., *Religious Institutions and Cults in the Deccan,* Delhi: Motilal Banarsidas, 1973.

O'Cannel, Joseph T., *Organisational and Indian Aspects of Indian Religious Movements,* Shimla: Indian Institute of Advanced Study, 1999.

Schomer Karine and W.H. Mcleod, eds., *The Saints: Studies in a Devotional Tradition of India,* Delhi: Motilal Banarsidas, 1987.

PAPERS III & IV OPT. (xii) SOCIO-RELIGIOUS REFORM MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 418

Objective: The course seeks to examine the variety of socio-religious reform movements in response to colonial rule in the regional context. The common links between them and their contrasts, and our understanding of the changes in the colonial times. Specific themes related to education, depressed classes, gender and identity are highlighted to study the conflict and competition in the socio-religious reform movements.

Pedagogy: The course utilizes recent research on the subject and critically examines 'stereotypes' on reform and debates on different issues to understand the larger context.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks for the written examination will be 80 and duration of the written examination will be 3 hours.

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions spread over the entire syllabus. The candidate is required to attempt any 10 short answer type questions. Each short question, carrying 2 marks, will be answered in 25-30 words.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Unit I

Society in the 18th century- traditional groups; New social categories; Colonial society; the historical origins of caste; western perceptions of caste; Impact of western education; critique of Indian society; social legislation.

Unit II

Socio-religious reform movements in Bengal and the north east India; in Bihar and Uttar Pradesh; Punjab and north west India; Central India and Maharashtra; South India.

Unit III

Agenda of social reformers; Response to new education; Attitudes towards the Depressed classes; Debates on sati; Age of consent; Widow remarriage.

Unit IV

Formation of socio-religious identities- Hindu consciousness; Muslim solidarity; Sikh identity; issues of conflict and competition; agents of social change.

Essential Readings

Bayly, Susan*, Caste, Society and Politics in India*, Cambridge University Press, 1999.

Desai, A.R., *Social Background of Indian Nationalism*, Delhi, 1962 (reprint).

Farquhar, J.N., *Modern Religious Movements in India.*

Grewal, J.S., *Perspectives of Sikh Identity*, Patiala, Punjabi University, 2001.

Jones, K.W., *Socio Religious Reform Movements in British India*, New Cambridge History, Delhi: Foundation Books, Delhi, 1994.

Lata Mani, *Contentious Traditions: Debate on Sati*, Delhi: Oxford University Press, 1998.

Nair, Janaki, *Women and Law in Colonial India*, Delhi: Kali for Women, 1996.

Rao, MSA, *Social Movements and Social Transformation,* Delhi, 1979.

Sen, S.P., *Social and Religious Reform Movement in the 19th & 20th Century*, Calcutta: 1999.

Reference Readings

Ahmad, *The Wahabhi Movement in India*, Delhi: Manohar, 1994.

Balrd, Robert, ed., *Religion in India*, Delhi: Manohar, 1975.

Heimseth, Chailes, *Indian Nationalism and Hindu Social Reform.*

Jones, K.W., *Arya Dharm*, Delhi: Manohar, 1989.

Metcalfe, Barbara, D., *Islamic Revival in British India*, Princeton, 1982.

Sudhir Chandra, *Social Transformation and Creative Imagination*, Delhi: 1984.

Webster, John C.B., *The Christian Community and Change in 19th Century North India*, Delhi: Manohar, 1976.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) EXAMINATIONS, 2016-2017

- : 0:-

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. Political Science (Semester System)

(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %

   (ii) Continuous Assessment : 20 %

   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.

   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
		Total :	**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES :

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

(iii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card (D.M.C.).

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF POLITICAL SCIENCE FOR M.A. (Semester System) i.e. 1st and 3rd SEMESTERS NOVEMBER/DECEMBER, 2016 AND 2nd and 4th SEMESTERS APRIL/MAY, 2017 EXAMINATIONS

Outlines of Test

Note : Each paper/course shall carry 4 credits/100 marks.

A semester shall have at least 60 hours of lectures and 15 hours of seminars in the papers included in the syllabus.

FIRST SEMESTER

Course I : Western Political Thought-I

Course II : Key Concepts in Political Analysis

Course III : Indian Politics : Institutions at work (Compulsory)

Course IV : International Relations : An Historical Overview

SECOND SEMESTER

Course V : Western Political Thought (II)

Course VI : Comparative Politics : Understanding Advanced Industrial Societies

Course VII : Indian Politics : Political Processes (Compulsory)

Course VIII : Approaches to the Study of International Relations.

THIRD SEMESTER

Course IX : Indian Political Thought-I (Compulsory)

Course X : Comparative Politics-II : Understanding Developing Societies (Compulsory)

Or

Comparative Political Systems with special reference to USA, UK, China, Japan & Switzerland (Compulsory)

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) International Organization

Option (b) Transnational Actors in International Politics

Option (c) Politics of Development in India

Option (d) Peace and Conflict Resolution

Option (e) Rethinking Geopolitics : Criactial Perspectives

Option (f) Theories of Development

Option (g) Public International Law-I

Course XII : ***The candidates are required to offer any one of the following courses :***

Option (a) Democracy in India

Option (b) Government & Politics of India's Neighbours (Pakistan, Bangladesh, Nepal and Sri Lanka).

Option (c) Women and Politics in India

Option (d) Rights : Ideas and Movements

Option (e) Nationalism : Theory and Context

Option (f) New Political Geography in Comparative Perspective

Option (g) Policies and Politics of Development in India

Option (h) Public Administration

FOURTH SEMESTER

Course XIII : Indian Political Thought-II (Compulsory)

Course XIV : Foreign Policy of India (Compulsory)

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) Parties and Electoral Politics in India

Option (b) State Politics in India

Option (c) Decentralized Governance and Local Level Institutions in India

Option (d) Political Sociology with special reference to India

Option (e) Representing "India" : Geopolitical Imaginations

Option (f) Dalit Movements and Issues in India

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) Feminist Political Theory

Option (b) Major themes in Recent Political Philosophy

Option (c) Readings in the Philosophy of Resistance and Liberation

Option (d) Contemporary Debates in 20th Century Marxism

Option (e) Introducing Federalism

Option (f) Public International Law-II

FIRST SEMESTER

Course I : WESTERN POLITICAL THOUGHT-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students to the major themes of western political thought. This will be done by undertaking an in-depth study of the key thinkers of this tradition.

Unit-I
1. Plato.
2. Aristotle.

Unit- II
1. St. Augustine.
2. St. Thomas Aquinas.

Unit-III

1. Machiavelli.
2. Hobbes.

Unit-IV
1. Locke.
2. Rousseau.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following secondary literature :

General Text Books :

1. Dunning, W.A., *A History of Political Theories,* Allahabad (any edition).
2. Ebenstein, William, *Great Political Thinkers,* IBH, Oxford (any edition).
3. Sabine, G.H., *A History of Political Theory,* Oxford and IBH, Bombay (any edition).
4. Russell, Bertand, *History of Western Philosophy,* Simon and Schuster, New York (any edition).
5. Strauss, Leo and Joseph Cropsey, *History of Political Philosophy,* Rand McNally, 1968.

Suggested Readings :

1. Allen, J.W., *A History of Political Thought in the Sixteenth Century,* Methuen, London, 1964 (Ch. II Machiavelli).
2. Bakshi, O.P., *Politics and Prejudice : Notes on Aristotle's Political Theory,* University of Delhi,1975.
3. Barker, E., "Introduction" in E. Barker (ed.), *The Politics of Aristotle,* OUP, Oxford.
4. Barker, E., *Greek Political Theory : Plato and His Predecessors,* Methuen, London, 1947.
5. Barnes, Jonathan, *Articles on Aristotle, Vol. 2, Ethics and Politics,* Duckworth, London, 1977.
6. Berlin, Isaiah, *The Originality of Machiavelli in I. Berlin, Against the Current,* OUP, Oxford, 1981.
7. Brian R. Nelson, *Western Political Thought,* Pearson, Delhi, 2004.
8. Brown, Keith C. (ed.), *Hobbes Studies,* Basil Blackwell, 1965.
9. Cole, G.D.H. (Translator), *The Social Contract and Discourses* by Jean Jacques Rousseau (Author) J.H. Brumfitt (Revised), London, Everyman's Library, 1993.
10. Colletti, Lucio, "Rousseau as Critic of Civil Society" in Lucio Colletti ed. From Rousseau to Lenin, OUP, Delhi, 1978.
11. Croix, GEM De Ste, *The Class Struggle in the Ancient Greek World,* Duckworth, London, 1981.
12. Crombie, I.M., *An Examination of Plato's Doctrines,* Vol. I R.K.P., London, 1962.
13. Cross, R.C. & A.B. Woozley, *Plato's Republic,* Macmillan, 1964.
14. Deane, Herbert, A., *The Politics and Social Ideas of St. Augustine,* Columbia University Press, New York, 1963.
15. Dunn, John, Locke, *Past Masters Series*, OUP, Oxford, 1984, Chs. 1 & 2.
16. Dunn, John, *The Political Thought of John Locke,* Cambridge University Press, Cambridge, 1969.
17. Filed, G.C., *The Philosophy of Plato,* London, 1969.
18. Gilby, Thomas, B., *The Political Thought of Thomas Aquinas,* University of Chicago Press, Chicago,1958.
19. Grimsley, Ronald, *The Philosophy of Rousseau,* OUP, London, 1973.
20. Hall, J.C., *Rousseau, Introduction to His Political Philosophy,* Macmillan, 1971.
21. Levinson, R.B., *In Defence of Plato,* Harvard University Press, Harvard, 1953.
22. Macpherson, C.B., "Introduction" in C.B. Macpherson (ed.), *Leviathan of Hobbes,* Penguin, Harmondsworth, 1968.
23. Macpherson, C.B., *Political Theory of Possessive Individualism, Hobbes to Locke,* OUP, London, 1962.
24. Masters, Roger D., *The Political Philosophy of Rousseau,* Princeton, 1968.
25. Muglan, R., *Aristotle's Political Theory,* Clarendon, Oxford, 1977.
26. Newman, N.L., *The Political Thought of Aristotle,* 4 Vols., Clarendon, Oxford, 1887-1902.
27. Pocock, J., *The Machiavellian Moment,* Princeton, 1975.
28. Popper, Karl, *The Open Society and Its Enemies,* Vol. I : The Spell of Plato, R.K.P., London, 1945.
29. Raphael, D.D., *Hobbes : Morals and Politics,* George Allen & Unwin, London, 1977.
30. Skinner, Q., *Machiavelli, Past Masters Series,* OUP, Oxford, 1981.
31. Skinners, Q., *Foundations of Modern Political Thought, Vol. 1 : The Rennaissance,* Cambridge University Press, Cambridge, 1978 (Chs. 4, 5, 6).

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Course II : KEY CONCEPTS IN POLITICAL ANALYSIS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course aims at introducing students to the key concepts which are the building blocks of political analysis. Each concept will be studied in terms of the main debates over its nature and scope in the discipline and its relationship with other concepts. After dong this course, the student will be able to discern the conceptural debates which underlie political phenomena.

Unit-I

What is Political? – Conflict, Class, Public and the Private
Power –Three Dimensional View of Power, Power as Influence, Exploitation, Hegemony, Power/Knowledge

Unit-II

State- Political Authority and Political Obligation, Modern State, State-Society relationship, Governmentality

Civil Society- Civil society and market, public sphere, civic virtue; community and civil society, State/civil society relationship

Unit III

Democracy- Who should rule and why? Protective, Pluralist and Radical democracy, Representation and Participation, Democracy and difference

Liberty – Negative and positive models, Civil and Political liberty, Freedom of expression, Alienation, Social conditioning and self realization

Unit-IV

Equality and Justice – Why equality; Equality of What; Universality and difference, Care
Rights- Natural, legal rights, human rights; Three generations of rights, Individual and group rights

Essential Readings:-

1. Andrew Heywood, *Political Theory*, Palgrave Macmillan, 2004 (Third Edition)
2. Andrew Heywood, *Politics*, Palgrave Macmillan, 2013 (Fourth Edition)
3. Rajeev Bhargava and Ashok Acharya (ed)*Political Theory: An Introduction* (Available in Hindi translation), Pearson Education, 2008
4. Andrew Vincent, *Modern Political Ideologies,* Wiley-Blackwell, 2010 (Third Edition)
5. Will Kymlicka, *Contemporary Political Philosophy* (Available in Hindi translation), OUP, 2002 (Second Edition)
6. Dudley Knowles, *Political Philosophy*, Routledge, 2001
7. Jonathan Wolff, *An Introduction to Political Philosophy,* OUP, 1996
8. John Dryzek, Bonnie Honig and Anne Phillips (eds), *The Oxford Handbook of Political Theory,* OUP, 2008
9. Jean Hampton, *Political Philosophy*, New Delhi, Oxford University Press, 1998

Suggested Readings:-

1. Adrian Leftwich: *What is Politics: The Activity and Its Study,* Polity Press, 2004
2. Amartya Sen, "Equality of What?" in S.M.McMurrin, ed., *The Tanner Lectures on Human Values*, Cambridge University Press, 1980, pp 195220.
3. Bhikhu Parekh, "Equality in a Multicultural Society", in *Rethinking Multiculturalism*, Palgrave, 2000
4. Colin Gordon et.al, eds., *The Foucault Effect: Studies in Governmentality*, University of Chicago Press, 1991
5. Craig Calhoun, "Civil Society and Public Sphere", in *Public Culture*, Vol 5, No2,1995.
6. David Held, *Models of Democracy*, Polity, 2006 (Third Edition)
7. David Held, *Political Theory and the Modern State*, Polity Press, 1989
8. David Miller: *The Liberty Reader*, Paradigm Publishers, 2006
9. John Rawls,' Justice as Fairness: Political not Metaphysical', *Philosophy and Public Affairs,* Vol 14 (3), 1985.
10. Michael Walzer, "Complex Equality", in *Spheres of Justice: A Defence of Pluralism and Equality*, Martin Robertson, 1983
11. Noberto Bobbio, 'Gramsci and the conception of civil society' in Chantal Mouffe (ed)*Gramsci and Marxist Theory*, Routledge,1979.
12. Robert Nozick, "Distributive Justice", in *Anarchy, State and Utopia*, Oxford, Blackwell, 1974
13. Ronald Dworkin, 'What is Equality? Part I: Equality of Welfare', *Philosophy and Public Affairs*, Vol 10/3, 1981
14. Ronald Dworkin, 'What is Equality? Part II: Equality of Resources', *Philosophy and Public Affairs*, Vol 10/4, 1981.
15. Selma Sevenhuijsen, 'The Place of Care: The Relevance of the Feminist Ethic of Care for Social Policy' in *Feminist Theory*, 4(2), 2003.
16. Simone Chambers and Will Kymlicka, eds., *Alternative Conceptions of Civil Society*, Princeton University Press, 2002.
17. Steven Lukes, *Power*: *A Radical Critique*, Palgrave Macmillan, 2005.

Semester-I

Course-III - Indian Politics: Institutions at Work (compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course:: Recent India has witnessed a major thrust in the study of India's political and economic processes. An important component of many such studies has been to refer to the relevant constitutional and institutional aspects. Such studies, sensitive to the constitutional experiences of a 'new democracy', have enriched themselves by undertaking an in-depth analysis of the way the constitutional provisions have been put into practice and also by making an attempt to explore the core ideas that guided the constitution-makers during the deliberations in the Constituent Assembly. The paper aims at making the students aware of the text of the Constitution of India, important debates and the way the institutions have worked over the last more than six and half decades.

1. Making of Political Institutions
a) Constituent Assembly Debates: Secularism, Rights
b) Preamble, Fundamental Rights and the Directive Principles of State Policy
c) Constitutional Amendments related to Right to Property: Nature, Problems and Politics

2. Federal Institutions
a) Strong Centre Framework: Reading Relevant Constitutional Text
b) Autonomy and Devolution: Sarkaria Commission Recommendations
c) Local Self Government: Politics of Decentralization

3. Executive and Legislature
a) President and Prime Minister: Modes of exercise of powers
b) Governors and Chief Ministers: Changing Role and Institutional Relationship
c) Union Parliament: Composition, Powers, Reservations and Parliamentary Committees

4. Judicial Power and Rule of Law
a) Supreme Court: Jurisdictions
b) Judicial Independence, Judicial Review
c) Judicial Activism, Public Interest Litigation
d) Election Commission of India and Electoral Reforms

Essential Readings

- Austin, Granville, *The Indian Constitution: Cornerstone of a Nation*, Oxford University Press, Delhi, 1966.
- Austin, Granville, *Working a Democratic Constitution: A History of the Indian Experience*, Oxford University Press, Delhi, 1999.
- Basu, D.D., *Introduction to the Constitution of India*, Lexis Nexis, Gurgaon, 2015.
- Bhargava, Rajeev, ed., *Politics and Ethics of the Indian Constitution*, Oxford University Press, New Delhi, 2008.
- Brass, Paul R., *The Politics of India since Independence*, Cambridge University Press, London, 1994.
- Chaube, S. K., *Constituent Assembly of India, Springboard of Revolution,* People's Publishing House, New Delhi, 1973.
- Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
- Hasan, Zoya et al., eds., *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, New Delhi, 2002.
- Kapur, Devesh and Pratap B Mehta (eds.) *Public Institutions in India: Performance and Design*, Oxford University Press, New Delhi, 2007.

Suggested Readings:-

Unit 1

1. Arora, Balveer and Douglas Verney**,** eds., *Multiple Identities in a Single State*: *Indian*
2. Bandyopadhyay, Sekhar (ed.) *Nationalist Movement in India*, Oxford University Press, New Delhi, 2009.
3. Constituent Assembly Debates (Selections).
4. *Federalism in Comparative Perspective*, Konark Publishers, New Delhi, 1995.
5. Mehta, Pratap Bhanu, *The Burden of Democracy*, Penguin, New Delhi, 2003
6. Mehta, V. R. and Thomas Pantham (ed.), *Political Ideas in Modern India,* Delhi, Sage, 2006.
7. Mukherji, Nirmal and Balveer Arora, eds., *Federalism in India: Origins and Development*, Vikas Publishing House, New Delhi, 1992.
8. Rao Shiva B., *The Framing of India's Constitution, A Study and Select Documents*, Tripathi, Bombay, 1968.
9. Saez, Lawrence, *Federalism without a Centre*: *The Impact of Political and Economic Reforms on India's Federal System*, Sage, New Delhi, 2002.

Unit 2

1. Baxi Upendra, *The Supreme Court in Indian Politics*, Eastern Book Company, New Delhi, 1980.
2. Baxi, Upendra, *Courage Craft and Contention: The Indian Supreme Court in the*
3. *Eighties,* N.M. Tripathi, Bombay, 1985.
4. Kashyap Subash, ed., *Constitutional Reforms*: *Problems, Prospects and Perspectives*, Radha Publications, New Delhi, 2004.
5. Kripal B.N. et al., eds., *Supreme but not Infallible*: *Essays in Honour of the Supreme Court of India*, Oxford University Press, New Delhi, 2000.
6. Sathe S.P., *Judicial Activism in India: Transgressing Borders and Enforcing Limits*, Oxford University Press, New Delhi, 2002.
7. Singh Ujjwal Kumar, *State, Democracy and AntiTerror Laws*, Sage Publications, New Delhi, 2007.

Unit 3

1. *2002 Jammu and Kashmir Assembly*, Penguin, New Delhi, 2004.
2. Bhagat A.K., *Elections and Electoral Reforms*, Vikas Publications, New Delhi, 1996.
3. Bhambhri, C.P., *The Indian Prime Minister: A Framework for Political Analysis,* The Indian Law Institute, New Delhi.
4. *Change*, Vol II, Oxford University Press, New Delhi, 2008.
5. Konark Publishers, New Delhi, 1996.
6. Lyngdoh J. M., *Chronicle of an Impossible Election*: *The Election Commission and the*
7. Manor James, ed., *Nehru to the Nineties: The Changing Office of Prime Minister in India*, Viking Press, New Delhi, 1994.
8. Mehra Ajay K. and V. A. Pai Panandiker, *The Indian Cabinet: A Study in Governance***,**
9. Morris Jones W.H., *Parliament in India*, University of Pennsylvania Press, Philadelphia,
10. Noorani, A G, *Constitutional Questions in India: The President, Parliament and the States*, Oxford University press, New Delhi, 2002.
11. PA, 1957.
12. Rudolph Lloyd and Susanne, *The Realm of Institutions*: *State Formation and Institutional*

Unit 4

1. 2001.
2. Baxi, Upendra and Bhikhu Parekh (ed.), *Crisis and Change in Contemporary India,* Sage, New Delhi, 1994.
3. Dhavan, Oxford University Press, Delhi, 1989.
4. Frankel Francine et al., eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
5. Galanter Marc, *Law and Society in Modern India*, edited with an introduction by Rajeev
6. Hardgrave Robert L., *India*: *Government and Politics in a Developing Nation*, Harcourt,
7. Jovanovich, New York, 1980.
8. Kaushik, Susheela (ed.), *Indian Government and Politics* (Hindi), Directorate of Hindi Implementation, Delhi University, 1990.
9. Keith A.B., *Constitutional History of India*, Methuen and Co, London, 1936.
10. Khan, Rasheeduddin (ed.), *Rethinking Indian Federalism, Indian Institute of Advanced Studies,* Shimla, 1997
11. Kohli Atul, ed., *The Success of India's Democracy*, Cambridge University Press, London,
12. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Cambridge University Press, Cambridge, 1991.
13. Noorani A.G., *Constitutional Questions in India***:** *The President, Parliament and the States***,** Oxford University Press**,** Delhi, 2000.
14. Palkivala, N.A., *Our Constitution Defaced and Defiled,* Macmillan, Delhi, 1974.
15. Pylee M.V., *India's Constitution*, Asia Publishing House, New Delhi, 1962.
16. Rao K.V. and K.M. Munshi, *Parliamentary Democracy of India*, The World Press Private Ltd, Calcutta, 1965.
17. Sudarshan, R., 'The Political Consequences of Constitutional Discourse' in T.V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Vol. I, OUP, Delhi, 1997.
18. Thakur, Ramesh, *The Government and Politics of India,* London, Macmillan Press, 1986
19. Vora, Rajendra and Suhas Palshikar (eds.), *Indian Democracy: Meanings and Practices,* Sage, New Delhi, 2003.
20. Weiner Myron, *The Indian Paradox*: *Essays in Indian Politics*, edited by Ashutosh Varshney, Sage Publications, New Delhi, 1989.

Journals to be Consulted

- ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues only on web)
- ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm

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Course IV : INTERNATIONAL RELATIONS : AN HISTORICAL OVERVIEW

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The purpose of this paper is to provide an historical overview of major developments in International Relations since the beginning of the twentieth century.

Unit-I

Crisis and Collapse of the 19th Century International System.
Two World Wars : Their causes and consequences.
Decolonization, rise and decline of third worldism.

Unit-II

Emerging of super powers, forms and phases of Bioplarity in the cold war.
Nuclear Politics : Issues of Proliferation, Discrimination and Hegemony.

Unit-III

Collapse of the Socialist Bloc : Alternative interpretation of its causes, consequences and future possibilities. End of cold war.
Emerging Issues in a Changing World : Ethnicity, environment, sustainable development, gender & peace.

Unit-IV

Emerging world order. Globalization, Regionalism and Trading,Trading blocks (NAFTA, APEC, EU & SAPTA) Changing role of IMF and The World Bank : Structural Adjustment Programmes. Transformation Facilities and Conditionalties, world trade organization.

Essential Reading

1. Rumki Basu, *International Politics: Concepts, Theories and Issues, SAGE,* 2012.
2. John Baylis, Steve Smith, Patricia Owens, *The Globalization of World Politics: An Introduction to International Relations,* Oxford University press, 2014.
3. Peter Calvocoressi, *World of Politics since 1945,* Longman, 1989 edn.

4. Christian Reus-Smit and Duncan Snidal, The Oxford Handbook of International Relations, OUP, 2010.
5. Mark V. Kaupp Paul R. Viotti, *International Relations And World Politics: Security, Economy, Identity* , Prentice Hall- Gale, 1996.
6. V. N. Khanna, *International Relations*, S.Chand (G/L) & Company Ltd; Fifth edition 2013

Suggested Readings :

1. Eric Hobsbawm, *Age of Extremes, The Short Twentieth Century,* 1914-91, Viking, 1995.
2. Paul Kennedy, *The Rise and Fall of Great Powers : Economic Change and Military Conflict from 1500 to 2000,* Fontana, 1988.
3. Paul Kennedy, *Preparing for the Twenty-First Century,* Indus, Harper Collins, 1993.
4. Kanta Ahuja *et al* (ed.), *Regime Transformations and Global Realignments* : Indo-European Dialogue *on Post-Cold War World,* Sage, 1993.
5. Peter Calvocoressi, *World of Politics Since 1945,* Longman, 1989 edn.
6. R. Giplin, *The Political Economy of International Relations,* Princeton, 1987.
7. Rama S. Melkote and A. Narasimha Rao, *International Relations,* Sterling, 1992.
8. R. Stubbs and G.R.D. Underhill, *Political Economy and the Changing Global Order,* Macmillan, 1994.
9. G. Hastedt (ed.), *One World, Many Voices : Global Perspectives on Political Issues,* Prentice Hall, 1995.
10. J.A. Camilleri and J. Falk, *The End of Sovereignty : The Politics of a Shrinking and Fragmenting World,* Edward Elgar, 1992.
11. Bhupinder Brar, *Explaining Communist Crises,* Ajanta, 1994.
12. Richard Little and Michael Smith (eds.), *Perspectives on World Politics,* Routledge, 2006.
13. Chris Brown, *Understanding International Relations,* Palgrave, 2001.
14. Peter Calvocoressi, *World Politics : 1945-2000,* Pearson Education, 2005.

SECOND SEMESTER

Course V : WESTERN POLITICAL THOUGHT (II)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students the major themes of western political thought. For this purpose, the paper undertakes a study of the key thinkers of this tradition.

Unit-I

1. Jeremy Bentham.
2. J.S. Mill.

Unit-II

1. Hegel.
2. Karl Marx.

Unit-III

1. Antonio Gramsci .
2. Herbert Marcuse.

Unit-IV

1. Hannah Arendt.
2. John Rawls.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following literature :

1. Plamenatz, John, *The English Utilitarians,* Basin Blackwell, Oxford, 1949.
2. Thakurdas, Frank, *The English Utilitarians and Idealists,* Vishal, Delhi, 1978.
3. Brinton, Crane, *English Political Thought in the 19th Century,* Havard University Press, 1954.

Suggested Readings :

1. Parekh, Bhikhu, *Bentham's Political Thought,* Barnes, and Noble, New York, 1973.
2. Marcuse, H., *Reason and Revolution : Hegel and the Rise of Social Theory,* RKP, London, 1955.
3. Evans, Michael, *Karl Marx*, George Allen & Unwin, 1975.
4. Kolakowski, Leszek, *Main Currents of Marxism, Vol. I,* The Founders, OUP, Oxford, 1978.
5. Cohen, G.A., *Karl Marx's Theory of History : A Defence,* Clarendon, Oxford, 1978.
6. Avineri, Shlomo, *The Social and Political Thought of Karl Marx,* S. Chand, New Delhi, 1968.
7. Ollman, Bertell, *Alienation : Marx's Concept of Man in Capitalist Society,* Cambridge University Press, Cambridge, 1977.
8. Althusser, Louis, *For Marx,* New Left Books, 1977.
9. Bottomore, T.B. (ed.), *A Dictionary of Marxist Thought,* Blackwell, Oxford, 1983.
10. Hoare, Q. and Smith, G.N. (ed.), *Selection from the Prison Notebooks of Antonio Gramsci,* International Publishers, New York, 1971.
11. Mouffe, C. (ed.), *Gramsci and Marxist Theory,* Routledge, 1979.
12. Sassoon, Anne, S., *Gramsci's Politics,* Croom Helm, London, 1980.
13. Arendt, Hannah, *The Origins of Totalitarianism,* Harcourt Brace, New York, 1951.
14. Arendt, Hannah, *The Human Conditions,* Chicago, University Press, Chicago, 1958.
15. Canovan, Margaret, *The Political Thought of Hannah Arendt,* Harcourt Brace, New York, 1974.
16. Parekh, Bhikhu C., *Hannah Arendt and the Search for A New Political Philosophy,* Humanities Press, Atlantic Highlands, 1991.
17. Rawls, John, *A Theory of Justice,* Oxford University Press, Oxford, 1971.
18. Rawls, John, *Political Liberalism,* Columbia University Press, New York, 1993.
19. Marcuse, Herbert, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society,* Beacon, Boston, 1964.
20. Anthony de Crespigny and Kenneth Minogue, *Contemporary Political Philosophers,* Dodd, Mead, and Company, New York, 1975.
21. Bhikhu, Parekh, *Contemporary Political Thinkers,* Martin Robbertson, Oxford, 1982.

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Course VI : COMPARATIVE POLITICS-I : UNDERSTANDING ADVANCED INDUSTRIAL SOCIETIES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial societies, and this will be undertaken in a comparative framework.

Unit-I

Comparative Politics : Meaning , Significance, Evolution, Nature and Content.
Comparative Method : Problems of comparative political analysis.

Unit-II

Modernity in Western Societies : meaning, evolution of modernity since the Christian era, nature and forms-political , social , economic and cultural.
Recent Debates: Modernity and class, Modernity and gender.

Unit-III

State and Civil Society : Theories and recent debates.
Constitutionalism : Theory and Practice in Contemporary States.

Unit-IV

Understanding Culture and Social change : Political Culture and Political Socialisation.
Political Participation and Representation : Political parties, Pressure groups and new social movements.

Essential Readings :

Students are advised to see the relevant entries in the following reference books—

Seymour Martin Lipset (ed. in chief). The Encyclopedia of Democracy, Volumes I, II and III, Routledge, London, 1955; Vernon Bogdanor (ed.), The Blackwell Encyclopedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Specific Readings :

1. Almond, G., 'The Return to the State', *American Political Science Review,* 82, No. 3, September, 1998.
2. Caramani, Daniele, *Comparative Politics*, OUP, New Delhi.
3. Carnoy, Martin, *The State and Political Theory,* Princeton University Press, Princeton, 2016 (1984)
4. Chandhoke, Neera, "Limits of Comparative Political Analysis," *Economic and Political Weekly,* Vol. XXXI, No. 4, January 27, 1996.
5. Chilcote, Ronald, *Comparative Politics: The Search for a Paradigm Reconsidered,* Westview, Boulder (Second Edition), 1994.
6. Hague, Rod, Martin Harrop and Shaun Breslin, *Comparative Government and Politics: An Introduction,* Macmillan, London, 1993
7. Jessop, B., *State Theory : Putting Capitalist States in their Place,* Polity Press, Cambridge, 1990.
8. Johary, J.C. , *Comparative Politics*, Sterling Publisher, New Delhi, 2011.
9. Synder, R. (2001). 'Scaling Down: The Subnational Comparative Method'. *Studies in Comparative International Developmen*t. 36(1): 93-110
10. Tillin, Louis (2013). 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2): 235-240.

Suggested Readings

1. Almond, G.A., and S. Verba (eds.), *The Civic Culture Revisited,* Little Brown, Boston, 1980.
2. Almond, Gabriel G. Bingham Powell, Kaare Strom and Russel T. Dalton, *Comparative Politics Today,* Pearson Education, Delhi, 2005.
3. Anthias, Floyas and Nira Yuval-Davis, *Racialized Boundaries, Race, Nation, Gender, Colour and Class and the Anti-Racist Struggle,* Routledge, London, 1992.
4. Ball, A., and F. Millward, *Pressure Politics in Industrial Societies,* Macmillan, London, 1986.
5. Bellamy, Richard and Dario Castiglone (ed.), *Constitutionalism in Transformations : European and Theoretical Perspectives, Political Studies Vol. XLIV,* Special Issue, 1996.
6. Block, F., 'Beyond Relative Autonomy' in Ralph Miliband and John Saville (eds.), *The Socialist Register,* Merlin, London, 1980.
7. Blondel, J., *The Discipline of Politics,* Butterworth, London, 1981.
8. Bogdanor, V., (ed.), *Constitutions in Democratic Politics,* Gower, Aldershot, 1988.
9. Bombwall, K.R., *World Constitutions,* Modern Publishers, Ambala, 1980.
10. Calvert, Peter, *Revolution and Counter Revolution,* Open University Press, Milton Keynes, 1990.
11. Cammack, P., 'Statism, New Institutionalism and Marxism' in Ralph Miliband and Leo Panitch (eds.), *The Socialist Register,* Merlin, London, 1990.
12. Cantori, Louis J., and Andrew H. Ziegler (eds.), *Comparative Politics in the Post-Behavioural Era,* Lynne Rienner Publisher, Boulder, 1988.
13. Cigler, C., and B. Loomis (eds.), *Interest Group Politics, Congressional Quarterly* Press, Washington DC, 1985.
14. Dalton, Russel, J., "Comparative Politics of the Industrial Democracies : From the Golden Age to Island Hopping" in William Crotty (ed.), *Comparative Politics Policy and International Relations,* Northwestern University Press, Evanstone, 1991.

15. Dalton, Russell and Manfred Kurchler (eds.), *Challenging the Political Order,* New York, 1990.
16. Dogan, Mattei and Ali Kazancigilli (eds.), *Comparing Nations, Concepts, Strategies, Substance,* Blackwell, Oxford, 1994.
17. Dogan, Mattei and Dominique Pelassy, *How to Compare Nations, Strategies in Comparative Politics,* Chatham House, 1984 (Indian reprint) Vision Books, New Delhi, 1988.
18. Dunleavy, P., and B. O' Leary, *Theories of the State,* Macmillan, London, 1987.
19. Easton, David, 'The Political System Beyond the State', *Political Theory, No. 3,* 1981.
20. Eckstein, Harry and David E., Apter (ed.), *Comparative Politics, A Reader,* The Free Press of Glencoe, Collier-Macmillan, London, 1993.
21. Elster, Jon, 'Ways of Constitution-making' in Axel Hadenius (ed.), *Democracy's Victory and Crisis,* Cambridge University Press, Cambridge, 1997.
22. Evans Peter B., P.D. Rueschemeyer and T. Skocpol (ed.), *Bring the State Back in,* Cambridge University Press, Cambridge, 1985.
23. Gellner, E., 'Civil Society in Historical Context', *International Social Science Journal, No. 129,*1991.
24. Gellner, Ernest, *Nations and Nationalism,* Blackwell, Oxford, 1983.
25. Gibbins, J., (ed.), *Contemporary Political Culture : Politics in a Post-Modern Age,* Sage, London,1989.
26. Glazer, N., and D. Moynihan (eds.), *Ethnicity: Theory and Experience,* Harward University Press,Cambridge, 1975.
27. Graham, B.D., *Representation and Party Politics: A Comparative Perspective,* OUP, Oxford, 1990.
28. Hall, Stuart and Bram Gieben, *Formations of Modernity,* Polity, Cambridge, 1992.
29. Hawkesworth, Mary and Maurice, Kogan (ed.), *Encyclopedia of Government and Politics,* Routledge, London, 1992.
30. Held, D., *Political Theory and the Modern State,* Polity Press, Cambridge, 1989, 1990.
31. Hobsbawm, Eric, *Nations and Nationalism since 1780,* Cambridge, 1991.
32. Hoffman, J., *State Power and Democracy,* Wheatsheaf, Sussex, 1988.
33. Hutchinson, J., and A.D. Smith (eds.), *Nationalism,* OUP, Oxford, 1994.
34. Lane, J.E., *Constitutions in Political Theory,* Manchester University Press, Manchester, 1996.
35. Lane, Jan-Erik and Svante Ersson, *Comparative Politics : An Introduction and New Approach,* Polity, Cambridge, 1994, (Ch. 1, Comparative Approaches, Ch. 6, The Logic to Model Building in Comparative Government).
36. LaPalombara, Joseph and Myron Weiner (ed.), *Political Parties and Political Development,* Princeton University Press, Princeton, 1966.
37. Larrain, Jorge, *Theories of Development,* Polity, Cambridge, 1989. 1.12 Mohanty, Manoranjan, "Moving the Centre in the Comparative Study of Politics, An Approach to Creative Theory", Unpublished Paper (Photostat copy in Political Science Departmental Library, Panjab University).
38. Michael G. Ruskin, Robert L. Cord, James A. Medeiros and Walter S. Jones (eds.), *Political Science: An Introduction,* Prentice Hall, New Jersey, 2005.
39. Miliband, Ralph, *The State in Capitalist Societies,* Weidenfeld and Nicolson, London, 1968.
40. Moore Jr., Barrington, *Social Origins of Dictatorship and Democracy : Lord and Peasant in the Making of the Modern World,* Penguin, 1967.

41. Mueller-Rommel, F. (ed.), *New Politics in Western Europe,* Boulder, 1989.
42. Nordlinger, E., 'The Return to the State, Critique', *American Political Science Review,* Vol. 82, 3 September, 1988.
43. Preuss, Ulrich, K., 'Constitutionalism – Meaning, Endangerment, Sustainability' in Satish Saberwal and Heiko Sievers (ed.), *Rules, Laws, Constitutions,* Sage, New Delhi, 1998.
44. Sartori, G., *Parties and Party Systems: A Framework for Analysis,* Cambridge University Press, Cambridge, 1976.
45. Sartori, Giovanni, 'Compare Why and How, Comparing, Miscomparing and the Comparative Method' in Mattei Dogan and Ali Kazancigil (ed.) *Comparing Nations,* Blackwell, Oxford, 1994, Pp. 14-34.Wiarda, H. J., *New Directions in Comparative Politics,* Westview Press, Boulder, 1991.
46. Skocpol, Theda, *States and Social Revolutions: A Comparative Analysis of France, Russia nad China,* Cambridge University Press, Cambridge, 1979.
47. Smith, A.D., *The Ethnic Origins of Nation,* Basil Blackwell, Oxford, 1986.
48. Taylor, Charles, 'Modes of Civil Society', *Public Culture, Vol. 3,* No. 1, Fall 1990.
49. Wilson, G., *Interest Groups,* Blackwell, Oxford, 1990.

Course VII : INDIAN POLITICS : POLITICAL PROCESSES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course aims to introduce students to politics in India as it has evolved after decolonization. The themes discussed during the course will be those that are crucial to the understanding of the way political processes in the largest democracy of the world unfold in varying form. The paper takes up the issues for discussion related to the way democratic politics in India has evolved and been shaped in an underdeveloped, multi-ethnic setting along the lines of caste, class, and linguistic and religious identities. It also focuses on the way India's democratic state has fared in promoting economic development, both growth and equity.

1. ***Democratic Politics in Independent India***
a) Legacies of the Nationalist Movement.
b) Challenges of Democratic Transition and Consolidation
c) Nature of Indian State: Class, Gender

2. ***Political Parties and Electoral Politics***
a) Evolution and Shifts in Party System: Dominant Party System, Its Breakdown
b) Electoral Politics: Emerging Trends Since 1990's

3. ***Caste, Religion and Region***
a) Caste and Politics: Rise of Dalit and Backward Caste Politics
b) Religion and Politics: Secularism, Communalism and Rise of Hindutva
c) Region and Politics: Linguistic Identities and Reorganization of States; Politics of New States

4. ***State, Economy and Development***
a) Development Planning Model: Concept, Strategies, Policies, and Critique
b) Economic Transition: Causal Explanations
c) New Economic Policies: Social implications for the Weaker Sections in the Society

Essential Readings

1. Brass, Paul, *The Politics of India since Independence*, Cambridge University Press, Cambridge, 1994, Introduction.
2. Chandhoke, Neera and Praveen Priyadarshi, *Contemporary India: Economy, Society, Politics,* Pearson Education, New Delhi, 2009
3. Corbridge, Stuart and John Harriss, *Reinventing India*, Oxford University Press, Delhi, 2000.
4. deSouza, Peter and E Sridharan, *India's Political Parties*, New Delhi, Sage, 2007.
5. Francine, Frankel, et al, eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
6. Jayal, Niraja Gopal, ed., *Democracy in India,* Oxford University Press, New Delhi, 2001.
7. Kaviraj Sudipta, *The Trajectories of the Indian State*, Permanent Black, New Delhi, 2010.
8. Kohli, Atul, ed., *The Success of India's Democracy*, Cambridge University Press, Cambridge, 2001.
9. Mehta, Pratap Bhanu and Niraja Gopal Jayal, *The Oxford Companion to Politics of India*, New Delhi, Oxford University Press, 2010.
10. Menon, Nivedita, *Gender and Politics in India*, Delhi, Oxford University Press, 2001.
11. Morris-Jones W.H., *The Government and Politics in India*, B.I. Publications, New Delhi,
12. Mukherji, Rahul, *India's Economic Transition: The Politics of Reforms*, *Oxford* University *Press, New Delhi, 2014.*
13. Varshney, Ashutosh, *Battles Half Won: India's Improbable Democracy*. *Penguin, New Delhi, 2014.*

Suggested Readings

Unit 1

1. Chhibber, Pradeep, *Democracy without Associations*, University of Michigan Press, Michigan, 1999.
2. Dubey, Abhay Kumar (ed.), *Loktantra Ke Saat Adhaya,* Vaani Prakashan, Delhi, 2002.
3. Hasan, Zoya, E. Sridharan and R. Sudarshan (eds.), *India's Living Constitution: Ideas, Practices, Controversies,* Permanent Black, Delhi, 2002.
4. Jenkins, Rob, *Democratic politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
5. Kaviraj, Sudipta, "A Critique of the Passive Revolution", *Economic and Political Weekly*, Vol. 23, No. 45/47, Special Number, Nov. 1988.
6. Kaviraj, Sudipta, "The Culture of Representative Democracy" in Partha Chatterjee (ed.), *Wages of freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1988.
7. Kohli, Atul, *India's democracy: An Analysis of Changing State-Society Relations*, Princeton University Press, Princeton, 1988.
8. Kothari, Rajni, "The Democratic Experiment" in Partha Chatterjee (ed.), *Wages of Freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1998.
9. Mehta, Pratap Bhanu, *Burden of Democracy,* Penguin, New Delhi, 2004.
10. Morris –Jones, W. H., *Politics Mainly Indian*, Orient Longman, New Delhi, 1978.
11. Nayyar, Deepak, 'Economic Development and Political Democracy-Interaction of Economics and Politics in Independent India', *Economic and Political Weekly, 33(49*), 5 December, 1998.
12. Nayyar, Deepak, 'Economic Growth in Independent India', *Economic and Political Weekly,* 41(15), 15 April, 2006.

13. Rudolph, Lloyd and Susanne, *In Pursuit of Lakshmi*: *Political Economy of the State in India*, University of Chicago Press, Chicago, 1987.
14. Satyamurthy, T.V., ed., *State and Nation in the Context of Social Change*, vol. l, Oxford University Press, Delhi, l994.
15. Vora, Rajendra and Suhas Palshikar, eds, *Indian Democracy: Meanings and Practices*, Sage, New Delhi, 2004.

Unit 2

1. Adeney, Katherine and Saez Lawrence, eds., *Coalition Politics and Hindu Nationalism*, Routledge, London, 2005.
2. Brass, Paul R. and Marcus F. Franda, (eds), *Radical Politics in South Asia*, MIT Press, Cambridge, 1973.
3. Hansen, Thomas and Jaffrelot Christophe, eds., *The BJP and the Compulsions of Politics in India,* Oxford University Press, New Delhi, 1998.
4. Hasan, Zoya ed., *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
5. Kothari, Rajni, *State against Democracy: In Search of Humane Governance*, Ajanta, Delhi, 1988.
6. Mehra, Ajay K., Khanna, D.D., and Gert W. Kueck, eds., *Political Parties and Party Systems,* Sage, New Delhi, 2003.
7. Weiner, Myron, *Party Politics in India: The Development of a Multiparty System,* Princeton University Press, New Jersey, 1957.
8. Yadav, Yogendra and Suhas Palshikar (eds) Political Parties and Elections in Indian States :1990-2003, *Journal of Indian School of Political Economy,* 2003.

Unit 3

1. Agarwal Bina, ed., *Structures of Patriarchy*: *State, Community and Household in Modernizing Asia*, Kali for Women, New Delhi, 1988.
2. Bardhan, Pranab*, The Political Economy of Development in India,* Oxford University Press, New Delhi, 1998.
3. Baruah, Sanjeeb (ed.) *Ethnonationalism in India: A Reader*, Oxford University Press, New Delhi, 2010.
4. Baruah, Sanjeeb, *India against Itself*: *Assam and the Politics of Nationality*, Oxford University Press, New Delhi, 2003.
5. Bhargava, Rajeev, ed., *Secularism and Its Critics*, Oxford University Press, New Delhi, 1998.
6. Brass, Paul, *Language, Religion and Politics in North India,* Cambridge University Press, London, 1974.
7. Fernandes, Leela, *India's New Middle Class*: *Democratic Politics in an Era of Economic Reform*, University of Minnesota Press, 2006.
8. Frankel, Francine and M.S.A. Rao, eds., *Dominance and State Power in India*: *Decline of a Social Order,* Oxford University Press, New Delhi, 1989.
9. Ganguly, Sumit (ed.) The State of India's Democracy, Oxford University Press, New Delhi, 2009.
10. Guru, Gopal (ed.), *Humiliation: Claims and Context*, Oxford University Press, New Delhi, 2009.
11. Jaffrelot, Christophe, *India's Silent Revolution: The Rise of the Low Castes in Northern Indian States,* Permanent Black, Delhi, 2003.
12. Jaffrelot, Christophe, *The Hindu Nationalist Movement and Indian Politics, 1925 to the 1990s,* Penguin Books, New Delhi, 1996.
13. Jenkins, Rob (ed.), *Regional Reflections: Company Politics across India's States,* Oxford University Press, New Delhi, 2004.
14. Kanungo, Pralay, *RSS's Tryst with Politics: from Hedgewar to Sudarshan,* Manohar, Delhi, 2002.
15. King, Robert D., *Nehru and Language Politics in India,* Oxford University Press, Delhi, 1995.

16. Kohli, Atul and Prerna Singh, edited, Handbook of Indian Politics, Routledge Press, 2013
17. Mcguire, John and Ian Copland (eds) *Hindu Nationalism and Governance*, Oxford University Press, Delhi, 2008.
18. Menon, Nivedita ed., *Gender and Politics in India*, Oxford University Press, New Delhi,
19. Misra B.B., *The Indian Middle Class- Their Growth in Modern Times*, Oxford University Press, Delhi, 1978.
20. Mohanty, Manoranjan ed., *Caste, Class and Gender*, Sage, Delhi, 2000.
21. Pai Sudha, *Dalit Assertion and the Unfinished Democratic Revolution*: *The Bahujan Samaj Party in Uttar Pradesh*, Sage, New Delhi, 2002.
22. Pai, Sudha , ed., *Handbook on Politics in the Indian States Regions*, *Political Parties and Economic Reforms,* Oxford University Press, New Delhi, 2013.
23. Prakash, Amit, *Jharkhand*: *Politics of Development and Identity*, Orient Longman, Hyderabad, 2001.
24. Samaddar, Ranabir, *The Politics of Autonomy: Indian Experience,* Sage, New Delhi, 2005.
25. Sarangi, Asha (ed.) *Language and Politics in India*, Oxford University Press, New Delhi, 2010.
26. Sathyamurthy T.V. ed., *Region, Religion, Caste, Gender and Culture in India*, Oxford University Press, Oxford, 1998.
27. Shah Ghanshyam ed., *Dalit Identity and Politics*, Sage, New Delhi, 2001.
28. Vanaik, Achin, *Communalism Contested: Religion, Modernity and Secularization,* Vistaar Publications, New Delhi, 1997.
29. Weiner Myron, *Sons of the Soil*: *Migration and Ethnic Conflict in India,* Oxford University Press, New Delhi, 1987.
30. Wilkinson, Steven I (ed.) *Religious Politics and Communal Violence*, Oxford University Press, New Delhi, 2007.

Unit 4

1. Bardhan, Pranab, *The Political Economy of Development in India,* Oxford University Press, Delhi, Revised Edition, 1997.
2. Brar, Bhupinder and Pampa Mukherjee, eds, *Facing Globality: Politics of resistance, Relocation and Reinvention in India,* New Delhi, Oxford University Press, 2012.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and the Politics of Identity in India* , Pearson-Longman, New Delhi , 2008.
4. Chatterjee Partha, ed., *Wages of Freedom*: *Fifty Years of the Indian Nation State*, Oxford University Press, New Delhi 1998.
5. Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
6. Frankel, Francine R., *India's Political Economy,* 1947-2004, 2nd edition, Oxford University Press, New Delhi, 2005.
7. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, OUP, Delhi, 1999
8. Kaviraj Sudipta, *The Enchantment of Democracy and India*, Permanent Black, New Delhi, 2010.
9. Kohli, Atul, *Democracy and Development in India: From Socialism to Pro-business,* Oxford University Press, New Delhi, 2010.
10. Kohli, Atul, *Poverty amid Plenty in the New India*, Oxford University Press, New Delhi, 2012.
11. Lakshman, Narayan, *Patrons of the Poor: Caste Politics and Policy Making in India,* Oxford University Press, New Delhi, 2011.
12. Mooji, Jos, *The Politics of Economic Reforms in India,* Sage, New Delhi, 2005.
13. Nayar, Baldev Raj (ed.) Globalization and Politics in India, Oxford University Press, New Delhi, 2010.

14. Patnaik, Prabhat, "Political Strategies of Economic Development," in Partha Chatterjee, ed., *Wages of Freedom, Fifty Years of the Indian Nation-State* Oxford University Press, New Delhi, 1998.
15. Rudolph, L. and Susanne Rudolph, *In Pursuit of Lakshmi: The Political Economy of Indian States,* Orient Longman, Delhi, 1988.
16. Shah, Ghanshyam, ed., *State and Social Movements,* Sage, Delhi, 1999.

Journals/Newspapers to be Consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web also check on JSTOR)
2. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
3. ***Studies In Indian Politics, Sage Journal***
4. ***The Hindu and Indian Express***

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Course VIII : APPROACHES TO THE STUDY OF INTERNATIONAL RELATIONS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The purpose of this paper is to familiarise students with alternative and diverse frameworks which seek to explain international relations.

Unit-I

"*Idealist*"*(Legal-Institutional) Approach :* Major Assumptions and Tenets; Roles assigned to International Law, International Organisations, World Public Opinion and International Morality. Proposals of World Government and Collective Security; World Order Models: Critical appraisal.

Unit-II

"*Realist*" *(Power Politics) Approach :* Major Assumptions and Tenets. Centrality of State, National Interest and National Power. Balance of Power and Deterrence. Neo-Realist Variants of Realism. Geopolitical Discourses. Critical Appraisals.

Unit-III

"Scientific" Approach : Theories of System, Decision-making, Bargaining and Communication. Critical appraisal.

Unit-IV

Radical Approaches : Marxism, Dependency Theory and World-System Analysis. Critical appraisal.

Essential Readings

1. Robert L. Pfaltzqraff and James Dougherty, *Contending Theories of International Relations,* Harper and Row, 1980.
2. Misra, K.P. and Richard Smith Beal (eds.), *International Relations Theory : Western and Non-Western Perspectives,* Vikas, 1980.
3. Taylor, Trevor (ed.), *Approaches and Theories in International Relations,* Longman, New York, 1978.
4. Ekkehart Krippendorff, *International Relations as a Social Science,* Radiant, New Delhi, 1982.
5. Kubalkova, V., and Albert Cruickshank, *Marxism and International Relations,* Clarendon, New York, 1985.
6. Keohane, R. (ed.), *Neo-Realism and Its Critics,* Columbia University, New York, 1986.
7. Parkinson, F., *The Philosophy of International Relations : A Study in the History of Thought,* Sage, California, 1977.
8. Immanuel Wallerstien, *The Modern World Systems, 3 Vols.,* Academic Press, 1974, 80, 89.

Suggested Readings

1. Light, M. and A.J.R., Groom, *International Relations : A Handbook of Current Theory,* Frances Printer, 1995.
2. Brown, C., *International Relations Theory : New Normative Approaches*, Hemel Henpstead, Harvester Wheatsheaf, 1992.
3. Bull, Hedley, *The Anarchical Society : A Study of Order in World Politics,* Macmillan, 1977.
4. Cox, R., *Production, Power and World Order : Social Forces in the Making of History,* Columbia University Press, 1987.
5. Frast, M., *Towards a Normative Theory of International Relations,* Cambridge University Press, 1986.
6. Hollis, M. and Smith, S., *Explaining and Understanding International Relations,* Clarendon Press, 1990.
7. Keohane, R., *After Hegemony : Cooperation and Discord in the World Political Economy,* PrincetonUniversity Press, 1984.
8. Linklater, A., *Beyond Realism and Marxism: Critical Theory and International Relations,* Macmillan,1990.
9. Little, R. and Smith, M. (ed.), *Perspectives and International Politics, Second edn.,* Routledge, 1991.
10. Mamsbach, R. and Vasquez, J., *In Search of Theory: A New Paradigm for Global Politics,* Polity Press,1992.
11. Olson, W. and Groom, A., *International Relations Then and Now: Origins and Trends in Interpretation,*Harper Collins, 1991.
12. Viotti, P. and M., Kauppi, *International Relations Theory: Realism, Pluralism, Globalism,* Second edn., Macmillan, 1993.

13. Derian, J. D., *International Theory: Critical Investigations,* Macmillan, 1995.
14. Charles W. Kegley, Jr., *Controversies in International Relations Theory : Realism and Neoliberal*
15. *Challenge,* St. Martin Press, 1995.
16. Booth, Ken and Steve Smith (ed.), *International Relations Theory Today,* Polity Press, 1995.
17. Taylor, P. J., ed., *Political Geography of Twentieth Century: A Global Analysis,* Belhaven Press, 1993.
18. Brunn, S.D. and T.R., Leinbach (ed.), *Collapsing Space and Time: Geographic Aspects of Communication and Information,* Harper Collins, 1991.
19. Glassner, M. I., *Political Geography,* John Wiley and Sons, 1993.
20. J.O. Loughlin, (ed.), *Dictionary of Geopolitics,* Greenwood Press, 1993.
21. Calvocovessi, Peter, *World Politics: 1945-2000,* Pearson Education, Delhi, 2005.

THIRD SEMESTER

Course IX : INDIAN POLITICAL THOUGHT-I (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper aims to introduce students to different discourses in the domain of Indian Political Thought. It includes historical roots, medieval socio-cultural traditions, renaissance and nationalist narratives.

Unit-I

Historical Roots and Medieval Socio-Cultural Traditions:

1. Dharmashastra and Arthashastra Traditions.
2. Bhakti and Sufi challenges to Hegemonic Religious Traditions.

Unit-II

Indian Renaissance and Social Reform Movements.

1. Meaning, Nature and Critical evaluation with Special reference to gender, caste and modernity.
2. Raja Rammohan Roy, Sir Syed Ahmed Khan, Pandita Ramabai, Jyotiba Phule.

Unit-III

Indian Liberalism and Nation-building:

Nehru, Tagore, Ranade, Gokhale

Unit-IV

Religious Nationalism :

1. Vivekananda, Tilak, Aurobindo and Savarkar.
2. Iqbal and Jinnah.

Essential Readings :

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century from Naroji to Nehru* (London : OUP, 1971).
2. Brown, D.M. (ed.), *The White Umbrella : Indian Political Thought from Manu to Gandhiji* (Bombay, Jaico, 1970).

3. Dallamayr, F.R. and Devy, G.N. (eds.), *Between Tradition and Modernity : India's Search for Identity* (London, Sage, 1998).

4. Dalton, D.G., *Indian Idea of Freedom* (Gurgaon, Academic Press, 1982).

5. Doctor, Adhi H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).

6. Karunakaran, K.P., *Religion and Political Awakening in India* (Meerut, Meenakshi, 1969), 2nd Edition.

7. Mahadevan, T.M.P. and G.V. Saroja, *Contemporary Indian Philosophy* (New Delhi, Sterling, 1981).

8. Mehta, V.R., *Foundations of Indian Political Thought* (New Delhi, Manohar, 1996).

9. Naravane, V.S., *Modern Indian Thought* (Bombay, Asia, 1964).

10. Pantham, Thomas and K.L., Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

11. Verma, V.P., *Modern Indian Political Thought* (Agra, Laxminarayan, 1996), Eleventh Revised Edition).

12. Verma, V.P., *Ancient and Medieval Indian Political Thought* (Agra, 1996).

13. Nandy, Ashis, *The Intimate Enemy : Loss and Recovery of Self under Colonialism*, Delhi, Oxford, 1983.

14. Guha, Ramachandra, 'The Absent Liberal', *Economic and Political Weekly,* December 15 2001.

15. Christopher Jaffrelot (edited), *Hindu Nationalism: A Reader,* Ranikhet, Permanent Black, 2007.

16. Quayum, Mohammad A, *'Imagining "One World": Rabindranath Tagore's Critique of Nationalism',* Interdisciplinary Literary Studies, Vol 7, No 2, Spring 2006.

17. Jahanbegloo, Ramin, 'Tagore and the Idea of Civilization', *India International Centre Quarterly,* Vol 34, No. 1, Summer, 2007.

18. Chakravarti, Uma, *Rewriting History: The Lives and the Times of Pandita Ramabai,* Delhi, Kali for Women, 1998.

19. Kosambi, Meera, 'Women, Emancipation and Equality: Pandita Ramabai's Contribution to Women's Cause', *Economic and Political Weekly,* October 29, 1988.

20. Lamba Rinku, 'Bringing the State Back in, Yet Again: The Debate on Socio-religious Reform in Late-Nineteenth-Century India', *Comparative Studies of South Asia, Africa and the Middle East,* Volume 29, Number 2, 2009.

21. Zachariah, Bhikhu, *'Nehru'* Routledge, 2004

22. Parekh, Bhikhu, 'Nehru and the National Philosophy of India', *Economic and Political Weekly*, Janurary 5 1991

23. Deshpande G. P. (ed.), *Selected Writings of Jotirao Phule, Delhi, Leftword Books,* 2002.

24. Omvedt, Gail, *Seeking Begumpura,* Delhi, Navayana, 2008.

25. Gopal, S, 'The Formative Ideology of Jawaharlal Nehru', *Economic and Political Weekly,* May 22 1976.

Suggested Readings :

1. Altekar, A.S., *State and Government in Ancient India* (Patna, Motilal Banarasi Dass, 1971), 3rd Edition.
2. Chausalkar, Ashok, 'Politics of Arthashastra Tradition', *Indian Journal of Political Science*, January-March, 1981.
3. Chaudhri, R.K., *Kautilya's Political Ideas and Institutions* (Varanasi, Chowkhamba Sanskrit Series, 1971).
4. Ghoshal, U.N., *A History of Indian Political Ideas* (London, OUP, 1959).
5. Jayaswal, K.P., *Hindu Polity* (Bangalore, 1978), 5th Edition.
6. Kangle, R.P., *The Kautilya Arthashastra Parts-I-III* (Delhi, Motilal Banarasidass, 1986).
7. Kohli, Ritu, *Kautilya's Political Theory* (New Delhi, Deep and Deep, 1995).
8. Parekh, Bhikhu, 'Some Reflections on Hindu Tradition of Political Thought' in Pantham and Deutsch (ed.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
9. Prasad, Beni, *Theory of Government in Ancient India* (Allahabad, Center Book, 1968), 2nd Revised Edition.
10. Ray, B.N., *Tradition and Innovation in Indian Political Thought* (Delhi, Ajanta, 1998).
11. Saletore, B.A., *Ancient Indian Political Thought and Institutions* (Bombay, Asia, 1963).
12. Singh, N.P., *Political Ideas and Ideals in the Mahabharata* (Bombay, Popular Prakashan, 1976).
13. Spellman, J., *The Political Theory of Ancient India* (Oxford, Clarendon Press, 1964).
14. Vanna, V.P., *Studies in Hindu Political Thought and Its Metaphysical Foundation* (Delhi : Motilal Banarasidass, 1954).
15. Anand, B.S., *Baba Farid* (New Delhi, Sahitya Akademy, 1975).
16. Bains, J.S., 'Political Ideas of Guru Nanak', *Indian Journal of Political Science,* 1962.
17. 'Political Ideas of Guru Gobind Singh', IIAS, *Sikhism and Indian Society*, Shimla, 1967.
18. Bihari, Bankey, *Sufism Mystics and Yogis of India* (Bombay, Bhartiya Vidya, Bhawan, 1962).
19. Kohli, S.S., *Bule Shah* (Sahitya Academy, 1987).
20. Majumdar, A.K., *Bhakti Renaissance* (Bombay, Bhartiya Vidya Bhawan, 1965).
21. Muller, Max, *Ram Mohan to Ramakrishna* (Calcutta, Susil, 1952).

22. Vaudeville, C., *A Weaver Named Kabir* (Delhi, OUP, 1997).

23. Westcott, G.H., *Kabir and the Kabir Panth* (Calcutta, Susil, 1953).

24. Aurobindo, Sri, *The Renaissance in India in Dallmayer,* Fred and G.N., Devy (ed.), 1998.

25. Bishop, Donald H. (ed.), *Thinkers of Indian Renaissance* (New Delhi, Wiley, 1982).

26. De, Barun, A Historical Critique of Renaissance Analogues for Nineteenth Century India, in Barun De (ed.), *Perspectives in Social Sciences I,* (Calcutta, 1977).

27. Majumdar, B.B., *History of Indian Social and Political Ideas* (Calcutta, Firma, KLM, 1996).

28. Mehta, V.R., 'Renaissance and the Beginning of Modern Thought', Ch. 8 in his *Foundations of Indian Political Thought* (New Delhi, Manohar, 1992).

29. Sarma, D.S., *The Renaissance of Hinduism in the Nineteenth and Twentieth Centuries* (Varanasi, Banaras Hindu University, 1944).

30. Vyas, K.C., *The Social Renaissance in India* (Bombay, Vohra and Company, 1957).

31. Zacharis, H.C.E., *Renascent India : From Rammohan Roy to Mohandas Gandhi* (London, George Allen and Unwin, 1933).

32. Buch, M.R., *Rise and Growth of Indian Liberalism* (Baroda, 1938).

33. Chakravarti, Uma, *Rewriting History : The Life and Times of Pandita Ramabai* (New Delhi, Kali for Women, 1998).

34. Chakravarti, Uma, *Gender, Class and Nation—Ramabai and the Critique of Brahmanical Patriarchy* (Delhi, OUP, 1998).

35. Joshi, V.C. (ed.), *Rammohan Roy and the Process of Modernisation in India* (Delhi, Vikas, 1975).

36. Kosambi, Meera, 'Indian Response to Christianity, Church and Colonialism : Case of Pandita Ramabai', *Economic and Political Weekly,* 24-31, October, 1992.

37. Mansani, R.P., *Dadabhai Naoroji : The Grand Old Man of India* (London, George Allen and Unwin, 1939).

38. Nanda, B.R., *Gokhale : The Indian Moderates and the British Raj* (Delhi, OUP, 1998).

39. Tucker, Richard P., *Ranade and the Roots of Indian Nationalism* (Bombay : Popular Prakashan, 1977).

40. Vora, Rajendra, 'Two Strands of Indian Liberalism : Ideas of Ranade and Phule' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

41. Aurobindo, Sri, *On Nationalism* (Pondicherry, Sri Aurobindo Ashram, 1965).

42. *Bankim–Tilak –Dayananda,* (Calcutta : Aryan, 1940).

43. Banerjee Sumanta, 'Hindutva – Ideology and Social Psychology', *Economic and Political Weekly,* 19 January, 1991).

44. Basu, Tapan, *et al* (eds.), *Khaki Shorts and Saffron Flags* (New Delhi, Oriented Longman, 1991).

45. Bose, N.S., *Swami Vivekananda* (New Delhi, Sahitya Akadami, 1994).
46. Dixit, Prabha, 'The Ideology of Hindu Nationalism' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
47. Embree, A.T., *Utopias in Conflict, Religion and Nationalism in Modern India* (Delhi, OUP, 1991).
48. Graham, B., *Hindu Nationalism and Indian Politics* (Cambridge, Cambridge University Press, 1990).
49. Heehs, Peter (ed.), *Essential Writings of Sri Aurobindo* (Delhi, OUP, 1998).
50. Joshi, V.C., *Aurobindo : An Interpretation* (Delhi, 1973).
51. Kaviraj, Sudipto, *The Unhappy Consciousness : Bankimchandra Chattopadhyaya and the Formation of Nationalist Discourse in India* (Delhi, OUP, 1995).
52. Savarkar, V.D., *"Hindutva Or Who is a Hindu"?* (Bombay, Veer Savarkar Prakashan, 1923).
53. Segupta, S.C., *Bankim Chandra Chatterjee* (New Delhi, Sahitya Akademi, 1982).
54. Shay, T.L., *Legacy of Lokmanya : Political Philosophy of Bal Gangadhar Tilak* (London, OUP, 1956).
55. Singh, Karan, *Prophet of Indian Nationalism* (Bombay, Bhartiya Vidya Bhawan, 1970).
56. Baljon, J.M.S., *The Reforms and Religious Ideas of Sir Sayyid Ahmad Khan* (Leiden : E.J. Bill, 1949).
57. Banerjee, A.C., *Two Nations : The Philosophy of Muslim Nationalism* (New Delhi, Concept, 1980).
58. Dar, B.A., *A Study of Iqbal's Philosophy* (Lahore, Md. Ashraf, 1933).
59. Hamid, Abdul, *Muslim Separatism in India* (London, OUP, 1967).
60. Hasan, Mushirul (ed.), *India's Partition : Process, Strategy and Mobilization* (Delhi, OUP, 1993).
61. Hussain, M. Hadi, *Syed Ahmed Khan : Pioneer of Indian Resurgence* (Lahore, Institute of Islamic Culture, 1970).
62. Imam, Zafar, *Muslims in India* (New Delhi : Orient Longman, 1975).
63. Mohammed, Shan, *Sir Syed Ahmad Khan : A Political Biography* (Meerut, Meenakshi Prakashan, 1969).
64. Mujahid, Sharif, *Quaid-i-Azam-Jinnah : Studies in Interpretation* (Delhi, B.R., 1985).
65. Naim, C.M. (ed.), *Iqbal, Jinnah and Pakistan* (Delhi, Jinnah Publi. House, 1982).
66. Shakir, Moin, 'Dynamic of Muslim Political Thought' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
67. Brohi, A.K., *Iqbal and The Concept of Islamic Socialism* (Karachi, Al-Karimi, 1967).
68. Hussain, Raiz, *Iqbal, Poet and His Politics* (New Delhi, Uppal Pub. House, 1987).
69. Burney, S.M., *Iqbal : Poet-Patriot of India* (New Delhi, Vikas, 1987).
70. Masud, Mohamad K. and Mumtaz Liaqat, *Iqbal Through Western Eyes (*Sterling, 1989).
71. Malik, Hafeez, *Iqbal : Poet-Philosopher of Pakistan* (New York : Columbia University Press, 1971).

Course X : COMPARATIVE POLITICS (II) : UNDERSTANDING DEVELOPING SOCIETIES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with key issues and debates in comparative politics with special reference to developing societies.

Unit-I

Approaches to the politics of developing countries :

- Political Sociology. –Systems theory, structural functionalism, political Culture, political development and institutionalism
- Political Economy. – Modernisation Theory, Dependency Theory and World System Analysis
- Alternative Approaches. New Institutional approach

Unit-II

- *Colonialism and Its Impact :* Politics, Economy and Culture.
- Nationalism and Anti-colonial Movement : Ideology, social base, strategies of mobilization and outcome with refrence to India, China and Latin America(creole nationalism)

Unit-III

- *Civil Society :* Ethnic, National and Regional identities.
- *Globalisation :* Definitin, difference between old and new, Its impact on the Developing World.

Unit-IV

- State- Nature of the state in Developing world with reference to Hamza Alavi, J.S. Saul and Colin Leys work, Political regimes- military, Islamic , etc ,
- Constitutionalism and Political parties,.

Essential Readings

1. Alavi, H., *The State in Post-Colonial Societies: Pakistan and Bangladesh*, New Left Review, No. 74, 1972.
2. Allen, C. and G. Willams (eds.), *Sociology of* 'Developing Societies', Sub-Saharan Africa, Macmillan, London, 1982.
3. Cammack, Paul, David Pool and William Tordoff, *Third World Politics: A Comparative Introduction*, John Hopkins University Press, Baltimore, 1993.
4. Caramani, Daniele, *Comparative Politics*, Oxford University Press, Oxford, 2014.
5. Clapham,C., Third World Politics: An Introduction, Routledge, London 1985.
6. Dickovick, J. Tyler and Jonathan Eastwood, *Comparative Politics: Integrating Theories,* Methods, and Cases, Oxford University press, Oxford, 2014.
7. Eckstein, Harry and David, E. Apter, *Comparative Politics : A Reader,* The Free Press of Glencoe, London, 1994
8. Manor, James (ed.), *Third World Politics*, Longman, London, 1991.
9. Mohanty, Manorajan, P. Mukherji with O. Tornquist, *People's Rights, Social Movements and the State in the Third World*, Sage, New Delhi, 1998.
10. Randall, V., *Political Parties in the Third World*, Sage, London, 1988.
11. Smith, Anthony D., *State and Nation in the Third World: The Western State and African Nationalism*, Wheatsheaf, Sussex, 1983.

Students are advised to see the relevant entries in the following reference books Seymour Martin Lipset (ed. in chief). The Encylopaedia of Democracy, Volumes I, II and III, Routledge, London, 1995 : Vernon Bogdanor (ed.). The Blackwell Encyclopaedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to the Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Suggested Readings

1. . Alavi, Hamza and Teodor Shanin (eds.), *Introduction to the Sociology* of 'Developing Societies', Macmillan, London, 1982.
2. Amin, Samir, 'Social Movements at the Periphery' in P. Wignaraja (ed.), *New Social Movements in the South*, Zed, London, 1993.
3. Archetti, E. et al., *Latin America*, Macmillan, London, 1987.
4. Ayoade, J.A., 'States Without Citizens: An Emerging African Phenomenon' in D. Rothchild and N. Chazan (ed.), *The Precious Balance : State and Society in Africa*, Westview Press, Boulder, Colorado, 1988.
5. Bayart, J.F., 'Civil Society in Africa' in Chabal, P. (ed.), *Political Domination in Africa : Reflections on the Limits of Power*, Cambridge University Press, Cambridge, 1986.
6. Berger, M., 'The End of the Third World', *Third World Quarterly*, Vol. 15, No. 2, 1994.
7. Bratton, M., and Van der Walle, N., 'Towards Governance in Africa : Popular Demands and State Responses' in G. Hayden and M. Bratton (eds.), *Governance and Politics in Africa*, Boulder, Colorado, 1991.

8. Callaghy, T., 'Vision and Politics in the Transformation of the Global, Political Economy : Lessons from the Second and the Third World's in R. Slater, Schutz, B. and Dorr, S. (eds.), *Global Transformation and the Third World*, L. Rienner Pub., Boulder, Colorado, 1993.
9. Chabal, P., Introduction : 'Thinking About Politics in Africa', in Chabal, P. (eds.), *Political Domination in Africa : Reflections on the Limits of Power,* Cambridge University Press, Cambridge, 1986.
10. Chezan, N., 'Between Liberalism and Statism : African Political Cultures and Democracy' in Diamond, Larry (ed.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
11. Diamond, L., 'Introduction : Political Culture and Democracy', in L. Diamond (eds.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
12. Diamond, L., 'The Globalisation of Democracy' in Slater, R., Shutz, B., and Dorr, S. (ed.), *Global Transformation and the Third World*, L. Rienner, Boulder, Colorado, 1993.
13. Dixon, Chris and Michael J. Heffernan (eds.), *Colonialism and Development in the Contemporary World*, Mansell, New York, 1991.
14. Eliott, Carolyn, *Civil Society : A Reader*, Oxford University Press, New Delhi, 2003.
15. Engles, Dagmar, and Shula Marks (eds.), *Contesting Colonial Hegemony : State and Society in Africa and India*, British Academic Press, London (1994).
16. Fatton, R., *Predatory Rule, State and Civil Society in Africa*, L. Rienner, Boulder, Colorado, 1992.
17. Frank, A.G., *Capitalism and Underdevelopment in Latin America*, Penguin, Harmondsworth, 1971(Kumar, Ashutosh, 'Hamza Alavi and Post-Colonial State', *Economic and Political Weekly*, August 7, 2004).
18. Garreton, M.A., 'Political Democratisation in Latin America and the Crisis of Paradigms' in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
19. Geddes, Barbara 'Paradigms and Sand Castles in Comparative Politics of Developing Areas' in Crotty, William (ed.), *Comparative Politics, Policy and International Relations*, Northwestern University Press, Evanston, 1991.
20. Hawthorn, G., "Waiting for a Text?" Comparing 'Third World Politics in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
21. Haynes, Jeff, *Third World Politics, A Concise Introduction,* Blackwell, Oxford, 1996.
22. Huntington, S., *Political Order in Changing Societies*, Yale University Press, New Haven, 1968.
23. Huntington, S., The Third Wave, Democratisation in the Late Twentieth Century, University of Oklohoma Press, Norman, 1991.
24. Jayaram, N., On Civil Society : Issues and Perspective, Sage Publications, New Delhi, 2005.
25. Kamrava, M., Politics and Society in the Third World, Routledge, London, 1993.
26. Kaviraj, S., 'On State, Society and Discourse in India' in Manor, J. (ed.), Rethinking Third World Politics, Addison-Wesley Longman, London, 1993.
27. Luckham, R., 'Introduction : The Military, The Developmental State and Social Forces in Asia and the Pacific : Issues for Comparative Analysis' in Selochan, V. (ed.), The Military, The State, and Development in Asia and Pacific, Westview, Boulder, 1991.

28. Mamdani, M., T, Mkandawire, and E. Wamba-dia-Wamba, 'Social Movements and Democracy in Africa' in Wignaraja, P. (ed.), *New Social Movements in the South*, Zed Books, London, 1993.
29. Migdal, J., *Strong Societies and Weak States : State Society Relations and State Capabilities in the Third World*, Princeton University Press, Princeton, 1988.
30. Mitra, S. (ed.), *The Post-Colonial State in Asia*, Wheatsheaf, Hemel Hampstead, 1990.
31. Mouzelis, N., *Politics in the Semi-Periphery*, Macmillan, London, 1986.
32. Nkruman, K., *Neo-colonialism : The Last Stage of Capitalism*, Nelson, London, 1965.
33. O'Donnell, G., *Modernisation and Bureaucratic Authoritarianism, Institute of International Studies*, Berkeley, 1973. O' Donnell, G., Authoritarian Rule : Prospects for Democracy, John Hopkins University Press, Baltimore, 1973.
34. Parpart, J., 'Women and the State in Africa'; in D. Rothchild and N. Chazan (eds.), *The Precarious Balance : State and Society in Africa*, Westview, Boulder, 1988.
35. Potter, D., "Democratisation in Asia" in D. Held (ed.), *Prospects for Democracy : North, South, East, West,* Polity, Cambridge, 1985.
36. Pye, L., *Asian Power and Politics : The Culture Dimension of Authority*, Harvard University Press, Cambridge, 1985.
37. Randall, V., and Theobold, R., *Political Change and Underdevelopment : A Critical Introduction to Third World Politics,* Macmillan, London, 1985.
38. Rudolph, S., 'State Formation in Asia – Prolegemenon to a Comparative Study', *Journal of Asian Studies*, 46, 4, 1987.
39. Saul, John S., 'The State in Post-Colonial Societies : Tanzania' in Ralph Miliband and John Saville (ed.), *The Socialist Register*, Merlin, London, 1974.
40. Sisson, R., 'Culture and Democratisation in India' in Diamond, L. (ed.), *Political Culture and Democracy in Developing Countries*, Lynne Reiner, Boulder, 1993.
41. Smith, B.C., *Understanding Third World Politics, Theories of Political Change and Development,* Palgrave Macmillan, Basingstoke, 2003.
42. Taylor, Peter, J., 'The Legacy of Imperialism' in Dixon Chris and Michael, J Heffernan (eds.), *Colonialism and Development in the Contemporary World,* Mansell, New York, 1991.
43. Thomas, Clive, Y., *The Rise of the Authoritarian State in Peripheral Societies*, Monthly Review Press, New York, 1980.
44. West, David "New Social Movements" in Gerald F. Gaus and Chandran Kukathas, Handbook of Political Theory, Sage, London, 2004.

OR

Course X : COMPARATIVE POLITICAL SYSTEMS WITH SPECIAL REFERENCE TO USA, UK, CHINA, JAPAN AND SWITZERLAND (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting **one question** from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debate in comparative politics with special reference to USA, UK, China, Japan and Switzerland.

UNIT-I

(i) Historical Antecedent of Contemporary Political Systems.
(ii) Evolution of the Constitution and Constitutional Systems.

UNIT-II

(i) Executive
(ii) Legislature

UNIT-III

(i) Political Parties
(ii) Pressure Groups

UNIT-IV

(i) Elections, Electoral Process
(ii) Political Participation, Voting Behavior

Books Recommended :

1. Jean Blondel : *An Introduction to Comparative Government,* Praeger, 1969.
2. G. Almond and B. Powell : *Comparative Politics* : *A Development Approach*, Little Brown, 1966.
3. Robert Ward & Roy Macrides (Eds.) : *Modern Political Systems*, Prentice Hall, 1972.
4. M. Irish & J.W. Protho : *The Politics of American Democracy*, Prentice Hall, 1968.
5. D. J. Weller : *The Government of Politics of Communist China*, Hutchinson, 1970.

6. Peter Bormhead : *Britains Developing Constitution,* St. Martin's Press,1974.
7. John P. Mackintosh : *The Government and Politics of Britain,* Hutchinson, 1971.
8. P.J. Madgwick : *Introduction to British Politics*, Hutchinson, 1971.
9. A.H. Birch : *The British System of Government*, Allen & Unwin, 1980.
10. Lucian Pye : *The Spirit of Chinese Politics*, Cambridge, 1970.
11. Richard Rose : *Studies in British Politics*, Macmillan, 1966.
12. Shanti Swarup : *A Study of the Chinese Communist Movement (only Introduction)*, Clarendon, 1966.
13. Robert Wesson : *Communism and Communist Systems*, Prentice-Hall, 1978.
14. Richard H. Solomon : *Mao's Revolution and the Chinese Political Culture*, Oxford University, 1971.

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) : INTERNATIONAL ORGANISATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is designed to introduce the students to the relevance and functioning of international organizations in Contemporary World Politics. It takes up for the purpose a detailed study of some of the major specialized international agencies under the auspices of the United Nations.

UNIT-I

Evolution of International Organisation.

Theoretical approaches to the study of international organization : Classical, neo-realist, functionalist, conflict resolution, world society approach and the Marxist approach.

UNIT-II

Role and function of :

(i) International government organization.

(ii) International non-governmental organization.

Making of the United Nations : Its purpose, principles and structure.
United Nations and maintenance of international peace and security, collective security and its alternative.

UNIT-III

Major specialized agencies : ILO, UNESCO, WHO, FAO.
United Nations and Human Rights.

UNIT-IV

United Nations in the Post-Cold War Era :
UN and disarmament, revision of UN Charter, UN and emerging deterioration in international relations.
Limitations and constraints.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty First Century : Unique Contexts, Enduring Patterns* (New Jersey, Prentice Hall, 2003).
3. A. LeRoy Bennett, *International Organization : Principles and Issues* (New Jersey, Prentice Hall, 1991).
4. B.N. Mehrish, *International Organisations : Structures and Processes* (Jallandhar, Vishal Publications, 1996).
5. Shambhavi Vendantam, *United Nations : Putting Words to Work* (New Delhi, Vikash, 1996).
6. K. P. Saksena, *Reforming the United Nations : The Challenge of Relevance* (New Delhi, Sage, 1993).
7. C. Archer, *International Organisations* (London, Routledge, 1992).
8. P. R. Baehr and L. Gordenker, *The United Nations in 1990s* (Hamshire, Macmillan, 1994).
9. Boutros-Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
10. Abi-Saab Georgeas (ed.), *The Concept of International Organisation* (Paris, UNESCO, 1981).
11. Thomas G. Wein, David P. Forsyth, Roger A. Coate, *The United Nations and Changing World Politics* (Boulder, Westview Press, 1994).
12. William Burch, *The Evolution of the United Nations Peace Keeping : Case Studies and Comparative Analysis* (St. Martin Press, 1993).
13. Paul Taylor and A.R.J. Groom (eds.), *International Organisation : A Conceptual Approach* (London, Frances Printer, 1978).
14. J.W. Burton, *World Society* (London, Cambridge University Press, 1972).
15. Freidrich Kratochwil and Edward Mansfield (eds.), *International Organisation : A Reader* (New York, Harper Collins, 1994).

Option (b) : TRANSNATIONAL ACTORS IN INTERNATIONAL POLITICS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course is designed to introduce the students to the changing dynamics of the emerging world order in which various transnational actors have come to play an increasingly important role in shaping the responses of the state actors to some of the most crucial issues in contemporary history.

UNIT -I

The politics of terminology : From "Non-state actors" to "Transnational actors".
Limitations of state-centric framework and emergence of transnational actors.

UNIT -II

Theorizing different types of transnational actors in International Politics.
Transnational companies; Regional economic groupings; strategic and security actors; Non-legitimate groups and liberation movements; and Non-governmental organizations.

UNIT -III

Post-War Economy and the International Monetary System : International Monetary Fund and World Bank.
Dynamics of Regional Integration : European experience.
Beyond Europe: The global rise of regionalism (special reference to ASEAN and SAARC).

UNIT -IV

Cartelization of Natural Resources in the Age of Globalization : OPEC.
Issues and challenges in international environmental politics.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. R. O. Keohane and J. S. Nye (eds.), *Transnational Relations and World Politics* (Cambridge Mass: Harvard University Press, 1972).

3. T.G. Weiss and L. Gordenker (eds.), *NGOs, the UN and Global Governance* (Boulder, Colo. : Lynne Rienner, 1996).
4. P. Willets (ed.), *Pressure Groups in the Global System : The Transnational Relations of Issue-Oriented Non-Governmental Organizations* (London : Pinter, 1982).
5. P. Willets (ed.), *'The Conscience of the World' : The Influence of Non-Governmental Organizations in the UN System* (London: Hurst and Co., 1996).
6. T. Risse-Kappen (ed.), *Bringing Transnational Relations Back In* (Cambridge : Cambridge University Press, 1995).
7. J. N. Rosenau, *The Study of Global Interdependence : Essays on the Transnationalisation of the World Affairs* (London : Pinter, 1990).
8. A.J.R. Groom and P. Taylor, *Frameworks for International Co-operation* (London : Pinter, 1990).
9. Michael Nicholson, *International Relations : A Concise Introduction*, Second Edition (New York: Palgrave, Macmillan, 2002).
10. Robert Keohane, *International Institutions and State Power : Essays in International Relations Theory* (Boulder: Westview, 1989).
11. John Madeley, *Big Business, Poor Peoples: The Impact of Transnational Corporations in the World's Poor* (London: Zed Books, 1999).
12. Joel Krieger (ed.), *The Oxford Companion to the Politics of the World* (New York : Oxford University Press, 1993).
13. John E. Spero and Jeffery A. Hart, *The Politics of International Economic Relations,* 5th ed. (New York, St. Martin's Press, 1997).
14. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty-First Century : Unique Contexts, Enduring Patterns*, (New Jersey : Prentice Hall, 2003).

Option (c) : POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper attempts to understand development issues and problems in India with reference to theoretical advances in development studies.

UNIT -I

Development, meaning and changing conceptions.
Economic growth.
Human development.
Sustainable development.

UNIT -II

Theory of the Developmentalist State.
Impact of Development on the Political Process.
Development Strategies and State Policies in India – Priorities, Strategies, Target Groups.

UNIT -III

Socio-Economic Problems and Developmental Issues in India.
Poverty, Social Backwardness and Disparities.
Displacement, Resettlement and Environmental degradation.

UNIT -IV

Democratic decentralization and development in India.
Developmental Interventions, Non Governmental Initiatives and Empowerment.
Globalization, Changing Policies, Strategies and their implications in India.

Readings :

1. Bardhan, Pranab, 1984*, The Political Economy of Development in India*, New York, Blackwell.
2. Jalan, Bimal (ed.) 1992, *The Indian Economy : Problems and Prospects*, New Delhi, Viking.
3. Cassen, Robert and Vijay Joshi (eds.), 1992, *India : The Future of Economic Reform*, New Delhi, Oxford University Press.
4. Dreze, Jean & Amartya Sen, 1995, *India : Economic Development & Social Opportunity*, Delhi, Oxford University Press.
5. Frankel Francis et. al (eds.) 2000, *Transforming India : Social and Political Dynamics of Democracy*, Delhi, Oxford University Press.
6. Jayal, Niraja Gopal (ed.) 2001, *Democracy in India*, New Delhi, Oxford University Press.
7. Kaviraj Sudipta, 1987, "Dilemmas of Democratic Development in India" in Adrian Leftwich ed. *Democracy and Development Theory and Practice*, Cambridge, Polity Press.
8. Kohli Atul, 1987, *The State and Poverty in India : The Politics of Reform*, Cambridge, Cambridge University Press.
9. Lewis, John P., 1995, *Governance and Reform : Essays in Indian Political Economy*, Delhi, Oxford University Press.

10. Mathur Kuldeep (ed.) 1996, *Development Policy and Administration*, Delhi, Sage Publications.

11. Satyamurthy, T.V., 1999, *Social Change and Political Discourse in Indian Structures of Power, Movements of Resistance,* Delhi, Oxford University Press.

12. Sen Amartya, 2000, *Development as Freedom*, Delhi, Oxford University Press.

Option (d) : PEACE AND CONFLICT RESOLUTION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to introduce students to the meaning and contending approaches in the discipline of peace and conflict studies. It also brings into broader context the concept and theories of conflict and conflict resolution and the different strategies and tactics of non-violent resolutions.

UNIT-I

Peace Studies :

1. Meaning, scope and approaches.
2. Peace-keeping, Peace-making, Peace-building and post-peace confidence building measures.

UNIT-II

Peace Movements :

1. Civil Rights Movements.
2. Green Peace Movements.

UNIT-III

Conflict and Conflict Resolution : Conceptual and Epistemological dimensions:

1. Conflict: Typologies and Causes.
2. Conflict Resolution: Meaning and Scope.

UNIT-IV

Conflict Resolution and Transformation : General Strategies and Tactics :

1. Pacific Methods (Mediation, Arbitration and Adjudication), and Analytical problem solving approach (notably of John Burton).
2. Non-Violent techniques of conflict resolution (Gandhian).

Recommended Books :

1. Bondurant, J.V., *Conquest of Violence* (London, Princeton Uni. Press, 1958).
2. Coser, L., *The Function of Social Conflict* (N.Y., The Free Press, 1956).
3. Simmel, G., *Conflict and the Web of Group-Affiliation* (New York, 1955).
4. Weber, Thomas, *Conflict Resolution and Gandhian Ethics* (New Delhi, Gandhi Peace Foundation, 1991).
5. Wallensteen, Peter (ed.), *Peace Research : Achievements and Challenges* (Boulder & London, Westview Press, 1988).
6. Holsti, K.J., "Paths to Peace ? Theories of Conflict Resolution and Realities of International Politics," in Thakur, Ramesh (ed.), *International Conflict Resolution* (Boulder and London, Westview Press, 1988).
7. Galtung, J., *Peace by Peaceful Means* (London, Sage, 1996).
8. Galtung, J., *The Way is the Goal : Gandhi Today* (Ahmedabad, Gujarat, Vidyapeeth, 1992).
9. Boulding, Elise (ed.), *New Agenda for Peace Research* (Boulder and London, Lynee Reimer, 1992).
10. Boutras, Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
11. Burton, J. Dukes, Frank, *Conflict : Practices in Management, Settlement and Resolution* (London, Macmillan, 1990).
12. Sandole, Dennis, J.D. and Merwe, Hugo Van der (ed.), *Conflict Resolution Theory and Practice* (New York, Manchester University Press, 1993).

Option (e) : RETHINKING GEOPOLITICS : CRITICAL PERSPECTIVES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on the premise that geopolitics needs to be re-conceptualized as twenty-first century unfolds. The intention is to rethink and radicalize its components 'geo' and 'politics' so that the self-evident character and nuance of the sign 'geopolitics' can be conceptualized and pluralized. Once conceptualized in a critical way as a problematic of geopolitics or geographical politics, geopolitics becomes a much broader social and cultural phenomena that is normally described and understood by the geopolitical tradition of 'wise-men' statecraft.

UNIT-I

Modern Geopolitical Imagination and Visualizing Global Space : Blocks, Worlds and Zones of identity and difference.
Epochs of Geopolitics (Imperial Geopolitics, Cold War Geopolitics, and the Geopolitics of the 'New World Order'.

UNIT-II

Twenty-First Century Geopolitics (End of History? The Clash of Civilizations?).
National Identity and Geopolitical Visions (USA, Russia, India and Pakistan).

UNIT-III

The Geopolitics of Global Dangers ('rogue states', the 'coming anarchy', diseases and disasters).
The Geopolitics of Terror (with special reference to 11 September and its aftermath).

UNIT-IV

Critical Geopolitics (anti-geopolitics, social movements and alternative political geographies).
Gender and Geopolitics.

Suggested Readings :

1. Andrew Herod, Gearoid O Tuathail and Susan M. Roberts (eds.), An *Unruly World ? Globalisation, Governance and Geography*, London and New York : Routledge, 1998.
2. Ciro, E., Zoppe (ed.), *Charles Zorgbibe* : *On Geopolitics, Classical and Nuclear,* Boston, Nijhoff, 1985.
3. David, Hoosan (ed.), *Geography and National Identity*, Oxford, U.K. and Cambridge : USA : Blackwell, 1994.
4. Geoffrey, Parker, *Geopolitics : Past, Present and Future*, London and Washington : Pinter, 1998.
5. Gertjan, Dijkink, *National Identity and Geopolitical Visions*, London, New York : Routledge, 1996.
6. Gearoid, O. Tuathail, *Critical Geopolitics : The Politics of Writing Global Space*, London and New York : Routledge, 1996.
7. Gearoid, O. Tuathail, Simon Dalby and Paul Routledge (ed.), *The Geopolitics Reader*, London and New York, Routledge, 1998.
8. Gearoid, O. Tuathail, Simon Dalby (eds.), *Rethinking Geopolitics,* London and New York : Routledge, 1998.

9. Sloan, G.R., *Geopolitics in United States Strategic Policy, 1890-1987*, Brighton Wheatsheaf Books, 1988.
10. Jan Nederveen Pieterse, *World Orders in the Making : Humanitarian Intervention and Beyond*, Houndmills, Macmillan, 1998.
11. Jan Nijman, *The Geopolitics of Power and Conflict : Superpowers in the International Systems*, London and New York : Belhaven Press, 1993.
12. John, Agnew and Stuart Corbridge, *Mastering Space, Hegemony, Territory and Political Economy*, London, New York : Routledge, 1995.
13. John, Agnew, *Geopolitics : Revisioning World Politics*, London and New York : Routledge, 1998.
14. Klaus, John Dodds, "Geopolitics, Cartography and the State in South America," *Political Geography* 12 (4), July 1993 : 361-381.
15. Kurt Mills, *Human Rights in the Emerging Global Order, A New Sovereignty*, Houndmills : Macmillan Press Limited, 1998.
16. Mathew, B. Fielden, "The Geopolitics of Aid : The Provision and Termination of Aid to Afghan Refugees in North West Frontier Province, Pakistan," *Political Geography*, 1998, 17 (4) : 459-487.
17. Simon, Dalby, *Creating the Second Cold War*, London : Pinter, 1990.

Journals :

1. *Geopolitics* (see Special Issue on "11 September and its Aftermath : The Geopolitics of Terror", Volume 8, Number 3, September 1998.
2. Agnew, J., "American Hegemony into American Empire", *Antipode*, 35(5) : 871-885, 2003.
3. Gregory, D., *The Colonial Present*, Oxford: Blackwell, 2004.
4. Kelly, P., "A Critique of Critical Geopolitics", *Geopolitics*, 11 (1) : 24-53, 2006.

Option (f) : THEORIES OF DEVELOPMENT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This Course introduces students to the significant ways in which development has been conceptualised. It tracks the main grounds on which mainstream models of development have been critiqued and the key issues facing contemporary development theory.

UNIT-I

Development as economic growth–capitalist and socialist models.
Theories of modernisation.
Neo-liberalism and globalisation.
Role of the state, welfare and redistribution.

UNIT-II

Dependency, Underdevelopment and world system analysis.
Human development–Basic Needs, capability approach, rights based approaches.
Notion of social capital.

UNIT-III

Ecology and Nature, Sustainable Development.
Gender and Development.
Culture and Development.
Impact of Postmodernism on Development studies and the Post development rejection of Development.

UNIT-IV

Issues in Development studies today

1. Aid, Role of Non-government Organisations and International Agencies.
2. Democracy and Development.
3. Displacement.
4. Poverty.

Reading List :

1. G. Rist, *A History of Development*, London, Zed Books, 1997.
2. J. Crush, *Power of Development*, Routledge, 1995.
3. Ashis Nandy, *Bonfire of Creeds*, New Delhi, OUP, 2004.
4. Richard Peet and Elaine Hartwick, *Theories of Development*, New Delhi, Rawat, 2005.
5. Jan Nederveen Pieterse, *Development Theory, Constructions/Deconstructions*, New Delhi, Vistaar, 2001.
6. Naila Kabeer, *Reversed Realities, Gender Hierarchies in Development Thought*, W.W. Norton & Co., 1994.
7. R.W. Shenton and M.P. Cowan, *Doctrines of Development*, Routledge, 1996.
8. Nalini Visvanathan (Co-ordinator), Lynn Duggan, Laurie Nisonoff & Nan Wiegersma (Eds.), *The Women, Gender and Development Reader*, Zubaan Books.

9. Kriemild Saunders (Ed.), *Feminist Post-Development Thought : Rethinking Modernity, Post-colonialism and Representation*, Zubaan Books.

10. M. Rahnema & V. Bawtree (Eds.), *The Postdevelopment Reader*, New York, Zed Books, 1997.

11. Wolfgang Sachs, *The Development Dictionary,* Zed Books, London, 1992.

12. Amartya Sen*, Development as Freedom*, New Delhi, OUP, 2002.

13. John Hariss, *Depoliticising Development*, Leftword Books, New Delhi, 2001.

14. Susanne Schech, Jane Haggis, *Culture and Development : A Critical Reader*, Blackwell, 2000.

Option (g) : PUBLIC INTERNATIONAL LAW-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper introduces the students to the fundamentals and various other aspects of Public International Law.

Unit-I : Introducing International Law

Definition, basis and nature.
Distinction between Private International Law and Public International Law.

Sources.
Subjects of International Law – States, Individual and the International Institutions.
Relation of International Law to Municipal Law.

Unit-II : Law of Peace

Intervention.
Recognition – Theories, Modes and Consequences.
State Responsibility.
State Succession.

Unit-III : Force and International Law

Disputes :

Settlement by peaceful means.

Settlement through the agencies – U.N. and the International Court of Justice.

Settlement through means of short of war.

War :

General Laws of Warfare (Land, Maritime and Air)

Geneva Conventions.

War Crimes.

Neutrality

Blockade, Contraband and Prize Courts.

Unit-IV : International Transactions

Diplomatic Agents.

Consuls.

Treaties.

(For Books of Course XI Option (g) : PUBLIC INTERNATIONAL LAW-I, See Page No. 95 & 96)

Course XII : ***The candidates are required to offer any one of the following courses :***
Option (a) : DEMOCRACY IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : The paper aims at enabling the students to understand and reflect upon the theory and practice of democracy in India.

Unit-I

Prefiguring Indian Democracy.
Indian Democracy : Colonial Inheritance.
Idea of Democracy : Constituent Assembly Debates.
State of Democracy in Contemporary India.

Unit-II

Democracy and Development.
Development Planning.
Economic Reforms.

Unit-III

Identities and Rights : Mobilisation and Contestation.
Gender.
Minority Rights.
Dalits and Backward Classes.

Unit-IV

Political Institutions and Democratic Consolidation.
Indian Federalism in Transition.
Democracy and Decentralisation : Panchayati Raj.
Representation, Participation and Electoral Politics.

Selected Readings :

1. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India : Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).
2. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.), *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).
3. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).
4. Kuldeep Mathur (ed.), *Development Policy and Administration* (New Delhi : Sage, 1996).
5. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi: Sage, 2002).
6. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence*, (New Delhi : Oxford, 1998).
7. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 : 1251-68.
8. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II-The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 : 1361-70.
9. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India*, (New Delhi : Oxford, 2001).
10. Rajendra Vohra and Suhas Palishkar, *Indian Democracy : Meanings and Practices,* (New Delhi : Sage, 2004).
11. Peter Ronald deSouza (ed.), *Contemporary India : Transitions* (New Delhi : Sage, 2000).
12. Pratap Bhanu Mehta, *The Burden of Democracy* (New Delhi : Penguin, 2003).
13. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004* (New Delhi : Oxford, 2005), 2nd Edition.
14. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution : The Bahujan Samaj Party in Uttar Pradesh* (New Delhi : Sage, 2002).
15. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003), 2nd Edition.

16. Madhu Purinima Kishwar, *Deepening Democracy : Challenges of Governance and Globalisation in India* (New Delhi : Oxford, 2005).
17. Abhay Kumar Dubey, *Loktantra Ke Saat Adhyaya* (Delhi : Vani, 2002).
18. Abhay Kumar Dubey, *Bharat Ka Bhumandalikaran* (Delhi : Vani, 2003).

Option (b) : GOVERNMENT & POLITICS OF INDIA'S NEIGHBOURS (PAKISTAN, BANGLADESH, NEPAL AND SRI LANKA)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims at introducing the students to some of the dominant issues in South Asia and their long-term implications on bilateral relations among the states of the region. A critical assessment of India's role in the region is the special focus of this course.

UNIT–I

Impact of Geography, History and Lingo-cultural influences on the Government and Politics of India's neighbours.
Major political institutions and political parties in these countries.

UNIT–II

Social change, ethnicity and demography's impact on politics with special reference to forces of modernization and religious fundamentalism.
Political economy of the neighbouring states and its equation with globalization and liberalisation processes.

UNIT–III

Internal Conflict in South Asia : Causes and Dynamics.

UNIT–IV

India as a factor in the politics of these countries with emphasis on bilateral relations and multilateral SAARC.

Suggested Readings

1. Sugata Bose and Ayesha Jalal, *Modern South Asia : History, Culture, Political Economy* (New Delhi, Oxford University Press, 2004).
2. S. Mahmud Ali, *The Fearful State : Power, People and Internal War in South Asia* (London, Zed Books, 1993).
3. Paul R. Brass, *The Politics of South Asia since Independence* (Cambridge, Cambridge University Press, 1990).
4. Dipankar Gupta, *The Context of Ethnicity : Sikh Identity in a Comparative Perspective* (New Delhi, Oxford University Press, 1996).

5. Ashutosh Varshney, *Ethnic Conflict and Civic Life : Hindus and Muslims in India* (New Delhi, Oxford University Press, 2005).
6. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India* (New Delhi, Oxford University Press, 2001).
7. Tapan K. Bose and Rita Manchanda (eds.), *States, Citizens and Outsiders : The Uprooted Peoples of South Asia* (Kathmandu, South Asian Forum for Human Rights, 1997).
8. Ranabir Samaddar, *The Marginal Nation : Transborder Migration from Bangladesh to West Bengal* (New Delhi, Sage Publications, 1999).
9. Sanjeev Baruah, *Durable Disorder : Understanding the Politics of Northeast India* (New Delhi, Oxford University Press, 2005).
10. Urmila Phadnis, *Ethnicity in South Asia* (New Delhi, South Asian Publishers, 1986).
11. Urmila Phadnis, Kalim Bahadur, S.D. Muni (eds.), *Domestic Conflicts in South Asia : Political Dimensions,* Vol. I (New Delhi, South Asian Publishers, 1986).
12. Urmila Phadnis, S.D Muni, Kalim Bahadur, *Domestic Conflicts in South Asia : Economic and Ethnic Dimensions,* Vol. II (New Delhi, South Asian Publishers, 1986).
13. Veena Kukreja, *Civil-Military Relations in South Asia* (New Delhi, Sage Publications, 1991).
14. Ponna Wignaraja and Akmal Hussain, *The Challenge in South Asia : Development, Democracy and Regional Cooperation* (New Delhi, Sage Publications, 1989).
15. Paul R. Brass, *Ethnicity and Nationalism : Theory and Comparison* (New Delhi, Sage Publications, 1991).

Option (c) : WOMEN AND POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course looks at Indian politics through the lens of gender and draws attention to the main themes and debates regarding gender in modern India. It undertakes an analysis of the issues raised by the women's movement in India and the Indian state. In doing so, it will examine the debates on nationalism, social reform, law, citizenship, development, environment and explore inter-sectionality of identities and structures in India. It is an interdisciplinary course which draws on the academic domain of feminist studies.

Unit 1

Social reform and national movements- debate on the position of women; modernity, colonialism and patriarchy; Gandhi and women

Modern Indian State- Institutional and legal provisions, Equality provisions, Family and the state

Unit 2

Women's movement in Contemporary India – Phases, key campaigns,autonomy, relationship with political parties and critical assessment

Violence - Law, Sexualities, State; Public and private violence, Censorship

Unit 3

Community, Identity and Citizenship

Gender and Caste- Reservations for women, Ambedkar, Periyar, Dalit feminism

Gender and Religion- Personal Laws, UCC Debate, Partition, Communalism

Unit 4

Gender and Development: Impact of development policies, Employment and work, ecology and gender

Human development- Health, education

Essential Readings:

1. Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
2. Mary John (ed) *Women's Studies in India: A Reader,* Penguin, 2008
3. Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
4. Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
5. Radha Kumar, *A History of Doing*, Kali for Women, 1997

Suggested Readings

Unit 1

1. Anupama Roy, *Gendered Citizenship*,('The Womanly Vote'), Orient Blackswan, 2005
2. Bina Agarwal, 'The Family in Public Policy', in Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
3. Brinda Bose, *Gender and Censorship,* Women Unlimited, 2006
4. Geraldine Forbes, Women in Modern India, OUP, 2008
5. Janaki Nair, *Women and Law in Colonial India*, Kali for Women, 1996
6. Joanna Liddle and Rama Joshi, 'Gender and Imperialism in British India', *EPW*
7. Kameshwari Jandhyala, State Initiatives, *Seminar*, September 2001
8. Kumkum Sangari and Sudesh Vaid (ed) *Recasting Women* (Chapters by Uma Chakravarti – Whatever Happened to the Vedic Dasi, Partha Chatterjee- Nationalist Resolution of the Women's Question), kali for Women, 1990
9. Leela Kasturi and Vina Mazumdar (ed) *Women and Indian Nationalism*, (Introduction), Vikas Publishing House, 1994
10. Madhu Kishwar, Gandhi on Women, *EPW,* 5 October 1985
11. Rajeshwari Sunder Rajan, *The Scandal of the State*, (Introduction), Permanent Black, 2003
12. Ratna Kaur and Brenda Crossman, 'On Women, Equality and the Constitution' in Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
13. Sadhna Arya, 'National Commission for Women, An Overview of its Performance', *EPW*, May 4 2013
14. Sujata Patel, 'Construction and Reconstruction of Woman in Gandhi', *EPW,* 20 February 1988
15. Sumit Sarkar and Tanika Sarkar (ed) *Women and Social Reform* (Introduction),

Unit 2

1. Arvind Narrain, ' The Verma Committee: Alchemizing anger to hope', Kafila.org
2. Bina Agarwal, 'A Field of One's Own' in Srimati Basu (ed) Dowry and Inheritance
3. Bina Agarwal, 'Landmark Step to Gender Equality', *The Hindu*,September 25 2005
4. Flavia Agnes, 'Economic Rights of Women in Muslim Law', *EPW*, Oct 12 1992
5. Gail Omvedt, 'Women's Movement: Some ideological Debates' in Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
6. Gopal Guru, 'Dalit Women Talk Differently', *EPW*, Oct 14 1995
7. Indira Jaising, 'Bringing Rights Home: Review of the Campaign for a Law on Domestic Violence', *EPW*, Oct 31 2009
8. Janaki Abraham , 'Contingent Caste Endogamy and Patriarchy', *EPW*, Jan 11 2014
9. Jayati Ghosh, 'Violence against Women: Economic Reforms and Increasing Insecurities', 29 January 2008 (http://www.macroscan.org/cur/jan08/cur290108Violence.htm)
10. Madhu Mehra, 'Taking Stock of the new Anti Rape Law', Kafila.org
11. Meena Dhanda (ed) *Reservations for Women* (Introduction), Women Unlimited, 2008
12. Nida Kirmani, 'Claiming their Space: Muslim Women's Networks and Women's Movement in India', *Journal of International Women's Studies*, Nov 2009.
13. Nivedita Menon, 'Conundrum of Agency in Sexual Violence' January 2014, Kafila.org
14. Nivedita Menon, 'Elusive Woman: Feminism and Women's Reservation Bill in Dhanda (ed)
15. Nivedita Menon, 'Rights, Bodies and Law' in Nivedita Menon (ed) *Gender and Politics in India,* OUP, 1999
16. Nivedita Menon, 'Uniform Civil Code: The Women's Movement Perspective', kafila.org
17. Pratima Pardeshi, 'Ambedkar and women's liberation', *the Dalit*, March-April 2002
18. R. Geetha, 'Panchayat Raj Institution and Women's Reservation' in Dhanda (ed)
19. Radha Kumar, *A History of Doing* (Chapters 6-11), Kali for Women, 1997
20. Rajeshwari Sunder Rajan, 'Women between Community and State' in Rajan (ed) *The Scandal of the State*
21. Sharmila Rege, (ed) *Against the Madness of Manu*(Introduction), Navayana Books, 2013
22. Sharmila Rege, 'Dalit Women talk Differently: A Critique of 'Difference' and towards a Dalit Feminist Standpoint', *EPW*, Oct 31 1998
23. Srimati Basu, 'The Politics of Giving: Dowry and Inheritance as Feminist Issues' in Basu (ed)*Dowry and Inheritance,* Women Unlimited, 2005
24. Susie Tharu and Tejaswini Niranjana, 'Problems for a Contemporary Theory of Gender' in Nivedita Menon, *Gender and Politics in India*, OUP, 1999
25. Tanika Sarkar, 'Women, Community and Nation' in Jaffrey and Basu (ed)
26. V Geetha, 'Periyar, Women and an Ethic of Citizenship' in Anupama Rao (ed) *Gender and Caste*, Women Unlimited, 2003
27. V. Geetha, 'Of Bodily Love and Hurt' in Mary E John and Janaki Nair (eds) *A Question of Silence: The Sexual Economies of Modern India,* Kali for Women, 1998
28. Veena Das, 'Sexual Violence, Discursive Formations and the State', *EPW*, Special Issue, September 1996
29. Zoya Hasan, 'Gender Politics, Legal Reform, and the Muslim Community in India' in Patricia Jaffrey and Amrita Basu (ed)*Appropriating Gender: Women's Activism and Politicized Religion in South Asia*, Routledge, 1998

Unit 4

1. Besty Hartmann and Mohan Rao, 'India's Population Programme', *EPW*, Oct 31 2015
2. Bina Agarwal, 'The Gender and Environment Debate' in N.Menon (ed) *Gender and Politics in India*, OUP, 1999
3. Dipta Bhog, 'Gender and Curriculum', *EPW*, April 27 2002
4. Executive Summary of the National Focus Group on Education, NCERT 2005
5. Geeta Nambissan, 'Integrating Gender Concerns', *Seminar*, April 2004
6. Harini Narayan, 'Women's Health, Population Control and Collective Action', *EPW*, Febuary 19, 2011
7. Indrani Mazumdar, Neetha N, 'Gender Dimensions: Employment Trends in India, 1993-94 to 2009-10, *EPW,* 22 October 2011
8. Kalpana Vishwanath, 'Whose Body, Whose Health' *Seminar*, Sept 2001
9. Kalyani Menon-Sen and Kalpana Kannabiran, "Microcredit: Magic Bullet or Poison Pill' in Michele Kelley and Deepika D'Souza (eds) *The World Bank in India,* Orient Blackswan, 2010
10. Leela Kasturi, 'Development, Patriarchy and Politics: Indian Women in the Political Process 1947-92', Occasional Paper, CWDS.
11. Maitrayee Chaudhuri, 'Citizens, Workers and emblems of Culture: An analysis of the First Plan Document on women', *Contributions to Indian Sociology,* 29 (no 1 and 2), 1995
12. Mary E John, 'Gender and Development in India, 1970s-1990s', *EPW*, Nov 23 1996
13. Mary E John, 'Reframing Globalisation: Perspectives from the Women's Movement' EPW, March 7 2009
14. Nirmala Banerjee, 'Whatever Happened to the Dreams of Modernity?' *EPW*, April 25, 1998.
15. NIrmala Buch, 'State Welfare Policy and Women, 1950-1975', *EPW*, 25 April 1998
16. Padmini Swaminathan (ed) Women and Work: Essays from EPW (Introduction), Orient Blackswan, 2012
17. Saheli Women's Resource Centre, 'Reproductive Rights in the Indian Context' (Also available in Hindi)
18. Sujatha Gothoskar, 'The Plight of Domestic Workers', *EPW*, June 1 2013.

Option (d) : RIGHTS : IDEAS AND MOVEMENTS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the various ways in which the notion of rights has been conceptualized in theory and the debates emerging from the rights-based movements.

Unit-I

Notions of Rights : Philosophical foundations, historical developments and normative framework (natural rights, civil rights, democratic rights and human rights).

Unit-II

Contextualizing Rights : Debate on universalism and cultural relativism of rights.
Development debates and human rights.

Unit-III

Human Rights Movements : Ideology and social basis of civil liberties and democratic rights movements in India : National Human Rights Commission; International Human Rights Movement – ideology and social basis.

Unit-IV

Current Challenges : State and rights of citizens (child, women, rights of victims of repression); community rights (minorities, ethnic groups), rights of migrants, displaced people and refugees.

Suggested Readings :

1. Arnold, Christopher, *Ideas and Ideology : Human Rights,* Edward Arnold, 1978.
2. Baviskar, Amita, *In the Belly of the River : Tribal Conflicts Over Development in the Valley,* OUP, Delhi, 1995.
3. Bose, Tapan K. and Rita Manchanda, States, Citizens and Outsiders : The Uprooted Peoples of South Asia, *South Asia Forum for Human Rights,* Kathmandu, 1998.
4. Butalia, Urvashi, *The Other Side of Silence : Voices from the Partition of India,* Viking, Delhi, 1998.
5. Claude, Richard Pieree and Burns H. Weston, *Human* Rights in the World Community : Issues and Actions, University of Pennsylvania Press, Philadelphia, 1989.
6. Dubois, M, "The Governance of the Third World : A Foucauldian Perspective on Power Relations in Development", *Alternatives, 16, 1, Winter,* 1991.
7. Freeden, Michael, *Rights, World View,* Delhi, 1998.
8. Gordenker, Leon, *Refugees in International Politics,* Columbia University Press, New York, 1987.
9. Gudwin-Gill, Guy S., *The Refugee in International Law,* Clarendon, Oxford, 1983.
10. Kochler, Hans, "The Concept of the Nation and the Question of Nationalism : The Traditional "Nation State" vs. a Multiculture 'Community State' in Michael Dunne and Tizianno Bonazzi (eds.) *Citizenship and Rights in Multicultural Societies,* Keele University Press, Keele, 1995.
11. Kothari, Smitu and Harsh Sethi (ed.), *Rethinking Human Rights, Challenges for Theory and Action,* Lokayan, 1989.
12. Kothari, Smitu, "The Human Rights Movement in India," *Social Action*, January-March, 1990, Pp. 1-15.
13. Kumar, Radha, *Divide and Fall? Bosnia in the Annals of Partition,* Verso, London, 1997.
14. Kymlicka, Will, *Multicultural Citizenship: A Liberal Theory of Minority Rights,* Clarendon, Oxford, 1996.
15. Donnelly, Jack, *The Concept of Human Rights,* Croom Helm, London, 1985.
16. Macfarlane, L. J., *The Theory and Practice of Human Rights,* Maurice Temple Smith, London, 1985.
17. Macpherson, C. B., "Problems of Human Rights in the Twentieth Century in C.B. Macpherson, *The Rise and Fall of Economic Justice,* OUP, Oxford, 1987.
18. Mills, Kurt, *Human Rights in the Emerging Global Order,* Palgrave Macmillan, 1998.

19. Mohanty, Manoranjan, Partha Nath Mukherji with Olle Tornquist (ed.), *People's Rights, Social Movements and the State in the Third World,* Sage, New Delhi, 1998.
20. Mani, S. D. and Lok Raj Baral (eds.), *Refugees and Regional Security in South Asia,* Konark, New Delhi, 1996.
21. Paraguli, P., "Power and Knowledge in Development Discourse : New Social Movements and State in India," *International Social Science Journal,* 127, February, 1991.
22. Ray, Ashwini, "Civil Rights Movement and Social Struggle in India", *Economic and Political Weekly,* Vol. XXI, No. 28, 12 July, 1986.
23. Rentein, Alison Dundes, *International Human Rights : Universalism vs Relativism,* Sage, 1990.
24. Rubin, B., "Civil Liberties Movements in India : New Approaches to the State", Asian Survey, Vol. 27, 1987, Pp. 371-92.
25. Singh, Pritam, "Sectarianism and Human Rights Discourse : The Politics of Human Rights in the Post-Colonial Punjab" in Michael R. Anderson and Sumit Guha (eds.), *Changing Concepts of Rights and Justice in South Asia,* OUP, Delhi, 1998.
26. Staunhagen, Rodalfo, *The Ethnic Question : Conflicts, Development and Human Rights,* United Nations University Press, Tokyo, 1990.
27. Steriner, Henry J. and Philip Alston, *International Human Rights in Context : Law, Politics and Morals,* Clarendon Press, Oxford, 1996.
28. Tambiah, Stanley, J., *Levelling Crowds : Ethnonationalist Conflicts and Collective Violence in South Asia,* Vistaar Publications, New Delhi, 1997.
29. UNESCO, *Violation of Human Rights : Possible Rights of Recourse and Forms of Resistance,* 1984.
30. UNHCR, *The State of the World's Refugees – A Humanitarian Agenda,* OUP, Oxford, (Latest edition).
31. Vincent, R. J., (ed.), *Foreign Policy and Human Rights,* Cambridge University Press, Cambridge, 1986.
32. Weiner, Myron, *The Global Migration Crisis : Challenge to States and to Human Rights,* Harper Collins, New York, 1995.
33. Wilmer, Frank, *The Indigenous Voice in World Politics : Since Time Immemorial,* Sage, Newbury Park, 1993.
34. Young, Iris, Marion, *Justice and the Politics of Difference,* Princeton University Press, Princeton, 1990.
35. Zolberg, Aristide R., Astri Suhyke and Sergio Aguayo, *Escape From Violence : Conflict and the Refugee Crisis in the Developing World,* OUP, New York, 1989.

Option (e) : NATIONALISM : THEORY AND CONTEXT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

(iii) The question paper will include the following instructions for the candidates:

(a) The first question is compulsory. It contains 15 questions covering the entire syllabus. The candidates are required to attempt any 10 of them, providing answers to each question in about 25 to 30 words. Each question carries 2 marks.

(b)The remaining question paper consists of 4 units. Each unit carries two questions. The candidates are required to answer one question from each Unit. Each question carries 15 marks.

OBJECTIVES:- This paper examines various theories of nationalism by placing them in the context of their origin. In the process, it examines the concept of nation, its relationshipwith other identities and new challenges it faces in the age of globalization.

UNIT-I

Nation, State and Nation-State: Conceptual Distinctions and Interrelationships.
Origins and Development of Nationalism: European and non-European contexts.
Various forms of nationalism.

UNIT-II

Primordialist theories of nationalism: socio-biological approach (Pierre van der Berghe); culturalist approach (Edward Shils and Clifford Geertz); perennialism (Adrian Hastings).Ethnosymbolist theories: (John Armstrong, Anthony D. Smith).
Modernist theories: nationalism as politics (JohnBreuilly, Paul R. Brass, Erich Hobsbawm); nationalism as social transformation (Ernest Gellner, Benedict Anderson).

UNIT-III

Marxist approach (Marx, Lenin, Rosa Luxemburg, Otto Bauer). Neo-Marxist approaches (tom Nairn, Michael Hector).
Feminstapproach (Nira Yuval-Davis).

UNIT-IV

Postcolonial theory (ParthaChatterjee).
Nationalism and Globalisation

ESSENTIAL READINGS

1. Hutchinson, J. and A.D. Smith (eds.), *Nationalism*,OUP, Oxford, 1994.
2. Ozkirimli, Umut, *Theories Of Nationalism: A Critical Introduction* (second edition), Palgrave Macmillan, New York,2010.

SUGGESTED READINGS

1. Alter, P., Nationalism, Edward Arnold, London, 1989.
2. Anderson, Benedict, *ImaginedCommunities: Reflection on the Origins and Spread of Nationalism*, Verso, London, 1991.
3. Anthiyas, Floya and Nira Yuval-Divas, *Women and the Nation-State*, Macmillan, London, 1989.
4. Balibar, Etienne and Immanuel Wallerstein, *Race, Nation, Class: Ambiguous Identities*, Verso, London, 1991.
5. Chatterjee, Partha, *The Nation and its Fragments*, Oxford University Press, 1994.
6. Connor, Walker, *The National Question in Marxist-Leninist Theory and Strategy*, Princeton University Press, Princeton, 1994.
7. Featherstone, Mike (ed.), *Global Culture: Nationalism, Globalization and Modernity,* Sage, London, 1990.
8. Gellner, Ernest, *Nations and Nationalism*, Blackwell, Oxford, 1983.
9. Hechter, Michael, *Internal Colonialism: The Celtic Fringe in British National Development, 1536-1966*, Routledge and Kegan Paul, London, 1975.

10. Hobsbawm, E.J., *Nations and Nationalism since 1780, Programme, Myth and Reality*, Cambridge University Press, Cambridge, 1990.
11. Ignatieff, Michael, *Blood and Belonging, Journeys into the Nationalism*, BBC Books and Chatto and Windus, London, 1993.
12. Jayawardena, K., *Feminism and Nationalism in the Third World*, New Delhi, 1986.
13. McGraw, A.G. et al (ed.), *Global Politics :Globalization and the Nation-State,* Polity, Oxford, 1992.
14. Nairn, Tom, *The Break-up of Britain: Crisis and Neo-Nationalism*, New Left Books, London, 1977.
15. Smith, Anthony, D., *The Ethnic Origins of Nations*, Blackwell, Oxford, 1986.
16. Smith, Anthony, D., *Theories of Nationalism*, Duckworth, London, 1971
17. Tiech, Mikulas and Roy Porter (eds.), *The National Question in Europe in Historical Context*, Cambridge University Press, Cambridge, 1993
18. Williams, Patrick and Laura Chrisman (eds.), *Colonial Discourse and Post-Colonial Theory*, A Reader, Harvester Wheatsheaf, London, 1993.

Option (f) : NEW POLITICAL GEOGRAPHY IN COMPARATIVE PERSPECTIVE

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : Political Geography is concerned with the reciprocal impact of spatial patterns, features and structures, and political ideas, institutions. Above all, it focuses on the twin ideas of territory and territoriality. This course is based on the premise that with the Post-World War era coming to a decisive end, a new political geography –one offering fresh perspectives on the relationship between geography and politics—is in the making. Such a political geography recognizes that spatial patterns of political processes are not confined only to national boundaries. The nation-state is a part of a globalizing world, and the resultant geopolitical map contains nested regions with over-lapping boundaries. It is equally important to examine the geopolitical economy of so-called 'resource wars', that is armed conflicts revolving to a significant degree over the pursuit or possession of critical materials. The course will draw upon a number of case studies from different parts of the globe (especially Afro-Asia, Polar Regions and the Indian Ocean region) to enable students develop a better understanding of the politics of space and spaces of politics.

Unit-I

Understanding Key Concepts : Power, Territory/Territoriality, Space and Spatiality.
Globalization and the Regionalization : Integration and Fragmentation.

Unit-II

Territory and the Power of Ethnic Nationalism.
The Geopolitics of 'Resource Wars'.

Unit-III

Environmental Geopolitics and Sustainability (with special reference to the polar regions).
International Migration, Refugee Flows and Diasporas.

Unit-IV

New States and the Geopolitical Transition (with special reference to Central Asian Republics).
Changing nature and role of international boundaries and border regions.

Suggested Readings

1. David Slater, "Geopolitical Imaginations Across the North-South Divide : Issues of Difference, Development and Power," *Political Geography 16 (8)*, November 1997 : 631-654.
2. Ghazi Flah, "The Spatial Manifestation of Threat : Israelis and Palestinian Seek a 'Good' Border," *Political Geography,* 1995, 14 (8) : 689-706.
3. Ian Bremmer and Ray Taras (eds.), *New States, New Politics : Building the Post-Soviet Nations*, Cambridge : Cambridge University Press, 1997.
4. Leif Ohlsson (ed.), *Hydropolitics : Conflicts Over Water as a Development Constraint*, Dhaka University Press Limited, 1996.
5. Linda Weiss, *The Myth of the Powerless State : Governing the Economy in a Global Era,* Cambridge : Polity Press, 1998.
6. Malcolm Anderson*, Frontiers : Territory and State Formation in the Modern World,* Cambridge, Polity Press, 1996.
7. Mekonnen Tesfahuney, "Mobility, Racism and Geopolitics", *Political Geography*, 1998, 17 (5), 499-515.
8. Ramesh Dutta Dikshit, *Development in Political Geography : A Century of Progress*, New Delhi : Sage, 1997.
9. Robert Bennett and Robert Estall (eds.), *Global Change and Challenge : Geography for the 1990s*, London, New York : Routledge, 1991.
10. Sanjay Chaturvedi, *The Polar Regions : A Political Geography*, Chichester : John Wiley & Sons, 1996.
11. Sarah A. Radcliff, "Frontiers and Popular Nationhood : Geographies of Identity in the 1995 Ecuador-Peru-Border Dispute," *Political Geography*, 1998, 17 (3) : 273-293.
12. Stanley D. Brunn & Thomas R. Leinbach (eds.), *Collapsing Space & Time : Geographical Aspects of Communication & Information*, London : Harper Collins Academic, 1991.
13. Tapan K. Bose and Rita Manchanda, *State, Citizens and Outsiders : The Uprooted Peoples of South Asia*, Kathmandu : South Asia Forum for Human Rights, 1997.

14 Vladimir Kolossov and Andrei Treivish, "The Political Geography of European Minorities : Past and Future", *Political Geography*, 1998 : 17 (5) : 517-534.

15 Rajat Ganguli, *Kin State Intervention in Ethnic Conflicts : Lessons from South Asia*, New Delhi : Sage Publications, 1998.

16 Feroz Ahmed, *Ethnicity and Politics in Pakistan*, Karachi : Oxford University Press, 1998.

17 Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism : Essays North-South,* Delhi : Oxford University Press, 1997.

18 Stephen Castles & Mark J. Miller, *The Age of Migration : International Population Movements in the Modern World,* Houndmills, MacMillan, 1998 (Second Edition)

19 Agnew, J., *Making Political Geography*, London : Arnold, 2002.

20 Blackwell, M., *Political Geography*, London : Routledge, 2002.

21 Cox, K.R., *Political Geography: Territory, State and Society*, Oxford : Blackwell, 2002.

22 Dodds, K., *Geopolitics in a Changing World*, Harlow : Pearson Education, 2000.

23 Glassner, M. and Fahrer, C., *Political Geography*, Chichester : John Wiley & Sons, 2003.

24 Jones, M., *An Introduction to Political Geography*, London : Routledge, 2004.

25 Loughlin, John O. *Dictionary of Geopolitics*, Westport : Greenwood Press.

26 Painter, J., *Politics, Geography and 'Political Geography'*, London : Arnold, 1995.

27 Tuathail, G.O., Dalby, S. and Routledge, P., *The Geopolitics Reader*, London : Routledge, 2007.

28 Rumley, D. and Chaturvedi, S., *Energy Security and the Indian Ocean Region*, New Delhi : South Asian Publishers, 2005.

Journals

Political Geography.
Progress in Human Geography.

*Geopolitics** A Frank Cass Journal, (see in particular *Special Issue* on "The Geopolitics of Resource Wars", Volume 9, number 1, Spring 2004 : Special Issue on "Boundaries, Territory and Post-Modernity, Volume 3, Number 1, Summer 1998).

*Note : This journal is also available on line at Panjab University library website.

Option (g) : POLICIES AND POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper familiarises students with the various trajectories of the Indian development experience and their interaction with politics since independence.

Unit-I

The Colonial Experience.
National Movement : Debates on Development.
Planning and its precursors.

Unit-II

Agriculture and the Institutional Strategy.
Politics of land reforms.
New Agricultural Policy.
Green Revolution and the Rise of agrarian power/capitalism.

Unit-III

Politics of industrial Policy.
State and Business : Labour, Import Substitution and Nationalisation.
Politics of business groups.

Unit-IV

Economic Reforms : Background, Scope and Content.
Political Economy of Reforms.
Economic Reforms, Democracy and Electoral Politics.

Readings

1. Amit Bhaduri and Deepak Nayar, *The Intelligent Person's Guide to Liberalisation* (New Delhi : Penguin, 1996).

2. Ashutosh Varshney, *Democracy, Development and the Countryside : Urban-Rural Struggles in India*, (Cambridge : Cambridge University Press, 1995).

3. Atul Kohli, 'Politics of Economic Liberalisation in India', *World Development* 17(3), 1989 : 305-28.

4. Atul Kohli, The Politics of Economic Growth in India, 1980-2005: Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 :1251-68.

5. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II- The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 :1361-70.

6. Atul Kohli, *The State and Poverty in India : The Politics of Reform* (Cambridge : Cambridge University Press, 1987).

7. Baldev Raj Nayar, *Globalisation and Nationalism : The Changing Balance in India's Economic Policy*, 1950-2000 (New Delhi: Sage, 2001).

8. Baldev Raj Nayar, *India's Mixed Economy : The Role of Ideology and Interest in its Development* (Bombay : Popular Prakashan, 1989).

9. Baldev Raj Nayar, "Policy and Performance under Democratic Coalitions : India's United Front Government and Economic Reforms, 1996-98", *Journal of Commonwealth and Comparative Politics*, 37(2) July 1999 : 22-56.

10. Bimal Jalan (ed.), *Indian Economy : Problems and Prospects*, (New Delhi : Oxford, 1993).

11. Bipan Chandra, *The Rise and Growth of Economic Nationalism in India.*

12. Deepak Naayar, 'Economic Development and Political Democracy : Interaction of Economics and Politics in Independent India', *Economic and Political Weekly* 39(21) : 2079-31.

13. Dige Jorgen Pedersen, 'Explaining Economic Liberalisation in India : State and Society Perspectives', *World Development*, 28(2) 2000 : 265–82.

14. Donald Horowitz, 'Is there a third-world policy process', *Policy Sciences*, 22, 1989 : 197–212.

15. E. Sridharan, "Economic Liberalisation and India's Political Economy : Towards a Paradigm Synthesis", *Journal of Commonwealth and Comparative Politics*, 31(3), November, 1993.

16. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004*, (New Delhi : Oxford, 2005) 2nd Edition.

17. G. Thimmaiah, 'The Political Economy of Populist Programmes', *Journal of Indian School of Political Economy*, 8(1),1996 : 40–63.

18. Ian Little and Vijay Joshi (eds.), *India's Economic Reforms*, 1964-91, (Delhi : Oxford, 1998).

19. Isher Judge Ahluwalia, *Industrial Growth in India : Stagnation since the Mid-Sixties* (Delhi : Oxford, 1985).

20. Jagdish Bhagwati, *India in Transition : Freeing the Economy*, (New Delhi : Oxford, 1993).

21. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.) *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).

22. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).

23. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi : Sage, 2002).

24. Lloyd Rudolph and Susanne Rudolph, *In Pursuit of Lakshmi : The Political Economy of the Indian State* (Chicago : Chicago University Press, 1987).

25. Mark Robinson and Gordon White (ed.), *Democratic Developmental State* (Delhi, 1998).

26. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India: Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).

27. Pradeep Chhibber, 'Political Parties, Electoral Competition, Government Expenditures and Economic Reforms in India', *Journal of Development Studies*, 32(1), 1995 : 74–96.

28. Pranab, Bardhan, *The Political Economy of Development in India* (expanded edition with an epilogue on the Political Economy of Reform in India) (New Delhi, Oxford, 1998).

29. Rob Jenkins, *Democratic Politics and Economic Reform in India* (Cambridge University Press, New Delhi, 1999).

30. Robert Cassen and Vijay Joshi (eds.), *India : The Future of Economic Reforms* (New Delhi : Oxford, 1995).

31. Robert Wade, 'The Market for Public Office : Why the Indian State is not Better at Development', *World Development*, 13(4), 1985 : 467–97.

32. Sanjay Kumar, 'Impact of Economic Reforms on Indian Electorate', *Economic and Political Weekly* 39(16): 1621-30.

33. Stanley Kochanek, 'Liberalisation and Business Lobbying in India', *Journal of Commonwealth and Comparative Politics* 34(3), 1996: 155–73.

34. Stanley Kochanek, 'The Transformation of Interest Politics in India', *Pacific Affairs*, 68 (4), 1996 : 529–50.

35. Stanley Kochanek, *Business and Politics in India* (Berkeley : University of California Press, 1974).

36. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003) 2nd Edition.

37. Sukhamoy Chakravarthy, *Development Planning : The Indian Experience* (New Delhi : Oxford, 1987).

38. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence* (New Delhi: Oxford, 1998).

39. Terence J. Byres (ed.), *The State, Development Planning and Liberalisation in India* (New Delhi : Oxford, 1997).

40. Vanita Shastri, 'The Politics of Economic Liberalization in India', *Contemporary South Asia*, 6(1), 1997 : 27–56.

41. Vivek Chibber : *Locked in Place : State Building and Late Industrialisation in India,* (New Delhi : Tulika, 2004).

Course XII: Option (h) : PUBLIC ADMINISTRATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper will introduce students to different aspects of public administration with special reference to India.

UNIT-I

Development of Public Administration as a discipline – Basic concepts of administration – Nature and Scope – private and public administration – control over Administration, Executive, Legislative, Judiciary.

UNIT-II

Principles of Organization : Line & Staff Agencies
Type of Organization : Formal & Informal
Forms of Organization, Departmental, Public Corporation and Board.

UNIT-III

Personnel Administration, Bureaucracy and Civil Service, Recruitment, Promotion, Training and Civil Service Neutrality.

Financial Administration : Importance of Fiscal Management Budgetary Process in India. The Finance Ministry, Organization and Functions, Budgetary Control – Financial Committees of Parliament – Public Account Committee and Estimate Committee – Audit in India, Comptroller and Auditor General.

UNIT-IV

Administration Law, Delegated Legislation : Need for Delegation, Delegated Legislation in India; Parliamentary Control of Delegated Legislation.

Administration Tribunals : Emergence and significance of Administrative Tribunals, Judiciary and Administrative Tribunals.

Administrative Improvement and Reforms ; Lok Pal and Lok Ayukta.

Books Recommended :

1. M. P. Sharma & B.L. Sadana : *Public Administration in Theory and Practice*, Kitab Mahal, 2004.
2. C.P. Bhambari : *Administration in Changing Society,* National, 1978.
3. C.P. Bhambari : *Public Administration (Theory and Practice),* J.P.Nath & Co., 1972.
4. A. Avasthi and S. Maheshwari : *Public Administration,* Lakshmi Narain Agarwal, 1966.
5. Ramesh K. Arora : *Comparative Public Administration : An Ecological Perspective, Associate Publishing House, 1972.*
6. R.S. Milne : *Concepts and Models in Public Administration,* IIPA, 1966.
7. Chester Barnard : *The Functions of the Executive,* Cambridge, 1928.
8. J.S. Bhalla : *Public Enterprise in U.K., U.S.A., and India,* 1969.
9. Lee, Hahn Been and Samonte, Abelardo G. (eds) : *Administration Reforms in Asia, EROPA, 1970, See Particularly J.N. Khosla " Administration Reforms in Asia",* pp 270-286.
10. Pfiffner & Sherwood : *Administrative Organisation, Prentice-Hall, 1968.*
11. Amitai Etzioni : *Modern Organisation, Prentice Hall, 1972.*
12. Edwin B. Flippo : *Principles of Personnel Management (Fourth Edition), McGraw-Hill, Kogakusha Ltd., 1976.*
13. HPA : *Personnel Administration-Implementing the Reforms, IIPA, 1967.*
14. Administrative Reforms Commission Report on Personnel Administration (New Delhi : 2010)
15. C.P. Bhambri : *Public Administration (Theory and Practice (Meerut : Educational Published 21th edition 2010)*
16. Mohit Bhattacharya : *Public Administration (Calcutta : World Press, 2000)*
17. S. L. Kaushik and Pardeep Sahni (eds.) : *Public Administration in India : Emerging Trends (Allahabad : Kitab Mehal, 2007)*
18. William A. Niskanen : *Bureaucracy and Representative Government (Chicago: Atherton, 2007)*

FOURTH SEMESTER

Course XIII : INDIAN POLITICAL THOUGHT-II (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the major themes of Indian Political Thought particularly during the Indian National Movement through a study of the contribution of key thinkers during this period.

Unit-I

- M.K. Gandhi : Politics of Non-violence.
- Satyagraha and Swaraj.
- Sarvodaya.

Unit-II

- Challenging Brahminical Discourse : B.R. Ambedkar.
- Critique of Brahminical Hinduism.
- Class, Caste and Democracy.

Unit-III

- Politics and Philosophy of M. N. Roy : Theory of Radical Humanism, Roy-Lenin Controversy.
- The Ideology of Communist Movement in India.

Unit-IV

- Indian Socialist Tradition : Jawaharlal Nehru, R.M. Lohia and Jayprakash Narayan.

Essential Readings

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century : From Naoroji to Nehru* (London, OUP,1971).
2. Bali, D.R., *Modern Indian Thought* (New Delhi, Sterling, 1980).
3. Baxi Uppendra & Parekh, B. (eds.), *Crisis and Change in Contemporary India* (New Delhi, Sage, 1995). Doctor, A.H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).
4. Brown, D.M., *Nationalist Movement : Indian Political Thought from Ranade to Bhave* (Berkeley : University of California Press, 1965).

5. Pantham, Thomas and Deutsch, K.L. (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
6. Pantham, Thomas, *Political Theories and Social Reconstruction* (New Delhi, Sage, 1995).
7. Parekh, B. and Pantham, Thomas (eds.), *Political Discourse: Exploration in Indian and Western Political*
8. Parel, Anthony J. & Keith Ronald C. (eds.), *Contemporary Political Philosophy* (New Delhi, Sage, 1992). Vanna, V.P., *Modern Indian Political Thought* (Agra : Lakshami Narain, 1996), 11th Revised Edition. *Thought* (New Delhi, Sage, 1987).

Specific Readings

1. Arooran, A. N., *Tamil Renaissance and Dravdian Nationalism,* 1905-44 (Madurai : Koodal, 1980).
2. Chandra, Bipan (ed.), *The Indian Left : Critical Appraisal* (New Delhi, Vikas, 1983).
3. Chatterjee, Partha, *Nationalist Thought and The Colonial World* (Delhi : OUP, 1986).
4. Chatterji, Bhola, *Conflict in J. P.'s Politics* (New Delhi : Ankur, 1984).
5. Dalton, Dennis, "The Ideology of Sarvodaya" in *Pantham and Deutsch,* 1986.
6. Das, M. N., *Political Philosophy of Nehru* (London : George Allen and Unwin, 1961).
7. Dasgupta, Biplab, *The Naxalite Movement* (Bombay, Allied, 1974).
8. Doctor, Adi H., "Low Caste Protest Movements in 19th and 20th Century Maharashtra : A Study of Jyotirao Phule and B. R. Ambedkar," *Indian Journal of Social Science,* IV (2), April-June, 1991.
9. Gard, R.A., *Buddhist Political Thought : A Bibliography* (Washington : School of Advanced International Studies, 1952).
10. Ghatak, B.K. (ed.), *Dr. Ambedkar's Thought* (New Delhi : APH, 1997).
11. Ghose, Shankar, *Socialism and Communism in India* (Bombay, Allied, 1971).
12. Guha, Ranjit, "Dominance Without Hegemony and its Historiography" in Guha (ed.), *Subaltern Studies VI* (Delhi : OUP, 1989).
13. Gupta, S. D., *Comintern, India and the Colonial Question* (Calcutta : K. P. Bagichi, 1980).
14. Haiah, Kancha, "Towards the Dalitaization of the Nation in Partha Chatterjee" (ed.), *Wages of Freedom* (Delhi : OUP, 1988).
15. Irschik, F., *Politics and Social Conflict in South Asia : The Non-Brahmin Movement and Tamil Separatism,* 1916-29 (Berkeley : University of California Press, 1969).
16. Iyer, Raghavan, *The Moral and Political Thought of Mahatma Gandhi* (Delhi : OUP, 1973).
17. Jatava, D. R., *The Political Philosophy of B. R. Ambedkar* (Agra Phoenic, 1965).
18. Josh, Bhagwan, *Struggle for Hegemony in India, 1920-1947,* Vol., II : 1934-41 (New Delhi : Sage, 1992).
19. Juergensmeyer, Mark, "Shoring up the Saint : Some Suggestions for Improving Satyagraha" in John, Hick and Lamont, C. Hempel (eds.), *Gandhi's Significance for Today* (London : Macmillan, 1989).
20. Kantowsky, D., *Sarvodaya : The Other Development* (New Delhi : Vikas, 1980).
21. Kaviraj, Sudipta, "The Heteronomous Radicalism of M. N. Roy" in *Pantham and Deutsch,* 1986.
22. Keer, Dhanajayay, *Dr. Ambedkar : Life and Mission* (Bombay : Popular Parkashan, 1964).
23. Martyshin, Orest, *Jawaharlal Nehru and His Political Views* (Moscow : Progress, 1989).
24. Mehrotra, N. C., *Lohia : A Study (*Delhi *:* Atma Ram and Sons, 1978).
25. Mohanty, Manoranjan, "Ideology and Strategy of the Communist Movement in India" in *Pantham and Deutsch,* 1986.

26. Mukherjee, Partha N., "Sarvodaya After Gandhi" in Ramashray Roy (ed.), *Contemporary Crisis in Gandhi* (Delhi : Discovery, 1986).
27. Nagaraj, D. R., "A Tibetian Dog, The Silent Sadhus and Peasants of Champaran Notes on Violence, Non-Violence and Counter-Violence in Gandhi" in Ramashray Roy (ed.), *Gandhi and the Present Global Crisis* (Shimla : IIAS, 1996).
28. Nandy, Ashis, "From Outside the Imperium : Gandhi's Cultural Critique of the West" in *Roy,* 1986.
29. O'Hanlon, Rosalind, *Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in Nineteenth Century Western India* (London : Cambridge, University Press, 1985).
30. Omvedt Gail, *Dalits and the Democratic Revolution : Dr. Ambedkar and the Dalit Movement in Colonial India* (Delhi : Sage, 1994).
31. Omvedt, Gail, *Cultural Revolution in a Colonial Society : The Non-Brahman Movement in Western India 1873 to 1940* (Bombay : SSET, 1976).
32. Omvedt, Gail, *Dalit Visions* (New Delhi : Orient Longman, 1995).
33. Ostergaard, Geoffrey, "The Gandhian Movement in India since the Death of Gandhi" in *Hick and Hempel,* 1989.
34. Overstree, G. D. and Marshall Windmiller, *Communism in India* (Bombay, Perennial Press, 1969).
35. Pantham Thomas, "Understanding Nehru's Political Ideology" in Amal Ray (et. al.) (eds.), *The Nehru Legacy : An Appraiser* (Delhi : Oxford and IBH, 1991).
36. Pantham, Thomas, "Gandhi's Quest for Non-Violent Political Philosophy" in L. Rouner (ed.), *Celebrating Peace* (Notre Dame, University of Notre Dame Press, 1991).
37. Pantham, Thomas, "Gandhi's Theory of Non-Violence : His Reply to the Terrorist" in Neol O'Sullivan (ed.), *The Theory and Practice of Terrorism* (Sussex, 1986).
38. Pantham, Thomas, "Habermas's Practical Discourse and Gandhi's Satyagraha" in *Parekh and Pantham,* 1987.
39. Pantham, Thomas, "Postrelativism in Emancipatory Thought : The Significance of Gandhi's Swaraj and Satyagraha", in Sheth, D.L. and Nandy, Ashis (eds.), *The Multiverse of Democracy* (Delhi : OUP, 1997).
40. Pantham, Thomas, Parekh, Bhikhu, *Gandhi's Political Philosophy* (London, Macmillan, 1989).
41. Pillai, R. C., "The Political Thought of Jawaharlal Nehru" in *Pantham and Duetsch,* 1986.
42. Prasad, Bimal, *Jayprakash Narayan : Quest and Legacy* (New Delhi, Vikas, 1982).
43. Prasad, N. (ed.), *J. P. and Social Change* (Delhi, Radiant, 1982).
44. Prasad, R. A., *Socialist Thought in Modern India* (Delhi : Meenakshi, 1974).
45. Ram, Mohan, *Indian Communism : Split Within a Split,* (New Delhi : Vikas, 1969).
46. Rao, K. Raghavendra, "Communication Against Communication : The Gandhian Critique of Modern Civilization in Hind Swaraj" in *Parekh and Pantham, 1987.*
47. Ray, Sibnarayan (ed.), *M. N. Roy : Philosopher Revolutionary* (Delhi, Ajanta, 1995).
48. Roy, M. N., *New Humanism* (Calcutta : Renaissance, 1953).
49. Roy, Samaren, *M. N. Roy : A Political Biography* (Hyderabad : Orient Longman, 1997).
50. Seth, Sanjay, *Marxist Theory and Nationalist Politics : The Ease of Colonial India* (New Delhi : Sage, 1995).
51. Sinha, L. P., *The Left Wing in India* (Muzaffarpur, New Publishers, 1965).

52. Srinivasan, R., "The Ideological Genesis of the Dravidian Movement", *Indo-British Review,* January-June, 1987.
53. Srivastava, R.K., "Sarvodaya; Vision and Reality" in Roy, 1986.
54. *The Philosophy and Practice of Radical Humanism* (New Delhi : Radical Humanist Association, 1970).
55. Yopadgtata, P.C., "A Celebration of the Gandhian Alternative", *Economic and Political Weekly,* 2nd December, 1989.
56. Zelliot, Eleanor, "The Social and Political Thought of B. R. Ambedkar" in *Pantham and Deutsch,* 1986.

Course XIV : FOREIGN POLICY OF INDIA (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course tries to underline the changes, which the shifting nature of world order has induced into the more enduring elements and themes of Indian foreign policy. At the same time, India's growing assertion on the world stage as an important international actor is assessed in the light of its role in various global regimes.

Unit –I: Making of Indian Foreign Policy

1. Legacies and Actors
2. Principal Phases of Indian Foreign Policy
3. Transition from Nehruvianism to Neoliberalism

Unit-II: India's Economic Foreign Policy

4. Global Setting: IMF, WB, and WTO
5. Regional Setting: SAARC and Beyond

Unit–III: India's Strategic Foreign Poicy

6. India's Strategic concerns at global and regional level
7. India's Nuclear Policy

Unit-IV: India's Environmental Policy:

8. Climate Change
9. Energy Security

Essential Readings

1. C Raja Mohan , *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).
2. A. Appadorai and M. S. Rajan, *India's Foreign Policy and Relations* (South Asian Publishers, 1988).
3. Achin Vanaik, *India in a Changing World* (Orient Longman, 1995).
4. C. Raja Mohan, *Modi's World*: *Expanding India's Sphere of Influence* (Harper Collins, 2015).
5. David Malone, C. Rajamohan, Srinath Raghavan (Eds.), *The Oxford Handbook of Indian Foreign Policy* (Oxford Handbooks 2015).
6. Imtiaz Ahmed (ed.), *Indian Foreign Polic* (Delhi , Vikas Publishing House, 1993).
7. J. N. Dixit, *Makers of Indian Foreign Policy: From Raja Ram Mohan Roy to Yashwant Sinha*, 2003. (New Delhi: Harper Collins, 2003)
8. J.N. Dixit, *Indian Foreign Policy, 1947-2003* (New Delhi, D. K. Publications, 2003).
9. Kanti Bajpai and Harish V. Pant (eds.), *India's Foreign Policy*: *A Reader* (Oxford University Press, 2013)
10. Kanti Bajpai, *India and the world*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.
11. Kanti P. Bajpai and Amitabh Mattoo eds., *Securing India: Strategic Thought and Practice*, (New Delhi, Manohar Publishers, 1996).
12. Muchkund Dubey, *India's Foreign Policy: Coping with the Changing World* (Pearson, 2012)
13. R. S. Yadav, Bhartiya Videsh Niti (Hindi Edition).
14. Sumit Ganguly, *Indian Foreign Policy* (Oxford India Short Introductions Series, 2015).
15. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
16. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
17. V. P. Dutt, *India's Foreign Policy* (New Delhi, Vikas, 1984).

Suggested Readings

1. A. Kapur and A. J. Wilson, *The Foreign Policy of India and her Neighbours*, (Basingstroke: Macmillan, 1996).
2. A.P. Rana, *The Imperatives of Non-Alignment*: *A Conceptual Study of India's Foreign Policy Strategy in the Nehru Period*, (Macmillan, 1976).

3. Bimal Prasad (ed.), *Indian Foreign Policy* (New Delhi, Vikas).

4. C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).

5. Harish Kapur, *India's Foreign Policy, 1947-1992*: *Shadows and Substance* (New Delhi, Sage, 1994).

6. Iqbal Singh, *Between Two Fires: Towards an Understanding of Nehru's Foreign policy,* (Hyderabad: Orient Longman, 1998).

7. Itty Abraham, *The Making of the Indian Atomic Bomb, Science, Secrecy and the Postcolonial State*, (Zed Books, 1998).

8. J. N. Dixit, *Indian Foreign Policy and its Neighbours* (New Delhi, Gyan Books, 2001).

9. J.N. Dixit, *Across Borders: Fifty Years of India's Foreign Policy* (New Delhi, Picus Books, 1998).

10. J.N. Dixit, *My South Block Years: Memoirs of a Foreign Secretary*, (New Delhi, UBSPD), 1996.

11. K. Subrahmanyam, "Nehru and the India-China Conflict of 1962", in *Indian Foreign Policy: The Nehru Years*, ed. B.R. Nanda, (New Delhi, Vikas, 1976)`.

12. Lalit Mansingh et al. (eds), *Indian Foreign policy: Agenda for the 21st Century* (New Delhi: Konark Publishers, 1997).

13. M. S. Rajan, *India and International Affairs: A Collection of Essays* (New Delhi, Lancers Books, 1999).

14. M.J. Akbar, *Nehru: The Making of India*, (London, Penguin Books, 1988).

15. N. Jayapalan, *Foreign Policy of India* (Delhi, Atlantic, 2001).

16. Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

17. Robert W. Bradnock, *India's Foreign Policy Since 1971*. (London, Pinter Publishers, 1990.

18. Ronald, Inden, *Imaging India* (Cambridge, MA, Blackwell, 1992).

19. Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York, Simon and Schuster, 1996).

20. Stepehn D. Krasner, *Structural Conflicts: The Third World Against Global Liberation* (Berkeley, University of California Press, 1985).

21. Sumit Ganguly, *Indian Defence Policy*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.

22. Surjit Mansingh, *India's Search for Power, Indira Gandhi's Foreign Policy, 1966-1982* (Delhi, Sage, 1984.)

23. V. P. Dutt, *India's Foreign in a Changing World* (New Delhi, Vikas, 1999).

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) : PARTIES AND ELECTORAL POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
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The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : It helps the students to understand the evolution and transformation of political parties in India. It also analyses different issues that impinge on party politics and challenges posed by parties and party system to Indian democracy.

Unit-I

Political Parties and Party Politics in Contemporary India :

- A political, sociological and economic analysis.
- Federalism, regionalism and political parties.
- Party system in transition.

Unit-II

National Political Parties :

- Ideology and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-III

Regional and State Parties :

- Origin and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-IV

Electoral Politics in India :

- Role of Social cleavages and elections.
- Electoral reforms and the Electoral process.
- New Social Movements, NGOs and their impact on political parties.

Selected Readings

1. Chatterjee, Partha (Ed.), *State and Politics in India*, OUP, 1999.
2. Hasan, Zoya, (Ed.), *Parties and Party Politics in India*, New Delhi, Oxford, 2001.
3. Mehra, Ajay Kumar, D.D. Khanna and Gert W. Kueck (Ed.) , *Political Parties and Party Systems*, Sage Publications, New Delhi, 2003.
4. Mitra, Subrata K. and V.B. Singh, *Democracy and Social Change in India : A Cross Sectional Analysis of the National Electorate*, Sage, 1999.
5. Kohli, Atul, *Centralization and Powerlessness : India's Democracy in a Comprehensive Perspective* in Midgal, Joe, Atul Kohli and Vivenne Shue (Eds.) , *State Power and Social Forces*, Cambridge University Press, 1994.
6. Roy, Ramashray and Paul Wallace (Eds.), *India's 1999, Elections and 20th Century Politics*, Sage, New Delhi, 2003.
7. Vora, Rajendra and Suhas Palshikar (Eds.), *Indian Democracy*, Sage, New Delhi, 2003.

Option (b) : STATE POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
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There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: There is much recognition and appreciation of the regional states to be viewed as important political and economic units for developing a theoretical framework for analysing politics and economy undergoing a transition in recent India. The regional states are being considered as critical to the understanding of the issues pertaining to emergent national politics and economy. This course aims to explore the multiple dimensions of state as well as sub-state level politics in India in a comparative perspective.

Unit -I
A Theory of State Politics in India
a. Rise of State Politics as an Autonomous Discipline: Survey of Literature
b. Beyond Nation-State: Framing Regional Politics in India

Unit-II
Language, Region and Federal Polity

a. Reorganization of States in Independent India: 1953-1999
b. Recent Demands for New States: Shifting Bases
c. Politics of Autonomy/Self-determination: Punjab, Jammu and Kashmir
d. Regionalization of Politics: State Level Parties, Coalitional Politics at the State Level

Unit -III

Dalit and Backward Classes Movements

a. Tamil Nadu : Dravidian Movement and Lower Castes Assertion
b. Uttar Pradesh: Lower and Middle Castes Political Assertion
c. Punjab: Ad-Dharm Movement, Dalit Cultural Assertion

Unit-IV

Regional Roots of Development Politics in India: State Level Experiences

a. State, Political Regimes and Social Welfare Policy: Stark Variations across the States
b. Agrarian Politics in the States: Green Revolution, Farmers' Movements, Farmers' Suicides
c. Politics of Economic Reforms and Growing Spatial Disparity: Regional States and Sub-Regions

Essential Readings

1. Frankel, Francine and M.S.A. Rao, eds, *Dominance and State Power in Modern India,*
2. Jenkins, Rob, *Regional Reflections: Comparing Politics across India's States, Oxford* University Press, New Delhi, 2004.
3. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
4. Narain, Iqbal, ed., *State Politics in India*, Meenakshi Prakashan, Meerut, 1976.
5. Pai, Sudha , *Handbook on Politics in the Indian States Regions, Political Parties and Economic Reforms (*Ed.). Oxford University Press, New Delhi, 2013.
6. Weiner, Myron, ed., *State Politics in India*, Princeton University Press, New Jersey, 1968.
7. Wood John R, ed., *State Politics in Contemporary India: Crisis or Continuity*, Westview Press, Boulder, 1984.

Suggested Readings:

Unit 1

1. Crane, Robert I. (ed.), *Regions and Regionalism in South Asian Studies: An Exploratory Study*, Duke University Monograph series, 1967.
2. Fadia, B., *State Politics in India*, Radiant Publishers, New Delhi, 1984.
3. Gould, W. *Hindu Nationalism and the Language of Politics in Late Colonial India*, Cambridge University Press, Cambridge, New York, 2004.
4. Heller, Patrick, 'Degrees of Democracy: Some Comparative Lessons from India', *World Politics*, 52, July, 2000. 484-519.
5. Iyer, L., 'Direct versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, 92(4), 2010, 693–713.
6. Jacob, Suraj, 'Towards a Comparative Sub-national Perspective on India', *Studies in Indian Politics*, December 2015 vol. 3 no. 2 229-246
7. Kailash, K. K., 'Varieties of Comparative State Politics Research in India', Seminar, 620, 2011, 66-71.
8. Kohli, Atul and Prerna Singh (eds.), *Handbook of Indian Politics*, Routledge, London, 2013.
9. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
10. Markovits, C., *A History of Modern India*, 1480–1950, Anthem, London, 2002.
11. Pai, Sudha, *State Politics New Dimensions: Party System, Liberalization and Politics of Identity.* Shipra Publications, New Delhi, 1999.

12. Palshikar, Suhas and Rajeswari Deshpande, 'Redefining State Politics in India', 2009, http://www.lokniti.org/newsletter/theme_note.pdf
13. Shastri, Sandeep and K. C. Suri and Yogendra Yadav, eds., *Electoral Politics in Indian States*, Oxford University Press, New Delhi, 2009.
14. Sinha, Aseema, 'Scaling Up: Beyond the Sub-national Comparative Method for India', *Studies in Indian Politics*, 3(1), June, 2015, 128-133.
15. Synder, Richard, 'Scaling Down: The Subnational Comparative Method', *Studies in Comparative International Development*, 36(1), March, 2001, 93-110
16. Tillin, Louise, 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2), December, 2013, 235-240.

Unit 2

1. Ahmed, B., 'Elections and Party Politics in India: A Symposium'. *Asian Survey* 10(11), November, 979–92, 1970.
2. Bose, Sumantra, *States, Nations, Sovereignty: Sri Lanka, India and the Tamil Eelam Movement*, Sage, New Delhi, 1999.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and Politics of Identity in India*, Pearson-Longman, New Delhi, 2008.
4. Brass, Paul R, *Language Religion and Politics in North India,* Cambridge University Press, 1974.
5. Chadha Behera, Navneeta, *State, Identity and Violence; Jammu, Kashmir and Ladakh*, Manohar, New Delhi, 2000.
6. Chandra, K. and S. Wilkinson, 'Measuring the Effect of 'Ethnicity,' Comparative Political Studies 41(4–5), 2008, 515–63.
7. Chandra, K. *Why Ethnic Parties Succeed: A Comparative Study of the Bahujan Samaj Party Across Indian States*, Cambridge University Press, New York, 2000.
8. Chhibber, Pradeep K. and I. Nooruddin, 'Do Party Systems Count? The Number of Parties and Government Performance in the Indian States', *Comparative Political Studies,* 37(2), 2004, 152–87
9. Dasgupta, J., *Language Conflict and National Development: Group Politics and National Language Policy in India,* University of California Press, Berkeley, 1970.
10. Jaffrelot, Christophe and Sanjay Kumar, eds, *Rise of the Plebeians: The Changing Face of Indian Legislative Assemblies*, New Delhi, Routledge, 2009.
11. Kailash, K.K., 'Federal Calculations in State Level Coalition Governments', *India Review*, 10(3), July–September, 2011, 246–282.
12. Kudasia, Gyanesh, *Region, Nation, "Heartland": Uttar Pradesh in India's Body Politic*, New Delhi, Sage, 2006.
13. Mawdsley, Emma, 'Redrawing the Body Politic: Federalism, Regionalism and the Creation of New States in India', *Journal of Commonwealth and Comparative Politics*, 40(3): pp. 34-54.
14. Robinson, John, 'Regionalizing India: Uttarakhand and the Politics of Creating States', *South Asia: Journal of South Asian Studies*, 24(2):189-212, 2001.
15. Samaddar, Ranabir, ed., *The Politics of Autonomy: Indian Experiences*, Sage, New Delhi, 2005.
16. Sarangi, Asha, ed., *Language and Politics in India,* Oxford University Press, New Delhi, 2009.
17. Stepan, Alfred, J. Linz, and Yogendra Yadav, *Crafting State-Nations: India and Other Multinational Democracies,* Johns Hopkins University Press, Baltimore, 2011.
18. Wallace, Paul, ed., Region *and Nation in India,* Oxford University Press, Delhi, 1985.
19. Wilkinson, Steven, *Electoral Competition and Ethnic Violence in India.* Cambridge University Press, Cambridge and New York, 2004

Unit 3

1. Deliege, R., *The World of the "Untouchables": Paraiyars of Tamil Nadu*, Oxford University Press, New Delhi, 1997.
2. Geeta, V., Rajdurai, 'Dalits and Non-Brahmin Consciousness in Colonial Tamil Nadu' *Economic and Political Weekly*, 28(39), September 25, 1993.
3. Hasan, Zoya, *Dominance and Mobilization: Rural Politics in Western Uttar Pradesh 1930-1980,* New Delhi, 1989.
4. Irschick, E. F., *Politics and Social Conflict in South India, the Non-Brahman Movement and Tamil Separatism*, 1916–1929. University of California Press, Berkeley and Los Angeles, 1969.
5. Jaffrelot, Christophe, *India's Silent Revolution the Rise of the Low Castes in North Indian Politics, Permanent* Black, New Delhi, 2003.
6. Jayal, Niraja Gopal, '*Federal Anxieties, Democratic Desires: The Politics of Governance Reform in Two Indian States'*, LSE, London, 2006. www.crisisstates.com.
7. Kumar, Ashutosh, 'Deras as Sites of Electoral Mobilization in Indian Punjab: Explaining Why Political Parties Do Flock to the Deras', *Asian Ethnicity*, Routledge, London, 17(3): 335-350, (June), 2014.
8. Pai, Sudha , *Dalit Assertion*, Short Introduction, Oxford University Press, 2013.
9. Pai, Sudha, *Dalit Assertion and the Unfinished Democratic Revolution: The BSP in Uttar Pradesh,* Sage Publications, New Delhi, 2002.
10. Pandey, Gyan, *The Construction of Communalism in Colonial North India*, Oxford University Press, Delhi, 1990.
11. Pandian, M. S. S., *Brahmin & Non-Brahmin: Genealogies of the Tamil Political Present,* New Delhi: Permanent Black, 2003.
12. Ram, Ronki (2016) 'Religion, identity and empowerment: the making of Ravidassia Dharm (Dalit Religion) in contemporary Punjab', in Knut A. Jacobsen (ed.) *Routledge Handbook of Contemporary India.* 371-83. London: Routledge.
13. Ram, Ronki, 'Social Exclusion, Resistance and Deras: Exploring the Myth of Casteless Sikh Society in Punjab', *Economic and Political Weekly*, 42(40), October 6-12, 2007, 4066-74.
14. Ram, Ronki, 'Untouchability in India with a Difference: Ad Dharm, Dalit Assertion and Caste Conflicts in Punjab', *Asian Survey*, XLIV (6), November-December 2004, 895-912
15. Shah, Ghanshyam, *Caste and Democratic Politics in India*, Anthem Press, London, 2004.
16. Subramanian, Narendra, *Ethnicity and Populist Mobilization: Political Parties, Citizens and Democracy in South India*, Oxford University Press, Delhi, 1999.
17. Varshney, Ashutosh, 'Is India Becoming More Democratic?' *The Journal of Asian Studies*, 59(1), 2000.
18. Yadav, Yogendra and Suhas Palshikar, 'From Hegemony to Convergence: Party System and Electoral Politics in the Indian States, 1952-2002', in Peter Ronald deSouza and E. Sridharan (eds) *India's Political Parties*, Sage, New Delhi, 2006.
19. Yadav, Yogendra and Suhas Palshikar, 'Ten Theses on State Politics in India', *Seminar*, 591, November, 2008
20. Yadav, Yogendra, 'India's Third Electoral System: 1989-1999', *Economic and Political Weekly*, 34(34-35), 1999, 2393-99
21. Yadav, Yogendra, 'Reconfiguration in Indian Politics: State Assembly Elections 1993-1995, *Economic and Political Weekly*, 31(2), January 13, 1996.

Unit 4

1. Ahluwalia, Montek Singh 'Economic Performance of States in Post-Reforms Period', *Economic and Political Weekly,* 6 May, 2000.
2. Bhalla, G.S. ed., *Economic Liberalization and Indian Agriculture,* Institute for Studies in Industrial Development, New Delhi, 1994.
3. Corbridge, Stuart, Glynn Williams, Rene Veron and Manoj Srivastava, *Seeing the State*, Cambridge University Press, New Delhi, 2008.
4. Dasgupta, Biplab, *The New Agrarian Technology and India,* Geneva UN, 1977.
5. Datt, G. and M. Ravallion, 'Is India's Economic Growth Leaving the Poor Behind?' *Journal of Economic Perspectives*, 16(3), 2002, 89–108.
6. Dreze, Jean & Amartya Sen, *India: Development and Participation*, Oxford University Press, Delhi, 2002.
7. Dreze, Jean & Amartya Sen, Indian *Development: Selected Regional Perspectives*, Oxford University Press, Delhi, 1998.
8. Frankel, Francine & M.S.A Rao (eds.) *Dominance and State Power in India,* Oxford University Press, New Delhi, 2 Vols. 1989, 1990.
9. Harriss, John, 'Comparing Political Regimes across Indian States: A Preliminary Essay, *Economic and Political Weekly*, November 27, 1999, 3367-3377.
10. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
11. Joshi, Vijay and I.E. Little, *India's Economic Reforms: 1991-2001*, Oxford University Press, New Delhi, 1996.
12. Kohli, Atul, 'Politics of Economic Growth in India, 1985-2005; Part 1: The 1980's and Part 11: The 1990's and Beyond', *Economic and Political Weekly*, April 1, 2007.
13. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Oxford University Press, Delhi, 1991.
14. Kohli, Atul, *The State and Poverty in India,* Cambridge University Press, Cambridge, 1987.
15. Kohli, Atul, *The Success of India's Democracy,* Cambridge; Cambridge University Press, New York, 2001.
16. Mitra, Subrata K., *The Puzzle of India's Governance: Culture, Context and Comparative Theory*, Routledge, London, 2006.
17. Mooij, Jos, ed., *The Politics of Economic Reforms in India*, Sage, New Delhi, 2005.
18. Paul, Samuel, and KS Sridhar, The Paradox of India's North–South Divide: **Lessons** from the States and Regions, New Delhi, Sage, 2016.
19. Prakash, Amit, *Jharkhand: Politics of Development and Identity*, Orient Longman, Hyderabad, 2002.
20. Rao, Govinda and Nirvikar Singh , *Political Economy of Federalism in India*, Oxford University Press, New Delhi, 2006.
21. Sachs, Jeffrey, Ashutosh Varshney, and Nirupam Bajpai, eds., *India in the Era of Economic Reforms***,** Oxford University Press, New Delhi, 1999.
22. Singh, Jagpal, *Capitalism and Dependence; Agrarian Politics in Western Uttar Pradesh, 1951-1991,* Manohar, New Delhi, 1992.
23. Singh, P. (2015). *How Solidarity Works for Welfare: Subnationalism and Social Development in India,* New York: Cambridge University Press

24. Sinha, Aseema, 'Ideas, Interests, and Institutions in Policy Change: A Comparison of West Bengal and Gujarat' in Jenkins, Rob , ed., *Regional Reflections: Comparing Politics across India's States*, New Delhi, Oxford University Press, Delhi, 2004.
25. Sinha, Aseema, *The Regional Roots of Developmental Politics in India: A Divided Leviathan*, Indiana University Press, Bloomington and Indianapolis, 2005.
26. Tillin L. & Deshpande, R. & Kailash, KK (Eds) (2016). *Politics of Welfare*: *Comparisons across Indian States*, Oxford, Oxford University Press.
27. Varshney, Ashutosh, Democracy, Development, and the Countryside: Urban-Rural Struggles in India. Cambridge University Press, Cambridge, 1998.

Journals/ Newsmagazine/Newspapers to be consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web. Also check on JSTOR)
2. ***Front Line***
3. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
4. ***Studies in Indian Politics***
5. ***The Hindu and Indian Express***

Option (c): DECENTRALIZED GOVERNANCE AND LOCAL LEVEL INSTITUTIONS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice i.e. attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with the concept of decentralized and democratic governance in India, both theoretically and at the level of institutional functioning at the local level. The emphasis of the course is on the process of democratic governance in both at the grassroots.

Unit-I

- Democratic Decentralization in India : Issues and Perspectives.
- Decentralization & Contemporary concerns—globalization and changing role of the state.

Unit-II

- Planning Urban Development – approaches, policies & programs.
- Urban local governance – Institutional aspects and functioning of urban local bodies with special reference to 74th Amendment.

Unit-III

- Planning Rural development—approaches, policies and programmes.
- Democracy at the grassroots—Growth, Development and functioning of PRI from 1952 to present.

Unit-IV

- Relationship between rural and urban local institutions.
- Role of NGOs in local governance & development.
- Challenges of Governance at the local level-autonomy, finance, personnel, participation.

Readings

1. Abdul, Aziz, *Decentralised Planning,* New Delhi, Sage, 1993.
2. Bose, Ashish, *National Commission on Urbanization,* Ministry of Urban Development, New Delhi, 1988.
3. Behra, M.C., *Globalising Rural Development*, Sage, Delhi, 2006.
4. Handy, Femida, Meenaz Kassuu, Suzanne Fervey (eds.), *Grass-Roots NGOs by Women for Women*, Sage, New Delhi, 2006.
5. Kumar, Girish, *Local Democracy in India*, Sage, Delhi, 2006.
6. Issaac Thomas & Richard W. Franke, *Local Government and Development : People's Campaign for Decentralized Planning in Kerala,* Delhi, Leftword, 2000.
7. Jain, L.C., Krishnamurthy, B.V. and Tripathi, P.M., *Grass without Roots : Rural Development Under Government Auspices,* New Delhi, Sage, 1987.
8. Maddick Henry, *Panchayati Raj : A Study of Rural Local Government in India,* London, Longman, 1970.
9. Mathur, O.M. (ed.), *India : The Challenge of Urban Governance,* New Delhi, National Institute of Public Finance & Policy, 1999.
10. Mishra, B.B., *District Administration and Rural Development in India,* Delhi, Oxford University Press, 1983.
11. Mukherjee Amitava, *Decentralization : Panchayats in the Nineties,* New Delhi, Vikas, 1994.
12. Prasad Kamta, *Planning and Poverty Alleviation,* New Delhi, Agricole, 1985.
13. Ravillion, M. and G. Datt, *Growth and Poverty in Rural India,* Washington D.C., World Bank, 1995.
14. Sen, Amartya, *Development as Freedom,* Delhi, Oxford University Press, 2000.
15. Chaturvedi, T.N. and Jain, R.B., *Panchayati Raj* (New Delhi, IIPA, 1981).
16. Bhattacharya, Mohit, *Municipal Government—Problems and Prospects* (Delhi Research Publications).
17. Jha, S.N. and Mathur, P.C., *Decentralization and Local Politics,* Sage, 1999.

Option (d) : POLITICAL SOCIOLOGY WITH SPECIAL REFERENCE TO INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: This paper aims at highlighting some of the major areas in the domain of political sociology with reference to India. The paper intends to familiarize the students with the social, cultural and economic structures of power in the Indian society and their mechanism of functioning in a critical perspective.

Unit I

Political Sociology : Thematic Concerns :

1. Nature, meaning and scope.
2. Historical Development.

Unit II

Social Stratification :

1. Concepts and Theoretical Contexts (Marx, Dahrendorf, Weber, and L. Dumont).
2. Caste, Class and Power.

Unit III

Conflict Formation :

1. Theoretical dimensions (Simmel, Coser, Marx and Dahrendorf).
2. Caste and Communal conflicts.

Unit IV

Political Sociology of Agrarian Relations :

1. Zamindari Abolition and Land Reforms.
2. Pressure Groups : Farmers and Labourers.

Books Recommended

1. Effrat, Andrew, *Perspective on Political Sociology*, New York, The Bobbs-Merrill, 1972.
2. Dowse, Robert E. & Hughes, John A., *Political Sociology*, London, John Wiley, 1975.
3. Horowitz, *Foundations of Political Sociology*, New York, Harper & Row, 1972.
4. Das, Hari Hara and Choudhary, B.C., *Introduction to Sociology*, New Delhi, Vikas, 1997.
5. Tumin, M.M., *Social Stratification*, New Jersey, Prentice Hall, 1978.
6. Gupta, Dipankar (ed.), *Social Stratification*, Delhi, OUP, 1991.
7. Scott, John, *Stratification and Power*, Cambridge, Polity, 1996.
8. Sharma, K.L., *Social Stratification in India*, New Delhi, Sage, 1997.
9. Singh, Yogendra, *Social Change in India*, New Delhi, Har Anand, 1993.
10. Layder, Derek, *Understanding Social Theory*, London, Sage, 1996.
11. Jaiswal, Suvira, *Caste : Origin, Function and Dimensions of Change*, Delhi, Manohar, 1998.
12. Srinivas, M.N., *Social Change in Modern India*, New Delhi, 1969.
13. Runciman, W.S., *Social Science and Political Theory*, Cambridge, 1971.
14. Lukes, *Steven, Power : A Radical View*, Hong Kong, Macmillan, 1974.
15. Barnes, Barry, *The Nature of Power*, Cambridge, Polity, 1988.

Option (e) : REPRESENTING 'INDIA' : GEOPOLITICAL IMAGINATIONS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course investigates how India has been represented by groups and individuals, political elites and the dominant institutions and intellectuals of statecraft. It intends to probe how a variety of geopolitical imaginations have come to compete with one another, as different actors seek to implant maps of meaning, relevance and order on to highly complex and dynamic political universe they inhabit, observe, try to understand and sometimes even desire to dominate. How various geopolitical idioms, myths and representational practices have been used to inscribe something called India and endow that entity with a content, history, meaning and trajectory. The intention of this course is exploratory and not normative.

Unit-I

1. Pre-colonial India : An Overview.
2. India in British Colonial Imagination.

Unit-II

3. Partition of British India and its Legacies.
4. Integration of Princely States.

Unit-III

5. The India Diaspora : Dynamics and Dilemmas of Migration.
6. Gender in Indian Geopolitics.

Unit-IV

7. Nationalist Constructions of India's Identity (with special reference to Nehru and Savarkar).
8. Rise of Hindutva and the Search for Alternative Geopolitical Imaginations.

Suggested Readings

1. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* I (4) : 53-71.
2. Bhargava, R. (ed.) (1998), *'Secularism and Its Critics' :* Delhi, Oxford University Press.
3. Bose, Sugata (1997), "Nation as Mother : Representations and Contestations of 'India' in Bengali Literature and Culture", in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press, 50-75.
4. Bose, Sumantra (1997), "Hindu Nationalism" and the Crisis of the Indian State : A Theoretical Perspective in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press.
5. Brecher, M. (1968), *India and World Politics : Krishna Menon's View of the World,* London : Oxford University Press.
6. Butalia, Urvashi (1998), *The Other Side of Silence,* New Delhi : Viking.
7. Cohn, B.S. (1997), *Colonialism and Its Forms of Knowledge : The British in India,* Delhi : Oxford University Press.
8. Dijkink, G. (1996), *National Identity and Geopolitical Visions : Maps of Pride and Pain,* London : Routledge.
9. Fisher, M. H. (1993), *The Politics of the British Annexation of India 1757-1857,* Delhi : Oxford University Press.
10. Graham, B. (1993), *Hindu Nationalism and Indian Politics : The Origins and Development of the Bharatiya Jana Sangh,* Cambridge, Cambridge University Press.
11. Hasan, M. (1996), "The Myth of Unity : Colonial and National Narratives" in D. Ludden (ed.) *Making India Hindu, Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
12. Jalal, A. (1997), "Exploding Communalism : The Politics of Muslim Identity in South Asia", in S. Bose and A. Jalal (eds.), Nationalism, Democracy and Development : State and Politics in India, Calcutta : Oxford University Press : 76-103.

13. Kakar, Sudhir (1995), *The Colours of Violence,* New Delhi : Penguin Books.
14. Kumar, R. (1997), "State Formation in India : Retrospect and Prospect", in M. Doornbos and S. Kaviraj (eds.), *Dynamics of State Formation : India and Europe Compared,* New Delhi : Sage : 359-409.
15. Katzenstein, M. F., Mehta, U. S. and Thakkar, U. (1998), "The Rebirth of Shiv Sena in Maharashtra : the Symbiosis of Discursive and Institutional Power" in A. Basu, and A. Kohli (eds.), *Community Conflicts and the State in India,* Delhi : Oxford University Press : 215-238.
16. Kaviraj, Sudhir (1993), "The Imaginary Institution of India," in P. Chatterjee and G. Pandey (eds.), *Subaltern Studies,* Delhi : OUP, Vol. VII : 1-39.
17. Kaviraj, S. (1994), "Crisis of the Nation-State in India," *Political Studies,* XLII : 115-129.
18. Kaviraj, S. (1997), "On The Structure of Nationalist Discourse", in T. V. Sathyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi : Oxford University Press.
19. Khilnani, S. (1998), *The Idea of India,* London : Penguin Books.
20. Kothari, R. (1997), "Fragments of a Discourse : Towards Conceptualization", in T.V. Sathyamurthi (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
21. Kothari, R. (1998), *Communalism in Indian Politics,* Ahmedabad, Rainbow Publishers Limited.
22. Krishna, B. (1995), *Sardar Vallabbhai Patel : India's Iron Man,* New Delhi : Indus.
23. Krishna, S. (1994), "Cartrographic Anxiety: Mapping the Body Politics in India," *Alternatives 19 : 507-521.*
24. Larson, G. J. (1997), *India's Agony Over Religion,* Delhi, Oxford University Press.
25. Ludden, D. (1996) (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
26. Mahanta, A. (1977), "The Indian State and Patriarchy" in T. V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
27. Malik, Y.K. and Singh, Y.B. (1994), *Hindu Nationalists in India : The Rise of the Bharatiya Janata Party,* New Delhi, Vistaar Publications.
28. Mayo, Katherine (1928), *Mother India,* New York : Harcourt Brace and Company.
29. Metcalf, T. R. (1995), *Ideologies of the Raj,* Cambridge : Cambridge University Press (The New Cambridge History of India).
30. Nandy, A. H., Trivedi, S. Mayaram and Yagnik, A. (eds.) (1995), *Creating a Nationality : The Ramjanambhumi Movement and the Fear of the Self,* Delhi : Oxford University Press.
31. Nehru, J. (1936), *An Autobiography,* London, John Lane.
32. Nehru, J. (1981), *The Discovery of India,* New Delhi : Jawaharlal Nehru Memorial Fund, Oxford University Press (First Published 1946 by the Signet Press, Calcutta).
33. Nehru, J. (1956), *Independence and After : A Collection of Speeches* 1946-1949, Delhi : Government of India.
34. Pandey, G. (1990), *The Construction of Communalism in Colonial North India,* Delhi, Oxford University Press.
35. Pandey, G. (1994) "The Prose of Otherness," *Subaltern Studies* (Delhi, OUP, Vol. VIII).
36. Parker, G. (1998), "Geopolitical Perspectives on India and Indian Foreign Policy" in The Ford Foundation Lectures in International Relations Studies, Departmental of Political Science, The Maharaja Sayajirao University of Baroda.

37. Pattanaik, D. D. (1998), *Hindu Nationalism in India : Conceptual Foundation,* New Delhi : Deep and Deep Publications.

38. Radhakrishnan, R. (1992), "Nationalism, Gender, and the Narrative of Identity" in Andrew Parker et al (eds.), *Nationalism and Sexuality,* New York, Sage.

39. Sarkar, T. (1996), "Imagining Hindurastra : the Hindu and the Muslim in Bankim Chandra's Writings" in D. Ludden (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.

40. Sarkar, T. (1992), "The Hindu Wife and the Hindu Nation : Domesticity and Nationalism in Nineteenth Century Bengal," *Studies in History* (Sage, Delhi) 8 (2).

41. Savarkar, V. D. (1969), Hindutva, Bombay, Savarkar Prakashan 5th Edn.

42. Sen, A. (1998a), "On Interpreting India's Past" in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press (Oxford India Paperbacks).

43. Sen, A. (1998b), "Secularism and its Discontents" in Bhargava, R. (ed.), *Secularism and its Critics,* Delhi : Oxford University Press.

44. Varshney, A. (1993), "Contesting Meanings : India's National Identity, Hindu Nationalism, and the Politics of Anxiety", *Daedalus, 122, 3 : 227-261.*

45. Van Hear, N. (1998), *New Diasporas : The Mass Exodus, Dispersal and Regrouping of Migrant Communities,* London, UCL Press.

46. Weiner, M. (1997), "Minority Identity", in S. Kaviraj (ed.), *Politics in India,* Delhi, Oxford University Press : pp 241-254.

47. Ali, D., 1999, *Invoking the Past : The Uses of History in South Asia,* New Delhi : Oxford University Press.

48. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* 1(4) : 53-71.

49. Bianchini, B., Chaturvedi, S., Ivekovic, R. and Samaddar, R., 2005, *Partitions : Reshaping Minds and States,* London : Frank Cass.

50. Chaturvedi, S., 2000, "Representing Post-Colonial India: Inclusive/Exclusive Imaginations" in David Atkinson and Klaus Dodds (eds), *Geopolitical Traditions : Critical Histories of a Century of Geopolitical Thought,* London : Routledge.

51. Chaturvedi, S., 2005, "Diaspora in India's Geopolitical Visions : Linkages, Categories and Contestations", *Asian Affairs : An American Review,* 32(3).

52. Deshpande, S., 2003, *Contemporary India : A Sociological View,* New Delhi : Viking.

53. Jayaram, N., 2004 (ed.), *The Indian Diaspora : Dynamics of Migration,* Delhi : Sage.

54. Krishna, S., 1999, Post-*Colonial Anxieties : India, Sri Lanka and the Question of Nationhood,* Minneapolis : University of Minnesota Press.

55. Ludden, D., 2002, *India and South Asia : A Short History,* Oxford : One World.

56. Sen, A., 2006, *Identity and Violence : The Illusion of Destiny,* London : Allen Lane/Penguin.

57. Sen, A., 2005, *Argumentative Indian Writings on Indian History, Culture and Identity,* London : Allen Lane/Penguin.

Option (f): Dalit Movements and Issues in India

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: The purpose of this paper is to make students familiar with major Dalit Movements and issues in India.

UNIT-I

Anti-Caste and Adi Movements in the Colonial period-I
Jotiba Phuleand Satyashodhak Samaj,
Mangoo Ram andAd-Dharm Movement,
Periyar and Self-Respect Movement

UNIT-II

Anti-Caste Movements in the Colonial period-II
Dalit Movement and B.R.Ambedkar
Caste and Untouchability
Democracy and Repsentation of Minorities

UNIT-III

Politics of Assertion and Representationin Independent India
Republican Party of India
Dalit Panthers
Bahujan Samaj Party

UNIT-IV

Dalits and Contemporary Issues
Reservation and Politics of Inclusion
Dalits and Globalization
Dalit Women's Issues

Essentail Readings

1. *Aditya Nigam, "In search of a Bourgeoisie: Dalit politics enters a New Phase."* Economic and Political Weekly*, March 30, 2002, pp. 1190-1193.*
2. *Aditya Nigam, "Secularism, Modernity, National: Epistemology of the Dalit Critique."* Economic and Political Weekly*, November 25, 2000.*
3. Aryama and SukhadeoThorat (ed.), *Ambedkar in Retrospect: Essays in Economics, Politics & Society*, Rawat Publications, New Delhi, 2007.
4. *B.L.Mungekar, "Globalization and the Dalits."* Radical Humanist, *65(1): April 2001: 9-10.*
5. B.R.Ambedkar, *Dr. Babasaheb Ambedkar: Writings and Speeches*, Vol.1-17 (compiled by Vasant Moon), Education Department, Government of Maharashtra, Bombay.
6. Christophe Jaffrelot,*India's Silent Revolution the Rise of the Low Castes in North Indian Politics,* Permanent Black,New Delhi, 2003.
7. Dhananjay Keer, *Dr. Ambedkar Life and Mission*, Popular Prakashan, Bombay1991.
8. *Dipankar Gupta, "Positive Discrimination and the Question of Fraternity: Contrasting Ambedkar and Mandal on Reservation."* Economic and Political Weekly, *32(31): 2 August 1997.*
9. Eleanor Zelliot, Ambedkar *and Mahar Movement.* University of Pennsylvania, 1982.
10. Eleanor Zelliot, *From Untouchable to Dalit: Essay on Ambedkar Movement.* Manohar: New Delhi, 1992.
11. G.P. Deshpande, (ed) *Selected Writings of Jotirao Phule,* Left World: New Delhi, 2002.
12. Gail Omvedit, *Dalits and Democratic Revolution: Dr. Ambedkar and Dalit Movement in Colonial India.* Sage*:* New Delhi, 1994.
13. *Gail Omvedt, "Peasants, Dalits and Women: Democracy and India's New Social Movements."* Journal of Contemporary Asia: *24 (1): 1994.*
14. *Gail Omvedt*, Ambedkar Towards an Enlightened India*.* Penguin: New Delhi, 2004.
15. Gail Omvedt, *Cultural Revolt in a Colonial Society: The Non – Brahman Movement in Western India.* Scientific Socialist Education Trust: Bombay, 1976.
16. Gail Omvedt, *Dalit Vision.* Orient Longman: New Delhi, 1996 first Published 1995.

Suggested Readings

1. Geeta, V., Rajdurai 1993 "Dalits and Non-BrahminConsciousness in ColonialTamil Nadu" *Economic and Political Weekly*,28(39), September 25.
2. *George Mathew, "Will Reservation Ensure Participation."* Social Welfare: *42 (5-6): August-September, 1995.*
3. Harish K. Puri, (ed.) *Dalits in Regional Context. Rawat*: New Delhi, 2004.
4. *J. Mencher, "The Caste System Upside Down,"* Current Anthropology*: 15: 469-93: 1974.*
5. J.Massey, *Downtrodden: The Struggle of Indian Dalits for Identity, Solidarity and Liberation.* WCC Publications: Geneva, 1997.
6. Jaffrelot, Christophe, *Dr.Ambedkar and Untouchability*. Permanent black: New Delhi, 2004.
7. Mark Juergensmeyer, *Religious Rebels in Punjab: The Social Vision Of Untouchables*. Ajanta: Delhi, 1988.
8. Michael Mahar, (ed) *The Untouchables in Contemporary India*. University of Arizona press, 1972.
9. *N.S.Gehlot, "Dr. Ambedkar, Mahatma Gandhi and Dalit movement,"* Indian Journal of Political Science, *54(3-4): July-December 1993.*
10. *Pradeep Kumar, "Reservation within Reservations: Real Dalit Bahujans,"* Economic and Political Weekly*, 15 September 2001, 3305-3307.*

11. *Ramaswamy R. Iyer, "Towards Clarity on Reservation Question,"* Economic and Political Weekly*, 26(9) and 10: 2-9 March 1991.*
12. Ramnarayan Rawat, "Making Claims for Power: A New Agenda In Dalit Politics of Uttar Pradesh, 1946-48", Modern Asian Studies, Vol. 37, No. 3, 2003.
13. *Ronki Ram, "From servitude to assertion: Ambedkar's Subalterns Approach to Nationalism and Dalit liberation."* Social Sciences Research Journal, *Vol. 9, November 2, 2001, p.160.*
14. Rosalind O' Hanlon, *Caste, Conflict and Ideology: Mahatma Phule and Low Caste Protest in the 19th Centurary*, CUP, 1985.
15. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution.The Bahujan Samajwadi Party in Uttar Pradesh.*, Sage : New Delhi, 2002.
16. *V. Geetha, and S.V. Rajadurai. "Dalits and non-Brahmin Consciousness in Colonial Tamil Nadu*." Economic and Political Weekly*, 28(3): 25 September 1993.*
17. *V. Jha, "Stages in History of Untouchables,"* Indian Historical Review, *2: 1975: 14-31.*
18. Valrian Rodrigues, (ed) *The Essential Writings of B.R. Ambedkar*, Oxford: New York,2002.
19. *Webster, John C.B. "Understanding the Modern Dalit Movement."* Sociological Bulletin *45 (2): September 1996.*

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) : FEMINIST POLITICAL THEORY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course aims to introduce students to the major interventions of feminism in political theory. After introducing students to the feminist critique of mainstream political theory and the key conceptual categories in feminism, this course in the latter units examines 5 main issues to understand the major debates within various strands of feminism.

Unit-I

Feminism and the redefinition of the Political.
Feminist critiques of mainstream political theory.

Unit-II

Key Feminist concepts—Patriarchy, Sex-Gender distinction, Production and Reproduction.
Destabilizing the category of 'woman'.

Unit-III

Key Issues in Feminist theory 1.
Abortion.
Pornography.

Unit-IV

Key Issues in Feminist theory 2.
Race/Religion/Culture.
Anti-Militarism.

Reading List

1. Anne Philips, *Engendering Democracy,* Cambridge*,* Polity Press, 1991.
2. Allison Jagger, *Feminist Politics and Human Nature*, Rowman & Allanheld, 1983.
3. Judith Butler, *Gender Trouble : Feminism and the Subversion of Identity*, New York, Routledge, 1990.
4. Carole Pateman, *The Sexual Contract*, Stanford University Press, 1989.
5. Iris Marion Young, *Justice and the Politics of Difference*, Princeton University Press, 1990.
6. Kate Millet, *Sexual Politics*, Granada Publishing, 1969.
7. Simone de Beauvoir, *The Second Sex*, 1949 (translated by H.M. Parshley, Penguin 1972).
8. Germaine Greer, The Female Eunuch, 1970.
9. Nancy Fraser and Linda J. Nicholson, Social Criticism without Philosophy : An Encounter between Feminism and Postmodernism in *Theory Culture Society,* 1988; 5.
10. Susan Moller Okin : *Women in Western Political Thought*, Princeton, Princeton University Press, 1979.

Option (b) : MAJOR THEMES IN RECENT POLITICAL PHILOSOPHY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the questionpaper as follows:
The syllabus has been divided into four units.
There shall be 9 questions in all.

The first question is compulsory and shall be short answer type containing 15 short questions spread over the wholesyllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each.

Rest of the paper shall contain 4 units. Each unit shall have two questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course is intended to be a companion to the compulsory courses on Western Political Thought and Key Concepts in Political Theory. It carries forward the discussion by focusing on themes and concerns which have occupied debates particularly since the late twentieth century.

Unit-I

1. Environmentalism.
2. Pacifism.

Unit-II

3. Feminism.
4. Multiculturism.

Unit-III

5. Neo-liberalism.
6. Post Marxism.

Unit-IV

7. Postcolonialism.
8. Postmodernism.

ESSENTIAL READINGS:

Relevant portions from the following textbooks and histories:

1. Colin Farelly, Contemporary Political Theory, Sage, 2004.
2. Gerald F. Gaus and ChandranKukathas, Handbook of Political Theory, Sage, 2004.
3. R.E. Goodin and P. Petit, A Companion to Contemporary Political Philosophy, Blackwell, 1995.
4. Terence Ball and Richard Bellamy (ed.), The Cambridge History of Twentieth Century Political Thought, Cambridge University Press (CUP), 2003.
5. Will Kymlicka, Contemporary Political Theory : An Introduction, OUP, 2002

SUGGESTED READINGS

Environmentalism:

6. John Dryzek and Scholberg, Debating the Earth : The Environmental Politics Reader, OUP, 1998.
7. Lorraine Eliot, Global Politics of Environment, Macmillan, 1998.
8. Ramchandra Guha and Juan Martinez-Alier, Varieties of Environmentalism: Essays on North and South, OUP, 1998.

Pacifism:

9. Allen Eickelmann, Eric Nelson and Tom Lansford, Violence, Pacifism and Cultural Transformation, Ashgate, 2005.
10. Peter Brock and Nigel Young, Pacifism in the Twentieth Century, Syracuse Univ. Press, 1999.

Feminism:

11. Alison Jaggar and Iris Marion Oung (ed.), A Companion to Feminist Philosophy, Blackwell, 1998.
12. Anne Phillips (ed.), Feminism and Politics, OUP, 1998.
13. Judith Butler and J.W. Scott (ed.), Feminists Theories : The Political, Routledge, 1992.

Multiculturalism:

14. Bhikhu Parekh, Rethinking Multiculturalism, Palgrave, 2006.
15. GurpreetMahajan, The Multicultural Path, Sage, 2002.

Neoliberalism:

16. Alfredo Saad-Filho and Deborah Johnson (eds.), Neo-Liberalism: A Critical Reader, Pluto Press, 2005.
17. David Harvey, A Brief History of Neo-Liberalism, OUP, 2005.

Post- Marxism:

18. Stuart Sim, Post Marxism: An Intellectual History, Routledge, 2000.

Postmodernism:

19. David Harvey, TheCondition of Postmodernity, Basil, Blackwell, 1989.
20. David Lyon, Postmodernity, Viva Books, 2002.

Postcolonialism:

21. Bill Ashcroft, Gareth Griffins and Helen Zigfin (eds.), The Postcolonial Studies Reader,Routledge, 2006.
22. ZiauddinSardar, Orientalism, Viva Books, 2002

Option (c) : READINGS IN THE PHILOSOPHY OF RESISTANCE AND LIBERATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on original texts. It seeks to study the ideas of resistance through the writings of the following Political Philosophers :

Unit-I

Gandhi : *Hind Swaraj* (1909), (Ahmedabad, Navjivan Trust, 1938).

Unit-II

Frantz Fanon : *The Wretched of the Earth* (London, Pluto Press, 1986).

Unit-III

Ernesto Che Guevara : *The Guerrilla Warfare*, with an Introduction and Case Studies by Brian Loveman and Thomas M. Davies, JR. (Lanchester University Press, 1985).

Unit-IV

Stokely Carmichael : *Black Power: The Politics of Liberation in America*, 1967.

Suggested Readings

1. Horace B. Davis, "Social Classes and the Formation of Nations : Fanon, Cabral and the African National Struggle" in Horace B. Davis, *Toward A Marxist Theory of Nationalism* (New York, Monthly Review Press, 1978, pp. 202-239).
2. Homi Bhabha, "Remembering Fanon: Self, Psyche and the Colonial Condition", Foreword to Frantz Fanon, *Black Skin, White Masks* (London, Pluto Press, 1986).
3. Irene Gentizier, *Frantz Fanon – A Critical Study* (New York, Vintage, 1973).
4. Renate Zahar, *Frantz Fanon : Colonialism and Alienation* (New York, Monthly Review Press, 1975).
5. Aristide R. Zolberg, "Frantz Fanon" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
6. Ashis Nandy, "Oppression and Human Liberation: Towards a Post-Gandhian Utopia", in Thomas Pantham and Karl Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage Publications, 1986).
7. Anthony J. Parel (ed.), *Hind Swaraj and Other Writings*, Cambridge University Press, New Delhi, Foundation Books, 1997).
8. Donald C. Hodges (ed.), *The Legacy of Che Guevara* (London, Thames and Hudson, 1977).
9. Michael Lowy, *The Marxism of Che Guevara : Philosophy, Economics and Revolutionary Warfare*, (New York, Monthly Review Press, 1973)
10. Renneth Minogue, "Che Guevara" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
11. George Feaver, "Black Power", in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
12. Stokely Carmichael, "Black Power", in David Cooper (ed.), *The Dialectics of Liberation*, Harmondsworth, Penguin, 1968.
13. Frantz Fanon, *The Wretched of the Earth* (Harmondsworth, Penguin, 1967).
14. Deborah Wyrick, *Fanon for Beginners* (Hyderabad, Orient Longman, 1998).
15. Sergio Sinay, *Che for Beginners* (Hyderabad, Orient Longman, 1997).

Option (d) : CONTEMPORARY DEBATES IN THE 20TH CENTURY MARXISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to familiarize students with the Marxist engagement with critical issues in the late twentieth century.

Unit-I

Structure and Agency : Marxian Debates.

Unit-II

Feminism and Marxism : Production, Reproduction and Power.

Unit-III

Environmentalism and Marxism, Capitalism, Colonialism, Socialism and Environmental Degradation.

Unit-IV

Nationalism, Internationalism and Marxism.
Globalization and Marxist Critique.

Readings :

(Students are expected to consult the journals *Monthly Review, New Left Review* and *Socialist Register* regularly).

1. Groz, A., *Farewell to the Working Class*, Pluto Press, London, 1982.
2. Barret, Michele, *Women's Oppression Today : Problems in Marxist Feminist Analysis*, Verso, London, 1980.
3. Landes, Joan, 'Marxism and the Women Question' in Sonia Kruks, Rayana Rapp and Marilyn B. Young (ed.), *Promissory Notes : Women in the Transition to Socialism,* Monthly Review Press, New York, 1989.
4. Mies, Maria, *Patriarchy and Accumulation on a World Scale*, Zed Books, London, 1986.
5. Mies, Maria, 'World Economy, Patriarchy and Accumulation' in Nelly Stromquist (ed.), *Women in the Third World*, Garland, New York, 1998.
6. Bahro, Rudolph, *From Red to Green*, 1984.
7. Foster, John Bellamy, *The Vulnerable Planet, A Short Economic History of the Environment,* Monthly Review Press, New York, 1994 (Indian Reprint) Cornerstone Publication, Kharagpur, 1999.
8. Foster, John Bellamy, *Marx's Ecology : Materialism and Nature,* Monthly Review Press, New York, 2000.
9. Harvey, David, 'The Nature of Environment : Dialectics of Social and Environmental Change' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register,* The Marlin Press, London, 1993.
10. Pratt, Larry and Wendy Montgomery, 'Green Imperialism, Pollution, Penitence, Profits in Leo Panitch (ed.), *Socialist Register*, Marlin Press, London and K.P. Bagchi & Compnay, Calcutta, 1997.

11. Davis, Horace B., *Toward a Marxist Theory of Nationalism,* Monthly Review Press, New York, 1978.
12. Lowy, Michael, 'Why Nationalism?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Marlin Press, London, 1993.
13. Munck, R., *The Difficult Dialogue, Marxism and Nationalism*, Zed, London, 1986.
14. Magdoff, Harry, 'Globalisation –To What End?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Merlin Press, London, 1992.

Option (e) : INTRODUCING FEDERALISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces certain key concepts and issues in federalism. The aim of the paper is to enable the student to obtain a broad perspective on federalism in a comparative perspective and to evaluate its utility as a tool for accommodating diversity.

Unit-I

The Essence of the Federal Idea.
Core features of Federations.
Models and variants of Federalism : Successive Waves.
Presidential and Parliamentary variant.

Unit-II

Approaches and Paths to Federalism.
Institutionalist Explanations of Origins.
Society-Centred Theories.
The William Riker- Alfred Stepan debate.

Unit-III

Federal Democracy and the Articulation of Diversity.
Federalism as a device for accommodating groups and interests.
Centralisation and Decentralisation in Federal Systems.
Asymmetric Federalism : India and Canada.

Unit-IV

The Making and Unmaking of Federal Systems.
Stress and Strains of Federalism : Failed Federations : USSR, Czechoslovakia, Yugoslavia.
New, Emerging, Incipient and Federal-type Solutions : South Africa, Belgium, Spain, Sri Lanka and the European Union.
Relevance of Federalism in a globalising world.

Readings

1. Alfred Stepan, "Federalism and Democracy : Beyond the US Model," *Journal of Democracy,* 1999, 10 : 4, 19-34.
2. Alfred Stepan, "Russian Federalism in Comparative Perspective," *Post-Soviet Affairs,* 2000b, 16 : 2, 133-176.
3. Alfred Stepan, *Arguing Comparative Politics* (Oxford : Oxford University Press, 2001).
4. Andrea Bosco (ed.), *The Federal Idea : The History of Federalism Since 1945* (London: Lothian Foundation Press, 1992).
5. Arendt Lijphart, 1977, *Democracy in Plural Societies: A Comparative Exploration,* New Haven, London, Yale University Press.
6. Arend Lijphart, Ronald Rogowski and R. Kent Weaver, "Separation of Powers and Cleavage Management," in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings, 1997), 302-344.
7. Balveer Arora, and Douglas V. Verney, 1995, *Multiple Identities in a Single State : Indian Federalism in Comparative Perspective,* New Delhi : Konark Publishers.
8. Bertus de Villiers (ed.), *Evaluating Federal Systems* (Cape Town : Jutta & Co., 1994).
9. Birch, A.H., 'Approaches to the Study of Federalism,' *Political Studies*, 1966, 14(1), 15-33.
10. C.D. Tarlton 1965, "Symmetry and Asymmetry as Elements of Federalism : A Theoretical Speculation," *The Journal of Politics*, 27.
11. Carol Skalnik Leff, "Democratization and Disintegration in Multinational States : The Break up of the Communist Federations," *World Politics*, 1999, 51, 205-35.
12. Daniel J. Elazar, "From Statism to Federalism - A Paradigm Shift," *International Political Science Review,* 1996 17(4), 417-429.
13. Daniel J. Elazar, "International and Comparative Federalism," *PS : Political Science and Politics*, 1993 (June).
14. Daniel J. Elazar, Federalism, in David Sills (ed.), *International Encyclopaedia of Social Sciences* (New York : Macmillan, 1968) 353-367.
15. Daniel J. Elazar, *Exploring Federalism* (Tuscaloosa : University of Alabama Press, 1987).
16. Graham Smith (ed.), *Federalism : The Multiethnic Challenge* (New York : Longman, 1995).
17. Graham Smith, "Russia Multiculturalism and Federal Justice," *Europe-Asia Studies*, 1998, 50(8), 1393-1411.
18. J. Coakley, 1994, "Approaches to the Resolution of Ethnic Conflict : The Strategy of Non-territorial Autonomy", *International Political Science Review*, Vol. 15, No. 3: 297-314.
19. Juan Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation : Southern Europe, South America and Post-Communist Europe*, (Baltimore, Johns Hopkins University Press, 1996).

20. Juan Linz and Alfred Stepan, "Political Identities and Electoral Consequences : Spain, the Soviet Union and Yugoslavia," *Daedalus*, 1992, 121.

21. Ivo Duchacek, *Comparative Federalism*, (Lanham Md : Reissued by University Press of America, 1987).

22. K.C. Wheare, *Federal Government*, Second Edition, London and New York : Oxford University Press, pp.1-34 (1951).

23. Michael Burgess and Alain-G. Gagnon (ed.), *Comparative Federalism and Federation* (Harvester: Wheatsheaf) (1993).

24. Michael Stein (1971), "Federal Political Systems and Federal Societies", in J. Peter Meekison (ed.), Canadian Federalism : Myth or Reality?, Second Edition, Toronto: Methuen, 37-48.

25. Peter C. Ordershook, "Russia's Party System : Is Russian Federalism Viable?" *Post-Soviet Affairs,*1996, 12(3), 195-217.

26. Richard Gunther and Anthony Mughan, "Political Institutions and Cleavage Management" in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings), 1997, 272-301.

27. Robert Agranoff (ed.) (1999), *Accommodating Diversity : Asymmetry in Federal States,* Baden-Baden: Nomos.

28. Robert Sharlet, "The Prospects for Federalism in Russian Constitutional Politics," *Publius* 1994, 24 (Spring), 115-127.

29. Ronald L. Watts, "Canada : Three Decades of Periodic Federal Crises," *International Political Science Review,* 1996 17(4), 353-371.

30. Ronald L. Watts, "Intergovernmental Relations : Conceptual Issues", in Norman Levy and Chris Tapscott (ed.), *Intergovernmental Relations in South Africa : The Challenges of Co-operative Government* (West Cape : IDASA, 2001) 22-42.

31. Ronald L. Watts, *Comparing Federal Systems in the 1990s* (Institute of Intergovernmental Relations, Queens University Ontario, 1999).

32. Ronald L. Watts, "Asymmetrical Decentralization : Functional or Dysfunctional", *Indian Journal of Federalism,* 2004, 1-42.

33. Steven Solnick, "Will Russia Survive? Centre and Periphery in the Russian Federation," in Barnett R. Rubin and Jack Snyder (ed.), *Post-Soviet Political Order : Conflict and State Building* (London: Routledge, 1998), 58-80.

34. William Riker, "Federalism", in Fred I. Greenstein and Nelson W. Polsby (eds.), *Handbook of Political Science : Governmental Institutions and Processes,* Vol. 5 : (Reading : Addison-Wesley, 1975), 93-172.

35. William S. Livingston (1952), "A Note on the Nature of Federalism", *Political Science Quarterly*, 67, 81-95.

36. Peter C. Ordeshook and Olga Shvetsova, "Federalism and Constitutional Design", *Journal of Democracy,* 8.1 (1997) 27-42.

Option (f) : PUBLIC INTERNATIONAL LAW-II

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This paper introduces the students to certain specific subjects and the recent trends of Public International Law.

Unit-I : States in general

State Territory :

Land Territory, National Waters, Territorial Sea, Air-Space and Subsoil under Earth, Modes of acquiring and losing State Territory.

State Jurisdiction :

Territorial Jurisdiction
Jurisdiction on High Seas
Jurisdiction on Aircraft
Jurisdiction on Antarctica and Outer-Space

Unit-II : Law of the Sea

The First and the Second United Nations Conference on the Law of the Sea

Third United Nations Conference on the Law of the Sea (UNCLOS III)

Convention on the Law of the Sea, 1982

Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (1994).

Unit-III : Individual in International Law

Nationality
Aliens
Extradition
Asylum
Human Rights

Unit-IV : Recent Trends

Recent Trends and the changing structure of International Law

Feminist Perspectives of International Law

Some new approaches to the study of International Law

The conflicts of Political Ideologies and the universality of International Law with particular reference to the Communist Approach to International Law, the Third and Fourth World Countries and International Law.

Books Recommended

1. Stark, J.G., *Introduction to International Law,* Butterworths, 1963.
2. Wolfgang Friedmann, *The Changing Structure of International Law,* Columbia University Press, 1964.
3. Gerhard Von Glahn, *Law Among Nations : An Introduction to Public International Law,* Longman, 1966.
4. D.P. O'Connell, *International Law,* Stevens and Sons, 1965, 2 Vols.
5. Richard A. Falk, *The Status of Law in International Society,* Princeton University Press, 1970, pp 447-539.
6. Anand, R.P., *Asian States and the Development of Universal International Law,* Vikas, 1972.
7. Anand, R.P., *New States and International Laws,* Vikas, 1972.
8. Ian Brownlie, *Principles of Public International Law,* Oxford University Press, 1973.
9. Grigory Tunkin, *Contemporary International Law,* Progress Publishers, 1969.
10. Corbett, P.E., *The Growth of World Law,* Princeton, 1971.
11. Quincy Wright, *Contemporary International Law : A Balance Sheet,* Random House, 1963.
12. *Journals :* (i) American Journal of International Law
    (ii) Indian Journal of International Law
13. Dallmeyer, G. Droninda (ed.), Reconceiving Reality : Women and International Law, American Society of International Law, 1999.

Course XI Option (g) Reading for Public International Law-I (M.A. 3rd Semester)

Books

1. Aggarwal, H.O. (2014), *International Law & Human Rights.* Jain Book Agency, New Delhi.
2. Cassese, Antonio (2005), *International Law.* Oxford University Press, USA.
3. Clapham, Andrew (2012), *Brierly's Law of Nations : An Introduction to the Role of International Law in International Relations.* Oxford University Press, USA.
4. Crawford, James (2013), *Brownlie's Principles of Public International Law.* Oxford University Press, USA.
5. Crawford, James and Koskenniemi, Martti (2012), *The Cambridge Companion to International Law (Cambridge Companions to Law).* Oxford University Press, USA.
6. Dixon, Martin (2013), *Textbook on International Law.* Oxford University Press, USA.
7. Evans, Malcolm (2010*), International Law.* Oxford University Press, USA.
8. Gray, Christine (2004), *International Law and the Use of Force.* Oxford University Press, USA.
9. Janis, Mark W. (2003), *An Introduction to International Law (Introduction to Law Series).* Oxford University Press, USA.
10. Lowe, Vaughan (2007), *International Law (Clarendon Law Series*). Oxford University Press, USA.
11. Malanczuk, Peter (1997), *Akehurst's Modern Introduction to International Law.* Routledge.
12. Shaw, Malcolm (2014), *International Law.* Cambridge University Press.
13. Tandon, M.P. and Anand, V.K. (2012), *International Law & Human Rights*. Jain Book Depot.

Journals

- *American Journal of International Law* (AJIL), American Society of International Law, 1907.
- Brooklyn Journal of International Law
- *European Journal of International Law* (EJIL) : European University Institute, 1990.
- *Indian Journal of International Law* : Indian Society of International Law, 1960.
- *International and Comparative Law Quarterly* (ICLQ), British Institute of International and Comparative Law, 1952.
- *Journal de droit international* (Clunet): founded by Edouard Clunet in 1874; now published by Lexis Nexis.
- *Recueil des Cours / Collected Courses,* Hague Academy of International Law, 1923.
- *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht, or Heidelberg Journal of International Law, (*ZaoRV / HJIL*):* Max Planck Inst. for Comparative Public Law and International Law, 1929.

Key websites

Listed below are a few key websites of the American Society of International Law:

- Electronic Resource Guide (ERG): the American Society of International Law's guide to international law resources on the web, arranged in subject-based chapters.
- Eagle-i : gateway to law websites, including international law sites, provided by IALS Library
- Electronic Information System for International Law (EISIL) : gateway to international law websites, provided by the American Society of International Law.
- International Law Commission (ILC): this UN body develops and codifies international law; its website provides ILC publications from 1949 onwards, and a research guide.
- *Researching Public International Law:* substantial, detailed research guide by Kent McKeever, Director of the Arthur W. Diamond Law Library at Columbia University in the US (last updated 2006).
- UN International Law page: information, resources and links relating to the UN's work in the field of international law
- UN Treaty Collection: free access to the UN Treaty Series, League of Nations Treaty Series and related information.
- United Nations Documents: gateway to the documentation of the UN General Assembly, Security Council, Secretariat and other UN bodies. (See also the IALS UN Research Guide.)
- World LII Internaational Law Library: free collection of treaties, international court decisions, journals and other international law materials.

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FACULTY OF ARTS

SYLLABI

FOR

M.A. SOCIOLOGY (SEMESTER SYSTEM)

EXAMINATIONS , 2016-17

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Note :

A candidate for M. A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he / she has completed the prescribed courses in an affiliated college or the Department concerned of this University.

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES of Sociology (Semester System)
(*Effective from the First Year Admissions for the Academic Session 2010-11*)

1. The Syndicate has approved the following Guidelines, Mode of Testing and Evaluation including Continuous Internal Assessment of students:

(i)	Terminal Evaluation	80%
(ii)	Continuous Assessment	20%
(iii)	Continuous Assessment may include Written Test, Snap Test, Participation in Discussions in the class, Term Paper, Attendance etc.	
(iv)	In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:	

(a)	Written Test (one per semester)	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Term Paper/s	:	25 (reduced to 5)
(d)	Participation in Class Discussions	:	15 (reduced to 3)
(e)	Attendance	:	10 (reduced to 2)*
		Total:	**100 reduced to 20**

*Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

Attendance Component		*Mark/s for Theory Papers*
(a)	75% and above up to 85%	: 1
(b)	Above 85%	: 2

2. **In the case of Paper SOC R 439: Methods & Techniques in Social Research:**

The system of evaluation for Internal Assessment shall be based on field work–data collection, report writing and presentation of report. The break-up of the marks shall be as under:

Data Collection	:	25 (reduced to 5)
Report Writing	:	50 (reduced to 10)
Presentation of Report	:	25 (reduced to 5)
Total		**100 reduced to 20**

<u>Note:</u> " In view of the peculiarity of distance education courses, students admitted to USOL in M.A. Sociology (Semesters I to IV) shall be given Internal Assessment for all the courses, including SOC-R-439 (3rd Semester), on the basis of Assignments as in the previous system."

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the particular subject and, thus he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the Proforma obtainable from the Examination Branch.

5. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2006 will be shown separately in the Detailed-Marks-Card (D.M.C.)

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READINGS IN THE SUBJECT OF SOCIOLOGY FOR M.A. I & III SEMESTERS EXAMINATIONS, NOVEMBER/DECEMBER, 2016 AND II & IV SEMESTER EXAMINATIONS, APRIL/MAY, 2017.

SCHEME FOR OPTING COURSES

SEMESTER-I

Course no.	**Title**
SOC R 411	History of Social Thought
SOC R 412	Sociology of Family and Gender
SOC R 413	Sociology of Development
SOC R 414	Social Stratification: Concepts & Theories

SEMESTER-II

SOC R 425	Positivistic Sociological Theories
SOC R 426	Methodology of Social Research
SOC O 521	Population and Society
SOC O 621	Social Dimensions of Development
SOC O 721	Sociology of Urban Settlements
SOC O 821	Structural Moorings of Gender Oppression
SOC O 921	Peasants and Rural Society In India
SOC O 922	Organizational Theory and Behaviour
SOC O 923	Basic Social Statistics

SEMESTER-III

SOC R 438	Interpretive Sociological Theories
SOC R 439	Methods & Techniques in Social Research
SOC O 532	Basic Methods in Population Studies
SOC O 632	Social Development in India
SOC O 633	Rural Development in India
SOC O 732	Problems of Urban India
SOC O 832	Family in Cross Cultural Perspective
SOC O 931	Sociology of Aging
SOC O 932	Organizational Structure and Development
SOC O 933	Sociology of Deviance: Concepts and Theories

SOC O 934	Sociology of Crime
SOC O 935/945	Dissertation (III and IV Semesters)*
SOC O 936	Advanced Social Statistics

SEMESTER-IV

SOC R 440	Perspectives on Indian Society
SOC O 543	Determinants and Consequences of Population Growth
SOC O 544/744	Sociology of Human Migration
SOC O 644	Environmental Crisis and Sustainable Development
SOC O 645	Entrepreneurship and Development
SOC O 743	Cities, Urban Planning and Development
SOC O 843	Family Dynamics in Contemporary India
SOC O 844	Gender and Development
SOC O 941	Fundamentals of Industrial Sociology
SOC O 942	Social Problems
SOC O 943	Political Sociology
SOC O 944	Sociology of Marginalized Communities
SOC O 945/935	Dissertation (IIIrd and IVth semesters)*
SOC O 946	Media and Culture

There will be **two** categories of courses and each course will be of 4 credits.

(1) SOC R level are Required or Compulsory Courses.
(2) SOC O level are Open Courses (including Dissertation).

The students will be required to complete 64 credit hour courses successfully in the total duration of four semesters. The break up of the credit hours is as follows:

	Course Category	**No. of Courses to be completed**	**Credits**
1.	Required or Compulsory Courses (SOC R level)	9	9x4= 36
2.	Open Courses (SOC O level)	7	7x4= 28
		Total credits	**64**

Each student shall take up all four Required Courses in the First Semester. In the Second Semester, in addition to two Required Courses, each student shall opt for two Open Courses out of those offered in that particular Semester. In the Third Semester again, in addition to two Required Courses, each student shall opt for two Open Courses, out of those offered during that Semester, including Field Dissertation, depending upon his/her eligibility for the same. In the Fourth Semester, apart from one Required Course,

each student shall opt for three Open Courses (two in case he/she already has dissertation)*.

***Note: Since the Semester system in M.A. Sociology is just being introduced in colleges from the session 2011-12, SOC O 935/945 Dissertation shall continue to be offered only in the Department and USOL. Its introduction in the colleges shall be subject to approval by the concerned university authorities as per university norms.**

Further, offering of Optional Courses by the Department/College will depend upon the availability of faculty for teaching the course(s). In this way, the candidates will exercise their choice in the following manner:

Semester	Required Course	Open Course
I	4	-
II	2	2
III	2	2
IV	1	3
	9	**7**

***Note**: The Dissertation (SOC O 935/945) will carry 8 credits (200 marks) and will spread over two Semesters, i.e. Semesters III and IV. Only those students who have scored 480 marks during the 1st year (1st and 2nd semesters), taking not more than a total of 32 credits, will be allowed to take up dissertation.

In Colleges affiliated to Panjab University offering M.A. (Semester System) in Sociology,

" There will be six contact hours per week (4 lectures and 2 tutorials)."

Areas of Specialization

There are four Areas of Specialization within the Open Courses. These are:

1. Development Studies
2. Population Studies
3. Family & Gender Studies
4. Urban Studies

A candidate who successfully completes at least 3 Open Courses during M.A. programme in one of these four areas of specialization, will be issued a Certificate of Specialization in that area.

For the purpose of providing specialization, various courses have been grouped under the areas as follows:

1. Development Studies

i) SOC O 621: Social Dimensions of Development (Sem. II)
ii) SOC O 632: Social Development in India (Sem. III)

iii) SOC O 633: Rural Development in India (Sem. III)
iv) SOC O 644: Environmental Crisis and Sustainable Development (Sem. IV)
v) SOC O 645: Entrepreneurship and Development (Sem. IV)
vi) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
vii) SOC O 844: Gender and Development (Sem. IV)

2. Population Studies

i) SOC O 521: Population and Society (Sem. II)
ii) SOC O 532: Basic Methods in Population Studies (Sem. III)
iii) SOC O 543: Determinants and Consequences of Population Growth (Sem. IV)
iv) SOC O 544/744: Sociology of Human Migration (Sem. IV)

3. Family and Gender Studies

i) SOC O 821: Structural Moorings of Gender Oppression**.** (Sem. II)
ii) SOC O 832: Family in Cross-Cultural Perspective (Sem. III)
iii) SOC O 843: Family Dynamics in Contemporary India (Sem. IV)
iv) SOC O 844: Gender and Development (Sem. IV)

4. Urban Studies

i) SOC O 721: Sociology of Urban Settlements (Sem. II)
ii) SOC O 732: Problems of Urban India (Sem. III)
iii) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
iv) SOC O 744/544: Sociology of Human Migration (Sem. IV)

Thrust Areas

- **Sustainable Development** (in the context of Globalization, Information, Communication and Technology)
- **Family and Gender Studies**
- **Population, Health and Aging**
- **Social Control and Deviance** (with special reference to Activism, Terrorism and Cyber Crime)

Additional Areas of Interest

Social Development, Deviance & Social Problems, Development and Social Change, Urban Studies, Peasant and Rural Studies, State and Society

M.A. (SOCIOLOGY) SYLLABI AND COURSES OF READING

SEMESTER-I

SOC R 411: HISTORY OF SOCIAL THOUGHT

Objective:

1. To introduce students to historical evolution of sociological thought.
2. To sensitize students to a detailed study of Classical Sociologists, i.e. Karl Marx, Max Weber and Emile Durkheim.
3. To apply the formulation of these thinkers to contemporary issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to the maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline:

Unit-I

A brief review of Enlightenment Thought with special reference to Rousseau; and of the Conservative Reaction to it, with special reference to St. Simon and Auguste Comte.

Unit-II

Karl Marx: Methodology - the concepts of Totality: Dialectical analysis of History, Species-Being, Human Praxis.
Basic Concepts: Means, Relations and Modes of Production: Base and Super-structure; Contradiction; Exploitation; Alienation.
Epochs of social development with special reference to Capitalism; Classes and Class Conflict.

Unit-III

Max Weber: Methodology-Verstehen, Value-Neutrality and Objectivity, Generality and the Ideal Type; Adequate Causation.
Basic concepts: Social action and its Types, social relationships; Power, Domination and Legitimate Order.
Protestant Ethic and the Spirit of Capitalism; the Rationalization process, Bureaucracy, distribution of Power and Social Stratification.

Unit-IV

Emile Durkheim: Methodology-the nature of Social Facts and their Causation.
Basic concepts: Individual and Collective Conscience, Social Solidarity and Anomie; the Sacred, the Profane and the nature of Religion, Suicide as social fact.
Mechanical to Organic Solidarity, Differentiation and Social Division of Labour, the Rise of Capitalism.

Suggested Readings

1. Aron, Raymond, (Reprint 1990), *Main Currents in Sociological Thought* (Vols. I & II), London, Pelican.
2. Avineri S. (1970) *The Social and Political Thought of Karl Marx*, London, Cambridge University Press.
3. Bendix R. (1960) Max Weber: *An Intellectual Portrait*, New York, Doubleday.
4. Durkheim E. (1960) *The Division of Labour in Society*, Illinois, Free Press of Gilencoe.
5. Giddens, Anthony (1971) *Capitalism and Modern Social Theory*, London, Cambridge, U. Press.
6. Irving M. Zeitlin (1969) *Ideology and the Development of Sociological Theory*, New Delhi, Prentice Hall.
7. Marx, K. and Engels F. (1971), *The Manifesto of the Communist Party*, Moscow, Progress Publishers.
8. Max Weber (1965), *Protestant Ethic and the Spirit of Capitalism*, London, Allen & Unwin.

Additional Readings

1. Ritzer, George, (1996) *Sociological Theory*, London, Sage Publications.
2. Hughes, John A. et. al., (1995), *Understanding Classical Sociology* - Marx, Weber and Durkheim, London, Sage Publications.
3. Pampel Fred C., (2000) *Sociological Lives and Ideas*: *An Introduction to the Classical Theorists*, N.Y., Worth Publishers.

SOC R 412: SOCIOLOGY OF FAMILY AND GENDER

Objective

This course is aimed at sensitizing the students regarding the basic concepts and approaches used for explaining and understanding family and gender. It also aims at sensitizing students about the process of gender socialization within the framework of family. Finally, it exposes the student to specific problems and legal provisions made available to counter these problems relating to gender inequality in the Indian context.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Approaches to Family

Concepts-Family, Household and Domestic function;
Approaches- Structural Functional, Conflict, Symbolic-Interactionist, Exchange and Feminist

Unit-II

Concept and Construction of Gender

i) Concepts- Sex, Gender, Gender-Identity and Gender-roles

ii) Basic understanding of Patriarchy, Masculinity and Femininity, Gender Socialization and Gender Stereotyping through the institutions of family, education, work and religion.

Unit-III

Approaches to Gender

Feminism: Meaning; Liberal, Radical, Socialist-Marxist and Post Modernist Feminisms

Unit-IV

Gender Equality through Legislation (in Indian Context)

i) Dimensions of Gender Inequality: Female Foeticide, Neglect of Girl Child and Bride Burning and Status of Elderly Women.
ii) Brief introduction to PNDT Act, Dowry Prohibition Act and Domestic Violence Act.

Suggested Readings

1. Bender, Donald R. (1970) 'A Refinement of the Concept of Household: Families, Co-residence and Domestic Functions', *American Anthropologist*, Vol.32,No.1, PP 1-15.
2. Chanana, Karuna (1988) *Socialization, Education and Women: Explorations in Gender-Identity*, New Delhi: Orient Longman.
3. Lipman, Jean Blumen (1984), *Gender-Roles and Power*, New Jersey, Prentice Hall Inc.
4. Oakely, Ann (1972 *Sex, Gender and Society*, London : Harper & Row Pub.
5. Patel, Tulsi (2005), *The Family in India: Structure And Practice,* New Delhi: Sage Publications.
6. Saradamoni K.(ed) (1992), *Finding the Household: Conceptual and Methodological Issues*, New Delhi: Sage Publication.
7. Shah. A.M. (1973), *The Household Dimension of Family*, New Delhi: Orient Longman.
8. White James M. & David M. Klein (2002), *Family Theories*. Thousand Oaks: Sage Publications (Second Edition).
9. Wood, Julia T (1999*), Gendered Lives.* London: Wadsworth Pub. Company (Third Edition).
10. Wykes, Maggie and Barrie, Gunter (2005) *The Media and Body Image*, New Delhi: Sage Publications.

Additional Readings

1. Bare Acts: PNDT Act, Dowry Prohibition Act, Protection of Women Against Domestic Violence Act, Hindu Succession Act.
2. Burr, Wersley R. et.al (1997), *Contemporary Theories about Family*, New York: Free Press.
3. Das, Man Singh & Gupta, Vijay Kumar (eds.) (1995), *Gender Roles and Family Analysis*, New Delhi: M.D. Pub.

4. Dube, Leela (1997), *Women and Kinship: Contemporary Perspectives on Gender in South and South-East Asia*, Tokyo: United Nations Univ. Press.
5. Hofstede, Geert and Associates (1998*), Masculinity and Femininity*, Thousand Oaks: Sage Publication.
6. Lancy, Lobo (1992), 'Household and Family among Thakurs in a North Village', *Sociological Bulletin*, Vol. 41, No. 1&2, pp 46-66.
7. Lengermann, Patrician M. & Jill Niebrugge-Brantley (1996) 'Contemporary Feminist Theory', in George Ritzer, *Sociological Theory,* (Fourth Edition), pp. 436-486, New York : McGraw-Hill.
8. Thorne, Barrie & Marilyn Yalom (eds.) (1982), *Rethinking the Family: Some Feminist Questions,* New York: Longman.
9. Weitz, Shirley (1977), *Sex-Roles*, London: George Allen & Unwin.

SOC R 413: SOCIOLOGY OF DEVELOPMENT

Objective

Keeping in view the relevance of the theme of development, especially in the less developed societies, this course aims (a) to familiarize the students with the various ways that development has been conceptualized; (b) to critically evaluate the modernization theory in its economic, sociological, social-psychological and political forms; (c) to provide a review of the underdevelopment theory given by the Latin American political economists; and (d) to re-assess the various paths to development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development: The concept and its changing connotations (liberal and socialist); Operational Indicators.

Unit-II

Modernization Theories:
Economic (Gunnar Myrdal, W. W. Rostow);
Sociological (Neil J. Smelser, Daniel Lerner, Talcott Parsons);
Social-Psychological (David C. McClelland, Everett E. Hagen);
Political (Gabriel A. Almond & James S. Coleman);
Their Critical Assessment

Unit-III

Theories of Underdevelopment:
Centre-Periphery (A. G. Frank, Samir Amin);
Unequal exchange (Paul Baran); World system (Immanuel Wallerstein);
Their Critical Assessment

Unit-IV

Paths of Development:
Capitalist, Socialist, Mixed;
Globalization as a Strategy of Development.

Suggested Readings

1. Coleman, J. (1968), "Modernization: Political Aspect", in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences* Vols. 9 & 10 (L-M), London: MacMillan.
2. Desai, Vandana and Robert B Potter, (2008), *The Companion to Development Studies*, London: Hodder Arnold Publication.
3. Gray, J. (1969), "The Economics of Maoism" in H. Bernstein (ed.) *Underdevelopment and Development-The Third World Today*, N.Y.: Penguin Pub. (pp. 254-273).
4. Harrison D. (1988), *The Sociology of Modernization and Development*, New Delhi: Routledge.
5. Horowitz, I. L. (1966), *Three Worlds of Development*, N.Y.: Oxford University Press (Selected chapters).

6. Lerner, D. (1968), "Modernization: Social Aspects" in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences*, Vols. 9 & 10 (L-M) (pp. 387-394), London: MacMillan.
7. McMichael, Philip (2008), *Development and Social Change: A Global Perspective*, Newbury Park, CA: Pine Forge Press.
8. Mehta, S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
9. Myrdal, Gunnar (1968), *An Approach to Asian Drama*, Harmondsworth: Penguin.
10. Ness, G. D. (1970), *Sociology of Economics Development: A Reader*, N.Y.: Harper and Row (Selected Chapters).
11. Pandey, R. (1985), *Sociology of Development*, New Delhi: Mittal Pub.
12. Pandey, R. (1986), *Sociology of Underdevelopment*, New Delhi: Mittal Pub.
13. Parsons, Talcott (1966), *Societies: Evolutionary and Comparative Perspectives*, Englewood Cliffs, N. J.: Prentice-Hall, (pp. 20-29).
14. Sabbarwal, Sherry (2010), "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
15. Sharma, S. L. (1980), Criteria of Social Development, *Journal of Social Action*, Jan.-March.
16. Sharma, S. L. (1986), *Development: Socio-Cultural Dimensions*, Jaipur: Rawat (Chapter I).
17. Smelser, N. J. (1968), *Essays in Sociological Explanation*, Englewood Cliffs, N. J.: Prentice-Hall, (Chapter 6).
18. Walby, Sylvia (2009), *Globalization and Inequalities: Complexity and Contested Modernities*, Newbury Park, CA: Pine Forge Press.
19. Went, Robert (2000), *Globalization: Neo-Liberal Challenge, Radical Responses*. London: Pluto Press.

Additional Readings

1. Abraham, M. F. (1990), *Modern Sociological Theory: An Introduction*. New Delhi: OUP.
2. Apter, D. (1987), *Rethinking Development*, London: Sage.
3. Blomstrom, M. and B. Hettne (1984), *Development Theory in Transition*, London: Zed Books.
4. Desai, A. R. (1983), *India's Path of Development: A Marxist Approach*. New Delhi, OUP.
5. Giddens, A. (1990), *The Consequences of Modernity*, Cambridge: Polity Press.
6. Haq, Mahbub Ul (1995), *Reflections on Human Development*, New Delhi: OUP.
7. Larrain, J. (1991), *Theories of Development: Capitalism, Colonialism and Dependency*, Cambridge, Polity Press.
8. Leeson, P. F. and Minogue, M. (eds.) (1988), *Perspectives on Development: Cross-Disciplinary Themes in Development*, Manchester: Manchester University Press.
9. Mehta, S.R. (2010), New Understanding of Indian Society: Incounters with Sociology, Shimla, Indian Institute of Advanced Study.
10. Mehta, Rani and Mehta, S.R. (2010), Social Transformation of an Island Nation: Development Wonder in Mauritius, New Delhi, Kalpaz Publications.
11. Schuurman, F. J. (1993), *Beyond the Impasse: New Directions in Development Theory*, London: Zed Books.

SOC R 414: SOCIAL STRATIFICATION: CONCEPTS & THEORIES

Objective

1. To sensitize students about elements of discrimination, exploitation, inequality and prevalence of hierarchies in everyday life.
2. To give a background of important sociological concepts.
3. To give theoretical formulations of important thinkers like Max Weber, Karl Marx, Talcott Parsons, Davis and Moore and Ralph Dahrendorf.
4. To sensitize students in terms of understanding contemporary formulations like the emerging of middle class and changing dimensions of caste and class.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts
Inequality, Differentiation; Ranking, Hierarchy and Social Stratification
Dimensions of Social Stratification
Caste, Class, Race, Ethnicity and Gender

Unit-II

Theoretical Formulations:
i) Functional Theory: Davis and Moore; Critique
ii) Conflict Theory: Karl Marx, R. Dahrendorf
iii) Multidimensional Theory: Max Weber

Unit-III

Emerging Class System
Class, Middle Class, New Middle Class
Correlates of Social Class: Occupation, Education and Income

Unit-IV

Changing Caste System
Change and Continuity in Caste in India
Resurgence of Caste (with special reference to Politics and Khap Panchayats)
Affirmative Action with regard to Scheduled Castes.

Suggested Readings

1. Beteille, Andre (1977) *Inequality Among Men*, Delhi, Oxford University Press.
2. Bendix, R & S. M. Lipset (eds.) (1970) *Class, Status and Power*, London, Routledge & Kegan Paul.
3. Beteille, Andre (ed.) (1969) *Social Inequality*, Penguin Books.
4. Cottrell, Allin (1984) *Social Classes in Marxist Theory*, London, Routledge & Kegan Paul.
5. Culvert, P (1982) *The Concept of Class*, London, Hutchison.
6. D'Souza V. S. (1981) *Inequality and its Perpetuation*, Delhi, Manohar Publication.
7. Eisenstadt, S. N. (1971) *Social Differentiation and Stratification*, London, Scott, Foresman & Co.
8. Giddens A. (1980*) The Class Structure of the Advanced Societies*, London, Unwin Hyman.
9. Gupta, Dipankar (ed) (1991) *Social Stratification*, Delhi, OUP.
10. Johnson, D. L. (1982*) Class and Social Development: A New Theory of the Middle Class,* Baverly Hills, Sage Pub.
11. Malik, S. C. (1986) *Determinants of Social Status in India*, Delhi, Motilal Banarsidas.
12. Sharma, K. L. (1986) *Social Stratification in India*, New Delhi, Manohar.
13. Srinivas, M. N., ed. (1996) *Caste: Its Twentieth Century Avatar*, New Delhi, Viking.
14. Singh G. (1985) *The New Middle Class in India: A Sociological Analysis*, Jaipur, Rawat Publication.
15. Singh, Yogendra (1977) *Social Stratification & Social Change*, Delhi. Manohar Publication.
16. Tumin, M. M. (1978) *Social Stratification*, Prentice Hall.

Additional Readings

1. Beteille, Andre (2002) *Equality and Universality: Essays in Political Theory*, Delhi, OUP.

2. Beteille, Andre (2002) *The Antinomies of Society*, Delhi, OUP.
3. Johnson, D. L. (ed.) (1985) *Middle Classes in Dependent Countries*, Beverly Hills, Sage Publication.
4. Lane, David (1982) *The End of Social Inequality*, New York, George Allen & Unwin.
5. Lloyd, Peter (1983) *The Third World Proletariat*, Boston, George Allen & Unwin.
6. Meale, R. S. (1984) *History and Class*, Oxford, Basic Blackwell.
7. Stinchcombe, A. L. (1986) *Stratification and Organization,* Cambridge, Cambridge University Press.

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SEMESTER-II

SOC R 425: POSITIVISTIC SOCIOLOGICAL THEORIES

Objectives

This course exposes the students to the writings of sociologists constituting the School of Positivistic Theories who actually treat Sociology as a natural science. It also includes the more recent theories such as Structuration, Post-structuralism, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Positivism: Definition; Contribution of Auguste Comte, Emile Durkheim
Functionalism: Definition; Anthropological functionalism–Radcliffe-Brown, Malinowski

Unit-II

Structural-Functionalism: Talcott Parsons
Functional analysis of Robert K.Merton
Neo-Functionalism: Jeffrey Alexander, Paul Colomy

Unit-III

Structuralism: Levi-Strauss
Structural Marxism: Louis Althusser
Structuration: Anthony Giddens

Unit-IV

Conflict Theories: Karl Marx, Ralf Dahrendorf, Randall Collins

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2002) *Contemporary Sociological Theory,* California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory,* California, Pine Forge Press.
3. Alexander, J. (1985) *Neofunctionalism*, Beverley Hills, California, Sage.
4. Alexander, J. (1982) *Theoretical Logic in Sociology*, Berkeley, California, University of California Press.
5. Bauman, Z. (1976) *Towards a Critical Sociology: An Essay on Commonsense and Emancipation*, London, Routledge and Kegan Paul.
6. Clarke, S. (1981) *The Foundation of Structuralism*, Brighton, Harvest Press.
7. Colomy, P. (ed.) (1990*) Functionalist Sociology*, London, Edward Elgar.
8. Colomy, P. (ed.) (1990*) Neofunctionalist Sociology*, London, Edward Elgar.
9. Craib, Ian (1984) *Modern Social Theory*, Brighton, Harvester Press.
10. Derek, Layder (2006) *Understanding Social Theory*, New Delhi: Sage Publications.
11. Giddens, A. (1987) *Social Theory and Modern Sociology,* Cambridge, Polity Press.
12. Giddens, A. and J.H. Turner (1987) *Social Theory Today*, Cambridge, Polity Press.
13. Helle, H.J. and S.N. Eisenstadt (eds.) (1985*) Macro-Sociological Theory,* London, Sage.
14. Lane, M. (ed.) (1970) *Structuralism: A Reader*, London, Jonathan Cape.
15. Ritzer, G. (1988*) Sociological Theory*, N.Y., McGraw-Hill.
16. Turner, J.H. (1978) *The Structure of Sociological Theory,* Homewood, Dorsey Press.

Additional Readings

1. Craib, Ian (1992) *Modern Social Theory: From Parsons to Habermas*, London, Harvester Press.
2. Collins, Randall (1997) *Sociological Theory*, Jaipur, Rawat.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat.
4. Westby, David L. (1991) *The Growth of Sociological Theory*, New Jersey: Prentice Hall.
5. Zeitlin, I.M. (1998) *Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat.

SOC R 426: METHODOLOGY OF SOCIAL RESEARCH

Objective

This course familiarizes the students with the major Epistemological Schools in methodology of social sciences. It will also acquaint the students with the basic elements of social research and the major problems confronted by social scientists in arriving at objectivity and value neutrality.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Major Epistemological Schools in Methodology in Social Research
Positivistic and Interpretive; Rationalism and Empiricism; Objectivism and Constructivism

Unit-II

Major Methodological Dilemmas in Social Research
Subjectivity and Objectivity
Value neutrality
Methodological Individualism versus Methodological Collectivism
Limits of Quantification in Social Research
Logic of Triangulation

Unit-III

Sampling
Meaning and Importance
Universe, Population, Sampling Frame, Sampling Error
Types of Sampling:
Probability Sampling- Meaning, Types, Advantages and Disadvantages
Non- Probability Sampling- Meaning, Types, Advantages and Disadvantages
Theoretical Sampling

Unit-IV

Qualitative Research
Ethnography, Participatory Research, Action Research, Interviewing as Conversation, Narratives, Grounded theory, Naturalistic Inquiry, Strengths and Weaknesses of Qualitative Research.

Suggested Readings

1. Bernard, H. Russell (2000) *Social Research Method — Qualitative and Quantitative Approaches,* New Delhi, Sage Publication India Pvt. Ltd.
2. Bryman, Alan (2001) *Social Research Methods,* New York, Oxford University Press.
3. Cicourel, A.V. (1964), *Method and Measurement in Sociology,* Glencoe, Free Press.
4. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
5. Mukherjee, Partha N. (2000), *Methodology in Social Research*, New Delhi: Sage Publication.
6. Strauss, Anselm (1990) *Basics of Qualitative Research — Grounded Theory Procedures and Techniques*, New Delhi: Sage Publication.

Additional Readings

1. Bose, P. K. (1997) "Problems and Paradoxes of Inductive Social Science: A Critique of Ramkrishna Mukherjee", *Sociological Bulletin*, 46 (2), Sept.

2. Bryant, G.A., (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Hanmond, Michael, Howarth, Jane and Keat, Russel (1991) *Understanding Phenomenology,* Basil Blackwell.
4. Himmelstrand, Ulf (1986) *The Sociology of Structure and Action*, New Delhi, Sage Publication.
5. Hindess, Barry (1977*) Philosophy and Methodology in Social Sciences*. The Harvester Press.
6. Jenks, Chris (ed.) (1998) *Core Sociological Dichotomies*, New Delhi, Sage Publication.

SOC O 521: POPULATION AND SOCIETY

Objective

The course intends to discuss the inter-linkages between size, growth, composition and quality of population with societal components. It introduces the students to the importance of population issues in ancient thought to modern times. The course would include theoretical contributions from Malthusian-Neo-Malthusian, Marxian-Neo-Marxian and Developmentalist perspectives. Discussion will focus mainly on issues in India but of course in comparative context at the global and regional levels.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Population and Society:
Development of Early Thought- A Brief view from Roman, Greek, Chinese, Arabian and Indian writings.
Emergence of ideas from these thoughts on Population Equilibrium, Optimum Population, Population Control, Regulating Population through the institution of Marriage, Family and the State

Unit-II

Theoretical Contribution:
Malthus and Neo-Malthusian
Marxian and Neo-Marxian
Demographic Transition
Family Planning and Developmentalist Perspectives
Middle Path Approach

Unit-III

Trends of Population Growth at Global and Regional level and Future Growth.
Trends of Population Growth in India:
Pre and Post Independence Period, Future Growth by mid of 21st century.
Distribution of Population by Regional Balances.
Compositions of Population by Age, Gender, Rural-Urban, Education, and Broad Industrial Classification Categories.

Unit-IV

Towards Population Stabilization in India:
Population Policy 2000 –Goals and Strategies
Continuity and Change from earlier Population Policy in the Post Independent India.
Reproductive & Child Health Approach.

Suggested Readings

1. Bhende, Asha & Tara Kanitkar (1999) *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, Donald J. (1969) *The Principles of Demography*, N.,Y. John Wiley.
3. Bose, Ashish (1991) *Demographic Diversity in India*, Delhi, B.R. Publishing.
4. Census of India (2001), Paper 2 (Rural-Urban Totals).
5. Chambliss, R. (1954), *Social Thought: From Hammurabi to Comte,* New York, Dryden Press.
6. Haberland, Nicole and Diana Measham (eds.) (2002) *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning,* New

York, Population Council.
7. *International Encyclopaedia of Population*, 2 Vols.
8. Kleinmann, Davis S. (1980) *Human Adaptation and Population Growth: A Non-Malthusian Perspective*, New York, Monclairef.
9. Nam, Charles (1968) *Population and Society*, Boston, Houghton, Miffin Co.
10. *National Population Policy (2000),* Government of India.
11. Pachauri, S. (ed.) (1999), *Implementing Reproductive Health Agenda in India: the Beginning*, New Delhi, Population Council.
12. Petersen, William (ed.) (1972*), Readings in Population*. N.Y., Macmillan.
13. Population Studies, (1996) *Golden Jubilee Special Issue*, Great Britain (select papers).
14. Premi, M.K. (1991), *India's Population: Heading Towards a Billion*, Delhi, B.R. Publishing.
15. Sen, Amartya and Jean Dreze (1996), *Indian Development*, Oxford University Press.
16. Simon, Julian L. (1981), *The Ultimate Resource,* Princeton, Princeton University Press.
17. U.N., (1973) *Determinants and Consequences of Population Growth*, (Chapter-Introduction), NY.
18. U.N. (2002) *World Population Reports*, N.Y.

Additional Readings

1. Agarwala, S.N. (1984), *Population,* New Delhi: National Book Trust, India.
2. Agarwala, S.N. (1977), *India's Population Problems*, New Delhi: Tata McGraw Hill.
3. Hans,Raj (2001*), Fundamentals of Demography*, New Delhi: Surjeet Publications.
4. Kulkarni, P.M. (2000), "Prospective Changes in the size and structure of India's Population – Implications of PFI Projections up to 2051" *in Millennium Conference on Population, Development and Environment Nexus*, New Delhi: PHD Chamber of Commerce and Industry.
5. Panandikar, V.A Pai (2000), "India's Demography and Democracy", in *Millennium Conference on Population, Development and Environment Nexus,* New Delhi: PHD Chamber of Commerce and Industry.
6. Thompson, Warren, S. (1953), *Population Problems*, New York: McGraw-Hill.

SOC O 621: SOCIAL DIMENSIONS OF DEVELOPMENT

Objective

Economic development in society cannot remain unaffected by social-structural factors. Similarly, the social structure, too, is influenced by economic growth and modernization. With this in view, the present paper (a) provides the Gandhian, Marxist, Ecological, Post-modernist, Feminist and Sociological critiques of the economic growth and modernization models of development; (b) discusses how structural factors like caste,

tradition, religion and population can impede or facilitate development; (c) examines how economic development and modernization can, in turn, lead to problems related to ethnicity, disparity, displacement and (d) discuss some of the new trends in development studies.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Critiques of Economic Paradigm of Development:
Gandhian, Marxist, Post-Modernist, Ecological, Feminist, and Sociological

Unit-II

Social-Structural and Cultural Factors in Economic Development:
Caste, Religion, Population, Traditions and Values

Unit-III

Socio-Cultural Consequences of Economic Development: Disparity, Displacement and Resettlement, Ethnic Resurgence, Erosion of Traditions and Values.

Unit-IV

New Directions in the Understanding of Development:
Ethical Development, Capability Approach (Amartya Sen)
New Modernity and Risk Society (Ulrich Beck)
Human Rights and Development (Peter Uvin)

Inclusive Development
Millennium Development Goals (UNDP)

Suggested Readings

1. Biswas, S. C. (ed.) (1969) *Gandhi, Theory and Practice: Social Impact and Contemporary Relevance*, Shimla, IIAS. (Articles by V. Palshikar & Raj Krishna).
2. Boyne, Roy (2003) *Risk (Concepts in the Social Sciences)*, Berkshire: Open University Press.
3. Cernea, M. M. (1988) "Involuntary Resettlement and Development" *Finance and Development*, Sept. (pp.) 44-46.
4. Desai, Vandana and Robert B Potter, (2008) *The Companion to Development Studies*, London: A Hodder Arnold Publication.
5. Development and Populations, Special Issue (1990) *Yojana*, Vol. 34, Nos. 1 & 2, Jan. 26.
6. Dube, S. C. (1958) *India's Changing Villages: Human Factors in Community Development*, London: Routledge & Kegan Paul (Chapter 6).
7. Ferreira, Francisco H. G. and Michael Walton (2006) *World Development Report: Equity and Development*, Washington DC: World Bank & N.Y.: Oxford University Press.
8. Mehta, Rani (2014) Sociology and Environmental Sustainability, Jaipur, Rawat Publications.
9. Mishra, G. P., D. M. Diwakar and Ashok Mathur (2006) *Deprivation and Inclusive Development,* Lucknow: New Royal Book Co.
10. Pieterse, Jan Nederveen (2010) *Development Theory*, Newbury Park, CA: Pine Forge Press.
11. Quinlivan, Gary and Antony Davies (2003) "Ethical Development and the Social Impact of Globalization", *International Journal on World Peace*, Vol. 20.
12. Rao, M. S. A. (1969) "Religion and Economic Development" *Sociological Bulletin*, Vol. XVIII, No. 1, March (pp.1-15).
13. Sabbarwal, Sherry (2010) "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
14. Sardar Sarovar Project: Review of Resettlement and Rehabilitation in Maharashtra (1993) report by the Tata Institute of Social Sciences, in *Economic and Political Weekly*, Aug. 21, (pp. 1705-1714).
15. Sen, Amartya (2000) *Development as Freedom*. Oxford: Oxford University Press.
16. Sharma, S. L. (1994) "Salience of Ethnicity in Modernization: Evidence from India", *Sociological Bulletin*, Vol. 39, Nos. 1 & 2 (pp. 33-51).
17. Sharma, S.L. (1988) "Modernization of Indian Society: A Symbolic Intreractionist Perspective", *The Journal of Sociological Studies*, Vol.7, Jan. (pp.10-33).
18. Sinha, D. and S. R. Kao (eds.) (1988) *Social Values and Development*, New Delhi: Sage (Introduction and Chapter I).
19. "Sustainable Development" Special Issue (1991) *The European Journal of Development Research*, Vol. 3, No. I June.
20. UN, (2007) *Globalization and Inclusive Development (Note by the UNCTAD Secretariat)*, Geneva: United Nations Pub.

21. UN, (2009) *Millennium Development Goals Report 2009*, N.Y.: United Nations Publication.
22. Uvin, Peter (2004) *Human Rights and Development*, West Hartford, Connecticut: Kumarian Press.

Additional Readings

1. Apthorpe, Raymond, J. and A. Krahl (1986) *Development Studies: Critique and Renewal*, Leiden, the Netherlands: Brill.
2. Chakraborty, M. (1987) "Resettlement of Large Dams Oustees in India" in *People and Dams, Published by the Society for Participatory Research in Asia*, New Delhi.
3. Foster, G. M. (1973) *Traditional Societies and Technological Change*, New Delhi: Allied Pub. (Chapter 5).
4. Giddens, A. (1996) "Global Problems and Ecological Crisis" in *Introduction to Sociology*, IInd edition, New York: W.W. Norton & Co.
5. Momsen, J. (1991) *Women and Development in the Third World*, N.Y.: Routledge.
6. Nusebaum, Martha (1993) *The Quality of Life*, Oxford: Oxford University Press.
7. Pieterse, J. N. (ed.) (1992) *Emancipations, Modern and Postmodern*, London: Sage.
8. Pimpley, P. N., "Development and Downward Social Mobility in Independent India", Unpublished Monograph.
9. Sabbarwal, Sherry (1992-93) "Ethnicity: A Critical Review of the Conceptions and Perspectives", *Social Science Research Journal*, Vol. 1, Nos. 1 & 2, March-Sept., 1992-93.
10. Sharma S. L. (1986) *Development: Socio-cultural Dimensions*; Jaipur: Rawat Publications (Chapters 1, 7, 8, 9).
11. Sharma, S. L. (1989), "Social Development: Reflection on the Concept and the Indian Experience", *Guru Nanak Journal of Sociology*, Vol.10, Nos. 1 & 2 (pp. 37-55).

SOC O 721: SOCIOLOGY OF URBAN SETTLEMENTS

Objective

This course has been devised to introduce the students to the history of urban settlements and emergence of Urban Sociology as a discipline. The course would acquaint the students with the basic concepts, approaches and theoretical formulations relating to urban typology, urban ecology, urbanism etc., with a special focus on the diverse experiences of western and non-western, particularly Indian, regions. This course will provide the basic understanding to the students who wish to specialize in urban sociology.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Urbanization in Historical Perspective
Emergence of Urban Settlements
Urbanization in Developed and Developing Countries
Suburbanization
Pre-industrial, Industrial and Post-industrial and Colonial city
Metropolitan and Mega city

Unit-II

Approaches to Urban Society
Ecological-Classical Neo-Classical and Socio-Cultural
Technological and Demographic
Urbanism as a Way of Life
Rural-Urban Continuum
Marxist Approach to City

Unit-III

Internal Structure of Cities
Concentric-Zone Theory, Star theory, Sector theory, Multiple-Nuclei theory
Location of Cities
Central Place theory, Break-in-transportation, Specialized Functions
Urban Primacy and Rank-Size Rule.

Unit-IV

Urban Functions
Basic and Non-basic Functions
Generative and Parasitic Cities.
Functional Classification of Cities
Cultural Role of Cities

Suggested Readings

1. Castells, Manuel, (1997), *The Urban Question*, London, Edward Arnold.
2. Gill, Rajesh, (2009) *The Contemporary Indian Urban Society — Gender, Ethnicity and Governance*, Jaipur, Rawat Publication.
3. Gill, Rajesh (1989), "Some Issues in the Conceptualization of Urbanism", *Journal of Sociological Studies,* Vol. 8, Jan., 75-85.
4. Gill, Rajesh, (2000), 'Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization', *Sociological Bulletin*, Vol. 49, No. 2, September, pp. 211-228.
5. Guglar, Joseph (ed.), (1988), *Urbanization of the Third World*, Oxford, Oxford University Press.
6. Hatt, P.K. and Reiss, A.J. (eds.) (1951), *Cities and Society,* Illinois, The Free Press.
7. Lewis, Oscar, (1970), *"Further Observations on the Folk-Urban Continuum and Urbanization with special reference to Mexico City",* in Hauser and Schnore (eds.), *The Study of Urbanization,* New York, John Wiley and Sons.
8. Redfield, Robert and Milton B. Singer, (1954), "Cultural Role of Cities", in *Economic Development and Cultural Change,* Vol. 3, 53-73.
9. Sjoberg, Gideon, (1960), *The Pre-Industrial City,* Illinois, The Free Press.
10. Theodorson, G.A. (ed), (1982), Urban Patterns, Studies in Human Ecology, University Press.
11. Theodorson, George, (1961), *Studies in Human Ecology, Evanstow,* Harper and Row.
12. Weber, Max, (1960), *The City,* Translated by Martindale, London, Heinemann.
13. Wirth, Louis, (1938), "Urbanism as a Way of Life", *American Journal of Sociology,* Vol. 44, 1-24.

Additional Readings

1. Ficker, V.B. & H.S. Graves, (1971), *Social Science and Urban Crisis*, New York, The Macmillan Company.
2. Flanagan, William G., (1990), *Urban Sociology, Images and Structure*. Boston, Allyn and Bacon.
3. Gans, Herbert J., (1968), "*Urbanism and Sub-Urbanism as ways of Life: A Re-evaluation of Definitions*" in Sylvia F. Fava (ed.), *Urbanism in World Perspective*, New York, Thomas Y. Crowell Co.
4. Hoselitz, Bert F., (1960), *Sociological Aspects of Economic Growth,* Illinois, Free Press.
5. Spates, James, (1982), *The Sociology of Cities,* New York, St. Martin Press.

SOC O 821: STRUCTURAL MOORINGS OF GENDER OPPRESSION

Objective

The course aims at understanding the social-structural underpinnings of gender oppression persisting in India and worldwide. The agenda of gender empowerment fails to yield the desired outcomes because of structural impediments which are, nevertheless, difficult to overcome. On the one hand, there is the socially given identity of 'otherness' of the woman and on the other, there are contested spaces and processes of self-identity formation. Various contemporary issues, perspectives and challenges in feminist scholarship, movements, agency and empowerment will be explored in a holistic framework through the course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Unit-I

Social construction of gender: Structural myths of femininity and masculinity.
Patriarchy and gendered division of labour.
Reflections on structural gender inequity in nature-culture debates.

Unit-II

Approaches to gender:
Liberal feminism.
Marxist, Radical and Socialist feminisms.
Dalit feminism

Unit-III

Internatinal Conventions with special reference to CEDAW Reports: Govt. of India, 2000 & 2007 (Articles 2 & 3)
Gendering the Human Development Indices: Recasting the Gender Development Index and the Gender Empowerment Measure for India: Govt. of India, 2009.

Women's movement in India

Unit-IV

Status of Women in India: critical appraisal of status reports
Work-participation and Sexual Harassment at the Workplace (Prevention, Prohibition and Redressal) Act, 2013

Gender Narratives in Indian Epics: Sita and Draupadi

Suggested Readings

1. Agarwal, Bina (ed.), 1994, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge, Cambridge University Press.
2. Agarwal, Bina (ed.), 1998, *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi, Kali for Women.
3. Beauvoir, Simone de, 1989, *The Second Sex*, New York, Vintage Books.
4. Blumberg, Rae Lesser (ed.), 1991, *Gender, Family and Economy: The Triple Overlap*, California, Sage.
5. Bose, Mandakranta, 2000, *Faces of the Feminine in Ancient, Medieval and Modern India*, New Delhi, OUP.
6. Butler, Judith, 1999, *Gender Trouble: Feminism and the Subversion of Identity*, New York, Routledge.
7. Cohen, Beth (ed.), 1995, *The Distaff Side: Representing the Female in Homer's 'Odyssey'*, New York, OUP.
8. Collins, Patricia Hill, 2000, *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*, New York, Routledge.
9. Friedan, Betty, 1984*, The Feminine Mystique*, New York, Dell Publications.
10. Grogan, Sarah, 1999, *Body Image: Understanding Body Dissatisfaction in Men, Women and Children*, New York, Routledge.
11. Hooks, Bell, 2000, *Feminist Theory: From Margin To Center*, London, Pluto Press.
12. Jackson, Stevi & Jackie Jones, 1998, *Contemporary Feminist Theories*, Edinburgh, Edinburgh University Press.

13. Kalleberg, Arne L. & Rachael A. Rosenfield, 1990, *"Work in the Family and the Labour Market: Cross-national Reciprocal Analysis."* In *Journal of Marriage and Family*, Vol. 52, No. 2 (May), pp. 331-346.
14. Kimmel, Michael S., 2000, *The Gendered Society*, New York, OUP.
15. Lerner, Gerda, 1986, *The Creation of Patriarchy*, Oxford, OUP.
16. Leslie, Julia, 1991, *Roles and Rituals for Hindu Women*, Madison, Fairleigh University Press.
17. Lorber, Judith & Susan A. Farrell (eds.), 1991, *The Social Construction of Gender*, California, Sage.
18. Mandelker, Amy, 1993, *Framing Anna Karenina: Tolstoy, the Woman Question and the Victorian Novel*, Columbus, Ohio State University Press.
19. Mazumdar, Vina, 1979, *Symbols of Power: Studies on the Political Status of Women in India*, Mumbai, Allied Publishers.
20. Mies, Maria, 1980, *Indian Women and Patriarchy*, New Delhi, Concept.
21. Oakley, Ann, 1985, *Sex, Gender and Society*, London, Gower.
22. Omvedt, Gail, 1990, *Violence Against Women: New Movements and New Theories in India*, New Delhi, Kali for Women.
23. Ray, Raka, 2002, *Fields of Protest: Women's Movements in India*, New Delhi, Kali for Women.
24. Rege, Sharmila, 2006,*Writing Caste/ Writing Gender: Narrating Dalit Women's Testimonies*, New Delhi, Zubaan.
25. Roman, Leslie G. & Linda Eyre (eds.), 1997, *Dangerous Territories: Struggles for Difference and Equality in Education*, New York, Routledge.
26. Weitz, Rose (ed.), 1998, *The Politics of Women's Bodies: Sexuality, Appearance and Behaviour*, New York, OUP.

Additional Readings

1. Agnes, Flavia, Sudhir Chandra & Monmayee Basu (eds.), 2004, *Women and Law in India*, New Delhi, OUP.
2. Desai, Neera & Maitreyi Krishnaraj (eds.), 1987, *Women and Society in India*, New Delhi, Ajanta.
3. Desai, Neera (ed.), 1988, *A Decade of the Women's Movement in India*, New Delhi, Himalaya.
4. Leslie, Julia (ed.), 2000, *Invented Identities: The Interplay of Gender, Religion and Politics in India*, New Delhi, OUP.
5. Shulamith, Firestone, 2003, *The Dialectic of Sex : The Case For Feminist Revolution*, New York, Farrar, Straus and Giroux.

SOC O 921: PEASANTS AND RURAL SOCIETY IN INDIA

Objective

The basic purpose of the course is to apprise the students about the basic differences of rural sociology *vis-a-vis* the urban sociology, and the crucial role played by the peasantry therein. Also how the traditional social institutions, agricultural economy and the caste system together build up social structure which is entirely different from the ideal market-oriented capitalist institutions. The course would also throw light on the nature of changes taking place in the rural social structure after the presentation of money and market economy linked to the global capital.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Significance of the study of Rural Society as a separate subject
Basic concepts/definition: Peasant, Rural Society, Village and Indian Village.
Rural Social Institutions: Family, Kinship, Class, Tribe, Caste System, Jajmani System, Religion, Political Institutions and Factions.

Unit-II

Rural India under the British rule:
Introduction of limited Land Reforms
Introduction of Commercial Crops and their Social and Political Repercussion
Introduction of Modern Industry and New Rural-Urban Linkages

Social Transformation in Independent India:
Shift from Feudal to Capitalist form of Agriculture and Change in Social Structure.
Role of Land Reforms
Role of Peasant Movement

Unit-III

Globalization and Crises of Rural Society
Impact on Economy
Impact on Social Institutions

Unit-IV

Emerging Social Ecology
Democratic Process and Caste-Ethnic Relations
Panchayati Raj Institutions and Neo-Village Republics

Suggested Readings

1. Desai, A.R. (1977) *Rural Sociology in India,* Bombay: Popular Prakashan.
2. Frankel, F.R. and Rao, M.S.A. (1989) *Dominance and State Power in Modern India*, Bombay: OUP.
3. Mencher, J.P, (1983) *Social Anthropology of Peasantry*, Part-III, OUP.
4. Mishra, Rajeeb (2006) *Voluntary Sector and Rural Development: Concepts, Practice and New Approach to Remove Rural Poverty,* New Delhi, Rawat Publications.
5. Omvedt, Gail (ed.) (1982) *Land, Caste and Politics in India*, Delhi: OUP.
6. Reddy, A.Vinayak and Charyulu, M.Yadagira. (Eds.). (2008). *Rural Development in India: Politics and Initiatives,* New Delhi, New Century.
7. Shanin, Theodor (ed.), (1987) *Peasants and Peasant Society*, New Delhi: Penguin.

Additional Readings

1. Appadurai, Arjun, (1996) *Modernity at Large: Cultural Dimensions of Globalization*; New Delhi, OUP
2. Beck, Ulrich (2000) *What is Globalization?* London: Polity.
3. Berch, Berberogue, ed. (1992) *Class, State and Development in India,* New Delhi: Sage Publications.
4. Thorner, D and Thorner, E. (1962) *Land and Labour in India,* Bombay: Asia Publications.
5. Walter, C. Neala, (1990) *Developing Rural India: Policies, Politics and Progress*, New Delhi, Allied Publishers.

SOC O 922: ORGANIZATIONAL THEORY AND BEHAVIOUR

Objective

The course provides (a) an introduction to the concept of organization; (b) discusses the various theoretical approaches to organizations; (c) familiarizes the student with the concepts of organizational ideologies and culture; and (d) focuses on the behavioral dimensions in organizations.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Organization:
Definition, Features and Typologies based on Function, Regulation, Technology and Structure and Environment

Unit-II

Theoretical Perspectives:
Classical – Marx, Weber, Taylor (Scientific Management);
Neo-Classical – Human Relations approach with special reference to the Hawthorne studies;
Modern – Systemic (closed, open and socio-technical systems approach by the Tavistock School) and Interactional (Goffman and the total institution)

Unit-III

Organizational Ideologies and Culture:
Ideologies – Structuralism, Psychologism, Consensualism, Welfarism and Legalism; Culture- sub-cultures and socialization

Unit-IV

Behaviour in Organizations:
Job satisfaction, Job Commitment, Decision making and Stress Management

Suggested Readings

1. Baron, Robert A. (1976) *Behavior in Organizations*, N.Y.: John Wiley.
2. Beach, L. R. (1997) *Psychology of Decision Making: People in Organizations*, Thousand Oaks: Sage.
3. Biddle, D. and R. Evenden (2000) *Human Aspects of Management*, New Delhi: JAICO Publishing House.
4. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: OUP
5. Eldridge, J. E. T. & A. D. Crombie (1974) *A Sociology of Organization*, London: Nelson.
6. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London: Sage Publications.
7. Pestonjee, D. M. (1999) *Stress and Coping: The Indian Experience*, New Delhi: Sage.
8. Robbins, S. P. (1999) *Organization Theory: Structure, Designs and Applications*, New Delhi: Prentice-Hall.
9. Salaman, G. (1979) *Work Organizations*, London: Longmans.
10. Wieland, George F. & R. A. Ullrich (1976) *Organizations: Behavior, Design and Change*, Homewood, Illinois: Richard D. Irwin Inc.

Additional Readings

1. Blau, P. M. & W. R. Scott (1963) *Formal Organizations: A Comparative Approach*, London: Routledge and Kegan-Paul.
2. Blumberg R. L. (1987) *Organizations in Contemporary Society*, Englewood Cliffs: N. J. Prentice Hall Inc.
3. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.
4. Etzioni, A. (eds.) (1969) *A Sociological Reader on Complex Organizations*, 2nd ed., N.Y.: Hold & Reinhard & Winston.
5. Etzioni, A. (1972) *Modern Organizations*, N. Delhi: E.E.E. Prentice-Hall of India.
6. Hall, Richard H. (1972) *Organizations: Structure and Process*, 2nd ed., Englewood Cliffs: N.J. Prentice Hall Inc.
7. Litterer, J. A. (ed.) (1969) *Organizations: Structure and Behavior*, N.Y.: Wiley & Sons.
8. Porter, L. W. *et al.* (1975) *Behavior in Organizations*, N.Y.: McGraw Hill.

9. Reitz, H. J. (1977) *Behavior in Organizations*, Homewood Illinois: Richard D. Irwin.
10. Sharma, K. L. (1981) *Voluntary Business Associations in Organizational Frame*, Department of Sociology: Panjab University, Chandigarh.
11. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 923: BASIC SOCIAL STATISTICS

Objective

This paper is designed to familiarize the students about basic statistical concepts, quantitative techniques for description and induction of sociological data. In the first and second units, students are introduced to measures of central tendency and measures of dispersion, bivariate distribution, etc. The third unit includes measures of association, probability, standard scores, etc. In the last unit, students are exposed to various inferential methods.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** (Theory portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable Electronic Calculators and Statistical Tables is permitted for the examination.

Course Outline

Unit-I

Statistics in Social Analysis - Functions of Statistics in social analysis, Limitations of

Statistics

Variables-discrete and continuous, quantitative and qualitative; independent and dependent

Levels of measurement-Nominal, ordinal and interval

Frequency distribution, grouping error, cumulative frequency distribution, Arithmetic mean, median and mode

Unit-II

Range, semi-interquartile range, average absolute deviation, variance, standard deviation, coefficient of variation, Symmetry and Kurtosis

Bivariate distributions-Bivariate contingency tables, rules for percentaging bivariate frequency tables

Unit-III

Measures of Association-Lambda, Cramer's V, Spearman's rank correlation, Gamma and Pearson's product moment correlation coefficient

Elements of probability- 'a priori' & empirical probability, properties of probability Normal probability distribution, area under the normal curve, standard scores, use of standard scores

Unit-IV

Statistical Inference-Simple random sampling, sample and universe, statistic and parameter, sampling distribution, standard error of statistic, level of significance, critical region

Tests of significance-Z and `t' tests for significance of mean (2 independent samples); Chi-square test for AXB contingency table.

Suggested Readings

1. Blalock, H.M. (1979*) Social Statistics*, New York, McGraw Hill Book Company.
2. Loether, H.J. and Tavish, Mac D.G. (1974) *Descriptive Statistics for Sociologists: An Introduction,* Boston, Allyn and Bacon, Inc.
3. Mark Sirkin R. (1995) *Statistics for the Social Sciences*, London, Sage Publications.
4. Muller John and Kar. F. Schusseller and Herbert, L. Costner, *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.
5. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.
6. Weiss, Roberts (1968) *Statistics in Social Research*, New York John Wiley & Sons, Inc.

Additional Readings

1. Jane, L. Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*; Sage Publications: London.
2. Deshpande, J.V., Gore, A.P., Shanubhogve (1995), *Statistical Analysis of Nominal Data*: New Age International Publishers: New Delhi.

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SEMESTER-III

SOC R 438: INTERPRETIVE SOCIOLOGICAL THEORIES

Objective

This course sensitizes the students to the works and ideas of sociologists who have contributed to the perspective of Interpretive Sociology, as against the Positivistic sociology. It focuses on the work of Action theorists, Interactionist theorists and the scholars belonging to the Frankfurt School of Critical Theory.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Action Theories : Max Weber, Talcott Parsons

Unit-II

Symbolic Interactionism : G.H. Mead, H. Blumer
Phenomenology : E. Husserl, A. Schutz

Unit-III

Dramaturgy : E. Goffman
Ethnomethodology : H. Garfinkel

Unit-IV

Critical Theory : J. Habermas
H. Marcuse

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory*, California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A., (2002) *Contemporary Sociological Theory*, California, Pine Forge Press.
3. Alexander, J. (1982) *Positivism: Presuppositions and Current Controversies*, Vol. I of Theoretical Logic in Sociology, Barkeley and Los Angeles, University of California Press.
4. Bernstein, R.J. (ed.) (1985) *Habermas and Modernity,* Cambridge Polity Press.
5. Blumer, H. (1969) *Symbolic Interactionism*, Englewood Cliffs, Prentice Hall.
6. Craib, Ian (1984) *Modern Social Theory,* Brigton, Harvestor Press.
7. Douglas, J. (ed.) (1971) *Understanding Everyday Life*, London, Routeledge & Kegan Paul.
8. Garfinkel, H. (1984*), Studies in Ethnomethodology*, Cambridge, Polity Press.
9. Giddens. A. (1987*) Social Theory and Modern Sociology*, Cambridge, Polity Press.
10. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
11. Goffman, E. (1959) *The Presentation of Self in Everyday Life*, New York, Doubleday.
12. Gurwitsch, A. (1962) "The Commonsense World as Social Reality", *Social Research*, 28-1, 71-93.
13. Habermas, J. (1984) *Theory of Communicative Action*, Cambridge, Polity Press.
14. Heritage, John C. (1987) "Ëthnomethodology" in A. Giddens and Turner (eds.), *Social Theory Today*, Cambridge Policy Press, 347-382.

15. Heritage, J. (1989) *Garfinkel and Ethnomethodology*, Cambridge, Polity Press.
16. Joas, H. (1987) "Symbolic Interactionism" in A. Giddens and J. H. Turner (eds.) *Social Theory Today*, Cambridge, Polity Press, 82-115.
17. Natanson, M. (1970) "Phenomenology and Typification: A Study in the Philosophy of A. Schutz", *Social Research* 37 (1), 1-22.
18. Parsons, Talcott, (1951) *The Social System*, Glencoe, III, The Free Press.
19. Weber, Max (1947) *The Theory of Social and Economic Organization*, Glencoe, III, The Free Press.
20. Zaner, R. M. (1961) "Theory of Intersubjectivity: Alfred Schutz", *Social Research*, 28-1, 1-17.

Additional Readings

1. Collins, Randall (1997*) Sociological Theory*, Jaipur, Rawat Publications.
2. Elliott, Anthony and Bryan S. Turner (eds.) (2001) *Profiles in Contemporary Social Theory*, London, Sage Publications.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat Publications.
4. Zeitlin, I.M. (1998*) Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat Publications.

SOC R 439: METHODS AND TECHNIQUES IN SOCIAL RESEARCH

Objective

Students in this Semester are supposed to do field work as a part of this Course. Hence, the Course familiarizes the students with basic elements of scientific method, apart from the process of field work, data collection and finally report writing. This course trains the students as to how to draw influences and conclusions out of empirical research.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the

candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Scientific Method:

i) Definition and Aims: Explanation; Generalization; Prediction; Control
ii) Basic Elements: Concepts, Constructs, Hypotheses, Fact, Theory
iii) Induction and Deduction

Unit-II

Field Work:
Meaning and Uses
Techniques of Data Collection:

- Observation: Structured and Unstructured; Participant and Non-Participant;
- Interview Schedule: Structured and Unstructured
- Interview: Types; Advantages and Disadvantages
- Questionnaire: Types, Advantages and Disadvantages
- Case Study; Content Analysis;
- Data Analysis: Coding, Tabulation and Report Writing

Unit-III

Measurement and Scaling:

- Measurement: Meaning, Levels, Indices, Operationalization, Problems
- Scaling Techniques - Thurstone, Likert, Guttman and Bogardus Scales Reliability and Validity of Scales.

Unit-IV

Research Design:

- Exploratory, Descriptive, Experimental, Quasi-experimental, Comparative, Longitudinal and Panel studies
- Problems of Experimental Studies in Social Research.

Suggested Readings

1. Bailey, K. D., (1997) *Methods of Social Research*, New York, The Free Press.
2. Bernard, H. Russell (2000) *Social Research Methods – Qualitative and Quantitative Approaches*, New Delhi, Sage Publications India Pvt. Ltd.
3. Colin, R. (2000) *Real World Research* Oxford, Blackwell,

4. Goode, W.J. and Hatt P.K. (1952), *Methods in Social Research*, New York: McGraw Hill, International Students Edition.
5. Kerlinger, Fred N. (1973), *Foundations of Behavioural Research*, New York, Holt, Rinehart & Winston, INC.
6. Moser and Kalton (1980) Survey *Methods in Social Investigation.* Heinemann Educational Books.
7. Punch, K. F, (1998) *Introduction of Social Research, Quantitative & Qualitative Approach*, New Delhi, Sage Robson,
8. Seltiz, Claire, et.al. (1959) *Research Methods in Social Relations,* New York, Henry Holt & Co.
9. Tashakkori, A. and Charles Teddlie, (2003) *Handbook of Mixed Methods,* New Delhi, Sage.
10. Tim, May, (2001) *Social Research: Issues, Methods and Process*. Buckingham, Open University Press.

Additional Readings

1. *Barly, Kenneth, D. (1978) Methods of Social Research,* New York. The Free Press.
2. Bryant, G.A. (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Giddens, Anthony, (1974), *Positivism and Sociology*, London: Hienmann.
4. Hindess, Barry (1977) *Philosophy and Methodology in Social Sciences*, The Harvester Press.
5. Madge, John, (1976) *The Tools of Social Science*, London, Longman.

SOC O 532: BASIC METHODS IN POPULATION STUDIES

Objective

To understand the basic dynamics of population, it is important to have basic knowledge of demographic methods. This course prepares the students to explore the sources of demographic data, learn basic techniques to handle these data and develop measures to understand changes in population size, fertility, mortality and marriage.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Sources of Demographic Data: Census, Civil Registration, Population Surveys, and UN Sources of Demographic Data. Nature and Quality of these Data Sources.
Changes in Population Size: Intercensal Change, Average Annual Growth Rate, Linear Growth Rate, Geometric Growth Rate, Exponential Growth Rate; Interpolation and Extrapolation.

Unit-II

Population Composition and Distribution: Literacy Rate, Rural-Urban, Labour Force Participation Rate.
Age and Sex Composition: Problems related to Age Data, Age Distribution, Age Heaping Effects, and Adjustment of Age Data. Dependency Ratios. Construction of Age-sex pyramids, Sex Ratio.

Unit-III

Measures of Mortality: Computation of Crude Death Rate, Age-Specific Death Rates; Infant Mortality Rate, Perinatal, Neonatal, Post-Neonatal Mortality Rate. Direct and Indirect Standardized Death Rate.

Life-Table Method: Types of Life Tables, Basic Columns of Life Tables and their computation. Relationship between various life-table columns, Life Table Stationary Population. Application of Life Table approach.

Unit-IV

Measures of Fertility: Computation of Crude Birth Rate and its uses, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate, Child Woman Ratio

Contraceptive Prevalence Rate, Abortion Rate & Foetal Wastage

Measure of Marriage & Divorce: Crude Marriage Rate, Divorce Rate. Mean and Median

Age at Marriage from Census and Survey Data.

Suggested Readings

1. Census of India*, Age and Life Tables*, Series of India, Paper 2 , GOI, 1974.
2. Hanp, Arthur and Thomas, T. (2001*) Population Reference Bureaus,* Population Handbook, 4th ed., Washington, PR3.
3. Mishra, Bhaskar D. (1993) *Introduction to the Study of Population.* New Delhi, National Book Population Reference Bureau, Trust (Latest Edition)
4. Shryock, Henry S. Jacob S. Siegel and Others (1976) *Methods and Materials of Demography.* (Condensed Edition) Harcourt Brace, Academic Press.
5. Spiegelman, Mortimer, (1968) *Introduction to Demography*, Cambridge, Harvard University Press.
6. *UN Manuals* Nos. 1, 2 & 3, United Nations.

Additional Readings

1. Cox, Peter (1959), *Demography,* London: Cambridge University.
2. Haupt, A. and Kane, T. (1998), *Population Handbook*, Washington DC, Population Reference Bureau.
3. Newell, Colin (1988), *Methods and Models in Demography*, London, Belhaven Press.

SOC O 632: SOCIAL DEVELOPMENT IN INDIA

Objective

This paper examines the development process in India focusing mainly on the issues of (a) the India State and planned development; (b) the role of voluntary sector in India's development; (c) the assessment of the problems of, and measures taken to improve the conditions of the underprivileged groups such as the SCs, STs and BCs; and (d) to consider the phenomenon of globalization and its consequences for the Indian society.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short

answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development Planning:
Review of Five Year Plans; Indian State and Social Development

Unit-II

Voluntary Sector and Development: Voluntary sector organizations, their Potential and Limitations as Agencies of Social Transformation; Some Case Studies; Issues in Voluntary Sector

Unit-III

Development of Disadvantaged Groups: Problems of Scheduled Castes (SCs), Scheduled Tribes (STs) and Backward Classes (BCs); Compensatory Discrimination through Constitutional and Legal measures; Development Schemes for SCs, STs and BCs; Commissions and their Recommendations: Mandal Commission and the Reservation Debate; Sociological Appraisal of the Development Policies for STs, SCs and BCs

Unit-IV

Globalization and its Social Implications in India: Impact on Agriculture and Labour; Repercussions for Women; Cultural Imperialism

Suggested Readings

1. Basu, A. R. (1985) *Tribal Development Programmes and Administration in India*, New Delhi: National Book Organization. (Chapters 2 & 15)
2. Basu, D. K. and R. Sisson (eds.) (1986) *Social and Economic Development in India: A Re-assessment*, New Delhi: Sage, (Chapters by Ser & Galanter).
3. Chitnis, Suma (1981) *A Long Way to Go: Report of a Survey of Scheduled Caste High School and College Students*, New Delhi: Allied Pub. (pp. 107-143).
4. Choudhary, K. (1990) "Reservations: A Systematic Compulsion", *Mainstream*, March 3. (pp. 23-26)
5. Conference Number on "Economic Restructuring in India and Labor" (1992) *The Indian Journal of Labor Economics*, Vol. 35, No. 4. Oct-Dec.

6. Desai A. R. (1985) *India's Path of Development: A Marxist Approach*, Bombay: Popular Prakashan (Chapter 2).
7. GO, (1993) "Farmers Movement: Fighting for Liberalization", *Economic and Political Weekly*, December 11 (pp. 2708-2710)
8. Jain, Devaki, (1980) *Quest for Power: Five Indian Case Studies*, Ghaziabad, Vikas
9. Jena, N. A. (1994) "An Inquiry into Popular Participation", *Participation and Governance*, Vol. I, No. I, July (pp.8-17)
10. Khan, Murtaz Ali (1980) *Scheduled Castes and Their Status*, New Delhi: ICSSR, (Introduction)
11. McPhail, T. L. (1992) "Electronic Colonialism and the World Information Order" in A. Giddens (ed.) *Human Societies: A Reader, Cambridge*, Polity Press (pp.289-291)
12. Mehta , S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
13. Misra, S. K. and V. K. Puri (1994) *Indian Economy: Its Development Experience*, Bombay: Himalaya Pub.
14. Mowli, V. C. (ed.) (1990) *Role of Voluntary Organizations in Social Development*, New Delhi: Sterling Pub. (Preface & Conclusion)
15. Petras, James (1994) "Cultural Imperialism in Late 20th Century", *Economic and Political Weekly*, Aug. 6 (pp. 2070-2073)
16. Pimpley, P. N. (1988) *Voluntaristic Approach to Development*, Unpublished Monograph.
17. Rajput, Pam and H. L. Swarup (eds.) (1994) *Women and Globalization: Reflections, Options and Strategies*, New Delhi: Ashish Pub. House.
18. Rao, V. M. (1994) "Agriculture and Liberalization: Some Implications for Development Policies", *Economic and Political Weekly*, April 16-23 (pp.999-1003)
19. Redelift, Michael (1984) *Development and the Environmental Crisis: Red or Green Alternatives?* London: Methuen Inc.
20. Sabbarwal, S. (1997) "Ecological and Socio-Economic Consequences of International Tourism for the Less Developed Countries" in S. R. Mehta (ed.) *Poverty, Population and Sustainable Development: Essays in Honour of Professor V. S. D'Souza*, Jaipur: Rawat.
21. Schchiananda (1977) *Harijan Elite: A Study of their Status, Network, Mobility and Role in Social Transformation*, New Delhi: Thomson Press (Chapter 6).
22. Shankar, K. (1989) "Planning Ethos in India", *Mainstream*, Sept. 23 (pp.7-8)
23. Sharma, S. L. (1992) "Social Action Groups as harbingers of Silent Revolution", *Economic and Political Weekly*, Vol. 27, No. 47
24. Singh, A. K. (1984) *Tribal Development in India*, New Delhi: Amar Prakashan, Chapters 2, 7 & 8
25. Singh, S. N. (1994) *Reservations: Problems and Prospects*, New Delhi: Uppal Pub. House, (Introduction & Chapter 3)
26. "Sustainable Development", Special Issue (1991), *The European Journal of Development Research*, Vol. 3, No. 1, June
27. "Symposium on Implications of Globalization" (1995) *Sociological Bulletin*, Vol. 44, (Articles by Mathew, Panini & Pathy)

28. Yadav, K. C. (1994) *India's Unequal Citizens: A Study of OBCs*, New Delhi: Manohar Pub. (Introduction & Chapters 3 & 5).

Additional Readings

1. Appadurai, A. (1997) *Modernity at Large: the Cultural Dimensions of Globalization*, New Delhi: OUP
2. Dereze, J. and Amartya Sen (1996) *India: Economic Development and Social Opportunity*, New Delhi: OUP
3. Keily, R. and P. Marflet (eds.) (1998) *Globalization and the Third World*, London: Routledge.
4. Peet, R. (1991) *Global Capitalism: Theories of Societal Development*, Routledge
5. Waters, M., (1995) *Globalization*, New York: Routledge & Kegan Paul.

SOC O 633: RURAL DEVELOPMENT IN INDIA

Objective

The objective of the course is to familiarize the students with the history of rural development in India, role of the state and farmers in it, and the impact of Market forces on agriculture.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Perspectives on Rural Development:
Liberal, Marxist, Gandhian

Unit-II

State and Rural Development: Land Reforms
Community Development Programs
State and Alleviation of Rural Poverty through Various Programs: SGSY, IAY, EAS, JRY. etc.
State and Education of Rural Masses
Role of Panchayati Raj Institutions

Unit-III

Rural Development and the Role of Peasant Movements:
Pre-Independence Period: Tribal Revolts, Kisan Sabha, Gandhi and Peasants and Telangana Uprising
Post-Independence Period: Tenant Movement, Naxalite Movement and Fresh move for Land Reforms, Farmers Movement.

Unit-IV

Rural Development and the Market Forces:
Green Revolution and its Impact on Rural Society
Globalization, Commercialization of Agriculture,
Impact on Non-Farm Employment and Distributive Justice
W.T.O. and the Process of Marginalization
Challenges of Sustainable Rural Development

Suggested Readings

1. Berch, Berberogue, (ed.) (1992) *Class, State and Development in India*, New Delhi, Sage Publications.
2. Desai, A.R. (ed.) (1979) *Peasant Struggles in India*, Bombay: Oxford University Press.
3. Desai, A.R (ed.) (1986) *Agrarian Struggles in India after Independence*, Oxford University Press.
4. Desai, A.R. (1977) *Rural Sociology in India,* Bombay, Popular.
5. Dhanagre, D.N. (1983) *Peasant Movements in India,* Delhi: Oxford Univ. Press.
6. Nadkarni, M.V. (1987) *Farmers' Movement in India*, Delhi, Allied Publishers.

7. Radhakrishana, P. (1989) *Peasant Struggles: Land Reforms and Social Change in Malabar 1836-1982,* New Delhi: Sage.
8. Shah, Ghanshyam (1990) *Social Movements in India: A Review of Literature*, New Delhi: Sage.
9. Singh, K.S. (1982) *Tribal Movements in India*, New Delhi: Mandra.

Additional Readings

1. Franda Marcus (1979), *India's Rural Development: An Assessment of Alternatives*, London: Indian Univ. Press.

2. Hoogvelt, Ankie (1998) *The Sociology of Development*, London: Macmillan.
3. Jain, L.C. (1979) *Grass Without Roots- Rural Development Under Government*, New Delhi: Sage.
4. Mehta, S.R. (1984) *Rural Development: Policies and Programmes*, New Delhi: Sage Publications.
5. Rao, S.K. (ed.) (1981) *Rural Development in India: Some Facets*, Hyderabad: NIRD.
6. Rao, S.V. (1985) *Education and Rural Development*, New Delhi: Sage Publications.
7. Rao, V.M. and Aziz, Abdul (1989) *Poverty Alleviation in India-Programme and Action,* New Delhi: Ashish.

SOC O 732: PROBLEMS OF URBAN INDIA

Objective

This course familiarizes the students with the contemporary urban situation in India, apart from the historical trends and patterns of urbanization in India. Focus shall be on the recently emerging urban problems and the approaches which have been used to tackle them. The students will be exposed to the most pertinent issues and controversies relating to urban population of India, so as to enable them to develop research problems for further specialization in the given area.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

India's Urbanization

Historical account of Urbanization in India:
Trends and Pattern, Features
Urbanism and Urbanization, Over-urbanization
Rural-Urban Migration. Urban Informal Sector, Tertiarization
Mega Cities of India

Unit-II

Urban Basic Services

Definition, Intra and Inter-City variations:
Water Supply, Power, Sanitation and Sewerage, Solid Waste Management, Education, Health, etc.

Environmental Pollution
Cities and Pollution, Causes, Types and Remedies.
Urban Transport and Traffic Management.

Unit-III

Approaches to Urban Management
Approaches:
Public Provision, Privatization and People's Participation,
Community Participation- Strengths and Weaknesses.
Lessons from Empirical Cases

Unit-IV

Urban Poverty in India

Concept of Urban Poverty; Theoretical Explanations- Structural and Cultural,
Economic and non economic indicators.

Culture of Poverty, Critique.
Empirical situation of Urban poverty in India, Housing, Slums, Features of Indian slums and Causes, Women and Child Poverty.

Suggested Readings

1. Bose, Ashish, (1994). *India's Urban Population- 1991 Census Data.* New Delhi, Wheeler Publishing Co. Ltd.
2. Bose, Ashish (1970). *Urbanization in India: An Inventory of Source Materials,* Bombay, Academic Books Ltd.
3. Census of India, every successive Report.
4. Dentler, Robert A., (1977). *Urban Problems, Perspectives and Solutions*. Chicago, Rand, McNally College Publishing Co.
5. D'Souza, Victor S., (1979). "Socio-Cultural Marginality: A Theory of Urban Slums and Poverty in Cities", in *Sociological Bulletin,* Vol. 28, Nos. 1-2.
6. Flanagan, William G. (1990). *Urban Sociology, Images and Structure.* Boston, Allyn and Bacon.
7. Gill, Rajesh (2009). *The Contemporary Indian Urban Society: Ethnicity, Gender and Governance*. New Delhi, Bookwell.
8. Gill, Rajesh 1993. "Urban Poverty in India: Theoretical Understanding and Policy Implications", in *Urban India.* Vol. XIII, July-Dec., No. 2.
9. Gill, Rajesh 1997. "Issues and Perspectives on Urban Poverty: The Indian Experience" in *Urban India,* Vol. XVII, Jan.-June/July-Dec. Nos. 1&2.
10. Misra, R.P. and K. Misra.1998. Million Cities of India. New Delhi, Sustainable Development Foundation.
11. Sovani, N.V. 1966. *Urbanization and Urban India.* Bombay, Asia Publishing House.
12. Tiwari, Vinod K. and Rao, W.P. (eds.) 1986. Indian Cities-Ecological Perspectives. New Delhi, Concept Publishing House.
13. Wratten, Ellen 1995. "What is Urban Poverty? Definitions and Characteristics". In *Environment and Urbanization*. Vol. 7 No.1.

Additional Readings

1. Garber, Judity A. & Turner, R.S. (eds.) 1995. *Gender in Urban Research*. Urban Annual Review, Sage Publications.
2. Gill, Rajesh 2000. "Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization?", in *Sociological Bulletin.* Vol. 49, No. 2, Sept.
3. Gill, Rajesh 1999. "Seventy-Fourth Constitution Amendment and Political Empowerment of Women in Punjab: A Study in Urban Governance", in *Urban India,* XIX(1).
4. Misra, R.P. and Misra, Kamlesh, 1998. *Million Cities of India.* New Delhi, Sustainable Development Foundation.
5. Mohanty, Bidyut (ed.) 1993. *Urbanization in Developing Countries, Basic Services and Community Participation.* New Delhi, Concept Publishing Company.

6. National Institute of Urban Affairs, 1988. *State of India's Urbanization.* New Delhi, NIUA.
7. National Commission on Urbanization 1988, *Report,* Vols. 1&2.
8. Pactone, Michael 1990. *Urban Problems-An Applied Urban Analysis.* London, Routledge.
9. Press, Irwin and Smith, M.F. *Urban Place and Process-Readings in The Anthropology of Cities.*
10. Ramachandran, R. 1989. *Urbanization and Urban Systems in India.* New Delhi, Oxford University Press.
11. Rao, M.S.A. 1974. *Urban Sociology in India, Reader and Source Book.* New Delhi, Orient Longmans Ltd.
12. Spates, James. 1982. *The Sociology of Cities*. New York, St. Martin Press.
13. Wit, J.W. 1996. *Poverty, Policy and Politics in Madras Slums-Dynamics of Survival, Gender and Leadership.* The Hague, Institute of Social Sciences, Development Studies, Sage.

SOC O 832: FAMILY IN CROSS-CULTURAL PERSPECTIVE

Objective

Students' exposure to this course intends to facilitate their comparative understanding of family and gender relations in different societies. Another aim is to make the students aware whether the family is the basic institution in all societies and whether family as an institution is near the point of extinction or restructuring itself and as a consequence many alternative lifestyles to traditional marriage and family living are emerging.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Family and Gender-Relations
In Highly-Developed, Developing and Under-Developed Countries
- Japan, Belgium
- India, Iran, Brazil
- Afghanistan and Ethiopia

Unit-II

Universality of Family

- Family As a Universal Social Institution- Views of Bronislaw Malinowski, George Murdock, Talcott Parsons, Norman W. Bell and Ezra F. Vogel
- Fate of Family among the Blacks in The Islands of West Indies, Parts of Central America and the U.S.A.;
  The Nayars of Central Kerala in India.

Unit-III

Future of Family
- Withering Away Theory
- Indispensability Theory
- Restructuring of Family

Unit-IV

Emerging Alternative Lifestyles
- Singlehood – Never Married
- Cohabitation – Living Together Without Marriage
- Single parent – Male/Female Headed Households
- Group Living – Communes (The Kibbutz of Israel)

Suggested Readings

1. Allen, Katherine (1990) *Single Women/Family Ties*, New Delhi: Sage Publications.
2. Bell Norman W. and Eza F. Vogel (1986) *A Modern Introduction to the Family* (Revised edition), New York: The Free Press.
3. Bender, David L. and Gray E. McCuen (eds.) (1972) *Is Family Obsolete*? Minnesota: Green Heaven Press.
4. Boh Katja and et. al (1990) *Changing Patterns of European Family Life*, New York: Routledge
5. Chakraborty, Krishna (2002) *Family in India*, New Delhi: Rawat Publications.

6. Das Man Singh & Clinton K. Jesser (eds) (1980) *The Family in Latin America,* New Delhi: Vikas Publishing House Pvt. Ltd.
7. Das Man Singh (ed.) (1990) *Family in the Muslim World*, Delhi: M.D. Publications.
8. Hereda, Rudolf C. and Mathas, Edward (1995) *Family in Changing World: Women, Children and Strategies of Intervention*, New Delhi: Indian Social Institute.
9. Leeder, Alaine, (2004) *The Family in Global Perspective*. New Delhi: Sage Publications.
10. Macklin, Eleanord D and Roger H. Rubin (1983) *Contemporary Families and Alternative Life Styles*, New Delhi. Sage Publications.
11. Vardhan Ranjay (1999) Female Headed Households in Patriarchal Society: A Sociological Study, Delhi, Indian Publishers Distributors

Additional Readings

1. Aidala, Angela A. (1989) 'Communes and Changing Family Norms', *Journal of Family Issues,* Vol. 10, No. 3, (Sept), PP 311-338.
2. Allan, Graham (1984) *Family Life: Domestic Roles and Social Organization*, New York: Basil Blackwell.
3. Bharat, Shalini (1984) 'Single-Parent Families- Consequences for Single Parents', *Indian Journal of Social Work*, Vol XLIX, No. 3, PP 227-238.
4. Bumpass, Larry L. James. A. Sweet and Andrew Cherlin (1991) 'The Role of Cohabitation in Declining Rates of Marriage', *Journal of Marriage and Family*, Vol. 53. No. 4, (Nov.), PP 913-927.
5. Uberoi, Patricia (ed.) (1993) *Family, Kinship and Marriage in India*, Delhi: Oxford University Press.
6. Vardhan Ranjay (2008) Single Women: A Study of Spinsters, Delhi, Indian Publishers Distributors

SOC O 931: SOCIOLOGY OF AGING

Objective

Owing to breakdown of traditional values and institutional framework in societies such as India, the aged are facing a number of socio-economic and psycho-medical problems. The worldwide trends indicate that the proportion of aged people in the populations of different societies is ever increasing. This has far reaching implications for the societies across the world. Social scientists are looking at this issue as a matter of serious concern. So, there is an urgent need to study the aged to understand their plight and problems, to study the problems created by increasing aging population as well as to formulate possible interventions for their welfare. This course is an attempt in this direction.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for

internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Aging:
- Biological & Physiological, Social and Psychological Aging
- Myths and Facts about Old Age
- Demographic Dimensions of the Elderly

Unit-II

Sociological Perspectives of Aging

Micro-Perspectives:
- Role Theory (Aging and the Individual),
- Activity Theory,
- Disengagement Theory,

Macro Perspectives:
- Modernization Theory,
- Age Stratification Theory,
- Political Economy Theory

Unit-III

Society, Family and Aging:

- Status of the Aged in the Family-Urban and Rural Settings.
- Neglect and Abuse of Elderly in Family.
- Aged in Different Societies- Tribal, Traditional, and Modern.
- Status and Treatment which they get in Traditional Hindu Society.

Unit-IV

Problems of aged and Rehabilitation:

- Economic, Social, Physical and Psychological Problems.
- Emerging Factors Responsible for Aggravating Problems of the Aged.
- Strategies for Coping with the Problems of the Aged, Social Security Schemes and other Developmental Programmes.

Suggested Readings

1. Bose, A. & Gangrade, K.D. eds. (1988) *Aging in India*, New Delhi: O.U.P.
2. Bhatia, H.S. (1983) *Aging and Society*, Udaipur: Aryan Publishers.
3. Dandekar, Kumudini (1996)*The Elderly in India*, New Delhi: Sage Pub. Pvt. Ltd.
4. Desai, Murli & Siva Raju (2000) *Gerontological Social Work in India: Some issues & Perspectives*, New Delhi: B.R. Pub Corp.
5. Donald, Cowgill (1972) *Aging & Modernization*, New York: Meredith Corp.
6. Sharma, M.L.; and Dak, M.K. (1987) *Aging in India*, Delhi: Ajanta Pub.
7. Wilson, Gail (2000) *Understanding Old Age: Critical and Global Perspectives*, New Delhi, Sage Publications.

Additional Readings

1. Cohen, Lawrence (1999) *No Aging in India: Modernity, Senility and the Family,* New Delhi: O.U.P.
2. Dandekar, Kumudini (1993), 'The Aged, their Problems and Social Interventions in Maharashtra', *Economic and Political Weekly*, Vol. XXVII, No. 23, June 5, pp. 1189-94.
3. Rajan, S. Irudaya, Mishra, V.S. and Sarma, P. Sankara, (1999), *India's Elderly: Burden or Challenge?*, New Delhi, Sage Publications.
4. Sati, P.N. (1988*) Retired and Aged People*, Delhi, Mittal Publications.

SOC O 932: ORGANIZATIONAL STRUCTURE AND DEVELOPMENT

Objective

This course focuses on a) the structural dimensions of organization; b) the phenomena of organizational power and environment; c) the emerging salience of information technology in organizational communication; and d) the processes of organizational change and development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Organizational Structure and Goals:
Structural Dimensions – Complexity, Centralization, Bureaucratization, Professionalization; Goals – Types, Goal Multiplicity and Goal Conflict, Goal Succession and Displacement

Unit-II

Organizational Regime and Environment:
Leadership – Definition, Theories and Styles
Power in Organizations – Authority (Weber)
Power and Compliance (Etzioni)
Environment – Definition and Types

Unit-III

Communication and Information Technology in Organizations:
Communication – Formal and Informal networks
Role of Information Technology (IT) in Modern Organizations

Unit-IV

Planned Change and Organizational Development (OD):
Definition, Nature and Approaches
The Process and Techniques of OD – Systemic and Interpersonal

Suggested Readings

1. Bhatnagar, Subhash (2000) *Information and Communication: Technology in Development*, New Delhi: Sage Publications.
2. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: Oxford University Press.
3. Fiedler, F. E. (1967) *A Theory of Leadership Effectiveness*. N.Y.: McGraw-Hill.
4. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London, Sage.
5. Kaur, K. P. (1993) *The Professional Management in Industrial Organizations*. New Delhi: Deep and Deep.
6. Luthans, F. (2000) *Organizational Behavior*, Boston, Irwin McGraw-Hill.
7. Manuel, C. (1996) *The Rise of Network Society*. London: Blackwell.
8. Marguilies, N. and A. Raja (eds.) (1978) *Conceptual Foundations of Organizational Development*. N.Y.: McGraw-Hill.
9. Melkote, S. (2001) *Communication for Development in the Third World*. New Delhi: Sage.
10. Sabbarwal, S. (1990) *Organizational Approach to Environmental Control*. New Delhi: Ashish Pub.
11. Sharma, R. A. (2000) *Organizational Theory and Behavior* (2nd edition), New Delhi: Tata McGraw-Hill.
12. Singh, N. (2000) *Human Relations and Organizational Behavior*, New Delhi, Deep and Deep.
13. Zrkocrzy, P. and N. Heap (1995) *Information Technology*. N.Y.: Pitman.

Additional Readings

1. Blumberg, R. L. (1987) *Organizations in Contemporary Society*, Englewood: Cliffs, N. J.: Prentice-Hall.
2. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.
3. Gross, E. (1969) "The Definition of Organizational Goals" *British Journal of Sociology*, Vol. 20, (pp 277-294).

4. Harlow, D. N. & J. J. Hall, Richard H. (1972) *Organizations: Structures and Process*, N. Y.: Wiley.
5. Haralambos, M. (1980) *Sociology: Themes and Perspectives*, New Delhi: Oxford University Press.
6. Litterer J. A. (1969) *Organizational Structure and Behavior*, N.Y.: Wiley.
7. Perrow, C. (1961) "The Analysis of Goals in Complex Organizations", *American Journal of Sociology*, Vol. 66, pp 335-341.
8. Sabbarwal, S. (1988) "Approaches to Organizational Structure and Effectiveness", *Sociological Bulletin*, 37 (1 & 2) March-September.
9. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 933: SOCIOLOGY OF DEVIANCE: CONCEPTS AND THEORIES

Objective

This paper aims at sensitizing the students regarding the concept of deviance and its related terms. Students will also be made aware of different explanations of deviance ranging from pathological to interactionist perspectives.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Deviant Behaviour:
Definition, Concept – Relative/Absolute.
Distinction between Deviant Behaviour and Deviant-Role
Pathological Perspective of Deviance – Biological and Psychological theories.

Unit-II

Social Disorganization and Value-Conflict Perspective:
Causes of Social Disorganization
Theories of Social Disorganization:
C.H. Cooley, W.I. Thomas and Florian Znaniechi, W.F. Ogburn.
Theory of Conflict of Values: Richard C. Fuller & Richard R. Myers.

Unit-III

Structural-Functional Perspective:
Theory of Anomie: Emile Durkheim and Robert K. Merton
Theory of Differential Association: Edwin Sutherland and Donald R. Cressey.

Unit-IV

Inter-actionist Perspective:
Theory of Labelling: Edwin M. Lemert and Howard S. Becker Social and Psychological Effects of Labelling for Primary and Secondary Deviance, Social Consequences of Stigma
Impediments to Labelling.

Suggested Readings

1. Aggleton, Peter (1987) *Deviance,* New York: Tavistock Publication.
2. Becker, H. and Aluin Boskoff (eds.) (1989) *Modern Sociological Theory: In Continuity and Change*, New York: Dryden.
3. Downes, David and Rock Paul (1982*) Understanding Deviance: A Guide to the Sociology of Crime and Rule-Breaking,* Oxford Clarendon Press.
4. Edwin H (1980) *The Deviance Process*, New York: D. Van Vost & Co.
5. Kelly Delos H (1979) *Deviant-Behaviour: Readings in the Sociology of Deviance.* New York: Martin's Press
6. Schur, Edwin M (1971) *Labelling Deviant Behaviour: Its Sociological Implications,* New York : Harper & Row Pub.
7. Singh R.G. (1985*) Sociology of Deviance*, New Delhi: Jain Sons Publications.
8. Thio, Alex (1978) *Deviant Behaviour*. London: Houghton Mifflin Co.

Additional Readings

1. Becker, Howard S. (1963) *Outsiders: Studies in the Sociology of Deviance*, Glenco: Free Press.
2. Gibbons, Don C. (1978) *Society, Crime and Criminal Careers* (3rd ed.) New Delhi: Prentice-Hall of India Pvt. Ltd.
3. Gove, Wolter R (ed) (1980) *The Labelling of Deviance* (2nd ed.) London : Sage Publications.
4. Reid Sue Titus (1976) *Crime and Criminology* Illionois: The Dryden Press.
5. Wolfgand, Marvin and E. Franco Ferrachtti (1982) *The Sub-Culture of Violence.* Beverly Hills: Sage Publications.

SOC O 934: SOCIOLOGY OF CRIME

Objective

This course is designed to acquaint the students with concepts and perspectives used to explain the criminal behaviour. Students will be introduced to the eruption of different forms of crime and the significant advances made towards its control and prevention and correctional measures.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Perspectives:
Deviance, Juvenile delinquency and Crime
Legal, Behavioral and Sociological Definitions of Crime
Classical and Positive Schools of Criminology
Biological, Psychological and Sociological Approaches (Conflict, Structural-Functional and Symbolic-Interactionist)

Unit-II

Major Forms of Crime:

Violent Crime: Homicide and Aggravated Assault
Property Offences: Economic and Property Crimes
Public Order Offenses: Crime against Moral and Political Order
Crimes involving Abuse of Power: White Collar and Corporate Crime

Unit-III

Punishment in Relation to Crime:

Theories of Punishment: Retributive, Deterrent and Reformative
Penology in India and Indian Penal Code
Types of Punishment: Capital punishment, transportation, imprisonment, forfeiture of property, fine, whipping

Unit-IV

Correctional Programmes:
Significance and Forms of Correctional Programmes: Prison based, Community based.
Prison based Correction: New Delhi Model of Correction.
Community based Correction: Probation, Parole, After-care and Rehabilitation.

Suggested Readings

1. Agarwal, Rajendra Saran & Sarvesh Kumar (eds.) (1986) *Crimes & Punishment in New Perspective*, Delhi: Mittal Publication.
2. Ahuja, Ram (2000) *Criminology*, Jaipur: Rawat Publications.
3. Bhatnagar, R.R. (1990) *Crimes in India: Problems and Policy*, New Delhi: Ashish Publications.
4. Crow, Iain (2001) *Treatment and Rehabilitation of Offenders,* London: Sage Publications.

5. Lilly, J.Robert., Cullen, Francis .T and Ball, Richard A. (2007). *Criminological Theory: Context and Consequences*, Sage Publications, Thousand Oaks.
6. Prasad, R.S.(2004). Cyber Crime and Introduction, ICFAI Univ, Hederabad.
7. Sharma, Ram Nath (1993) *Crime and Penology: Social Disorganization and Social Problems*, Delhi, Surjeet Publications.
8. Singha, Radhika (1999) *Despotism in Law: Crime and Justice in Early Colonial India*, New Delhi, O.U.P.
9. Sutherland, Edwin H & Donald R. Cressey (1968) *Principles of Criminology,* Bombay, The Times of India Press.
10. Weisburd, Dand & Kip Schlegal (1990) *White-Collar Crime Reconsidered*, Boston: Northeastern University Press.

Additional Readings

1. Devasia, V.V. (1993) *Criminology, Victimology and Corrections*, Delhi: Ashish Publications.
2. Doongaji, Damayanti (1986) *Crime and Punishment in Ancient Hindu Society*, Delhi, Ajanta Publications.
3. Dutta, N.K.(1989) *Origin and Development of Criminal Justice in India*, New Delhi: Deep and Deep Publications.
4. Gill, S.S. (1998*) The Pathology of Corruption*, New Delhi: Harper Collins Publishers.
5. Gilsinan, James F. (1989) *Criminology and Public Policy: An Introduction*, Englewood Cliffs, Prentice Hall.
6. Mathur, Krishan Mohan (1996) *Crime, Human Rights and National Security*, New Delhi: Gyan Publication House.
7. Meier, Robert F. (1988) *Crime and Society*, Boston, Allyn & Bacon.
8. Ministry of Home Affairs (1998) *Crime in India*, New Delhi, Government of India.

SOC O 935/945: DISSERTATION (3rd and 4th Semesters)

SOC O 936: ADVANCED SOCIAL STATISTICS

Objective

The course is aimed at introducing the students with advanced statistical techniques for multivariate analysis of sociological data. In the first two units the students are familiarized with various aspects of simple and multiple regression analysis including coefficient of determination, correction-ratio, point-biserial correction, partial correlation etc. The last two units include discussion on Path analysis and various parametric and non- parametric tests of significance.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** (Theory Portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable electronic calculators and Statistical Tables is permitted for the examination.

Course outline

Unit-I

Linear Regression, Least Squares Method, Estimating the Intercept and Slope of the Linear Regression Model
Standard Error of the Estimate and its Uses, Zero-Order Correlation by Least Squares Method
Coefficient of Determination, Correlation and Causation, Ecological Fallacy of Correlation, Correlation-Ratio, Point Biserial Correlation.

Unit-II

Multiple Regression, Multiple Regression Equations, Multiple Collinearity, Interpretation of Regression Coefficient, Confidence Interval for the Estimate of Multiple Regression, Multiple Correlation, Properties of Multiple Correlation Coefficient, Coefficient of Multiple Determination, First order Partial Correlation.

Unit-III

Path Analysis, Formulation of Recursive, Fully Recursive Path Models, Estimation of Path Coefficients (No numerical questions to be set in the question paper on path analysis)

Parametric tests-One way analysis of variance for means, t-test for means (related samples), z-test for proportions (One Sample and Two Independent Samples)

Unit-IV

Non-Parametric Tests of Significance
Distinction between Parametric and Non-Parametric Tests, Kruskal Wallis One Way Analysis of Variance, Friedman Two–Way Analysis of Variance, Kolmogorov Smirnov Test (Two Independent Samples), Mann-Whitney-U Test, Wilcoxon Matched-Pairs-signed-Ranks Test.

Suggested Readings

1. Alexander Von Eye, Chrisof Schustee (1998) *Regression Analysis for Social Sciences,*USA, Academic Press.
2. Blalock, H.M. (1979) *Social Statistics,*New York, McGraw Hill Book Company.
3. Joseph F. Hair, Rolph E. Anderson Ronald L. Tatham (1987), *Multivariate Data Analysis with Readings*, New York, Macmillan Publishing Company.
4. Kothari C.R. (1984) *Quantitative Techniques*, New Delhi, Vikas Publishing House, Pvt. Ltd.
5. Morris Hamburg (1983) *Statistical Analysis for Decision Making*. San Diego, Harcourt Brace Jovanovich Pubs.
6. Muller John and Karl, F. Schuseller and Herbert, L. Costner (1977), *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.
7. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

Additional Readings

1. Marl Sirkin, R. (1995), *Statistics for the Social Science;* London, Sage Publications.
2. Jane, J., Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*, London, Sage Publications.

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SEMESTER –IV

SOC R 440: PERSPECTIVES ON INDIAN SOCIETY

Objective

This paper aims to acquaint the students with some of the sociological perspectives which have been developed to study the Indian Society. The course aims at giving a chronological view on studies of Indian society. Introducing the students to important Indian Sociologists and their monographs; It further hopes to help the students formulate a link between their theoretical background and examples from the field and to sensitize students about important Indian Social Institutions: Family, Village and Caste, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Indological: G.S. Ghurye, P.N. Prabhu.
Structuralist: Dumont, Louis & Pocock, David, Mckim Marriot.

Unit-II

Structural Functionalist: M.N. Srinivas, S.C. Dube, Yogendra Singh.

Unit-III

Conflict and Subaltern: B.R. Ambedkar, D.P. Mukherji, A.R. Desai.

Unit-IV

Current Issues in Indian Sociology: Indianization/Indegenization, Contextualization

Suggested Readings

1. Ahmad, Imtiaz (1972) 'For a Sociology of India', *Contributions to Indian Sociology*, 6:172-8.
2. Ambedkar, B.R. (1948) *The Untouchables: Who Were They and Why They Became Untouchable*s, Delhi, Amrit Book Company.
3. Atal, Yogesh (2003). *Indian Sociology from Where to Where: Footnotes to the History of the Discipline.* Jaipur, Rawat Publications.
4. Atal, Yogesh (1993). *Understanding Indian Society: Festschrift in Honour of Professor S.C.Dube.* New Delhi, Har-Anand Publications.
5. Bailey, F.G. (1959) 'For a Sociology of India', *Contributions to Indian Sociology,* 3, 88-101.
6. Beteille, Andre (1974) 'Sociology and Ethnosociology', *International Social Science Journal,* 24(4) 703-4.
7. Burghart, R (1983) 'For a Sociology of India: An Intracultural Approach to the Study of Hindu Society', Contributions to Indian Sociology, 17 (2): 275-93.
8. Das, Veena (ed.) (2004). *Handbook of Indian Sociology.* New Delhi, Oxford University Press.
9. Desai, A.R. (1976*) Social Background of Indian Nationalism*, Bombay, Popular Prakashan.
10. Dhanagare, D.N. (1993) *Themes and Perspectives in Indian Sociology.* Jaipur, Rawat Publications.
11. Dube, S.C. (1959) *Indian Villages,* London, Routledge & Kegan Paul Ltd.
12. Dumont, Louis and Pocock, D. (eds.) (1960). *Contibutions to Indian Sociology.* Paris, Monton.
13. Dumont, L. & Pocock (1960) 'For a Sociology of India: A Rejoinder To Dr. Bailey', Contributions to Indian Sociology, 4:82-9.
14. Dumont, Louis (1970) *Home-Hierarchicus: Caste System and its Implications,* Delhi: Vikas Publications.
15. Ghurye, G.S. (1957*) Caste and Class in India*, Bombay, Popular Book Depot.
16. Gill, Rajesh.(2007). Let Sociology be Sociology**,** in *Sociological Bulletin*, Vol. 56, No. 3, Sept.-Dec. 2007, pp. 430-34.
17. Jodhka S.S. (1998) 'From Book View' to 'Field View': Social Anthropological Constructions of the Indian Village', *Oxford Development Studies*, Vol.26 No.3, 1998.
18. Marriot, Mackim (1994) *India Through Hindu Categories*, Delhi: Sage Publication.
19. Mukerjee, Ramakrishna (1979) *Sociology of Indian Sociology,* Bombay, Allied.
20. Mukherji, D.P. (1958) *Diversities*, Delhi Peoples Publishing House.
21. Mukherji, D.P. (1979). *Sociology of Indian Culture.* Jaipur, Rawat Publications.
22. Omvedt, Gail (1994) *Dalits and the Democratic Revolution*. New Delhi, Sage Publications.

23. Oommen, T.K. (1986) *Indian Sociology: Reflections and Interpretations.* Bombay, Popular Prakashan.
24. Patel Sujata (1998), 'The Nostalgia for the Village: M.N. Srinivas and the Making of Indian Social Anthropology', *South Asia,* Vol.XXI, No.1, pp-49-61.
25. Prabhu, P.N. (1954) *Hindu Social Organization*, Bombay, Popular Book Depot.
26. Pramanick, S.N. (1994) *Sociology of G.S. Ghurye: Concerns*, New Delhi, Vistaar Publication.
27. Ram, Nandu (1999), *Beyond Ambedkar*, New Delhi, Har Anand Publishers.
28. Singh, Yogendra (1973) *Modernization of Indian Tradition*, Jaipur, Rawat Publications.
29. Singh, Yogendra (1986) *Indian Sociology: Social Conditioning and Emerging Concerns*, New Delhi, Vistaar Publications.
30. Singh, Yogendra (1984). *Image of Man: Ideology and Theory in Indian Sociology.* Delhi, Chanakya.
31. Srinivas, M.N. (1952*) Religion and Society Among the Coorgs of South India*, London, Asia.
32. Srinivas, M.N. (1970) 'Sociology and Sociologists in India Today', *Sociological Bulletin* 19(1): 1-10.
33. Unnithan, T.K.N., Deva, Indra and Singh, Yogendra (eds.) (1965). *Towards a Sociology of Culture in India: Essays in Honour of Professor D.P.Mukherji.* New Delhi, Prentice Hall.

Additional Readings

1. Madan, T.N. (1977) 'The Dialectic of Tradition and Modernity in the Sociology of D.P. Mukerji', *Sociological Bulletin*, Vol.26 (2) 155-76.
2. Marriot, Mckim (1955) *Village India: Studies in the Little Community*, Chicago, The University of Chicago Press.
3. Oommen, T.K. (2007) *Knowledge and Society: Situating Sociology and Social Anthropology.* New Delhi, Oxford University Press.
4. Srinivas, M.N. (1970) *Social Change in Modern India*, Barkeley, California University Press.
5. Unnithan, T.K. N., Singh, Y. Singhi Narendra and Indra Deva (eds.) (1967) *Sociology for India,* New Delhi, Prentice Hall
6. Srinivas, M.N. (1976) *The Remembered Village*, Delhi, Oxford University Press.
7. Srinivas, M.N. (1980) *Social Structure*, Delhi, Hindustan Publishing Corporation.

SOC O 543: DETERMINANTS AND CONSEQUENCES OF POPULATION GROWTH

Objective

The course mainly focuses to sensitize students about a) the effect of population growth on development processes; b) Differential mortality and fertility patterns in the developed and the developing countries; c) Population distribution patterns in India; and d) the various programmes implemented for regulating population in India.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment. **The paper setter must put note (ii) in the question paper.**

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Relationship between Population, Development, Environment and Society in the context of Population Size, Composition and Distribution of Population

Factors affecting Age, Structure and Sex Compositions; Demographic, Social and Economic implications

Unit-II

Mortality Patterns in Developed and Developing Countries:
General Mortality, Infant and Child Mortality, Morality Differentials, Determinants of Mortality and Cause of deaths. Consequences of Declining Mortality for demographic and social structures

Unit-III

Fertility Patterns and Trends in Developed and Developing Countries, Crude Birth Rates and Total Fertility Rates, Net Reproduction Rate, Theoretical Understanding of the Biosocial, Socio-cultural, Social-psychological and Socio-demographic factors affecting Fertility. Fertility Differentials, Consequences of Fertility Decline for Demographic and Social Structures

Unit-IV

Population Distribution Patterns in India- Regional Level, Rural-Urban, Socio-economic and demographic factors associated with population distribution.
Consequences of Population Redistribution on Demographic and Social Structures.

Regulating Population in India: National Family Welfare Programme
Reproductive and Child Health Programme
Strategies for Implementation and Overall Impact
MTP and PNDT Act- Correcting the Gender Bias.

Suggested Readings

1. Bhende, Asha and Tara Kanitkar (1999), *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, D.J. (1969) *Principles of Demography*, N.Y,John Wiley.
3. Bose, A. (1991) *Demographic Diversity in India*. Delhi, B.R. Publications.
4. Cassen, D. (1978), *India, Population Economy and Society*, London, MacMillan.
5. Ersheng GAO (2003), *Reproductive Health , Gender and Development*, Delhi, B.R.Publishing Corporation.
6. Jain, A.K. and Visaria (eds.) (1988), *Infant Mortality in India. Differentials and Determinants,* Sage Publications.
7. Kaistha, K.C. and Satish Sharma (1998), *Population, Environment and Spatial Mobility,* New Delhi, Gyan Publications.
8. Mahadevan, K. (1989*) Fertility Policies from Asian Countries*, Delhi, Sage.
9. Matras, Juda (1977) *Introduction to Population*, New Jersey, Prentice Hall, Inc.
10. Mitra, Ashok (1978) *India's Population, Aspects of Quality Control*, 2 Vols.
11. MOHFW, GOI, *Cause of Death Statistics* (Annual Issues).
12. *National Family Health Survey, India* (1994) (2000) Bombay, IIPS.
13. *PNDT Act* (1996) GOI.
14. Prasad, Narendra (2001), *Population Growth and Child Labour*, New Delhi, Kanishka Publishers.
15. Premi, M.K. (1991), *India's Population: Heading towards a Billion,* Delhi, B.R. Publications.
16. Retherford, Robert D. & T.K. Roy (2003) *Factors Affecting Sex Selective Abortions in India and 17 Major States*, NFHS Report No.21, Mumbai, IIPS.
17. Sen, Amartya (1982) *Choice, Welfare and Measurement*, Oxford Univ.Press.
18. Sen, Amartya & Jean Dreze (1996) *Indian Development*, Oxford Univ.Press.
19. Srinivas, M.N. (1977) *Culture and Human Fertility in India,* Delhi, Oxford Univ. Press.
20. Singh, K.P. (1986) *Correlates of Fertility Behaviour: A Study of Rural Communities in Punjab and Haryana*, New Delhi, Concept Publishing House, 205p.
21. Sinha, P. N (2001), *Population Growth and Global Stability*, New Delhi, Author's Press.
22. Tandon, Usha (2003). *Population Law: An Instrument for Population*

Stabilization, New Delhi, Deep and Deep Publications Pvt. Ltd.
23. U.N. (1987) *Fertility Behaviour in the Context of Development* (P.S. No. 100).
24. United Nations (1987) *World Population Policies*, Monitoring Report Vol. II

Additional Readings

1. Dyson, T. and Crook, N. (eds.) (1984), *India's Demography: Essays on the Contemporary Population*, New Delhi, South Asian Publishers Pvt. Ltd.
2. D'Souza, V.S. (1984), *Economic Development, Social Structure and Population Growth,* New Delhi, Sage Publications.
3. Finkle, L. Jason and C. Anson McIntesh, (1994), (eds.), *The New Politics of Population: Conflict and Consequences in Family Planning*, New York, The Population Council.
4. Mc Nicoll, Geoffrey and Mead Cain, (1990), *Rural Development and Population: Institutions and Policy*, New York, Oxford University Press (The Population Council, New York).
5. Mehta, S.R. (1997), (ed.), *Poverty, Population and Sustainable Development*, Jaipur, Rawat Publications.
6. Mehta, Rani (2014) Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications, pp 29-168.

SOC O 544/744: SOCIOLOGY OF HUMAN MIGRATION

Objective

The aim of this course is to explore how migration as a social demographic process has a bearing on the processes of urbanization and social integration. It attempts to discuss the need to address the problems associated with large influx of immigrants into cities, within the country and trans-nationally, leading to crises of physical infrastructure and conflict situations. Also, it aims to appreciate the positive consequences of migration in terms of its capacity to enrich various cultures.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of

the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Migration	:	Conventional View and Changing Conception
Migration Data	:	Sources and Problems relating to Measurement.

Unit-II

Major Typologies	:	Spatial, Temporal, Purposive and Stream Criteria.
Broad Trends and Patterns:		At Global Level with special reference to India.

Unit-III

Theoretical Formulations:	Classical, Socio-economic & Developmental (Contributions of Revenstein, Stouffer, Everett Lee, Lewis, Harris and Todaro, Zelinski, Davis and Push-Pull Factor theory).
Determinants of Migration:	Ecological, Demographic, Social, Economic and Political

Unit-IV

Consequences of Migration:	International context – Brain-Drain and Critique: Internal context- Social, Economic and Political
Migration Policy:	Need and Challenges

Suggested Readings

1. Balan, Jorge (ed.), 1981), *Why People Move*, Paris, Unesco Press.
2. Chaudhuri, I.R., (1993), *Migration and Remittances: Inter-Urban and Rural-Urban Linkages*, New Delhi, Sage Publications.
3. Connel, John & Others, (1970), *Migration from Rural Areas: Evidence from Village Studies,* Oxford University Press, Delhi.
4. Dutoit, B.M. and H.I. Safa, (1975), *Migration and Urbanization Models and Adaptive Strategies*, The Hague, Mouton.
5. Findley, Sally, (1982), *Migration Surveys, Methodologies*, A Review of Designs, IUSSP, No.2
6. Hugo, H., (1982), 'Circular Migration in Indonesia', *Population and Development Review*, Vol 8, No. 1, March, pp-59-83.

7. Kaistha, K.C., (1987), 'Migration Patterns in Development Transition of Rural Areas', *Population Geography* (1 & 2), June-December.
8. Kosinski, L.A. & K.K. Mandood Elahi, (1985), *Population Redistribution and Development in South Asia,* Boston, D. Reidel Pub. Co.
9. Kosinski L. and Prothero R. (1974) *People on the Move: Studies on Internal Migration,* London, Methuen.
10. Oberoi, A. S. & H. K.M. Singh, (1982), *Causes and Consequences of Internal Migration: Studies from Indian Punjab*, Delhi, OUP.
11. Oberoi, A.S. & Others, (1989), *Determinants and Consequences of Internal Migration in India: Studies in Bihar, Kerala and Uttar Pradesh*, Delhi, OUP.
12. Bogue, D.J., (1969), Principles of Demography, New York, John Wiley & Sons.
13. Prother, R.M. & Chapman Murray (eds.), 1985, *Circulation in Third World Countries,* London, Routledge & Kegan Paul.
14. Rao, M.S.A., (1986), *Studies in Migration*, Delhi, Manohar.
15. UN (1984) *Population Distribution, Migration and Development. Proceedings of the Expert Group on Population Distribution Migration and Development,* Hammamat (Tunisia) March 21-25, 1983.
16. U.N. (1994) *Population Distribution and Migration* (Particularly Papers by Castals, S. 'Process of Integration of Migrant Communities' and Rogge, I.R. 'Changing Solutions to Refugee Movement'.
17. Weiner, Myron, (1978), *Sons of Soil: Migration and Ethnic Conflict in India*, New Jersey, Princeton University Press.

Additional Readings

1. Brettel, Caroline & James Hollifield, (2000), *Migration Theory: Talking Across Disciplines,*New York, Routledge.
2. Hazari, Bharat R. & Pasquale M., (2001*), Migration, Unemployment and Trade*, Boston, Kluwer Academic Publishers.
3. Indra, Doreen (ed.), (1998*), Engendering Forced Migration: Theory and Practice,* New York, Berghahn Books.
4. Lucassen, Jan & Lucassen, Leo, (1997), *Migration, Migration History, History: Old Paradigms and New Perspectives,* University of Bern Publications, Bern.
5. Manning, Patrick, (2005), *Migration in World History*, London, Cambridge University Press.
6. Sharpe, Pamela, (2001), *Women, Gender and Labour Migration: Historical and Global Perspectives,* New York, Routledge.

SOC O 644: ENVIRONMENTAL CRISIS AND SUSTAINABLE DEVELOPMENT

Objective

The course focuses on the discussion of the environment–society interface keeping the following objectives in view (a) to familiarize the student with the crisis of environmental degradation both at the global and national levels; (b) to focus on the environmental

problems in India; (c) to highlight the role of environmental movements in ecological protection; and (d) to discuss some of the measures necessary for environmental preservation.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development and Environmental Degradation:
Meaning of Environment; Environment and Society;
Development and Environmental Consequences – Global Warming, Pollution, Deforestation, Displacement of People and the Problem of Resettlement, Land Degradation and Wastelands, Danger to Bio Diversity, Perils of Mining and Quarrying, Ecological threat to Agro-systems;
Impact of Development on Tribals;
Ecological Degradation and Women.

Unit-II

Environment Situation in India:
Environmental Problems in India – Extent, Causes and Solutions; Environmental Policy in India.

Unit-III

Environmental Movements:
Role of voluntary organizations and popular participation in environmental protection and preservation; The Chipko Movement, Movements against Narmada Valley and Tehri

Dam projects, Sukhomajri Experiment, Protest against Mining in Doon Valley; Eco-feminism; Public Interest Litigation (PIL) and Judicial Activism.

Unit-IV

Sustainable Development: Towards a Sound Environmental Policy;
Environmental Education; Social Forestry and Afforestation Program; Biogas and Renewable Energy Program; Efficient Water Management Programs; Use of Appropriate Technology.

Suggested Readings

1. Deoria, R.S. et al. (1990) *Man, Development and Environment*. N. Delhi: Ashish Publications.
2. Katyal, J and M. Satake (1989) *Environmental Pollution*. New Delhi: Anmol Pub.
3. Khoshoo, T.N. (1986) *Environmental Priorities in India and Sustainable Development*. New Delhi: Indian Science Congress Association.
4. Mahesh, K and B. Bhattacharya (eds.), (1999) *Judging the Judges*. N. Delhi: Gyan Publications.
5. Mehta, Rani (2014), Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications.
6. Raza, Mehdi (ed.), (1992) *Development and Ecology*. Jaipur: Rawat.
7. Rasure, K.A. (2007) , *Environment and Sustainable Developmen*t , New Delhi, Serial Publications, VOL. I,II,III.
8. Spaargaren G. et al (2000) (ed.), *Environment and Global Modernity*, New Delhi, Sage Publications India Pvt. Ltd.
9. Singh,R.B. (2002) (ed.) *Human Dimensions of Sustainable Development*, New Delhi, Rawat Publications.
10. Sharma, S.L. (1993) "Managing Environmental Crisis – Regulatory vis-à-vis Participatory Approach" in J.L. Rastogi and Bidhi Chand (eds.) *Management and Business Education*. Jaipur: Rawat Publications.
11. Shiva, Vandana, (1988) *Staying Alive – Women, Ecology and Survival in India*. New Delhi: Kali for Women.
12. Singh, Gian (1991) Environmental Deterioration in India – Causes and Control. New Delhi: Agricole.
13. Tewari, K.M. (1989) *Social Forestry in India*. Dehradun: Natraj Publishers.
14. Wilson, D. (ed.) (1984) *The Environmental Crisis*, London: Hinemann.

Additional Readings

1. Bandhu, Desh (ed.), (1981) *Environmental Management*, Dehradun, Natraj Publishers.
2. Bandhu, Desh and N.L. Ramanathan (eds.) (1982) *Education For Environmental Planning and Conservation*, Dehradun, Natraj Publishers.
3. Bharadwaj, H.R. (1997) *Lawyers and Judges*, New Delhi, Konark Pub.
4. Chaudhary, Jayasri R.(2001). *An Introduction to Development and Regional Planning,* New Delhi, Orient Longman.
5. Ehrlich, P. R. et al., (1973) *Human Ecology- Problems and Solutions*, San Francisco, W.H. Freeman and Co.
6. Kothari, Ashish et al. (eds.), (1998) *Communities and Conservation*, New Delhi, Sage Publications.
7. Mehta, Rani (2011) "Sustainable Development in Mauritius: Issues and Implications," New Delhi, Contributions to Indian Social Science, IASSI, Vol. 30, No. 2, April-June.

8. Pawar, S.N. and R.B. Patil (eds.) (1998) *Sociology of Environment*, Jaipur, Rawat
9. Sheth, Pravin (1997) *Environmentalism – Politics, Ecology and Development*, Jaipur, Rawat Publications.

SOC O 645: ENTREPRENEURSHIP AND DEVELOPMENT

Objective

This course is acquainting the students with various theoretical developments in the area of entrepreneurship and their implication for action programs. Accordingly, first two units deal with various theories and development of entrepreneurship in different communities and groups. The other two units deal with the implication of theories for action programs and development of Entrepreneurship Development Program (EDPs) and interaction of entrepreneurs with business environment.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Entrepreneur and Entrepreneurship:
Concept, Functions: Growth of Entrepreneurship with special reference to India
Theories of Entrepreneurship: Max Weber, David McClelland, E. E. Hagen, B. E. Hoselitz and Schumpeter

Unit-II

Entrepreneurship among Social Groups
Business Communities: Samurai Community in Japan, Filipino and Chinese in Philippines; Parsees, Marwaris, Ramgarhias, Ravidasias and Business Communities in South India; Social Groups: Women, Tribals, Scheduled Castes

Unit-III

Development of an Entrepreneur
Implication of Theories for Action Program and Development of Entrepreneurs through Training and Entrepreneurship Development Program (EDPs).

Unit-IV

Entrepreneurship and Environment:
General Environment, Typology of Environment, Role of Business Associations in Controlling the Environment.

Suggested Readings

1. Akhouri, M. M. P. *et al.* (1987) *Trainers' Manual on Developing Entrepreneurial Motivation*, New Delhi: National Institute for Entrepreneurship and Small Business Development.
2. Bansal, C. L. (1993) *Entrepreneurship and Small Business Management*, Delhi, Har Anand Publications.
3. Bhatia, B. S. and Batra, G. S. (2001) *Entrepreneurship and Small Business Management*, New Delhi: Deep and Deep Publications, Pvt. Ltd.
4. Bisht, N. S. *et al.* (1989) *Entrepreneurship: Reflections and Investigations*, Allahabad: Chugh Pub.
5. Guha, A. (1984) "More about Parsi-Seths, their roots, Entrepreneurship and Compradoe Role", *Economic and Political Weekly*, Vol. IX, No.3, June, pp 1660-18.
6. Hagen, E. E. (1962) *On the Theory of Social Change*, Bombay: Vakils, Feff and Simpson.
7. Hoselitz, B. F. (1952) "Entrepreneurship and Economic Growth" *American Journal of Economics and Sociology*, Vol.12 (1).
8. Hoselitz, B. F. (1960) *Sociological Aspects of Economic Growth*, London: Collier- McMillan.
9. Kaur, K. P. (1992) *Professional Management in Industrial Organizations*, New Delhi: Deep & Deep Publications.
10. Kaur, K. P. (1995) "Role of Trade Associations in Entrepreneurial Development", *SEDME*, Vol. XXII, No.3.
11. Kelbagh, Chetana (ed.), (1991) *Women and Development, Women in Enterprise and Profession*, Vol. III, New Delhi: Discovery Publishing House.
12. Kilby, P. (1971) *Entrepreneurship and Economic Development*, N.Y.: Free, Free Press.

13. Kirchhoff B. A. *et al.* (eds.) (1988) *Frontiers of Entrepreneurship Research*, Wellesley: Babson College.
14. Leibenstein, H. (1968) "Entrepreneurship and Development", *American Economic Review*, LVIII (2), May.
15. McClelland, D. C. (1961) *The Achieving Society*, N.Y.: Van Nostrand Co.
16. Pruthi, S. P. S. (1972) *Economic and Managerial Environment in India*, Bombay: Progressive Corp.
17. Sabbarwal, S. (1990) *Organizational Approach to Environment Control*, N. Delhi: Ashish Publications.
18. Sabherwal, Satish (1976) *Mobile Man*, New Delhi: Vikas Publishing House. Pvt. Ltd.
19. Schumpeter, J. A. (1959) *The Theory of Economic Development*, Cambridge: Harvard Univ. Press.
20. Sharma, K. L. & H. Singh (1980) *Entrepreneurial Growth and Development: Programmes in Northern India*, New Delhi: Abhinay Publications.
21. Sharma, K. L. (1981) *Voluntary Business Associations*, Chandigarh: Panjab University.
22. Sharma, K. L. (1988) "Community and Entrepreneurship", *Eastern Anthropologist*, 42 (3).
23. Tandon, B. C. (1975) *Environment and Entrepreneurs*, Allahabad: Chugh Pub.
24. Weber, Max (1947) *Theory of Social and Economic Organization*: tr. by A. R. Henderson and Talcott Parsons (ed.), Oxford: Oxford University Press.

Additional Readings

1. Rathore, B. S. and J. S. Saini (eds.) (2007) *A Handbook of Entrepreneurship*, Panchkula: Aapaga.
2. Hagen, E. E. (1980) *The Economics of Development*, Illinois: Irwin, Inc., Homewood.
3. Schumpeter, J. A. (1939) *Business Cycles: A Theoretical, Historical and Statistical Analysis of Capitalist Process*, London: McGraw Hill.
4. Weber, Max (1965) *The Protest and Ethic and the Spirit of Capitalism*, Tr. by Talcott Parsons, London: Union.
5. Weber, Max (1968) *Economy and Society*, New York: Bedminster Press.

SOC O 743: CITIES, URBAN PLANNING AND DEVELOPMENT

Objective

This is the third course in the specialization of Urban Sociology offered to MA students from second through fourth semesters. It is presumed that by now the students has the basic understanding of the conceptual and theoretical formulations in urban sociology,

with specific relation to India's experience as compared to the Western. In this course the student shall be apprised with the contemporary and emerging conceptual and empirical developments in the area of urban planning and development, especially with an emphasis upon the shift from mere town and physical planning to social planning, decentralization etc. manifested both at global and national agenda.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Urban Planning

Physical and Town Planning, Zoning, Master Plan;
Critique of Conventional Urban Planning;
Concept of Social Planning and its Implications on Urban Planning;
People's Participation in Urban Planning and Development; Decentralization and Democratization in Urban Planning.

Unit-II

Cities and Urban Development

U.N. Conventions on Human Settlements and Global Agenda;
Urban Renewal and Urban Redevelopment;
Sustainable, Humane, Child-Friendly, Eco-Friendly Cities;
From Urban Development to Sustainable Urban Development and its Features;

Unit-III

Urban Planning in India

Critical Appraisal of Slum Rehabilitation Schemes

Critical Appraisal of Urban Poverty Alleviation Programs.
Critical Appraisal of 74th Constitutional Amendment Act and its Salient Features

Unit-IV

Cities and Culture

Cities and Cultural Change (with reference to Georg Simmel, Louis Wirth and C. Fischer)
Cities and Consumerism
Cities and Ethnicity

Suggested Readings

1. Ali, Sabir, (1990), *Slums Within Slums- A Study of Resettlement Colonies in Delhi*, New Delhi, HarAnand and Vikas.
2. Breese, Gerald and Whiteman, Dorothy E, (eds.), (1953)*, An Approach to Urban Planning*, Princeton, Princeton University Press.
3. Castells, Manuel, (1977). *The Urban Question*, London, Edward Arnold Publishers Ltd.
4. Castells, Manuel, (1975), 1968, Is there an Urban Sociology? Reprinted in Urban *Sociology: Critical Essays* (ed.) by C. Pickvance, New York, St. Martin's Press. Pp. 33-59.
5. Flanagan, William, (1993), Contemporary Urban Sociology, Cambridge, Cambridge University Press.
6. Gill, Rajesh, (2009). *The Contemporary Indian Urban Society -Ethnicity, Gender and Governance.* New Delhi, Bookwell Publishers.
7. Gill, Rajesh, (2003)'. Planning Urban Settlements for People: A Social Agenda', in *Urban India,* Vol. XXIII, No. I, Jan.-June 2003.
8. Harvey, D. (1999), "The City in a Globalizing World" (ed.) by Charles Lemerit (2004), *Social Theory: Multicultural and Classical Readings*, U.S.A., Westview Press.
9. Jo Beall (ed.), (1997), *A City for All- Valuing Difference and Working with Diversity*, London, Zed Books Ltd.
10. Lo, Fu Chen and Yeung, Yue-man (eds.),(1998), *Globalization and the World of Large Cities,* Tokyo, United Nations University Press.
11. Miles, S. and Miles, M., (2004). *Consuming Cities.* New York, MacMillan.
12. Report of National Commission on Urbanization, (1988), Vols. 1&2.
13. Sassen, S. (1991). *The Global City*, Princeton, Princeton University Press.

14. Satterthwaite, D. (2007), "When People Live Mostly in the Cities" *The Hindu*, January 18.
15. Simmel, Georg, (1990). 2nd Edition. *The Philosophy of Money,* trans. by T. Bottomore and D. Frisby (ed.) D. Frisby. London, Routledge.
16. Simmel, Georg, (1964). "The Metropolis and Mental Life" in K. Wolff (ed.), *The Sociology of Georg Simmel,* New York, Free Press. (Org. 1905).
17. Uner, Kirdar (ed.), (1997), *Cities Fit For People*, New York, United Nations.
18. Weber, Max, (1958), *The City*, Chicago, Free Press.

Additional Readings

1. Chandoke, Neera, (1991). "The Post Colonial City", *Economic and Political Weekly,* Mumbai, December 14, pp. 2868-2873.
2. Fagence, Michael, (1977), *Citizen Participation in Planning,* Oxford, Pergamon Press.
3. Gill, Rajesh, (1991), *Slums as Urban Villages- A Comparative Study in Two Cities*, Jaipur, Rawat Publications.
4. Mumford, Lewis, (1961). *The City in History.* New York, Harcourt, Brace and World.
5. Sarin, Madhu, 1975*, Planning and the Urban Poor: The Chandigarh Experience*, London, School of Environmental Studies.
6. Saunders, P. 1981*, Social Theory and the Urban Question*, London, Hutchison & Co. Ltd.
7. Short, J.R., 1996, *The Urban Order- An Introduction to Cities, Culture and Power*, Blackwell Publishers.
8. Southall, Adian, 1998, *The City in Time and Space,* Cambridge, Cambridge University Press.

SOC O 843: FAMILY DYNAMICS IN CONTEMPORARY INDIA

Objective

In this course students will be enabled to have a grasp of the changing marriage and family patterns in India. The course will be addressing to the impact of technological and economic factors on family and how family has responded to these by undergoing

changes in its Form, Structure and Functions, which in turn influence the values and role-relations within the family. Students will be further acquainted with the family's failure in coping with the pressures of modern life.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marriage Patterns

- Traditional and Contemporary Patterns from Vedic times to Modern time.
- Changing Patterns of Marriage Alliance.
- Increasing Age at Marriage, its Socio-economic and Cultural Determinants, Regional Variations and Demographic Consequences.

Unit-II

Trends in Family Type

- Regional Variation in Family Type and its Socio-cultural Correlates.
- Joint Family: Its Structural & Functional Aspects, Changing forms of Joint family – Nuclearization.
- Changing Status and Role of the Women and the Aged.

Unit-III

Family Values and Role-Relations

- Familial Values : Familism vs. Individualism.
- Dyadic Relations : Changing Filial (Parent and Child), Fraternal (Siblings-Brother and Sister, Brother and Brother, Sister and Sister), Conjugal (Husband and Wife) and Gender (Men and Women) Relations.

Unit-IV

Family Disintegration

- Marital Maladjustment.
- Factors Responsible for Disintegration of Joint and Nuclear family.
- Desertion and Divorce: their Extent, Causes and Consequences.

Suggested Readings

1. Apte, Usha M. (1978) *The Sacrament of Marriage in Hindu Society*, Delhi : Ajanta Publications.
2. Chakrabortty, Krishna (2002) *Family in India,* New Delhi : Rawat Publications.
3. Kolenda, Pauline (1987*) Regional Differences in Family Structure in India*, Jaipur Rawat Publications.
4. Lal, A.K. (1990*) The Urban Family, A Study of Hindu Social System*, New Delhi: Concept Publishing Company.
5. Madan, T.N. (1989) *Family and Kinship* (2nd Edition), Delhi: Oxford University Press.
6. Mandelbaum, David G. (1970) *Society in India: Continuity and Change* (Vol.1), Bombay: Popular Parkashan.
7. Pandey, Rajendra (1994) *Social Problems of Contemporary India*, (Chapter-12), New Delhi: Ashish Publishing House.
8. Pernau,Maragrit, Ahmed, Imtiaz and Helmut, Redfield (2003) *Family and Gender:Changing Values in Germany and India*, New Delhi: Sage Publications.
9. Pothen S. (1980) *Divorce: Its Causes and Consequences in Hindu Society,* Delhi: Shakti Books.
10. Reddy, M.M. Krishna (1998) *Marriage, Population and Society*, New Delhi: Kanishka Publishers.
11. Shah, A.M. (1998) *The Family in India: Critical Essays*, New Delhi: Orient Longman.
12. Singh, J.P. (2003) 'Nuclearisation of Household and Family in Urban India', *Sociological Bulletin*, Vol.52, No.1, PP: 53-70.
13. Sinha, Raghvir (1993) *Dynamics of Change in the Modern Family*, New Delhi: Concept Publishing Company.

Additional Readings

1. Audinarayana N. & R. Rajasree (1995) 'Cultural Determinants of Age at Marriage', *The Journal of Family Welfare*, Vol. 4, No.1, pp.8-14.
2. Augustin, John S. (1982) *The Indian Family in Transition*, New Delhi: Vikas Publishing House.
3. Basu, Monmayee (2003) *Hindu Women and Marriage Law from Sacrament to Contract,* New Delhi: O.U.P.

4. Chauhan, Abha (2003) 'Kinship Principles and the Patterns of Marriage Alliance: The Meos of Mewat', *Sociological Bulletin*, Vol.52, No.1, pp: 71-90.
5. Goode, William J.(1970) *World Revolution & Family Patterns*, New York: Free Press.
6. Kapoor, Promila (1974) *The Changing Status of Working Women in India*, New Delhi: Vikas Publishing House.
7. Madan, T.N. (1993) 'The Hindu Family and Development', in P. Uberoi (ed.), *Family, Kinship and Marriage*, Delhi: Oxford University Press.
8. Sharma, Bela Rani (1997) *Women: Marriage, Family and Divorce*, Jaipur: Mangal Deep Publication.
9. Sinha, Durganand, Henry and S.R. Rao (1988) *Social Values & Development: Asian Perspective*, New Delhi: Sage Publications.
10. Vatuk, Sylvia (1972) *Kinship and Urbanization: White Collar Migration in North India,* London: University of California Press.

SOC O 844: GENDER AND DEVELOPMENT

Objective

This paper largely focuses on India attempts to establish a link between Development and Gender. It will particularly focus on different perspectives and schemes adopted for promoting Gender and Development. Secondly, it will highlight the biases inherent in most developmental policies which have been detrimental to women. Thirdly, it will look at changes taking place in gender relations particularly in the area of work. The focus will be on women and work; differentials and role conflict in family due to changing equations. Lastly, it will take an overview of indicators of issues related to Discrimination, Exploitation and Oppression.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the

candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

- Gender Equality and Inequality in Productivity and Work
- Issues of Discrimination, Exploitation and Oppression.
- Indicators of Low Status.
- Nature and Problems of Women's work: Self-employment, Labour force participation.
- Family compulsions and other factors affecting gender related choices or priorities of work, Role Conflict Among Women.

Unit-II

Perspectives on Gender and Development

- Welfarist, Developmentalist and Empowerment.
- Empowerment: Paradigms and Paradoxes.
- Changing status of Women in India, Precolonial, Colonial and Post-Colonial.
- Measures to uplift women's status.

Unit-III

Measures to Improve Gender Relations

- Special Schemes and Strategies for Women's Development in Five-Year Plans.
- Voluntary sector and Women's Development.
- Women in Sectoral Development: Education, Health, Agriculture and Industry.

Unit-IV

- Globalisation and Women's Development
- Development Policies- Liberalization and Globalization: their Impact on Women.
- Environment, Development and Gender: Deforestation, Environmental Degradation and Feminization of Poverty.
- Women in Panchayati Raj Institutions and Urban Local Bodies: 73rd and 74th Constitutional Amendments.

Suggested Readings

1. Arya, Sadhna (2000) *Women, Gender Equality and the State*, Delhi: New Deep and Deep Publication.
2. Forbes, Geraldine (1998) *Women in Modern India*, Cambridge University Press.

3. Ghadially, Rehana (1988) *Women in Indian Society*, New Delhi; Sage.
4. Laxmi Devi (1998*) Women and Development*, New Delhi. Anmol Publications.
5. Manchanda, Rita (2001) *Women, War and Peace in South Asia: From Victimhood to Agency,* New Delhi: Sage Publication.
6. Seth, Mira (2001) *Women and Development*, New Delhi: Sage Publications.
7. Suchitra, Anant, Ramani Rao and Kabita Kappor, *Women at Work in India*, Ministry of Labour, GOI.

Additional Readings

1. Aggarwal, Bina (1988) *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi: Kali for Women.
2. Ahooja, Patel, Krishna (1995) *Women and Development*, New Delhi: Ashish Publishing House.
3. Chafeltz, Saltrman, Janet (1999) *Gender Equity–An Integrated Theory of Stability and Change,* New Delhi: Sage Publications.
4. Gulati, Leela (1982) *Profiles in Poverty*. New Delhi, Hindustan Publishing Corporation.
5. Heyser, Noeleen and Sen, Gita (1994) *Gender, Economic Growth and Poverty*, New Delhi: Kali for Women.
6. Krishnaraj Maitraeyi (1988) *Women and Development: The Indian Experience,* New Delhi: Subheda Publications.
7. Kumari, Abhilesha and Sabina Kidwai (1997) *Crossing the Sacred Line, Womens' Search for Political Power,* New Delhi: Orient Longman.
8. Maheshwari, S.R. (2002) *Local Government in India*, (New Delhi: Uppal Book Store).
9. Mazumdar, Vina (1979) *Symbols of Power: Studies on the Political Status of Women in India*, New Delhi: Allied.
10. Myers, Kristen Anderson (1998) *Feminist Foundations–Towards Transforming Sociology*, New Delhi: Sage.
11. Powell, Gang N. (1995) *Handbook of Gender and Work*, New Delhi: Sage Publications.
12. Rajput, Pam and Swarup, Hemlata (1994) *Women and Globalization*, New Delhi: Ashish Publishers.
13. Sangari Kumkum and Uma, Chakravarty (ed.) (1998), *From Myths to Markets,* Shimla, IIAS.
14. Shiva,Vandana (1988) *Staying Alive*, New Delhi: Kali for Women.
15. Staggenborg, Suzanne (1998) *Gender, Family and Social Movements,* New Delhi: Forge Press.
16. Vaid S,K Sangpari (1989) *Recasting Women: Essays in Colonial History*, New Delhi: Kali for Women.
17. Venkatashwara, Sandhya, (1995) *Environment, Development and the Gender Gap*, New Delhi: Sage Publications.

SOC O 941: FUNDAMENTALS OF INDUSTRIAL SOCIOLOGY

Objective

This paper aims to familiarize the students to the nature of industrial sociology highlighting (a) the theories relating to industry, organization and trade unionism; (b) industrialization and its impact on social institutions; (c) the issues related to industrial conflict with special emphasis on the role of trade unions; and (d) to assess the impact of globalization on industry.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit- I

Industrial Sociology: Nature and scope
Theories– Marx (Alienation), Taylor (Scientific Management), Mayo (Human Relations), Marcuse (One Dimensional Man)
Types of Productive Systems– Cottage, Guild, Domestic, Factory
Industrial Roles – Worker, Foreman, Line and Staff, Specialist.

Unit- II

Industrialization and Social Institutions:
Impact on Family, Education and Stratification; Work and Leisure

Unit- III

Industrial Conflict and Employee Participation:
Trade Unions: Managerial and Conflict Theories; Strike as a Bargaining Tool

Unit- IV

Globalization and Industry:
Fordism vs. Flexible Specialization
Globalization and Industrial Relations
Emergence of Multi National Companies (MNCs)
Technological Revolution and Impact on Industry and Society

Suggested Readings

1. Bain, G. S. (ed.) (1984) *Industrial Relations in Britain*. London: Basil Blackwell.
2. Dosi, G. (1984) *Technological Change and Industrial Transformation*. N.Y.: St. Martins Press.
3. Eldridge, John *et al.* (1991) *Industrial Sociology and Economic Crisis*. N.Y.: Harvester Wheatsheaf.
4. Jorgenson, D. W. and K. J. Stroh (1999) "Information Technology and Growth", *American Economic Review,* 89 (109-115).
5. Kalleberg, A. L. and I. Berg (1987) *Work and Industry,* N.Y. Plennum.
6. Moses, J. A. (1990) *Trade Union Theory from Marx to Walesa*, N.Y.: Berg.
7. Parker, Stanley (1976) *The Sociology of Leisure*. London: George Affer & Union Ud.
8. Pojek, Chris (1985) *Capitalism and Leisure Theory*, London: Tavistock.
9. Schnieder, E. V. (1972) *Industrial Sociology*, London: Harper and Row.
10. Southall R. (ed.) (1988) *Trade Unions and the New Industrialization of the Third World*, London: Zed Books.
11. Watson, K. T. (1995) *Sociology, Work and Industry*. London: Routledge and Kegan Paul.

Additional Readings

1. Burns, Tom (Ed) (1969) *Industrial Man*, Harmondsworth: Penguin Books.
2. Caplow, Theodore (1965) *The Sociology of Work*, N. Y.: McGraw Hill Book Co., Chapter 6.
3. Faunce, William, A. (ed) (1967) *Readings in Industrial Sociology*, Appleton: Century, Crof & Gisbel.
4. Miller, D. and W. H. Form (1964) *Industrial Sociology*, Second Ed. London: Harper and Row.
5. Parker, S. R. *et al.* (1977) *The Sociology of Industry*, London: George Allen and Unwin.
6. Pascual, Gisbert (1972) *Fundamentals of Industrial Sociology*, New Delhi: Tata McGraw Hill.
7. Ramaswamy E. A. & Uma Ramaswamy (1981) *Industry and Labour: An Introduction*, Delhi: Oxford University Press.

SOC O 942: SOCIAL PROBLEMS

Objective

Over the years, India's social problems have become difficult, intricate and hydra-headed, pervading the entire social, economic, cultural and demographic structure. Keeping this in view, this paper aims at introducing the students to the concept and various perspectives on social problems. It also aims at providing detailed knowledge about specific social problems ranging from socio-cultural problems to socio-demographic problems.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept and Sociological Perspectives:

- Definition
- How and When an Issue becomes a Social Problem
- Subjective Definition and Objective Condition
- Stages in its Development
- Assumptions of Social Problems.

Perspectives on Social Problems**:**

- Functional Perspective
- Conflict Perspective
- Symbolic Interactionist Perspective

Unit-II

Socio-Cultural Problems:
- Corruption
- Sex-Deviation
- Dowry

Unit-III

Socio-Economic and Structural Problems
- Poverty
- Unemployment
- Drug-addiction

Unit-IV

Socio-Demographic Problems:
- Child Labour
- Problems of the Elderly
- Physically Challenged

Suggested Readings

1. Aziz, Abdul (1994) Poverty, *Alleviation in India: Policies and Programes,* New Delhi: Ashish Publication.
2. Bajpai, P.K. (1992) *Youth, Education and Unemployment*, New Delhi: Ashish Pub.House.
3. Ghosh S.K. (1996) *The World of Prostitutes*, A.P.H. Publication Corporation.
4. Julian Joseph (1989) *Social Problems (6th edition)* New Jersey: Prentice Hall.
5. Kapoor.T. (1985) *Drug Epidemic among Indian Youth*, New Delhi: Mittal Pub.
6. Mani, D. Ram, (1988) *The Physically-Handicapped in India,* New Delhi: Shilpa Publications.
7. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
8. Murickan J. (ed.) (1989) *Poverty in India: Challenges & Responses*, Bangalore: Xavier Board Publication.
9. *Sharma, Vijay (1994) Protection* to Women in Matrimonial Home, New Delhi: Deep and Deep Publication.
10. Singh, Amarnath (1990) *Child Labour in India*, New Delhi: Shipra Publication.
11. Singhvi L.M (1977) *Unemployment Problems in India*, New Delhi: National Publishing House.
12. Srivastava C.P. (2001) *Corruption: India's Enemy within*, Delhi: MacMillan.
13. Teja M. K. (1993) Dowry: *A Study in Attitudes and Practices,* New Delhi: Inter India Publication.

Additional Readings

1. Sharma, R.K. (1998), *Social Problems and Welfare*, Atlantic Publishers: New Delhi.
2. Ahuja, Ram (2003), *Social Problems in India,* Rawat Publications: Jaipur.
3. Wilson, Gial (2000), Understanding Old Age: Critical and Global Perspective: New Delhi: Sage Publications.

SOC O 943: POLITICAL SOCIOLOGY

Objective

The course expects to familiarize the students with the relationship between the state and social structure. How power is central to any social institution is another important focus of the course. After the theoretical introduction, the course would finally focus on the Indian state and civil society including the various institutions. What role did the social movements play in the democratization of the Indian society would also be the part of the discussion.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Meaning and Scope of Political Sociology;
Concepts of State, Civil Society, Power, Social Caste, Varna, Structure and Nation.

Unit-II

Socio-economic Conditions and the Nature of Political Institutions:
Authoritarian State, Theocratic State, Military State, Democratic State

Unit-III

Sociology of Power, Nature and Form of Power; Power and Authority
Theories of Political Power; Elite, Structural-Functional and Marxist

Unit-IV

Thematic Concerns in Indian Political Sociology:
Varna, Caste and Kinship
State and Civil Society, State and Social Structure, State and Nation-building
Movements of Resistance.

Suggested Readings

1. Barrington Moore, Jr. (1966) *Social Bases of Dictatorship and Democracy,* Boston: Beacon Press.
2. Bottomore, T. (1979) *Political Sociology*, Ambika, Bombay: B.I.
3. Chakraborty, Salyabrata (Eds.). (2005*). Political Sociology*, Macmillan, New Delhi.
4. Kothari, R. (1970*) Caste in Indian Politics*, New Delhi: Orient Longman.
5. Lukes, Steven (1974*) Power: A Radical View*, Hong Kong, Macmillan.
6. Motwani, K., Saksena, RD. (Eds.) (2009). Sociology of Politics: Theoretical Perspectives, New Delhi, Cosmo.
7. Phadnis, U. and Ganguly, R. (2001) *Ethnicity and Nation Building in South Asia*, New Delhi: Sage.
8. Pizzorni, A. (ed) (1971) *Political Sociology*: Penguin
9. Rathod, P.B., (2005). *Fundamentals of Political Sociology,* Jaipur, ABD Publication.
10. Verma, R.P., (2001). *Dynamics of Political Sociology*, New Delhi, Rajat.

Additional Readings

1. Quigley, D. (1999) *Interpretation of Caste*, Delhi: Oxford.
2. Martin, Roderick (1977*) The Sociology of Power*, New Delhi, London, Routledge and Kegan Paul.
3. Munek, R. (2002) *Globalization and Labour*, Delhi: Madhyam Brs.

SOC O 944: SOCIOLOGY OF MARGINALIZED COMMUNITIES

Objective

The course aims at sensitizing the students to the significance of the sociological study of Dalits, tribals and other sub-alteran groups. The focus would be on communities/groups suffering poverty, deprivation and discrimination.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marginalization and its Socio-economic Indices:
Poverty, Relative Isolation, Deprivation, Exploitation, Discrimination, Educational Backwardness; Inequality
A Critical View of the Caste System
Untouchability: Historical and Social Roots.

Unit-II

The Social Structure and Culture of marginalized communities:
The Status of SCs, STs, Nomadic Castes and Tribes and De-Notified Tribes; Problems; Social Mobility; Development; Identity Formation.

Unit-III

Perspectives on Marginalization:
Role of Ideology in Marginalization

The views of Jotirao Phule, Periyar, Babasaheb Ambedkar, Ram Manohar Lohiya.

Unit-IV

(a) Social Movements among Marginalized Communities: Nature and Dynamics; Perspectives on Social Movements: Protest, Reform: Role of Christian Missionaries in Social Reform Movements; Role of NGOs.

(b) Marginalization and Affirmative Action: Constitutional Provisions; Implementation; Impact on Marginalized Communities; Limitations; Critical Review.

Suggested Readings

1. Beteille, Andre (1981) *Backward Classes and the New Social Order*, Delhi: Oxford University Press.
2. Beteille, Andre (1992) *The Backward Classes in Contemporary India,* Delhi: Oxford University Press.
3. Charsley, S.R. and G.K. Karanth (1998) (eds.) *Challenging Untouchability*, Delhi: Sage Publications.
4. Chako, M. Priyaram. (2005). *Tribal Communities and Social Change*, New Delhi: Sage Publications.
5. Chaudhuri, S.N. (1988) *Changing Status of Depressed Castes in Contemporary India*, Delhi: Daya Publishing House.
6. Gupta, Dipankar (1991) *Social Stratification,* New Delhi: Oxford University Press.
7. Jogdand, P.G. (2000) *New Economic Policy and Dalits*, Jaipur: Rawat Publications.
8. Narayan, Badri. (2006). *Women Heroes and Dalit Asssertion In North India: Cultural Identity and Politics,* New Delhi: Sage Publications.
9. Singha, Roy (2004), (ed.), *Social Development and the Empowerment of Marginalized Groups. Perspectives and Strategies* New Delhi: Sage Publications.
10. Srikrishna, S., Samudrala and Anil Kumar. (Eds.). (2007). *Dalits and Human Rights*, New Delhi: Serial Publication.

Additional Readings

1. Gore, M.S. (1993) *The Social Context of an Ideology: The Social and Political Thoughts of Babasaheb Ambedkar*, New Delhi : Sage.
2. Jogdand P.C. (1991) *Dalit Movement in Maharastra*, New Delhi: Kanak Publications, 1991.
3. Mahajan, Gurpreet (1998) *Democracy, Difference and Social Justice*, New Delhi: Oxford University Press.
4. Mehta, Rani (2011), "Globalization and Human Rights of the Marginalised Groups: A Sociological Perspective," Amritsar, Guru Nanak Journal of Sociology, GNDU, Vol. 32, Nos. 1&2.
5. Omvedt, Gail (1995): *Dalit Visions: The Anti-Caste Movement and the Construction of an Indian Identity,* New Delhi: Orient Longman.
6. Omvedt, Gail (1999) *Dalits and the Democratic Revolution*, New Delhi: Sage.
7. Oommen, T.K. (1990*) Protest and Change: Studies in Social Movements*, Delhi: Sage Publications.
8. Robb, Peter (1993) (eds.*) Dalit Movements and the Meeting of labour in India*, Delhi: Sage Publications.

9. Shah, Ghansham (1990) *Social Movements in India: a Review of Literature*, Delhi: Sage Publications.
10. Shah, Ghansham (2002*), Dalit Identity and Politics*, New Delhi: Sage.
11. Singh, K.S. (1988) *The Scheduled Castes,* Delhi: Anthropological Survey of India.
12. Singh K.S. (1995) *The Scheduled Tribes*, Delhi: Oxford University Press.
13. Zelliot, Eleanor (1995) *From Untouchable to Dalit: Essays on the Ambedkar Movement,* New Delhi: Manohar.

SOC O 945/935: DISSERTATION (IIIrd and IVth Semesters)

SOC O 946: MEDIA AND CULTURE

Objective

This course has been designed to provide a sociological perspective on the role of popular culture and mass media in modern society. It focuses on the phenomena of communication, mass media, popular culture, especially in the Indian context, and their relationship with the globalization process since all these together play a major role in shaping the society.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Communication: Definition, Process, Functions and Types
Approaches to Communication
Factors influencing Communication
Mass Media – Print, Electronic and Photographic.

Unit-II

Culture: Popular Culture, Mass Culture, Folk Culture, Elite Culture; Mass Media and Culture; Theoretical Perspectives on Popular Culture and the Media.

Unit-III

Globalization, Mass Media and Culture – Diffusion of global culture through the mass media and its impact on society – social values, youth, family, consumerism, food, clothes, entertainment; Dissemination of awareness by media on social issues – violence, stereotypes, gender issues.

Unit-IV

Media and the Indian society – Satellite television and its impact; Commercialization of culture; Media and social policy.

Suggested Readings

1. Axford, B. and R. Huggins (2001) *New Media and Politics*, London, Sage Publications.
2. Curren, J. and M. Gurevitch (1991) (eds.), *Mass Media and Society*, London, Edward Arnold.
3. Dwyer, R. and C. Pinney (2001) (eds.*), Pleasure and the Nation: The History, Politics and Consumption of Public Culture in India,* New Delhi, Oxford University Press.
4. French, D. and Michael Richard (2000) (eds.), *Television in Contemporary Asia*, London, Sage.
5. Garnham, Nicholas, (2000*) Emancipation: the Media and Modernity,* New Delhi, Oxford University Press.
6. Gunaratne, S. (2000) (ed.), *Handbook of the Media in Asia*, London, Sage.
7. Mitra, A. (1993) *Television and Popular Culture in India,* New Delhi, Sage Publications.
8. Page, D and W. Crawley (2001) *Satellites over South Asia*, London, Sage Publications.

9. Preston, P. (2001) *Reshaping Communications,* Cambridge, Cambridge University Press.
10. Real, M.R. (1996) Exploring Media Culture: A Guide, New Delhi, Sage.
11. Singhal, A. and E.M. Rogers (2000) *India's Communication Revolution*, New Delhi, Sage Publications.

Additional Readings

1. Chakravarty, Sunita S. (2000) *National Identity in Indian Popular Cinema 1947-87*, New Delhi, Oxford University Press.
2. Croteau, David and W. Hoynes (1997) *Media/Society: Industries, Images and Audiences*, London, Pine Forge Press.
3. Johnson, K. (2000) *Television and Social Change in Rural India*, London, Sage.
4. Mankekar, P. (2000) *Screening Culture, Viewing Politics: Television, Womanhood and Nation in Modern India*, New Delhi, Oxford University Press.
5. Gupta, Nilanjana (1998) *Switching Channels: Ideologies of Television in India,* New Delhi, Oxford University Press.
6. Melkote, S.R. and H.L. Steeves (2001) *Communication for Development in the Third World: Theory and Practice for Empowerment*, London, Sage Publications.

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PANJABUNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI FOR

POSTGRADUATE DIPLOMA

IN

COMPUTER APPLICATIONS

FOR

EXAMINATIONS 2016 – 2017
(SEMESTER SYSTEM)

--:O:-

Outline of the Syllabi and Courses for Post Graduate Diploma in Computer Applications for Examination – 2016 - 2017 (Semester System).

FIRST YEAR (SEMESTER –I)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/ Weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-1101	Computer Fundamentals	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1102	Computer Programming using C	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1103	DataBase Management System	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1104	Data Communications and Networks	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-1105	Lab1 (Based on PGD-1101 & PGD-1102) **(PGD – 1001)**	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-1106	Lab2 (Based on PGD-1103)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
TOTAL PERIODS =42					**TOTAL MARKS = 450**			

FIRST YEAR (SEMESTER –II)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-2101	Object Oriented Concepts Using JAVA	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2102	Web Technologies	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2103	Software Engineering	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2104	Computer Based Accounting	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-2105	Lab3 (Practical based on PGD-2101)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-2106	Lab4 (Practical based on PGD-2102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-2107	**Project Work :** Project will involve Development of Business Application / Web Site	**0**	**0**	**6**	**0**	**--**	**100**	**--**
TOTAL PERIODS =48					**TOTAL MARKS = 550**			

Note: Pass Marks 40% marks in Theory, Internal Assessment, and Practical separately.
50% marks for Project Work.
50% marks in Aggregate to qualify the examinations.

SEMESTER -I

Paper Title : COMPUTER FUNDAMENTALS

Paper Code : PGD-1101 Max. Marks : 60 Time : 3 Hrs.
Course Duration: 60 Lectures
Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
   ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation Input/Output devices

.

SECTION – B

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting; Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
   Comparison of main features of DOS, LINUX and Windows Operating Systems.

SECTION – C

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.

Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
Clipart: Using clip art, Creating Word Art
Mail merge: Creating merged envelops, creating merged mailing labels

SECTION – D

7. **Spreadsheet Software:**
Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. **Presentation Software**:
Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References :

1.	Basandra, S.K.	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K.	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M	Computers Today by McGraw Hill, New York
5.	Rajaraman, V	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Noroton, P.	Complete guide to LINUX, Techmedia

Paper Title: COMPUTER PROGRAMMING Using C

Paper Code : PGD-1102 Max. Marks : 60 Time : 3 Hrs.
Course Duration: 60 Lectures of one hour each.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes**: automatic, external, static, register
5. **Preprocessor**: #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

SECTION - B

6. **Functions**: library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions
8. **Pointer**s: Definition, Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers, array of pointers

SECTION - C

9. **Strings:** Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
10. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures
11. **Unions**: Declaring a Union, Accessing elements of a type union.

SECTION – D

12. **Console Input/Output:** Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
13. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File.

References:		
1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series.N.D. TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications,
4.	Salaria, R. S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper Title: DATABASE MANAGEMENT SYSTEM

Paper Code : PGD -1103 **Max. Marks : 60** **Time : 3 Hrs.**
Course Duration: 60 Lectures

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION - A

1. **Data Base Concept:** Data Base Vs File Oriented Approach, Basic DBMS terminology, Data Independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantages and Disadvantages of DBMS. Distributed Databases, Structure and Design of Distributed Databases.

2. **Data Base Design:** Introduction to Data Models, Entity Relationship Model, Entities, Attributes, E-R Diagrams, Conceptual Design of a relational data base model.

SECTION – B

3. **Relational Model:** Storage organization for Relations, Relational Algebra, Relational Calculus, Functional dependencies, multivalued dependencies, Candidate Key and Primary Key in a Relation, Foreign Keys, Normalization - Introduction, 1NF, Partial Dependencies, 2N, data Anomalies in 2NF Relations, Transitive Dependencies 3NF

3. **Database Security:** Database Security and Integrity: Data security risks, Password-related threats, Protecting the data within the database- database privileges, system privileges and object privileges, granting and revoking privileges and Roles. Concurrency: locking techniques for concurrency control.
   Recovery: Causes of failures, recovery from failures, Log based recovery, checkpoints

SECTION - C

4. **Understanding SQL-1:** Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Functions: Character Functions, Date Functions, Group Functions, Ordering the result of a Query Aggregate Functions, Grouping the Result of a Query.

SECTION - D

5. **Understanding SQL-II:** Definition and Advantages of Views, Creating and Altering Views, Using Views, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries, Define Transaction, COMMIT and ROLLBACK,

References:		
1.	Desai, B.C.	An Introduction to Database Systems, Galgotia Pub. New Delhi
2.	Date, C. J.	Database Systems Vol. I & II, Narosa Publ., New Delhi (Indian student ed.)
3.	Henry F. Korth, Abraham,	Database System Concepts, McGraw Hill Inc., New York International ed
4.	Mukhi, Vijay	Mastering Oracle, BPB Publication, NewDelhi
5.	James T. Perry	Understanding ORACLE, BPB Publications
6.	O'Reilly	Oracle PL/SQL Programming, Shroff Publications Mumbai
7.	Rowski, Bob	Oracle Client server Computing, BPB publications

Paper Title: DATA COMMUNICATIONS AND NETWORKS.

Paper Code : PGD -1104 **Max. Marks : 60** **Time : 3 Hrs.**
Course Duration: 60 Lectures
Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

1. **Introduction to Computer networks and applications:** Network Structure and Architecture, Network Hardware and Software (protocol hierarchies, design issues for layers, interfaces and services: connection oriented and connection less), Network structure and architecture-point to point, multicast, broadcast, Classification of networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) , LAN topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). Network Connecting Devices: Repeaters, Hubs, Bridges, Routers, Gateways and Switches, Network Reference models: OSI model, TCP / IP model. Comparison between OSI and TCP/IP.

SECTION – B

2. **Introduction to Data Communication**: Analog Signal, Digital Signal, Analog vs Digital Communication; Band Width Limitation, Data rate of a channel; Physical Layer: Transmission media: Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, Telephone system, modems. Modulation techniques: AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM

SECTION – C

3. **The Data Link Layer:** Design Issues, Error Detection and Correction: Nature of errors, Parity Check, CRC, Hamming Code, Elementary Data Link Protocols: Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sliding windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.

SECTION – D

4. **The Network Layer:** Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast, Hierarchical Routing), Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket); Internetworking: tunneling, Internet Routing, fragmentation.

References :

1.	Tanenbaum, Andrew S.	Computer Networks, PHI.
2.	Behrouz A. Forouzan	Data Communication & Networking, TMH
3.	Stalling William Maxwell	Data and Computer Communication, Macmillan International edition.
4.	McGoven, Tom	Data Communication Concepts& Applications", (Prentice Hall)

Title : Lab1(Based on PGD- 1101 and PGD-1102)

Paper Code : PGD-PR-1105 **Max. Marks : 60** **Time : 4 Hrs.**

This laboratory course will be based on PGD- 1101 and PGD- 1102

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title : Lab2(Based on PGD -1103)

Paper Code : PGD-PR-1106 **Max. Marks : 60** **Time : 4 Hrs.**

This laboratory course will be based on PGD- 1103.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation

SEMESTER -II

Paper Title: Object Oriented Concepts Using JAVA

Paper Code : PGD-2101 Max. Marks : 60 Time : 3 Hrs.
Course Duration: 60 Lectures of one hour each.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION - A

1. **OOPs concepts**: Basic Concepts of Object-Oriented Programming (Objects and Classes, Data abstraction and encapsulation, Inheritance, Polymorphism, Dynamic binding, Message communication), difference between procedure oriented and object oriented approach, Benefits of OOP's; Applications of OOP's, Object-Oriented languages.

2. **Object oriented programming with JAVA**: Byte code, Java virtual machine, Java Development Kit, java tokens, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, method overloading, static members

SECTION – B

3. **Inheritance:** Defining a subclass, subclass constructor, multilevel inheritance, Hirerchical inheritance. Overriding methods, Final variables, methods, and classes, Abstract Methods and Classes.

4. **Visibility Control**: Public access, friendly access, protected access, private access, private protected access.

5. **Arrays:** One dimensional array, declaration, creation and initialization of arrays, Array length, Two dimensional array

SECTION – C

6. **Strings**: String arrays, String methods, StringBuffer class

7. **Interfaces:** Defining interfaces, Extending Interfaces, Implementing Interfaces.Accessing Interface variables

8. **Packages:** Java API packages, Defining a package, Creating and Accessing packages, Adding class to a package, Hiding Classes.

9. **Multithreaded Programming**: Creating Thread, Extending the Thread class, Stopping and Blocking a Thread, Life cycle of a Thread.

SECTION – D

10. **Errors and Exception Handling**: Fundamentals, error types, exception types, using Try and catch, finally statement, Built–in exceptions.

11. **Applet Programming**: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets

References:		
1.	Balaguruswamy, E.	Fundamentals of Java
2.	Daniel Dang	An Introduction to Java Programming, PHI, New Delhi
3.	Deitel & Dietel	JAVA, How to Program, Pearson Education Asia
4.	Liang	An Introduction to Java Programming PHI

Paper Title: WEB Technologies

Paper Code : PGD-2102 Max. Marks : 60 Time : 3 Hrs.
Course Duration: 60 Lectures of one hour each.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

1. **Introduction to HTML/DHTML:** Brief history of HTML, Building blocks of HTML, lists, links, images, image map, tables, frames, forms

2. **Introduction to cascading style sheets (CSS):** Introduction to Style Sheets, Types of style Sheets-Inline, embedded and external style sheets.

SECTION – B

3. **Fundamentals of Javascript:** Features, tokens, data types, variables, operations, control constructs, strings, arrays, functions, Document Object Model, event handling. Applications related to client side form validation.

4. **Javascript Objects**: Core language objects, The String Object, The Math Object, and The Date Object; User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects

SECTION – C

5. **Introduction to PHP:** Embedding PHP code in a Web Page, Basic Syntax, Defining variable and constant, PHP Data types, Operators and Expressions

6. **Control Structures:** Making Decisions, Doing Repetitive task with looping, File inclusion statements.

7. **Functions**: Defining a function, Call by value and Call by reference, recursive function, Library functions

8. **String**s: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function.

SECTION – D

9. **Arrays:** Anatomy of an Array, Creating index based and Associative array, Accessing array Element, Looping with associative array using each() and foreach(),

Some useful Library function: current(), next(), prev(), reset(), end(). **Working with Forms:** Super global variables, super global array, Importing and accessing user input, Combine HTML and PHP code.

10. **Working with files and Directories**: Opening, closing, Coping, renaming and deleting a file, working with directories, File Uploading & Downloading

References:		
1.	Phillips	Using HTML, PHI
2.	Bayross, Ivan	HTMLl,DHTML, Javascript by BPB
3.	Wanger & Wyke	Java Script Unleased, Techmedia, New Delhi.
4.	Steve Suehring	PHP6 and MYSQL Bible, Wiley India edition
5.	Steven Holzner	PHP:The complete Reference, Tata McGraw Hill
6	Kelvin Tetroi	Programming PHP

Paper Title: Software Engineering
Paper Code : PGD -2103 **Max. Marks : 60** **Time : 3 Hrs.**
Course Duration: 60 Lectures

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.

All questions carry equal marks unless specified

SECTION-A

1. **Software Engineering Fundamentals**: Characteristics, Components, Applications, principles of software engineering, skills of software engineer.

2. **Software Process Models**: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, win Win Spiral Model

Section B

3. **Software Project Management**: Software Project management Plan(SPMP), Project scheduling Techniques- Work Breakdown Structure(WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM)

4. **Software Project Estimation and risk Management**: Problem-based estimation, Process based estimation, Cost Estimation Model- COCOMO Model, Software Risks, software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS

Section C

5. **Software Design**: Software Design Process, Design Failures and Remedies

6. **Structured Analysis and Design tools:** Structured Analysis and Structured Design (SASD)-Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary(DD), Entity-Relationship diagram(ERD)

Section D

7. **Software Testing**: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing

8. **Software Quality and Maintenance**: Software quality attributes, Factors affecting Software Quality, Aims of Software Maintenance, Types of Software Maintenance, Software Maintenance Costs.

References :

1.	Fairley	Software Engineering Concepts, McGraw Hill
2.	Lewis, T.G	Software Engineering, McGraw Hill.
3.	Meyers, G.	The Art of Software Testing, Wiley-Inter-Science
4.	Hibbard, P.G.	Constructing Quality Software, North Holland Publication
5.	Shere, Kenneth	Software Engineering & Management, Prentice Hall
6.	Deutsch, Willis	Software Quality Engineering : A Total Technical and Management Approach, Prentice Hall
7.	Dough Bell, Ian Murrey and John Pugh	Software Engineering : A Programming Approach, Prentice Hall
8.	Pressman	Software Engineering, Tata McGraw Hill
9.	Ghazzi, Carlo	Fundamentals of Software Engineering, PHI

Paper Title : COMPUTER BASED ACCOUNTING

Paper Code : PGD-2104 Max. Marks : 60 Time : 3 Hrs.
Course Duration : 60 Lectures of one hour each.

Note:

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

SECTION – A

Accounting: Principles, concepts and conventions, double entry system of accounting, introduction of basic books of accounts of sole proprietary concern, control accounts for debtors and creditors, closing of books of accounts and preparation of trial balance.

Final Accounts: Trading, profit and loss accounts and balance sheet of sole proprietary concern with normal closing entries.

SECTION – B

Introduction to Manufacturing Account, final accounts of partnership firms, limited company.

Introduction to Computerized Financial Accounting, coding logic and codes rquired,master files, Transaction files, Introduction to documents used data collection, processing of different files, outputs obtained

SECTION – C

Introduction to Computerized Inventory Control, types of inventory and associated documents, Inventory reports-nature and types, Inventory Control : ABC and Ageing analysis, Methods of Stock validation : LIFO, FIFO, actual bases, Interfacing Inventory with Financial Accounting, Purchasing Sub-Systems, Sales Order processing.

SECTION – D

Introduction to Computerized Payroll & Invoicing Applications, Exposure to Structure, Processing and Reports, Interfacing these applications to financial Accounting.

Use of Accounting package Tally: Introduction to Tally, Groups, Ledgers, Vouchers, Orders, Cost Centers and Categories, Stock, Reports in Tally

References:	
Kellock, J., 1972	Elements of Accounting, Heinemann 1st ed., London
Rockley, L.E., 1970	Finance for the Non-Accountant 2nd. Edition, London : Business Book.
Levy and Sarnat, 1991	Principle of Financial Management, Prentice-Hall, International, PHI.
Arnold, 1984	Financial Accounting, Prentice-Hall, International (Paperback Edition).
Horngren and Sundem, 2010	Introduction to FinancialAccounting, Prentice-Hall International (Paperback Ediion) N.D: PHI
Murthy, U.S.	Management Finance, 2nd. Edition, Vakils Fefers & Simons Ltd
Van Home, James, C., 2004	Financial Management & Policy, Prentice Inc
Pandey, I.M., 1979	Financial Management, Vikas Publication, 6th Rev. ed., N. Delhi

Paper Title: Lab3 (Based on PGD- 2101)

Paper Code: PGD-PR- 2105 **Max. Marks: 60** **Time: 4 Hrs.**

This laboratory course will be based on PGD -2101.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Lab4 (Based on PGD- 2102)

Paper Code: PGD-PR- 2106 **Max. Marks: 60** **Time: 4 Hrs.**

This laboratory course will be based on **PGD- 2102**

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Project Work.

Paper Code: PGD-2107 **Max. Marks: 100**

Major Project on any database application using any database development tool is to be developed/ Development of a Web Site using Database connectivity

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PANJAB UNIVERSITY, CHANDIGARH

(Estted. under the Panjab University Act VII of 1947- enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

POSTGRADUATE DIPLOMA

IN

MASS COMMUNICATION

(SEMESTER SYSTEM)

EXAMINATIONS, 2016-17

PANJAB UNIVERSITY, CHANDIGARH

Outlines of tests, syllabi and courses of reading for Post-Graduate Diploma in Mass Communication (Semester System) for the examination 2016-17.

SEMESTER I

NOTE: **There will be four theory papers each carrying 100 marks in each semester. One practical assignment of 50 marks is compulsory in each semester.**

PGDMC	101	Introduction to Mass Communication
PGDMC	102	Print Media
PGDMC	103	Electronic Media
PGDMC	104	Advertising and Public Relations
PGDMC	105	Practical Assignments

SEMESTER II

PGDMC	106	Introduction to Mass Communication
PGDMC	107	Print Media
PGDMC	108	Electronic Media
PGDMC	109	Advertising and Public Relations
PGDMC	110	Practical Assignments

NOTE: The assignments are required to be submitted in the portfolio 20 days before the commencement of the theory exams as mentioned in the Academic Calendar. No assignment will be accepted thereafter and the candidates' defaulter in this regard will not be issue the roll numbers for the theory papers.

Post-Graduate Diploma in Mass Communication

FIRST SEMESTER

PGDMC 101: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Communication: Meaning & Definition of communication; Functions of communication; Modern & Classical.

Unit -II

- Process & elements of communication; Forms of communication – Intrapersonal, Interpersonal, Group (public, crowd, small & large group); mass communications importance & characteristics.

Unit – III

- Theories & Models of Mass Communication: Meaning & Definition; Models: S-R,
- Shannon & Weaver, Laswell formula, Osgood & Schramm.

Unit - IV

- Two – step flow; Diffusion of Innovations; four rings of defences

ESSENTIAL READINGS:

1. Everett M. Rogers, (1976), *Communication and Development*. Beverly Hills, Sage Publications.
2. E.S. Herman & Noam Chomsky, (1994), *Manufacturing Consent*, Vintage.
3. Berelson, Bernard & Janowitz, Morris (ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York.
4. Carwright, Dorwin & Zander, Alvin (ed.), (1968), *Group Dynamics Tavistock*, London.
5. McQuail, Denis, (1994), *Mass Communication Theory,* SAGE, London.
6. McQuail, Denis (ed.), (1976), *Sociology of Mass Communication*. Penguin, London.

7. Rogers, Evertt M. (ed), (1982), Communication & Development. SAGE, Beverly Hills.
8. Sage, (1981 onwards), *Mass Communication Year Books*. SAGE, Beverly Hills.
9. Schramm, Wilbur, (1975), *Men, Messages & Media*. Harper & Row, New York.
10. Schramm, Wilbur (ed.), (1963), *Mass Communication*. University of Illinois Press, Illinois.
11. Schramm, Wilbur (ed.), (1955), The Process and Effects of Mass Communication, University of Illinois Press, Urban.
12. Schramm, Wilbur, (1957), *Responsibility in Mass Communication*. Harper & Row, New York.
13. Wood, Ronald N., (1983), *Mass Media & the Individual,* West Publishing Co., Minnesota.

ADDITIONAL READINGS:

1. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
2. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.,
3. Keval J. Kumar, Jaico, (1995), Mass Communications in India, Publishing House.
4. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
5. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
6. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
7. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

PGDMC 102: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing and editing. To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. To help the students to understand the finer aspects of reporting for print media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

News	:	Definition, Concept, Elements, Values, Sources, Making and Maintaining sources, Structure – 5 Ws and IH, Inverted Pyramid Pattern, Different Types and styles of lead writing.

Unit –II

Principles of Reporting	:	Role and Responsibilities of Reporting staff, Concept of Beats.

Unit – III

Interviews	:	Types, purposes, techniques, preparation, skills.
Writing	:	News analysis, Features, Articles, Editorials.

Unit- IV

Subbing & Editing	:	Significance and Principles; Subbing Symbols; Brief introduction to DTP.

ESSENTIAL READINGS:

1. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
2. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D.
3. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D.
4. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey.
5. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D.
6. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D.
7. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
8. Barns, Margarita, (1940), Indian Press, George Allen & Unwin, London.
9. Basu, Durgada, (1982), The Law of the Press in India, Prentice-Hall, New Delhi.
10. Cheney, William, (1955), Freedom of the Press, Harcourt-Brace, New York.
11. Eliott, Deni (ed.), (1986), Responsible Journalism, Sage Beverly Hills.
12. Herd, Harold, (1976), The March of Journalism, Greenwood Press, Connecticut.
13. Karkhanis, Sharad, (1981), Indian Politics & Role of the Press, Vikas Publishers, New Delhi.

ADDITIONAL READINGS:

1. Wray, Cheryl Sloan, (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group.
2. Hay and Vicky, (1991), *The Essential Feature: Writing for Newspapers and Magazines*, Columbia University Press.
3. Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books.
4. Harrington, Walt. Ed, (1997), *Intimate Journalism: The Art and Craft of Reporting Everyday Life*, Sage Publications, Sage Publications, N.Y.
5. Metzler, Ken, (1996), *Creative Interviewing: The Writer's Guide to Gathering Information by Asking Questions*, Allyn and Bacon Inc.

PGDMC 103: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes;

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

RADIO

Brief History of Radio in India

Characteristics of Radio

Radio as Mass Medium : Role, reach and future.

All India Radio : Organizational structure.

Unit – II

Different types of Radio Programmes : Interviews, talks, discussion, radio-features.

Unit-III

TELEVISION

Brief History of Television in India

Characteristics of Television

Television as a Mass Medium : Role, reach and future.

Doordarshan : Organizational Structure.

Unit -IV

Different types of TV programmes : Interviews, discussions, TV documentary.

ESSENTIAL READINGS:

1. Govt. of India, (1966), *Radio and Television: Report of the Committee of Broadcasting and Information.*

2. Govt. of India, (1978), *Akash Bharti (Report of The Working Group of Autonomy for Akashvani & Doordarshan)* 2 Volumes. Publications Division, Min. of 1 & B.

3. Govt. of India, (1985), *An Indian Personality for Television: (Report of The Working Group On Software for Doordarshan)* Min I & B.

4. Govt. of India, (1968), *Radio and Television (Report of The Committee on Broadcasting and Information),* Publications Division, Min. of I & B.

5. Barnouw, Erik, (1978), *The Sponsor*, Oxford University Press, New York.

6. Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice*, Routledge, New York.

7. Shrivastava, K.M., (1989), *Radio and TV Journalism*, Sterling Publishers, New Delhi.

8. Cohler, David Keith, (1985), *Broadcast Journalism*, Prentice-Hall, New Jersey.

9. Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*, Rajat Publications, New Delhi.

10. Fedler, Fred, bender, John R., Davenport, Huanda, Drager, Michael W., (2005), *Reporting for the Media*, Oxford University Press, New York.

11. Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi.

ADDITIONAL READINGS:

1. Cohen, Akilia A, (1987), *The Television News Interview*, SAGE, New Delhi.

2. Caywood, Clark L., (2004), *The Handbook of Strategic Public Relations and Integrated Communications*, Tata McGraw Hill, New York.

3. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications, Tata McGraw Hill, New York.

4. Shrivastava, K.M, (2005), *Broadcast Journalism in the 21st century New Dawn Press Group*, New Delhi.

PGDMC 104: ADVERTISING AND PUBLIC RELATIONS Marks = 100

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Definition, scope and concept of Advertising
- Advertising in marketing – mix; concept of IMC
- Major types of Advertising : Classified; classified display; display
- Carrier and Non – carrier media of advertising

Unit -II

- Advertising Media: Newspaper, Magazines, Radio, TV, Internet, Outdoor, Transit, Direct Mail, P-O-P; characteristics of individual media and their advertising features.

Unit – III

- PR: Definition and Role.
- PR vis-à-vis Publicity, propaganda, advertising, PR in Marketing Mix, Brief introduction to Integrated Marketing Communication.
- Organisation; different types of organisation; Importance of Communication within organisation, different types of channels of communications.

Unit - IV

- Publics in PR: Internal & External & their importance
- Code of Ethics in PR

ESSENTIAL READINGS:

1. David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson.
2. David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman.
3. Subroto Sengupta, (1990), *Positioning,* New Delhi, Tata-Mcgraw Hill.
4. Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.
5. J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books.
6. Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School.
7. Dorothy Cohen, (1972), *Advertising.* NY, Wiley.
8. Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956.
9. Fraser P. Seital, (1984), The Practice of Public Relations. 2nd ed., Columbus Bell & Howell Co.

ADDITIONAL READINGS:

1. John Lee, (1968), Diplomatic. Persuaders, N.Y. Wiley.
2. Black, Marwin & Harlow, Rex, (1985), Practical Public Relations. Harper & Bros.; New York.
3. Black, Sam, (1978), Practical Public Relations Pitman, London.
4. Black, Sam, (1972), Role of Public Relations in Management. Pitman, London.
5. Bowman, Pat & Ellis, Nigel (ed.), (1985), Handbook of Public Relations. George Harrap & Co., Ltd., London.

PGDMC-105 Practical Assignments Marks : 50

S. NO.	ASSIGNMENTS	NOS.	MARKS
1.	News Stories – Covering major events in your areas	4	8
2.	Interviews of prominent persons	2	8
3.	Translation of News Story: English to Hindi/Punjabi	2	8
4.	Translation of News Story: Hindi/Punjabi to English	2	8
5.	Review of any radio programme (current affairs/news bulletin/ interview based programme/feature/talk shows/ song-based programme etc.)	1	4
6.	Press Releases	2	6
7.	Dummy of two pages of a Newspaper	1	8
	TOTAL		**50**

Post-Graduate Diploma in Mass Communication

SECOND SEMESTER

PGDMC 106: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Theories of Mass Communication

Unit-I

- Agenda –setting; Uses & gratification.

Unit-II

- Characteristics of various media of mass communication: Print, Electronic, Traditional.

Unit-III

- Media Systems: Authoritarian theory; Libertarian theory; Social – Responsibility Theory

Unit -IV

- Totalitarian theory; Development Media Hypothesis, Democratic – Participant Media Hypothesis.

Course of reading is as same as in the paper in Semester -I

PGDMC 107: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing, editing and design; To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. The paper is also design to familiarize students with various laws pertaining to the media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

Editorial department set - up	:	Criteria for judging news copy. Organizational structure of the editorial department of a newspaper.
News room organization	:	Functions of News Editor, Chief Sub – Editor and Sub – Editor

Unit – II

Headline	:	Mechanics of headline writing; typographical patterns; purposes; kinds of headlines; Dummy; page – make – up.
Photo – editing	:	Selection; editing and cropping of pictures; placement of photographs. Writing captions.

Unit - III

Role & Responsibilities of Journalists	:	Code of ethics for journalists (Press Council of India).

Unit – IV

Press Laws	:	Copyright Act, Law of Defamation, Contempt of Court, Official Secrets Act, Right to Information Act. Contempt of Legislature, Law of Obscenity.

Course of reading is as same as in the paper in Semester -I

PGDMC 108: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes; To equip the students with the skill to camera shot composition, camera movements and basic steps of program production.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Organisational structure of NSD in Dordarshan & AIR.
- Characteristics of Radio & TV.
- Structure and preparation of a Television Bulletin (gathering, condensing, compiling and presenting TV news).
- Basics principles of writing news for Radio & TV
- News packages.

Unit – II

- Basics of TV script, Writing, Different types of scripts (Narrative Style, split page, camera script)
- Above & below the line function in TV production.

Unit – III

- Basic camera shots, camera movements, competition & transitions.

Unit – IV

- Basics of Programmes Editing: Linear and Non-Linear Editing.
- Basic process of programme production: Pre-production, production, post-production.

Course of reading is as same as in the paper in Semester -I

PGDMC 109: ADVERTISING AND PUBLIC RELATIONS **Marks = 100**

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Advertising Copy Writing: Definition; principles; do's & don'ts; U.S.P.; AIDA formula.
- Advertising layout and Design: Design vocabulary & Design principles; and stages of layout.

Unit-II

- Advertising Agency: Structure and Functions
- Advertising Campaign: Brief Introduction.
- Code of Ethics of Advertising in India.

Unit – III

- PR tools: House Journals; pamphlets; brochures; Newsletter; bill boards; press conferences, Cable TV, Exhibitions; internet, mobile.

Unit - IV

- Brief introduction to PR process; Fact Finding & Feedback, Planning & programming, communication & action, evaluation.

Course of reading is as same as in the paper in Semester -I

PGMC- 110: PRACTICAL ASSIGNMENTS **Marks: 50**

S. NO.	ASSIGNMENTS	NOS.	MARKS
1.	Photo caption Writing	1	4
2.	Feature Writing	1	6
3.	Script writing for radio news of five minutes	1	8
4.	Script writing for TV news of five minutes	1	8
5.	Write a story board of a half minute TV commercial	1	4
6.	Print Advertisements Analysis		
	a) Classified	2	4
	b) Display Classified	2	4
	c) Display	2	4
7.	Brochure	2	8
	TOTAL		**50**

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 – enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT AND COMMERCE

SYLLABI

FOR

B.Com. (General & Hons.)
(Semester System)
For the Examinations 2017-2018

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SCHEME OF B.Com COURSE (General and Hons.)

Semester – I

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 101 A **BCM 101 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 102	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 103	**INTERDISCIPLINARY** PSYCHOLOGY FOR MANAGERS	100	5	1
BCM 104	BUSINESS ECONOMICS-I	100	5	1
BCM 105	PRINCIPLES OF FINANCIAL ACOUNTING**	100	5	1
BCM 106	COMMERCIAL LAWS	100	5	1
BCM 107	PRINCIPLES AND PRACTICES OF MANAGEMENT	100	5	1

Semester – II

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 201 A **BCM 201 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 202	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 203	**INTERDISCIPLINARY** E-COMMERCE	100	5	1
BCM 204	BUSINESS ECONOMICS-II	100	5	1
BCM 205	CORPORATE ACOUNTING**	100	5	1
BCM 206	BUSINESS LAWS	100	5	1
BCM 207	HUMAN RESOURCE MANAGEMENT	100	5	1
	ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE*	100+50		

Semester – III

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 301	**INTERDISCIPLINARY** ISSUES IN INDIAN COMMERCE	100	5	1
BCM 302	COST ACCOUNTING**	100	5	1
BCM 303	COMPANY LAW	100	5	
BCM 304	BUSINESS MATHEMATICS AND STATISTICS **	100	5	1
BCM 305	BANKING AND INSURANCE	100	5	1
BCM 306	GOODS AND SERVICES TAX (GST)**	100	5	1

Semester-IV

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 401	**INTERDISCIPLINARY** SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	100	5	1
BCM 402	ADVANCED ACCOUNTING**	100	5	1
BCM 403	AUDITING AND SECRETARIAL PRACTICE	100	5	1
BCM 404	COST MANAGEMENT**	100	5	1
BCM 405	MARKETING MANAGEMENT	100	5	1
BCM 406	QUANTITATIVE TECHNIQUES AND METHODS**	100	5	1

Semester-V

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T)Per Week***
BCM 501	INCOME TAX LAW**	100	5	1
BCM 502	MANAGEMENT ACCOUNTING**	100	5	1
BCM 503	INDIAN ECONOMY	100	5	1
BCM 504	PRODUCTION AND OPERATION MANAGEMENT	100	5	1
BCM 505	ENTREPRENEURSHIP AND SMALL BUSINESS	100	5	1
BCM 506	FINANCIAL MARKETS AND SERVICES	100	5	1

Semester-VI

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 601	DIRECT TAX LAWS**	100	5	1
BCM 602	FINANCIAL MANAGEMENT	100	5	1
BCM 603	ISSUES IN FINANCIAL REPORTING	100	5	1
BCM 604	SOCIAL AND BUSINESS ETHICS	100	5	1
BCM 605	OPERATIONAL RESEARCH**	100	5	1
BCM 606	SECTORAL ASPECTS OF INDIAN ECONOMY	100	5	1

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./BBA 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/ they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

** the strength of B.Com. unit shall be 70. There will be tutorials only in the papers which have been highlighted with asterisk**.

***Each unit of B.com. will be divided into 3-groups for the purpose of Tutorials.

Scheme of Examination

B.Com. Honours

A student can pursue Honours course in B.Com. by taking up one paper each in four semesters beginning with 3rd semester in any one of the following four streams. Option of any stream once exercised cannot be changed subsequently.

1. Accounting & Finance

1. **BCH 307:** Accounting Theory and Reporting Practices	3rd Semester
2. **BCH 407:** Contemporary Issues in Accounting	4th Semester
3. **BCH 507:**Strategic Financial Management	5th Semester
4. **BCH607:**Investment Management	6th Semester

2. Economics

1. **BCH 308:** Development Economics	3rd Semester
2. **BCH 408:** Industrial Economics	4th Semester
3. **BCH 508:** Money and Banking	5th Semester
4. **BCH 608:** International Economics	6th Semester

3. Management Studies

1. **BCH 309:** Advertising & Brand Management	3rd Semester
2. **BCH 409:** Consumer Behaviour	4th Semester
3. **BCH 509:** Compensation Management	5th Semester
4. **BCH 609:** Training & Development	6th Semester

4. Banking

1. **BCH 310:** Bank Management	3rd Semester
2. **BCH 410:** Bank Legislation	4th Semester
3. **BCH 510:** Electronic Banking and Risk Management	5th Semester
4. **BCH 610:** Bank Marketing	6th Semester

SYLLABI FOR B.COM FOR THE EXAMINATION OF 2017-18 ONWARDS

Note :

1. Examination in each subject for B.Com will be of 3 hours duration.
2. There will be no objective type questions.
3. Students are required to have the knowledge of the developments in the subject up to 6 months before the examination.
4. Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University/College to the examinees.
5. Tutorials classes will be held as notified in the Scheme of Examination for the session 2014-15 and 2015 onwards.
6. The following categories of the students shall be entitled to take the option of History and Culture of Punjab in lieu of Punjabi as compulsory subject:
   (a) Students who have not studied Punjabi up to Class 10^{th}.
   (b) Wards of defence personnel and Central government employee/employees, who are transferable on all India basis.
   (c) Foreigners.
7. 20% marks in each paper will be internal assessment based on the following parameters:
   a. Mid-Semester Test : 50%
   b. Academic Activity : 30%
      (Seminar, Project &Assignments)
   c. Attendance : 20%

INSTRUCTIONS FOR THE PAPER SETTERS

Note : The question paper of each subject covering the entire course shall be divided into three sections :

Section A (20 marks)
This section will have 6 short answer questions from the entire syllabus. Students are required to attempt 4 questions from this section. Each question will carry 5 marks; the total weightage being 20 marks.

Section B (30 marks)
This section will consist of essay type/numerical questions from Unit I of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Section C (30 marks)
This section will consist of essay type/numerical questions from Unit II of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Important Note : In all numerical papers the paper setter is required to set numerical questions as follows:

Section A :	Four numerical questions out of six questions.
Section B and C:	At least two numerical questions out of four questions.

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

SEMESTER-I

BCM101 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Essay Writing on National and International Problems.	10 marks
3.	Translation of Business Advertisement from English to Punjabi	05 marks
4.	Correct-Incorrect words	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi,
   Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 1 to 6
2. List of words of Business Vocabulary attached (A to H)

Themes and Units:

1.	Two questions from the book **Galiey Chikkarh Door Ghar** (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2×4=08 marks
3.	Essay (1 out of 4) (National and International Problems)	10 marks
4.	Translation of Business Advertisement from English to Punjabi	05 marks
5.	Correct-Incorrect words (5 words out of 8)	05 marks
6.	Business Vocabulary (5 words out of 8)	05 marks

phHekwH Gkr gfjbk

;w;No gfjbk

Business Vocabulary

1.	Acceptance	**gtkBrh, ;thfesh**
2.	Access	**gju**
3.	Account	**byk**
4.	Accountant	**bykeko**
5.	Account Book	**tjh yksk**
6.	Acknowledgement	**gju o;hd**
7.	Advance	**gôrh**
8.	Alternative Cost	**ftebgh bkrs**
9.	Amalgamation	**;fwôoD**
10.	Amortization of Debts	**eof÷nK dk feôs tko Grskb**
11.	Amortization of fixed Assets	**nub ;gsh dh feôs tko gosh**
12.	Annuity	**tkofôeh**
13.	Anticipated Prices	**nBwkfBs ehwsK**
14.	Arbitration	**;kb;h, ftubrh**
15.	Assessed Tax	**fBoXkos eo**
16.	Assets	**;gsh**
17.	Assets and Liabilities	**bDdkohnK ns dDdkohnK**
18.	Authorized Capital	**nfXekfos gih**
19.	Audit	**byk gVskb**
20.	Audit Staff	**byk gVskb nwbk**
21.	Average	**n;s**
22.	Average Productivity	**n;s Tsgkdesk**
23.	Average Income	**n;s nkwdB**
24.	Back Log	**fgSbk pekfJnk**
25.	Balance Sheet	**ôô ;koDh**
26.	Bankrupt	**fdtkbhnk**
27.	Barter	**t;s tNKdok**
28.	Beneficial	**bkGdkfJe**
29.	Bilateral Agreement	**d fXoh ;wMsk**
30.	Bill of Exchange	**jvh**
31.	Bond	**foDFgso**
32.	Book Value	**feskph wb**
33.	Book Keeping	**tjh yksk**
34.	Break-Even Point	**;wkB fpd**
35.	Breach of Trust	**nwkBs ftu fõnkBs**
36.	Broker	**dbkb**

37.	Capital Account	gihrs yksk
38.	Capital Expenditure	gih og you
39.	Capital Formation	gih fBowkD
40.	Capital Investment	gih fBtô
41.	Capital Gains	gih og bkG
42.	Capital Goods	gih og t;sK
43.	Cash Account	oeV yksk
44.	Cash Balance	Bed pekfJnk
45.	Cash Book	oeV tjh
46.	Census	iBrDBk
47.	Circulating Capital	wkoehN ftu bZrh gih
48.	Commerce	ekwo;, tDi, tgko
49.	Commercial Capital	tDih gih
50.	Commodity	TgGrsk t;s
51.	Company	egBh
52.	Competition	gsh:rsk
53.	Corporation	fBrw
54.	Cost Account	bkrs byk
55.	Cost of Production	TsgkdB dh bkrs
56.	Current Account	ukb yksk
57.	Current Liabilities	ubs dDdkohnK
58.	Debenture	foD gZso
59.	Debt Management	foDFgpX
60.	deduct	eNsh
61.	Deferred Payment	;Efrs Grskb
62.	Deflation	wZdok ft;chsh
63.	Demand for payment	ndkfJrh bJh wr
64.	Demonstration Effect	gdoôBh gGkt
65.	Depreciation	wZb xNkJh
66.	Depression	nkofEe wdk
67.	Devaluation	eo;h dk ntwbD
68.	Discount Rate	eNsh do
69.	Disinvestment	ftfBtô
70.	Dividend	bkGFnô
71.	Distribution	ftsoD
72.	Documentary proof	d;skt÷h ;ps
73.	Double Entry	djok fJdoki
74.	Draftsman	Beôk Bth;
75.	Economic Indicator	nkofEe ;ue

76.	Entrepreneur	**T[dwh**
77.	Excise Duty	**Tsgk dB eo**
78.	Export Tax	**fBo:ks eo**
79.	Expenditure	**you**
80.	Fair Trade	**Tfus tgko**
81.	Finance	**ft[s**
82.	Finance affairs	**ft[sh wkwb**
83.	Financial Penalty	**ft[sh dv**
84.	Fine Paper	**T[sw j[vh**
85.	Firm	**cow**
86.	Firm Offer	**g[eh gôeô**
87.	Fiscal Policy	**ft[sh Bhsh**
88.	Fiscal Year	**ft[sh ;kb**
89.	Fixed Capital	**;EkJh g[ih**
90.	Fixed Costs	**;EkJh you**
91.	Floatation	**eo÷k ukb[eoBk**
92.	Foreign Exchange	**ft dôh w[dok**
93.	Fringe Benefits	**Tgob[bkG**
94.	Glut	**Gowko**
95.	Goods Account	**wkb byk**
96.	Gross Profit	**e[b bkG**
97.	Hidden Tax	**b[gs eo**
98.	Hoarding	**÷yhokpk÷h**
99.	Holding Company	**fB:soe egBh**
100.	Human Capital	**wB[yh g[ih**

BCM101 B HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. and Das, :A Social, Cultural and Economic History of India, Vol. II, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

BCM 102: ENGLISH AND BUSINESS COMMUNICATION SKILLS

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens,** ed., K.A. Kalia (Oxford University Press), The relevant sections, however, are as follows:

I.	The Model Millionaire	: *Oscar Wilde*
II.	The Gift of the Magi	: *O. Henry*
III.	The Judgement-seat of Vikramaditya	: *Sister Nivedita*
IV.	Fur	: *Saki*
V.	A. Marriage Proposal	: *Anton Chekhov*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end. Unit II shall consist of the following sub-units:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: Letters of all kinds, tender notices, auction notices, public notices; memos and advertisements relating to sales/marketing.

Practical Work: To impart the skills of Personal Interview and public speaking like Declamation and Debate.

Practical Work:

There will be viva-voce examination of 10 marks which will include Debate, Declamation and Personal Interview.

Note : *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 Marks
Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, be based upon the prescribed text **Ten Mighty Pens.**	10 Marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q. 3.	It shall consist of an Unseen Passage for Comprehension (not more than 300 words), with minimum five questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 Marks
Q. 4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 Marks
Section II *(Based upon Unit II)*		
Q. 5.	This question shall test a students' ability to write business letter of various kinds (in not more than 250 words). There will be Internal Choice in the question.	10 Marks
Q. 6.	This question shall be on Memos, Tender Notices/Auction Notices/Public Notices/ Advertisements.(have to attempt four of 5 marks each)	20 Marks 5x4=20
Q.7.	Two short questions to test the students' understanding of various aspects of business communication.	10 Marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *Textbook of Business Communication,* Anjali Kalkar, R.B. Suryawanshi, Amlanjyoti Sengupta,, Hyderbad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM103: PSYCHOLOGY FOR MANAGERS

Objective: The objective of the paper is to provide broad understanding about basic concepts and techniques of human behaviour to the students.

UNIT- I

Introduction: Concepts, Definitions; Need and Importance of Organisational Behaviour for Managers, Contributing Disciplines of OB. Nature and Scope, Organisational Behaviour Models.

Individual Behaviour: Introduction and Meaning, Factors Affecting Individual Behaviour, Models of Individual Behaviour

Personality: Meaning, Characteristics, Determinants and Theories of Personality

Perception: Nature & Importance, Perception Process, Perceptual Selectivity, Perceptual Organization, Perpetual Errors and Distortions.

Attitudes and Values: Components, Sources and Measurement of Attitudes. Concept, Sources and Types of Values.

UNIT II:

Motivation: Meaning and Importance of Motivation, Theories of Motivation, Morale.

Inter Personal Behaviour and Transactional Analysis (TA).

Leadership: Definition, Importance, Leadership Styles, Models and Theories of Leadership .

Stress Management: Concept, Sources of Stress, Work Stressors, Consequences, Prevention and Management of Stress.

Conflict Management: Traditional vis-a-vis Modern View of Conflict, Types and Causes of Conflict, Conflict Resolution.

Reference books:

1. Robbins, Stephens P., Organisational Behaviour
2. French, W and C. Bell, Organisational Development
3. Davis, Keith, Human Behaviour at Work: Organisational Behaviour
4. Luthans, Fred, Organisational Behaviour
5. Harold Weihrich, Koontz, Essentials of Management
6. Robbins, Stephens P., Organisational Behaviour Concepts, controversies and Applications.

BCM 104: BUSINESS ECONOMICS-I

Objective: To study the basic concepts of microeconomics relevant for Business decision making and helping the students to understand the application of economic principles in business management

UNIT – I

Consumer Behaviour

Utility Approach: Meaning, Types, Relationship between Marginal Utility and Total Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium, Derivation of Demand Curve.

Indifference Curve Approach: Properties, Consumer Equilibrium, Price Effect, Income Effect, Substitution Effect, Price Effect a combination of Income Effect and Substitution Effect.

Law of Demand

Elasticity of Demand: Definitions, Types, Measurement, Factors and Importance.

Demand Forecasting

UNIT-II

Production and Revenue

Production Function : Laws of Returns, Law of Variable Proportion and Returns to Scale.

Cost and Cost Curves : Concept of Nominal Real Economic Implicit, Explicit and Opportunity Cost, Cost Curve under Short-run and Long-run, Relationship between Average Cost and Marginal Cost.

Revenue Curves : Concept of Total Average and Marginal Revenue under different Market Conditions, Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Perfect Competition: Features, Equilibrium of Firm, Equilibrium of Industry, Role of Time element in Price Determination.

Monopoly: Feature, Equilibrium of Firm/Industry, Price Discrimination and Its Types.

Monopolistic Combination: Features, Price-Output Policy of the Firm. Selling Cost, Meaning, Effects, Equilibrium of Firm with respect to Selling Cost.

Oligopoly: Features, Price Leadership, Collusive Oligopoly, Kinky Demand Curve Analysis

Reference books:

1. Dwivedi, D.N. Managerial Economics, 7th Edition, Vikas Publishing House.
2. Salvatore, D. Managerial Economics in a Global Economy, 6th Edition, Oxford University Press.
3. Peterson, L. and Jain Managerial Eco., 4th Edition, Pearson Education.
4. A. Kontsoyianis; Modern Micro-Economics.
5. M. Adhikary ; Business Economics.

BCM 105: PRINCIPLES OF FINANCIAL ACOUNTING

Objective: The objective of this paper is to help students to acquire conceptual knowledge of financial accounting and to impart skills for recording various kinds of business transactions.

UNIT – I

Generally Accepted Accounting Principles (GAAP): Accounting Concepts and Conventions: their Nature, Purposes and Limitations. Financial Accounting Standards: Transition from IAS to IFRS.

Financial Statements of Sole Proprietor and Partnership Firm (with adjustments): Income Statement, Balance Sheet

Branch Accounting: Dependent and Independent Branches (Excluding Foreign Branches).

Departmental Accounting: Meaning, Needs, Advantages, Apportionment of Expenses, Inter Departmental Transfers and Provision for Unrealised Profit.

UNIT – II

Accounting for Consignment.

Accounting for Joint Venture.

Accounting for Dissolution of Partnership Firm; Insolvency of Partners(excluding Sale to a Company) and Piecemeal Distribution.

Royalty Accounts

Practical work:

1 . Preparation of List of Accounting Standards and IFRS.

2. Comparison of US GAPP with Indian Accounting Standards.

Reference books:

1. Shukla and Grewal ï Advanced Accounting, S. Chand Publication, New Delhi.
2. R.L. Gupta and V.K. Gupta - Advanced Accounting, Sultan Chand Publication, New Delhi.
3. T.S. Reddy & A. Murthy ï Financial Accounting, Margham Publications, Chennai.
4. P.C. Tulsian ï Financial Accounting, S.Chand and Sons.

BCM 106: COMMERCIAL LAW

Objective: The main objective of the paper is to acquaint the students with general Commercial Laws.

UNIT I

Indian Contract Act, 1872: Definition & Nature of Contract, Classification; Offer & Acceptance; Consideration; Capacity of Parties; Free Consent; Legality of Objectives; Void Agreements; Performance of Contracts; Discharge of Contract; Contingent Contracts; Quasi Contracts; Remedies for Breach of Contract.

UNIT II

Special Contracts: Indemnity & Guarantee; Bailment & Pledge; Contract of Agency.

Right to Information Act, 2005: Definitions, Right to Information & Obligations of Public Authorities, The Central & State Information Commission, Power & Functions of the Information Commissions, Appeal & Penalties.

The Consumer Protection Act, 1986: Introduction, Objectives Commencement & Application, Definitions, Salient Features, Grievance Redressal Machinery.

Reference books:

1. Avtar Singh : The Principles of Mercantile Law
2. M.C. Kuchhal : Business Law
3. N.D. Kapoor : Business Law
4. P.R. Chandra : Business Law, Galgotia, New Delhi
5. Gogna : Mercantile Law, S. Chand
6. M.S. Shukla : Business Law, Sultan Chand.

BCM 107: PRINCIPLES AND PRACTICES OF MANAGEMENT

Objective: The objective of the paper is to help the students in understanding the process of business management and its functions.

UNIT I

Management: Nature, Definitions, Scope, Levels, Process and Significance of Management. Development of Management Thoughts: Classical, Neo-Classical Systems, Contingency and Contemporary Approaches to Management (Drucker, Porter, Prahalad, Senge and Tom Peters)

Planning: Concept, Process, Nature, Steps in Planning, Significance and Types. Decision Making: Concept and Process, Types of Decisions, Management By Objectives (MBO).

Organization: Concept, Nature, Process, Significance, Types, Organisational Structure, Committees, Span of Control. Authority and Responsibility. Delegation, Decentralization and Departmentation.

UNIT II

Direction: Concept, Features, Importance and Limitations of Direction. Elements of Direction- Supervision, Motivation, Leadership and Communication

Coordination: Concept, Features, Importance and Limitations of Coordination. Internal and External Coordination

Control: Concept, Features, Importance and Limitations of Control. Control Process. Essentials of a Good Control System. Techniques of Control. Relationship between Planning and Control

Reference books:

1. Peter F. Drucker, ôThe Practice of Managementô
2. Weihrich and Koontz, ôEssentials of Managementô
3. Stoner and Freeman, ôManagementô
4. David R Hampton, ôModern Managementô
5. Stephen P Robbins, David A DeCenzo, ôFundamentals of Management, Essential Concepts and Applicationsô

SEMESTER-II

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

BCM201 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Business Correspondence : Letters	10 marks
3.	Punctuation	05 marks
4.	Business Advertisement	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi, Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 7 to 12.
2. List of words of Business Vocabulary attached (I to Z)

Themes and Units:

1.	Two questions from the book Galiey Chikkarh Door Ghar. (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2 x 4=08 marks
3.	Business Correspondence : Letters	10 marks
4.	Punctuation	05 marks
5.	Business Advertisement (Punjabi)	05 marks
6.	Business Vocabulary	05 marks

Suggested Readings
Punjabi Viyakaran by Dr. Harkirat Singh, Punjab State University Text-book Board, Chandigarh.

phHekwH Gkr gfjbk

;w;No dik

Business Vocabulary

1.	Imperfect Market	**ngoD wvh**
2.	Imports	**nk:ks**
3.	Import Duty	**nk:ks eo**
4.	Imputed Income	**nkofgs nkwdB**
5.	Imprest Account	**;oekoh gôrh byk**
6.	Income Statement	**nkwdB fuzmk**
7.	Index of Profit	**bkG ;ue**
8.	Income Tax	**nkwdB eo**
9.	Inflation	**wdok ;chsh**
10.	Intangible Assets	**n;Eb bDdkohnK**
11.	Investment	**fBtô**
12.	Invoice	**phue**
13.	Jobber	**;Nke nkVsh**
14.	Job Casting	**bkrs fBoXkoD**
15.	Joint Venture	**;KMk Tzdw**
16.	Labour	**feos**
17.	Laissez Fair	**yzbh ftt;Ek**
18.	Lease Holding Building and Property	**gzNôs fJwkos ns ikfJdkd**
19.	Ledger	**õksk**
20.	Ledger Folio	**yksk gBk**
21.	Liabilities	**dDdkohnK**
22.	Liquidator	**fBoXkoe**
23.	Market	**wvh**
24.	Marketable Goods	**fteD:rt;sK**
25.	Mechanization	**wôhBheoB**
26.	Mercantilism	**tgkotkd**
27.	Monetary System	**wzdok gpX**
28.	Money of Account	**by dh wzdok**
29.	Monopoly	**JekfXeko**
30.	Mortgage	**ofjD,froth**
31.	Net Investment	**fBob fBtô**
32.	Net Profit	**fBob bkG**
33.	Notice of Stoppage	**oe ;uBk**
34.	Office Expenses Account	**døsoh õou byk**

35.	Open Market Operations	y[bk wvh ft jko
36.	Over Due	fwnkd g[rh
37.	Over Head Cost	p[Mh bkrs
38.	Partnership	fj[;dkoh, ;KMhdkoh
39.	Payable Accounts	dD:r by
40.	Preference Shares	soihjh fj[;
41.	Premium	ghwhnw
42.	Price Control	ehws fB:soD
43.	Production	T[sgkdB
44.	Profit Margin	bkG nô
45.	Proprietor	;gsh wkbe
46.	Quasi Negotiable Instrument	noX ft[eoh:r j[vh
47.	Quotation	w[b ;[uh
48.	Rate of Exchange	tNKdok do
49.	Ready Delivery	fsnko wkb
50.	Real Wages	tk;sfte widoh
51.	Rebate	SN, eNsh
52.	Recession	nkofEe wdh dk do
53.	Receivable Accounts	bD:r by
54.	Redemption of Mortgage	ofjD Sv[kTDk
55.	Receipts and Payment Account	gkgsh ns ndkfJrh byk
56.	Rent	feokfJnk
57.	Rent Account	brkB byk, feokfJnk byk
58.	Reserve Price	oky th ehws
59.	Revenue	nkwdB
60.	Sales Tax	ft[eoh eo
61.	Sales Transfer Order	ft[eoh fJsekb j[ew
62.	Security Bond	iwkBsBkwk
63.	Service Goods	;[tk t;sK
64.	Shares	ôno, fj[;
65.	Share Capital	ôno g[h
66.	Share Holder	fj[;dko
67.	Share Market	ôno pkiko
68.	Short Bills	nbgekbh j[vhnK
69.	Slump	wdk
70.	Sole Proprietorship	Jeb wkbeh
71.	Speculation	;[Nk nB[wkB
72.	Statutory Company	ekB[B nXhB ;Ekfgs egBh
73.	Stipulated	fBôfus ehsk

74.	Stock	Gvko, ;Nke
75.	Stock Exchange	ôno pkiko
76.	Subsidiary Company	;jkfJe egBh
77.	Surety	÷kwB
78.	Tariff	do ;uh
79.	Tax Exemption	eo SN
80.	Tax Base	eo nkXko
81.	Tax Evasion	eo uoh
82.	Tax Equity	eo ;wBhsh
83.	Tender	Nvo
84.	Tender money	Nvo dh oew
85.	Terms of Payment	Gr skB dhnK ôosK
86.	Terms of Trade	tgko dhnK ôosK
87.	Trademark	wkoek
88.	Transactions	;d, bD dD
89.	Transfer Book	fJsekb yksk
90.	Under Value	xÍN wÍbneD
91.	Unproductive Expenditure	nD-TgikT you
92.	Unproductive Labour	nD-TgikT feos
93.	Validity Period	gwkfDs fwnkd
94.	Vertical Integration	;wog ;xNB
95.	Wages	widoh
96.	Wages Account	Tios byk
97.	Wage Goods	widoh t;sK
98.	Wage Book	Tios tjh
99.	Wharf age	TsokJh
100.	Write Off	tÍN yks gkTDk
101.	Working Capital	ubs gih
102.	Yield	Tgi
103.	Zero Rate of Interest	ftnki dh ÷ho do

Semester II

BCM201 B HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements ï non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.

BCM 202 : ENGLISH AND BUSINESS COMUNICATION

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens** Issues ed. K.A. Kalia (Oxford University Press).

The relevant sections, however, are as follows:

I. Chandalika: *Rabindranath Tagore*
II. A Bachelor's Complaint of the Behaviour of Married People: *Charles Lamb*
III. El Dorado: *R.L. Stevenson*
IV. Bores : *E.V. Lucas*
V. The Art of the Essayist : *A.C. Benson*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end, Unit II shall consist of the following sub-units:

Writing Skills: This section shall focus on business précis-writing, curriculum vitae; short formal reports (not exceeding 200 words).

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of e-mails, Fax Messages, Teleconferencing, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for Group Discussion etc.

Practical Work: To impart skills of Group Discussion.

Practical Work: There will be viva-voce examination of 10 marks which will include Group Discussion. The students will appear in the group of 10 students for viva-voce.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Section I *(It is text-based and corresponds to Unit I in the syllabus)*

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 marks

Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, and be based upon the prescribed text **Ten Mighty Pens.**	10 marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q.3.	It shall consist of **an Unseen Passage for Comprehension** (not more than 300 words), with minimum six questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 marks
Q.4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 marks
Section II *(Based upon Unit II)*		
Q.5.	The students shall be asked to write a short survey report on a situation, incident, business problem, or the possibility of starting a new commercial venture (in about 150-200 words). The students shall be given an internal choice in this question.	10 marks
Q.6.	This will test the students' ability to write a Précis. A passage of about 200 words shall be given and the students shall have to write a précis of about 70 words (including the title).	10 marks
Q.7.	Definition/format of Modern forms of communication to be tested- Listening - Non verbal communication, e-mail, fax, teleconferencing etc.	10 marks
Q.8.	Curriculum Vitae	10 marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM 203: E- COMMERCE

Objective: The objective of this paper is to provide fundamental knowledge to the students about E-Commerce so that they can better perform in any area of operation and can excel in the field of commerce with IT specialization.

UNIT I

Electronic Commerce Framework, History, Basics and Tools of E-Commerce, Comparison of Web-based with Traditional Business; Growth of E-Commerce ï Present and potential.

E-Business : Meaning, Importance, Models Based on the Relationships of Transacting Parties (B2B, B2C, C2C and C2B), Present Status of E-Commerce in India, Regulatory Aspects of E-Commerce.

UNIT II

Changing Structure of Organisation ï The Impact of E-Commerce on Various Business Sectors such as Entertainment, Education, Health Services, Publishing and Financial Services. Socio-Economic Impacts of E-Commerce.

Electronic Payment System: Types of Payment System ð E-Cash and Currency Servers, E-Cheques, Credit Cards, Smart Cards, Electronic Purses and Debit Cards. Electronic Data Interchange, Digital Signatures, Cryptography, Interoperatibility and Intercompatibility.

Reference books:

1. Diwan, Prag and Sushil Sharma: Electronic Commerce, A Managerôs Guide to E,Business Vanity Books International, Delhi.
2. Kalakota, Ravi and Shinston Andrew B: Frontiers of Eletronic Commerce, Addision Wesley.
3. Minoli and Minoli: Web Commerce Technology Handbook, Tata McGraw Hill, New Delhi.
4. Schneider, Gray P.: Electronic Commerce, Course Technology, Delhi.

BCM 204: BUSINESS ECONOMICS-II

Objective: The paper aims at providing the knowledge of basic concepts of the distribution and modern tools of macro-economic analysis.

UNIT-I

Distribution

Wages : Meaning, Types, Marginal Productivity Theory of Wages, Modern Theory of Wages.
Rent: Meaning ,Types, Ricardian Theory of Rent, Modern Theory of Rent, Quasi- Rent.
Interest: Meaning, Types, Classical Theory of Interest, Neo-Classical Theory of Interest, Liquidity Preference Theory of Interest.
Profits: Nature, Types, Dynamic Theory of Profits, Innovation Theory of Profits, Risks Bearing Theory of Profit, Uncertainty Bearing Theory of Profits.
National Income: Meaning, Concepts of National Income, Measurement of National Income, Difficulties in Its Measurements, Its Significance.

UNIT- II

Sayôs Law of Market: Meaning, Implications,
Classical Theory of Income Output and Employment:
Keynesian Theory of Employment.
Effective Demand: Determination, Importance
Consumption Function: Meaning, Factors Influencing Consumption Function, Average and Marginal Propensities to Consume, Propensity to Save, Psychological Law of Consumption and its Importance.
Marginal Efficiency of Capital: Meaning, Determinants, Theory of Secular Stagnation.
Investment: Meaning, Types, Factors Affecting Investment, Importance of Investment, Measures to Raise Private Investment.
Multiplier: Meaning, Keynesian Income or Investment Multiplier, Leakages, Uses, Limitations of Multiplier, Multiplier and Under-Developed Countries.

Reference books:

1.Shapiro. E	Macroeconomic analysis Galotia publications, New Delhi.
2.Eugene Diulio	Macro economics, 4th Edition, Tata McGraw Hills, Publishing Col. Ltd, New Delhi.
3.Dornbusch R, Fisher, S and Startz, R	Macro Economics, 8th Edition, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
4.Ackley,G.	Macroeconomics: Theory and Policy, Macmillan, New York

BCM 205: CORPORATE ACCOUNTING

Objective: To provide knowledge about basic corporate accounting with the relevant accounting standards.

UNIT 1

Issue, Forfeiture, Reissue and Buy-Back of Shares,

Redemption of Preference Shares.

Right Issue and Bonus Shares.

Final Accounts of Companies (including Managerial Remuneration & Profit Prior to Incorporation),

UNIT II

Underwriting of Shares and Debentures.

Issue and Redemption of Debentures.

Accounts of Banking Companies

Accounts of Insurance Companies.

Note : Accounting Standards are to be covered along with topics.

Practical Work:

1. Preparation of Final Accounts of Companies and critical evaluation.
2. Comparison of annual reports of companies and disclosures norms.

Reference books:

1. R.L. Gupta and M. Radhaswamy ï Advanced accounts ï Sultan Chand.
2. Shukla Garewal and Gupta ï Advanced accounts ï S.Chand, New Delhi.
3. D. Chanderbose ï Advanced Accounting, Vol. I, PHI Learning Pvt. Ltd.
4. T.S. Reddy and A. Murthy ï Corporate Accounting, Margham Publications, Chennai.

BCM 206: BUSINESS LAWS

Objective: The main objective of the paper is to acquaint the students about Business Laws.

UNIT– I

Sale of Goods Act, 1930: Contract of Sale of Goods, Conditions & Warranties; Transfer of Ownership; Performance of the Contract: Remedial Measures; Auctionable Claims.

Negotiable Instruments Act, 1881: Definition, Acceptance and Negotiation, Rights and Liabilities of Parties, Dishonor of Negotiable Instrument, Hundis, Bankers and Customers.

UNIT- II

Factories Act, 1948: Objectives; Definitions; Approval; Licensing & Registration of Factories; The Inspecting Staff Health; Safety Welfare; Working Hours of Adults; Employment of Women; Child Labour ï Issues and Challenges; Leave with Wages; Penalties & Procedure Supplemental.

The Industrial Disputes Act, 1947: Scope & Object; Definitions; Authorities; Notice of Change; Reference of Disputes; Procedure; Powers & Duties of Authorities; Award & Settlement; Strikes & Lockouts; Lay-off & Retrenchment etc.

Reference books:

1. Malik, K.L., Industrial Laws and Labour Laws, Eastern Book Company, Lucknow.
2. Kumar, H.L., Digest of Labour Cases, Universal Law Publishing Co P Ltd, New Delhi
3. Srivastava, S.C., Industrial Relations &Labour Laws, Vikas Publishing House (P) Ltd.
4. Sharma, J.P., Simplified Approach to Labour Laws, Bharat Law House (P) Ltd., New Delhi.
5. Sharma, J.P., Industrial Laws, Taxmann, New Delhi.

BCM 207: HUMAN RESOURCE MANAGEMENT

Objective: The objective of the paper is to familiarize the students with the different aspects of managing human resource in the organization.

UNIT – I

Human Resource Management: Introduction, Meaning and Definitions, Brief History, Nature, Functions, Importance and Limitations of HRM. Contemporary Challenges in HRM.

Human Resource Planning; Introduction, Definitions, Features, Need for HR Planning, Objectives, Process, Factors affecting HR Planning, Types, Benefits, Problems in HR Planning and Way for Effective HR Planning.

Job Analysis and Job Design: Introduction, Objectives, Benefits, Process, Techniques and Problems in Job Analysis. Job Design- Meaning, Objectives and Techniques of Job Design.

Recruitment and Selection: Meaning and Definitions, Importance and Purpose, Process, Factors Affecting Recruitment, Sources of Recruitment, Methods, Constraints and Challenges of Recruitment. Recent Trends in Recruitment. Selection: Meaning and Definition, Selection Process and Methods.

Placement and Induction: Meaning and Problems in Placement. Induction: Meaning, Objectives, Contents, Elements, Procedure and Problems in Induction.

UNIT – II

Training and Development: Concepts, Importance, Identification of Training Needs. Types of Training: On the Job and Off the Job Methods of Training. Designing and Evaluation of Training Programmes. Meaning of Development, Difference between Training and Development.

Performance Appraisal: Concept, Objectives, Methods of Performance Appraisal; How to Make it Effective.

Internal Mobility and Transfers: Promotions, Demotions and Other Forms of Separations, Definitions, Purpose, and Basis of Promotions. Transfer: Definitions, Purpose, Types and Transfer Policy.

Compensation Management: Concept, Methods of Wage payments and Incentive Plans, Fringe Benefits.

Reference books:

1. Dessler, Personnel Human Resource Management, Prentice Hall of India.
2. D A DeCenzo and S P Robbins, Personnel/ Human Resource Management, Prentice Hall of India.
3. Ian Beardwell and Len Holden, Human Resource Management, Macmillan.
4. Wendell French, The Personnel Management Process, Houghton Mifflin Co., Boston...
5. M S Saiyadain, Human Resource Management, Tata McGraw

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE

UNIT I (Environment)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere ï lithosphere, hydrosphere, atmosphere; Natural resources ï their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil ï a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems ï soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste managementï open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food;

uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering ï Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in
(b) www.punjabpolice.gov.in
(c) www.haryanapolice.gov.in
(d) **www.hppolice.nic.in**

SYLLABUS ON "VIOLENCE AGAINST WOMEN/CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II
Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women ï domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children ï physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death ï Section 304B;
Rape ï Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty ï Section 498A;
Insult to Modesty ï The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 ï (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions ï Sections 319 to 326;
Acid Attacks ï Sections 326A and 326B;
Female Infanticide ï Section 312, Section 313 of Indian Penal Code (Causing miscarriage without womenôs consent) and section 314;
Sexual Harassment ï For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 ï Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ï Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361

(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/**HRLN**India/a-life-free-from-**violence**
http://hrln.org/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

The paper/Topic "Drug Abuse: Problem, Prevention and Management" having 2 credit/50 marks (40 theory+10 Internal) at undergraduate level, as a fourth part of the paper 'Environment, Road Safety Education and Violence against Women and Children' from the academic session 2017-18.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.

- A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) **Concept and overview :** what are drugs and what constitutes drug abuse? Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3,4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.

SEMESTER-III

BCM 301: ISSUES IN INDIAN COMMERCE

Objective: To enable the students to acquire basic knowledge of different issues faced in progress and prospects of commerce in India.

UNIT-I

Foreign Direct Investment: Concept, Historical Perspective, Incentives for Attracting Foreign Capital, Implication for Indian industry, Role of Foreign Investment Promotion Board (FIPB) ï Automatic Route and Sectoral Limits, Difference between FDI and Foreign Portfolio Investment (FPI).

ñMake in Indiaò An Initiative of Government of India, Objectives, Sectors in Focus and Issues & Challenges ahead.

Technology in Commerce: Features, Impact, Management and Status of Technology and Impact of Technology on Commerce in India.

International Finance: Introduction, Need, Importance, Sources-External Commercial (FCCBs) Borrowings (ECB), American Depository Receipt (ADR), Global Depository Receipt (GDR).

UNIT-II

Infrastructure: Growth of Infrastructure- Energy, Transport and Communication. Public-Private Partnership (PPP) in Infrastructure Development in India, Bottlenecks, Models - Built Operate and Transfer (BOT), Built Operate Levy and Transfer (BOLT), Special Economic Zones (SEZs).

Stock Exchanges in India: Organisation, Nature, Functions, Benefits, Growth, Trading in Stock Markets- Electronic Trading, Listing and Role of SEBI, Commodity Exchanges in India.

Corporate Debt Restructuring: Concept, Importance, Methods, Corporate Scams and Regulatory Authorities-Serious Fraud Investigation Office (SFIO), Investors; Protection in India- Importance, Need, and Initiatives by the Central Government.

Recent Trends in Credit Rating Services in India- Role of ICRA and CRISIL.

Reference books:

1. Indian Economy - Datt and Sundharam, S Chand and Co. New Delhi
2. Indian Economy - M.B. Shukla, Taxman Publication, New Delhi
3. India Transport Report, National Transport Development Committee Report, Routledge, Tolstoy Marg, New Delhi
4. Financial Markets Institutions and Financial Services, C Gomez ï Prentice-Hall.
5. Principles of Business Organisation, by Y.K. Bhushan, Sultan Chand & Co, New Delhi
6. Guruswamy. S ï Global Financial Institutions, Tata Mcgraw Hills India.
8. Khan ï my Indian Financial Systems - Tata Mcgraw Hills India.
9. Website of Make in India

BCM 302: COST ACCOUNTING

Objective: The objective of this paper is to help the students to acquire conceptual knowledge of cost accounting and elements of cost.

UNIT – I

Introduction: Nature, Scope and Advantages of Cost Accounting, Installation of Costing System, Difference between Cost and Financial Accounting, Classification of Costs.

Material: Purchase, Storage and Control of Material, Stock Levels, Inventory, Control Techniques. Methods of Pricing Material Issues.

Labour: Meaning and Components of Labour Cost. Concept, Accounting and Control of Idle time and Overtime. Methods of Wage Payment and Incentive Plans, Labour Turnover .

UNIT – II

Overheads: Collection, Classification, Allocation, Apportionment and Absorption of Overheads (Primary and Secondary Distribution), Machine Hour Rate.

Preparation of Cost Sheet, Operation Costing, Service Costing.

Cost Ledger Accounting, Integral Accounting, Reconciliation of Cost and Financial Accounts.

Practical Work:
Use of software package to obtain cost accounting output like: Analysis of Cost- Centre wise and Element wise, Allocation and Apportionment of Overheads, Preparation of Cost Sheet.

Reference books:

1. Banerjee Bhabatosh: Cost Accounting, Phi Learning
2. Saxena and Vashist: Cost Accounting, Sultan Chand and Sons.
3. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
4. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 303: COMPANY LAW

Objective: The objective of this paper is to help the students understand various provisions of Companies Act 2013.

UNIT - I

Introduction: Characteristics of a Company, Concept of Lifting of Corporate Veil, Emerging Types of Companies.

Formation of Company ï Promotion & Registration, Pre-incorporation Contract and Provisional Contracts.

Memorandum of Association, Articles of Association, Doctrine of Constructive Notice, Doctrine of Ultra-Vires, Doctrine of Indoor Management,

Prospectus and Statement in Lieu of Prospectus, Red-Herring Prospectus.

Share Capital ï Kinds of Shares, Book Building Process, Information Memorandum, Dematerlisation of Shares, ASBA System, Transfer & Transmission of Shares, Buyback of Shares.

UNIT- II

Members and Shareholders ï Their Rights and Duties.

Management ï Directors, Classification of Directors, Disqualification, Appointment, Legal Position, Powers and Duties, Disclosures of Interest, Removal of Directors, Board Meetings, Other Managerial Personnel and Remuneration, Digital Signatures of Directors.

Winding Up-Concept and Modes.

Practical Work: Teacher should use Internet and Communication Technology to give students demo regarding procedure of Online Filing of Documents for Registration of Company, obtaining Director Identity Number (DIN), Corporate Identity Number (CIN), etc. Students should be apprised of National Company Law Tribunal (NCLT), Insider Trading, Rating Agencies, etc. Practical Training about Notice of Meeting, Agenda, Quorum, Proxy, Reports, Minutes of Meeting, Resolutions, etc. The teacher should use simulation method and will hold at least One Statutory Meeting, One Annual General Meeting, One Extra-ordinary Meeting and One Board Meeting.

Reference books:

1. Kannal, S., & V.S. Sowrirajan, ñ*Company Law Procedure*ò, Taxmanôs Allied Services (P)Ltd., New Delhi (Latest Edn).
2. Ramaiya, A., ñ*A Ramaiya's Guide to Companies Act*ò, Lexis Nexis ButterworthsWadhwa, Nagpur.
3. Singh, Harpal, ñ*Indian Company Law*ò, Galgotia Publishing, Delhi.
4. Singh, Avtar, ñCompany Lawò, Eastern Book Company, Lucknow

BCM 304: BUSINESS MATHEMATICS AND STATISTICS

Objective: The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions.

UNIT I

Matrices and Determinants: Definition of a Matrix. Types of Matrices; Algebra of Matrices; Properties of Determinants; Calculation of Values of Determinants upto Third Order, Ad-Joint of a Matrix, Elementary Row or Column Operations; Inverse of a Matrix. Solution of a System of Linear Equations having Unique Solution and Involving not More Than Three Variables.

Differentiation ï Idea of Simple Derivative of different Functions (excluding trigonometric function).
Maxima and Minima of Functions of One Variable only

UNIT II

Introduction: Statistics as a Subject; Statistical Data: Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data.

Analysis of Univariate Data: Construction of a Frequency Distribution; Concept of Central Tendency and Dispersion-and Their Measures; Measures of Skewness; Concept of Kurtosis.
Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend
Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate); Tests of Adequacy; Chain-Base Index Numbers; Base Shifting, Splicing, and Deflecting; Problems in Constructing Index Numbers; Consumer Price Index.

Practical work: Collection, Classification and Presentation of data using Microsoft Excel

Reference books:

1. Dowling E.T.: Mathematics for Economics; Shaum Series, McGraw Hill, London.
2. Holden: Mathematics for Business and Economics; Macmillan India, New Delhi.
3. Kapoor, V.K.: Business Mathematics; Sultan Chand & Sons, Delhi.
4. Vohra, N.D.: Quantitative Techniques in Management; Tata McGraw Hill, New Delhi.
5. Aczel, Amir D.: Complete Business Statistics, Irwin.
6. Chou-Ya-Lun: Statistical Analysis, Holt, Rinchart and Winslon.
7. Heinz, Kohler: Statistics for Business & Economics, Harper Collins.
8. Levin, Richard I.& David S Rubin: Statistics for Management, Prentice Hall of India, Delhi.

BCM 305: BANKING AND INSURANCE

Objective: To acquaint the students with Indian Banking and Insurance industry.

UNIT – I

Indian Banking System: Introduction, Concept, Types of Banks and Structure of Banking System, Functions of Commercial Banks, The Reserve Bank of India: Management and Structure, Functions of RBI, Monetary Policies and Techniques of Credit Control.

Reforms in Indian Banking: Overview, Recommendations of Narasimham Committee, Verma Panel Report, Basel II Norms, Capital Adequacy Ratio (CAR), Revised NPA Norms- Grievance Mechanism and Banking Ombudsman, Impact of Reforms.

Emerging Trends in Banking: Concept of E-Banking, Mobile Banking, Electronic Fund Transfer- (RTGS & NEFT) and Core Banking. RBI Guidelines on Internet Banking, Challenges faced by Indian Banking, Cheque Truncation System.

UNIT – II

Insurance: Concept, Nature of Insurance, Functions of Insurance, Types of Insurance (Life and Non-Life), Importance of Insurance, Principles of Insurance Contract-Features of Life and Non-life Insurance.

Insurance and IRDA: IRDA Act 1999, Provisions, Duties, Powers and Functions of IRDA, Composition and Grievance Mechanism and Insurance Ombudsman.

Reference books:

1. M N Mishra, S B Mishra: Insurance Principles & Practice, Sultan Chand and Sons.
2. James L Athearn: Risk and Insurance, West Publication Co.
3. NaliniPravaTripathy and Prabir Pal: Insurance Theory and Practice, Prentice Hall India.
4. PAS Mani: Life Insurance in India, Western Printers and Publication. Insurance & Risk Management ï Dr. P.K.Gupta,Himalaya Publishing House, Delhi.
5. Banking Law and Practice Maheshwari, S.N. and Maheshwari, S.K.,Kalyani Publishers, New Delhi.
6. Emerging Trends in the Banking Sector, Mittal R.K., Saini A.K. &Dhingra Sanjay, Macmillan, New Delhi.
7. MadhuVij: Management of Financial Institutions in India, Anmol Publications.
8. U.C. Patnaik: Rural Banking in India, Anmol Publications.
9. Vasanth Desai: Nature and Problems of Commercial Banking in India, Himalaya Publishing House.
10. V.K. Gupta: Management of Financial Institutions in India, Radha Publications
11. G. Ramesh Babu: Management of Financial Institutions in India, Craft Publishing Company.
12. Vasanth Desai: Indian Banking, Nature and Problems, Himalaya Publications House.

BCM-306: GOODS AND SERVICE TAX

Objective: Understanding of Basics of GST

Unit I

Tax Structure in India, Direct and Indirect Taxes, Overview of Goods and Services Tax, Implementation of GST, Reasons for GST introduction, Pros and cons of GST,Registration procedure under GST, CGST/ SGST Act, 2017,Classes of officers under GST, their appointment and powers; Levy and collection of CGST/ SGST; Composition Levy scheme;Timeand Value of supply, valuation in GST (basics),Tax invoice, credit and debit notes.

Unit II

IGST Act, 2017: Definitions, Supplies in the course of inter-State trade or commerce, Supplies in the course of intra-State trade or commerce, Levy and collection of IGST, power to grant exemption from tax, place of supply under IGST; Input tax credit;Returns under GST;Refund of tax; offences and penalties, Prosecution and Appeals under GST, GST Portal: GST Eco system,GST suvidha provider.

References

1. The Central Goods and Services Tax Act, 2017 of Ministry of Law and Justice (Legislative Department) 12th April, 2017) published in The Gazette of India dated 12th April, 2017.
2. Taxmannôs GST Ready Reckoner Updated till 18th June, 2017.
3. Taxmannôs GST Manual-Enforced w.e.f. 1.7.2017.
4. GST Ready Reckoner by CA Kesha R Garg, Bharat Law House, Delhi.
5. Goods and Services Tax in India -----Notifications by Government of India
6. GST Bill 2012
7. Integrated Goods and Services Tax Act 2017

SEMESTER-IV

BCM 401: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: The paper aims at providing the students a comprehensive knowledge about security analysis and portfolio management and equipping for taking profitable investment decisions.

UNIT – I

Investment ï Meaning, Nature, Objectives and Process. Investment Avenues/ Alternatives. Investment Philosophy, Value Investing and Growth Investing, Investment Strategy, Individual and Institutional Investors.

Security Analysis ï Meaning, Risk and Return, Types and Measurement of Risk, Risk and Return Trade Off.

Investment Analysis : Fundamental Analysis ï Economic, Industry and Company Analysis.

Technical Analysis. Fundamental v/s Technical Analysis.

UNIT – II

Portfolio Management ï Concept, Portfolio Management Schemes, Portfolio Theories, Capital Market Line, Marvkowitz Model, Sharpe Model, Jensen and Treynor Model, Capital Asset Pricing Model, Arbitrage Pricing Theory, Efficient Market Theory, Security Market Line.

Portfolio Performance Evaluation and Revision.
Global Investing ï Benefits and Options for Global Investment.

Reference books:

1. Fischer & Jordan, Security Analysis and Portfolio Management, Prentice Hall India.
2. Punithavathy Pandian, Security Analysis and Portfolio Management, Vikas Publishing House Pvt. Ltd.
3. Martin Pring, Technical Analysis Explained, McGraw Hill.
4. V. A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House.
5. French, Don, Security and Portfolio Analysis, Merril Publishing Co.
6. Preeti Singh, Investment Management, Himalaya Publishing.
7. Devin S., Portfolio Management, Prentice Hall.
8. Cheney, Muses, Fundamentals of Investments
9. V. K. Bhalla, Portfolio Analysis and Management, Sultan Chand & Sons

BCM 402: ADVANCED ACCOUNTING

Objective: To provide knowledge to students about advanced accounting problems with the relevant Indian Accounting Standards.

UNIT-I

Valuation of Shares and Goodwill.

Insurance Claims.

Accounting for Hire- Purchase and Instalment System

Investment Accounts.

UNIT-II

Accounting for Amalgamation, Absorption(Excluding Inter-Holding) & External and Internal Reconstructions.

Accounts of Holding Companies-Preparation of CBS, Mutual Owings- Revaluation of Assests - Bonus Issue (Excluding Cross Holdings).

Liquidation of Companies.

Practical work:

1. Designing Scheme of Internal Reconstruction.

2. Case Studies on Mergers and Acquisitions.

Reference books:

1. Sehgal A. and Sehgal D., ñAdvanced Accountingò, Taxman Publications Pvt Ltd., New Delhi.
2. Shukla, M.C., Grewal T.S. and Gupta S.C: ñCorporate Accountingò, S. Chand and Co., New Delhi.
3. Gupta R.L, and Radhaswamy M, ñCorporate Accountingò, Sultan Chand and Sons, New Delhi.
4. Goyal V.K., ñCorporate Accountingò, Excel Books, New Delhi.
5. Maheshwari S.N., and Maheshwari S.K., ñCorporate Accountingò, Vikas Publication,New Delhi.
6. Gupta N.and Sharma C., ñCorporate Accountingò, Ane Books Pvt Ltd,New Delhi

BCM403: AUDITING AND SECRETARIAL PRACTICE

Objective: The objective of the paper is to help the students in understanding concepts and issues in Auditing and Secretarial Practice.

UNIT-I

Auditing: Introduction, Meaning, Objectives, Basic Principles, Classifications, Advantages and Limitations of Audit. Investigation, Difference between Audit and Investigation: Audit Program, Audit Evidence, Internal Control, Internal Check and Internal Audit.

Vouching ï Definition ï Features ï Examining Vouchers - Vouching of Cash book ï Vouching of Trading Transactions.

Verification and Valuation of Assets & Liabilities
Company Auditor - Qualifications and Disqualifications ï Appointment - Removal, Remuneration, Rights, Duties and Liabilities, Auditorôs Report - Contents and Types Company Auditor Report Order (CARO).

UNIT – II

Secretarial Practice: Definition of Company Secretary, Qualification of Company Secretary, Appointment, Dismissal, Duties & Liability for Offences of Company Secretaries. Position and Role of Company Secretaries, Company Secretary in Practice.

Procedure for Statutory Meeting and its fate under New Companies Act 2013, Annual General Meeting, Extra Ordinary General Meeting, Director, Board and Committee Meetings, Meaning and Types of Motions and Resolution, Minutes, Role of Company Secretary before, during and after Meetings.

Practical Work :

a) Practical Work on Vouching and Audit Report Preparation.
b) Preparing of Minutes, Motions and Resolutions, Holding of Meetings.

Reference books:

1. Dinkar, P., ñ*Principles and Practice of Auditing",* Sultan Chand and Sons, New Delhi.
2. Institute of Chartered Accountants of India: óó*Auditing and Assurance Standards*öö, ICAI,
3. Gupta, K., and Arora, A., ñ*Fundamentals of Auditing,*ò, Tata Mc-Graw Hill, Publishing Co. Ltd., New Delhi.
4. Ghatalia, S.V.: ñ*Practical Auditing,*ò, Allied Publishers Private Ltd., New Delhi.
5. Kapoor, N.D., ñSecretarial Practiceò Sultan Chand and sons.
6. Kuchal,M.C., ñSecretarial Practiceò, Vikas Publishing.

BCM 404: COST MANAGEMENT

Objective: The objective of the paper is to acquaint the students with the various methods of cost determination and tools and techniques of cost control.

UNIT – I

Cost Management: Need Significance and Different Areas of Cost Management and Application.

Methods of Cost Determination: Job Costing, Batch Costing, Contract Costing, Uniform Costing and Inter Firm Costing, Process Costing (including joint and by- products).

Contemporary Concepts: Activity Based Costing, Target Costing, Life Cycle Costing, Value Chain Analysis.

UNIT – II

Techniques for Cost Control:

Marginal Costing, Cost, Volume; Profit Analysis and Decision Making; Differential Costing and Absorption Costing.

Budgeting and Budgetary Control: Concepts, Objectives, Limitations, Types of Budgets, Zero Base Budgeting.

Standard Costing, Analysis of Variance.

Practical Work:

Use of software package to obtain cost accounting output like: Fixed and Variable Cost, Break Even Point, P/V Analysis, Preparation of budgets.

Reference books:

1. Edward Blocher, David Stoul-GaryCokins: Cost Management,McGraw Hill
2. Jawahar Lal: Advance Management Accounting, S.Chand and Company Ltd.
3. M. Ravi Kishore: Cost Management, Taxman Publications.
4. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
5. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 405: MARKETING MANAGEMENT

Objective: The paper aims at making students to understand the basic concepts, philosophies, process and techniques of marketing.

UNIT – I

Introduction to Marketing: Meaning, Nature and Scope of Marketing, Marketing Concepts and Philosophies, Marketing Process, Marketing Mix.
Marketing Information System: Meaning and Components, Marketing Research Process.
Consumer Buying Behaviour: Factors Influencing Buying Behaviour, Buying Decision Process.
Market Segmentation: Levels and Patterns of Market Segmentation, Basis, Major Segmentation Variables for Consumer Markets, Concepts of Market Targeting and Positioning.
Product Planning and Market Strategies: Product Life Cycle, New Product Development, Product Concepts and Classification, Branding, Packaging and Labeling.

UNIT – II

Pricing Decision: Pricing Policies and Strategies.
Distribution Decisions: Channel Design Decisions, Major Channel Alternatives, Channels Management Decision, Causes and Managing Channel Conflict, Physical Distribution.
Promotion Decisions: Communication Process.

Promotion Tools: Advertising (Steps Involved in Designing and Advertising Programme), Sales Promotions, Public Relations, Personal Selling.
Issues in Marketing in a Developing Economy, Rural Marketing.

Reference books:

1. Czinkota, M.R. and Kotabe.M., *Marketing Management,* Vikas Publishing, New Delhi.
2. Kotler, P., *Marketing Management: Analysis, Planning, Implementation & Control*, Prentice Hall of India, New Delhi.
3. Perreault, W.D. and Jerome, E.M.., *Basic Marketing*, Tata McGraw Hill, New Delh.
4. Ramaswamy, V.S. and Namakumari, S., *Marketing Management: Planning, Control*, MacMillan Press, New Delhi.
5. Zikmund, A., *Marketing,* Thomson Learning, Mumbai.

BCM 406: QUANTITATIVE TECHNIQUES AND METHODS

Objective: The objective of the paper is to acquaint the student with the various quantitative techniques and methods used in managerial decisions.

UNIT I

Quantitative Techniques: Introduction and Use in Business

Theory of Probability: Introduction, Definitions and Use of Addition and Multiplicative Theorem, Conditional Probability. Probability-Distribution: Binomial-Distribution, Poisson-Distribution, Normal-Distribution

Linear Programming: Meaning, Advantages, Limitations, Basic Terminology, Formulation of Linear Programming Problem, Graphic Solution of Linear Programming Problem; Business Application of Linear Programming.

UNIT II

Interpolation and Extrapolation

Correlation: Meaning, Types, Methods-Scattered Diagram, Karl Pearsonôs Coefficient of Correlation, Rank Correlation and Concurrent Deviation Method.

Regression: Meaning and Significance, Difference Between Correlation and Regression, Simple Linear Regression and Estimation of Parameters (Slope and Intercept).

Practical Work: Use of Microsoft Excel in Solving Simple Data Analysis.

Reference books:

1. Dowling E. Mathematical Methods for Business and Economics, McGraw Hill
2. K. Sydsaeter, P. Hammond Essential Mathematics for Economic Analysis, Pearson
3. Chiang Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill
4. Renshaw, G. Maths for Economics. Oxford: Oxford University Press.
5. Spiegel M. and Stephens L. Schaumôs Outline of Statistics, McGraw Hill
6. Lind D. Basic Statistics for Business and Economics, McGraw Hill
7. Dougherty, C. Introduction to Econometrics. Oxford: Oxford University Press.
8. Vogelvang, B. Econometrics: Theory and Applications with E-Views. London Pearson.

SEMESTER-V

BCM 501: INCOME TAX LAW

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Introduction, Important Definitions: Assessee, Person, Income, Total Income, Assessment Year & Previous Year. Agricultural Income & its assessment. Residence & Tax Liability (Basis of Charge). Capital & Revenue. Exempted Incomes.

Income from Salaries, Income from House Property.

UNIT – II

Profits and Gains of Business and Profession including Depreciation, Capital gains, Income from Other Sources.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Preparation of Form 16 and 16A
2. Preparation and Filling of ITR Forms
3. Preparation of PAN Form

Suggested Readings:

1. Studentsô Guide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts ï Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax ï Dr. Garish Ahuja & Dr. Ravi Gupta

   (Bharat Publications, New Delhi)

BCM 502: MANAGEMENT ACCOUNTING

Objective: To study the basic concepts of Management Accounting relevant in Business and helping the students to understand the usage of Accounting in Financial Management.

Unit-I

Origin Concept, Nature and Scope of Management Accounting, Distinction between Management Accounting and Financial Accounting. Nature, Importance and Limitations of Financial Statements, Tools of Financial Analysis-Trend Analysis, Common Size Financial Statements and Comparative Financial Statements, Ratio Analysis.

Unit-II

Fund Flow Statement, Cash Flow Statement (AS-3). Price Level Accounting, Social Accounting, Human Resource Accounting (Concept only), Responsibility Accounting: Concepts, Steps in Responsibility Accounting and Advantages of Responsibility Accounting.

***Practical*:** Use of various software packages to obtain different Management Accounting outputs like : (i) Fund Flow Statement, (ii) Ratio Analysis, (iii) Cash Forecasting.

Reference books:

1. Anthony Robert, Reece, Principles of Management Accounting; Richard D. Irwin Inc. Illinois.
2. Khan M.Y. and Jain P.K., Management Accounting; Tata McGraw Hill, New Delhi.
3. Kaplan R.S. and Atkinson A.A., Advanced Management Accounting, Prentice India International, New Delhi.
4. Dr. S.N. Maheshwari : Principles of Management Accounting, Sultan Chand & Sons, New Delhi
5. I.M. Pandey : Management Accounting, Vikas Publication
6. Debarshi Bhattachharya : Management Accounting, Pearson Publication

BCM 503: INDIAN ECONOMY

Unit – I

i) State of Indian Economy at the time of Independence.

ii) Nature of Indian Economy.

iii) Features and Appraisal of Economic Reforms Programme.

iv) Comparing Development Experience of Economies of India and China.

v) National Income of India ï Estimates, Inter-regional Variations in National Income.

vi) Demographic Features of Indian Population, Demographic Dividend.

Unit – II

i) Indian Public Finance: The Indian Tax Structure, Public Expenditure, Public Debt.

ii) Capital Market: Growth, Problems and Reforms since 1991.

iii) External Sector: Contemporary Problems of Indiaôs International trade. Balance of Payments Position, Foreign Trade Policy.

iv) Economic Planning in India ï Objectives, Achievements and Failures, Latest Five Year Plan in India, NITI Aayog.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 ï Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy ï Problems and Prospects, Viking, New Delhi.
3. Ahluwalia, I.J. and Little, IMD(eds.) 1998: Indiaôs Economic Reforms and Development. (Essays in Honour of Manmohan Singh), OUP, New Delhi
4. Nagraj, R.2006: Aspects of Indiaôs Economic Growth and Reforms, academic Foundations, New Delhi.
5. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
6. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
7. Dhar, P.K.: Indian Economy ï Its Growing Dimensions (Latest Edition), Kalyani Publishers
8. Economic Survey: Government of India, Latest Issue
9. Economic and Political Weekly: Various Issues

BCM 504: PRODUCTION AND OPERATION MANAGEMENT

Objectives: The objective of this course is to enable the students to understand the concepts of production and operations management of an industrial undertaking.

Unit-I

Introduction of Production and Operational Management: Meaning, Objectives and Scope. Strategic Planning and Demand Forecasting. Production Process and Analysis. Capacity Planning and Management. New Product/ Service Design and Development. Facility Location. Facility Layout. Production Planning and Control Techniques- Sequencing (Processing in Job through Two Machines) and Network Analysis - PERT/CPM (including Crashing).

Unit-II

Work Measurement and Work Study: Methods, Analysis and various Charts, Time Study and Principles of Motion Economy. Purchase Management. Inventory Management Fundamentals : Economic Order Quantity, Quantity Discount, Reorder Level, Lead Time, Safety Stock, JIT. Supply Chain Management: Concept & Components of Supply Chain, Activities in Supply Chain Management, Logistics Management.

Suggested Readings:

1. B. Mahadevan ñOperations Management Theory & Practiceò, Pearson Education.

2. Kanishka Bedi , ñProduction & Operations Managementò, Oxford Higher Education.

3. L.J. Krajewski & L.P. Ritzman ñOperations Management Processes & Value Chainsò, Pearson Education.

4. B.S. Goel ñProduction Operation Managementò.

5. Richard B Chase, F Robert Jacobs, Nicholas J Aquilano and Nitin K Agarwal , ñOperations Management ï For Competitive Advantageò, The McGraw Hill Companies.

BCM 505: ENTREPRENEURSHIP AND SMALL BUSINESS

Objectives:- The basic objective of this course is to help the learners understand various issues involved in setting up a private enterprise and develop required entrepreneurial skills in economic development. It also aims to motivate students to opt for entrepreneurship and self-employment as alternate career options.

UNIT- I

Entrepreneurship- Concept and Theories; Entrepreneur- Meaning and Characteristics: Leadership, Risk taking, Decision making, Motivation, Innovation.

Women Entrepreneurship- Problems Faced, Suggestions, Role of Government to promote Women Entrepreneurship; Socio- economic Environment.

Business Planning; Entrepreneurial Development Programmes- their Relevance and Achievement, Role of Government in Organizing EDPs.

UNIT- II

Small Scale Business-Seed Bed of Entrepreneurship; Business Venture- Its Concept; Setting up a Small Scale Enterprise.

Product Planning and Management; Marketing Management; Growth and Diversification Strategies.

Role of Small Business in the National Economy; Small Business and Modern Technology.

Tax Considerations/ Benefits to Small Scale Units; SSI Exemptions.

Suggested readings

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House, Delhi.
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd., Singapore.
4. Chandra, Ravi (2003). Entrepreneurial Success: A Psychological Study. Sterling Publication Pvt. Ltd., New Delhi.
5. . Balaraju, Theduri (2004). Entrepreneurship Development: An Analytical Study. Akansha Publishing House, Uttam Nagar, New Delhi.
6. David, Otes (2004). A Guide to Entrepreneurship. Jaico Books Publishing House, Delhi.
7. Taneja (2004). Entrepreneurship. Galgotia Publishers

BCM 506: FINANCIAL MARKETS AND SERVICES

Objective: To familiarize the students with the traditional and modern financial and services.

UNIT I

Financial Markets: Meaning, Functions and Types.

Money Market: Meaning, Characteristics, Structure, Participants, Growth of Indian Money Market, Components of Money Market, Call Money Market, Acceptance Market, Bills Market, Commercial Paper Market. Certificates of Deposits Market in India.

Capital Market: Nature and Role, Functions, Distinction between Money market and Capital Market, Primary Market, Secondary market, Operational Mechanism of Capital Market.

UNIT II

Financial Services: Meaning, Characteristics, Importance and Kinds of Financial services, Financial Services and Economic Environment, Players in Financial services. Merchant Banking: Concept, Evolution and Functions of Merchant banks.

Mutual Funds: Concept, Types, Advantages, Problems of Mutual Funds in India, Constitution and Management of Mutual Funds.

Exchange Traded Funds, Factoring.

Suggested readings

1.Financial Markets: A BeginnersôModule, Workbook from NSE
2. Mutual Fund: A BeginnersôModule, Workbook from NSE
3. Gurusamy, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
4.. Saunders, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
5. Thummuluri, Siddaiah, Financial Services, 1st edition, Pearson Education.
6. Khan, Indian Financial Systems, 6th edition, Tata McGraw Hill

BCM 601: DIRECT TAX LAWS

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Deemed Incomes and Clubbing of Incomes (Aggregation of Incomes), Set-off and Carry Forward of Losses, Deductions to be made in Computing the Total Income, Rebate & Relief.

Assessment of Individual.

UNIT – II

Assessments of HUF, Association of Persons & Firm.

Income Tax Authorities, Procedure of Assessment (Practical aspects of Filing of Return to be stressed), Penalties, Deduction & Collection of Tax at Source, Advance Payment of Tax, Appeals & Revision.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Filing of return by an Individual, HUF & Firm.

2. Filling and Submission of TDS Form.

Suggested Readings:

1. StudentsôGuide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts ï Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax ï Dr. Garish Ahuja & Dr. Ravi Gupta (Bharat Publications, New Delhi)

BCM 602: FINANCIAL MANAGEMENT

Objective: The objective of the paper is to familiarize the students with Principles and Practices of Financial Management.

UNIT- I

Financial Management: Meaning, Scope and Objectives of Financial Management, Time Value of Money- Compounding Techniques and Discounting Techniques. Capital Budgeting, Evaluation of Projects (excluding Risk and Uncertainty, Implications of Normal, Initial and Terminal Depreciation and Balancing Charge). Cost of Capital: Determination of Cost of Capital, Components of Cost of Capital.

UNIT- II

Sources of Corporate Finance, SEBI Guidelines for Raising Corporate Finance. Capital Structure, Meaning, Types of Leverage, Determinants of Capital Structure. Theories of Capital Structure. Working Capital Management and Its Estimation (Excluding Cash, Receivable and Inventory Management). Dividend Policy- Relevance and Irrelevance Theories.

Reference books:

1. J C Van Horne, ñFinancial Management and Policyò, 12th Edition, New Delhi, Prentice Hall of India
2. J C Van Horne, J W Wachowicz, Jr. ñFundamentals of Financial Managementò 13th Edition, Prentice Hall of India
3. Prasanna Chandra, ñFinancial Managementô Tata McGraw Hill.
4. Khan and Jain, ñFinancial Management- Text and Problemsò 2nd Edition, Tata McGraw Hillô
5. R A Brealey and S C Myers, ñPrinciples of Corporate Financeò, Tata McGraw Hill, 7th Edition
6. I M Pandey, ñFinancial Managementò, Vikas Publishing House, 9th Edition

BCM 603: ISSUES IN FINANCIAL REPORTING

Objectives: The main objective of this subject is to provide knowledge to the students about developments in financial reporting, and understanding of reporting issues at the national and international level.

Unit I

Financial reporting: Nature and Objectives, Benefits, Users of Financial Reports. General Purpose and Specific Purpose Report. Qualitative Characteristics of Accounting Information.

Conceptual Framework of Financial Reporting: FASB and IASB

International Financial Reporting Standards (IFRS): Role of IASB, Arguments for Global Conversion. Achievements of IASB and Obstacles in Conversion. Required Disclosures as per IFRS.

Unit II

Issues in Corporate Financial Reporting - Accounting for Changing Price Level, Social Reporting, Human Resource Accounting.

Indian Accounting Standard with reference to Segment Reporting, Interim Reporting, Leases and Intangible Assets.

Difference between IFRS and Indian Accounting Standards. US GAAP.

Recent Trends in Financial Reporting in the Indian context

Suggested Readings:

1. E.S. Hendriksen, Accounting Theory, Richard D. Irwin.

2. M.W.E. Glautier and B. Underdown, Accounting Theory and Practice.

3. Ahmed Riahi Belkaoui, Accounting Theory, Thomson Learning.

4. Henry I- Wolk, Jere R. Francis and Michael G- Tearney, Accounting Theory: A Conceptual and Institutional Approach, South Western Publishing Co.

5. Robert Bloom and Pieter T. Elagers, Accounting Theory and Policy, Harcourt Brace Joranovich.

6. L.S. Porwal, Accounting Theory, McGraw Hill Education (India) Ltd.

7. Jawahar Lal, Accounting Theory and Practice, Himalaya Publishing House, New Delhi.

BCM604: SOCIAL AND BUSINESS ETHICS

Objectives: The course aims to educate that how the adoption of Business Ethics by organizations not only discourages corporate wrong-doing, but also contributes substantially in the achievement of corporate excellence.

Unit-I

Business Ethics, Definition, Nature, Purpose, Ethical Issues in Management, Causes of Unethical Behaviour, Ethical Abuse-Values, Morals and Business Ethics-Levels of Business Ethics, Myths of Business Ethics, Relationship between Value, Morals and Ethics., Conflict of Interest.
Ethics at Workplace: Individual in Organisation, Gender Issues, Harassment, Discrimination.
Ethics in Accounting &Finance, Marketing and Consumer Protection- Importance, Problems and Issues.

Unit –II

Whistle Blower Policies-Meaning, Importance and Issues.
Corporate Social Responsibility under Company Act 2013.
Ethical Issues in Corporate Governance.
Environmental Issues-Protection of Natural Environment, Prevention of Pollution, Depletion and Conservation of Natural resources.

Suggested Readings:

1. Chakraborty , S.K. : ,Foundations of management Work - Contributions from Indian Thought: Himalaya Publishing House Delhi
2. Griffiths , B. : Themarriage of East and West , colling London
3. Gandhi , M.K. : The Study of My Experience with Truth, Navjivan Publishing House , Ahmedabad
4. Velasquez , M.G. : Business Ethics 5. Sekhar , R.C. : Ethical Choices in Business .

BCM 605: OPERATIONAL RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operational Researchð Meaning, Significance and Scope. Introduction to Linear Programming, Formulation of Linear Programmingð Problem, Graphical Method, Simplex Method. Duality in Linear Programming, Definition of Dual Problem, General Rules in Converting any Primal into its Dual, Transportation Problem, Assignment Problem.

UNIT-II

Decision Theory: Decision Making under Uncertainty and Risk, Decision Trees. Replacement Problem (Individual and Group replacement Problems both). Games Theory : Two Persons Zero Sum Games, Pure Strategies, Mixed Strategies. Simulation; Meaning, Process, Advantages, Limitations and Applications.

Practical Work :

Use of Linear Programming in Industry.

Suggested Readings:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

BCM 606: SECTORAL ASPECTS OF INDIAN ECONOMY

Objectives: This course will provide insight into the various sectoral aspects of indian economy

Unit – I

i) Agriculture: Features, Agricultural Productivity and Income, Rural Indebtedness, Agricultural Marketing, Agricultural Finance and Agricultural Policy, New Development in Agriculture ï Contract Farming, Organic Farming and Corporate Farming.

ii) Industrial Development during the Planning Period, Industrial Policy of Govt. of India, National manufacturing policy, Small Scale and Cottage industries in India: Importance, problems and Govt. Policy, Large Scale Industries ï Iron & Steel, Cement and Petrochemicals.

Unit – II

i) Services Sector in India: Growth and Contribution of Services in India in Pre and Post Reform Period, Role and Problems of Public and Private Sector in India

ii) Problems of Indian Economy: Poverty, Unemployment, Inflation, Unequal distribution of Income and Wealth, Inter-State disparities in the Pattern of Development.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 ï Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy ï Problems and Prospects, Viking, New Delhi.
3. Nagraj, R.2006: Aspects of Indiaôs Economic Growth and Reforms, academic Foundations, New Delhi.
4. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
5. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
6. Dhar, P.K.: Indian Economy ï Its Growing Dimensions (Latest Edition), Kalyani Publishers
7. Economic Survey: Government of India, Latest Issue
8. Economic and Political Weekly: Various Issues

B.COM. (HONS.) 3rd SEMESTER

BCH 307: ACCOUNTING THEORY AND REPORTING PRACTICES

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding accounting theory.

UNIT-I

The History and Development of Accounting, Nature and Uses of Accounting, Traditional Approaches to the Formulation of An Accounting Theory, Regulatory Approach to the Formulation of An Accounting Theory; The Events, Behavioural and Human Information Processing Approach.

Unit –II

The Predictive and Positive Approaches to the Formulation of Accounting Theory, A Conceptual Framework for Financial Accounting and Reporting. The Structure of Accounting Theory, Alternatives Asset-Valuation and Income Determination Models.

Reference Books:

1. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
2. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
3. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting.
4. Elliott, B. & Elliott, J., Financial Accounting and Reporting. Harlow
5. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. S. Agarwal, Manual of Accounting Standards, Snow White.
8. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.

BCH 308: DEVELOPMENT ECONOMICS

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding economic development and growth.

UNIT-1

Concept of Economic Development, Distinction between Growth and Development, Various Traditional and Modern Criteria to Measure Development, Determinants of Development, Balanced vs. Unbalanced Growth,

Concept of Sustainable Development, Importance, Indices of Development,

Classical Theories of Development-Adam Smith, Karl Marks and Schumpeter, Rostowós Stages of Growth, Kaldor Model of Growth.

UNIT-II

Economic Development Since Independence, Indiaôs Five Years Plans- Objectives, Strategies, Achievements and Constraints,
Models in Economic Planning- Harrod-Domar Model, Mahalanobis Model,
Role of State and Capital Formation in Economic Development, Growth and Distribution Trends and Policies regarding Poverty; Inequality and Unemployment in India,

Reference Books:

1. Agarwala, A.N. and S.P. Singh, Economics of Underdevelopment, Oxford University Press, London.
2. Misra, S. K. and Puri, Economics of Development and Planning, Mumbai: Himalaya Publishers.
3. Meier, Gerald M. and James E. Rauch, Leading Issues in Economic Development, Oxford University Press, New Delhi.
4. Todaro, M.P., Economic Development in the Third World, Longman, New York.
5. Salvatore, D. and E. Dowling: Development Economics, Schaum's, Outline Series in Economics, McGraw Hill, New York.

BCH 309: ADVERTISING AND BRAND MANAGEMENT

Objective: The objective of the paper is to provide an understanding of the principles of advertising and brand management.

UNIT - I

Advertising: Introduction, Scope, Importance in Business : Role of Advertising in Social and Economic Development of India: Ethics in Indian Advertising. Advertising and Consumer Behaviour; Setting Advertising Objectives, DAGMAR; Determining Advertising Budgets; Advertising Planning and Strategy, Creative Strategy Development and Implementation. Role of Integrated Marketing Communication in the Marketing Programme; Process of Marketing Communication; Definition and Scope of Advertising Management; Determination of Target Audience. Media Planning: Setting Media Objectives; Developing Media Strategies, Evaluation of Different Media and Media Selection; Media Buying; Measuring Advertising Effectiveness.

UNIT – II

Brand-Concept: Nature and Importance of Brand; Brand vs. Generics, Brand Life Cycle, Brand Name and Brand Management; Brand Identity: Conceiving, Planning and Executing (Aaker Model), Brand Loyalty, Measures of Loyalty; Brand Equity: Concepts and Measures of Brand Equity-Cost, Price and Consumer Based Methods; Sustaining Brand Equity; Brand Personality: Definition of Brand Personality, Measures of Personality, Formulation of Brand Personality; Brand Image Vs Brand Personality. Brand Positioning: Concepts and Definitions, Repositioning, Celebrity Endorsement, Brand Extension; Differential Advantage: Strategies for Competitive Advantage, Brand Pyramid; Branding in different sectors; Role of Information in Brand Management; Role of e-Communities in Brand Management.

Reference Books:

1. Arens W.A. Contemporary Advertising, Tata Mc Graw Hill, New Delhi

2. Batra. R. Myers, J.G. and Aaker D.A., Advertising management, prentice hall of India, New Delhi

BCH 310: BANK MANAGEMENT

Objectives: The paper aims at acquainting the students, the concepts of Bank Management and relevant aspects.

UNIT – I

Banking Structure in India ï Banks and Regulatory Environment ï Analysis of Balance Sheet and Profit and Loss Account ï Financial Performance Analysis with Ratios ï RBI and its role on Bank Performance ï Banks and Risk Management, Types of Risks in Banking Industries ï Risk and Return ï Profitability ï Liquidity ï Solvency Trace off ï Project Appraisal ï Capital Adequacy Norms ï MIM ï Interest and Non ï Interest Income ï Lending Principles.

UNIT – II

NPA ï Provisions, Types, Impact on Profitability. Warning Signals ï NPA Management ï How to Overcome NPA ï Recent Measures by Regulatory Authority ï Debt Recovery Tribunal ï Provisions of Revenue Recovery Act ï Portfolio Management in Banks ï Allocation of Bank Funds ï Investment Avenues for Banks ï Asset Liability Management ï Models ï Importance ï SARFESI Act ï Information and Communication Technology and Bank Management.

Reference Books:

1. Donald,F., R. Gup Benten E., Kolari, J.W., *Commercial Banking The Management of Risk*, South Western Thomson Learning
2. Justin,P. and Padmalatha, S.,*Management of Banking and Financial Service*s, Pearson Education
3. Timothy,K.W. and MacDonald, *Bank Management*, The Dryden Press, Hascourt College Publisher

B.COM. (HONOURS) 4th SEMESTER

BCH407: CONTEMPORARY ISSUES IN ACCOUNTING

Objective: The paper aims at acquainting students with the contemporary issues in accounting.

UNIT – I

Role of International Accounting Standard Committee in Harmonisation of Divergent Accounting Practices.

Accounting for Human Resources.

Accounting for Price-Level Changes.

Accounting for Financial Instruments.

UNIT – II

Segment Reporting, Interim Reporting.

Forensic Accounting ï Introduction ï Historical Background, Essentials ï Role of Forensic Accountant ï Forensic Accounting in India.

Corporate Accountability Reporting- Basics of Sustainability Reporting- Social Reporting and Performance Reporting.

Accounting for Brand Equity ï Introduction, Types of Brands, Objectives ï Models, Environment Accounting.

Reference Books: -

1. L S Porwal. Tata McGraw-Hill Education, .
2. Hendriksen, Irwin Professional Publishing; 5 Sub edition, .
3. Accounting theory and practice / M.W.E. Glautier, B. Underdown Glautier, M. W.(Michel William Edgard).

BCH 408: INDUSTRIAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about concepts, theories and policies regarding industrial structure and growth.

Unit - I

Industrial Economics - Meaning, Scope, Need and Significance,

Pattern and Phases of Industrial Growth and Changes in Industrial Structure, Role of Industry in Economic Development,

Theories of Industrial Location- Weber, Sargent Florence, Factors Influencing Location of Industries, Localization and Decentralization on Industriesm, Industrial Productivity and Efficiency, Measures Required for Improving Productivity and Efficiency

Unit - II

Role of Industrialization in Economic Development, Factors for and Against Industrial Development, Problems of Industrialization in Developing Countries,

Industrial Finance in India- Scope, Importance and Sources, Industrial Growth in India during Plans, Impact of Economic Reforms on India's Industrial Growth,

Indiaôs Industrial Policies, Role and Performance of Public Sector Enterprises, Privatization of Public Sector Undertakings in India,

Performance and Problems of Micro, Small, Medium Enterprises in India

Reference Books:

1. Ahluwalia I.J., ôIndustrial Growth in India,ô Oxford University Press, New Delhi Barthwal R.R., ôIndustrial Economics,ô Wiley Eastern Ltd., New Delh
2. Cherunilam, F. ,ôIndustrial Economics: Indian Perspectiveô, Himalaya Publishing House, Mumbai.
3. Desai, B. , ôIndustrial Economics in India,ô Himalaya Publishing House, Mumbai
4. Hay, D. and D.J. Morries , Industrial Economy; Theory and Evidence, Oxford University Press, New Delhi
5. Kuchhal, S.C.,ôIndustrial Economy of India,ô Chaitanya Publishing House, Allahabad
6. Thakur, Srinivas V. , ôIndustrialization and Economic Developmentô Popular Parkashan, Mumbai

BCH 409 : CONSUMER BEHAVIOUR

Objective: The paper aims at enabling students to understand the process of consumer behaviour, the various external and internal factors that influence consumer behaviour and to apply the concept to the development of marketing strategy.

UNIT- I

Introduction to Consumer Behavior: Scope and Relevance of Consumer Behavior Studies; Buying Decision Process; Basic Model of Consumer Behavior; Problem Recognition ï Methods of Problem Solving; Information Search, Alternative Evaluation and Selection, Outlet Selection and Purchase, Post Purchase Behavior and Customer Satisfaction, Role of Involvement. Individual Determinants of Consumer Behaviour: Role of Motivation; Personality and Self Concept; Attention and Perception; Consumer Learning; Consumer Attitudes ï Formation and Change; Consumer Values and Lifestyles. External Determinants of Consumer Behavior: Influence of Culture and Subculture; Social Class; Reference Groups and Family Influences; Diffusion of Innovations.

UNIT- II

Consumer Decision Process: Problem Recognition; Search and Evaluation of Alternatives; Purchase Process; Post Purchase Behaviour and Cognitive Dissonance. Models of Consumer Behaviour; Researching Consumer Behaviour; Online Customer Behaviour. Diversity of Consumer Behaviour; Role of Consumer Behaviour in Marketing Strategy.

Reference Books:

1. Schiffman L.G. and Kanuk L.L., Consumer Behaviour, 9th Edition, Prentice Hall of India, New Delhi
2. Assel Henry, Consumer Behaviour, Biztantra, New Delhi.
3. Hawkins, D. I. & Roger, J. B. and Kenneth, A.C. . Consumer Behaviour-Building
4. Satish Batra & S. H. H. Kazmi: Consumer Behavior Text & Cases (Excel)

BCH 410: BANK LEGISLATION

Objective: The paper aims to acquire knowledge about the legal & regulatory framework of the banking system and the various laws and enactments.

UNIT –I

Evolution of Banking Laws in India- Provisions of Banking Regulation Act, 1949 ï Its Amendments. Reserve Bank of India Act, 1934 ï Role and Functions of RBI-Credit Control Techniques- Indian Evidence Act- Negotiable Instruments Act 1881. Payments and Settlements Systems Act 2007 and Amendments.

UNIT-II

Special Features of Recovery of Debts due to Banks and Financial Institutions Act, 1993, The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002, Grievance Mechanism and Banking Ombudsman- Lok-Adalats- Banking Codes and Standard Boards Board- Debts Recovery Tribunals.

Reference Books:

1. Banking Regulation Act, 1949.
2. RBI, Act, 1934.
3. J.N. Jain and R.K. Jain: Modern Banking and Insurance, Deep and Deep Publications.
4. R.K. Mittal, A.K. Sahni and Sanjay Dhingra: Emerging Trends in the Banking Sector, Macmillan.
5. Arundeep Singh and N.S. Toor: Legal and Regulatory Aspects of Banking, Skylark Publications.
6. John C. Hull: Risk Management and Financial Institutions, Pearson Education.

B.COM. HONOURS
5th Semester

BCH 507: STRATEGIC FINANCIAL MANAGEMENT

OBJECTIVE: This Course aims at enabling the students to understand various financial management concepts and to apply financial management theories and techniques for strategic decision making and informed analysis. It aims at enabling students to manage basic corporate finance transactions besides investing more profitably and operate more efficiently.

.UNIT-I

Introduction to Strategic Financial Management. Interface of Financial Policy and Strategic Management. Significant references for Strategic Financial Management. Strategic Business Unit. Financing Choices and Decisions: Differences in Financing of Venture Firm, Mature Companies and Firms in High Growth Stage, Deal Structuring and Pricing, IPOs and their Under-pricing. Asset -stripping. Investment Appraisal Techniques, Capital Rationing, Impact of Inflation on Capital Budgeting Decisions.

UNIT-II

Financial aspects of Corporate Restructuring. Monitoring the Restructuring Process. Leveraged Buyouts (LBOs), Management Buyouts (MBOs), Spin Offs and Asset Divestitures Financial Engineering. Financial Innovation: Relevance, Drivers and Implications. Ethical Aspects of Strategic Financial Management. Financial Aspects of Supply Chain Management and Distribution Chain Management. Innovative Approach to Internal Cost-Profit Analysis. Valuation of a Business Enterprise.

Suggested Readings:

1. Allen, D: An Introduction to Strategic Financial Management, CIMA/Kogan Page, London.
2. Brealey, Richard A. and Myers, Stewart C, Principles of Corporate Finance, Tata McGraw Hill.
3. Chandra, Prasanna: Financial Management, Tata McGraw Hill, Delhi.
4. Damodaran, Aswath, Valuation, John Wiley & Sons.
5. Foster, George, Financial Statement Analysis, Pearson Education Hampton, Jone, Financial Decision Making, PHI, New Delhi.
6. Grinblatt, Mark and Titman, Sheridan, Financial Markets and Corporate Strategy, Tata McGraw Hill.
7. Jakhotiya,Dr.Girish: Strategic Financial Management, Vikas Publishing House Limited.
8. Kaplan, Robert S., and Cooper, Robin: Cost & effect: Using integrated cost systems to drive profitability and performance, Harvard Business Press.

BCH 508: Money and Banking

Objectives: This course exposes students to the theory and functioning of the monetary and banking sectors of the economy.

Unit –I

Money- Concept, Functions, Measures;
Fisherôs Transactions Approach to the Quantity Theory of Money; Cambridge Cash- Balances Approach;
Keynes Demand Theory of Money; Friedmanôs Theory of Demand for Money;
Theory of Money Supply- H- Theory of Money;
Inflation- Concept, Types, Demand-Pull inflation, Cost-Push Inflation, Philips Curve, Structural Inflation in the Less Developed Countries;

Unit-II

Bank- Meaning, Functions, Liabilities and Assets;
Commercial banks; Co-operative banks; Development banks; Non-Bank Financial Intermediaries (NBFIs); Unregulated Credit Markets;
Reserve Bank of India- Goals, Current Monetary Policy;
Banking Sector Reforms in India

Suggested Readings:

1. Suraj B. Gupta, Monetary Economics: Institutions, Theory and Policy, S. Chand & Company Ltd.
2. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
3. Michael R. Baye and Dennis W. Jansen, Money, Banking, and Financial Markets: An Economics Approach, Houghton Mifflin Company, U.S.A.
4. F.S. Mishkin, The Economics of Money Banking and Financial Markets Business School Edition, Pearson India.
5. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill,
6. L. M. Bhole, Collected Papers on Money, Interest and Monetary Policy, Amani International Publishers.
7. Economic Survey, Ministry of Finance, Government of India, Latest edition
8. www.rbi.org.in

BCH 509: COMPENSATION MANAGEMENT

Objective: To enable the students to design and administer a compensation system that rewards employees fairly while satisfying customer demands and permitting the organization to operate profitably.

Unit I

Compensation Management - Concept, Principles and Practices; Theories of Compensation; Compensation in a Knowledge Based World. Foundations of Compensation - Performance Evaluation, Job Evaluation - Job Grading and Job Design; Executive Compensation. Compensation and Organizational Strategy- Monetary and Non-Monetary Rewards; Fringe Benefits, Developing Strategic Compensation Alternatives; Challenges of Compensation Design and Compensation Policies in India.

Unit II

Components of Compensation -Basic Pay, D.A., Incentives Plans, Profit Sharing Schemes, Provident fund, Gratuity and Pension. Payroll Accounting -Tax planning, Tax Efficient Compensation Package. International Compensation Management - Components and Approaches .Compensation Laws- Payment of Wages Act, Payment of Gratuity Act, Employees State Insurance Act, and Workmenôs Compensation Act.

Suggested Readings:

1. Venkataratnam, C.S., and B. K. Srivastava,óPersonnel Management and Human Resourcesô, Tata McGraw Hill.
2. Thomas, J. Bergman, V.G. Scarpllo and F.S. Hills.óCompensation Decision Makingô, Dryden Press.
3. Dunn, J.D. and F. M. Rachal, óWage and Salary Administration: Total Compensation Systemô, McGraw Hill, New York.
4. Armstrong, M. and HellenMurlis,óReward Management-A handbook of Remuneration Strategyô.
5. Henderson, Richard I., óCompensation Management in a Knowledge Based worldô, Pearson Education.
6. Bhattacharya, Mousumi S. and Sengupta, Nilanjai, óCompensation Managementô, Excel Books.

BCH 510: Electronic Banking and Risk Management

Objective: To provide an understanding and an appreciation of Electronic Banking and of Risk Management in order to enable the optimum strategy for the handling of risk in banks.

Unit-I

Electronic Bankingï Core Banking ï Electronic Products, On line Banking ï Facilities provided and Security Issues, Cheque Truncation, Microfiche, Phone and Mobile Banking Electronic Funds Transfer Systems ï Plain Messages (Telex or Data Communication) ï Structured Messages (SWIFT, etc...) ï RTGS, NEFT, Information Technology ï Current Trends ï Bank Net, RBI Net, Data Net, Nicnet, Iï net, Eï mail, etc.ï Role and Uses of Technology Up-gradation ï Global Developments in Banking Technology Impact of Technology on Banks ï Effect on Customers and Service Quality ï Computer Audit ï Information System Audit.

Unit-II

Risk Management: Types of Risks in BANKS, Risk Management Framework in Banks: Enterprise ï wide Risk Management in Banks; Elements of Risk Management Framework; Systematic Risk Management in Banks; Different Measures of Measuring Risks; Risk Management ï Process and Techniques for Assessment and Management. Assetï liability Management in Banks, Role of RBI. Information System Security and Disaster Management.

Suggested Readings:

1. Marrison, Christopher Ian, ñThe fundamentals of risk measurementò, New York: McGrw Hill.

2. Marshall, Christopher Lee, ñMeasuring and Managing Operational Risks in Financial Institutions: Tools, Techniques, and Other Resourcesò, Singapore, New York: John Wiley.

3. MacDonald and Koch, ñManagement of Bankingò, Thomson, London.

4. Bidani, S.N., ñBanking Risksò, Vision Books. 5. Joshi, V.C. and Joshi, V.V., ñManaging Indian Banksò, Sage Publications.88

B.COM. (HONOURS)

6th Semester

BCH607: INVESTMENT MANAGEMENT

Objective and expected outcome of the course: This course provides a broad overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general. It aims at enabling the students to get theoretical and practical background in the field of investments, financial markets, valuation of investment and different investment strategies. Students will know the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.

Unit - I

Introduction to Investment Management

Financial System in India ï Money Market, Capital Market, Debt Market, Need for correlating these ï Bullion Market and Foreign Exchange Market.

Organization and Functioning of Securities Markets in India ï Nature and Function, Organizational Structure, Role and Function of Primary Market and Secondary Markets, Type of Market Transactions based upon ï Long and Short Orders, Size of Order, Price Limit of Orders, Time limit of orders, Special type of orders and order execution. Margin Trading.

Valuation of Securities ï Valuation of Bonds, Valuation of Debentures, Valuation of Preference Shares, Valuation of Equity Shares and Share Valuation: CAPM Model.

UNIT - II

Market Indices ï Concept, Method of Computing Indiaôs Leading Stock Indices, Overview of various Benchmark Indices, Market capitalization Indices, Sectoral Indices and Broad market Indices.

Security Credit Rating ï Introduction, Factors Affecting Assigned Ratings, Credit Rating Agencies in India, Functions, Approaches and Framework Used and Business Models, Benefits of Credit Rating, Regulatory Concerns.

Risk Management Through Derivatives – Introduction to Derivatives Market and Securities, Forward and Future Contracts ï Overview, Hedging, Optimal Hedge Ratio, Valuation, Application and Strategies. Options ï Overview, Valuation Models and Strategies. Swaps.

Investing in Alternative Asset Classes - Hedge Funds, Characteristics of a Hedge Fund, Hedge Fund Strategies, Risk Arbitrage Investing, Hedge Fund Performance, Private Equity and Venture Capital.

Suggested Readings:

1. Babu.Dr.G.Ramesh, Portfolio Management including Security Analysis,Concept Publishing Company.

2. Dr.Raganatham M&Madhumathi R. Investment analysis Portfolio management. Person Education, New Delhi.

3. Dr.BhallaV.K.Investment Management, S.Chand and Company, New Delhi.

4. Fisher & Jordan, Security analysis and portfolio management, Prentice Hall of India, New Delhi.

5. Rustagi R.P, Investments Analysis and Portfolio management, Sultan Chand & Sons, New Delhi.

6. Sharpe, William and Gordon, Investments ï Prentice hall of India, New Delhi.

BCH 608: INTERNATIONAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about International Economics.

Unit-I

Adam Smithôs Absolute Advantage Theory; Ricardoôs Comparative Advantage Theory; Heckscher-Ohlin Theory of Trade; Terms of Trade

Free Trade vs Protection, Rationale of Protection Policy in Developing Countries, Barrier Tarriffs, Quotas to Trade.

Unit-II

Balance of Payments: Definitions and Concepts- Balance of Trade, Balance of Payments on Current Account, Balance of Payments on Capital Account, Autonomous and Accommodating Capital Flows; Causes and Measures to Correct the Disequilibrium

Exchange Rate: Meaning and Its determination; Fixed vs Flexible Exchange Rate, Theories of Exchange Rate: BoPs Theory, PPP Theory.

Suggested Readings:

1. H.G. Mannur, International Economics, Vikas Publishing House Pvt Ltd.
2. Bo Sodersten, International Economics, Macmillan Publishers Ltd.
3. Bo Sodersten and Geoffrey Reed, International Economics, St. Martinôs Press.
4. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
5. Dominic Salvatore, International Economics, John Wiley and Sons Inc.
6. Economic Survey, Ministry of Finance, Government of India, Latest edition.

BCH 609: TRAINING & DEVELOPMENT

Objectives: This Course aims at educating students regarding the concept of training and development in an organization.

UNIT – I

Introduction to Training Concept: Definition, Meaning, Need For Training, Importance Of Training, Objectives Of Training, Process Of Training: Steps In Training

Concept of Training Need; Identification of Training Need, Methods of Training and Techniques of Training, On the Job, Off the Job, Lecture, Role Play , Case Study, Vestibule Training, Simulation Techniques, in Basket Exercise, Syndicate Method, T- Group Training, Psychological Lab, Business Game, Activity Based Training, Programme Instruction Training, Choosing the Right Training Techniques.

UNIT – II

Designing Training and Development Programs: Organisation of Training and Development Programs, Training Design, Kinds of Training and Development Programs- Competence Based and Role Based Training; Orientation and Socialization

Evaluation of Training and Development Effectiveness: Reasons for Evaluating Training and Development Programs, Problems in Evaluation; Methods of Evaluating Effectiveness of Training Efforts.

Suggested Readings:

1. Prior, John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Noe, Raymond A., and Amitabh Deo Kodwani, Employee Training and Development, Tata McGraw Hill.
3. Blanchard, P. N. & Thacker, W. J. (1998). Effective Training: Systems, Strategies and Practices. Prentice Hall, New Jersey.
4. Raymond Noe, A. (2005). Employees Training and Developmentò, McGraw Hill Publication.
5. Bhatia, S.K ñTraining And Developmentò.

BCH 610: BANK MARKETING

Objective: The paper aims at acquainting the students application of marketing functions in banks, being directed at providing services to satisfy customers financial (and other related) needs and wants, more effectively and efficiently.

UNIT–I

Introduction of Marketing and Key Conceptsï Definition Marketing and Market, Four Elements in Marketing Mix and Their inter-relationship. Marketing Planningï Micro and Macro Factors influencing the Market for an Organisation, Bank Marketing and Marketing Mix, Bank Distribution. The art of Customer Service as Applied to Banking. Customer Behaviour in Banking, Banking Consumer and Market Segmentationï Mass Marketing, Multiple Marketing, Steps in Strategy Formulation, Marketing Research in Bankingï Types of Dataï Primary and Secondary, Uses of Marketing Research. Relationship Marketing in Banking, Competitive Analysis in Banking.

UNIT–II

Bankôs Product Strategyï Core, Value Added, Fundamental and Augmented Products, Product Item and Product Line , Difference between Product and Service , The Concept of Product/Service Delivery in Banking, Pricing Strategies and Its Applications in Bankingï ï Elasticity of Demand , Break Even Analysis, Different Types of Products and Key Variables Banking Promotion Strategyï The Communication Process, Goals of Communication, Steps in Developing Effective Communication, Selling and Organising for Sales and Selling to Corporate Clientsï Meaning of Corporate Clients, Relationship and Transaction Banking, Bank Organisation for large Corporate Clients, International Bank Marketing.

Suggested Readings:

1. Chacko, Oommen and Grewal, Rajendra, ñMarketing of Banking Servicesò.
MacMillan India Ltd
2. Bank Marketing Association, ñBank Marketingò, The Association
3. Reidenbach, R. Eric and Pitts, Robert E, ñEffective bank marketing: issues, Techniques and Applicationsò,1987, Bank Administration Institute.

DEPARTMENT OF PHYSICAL EDUCATION

FACULTY OF EDUCATION
(PANJAB UNIVERSITY CHANDIGARH)

SYLLABUS FOR
BACHELOR OF PHYSICAL EDUCATION (B.P.Ed)
Two Year (SEMESTER SYSTEM)

SESSION: 2016-2017

PREAMBLE:

The Bachelor of Physical Education (B.P.Ed) – Two Years (Four Semesters) Programme is meant for preparing quality teacher in Physical Education for Secondary Schools.

VISION

In line with the University mission, the Department has the aim of educating the "whole-person" and to produce quality teachers to serve as administrators in the profession of physical education and sports. Through improving our academic programme and services to the University and local community, we pledge to continually strive for academic excellence and to maintain our leadership role in our profession.

MISSION

1. To produce quality physical education teachers for imparting instructions in the subject of physical education.
2. To make people aware about the benefits of physical activity through extension lectures and demonstrations.
3. To provide excellent research and teaching in Physical Education in order to promote and develop the health and well being of people.
4. To promote health through specific physical activities, prescribed by a specialized physical educationalist.
5. To collaborate with the different organizations which are involved in promoting the quality life of the human beings i.e., educational institutions and NGOs.
6. To provide harmonious and stimulated academic environment for the promotion of quality teaching and research in the department.
7. To provide opportunity to faculty and students of the department for their self evaluations, accountability, autonomy and innovations in the area of physical education and sports.
8. To concentrate on quality research in the area of health, physical education and sports.
9. To introduce consultancy and training programmes for different educational institutions and other organizations for the conduct of sports and fitness events.
10. To update the curriculum and syllabi as per global needs and challenges.

OBJECTIVES:

This programme shall strive to achieve the following objectives:

General Objectives:

1. To enable teacher to understand the nature, purpose and philosophy of physical education at secondary stage.
2. To prepare teachers of physical education with broader educational perspective.
3. To develop for potentialities and organizing physical education programmes and activities.
4. To develop capacity to organized leisure and recreational activities.
5. To empower them to inspire their students to actively participate in physical and yogic exercises.
6. To enable teachers to develop personality, character, willpower, democratic values and positive games and sports.
7. To make teachers capable of imparting basic knowledge about health, hygiene and nutrition
8. To develop skills and competencies to organized school and community games and sports.
9. To cultivate the spirit of sportsmanship, mental and physical alertness, scientific temper and optimism.
10. To promote mental health, power of self- decision and self control, correct judgment and action emotional stability and equanimity, respect for others and acceptance of authority and rules
11. To promote appreciation and interest for indigenous games , sports and yogic exercises
12. To create awareness about health and hygiene in the community.

Specific Objectives

1. To lay down a sound foundation for higher and advance studies in Physical Education in India.
2. To produce quality teachers in physical education.
3. To prepare students for advance coaching Diplomas in disciplines – Athletics, Gymnastics, Hockey, Swimming, Basketball, Football etc.
4. To fulfill the eligibility criteria of Foreign Universities to get admission in post graduate courses abroad since it is a basic and global programme.
5. To generate employment in the fields of Health Fitness and Gym- Management, Physiotherapy, Journalism, Aquatics and Yoga.
6. To provide opportunity to talented students to excel in sports and become outstanding sports persons.
7. To promote mass participation in Physical Education activities (Games, Sports Displays etc) through intra – mural and Extra- mural programmes.

OUTLINES OF TESTS, SYLLABI AND COURSES FOR THE BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.) EXAMINATION (SEMESTER SYSTEM) FOR THE SESSION: 2015-2016

The course of instruction for the B.P.Ed Examination consists of three parts as under:

PART – I	Theory Papers	1600 Marks
PART – II	Practical Course (Skill and Prowess)	800 Marks
PART – III	Practice of Teaching	800 Marks
		Total: 3200

Marks

Note I:

- *Part-I will be evaluated externally.*
- *Part-II will be evaluated by a panel of three internal examiners appointed by the Chairman/Principal of the Department/Institution.*
- *Part-III will be evaluated with one external and one internal examiner.*

Successful candidate shall be classified as follows:

	Pass	Third Division	Second Division	First Division	Distinction
Part-I: Theory	35%	Less than 50% marks in Aggregate	50%	60%	75%
Part-II: Practical Course (Skill and Prowess)	40%	Less than 50% marks in Aggregate	50%	60%	75%
Part-III: Practice of Teaching	40%	Less than 50% marks in Aggregate	50%	60%	75%

Note: Since this is a professional course aimed at improving the standard of games and sports, it is essential that special attention be given to the practical aspect of Track and Field, Games and Sports. Therefore, specified 20 hours per week must be devoted to the practical teaching.

SEMESTER-I
PART–I: THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
I.	CC-101	History, Principles and Foundation of Physical Education	68	4	20	80	100
II.	CC-102	Anatomy and Physiology	68	4	20	80	100
III.	CC-103	Educational Technology and Methods of Teaching in Physical Education	68	4	20	80	100
Elective Course (Any One)							
IV.	EC-101	Olympic Movement	68	4	20	80	100
	EC-102	Officiating and Coaching					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-101	Track and Field (Sprints, Shot-Put, Long Jump, Relays)	68	4	40	-	40
	PC-102	Swimming, Gymnastics	68	4	20+20	-	40
	PC-103	Calisthenics, Dumb-bells, Opening and Closing Ceremonies of Sports Events	68	4	40	-	40
	PC-104	Basketball, Football, Kabaddi, Kho-Kho	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
.	PT-101	Movement Lesson (A) Action Song (B) Motion Story	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons in the movement lesson, preferably in primary schools. The candidate shall prepare a note book covering action song and motion story lessons which shall carry (20+20) 40 marks.

Paper –I (CC-101)
HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT 1: INTRODUCTION
- Meaning, Definition and Scope of Physical Education
- Aims and Objective of Physical Education
- Importance of Physical Education in present era.
- Misconceptions about Physical Education.
- Relationship of Physical Education with General Education.
- Physical Education as an Art and Science.

UNIT- 2 HISTORICAL DEVELOPMENT OF PHYSICAL EDUCATION IN INDIA
- Indus Valley Civilization Period. (3250 BC 2500 BC)
- Vedic Period (2500 BC 600 BC)
- Early Hindu Period (600 BC 320 AD) and Later Hindu Period (320 AD 1000 AD)
- British Period (Before 1947)
- Physical Education in India (After 1947)
- Y.M.C.A. and its contributions.

UNIT- 3 FOUNDATION OF PHYSICAL EDUCATION
- Philosophical foundation:
  - Idealism
  - Pragmatism
  - Naturalism
  - Realism
  - Humanism and Existentialism
- Fitness and wellness movement in the contemporary perspectives
- Sports for all and its role in the maintenance and promotion of fitness.

UNIT-4 PRINCIPLES OF PHYSICAL EDUCATION
- Biological
  - Growth and development
  - Age and gender characteristics
  - Body Types
  - Anthropometric differences
- Psychological
  - Learning types, learning curve
  - Laws and principles of learning
  - Attitude, interest, emotions and sentiments
- Sociological
  - Society and culture
  - Leadership
  - Social integration and cohesiveness

REFERENCES:

1. Barow, H.M. (1971). *Man and His Movement*-Principles of Physical Education, Philadelphia, Lea and Febiger.
2. Bucher, C.A. (1972). *Foundations of Physical Education*, St. Louis; C.V. Mosby Co.
3. Kamlesh, M.L. (2004). *Principles and History of Physical Education and Sports,* Friends Publications (India), New Delhi.
4. Mohan, V. M. (1969). Principles of physical education. Delhi: Metropolitan Book Depot
5. Khan, E.A. (1964). *History of Physical Education,* Scientific Book Company. Patna.
6. Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
7. Obertuffer (1970). Delbert physical education. New York: Harper & Brothers Publisher.
8. Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
9. William, J. F. (1964). The principles of physical education. Philadelphia: W.B. Saunders Co.

Paper –II (CC-102)
ANATOMY AND PHYSIOLOGY

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: ANATOMY AND PHYSIOLOGY

- Introduction of Anatomy and physiology and its importance in the field of physical education and sports.
- Introduction of Cell and Tissue.
- The arrangement of the skeleton Function - of the skeleton Ribs and Vertebral column and the extremities.
- Joints of the body and their types
- Gender differences in the skeleton.

UNIT-II: SYSTEMS OF HUMAN BODY

- **Blood and circulatory system:** Constituents of blood and their function Blood groups and blood transfusion, clotting of blood, the structure of the heart-properties of the heart muscle, circulation of blood, cardiac cycle, blood pressure, Cardiac output.
- **The Respiratory system:** The Respiratory passage the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.
- **The Digestive system:** structure and functions of the digestive system, Digestive organs, Metabolism,
- **Excretory system:** Structure and functions of the kidneys and the skin.
- **The Endocrine glands:** Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.
- **Nervous systems:** Function of the Autonomic nervous system and Central nervous system. Reflex Action,

UNIT-III: NEUROMUSCULAR JUNCTIONS

- Muscles: Types of muscles, Properties and functions.
- Neuromuscular junction
- Fuel for muscular activity
- Role of oxygen- oxygen debt, second wind, vital capacity.
- Fatigue: Meaning and sites of fatigue.

UNIT-IV: EFFECTS OF EXERCISE ON VARIOUS SYSTEMS

- Effect of exercise and training on cardiovascular system.
- Effect of exercise and training on respiratory system.
- Effect of exercise and training on muscular system
- Physiological concept of physical fitness, warming up, conditioning.

REFERENCES:

1. Gupta, A. P. (2010). Anatomy *and physiology.* Agra: SumitPrakashan.
2. Hoeger, Werner W.K, Hoegen,Sharon A. (2004). Principles and Labs for fitness and wellness.
3. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication,1982.
4. Moorthy, A. M. (2014). *Anatomy physiology and health education.*Karaikudi: Madalayam Publications.
5. Pearce. E. (1989). Anatomy and Physiology for Nurses, Delhi, Oxford University Press.
6. Richardson, Seano, Anderson, Mark B. (2008). Overtraining Athletes: Personal Journey in Sports.
7. Wilmore, Jack H and Costill, David L. (1994).Physiology of Sports and Exercise. Human Kinetics.

Paper –III (CC-103)
EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION

- Education and Education Technology: Meaning and Definitions.
- Types of Education: Formal, Informal and Non- Formal education.
- Teaching: Meaning and Principles of teaching.
- Importance of technological devices used for imparting knowledge.

UNIT II TEACHING METHODS AND PRESENTATION TECHNIQUES

- Teaching Methods: Lecture method, Command method, Demonstration method, Imitation method, project method, Whole method, Whole- part- whole method, Part method, , At will method etc.
- Factors affecting teaching methods.
- Presentation Techniques: Personal and technical preparation, Steps of presentation.
- Types of class formations and Methods of classification of students.

UNIT III TEACHING AIDS

- Teaching Aids: Meaning, Importance, types of teaching aids.
- Criteria for selecting teaching aids.
- Team Teaching: Meaning, Principles and advantage of team teaching.
- Difference between Teaching Methods and Teaching Aid.

UNIT IV LESSON PLANNING AND TEACHING INNOVATIONS

- Lesson Planning: Meaning, Importance and Types
- Principles of lesson plans.
- Micro Teaching: Meaning, steps of micro teaching, advantages and principles
- Simulation Teaching: Meaning, Types and steps of simulation teaching.

REFERENCES:

1. Bhardwaj (2003).A *New media of educational planning*.New Delhi:Sarup of Sons.
2. Brar, R.S & Kanwar,S., (2008). Teaching Methodology and Education Technology in Physical Education, Kalyani Publisher, New Delhi.
3. Kochar, S.K. (2014). *Methods and techniques of teaching.* New Delhi: Sterling Publishers.
4. M.L. Kamlesh & Sangral, M..S., (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
5. Walia, J.S. (1999). *Principles and methods of education.*Jullandhar:Paul Publishers.

Paper –IV (EC-101)
OLYMPIC MOVEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I ORIGIN OF OLYMPIC MOVEMENT
- Philosophy of Olympic movement
- The early history of the Olympic movement
- The significant stages in the development of the modern Olympic movement
- Educational and cultural values of Olympic movement

UNIT IIMODERN OLYMPIC GAMES
- Significance of Olympic Ideals, Olympic Rings, Olympic Flag
- Olympic Protocol for member countries
- Olympic Code of Ethics
- Olympism in action
- Sports for All

UNIT III DIFFERENT OLYMPIC GAMES
- Para Olympic Games
- Summer Olympics
- Winter Olympics
- Youth Olympic Games

UNIT IV COMMITTEES OF OLYMPIC GAMES
- International Olympic Committee - Structure and Functions
- National Olympic committees and their role in Olympic movement
- Olympic commission and their functions
- Olympic medal winners of India

REFERENCES:
1. Osborne, M. P. (2004). *Magictree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York:* Random House Books for Young Readers.
2. Burbank, J. M., Andranovich, G. D. &Heying Boulder, C. H. (2001).Olympic dreams: the impact of mega-events on local politics: Lynne Rienner.

Paper –IV (EC-102)
OFFICIATING AND COACHING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION OF OFFICIATING AND COACHING
- Concept of officiating and coaching
- Importance and principles of officiating
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

UNIT- II: COACH AS A MENTOR
- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching

UNIT- III: DUTIES OF OFFICIAL
- Duties of official in general, pre, during and post game.
- Philosophy of officiating
- Mechanics of officiating position, singles and movement etc.
- Ethics of officiating

UNIT- IV: QUALITIES AND QUALIFICATIONS OF COACH AND OFFICIAL
- Qualities and qualification of coach and official
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments, preparation of TA, DA bills
- Integrity and values of sports

REFERENCES:
1. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
2. Dyson, G. H. (1963).*The mechanics of athletics*. London: University of London Press Ltd.
3. Singer, R. N. (1972).*Coaching, athletic & psychology*. New York: M.C. Graw Hill.
4. Brar. T. S. (2002). Officiating techniques in Track and Field, Gwalior. Bhargava Press.
5. De Souza A. J. (1999).Track Geography and Field Sites. Chennai. DBAC Sports Envisions.
6. Mortensen, J. and Cooper J. M. (1963). Track & Field for coach & athlete,. Prentice Hall Inc., Englewood Cliffs.

SEMESTER-II
PART – I THEORY PAPERS

Paper	Course Code	Subject	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
V.	CC-201	Yoga Education	68	4	20	80	100
VI.	CC-202	Health Education and Environmental Studies	68	4	20	80	100
VII.	CC-203	Organization and Administration	68	4	20	80	100
Elective Course (Any One)							
VIII.	EC-201	Contemporary issues in Physical Education, Fitness and Wellness	68	4	20	80	100
	EC-202	Sports Nutrition and Weight Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-201	Track and Field (Middle Distance Races, Hurdles, Discus Throw, High Jump)	68	4	40	-	40
	PC-202	Swimming, Gymnastics	68	4	20+20	-	40
	PC-203	Aerobics, Lezium, Indian Clubs,	68	4	40	-	40
	PC-204	Hockey, Volleyball, Handball, Softball,	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-201	(A) General Lesson (B) Theory Lesson	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (General and Theory Lessons), preferably in Secondary Schools. The candidate shall prepare a note book covering General and Theory Lessons which shall carry (20+20) 40 marks.

Paper –V (CC-201)
YOGA EDUCATION

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION
- Meaning and Definition of Yoga
- Aims and Objectives of Yoga
- Yoga in Early Upanisads
- The Yoga Sutra: General Consideration
- Need and Importance of Yoga in Physical Education and Sports

UNIT II: FOUNDATION OF YOGA
- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga

UNIT - III ASANAS
- Effect of Asanas and Pranayama on various system of the body
- Classification of asanas with special reference to physical education and sports
- Influences of relaxtive, meditative posture on various system of the body
- Types of Bandhas and mudras
- Type of kriyas

UNIT IV YOGA EDUCATION
- Basic, applied and action research in Yoga
- Difference between yogic practices and physical exercises
- Yoga education centers in India and abroad
- Competitions in Yogasanas

REFERENCES:
1. Brown, F. Y.,(2000). *How to use yoga*. Delhi:Sports Publication.
2. Gharote, M. L. & Ganguly, H.(1988). *Teaching methods for yogic practices*. Lonawala: Kaixydahmoe.
3. Rajjan, S. M. (1985). *Yoga strengthening of relaxation for sports man.* New Delhi: Allied Publishers.
4. Shankar,G. (1998) *Holistic approach of yoga.* New Delhi:Aditya Publishers.
5. Shekar,K. C., (2003).*Yoga for health*. Delhi: Khel Sahitya Kendra.

Paper –VI (CC-202)
HEALTH EDUCATION AND ENVIRONMENT STUDIES

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

Unit I Health Education

- Concept, Dimensions, Spectrum and Determinants of Health
- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene

Unit II Health Problems in India

- Communicable and Non Communicable Diseases
- Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive Population,
- Personal and Environmental Hygiene for schools
- Objective of school health service, Role of health education in schools
- Health Services Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

Unit III Environmental Science

- Definition, Scope, Need and Importance of environmental studies.
- Concept of environmental education, Historical background of environmental education,
- Celebration of various days in relation with environment.
- Plastic recycling & probation of plastic bag / cover.
- Role of school in environmental conservation and sustainable development.

Unit IV Natural Resources and related environmental issues:

- Water resources, food resources and Land resources
- Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- Management of environment and Govt. policies , Role of pollution control board.

REFERENCES:

1. Agrawal, K.C. (2001). *Environmental biology*. Bikaner: Nidhi publishers Ltd.
2. Beotra, Alka (2001). Drug Education Handbook on Drug Abuse in Sports. Mumbai: Applied Nutrition Sciences.
3. Frank, H. &Walter, H. (1976). *Turners school health education*. Saint Louis: The C.V. Mosby Company.
4. Odum, E.P. (1971). *Fundamental of ecology*. U.S.A.: W.B. Saunders Co.
5. Pande, P. K. (1987). Outline of Sports Medicine, New Delhi : Jaypee Brothers.
6. Roy, Steven and Richard, Irvin (1983). Sports Medicine ,N.J. : Englewood Cliff.
7. Sharma, N.P.(2005). Sharir Rachna Tatha Sharir Kriya Vigyan . New Delhi : Khel Sahitya Kendra.

Paper –VII (CC-203)
ORGANIZATION AND ADMINISTRATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: ORGANIZATION AND ADMINISTRATION

- Meaning and importance of Organization and Administration in physical education.
- Qualification and Responsibilities of Physical Education teacher and pupil leader.
- Planning and their basic principles,
- Program planning: Meaning, Importance, Principles of program planning in physical education.
- Functions of Management: Planning, organizing, staffing, directing, communicating, co-ordination, controlling, evaluating and innovating.

UNIT II: OFFICE MANAGEMENT, RECORD, REGISTER & BUDGET

- Office Management: Meaning, definition, functions and kinds of office management
- Records and Registers: Maintenance of attendance Register, stock register, cash register, physical efficiency record, Medical examination Record.
- Budget: Meaning, Importance of Budget making,
- Criteria of a good Budget, Sources of Income, Expenditure, Preparation of Budget.

UNITIII: FACILITIES, & TIME-TABLE MANAGEMENT

- Facilities and equipment management: Types of facilities; Infrastructure-indoor, out door.
- Playfields: Area, Location, layout and care
- Equipment: Need, importance, purchase, care and maintenance.
- Time Table Management: Meaning, Need, Importance and Factor affecting time table.

UNITIV: COMPETITION ORGANIZATION

- Tournament and its importance.
- Types of Tournament and its organization structure - Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament, consolation tournaments and challenge Tournament.
- Organization structure of Athletic Meet.
- Sports Event Intramurals & Extramural Tournament planning.

REFERENCES:

1. Bucher, C. A. (1985). *Administration of Physical Education and Athletic programme.*St. Lolis: The C.V. Hosby Co.
2. M.L. Kamlesh and M.S. Sangral (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
3. Sharma, V.M. & Tiwari, R.H. (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
4. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press.
5. Tirunarayan and Hariharan (1985). Methods in Physical education M.S C.T. & S. H. Allagappa College of Physical Education, Karaikuddi U.

Paper –VIII (EC-201)
CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I CONCEPT OF PHYSICAL EDUCATION AND FITNESS
- Definition, Aims and Objectives of Physical Education, fitness and Wellness
- Importance and Scope of fitness and wellness
- Modern concept of Physical fitness and Wellness
- Physical Education and its Relevance in Inter Disciplinary Context.

UNIT II FITNESS, WELLNESS AND LIFESTYLE
- Fitness Types of Fitness and Components of Fitness
- Understanding of Wellness
- Modern Lifestyle and Hypo kinetic Diseases Prevention and Management
- Physical Activity and Health Benefits

UNIT III PRINCIPLES OF EXERCISE PROGRAM
- Means of Fitness development aerobic and anaerobic exercises
- Exercises and Heart rate Zones for various aerobic exercise intensities
- Concept of free weight Vs Machine, Sets and Repetition etc
- Concept of designing different fitness training program for different age group.

UNIT IV SAFETY EDUCATION AND FITNESS PROMOTION
- Health and Safety in Daily Life
- First Aid and Emergency Care
- Common Injuries and their Management

REFERENCES:
1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). Sport *medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G. (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

Paper –VIII (EC-202)
SPORTS NUTRITION AND WEIGHT MANAGEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS NUTRITION

- Meaning and Definition of Sports Nutrition
- Basic Nutrition guidelines
- Role of nutrition in sports
- Factor to consider for developing nutrition plan

UNIT II NUTRIENTS: INGESTION TO ENERGY METABOLISM

- Carbohydrates, Protein, Fat Meaning, classification and its function
- Role of carbohydrates, Fat and protein during exercise
- Vitamins, Minerals, Water Meaning, classification and its function
- Role of hydration during exercise, water balance, Nutrition daily caloric requirement and expenditure.

UNIT III NUTRITION AND WEIGHT MANAGEMENT

- Meaning of weight management Concept of weight management in modern era Factor affecting weight management and values of weight management
- Concept of BMI (Body mass index), Obesity and its hazard, Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss
- Obesity Definition, meaning and types of obesity,
- Health Risks Associated with Obesity, Obesity - Causes and Solutions for Overcoming Obesity.

UNIT IV STEPS OF PLANNING OF WEIGHT MANAGEMENT

- Nutrition Daily calorie intake and expenditure, Determination of desirable body weight
- Balanced diet for Indian School Children, Maintaining a Healthy Lifestyle
- Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss

REFERENCES:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6).
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a keycomponent of successful weight loss maintenance.*Obesity(Silver Spring). 15*(12).
3. Chu, S.Y. & Kim, L. J.(2007). Maternal obesity and risk of stillbirth: a metaanalysis. Am J ObstetGynecol, 197(3).
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. N Engl J Med,356(21).
5. Dixon, J.B., & O'Brien, P.E., Playfair, J. (2006). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized.

SEMESTER-III
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
IX.	CC-301	Computer Application in Physical Education	68	4	20	80	100
X	CC-302	Sports Psychology and Sociology	68	4	20	80	100
XI	CC-303	Sports Training	68	4	20	80	100
Elective Course (Any One)							
XII.	EC-301	Sports Medicine, Physiotherapy, and rehabilitation	68	4	20	80	100
	EC-302	Curriculum Design					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-301	Track and Field (Long Distance Races, Javelin Throw, Triple Jump, Steeple Chase)	68	4	40	-	40
	PC-302	Swimming, Gymnastics	68	4	20+20	-	40
	PC-303	Folk Dances	68	4	40	-	40
	PC-304	Cricket, Badminton, Table-Tennis, Lawn-Tennis	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-301	Teaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (Games, Track & Field), preferably in Secondary/ Senior Secondary Schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –IX (CC-301)
COMPUTER APPLICATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION TO COMPUTER
- Meaning, need and importance of information and communication technology (ICT). Application of Computers in Physical Education
- Components of computer, input and output device
- Application software used in Physical Education and sports

UNIT II: MS WORD
- Introduction to MS Word
- Creating, saving and opening a document
- Formatting Editing features Drawing table
- Page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes

UNIT III: MS EXCEL
- Introduction to MS Excel
- Creating, saving and opening spreadsheet
- Creating formulas
- Format and editing features adjusting columns width and row height understanding charts.

UNIT IV: MS POWER POINT
- Introduction to MS Power Point
- Creating, saving and opening a ppt. file
- Format and editing features slide show, design, inserting slide number
- Picture, graph, table
- Preparation of Power point presentations

REFERANCES:
1. Irtegov, D.(2004). *Operating system fundamentals*. Firewall Media.
2. Milke, M. (2007). *Absolute beginners guide to computer basics*. Pearson Education Asia.
3. Barrett, R. (2007). Administrator's Guide to Microsoft Office 2007 servers.
4. Eric, L. Einspruch (2005). AN Introductory Guide to SPSS for Windows, Sage.
5. Kilman, Shin (1995). *SPSS GUIDE* Mc Graw – Hill Higher Education.
6. Murray, K. (2007). Faster smarter Microsoft office XP: Take charge of your Microsoft office programme.

Paper –X (CC-302)
SPORTS PSYCHOLOGY AND SOCIOLOGY

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT -I: INTRODUCTION
- Meaning, Importance and scope of Educational and Sports Psychology
- General characteristics of Various Stages of growth and development
- Types and nature of individual differences; Factors responsible -Heredity And environment
- Psycho-sociological aspects of Human behavior in relation to physical education and sports

UNIT-II: SPORTS PSYCHOLOGY
- Nature of learning, theories of learning, Laws of learning,
- Plateau in Learning; & transfer of training
- Meaning and definition of personality, characteristics of personality,
- Dimension of personality, Personality and Sports performance
- Nature of motivation: Factors influencing motivation; Motivation and techniques and its impact on sports performance.
- Mental Preparation Strategies: Attention focus, Self- talk, Relaxation, Imaginary.
- Aggression and Sports, Meaning and nature of anxiety, Kinds of anxiety
- Meaning and nature of stress; Types of stress, Anxiety, Stress, Arousal and their effects on sports performance

UNIT-III: RELATION BETWEEN SOCIAL SCIENCE AND PHYSICAL EDUCATION.
- Orthodoxy, customs, Tradition and Physical Education.
- Festivals and Physical Education.
- Socialization through Physical Education.
- Social Group life, Social conglomeration and Social group, Primary group and Remote group.

UNIT-4 CULTURE: MEANING AND IMPORTANCE.
- Features of culture,
- Importance of culture.
- Effects of culture on people life style.
- Different methods of studying Observation/ Inspection method, Questionnaire method, Interview method

REFERENCES:

1. Ball, D. W. & Loy, J. W. (1975). Sport *and social order; Contribution to the sociology of sport.* London: Addison Wesley Publishing Co., Inc.
2. Kamlesh, M.L. (1998). Psychology in physical education and sport. New Delhi: Metropolitan Book Co.
3. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1981). Sports culture and society. Philadelphia: Lea &Febiger.
4. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sport and social system. London: Addison Wesley Publishing Company Inc.
5. Skinnner, C. E.(1984). Education psychology. New Delhi: Prentice Hall of India.
6. William, F. O.& Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt Ltd.

Paper –XI (CC-303)
SPORTS TRAINING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS TRAINING

- Meaning and Definition of Sports Training ○ Aim and Objective of Sports Training
- Principles of Sports Training
- System of Sports Training Basic Performance, Good Performance and High Performance Training

UNIT II TRAINING COMPONENTS

- Strength Mean and Methods of Strength Development
- Speed Mean and Methods of Speed Development
- Endurance - Mean and Methods of Endurance Development
- Coordination Mean and Methods of coordination Development
- Flexibility Mean and Methods of Flexibility Development

UNIT III TRAINING PROCESS

- Training Load- Definition and Types of Training Load
- Principles of Intensity and Volume of stimulus
- Technical Training Meaning and Methods of Technique Training
- Tactical Training Meaning and Methods of Tactical Training

UNIT IV TRAINING PROGRAMMING AND PLANNING

- Periodization Meaning and types of Periodization
- Aim and Content of Periods Preparatory, Competition, Transitional etc.
- Planning Training session
- Talent Identification and Development

REFERENCES:

1. Bompa, Tudor, O. (1999). Periodisations Training for sports: Human Kinetic (U.S.A).
2. Dick, W. F. (1980). *Sports training principles.*London: Lepus Books.
3. Dick. W. Frank. (1980). *Sports Training Principles*, London: Lepus Birks.
4. Harre . Dictrich. (1982). *Principles of Sports Training*. Beslin : Sportulag.
5. Harre, D. (1982). *Principles of sports training.*Berlin: Sporulated.
6. Singh, Hardyal (1991). *Science of Sports Training*. D, V, S Publications. New Delhi.
7. Uppal, A.K. (1999). S*ports Training.*New Delhi: Friends Publication.

Paper –XII (EC-301)
SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: - SPORTS MEDICINE:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education
- Prevention of injuries in sports Common sports injuries Diagnosis
- First Aid - Treatment - Laceration Blisters Contusion - Strain Sprain Fracture Dislocation and Cramps Bandages Types of Bandages trapping and supports.

UNIT-II: PHYSIOTHERAPY

- Definition Guiding principles of physiotherapy, Importance of physiotherapy, Introduction and demonstration of treatments - Electrotherapy infrared rays Ultraviolet rays short wave diathermy ultrasonic rays.

UNIT-III: HYDROTHERAPY:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast Bath, Whirlpool Bath Steam Bath Sauna Bath Hot Water Fomentation Massage: History of Massage Classification of Manipulation (Swedish System) physiological Effect of Massage.

UNIT-IV: THERAPEUTIC EXERCISE:

- Definition and Scope Principles of Therapeutic Exercise Classification, Effects and uses of Therapeutic exercise passive Movements (Relaxed, Forced and passive - stretching) active movements (concentric, Eccentric and static) application of the therapeutic exercise: Free Mobility Exercise Shoulder, Elbow Wrist and Finger Joints Hips, Knee, ankle and Foot joints Trunk. Head and Neck exercises.

REFERENCES:

1. Christine, M. D. (1999). *Physiology of sports and exercise*.USA: Human Kinetics.
2. Conley, M.(2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005). *Drugs in sports,* (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D.(1979). A *dictionary for physical educators.* In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.
5. Jeyaprakash, C. S. (2003). Sports Medicine, J.P. Brothers Pub., New Delhi.
6. Khanna, G.L. (1990). *Exercise physiology & sports medicine*. Delhi:Lucky Enterprises.
7. Pandey, P.K. (1987). Outline *of sports medicine*, New Delhi: J.P. Brothers Pub.,1987.

Paper –XII (EC-302)
CURRICULUM DISIGN

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I MODERN CONCEPT OF THE CURRICULUM

- Need and importance of curriculum, Need and importance of curriculum development, the role of the teacher in curriculum development.
- Factors affecting curriculum - Social factors - Personnel qualifications - Climatic consideration - Equipment and facilities -Time suitability of hours.
- National and Professional policies, Research finding

UNIT II BASIC GUIDE LINE FOR CURRICULUM CONSTRUCTION; CONTEST (SELECTION AND EXPANSION).

- Focalization
- Socialization
- Individualization
- Sequence and operation
- Steps in curriculum construction.

UNIT III CURRICULUM-OLD AND NEW CONCEPTS, MECHANICS OF CURRICULUM PLANNING.

- Basic principles of curriculum construction.
- Curriculum Design, Meaning, Importance and factors affecting curriculum design.
- Principles of Curriculum design according to the needs of the students and state and national level policies.
- Role of Teachers

UNIT IV Under-graduate preparation of professional preparation.

- Areas of Health education, Physical education and Recreation.
- Curriculum design-Experience of Education, Field and Laboratory.
- Teaching practice.
- Professional Competencies to be developed-Facilities and special resources for library, laboratory and other facilities.

REFERENCES:

1. Barrow, H. M. (1983). *Man and movement: principles of physical education*. Philadelphia: Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby & Company.
3. Cassidy, R. (1986). *Curriculum development in physical education*. New York: Harper & Company.

SEMESTER-IV
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
XIII.	CC-401	Measurement and Evaluation in Physical Education	68	4	20	80	100
XIV.	CC-402	Kinesiology and Biomechanics	68	4	20	80	100
XV.	CC-403	Research and Statistics in Physical Education	68	4	20	80	100
Elective Course (Any One)							
XVI.	EC-401	Theory of Sports and Games	68	4	20	80	100
	EC-402	Sports Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-401	Track and Field (Race Walk, Road Race, Hammer throw, Pole Vault)	68	4	40	-	40
	PC-402	Swimming, Gymnastics	68	4	20+20	-	40
	PC-403	Mass Demonstrations	68	4	40	-	40
	PC-404	Wrestling, Judo, Boxing, Kabaddi (circle Style)	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-401	Coaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each trainee will be required to take a minimum of 10 supervised lessons (Games, Track & Field), preferably in Secondary/ Senior Secondary Schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –XIII (CC-401)
MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I INTRODUCTION TO TEST & MEASUREMENT & EVALUATION
- Meaning of Test & Measurement & Evaluation in Physical Education
- Need & Importance of Test & Measurement & Evaluation in Physical Education
- Principles of Evaluation

UNIT-II CRITERIA, CLASSIFICATION AND ADMINISTRATION OF TEST
- Criteria of good Test
- Criteria of tests, scientific authenticity (reliability, objectivity, validity and availability of norms)
- Type and classification of Test
- Administration of test

UNIT- III PHYSICAL FITNESS TESTS
- AAHPER youth fitness test
- National physical Fitness Test
- Indiana Motor Fitness Test
- JCR test

UNIT- IV SPORTS SKILL TESTS
- Lockhart and McPherson badminton test
- Johnson basketball test
- McDonald soccer test
- S.A.I volleyball test

REFERENCES:
1. Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark.
2. Barron, H. M., & Mchee, R. (1997). *A practical approach to measurement in physical education*. Philadelphia: Lea and Febiger.
3. Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi: D.V.S. Publications.
4. Mathews, D.K. (1973). Measurement in physical education, Philadelphia: W.B.Sounders Compnay.

5. Pheasant, S.(1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
6. Phillips, D. A., &Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Willey and Sons.
7. Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

Paper –XIV (CC-402)
KINESIOLOGY AND BIOMECHANICS

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO KINESIOLOGY AND SPORTS BIOMECHANICS
- Meaning and Definition of Kinesiology and Sports Biomechanics
- Importance of Kinesiology and Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- Terminology of Fundamental Movements
- Fundamental concepts of following terms Axes and Planes, Centre of Gravity, Equilibrium, Line of Gravity

UNIT II FUNDAMENTAL CONCEPT OF ANATOMY AND PHYSIOLOGY
- Classification of Joints and Muscles
- Types of Muscle Contractions
- Posture Meaning, Types and Importance of good posture.
- Fundamental concepts of following terms- Angle of Pull, All or None Law, Reciprocal Innovation

UNIT III MECHANICAL CONCEPTS
- Force - Meaning, definition, types and its application to sports activities
- Lever - Meaning, definition, types and its application to human body.
- Newtons Laws of Motion Meaning, definition and its application to sports activities.
- Projectile Factors influencing projectile trajectory.

UNIT IV KINEMATICS AND KINETICS OF HUMAN MOVEMENT
- Linear Kinematics Distance and Displacement, speed and velocity, Acceleration
- Angular kinematics Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.
- Linear Kinetics Inertia, Mass, Momentum, Friction.
- Angular Kinetics Moment of inertia ,Couple, Stability.

REFERENCES:

1. Bunn, J. W. (1972).*Scientific principles of coaching.* Englewood Cliffs, N.J.: Prentice Hall Inc.
2. Hay, J. G. & Reid, J. G.(1982).*The anatomical and mechanical basis of human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
3. Hay, J. G. & Reid, J. G.(1988).*Anatomy, mechanics and human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
4. Hay, J. G. (1970).*The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc. Simonian, C. (1911).*Fundamentalsof sport biomechanics.* Englewood Cliffs, N.J.: Prentice Hall Inc.

Paper –XV (CC-403)
RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO RESEARCH

- Definition of Research
- Need and importance of Research in Physical Education and Sports.
- Scope of Research in Physical Education & Sports.
- Classification of Research
- Research Problem, Meaning of the term, Location and criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations.

UNIT II SURVEY OF RELATED LITERATURE

- Need for surveying related literature.
- Literature Sources, Library Reading
- Research Proposal, Meaning and Significance of Research Proposal.
- Preparation of Research proposal / project.
- Research Report: A group project is to be undertaken by a small batch of students under the supervision of a teacher, wherein it is expected to survey school facilities of physical education, health assessment programme evaluation, fitness status of the students, staff and other stakeholders etc. and submit the report to the institution.

UNIT-III BASICS OF STATISTICAL ANALYSIS

- Statistics: Meaning, Definition, Nature and Importance
- Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables
- Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram

UNIT- IVSTATISTICAL MODELS IN PHYSICAL EDUCATION AND SPORTS

- Measures of Central Tendency: Mean, Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data
- Measures of Variability: Meaning, importance, computing from group and ungroup data
- Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data

REFERENCES:

1. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc. +
2. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
3. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
4. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
5. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
6. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

Paper –XVI (EC-401)
THEORY OF SPORTS AND GAMES

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: GENERAL INTRODUCTION OF SPECIALIZED GAMES AND SPORTS

Athletics, Badminton, Basketball, Cricket, Football, Gymnastic, Hockey, Handball, Kabaddi, Kho-Kho, Tennis, Volleyball and Yoga.

Each game or sports to be dealt under the following heads

○ History and development of the Game and Sports ○ Ground preparation, dimensions and marking ○ Standard equipment and their specifications ○ Ethics of sports and sportsmanship

UNIT-II: SCIENTIFIC PRINCIPLES OF COACHING: (Particular Sports And Game Specific)

○ Motion Types of motion and Displacement, Speed, Velocity, Acceleration, Distance and Newtons Law of motions.
○ Force Friction, Centripetal and Centrifugal force, Principles of force.
○ Equilibrium and its types ○ Lever and its types
○ Sports Training Aims, Principles and characteristics.
○ Training load Components, Principles of load, Over Load (causes and symptoms).

UNIT-III: PHYSICAL FITNESS COMPONENTS: (Particular Sports and Game Specific)

○ Speed and its types
o Strength and its types ○ Endurance and its types
○ Flexibility and its types
○ Coordinative ability and its types
○ Training methods: Development of components of physical fitness and motor fitness through following training methods (continuous method, interval method, circuit method, fartlek /speed play and weight training)

UNIT-IV: CONDITIONING EXERCISES AND WARMING UP

○ Concept of Conditioning and warming up.
○ Role of weight training in games and sports.
○ Teaching of fundamental skill & their mastery (technique, tactic and different phases of skill acquisition).
○ Recreational and Lead up games
○ Strategy Offence and defense, Principles of offence and defense.

REFERENCES:

1. Bunn, J. W. (1968). *The art of officiating sports*. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). *Scientific principles of coaching.* Englewood cliffs N. J. Prentice Hall.
3. Dyson, G. H. (1963). *The mechanics of athletics*. London: University of London Press Ltd.
4. Lawther, J.D. (1965). *Psychology of coaching.* New York: Pre. Hall.
5. Singer, R. N. (1972). *Coaching, athletic & psychology*. New York: M.C. Graw Hill.

Paper –XVI (EC-402)
SPORTS MANAGEMENT

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I

- Nature and Concept of Sports Management.
- Progressive concept of Sports management.
- The purpose and scope of Sports Management.
- Essential skills of Sports Management.
- Qualities and competencies required for the Sports Manager.
- Event Management in physical education and sports.

UNIT-II

- Meaning and Definition of leadership
- Leadership style and method.
- Elements of leadership.
- Forms of Leadership.
    - Autocratic
    - Laissez-faire
    - Democratic
    - Benevolent Dictator
- Qualities of administrative leader.
- Preparation of administrative leader.
- Leadership and Organizational performance.

UNIT-III

- Sports Management in Schools, colleges and Universities.
- Factors affecting planning ○ Planning a school or college sports programme.
- Directing of school or college sports programme.
- Controlling a school, college and university sports programme.
    - Developing performance standard
    - Establishing a reporting system
    - Evaluation
    - The reward/punishment system

UNIT-IV

- Financial management in Physical Education & sports in schools, Colleges and Universities.
- Budget Importance, Criteria of good budget,
- Steps of Budget making
- Principles of budgeting

REFERENCES:

1. Ashton, D. (1968).Administration of physical education for women.New York: The Ronal Press
2. Bucher, C.A. (1978). Administration of physical education and athletic programme. 7th Edition, St. Louis: The C.V. Mosby Co.
3. Daughtrey, G. & Woods, J.B. (1976). Physical education and intramural programmes, organisation and administration. Philadelphia U.S.A. : W.B. Sounders Cp.
4. Earl, F. Z,& Gary, W. B. (1963).Management competency development in sports and physical education. Philadelphia: W. Lea and Febiger.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) FIRST YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2017-2018

(SEMESTER : FIRST AND SECOND)

i.e

First Semester **:** ***November/December, 2017***
Second Semester **:** ***April/May, 2018***

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SCHEME FOR OPTING SUBJECTS
B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM)
EXAMINATION, 2017-2018

B.A. (General) 1st Year (Semester System) study programme consists of three compulsory subjects and three elective subjects :

Compulsory subjects :

(a) Punjabi
OR
History & Culture of Punjab

(b) English

(c) Environment, Road Safety Education and Violence against Women & Children ***

Elective Subjects : A student is required to take up 3 elective subjects in all, selecting *not more than one subject* from any of the following sets of combinations. :

1. English, Hindi, Punjabi, ** Bengali, Urdu, Persian, ** Tamil, French,** Arabic, Russian, German, ** Kannada, ** Malayalam, ** Telugu.
2. Economics, Defence & Strategic Studies, Fine Arts, Education, Adult Education, History of Art.
3. History, Mathematics.
4. Public Administration, Home Science, Gandhian Studies, Philosophy.
5. Political Science, * Statistics, Applied Statistics; Indian Classical Dance, Human Rights and Duties.
6. Sanskrit, Physical Education, Ancient Indian History, Culture & Archaeology, Psychology, Geography.
7. Computer Science, Agriculture, Sociology.
8. Music (Instrumental), Women's Studies, Music (Tabla), Environment Conservation, Religious and Sikh Studies
9. Music (Vocal), Police Administration, Journalism & Mass Communication.

Note: *The students can opt. only two elective subjects from the following :*
Music (Instrumental), Music (Vocal), Music (Tabla) and Indian Classical Dance.

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* Statistics can be opted only with Mathematics

** The Syllabus of Tamil, Telugu, Kannada, Malayalam, Arabic & Bengali Languages are **kept in abeyance**

*** This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

10. ** *Elective Vocational Subject (one of the following) :* *Pre-requisite subject at +2 level*

1.	Mass Communication –Video Production	Any
2.	Functional English	English
3.	Advertising, Sales Promotion & Sales Management	Any
4.	Foreign Trade, Practices and Procedures	Preferably with Economics or Commerce
5.	Office Management & Secretarial Practice	Any
6.	Computer Applications	Preferably Computer
7.	Functional Hindi	Hindi
8.	Tax Procedures & Practices	Accountancy/Business Studies
9.	Principles and Practice of Insurance	Any
10.	Information Technology	Any
11.	Fashion Designing	Any
12.	Early Childhood Care & Education	Any

**A student who opts for Computer Science as an Elective subject shall not take up Computer Applications/Information Technology as Elective Vocational subject and vice-versa.

Note :- Syllabus for the Subject at Sr. No. 1 is not framed.

FOR B.SC. (GENERAL) CANDIDATES :

(Besides the compulsory subject, a student shall offer any three elective subjects)

A	*Elective Vocational Subject*	*Other Two Elective Subjects*	*Pre-requisite subjects at +2 level*
1.	Clinical Nutrition Dietetics	Chemistry, Physics & Botany	PCB*
2.	Bio-Technology	Chemistry, Botany or Zoology	PCB
3.	Seed Technology	Botany, Chemistry	PCB
4.	Industrial Fish & Fishery	Zoology, Chemistry	PCB
5.	Instrumentation	Physics, Mathematics	PCM
6.	Mass Communication Video Production	Any two Science Subjects	Any
7.	Electronic Equipment Maintenance **(Kept In Abeyance)**	Physics, Chemistry/Maths.	PCM
8.	Computer Applications	Any two Science Subjects	Preferably Computer
9.	Industrial Chemistry	Chem., Maths./Botany/Zoology	PCM/B
10.	Industrial Microbiology	Chemistry and Botany or Zoology	PCB
11.	Food Science & Quality Control **(Kept In Abeyance)**	Chemistry and Botany/Zoology	PCB
12.	Information Technology	Any	Any

B			
13.	Bioinformatics, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
14.	Biotechnology, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
15.	Electronics : Physics + Electronics +Mathematics	:	PCM
	OR		
	Chemistry + Electronics + Computer Science		
16.	1. Agriculture, Botany & Zoology	:	PCB
	2. Agriculture, Biotechnology, Botany/Zoology	:	PCB
	3. Agriculture, Microbiology, Chemistry/Botany/Zoology	:	PCB
	4. Agriculture, Chemistry, Physics/Botany/Zoology	:	PCB

* P stands for Physics, C stands for Chemistry, B for Biology and M for Mathematics.
** B for Botany.
*** Z for Zoology

Note :- Syllabus for the Subject at Sr. No. 1, 3, 4, 5 and 6 are not framed.

Guidelines for continuous internal assessment (10%) for regular students of Under-Graduate courses (semester system):

Criteria for Internal Assessment:

(i)	Class test	=	5%
(ii)	Academic Activities (Seminar, Project, Assignment)	=	3%
(iii)	Attendance	=	2%

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be proportionately be increased to maximum marks of the paper in lieu of internal assessment.

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) i.e. FIRST SEMESTER NOVEMBER/DECEMBER 2017 AND SECOND SEMESTER APRIL/MAY 2018, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – I

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Text Prescribed :

English at Work, (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 1-4
Prose Chapters = 1-4

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type questions from Prose in not more than 100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Paragraph Writing (Descriptive and Narrative) ***One*** out of ***three*** to be attempted **05 marks**

Q.5. Comprehension of passage from Prose text **05 marks**

Q.6 Grammar - Voice, Determiners, Modals, Antonyms **10 marks**

Q.7. Translation from Vernacular to English. ***Four*** out of ***Six*** sentences (only tense based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ENGLISH (Compulsory)

SEMESTER – II

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Text Prescribed :

English at Work (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 5-8
Prose Chapters = 5-8

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type question from Prose in not more than100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Letter Writing (Personal only) **05 marks**

Q.5. Grammar : Narration, Preposition, Conjunctions, Synonyms **10 marks**

Q.6 Comprehension of Unseen Passage **05 marks**

Q.7. Translation from Hindi to English. ***Four*** out of ***six*** sentences (only idiom based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ਪੰਜਾਬੀ (ਲਾਜਮੀ)

ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਲੇਖ ਰਚਨਾ 10 ਅੰਕ
3. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਾਵਿ-ਸੁਮੇਲ**, (ਸੰਪਾਦਕ) ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ ।
(ਹਰਭਜਨ ਸਿੰਘ ਹੁੰਦਲ ਅਤੇ ਹਰਭਜਨ ਸਿੰਘ ਰੈਨੂ ਸਿਲੇਬਸ ਵਿਚ ਨਹੀਂ ਹਨ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਕਾਵਿ-ਸੁਮੇਲ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 5 ਅੰਕ

(ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਂਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋਂ ਇਕ) 5+5= 10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਪ੍ਰਸ਼ਨਾ ਵਿਚੋਂ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1= 5 ਅੰਕ

3. ਲੇਖ ਰਚਨਾ (500 ਸ਼ਬਦਾਂ ਵਿਚ) ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ 10 ਅੰਕ
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ

5. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 6 ਅੰਕ

(i) ਵਿਆਕਰਨ : ਵਿਆਕਰਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹਤੱਵ ਤੇ ਤੱਤ (ਵਾਕ ਪ੍ਰਬੰਧ, ਰੂਪ ਪ੍ਰਬੰਧ, ਧੁਨੀ ਪ੍ਰਬੰਧ ਤੇ ਲਿਖਤ ਪ੍ਰਬੰਧ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ) (ਦੋ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨਾ ਹੈ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ) 2+2= 4 ਅੰਕ

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਭਾਗ ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁਲ ਅੰਕ: 50
ਲਿਖਤੀ ਅੰਕ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ — 10 ਅੰਕ
3. ਮੁਹਾਵਰੇ — 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਥਾ ਕਹਾਣੀ**, (ਸੰਪਾਦਕ) ਡਾ ਧਨਵੰਤ ਕੌਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਕਥਾ ਕਹਾਣੀ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 4+6= 10 ਅੰਕ

   (ਅ) ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚ ਸੰਮਲਿਤ ਕਹਾਣੀਆਂ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਣ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ

2. ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ।) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 5×1= 5 ਅੰਕ

3 ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ ਲਿਖਣਾ (ਸਾਹਿਤਕ, ਸੱਭਿਆਚਾਰਕ ਤੇ ਖੇਡ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ) — 10 ਅੰਕ

4 ਮੁਹਾਵਰੇ : ਅਰਥ ਦਸ ਕੇ ਵਾਕ ਬਣਾਉਣੇ (ਸੱਤ ਵਿਚੋਂ ਕੋਈ ਪੰਜ ਕਰਨੇ) (ਮੁਹਾਵਰੇ ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ਵਿਚੋਂ ਹੀ ਪੁੱਛੇ ਜਾਣ) — 5 ਅੰਕ

5 ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ

(i) ਧੁਨੀ ਤੇ ਧੁਨੀ ਗ੍ਰਾਮ : ਧੁਨੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੰਡੀ ਤੇ ਅਖੰਡੀ ਧੁਨੀਆਂ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ)
ਪੰਜਾਬੀ ਸਵਰ ਧੁਨੀਆਂ ਤੇ ਵਿਅੰਜਨ ਧੁਨੀਆਂ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ । (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ , 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ' , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ' , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ' , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3= 9 ਪੀਰੀਅਡ ।

HISTORY AND CULTURE OF PUNJAB

(For B.A. Candidates Only)

B.A. (General) 1st SEMESTER EXAMINATION

Paper: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO PRE-MAURYAN PERIOD

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 06 marks

   Explanatory Note : 04 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper I:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives : To introduce the students to the history of the Early History of the region.

Pedagogy : Lectures, library work and discussions.

Unit-I

I. Ancient Punjab : Physical features; impact on history.

II. Historical Sources : Literary; archaeological.

III. Harappan Culture : Extent and town planning.

Unit-II

IV. Harappan Culture : Social, Economic and Religious life; causes of disappearance.

V. Rig Vedic Age : The rise of Indo Aryans; main features of life in the early Vedic Age.

VI. Later Vedic Age : Political, Social, Economic and Religious life of later Vedic Aryans.

Unit-III

VII. Caste System : Origin and evolution.

VIII. The Epics : Historical importance of Ramayan and Mahabharat.

IX. Political Condition on eve of Alexander's invasion.

Unit-IV

X. Impact of Alexander's invasion on social and cultural life.

XI. Position of women : Harappan, early Vedic and later Vedic Age.

XII. Important Historical places of Punjab : Mohenjodaro, Harappa, Kotla Nihang Khan, Sanghol, Banawali, Taxila, Indraprastha, Hastinapur, Kurukshetra, Srinagar, Purusapura, Sakala.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

Note : The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.

(b) Ward of/and Defence Personnel and Central Government Employee/Employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(For B.A. Candidates Only)

B.A. (General) 2nd SEMESTER EXAMINATION

Paper : HISTORY AND CULTURE OF PUNJAB FROM MAURYAN TIMES TO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. One question from Unit IV shall be set on the map.

Explanation :

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

5. The distribution of marks for the map question would be as under :

Map	:	06 marks
Explanatory Note	:	04 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

6. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives : To introduce the students to the history of the early history of the region.

Pedagogy : Lectures, library work and discussions.

Unit-I

I. The Mauryan Empire : Social, Economic and religious life.

II. Buddhism and Jainism : Impact on Punjab with special reference to 4th Buddhist Council.

III. The Kushanas : Impact of Kanishka's rule on Punjab.

Unit-II

IV. Gandhara School of Art : Salient features..

V. The Guptas : Cultural and scientific developments.

VI. Position of Women : Under the Mauryas, the Guptas and the Vardhanas.

Unit-III

VII. Depiction of Punjab in the accounts of Chinese travelers. Fahien and Hwen Tsang.

VIII. Main developments in literature.

IX. Education : Significant developments; Taxila.

Unit-IV

X. Society and Culture on the eve of the Turkish invasion of Punjab.

XI. Punjab in the Kitab-ul-Hind of Alberuni.

XII. Important Historical places : Lahore, Multan Bathinda, Uchh, Jalandhar, Thanesar, Kangra, Taxila, Kundalvana, Pehowa, Thatta.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

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(b) Ward of/and Defence Personnel and Central Government employee/employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(All Candidates other than B.A.)

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Life in Vedic Age: socio-economic and religious;
3. Growth of Jainism and Buddhism in Panjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Guptas
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development- Manji, Masand, Sangat and Pangat
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur and its impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions - rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab):
    Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. And Das,M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, Delhi 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of/and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

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HISTORY AND CULTURE OF PUNJAB
(All Candidates other than B.A.)
SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES
INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab; Board of Administration.
2. Western Education: Growth of Education and rise of middle classes.
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of print technology; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising of 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal- Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP (physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuswant : A History of the Sikhs, vol I: 1469-1839, oxford University Press, Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das, M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN & CHILDREN

SEMESTER II

PART - I (ENVIRONMENT)

Note: *The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.*

1. **Environment Concept :**
Introduction, concept of biosphere—lithosphere, hydrosphere, atmosphere; Natural resources—their need and types; principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. **Atmosphere :**
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. **Hydrosphere :**
Types of aquatic systems. Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. **Lithosphere :**
Earth crust, Soil—a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. **Forests :**
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. **Conservation of Environment :**
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems—soil, water, air, wildlife, forests.

7. **Management of Solid Waste :**
Merits and demerits of different ways of solid waste management—open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. **Indoor Environment :**
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. **Global Environmental Issues :**
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. **Indian Laws on Environment :**
Indian laws pertaining to Environmental protection : Environment (Protection) Act, 1986; General information about Laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. **Biodiversity :**
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. **Noise and Microbial Pollution :**
Pollution due to noise and microbes and their effects.

13. **Human Population and Environment :**
Population growth and family welfare programme, Human Health, HIV/AIDS, Human rights.

14. **Social Issues :**
Environmental Ethics : Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. **Local Environmental Issues :**
Environmental problems in rural and urban areas, Problem of Congress grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practicals:

Depending on the available facility in the college, a visit to Vermicomposting units or any other such non-poluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern :

A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deducation for wrong answer or unattempted question), and of 1 hour duration.

The students have to obtain 33% marks to quality the paper. The marks are not added/included in the final mark sheet.

PART - II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination : 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

PART - III (VIOLENCE AGAINST WOMEN & CHILDREN)

1. **Concept and Types of Violence:** Meaning and Definiton of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. **Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:**

Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376(A), 376B, 376C, 376D and 376E;
Cruelty - Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve- teasing. These are Sections 294, 354 and 509 of Indian Penal Code. Section 509 of the Indian Penal Code defines (Word, gesture or act intended to insult the modesty of a women), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty).
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. **Protective Laws for Women:**

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. **Protective Provisions of IPC regarding Sexual Violence against Children:**

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305(abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 **The Protection of Children from Sexual Offences Act, 2012:** An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women*, New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/HRLNIndia/a-life-free-from-violence
http://hrln.rg/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

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PART – IV (DRUG ABUSE: PROBLEM, PREVENTION AND MANAGEMENT)

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

The paper/Topic "Drug Abuse: Problem, Prevention and Management" having 2 credit/50 marks (40 theory+10 Internal) at undergraduate level, as a fourth part of the paper 'Environment, Road Safety Education and Violence against Women and Children' from the academic session 2017-18.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.

- A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) Concept and overview : what are drugs and what constitutes drug abuse? Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3,4-methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.

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ENGLISH (Elective)

SEMESTER –I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Units from **Fluency in English** Ed., Promodini Verma**,** Mukti Sanyal, Tulika Prasad, New Delhi: Macmillan India, 2009 (**the prescribed text)** are recommended for **First Semester:**

Units: 1, 3, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17

Literary Terms: Ballad, Sonnet, Ode, Lyric, Elegy, Dramatic Monologue, Interior Monologue, Blank Verse, Free Verse, Mock-Epic, Metaphysical Conceit, Negative Capability, Egotistical Sublime, Fancy, Imagination, Irony, Paradox, Ambiguity, Alliteration, Assonance, Imagery.

Testing Pattern:

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do five in not more than 50-60 words. (15 marks)

Q.2. The examiner will set twelve short questions (to be answered in not more than 30-40 words) from **Fluency in English (the prescribed text),** out of which a student shall be expected to attempt any *ten.* (15 marks)

Q.3. The examiner shall give two passages from the anthology **Fluency in English** along with five questions. The students shall be expected to attempt only one passage of the two. In other words, this question shall have internal choice. This question shall test the comprehension, critical acumen and the presentation skills of a student. (15 marks)

Section -B

Q.4. Letter Writing (Official) (10marks)

Q.5. Applied Grammar:

(a) Voice, Direct/Indirect, Transformation of Sentences (simple, complex, compound) (15 marks)

(b) Articles, Preposition, Conjunctions (10 marks)

Q.6. Vocabulary:

Antonyms/Synonyms, Use of words/phrases in sentences (10 marks)

ENGLISH (Elective)

SEMESTER –II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Essays, Stories and Plays from the prescribed book **'A Collection of Essays, Short Stories & One Act Plays,** Ed., R.K Kaushik & S.C. Bhatia, New Delhi, OUP, 2006. (**Included in Section -A**) are recommended for **Second Semester:**

Essays 1-6
Stories 1-6
Plays 1-4

Literary terms/concepts*: Prose, Essay, Expository Essay, Analytical /Argumentative Essay, Lyrical Essay, Descriptive Essay, Imaginative Essay, Philosophical Essay, Short Story, Long Story, Drama, Dramatic Plot, Character, Incident, Setting, Structure, Tragedy, Comedy, Tragi-comedy*

Testing Pattern:

Q. 1. Literary terms/concepts (Five out of Eight) (15 marks)

Q. 2. Ten short questions to be attempted out of fourteen, based on **A Collection of Essays, Short Stories and One Act Plays'** (each to be answered in not more than 30-40 words.) (15 marks)

Q. 3. Long questions *five out of seven*, again based on **A Collection of Essays, Short Stories and One Act Plays' (**each to be answered in not more than 100-120 words) . (15 marks)

Section -B

Q. 4. Paragraph Writing (based on outline, a situation, a string of questions etc.) (15 marks)

Q. 5. Applied Grammar-

(a) Corrections (10 marks)
(b) Use of the same words as different parts of speech (10 marks)

Q. 6. Translation from Vernacular into English (10 sentences only) (10 marks)

OR

(For foreign students, a paragraph on any one of the two given topics, preferably, proverbs or idioms**)**

हिन्दी (ऐच्छिक)
सेमेस्टर-1

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1 कवितालोक :

सं. डॉ. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित।

इन चार कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई है-

कबीर, रैदास, गुरुनानक देव, सूरदास।

(क) 5-5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होंगी। कुल 4 संदर्भ पूछे जाएँगे। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल 2 प्रश्न पूछे जाएँगे। अंक : 06

इस खंड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछे जायेंगे। उत्तरों की शब्द-सीमा 200 होगी।

2 सजीव कहानियाँ :

सं. डॉ. लक्ष्मीचन्द्र खुराना, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित। निम्नलिखित सात कहानियाँ पाठ्यक्रम में हैं :-
शतरंज के खिलाड़ी, ममता, अशिक्षित का हृदय, मौत के मुँह में, व्याय मंत्री, गुलाब, सभ्य-असभ्य।

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी। कुल 4 व्याख्याएँ पूछी जाएँगी। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। इस खंड में कथावस्तु, चरित्र-चित्रण एवं उद्देश्य से संबंधित कुल दो प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की शब्द-सीमा 200 तक होगी। अंक : 06

3 तीन-तीन अंकों के तीन लघु-उत्तरापेक्षी प्रश्न करने होंगे। अंक : 09

कुल 6 प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की सीमा 50 शब्दों तक होगी। ये प्रश्न इस पत्र के पूर्वोक्त दो खंडों (कवितालोक एवं सजीव कहानियाँ) पर आधारित होंगे।

4 हिन्दी-साहित्य का इतिहास : अंक : 07

आदिकाल (अपभ्रंश साहित्य को छोड़कर) से निम्नलिखित शीर्षकों पर आधारित प्रश्न पूछे जाएँगे।

आदिकाल का नामकरण, काल-सीमा, परिस्थितियाँ, प्रवृतियाँ और पृथ्वीराज रासो तथा बीसलदेव रासो का परिचय।

7 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगे। (शब्द-सीमा 200)

5 वस्तुनिष्ठ प्रश्न अंक : 10

इस पत्र के पूर्वोक्त तीनों खंडों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगे।

6 समीक्षा सिद्धान्त : अंक : 07

कहानी :- परिभाषा, तत्त्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगे। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200)

7 व्यावहारिक व्याकरण : अंक : 20

(क) विपरीतार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ख) समानार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ग) शब्द-शोधन और वाक्य-शोधन (सात में से पाँच करने होगे।) 5 अंक

(घ) वाक्यांश के लिए एक शब्द (सात में से पाँच करने होगे।) 5 अंक

8 परिभाषिक शब्दावली (सलग्न शब्दावली) अंक : 5

कुल आठ में से पाँच के उतर देने होगे।

9 आंतरिक मूल्यांकन : अंक : 10

सहायक पुस्तकें :

हिन्दी साहित्य का इतिहास : कुसुम वर्मा

निर्देश : छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होगे।

पारिभाषिक शब्दावली

	A	
1.	Abbreviation	संक्षिप्ति
2.	Absence	अनुपस्थिति, गैरहाजिरी
3.	Accommodation	आवास
4.	Advice	परामर्श, सलाह, सूचना, संज्ञापन
5.	Allegiance	निष्ठा
6.	Alteration	परिवर्तन, हेर-फेर
7.	Amendation	संशोधन
8.	Appendix	परिशिष्ट
9.	Assistant	सहायक
10.	Attendance	उपस्थिति, हाजिरी
	B	
11.	Basic pay	मूल वेतन
12.	Birth Date	जन्म तिथि, जन्म की तारीख़
13.	Block	खंड, ब्लाक
14.	Board	बोर्ड, मंडल
15.	Break in Service	सेवा में व्यवधान
16.	By Hand	दस्ती
	C	
17.	Cancel	रद्द करना
18.	Clarification	स्पष्टीकरण
19	Closing Balance	अंत-शेष, रोकड़ बाकी
20.	Committee	समिति
21.	Competence	सक्षमता
22	Conference	सम्मेलन
23.	Confirmation	पुष्टि
24.	Consolidated fund	समेकित निधि
25.	Conveyance allowance	वाहन भत्ता
26.	Corruption	भ्रष्टाचार
27.	Covering letter	सहपत्र

	D	
28.	Dealing Assistant	संबंधित सहायक
29.	Dearness Allowance	मंहगाई भत्ता
30.	Department	विभाग
31.	Deputy Secretary	उपसचिव
32.	Dissent	विसम्मति, विमति, (विधि), अहसमति
33.	Duplicate	अनुलिपि, दूसरी प्रति
34.	Duration	अवधि
35.	Duty	ड्यूटी, काम, कार्य, कर्त्तव्य, भार, शुल्क
	E	
36.	Encashment	भुनाना, तुड़ाना
37.	Entry	प्रविष्टि, इंदराज, प्रवेश
38.	Evidence	साक्ष्य, गवाही, प्रमाण
39.	Expert	विशेषज्ञ
40.	Export	निर्यात
41.	Extract	उद्धरण
	F	
42.	Fitness Certificate	स्वस्थता प्रमाणपत्र, योग्यता प्रमाणपत्र
43.	Fresh Receipt (F.R.)	नई आवती
44.	Further Action	आगे की कार्रवाई, अगली कार्यवाही
	G	
45.	General Manager	प्रधान प्रबंधक, महाप्रबंधक
46.	General Meeting	साधारण सभा, साधारण बैठक
47.	Grant-in-aid	सहायता-अनुदान
48.	Guidance	मार्गदर्शन, निर्देशन
	H	
49	Head Clerk	प्रधान लिपिक, हैड कलर्क
50.	Head of Account	लेखा-शीर्ष
51.	Head office	प्रधान कार्यालय
52.	Head Quarter	मुख्यालय
53.	Holiday	अवकाश

I

54.	Immediate officer	आसन्न अधिकारी
55.	Import	आयात
56.	Increment	वेतन-वृद्धि
57.	Inquiry	पूछताछ, जाँच
58.	Inspector	निरीक्षक
59.	Instruction	अनुदेश, हिदायत
60.	Instructor	अनुदेशक
61.	Interpretation	निर्वचन, व्याख्या
62.	Intimation	प्रज्ञापन, सूचना, इत्तिला
63.	Investigation	अन्वेषण, तफतीश, जाँच-पड़ताल
64.	Irrelevant	असंबद्ध, विसंगत
65.	Issue	(संज्ञा) निर्गम, प्रश्न, मसला, (क्रिया) जारी करना, भेजना, देना

J

66.	Job	नौकरी, जाँच, कार्य
67.	Joining Date	कार्यग्रहण-तारीख, कार्यारम्भ-तारीख
68.	Joint Secretary	संयुक्त सचिव

L

69.	Labour Welfare	श्रम-कल्याण
70.	Leave Salary	छुट्टी का वेतन
71.	Leave Vacancy	अवकाश-रिक्ति
72.	Length of Service	सेवाकाल

हिन्दी (ऐच्छिक)
सेमेस्टर-2

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1. कवितालोक :

सं. डा. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित ।
इन तीन कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई हैं
मीरांबाई, तुलसीदास, गिरिध्र कविराय

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी । कुल 4 व्याख्याएँ पूछी जाएँगी। अंक-10
(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल 2 प्रश्न पूछे जाएँगे। अंक-06

इस खण्ड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछें जायेंगे। उतर की शब्द सीमा 200 होगी।

2. झांसी की रानी- वृंदावनलाल वर्मा, मयूर प्रकाशन, झांसी । अंक-16

नामकरण, कथावस्तु, चरित्र-चित्रण, उद्देश्य के आधर पर चार समीक्षात्मक प्रश्न पूछे जाएँगे, जिनमें से 8 अंको के कोई दो प्रश्न करने होंगे। (शब्द- सीमा 200-250)

3. हिन्दी साहित्य का इतिहास :
भक्तिकाल :- निम्न शीर्षकों पर आधारित 2 प्रश्न पूछें जाएँगें। एक का उतर देना होगा। (शब्द-सीमा 200) अंक-08
भक्तिकाल की परिस्थितियाँ, सन्तकाव्य, प्रेमाख्यानकाव्य, रामकाव्य और कृष्ण काव्य की विशेषताएँ, कबीर, जायसी, तुलसी और सूरदास

4. वस्तुनिष्ठ प्रश्न अंक-10
इस पत्र के पूर्वोक्त तीनों खण्डों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उतर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5. समीक्षा सिद्धान्त
उपन्यास:-परिभाषा, तत्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगें। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200) अंक-07

6. मुहावरे और लोकोक्तियाँ (सात में से पाँच के उतर देने होंगे।) अंक-10

7. निर्धारित विषय पर अनुच्छेद-लेखन (तीन में से एक प्रश्न करना होगा।) अंक-10

8. निजी पत्र-लेखन (दो में से एक प्रश्न करना होगा) अंक-08

9. पारिभाषिक शब्दावली-(संलग्न शब्दावली) अंक-05

आंतरिक मूल्यांकन अंक-10

निर्देश :-छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।

	M	
1..	Management	प्रबंध
2.	Medical	चिकित्सा
3.	Medical Leave	चिकित्सा-छुट्टी
4.	Medical Officer	चिकित्सा-अधिकारी
5.	Messenger	संदेशवाहक
6.	Ministry	मंत्रालय, मंत्रिमंडल
7.	Modification	संशोधन, रूपांतर
8.	Most Immediate	अति-तात्कालिक
	N	
9.	Nationality	राष्ट्रीयता
10.	Necessary Action	आवश्यक कार्रवाई
11.	Negligence	उपेक्षा, प्रमाद, गफलत
12.	No-Objection	अनापत्ति
13.	Non-Official	गैर-सरकारी, अशासकीय
	O	
14.	Obedience	आज्ञापालन, आज्ञानुवर्तन
15.	Objection	आपत्ति
16.	Offence	अपराध
17.	Offer	प्रस्ताव
18.	Office	कार्यालय, दफतर, पद
19.	Office Copy	कार्यालय-प्रति, दफतर की प्रति
20.	Office Hours	कार्यालय-समय
21.	Office Order	कार्यालय-आदेश
22.	Officer	अधिकारी, अफसर
23.	Officer-in-charge	प्रभारी अधिकारी
24.	Officiating	स्थानापन्न
25.	Option	विकल्प
26.	Original Copy	मूल प्रति
27.	Outstanding	बकाया
28.	Overtime	समयोपरि, अतिरिक्त समय
	P	
29.	Part Time	अंशकालिक
30.	Pay	वेतन

31.	Payment	अदायगी
32.	Penalty	दंड, अर्थ-दंड, जुर्माना
33.	Pending	अनिर्णीत पड़ा हुआ, रूका हुआ, लंबित
34.	Pension	पेंशन
35.	Planning	योजना, योजना बनाना
36.	Proceedings	कार्यवाही
37.	Proposal	प्रस्ताव
38.	Publicity	प्रचार
39.	Postpone	स्थगित करना, मुल्तवी करना
	Q	
40.	Qualification	अर्हता, योग्यता
41.	Quarterly	त्रैमासिक
	R	
42.	Rectification	परिशोधन
43.	Reference	संदर्भ, निर्देश, हवाला
44.	Remark	विचार, अभ्युक्ति
45.	Remuneration	पारिश्रमिक, मेहनताना
46.	Renewal	नवीनीकरण
47.	Revenue	राजस्व
	S	
48.	Satisfactory	संतोषजनक
49.	Scrutiny	संवीक्षा
50.	Seal	मुद्रा, मोहर
51.	Secret	गुप्त, गुप्त बात
52.	Security	प्रतिभूति, सुरक्षा
53.	Seniority	वरिष्ठता
54.	State Government	राज्य सरकार
55.	Stores	सामान, सामग्री, भंडार
56.	Summary	सारांश, संक्षेप
57.	Superintendent	अधीक्षक
58.	Supervisor	पर्यवेक्षक
	T	
59.	Target	लक्ष्य
60.	Technical	तकनीकी
61.	Testimonial	शंसापत्र
62.	Tour	दौरा
63.	Training	प्रशिक्षण
64.	Translation	अनुवाद

65.	Travelling Allowance	यात्रा-भत्ता
	U	
66.	Under Secretary	अवर-सचिव
67.	Unemployment	बेकारी, बेरोजगारी
68.	Unofficial Letter	अशासकीय पत्र
69.	Up-to-date	अद्यतन
	V	
70.	Verification	सत्यापन
71.	Violation	अतिक्रमण
	W	
72.	Waiting list	प्रतीक्षा-सूची
73.	Warning	चेतावनी
74.	Working days	कार्य-दिवस, काम के दिन
75.	Working Hours	कार्य-समय, काम के घंटे
76.	Working Knowledge	कार्य-साधक-ज्ञान
77.	Write off	बट्टे-खाते डालना
	Z	
78.	Zone	जोन, अंचल

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਜਨਰਲ ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ : 100
ਲਿਖਤੀ : 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 10
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ	25 ਅੰਕ
2.	ਪੰਜਾਬੀ ਇਕਾਂਗੀ	25 ਅੰਕ
3.	ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ)	20 ਅੰਕ
4.	ਭਾਸ਼ਾ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	10 ਅੰਕ
5.	ਸਾਹਿਤ ਦੇ ਰੂਪ	10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਬਾਵਾ ਬਲਵੰਤ, ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ, ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ, ਡਾ. ਜਗਤਾਰ)

2. **ਛੇ ਦਰਸ਼ਨ**, ਸੰਤ ਸਿੰਘ ਸੇਖੋ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ। ('ਨਿਸ਼ਾਂਤ ਬਾਗ ਵਿੱਚ' ਇਕਾਂਗੀ ਨੂੰ ਛੱਡ ਕੇ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	**(ੳ)**	'**ਨਕਸ਼ ਨੁਹਾਰ**' ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	**10 ਅੰਕ**
	(ਅ)	'ਛੇ ਦਰਸ਼ਨ' ਇਕਾਂਗੀ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
2.	(ੳ)	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
	(ਅ)	ਇਕਾਂਗੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ)	10 ਅੰਕ
3.	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		2 x 5=10 ਅੰਕ
4.	**ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਕਵਿਤਾ, ਨਾਟਕ ਤੇ ਇਕਾਂਗੀ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		5 x 4=20 ਅੰਕ
5.	ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਮਹਤੱਵ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ
6.	ਸਾਹਿਤ ਦੇ ਰੂਪ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਤੱਤ ਕਵਿਤਾ, ਗੀਤ, ਗ਼ਜ਼ਲ, ਇਕਾਂਗੀ, ਨਾਵਲ, ਕਹਾਣੀ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ **ਨੋਟ** : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਵਲ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਆਲੋਚਨਾ — 10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਪਾਸ਼, ਸੰਤ ਰਾਮ ਉਦਾਸੀ, ਸੁਰਜੀਤ ਪਾਤਰ, ਜਸਵੰਤ ਦੀਦ, ਨਵਤੇਜ ਭਾਰਤੀ, ਸੁਖਵਿੰਦਰ ਅੰਮ੍ਰਿਤ, ਦਰਸ਼ਨ ਬੁਲੰਦਵੀ, ਜਸਵਿੰਦਰ, ਸੁਖਪਾਲ)
2. **ਦੁਆਬਾ,** ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਨਕਸ਼ ਨੁਹਾਰ ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਦੁਆਬਾ ਨਾਵਲ ਵਿਚੋਂ ਪ੍ਰਮੁੱਖ ਘਟਨਾਵਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਵਲ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ)
   (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਵਲ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਨਾਵਲ, ਕਹਾਣੀ ਤੇ ਸਫ਼ਰਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : — 10 ਅੰਕ
   (ੳ) ਧੁਨੀ ਸੰਪਰਦਾਇ (ਅ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ)
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)
6. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਤੱਤ — 10 ਅੰਕ
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪੱਤੀ ਤੇ ਵਿਕਾਸ, ਡਾ. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕ੍ਰਿਪਾਲ ਸਿੰਘ ਕਸੇਲ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
5. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.) 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
6. ਜੱਗੀ, ਰਤਨ ਸਿੰਘ (ਡਾ.). ਸਾਹਿਤ ਦੇ ਰੂਪ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
8. ਸ਼ੈਰੀ ਸਿੰਘ ਤੇ ਬ੍ਰਹਮ ਜਗਦੀਸ਼ (ਪ੍ਰੋ.), ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
9. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

संस्कृत (इलैक्टिव)
सेमेस्टर–1

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT - I

(क) **अपरीक्षितकारकम्** (1-4 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) **नीतिशतकम्** (1-25 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

UNIT – II

(ग) **व्यावहारिक संस्कृत शब्दावलीः** शरीरांग, फल एवं सब्जियाँ सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. अगूंठा-अङ्गुष्ठः	2. आँख-चक्षुः, लोचनम्, नेत्रम्, नयनम्	3. अंगुली-अङ्गुलिः
4. ओठ-ओष्ठः	5. कमर-श्रोणिः, कटिः	6. कलाई-मणिबन्ध:
7. कान-कर्णः, श्रोत्रम्	8. गर्दन-ग्रीवा	9. घुटना-जानुः
10. जीभ-जिह्वा, रसना	11. दाँत-दन्तः, दशनः	12. नाक-घ्राणम्, नासिका
13. पेट-कुक्षिः, उदरम्	14. बांह-बाहुः, भुजः	15. भौं-भ्रूः

16. माथा-ललाटम्
17. शरीर-गात्रम्, शरीरम्
18. अंगूर-द्राक्षा
19. अमरूद-आम्रलम्
20. आम-आम्रम्
21. काजू-काजवम्
22. किशमिश-शुष्कद्राक्षा
23. खजूर-खर्जूरम्
24. जामुन-जम्बूफलम्
25. तरबूज-तारबूजम्
26. खरबूजा-खर्बुजम्
27. नारियल-नारिकेलम्
28. लीची-लीचिका
29. सेव-सेवम्
30. अंजीर-अंजीरम्
31. नारंगी-नारंगम्
32. बेल-बिल्वम्, श्रीफलम्
33. बेर-बदरीफलम्
34. मेवा-शुष्कफलम्
35. आलू-आलुः
36. ककडी-कर्कटी
37. करेला-कारवेल्लम्
38. गोभी-गोजिह्वा
39. टमाटर-रक्ताङ्गम्
40. टिंडा-टिंडिशः
41. धनिया-धान्यकम्
42. पालक-पालकीर्ः
43. प्याज-पलाण्डुः
44. वैंगन-वंगनः
45. भिंडी-भिंडकः
46. मिर्च-मरीचम्
47. मूली-मूलकम्
48. लहसून-लशुनम्
49. शलगम-श्वेतकन्दः
50. साग-शाकः

UNIT-III

(घ) वर्णों के उच्चारण स्थान **4x1=4अंक**

(ङ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

अत्र, तत्र, कुत्र, यत्र, अन्यत्र, सर्वत्र एकत्र, इतः, ततः, कुतः, कदा, तदा, यदा, सदा, तथा, यथा

(च) संख्या (गणना) वाची शब्द (1 से 50 तक (पाँच शब्द) **5x1=5अंक**

(छ) सामान्य- ज्ञान - तिथि, नक्षत्र, योग, करण, वार **5अंक**

(ज) स्वर सन्धि (पाँच सन्धियाँ प्रष्टव्य) **5x1=5अंक**

UNIT-IV

(झ) शब्दरूप : राम, लता, फल, मुनि, मति, नदी (दो शब्दरूप प्रष्टव्य) **2x4=8अंक**

(ञ) धातुरूप : पत, गम, पठ्, क्रीड, वद्, पा (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में, दो धातुरूप प्रष्टव्य) **2x4=8अंक**

UNIT-V

(ट) हिन्दी से संस्कृत में अनुवाद (5 वाक्य) **5x1=5अंक**

सहायक पुस्तकें – 1. अपरीक्षितकारकम्(विष्णुशर्मा)। 2. नीतिशतकम् (भर्तृहरि)। 3. शीघ्रबोध, चौखम्बा, वाराणसी।

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संस्कृत (इलैक्टिव)
सेमेस्टर–2

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) अपरीक्षितकारकम् (5-8 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) नीतिशतकम् (26-50 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

(ग) व्यावहारिक संस्कृत शब्दावली : पशु, पक्षी एवं वनस्पति सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. ऊँट-उष्ट्रः	2. खरगोश-शशकः	3. गधा-गर्दभः, खरः
4. गाय-गौः	5. गीदड़-श्रृगालः	6. गैंडा-गण्डकः
7. घोड़ा-अश्वः, घोटकः	8. चूहा - मूषकः	9. छिपकली-ललन्तिका
10. नेवला-नकुलः	11. बन्दर-वानरः, कपिः	12. बकरा-अजः
13. बिल्ली-मार्जारी	14. बैल-बलदः, बलीवर्दः, वृषभः	15. भैंस-महिषी
16. शेर-सिंहः	17. हाथी-गजः, दन्ती, करी	18. हिरन-मृगः, हरिणः, कुरंगः
19. उल्लू-उलुकः, कौशिकः	20. कबूतर-कपोतः, पारावतः	21. कोयल-कोकिलः

22. कौवा-काकः	23. गीध-गृधः	24. चकवा-चक्रवाकः
25. चिड़िया-चटका	26. तोता - शुकः	27. पपीहा-चातकः
28. बगला-बकः	29. बतख-वर्तकः, वर्तिका	30. बाज-श्येनः
31. मोर-मयूरः	32. मुर्गा-कुक्कुटः	33. हंस-हंसः
34. सारस-सारसः	35. आंवला-आमलकी	36. आम(वृक्ष)-आम्रः
37. जामुन (वृक्ष)-जम्बूः	38. नारियल (वृक्ष)-नारिकेलः	39. नीम-निम्बः
40. पीपल-अश्वत्थः	41. बेल (वृक्ष)-बिल्वः	42. गुलाब-स्थलपद्मम्
43. कमल-कुवलयम्, पुण्डरीकम्, पद्मम्	44. गेंदा-गन्धपुष्पम्	45. चमेली-मालती
46. चम्पा-चम्पकः	47. पराग-मकरन्दः	48. रात की रानी-रजनीगन्धा
49. पत्ता-पत्रम्, पर्णम्	50. लता-व्रततिः, वीरुत्	

(घ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

कथम्, अद्यः, श्वः, ह्यः, परश्वः, सद्यः, पुरतः, पृष्ठतः, वामतः, दक्षिणतः, नीचै, उच्चैः, बहिः, अन्तः

(ङ) संख्या (गणना) वाची शब्द (51 से 100 तक) पाँच शब्द **5x1=5अंक**

(च) सामान्य- ज्ञान (राशि, मास, ग्रह एवं दश दिशाओं के नाम) **5अंक**

(छ) शब्दरूप : गुरु, पितृ, मातृ, भवत्, अस्मद्, युष्मद् (दो शब्दरूप प्रष्टव्य) **2x5=10अंक**

(ज) धातुरूप : लिख्, नी, दृश्, भू, त्यज्, स्मृ धातु (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में दो धातुरूप प्रष्टव्य) **10अंक**

(झ) हिन्दी से संस्कृत में अनुवाद (10 वाक्य) **5x2=10अंक**

सहायक पुस्तकें – अपरीक्षितकारकम् (विष्णुशर्मा)। नीतिशतकम् (भर्तृहरि)। शीघ्रबोध, चौखम्बा वाराणसी।

URDU (Elective)

SEMESTER - I

Essay and Composition:

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Essay 30 marks

Unit-II

Letter/ Application 20 marks

Unit-III

Mutazad Alfaz, Mutaradif Alfaz, Wahid aur Jama, Tazkeer-o-Taanees 20 marks

Unit-IV

Muhaware, Correction of words/ sentences 20 marks

Books Recommended:

1. Guldasta-e- mazameen -Insha pardazi Part II by Dr. Arif Mohd. Khan, published by Educational Book House, AMU Market, Aligarh.
2. Urdu Qaedah-mae- Intekhaab Nasar-o-nazm by Dr. Haroon Ayub.

URDU (Elective)

SEMESTER - II

Prose and Poetry

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Explanation of Prose Passages from : 30 marks
Urdu Zuban Hamari, Mirza Ghalib ki Seerat, Darogha ki Panchon Ghee mein, Nasooh ki Bimari.

Unit-II

Explanation of Ghazal verses from : 20 marks
Muhammed Valiullah Vali, Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Faiz Ahmed Faiz, Raghupati Sahay Firaq Gorakhpuri, Jigar Moradabadi.

Unit-III

Explanation of Nazm verses from : 20 marks
Ajanta, Taj Mahal, Kashmir, Shikast-e-zindan ka khwab, Dastan Shahzade ke ghayab hone ki, Farzi latifa, Ek chehlum par, Clerk.

Unit-IV

Summary of poem or a lesson from prose and poetry (given in Unit I & III) 20 marks

Books Prescribed

Urdu Nisab Part II, published by Educational Book House, A.M.U. Market, Aligarh.

PERSIAN (Elective)

Note : There will be one paper in each Semester i.e. 1st and 2nd Semester of 90 marks each and Internal Assessment 10 marks each Semester for the session of 2017 -18 .

SEMESTER-I

Paper-A – Prose:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Translation of two passages into English, Urdu, Punjabi, Hindi or Persian. (Out of three question 2 have to be attempted)	Marks: 30
2.	Explanation of Hikayat or Intekhab into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the Hikayat from Gulistan-e-Saadi into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the authors.	Marks: 20

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. Complete Prose section.
   Hafiz Maulavi Mohd. Ayyub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Ilahabad.

PERSIAN (Elective)

SEMESTER-II

Paper-B – Poetry:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Explanation of poems into English, Urdu, Punjabi, Hindi or Persian (Out of three poems comprising five Ashaar two have to be attempted)	Marks: 30
2.	Explanation of the theme of the poem into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the poem into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the poets.	Marks: 20

Only the following poems from the book Guldasta-ye-Farsi:

(1) **انتخاب از سعدی**

شنیدم که در وقت نزع روان
شنیدم که دا رای فرخ تبار
مشتاقی وصبوری از حد گزشت یارا

(2) **غزلیات حافظ**

دوش وقت سحرا از غصه نجاتم دادند
دل می رود زدستم صاحب دلان خدار

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. From Hissa-ye-Nazm.
   Hafiz Maulavi Mohd. Ayub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Allahabad.

FRENCH (Elective)

SEMESTER - I

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. — 20 marks

2. Comprehension of an unseen text (easier than the prescribed textbook). Ten questions to be put and answered in French. — 10 marks

3. Translation from English into French and from French into English of a passage or short sentences based on the vocabulary of the prescribed textbook. — 10+10 marks

4. Questions on applied grammar, including conjugation of verbs in applied form, pertaining to the text book. — 30 marks

5. Write a dialogue of 150 words on the topics covered in the syllabus. — 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 1-6) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Semester.

2. All questions are to be asked and answered in French (except questions on translation).

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (Elective)

SEMESTER – II

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 70 marks
Internal Assessment : 10 marks
Viva : 20 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. 20 marks

2. Comprehension of an unseen text. Ten questions to be put and answered in French. 10 marks

3. Questions on applied grammar, including conjugation of verbs in applied form pertaining to the text book. 30 marks

4. Write an essay/composition of 150 words on any topic covered in the syllabus 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 7-8) Version Originale-2 (Units 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie, Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Year.

2. All questions are to be asked and answered in French

Viva:	**20 marks**
Reading	10 marks
Seen	05 marks
Unseen	05 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory**.**
2. The theory paper would be proportionately marked out of 80 as there is no internal assessment.

GERMAN (Elective)

SEMESTER – I

Summary

Max. Marks	:	100 marks(Total)
Paper-A (Theory)	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 1-15 upto page 78 (5 questions) : 50 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1": Chapters 1-15 upto page 78 (3 out of 4 questions to be attempted) : 20 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 20 marks

i. Gefunden (Goethe)
ii. Da ich ein Knabe war (Hölderlin)
iii. Sehnsucht (Eichendorff)

Internal Assessment : 1**0 marks (Total)**

- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 1-15 upto page 78.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary Book:

"Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 1-15.

GERMAN (Elective)

SEMESTER –II

Summary

Max. Marks	:	100 marks(Total)
End-Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) Examination	:	30 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 16-30 (5 questions) : 30 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1" : Chapters 16-30 (3 out of 4 questions to be attempted) : 15 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 15 marks

i. Die Lorelei (Heine)
ii. Sommerbild (Hebbel)
iii. Abendlied (Keller)

Oral (viva-voce) Examination : 30 marks (Total)

i. Easy conversation in German
ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : 10 marks (Total)

i. Continuous Evaluation
ii. Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 16-30.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary book:

i. "Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 16-30.

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RUSSIAN (Elective)

SEMESTER - I

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks	**:**	**100**
Theory	**:**	**90 marks**
Internal Assessment (For regular students)	**:**	**10 marks**
Maximum Time	**:**	**3 hrs.**

1. Translation from simple Russian into English/Hindi/Punjabi (about 120 words) **15 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 100 words). **15 Marks**

3. Simple applied grammar: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

4. Questions on prescribed texts in Russian: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

5. Composition (One out of three) on the following topics: **15 Marks**
   1. My family. 2. My day. 3. Our class. 4. Working day.

6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper: **15 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi.(Lessons 1-15)

Books recommended for additional reading

1. A. K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.

2. S. Khavronina: Russian in Exercise,1978.

3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.

4. Dictionaries : English -Russian dictionary.
   Russian -English dictionary.

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RUSSIAN (Elective)
SEMESTER - II

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks : 70
Theory : 60 marks
Internal Assessment : 10 marks
(For regular students)
Maximum Time : 3 hrs.

1. Translation from simple Russian into English/Hindi/Punjabi (about 80 words) **10 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 75 words). **10 Marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) (Covered in Lessons 16-31, Wagner) **12 Marks**

4. Questions on prescribed texts in Russian: 4 questions out of 6 (2 marks each) (Covered in Lessons 16-31, Wagner) **08 Marks**

5. Composition (One out of three) on the following topics: **10 Marks**
   1. Our city. 2. Our flat. 3. An evening party. 4. Birthday.

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper: **10 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 16-31)

Books recommended for additional reading

1. A.K.Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S. Khavronina: Russian in Exercise,1978.
3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.
4. Dictionaries: English -Russian dictionary.
   Russian -English dictionary.

Oral/ Practical **Maximum Marks: 30**

Reading of text(s) and conversation in simple Russian.

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 6-31)

SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabus for B.A.(GENERAL)
FIRST YEAR (SEMESTER SYSTEM) SYLLABUS has been
KEPT IN ABEYANCE

PHYSICAL EDUCATION

SEMESTER-I

THEORY :

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks, i.e two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Education :

- Meaning and concept of Education

Physical Education :

- Meaning and definition of Physical Education, its aim and objectives.
- Need and importance of Physical Education in the Modern Society and its relationship with other subjects.

History of Physical Education :

- Pre and Post Independence Development of Physical Education in India.

UNIT-III 12 Marks

Olympic Games, Asian Games & Common Wealth Games :

- Ancient Olympic Games.
- Modern Olympic Games.
- Asian Games; and
- Common Wealth Games.

UNIT-IV 12 Marks

Sports Schemes, National Institutions of Sports and National and International Governing Bodies of Olympic Games :

- Raj Kumari Amrit Kaur Coaching Scheme.
- Netaji Subash National Institute of Sports, Patiala (NSNIS, Patiala).
- Sports Authority of India (SAI).
- Indian Olympic Association (IOA).
- International Olympic Committee (IOC).

UNIT-V 12 Marks

Basics of Handball :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna Awardees of the game.

References :

1. Barrow, H. M. (1983) : *"Man and Movements : Principles of Physical Education",* Philadelphia, Lea and Febiger.
2. Brar, R.S. Walia, R., Gill, M., Kanwar, S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of physical education"* Kalyani Publisher, Ludhiana, Punjab.
3. Bucher, C. A. (1979) : *"Foundations of Physical Education,"* St. Louis C.V. Mosby Company.
4. Chauhan, S.S. (1985) : *"Advanced Educational Psychology",* New Print-India Pvt. Ltd., Sahibabad, U.P.
5. Khan, E. A. (1964) : *"History of Physical Education,"* Scientific Book Company.

6. Murti K. & Ram, P. N. (1990) : *"Educational Dimensions of Physical Education",* 2nd Revised Edition, Print India, New Delhi.

7. Moslon (1976) : *"The Olympian",* Olympic House, Canada.

8. Puni, A.T. (1980) : *"Sports Psychology",* An abridged Translated by G.S.Sandhu, NIS, Patiala.

9. Sharma, P.D. (1996) : *"Olympics : Athens to Atlanta, 1896-1996",* Friends Publications (India) Delhi.

10. Sheldon, W.H. (1940) : *"The Varieties of Human Physique",* New York, Harper and Row Publishers.

11. Singh, Ajmer et al (2000) : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana.

12. Skinner, C. E. (1964) : *"Educational Psychology",* 4th edition, Prentice Hall of India Pvt. Ltd.

13. Narayanan T. C. and Hariharan S. (1975) : *"An Analytical History of Physical Education",* South India Press, Karaikudi.

PRACTICAL

Max. Marks : 35
Practical : 30
Internal Assessment : 05

ATHLETICS

Sprints (Types of Start and Finish) :

(a) Crouch start-fixing of starting blocks, getting in and off the block, emphasizing on body position, need of starting blocks in a sprint race.

(b) Practice of starts with starting blocks using proper commands.

(c) Training the students for correct running style.

(d) Practice of Finishing the sprint with different techniques.

(e) Rules and Regulations of Sprint races.

Middle Distance, Long Distance and Walking Events :

(a) Marking of standard tracks, width of lanes and starting points for various races.
(b) Practical of Standing Start.
(c) Correct running and walking style, emphasis on proper body position and foot placement.
(d) Running tactics.
(e) Rules of competition.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under :

Athletics 15 marks, participation and achievement in Athletics 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover, in the absence of proper facilities required for the events mentioned above may prove to be injurious/ fatal to the students.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher /class for each semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

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PHYSICAL EDUCATION

SEMESTER-II

THEORY

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is **compulsory.** It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks i.e., two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Cell:

- Meaning and definition of Anatomy & Physiology, Structure and Functions of a cell.

Skeletal System :

- Meaning and functions of skeletal system.
- Types of Bones and names of various bones of the body.

Muscular System :

- Introduction of Muscular system, structure and function of muscular system.
- Effect of short and long duration physical Exercise on the muscular system.

UNIT-III 12 Marks

Warming up, Cooling down and Physical Fitness :

- Warming up and cooling down in sports and its singnificance
- Meaning, definition and components of Physical Fitness.
- Influence of age, sex, body composition, diet, climate, exercise and training on Physical Fitness.

Kho-kho:

- History of the game
- Basic fundamentals
- Equipment and specifications
- Marking/layout of court
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play); and
- Major tournaments and Arjuna Awardees of the game

UNIT-IV 12 Marks

Health & Health Education :

- Meaning and definition of health.
- Meaning, definition, objectives, scope, principles and importance of Health Education.
- Personal hygiene, its meaning and importance.

First Aid :

- Meaning and importance of First Aid in Physical Education and Sports with special reference to Drowning, Dislocation of a joint, Fracture of bone, Sprain and Strain.

UNIT-V 12 Marks

Biological Basis of Physical Education :

- Growth and Development, Differences between growth and development.
- Factors affecting growth and development.
- Heredity and Environment and its effects on Growth and Development.
- Various stages of growth and development.

References :

1. Brar, R.S. Walia, R., Gill, M., Kanwar,S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of Physical Education"* Kalyani Publisher, Ludhiana Punjab.
2. Chaurasia, B.D. (1981) : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition.
3. Dandiya, P.C., Jafer, Z., Y.K. & Afifa J. (1996) : *"Health Education and Community Pharmacy",* Vallabh Prakashan, Pitampura, New Delhi.
4. Marley, W.P. (1982) : *"Health and Physical Fitness",* CBS College Publishing.
5. Mathews, D.K. and Fox, E.L. (1976) : *"The Physiological Basis of Physical Education & Athletics*", Second Edition, W.B. Saunders Co., Philadelphia.
6. Park, J.E. & Park, K. (1985) : *"Text Book of Preventive and Social Medicine",* 10th Edition, Banarasi Dass Bhanot, Jabalpur, India.
7. Rose & Wilson (1981) : *"Foundations of Anatomy and Physiology",* 5th Edition.
8. Sampath, K. & Maheshwar B.U. (1999) : *"Human Anatomy & Physiology",* First Edition, Birla Publications, Delhi.
9. Dinshaw, S.F. (1997) : *Fighting fit for ever.* The Marine Sports Publishing Division, Bombay.
10. Shaphard, R.J. (1978) : *"The Fit Athlete",* Oxford University Press.
11. Larry, S.G. (1982) : *Essential of exercise physiology.* Surjeet Publications, Delhi, First Indian Print.
12. Singh, Ajmer et. al. (2000) : *Modern text book of physical education, health and sports,* Kalyani Publishers, Ludhiana.
13. Wilmore, J. H. (1997) : *"Athletic Training and Physical Fitness",* Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Messachusetts.

PRACTICAL

Max. Marks : 35
Practical : 30 marks
Internal Assessment : 05 marks

Games :

Note : Volleyball or Kabaddi (NS) and any one game of the choice of the student (other than the two) which should be confined to the list of games approved by the Association of Indian Universities.

Volleyball

(a) Measurements (volleyball court, net, poles, antenna and ball).
(b) Number and position of players and officials.
(c) Types of service (under arm service, side arm service and tennis service).
(d) Types of passes (under hand and over head pass).
(e) Rules of the game.

OR

Kabaddi (NS)

(a) Measurements (Kabaddi court for men and women).
(b) Number of players and officials.
(c) Fundamental offensive skills, touching with hand, leg thrust, front kick, side kick, Mule kick, jump and dive counter.
(d) Defensive Skill (wrist catch, normal grip, ankle catch, knee catch and chain formation).
(e) Tactics : (a) getting bonus point (b) counter to bonus line crossing (c) Delaying tactics for getting lona.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under : Games 15 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. The choice of games by the students shall be confined to the list of games approved by the Association of Indian Universities.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher/class semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

EDUCATION

SEMESTER – I

PAPER : EDUCATION AND SOCIETY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV and; 75 words for each short answer type question in Unit V) for answer.

Objectives :

To enable the students to understand :

1. The Meaning, Nature and Scope of Education along with its types.
2. Functions of Education in light of its aims.
3. Role of Education viz-a-viz present day needs.

Course Contents :

UNIT-I : (a) Meaning and Nature of Education : Education as a Socio-Political Process and Developmental Process.
(b) Informal, Formal and Non-Formal Education.

UNIT-II : (a) Aims of Education – Individual, Social, Vocational and Democratic.
(b) Functions of Education – Individual Development, Transmission of Cultural Heritage and Education for Social Change.

UNIT-III : (a) Education for Democratic Citizenship.
(b) National Integration and International Understanding.

UNIT-IV : (a) Value Education –Meaning of Values, their Development
(b) Transactional Strategies.

Books Recommended :

1. Bhatia, K.K. and Narang, C.L. : *Teacher and Education in Emerging Indian Society,* Tandon Publishers, Ludhiana, 2002.
2. Bhatia, K.K. and Sharma, S. : *Bhartiya Shiksha Ki Adhunik Samasyaein,* Parkash *et al* Bros., Ludhiana, 1986.
3. Bhatnagar, Suresh : *Kothari Commission Recommendations and Evaluation with a Text on National Policy on Education,* Loyal Book Depot, Meerut, 1982.
4. Govt. of India : *National Policy on Education,* Ministry of Human Resource Development, New Delhi, 1986.
5. Govt. of India, Ministry of Education : *Report of Education Commission (1964-66)—Education and National Development.*
6. Govt. of India, Ministry of Education : *Report of Secondary Education Commission* (1952-53), New Delhi.
7. Gupta, S.P. : *Sikhya de Sidhant ate Takneekan,* Hans Book Depot, Faridkot, 1989.
8. Kansal, M.R. : *Sikhya de Sidhant,* Punjab State University Text Book Board, Chandigarh.
9. Mathur, S. S. : *Shiksha Sidhant,* Vinod Pustak Mandir, Agra, 1981.
10. Sharma, T.R. : *Sikhya de Sidhant,* Punjabi University, Patiala.
11. Safaya, R.N. : *Principles and Techniques of Education,* Dhanpat Rai & Sons, Jallandhar.
12. Yadav, H. S. et al : *Adhunik Bhartiya Smaj Mein Shiksha,* Tandon Publishers, Ludhiana, 1995.
13. Yadav & Yadav : *Education in the Emerging Indian Society,* Tandon Publications, Ludhiana.

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EDUCATION
SEMESTER – II

PAPER : EDUCATION AND HUMAN DEVELOPMENT

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV; and 75 words for each short answer type question in Unit V) for answer.

Objectives :

To make the students understand :

1. The meaning, scope and uses of psychology in education.
2. Human growth and development upto the stage of childhood.
3. Meaning, purpose of learning and factors influencing learning.
4. The concept of intelligence - its meaning and measurements.
5. Causes and significance of individual differences.

Course Contents :

UNIT-I : (a) *Educational Psychology :* Meaning, Nature and Scope.
(b) Individual Differences – Causes, Significance and Educational Implications.

UNIT-II : (a) Nature of Human Growth and Development – Physical, Mental, Emotional and Social.
(b) *Stages of Human Development :* Infancy and Childhood, their Needs, Significance and Problems.

UNIT-III : (a) *Learning :* Meaning and Definition.
(b) Theories of Learning - Trial and Error by Thorndike and Classical Conditioning by Pavlov.

UNIT-IV : (a) *Intelligence :* Meaning, Types
(b) Measurement of Intelligence.

Books Recommended :

1. Aggarwal, J.C. : *Essentials of Educational Psychology,* Vikas Publishing House, Private Ltd., New Delhi, 1995.
2. Bhatia, H.R. : *A Textbook of Educational Psychology,* Asia Publishing House, New Delhi, 1977.
3. Bhatnagar, S. : *Shiksha Manovigyan,* International Publishing House, Meerut, 1977.
4. Dhingra, R. : *Educational Psychology and Guidance,* Punjab Katab Ghar, Jallandhar.
5. Kagan, J. and Lang, C. : *Psychology and Education,* Harcourt Brace Jovanovich, Inc., New York, 1978.
6. Kundu, D. : *Modern Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1974.
7. Kuppuswamy, B. : *Advanced Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1994.
8. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
9. Mathur, S.S. : *Educational Psychology,* Vinod Pustak Mandir, Agra, 1998.
10. Sandhu, I.K. and Kaur, A. : *Shikhya Manovigyan,* Punjabi University, Patiala, 1976.
11. Walia, J. S. : *Foundations of Educational Psychology,* Paul Publishers, Jallandhar, 2001.

ADULT EDUCATION

SEMESTER-I

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	03Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 9 marks each. Unit V will consist of **6** short answer type questions which will cover the entire syllabus uniformly and will carry 9 marks in all. Each short question will carry 1½ marks comprising 6 question.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of 8 in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question.

OBJECTIVES OF THE COURSE :

The main objectives of the paper are :

1. To introduce students with meaning, scope and components of adult education.
2. To provide an overview of history of adult education.
3. To equip students with objectives, strategies and implementation of National Literacy Mission's Programs.
4. To acquaint students with structuring of teaching – learning environment for an adult learner.
5. To explain to students the various forms of Adult Education.

THEORY :-

UNIT-I : *Adult Education :* Concept, Meaning, Brief History during Post-Independence Period.

UNIT-II : Scope and Components of Adult Education i.e. Literacy, Numeracy, Awareness and Functionality.

UNIT-III : *National Literacy Mission :* Objectives, Strategies and Implementation.

UNIT-IV : Sakshar Bhart Mission- Objectives Strategies and Implementation.

PRACTICAL/ FIELD WORK:

Participation of the students in the following and preparation of Project Report :

Survey of the Village/Area : General information regarding the village; its Economic, Social and Cultural Activities : Needs and Problems.

The break up of 50 marks allotted to practical is as under :	*External*	*Internal*
(i) Viva-Voce	15 marks	
(ii) Written questions based on the Project	10 marks	5
(iii) Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended:

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*
5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*
6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.
7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.
9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.
10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.
11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.
12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.
13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

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ADULT EDUCATION

SEMESTER-II

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	3 Hours

UNIT-I : *Structuring Teaching Learning Environment for Adult Learners :* Identification of Areas. Survey of the Community, Identification of Learners.

UNIT-II : Campaign for enrolment of Adult Learning, enrolment of the learners and day-to-day functioning of Adult Education Centre, Involvement of Community & Developmental Agencies.

UNIT-III : Various forms of Adult Education i.e. Social Education, Community Education.

UNIT-IV : Basic Education and Life Long Education.

PRACTICAL/FIELD WORK :

Participation of the students in the following and preparation of Project Report :

1. Preparation of profile of the area.
2. Organization of Adult Education Centres for Basic Literacy Development.

The break up of 50 marks allotted to practical is as under :

		External	*Internal*
(i)	Viva-Voce	15 marks	
(ii)	Written questions based on the Project	10 marks	5
(iii)	Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended :

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*

5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*

6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.

7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.

8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.

9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.

10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.

11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.

12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.

13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

MUSIC (Vocal)

SEMESTER – I

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section of Practical Class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**

6. The candidate can take vocal music along with Instrumental Music/Tabla.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)				45 Marks
PRACTICAL (20 minute's duration)				45 Marks
(i)	Choice & Viva	:	35 Marks	
(ii)	Harmonium	:	05 Marks	
(iii)	Tabla	:	05 Marks	
Internal Assessment (Theory + Practical) (05+05)				10 Marks
			Total :	**100 Marks**

THEORY

Unit-I

1. Bhatkhande Notation System in Modern Period.
2. Elementary knowledge of Raga
3. Different Jaties of Ragas of ***the Present Raga System*** of North Indian Music

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words): Shruti, Swara (Shudh & Vikrit), Saptak, Alankar
2. Life sketch and contribution of Bhatkhande.
3. Sangeet: (Definition and Importance)

Unit-III

1. Brief description of Tanpura.
2. Definitions and types of Khayal.

Unit-IV

1. Notation & b r i e f d escription of Ragas prescribed in the course with Alap and Taans:- Alhaiya Bilawal, Bhopali
2. Notation & Description of Talas prescribed in the course:- Teentala, Dadra (Single & Double)

NOTE :- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: - Alhaiya Bilawal, Bhopali
2. One Sargamgeet in any of the prescribed ragas
3. Ability to play Dadra Tala on Tabla
4. Ability to recite bols of the tala prescribed in the course in Thah and Dugun by hand:-Teen tala, Dadra
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swaras and sing alongwith it.
6. Ability to sing national Anthem

Books Recommended:

1.	Sangeet Bodh	:	Paranjpe, Shartchandra Shridhar.
2.	Sangeet Shastra Vigyan	:	Panna Lal Madan.
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	Sangeet Sar Part (I)	:	Mrs. Veena Mankaran
5.	Raga Vigyan, Part I to IV	:	Pt. V.N. Patwardhan.
6.	Hamare Sangeet Ratan	:	Sangeet Karayalaya, Hathras.
7.	Sangeetanjali Part I to IV	:	Pt. Onkar Nath Thakur.
8.	Kramik Pustak Mallika Part I to III	:	Pt. V.N. Bhatkhande.
9.	Raag Parichay Part I,II,III	:	Sh. H.C. Srivastav.
10.	Sangeet Kaumudi Part II	:	V.S. Nigam.
11.	Sangeet Shastra Darpan Part II	:	Shanti Goverdhan.

MUSIC (Vocal)

SEMESTER-II

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto10 students in one section of Practical Class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**
6. The candidate can take vocal music along with Instrumental Music/Tabla.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
(i) Choice & Viva :	35 Marks
(ii) Harmonium :	05 Marks
(iii) Tabla :	05 Marks
Internal Assessment (Theory + Practical) (05 + 05) :	10 Marks

THEORY

Unit-I

1. Knowledge of Bhatkhande Thaat Paddhati
2. Study of Naad
3. Various developments (in brief) in the History of North Indian Music of Modern Period.

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words):

   Matra, Avartan, Sam, Tali, Khali, Vibhag, Aroh, Avaroh

2. Elementary knowledge of the Gun Dosh of Gayak

Unit-III

1. Elementary knowledge of the Laya & Taal in Music
2. Brief life sketch and contributions of : Pt. Vishnu Digambar Paluskar.

Unit-IV

Notation and Description of the prescribed Ragas and Talas :-

1. To write one drut khyal in each of the following ragas:- Yaman, Kafi with Alap and Taans
2. To write one bada khyal in any raga of the syllabus with Alap and Taans
3. To write the notation of Talas:- Ektal, Kehrwa.
4. To write the description of ragas of the syllabus

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Tala.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas : -Yaman, Kafi
2. One Vilambit Khayal in any of the prescribed Ragas.
3. Ability to play Teen Tala on Tabla
4. Ability to recite bols of the talas prescribed in the course in Thah and Dugun by hand:- Ek tal, Kehrwa
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swars and sing along with it.

Books Recommended:

1.	*Sangeet Bodh*	:	Paranjpe, Shartchandra Shridhar.
2.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	*Sangeet Sar Part (I)*	:	Mrs. Veena Mankaran.
5.	*Raga Vigyan, Part I to IV*	:	Pt. V.N. Patwardhan.
6.	*Hamare Sangeet Ratan*	:	Sangeet Karayalaya, Hathras.
7.	*Sangeetanjali Part I to IV*	:	Pt. Onkar Nath Thakur.
8.	*Kramik Pustak Mallika Part I to III*	:	Pt. V.N. Bhatkhande.
9.	*Raag Parichay Part I,II,III*	:	Sh. H.C. Srivastav.
10.	*Sangeet Kaumudi Part II*	:	V.S. Nigam.
11.	*Sangeet Shastra Darpan Part II*	:	Shanti Goverdhan.

MUSIC (Instrumental)

SEMESTER-I

GENERAL INSTRUCTIONS :-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i)	Viva	:	35 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla	:	05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit – I

1. Elementary knowledge of Raga
2. Sangeet (Definition & importance)
3. Different Jaties of Ragas of the Present Raga System of North Indian Music.

Unit – II

1. Elementary knowledge of the following terms: (not more than 100 words) :
   Swara, Saptak, Alankar. Aron, Avroh, Pakad, Thaat
2. Elementary knowledge of Bhatkhande Notation System.

Unit – III

1. Brief description of your own instrument.
2. Definition and types of Gat (Razakhani and Maseetkhani).

Unit – IV

Notation and Description of the prescribed Ragas and Talas :

1. Rag Bhopali (one Razakhani gat)
2. To write Alankars.
3. To write the notation of Tala (Dadra & Teental) with dugun layakaries

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. Demonstration of different Alankars of Shudh & Vikrit Swaras on your instrument.
2. One Razakhani gat of raga Bhopali
3. Knowledge of the non-detailed raga : Deshkar (only Aroh-Avroh and Pakad).
4. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries: Dadra, Teental .
5. Ability to play Shudh-Swaras on Harmonium.
6. Ability to play Dadra tala on tabla.

Books Recommended

1.	*Rag Parichaya Part II and III*	:	H.C. Srivastava.
2.	*Sangeet Kaumudi Part-II (Punjabi)*	:	V.S. Nigam
3.	*Sitar Marg, Part-II*	:	S. Bandopadhya.
4.	*Sangeet Sar, Part-I*	:	Mrs. Veena Mankaran.
5.	*Sangeetanjali, Part I & IV*	:	Pt. Onkar Nath Thakur.
6.	*Sangeet Manjusha*	:	Dr. Indrani Chakravarti.
7.	Sangeet Shastra Vigyan	:	Sh. Panna Lal Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna Lal Madan

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MUSIC (Instrumental)

SEMESTER-II

GENERAL INSTRUCTIONS

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i) Viva : 35 Marks

(ii) Harmonium : 05 Marks

(iii) Tabla : 05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit-I

1. Various developments (in brief) in the History of Indian Music of Modern Period.
2. Knowledge of Bhatkhande That Paddhati.
3. Study of Nada

Unit-II

1. Elementary knowledge of the following terms (not more than 100 words) :
   Matra, Avartan, Sam, Tali, Khali and Vibhag
2. Study of various bols of Mizrab,Tora , Jhala

Unit-III

1. Elementary knowledge of Laya and Taal in Music
2. Brief life sketches and their contributions to Indian Music of the following great masters :-
   (i) Pt. Ravi Shanker
   (ii) Pt. V.N. Bhatkhande

Unit-IV

Definition and description of the prescribed Ragas and Tala :- Yaman , Kafi

1. One Maseetkhani Gat in any prescribed raga and talas :-Yaman , Kafi
2. To write the notation of Razakhani Gat of rag Kafi and Yaman with atleast four todas
3. Write in notation Jhaptala, Keharva Tala with dugan layakaries.

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. One Maseetkhani Gat in any raga of your syllabus.
2. Razakhani gats with toras & Jhala in the following ragas :-Kafi, Yaman
3. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries :Talas : Jhaptal & Keharva
4. Ability to play Teen tala on Tabla
5. Ability to play Aroh, Avron of Raag Yaman & Kafi on Harmonium.
6. Ability to play National Anthem on your own instrument.

Books Recommended:

1.	Rag Parichaya Part II and III	:	H.C. Srivastava
2.	Sangeet Kaumudi Part-II (Punjabi)	:	V.S. Nigam
3.	Sitar Marg Part-II	:	S. Bandopadhya
4.	Sangeet Sar, Part-I	:	Mrs. Veena Mankaran
5.	Sangeetanjali, Part I & IV	:	Pt. Onkar Nath Thakur
6.	Sangeet Manjusha	:	Dr. Indrani Chakravarti
7.	Sangeet Shastra Vigyan	:	Sh. Panna La Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna La Madan

TABLA (Instrumental)

SEMESTER – I

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, *nine* questions will be set from the whole syllabus of Semester-I. The question paper will be divided into five Units. First four units will contain two questions each, out of which the candidates are to attempt one question from each Unit, fifth unit based on notation shall be compulsory. Thus in all, the candidates are required to attempt five questions.
3. Harmonium/ Sarangee will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

Paper-B: **PRACTICAL** (20 minute's duration). : 45 Marks

(i)	Viva	30 Marks
(ii)	Harmonium	05 Marks
(iii)	Tabla (Tuning)	05 Marks
(iv)	Padhant on Hand	05 Marks

Internal Assessment (Theory+Practical) (5+5) 10 Marks

Total: 100 Marks

Paper-A THEORY

UNIT-I

1. Define :- Dahina, Bayan, Palli, Kinar, Syahi
2. Explain :- Laya, Matra, Vibhag, Tali
3. Brief Introduction of Bhatkhande Tala notation system.

UNIT-II

1. Description of playing techniques of Ten Varnas.
2. Definition with example:- Tihai, Mukhra, Mohra and SimpleTukra.
3. Definition of Thah and Dugun.

UNIT-III

1. Importance of Taal in Music.
2. A structural study of the following Instruments:- Dholak, Naal, Pakhawaj
3. Definition of Avanaddha Vadyas.

UNIT-IV

1. Definition of Baaj and Gharana.
2. Detail playing techniques of Delhi Gharana and its Kayda.
3. Life sketches and contribution of the following artists:
   (i) Ustad Siddhar Khan
   (ii) Ustad Nathoo Khan

UNIT-V

Ability to write in notation the composition prescribed in Teen Taal, Chautaal.(Quaida, Simple Tukra, Tihai).

Paper-B PRACTICAL

(1) Taals Prescribed Teen Taal, Chautaal, Kehrwa

(2) Laggi in Kehrwa Taal and its variety.

(3) Teen Taal (Peshkara, Two Paltas, Two Kaydas, Two Mukhra)

(4) Chautaal (Theka in Thah and Dugun)

(5) Practice of playing the above Taals with Vocal and Instrumental performances.

(6) Ability to play Nagma/Lehra on Harmonium in Teen Taal.

Books Recommended:

1. Taal Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadhya : M.P. Sharma
5. Hamare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

TABLA (Instrumental)

SEMESTER-II

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, 09 questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five Units. First four units will contain 02 questions each, out of which the candidates are to attempt one question from each Unit, 5th unit based on the notation shall be compulsory. Thus in all, the candidates are required to attempt five questions.
3. Harmonium/Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).
5. All syllabus included of Semester-I.

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

Paper-B: **PRACTICAL** (20 minutes duration). : 45 Marks

(i)	Viva	:	30 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla (Tuning)	:	05 Marks
(iv)	Padhant on Hand	:	05 Marks

Internal Assessment (Theory & Practical) (5+5) : 10 Marks

Total : **100 Marks**

Paper-A Theory

UNIT- I

1. Define- Lav (maidan), Baddhee, Gatta, Gudri (Yaduri)
2. Explain:- Khali, Sum, Avartan and Theka.
3. Detail Introduction of Bhatkhande Taal notation system and writing of Talas in Bhatkhande notation system.

UNIT- II

1. Playing techniques of Ten Varnas :- Sanyukta & Asanyukta Varnas.
2. Define with examples:- Quaida (Kayda), Rela, Peshkar and Paran.
3. Definition of Chougun and Athgun.

UNIT- III

1. Importance of Taal in Music & Dance.
2. Avanaddha Vadyas and their importance in Music.
3. A structural study of the following instruments :-
   Khol, Khanjari, Damru.

UNIT- IV

1. Definition of Gharana and brief history of Delhi and Ajrada Gharana of Tabla Vadan.
2. Detail Playing techniques and characteristics of Delhi and Arjrada Gharana.
3. Life sketches and contribution of the following Artists:
   (i) Ustad Habibuddin Khan
   (ii) Pt. Beeroo Mishra

UNIT- V

Ability to write in notation the composition prescribed in Teen Taal and Ektaal (Simple and Chakradar Tukra, Paran, Mukhra)

Paper-B: PRACTICAL

1. Taals prescribed Dadra, Ektaal, Teen Taal
2. Laggi in Dadra and Kehrwa Taal.
3. Ektaal (One Qaida, Two Tukra, Two Tihai, One Paran)
4. Teentaal (One Rela, One Chakradar Paran, One Tukra, One Mohra)
5. Practice of Dholak playing in Kehrwa Taal.
6. Ability to play Nagma/Lehra on Harmonium in Ektaal.
7. Tuning of Tabla.

Books Recommended:

1. Tala Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadya : M.P. Sharma
5. Hamare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

INDIAN CLASSICAL DANCE

SEMESTER-I

GENERAL INSTRUCTIONS:

1 In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2 There would be upto ten students in one section in practical class.
3 There would not be more than eight students in a batch for practical examination.
4 No electronic Instruments will be allowed for lehra in practical examination
5 The candidate can take Dance along with Vocal music.
6 The candidate can also take instrumental music with Dance.
7 While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8 In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
Internal assessment (Theory and Practical) (5 + 5)	10 Marks

Paper-A : Theory

Unit –I

1. Origin of Tandava
2. Four Neck movements
3. Eight eye glances

Unit-II

1. Defination of Mudra. Explain Asamyukta Mudras based on Abhinaya Darpan.
2. Definition of the following terms:
   Tora, Salami, Theka, Tehai, Amad.
3. Brief study of Kathak Dance in Ancient period .

Unit-III

1. Definition of folk Dance.
2. A study of folk dances of Punjab, their costumes and background music.
3. A study of folk dance of Haryana, their costumes and background music.

Unit-IV

1. Notation of Tatkar and Theka in Ekgun, Dugun and Chaugun laykaries.
2. Notation of Amad, Tukra, Salami, Tora and Tihai in Teentaal.
3. Notation of Nagma in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Practical: Paper-B

(A) Teen Taal:

i)Tatkar in Ekgun, Dugun and Chaugun laykaries. Theka and Tatkar with Ekgun. Dugun and Chaugun Layakaries

ii) Salami - 1
iii) Amad - 1
iv) Tora - 4
v) Tihai - 1
vi) Tukra - 1

B) Practical of all the technical part in Teentaal on hand
C) Theka of Teentaal on hand in Ekgun and Dugun laykaries
D) Theka of Teentaal on table.

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INDIAN CLASSICAL DANCE

SEMESTER –II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
Internal assessment (Theory and Practical) (5 + 5)	10 Marks

Paper-A: THEORY

Unit –I

1. Study of Lasya Dance.
2. Six Eyebrow movements.
3. Nine Head movements.

Unit-II

1. Detail knowledge of Samyukta Mudras based on Abhinaya Darpan.
2. Essential characteristics of Bharatnatyam.
3. Detailed study of Kathak in mughal period.

Unit-III

1. Brief study of Abhinaya and its various parts.
2. Life sketch of Pt. Narayan Prasad.
3. Definition of Nritta, Nritya and Natya.

Unit IV

1. Notation of Theka of Jhaptaal in Ekgun, Dugun and Chougun layakaries.
2. Notation of Tatkar, Tora, Amad and Paran and Chakardar Paran in Jhaptaal.
3. Notation of Tatkar, Thaat, Tora, Tehai and Kavit in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

(A) Teen Taal:

i)	Tatkar in teentaal in Ekgun, Dugun and Chougun layakaries.		
ii)	Thaat	-	1
iii)	Tora	-	2
iv)	Kavit	-	1
v)	Tihai	-	1

(B) Jhaptaal:-

i)	Tatkar in Ekgun, Dugun and Chaugun layakaries.		
ii)	Tora	-	2
iii)	Amad	-	1
iv)	Paran	-	1
v)	Chakardar paran	-	1

(C) Practice of prescribed material in both the taals on hand.

(D) Practical knowledge of Samyukta Mudras.

(E) Ability to play nagma in teentaal on Harmonium.

(F) Ability to play theka of Jhaptaal on Tabla.

FINE ARTS

SEMESTER – I

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

Instruction to paper-setters

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Pre-historic paintings from Bhim–Betka .
- Ajanta Cave Painting: Shaddanta Jataka, Padmapani, Avalokitesvara, Dying Princess, Mahajanaka Jataka, Decorative ceiling panels from Cave No. 2.

Unit-II : History of Indian Sculpture

- Indus Valley Civilization - Seals, Metal Dancing Girl, Red Sandstone Torso, Bust of Priest from Mohenjodaro.
- Mauryan Art: Rampurva Bull Capital, Lion Capital from Sarnath, Didarganj Yakshi.

Unit-III : History of Western Art

- Pre-historic Art - Wounded Bison (Altamira), Venus of Willendorf.
- Egyptian Art - Palette of King Narmer, Seated Scribe.
- Greek Art - Standing Youth, Discobolus, Laocoon Group.

Unit-IV : Definition of Key Terms and General Concepts

- Colour: Colour Theory, Colour wheel, Colour terminology and meaning of colour, Line - different types of lines and its meaning, Perspective: Linear and Aerial, Foreshortening.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks: 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects and to study the proportion, volume and rhythmic relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Pencil, charcoal or Pastel colours.
4. Size : ½ Imperial sheet

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Pencil Shading, charcoal
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

1. Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
2. Medium : Pencil Sketching or Pastel, Pencil colours.
3. Size : ½ Imperial sheet

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).

Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

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FINE ARTS

SEMESTER – II

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

INSTRUCTIONS TO PAPER-SETTERS

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Sittanavasal - Lotus Pond.
- Eastern Indian Miniature Painting with special reference to Ashtasahasrika Prajnaparamita.
- Western Indian Miniature Painting with special reference to Nativity of Mahavira from Palm-leaf manuscripts.

Unit-II : History of Indian Sculpture

- Bharhut - Dream of Queen Maya, Yakshas and Yakshini figures.
- Amravati - The Great Departure, Subjugation of Nalagiri.

Unit-III : History of Western Art

- Roman Art - Augustus of Primaporta, Arch of Titus.
- Byzantine Art – Mosaic: Emperor Justinian and his Attendants in S. Vitale.
- Gothic Art - Madonna Enthroned by Duccio, The Lamentation by Giotto.

Unit-IV : Definition of Key Terms and General Concepts

Mural - Fresco and Tempera techniques, Miniature, Chiaroscuro (light-shade), Sculpture in round and in relief.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitons and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks : 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects to study proportion, volume and rhythmic : relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Oil, acrylic or water colours.
4. Size : ½ Imperial sheet or Canvas Pad

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Charcoal or Pastels (Monochrome)
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.

1. Medium : Oil, acrylic or water colours.
2. Size : ½ Imperial sheet or Canvas pad

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).
Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.

2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

HISTORY OF ART

SEMESTER – I

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

HISTORY OF INDIAN PAINTING AND SCULPTURE Max. Marks : 100
Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Study of Indian Painting :

Unit-I

(a) Pre-historic Painting.

(b) *Ajanta :* Early Period, Classical Period and Post-Classical Period.

Unit-II

(a) Bagh

(b) Badami.

(c) Sittanavasal.

(d) Ellora.

Study of Indian Sculpture :

Unit-III

(a) Indus Valley Civilization.

(b) Mauryan Period.

(c) Bharhut.

(d) Sanchi.

Unit-IV

(a) Amaravati.

(b) Nagarjunikonda.

(c) Mathura under the Kushanas.

(d) Gandharan Art.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Reprint Corporation, New Delhi, 1983.

2. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

3. Gupte and Mahajan : *Ajanta, Ellora and Aurangabad Caves,* D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.

4. Rowland, Benjamin : *The Art and Architecture of India,* Penguin Books, Great Britain, 1959.

5. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.

6. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.

7. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.

8. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART

SEMESTER – II

Max. Marks : 100
Time : 3 Hours

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

STUDY OF WESTERN PAINTING AND SCULPTURE (from the earliest times to ca. 1400 A.D.) and Theory and Principles of Art Appreciation

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Western Art :

Unit-I

(a) Pre-historic Painting.

(b) Egyptian Art.

Unit-II

(a) Greek Art.

(b) Roman Art.

Unit-III

(a) Art of Early Christian Period.

(b) Byzantine Period.

(c) Gothic Period.

Unit-IV

Explanation through illustrations of the concept of :

(a) Space, Line, Colour, Form, Texture, Light and Shade, Design, Balance, Harmony, Composition, Perspective, Foreshortening.

(b) Mural, Fresco and Tempera techniques.

Pedagogy :

The students are expected to familiarize themselves with the art form as seen from the books, slides and related films.

Suggested Readings :

1. Read, Herbert : *Meaning of Art,* Faber & Faber, London, 1972.
2. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
3. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
4. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – I

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-A : HISTORY AND CULTURE OF INDIA FROM THE INDUS VALLEY CIVILIZATION TO 321 B.C.

Objectives :

The paper is a survey of the proto-historic and historic background to Indian history from the Harappan Civilization to the time of the Iranian and Macedonian invasions.

Pedagogy of the Course Work :

Students are expected to familiarize themselves with sources and with methods of reconstructing ancient political history. Further, an attempt is made to view the political events in their situational context, locating the interconnection of social, economic and political developments, as far as their sources permit.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hours duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of the Harappan Civilization.

   (b) Location of the 16 Mahajanapadas.

   (c) Alexander's Indian campaign.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I

Sources of Ancient Indian history: Harappan Civilization: origin; extent; urban features and decline.

UNIT-II

Vedic Civilization (Rig Vedic and Later Vedic Period): society; polity; economy; culture and religion.

UNIT-III

The Sixteen Mahajanapadas with special reference to the rise of Magadha (from Bimbisara to the fall of the Nandas); The rise of Buddhism and Jainism.

UNIT-IV

The Iranian and Macedonian invasions: political and cultural impact on the Indian subcontinent.

Essential Readings :

1. Basham, A.L. : *The Wonder that was India,* Rupa, Mumbai, 1971.
2. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
3. Majumdar, R.C. et al : *The Vedic Age,Vol.I, Bombay;* Bhartiya Vidya Bhavan, Mumbai, 1971.
4. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
5. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed. University of Calcutta, Delhi, 1996.
6. Sharma, R.S. *Material Culture and Social Formation in Ancient India*, Machmillan, Delhi, 1983
7. Singh, Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century),* Pearson Education, Delhi, 2009
8. Thapar, R. : *A History of India,* Vol. I, Pelican Books, New Delhi, 1966.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER – II

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper : HISTORY AND CULTURE OF INDIA FROM THE MAURYAS TO 319 A.D.

Objectives :

This course deals with the political and cultural history of India from Mauryas to 319 A.D. It also acquaints the students about the foreign invasions which took place during the time span as mentioned above and their impact on the Indian Culture.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs, topographical maps, political maps etc. In addition to it, lectures, workshops and seminars may be arranged to facilitate the students to understand the subject in a better way.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.
4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
5. The map question shall have the following topics :
   (a) Extent of the Mauryan empire.
   (b) Location of Ashokan inscriptions.
   (c) Extent of Kanishka's empire.
6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I :

The Mauryan empire: sources; political and cultural relations; administrative organization; society and economy; Ashoka's dhamma; downfall of the Mauryan Empire.

UNIT-II:

Sungas, Kanvas and Satvahanas: Survey of the sources; political overview; society and economy; culture and religion.

UNIT-III:

The Indo Greeks, Shakas and Parthians: Survey of the sources; polity; society and economy.

UNIT-IV:

Kushana and Post-Kushana Period: Survey of the sources; Political; socio-economic; cultural and religious conditions.

Essential Readings :

1. Bongard Levin, G. : *Mauryan India,* Sterling, Delhi, 1985.
2. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
3. Majumdar, R.C. et al, eds. : *The History and Culture of the Indian People,* Bhartiya Vidya Bhawan, Mumbai, 1951.
4. Mukherjee, B.N. : *The Rise and Fall of the Kushana Empire,* Firma KLM, Calcutta, 1988.
5. Narain, A.K. : *The Indo–Greeks,* Chaerendon Press, Oxford, 1957.
6. Nilakantha Sastri, K.A. (ed.) : *The Age of the Nandas and Mauryas,* Varanasi, 1952.
8. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed., University of Calcutta, Delhi, 1996.
7. Shastri, A.M. : *Early History of the Deccan, Sandeep Prakashan,* New Delhi, 1987.
8. Shrimali, K.N. : *Prachin Bharat Ka Itihas,* Karyanvaya Nideshalay, Delhi University , Delhi 2009.
9. Singh Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century*), Pearson Education, Delhi, 2009.
10. Thapar, R. : *Ashoka and the Decline of the Mauryas, 2nd ed.* Oxford University Press, Delhi, 1997.
11. Thapar Romila : *The Penguin History of Early India from the origin to AD 1300,* Penguin Books, New Delhi, 2002.

DEFENCE & STRATEGIC STUDIES

SEMESTER – I

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

PAPER : CONCEPT OF WARFARE

M. Marks : 70
Time : 3 Hrs.

Objective : This paper deals with the conceptual aspects of warfare focuses on the various aspects of warfare from conventional to Nuclear age.

SECTION-I

1. War : Its definition concept and evolution.
2. Principles of War, Historical Development, Meaning & Importance.

SECTION-II

3. Modern War : Meaning, Historical Development, Features and Humanization of War.
4. Non-Conventional Warfare with reference to Guerrilla War : Its Origin, Principles and Techniques.
5. Asymmetric Warfare

SECTION-III

6. Nuclear War, Beginning of Nuclear Era, Effects of Nuclear explosions, Nuclear strategy, Deterrence, Missiles and their classification.

SECTION-IV

7. Psychological aspects of war, Leadership, Motivation, Morale, Discipline, Panic and Fear.
8. Information Warfare.

Books Recommended :

1. Bernard, Brodie, Strategy in the Missile Age Rand Corp., Santa Monica, 2007.
2. Boring, E., Psychology in the Armed Services, National Academics, Washington 1945.
3. Clausewitz Von Carl, On War, Wilder Publications, United States, 2008.
4. Fuller, J.F.C, Armament and History, Da Press, New York,1998 .
5. Fuller, J.F.C., The Conduct of War, N.J. Rutgers University Press, New Brunswick, 1961.
6. Gerald, J., Defence Psychology, Pergamon Press, Michigan, 2008.
7. Harkabi Y., Nuclear War and Nuclear Peace, Transaction Publishers,Piscataway, New Jersey, 2008.
8. Hart, Liddle, Strategy of Indirect Approach, BiblioBazaar, 2011 Washington, 1945.
9. JFR Jacob, Surrender at Dacca, Birth of a Nation, Manohar Publishers & Distributors, New Delhi, 1997.
10. Malkasian Carter, A History of Modern Wars of Attrition, Greenwood Publishing Group, 2002.
11. May Larry, Emily Crookston, War: Eassy in Political Philosophy, Cambridge University Press, 2008.
12. Montgomery, A History of Warfare, Cleveland world Publishers,1968.
13. Palit, D.K., War in the Deterrent Age, Gardners Books, Delhi 2006.
14. Tripathi, K.S., Evolution of Nuclear Strategy, Vikas Publication, Delhi,1970.
15. Waelder Robert, Psychological aspects of war and peace, Geneva research Centre, Geneva, 1939.

Paper : <u>PRACTICAL</u> Total Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on Computer.

SECTION-A, Practical Test

Marks: 10

Note :

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Conventional Signs*:* Military and Geographical.
2. Introduction to Topographical Maps*:* Definition, features, classification, enlargement and reduction of maps.
3. Grid System*:* Four figure, six figure and eight figure map, references.

SECTION-B

Marks: 10

1. Practical Record	5 marks
2. Viva-Voce	5 marks

(Students be asked to prepare on current topics of general interest)

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DEFENCE & STRATEGIC STUDIES

SEMESTER – II

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : INTERNATIONAL RELATIONS, STRATEGIC ASPECTS

M. Marks : 70
Time : 3 Hrs.

Objective : This paper focuses on the various attributes of international relations and its role in maintaining peace & security.

SECTION-I

1. International Relations: Meaning, concept and its relationship with strategic aspects.
2. National interest and war: Definition of national interest & its relationship with security; War as an instrument of National Policy.

SECTION-II

3. Balance of Power: Meaning, Historical Development, Evaluation and its functioning.
4. Cold War: Definition, Cause and Means, Diplomatic, Psychological, Economic effects and Perspective.

SECTION-III

5. Collective Security: Meaning and Concept, Role of United Nations Organization in maintaining Collective Security.

SECTION-IV

6. Disarmament and Arms Control, Meaning and Concept, Efforts by UNO towards its achievement.

Books Recommended:

1. Flemming, D.F., *The Cold War and its Origin,* Doubleday, University of Michigan, United States, 1961.
2. Gaddis Lewis John, *The Cold War,* Penguin, UK, 2011.
3. Goldblat Jozef, *Arms Control: The New Guide to Negotiations and Agreements with New CD-ROM Supplement,* SAGE, London, 2002.
4. Griffiths Martin, *International Relations: The Key Concepts,* Psychology Press, 2002.
5. Joseph , Frankel , *The Making of Foreign Policy,* Oxford University Press, Oxford, 1963.
6. Knapp, W., *A History of War and Peace,* Oxford University Press, Oxford, 1967.
7. Kumar, Mahendra, *Theoretical Aspects of International Politics,* University of Notre Dame Press, Notre Dame, Ind., 1959
8. Lawrence Robert M., *Arms Control and Disarmament,* Burgers, 1973.
9. Lucas, *A History of Cold War,* Bloomsbury Publishing London, 2008.
10. Morgenthau, H., *Politics Among Nations,* McGraw-Hill New York, 1993.
11. Morton, Halperin , *Limited War in the Nuclear Age,* Greenwood Press, Michigan, 1978.
12. Orakhelashvili Alexander, *Collective Security,* Oxford University Press, UK, 2011.
13. Sarooshi Dan, *The United Nations and the Development of Collective Security: The Delegation by the UN Security Council of Its Chapter VII Powers,* Oxford University Press, UK, 1999.
14. Sheehan Michael J., *The Balance of Power: History and Theory,* Taylor & Francis, 1996.
15. Qamar, Hasanan, *Psychology for the Fighting Man,* Penguin Books, U.K, 1943.

Paper-B: PRACTICAL Total Marks : 20
Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A, Practical Test

Marks: 10

Note:

1. There will be three questions in all and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Distance and Scale*:* Definition, types, methods of representing scale, inters conversion of statement, into representative fraction, construction of simple scale line and comparative scale lines.

2. Directions*:* Types of North, finding out True North, direction by equal altitude method, Watch method, Map method and Compass method.

3. Service Protector: Its type and uses.

SECTION-B

Marks: 10

1. Practical Record 5 marks
2. Viva-Voce 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER – I

PAPER : HISTORY OF INDIA UPTO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit– IV in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of the Ancient period in Indian History.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Major Sources of History : Literary and travel accounts; Archaeological findings; inscriptions; coins.

II. Harappan Civilization : Extent, town planning; social economic and religious life.

III. Life in Vedic Age: Political and Economic; social and religious.

UNIT II

IV. Republics and Kingdoms 600-321 B.C.: Mahajanpadas; the rise of Magadha.

V. Jainism and Buddhism : Life and teachings of Vardhman Mahavir; Life and teachings of Gautam Buddha.

VI The Mauryan Empire : Central and Provinicial Administration; revenue, judicial and local administration; Ashoka's Dhamma.

UNIT III

VII Post Mauryan Period : Decline of Mauryas and Kanishka and his achievements.

VIII. The Gupta Empire : The rise of Guptas and social, economic, cultural and scientific Developments under Guptas.

IX. The Rise of Southern Kingdoms: Administration Under Pallavas; Rashtrakutas; Chalukyas.

UNIT IV

X. Regional Kingdoms in the North : Administration under Harsh Vardhana; origin of Rajputs.

XI South Indian States: Administration under Cholas; Taxation and trade under Pandayas.

XII Map :

(i) Map on important Historical places: Ajanta, Bodhgaya, Ellora, Harrappa, Indraprastha, Kalibangan, Kalinga , Kannauj, Lothal, Nalanda, Patliputra, Sanchi , Sopara, Taxila, Ujjain, Varanasi.

(ii) Extent of Harappan Civilization.

(iii) Mauryan Kingdom under Ashoka.

Reading List :

1. Basham, A.L. : *The Wonder That Was India,* Calcutta : Rupa & Co., 1992.
2. Jha, D.N. : *Ancient India : An Historical Outline,* Delhi : Manohar, 2nd Rev. Ed., 2005.
3. Sharma, R.S. : *India's Ancient Past,* Delhi : OUP, 2005.
4. Sharma, R.S. : *Parambhik Bharat Ka Parichay,* Delhi : Orient Black Swan, 2007 (Hindi Medium).
5. Thapar, Romila : *Early India from the Origin to A.D. 1300,* Penguin, 2002.
6. Noboru, Karashima : *Concise History of South India, OUP, Delhi.*
7. Chakravarty Ranbir : *Exploring Early India*

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HISTORY

SEMESTER – II

PAPER : HISTORY OF INDIA 1200-1750 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit– IV in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of Medieval India.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Establishment of Turkish rule under Muizuddin of Ghor; Consolidation under Iltutmish and Balban.

II. The Khaljis : Administration; agrarian and market reforms of Alauddin Khailji.

III. The Tughlaqs : Muhammad Bin Tughlaq's administrative experiments and its impact, Feroz Shah Tughluq's administrative and economic reforms.

UNIT II

IV. Vijaynagar Kingdom : Establishment; Administration and Economy.

V. Formation of the Mughal Empire : Political condition of India on the eve of Babur's invasions; conquests and causes of his success.

VI. The Afghans : Establishment of Afghan power under Sher Shah Suri; administrative reforms.

UNIT III

VII. The Mughal Empire : Central and Provincial administration; Land revenue system.

VIII. The Mughal Empire : Mansabdari system; Jagirdari System.

IX. Debates on the Decline of the Mughal Empire.

UNIT IV

X. The Rise of the Marathas : conquests of Shivaji; administration.

XI. Evolution and main features : Bhakti movement; Sufism.

XII. MAP :

(i) Important Historical places : Lahore, Delhi, Agra, Mathura, Fatehpur Sikri, Chittor, Jaipur, Udaipur, Panipat, Lucknow, Ahmednagar, Poona, Surat, Golkonda, Bijapur, Daulatabad,

(ii) Extent of Empire under Allauddin Khalji.

(iii) Mughal Empire in 1707.

Reading List :

1. Alam, Muzaffar and Sanjay Subrahmanyam : The Mughal State 1526-1750, New Delhi : Oxford University Press, 1998.
2. Chandra, Satish : Medieval India from Sultanate to the Mughals (1206-1526), New Delhi : Har-Anand Publications Pvt. Ltd., 1997.
3. Chandra, Satish : Medieval India from Sultanate to the Mughals, Part -II Mughal Empire (1526-1748).
4. Chandra, Satish : Essays on Medieval Indian History, New Delhi : Oxford University Press, 1987.
5. Chandra, Satish : History of Medieval India, Delhi : Orient Black Swan, 2007 (Hindi Medium).
6. Habib, Irfan : Medieval India : The Study of Civilization, New Delhi : National Book Trust, India, 2008.
7. Ray Chaudhri Tapan and Irfan Habib : The Cambridge Economic History of India, Vol. I., c. 1200-c.1750, New Delhi : Orient Longman, 2007.
8. Rizvi, S.A.A. : The Wonder That Was India, Vol. II, 1200-1700, New Delhi : Rupa & Co., 1996.
9. Singh, Navtej : Madhkalin Bharat, National Book Trust (Punjabi)

POLITICAL SCIENCE

SEMESTER – I

POLITICAL THEORY-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The objective of this paper is to introduce first year undergraduate students to some of the basic aspects, concepts and themes in the discipline of Political Science.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Political Sciene :* Meaning, Definition and Scope.

2. Relationship of Political Science with Economics, History and Sociology.

Unit-II

1. *The State :* Definition, Elements and its Distinction from Government and Society.

2. *Theories of the Origin of State :* Social Contract, Historical/Evolutionary.

Unit-III

1. *State :* Liberal, Marxian and Gandhian View.
2. *Welfare State :* Liberal and Socialist Perspective.

Unit-IV

1. *Sovereignty :* Definition, Attributes/ Characteristics and Types.
2. *Theories of Sovereignty :* Monistic and Pluralistic.
3. *Political System : a)* Meaning & Characteristics.
   Political System : b) Functions according to David Easton & Almond & Powell.

Books Recommended :

1. J.C. Johri : *Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2. A.C. Kapoor : *Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3. O.P. Gauba : *An Introduction to Political Theory,* Macmillan India Ltd., New Delhi, 2009.
4. Andrew Heywood : *Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5. Robert A. Dahl & Bruce S. Finebric Kner : *Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6. Frank Bealey, Richard Chapman and Michael Sheehan : *Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7. Andrew Heywood : *Political Theory : An Introduction,* MacMillan Press, London, 1999.
8. Aron I. Skoble & Fiber R. Maclian (eds.) : *Political Philosophy : Essential Selections,* Pearson Education, 1999.
9. Andrew Heywood : *Politics,* Macmillan, London, 1997.
10. M.P. Jain : *Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11. S.P. Verma : Modern *Political Theory,* General Publishing House, New Delhi. 1983.

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POLITICAL SCIENCE

SEMESTER – II

POLITICAL THEORY-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The aim of this paper is to deepen and expand the knowledge of the student in Political Science. It introduces higher level concepts and themes in political theory. It will provide students with the tools to engage with some key political issues of our times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Power, Authority, Legitimacy :* Meaning and Characteristics.
2. *Political Culture :* Meaning, Characteristics and Types.
3. *Political Socialisation :* Meaning, Characteristics and Agencies.

Unit-II

1. *Rights & Duties :* Meaning, Types and Co-relation between the two.
2. *Universal Declaration of Human Rights:* Meaning of Human Rights, Nature and Characteristics.

Unit-III

1. *Liberty :* Meaning, Types & its Safeguards.
2. *Equality :* Meaning, Types and Relationship between Liberty and Equality.
3. *Justice :* Meaning and its various Dimensions.

Unit-IV

1. *Social Change :* Meaning, Characteristics and Factors.
2. *Democracy :* Meaning, types, necessary conditions for the success of Democracy.
3. *Theories of Democracy:* Elite and Marxian.

Books Recommended :

1.	J.C. Johri	:	*Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2.	A.C. Kapoor	:	*Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3.	O.P. Gauba	:	*An Introduction to Political Theory,* MacMillan India Ltd., New Delhi, 2009.
4.	Andrew Heywood	:	*Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5.	Robert A. Dahl & Bruce S. Finebric Kner	:	*Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6.	Frank Bealey, Richard Chapman and Michael Sheehan	:	*Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7.	Andrew Heywood	:	*Political Theory : An Introduction,* MacMillan Press, London, 1999.
8.	Aron I. Skoble & Fiber R. Maclian (eds.)	:	*Political Philosophy, Essential Selections,* Pearson Education, 1999.
9.	Andrew Heywood	:	*Politics,* Macmillan, London, 1997.
10.	M.P. Jain	:	*Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11.	S.P. Verma	:	*Modern Political Theory,* General Publishing House, New Delhi, 1983.

ECONOMICS

SEMESTER – I

Paper : MICRO ECONOMICS

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objective :

Microeconomics is concerned with the analysis of economic phenomena from the perspective of the individual. The course covers the basic concepts and tools needed to undertake the analysis of such problems that arise due to the law of scarcity. The course also aims at introduction of the functioning of competitive and noncompetitive product markets and performance of the markets for resources. The students are expected to develop rudimentary understanding of how and why consumers, firms, and markets in the economy function the way they do.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction : Definition, Meaning, Nature and Scope of Economics.

Theory of Demand and consumer Behaviuor : Utility Analysis and Indifference Curve Analysis. Law of Demand and its Exceptions, Elasticity of Demand and its measurement, Consumer Surplus and its measurement.

Unit-II

Theory of Production and Costs: Concept, Law of Variable Proportions and Laws of Returns to Scale, Cost Concepts and Cost Curves in Short and Long periods (Traditional Theory of Costs).
Market Forms and Revenue: Behaviour of Average Revenue and Marginal Revenue under Perfect Competition and Imperfect Competition. Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Unit-III

Price and Output Determination: Price and Output Determination of the Firm and Industry under Perfect Competition, Monopoly and Monopolistic Competition in Short and Long run, Concept of Discriminating Monopoly.

Unit-IV

Distribution: Marginal Productivity and Modern Theories of Wage Determination, Ricardian and Modern Theories of Rent. Classical and Loanable Funds Theory of Interest, Risk and Uncertainty theories of Profit.

Recommended Readings:

1. Chaudhary, Kalyanjit Roy(2012) : Modern Micro Economics, Vol. I & II Bookland Publishers, New Delhi.
2. Chopra, P.N., Singh, Joginder & Grewal, P.S. (Punjabi Medium) (Latest Edition) : Price Theory and Distrubution, Kalyani Publishers, Ludhiana.
3. Lipsey, R.G. & Crystal, K.A.(2011) : Principles of Economics, Oxford University Press, New Delhi.
4. Samuelson, P.A. (trans. Piar Singh) (1972) : Arth-Shastar Ek Prarmbhik Vishleshan, Punjabi University, Patiala
5. Stonier, A.W.. & Hague, D.C. (2005) : A Text Book of Economic Theory.

Supplementary Readings:

1. Ahuja, H.. (2012) : Advanced Economic Theory, S.Chand & Co., New Delhi.
2. Chopra, P.N.(2012) : Micro Economics Theory and Welfare Economics, Kalyani Publishers, New Delhi.
3. Dwivedi, D.N. (2012) : Microeconomics-Theory and Applications, Pearson Education Delhi.
4. Pindyck, Robert, S., Rubinfeld Dainel, L. and Mehta, P.L. (2013) : Microeconomics, Prentice Hall of India, New Delhi.
5. Ray, N.C. (1980) : An Introduction to Microeconomics, The Macmillan, New Delhi.
6. Robinson, John (Trans.) (Latest Edition) : Apuran Prityogita Di Arhiki, Punjabi University, Patiala.
7. Salvatore, D (2009) : Micro Economics: Theory & Applications, Oxford University Press, New York.
8. Singh, H.K. Manmohan (Trans Vashisht, Om Parkash) (1971) : Mang Sidhant Ate Mishrat Arth-Vivstha Vich Arthik Ganana, Punjabi University, Patiala.

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ECONOMICS

SEMESTER – II

Paper : MACRO ECONOMICS

Max. Marks	: 100
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 hours

Course Objective:

This paper aims to familiarize the student with the generally accepted principles of macroeconomics. It deals with aggregates i.e. consumers as a whole, producers as a whole, exporters and importers as a whole, the effects of government spending and taxation, and the monetary policy of the central bank. The course includes the basic theories of determination of income, consumption, investment, employment, money and interest, inflation, Monetary and Fiscal policies, and business cycles.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type question i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidate shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction: Nature, Meaning and Scope of Macro-Economics.

Consumption Function:
Average and Marginal Propensity to Consume, Keynes' Psychological Law of Consumption.
Investment Function:
Types of Investment, Investment Demand Schedule and Factors Affecting Investment Decisions, Marginal Efficiency of Capital, Static and Dynamic Multiplier.

Unit-II

Determination of Income and Employment:
Classical and Keynesian Theories of Income, Output and Employment, Say's Law of Markets. Principle of Effective Demand.

Unit-III

Money and Banking:
Money : Definition, Functions and Role
Quantity Theory of Money: Fisher's Equation and Cambridge Equation, Keynesian Liquidity Preference Theory.
Banking: Major Functions of Commercial Banks and Process of Credit Creation.

Unit-IV

Inflation and Macro-Economic Policies:
Cost-push and Demand-pull Theories of Inflation, Measures to Control Inflation. Monetary and Fiscal Policies for Stabilization.

Trade Cycle: Meaning and Phases.

Recommended Readings:

1. Dernburg, T.F. & McDougal, D.M.(1983) : Macro Economics, McGraw Hill, New York.
2. Ghuman, Ranjit Singh (latest edition) : Antar-Rashtriya Arth Vigyan, Punjabi University, Patiala.
3. Shapiro, E. (1996) : Macroeconomic Analysis, Galgotia Pub.(P) Ltd., New Delhi.
4. Sharma, O.P. (Punjabi Medium) (latest edition) : Macro Economics, Punjabi University, Patiala.
5. Vaish, M.C. (2010) : Macro Economic Theory, Oxford Unversity, Press, New Delhi.

Supplementary Readings:

1. Ackley, Gardner (1985) : Macro Economic Theory, McMillan, New York.
2. Ahuja, H.L. (2004) : Macroeconomics Theory and Policy, S.Chand Pub. New Delhi.
3. Baird, C.W. (1982) : Elements of Modern Economics, West Publishing Company.
4. Dwivedi, D.N. (2012) : Macroeconomics-Theory and Policy, Tata McGraw Hill Publication House, New Delhi.

SOCIOLOGY

SEMESTER - I

FUNDAMENTALS OF SOCIOLOGY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper aims at introducing Fundamentals of Sociology to the beginners of the subjec, the basic understanding about Sociology as a discipline. Study of various terms, concepts and processes will help students in formulating a Sociological Viewpoint and an easy comprehension of the discipline at later stages.

Course Content :

Unit-I

Introduction to Sociology: Origin and Development; Nature and Significance.

Relationship of Sociology with other Social Sciences –Anthropology, History and Psychology.

Unit-II

Understanding Society: Meaning, Characteristics, Theories of Origin of Society – Organic and Social-Contract. Relationship between Individual and Society.

Social Groups - Meaning, Characteristics and Classification Primary and Secondary Groups Ingroups & Outgroups, Reference Group.

Unit-III

Culture: Meaning and Features, Culture and Civilization, Cultural Lag, Acculturation, Assimilation, Cultural Pluralism.

Dimensions of Culture: Cultural Trait, Cultural Patterns, Cultural Complexes, Cultural Relativism.

Unit-IV

Socialization: Meaning, Stages, Agencies and Theories of Mead and Cooley.
Social Control: Meaning, Types and Agencies – Formal and Informal

Essential Readings:

1. *Bhushan Vidya & Sachdeva D.D. (2014)* : *An Introduction of Sociology Kitab Maaal, Allahabad*
2. *Bottomore, T.B. (1975)* : *Introduction to Sociology, Bombay : Blackie and Sons.*
3. *Bottomore, T.B. (1975)* : *Sociology : A Guide to Problems and Literature (Hindi and English), Bombay : Blackie and Sons.*
4. *Davis, Kingsley (1978)* : *Human Society, London : MacMillan Company.*
5. *Dube, S.C. (1990)* : *Understanding Society - A Text Book, NCERT.*
6. *Maciver, R.M. and C.H. Page* : *Society, London : MacMillan Company.*
7. *Macionis, John, J. (2005)* : *Society: The Basics, New York : Prentice Hall.*
8. *Madhurima (2015)* : *Readings in Sociology – Semester-1, Jalandhar : New Academic Publishing House (All Mediums).*
9. *Rao, Shankar, C.N. (2013)* : *Sociology—Primary Principles of Sociology. S.S. Chand and Company Ltd.*
10. *Sharma, R.N. (2001)* : *Samajshastra Ke Sidhant, New Delhi: Atlantic Publishers.*

Further Readings :

1. *Broom, L. and P. Selznick (1968)* : *Sociology, New York : Harper and Row.*
2. *Berger, Peter L. (1998)* : *Invitation to Sociology : A Humanistic Perspective, U.S.A. : Pelican Books.*
3. *Giddens, Anthony Sutton Philip M (2013)* : *Sociology : Seventh Edition, Polity press*
4. *Haralambos, M. (2010) Heald R.M.* : *Sociology : Themes & Perspectives, New Delhi : Oxford University Press.*
5. *Harlombos & Holborn (2014)* : *Sociology : Themes & Perspectives Collins Education E Editing Work*
6. *Schaefer, Richard, T. and Robert P. Lamm (1999)* : *Sociology, New Delhi : Tata-McGraw Hill.*

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SOCIOLOGY

SEMESTER - II

SOCIOLOGY STRATIFICATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

All over the world, social groups are differentiated from one another and often ranked in terms of certain criteria. In this paper, students are exposed to the theoretical understanding of social stratification. In the Indian context, it is pertinent to apprise the students of the concept of social mobility and various factors that contribute to it. The major purpose of this course is to prepare the students to understand the hierarchical structure of groups in various societies and help them understand the social mobility.

Course Content

Unit-I

Social Stratification – Meaning, feature and functions; Inequalities – Social and Natural.
Elements : Differentiation, Hierarchy, Ranking, Reward, Evaluation.

Unit-II

Theories of Social Stratification :
Functionalist – Davis and Moore.

Conflict – Marx.
Class, Status, Party – Weber.

Unit-III

Forms of Social stratification: Caste, Class, Race and Gender. Interface between caste and class.

Unit-IV

Social Mobility – Meaning, types, factors.
Indicators – Education, Occupation, Income.

Essential Readings :

1. Bendix, R. & Lipset, S.M. (1974) : *Class, Status & Power : Social Stratification in Comparative Perspective,* London : Routledge & Kegan Paul.
2. Ghurye, G.S. (1983) : *Caste, Class and Occupation,* Bombay : Popular Prakashan.
3. Giddens, Anthony (2001) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
6. Sharma, K.L. (1980) : *Essays in Social Stratification*, Jaipur : Rawat.
7. Tumin, M. (1987) : *Social Stratification,* New Delhi : Prentice Hall.
8. Sharma K.L. (2009) : *Social Inequality in India, Jaipur Rawat Publication*

Further Readings :

1. Beteille, Andre (ed.) (1978) : *Social Inequality,* Auckland : Penguin Books.
2. Beteille, Andre (1996) : "Varna & Jati", *Sociological Bulletin,* Vol. 45, No. 1 (March) Pages 15-27.
3. Culvert (1982) : *The Concept of Class*, London : Hutchinson.
4. Gupta, Dipankar (2008) : *Social Stratification*, New Delhi : Oxford University Press.
5. Hughes, John *et al* (1995) : *Understanding Classical Sociology,* Marx, Weber & Durkheim, London : Sage.
6. Richardson, C.J. (1977) : *Contemporary Social Mobility*, L and Francies Printer.
7. Inglis David & John Bone (ed) (2006) : Social Stratification Dimensions of Social Stratification Caste ethnicity & Gender Taylor & Francis
8. Levine, Rhona (ed) (2006) : Social class & Stratification Rowman & Littlefield Publishers.
9. Singh, Yogendra, (2006) : Social Stratification and Change in India, New Delhi
10. Ritzer, George (2012) : Sociological Theory, Manohar Publication Tata McGrew Hill Education Private Limited, New Delhi
11. Mac Ion's John J, Plummmer Ken, (2014) : Sociology: A Global Introduction, New Delhi, Pearson
12. Samdna Peter (1990) : Social class & Stratification Routledge, N.Y.
13. Giddens, Anthony & Sutton W.Philip (2007) : Sociology: Introductory Readings Polity Press, Malden: M.A.
14. Schaefer, Richard, T. (2010) : Sociology: A brief Introductions Tata Mcgraw Hill., N.Y.

PUBLIC ADMINISTRATION

SEMESTER - I

PAPER : ADMINISTRATIVE THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	03 Hours

Objective of the Paper :

The objective of this paper is to acquaint the student with the basic concepts and principles of public administration. In addition, the paper would trace the evolution of public administration and its relationship with other social sciences.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning, Nature, Scope and Significance of Public Administration; Public and Private Administration; Public Administration as a Science or an Art; Relationship of Public Administration with other Social Sciences; Evolution of Public Administration since 1887.

Unit-II

Organization: Meaning, Types: Formal and Informal Organization
Forms of Organization: Department, Public Corporation, Government Company.
Principles of Organization: Hierarchy, Span of Control, Unity of Command, Authority and Responsibility.

Unit-III

Chief Executive- Types, functions and Role
Line, Staff and Auxiliary Agencies
Centralisation and Decentralisation
Decision Making: Meaning, types and process

Unit-IV

Coordination: Concept, Methods and Hindrances
Communication: Concept, Process and Barriers
Supervison: Concept and Methods
Leadership: Concept, Styles, Qualities of a Good Administrator

Essential Readings

Awasthi, A. and Maheshwari, S.R. (2011). *Public Administration*. Agra: Laxmi Narain Aggarwal Publication.

Basu, Rumki (1990). *Introduction to Public Administration*. New Delhi: Sterling Publishers.

Basu, Rumki (2008). *Public Administration: Theory and Concept*. New Delhi: Sterling Publishers.

Bhattacharya, Mohit (2002). *Public Administration: Structure, Process and Behaviour*. Calcutta: World Press.

Bhattacharya, Mohit (2012). *New Horizons of Public Administration*. New Delhi: Jawahar Publishers & Distributers.

Fadia, B.L. and Fadia, Kuldeep (2011). *Public Administration: Administrative Theories and Concepts*. Agra: Sahitya Bhawan Publication

Goel, S.L. (2003). *Public Administration: Theory and Practice*. New Delhi: Deep &Deep Publishers.

Mahajan, Chander Mohan. *Elements of Public Administration*, Patiala: Publication Bureau (Panjabi) Punjabi University.

Nigro, Felix A. and Nigro, Llyod G. (1970). *Modern Public Administration*. New York: Harper and Row.

Ojha, Pundrik and Sharma, Kiran (2009). *Public Administration: Theory and Practice* Jalandhar: Raj Publishers.

Puri,K.K .(2004). *Elements of Public Administration*. Jalandhar: Bharat Prakash

Sapru, R.K. (2008). *Administrative Theories and Management Thought*. New Delhi: Prentice-Hall of India.

Sharma, M.P. and Sadana, B.L. (2009). *Public Administration in Theory and Practice*. Allahabad: Kitab Mahal.

Singh, Sahib and Singh, Swinder (2015). *Public Administration: Theory and* Practice. Jalandhar: New Academic Publishing Co.

Further Readings

Gladden, E.N. (1964). *An Introduction to Public* Administration. London: Staples Press.

Golembiewski, Robert T. (1977). *Public Administration as a Developing Discipline*. New York: Marcel Dekker.

Henry, Nicholas (2012). *Public Administration and Public Affairs (12th ed.)*. New Delhi: Prentice Hall of India Pvt. Ltd.

Koontz, H. and O' Donnel, Cyril (1972).*Principles of Management: An Analysis of Managerial Functions*. New York: McGraw Hill

Naidu, S.P. (2005). *Public Administration concept and Theories*. New Delhi, New Age International Publication.

Ojha, Pundrik and Sharma, Kiran (2012). *Public Administration: Theory and Practice.* Jalandhar: Raj Publishers.

Pfiffner John, M. and Presthus, R.Vance (1953). *Public Administration*. New York: Ronald Press.

Pfiffner, John M. and Sherwood, Frank P. (1960). *Administrative Organization*. New Delhi: Prentice Hall.

Phillip, A.T. and Rao. K.H. Sivaji (1989). *Indian Government and Politics.* New Delhi: Sterling Publishers.

Self, Peter. (1972). *Administrative Theories and Politics.* London: George Allen and Unwin.

PUBLIC ADMINISTRATION

SEMESTER - II

PAPER : : INDIAN ADMINISTRATION

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of Indian administration particularly the functioning of executive, legislature and judiciary at the union and state levels. It would also make them aware of the bureaucratic set up at these levels.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Features of Indian Administration
Union Executive: President; Prime Minister, and Council of Ministers
Union Legislature: Lok Sabha – Composition, Functions and Role: Rajya Sabha – Composition, Functions and Role

Unit-II

State Executive: Governor, Chief Minister and State Council of Ministers
State-Legislature: Legislative Assembly and Legislative Council – Composition, Functions and Role
Centre-State Relations: Administrative and Legislative

Unit-III

Union and State Judiciary: Supreme Court – Composition, Functions and Role
High Court – Composition, Functions and Role
Control over Administration: Legislative and Judicial
Delegated Legislation: Meaning, Reasons and Safeguards

Unit-IV

Cabinet Secretariat– Composition, Functions and Role
State Secretariat– Composition, Functions and Role
District Administration: Structure and Functions

Essential Readings

Arora, Ramesh. K and Chaturvedi, Geeta (2000). *Indian Public Administration: Institution and Issues.* New Delhi: WishwasPrakashan.

Awasthi, A. (1980). *Central Administration*. New Delhi: Tata McGraw Hill.

Fadia, B.L. and Fadia, Kuldeep (2011). *Indian Administration.* Agra: SahityaBhawan Publication.

Maheshwari, S.R. (1979). *State Government in India*. New Delhi: Mac. Millan.

Maheshwari, S.R. (2001). *Indian Administration*. New Delhi: Orient Longman.

Puri, K.K. (2006). *Indian Administration*. Jalandhar: Bharat Prakashan

Sapru, R.K. (2001). *Indian Administration*. Ludhiana: Kalyani Publishers.

Sharma, P.D. and Sharma, B.M. (2009).*Indian Administration Retrospect and Prospect*. Jaipur: Rawat Publication.

Singh, Sahib and Singh, Swinder (2007). *Public Administration: Theory and Practice*. Jalandhar: New Academic Publishing Co.

Further Readings

Government of India (2009). *Organisational Structure of Government of India - Fifteenth Report*. New Delhi: Second Administrative Reforms Commission.

Government of India (2009). *State and District Administration - Thirteenth Report*. New Delhi: Second Administrative Reforms Commission.

Pylee, M.V. (1965). *Constitutional Government in India*. Bombay: Asia Publishing House

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PHILOSOPHY

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

Paper : ELEMENTS OF PHILOSOPHY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS & OBJECTIVES :

The aim of this paper is to familiarize the students with the subject, its branches, problems and methods. The contents of this paper provide the students with a wider canvas about tackling day-to-day problems from a larger perspective.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be 9 questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidates shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature of Philosophy (Introduction).
2. Problems of Philosophy with special focus on social equality, self knowledge and rationality.
3. Methods of Philosophy : Critical and Reflective approach.

Unit-II

4. Introduction to main branches of Philosophy : Metaphysics, Epistemology, Ethics, Social Philosophy and Aesthetics (The interrelation between the branches will be focused).
5. Relation of Philosophy with Science and Religion.
6. Nature of Art and Aesthetic Experience

Unit-III

7. Ethics and Social Philosophy : Good life and Good Society.
8. Morality in Public and Private life.
9. Individual and Society.

Unit-IV

11. Justice : Virtue, Fairness, Equality.
12. Tolerance : Respect for Cultural Pluralism and Social diversities.
13. Caste System in India : Jyoti Ba Phule, Gandhi, Ambedkar.

Essential Readings :

1. G.L. Chandramani : Hitopadesa, Jaico Publishing House, 1995.
2. Mandukya Upanisad, Yamuna Prasad Tripathi : Varanasi Bhartiya Vidya Prakashan, 1966.
3. Narvane, V.S. : Modern Indian Thought, Orient Longman Publishers, 1978.
4. Titus, H.H. : Living Issues in Philosophy, Oxford University, 1993.
5. Amartya Sen : The Idea of Justice, The Belknap Press of Harvard University Press Cambridge, Massachusetts, 2009.
6. Calvin Lewis Pinchin : Issues in Philosophy, Palgrave Macmillan, London, 2nd Ed. December, 2004.
7. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

Suggested Readings :

1. Aesop's Fables : Penguin Books, Harmondsworth, 1998.
2. Dr. B.R. Ambedkar : Annihilation of Caste, Navayana Publishers, New Delhi, 1936.
3. Jyotiba Phule : Gulamgiri (The Slavery), Hindi Translator S. Murti, Cultural Publishers, Lucknow, 3rd Ed. 1994.
4. Narayana Hitopadesa : Translated from Sanskrit by A.B.D. Haksar, Penguin Books, 1998.

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PHILOSOPHY

SEMESTER-II

Paper : LOGIC

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS AND OBJECTIVES :

This paper aims at a systematic study of the Science of Logic which is the most effective means of developing logical abstract thinking in us. It tries to provide students with a mastery of Logic so that they can think in clearer terms and be less prone to error.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be **9** questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidate shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature, Scope and Utility of Logic.
2. Terms and Propositions : Kinds of Terms, Connotation and Denotation of Terms. Aristotle's classification of proposition (Square of Opposition—Contradictories), Contraries, Sub-Contraries and Sub-Alterns.

Unit-II

3. Laws of Thought : Identity, Contradiction, Excluded Middle and Sufficient Reason.
4. Argument : Immediate Inference and Mediate Inference. Some kinds of immediate inference : Conversion, Obversion, Contraposition, Inversion.

Unit-III

5. Categorical Syllogism : The Structure and Rules of validity of Pure Categorical Syllogism, Figures and moods, Fallacies of Syllogism.
6. Introduction to Truth-Tables, Negation, Conjunction, Disjunction, Implications and Equivalences.

Unit-IV

7. Nature of Induction : Distinction between Deduction and Induction.
8. Kinds of Induction.
9. Causation : Nature of Cause, Plurality of Causes.

Essential Readings :

1.	Copi, I. M.	:	Introduction to Logic (N.Y., Macmillan, 1972, Hindi Translation available); London : Routledge and Kegan Paul.
2.	Copi, Irvin M.	:	Introduction to Symbolic Logic (Prentice Hall of India), New Delhi, 1998.
3.	Cohen and Nagel	:	Introduction to Logic and Scientific Method (Allied Publishers), New Delhi, 2000.

Suggested Readings :

1.	Alice Ambrose, Morris Lazerowitz	:	Fundamentals of Symbolic Logic, revised ed., Holt, Rinehart and Winston, New York, 1962.
2.	F.H. Bradley	:	The Principles of Logic, Oxford University Press, London, 1950.
3.	John Dewey	:	Logic, Henry Holt and Company, New York, 1938.

PSYCHOLOGY

SEMESTER –I

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-I

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Nature of Psychology, Goals and Branches of Psychology, Historical Evolution of Psychology, Development of Psychology in India.

Unit II

Emotions : Definition and Concept of Emotions, Types of Emotions, Theories of Emotions (James–Lange, Cannon Bard, Schacter-Singer Theory.), Introduction to Emotion Intelligence.

Unit III

Method of Psychology: Experimental Method, Observation Method.
Sampling Techniques, Survey Method.

Unit IV

Motivation: Definition, Nature, Concept. Types of Motives (Physiological, Psychological, Social): Theories of Motivation: Humanistic (Maslow), Need Theories (McClelland and Murray).

Note: The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Level of Aspiration.
2. Facial Expressions in Emotions
3. Public Opinion Survey.
4. Measurement of Motivation
5. Zeigarnik Effect
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2003). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (2014). Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966). Statistics in Psychology and Education, New Delhi : Vakils, Feffer and Simons.
6. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Rinehart and Winston.
7. Morgan, C.T., King, R.A., J.R. Weisz and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
8. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

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PSYCHOLOGY

SEMESTER –II

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-II

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Personality – Concept, Trait Theories (Eysenck, Costa and MCrae), Psychoanalytic Theory (Freud).

Humanistic Theory (Rogers). Measurement of Personality, (Self Report Measures, Projective Techniques and Behavioural Assessment)

Unit II

Statistics: Graphical Representation of Data: Measures of Central Tendency and Variability.

Correlation - Meaning of Correlation, Rank Order and Product Moment-Correlation and Interpretation.

Unit III

Development: Concept, Heredity and Environmental Influences. Theories of Development : Erickson, Psychosocial Theory, Piaget's theory of Cognitive Development.

Unit IV

Intelligence : Concept, Theories of Intelligence: Spearman, Thurstone, Cattell, Guilford. Measurement of Intelligence (Verbal and Non Verbal Test and Individual and Group Tests).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Verbal Test of Intelligence
2. Non Verbal Test of Intelligence
3. Performance Test of Intelligence.
4. McCosta & Crae NEO Big Five Personality Inventory.
5. Interest Inventory.
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2002). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1996). Understanding Psychology, New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer and Simons.
6. Guilford, J.P., and Fruchter, B. (1981). Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000). Introduction to Psychology. New Delhi: Kalyani.
8. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Holy, Tinvsty snf Eindyon.
9. Morgan, C.T., King, R.A., Weisz ,J.R. and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
10. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

GEOGRAPHY

SEMESTER - I

Paper-I : PHYSICAL GEOGRAPHY-I : Geomorphology

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

The course aims to familiarize the students with the fundamental concepts in physical geography, essentially geomorphology.

Course Content:

UNIT-I

Nature & Scope of Geography: Place of Physical Geography within the discipline of Geography, Divisions of Physical Geography (Geomorphology, Climatology Oceanography and Biogeography). (8 lectures)

Interior of the Earth: Constitution, Isostasy, Continental Drift (with special reference to Wegener's Theory and Plate Tectonics). (12 lectures)

UNIT-II

Movements of the Earth : Orogenic and Epeirogenic (with special reference to Geosyncline theory); landforms resulting from forces of Compression and Tension; Earthquakes and Volcanoes (causes, types and distribution) (20 lectures)

UNIT-III

Rocks: Origin, classification and characteristics. (8 lectures)

Major Land Forms: Mountains, plateaus and plains in the world. (10 lectures)

UNIT-IV

Geomorphic Agents and Landscapes: Fluvial, Glacial, Aeolian, Coastal and Karst. (22 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.
   The paper-setter must put note (5) in the question paper

List of Readings :

Essential Readings:

1. Blij, H.J. De & Petor O. Muller : *Physical Geography of the Global Environment,* John Wiley & Sons, Inc., New York, 1996.
2. Bryant, R.H. : *Physical Geography*, Rupa Publications India Pvt. Ltd., New Delhi, 2011.
3. Hussain, Majid : *Fundamentals of Physical Geography (3rd Edition),* Rawat Publication, Jaipur, 2011.
4. Hyndman, D. and D. Hyndman : *Natural Hazards and Disasters (2nd Edition),* Brooks/Cole Cengage Learning, Belmont, USA, 2009.
5. Khan, Nizamuddin : *An Introduction to Physical Geography*, Concept Publishing Company, New Delhi, 2001.
6. Lal, D.S. : *Physical Geography,* Sharda Pustak Bhawan, Allahabad, 2012.
7. Monkhouse, F.J. : *Principles of Physical Geography (8th Edition),* Hodder & Stoughton, London, UK, 1975
8. Pal, Saroj K. : *Physical Geography of India : A Study in Regional Earth Sciences,* Orient Longman, Calcutta, 1998.
9. Petersen, J.F., D. Sack and R.E. Gabler : *Physical Geography (10th Edition)*, Brooks/Cole Cengage Learning, Belmont, USA, 2011
10. Singh, Savindra : *Physical Geography,* Gyanodya Prakashan, Gorakhpur, 2012.
11. Strahler, Alan H. and Arthur N. Strahler : *Modern Physical Geography,* John Wiley, New York, 2003.

Further Readings:

1. Bunnett, R.B. : *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
2. Dayal, P. : *A Text Book of Geomorphology*, Shukla Book Depot, Patna, 1995.
3. Dury, G.H. : *The Face of the Earth,* Penguin, England, 1973.
4. Gass, I.G. : *Understanding the Earth,* The Artemis Press, Sussex, 1973.
5. Gautam, Alka *Geomorphology,* Sharda Pustak Bhawan, Allahabad, 2012.
6. Kaur, Dhian : *The Earth,* Kalyani Publishers, Ludhiana, 2000.
7. Kale, V. and Gupta, A. : *Elements of Geomorphology,* Oxford University Press, Calcutta, 2001.
8. Mamoria, C.P. and Niati, J.L. : *Bhautic Bhoogol Ke Tatwa* (in Hindi), Agra, 1976.
9. Singh, Savindra : *Geomorphology,* Prayag Pustak Bhawan, Allahabad, 2004.
10. Sparks, B.W. : *Geomorphology,* Longman, London, 1986.
11. Thornbury, W.D. : *Principles of Geomorphology,* Second Edition, Wiley Eastern Ltd., New Delhi, 1993.

Pedagogy:

- Use of Audio-visual aids, maps, diagrams and other forms of illustrations especially in the Indian context are recommended.
- Relevant educational field trips must be arranged to illustrate the theory being taught.

Paper-II: CARTOGRAPHY-I Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (5+5)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography.
- To explain the elements of Map (Scale and Orientation) and steps in Map making.
- To introduce relief representation.

Course Content:

UNIT-I

Maps: Brief history of map making and types of maps.

Geometry of the Earth: Latitude, Longitude (Time Zones and International Date Line), Size and Shape of the Earth. (3 lectures, 6 lab sessions)

UNIT-II

Scales: Methods of representing scale;
Methods of construction of Graphic scales: Plain, Comparative, Time and Diagonal.
(6 lectures, 12 Lab. sessions)

UNIT-III

Directions and Bearings: Plotting of a course, True North, Magnetic North, finding True North with the Pole star, a watch and a rod; Bearing and its conversion. (6 lectures, 12 Lab. sessions)

UNIT-IV

Representation of Relief: Hill-shading, Hachures, and Layer Tints, Spot heights, Benchmarks, Contours.
(6 lectures, 12 Lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be in about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL.They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper.

List of Readings

Essential Readings:

1. Dink, Phyllis: *Map Work*, Atma Ram & Sons, 1962.
2. Khullar, D.R.: *Essentials of Practical Geography*, New Academic Publishing Company, Jalandhar, 2003.
3. Mishra, R.P. & Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
4. Sarkar, Asish: Practical Geography: A Systematic Approach (2nd Edition), Orient BlackSwan, Hyderabad, 2011.
5. Singh, Gopal: *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
6. Singh, R.L. & P.B. Singh: *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Bagulia, A.M.: *Practical Geography*, Anmol Publications Pvt. Limited, New Delhi, 2006.
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
3. Rather, G.M.: *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011.
4. Robinson et al.: *Elements of Cartography (6th Edition)*, Wiley India Pvt. Ltd., New Delhi, 2009.

Pedagogy:

- The use of topographical sheets of Survey of India
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

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GEOGRAPHY

SEMESTER - II

Paper-III: PHYSICAL GEOGRAPHY-II: Climatology & Oceanography

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To acquaint the students with the elements and attributes of climatology and oceanography
- To underscore the role of climate in human life
- To emphasize the significance of oceans within the global environmental system

Course Content:

UNIT-I

Definition of Climatology: Concepts of Climate and Weather, Nature and Scope of Climatology. (2 Lectures)
Climate: Elements and Controls. (4 Lectures)
Physical Structure of the Atmosphere: Troposphere, Tropopause, Stratosphere, Ozonosphere, Mesosphere, Thermosphere and Exosphere (attributes of these layers). (6 Lectures)
Physical and Chemical Composition of the Atmosphere: Dust particles, Vapour Particles, Active gases, Inert gases. (2 Lectures)
Insolation and Temperature: Distribution of Insolation (horizontal); Distribution of Temperature (vertical, horizontal, annual, seasonal and diurnal) (6 Lectures)

UNIT-II

Atmospheric Pressure and Wind Distribution: Atmospheric disturbances: Tropical Cyclones, Temperate Cyclones and Anticyclones. (8 Lectures)
Atmospheric Moisture: Condensation forms: cloud, dew, fog, frost and snow. (8 Lectures)
Precipitation: forms and types, world patterns (spatial and seasonal).
Introduction to Koppen's classification of world climate (4 lectures)
Role of Climate in Human Life : Atmospheric pollution and global warming: causes, consequences and measures of control (4 lectures)

UNIT-III

Oceanography : Definition, Nature and Scope (5 lectures)
Topography of the Ocean Basins; Continental Shelf, Continental Slope, Abyssal Plain, Ridges, Deeps and Trenches (5 lectures)
Temperature and Salinity of ocean waters: World patterns and controlling factors (6 lectures)

UNIT-IV

Movements of Oceanic Waters: Waves, Tides and Currents; Surface currents of the oceans;
Role of Ocean Currents in heat distribution over the globe. (10 lectures)
Marine Deposits and Corals: Origin and types. (10 lectures)

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be about 25 words. Each part will carry 2 marks (Total 20 marks).

2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks. These will be in addition to the compulsory question I.

3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.

4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (5) in the question paper.

Essential Readings :

1. Critchfield, H.J. : *General Climatology,* Prentice Hall of India Private Ltd., New Delhi, 1975
2. Frederick K. and Edward J. Tarbuck : The Atmosphere: An Introduction to Meteorology, Prentice Hall of India Pvt. Ltd., New Delhi, 1995.
3. Hess Darrel, Dennis G Tasa : Mcknight's Physical Geography: A Landscape Appreciation (2011).
4. Khan, N. : *An Introduction to Physical Geography,* Concept, New Delhi, 2001.
5. Lal, D.S. : *Climatology,* Chaitanya Publishing House, Allahabad, 2009.
6. Sharma, R.C and Vatal, M : *Oceanography for Geographers*, Chetnya, Allahabad, 2005.
7. Singh, Malkit : Dimensions in Physical Geography, Rasmeet Parkashan, Jalandhar 2012.
8. Singh, Savindra : *Climatology,* Prayag Pustak Bhavan, Allahabad, 2004.
9. Trewartha, G.T. Delhi, : *An Introduction to Climate,* McGraw Hill Book Co., New International Student Edition, 1980.

Further Readings :

1. Bhutani, Smita : *Our Atmosphere,* Edited by R.C. Chandna, Kalyani Publishers, Ludhiana, Delhi, 2000.
2. Bunnett, R.B. *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
3. Gross, Grant M. : *Oceanography : A View of the Earth*, Prentice Hall, New Jersey, 1975.
4. Monkhouse, F.J. : *The Principles of Physical Geography*, University of London Press, London, 1959.
5. Pattersen, S. : *Introduction to Meteorology,* McGraw Hill Book Co., London, 2011
6. Stringer, E.T. : *Foundations of Climatology*, Surjeet Publications, Delhi, 1982.

Pedagogy:

- Conscious effort be made to make the students aware of the significance of climate and oceans to human life.
- Use of Slides, photographs and documentaries on climates and oceans strongly recommended.

Paper-IV: CARTOGRAPHY-II Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (10+10)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography
- To explain the elements of Map (Scale and Orientation) and steps in Map making
- To introduce relief representation and weather symbolization on maps

COURSE CONTENT

UNIT-I

Brief History of Cartography
Elements of Map Design (6 lectures, 12lab sessions)

UNIT-II

Enlargement and Reduction of Maps: Graphic methods – Square and Similar Triangles.
Introduction to concept of Global Positioning System (GPS).

(6 lectures, 12 Lab. sessions)

UNIT-III

Interpretation of Indian Weather Maps: General introduction to the study of weather maps, the scheme of weather symbols including Beaufort's scale employed in Indian Daily Weather Maps.

(6 lectures, 12 lab. sessions)

UNIT-IV

Weather in India: Summer season (period of summer monsoon), winter season, Weather Forecasting through the study of weather maps and recent advances in weather forecasting.

(6 lectures, 12 lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question I.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper

Essential Readings :

1. Mishra, R.P. & Ramesh, A. : *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
2. Singh, Gopal : *Mapwork and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 1995.
3. Singh, R.L. & Singh : *Mapwork and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.
4. Dink, Phyllis : *Mapwork*, Atma Ram & Sons, Latest Edition, 1962.
5. Anderle, R : *The Global Positioning System, Royal* Society of London, 1998.
6. Kulkarni, M.N : *The GPS and Its Applications, Training,* Volume GPS Training Course, Civil Engg. Dept., I.I.T. Bombay, 9-19 May, 2000.
7. Hoffman-Wellenhof, B. et. al.: *GPS Theory and Practice,* $4^{th\ Rev}$. Edition, Springer Wien, New York.

Further Readings:

1. Monkhouse, F.J. & Wilkinson, H.R. : *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
2. Robinson, A.H. & Randall, D. Sale: *Elements of Cartography*, John Wiley & Sons, New York (Sixth Edition), 1995.
3. Colombo, O.L. & Watkins, M.M.: *Satellite Positioning in US National Report to IUGG,* on Geodesy, 1991.
4. King, R.W. & Others: *Surveying with GPS,* University of New South Wales, Australia,1985.
5. Kulkarni, M.N.: *GPS from an Indian Perspective,* GIM International Journal, GITC Publication, The Netherlands, Vol. 14, Oct., pp. 43-45. (2000a).
6. Mueller, I.I.: *Global and Regional Geodynamics,* IAG Symposia 101, Springer Verlag, 1989.
7. Wells, D.E.: *Guideto GPS Positioning, Canadian* GPS Association, New Brunswick, Canada, 1988.

Pedagogy :

- The use of topographical sheets of Survey of India and weather maps.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

GANDHIAN STUDIES
SEMESTER –I

MAHATMA GANDHI: FAMILY AND EARLY LIFE (INDIA, ENGLAND AND SOUTH AFRICA)

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives :

The paper is designed to acquaint the students with the early life of Mahatma Gandhi in India and in London.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Family and Schooling

a) Family Background – Parents, Rambha & others
b) Neighbourhood and Early Impact
c) Schooling
d) Influence of Indian Scriptures

UNIT-II

As a Law Student in London

a) Dilemma Before Going to London
b) As a Law Student
c) Vegetarianism
d) Self-transformation and Home Coming

UNIT-III

Gandhi in South Africa

a) Journey to South Africa
b) Encounter with Racial Discrimination/Apartheid
c) Conditions of Indians in South Africa
d) Birth of Satyagraha

UNIT-IV

Satyagraha in Practice

a) Disfranchisement of Indians
b) Establishment of Natal Indian Congress
c) Asiatic Law Amendment Ordinance
d) Home Coming

ESSENTIAL READINGS:

1 Bhattacharyya, Buddhadeva : *Evolution of the Political Philosophy of Gandhi* (Calcutta: Calcutta Book House), 1969.

2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.

3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 1986, 1995, 2004 editions.

4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1987.

5. Gandhi, M.K. : *Hind Swaraj (*Ahmedabad: Navajivan Publishing House), 1992.

6. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi : Deep & Deep Publication), 2001.

7. Mishra, Anil Dutta : *Reading Gandhi* (New Delhi: Dorling Kindersley Pearson), 2012.

8. Nanda, B.R. : *Mahatma Gandhi - A Biography* (London: George Allen and Unwin), 1976.

FURTHER READINGS:

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.

2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.

3. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.

4. Nanda, B.R. : *Making of a Nation: India's Road to Independence* (New Delhi: Harper Collins), 1998.

5. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997 edition.

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GANDHIAN STUDIES

SEMESTER –II

GANDHI IN FREEDOM STRUGGLE - SOUTH AFRICA AND INDIA

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives:

The paper is designed to acquaint the students with life in South Africa and struggle against racial discrimination.

Pedagogy of the Course Work :

90% Lectures (including expert lectures).
10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Struggle for Human Rights in South Africa

a) Green Pamphlet
b) Indian Opinion
c) Visit to London
d) Interaction and Confrontation : Race & Caste

UNIT-II

Establishing Ashrams

a) Experience of Community Life in South Africa
b) Phoenix Settlement
c) Tolstoy Farm
d) Return to India

UNIT-III

Western Influences-I

a) Influence of John Ruskin
b) Influence of Henry David Thoreau
c) Influence of Leo Tolstoy
d) Influence of Emerson

UNIT-IV

Gandhi's entry into Indian Politics

a) Early Political Activities
b) Champaran Satyagrah
c) Kheda Satyagrah
d) Ahmadabad Mill Strike

Essential Readings:

1. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
3. Fischer, Louis : *Life of Mahatma Gandhi* (New York: Harper and Row), 1983.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001.
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992.
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999.
7. Kripalani, J.B. : *Mahatma Gandhi, His Life and Thought* (New Delhi: Publications Division, Ministry of Information and Broadcasting), 1971.
8. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi: Deep & Deep Publication), 2001.
9. Nanda, B.R. : *Making of a Nation : India's Road to Independence(New Delhi: Harper Collins), 1998.*
10. Parekh, Bhikhu : *Gandhi's Political Philosophy: A Critical Examination* (Delhi: Ajanta), 1989.

Further Readings :

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.
2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.
3. Bondurant, John V. : *Conquest of Violence: The Gandhian Philosophy of Conflict* (Bombay : Oxford University Press), 1959.
4. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
5. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.
6. Ganguly, Debjani & Docker, John (eds.). : *Rethinking Gandhi and Non-violence Relationlity Global Perspective* (New Delhi: Orient Blackswan Pvt.,), 2009.
7. Nanda, B.R. : *Mahatma Gandhi- A Biography (London :George Allen and Unwin), 1976.*
8. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997, edition.

JOURNALISM & MASS COMMUNICATION

SEMESTER –I

INTRODUCTION TO MASS COMMUNICATION - I

Max. Marks	:	100
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will introduce to the students the general concepts and historical viewpoints in communication and media. The students would also get an understanding of the basic models communication and gain an understanding of the current scenario of media industry in India.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Definition, nature and concept of communication; types of communication: intra; inter; group and mass.

Unit-II : Basic models of mass communication : S-R model; Schramm's Model; Model based on Lasswell formula; Mathematical Model.

Unit-III : Early Press History in India (1782-1947); Role of nationalist newspapers in freedom struggle; Laws to curb press freedom before Indian independence; Role of press in Post Independence era (1947-1975); Role of Press during Emergency (1975-1977); Press in modern India (1978-present)

Unit-IV : Brief overview of media industry in India with emphasis on growth of

- Press
- Radio
- TV
- New Media

PRACTICALS

Max. Marks : 20 Marks

1. Project on any one aspect of communication : 1 0 Marks
2. Case study of any one early newspaper : 1 0 Marks

Books Recommended:

Essential Reading :

1. Wilbur Schramm, (1960), *Mass Communication*, 2nd ed. Urbana, University of Illinois Pr.
2. Wilbur Schramm, (1953), *Process & Effects of Mass Communication*, Urbana, University of Illinois Press.
3. Lee Richardson, (1969), *Dimensions of Communication*, N.Y. Appleton- Century-Croft.
4. Kenneth K. Anderson, 1972, *Introduction of Communication: Theory and Practice*. Menlo Park, Cummings Pub. Co.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd..
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading:

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, NY
3. Blumler, Jay G & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- II

PAPER : INTRODUCTION TO MASS COMMUNICATION-II

Max. Marks	**:**	**100**
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives:

This course will introduce students to the basic terminology of various forms of mass media as well as folk and new media. They will also be apprised with application areas such as Advertising & Public Relations.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Basic terms, concepts, definitions and nature of Print, TV and Radio Journalism.

Unit-II : Folk Media: Types, reach and relevance.

Unit-III : New Media: Cyberspace as a source of information, communication and entertainment.

Unit-IV : Definition, role of Advertising and Public Relations.

PRACTICALS

Max. Marks : 20 Marks

1.	Case study of any one newspaper, radio station or TV channel	:	10 Marks
2.	Project on either folk or new media	:	10 Marks

Books Recommended:

Essential Reading :

1. Luthra, H.P., 1984, *Indian Broadcasting*. Publications Division, Min. of I & B.
2. Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi.
3. Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd., New Delhi.
4. Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth Publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading :

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, N.Y.
3. Blumler, Jay G. & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.
5. Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London.
6. Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher.
7. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York.
8. Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

POLICE ADMINISTRATION

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

PAPER : POLICE ADMINISTRATION IN INDIA

(A) Course Objectives :

The principal objective of this paper is to acquaint the students with the features of Indian Police Administration along with its history and growth. Considerable attention has been paid to the concept and significance of reforms in Police Administration with special reference to reform initiatives after independence. The endeavor of the course would be to familiarize the students with the Police Administration at the Union Level with special focus on the Union Ministry of Home Affairs and Central Armed Police Forces .The powers functions and role of Police at Union, State, District and Police Station level will also be discussed.

(B) Pedagogy of the Course Work :

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words . The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 =18 marks).
- Rest of the paper shall contain 4 Units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit-I

Concept, Role and Significance of Police; Origin and development of Police in Ancient, Medieval and British Period. Police Reforms in India after Independence.

Unit-II

Organization and Working of Union Ministry of Home Affairs; Organization and Working of Central Police Organizations with special reference to Central Bureau of Investigation (CBI); Intelligence Bureau (IB); Bureau of Police Research and Development (BPR & D); and National Crime Records Bureau (NCRB).

Unit-III

Origin, Structure and Working of Central Armed Police Forces (CAPFs) with Special Reference to BSF, CRPF, ITBP , CISF and SSB.

Unit-IV

Organization and Working of Police Administration at the State Level, District Level and Police Station Level. Commissionerate System of Policing.

Essential Readings:

1. Gupta, Anandswarup : The Police in British India: 1861-1947, Bureau of Police Research & Development, New Delhi, 2007.
2. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
3. Sharma, P. D. : Indian Police – A Developmental Approach, Research Publications, New Delhi, 1977.
4. Sen, Shankar : Indian Police Today, Ashish Publishing House, New Delhi, 1994.
5. K.P Singh : Police Gyan Vigyan, Bright Law House, New Delhi, 2004.

Further Readings:

1. Vadackumchery, James : National Police Commission: Issues for Rethinking, APH Publishing Corporation, New Delhi, 1998.
2. Saxena, Anil K. : Professionalism in Indian Police, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Chaturvedi, J.C. : Police Administration and Investigation of Crime, Isha Books, Delhi, 2006.
4. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.

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POLICE ADMINISTRATION

SEMESTER – II

Paper : CONSTITUTION OF INDIA

(A) Course Objectives:

The objective of this course is to give an overview to the students the basic information about the Constitution of India. The students would be taught concepts such as Preamble, Citizenship, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties. They are made to understand the political executive at the union and state level; the union and state legislature and judiciary at the Union and in the state. In addition, efforts would be made to discuss the mechanism available for ensuring police accountability.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :
(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit – I

Preamble, Citizenship, Fundamental Rights, Restrictions of Police Rights, Directive Principles of State Policy & Fundamental Duties.

Unit – II

Executive at the Union Level; President, Prime Minister and Council of Ministers; Union Legislature: Lok Sabha and Rajya Sabha; Judiciary at the Union Level: Supreme Court.

Unit-III

Executive at the State Level; Governor, Chief Minister and Council of Ministers. State Legislature: Vidhan Sabha and Vidhan Parishad. Judiciary in the State : High Court and Subordinate Courts.

Unit – IV

Public Accountability of Police through Constitutional and statutory bodies: National Commission for Schedule Caste, National Commission for Schedule Tribes, National Commission for Women, National Human Rights Commission. National Commission on Protection of Child Rights.

Essential Readings:

1.	Ramesh K. Arora and Rajni Goyal	:	Indian Public Administration: Institutions and Issues, Wishwa Prakashan, New Delhi, 1997.
2.	Avasthi and Avasthi	:	Indian Administration, Lakshmi Narain Agarwal, Agra, 1995.
3.	Norman D. Palmer	:	The Indian Political System, Houghton Hiffin, New York, 1975.
4.	Iqbal Narain (Ed.)	:	State Politics in India, Meenakshi Publications, Meerut, 1976.
5.	Granville Austin	:	The Indian Constitution : Cornerstone of a Nation, Oxford University Press, London, 1966.
6.	Sriram Maheshwari	:	State Government in India, Macmillan, New Delhi, 2000.

Further Readings :

1.	Bambri, C. P.	:	The Indian State – 50 Years, Shipra Publications, Delhi, 1977.
2.	Singh, Hoshiar (Ed.)	:	Indian Administration, Aalekh Publishers, Jaipur, 1990.
3.	Pye, Lucian W. and Sidney Verba (Eds.)	:	Political Culture and Political Development, Princeton University Press, New Jersey, USA, 1965.

WOMEN'S STUDIES

SEMESTER–I

Paper- : FOUNDATIONAL CONCEPTS IN WOMEN'S STUDIES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : The objective of this course is to conscientise the students about some of the key concepts in women's studies, their meaning from a feminist and gender perspective with special reference to India.

Course Contents :

Unit I: Gender

- Sex and Gender : Definition and Difference
- Gender Stereotypes: Genesis and Persistence through Family, School and Peer Group
- Social Construction of Gender: From infancy to Adulthood to Old age

Unit II: Patriarchy

- Definition and Origin of Patriarchy
- Manifestations of Patriarchy:
  - (a) Preference for Male Child
  - (b) Discrimination against girl-child and women in the family
  - (c) Violence against Women
  - (d) Discrimination against Women at the Workplace

Unit III: Empowerment

- Definition
- Types of Empowerment:
  - (a) Social – with reference to women's role in marriage and family
  - (b) Political – 73rd and 74th Constitutional Amendment Acts
  - (c) Economic – Employment and Property Rights

Unit IV: Women's Studies

- (a) Definition,
- (b) Rationale for Women's Studies,
- (c) Evolution of Women's Studies,
- (d) Women's Studies as a discipline.

NOTE:

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

1. Anderson, Margaret : *Thinking About Women,* Macmillan, New York, 1993.
2. Bhasin, Kamla : *What is Patriarchy?,* Kali for Women, New Delhi, 1994.
3. Bhasin, Kamla : *Understanding Gender,* Kali for Women, New Delhi, 2000.
4. Connel, R.W. : *Gender,* Polity, Cambridge, 2002.
5. Jain, Devaki and Rajput, Pam (eds.) : *Narratives from the Women's Studies Family,* Sage, New Delhi, 2003.
6. Poonacha, Veena : *Understanding Women's Studies*, RCWS, SNDT University, Mumbai, 1999.
7. Singh, Umesh Pratap, Garg, Rajesh Kumar and Nigam, Vivek Kumar : *Women Empowerment : Dimension and Direction,* Adhyayan Publishers and Distributors, New Delhi, 2012.
8. Woodward, Kath : *The Short Guide of Gender,* Rawat Publications, Jaipur, 2012.
9. Viz. M., Bhatia, M. and S.(eds) : *Women Studies in India: A Journey of 25 Years*, Rawat Publications, Jaipur, 2014

Further Readings :

1. Aravamudan, Gita : *Disappearing Daughters : The Tragedy of Female Foeticide,* Penguin, New Delhi, 2007.
2. Lerner, Gerda : *The Creation of Patriarchy,* Oxford University Press, New Delhi, 1986.
3. Lorber, Judith and Farell, Susan A. (ed.) : *The Social Construction of Gender,* Sage, New Delhi, 1991.
4. Makwana Ramesh H. : *Women Empowerment through Panchayati Raj,* ABD Publishers, Jaipur, New Delhi, 2012
5. Mies, Maria : *Indian Women and Patriarchy,* Concept Publishing Company, New Delhi, 1980.
6. Rajput, Pam & Kaur, Manvinder : "Women's Studies in Higher Education in India: Some Reflections", *Samyukta,* Vol. III, No.1, January, 2003.

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WOMEN'S STUDIES

SEMESTER -II

Paper : STATUS OF WOMEN IN INDIA-I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: The status of women in India has changed over time in relation to historical and cultural realities, levels of consciousness, perceptions and actions of individual women, women's groups and finally State initiatives. This course first aims to acquaint the student with women in the Indian tradition from ancient times to the present, a tradition which has arisen out of the heterogeneity of experience. Further it aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Course Contents

Unit I : Status of women in India in a historical perspective:

(a) Ancient India
(b) Medieval India
(c) Modern India

Unit II: Women and Family

(a) Origin of the family
(b) Types of family
(c) Gender Division of labour in family
(d) Female headed households

Unit III: Women, Religion and Caste

(a) Religion: Women's Status in major Indian religions - Hinduism, Islam, Sikhism, Christianity
(b) Caste: Introduction to caste system in India; Caste and Gender

Unit IV: Violence against Women

(a) Violence against Women: Definition as given by the United Nations
(b) Prevalent forms of violence against Women :

- Domestic violence
- Rape and Molestation
- Sexual Harassment
- Dowry Related Violence

NOTE:

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal, Banarsidass, Delhi, 1959.
2. Bader, Clarisse : *Women in Ancient India: Moral and Literary Studies,* Anmol Pub., Delhi, 1987.
3. Chatterjee, Meera : *A Report on Indian Women from Birth to Twenty*, NIPCCD, New Delhi, 1999.
4. Gopalan, Sarala and Shiva, Mira : *National Profile on Women, Health and Development,* VHAI, & WHO, 2000.
5. Gopalan, Sarala : *Towards Equality – The Unfinished Agenda : Status of Women in India-2001,* National Commission for Women, New Delhi, 2002.
6. Menon-Sen, Kalayani and Shiva Kumar, A.K. : *Women in India! How Free? How Equal?,* Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.
7. *National Human Development Report, 2001,* Planning Commission, Govt. of India, March, 2002.
8. Pruthi, Raj Kumar, Devi, Rameshwari and Pruthi, Romila, (eds.) : *Status and Position of Women: In Ancient, Medieval and Modern India,* Mangal Deep, Jaipur, 2001.
9. Sagade, J. : *Child marriage in India: Socio-Legal and Human Rights Dimensions,* Oxford University Press, New Delhi, 2012.

Further Readings :

1. Ali, Azra Asghar : *The Emergence of Feminism Among Indian Muslim Women,* 1920-1947, Oxford, Karachi, 2000.
2. Anand, Meena : *Dalit Women : Fear and Discrimination,* Isha Books, Delhi, 2005.
3. Bhattacharya, Rinki (eds.) : *Behind Closed Doors: Domestic Violence in India,* Sage, New Delhi 2004.
4. Choudhary, Prem : *Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India,* OUP, New Delhi, 2007.
5. Desai, Neera and Krishnaraj, Maithreyi (eds.) : *Women and Society in India,* Ajanta Publication, New Delhi, 1987.
6. Goodman, Jacqueline : *Global Perspectives on Gender and Work : Readings and Interpretations Reprint,* Rowman and Little Field Publishers, New York, Toronto Plymouth, UK, 2012.
7. Jacobson, Doranne and Wadley, Susan S. : *Women in India: Two Perspectives,* Manohar, New Delhi, 1986.
8. Kumar, Hajira (ed.) : *Status of Muslim Women in India,* Aakar Books, Delhi, 2002.
9. Mohanti, Bedabati : *Violence Against Women : An Analysis of Contemporary Realities,* Kanishka Publications, New Delhi, 2005.
10. Mohini Giri, V. : *Deprived Devis : Women's Unequal Status in Society,* Gyan, New Delhi, 2006.
11. Nagar, N.S. : *Changing Status of Indian Women,* Vista International Pub., Delhi, 2008.
12. Rajawat, Mamta : *Dalit Women: Issues and Perspectives,* Anmol Pub., New Delhi, 2005.
13. Thomas, P. : *Indian Women Through the Ages,* Asia Publishing House, Bombay, 1964.
14. Yadav, Ravi Prakash and Barsa Kumar Chandradeep : *Women Workers in India,* New Century Publications, New Delhi, India, 2012.

HUMAN RIGHTS AND DUTIES

SEMESTER-I

Paper : HUMAN RIGHTS AND DUTIES : CONCEPTUAL UNDERSTANDING

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

The course is designed to provide adequate theoretical understanding about humans rights and duties. It purports to develop a broad understanding of human rights and duties, awareness about the theoretical origins of human rights and their correlation with governance issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72

UNIT-I

THE CONCEPT OF HUMAN RIGHTS:

- Meaning and nature of Human Rights
- Classification of Rights
- The Concept of Human Rights

UNIT-II

CONCEPT OF HUMAN DUTIES:

- Meaning and nature of Human Duties; Moral, ethical, social, economic, political and cultural universal
- Classification of Human Duties: Individual, family, Community, Nation-State, Human kind and Mother Earth.
- Relationship between Rights and Duties.

UNIT-III

INTRODUCTION TO THEORIES OF HUMAN RIGHTS:

- Natural Rights Theory
- Liberal Theory of Rights,
- Legal/ positivist Theory of Rights
- Marxist Theory of Rights.
- Feminist Theory of Rights

UNIT-IV

DEMOCRATIC GOVERNANCE:

- Democracy and People's participation.
- Rule of Law: Non-arbitraries.
- Role of Civil Society

Essential Readings:

1. Brundlad Report : *Our Common future,* (1986) Oxford.

2. David Robert son : *A Dictionary of Human Rights,* (2004) Europa Publications, London.

3. Darren, J.O. Byrne : *Human Rights: An Introduction*, Pearson, (2005) Education Pvt. Ltd., Singapore.

4. Ian Brownlie, et al. (eds.): *Basic Documents on Human Rights,* (2006) Oxford

5. Jayapalan, N. : *Human Rights,* Atlantic Publishers, (2000) New Delhi.

6. Kalpana Kammabiran : C*rafting Human Rights Cultures* (2006), NALSAR University of Law, Hyderabad.

7. Gandhi, P.R. (ed.) : *Blackstone's International Human Rights Documents,* (2001) University, Delhi.

Further Readings

1. Baxi Upendra (ed.) : *The Right to be Human ,* (1987) *Lancer International,* New Delhi.

2. Sanajaoba, N. : *Human Rights in the New Millennium,* (2000) Manas Publications, New Delhi

3. Tripathi, Mani B.N. : *Jurisprudence,* (2008) *Faridabad*: Allahbad Law Agency

4. Lakhani, M.V. : *Studies in Juris Prudence*, (2013), Tech Publications New Delhi: Cyber

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HUMAN RIGHTS AND DUTIES

SEMESTER-II

Paper : HUMAN RIGHTS : INTERNATIONAL DIMENSIONS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

This paper purports to deal with promotion and protection of human rights in the international context, particularly in the UN bodies. It aims to create awareness regarding the Universal Declaration of Human Rights, 1948, significant Covenants along with the Optional Protocols.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e. 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72 marks

UNIT-I

INTERNATIONAL NORMS AND MECHANISMS:

- League of Nations
- The United Nations Charter and the development of Human Rights.

UNIT-II

INTERNATIONAL BILL OF RIGHTS:

- Universal Declaration of Human Rights (UDHR), 1948
- International Covenant on Civil and Political Rights (ICCPR), 1966; Optional Protocol
- International Covenant on Economic Social and Cultural Rights (ICESCR), 1966; Optional Protocol

UNIT-III

HUMAN RIGHTS AND UNITED NATIONS BODIES (I):

- UN General Assembly
- Economic and Social Council (ECOSOC)
- UN Human Rights Council

UNIT-IV

HUMAN RIGHTS AND UNITED NATIONS BODIES (II):

- International Labour Organization (ILO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Health Organization (WHO)

Essential Readings:

1. Philip (ed.) : *United Nations and Human Rights* (1966), Clearndon Press, Oxford.
2. Henry Steiner J. et al (eds.) : *International Human Rights in Context* (1966), Chapter 10, Clarendon Press, Oxford.
3. Saxena, J.N. et al (ed.) : *United Nations for Better World* (1986), Lancers Books, New Delhi.
4. Henkin Louis : *International Bill of Rights: The Covenant on Civil and Political Rights* (1981), Columbia University Press, New York.
5. Krasno Jean A. : *The United Nations* (2005), Viva books, New Delhi.
6. Lauterpacht, Hersch : *An International Bill of the Right of Man* (1945), Columbia University Press, New York.
7. Morsink, Johannes : *The Universal Declaration of Human Rights : Origins, Drafting and Intent* (1999), University of Pennsylania Press, Philadelphia

Further Readings

8. UN Centre for Human Rights : *International Human Rights Standards for Law Enforcement*(1966), World Campaign for Human Rights, Geneva.
9. Kapoor, S.K. : *Human Rights,* (2005) Allahabad Central Law Agency:
10. Aggarwal, H.O : *International Law and Human Rights*, (2008) Central Allahabad Law Agency:

RELIGIOUS AND SIKH STUDIES

SEMESTER- I

PAPER-I, HINDUISM

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious and Sikh Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course as one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness regarding the origin, features and teachings of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9x2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4x18).

Course Contents

Unit. I. Vaishnavism : origin, development; features and institutions

Unit. II. Shaivism: origin, development; features and institutions

Unit. III. Shaktism: origin, development; features and institutions

Unit. IV. Bhakti Movement in India: growth and development; with special reference to Ramanuj and Chaitanya

Essential Readings:

1. Bhandarkar, R.G., *Vaishnavism, Shaivism and Minor Religious Systems*, Varanasi 1965.
2. Jayaswal, Suvira, *the Origin and Development of Vaishnavism*, New Delhi, 1981.
3. Majumdar, A.K., Chaitanya, *His Life and Doctrine: A Study in Vaishnaism,* Bombay: Bhartiya Vidya Bhavan, 1969.
4. Sharma, Krishna, *Bhakti and the Bhakti Movement: A New Perspective*, New Delhi: Munshiram Manoharlal, 1987.
5. ਉਪਾਧਿਆਇ **ਬਲਦੇਵ, *ਭਾਰਤੀ ਦਰਸ਼ਨ ਕੀ ਰੂਪਰੇਖਾ*** (**ਹਿੰਦੀ**), ਪ੍ਰਕਾਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ,2016 ਪੇਪਰ ਬੈਕ.
6. **ਸਿੰਘ ਸਰਬਜਿੰਦਰ, ਡਾ.(ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪਤ੍ਰਿਕਾ**
7. ਸਿਨਹਾ, ਹਰੇਂਦ੍ਰ ਪ੍ਰਸਾਦ (ਡਾ.), *ਧਰਮ ਦਰਸ਼ਨ ਕੀ ਰੂਪ ਰੇਖਾ,* ਮੋਤੀਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ, 1985.
8. **ਦੱਤਾ ਅਤੇ ਚੈਟਰਜੀ, *ਭਾਰਤੀ ਦਰਸ਼ਨ*** (**ਹਿੰਦੀ**), ਪਬਲੀਕੇਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ, 1973
9. **ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: 'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●5**
11 ਨਿਰਾਕਾਰੀ, ਆਰ. ਡੀ. *ਭਾਰਤੀ ਦਰਸ਼ਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1994.
12 ਪੰਨੂੰ, ਹਰਪਾਲ ਸਿੰਘ (ਡਾ.), *ਭਾਰਤ ਦੇ ਪੁਰਾਤਨ ਧਰਮ,* ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2000.
13 ਮਿਸ਼ਰ, ਉਮੇਸ਼ (ਡਾ.), *ਭਾਰਤੀ ਦਰਸ਼ਨ, ਉਤਰ ਪ੍ਰਦੇਸ਼,* ਹਿੰਦੀ ਸੰਸਥਾਨ, ਲਖਨਊ, 2003.

Further readings:

- Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

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RELIGIOUS AND SIKH STUDIES

SEMESTER- II

PAPER-II NEW FAITHS AND SAINTS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit I. Jainism: Life and Teachings of Mahavira ; origin and development of Jainism

Unit. II. Buddhism: Life and Teachings of Lord Buddha; origin and development of Buddhism

Unit. III. Sant Kabir: Life, Teachings and Contribution

Unit. IV. Sant Ravidas: Life, Teachings and Contribution

Essential Readings:

1. Chatterjee, Asim Kumar, *A Comprehensive History of Jainism,* Delhi: Munshilal Manoharlal Publishers, 2000.
2. Dutt R.C., *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983.
3. Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.
4 Vandeville, Charlotte, *A Weaver Named Kabir*, Oxford: India Paperbacks, 1997.
5 ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ' ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●9
6 ਸਿੰਗਲ, ਧਰਮ ਪਾਲ ਡਾ., *ਗੁਰੂ ਰਵਿਦਾਸ, ਜੀਵਨ ਤੇ ਵਿਚਾਰ,* ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ, 2●●1
7 ਸਰਾਓ, ਕਰਮਤੇਜ ਸਿੰਘ, *ਪ੍ਰਾਚੀਨ ਭਾਰਤੀ ਬੁੱਧ ਧਰਮ: ਉਦਭਵ, ਵਿਕਾਸ ਤੇ ਪਤਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2007.
8 ਕੁਮਾਰ ਲਾਲ ਬਸੰਤ, *'ਸਮਕਾਲੀ ਭਾਰਤੀ ਦਰਸ਼ਨ*, ਮੋਤੀ ਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ 2●●6 (ਹਿੰਦੀ)
9 ਜੋਸ਼ੀ, ਐਲ. ਐਮ., (ਸੰਪਾ.), *ਧੱਮਪੱਦ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1990.
10 ਬ੍ਰਹਮਜਗਦੀਸ਼ ਸਿੰਘ, *ਸੰਤ ਕਬੀਰ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਬਾਣੀ,* ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●2
11 ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: *'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ* ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●1

Further readings:

1. Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.
2. Lopez, Jr., Donald S. (Ed.) *Buddhism in Practice,* New Delhi, 1998.
3. Vandeville, Charlotte, *Myths, Saints and Legends in Medieval India*, Delhi: Oxford University Press, 1999.

HOME SCIENCE

SEMESTER- I

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	40	10	1	3	40	10	100
									Total :	**100**

Note : 1. Each Practical group will have 12-15 students.

PAPER : FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I (a) Meaning & Importance of Home Science.
(b) Functions of Home.

II (a) Home Scientist as an Entrepreneur.
(b) Agencies promoting Entrepreneurship- Commercial Banks, District Industries, Co-operative Societes.

Section B

III Interior Decoration

(a) Elements of Art - Line, Form, Pattern, Texture, Colour, Light and Space.
(b) Principles of Art in relation to interior decoration - Harmony, Balance, Rhythm, Proportion & Emphasis.

IV Colour

(a) Characteristics of colour
(b) Colour wheel
(c) Colour schemes

Section C

V Hygiene & Health

(a) Definition of Hygiene, Health
(b) Definition of infection, sources, carrier and control
(c) Definition and types of immunity.
(d) Immunization schedule

VI Causes & Spread of following diseases.

(a) Caused by insects – Malaria & Dengue
(b) Conveyed by ingestion – Enteric Fever, Cholera, Dysentery & Diarrhea
(c) Spread by droplet infection- chickenpox, measles, mumps & TB.
(d) Sexually transmitted diseases -AIDS.

Section D

VII Food Hygiene

(a) Definition
(b) Hygiene during preparation, service and storage of food.
(c) Domestic purification of water-
- Aquaguard
- Reverse Osmosis

VIII Food Adulteration

(a) Definition
(b) Common food adulterants and their effects on health.
(c) Household Methods of testing food adulteration.

PRACTICAL

Max. Marks : 50 Marks
Practical Theory : 40 Marks
Inter. Asses. : 10 Marks
Time : 3 hours per week.

1. Floor Decoration - Making of Alpana and Rangoli for different occasions.
2. Methods of detecting adulteration in any five foods such as ghee, castor sugar, milk, honey, red chili powder, tea leaves, turmeric powder etc.
3. Table setting, Table manners and Napkin foldings.
4. Making of a Chart/Model/Poster of Colour Wheel or Colour Schemes.
5. Survey of 5 households to study Immunisation schedule.

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HOME SCIENCE
SEMESTER- II

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	40	10	1	3	40	10	100
									Total :	**100**

Note: 1. Each Practical group will have 12-15 students.

PAPER: FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I. Resources

(a) Introduction
(b) Classification

II. Time Management

(a) Steps in making time plans.
(b) Tools in time management- peak loads, work curves and rest periods.

III. Money Management
(a) Types of Income
(b) Budget- Types, Advantages and limitations of budgeting, factors affecting budget, basic steps in planning of budget.
(c) Means of supplementing family income.

IV. Energy Management

(a) Fatigue – Types, Symptoms & Effects.
(b) Work Simplification (Mundel)

Section B

V. Furniture

(a) Factors affecting selection of furniture.
(b) Furniture requirement and arrangement for different rooms.
(1) Master Bedroom
(2) Drawing Room
(3) Dining Room
(4) Children's Room

VI. Flower Arrangement
(a) Definition and Types
(b) Principles of art in flower arrangement
(c) Material and Essential equipment used in Flower Arrangement.

Section C

VII. The Home maker as a Consumer
(a) Concept and objectives of Consumer Education.
(b) Rights and responsibilities of a Consumer.
(c) Malpractices in the production of consumer goods.
(d) Consumer guides- Standardized marks, labels, packaging, media and consumer redressal forum.

VII. Health Education
(a) Aims and Objectives
(b) Scope
(c) Importance

Section D

IX. Digestive System
(a) Diagram of Alimentary Canal
(b) Functions of mouth, stomach, intestines (Small and Large)
(c) Digestion of Carbohydrates, proteins and fats.

X. Simple first aid for burns, poisoning, electric shock, bleeding, drowning, fainting, fractures, insect bite, snake bite, nose bleeding, sunstroke, sprain, heart attack.

PRACTICAL

Max. Marks : 50 Marks
Practical : 40 Marks
Inter. Asses. : 10 Marks
Time : 3 hours per week.

1. Making of fresh flower arrangement for a corner and centre table.
2. Introduction to basic first aid techniques.
3. Cleaning & Polishing of household metals: brass, copper, silver, iron, aluminium, plastic and nonstick ware.
4. Cleaning and polishing of Wooden Furniture.
5. Cleaning of Glass windowpanes.

References

1. Anna Hong Rutt : *Home Furnishing,* Wiley Eastern Ltd., New Delhi, 1973.
2. Hazel Thompson, Criag old Day Rush : *Home with character,* Univesal Book Stall, Delhi, Kanpur 1969.
3. Betty Pepis : *Interior Decoration A to Z,* Doubleday & Co., Inc. New York, 1965.
4. Ray Faulkiner, Sarah Faulkner : *Inside Today's Home,* Holt, Rinehart & Winston, 1973.
5. R.S. Deshpandae : *Modern Ideal Home for India,* United Book Corporation, Poona, 1983.
6. R.S. Deshpandae : *Build your own Home,* United Book Corporation, Poon, 1983.
7. M.A. Varghese, N.M. Ogale, K. Srinivisan : *Home Management,* Wiley Eastern Ltd., 1985.
8. The Educational Planning Group, Delhi : *Home Management,* Arya Publishing House, New Delhi, 1986.
9. Stella Sournderaj : *A text book of Household Arts,* Orient Longman Ltd., 1974.
10. A Margaret Kaye : *A Student Hand Book of Housewifery,* J.M. Dent and Sons Ltd., London, 1958.
11. Ball, Vetrio Kloss : *Art of Interior Design,* The Macmillan Co., New York, 1962.
12. Goldstein H.I. and Goldstein V. : *Art in Everyday Life,* Macmillan, New York, 1964.
13. Swanson, Betty : *Introduction to Home Management,* Macmillan Co., New York, 1981.
14. Julia Elements : *101 ideas for flower arrangement,* C. Arthur Persons Ltd., London, 1963.
15. Halse A.O. : *The Use of Colour in Interior,* Mcgraw Hill Book Co., New York, 1961.
16. Walter Ian Fischman, Richerd Demsbe, William Bernard: *Basic Home Repairs,* A Grosset Super Good Life Book Publishers, New York, 1975.
17. Saxena, R. R. (1990) *Social and Preventive Medicine,* CBS Publishers and Distributors, Delhi.
18. Selman, A. C. (1992) *Health & Longevity,* Oriental watchman Publishing house, Park, Poona, India.
19. Bedi, Y. P. : *Hygiene and Public Health.*
20. Pearce Evelyn. C., Anatomy and Physiology for Nurses, Oxford University.
21. Best, Charles, H.and Taylor, N.B., The Living Body – A Text in Human Physiology, Asia Publishing House.
22. Phadke : Aids to Hygiene
23. Bhatia, B.C. and Sri P.N. (1968), Elementary Hygiene, Oriental Longman.
24. Seetharam, (2005) *An Introduction to Family Resource Management*, CBS Publishers and Distributors, Delhi.
25. Kaur and Macneil, (1994), *Theory and Practice of Home Science*, Subject Publication, New Delhi.

Journals

1. Indian Journal of Home Science, Home Science Association of India, Sri Avinashilingam Home Science College for Women, Coimbatore.
2. Inside Outside, Edited and Published by Malika Sarabhai, Wadia Building, 19/21 Dalal Street, Bombay.
3. Journal of Home Economics, American Home, A Venue, NW Wahington.

AGRICULTURE

SEMESTER-I

Paper-I : Basics of Agricultural Botany & Forestry (THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week : 1. Theory - Six of 45 minutes duration each.
2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Plant Morphology - Root, Stem, Leaf - Their types and modifications.

Inflorescence - Types and classification.

Flower - Parts and their functions.

Fruit - Types and classification.

Unit-II

Pollination - Types, Significance, Emasculation, Techniques, mode of Reproduction and their significance

Life cycle of a typical angiosperm. Objectives of Plant Breeding, introduction to self – Incompatibility.

Unit-III

Cultivation practices including soil requirements, Water requirements, Improved varieties of the region for:

Cereals - Wheat, Rice, Maize.

Fibres – Cotton, Jute.

Oil Crops - Sarson, Soyabean.

Fruits - Mango, Grapes, Citrus, Sapota.

Unit-IV

Importance of forests, Important forest trees of India and status of forestry in Punjab, its significance.

Raising of Nurseries for forestry.

Social forestry: Definition, concept & its significance.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Study of root, stem, leaf modifications.

Raising of crops/visit to farms/fields to have knowledge of various agricultural tools, implements, and methods of crop production of related area.

Visit to Fruit and Forest nurseries.

Performance of emasculation techniques.

Books Recommended:

1. ICAR : *Hand Book of Agriculture,* New Delhi (2008).
2. S.S. Sinha, P. Gupta and A.K. Gupta : *Hand Book of Agricultural Science,* Kalyani Publishers, Ludhiana (2009).
3. P.A.U., Ludhiana (2010). : Rabi Crops *Package of Practices,*
4. P.A.U., Ludhiana (2010). : Kharif Crops *Package of Practices,*
5. Bhatia : *Elementary Biology,* Trumen Publishers, Jalandhar (2010).
6. Alan Stephens : *Dictionary of Agriculture,* Universal Book Stall, New Delhi (1998).
7. Chidda Singh, Prem Singh and Rajbir Singh : *Modern Techniques of Raising Field Crops,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2009).
8. B.S. Chundawat and S.K. Gautam : *Text Book of Agroforestry,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2006).

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AGRICULTURE

SEMESTER-II

Paper-II: Agricultural Economics and Agronomy (THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week: 1. Theory - Six of 45 minutes duration each.

2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural Banking, Agricultural Loans – Its various types, repayment mode, form filling for agricultural loans.

National policy for agricultural loans.

Agriculture credit cards.

Fundamentals of land measurements and land revenue

Unit-II

Various legal aspects of import and export of raw crop and crop products.

Quarantine laws.

Fundamentals of agricultural economics.

Psychological pressure on farmer and villagers of different classes.

Unit-III

Storage of vegetables, Fruits, Grains at local and large level.

Vegetable and fruit preservation.

Unit-IV

Soil types, Management, Improvement and Amendments.

Soil Testing.

Fundamental of fertilizers and manures.

Important fertilizers and their uses.

Nitrogen fixation.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Visit to Agricultural, Rural Banks to have basic knowledge of loan processing and recovery.

Identification of financial problems of a village.

Identification and collection of fertilizers.

Preservation of fruits and vegetables in Pickle, Jam, Jellies, Squash and Sauce forms.

Books Recommended:

1. K.T. Acharya : *Every Day Indian Processed Foods,* National Book Trust, New Delhi (2008).
2. Malkit Nagi and Satinder Bajaj : *Home Preservation of Fruit and Vegetables,* P.A.U., Ludhiana (2008).
3. ICAR : *Hand Book of Agriculture,* New Delhi.
4. T.D. Biswas and S.K. Mukherjee : *Text Book of Soil Sciences,* Kalyani Publishers, Ludhiana (2008).
5. Girdhari Lal, G.S. Siddappa and G.L. Tandon : *Preservation of Fruit and Vegetables,* ICAR Publication, New Delhi (2008).
6. Das and Gupta : *Manures and Fertilizers,* Kalyani Publishers, Ludhiana (1999).

ENVIRONMENT CONSERVATION

SEMESTER – I

Paper : ENVIRONMENT AND FORESTRY

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	65	10	25	-	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:
There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : ENVIRONMENT AND FORESTRY

UNIT-I

Environment: **Definition, Scope & importance** of Environment. A brief introduction of Physical & biological environment.

Ecosystem: Concept of Ecosystem, Biotic & abiotic components, food chain, food web trophic levels, types of ecosystems, terrestrial and aquatic. Biogeochemical cycles - nitrogen, carbon, phosphorous and sulphur cycle.

UNIT-II

Natural Resources: Definition, type of natural resources (Renewable and nonrenewable natural resources) and the policies of their conservation. Energy resources; Fossil fuel, Alternative source of energy (Solar energy, wind power, geothermal energy, dung energy and wood energy.

UNIT-III

Forestry: Forestry, Concept, types of forests in India & the world. Deforestation, reforestation and afforestation. Major and minor forest products. Reasons of forest destruction and its impact on Environment. Community forestry, Farm forestry, Social forestry and Agroforestry.

UNIT-IV

Indoor Environment: Pollution of the in house environment pollutants in the offices, workplaces (School, Bus stand, College and Kitchens). Environmental problems linked to urban and rural lifestyle, Adulterants; Food adulterants (Wheat flour, milk, red chili powder, mustard oil, desi ghee, sweets, artificial sweetness, dyes, food allergens).

PRACTICAL

(*Based on theory paper*)

Laboratory work: Tests of food adulterants.

Study the forest products with help of charts and specimens.

Survey reports of indoor environmental pollutants and local forests.

A visit to forest to study different components of these ecosystems.

Books Recommended :

1. Purochit, S.S., Shammi, Q.J. & Agarwal, A.K. : Text Book of Environment Sciences, Saraswati Pub., Jodhpur, 2007.
2. Dhaliwal, G.S & Kukul, S.S. : Essentials of Environmental Sciences, Kalyani Pub., Ludhiana, 2008.
3. Chundawat, B.S. & Gautam, S.K : Text Book of Agroforestry, Raju Primalai, New Delhi. 2006.
4. Chandna, R.C. : Environmental Geography, Kalyani Pub., Ludhiana, 2006.
5. Sagreiya, K.P. : Forests and Forestry, National Book Trust, New Delhi, 2007.
6. Ralhon, P.K., Dhaliwal, G.S. & Avtar Singh : The Forests-Production and Management, Kalyani Pub., Ludhiana.
7. Arora, S. : Fundamentals of Environmental Biology, Kalyani Pub., Ludhiana, 2008.
8. Dwivedi, A.P. : Forestry in India, Surya Publications, Dehradun, 1993.

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ENVIRONMENT CONSERVATION

SEMESTER – II

PAPER : SOIL AND WATER POLLUTION

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	68	7	22	3	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:

There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : SOIL AND WATER POLLUTION

UNIT-I

Lithosphere: Meaning of Soil profile, its components, types of soil, physical-chemical properties of soil.

Soil Fertility: Micro-and macro-nutrients, technique of testing soil sample. Methods of increasing soil fertility, merits and demerits of fertilizers, role of soil microorganisms.

UNIT-II

Degradation of soil: Soil erosion (Water and Wind erosion) causes of effect of erosion. Soil pollution: Different types of soil pollutants (Chemicals, Pesticides, Fertilizers & manure, discarded material. Pollution and control measures.

UNIT-III

Hydrosphere: Major sources and uses of water. Overutilization of surface & ground water, floods, drought. Conflicts over water. Potable water, its characteristics. Water cycle (Global and Biological)

UNIT-IV

Water pollution: Definition, Types & Sources of water pollution, its consequences and control measures. Different types of diseases due to water pollution. Treatment of wastewater by green method (Root-zone technology), Marine pollution - a brief account.

PRACTICAL

Determination of soil pH

Use of Portable Kit

Determination of organic matter in soil

Determination of $CaCO_3$ in soil.

Determination of available Nitrogen in soil.

Identification of different fertilizers.

Determination of pH of water.

Determination of organic carbon.

Determination of microbial carbon.

Determination of available Nitrogen.

Determination of dissolved Oxygen, BOD.

Determination of hardness and alkalinity of water.

Survey reports of different water samples in local and adjoining areas and interpretation of water test report.

Books Recommended

1. Singh, R.A. : Soil Physical Analysis, Kalyani Publishers, Delhi, India, 1989.
2. Rao, Sitaram : Introduction to Soil Forestry, Oxford and IBH, New Delhi, 1979.
3. Gupta, P.K. : A Handbook of Soil Fertilizer and Manure, Agrobios, Jodhpur, India, 2003.
4. Miller, R.W. and Donahue, R.L. : Soils in our Environment , Prentice Hall, USA, 1995.
5. Mahajan, S.P. : Air Pollution, Control, TERI Press, Delhi, India, 2009
6. Kudeshia, V.P. : Water Pollution, Prgati Parkashan, New Delhi, India, 2009
7. Hooja, R. : Management of water for Agriculture: Irrigation, Watersheds, and Drainage, Rawat Publications, India, 2009.
8. Goel, P.K. : Water Pollution: Causes, Effects and Control, New Age International Publishers, New Delhi, 2006
9. Ramachandra, T.V. : Soil and Groundwater Production from Agricultural Activities, TERI Press, New Delhi, India, 2006

MATHEMATICS

SEMESTER – I

Paper-I : PLANE GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes in two dimensions: Shifting of origin, rotation of axes, invariants.

Pair of Straight Lines :
Joint equation of pair of straight lines and angle between them, Condition of parallelism and perpendicularity, Joint equation of the angle bisectors, Joint equation of lines joining origin to the intersection of a line and a curve.

Circle :
General equation of circle, Circle through intersection of two lines, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, angle of intersection and orthogonality, power of a point w.r.t. circle, radical axis, co-axial family of circles, limiting points.

Unit-II

Conic :
General equation of a conic, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, diameter. Conjugate diameters of ellipse and hyperbola, special properties of parabola, ellipse and hyperbola, conjugate hyperbola, asymptotes of hyperbola, rectangular hyperbola. Indentification of conic in general second degree equations.

References :

1. S. L. Loney : *The Elements of Coordinate Geometry,* Macmillan and Company, London, 2nd Edition 2007.
2. P.K. Jain and Khalil Ahmad : *A Text Book of Analytical Geometry of Two Dimensions, Wiley Eastern Ltd., 1999.*
3. Erwin Kreyszig : *Advanced Engineering Mathematics, John Wiley & Sons,1999.*
4. Gorakh Prasad and H.C. Gupta : *Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahabad, 1955.*

Paper-II : CALCULUS - I

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Properties of real numbers :
Order property of real numbers, bounds, l.u.b. and g.l.b. order completeness property of real numbers, archimedian property of real numbers.

Limits:
ε - δ definition of the limit of a function, basic properties of limits, infinite limits, indeterminate forms.

Continuity:
Continuous functions, types of discontinuities, continuity of composite functions, continuity of $|f(x)|$, sign of a function in a neighborhood of a point of continuity, intermediate value theorem, maximum and minimum value theorem.

Unit-II

Mean value theorems:
Rolle's Theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, their geometric interpretation and applications, Taylor's theorem, Maclaurin's theorem with various form of remainders and their applications.

Hyperbolic, inverse hyperbolic functions of a real variable and their derivatives, successive differentiations, Leibnitz's theorem.

References :

1. J. D. Murray & M . R. Spiegel : *Theory and Problems of Advanced Calculus,* Schaum's Outline Series, Schaum Publishing Co., New York.
2. P.K. Jain and S. K. Kaushik : *An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.*
3. Gorakh Prasad : *Differential Calculus, Pothishala Private Ltd., Allahabad.*
4. G.B. Thomas & R.L. Finney : *Calculus and Analytic Geometry (Ninth Edition), Pearson Publication.*
5. Shanti Narayan and P.K. Mittal : *Differential Calculus, Edition 2006, S. Chand & Co., New Delhi.*

Paper III: TRIGONOMETRY AND MATRICES

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

D'Moivre's theorem, application of D'Moivre's theorem including primitive n^{th} root of unity. Expansions of $\sin n\theta$, $\cos n\theta$, $\sin^n \theta$, $\cos^n \theta$ ($n \in N$). The exponential, logarithmic, direct and inverse circular and hyperbolic functions of a complex variable. Summation of series including Gregory Series.

Unit-II

Hermitian and skew-hermitian matrices, linear dependence of row and column vectors, row rank, column rank and rank of a matrix and their equivalence. Theorems on consistency of a system of linear equations (both homogeneous and non-homogeneous). Eigen-values, eigen-vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix. Diagonalization.

References:

1. K.B. Datta : *Matrix and Linear Algebra*, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.

2. S. R. Knight and H.S. Hall : *Higher Algebra, H.M. Publications, 1994.*

3. R.S. Verma and K.S. Shukla : *Text Book on Trigonometry, Pothishala Pvt. Ltd., Allahabad.*

4. Shanti Narayan and P.K. Mittal : *A Text Book of Matrices, S. Chand & Co., New Delhi, Revised Edition, 2007.*

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MATHEMATICS

SEMESTER – II

Paper-I : SOLID GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes:
Shifting of origin and rotation of axes.

Sphere:
Section of a sphere and a plane, spheres through a given circle, intersection of a line and a sphere, tangent line, tangent plane, angle of intersection of two spheres and condition of orthogonality, power of a point w.r.t. a sphere, radical axis, radical center, co-axial family of spheres, limiting points.

Cylinder:
Cylinder as a surface generated by a line moving parallel to a fixed line and through a fixed curve, different kinds of cylinders such as right circular, elliptic, parabolic and hyperbolic cylinders in standard forms, enveloping cylinders.

Unit-II

Cone:
Cone with a vertex at the origin as the graph of a homogeneous equation of second degree in x,y,z, cone as a surface generated by a line passing through a fixed curve and a fixed point outside the plane of the curve, reciprocal cones, right circular and elliptic cones, right circular cone as a surface of revolution obtained by rotating the curve in a plane about an axis, enveloping cones.

Conicoid:
Equations of ellipsoid, hyperboloid and paraboloid in standard form. Reduction of second degree equation in three variables in standard form.

References:

1. P.K.Jain and Khalil Ahmad : A Text Book of Analytical Geometry of Three Dimensions, Wiley Eastern Ltd., 1999.
2. Shanti Narayan and P. K. Mittal : Analytical Solid Geometry, Seventeenth Revised Edition, S. Chand & Co., New Delhi, 2006.
3. R.J.T. Bill : Elementary Treatise on Coordinate Geometry of Three Dimensions, Macmillan India Ltd., 1994.

Paper-II : CALCULUS - II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Concavity, convexity and points of inflexion, Multiple points, Asymptotes, Tracing of curves (Cartesian and parametric co-ordinates only).

Curvature:
Curvature of a curve at a point, radius of curvature of cartesian, parametric, polar curves and for implicit functions , evolute and involute, chord of curvature.

Unit-II

Integral calculus:
Integration of hyperbolic and inverse hyperbolic functions. Reduction Formulae.

Numerical Integration: Trapezoidal, Prismoidal and Simpson Rules.

Application of definite integral: Summation of Series, Quadrature, rectification, volumes and surfaces of solids of revolution (Cartesian co-ordinates only)

References:

1. G. B. Thomas & R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
2. Gabriel Klambauer : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
3. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.
4. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co. New Delhi, 2000.

Paper III: THEORY OF EQUATIONS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Euclid's algorithm, synthetic division, roots and their multiplicity. Complex roots of real polynomials occur in conjugate pairs with same multiplicity. Relation between roots and co-efficients. Transformation of equations. Descartes' Rule of Signs.

Unit-II

Newton's method of divisors, Solution of cubic and bi-quadratic equations, Cardan's method of solving a cubic, discriminant and nature of roots of real cubic, trigonometric solutions of a real cubic with real roots. Descarte's and Ferrari's method for a bi-quadratic.

References:

1. S.R. Knight and H.S. Hall : Higher Algebra, H. M. Publications, 1994.

2. Chandrika Prasad : Text Book on Algebra and Theory of Equations, Pothishala Private Ltd., Allahabad.

COMPUTER SCIENCE

SEMESTER-I

SCHEME OF EXAMINATION

FIRST SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS01	**Theory-A**	**Computer Fundamentals**	**3**	**30**	**5**	**35**
Paper –CS02	**Theory-B**	**PC Software**	**3**	**30**	**5**	**35**
Paper – PCS01	**Practical-C**	**Practical Based on Paper – CS01**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS01 : Computer Fundamentals

Objective : To teach the students the fundamentals of computer related to its hardware & software.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

UNIT –II

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

UNIT – III

Types of software: System and Application software; **Programming Languages**: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison. **Range of Applications**: Scientific, Word Processing, Spread Sheets, E-commerce, Business, Educational, Industrial, National level weather forecasting, Remote Sensing, Planning Multilingual Applications.

UNIT – IV

Operating Systems : Components of Operating System; Functions of Operating System; Types of Operating System; Linux/Dos/Windows. **Computers and Communication**: Single user, multi-user, workstation, and client server systems. Computer networks, Network protocols. LAN, WAN, Services offered by Internet.

Suggested Readings :

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications

Paper-CS02: PC Software

Objective : To teach the basic functionality of Disk Operating System & Windows. To impart detailed knowledge for creating word processing, spreadsheet & presentation documents.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Concept of files and directories; Disk Operating System: DOS, System Files, types of DOS commands: Internal and External commands: Introduction to AUTOEXEC.BAT, Directory commands: XCOPY, DEL, RENAME, ATTRIB, BACKUP, RESTORE, FIND, SYS; General commands: TYPE, DATE, TIME, PROMPT; Batch Files, Wild Cards, Line Editor.

UNIT – II

Introduction to graphical user interface, window operating system, Anatomy of windows, organizing folders and files, recycle bin, my computer, windows explorer, control panel.

UNIT – III

Word Processing : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement; Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Sorting blocks, Adjusting Margins and Hyphenating Documents, Creating Master Documents, Creating Data Source, Merging Documents, Using Mail merge feature for labels and envelops; Inserting Pictures, Tables, Working with equations.

UNIT – IV

Spread Sheet : Worksheet overview, Row, Column, Cells, Menus, Creating Worksheet, Opening, Saving, Printing Worksheets; Calculations, Auto fill, Working with Formulae, Data Formatting (number formatting, date formatting), Working with Ranges, Establishing Worksheet links; Creating, Sorting and Filtering Data Base; Creating chart, Adding Titles, Legends etc. to charts, Printing Charts, Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons, Functions (Statistical, Financial, Mathematical, String, Date and Time).

MS-Power Point: Creating, Saving, Printing Presentation; Selecting Design Templates, Animations and Transitions, Auto Content Wizard.

Suggested Readings :

1. Ludd Robbins : *Mastering DOS.*
2. Alan R. Miller : *The ABC's of DOS-6.2.*
3. Richard Allen King : *MS-DOS H. B.*
4. Gilbert Held : *IBM PC and PCXT User's Reference Manual.*
5. Cowart, Robert : *Using Microsoft Windows 2000 Professional,* Que Publishing, 2000.
6. Taxali, Ravikant : *PC Software Made Simple,* New Delhi.
7. Mansfield, Ron : *Compact Guide to Windows, Word & Excel.*

Paper – PCS01 : Practical : Practicals Based on Paper CS02

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COMPUTER SCIENCE
SEMESTER-II

SCHEME OF EXAMINATION

SECOND SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS03	**Theory-A**	**Operating System Concepts**	**3**	**30**	**5**	**35**
Paper –CS04	**Theory-B**	**C Programming**	**3**	**30**	**5**	**35**
Paper – PCS02	**Practical-C**	**Practical Based on Paper – CS04**	**3**	**30**	**--**	**30**

Paper-CS03: Operating System Concepts

Objective : To teach the students various operating system concepts relating to managing processes, memory and deadlocks.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, need of operating system and functions of operating system, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems; Structure of Operating System;

UNIT - II

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling.

UNIT - III

Deadlocks: Introduction, Necessary and sufficient conditions for Deadlocks, Resource allocation graph, Introduction to methods for handling deadlocks, deadlock prevention, deadlock avoidance: Banker Algorithm, deadlock detection and recovery.

UNIT - IV

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

Suggested Readings :

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.

Further Reading :

2. Brinch, Hansen, Operating System Principles, Prentice Hall of India
3. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delhi

Paper-CS04 : C Programming

Objective : To teach the student basic constructs of 'C' programming language and enable them to create 'C' based applications.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.

Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.

UNIT – II

Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.

Loop Control Structure: While and do-while, for loop and Nested for loop,

Case Control Structure: Decision using switch, The goto statement.

UNIT – III

Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function.

UNIT – IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).

Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Union, Difference between Structure and Union .

Suggested Readings :

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading :

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

Paper – PCS02 : Practical : Practical Based on Paper CS04.

STATISTICS

SEMESTER - I

Note :
1. A candidate shall offer this subject in B.A./B .Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. There are two papers code named papers 101 and 102 in the subject of Statistics in B.A./B.Sc. 1st Semester. These are to be taught simultaneously throughout the Semester.
3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 101: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-I

Max. Marks	:	75
Theory	:	65
Internal Assessment	:	10
Time	:	3 Hours

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach. This course will lay the foundation to probability theory of outcomes of real life random experiments. The focus will be on theoretical as well as practical approach.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical tables and log tables will be provided on request.

Unit-I

Important Concepts in Probability: Random experiment, trial, sample point and sample space, definition of an event, mutually exclusive, exhaustive, independent and equally likely events. Definition of probability – classical and relative frequency approach to probability, their demerits and axiomatic approach to probability. Properties of probability based on axiomatic approach, conditional probability, Bayes' theorem and its applications (concepts and simple applications).

Random Variables: Definition of discrete random variables, probability mass function, continuous random variable, probability density function, illustrations of random variables and their properties, distribution function and its properties, expectation of a random variable and its properties – moments, (only definition), moment generating function. Two dimensional random variables- joint, marginal and conditional distributions . Distribution of random variables.

Unit-II

Collection of Data: Primary data – designing a questionnaire and a schedule. Secondary data- its major sources including some government publications. Concept of a Statistical Population and samples from a population; qualitative and quantitative data; discrete and continuous data.

Presentation of Data: Diagrammatic representations of data, frequency distribution, graphical representation, histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display, Box and whisker plot.

Analysis of Quantitative Data: univariate data concepts of central tendency, dispersion and relative dispersion, skewness and kurtosis and their measures including those based on quartiles and moments. Sheppard's correction for moments (without derivation).

Suggested Readings

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications*. Addison Wesley.

2. Goon A.M., Gupta M.K., Dasgupta.B. (2005) :*Fundamentals of Statistics*, Vol. I, World Press, Calcutta.

3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics* (7th edition) Wiley.

Additional Readings

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.

2. Miller, I. and Miller, M. (2002) : John E. Freunds's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.

3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.

4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.

5. Lipshut Z, S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.

6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper-102 : PRACTICAL (SEMESTER-I)

Maximum Marks : 25
Time Allowed : 3 Hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Presentation of data by Frequency tables
2. Diagrams: Bar, Multiple Bar, Stacked Bar, Line and Pie
3. Graphs: histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display
4. Measures of central tendency
5. Measures of dispersion
6. Measures of Skewness
7. Box and Whisker Plot
8. Measures of Kurtosis.

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STATISTICS

SEMESTER-II

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. There are two papers code named papers 103 and 104 in the subject of Statistics in B.A./B.Sc. 2nd semester. These are to be taught simultaneously throughout the semester.

3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 103: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-II

Maximum Marks : 75
Theory : 65
Internal Assessment : 10
Time allowed : 3 hours

Objective: This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.
The objective of the course is to make the students conversant with various techniques used in analysis of data.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical **tables** and log tables will be provided on request.

Unit-I

Standard Univariate Distributions and their Properties: Discrete uniform, Binominal, Poisson, Hyper geometric, Geometric and negative binomial distributions, uniform, normal , exponential, gamma, beta distributions.

Bivariate normal distribution and associated marginal and conditional probability distributions (without derivation).

Chebyshev's inequality and its applications, statements and applications of weak law of large numbers, and Central Limit Theorems (De-moivre's – Laplace and Lindeberg -Levy).

Unit-II

Bivariate Data: scatter diagram, product moment correlation coefficient, properties and coefficient of determination. Spearman's rank correlation coefficient. Simple linear regression and its properties, principle of least square, fitting of linear regression and related results

Multivariate Data: multiple and partial correlation in three variables. (only results no derivations).

Analysis of Categorical Data (using 2x2 contingency table): consistency of categorical data independence and association of attributes. Various measures of association:-Yule coefficient, coefficient of colligation & coefficient V_{AB}.

References:

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications.* Addison Wesley.
2. Goon A.M., Gupta M.K., Das Gupta.B. (2005) : *Fundamentals of Statistics*, Vol. I, World Press, Calcutta.
3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics*: A Foundation for analysis in the Health Sciences, Tenth Edition, Wiley

Additional References:

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.
2. Miller, I. and Miller, M. (2002) : John E. Frends's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.
3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.
4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.
5. Lipshut Z,S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.
6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper - 104: PRACTICAL (Semester-II)

Maximum Marks: 25
Time allowed : 3 hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Product Moment Correlation.
2. Spearman's rank correlation
3. Linear Regression of two variables.
4. Fitting of Curves (reducible to linear form) by the least square method.
5. Multiple and Partial correlations
6. Fitting of Binomial, Poisson and Normal distributions

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APPLIED STATISTICS

SEMESTER - I

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 101AS in B.A. /B.Sc. Semester-I having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 101AS: MATHEMATICAL METHODS – I

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective: The objective of the course is to provide knowledge of the basic concepts in Calculus, Trigonometry, Algebra and Geometry.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I (CALCULUS AND TRIGONOMETRY)

Limits and continuity of functions, derivatives and their geometrical interpretations. Applications of derivatives to maxima and minima, exponential and logarithmic functions, integrals of functions of one variable, geometrical interpretation of integral as area, integration of standard functions, integration by substitution and parts.

Trigonometry: Definition of an angle, its various measures and relations between them, graphs circular functions.

UNIT-II (ALGEBRA AND GEOMETRY)

The solution of linear and quadratic equations in one variable, arithmetic, geometric and harmonic progressions, permutations and combinations, principle of induction, Binomial theorem for positive integral index.

Elementary Analytical Geometry: Equations of straight line, parabola, and hyperbola.

Books Recommended

1. Allen, R.G.D (2006) : Mathematical Analysis for Economists, Chapter-II (Units 2.1, 2.2, 2.8), Chapter-III (Units 3.1, 3.6), Chapter – IV (Units 4.1, 4.7), Chapter VI (Units 6.1 – 6.8), Chapter VII, Chapter VIII (Unit 8.2), Chapter IX (Units 9.1 – 9.4), Macmillan Delhi.

2. Gurhard Tintner (1970) : Mathematics and Statistics for Economists Chapter – VI., Rinehart : New York

3. Loney, S.L. (2010) : Plane Trigonometry, Part – I, Chapter – I (Units I to 22), Part – II, Chapter V (Units 61, 65),Aitbs Publishers, India.

Additional references:

1. Arye, F. Jr. (1999) : First Year College Mathematics (Schaum's Series).Mc Graw Hill, New York.

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APPLIED STATISTICS

SEMESTER – II

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2 The candidate opted for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 102AS in B.A./B.Sc. Semester-II having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 102AS: PROBABILITY

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective:. This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculators are allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I

Random experiments, sample space, events probability, Finite sample spaces, equally likely outcomes, conditional probability, Bayes theorem, independent events, random variables, discrete and continuous probability density functions.

UNIT –II

Expectation and variance of random variable.
Binomial, Poisson, geometric, hypergeometric, uniform, exponential and normal distribution

Books Prescribed

1. P.L.Meyer , (1971) : Introductory Probability and Statistical Applications, Addison Wesley, chapters 1, 2, 3, 4, 5, 8 and 9.

2. Goon, A.M., Gupta, M.K. & Dasgupta,B (2005). : Fundamentals of Statistics, Vol. I. The world press private Ltd.

3. Murray Spiegel, John Schiller & A. Srinivasan (2002) : Schaum's Easy outline of Probability and Statistics, Mc Graw Hill, New York.

Additional References:

1. Sheldon M. Ross (2009) : Introduction to Probability Models, Academic Press: San Diego.

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PHYSICS

B.Sc. (GENERAL) FIRST YEAR (1st and 2nd Semester) EXAMINATION, 2017-18

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3 (three) marks for the Internal assessment. **The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the second semester examination.**
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper as well as practical paper will be three hours.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems/exercises in the question paper should be 25-30%.
6. Student will attempt two questions from each Unit (I-II) and any six parts of question seven.
7. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

Papers, marks and teaching hours allocation :

Paper A :	Mechanics	Total Teaching hrs. 30
Paper B :	Vibrations, Waves and EM Theory	Total Teaching hrs. 30
Paper C :	Electricity and Magnetism	Total Teaching hrs. 30
	Physics Practicals	Total Teaching hrs. 45

* marks allotted for internal assessment.

PHYSICS

SEMESTER – I

Paper A: MECHANICS-I (30 Hrs.)

UNIT-I

Cartesian and spherical polar co-ordinate systems, Two- and three-dimensional coordinate systems, area, volume, displacement, velocity, and acceleration in these systems, solid angle.
Centre of mass, linear momentum, angular momentum, torque, potential energy and kinetic energy of a system of particles.
Relationship of conservation laws of linear momentum, angular momentum and energy, and symmetries of space and time.

UNIT-II

Various forces in nature, relative strengths and spatial dependence,
Motion under force obeying inverse square law, equivalent one body problem.
Motion under central forces, equation of motion under central force, equation of orbit and turning points, Kepler's Laws.
Elastic collision in Lab. and C.M. systems, relationships of velocities, angles, and kinetic energies in these two systems, cross section of elastic scattering, Rutherford scattering.

Books Suggested :

Essential Readings :

1. Mechanics, H.S. Hans & S.P. Puri.
2. Mechanics, Berkeley, Vol. I, C. Kittle.

Further Readings :

1. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
2. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-I (30 Hrs.)

UNIT-I

Simple harmonic motion, energy of a SHM, Compound Pendulum, Torsional Pendulum, Electrical Oscillations, Transverse Vibrations of a mass on a string, composition of two perpendicular SHM of same period and of period in ratio 1: 2. Decay of free vibrations due to damping, differential equation of motion, types of damping, determination of damping co-efficient; Logarithmic decrement, relaxation time and Q- Factor. Electromagnetic damping (Electrical oscillator).

UNIT-II

Differential equation for forced mechanical and electrical oscillators, Transient and steady state behaviour. Displacement and velocity variation with driving force frequency, variation of phase with frequency, resonance. Power supplied to an oscillator and its variation with frequency. Q-value and band width. Q-value as an amplification factor. Stiffness, coupled oscillators, Normal co-ordinates and normal modes of vibration, Inductance coupling of electrical oscillators.

Books Suggested :

Essential Readings :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper–C : ELECTRICITY AND MAGNETISM-I (30 Hrs.)

UNIT-I

Basic ideas of Vector Calculus, Gradient, Divergence, curl in Cartesian coordinates and their useful relations, physical significance and applications, Conservative field, Greens's theorem in a plane, Laplacian in Rectangular coordinates. Stoke's theorem, Gauss's divergence theorem, Coulomb's Law for point charges and continuous distribution of charges, electric field due to dipole, line charge, charged ring, circular disc and sheet of charge, Gauss's Law and its differential form.

UNIT-II

Work and potential difference, Potential difference as line integral of field, Electric potential due to dipole and quadrupole and its applications in Electrostatic field, Electric field as gradient of scalar potential, curl $\mathbf{E} = 0$. Calculation of $\mathbf{E}$ due to a point charge and dipole from potential. Poisson and Laplace's equation, Concept of electrical images. Calculation of electric potential and field due to a point charge placed near an infinitely conducting sheet.

Polarisation of matter, atomic and molecular dipoles, induced dipole moment and atomic polarizability. Electric susceptibility and polarization vector. Relation $K= 1 + \chi$, Gauss's law for dielectrics. Displacement vector, Div. $\mathbf{D} = 0$, Energy stored in dielectric medium.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism* by A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The activities given in the section "Analysis of Experimental Data" are compulsory for all the students in the First semester.

The students are required to perform all the Nine experiments from each of the Units I and Unit II. The Practical examination will be held along with the second semester examinations.

The aim of project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepara a project report of about 10 pages. Assessment of the project work will be done on the basis of effort put in the execution of the project, report prepared, and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section-A will consist of 4 experiments from each of Unit I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section–A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **12**.
7. In a single group, no experiment to be allotted to more than three examinees in the group.

Analysis of Experimental Data (Compulsory for all students in first semester):

Objectives :

(i) Knowledge of propagation of errors.
(ii) Knowledge of significant figures, Determination of standard deviation and probable error and their use in interpretation of the experimental result.
(iii) Familiarity with the method of least square fitting of experimental data to a curve.

LIST OF EXPERIMENTS :

UNIT-I

MECHANICS

I. Measurements :

Objectives :

(i) Measurements of time, length, thickness and curvature, pressure, humidity
(ii) Concepts of least count, horizontal, vertical and angular alignments

Activities :

(i) To measure internal/external diameter of a hollow cylinder using Vernier calipers
(ii) To measure thickness of wire
(iii) To measure curvature of a lens
(iv) To measure pressure using Barometer
(v) To measure humidity using dry and wet thermometer

II. Rotation :

Objectives :

(i) Study of rotational motion.
(ii) Establishing relationship between different quantities.

Activities :

(i) To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).

(ii) To establish relationship between torque and angular acceleration using fly wheel.

III. One-Dimensional Collisions :

Objectives :

(i) Conservation of linear momentum and kinetic energy in elastic collisions.
(ii) Dependence of fraction of kinetic energy transferred on the masses of colliding bodies.
(iii) Idea of coefficient of restitution.

Activities :

To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.

IV. Compound Pendulum :

Objectives :

(i) Idea of equivalent simple pendulum.
(ii) Concepts of centre of suspension and oscillation.
(iii) Dependence of time period on moment of Inertia .
(iv) Radius of gyration.
(v) Determination of g.

Activities :

(i) Measure time period as a function of distance of centre of suspension (oscillation) from centre of mass, plot relevant graphs, determine radius of gyration and acceleration due to gravity.
(ii) Find the value of g by Katers' or Bar pendulum.

V. Torsion Pendulum :

Objectives :

(i) Idea of torsional vibration, dependence of time period on M.O.I. and restoring torque.
(ii) Modulus of rigidity.

Activity :

Measure time period of oscillation of a Maxwell needle and determine modulus of rigidity of the material of a given wire.

VI. Damped Oscillator :

Objectives :

(i) Study damped oscillations.
(ii) Coefficient of damping, quality factor etc.

Activities :

To measure/obtain logarithmic decrement, coefficient of damping, relaxation time, and quality factor of a damped simple pendulum.

VII. Elasticity :

Objective :

Knowledge of elastic constants and related quantities.

Activities :

(i) Study of bending of beams and determination of Young's Modulus.
(ii) Determination of Poisson's ratio for rubber/plastic.

VIII. Standing waves :

Objective :

Standing waves on a string and in air.

Activities :

(i) Melde's experiment.
(ii) Kundt's tube.

IX. Viscosity :

Objective :

Knowledge of viscosity of liquids.

Activity :

Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.

Computer based activities : Elementary C language programs, flowcharts and their interpretation.

1. To print out all natural even/odd numbers from a given series of natural numbers.
2. Numerical solution of equations of motion.
3. To calculate first ten prime numbers.

UNIT-II

ELECTRICITY AND MAGNETISM

I. Objective :

Measurement of resistance, voltage, current and electric energy.

Activities :

(i) To use a multimeter for measuring AC and DC voltage and resistance.
(ii) Measurement of resistance of LDR - To study inverse-square law (concept of solid angle and inverse square law) using linear LDR and light source.
(iii) Observations and measurements using an Electric energy meter. To find wattage of given bulb or heater.
(iv) To study the efficiency of an electric kettle or heater element with varying input voltage.

II. Low Resistance Measurements :

Objectives :

(i) Inadequacy of Wheatstone bridge to measure low resistances.
(ii) Acquaintance with a method of measuring low resistances.

Activity :

To determine low resistance with Carey Fosters Bridge.

III. Magnetic Field :

Objectives :

(i) Familiarity with the magnetic field produced by a solenoid.
(ii) Dependence of solenoidal field on number of turns and current.
(iii) Permeability of air.

Activities :

To study the magnetic field produced by a current carrying solenoid using a search coil and calculate permeability of air.

IV. Electromagnetic Induction :

Objective :

Verification of laws of electromagnetic induction.

Activity :

To study the induced e.m.f. as function of the velocity of the magnet.

V. Magnetism and current :
Objectives and Activities :

Force on a conductor carrying current in a magnetic field.

VI. LCR Circuits :

Objective :

Study of phase relationship between currents and voltages in ac circuits.

Activity :

Study of phase relationships using impedance triangle for LCR circuit and calculate impedance.

VII. Resonant Circuits :

Objective :

Concepts of resonance and Q-value.

Activities :

(i) Resonance in a series LCR circuits for different R-value and calculate Q-value.
(ii) Resonance in a parallel LCR circuits for different R-value and calculate Q-value.
(iii) To determine the dielectric constant of a solid by resonance method.

VIII. Capacitance :

Objectives :

(i) Measurement of capacitance, dielectric constant.
(ii) Concept of time constant and time base circuit.
(iii) Knowledge of a-c Bridges.

Activities :

(i) Capacitance by flashing and quenching of a neon lamp.
(ii) Measurement of capacitance, determination of permittivity of a medium, air and relative permittivity by De-Sauty's bridge.

IX. Self Inductance :

Objectives :

(i) Knowledge of a-c bridges.
(ii) Concept of self-inductance.

Activities :

(i) To determine L using Anderson Bridge.

Computer based activities: Elementary C language programs, flowchart and their interpretation.

1. To rearrange a list of numbers in ascending and descending orders.
2. To compile a frequency distribution and evaluate moments such as mean; standard deviation etc.
3. To evaluate sum of finite series and the area under a curve.

Texts and Reference Books :

1. *"B.Sc. Practical Physics by C.L. Arora, S.Chand & Co. (2014).*
2. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
3. *"Programming with C, Schaum series"* by Byron Gottfried & Jitender Chhabra

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PHYSICS

SEMESTER–II

Paper A : MECHANICS – II

UNIT-I

Rigid Body motion; Rotational motion, principal moments and Axes, Euler's equations, precession and elementary gyroscope.
Galilean transformations and Invariance, Transformation equations for inertial frames inclined to each other, Non-Inertial frames. Fictitious forces in a rotating frames of reference, Centrifugal and Coriolis forces due to rotation of earth, Foucault's pendulum.
Concept of stationery universal frame of reference and ether, Michelson-Morley experiment and its results.

UNIT-II

Postulates of special theory of relativity, Lorentz transformations, Kinematical consequences of Lorentz transformations – length contraction and time dilation, Twin paradox, Transformation of velocities, Simultaneity of relativity, Velocity of light in moving fluid, Relativistic Doppler effect.
Variation of mass with velocity, mass-energy equivalence, rest mass in an inelastic collision, relativistic momentum & energy, their transformation, concepts of Minkowski space, four vector formulation.

Books Suggested :

Essential Readings :

1. Mechanics, Berkeley, Vol. I, C. Kittle.
2. Mechanics, H.S. Hans & S.P. Puri.

Further Readings :

1. *Mechanics & Relativity (3rd Edition)*, Vidwan Singh Soni (PHI Learning, New Delhi, 2013)
2. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
3. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).
4. *Basic Concepts of Relativity,* R.H. Good (East-West Press, New Delhi, 1974).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-II (30 Hrs.)

UNIT-I

Waves in physical media, Wave equation and its solution, Types of waves, particle velocity, acceleration and energy in progressive waves. Longitudinal waves on a rod.
Transverse waves on a string, characteristic impedance of a string, Waves in absorbing media.
Reflection and Transmission of transverse waves on a string at discontinuity, Reflection and transmission of energy.
Reflection and transmission of longitudinal waves at a boundary.
Standing wave ratio, Impedance matching, Energy of vibrating string. Wave and group velocity.

UNIT-II

Physical interpretation of Maxwell's equations, E.M. waves and wave equation in a medium having finite permeability, permittivity and conductivity. Energy flow due to EM wave - Poynting vector, Impedance of a dielectric to EM waves. EM waves in a conducting medium and skin depth. Impedance and Refractive index of a dielectric and a conductor.
Reflection and transmission of EM waves at a boundary of two dielectric media for normal and oblique incidence.
Reflection of EM waves from the surface of a conductor at normal incidence.

Essential Readings :

Books Suggested :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.
3. *EM Waves and Radiating Systems* by Edward C. Jordan and K.G. Balmain, Prentice Hall.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper-C: ELECTRICITY AND MAGNETISM-II (30 Hrs.)

UNIT-I

Current and current density, equation of continuity. Microscopic form of Ohm's Law ($\mathbf{J} = \sigma\mathbf{E}$) and conductivity. Failure of Ohm's Law. Invariance of charge. **E** in different frames of reference. Field of a point charge moving with constant velocity. Force between parallel currents.
Behaviour of various substances in magnetic field. Definition of M and H and their relation to free and bound currents. Permeability and susceptibility and their interrelationship. B-H curve and energy loss in hysteresis, Langevin theory of diamagnetism.

UNIT-II

Lorentz's force. Definition of **B**. Biot Savart's Law and its application to long straight wire, circular current loop and solenoid. Ampere's Circuital law and its application. Divergence and curl of **B**. Hall effect, expression and co-efficient. Vector potential, Definition and derivation, current density— definition, its use in calculation of change in magnetic field at a current sheet. Energy stored in magnetic field, Faraday's Law of EM induction, Displacement current, Mutual inductance and reciprocity theorem. Self inductance for solenoid.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism,* A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The Practical examination will be held along with the second semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester I.

CHEMISTRY
SEMESTER – I

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
I	Inorganic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
II	Organic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
III	Physical Chemistry-A	30	3 periods per week	22 + 3 internal assessment
IV	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper 1 – INORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Atomic Structure

Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, Schrodinger wave equation, significance of Ψ and Ψ^2, quantum numbers, radial and angular wave functions and probability distribution curves, shapes of *s*, *p*, *d* orbitals. Aufbau and Pauli exclusion principles, Hund's multiplicity rule. Electronic configurations of the elements and ions.

UNIT-II (7 Hrs.)

Periodic Properties

Position of elements in the periodic table; effective nuclear charge and its Calculations Atomic and ionic radii, ionization energy, electron affinity and electronegativity – definition, methods of determination or evaluation, trends in periodic table and applications in predicting and explaining the chemical behaviour.

UNIT-III (7 Hrs.)

Chemistry of Noble Gases and *s*-Block Elements

Chemical properties of the noble gases, chemistry of xenon, structure and bonding in xenon compounds. Comparative study, diagonal relationships, salient features of hydrides, solvation and complexation tendencies including their function in biosystems, an introduction to alkyls and aryls.

UNIT-IV (8 Hrs.)

Chemical Bonding-I

Covalent Bond – Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions. BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, $SnCl_2$, XeF_4, BF_4^-, PF_6^-, $SnCl_6^{2-}$. Valence shell electron pair repulsion (VSEPR) theory to NH_3, H_3O^+, SF_4, ClF_3, ICl_2^- and H_2O. MO theory, homonuclear (elements and ions of 1st and 2nd row), and heteronuclear (BO, CN, CO^+, NO^+, CO, CN^-), diatomic molecules. Percentage ionic character from dipole moment and electronegativity difference.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-II: ORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Structure and Bonding:
Hybridization, bond lengths and bond angles, bond energy, localized and delocalized chemical bond, Van der Waals interactions, resonance, hyperconjugation, aromaticity, inductive and field effects, hydrogen bonding.

Mechanism of Organic Reactions:
Curved arrow notation, drawing electron movements with arrows, half-headed and double-headed arrows, homolytic and heterolytic bond breaking. Types of reagents-electrophiles and nucleophiles. Types of organic reactions. Energy considerations.

Reactive intermediates-Carbocations, carbanions, free radicals, carbenes, arynes and nitrenes (with examples). Assigning formal charges on intermediates and other ionic species.

Methods of determination of reaction mechanism (product analysis, intermediates, isotope effects, kinetic and stereochemical studies).

UNIT –II (7 Hrs.)

Alkanes and Cycloalkanes:
Isomerism in alkanes, sources, methods of formation (with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acids), physical properties and chemical reactions of alkanes
Mechanism of free radical halogenation of alkanes: Orientation, reactivity and selectivity. Cycloalkanes – nomenclature, methods of formation, chemical reactions, Baeyer's strain theory and its limitation. Ring strain in small rings (cyclopropane and cyclobutane), theory of strainless rings. The case of cyclopropane ring: banana bonds

UNIT-III (8 Hrs.)

Stereochemistry of Organic Compounds I:
Concept of isomerism, Types of isomerism.
Optical isomerism – Elements of symmetry, molecular chirality, enantiomers, stereogenic center, optical activity, properties of enantiomers, chiral and achiral molecules with two stereogenic centers, diastereomers, threo and erythro diastereomers, meso compounds, resolution of enantiomers, inversion, retention and racemization.

Relative and absolute configuration, sequence rules, D & L and R & S systems of nomenclature.

UNIT-IV **(7 Hrs.)**

Stereochemistry of Organic Compounds II:

Geometric isomerism: Determination of configuration of geometric isomers. E & Z system of nomenclature, geometric isomerism in oximes and alicyclic compounds.

Conformational isomerism – Conformational analysis of ethane and n-butane; conformations of cyclohexane, axial and equatorial bonds, conformation of mono and disubstituted cyclohexane derivatives. Newman projection and Sawhorse formulae, Fischer and flying wedge formulae.

Difference between configuration and conformation.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-III: PHYSICAL CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills**.**

UNIT-I (8 Hrs.)

Mathematical Concepts and Evaluation of Analytical Data:

Logarithmic relations, curve sketching, linear graphs and calculation of slopes, differentiation and integration of functions like e^x, x^n, sin x, log x; maxima and minima, partial differentiation and reciprocity relations.

Terms of mean and median, precision and accuracy in chemical analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, linear least squares curve fitting, types of errors, standard deviation.

UNIT-II (7 Hrs.)

Gaseous States:

Postulates of kinetic theory of gases, deviation from ideal behavior, Van der Waal's equation of state.

Critical Phenomena: PV isotherms of real gases, continuity of states, the isotherms of Van der Waal's equation, relationship between critical constants and Van der Waal's constants, the law of corresponding states, reduced equation of state.

Molecular Velocities*:* Root mean square, average and most probable velocities. Qualitative discussion of the Maxwell's distribution of molecular velocities, collision number, mean free path and collision diameter. Liquification of gases (based on Joule-Thomson effect).

UNIT-III (8 Hrs.)

Chemical Kinetics-I

Chemical kinetics and its scope, rate of a reaction, factors influencing the rate of a reaction- concentration, temperature, pressure, solvent, light, catalyst. Concentration dependence of rates, mathematical characteristics of simple chemical reactions – zero order, first order, second order, pseudo order, half life and mean life. Determination of the order of reaction – differential method, method of integration, method of half life period and isolation method.

Radioactive decay as a first order phenomenon.

UNIT-IV (7 Hrs.)

Chemical Kinetics-II

Theories of Chemical Kinetics: Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

Simple collision theory based on hard sphere model, transition state theory (equilibrium hypothesis). Expression for the rate constant based on equilibrium constant and thermodynamic aspects.

Catalysis and general characteristics of catalytic reactions, Homogeneous catalysis, acid-base catalysis and enzyme catalysis including their mechanisms, Michaelis Menten equation for enzyme catalysis and its mechanism.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-IV: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

INORGANIC CHEMISTRY

(a) QUALITATIVE ANALYSIS:

Semimicro Analysis, cation analysis, separation and identification of ions from groups I, II, III, IV, V and VI. Anion analysis (4 ions).

Instruction to Examiners: Four ions with no interference (anions such as PO_4^{3-}, BO^{3-}_3 and similar anions like Cl^-, Br^-, I^- etc. and cattons from the same group) may not be given.

(b) QUANTITATIVE ANALYSIS:

Volumetric titrations involving acid-base, $KMnO_4$ and $K_2Cr_2O_7$.

There are three experiments - one involving acid-base titrations, one involving $KMnO_4$ and one involving $K_2Cr_2O_7$.

1. Determination of strength of Na_2Co_3 solution by titrating it against a standard solution of HCl.
2. Determination of molarity of $KMnO_4$ solution by titrating it against a standard solution of Oxalic acid.
3. Standarise the given $K_2Cr_2O_7$ solution by titrating it against a standard solution of Mohr's Salt.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Qualitative Analysis : 10 marks

Q.No. II. Quantitative Analysis : 06 marks

Q.No. III. Viva-Voce :03 marks

Ask three questions (1 marks each) related to chemistry practicals. :03 marks

Q.No. IV. Note Book

Books Suggested (Laboratory Courses)

1. Svehla, Vogel's Qualitative Inorganic Analysis (revised); 7th edition Pubs: Orient Longman, 1996.
2. Bassett, J., Denney, R.C., Jeffery, G.H., Mendham, J., Vogel's Textbook of Quantitative Inorganic Analysis (revised); 4th edition, 1978.
3. Palmer, W.G., Experimental Inorganic Chemistry; 1st edition, Pubs: Cambridge, 1954.
4. Brauer, Handbook of Preparative Inorganic Chemistry; 2nd edition, Pubs: Academic Press, 1963, Vol. I, & 1965, Vol. II.
5. Audrieth, L.F., Inorganic Synthesis; Pubs: McGraw Hill, 1950, Vol. 3rd; E.G. Rochow, 1960 Vol. VI; J. Kleinberg, 1963, Vol. 7; S.Y. Tyree, 1967 ,Vol.9; E.L. Muetterties, 1967, Vol.10; W.L. Jolly 1986, Vol 11; R.W. Parry 1970, Vol. 12; F.A. Cotton 1972, Vol. 13; A.G. Mac Diarmid, 1977, Vol. 17.
6. Bansal, R.K., Laboratory Manual of Organic chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

CHEMISTRY
SEMESTER –II

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
V	Inorganic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VI	Organic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VII	Physical Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VIII	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper V – INORGANIC CHEMISTRY –B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Chemical Bonding-II

Ionic Solids – Concept of close packing., Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF_2 and antifluorite), radius ratio rule and coordination number, limitation of radius ratio rule, lattice defects, semiconductors.

UNIT-II (8 Hrs.)

Chemical Bonding-III

Lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids, polarizing power and polarisability of ions, Fajan's rule. Metallic bond-free electron, valence bond and band theories. Weak Interactions – Hydrogen bonding, Van der Waals forces.

UNIT-III (7 Hrs.)

***p*-Block Elements-I**

Comparative study (including diagonal relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane and higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.

UNIT-IV (8 Hrs.)

***p*-Block Elements-II**

Comparative study of groups 15-17 elements, compounds like hydrides, oxides, oxyacids and halides of groups 15-17, silicates (structural principle), tetrasulphur tetranitride, basic properties of halogens, interhalogens and polyhalides.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-VI: ORGANIC CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Alkenes, Cycloalkenes

Nomenclature of alkenes, methods of formation, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides, regioselectivity in alcohol dehydration. The Saytzeff's Rule, Hofmann elimination, physical properties and relative stabilities of alkenes.

Chemical reactions of alkenes – mechanisms involved in hydrogenation, electrophilic and free radical additions, Markownikoff's rule, hydroboration – oxidation, oxymercuration-reduction. Epoxidation, ozonolysis, hydration, hydroxylation and oxidation with $KMnO_4$. Polymerization of alkenes. Substitution at the allylic and vinylic positions of alkenes. Industrial applications of ethylene and propene.

UNIT-II (7 Hrs.)

Dienes and Alkynes

Methods of formation, conformation and chemical reactions of cycloalkenes.
Nomenclature and classification of dienes : Isolated, conjugated and cumulated dienes. Structure of allenes and butadiene, methods of formation, polymerization. Chemical reactions – 1,2 and 1,4 additions, Diels-Alder reaction.

Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation, metal-ammonia reductions, oxidation and polymerization.

UNIT-III (8 Hrs.)

Arenes and Aromaticity:

Nomenclature of benzene derivatives. The aryl group, Aromatic nucleus and side chain, Structure of benzene : Molecular formula and Kekule structure. Stability and carbon-carbon bond lengths of benzene, resonance structure, MO picture.

Aromaticity: The Huckel rule, aromatic ions.

Aromatic electrophilic substitution – General pattern of the mechanism, role of σ and π – complexes. Mechanism of nitration, halogenation, sulphonation, mercuration and Friedel-Crafts reaction. Energy profile diagrams. Activating and deactivating substituents, orientation and ortho/para ratio. Side chain reactions of benzene derivatives. Methods of formation and chemical reactions of alkylbenzenes, alkynyl benzenes and biphenyl.

UNIT-IV **(7 Hrs.)**

Alkyl and Aryl Halides

Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms of nucleophilic substitution reactions of alkyl halides, S_N2 and S_N1 reactions with energy profile diagrams.

Polyhalogen compounds : chloroform, carbon tetrachloride.

Methods of formation of aryl halides, nuclear and side chain reactions. The addition-elimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions.

Relative relativities of alkyl halides vs. allyl, vinyl and aryl halides.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-VII: PHYSICAL CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Thermodynamics-I:

Definition of Thermodynamic Terms: System, surroundings etc. Types of systems, intensive and extensive properties. State and path functions and their differentials. Thermodynamic process. Concept of heat and work.

First Law of Thermodynamics: Statement, definition of internal energy and enthalpy, Heat capacity, heat capacities at constant volume and pressure and their relationship. Joule's Law-Joule-Thomson coefficient and inversion temperature. Calculations of w, q, dU & dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process.

UNIT-II (7 Hrs.)

Thermochemistry:

Standard state, standard enthalpy of formation-Hess's Law of constant Heat Summation and its applications. Heat of reaction at constant pressure and at constant volume. Enthalpy of neutralization. Bond dissociation energy and its calculation from thermo-chemical data, temperature dependence of enthalpy. Kirchoff's equation.

UNIT- III (7 Hrs.)

Colloidal State:

Definition of colloids, classification of colloids.

Solids in liquids (sols): Properties –kinetic, optical and electrical; stability of colloids, protective action, Hardy-Schulze rules, gold number.

Liquids in liquids (emulsions) : Types of emulsions, preparation. Emulsifier.

Liquids in solids (gels): Classification, preparation and properties, inhibition, general applications of colloids.

UNIT-IV (8 Hrs.)

Solutions, Dilute Solutions and Colligative Properties:

Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

Dilute solution, colligative properties, Raoult's law, relative lowering of vapour pressure, molecular weight determination. Osmosis, law of osmotic pressure and its measurement, determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point, Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression of freezing point. Experimental methods for determining various colligative properties.

Abnormal molar mass, degree of dissociation and association of solutes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-VIII: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

ORGANIC CHEMISTRY AND GREEN CHEMISTRY PRACTICALS
Crystallization and determination of melting points

Concept of induction of crystallization
1. Phthalic acid from hot water (using fluted filter paper and stemless funnel).
2. Acetanilide from boiling water.
3. Benzoic acid from water

PHYSICAL CHEMISTRY

1. Refractive indices
   Determine the Refractive indices of given liquids (water, acetone, methanol, ethylacetate, cyclohexane) by Abbe's refractometer & calculate their specific refractions.
2. Viscosity
   To determine the viscosity of Brine Solution (20%), n-Butyl alcohol, cyclohexane
3. Surface Tension
   To determine the surface tension of Brine Solution (20%), n-Butyl alcohol, cyclohexane

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:
Q.No. I. Physical Chemistry : 10 marks
Q.No. II. Organic Chemistry : 06 marks
Q.No. III. Viva-Voce : 03 marks
Ask three questions (1 marks each) related to chemistry practicals.

Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition Pubs: R. Chand & Co., New Delhi, 2002.
2. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1998.
3. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

SEMESTER-I

First Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A	Plant Diversity-I	3 hrs.	36	04	40
Theory Paper-B	Cell Biology	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Second Semester					
Theory Paper –A	Plant Diversity-II	3hrs	36	04	40
Theory Paper-B	Genetics	3hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3hrs.	18	02	20
		Total			**200**

Note: **1.** The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

Paper-A: PLANT DIVERSITY-I

Objective: The basic objective of this paper is to make students aware about the diversity in various life forms of plant kingdom. It gives an idea about the most simple group of plants. A systematic study of algae and fungi included in this group would familiarize students not only with structural differentiation but also provide an insight about the heterotrophic and autotrophic modes of nutrition in the plant kingdom. This paper in fact forms the basis of any advance study in Botany.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bacteria: Salient features, types and cell structure.

Algae: General Characters; systematic position, structure and life history of *Oscillatoria* (Cyanophyceae) *Volvox*, *Cladophora* (Chlorophyceae); *Vaucheria* (Xanthophyceae).

UNIT-II

Systematic position, structure and life history of *Dictyota* (Phaeophyceae); *Batrachospermum* (Rhodophyceae) and economic importance of algae.

UNIT-III

Fungi: General characters; systematic position, structure and life history of *Albugo* (White rust of crucifers: *Albugo candida*), *Rhizopus* and *Saccharomyces*.

UNIT-IV

Systematic position, structure and life history of *Agaricus*, *Ustilago* (Loose smut of wheat: *Ustilago tritici*), *Puccinia* (Black rust of wheat: *Puccinia graminis tritici*), *Colletotrichum* (Red rot of sugarcane: *Colletotrichum falcatum*); general account of Lichens and their economic importance.

Suggested Readings :

1. Alexopoulos, C. J. Mims, C. W`. and Blackwell, M. 1996. Introductory Mycology. John Wiley and Sons, Inc. USA.
2. Dube, H.C. 1990. An Introduction to Fungi. Vikas Publishing House Pvt. Ltd., Delhi.
3. Goyal, J. P. Dhand, Neelam and Saini, Aruna. 2011. Foundations of Botany. Trueman Book Company Jalandhar.
4. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi.
5. Sharma, O.P. 1992. Text Book of Thallophytes, McMillan India Ltd., New Delhi.
6. Sharma, P.D. 1991. The Fungi. Rastogi & Co., Meerut.
7. Smith, G.M. 1971. Cryptogamic Botany. Vol. 1, Algae & Fungi, Tata McGraw Hill Publishing Co. New Delhi.
8. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
9. Srivastava, H.N. 2013. Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
10. Vishishta, B. R. 1999. Botany for Degree Students. Algae. S. Chand and Company Ltd., New Delhi.
11. Vishishta, B. R. 1999. Botany for Degree Students. Fungi. S. Chand and Company Ltd., New Delhi.

Paper-B: Cell Biology

Objective: This paper deals with the basic structural unit of life i.e. Cell & its organelles. It provides an insight into structural and cytological basis of functional differentiation in plants. Coupled with the study of prokaryotic and eukaryotic diversity of life forms included in Paper-A, the course material of this paper gives an idea about cellular, molecular and biochemical basis of such differentiation.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Ultrastructure and functions of a typical plant cell and its organelles: Nucleus, Mitochondrion, Plastids, Ribosome, Endoplasmic reticulum, Golgi apparatus, Lysosomes; Structure and functions of cell wall and plasma membrane: fluid mosaic model only.

UNIT-II

Physical structure of chromosome; Giant chromosomes: Polytene and Lampbrush chromosomes; Chromosomal alterations (deletion, duplication, inversion, translocation) and their importance; Variations in chromosome number, (aneuploidy and polyploidy) introduction and their importance.

UNIT-III

Cell divisions: Mitosis and Meiosis in plants and their significance, Synaptonemal complex, DNA: Structure (Watson and Crick model), Nucleosome, types of DNA and role of DNA, Replication of DNA.

UNIT-IV

Structure and concept of gene: One gene-one enzyme hypothesis; Genetic Code: Characteristics, exceptions, Wobble hypothesis; RNA: Structure and types; Transcription and translation; Regulation of gene expression in prokaryotes (Lac operon and Tryptophan operon) and in eukaryotes (a brief account).

Suggested Readings :

1. Alberts, B., Gray, D. Lewis, J. Raff, M., Roberts, K. and Watson, I.D. 1999. Molecular Biology of Cell. Garland Publishing Co., Inc., New York, USA.
2. Bhatia, K.N. and Dhand Neelam. 2013. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. A Text-book of Cell and Molecular Biology. Rastogi Publications, Meerut, India.
4. Kleinsmith, L.J. and Kish, V.M. 1995. Principles of Cell and Molecular Biology (2nd edition). Harper Collins College Publishers, New York, USA.
5. Lodish, H., Berk, A., Zipursky, S.L. Matsudaira, P., Baltimor, D. and Darnell, J. 2000. Molecular Cell Biology. W.H. Freeman & Co., New York, USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Wolfe, S.L. 1993. Molecular and Cell Biology. Wadsworth Publishing Co., California, USA.

Suggested laboratory exercises for First Semester :

1. Study of morphology of various genera included in algae and fungi.
2. Study of Crustose, Foliose and Fructicose types of Lichen thalli.
3. Histopathological study of White rust of crucifers, Loose smut of wheat, Black rust of wheat and Red rot of sugarcane.
4. To study cell structure from onion leaf peels; demonostration of staining and mounting method.
5. Preparation of temporary slides to show different stages of mitosis from root tips of *Allium cepa* and *A. sativum*.
6. Preparation of temporary slides to show different stages of meiosis from floral buds of *Allium/Brassica*.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1.	Identify and write illustrated morphological note on specimens A and B.	05
2.	Prepare a squash mount of specimen C to show the stage of cell division visible in the slide and show it to the examiner. Identify it giving at least one reason. Draw the stage of cell division and show it to the examiner.	05
3.	Identify and the slides D and E giving at least two reasons for each.	04
1.	Practical Note-book	02
2.	Viva-voce	02

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BOTANY

SEMESTER – II

Paper-A: Plant Diversity-II

Objective: The basic objective of this paper is to make the students aware about the diversity in various life forms of plant kingdom. It gives an idea about how different life forms have evolved from simpler to complex ones. A sequential study ranging from Bryophytes (the amphibians of plant kingdom) and then to Pteridophytes -the first vascular land plants, would enable students to have a broad prospective of evolutionary trends in plant kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bryophyta: General characters; systematic position, structure, reproduction and life cycle of *Marchantia* and *Riccia* (Hepaticopsida) excluding developmental stages.

UNIT-II

Systematic position, structure, reproduction and life cycle of *Anthoceros* (Anthocerotopsida) and *Funaria* (Bryopsida) excluding developmental stages.

UNIT–III

Pteridophyta: General characters; systematic position, structure, reproduction and life cycle of *Rhynia* (Psilophytopsida) and *Selaginella* (Lycopsida) excluding developmental stages.

UNIT-IV

Systematic position, structure, reproduction and life cycle of *Equisetum* (Sphenopsida) and *Pteris* (Pteropsida) excluding developmental stages.

Suggested Readings

1. Goyal, J. P. Dhand, Neelam and Saini, Aruna 2011. Foundations of Botany. Trueman Book Company Jalandhar.
2. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi
3. Puri, P. 1980. Bryophyta. Atma Ram & Sons, Delhi.
4. Sharma, O.P. 1990. Text Book of Pteridophyta, McGraw Hill Publishing Co., New Delhi.
5. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
6. Smith, G.M. 1971. Cryptogamic Botany. Vol. II, Bryophytes and Pteridophytes, Tata McGraw Hill Publishing Co., New Delhi.
7. Srivastava, H.N. 2013.Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
8. Vishishta, B. R. 1999. Botany for Degree Students. Bryophyta. S. Chand and Company Ltd., New Delhi.

Paper-B : Genetics

Objective: This paper deals with various aspects of hereditary trends observed in successive generations. It provides an insight into genetic basis of such evolutionary trends in plants. Coupled with the study of variations in life forms included in Paper A, the course material of Paper B provides an idea about the important role that genetics plays in structural and functional differentiation of plants.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Mendelism : Mendel's experiments and results, Mendel's Laws of Dominance, Segregation and Independent assortment; Linkage: complete and incomplete linkage, linkage groups, linkage maps, importance of linkage, cytological interpretation of Mendelism.

UNIT-II

Non-allelic Gene Interactions: Dominant and recessive epistasis, supplementary genes, complementary genes, quantitative or polygenic inheritance, duplicate genes. Allelic gene interactions: Incomplete dominance, codominance, multiple alleles, pleiotropic genes.

UNIT-III

Chromosome theory of heredity, parallelism between chromosome and Mendelian factors, Sex linked inheritance; Characteristics and examples (Haemophilia, colour-blindness); Cytoplasmic or extranuclear inheritance: mitochondrial and plastid DNA; plastid inheritance in *Mirabilis*, mitochondrial inheritance in Yeast.

UNIT–IV

Genetic variations: Continuous and Discontinuous; Mutations: characteristics, types, importance, factors affecting mutations; Mutagens: Physical and chemical, mechanism of gene mutations; DNA damage and repair: Types of damage (Single base change and structural distortion), types of repair system in prokaryotes and eukaryotes.

Suggested Readings :

1. Atherly, A.G., Girton, J.R. and McDonald, J.F. 1999. The Science of Genetics. Saunders College Publishing, Fort Worth, USA.
2. Bhatia, K. N. and Dhand Neelam 2013.. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. Genetics. Rastogi Publications, Meerut, India.
4. Russel, P.J. 1998. Genetics. The Benjamin/Cummings. Publishing Co. Inc., USA.
5. Snustad, D.P. and Simmons, M.J. 2000. Principles of Genetics, John Wiley & Sons, Inc., USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Stent, G.S. 1986. Molecular Genetics. CBS Publications.

Suggested laboratory exercises for Second Semester:

1. Study of morphology of various genera mentioned in Bryophyta and Pteridophyta.

2. I. Preparation of permanent stained slides of :

Marchantia	(V.S. Thallus)	*Selaginella*	(T.S. Stem)
Riccia	(V.S. Thallus)		
Anthoceros	(V.S. Thallus)	*Equisetum*	(T.S. Aerial stem passing through internode)
Funaria	(T.S. Stem)	*Pteris*	(T.S. Petiole and leaflet)

II. Study through permanent slides:

Marchantia

i) L.S. Antheridiophore
ii) L.S. Archegoniophore
iii) L.S. Mature sporogonium

Riccia

L.S. Mature sporogonium

Anthoceros

i) T.S. Thallus passing through antheridia
ii) T.S. Thallus passing through archegonia
iii) L.S. Mature sporogonium.

Funaria

i) L.S. Male receptacle
ii) L.S. Female receptacle
iii) L.S. Capsule
iv) Primary protonema

Selaginella

L.S. Sporangiferous spike

Equisetum

i) L.S. Strobilus
ii) T.S. Strobilus

Pteris

Mature prothallus

3. Problems related to Mendalism and gene interactions.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1. Cut T.S., stain and make a permanent mount of specimen A. Identify, draw its labelled diagram and show the slide to the examiner. 06

2. Problem related to Mendalism or gene interaction (to be announced by the examiner). 04

3. Identify the slides B and C giving at least two reasons for each. 04

4. *Viva-voce* & Practical Note-book. 2+2= 04

ZOOLOGY

FIRST SEMESTER

	Time	Theory	Internal Assessment	Marks
Paper-I : Biodiversity & Cell Biology – I	3 hrs.	36	4	40
Paper-II: Biodiversity & Cell Biology – II	3 hrs.	36	4	40
Practical: One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
			Total marks :	100

SECOND SEMESTER

	Time	Theory	Internal Assessment	Marks
Paper-I : Biodiversity & Ecology - I	3 hrs.	36	4	40
Paper-II: Biodiversity & Ecology - II	3 hrs.	36	4	40
Practical: One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
			Total marks :	100

Note : The number of hours for Theory and Practical per week shall be 6 and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Semester-I and Semester-II in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

ZOOLOGY

FIRST SEMESTER

PAPER–I : BIODIVERSITY & CELL BIOLOGY-I (ZOO. 101)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following protozoan types :
Amoeba, Paramecium and Plasmodium.

Classification up to orders with ecological notes and economic importance (if any) of the following :
Entamoeba, Trypanosoma, Giardia, Noctiluca, Eimeria, Opalina,Vorticella, Balantidium and Nyctotherus.

UNIT – II

Detailed study of the following animal types :

Parazoa (Porifera)	:	Sycon (*Scypha*)
Cnidaria (Coelenterata)	:	*Obelia*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Parazoa (Porifera)	:	*Grantia, Euplectella, Hyalonema and Spongilla*
Cnidaria (Coelenterata)	:	*Hydra, Sertularia, Plumularia, Obelia, Tubularia, Bougainvillea, Porpita, Velella, Physalia, Rhizostoma Millipora, Aurelia, Alcyonium, Tubipora, Zoanthus, Metridium, Madrepora, Favia, Fungia and Astrangia.*

UNIT – III

Methods in Cell Biology	:	Principles and applications of light (simple, compound & phase contrast) and electron (SEM & TEM) microscopes Fixation & fixatives, staining techniques. (simple and double staining)
Organisation of Cell	:	Concept of Prokaryotic and Eukaryotic cell, extra nuclear and nuclear organization of cell.
Plasma membrane	:	Structure with particular references to Fluid Mosaic Model, Osmosis, active and passive transport, endocytosis and exocytosis.

UNIT – IV

Endoplasmic reticulum	:	Structure, types, associated enzymes and functions.
Mitochondria	:	Structure, mitochondrial enzymes and the role of mitochondria in respiration. Mitochondrial DNA.
Golgi complex	:	Structure, associated enzymes and functions.

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A molecular approach – G. M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PAPER–II : BIODIVERSITY & CELL BIOLOGY - II (ZOO. 102)

Max. Marks	:	40 marks
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

UNIT – I

Detailed study of the following animal types :

Platyhelminthes	:	*Fasciola,Taenia*
Aschelminthes	:	*Ascaris*
		Parasitic adaptations in Helminths

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Platyhelminthes	:	*Dugesia, Schistosoma and Echinococcus.*
Aschelminthes	:	*Ascaris, Oxyuris, Wuchereria.*

UNIT – II

Detailed study of the following animal type :

Annelida	:	*Pheretima*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Annelida	:	*Nereis, Polynoe, Eunice, Arenicola, Aphrodite, Amphitrite, Chaetopterus, Tubifex and Pontobdella.*

UNIT – III

Lysosomes	:	Lysosomal enzymes, Polymorphism and functions.
Ribosomes	:	Types of ribosomes, their structure and functions.
Centrosome	:	Structure and functions.

UNIT-IV

Nucleus	:	Structure and functions of nuclear membrane, nucleolus and chromosomes. Euchromatin & Heterochromatin
An elementary idea of cell transformation in Cancer	:	Introduction, difference between normal and Cancer cells, types of cancer, basic idea of transformation.
An elementary idea of cellular basis of immunity	:	Cellular & Humoral immunity. Elementary idea of cells & organs of immune system .

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A Molecular approach – G.M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PRACTICALS : Practical based on Theory Papers ZOO-101 & ZOO-102 (ZOO-151)

1. Examination of cultures of *Euglena* and *Paramecium.*
2. Classification upto orders with ecological notes and economic importance, if any, of the following animals :
   Slides : *Amoeba, Euglena, Trypanosoma, Noctiluca, Eimeria, Monocystis, Paramoecium* (Binary fission and conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus & Polystomella.*

Parazoa (Porifera) :		Specimens: *Sycon, Grantia, Euplectella, Hyalonema, Spongilla, Euspongia.*
Cnidaria (Coelenterata)	(a)	Specimens : *Porpita, Velella, Physalia, Aurelia, Rhizostoma Metridium, Millipora, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia and Astrangia.*
	(b)	Slides : *Hydra* (W.M.) *Hydra* with buds. *Obelia* (colony and medusa). *Sertularia, Plumularia, Tubularia, Bougainvillea* and *Aurelia larva.*
Aschelminthes	:	*Ascaris* (male and female), *Trichinella, Ancylostoma.*
Platyhelminthes	(a)	Specimens : *Dugesia, Fasciola, Taenia, Echinococcus.*
	(b)	Slides : Miracidium, Sporocyst, Redia, Cercaria of *Fasciola*, Scolex and Proglottids of *Taenia* (mature and gravid).
Annelida	:	*Pheretima, Nereis, Heteronereis, Polynoe, Eunice, Aphrodite, Chaetopterus, Arenicola, Tubifex* and *Pontobdella.*

3. Study of the following permanent stained preparations :
   - L.S. and T.S. *Sycon,* gemmules, spicules and spongin fibres of a sponge.
   - T.S. *Hydra* (Testis and ovary region).
   - T.S. *Pheretima* (Pharyngeal and typhlosolar regions); setae, septal nephridia, spermathecae and ovary of *Pheretima*
   - T.S. *Fasciola* (Different regions).
   - T.S. *Ascaris* (Male & female).

4. Preparation of the following slides :
   Temporary preparation of *Paramecium*, Euglena and vorticella.

5. Demonstration of dissection of earthworm through video clipping/models/charts ets.

6. Make a preparation of sex-chromatin from buccal smear.

7 . Introduction to the following through photographs/lab. visits :
   - Gel electrophoresis, TEM & SEM, ultrastructure of cell organelles.

8. Study of slide of striated muscle fibre and Animal cell.

Note : . Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labelled sketch of the any given system and show to examiner/Spot any four parts of anatomy in given models/charts. 2 marks

2. Make a temporary mount of the material "A". Identify and draw its labelled sketch and show it to the examiner. 1 marks

3. Identify the slides (B-C) and give two important reasons for each identification. 3 marks

4. Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks

5. Identify the cell organelle through photograph and give two important reasons for Identification/Buccal smear/striated muscle fibre/paper chromatography. 2 marks

6. Viva voce 2 marks

7. Practical records and chart 2 marks

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ZOOLOGY

SECOND SEMESTER

Paper- I : BIODIVERSITY & ECOLOGY - I (ZOO-201)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type Questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Detailed study of the following animal types :

Arthropoda : *Periplaneata*
Social organizations in insects (honey bee and termite).

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Arthropoda : *Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper) *Gryllus* (Cricket), *Mantis* (Preying Mantis), *Cicada, Forficula* (Earwig), *Cimex*, *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth).

UNIT –II

Detailed study of the following animal types :

Arthropoda : Prawn (*Palaemon*)
Life cycle of *Anopheles* and *Culex*.

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Peripatus, Prawn, Lobster, *Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

UNIT – III

Ecology	:	Subdivisions and Scope of ecology.
Ecosystem	:	Components, ecological energetics, food web, introduction to major ecosystems of the world.
Ecological factors	:	Temperature, light and soil as ecological factors.

UNIT – IV

Nutrients	:	Biogeochemical cycles & concept of limiting factors.
Ecological Adaptations	:	Morphological, physiological and behavioural adaptations in animals in different habitats.
Population	:	Characteristics and regulation of population.

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10^{th} edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

Paper-II BIODIVERSITY & ECOLOGY - II (ZOO-202)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following animal type :

Mollusca : *Pila*

Classification up to orders with ecological notes and economic importance (if any)

Mollusca : *Chiton, Anodonta, Mytilus, Ostrea, Cardium, Pholas, Solen* (Razor Fish), *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus and Dentalium*

UNIT – II

Detailed study of the following animal types :

Echinodermata : *Asterias*, Echinoderm Larvae.
Hemichordata : *Balanoglossus*, External characters and affinities.

Classification up to orders with ecological notes and economic importance (if any)

Echinodermata : *Echinus, Cucumaria, Ophiothrix, Antedon and Asterias.*
Hemichordata : *Balanoglossus.*

UNIT – III

Inter and intra ecological relationships : Competition, predation, parasitism, commensalism, ammensalism & mutualism

Biotic community : Characteristics, ecological succession, ecological niche.

UNIT – IV

Natural resources : Renewable and nonrenewable natural resources and their conservations.

Environmental Degradation : Causes, impact and control of environmental pollution. (Air, Water, Land, Noise)

Wildlife conservation : Basic concepts

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

PRACTICALS : Practical based on Theory Papers ZOO-201 & ZOO-202 (ZOO 152)

1. Classification upto orders with ecological notes and economic importance, if any, of the following animals :

Arthropoda : *Peripatus, Palaemon, Lobster, Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper), *Gryllus* (Cricket), *Mantis* (Praying Mantis) *Cicada, Forficula* (Earwig), *Scarabaeus (*Dung beetle*),* *Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth), *Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

Mollusca : *Anodonta, Mytilus, Ostrea, Cardium,Pholas, Solen* (Razorfish) *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus shell* (Complete and T.S.), *Chiton and Dentalium.*

Echinodermata : *Asterias, Echinus, Ophiothrix* and *Antedon Cucumaria*

Hemichordata : *Balanoglossus*.

2. Study of the following permanent stained preparations :
   Trachea, mouth parts of *Periplaneta*
   Radula and osphradium of *Pila*.
   T.S. Star fish (Arm).

3. Demonstration of dissection of the following animals through video clippings/charts/models:
   Periplaneta : Digestive and nervous systems; mouth parts and trachea.
   Pila : Pallial complex, digestive and nervous systems, Radula.
4. Study of animal adaptations with the help of specimens, charts and models.
5. Study of Zoogeographical regions and their fauna.
6. Study of biotic components of an ecosystem.
7. Study of different types of nests in birds.
8. Study & preparation of zoogeographical charts/maps.

Note: Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1.	Draw a labeled diagram of any given system of an animal and explain it to the examiner Sketch and demonstrate it to the examiner.	2 marks
2.	Identify the slides (A-C) and give two important reasons for each identification.	3 marks
3.	Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance.	6 marks
4.	Identify the type of adaptation/type of nest/biotic components with a short note.	1 marks
5.	Mark Zoogeographical region on the given physical map along with endemic fauna and climate.	2 marks
6.	Viva voce	2 marks
7.	Practical record, charts/maps and project report of excursion to a place of zoological interest	2 marks

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BIOCHEMISTRY
Semester I

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper-A: Carbohydrates and Lipids **Marks: 45+5**

(*Three periods per week)*

Objective: To learn about biomolecules, their structure and functional significance.

SECTION-I

(Lectures: 6)

Introduction to biochemistry and its scope. Water: physical properties, as a biological solvent and structure of water, dissociation of water. pH and pOH, buffer solution. Henderson Hasselbalch equation, acid-base indicators, buffers and physiologically important buffers, dialysis and osmosis.

SECTION-II

(Lectures: 8)

Definition and classification of carbohydrates. Fischer and Haworth structures of carbohydrates. Stereoisomerism, and mutarotation. Anomeric forms of monosaccharides. Derivatives of monosaccharides (glycosides, deoxysugars, amino sugars and other derivatives of biological importance). Oligosaccharides of biological importance (structure of maltose, lactose, sucrose, cellobiose, trehalose, raffinose). Characteristic reactions of monosaccharides: reactions with hydrazine, hydrogen cyanide, hydroxylamine; reduction and oxidation of sugars; periodic acid oxidation; action of alkali upon sugars; acylation and methylation of sugars. Homo-and hetero-polysaccharides (structures of amylose, amylopectin, starch, inulin, pectins, dextrins, glycogen, cellulose, chitin). GAGs as components of connective tissue. Polysaccharides of bacterial cell wall, glycoproteins

SECTION-III

(Lectures: 8)

Definition and classification of fatty acids (saturated and unsaturated). Essential fatty acids. Important reactions of functional groups present in fatty acids. Characteristics of fatty acids and fats (saponification, iodine, acid, acetyl and peroxide values). Refractive index, m. p., b.p. and their relation to molecular size. Properties of glycerol. Fats as source of energy. Waxes.Structures, characteristics and functions of lipids: triacylglycerols, phospholipids: lecithins (Phosphotidylcholines), lysolecithins, cephalins (phosphotidylethanolamines), phosphatidylserines, Phosphatidyl inositol, sphingomyelins, plasmalogens), cerebrosides, gangliosides, sulfatides.

SECTION-IV

(Lectures: 6)

Lipoproteins– composition, classification and biological functions. Liposomes.
Terpenes and steroids – Terpenes of biological significance e.g. carotenes, phytol. Cholesterol and other animal sterols. Colour reactions of sterols. Sterols of yeast and fungi (mycosterols). Phytosterols. Steroidal hormones. Bile acids.
Structure and properties of eicosanoids-prostaglandins, leukotrienes, thromboxanes, prostacyclins

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th Edition, 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

1. Qualitative tests for carbohydrates.
2. Estimation of carbohydrate by anthrone method.
3. Estimation of ascorbic acid by dye method.
4. Verification of Beer-Lambert law for nitrophenol or cobalt chloride.
5. Qualitative tests for cholesterol and lipids
6. Determination of saponification value of fats
7. Determination of iodine value of fats.
8. Estimation of phospholipids by vanillin method.

Paper-B: Nitrogen containing Biomolecules Marks: 45+5

SECTION–I

(Lectures: 7)

Amino acids: common structural features. Stereoisomerism and RS system of designating optical isomers. Classification based on the nature of "R" groups. Amino acids present in proteins and non-protein amino acids. Specialized role of amino acids. Physical and chemical properties of amino acids. Titration of amino acids. Rigid and planar nature of a peptide bond. Folding of peptide chains into regular repeating structures (α helix, β pleated sheets). β -turn in polypeptides. Chemical synthesis of polypeptides. Biologically active peptides.

SECTION–II

(Lectures: 8)

Proteins: levels of protein structure. Determination of primary structure of proteins. Forces stabilizing structure and shape of proteins. Native proteins and their conformations. Behaviour of proteins in solutions. Salting in & salting out of proteins. Denaturation of proteins. Structural and functional diversity of proteins, fibrous proteins (keratins, collagen & elastin), globular proteins (hemoglobin, myoglobin) and conjugated proteins.

SECTION-III

(Lectures: 8)

Nucleic Acids: structure and properties of purine and pyrimidine bases. Nucleosides and nucleotides. Biologically important nucleotides. Double helical model of DNA and forces responsible for it. Different forms of DNA (A,B and Z type), denaturation of DNA. Physical and chemical properties of nucleic acids. Chemical and enzymatic hydrolysis of nucleic acids. Sequencing of polynucleotides. Types of RNA and ribozyme.

SECTION-IV

(Lectures: 6)

Porphyrins: porphyrin nucleus and classification of porphyrins. Heme and other metalloporphyrins occurring in nature. Detection of porphyrins spectrophotometrically and by fluorescence. Chemical nature and physiological significance of bile pigments.

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th Edition, 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

1. Qualitative tests for Amino acids and proteins
2.Titration curve for amino acids and determination of pKa value.
3. Estimation of:
   (a) Amino acids by ninhydrin method.
   (b) Protein by biuret and Lowery method
   (c) DNA by diphenylamine method
   (d) RNA by orcinol method
4. Spectrophotometic measurements of DNA and RNA solutions

BIOCHEMISTRY
Semester II

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper- A: Biochemical Techniques **Marks: 45+5**

Credit: 3+0+0
Objective: To learn various biochemical techniques

Section-I

(Lectures: 7)

Beer-Lambert's law. Light absorption and its transmittance. Determination and application of extinction coefficient. Applications of following spectroscopic techniques in elucidating structure of Biomolecules:- visible, U.V., Infra-red and fluorescence spectroscopy

Section-II

(Lectures: 8)

Chromatography: general principles, distribution coefficient, partition chromatography-normal phase and reverse phase liquid chromatography. Modes of chromatography-column, thin layer and paper chromatography. Principles, matrices and applications of gel permeation, adsorption, ion exchange and affinity chromatography.Gas chromatography (GC) and High Performance Liquid Chromatography (HPLC).

Section-III

(Lectures: 7)

Various centrifugation techniques and their applications in Biochemistry.Preparative and analytical ultracentrifugation procedures.Application of partial specific volume, diffusion coefficient and viscosity measurements in the study of macromolecules of biochemical importance.

Section-IV

(Lectures: 8)

Electrophoresis: General principle, support media, types of electrophoresis.
Electrophoresis of proteins: native and SDS-PAGE. Isoelectric focusing, 2D-PAGE, detection and recovery of proteins.Molecular weight determination.Immuno electrophoresis. Electrophoresis of nucleic acid: agarose-gel electrophoresis of DNA and RNA, pulsed-field gel electrophoresis, Northern and Southern transfer procedure.

SUGGESTED BOOKS

1. Biochemical Techniques: Theory and practice by Robyt, J.F. and White, B.J, 1987, Brooke/Cole Publishing Company, California.
2. Principles and techniques of Biochemistry & Molecular biology by K Wilson & J Walker 6th Ed.Cambridge University press
3. Fundamentals of analytical chemistry by Skoog /West/Holter/Crouch Thompson/Brooks/Cole

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

I. Estimation of proteins using UV absorbance and biuret method.
II. Estimation of proteins using Lowry/Bradford method.
III. Isoelectric pH of casein.
IV. Ammonium sulphate fractionation of serum proteins.
V. Separation of albumin from serum using anion-exchange chromatography.
VI. SDS-PAGE analysis of proteins.

Paper-B: Enzymes and Bioenergetics **Marks: 45+5**

Objective: To learn principles of thermodynamics, nature of enzymes, their mode of action and enzyme kinetics

SECTION-I

(Lecture: 7)

Introduction to enzymes.General characteristics of enzymes.IUB system of nomenclature and classification of enzymes.Prosthetic group.Holoenzyme, apoenzyme, cofactors, isoenzymes and their clinical significance and zymogens, coenzymes (NAD/NADP,FMN/FAD, coenzyme A,TPP, pyridoxal phosphate, tetrahydrofolate) and their biochemical functions, assay of enzyme activity, units of enzyme activity. Active site of enzymes

SECTION-II

(Lectures: 8)

Enzymes as catalysts. Theories of enzymes catalysis: proximity and orientation effects, acid base catalysis, covalent catalysis. Role of metals in enzyme catalysis
Monomeric enzymes, oligomeric enzymes & multienzyme complexes.Mechanism of action of chymotrypsin and pyruvate dehydrogenase.

SECTION-III

(Lectures: 8)

Factors affecting velocity of enzyme catalysed reactions: enzyme concentration, pH and temperature. Michaelis-Menten equation.Determination of Km and its significance.
Enzyme inhibition: Various types of enzyme inhibitions. Determination of Ki value.Enzyme inhibitors and their importance.Introduction to multisubstrate enzymes. Allosteric enzymes and enzyme regulation.

SECTION-IV

(Lectures: 8)

Concepts of bioenergetics, principles of thermodynamics & their application in Biochemistry, concept of free energy.Biological oxidations.Redox potential. ATP and High energy phosphate compounds: introduction, phosphate group transfer potential, enzymes and co-enzymes involved in oxidations and reductions. Mitochondrial electron transport chain and oxidative phosphorylation.Substrate level phosphorylation, mechanism of oxidative phosphorylation.

Books Recommended:

1. J.R. Whitaker : Principles of Enzymology for the Food Sciences, 2nd Ed., Marcel Dekker, Inc., New York.
2. J.E. Bell and E.T. Bell : Protein and Enzymes, Prentice Hall Inc, New Jersey.
3. Berg J. M, LubertStryer : Bio-chemistry, W.F. Freeman and Co., New York, Edition 7th, 2002.
4. Nelson D.L & Cox M. M. : Principles of Bio-chemistry, Worth Publishers, Inc., New York, edition 4th 2005.
5. Conn E.E &Stumpf P.K. : Outlines of Bio-chemistry, Bruening & Doi John Wiley & Sons.
6. T. Palmer : Enzymes: Biochemistry, Biotechnology and Clinical chemistry, 2nd Ed. (2008) Affiliated East-West press Pvt. Ltd. New Delhi.

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

I. Preparation of casein from milk
II. Determination of achromatic point of saliva
III. (a) Assay of serum alkaline phosphatase activity.
(b) Effect of pH on enzyme activity.
(c) Effect of temperature on enzyme activity and determination of energy of activation.
(d) Effect of substrate concentration on enzyme activity and determination of Km.
IV. Inhibition of alkaline phosphatase by EDTA.
V. Demonstration of potato polyphenoloxidase activity.

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INTRODUCTION TO COMPUTER SCIENCE
(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module I while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III.

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lecturers per week	Max. Marks			Exam Hours
	First Semester			Ext.	Int.		
1	A	Fundamentals of Information Technology	6	25	5	30	3
2	C	Practical on Paper – A	6	-	-	20	3
	Second Semester			Ext.	Int.		
3	B	Computer Programming Using C	6	25	5	30	3
4	D	Practical on Paper – B	6	-	-	20	3

SEMESTER I

Paper A
Paper Title: Fundamentals Of Information Technology
Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

Objective : To familiarize students with basic concepts of Computer and Information Technology, Students will get understanding of concepts related to operating systems and application softwares.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation. Input/Output devices.

UNIT-II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT-III

6. **Word Processing Software**:
Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.

Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
Clipart: Using clip art, Creating Word Art
Mail merge: Creating merged envelops, creating merged mailing labels

UNIT-IV

7. **Spreadsheet Software:**
Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. **Presentation Software**:
Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References:

1.	Basandra, S.K.	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K.	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K.	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M.	Computers Todays by McGraw Hill, New York, 3rd ed., N.Y. Int. ed.
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron.	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper – C : Practical on Paper - A

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

INTRODUCTION TO COMPUTER SCIENCE

SEMESTER II

Paper B
Paper Title: Computer Programming Using C

Max. Marks : 25 **Time : 3 Hrs**
Theory: Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60
Objective : To make student understand programming concepts of 'C' language including functions, arrays, input/output etc.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Input/Output, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes:** automatic, external, static, register
5. **Preprocessor:** #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT-II

6. **Functions:** library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions

UNIT-III

8. **Strings**: Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
9. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures

UNIT-IV

10. **Console Input/Output**: Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
11. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File, Text Files and Binary Files.

References:

1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi, 8th Edition.
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series, N.D., TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications.
4.	Salaria, R.S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper – D : Practical on Paper - B

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

MICROBIOLOGY

B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-18

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

Semester-I

Scheme of Examination	*Duration*	*Marks*
Theory	6 hrs.	75 (60+15*)
MIC 101 : Fundamentals of Microbiology-I	3 hrs.	37.5 (30+7.5*)
MIC 102 : Microbial Physiology—Metabolism-I	3 hrs.	37.5 (30+7.5*)
Practical		
One Practical pertaining to the entire syllabus included in Theory Papers MIC 101 and MIC 102	6 hrs.	25 (20+5*)

Semester-II

Theory	6 hrs.	75 (60+15*)
MIC 201 : Fundamentals of Microbiology-II	3 hrs.	37.5 (30+7.5*)
MIC 202 : Microbial Physiology—Metabolism-II	3 hrs.	37.5 (30+7.5*)
Practical		
One Practical pertaining to the entire syllabus included in Theory Papers MIC 201 and MIC 202	6 hrs.	25 (20+5*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

SEMESTER-I

OUTLINES OF TESTS AND SYLLABI

MIC 101 : FUNDAMENTALS OF MICROBIOLOGY-I

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. History, development, scope and applications of Microbiology.
2. Methods of Microbiology isolation of pure cultures, theory and practice of sterilization.
3. Nature of Microbial World : Prokaryotes and eukaryotes, growth pattern in microbes.

SECTION-B

1. Morphology and fine structure of bacteria, fungi, actinomycetes and algae.
2. Organization of cell wall, cell membrane, flagella and capsules in bacteria.
3. Morphogenesis in bacteria, formation of spores and cysts.

SECTION-C

1. Recombinant DNA technology: genetic engineering and gene cloning in micro-organisms.
2. Strategies of genetic engineering: Restriction enzymes, vectors and plasmids.

SECTION-D

1. Microorganism Association with Vascular Plants : Rhizosphere and Rhizoplane microorganisms and Mycorrhizae.
2. Nitrogen fixation : Symbiotic and nonsymbiotic and biofertilizers.
3. Biopesticides.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M. Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008).

MIC 102 : MICROBIAL PHYSIOLOGY—METABOLISM-I

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objectives :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth and enzymes.

SECTION-A

1. Microbial Nutrition : Requirements for Growth. Physical requirement (temperature, pH, osmotic pressure), chemical requirements (C, N, S, P, O).
2. Culture Media : Chemically defined media, complex media, anaerobic growth media, selective & differential media, and enrichment culture. Cultivation of Aerobes and Anaerobes.

SECTION-B

1. Enzymes : Chemical and physical properties of enzymes.
2. Classification and nomenclature of Enzymes.
3. Factors affecting enzyme activity.

SECTION-C

Microbial Metabolism :

1. Respiration and fermentation.
2. Glycolysis.
3. Pentose Phosphate pathway
4. The Entner Doudoroff pathway.
5. Tricarboxylic acid cycle.
6. Glyoxylate cycle.

SECTION-D

Bacterial Genetics:

1. Conjugation.
2. Transformation.
3. Transduction (generalized transduction, specialized transduction).
4. The Regulation of Gene Expression : Lac operon, tryptophan operon. Recommended

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Text Book of Microbiology, S. Chand and Company.

PRACTICALS

MAX. MARKS	**:**	**25 MARKS**
THEORY	**:**	**20 MARKS**
INTERNAL ASSESSMENT	**:**	**5 MARKS**
TIME	**:**	**3 HOURS**

1. Preparation of culture media, spread plates, pour plates, selective media, differential media.
2. Separation of pure cultures and study the effect of selective nutrients on prokaryotes.
3. Isolation of Soil Bacteria, Soil Fungi, Soil Actinomycetes.
4. Selective media for Soil microflora and use of growth factors, Study of Rhizosphere interactions, Quantitative measurements of Soil nutrients and Rhizosphere microflora and preparation of starter cultures of Rhizobium, Azotobacter.
5. Measurement of Soil Enzymes.
6. Use of ultraviolet light for its germicidal effect.
7. The replica plating technique.
8. Effect of temperature, Osmotic pressure, energy source etc. on growth of prokaryotes.

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MICROBIOLOGY

SEMESTER-II

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

MIC 201 : FUNDAMENTALS OF MICROBIOLOGY-II

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objectives :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. Microscopic examination of micro-organism, bright field microscopy, dark field microscopy, phase contrast microscopy and electron microscopy.
2. Staining of microbes, theory of Gram staining.

SECTION-B

1. Animal Viruses : Morphology, cultivation and viral disease cycle.
2. Bacteriophages : Morphology, multiplication, detection and enumeration.
3. Biotransformation of
   (a) D-Sorbitol to L-Sorbose. (b) Antibiotics. (c) Steroids.

SECTION-C

Genetic engineering for human welfare :

1. Production of pharmaceuticals.
2. Insect pest control.
3. Use of Genetically Engineered Microorganisms (GEMs) for control of pollution.

SECTION-D

1. Biogeochemical Cycling—Carbon cycle, Nitrogen cycle, Phosphorus and Sulphur cycle with role of microorganisms.

2. Sewage (waste-water) treatment, chemical characteristics, microbiological characteristics, waste water treatment processes.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M. Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008).

MIC 202 : MICROBIAL PHYSIOLOGY—METABOLISM-II

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth and enzymes.

SECTION-A

1. Microbial Growth : Growth in population, bacterial growth curve, mathematical nature and expression.
2. Factors affecting growth in microorganisms.
3. Methods for measurement of growth in microorganisms.

SECTION-B

1. Mechanisms of enzymes action.
2. Inhibition, control and regulation of enzyme activity.
3. Enzyme kinetics : Michaelis-Menten equation.

SECTION-C

Microbial Metabolism :

1. Catabolism of lipids and proteins.
2. Beta oxidation.
3. Electron transport chain.
4. Biochemical mechanisms of generation of ATP.

SECTION-D

Microbial Utilization of Energy & Biosynthesis :

1. Transport of nutrient by bacteria.
2. Synthesis of Amino Acids : Glutamate, lysine, glutamine, serine, arginine family.
3. Structures and biosynthesis of cell wall peptidoglycan.
4. Biosynthesis of Carbohydrates (gluconeogenesis) & Phospholipids.
   Replication of DNA molecules, Transcription & Translation (process of protein synthesis).

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), *Microbes and Man,* Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), *A Text Book of Microbiology,* S. Chand and Company.

PRACTICALS

MAX. MARKS	**:**	**25 MARKS**
THEORY	**:**	**20 MARKS**
INTERNAL ASSESSMENT	**:**	**5 MARKS**
TIME	**:**	**3 HOURS**

1. Use of microscope in examination of unstained bacteria, fungi, algae, parasites and stained cell preparations including simple staining, Gram's staining, acid fast staining, capsule staining, spore staining using prokaryotic and eukaryotic cells, hanging drop preparation.
2. Presumptive, confirmed and completed tests for safety of water supplies.
3. Relation of free oxygen to microbial growth, monitoring of dissolved oxygen in various effluents.
4. Determination of COD in Industrial effluents.
5. Effects of antimetabolites on Microbial culture (Inhibition by Sulfanilamide).
6. Determination of Water Activity of various substrates and assay of surface active agents.
7. Turbidimetric/spectrophotometric monitoring of growth using liquid cultures.
8. Efficiency of photosynthesis in photoautotrophs.

ELECTRONICS

(KEPT IN ABEYANCE FOR THE EXAMINATION, 2017-18)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) SECOND YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2017-2018

(SEMESTER : THIRD AND FOURTH)

i.e

Third Semester **:** ***November/December, 2017***
Fourth Semester **:** ***April/May, 2018***

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2017 AND FOURTH SEMESTER APRIL/MAY 2018, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – III

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Objective:

- To teach finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G Damodar, D Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Ode to Autumn

ii. The Road Not Taken

iii. Money Madness

iv. I, Too

Prose Section:

i. Mr. Know All

ii. Film Making

iii. Not Just Oranges

iv. A Tale on Advertising

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section-B

Q.4. Note making (**one** out of **two** is to be attempted) 4 marks
(The examiner will set **two** paragraphs based on the prescribed text for note making. The students be asked to attempt any **one** of the **two**).

Q.5. Grammer:

i. Non finite verbs 5 marks
ii. Punctuation (A short paragraph) 5 marks
iii. Do as directed (based on transformation of sentences) 10 marks

(The examiner will set **three** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities, students have done in the class are adequately covered.)

ENGLISH (Compulsory)

SEMESTER – IV

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Objective:

- To Teach Finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill.
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G. Damodar, D. Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Goodbye Party for Miss Pushpa T.S.

ii. I Will Embrace Only the Sun

iii. Refugee Mother and Child

iv. This is a Photograph of Me

Prose Section:

i. On Shaking Hands

ii. No Man is an Island

iii. Freedom of the Press

iv. An Except From Decolonizing the Mind

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section – B

Q.4. Paragraph writing (based on post-reading activities suggested in the prescribed texts)
One out of **three** is to attempted. 5 marks
(The examiner will set **three** topics for paragraphs writing from the post reading activities suggested in the prescribed texts. While selecting this question, special care must be taken to borrow ideas from the text or suitably modify them so as to identify viable topics that the students of B.A.(compulsory)can easily handle.)

Q.5. Report writing (with internal choice) 4 marks
(The examiner will give information about some social issue, an event/incident, some topic of current affairs etc. and will ask the students to write a report in about 100 words on the given topic. The information can also be given in form of a dialogue on some issue of general interest. The examiner will set this question with an internal choice).

Q.6. Grammer:
i. Using nouns as verbs or vice-versa 5 marks
ii. Combining pairs of sentences using words given in the brackets 5 marks
iii. Text-based Idioms and Phrases 5 marks
(The examiner will set **four** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities students have done in the class are adequately covered.)

****

ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-III

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 1-4
Drama : Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical work:-

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and one from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5. Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6. One short question to test the students' understanding of various aspects of Business Communication.

5 marks

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ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-IV

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 5-8
Drama : Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae, short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations.Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication. How to Prepare for an Interview & Group Discussion etc.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any four, **Two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and **one** from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. Short Survey Report (150-200 words) with internal choice. **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6. Definition/Format of modern forms of communication to be tested.
(e-mail, fax, videoconferencing) **5 marks**

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ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਬਾਰੇ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਚਿੱਠੀ ਪੱਤਰ — 8 ਅੰਕ
3. ਪੰਜਾਬੀ ਭਾਸ਼ਾ — 7 ਅੰਕ
4. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. ਪੰਜ-ਆਬ, (ਸੰਪਾ.) ਪ੍ਰੋ. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਪੰਜ -ਆਬ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ) — 4+6=10 ਅੰਕ

   (ਅ) ਨਿਬੰਧਾਂ ਦੀ ਪੁਸਤਕ ਵਿਚ ਆਏ ਸਭਿਆਚਾਰਕ ਸੰਕਲਪਾਂ (ਇਸ਼ਟ, ਅਖਾਣ, ਲੋਕਗੀਤ, ਵਿਰਾਸਤੀ ਖੇਡਾਂ, ਲੋਕ ਵਿਸ਼ਵਾਸ, ਮੇਲੇ, ਤਿਉਹਾਰ, ਗਿੱਧਾ, ਲੋਕ ਚਿਕਿਤਸਾ ਤੇ ਲੋਕਧਾਰਾ) ਬਾਰੇ ਪ੍ਰਸ਼ਨ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 5 ਅੰਕ

2. 'ਪੰਜ-ਆਬ' ਪੁਸਤਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 1 x 5= 5 ਅੰਕ
3. ਚਿੱਠੀ ਪੱਤਰ (ਦਫ਼ਤਰੀ, ਵਪਾਰਕ, ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਮਸਲਿਆਂ ਬਾਰੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ) (ਦੋ ਵਿਚੋਂ ਇਕ) — 8 ਅੰਕ
4. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਜਨਮ , ਵਿਕਾਸ ਤੇ ਵਰਤਮਾਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 7 ਅੰਕ
5. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ
   (i) ਸ਼ਬਦ ਤੇ ਸ਼ਬਦ ਰਚਨਾ:ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ, ਭਾਵੰਸ਼: ਬੰਦ ਤੇ ਖੁੱਲ੍ਹੇ ਭਾਵੰਸ਼, ਧਾਤੂ ਤੇ ਵਧੇਤਰ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)
   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
   ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਇਕਾਂਗੀ ਤੇ ਨਾਟਕ	20 ਅੰਕ
2.	ਪੈਰ੍ਹੇ ਦਾ ਅਨੁਵਾਦ (ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ)	8 ਅੰਕ
3.	ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਛੇ ਛੱਲਾਂ (ਸੰਪਾ.) ਡਾ.ਆਤਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਕੱਲਰ, ਸਵਰਾਜਬੀਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ)	‘ਛੇ ਛੱਲਾਂ’ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	4+6 =10 ਅੰਕ
	(ਅ)	‘ਛੇ ਛੱਲਾਂ’ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਨ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	5 ਅੰਕ
2.		ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ ਕਰਨੇ)	1 x 5=5 ਅੰਕ
3.		ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ (ਲਗਭਗ 100 ਸ਼ਬਦਾਂ ਵਿਚ)	8 ਅੰਕ
4.		ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
		ਨੋਟ: ਉਪਭਾਸ਼ਾਵਾਂ ਉਪਰ ਸਵਾਲ ਸਿਰਫ ਪੂਰਬੀ ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ (ਮਾਝੀ, ਮਲਵਈ, ਦੁਆਬੀ ਤੇ ਪੁਆਧੀ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਪੁੱਛਿਆ ਜਾਵੇ। (ਦੋ ਵਿਚੋਂ ਇਕ)	
5.		ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	6 ਅੰਕ
		(i) ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਕੋਸ਼ਗਤ ਤੇ ਵਿਆਕਰਨਕ ਸ਼ਬਦ, ਵਿਕਾਰੀ ਤੇ ਅਵਿਕਾਰੀ ਸ਼ਬਦ, ਸਧਾਰਨ,ਸਮਾਸੀ ਤੇ ਮਿਸ਼ਰਤ, ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨੇਮ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	
		(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ	2+2= 4 ਅੰਕ
		ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ।(ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋਂ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ:
1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

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HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-III

INSTRUCTIONS FOR THE PAPER–SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER 3 AND 4)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 mark each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **HISTORY AND CULTURE OF PUNJAB 1200-C- 1700 A.D**

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the region during medieval times.
Pedagogy: Lectures, library work and discussions.

Unit-I

1. Society and Culture in Punjab during the Turko-Afghan rule
2. The Punjab under the Great Mughals
3. Guru Nanak : His teachings, concept of Langar and Sangat

Unit-II

4. Salient features of the Bhakti movement
5. Main Features of Sufism in Punjab
6 Development of Sikhism (1539-1581): Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das for the development of Sikhism

Unit III

7. Transformation of Sikhism : Compilation of Adi-Granth; Martyrdom of Guru Arjan Dev
8. Guru Hargobind's New policy
9. Martyrdom of Guru Tegh Bahadur

Unit IV

10. Foundation of the Khalsa
11. Post Khalsa activities of Guru Gobind Singh
12. MAP: Important Historical Places Delhi; Lahore; Sarhind; Multan; Kartarpur; Amritsar; Kiratpur; Tarn Taran; Anandpur Sahib; Fatehgarh Sahib; Paonta Sahib; Machhiwara; Muktsar

Suggested Readings:

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER 3 AND 4)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

5. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

6. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: HISTORY AND CULTURE OF PUNJAB 18TH AND EARLY 19TH CENTURIES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the region in the later medieval period.
Pedagogy: Lectures, library work and discussions.

Unit I

1. Banda Bahadur and his achievements
2. Sikh Struggle for Sovereignity from 1716-1765
3. Role of Dal Khalsa, Rakhi, Gurmata and Misls

Unit II

4. Ranjit Singh's rise to Power
5. Civil and Military administration
6. Relations with the British

Unit-III

7. Political Developments 1839-1845
8. Anglo-Sikh Wars
9. Annexation of the Punjab

Unit-IV

10. New Developments in literature, art and architecture in the Punjab region
11. Social life with special reference to the position of women, fairs, festivals, folk music, dance and games in the Punjab.
12. MAP Important Historical Places Lohgarh; Sarhind; Gujranwala; Lahore; Amritsar; Multan; Peshawar; Sialkot; Ferozepore; Ambala; Gujrat; Mudki; Ludhiana.

Suggested Readings :

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

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ENGLISH (Elective)

SEMESTER-III

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

William Shakespeare: *The Merchant of Venice*

LITERARY TERMS:

Drama, Myth of Dionysus, Liturgical Drama, Miracle Plays, Mystery Plays, Interlude, Mimesis, Catharsis, Tragic Hero, Organic Unity, Revenge Tragedy, Poetic Drama, Verse Drama, Myth & Drama, Ritual & Drama, Yaksgana, Theory, Indian Theory of Drama, Puppetry, Ardhnarishwra.

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks
2. Reference to the Context from the prescribed play. 15 marks
   (*The examiner will set three passages/stanzas from the prescribed play. The students will attempt any two out of these three.*)
3. Long answer type question in about 300-350 words form the prescribed text. One out of two is to be attempted. 15 marks

Section - B

4. Dialogue writing
(*The examiner will set one descriptive passage of about 300-400 words and ask the students to re-write the same in dialogue form. The examiner, however, must ensure that the passage can easily be converted into dialogue form.*) 10 marks

5. Identifying figures of speech in sentences (unseen):
Simile, Metaphor, Alliteration, Assonance. 10 marks
(*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Idioms and Phrases 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
(The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

ENGLISH (Elective)

SEMESTER IV

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

An Anthology of English Verse
Ed. Department of English, Deen Dayal Upadhayaya, Gorakhpur University. New Delhi: OUP, 2004

Prescribed poems:

i. John Donne: *The Sun Rising*
ii. Alexander Pope: *From Essay on Man*
iii. Thomas Gray: *Elegy Written in the Country Churchyard*
iv. William Blake: *The Tiger*
v. William Wordsworth: *Tintern Abbey*
vi. John Keats: *Ode to a Nightingale*
vii. Tennyson: *Ulysses*
viii. Browning: *My Last Duchess*
ix. Matthew Arnold: *To Marguerite*
x. Hopkins: *Pied Beauty*
xi. A. K. Ramanujan: *History*
xii. W.B. Yeats: *A Prayer for my Daughter*
xiii. T.S. Eliot: *Journey of the Magi*
xiv. Thomas Hardy: *The Darkling Thrush*
xv. Philip Larkin: *The Trees*

LITERARY TERMS:

Allegory, Allusion, Antithesis, Epic, Epithet, Hyperbole, Internal Rhyme, Rhyme Royal, Terza Rima Metaphor, Metonymy, Medias Res, Oxymoron, Mood, Tone, Personification, Stanza, Spenserian Stanza, Satire, Free paragraph

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks

2. Short answer type question in about 50-60 words from the prescribed text. Five out of seven are to be attempted. 15 marks

3. Long answer type of questions in about 100-120 words from the prescribed text. Three out of five are to be attempted. 15 marks

Section – B

4. Precis Writing 10 marks

5. Identifying figures of speech in sentences (unseen)
   Metonymy, Epithet, Oxymoron, Epigram, Metonymy 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Choose the correct meaning of the word 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

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हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–3

पूर्णांक : 90+10=100

समय : 3 घण्टे

1. **तरंगिणी– मनोहर लाल आनन्द, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो, चण्डीगढ़।**
निम्नलिखित कवि पाठ्यक्रम में निध रित है:–
मैथिलीशरण गुप्त, जयशंकर प्रसाद, सूर्यकान्त त्रिपाठी निराला, सुमित्रानन्दन पन्त

   क) 5–5 अंकों की दो सन्दर्भ–सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाऐंगी। अंक–10

   ख) कवि–परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जायेंगे। 8 अंकों का एक ही प्रश्न करना होगा। प्रत्येक उत्तर की शब्द सीमा 200 होगी। अंक–08

2. **एक सत्य हरिश्चन्द्र– डॉ0 लक्ष्मीनारायण लाल, राजपाल एण्ड सन्ज, नई दिल्ली।**

   क) संदर्भ सहित व्याख्या के लिए दो प्रश्न पूछे जाएँगे; उत्तर एक का ही देना होगा। अंक–05

   ख) पात्रों के चरित्र–चित्रण, तत्वों के आधार पर नाटक की समीक्षा तथा समस्या संबंधी दो प्रश्न पूछे जायेंगें। 8 अंकों का एक ही प्रश्न करना होगा। (शब्द–सीमा 200) अंक–08

3. **इस खण्ड में 3–3 अंकों के तीन लघुत्तरी प्रश्नों के उत्तर देने होंगे। कुल 6 प्रश्न पूछे जायेंगे। ये प्रश्न इस पत्र के पूर्वोक्त दो खण्डों (तरंगिणी व एक सत्य हरिश्चन्द्र) पर आधारित होंगे। (शब्द–सीमा 50) अंक–09**

4. **हिन्दी साहित्य का इतिहास– रीतिकाल : (केवल काव्य–खंड) अंक–08**
रीतिकाल की परिस्थितियाँ, नामकरण, सीमा–निर्धारण, प्रवृतियाँ रीतिबद्ध और रीतिमुक्त काव्य की प्रमुख विशेषताएँ, प्रमुख कवि– केशव, बिहारी, घनानंद, के संबंध में 8 अंकों का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगें। (शब्द–सीमा 200–250)

5. **वस्तुनिष्ठ प्रश्न** **अंक–10**

इस पत्र के पूर्वोक्त तीनों खण्डों के आधर पर 1–1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

6. **समीक्षा सिद्धान्त– केवल 'नाटक'** **अंक–07**

परिभाषा, तत्व और वर्गीकरण पर आधरित नाटक से संबंध्ति दो प्रश्न पूछे जायेंगे। जिनमें से 7 अंकों का एक प्रश्न करना होगा। (शब्द सीमा 200)

7. **व्यावहारिक व्याकरण–** **अंक–15**

क)	**समाकृति, भिन्नार्थक शब्द–युग्म**	**3)**	**(चार में से तीन)**
ख)	**स्वर–सन्धि एवं व्यंजन–संधि**	**3)**	
ग)	**सन्धि–विच्छेद(केवल व्यावहारिक)**	**3)**	**(चार में से तीन)**
घ)	**वाक्य–शोध्न**	**3)**	**(चार में से तीन)**
ड.)	**विराम–चिह्न**	**3)**	

8. **तकनीकी शब्दावली (केवल प्रशासकीय शब्दावली)** **अंक–10**

(सलंग्न शब्दावली)

15 में से 10 का उत्तर देना होगा।

आंतरिक मूल्यांकन– **अंक–10**

निर्देश :–छह लेक्चर Text **के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।**

प्रशासनिक शब्दावली

1.	Acceptance	**स्वीकृति**
2.	Account	**लेखा, खाता, हिसाब**
3.	Accuse	**अभियोग लगाना**
4.	Acknowledge (fact etc.)	**अभिस्वीकार करना, मानना कबूल करना**
5.	Acknowledgement due	**रसीद, पावती सहित**
6.	Addressee	**पाने वाला**
7.	Adjournment	**स्थगन**
8.	Administration	**प्रशासन**
9.	Admissible	**ग्राह्य, स्वीकार्य**

10.	Affidavit	शपथ लेना, हलफनामा
11.	Agent	अभिकर्ता, एजेन्ट
12.	Agitation	आन्दोलन
13.	Agreement	करार, अनुबंध,सहमति
14.	Allowance	भत्ता
15.	Amenity	सुख-सुविधा
16.	Anti-Corruption Officer	भ्रष्टाचार निरोध अध्किारी
17.	Appeal	अपील, अपील करना
18.	Appointment	नियुक्ति
19.	Appoint	नियुक्ति करना
20.	Approval	अनुमोदन
21.	Article	अनुच्छेद, नियम,वस्तु
22.	Association	संघ, समाज, संगम
23.	At Par	सममूल्य पर
24.	Attendant	परिचर
25.	Attestation	साक्ष्यांकन, अनुप्रमाणन
26.	Audit	लेखा परीक्षा
27.	Ballot Paper	मतपत्र, मतपर्ची
28.	Ban	प्रतिबंध, रोक, पाबंदी
29.	Bonafide	सद्भावी, वास्तविक, असली
30.	Book –Fair	पुस्तक मेला
31.	Bureau	कार्यालय, ब्यूरो
32.	Cabinet	मंत्री मंडल
33.	Candidate	अभ्य ार्थी, प्रार्थी, उम्मीदवार
34.	Care-taker	रखवाला, अवधायक
35.	Cashier	रोकड़िया
36.	Censure	निंदा प्रस्ताव, परिनिंदा
37.	Certificate of Medical Fitness	आरोग्य प्रमाण-पत्र
38.	Character Certificate	चरित्र प्रमाण-पत्र
39.	Charge Sheet	आरोप पत्र, फर्द, जुर्म
40.	Circular	परिपत्र, गशती-चिट्ठी
41.	Circulation of Traffic	यातायात परिचालन
42.	Circus	क्रीड़ा रंग, रंगमंडप
43.	Citation	प्रशास्ति, उद्धरण, अनुलेखन
44.	City Booking Office	नगर टिकट घर, नगर बुकिंग-कार्यालय

45.	City Compensatory Allowance	नगर भत्ता
46.	Civil	नागरिक
47.	Civil Pole	नगर निर्वाचन
48.	Civil Sense	नागरिक भावना
49.	Civil-air-craft	असैनिक वायुयान
50.	Claimant	दावेदार, दावी
51.	Collector	समाहर्ता, संग्रहक, संकलनकर्ता,कलेक्टर
52.	Colony	बस्ती, उपनिवेश
53.	Colosal	विशाल, वृहत्काय
54.	Colour Blindness	वर्णान्धता
55.	Communique	विज्ञप्ति
56.	Complaint	शिकायत
57.	Complementary	पूरक
58.	Completion Report	समापन रिपोर्ट
59.	Certified Copy	प्रमाणित प्रतिलिपि
60.	Complementary Copy	उपहार प्रति,मानार्थ प्रति
61.	Composite	मिला जुला, सम्मिश्रण संशिष्ट
62.	Comprehension	व्यापक कार्य बोध
63.	Contingencies	आकस्मिक व्यय
64.	Contractor	ठेकदार, संविदाकार
65.	Confiscate	जब्त करना, अधिहरण करना
66.	Corporation	निगम
67.	Custody	अभिरक्षा
68.	Decorum	शिष्टता, शालीनता
69.	Defacto	वस्तुतः
70.	Defaulter	त्रुटिकारी, चूक करने वाला,बाकीदार
71.	Defendant	प्रतिवादी
72.	Depreciation Charge	मूल्यह्रास प्रभार,अवक्षय प्रभार
73.	Design	अभिकल्प, अभिकल्पना,रुपांकन, डिज़ाइन
74.	Dispatch	प्रेषण,रवानगी, प्रेषित करना, रवाना करना
75.	Dignitary	उच्च पदधरी, महिमान्वित
76.	Director	निदेशक
77.	Disbursement	संवितरण
78.	Discipline	अनुशासन
79.	Discrepancy	विसंगति, गलती
80.	Discretion	विवेक, विवेकाधिकार

81.	Dissent	विसम्मति, असहमति
82.	Disqualified	अयोग्य
83.	Division	विभाजन, मंडल, श्रेणी, प्रभाग, डिवीजन
84.	Eligible	पात्रता, प्राप्त,पात्र
85.	Emergency	आपात, आपात्–स्थिति, आपतिक
86.	Emigrant	उत्प्रवासी
87.	Employment	रोजगार, नौकरी, नियोजन
88.	Employment Exchange	रोजगार कार्यालय, रोजगार दफतर
89.	Employment Officer	रोजगार अधि कारी
90.	Enquiry	पूछताछ,जाँच
91.	Enrolment Number	नामांकन संख्या
92.	Enrolled	नामांकित
93.	Evacuee	निष्क्रान्त
94.	Executive Engineer	कार्यपालक अभियन्ता, कार्यपाल इंजीनियर
95.	Faculty	संकाय
96.	Finance	वित्त, रूपया लगाना
97.	Gazetted Officer	राजपत्रित अधिकारी
98.	Gazetteer	राजविवरणिका
99.	Gazetted post	राजपत्रित पद
100.	Grant	अनुदान, स्वीकार करना
101.	Incentive	प्रोत्साहन
102.	Index	सूचक, अनुक्रमणी
103.	Initials	आद्यक्षर
104.	Insured Letter	बीमा किया हुआ पत्रा
105.	Interim	अन्तरिम
106.	Intelligence	गुप्तवार्ता, आसूचना
107.	Intelligentia	प्रबुद्ध वर्ग, बुद्धिजीवी वर्ग
108.	Intensive reading	गहन पठन
109.	Intention	अभिप्राय, आशय
110.	Judgment	निर्णय
111.	Jurisdiction	अधिकार– क्षेत्र
112.	Ledger	खाता
113.	Lessee	पट्टेदार
114.	Liaision Officer	संपर्क अधिकारी
115.	Maintenance	अनुरक्षण, भरण–पोषण, रख–रखाव
116.	Major	व्यस्क, बालिग, मेजर,प्राप्तत्य

117.	Manager	प्रबंधक, व्यवस्थापक, मैनेजर
118.	Minor	अवस्यक, नाबालिग, अप्राप्तव्य
119.	Monopoly	एकाधिकारी, एकाधिपत्य
120.	Motion	प्रस्ताव
121.	Nationalization	राष्ट्रीयकरण
122.	Negotiation	संधिवार्ता, समझौते की बातचीत
123.	Note of Dissent	विसन्मति लेख, असहमति लेख
124.	Notification	अधिसूचना
125.	Oath Commissioner	शपथ आयुक्त
126.	Offender	अपराधी
127.	Permissible	अनुभेय, अनुज्ञेय,क्षम्य
128.	Planning Commission	योजना आयोग
129.	Precedence	पूर्वता, अग्रता
130.	Procedure	कार्यविधि
131.	Public	सार्वजनिक,आम,सरकारी,लोक
132.	Quorum	गणपूर्ति, कोरम
133.	Receipt	पावती, प्राप्ति रसीद
134.	Recruitment	भर्ती
135.	Receiver	पानेवाला
136.	Reminder	स्मरण–पत्र
137.	Representative	प्रतिनिधि
138.	Senior	वरिष्ठ, ज्येष्ठ
139.	Sine die	अनिश्चित काल के लिए
140.	Statutory	कानुनी, विधिक,संविधिक
141.	Stenographer	आशुलिपिक
142.	Subordinate	अधीन, अधीनस्थ
143.	Tender	निविदा,टेंडर
144.	Transfer	बदली, स्थानांतरण, अंतरण
145.	Treasurer	कोषपाल
146.	Unofficial	अशासकीय
147.	Vacancy	रिक्ति
148.	Vigilance Officer	सतर्कता अधिकारी, निगरानी अधिकारी
149.	Warrant	अधिपत्र, वारंट

हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–4

पूर्णांक : 90+10=100
समय : 3 घण्टे

1. तंरगिणी–मनोहर लाल आनन्द, पंजाब विश्व विद्यालय, पब्लिकेशन ब्यूरो, चण्डीगढ़ से प्रकाशित निम्न कवि पाठ्यक्रम में निध रित हैः–
महादेवी वर्मा, अज्ञेय, धर्मवीर भारती।

   क) 5–5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाएंगी। **अंक–10**

   ख) कवि परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जाएंगे। 8 अंको का एक प्रश्न करना होगा। उत्तर सीमा 200 शब्दों की होगी। **अंक–08**

2. आदर्श एकांकी संग्रह – सं. डॉ0 संसार चन्द्र, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो चण्डीगढ़ द्वारा प्रकाशित

   क) एकांकी के तत्वों के आधार पर समीक्षात्मक प्रश्न (सार–लेखन, चरित्र–चित्रण, उद्देश्य संबंधी) दो प्रश्न पूछे जायेंगे। 8 अंकों का एक प्रश्न करना होगा। **अंक–08**

   ख) संदर्भ सहित व्याख्या नहीं पूछी जाएगी।

3. हिन्दी साहित्य का इतिहास : आधुनिक काल (केवल काव्य–खण्ड)
आधुनिक काल के भारतेन्दु–युग, द्विवेदी युग,छायावाद, प्रगतिवाद, प्रयोगवाद और नई कविता की केवल प्रमुख प्रवृतियों से संबंधित 10 अंको का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगें। (शब्द सीमा–सीमा 250) **अंक–10**

4. वस्तुनिष्ठ प्रश्न **अंक–10**
इस पत्रा के पूर्वोक्त तीन खण्डों के आधार पर एक–एक अंक के दस वस्तुनिष्ठ प्रश्न करने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5.	**संलग्न 50 टिप्पणियों का अभ्यास :** **पूछी गई दस टिप्पणियों में से पाँच का उत्तर देना होगा।**	**अंक–10**
6.	**समीक्षा सिद्धान्त : केवल 'एंकाकी'** **एकांकी के तत्व, परिभाषा और वर्गीकरण से संबंधित दो प्रश्न पूछे जाएँगें। 10 अंको का केवल एक प्रश्न करना होगा। शब्द–सीमा 250)**	**अंक–10**
7.	**सार लेखन**	**अंक–8**
8.	**शासकीय पत्र लेखन (दो में से एक)**	**अंक–8**
9.	**विस्तारण**	**अंक–8**
	आंतरिक मूल्यांकन	**अंक–10**

निर्देश : 6 लेक्चर Text **के और 3 लेक्चर व्याकरण के अनिवार्य होंगे।**

50 टिप्पणियाँ

1.	A brief note is placed below	**संक्षिप्त टिप्पणी नीचे प्रस्तुत है ।**
2.	Acknowledge receipt of this	**इसकी पावती भेजिए ।**
3.	Action as proposed may be taken	**यथा प्रस्तावित कार्यवाही की जाए।**
4.	Agenda of the meeting is put up	**बैठक की कार्यसूची प्रस्तुत है ।**
5.	Application may be rejected	**आवेदन अस्वीकार कर दिया जाए ।**
6.	Approved as proposed	**प्रस्ताव के अनुसार अनुमोदित**
7.	Administrative approval may be obtained	**प्रशासनिक अनुमोदन प्राप्त किया जाए ।**
8.	Await reply	**उत्तर की प्रतीक्षा करें ।**
9.	Await further report	**और विवरण की प्रतीक्षा करें ।**
10.	Ascertain this position please	**कृपया स्थिति का पता लगायें ।**
11.	Amended draft is submitted for approval	**संशोध्ति प्रारूप अवलोकनार्थ प्रस्तुत हैं ।**
12.	Brief resume of the case is given below	**मामले का संक्षिप्त सार नीचे दिया गया है।**
13.	Call for explanation	**स्पष्टीकरण माँगे**
14.	Call for report	**रिपोर्ट मँगवाए ।**
15.	Comply with the orders	**आदेशों का पालन करें ।**
16.	Clarify the position please	**कृपया स्थिति का स्पष्ट करें ।**
17-	Copy enclosed for ready reference	**सुलभ संदर्भ के लिए प्रतिलिपि संलग्न है ।**
18.	Copy is enclosed	**प्रतिलिपि संलग्न है ।**

19.	Copy forwarded for information and Necessary action	प्रतिलिपि सूचनार्थ एवं आवश्यक कार्यवाही के लिए प्रषित है ।
20.	Case may be kept pending	मामले को अभी अनिर्णीत रखा जाए ।
21.	Delay should be avoided	विलम्ब न किया जाए।
22.	Disciplinary proceedings may be initiated	आनुशासनिक कार्यवाही शुरू की जाए ।
23.	Draft reply is put up	उत्तर का मसौदा प्रस्तुत है
24.	Enquiry may be conducted	जाँच की जाएं
25.	Expedite action	शीघ्र कार्यवाही करें ।
26.	Explanation may be called for	स्पष्टीकरण माँगा जाए ।
27.	Facts for the case may be put up	मामलों के तथ्य प्रस्तुत करें ।
28.	For perusal and return	देखकर लौटाने के लिए
29.	For comments please	कृपया टिप्पणी दें ।
30.	For sympathetic consideration	सहानुभुतिपूर्ण विचार के लिए।
31.	Forwarded and recommended	प्रेषित और संस्तुत।
32.	I concur with the proposal	मैं इस प्रस्ताव से अपनी सहमति प्रकट करता हूँ।
33.	I have no remarks to offer	मुझे कोई टिप्पणी नहीं करनी हैं ।
34.	Inform all concerned	सभी संबंध्ति व्यक्तियों को सूचित करें ।
35.	Issue a circular	परिपत्र जारी करें ।
36.	Keep pending	निर्णय के लिए रोक रखें ।
37.	Kindly accord sanction	कृपया स्वीकृति दीजिए ।
38.	Kindly confirm	कृपया पुष्टि करें।
39.	Matter is under consideration	मामला विचाराधीन है ।
40.	No action is necessary	कोई कार्यवाही अपेक्षित नहीं है
41.	Needful has been done	आवश्यक कार्यवाही की गई है ।
42.	Order may be issued	आदेश जारी किया जाए ।
43.	Please see the proceeding notes	कृपया पिछली टिप्पणियाँ देख लें ।
44.	Put up the relevant papers	संबध्ति कागज प्रस्तुत करें ।
45.	Reminder may be sent	अनुस्मारक भेजा जाए ।
46.	Report compliance immediately	अनुपालन करके तुरन्त सूचित करें ।
47.	Specific reason may be given	विशिष्ट कारण दिया जाए ।
48.	Submitted for information	सूचना के लिए प्रस्तुत है ।
49.	This may be treated as confident	इसे गोपनीय समझा जाए ।
50.	Verified and found correct	जाँचा और सही पाया ।

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਦੂਜਾ ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ — 25 ਅੰਕ
2. ਸਫ਼ਰਨਾਮੇ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਬਾਬਾ ਵਜੀਦ, ਅਲੀ ਹੈਦਰ, ਸੱਯਦ ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਸੱਯਦ ਵਾਰਿਸ ਸ਼ਾਹ, ਨਜਾਬਤ ਅਤੇ ਪੀਰ ਮੁਹੰਮਦ)
2. ਸੱਚੋ ਸੱਚ , ਅਮਰੀਕਾ ਦਾ ਸਫ਼ਰਨਾਮਾ, ਨਰਿੰਦਰ ਸਿੰਘ ਕਪੂਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ‘ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ’ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ –ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ‘ਸੱਚੋ ਸੱਚ’ ਅਮਰੀਕਾ ਦਾ ਸਫ਼ਰਨਾਮਾ ਪੁਸਤਕ ਦੇ ਆਧਾਰ ਉੱਤੇ ਪ੍ਰਮੁੱਖ ਥਾਵਾਂ ਤੇ ਘਟਨਾਵਾਂ ਦੇ ਵੇਰਵੇ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਸਫ਼ਰਨਾਮੇ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਸਫ਼ਰਨਾਮੇ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ: ਤੱਕ ਸੂਫ਼ੀ ਕਾਵਿ-ਧਾਰਾ ਤੇ ਕਿੱਸਾ – ਕਾਵਿ ਧਾਰਾ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਚਾਰ – ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ), ਰਸ ਸੰਪ੍ਰਦਾਇ, ਵਕ੍ਰੋਕਤੀ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ: ਟਕਸਾਲੀ ਭਾਸ਼ਾ, ਵਿਅਕਤੀ ਭਾਸ਼ਾ, ਅਪਭਾਸ਼ਾ, ਗੁਪਤ ਭਾਸ਼ਾ, ਰਜਿਸਟਰ, ਪਿਜ਼ਨ ਤੇ ਕ੍ਰਿਓਲ (ਚਾਰ ਵਿਚੋਂ ਦੋ) — 10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਦੂਜਾ ਅਪ੍ਰੈਲ/ ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ 25 ਅੰਕ
2. ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) 20 ਅੰਕ
4. ਸਾਹਿਤ ਆਲੋਚਨਾ 10 ਅੰਕ
5. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਹਾਸ਼ਮ ਸ਼ਾਹ, ਕਵੀ ਸੋਂਧਾ, ਕਾਦਰਯਾਰ, ਸ਼ਾਹ ਮੁਹੰਮਦ ਅਤੇ ਭਗਵਾਨ ਸਿੰਘ)
2. ਕਥਾ –ਪ੍ਰਵਾਹ (ਸੰਪਾ.) ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਨਿਰਧਾਰਤ ਕਾਵਿ-ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ- ਬੰਦ ਦੀ ਵਿਹਾਰਕ ਸਮੀਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
2. (ੳ) ਕਥਾ-ਪ੍ਰਵਾਹ ਪੁਸਤਕ ਵਿਚੋਂ ਘਟਨਾਵਾਂ , ਥੀਮ, ਪਾਤਰ ਚਿਤਰਨ ਤੇ ਕਥਾ ਜੁਗਤਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ:) ਵਾਰ ਕਾਵਿ, ਜੰਗਨਾਮਾ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) 5 x 4=20 ਅੰਕ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਤੇ ਸਮਾਜ, ਸਾਹਿਤ ਤੇ ਸਖ਼ਸ਼ੀਅਤ, ਸਾਹਿਤ ਤੇ ਸ਼ੈਲੀ, ਸਾਹਿਤ ਤੇ ਮਨੋਵਿਗਿਆਨ, ਸਾਹਿਤ ਤੇ ਵਿਗਿਆਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
6. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਉਪਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਭਾਸ਼ਾ ਤੇ ਉਪਭਾਸ਼ਾ, ਉਪਭਾਸ਼ਾ ਦੀਆਂ ਪਛਾਣ ਵਿਧੀਆਂ। 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
5. ਸੰਘਾ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿੱਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਉਹੀ, 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
10. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

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संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष, 2017

SEMESTER-III

Paper - Sanskrit : **श्रीमद्भगवद्गीता एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को भारतीय दर्शन के अद्वितीय ग्रन्थ रत्न श्रीमद्भगवद्गीता (चतुर्थ अध्याय) में प्रतिपादित निष्काम कर्मयोग, समत्व योग में स्थित योगी पुरुषों का आचरण एवं उनकी महिमा, विभिन्न प्रकार के ज्ञानयज्ञ तथा ज्ञान का महत्त्व इत्यादि विषयों का अध्ययन करवाना ।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) गीता (चतुर्थ - अध्याय) (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **2x10= 20 अंक**

(ख) गीता (चतुर्थ अध्याय) पर आधारित समीक्षात्मक लघुप्रश्न **05 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : वस्त्र, आभूषण एवं श्रृंगारपरक (15 में से 10 शब्दों की संस्कृत) **10x 1= 10 अंक**

1. कंबल-कम्बलः	2. कुरता-कञ्चुकः	3. कोट-प्रावारः
4. चादर-प्रच्छदः, शय्याच्छादनम्	5. जूता-उपानत्	6. तकिया-उपधानम्
7. दरी-आस्तरणम्	8. दुपट्टा-उत्तरीयम्	9. धोती-अधोवस्त्रम्,
10. पगड़ी-शिरस्त्रम् उष्णीकम्	11. परदा-यवनिका	12. पायजामा-पादयामः
13. पैंट-आप्रपदीनम्	14. रुमाल-करवस्त्रम्	15. शेरवानी-प्रावारकम्
16. साड़ी-साटिका	17. स्वेटर-उर्णावरकम्	18. कपड़ा-वस्त्रम्, वसनम्, चीरम्
19. अंगूठी-अङ्गुलीयकम्, मुद्रिका	20. कंगना-कंकणः	21. कान की बाली-कुण्डलम्
22. गहना-अलङ्कारः, आभरणम्	23. घुंघरू -किंकिणी	24. चूड़ी-काचवलयः, काचवलयम्
25. नथ-छोलिका	26. पाजेब-नूपुरः, नूपुरम्	27. बाजूबंद (ब्रेस लेट)-केयूरम्
28. हार-हारः	29. सोने का कड़ा-कटकः	30. आयना (शीशा)-दर्पणः, आदर्शः

31. इत्र (सैंट)-गन्धतैलम्	32. उबटन - उद्वर्तनम्	33. कंघी-प्रसाधनी
34. काजल-अञ्जनम्, कज्जलम्	35. क्रीम-शरः	36. ड्रेसिंग टेबल-शृंगारफलकम्
37. तिलक-तिलकम्	38. दाँत का ब्रुश-दन्तधावनम्,दन्तकूर्चः	39. नेल पोलिश-नखरंजनम्
40. बिन्दी-बिन्दुकः	41. पाउडर-चूर्णकम्	42. मंजन-दन्तचूर्णम्
43. मेहदी-मञ्जिष्ठा	44. लिपस्टिक-ओष्ठरंजनम्	45. साबुन-फेनिलम्, फेनकम्
46.. सिंदूर-सिन्दूरम्	47. दांत कूरेदने की सूई-दन्तशोधनी	48. महावर-अलक्तका
49. रूज-कपोलरंजनम्	50. सिंगारदान-शृंगारधानम्, शृंगारपिटकम्	

UNIT-III

(घ) व्यञ्जन सन्धि **5x1=05अंक**

(ङ) द्वन्द्व- समास **5x1=05अंक**

(च) तद्धित प्रत्यय : अण्, मतुप्, तरप्, तमप् - केवल उदाहरण ही प्रष्टव्य हैं) **5x1=05अंक**

UNIT-IV

(छ) शब्दरूप : तत्, एतत्, यत्(तीनों लिंगों में) राजन् तथा चन्द्रमस् **2x5=10अंक**

(ज) धातुरूप : अस्, दा, कुप्, शक्, प्रच्छ्, मिल् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(झ) छन्द : अनुष्टुप्, वंशस्थ, इन्द्रवज्रा, उपेन्द्रवज्रा, उपजाति (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **2x5=10अंक**

UNIT-V

(ञ) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष, 2018

SEMESTER-IV

Paper - Sanskrit : **नाटक एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- संस्कृत नाट्यविद्या के स्वरूप और प्रवृत्तियों से परिचित कराना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) दूतवाक्यम् - भास (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **3x10=30 अंक**

(ख) समीक्षात्मक लघु प्रश्न, पात्र चरित्र चित्रण, लेखक परिचय, रचनाएँ व दूतवाक्यम् की विषयवस्तु **5 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : अन्न, भोजन एवं तत्सम्बद्ध पात्र (15 में से 10 शब्दों की संस्कृत) **10x1=10 अंक**

1. अरहर-आढकी
2. उडद-माषः
3. गेहूँ-गोधूमः
4. गेहूँ का आटा - गोधूमचूर्णः
5. चना-चणकः
6. जौ-यवः
7. चावल-तण्डुलः, व्रीहिः
8. ज्वार-यवनालः
9. तिल-तिलः
10. दाल-द्विदलम्
11. धान-धान्यम्, शालिः
12. बाजरा-प्रियङ्गुः
13. बेसन-चणकचूर्णम्
14. मसूर-मसूरः
15. मूंग-मुद्गः
16. सत्तु-सक्तुः
17. सरसों-सर्षपः
18. हल्दी-हरिद्रा
19. अचार-सन्धितम्
20. गरम भोजन-उष्णभोजनम्
21. खिचडी-कृशरः
22. चटनी-अवलेहः
23. चिकना-चिक्कणम्
24. ठंडाभोजन-शीतभोजनम्
25. भरता-भर्ता
26. भात-ओदनः, ओदनम्
27. मट्ठा-तक्रम्
28. रसोई-रसवती, पाकशाला, महानस
29. रायता-राज्यक्तम्
30. रोटी-रोटिका
31. शक्कर-शर्करा
32. समोसा-समोषः
33. सौंफ-मधुरः
34. हींग-हिंगुः
35. अंगीठी-हसन्ती
36. कटोरा-कटोरम्
37. कडाही-कटाहः, स्वेदनी
38. कांच का गिलास - काचकंसम्, काचचषकः

39. गिलास-कंसम्, चषकः	40. घड़ा-घटः, कुम्भः	41. चम्मच-चमसः
42. चीमठा-सन्दंशः	43. टब-द्रोणी	44. थाली-स्थालिका, थालिका
45. प्लेट - शरावः	46. बाल्टी-उदञ्चनम्	47. लोटा-करकः
48. स्टोव-उच्चानम्	49. बेलन-वेलनम्	50. चाकू-छुरिका

UNIT-III

(घ) तत्पुरुष - समास **5x1=05अंक**

(ङ) कृदन्त प्रत्यय : क्त, क्तवतु, क्त्वा तथा तुमुन् प्रत्यय **5x1=05अंक**

(गम्, पठ्, पत्, क्रीड्, वद्, पा, लिख्, नी, दृश्, भू, त्यज्, स्मृ, अस्, दा, कुप्, शक्, प्रच्छ्, मिल्, कृ, क्री, ग्रह्, ज्ञा, श्रु, कथ् - इन धातुओं के योग में)

(च) शब्दरूप : किम् व सर्व (तीनों लिंगों में), महत् व बलवत् (पुलिङ्ग में) एवं कति **2x5=10अंक**

UNIT-IV

(छ) धातुरूप : कृ, क्रीञ्, ग्रह्, ज्ञा, श्रु तथा कथ् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(ज) कारक (केवल सामान्य नियम-अशुद्ध वाक्यों को शुद्ध करना) **5x1=05अंक**

UNIT-V

(छ) छन्द : शिखरिणी, मन्दाक्रान्ता, मालिनी, वसन्ततिलका तथा भुजंगप्रयात (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **10अंक**

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

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URDU (Elective)

SEMESTER-III

Prose and Poetry

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

i. Explanation of Verses(Ghazaliat) :
Mir Taqi Mir, Khwaja Mir Dard, Ibrahim Zauq, Mirza Asadullah Khan Ghalib, Momin Khan Momin, Hasrat Mohani, Raghupati Sahay Firaq Gorakhpuri.

20 marks

ii. Explanation of Nazms:
Search Results

Allama Iqbal	-	Chand aur Tare, Mulla aur Bahisht
Nazir Akbrabadi	-	Mele ki Sair
Brij Narayan Chakbast	-	Ramayan ka ek Scene

10 marks

Unit-II

Explanation of prose:

Mir Amman	-	Sair Pehle Darvesh Ki	
Sir Syed Ahmed Khan	-	Sarab-e-hayat	
Farahatullah Baig	-	Murda Badast Zinda Ast	
Munshi Prem Chand	-	Roshni	
Rashid-ul-Kheri	-	Toonfan-e-Hayat Ka Ek warq	30 marks

Unit-III

Central idea of a lesson or nazm (from Unit I & II above) 15 marks

Unit-IV

Introduction and literary contribution of the poets & prose writers
Poets: Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Nazir Akbarabadi
Prose writers : Sir Syed Ahmed Khan, Altaf Hussain Hali, Munshi Prem Chand 15 marks

Books Prescribed:

1. Khyaban-e-Adab by, Azimul Haq Junedi, Educational BookHouse, AMU Market, Aligarh.

URDU (Elective)

SEMESTER-IV

Novel: Ek Chadar Maili Si

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

Novel - One question each on its Plot and Characters 30 marks

Unit-II

Explanation of Paragraph from Novel 30 marks

Unit-III

Rajinder Singh Bedi Ki Novel Nigari Ki Khususiyat

Or

Novel Ke Ajza-e-Tarkibi 15 marks

Unit-IV

Unseen paragraph (candidate will be asked three questions from it) 15 marks

Books Prescribed :

1. Ek Chadar Maili Si, by Rajinder Singh Bedi.

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PERSIAN (Elective)
SEMESTER-III

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2017-18.

Paper-A : Prose

Marks : 90
Internal Assessment : 10
Time : 3 hours

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye-Kutah.	20 marks
4.	Simple direct questions on the life and works of the authors.	30 marks

Books prescribed

Nisabe Jadide Farsi
(Published By Jayyad Press Ballimaran Delhi)
Only following portions from Prose Section.

i. Intekhab-e-Sarzamin-e-Hind-Ali Asghar Hikmat.

ii. Dastan-e-Kutah by Mohammad Hejazi.

PERSIAN (Elective)

SEMESTER-IV

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2017-18.

Paper-B : Poetry

Marks : 90
Internal Assessment : 10
Time : 3 hours

Distribution of marks :

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Central idea of the poem.	20 marks
4.	Simple direct questions on the life and works of the poets as prescribed in the text.	30 marks

Books prescribed

Nisab-e-Jadeed-e-Farsi(Published by Jayyad Press Ballimaran, Delhi). Only following portions from Prose Section.

Az Gzalliyat-e-Hafiz

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.

Saaqi Benur Badah Bar Afrooz Jam-e- Maa.

Doosh deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:

Jan Ze Tan Burdi-o- Dar Jaani Hunooz.

Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

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FRENCH(ELECTIVE)

SEMESTER-III

WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 marks

II (a) Questions (including General and based on Civilisation) from the prescribed Text book (of 3 marks each). 15 marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 20 marks

(c) Composition based on the subject or theme from the text. 10 marks

(d) Comprehension of an unseen text .
Ten questions to be put in French and to be answered in French. 10 marks

III Prose:
Direct simple questions based on the prescribed text to be asked and answered in French,
Questions should be of 5 marks each. 20 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Version Originale-2 (Units 5-8) Version Originale-3 (Units 1-2) Méthode de Français/Livre de I' élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) Livre de I' éléve
(b) Cahier d' exercices

Poetry:

To be studied: Comprehension, explanation, literary, appreciation and criticism of the poems.

The following 5 poems to be studied:

1. **Pierre De RONSARD (1524-1585)**
   Sonnet à Marie

2. **Alphonse De LAMARTINE 1790-1869- Harmonie poétiques et religieuses**
   Au rossignol

3. **Alfred De MUSSET (1810-1857)-Poésies nouvelles**

   Tristesse

4. **Théodore De BANVILLE (1823-1891)**

   Le Verger du roi Louis

5. **Paul ELUARD (1895-1952)**

   Le Sourd et l'aveugle

Prose:- Tintin au Tibet, Casterman

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. 3rd Semester.

2. All questions are to be asked and answered in French.

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH(ELECTIVE)

SEMESTER-IV

CREATIVE WRITING AND EXPRESSION, GRAMMAR IN CONTEXT

Max. Marks	:	100
Theory	:	60 marks
Internal Assessment	:	10 marks
Viva	:	30 marks
Time	:	3 Hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 marks

II Prose:
Direct simple questions based on the prescribed text to be asked and answered in French, Questions should be of 5 marks each. 15 marks

III (a) Questions (including General and based on Civilisation) from the prescribed Text book (of 3 marks each). 15 marks
(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 15 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Version Originale-3 (Units 3-8) Méthode de Français/Livre de I' élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) Livre de I' éléve
(b) Cahier d' exercices

Poetry:

To be studied: Comprehension, explanation, literary, appreciation of the poems.

The following 5 poems to be studied:

1. Victor Hugo 1802-1885- Les contemplations
La coccinelle

2. Théophile GAUTIER (1811-1872)- Emaux et camées

Noël

Noél

3. Charles BAUDELAIRE (1821-1867) Les fleurs du mal

La vie antérieure

4. Paul VERLAINE (1844-1896) Sagesse

D'une prison

5. Georges BRASSENS – (1921-1981)

Le vent

Prose:- Guy de Maupassant, La Parure

All questions are to be asked and answered in French

Viva:	30 marks
Reading :	
Seen	10 marks
Unseen	10 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory
2. The theory paper would be proportionately marked out of 70 as there is no internal assessment.

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GERMAN (Elective)

SEMESTER-III

Summary

Max. Marks	:	100 marks (Total)
Paper-A(Theory)	:	90 marks
Internal Assessment	:	10 marks

Paper A-Theory: 90 marks
Time: 3 hours
Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks) conforming to prescribed text-book "Lagune-2": Chapters1-17 upto page 87 50 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-2": Chapters 1-17 upto page 87 20 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book "Texte zum Lesen und Nacherzählen", from pages 1-12 20 marks

Internal Assessment **10 marks(Total)**

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 1-17 upto page 87.
ii. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, upto page 12.

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters1-17

GERMAN (Elective)

SEMESTER-IV

Summary

Max. Marks	:	100marks(Total)
End Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) examination	:	30 marks
Internal Assessment	:	10 marks

Paper B-Theory : 60 marks(Total)

Time : 3 hours

Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks)confirming to prescribed text-book "Lagune-2": Chapters 18-34 30 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed text-book "Lagune-2": Chapters 18-34 15 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book " Texte zum Lesen und Nacherzählen", from pages 12-21 15 marks

Oral (viva-voce) Examination : 30 marks(Total)

i. Conversation in German
ii. Reading of a simple unseen text and answering questions there-on

Internal Assessment : 10 marks(Total)

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

iii. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 18-34.
iv. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, page 12-21.

Supplementary book:

ii. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 18-34

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RUSSIAN (Elective)

SEMESTER-III

Paper-A (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 100**
			Theory	**: 90 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) **15 marks**
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) **15 marks**
3. Simple applied grammar: 3 question out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
4. Question on prescribed texts in Russian : 3 questions out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
5. Composition (One out of three) on the following topics: **15 marks**
   1. My friend 2. My Country 3. My favorite writer 4. Our Library
6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper **15 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 31-37)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary
   Russian-English dictionary

RUSSIAN (Elective)
SEMESTER-IV

Paper-B (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 70**
			Theory	**: 60 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 80 words) **10 marks**

2. Translation from simple English/Hindi/Punjabi into Russian (about 75 words) **10 marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) **12 marks**
(Covered in Lessons 38-45, Wagner)

4. Questions on prescribed texts in Russian : 4 questions out of 6 **08 marks**
(2 marks each)
(Covered in Lessons 38-45, Wagner)

5. Composition (One out of three) on the following topics: **10 marks**
1. Our City 2. Our University 3. A Cultural evening 4. Journey/Excursion

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper **10 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 38-45)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary.
Russian-English dictionary.

(iii) **Oral/Practical** **Maximum Marks:30**

Reading of text(s) and conversation in simple Russian

1. V. N. Wagner: Russian, PPH, New Delhi.(Lessons 31-45)

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SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabi for B.A.(GENERAL)
SECOND YEAR (SEMESTER SYSTEM) has been
KEPT IN ABEYANCE

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PHYSICAL EDUCATION

B.A. (GENERAL) THIRD SEMESTER EXAMINATION, 2017

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Psychological Basis of Physical Education :

- Meaning of Psychology and Sports Psychology.
- Psychological factors effecting physical performance.
- Meaning of Learning.
- Laws of Learning.
- Learning curve, its types, characteristics and implications in Physical Education and Sports.
- Psychological characteristics and problems of an adolescent.
- The role of Physical Education and Sports in solving the problems of an adolescent.

UNIT-III 12 Marks

Motivation:

- Meaning, definitions, types and methods of motivation.
- Importance of motivation in Physical Education and Sports.

Transfer of Training:

- Meaning, definitions, types and factors affecting transfer of training.

UNIT-IV 12 Marks

Personality:

- Meaning, definitions, characteristics, dimensions and traits of personality.
- Factors affecting development of personality (Heredity and Environment).
- Role of physical activities in Personality Development.

Sports and Socialization:

- Meaning and definitions of socialization, socialization through sports.

UNIT-V 12 Marks

Politics, Economy, Media and Sports Performance :

- Role of politics and economy in the promotion of games and sports.
- Role of media in promotion of sports.
- Causes of deterioration and suggestions for the improvement of Sports Performance.

Softball:

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of field.
- Rules and regulations (number of players, number of officials required and general rules of play).
- Major tournaments of the game.

References :

1. Blair Jones & Simpson :*"Educational Psychology ",* The MacMillan Co., New York, 1962.
2. Brown, R. : *"Social Psychology",* Free Press, New York, 1965.
3. Bucher, Charles A. : *"Foundations of Physical Education",* St. Louis, 1979, The C.V. Mosby Company.
4. Conger, J.J.: "*Adolescence and Youth : Psychological Development in a Changing World,"* 22nd Edition, 1977, Harper and Row, New York.

5. Cratty, B.J.: *" Psychology and Physical Activity"*, Englewood Cliffs, N.J., Prentice Hall, 1968

6. Hollander, E.P.: *" Principles and Methods of Social Psychology"*, New York, 1971, Oxford University Press.
7. Linsa, M.I., *"Child-Adults, Peers : Patterns Communication",* Progress Publishers, Moscow, 1985.
8. Linggren, H.E.: *" Educational Psychology in the Class Room"*, John Wiley & Sons, New York, 1962.

9. Loy, John W. and Kenyon Gerald, S. *: "Sport, Cultural and Society : A Reader on the Sociology of Sport",* London, 1969, The MacMillan Co.
10. Hurlock, E.B. : *"Adolescent Development",* Appleton Century Crofts, New York,1956.

11. Rushall, Brent S. and Siedentop : *"The Development and Control of Behaviour in Sport and Physical Daryl Education"*, Philadelphia, 1972, Lea and Febiger.
12. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

13. Singh, Ajmer et. al. : *Modern Text Books of Physical Education, Health and Sports,* Kalyani Publishers, Ludhiana, 2000.
14. Talamini, John T. and Page & Charles, H. : *"Sport & Society – An Anthology",* Boston, 1973, Little Brown Co.
15. Walia, J.S. : *"Foundations of Educational Psychology",* Paul Publishers, Jalandhar City, 1992.

16. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Massachusetts.

PRACTICAL

Max.Marks : 35
Practical : 30
Internal assessment: 5

ATHLETICS

a) History of athletics
b) List of track and field events
c) Marking of standard track, width of lanes and starting points for various races.

LONG JUMP:

(a) Approach run (b) Take off (c) Flight (d) Landing (e) Brief information of various styles and practice of any one style depending upon the facilities available (f) Rules and regulations of the long jump.

PHYSICAL FITNESS TESTS:

More emphasis shall be given on physical fitness with regard to specific physical fitness components (Endurance and Strength).

Test 1 : ENDURANCE : 9/12 min. run and walk test.
Test 2 : STRENGTH : Standing broad jump test.

Division of Practical Marks*:* Marks for each activity shall be divided as under:

Athletics 10 Marks, Participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory and practical papers shall consist of 65 and 35 marks each.
5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students :***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods :***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. ***Teaching Work Load :***

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. ***Division of Marks (Theory and Practical) :***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

PHYSICAL EDUCATION
B.A. (GENERAL) FOURTH SEMESTER EXAMINATION, 2018

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Respiratory System :

- Meaning of Respiration, types of Respiration, Organs of the Respiratory System.
- Functions of the Respiratory System. Vital capacity and its measurement.
- Mechanism and Neural Control of Respiration.

Digestive System :

- Meaning, Importance and Organs of Digestive System.
- Functions, processes, mechanism and nerve regulators of Digestive System.

UNIT-III 12 Marks

Circulatory System :

- Meaning of the circulatory system.
- Heart, its structure, functions and control of the heart rate.
- Various types of blood vessels and their functions.
- Cardiac Cycle.

Blood :

- Meaning, functions and composition of blood.
- Maintenance of blood supply.
- Blood groups and their importance.
- Blood Clotting.

UNIT-IV 12 Marks

Communicable Diseases :

Meaning of a communicable disease. Communicable diseases such as HIV/AIDS, Viral Hepatitis—A, B & C and Tetanus, their modes of transmission and methods of prevention.

Yoga:

- Meaning and aim of Yoga.
- Meaning, Principles and Importance of Asanas.
- Meditative poses (Padamasna, Vajrasana, and Sukhasana), their technique, precautions and effects/advantages.
- Cultural poses (Savasna, Halasana, Bhujangasana Sarvangasana, and Dhanurasana), their technique, precautions and effects/advantages.

Basics of Tennis :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking / layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna awardees of the game.

UNIT-V 12 Marks

Sports Injuries :

- Basis of Sports Injuries.
- Common Sports Injuries, such as sprains, strains, fracture, dislocation, abrasions, contusion, bruise, tennis elbow. Their causes, preventive and remedial measures.
- Treatment and care (RICE) of sports injuries.

Disability and Rehabilitation :

- Meaning, types, causes and preventive measures of disability.
- Problems of the disabled. Physical Activity and health for disabled.
- Meaning and scope of Rehabilitation.

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.
2. Dandiya, P.C., Jafer, Z.Y. K. and Jafer Afifa: *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.
3. Govt. of India : *"Occupational Diseases : A Guide to Recognition and Notification",* Chief Adviser Factories, Ministry of Labour and Employment, New Delhi, 1955.
4. Park, J.E. & Park, K. : *"Text Book of Preventive and Social Medicine",* 10th Edition, 1985, Banarsi Dass Bhanot, Jabalpur, India.
5. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Assistant Professors",* Lend : Edward Arnold Ltd., 1983.
6. Rao, M.N. and Lundgren, N.P.V. : *"A Review of Occupational Health Research in India",* ICMR, New Delhi, 1955.
7. Rose & Wilson : *"Foundations of Anatomy and Physiology",* 5th Edition, 1981, Reprinted in 1985.
8. Winter Griffith, H. : *"Complete Guide to Sports Injuries",* First Indian Edition, 1989, Metropolitan Book Co. Pvt. Ltd., New Delhi.
9. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999- 2000, Birla Publications, Delhi.
10. Singh, Ajmer et. al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.
11. Smith, Olive and F. Guthrie : *"Rehabilitation and Remedial Exercise",* Bailliere, Tindall and Cox Limited, London, 1949.
12. Sri Anand : *"The Complete Book of Yoga : Harmony of Body and Minds",* Orient Paper Back, New Delhi, 1980.
13. Staford, T. & Ellen Davis Kelly : *"Preventive and Corrective Physical Education",* Third Edition, 1958, Ronald Press Co., New York.
14. Swami Kuvalyananda : *"Kaivalyadhama",* Lonavala, Bombay, 1933.
15. Vijayendra Pratap : *"A Teacher's Guide for Beginning Yoga",* First Edition, 1987, Sky Foundations, Philadelphia, Pennsylavania, U.S.A.
16. World Health Organisation : *"Health Hazards of the Human Environment",* Geneva,1962.

PRACTICAL

Max. Marks	:	35
Practical	:	30
Internal Assessment	:	05

GAMES

Basketball or Ball badminton and any other one game of the choice of the student.

Basketball

(a) Measurements (Basket ball ground).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental and basic skills.

Football

(a) Measurements (Field & ball).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental Skills.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.
(ii) This subject should be offered to the normal students (not to disabled one).
(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.
(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students:***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. ***Infrastructure/facilities and Supporting personnel:***

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods:***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6.Teaching Work Load:

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. ***Division of Marks (Theory and Practical):***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper-III : FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer type question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from Units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV; and 75 words for each short answer type in Unit V.

Objectives :

1. To acquaint the students with major foundations underlying Education.
2. To enable the students to understand the concept of Philosophy of Education.
3. To enable the students to understand the concept of Educational Sociology and Educational Technology.
4. To enable the students to understand major Philosophies and their Educational implications.

COURSE CONTENTS :

UNIT-I

Philosophical, Sociological, and Technological Foundations of Education—Concept and their Role in Education.

UNIT-II

Philosophy of Education – Definition, Nature and Scope.

Difference between Educational Philosophy and Philosophy of Education.

UNIT-III

Educational Sociology – Definition, Nature and Scope.

Information and Communication Technology—Role in Education.

UNIT-IV

Major Philosophies of the World—Idealism, Naturalism and Pragmatism—Main Features and their Contribution to Education.

Books Recommended :

1. Aggarwal, J.C. : *Theory and Principles of Education,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

2. Bhatia, K.K. and Narang, C.L. : *Philosophical and Sociological Bases of Education,* Tondon Publications, Ludhiana, 2002.

3. Sataya, R.N. and Shaida, B.D. : *Development of Educational Thought and Practice,* Dhanpat Rai Publishing Company (P.), New Delhi, 1996.

4. Taneja, V.R. : *Foundations of Education,* Mohindra Capital Publishers, Panchkula, 1998.

5. Singh, K. : *Vidiyak Manovigian,* Gujral Book Depot, Patiala, 1999.

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-IV

Paper-IV : PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in Unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for Units I, II, III, IV and 75 words for each short answer question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV and 75 words for short answer type question in Unit V.

Objectives :

1. To enable the students to understand the perspective roles of heredity and environment in educational development of a child.

2. To enable the students to understand the concept of personality and its place in Education.

3. To make the students familiar with the concept of Special Education; the special needs of the Gifted, Backward and Delinquent Children and their Educational implications.

4. To make the students familiar with the concepts of Emotions, Stress and Stress management among adolescents.

COURSE CONTENTS :

UNIT-I

Difference between Psychology and Educational Psychology, Significance of Educational Psychology.

Heredity and Environment – Concepts and their role in Educational development.

UNIT-II

Personality : Concept, Assessment and its Educational Implications.

UNIT-III

Special Education : Meaning and Concept.

Types of Exceptional Children with special reference to the Gifted, Backward and Delinquents (Their Characteristics and Educational Implications).

UNIT-IV

Emotions and Stress – Concept, Types of Stress (Physical, Psychological and Social), Stress Management with Special Reference to Adolescents.

Books Recommended :

1. Batra, Promod : *Simple Ways to Manage Stress,* Think Inc., Delhi, 1997.

2. Carewell, M., Clark, L. & Meldrum, C. : *Psychology,* Harper Collins Publishers Ltd., London, 2000.

3. Clare, Sylvia : *Emotions –Releasing Your Child's Potential,* UBS Publishers and Distributors, New Delhi, 2003.

4. Chauhan, S.S. : *Advanced Educational Psychology,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

5. Dhaliwal, A.S. : *Vidyak Mnovigian,* Punjabi University, Patiala, 2001.

6. Dutt, Sunil & Sodhi, G.S. : *Teaching Learning – A Process Approach,* Samir Publications, Chandigarh, 1995.

7. Goleman Daniel : *Emotional Intelligence,* Baanam Books, New York, 1995.

8. Kirk, Semual : *Educating the Exceptional Child,* I.B.H. Publishing Co., Calcutta, 1992.

9. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.

10. Panda, K.C. : *Education of Exceptional Children,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

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ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-2018

Semester –III

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To acquaint students with the psychology of adult learner and the strategies employed to motivate them.

2. To impart knowledge to students on adult characteristics and their psychology.

3. To impart knowledge on suitability of teaching – learning material and audio visual material used by new – literates, preraks and Nodal Prerakes.

4. To acquaint students with various agencies involved in adult education program.

5. To provide knowledge to students regarding concept, need, methods and procedures involved in monitoring process.

6. To impart knowledge to students on the concept, meaning, scope and significance of Adult Education.

7. To acquaint students with the knowledge, how adult education play an important role in social and economic development.

THEORY

UNIT I

(i) Characteristics of Adult and Psychology of Adult Learners involved in Adult Literacy Program.

(ii) Roll of Motivational Strategies in Adult Educational Program.

UNIT II

(i) Suitability of Teaching – Learning and Audio – Visual Material used for Neo-Literates.

(ii) Suitability of Training Material for Preraks and Nodal Preraks.

UNIT III

(i) Agencies of Adult Education: Government, Private.

(ii) Monitoring of Adult Education Program: The Paradigm Content, General Consideration, Need for Monitoring.

UNIT IV

(i) Meaning of Adult Education, its Scope, Aims and Significance.

(ii) Role of Adult Education in Social and Economic Development.

Practical/Field Work:

Max Marks : 50 Marks
External : 45 Marks
Internal : 5 Marks

Participation of the Students in the following:

1. Survey of the Area - A brief report.
2. Planning and Organization of Awareness Generating Activities for Adults.

ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-2018
Semester –IV

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To provide an overview on History of Adult Education in India.
2. To impart knowledge to students on various Target Groups involved Under Adult Literacy Programs.
3. To expose students with the Teaching Learning Methodologies for teaching Adults.
4. To acquaint students with the Role and Responsibilities assumed by Preraks and Nodal Preraks.
5. To expose students with Concepts and Strategies involved under Total Literacy Campaign.
6. To acquaint students with the knowledge of various agencies involved in Adult Education Programs.
7. To expose students with the Preparation and Planning of Continuing Education and Awareness Generating Programs.
8. To impart knowledge to students on Linkage of Adult Education with Development.

THEORY

UNIT-I

(i) History of Adult Education in India.

(ii) Target Groups involved under Adult Education Programs.

UNIT-II

(i) Methodology of Teaching Adults in Adult Literacy Programs

(ii) Role of Preraks and Nodal Preraks in Adult Education.

UINIT-III

(i) Total Literacy Campaign : Its Concept and Strategies.

(ii) Agencies Involved under Adult Education : Government and Non-Government.

UNIT-IV

(i) Preparation and Planning of Adult Education Programs : Continuing Education and Awareness Generating Programs.

(ii) Adult Education and its Linkage with Development.

Practical/Field Work:

Max Marks	:	50 Marks
External	:	45 Marks
Internal	:	5 Marks

Participation of the Students in the following:

1. Visits to the 5 Government and Non-Government Agencies – A brief Report in the form of file to be submitted in the practical exam.

2. Preparation of Teaching – Learning Aids used for Teaching Adults.

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MUSIC (Vocal)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto ten students in one section in practical class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. The candidate can take vocal music along with instrumental music.

6. The candidate can also take instrumental music with tabla.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit**. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: Practical (20 minutes duration)			: 45 marks
(i) Viva		: 35 marks	
(ii) Harmonium		: 05 marks	
(iii) Tabla		: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Brief knowledge of Gram.
2. Kanth Sadhana.
3. Gharana: definition and importance

Unit–II

1 Knowledge of Alap, and its various forms.
2 Explain the following: - Upaj, Mukhda, Bol-Baant, Khatka, Murki, Kan.
3 Knowledge of Lakshans of Ragas in Modern Period.

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.

(i) Ustad Alladiya Khan
(ii) Pt. Bhimsen Joshi
(iii) Sh. Krishan Rao Shankar Pandit.

Unit–IV

1 Description and Notations of the prescribed Ragas and Talas : -

(i) To write drut khyal in any one of the prescribed ragas :-Malkauns, Bhairav with Alap and Taans
(ii) To write prescribed ragas of the syllabus with Alap and Taans
(iii) To write the notation of Tala :- Jhaptala, Chartala (single & double)
(iv) To write the description of detailed and non detailed Ragas: Chandrakauns, Kalingda.

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas:Malkauns, Bhairav.
2. One lakshana geet/ Sargam geet in any prescribed ragas
3. Ability to play Jhaptala on Tabla
4. Ability to recite following talas by hand: Tilwada, Chartala
5. Ability to play on Harmonium at least three alankaras based on Shudh swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Chandrakauns, Kalingda.
8. Ability to sing one Drut khayal of your course with harmonium.

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	Sangeet Kala ka Itihas	:	Panna Lal Madan

MUSIC (Vocal)

SEMESTER-IV

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. The candidate can take vocal music along with instrumental music.

5. The candidate can also take instrumental music with Tabla.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**		: 45 marks
Paper-B:	**Practical** (20 minutes duration)		: 45 marks
	(i) Viva	: 35 marks	
	(ii) Harmonium	: 05 marks	
	(iii) Tabla	: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical development (in brief) of North Indian Music during the Medieval Period.
2. Brief knowledge of Murchhana.
3. Importance of Notation system.

Unit-II

1. Importance of Tanpura and Sahayak Nada
2. Varieties of Gamak
3. Explain the following :- Meend, Bol-Alap, andolan, boltana, Badat.

Unit-III

1. Brief life sketches of great masters of music and their contributions:
   i) Ustad Amir Khan Sahib
   ii) Ustad Faiyaz Khan Sahib
   iii) Pt. Onkar Nath Thakur

Unit-IV

1. Description and Notations of the prescribed Ragas and Talas :-
   i) To write in notation a drut khyal in any one of the prescribed Raga of the syllabus:- Bihag, Bageshwari
   ii) To write in notation a vilambit khyal in any prescribed raga of the syllabus.
   iii) To write the notations of Talas: Roopak, Tilwada (Single & Double)
   iv) To write the description of Ragas :- Non detailed: Maru Bihag, Rageshwari

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: Bihag, Bageshwari.
2. One vilambit Khayal in any of the detailed ragas prescribed in the course with extempore alaps and tanas.
3. Ability to play Ek taal on Tabla
4. Ability to recite following talas by hand: Jhaptala, Roopak
5. Ability to play on Harmonium at least three Alankaras based on komal and Teevra Swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Maru Bihag, Rageshwari
8. Ability to sing one Drut khayal of your course with harmonium

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper A : THEORY (3 Hours duration) **(Duration 45 minutes 06 practical + 02 Theory periods per week)**		:	45 marks
Paper-B: PRACTICAL (20 minutes duration)		:	45 marks
(i) Viva	: 35 marks		
(ii) Harmonium	: 05 marks		
(iii) Tabla	: 05 marks		
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1 Ghamak and its varieties.
2 Brief knowledge of Gram.
3 Gun and Dosh of Vadak.

Unit–II

1. Gharana (definition and importance)
2 Knowledge of Alap, and its various forms.
3. Knowledge of Avirbhav and Tirobhav, Alaptav- Bahutav

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.
(i) Ustad Inayat Khan
(ii) Ustad Allaudin Khan
(iii) Pt. Vishnu Digambar Pluskar

Unit–IV

Description and Notation of the prescribed Ragas of Syllabus: -
1. To write one Drut Gat (in any prescribed raga of your course with Toras)
2. Description and notation of Raga:- Bihag, Bhimplasi with todas
3. Notation of Ektal and Rupak tala with dugun layakaries

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas :
Bihag, Bhimplasi
2. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad : Maru Bihag, Patdeep
3. Use of one swara meend and kan.
4. Ability to play teen tala on Tabla
5. Ability to sing three alankras of Shudh swaras with the help of harmonium.
6. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Ektala, Rupak

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: PRACTICAL (20 minutes duration)			: 45 marks
(i) Viva		:	35 marks
(ii) Harmonium		:	05 marks
(iii) Tabla		:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical developments in North Indian Music during Medieval period.
2. Brief knowledge of Murchhana system
3. Classification of Indian Musical Instruments

Unit-II

1. A Study of Shuddh, Chhaya Lag and Sankiran Ragas
2. Time theory of Indian Ragas
3. Definitions and explanations of the musical terms (not more than 100 words):-
   Kampan, Meend, Ghaseet, Zamzama, Krintan

Unit–III

1. Brief life sketches of great masters of music and their contributions:
   - i) Ustad Vilayat Khan
   - ii) Ustad Abdul Halim Zafar Khan
   - iii) Smt. Annapurna Devi Ji

Unit–IV

Description and Notation of the prescribed Raga of syllabus :-

- i) To write one Maseetkhani Gat (in any prescribed raga of your course.
- ii) To write the notation of Razakhani Gat of with Toras: Raga Madhuwanti, Hamir
- iii) To write the notation of Tivra and Dhamar with dugun

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carrying 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Maseetkhani Gat in any raga from your course
2. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas:- Hamir, Madhuwanti.
3. One Madhya laya gat with alap and todas in any prescribed raga other than teentala.
4. Knowledge of the following Non-detailed Raga: Aroh, Avroh and Pakad : Multani, Kedar
5. Use of two swara meend and kan.
6. Ability to play Jhaptala on Tabla
7. Ability to sing three alankars of komal and teevra swaras with the help of harmonium.
8. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Tivra, Dhamar

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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TABLA (Instrumental Music)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

General Instructions

1. In the case of private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. The candidate can take vocal music along with instrumental music or Tabla.
3. The candidate can also take instrumental music with tabla.
4. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
2. **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation and question no. 8 will be based on objective type questions.**
   Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.
3. There should not be more than eight students in a batch for practical examination.
4. There would be upto ten students in one section in practical class.

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	30	marks
(ii)	Harmonium	:	05	marks
(iii)	Tabla	:	05	marks
(iv)	Padhant on Hand	:	05	marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

(a) Origin of Tala

(b) Definition of Tisra, Chatasra, Khand, Mishar and Sankeeran jati

(c) Define Uthan, Rau, Chakradar, Gat & Nagma with example

(d) Knowledge of playing techniques of the following bol Dhaghe Tirkit, Ghe-Ghe, Gadigan Kdaan.

UNIT-II

(a) Knowledge of Uttar Bhartiya Tala system.

(b) Introduction of V.D. Paluskar Tala notation system.

(c) Importance of Gharana of Tabla

(d) Life sketch of the following:

- Ustad Allah Rakkha Khan
- Ustad Ahemadjan Thirakuwa

UNIT-III

(a) Ability to write in notation of Uthan, Peshkar, Kayda, Palta in the following Talas – Jhaptal, Roopak, Sultal.

(b) Nine objective type question (covering entire syllabus)

Paper-B: PRACTICAL

(a) Proper Badhat of following Talas on Tabla Jhaptal, Sultal, Rupak

(b) Improvisaon of laggi in Kaharawa

(c) Jhaptal- Peshkar, Two Palatas, Two Kaydas and Two Palatas, One simple Tukra

(d) Sultal – Thah, Dugun & Chaugun

(e) Practical Knowledge of Khemta Taal

(f) Ability to play Nagma on Harmonium in Jhaptal

(g) Tuning of Tabla

TABLA (Instrumental Music)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

General Instructions

1. In the case of private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. The candidate can take vocal music along with instrumental music or Tabla.
3. The candidate can also take instrumental music with tabla.
4. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
5. **In all, eight questions will be set. The question paper will be divided into three units (I, II & III). Unit 1st and 2nd will contain three questions each. Candidates are required to attempt three questions selecting at least one from each unit. Unit III will consist of two compulsory questions, in which question no. 7 will be based on notation and question no. 8 will be based on objective type questions.**
   Objective type will consist of ten short answer type questions covering entire syllabus uniformly. Candidates are required to attempt nine questions. All questions carry equal marks.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	30 marks
(ii)	Harmonium	:	05 marks
(iii)	Tabla	:	05 marks
(iv)	Padhant on Hand	:	05 marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

(a) Origin & Evolution of tabla.

(b) Detail study of ten Pranas of Tabla.

(c) Write notation in Dugun, Tigun & Chaugun of the following talas :- Teental, Ektal, Jhaptal & Sooltal.

(d) Playing technique of Delhi, Ajarada, Lucknow, Farrukhabad, Punjab and Banaras Gharana.

UNIT-II

(a) Knowledge of Karnataka taal system.

(b) Comparative study of Ultari & Dakshni Bhartiya Tala System.

(c) Ability to write V.D. Paluskar tal notation system of the following Taalas:-
Teental, Ektal, Jhaptal, Sooltal.

(d) Life Sketch & Contribution of the following:-
(i) Amir Hussain Khan
(ii) Bhai Bahadur Singh

UNIT-III

(a) Ability to write in notation of Gat, Chakradar, Rela & Laggi in following Taalas:-
Roopak, Tivra, Ada-Chartaal

(b) Nine objective type question (covering entire syllabus)

Paper-B : PRACTICAL

(a) Proper Badhat of the following Talas on Tabla: Rupak, Tivra, Ada-chartaal.

(b) Improvisation of laggi in Dadra

(c) Rupak- Peshkar, Two Palatas, One Kayada and Two Paltas, One Mohra.

(d) Teental – Two Rela with Two Paltas, Two Charkradaar Paran, One Charkrdaar Tukra

(e) Practical Knowledge of Playing above taalas with vocal & instrumental music performance

(f) Ability to play Nagma on Harmonium in Rupak

(g) Tuning of Tabla.

Note:- It is understood that candidate must have knowledge of tala of Semester 3rd also.

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-1	:	G.C. Srivastava

Ten Books recommended other than already recommended

Aakrosh By : G.C. Srivastava

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INDIAN CLASSICAL DANCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-2018

SEMESTER-III

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Kasak-Masak, Bharramri, Chari, Astooti
2. Present status of Kathak Dance.
3. Survey of essential characteristics of Manipuri Dance.

Unit-II

1 . Life Sketch of Pt. Shambhu Maharaj
2. Importance of Gayan and Vadan in Kathak Dance
3. Guru Shishya Prampra

Unit-III

1. Comparision of Classical and Folk Dance.
2. Folk Dance of Himachal.
3. Brief. Study of Rasa.

Unit-IV

1. Theka and Bol Tatkar in Ekgun,Dugun and Chaugun layakaries of Ada Chautal, Ektaal and Teental
2. Notation of Salami, Amad,Tora and Tihai in Ada Chautaal.
3. Notation of Thaat, Amad, Tora and Paran in Teentaal.
4. Write Nagma in Teental and Adachautaal.
5. Theka and Tatkar of Ektaal in Ekgun, Dugun and Chougun layakaries.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

I. Ada Chautal:

1.	Theka and Tatkar with Ekgun, Dugun and Chaugun Layakaries.		
2.	Salami	:	1
3.	Tora	:	2
4.	Amad	:	1
5.	Nagma	:	1
6.	Tihai	:	1

II. Teentaal

1.	Tatkar with Ekgun, Dugun and Chaugun Layakaries		
2.	Thaat	:	1
3.	Amad	:	1
4.	Tora	:	2
5.	Paran	:	2
6.	Nagma	:	1
7.	Ektaal:		
8.	Theka		
9.	Tatkar		

III. One Gat of Ghunghat

IV. Padhant of above mentioned material on hand in teen taal and Ada chautaal

V. Ability of play Nagma in teentaal

VI. Theka of Ektaal in Ekgun Layakari on hand

VII. Practical Demonstration of Gidha.

INDIAN CLASSICAL DANCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

General Instructions:

1. In case of private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Gati, Paran, Tisrajali Paran, Chatusrajati Paran, Premlu.
2. Brief knowledge of Kathakali.
3. Importance of Ghungroo in Kathak Dance

Unit-II

1. Gharanas of Kathak Dance and their comparison
2. Merits and demerits of Kathak Dance
3. Contribution of Pt. Rajender Gangani ji in the field of Kathak Dance

Unit-III

1. Knowledge of thumri
2. Knowledge of Chhau Nritya.
3. Knowledge of different Instruments used in Kathak Dance.

Unit-IV

1. Notation of Theka and Bol-Tatkar in Ekgun,Dugun and chaugun layakaries in Ada chautaal, Teentaal and Ektaal.
2. Notation of Chakardar Tora Chakardar paran, Kavit, Tihai and Nagma in Teentaal.
3. Write Tihai, Thaat, Paran, Chakardar Paran, Kavit and Nagma.
4. Theka of Ektaal in Ekgun, Dugun and Chaugun layakaries with Tihai, Tora and Amad.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

I. Adachautal

1. Tatkar with Ekgun, Dwigun and Chaugun Layakari
2. Paran : 1
3. Chakardary Paran : 1
4. Thaat : 1
5. Tihai : 1
6. Kavit : 1

II. Teentaal

1. Tatkar with Ekgun, Dugun, Chaugun and Athgun layakaries.
2. Kavit : 1
3. Chakardar Tora : 1
4. Chakardar Paran : 1
5. Tihai : 1
6. Nagma : 1
7. Ektaal
8. Amad : 1
9. Tora : 1
10. Tihai : 1

III. One Gat Nikas of Mataki
IV. Padhant of above mentioned material in teen taal and Ada Chautaal on hand
V. Ability to play Nagma in Ada Chautaal
VI. Theka of Ekgun and Dwigun Layakaries of above mentioned taals.
VII. Practical Demonstration of a Bhangra steps.

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FINE ARTS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper A : Theory (History of Art) **Max. Marks : 54**

Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions. Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Western Indian Minitaure Painting -- Decorative Designs and Paintings of the 1439 Kalpasutra Manuscript.
- Pre Mughal Paingting -- Chaurapanchashika and Nimat Nama Manuscript Paintings

Unit-II : History of Indian Sculpture

- Gandhara –Fasting Buddha and Mahaparinirvana of Buddha
- Mathura –Portraits of the Kushana Kings.
- Sarnath –Seated Buddha.
- Sultanganj –Bronze Buddha.

Unit-III : History of Western Art

- Early Renaissance : Masaccio-Expulsion; Holy Trinity.
- High Renaissance: Leonardo Da Vinci – Last Supper; Michelangelo—Creation of Adam from the Sistine ceiling; Pieta.
- Northern Renaissance : Durer – Knight, Death and the Devil.

Unit-IV : Definition of Key Terms and General Concepts

- Composition – Volume, Texture, Space, Unity, Harmony, Rhythm, Proportion.
- Six Limbs of Indian Painting.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

		Max. Marks	*Max. Time*
1.	Landscape Painting (on the spot)	30	5 hours
2.	Life Sketching	30	5 hours
3.	Poster & Book Cover Design or Clay Modelling	30	5 hours
		Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

FINE ARTS

SEMESTER-IV

Paper A : Theory (History of Art) **Max. Marks : 54**
Time : 3 Hours

Objectives :
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus. Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions.
   Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Mughal Paintings of Hamza-Nama ; South Kensington Akbar Nama ; Jahangiri Portraits and illustrations of birds and animals.
- Deccani Paintings –Tarif-i-Hussain-Shahi from Ahmednagar ; Najam-ul-Ulum from Bijapur.

Unit-II : History of Indian Sculpture

- Deogarh –Vishnu Anantashayana.
- Ellora—Ravana Shaking Mount Kailasha.
- Mahabalipuram –Descent of Ganges (Kiratarjuniyam panel).

Unit-III : History of Western Art

- Baroque : Rubens –Garden of Love.
- Neo-Classicism and Romanticism : David –The Death of Socrates; Constable-The Haywain.
- Realism : Courbet –Artist's Studio.

Unit-IV : Definition of Key Terms and General Concepts

- Art and Craft ; Design ; Mosaic ; Tribal Art ; Folk Art ; Piece-mould ; Waste-mould.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

		Max. Marks	*Max. Time*
1.	Landscape Painting (on the spot)	30	5 hours
2.	Life Sketching	30	5 hours
3.	Poster & Book Cover Design or Clay Modelling	30	5 hours
		Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

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HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF INDIAN PAINTING (from ca. 9th century to ca. 1800 A.D.) AND SCULPTURE (from ca. 4th century A.D. to ca. 6th century A.D.)

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I

Development of Miniature Painting :

(a) Eastern Indian.

(b) Western Indian.

Unit-II

Painting under the Mughals :

(a) Akbar.

(b) Jahangir.

(c) Shahjahan.

Unit-III

Indian Miniature Painting :

(a) Rajasthani Schools—Mewar, Bundi, Kishangarh.

(b) Pahari Schools—Basohli, Guler, Kangra.

Unit-IV

Indian Sculpture in the Classical Phase :

Sculpture under the Guptas – Mathura, Sarnath, Deogarh, Ajanta.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : *The History and Culture of Indian People, Vols. I, II and III* (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Goswamy, B.N. & E. Fischer : *Pahari Masters : Court Painters of Northern India,* Museum Reitberg, Zurich Switzerland, 1992.
4. Khandalvala, Karl : *Pahari Miniature Painting,* The New Book Co. Pvt. Ltd., Bombay, 1958.
5. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
6. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
7. Barrett, D. and Gray, B. : *Painting of India,* The World Publishing Co., Ohio, 1963.
8. Brown, Percy : *Indian Painting under the Mughals,* Cosmo Publications, New Delhi, 1981.
9. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-IV

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF EUROPEAN PAINTING AND SCULPTURE (from 1300 A.D. to ca. 1850 A.D.) and THEORY AND PRINCIPLES OF ART APPRECIATION

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of European Painting and Sculpture

(a) Early Renaissance–Masaccio, Donatello.

(b) High Renaissance–Lenoardo Da Vinci, Michelangelo, Raphael, Titian.

Unit-II: Baroque Period

Caravaggio, Rubens, Rembrandt, Bernini, Claude Lorrain.

Unit-III:

(a) Neo-Classicism and Romanticism–David, Ingres, John Constable, W. Turner.

(b) Realism–Courbet.

Unit-IV : Theory and Principles of Art Appreciation

(a) Definition of the term Miniature Painting

(b) Six limbs of Indian Painting (Shadanga) and their manifestations in actual works.

(c) Indian concept of primary colours and their symbolic meaning.

(d) Indian theory of Rasa, Bhava and Beauty.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
2. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
3. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.
4. Turner, Jane (ed.) : *The Dictionary of Art,* Macmillan Publishers Limited, New York, 1996.
5. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
6. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
7. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
8. Murray, Peter and Linda Murray : *A Dictionary of Art & Artists,* Penguin Reference Book, Great Britain, 1959.
9. Rowland Benjamin (Jr.) : *Art in East and West,* Beacon Press, Toronto, 1964.
10. Ray, Niharanjan : *An Approach to Indian Art,* Publication Bureau, P.U., Chandigarh, 1974.
11. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper-III : HISTORY AND CULTURE OF INDIA FROM 320 A.D. TO 650 A.D.

Objectives :

The main objective of this paper is to make students do a detailed study of the political history and cultural development starting from the Gupta period till the death of Harsha.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :
   (a) Extent of Chandragupta II's empire.
   (b) Extent of Harsha's empire.
   (c) Distribution of monuments of the Gupta-Vakataka period.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper-setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

UNIT-I

1. (a) Political condition of Northern India on the eve of the rise of the Guptas.
   (b) Foundation of the Gupta Empire.

2. The Imperial Gupta rulers.

UNIT-II

1. Decline of the Gupta Empire.
2. The Gupta administration.
3. Cultural and Economic achievements during the Gupta period.

UNIT-III

1. The Vakatakas of the Deccan.
2. The Huna Invasions and their impact.

UNIT-IV

1. The Aulikaras of Daspura, the Maukharis and the Later Guptas, Pallavas & Chalukyas of Badami, Vatapi.
2. The Pushyabhutis of Thanesar : Political and Cultural survey.

Pedagogy of the Course Work :
The students are expected to have an idea of the original sources for the reconstruction of the history of the period. Maps and transparencies should be put to use for better understanding by the students.

Essential Readings :

1. Agrawal, Ashvini : *Rise & Fall of the Imperial Guptas,* Motilal Banarsidass, Delhi, 1989.
2. Altekar, A.S. & Majumdar, R.C. : *The Vakataka-Gupta Age,* rpt., Motilal Banarsidass, Delhi, 1967.
3. Majumdar, R.C. & Dasgupta, K.K. (Eds.) : *The Comprehensive History of India, Vol. III,* Pt. 1, People Publishing House, Delhi 1981, (Chapters Dealing with the Gupta and the Post Gupta History).
4. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
5. Mookerji, R.K. : *The Gupta Empire,* Motilal Banarsidass, Delhi, 1989.
6. Tripathi, R.S. : *History of Ancient India,* rpt., Delhi, 1977.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

Paper-IV : HISTORY AND CULTURE OF INDIA FROM 650 A.D. TO 1200 A.D.

Objectives :

The primary objective of this paper is to acquaint the students about the political development in India after the death of Harsha. A detailed study of the various dynasties ruling in the different parts of our country will be made.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of Pratihara Empire.

   (b) Distribution of Temples—Lingaraja, Konark, Jagannath, Kandariya Mahadev, Parsvanath, Lakshman, Osian, Mahabalipuram.

   (c) Important Centres of Education—Nalanda, Ujjain, Pushpagiri, Nagarjunakonda.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper- setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

UNIT-I :

1. Pratiharas
2. Palas

UNIT-II :

1. Paramaras
2. Chahamanas

UNIT-III :

1. Gahadavalas
2. Chandellas

UNIT-IV :

1. Rashtrakutas
2. Cholas.

Pedagogy of the Course Work :

The students should be given an outline of the original sources that help to reconstruct the political history of the dynasties and the kings. Slides and transparencies should be used in the class room lectures.

Essential Readings :

1. Altekar, A.S. : *Rastrakutas and Their Times,* 2nd ed. Oriental Book Agency, Poona, 1967.
2. Bhatia, Pratipal : *The Paramaras,* Munshiram Manoharlal,New Delhi, 1970.
3. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
4. Majumdar, R.C. : *History & Culture of Indian People,* Vol. IV, *The Age of Imperial Kanauj,* Bhartiya Vidya Bhawan, Bombay, 1955 (Relevant Chapters) Vol. V, *The Struggle for Empire,* Bombay 1957 (Relevant Chapters).
5. Puri, B.N. : *The History of the Gurjara-Pratiharas, Manohar,* Delhi, 1986.
6. Ray, H.C. : *Dynastic History of India,* 2 Vols, Calcutta 1931,1936.
7. Sastri, K.A.N. : *A History of South India, 4th ed.* Oxford University Press, Madras, 1976.
8. Tripathi, R.S. : *History of Kanauj,* Motilal Banarsidass, Delhi, 1964.

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DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE IN INDIA

M. Marks : 70
Time : 3 Hrs.

Objective :

This paper deals with the salient features of Indian warfare with emphasis on Military Organization, Battle techniques and Leadership.

SECTION-I

1. Battle of Hydaspes and Alexander's Art of War.
2. Kautilya's Philosophy of War.

SECTION-II

3. Military Organizations and Battle Techniques of Rajputs and Turks with particular reference to Battle of Tarrain, 1192 A.D.
4. Military Organizations and Battle Techniques of Mughals and Afghans with particular reference to First Battle of Panipat, 1526 A.D.

SECTION-III

5. Battle techniques of Southern Muslim Sultans with particular reference to Battle of Talikota, 1565 A.D.
6. Military Organization and Battle Techniques of Marathas under Shivaji.

SECTION-IV

1. Military organization and Battle Techniques of Sikh Army under Maharaja Ranjit Singh.
2. Warfare under East India Company with particular reference to Battle of Assaye 1803 A.D. and Chilianwala 1849 A.D.
3. Indian Armed Forces 1858 to 1947: General Evolution and Development (A Broad Perspective).

Books Recommended :

1. Bajwa, F.S., The Military Systems of Sikhs, Motilal Banarsidas Delhi, 1964.
2. Dass, S.T., An Introduction to the Art of War, Sagar Publications, Delhi, 1970.
3. Erskin, Memories of Babur, Biblio Bazaar, 2012.
4. JFC, Fuller, Generalship of Alexander, The Great, Eyre and Spottiswoode, 1958.
5. Kangle, K.P., Kautilya's Arthshastra, Motilal Banarsidas Publishers Pvt. Ltd., Delhi, 1986.
6. Majumdar, B.K., Military Systems in Ancient India, Firma K.L. Mukopadhayay Publishers, Delhi, 1960.
7. Mallesan, Decisive Battle of India, Read Books Design, 2010.
8. Nath, Rajendra, Military Leadership in India, Vedic Period to Indo-Pak Wars, Lancers Books, California, 1990.
9. Sarkar, J.N., Military History of India, Orient Longmans, Virginia, 1960.
10. Sen., S.N., Military System of the Marathas, Orient Longmans, Michigan, 1958.
11. Sharma, Gautam, Indian Army through the Ages, Allied Publishers, University of Michigan, 1966.
12. Singh, Gurcharan, Battles of Panipat, Army Educational Stores, 1966.
13. William, Irvin, Army of the Indian Mughals, Low Price Publishers, 1994.

Paper: **PRACTICAL**

Max. Marks : 20
Time: 1 hrs

Note:

1. There will be of 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A Practical Test

Marks : 10

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Bearing: Definition, Types and Inter conversion of Bearing in detail.
2. Liquid Prismatic Compass: Features and Funcitons of its various parts.
3. Determination of Individual Compass Error

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva Voce Marks : 5

DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question form each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students.. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE

M. Marks : 70
Time : 3 Hours

SECTION-I

1. Military Organizations and Battle techniques of Macedonians and Persians with particular reference to Battles of Arbella, 331 B.C.
2. Military Organization and Battle Technique of Romans and Carthagenians with particular reference to the Battles of Cannae, 216 B.C.
3. Military Organizations and Battle Techniques of Barbarians with particular reference to Battle of Adrianople, 378 A.D.

SECTION-II

4. Military Organizations and Battle Techniques of the English and French with reference to the Battle of Hastings, 1066 A.D.
5. The Mongol Art of War under Changez Khan and his successors.

SECTION-III

6. Industrial revolution and its Impact on Weapons, Communications and Tactics.
7. Elements and Principles of Napoleonic Warfare.

SECTION-IV

8. Naval Warfare with particular reference to the Battle of Trafalgar, 1805.
9. American Civil War (1861-65) : Causes and Events.

Books Recommended :

1. Barrie and Rackett, The Ancient Art of War Vols. I & II., Barrie and Rockliff, 1957.
2. Bullock, H., Military History of the Western World,Vol. 1, Da Capo Press, 1978.
3. Fuller, JFC, Armament and History, Da Capo Press, New York, 1998.
4. Fuller, JFC, Conduct of War, Eyre & Spottiswoode (Publisher) Ltd., Great Britain, 1962.
5. Fuller, JFC, Machine Warfare, the Infantry Journal, University of Michigan, 1943.
6. Fuller, JFC, Military History of the Western World, Da Capo Press, New York, 1987.
7. Montgomery, F.M., A History of Warfare, World Publication Co. The University of Michigan, 1968.
8. Montress, L., War through the Ages, Harper & Brothers, Indiana University, New York, 1987.

Paper : PRACTICAL

Max. Marks : 20

Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical.For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A : Practical Test

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Setting of Map: With Compass and without Compass.
2. Marching by Compass: To set the Compas in a particular direction for Night March.
3. Finding position on the Maps: Determine One's and Enemy's position on the Map by Resection and Intersection method.

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva-Voce Marks : 5

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HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) One question from Unit IV shall be set on the map.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (iii) in the question paper.

Explanation :

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

Map	:	10 marks
Explanatory Note	:	08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper-setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF INDIA, 1750-1964 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : To introduce the students to the broad developments in the history of India in Modern times.

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Foundation of British Rule : Circumstances leading to the battles of Plassey and Buxar and their significance; Reforms of Warren Hastings.
2. Administrative Reforms : Reforms of Cornwallis, William Bentinck and Dalhousie.
3. The Uprising of 1857 : Political, socio-religious, economic and immediate causes; failure; results.

Unit-II

4. Economic Changes : British Agrarian policies and commercialization of agriculture; rural indebtedness; Growth of modern industry; theory of economic drain.
5. Socio-Religious Reform Movements : Brahmo Samaj; Aligarh Movement; Arya Samaj; Ramakrishna Mission.
6. Depressed Classes Movement : Contribution of Jyotiba Phule, Dr.B.R. Ambedkar and Mahatma Gandhi.

Unit-III

7. Growth of Political Consciousness : Foundation and growth of the Indian National Congress from 1885-1905; Growth of Nationalism 1905-1919.
8. Indian National Movement : Circumstances leading to the non-cooperation movement 1920-1922; the Civil Disobedience Movement.
9. Rise of Communal Politics : Factors responsible for the growth of communal politics; Separate electorate; Muslim League and Pakistan Resolution.

Unit-IV

10. Towards Partition and Independence : Quit India Movement; British proposals for independence; Indian Independence Act of 1947.
11. Significant Developments after Independence,1947- 64 : Making of the constitution; integration of princely states; the reorganisation of states.
12. Map:
    (a) Important Historical Places – Delhi, Calcutta, Madras, Bombay, Goa, Surat, Plassey, Buxar, Gwalior, Jhansi, Hyderabad, Sabarmati, Amritsar, Lucknow, Lahore and Aligarh.
    (b) Extent of the British Empire in 1856.
    (c) Republic of India in 1950.

Books Recommended :

1. Abdul Kalam Azad, *Azadi Ki Kahani* (Hindi Medium), Delhi : Orient Black Swan, 2007.
2. Bandyopadhyay, Sekhar, *From Plassey to Partition : A History of Modern India,* Delhi : Orient Black Swan, 2007 (Also available in Hindi Medium).
3. Chandra, Bipan, *Communalism in Modern India,* Delhi : Vikas Publishers, 1987.
4. Chandra, Bipan *et al., India's Struggle for Independence, 1875-1947,* Delhi : Viking/Penguin Books,1989.
5. Chandra, Bipan, *Aitihasik Sangharsh – EPIC Struggle* (Hindi Medium), Delhi : Orient Black Swan, 2007.
6. Nanda, B.R., *Making of a Nation : India's Road to Independence,* New Delhi : Harper-Collins, 1998.
7. Gopal, S, (Pbi)

HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-2018

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(i) One question from Unit IV shall be set on the map.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Explanation:

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under :
Map : 10 marks
Explanatory Note : 08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF THE PUNJAB, 1469-1849 A.D.

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objectives : To introduce the students to the broad developments in the history of the Punjab from the mid 15^{th} to the mid 19^{th} century i.e. the medieval period

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Teachings of Guru Nanak, Development of Sikh Institutions : langar, manji, masand, gurdwara
2. Compilation of the Adi Granth; causes and significance of the martyrdom of Guru Arjan Dev.
3. Guru Hargobind's new policy and its justification; martyrdom of Guru Tegh Bahadur and its significance.

Unit-II

4. Circumstances leading to the creation of Khalsa and its significance; the new injunctions and symbols of the Khalsa.
5. Establishment of independent rule under Banda Bahadur; socio-economic transformation.
6. Role of Rakhi, Gurmata and Dal Khalsa in 18th century polity; emergence of autonomous chiefs.

Unit-III

7. Unification under Ranjit Singh; expansion of the Kingdom of Lahore
8. Civil & Provincial administration;Land Revenue system under Maharaja Ranjit Singh
9. Social Structure in the early 19th century Punjab

Unit-IV

10. Anglo-Sikh relations upto 1839; political developments 1839-1849.
11. First Anglo-Sikh war; second Anglo-Sikh war and the annexation of the Punjab.
12. Map :
    (a) Important Historical Places – Amritsar, Goindwal, Anandpur Sahib, Chamkaur Sahib, Kiratpur, Kartarpur, Paonta Sahib, Sirhind, Muktsar, Tarn Taran, Lahore, Machhiwara, Ropar, Multan and Peshawar.
    (b) Battles of Banda Bahadur. (location)
    (c) Kingdom of Lahore(Boundaries)

Note : In case, a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

Books Recommended :

1. Banerjee, I.B., *Evolution of the Khalsa,* 2 Vols., Calcutta : A Mukherjee & Co., 1979 (2nd edn.).
2. Banga, Indu (ed.), *Five Punjabi Centuries : Polity, Economy, Society and Culture c. 1500-1900,* New Delhi : Manohar, 1997.
3. Fauja Singh, *State and Society under Maharaja Ranjit Singh,*Master Publishers, Delhi.
4. Grewal, J.S., *The Sikhs of the Punjab : The New Cambridge History of India,* New Delhi : Cambridge University Press, 1999 (2nd edn.).
5. Khushwant singh*, A History of the Sikhs* Volume I and II
6. McLeod, W.H., *Sikhs and Sikhism,* New Delhi : Oxford University Press, 2000.
7. Sinha, N.K., *Rise of the Sikh Power,* Calcutta : A Mukherjee & Co., 1973
8. Teja Singh and Ganda Singh, *A Short History of the Sikhs,1469-1765* ,Vol.I, Patiala : Punjabi University, 1983.

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POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

INDIAN GOVERNMENT AND POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives: This paper provides students with a basic knowledge of the fundamental elements and institutions of government, politics and processes in India at both the centre and state levels.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Basic Features of Indian Constitution.
2. Preamble and its perceptions.
3. Indian Federalism- Meaning & its features.
4. Centre State Relations (Legislative, Administrative & Financial)

Unit-II

1. Fundamental Rights (Art14-Art 32)- Meaning, Explanation, Criticism & Importance.
2. Fundamental Duties- Meaning, Explanation, Evaluation (Criticism & Importance).
3. Directive Principals of State Policy (Art 36- Art 51)- Liberal, Socialist, International, Gandhian- Meaning, Explanation, Sanctions, Criticism & Importance

Unit-III

1. President : Election, powers, position and changing role.
2. Parliament : Composition, powers and role.
3. Cabinet –
   a) Parliamentary features
   b) Prime Minister : Election, powers, position and changing role.
4. Supreme Court : Composition, powers & Judicial Review.

Unit-IV

1. Governor : Appointment, powers and role.
2. State Legislature : Composition, powers and role of Legislative Assembly/Vidhan Sabha.
3. Council of Ministers and Chief Minister : Election, powers, position and role.
4. High Court : Composition, powers and its role.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.
20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.
21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.
22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.
23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.
24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.
25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.
26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

INDIAN POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours.

Objectives :

The aim of this paper is to enrich the student's understanding of the working of the Indian political system with reference to political parties, the party system, elections and voting behaviour. Units III and IV of the paper examine in detail certain key issues and debates in contemporary India.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Nature of party system in India : A critical evaluation.
2. National Political Parties [Indian National Congress, BJP, CPI, CPI(M), BSP] : Ideology, Policy and Programmes
3. Regional Political Parties (SAD, DMK, AIDMK) : Ideology, Policy and Programmes.

Unit-II

1. The Election Commission : A critical evaluation and electoral reforms in India.
2. Pressure Groups in Indian Politics- Types & Role
3. Voting Behaviour in India – its Determinants.

Unit-III

1. Emerging Trends in Indian Politics.
2. Role of Caste, Religion in Indian Politics.
3. Regionalism in Indian Politics-its causes & impact.

Unit-IV

1. Basic principles and determinants of Indian Foreign Policy.
2. Non-alignment : Meaning and Nature.
3. Non-alignment Movement- its Relevance.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.

20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.

21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.

22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.

23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.

24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.

25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.

26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

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ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper : PUBLIC FINANCE AND INTERNATIONAL ECONOMICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective : The primary course objective is to introduce the students to the basics of public finance and international trade. The first two units aim to introduce students to the primary functions of government to generate resources from the people and to spend money improving their lives. The last two units are concerned with basic theories of international trade and commercial policies, balance of payments, determination of exchange rates and role of international financial institutions.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Introduction to Public Finance : Nature, Scope and its Importance.

Public Expenditure: Canons, Principle of Maximum Social Advantage, Wagner's Law, Wiseman Peacock Hypothesis. Causes for the Recent Growth of Public Expenditure in India.

Taxation : Classification and Canons, Characteristics of a Good Tax System.

Unit-II

Incidence and Impact of Taxation : Demand and Supply Theory.
Taxable Capacity : Absolute and Relative Capacity, Determinants of Taxable Capacity.
Public Debt : Its types and Role, Burden of debt and Methods of its Redemption.
Deficit Financing : Objectives and Limitations.

Unit-III

Pure Theory of International Trade : Classical and Heckscher - Ohlin Theories, The Theory of Reciprocal Demand.

Terms of Trade : Concept and Types

Commercial Policy : Free Trade Vs. Protection, Regional Blocks: ASEAN, SAFTA Problems and prospects. Impact of W.T.O. on Less Developed Countries.

Unit-IV

Balance of Payments: Meaning, Concept and Components of Balance of Payments. Disequilibrium in the Balance of Payments : Causes and Measures to corret the disequilibrium

Exchange Rate : Meaning and its Determination, Fixed Vs. Flexible Rate of Exchange and Purchasing Power Parity Theory.

IMF and IBRD : Objectives, Working and Achievements.

Recommended Readings :

1. Musgrave, A.R. & Musgrave, P.B. (2011) : *Public Finance in Theory and Practice,* McGraw Hills, International Students' Edition.
2. Kindleberger, C.P. (1987) : *International Economics,* Richard Irwin Homewood, Illiois, Indian Edition
3. Sharma, O.P. (latest edition) : *Sarvjnik Vit,* Punjabi University, Patiala.
4. Ghuman, Ranjit Singh (latest edition) : *Antar-Rashtriya Arth Vigyan,* Punjabi University, Patiala.
5. Soderston B.O. (1994) : *International Economics,* McMillan Press Ltd.

Supplementary Reading :

1. Bhatia, H.L. (2008) : *Public Finance*, Vikas Publishing House Pvt. Ltd.
2. Dalton, H. (1978) : *Principles of Public Finance,* Routledge and Kegan Paul, London.
3. Tyagi, B.P. (1994) : *Public Finance,* Jai Prakash Math & Co, Meerut.

ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

Semester-IV

Paper : QUANTITATIVE METHODS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective :

The objective of the course is to train the students in the use of basic mathematical and statistical tools in analyzing various economic phenomenons. It deals with the design of how data is presented, the analysis of the data, and the drawing of conclusions from the data. The course aims to improve decision-making accuracy of the students and enabling them to test new ideas.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

1. There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 09 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.
2. Use of simple calculator is allowed.
3. The paper setter may in general stick to the distribution of marks of 1/3 to theory and 2/3 to numericals.

Unit-I

Elementary Idea of Sets and Functions : Simple and Partial Derivatives, Differentiation of Simple functions – Polynomial (x) and Exponential functions. Maxima and Minima of functions of one variable only. Their Applications of Micro and Macro Economics.

Unit-II

Matrices : Definition and Types, Operations (Sum, Difference, Product and Transpose), Adjoint and Inverse of a matrix (upto $3 \cdot 3$), Solution of Equations (upto 3) by Matrix Methods and Crammer's rule.
Measures of Central Tendency : Mean, Median, Partition Values, Mode, Measures of Dispersion, Skewness.

Unit-III

Correlation Analysis—Karl Pearson's (except grouped data) and Spearman's formula, Simple Regression Analysis.
Interpolation – Binomial, Expansion, Newton's (Advancing Difference Method) and Lagrange's Method.

Unit-IV

Index Numbers : Concepts, Problems and Importance, Simple Index Number, Lespeyre's and Fisher's Index Numbers only (among weighted index numbers), Reversibility Tests.
Time Series Analysis : Components of Time Series, Determination of Trend, Least Square and Moving Average Method.

Books Recommended

1. Archibald, G. C. and Lipsey, R. G. (1977) : *An Introduction to a Mathematical Treatment of Economics,* English Language Book Society, Weidenfeld and Nicolson.

2. Gupta, S.C. (1992) : Fundamentals of Statics, Mumbai, Himalaya Publishing House.

3. Kandoi, Balwant (2011) : Mathematics for Business and Economics with Applications, in 2 Vol., Himalaya, Mumbai.

4. Sanchati, D. C. & Kapoor, V. K. (1987) : *Business Mathematics,* Sultan Chand & Sons, New Delhi.

5. Yamane, Taro (1972) : Economists, Prentice Hall, New Delhi.

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

SOCIAL STRUCTURE AND SOCIAL CHANGE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper basically introduces students both to conceptual and some theoretical understanding of social structure and social change. Students are introduced to characteristics and elements of social structure and to understand the meaning, process and factors of social change.

Course Content

Unit-I

Social Structure : Meaning, Characteristics, Elements – Status, Role, Power and Prestige. Norms and Values.

Unit-II

Social Change : Meaning and Features.
Types of Social Change : Evolution (Comte), Revolution (Marx), Development – Changing Connotations.

Unit-III

Factors of Social Change: Economic, Demographic, Education, Legislative, Scientific and Technological

Unit-IV

Processes of Social Change : Sanskritization, Westernization, Modernization and Secularization, Globalization and its impact on Society.

Essential Readings :

1.	Bierstedt, Robert (1970)	:	*Social Order,* New York : McGraw Hill.
2.	Haferkand, H. and Smelser, N.J. (1992)	:	*Social Change and Modernity,* Berkeley : University of California Press.
3.	Macionis, John, J. (2005)	:	*Society : The Basics,* New York : Prentice Hall.
4.	Madhurima (2016)	:	*Readings in Sociology – Semester-II,* Jalandhar : New Academic Publishing House (All Mediums).
5.	Moore, Wilbert (2004)	:	*Social Change*, New Delhi, Prentice Hall.
6.	Singh, Yogendra (1993)	:	*Social Change in India,* New Delhi : Haranand Publications.
7.	Srinivas, M.N. (1963)	:	*Social Change in Modern India,* Berkeley : University of California Press.

Further Readings :

1.	Radcliffe-Brown, A.R. (1979)	:	*Structure and Function in Primitive Society*, London : Routledge and Kegan paul.
2.	Haralambos, M. (1998)	:	*Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
3.	Talcott, Parsons (1959)	:	*Social System*, London : Tavistock Publications.
4.	Singh, Yogendra (1996)	:	"Sociology and the Emerging Challenge of Change", *Sociological Bulletin,* Volume 45, No. 1, March, Page 1-14.
5.	Singer, M. (1972)	:	*When a Great Tradition Modernizes : An Anthropological Approach to Indian Civilization,* New York : Praeger Publishers.
6.	Yogendra Singh, (2008)	:	Social Change in India, New Delhi, Har Anand Publications
7.	Srinivas, M.N., (2011)	:	Social Change in Modern India, Hyderabad, Orient Black Swan
8.	Kuppu (Swamy, B, 2001)	:	Social Change in India, Delhi, Konark

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER IV

SOCIAL INSTITUTIONS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective:

In this paper, social institution as a concept is introduced to the students. Study of various institutions which are foundations of human society, will help students to look at society in an objective and analytical way.

Course Work

Unit-I

Institutions – Meaning, Features; Normative and Relational aspects of Institutions.
Types – Social, Political, Economic and Cultural.
Difference of Institutions with Society Community and Association

Unit-II

Social Institutions :
Marriage –Types : Monogamy and Polygamy; Rules of Mate Selection, Contemporary Trends.
Family – Meaning, Types, Structure, Function; Development Cycle and Changing Trends.
Kinship – Meaning, Significance and a Brief Understanding of Incest, Consanguinity, Affinity, Clan, Lineage, Contemporary Trends.

Unit-III

Political Institutions – State, Government and Political Parties – Features and Functions.
Economic Institutions – Features and Functions, Property, Division of Labour (Emile Durkheim).

Unit-IV

Cultural Institutions – Religion : Meaning elements, Types, Functions (Emile Durkheim & Max Weber),Dysfunctions

Essential Readings :

1. Christensen, H.(ed.) (1964) : *Handbook of Marriage & Family,* New Delhi: Allyn and Bacon.
2. Fox, Robin (1967) : *Kinship and Marriage : An Anthropological Perspective; Baltimore : Penguin Books.*
3. Giddens, Anthony (2013) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Johnson, Harry, M. (1998) : *Sociology : A Systematic Introduction*, Delhi : Allied Publishers.
6. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
7. Giddens, Anthony & Sutton W. Philip (2010) : *Sociology : Introductory Readings,* U.K.: Polity Press.
8. Schacfer, Richard, T.(2010) : *Sociology : A Brief Introductions,* N.Y.: Tata McGraw Hill.

Further Readings :

1. K.M. Kapadia (1996) : *Marriage & Family in India, Delhi, Oxford University Press*
2. Bronislaw Malinowski (1944) : *A Scientific Theory of Culture & other Essay (ed.) Huntington Cairns, C Hapel Hall,* The University of North Caroliva Press.
3. Particia Uberoi (1997) : *Family, Kinship & Marriage in India, New Delhi, Oxford University Press*
4. Max Weber (1968) : *The Protestant Ethic and the Spirit of Capitalism-R.H. Tawney (ed.) Unvwin University, Book London.*
5. Radcliff Brown, A.R. (1979) : *Structure and Functions in Primitive Society, London: Routledge and Kegan Paul.*
6. Madan, T.N.(2002) : *Religion in India, Delhi-Oxfored UniversityPress,Atal,yogesh,2012,Sociology,Delhi ;Pearson*
7. Marlom bos & Holborn,(2016) : *Cociology Themes and perspectives,London, Collins*
8. Madan, T.N.,(2001) : *Family and Kinship,New Delhi, Oxford University Press*
9. Froer, Peggy,(2010) : *Religious Divisions and Social Conflict,New Delhi, Esha Beteille*

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PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER – III

PAPER : PERSONNEL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of this paper is to give the student an in-depth understanding of various aspects of public personnel administration particularly recruitment, training and promotion. Contemporary issues like grievance redressal machinery, corruption, morale etc. concerning administration of human resources in government will also be examined.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

For Private/University School of Open Learning (USOL) students who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.
The Paper-Setter must put note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Personnel Administration – Meaning and Significance.
Bureaucracy: Meaning, Characteristics, Demerits and Remedies.
Civil Service: Meaning, Features and Role.
Position and Rank Classification Systems: Significance and Features

Unit-II

Recruitment: Meaning, Methods and Problems.
Recruitment System of Higher Civil Services in India.
UPSC: Composition, Functions and Role.
SPSC: Composition, Functions and Role.

Unit-III

Training – Meaning, Types, Methods, Training of Higher Civil Services in India.
Conduct, Discipline and Ethics in Public Services.
Promotion: Meaning, Significance and Principles.

Unit-IV

Morale, Causes of Low Morale and Measures for Improvement.
Corruption in Administration - Causes and Remedies.
Administrative Tribunals: Meaning, Types, Advantages and Disadvantages.

Essential Readings :

Davar , R.S.(1976). *Personnel Management and Industrial Relations* . NewDelhi : Vikas Publishers.

Goel, S.L.(2008).*Public Personnel Administration* . New Delhi : Sterling Publishers.

Stahl,O.G.(1975).*Public Personnel Administration.* New Delhi : Oxford and IBH Publications.

Tyagi, A.R.(2001).*Public Administration: Principles and Practice* .Delhi: Atma Ram and Sons Publishers.

Further Readings :

Government of India, Administrative Reforms Commission(1967). *Report on Personnel Administration.* New Delhi : Manager of Publications.

Government of India, 2nd Administrative Reforms Commission.(2010) *10th Report :Refurbishing of Personal Administration – Scaling New Heights.* New Delhi : Manager of Publications.

Indian Institute of Public Administration(1970). *Personnel Adminstration*.New Delhi : IIPA.

Paul Pigors and C.A. Myers(1973). *Personnel Administration : A Point of View and Method.*

New York:McGraw Hill.

Sinha , V.M. (1986).*Personnel Administration.* Jaipur : RBSA.

PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

PAPER : FINANCIAL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of financial administration like budgeting, auditing, centre-state financial relations etc. It would also make them aware of: institutions like ministry of finance, union finance commission, parliamentary committees; and concepts like direct taxes, indirect taxes, deficit financing, public debt.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Financial Administration: Meaning and Significance .
Aspects of Public Finance.
Budget: Meaning, Types and Principles.
Budget: Preparation and Enactment.

Unit-II

Union Ministry of Finance: Organisation, Functions and Role.
Centre-State Financial Relations.
Union Finance Commission: Composition and Functions.

Unit-III

Audit: Concept, Objectives and Types.
Comptroller and Auditor General of India(CAGI) : Appointment, Functions and Role.
Concepts: Deficit Financing, Fiscal Deficit, Public Debt and Public Expenditure.

Unit-IV

Legislative Control over Finance.
Public Accounts Committee:Composition, Functions and Role.
Estimates Committee:Composition, Functions and Role.

Essential Readings

Goel,S.L.,(1993).*Financial Management and Administration.* New Delhi: Sterling Publication.

Lall,G.S..*Financial Administration in India* .Delhi: H.P.J.Kapoor, 4th ed.

Mookerjee ,S.S. *Indian Public Finance and Financial Administration* . New Delhi.

S.Sahib and S.Swinder.(2016)*Public Personnel and Financial Administration* Jalandhar: New Academic Publishers Co.

Thavaraj,M.J.K.(1978).*Financial Administration of India* . New Delhi: Sultan Chand Publications.

Further Readings

Government of India, 2nd ARC .14th Report-*Strengthening Financial Management System.*

Government of India,Administrative Reforms Commission.(1967). *Report on Financial Administration*. New Delhi : Manager of Publications.

Government of India,Administrative Reforms Commission. *Report on Financial Accounts and Audit* (1967). New Delhi.

Government of India,Administrative Reforms Commission(1967).*Report on Centre-State Relations*. New Delhi : Manager of Publications.

Mahajan S. and Mahajan,A.(2014). *Financial Administration in India*. Delhi : PHI Learning Private Limited.
Sinha, R.K.(1986). *Centre-State Financial Relations in India: Various Aspects, Irritants, Framework for Action* .New Delhi: Deep & Deep Publications.

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

Outlines of tests, syllabi and courses of reading

SEMESTER-III

Paper : INDIAN ETHICS (Theory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper highlights the ethical philosophies propounded in the different Indian Philosophical Systems. It exposes the students to the main tenets of Buddhism, Sikhism, Gandhism, Gita and Vedic Culture.

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical Philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

1. Salient Features of Indian Ethics with reference to Purusartha : Yuga Dharma and Sanatan Dharma.
2. Varna Vyastha and Ashrama Dharma : A Contemporary Analysis.
3. Concept of Sreyas and Preyas.

Unit-II

4. Buddhist Ethics : Four Noble Truths, Eight Noble Paths, Ahimsa and Karma Bhava Chakra, Sila.
5. Jaina Ethics : Triratnas.
6. Sikh Ethics : Hukum, Nirbhau, Nirvair, Parupkar, Sewa and Sahaj.

Unit-III

7. Gandhi : Ahimsa, Satyagraha and Antyodaya.
8. Gita : Anasakta Karma, Lok Samgraha, Sva-Dharma.

Unit-IV

9. Yoga and Stress Management : Definition of Yoga, Ashtanga Yoga.
10. Yoga : Yama, Niyama, Asana, Pranayama, Pratyahara, Dharna, Dhyan, Samadhi.

Essential Readings :

1. Avtar Singh : Ethics of the Sikhs, Punjabi University, Patiala, 1970.
2. I. C. Sharma : Ethical Philosophies of India, George Allen and Unwin, London, 1965.
3. S. K. Maitra : The Ethics of the Hindus, Asian Publication Services, New Delhi, 1956.
4. Vivekananda : Raj Yoga, Advaita Ashram., 1896.

Suggested Readings :

1. Surama Dasgupta : Development of Moral Philosophy in India, Munshi Ram Manoharlal Pub., New Delhi, 1994.
2. Four chapters on Freedom, Commentary on the Yoga Sutras of Patanjali, Swami Satyananda Saraswati Yoga Publications Trust, Munger, Bihar-Chapter II Section 29 onwards, Chapter III—Sections 1 to 6.

PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER – IV

Paper: WESTERN ETHICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

1. The Nature of Ethics : Virtues and Goodness, its concerns, Relation of Ethics with Aesthetics, Psychology and Religion.
2. The notion of Truth, Beauty & Goodness, Reflective Customary Morality.
3. Object of Moral Judgement : Actions, Intentions, Situations and Character.

Unit-II

4. Virtue Ethics : Aristotle.
5. Categorical Ethics : Kant.
6. Concepts of love, sin and freedom in Christian Tradition.

Unit-III

7. Teleological Ethics :
   - (i) Hedonism
   - (ii) Utilitarianism :
     - (a) Mill
     - (b) Bentham

Unit-IV

8. Moral Rights of Foetus and Female Foeticide.
9. Sexual harassment and Gender Justice.
10. Environmental Ethics : Pollution, Land Degradation and Organic Farming and Global Warming.

Essential Readings :

1.	Aristotle	:	Nicomachean Ethics, Dordrecht : D. Reidel, Penguin Harmondsworth, 2001.
2.	Peter Singer	:	Practical Ethics (Second Edition), Cambridge University Press, 1995.
3.	Ved Parkash Verma	:	Neeti Shastra (in Hindi), Allied Publishers (New Delhi, 1987).
4.	William Lillie	:	An Introduction to Ethics (London, Matheun, 1957).

Suggested Readings :

1.	J.D. Mcbbott	:	An Introduction to Ethics, London : Hutchinson, 1966.
2.	John Hospers	:	Human Conduct : An Introduction to the Problems of Ethics, N.Y., Harcourt, 1961.
3.	Rosaline Hursthome	:	Virtue Ethics, New York, Harcourt, 1961.
4.	W. Frankena	:	Ethics, Englewood Cliffs, Prentice Hall, New Delhi, India, 1994.

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PSYCHOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in experimental psychology. The students would also get an understanding of the Nervous System, Psychophysics, Learning. This course will also give an insight into psychophysics, statistics and cognitive aspects of Psychology.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper: EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

The Nervous System: Structure and functioning of the neuron; division of nervous system – Central Nervous System and Peripheral Nervous System; Structure and functioning of the brain.

Unit II

Sensation

Concept and types; Vision-The Visual Stimulus, Structure and Functioning of the Eye , Theories of Colour Vision; Audition: The Auditory Stimulus,Structure and Functioning of the Ear, Theories of Hearing.

Unit III

Psychophysics

Thresholds; Psychophysical Methods of Limits, Constant stimuli and Average Error.

Unit IV

Learning

Concept, Classical Conditioning, Operant Conditioning, Observational Learning.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Two Point Threshold
2. Muller Lyer Illusion
3. Differential Threshold
4. Method of Paired Comparison
5. Maze Learning
6. Bilateral Transfer of Training

Suggested Readings :

1. Baron, R.A. (2003): Psychology. New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology. Delhi: Pearson.
3. Das, J.P. (1998): The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1998) : Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
6. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
7. Guilford, J.P. and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education. Singapore: McGraw Hill.
8. Kerlinger, F. N. (1964) : Foundations of Behavioural Research. New York: Rinehart and Winston.
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology. Singapore: McGraw Hill.

PSYCHOLOGY

SEMESTER-IV

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in General Psychology. The students would also get an understanding of the principles and theories in different areas like Sensation, Perception and Thinking. The course also introduces the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Memory
Sensory Register; Short-Term and Long -Term Memory; Levels of Processing; Measurement of Memory; Forgetting with special reference to retro-active and pro-active inhibition

Unit II

Perception:Concepts , Types of Perception of Form,Space and Movement
Attention: Nature, Types anf Factors.

Unit III

Thinking :Nature, Tool & Types and Factors
Problem Solving: Nature ,Stages and Factors.
Creativity: Concept; Torrance's Theory of Creativity.

Unit IV

Statistics
Normal Probability Distribution: Properties and Applications: Hypothesis Testing – Type I and Type II Errors; Chi-square Test Application to one – way and Two-way classifications.

Note : The use of non-programmable calculators and statistical tables are allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Division of Attention
2. Span of Attention
3. Comparing Recall and Recognition as Measures of Memory
4. Retroactive Interference
5. Concept Formation.

Suggested Readings:

1. Baron, R.A. (2003): *Psychology,* New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology, Delhi: Pearson.
3. Das , J.P. (1998):The Working Mind: An Introduction to Psychology, New Delhi: Sage.
4. Feldman, R.S. (1998) :Understanding Psychology, New Delhi: Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer And Simons.
6. Guilford, J.P., and Fruchter, B. (1981):Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000) : Introduction to Psychology, New Delhi: Kalyani
8. Kerlinger, F.N. (1964): Foundations of Behavioural Research, New York Holy, Rinehart and Wintson
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987): Introduction to Psychology, Singapore: McGraw Hill

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GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-III

Paper –V: GEOGRAPHY OF INDIA

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

To foster an understanding of the physical and cultural landscape of India and its spatial diversity

Course Content

Unit-I

Introduction: India in the context of South Asia, Asia and the World. (05 lectures)
Physiography: Relief, drainage, climate, vegetation, soils. (15 lectures)

Unit-II

Agriculture: Characteristics and problems of Indian agriculture; irrigation, major crops (rice, wheat, maize, sugarcane, cotton, jute and tea), Food security with special reference to India. (15 lectures)
Natural hazards in India: Flood, Drought and Earthquake. (05 lectures)

Unit III

Population: Distribution and density, Growth, Migration, Urbanization (05 lectures)
Mineral and Power Resources: Iron ore, manganese, mica, copper and gold; Coal, Petroleum, Hydroelectricity and Non- conventional Power resources. (15 lectures)

Unit IV

Industries: Distribution and localization factors of major industries (Iron and Steel, Cotton Textiles, Sugar, Fertilizers, Automobile). (15 lectures)
Trade &Transport: Rail, Road, Airways and Waterways; International Trade (05 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests,(5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance(2%).
6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings:

Essential Reading:

1. Deshpande, C.D. : *India: A Regional Interpretation,* Indian Council of Social Science Research, New Delhi, 1992.
2. Johnson, B.L.C. : *India: Resources and Development,* Arnold Heinemann, London, 1980.
3. Johnson, B.L.C. : *South Asia,* Heinemann, London, 1981.
4. Khullar, D.R. : *India: A Comprehensive Geography,* Kalyani Publishers, New Delhi, 2011.
5. Majid Hussain : *Geography of India*, Tata McGraw-Hill, Delhi, 2013.
6. Spate, O.H.K. and ATA : *India & Pakistan*: *Land, People and Economy,* Methuen, London, Learmonth, 1967.
7. Tiwari, R.C : *Geography of India,* Pravalika Publications, Allahabad, 2013.

Further Readings :

1. Singh, Gopal : *A Geography of India,* Atma Ram & Sons, New Delhi, 1995
2. Singh, Jagdish : *India: A Comprehensive Systematic Geography,* Gyanodaya Prakashan, Gorakhpur, 2nd Edition, 2003.
3. Singh, R.L. : *India: A Regional Geography (Ed.),* National Geographical Society of India, Varanasi, 1971.
4. Singh, Savindra : *Environmental Geography,* Pravalika Publications, Allahabad, 2014
5. Sharma, T.C. and O. : *Economic and Commercial Geography of India,* Vikas Publishing, House, New Delhi, 2005.
6. Tirtha, Ranjit & Gopal Krishan : *Emerging India,* Conpub Ann Arbour Publishers, Michigan, 1992.

Pedagogy:

- Use of visual aids especially maps.
- Students should be encouraged to use an atlas in the classrooms.
- Audio-video shows on different parts of India.

Paper-VI: CARTOGRAPHY-III

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives:

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Nature of Geographic Data: Spatial and Attribute (Climatic, Population, Agriculture and Industrial)
Symbolization & Scaling of Geographical Data: Point, Line and Area

(4 lectures, 4 lab sessions)

UNIT-II

Choice, Use and Representation of Data using Point Symbols: Columnar Diagrams (Simple, Multiple, Compound, Percentage); Dot, Circle and Sphere

(6 lectures, 12 lab sessions)

UNIT-III

Choice, Use and Representation of the following Point Symbols: Graphs (Line Graph, Climograph, Hythergraph, Ergograph, Wind Rose, Combined and Bar Graph)

(8 lectures, 20 lab sessions)

UNIT-IV

Choice, Use and Representation of Data using: Line Symbols (Isopleth and Flow Lines); and Area Symbols (Choropleth)

(6 lectures, 12 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.

2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.

3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.

6. Three hours Practical Classes in a week are compulsory.

7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.

10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.

11. For practical classes, the number of students in one group shall not exceed fifteen.

12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Khullar, D.R. : *Essentials of Practical Geography, New Academic Publishig Co.*, Jalandhar, 2009.
2. Robinson, A.H. : *Elements of Cartography, 6th Edition*, John Wiley, New York, 2009.
3. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
4. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
5. Singh, R.L. & P.B. Singh : *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
4. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- The students need to be trained in the use of symbols to depict various geographic data.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

Paper-VII: GEOGRAPHY OF PUNJAB

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To understand the regional setting of Punjab state in detail through physical and political maps.
- To examine the cultural patterns of the regions.
- To study the distribution of major crops, industries and transport links in the state.
- To understand the intra regional variations in select aspects.

Course Content:

Unit –I

Introduction: Location, Evolution, Cultural Regions (Majha, Doaba & Malwa) and Administrative Divisions of the State. (15 lectures)

Unit –II

Physical Base: Relief, Drainage, Climate, Soils and Vegetation (12 lectures)
Resources: Mineral and Power; Water with special reference to river water sharing. (8 lectures)

Unit-III

Agriculture: Main Characteristics and Problems; Agro-climatic Regions; Green Revolution & its Ecological Implications; Irrigation; Main crops (wheat, rice, cotton, sugarcane) and their distribution, Livestock and dairying. (20 lectures)

Unit –IV

Population: Distribution, Density, Growth, Migration, Sex Ratio, Urbanization. (7 lectures)
Industries: Main characteristics, Distribution Patterns of Major Industries (Cotton Textile, Sugar, Hosiery Engineering) Industrial Concentration, Problems of Industrialization. (15 lectures)
Trade &Transport: Road, Rail and Air Transport; Inter-State Trade. (3 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests, (5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance (2%).

6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings

Essential Readings:

1. Mankoo, Darshan Singh : *Geography of Punjab, 4th Edition,* Kalyani Publishers, Ludhaina 2009.
2. Mavi, H.S. & Tiwana, D.S. : *Geography of Punjab*, National Book Trust, Delhi, 1993.
3. Singh, Jaspal : *Geography of Punjab,* Twenty First Century Publications, Patiala, 2014
4. Singh, Malkit : *Geography of Punjab*, Rashmeet Parkashan, Jalandhar, 2004

Further Readings:

1. Deshpande ,C.D. : *India: A Regional Interpretation* , Indian Council of Social Science Research, New Delhi, 1992.
2. Economic and Statistical Organization of Punjab : *Statistical Abstract of Punjab*, Economic and Statistical Organization of Punjab, Chandigarh, 2014
3. Gosal, G.S. & Gopal Krishan : *Regional Disparities in Level of Socio-Economic Development in Punjab*, Vishal Publications, Kurukshetra , 1984.
4. Gupta S.P. : *The Punjab: An Overview*, ESS PEE Publications, Chandigarh, 2004.
5. Kahlon, Simrit : *Punjab: regional reflections,* Man and Development, 29 (2), 2007.
6. Singh Pritam : *Punjab Economy: The Emerging Patterns*, Enkay Publishers, New Delhi, 1995.
7. Singh, R.L. : *India: A Regional Geography (Ed)*, National Geographical Society of India, 1990, Reprint.
8. Spate, O.H.K. & Learmonth A.T.A. : *India and Pakistan: A General and Regional Geography*, Methuen, London, 1967

Pedagogy

- Extensive and intensive use of maps to understand the regional setting.
- A component of field visit to some areas of each region may be planned for effective understanding of the region.

Paper-VIII: CARTOGRAPHY-IV

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives :

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Topographical Maps: Nomenclature (Classification), Study and Interpretation; Significance and Application in Geographical Studies

(4 lectures, 4 lab sessions)

UNIT-II

Profiles: Serial, Composite, Superimposed and Projected
Longitudinal and Transverse; Profiles of rivers

(8 lectures, 16 lab sessions)

UNIT-III

Elementary Remote Sensing : Definition, Concept, History, Application Areas and Types of platforms

(10 lectures, 8 lab sessions)

UNIT-IV

Introduction to Concept of GIS and Computer Cartography.
Definition, Development, Database (Spatial and Non Spatial) GIS Components (Hardware & Software) and Application.
Preparation of Line Graphs, Bars and Pie Charts using Computers.

(10 lectures, 10 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. For college students, a separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.
3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared by the University for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Three hours Practical Classes in a week are compulsory.
7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.
11. For practical classes, the number of students in one group shall not exceed fifteen.
12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Bhatta, Basudeb : *Remote Sensing and GIS,* Oxford, 2nd Edition, New Delhi, 2011
2. Guha, P.K. : *Remote Sensing For The Beginner,* East-West Press, 3rd Edition, New Delhi, 2013..
3. Khullar, D.R. : Essentials of Practical Geography, New Academic Publishing Co., Jalandhar, 2009.
4. Robinson, A.H. : *Elements of Cartography, 6th Edition,* John Wiley, New York, 2009.
5. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
6. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
7. Singh, R.L. & Singh, P.B. : *Map Work and Practical Geography, Central Book Depot, Raghunandan Allahabad, 2007.*

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Joseph, George : *Fundamentals of Remote Sensing,* Universities Press (India) Private Limited, 2nd Edition, Hyderabad, 2005
4. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
5. Panda, B.C. : *Remote Sensing: Principles and Applications,* Viva Books, New Delhi, 2008
6. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- They should learn to comprehend the topographical maps by deriving slopes and drawing profiles.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

SOCIAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Social Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Social Thought

1. Truth
2. Non-violence
3. Sarvodaya

UNIT-II

Man and State

4. Human Rights
5. Ideal Society, State and Rama Rajya

UNIT-III

Gandhi and Ethics

6. Education
7. Theory of Civilization
8. Morality and Religion

UNIT-IV

Gandhi and Social Justice

9. Drive against Untouchability :
   (a) Caste System
   (b) Communal Award
   (c) Poona Pact

10. Women Empowerment

Essential Readings :

1. Bandyopadhyaya, J. : *Social and Political Thought of Mahatma Gandhi,* (Bombay : Allied Publisher) 1969.
2. Bharathi, K.S. : *Social and Political Thought of Mahatma Gandhi* (New Delhi : Concept) 1995.
3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navjivan Publishing House), 2001
4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
5. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
6. Mishra, Anil Dutta : *Reading Gandhi,* (New Delhi : Pearson), 2012
7. Varma, V.P. : *Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1998.

Further Readings :

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.
3.	Suda, J.P.	:	*Main Currents of Social and Political Thought of Modern India,* Vol. II, Meerut (K. Nath & Co.) 1973.
4.	Unnithan, T.K.N.	:	*Gandhi and Social Change,* New Delhi (Arnold Heinemann India), 1973.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

POLITICAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Political Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.

2. There shall be **9** questions in all.

3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.

4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.

5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Political Thought

1. Truth & Non-violence
2. Theory of Ends & Means
3. State : Ideal Society and State

UNIT-II

Democracy & Decentralization

4. Panchayat Raj/Gram Swaraj
5. Freedom & Equality
6. Rights and Duties

UNIT-III

Religion and Politics

7. Satyagraha : Meaning, Essentials, Forms & Significance
8. Satyagraha & Passive Resistance
9. Spiritualization of Politics

UNIT-IV

Contemporary Relevance

10. Communal Harmony
11. Assessment and Contemporary Relevance

Essential Readings

1. Bhattacharyya, Buddhadeva : *Evolution of Political Thought of Gandhi,* Calcutta: Calcutta Book House, 1969.
2. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
3. Dhawan, G.N. : *Political Philosophy of Mahatma Gandhi,* Ahmedabad (Navajivan Publishing House) 1990, 4th Edition.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
7. Mishra, Anil Dutta : *Reading Gandhi,* New Delhi (Dorling Kindersley, Pearson), 2012
8. Varma, V.P. : *The Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1981.

Further Readings:

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Iyer, Raghaavan N.	:	*The Moral & Political Thought of Mahatma Gandhi, London,* Oxford University Press, 1973.
3.	Mishra, Anil Dutta (ed.)	:	Perspectives on Human Rights (New Delhi, Radha Publications)2002.
4.	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

PRINT JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives:

This course will introduce students to the basic techniques of sourcing news stairs and features. They will also be trained in the art and science of writing and presenting print media content.

B. Pedagogy of the Course Work:

80 % Lectures (including expert lectures).

20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Definition, nature and types of news and features; sourcing news and features.

Unit-II: Writing techniques and styles of news reports and features.

Unit-III: Role and responsibility of a sub-editor; basic editing techniques for copy and pictures; importance and writing of headlines.

Unit-IV: Introduction to typography and design principles; page make up using publishing software

PRACTICALS

Max. Marks : 20

1. Prepare a Current Affairs file of news & features . : 20 Marks

Books Recommended :

ESSENTIAL READING

1 Mencher, Melvin, , (1989), *Basic News Writing: W.M.C*. Brown Publishers, New York

2 Metz, William, (1990), *News Writing: From Lead to 30*. 3rd Edition, Prentice-Hall Inc., New Jersey

3 Rivers, William. L , (1991), *Freelancer and Staff Writer: Newspaper Features and Magazine Articles*, Wadsworth Publishing Co.

4 Alexander Louis , (1987), *Beyond the Facts: A Guide to the Art of Feature Writing*. Gulf Publishing Co.

5 Garrison, B, (1999), *Profession of Feature Writing.* New Jersey: Lawrence Erlbaum Assoc

6 Aamidor, A., (1999), *Real Feature Writing*. New Jersey: Lawrence Erlbaum Assoc

7 Blundell, William. E , (1998), *The Art and Craft of Feature Writing*, Plume Inc.

8 Garrison, Bruce , (1998), *Professional Feature Writing*, Laurence Eribaum Assoc

9 Bean, Erik , (1999) , *Writing for Publication*, Deadline Communications

10 Krantz, Marshall , (1996), *Ideas and Research*, Writers' Digest Books

11 Bruce D. Itule, Dougles A Anderson, (2006), *News Writing and Reporting for Today's Media*, McGraw Hill

12 Melvin Mencher, (2007), *News Reporting & Writing*, McGraw Hill

13 Tim Harrower, (2006), *Inside Reporting, A Practical guide to the Craft of Journalism*, McGraw Hill.

14 Stephen G. Bloom, (2002), *Writing Narrative Journalism : Inside the Writers mind*, Iowa Sate University Press.

ADDITIONAL READING

1 Kennedy, A , (1992), *Beyond the Inverted Pyramid*, Bradford Books

2 Bowles, D., & Borden, (2000), *Creative Editing*, (3rd ed.) Belmont, CA: Wadsworth

3 Elbow Peter, (1998), Writing *with Power*. Oxford University Press. N.Y

4 Johnson, C., (2005), *21st Century: Feature Writing*. New York: Allyn and Bacon

5 Wray, Cheryl Sloan , (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group

6 Wilbur, R., (1995), *Magazine feature writing*. New York: St. Martin's Press

7 Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books

8 Greene, B., (1988), *Handbook of Magazine Article Writing*. Cincinnati, OH: Writer's Digest

9 Wray, C., (2005), *Writing for Magazines*, (2nd ed.). Boston: McGraw Hill.

10 Ward, H., (1993), *Magazine and Feature Writing*. Mountain View, CA: Mayfield Publishing.

11 Wells, Gordon , (1997), *The Craft of Writing Articles*, Allison and Burby Inc.

12 Hennessey, Brendan, (1997), *Writing Feature Articles: A Practical Guide to Methods and Markets*, Focal Press.

13 Friedlander, Edward. J , (1999), *Feature Writing for Newspapers and Magazines: The Pursuit of Excellence*, Addison-Wesley Publishing Co.

14 Bell, James Scott,(2008), *Revision and Self Editing (Write great Fiction),* Writers Digest Books, New York,

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER- IV

RADIO & TV JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives :

The course will introduce students to the basic techniques of writing & presenting for the radio and TV medium.

B. Pedagogy of the Course Work :
80 % lectures (including expert lectures).
20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Basic principles of gathering, treatment and presentation of news for Radio; Basic principles of gathering, treatment and presentation of news for Television

Unit-II: Reporting and writing for Radio and TV; Pronunciation and modulation in Radio/TV reporting: Pitch, volume, tempo, vitality.

Unit-III: Basic introduction to audio/video production & its stages (pre-production, production, post production).

Unit-IV: Basic camera shots and language of camera movements.

PRACTICALS

Max. Marks : 20

1. Compilation of 5-minute weekly TV news bulletins — 10 Marks
2. Compilation of 10-minute weekly radio bulletins. — 10 Marks

ESSENTIAL READING

1 Chatterji,P.C. , (1991), *Broadcasting in India*. SAGE, New Delhi

2 Luthra, H.P., 1984, *Indian Broadcasting.* Publications Division, Min. of I & B.

3 Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi,

4 Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd.., New Delhi,

5 Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey

6 Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice,* Routledge, New York

7 Shrivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publishers, New Delhi.

8 Cohler, David Keith, (1985), *Broadcast Journalism*. Prentice-Hall, New Jersey.

9 Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*. Rajat Publications, New Delhi.

10 Fedler, Fred, bender, John R., Davenport, huanda, Drager, Michael W., (2005), *Reporting for the media.* Oxford University Press, New York.

11 Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi,

12 Cohen, Akilia A, (1987), *The Television News Interview.* SAGE, New Delhi,

13 Shrivastava, K.M., (2005), *Broadcast Journalism in the 21st century* new Dawn Press Group, New Delhi,

14 Fulding, Ken, (1990), Introduction *to Television Production*, Longman, New York,

ADDITIONAL READING

1 Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London

2 Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher

3 Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York,

4 Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

5 Fulding, Ken, (1990), Introduction to Television Production, Longman, New York.

6 Cohen,Akiba N., (1987), The Television News Interview, SAGE, Beverly Hills.

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POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Police Personnel Administration

(A) Course Objectives:

The objective of this course is to give inputs to the students on the various aspects of personnel relevant to police administration. Effort is made to impart knowledge to the candidates about the meaning, nature, scope and significance of Police Personnel Administration in India. In addition, job analysis, job description, pay policy, compensation and fringe benefits have been discussed. Further, the recruitment, training and promotion system in Police Service in India has been included in the syllabus. The students are also taught about the performance appraisal, police ethics, corruption in police, code of conduct and discipline along with doctrine of pleasure.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Police Personnel Administration; Significance of Police Personnel Administration in India; Career System in Police Administration.

Unit-II

Job Analysis and Job Description of Police Personnel – Concept and Significance; Pay Policy, Compensation and Fringe Benefits.

Unit-III

Recruitment: Meaning and Methods; Recruitment of Police Personnel in India; Training: Meaning and Types; Training of IPS Officers and State Police Services in India; Promotion: Meaning and Principles; Promotion of Police Personnel in India.

Unit-IV

Performance Appraisal; Police Ethics and Code of Conduct; Corruption – Meaning and Causes; Corruption in Police Force; Disciplinary Actions; Doctrine of Pleasure – Safeguards against Arbitrary Punishment.

Essential Readings:

1. Administrative Reforms Commission : Report on Personnel Administration, 11th Report, Government of India, New Delhi.
2. Goel, S.L. : Public Personnel Administration, Deep & Deep Publication Pvt. Ltd., New Delhi, 2006.
3. Mamoria, C.B. : Personnel Management, Himalaya Publishing House, Mumbai, 2007.
4. Zehra, Kaneez : Training of I.P.S., Ashish Publishing House, New Delhi, 1993.
5. Muthuswamy, P. : Swamy's Manual on Disciplinary Proceedings, Swamy Publishers (p) Ltd., Madras, 1986.

Further Readings

1. Saxena, A.P. : Training and Development in Government, The Indian Institute of Public Administration, New Delhi, 1974.
2. Singh, Sahib Bhayana, Singh, Swinder and Dogra, R.K. : Public Personnel and Financial Administration, New Academics, Jalandhar, 1990.
3. Ghosh, P. : Personnel Administration in India, Sudha Publications Private Limited, New Delhi, 1973.

POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

Law and Order Administration

(A) Course Objectives:

The principal objective of the syllabi is to acquaint the students with the basics of Law and Order Administration in India. Specifically, the students will be imparted the knowledge about the meaning, nature, scope and significance of Law and Order Administration in India along with some basic issues and emerging patterns. The endeavour is to discuss in detail the role and significance of Primary and Auxiliary Agencies of Law and Order Administration. Further, the role of Law and Order Administration in crowd management, communal riots, agrarian and industrial conflicts has also been discussed. The students are also taught about the challenges before Law and Order Administration. In addition, the concept of National Security along with challenges to it, in contemporary terms have been included in the syllabus.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Law and Order Administration; Significance of Law and Order Administration in India; Law and Order Administration – Some Basic Issues and Emerging Patterns.

Unit-II

Role, Significance and interrelationships of Law and Order Administration Agencies at the District level : The Police; Civil Administration; Court of Law; Prisons; and Health.

Unit-III

Role of Law and Order Administration in Crowd Management, Communal Riots and Industrial & Agrarian Conflicts. Challenges before Law and Order Administration.

Unit-IV

National Security: Concept and Significance. Challenges to National Security in India – Contemporary Issues.

Essential Readings:

1. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.
2. Sharma, K.K. : Law and Order Administration, National Book Organization, New Delhi, 1985.
3. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
4. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume - I, Ashish Publishing House, New Delhi, 1993.
5. Bharti, Dalbir : *Police Evam Log: Donon ke Adhikar Va Zimmedarian,* A.P.H. Publishing Corporation, New Delhi, 2007.
6. Singh, Yogendra : Social Change in India: Crisis and Resilience, Har-Anand Publications Pvt. Ltd., New Delhi, 2007.

Further Readings

1. Mayhall, Pamela D.et.al. : Police-Community Relations and the Administration of Justice, Prentice-Hall Inc., New Jersey, 1995.
2. Ghosh, S.K. : Keeping the Peace: For Whom the Bell Tolls (Police Then and Now), Ashish Publishing House, New Delhi, 1989.
3. Vadackumchery, James & Kattakayam, John : Human Behaviour and Law Enforcement, Ashish Publishing House, New Delhi, 1995.
4. Owens, R.Glynn and Ashcraft, J. Barrie : Violence: A Guide for the Caring Professions, Croom Helm, New Hampshire, USA, 1985.
5. Singh, K.P. ` : Police Gyan Vigyan, The Bright Law House Delhi, 2003.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper : FEMINIST THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :
This course offers the prominent theories that feminists have formulated to explain the matrix of gender inequality from the nineteenth century to the present. It further seeks to introduce the student to the key debates within feminist theories as well as the shifts in feminism.

Note : The students are expected to have a general understanding of the various strands of feminism and not of any specific feminist thinker in this course.

Course Contents :

Unit-I : Feminism

(a) Definition,

(b) Emergence of Feminism with special focus on

- Women in French Revolution,
- Suffrage Movement in the U.S.A. (with reference to Seneca Falls Convention and Declaration of Sentiments),
- Suffrage Movement in the U.K.

(c) Three waves of Feminism.

Unit-II : Strands of Feminism-I

(a) Liberal Feminism,

(b) Socialist Feminism,

(c) Marxist Feminism.

Unit-III : Strands of Feminism-II

(a) Radical Feminism

(b) Post modern Feminism

(c) Psycho-analytic Feminism (Freudian).

Unit-IV : Strands of Feminism-III

(a) Black Feminism

(b) Cultural Feminism

(c) Eco-Feminism.

NOTE :

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

Agarwal, Bina, **The Gender and Environment Debate: Lessons from India, Feminist Studies,** Vol. 18, No.1, Spring 1992, pp 119-158.

Anderson, Margaret, **Thinking About Women,** Macmillan, New York, 1993.

Beasley, Chris, **What is Feminism?,** Sage, London, 1999.

Bell Hooks, **Ain't I a Woman: Black Women and Feminism,** Pluto Press, London, 1982.

Bhasin, K. and Khan, N.S., **Feminism and its Relevance in South Asia, Women Unlimited**, New Delhi, 2013

Chatterjee, Mohini, **Feminism and Gender Equality,** Aavishkar, Jaipur, 2005.

Collins, Patricia Hill, **Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment,** Routledge, New York, 1999.

Desai, Leela, **Issues in Feminism,** Pointer Pub., Jaipur, 2004.

Geetha, V., **Theorizing Feminism,** Stree, Kolkata, 2012.

Molyneux, Maxinne and Steiberg, Deborah Lynn, **Mies and Shiva's Ecofeminism: A New Testament, Feminist Review,** No. 49, Spring 1995, pp 86-107.

Further Readings :

1. Banks, Olive, **Faces of Feminism: A Study of Feminism as a Social Movement,** St. Martin's Press, New York, 1981.

2. Freeman, Jo (ed.), **Women: A Feminist Perspective,** Palo Alto, California : Mayfield, 1975.

3. Kosambi, Meera, **Crossing Thresholds: Feminist Essays in Social History**, Permanent Black, New Delhi, 2007.

4. Mishra, Binod (ed.), **Critical Responses to Feminism,** Sapru & Sons, New Delhi, 2006.

5. Shukla, Bhaskar A., **Feminism : From Mary Wollstonecraft to Betty Friedan,** Sapru & Sons, New Delhi, 2007.

6. Spender, Dale, **Feminist Theorists: Three Centuries of Women's Intellectual Traditions,** The Women's Press, London, 1982.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

Paper : Status of Women in India – II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective : This course aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Unit-I : Demographic Trends

(a) Sex Ratio, Age Specific Sex Ratio : Trends

(b) Change in Sex Ratio : Causes and Consequences

(c) Fertility Rates

(d) Definitions: Infant Mortality Rate, Child Mortality Rate, Total Mortality Rate, Maternal Mortality Rate, Causes of Gender Differentials in Mortality Rates

Unit-II : Women and Education

(a) Gender Gaps in Literacy Rates, School Enrolment and Dropout Rates

(b) Women in Higher Education : Gender Gaps

(c) Obstacles to Women's Education : Socio Cultural, Economic and Infrastructural

Unit-III : Women and Health

(a) Definition : Health & Reproductive Health

(b) Factors affecting Women's Health Status

(c) Issues relating to women's health status : Nutritional health status of women and girl child in India.

Unit-IV : Women and Work :

(a) Changing definition

(b) Gender differential in Work Participation Rates

(c) Sexual Division of Labour

(d) Sexual Harassment at the Workplace

(e) Obstacles to Women's Workforce Participation : Cultural, Skill development etc.

NOTE :

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

1. Chatterjee, Meera , **A Report on Indian Women from Birth to Twenty,** NIPCCD, New Delhi, 1999.

2. Gopalan, Sarala and Shiva, Mira, **National Profile on Women, Health and Development,** VHAI & WHO, 2000.

3. Gopalan, Sarala, **Towards Equality - The Unfinished Agenda : Status of Women in India -2001,** National Commission for Women, New Delhi, 2002.

4. Menon-Sen, Kalayani and Shiva Kumar, A.K., **Women in India ! How Free?, How Equal?** Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.

5. **National Human Development Report, 2001**, Planning Commission, Govt. of India, March, 2002.

Further Readings :

1. Ali, Aruna Asaf, **Resurgence of Indian Women,** Nehru Memorial Museum and Library, New Delhi, Radiant ,1991.

2. Ali, Azra Asghar, **The Emergence of Feminism Among Indian Muslim Women,** 1920-1947, Oxford, Karachi, 2000.

3. Anand, Meena **Dalit Women : Fear and Discrimination,** Isha Books, Delhi, 2005.

4. Bhattacharya, Rinki (ed.), **Behind Closed Doors : Domestic Violence in India,** Sage, New Delhi, 2004.

5. Choudhary, Prem, **Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India**, OUP, New Delhi, 2007.

6. Desai, Neera and Krishnaraj, Maithreyi (ed.), **Women and Society in India**, Ajanta Publication, New Delhi, 1987.

7. Kumar, Hajira (ed.), **Status of Muslim Women in India**, Aakar Books, Delhi, 2002.

8. Mohanti, Bedabati, **Violence Against Women: An Analysis of Contemporary Realities**, Kanishka Publication, New Delhi, 2005.

9. Mohini, Giri, V., **Deprived Devis : Women's Unequal Status in Society Gyan**, New Delhi, 2006.

10. Rajawat, Mamta, **Dalit Women : Issues and Perspectives**, Anmol Pub, New Delhi, 2006.

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HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

PAPER : HUMAN RIGHTS & DUTIES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:
The course is designed to make students aware about the human rights and duties framework in India. An attempt has been made to deal the issue within the ambit of evolution of the concepts of human rights and duties; Constitutional structure and Implementation mechanisms.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: EVOLUTIONARY PHASE

(i) Evolution of the concept of Human Rights in India
(ii) The notion and significance of Duties in India
(iii) Values and relevance of composite culture of India: non-violence; secularism and fraternity

UNIT II: CONSTITUTIONAL FRAMEWORK

(i) The Preamble
(ii) Fundamental Rights
(iii) Directive Principles of State Policy
(iv) Fundamental Duties

UNIT III: KEY AREAS IN THE CONTEMPORARY PHASE

(i) Right to food security
(ii) Right to Education
(iii) Right to Information
(iv) Right to clear environment

UNIT IV: IMPLEMENTATION OF HUMAN RIGHTS

(i) Constitutional Machinery: Role of Judiciary
(ii) Statuary Machinery: National Human Rights Commission and State Human Rights Commissions

Essential Readings:

1. Brownlie Ian, et al.(eds), *Basic Documents on Human Rights*, (2006) Oxford.

2. Gandhi, P.R. (ed), *Blackstone's International Human Rights Documents* (2001),Universal, Delhi.

3. David Robertson, *A Dictionary of Human Rights*, Europa Publications, (2004), London.

4. Basu, D.D., *Introduction to the Constitution of India,* (1997), New Delhi: Prentice Hall of India.

5. Henry J. Steiner, et al., (eds.), *International Human Rights in Context*, Chapter 10, (1996) Clarendon Press, Oxford.

6. Brundland Report, *Our Common Future,* (1986), Oxford.

Further Readings:

1. Kapoor, S.K:, *Human Rights under International Law and Indian Law*, (2014) Central Law Publications, Allahabad.

2. Kapoor, S.K:, *Human Rights under International Law*, (2009) Central Law Publications, Allahabad.

3. Paul, R.C., *Situation of Human Rights in India,* (2000) Commonwealth New Delhi: Publishers.

4. Rao, Ashiwini, *Status of Human Rights in India*, (2010) New Delhi, Pacific.

5. South Asian Human Rights Documentation Centre : *Human Rights and Humanitarian Law,* (2008) South Asian Human Rights Documentation Centre, New Delhi.

6. South Asian Human Rights Documentation Centre: *Introducing Human Rights,* New Delhi, (2006) South Asian Human Rights Documentation Centre, New Delhi.

HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

PAPER : HUMAN RIGHTS ISSUES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:

The Paper deals with a few specific issues in India along with some key responses emerging from the Indian society for the protection and Promotion of human rights.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: HUMAN RIGHTS & LABOUR

(i) Bonded Labour
(ii) Unorganized labour
(iii) Child Labour

UNIT II: STRUCTURAL PROBLEMS AND IMPACT ON HUMAN RIGHTS

(i) Poverty
(ii) Illiteracy
(iii) Unemployment

UNIT II: HUMAN RIGHTS & CRIMINAL JUSTICE

(i) Concept of Criminal Justice System in India
(ii) Rights of the accused
(iii) Rights of the victim

UNIT IV: SOCIAL AUDITING FOR HUMAN RIGHTS

(i) Definition, significance of social auditing
(ii) Agent of Social Auditing including Human Rights Defenders
(iii) Role of Media in social auditing
(iv) Role of Civil Society in social auditing

Essential Readings:

1. Amita Agarwal, *Human Rights for Survival of Civilization*, (2004), Kalinga Publications, Delhi.

2. V.R.Krishna lyer, *Human rights – A judge's Miscellany,* (1995) B. R. Publishing Corporation, Delhi.

3. Satish C. Shastri(ed), *Human Rights, Development and Environmental Law: An Anthology,* (2007), Jain Book Agency, Delhi.

4. Kalpana Kannabiran, *Crafting Human Rights Cultures*, (2006), NALSAR University of Law.

5. Upendra Baxi (ed.), *The Right to be Human*, (1987), Lancer International, New Delhi.

6. R.C.Mishra, *Human Rights and Policing*, Authors Press, (2005), New Delhi.

Further Readings:

1. K.I. Vibhute, *Criminal Justice A Human Rights Perspective of the Criminal Justice Process in India*, (2004), Eastern Book Company, Lucknow.

2. Khanna, S.K., *Children and the Human Rights,* (1998), Commonwealth, New Delhi.

3. Pandit Kamalkar, Human Rights and Criminal Justice, (2010), Asia Law House, Hyderbad.

4. Pachauri, S.K., *Children and Human Rights,* (1999), APH Publications, Delhi.

5. Pachauri, S.K. *Women and Human Rights,* (1999), APH Publications, New Delhi.

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RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

PAPER- III, SIKH RELIGION AND HISTORY

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs.

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Life, Teachings and Contribution: Guru Nanak Dev, Guru Angad Dev, Guru Amar Das, Guru Ram Das and Guru Arjun Dev; Martyrdom of Guru Arjan Dev.

Unit - II

Life, Teachings and Contribution: Guru Hargobind, Guru Har Rai, Guru Harkrishan,Guru Teg Bahadur and Guru Gobind Singh; Martyrdom of Guru Tegh Bahadur.

Unit - III

Life, Teachings and Contribution:Bhagats and Bhatts

Unit - IV

Compilation of the *Adi Granth*; Foundation of the Khalsa

Essential Readings

- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ, ਡਾ. (ਮੁਖ ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀਕਾਰ ਵਿਸ਼ੇਸ਼ ਅੰਕ-57 ਮਾਰਚ 2●●3, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅਜਮੇਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਪ੍ਰਗਟਯੋ ਖਾਲਸਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਰਾਜਿੰਦਰ ਸਿੰਘ ਜਾਲੀ, ਸਿਖ ਇਤਿਹਾਸ ਦੀਆਂ ਝਲਕੀਆਂ, ਜਾਲੀ ਲਿਟਰੇਟਚਰ ਹਾਊਸ ਦਿੱਲੀ-ਅਮਰੀਕਾ
- ਹਰਚਰਨ ਸਿੰਘ, ਡਾ., ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਨਾਨਕ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ , ਡਾ. , ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀ ਸੰਪਾਦਨਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਡਾ. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿਲੋ, ਗੁਰੂ ਰਾਮਦਾਸ, ਰੂਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਅੰਮ੍ਰਿਤ ਲਾਲ ਪਾਲ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ- ਜੀਵਨ ਤੇ ਬਾਣੀ, ਸੰਗਮ ਪਬਲੀਕੇਸ਼ਨ
- ਗੁਰਮੁਖ ਸਿੰਘ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ: ਜੀਵਨ ਦਰਸ਼ਨ ਤੇ ਬਾਣੀ, ਰੁਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਸਤਿਬੀਰ ਸਿੰਘ, 'ਗੁਰ ਭਾਰੀ' ਜੀਵਨੀ ਗੁਰੂ ਹਰਿਗੋਬਿੰਦ ਜੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਅਮਰਦਾਸ- ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).
- Grewal, J.S., *Guru Nanak in History*, Chandigarh: Panjab University, 1979.
- Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: Oxford University Press, 1968.
- G.S. Talib: *Guru Nanak; His personality & Vision*

Further Reading

- ਇੰਦੂਭੂਸ਼ਨ ਬੈਨਰਜੀ, ਖਾਲਸੇ ਦੀ ਉਤਪਤੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਿਆਰ ਸਿੰਘ, (ਸੰਪਾ.) ਸ੍ਰੀ ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ (ਫਾਰਸੀ ਸਰੋਤ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਡਾ. ਗੁਰਸ਼ਰਨ ਜੱਗੀ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਬਾਣੀ, ਗੁਰਮਤ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ
- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).
- Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

PAPER- IV SIKH LITERATURE AND INSTITUTIONS

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Unity of Guruship; Institution of Gurdwara

Unit -II

Different sects within the Sikh Movement (Udasis, Minas, Dhirmalya , Ram Raiyas) origin and development

Unit - III

Study of *Japji* and *Chandi Di Var* (Message and Formation)

Unit - IV

Study of Janam Sakhis; Tika; Parmarath; Gost. (Definition and Features) (Two out of three)

Essential Readings

- ਨਰਿੰਦਰ ਕੌਰ ਭਾਟੀਆ ਅਤੇ ਜਸਵਿੰਦਰ ਕੌਰ ਢਿਲੋਂ, ਡਾ. (ਸੰਪਾ.) ਪ੍ਰਮੁੱਖ ਸਿੱਖ ਸੰਸਥਾਵਾਂ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਤਾਰਨ ਸਿੰਘ, ਗੁਰਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਦਰਸ਼ਨ ਸਿੰਘ, ਡਾ., ਧਰਮ ਅਧਿਐਨ ਅਤੇ ਸਿੱਖ ਅਧਿਐਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਜਪੁਜੀ, ਵਿਚਾਰਧਾਰਾ, ਪ੍ਰਬੰਧ ਤੇ ਪਾਠ, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਰਾਮ ਸਿੰਘ, ਡਾ. ਜਪੁਜੀ ਦੇ ਪੰਜ ਖੰਡ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ, ਚੰਡੀ ਦੀ ਵਾਰ, ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
- ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਚੰਡੀ ਦੀ ਵਾਰ, ਗੁਰਮਤਿ ਪ੍ਰਕਾਸ਼ਨ ਪਟਿਆਲਾ
- ਹਰਬੰਸ ਸਿੰਘ ਗਿਆਨੀ, ਚੰਡੀ ਦੀ ਵਾਰ ਸਟੀਕ, ਸਹਿਗਲ ਪ੍ਰਿੰਟਿਰਜ਼ ਜਲੰਧਰ

Further Reading

- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Grewal, J.S., *Sikh Ideology, Polity and Social Order*, New Delhi: Manohar, 1996.
- Mcleod, W.H., *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999.
- Jagraj Singh: A complete guide to Sikhism, Unistar Chandigarh, 2011

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ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper : Air Pollution and Climate Change

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Paper : AIR POLLUTION AND CLIMATE CHANGE

Unit-I

Atmosphere: Composition of atmosphere, Air Pollution: Sources, Classification (Natural and anthropogenic sources; primary and secondary pollutants), Smoke, Smog, Particulate Matter and Acid rain. Effects of air pollution on human health, plants, animals and material. Air (Prevention and Control of Pollution) Act, 1981.

Unit-II

Green House Effect: Definition, Green house gases, Sources of green house effect, Global Warming.

Stratospheric ozone layer depletion. Role of agriculture to green house effect (paddy and livestock, biomass burning) in GHE.

Unit-III

Noise pollution: Definition, Sources, Noise standards, Silence Zones, Consequences of noise pollution.

Radioactive Pollution: Definition**,** Sources, effect on human health.

Mineral Resources: Types and Importance of minerals; Mineral extraction and environmental problems (limestone mining in Moussourie hills, coal mining in Jharkhand).

Unit-IV

Control: Measures and techniques to control air pollution in vehicles and industries, Green building concept, CDM (Clean Development Mechanism), Carbon sequestration. Control of noise pollution.

PRACTICAL

To monitor the level of Dust fall, SPM in surrounding atmosphere.

To monitor the level of NOx and SO_2 in surrounding atmosphere.

To prepare a survey report on different sources causing air pollution in local area.

To prepare a survey report on noise pollution in your locality.

To visit, collect data and prepare report regarding air and water pollution from sugar mill, thermal plant, cement factory in the adjoining area like Nawanshahr, Ropar, and Hoshiarpur.

ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

Paper : SOLID WASTE AND DISASTER MANAGEMENT

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Unit-I

Solid waste: Sources, nature and characteristics; categories of solid waste, Biodegradable and non-biodegradable waste; Plastic nuisance. Solid waste disposal: Sanitary landfills, Composting, optimum conditions for composting, Pyrolysis, Incineration and Refuse Derived Fuels. Fly Ash utilization, MSW Handling Rules, 2000.

Unit-II

Natural disasters: Floods, earthquakes, Tsunami, land slides, drought, forest fire and Tropical cyclones.

Disaster management: pre-disaster phase, actual disaster phase, post- disaster phase.

Unit-III

Bioenergy and waste water treatment: Biogas plant: Construction and working of biogas plants, its advantages and disadvantages. Vermi-culture and Vermi-composting, Biofertilisers, Biofuels.

Waste water treatment (STP and ETP), A brief account of primary, secondary and tertiary treatment.

Unit-IV

Organic farming: Definition, Need of Organic Farming, Methods: Soil management, weed management, control of pests. Its advantages. Organic Food, its benefits.

Waste lands: Definition, Categories of waste lands, Desertification, ways of reclamation.

PRACTICAL

A visit to Composting/Vermicomposting Unit.

To prepare a survey report of municipal waste of your city (Generation to disposal).

Classify the waste of your municipality waste (Source based and Waste based)

To visit any landfill site and prepare a tour report.

To prepare a list of herbicides / pesticides / insecticides commonly used in this area

To make a list of various botanical pesticides available in the market

Assignments/project as assigned by the teacher

Books Recommended

1. Critchfield, Howard J., General Climatology, Second Edition, Prentice-Hall, Inc., 1982.
2. Houghton, J., Global Warming, The Complete Briefing, 3rd Edition, Cambridge Univ. Press, 2006.
3. Hill, M. K., Understanding Environmental Pollution, Cambridge Univ. Press, 2008.
4. Malsin, M., Global Warming, A Very Short Introduction, Oxford Univ. Press, 2009
5. Tchobanogloas, G., Integrated Solid Waste Management: Engineering, Principle and Management. McGraw Hill, USA. 1993.
6. Singh, H.M., Solid Waste Management. Alfa Publications, Delhi. 2010.
7. Bhatnagar R.K. & Palta R.K., Earthworm Vermin Culture & Vermi Composting, Kalyani, Pub. 2007.
8. Ranganathan L.S, Vermi biotechnology: From Soil Health to Human Health, Updesh Purodit Pub. Jodhpur, 2006.
9. Aggarwal, A. K., Water Pollution, APH Publications, New Delhi, 2008.
10. American Public Health Association, Standard Methods for Examination of Water and Wastewater, APHA, New York, 2003.
11. Sengupta, B., John, S. & Abraham, T. Forth Estate, A Handbook on Air, Water and Land Pollution. IDMA Foundation for Sustainable Development and BR Publications Corporation, Delhi. 2006.
12. Aggarwal, A. K., Noise Pollution. APH Publications, New Delhi, 2008.
13. Veeresh, G. K., Organic Farming. Foundation Books, Delhi, 2006.
14. Gehlot, D., Organic Farming: Components and Management, Agrobios, Jodhpur, 2010.
15. Singh, K. K. & Aleyer, L., Disaster Management: Manmade Disasters. APH Publications. 2010.
16. Dhunna, M., Disaster Management, Vayu Education of India, Delhi, 2009.
16. Sharma & Sharma, Natural Disasters, APH Publications, 2009.
17. Dara, S.S., A Textbook of Environmental Chemistry. 2nd Edition. S. Chand & Company Ltd., Ram Nagar, New Delhi, 2010.

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HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER- III

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	6	40	10	1	6	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-III

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Equipment & supplies used for Clothing construction - their use & care
2. Sewing Machine :
   (a) Parts of Sewing Machine and its accessories.
   (b) Common defects in sewing machine & their remedies.
   (c) Care of Sewing Machine.

SECTION-B

1. Recording of body measurements & care to be taken while taking body measurements.
2. Preparation of fabric for construction- shrinking and straightening.
3. Tools of Drafting, Steps involved in drafting from measurement to garment construction, points to be kept in mind while making a draft.
4. Terms used in construction i.e. Seam Allowance, Ease, Selvedge, Dart, Grain line, Stay stitching.

SECTION-C

1. Classification of textile fibres
2. Manufacture and Properties of fibres:
   Cotton, Silk, Wool, Nylon.

SECTION-D

1. Different types of yarns:

   Simple, Novelty and Textured Yarns.

2. Fabric Construction –
   (A) Weaving - Parts of a loom, Process of weaving & Types
      a. Simple weaves – Plain, Rib, Basket
      b. Twill weaves
      c. Satin weave & Sateen weave

   (B) Knitting, Felting and Bonding.

(SEMESTER-III)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 40
Internal Assessment : 10
Time : 6 periods/week

1. Make samples of the following :

(a) Tacking, running stitch, hemming, Back Stitch, Fasteners using buttonhole stitch

(b) Seams—Flat seam, Counter hem, Mantua maker, French Seam & Run & Fell seam.

(c) Processes—Continuous wrap, two piece placket opening, pleats, gathers into a band, tucks.

(d) Joining- shaped facing on V neck line & piping on round neck.

2. Embroidery—any "10" fancy stitches.

3. Drafting of the following:

(a) Jangia
(b) Bloomer
(c) Child's bodice block
(d) Sleeve- Plain sleeve, Puff sleeve
(e) Collars- Baby, Cape & Peter Pan

4. Construction of following :

(a) Jangia
(b) Bloomer
(c) Gathered frock with any sleeve and collar.

HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER- IV

SEMESTER-IV

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	6	40	10	1	6	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-IV

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of 8 objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Elements of art such as colour, form, texture, shape and line
2. Principles of design such as Harmony, Balance, Rhythm, Emphasis, Proportion in relation to clothing

SECTION-B

1. Introduction to Fashion, Fad and Style.
2. Selection of suitable clothes for following age groups :
   Infants, Toddlers, School going children, Adolescents, Adults, Elderly.
3. Care & Storage of garments of cotton, wool, silk.

SECTION-C

1. Bleaches- Oxidising, reducing bleaches & their suitability to different fabrics.
2. Finishing- types & importance. Different Finishes- Sizing, Desizing, Calendering, Sanforising, Mercerization, Crease resistant, Water proof & Water repellent, Flame resistant & Flame proof.

SECTION-D

1. Application of colour on fabrics
   (a) Dyeing-Simple dyeing of cotton
   (b) Resist-Tie, Dye and Batik
2. Printing-Block printing, screen printing, roller printing
3. Methods of Laundry/Washing.

(SEMESTER-IV)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 40
Internal Assessment : 10
Time : 6 periods/week

1. Laundry :

   (a) Testing of cotton, wool silk and nylon by burning test.
   (b) Stain Removal : Rust, Coffee, Tea, Paint, Nail Polish, Lipstick, Perfume, Blood, Boot Polish, Ink (Ball Pen), Curry and Juice.

2. Laundry & finishing of following garments :

   *Cotton : Salwar, Kameez.

   *Synthetic : Gathered Frock/Pleated Skirt.

   *Woollen : Cardigan/Pullovers.

   * Spot cleaning of a Shawl.

3. Preparation of samples of Tie and Dye & Block Printing.
4. Drafting and construction of the following garments:
   a. Petticoat
   b. Lady's kameez and salwar

5. Project on Care Labels of Garments or Market survey of Laundry Products.

Reference Books :

1. Singer Sewing Book, Mary Brocks Bichen, McGraw Hill Book Company, Inc., New York, Toronto, London, 1953.

2. Basic Processes & Clothing Construction, Sherie Doongaji & Raushni Deshpande, Raaj Prakashan, New Delhi (Fourth Revised edition).

3. Pattern Drafting Vol. III, Dress Making, Kamakura—Shobo Publishing Co. Ltd., Tokyo, Japan, 1972 (Fifth Edition).

4. A Manual of Children Clothing, Savitri Pandit, Orient Longmans Ltd., Bombay, 1967.

5. Practical Dress Design, Principles of Fitting and Pattern Making, Mabel D. Erwin, The Macmillan Company, New York, Ninth Printing, 1966.

6. Indian Embroidery, Its Variegated Charms, Savitri Pandit, Faculty of Home Sciences, Baroda, 1976, First Edition.

7. The Basic Book of Sewing, Eve Harlow Pub. Octopids Books Ltd., London.

8. Simple Dress Making 2, Maureen Guddsworthy Pub. Mills & Boon Ltd., London.

9. Encyclopaedia of Dress Making, Pub. Marshall Caven Dish Books Ltd., London.

10. Textile Fabrics and their Selection, Isable B. Wingate Prentice Hall, Inc., Englewood Cliffs, N.J., 1970.

11. Fundamentals of Textiles and their Care, Susheela Dantyagi, Orient Longmans, Bombay, Calcutta, Madras, New Delhi, Reprinted, 1968.

12. Household Textiles and Laundry Work, Durga Deulkar, Atma Ram & Sons, New Delhi, 1973.

13. Ideas for Fabric Printing and Dyeing Gooch, Peter H. Charles Cribner's, New York, 1974.

14. Encyclopaedia of Textiles, Fabrics, Grayson Martin, John Wiley, New York, 1984.

15. Tie-Dyed Textiles of India—Veronica Murphy & Rosemary Crill, Pub. Mapiu Publishing Pvt. Ltd., Ahmedabad.

16. Fashion and Textile Design, Neelima.

17. Printing and Washing of Textile, Neelima

18. Handbook of Fashion and Textile Designing, R. K. Sahu.

19. Traditional Embroidery of India, Shailajan D. Naik.

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AGRICULTURE (ELECTIVE)

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2017-18

SEMESTER-III

Paper – III : Agricultural Diversification and Machinery

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration each.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1. The syllabus of this paper has been diveided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural aid on works :
Dairy
Poultry
Fishery
Mushroom Cultivation
Animal Husbandry
Bee Keeping

Unit-II

Maintenance of grassy lawns and flower beds.
Raising of winter and summer ornamental flowers (rose, gladioli, dahlias, dianthus, foliage plants).
Fundamentals of landscape of an educational institute, factory, panchayat lands and office buildings.

Unit-III

Introduction to medicinal, aromatic and spice plants.
Growing of non-conventional plants.
Basic idea of Gentically Modified crops.
Fundamentals of land measurements and land revenue.

Unit-IV

Important parts of the tractor, combine, thresher and their maintenance.
Study of various agricultural tools and implements.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Poultry Farms, Fish Ponds, Apiary, Dairy Farms
Raising various ornamental flowers of different seasons
Maintenance of grassy lawns
Study the parts of engines, tractor and combine

Books :

1. Agriculture Engineering Vol.I and Vol. II, A. M. Michae, T.P. Ojha, 2006, Jain Brothers, New Delhi.
2. Mushroom Growing, 1997, H. S. Garcha, P. A. U., Ludhiana.
3. Hand Book of Agriculture, 2008, ICAR, New Delhi.
4. Farm Machinery, An Approach, S.C. Jain and Grace Philips, 2006, Standard Publishers, Distributors, New Delhi.
5. Fundamentals of Dairy Chemistry, Wong, Jenness, Keeney and Marth, 1998, CBS Publishers and Distributors, New Delhi.
6. Milk and Milk Products, Clarence Henry Eckles, Willes Barnes Combs and Harold Macy, Delhi, 2006, Tata McGraw Hill Publishing Company Limited, New Delhi.
7. Introduction to Plant Biotechnology, H. S. Chawla, 2008, Oxford and IBH Publishing Company Pvt. Ltd., New Delhi 2.
8. Plant Biotechnology, B. D. Singh, 2009, Kalyani Publishers, Ludhiana.
9. Aquarium and Fish Keeping, C. B. L. Srivastava, 2006, Kitab Mahal Allahabad.
10. Medicinal Plants of India, R. Zafar, 2006, CBS Publishers and Distributors, New Delhi.
11. Spices and Condiments, J. S. Pruthi, 2008, National Book Trust, New Delhi.

AGRICULTURE (ELECTIVE)

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2017-18
SEMESTER-IV

Paper – IV : Cultivation Practices of Vegetables, Timber and basic statistical methods

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1 The syllabus of this paper has been divided into four units.

2 Question paper shall comprise of 9 question in all.

3 Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.

4 Units I, II, III and IV shall have two questions each from respective Units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.

5 Total five questions are to be attempted.

Unit – I

Tillage, Fundamentals and Principles of Tillage, Zero Tillage, Tillage Implements.

Unit – II

Cultivation Practices of Potato, Tomato; Bhindi, Cabbage; Onion and Asparagus

Unit – III

What are Timbers and Lumbers ?
Raising of Dalbergia; Tectona; Poplar; and Eucalyptus

Unit- IV

Statistical Methods for Agricultural workers including Mean, Mode, Median, Chi-Square, Standard Deviation.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Agricultural Farms for Fundamental Aspects of Tillage
Raising Forest Nursery
Cultivation of Seasonal Vegetables
Numerical Problems of Statistics

Books :

1. Principles of Agronomy**,** T. Yellamanda Reddy and G. H. Sankara Reddy, 2008, Kalyani Publishers, Ludhiana.

2. Statistical Methods for Agricultural Workers, V.G. Panse and P.V. Sukhatme, 1997, ICAR, New Delhi.

3. Modern Techniques for Raising Field Crops, Chidda Singh, Prem Singh and Rajbir Singh, 2009, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

4. Vegetable Crops of India, P.C. Das, 1998, Kalyani Publishers, Ludhiana.

5. Potato Cultivation, 1998, Nandpuri and Kumar, P.A.U., Ludhiana.

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MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper-I : ADVANCED CALCULUS-I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note :

1. The syllabus has been split into two Units : Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions in all selecting at least two questions from each unit. Each question will be of 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorials.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Limit and continuity of functions of two and three variables. Partial differentiation. Change of variables. Partial derivation and differentiability of real-valued functions of two and three variables. Schwarz and Young's theorem. Statements of Inverse and implicit function theorems and applications.

Vector differentiation, Gradient, Divergence and Curl with their properties and applications.

Unit-II

Euler's theorem on homogeneous functions. Taylor's theorem for functions of two and three variables. Jacobians. Envelopes. Evolutes. Maxima, minima and saddle points of functions of two and three variables. Lagrange's multiplier method.

References

1.	Gabriel Klaumber	:	Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
2.	T.M. Apostol	:	Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
3.	R.R.Goldberg	:	Real Analysis, Oxford & I.B.H. Publishing Co., New Delhi, 1970.
4.	D. Soma Sundaram and B. Choudhary	:	A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.
5.	P. K. Jain and S. K. Kaushik	:	An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6.	Gorakh Prasad	:	Differential Calculus, Pothishala Pvt.Ltd., Allahabad.

7.	J. D. Murray & M. R. Spiegel	:	Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
8.	S.C.Malik	:	Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
9.	Shanti Narayan	:	A Course of Mathematical Analysis, S. Chand and Company, New Delhi
10.	J. D. Murray & M.R. Spiegel	:	Vector Analysis, Schaum Publishing Company, New York.
11.	N.Saram and S.N. Nigam	:	Introduction to Vector Analysis, Pothishala Pvt. Ltd., Allahabad.
12.	Shanti Narayan	:	A Text Book of Vector Calculus, S. Chand & Co., New Delhi.

Paper II : DIFFERENTIAL EQUATIONS- I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Exact differential equations. First order and higher degree equations solvable for x, y, p. Clairaut's form. Singular solution as an envelope of general solutions. Geometrical meaning of a differential equation. Orthogonal trajectories. Linear differential equations with constant coefficients.

Unit-II

Linear differential equations with variable coefficients- Cauchy and Legendre Equations. Linear differential equations of second order- transformation of the equation by changing the dependent variable/the independent variable, methods of variation of parameters and reduction of order. Simultaneous Differential Equations

References

1.	Erwin Kreyszig	:	Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2.	D.A. Murray	:	Introductory Course on Differential Equations, Orient Longmen, (India), 1967.
3.	A.R. Forsyth	:	A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4.	Ross, S.L.	:	Differential Equations, John Willey & Sons, 2004.

Paper III : STATICS

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Basic notions. Composition and resolution of concurrent forces – Parallelogram law of forces, Components of a force in given directions, Resolved parts of a force, Resultant of any number of coplanar concurrent forces, Equilibrium conditions for coplanar concurrent forces, equilbrium of a body resting on a smooth inclined plane. Equilibrium of three forces acting at a point – Triangle law of forces, $\lambda - \mu$ theorem, Lami's theorem. Parallel Forces.

Unit-II

Moments and Couples – Moment of a force about a point and a line, Centre of Parallel forces, theorems on moment of a couple, Equivalent couples, Varignon's theorem, generalized theorem of moments, resultant of a force and a couple, resolution of a force into a force and a couple, reduction of a system of coplanar forces to a force and a couple. Equilibrium conditions for any number of coplanar non-concurrent forces.

Friction: Definition and nature of friction, laws of friction, equilibrium of a particle on a rough plane, Problems on ladders, rods, spheres and circles.

References

1. S.L. Loney : Statics, Macmillan and Company, London.
2. R.S. Verma : A Text Book on Statics, Pothishala Pvt. Ltd., Allahabad.
3. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics, S. Chand and Company
4. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.

MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

Paper I: ADVANCED CALCULUS II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Definition of a sequence, Bounds of a sequence, Convergent, divergent and oscillatory sequences, Algebra of limits, Monotonic Sequences, Cauchy's theorems on limits, Subsequences, Bolzano-Weirstrass Theorem, Cauchy's convergence criterion.

Sequential continuity and Uniform continuity of functions of single variable.

Unit-II

Series of non-negative terms, P-Test, Comparison tests, Cauchy's integral test, Cauchy's Root test, Ratio tests, Kummer's Test, D'Alembert's test, Raabe's test, De Morgan and Bertrand's test, Gauss Test, Logarithmic test, Alternating series, Leibnitz's theorem, Absolute and conditional convergence, Rearrangement of absolutely convergent series, Riemann's rearrangement theorem.

References

1. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi 1997.
2. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi 2000.
3. J. D. Murray & M.R. Spiegel : Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
4. S.C.Malik : Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
5. O.E.Stanaitis : An Introduction to Sequences, Series and Improper Integrals, Holden – Dey, Inc., San Francisco, California.
6. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.
7. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper II : DIFFERENTIAL EQUATIONS- II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Series solution of differential equations-Power Series method, Bessel and Legendre equations.

Bessel functions of First and Second kind. Legendre function. Generating function. Recurrence relation and orthogonality of Bessel and Legendre function.

Partial Differential Equations: Origin of first order Partial Differential Equations, Linear Equation of first order, Integral surfaces passing through a given curve, surfaces orthogonal to a given system of surfaces.

Unit-II

Inverse Laplace transforms- Linearity property, Shifting properties, Change of Scale Property. Inverse Laplace transforms of derivatives and integrals, Convolution theorem.

Applications of Laplace Transforms - Solution of differential equations with constant coefficients, Solution of differential equations with variable coefficients, Solution of simultaneous differential equations.

Laplace Transformation-Linearity of the Laplace transformation. Existence theorem for Laplace transformations, Shifting Theorems, Laplace transforms of derivatives and integrals, Multiplication of t^n, Division by t.

References

1. Erwin Kreyszig : Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2. D.A. Murray : Introductory Course on Differential Equations, Orient Longmen, (India) 1967.
3. A.R. Forsyth : A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4. Sneddon, I.N. : Elements of Partial Differential Equations, McGraw Hill, 1957.
5. J. D. Murray & M. R. Spiegel : Schaum Series, Laplace Transforms.
6. Ross, S.L. : Differential Equations, John Willey & Sons, 2004.

Paper III : DYNAMICS

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

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Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.

3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.

4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Motion of a particle with constant acceleration, acceleration of falling bodies, motion under gravity, motion of a body projected vertically upwards: Newton's Laws of Motion, Motion of two particles connected by a string, motion along a smooth inclined plane, constrained motion along a smooth inclined plane. Variable acceleration: Simple harmonic motion, elastic string.

Unit-II

Curvilinear motion of a particle in a plane: Definition of velocity and acceleration, projectiles, motion in a circle.

Work, power, conservative fields and the potential energy, work done against gravity, potential energy of a gravitational field.

Relative motion, relative displacement, velocity and acceleration, motion relative to a rotating frame of reference.

Linear momentum, angular momentum, conservation of angular momentum, impulsive forces, principle of impulse and momentum, motion with respect to centre of mass of a system of particles, collisions of elastic bodies, loss of energy during impact.

References

1.	S.L. Loney	:	An Elementary Treatise on the Dynamics of a Particle and of Rigid bodies, Cambridge University Press, 1956.
2.	K.R.Chaudhery and A.C.Aggarwal	:	Elements of Mechanics, Statics and Dynamics. S Chand and Company
3.	S. L. Loney	:	The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.
4.	Donald T. GreenWood	:	Principles of Dynamics, Second Edition, Prentice Hall of India.
5.	M . Ray	:	A Text Book on Dynamics , S. Chand and Company- 1989

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COMPUTER SCIENCE
SEMESTER-III

SCHEME OF EXAMINATION

THIRD SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS05	**Theory-A**	**Computer Organization**	**3**	**30**	**5**	**35**
Paper –CS06	**Theory-B**	**Object Oriented Programming using (C++)**	**3**	**30**	**5**	**35**
Paper – PCS03	**Practical-C**	**Practical Based on Paper – CS06**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS05 : Computer Organization

Objective : To teach the students the basics of computer organization, Microprocessor & basic know how about system maintenance.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Representation of Information : Number system: Binary, Decimal, Hexadecimal, Octal; Conversions; integer and floating point representation, character codes (ASCII, EBCDIC), error detection and correction codes: Parity bit method, Hamming code; Boolean algebra.

UNIT – II

*Basic Building Blocks :*Combinatorial logic design : Gates, Half Adder, Full Adder, Encoder, Decoder, Multiplexer : Sequential Building Block : Flip-Flops, Registers, Counters: Synchronous and Asynchronous Counters, Bus.

Microinstructions : Register Transfer, Arithmetic, Logical and Shift Operations; Instruction : Instruction Format, Instruction Cycle; Interrrupt: Interrupt types, Interrupt Cycle.

UNIT – III

Micrprocessor : Architecture of 8086/8088 Processor Model; Instruction Set; Addressing Modes: Registgers used in Mircoprocessor.

Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/Output.

UNIT – IV

System Maintenance : Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, types of displays and other peripheral devices, installing software; Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection of Viruses, Protection from Viruses.

Suggested Readings :

Essential :

1. Mano, M.M. : *Computer System Architecture,* 3rd Ed., Dec., 1998, PHI.

Further Reading :

2. Tannenbaum, A.S. : *Structured Computer Organization,* 3rd Ed., Oct., 1993, PHI.

3. Gear, C.W. : *Computer Organisation and Programming,* McGraw Hill, 1975.

4. Langholz, G., Grancioni, J. & Kandel, A. : *Elements of Computer Organization,* Prentice Hall International, 1988.

5. Hayes : *Computer Architecture and Organization,* McGraw Hill, International Edition.

6. Sloan, M.E. : *Computer Hardware and Organization,* 2nd Edition, Galgotia Pvt. Ltd.

Paper-CS06 : Object Oriented Programming (using C++)

Objective : To teach the students the implementation of various object oriented programming concepts through C++ programming

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts of Object Oriented Programming(OOP) : Object, Class, Encapsulation, Data Hiding, Inheritance, Polymorphism. Analysis and design of system using Object Oriented Approach, Benefit of OOPs.

Structure of a C++ Program : Include files, Declaration of class, Main function, I/O streams.

Classes : Class Declaration : Data Members, Member Functions, Private and Public members, data hiding and encapsulation, arrays within a class.

Objects : Creating Objects, Accessing class data members, Accessing member functions, Methods of passing arguments to functions.

UNIT – II

Object Concepts: Arrays of Objects, Objects as function arguments: Pass by value, Pass by Reference, Pointers to Objects.

Functions in C++ : Member function definition inside the class declaration and outside the class declaration, scope resolution operator, Private and Public member function, Nesting of member functions, Static and Friend functions.

UNIT – III

Constructors and Destructors: Constructors: Declaration and Definition, Default Constructors, Parameterized Constructors, Copy Constructors. *Destructors*: Definition and use.

Inheritance – Extending Classes : Concept of inheritance, base class, derived class, defining derived classes, visibility modes, private, public, protected; single inheritance : privately derived, publicly derived; making a protected member inheritable, access control to private and protected members by member functions of a derived class, multilevel inheritance, nesting of classes.

UNIT – IV

Polymorphism : Definition, types, Function overloading, Operator Overloading, Virtual functions and pure virtual functions.

Suggested Readings :

Essential :

1. Stroustrup : ***The C ++ Programming Language,*** **Addison Wesley.**
2. E. Balaguruswamy : ***Object Oriented Programming with C++,*** **TMH.**

Further Reading :

3. Robert Lafore : ***OOP in Turbo C++,*** **Galgotia.**
4. Herbert Schildt : ***Schildt's Advanced Win 95 Prog. in C & C++,*** **TMH.**
5. Herbert Schildt : ***C++ The Complete Reference,*** **TMH.**

Paper – PCS03 : Practical Based on Paper CS06

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COMPUTER SCIENCE
SEMESTER-IV

SCHEME OF EXAMINATION

FOURTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS07	**Theory-A**	**Database Concepts**	**3**	**30**	**5**	**35**
Paper –CS08	**Theory-B**	**Data Structures**	**3**	**30**	**5**	**35**
Paper – PCS04	**Practical-C**	**Practical Based on Paper – CS08**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS07: Database Concepts

Objective : To teach the underlying concepts of database system in depth to students.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach; Data Independence.

UNIT – II

Relational Data Model: Relational model concepts, Integrity constraints over Relations, Conventional Data Models : An overview of Network and Hierarchical Data Models. The 12 Rules (Codd's Rule) for an RDBMS; Entity Relationship model.

UNIT – III

Relational Algebra and Calculus: Storage Organization for Relations, Relational Algebra: Operations - union, intersection, difference, Cartesian product, projection, selection, division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

UNIT – IV

Advance concepts: Client-Server Architecture, 3-tier Architecture of database, Distributed databases, Normalization: First, second and third Normal Form, Boyce Codd Normal Form; Database Integrity: entity and referential; Security: , Concurrency, Recovery

Suggested Reading

Essential :

1. Date, C.J., 1981 : *An Introduction to Data Base Systems,* Vols. I and II, Addison-Wesley.

Further Readings

2. Ullman, Jeffrey D., : *Principles of Data Base Systems,* 2nd Edition, Galgotia Publ. Pvt. Ltd. 1982.
3. Whittington, R.P. : *Data Base System Engineering,* Clavendon Press.
4. Pratt, P., 1987 : *Data Base Systems Management and Design,* Boyd and Fraser Publ.
Comp.

Paper-CS08 : Data Structures

Objective : To teach the students various data structures and operations performed on them using algorithms. The students will be capable to implement these operations using any programming language.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures; **Arrays**: Introduction, Types of Array, Memory representation, Applications and operations. **Stacks**: Introduction, memory representation, Applications and operations

UNIT – II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation; **Queue**: Introduction, Types, Memory Representation and Applications.

UNIT – III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Binary Search tree; **Graphs**: Introduction, Memory Representation, Graph Traversal (DFS and BFS)

UNIT – IV

Searching: Binary and Linear Search; **Sorting**: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Readings :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.

Paper – PCS04 : Practical Based on Paper CS08 – Implement Data Structures Operations using C / C++.

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STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Note :

1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers with codes 201 and 202 in the subject of Statistics in B.A./B.Sc. 3rd Semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (of 45 minutes each) for theory per week and 4 lectures (of 45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper–201 : STATISTICAL INFERENCE

Max. Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time Allowed	**:**	**3 hours**

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

Unit-I

Concept of a statistic and its sampling distribution. Point estimate of a parameter, concept of unbiasedness, consistency, efficiency and sufficiency (only the definitions and examples). Maximum likelihood estimation (standard distributions). Standard errors of sample mean and sample proportion. Sampling distribution of sum of independent Binomial and Poisson random variables. Independence of sample mean and variance in random sampling from a Normal distribution (without derivation).

Statements and sampling distributions of chi-square, t & F distributions and their relationships.

Unit-II

Statistical Tests and Interval Estimation : Null and alternative hypothesis, two types of errors, level of significance and p-value. Testing for the mean and variance of a normal distribution, testing of equality of means and variances of two univariate normal distributions, and their related confidence intervals. Testing the significance of sample correlation coefficient.

Large Sample Tests : Use of central limit theorem for testing and interval estimation of a single mean and a single proportion, difference of two means and two proportions. Fisher's Z-transformation and its uses. Chi-square test for goodness of fit and testing of independence of attributes, Yates' correction.

References :

1. Goon, A.M., Gupta, M.K., Dass Gupta, B. (2005) : Fundamentals of Statistics, Vol. I, World Press, Calcutta.
2. Miller, I. and Miller, M. (2002) : John E. Freund's Mathematical Statistics (6^{th} Edition, Low Price Edition), Prentice Hall of India.

Additional References :

1. Mood, A.M., Graybill, F.A. and Boes, D.C. (1974) : Introduction to the Theory of Statistics, McGraw Hill.
2. Bhat, B.R., Srivenkatramana, T and Rao Madhava, K.S. (1997) : Statistics : A Beginner's Text, Vol. I, New Age International (P.) Ltd.
3. Snedecor, G.W. and Cochran W.G. (1967) : Statistical Methods. lowa State University Press.
4. Spiegel, M.R. Stephens, LJ. And Kumar N. (2010) : Schaum's outlines Statistics, (4^{th} edition) Tata McGraw Hill Education Private Limited

Paper-202: PRACTICAL (Semester-III)

Maximum Marks : 25
Time allowed : 3 hours

(Viva-Voce : 5 marks; Record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks in three hours' duration.

1. Drawing random samples from standard distributions : Uniform, Exponential and Normal.
2. Tests of significance based on t, chi-square and F for one sample, two samples and paired sample problems; significance of correlation coefficient. Use of Z-Transformation for testing $p = p_0$.
3. Large sample tests for means and proportions, tests of goodness of fit and independence of attributes in contingency tables.
4. Confidence intervals for one and two sample problems (mean, variance and proportion).

STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-IV

Note :

1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer this subject in B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers code named 203 and 204 in the subject of Statistics in B.A./B.Sc. 4th Semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper–203 : SAMPLE SURVEYS, DESIGN AND ANALYSIS OF EXPERIMENTS

Max. Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time Allowed	**:**	**3 hours**

Objective: The objective of this course is to acquaint the students about the need & merits of sampling over census and the implementation of various sampling schemes along with their merits, demerits and comparisons in appropriate practical situations. The students will get exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

Unit-I

Concepts of population and sample, need for sampling, census and sample surveys, basic concepts in sampling. Sample selection and sample size. Sampling and non-sampling errors.

Some basic sampling methods for estimation of population mean, variance and standard error of estimates : Simple Random Sampling (SRS) with and without replacement, stratified random sampling under various allocations and systematic sampling.

Unit-II

Linear Models : Concepts of fixed effect, random effect and mixed effect models. Analysis of variance for one-way, two-way (with one observation per cell and with multiple but equal observations per cell) classifications under the fixed effect models.

Need for design of experiment, three fundamental principles of design, basic designs—CRD, RBD, LSD and their analysis.

References:

1. Goon, A.M., Gupta, M.K., Das Gupta, B. (2005). : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Singh, D. and Chaudhary, F.S. (1986). : Theory and Analysis of Sample Survey Designs, John Wiley and sons.

Additional References:

1. Sukhatme, B.V. (1984) : Sample Survey Methods and Its Applications, Indian Society of Agricultural Statistics.
2. Murthy, M.N. (1967) : Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
3. Sampath, S. (2000) : Sampling Theory and Methods, Narosa Publishing House.
4. Dass, M.N. and Giri (1986) : Design and Analysis of Experiments, Springer Verlag.
5. Cochran, W.G. and Cox, G.M. (1992) : Experimental Designs, John Wiley and Sons.
6. Montgomery, D. C. (2000) : Design and Analysis of Experiment John Wiley, New York.

Paper-204: PRACTICAL (Semester-IV)

Maximum Marks : 25
Time allowed : 3 hours

(Viva-Voce : 5 marks; Record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks in three hours duration.

1. Selection of sample and determination of sample size : Simple Random Sampling (SRS), stratified SRS, allocation problems in stratified SRS and systematic sampling.
2. Analysis of variance for one-way and two-way classifications. Analysis of CRD, RBD and LSD.

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APPLIED STATISTICS

SEMESTER-III

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 201AS in B.A./B.Sc. Semester-III having a total of 100 marks.
4. 9 lectures of 45 minutes each per week shall be allotted for the teaching.

Paper-201AS : MATHEMATICAL METHODS-II

Max. Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 Hours**

Objective: The objective of the course is t provide an exposure to the Coordinate Geometry of three dimensions, Calculus of several variables and theory of Matrics.

Note : There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.

Unit-I

Coordinate Geometry of 3 Dimensions : Cartesian, spherical coordinates, equations of line, plane, sphere and ellipsoid.

Matrices and Linear Algebra : Determinants, algebra of matrices, rank of a matrix, inverse of a matrix, symmetric matrices (upto 4×4 matrices only).

Unit-II

Matrices and Linear Algebra : Systems of Linear equations and their solutions.

Calculus of Several Variables : Functions of two variables, Partial derivatives and double integrals. Applications to evaluation of area.

Books Prescribed :

1. Ayres, F. (1999) : First Year College Mathematics, Schaum Series, Mc Graw Hill, New York.

2. Ayres, F. (1980) : Matrices, Schaum Series, Mc Graw Hill, New York.

Books Suggested for Supplementary Reading :

1. Kindle, J.H. (1990) : Analytical Geometry, Schaum Series, Mc Graw Hill, New York.

2. Ayres, F. (1999) : Calculus, Schaum Series, Mc Graw Hill, New York.

3. Spiegel, M.R. (2002) : Advanced Calculus, Schaum Series, Mc Graw Hill, New York.

APPLIED STATISTICS

SEMESTER-IV

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 202AS in the subject of Applied Statistics in B.A./B.Sc. Semester-IV having a total of 100 marks.
4. 9 lectures of 45 minutes each per week shall be allotted for the teaching.

Paper-202AS : STATISTICAL METHODS

Max. Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 Hours**

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach.

Notes :
1. There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

Unit-I

Compilation, classification, tabulation and diagrammatic representation of statistical data. Concepts of Statistical population, random sample and frequency curve, measures of location, dispersion, skewness and kurtosis.

Two dimensional random variable, joint probability distributions, marginal and conditional probability distributions, conditional expectation, covariance and correlation coefficient.

Unit-II

Measures of association and contingency, correlation and linear-regression involving two variables. Bivariate normal distributions.

Statement of weak law of large numbers and central limit theorem for independent and identical random variables. Sampling distributions of means, chi-square, t and F in sampling from normal populations (without proof).

Books Recommended :

1. Goon, A.M., Gupta, M.K. and Dasgupta, B. (2005) : Fundamentals of Statistics, Vol.1 Chapter 1 to 6, 9, 10, 13 (only the relevant portion from these chapters as suggested by the body of the syllabus).

2. Meyer, P.L. (1971) : Introductory Probability and Statistical Applications, Addison Wesley. American Pub. Co.

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PHYSICS

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2017-18

General Instructions for teachers, students and paper setters:

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal Assessment. **The Practical examination is of 50 marks including 5(Five) marks for the Internal assessment and will be held along with the fourth semester examination.**

2. The number of lectures per week will be three for each theory paper and six for practicals.

3. The examination time for each theory paper as well as practical paper will be three hours.

4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory questions. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – I	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –I	Total Teaching hrs. 30
Paper C	:	Quantum Physics-I	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-I (30 Hrs.)

UNIT-I

Basic ideas of Statistical Physics, Scope of Statistical Physics, basic ideas about probability, distribution of four distinguishable particles in two compartments of equal size. Concept of macrostates, microstates, thermodynamic probability, effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability, equilibrium state of dynamic system, distribution of distinguishable n particles in k compartments of unequal sizes.

UNIT-II

Phase space and its division into elementary cells, three kinds of statistics. The basic approach in the three statistics. Maxwell-Boltzman statistics applied to an ideal gas in equilibrium, experimental verification of Maxwell-Boltzman's law of distribution of molecular speeds.
Need of quantum statistics--B.E. statistics, derivation of Planck's law of radiation, deduction of Wien's displacement law and Stefan's law from Planck's law, F.D. statistics, Comparison of M.B., B.E. and F.D. statistics.

Books Suggested :

Essential Readings :

1. "*Statistical Physics and Thermodynamics*", V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar).
2. "*A Treatise on Heat*" Saha and Srivastava (Indian Press, Ahmedabad, 1972).

Further Readings:

1. *Thermal Physics* by C. Kittel & H. Kroemer, CBS Pub., 1987.
2. *Thermal Physics*, S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-I **(30 Hrs.)**

UNIT-I

Interference : Concept of coherence, spatial and temporal coherence, coherence time, coherence length, area of coherence. Conditions for observing interference fringes. Interference by wavefront division and amplitude division. Young's double slit experiment. Lloyd's mirror and Fresnel's biprism, phase change on reflection. Newton's rings,Michelson interferometer—working, principle and nature of fringes. Interference in thin films, Role of interference in anti-reflection. Multiple beam interference, Fabry-Perot interferometer, nature of fringes, finesse.

UNIT-II

Diffraction : Huygen-Fresnal theory half period zones, zone plates. Distinction between Fresnel and Fraunhofer diffraction. Fraunhofer diffraction due to single slit and intensity distribution,double slits & multiple slits(qualitative). Fraunhofer diffraction at rectangular (qualitative discussion)and circular apertures. Effects of diffraction in optical imaging, resolving power of microscope and telescope, diffraction grating, its use as a spectroscopic element, resolving power, Moire's fringes.

Polarization : Concept and analytical treatment of unpolarised, plane polarized and elliptically polarized light. Double refraction, Nicol prism, sheet polarisers, retardation plates. Production and analysis of polarized light (quarter and half wave plates).

Books Suggested :

Essential Readings:

1. *Optics*, Jenkins and White, McGraw Hill.
2. *Optics*, Ajoy Ghatak, McMillan India.
3. *Physics for Degree Students,* C. L. Arora and P .S. Hemne, S. Chand & Co., 2014.

Further Readings:

1. *Optics*, Born and Wolf, Pergamon.

Paper-C : QUANTUM PHYSICS-I (30 Hrs.)

UNIT-I

Formalism of Wave Mechanics :

(i) Plancks's formula of Black body radiation and energy quantization,
Wave-particle duality – Photoelectric effect, X-ray diffraction, Compton effect, Pair production, Photon and gravity.
De Brogile waves, wave packet, Phase velocity and Group velocity, Electron microscope, Particle in a box, Particle diffraction, Davisson-Germer experiment, Interferferometry with particles.
Uncertainty principle with illustrations, Principle of complementarity. (Chapters 2 and 3 of book 1 or Chapters 1-3 of book 2)

(ii) Quantum mechanics, Wave equation, Plausible arguments leading to time-dependent Schrodinger equations, Born's interpretation of Wave function, complex character, continuity and boundary conditions, probability interpretation, normalization, Probabilty current, Probability conservation equation, Principle of superposition.

(iii) Fundamental postulates of quantum mechanics. Eigenvalues and eigenfunctions. Operator formalism, Position, momentum and energy operators, expectation values, Ehrenfest theorem, Hermitian operators.

(Chapter 5 of book 1 and book 2)

UNIT-II

Problems in One and Three Dimensions :

(h) Steady-state Schrodinger equation, Appliction to stationary states for one dimension, Potential step. potential barrier, Tunnel effect examples, Scanning Tunneling microscope, rectangular potential well, Linear harmonic oscillator.

(Chapter 5 of book 1 and book 2)

(ii) Schrödinger equation for spherically symmetric potential, spherical harmonics, hydrogen atom energy levels and eigenfunctions, Principal, Orbital and Magnetic quantum numbers, Electron probability density.

(Chapter 6 of book 1 and book 2)

Books Suggested :

Essential Readings :

1. *Concept of Modern Physics, A. Beiser, S. Mahajan and S. R. Choudhury, Tata McGraw Hill, 6th Edition.*
2. *Quantum Physics of Atoms, Molecular, R. Eisberg & R.Resnick, Second Edition, John Wiley, 2002.*
3. *Physics for Degree Students, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014*

Further Readings :

1. *Modern Physics,* J. Bernstein, P.M. Fishbane, S.G. Gasiorowicz, Pearson, 2000.
2. *Elements of Modern Physics*, S.H. Patil, McGraw Hill, 1998.
3. *Quantum Mechanics*, E. Merzbacaher, II Ed., John Wiley.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II .The Practical examination will be held along with the fourth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment,fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

UNIT-I

A. Statistical Physics and Thermodynamics :

I. To study adiabatic expansion of a gas.

II. To measure thermal expansion of crystal using interference fringes.

III. To measure thermal conductivity in poor conductor by Lee's method.

IV. Thermo emf calibration, comparison.

V. Total radiation law, temperature dependence of radiation.

VI. To study Probability distribution using coloured dice, coins.

B. Optics and Lasers :

VII. To determine the refractive index of a liquid using spectrometer.

VIII. To determine the Cauchy's constants.

IX. To study the refractive index of a doubly refracting prism.

X. Study of rotation of plane of polarization with a polarimeter.

XI. To determine the wave length of a given light using biprism.

Exercises :

1. To measure the thermo e.m.f.
2. To determine the heating efficiency of an electric kettle with varying voltages.
3. To measure the angle of rotation of plane of polarization for the given liquid.
4. To determine the least count and setup the spectrometer for minimum deviation position of the prism.

Computer Based Activities : Elementary C language programs.

1. Motion of particle in a central force field.
2. Calculation of days between two dates of a year.
3. To check if triangle exists and the type of the triangle.

UNIT-II

C. Optics and Lasers :

I. To determine the wave length and dispersive power using plane diffraction grating (use Hg source).

II. To determine the resolving power of a telescope.

III. To determine the resolving power of a grating.

IV. Set up Newton's rings to determine wave length of sodium light.

V. To measure an inaccessible height using sextant.

VI. To determine the principal points of a lens system.

VII. To determine the divergence and wave length of a given laser source.

D. Quantum Physics:

VIII. To study the Photoelectric effect and determine the value of Planck's constant.

IX. To study the gas discharge spectrum of hydrogen.

X. To study the absorption spectra of iodine vapours.

XI. To determine the ionization potential of mercury.

Exercises :

1. To measure the diameter of Newton's rings.
2. Study of variation of light intensity using photovoltaic cell/inverse square law.
3. To determine the angle of wedge using interference method.
4. To measure the angle of elevation of a tall building.

Computer Based Activities : Elementary C language programs.

1. To find the sum of the sine and cosine series and print out the curve.
2. To find Sum and Product of Matrices
3. Motion of a projectile using computer simulation.

Text and Reference Books :

1. *A Laboratory Manual of Physics for Undergraduate Classes,* D.P. Khandelwal.
2. *B.Sc. Practical Physics, C.L.* Arora (S. Chand) & Co. (2014)
3. *Numerical Analysis* by C. Dixon.
4. *Programming with C, Schaum series* by Byron Gottfried & Jitender Chhabra.

PHYSICS

SEMESTER – IV

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – II	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –II	Total Teaching hrs. 30
Paper C	:	Quantum Physics-II	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-II (30 Hrs.)

UNIT-I

Statistical definition of entropy, change of entropy of a system, additive nature of entropy, law of increase of entropy, reversible and irreversible processes with examples. Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder.
Brief review of the terms and Laws of Thermodynamics, Carnot's Cycle. Entropy changes in Carnot's Cycle. Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path in a P.V. diagram, entropy of a perfect gas. Equation of state of ideal gas from simple statistical consideration. Heat death of the universe.

UNIT-II

Derivation of Maxwell's thermodynamical relations and applications, cooling produced by adiabatic stretching, adiabatic compression, change of internal energy with volume. Expression for (C_p-C_v), change of state and Clayperon Equation. Thermodynamical treatment of Joule-Thomson effect. Use of Joule-Thomson effect for liquification of helium. Production of very low temperature by adiabatic demagnetisation.

Books Suggested :

Essential Readings:

1. *"Statistical Physics and Thermodynamics",* V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar)
2. *"A Treatise on Heat"* Saha and Srivastava (Indian Press, Ahmedabad, 1972.)

Further Readings :

1. *Thermal Physics by C.* Kittel & H. Kroemer, CBS Pub., 1987
2. *Thermal Physics,* S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-II **(30 Hrs.)**

UNIT-I

Laser Fundamentals :

Interacation of light with matter : Absorption, spontaneous emission, stimulated emission, Wave mechanical explanation, Properties of Spectral Lines, Temporal and spatial coherence, Charatertistics of stimulated emission, Einstein coefficients and their relations, Light amplification and threshold condition ,Population inversion, Kinetics of optical absorption (qualitative account only), Qualitative account of Collisional broadening, Doppler broadening & Natural broadening, Mechanism of Luminescence.

Lasing action, Components of Laser, Elementary theory of optical cavity, longitudinal and transverse modes, Principal pumping schemes, Three level and four level laser schemes.

UNIT-II

Laser Systems : Types of lasers, Ruby and Nd : YAG lasers. He–Ne, N_2, Dye and CO_2 lasers – construction, mode of creating population inversion and output characteristics.

Applications of lasers—a general outline, Holography. Principle, recording of hologram and reconstruction of image.

Fiber Optics : Photonics, Optical fibre, Construction, Numerical aperture, acceptance angle, skip distance, Step index fibre – single mode and multimode, Graded index fibre, Losses in optical fibre, Material losses and Rayleigh scattering, bending losses, Intermodal and intramodal dispersion.

Splicing techniques, Optical fibre based communication system, Medical applications, Displacement sensor temperature sensor, force sensor, Humidity sensor.

Books Suggested :

Essential Readings :

1. *Laser Fundamentals,* W.T. Silfvast, Foundation Books.
2. *Lasers and Non-linear Optics,* B.B. Laud, Wiley Eastern Limited.
3. *A text book of Optics,* Subtahmanyam N., Lal B. and Avadhanulu, M. N., S. Chand & Co., 2012.
4. *Optical Fiber Communication,* Keiser, MH.

Further Readings :

1. *Lasers,* Svelto Pergmon.

Paper-C : QUANTUM PHYSICS-II (30 Hrs.)

UNIT-I

Radiative transitions, selection rules and life times,
Spectrum of hydrogen atom.
Normal Neeman effect and experiment, Degeneracy of H-atom energy levels, fine structure, Electron angular momentum, Larmor's frequency, electron spin angular momentum, Exclusive principle, Stern-Gerlach experiment, spin-orbit coupling, electron magnetic moment, total angular momentum, Hyperfine structure, examples of one electron systems, Anomalous Zeeman effect, Lande-g factor (sodium D-lines). Paschen-Back Effect, Stark Effect.

(Chapters 6 & 7 of Book 1, Chapters 8-10 of Book 2)

UNIT-II

Symmetric and Antisymmetric wave functions, exclusion principle, Many electron atoms, Slater determinant, Electronic configurations, Hund's rule, Spin-Orbit coupling, L-S coupling, J-J couplings, term symbols. Atomic spectra of H, Na, He and Hg, selection rules.

X-ray spectra, nomenclature, Selection rules, Mosley law, Auger effect.

Molecular bonding, H_2^+ ion afnd H_2 molecules, Complex molecules, molecular spectra, selection rules, symmetric structures, rotational vibrational levels and spectra of diatomic molecules,vibration-rotation spectra, electronic spectra of molecules, Franck Condon principle, fluorescence and phosphorescence, Raman Effect, Magnetic resonance experiments.

(Chapters 7 & 8 of Book 1, Chapter 12 of Book 2)

Books Suggested :

Essential Readings :

1. *Concepts of Modern Physics,* A. Beiser, S. Mahajan and S. R. Choudhary, Tata McGraw Hill, 6th Edition.
2. *Quantum Physics of Atoms, Molecular,* R. Eisberg & R. Resnick, Second Edition, John Wiley, 2002.
3. *Physics for Degree Students,* C.L. Arora and P.S. Hemne, S.Chand & Co., 2014.
4. *Elements of Modern Physics,* S.H. Patil, McGraw Hill, 1998.

Further Readings :

1. *Fundamentals of Molecular Spectroscopy,* C.N . Banwell, T.M.H., 1972
2. *Atomic and Molecular Spectra*, Rajkumar (Kedarnath Ramnath Prakashan, Meerut).
3. *Atomic Spectra,* H.G. Kuhn, Academic Press, N.Y.

PHYSICS PRACTICALS

The Practical examination will be held along with the fourth semester examinations. General Guielines for Physics Practical Examinations and syllabus is given in syllabus for Semester III.

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CHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

Scheme of Teaching and Examination

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Total Marks

SEMESTER-III- 100

SEMESTER-IV- 100

200

CHEMISTRY

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-IX: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Chemistry of Elements of First Transition Series:
Characteristic properties of *d*-block elements.

Properties of the elements of the first transition series, their simple compounds and complexes, illustrating relative stability of their oxidation states, coordination number and geometry.

UNIT-II **(7 Hrs.)**

Chemistry of Elements of Second and Third Transition Series:
General characteristics, comparative treatment with their 3*d*-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and stereochemistry.

UNIT-III **(8 Hrs.)**

Chemistry of Coordination Compounds-I
Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds

UNIT-IV **(7 Hrs.)**

Chemistry of Coordination Compounds-II
Valence bond theory of transition metal complexes. Properties of Coordination compounds i.e. magenetic properties, colours (Qualitative approach only), use of coordination compounds.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-X: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Alcohols and Phenols:

Classification and nomenclature

Monohydric alcohols-Nomenclature, methods of formation by reduction of aldehydes, ketones, carboxylic acids and esters. Hydrogen bonding. Acidic nature. Reactions of alcohols. Dihydric and Trihydric alcohols-Nomenclature, methods of formation, chemical reactions of vicinal glycols and glycerol.

Preparation of phenols, physical properties and acidic character. Comparative acidic strengths of alcohols and phenols, resonance stabilization of phenoxide ion. Reactions of phenols-electrophilic aromatic substitution, acylation and carboxylation. Mechanisms of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, and Reimer-Tiemann reaction.

UNIT-II **(8 Hrs.)**

Aldehydes and Ketones I

Nomenclature and structure of the carbonyl group. Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids. Physical properties.

UNIT-III **(7 Hrs.)**

Aldehydes and Ketones-II

Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol, Perkin and Knoevenagel condensations. Condensation with ammonia and its derivatives. Wittig reaction, Mannich reaction.

Use of acetals as protecting group. Oxidation of aldehydes, Baeyer-Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen, Wolff-Kishner, $LiAlH_4$ and $NaBH_4$ reductions.

UNIT-IV

Carboxylic Acids: **(7 Hrs.)**

Nomenclature, structure and bonding, physical properties, acidity of carboxylic acids, effects of substitutions on acid strength. Preparations of carboxylic acids. Reactions of carboxylic acids. Hell-Volhard-Zelinsky reaction. Synthesis of acid chlorides, esters and amides, Reduction of carboxylic acids. Mechanism of decarboxylation. Methods of formation and chemical reactions of halo acids. Hydroxyl acids: Malic, tartaric and citric acids(structural features only).

Methods of formation and chemical reactions of unsaturated monocarboxylic acids.

Dicarboxylic acids: Methods of formation and effects of heat and hydrating agents.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.
4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XI: PHYSICAL CHEMISTRY-A

Time : 3 Hrs.
Max. Marks:22+3
60 Hrs. (2 Hrs./Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Liquid State:
Intermolecular forces, structure of liquids (a qualitative description).
Structural differences between solids, liquids and gases.
Liquid Crystals : Difference between liquid crystal, solid and liquid. Classification, structure of nematic and cholestric phases. Thermography and seven segment cell.

UNIT-II **(7 Hrs.)**

Chemical Equilibrium:
Equilibrium constant and free energy. Thermodynamic derivation of law of mass of mass action. Le - Chatelier's principle.
Reaction isotherm and Reaction isochore-Clapeyron equation and Clausius –Clapeyron equation, applications.

UNIT-III **(8 Hrs.)**

Thermodynamics-II:
Second Law of Thermodynamics: Need for the law, different statements of the law, Carnot cycle and its efficiency, Carnot theorem. Thermodynamic scale of temperature.

Concept of Entropy: Entropy as a state function, entropy as a function of V & T, entropy as a function of P & T, entropy change in physical change, Clausius inequality, entropy as a criteria of spontaneity and equilibrium. Entropy change in ideal gases and mixing of gases.

UNIT-IV (7 Hrs.)

Thermodynamics-III:

Third Law of Thermodynamics: Nernst heat theorem, statement and concept of residual entropy, evaluation of absolute entropy from heat capacity data. Gibbs and Helmholtz functions; Gibbs function (G) and Helmholtz functions (A) as thermodynamic quantities, A & G as criteria for thermodynamic equilibrium and spontaneity, their advantage over entropy change. Variation of G and A with P, V and T.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XII: LABORATORY PRACTICALS

Max. Marks:22+3

Inorganic Chemistry **6 Periods/week**

Quantitative Analysis

Volumetric Analysis:

a) Estimation of calcium content in chalk as calcium oxalate by permanganometry.
b) Estimation of hardness of water by EDTA.
c) Estimation of ferrous and ferric by dichromate method.
d) Estimation of copper using sodium thiosulphate

Gravimetric Analysis

Analysis of Cu as CuSCN and Ni as Ni (dimethylgyoxime)$_2$.

Physical Chemistry

Thermochemistry:

a) To determine the solubility of benzoic acid at different temperatures and to determine ΔH of the dissolution process.
b) To determine the enthalpy of neutralization of a weak acid/weak base versus strong base/strong acid and determine the enthalpy of ionization of the weak acid/weak base. pH of a Buffer solution, Determination of ionization constant of a weak acid.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Inorganic Chemistry	: 09 marks
Q.No. II. Physical Chemistry	: 06 marks
Q.No. III. Viva-Voce	: 04 marks
Ask four questions (2 marks each) related to chemistry practicals.	
Q.No. IV. Note Book	: 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs:Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R. Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

CHEMISTRY

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-XIII: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Chemistry of Lanthanide Elements:
Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

Chemistry of Actinides:
General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from U, similarities between the later actinides and the later lanthanides.

UNIT-II (7 Hrs.)

Acids and Bases:
Arrhenius, Bronsted-Lowry, the Lux-Flood, solvent system and Lewis concepts of acids and bases.

UNIT-III (8 Hrs.)

Oxidation and Reduction:
Use of redox potential data – analysis of redox cycle, redox stability in water – Frost, Latimer and Pourbaix diagrams. Principles involved in the extraction of the elements.

UNIT-IV (7 Hrs.)

Non-aqueous Solvents:
Physical properties of a solvent, types of solvents and their general characteristics, reactions in non-aqueous solvents with reference to liquid NH_3 and liquid SO_2.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-XIV: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Carboxylic Acid Derivatives:
Structure and nomenclature of acid chlorides, esters, amides and acid anhydrides. Relative stability & reactivity of acyl derivatives. Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution.

Preparation of carboxylic acid derivatives, chemical reactions. Mechanisms of esterification and hydrolysis (acidic and basic).

UNIT-II (8 Hrs.)

Ethers , Epoxides Fats, Oils and Detergents:
Nomenclature of ether and methods of their formation, physical properties. Chemical reaction-cleavage and autoxidation, Ziesel's method.

Synthesis of epoxides. Acid and base-catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides.

Natural fats, edible and industrial oils of vegetable origin, common fatty acids, glycerides, hydrogenation of unsaturated oils. Saponification value, iodine value, acid value. Soaps, synthetic detergents; alkyl and aryl sulphonates.

UNIT-III (7 Hrs.)

Organic Compounds of Nitrogen:
Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanisms of nucleophilic substitution in nitroarenes and their reductions in acidic, neutral and alkaline media. Picric acid.

Structure and nomenclature of amines, physical properties. Stereochemistry of amines, Separation of a mixture of primary, secondary and tertiary amines. Structural features effecting basicity of amines. Amine salts as phase-transfer catalysis. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel-phthalimide reaction, Hofmann bromamide reaction.

UNIT-IV

Electromagnetic Spectrum: Absorption Spectra –I: (7 Hrs.)

Ultraviolet (UV) absorption spectroscopy – Absorption laws (Beer – Lambert Law), molar absorptivity, presentation and analysis of UV spectra, types of electronic transitions, effect of conjugation. Concept of chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. UV spectra of conjugated enes and enones.

Woodward Fieser Rules and their applications in calculating maximum values of conjugated alkenes (cyclic as well as acyclic) and conjugated carbonyl compounds.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

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Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.
4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XV: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Phase equilibrium:

Statement and meaning of the terms – phase, component and degree of freedom, derivation of Gibbs phase rule, phase equilibria of one component system—water, CO_2 and S systems.

Phase equilibria of two component system –solid –liquid equilibria, simple eutectic – Bi-Cd system, desiliverisation of lead.

Solid solutions—compound formation with congruent melting point (Mg-Zn) and incongruent melting point, ($NaCl-H_2O$) system. Freezing mixtures, acetone-dry ice.

Partially Miscible Liquids –Phenol-water, trimethylamine – water, nicotine –water systems.

Nernst distribution law-thermodynamic derivation, applications.

UNIT-II (7 Hrs.)

Electrochemistry –I:

Electrical transport –Conduction in metals and in electrolyte solutions, specific conductance and equivalent conductance, measurement of equivalent conductance, variation of equivalent and specific conductance with dilution.

Migration of ions and Kohlrausch Law, Arrhennius theory of electrolyte dissociation and its limitations, weak and strong electrolytes, Ostwald's dilution law, its uses and limitations. Debye-Huckel-Onsager's equation for strong electrolytes (elementary treatment only). Transport number, definition and determination by Hittorf method and moving boundary method.

UNIT-III (8 Hrs.)

Electrochemistry-II:

Types of reversible electrodes – gas metal – ion, metal –insoluble salt – anion and redox electrodes. Electrode reactions, Nernst equation, derivation of cell E.M.F. and single electrode potential, standard hydrogen electrode – reference electrodes – standard electrode potential, sign conventions, electrochemical series and its significance.

UNIT-IV **(7 Hrs.)**

Electrolytic and Galvanic cells – reversible and irreversible cells, conventional representation of electrochemical cells.

E.M.F. of a cell and its measurements. Computation of cell E.M.F. Calculation of thermodynamic quantities of cell reactions (ΔG, ΔH and K), Polarization, over potential and hydrogen overvoltage.
Concentration cell with and without transport, liquid junction potential, application of concentration cells, valency of ions, solubility product and activity coefficient, potentiometric titrations.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each..

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XVI LABORATORY PRACTICALS

Max. Marks: 22+3
6 Periods/week

Organic Chemistry

Laboratory Techniques:

a) Determination of R_f values and identification of organic compounds. Separation of isometric mixture of Ortho and paranitroaniline using hexane and ethyl acetate (8.5 : 1.5) by thin layer chromatography.

b) Extraction of caffeine from tea leaves.

Qualitative Analysis:

Detection of elements (N, S and halogens) and functional groups (phenolic, carboxylic, carbonyl, esters, carbohydrates, amines, amides, nitro and anilide), in simple organic compounds.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Organic Chemistry: (analysis of organic compound) : 09 marks
Q.No II. TLC experiment, Extraction of caffeine) : 06 marks
Q.No. III. Viva-Voce : 04 marks
Ask four questions (2 marks each) related to chemistry practicals.
Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs : Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2017-18

Third Semester		**Time**	**Theory**	**Int Assess.**	**Max Marks**
Theory Paper-A:	Diversity of Seed Plants and their Systematics-I	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-I	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Fourth Semester					
Theory Paper-A:	Diversity of Seed Plants and their Systematics-II	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-II	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY
SEMESTER-III

THEORY PAPER- A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS- I

Objective: This paper deals with highly advance and evolved group of plants with naked seeds i.e. Gymnosperms. The course work of this paper gives a fair idea about the general features, economic importance and study of fossil as well as living gymnosperms.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various plant forms.

UNIT-I

General characteristics and economic importance of gymnosperms; differences between gymnosperms and angiosperms; differences between manoxylic and pycnoxylic wood.

UNIT-II

Fossil gymnosperms : Brief account of fossils , their formation and types (excluding details).
Lyginopteris: Introduction, external structure of stem; internal structure of primary stem, root and leaf; reproduction.
Williamsonia: Introduction, external morphology; internal structure; reproductive organs, male and female flowers.

UNIT-III

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of *Cycas*.

UNIT-IV

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of:

a) *Pinus*
b) *Ephedra*

Suggested Reading:

1. Bhatnagar, S.P. and Moitra, A. Gymnosperms, New Age International Limited, New Delhi, 1996.
2. Chopra, G.L. Text book of Gymnosperms, S. Nagin, Delhi, 1976.
3. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012
4. Gifford, E.M. and Foster, A.S., Morphology and Evolution of Vascular Plants., W.H. Freeman & Company, New York, 1988.
5. Pandey, B.P. College Botany, Vol. II., S. Chand & Company Ltd., New Delhi, 1994.
6. Singh, V., Pande, P.C. and Jain, D.K., A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
7. Sporne, K.R. The Morphology of Gymnosperms, Hutchinson & Co (Publishers) Ltd., London, 1965.
8. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III., Pradeep Publications, Jalandhar, 2014.
9. Stewart, W.M. Paleobotany and the Evolution of Plants, Cambridge University Press, Cambridge, 1983.

PAPER –B: STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-I

Objective: This paper deals with the basic body plan and diversity in flowering plant forms. The course work of this paper covers vegetative and reproductive morphology of these plants and will familiarize the students with plants bearing the enclosed seeds.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

The basic body plan of a flowering plant.
Diversity in plant form in annuals, biennials and perennials.
Root system: Tap root and adventitious root system and their various types; structural and anatomical modifications for storage, respiration and reproduction.

UNIT-II

Stem : Modifications of aerial and underground stem.
Leaf: Venation, phyllotaxy, simple and compound leaves, functions and modifications; internal structure (dicot and monocot leaves).

UNIT-III

Flower : As a modified shoot, functions; structure of anther and pistil; structure and development of male and female gametophytes.

UNIT-IV

Double fertilization and its significance; different types of ovules and embryo-sacs.

Suggested Reading:

1. Bhojwani, S.S. and Bhatnagar, S.P., The Embryology of Angiosperms, 5th edition. Vikas Publishing House Pvt. Ltd., Delhi, 2009.

2. Goyal J.P. and Saini, A., Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

3. Pandey, S.N., Chadha, A., Plant Anatomy and Embryology, Vikas Publishing House Pvt. Ltd., Delhi, 1996.

4. Pullaiah, T., Lakshminarayana, K., Rao, B.H. Text book of Embryology of Angiosperms, Regency Publications, New Delhi, 2001.

5. Rudall, P.J., Anatomy of Flowering Plants - An Introduction to Structure and Development, Cambridge University Press, USA, 2007

6. Singh, V., Plant Anatomy and Embryology of Angiosperms, Global Media Publications, Delhi 2010.

7. Singh, V., Pande, P.C. and Jain, D.K., A Text Book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

8. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.

Suggested laboratory exercises:

1. *Cycas*:
   - i) Habit, armour of leaf bases on the stem, young and old foliage leaves, scale leaves, male cone, megasporophyll, seed.
   - ii) Preparation of permanent stained slides of *Cycas* (T.S. leaflet, rachis and coralloid root).

2. *Pinus*:
   - i) Dwarf shoot; Male cone; Female cones (first year, second year and third year); Seed.
   - ii) Preparation of permanent slide of T.S. needle and pollen grains.
   - iii) Study through permanent slides :
     - a) L.S. male cone
     - b) L.S. female cone
     - c) L.S. ovule

3. *Ephedra*:
   - i) Habit and structure of male and female cones
   - ii) Preparation of permanent slide of T.S. stem (young).
   - iii) Study through permanent slides:
     - a) L.S. female cone
     - b) L.S. male cone

4. Modifications of underground stem and leaf modifications.

5. Study through permanent slides :
   i) V.S. dicot leaf
   ii) V.S. monocot leaf

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify, draw its well labeled diagram and show it to the examiner. 6

2. Identify, write illustrated morphological note on specimen B (from gymnosperms) and C from underground stem/leaf modifications. 4

3. Identify slides D and E giving at least two identifying features. 4

4. Practical note book and *Viva-voce* 2+2=4

BOTANY
SEMESTER-IV

PAPER-A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS-II

Objectives: This paper deals with highly advanced and evolved group of plants i.e. Angiosperms. The study of gradual transition from seedless plants to seed plants would make students familiar with origin of structural and functional complexity in plant kingdom. The systematics part of this paper is the backbone of study of Botany. Without having knowledge of taxonomy and species concept, no further research work can be pursued. The identification, nomenclature and classification of the concerned plants make the first step of any research work in Botany.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various families of flowering plants.

UNIT-I

General characters of Angiosperms. Plant nomenclature and International Code of Botanical Nomenclature : Common names and scientific names, principles and rules; taxonomic ranks; type concept (Holotype, Isotype, Syntype, Paratype, Lectotype, Neotype and Topotype); principle of priority, aims and objectives of plant taxonomy.

A brief account of Bentham and Hooker's System of classification, its merits and demerits.

UNIT-II

Terminology pertaining to floral description.

General account and diagnostic features of the following families (excluding economic importance) :

Liliaceae	:	*Asphodelus/Asparagus*
Gramineae (Poaceae)	:	*Triticum*
Ranunculaceae	:	*Ranunculus* and *Delphinium*
Brassicaceae	:	*Brassica*

UNIT-III

General account and diagnostic features of the following families (excluding economic importance):

Rutaceae	:	*Citrus* and *Murraya*
Malvaceae	:	*Hibiscus*
Fabaceae	:	*Lathyrus, Cassia* and *Acacia*
Umbelliferae (Apiaceae)	:	*Coriandrum*

UNIT-IV

General account and diagnostic features of the following families (excluding economic importance) :

Compositae (Asteraceae)	:	*Helianthus/Ageratum*
Asclepiadaceae	:	*Calotropis*
Solanaceae	:	*Solanum* and *Petunia*
Labiatae (Lamiaceae)	:	*Ocimum*
Chenopodiaceae	:	*Chenopodium*

Suggested Readings:

1. Chopra, G.L. Angiosperms: Systematic and Life Cycle, Pradeep Publications, Jalandhar, 1987.

2. Davis, P.H. and Heywood, V.H. Principles of Angiosperm Taxonomy, Oliver and Boyd, London, 1963.

3. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012.

4. Heywood, V.H. and Moore, D.M. (eds.) Current Concepts in Plant Taxonomy, Academic Press, London, 1984.

5. Jeffrey, C. An Introduction to Plant Taxonomy, Cambridge University Press, London, 1982.

6. Jones, S.B., Jr. and Luchsinger, A.E. Plant Systematics (2nd edition), McGraw-Hill Book Co., New York, 1986.

7. Maheshwari, J.K. Flora of Delhi, CSIR, New Delhi, 1963.

8. Naik, V.N. Taxonomy of Angiosperms, Tata McGraw Hill Education, 1984.

9. Radford, A.E. Fundamentals of Plant Systematics, Harper and Row, New York, 1986.

10. Singh, G. Plant Systematics: Theory and Practice, Oxford and IBH Pvt. Ltd., New Delhi, 1999.

11. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.

12. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III, Pradeep Publications, Jalandhar, 2006.

13. Stace, C.A. Plant Taxonomy and Biosystematics (2nd edition). Edward Arnold, London, 1989.

14. Vasishta, P.C. Taxonomy of Angiosperms. R. Chand & Co., New Delhi, 1997.

PAPER-B: **STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-II**

Objectives: This paper deals with structure development and reproduction in flowering plants – the most fascinating group of plants on earth. The course material of this paper deals with internal structure of various plant parts, their growth patterns and abnormalities in structural development. The vast range of variation found in this group of plants provides a platform to students for acquiring basic knowledge of flowering plants which makes a foundation of applied branches like horticulture, floriculture, olericulture and arboriculture.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Tissue systems: Meristematic, shoot apex, root apex; simple and complex permanent tissues, special tissues; internal structure of primary dicot stem & root (*Helianthus*); secondary growth in dicot stem & root (*Helianthus*); internal structure of monocot stem & root (*Zea mays*); differences between dicot stem and monocot stem; differences between dicot root and monocot root.

UNIT-II

Anomalous stem structure in *Boerhaavia*, *Nyctanthes*, *Mirabilis* and *Dracaena*.
Various methods of vegetative propagation; micropropagation, basic technique and its importance.

UNIT-III

Types of pollination, advantages and disadvantages of self and cross-pollination; contrivances for self and cross-pollination, various agencies to bring about cross-pollination, characters of flowers pollinated by different agencies.

UNIT-IV

Seed formation: Development of endosperm and embryo. Fruit development, maturation and parthenocarpy. Significance of seed: Suspended animation; ecological adaptation and dispersal strategies.

Suggested Readings:

1. Cutter, E.G. Part. I. Cells and Tissues, Edward Arnold, London, 1969.

2. Cutter, E.G. Plant Anatomy: Experiment and Interpretation. Part II, Organs. Edward Arnold, London, 1971.

3. Esau, K. Anatomy of Seed Plants, 2nd edition, John Wiley & Sons, New York, 1977.

4. Fageri, K. and Van der Pijl. The Principles of Pollination Ecology, Pergamon Press, Oxford, 1979.

5. Fahn, A., Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.

6. Goyal J.P. and Saini, A., Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

7. Hartmann, H.T. and Kestler, D.E. Plant Propagation: Principles and Practices, 3rd edition. Prentice-Hall of India Pvt. Ltd. New Delhi, 1976.

8. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California. U.S.A, 1988.

9. Proctor, M. and Yeo, P., The Pollination of Flowers, William Collins Sons, London, 1973.

10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants, 5th edition, W.H. Freeman and Co., Worth Publishers, New York, 1999.

11. Singh, V. Pande, P.C. and Jain, D.K. A Text book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

12. Srivastava, H.N.. Structure, Development and Reproduction in Flowering Plants, Vol. IV., Pradeep Publications, Jalandhar, 2014.

13. Vasishta, P.C. A Text book of Plant Anatomy, S. Nagin & Co., Delhi, 1979.

Suggested Laboratory Exercises:

1. Preparation of permanent stained slides to show:

    a. Anomalous internal structure of stem in *Boerhaavia, Nyctanthes, Mirabilis* and *Dracaena*.
    b. T.S. dicot stem & root (*Helianthus*)
    c. T.S. monocot stem & root (*Zea mays*)

2. Description of flowers in technical terms, drawing Floral Diagram, V.S. flower, T.S. ovary, writing Floral Formula with reference to the respective families of the genera mentioned in different families in theory syllabus.

Note: To make the students familiar with plants, (preferably pertaining to syllabus) the teachers are required to organize excursions to forests and hills.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A., Make its permanent stained slide. Identify and draw its well labeled diagram and show it to the examiner. 5

2. Describe specimen B or C in technical terms and proper sequence. Draw Floral Diagram and V.S. of flower B or C. Cut T.S. of ovary and V.S. of flower and show them to the examiner. Write Floral Formula also. Refer specimen B or C to its respective family. 5

3. Identify slides D and E giving at least one reason. 2

4. Practical note book 2

5. Plant Album 2

6. *Viva-voce* 2

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ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper-I	:	Biodiversity (Chordates) & Evolution-I	40	(36+ 4 marks)
Paper-II	:	Biochemistry & Animal Physiology-I	40	(36 + 4 marks)
Practical		(Covering the entire syllabus) of 4 hours duration	20	(18+ 2 marks)
		Total :	**100 marks**	

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE :

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER–I : BIODIVERSITY (CHORDATES) & EVOLUTION-I (ZOO 301)

Max. Marks	:	40
Theory Exam.	:	36 Marks
Internal Assessment	:	4 Marks
Time	:	3 Hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Concept and evidences of organic evolution.
Theories of organic evolution.
Origin of life.

UNIT-II

Chordates – Origin, Parental care and migration.
Protochordates –Urochordata-Type Study – *Herdmania* except development,
Cephalochordata- Type Study – *Amphioxus* (except development)

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Protochordates	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa, Oikopleura & Amphioxus (*excluding development*).*

UNIT-III

Cyclostomata – External Characters of *Petromyzon* & affinities of Cyclostomata
Pisces-Type study-*Labeo*, Scales & fins.

Cyclostomata	:	*Myxine, Petromyzon* & *Ammocoetes* larva.
Chondrichthyes	:	*Zygaena*(Hammer headed shark), *Pristis* (saw fish), *Narcine* (electric ray), *Trygon*, *Rhinobatus* and *Chimaera*(rabbit fish).
Actinopterygii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus* (lung fish)

UNIT-IV

Amphibia – Type study-Frog.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Amphibia	:	*Uraeotyphlus, Necturus, Ambhiuma, Amblystoma* and its Axolotl Larva, *Triton, Salamandra, Hyla, Rhacophorus.*

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.

4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.

5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt. Ltd., 1993.

PAPER II : BIOCHEMISTRY AND ANIMAL PHYSIOLOGY-I (ZOO 302)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Biochemistry and its scope;
Carbohydrates, proteins, lipids and nucleic acids: their classifications and functions.

UNIT-II

Enzymes : Nature, their classification and coenzymes.

Carbohydrate metabolism : The Embden Meyerhoff, Parnas pathway,(glycolysis), the tricarboxylic acid cycle, the hexose monophosphate shunt**,** glycogenesis and glycogenolysis.

UNIT-III

Digestion : Digestion of dietary constituents, regulation of digestive processes and absorption. extra and intra cellular digestion, enzymatic digestion and symbiotic digestion.

Respiration : Transport of O_2 and CO_2, Oxygen dissociation curve of haemoglobin, Bohr effect, chloride(-) shift, Haldane effect and control of breathing.

UNIT-IV

Blood : Composition and functions of blood and lymph. Function of hemoglobin, blood clotting. Blood groups including Rh. Factor.

Heart : Origin and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, blood pressure and micro-circulation.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.
2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.
3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990
4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 301 & 302 (ZOO 251)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Urochordata	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa & Oikopleura.*
Cephalochordata	:	*Amphioxus.*
Cyclostomata	:	*Myxine, Petromyzon & Ammocoetes* Larva.
Chondrinchthyes	:	*Zygaena* (Hammer headed shark), *Pristis* (Saw fish), *Narcine* (Electric ray), *Trygon*, *Rhinobatus* and *Chimaera* (Rabbit fish).
Actinoptergii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus*
Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva, *Triton, Salamandra, Hyla, Rhacophorus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Herdmania	:	General anatomy
Labeo	:	Digestive**,** reproductive systems, heart, afferent and efferent branchial arteries and cranial nerves.

3. Study of the skeleton of *Labeo, Rana* (frog)
4. Study of the following prepared slides :
   T.S. *Amphioxus* through various regions.
   Spicules & pharynx of *Herdmania* & pharynx of *Amphioxus.*
5. Study of the following prepared slides :
   Histology of frog (compound tissues).
6. Recording of blood pressure of man
7. Demonstration of equipment used for estimating haemoglobin content.
8. Demonstrate the presence of amylase in saliva, denaturation by pH and temperature.
9. Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides F-H giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-IV

Paper I: Biodiversity (Chordates) & Evolution – II	40 (36 + 4) marks
Paper II : Biochemistry & Animal Physiology-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
	--------
	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER – I : BIODIVERSITY (CHORDATES) & EVOLUTION- II (ZOO 401)

UNIT-I

Reptilia- Type study-*Uromastix*, Poisonous and non-poisonous snakes, Poison apparatus.
Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Reptilia : *Chelone*(turtle) and *Testudo*(Tortoise), *Hemidactylus* (wall lizard), *Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis* and Alligator.

UNIT-II

Aves-Type study-Pigeon, Flight adaptations.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Aves : *Ardea, Milvus, Pavo, Tyto, Alcedo, Eudynamis* and *Casuarius*.

UNIT- III

Mammals-Type study-Rat, Dentition.

Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus* (Kangaroo), *Loris, Macaca, Manis* (Scaly ant eater), *Hystrix* (porcupine), *Funambulus* (Squirrel) *Panthera, Canis,Herpestes* (Mongoose), *Capra, Pteropus*.

UNIT-IV

Concept of micro, macro and mega-evolution.
Biological concept of species.
Fossils and evolutionary rate.
Evolution of man.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.
4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.
5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt.Ltd., 1993.

PAPER II : BIOCHEMISTRY AND ANIMAL PHYSIOLOGY-II (ZOO 402)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Lipid metabolism : B-oxidation of fatty acids, fate of glycerol and gluconeogenesis, interaction of carbohydrates and lipids, lipogenesis in tissues, ketosis.

UNIT-II

Protein metabolism : Protein metabolism of amino acids (Oxidative deamination, transamination and decarboxylation**;** hydrolysis of proteins and Ornithine cycle).

UNIT-III

Excretion : Urine formation, osmoregulation and counter current mechanism.

Muscles : Ultrastructure, chemical and physiological basis of skeletal muscle contraction.

UNIT-IV

Neural Integration : Structure of neuron, resting membrane potential, origin and propagation of impulse along the axon, synapse and myoneural junction.

Endocrine System : Structure, hormones and functions of thyroid, parathyroid, adrenal, pineal, hypothalamus, pituitary, pancreas, gonads, thymus, hormones of alimentary canal and kidney.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.

2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.

3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990

4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 401 & 402 (ZOO 252)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Reptilia	:	*Chelone*(Turtle) and *Testudo* (Tortoise), *Hemidactylus, Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera,Crocodilus, Gavialis.*
Aves	:	*Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
Mammalia	:	*Ornithorhynchus, Echidna, Didelphis, Macropus,Loris, Macaca, Manis, Hystrix, Funambulus,Panthera, Canis, Herpestes,Capra,Pteropus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Chick	:	Digestive, arterial, venous and urinogenital systems.
White Rat	:	Digestive, arterial, venous and urinogenital systems.

3. Study of the skeleton of *Varanus, Gallus* and Rat/ *Oryctolagus* (Rabbit).
4. Study of the following prepared slides :
   Histology of rat/rabbit (compound tissues)
5. Make temporary preparations of the following:
   Blood smear of a mammal.
6. Identification of food stuffs:starch, glucose, proteins and fats in solution.
7. Demonstration of osmosis and diffusion.
8. Analysis of urine for urea, chloride, glucose and uric acid.
9. An idea of location of endocrine glands in mammals through charts / models/ video clippings

   Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	4 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides D & E giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

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BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Carbohydrate & Lipid metabolism **Marks: 45+5**

Objective: To learn about digestion and absorption of carbohydrates and lipids and major metabolic pathways pertaining to them.

SECTION-I

(Lectures 8)

Digestion & Absorption of Carbohydrates:
Metabolic pathways of carbohydrates, glycolysis and alcoholic fermentation, The pentose phosphate pathway, glucuronate and glyoxylate pathway, TCA cycle, glycogenolysis & glycogenesis, gluconeogenesis, biosynthesis of starch and ascorbic acid.

SECTION-II

(Lectures 8)

Digestion & transport of lipids:
β-Oxidation of fatty acids including odd chain fatty acids. α and ω oxidation of fatty acids. Degradation of triglycerides and phospholipids. Formation and utilization of ketone bodies.

SECTION-III

(Lectures 7)

Lipid biosynthesis
Biosynthesis of saturated and unsaturated fatty acids, triglycerides and phospholipids

SECTION-IV

(Lectures 7)

Biosynthesis of Cholesterol and other lipids
Cholesterol biosynthetic pathway. Biosynthesis of cerebrosides; sulfatides and gangliosides. Biosynthesis of prostaglandins, thromboxanes, leukotrienes, lipooxins and prostacyclins.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey& D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Grannerand V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

Paper B: Protein & Nucleic acid metabolism **Marks: 45+5**

Objective: To learn major metabolic pathways pertaining to nitrogenous compounds proteins & nucleic acids.

SECTION-I

(Lectures 6)

Digestion & absorption of proteins, nitrogen balance, general reactions of amino acids: deamination, transamination and decarboxylation. Urea cycle.

SECTION-II

(Lectures 8)

Catabolism of carbon skeletons of amino acids: glycine, alanine, serine and threonine, phenylalanine and tyrosine, tryptophan, histidine, leucine, valine and isoleucine, cysteine and methionine, lysine, glutamic acid and glutamine, aspartic acid and asparagine.

SECTION-III

(Lectures7)

Biosynthesis of nutritionally non-essential amino acids : glutamate and glutamine, aspartate and asparagine, proline, alanine, cysteine & selenocysteine, tyrosine, serine, glycine. conversion of amino acids to specialized products : polyamines, catecholamines, glutathione, creatinine, melanin, serotonin.

SECTION-IV

(Lectures 9)

Nucleic Acids

Degradation and biosynthesis of purines and pyrimidines nucleotides, salvage pathway, formation of deoxyribonucleotides, biosynthesis and degradation of heme. Disorders of purine & pyrimidine metabolism, anticancer drugs.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey & D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Estimation of blood glucose by the methods of (i) Folin Wu (ii) Nelson Somogyi.
2. Isolation and assay of glycogen from rat liver.
3. Separation and identification of amino acids by
   (i) Paper chromatography (ii) Thin layer chromatography.
4. Estimation of Ca^{2+} in serum.
5. Estimation of total and free cholesterol in serum.
6. Estimation of total lipids in serum by Vanillin method.

BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2017-18
SEMESTER-IV

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Advanced Biochemical Techniques **Marks: 45+5**

Objective: To understand the principles and applications of cell biology techniques, spectroscopic, radioisotopic & spectrometry techniques.

SECTION-I

(Lectures: 8)

General Laboratory Techniques:

Membrane/ultra filtration, dialysis, diffusion, surface tension, viscosity and their applications to biological systems. Cell biology techniques: microbial, animal and plant cell/tissue culture, cell disruption/homogenization/sonication, cell sorting, cell counting, cryopreservation.

SECTION-II

(Lectures: 6)

Fluorescence spectroscopy: principle, applications of fluorescence activated cell sorting (FACS), different fluorescence in situ hybridization (FISH), fluorescence immunoassay.

SECTION-III

Radio isotopic techniques: **(Lectures: 10)**

Nature of isotopes and radioisotopes. Radioactive decay. Properties of radioactive emissions. Units of radioactivity. Techniques used to measure radioactivity; GM counter and liquid scintillation counting and gamma counter. Labelling of biochemical compounds and autoradiography. Use of radioactive tracers in the study of enzyme reaction mechanisms and metabolic pathways. Radioimmuno assay. Biological hazards of radiation and safety measures in handling radioisotopes.

SECTION-IV

(Lectures: 6)

Nuclear magnetic resonance (NMR) and Electron spin resonance (ESR) : theory, applications. atomic spectrometry; mass spectrometry: matrix assisted desorption ionization (MALDI)

Books Suggested:

1. Biochemical Techniques – Theory and Practice by John. F. Robyt and Bernard J. White Cole Publishing Co. (U.S.A.).
2. Physical Biochemistry: Application to Biochemistry and Molecular Biology by David Freifelder W.H. Freeman and Company (U.S.A.).
3. A Biologist's Guide to Principles and Techniques of Practical Biochemistry by K.H. Goulding and Keith Wilson, Edward Arnold (U.K.), Ltd.

Paper B: Membrane Biochemistry **Marks: 50**

Objective: to make students aware of structural and functional aspects of membranes. Highlighting the significance of their compositional heterogeneity and to various cell functions.

SECTION-I

(Lectures 7)

Introduction: membrane structure and organization: physical and biological models of membranes structure. Protein- lipid interactions in membranes, fluid mosaic model of membrane structure, its merits and demerits. Constituents of biological membranes in prokaryotes and eukaryotes. Asymmetry of biomembranes. Structure of RBC membrane.

SECTION –II

(Lectures 7)

Membrane dynamics: Physical properties of membrane lipids, membrane fluidity, Phase transitions, cytological biochemical probes and methods to study membrane fluids. Membrane transport: Typical properties of membrane transport, passive diffusion, facilitative diffusion, Carrier mediated active transport. Role of Na, K- ATPase.Ca-ATPase & H^+-ATPase. Ionophores and siderophores, structure and functions.

SECTION –III

(Lectures 8)

Membrane analysis: isolation and characterization of cell membrane, criteria of membrane purity. Solubilization of membranes and their reconstitution. Labeling of membrane probes and determination of transbilayer distribution of membrane components. Liposomes: unilamelar and multilamelar vesicles. Methods of their preparation, characterization and their applications in targeting drugs and gene therapy.

SECTION –IV

(Lectures 8)

Biogenesis and turnover of membranes: Synthesis of membrane components and their trafficking, signal hypothesis, coated vesicles. Regulation and coordination of membrane component synthesis. Membrane disorders: erythrocyte deformities, transport disorders. Disorders of membrane lipids

Books Suggested

1. Jain, MK. Introduction to Biological membranes, John Wiley and sons New York, 1988
2. Vance, DE & Vance JE, Biochemistry of lipids and Biomembranes, Benzamin Cummings, 1985
3. Jones MN & Chapman D. Micelles monolayers and biomembranes, Wiley-Lis New York, 1995
4. Lodish H. Molecular Cell biology, WH Freeman and Company, 2013
5. Various review articles.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Electrophoresis of nucleic acids.
2. Gram staining of cells.
3. Estimation of Lipoproteins in plasma.
4. Colorimetric estimation of inorganic phosphate.
5. Separation of phospholipids by thin layer chromatography.
6. Estimation of lactic acid in blood before and after exercise.
7. Preparation of starch from potato and its hydrolysis by salivary amylase.

****

MICROBIOLOGY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2017-18

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

SEMESTER-III

Scheme of Examination			Duration	Marks
THEORY			**6 hrs.**	**75(33+33+9*)**
MIC 301	**:**	**Introduction to Medical Microbiology-I**	**3 hrs.**	**37.5(33+4.5*)**
MIC 302	**:**	**Introductory Immunology-I**	**3 hrs.**	**37.5(33+4.5*)**
PRACTICAL				
One Practical pertaining to the entire syllabus included in Theory Papers MIC 301 and MIC 302			**3 hrs.**	**25(20+5*)**

Semester-IV

THEORY			**6 hrs.**	**75(33+33+9*)**
MIC 401	**:**	**Introduction to Medical Microbiology-II**	**3 hrs.**	**37.5(33+4.5*)**
MIC 402	**:**	**Introductory Immunology-II**	**3 hrs.**	**37.5(33+4.5*)**
PRACTICAL				
One Practical pertaining to the entire syllabus included in Theory Papers MIC 401 and MIC 402			**3 hrs.**	**25(20+5*)**

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY
SEMESTER-III

MIC 301 : INTRODUCTION TO MEDICAL MICROBIOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Brief introduction to terminology of infectious diseases, Frequency of disease, Recognition of infectious disease, Infectious disease cycle.

Section B

Nomenclature and classification of microbes of medical importance, criteria of classification

Section C

Microbial adherence, Active penetration into body, Passive penetration into body, Microbial production of enzymes in the body.

Section D

Development of chemotherapy, General characteristics of antimicrobial drugs, Determining level of antimicrobial activity, Mechanism of action of antimicrobial drugs, Factors influencing the effectiveness of antimicrobial drugs.

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 302 : INTRODUCTORY IMMUNOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction and history of immunology, Non-specific defence; Physical barriers, Chemical barriers, Cellular, Phagocytosis, Inflammatory barriers, Inflammation, Fever, Types of Immunity, Active and Passive Immunity, Immunological memory

Section B

Humoral Immune Response, Antibodies/ Immunoglobulins, Structure, function and type of antibodies

Section C

Cell Mediated Immune System (CMI), Mechanism of CMI, Types of effector T cells, Helper T cells, Suppressor T cells, Cytotoxic T cells, Killer T cells, Interactions between T and B lymphocytes

Section D

Antigen-antibody interactions,: Precipitation reaction, Immunodiffusion test, Counter current Immuno electrophoresis, Complement fixation tests

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

PRACTICAL

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Staining- Gram staining, Albert and ZNCF staining
2. Isolation and maintenance of pure cultures
3. Physiological characteristics of bacteria and its use for their identification
4. Assay of antimicrobials
5. Preparation of serum/plasma

MICROBIOLOGY

SEMESTER IV

MIC 401 : INTRODUCTION TO MEDICAL MICROBIOLOGY-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Virulence and mode of transmission, Emerging and reemerging infectious diseases, Global travel and health considerations, Nosocomial infections

Section B

Origin of normal flora, Germ free and gnotobiotic life, Distribution and occurrence of Normal flora of skin, eye, respiratory tract, mouth, intestinal tract and genitourinary tract

Section C

Events in infection following penetration, Microbial virulence factors

Section D

Antibacterial drugs viz. sulphonamides, Quinolones, Penicillins, Cephalosporins, Tetracyclines, Erythromycin, and Chloramphenicol, Drug resistance, Antifungal and antiviral drugs

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 402 : INTRODUCTORY IMMUNOLOGY-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Primary and secondary lymphoid organs, Mucosa associated lymphoid tissues (MALT), Cutaneous associated lymphoid tissues (CALT), Lymphocyte traffic, Cells of Immune system, Antigens; Factors affecting Immunogenicity, Epitopes, Haptens

Section B

Antigenic combining regions of antibodies, Factors influencing antibody production, Genetic model, Multigene organisation, Generation of antibody diversity

Section C

Cytokines, Lymphokines, Colony stimulating factors, Tumour necrosis factors, Interferons, Accessory cells (Macrophages), the complement system, Classical and alternate pathway, HLA, Monoclonal antibody technology and its applications

Section D

Antigen-antibody Interactions: Widal test, Wasserman's test, Weil-Felix reaction, Western blotting, Types of Vaccines

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

PRACTICAL

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Sterilization- Introduction to autoclave, hot air oven, filter sterilization
2. Demonstration of Immune organs in dissected animals
3. Demonstration of Immune cells in smears prepared from Immune organs
4. Complement fixation
5. Antigen-antibody interactions:
   -Agglutination
   -Precipitation
   -Blood grouping
   -Immunodiffusion

****

ELECTRONICS

(KEPT IN ABEYANCE)

****

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATIONS, 2017-2018

(SEMESTER : FIFTH AND SIX)

i.e

Fifth Semester : November/December, 2017
Sixth Semester : April/May, 2018

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) i.e. FIFTH SEMESTER NOVEMBER/DECEMBER 2017 AND SIXTH SEMESTER APRIL/MAY 2018, EXAMINATIONS.

ENGLISH (Compulsory)

(For B.A. Candidates Only)

SEMESTER V

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

Note:

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.

(ii) Section A shall deal with the text and Section B with composition and grammar.

(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan), **Panjab University Edition.**

Unit I to III (Unit II- Chapter 'Emotional Intelligence' deleted)

Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five** selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting, at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4. Write an essay (in not more than 500 words), choosing one topic out of the given **four**. A wide range of topics should be given and in this respect ideas may be drawn from the prescribed text. **10Marks**

Q.5. (a) Antonyms –***ten*** out of ***fifteen .*** **5 Marks**

(b) Correct the sentences- ***ten*** out of ***fifteen.*** **5 Marks**

……..

ENGLISH (Compulsory)

(For B.A. Candidates Only)

SEMESTER VI

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.
(ii) Section A shall deal with the text and Section B with composition and grammar.
(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan) , **Panjab University Edition.**

Unit IV-VI
Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas. **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five**, selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4.A question on Précis writing shall be set, without any internal choice. For this purpose, the passage chosen should be simple, lucid and coherent and must not exceed 240-250 words. **10 Marks**

Q.5 (a) Idioms and Phrases to be used in sentences. ***ten*** out of ***fifteen*** **5 marks**

(b) One word substitution – ***ten*** out of ***fifteen*** **5 Marks**

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
(ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ)
(ਬੀਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ **)**

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਪੈਰ੍ਹਾ ਰਚਨਾ 8 ਅੰਕ
3. ਲਿਪੀ 7 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ (ਸੰਪਾ) ਅਤਰ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

   (ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋ ਇਕ) 5+5=10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5+1 = 5 ਅੰਕ

3. ਪੈਰ੍ਹਾ ਰਚਨਾ (ਲਗਪਗ 250 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
(ਮਨੁੱਖੀ ਸੁਭਾਅ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਜੀਵਨ ਦੇ ਹਲਕੇ ਫ਼ੁਲਕੇ ਵਿਸ਼ਿਆ ਨਾਲ ਸੰਬੰਧਤ)
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7ਅੰਕ
ਲਿਪੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਜਨਮ ਤੇ ਵਿਕਾਸ,

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ

   (i) ਵਾਕੰਸ਼, ਨਾਂਵ ਵਾਕੰਸ਼ ਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪਛਾਣ 6 ਅੰਕ

   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

.....

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਨਾਵਲ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਅਖ਼ਬਾਰ ਲਈ ਪ੍ਰੈਸ ਨੋਟ	10 ਅੰਕ
3.	ਗੁਰਮੁਖੀ ਲਿਪੀ	5 ਅੰਕ
4.	ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. **ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ**, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

(ਅ) ਨਾਵਲ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ ਤੇ ਪਾਤਰ ਚਿਤਰਨ (ਦੋ ਵਿਚੋ ਇਕ) 10 ਅੰਕ

2 ਨਾਵਲ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1 = 5 ਅੰਕ

3. ਅਖ਼ਬਾਰਾਂ ਲਈ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨੇ : ਕਾਲਜ ਦੀਆਂ ਸਾਹਿਤਕ, ਸਭਿਆਚਾਰਕ, ਖੇਡਾਂ ਅਤੇ ਅਕਾਦਮਿਕ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ ਸਰਗਰਮੀਆਂ ਬਾਰੇ। (ਲਗਪਗ 200 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
ਨੋਟ : ਸਿਰਫ਼ ਇਕ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨ ਲਈ ਹੀ ਕਿਹਾ ਜਾਵੇ

4. ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7 ਅੰਕ

ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਨਾਮਕਰਣ, ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਲਈ ਅਨੁਕੂਲਤਾ, ਪ੍ਰਮੁੱਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਲਿਖਣ ਵਿਧੀ (ਆਰਥੋਗ੍ਰਾਫ਼ੀ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਸਵਾਲ)

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ
(i) ਵਾਕ ਤੇ ਉਪਵਾਕ ਦੀ ਪਰਿਭਾਸ਼ਾ: ਵਾਕ ਬਣਤਰ ਤੇ ਕਾਰਜ
ਬਣਤਰ: ਸਧਾਰਨ, ਸੰਯੁਕਤ ਤੇ ਮਿਸ਼ਰਤ ਵਾਕ
ਕਾਰਜ: ਪ੍ਰਸ਼ਨਵਾਚੀ, ਆਗਿਆਵਾਚੀ ਤੇ ਬਿਆਨੀਆ ਵਾਕ 6 ਅੰਕ

(ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), 'ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ', ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜ੍ਹ ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ , 1999.
2. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ(ਡਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997
3. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ', ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ,ਅੰਮ੍ਰਿਤਸਰ,2012.
4. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. ਬਰਾੜ ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ', ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ,2008.
6. ਧਾਲੀਵਾਲ ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
7. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER V

PAPER: HISTORY AND CULTURE OF PUNJAB: COLONIAL PERIOD
INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

Objectives: To introduce the students to the history of the history of the region and the impact of colonial rule.

Pedagogy: Lectures, library work and discussions.

UNIT 1

1. Early British Administration: Board of Administration 1849-1853; Reforms under John Lawrence
2. Colonial Policy: Agriculture; Trade & Industry
3. Spread of Modern Education

UNIT II

4. Impact of Socio-Religious Reform Movements: Namdharis; Singh Sabha
5. Impact of Socio-Religious Reform Movements: Arya Samaj; Ahmediyas
6. Uprising of 1907: Causes and Consequences

UNIT III

7. Ghadar Movement: Origin and Activities
8. Jallianwala Bagh: Circumstances and Consequences
9. Gurudwara Reform Movement: Causes and Consequences

UNIT IV

10. Response to Non Co-operation ; Civil Disobedience
11. Partition : Circumstances; Impact
12. Map:, Delhi, Amritsar, Lahore, Lyallpur, Montgomery, Jaito, Nankana Sahib, Khemkaran, Tarn Taran, Jalandhar, Sargodha, Sialkot, Ambala,

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	Khushwant Singh	*A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi,1991.
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991.

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER VI

PAPER: HISTORY AND CULTURE OF PUNJAB: POST INDEPENDENCE PERIOD

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

Objectives: To introduce the students to the history of the history of the region in the post 1947 period.

Pedagogy: Lectures, library work and discussions.

UNIT 1

1. Migration and its Socio-Economic impact
2. Rehabilitation and Resettlement
3. Demand for Punjabi Suba; Reorganization Act 1966

UNIT II

4. Green Revolution and its impact
5. Development of Education
6. Political and Economic Development post 1966

UNIT III

7. Issues of Boundary; water; Chandigarh
8. Socio-Economic Development in the 1980's
9. Operation Bluestar and its impact

UNIT IV

10. New Social issues-gender discrimination, drug menace, farmer suicide
11. Development of Punjabi literature :Bhai Vir Singh; Shiv Kumar Batalvi;Amrita Pritam
12. Map: Delhi,Amritsar,Khemkaran,TarnTaran,Jalandhar, Ambala,Ludhiana,Panipat, Karnal,Qadian, Gurdaspur,Hissar, Chandigarh.

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	R.S. Johar, and J.S. Khanna	*Studies in Punjab Economy,* GNDU, Amritsar, 1983
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy,Chandigarh, 1991.

ENGLISH (ELECTIVE)

SEMESTER V

Max.Marks 100
Written 90
Int. Assessment 10

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding.The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II .**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

1. Modern Indian Literature: Poems and Short Stories, Edited by the Dept. of , University of Delhi, OUP, 2007 New Delhi.

Section I

(Literary terms/Concepts: *Literatures Indian Languages, Colonialism, Post-colonial, Multicultural Society: Orientalism, Hybridity, Ideology, Gender, Race, Class, Caste, Nation, Importance of Translation in India, Methods of Translation)*

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do *five.* 15 marks

Q.2 The examiner will set seven short questions (each to be answered in 60-80 words) based on Modern Indian Literature: Poems and Short stories out of which the students shall be required to attempt only *five.* 15 marks

Q.3. There will be three long questions, out of which two long questions are to be answered each in about 180-200 words. These questions shall be based on *Modern Indian Literature: Poems and Short Stories.* 15 marks

Section II

Q.4 Note-making (A passage of about 1000 words is to be given for this Purpose) 15 marks

Q.5. An unseen passage for Comprehension (about 1000 words again) With ten multiple choice questions is to be given. 15 marks

Q.6 Applied Grammar:

(a) 5 Pairs of words to be used in sentences. (altar/alter/compliment/complement etc.) (1x5=5 marks)

(b) First find one word for many and then use it in a sentence. 5 marks

(c) First change the form of nouns/verbs/adjectives and then make sentences. (1x5=5 marks)

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ENGLISH (ELECTIVE)

SEMESTER VI

Max.Marks	**100**
Written	**90**
Int. Assessment	**10**

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding. The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II.**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

R.K.Narayan's Novel: The Guide

SECTION I

(Literary Concepts/Terms: *Fiction, Non-fiction, Narrative, Bildungsroman, Picaresque Novel, Novel of Sensibility, Historical Romance, Gothic Novel, Realistic Novel, Psychological Novel, Political Novel, Regional Novel, Point of View, Omniscient Author, First Person Narrator, Stream of Consciousness, Protagonist/ antagonist, Plot/Story, Character, Structure)*

Q.1	Literary terms/concepts (*five out of eight*)	15 marks
Q.2.	Short question based on the prescribed novel, *Five out of Seven* (each in 60-80 words).	15 marks
Q.3	Long questions based on the novel *three out of five* dealing with the incidents, theme(s) Character(s), symbols etc.(each in 180-200 words)	15 marks

SECTION II

Q.4	Essay on any one (out of the given four) topic of international importance (in about 700 words)	20 marks
Q.5.	Report-writing (in about 300 words) on an incident/situation , conference/seminar, problem/state of education/poverty /unemployment or similar issues.	10 marks
Q.6.	Translation from Hindi/Punjabi into English (Passage of about 400 words)	
	OR	
	Paragraph on any *one* out of the *two* given topics (for foreign students only)	15 marks

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हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य तृतीय वर्ष) सेमेस्टर-5

पूर्णांक **90+10=100**
समय- 3 घंटे

1. **कुरुक्षेत्र**

रामधारी सिंह 'दिनकर' प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।

(क) 6-6 अंकों की दो संदर्भ सहित व्याख्याएं करनी होगी। कुल चार काव्यांश दिए जायेंगे।

(ख) 15 अंकों का एक आलोचनात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगे। अंक-27

2. **समीक्षा सिद्धांत :**

क. काव्य की परिभाषा तथा भेद, महाकाव्य, खंडकाव्य, गीतिकाव्य की परिभाषा तथा विशेषताएँ

ख. गद्य विधाएं-निबंध, संस्मरण, जीवनी तथा आत्मकथा के स्वरूप और तत्वों का सामान्य परिचय। अंक-30

उपर्युक्त खंडों क ख में से संबंधित 15-15 अंकों के चार प्रश्न पूछे जाएंगे इनमें से केवल दो के उत्तर देने होंगे ।

3 **अलंकार :**

केवल निम्नलिखित अलंकार निर्धारित हैं।
अनुप्रास, यमक, श्लेष, वकोक्ति, उपमा, रूपक, अतिशयोक्ति, विरोधभास, उत्प्रेक्षा, प्रतीप । 6 X 3=18

4 **लघूत्तरापेक्षी :**

प्रथम दो खंडों (कुरुक्षेत्र एवं समीक्षा सिद्धांत) में से पांच-पांच अंक के तीन प्रश्न करने होंगे, 6 प्रश्न पूछे जाएंगे । (शब्द सीमा - 50 शब्द) अंक-15

5. **आंतरिक मूल्यांकन** अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य) (तृतीय वर्ष) सेमेस्टर-6

पूर्णांक 90+10=100
समय- 3 घंटे

1. निबंध लेखन (केवल साहित्यिक और सामाजिक विषयों पर) अंक-20
कुल आठ निबंधों में से किसी एक विषय पर लिखने के लिए कहा जाएगा।

2. गद्य फुलवारी, सम्पादक डॉ0 शहाबुद्दीन शेख, प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।
केवल निम्नलिखित पाठ निर्धारित है । अंक-16

'आसुओं की होली' (प्रेमचंद), 'अकेली' (मन्नु भंडारी), 'चीफ की दावत' (भीष्म साहनी)
'सुभान खाँ' (रामवृक्ष बेनीपुरी) 'भाभी' (महादेवी वर्मा), 'सदाचार का ताबीज (हरिशंकर परसाई), महात्मा गांधी' (रामकुमार वर्मा), 'मैं धोबी हू¡' शिवपूजन सहाय), 'गप-शप' (नामवर सिंह), 'जमनोत्री की यात्रा' (विष्णु प्रभाकर)

(क) 6 अंकों की एक सन्दर्भ सहित व्याख्या करनी होगी । कुल दो व्याख्याँए पूछी जाएंगी ।

(ख) 10 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल दो प्रश्न पूछे जाएंगे ।

3. हिन्दी साहित्य का इतिहास अंक-24
केवल निम्नलिखित गद्य-विधाओं का उद्भव और विकास : उपन्यास, कहानी, नाटक, निबंध, आत्मकथा, जीवनी, संस्मरण, रेखाचित्र ।
इन गद्य- विधाओं में से 12-12 अंकों के कम से कम चार प्रश्न पूछे जाएंगे, छात्रों को केवल दो प्रश्नों के उत्तर लिखने होंगे ।

4. छन्द-परिचय- निम्नलिखित छन्द निर्धारित हैं । अंक-15
दोहा, सोरठा, चौपाई, रोला, कुण्डलियां, सवैया, द्रुतविलम्बित, हरिगीतिका, उपेन्द्रवज्रा, इन्द्रवज्रा ।
पाँच छन्दों के लक्षण और उदाहरण पूछे जाएंगे, जिनमें से तीन का उत्तर देना होगा ।

5. हिन्दी भाषा और उसकी लिपि अंक-10
देवनागरी लिपि : विकास, गुण दोष, सुधार के उपाय 10 अंकों के कुल दो प्रश्न पूछे जाएंगे, जिनमें से केवल एक प्रश्न का उत्तर देना होगा ।

6. निमन्त्रण पत्र, प्रेस, विज्ञप्ति, विज्ञापन का प्रारूप तैयार करना । अंक-5
दो प्रश्न पूछे जाएंगे, छात्रों को एक प्रश्न का उत्तर देना होगा।

आंतरिक मूल्यांकन अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

संस्कृत (इलैक्टिव)
5th Semester

Paper - Sanskrit : **उपनिषद्, रामायण, शब्दावली व व्याकरण** पूर्णांकः 90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।-
- ईश्वर, त्याग, कर्म, विद्या, अविद्या, सम्भूति, असम्भूति आदि औपनिषदिक विषयों का अध्ययन कराना।
- आदि काव्य वाल्मीकि रामायण तथा लौकिक काव्य के सौन्दर्य का दिग्दर्शन कराना ।
- संस्कृत के समृद्ध शब्दभण्डार द्वारा छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT-1

(क) ईशोपनिषद्

(1) मन्त्र/मन्त्रांश का अनुवाद एवं व्याख्या 1x10=10अंक

(2) समीक्षात्मक प्रश्न / सूक्ति व्याख्या 1x10=10अंक

(ख) वाल्मीकिरामायण (सुन्दरकाण्ड, सर्ग-15, गीता प्रैस गोरखपुर) श्लोक व्याख्या 2x7½=15अंक

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : वाद्य, खेल एवं युद्ध सम्बन्धी (15 में से 10 शब्दों की संस्कृत) 1x10=10अंक

1. उतार – अवरोहः	2. चढ़ाव-आरोह	3. जलतरंग-जलतरङ्गः
4. ढिंढोरा - डिण्डिमः	5. ढोल - पटहः	6. ढोलकः - ढोलक
7. तवला - मुरजः	8. तानपुरा - तानपुराः	9. तुरही (शहनाई) - तूर्यम्
10. नगाड़ा - दुन्दुभिः	11. पियानो - तन्त्रीवाद्यम्	12. बांसुरी - मुरली
13. मंजीरा-मञ्जीरम्	14. सारंगी (वायलिन)-सारंगी	15. सितार-वीणा
16. हारमोनियम-मनोहारिवाद्यम्	17. गेंद-कन्दुकः	18. टेनिस का खेल-टेनिस-क्रीडा
19. नेट-जालम्	20. फुटबाल-पादकन्दुकः	21. बैड मिंटन-पत्रिक्रीडा
22. मैच-क्रीडाप्रतियोगिता	23. रेफरी-निर्णायकः	24. रैकेट-काष्ठपरिष्करः
25. बालीबालक्षेपकन्दुकः	26. हाकी का खेल-यष्टिक्रीडा	27. बिगुल-संज्ञाशंखः
28. कोमलस्वर-मन्द्रः स्वरः	29. तीव्रस्वर-तारःस्वरः	30. मध्यमस्वर- मध्यः, मध्यस्वरः

31.एटमबम-परमाणु अस्त्रम्	32. क्रच-वर्मन्	33.कृपाण-असिः
34. गण्डासा-तोमरः	35. गदा- गदा	36. गोली-गुलिका
37. छावनी-शिविरम्	38. टीयर गैस-धूम्रास्त्रम्	39. तेप-शतघ्नी
40. जल सेनापति-भूसेनाध्यक्षः	41. थल सेनापति- भूसेनाध्यक्षः	42. वायुसेनापति-वायुसेनाध्यक्षः
43. धनुष- धनुः, कोदण्डः, चापम्, कार्मुकम्	44. पिस्तौल-लघुभुशुण्डिः	45. बन्दूक-भूशुण्डिः
46. बम-आग्नेयास्त्रम्	47. हाइड्रोजन बम-जलपरमाण्वस्त्रम्	48. बारूद-अग्निचूर्णम्
49. लड़ाई का जहाज-युद्धपोतः	50.लड़ाई का विमान-युद्धविमानम्	

UNIT-III

(घ) विसर्ग सन्धि 5x1=5अंक

(ङ) अव्ययीभाव समास 5x1=5अंक

(च) अलंकार : उपमा, उत्प्रेक्षा, रूपक, विभावना, विशेषोक्ति तथा विरोधाभास 2x7½=15 अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT-IV

(छ) वैदिक इतिहास (लघु प्रश्न/टिप्पणी) 2x5=10अंक

(i) वेदों का सामान्य परचिय

(ii) वेदांग साहित्य का सामान्य परिचय

UNIT-V

(ज) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

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संस्कृत (इलैक्टिव)

6th Semester

Paper - Sanskrit : **लौकिक काव्य, इतिहास, निबन्ध व व्याकरण** पूर्णांकः90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- लौकिक काव्य के रचनासौष्ठव से परिचय कराना।
- संस्कृत के समृद्ध शब्दभण्डार से छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT-I

(क) रघुवंश (प्रथम सर्ग) - कालिदास

i) श्लोकों का सप्रसंग अनुवाद व व्याख्या 2x10=20अंक

ii) सूक्ति-सप्रंसग व्याख्या (तीन में से एक) 1x10=10अंक

UNIT-II

(ख) संस्कृत शब्दावली : सम्बन्धसूचक एवं प्रशासनिक शब्द 10x1=10अंक

1.पिता/माता - जनकः, /जननी

2. चाचा, चाची-पितृव्यः, पितृव्या

3. पति, पत्नी-पतिः, पत्नी (भार्या, जाया)

4. नाना, नानी-मातामहः, मातामही

5. छोटा भाई, बड़ा भाई-अनुजः, अग्रजः

6. दादा, दादी-पितामहः, पितामही

7. पुत्र, पुत्री-पुत्रः/आत्मजः, पुत्री/आत्मजा

8. जीजा-भगिनीपतिः

9. जंवाई (दामाद)-जामाता

10. देवर, देवरानी-देवरः, याता

11. मामा, मामी-मातुलः, मातुली

12. साला, साली-श्यालः (स्यालः), श्याली (स्याली)

13. सास, ससुर-श्वश्रूः, श्वशुरः

14. समधी (कुडम), समधिन (कुडमनी) -सम्बन्धी, सम्बन्धिनी

15. पोता, पोती-पौत्रः, पौत्री

16. भतीजा, भतीजी-भ्रातृपुत्रः /भ्रातृव्यः, भ्रातृपुत्री /भ्रातृव्या

17. भानजा, भानजी-भागिनेयः, भागिनेयी

18. चचेरा भाई, चचेरी बहिन-पितृव्यपुत्रः, पितृव्यपुत्री

19. भाभी-भ्रातृजाया

20. Administration-प्रशासनम्

21.Appeal-निवेदनम्

22. Approval-अनुमोदनम्

23. Ban-प्रतिबन्धः
24. Cabinet-मन्त्रिमण्डलम्
25. Corporation-निगमः
26. Director-निदेशकः
27. Employment-आजीविका, वृत्तिः
28. Initials-आद्यक्षरम्
29. Judgement-निर्णयः
30. Gazetted Officer-राजपत्रिताधिकारी
31. Notification-अधिसूचना
32. Procedure-कार्यविधिः
33. Receipt-प्राप्तिः
34. Senior-वरिष्ठः
35. Subordinate-अधीनस्थः
36. Transfer-स्थानान्तरणम्
37. Vacancy-रिक्तिः
38. Character Certificate-चरित्रप्रमाणपत्रम्
39. Civic-नागरिकः

(ii) पंजाबी में प्रयुक्त संस्कृत के तत्सम तथा तद्भव शब्दों की सूची 10x1=10अंक

संस्कृत शब्द	पंजाबी शब्द	संस्कृत शब्द	पंजाबी शब्द
1. चिरम्-(विलम्ब, देरी, दीर्घकाल)	चिर	21. रटितम् (रटा हुआ)	रटंत
2. वेला (समय, अवसर)	बेला	22. लोहितम् (खून)	लहूं
3. शाकः (हरि सब्जी)	साग	23. वसितम्, वसितिः (वस्ती)	वसूं, वसों
4. कर्करम् (ढेला, कंकर)	कंकर	24. हृदयम् (हृदय, दिल)	हिउं, हियां
5. चतुष्कम् (चौंक)	चौंक, चौंका	25. श्वश्रूः (सास)	सस्सू
6. द्वयम् (दो, जोड़ा)	दोह	26. वधूः (बहू)	वहू
7. धावनम् (धोना)	धावण	27. अद्य (आज)	अज्ज
8. नखम् (नाखून)	नउंह, नहुं, नौंह	28. अर्ध (आधा)	अद्धा
9. निषिद्धम् (बुरा, अपवित्र)	नखिंध	29. उच्चैः (ऊँचा)	उच्चा
10. नीलम् (एक रत्न)	नीलम, लीलम	30. कदा (कब)	कद
11. पदम् (पैर)	पउं	31. तदा (तब)	तद
12. नयनम् (नेत्र)	नैणूं	32. यदा (जब)	जद
13. पुच्छम् (पूंछ)	पूंछ	33. कृतः (किया)	कीत्ता
14. बाल्यम् (बचपन)	बालम	34. चन्द्रः (चांद)	चन्द
15. बीजम् (बीज)	बीं, बीउं	35. त्वम् (तुम)	तूं
16. भयम् (डर)	भैं, भउं, भंऊ	36. निम्बः (नीम)	निम्म
17. माषम् (उड़द)	मांह, महां	37. पिप्पलः (पीप	पिप्पल

18. मनःघटितम् (स्वकल्पित)	मनघडंत	38. बलदः (बैल)	बलद, बौलद
19. मुखम् (मुंह)	मूंह, मूं	39. हस्तः (हाथ)	हत्थ
20. युगलम् (जोड़ा)	जुगलां	40. सर्वः (सब)	सब्भ

UNIT-III

(ग)णिजन्त व सन्नन्त प्रयोग (प्रथम पुरुष का एकवचन ही प्रष्टव्य है।) 5x1= 5 अंक

(i) णिच् प्रत्यय केवल भू, पठ्, हस्, गम्, कृ, अधिइङ्, खाद्, चल्, नश्, व नम् धातु से ही प्रष्टव्य हैं।

(ii) सन् प्रत्यय केवल स्वप्, घ्रा, पठ्, कृ, गम्, मृ, मुच्, दा, तृ तथा भू धातु से ही प्रष्टव्य हैं।

(घ)बहुव्रीहि समास 5x1= 5 अंक

(ङ)अंलकार : अनुप्रास, यमक, अर्थान्तरन्यास, श्लेष, अतिशयोक्ति व दृष्टान्त 2x5=10 अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT-IV

(च)लौकिक संस्कृत साहित्य के निम्नलिखित लेखकों की कृतियों का परिचय 2x5= 10 अंक

(भास, कालिदास, भवभूति, बाणभट्ट, माघ, भर्तृहरि व दण्डी)

UNIT-V

(छ)संस्कृत निबन्ध (तीन में से एक विषय पर दस पंक्तयों में) 1x10=10अंक

विषय – संस्कृतभाषाया महत्त्वम्, मम प्रियः कविः, मम प्रियं पुस्तकम्, दीपावली, सत्संगतिः तथा पर्यावरणसुरक्षा)

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਥੀਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਦੇ ਰੂਪ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

(ਨਿਰਧਾਰਤ ਕਵੀ : ਸ਼ੇਖ ਫਰੀਦ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ, ਗਰੂ ਅਰਜਨ ਦੇਵ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ, ਭਾਈ ਗੁਰਦਾਸ)

2. ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ, ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) 'ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ' ਨਾਟਕ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਟਕ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) (ਦੋ ਵਿਚੋ ਇੱਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2x5 = 10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)

4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ)** : — 5 x 4 =20 ਅੰਕ
   ਗੁਰਮਤਿ, ਵਾਰ ਕਾਵਿ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: ਰੀਤੀ ਸੰਪ੍ਰਦਾਇ, ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਸਾਹਿਤ ਦੇ ਰੂਪ : ਜਨਮਸਾਖੀ, ਸ਼ਲੋਕ, ਕਾਫ਼ੀ, ਕਿੱਸਾ, ਵਾਰ, ਸੀਹਰਫ਼ੀ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਪੱਛਮੀਂ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
(ਨਿਰਧਾਰਤ ਕਵੀ: ਸ਼ਾਹ ਹੁਸੈਨ, ਦਮੋਦਰ, ਹਾਫਿਜ਼ ਬਰਖੁਰਦਾਰ, ਮਿਰਜ਼ਾ ਸਾਹਿਬਾ
2. ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼, (;ਜ਼ਗਕਓ) ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
(ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਤੇ ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼ ਪਾਠ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ-ਬੰਦ / ਵਾਰਤਕ ਅੰਸ਼ਾਂ ਦੀ ਵਿਹਾਰਕ ਆਲੋਚਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
(ਅ) ਨਿਬੰਧ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਿਬੰਧ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 2x5 = 10 ਅੰਕ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ)** : ਸੂਫੀ, ਕਿੱਸਾ ਤੇ ਜੰਗਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5x4 = 20 ਅੰਕ
5. ਪੱਛਮੀਂ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ੳ) ਅਰਸਤੂ ਦਕ ਅਨੁਕਰਣ ਸਿਧਾਂਤ (ਅ) ਮਨੋਵਿਸ਼ਲੇਸ਼ਣੀ ਵਿਧੀ (ਏ) ਮਾਰਕਸਵਾਦ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੇਤਰ ਤੇ ਹੋਰ ਵਿਗਿਆਨਾਂ ਨਾਲ ਸੰਬੰਧ (ਮਨੋ ਵਿਗਿਆਨ, ਸਮਾਜ ਵਿਗਿਆਨ ਤੇ ਮਾਨਵ ਵਿਗਿਆਨ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਈਸ਼ਰ ਸਿੰਘ ਤਾਂਘ, ਪੱਛਮੀਂ ਸਮੀਖਿਆ ਦੇ ਸਿਧਾਂਤ, ਦੀਪ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਸ਼ਹਿਰ।
5. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), 'ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
6. ਹਰਿਭਜਨ ਸਿੰਘ, ਅਧਿਅਨ ਤੇ ਅਧਿਆਪਨ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਧਾਲੀਵਾਲ,ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ' ,ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

URDU (ELECTIVE)
SEMESTER-V

Theory **90 Marks**
Internal Assessment **10 Marks**
Time: 3 Hours

Paper-A

Unit-I

Explanation of prose passage from following lessons: 30 Marks

1.
- Ek khuda parast shahzadi (Meer Amman)
- Shahzade ke pahle safar ka aaghaz (Rajab Ali Baig Suroor)
- Guzra hua zamana (Sir Syed Ahmed Khan)
- Qatil ki maa (Prem Chand)

Unit-II

2. (i) Explanation of Verses from following ghazals 30 Marks
- Jo is shor se Meer rota rahega (Meer Taqi Meer)
- Maqdur nahin uski tajalli ke bayan ka (Sauda)
- Tohmaten chand apne zimme dhar chale (Khawaja Mir Dard)
- Dil-e-nadan tujhe hua kya hai (Mirza Asdullah Khan Ghalib)
- Tamannaon mein uljhaya gaya hun (Shad Azimabadi)
- Duniya meri bala jane, mahngi ya sasti hai (Fani Badayuni)
- Na jane ashk se aankhon mein kyon hain aaye hue (Firaq Gorakhpuri)
- Mauje gul, mauje saba, mauje sehar lagti hai (Jam Nisar Akhtar)

(ii) Explanation of verses from following nazams
- Daastan shehzade ke ghayab hone ki (Meer Hassan)
- Aadmi Nama (Nazeer Akbar Abadi)
- Badli Ka Chand (Josh Malihabadi)
- Raat aur rail (Asrar-ul Haq Majaz)
- Kutte (Faiz Ahmed Faiz)

Unit-III

3. Summary of a lesson or a poem from Unit I and II 15 Marks

Unit-IV

4. Question on the basis of the following forms of prose and poetry 15 Marks

1. Ghazal 2. Nazam 3.Qasida 4.Novel 5.Afsana

Books Prescribed:
Shaoore Adab: Intikhab Nasar-o-nazam,Maktaba Jamia,New Delhi

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URDU (ELECTIVE)
SEMESTER-VI

Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Paper-B

Short story and literary history of Urdu literature

Unit-I

1. Urdu adab ki ibtida aur irtiqa 30 Marks
2. Fort William College Ki adabi khidmaat

Unit-II

Contribution of Urdu Poetry with special reference to: 30 Marks

- Asadullah Khan Ghalib
- Brij Narayan Chakbast
- Allama Iqbal
- Faiz Ahmad Faiz

Unit-III

Contribution of Urdu prose with special reference to: 15 Marks

- Sir Syed Ahmed Khan
- Altaf Husain Hali
- Quratulain Haider
- Ismat Chughtai

Unit-IV

Urdu Afsane Inshaiye 15 Marks

- Bhola
- Hajj e Akbar
- Manzoor
- Election

Book Prescribed:
Tarikh-e-Adab Urdu by, Dr.Ram Babu Saxena
Afsane Inshaiye aur drame, compiled by Mohammad Qasim Siddiqui,
Education Book House Aligarh

Books Recommended:
Tarikh-e-Adab Urdu, by Dr. Aijaz Hussain

PERSIAN (ELECTIVE)
SEMESTER-V

There will be two Paper Setters/Examiner.

PAPER-A : PROSE

Marks: 90
TIME : 3 Hrs
Internal Assessment : 10

1.	Translation of text pieces into English,Hindi,Urdu, Panjabi or Persian.	20 Marks
2.	Explanation of text pieces into English,Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye- Kuath	20 Marks
4.	Simple direct questions on the life works of the authors	20 Marks
5.	Short notes.	10 Marks
	Total:-	90 marks

Books prescribed:

Nisabe Jadide Farsi (Published By Jayyad Ballimaran, Delhi) Only following portion from Prose Section.

(i) Intekhab Sarzamin-e-Hindi-Ali Asghar Hikmat,P.33-60
(ii) Dastanha-ye-Kutah:-
  (a) Azzan-e- Maghrib by Saeed Nafisi.
  (b) Khukushi By Mohd. Hijazi.

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PERSIAN (ELECTIVE)
SEMESTER-VI

Paper-B POETRY

Marks 90
Time 3 Hours
Internal Assessment 10

1.	Translation of text pieces into English, Hindi,Urdu, Panjabi Or Persian.	20 Marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Central idea of the poem	20 Marks
4.	Simple direct questions on the life works of the Poets	20 Marks
5.	Short notes.	10 Marks
	Total:	90 Marks

Books Prescribed:

Nisabe Jadide Farsi(Published by Jayyad Ballimaran, Delhi). Only following portions form poetry section:-

Az Gzalliyat-e-Hafiz:

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.
Saaqi Benur Badah Bar Afrooz Jam-e-Maa.
Doosh Deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:
Jan Ze Tan Burdi-o-Dar Jaani Hunooz.
Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

Masanaviy-e-Maulana Rum:
Deed Musa Yek Shabani Rah Be Rah.
Wahi Aamad Suy-e-Musa Az Khusa

Wassayad-e-Urfi
Dar Wasf-e-Kashmir

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FRENCH (ELECTIVE)

B.A. /B.SC.(GENERAL) THIRD YEAR (SEMESTER SYSTEM) SYLLABUS, 2017-2018

SEMESTER-5TH

INTRODUCTION TO FRENCH DRAMA, POETRY AND PROSE

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

I Literary Master Pieces Drama, La Femme du Boulanger by Marcel Pagnol. 25 Marks

Questions on character sketches and Critical appreciation of the drama to be asked and answered in French.

II Selected Reading-Poetry 25 Marks
Questions, explanations of stanzas of poems and central ideas, critical appreciation and summaries of the poems to be asked and answered in French.

III Text Book : Version Originale-3 (Units 8-9) Version Originale-4 (Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) General questions to be based on the prescribed text.(4 questions of 5 marks each) 20 Marks

(b) Questions on French civilization in the form of fill in the blanks, multiple choice multiple choice and short answers of 1-2 sentences. 20 Marks

I Courses of Reading :

Drama :Marcel Pagnol La Femme du Boulanger, Presses, Pocket

II Poetry :

1.	Le Pont Mirabeau	Apollinaire (Alcools)
2.	Horloge	Baudelaire (Fleurs du mal)
3.	Les animaux malades de la peste	La Fontaine
4.	La jeune Veuve ;	La Fontaine
5.	Le Vase brisé	Sully Prudhomme.

Text Books for Reference :

1. French Poetry for students by - A.W. Bains.
2. Paroles Edition Folio by Jacques Prevert.
3. Le Français et la Vie-Tome III G. Mauger/M.Bruezier e.
4. Collection Littéraire XIX & XX Siècle-Nouveaux classique Larousse.
5. Poèmes choisis-A de. Musset-Edition-Nouveaux classique Larousse.
6. Les Textes français -XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

CHOICE TO BE GIVEN IN ALL QUESTIONS

Note for Private Candidates: -The theory paper would be marked proportionately out of 100 as there is no internal assessment.

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FRENCH (ELECTIVE)

SEMESTER-6

FRENCH POETRY, APPLIED GRAMMAR, CREATIVE WRITING AND VIVA-VOCE

Max. Marks	: 100
Theory	: 60 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

1.	Summary, explanation and analysis of prescribed poems	20 Marks
2.	A composition on a topic with in the textbook of about 200-300 words	15 Marks
3.	Questions on applied grammar [Questions to be based on grammar section of Prose - Version Originale-3 Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil Pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.	25 Marks
4.	**Viva-Voce:**	
1.	Dictation of an unseen passage of about 100 words.	10 Marks
2.	Conversation (general)	10 Marks
3.	Reading (Unseen passage)	10 Marks

Courses of Reading:

Poetry: The following five poems are to be studied:

1.	Le Lac	Lamartine
2.	La Grasse matinée	Jacques Prévert
3.	Le colloque sentimental	P. Verlaine
4.	Le manteau impérial	V. Hugo
5.	Le Déjeuner du Matin	J. Prévert

Comprehension, explanation, literary, appreciation and criticism of the poems to be studied.

Note : 1. The latest syllabus should be strictly followed.

2. Choice should be given in questions.

Text Books for Reference:

1. French Poetry for students by - A.W. Bains.
2. Paroles édition Folio by Jacques Prevert.
3. Le francais et la Vie-Tome III G. Mauger/M.Bruezier.
4. Collection Litteraire XIX & XX Siecle-Nouveaux classique Larousse.
5. Poèmes choisis-A de. Musset-edition-Nouveaux classique Larousse.
6. Les Textes français - XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

Courses of Reading :

Prose - Version Originale-3 Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

N.B. : (1) The latest syllabus to be followed strictly and the question paper should be of B.A.III level.

(2) Choice in questions must be given.

(3) Eight periods of one hour weekly – Six hours for text and two hours for composition.

(4) The composition and the unseen passages should be based on the vocabulary and grammar covered till B.A. III.

(5) The paper will be set and answered in French (except Translation).

Note for Private Candidates: - The theory paper would be marked proportionately out of 70 as there is no internal assessment.

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GERMAN (Elective)
Semester - V

Summary

Max. Marks :100 marks(Total)
Paper – A (Theory) : 90 marks
Internal Assessment: 10 marks

Paper A - Theory : **90 marks**

Time: 3 hours

Note: Use of dictionary is allowed

i. Explanation and interpretation of any **two** poems or **three** stanzas from the prescribed book "German Verse" (Kulkarni & Chapekar) : 30 marks

- i. Hyperions Schicksalslied (Hölderlin)
- ii. Der Karussel (Rilke)
- iii. Des Schiffers Traum (Arndt)
- iv. Der Zauberlehrling (Goethe)
- v. Ganymed (Goethe)
- vi. Einkehr (Uhland)

ii. Characterization / Literary questions (2) on the prescribed drama "Andorra" (Max Frisch) : 30 marks

iii. Translation of unseen text/s from German into English : 30 marks

5.2 **Internal Assessment** : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "German Verse" (Kulkarni & Chapekar)

ii. "Andorra" (Max Frisch)

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GERMAN (Elective)

Semester - VI

Summary

Max. Marks: 100 marks (Total)
End-semester Exam Paper-B (Theory) : 60 marks
Oral (viva-voce) examination : 30 marks
Internal Assessment : 10 marks

Paper B - Theory		:	**60 marks (Total)**
	Time Note: Use of dictionary is allowed	:	3 hours
i.	Translation of unseen text/s from German into English	:	20 marks
ii.	Translation of unseen text/s from English into German	:	10 marks
iii.	Characterization / Literary questions (2 out of 3) on the prescribed novel "Der Verdacht" (Dürrenmatt)	:	30 marks
Oral (viva-voce) Examination		**:**	**30 marks (Total)**
i.	Conversation in German		
ii.	Reading of a simple unseen text and answering questions there-on.		
Internal Assessment		:	**10 marks (Total)**
	- Continuous Evaluation - Attendance		

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbooks:

i. "Deutsche Texte zum Übersetzen", Max Hueber Verlag.
ii. "Der Verdacht" (Dürrenmatt)

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Russian (Elective)
SEMESTER -V

Paper –Option (i) (General Translation & Grammar): Written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) Cases(Nouns, Pronouns, Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes). 20 Marks

Note: Use of dictionaries is allowed.

OR

Paper: Option(ii) (Scientific & technical Translation & Grammar): written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian (Scientific & technical material) into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) 20 Marks

   Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes).

Note: Use of dictionaries is allowed.

Extra material to be provided by the department.

RUSSIAN (ELECTIVE)
SEMESTER -VI

Paper : Written (Literature)
Maximum Time : 3 hrs.

Maximum Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Biographies of Russian writers from prescribed text books **20 marks**

Biographies 2 out of 4 (10 marks each)

A.S.Pushkin
N.V.Gogol
A.P.Chekhov
M.Gorky
Leo Tolstoy
Chigiz Aitmatov
Konstantin Paustovsky

2. Literary works

(2 Question out of 4(10 marks each) on the following works: **20 marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

3.

a/ Reference to the context (Poetry): **10 marks**

a) Nyane	A.S.Pushkin
b) V Sibri	A.S.Pushkin
c) Parus	M.V.Lermontov

Poetry paragraph from the text studied (1 out of 2)

b/ Reference to the context (Prose): **10 Marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

Prose paragraph from the text studied (1 out of 2)

iii) Oral/Practical **30 marks**

Practical (Dissertation: Independent translation of about 2500 words from Russian literary, socio-political, popular science texts into English/Hindi/Punjabi) **15 marks**

OR

Verbal Narration in Russian on any two of the following topics:
1.Biography of any Indian/Russian personality 2. Native state 3. My favorite Russian Literary work.
4. Russia 5. India 6. Sport, 7. India-Russia commercial/Trade Relation.

General Conversation **15 marks**

Books Recommended for additional reading

N.S.Burlakov & C.N. Chakravarti : A Cherstomathy of Russian Literature. 1970
Nikolai Bannikov; Three centuries of Russian Literature. Progress Publishers, Moscow,1980.
A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
T.E. Pecherista : DOROGI – Stories by Soviet writers Russian language,Moscow,1979.
S Khavronnia: Russian in Exercise, 1978.
I Pulkina: RUSSIAN A Practical Grammar with Exercise. Russky Yazik. Pub. H.Moscow.
Dictionaries: English-Russian dictionary.
Russian-English dictionary
B.I.Balin and R.M.Bakaya: An Introductory Russian course for students of Science and technology, Asia publishing house, Delhi (For Scientific & technical Translation group)

Note: Extra materials to be provided by the department.

FOLLOWING SUBJECTS ARE KEPT IN ABEYANCE

1. **ARABIC (ELECTIVE)**
2. **BENGALI (ELECTIVE)**
3. **TAMIL (ELECTIVE)**
4. **KANNADA (ELECTIVE)**
5. **MALAYALAM (ELECTIVE)**
6. **TELUGU (ELECTIVE)**

PHYSICAL EDUCATION

B.A. /B.Sc. (GENERAL) FIFTH SEMESTER EXAMINATION (2017-18)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Play:

– Meaning and Definition of Play.
– Various theories of play and their significance in Physical Education and Sports.

Recreation:

– Meaning, definition, characteristics, aim, objectives and types of recreation and recreational activities.
– Significance of recreation in the modern society.
– Recreation providing agencies.

UNIT-III **12** Marks

Competitions:

– Meaning, importance and conduct of intramural and extramural competitions.
– Meaning and types of tournament and their merits and demerits.
– Draw of fixtures of various tournaments.

Camps:

– Meaning, aim and objectives of the camp.
– Advantages of camping/outdoor education.
– Types and agencies promoting camping.
– Organization of camps and factors affecting its organization.
– Educative values of a camp.

Athletic Meet:

– Organization of an athletic meet.
– Importance/significance of an athletic meet.

UNIT-IV **12** Marks

Posture:

– Meaning, types and importance of a good posture.
– Causes, preventive and remedial measures of a poor posture.

Postural Deformities:

– Postural deformities (Kyphosis, lordosis, scoliosis and flat foot), their causes, preventive and remedial measures.

Physical Activities and their effects on various physical parameters and vice versa:

– Physical activities/training and their effects on aging, body composition, and obesity.
– General problems of obesity.
– Health related risk factors of obesity.
– Obesity and physical activity.
– Causes, preventive and remedial measures of obesity.

UNIT-V **12** Marks

Massage:

– Brief history of massage.
– Meaning and definition of massage.
– Principles/guidelines for massage.
– Types of massage and their benefits.
– Effects of massage on skin, blood circulation, nervous system and muscles.

Basics of Cricket:

History of the game
Basic fundamentals
Equipment and specifications
Marking / layout of field
Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
Major tournaments and Arjuna awardees of the game.

References :

1. Bell, A.J. : *"Massage and the Physiotherapist : Physiotherapy",* 1964.

2. Butler, G.D. : *"Introduction to Community Recreation",* McGraw Hill Book Company, Inc. New York, 1959.

3. Garinder, M. Dena : *"The Principles of Exercise Therapy",* Fourth Edition, 1985, CBS Publishers and Distributors, Delhi.

4. Gladys Scott, M. : *"Analysis of Human Motion",* 2nd Edition, 1970, Eurasia Publishing House Pvt. Ltd., New Delhi.

5. Lee Joseph : *"Play in Education, National Recreation Association",* New York, 1942.

6. Meyer, Herold D., and Charles K. Brightbill : *"Recreation Administration : A Guide to its Practices",* Prentice Hall Inc., Englewood Cliffs, N.J., 1956.

7. Mitchell, Elmer D., and Bernard S. Mason : *"Theory of Play",* The Ronald Press Co., New York, 1948.

8. Nash, Jay B. : *"Philosophy of Recreation and Leisure",* The C.V. Mosby Co., St. Louis, 1953.

9. Parameswara Ram, N. : *"Kinesiology – Physical Education and Sports",* Parkash Brothers – Educational Publishers, 1988.

10. Piscopo, John and Baley, James A. : *"Kinesiology : The Science of Movement",* John Wiley & Sons, Inc., 1981.

11. Singh, Ajmer *et.al.* : *Modern Text Book of Physical Education, Health and Sports* Kalyani Publishers, Ludhiana, 2000.

12. Struna, Monika and Church, Connie : *"Self Massage : Touch Techniques of Relax, Soothe and Stimulate your Body",* Hutchinson & Co. Ltd., London, 1983.

13. Tirunarayanan, C. Hariharasarma, S. : *"Methods in Physical Education",* The South India Press, Karaikudi.

14. Wilmore, Jack H. : *"Atheltic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc. 470, Atlantic Avenue, Boston Massachusetts.

15. Wood, Elizabeth C. and Becker, Paul D. : *"Beard's Massage",* Third Edition, 1981, W.B. Saunders Company, Philadelphia, P.A.

PRACTICAL

Max. Marks : 35 Marks
Practical : 30 Marks
Internal assessment : 5 Marks

ATHLETICS

(a) History of athletics

(b) List of track and field events

(c) Marking of standard track, width of lanes and starting points for various races.

1. THROWS:

Throws (Shot-put or Discuss Throw or Javelin Throw) and one event of the choice of the student.

(a) **Shot-put** (The holding the stance, the glide, the delivery and the reverse or the recovery).

OR

Discuss Throw (The handhold, the initial stance, the preliminary swings, turn the delivery and the reverse or the recovery).

OR

Javelin Throw (The grip, the carry, the run way approach, the last five strides, the delivery, the reverse or the recovery).

(b) Measurements of equipment and the throwing circles or the approach run, the arc and the throwing area/the sectors.

2. PHYSICAL FITNESS TESTS: More emphasis shall be given on variety of physical exercises for the development of Flexibility and strength components of physical fitness.

Test 1- Flexibility: Sit and reach test

Test 2- Strength: Medicine Ball Throw.

Division of Practical Marks: Marks for each activity shall be divided as under:

Athletics and Physical fitness 15 marks, Participation and achievement in sports/games 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.

3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.

4. The theory and practical papers shall consist of 65 and 35 marks each.

5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.

6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.

7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections:*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students :*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods :*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load :*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. *Division of Marks (Theory and Practical) :*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

PHYSICAL EDUCATION

B.A. / B.Sc. (GENERAL) SIXTH SEMESTER EXAMINATION (2017-18)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(a) There shall be nine questions in all, spread over Five Units.
(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.
(c) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.
(d) All questions/units will carry equal marks.
(e) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Nervous System:

– Meaning of Nervous System.
– Main organs of Nervous System and their functions.
– Reflex action and Reciprocal Innervations.
– Functional classification of Nervous System.

Excretory System:

– Meaning of Excretory System.
– Main organs of Excretory System and their structure and functions.

Endocrine System:

– Meaning of **Endocrine System**.
– Meaning of Glands, their location and functions/Harmones produced by them.

UNIT-III **12** Marks

Sports Training,

– Meaning, definition, aim, objective, characteristics and principles of sports training.

General Physiological concept:

– Physiological concepts such as vital capacity, second wind, stitch in the side and its causes.
– Definition of oxygen debt/excess post exercise oxygen consumption (EPOC) and its implication.
– Meaning definition and types of fatigue.
– Muscular contractions such as isotonic, isometric, eccentric and isokinetic.
– Meaning of Blood pressure, Hypertension: Its causes, effects and treatment, exercise and Hypertension.

Effects of Physical Exercise / Training on body systems:

– Effects of Physical exercise/Training on muscular, respiratory and circulatory systems of the body.

UNIT-IV **12** Marks

Carrier aspects in Physical Education:

– Carrier options in Physical Education.
– Different avenues in Physical Education.
– Self assessment for carrier choices.
– Courses and institutions available for Physical Education profession.

UNIT-V **12** Marks

Coach:

– Coaching, coaching philosophy, definition of a coach.
– Qualification and characteristics of a coach.
– Responsibilities of a coach.

Basics of Table Tennis:

– History of the game
– Basic fundamentals
– Equipment and specifications
– Marking / layout of T.T Table
– Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
– Major tournaments and Arjuna awardees of the game

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.

2. Dandiya, P.C., Jafer, Z.Y.K. and Jafer Afifa : *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.

3. Dick, Frank, W. : *"Sports Training Principles",* Lepus Books, London, 1980.

4. Jensen, C.R. and Fisher, A.G. : *"Scientific Basis of Athletic Conditioning",* Lea and Febiger, Philadelphia, 1979.

5. Matveyer, L. : *"Fundamentals of Sports Training",* Mir Publication, Moscow, 1981.

6. Mathews, D.K. and Fox, E.L. : *"The Physiological Basis of Physical Education & Athletics",* Second Edition, W.B. Saunders Co., Philadelphia, 1976.

7. McArdle, William D., Katch Frank I., and Katch, Victor, L.

: *"Exercise Physiology : Energy, Nutrition and Human Performance",* Lea and Febiger, Philadelphia, 1981.

8. Morgan, R.E. and Adamson, G.T. : *"Circuit Training",* Bell and Sons, London, 1958.

9. Morehouse, L.E. and Miller, A.T. : *"Physiology of Exercise",* The C.V. Mosby Co., St. Louis, 1965.

10. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Teachers",* Lend Edward Arnolod Ltd., 1983.

11. Rose & Wilson : *"Foundations of Anatomy and Physiology*, 5th Edition,1981, Reprinted in 1985.

12. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999-2000, Birla Publications, Delhi.

13. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

14. Shaver, Larry G. : *"Essential of Exercise Physiology",* Surjeet Publications, Delhi First Indian Print, 1982.

15. Singh, Ajmer, Et.al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.

16. Singh, Hardyal : *"Sports Training-General Theory and Methods",* Netaji Subhash National Institute of Sports, Patiala, 1984.

17. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",*1977, Allyn and Bacon, Incl., 470, Atlantic Avenue Boston, Massachusetts.

PRACTICAL

Max Marks : 35
Practical : 30
Internal assessment : 5

GAMES

(Badminton or Hockey and any other one game of the choice of the student).

Badminton:

(a) Measurement (Badminton Court, Net, Racket and Shuttle cock) for singles and doubles.
(b) Number of players and officials.
(c) Holding the racket and shuttle cock.
(d) Types of Service: High and Low.
(e) Types of Strokes: fore hand, back hand, over head.
(f) Shots: Smash, Lob shot, net shot, dive shot.
(g) Rules and regulations of the game.

Hockey :

(a) Measurements (Hockey ground, goalpost, hockey stick, ball and flags) for men and women.
(b) Number and position of players and officials.
(c) Fundamental skills (grip, hitting, stopping dribbling, push, scoop and flick).
(d) Rules and regulations of the game.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections :*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students:*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods:*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load:*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. *Division of Marks (Theory and Practical):*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2017-18

SEMESTER –V

Paper- : INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. The students are required to attempt **6** short answer type questions out of **8** in Unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To enable the students to know about History of Indian Education.
2. To enable the students to understand the problems of pre-primary Education.
3. To make the students familiar with the concept of Universalization of Elementary Education and its problems.
4. To make the students familiar with the constitutional provisions of Education and role of different agencies in Education.

Course Contents :

UNIT-I : Education in the ancient and medieval period of Indian History.

UNIT-II : Current status and problems of pre-primary education. Public schools and their future.

UNIT-III : Importance of Elementary Education.
Universalization of Elementary Education. Problems of Elementary Education and Role of the State in Elementary Education.
Sarav Sikhiya Abhiyan – Concept, Objectives & Implementation.

UNIT-IV : Constitutional Provisions of Education.
Provisions for Education of Weaker Sections of Society.

Books Recommended :

1. Kaur, Kuldip : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh Centre for Research in Rural and Industrial Development, 1985.
2. Narula and Naik, J.I. : *Bharat Wich Vidyak Sikhya Da Itihas,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi 1953.
4. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-65), New Delhi, 1966.
5. Kochhar, S.K. : *Pivotal Issue of Education,* New Delhi, Sterling Publisher, 1984.
6. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* New Delhi, 1986.
7. Govt. of India : *Seventh Five Year Plan,* New Delhi.
8. Govt. of India : *Challenges of Education, A Policy Perspective,* New Delhi, 1986.
9. Sodhi, T.S. : *Bharti Sikhya Ate Us Diyan Samasiyavan,* Bawa Publications, Patiala.
10. Govt. of India, Ministry of Human Resource Development : *National Policy on Education, Programme of Action*, New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2017-18

SEMESTER –VI

PAPER : MODERN INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To make the students familiar with the structure of Secondary Education in India.
2. To enable the students to know about different policies of education.
3. To make the students familiar with the problems of education for 21st century.
4. To enable the students to know about the need and importance of vocationalisation of education.
5. To enable the students to know about Adult, Continuing and Environmental Education.

Course Contents :

UNIT-I : Secondary Education – Structure, Recommendations of Kothari Education Commission and National Policy of Education.

RMSA(Rashtriya Madhmik Shiksha Abhiyan) – Concept Objectives and Implementation.

UNIT-II: Implementation of National Policy of Education of 1986 and 1992.

Education in the Twelveth Five Year Plan.

Problems and Prospects of Education for the 21st century.

UNIT-III : Vocationalisation of Education – Meaning, Need and Importance.

Aims, Objectives and Problems of Secondary Education.

Role of different Agencies – NCERT, NCTE AND DIET.

UNIT-IV : Adult, Continuing and Distance Education.

Environmental Education, ICT in Education.

Books Recommended :

1. Narula & Naik, J.P. : *Bharat Wich Vidyak Sikhya Da Ithas,* Patiala, Punjabi University.
2. Sharma, T.R. : *Bharti Sikhya Dian Samasiyan,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.
4. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi, 1953.
5. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-66), New Delhi, 1966.
6. Kochhar, S.K. : *Pivotal Issues in Education,* New Delhi, Sterling Publishers, 1984.
7. Kaur, K. : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh : Centre for Research in Rural and Industrial Development, 1985.
8. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* New Delhi, 1986.
9. Govt. of India : *Seventh Five Year Plan,* New Delhi.
10. Govt. of India : *Challenge of Education : A Policy Perspective,* New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992

ADULT EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

Max. Marks	:	100
Theory	:	40 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND FOR THE CANDIDATE:

The question paper will consist of five Units: I, II, III, IV and V. Units II, III, IV and V will have two questions from the respective units of the syllabus and will carry 8 marks each. The students are requested to attempt **one** question from each Unit i.e. (II, III, IV and V). Unit I will consist of **eight** short answer type questions which will cover the entire syllabus and is compulsory and carrying one mark for each question.

OBJECTIVES OF THE COURSE :

The objectives of the paper are :

1. To expose students to the concept, importance and scope of continuing education.
2. To acquaint students with the basis of life skills education, its concept, meaning and its various forms.
3. To expose students with life long learning and its future perspectives.
4. To equip students with role of universities in adult and continuing education programs.
5. To explain students extension as third dimension.

ADULT EDUCATION
SEMESTER-V

THEORY :

UNIT-I

Adult and Continuing E ducation:

(a) Adult Literacy in reference to National Literacy Mission 1985, its objectives.
(b) Continuing Education : Concept, Importance, Scope and Objectives

UNIT-II

Saakhshar Bharat Mission 2009.

(a) Saakhshar Bharat Mission 2009, its targets and specific objectives.

(b) Flexi Approach to Saakhshar Bharat Mission 2009 and Continuing Education.

UNIT-III

Life Long Learning

(a) Life Long Learning - Concept, Needs, Scope, Strategies.

(b) Its Implications and Future Perspectives.

UNIT-IV

Extension Education

(a) Extension Education – The Third Dimension.

(b) Its Major Thrust Areas, Programs and Activities.

PRACTICAL/FIELD WORK **50 marks**

1. Organisation of T wo Awareness Generating Programs and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

ADULT EDUCATION
SEMESTER-VI

UNIT-I

Adult and Continuing Education:

(a) Different types of Programes in Continuing Education

(b) Role of Universities in Adult & Continuing Education.

UNIT-II

Life Skills

(a) Life skill Education – its meaning and Concept.

(b) NCERT CORE LIFE SKILLS
Problem-Solving, Decision-Making, Empathy, Creative-Thinking, Critical-Thinking, Stress Management, Time Management, Emotional Security, Communication Skills, Recreation Skills

UNIT-III

National Policy on Skill Development 2015.

(a) National Policy on Skill and Entrepreneurial Development 2015, its objectives and targets.

(b) Its Policy Frame Work, Governance and Financing.

UNIT-IV

Extension Education

(a) Swachh Bharat Mission-Objectives, Targets.

(b) Women Empowerment Challenges and Issues, Its Need and Importance.

PRACTICAL/FIELD WORK **50 marks**

1. Organization of Two Extension Lectures in Slum/Village and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

Books Recommended

1. Singh, Madan: Companion to Adult Educators
National Literacy Mission
Director of Adult Education
Ministry of Human Resource
Development,
Dept. of Adult Education, New
Delhi, 1999
2. Suriakanthi, A. : Perspectives of Continuing
Education, Dept. of Adult,
Continuing Education &
Extension,
Gandhi Gram Rural University,
Gandhi Gram, 2007
3. Parthasarathy, K. : Facets of Adult and Continuing
Education, School of Education,
Centre for Adult, Continuing
Education & Extension,
Bharathidasan University
Trichirappatti, 2006
4. Parthasarathy, K. : Population Education and Youth
Development, School of Education,
Centre for Adult, Continuing
Education and Extionsion,
Barathidasan University,
Trichirappatti, 2007
5. Alan Rogers : Teaching Adults, Sterling Publishers
Pvt. Ltd., New Delhi, 1989
6. Mohanty J. : Adult & Non formal Education,
Deep Publications, New Delhi, 1993
7.U.G.C. Guidelines. (X and XI Plan) : University Grants Commission,
for Adult, Continuing Education and Extension New Delhi

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MUSIC (Vocal)

SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent**.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	:	45 marks
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
	(i) Viva	:	35 marks
	(ii) Harmonium	:	05 marks
	(iii) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
		Total :	**100 marks**

Paper-A : THEORY (Duration 45 minutes 02 Theory per week)

UNIT-I

1. Explain the following Gayan Shaillies:-Tappa, Dharupad, Tarana.
2. Special features of time Theory of Indian Ragas
3. Raganga Paddhti

UNIT-II

Detailed study of the following:-

1. Manch- Pradarshan
2. Professions in Music
3. Lok Sangeet of Punjab

UNIT-III

Contribution in detail and life sketches in brief of the following: -

1. Pt. Kumar Gandharv
2. Smt. Gangu Bai Hangal
3. Ustad Bade Gulam Ali Khan Sahib

UNIT-IV

Description and Notation of the prescribed Ragas:-

1. To write notation of Vilambit / Drut khyal in the prescribed Ragas with Alaps and Taans : -Vrindavani Sarang, Asavari
2. To write notations of Talas in Ekgun & Dugun of :- Jhumra, Sultala
3. To write the description of Ragas:- Non-detailed Ragas:Des, Jaunpuri

NOTE: Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: -Vrindavani Sarang & Asavari
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dharupad in proper style.
4. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
5. Ability to play Jhaptal on Tabla.
6. Ability to recite the following Talas in Thah, Dugun by hand:-Jhumra, Sultala
7. Ability to sing any two Drut Khayals of your course on Harmonium.
8. Knowledge of non-detailed Ragas:
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Des, Jaunpuri.
9. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*		Panna Lal Madan

MUSIC (Vocal)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	: 45 marks
Paper-B:	**Practical** (20 minutes duration)	: 45 marks
(iv)	Viva	: 35 marks
(v)	Harmonium	: 05 marks
(vi)	Tabla	: 05 marks
Internal Assessment (Theory + Practical)	(05 +05)	: 10 marks
	Total	**: 100 marks**

Paper-A: THEORY (Duration 45 minutes 02 Theory per week)

UNIT –I

1. General History of Indian Music i.e. from Bharat to Sharangdev
2. Explain the following Gayan Shaillies: - Dhamar, Bhajan , Shabad, Thumri
3. Varieties of Kanth Sadhna

UNIT –II

Contribution in detail and life sketches in brief of the following great masters:-

1. Ustad Vilayat Hussain Khan
2. Smt. Siddheshwari Devi
3. Pt. V. N. Patvardhan

UNIT-III

Detailed study of the following:-

1. Role of Akashwani and Doordarshan towards the popularisation of Indian Classical Music
2. Role of Electronic mediums (Basic Instruments) i.e Electronic, Tabla, Tanpura
3. Sansthagat Sangeet Shikshan Pranali

UNIT-IV

Description and Notations of the prescribed Ragas and Talas :-

1. To write in notation of Vilambit gat / drut khyal in the prescribed Ragas with Alap & Taans:-- Madhuwanti & Darbari- kanada.
2. To write in notations of talas:-Deepchandi, Dhamar (Single + Double)
3. To write the description of Ragas:- Non detailed Ragas: Multani, Adana

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

Paper-B : PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: Madhuwanti & Darbari Kanhada
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dhamar in proper style.
4. One Tarana in any of the detailed Ragas prescribed in the course.
5. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
6. Ability to play Chartala on Tabla.
7. Ability to recite the following Talas in Thah, Dugun by hand: Deepchandi & Dhamar
8. Ability to sing any two Drut Khayals of your course on Harmonium.
9. Knowledge of non-detailed Ragas :
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Multani & Adana
10. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*		Panna Lal Madan

MUSIC (Instrumental)

SEMESTER-V

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. **There should not be more than eight students in a batch for practical examination.**
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	: 35 marks
(ii)	Gayan	: 05 marks
(iii)	Tabla	: 05 marks
Internal Assessment (Theory + Practical)		: 05+05 = 10 marks
		Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. Explain & define the different Vadan Shaillies (Styles) of your own instrument.
2. Historical development of Indian Musical Scale.
3. Varieties of Tana / Tora

UNIT-II

1. Importance of Laya and Tala in Music
2. Folk Instruments of Punjab.
3. Future of Instrumental Music.

UNIT-III

Brief life sketches and their contributions:-

1. Ustad Bismillah Khan
2. Ustad Hafiz Ali Khan
3. Pt. Nikhil Banerji

UNIT-IV

Notations and Description of ragas and Talas:- Multani, Jai Jaiwanti

1. To write one Maseetkhani Gat with Todas
2. To write Razakhani Gat with Todas of ragas Multani, Jaijaiwanti
3. To write single and double of Tala :- Deepchandi, Tilwada
4. Non- detailed raga:- Madhuwanti, Chhayanat

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ Description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas : Multani, Jaijaiwanti
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:-Madhuwanti, Chhayanat
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Deepchandi, Tilwada,
5. Ability to play Dhamar on Tabla.
6. One Dhun.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan,Ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
4	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla

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MUSIC (Instrumental)
SEMESTER-VI

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45marks

(i)	Viva	:	35 marks
(ii)	Gayan	:	05 marks
(iii)	Tabla	:	05 marks
Internal Assessment (Theory + Practical)		:	05+05 = 10 marks
		Total:	**100 marks**

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. General History of Indian Music i.e. from Bharata to Sharangdeva
2. Notational System, origin and development
3. Knowledge of Uttari and Dakshani Sangeet Paddhati

UNIT-II

1. The life Sketches and contributions of the following great musicians :-
   (i) Dr. Lal Mani Mishra
   (ii) Dr. Panna Lal Ghosh
   (iii) Smt. Sharan Rani

UNIT-III

Essays:-

(i) Chitrpat Sangeet Mein Vadyon Ki Bhoomika.
(ii) Role of the Akashvani and Doordarshan in popularizing Instrumental Music.
(iii) Manch Pradarshan

UNIT-IV

Notation and Description of the prescribed Ragas and Talas:-

1. Ragas:- Mian-Ki-Todi, ,Mian Malhar.
2. Talas :- Sultal, Adachartal
3. Non detail Raga :- Gujri -Todi, Bahar

- To write one maseetkhnai Gat with todas in any prescribed rag
- To write a Razakhani Gat with Todas
- To write single and double of prescribed Talas
- To write the description of detailed and non detailed raga

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas: Mian-Ki-Todi, Mian- Malhar
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:Gujri-Todi, Bahar
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Adachautal, Sultal.
5. Ability to play Tilwada on Tabla.
6. One Sitarkhani gat with toras in any prescribed ragas.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan, ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1. Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2. Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3. Rag Parichaya Part III & IV	:	H.C. Shrivastava.
4 *Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5. *Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6. *Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7. Sangeet Granth atey Bharti Sangeet Da Itihas	:	Chander Kanta, Khosla

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TABLA (Instrumental Music)

SEMESTER-V

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There will be upto eight students in one secton.
3) Candidate can take any other instruments alongwith Tabla i.e. Sitar, Sarangi Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shehnai.
4) The candidate can take Vocal Music along with Instrumental Music
5) The candidate can also take Instrumental Music with Tabla
6) In all, 9 questions will be set. The question paper will be divided into five units. Four units contain 2 questions each. The candidates are required to attempt 4 questions selecting at least one question from each unit. The 5th unit based on the notation shall be compulsory.

Paper-A: THEORY (3 Hours duration)	:	45 marks
Paper-B: PRACTICAL (20 minute's duration)	:	45 marks
(i) Viva	:	30 marks
(ii) Harmonium	:	05 marks
(iii) Tabla	:	05 marks
(iv) Padhant on Hand	:	05 marks
Internal Assessment (Theory & Practical) (5+5)	:	10 marks
Total	:	**100 marks**

Paper-A Theory

UNIT-I

(a) Classification of Musical Instruments.
(b) Brief study of following south Indian Instruments:-
Mridangam , Ghatam, Tabil

UNIT-II

(a) Origin and development of Tabla Instrument.
(b) Playing techniques of Tabla

UNIT-III

(a) Comparison between Uttari and Dakshini Tala System.
(b) Comparative study of different talas having equal matras:
(i) Teental –Punjabi Tala (Addha Tala)
(ii) Roopak – Tivra

UNIT-IV

(a) Development & Importance of Tabla Gharana.
(b) Life sketches and contributions of the following:
(i) Mian Kadar Baksh
(ii) Pt. Ram Sahai

UNIT-V

Ability to write in notation of Quaida, Paran, Gat, Tihais & Peshkar in Teentala, Jhaptal, Roopak Talas

Paper-B: PRACTICAL

a) Playing of Talas prescribed in the course:- Ada Chautal, Tilwara and Punjabi Tala
b) Playing proper Badhat of Ada-Chautal, Teentala
c) Playing all the prescribed Talas with Vocal and Instrumental performances as well as solo items.
d) Tuning of Tabla/Pakhawaj
e) Practical knowledge of the following in the prescribed Talas:
   (i) Ada chartala:- simple Paran, Mukhra, Mohra, Uthan
   (ii) Rupak /Teevra:- Peshkar, Quaida, Palta, Rela, Paran.

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

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TABLA (Instrumental Music)

SEMESTER-VI

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There will be upto eight students in one secton.
3) Candidate can take any other instruments alongwith Tabla i.e. Sitar, Sarangi Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shehnai.
4) The candidate can take Vocal Music along with Instrumental Music
5) The candidate can also take Instrumental Music with Tabla
6) In all, 9 questions will be set. The question paper will be divided into five units. Four units contain 2 questions each. The candidates are required to attempt 4 questions selecting at least one question from each unit. The 5th unit based on the notation shall be compulsory.

Paper-A: THEORY (3 Hours duration) : 45 marks

Paper-B: PRACTICAL (20 minute's duration) : 45 marks

i)	Viva	:	30 marks
ii)	Harmonium	:	05 marks
iii)	Tabla	:	05 marks
iv)	Padhant on Hand	:	05 marks

Internal Assessment (Theory & Practical) (5+5) : 10 marks

Total : **100 marks**

Paper-A Theory

UNIT-I

a) Folk Tala Instruments of Punjab.
b) Brief study of following south Indian Instruments:-
Morchang, Kanjeera, Manjeera.

UNIT-II

a) Origin and development of Pakhawaj
b) Playing technique of Pakhawaj
c) Basic principle of Tabla / Pakhawaj accompaniment

UNIT-III

a) Comparative study of Bhatkhande and Paluskar Tala Notation System.
b) Comparative study of different talas having equal matras:
(i) Deepchandi –Jhoomra
(ii) Jhaptal – Sooltal
(iii) Ektal-Chautal

UNIT-IV

a) History of Delhi, Punjabi & Banars Gharana of Tabla
b) Life sketches and contributions of the following:-
   (i) Ustad Allarakha Khan
   (ii) Pt. Kishan Maharaj
   (iii) Pt. Anokhe Lal Mishra

UNIT-V

Ability to write in notation of Quaida, Paran, Gat, Tihais & Peshkar in Pancham, Sawari & Adachautal

Paper-B: PRACTICAL

a) Playing of Talas prescribed in the course:- Dhamar, Pancham- Sawari, Vilambit Ektala
b) Playing proper Badhat of Dhamar:- Pancham,- Sawari Talas
c) Playing all the prescribed Talas with Vocal and Instrumental performance as well as solo item.
d) Tuning of Tabla/Pakhawaj
e) Practical knowledge of the following in the prescribed Talas:
   (i) Dhamar:-Chakardar Paran, Farmaishi Paran, Tukra
   (ii) Tilwara:-Vilambit, Theka with accompaniment in Vocal

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

INDIAN CLASSICAL DANCE
SEMESTER –V

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

PAPER-A THEORY

Unit –I

1. Defination the following terms:
   Kataksh, Ang, Upang, Pratyanga, Hela.
2. Origin of Taal and its ten pranas.
3. Technique of Indian Ballet.

Unit-II

1. Dance and Nature
2. Brief study of Natya Shastra
3. Brief study of Natak Bheda

Unit-III

1. Essential characteristics of Mohini Attam.
2. Brief note on Bhave.
3. Brief note on Folk Dances of Rajasthan.

Unit-IV

1. Description of Teen Tala anad Sawari and Dhamar
2. Notation of Theka, Bol Tatkar, thaat, Amad, Chakardar, Tora, Tihai and Premelu and Nagma in Teen Taal.
3. Notation of Theka, Bol, Tatkar, Tihai, Amad, Paran, Chakardar, Paran, Tukra, Kavit and Nagma in Sawari Tala.
4. Notation of Theka, Bol -Tatkar and Tihai in Dhamar.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 minutes 06 periods per week)

Unit - I

1. Swari Tala
   b) Theka
   c) Bol Tatkar
   d) Tukra - 2
   e) Amad - 1
   f) Chakardar Paran - 1
   g) Tihai - 1
   h) Paran - 1
   i) Nagma - 1
   j) Kavit - 1

Teen Taal:

2. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Thaat - 1
   d) Amad - 1
   e) Chakardar Tora - 1
   f) Tihai - 1
   g) Premula - 1
   h) Nagma - 1

3. Dhamar Taal:

   I Tatkar
   II Tihai

4. a) Knowledge of Folk Dance of Rajasthani practically
   b) Play Theka of Sawari on Tabla
   c) Gat Nikas of Ghungat and Matki
   d) All the practical work on Hand

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INDIAN CLASSICAL DANCE

SEMESTER –VI

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

Paper-A Theory

Unit- I

1. History of Kathak Dance.
2. Brief study of Nayika Bheda.
3. Knowledge of Dakshini Taal System.

Unit-II

1. Essential characteristics of Odissi.
2. Loka Dharmi and Natya Dharmi.
3. Life sketch of Achhan Maharaj Ji.

Unit III

1. Brief study of Abhinaya Darpan.
2. Dance and Fine Arts.
3. History of Stage.

Unit IV

1. Description of Dhamar with Theka, Two Toras, Tihai, Amad and Pakshiparan.
2. Notation of Theka, Amad, Tihai, Tora, Kavit and Chatusjati paran in Teen Taal.
3. Notation of Theka, Paran, Chakardar Paran, Tisarjati Paran, Kavit in Sawari Taal.
4. Nagma, Bol Tatkar in Dhamar, Teen Taal and Sawari.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical (Duration 45 minutes, 06 periods per week)

Unit-I

1. Dhamar (Matra 14)
   a) Bol Tatkar
   b) Theka
   c) Toras-
   d) Tihai-1
   e) Pakshiparan
   f) Amad

2. Swari Tala (Matra 15)
   a) Theka
   b) Bol Tatkar
   c) Paran-1
   d) Chakardar Paran-1
   e) Tisarjati Paran-1
   f) Kavit-1

3. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Amad -1
   d) Tihai -1
   e) Tora - 2
   f) Kavit -1
   g) Chatusjati paran

4. a) Knowledge of Sammi Dance practically
   b) Play Theka of Dhamar on Tabla
   c) Gat Nikas of Murli and Ghungat
   d) All the practical work on Hand
   e) Gat Bhava (Panghat ki Chhed Chhaad).

BOOKS RECOMMENDED:

1.	Kathak	:	Sunil Kothari
2.	Bhartiya Sanskriti mein Kathak Parampara	:	Mandavi Singh
3.	Bharatiya Nritya Kala	:	Keshav Chander Verma
4.	Dance in Thumri	:	Projesh Banerji
5.	Dances of Asia	:	Kiets Sakakibera
6.	Kathak Darpan	:	T. R. Azad
7.	Kathak Nritya Shiksha Part - I & Part - II	:	Puru Dadhich
8.	Natya Shashstra of Bharatmuni	:	
9.	Abhinaya Darpan aur Geet – Gobind	:	Dr. Laxmi Narayan Garg
10.	Abhinaya Darpan	:	Dr. Aarohi Walia
11.	Nritya Abhigyan	:	Shobha Koser
12.	Kathak Gyaneshwari	:	T. R. Azad
13.	Bhartiya Lok Nritye Mein Haryana aur Rajasthan	:	Neera Sharma
14.	Etihasik Paripeksh Mein Kathak Nritya	:	Maya Tak
15.	Kathak	:	Shikha Khare
16.	Bhartiye Sangeet Vadya	:	Lal Mani Mishra
17.	Kathak Kalpdrum	:	Dr. Chetna Jyotshi
18.	Indian Art	:	K. Bharatha Iyer
19.	Indian Sculpture and Painting	:	E.B. Havell
20.	Fine Art	:	Kulwant Singh
21.	Indian Sculpture	:	Stella Kramrish
22.	Sculpture in India	:	Dr. N. L. Mathur
23.	Kala Wahegure di	:	Shobha Singh

FINE ARTS

B.A./ B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER V

THEORY

Paper A : History of Art **Max. Marks : 54**
Max. Time : 3 hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Rajasthani Painting – Chavand Raagmala from Mewar, Raag-Raagini from Bundi and Nayika from Kishangarh
- Pahari Painting – Ramayana from Basohli, Gita-Govinda from Kangra

Unit II : History of Indian Sculpture

- Mahabalipuram – Maheshasuramardini
- Elephanta – Ardhanarishwara
- Chola Bronzes – Nataraja and Parvati Images

Unit III : History of Western Art

- Beginning of Modern Painting – Manet
- Impressionism – Monet
- Neo Impressionism-Seurat
- Post Impressionism-Van Gogh

Unit IV : Definition of Key terms, General Concepts and Techniques

- Form and Content, Art and Religion, Art and Society, Tradition, Modernity

Pedagogy:

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

FINE ARTS
SEMESTER VI

THEORY

Paper A : History of Art **Max. Marks : 54**
Max.Time : 3hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Company Painting
- Folk Style – Kalighat and Maithili

Unit II : History of Indian Sculpture

- Khajuraho – Mother and Child
- Konark – Musician Figures
- Sravanbelgola – Bahubali

Unit III : History of Western Art

- Expressionism – Edvard Munch
- Fauvism-Matisse
- Cubism-Picasso

Unit IV : Definition of Key terms, General Concepts and Techniques

- Beauty, Rasa and Bhava, Gestures, Postures and Movements, Stained Glass, Cire-perdue (lost-wax casting)

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

HISTORY OF ART

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER - V

History of Indian Painting (from ca. 1800 to the present times) and Sculpture (from ca. 600 to 1300 A.D.)

Max.Marks: 100
Time: 3 Hr

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Indian Painting

Unit-I

- Company painting.
- Early oil painters - Raja Ravi Verma.
- Bengal School with special reference to Abanindranath Tagore

Unit-II

- New Trends: Nandlal Bose, Rabindranath Tagore, Gaganendranath Tagore, Jamini Roy, Amrita Shergil, D.P. Roy Chowdhury, Sobha Singh, M.F.Hussain, Satish Gujral.

History of Indian Sculpture

Unit-III

- Sculptures of Pala and Sena Period - Bengal, Bihar, Orissa

Unit-IV

- Pratihara Sculpture of Central and Western India.
- Chola Sculpture in Stone & Bronze

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Archer, W.G : India and Modern Art, George Allen & Unwin Limited, London, 1959.
- Archer, M. & Archer W.G. : Indian Painting for the British, 1770-1880, Oxford University Press, London, 1955.
- Chaitanya, Krishna : A History of Indian Painting, The Modern Period, Abhinav Publications, New Delhi, 1994.
- Appasamy, Jaya : Abanindranath Tagore and the Art of his Times, Lalit Kala Akademi, New Delhi, 1968.
- Mago, P.N. : Contemporary Art in India, A Perspective, National Book Trust of India, New Delhi, 2000.
- …… : Lalit Kala Monographs, Lalit Kala **Akademi, Delhi.**
- Journals and Periodicals : Lalit Kala Contemporary, Roopa-lekha, Marg.
- Parimoo, Ratan : The Paintings of the Three Tagores, Maharaja Sayajirao University, Baroda, 1973.
- Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
- Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
- Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART
SEMESTER-VI

History of European Painting and Sculpture (from ca. 1850 A.D. onwards), and Theory and Principles of Art Appreciation.

Max.Marks: 100
Time: 3 Hrs

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set 9 **questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of European Painting and Sculpture

Unit-I

- Impressionism - Monet, Degas, Renoir.
- Post-impressionism - Van Gogh, Cezanne, Gauguin.

Unit-II

- Cubism - Picasso, Braque
- Expressionism - Munch, Nolde.
- Abstract Art - Kandinsky
- Abstract Expressionism - Jackson Pollock.

Theory and Principles of Art Appreciation

Unit-III

- Function of Art.
- A brief study of Indian and Western approaches to Art.

Unit-IV
Explanation of the term

- Form, Content, Abstraction, Modernity, Contemporaneity, Pointillism, Collage, Lithograph, Etching and Ready-made with the help of relevant examples.

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
- Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
- Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
- Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.
- Ray, Niharanjan : An Approach to Indian Art, Publication Bureau, P.U., Chandigarh, 1974.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
- Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.

ANCIENT INDIAN HISTORY, CULTURE AND ARCHAEOLOGY

SEMESTER V

Paper-V (VOCATIONAL) : EXCAVATIONS, MONUMENTS AND SCULPTURES IN STONE AND BRONZE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
marks Time	:	3 Hours

Objectives :

The primary objective of this paper is to prepare the students to become professional archaeologists through the study of various excavated archaeological sites, monuments and antiquities such as stone and bronze sculptures. The study of this paper is also designed for preparing students to take higher and advanced study in the subject.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
3. The map question shall have the following topics :
   (a) Location of important archaeological sites mentioned in Unit I.
   (b) Location of important monuments mentioned in Unit II.
   (c) Location/Provenance of important sculptures mentioned in Units III and IV.
4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice, i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.
5. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I:

Excavations : (Note: Instructions will be confined only to the location of the site and important results obtained). Kalibangan, Lothal Mitathal, Sugh, Sanghol, Inamgaon, Atranjikhera, Sisupalgarh, Nagarjunkonda.

UNIT-II:

Monuments : Asokan Pillars, Stupa of Sanchi, Rock-cut-architecture of Ajanta and Ellora, Temples: Kandariya, Mahadev, Lingaraja, Jagannath, Konark, Hoyasalesvara and Brihadesvara.

UNIT-III:

Sculptures : Stone-Harappan, Rampurva Ashokan Bull, Didarganj Yakshi, Katra Buddha, Sarnath Seated Buddha, Gomatesvara at Sravanavelagola, Maheshamurti, (Elephanta), Krishna holding Govardhana (Halebid), Sun Image of Konark, Kasia reclining Buddha (Mahaparinirvana).

UNIT-IV:

Bronze : Sultanganj Buddha, Nalanda Image of Balarama and Buddha, Kurkihar Avalokitesvara, Indra and Padmapani from Nepal, Tanjore (Chola), Nataraja, Balakrishna Kaliyadamana and Somaskanda Murti,

Pedagogy of the Course Work :

It is expected to familiarize students with brief outline of the topics with the help of visual aids like slides and transparencies. Field work trips to museums and sites may also be undertaken.

Essential Readings :

1. Agrawala, P.K. : *Bharitya Kala Avam Vastu,* Prithvi Prakashan, *Varanasi.*
2. Agrawala, V.S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
3. Allchin, B. and Allchin, F.R. : *The Rise of Civilization in India and Pakistan,* Cambridge University, Cambridge, 1982.
4. Bajpai, K.D. : *Five Phases of Indian Art,* Vidya Prakashan Jodhpur, 1991.
5. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* Vol-1, rpt. D.B. Tara Gorevala sons, Bombay, 1971
6. Grover, Satish : *The Architecture of India : Buddhist and Hindu,* Delhi, 1980.
7. Lal, B.B. : *The Early Civilization of South Asia,* Aryan Books, *New* Delhi, 1997.
8. Saraswati, S.K. : *A Survey of Indian Sculpture,* 2nd ed. Munshiram Manoharlal, New Delhi 1975.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER VI

Paper-VI: EPIGRAPHY AND NUMISMATICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

This course makes the students aware of major scripts of Ancient India and their origin and development upto 6th century A.D. Antiquity and art treasure laws are also taught. It also provides knowledge about the origin and antiquity of Punchmarked coins; tribal coins; Yaudheyas, Kunindas, Agra, Audumbaras and Malavas; Kushana and Gupta coins.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The question on map shall consist of the location of the sites of important inscriptions of Asoka.
3. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate will attempt one question from each unit. Each question shall carry 18 marks.
4. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (4) in the question paper.

UNIT-I:

(a) Epigraphy : Major scripts of Ancient India.

(b) Their origin and development up to 6th century A.D.

UNIT-II:

Rock and pillar edicts of Asoka.

UNIT-III:

(a) Origin and Antiquity of Punchmarked coins.

(b) Origin and date of Tribal coins : Yaudheyas, Kunindas, Agra, Audumbaras and Malavas.

UNIT-IV:

(a) Kushana Coins.
(b) Gupta Coins.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs and maps. In addition to it, special lectures, workshops, seminars, written assignments, class discussions, and term papers, should be included in the teaching work.

Essential Readings :

1 Allan, John : *Catalogue of Coins of Ancient India,* Vol.I, rpt., Delhi, 1974.

2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, BHU, Varanasi, 1957.

3. Chattopadhya, B. : *The Age of Kushanas,* A Numismatic Study, Calcutta, 1970.

4. Gupta, P.L. : *Coins,* rpt., National Book Trust, New Delhi, 2006.

5 Hultzsch, E. : *Corpus Inscriptionum Indicarum,* Vol.I, rpt. Archaeological Survey of India, Delhi, 1991.

6. Pandey, R.B. : *Indian Palaeography,* Munshiram Manoharlal, Banaras, 1952.

DEFENCE & STRATEGIC STUDIES

SEMESTER –V

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper - NATIONAL SECURITY: CONCEPTIONAL ASPECTS

M. Marks: 70
Time: 3 hours

Objective :

This paper deals with the conceptual aspects of national security and the role of economy & military organizations in furthering national pursuits.

SECTION -I

1. National Security: Definition and Concept.
2. Elements of National Security: Geography, Mineral Resources, Economic Stability, Military preparedness, Socio-Political Factors, Science and Technology.

SECTION -II

3. Collective Security Arrangements: Security Relevance of UN in the modern context, Role of NATO in the Post Cold War era.

SECTION -III

4. Regional groupings: SAARC, ASEAN and BIMSTEC (Aims and Objectives of the three Alliances to be discussed).

SECTION -IV

5. Non-Aligned Movement and National Security: History, Features, Problems and Achievements.

Books Recommended

1. Abhyankar, M.G., Defence Principles and Organisation, Usha Publications, Longmans, Michigan, 1966.
2. Aditya, Chibber , National Security Doctrine, Lancers International, New Delhi, 1990.
3. Alva, Myrdal , The Game of Disarmament, Pantheon Books, New York ,1982.
4. Bandhyopadhyay, J., India's Foreign Policy Making, Allied Publishers Private Ltd., Mumbai, 1970.
5. Choudhary, Subrata Roy, Military Alliances and Neutrality in War and Peace, Orient Longmans, Bombay, 1966.
6. Hadley Arthur T., The Nation's Safety and Arms Control, Viking Press, University of Michigan, 1961.
7. Hans, J. Margenthau , Politics Among Nations, McGraw-Hill, New York, 1993.
8. Misra, K.P., Studies in Indian Foreign Policy, Vikas Publications, Delhi, 1969.
9. Rana, A.P., The Imperative of Non-Alignment, McMillan Cop. of India, 1976.
10. Shah, A.B., India's Defence and Foreign Policies, Manaktalas , 1966.
11. Singh, Jasbir, Indian Defence Year Book 2012-13, Natraj Publishers, Dehradun, 2001.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Relief features and their representation on Map.
2. Degree of Slopes, Gradients and Inter-visibility of Points.
3. Study of Field Craft with reference to the following:

   (a) Ground
   (b) Cover
   (c) Camouflage
   (d) Observation

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

DEFENCE & STRATEGIC STUDIES

SEMESTER –VI

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper: NATIONAL SECURITY OF INDIA

M. Marks: 70
Time : 3 hours

Objective - This paper covers the various factors related to National Security in India.

SECTION -I

1. India's Security Problems since 1947:
   (a) Geo-political effects of Partition: Boundaries and Frontiers.
   (b) Integration of States: J & K, Junagarh, Hyderabad and Goa.
   (c) An overview of India's Security problems related to Pakistan and China.

SECTION -II

2. Indian Ocean and India's Maritime Security.
3. Nuclear Policy of India: History, Evolution and Policy options.

SECTION -III

4. Internal Dimensions of India's National Security with particular reference to Insurgency, Terrorism and Low Intensity Conflict.
5. Disaster Management in India and the role of Civil Defence.

SECTION -IV

6. Economic Mobilization for National Defence.
7. Planning and Production for National Defence with particular reference to India's Defence Production and DRDO.
8. Higher Defence Organization in India

Books Recommended

1. Barnawal, S.P., Military Year Book, A Guide Publication, New Delhi, 2012.
2. Chopra, Maharaj, K., India the Search for Power: India and the Indian Ocean, Lalwani Publication House, Delhi, 1969.
3. Cohen Stephen, P. , The Indian Army, Oxford University Press, New Delhi,1990.
4. Kaul, Ravi, India's Strategic Spectrum, Chanakya Publishing House, Delhi, 1969.
5. Kavic, L.J., India's Quest for Security, Cambridge University Press, London,1967.
6. Klaus, Knorr, War Potential of the Nation, Greenwood Press, Northwestern University, 1979.
7. Khera, S.S. , India's Defence Problem, Orient Longmans, University of California,1968.
8. Kohli, S.N., Sea Power in the Indian Ocean, Tata McGraw Hill, Delhi, 1978.
9. Misra, R.N., Indian Ocean and India's Security, Mittal Publications, Delhi, 1986.
10. Pathak, K.K., Nuclear Policy of India, Gitanjali Prakashan, Delhi, 1980.
11. Panikkar, K.M.
    (i) Defence Problems of India.
    (ii) India and the Indian Ocean, G.Allen & Unwin, Ltd., 1945.
12. Rao, PVR, Defence Without Drift, Popular Prakashan, Delhi, 1970.
13. Rao, Rama, (i) Self Reliance and Security, Radiant , University of Michigan,1984.
    (ii) Role of Defence Production, Radiant, University of Michigan, 1984.
14. Singh, Bhupinder, Textbook of Defence Studies (Part III Punjabi), B.C. Publishers, Patiala,1983.
15. Singh, Jasbir, Defence Year Book, 2012-13, Natraj Publication, Dehradun, 2001.
16. Singh, Jasjit , Nuclear India, Knowledge World, Delhi, 1998.
17. Singh, Jaswant , Defending Indian Hemisphere , McMillan, Basingstoke, 1998.
18. Thomas, Raju G.C., The Defence of India (A Budgetary Perspectives), McMillan, Delhi, 1970.
19. Subrahmanyam, K.
    (i) Indian Security Perspectives, ABC Publishing House, New Delhi,1982
    (ii) Planning for Defence.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Tactical Formations: Section and Platoon.
2. Application of Fire: Fire Control, Fire Control Orders and Sequence of Fire Control Orders.
3. Military Messages: Verbal and Written.

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER- V

PAPER: HISTORY OF PUNJAB 1849-1966

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the impact of the colonial period on the region

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. British Administration: new structure; formation and achievements of Board of Administration
2. British Agrarian Policy; commercialisation of agriculture
3. Developments in Irrigation; transport and communication

UNIT-II:

4. Growth of Modern Education
5. Socio-Religious Reform- main ideas of Namdharis; Singh Sabha; Arya Samaj;Ad Dharam Movement.
6. Political awakening: agitation of 1907; Ghadar Movement

UNIT-III:

7. Growth of Political consciousness: Jallian wala bagh; Gurudwara Reform Movement
8. Circumstance leading to partition.
9. Rehabilitation and resettlement

UNIT –IV:

10. Punjabi Suba Movement and Reorganisation Act 1966
11. Agricultural development: Green Revolution; Land reforms
12. Map : Ambala, Amritsar, Delhi, Hissar , Jaito, Jalandhar, Khem Karan, Kurukshetra, Ludhiana, Lahore, Lyallpur, Nankana Sahib, Sargodha, Tarn Taran

Reading List:

1. Fauja Singh (ed.) : *History and Culture of the Punjab, Part II*, Publication Bureau, Punjabi University, Patiala, 1987.

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. It would also form the basis for one to two sentence answer questions.

2. Fauja Singh : *Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3. J.S. Grewal : *The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4. Khushwant Singh : *A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi, 1991.
5. Satya, M. Rai : *Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6. P.N. Chopra, B.N. Puri and M.N. Das : *A Social,Cultural & Economic History of India,* Vol. III, Macmillan, Delhi, 1974.
7. K.C. Yadav and S.M. Fogat : *Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991
8. R.S. Johar, and J.S Khanna : *Studies in Punjab Economy,* GNDU, Amritsar, 1983.
9. Monica Das Gupta, T.N. Krishna & Lincon C. Chen : *Women's Health in India, Risk and Vulnerability*, Oxford, OUP, 1998.

HISTORY

SEMESTER-VI

PAPER: WORLD HISTORY 18TH - 20TH CENTURY

INSTRUCTIONS FOR THE PAPER – SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **World History 1761 - 1956**

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the modern period in World history.

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. The American Revolution; causes and consequences
2. The French Revolution-causes and impact; Continental System of Napoleon
3. Congress of Vienna 1815-motives, provisions, significance

UNIT-II:

4. The Industrial Era-causes of origin, new inventions, impact on society
5. Unification of Italy and Germany
6. New Imperialism 1871-1914

UNIT-III:

7. World War I: Division of Europe into two blocks, causes, Paris Peace Conference
8. Russian Revolution 1917- causes and impact
9. Nationalism and Communism in China- causes of revolution of 1911 and its impact; causes and consequences of revolution of 1949

UNIT–IV:

10. Mejie restoration and modernization in Japan
11. World War II; causes and consequences
12. World Map: Beijing, Berlin, Boston, Cairo, Constantinople, Frankfurt, Geneva, London, Moscow, Nagasaki, Nanking, Paris, Rome, Tokyo, Trafalgar, Vienna, Waterloo.

Suggested Readings

1. Davis, H.A. : *An Outline History of The World,* OUP, 1964, 4th Edition.
2. Garraty John A. & Peter Gay (ed.) : *The University History of the World,* United Kingdom : New Orchard Edition, 1985.
3. Gupta, P.S. : *Europe Ka Itihas,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1996 (Hindi Medium).
4. Hinsley, F.H. (ed.) : *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.
5. Stavrianos, L.S. : *The World Since 1500,* Delhi : Prentice Hall of India, 1965.
6. Ashworth, W. : *A Short History of the International Economy, 1850-1950,* London : Longmans, 1954.
7. Brecher, Michael : *The Foreign Policy System of Israel, Toronto* : Oxford University Press, 1972.
8. Chabod, Fredrico : *History of Italian Fascism,* London : Weidenfeld, 1961.
9. Gupta, P.S. : *Adhunik Paschim Ka Uday,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1997 (Hindi Medium).
10. Garraty John A. & Peter Gay (ed.) : *The Columbia History of the World,* United Kingdom : New Orchard Edition, 1985.

POLITICAL SCIENCE
SEMESTER - V

COMPARATIVE POLITICAL SYSTEMS (UK AND USA)

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The purpose of this paper is to serve as an introduction to the field of comparative politics. It provides a broad overview of the field of comparative politics and examines some key approaches. The major part of the paper is devoted to understanding and analyzing the origins and working of two political systems, the UK and the USA. The student will not only become familiar with the working of these two political systems but also understand how the concepts of comparative politics can be used to understand real world politics.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit–4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I: Theoretical Framework

(i) Meaning, Nature and Scope of Comparative Government and Politics
(ii) Comparative Method.

Unit-II: U.K.

(i) The British Political System - Salient Features and Conventions.

(ii) Executive
   (a) Monarchy:- Difference b/w King and Crown, Powers of Crown, Nominal and Real position Justification of Monarchy
   (b) Features of Parliamentary/ Cabinet Government
   (c) Prime Minster:- Composition, Powers, Position and Role

   Legislature
   (a) House of Lords:- Composition, Powers, Criticism & Utility
   (b) House of Commons:- Composition, Powers, Mutual relations between House of Lords and House of Commons

(iii) Judiciary
   (a) Organisation of Courts in U.K.
   (b) Rule of Law.

Unit-III : U.S.A.

(i) The Constitutional framework of U.S.

(i) Salient features
(ii) Separation of Powers & Checks & Balances
(iii) Federal System- Meaning, Features, Tendency towards Centralisation and its future.

(ii) Executive

(i) Elections of U.S. President

(ii) Composition, Powers & Position of U.S. President.

Legislature/Congress

(i) House of Representative- Composition, Power, House of Representative is the weakest chamber
(ii) Senate – Composition, Powers, Most Powerful Second Chamber, Mutual relations b/w House of Representative & Senate

Judiciary

(i) Supreme Court - Organisation, Composition, Powers & its Role.
(ii) Power of Judicial review

Unit-IV

(i) Political Parties and Interest/Pressure Groups of U.K- Nature & Role.
(ii) Political Parties and Interest/ Pressure Groups of U.S.A. - Nature & Role.

Books Recommended :

1. Hague and Harrop : *Comparative Government and Politics*, Palgrave, New York, 2001.
2. V.N. Khanna Comp., : *Comparative Study of Government and Politics*, S. Chand and New Delhi 1999.
3. Andrew Heywood : *Politics*, Macmillan Palgrave, New York, 1997.
4. A.C. Kapoor : *Select Constitutions*, S. Chand and Company, New Delhi 1995.
5. Vishnu Bhagwan and Vidya Bhushan : World Constitutions, Sterling Publisher, New Delhi 1993.
6. J.C. Johari : *Major Modern Political Systems*, Vishal Publication, Delhi 1986.
7. J.C. Johari : *Comparative Politics*, Sterling Publishers, New Delhi 1982.
8. K.R. Bombwall Ambala : *Major Contemporary Constitutional Systems*, Modern Publication, Cantt 1978.
9. Mackintosh London, : *The Government and Politics of Britain*, Hutchinson and Comp., 1977.
10. Herman Finer London, : *Theory and Practice of Modern Government*, Theuen and Comp., 1963.

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POLITICAL SCIENCE

SEMESTER-VI

INTERNATIONAL POLITICS : THEORY AND PRACTICE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : This paper provides students with an overview of the broad theories and concepts used to understand international politics. It also examines key issues in contemporary global history from an international politics perspective.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (2) in the question paper.

Unit-I

1. Meaning, Nature and Scope of International Politics.
2. Realist and Idealist approaches to International Politics.

Unit-II

1. National Power : Its Elements and Limitations.
2. Balance of Power - Its critical evaluation.
3. Collective Security –Meaning & Feature, Difference between Balance of Power & Collective Security

Unit-III

1. Bipolar, Unipolar and Multi-Polar World.
2. Nature of Emerging World Order.

Unit-IV

1. Regional Organisations : SAARC and EU.
2. New International Economic Order (NIEO).

Books Recommended :

1. H. Bull, *The Anarchical Society : A Study of Order in World Politics,* London, Macmillan 2002.
2. John Baylis and Steve Smith, *The Globalisation of World Politics,* OUP, Oxford, 2001.
3. A. Roberts, "The UN and International Security"*, Survival*, Vol. 35, No. 1, Spring 1993.
4. A. Hurell, "Collective Security and International Order Revision", *International Relations*, Vol. II,No. 1, April 1992.
5. S.P. Verma, *International System and the Third World,* New Delhi, Vikas, 1988.
6. H.J. Morgenthau, *Politics Among Nations : The Struggle for Power and Peace*, 6th Edn., revised by K.W. Thompson, New York, Alfred Knopf, 1985.
6. S.H. Hoffman (ed.), *Contemporary Theory in International Relations,* Massachusetts, Addison-Wesley, 1979.
8. N.D. Palmer and H. Perkins, *International Relations,* Calcutta Scientific Book Company, 1971.
9. J. Frankel, *The Making of Foreign Policy,* London, Oxford University Press, 1963.
10. E.H. Carr, *Conditions of Peace,* New York, The Macmillan Company, 1944.
11. E.H. Carr, *The Twenty Year Crisis,* London, Macmillan, 1939.

ECONOMICS

B.A./B.Sc.(GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER - V

ECONOMICS OF DEVELOPMENT

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The primary course objective is to introduce the students to the basic features, determinants, and theories and strategies of development of underdeveloped economies. It also introduces students to the theory of how control and direction of economic activity by a central public authority can be used as an alternative to market by the underdeveloped economies.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Economic Growth and Development- Concept and Measurement. Main Features of an Underdeveloped Economy.
Determinants of Economic Development. Capital Formation:It's Source, Nurkse's Thesis of Disguised Unemployment. Lewis Theory of Unlimited Supply of Labour.

Unit-II

Classical Model of Growth; HarrodDomar Model of EconomicGrowth; One Sector Neo-classical Model of Growth. Solow Model of Growth. *Dualism :* Social and Technological.

Unit-III

Theory of Big Push. Leibenstein's Critical MinimumEffect Thesis. Strategies of Economic Development:Balanced Vs. Unbalanced Growth. Rostow's Theory of Stages of Growth.

Unit-IV

Theory of Planning in Developing Countries:Need, Objectives, Strategies and Problems of Planning. Price Mechanism and Planning. Investment Criteria. Choice of Technique. Emerging Strategies: Export Promotion and Import Substitution Strategy.

Books Recommended :

1 Higgins, Benjamin (1994) : Economic Development : Principles, Problems and Policies, Norton Publisher, New York.

2 Meier, G.M. (1995) : Leading Issues in Economic Development, Oxford University Press, New York.

3 Meier, G. M. and Rauch, James E. (2006) : Leading Issues in Economic Development, Eighth Edition, Oxford University Press

4 Nurkse, R. (1992) : Problems of Capital Formation in Underdeveloped Countries, Oxford University, Press

5 Rostow, W. W. (1960) : Stages of Economic Growth, Cambridge University Press.

6 Thirlwal, A P (2011) : Economics of Development, Palgrave Macmillan Publishers, UK.

Supplementary Readings:

Todaro, Michael. P (1989) : Economic Development in the Third World, Orient Longman, London.PalgraveMacMillan,UK

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ECONOMICS

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER- VI

INDIAN ECONOMY

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The objective of the paper is to familiarize the students with the features and characteristics of the Indian Economy. It also includes performance and problems of Industrial development, Indian tax structure, external trade and balance of payments, and objectives, strategy and performance of Indian planning. The course aims to develop analytical understanding of the students by exposing them to the basic issues of the Indian economy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Indian Economy on the Eve of Independence. Features and Characteristics of Indian Economy since Independence: Agriculture: Importance of Agriculture; Causes of Backwardness and Low productivity; New Agricultural Strategy, Green Revolution and Critical Evaluation with Special Reference to Environmental Degradation; Land Reforms: Need, Implementation and Evaluation.

Unit-II

Industry: Problems of Industrial Development; Public and Private Sector; Industrial Policy since 1956 with Special Emphasis on Recent Trends of Liberalization; Role and Problems of Small and Large Scale Industries in the era of Globlisation. Major Large Scale Industries: Iron& Steel, Cotton Textile, Petroleum & I.T.

Unit-III

Principal Features of Indian Tax Structure. Division of Financial Recourses between Centre and the States. Direction and Composition of Exports and Imports and Changes there in since Economic Reforms; Balance of Payment problems; Critical Evaluation of the Role of MNCs in India.

Unit-IV

Planning: Importance, Objectives, Strategy and Achievements of Indian Planning; Critical Evaluation of the Latest Five Year Plan (Plan wise details to be excluded); Major Indian Economic Problems: Inflation, Unemployment and Poverty; Introduction to Consumer Education and Consumer Protection (elementary ideas).

Books Recommended :

1 Dhar, P.K : Indian Economy, Kalyani Publishers, Ludhiana. (Latest Edition)

2 Gill, K : Evolution of Indian Economy, NCERT, New Delhi.

3 Aggarwal, A N Indian Economy, Wiley Eastern Ltd. (Latest Edition).

4 Datt, Rudder & Sundram, KPM : Indian Economy, S. Chand & Co. (Latest Edition)

5 Soni .R. N. : Leading Issues in Agriculture Economics , Sohan Lal Nagin Chand & Sons.

6 Ghosh. A (Trans. Avtar Narinder Singh) : Bhartiy Arth Vivshta (Punjabi University, Patiala).

7 Singh, Chander Gupt : Bharti Arth Shastar (PunjabiUniversity, Patiala).

8 Mishra, S.K. & Puri, V.K. (English & Hindi Medium) : Indian Economy, Himalaya Publishing House, Mumbai (Latest Edition).

9 Tondon, B.B. & Tondon, K.K : Indian Economy, Tata McGraw Hills Pub. Co., New Delhi(1998).

Supplementary Readings:

1. Government of India: Five Year Plan (latest).
2. Government of India: Economic Survey (latest).

SOCIOLOGY

B.A. /B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER - V

SOCIETY IN INDIA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper–setter must put note (iii) in the question paper.

Objective

The objective of this paper is to present a comprehensive view of Indian Society. The students are exposed to the tribal, rural and urban societies and are presented with the social structure and social institutions to understand these segments of Indian Society. Through this paper, the students are also introduced to the problems of the underprivileged in Indian Society.

Course Content

Unit-I

Tribal Society: Meaning, Characteristics; Classification of tribes.

Institutional Features: Family, Marriage, Economy and Changing trends.

Unit-II

Rural Society: Meaning; Characteristics.

Institutional Features : Family, Marriage; Economy and Polity (Village Panchayat); Changing Trends.

Unit-III

Urban Society : Meaning and characteristics, Concepts of urbanization and urbanism;

Institutional features; Urban family - features and changes; Economy; Voluntary associations; Slums.

Unit-IV

Under-privileged Sections—Women, Physically Disabled, Scheduled Castes and Scheduled Tribes: Measures to improve their status.

Essential Readings:

1. Bose, N.K. (1980) : *Tribal Life in India,* National Book Trust.
2. Desai, A.R. (1969) : *Rural Sociology in India,* Bombay: Popular Prakashan.
3. Desai, A.R. (2006) : *Social Background of Indian Nationalism, Mumbai Popular Prakashan*
4. Lal, S.N. & Nahar, U.R. (1992) : *Rural Social Transformations,* Jaipur : Rawat.
5. Madan & Majumdar (1989) : *An Introduction to Social Anthropology,* New Delhi: National Publications (Hindi & English).
6. Madhurima (2009) : *Readings in Sociology-Part-3*, Jalandhar: New Academic Publishing House [All Mediums].
7. Mandelbaum, G. (1970) : *Society in India,* Bombay: Popular Prakashan (Hindi & English).
8. Sen, Pujan Kumar,(2012) : *Indian Society:Continuity and Change Pearson, New Delhi*
7. Shah, Ghanshyam (ed.) (2002) : *Caste & Democratic Politics in India,* New Delhi: Permanent Black.
8. Sharma, R.K. (2004) : *Indian Society: Institutions & Change,* New Delhi: Atlantic Publications.
9. Singh, K.S. (2002) : *The Scheduled Castes*, New Delhi: Oxford University Press.

Further Readings:

1. Ahuja, Ram (2015) : *Social Problems in India,* Jaipur, Rawat Publications.
2. Mahajan, Sanjeev (2004) : *Gramin Samajshastra,* New Delhi: Arjun Publishing House.
3. Punit, A.E. (1978) : *Social Systems in Rural India,* New Delhi: Sterling Publications.
4 Rao, M.S., Chandrashekar Bhatt, L.N. Kelkar (eds.) (1991) : *A Reader in Urban Sociology,* New Delhi: Orient Longman.
5. Shah, D.S. & Sisodia, Y.S. (ed.) (2004) : *Tribal Issues in India,* Jaipur: Rawat Publications.
6. Singh, K. Suresh (2001) : *The Scheduled Tribes,* New Delhi: Oxford University Press.
7. Vardhan,Ranjay, (2008) : Single Women, A Study of Spinsters, Delhi, Indian Publishers Distributors

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SOCIOLOGY

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER -VI

DISORGANISATION AND EMERGING PROBLEMS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective

This paper exposes the students to social disorganization, its levels and current problems. It helps students to understand social realities and also equips them to utilize their knowledge in various theoretical and practical exercises.

Course Content

Unit-I

Social Disorganization : Concepts and Levels –Personal, Familial and Societal.

Unit-II

Personal Problems: Problems of Adolescence; Alcoholism; Drug Addiction, Suicide.

Unit-III

Familial Problems: Domestic Violence, Violence against Children; Female Headed Households; Problems of Working Women.

Unit-IV

Societal Problems : Poverty; Corruption; Problems of the Aged, Cyber Crime

Essential Readings:

1. *Ahuja, Ram (2015)* : *Social Problems in India, Jaipur: Rawat Publications.*
2. *Elliot, H.V. & Merill, F. (1950)* : *Social Disorganization, New York: Harper Brothers.*
3. *Gill, S.S. (1998)* : *Pathology of Corruption, New Delhi: Harper Collins.*
4. *Macionis, John J. (2005)* : *Social Problems, New York: Prentice Hall.*
5. *Madan, G.R. (1978)* : *Indian Social Problems, New Delhi: Allied Publishers.*
6. *Mitra, S.M. (2005)* : *Indian Problems, New Delhi: Eastern Book Corporation.*
7. *Mohan, J. & Sehgal, M. (2004)* : *Youth & Drugs, New Delhi: Abhijit Publications.*
8. *Narasaiah, M.L. (2005)* : *Poverty & Environment, New Delhi: Discovery Publishing House.*
9. *Rai, Bhartiya (2004)* : *Samajik Samasyaein, New Delhi: Arjun Publishing House.*
10. *Shankar Rao,(2015)* : *Indian Social Problems: A Sociological Perspective,S. Chand & Company, New Delhi*
11. *Vardhan, Ranjay (1999)* : *Female Headed Households in Patriarchal Society: A Sociological Study, Delhi: Indian Publishers Distributors.*

Further Readings:

1. *Chakraborty, Rajgopal Dhar (2004)* : *The Greying of India : Population, Ageing in the Context of Asia, New Delhi : Sage.*
2. *Mahajan, Amarjit & Madhurima (1994)* : *Family Violence and Abuse in India, New Delhi : Deep and Deep Publications.*
3. *Natrajan, P.S. (2003)* : *"A Theory of Indian Communalism" in Think India Quarterly, Vol. 6, No. 3, July-Sept.*
4. *Pavrala, Vinod (1996)* : *Interpreting Corruption, New Delhi : Sage.*
5. *Phandaris, Urmila (1989)* : *Ethnicity and Nation Building in South Asia, New Delhi: Sage.*
6. *Shankar Rao, C.N. (2007)* : *Indian Society, Delhi: S. Chand and Company.*
7. *Bansal,S.K.(2013)* : *Cyber Crime, New Delhi,APJ Publications*
8. *Pendse Neelkanth Ganjan, Sarkar Sukanta,(2015)* : *Social Problems in India, Delhi,Kalpur Publications*

PUBLIC ADMINISTRATION

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER -V

PAPER: LOCAL GOVERNMENT (WITH SPECIAL REFERENCE TO PUNJAB

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of the concept, significance and evolution of local government in India. It would also acquaint them with the pattern and working of divisional and district administration. The key areas covered are the types, structure, functions, finances and personnel of rural and urban local governments. It would also include the concept of state control over local bodies, provincialisation and rural-urban relationship with reference to Punjab.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and Significance of Local Government
Evolution of Local Government since 1882
Role of Deputy Commissioner; Divisional Commissioner
Rural and Urban Development: Dimensions and Issues

Unit-II

The 73rd Constitutional Amendment – Provisions and its Impact
Gram Sabha – Composition Functions and Powers
Panchayati Raj Institutions in Punjab – Structure, Functions, Sources of Finances and Personnel

Unit-III

The 74th Constitutional Amendment – Provisions and its Impact
Urban Local Bodies – Structure, Functions and Sources of Finance
Mayor – Position, Functions and Powers
Municipal Commissioner – Position, Functions and Powers

Unit-IV

State Control over Local Bodies
State Finance Commission: Composition, Functions and Role
Provincialisation of Municipal Services
Rural- Urban Relationship – Challenges and Remedies

Essential Readings:

Goel, S.L. & Ramesh, S. (2003). *Panchayati Raj in India* .New Delhi: Deep & Deep Publishers.
Hochgesang, T.W. (1994). Rural Local Self -Government in India.Hyderabad: NIRD.
Maheshwari, S.R. (2002). *Local Government in India*. Agra : L.N. Aggawal.
Puri, K.K. and.Barara, G.S.(2008) *Local Government in India*. Jalandhar: Bharat Prakashan.
Sahib, S & Singh, S. (2000). *Local Government in India*. Jalandhar: New Academic Publishers.

Further Readings

Government of India, Second Administrative Reforms Commission, 6th Report – Local Governance

Khanna, B.S. (1991). *Rural Developments in South Asia.*New Delhi: Deep & Deep Publications.

Singh, H.B. (2003). *Revitalised Urban Administration in India*. Delhi: Kalpaz Publishers.

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PUBLIC ADMINISTRATION

SEMESTER - VI

PAPER: DEVELOPMENT ADMINISTRATION (WITH SPECIAL REFERENCE TO PUNJAB)

Max. Marks : 100
Theory : 90 Marks
Internal assessment: 10 Marks
Time : 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the concept & significance of development administration, features of developed & developing countries, planning machinery at Centre & State level and the emergence of India as a welfare state. The paper would also give an understanding about the concept, forms, role and problems of public enterprises as well as the working of select Union Ministries and agencies in Welfare and Development Administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Development: Meaning, Features and Aspects
Development Administration: Meaning, Nature, Scope and Significance
Features of Developed and Developing Countries

Unit-II

India as a Welfare State.
Planning: Meaning, Objectives and Significance
Planning Machinery in India at National, State and Local

Unit-III

Public Enterprises: Concept and Forms
Role of Public Enterprises in Economic Development
Managerial Problems of Public Enterprises
Public Enterprise Reforms since 1991; Concept of Privatisation

Unit-IV

Administration of Rural Development at the local level
Education and Development; Role of State Administration in Primary and Secondary Education
Health and Development; Role of the Ministry of Health and Family Welfare
Role of Voluntary Sector in Development

Essential Readings

Bava, N.J. (1997). *Non-Governmental Organisations in Development: Theory and Practice*.Ed. New Delhi: Kanishka

Dhar, P.K. (2007). *Indian Economy-Its Growing Dimensions*.New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). Development Administration: From Underdevelopment to Sustainable Development. London: Macmillan.

Mathur, B.P. (1999). *Public Enterprise Management* .Macmillan India: New Delhi.

Sapru, R.K. (2003). 2nd Ed. *Development Administration.* New Delhi: Sterling Publishers.

Singh, S. & Singh S. (2010). *Public Administration: Development and Local Administration*. Jalandhar: New Academic Publishers.

Website of Ministry of Health and Family Welfare: mohfw.gov.in/

Website of Planning Commission: planningcommission.nic.in/data/ngo/npvol07.pdf

Further Readings

Goel, S.L. (2003). *Advanced Public Administration*. New Delhi: Deep & Deep Publications.

Jain, R.B. (2002). *Public Administration in India – 21st Century Challenges for Good Governance.* Delhi: Deep & Deep Publications Pvt. Ltd.

Parikh, S. & Radhakrishna, R. (2002). *Indian Development Report* .Indira Gandhi Institute of Development. New Delhi: Oxford University Press.

Rao, Vasudeva. B.S. (2007). *Rural Development Strategies & Role of Institutions*; *Issue Innovations and Initiatives.* Ambala: The Associated Publishers.

Rattan,V.(1997). *Women and Child Development Programme Administration.* New Delhi: S. Chand.

Srivastava, S.P. (1998). *The Development Debate: Critical Perspectives.* Jaipur & New Delhi: Rawat Publications.

PHILOSOPHY

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER – V

PAPER : INDIAN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper discusses the main epistemological and metaphysical issues as discussed in the various Indian Philosophical Systems.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit–I

1. Salient features of Indian Epistemology and Metaphysics.
2. Concept of Prama and Pramana according to Nyaya
   - i) Pratyaksa
   - ii) Anumana
   - iii) Sabda
   - iv) Upamana
   - v) Arthapatti
   - vi) Anuplabdhi

Unit–II

3. Materialism (Swabhava vada) of Charvakas.
4. Anekantavada of Jainism.
5. Aryasatyas, Pratityasamutpada of Buddhism.

Unit–III

6. Concept of Self and Consciousness with special reference to Mandukya Upanishads.
7. Advaita Vedanta : Sankara on Brahman and Maya.

Unit - IV

8. Samkhya. : Theory of Causation. (Satkaryavada)
9. Vaisesika : Nature and kinds of Padartha (Categories)
10. Sikhism : Nature of Ultimate Reality, Mand and the World.

Essential Readings:

1. Chatterjee, S.C. & Datta, D.M. : An Introduction to Indian Philosophy (Calcutta University, Calcutta, 1993).
2. Hiriyanna, M. : Outlines of Indian Philosophy (Allen and Unwin, London, 1999) (Hindi Translation Available), London: Allen.
3. Tarka-Samgraha of Annambhatta (Poona-Bhandarkar Oriental Research Institute, Poone, 1992).

Suggested Readings:

1. Ananikana : A Nyaya Manual, Ed. Sri. Krishna Sarma, Adyar Library and Research, Chennai, 1991.
2. Chatterjee, S.C. : The Nyaya Theory of Knowledge (University of Calcutta, Calcutta, 1995).
3. Panchapagesha Sastri : The Philosophy of Aesthetic Pleasure (Annamalai University, 1999).
4. Complete Works of Swami Vivekananda (relevant portions), (Advaita Ashram, Calcutta), 1957.

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PHILOSOPHY

SEMESTER – VI

PAPER : WESTERN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives:

This paper aims at exposing the students to main epistemological and metaphysical theories and problems of western philosophy. It also deals with basic themes of existentialism, logical positivism and analytical philosophy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I

1. Nature of Philosophy with special reference to Metaphysics and Epistemology (introductory).
2. Materialism : Mechanical and Dialectical.
3. Idealism : Objective (Plato), Subjective (Berkeley).

Unit-II

1. Nature of Knowledge : Knowing subject, Act of knowing and object of Knowledge.
2. Theories of Truth : Coherence, Correspondence and Pragmatic

Unit-III

3. Theories of Knowledge :

   (a) Rationalism.

   (b) Empiricism.

   (c) Transcendentalism of Kant.

Unit-IV

4. Universal and Particulars : Concept of Being (Parmenides) and Becoming (Heraclites).
5. Substance (Spinoza) Causality (Hume).
6. Existentialism : Being in itself; Being for itself; Choice and Freedom.

Essential Readings :

1.	Ewing, A.C.	:	Fundamental Questions of Philosophy (London : Routledge & Kegan Paul, 1999).
2.	Titus, H.H.	:	Living Issues in Philosophy, Prentice Hall Pub. (New Delhi : Eurasia Pub. House, 4th ed., 1999).
3.	Macquire, John		Existentialism, Philosophical Library, New York, 1949.

Suggested Readings :

1.	Ayer, A.J.	:	Twentieth Century Philosophy, Penguin Books, Harmondsworth, 2002.
2.	Ayer, A.J.		Language, Truth and Logic, Soft Cover ISBN 0486200108, Dover Publications, 1969.
3.	Korner, Stephen	:	Fundamental Questions of Philosophy (Penguin), Harmondsworth, 2002.

PSYCHOLOGY

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER - V

Objectives :

(I) The course will enable the students to get an introductory knowledge about Clinical Psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: CLINICAL PSYCHOLOGY

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be Compulsory question. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Nature and Criteria of abnormality, *Viewpoints Regarding Abnormality:* Historical, Psychodynamic, Behavioural, Cognitive Behavioural, Humanistic and Interpersonal;

UNIT-II : *Causes of Abnormal Behaviour:* Biological, Psychological and Sociocultural Causes.

UNIT-III : *Stress:* Concept of Stress; Types of Stressors; Etiology of Stress; Coping Strategies: Problem Focussed and Emotion Focussed, Effects of Stress.

UNIT-IV : *Significance of Statistics :* Mean, Standard Deviation, Correlation. Significance of Difference Between Means (Correlated and Uncorrelated).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. The use of Biofeedback.
2. Presumptive Stressful Life Event Scale.
3. Adjustment Inventory.
4. Mental Health Inventory.
5. Sentence Completion Test.
6. Word Association Test.

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003).*Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) . *Abnormal Psychology,* New York : John Wiley and Sons.

3. Feldman, R.S. (2014).*Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

4. Garrett, H. E. (1966) . *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons.

5. Guilford, J.P., and Fruchter, B. (1981) . *Fundamental Statistics in Psychology and Education.* Singapore: McGraw Hill.

6. Sarason, B.R. & Sarason, I.G. *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_Prentice Hall of India.

7. Singh, A.K.(1986).*Tests, measurements and research methods in behavioural sciences.*Tata McGraw Hill.

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PSYCHOLOGY
SEMESTER - VI

Objectives :

(I) This course will enable the students to get an introductory knowledge about Clinical psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: BEHAVIOURAL DISORDERS

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :
The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry14 marks and shall be Compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Anxiety Based Disorders viz. Phobia; OCD; Panic; Generalized Anxiety Disorder. Conversion Disorders, Dissociative Disorders : Types, Symptoms and Etiology.

UNIT-II : *Mood Disorders :* Types, Symptoms and Etiology.

UNIT-III : *Schizophrenia Types :* Symptoms and Etiology.

UNIT-IV : *Psychotherapies :* Psychodynamic Therapy, Behaviour Therapy, Cognitive- Behaviour Therapy, Humanistic Therapy.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. Clinical Interview.
2. TAT.
3. Depression Inventory (Beck).
4. State Trait Anxiety Inventory
5. Self Efficacy
6. Aggression Scale

Books Recommended:

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003) : *Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) : *Abnormal Psychology,* New York : John Wiley and Sons.

3. Garrett, H. E. (1966) : *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons

Reference Books

1. Feldman, R.S. (2014) : *Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

2. Guilford, J.P. and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education* Singapore: McGraw Hill.

3. Sarason, B.R. & Sarason, I.G. : *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_ Prentice Hall of India.

GEOGRAPHY

SEMESTER-V

Paper-IX: WORLD REGIONAL GEOGRAPHY- I

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:

To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:

Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to Regional Groupings (European Union, North Atlantic Treaty Organization, North American Free Trade Agreement and Commonwealth of Independent States).

UNIT-I

(i) Anglo America (20 lectures)

UNIT-II

(ii) Latin America (20 lectures)

UNIT-III

(iii) Europe (20 lectures)

UNIT-IV

(iv) Russia & Commonwealth of Independent States (30 lectures)

(v) Oceania

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words each. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 Marks) and (iii) attendance (2marks).

7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 7 in the question paper.

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective*. Prentis Hall, New Jersy, 1995.
2. Blij, Harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cairns, G. O. et. al. : *Australia. Macmillan Co.* New York, 1962.
4. Coysh, A. W. and M. E. Tomlinson : *The Southern Continents.* University Tutorial Press, London, 1980.
5. English, Paul Ward & James, A.Miller : *World Regional Geography: A Question of Place, John Wiley*, New York, 1989.
6. Gilbert, Alan : *Latin American Development: A Geographical Perspective.* Hanswoodsworth Penguin, Middlesex, London, 1974.
7. Gottmann, Jean : *A Geography of Europe. Harrape & Co*. London, 1969.
8. Gregory, J. S. ed. : *The Geography of USSR*. Novosti Press Agency, Moscow, 1985.
9. Hudson, F. S. : *North America. Mc. Donald & Evans*, Fly Mouth, 1975.
10. Jackson, Richard H. & Lloyd E.Hudman : *World Regional Geography: Issues for Today, John Wiley*, New York, 1991.
11. Kromm, D. E. : *World Regional Geography, Saunders Publishing*, New York, 1980.
12. Malmstorm, V. H. Englewood Cliffs : *Geography of Europe: A Regional Analysis*. Prentice Hall, New York, 1991.
13. Patterson, J. H. : *North America. Oxford University Press,* New York, 1995.
14. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando, 1998.

Further Readings:

1. Don R. Hoy (Ed.) 1980. : *Essentials of Geography and Development,* Macmillan, New York,
2. Hussain, Majid : *World Regional Geography, Rawat Publications*, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the Wold, Kalyani Publishers,* Ludhiana, 2009.
4. Tikkha, R. N., Bali, P.K. and Sekhon, M. S. : *World Regional Geography,* New Academic Publishers, 2007.
5. Singh, Malkit : *World Regional Geography,* Rasmeet Prakashan, Jalandhar, 2009.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents.Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - X: MAP PROJECTIONS

Max. Marks: 30
Time: 3 hours

Distribution of Marks:

(i) Written paper of three hours covering entire syllabus shall be held for students of USOL. For others it shall be at respective colleges. 20 marks

(ii) Practical Record relating to Map Projections and Viva voce on Practical Record relating to Map Projections. 10 marks

Objective:

- To provide an analytical understanding of use of common map projections.

Course Content:

Unit- I

Map Projections:
General introduction , classification of projections, general principles of identification and choice of projections.
(6 lectures)

Unit- II

Construction, properties and limitations of following projections

Cylindrical : Simple, Equal area, Mercator's (4 lectures, 6 lab. sessions)

Unit- III

Construction, properties and limitations of following projections

Conical : One Standard Parallel, Two Standard Parallel , Bonne's, Polyconic and International
(4 lectures, 6 lab. sessions)

Unit- IV

Construction, properties and limitations of following projections

Zenithals : Gnomonic, Stereographic, Orthographic, Equidistant and Equal Area (Polar cases only)
Conventional : Sinusoidal and Molleweide's (normal cases only) (7 lectures, 7 lab. sessions)

Note:

1. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of geography in the college.

3. Evaluation of Practical Record and Field Report will be done at the time of viva-voce examination.A minimum of 20 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in practical record and field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Practical Record.

6. A fresh practical note book shall be prepared by failed /improvement candidates.

7 For Practical classes, the number of students in one group shall not exceed fifteen.

8. There will be 3 hours of teaching per week for this paper.

9. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 9 in the question paper.

Books Recommended

Essential Readings

1. Kellaway, George P. : *Map Projections*, Methuen and Co., London. Year 1956
2. Steers, J.A. : *Map Projections*, University of London Press, London,1957 Year .
3. Garnett, William : *Map Projections,* George Phillip and Sons, London.

Essential Readings

3. Singh, R.L & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

Basic fundamentals of map projections are introduced by demonstration of construction exercises in class.

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GEOGRAPHY
SEMESTER-VI

Paper-XI: WORLD REGIONAL GEOGRAPHY- II

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 hours

Objectives:
To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:
Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to regional groupings (South Asian Association of Regional Cooperation, Association of South East Asian Nations, Organization of Petroleum Exporting Countries and Organization of African Unity).

UNIT-I

(i) East Asia (20 lectures)

UNIT-II

(ii) South East Asia (iii) South Asia. (30 lectures)

UNIT-III

(iv) Middle East and North Africa (20 lectures)

UNIT-IV

(v) Africa South of Sahara (20 lectures)

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 marks) and (iii) attendance (2 marks).
7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. (**The paper setter must put note 7 in the question paper.)**

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective.* Prentis Hall,New Jersy, 1995.
2. Blij, harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cressy, G. B. : *Asia's Land and People*. McGraw Hill, London, 1963.
4. Dobby, E. H. G. : *South East Asia*. University of London Press, London, 1980.
5. English, Paul Ward & James, A. : *World Regional Geography: A Question of Place*,John Miller Wiley, New York, 1989.
6. Fisher, W. B. : *The Middle East.* Methuen, London, 1978.
7. Ginsburg, Norton. Ed. : *The Pattern of Asia*. Englewood Cliffs, New Jersey, 1958.
8. Hance, William, A. : *The Geography of Modern Africa*. Columbia University Press, London, 1965.
9. Jackson, Richard H. & Lloyd E. Hudman : *World Regional Geography: Issues for Today*, John Wiley, New York, 1991.
10. Kromm, D. E. : *World Regional Geography,* Saunders Publishing, New York, 1980.
11. Prichard, J.M. : *Africa,* Longman, London, 1981.
12. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando,1998.
13. Spencer, J. E. and L. T. William : *Asia, East by South: A Cultural Geography.* John Willey & Sons, New York, 1971.
14. Spate, O. H. K. and A. T. A. Learmonth : *India and Pakistan: A General and Regional Geography*,Methuen, London, 1967.

Further Readings:

1. Don R. Hoy (Ed.) : *Essentials of Geography and Development*, Macmillan, New York, 1980.
2. Hussain, Majid : *World Regional Geography*, Rawat Publications, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the World*, Kalyani Publishers, Ludhiana, 2009.
4. Singh, Malkit : *World Regional Geography*, Rasmeet Prakashan, Jalandhar, 2009.
5. Tikkha, R. N., Bali, P.K. and Sekhon, M. S : *World Regional Geography*, New Academic Publishers, 2007.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents. Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - XII: FIELD SURVEY BASED REPORT

Max. Marks: 30
Time : 3 hours

- To acquaint the students with the importance of field work as one of the methodologies in geography.
- To familiarise the students about pre-field work and post-field work i.e. data processing and analysis and writing of field work report.

Distribution of Marks

i) Viva-Voce : 10 Marks ii) Field Report: 20 Marks

Fieldwork (Theory):

(i) Role of fieldwork in Geography.

(ii) Scale of study and fieldwork methodology.

(iii) Methods of collecting primary data : Observation, Interview and Questionnaire and Measurement.

(iv) Methods of field study of: a farm, a village, and a town. (20 lectures)

Note: The teachers should familiarize the students in the class before collection of primary data for preparation of field work.

Fieldwork (Practical): A field report of minimum 20 pages will be prepared based on primary data on problems such as (a) local market survey, (b) service area of school/ or hospital; (c) traffic flow, and (d) socio-economic characteristics of student's village/ mohalla/ sector.

(25 lab. Sessions)

Note:

1. There will be no written paper for USOL and college students.
2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher the Geography in the college.
3. Evaluation of Field Report will be done at the time of viva-voce examination. There will be no laboratory exercise at that time.
4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Field Report with the University School of Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Field Report will be evaluated by two examiners (including at least one from the USOL).
5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Field Report. .
6. All students are required to submit a practical record based on theoretical component listed as fieldwork (theory)
7. A fresh field report shall be prepared by failed /improvement candidates.
8. For Practical classes, the number of students in one group shall not exceed fifteen.
9. There will be 3 hours of teaching per week for this paper.
10. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 10 in the question paper.

Books Recommended

Essential Readings

1. Jones, P.A. : *Fieldwork in Geography*, Longman, London, 1968.
2. Archer, J.E. & Dalton, T.H. : *Fieldwork in Geography,* E.T. Bastford Ltd., London, 1968.
3. Singh, Gopal : *Mapwork and Practical Geography*, Surjeet Book Depot, Delhi,1993.

Further Readings

1. Hudson, F.S. : *A Geography of Settlements*, MacDonald, London, 1970.
2. Singh, L.R. & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

The students need to be trained to collect primary data, its processing and cartographic representation through taking up field exercises.

GANDHIAN STUDIES

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER-V

ECONOMIC THOUGHT OF MAHATMA GANDHI

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the Economic Thought of Mahatma Gandhi.

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:
1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Bases of Gandhian Economic Thought

1. Indian Influences on Gandhi's Economic Thought
2. Western Influences on Gandhi's Economic Thought
3. Fundamental Principles of Gandhi's Economic Thought

UNIT-II- Critique of Mechanization

4. Gandhi's Views on Machinery
5. Labour-Capital Relations
6. Theory of Trusteeship
7. Gandhi & Role of Corporate Social Resposibility

UNIT-III-Essence of Gandhian Economy

8. Doctrine of Swadeshi
9. Bread Labour
10. Concept of Wantlessness
11. Concept of Sarvodaya

UNIT-IV-Gandhi and Contemporary Idealogies

12. Gandhi's Views on Communism
13. Gandhi on Capitalism
14. Gandhian Socialism
15. Relevance of Gandhi's views in Globalized World

ESSENTIAL READINGS:

1. Biswas, S.C.(ed.) : *Gandhi: Theory and Practice, Social Impact and Contemporary Relevance* (Shimla: Indian Institute of Advanced Studies), 1960, pp.183-247.

2. Dasgupta, Ajit, K. : *Gandhi's Economic Thought* (London: Routledge), 1996.

3. Diwan, Romesh & Lutz : *Essays in Gandhian Economics* (Delhi: Gandhi Peace Foundation),1985.

4. Kumarappa, J.C. : *Gandhian Economic Thought* (Varanasi: Sarva Seva Sangh), 1962.

5. Mehta, Usha : *The Multi-Dimensional Thought of Mahatma Gandhi* (Mumbai : Mani Bhavan Gandhi Sangrahalaya), 2008.

6. Sethi, J.D. : *International Economic Disorder, A Theory of Economic Darwinism & A Gandhian Solution*, (Shimla: Indian Institute of Advanced Studies), 1996.

FURTHER READINGS

1. Dantwala,M.L. : *Gandhism Reconsidered* (Bombay: Padma Publications Publications), 1945.

2. Gandhi, M.K. : *Hind Swaraj or Indian Home Rule* (Ahmedabad: Navajivan Publishing House), 1982 edition.

3. Mehta, J. K. : *A Philosophical Interpretation of Economics* (London: Oxford University Press), 1956.

4. Schumacher, E.F. : *Small is Beautiful* (London: Abacus), 1989.

5. Sethi, J.D. : *Gandhi Today* (New Delhi: Vikas Publishing House), 1976.

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GANDHIAN STUDIES

SEMESTER-VI

Peace and Conflict Resolution

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the understanding of the concept of Peace and different methods of Conflict Resolution

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:

1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Understanding Peace

1. Meaning & basic components of Peace
2. Approaches to Peace
3. Obstacles to Peace
4. Gandhi's approach to Peace

UNIT-II- Peace Movements

1. Social Movements-Environment, Women, Dalit
2. NGOs
3. Civil Right movements in United States

UNIT-III-Understanding Conflict

1. Concept of Conflict
2. Causes of Conflicts
3. Types of Conflicts

UNIT-IV- Methods and Agencies of Conflict Resolution

1. Pacific methods of Conflict Resolution
2. Peace making
3. U.N. Peace Keeping & Peace Building

ESSENTIAL READINGS:

1. Barash, David, P. : *Approaches to Peace: A Reader in Peace Studies* (New York: Oxford University Press), 2000.
2. Brock, Peter : *Mahatma Gandhi & Mother India, Essay on Gandhi's Non-Violence & Nationalism* (Ahmedabad: Navajivan Publishing House), 1983.
3. Brock, Peter : *Twentieth Century Pacifism* (New York: Van-Nostrand Reinhold Company), 1970.
4. Galtung, Johan : *Peace by Peaceful Means* (New Delhi: Sage Publications), 1996.
5. Gultung, Johan : *The Struggle for Peace* (Ahmedabad: Peace Research Centre, Gujarat Vidyapeeth), 1984.
6. Melasuo, Tuomo (ed.) : *National Movements and World Peace* (U.S.A.: Avebury-Aldershot Brook),
7. Misra, R.P. : *Gandhian Model of Development and World Peace* (New Delhi: Concept Publishers), 1988.
8. Murty, K. S : *Quest for Peace* (Delhi: Ajanta), 1986.
9.. Murty, K. S. and Boughet, A.C. : *Studies in the Problems of Peace* (Bombay: Asia Publishers), 1960.
10. Peter, Wallen Steen (ed.) : *Peace Research: Achievements and Challenges* (London: West View), 1988.
11. Rennie, Linda and Preagar, Forcey (eds.) : *Peace: Meanings, Politics and Strategies* (London: West View),1986.
12. Sethi, J. D. : *Gandhian Critique of Western Peace Movement* (Delhi: Chanakya), 1989.
13. Sharp, Gene : *Politics of Non-Violent Action* (Boston: Sergent Publications), 1973.
14. Bondurant, J.V. : *Conquest of Violence* (Bombay: *O.U.P*), 1959.
15. Burton, J.W. : *Global Conflict* (London: Wheatsheef),1984.
16. Burton, John (ed.) : *Conflict Resolution and Preventive Human Needs Theory* (New York: St. Martin Press), 1990.
17. Chernyak, Yefim : *Ambient Conflicts* (Delhi: Progress Press), 1987.
18. Conlon, D.E. : "The Mediation-Intervention, Discussion-Towards an Integrated Perspective". *Negotiation Journal*, Vol. 4, No.2 of 1988, pp. 143-148.
19. Galtung, Johan : "Institutionalized Conflict Resolution-A Theoretical Paradigm*" Journal of Peace Research*, 1965, pp 348-395
20. Khanna, D.D. & Kueck Gert W. (eds.) : *Conflict Resolution, Human Rights and Democracy* (New Delhi: Shipra Publications), 2003
21. Kriesberg, Louis : *Social Conflicts* (Englewood Cliffs: Prentice Hall), 1982.
22. Kulkarni, V.B. : *Conflict in Indian Society* (Bombay: Bhartiya Vidya Bhavan), 1987
23. Shridharani, K.L. : *War Without Violence* (Bombay: Bhartiya Vidya Bhavan),1962.
24. Thakur, Ramesh : *International Conflict Resolution* (Bombay: West View),1998.
25. Weber, Thomas : *Conflict Resolution & Gandhian Ethics* (New Delhi: Gandhi Peace Foundation), 1991.

FURTHER READINGS:

1.	Danesh, H.B.	:	"Towards on Integrative Theory of Peace Education", *Journal of Peace Education*, Vol. 3, No.1, 2006.
2.	Elsie Boulding	:	"Peace Culture" in *Encyclopedia of Violence, Peace and Conflict* (San Diego: Academic Press), 1999.
3.	Kant , Immaunel	:	*Perpetual Peace: A Philosophical Essay* (London: Swan Sunne), 1902.
4.	UNESCO	:	*From a Culture of Violence to a Culture of Peace* (Paris: UNESCO), 1996.
5.	Azar, E.E. & Buitor J.W. (ed.)	:	*International Conflict Resolution: Theory & Practice (Brighton: Wheatsheef), 1986.*
6.	Burton, J.W.	:	*Conflict Resolution & Prevention (Basingstoke: Macmillan),1990.*
7.	Darby J. & Mac. Ginty R.	:	*Contemporary Peace Making (Palgrave: Macmillan), 2002.*
8.	Juergensmeyer, Mart	:	*Gandhi Way: A Handbook of Conflict Resolution (Berkeley: University of California Press), 2002.*
9.	Kriesbery, Lawis	:	*International Conflict Resolution (New Heven: Yale University Press), 1992.*
10.	Mitchell, C.R.	:	*Handbook of Conflict Resolution: An Problem Solving Approach (London), 1996.*
11.	Ramsbothan D. & Miall, H.	:	*Contemporary Conflict Management (New York : Blackwell), 2005.*
12.	Sustac, Zeno & Claudin Ignet	:	*Alternative Ways of Solving Conflicts (ADR) (New Delhi: Promila and Co. Publishers), 2001.*

JOURNALISM & MASS COMMUNICATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2017-18
SEMESTER V

MEDIA MANAGEMENT, ETHICS AND LAWS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :
The course will introduce the students to the basic structure of media organizations and the regulatory framework and laws of the journalistic profession.

B. Pedagogy of the Course Work:
80% Lectures (including expert lectures)
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be 9 questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I
Types of ownership patterns: Sole Proprietorship, Partnership, Joint Stock Company, Conglomerate, Chain, Trust/Societies/Associations, Cross Media Ownership

Unit II
Basic principles of Management given by Henry Fayoland their applications in media organistions,Organistional structure of Large Daily Newspaper,Radio Station and TV Station.

Unit III
Freedom of speech and expression [Article 19(1)(a) and 19(2)] Press Council of India guidelines for Ethical conduct.

Unit IV
Brief overview of: Right to Information Act, Copyright Act, Law of Defamation, Law of Obscenity, Contempt of Court, Contempt of Legislature

PRACTICALS **Max. Marks : 20**

1	Case study of any one type of ownership pattern of Indian media organizations.	20 Marks

Books Recommended

ESSENTIAL READING

1. Kohli Vanita ,(2003), *The Indian Media Business*, Sage.
2. Ganaratne Shelton ,(2000) *Handbook of the media*, Sage
3. Kothari Gulab (1995) *Newspaper Management in India*, DK Publishers, New Delhi
4. Frank Thayer(1954) *Newspaper Business management*, Prentice hall Inc, New York
5. Trilok N Sindhwani (1975), *Newspaper Economics and management*, Ankur publishing House, New Delhi.
6. John Mcmanus (1994), *Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
7. Edward S. Herman and Robert W. McChesney(1997), *The Global media: New missionaries of corporate capitalism* , Madhyam Books, New Delhi
8. Edward S. Herman and Robert W. McChesney(2002) *Manufacturing Consent: The political economy of mass media*, Random House,
9. Bagdikian Ben H,(2004), *The New Media Monopoly*,.Beacon Press
10. Redmond James and Trager Robert, (2004),*Balancing on the Wire: The Art of Managing Media Organizations*, 2nd ed., Atomic Dog
11. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
12. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D
13. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D
14. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey
15. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D
16. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D
17. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
18. Christians, Clifford and Traber, Michael, (1997), Communication Ethics and Universal Values, Sage Publications, N.D
19. Sharma, S.R , (1996), *Democracy and the Press*, Radha Publications, N.D.
20. Padhy, K.S., (1991), *Battle for Freedom of Press in India*, Academic Foundation, N.D

ADDITIONAL READING

1. McManus John (1994),*Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
2. Underwood Doug(1993),*When MBA's Rule the Newsroom: How the Marketers and Managers are Reshaping Today's Media*, Columbia University Press
3. Neuharth Al(1989),*Confessions of an S.O.B.,* Doubleday
4. Mackay Harvey(1988),*Swim With the Sharks without Being Eaten Alive*, Wm. Morrow & Co
5. Adarsh Kumar Varma (2003), *12 ½, Management Mantras of Journalism*, Kanishka Publishers, New Delhi
6. Mehta, Vinod, (1999), *Mr. Editor, How Close are you to the PM*, Konark Publishers, N.D.Shamsi N Afeque, (2006*), Media Organisation And Management*, Anmol Publications Pvt Ltd, New Delhi
7. Aggarwal, S.K., (1993), *Media and Ethics*, Sipra Publications, N.D.Stephen Lacy, George Sylvie, Robert H. Wicks, Jan LeBlanc Wicks, Ardyth Broadrick Sohn, (2003), *Media management: A Casebook Approach, Lea's Communication Series* , Lawrence Erlbaum Associates
8. Chauhan, Swati and Chandra, Navin, (1997), *Journalism Today: Principles, Practices and Challenges,* Kanishka Publishers, N.D.
9. Tharyam, P., (1999), *Good News, Bad News*, Punnoose Tharyam, N.D.
10. Fineman, Martha.A ed, (1997), *Feminism, Media and the Law,* Oxford University Press. N.Y.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- VI

ADVERTISING & PUBLIC RELATIONS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :
The course will make students conversant with strategic communication by imparting training in writing advertising copy and press releases amongst other tools.

B. Pedagogy of the Course Work :
80 % lectures (including expert lectures).
20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I
Definition & types of advertising; Place of Advertising in marketing mix; Advertising agency - structure and functions

Unit-II
Concept & definition of advertising copy; Elements of a typical advertisement; Basic principles of writing advertising copy;

Unit –III
Concepts & types of Public in PR; Brief introduction to Public Relations in Public & Private Sector; PR Agency: Structure & Functions

Unit – IV
Brief introduction to PR tools & Media Relations

PRACTICALS

Max. Marks : 20

1	Portfolio of five self-designed advertisements	10 marks
2	Prepare a file of PR tools used by anyone organization	10 marks

Books Recommended

ESSENTIAL READING

1 David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson

2 David Ogilvy, *The Unpublished David Ogilvy*

3 David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman

4 Subroto Sengupta, *Cases in Advertising and Communication Marketing*

5 Subroto Sengupta, (1990), *Positioning* (New Delhi, Tata-Mcgraw Hill

6 Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.

7 J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books

8 Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School

9 Dorothy Cohen, (1972), *Advertising.* NY, Wiley

10 Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956

11 Scott M. Cutlip & A.H. Genter, (1964), *Effective Public Relations*. 3rd ed. ,Englishwood Cliffs, Prentice-hall

12 Fraser P. Seital, (1984), *The Practice of Public Relations*. 2nd ed., Columbus Bell & Howell Co.

13 S.K. Roy, (1974), *Corporate Image of India*. New Delhi, Sh. Ram Center

14 Krishnachander Lehiri, *Publicity: Art and Literature with special reference to India*.

15 John Lee, (1968), *Diplomatic.* Persuaders, N.Y. Wiley.

16 Rajendra, *Lok Sampark* (Haryana Hindi Granth Academy, Chandigarh)

17 Dilgir, H.S., *Lok Sampark-Sanchar Atay Sandhan* (Kala Darpan Prakashan Chandigarh)

18 Mehta, D.S., *Handbook of Public Relations in India*, (Allied Publishers, New Delhi.)

19 Black, Marwin & Harlow, Rex, (1985), *Practical Public Relations*. Harper & Bros.; New York

20 Black, Sam, (1978), *Practical Public Relations Pitman*, London.

ADDITIONAL READING

1 Bajpai, Shailaja & Unikrishnan, Namita, (1996), *The Impact of Television Advertising on children*. SAGE, ND

2 Berelson, Bernard & Janowitz, Morris (Ed.), (1996), *Reader in Public Opinion & Communication*. The Free Press, New York

3 Berman, Ronald, (1981), *Advertising & Social Change*. SAGE, Newbury Park

4 Burke, Kenneth, (1946), *A grammar of motives*. Prentice-hall Englewood Cliffs

5 Burke, Kenneth, (1950), *A Rhetoric of motive*. Prentice-hall Englewood Cliffs

6 Cannon, Tom, (1973), *Advertising Research: Intertext-Books*, London

7 Agarwala-Rogers, Rekha & Rogers, Everett M., (1976), *Communication in Organisations*. The Free Press, Toronto

8 Berelson, Bernard & Janowitz, Morris (Ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York

9 Brembeck Winston & Howell, William, (1976), *Persuasion,* Prentice Hall, New Jersey

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POLICE ADMINISTRATION
SEMESTER - V

Organisational Behaviour With Special Reference to Police Administration

(A) Course Objectives:

The objective of this course is to familiarize the students with the concept, nature and significance of organizational behavior with special reference to police administration. The course also aims to discuss the foundations and models of organisational behavior. In particular, the students would be taught the concepts such as motivation, morale, leadership, communication, decision-making, and transactional analysis. Further, the inputs regarding the concept and rationale of organizational change and organizational development would be imparted to the students.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of:

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Organisational Behaviour: Concept, Nature and Significance. Foundations of Organisational Behaviour – Scientific Management, Human Relations, Systems and Contingency. Models of Organisational Behaviour.

Unit-II

Motivation: Concept; and Theories – Maslow's Need Hierarchy and McGregor's Theory X & Y. Morale: Concept; and Factors to Build-up Morale in India Police. Leadership: Concept, Theories – Trait and Situational; and Qualities.

Unit-III

Communication: Concept, Process, Types and Barriers. Communication Modes in Indian Police. Decision-Making: Concept; Types; and Simon's Rational Comprehensive Theory. Transactional Analysis: Meaning; and Types of Transactions.

Unit-IV

Organizational Change: Concept; Rationale; and Resistance to Change. Organisational Development: Concept and Rationale.

Essential Readings:

1. Prasad, L.M. : Organisation Behaviour, Sultan Chand & Sons, New Delhi, 2008.
2. Aswathappa, K. : Organisational Behaviour, 7th Edition, Himalaya Publishing House, New Delhi, 2007.
3. Moorhead, Gregory & Ricky W. Griffin : Organizational Behaviour: Managing People & Organizations, Biztantra, New Delhi, 2005.
4. Robbins, Stephen P. : Organizational Behaviour, Prentice-Hall of India Private Limited, New Delhi, 2001.
5. Sharma, K.K. & : Organisation Behaviour, Deep & Deep Sahni, Pradeep Publishers, New Delhi,1988.
6. Dubin, Robert : Human Relations in Administration, Prentice-Hall of India Private Limited, New Delhi, 1968.
7. George, C. S. : History of Management Thought, Prentice-Hall of India Private Limited, New Delhi.
8. Simon, Herbert A. : Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation, Macmillan, New York, 1976.
9. Sapru, R. K. : Theories of Administration, S. Chand, New Delhi, 1996.
10. Maheshwari, S. R. : Administrative Thinkers, MacMillan, New Delhi, Latest Edition.
11. Saiyadain, Mirza S. : Organisational Behaviour, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2006.
12. McShane, Steven L.; Glinow, Mary Ann Von; & Sharma, Radha R. : Organisational Behaviour, Tata McGraw-Hill, Publishing Company Ltd., New Delhi, 2006.

Further Readings

1. Argyris, Chris : Personality and Organisation: The Conflict Between System and the Individual, Harper and Row, New York, 1957.
2. Argyris, Chris : Integrating Individual and Organisation, Wiley, New York, 1964.
3. Mayo, Elton : The Social Problems of an Industrial Civilisation, Routledge and Kegan Paul Limited, London, 1957.
4. Hicks, Herbert G. : The Management of Organisation: a system and human resource approach, McGraw Hill, New York,1972.
5. Vadackumchery, James : Police Leadership: The Inside Story, APH Publishing Corporation, New Delhi, 1999.
6. Pugh, D. S. (ed.) : Organisation Theory, Penguin Books, Harmondsworth, 2nd Edition, 1984.

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POLICE ADMINISTRATION
SEMESTER- VI

Law and Police Administration

(A) Course Objectives:

The police system in India has to work within the ambit of legal framework laid down by the Constitution and by the enacted laws. The major responsibility of the police is to ensure the implementation of such laws. The course has been designed to impart knowledge to the students on the laws governing the 'prevention and detection of crime' which is laid down as the primary duty in the Indian Police Act 1861. The endeavour of the course is to familiarize the students with the main provisions of the Indian Penal Code 1860, the offences under it and the offences affecting the human body. In addition, meaning and definition of terms covered under Section 2 relevant to the police administration along with the powers of the police officer have been discussed.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

THE INDIAN PENAL CODE 1860: MAIN PROVISIONS

(i) Jurisdiction (Sections 1-5)
(ii) General Explanations (Sections 6-52-A)
(iii) Punishments (Sections 53, 53A, 54, 55, 60, 63, 73)
(iv) Joint & Constructive Liability Section 34 & Section149

Unit-II

Offences under the Indian Penal Code 1860

(i) Abetment (Section 107 & 108)
(ii) Criminal Conspiracy (Sections 120-A, 120-B)
(iii) Offences against the State (Sections 121, 121-A, 124-A)
(iv) Offences Against Public Tranquility (Sections 141-147)

Unit-III

Offences Affecting Human Body

-Culpable Homicide (Section 299) & Murder (Section 300)
-Causing death by rash and negligent act (Section 304A)
-Dowry Death (Section 304B)
-Hurt (Section 319), Grievous Hurt (Section 320)
-Wrongful Restraint and Wrongful Confinement (Sections 339, 340)
-Assault (Section 351)
-Sexual Harassment (Sections 354 A, 354 B, 354 C & 354 D)
-Kidnapping and Abduction (Sections 359-362)
-Rape (Sections 375, 376 A to D)

Unit-IV

Classification of offences in CRPC:

-Bailable and non-bailable offence;
-Cognizable and non-cognizable offence;
-Compoundable offences;
-Summons Case;
-Warrant Case;

Role of Police Officer:

-Lodging of First Information Report (Section 154) & Effects of Refusal to lodge FIR
-Police investigation
-Arrest (Section 41) & Rights of Arrested Persons
-Search (Section 165)

Essential Readings:

1. Tandon, Mahesh : The Indian Penal Code, Allahabad Law Agency, Prasad & Tandon, Rajesh Latest Edition.
2. Gandhi, B. M. : Indian Penal Code, Eastern Book Company, 2nd Edition.
3. Bhattacharya, T. : Indian Penal Code, Central Law Agency, Allahabad, 2007.
4. Mishra, S.N. : Indian Penal Code, Central Law Publications, Allahabad, 2007.
5. The Indian Penal Code : Bare Act with Short Notes, Universal Law Publishing Co. Pvt. Ltd., Delhi, 2008.

Further Readings

1. Lal, Rattan and Dhiraj Lal : Indian Penal Code
2. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.

WOMEN'S STUDIES

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER - V

PAPER: NATIONAL AND INTERNATIONAL INITIATIVES FOR WOMEN

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objective: This course aims to conscientise the students about the efforts made by national and international organizations, both governmental and non-governmental, towards women's empowerment and increased participation in social, economic and political life. The course exposes the student particularly to the U.N. initiatives in empowering women, putting an end to age old discrimination against them.

Course Contents

Unit I – Constitution of India and Women's Rights:

a) Fundamental rights and women's rights: de jure and de facto position
b) Directive Principles of State Policy and women's rights with special reference to Articles 39, 42, 43 and 44
c) Factors inhibiting effective implementation of Constitutional provisions

Unit II – Women and Law in India:

a) Dowry Prohibition Act, 1961 (as amended in 1984 & 1986);
b) Protection of Women from Domestic Violence Act, 2005,
c) Women's Rights in Property as Coparcener (as per 2005 Amendment of Hindu Succession Act, 1956)

Unit III – UN Conferences on Women:

a) Mexico (1975)
b) Copenhagen (1980)
c) Nairobi (1985)
d) Beijing (1995)
e) Beijing +5 (2000)
f) Beijing + 10 (2005)

Unit IV – UN Conventions for Women and Children:

a) Convention on the Political Rights of Women 1952
b) Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) 1979
c) Convention on the Rights of the Child (CRC), 1990.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

Aggarwal, Nomita : **Women and Law in India**, New Century Publication, Delhi, 2002.

Basu,D.D. : **Introduction to The Constitution of India**, Wadhwa & Co. Agra, 2001.

Jain, Devaki : **Women Development and the UN: A Sixty Year Quest for Equality and Justice**, Orient Longman, Delhi, 2006.

Shukla, Surinder : **United Nations and Empowerment of Women**, Arun Pub. House, Chandigarh, 2009.

United Nations and The Advancement of Women *(*1945-1996), United Nations Publication, 1996.

Further Readings:

Diwan, Paras : **Dowry and Protection to Married Women**, Deep and Deep Publication, New Delhi, 1987.

Ghosh, S. K. : Women in Changing Society, Ashish Publishing House, New Delhi, 1984.

Ratra, Amiteshwar; Parveen Kaur & Chhikara,Sudha : **Marriage and Family: In Diverse and Changing Scenario,** Deep & Deep, New Delhi, 2006.

Singh, Indu Prakash : Women, law and Social Change in India, Radiant, New Delhi, 1989.

Readings in Hindi:

Anthony,M.J. : **Kanooni Salha**, Hind Pocket Books, New Delhi, 2006.

Bansal, Bandna **Panchayati Raj Mein Mahila Bhagyadari**, Kalpaz Pub., New Delhi, 2004.

Gupta, Kamlesh Kumar : **Bharatiya Mahilayen Shoshan**, Utpidan avam Adhikar, Book Enclave, Jaipur, 2005.

Natani, Prakash : **Mahila Jagriti aur Kanoon**, Aavishkar Pub., Jaipur, Narayan 2005.

Natani, Prakash Narayan : **Manavadhikar avam Mahilayen**, sublime Pub., Delhi, 2005.

Sanyukt Rashtr, Karavahi Hatu Ghushana-Patra Tatha Beijing Ghushana, Campewell Publication, New Delhi, 1995.

Mathew, D.P. : **Hindu Vivaha Aur Talaq**, Indian Social Institute, New Delhi, 1986.

Mathew, D.P. : **Atam Raksha**, New Delhi, 1984.

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WOMEN'S STUDIES

SEMESTER-VI

PAPER : WOMEN'S DEVELOPMENT AND EMPOWERMENT IN INDIA

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objectives: This paper focuses on the issues related to the process of development and its impact on women, particularly in the context of a developing nation like India. The attempt is to equip the student to understand the major aspects of critique of development through a gender lens in its global and local contexts.

Course Contents

Unit I – Concept of Development

- Changing concept from Growth to Development;
- Human Centric Development;
- Why is gender a development issue?
- Indices of development: Human Development Index (HDI), Gender Development Index (GDI), Gender Empowerment Measure (GEM)

Unit II – Strategies for Women's Development

- Women in Development (WID), Women and Development (WAD) and Gender and Development (GAD),
- Empowerment and Sustainable Development;
- Microcredit

Unit III - Policy Initiatives

- Changing approaches from welfare to development to empowerment with special reference to Five Year Plans (First to Eleventh Plan)
- National Policy for Empowerment of Women

Unit IV – Implementation Machinery

- Social Welfare Boards,
- National Commission for Women (NCW),
- Ministry of Women and Child Development (MOWCD),
- National Institute of Public Cooperation and Child Development (NIPCCD)

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units.

  Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

ESSENTIAL READINGS

Ahooja-Patel, Krishna : **Women and Development**, Ashish Publishing House New Delhi, 1995.

Govt. of India, Five Year Plans (1st to 11th), Planning Commission, New Delhi.

Gupte, Shakuntla : **Women Development in India**, Anmol Pub, New Delhi, 2005.

Mathu, Anuradha (ed) : **Facets of Women's Development**, Kalpaz Pub, Delhi, 2006.

South Asia Human Development Reports 2000 and 2004, Mahbub ul Haq Human Development Centre.

UNDP Human Development Reports, 1995-2007.

Further Readings

Heyzer, Noeleen and Gita,(ed.), : **Gender, Economic Growth and Poverty**, Kali for Sen, Women, New Delhi, 1994.

Jain, Devaki : **Development as if Women Mattered**, Monograph, ISS, New Delhi,1983.

Krishanaraj, Maitreyi, Subhada : **Women and Development: The Indian Experience**, Publishers.

Rajput, Pam & Swarup 1994. : **Women and Globalization**, Ashish Pub. House, New, Delhi, Hemlata (ed.),

Reddy, V Narayana et al (eds), : **Women in Development: Challenges and Achievements,** Serials Pub, Delhi, 2005.

Singh, Gopal : **Economic Empowerment of Rural Women in India,** et al (eds) RBSA Pub, Jaipur, 2003.

Verma, S.B, Jiloka, S.K. U.K, Kushwah, K.J, (eds), : **Rural Women Empowerment,** Cambridge Univ Press, & 2005.

Readings in Hindi:

Kumar, Raj (ed.) : **Bhartiya Mahila**, Arjun Publishing, New Delhi, 2003.

Sarawat, Sawapnal : **Mahila Vikas AK Paridrashay**, Nayanprakashan, New Delhi,

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HUMAN RIGHTS & DUTIES

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER-V

PAPER: HUMAN RIGHTS RESPONSES TO SELECT PROBLEMS INTERNATIONAL AND NATIONAL PERSPECTIVE

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with a few select problems that have been addressed internationally through the UN Conventions to ensure protection of human rights. The objective is to regard to problems such as racial discrimination; custodial violence; and socially vulnerable groups including women, children, Specially-Abled and Internally Displaced Persons.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: (i) for written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9 x 2 = 18 marks. (ii) In addition to it, Question Nos. II to IX will consist of long answer of long answer (easy) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4 x 18 = 72 marks.

UNIT-I

Racial Discrimination: International Convention and Related Mechanism

(a) Convention on the prevention and punishment of the Crime of Genocide, 1948.
(b) International Convention on Elimination of All Forms of Racial Discrimination 1965.
(c) Refugees and the Refugee Convention, 1951

UNIT –II

Custodial Violence and Safeguards:

(a) Custodial Violence a
  (i) Torture and Death in Police Custody
  (ii) Fake Encounters and Enforced Disappearances
  (iii) Human Indignity against Women and Children

(b) Convention against Torture and Other Cruel and Human of Degrading Treatment or Punishment, 1984.

UNIT-III

Social Vulnerability and Protection –I: Women and Children

(a) Understanding Discrimination and Violence against Women and Children
(b) Convention on the Elimination of All Forms of Discrimination against Women, 1979.
(c) Convention on the Rights of the Child, 1989.
(d) Human Trafficking and United Nations Convention against Transnational Organized Crime, 2000

UNIT- IV

Social Vulnerability and Protection- II: Aged, Specially-Abled and Internally Displaced Persons.

(a) Problems of Aged and specially – Abled Persons.
(b) Convention of the Rights of Persons with Disabilities, 2006.
(c) International Mechanism for the Rights of the Aged.
(d) Internally Displaced Persons and Related Mechanism.

References:

Essential Readings:

1. Addlakha, Renu and Blume, Stuart et. Al: Disability and Society: A Reader, orient BlackSwan, Hyderabad, 2009.
2. Aggarwal, H.O: *Human Rights*, Central Law Publications, Allahbad, 2010.
3. Aggarwal, H.O: *International Law and Human Rights,* Central Law Publications, New Delhi, 2010.
4. Ahuja, Ram: *Social Problems in India*, Rawat jaipur, 2009.
5. Biswal, Tapan: *Human Rights*, *Gender and Environment,* New Delhi: Viva, 2006.
6. Kapoor, SK.: *Human Rights under International Law*, Central Law Publications, Allahabad, 2009.
7. Karna, G.N.: *Disability Studies in India: Retrospect and Prospect*, New Delhi: Gyan Publishing House, 2001.
8. Lauterpacht, Hersch: *An International Bill of the Rights of the Man*, New York: Columbia University Press, 1945.
9. South Asian Human Rights Documentation Centre: *Human Rights and Humanitarian Law,* South Asian Human Rights Documentation Centre, New Delhi, 2008.
10. Wolf, Sherry: *Sexuality and Socialism*: History, Politics, Theory of LGBT Liberalization, Chicago: Haymarket Books, 2009.

Further Reading:

1. Langley, Winstore E.: Encyclopedia of Human Rights Issues Since 1945, London: Fitzroy Dearborn Publishers, 1999.
2. Pachauri, S.K. : Children and Human Rigths , New Delhi: APH Publications, 1999.
3. *Pacuhauri, S.K: Women and Human Rights, New Delhi: APH Publications, 1999.*
4. *Rao, Mamta: Law Relating to Women and Children, Eastern Book Company, Lucknow, 2008.*
5. *Verma, R.S.: Human Rights: Burning Issues of the World, Volumes I, II and III. Delhi: Radiant Publishers, 2000.*
6. *Karna, G.N: United Nations and the Rights of Disabled Persons: A Study in Indian Perspective, New Delhi: APH Publishing Co. , 1999.*

HUMAN RIGHTS & DUTIES
SEMESTER-VI

PAPER: REGIONAL HUMAN RIGHTS INSTRUMENTS, STANDARDS AND MECHANISM

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with key features of regional human rights standards and mechanisms. The objectives of the paper are twofold. Firstly, it is familiarize the students that regional initiatives complement the international initiatives in promoting and protecting human rights. Secondly, it is to train students to locate countries of the specific region on an outline map of the world.

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES: Note: (i) for the written appear, the students will be required to attempt five questions in all. Questions No. I will be compulsory comprising of 12 short answers type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9x2 =18 marks. (ii) In addition to it. Questions Nos. II to IX will consist of long answer (essay) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4x18=72 marks per Unit where students will be asked to located countries that are party to the Regional Conventions or have either ratified specific Conventions or have not ratified the given Conventions on the attached world outline map.

UNIT-I

Europe:

(a) European Convention on the Protection of Human Rights (ECHR), 1950.
(b) European Social Charter (ESC), 1961 (Revised 1996)
(c) Charter of Fundamental Rights of the European Union, 2000.

UNIT-II

Americas:

(a) American Convention on Human Rights (ACHR), 1969.
(b) Inter-American Convention to Prevent and Punish Torture,1985
(c) Inter-American Convention on Forced Disappearance of Persons, 1994.

UNIT-III

Africa and Arab

(a) African harter on Human and Peoples' Rights (Banjul Charter), 1981
(b) Convention Regarding the Specific aspects of Refugee Problem in Africa
(c) Arab Charter on Human Rights, 2004

UNIT-IV

South and South-East Asia

(a) SARC Conventions: (i) Conventions on Regional Arrangements for the Promotion of Child Welfare in South Asia and Convention on Preventing and Combating the Trafficking in Women and Children for Prostitution
(b) ASEAN Charter on Rights, 2007.

REFERENCES:

Essential Readings:

1. Aggarwal, H.O.: *Human Rights, Central Law Publications*, Allahabad, 2010.
2. Aggarwal, H.O.: *International Law and Human Rights*, Central Law Publications, New Delhi, 2010.
3. Chodhury, A.R. and Bhuiyan, J.H.: *An introduction to international Human Rights* Law. Brill, 2010
4. Kappor, S.K: *Human Rights Under International Law, Central Law Publications* Allahbad, 2009.
5. Jacobs, Francis G and R.C.A White: *The European Convention on Human Rights*, Oxford: Clarendon University Press, 1996.

Further Readings:

1. Arora, Lalit Kumar: *Major Human Rights Instruments*, Isha Book, New Delhi, 2006.
2 .Vincent O. Orlu Nmehielle: *The African Human Rights System: it's Law Practice and Institutions*, Kluwer Law International, The Netherlands, 2001.
3. South Asia Human Rights Documentation Centre: *Human Rights and Humanitarian Law, South Asian Human Rights Documentation Centre*, New Delhi, 2008.
4. Sarkar, Sukanta: Human Rights Violations of Minorities, Anmol Publications, New Delhi, 2015.

COMPUTER SCIENCE

B.A. / B.Sc. (GENERAL) FIFTH SEMESTER

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – A05	**Theory**	**Business Data Processing and Data Base Management Software**	**3**	**65**	**10**	**75**
Paper – PA05	**Practical**	**Practical Based on Paper – A05**	**3**	**25**	**--**	**25**

Note : Practical marks will include the appropriate weightage for proper maintenance of lab. record.

Paper-A05 : Business Data Processing and Data Base Management Software

Objective :
The course enables the students to understand the basics of date processing, files, DBMS (concept & design).
Any RDBMS tools such as Oracle/mySQL/MS-SQL may be used.

Note :
(i) The question paper will consist of Four units.
(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.
(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.
(iv) All questions carry equal marks unless specified.

UNIT-I

Introduction: Database vs File Oriented Approach, Advantages and Disadvantages of DBMS, Data models: Hierarchical, Network and Relational models, Entity Relationship model, Client-Server Architecture, Distributed databases, Data Independence, Normalization (1NF, 2NF, 3NF and BCNF)

UNIT-II

Relational Algebra and Calculus : Storage Organization for Relations, Relational Algebra: Operations - union, intersection, difference, Cartesian product, projection, selection, division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations, Database Integrity : Entity Integrity and Referential Integrity; Security: introduction, Granting and revoking Privileges ; Recovery: Transaction Recovery Techniques. (Log Based Recovery and Shadow Paging)

UNIT-III

SQL I: Data Definition Language(DDL): Create, rename, truncate, alter and drop tables. Data manipulation Language(DML): Insert, update and delete commands. Various forms of SELECT- simple, using special operators, aggregate functions, arithmetic functions, character functions, date functions, group by clause, Nested Queries, Joins.

UNIT-IV

SQL II: Introduction to VIEWs, Manipulating the Base table(s) through VIEWs, Rules of DML Statements on Join Views, Dropping a VIEW, Inline Views, Materialized Views. Database Security and Privileges, GRANT Command, REVOKE Command, Application Privileges Management, Sequences, Introduction to INDEXES, Creating simple, unique and composite INDEX, dropping INDEX, COMMIT and ROLLBACK, Backup and Recovery of the database.

Suggested Readings:

Essential :

1. Date, C.J., 1981 : An Introduction to Data Base Systems, Vols. I and II, Addison-Wesley.
2. Ullman, Jeffrey D., : Principles of Data Base Systems, 2nd Edition, Galgotia Publ. Pvt. Ltd.

Further Readings:

3. Whittington, R.P. : Data Base System Engineering, Clavendon Press.
4. Pratt, P., 1987 : Data Base Systems Management and Design, Boyd and Fraser Publ. Comp.
5. Kroenke, D.M. : Data Base Processing : Fundamentals, Design, Implementation, 2nd Edition, Galgotia Publ. Pvt. Ltd.
6. Powell, Gavin : Beginning Database Design.
7. Jain, V.K. : Database Management Systems.
8. Inmon, W. H., 2002 : Building the Data Warehouse, John Wiley.
9. Vieira, Robert : Beginning SQL Server 2005 Programming.
10. Black Book : Oracle 10g Database Administration Little Book.

PAPER-PA05 : Practical : Practical based on Paper A05.

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COMPUTER SCIENCE

B.A./B.Sc. (GENERAL) SIXTH SEMESTER

SCHEME OF EXAMINATION

SIXTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – A06	**Theory**	**Web Programming**	**3**	**65**	**10**	**75**
Paper – PA06	**Practical**	**Practical Based on Paper – A06**	**3**	**25**	**--**	**25**

Note : Practical marks will include the appropriate weightage for proper maintenance of lab. record.

Paper – A06 : Web Programming

Objective : The course provides fundamentals of Internet & Web Programming using HTML. It also focuses Front Page, Java script & Java .

Note :

i. The question paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising of **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.
iii. The students are required to attempt **ONE** question from each unit and the compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. ***Internet :*** Evolution of Internet, Future of Internet, Services provided on the Internet, Internet Access Methods.

2. ***World Wide Web :*** Evolution of www, Future of www, Fundamentals of web.

3. **Web Browser and Web Server**: Architecture, Working with Examples.

4. ***Hypertext Markup Language :*** Introduction to HTML, Building Blocks of HTML, HTML Lists, HTML Links, Images in HTML.

UNIT-II

5. ***Advanced HTML :*** HTML Tables, Frames, Forms, Editors.

6. ***Cascading Style Sheets :*** Introduction to CSS, Limitation of HTML, CSS Positioning, Layers.

7. **Developing Simple Website** : Website development using latest website development open source tool.

UNIT-III

8. ***Dynamic HTML :*** Moving elements and images, changing colors and hiding elements, moving between layers, mouse rollovers.

9. ***Java Scripting :*** Features, tokens, data types, variables, operators, control structs, strings, arrays, functions, core language objects, client side objects, event handling, application related to client side from validation.

UNIT-IV

10. ***Fundamentals of Java Programming Language :*** Java vs. C++, bytecode, java virtual machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructors, method overloading, Implementation of following programs in Java:
    1. Program to identify whether entered number is prime or not.
    2. Program to show table of a given number upto given limit.
    3. Program to calculate factorial of a given number.
    4. Program for explaining application of classes and objects.
    5. Program explaining application of various types of constructors in Java.
    6. Overload method area to calculate area of different objects like rectangle, circle, cube and cylinder.

Suggested Readings :

1. Kraynak & Hubraken : *Internet 6 in 1,* Prentice Hall of India, 2000
2. Kasser : *Using the Internet,* PHI, 4th ed, 2000
3. WALL : *Using the World Wide Web,* PHI, 2nd ed., 2000
4. Phillips : *Using HTML, PHI,* 4th ed., 2000
5. Randall & Jones : *Special Edition Using Front Page 2000,* PHI, 2000
6. Liang : *An Introduction to Java Programming,* PHI, 2000
7. :*DHTML (Any Book).*
8. :*Java Script (Any Book).*
9. Duckelt, John : *Beginning Web Programming.*
10. Keogh, Jim : *Java Programming Fundamentals.*
11. Wilton, Paul *: Beginning Java Script, II ed.* Wilby India Pvt. Ltd.

PAPER-PA06 : Practical : Practical based on Paper A06.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER-V

Paper: Biodiversity and Conservation

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question NO. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Biodiversity and Conservation

Section-I

Biodiversity: Definition, levels, importance, threats to biodiversity, hot spots of biodiversity in India. Environment Protection Act, 1986, Water (Prevention and Control of Pollution Act) 1974, Forest (Conservation) Act, 1980.

Section-II

Conservation: Causes of extinction of biodiversity**,** Strategies of conservation (in-situ and ex-situ). Protected Areas (National Parks, Sanctuaries and Biosphere reserves). Wild Life Protection Act, 1972.
Joint Forest Managemnt (JFM)

Section-III

Environmental Ethics: Role of religion in Environment Protection. Role of Indian tradition in environment conservation, Sustainable agriculture.
Different possible measures to make aware localties about environmental hazards and its remedies. Public Interest Litigation(PIL).

Section-IV

Cultivation Practices: Role of tree & plants in conservation; use of medicinal plants; cultivation methods *(Aloe vera, Calotropis (AK), Mentha, Ocimum*, Neem, *Ricinus, Jatropa, Accacia, Khair* (Katha).

Practical

Collection of local flora and fauna.
Study of vegetation of local area/college campus.
Collection of ten pests.
Identification of weeds.
Study of vegetation density by quadrat method
Plantation of medicinal plants**.**
Adaptation features of plants and animals.
Assignments/project as assigned by the teacher.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER -VI

Paper: Public Awareness and Environment Issues

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	05	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Public Awareness and Environment Issues

Section-I

Current Environmnet Issues: Climate Change, Global Warming, Population Explosion, Rain water harvesting, relamation of mining areas, impact of green revolution on environment with special referencve to Punab, Tehri Dam, Narmada Project, Bhopa Gas Tragedy, River Cleaning Project of Sant B.S. Seechewal (Punjab).

Section-II

Environmental Protection: Role of Non - Governmental Organizations (NGOs) in environmental protection (Chipko movement, For a Living Ganga by WWF, Transformation DTC fleet to CNG driven transport, Earth Hour, Green Peace (Nitrate Pollution in Punjab), KVM, Jaito). Role of individual in environment protection. Role of environmental education.

Section-III

Environmental Agencies: Role of International & National Agencies: UNEP, UNDP, WWF, MOEF, CPCB, in environment conservation and management.
A brief account on Ramsar convention, CITES (Convention on International Trade in Endangered Species), UNFCC, Montreal Protocol, Kyoto Protocol, Copenhagen Summit.

Section-IV

RS and GIS: Definition, Application in Environment**.**
Biostat: Mean mode, median, standard deviation, co-relation, Regression.

Practical

Public/Mass awareness programmes in different villages and their reports.
Survey report on different diseases based theory.
Visit to a dam to study its construction and working.
To visit any NGO working for environment.
To study various indoor pollutants in houses like LPG, AC, Paints, Polish, Cosmetics, Detergents, Shampoo, Hair dyes.
To study the different tools of stat in data interpretation.
Assignments/project as assigned by the teacher.

Books Recommended:

Jaswal & Jaswal	:	Environmental Law, APH Publications, New Delhi, 2006.
Khitoliya, R. K.	:	Environment Protection and Law, APH Publications, 2009.
Trivedi, R.K.	:	Handbook of Environmental Laws, Acts, Guidelines, Compliance and Standards, Vol. I & II, B.S. Publications, Hyderabad. 2004.
Srivastava, A.K.	:	Environmental Ethics, APH Publications, 2004.
Lillesand, T.M. and Kiefer, R.W.	:	Remote Sensing and Image Interpretation, John Wiley, Cambridge, 1987.
Fazal, S.	:	Remote Sensing Basics, Kalyani Pub. 2008.
Patel, A.N. & Singh, S.	:	Remote Sensing: Principles and Applications, Scientific Books, Jodhpur, 2009.
Jensen, J.	:	Remote Sensing of the Environment, Pearson Education, Prentice Hall, 2007.
CSE, Delhi	:	A Water Harvesting Manual, 2010.
Arora, P.N.	:	Biostatistics, Himalayan Pub. House, 2008.
Spencere, J.	:	Biodiversity: Beginners Guide, One World Publication, Oxford, 2009.
Chaudhari, A. B.	:	Biodiversity Endangered, Scientific Books, 2009.
Singh, Oraon & Prasad.	:	Medicinal Plants, APH Publications, 2009

HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2017-18
SEMESTER- V

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	40	10	1	3	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I. Importance and Functions of Food :

(a) Physiological; (b) Psychological; (c) Social

II. Food Constituents : Carbohydrates, Proteins and Fats—Functions, sources, requirements and deficiency.

III. Methods of Cooking : Boiling, Steaming, Frying, Baking, Roasting and Microwave cooking.

SECTION B

IV. Functions, recommended allowances, deficiency, excess and food sources of the following nutrients:

(a) Vitamins–A, B_1, B_2, B_3 , Vit. C, Vit. D.
(b) Minerals– Calcium, Phosphorous, Iron, Sodium, Iodine.

V. Balanced Diet

(a) Concept
(b) Classification of food based on the five/seven food groups.

SECTION-C

VI. Pregnancy

1. Signs and symptoms of pregnancy.
2. Discomforts and Complications.
3. Care during pregnancy
4. Preparation for delivery
5. Post natal care- Importance of breast feeding, bottle feeding, weaning and different types of weaning foods

VII. Methods of family planning

SECTION D

VIII Definition and importance of Child Development.

(a) Differences between growth and development;
(b) Principles of development.

IX Developmental tasks at various stages of development

PRACTICAL

Max. Marks	:	50
Practical	:	40
Int. Ass.	:	10
Teaching Periods	:	6 Periods/Week

I. Preparation of following dishes using various methods of cooking
   a. Soups- stimulating and nourishing (any two)
   b. Snacks- savory and sweet (two each)
   c. Salads- decorative and nutritious (two each)
   d. Bakery items (any two)
   e. Preparation with cereal pulse combination (any two)
   f. Desserts (any two)

II. Hot and cold beverages (at least two each).

III. Preparation of low cost nutritious recipes (at least two)

IV. Recipes- enhancing nutritive value (at least two)

V. Project

- Survey of Food Labels in order to study their nutritional facts

OR

- Survey of eating habits of five students

Reports to be submitted

List of Equipments for a practical group of 12-15 students :

1.	Gas Burners	15
2.	Cooking Range	01
3.	Ovens	05
4.	Mixers and Grinders	05
5.	Weighing Scales (for food)	05
6.	Gas Lighters	15
7.	Dustbin-Small	15-Big-1
8.	Vegetable Racks	02
9.	Plate Racks	15
10.	Storage Jars and Containers	25
11.	Refrigerator	01
12.	Icing Sets	05

Cooking Utensils

1.	Pressure Cooker	15
2.	Patila with Lid	30
3.	Kadahai	15
4.	Parat	15
5.	Tawa	15
6.	Chakla-Belna	15
7.	Grinding Stone	15
8.	Saucepans	15
9.	Karchhi	15
10.	Palta	15

11.	Poni	15
12.	Soup Strainers	15
13.	Sieves	15
14.	Enamel Bowls	15
15.	Baking Trays and Tins	15
16.	Cookie Trays	15
17.	Serving Trays	15
18.	Cutting Knives	15
19.	Peelers	15
20.	Jelly Moulds	15

Crockery and Cutlery

1.	Full Plates	30
2.	Half Plates	30
3.	Quarter Plates	30
4.	Cups & Saucers	30
5.	Soup Bowls	30
6.	Glasses	36
7.	Katoris (Vegetables Bowls)	30
8.	Dongas	30
9.	Forks	30
10.	Table Knives	30
11.	Table Spoons	48
12.	Tea Spoons	48
13.	Serving Spoons	24
14.	Tea Sets	05
15.	Dinner Sets	05
16.	Borosil Bowls	15
17.	Casseroles	15

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HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2017-18
SEMESTER- VI

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time In hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	40	10	1	3	40	10	100

Total: 100

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I Food Preservation :
- (a) Definition, Importance & Principles.
- (b) Causes of food spoilage.
- (c) Household methods of food preservation—sun drying, use of salt, oil, spices, sugar & chemical preservatives.

II Meal Planning
- (a) Definition
- (b) Importance
- (c) Principles of meal planning (physiological, psychological and economical)

SECTION-B

III. Therapeutic Diets & Modification of Normal Diet:
- (a) Principles of therapeutic diets.
- (b) Concept of soft, bland, liquid diets with examples.

IV. Therapeutic diets in the following conditions with principles involved :

- (a) Fever
- (b) Diarrhoea
- (c) High blood pressure/ Hypertension
- (d) Diabetes Mellitus.

SECTION-C

VI. Emotional Development of the child from infancy up to 6 years

- (a) Characteristics of children's emotions.
- (b) Common childhood emotions—Fear, angers, jealousy, curiosity love and affection.

VII. Language Development.

- (a) Stages of language development.
- (b) Factors affecting language development

SECTION-D

VIII. Play
- (a) Significance of play.
- (b) Types of play.
- (c) Play materials/equipment required for various age groups.

IX. Common behavioural problems and their remedies—Bed wetting, thumb sucking, nail biting, temper tantrums.

PRACTICAL

Max. Marks	:	50
Practical	:	40
Int. Ass.	:	10
Teaching Periods	:	6 Periods/week

I Planning & Preparation of diets for the following :

- (a) Pre-Schooler;
- (b) School going/packed lunch;
- (c) Adolescent;
- (d) Pregnant and lactating woman.

II Cooking and serving of the following : Soft, liquid, fluid diets (two each)

III Preservation- preparation of pickle, jam, chutney and squash (one each)

IV Project

- Safety measures of play equipment
  OR
- Visit to a nursery school
  OR
- Preparation of any one play item

Reports to be submitted

- **List of Equipments for a practical group of 15 students : SAME AS OF SEMESTER V**

Reference Books :

1. *Applied Nutrition,* R. Rajalakshmi, Oxford & IBH Publishing Co. Pvt. Ltd., N. Delhi.
2. *Principles of Nutrition-Dietetics,* Dr. M. Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 88, Mysore Road, Bangalore.
3. *Food & Nutrition, Educational Planning Group,* Arya Publishing House, Karol Bagh, New Delhi-5.
4. *Normal and Therapeutic Nutrition,* Br Corinne, H. Robinson, Marlya R. Lowler, Macmillan Publishing Co., New York, Collier Macmillan Publishers, London.
5. *Textbook of Nutrition and Dietetics*. Kumud Khanna, Sharda Gupta, Santosh Jain Passi, Rama Seth, Ranjana Mahna, Seema Puri. 2nd Edition. Elite Publishing House Pvt Ltd 2013
6. *Diet Nutrition and Health*. Rakesh Mittal
7. *Diet and Nutrition*. Huma Zaidi
8. *Nutritive Value of Indian Foods,* G. Copalen, B.V. Rama Sastri, and S.C. Balasubramaniam, National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, India.
9. *Human Development,* Graing J. Graig, 5th Edition, 1989/Prentice Hall, Englewood Cliffs, New Jersey, 07632.
10. *The Modern Parents Guide to Baby & Child Care-Violet,* Broadribb, R. N.H.S. & Henry F. Loc. M.E., 1973 Macdonald's and Jane's London.
11. *Good House Keeping's Baby Book V—The Good Housekeeping,* 12th ed., 1959.
12. *Child Psychology.* Dr. Nisha Sharma
13. *These are your children—Dadys,* Gardner Jenkins and Helen Shacter, 4th ed., Scott, Foresman and Co., Glenview Illinios.
    Hurlock, E.B., *Child Development,* 6th ed., McGraw Hill International Book Company, 1978.

AGRICULTURE
B.A/B.Sc. 5th and 6th Semester System

SEMESTER-V

Paper-V: Agrodiversity and Physiology

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Unit I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

History of Agroforestry
Agroecological Zonification
Socioeconomic Aspects of Agroforestry
Agroforestry System for Small Holdings
Arid Land Agroforestry

Unit – II

Establishment of Orchard
Basic Cultural Practices
Elemental Role and Needs of Nutrients
Propagation – Principles and Techniques
Stock –Scion relationship and their incompatibility
Fruit Physiology

Unit – III

Respiration- Glycolysis, Citric Acid Cycle, Photorespiration
Photosynthesis – Light Reaction, Dark Reaction, C_4 – Cycle, CAM Plants
Growth Hormones and their role in Agriculture
Enzymes and Vitamins
Vernalization
Photoperiodism

Unit – IV

Intellectual Property Right
Informatics in Agriculture
Seed Production and Technology
Indigenous Technical Knowledge in Agriculture
Introduction to Crop Biotechnology
Agrobiodiversity

PRACTICAL

Max. Marks	: 25 Marks
Practical	: 20 Marks
Internal Assessment	: 05 Marks

Planning an Orchard
Study of Agroforestry of Local Area
Scion- Stock relationship study
Study the effect of temperature and light duration on various crop plants of an area
Role of computer in Agriculture
GM crops and techniques
Study of Agrobiodiversity of Punjab

BOOKS

Plant Physiology, 2010 – K.N. Bhatia – Trumen Publishers, Jalandhar
Plant Physiology, 2010 – H.N. Srivasava – Pardeep Publishers, Jalandhar
Fruits – Ranjit Singh and S.K. Sexena - National Book Trust, New Delhi, 2008
Fruit Physiology – Amar Singh – Kalyani Publishers, Ludhiana, 1997

AGRICULTURE

SEMESTER-VI

Paper-VI: Insect Pests and Diseases of Crop

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 5 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

Plant Protection
Crop diseases ? How to control them?
Biological control, chemical control
Systemic fungicides
Weedicides
Compatibility of various fungicides and weedicides
Rodenticides

Unit – II

Diseases of Crop Plants

1. Crop-Wheat

Type of Disease	Name of Disease	Causal Organism
Fungal	Loose smut of Wheat	*Ustilago tritici*
Bacterial	Tundu disease of Wheat	*Corynebacterium tritici*
Viral	Chloris striate mosaic	Chloris striate mosaic virus (CSMV)

2. Crop- Rice

Type of Disease	Name of Disease	Causal Organism
Fungal	Blast of Rice	*Piricularia oryzae*
Bacterial	Bacterial Blight of Rice	*Xanthomonas oryzae*
Viral	Rice Tungro disease	Rice tungro Bacilliform virus (RTBV)

3. Crop- Maize

Type of Disease	Name of Disease	Causal Organism
Fungal	Black kernal rot	*Lasiodiplodia theorbrome*
Bacterial	Stalk rot of Maize	*Erwinia cartovora*
Viral	Maize chlorotic dwarf	Maize chlorotic dwarf virus (MCDV)

4. Crop-Citrus

Type of Disease	Name of Disease	Causal Organism
Fungal	Citrus black spot	*Guignardia citricarpa*
Bacterial	Citrus canker	*Xanthomonas citri*
Viral	Citrus Yellow Mosaic	Badnavirus

5. Crop-Grapes

Type of Disease	Name of Disease	Causal Organism
Fungal	Powdery Mildew of grapevine	*Unicinula nectator*
Bacterial	Crown gall	*Agrobacterium tumifaciens*
Viral	Cork bark	Grapevine virus B

6. Crop-Cotton

Type of Disease	Name of Disease	Causal Organism
Fungal	Cotton Rust	*Puccinia schedonnardii*
Bacterial	Bacterial Blight of Cotton	*Xanthomonas citri*
Viral	Leaf curl	Bigeminivirus or Cotton Leaf curl virus (CLCuV)

7. Vegetables

Type of Disease	Name of Disease	Causal Organism
Fungal	Late Blight of Potato	*Phytopthora infestans*
Bacterial	Bacterial canker of Tomato	*Clavibacter michiganensis*
Viral	Yellow vein mosaic of Bhindi	Yellow vein mosaic virus

8. Oil Crops: Mustard

Type of Disease	Name of Disease	Causal Organism
Fungal	White rust of crucifers	*Albugo candida*
Bacterial	Black rot of crucifers	*Xanthomonas campestris*
Viral	Rai Mosaic virus	Yellow Mosaic Virus

9. Oil Crops: Groundnut

Type of Disease	Name of Disease	Causal Organism
Fungal	Tikka Disease of groundnut	*Cercospora s*p.
Bacterial	Bacterial wilt	*Pseudomonas solanacearum*
Viral	Groundnut crinkle	Groundnut crinkle virus

Unit – III

General account of Insects and pests
Classification of Insects
Parts of Insect body
Control measures of Insect pests and diseases of crop

Unit – IV

Insect and nematode diseases of Cereal (Wheat, Maize, Rice) crops; Oil (Sunflower, Groundnut, Mustard) crops; Fruit (Mango, Guava, Citrus) crops

Vegetable crops

Rabi Crops	**Kharif Crops**
Green Peas	Chilli
Chick Peas (Cicer arientinum)	Okra
Onion (Allium cepa)	Bitter Gourd
Tomato (Solanum lycopersicum)	Bottle Gourd
Potato (Solanum tuberosum)	Brinjal

PRACTICAL

Max. Marks : 25 Marks
Practical : 20 Marks
Internal Assessment : 05 Marks

Study of all the diseases mentioned in theory
Symptoms and their control measures

Books

Plant Pathology – R.S. Singh, 2007 – Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi

Plant Pathology – R.S. Malhotra and Aggarwal, 2009 – Tata MacGraw Hill Publishing, New Delhi

Economic and Applied Entomolgy – Kumar and Nigam, 2008 - Emkay Publishing, New Delhi

Fungicides– Y.L. Naine and Thaplial, 2008 – Oxford and IBH Publishing Co. Pvt. Ltd., Calcutta, Bombay

Elements of Entomology – Rajendra Singh, 2007 – Rastogi Publications, Meerut

A Text book of Applied Entomology – Vol I and Vol II – Srivastva, 2007- Kalyani Publishers, Ludhiana

Indian Crop Pests - Kumar and Nigam, 2007 – Emkay Publishers, Allahabad

Integrated Pest Management – G.s. Dhaliwal and R. Arora, 2006 – Kalyani Publishers, Ludhiana

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MATHEMATICS

SEMESTER V

Paper I : ANALYSIS - I

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Countable and uncountable sets.
Riemann integral, Integrability of continuous and monotonic functions, Properties of integrable functions, The fundamental theorem of integral calculus, Mean value theorems of integral calculus.
Beta and Gamma functions.

Unit-II

Improper integrals and their convergence, Comparison tests, Absolute and conditional convergence, Abel's and Dirichlet's tests, Frullani's integral.
Integral as a function of a parameter. Continuity, derivability and integrability of an integral of a function of a parameter.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa New Delhi, 1997.
5. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.
6. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
7. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
8. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.

Paper II: MODERN ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.

3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.

4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Groups, Subgroups, Lagrange's Theorem, Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems, Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of A_n, $n \geq 5$ (without proof).

Unit-II

Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings, Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings.

References :

1. S. Singh and Q. Zameerudin : *Modern Algebra*, 8th Edition, Vikas Publication, New Delhi.
2. I.N. Herstein : *Topics in Algebra*, Wiley Eastern Ltd., New Delhi.
3. J.A. Gallian : *Contemporary Abstract Algebra*, Narosa Publication House, New Delhi.
4. M. Artin : *Algebra*, Prentice Hall of India, New Delhi, 1994.

Paper III : PROBABILITY THEORY

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Review of notion of Probability, conditional Probability and independence, Bayes' Theorem.

Random Variables : Concept, probability density function, cumulative distribution function, discrete and continuous random variables, expectations, mean, variance, moment generating function, skewness and kurtosis.

Discrete Random Variables : Bernoulli random variable, binomial random variable, negative binomial random variable, geometric random variable, Poisson random variable.

SECTION B

Continuous Random Variables : Uniform random variable, exponential random variable, Beta random variable, Gamma random variable, Chi-square random variable, normal random variable.

Bivariate Random Variables : Joint distribution, joint and conditional distributions, Conditional Expectations, Independent random variables, the correlation coefficient, Bivariate normal distribution.

References

Ross, S.M. : Introduction to Probability Models (Sixth edition) Academic Press, 1997.

Hogg., R.V and Craig, A.T : Introduction to Mathematical Statistics, MacMillan, 2002.

I. Blake : An Introduction to Applied Probability, John Wiley & Sons,1979.

J. Pitman : Probability, Narosa,1993.

P. L. Meyer : Introductory Probability and Statistical Applications, 2nd Edition, Oxford and IBH Publishing Co

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MATHEMATICS
SEMESTER VI

Paper I : ANALYSIS - II

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Double and triple integrals : Double Integral over A Rectangle, Repeated Integrals in $\mathbf{R}^2$, Double Integrals over Bounded Non-rectangular Regions, Area of Bounded Regions in Plane, Double Integrals as Volumes, Change of Variables in Double Integrals, Change to Polar Coordinates, Area in Polar Coordinates, Triple Integral in Rectangular Coordinates, Triple Integrals over General Regions in $\mathbf{R}^3$, Repeated Integrals in $\mathbf{R}^3$, Volume of a Region in $\mathbf{R}^3$, Change of Variables in a Triple Integral to Cylindrical and Spherical Coordinates

Vector Integration : Line, Surface and Volume integration. Gauss divergence theorem, Stokes' theorem, Green's theorem.

Unit-II

Sequences and series of functions : Pointwise and uniform convergence, Cauchy criterion for uniform convergence, Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence, uniform convergence and continuity, uniform convergence and Riemann integration, uniform convergence and differentiation, Weierstrass approximation theorem(Statement only), Abel's and Taylor's theorems for power series.

Fourier series : Fourier expansion of piecewise monotonic functions, Fourier Series for Odd and Even Function, Half Range Series, Fourier Series in the Intervals $[0, 2\pi]$, $[-1, 1]$ and $[a, b]$.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.

5. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.

6. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.

7. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.

8. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.

Paper II : LINEAR ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Vectror Space : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors, Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements

Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations

Unit-II

Linear transformations and matrices, Change of basis.

Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value, Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix).

References :

1. K. Hoffman and R. Kunze : *Linear Algebra*, 2nd Edition, Prentice Hall, New Jersy, 1971.
2. P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, First Course in Linear Algebra (Wiley Eastern Delhi).
3. J. Gilbert and L. Gilbert: Linear Algebra and Matrix Theory (Academic Press).
4. I.N. Herstein, Topics in Algebra (Delhi Vikas).
5. V.Bist and V. Sahai, Linear Algebra (Narosa, Delhi).

Paper III : NUMERICAL ANALYSIS

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials.
Interpolation: Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation

Formulas using Difference.

Numerical Differentiation.
Numerical Quadrature: Newton-Cote's Formulas, Gauss Quadrature Formulas, Chebychev's Formulas.

SECTION B

Linear Equations: Direct Methods for Solving Systems of Linear Equations (Gauss Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, Gauss-Seidel, Relaxation Methods).
The Algebraic Eigenvalue problem: Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.
Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods.

References

1. C.E. Froberg : *Introduction to Numerical Analysis* (Second Edition),Addison-Wesley, 1979.
2. Melvin J. Maron : *Numerical Analysis : A Practical Approach,* Macmillan Publishing Co., Inc. New York, 1982.
3. M.K. Jain, S.R.K. Iyengar and R.K. Jain : *Numerical Methods for Scientific and Engineering Computation,* New Age International (P.) Ltd., 1999.
4. R.Y. Rubistein : *Simulation and the Monte Carlo Methods,* John Wiley, 1981.
5. D. J. Yakowitz : *Computational Probability and Simulation,* Addison-Wesley, 1977.
6. S.S. Sastry : *Introductory Methods of Numerical Analysis,* 3rd Edition (2000), Prentice Hall of India Pvt. Ltd., New Delhi.

STATISTICS
SEMESTER -V

Note:
1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a Subject in B.A./B.Sc.
2. A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc First and Second years.
3. There are two papers with codes 301 and 302 in the subject of Statistics in B.A./B.Sc. Semester -V. These are to be taught simultaneously throughout the Semester.
4. For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lecturers per week for theory and practical, shall be allotted for the teaching.

Paper 301: DEMOGRAPHY AND ECONOMIC STATISTICS

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of this course is to acquaint students with the basis concepts of Microeconomic theory and the analysis of Statistical concepts used in the context of economic set up. They will also be exposed to the basic concepts in Demography.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

Unit - I

Sources of demographic data-census, vital statistical registers, adhoc surveys and hospital records. Measurement of mortality - crude death rate, specific death rates, standardized death rate, infant mortality rate and cause of death rate, complete life Table and its description. Measurement of fertility - crude birth rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate.

Economic time series, its different components, illustrations, additive and multiplicative models, determination of trend, growth curves (exponential and modified exponential), analysis of seasonal fluctuations, construction of seasonal indices.

Unit - II

Index numbers**,** definition, Methods to construct price, quantity and value index numbers. Problems involved in the construction of index numbers, use of averages, simple aggregative and weighted average methods. Laspeyre's, Paasche's, Edgeworth - Marshall and Fisher's index numbers. Time and factor reversal tests of

index numbers. Chain Base index numbers, Cost of living index number, interpretation and applications of index numbers.

Static laws of demand and supply, price elasticity of demand, Pareto distribution, log normal distribution and their properties.

References:

1. Goon, A.M., Gupta ,M.K. and Das Gupta, B.(2005) : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Srivastava, O.S. (1983) : A Textbook of Demography, Vikas Publishing.

Additional References:

1. Croxton, F.E and Cowden, D.J. (1969) : Applied General Statistics, Prentice Hall of India.
2. Gupta and Mukhopadhyay, P.P. (1999) : Applied Statistics, Central Book Agency.
3. Gupta,S. C. & Kapoor,V. K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

Paper-302 PRACTICAL

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Computing measures of mortality & fertility, construction of complete life table and examples involving users of life tables.
2. Construction of Index Numbers by Laspeyre's, Paasche's, Edgeworth-Marshall's and Fisher's methods.
3. Determination of trend, construction of seasonal indices in a time series

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STATISTICS
SEMESTER -VI

Note:
1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc First and Second years.
3. There are two papers with codes 303 and 304 in the subject of Statistics in B.A./B.Sc. Semester -VI. These are to be taught simultaneously throughout the semester.
4. For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lecturers per week for theory and practical, shall be allotted for teaching.

Paper 303: STATISTICAL QUALITY CONTROL AND COMPUTATIONAL TECHNIQUES

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: This course teaches the applications of Statistics to maintain quality in Engineering or industrial set up. Linear programming with applications in the management and administration of military, government, commercial, and industrial systems, is used to maximize the utility of limited resources. The objective is to acquaint the students with different techniques for optimization.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**

Unit - I

Importance of Statistical methods in industrial research and practice, meaning of quality, quality assurance and process control. General theory of control charts, causes of variations in quality, control limits, sub-grouping summery of out of control criteria. Charts for variables - $\overline{X}$ and R charts. Charts for attributes - np, p, c and u - charts.

Principle of acceptance sampling- problem of lot acceptance, stipulation of good and bad lots, concepts of producer's and consumer's risks, AQL, LTPD, AOQL, ATI, ASN and OC functions. Single and double sampling plans and their ATI, ASN and OC functions.

Unit - II

Difference tables and methods of interpolation, Newton's and Lagrange's methods of interpolation, divided differences, numerical differentiation and integration. Trapezoidal rule, Simpson's one third formula, iterative solution of linear equations by Gauss – Seidel Method.

Linear Programming: elementary theory of convex sets, definition of general linear programming problems (LPP), formulation of LPP, examples of LPP. Graphical and simplex methods of solving an LPP, artificial variables, duality of LPP ,Transportation problem (non-degenerate and balanced cases), initial basic feasible solution through North-West Corner Rule, Matrix Minima & VAN method.

References:

1. Goon, A.M, Gupta, M.K. and Das Gupta, B. (2005) : Fundamental of Statistics Vol. I. World Press, Calcutta.
2. Goon, A.M, Gupta, M.K. and Das Gupta, B. (2005) : Fundamental of Statistics Vol. II. World Press, Calcutta.
3. Jain, M.K., Iyengar, S.R.K. & Jain, R.K. (2010) : Numerical Methods 5th edition.
4. Montgomery, D.C (2001) : Introduction to Statistical Quality Control; Wiley
5. Swarup, K, Gupta, P.K. and Manmohan. (2008) : Operation research, Sultan Chand & Sons Educational Publishers New Delhi.

Additional References:

1. Grant, E.L. (1964) : Statistical Quality Control, McGraw Hill.
2. Duncan, A.J. (1974) : Quality Control and Industrial Statistics, Taraporewala and Sons.
3. Gass, S.I. (1975) : Linear Programming Methods and Applications, McGraw Hill.
4. Rajaraman, V. (1981) : Computer Oriented Numerical Methods, Prentice Hall.

Paper 304 : PRACTICAL

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Drawing of $\overline{X}$ - R, np, p,c and u – charts, Drawing of OC, AOQ and ATI curves for single and double sampling plans for attributes.
2. Construction of difference tables, use of Newton, Lagrange and divided difference interpolation formulae, numerical evaluation of integrals using Trapezoidal and Simpson one-third formulae, solution of system of linear equations by Gauss – Seidel iterative method.
3. Formulation of LPP's and their duals. Solving LPP's by graphical and Simplex methods, solution of transportation problem.

APPLIED STATISTICS
FIFTH SEMESTER

Note:

1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/ or B.A./ B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.
3. There is one paper with code 301AS in the subject of Applied Statistics in B.A./B.Sc. Semester-V, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 301AS: ESTIMATION AND TESTING OF HYPOTHESIS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide

(i) a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.

(ii) exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.

(iii) an insight into Multivariate Techniques.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**

UNIT -I

Estimators and estimates, unbiased, consistent, efficient estimators. Methods of moments, maximum likelihood estimators for the parameters of Binomial, Poisson and normal distributions, confidence intervals.

Tests of a statistical hypothesis, two types of errors, power of a test, Tests for the parameters of Binomial, Poisson and normal distributions, Chi-squared tests of goodness of fit. Wilcoxon and sign test.

UNIT -II

Analysis of variance, one and two way classifications. Estimates of main effects, tests of significance for equality of effects.

Principles of design of experiments- Randomization, replication and local control. Completely randomized and randomized block designs.

Multivariate Techniques (upto 4 variables only). Estimators of mean vector and variance-covariance matrix of multivariate (upto 4) normal distribution, multiple regression, multiple correlation and partial correlation.

Book Recommended

1. Goon, A.M., Gupta, M.K. And Das Gupta, B (2005) : Fundamentals of Statistics, Vol. I Chapters: 14 to18 (only the relevant portion from these chapters as suggested in the syllabus)

2. Goon, A.M., Gupta, M.K. And Das Gupta, B (2005) : Fundamentals of Statistics, Vol. II, Chapters: 1, 2 (only the relevant portion from these chapters as suggested in the syllabus)

Additional references:

1. Daniel, W.W. and Cross C.L. (2013) : Biostatistics. A foundation for analysis in the health Sciences, (10^{th} edition) Wiley India: New Delhi.

2. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

APPLIED STATISTICS

SIXTH SEMESTER

Note:

1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/ or B.A./ B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.
3. There is one paper with code 302AS in the subject of Applied Statistics in B.A./B.Sc. Semester VI, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 302AS: ECONOMICS AND INDUSTRIAL STATISTICS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide and idea about different sampling methods, use of index numbers and time series. It also provides exposure to the knowledge about controlling quality in industry. Different measures used in demography are described.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

UNIT-I

Sampling: Simple random and stratified sampling, optimum allocation in stratified sampling. Ratio and regression estimates.

Index Numbers: Index Numbers-as weighted averages, Price Index numbers, Quantity index numbers, Fisher's tests for index numbers.

Time Series: The four components of a time series, moving average, the Slutsky Yule effect, determination of trend by curve fitting and moving average methods.

UNIT –II

Quality Control: Construction, use and interpretation of control charts for mean, range, fraction defective and number of defects. Single sampling inspection plans. Concepts of producer's and consumer's risks, O.C. and A.O.Q. Curves.

Vital Statistics: Rates and ratios, crude death rate, age specific death rate, infant mortality rates, standardized death rates, direct and indirect methods. Measurement of fertility, crude birth rate, general, specific and total fertility rates. Standardized birth rates. Calendar Year rates.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B. (2005) : Fundamentals of Statistics, Vol. II, Ch. 3, 4, 6, 7, 9. (only the relevant portion from these chapters as suggested in the syllabus)

2. Daniel, W.W. and Cross C.L. (2013) : Biostatistics. A foundation for analysis in the health Sciences, (Tenth edition) Wiley India: New Delhi.

Additional References:

1. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

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PHYSICS

B.Sc. (GENERAL) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2017-18

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal assessment.
   The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the sixth semester examination.
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper will be three hours and it will be four hours for practicals.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems /exercises in the question paper should be 25-30%.
6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

PHYSICS

SEMESTER – V

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - I	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - I	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - I	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - I (30 Hrs.)

UNIT-I

Crystal structure: Symmetry operations for a two dimensional crystal. Two dimensional Bravais lattices, Three dimensional Bravais lattices, Basic primitive cells, Crystal planes and Miller indices, Diamond and NaCl structure. Crystal diffraction : Bragg's Law, Determination of crystal structure, Laue equations, Reciprocal lattices of SC, BCC and FCC, Bragg's law in reciprocal lattice, Brillouin zones and its derivation in two dimensions, structure factor and atomic form factor.

UNIT-II

Band Theory of solids, periodic potential and Bloch theorem, Kronig-Penney model, band gaps, band structures in conductors, direct and indirect semiconductors and insulators.
Free electron theory of metals, effective mass, drift current, mobility and conductivity (carrier concentration and mobility of carriers) and their variation with temperature in semi-conductors, Fermi level positions in intrinsic and extrinsic semiconductors, Wiedemann-Franz law, Hall effect in metals and semiconductors.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition, S.O.* Pillai, *New Age International Publishers.*
4. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - I (30 Hrs.)

UNIT-I

Concepts of current and voltage sources, Thevenin's theorem, Norton's theorem, Source conversion. CRO, Block diagram, construction and principle of working, Use of CRO for frequency, time period, special features of dual trace, phase measurements.

Energy band diagrams in semiconductors, Direct and indirect semiconductors, Formula to calculate Position of Fermi level in p and n semiconductors, Barrier formation, energy band diagram of p-n junction, Formula for Depletion width, Qualitative ides of current flow mechanism in forward and reverse biased diode, v-i characteristics, static and dynamic resistance, Depletion and diffusion capacitance, zener diode, LED, photodiode and solar cell.

(Book 1, Book 3)

UNIT-II

Diode circuits, Clipping circuits, Rectification: half wave, full wave and bridge rectifiers, filter circuits (C, LC and π filters), rectification efficiency and ripple factor in LC filter, voltage regulation circuit using zener diode, voltage multiplier circuits.
Bipolar Junction transistors : Structure and working, different currents in transistor, switching action. Characteristics of CB, CE and CC configurations, Active, cutoff and saturation regions.
Load line analysis of transistors, Q-point, Transistor biasing and stabilization of operating point, fixed bias, collector to base bias, bias circuit with emitter resistor, voltage divider biasing circuit.
Working ans analysis of CE amplifier using h-parameters, current, voltage and power gain, input and output impedance. Class A, B and C amplifiers.

(Book 1, Book 2)

Recommended Books :

Essential Readings :

1. Electronic Devices and Circuit Theory, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, *7th ed.* McGraw Hill
3. *Solid State Electronic Devices,* 6th Ed., Ben G. Streetman and S. Banerjee, Eastern Economy Edition.

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata Mc Graw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha, and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - I (60 Hrs.)

UNIT-I

General properties of Nuclei : Constituents of nucleus and their intrinsic properties, Quantitative facts about nuclear size, mass, density, binding energy and its variation with mass number, Wave mechanical properties of nucleus, angular momentum, parity; magnetic moment and electric moments of the nucleus. properties of nuclear forces and saturation, meson theory of nuclear forces
Nuclear Models : Liquid drop model, semi-empirical mass formula, most stable isobar.
Evidence for nuclear shell structure, Nuclear shell model, concept of mean field.

UNIT-II

Radioactive decay, Units of radioactivity (Ci and Bq), Successive disintegration, Natural radioactivity, Radioactive series, Carbon dating.
Alpha decay, energetic, alpha spectrum, Gamow's theory of alpha decay, Geiger-Nuttal rule.
Beta decay, Qualitative discussion of beta spectrum, Evidence of existence of Neutrino, Conservation of nuclear energy in Beta minus, Beta plus and Electron capture decays.
Gamma-ray emission, selection rules, Internal conversion.

Nuclear Reactions: Types, Concept of compound and direct (pickup and stripping) reactions, Reaction differential and integral cross section, units, conservation laws and kinematics, Q-value equation, Coulomb (Rutherford) scattering cross section and distance of nearest approach.
Energy classification of neutrons, Nuclear fission in reactors, Reactor facilities available in India, Nuclear fusion in stars.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.
2. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
3. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II . The Practical examination will be held along with the sixth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.

3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.

4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.

5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.

6. Number of candidates in a group for practical examination should not exceed 12.

7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

Note : Each student should perform ***at least Nine experiments*** in the laboratory.

UNIT-I

I CONDENSED MATTER PHYSICS:

(i) Measurement of reverse saturation current in p-n junction diode at various temperatures and to find the approximate value of energy gap.
(ii) To draw forward and reverse bias characteristics of a p-n junction diode and draw a load line.
(iii) Study of a diode as a clipping element.
(iv) To measure the magnetic susceptibility of $FeCl_2$ solution by Quincke's method.

II ELECTRONICS AND SOLID STATE DEVICES :

(v) To study the response of RC-circuit to various input voltages (square, sine and triangular).
(vi) To measure the efficiency and ripple factors for (a) Half-wave, (b) Full wave, and (c) Bridge rectifier circuits.
(vii) To study the reduction in the ripples in the rectified output with RC, LC and π-filters.
(viii) To draw the characteristics of a Zener diode and LED using constant current source.
(ix) To study the stabilization of output voltage of a power supply with Zener diode.
(x) To set up an oscillator and study its output on CRO for different V values.
(xi) To study the characteristics of a thermistor and find its parameters.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. Print a 2D array in spiral form.
2. To find determinant of a given matrix.
3. To find inverse of a given matrix.
4. To interpolate the data values from the given set.

UNIT-II

I CONDENSED MATTER PHYSICS:

(i) To trace the B-H curves for different materials using CRO and find the magnetic parameters from these.
(ii) To find the conductivity of a given semi-conductor crystal using four probe method.
(iii) To determine the Hall coefficient for a given semiconductor.

II ELECTRONICS AND SOLID STATE DEVICES :

(iv) To measure and plot Common Emitter Characteristics of a transistor (pnp or npn).
(v) To plot Common Base Characteristics and determine h-parameters of a given transistor.
(vi) To draw output and mutual characteristics of an FET and determine its parameters.
(vii) To study the gain of an amplifier at different frequencies and to find band-width and gain-band-width product.

III NUCLEAR PHYSICS :

(viii) To draw the Plateau of a GM counter and find its dead time.

(ix) To study the statistical fluctuations using GM counter.

(x) To study the absorption of beta-particles and determine the end point energy using GM counter. Also determine the absorption co-efficient (for aluminium) from it.

(xi) Verification of Rutherford Scattering experiment-mechanical analogue.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. To solve simultaneous equations by elimination method.
2. Fitting a straight line or a simple curve of a given data.
3. Convert a given integer into binary and octal/hexadecimal system and vice versa.

Text and Reference Books :

1. *"A Laboratory Manual of Physics for Undergraduate Classes" by D.P.* Khandelwal.
2. *"B.Sc. Practical Physics" by C.L. Arora, S. Chand & Co. (2014)*
3. *"Numerical Analysis" by C. Dixon*
4. *Programming with C,* Byron Gottfried & Jitender Chhabra, *Schaum series*

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PHYSICS

SEMESTER – VI

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - II	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - II	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - II	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - II (30 Hrs.)

UNIT-I

Lattice Dynamics : Lattice vibrations and phonons, Scattering of photons by phonons, Dynamics of a linear chain of similar atoms and chain of two types of atoms, optical and acoustic modes, Density of modes, Einstein and Debye theories of specific heats of solids.

Magnetic classification of materials (Dia, para, ferro, ferri, antiferro), Langevin theory of dia and paramagnetism, Quantum theory, Weiss's theory of Ferromagnetism, temperature dependence, hysteresis of ferromagnetic materials.

UNIT-II

Dielectric constant & polarizability, electric susceptibility, Clausius Mosotti equation, frequency dependence, ferroelectrics and Piezoelectrics.

Liquid crystals, various types and properties. Applications.

Superconductivity: Meisner effect, London's equation and penetration depth, critical magnetic field and temperature, DC and AC Josephson effect, BCS theory (formation of cooper pairs), ground state and energy gap.

Basic ideas of materials at nanoscale: Difference from bulk material properties, Nanoparticles, introduction to fabrication and characterization techniques, Carbon Nanostructures - nanotubes, grapheme. Applications of nanotechnology in various fields.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition,* S.O. Pillai, New Age International Publishers.
4. *Fundamental of Physics, Vol. II,* R.M.P. Jaiswal, S.K. Gupta and A. Rani, R. Chand and Co.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - II (30 Hrs.)

UNIT-I

Structure and working of JEFT, characteristics, drain and transconductance curve, FET amplifier and its voltage gain, Structure and working of MOSFET.
Feed back in amplifiers, voltage gain of negative feedback amplifier, advantages of negative voltage feedback, negative current feedback circuit, emitter follower.
Theory of sinusoidal oscillations, loop gain and phase, Lead-lag RC circuit, Wein bridge oscillator. Barkhausen criterion of sustained oscillations, positive feedback amplifier, LC oscillators, Colpitts and Hartley oscillators. (Book1, Book2)

UNIT-II

Operational amplifier (black box approach) : Characteristics of ideal and practical opamp 741, open-loop and closed-loop gain, characteristics and applications - inverting and non-inverting amplifiers, adder, subtractor, differentiator and integrator, Comparator, Timer IC555, pin diagram and its applications as astable and monostable multivibrator.

(Book1, Book2)

Analog and digital circuits, binary numbers, decimal to binary conversions, AND, OR, NOT gates, NAND NOR gates as universal gates, XOR and XNOR gates.
De Morgan's theorem, Simplification of logic circuit using Boolean algebra, Minterms and Maxterms, Conversion of a truth table into an equivalent logic circuit by Sum of products method. (Book 3)

Analog and digital communication systems, Amplitude and Frequency modulation, Power in AM wave, generation and detection, Brief account of Satellite communication, Sky-wave communication, and mobile communication.

Recommended Books :

Essential Readings :

1. *Electronic Devices and Circuit Theory*, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, 7th *ed.* McGraw Hill
3. Digital Principles and Applications, 7th Ed., A.P. Malvino, D.P. Leach and Saha, 2011, Tata McGraw Hill

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata McGraw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - II (30 Hrs.)

UNIT-I

Interaction of nuclear radiation with matter: Energy loss due to ionization (Bethe Bloch formula), Range and energy straggling, Energy loss of electrons and positrons, radiation loss by fast electrons, Bremsstrahlung, electron-positron annihilation, production of Cerenkov radiation,
Gamma-ray interaction with matter, photoelectric effect, Compton scattering, pair production (qualitative description).
Detectors for nuclear radiation: Gas-filled detectors, Ionization chamber, proportional counter, G.M. counter, Scintillation detector and Photomultiplier tube, Brief account of Semiconductor detectors.

UNIT-II

Particle Physics : Particle interactions : basic features and their exchange particles, Classification of elementary particles, properties, decay modes of leptons and mesons, Antiparticles, charge conjugation
Symmetries and Conservation principles, Lepton number, baryon number, Isospin, Hypercharge, Strangeness and charm, Gell-mann Nishijima formula
Concept of the quark model, color quantum number and gluons.
Origin and composition of Cosmic rays, Secondary cosmic rays, Effect of magnetic field of earth, Van Allen belts.
Particle accelerators: Cockcroft-Walton accelerator, Van-de Graaff generator, Tandem accelerator Linear accelerator, Cyclotron. Brief account of Syncrhrotron, Accelerator facilities available in India.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.
4. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.

Further Readings :

1. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
2. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The Practical examination will be held along with the sixth semester examinations.General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester V.

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

SEMESTER-6th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Total Marks

SEMESTER-5-100

SEMESTER-6-100

200

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*		*Teaching Hrs.*	*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XVII: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Metal – Ligand Bonding in Transition Metal Complexes:

Limitations of valence bond theory, an elementary idea of crystal – field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal – field parameters, Spectro chemical Series.

UNIT-II **(7 Hrs.)**

Thermodynamic and Kinetic Aspects of Metal Complexes :

A brief outline of thermodynamic and Kinetic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes.

UNIT-III **(8 Hrs.)**

Organometallic Chemistry:

Definition, nomenclature and classification of organometallic compounds. Preparation, properties, bonding and applications of alkyls and aryls of Li, Al , Hg, Sn and Ti, a brief account of metal – ethylenic complexes and homogeneous hydrogenation, mononuclear carbonyls and the nature of bonding in metal carbonyls

UNIT-IV **(7 Hrs.)**

Bioinorganic Chemistry:
Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin. Biological role of alkali and alkaline earth metal ions. Nitrogen fixation.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5. Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6. Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9. Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XVIII: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I

Heterocyclic Compounds: **(7 Hrs.)**

Introduction: Moleculer Orbital picture and aromatic character of pyrrole, furan, thiophene, pyridine. Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution. Mechanism of nucleophilic substitution reactions in pyridine derivatives.Comparision of basicity of pyridine, piperidine and pyrrole.

Introduction to condensed-five and six-membered heterocycles. Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis. Skraup synthesis and Bischler-Napieralski synthesis. Mechanism of electrophilic substitution reactions of indole, quinoline and isoquinoline.

UNIT-II **(7 Hrs.)**

Electromagnetic Spectrum: Absorption Spectra-II:

Infrared (IR) absorption spectroscopy – Molecular vibrations, Hooke's law, selection rules, intensity and position of IR bands, measurement of IR spectrum, fingerprint region, characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds.

Problems pertaining to the structure elucidation of simple organic compounds using UV, IR and PMR spectroscopic techniques.

UNIT-III **(8 Hrs.)**

Spectroscopy:

Nuclear magnetic resonance (NMR) spectroscopy.
Proton magnetic resonance (^{1}H NMR) spectroscopy, nuclear shielding and deshielding, chemical shift and molecular structure, spin-spin splitting and coupling constants, area of signals, interpretation of PMR spectra of simple organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromoethane, ethyl acetate, toluene and acetophenone.

UNIT-IV **(8 Hrs.)**

Carbohydrates:

Classification and nomenclature. Monosaccharides, mechanism of osazone formation, interconversion of glucose and fructose, chain lengthening and chain shortening of aldoses. Configuration of monosaccharides. Erythro and threo diastereomers. Conversion of glucose into mannose. Formation of glycosides, ethers and esters. Determination of ring size of monosaccharides. Cyclic structure of D (+) – glucose. Mechanism of mutarotation.

Structure of ribose and deoxyribose.

An introduction to disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose) without involving structure determination.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5. Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XIX: PHYSICAL CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Elementary Quantum Mechanics-I:

Black-body radiation, Planck's radiation law, photoelectric effect, heat capacity of solids, Bohr's model of hydrogen atom (no derivation) and its defects, Compton effect.

De Broglie hypothesis, the Heisenberg's uncertainty principle, Sinusoidal wave equation, Hamiltonian operator, Schrodinger wave equation and its importance, physical interpretation of the wave function, postulates of quantum mechanics, particle in a one dimensional box.

Schrodinger wave equation for H-atom, separation into three equations (without derivation), quantum numbers and their importance, hydrogen like wave functions, radial wave functions, angular wave functions.

UNIT-II (7 Hrs.)

Elementary Quantum Mechanics-II:

Molecular orbital theory, basic ideas – criteria for forming M.O. from A.O., construction of M.O.'s by LCAO – H_2^+ ion. Calculation of energy levels from wave functions, physical picture of bonding and antibonding wave functions, concept of $\sigma, \sigma*, \pi, \pi*$ orbitals and their characteristics. Hybrid orbitals – sp, sp^2, sp^3; calculation of coefficients of A.O.'s used in these hybrid orbitals.

Introduction to valence bond model of H_2, comparison of M.O. and V.B. models.

UNIT-III (8 Hrs.)

Photochemistry-I:

Interaction of radiation with matter, difference between thermal and photochemical processes. Laws of Photochemistry: Grothus – Drapper law, Stark – Einstein law, Jablonski diagram depicting various processes occurring in the excited state.

UNIT-IV (7 Hrs.)

Photochemistry-II:

Qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions – energy transfer processes (simple examples).Photochemistry of carbonyl compounds and alkenes.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11. Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12. Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13. Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XX: LABORATORY PRACTICALS **Max. Marks: 22+3**

INORGANIC CHEMISTRY

Synthesis and Analysis: **6 Periods/ week**

(a) Preparation of sodium trioxalatoferrate (III), $Na_3[Fe(C_2O_4)_3]$ and determination of its composition by permaganometry.
(b) Preparation of copper tetraammine complex $[Cu(NH_3)_4]SO_4$.
(c) Preparation of cis-and trans-bisoxalatodiaqua chromate (III) ion.

Instrumentation

Solvent Extraction

Separation and estimation of Mg(II) and Fe(II).

PHYSICAL CHEMISTRY

Electrochemistry

(a) To determine the strength of the given acid conductometrically using standard alkali solution.

(b) To determine the solubility and solubility product of a sparingly soluble electrolyte conductomertircally.

(c) To study the saponification of ethyl acetate conductometrically.

(d) To determine the ionization constant of a weak acid conductometrically.

(e) To study the distribution of iodine between water and CCl_4.

(f) To study the distribution of benzoic acid between benzene and water.

Molecular Weight Determination

(a) Determination of molecular weight of a non – volatile solute by Rast method.

(b) Determination of the apparent degree of dissociation of an electrolyte (e.g. NaCl) in aqueous solution of the substance.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an inorganic complex : 7 marks

Q.No. 2. Physical Chemistry : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1. Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.
2. Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.
3. Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.
4. Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.
5. Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.
6. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.
7. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.
8. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.
9. Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.
10. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

CHEMISTRY
SEMESTER-6th
Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XXI: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course
To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Silicones and Phosphazenes:

Silicones and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.

UNIT-II **(8 Hrs.)**

Hard and Soft Acids and Bases (HSAB):

Classification of acids and bases as hard and soft Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, theoretical basis of hardness and softness, electronegativity and hardness and softness.

UNIT-III **(8 Hrs.)**

Electronic Spectra of Transition Metal Complexes:
Types of electronic transitions, L – S coupling, selection rules for *d-d* transitions, spectroscopic ground states, Orgel – energy level diagram for d^1 and d^9states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-IV **(7 Hrs.)**

Magnetic Properties of Transition Metal Complexes:

Types of magnetic behaviour, methods of determining magnetic susceptibility, spin-only formula. Correlation of μ_s and μ_{eff} values, orbital contribution to magnetic moments, application of magnetic moment data for 3*d*-metal complexes.

Instructions for paper setters and candidates:

i ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2 Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3 Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4 Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5 Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6 Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7 Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8 Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9 Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XXII: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Amino Acids, Peptides, Proteins and Nucleic Acids:

Classification, structure and stereochemistry of amino acids. Acid- base behavior, isoelectric point and electrophoresis. Preparation and reactions of α - amino acids.

Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid – phase peptide synthesis. Structures of peptides and proteins. Levels of protein structure. Protein denaturation/renaturation.

Nucleic Acids : Introduction. Constituents of nucleic acids. Ribonucleosides and ribonucleotides. The double helical Structure of DNA.

UNIT-II **(7 Hrs.)**

Synthetic Polymers:

Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler – Natta polymerization and vinyl polymers.

Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy resins and polyurethanes.

Natural and synthetic rubbers.

UNIT-III **(7 Hrs.)**

Organic Synthesis via Enolates:

Acidity of ά-hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.

UNIT-IV **(8 Hrs.)**

Organometallic Compounds:

Organomagnesium Compounds: The Grignard reagents – Formation, structure and chemical reactions.

Organozinc Compounds: Formation and Chemical reactions.

Organolithium Compounds: Formation and Chemical reactions.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1 Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2 Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3 Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4 Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5 Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6 Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XXIII: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Solid State-I:

Definition of space lattice, unit cell and Miller Indices

Laws of Crystallography – (i) Law of Constancy of Interfacial Angles, (ii) Law of Rationality of Indices, (iii) Law of Symmetry. Symmetry elements in crystals.

UNIT-II **(8 Hrs.)**

Solid State-II:

X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure of NaCl, KCl and CsCl (Laue's method and powder method). Applications of Powder diffraction for structure determination, Thermal and photochemical reaction in solid state

UNIT-III **(8 Hrs.)**

Spectroscopy :

Introduction : Electromagnetic radiation, regions of the spectrum, basic features of different spectrometers, statement of the Born-Oppenheimer approximation, degrees of freedom.

Rotational Spectrum:

Diatomic molecules. Energy levels of a rigid rotor (semi – classical principles), selection rules, spectral intensity, determination of bond length, qualitative description of non-rigid rotor, isotope effect.

UNIT-IV **(7 Hrs.)**

Vibrational Spectrum:

Infrared Spectrum : Energy levels of simple harmonic oscillator, selection rules, pure vibrational spectrum intensity, determination of force constant and qualitative relation of force constant and bond energies, effect of anharmonic motion and isotope on the spectrum, idea of vibrational frequencies of different functional groups. Raman Spectrum : Concept of polarizability, pure rotational and pure vibrational, Raman spectra of diatomic molecules, selection rules.

Electronic Spectrum:
Concept of potential energy curves for bonding and antibonding molecular orbitals, qualitative description of selection rules and Franck- Condon principle.

Qualitative description of σ, π – and n M.O., their energy levels and the respective transitions.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2 Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3 Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4 Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5 Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6 Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7 Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8 Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9 Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10 Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11 Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12 Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13 Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XXIV: LABORATORY PRACTICALS **Max. Marks: 22+3**

ORGANIC CHEMISTRY
Laboratory Techniques
Column Chromatography
Separation of fluorescein and methylene blue.
Separation of leaf pigments from spinach leaves.

Synthesis of Organic Compounds

(a) Aliphatic electrophilic substitution.
Preparation of iodoform from ethanol and acetone.

(b) Aromatic electrophilic substitution.
Nitration

Preparation of m-dinitrobenzene
Preparation of p-nitroacetanilide
Preparation of p-iodoaniline from aniline.
Preparation of methyl orange from N,N-dimethyl aniline and sulphanilic acid.

Halogenation

Preparation of p-bromoacetanilide

Preparation of 2,4,6 – tribromophenol

(c) Oxidation

Preparation of benzoic acid from toluene.

(d) Reduction

Preparation of aniline from nitrobenzene

Preparation of m-nitroaniline from m - dinitrobenzene

Stereochemical study of Organic Compounds via Models

R and S configuration of optical isomers.

E, Z configuration of geometrical isomers

Conformational analysis of cyclohexanes and substituted cyclohexanes.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an organic compound : 7 marks

Q.No. 2. Experiment based onLaboratory Technique : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1 Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.

2 Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.

3 Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.

4 Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.

5 Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.

6 Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

7 Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

8 Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

9 Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

10 Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

BOTANY

B.Sc. (General) Botany Fifth and Sixth Semester Syllabus (Examinations, 2017-2018)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper-A:	Plant Physiology-I	3 hrs.	36	04	40
Theory Paper-B:	Plant Ecology	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Sixth Semester					
Theory Paper-A:	Plant Physiology-II	3 hrs.	36	04	40
Theory Paper-B:	Economic Botany	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY

SEMESTER -V

THEORY PAPER- A: PLANT PHYSIOLOGY-I

Objectives: The basic aim of this paper is to familiarize the students with various concepts of functions and metabolism of plants. The course material of this paper would enable the students to correlate structural diversity of various plant forms with functional differentiation and its biological aspects including biological nitrogen fixation and mineral nutrition. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

UNIT-I

Plant Water Relations: Importance of water to plant life; physical properties of water; imbibition, diffusion, osmosis, plasmolysis and deplasmolysis, concept of osmotic potential, water potential and pressure potential; absorption of water, active and passive mechanism of water absorption; transport of water, mechanism and theories to explain ascent of sap; transpiration types, mechanism of opening and closing of stomata, mechanism of transpiration, factors affecting transpiration, antitranspirants.

UNIT-II

Mineral nutrition: Hydroponics and its importance; essential macro-and micro elements, essentiality criteria, deficiency symptoms and their role; mineral uptake; mechanism of mineral uptake (active, passive absorption and modern concepts).

UNIT-III

Nitrogen Metabolism: Biological nitrogen fixation; importance of nitrate reductase and its regulation; ammonia assimilation.

Lipid Metabolism: Structure and function of lipids; β – oxidation; saturated and unsaturated fatty acids.

UNIT-IV

Proteins: Classification, role and structure (primary, secondary and tertiary) of proteins.

Basics of enzymology: Discovery and nomenclature; classification, structure, properties, factors affecting enzyme activity, mechanism of enzyme action.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Dennis, D.T., Turpin, D.H. Lefebvre, D.D. and Layzell (eds.) Plant Metabolism (2nd Edition). Longman, Essex. England, 1997.
3. Galston, A.W. Life Processes in Plants. Scientific American Library, Springer-Verlag, New York, U.S.A., 1989.
4. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
5. Mohr, H. and Schopfer, P. Plant Physiology. Springer-Verlag, Berlin, Germany, 1995.
6. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
7. Srivastava, H.N. Plant Physiology, Bio-chemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
8. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
9. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
10. Taiz, L. and Zeiger, E. Plant Physiology (2nd Edition). Sinauer Associates, Inc., Publishers, Massachusetts, USA, 1988.
11. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: PLANT ECOLOGY

Objective: The basic objective of this paper is to make students aware about the role of environment in causing structural and functional variation in plants. Since the present day problems of varied nature like pollution, Global Warming etc. are directly or indirectly related to ecology, it is more than desired to provide the students with knowledge of basic concepts of ecology.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Definition, scope, relationship with other sciences.

Plant Environment: Climatic, edaphic, topographic and biotic factors affecting growth and distribution of plants.

UNIT-II

Ecosystem : Concept, structure; abiotic and biotic components; trophic levels, food chain, food web, ecological pyramids, energy flow, biogeochemical cycles of carbon, nitrogen and water.

UNIT-III

Community Ecology: Community characteristics, frequency, density cover, life forms, biological spectrum; ecological succession – Hydrosere and Xerosere.

UNIT-IV

Applied Ecology :

a) Air, water and soil pollution and their control.

b) Conservation and management of natural resources. (renewable and non-renewable)

Suggested Readings

1. Chapman, J.L. and Reiss, M.J. Ecology: Principles and Applications (2nd Edition), Cambridge University Press, 1998.
2. Kormondy, E.J. Concepts of Ecology. Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.
3. Mackenzie, A. *et al*. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.
4. Odum, E. and Barrett, G.W. Fundamentals of Ecology, Cengage Learning Publisher, 2004.
5. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.
6. Saini A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
7. Sharma, P.D. Ecology and Environment, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To determine osmotic pressure of cell sap by plasmolytic method.
2. To demonstrate imbibition pressure using:
   i) Imbibition pressure apparatus.
   ii) Plaster of Paris cone.
3. To demonstrate osmosis through animal membrane/potato osmoscope.
4. To demonstrate plasmolysis and deplasmolysis.
5. To demonstrate mechanical and electrical adsorption.
6. To demonstrate the measurement of transpiration using simple potometer.
7. To demonstrate transpiration pull.
8. To study the effect of light intensity, and wind velocity on the rate of transpiration using Ganong's potometer.

9. To compare the rate of transpiration from the two sides of a leaf using :

   i) Vaseline method
   ii) Cobalt chloride method

10. To demonstrate the mechanism of opening and closing of stomata.

11. To demonstrate the path of ascent of sap.

Plant Ecology:

1. Study of ecological adaptations in external characters of :

   Hydrilla, Potamogeton, Ceratophyllum, Vallisneria, Lemna, Eichhornia Nelumbium, Calotropis, Nerium, Acacia, Zizyphus, Casuarina, Capparis, Asparagus, Ruscus, Opuntia, Euphorbia royleana.

2. To prepare permanent stained slide to show ecological adaptations in the internal structure of the following:

   a) T.S. stem of *Hydrilla*

   b) T.S. leaf of *Potamogeton* and *Vallisneria*

   c) T.S. leaf and petiole of *Eichhornia*

   d) T.S. leaf and petiole of *Nelumbium*

   e) T.S. leaf of *Nerium*

   f) T.S. stem of *Casuarina* and *Capparis*

3. To determine soil pH using pH paper/solution/pH meter.

4. To determine water holding capacity of soil.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and cut T.S. of stem, leaf or petiole (to be announced by the examiner) of specimen B. Make its permanent stained slide and show it to the examiner. Draw its labelled diagram and write its morphological and anatomical characters of ecological importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

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BOTANY

SEMESTER -VI

PAPER-A: PLANT PHYSIOLOGY-II

Objectives: The main objective of this paper is to familiarize the students with growth and metabolic processes of the plants. It also deals with the plant development, differentiation and their regulatory mechanism along with basic concepts in tissue culture.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

UNIT-I

Photosynthesis: Significance, historical aspect; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems, cyclic and non- cyclic photophosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration; factors affecting photosynthesis; transport of organic substances: Mechanism of phloem transport, source-sink relationship, factors affecting translocation.

UNIT-II

Respiration: ATP – The biological energy currency; aerobic and anaerobic respiration; Krebs cycle; electron transport mechanism (Chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway; respiratory quotient.

UNIT-III

Growth and development: Definitions; phases of growth and development; kinetics of growth, factors affecting growth; plant movements; the concept of photoperiodism, physiology of flowering; florigen concept; roles of plant hormones– auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery.

UNIT-IV

Biotechnology: Functional definition; basic aspects of plant tissue culture, its applications and somatic hybridization.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Bhojwani, S.S. Plant Tissue Culture: applications and Limitations. Elsevier Science Publishers, New York, USA, 1990.
3. Dennis, D.T., Turpin, D.H. Lefebvre, D.D. and Layzell (eds.) Plant Metabolism (2nd Edition). Longman, Essex. England, 1997.
4. Galston, A.W. Life Processes in Plants. Scientific American Library, Springer-Verlag, New York, U.S.A., 1989.
5. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
6. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology. John Wiley and Sons, Chichester, England, 1999.
7. Mohr, H. and Schopfer, P. Plant Physiology. Springer-Verlag, Berlin, Germany, 1995.
8. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
9. Srivastava, H.N. Plant Physiology, Biochemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
10. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
11. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
12. Taiz, L. and Zeiger, E. Plant Physiology (2nd Edition). Sinauer Associates, Inc., Publishers, Massachusetts, USA, 1988.
13. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture. Kluwer Academic Publishers, The Netherlands, 1994.
14. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: ECONOMIC BOTANY

Objective: The basic objective of this paper is aimed to give an insight into plant wealth such as medicinal plants; crop plants; beverages; spices; condiments; sugar; fiber; pulp & oil yielding plants of commercial & economic importance. Both the aspects of this paper give a sound basis of ecology and economic botany so that students can venture into fields like Environmental Biology, Conservation Biology, Forestry, Agriculture, Horticulture and Crop production etc.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Cereals (Wheat, Rice and Maize)
ii) Fibres (Cotton)
iii) Vegetables (Potato)

UNIT-II

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Fruits (Mango, Grapes, Lemon)
ii) Sugar-yielding plants (Sugarcane)
iii) Oil-yielding plants (Groundnut, Mustard)

UNIT-III

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Wheat, Maize, Rice, Moong, Gram (Food).
ii) Teak, Shisham, Deodar, Sal (Timbers).
iii) Cotton, Jute, Coir, Flax (Fibres).
iv) Fennel, Coriander, Turmeric, Ginger, Mint, Clove (Spices and Condiments).

UNIT-IV

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Bamboo, Eucalyptus (Pulp plants).
ii) Liquorice, Belladona, Aconite, Ashwagandha, Arjun, Poppy, Amla (Medicinal plants).
iii) Tea and Coffee (Beverages).

Forestry: Forest conservation, wood seasoning and its preservation.

Suggested Readings

1. Kochhar, S.L. Economic Botany in Tropics, (4th edition). Macmillan India Ltd., New Delhi, 2012.
2. Saini, A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S. A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma, O.P. Hill's Economic Botany (Late Dr. A.F. Hill, Adapted by O.P. Sharma). Tata McGraw Hill Co. Ltd., New Delhi, 1996.
5. Simpson B. and Ogorzaly, M. Economic Botany: Plants in our World (3rd edition). McGraw Hill Publisher, 2000.
6. Simpson, B.B. and Conner-Ogorzaly, M. Economic Botany – Plants in Our World. McGraw Hill, New York, 1986.
7. Singh, V., Pande, P.C. and Jain, D.K. Economic Botany, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To demonstrate that chlorophyll is necessary for photosynthesis.
2. To demonstrate that light is necessary for photosynthesis.
3. To demonstrate that CO2 is essential for photosynthesis.
4. To demonstrate evolution of oxygen during photosynthesis in an aquatic plant.
5. To study the effect of light intensity and CO2 concentration on the rate of photosynthesis using an aquatic plant.
6. To demonstrate aerobic respiration using flask method.
7. To demonstrate anaerobic respiration in germinating seeds or yeast.
8. To demonstrate the activity of amylase.
9. To demonstrate the activity of catalase in plant tissue (germinating seeds).
10. To demonstrate phototropism.
11. To demonstrate geotropism using clinostat.
12. To test for the presence of starch, proteins, amino acids, and reducing sugars in plant material.

Economic Botany:

Identification and morphology of economically important part/s of crop plants mentioned below:

Cereals (wheat, rice); Fibres (cotton); Vegetables (potato); Fruits (mango, grapes, lemon); sugar-yielding plants (sugarcane) and oil-yielding plants (groundnut, mustard).

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and write illustrated morphological notes on specimens B & C giving their economic importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

ZOOLOGY
SEMESTER -V

Paper I: Developmental Biology	40 (36 +4) marks
Paper II: Applied Zoology-I	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester V,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: DEVELOPMENTAL BIOLOGY (ZOO-501)

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

UNIT-I

Gametogenesis with particular reference to differentiation of spermatozoa. Vitellogenesis, role of follicle/subtesticular cells in gametogenesis.

Egg maturation : egg membranes : polarity of egg.

UNIT-II

Fertilization, parthenogenesis.

Cleavage : Types of cleavage patterns depending upon amount and distribution of yolk and position of spindle. Blastula and types of blastula.

Fate maps of chick and frog embryos.

UNIT-III

Induction: cell to cell interactions: juxtacrine, paracrine, gap junctions; basic concepts of organizers and inducers and their role.Determination and differentiation.

Development up to three germ layers in *Herdmania, Amphioxus*, frog, chick and rabbit.

UNIT-IV

Foetal membranes, their formation and role.

Mammalian placenta – its formation, types and functions.

Metamorphosis in *Herdmania* and *Rana* (frog)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Ballinsky, B.I. — An Introduction to Embryology, 5th edition, Saunders Co., 1981.
2. Gilbert, S.F. — Developmental Biology, 10th ed.,Sinauer Ass., Inc. Publ., 2014.
3. Urspaung, H. — Major Problems in Developmental Biology, Academic Press, New York, 1966.
4. Gardner, E.J., Simmons, M.J. and Snustad, D.P — Principles of Genetics, 8thed., John Wiley and Sons, Inc. New York, 2004.
5. Wolport, Lewis — Principles of development, Oxford University press, Oxford, 2007

Practical based on Theory Paper

1. Study of the development of frog from permanent slides.
2. Window preparation and identification of stages of development in chick egg.
3. Study of the development of chick embryo from permanent slides up to 96 hours.
4. Study of the following permanent slides:
    a. Stages of gametogenesis, structure of egg and sperm of a mammal.
    b. Larva of *Herdmania*.

Paper II: APPLIED ZOOLOGY-I

Max. Marks	: 40
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-I
2. Economic Entomology and Pest Management-I
3. Inland Fisheries & Aquaculture-I

OPTION I: MEDICAL ZOOLOGY & MEDICAL LABORATORYTECHNOLOGY-I

(ZOO-502A)

UNIT-I

Introduction to parasitology (pertaining to various terminologies in use).
Brief introduction to pathogenic microbes. Viruses,Rickettsiae, Spirochaetes and Bacteria.
Epidemic diseases, such as typhoid, cholera, small pox; their occurrence and eradication programmes.

UNIT-II

Brief accounts of life history, mode of infection and pathogenicity of the following pathogens with reference to man; prophylaxis and treatment:

Pathogenic protozoans : *Entamoeba, Trypanosoma, Leishmania, Giardia, Trichomonas;* and *Plasmodium.*

UNIT-III

Pathogenic helminthes: *Fasciolopsis, Schistosoma, Echinococcus, Ancylostoma, Trichinella, Wuchereria, Dracunculus* and *Oxyuris*.

UNIT-IV

Life cycle, disease caused and control measures of arthropod vectors : *Anopheles stephensi, A culicifaces,Aedes aegypti A. albopictus*, *Culex fatigans C.tritaeniorhynchus*, *Mansonia* sp., *Xenopsylla cheopis,Pediculus.*

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Chatterjee, K.D. : Parasitology, Protozoology and Helminthology, 13th ed., CSB Publishers and Distributors Pvt. Ltd., 2009.
2. Garcia, L.S. Diagnostic Medical Parasitology, 4th ed., ASM Press Washington, 2001.
3. Parija, S.C. Text book of Medical Parasitology, Protozoology and Helminthology, 1st edition, 2001.

Practicals based on Theory Paper ZOO-502A (ZOO-352A)

1. Demonstration of parts of microscope, its functioning and care.
2. Study of permanent slides and specimens of parasitic protozoans, helminthes and arthropods mentioned in theory syllabus.

OPTION-II:ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-I (ZOO-502B)

UNIT-I

Development of Insects: Different type of metamorphosis along with a study of different kinds of larvae and pupae.

Systematic position, habits and nature of damage of the following pests of crops and vegetables :

I. Sugarcane :

1. Sugarcane leaf hopper (*Pyriliaperpusila*) alongwith life cycle and control measures.
2. Sugarcane top borer (*Scirpophaganivella*)
3. Sugarcane stem borer (*Chilotreainfuscatellus*)

II. Cotton :

1. Pink bollworm (*Pectinophoragossypiella*) alongwith life cycle and control measures.
2. Red cotton bug (*Dysdercuscinglulatus*)
3. Cotton grey weevil (*Mylloceruspmaculosus*)
4. Surface grasshopper (*Chrotogonustrachypterus*)
5. Cotton jassid (*Empoascadevastans*)

UNIT-II

III. Paddy :

1. Rice Gundhy Bug (*Leptocorisavaricornis*) alongwith life cycle and control measures.
2. Rice grasshopper (*Hieroglyphyusbanian*)
3. Rice Hispa (*Dicladispaarmigera*)

IV. Wheat :

1. Wheat stem borer (*Sesamiainferens*) alongwith life cycle and control measures.
2. Termites (*Microtermesobesi*)
3. Aphids (*Macrosiphummiscanthi*) Jassids (*Amrasca sp*.)

V. Vegetables :

1. Red pumpkin beetle (*Aulacophorafoveicollis*)
2. Pumpkin fruit fly (*Dacuscucurbitae*) alongwith life cycle and control measures.
3. Hadda beetle (*Epilachnavigintioctopunctata*)

UNIT-III

VI. Pests of Stored Grains : Systematic position, habits and nature of damage of the following pests of stored grains :

1. Pulse Beetle (*Callosobruchus maculates*) alongwith life cycle and control.
2. Rice weevil (*Sitophilus oryzae*)
3. Khapra beetle (*Trogodermagranarium*)
4. Rust red flour beetle (*Tribolumcastaneum*)
5. Lesser grain borer (*Rhizoperthadominica*)
6. Rice moth (*Corcyra cephalonica*)

UNIT-IV

Systematic position, disease caused and control of the following insects of Medical and Veterinary importance :

1. Mosquitoes (Aedes,Anopheles, Culex)
2. Sand fly (*Phlebotomus minutus*)
3. House fly (*Musca domestica*) along with life cycle of house fly.
4. Horse fly (*Tabanus striatus*)
5. Blow fly (*Calliphora erythrocephala*)
6. Warble fly (*Hypoderma lineatum*)
7. Poultry louse(*Menopon gallinae*)
8. Sucking louse/(*Haematopinus surysternus*)
9. Fleas (*Xenopsylla cheopis*)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Attwal, A.S., : Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991.
2. Nair, M.R.G.K. : Insects and Mites of Crops in India, ICAR, New Delhi, 1975.
3. Kumar, A. and Nigam, P.M. : Economic and Applied Entomology, Emkay Publications, 1991.
4. Matheson, R. : Medical Entomology, Comstock Publishing Company, Inc., 1950.
5. Metcalf, R.L. & Metcalf, R.A. : Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-502B (ZOO-352B)

1. External morphology and identification marks of the crops and vegetables pests : P*yrillaperpusilla* (Sugarcane leaf hopper), *Pectinophora gossypiella* (Pink bollworm), *Leptocorisa varicornis* (Gunbdhy bug) *Hieroglyphus banian* (Paddy grass hopper), *Dacus cucurbitae* (Pumpkin fruit fly).
2. External morphology and identification marks of the following stored grain pests : *Sitophilus oryzae* (Rice weevil), *Tribolium castaneum* (Rustred flour beetle), *Rhizopertha dominica* (Lesser grain borer/susri),*Trogoderma granarium* (Khapra beetle), *Callosobruchu smaculatus* (Pulse beetle/Dhora).
3. External morphology and identification marks of the following insects of Medical/Veterinary importance-Mosquitoes (*Culex, Anopheles and Aedes*), house fly (*Musca domestica*), blow fly (*Calliphora erythrocephala*), warble fly (*Hypoderma lineatum*) and horse fly (*Tabanus striatus*).

4. A study of different types of larvae and pupae of insects through slides, charts etc.

OPTION III: INLAND FISHERIES & AQUACULTURE-I (ZOO-502C)

UNIT-I

- Components of Aquaculture: Capture, Culture, Intensive, Extensive, Semi-Intensive, Pen Culture, Cage Culture.
- Morphology of a typical fish (Carp, Catfish, Eel, Perch)
- Culturable fishes: Characters of culturable fishes, Indian major carps, saltwater fishes, exotic species and air breathing fishes.

UNIT-II

- Structure of mouth of different fishes in relation to feeding habits
- Bionomics of *Labeorohita, CatlaCatla, Cirrhinusmrigala, Wallago attu.*
- Food value of Fish (Vitamins, Amino acids, Minerals etc.)

UNIT-III

- Exotic fishes: History, their introduction, morphology, their role in fish culture and impact on native fish fauna.
- Induced Breeding: History, technique, chemicals involved in induced breeding and impact on fish culture.

UNIT-IV

- Pond culture: Construction of pond, types of pond, hydrobiological factors of water and soil of a fish pond, fertilization of pond, maintenance of pond.
- Aquatic weeds and their control both biological and chemical.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1.	Jhingran, V.G.	:	Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2.	Day, F.	:	Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3.	Johal, M.S. &Tandon,	:	Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4.	Agarwal, S.C. &Johal M.S.	:	Fishery Development, Narendra Publishing House, Delhi, 1997.
5.	Johal, M.S. &Tandon K.K.	:	Fishes of Punjab, Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6.	Karl, F.L.	:	Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7.	Brian, R.M. &David W.W.(ed.).,	:	Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO-502C (ZOO-352C)

1. Morphology of a Carp, Cat fish and Perch.
2. Morphometric and meristic characters of a typical fish.
3. Identification of the following fishes using keys to the species :
   Notopterus n*otopterus*. ; *Labeo rohita, L. colbasu, L. bata, Cirrhinus mrigala, Catla catla, Puntius sarana, Tor putitora, Schizothorax richardsonii, Aorichthys seenghala, Wallago attu, Bagarius bagarius, Heterpneustus fossilis, Channamaruluis, C. striatus, Xenentondon cancila, Cyprinus carpio, Hypophthalmichthys molitrix,Ctenopharyngodon idellaus, Colisa fasciatus, Mastacembelus armatus.*

   For the identification of the fishes, the students can use already prepared keys or can prepare their own keys.

4. Determination of maturity stages (both male and female) of any commercial fish (preserved specimens) through slides/charts etc.
5. Preparation of permanant slides of phytoplanktons and zooplanktons which constitute the food of commercial fishes. Their identification and study of important characters.
6. Identification of common aquatic weeds of a fish pond.
7. Study of various exotic fishes (*Hypophthalmichthys molitrix, Ctenopharyngodon idellaus, Cyprinus carpio, Gambusia affinis, Salmo trutta fario, salmo gairdneri, gairdneri*) with respect to the purpose with which they were introduced.
8. Study of endemic culturable fish species *(Catla catla, Labeo rohita, Cirrhinus mrigala)*

Guidelines for the conduct of Practical Examinations:

Max. Marks : 20 marks
Practical Exam : 18 marks
Internal Assessment : 2 marks
Time : 4 hours

1. Identify the developmental stage of chick embryo by window preparation. 2.5
2. Identify the slides A , B& C. Give two reasons for each identification 4.5
3. Viva-Voce 2
4. Practical Note Book and Project Report 2

Option-I

5. To identify the specimens D, E&F. Write the disease caused by each and two reasons for their identification. 4.5
6. Identify the given instrument. Write about its uses and functions. 2.5

Option- II

5 To identify the specimens D, E & F belonging to crop and stored grain pests. Give one outstanding character of each. 4.5

6 Identify specimen/ slide G. Give its one outstanding morphological character and medical/ veterinary importance. 2.5

Option- III

5. Giving two identification features identify specimen D&E. 2

6. Identify specimen 'F'. Give the purpose for which this fish has been introduced. 1

7. Identify the slides G & H. Give one identification features of each. 2

8. Identify the weed 'I' and write its common identification features. 2

ZOOLOGY

SEMESTER -VI

Paper I: GENETICS	40 (36 +4) marks
Paper II: APPLIED ZOOLOGY-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note: The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester VI,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: GENETICS (ZOO-601)

UNIT-I

Modification of Mendelian ratios :

Non-allelic gene interaction, Modified F_2 ratios.

(9:7, 9:3:4, 9:3:3:1, 12:3:1, 13:3,15:1,9:6:1)

Gene modifications due to incomplete dominance, lethal factors (2:1), Pleiotropic genes.

Multiple Alleles : Blood group inheritance,eye colour in *Drosophila*, pseudo-allelism.

Multiple factors : Qualitative and quantitative characters, inheritance of quantitative traits (skin colour in man).

UNIT-II

Linkage, crossing over and recombination : Linkage, sex-linked characters, crossing over, frequency of crossing over, cytological basis of crossing over, synaptonemal complex. Recombination in Fungi, (tetrad analysis).

Gene and Genetic Code : Structure of nucleic acids (DNA & RNA). Replication of DNA and transcription.Expression of gene (protein synthesis in Prokaryotes and Eukaryotes).

Properties of genetic code, codon assignment, wobble hypothesis.

Extranuclearinheritance : Kappa particles in *Paramoecium.*

UNIT-III

Mutations : Spontaneous and induced mutations, physical and chemical mutagens. Detection of mutations in *Drosophila*. Inborn errors of metabolism in man (Phenylketonuria, Alcaptonuria, Albinism).Somatic mutations and carcinogenesis. Regulation of gene expression in prokaryotes (Operon model) and in eukaryotes.

UNIT-IV

Population genetics : Equilibrium of gene frequencies and Hardy Weinberg Law.

Genetic recombination in bacteria (conjugation, transduction and transformation) plasmids.

Applied Genetics : Recombinant DNA,genetic cloning and its applications in medicine and agriculture, DNA finger printing.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. De Robertis, E.D.P. and De Robertis, E.M.F : Cell and Molecular Biology, W.B. Saunders Co., Philadelphia, 1995.
2. Powar, C.B. : Cell Biology, Himalaya Publishing House, Bombay, 1999.
3. Swanson, C.P., Merz, T. and : Cytogenetics – The Chromosome in Young, W.J Division, Inheritance and Evolution, Prentice Hall, 1981.
4. Gupta, P.K. : Cytology, Genetics and Molecular Biology, Rastogi Publishers, Meerut, 1993.
5. Chaudhry, S. and Sharma, A. : PV's Cytology& Ecology, S. Vikas& Co., Jallandhar, 2003.
6. Gardner, E. J., Simmons, M.J. and Snustad, D.P. : Priciples of Genetics, 8th ed., John Wiley and Sons, Inc., New York, 2004.

Practicals based on Theory Paper ZOO-601(ZOO-353)

1. Demonstration of Law of segregation, Independent assortment and epistasis (use of coloured beads or capsules etc.). Numericals for segregation and Independent assortment.
2. Segregation demonstration in preserved material (Maize).
3. Cytoplasmic inheritance in *Mirabilis jalapa*.
4. Inheritance of other human characteristics, ability to taste, PTC, thiourea.
5. Comparison of variance in respect of pod length and number of seeds/pods.
6. Calculation of gene frequencies and random mating (coloured beads or capsules).
7. Study of polytene chromosomes of Chironomus/*Drosophila* through photographs.
8. Dermatographics: Palm print taking and finger tip patterns.

Paper II: APPLIED ZOOLOGY-II

Max. Marks	:	40
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-II
2. Economic Entomology and Pest Management-II
3. Inland Fisheries & Aquaculture-II

OPTION I: MEDICAL ZOOLOGY AND MEDICAL LABORATORY TECHNOLOGY-II (ZOO-602A)

UNIT-I

Brief introduction to human defence mechanisms.
Humoral and cell mediated immune-response, Antigens-physical & chemical properties.

UNIT-II

Antibodies - structure and function of immunoglobulin M, G, A, E and D.
Antigen and antibody interactions :Serodiagnostic assays.
Vaccines and their types.

UNIT- III

Laboratory safety rules, hazards and precautions during sample collection and laboratory investigations.

Laboratory techniques: Colorimetry, Microscopy (student's and electron microscope), Autoclaving.,

Centrifugation, Spectrophotometry.

Haematology : Collection of blood (Venous and Capillary), Anticoagulants (merits and demerits),

Romanowsky's stains,

UNIT- IV

Bacteriology : Sterilisation, (dry heat, moist heat, autoclave, filtration), Disinfection, Staining techniques (gram's stain, AFB stain, etc), Culture media (Defined & Synthetic media & routine laboratory media), Bacterial culture (aerobic and anaerobic), Antibiotic sensitivity.

Biochemistry : Protein estimation, Estimation of blood urea, blood sugar and urine analysis.

Histopathology : Common fixatives and staining techniques, Histochemistry : Principle and method : Staining of carbohydrates, proteins and fats with bromo phenol blue, Periodic acid Schiff, Sudan Black blue and Feulgen reaction.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Baker, F.J. and Silverton, R.E.	:	Introduction to Medical Laboratory Technology, 6th edition, Butterworth and Co. Ltd., 1985.
2.	Cheesborough, M.	:	Medical Laboratory Technology for Tropical countries, 2nd edition, Butterworth and Co. Ltd., 1987.
3.	Talib, V.H.	:	Essential Laboratory Manual, Mehta Publishers, New Delhi, 1999.
4.	Goldsby, R.A., Kindt, T.J. Osborne, B.A. and Kuby, J	:	Immunology, 6th edition, Freeman, W.H. & Co., New York, U.S.A., 2007.

Practicals based on Theory Paper ZOO-602A (ZOO-354A)

1. Demonstration of safety rules in laboratory like proper handling of patients specimens and disposal of syringes, needles etc.
2. Demonstration of the use of autoclave, centrifuge and spectrophotometer.
3. Cleaning and sterilization of glassware using hot air oven, autoclave etc.
4. Demonstration of various equipments for the estimation of hemoglobin, WBC, RBC, ESR.
5. Estimation of sugar and protein in a sample.
6. Procedure of Fixation, embedding, cutting of tissue sections and their staining (Routine Haematoxylin and Eosin and special staining with BPB,PAS, SBB and Feulgen reaction) (Theory only).
7. Study of permanent slides-Thymus, spleen & lymph mode.

OPTION-II: ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-II (ZOO-602B)

UNIT-I

Comparative studies of mouth parts in Grasshopper, Honeybee, Butterfly, Red-Cotton bug and Mosquito.

Major modifications in the antennae and legs of insects.

1. Sericulture

(i) Species of silkworm
(ii) Requirements of Sericulture Industry
(iii) Grainage Management
(iv) Pre and Post-cocoon processing (Stifling & Reeling)
(v) Diseases of silkworm.

UNIT-II

2. Apiculture

(i) Species of Honeybees
(ii) Flora for Apiculture
(iii) Methods & Appliances of Bee Keeping
(iv) Products - (a) Honey (b) Bee wax (c) Propolis (d) Pollen (e) Royal Jelly (f) Bee Venom
(v) Diseases of Honey bee

3. Lac Culture

(i) Species and varities of Lac insect
(ii) Host Plants
(iii) Cultivation of Lac
(iv) Processing of Lac
(v) Lac Industry
(vi) Enemies of Lac insect.

UNIT-III

I. **Chemical Control** : Types and Classification of Insecticides (a) Insecticides of plant origin with special reference to vicotine; Pyrethrum; Rotenoneand Azadirachtin (b) Chlorinated Hydrocarbons insecticides with special reference to DDT; Toxaphene; BNC; Chlordane; Aldrin; Endrin and Endosulfan (c) Organophosphorus Insecticides with special reference toMalathion;TEPP; Parathion and DDVP (d) Carbamate Insecticides with reference to Carbaryl and Carbofuran (e) Fumigants with reference to Hydrogen cyanide; Methyl bromide; Ethylene dichloride; Carbon tetrachloride and Aluminium phosphide. Hazards of chemical control.List of banned pesticides.

UNIT-IV

II. **Recent methods of Pest Control**:

- **Biological Control** : History; Techniques in biological control, Agents of biological Control (a) Vertebrates (b) Nemathelminthes (c) Arthropods (d) Protozoan; Microbial control with the help of Bacteria, Virus and Fungi.
- **Integrated Pest Control**: Introduction of IPM: Pre-requisites; Implementation Strategy; Framework of IPM programme and perspectives in IPM.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Attwal, A.S.,	:	Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991
2.	Dent, D.	:	Integrated Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1995.
3.	Howse, P., Stevens, I. & Jones, O	:	Insect Pheromones and their use in Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1998.
4.	Mishra, R.C.	:	Honey Bees and their Management in India, ICAR Publication, New Delhi, 1995.
5.	Kumar, A. and Nigam, P.M.,	:	Economic and Applied Entomology, Emkay Publications, 1991.
6.	Metcalf, R.L. & Metcalf, R.A.	:	Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-602B (ZOO-354B)

1. Study of Mouth parts of honey bee, butterfly and red cotton bug from permanent mounts.
2. Study of different types of antennae, legs and wings through preserved specimens and permanent slides.
3. A study of life stages of silk worm, honey bees and lac insect.
4. Structure and working of common sprayers: Hand Compression sprayer, Knap sack sprayer.
5. Visit to apiary and godowns for study of infestation and project report.

OPTION III - INLAND FISHERIES & AQUACULTURE-II (ZOO-602C)

UNIT-I

- Fishing gears: Classification of the fishing gears according to the habitats in which they are being used, Electrical fishing.
- Culture systems: Monoculture and polyculture

UNIT-II

- Integrated fish farming: Duck-cum-fish farming, Dairy-cum-fish farming and Poultry-cum-fish farming.
- Pearl culture in India: Species used, implantation procedures, water quality requirements and economics
- Fish seed resources and their transport

UNIT-III

- Prawn culture: Culture of fresh water prawn, culture technology
- Cold water fisheries: Mahseer fisheries and trout fisheries
- Fish Diseases and their control: Viral, bacterial, fungal, protozoan, helminth, crustacean, diseases due to unhygienic conditions, diseases during transportation.

UNIT-IV

- Fish by-products
- Fish marketing
- Fish preservation: Principles of fish preservation, preservation by curing (Drying, Salting and Smoking), Chilling and freezing of fish, Canning of fish and fish products, Spoilage of fish, Rigor mortis

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1. Jhingran, V.G., : Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2. Day, F. : Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3. Johal, M.S. &Tandon, : Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4. Agarwal, S.C. &Johal M.S. : Fishery Development, Narendra Publishing House, Delhi, 1997.
5. Johal, M.S. &Tandon K.K. : Fishes of Punjab,Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6. Karl, F.L. : Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, Publ., Dubuque, IOWA, USA, 1969.
7. Brian, R.M. &David W.W.(ed.)., : Fisheries Techniques: American Fisheries Society, Bethesda Maryland, Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO 602C (ZOO-354C)

1. Determination of food and feeding habits of locally available fishes on the basis of stomach analysis adopting the following methods :
   a. Frequency occurrence method
   b. Feeding intensity
   c. Point method.
2. Estimation of following chemical parameters of the water of a fish pond:
   a. Temperature
   b. pH
   c. Dissolved oxygen
   d. Phosphates
   e. Total dissolved solids
   f. Nitrates
   g. Hardness
   h. Chlorides
3. Visits to various fish ponds and fish market.
4. Study of various fresh water prawn species cultured in India.

Guidelines for the conduct of Practical Examinations

Max. Marks	**: 20**
Practical Exam	**: 18 marks**
Internal Assessment	**: 2 marks**
Time	**: 4 hours**

1. Demonstrate the law of independent assortment/segregation/epistasis from the material provided. Identify the characters involved showing the dominance/recessiveness of characters.

   OR

   Calculate the gene frequency from a known sample of characteristics using Hardy-Weinberg Law. 3
2. Make a dermatographic print of your finger tips or palm pattern and classify the various visible patterns with the help of diagrams and demonstrate it to the examiner. 3
3. Identification of polytene chromosomes from the photograph provided. 1
4. Viva-Voce 2
5. Practical Note Book and Project Report 2

Option-I

6. Identify the slide and give two reasons for identification. 2
7. Identify the instrument/apparatus (Autoclave/centrifuge/spectrophotometer/microtome etc.). Write about its uses and working. 2
8. Quantitative estimation of sugar/protein in the given sample 3

Option- II

9. Identification of mouth parts/antennae/legs/wings from charts/slides/specimens 2
10. Mention the type of larva/pupa/stages of life history of silkworm, honeybees, lac insect. Write a note on its external morphology. 2
11. Name the apparatus provided. Draw its well labeled diagram and explain its structure and working. 3

Option- III

12. Identify the gear 'A' and draw its well labeled diagram. 2
13. Identify specimens B & C giving one identification feature of each. 2
14. Determine the Temperature/pH/Dissolved oxygen/Phosphates/Total dissolved Solids/Nitrates/Hardness/Chlorides in given water sample. 1
15. Write the habit and habitat of given specimen (Cold water fish)'D'. 2

BIO-CHEMISTRY
SEMESTER V

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – I **Marks: 45+5**

Objective: To understand aspects of storage and expression of genetic information. Membrane structure and function.

SECTION-I

(Lectures: 10)

Experimental proof for DNA as genetic material. Watson-Crick model of DNA. A&Z-DNA, structure of chromatin topology of DNA & topoisomerases. Organization of genes in different genomes. Extra nuclear genomes.

SECTION-II

(Lectures: 10)

Types & biochemical basis of mutations, DNA replication: semiconservative, semicontinuous, bidirectional & from a unique origin. Enzymes & proteins of DNA replication. Mechanism of DNA repair, DNA recombination.

SECTION-III

(Lectures: 10)

Transcription: initiation, elongation, termination regulation, processing & Inhibitors of transcription.

SECTION-IV

(Lectures: 10)

Genetic code, amino acid activation, initiation, elongation, termination and inhibitors of translation.

Books Suggested :

1. Biochemistry, 5th Ed., 2002., Berg, J. M. & L. Stryer, W.H. Freeman, San Francisco.
2. *Molecular Biology* by David Freifelder, 1987.
3. *Genes XI,* by Benjamin Lewin, 2014.
4. *Molecular Cell Biology* by James Darnell, Harvey Lodish and Davit Baltimore, 7th Edition, 2014.

Paper B: Applied Biochemistry – I **Marks: 45+5**

Objective: To understand general aspects of vitamins, hormones, nutrition, immunology, blood coagulation, muscle contraction and nerve impulse transmission.

SECTION-I

(Lectures: 10)

Vitamins: water soluble & fat soluble, their sources, structure & biochemical function

SECTION-II

(Lectures: 10)

Essential nutrients. Protein energy malnutrition, starvation and obesity. Respiratory quotient (R.Q.) of carbohydrates, proteins and lipids. Basic metabolic rate and factors influencing it. Specific dynamic action of foods

SECTION-III

(Lectures: 10)

Biochemical principles of toxicology. Phase I reactions and cytochrome P 450 enzyme systems. Phase II reactions and various conjugation systems. Effects of nutritional status and metabolic induction on xenobiotic toxicity; importance of physico–chemical properties of toxic chemicals. Biochemical basis of organophosphate and carbamate pesticides toxicity.

SECTION-IV

(Lectures: 10)

Hormones: classes, modes of action, endocrine glands & their hormones.

Books Suggested :

1. Berg, J. M., Lubert Stryer *: Bio-chemistry,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. *Harper's Illustrated Biochemistry* by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. *Biochemical Toxicology of Environmental Agents* by A. De Bruin, Elsevier Pub.
4. *Human Nutrition & Dietetics* by R. Passmore & M.A. Eastwood.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Estimation of DNA by diphenylamine method.
2. Effect of temperature on the Viscosity of DNA using Oswald's viscometer.
3. Assays of SGPT and SGOT in serum.
4. Extraction of RNA from yeast and its estimation by Orcinol method.
5. Determination of total protein and A/G ratio in serum.
6. Separation of serum proteins using paper electrophoresis.

BIO-CHEMISTRY

SEMESTER -VI

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – II **Marks: 45+5**

Objective: To understand aspects of storage, expression and regulation of genetic information.

SECTION-I

(Lectures: 10)

Targetting of proteins to different cell organelles. Post & co-translational modification of proteins. DNA binding domains of protein. Regulation of prokaryotes gene expression. Concept of operon, regulation of lac operon, trp-operon, phage infection (lysogenic & lytic mode)

SECTION-II

(Lectures: 10)

Regulation of enkaryotic gene expression. transcription factors: Zn fingers and leucine zipper. Roles of RNA regulators. hormonal control of transcription.

SECTION-III

(Lectures: 10)

Gene cloning: different types of vectors, libraries & isolation of gene. Yeast gal gene and mat locus. Mechanism of development in Drosophila.

SECTION-IV

(Lectures: 10)

Analysing genome, genome size, genome sequencing, microarrays, DNA finger printing, SNPs and applications in diseases and forensic.

Books Suggested :

1. Freifelder's Essentilas of Molecular Biology Malacinski GM 4th edition Narosa New Delhi 2005
2. Molecular Biology of Gene Watson JD 7th edition 2007 CSH New York 2013.
3. Genes XI, Benzamin Lewin, 2014 Oxford press Oxford.
4. Molecular cell biology Lodish H et al 8th edition 2016 McMilian Publishers, London.
5. Genomes 3 Brown TA. Garland Science New York 2007.

Paper B: Applied Biochemistry – II **Marks: 45+5**

Objective: Providing the student a comprehensive knowledge of physiology with emphasis on immune system and techniques in use; blood, muscle and nerve. This course will explain and demonstrate important techniques being used for analysis of blood. It will also enable the students to understand how the fundamental systems work in tandem for keeping the body fit.

SECTION-I

(Lectures: 10)

Basics of immune system. Cells & organs involved in immune response. Molecules associated: antigen, hapten & immunoglobulins- their structure, properties & functions. Innate & adaptive responses. Complement system- types, mechanism & functions. Humoral & cell mediated immune responses.

Immunological techniques-their principle, method & applications: precipitation, agglutination, Immunofluorescence, radio-immunoassay (RIA), enzyme liked immunosorbent assay (ELISA) and immunoblotting.

SECTION-II

(Lectures: 10)

Blood: composition, groups, functions; coagulation. Anticoagulants. Hemoglobin- forms, roles and disorders: hemoglobinopathies, aneima.

Buffers in the body: acid base equilibrium. Systems responsible for maintenance of acid-base balance-erythrocytes, respiration, liver, kidneys. Disturbances in acid base balance and compensation.

Detoxification: role of liver, biotransformation, phase I and II.

SECTION-III

(Lectures: 10)

Muscle: basic components of muscle cell, arichitecture of muscular organization, types. Microscopic & electron microscopic structure-skeletal, smooth & cardiac. Role of muscle proteins & calcium.

Mechanism of skeletal and smooth muscle contraction and relaxation. Sliding filament theory. Excitation-contraction coupling.

SECTION-IV

(Lectures: 10)

Central nervous system, peripheral nervous system, action potential, neurotransmitters, synapses & nerve gases. Mechanism of nerve impulse transmission: structure, classification and functions of neurons and neuroglias. The resting membrane potential & action potential.

Properties of nerve fibers : excitability, conductivity, all or none law, accommodation, adaptation, summation, refractory period, indefatigability.

Synapses : types, structure, synaptic transmission of the impulse, synaptic potentials, neurotransmitters, cotransmitters, neuromodulators. The neuromuscular junction : structure, transmission, end-plate potential.

Books Suggested :

1. Berg, J. M., Lubert Stryer *: Bio-chemistry,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. *Harper's Illustrated Biochemistry* by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. *Essential Immunology* by Ivan M. Roitt, English Language Book Society (ELBS) 8th Ed.,1994.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Separation of serum/ plasma from blood.
2. Use of different anticoagulants.
3. Estimation of haemoglobin in blood.
4. Use of Haemocytometer.
5. Determination of clotting time of blood.
6. Determination of proteins by dye binding assay.
7. Visualizing antigen-abtibody precipitation in gel.
8. Agglutination assay.
9. Separation of proteins by SDS-Polyacrylamine Gel Electrophoresis
10. Liver function tests.

MICROBIOLOGY

SEMESTER -V

THEORY		6 hrs	75 (33+33+9*)
MIC 501:	**Pathogenic Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 502:	**Food and Industrial Microbiology-I**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical pertaining to the entire syllabus included in Theory Papers MIC 501 and MIC 502 — 3 hrs — 25 (20+5*)

SEMESTER -VI

THEORY		6 hrs	75 (33+33+9*)
MIC 601:	**Pathogenic Microbiology-II**	3 hrs	37.5 (33+4.5*)
MIC 602:	**Food and Industrial Microbiology-II**	3 hrs	37.5 (33+4.5*)

PRACTICAL

One Practical pertaining to the entire syllabus included in Theory Papers MIC 601 and MIC 602 — 3 hrs — 25 (20+5*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

MIC 501-PATHOGENIC MICROBIOLOGY-I

SEMESTER- V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Streptococcus, Pneumococcus, Neisseria, Corynebacterium, Bacillus, Clostridium, Proteus*. The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Rabies, Polio, Small pox and Measles.

Section C

Introduction to Human mycotic infections viz Superficial, Cryptococcosis and Dermatophytosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz. amoebiasis, Kala-azar and Toxoplasmosis.

MICROBIOLOGY

MIC502-FOOD AND INDUSTRIAL MICROBIOLOGY-I

SEMESTER -V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Food as substrate for microorganisms, Nutritive value of food stuffs, Effect of Hydrogen ion concentration (pH), moisture requirement on food, Important food borne diseases viz. Staphylococcal intoxication, Botulism, Salmonellosis and Shigillosis.

Section B

Contamination, preservation and spoilage in various foods viz. cereal and cereal products (cereal grains, flour, bread, pasta, macroni), Sugar and sugar products (Maple, Syrup, Honey, Candy).

Section C

Production strains, Isolation and screening techniques, preservation and genetic modification of Industrial microorganisms.

Section D

Yeast (Baker's) and its uses, Fermentation of Beer, Wine and Alcohol.

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.

5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.
6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY

PRACTICAL

SEMESTER- V

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Identification of both Gram positive and Gram negative bacteria on the basis of:
   i) Morphology
   ii) Biochemical characteristics
   iii) Serological reactions
2. Demonstration of pathogens (Viruses, fungi, parasites) in permanent mounted slides
3. Demonstation of cysts/ ovas of Protozoa/ Helminths.
4. Demonstration of Laboratory grown fungi on Sabauraud's agar
5. Germ tube test for *Candida albicans*

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MICROBIOLOGY

MIC601-PATHOGENIC MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Shigella, Salmonella, Vibrio, Yersinia, Hemophilus*and *Mycobacterium.* The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Herpes, Influenza and AIDS

Section C

Introduction to Human mycotic infections viz Blastomycosis, Opportunistic mycosis; Candidiasis and Aspergillosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz.Ascariasis, Filariasis and Hook worm infections

MICROBIOLOGY
MIC602-FOOD AND INDUSTRIAL MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS:37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Qualitative and Quantitative analysis of food components (proteins, lipids, carbohydrates), Microbiological examination of food products including dairy products, food poisoning caused by bacteria and fungi.

Section B

Contamination, preservation and spoilage in various foods viz. Vegetables and fruits, Meat (Fresh meat, fresh beef, hamburger, fish), Milk and milk products (Cheese, butter)

Section C

Fermentation media, Characteristics of Ideal production media, Common substrates used in Ideal fermentations, Batch and continuous fermentations

Section D

Production of organic acids viz. acetic acid, lactic acid, propionic acid, butyric acid and mixed acids. Mass transfer in aerobic fermentations

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.
5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.

6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY
PRACTICAL
SEMESTER- VI

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Demonstration of Fungi through normal saline/KOH preparation
2. Quantitative examination of microbial types in raw processed preserved food stuffs
3. Direct microscopic examination of bacteria in raw, pasteurised milk
4. Methylene reductase test for milk
5. Various biochemical tests and their importance in Food Microbiology

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ELECTRONICS

(Kept in Abeyance)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
SECOND YEAR
(SEMESTER : THIRD AND FOURTH)
Examination, 2017-2018

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2017 AND FOURTH SEMESTER APRIL/MAY 2018, EXAMINATIONS.

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER -III

16th and 17th Century Literature

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1.	William Shakespeare	*Othello*	
2.	Francis Bacon	(i)	*Of Friendship.*
		(ii)	*Of Studies.*
3.	John Donne	(i)	*The Sun Rising.*
		(ii)	*The Canonization.*
		(iii)	*The Relique.*
		(iv)	*Hymn to God, The Father.*
4.	John Milton	The following poems :	
		(i)	*Of Man's First Disobedience.*
		(ii)	*On the Morning of Christ's Nativity.*
		(iii)	*On his blindness.*

Testing :
There will be **two Units-**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I
There will be one question on the literary movement of 16th & 17th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer with internal choice at Serial No. 1, 3 and 4. Students will attempt one passage from each writer.

(15 Marks)

Unit II
Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER – IV

18th and 19th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	Emily Bronte	Wuthering Heights.
2.	S. T. Coleridge	The following poems : (a) *Kubla Khan.* (b) *The Rime of the Ancient Mariner.*
3.	P.B. Shelley	The following poems : (a) *Ozymandias.* (b) *Ode to the West Wind.* (c) *To A Skylark.*
4.	Thomas Hardy	*Tess of the D'Urbenvilles.*

Testing :
There will be **two Units-**
Unit I will consist of compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I

There will be one question on the literary movement of 18th & 19th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer at serial No. 2 and 3 with internal choice. Students will attempt one passage from each author.

(15 Marks)

Unit II

Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2017-18

SEMESTER-III

प्रथम पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- उपनिषद् तथा नीति साहित्य द्वारा प्रतिपादित शाश्वत जीवन मूल्यों से छात्र को अवगत कराना तथा व्याकरण की संज्ञाओं का बोध कराना।

UNIT-I

(क) केनोपनिषद् (मन्त्र व्याख्या पाँच में से तीन - 3x 10=30अंक व **समीक्षात्मक** प्रश्न दो में से एक प्रश्न – 1x9=9अंक) 39अंक

UNIT-II

(ख) नीतिशतकम्

(श्लोक 51 से अन्त तक) (श्लोक व्याख्या पाँच में से तीन -3x10=30अंक व सूक्ति व्याख्या तीन में से एक - 1x9=9अंक) 39अंक

UNIT-III

(ग)संज्ञा प्रकरण (लघुसिधान्तकौमुदी) (6 में से 3 सूत्रार्थ) 3 x 4=12अंक 12अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2017-18

SEMESTER-IV

द्वितीय पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- विद्यार्थियों को संस्कृत नाट्य साहित्य के प्रमुख नाटककार भास अथवा कालिदास के समय, जीवनचक्र, काव्यसौन्दर्य, प्रकृतिचित्रण, प्रेम एवं सौन्दर्य-बोध, नाट्य-कला, पात्र-चरित्रचित्रण इत्यादि विषयों के विस्तृत अध्ययन के लिए प्रेरित करना।

(इस पत्र में छात्र **विकल्प - I** या **विकल्प - II** ग्रहण करेगा)।

विकल्प - I : भास पूर्णांक **-** 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) भास 2x15= 30 अंक

भास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख) स्वप्नवासवदत्तम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

अथवा

विकल्प - II : कालिदास पूर्णांक - 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) कालिदास 2x15=30 अंक

कालिदास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख)अभिज्ञान- शाकुन्तलम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

.....

URDU

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER -III

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER I : Poetry and Prose

Unit – I

Diwan-e-Ghalib Radif Alif : 30 Marks

Explanation (Tashrih of first 30 Ghazaliyat)

Unit – II

Critical notes on Ghalib ki Qasida Nigari 15 Marks

Unit – III

Mirza Ghalib ki Khutut Nigari ki Khususiyat 30 Marks

Unit -IV

Mirza Ghalib ki Hayat aur Karname 15 Marks

Books Recommended:

1. Zikr-e-Ghalib, by Malik Ram, Tamal Printing Press, 1976.
2. Afkar-e-Ghalib, by Dr. Khalifa Abdur Rehman, 1973.
3. Ghalib Ki Maktoob Nigari, by Prof. Nazir Ahmad

……..

URDU

SEMESTER -IV

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER II : Essay (Literary)

Unit – I

Fort William College Ki Adabi Khidmat 25 Marks

Unit – II

Urdu Zaban ki Ibtida aur Irtiqa 20 Marks

Unit – III

Dabistan Luckhnow ki Khusiyat 20 Marks

Unit -IV

Dabistan Delhi ki Khusiyat 25 Marks

Books Recommended:

1. Urdu Adab Ki Tarikh, by Azeem-ul-Haq Junedi.
2. Tareekh-e-Adab-e-Urdu, by Prof. Noor-ul-Hasan Naqvi.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER -III

Paper : I **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

i) Ghaznzvid Period

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER -IV

Paper : II **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

1. Ereteqaye Zaban-o-Adabiyat-e-Farsi be Ahde Moghal dar Hind.

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

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ARABIC

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

(KEPT IN ABEYANCE)

FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

3rd Semester : APPLIED GRAMMAR AND DRAMA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

a)Drama

Comprehension, explanation and literary appreciation of the prescribed textbook. 50 Marks

Courses of Reading :

Molière , Le Bourgeois Gentilhomme—(Edition Bordas).

Grammar : 40 Marks

1. Applied Grammer . 15 Marks
2. Essay in French, subject or theme to be taken from the given text. 10 Marks
3. Precis or analysis of a given text. 15 Marks

N.B. 1. The latest syllabus will be followed and question paper should be of B.A.II (Hons.) level.

2. Choice in questions should be given.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

****

FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

4th Semester : PROSE, APPLIED GRAMMAR & VIVA-VOCE

Max. Marks	: 100
Theory	: 60 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Applied Grammar: 25 Marks

Prose : 35 Marks

La Symphonie Pastorale, André Gide,
Comprehension, explanation and literary appreciation of the prescribed text.

Courses of Reading :
La Symphonie Pastorale, André Gide, (Edition Bordas) ou Nouveaux Classiques Larousse.

La Grammaire pour bien écrire, Bescherelle, Hatier, 1987.

Viva-Voce : **30 Marks**

(a) Dictation of an unseen passage of about 200 words based on the Vocabulary and grammar covered upto B.A.II. 10 Marks

(b) Oral questions and answers on a given text (unseen). 10 Marks

(c) General questions and reading. 10 Marks

N.B. : 1. All unseen passages shall be based on the vocabulary and grammar covered till the end of 3rd and 4th Semester courses.
2. All questions are to be asked and answered in French.
3. The latest syllabus must be followed.
4. Choice in questions must be given.
5. Question paper will be set according to B.A.II (Hons.) level.

For the information of private candidate :

1.Viva is compulsory.

2.The theory paper would be marked proportionately out of 70 as there is no internal assessment.

HINDI

बी.ए. (आनर्स) 2017–18 (द्वितीय वर्ष)

सेमेस्टर–तीन **पूर्णांक : 90+10=100**

समय : 3 घण्टे

1. **कवितावली : तुलसीदास (केवल सुन्दरकाण्ड)**

2. **भारत–भारती : मैथिलीशरण गुप्त**

   (क)दोनों काव्यकृतियों में से 12–12 अंकों की 4 व्याख्याएँ पूछी जाएँगी जिनमें से 2 व्याख्याएँ करनी होंगी। सन्दर्भ सहित व्याख्या के साथ–साथ काव्य–सौन्दर्य भी स्पष्ट करना होगा। अंक–24

   (ख) दोनों काव्य कृतियों में से 6 समीक्षात्मक प्रश्न पूछे जाएँगें जिनमें से 18–18 अंकों के तीन प्रश्न करने होंगे। अंक–54

   विशेष : प्रत्येक काव्य कृति में से एक प्रश्न करना अनिवार्य होगा।

3. **राष्ट्रीय भाषा हिन्दी : स्वरूप एवं महत्व अंक–12**

4. **आंतरिक मूल्यांकन अंक : 10**

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HINDI

बी.ए. (आनर्स) 2017–18

सेमेस्टर–चार **पूर्णांक : 90+10= 100**

समय : 3 घण्टे

1. **लहर : जयशंकर प्रसाद**

   क) **लहर में से 12–12 अंकों की 2 व्याख्याएँ पूछी जाएँगी जिनमें से एक पद्यांश की सप्रसंग व्याख्या करनी होगी। अंक–12**

   काव्य–सौन्दर्य भी स्पष्ट करना होगा।

   ख) **लहर काव्य कृति में से दो समीक्षात्मक प्रश्न पूछे जाएँगें। जिनमें से 16 अंक का एक प्रश्न करना होगा। अंक–16**

2. **अंग्रेजी से हिन्दी अनुवाद अंक–20**
3. **निबन्ध लेखन अंक–10**
4. **टिप्पण तथा प्रारूपण सम्बन्धी नियमों का सामान्य ज्ञान अंक–10**
5. **जन संचार–रेडियो, दूरदर्शन एवं समाचार पत्रों के लिए लेखन की विशिष्ट विधि अंक–10**
6. **हिन्दी के उपसर्ग–प्रत्यय अर्थ व प्रयोग तथा शब्द शोध अंक–12**

आन्तरिक मूल्यांकन अंक–10

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ਪੰਜਾਬੀ
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਦੂਜਾ (2017–18) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – I

ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

ਆਧੁਨਿਕਤਾ, ਆਧੁਨਿਕ ਸੰਵੇਦਨਾ, ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

1. ਆਧੁਨਿਕਤਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਲੱਛਣ
3. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ : ਪ੍ਰਗਤੀਵਾਦੀ, ਪ੍ਰਯੋਗਸ਼ੀਲ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ
ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ

ਪੰਜਾਬੀ ਨਾਵਲ, ਕਵਿਤਾ, ਕਹਾਣੀ, ਸਵੈ-ਜੀਵਨੀ, ਨਾਟਕ
(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ
ਮੇਰੀ ਚੋਣਵੀਂ ਕਵਿਤਾ : ਪ੍ਰੋ ਮੋਹਨ ਸਿੰਘ
ਆਰਸੀ ਪਬਲੀਕੇਸ਼ਨ, ਦਿੱਲੀ

(ਵਿਸ਼ਾ– ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿ–ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

ਪੰਜਾਬੀ
B.A. II (SEMESTER III) ਆਨਰਜ਼
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – ।।
ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਮੱਧਕਾਲ – ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਮੱਧਕਾਲੀ ਸੰਵੇਦਨਾ ਤੇ ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ
3. ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ :ਗੁਰਮਤਿ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਵਾਰ ਤੇ ਜੰਗਨਾਮਾ, ਜਨਮਸਾਖੀ, ਕਾਫ਼ੀ, ਬਾਰ੍ਹਮਾਂਹ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਪੂਰਨ ਭਗਤ : ਕਾਦਰਯਾਰ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿਸ਼ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼
ਅਪ੍ਰੈਲ / ਮਈ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ –।।।
ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਪੰਜਾਬ ਦਾ ਬਟਵਾਰਾ : ਕਹਾਣੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਸੰਗ ਵਿੱਚ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦੇ ਪ੍ਰਮੁੱਖ ਸਾਹਿਤਕਾਰ : ਰਜਿੰਦਰ ਸਿੰਘ ਬੇਦੀ, ਭੀਸ਼ਮ ਸਾਹਨੀ, ਖੁਸ਼ਵੰਤ ਸਿੰਘ, ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਮੰਟੋ ਦੀਆਂ ਕਹਾਣੀਆਂ : ਸੰਪਾਦਕ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼
ਪ੍ਰਮੁੱਖ ਪੰਜ ਕਹਾਣੀਆਂ : ਟੋਭਾ ਟੇਕ ਸਿੰਘ
ਬੋਅ
ਬਾਪੂ ਗੋਪੀ ਨਾਥ
ਟੇਟਵਾਲ ਦਾ ਕੁੱਤਾ
ਧੂੰਆਂ
(ਵਿਸ਼ ਯਸ਼ਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਕਹਾਣੀ-ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ–IV
ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਅਤੇ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 — 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 — Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦੀ ਸਾਹਿਤਕ ਸਿਰਜਣਕਾਰੀ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮੁਨਸ਼ੀ ਪ੍ਰੇਮ ਚੰਦ, ਰਬਿੰਦਰ ਨਾਥ ਟੈਗੋਰ
ਮੁਲਕ ਰਾਜ ਅਨੰਦ, ਗਿਰੀਸ਼ ਕਰਨਾਰਡ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸੰਸਕਾਰ (ਨਾਵਲ) : ਯੂ ਆਰ ਅਨੰਤਮੂਰਤੀ (ਅਨੁਵਾਦਕ)
ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਨਾਵਲ–ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

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GERMAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER –III

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed novel "Der Richter und sein Henker" (Dürrenmatt) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 1-17 upto page 87 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstarße a.o. Chapters 1-17 upto page 87.

ii. "Der Richter und sein Henker" (Dürrenmatt)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 1-17

Summary

Max. Marks : 100 marks(Total)
Paper-2 (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory): 90 marks

Note : Use of dictionary is allowed

i.	Translation of an unseen text/s from German into English.	:	50 marks
ii.	Translation of an unseen text/s from English into German	:	20 Marks
iii.	Essay writing in German (about 250 words)	:	20 Marks

i. Ein Traum
ii. Eine Ferienreise
iii. Essen und Trinken
iv. Heutige Mode und Kleidung
v. Ein Fest (indisch/deutsch)

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessmet will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbook:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

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GERMAN

SEMESTER –IV

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed drama "Biedermann und die Brandstifter" (Max Frisch) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 18-34 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstraße a.o. Chapters 18-34.

ii. "Biedermann und die Brandstifter" (Max Frisch)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 18-34.

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory) : 90 marks

Note : Use of dictionary is allowed

i. Translation of an unseen text/s from German into English. : 50 marks

ii. Translation of an unseen text/s from English into German : 20 Marks

iii. Essay writing in German (about 250 words) : 20 Marks

i. Der Klimawandel
ii. Auf dem Markt
iii. Medien und Netzwerk
iv. Heutige Frau
v. Jugend und Gesellschaft

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch & Arbeitsbuch by Hartmut Aufderstraße a.o.

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DEFENCE & STRATEGIC STUDIES

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN -I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Military Geography of Pakistan : Its strategic importance, economic and industrial resources.
2. People and their characteristics.

SECTION-II

3. Outlines of history leading to the Birth of Pakistan.
4. Political Developments in Pakistan since 1947.
5. Role of Military in Pakistan's Politics.

SECTION-III

6. Foreign Policy of Pakistan (Basic Determinants).
7. Foreign Policy of Pakistan with regard to U.S.A. & Russia.

SECTION-IV

8. Pakistan's Foreign relations with its neighbours with particular reference to Afghanistan, India and Iran.

Books Recommended :

1. Akhtar, Jamna Das, *Political Conspiracies in Pakistan*, Delhi : Punjabi Pustak Bhandar, 1969
2. Britanninca., *The New Encyclopedia Britannica*, Chicago, II : Encyclopedia Britannica, Inc, 2005.
3. Burke, S.M., *Pakistan's Foreign Policy* : An Historical Analysis. [S.I.: s.n. Print]
4. Callerd, Keith B., Pakistan – A Political Study, London : Allen & Unwin, 1957.
5. Chopra, Surendra, *Perspectives on Pakistan's Foreign Policy*, Amritsar: Guru Nanak Dev University Press, 1983.
6. Cohen, Stephen P., *The Pakistan Army*, Berkeley: University of California Press, 1984.
7. Johnson, Allan G., *Privilege, Power, and Difference*, Boston, Mass: McGraw- Hill, 2006.
8. Khaliq, Sheikh Abdul, *Pakistan—Peace and War*, London : Regency Press, 1973.
9. Moon, Penderel, *Divide and Quit*, Delhi: Oxford University Press, 1998.
10. Sahni, Naresh Chander, *Political Struggle In Pakistan*, Jullundur City: New Academic Pub. Co., 1969, Print.
11. Sayeed, Khalid B., *Pakistan, The Formative Phase, 1857-1948*, London: Oxford University Press, 1968.
12. Sidhu, K.S., *Pakistan: Khetri Adhyayan*; Publication Bureau, Punjabi University Patiala, 1987.
13. Stephens, Ian. *Pakistan: New York* : Praeger, 1963.
14. Tayyeb Ali, and A Tayyeb. *Pakistan.* London [etc.] Oxford University Press, 1966.
15. Tinker, Hugh. *India and Pakistan*. New York: Frederick. A. Praeger, 1968.
16. Williams, L.F. Rushbrook. *The State of Pakistan*. London: Faber, 1966.
17. Ziring, Lawrence. *Pakistan In The Twentieth Century*, Karachi [u.a.]: Oxford University Press, 1998.
18. Ziring Lawrence, *The Ayub Khan Era,* Karachi: Paramount Publishing, 2009.

DEFENCE & STRATEGIC STUDIES

SEMESTER-IV

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Jammu and Kashmir Campaign 1947-48 : Causes, operations in brief and effects.
2. Indo-Pak War 1965 : Causes, operations in brief and effects.

SECTION-II

3. Indo-Pak War 1971 : Causes, operations in brief and effects.
4. 1999-Kargil War .

SECTION-III

5. Defence Potential of Pakistan.
6. Armed Forces of Pakistan.

SECTION-IV

7. Nuclear Policy of Pakistan.
8. Terrorism in Pakistan

Books Recommended :

1. Ayoob, Mohammed, and K. Subrahmanyam. *The Liberation War*, The University of Michigan: S.Chand, 1972.

2. Brines, Russell. The Indo-Pakistani Conflict, London: Pall Mall P., 1968.

3. Costa, Benedict. *Dismemberment of Pakistan*, Ludhiana: Kalyani Publisher,: 1972.

4. Dasgupta, C. *War and Diplomacy In Kashmir*, 1947-48. New Delhi: Sage, 2002.

5. Feldman, Herbert. *Revolution In Pakistan*. London: Oxford U.P., 1967, Print.

6. Feldman, Herbert. *The End and The Beginning*. London: Oxford University Press, 1975.

7. Gupta, K.R., *India-Pakistan Relations with Special Refernce to Kashmir*, New Delhi: Atlantic Publishers & Distributors, 2003.

8. Hackett, James T., *The Military Balance 2011*. Oxfordshire: Routledge, 2011.

9. Johri, Sita Ram. The Indo-Pak Conflict of 1965. Luckhnow: Himalaya Publications, 1967.

10. Kaul, Brij Mohan. Confrontation With Pakistan, Delhi: Vikas Publicaitons, 1971.

11. Khaliq, Sheikh Abdul, Pakistan, Peace and War, London: Regency Press, 1973.

12. Lachhman Singh., Indian Sword Strikes In East Pakistan. New Delhi: Vikas, 1979.

13. Mankekar, D. R. Pakistan Cut To Size, New Delhi: Indian Book Co, 1972. Print.

14. Mankekar, D.R. Twenty two Fateful Days. Bombay: Manaktalas, 1967. Print.

15. Nath, Rajendra. Military Leadership In India. New Delhi, India: Lancers Books, 1990.

16. Palit, D.K. The Lightning Campaign. New Delhi: Thomson Press (India), 1972.

17. Sahni, Naresh Chander, *Political Struggle in Pakistan*, Jullundur City: New Academic Pub. Co, 1969.

18. Sen. Lionel Protip. *Slender Was The Thread: Kashmir Confrontations, 1947-48*, Bombay: Orient Longmans, 1969.

19. Sethi, Surinder Singh. *The Decisive War: Emergence of a New Nation*. New Delhi: Sagar Publications, 1972.

20. Sidhu, K.S. *Pakistan: Khetri Adhyayan*: Publication Bureau, Punjabi University Patiala, 1987.

21. Sinha, S.K. *Operations Rescue*, New Delhi: Vision Books, 1977.

22. Ziring, Lawerence. *The Ayub Khan Era*. Karachi: Paramount Publishing, 2009.

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HISTORY

SYLLABUS OF B.A. (HONOURS) SEMESTER III/IV, 2017-18

Note : The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any two papers, one in Semester III and one in Semester IV according to the following :

Semester III

(i) Social and Cultural Trends in Ancient India.

OR

(ii) Social and Cultural Trends in Medieval India.

Semester IV

(ii) Social and Cultural Trends in Medieval India.

OR

(iii) Social and Cultural Trends in Modern India.

Note: Candidates CANNOT OPT FOR PAPER (ii) in BOTH Semesters.

(i) SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The paper-setter would avoid repetition between different types of question within one question paper.

Paper- SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Institutions: Varna, Jati, Ashrama and Samskara
2. Marginalized Sections of the Society: Shudras and slaves.

UNIT II

3. Women: Status and rights
4. Education: system of learning, Principal centres,

UNIT III

3. Early Religions : Harappan and Vedic
4. Protest Movements: Jainism and Buddhism

UNIT IV

5. Puranic Religions: Vaishnavism, Shaivism and Shaktism
6. Significant developments in art and architecture.

   (a) Styles of Temple Architecture: Nagara, Dravida and Vesara
   (b) Sculpture: Mauryan, Mathura, Gandhara and Gupta
   (c) Painting: Ajanta caves.

Recommended readings:

1. P.N.Prabhu, *Hindu Social Organisation*, Popular Prakashan, Bombay, 1979.
2. R.S.Sharma, *Surdas in Ancient India*, Motilal Banarasidas, Delhi, 1980.
3. K.Roy, Ed. *Women in Early Indian Societies*, Manohar, New Delhi,1999.
4. A.S. Altekar, *Education in Ancient India*, The Indian Book shop, Benaras, 1937.
5. S. Ratnagar, *Understanding Haraappa*, Tulika, New Delhi, 2001.
6. A.L. Basham, *The Wonder That Was India*, Rupa, Calcutta, 1992.
7. R.G. Bhandarkar, *Vaishnavism, Shaivism and Minor Religious Systems*, Indological Book House, Varanasi, 1965.
8. P.Brown, *History of Indian Architecture*, Vol. I Taraporevavala, Bombay 1965.
9. S.K. Saraswati, *Survey of Indian Sculpture*, Munshiram Manoharlal, New Delhi, 1975.
10. D.Barrett & B Grey, *Indian Painting* Skira, Lausanne, 1963.

(ii) SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper II: SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Conditions in the Delhi Sultanate: Nobles, theologians, slaves and other social groups; position of women; social customs and manners.
2. Devotional Movement: Vaishnavism in Bengal, the Gangetic Plain and Rajputana; the teachings and impact of Kabir and Guru Nanak

UNIT II

3. Mystical Dimensions of Islam: Organisation of the Chishti and Suhrawardi orders, with reference to their beliefs and practices.
4. Landmarks in Persian Historiography: The historical works of Ziauddin Barani and Abul Fazl.

UNIT III

5. State Intervention in the Socio-Religious Sphere: Akbar's liberal policy; his *Ibadat Khana* debates, the *mahzar* and breach with orthodox ulama; introduction of *Tauhid-i-Ilahi* and social reforms
6. Muslim Revivalist Movements: Salient features of the Mahdawi movement; socio-religious ideas of Sheikh Ahmad Sirhindi and their impact.

UNIT IV

7. Development of Literature: the devotional writings of Tulsidas, Ravidas and Namdev; the contribution of Malik Muhammad Jaisi; Abdur Rahim Khan-i-Khanan and Ras Khan.
8. Fine Arts in Mughal India: the development of architecture, painting and music during the sixteenth and seventeenth centuries.

Recommended Readings:

1. *K.M. Ashraf: Life and Conditions of the People of Hindustan,* Second Edition, Munshiram Manoharlal, New Delhi, 1970.
2. Satish Chandra*: Medieval India: From Sultanate to the Mughals*, Parts I & II, Haranand Publications (Rep.), New Delhi, 2003.
3. Peter Hardy*: Historians of Medieval India: Studies in Indo-Muslim Historical Writing*, First Indian Edition, Munshiram Manoharlal, New Delhi 1997.
4. Harbans Mukhia *: Historians and Historiography During the Reign of Akbar*, Vikas Publishing House, New Delhi 1976.
5. Khaliq Ahmad Nizami: *Religion and Politics in India During the Thirteenth Century*, New Edition, Oxford University Press, Delhi, 2001.
6. S.A.A. Razvi: *The Wonder That was India*, Part II, Twelfth Impression, Rupa and Company, New Delhi, 2002.
7. Mohammad Yasin: *A Social History of Islamic India*, Second Revised Edition, Munshiram Manoharlal, New Delhi, 1974

III. SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Socio-Cultural Trends in Early 19th Century: Religion, education and literature
2. Women Education: Aligarh Girls School; Kanya Maha Vidyalya.

UNIT II

3. Socio-Religious Reform Movements in Punjab and North- West: The Arya Samaj; Singh Sabhas and the Ahmadiyas
4. Socio-Religious Awakening in the Central Belt and Maharashtra: The Manav Dharma Sabha; the Prathana Samaj: the Rahnumai Mazdayesan Sabha (among Parsis)

UNIT III

5. Cultural Reorientation in the South: Annie Besant and the Theosophical Movement
6. The Marriage Reform Efforts: Legislative measures for the abolition of Sati and Female infanticide; contribution of reformers towards the promotion of widow-remarriage

UNIT IV

7. The Social Protest Movements: Role of Jyotiba Phule in Maharashtra; Swami Narayana Guru in Kerala; Mangoo Ram and the Ad Dharm Movement in Punjab.
8. The Literary Trends: Development of literature in Hindi; Bengali and Marathi languages.

Recommended Readings:

1. Kenneth W., Jones: *The New Cambridge History of India: Socio Religious Reform Movements in British India* (Cambridge, 1989).

2. R.C.Majumdar and Others (ed.): *British Paramountcy and Indian Renaissance*, Part II, Bhartiya Vidya Bhavan Series, Vol. X.

3. Robert D, Baird (ed.*): Religion in Modern India*, Manohar, New Delhi, 1981.

4. Gail Minault*: Secluded Scholars: Women's Education and Muslim Social Reform in Colonial India* New Delhi, O.U.P.1998.

5. Geraldine Forbes: *Women in Modern India* , Foundation Books, New Delhi, 1996.

6. Tara Chand *: History of the Freedom Movement in India*, Vol.II, New Delhi, 1967, Publication Division, G.O.I.

7. Mark Jurgensmeyer: *Religious Rebels in the Punjab*, Delhi, Ajanta, 1988.

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POLITICAL SCIENCE

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

Outlines of Test

Semester-III Option (i) : International Relations 1917-1945

OR

Option (ii) : Colonialism and Nationalism in Modern India

Semester-IV Option (i) : Western Political Thought

OR

Option (ii) : Comparative Politics

Syllabus and Courses of Reading :

Semester-III

OPTION (I) : INTERNATIONAL RELATIONS 1917-1945

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The essential concern of the course is with the period between the Bolshevik Revolution and the end of the Second World War. However, to facilitate better understanding of the developments during this period, it is very essential that the teacher familiarizes the students with the major currents of international politics immediately preceding the First World War as well as during the course of that war. Needless to say, no question will be asked on the period up to the Bolshevik Revolution.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Course Content :

Unit-I : *Nature of International Relations before and after World War-I :*

(a) Imperial confrontation & Concern for peace.
(b) Peace treaties & rise of International Organisation-League of Nation.

Unit-II : *Rise of Nationalism :*

(a) National Upsurge

(b) Search for colonies

Unit-III : *European Politics and the Post-War Settlement :*

(a) French quest for security and the German urge for equality.

(b) Britain and the European power system.

Unit-IV: *Origins of the Second World War, & International Organisation (United Nations) :*

(a) Alliances and counter-alliances.

(b) Failure of the League of Nations & Emergence of U.N.

(d) American Ambivalence.

Note : Questions to be asked on the Genesis itself and not on post-1945 developments related to the United Nations.

Suggested Readings :

1. Carr, E.H. : International Relations Between the Two World Wars (1919-1939), (London : Macmillan Press, 1973).
2. Northedge, F.S. : A Hundred Years of International Relations (London : Duchworth, 1971).
3. William Shirer : The Rise and Fall of the Third Reich, A History of Nazi Germany (London : Secker and Warburg, 1960).
4. Keswani, K.B. : International Relations : 1900 to Present Day (Bombay : Himalaya Publishing House, 2004).
5. Quicky Wright : A Study of War (Chicago : University of Chicago Press, 1942).
6. Goodrich, L.M., and Edward Hambro : Charter of the United Nations-Commentary and Documents (London: London Institute fo World Affairs, 1949).
7. Richard Little and Michael Smith (eds.) : *Perspective in World Politics (London: Routledge, 2006).*
8. Chris Brown : *Understanding International Relations (London, Palgrave, 2001).*

OR

OPTION (ii) COLONIALISM AND NATIONALISM IN MODERN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The paper aims at enabling the students about the nature and evolution of the Indian National Movement and constitutional development in colonial India.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Historical Foundations of National Movement :*

(a) Socio-Religious reform movements.

(i) Arya Samaj
(ii) Brahmo Samaj
(iii) Singh Sabha Movement
(iv) Tama Krishan Mission

Unit-II : (a) Origin and growth of Indian National Congress.

(b) Moderates and Extremists—Debates over objectives, ideology, strategy, social basis.

(c) Revolutionary Terrorism.

Unit-III : *Gandhi and Nationalist Movement in India :*

(a) Gandhi : Political strategy and new techniques of struggle.

(b) Non-Cooperation, Civil Disobedience and Quit India Movements.

Unit-IV : Landmarks in the devolution of power with special reference to Government of India Acts of

(i) 1909
(ii) 1919
(iii) 1935
(iv) Indian Independence Act 1947.

Suggested Readings :

1.	Sumit Sarkar	:	Modern India (Madras : Macmillan, 1995).
2.	Bipan Chandra	:	Essays on Colonialism (Delhi : Orient Longman, 2000).
3.	Thomas Pantham et al (ed.)	:	Modern Indian Political Thought (Delhi : Sage, 1986).
4.	Gail Omvedt	:	Dalit Visions –The Tract of the Times (Delhi : Orient Longman, 2002).
5.	Radha Kumar	:	History of Doing (Delhi : Kali for Women, 1995).
6.	Paul Brass	:	The Politics of India Since Independence (Delhi : Foundation Books, 1992).
7.	V.R. Mehta and Thomas Pantham, ed.	:	Political Ideas in Modern India, Thematic Exploration (Delhi : Sage, 2006).

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POLITICAL SCIENCE
Semester-IV

OPTION (i) WESTERN POLITICAL THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

This paper aims to introduce to the students the major themes of western political thought. This will be done by undertaking an indepth study of the key thinkers of this tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I	**:**	*Plato* : The Republic	-	Justice
			-	Philosopher-King
			-	Educations
			-	Communism of wives & property
Unit-II	**:**	*Plato* : The Statesman and the Laws	-	Ideal State
			-	Second Best State
Unit-III	**:**	*Aristotle* : The Politics	-	Inequality-Slavery, Women
			-	Nature of the State
			-	Classification of Constitutions
			-	Revolution
Unit-IV	**:**	*Machiavelli* : The Prince	-	Machiavelli as a Modern Political Thinker.
			-	Morality and Politics.
			-	Power and Statecraft.

Suggested Readings :

1. Sabine, G.H. : *A History of Political Theory* (Bombay : Oxford & IBH, 1973).
2. Dunning, W.A. : *A History of Political Theories,* 3 Vols. (Allahabad : Central, 1973).
3. Sait, E.M. (ed.) : *Masters of Political Thought*, 3 Vols. (London : George and Harap, 1947).
4. William Ebenstein : *Great Political Thinkers : Plato to Present*, 1966 (New Delhi : OUP, 2000).

Reference Books :

1. Ernest Barker : *Greek Political Theory : Plato and His Predecessors* (London : Methuen, 1978).
2. Mulgan, R. : *Aristotle's Political Theory* (Oxford : Clarendon, 1977).
3. Plamenatz, John *Man and Society,* 2 Vols. (New York : Longman, Latest Edition).
4. Quentin Skinner : *Machiavelli* (Oxford : OUP, 1981).
5. Raphael, D.D. : *Hobbes : Morals and Politics* (London : George Allen, 1978).
6. Hall, J.C. : *Rousseau : Introduction to His Political Philosophy* (London : Macmillan, 1971).
7. David Maclellan : *Marx : Fontana Modern Masters Series* (London : Fontana, 1986).

OR

OPTION (ii) C O M P A R A T I V E POLITICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :
The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial as well as developing societies and this will be undertaken in a comparative framework.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 **units**. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Approaches to Comparative Politics :*

(a) Political Sociology.

(b) Political Economy.

Unit-II : *Theories of Development :*

(a) Modernisation and Development Theories.

(b) Alternative Third World perspective on development.

Unit-III : *Political Participation and Representation :*

(a) Political Parties.

(b) Interest Groups and Pressure Groups.

(c) Political Elite.

Unit-IV : (a) Theories of State : Liberal, Marxist.

(b) Civil Society and New Social Movements.

Suggested Readings :

1. Andrew Heywood : *Politics* (London : Macmillan, 1997).

2. Mary Mank Sworth and Mourice Kogan (ed.) : *The Encyclopaedia of Government and Politics* (London : Routledge, 1992).

3. Rod Hague, Martin Harrop and Shaun Breslin : *Comparative Government and Politics : An Introduction* (London : Macmillan, 1998).

4. Gabriel Almond, G. Bingham Powell, Kaare Strom and Russel J. Dalton : *Comparative Politics Today* (Delhi : Pearson Education, 2005).

5. Ronald H. Chilcote : *Theories of Comparative Politics : The Search for a Paradigm Reconsidered* (Boulder : Westview Press, 1994).

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ECONOMICS

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

The candidates are required to study one paper out of the following three papers :

I Economics of Agriculture.

II History of Economic Thought.

III Economics of Population.

Paper–I : ECONOMICS OF AGRICULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Economics of Agriculture : Its nature and scope, Interdependence between agriculture and industry. Nature and problems of agricultural development in developing countries.

Unit-II

Transforming Traditional Agriculture : Ranis & Fei, Schultz and Meller's Models, Lewis model of unlimited supplies of labour.

Unit-III

Land reforms and system of farming. Farm size and productivity relationship. Agricultural price policy, Agricultural taxation (All these topics should deal with special reference to India).

Unit-IV

New agricultural strategy and Green Revolution. Problems of small farmers and agricultural labourers. Agricultural credit, marketable and marketed surplus. Surplus and its utilization. (All these topics would deal with special reference to India).

Recommended Readings:

1.	Eicher, C. & Witt, L. (1970)	:	Agriculture in Economic Development, Vera & Co., Bombay
2.	Frankel, Francis R. (1971)	:	India's Green Revolution-Economic Gains and Political Costs, Oxford University Press, Bombay
3.	Joshi, P.C. (1975)	:	:Land Reforms in India, Allied, Bombay, Part II, Sections I & II
4.	Khusro, A.M. (1968)	:	Readings in Agricultural Development, Allied, Bombay, Articles by : B.S. Minhas & T.N. Srinivasan, V.M. Dandekar, M.L. Dantwala, A.N. Khusro, T. Bergman, V.K.R.V. Rao.
5.	Meller, J.W. (1966)	:	The Economics of Agricultural Development, Vera & Co., Bombay
6.	Misra, S.K. & Puri, V.K. (2014)	:	Indian Economy, Himalaya Publishing House, Bombay
7.	Schultz, T.W. (1970)	:	Transforming Traditional Agriculture, Lyall Book Depot, Ludhiana
8.	Singh, Amarjit & Sadhu, A.N. (1986)	:	Agricultural Problems in India, Himalaya Publishing House, Bombay
9.	Soni,R.N. (1992)	:	Leading Issues in Agricultural Economics, Vishal Publisher, Jalandhar.
10.	Todaro, Michael P. (1987)	:	Economic Development in the Third World, Orient Longman, New Delhi
11.	Wadhva, Charan D. (1973)	:	Some Problems of India's Economic Policy, Tata McGraw Hills, Bombay, Part II: Articles-B,C,D, F and G

Supplementary Readings:

1.	Sameeksha Trust, Bombay	:	Various Issues : Economic and Political Weekly.
2.	Indian Society of Agricultural Economics, Bombay	:	Various Issues : Indian Journal of Agricultural Economics.

Paper -II : HISTORY OF ECONOMIC THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Pre-Classical Economic Thought : Mercantilism : Mercantilist ideas, regulations of economic life, leading theory of Mercantilist school, Physiocracy : ideas with special reference to Quesnay and Turgot.

Unit-II

Classical and Marxian Political Economy : The classical tradition : Adam Smith, Ricardo, J. S. Mill and Karl Marx on value, distribution and development.

Unit-III

Reaction Against Classicism : Socialist and Nationalist thinkers, Sismondi, Saint-Simon, Robert Brown and Fourier, Subjective School : Menger, Weiser and Bohm Bewark.

Unit-IV

Neo-Classical Economics : Main features.
Marshall : Scope of Economics, theory of firm, time-element, partial equilibrium analysis.
Keynes: Concept of effective demand, consumption, investment, inflationary gap.

Recommned Readings:

1. Blaug , M. (1968) : Economic Theory in Retrospect, Richard D. Irwin Inc. Illinois.
2. Gide & Rist (1964) : A History of Economic Doctrine, George G. Harper & Co. Ltd., London
3. Sweezy , P. M. (1991) : The Theory of Capitalist Development, K. P. Bagchi & Co., Calcutta,
4. Roll, Eric (1993) : History of Economic Thought, Oxford University Press, Calcutta..

Supplementary Readings :

1. Ghosh , B. N. & Ghosh, Rama (1988) : Concise History of Economic Thought, Himalaya Publishing House, Delhi .
2. Paul , R.R. (1979) : Classical Political Economy, Kalyani Publishers, Delhi..
3. Schumpeter , J.A. (1961) : History of Economic Analysis (Selected Portions), George Allen & Unwin, London,

Paper-III: Economics of Population

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT – I

Theories of Population: Malthus, optimum.
Demographic transition theory .
Population and Economic Development.

UNIT – II

Population Structure and Characteristics: Impact of Population growth on the age and gender structure
Fertility: Concepts of fertility transition. Measurement of fertility .
Mortality: Components and Measurement, Infant Mortality in India.

UNIT – III

Migration: Concepts, causes and consequences (economic and demographic) of migration.
Migration in India: Causes and Trends, Rural-Urban, Male-Female.
Urbanization: Concepts, Trends of Urbanization in India.

UNIT – IV

Growth and Structure of Indian Population.
Literacy: Literacy transition in India, pattern of literacy and literacy differentials in India.
Estimation of Population in India: Census, sampling and vital registration methods.
Population Policy in India since Independence.

Essential Readings:

Aggarwal, A. S. N. (1972)	:	India's Population Problem Tata McGraw Hills Co., Bombay.
Becker, G. (1960)	:	An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
Boserup, E. (1981)	:	Population and Technological Change University of Chicago Press, Chicago.
Bouge, D. J. (1971)	:	Principles of Demography, John Wiley, New York.
Bose, Ashish (1978)	:	India's Urbanization, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
Coale, A. and E. Hoover (1958)	:	Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects. Princeton University, Press, Princeton.
Chenery, H. and T.N. Srinivasan (eds.) (1989)	:	Handbook of Development Economics, Vol. 1 & 2, Elsevier, Amsterdam.
Chandna, R. C. (2000)	:	A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
Cox, Peter R. (1979)	:	Demography, Vikas Publishing House, New Delhi
Easterlin, R. A. (1968)	:	Population, Labour Force and Long Swings in Economic Growth: National Bureau of Economic Research, New York.
Ghosh, B. N. (ed.) (1987)	:	Studies in Population and Economic Development, Deep and Deep Publications, New Delhi
John R. Weeks (2002)	:	Population : An Introduction to Concepts and Issues (7^{th} edition), Wadsworth Publishing Company, New York.
Leibenstein, H. (1957)	:	Economic Backwardness and Economic Growth, New York, John Wiley and Sons
Govt. of India	:	Census Report, 2001.

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ECONOMICS

Semester-IV

The candidates are required to study one paper out of the following three papers :

I Industrial Economics.
II Economics of Public Enterprises.
III Theory of Statistics.

Paper-I : INDUSTRIAL ECONOMICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Scope and methods of Industrial Economics; Basic concepts of firm, industry and market; Organisational forms and alternative motives of the firms; Industrial structure and economic development.

Unit-II

Market Structure : Sellers concentration, product differentiation, conditions of entry and economies of scale, market structure and profitability.
Growth of Firms : Vertical integration, diversification, mergers and innovation; constraints on growth-demand, financial and managerial.

Unit-III

Theory of industrial location, contribution of Weber and Sergent Florence, centralized vs. balanced regional development, industrial concentration and dispersal in India.

Unit-IV

Industrial policy since independence, Industrial development under plans and reasons for deceleration of industrial growth, Growth of State industrialization in India.

Recommended Readings :

1. Barthwal, R. R. (2010) : Industrial Economics : An Introductory Text Book, New Age International Publisher (P.) Ltd., New Delhi.
2. Datt , Rudar & Sundharam K. P. M. (2012) : Indian Economy , S. Chand & Company.
3. Devine , P. J. et al. (1974) : An Introduction of Industrial Economics, George Allen & Unwin Ltd.,London.
4. Howe , W. Steward (1978) : Industrial Economics : An Applied Approach, The Macmillan Press Ltd.
5. Kuchhal, S. C. (1989) : Industrial Economy of India , Allahabad, Chaitanya Publishing House.

Supplementary Readings :

1. Ahluwalia , Ishar Judge (1985) : Industrial Growth in India : Stagnation Since Mid Sixties, Oxford University Press, Delhi.
2. Penrose, E. T. (1995) : The Theory of Growth of Firm, Oxford, Basil Blackwell.
3. Richardson, Harry W. (1969) : Elements of Regional Economics, Penguin Education.
4. Sivayya & Das (1978) : Indian Industrial Economy, S. Chand & Co., New Delhi
5. Smith, David M. (1971) : Industrial Location : An Economic Geographical Analysis, John Wiley & Sons Inc.

Paper II : ECONOMICS OF PUBLIC ENTERPRISES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Concepts : Role of public sector in socio-economic development, Rationale of public sector—multiple objectives of public enterprises and clash and complementarity in objectives. Historical perspective of public sector in India. Organisation of public enterprises – various forms and role.

Unit-II

Role of public sector financial institutions in the financing of public enterprises. Problems of management of working capital – Management of inventory, credit and cash financing of working capital.

Unit-III

Pricing in Public Sector : Basis and types of pricing policies, pricing practices, machinery of price fixation. Accountability and profitability of public sector – Causes of poor financial performance of public sector in India.

Unit-IV

Sources of funds of public enterprises – Debt and equity, Industrial relations and its importance, Industrial disputes : causes, effects and their settlements.

Recommended Readings :

1. Narain , Laxmi (1980) : Principles and Practices of Public Enterprises Management, S. Chand & Co.,New Delhi.
2. Narain , Laxmi (1982) : Public Enterprises in India, S. Chand & Co., New Delhi.
3. Institute of Public Enterprises (1967) : Organisation in Public Enterprises, Tripathi, Bombay.
4. Institute of Public Enterprises (latest edition) : Pricing and Investment in Public Enterprises, Oxford and IBH Publishing Co., New Delhi.

Supplementary Readings :

1. Bhalla , G. S. (1968) : Financial Administration of Nationalised Industry in U.K. and India, Meenakshi, Meerut.

2. Gupta, K. R. (1978) : Issues in Public Enterprises, S. Chand & Co., New Delhi.

Paper- III : THEORY OF STATISTICS

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT - I

*Moments & Expectation***:** Concept of random variables, Moments, Mathematical expectation, Moment Generating Function, Characteristic Function.
*Regression and Correlation***:** Multiple, Partial Regression and Correlation, Fitting of multiple regression by least squares technique
*Growth Curves***:** Properties, methods of estimation and applications of parabolic, geometric, exponential, modified exponential, Gompertz and logistic growth curves.

UNIT - II

Probability: Addition and Multiplication Theorems, Conditional Probability, Bays Theorem, Chebychev's Inequality, Central limit theorem
*Probability Distribution***:** General Characteristics and Applications of Binomial, Poisson and Normal Distribution.

UNIT - III

*Sampling & Sampling Distribution***:** Concept of sampling distribution, Types & Techniques of Sampling, Statistic vs Parameter.
Estimation: Point Estimation and Interval Estimation, Properties of Point Estimates, Maximum Likelihood Estimates.
Statistical Hypothesis: Two -tailed and one-tailed tests, Types I and II Errors, Level of significance, Critical Region.

UNIT - IV

*Large and small samples***:** Tests of significance based on Normal, 't' 'F' and 'Z' distributions. Testing the significance of means, proportions, correlation and regression coefficients and their interpretation. Elementary Knowledge of Analysis of Variance (one-way and two -way classification) and Analysis of Covariance.
*Non-Parametric Tests***:** Chi-square test and sign test.
Quality Control: Elementary Knowledge of quality Control and its simple application.

RECOMMENDED READINGS

1.	Croxton, F.E. & Cowden, D.J. (latest edition)	:	Applied General Statistics, Prentice Hall London and Prentice Hall of India.
2.	Gupta , S.C. &Kapoor, V.K. (1996)	:	Fundamentals of Applied Statistics, Sultan Chand & Sons, New Delhi
3.	Gupta, S.P. (1980)	:	Statistical Methods, Sultan Chand & Sons, New Delhi
4.	Kapoor, J.N. & H.C.Saxena (1976)	:	Mathematical Statistics, S. Chand & Co .Pvt. Ltd., New Delhi
5.	Mills, F.C. (1955)	:	Statistical Methods, Henry Hold & Co, New York
6.	Speigal, M.R. (1961)	:	Theory and Problems of Statistics
7.	Wonnacott , T. & Wonnacott, R. (1977)	:	Introductory Statistics for Business and Economics, John Willey & Sons.
8.	Yule, G.U. & Kendall, M.G. (1950)	:	An Introduction to Theory of Statistics (for theory of attributes)

SUPPLEMENTARY READINGS

1.	Carmal, P.H. (latest edition)	:	Applied Statistics for Economics, Sir Issac Pitman and Sons Ltd., London
2.	Chou, Ya-Lun (1975)	:	Statistical Analysis, Hold, Rinehart and Winston, New York.
3.	Freund, J.E. (1964)	:	Mathematical Statistics, Prentice Hall
4.	Freund,J.E. & William, F.J. (1979)	:	Modern Business Statistics, Prentice Hall, Englewood
5.	Grant, R.L. (1996)	:	Statistical Quality Control, McGraw Hill Book
6.	Hoel, P.G. (2007)	:	Elementary Statistics, John Wiley & Sons.
7.	Mood, A.M. & Graybill, F.A.(1963)	:	Introduction to the Theory of Statistics McGraw Hill.
8.	Yamane, Taro (1970)	:	Statistics: An Introductory Analysis, Harper and Rew, New York.

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SOCIOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER –III

SOCIAL THOUGHT (Compulsory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

Note

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper intends to familiarize the students with the contributions of major thinkers in classical Sociology and their continuing relevance to its contemporary concerns. This paper offers the Honours students with an understanding of the development of Sociology as a discipline, with a focus upon classical thinkers.

Course Content :

UNIT-I

Auguste Comte : Laws of Three Stages, Hierarchy of Sciences, Positivism.

UNIT-II

Emile Durkheim : Social facts and division of labour, social solidarity; suicide and religion.

UNIT-III

Max Weber : Social action, class, status and power, types of authority; Protestant ethic and the spirit of capitalism.

UNIT-IV

Karl Marx : Historical materialism; dialectical materialism; class conflict, capitalism and theory of social change.

Essential Readings:

1. *Coser, L.A. (1997) : Masters of Sociological Thought, New York : Harcourt Brace Jovonovich*
2. *Collins, Randall (1977) : Theoretical Sociology, Jaipur : Rawat Publications.*
3. *Raymond, Aron (1982) : Main Currents in Sociological Thought, Vols. I & II, Harmondsworth: Penguin Books.*
4. *Timasheff, N.S.(1967) : Sociological Theory : Its Nature and Growth, New York : Random House.*
5. *Zeitlin, I.M.(1987) : Ideology and the Development of Sociological Theory, New Jersey : Prentice Hall.*
6. *Stones Reb (ed) (2007) : Key Sociological Thinkers Palgrove, NY.: Macmillon*
7. *John A Hughes, W Sharrock Peter T. Martin(2004) : Understanding Classical Sociology Sage, Thousand Oak*
8. *Bert N Adams & R.A. Sydie (2002) : Classical Sociological Theory, Sage, New Delhi*
9. *Anthony Giddens & Philip W Sutton (2007) : Sociology: Introductory Readings Maldon: Polity Press*

Further Readings :

1. *Harlambos, M. (1984) : Sociology, Themes and Perspectives, Delhi : Oxford University Press.*
2. *Lemert, C. (ed.) (2004) : Social Theory – The Multicultural & Classical Readings, Jaipur : Rawat Publications.*
3. *Marx & Engles(1967) : The Communist Manifesto, Harmondsworth : Penguin Books.*
4. *Morrison, Ken, Marx, Durkheim, Weber (1995) : Formation of Modern Social Thought, London : Sage,*
5. *Sorokin, P. (1978) : Contemporary Sociological Theories, Ludhiana : Kalyani Publishers.*
6. *Judge, paramjit S, (2012) : Foundations of Classical Theory, New Delhi, Pearson*
7. *Kundu, Abhijit, (2012) : Sociological Theory, New Delhi, Pearson*

SOCIOLOGY

SEMESTER-IV

SOCIAL PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper exposes the honours students in Sociology to the related field - Social Psychology. The purpose of this paper is to introduce the basic concepts in Social Psychology, which have a bearing on the Social-Psychological understanding of social interaction, social groups, public opinion and leadership qualities. This course prepares the students to study social phenomena from social-psychological perspectives.

Course Content :

UNIT-I

Introduction – Nature, Scope, Application and Relationship of Social Psychology with Sociology.

UNIT-II

Perception, Motivation, Learning, Attitudes and their Measurement.

UNIT-III

Social Groups – Groups and Classification. Collective Behaviour : Crowd, Audience, Mob and their differences.

UNIT-IV

Propaganda and Public Opinion.
Leadership – Emergence, type and functions of leaders, leadership qualities.

Essential Readings:

1. *Curtis, Jack H. (1960)* : *Social Psychology, New York : McGraw Hill.*
2. *Fraser, C. & Burchell, B. (2001)* : *Introducing Social Psychology, Cambridge : Polity Press.*
3. *Kuppuswamy, B. (1980)* : *Social Psychology, Bombay, Asia Pub. House.*
4. *Krech, D. & Cretchfield, Richards (1948)* : *Theory & Problems of Social Psychology, New York : McGraw Hill, 1948.*
5. *Lindgren, H. Clay (1974)* : *An Introduction to Social Psychology, 2nd ed., New Delhi : Wiley Eastern.*
6. *Linde Smith, Strauss, A.R., Denzin, A.L. & Norman, D.(1988)* : *Social Psychology, New Jersey : Prentice Hall.*
7. *Perry, J.B. & Pugh, M.D.(1978)* : *Collective Behaviour : Response to Social Stress, Minnisotta : West Publishing Co.*

Further Readings

1. *Baron, Robert A, Branscombe Nyla R., Byrne Donn, Bhardwaj Gopa (2012)* : *Social Psychology, New Delhi, Pearson*
2. *Taylor, Shelley E., Pepla, Letitia Anne, Sears David O, (2006)* : *Social Psychology, New Delhi, Pearson*
3. *Patiwal, Suprithy, (2002)* : *Jaipur, RBSA Publication*

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PHILOSOPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER – III

Paper : CONTEMPORARY WESTERN PHILOSOPHY & CONTEMPORARY INDIAN THOUGHT AND CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives :

The aim of this paper is to acquaint students with the theories of different western contemporary philosophers and the problems of language, perception, meaning and truth, science and God; and to familiarize the students with Indian thought and culture according to Contemporary Indian thinkers.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

1. Idealism (Bradley).
2. Realism – Common Sense & Critical Realism (Moore, Russell & Putnam)

Unit-II

1. Language, Meaning & Truth.
2. Philosophy, Science & Religion.
3. Existentialism : Theistic and Atheistic Approaches.

Unit-III

1. Mahatma Gandhi & Tilak.
2. Ambedkar & M.N. Roy

Unit-IV

1. Sri Aurobindo
2. Swami Dayanand Saraswati, Swami Vivekananda.
3. Tagore

Essential Readings :

1. Inquiry into Meaning & Truth by Russell, Harper Collins, 1980.

2. Modern Indian Thought by V.S. Narvane, Asia, 1967.

3. Philosophy in the 20th Century by A.J. Ayer, London, Unwin, 1982.

Suggested Readings :

1. Contemporary Philosophy : Studies of Logical Positivism and Existentialism by F.C. Copleston, Continuum Intl. Pub. Group, 2003.

2. Religion of Man by Rabindranath Tagore., Macmillian Publishers, New York, 1931.

3. Srimad Bhagwad Gita Rahasya or Karma Yoga Sastra by B.G. Tilak, Manohar Book Pub., 2002, Delhi.

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PHILOSOPHY

SEMESTER – IV

Paper: STUDY OF A SPECIAL PHILOSOPHER

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives:

The aim of this paper is to make students study a philosopher indepth amongst the options offered.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain **4** units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

One out of the following Philosophers :

Option (i) : PLATO

Unit-I	:	Virtues : Wisdom, Courage, Temperance and Justice, Justice and Happiness : Is the just life happier than the unjust one
Unit-II	:	The meaning and purpose of education.
Unit-III	:	Nature of knowledge and its relation to sensation.
Unit-IV	:	Language and its relation to the world : Do names picture the objects named ?

OR

Option (ii) : ARISTOTLE

Unit-I	:	Form and Matter.
Unit-II	:	Aristotle's Ten Categories.
Unit-III	:	Four Causes and Change.
Unit-IV	:	Identity of Thought and Truth in the Active Reason.

OR

Option (iii) : IMMANUEL KANT

Unit-I : A –priori and A –posteriori judgements.

Unit-II : Nature of Space and Time.

Unit-III : Function of Categories and Significance of Antinomies.

Unit-IV : Refutation on the various proofs for the existence of God.

OR

Option (iv) : UPANISHADS

(Chandogya, Mandukya and Isa)

Unit-I : Mandukya's Treatment of 'Aum'. Symbol of Immanent and Transcendent aspects of Atman.

Unit-II : Philosophy of Being as instructed by Uddalaka Aruni in Chandogya Upanishad.

Unit-III : Nature of Atman in Isa Upanishad.

Unit-IV : Views of Upanishads on Brahman, Soul and World.

OR

Option (v) : SARTRE : Being and Nothingness

Unit-I : Being-in-itself and Being-for-itself.

Unit-II : Facticity.

Unit-III : Freedom, responsibility and badfaith.

Unit-IV : Being for Others, Existence of Others, the problem of embodiment.

OR

Option (vi) : NAGARJUNA

Unit-I : Concept of Sunya.

Unit-II : Sunyata and Pratiyasamutpada.

Unit-III : Logic and Reality.

Unit-IV : Dialectical System.

OR

Option (vii) : SAMKARA

Unit-I : Theory of Causation.

Unit-II : Prakriti as a Ultimate Cause.

Unit-III : Parinamavada Vs. Vivartavada.

Unit-IV : Refutation of Prakritikaranavada.

OR

Option (viii) : PATANJALI

Unit-I : Language and meaning.

Unit-II : Word-meaning relationship.

Unit-III : Purpose of grammar.

Unit-IV : Sabda as a Pramana.

Essential Readings :

1. Aristotle-Metaphysics Ed. & Tr. By John Washington and with an introduction by Sir David Ross (London : Dentsons, 1956).
2. Being & Nothingness by J.P. Sartre, Washington Square Press, 1993.
3. Cambridge Companion to Sartre ed. By Christina Howells, Cambridge University Press, 1992.
4. Cratylus in Plato's Dialogues, Plato, D.N. Sedley, Cambridge University Press, 2003, Cambridge, U.K..
5. Kant-Critique of Pure Reason : Norman Kemp Smith (Tr.) (London, Macmillan, 1952).
6. Nagarjuna-Madhyamika Karika, Stcherbatsky Theo : Conception of Buddhist Nirvana Delhi : Bharatiya Vidya Prakashan, 2003.
7. Patanjali : Mahabhasya, Chaps. I & II Gita Press, Gorakhpur, 1927
8. Plato-Republic, Theatetus, Cratylus In : B. Jowett (Tr.) Plato's Dialogues (New York : Random, 1937).
9. Republic, Hackett Publishing Company, Indian Polish, 1992, U.S.A.
10. Samkara, Brahmasutrabhasya : Tarka Pada (First four Sutras, Thibaut, Sacred Books of the East, Delhi, Motilal Banarasi Dass, 1956).
11. Theatetus, Plato, Robin H. Waterfield, Penguine Books, London, 2004.

Suggested Readings :

1. A Critical History of Greek Philosophy by W.T. Stace, Macmillan India Ltd., 1982.
2. PLATO by J.C.B. Gosling, Routledge & Kegan Paul, London, 1973.
3. Sartre, Jean Paul, Between Existentialism and Marxism (Translated by) John Mathews, Verso, New York, 2005.
4. Stephen Priest (Ed.), Jean Paul Sartre, Basic Writings, Routledge, London, 2007.
5. The Philosophy of Plato by Rupert C. Lodge, Routledge & Kegan Paul, London, 1956.
6. The Philosophy of Sankara's Advaita Vedanta, S.K. Chattopadhyaya, Sarop of Sons, 2000.

PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

PAPER : SOCIAL PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) Social Psychology course emphasizes the relationship between society and individuals. It also enables the students in understanding group dynamics, role of attitudes and leadership behaviour in the society.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit I : *Introduction :* Nature of Social Psychology, Methods of Research in Social Psychology.

Unit II : *Attitudes :* Concepts, Formation of Attitudes, Theories of Attitude Change; Measurement of Attitudes.

Unit III : *Leadership :* Functions of Leaders, Theories of Leadership (Trait Theories, Behavioural Theories, Fiedler's Contingency Model).

Unit IV : Applications of Social Psychology: Pro Social behavior, Bulling, Ragging.

Books Recommended :

Suggested Readings :

1. Baron, R.A. and Byrne, D. (2003) : Social Psychology : Understanding Human Interaction, New Delhi: Prentice Hall of India.

2. Robbins, S.P. (1998) zzzzzzzzzzzz Organizational Behaviour, New York : Prentice Hall of India.

3. Luthans, F. (1998) : Organizational Behaviour.New York : McGraw Hill.

4. Taylor, G.E. Peplau, L.A. and Sears, D.O. (2006) : Social Psychology, Delhi:Pearson.

Reference Books :

1. Lindgren, H.C. (1973) : Introduction of Social Psychology. New York : Wiley.

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PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER IV

Paper : RECENT PERSPECTIVES OF PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) This course aims at helping the students to appreciate the basic assumptions, principles and historical roots of modern scientific psychology. It will also help them to understand main theoretical perspective in psychology.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totaling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit- I : *Emotional Intelligence* : Concept and Theories (Goleman, Salovey and Meyer).

Unit-II: *Spirituality and Well Being* : Concept, Measurement and Relationship with Well Being.

Unit-III: *Stress and Coronary Heart Disease;* Concept, Symptoms, Role of Stress in Coronary Heart Disease.

Unit-IV: *Positive Emotions and Mental Health:* Forgiveness, Gratitude and Mental Health.

Books Recommended :

Suggested Readings

1. Crompton, W.C. (2005): An Introduction to Positive Psychology. Singapore: Thomson.

2. Snyder, C.R. and Lopez, S.J. (2005): Handbook of Positive Psychology. New York: Oxford University Press.

3. Brannon, L. and Feist, J. (2007): Introduction to Health Psychology. New Delhi. Thomson – Wadsworth.

4. Cohen, L.M., M.C. Chargue, D.E. and Colins, F.J.: The Health Psychology Handbook. New Delhi: Sage Publications.

5. Mohan, J. (2003) : Psychosocial Correlates of Coronary Artery Disease: A Monograph. New Delhi: Friends Publishers.

5. Mohan, J. and Sehgal , M. (2006) : Health Psychology. New Delhi: Abhijeet Publications.

7. Pestonjee, D.M. (2006): Stress and Coping: The Indian Experience. New Delhi: Sage Publications.

Reference Books:

1. Carr, A.(2004): Positive Psychology; The Science of Happiness and Human Strengths. New York: Brunner –Routledge.

2. Linley, P.A. and Joseph, S. (2004) : Positive Psychology in Practice. New York John Wiley and Sons.

3. Peterson, C. (2006): Positive Psychology. New York: Oxford University Press.

4. Friedman –Di, Mateo (1989): Health Psychology. New York: Prentice Hall.

5. Kaplan, R.M., Sallis, J.E. and Patterson, T.L. (1993): Health and Human Behaviour. New York: McGraw Hill.

6. Sarafino, P.E. (1998): Health Psychology: Biopsychosocial Interactions. New Delhi: John Wiley and Sons..

7. Taylor, S.E. (2006) : Health Psychology. New Delhi: John Wiley and Sons.

8. White, P. (2005): Biopsychosocial Medicine: An Integrated Appraoch to Understanding Illness, New Delhi: Oxford University Press.

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GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

Paper-I : THE NATURE OF GEOGRAPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

1. To introduce the students to the philosophical and methodological foundations of the subject and its place in the world of knowledge.
2. To familiarise them with the major landmarks in development of geographic thought at different periods of time.

Course Content :

UNIT-I

- Nature and Development of Geography as a Discipline.
- Contribution of Eratosthenes, Ptolemy, Humboldt, Ritter and Darwin.

UNIT-II

Concepts in Geography:

(i) Spatial Distribution (ii) Man-Environment Relationship (iii) Areal Differentiation and (iv) Spatial Organisation.

UNIT-III

Approaches:
Empirical/Theoretical, Systematic / Regional, Behavioural.

UNIT-IV

Schools of Thought:
Determinism, Possibilism, Neo Determinism, Humanism, Radicalism.

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.
3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings :

1. Husain, Majid. : *Evolution of Geographical Thought,* Rawat, Jaipur, 2001.
2. Martin, G.J. : *All Possible Worlds – A History of Geographical Ideas*, Oxford University Press, U.K., 2005.

Further Readings :

1. Adhikari, Sudeepta : *Fundamentals of Geographic Thought,* Chaitanya, Allahabad, 2004.
2. Dikshit, R.D. : *Geographical Thought : A Contextual History of Ideas*, Prentice Hall, New Delhi, 2000.
3. Hartshorne, Richard : *Perspectives on the Nature of Geography,* Rand, McNally and Co., Chicago, 1959.
4. Minshull, R. : *The Changing Nature of Geography,* Hutchinson University Library, London, 1970.

Pedagogy :

- Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of the subject.
- The students may be encouraged to collect information on any theme amenable to geographical interpretation.

GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER IV

Any one of the following optional courses :

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

OR

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The course is meant to provide an understanding of spatial and structural dimensions of population and the emerging issues. The course is further aimed at familiarising the students with global and regional level problems and also equip them for comprehending the Indian situation.

Course Content :

UNIT-I

Nature and scope of population geography, factors affecting distribution of population; present world pattern of population distribution. Density of population – various types of densities and their significance; broad spatial patterns of density of population in the world.

UNIT-II

Growth of population – Determinants of population growth; trends of population growth in developed and developing countries of the world.

Migration – Types, causes and consequences.

UNIT-III

Sex composition – Its determinants and world patterns.

Occupational structure – A comparative study of developed and developing countries.
Literacy–its determinants and world patterns.

UNIT-IV

Urbanization – Definition, process of urbanization; comparative study of urbanization in developed and developing countries.

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Special credit will be given to suitable use of maps.

4. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings:

Essential Readings :

1. Chandna, R.C. : *A Geography of Population*, Kalyani Publishers, Delhi, 1996.
2. Clarke, J.I. : *Population Geography,* Pergamon Press, Oxford, Latest Edition.

Further Readings :

1. Chandna, R.C. : *Jansankhya Bhoogol*, Kalyani Publishers, New Delhi, 1996.
2. Crook, N. : *Principles of Population and Development*, Pergamon, New York, 1997.
3. Jones, H.R. : *Population Geography*, Harper and Row, London, 1981.
4. Sundaram, K.V. & Nangia, S. (Eds.) : *Population Geography*, Heritage, New Delhi, 1986.
5. Trewartha, G.T. : *The Less Developed Realm – A Population Geography*, McGraw-Hill, New York, 1972.
6. Trewartha, G.T. : *The More Developed Realm : A Geography of its Population,* Pergamon Press, Oxford, 1979.

Pedagogy :

1. Use maps and atlases.
2. Students should be encouraged to read Population Clock.
3. Consult census publications.
4. Organised field work.
5. Organise discussions on population issues.

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

1. To understand the process of urbanization and origin, growth and classification of urban settlements with relevant theories and models.
2. To examine the changing economic base and structure of the contemporary cities.
3. To relate urbanisation process and the evolution of the urban system.
4. To examine the contemporary urban issues and suggest new urban planning and urban policy

Course Content :

UNIT-I

Definition, nature and scope of urban geography.

Definition of urban places.

Evolution of City through Historical Times : Ancient, medieval, modern.

UNIT-II

Site and situation of cities : Definition, importance, types.

Size and spacing of cities.

Ecological Processes : Centripetal and centrifugal forces, types of ecological processes.

UNIT-III

Internal structure of cities : Theories of internal structure and their evaluation, concentric zone theory, sector theory, multiple nuclei theory.

UNIT-IV

City – Region relations.

Umland of Cities : Definition, bases of demarcation, attributes.

Rural –Urban Fringe : Attributes and demarcation.

Note :

1. The compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each Unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings:

1. Carter, Harold : *The Study of Urban Geography*, Edward Arnold, London, Latest Edition.
2. Krishan, Gopal : *Nagar Bhugol,* Punjab State University Text Book Board, Chandigarh, 1974.
3. Mayer, H.M. and Kohn, L.F. (Eds.) : *Readings in Urban Geography*, University of Chicago Press, Chicago, 1964.

Further Readings :

1. Johnson, H.J. : *Urban Geography : An Introductory Analysis,* Pergamon Press, London, 1972.
2. Knox, Paul : *Urban Social Geography : An Introduction,* Longman, London, 1982.
3. Verma, LN : *Urban Geography :* Rawat Publications
4. Sidhartha K & Mukherjee S : *Cities Urbanization and Urban systems* Kisalaya Publications Pvt. Ltd., 2013.
5. Ramachandran, K : *Urbanisation and Urban Systems in India* Oxford University, Press, 1992.

Pedagogy :

- Awareness of data sources such as from Census of India, Town Planning organizations, and their applications to understand and evaluate the spatial patterns and the processes of urbanization should be highlighted in the class. This needs to be in form of selected case studies.
- Study of urban morphology and urban functions with special reference to selected towns need to be encouraged.
- Atlases and maps of NATMO and Census should be consulted and students should be given opportunity to participate in group discussions.

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PUBLIC ADMINISTRATION

SEMESTER -III

PAPER- I: ADMINISTRATIVE THOUGHT

Max. Marks: 100
Theory: 90 Marks
Internal assessment: 10 Marks
Time: 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of select ancient, classical, neo-classical and modern administrative thinkers and their contribution to administration .

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Kautilya, M.K.Gandhi and Woodrow Wilson

Unit-II

Frederick W. Taylor, Henri Fayol, Luther Gulick and L.B.Urwick

Unit-III

Max Weber, Elton Mayo and M.P.Follet

Unit-IV

Herbert A. Simon, Abraham Maslow and Fred W. Riggs

Essential Readings

Bertram, M. Gross.(1964).*The Managing of Organisations: The Administrative Struggle* .London: Mac Millan Publishers.

Fred W, Rigg.(1964)..*Administration in Developing Countries* .Boston Houghton.

George, C.S.(1974).*History of Management Thought.*New Delhi: Prentice Hall.

Hooja, R & Arora, R. K. (2007).*Administrative Theories* .Jaipur: Rawat Publicaion.

Katariya,S.(2011). *Administrative Thinkers* .New Delhi: National Publishing House Jaipur.

Maheshwari ,S.R.(2003) . *Administrative Thinkers* .New Delhi: MacMillan.

Prasad & Prasad.(2007). *Administrative Thinkers* .New Delhi: Sterling Publishers,Reprint.

Sapru, R.K.(1996).*Theories of administration* .New Delhi: S. Chand.

Simon, A. Herbert.(1976). 3rd Ed. *Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation* . New York: Macmillan.

Sudha , G.S.(2004). *Management of History Thinkers*.Jaipur : R.B.S.A. Publishers .

Further Reading

Barnard, C. (1974).*The Functions of the Executive* . London: Oxford University Press.

Pugh, D. S. (1984). 2nd Ed. *Organisation Theory* .Harmondsworth :Penguin Books.

Rabin, J. & Others.(2007). 3rd Ed.*Handbook of Public Administration.* New York: Marcel Dekker.

Silverman, D.(1970).*The Theory of Organisation* . London: Heinemann.

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PUBLIC ADMINISTRATION

SEMESTER-IV

PAPER- II: The candidates have to select one out of the following three options:

Option (i) : Agricultural Administration in India
Option (ii) : Industrial Administration in India
Option (iii) : Police Administration
Option (iv) : Public Policy and Analysis

PAPER-II – Option (i): AGRICULTURAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth knowledge about the role of agriculture in the economic development of the country, role of technology in agricultural development, marketing of agricultural produce. It would also give understanding about the agricultural policies of the government and introduce the student to certain related issues like agricultural finance, agricultural education, research, and extension.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Role of Agriculture in Economic Development
Problems of Agricultural Development
Agriculture Policy

Unit-II

Agriculture Development under Five-Year Plans
Centre-State Relations in Agriculture
Agriculture Administration at the Central and State Levels

Unit-III

New Technology for the Development of Agriculture
Marketing of Agriculture Produce
Agriculture Finance and Rural Indebtedness

Unit-IV

Role of NABARD in Agricultural Development
Agricultural Education and Research
World Trade Organisation and Agriculture

Essential Readings

Chaudhary, P. (1972). *Readings in Indian Agricultural Development*. London: George Allen & Unwin.
Ghosh , R.N.(1977). *Agriculture in Economic Development with Special Reference to Punjab* . New Delhi: Vikas.
Mahajan , V.S. (1990). *Agriculture and Rural Economy in India.* New Delhi: Deep & Deep Publications.
Rao , C.H. Hanumantha.(1975). *Technological Change and Distribution of Gains in Indian Agriculture* . Delhi: Macmillan.

Further Readings

Government of India. (2007-2012). 11th Five Year Plan.
Government of India.(1976) . *National Commission on Agriculture* (*Reports)* .New Delhi: Manager of Publications.
Government of India.(Recent Year). Economy Survey. Ministry of Finance, Economic Division.
N.C.A.E.R. (1974). *Credit Recruitment for Agriculture.* New Delhi.
Planning Commission. 12th Plan Approach Paper

PAPER-II – Option (ii): INDUSTRIAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper: The objective of the paper is to give the student an insight and rationale into the concept of Industrialization, role of Public Enterprises in industrial development and the concepts of privatization and disinvestment. It would also give an understanding about the industrial policies of the government and introduce the student to certain related issues like industrial pollution, industrial sickness, and industrial dispersal.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Industrialization – Meaning, Objectives and Rationale
Role of Industry in Economic Development
Problems of Industrialization in India

UNIT-II

Industrial Policy Resolution of 1948 and 1956
New Industrial Policy of 1991
Industrial Finance – Sources, Problems and Remedies

UNIT-III

Role of Public Enterprises in Industrial Development of India
Privatization – Meaning, Methods, Merits and Demerits
Disinvestment – Meaning, Methods, Merits and Demerits

UNIT-IV

Industrial Pollution – Meaning, Types and its Impact on Environment
Industrial Sickness – Meaning, Extent and Magnitude, Causes and Remedies
Industrial Dispersal – Meaning and Policy Measures

Essential Readings

Aggarwal, A.N. (2001). *Indian Economy* .New Delhi : Vikas Publishing House.
Dutt,R. (2009).*Indian Economy* .New Delhi: S.Chand&Company Private Limited.
Kuchhal,S.C.(1983).*Industrial Economy of India.*Allahabad : Chaitnaya Publishing House.
Marathe,S.S.(1986).*Regulation and Development: The Indian Policy Experience of Controls over Industry* .New Delhi: Sage Publications.

Further Readings

Dhar,P.K.(2007).*Indian Economy : Its Growing Dimensions.*New Delhi: Kalyani Publishers.

Govt. of India.(2002). *Planning Commission*:*10th Five Year Plan 2002-2007* .New Delhi: Planning Commission.

Government of India.*Economic Survey* (Recent Years) Ministry of Finance, Economic Division.

Sivayya, K.V., & Dass, V.B.M. (2004).*Indian Industrial Economy* . New Delhi: S.Chand & Company Private Limited.

PAPER-II – Option (iii): Police Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the evolution of police system in India, need and importance of police in society, personnel aspects of police administration like recruitment, training, promotion, service conditions etc. It would also give an understanding about the expectations of the public from police and introduce the student to certain related issues like community policing, e-governance in police, attitudinal change in police services etc.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and significance of Police Administration
Evolution of Police Administration in India
Police Reforms in India

Unit-II

Organization and functions of Union Ministry of Home Affairs
Police Administration at State level
Police Administration at District level

Unit-III

Police Personnel Administration in India: Recruitment and Training of Police Personnel at Centre (IPS) and State level (SPS)
Service conditions and Discipline in Police Services

Unit-IV

The Concept and Need of Community Policing.
Concept & Importance of E-Governance in Police.
Attitudinal Change in Police: Concept, Significance and Methods.

Essential Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books.
Ghosh, S.K. & Rustamji, K.F.M. (1993,1994,1995).*Encyclopaedia of Police in India*, Vol. I-III. New Delhi:Light and Life Publishers.
Gupta,A. (2007).*The Police in British India 1861-1947.* New Delhi:Bureau of Police Research and Development.
James, V.D. (1998). *National Police Commission: Issues ForRethinking*. New Delhi: APH Publishing Corporation.
Muthuswamy, P. (1989). *Swamy's Manual on Disciplinary Proceedings. Chennai*: Swamy Publishers Ltd.
Stahl, O. G. (1975). *Public Personnel Administration.* New Delhi*:* Oxford & IBH Publishing Co.

PAPER-II-Option (iv) : Public Policy and Analysis

Max. Marks:	**100**
Theory:	**90 Marks**
Internal assessment:	**10 Marks**
Time:	**3 Hours**

Objective of the Paper:

The purpose of this course is to provide students an understanding of the basic concepts of public policy and the environment in which it operates .It attempts to help students understand and gain insights into the various stages in policy process with special reference to the social, political and administrative environment prevailing in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Public Policy - Meaning, Significance and Types
Distinction between Policy, Planning , Decision making and Goals; Policy Cycle
Policy Analysis- Meaning, Significance; Approaches to Policy Analysis

Unit-II

Public Policy Formulation:Models of Policy-Making:Incremental, Rational, Institutional
Role of Legislature, Executive, Judiciary, Political Parties in policy formulation

Unit-III

Public Policy Implementation :
Role of Executive, Legislature, Bureaucracy and Judiciary in Policy Implementation
Major problems in policy implementation

Unit IV

Policy Monitoring and Evaluation ; Criteria for Evaluation;
Problems in Policy Evaluation

Essential Readings

Birkland, Thomas A. (2005) .An introduction to the Policy Process: Theories , Concepts and Models of Public Policy Making M.E.Sharpe

Dye , Thomas (2002) Understanding Public Policy (New Delhi:Pearson Education Singapore (P) Ltd.,

Henry, Nicholas (2015) Public Administration and Public Affairs,(New Jersey:Prentice Hall,Twelfth Edition,

Mathur , Kuldeep (2013) .Public Policy and Politics in India:How Institutions Matter? (Oxford,

Manon, Vineetha (2014) Public Policy and Administration,Wisdom Press , New Delhi,

Sapru, R.K. Public Policy: Art and Craft of Policy Analysis (New Delhi: Prentice Hall of India, learning 2nd Edition.)

Furthur Readings

Anderson, J. E. (2005). *Public Policy Making (6th ed.)*. New York:Houghton Mifflin Co.

Ayyar, V. R.V. (2009). *Public Policy Making in India*.New Delhi:Pearson.

Frank. F, Miller, G. J., & Sidney, M.S. (2007).*Handbook of Public Policy Analysis Theory, Politics and Methods*, Boca Raton, Florida: CRC Press.

Nagel . S.S. (1991*)* . *Public Policy:Goals, Means and Methods*. New York: St. Martin Press.

Rabin J., Hildreth, W., & Miller, G. (2007).*Handbook of Public Administration (3rd ed.).*Florida: Taylor & Francis Group.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-18

SEMESTER-III

Note : **The students shall have to opt for one paper for Semester III examination out of the following two papers :**

OUTLINES OF TEST

Paper I	:	Social ideas and social life from the earliest times to 1000 A.D.
Paper-II	:	Economic ideas & economic life from the earliest times to 1000 A.D.

Paper-I : SOCIAL IDEAS AND SOCIAL LIFE FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary objective of this paper is to acquaint the students with the origin and development of social institutions and ideas so peculiar to Indian society. It will also made a survey of the social life of the people in ancient India.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology and contents of the sources mentioned above. The changing pattern in social life should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I

1. Sources: Vedic Literature, Epics, *Manu Smriti* and *Kamsutra* of Vatsayayana.
2. Four Purusharthas; Sixteen Samsakaras.

UNIT-II

3. Origin and development of caste system.
4. Slavery in ancient India.
5. Stages of life—four ashramas.

Unit-III

6. Family life, law of inheritance.
7. Development of education in Ancient India.
8. Dress, ornaments, foods and drinks.

Unit-IV

9. Position of women in ancient India.
10. Institution of marriage.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal Banarsidass, Delhi, 1991.
2. Altekar, A.S. : *Education in Ancient India,* rpt. Gyan Publishing House, New Delhi, 2009.
3. Banerji, S.C. : *Society in Ancient India,* D.K. Print World, New Delhi, 1997.
4. Basham, A.L. ed. : *Cultural History of India,* Oxford University Press, New, Delhi, 1957.
5. Chanana, D.R. : *Slavery in Ancient India, as depicted in Pali and Sanskrit Texts,* New Age Printing Press, Delhi, 1960.
6. Ghurye, G.S. : *Caste and Class in India,* Popular Prakashan, Bombay, 1950.
7. Majumdar, B.P. : *Social and Economic History of North India,* Budh Prakashan, Calcutta, 1960.
8. Mookerjee, R.K. : *Ancient Indian Education,* 3rd ed. Cosmo Publiscations, London, 1960.
9. Sharma, B.N. : *Social Life in Northern India,* Munshiram Manoharlal, Delhi, 1966.

Paper-II : ECONOMIC IDEAS & ECONOMIC LIFE FROM THE EARLIEST TIMES TO 1000 A. D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The main objective of this paper is to familiarize the students with economic ideas as contained in the secular and non-secular literature of our country. It will also make a survey of the economic life in ancient India to help the students to understand economic problems of the people.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology, authorship and contents of the sources mentioned above. The changing condition of agriculture, industries, and trade and commerce should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

1. Sources : Vedic literature, Epics, *Arthasastra* of Kautilya and *Nitisara* of Kamandaka.

2. Agriculture in ancient India, ownership of land.

UNIT-II:

3. Taxation.

4. Industries and industrial products in ancient India.

UNIT-III:

5. Types of labour and wages.

6. Introduction and development of coinage.

Unit-IV

7. Trade and Commerce in ancient India.
8. Guild System.
9. Trade routes and transport.

Essential Readings :

1. Chakraborty, S.N. : *A Study of Ancient Indian Numismatics,* Bhartiya Publishing House, Varanasi, 1963.
2. Gopal, Lallanji : *Economic Life in Northern India* (700 to 1200 A.D.) Motilal Banarsidass, Delhi, 1965.
3. Maity, S.K. : *Economic Life in North India in the Gupta Period,* Motilal Banarsidass, Calcutta, 1970.
4. Majumdar, B.P. : *Social and Economic History of North India,* Firma KLM, Calcutta, 1960.
5. Majumdar, R.C. : *Corporate Life in Ancient India,* Firma KLM, Calcutta, 1922.
6 Moti Chandra : *Sarthavaha,* Shakti Malik Abhinav Publishers, Patna, 1953.
7. Moti Chandra : *Trade and Trade Routes in Ancient India,* Shakti Malik Abhinav Publishers, Delhi, 1977.
8. Saletore, R.N. : *Early Indian Economic History,* N.M. Tripathi Publishers, Bombay, 1973.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER-IV

Note : **The students shall have to opt for one paper for Semester - IV examination out of the following two papers :**

OUTLINES OF TEST

Paper-III : Political ideas and institutions from the earliest times to 1000 A.D.

Paper-IV : History of Art and Architecture (Earliest times to C. 1000 A.D.)

Paper-III : POLITICAL IDEAS AND INSTITUTIONS FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The emphasis of this paper will be on the development of political ideas as enshrined in our secular and non-secular literature. It will also make a study of the administrative systems during various periods focusing on the ideologies of the kings.

2. **Pedagogy of the Course Work :**
The students are expected to know the broad rules laid down by the lawgivers and have knowledge of the administrative organization in different periods. They should be familiarized with the changing patterns of administrative set up at different times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

1. Sources *:* Vedic literature, Epics, the *Arthasastra* of Kautilya, *Smritis* of Manu and Yajnavalkya.

2. Political Institutions *:* State, King, Council of Ministers and Foreign Relations.

UNIT-II:

3. Administrative organization during the Vedic period.

4. Administrative Organisation under the Mauryas.

UNIT-III:

5. Administrative Organisation under the Kushanas.
6. Administrative Organisation under the Guptas.

UNIT-IV:

7. Administrative Organisation under the Pushyabhutis.
8. Administrative Organisation under the Cholas.

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Essential Readings :

1. Altekar, A.S. : *State and Government in Ancient India,* Motilal Banarsidass, Delhi, 1958.
2. Devhuti, D. : *Harsha, A Political Study,* Oxford University Press, New Delhi, 2001.
3. Dikshitar, V.R.R. : *Hindu Administrative Institutions,* University of Madras, Madras, 1929.
4. Ghoshal, U.N. : *A History of Indian Political Ideas,* Oxford University Press. London, 1959.
5. Goyal, S.R. : *History of Imperial Guptas,* Central Book Depot, Allahabad, 1968.
6. Jayaswal, K.P. : *Hindu Polity,* Chowkhamba Sanskrit Pratisthan, Banglore, 1967, 2005.
7. Mukherjee, B.N. : *Rise and Fall of the Kushanas,* Firma KLM, Calcutta, 1988.
8. Prasad, Beni : *State in Ancient India,* Central Book Depot, Allahabad, 1974.
9. Satya Shrava : *The Sakas in India,* Motilal Banarsidass, New Delhi, 1981.
10. Sharma, R.S. : *Some Aspects of Political Ideas and Institutions in Ancient India,* Motilal Banarsidass, Delhi, 2001.
11. Shastri K.A.N. : *The Cholas, Madras, 1975; Chola Vansha,* New Delhi, 1979 (In Hindi).
12. Thapar, Romila : *The Mauryas Revisited,* K.P. Bagchi and Company, Calcutta, 1988.
13. Thapar, Romila : *Ashoka and the Decline of the Mauryas,* 2nd ed. Oxford University Press, New Delhi, 1977.

Paper VII: HISTORY OF ART AND ARCHITECTURE (EARLIEST TIMES TO C. 1000 A.D.)

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Total	:	3 Hours

Objectives :

The main objective of the paper is to acquaint the students with the architecture of ancient Buddhist and Hindu monuments, stone and bronze sculptures, that form an integral part of ancient history and heritage, for comprehensive understanding of the subject.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I :

(a) Harappan architecture

(b) Harappan sculptures.

UNIT-II :

(a) Stupa Architecture – Sanchi and Amaravati Stupas
(b) Rock-cut Architecture– Lomas Rishi, Ajanta and Ellora Caves

UNIT-III:

Temple Architecture :

(a) Gupta temples.
(b) *Nagara style temples* – Chandella.
(c) *Dravida style temples* – Chola.
(d) *Vesara style temples* – Chalukya.

UNIT-IV:

Sculpture

(a) Early Period – Mauryan, Sunga and Kushanas.

(b) Gupta and Early Medieval – Gupta, Pala and Chola.

Pedagogy of the Course Work :

Besides giving an outline of the history and salient features of the topics enumerated in the syllabus, students should be thoroughly acquainted with important monuments and images in stone and bronze of each period. Important schools of art should also be taught. Constant help of visual aids like slides and transparencies should form integral part of teaching. Field work trips to museums and sites of monuments should be undertaken.

Essential Readings :

1. Agrawala, P.K. : *Gupta Temple Architecture,* Prithvi Prakashan, Varanasi, 1968.
2. Agrawala, V.S. : *Gupta Art,* U.P Historical Society, Lucknow, 1948.
3. Agrawala, V. S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* D.B. Taraporevala Sons, Bombay, 1971.
5. Dehejia, Vidya : *Early Buddhist Rock Temples : A Chronological Study,*Thomson and Hudson Ltd., London, 1972.
6. Gangoly, O.C. : *South Indian Bronzes,* Nababharat Publishers, Calcutta, 1978.
7. Harle, J.C. : *Gupta Sculpture,* Munshiram Manoharlal, New Delhi, 1996.
8. Huntington, S. : *The Art of Ancient India (Buddhist, Hindu, Jain),* Weather Hill, Tokyo, 1985.
9. Kramrisch, Stella : *Indian Scuplture, 2 Vols.,* Motilal Banarasidas, Delhi, 1981.
10. Krishna Deva : *Temples of North India,* National Book Trust India, New Delhi, 2000
11. Ray, Niharranjan : *Maurya and Sunga Art,* Indian Studies,Calcutta, 1965.
12. Rowland, R. : *The Art and Architecture of India,* Penguin Books, London, 1953.
13. Saraswati, S.K. : *Survey of Indian Sculpture, 2nd ed.,* Munshiram Manoharlal, New Delhi, 1975.
14. Srinivasan, K.R. : *Temples of South India,* National Book Trust, India,New Delhi, 1998.

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POLICE ADMINISTRATION

B.A. (HONOURS) 3rd Semester EXAMINATION, 2017-18

SEMESTER-III

Semester III : Police Administration and Crime

(A) Course Objectives:

The objective of this course is to introduce to the students, the Concept, Characteristics, and Causes of Crime. The endeavour also is to discuss the special forms of crime. Towards the end the students will be imparted knowledge relating to the role of Police in controlling crime.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit – I

Crime: Concept, Characteristics and Classification.
Causative factors of Crime.
Crime Statistics in India: Sources and Problems.

Unit- II

Organized Crime: Meaning, Characteristics and Types.
White Collar Crime: Meaning, Elements and Types.
Cyber Crime: Meaning, Causes and Types.

Unit- III

Crime Against Women: Concept, Incidence and Remedies.
Juvenile Delinquency: Meaning, Causes and Treatment.
Youth and Crime: Meaning, Characteristics and Trends.

Unit- IV

Drug related Crimes: Concept, Extent and Remedial Measures.
Custodial Crime: Concept, Extent and Remedial Measures.
Role of Police in Crime Control.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central law Publication, Allahabad, 2008.
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Siddique, Ahmad : Criminology- Problems and Perspectives, Eastern Books Co., Lucknow, 1993
4. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Gandhirajan, C. K : Organized Crime, A.P.H. Publishing Corp., New Delhi, 2004
2. Venugopal, Rao : Facets of Crime in India, Allied Publishers Private Limited, Bombay, 1967
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003

POLICE ADMINISTRATION

B.A. (HONOURS) 4th Semester EXAMINATION, 2017-18

SEMESTER-IV

Paper : Correctional Administration

(A) Course Objectives:

The Prime objective of this course is to familiarize the students with the meaning, nature , scope and principle of correctional administration. In addition the efforts are made to discuss with the students, Prison administration along with the alternative non-institutional methods of Probation and Parole elaborately.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72marks)

Unit- I

Meaning, Nature and Scope of Correctional Administration.
Punishment: Concept and Theories.
Forms of Punishment.

Unit- II

Probation: Concept and Development.
Parole: Concept and Development.
Prison: Concept and Origin.

Unit- III

Statutory Prisons in India.
Classification of Prisons in India.
Problems of Prisons in India.

Unit-IV

Prison Reforms in India.
Open Prisons: Concept, Origin and Advantages.
Prisons and Human Rights.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central Law Publication, Allahabad, 2008
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003
4. Davies, Martin : Prisoners of Society: Attitudes and After-Care.
5. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A. 2003
2. Hassine, Victor : Life without Parole: Living in Prison Today, Roxbury Publishing Company, California, 2004.
3. Carrbine, Eamonn. et.al. : Criminology: A Sociological Introduction, Routledge, London, 2005.
4. Pollock, Joyceiyn M. : Prisons and Prison Life : Costs and Consequences, Roxbury Publishing Company, California,2004.
5. Pachauri, S.K : Prisoners and Human Rights, A.P.H. Publishing Corporation, New Delhi, 1999.
6. Paluch (Jr.), James A. : A Life for a Life-Life Imprisonment: America's Other Death Penalty, Edited by Bernard, Thomas J. & Johnson, Robert, Roxbury Publishing Company, California, 2004.
7. Sharma, S.D. : Creative Activities and the Law: Human Rights Approach, Deep & Deep Publications, 2007.

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MUSIC (VOCAL AND INSTRUMENTAL)

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

UNIT-I

1. Concept and characteristics of Raga Dhyan.
2. Role of computer to promote Indian Classical Music
3. A study of Jati Lakshan

UNIT-II

1. Detailed Study of Ghranas of the following:
   (a) Khayal Gayan
   (b) Sitar Vadan.

2. A study of the following:-
   Thumri, Maseetkhani, Razakhani Gat, Trivat

3. Brief Knowledge of the following:-
   Nada, Swara, Shruti, Nyas, Vadi, Laya & Tala.

UNIT-III

1. Brief biographical sketches and contributions towards music of the following Musicians:
   (a) Ustad Mushtaq Ali Khan.
   (b) Ustad Alladiya Khan
   (c) Ustad Alaudin Khan

UNIT-IV

1. Shudha Vikrat Swaas of Bharat and Sharangdev
2. Study of Shruti, Chaturarna or Bharat and Sharngdev
3. Importance of Laya and Tala

UNIT-V

1. Description and Comparative study of Detailed and Non-detailed Ragas :-
   (a) Detailed Ragas :-Hamir, Darbari
   (b) Non-detailed Ragas :-Adana, Kamod

2. Notation of Detailed Ragas and Talas
   A) i) Notation of Khayal/Gat
      ii) Notation of Tala prescribed in the syllabus
      Dhmar, Adachantal, Deepchandi

B) Objective type questions

Paper–II: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(b) One Dhrupad with different Layakaries in any detailed ragas 5 marks

OR

One Vilambit Gat in *Chautala* with different layakaries 5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Darbari.
(ii) Hamir.

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Adana.
(ii) Kamod.

(c) Talas : Jhaptal, Ektal and Teental on Tabla.

(i) One slow Khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 5 marks

(iii) Ability to recite Dhamar, Adachautal and Deepchandi talas in single. 2.5 marks.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Pranav Bharti	:	Pt. Onkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Gharanedaar Gayaki	:	Varman Rao H. Deshpanday
4.	Sangeetanjali	:	Pt. Onkar Nath Thakur
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet swarit	:	Dr. Ramakant Dwivedi
7.	Sangeet Chintan	:	Dr. Soubhagya Vardhan Brihaspati
8.	Bhartiya Sangeet Mein Vaigyanik Upakarano ka Prayog	:	Aneeta Gautam
9.	Saat Sur aur Sattairs Dayare	:	Shambu Nath Mishra
10.	Raag Parichay	:	Harish Chandra Srivastav
11.	Sangeet Prabodhika	:	Dr. Gyan Chand

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-IV

General Instructions

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

UNIT-I

1. Detailed study of Gram
2. Detailed study of Murchhna

UNIT-II

3. Role of Electronic Media in Indian Classical Music
4. Music and Fine Arts

UNIT-III

1. Brief biographical sketches and contributions towards music of the following Musicians :
   (a) Ustad Imdad Khan.
   (b) Ustad Abdul Karim Khan.
   (c) Pt. V. G. Jog

UNIT-IV

1. A study of the following:-
   Sitarkhani Gat , Dhun, Chaturang, Dadra
2. Brief knowledge of the following with illustrations :-
   Vadi, Samvadi, Zamzama, Jod Alap, Gat, Avirbhav & Tirobhav.
3. A study of present raga Lakshan

UNIT-V

1. Notation of Detailed Ragas and Talaas
   A) i) Notation of Khayal /Gat
      ii) Notation of Tala prescribed in the syllabus:Tivra, Jhumra, Punjabi Theka

   B) i) Kedar
      ii) Des

Paper–B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Kedar
(ii) Des

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Hamir
(ii) Vrindavani Sarang

(c) Talas : Chartal, Sultal and Tilwada on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeet swarit	:	Dr. Ramakant Dwivedi
2.	Sangeetanjali	:	Pt. Onkar Nath Thakur
3.	Abhinav Geetanjali	:	Pt. Ramashray Jha
4.	Sanchar Aur Sanchar Madhyam	:	Dr. Chandra Prakash Mishra
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet Visharad	:	Basant
7.	Raag Parichay	:	Harish Chandra Srivastav
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal
9.	Raag ka Udbhav Evam Vikas	:	

HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Second year has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2017-18

General Instructions for teachers, students and paper setters:

1. There will be two papers in each of the Semesters III-VI. Each of the papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The teaching hours for each theory paper are prescribed to be 30 hours and Physics Practical and Computational Physics are prescribed to be 60 hours.

2. The number of lectures per week will be three for each theory paper and six for practicals .

3. The examination time for each theory paper as well as Physics practical paper will be three hours.The Computational Physics paper will consist of two parts(a)written examination of one hour duration,and (b)Practical examination of two hours duration . Both the parts carry equal marks.

4. Each theory paper will consist of **seven** questions comprising of three sections .First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus.The question paper will be set for 44 marks-**All the questions in first and second sections will carry 9(nine) marks each and the compulsory question will carry 8 marks**. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question.**After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
   Computational Physics paper in Semester V will consist of two papers carrying equal marks:
   (a)Written examination of one and half hour duration common for all the students appearing in examination.
   (b)Practical examination of one and half hours duration Both the parts carry equal marks.

4. The numerical problems/exercises in the question paper should be 25-30%.

5. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Paper I : Physics of Vacuum and Low Temperature

Unit I

Basics of Vacuum Techniques: Introduction, classification of vacuum ranges, throughput, Pump speed, speed of exhaust, conductance, ultimate pressure, viscous flow, molecular flow.

Production of Low Pressures: Pump types, Gaede oil-sealed rotating vane pump, Diffusion pump, sputter ion pumps, Gettering, types of getters, Cryogenic pumps.

Measurement of Low Pressures: Types of gauges, Mcleod gauge, Pirani gauge, Measurement of ultrahigh vacuum, penning gauge.

Methodology of Vacuum systems: Vacuum system, Materials for vacuum system, cleaning and sealing of vacuum system, Leak detection and its location.

(Book 1 and Book 2)

Unit II

Production and Measurement of Low Temperatures: Various methods for refrigeration, Coefficient of performance, Liquefaction of gases, Joule-Thomson effect, Principle of regenerative cooling, liquefaction of H_2 and He, Liquefaction of nitrogen, Solidification of He. Liquid He II, Thermodynamics of λ-transition, Adiabatic demagnetization, Linde's method, Temperatures below 0.01K, Low temperature thermometry and techniques, Use of liquid air and other liquefied gases.

(Book 3 and Book 4)

Recommended Books:

1. Vacuum Technology: A. Roth (North Holland, 1990).
2. Vacuum Technology: A. Guthrie (John Wiley, 1963).
3. A Treatise on Heat: M.N. Saha and B.N. Srivastava (Indian Press, 1965).
4. Low Temperature Physics: C. Dewitt, B. Dreyfus and P.G. de Gennes (Gordon & Breach, 1962).

Paper II : Electronics

Unit I

Analog Electronics

Circuit Theory: Voltage sources, Current sources, Capacitors, Inductors, Linear circuits, KCL, KVL, Mesh and Node analysis, Level shifting, Thevenin and Norton equivalent circuits, Power and energy relationships in case of R, L and C, Maximum Power Transfer Theorem, Series and parallel connection of mutually coupled coil, Equivalent circuit of transformer. (Book 1)

Transducers : Electrical transducers, Resistive transducers – Resistive position transducer, Strain gauge, Resistance thermometer, Platinum thermometer, Thermistor. Inductive transducers – Differential output transducers, LVDT, Pressure inductive transducer. Capacitive transducers, Piezo electric load cell, Thermocouple transducers.

(Book 2)

Unit II

Digital Electronics

Number systems: Binary, Hexadecimal and octal number systems, Interconversions and Binary arithmetic, 2's complement arithmetic, Binary fractions and negative binary numbers, floating point representations, Codes, Error detecting and correcting codes.

Digital Principles and Logic: Digital signals, Positive and Negative Logic, Basic digital circuits, Basic Gates – NOT, OR, AND; Universal Logic gates: NOR, NAND; Exclusive-OR gate.

Combinational Logic Circuits – Boolean Laws and De Morgan's theorems, Sum of Product method, Product of sums method, Karnaugh map (up to 4 variables).

Sequential circuits: Flip-flops – RS, JK, D, clocked, race-around conditions in JK flip-flop, master slave JK, Shift registers: serial in serial out, serial in parallel out, parallel in parallel out (only up to 4 bits)

(Book 3 and Book 4)

Recommended Books:

1. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).
2. Electronic Instrumentation, H.S. Kalsi (Tata McGraw-Hill, 2004).
3. Modern Digital Electronics: R.P. Jain (Tata McGraw Hill, 2010).
4. Digital Principles and Applications : Malvino and Leach (Tata McGraw Hill, 2010).

PHYSICS

SEMESTER-IV

Paper III: Statistics and Numerical Techniques

Unit I

Statistics and Probability: Measures of central tendency, Arithmetic mean, median, mode, Geometric mean, Harmonic mean, Quartiles, deciles and percentiles.
Measures of dispersion : Standard deviation, mean deviation, semi-interquartile range, coefficient of variation, Moments, Skewness and Kurtosis.
Linear Correlation and Regression for Two Variables only.
Conditional probability, probability distributions, Mathematical expectation, Probability and Combinatorial analysis

(Book 1)

Counting Statistics and Error Prediction: Characterization of Data, Binomial, Normal and Poisson distributions and their applications, Estimation of the Precision of a Single Measurement, Measure of consistency of observed fluctuations with expected Statistical fluctuation, chi square, Error Propagation, Distribution of time intervals between successive random events.

(Book 2)

Unit II

Numerical Techniques:
Solution of Algebraic and Transcendental Equations: Bisection Method, Secant Method, Newton-Raphson Method.
Interpolation : Finite difference interpolation with equal intervals, Newton' Forward and Backward Interpolation Formulae, Interpolation with unequally spaced points, Lagrange's interpolation formula, Extrapolation.
Numerical integration by Trapezoidal, Weddle's and Simpson's rules, Romberg integration.
Numerical differentiation by Newtons's forward and backward difference formulae, divided difference formula.
Numerical solution of differential equations, Euler's and Runge-Kutta Method.
Method of least-squares fitting of straight line, parabola and exponential curves, least squares fitting for any non-linear function by iterative method.

(Book 3 and Book 4)

Recommended Books:

1. Schaum's Outlines Statistics: Murry R Spiegel and Larry J Stephens (Tata McGraw Hill Education Pvt. Ltd., 2011)
2. Radiation Detection and Measurement: G.F. Knoll (Wiley, New York) (2000).
3. Numerical Mathematical Analysis, J.B. Scarborough (Oxford Book Co. Kolkata) (1961).
4. Introductory *Methods* of *Numerical Analysis,* S.S. *Sastry*. PHI Learning Pvt. Ltd. (2005).
5. A First Course in Computational Physics: P.L. Devries (Wiley, New York) (1994).

Paper IV : Mathematical Physics

Unit I

Differential Equations : Methods of separation of variables; separation of Helmholtz equation in Cartesian, spherical and cylindrical coordinates. Laplace equation in various coordinate systems, Ordinary and singular points; Examples of partial differential equations in physics, Heat Flow in one and two Dimensions.

Series solution of differential equations - Power series solution about ordinary point and regular singular point.

Special Functions in Physics : Dirac delta function, properties of delta function. Gamma function, factorial notation and applications. Beta function.

(Book 1 and Book 2)

Unit II

Special polynomials in Physics :

Bessel's differential equation, Bessel functions of first kind, generating function, recurrence formulae, plots, zeros of Bessel functions and orthogonality.

Legendre's equation, Legendre's polynomials, plots, generating functions, recurrence relations, orthogonality, Series expansion of a function in terms of a complete set of Legendre functions, Rodrigues formula.

(Book 1 and Book 2)

Laplace transforms, Applications of Laplace transforms to derivatives and integrals, s-domain interpretation of passive circuit elements R, L and C; Analysis of simple circuits in s-domain, Transfer function, poles and zeros, Stability of circuit.

Recommended Books:

1. Mathematical Physics: P.K. Chatopadhyay (Wiley Eastern, New Delhi, 2005)
2. Mathematical methods for Physicists : G. Arfken and H.J. Weber (Academic Press, SanDiego, sixth edition, 2005)
3. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).

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CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18
Outlines of Tests

SEMESTER - III

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper I	:	Organic Chemistry-A	20	22	03
Paper II	:	Analytical Chemistry-A	20	22	03

Paper I : ORGANIC CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hoffmann, Curtius, Lossen-similarities, advantages and stereochemistry at the migrating group, effect of migrating group on rate of reaction. Baeyer Villiger Rearrangement.

Unit-II

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hydroperoxide rearrangement–migratory aptitude, Brown, Pinacol, Wolff, Stevens, Wittig and Favorskii rearrangements-participation of groups such as –O–C–R, halogens, Aryl, and sigma bond, nonclassical carbocation.

Unit-III

Stereochemistry I: (05 Lectures)
Enantiomeric relationship, Diastereomeric relationship, Prochiral relationship. Conformational relationship in carbocyclic rings other than 5-membered, conformational effects on reactivity. Relationships between ring size and facility of ring closure.

Unit-IV

Stereochemistry II: (05 Lectures)

Hard Soft Acid Base principles: pka Values. Generation of Carbon Nucleophiles by Deprotonation, Regio selectivity and stereo selectivity in enolate formation, Medium effects, O versus C as site of alkylation, examples of Stork enamine reactions.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper II : ANALYTICAL CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Elementary Concepts I: (05 Lectures)

Qualitative and quantitative analysis, concepts and importance of quantitative analysis, choice of methods for analysis, sampling and theories of sampling, preparation of samples for analysis, calibration standards, solution concentrations in terms of various conventions, simple equilibrium calculations, calibration of analytical weights and glass wares, significance of calibration, role of instrumental methods of analysis in analytical chemistry.

Unit-II

Elementary Concepts II: (05 Lectures)

Terms of mean, medium, precision and accuracy in chemical analysis, types of errors in analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, least square curve fitting, propagation of errors, significant figure convention, standard deviations, confidence limits.

Theory of volumetric and gravimetric methods of analysis, primary and secondary standards, theory of indicators and their selection for titrations, precipitation methods, optimum conditions for precipitation, steps involved in gravimetric analysis, important organic precipitants.

Unit-III

Acid-Base Equilibria : (05 Lectures)

Acids and bases, ionization equilibria for weak monobasic acids, bases and related salts, acid base titration reagents and indicators for neutralization titrations, neutralization titrations for a strong acid with a strong base, polybasic acid with a strong base.

Unit-IV

Oxidation-Reduction Equilibria : (05 Lectures)

Oxidation-reduction reactions, reduction potentials, Nernst equation, oxidation-reduction titrations and curves, oxidation-reduction indicators, applications of oxidation-reduction techniques, determination of water by the Karl Fischer titration method.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18
Outlines of Tests

SEMESTER - IV

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
Paper III	:	Organic Chemistry-B	20	22	03
Paper IV	:	Analytical Chemistry-B	20	22	03

Paper III : Organic Chemistry-B

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Organic Chemistry of Life I: (05 Lectures)

Nucleic Acids : Nucleosides; Pentoses, heterocyclic bases, nucleotide; Purines and phosphate, DNA and RNA Hydrogen bonding and DNA replication (heredity).

Unit-II

Organic Chemistry of Life I: (05 Lectures)

Enzymes, nomenclature of enzymes, characteristics of enzymes, coenzyme A and prosthetic group. Coenzyme derived from niacin and examples of redox reaction with it.

Unit-III

Pericyclic Reactions I : (05 Lectures)

Electrocyclic Reactions: Woodward and Hoffmann rules, correlation diagram for cyclobutene = butadiene interconversion, Frontier orbital theory. Examples of 4, 6 and 8 electron systems, stereochemical modes.

Cycloaddition Reactions : Woodward and Hoffmann rules, Frontier Molecular orbital theory for Dieis-Alder reaction.

Unit-IV

Pericyclic Reactions II: (05 Lectures)

(4+2) and (2+2) cycloadditions, exo and endo isomers, Examples Bicyclo (2, 2, 1) heptane and Bicyclo (2, 2, 2,) octane systems. Intramolecular Diels Alder reaction.

Sigmatropic Rearrangements: Woodward and Hoffmann rules, Frontier Molecular orbital for 1, 3; 1, 5 and 1, 7 shifts. Examples including vitamin D_2 formation from 7-dehydro cholesterol (Provitamin D_3).

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory questions carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper IV : ANALYTICAL CHEMISTRY-B:

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE:

To teach the fundamental concept of Chemistry and their applications, The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit- I

Precipitation Equilibria : (05 Lectures)

Solubility of precipitates, effect of competing equilibria on solubility of precipitates, separation of ions by control of concentration of precipitating reagents, effect of electrolyte concentration on solubility product, theory of precipitation titrations. The Vohlard and the Mohr's methods of analysis, adsorption indicators.

Unit-II

Complexation Equilibria : (05 Lectures)

Complexation, formation constants, EDTA equilibria, effect of pH on EDTA equilibria, complexometric titration curves, selection of indicators for complexometric titrations, applications of complexometric equilibria.

Unit-III

Solvent Extraction and Ion-Exchange Separation : (06 Lectures)

Basic concepts of solvent extraction, relationship between distribution coefficient, distribution ratio and per cent extraction, applications of extraction methods in analytical chemistry, ion-exchange processes, ion-exchange-resins, techniques and applications of ion-exchange separation, basic concepts of column and gas chromatography.

Unit-IV

Radioisotope Methodology and its Applications : (04 Lectures)

Radioactive isotopes, radioactive decay rates and half-life periods of radioactive isotopes, sample preparation in radiochemical measurements, background, dead-time and inefficiency corrections in radioactive measurements, isotope dilution method and its applications, radiometric-titrations, neutron activation analysis.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

BOTANY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

Third Semester

		Time	Theory	Int Assess.	Max Marks
Theory Paper-A :	Plant Physiology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – I	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20

Fourth Semester

Theory Paper-A :	Plant Ecology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – II	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			200

Note : 1. The number of teaching hours for theory and practical per session shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of nine questions. Question No. 1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

SEMESTER –III

Paper -A : PLANT PHYSIOLOGY

Objective :

The main objective of this paper is to make the students aware about various functions and metabolisms of plants. The course material of this paper would enable the students to understand gradual aspects of growth and development in plants along with concept of photoperiodism, role of hormones and photomorphogenesis.

Teaching Methodology :

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

Unit-I

Plant-Water Relations : Water transport processes; diffusion and osmosis; water potential and chemical potential; absorption of water, water transport through xylem; transpiration and its significance; factors affecting transpiration; mechanism of stomatal movement.

Mineral Nutrition : Criteria of essentiality of elements; macro-and micronutrients; role of essential elements; mineral deficiency symptoms and plant disorders; nutrient uptake and transport mechanisms; role of cell membrane, ion pumps and carriers.

Unit-II

Photosynthesis : Historical background and significance; structure of photosynthetic apparatus; photosynthetic pigments; accessory pigments and the photoprotective carotenoids; reaction center complexes; photochemical reactions; electron transport pathways in chloroplast membranes; photophosphorylation; the Calvin cycle; the C_4 carbon cycle; crassulacean acid metabolism; synthesis of starch and sucrose; photorespiration.

Transport of Organic Substances: Transport of photosynthates; source-sink relationships; the mechanism of translocation in the phloem; assimilate partitioning.

UNIT-III

Respiration : Glycolysis; the TCA cycle and its regulation; electron transport in mitochondria; oxidative phosphorylation; pentose phosphate pathway; cyanide-resistant respiration.

Nitrogen Metabolism : Biological nitrogen fixation; reduction of N_2 into ammonia; *nif* genes; regulation of nitrate reductase and nitrogenase; nitrate and ammonium assimilation.

Unit-IV

Growth and Development : General aspects – definitions, phases of growth; kinetics of growth; physiology of seed dormancy and seed germination; concept of photoperiodism; Physiology of flowering; the florigen concept and role of hormones; vernalization; senescence and fruit ripening; importance of respiratory climacteric; discovery, physiological role and mechanism of action of the phytohormones – auxins, cytokinins, gibberellins, abscisic acid and ethylene; photomorphogenesis; discovery of phytochromes and cryptochromes, their role and mechanism of actions; signal transduction – basic concept; plant movements – tropic and nastic; biological clocks.

Suggested Readings :

1. Copleand, R. A. Enzymes: A Practical Introduction to Structure, Mechanism and Data Analysis, VCH Publishers, New York, 1996.
2. Dryer, R.L. and Lata, G.F. Experimental Biochemistry, Oxford University Press, New York, 1989.
3. Galston, A.W. Life Processess In Plants, Scientific American Library, Springer-Verlag, New York USA, 1989.
4. Hooykaas, P.J.J., Hall M.A. and Libbenga, K.R. (eds.) Biochemistry and Molecular Biology of Plant Hormones, Elsevier, Amsterdam, The Netherlands, 1999.
5. Hopkins W.G. Introduction to Plant Physiology : John Wiley and Sons. Inc., New York, USA, 1995.
6. Moore, T.C. Research Experiences in Plant Physiology: A Laboratory Manual, Springer-Verlag, Berlin, 1974.
7. Moore, T.C. Biochemistry and Physiology of Plant Hormones (2nd edition), Springer-Verlag, New York, USA, 1989.
8. Salisbury. F.B. and Ross, C.W. Plant Physiology (4th edition), Wadsworth Pulishing Co., California, USA, 1992.
9. Srivastava, H.N. Plant Physiology, Biochemistry & Biotechnology, Vol. V, Pradeep Publications, Jalandhar, India, 2013.
10. Taiz, L. and Zeiger, E. Plant Physiologyy (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010.
11. Wilson, K. and Goulding, K.H. (eds.). A Biologist's Guide to Principles and Techniques of Practical Biochemistry, Edward Arnold, London, U.K., 1986.

Suggested Labortary exercises for Third Semester

1. To study the permeability of plasma membrane using different concentrations of organic solvents.
2. To study the effect of temperature on permeability of plasma membrane.
3. To extract enzymes and study their activity, e.g. amylase, lipase, acid phosphatase, catalase, peroxidase.
4. Effect of the following factors on enzyme activity :

   pH, temperature, enzyme and substrate concentration, heavy metals.
5. To extract and separate chloroplast pigments by solvent method and demonstrate fluorescence in chloroplast extracts.
6. To determine the osmotic potential of vascular sap by plasmolytic method.

7. To determine the water potential of given tissue (any tuber).
8. To determine stomatal Index, stomatal frequency and percentage of leaf area open through stomata. Also study the effect of ABA on stomatal closure.
9. Effect of carbon dioxide concentration on the rate of photosynthesis.
10. To demonstrate that oxygen is evolved during photosynthesis.

Paper -B: DEVELOPMENT OF PLANTS AND THEIR UTILIZATION-I

Objective:

This paper deals with internal structure of various plant parts, their growth and development patterns. It gives an insight into plant domestication and role of wild plants in ecosystem functioning.

Teaching Methodology:

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Organization of the Higher Plant Body : The shoot and root systems; variation in habit and longevity; environmental influences.

UNIT-II

Meristems and Development : Shoot apical meristem, root apical meristem, lateral meristems and their functions. Range of form and structure of stem, leaf and root; their tissues and functions.

UNIT-III

Secondary Body of the Plant : Vascular cambium; secondary xylem (basic structure of wood); secondary phloem and periderm.

Unit-IV

Role of Wild Plants in Ecosystem Functioning : A general account.
Domestication of Plants : Primary and secondary centres of diversity; plant introduction.

Suggested Readings :

1. Carlquist, S. Comparative Wood Anatomy : Systematic, Ecological and Evolutionary Aspects of Dicotyledonous Wood, Springer-Verlag, Berlin, 1988.
2. Cutter, E.G. Cell and Tissues, Part I, Edward Arnold, London, 1969.

3. Cutter, E.G. Plant Anatomy: Experiment and Interpretation, Part II, Organs, Edward Arnold, London, 1971.

4. Esau, K. Anatomy of Seed Plants, 2nd Edition, John Wiley and Sons, New York, 1977.

5. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.

6. Fuller, K.W. and Gallon, J.R. Plant Products and New Technology, Clarendon Press, Oxford, New York, 1985.

7. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California, USA, 1998.

8. Nair, M.N.B. Wood Anatomy and Major Uses of Wood, Faculty of Forestry, University Putra Malaysia, 43400 Serdang, Selangor D.E. Malaysia, 1988.

9. Raghvan, V. Development Biology of Flowering Plants, Springer-Verlag, New York, 2000.

10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants,5th Edition, W. H. Freeman and Co., Worth Publishers, New York, 1999.

11. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV, Pradeep Publications, Jalandhar, India, 2007.

12. Goyal, J.P., Saini, Aruna. Angiosperms, Structure, Development and Reproduction, Trueman Company, Jalandhar, India, 2006.

13. Singh, V., Pande, P.C and Jain, D.K. Structure, Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, India, 2012.

Suggested Laboratory Exercises :

1. Study in the field of a large variety of herbaceous and perennials, both monocotyledonous and dicotyledonous, aquatic, mesophytic, xeromorphic plants, succulents, climbers, twiners, parasites, and trees with varied canopy architecture. Field diary to be prepared.

2. Morphology and anatomy of stems, roots and leaves using stained hand sections of permanent slides (tapioca, carrot, radish, onion, garlic, turnip, potato, etc.)

3. Study of vascular cambium in stem and root. Secondary growth. Examples of cambial variants and resultant secondary structures.

4. Preparation of world maps to show Vavilov's centres of origin of cultivated plants and Zhukovsky's concept of mega centres.

5. Preparation of maps showing the centres of primary diversity of important economic plants that originated in India and region of cultivation of plants introduced from the New World, Europe, Central Asia, Australia, Malaysia, China.

Guidelines for Botany Practical Examination:

Max. Marks:	**20**
Practical:	**18**
Int. Assessment:	**2**
Time:	**3 hrs.**

Q.1. Write procedure and precautions for Physiology experiment A. Perform the experiment, record observations calculation if any and results. Show the experiment to the examiner. 5

Q.2. Write illustrated morphological note on specimens B & C. 4

Q.3. Idenitfy slides D & E giving at least two identifying features for each. 4

Q.4. Practical Note book. 2

Q.5. Viva-Voce 3

BOTANY
SEMESTER-IV

PAPER-A: PLANT ECOLOGY

Objective: This paper deals with the role of environment in causing structural and functional variations in plants. It provides a broad idea about concept of population, community, ecosystem, ecological succession and role of plant indicators in environment monitoring.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT- I

Introduction : Holocoenotic nature of environment; limiting factors; ecological amplitude triggering factors (soil, water, atmosphere).

Ecological Adaptations: Concept, ecads, ecotypes and ecoclines; adaptations in relation to soil oligotrophy; adaptive significance of photosynthetic pathways.

Population : Concepts; density and pattern; idealized plant life history; population growth; carrying capacity; population regulation; r and k selection; population interactions.

UNIT- II

Community: Community characteristics and their measurement, species diversity (alpha, beta and gamma), niche.

Ecosystem : Concept, components and organisation, energy flow; ecological efficiencies; cycling of C, N and P; characterization and structure of ecosystem; the biotic and abiotic components, their inter-relationship; the processes within ecosystem, the trophic organisation; autotrophy, heterotrophy, parasitism, detritus, decomposition.

Ecological Succession : Mechanism and types; nature of climax; food chains and food webs; ecological pyramids.

UNIT- III

Flow of Energy and Materials : Flow of energy and materials within ecosystem; models of energy flow; ecosystem productivity; biogeochemical cycles; major types of ecosystems.

UNIT- IV

Plant Indicators and their role in Environmental Monitoring.

Phytogeography : General principles, vegetation of India.

Suggested Readings :

1. Barbour, M.G., Burk, J.H. and Pitts, W.D., Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.

2. Hill, M.K., Understanding Environmental Pollution, Cambridge University Press, 1997.

3. Kormondy, E.J., Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.

4. Mackenzie, A. et al., Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.

5. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.

6. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.

7. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.

8. Smith, R.K. Ecology and Field Biology, Harper Collins, New York, 1996.

9. Srivastava, H.N. Ecology and Utilization of Plants, Vol.VI Pradeep Publications, Jalandhar, India, 2012.

Suggested Labortary exercises:

1. To study ecological adaptations (morphological and anatomical) in plants (hydrophytes, xerophytes, epiphytes).

2. To determine minimum area of sampling unit (quadrat) for the study of grassland community.

3. To estimate Importance Value Index for grassland species.

4. To prepare maps of India with respect to (i) Major climate zones, (ii) Forest types, and (iii) Bio-geographical regions and to comment on these.

Paper -B : DEVELOPMENT OF PLANTS AND THEIR UTILIZATION – II

Objective :

The course work of this paper deals with utilization of plants. It would provide the students an idea about importance of various plant parts as well as plant wealth such as medicinal, crops and food plants, fibre and oil yielding plants, timber yielding and firewood species.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT-I

A General account of wheat, rice, maize, sorghum, bajra, potato and sugarcane.
Legumes : Chickpea (Bengal gram), red gram (arhar) – a general account.

UNIT-II

Vegetable Oil Sources : Mustard, groundnut, soyabean and coconut –a brief account.
Plant Fibres : Cotton, jute and coir.
Timber and Firewood Species : A general account of use of following trees:
Tectona, Dalbergia, Albizzia, Eucalyptus, Cedrus, Acacia, Shorea, Terminalia, Mangifera and Azadirachta.

UNIT -III

Medicinal Plants : A brief account of plant drugs and their chief constituents used in indigenous and allopathic systems of medicines viz. *Opium, Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrhiza, Phyllanthus amarus (P. fraternus), Allium sativum, Atropa belladonna and Aloe barbadense.*

Unit-IV

A brief account of the following:
Natual Rubber : *Hevea brasiliensis*
Essential Oils: *Cymbopogon sp., Eucalyptus, Jasminum, Geramium and Vetiveria.*
Insecticides : *Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum).*
Dyes : *Curcuma longa(turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigofera (Indigo) and Lawsonia inermis (mehndi).* Extraction of pigments.
Ornamental Plans : Familarity with seasonal and perennials grown in your locality.

Suggested Reading :

1. Kocchar, S.L., Economic Botany in Tropics, 2nd edition, Macmillan India Ltd., New Delhi, 1988.
2. Lyndon, R.F., Plant Development : The Cellular Basis, Unwin Hyman, London, 1990.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S., A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma O.P. Hill's Economic Botany, Tata McGraw Hill Publishing Company Ltd., New Delhi, India, 1996.
5. Simpson, B.B. and Conner-Ogorzaly, M., Economic Botany –Plants in Our World, McGraw Hill, New York, 1986.
6. Srivastava, H.N. Eology and Utilization of Plants, Vol. VI, Pradeep Publications, Jalandhar, India, 2012.
7. Steevas, T.A. and Sussex, I.M. Patterns in Plant Development, 2nd Edition, Cambridge University Press, Cambridge, 1989.
8. Thoms, P.Trees: Their Natural History Cambridge University Press, Cambridge, 2000.
9. Tippo, O. and Stern, W.L. Humanistic Botany, W.W. Norton, New York, 1977.
10. Vishnu Swarup, Ornatmental Horticulture, Macmillan India, Ltd., Neew Delhi India, 1997.

Suggested Laboratory Exercises

1. Study of vegetative and reproductive morphology and anatomy of wheat, rice, maize, sorghum, bajra, potato and sugarcane. Study of starch grains in these plants (except in sugarcane). Epidermal structure of sugarcane stem and leaves. Tests for sucrose.
2. Study of vegetative and floral morphology, and pod development in chickpea and red gram.
3. Study of structure of oil storing tissues in sectioned seeds of mustard, groundnut and soyabean, and coconut endosperm, using micro-chemical tests.
4. Study of wood anatomy of ring-porous, diffuse porous woods using hand sections or prepared slides. Understanding of wood anatomy using T.S., T.L.S. and R.L.S. in five timber yielding species (*Tectona, Dalbergia, Albizzia, Eucalyptus Cedrus, Acacia, Shorea, Terminalia, Mangifera, Azadirachta,* or any other depending on the location of the institution). Preparation of a list of 10 fire wood species in your region and their properties.
5. Study of 10 whole plants (live or from herbarium specimens) used as resources of drugs : (*Opium*, *Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrrhiza, Phyllanthus amarus (P. fraternus*), *Allium sativum, Atropa belladonna, , Aloe barbadense,* or any other important plants of your area.
6. Study of laticiferous system in the stem of *Hevea brasiliensis,* familiarization with whole plants (fresh or herbarium specimens of *Cymbopogon* sp., *Eucalyptus, Jasminum, Geranium and Vetiveria* (or any other local sources of essential oils).
7. Study of Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum) from live specimens. Sources of dyes : Curcuma longa (turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigo fera (indigo) and Lawsonia inermis (mehndi). Extraction of pigments.
8. Preparation of a list of trees and shrubs used as ornamentals alongwith their popular and scientific names. Seasons of flowering and brief description. Calendar of seasonals grown as bed plants, potted plants, house plants, flowers used for worship or ornamentation. This may be illustrated and presented as a term paper at the time of examination.

Guidelines for Botany Practical Examination

Max. Marks : 20
Practical : 18
Int. Assessment : 2
Time : 3 hrs.

1.	Identify specimen A and write note on its ecological adaptations.	3
2.	Identify and write illustrated morphological note on specimens B,C & D giving their economic importance.	6
3.	Identify & write botanical name and family of specimens E & F.	4
4.	Practical note book.	2
5.	Vice-Voce .	3

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-III

PAPER I : ENVIRONMENTAL BIOLOGY-I

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Environment :** Introduction and components.

1. **Ecological Concepts :** Ecosystem: Types food chains, food web, energy flow.

UNIT-II

3. **Biogeochemical cycles**
4. **Ecological succession**

UNIT-III

5. **Pollution: Types** - Air, water, land, thermal and noise pollution.

   (a) *Sources of Pollution :* Sewage, industrial wastes, silt, fertilizers, detergents, oils, pesticides, smoke, exhaust gases from automobiles, smog, acid rains, radioactive elements etc.

   (b) *Pollution in India:* Major polluted rivers and their sources of pollution, air pollution in major cities.

   (c) *Hazards of Pollution :* Effects of pollution on plants and animals.

UNIT-IV

6. (a) *Control of Pollution:* Primary, secondary and tertiary treatment, standards for the quality of drinking water.

   (b) Bioremediation

Suggested Readings :

1. Odum, E.P. : *Fundamentals of Ecology,* W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : *The Biology of Pollution : Studies in Biology,* No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3. Louis, K. : *River Pollution,* Butterworths, 1969.
4. Dix, H.M. : *Environmental Pollution, Atmosphere, Land, Water and Noise,* (Institution of Environmental Science) Wiley, 1981.
5. Mani, M.S. : *Ecology and Biogeography of India,* Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6. Kendeigh, S.C. : *Ecology with Special Reference to Animals and Man,* New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-I

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Introduction :** Scope and historical account from molecules to cells, prokaryotes to eukaryotes, unicellular to multicellular.
2. **Biomolecules : Micro and Macro molecules.**Structure and function of carbohydrates, lipids, proteins and nucleic acids.

UNIT-II

3. **Carbohydrates :** Classification, structure of cellulose and glycogen.
4. **Lipids :** Classification, structure of ganglioside and steroids.

UNIT-III

5. **Proteins :** Classification, structure of amino acids, primary, secondary and tertiary structure of proteins, structure of hemoglobin and lysozyme.

UNIT-IV

6. **Nucleic Acids :** DNA. What genes are made of ? Detailed structure of DNA Molecule, replication, RNA - various types, transcription, translation and involvement of RNAs in protein synthesis.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	*Molecular Biology of the Cell,* Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	*Essentials of Cell and Molecular Biology,* Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	*Cell and Molecular Biology,* 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	*Principles of Genetics,* John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	*Cell Biology,* Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	*Genetics and Molecular Biology,* Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	*Biology,* Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	*Molecular Biology of the Gene,* 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	*Molecular Biology, Genes and Chemical Control of Living Cells,* Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-III

Practical's based on both theory papers.

1. Estimation of D.O. of the given water sample (normal and polluted).
2. Estimation of total alkalinity of water sample (normal and polluted).
3. Estimation of chlorine of water sample (normal and polluted).
4. Estimation of Hardness of water sample (normal and polluted).
5. Estimation of NO3 of water sample (normal and polluted).
6. Estimation of PO4 of water sample (normal and polluted).

7. Analysis of the variations in protein contents in different organs of an animal procured from slaughter house.

8. Analysis of the species variations in amino acids requirements.

9. Demonstration of carbohydrate and proteins in a cell (Cytochemically).

10. Prepare a Project on national parks/sanctuaries/biosphere reserves.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) III Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks

I. Analyze the variations in protein contents in the organs of a given specimen. Write the procedure and show the reading to the examiner. (3)

II. Determine the physico-chemical factors (A) in given water sample from a lake. Write the procedures followed. (3)

III. Demonstrate cytochemically carbohydrates/protein in an eukaryotic cell. Write the procedure and show the preparation to the examiner. (3)

IV. Write a note on the project…… (2)

V. Viva-Voce. (3)

VI. Note Book and Charts. (4)

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2017-18

SEMESTER-IV

PAPER I : ENVIRONMENTAL BIOLOGY-II
PAPER II: MOLECULER BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

PAPER I : ENVIRONMENTAL BIOLOGY-II

UNIT-I

1. **Biodiversity Conservation :** (In-situ, Ex-situ)

2. **IUCN Red List Categories :** Critically Endangered, Endangered, Vulnerable, Rare, Least Concern.

UNIT-II

3. **National Conservation Projects**

4. **National Biodiversity Act and Wild life Act**

UNIT-III

5. **Ecology of Conservation :**

   (a) *Conservation of Natural Resources:* Water, land and minerals.

   (b) *Aquaculture:* Pisciculture and management of ponds, extensive & intensive and integrated fish culture.

UNIT-IV

6. (a) *Forest Ecology :* Forest statistics of India, conservation of forests, management of forests for timber productions.
   (b) *Agriculture :*Weed control, crop rotation, green revolution, checking of soil erosion.
   (c) *Dedesertification :* Measures to control the advance of desert.

Suggested Readings :

1. Odum, E.P. : *Fundamentals of Ecology,* W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : *The Biology of Pollution : Studies in Biology,* No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3. Louis, K. : *River Pollution,* Butterworths, 1969.
4. Dix, H.M. : *Environmental Pollution, Atmosphere, Land, Water and Noise,* (Institution of Environmental Science) Wiley, 1981.
5. Mani, M.S. : *Ecology and Biogeography of India,* Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6. Kendeigh, S.C. : *Ecology with Special Reference to Animals and Man,* New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-II

UNIT-I

1. **Mutations :** Types of mutations, physical and chemical mutagens and their mode of action on DNA.
2. **Bioenergetics :** Types of energy and their transformation, first and second law of thermodynamics.

UNIT-II

3. Factors governing chemical reactions, generation and function of ATP, biocatalysts; role of enzymes in cellular reactions. Types of major enzymes, Apoptosis.
4. **Regulation of Gene Expression :** Concept of operon, induction and repression in Prokaryotes, gene regulation in eukaryotes.

UNIT-III

5. **Molecules of Cellular Defence :** Structure and function of antibody, major histocompatibility antigens, HLA system. Genetic basis of antibody diversity.

UNIT-IV

6. **Molecular Basis of Inborn Errors of Metabolism :** Genetic basis of carbohydrates and amino acid metabolism, galactosemia and Phenylketonuria.
7. **Recombinant DNA :** Restriction endonucleases, Plasmids, cloning of DNA, use of recombinant DNA technology.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	*Molecular Biology of the Cell,* Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	*Essentials of Cell and Molecular Biology,* Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	*Cell and Molecular Biology,* 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	*Principles of Genetics,* John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	*Cell Biology,* Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	*Genetics and Molecular Biology,* Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	*Biology,* Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	*Molecular Biology of the Gene, 4th* Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	*Molecular Biology, Genes and Chemical Control of Living Cells,* Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-IV

Practical's based on both theory papers.

1. Biota of pond water and sewage/industrial effluent.
2. Effect of light and gravity on organism.
3. Study of littoral, limnetic, profundal communities.
4. Study of nucleic acids in tissues (Cytochemically).
5. Idea about viruses and bacteria through charts etc.
6. Preparation and study of onion root tip chromosomes.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) IV Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2marks

I. Record biota in the given sewage samples. Draw labeled sketches & demonstrare these to the examiner. (3)

II. Examine water sample for biotic communities from particular zone of lake, sketch and demonstrate. (3)

III. Identify the given chart/diagram. Write a brief note on it. (2)

IV. Study the effect of …… on the given animal. Write the procedure followed. (2)

V. Male a chromosomes preparations of the onion root tip. Draw a label diagram of any stage of mitosis and show it to the Examiner. (3)

VI. Viva-Voce. (2)

VII. Note Book and Charts. (3)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
THIRD YEAR
(SEMESTER : FIFTH AND SIXTH)
Examination, 2017-2018

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE HONOURS SUBJECTS OF THE B.A./B.Sc. THIRD YEAR FOR THE EXAMINATION, 2017-2018

ENGLISH

SEMESTER V

PAPER : 20th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	G.B. Shaw	:	*Arms and the Man.*
2.	George Orwell	:	*Nineteen Eighty Four.*
3.	D. H. Lawrence	:	*The Rainbow.*
4.	W.B. Yeats	:	(i) *Among school Children* (ii) *The Second coming* (iii) *Lake of Isle Innisfree*

Testing :

There will be **Two Units.**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three

Unit I
There will be one question on the literary movement of 20th Century with internal choice

(15 marks)

There will be one question with reference to the context from writers at Serial No. 1 and 4. Two passages will be set from each writer with internal choice. Students will attempt one passage from each writer.

(15 Marks)

Unit II
There will be two essay type questions with internal choice on each of the four writers' texts. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

SEMESTER VI

PAPER : INDIAN WRITING IN ENGLISH

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1. Tagore : (i) *The Joureny*, (ii) *Sea Shore.*, (iii) *Maya* — *Selection from Geetanjali*
2. Mulk Raj Anand : *Coolie.*
3. R.K. Narayan : *The Vender of Sweets*
4. Kamla Dass : (i) *An Introduction* (ii) *Forest Fire* (iii) *The Freaks* (iv) *My Grandmother's House*

Testing :

1. There will be one question with reference to context. Two stanzas with internal choice will be set from Tagore and Kamla Dass. Students will attempt one stanza from each Poet.. (10 marks)
2. Four questions (one on each author) of 20 marks each will internal choice. (20 × 4 = 80 marks)

****

संस्कृत

बी. ए. (आनर्स) तृतीय वर्ष परीक्षा, 2017-2018

SEMESTER-V

तृतीय पत्र : पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः–

विद्यार्थियों को काव्य के स्वरूप, प्रयोजन इत्यादि से अवगत करना । इसी के साथ ही पाणिनीय सूत्रों के माध्यम से कारक तथा स्त्री प्रत्ययों के अध्ययनोपरान्त संस्कृत लेखन के प्रति उत्साहित करना ।

UNIT-I

(क) साहित्यदर्पण–प्रथम परिच्छेद 40 अंक

UNIT-II

(ख) लघुसिद्धान्तकौमुदी– 30 अंक

(i) विभक्त्यर्थ (कारक–प्रकरण) 15 अंक

(ii) स्त्री–प्रत्यय 15 अंक

UNIT-III

(ग) संस्कृत में निबन्ध (इन विषयों पर– संस्कृतभाषा, परोपकारः, गीता, वेदानां महत्त्वम्, आदर्श–छात्रः)। 20 अंक

नोट – पत्र का अध्यापन समय–नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

संस्कृत

बी. ए. (आनर्स) तृतीय वर्ष परीक्षा, 2017-2018

SEMESTER-VI

चतुर्थ प्रश्न -पत्रः पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः-

उपनिषद् प्रतिपादित नचिकेता एवं यम के संवाद द्वारा विद्यार्थियों को रहस्यमय परमतत्त्व से परिचित कराना, इसके अतिरिक्त चतुर्वेद, ब्राह्मण तथा उपनिषद् ग्रन्थों के विषय-वस्तु का अध्ययन करवाना।

UNIT-I

(क) उपनिषद्-साहित्य 60 अंक

(i) कठोपनिषद्-(प्रथम अध्याय) अनुवाद एवं व्याख्या (6 में से 4 सन्दर्भ) 4×10 = 40 अंक

(ii) कठोपनिषद् से सम्बद्ध प्रश्न (2 में से 1 का उत्तर) 1×20 = 20 अंक

UNIT-II

(ख) वैदिक साहित्य का इतिहास 30 अंक

1. सहिंताएँ 2. ब्राह्मणग्रन्थ 3. उपनिषद 2×15 = 30 अंक

(विषय वस्तु से सम्बन्धित चार में से दो के उत्तर पूछे जायेगें) ।

नोट - पत्र का अध्यापन समय-नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

Books Recommended :

1. Sanskrit Drama : A.B. Keith.
2. Classical Sanskrit Literature : A.B. Keith.
3. A History of Sanskrit Literature : A.A. Macdone.
4. A History of Indian Literature, Vol. 1 : M. Vintenitz
5. History of Sanskrit Literature by V. Varadachari.
6. संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय
7. वैदिक साहित्य और संस्कृति : बलदेव उपाध्याय
8. संस्कृत वाड्मय का इतिहास : वाचस्पति गैरोला
9. संस्कृत साहित्य की रूपरेखा : चन्द्रशेखर पाण्डेय

Note : All books are available at the Chaukhamba Sanskrit Series, Chaukhamba, Varanasi and Motilal Banarasidas, Jawahar Nagar, Bunglow Road, Delhi.

PERSIAN

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-2018

SEMESTER V

PAPER-III : HISTORY OF PERSIAN LITERATURE

SAFIVID PERIOD

100 Marks

Time : 3 Hrs.

Books Recommended:

1. History of Persian Literature by Dr. Razazadeh Shafaq.
2. History of Persian Literature by Dr. Brown Vol. III.

PERSIAN

B.A.(HONOURS) THIRD YEAR EXAMINATION, 2017-2018

SEMESTER-VI

Paper-IV MODERN PERSIAN

100 Marks
Time : 3 Hrs

1. PROSE:
   (i) The following three short stories of Saeed-Nafisi
   (a) Azan-E-Maghrib
   (b) Khana-Ye-Pidari.
   (c) Janayat-E-Man

   (ii) The following three short stories of Mohammed Heijazi:
   (a) Khud Khusi.
   (b) Eedi.
   (c) Mah-e-man

Book Prescribed:

Nasib-Jadid-e-farsi, jayyed Press, Ballimaran, Delhi-6

2. POETRY:
   Quasidan
   1. Namund Namah by Bahar.
      "Dar Sher Band Mehro-Wafa Dilbari Namund."
   2. Ghazalliyat-E-Parveen Etisami by Mehdi Hameedi.
   3. Qataat by Mehdi Hameedi.

Books Recommended:

1. Barguzida-Ye-She'r-e-Farsi-Ye-Mu' aasir Part-I by Dr. Muneeb-al-Rehaman.
2. Edara-ye-Ulam-e-Islami, Danish gah-e-Islami,Aligarh.

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ARABIC

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

(Kept in Abeyance)

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FRENCH

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-2018

SEMESTER V

5th Semester: FRENCH LITERATURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

INTRODUCTION TO HISTORY OF FRENCH LITERATURE FROM 17th– 18th CENTURY

Questions should be asked strictly from the prescribed text book.

1. Five questions of 8 marks each based on History of French Literature — 40 Marks
2. Fill in the blanks or multiple choice questions on History of literature with maximum of 2 marks each. — 20 Marks

Poetry: Explanation, central idea, critical appreciation of poems — 30 Marks

1. L'amour et la folie (La Fontaine)
2. Le laboureur et ses enfants (La Fontaine)
3. Le lion et le rat (La Fontaine)
4. Le chêne et le Roseau (La Fontaine)
5. La Jeune veuve (La Fontaine)

Courses of Reading :

Memento de Littérature française, by Hélène, Publication Hatier, Profil Littèrature. Only from 17-18 centuries to be studied.

Note : 1. The latest syllabus should be followed.
2. Choice should be given in questions.

Reference Books :

1. Collection littéraire—Moyen age – 20eme siècle -Lagarde et Michard, Bordas.
2. Recueil de Textes littéraires français. Moyen Age -20eme siècle-Chassang et Senninger.
3. Moyen age -20eme siècle – Castex et. P. Surer, Hachette.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH

SEMESTER VI

6th SEMSETER-: HISTORY OF LITERATURE, POETRY &VIVA-VOCE

Max. Marks	: 100
Theory	: 70 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours
Viva-Voce	: 20 Marks

History of literature 19th-20thCentury:

Introduction to the History of French Literature 19th – 20th century.
Five questions of 8 marks each based on History of French Literature 40 Marks

Poetry: 30 Marks

Explanation, resume, central idea, critical appreciation of the poems

1. Les feuilles mortes (Jacques Prévert)
2. Chant d'automne (Baudelaire)
3. L'homme et la mer (Baudelaire)
4. Paysage(Baudelaire)
5. L'albatros (Baudelaire)

Viva-Voce 20 Marks

1. Dictation of an unseen passage of about 200 words. 10 Marks
2. Oral questions based on the dictation passage and also general questions 10 Marks

Note: Questions in all the papers shall be asked and answered in French only.

For the information of private candidates:

1 Viva is compulsory

2.The theory paper would be proportionately marked out of 80 as there is no internal assessment.

HINDI
(B.A. HONS. 3rd YEAR 5th SEMESTER 2017)

PAPER-III (A)

तृतीय पाठ्यचर्या

पूर्णांक – 90 + 10 = 100

समय – तीन घंटे

1. **कहानियाँ : आधार चयन–भीष्म साहनी, आधार पब्लिकेशन, पंचकूला ।**
2. **संस्मरण : अतीत के चलचित्र – महादेवी वर्मा, राधकृष्ण प्रकाशन, नई दिल्ली ।**

(क) प्रस्तुत दोनों कृतियों में से 10/10 अंकों के 4 व्याख्यांश पूछे जाएंगे । छात्रों को केवल दो की संदर्भ एवं काव्य–सौन्दय सहित व्याख्या करनी होगी । 10+10=20

(ख) दोनों कृतियों में से 4 समीक्षात्मक प्रश्न पूछे जाएंगे । जिनमें से छात्रों को 15–15 अंको के दो प्रश्नों के उत्तर देने होंगे । 15+15=30

(प्रत्येक कृति में से एक प्रश्न अवश्य करना होगा)

(चरित्र, मूल संवेदना, तात्त्विक समीक्षा, उद्देश्य, भाषा–शैली)

3. **काव्यशास्त्र** **अंक–30**

(क) शब्द शक्तियाँ – परिभाषा और उदाहरण

(ख) बिम्ब – परिभाषा एवं स्वरुप

(ग) रस – परिचय, प्रकार, लक्षण और उदाहरण

(घ) प्रतीक – परिभाषा एवं स्वरुप

खंड तीन से संबंध्ति चारों उपखंडों (क ख ग घ) में से कुल मिलाकर 20–20 अंकों के चार प्रश्न पूछे जाएंगे जिनमें से छात्रों को किन्हीं दो के उत्तर देने होंगे ।

4. **दो–दो अंकों के 5 वस्तुनिष्ठ प्रश्न करने होंगे ।**
   8 प्रश्न पूछे जाएंगे । 5x2=10

5. **आंतरिक मूल्यांकन –** **अंक–10**

सहायक पुस्तकें :

1 **अन्धा युग : एक विवेचन, डॉ0 हरीश्चन्द्र वर्मा. नव भारती शंकर प्रतिष्ठान, नई दिल्ली**

2 **हिन्दी कहानी अन्तरंग परिचय : रामदरश मिश्र, नेशनल पब्लिकेषन, नई दिल्ली ।**

3 **हिन्दी कहानी अपनी जुबानी : डॉ0 इन्द्रनाथ मदान, संभावना पब्लिकेशन, हापुड ।**

HINDI
(B.A. HONS. 3rd YEAR 6th SEMESTER 2018)

PAPER-IV (B)

चतुर्थ पाठ्यचर्या

पूर्णांक–90+10=100

समय – तीन घंटे

1. **काव्य–नाटक : एक कण्ठ विषयायी–दुष्यंत कुमार, लोकभारती**

   (क) इस कृति में से 10–10 अंकों के दो व्याख्यांश पूछे जाएंगे,

   इनमें से एक करना होगा ।

   (ख) इस कृति में से 16–16 अंकों के दो समीक्षात्मक प्रश्न पूछे जाएंगे,

   इनमें से एक करना होगा । अंक–26

2. **छंद : भुजंगप्रयात, मालिनी, मंदाक्रान्ता, शिखरिणी, अहीर**

   मनव, बरवै । अंक–20

3. **अंलकार : अन्योक्ति, तुल्योगिता, उल्लेख, व्याजस्तुति,**
   अनन्वय, विभावना अंक–20

(छात्रों को पाँच–पाँच अंकों के 4 छंदो और पाँच–पाँच अंकों के चार अलंकारों के लक्षण तथा उदाहरण लिखने होंगे । प्राश्निक को दुगना विकल्प देना होगा)

4. **भाषा : अंक–24**

   (i) हिन्दी की प्रमुख बोलियां–क्षेत्र और विशेषताएं
   विशेषतः ब्रज, अवधी का परिचय

(ii) **मानक हिन्दी की संरचना–शब्द संरचना, रूप–सरंचना**
वाक्य संरचना

(iii) **क. राजभाषा हिन्दी का परिचय तथा वर्तमानस्थिति ।**
ख. देवनागरी लिपि का अनुमोदित मानक रूप ।

विशेष : खंड 4 में से 15–15 अंकों के कुल चार प्रश्न पूछे जाएंगे । जिनमें से छात्रों को दो के उत्तर देने होंगे ।

5. आंतरिक मूल्यांकन : अंक–10

सहायक पुस्तकें :–

1. **अन्धा युग : पथ और प्रदर्शन, जयदेव तनेजा, वाणी प्रकाशन, नई दिल्ली ।**
2. **अन्धा युग और भारती के अन्य नाट्य प्रयोग : जयदेव तनेजा, नचिकेता प्रकाशन, नई दिल्ली ।**
3. **काव्य के तत्त्व : आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद ।**

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2017–18) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਪੰਜਵਾਂ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਕਾਵਿ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪ੍ਰਯੋਜਨ
2. ਕਾਵਿ ਦੀ ਆਤਮਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਨਿਰਧਾਰਨ
3. ਕਾਵਿ ਦੇ ਤੱਤ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

1. ਧੁਨੀ ਸੰਪ੍ਰਦਾਇ
2. ਰਸ ਸੰਪ੍ਰਦਾਇ
3. ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਚੋਣਵੇ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਮਾਲੋਚਨਾ ਦਾ ਆਰੰਭ
2. ਨਾਮਕਰਣ
3. ਕਾਵਿ ਦਾ ਲੱਛਣ ਤੇ ਸਰੂਪ
4. ਕਾਵਿ ਤੇ ਸਾਹਿਤ
5. ਕਾਵਿ ਦੇ ਪ੍ਰਯੋਜਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2017–18) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2017 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਛੇਵਾਂ

ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਉਦੇਸ਼ ਅਤੇ ਖੇਤਰ
2. ਪੰਜਾਬੀ ਆਲੋਚਨਾ – ਆਰੰਭ ਤੇ ਵਿਕਾਸ
3. ਕਾਵਿ ਟਿੱਪਣੀਆਂ ਤੇ ਟੀਕਾਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਬਾਵਾ ਬੁੱਧ ਸਿੰਘ, ਕਿਸ਼ਨ ਸਿੰਘ, ਅਤਰ ਸਿੰਘ, ਹਰਿਭਜਨ ਸਿੰਘ।

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸਾਹਿਤਿਆਰਥ – ਸੰਤ ਸਿੰਘ ਸੇਖੋ (ਪੰਜ ਚੋਣਵੇ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਪੁਰਾਤਨ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
2. ਆਧੁਨਿਕ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
3. ਅਧਿਆਤਮਿਕ ਕਵਿਤਾ
4. ਕਵਿਤਾ ਤੇ ਸਮਾਜਕ ਆਲੋਚਨਾ
5. ਕਵਿਤਾ ਤੇ ਵਿਗਿਆਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2017–18) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ – ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਸੱਤਵਾਂ

ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਪ੍ਰਯੋਜਨ
2. ਅਨੁਕਰਨ, ਵਿਰੇਚਨ ਅਤੇ ਉੱਦਾਤ
3. ਤ੍ਰਾਸਦੀ/ਦੁਖਾਂਤ : ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪਲੈਟੋ, ਅਰਸਤੂ, ਲੌਂਜਾਈਨਸ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ

(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਸ਼ਾਸਤ੍ਰ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ ਤੇ ਜੀਵਨ
2. ਸਾਹਿਤ ਤੇ ਸਮਾਜ
3. ਸਾਹਿਤ ਤੇ ਵਿਅਕਤੀ
4. ਵਾਰਤਕ ਕਲਾ
5. ਨਿਬੰਧ ਤੇ ਸ਼ੈਲੀ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2017–18) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ–ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਅੱਠਵਾਂ

ਪੱਛਮੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ : ਉਦੇਸ਼ ਤੇ ਖੇਤਰ
2. ਪੱਛਮੀ ਆਲੋਚਨਾ : ਪ੍ਰਮੁੱਖ ਸਥਾਪਨਾਵਾਂ
3. ਵਿਚਾਰਧਾਰਾ ਤੇ ਸਾਹਿਤ, ਅਜਨਬੀਕਰਨ ਤੇ ਸਾਹਿਤਕ ਪਾਠ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮਾਰਕਸਵਾਦ, ਰੂਪਵਾਦ, ਮਨੋਵਿਸ਼ਲੇਸ਼ਣ, ਸੰਰਚਨਾਵਾਦ : ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਟੀ ਆਰ਼ ਵਿਨੋਦ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਆਲੋਚਨਾ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ (ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਾਰਜ ਤੇ ਕਰਤੱਵ)
2. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਚਾਰ
3. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਤਿਬੱਧਤਾ
4. ਸਾਹਿਤ ਅਤੇ ਸੁਤੰਤਰਤਾ
5. ਸਾਹਿਤ ਅਤੇ ਚਿਤੰਨ

(ਅੰਕ : 15)

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URDU

SEMESTER V

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- I Novelette

Unit-I

Novelette-‘ Dilruba’ Ka tanqidi Jayeza 25 marks

Unit-II

Plot aur Character 20 marks

Unit-III

‘Agle Janam Mohe Bitiya na Kijo’ ka tanqidi jayeza 25 marks

Unit –IV

Plot aur character 20 marks

Books Prescribed:-

1. ‘ Char Novelette’by Qurrat-ul-ain Hyder,Educational Book House,Aligarh.
2. ‘Beesveen Sadi mein Urdu Novel’ by Dr. Usuf Sarmast, Education Book House, Aligarh.

URDU

SEMESTER VI

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- II Novelette

Unit-I

Ismat Chughtai Ka Novelette 'Ziddi' Ka Plot 25 marks

Unit-II

Character 20 marks

Unit-III

Critical notes on Ismat Chughtai ki novel nigari ki khususiaat 25 marks

Unit –IV

Ismat Chughtai ki life history 20 marks

Books Prescribed:-

1. Novelette'Ziddi' by Ismat Chughtai,Education Book House, Aligarh
2. 'Beesveen Sadi mein Urdu Novel'by Dr. Usuf Sarmast, Education Book House, Aligarh.

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GERMAN

SEMESTER V

Summary

Max. Marks: 100 marks (Total)
Paper-1 (Theory): 90 marks
Internal Assessment: 10 marks

Paper – 1 (Theory): 90 marks (Total)
Time: 3 hours
Note: Use of dictionary is allowed

i. Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:

i. Aufklärung

ii. Sturm und Drang.

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Geschichte der deutschen Dichtung, Fricke/Klotz.

ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

GERMAN

Summary

Max. Marks: 100 marks (Total)
Paper-2 (Theory): 90 marks
Internal Assessment: 10 marks

Paper - 2 Essay and Translation (Theory): 90 marks

Time: 3 hours
Note: Use of dictionary is allowed

i. Translation of an unseen text/s from German into English : 50 marks

ii. Translation of an unseen text/s from English into German : 20 marks

iii. Essay writing in German (about 250 words) : 20 marks

i. Länder und Leute

ii. Ausbildung und Berufswege (Indien / Deutschland)

iii. Politik (Indien / Deutschland / Europa / Welt)

iv. Umzug und Einrichtung

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:
1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch by Hartmut Aufderstraße a.o.

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GERMAN

SEMESTER VI

Summary

Max. Marks: 100 marks (Total)
Written Paper (Theory): 90 marks
Internal Assessment: 10 marks

Written Paper (Theory): 90 marks (Total)

Time: 3 hours
Note: Use of dictionary is allowed

Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:
i. Klassik
ii. Romantik

Internal Assessment : 10 marks (Total)
- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:
i. Geschichte der deutschen Dichtung, Fricke/Klotz.
ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:
i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

Viva-voce (Oral exam)

Max. Marks : 100 marks (Total)

i. Reading, comprehension (question/answers) of an unseen text : 40 marks
ii. To speak on one of the given topics : 30 marks
iii. General conversation in German : 30 marks

Suggestions for preparation:
i. Magazine (Der Spiegel), Internet websites, Information on German-speaking countries etc.

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DEFENCE & STRATEGIC STUDIES
SEMESTER - V
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-18

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Paper : Area Studies China-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hrs.

Total Teaching Periods: 75

SECTION-I

1. Military Geography of China : Location, size and strategic importance.
2. Economic and Industrial resources (in brief).
3. Population, composition and characteristics of major ethnic groups.

SECTION-II

1. History of China in brief from the CH'IN to Manchus Dynasty.
2. Nationalist Revolution in China under Dr. Sun Yet Sen : Events and effects.

SECTION-III

1. Rise of Chiang Kai Shek.
2. The Nanking Government of China, long march in China.
3. The Civil War in brief.

SECTION-IV

1. Party-Army Relationship.
2. Communist party and its relationship with the Armed Forces.
3. Higher Defence Organisation.
4. Cultural Revolution.

BOOKS RECOMMENDED :

1.	Balance, Edger O.	:	The Red Army of China, Russell Square, London.
2.	Chatterji, B.R.	:	Modern China –A Short History, Meenakshi Printing, Meerut.
3.	Encyclopaedia of Britannica.		
4.	Gupta, R.S.	:	History of Modern China, Sterling Pub.
5.	Kapur, Harish	:	China in World Politics, Div. Pub., N.D.
6.	Liu, F.F.	:	A Military History of Modern China, Princeton Uni. Press.
7.	Mao Tse Tung	:	Communist Rule in China.
8.	Mc. Aleavy, Henry	:	The Modern History of China.
9.	Mitchison	:	Chinese Revolution.
10.	Nung Chen Li	:	The Political History of China, Princeton Uni. Press.
11.	Pelissier Roger	:	The Awakening of China, Secker and Warturg, London.
12.	Tregear, T.R.	:	A Geography of China, University of London.
13.	Wilson Dick	:	A Quarter of Mankind, Weidenfeld and Micholson Olson, London.

DEFENCE & STRATEGIC STUDIES
SEMESTER - VI
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-18

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Max. Marks : 100
Theory : 90 Marks
Int. Ass. : 10 Marks
Time : 3hrs

Total Teaching Periods: 75

Paper : Area Studies China-II

SECTION- I

SINO-INDIAN WAR (1962)

1. Events Leading to the war.
2. Operation in brief.
3. Lessions learnt

SECTION- II

1. Determinants of Chinese Foreign Policy.
2. China's Relations with India.
3. China's Relations with Pakistan and its impact on India.

SECTION–III

1. China's Relations with other neighbouring countries.
2. China's Relations with the U.S.A.
3. China's Relations with Russia.

SECTION-IV

1. Defence Potential of China.
2. China's Modernization Program.
3. China's Nuclear Weapon Development.

Books Recommended:

1. Dalvi, J.P. : Himalyan Blunder, Thackei' and Co., Bombay.
2. Griffith Samoul, B. : The Chinese People's Liberation Anny, Army Pub., N.D.
3. Kapur, Harish : China in World Politics, Div. Pub., N.D.
4. Mao TsiTung : CoIn;m~ist Rule ~Chin~. .
5. Sharma, B.L. : The Paklstan-'-Chma AXIS, Asia Pub., B~mbay.
6. Sinh~; K.K. : Problems of Defence of South and East Asia, Rawat Pub., Jaipur.
7. Tr~er N. Frank and : Twentieth Appraisal Year, Weidenfeld and Nicolson, London, William Genderson
8. Cassell & Company : Guerilla Warfare-Mac Tse- Tung & Guevera, Red Lion Sq.,London.

Journals: -

1. RAUSEN DATA : Problem of Communism.
2. Institute of Defence Studies & Analysis (India)
   i. Strategic Analysis.
   ii. Strategic Digest.
3. The China Quarterly.
4. The Institute of Strategic Studies, London. : Military Balance, IISS London.

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HISTORY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-18

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

SEMESTER V

Any one paper from the following:

(i) History of China

OR

(ii) History of Russia

(i) HISTORY OF CHINA:

Max. Marks:	**100**
Theory:	**90 Marks**
Internal Assessment:	**10 Marks**
Time	**3 hours**

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

CHINA IN THE 18TH CENTURY

1. Political and Economic Institutions
2. Social and Intellectual Conditions
3. Foreign Relations

UNIT-II

'OPENING' OF CHINA AND REBELLIONS

4. Canton Trade System, Opium Wars, Treaty Settlements
5. Taiping Revolution
6. Reform Movement of 1898

UNIT-III

REVOLUTION AND REFORM

7. Boxer Rebellion 1900
8. Intellectual, Social and Economic Change
9. Rise of Sun Yat Sen and Revolution

UNIT-IV

RISE OF THE REPUBLIC

10. Intellectual Revolution and National Unification
11. National Government 1928-37
12. Chinese People's Republic 1945-49

Recommended Readings:

1. Chesneaux, Jean Francoise Le : *China : From the Opium Wars to 1911 Revolution Vol.I.* Delhi : Khosla, 1978.
2. Hsu Immanuel : C.Y., *The Rise of Modern China*, New York : Oxford University Press, 1970.
3. Vinacke, Harold M. : *A History of the Far East in Modern Times*, New York : Appleton Century Crafts, 1961 (6th edn.).
4. Clyde, Paul Hibbert, : *The Far East : A History of the Impact of the West on Eastern Asia*, Englewood Cliffs, N.J. Prentice Hall : 1958 (3rd edn.).

(ii) HISTORY OF RUSSIA:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

1. *Liberalism and Reaction :* Alexander I; Nicholas I.
2. *Modernisation of Russia :* Alexander II; Alexander III & Nicholas II.

UNIT-II

3. *Russia and the Far East :* Interventions in China, Mongolia and Manchuria.

4. *Background of Russian Revolution 1905-1917 :* Revolution of 1905; Russia on the eve of the Revolution of 1917 – Polity, Society, Economy; Lenin's Contribution to the Revolution.

UNIT-III

5. *Causes of the Russian Revolution and its Aftermath :* The February Revolution and the Provisional Government, the Bolshevik (October Revolution), its impact on Russia and the World.

6. *Civil War :* Russian withdrawal from First World War; Peace of Brest Litovisk; Allied Intervention.

UNIT-IV

7. *The Soviet Economy :* War Communism; New Economic Policy and its impact.

8. *Planned Economy :* Weaning from the New Economic Policy and the First Five Year Plan.

Recommended Readings :

1. Barrington Moore (Jr.) : *The Social Origins of Dictatorship and Democracy.*
2. Paul Kennedy : *The Rise & Fall of Great Powers,* Fontana Press London, 1988.
3. Lionel Kochan : *The Making of Modern Russia,* Penguin Books, 1962.
4. Basil, Dymtrystyn : *History of Russia,* Prentice Hall, New Delhi, 1977.
5. E.H. Carr : *The Bolshevik Revolution,* Penguin Books Ltd., Victoria, 1971 (Reprint).
6. M.T. Florinsky : *Russia : A Short History,* Macmillan, London, 1971 (2nd ed.)

HISTORY

SEMESTER VI

Any one paper from the following :

(iii) Social Origins of Right And Left Wing Dictatorship Of Modern Times
OR
(iv) USA and the World c.1800-1960's

(iii) SOCIAL ORIGINS OF RIGHT AND LEFT WING DICTATORSHIP IN MODERN TIMES:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I: China

1. The Collapse of Imperial System, the emergence of War lords; the Kuomintang interlude; efforts at democracy and Capitalism.
2. The Peasant rebellions; Communist Revolutions; success against the Kuomintang

UNIT II: Russia

3. The Internal Collapse of the Tsarist Regime; Revolution of 1917- Feb/ March and October
4. The Establishment of a Communist Government; Forced industrialization and Collective Agriculture; Stalinist Totalitarianism.

UNIT III: Italy

5. Italy's problems with the Capitalist powers; Failure of Italian Democracy in Economic, Social and Foreign policy
6. The Fascist alternative: Ideology and the corporative state

UNIT IV: Germany

7. Germany's rise as a capitalist powers; Weimar republic and its failure.
8. The fascist stresses with western Europe; Nazi totalitarian programme.

Essential readings:

Barrington Moore : *Social Origins of Dictatorship and Democracy*, Penguin/Peregrine 1977. (reprint)

Reference Reading

Hannah Arendt : *The Origin of Totalitarianism*, Harcourt Brace, New York. 1951

F. Chabad : *A History of Italian Fascism* (Tr. Muricl Grindard) Weidenfeld and Nicolson, London 1961.

(iv) USA AND THE WORLD c.1800-1960's:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I

1. US Foreign Policy 1789-97-Response to French; issues with Britain; Jay's Treaty 1799; Pinckney's Treaty 1797; Peace with France
2. Diplomatic Achievements 1800-1820's-Louisiana Purchase; Settlement with Britain; Acquisition of Florida; non colonization of Alaska; liberation of Latin America; Monroe Doctrine
3. Industrial Revolution in America-expansion of transportation; manufacturing; foreign trade and shipping

UNIT II

4. Expansion to the West in the 1830's –Early settlement in the West; Texas question; migration to Oregon
5. Manifest Destiny –Annexation of Texas; Oregon Treaty; Relations with Mexico; conquest of California
6. USA as a World Power-Expansion in Pacific region; Dispute with Venezuela; Results of War with Spain 1898; Policy in Caribbean and Mexico; Open Door Policy in South East Asia

UNIT III

7. USA and World War I-US attitude to war, entry into the war; 14 point programme, role in Paris peace conference 1919
8. Foreign Policy 1920,s-30's- Washington Treaties, Locarno Treaty, Relations with Mexico, Change in 'Big Stick' Policy, Good Neighbour policy, reaction to Chinese situation
9. USA and World War II- US attitude, US aid to War and War Production, Pearl Harbour

UNIT IV

10. New World Order-US Peace Programme and United Nations, Relations with Soviet Union and Containment, Pan, American Conference 1945, post War Europe
11. US in East Asia-American response to China, Japan, Korea, Vietnam
12. US in Europe and West Asia-US and NATO, issues with Egypt, support to Israelis, Eisenhower Doctrine

Recommended readings:

1. Henry Bamford Parkes : *The United States of America: A History*, 1964 (Reprint), Scientific Book Agency, Calcutta, 1976.
2. Richard Current & Others : *History of United States: A Survey,* Alfred A. Knopf, New York,1965.
3. Julius W. Pratt : *A History of United States Foreign Policy,* Prentice Hall (Second Edition), New Jersey, 1965.
4. Allen, G.C., : *Japan's Economic Recovery*, London Oxford University Press, 1958 (Reprint 1960).
5. Beckman, George H : *The Modernization of China and Japan*, New York : Harper and Row, 1962.

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POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

Outlines of Tests, Syllabi and Courses of Reading

V SEMESTER : Option (i) International Relations since 1945.
OR
Option (ii) Modern Indian Political Thought.
OR
Option (iii) Women and Political Process.

VI SEMESTER : Option (i) Research Methods in (Political Science) Social Sciences.
OR
Option (ii) Modern Political Ideologies
OR
Option (iii) Western Political Thought.

V SEMESTER : Option (i) — INTERNATIONAL RELATIONS SINCE 1945

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims at mapping out some of the major transformations that have occurred in the realm of International Relations since 1945.

UNIT-I Post World War-II International Relations :

(a) Post War World Order.
(b) Emergence of Super Powers.

UNIT-II Democracy and Rise of IIIrd World :

(a) Non-Alignment: Meaning and Relevance.
(b) SAARC, European Union.

UNIT-III **Transformation in Post World War II International Relations :**

(a) Decline of Bipolarity.
(b) Nature of Emerging World Order.

UNIT-IV **New Global Scenario and International Relations:**

(a) Demand for New International Economic Order (NIEO)
(b) Issue of Global Terrorism.

Suggested Readings :

1. Peter Calvocoressi : *World Politics Since 1945*, London : Longman, 1945.
2. Budhraj, V.S. : *International Relations After Second World War* (in Hindi), Chandigarh, Haryana Sahitya Academy, 2000.
3. Keswani, K. B. : *International Relations in Modern World* (1900-1988), Bombay, Himalaya Publishing House, 1994.
4. Baylis and Steve Smith : *The Globalization of World Politics – An Introduction to International Relations*, Oxford, Oxford University Press, 2001.
5. Alan C. Lamborn and Joseph Lepgold : *World Politics into the Twenty First Century : Unique Context, Enduring Patterns*, New Jersey, Prentice Hall, 2003.

References :

1. Paul Kennedy : *The Rise and Fall of Great Power*, Fontana Press.
2. Henry Kissinger : *Diplomacy*, London, Simon & Soluster, 1994.
3. Paul R. Viotti & Mark V. Kauppi : *International Relations and World Politics : Security, Economy*, Identity Third Edition Pearson Education, 2007.
4. John Baylis and Steve Smith : *The Globalisation of World Politics* : An Introduction to International Relations, Second Edition, OUP, 2001.

OR

V SEMESTER : Option (ii) — MODERN INDIAN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory

question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims at creating understanding about the evolution of political thought in modern India with special reference to the stated philosophers.

UNIT-I **Sir Syed Ahmed Khan :**

(a) As a Nationalist.
(b) Education.
(c) Muslim Nationalism-As a Communalist.

UNIT-II **M.K. Gandhi :**

(a) Satyagraha.
(b) Swaraj.
(c) Non-Violence.

UNIT-III **M.N. Roy :**

(a) Radical Humanism - critique of Marxism
(b) New Humanism

UNIT-IV **B.R. Ambedkar** :

(a) Annihilation of Caste
(b) Social Justice
(c) Democracy : Political and Social

Recommended Readings:-

1. Thomas Pantham & Deutsch (ed.) : *Political Thought in Modern India*, New Delhi, Sage, 1986.
2. Majumdar, B.B. : *History of Indian Social and Political Ideas,* Calcutta: Bookland, 1967.

References :

1. Parekh, Bhikhu : *Colonialism, Tradition, Reform : Analysis of Gandhi's Political Discourse*, New Delhi, Sage, 1989.
2. Iyer, Raghvan (ed.) : *Moral and Political Thought of Mahatma Gandhi*, New York, Oxford, 1973.
3. Appadorai, A : *Indian Political Thinkers in the Twentieth Century*, Delhi, Oxford, 1972.
4. Jatava, D.R. : *The Political Philosophy of B.R. Ambedkar*, Delhi; Arya Phoenix, 1965.
5. Hussain, M. Hadi, Syed Ahmed Khan : *Pioneer of Indian Resurgence Lahore*, Institute of Islamic Culture, 1970.
6. Imam, Zafar, : *Muslims in India*, New Delhi : Orient Longman, 1975.

7.	Chattarjee, Partha	:	*Nationalist Thought and the Colonial World, Delhi* : OUP, 1986.
8.	Lyer, Raghavan	:	*The Moral and Political Thought of Mahatma Gandhi*, Delhi : OUP, 1973.
9.	Pantham, Thomas, Parekh,	:	*Gandhi's Political Philosophy*, London, Macmillan, 1989, Bhikhu.
10.	Ghatak, B.K. (ed.)	:	*Dr. Ambedkar's Thought*, New Delhi : APH, 1997.
11.	Keer, Dhanajayay, Dr. Ambedkar	:	*Life and Mission, Bombay* : Popular Parkashan, 1964.
12.	Zelliot, Eleanor	:	*The Social and Political Thought of B.R. Ambedkar in Pantham and Deutsch*, 1986.
13.	Roy, M.N.	:	*New Humanism,* Calcutta : Renaissance, 1953.
14.	Roy, M.N.	:	*The Philosophy and Practice of Radical Humanism*, New Delhi : Radical Humanist Association, 1970.
15.	Roy, Samaren, M.N. Roy	:	*A Political Biography*, Hyderabad : Orient Longman, 1997.
16.	Ray, Sibnarayan (ed.), M.N. Roy	:	*Philosopher Revolutionary*, Delhi, Ajanta, 1995.
17.	Seth, Sanjay	:	*Marxist Theory and Nationalist Politics, The Case of Colonical India*, New Delhi : Sage, 1995.
18.	B.R. Ambedkar (Author) and Arundhati Roy (Introduction)	:	*Annihilation of Caste: The Annoted Critcial Edition,* Navayana, Delhi, 2014.
19.	Chitkara, MG	:	*Dr. Ambedkar and Social Justice,* APH Publishing Corporation, 2002.
20.	Christophe Jaffrelot	:	*Dr. Ambedkar and Untouchability: Analysing and Fighting Caste,* Columbia University Press, 2015.
21.	Gail Omvedt	:	Ambedkar: Towards An Enlightened India, Penguin India, 2008.

OR

V SEMESTER : Option (iii) — WOMEN AND POLITICAL PROCESS

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims to introduce students to the key approaches of Feminist thought contemporary debates concerning women and politics in India. It will include an analysis of the Indian State, the role of women's movement and the major feminist issues in contemporary Indian politics.

UNIT-I **Theoretical Approaches to Women Studies :**

(a) Liberal Feminism.

(b) Marxist / Socialist Feminism .

UNIT-II **Rise of Women's Movement, its role in Contemporary Societies :**

Historical Legacy :

(a) French Revolution, Civil Rights and Suffrage Movements in the West.

(b) Role and Contribution of Women in Indian National Movement.

UNIT-III **Women and Society in India :**

(a) Evolution of Women's position in India – an historical overview-

- (i) Vedic period
- (ii) Medieval Period (Post Vedic Period)
- (iii) Modern Period

(b) Social Position:

- (i) Demographic pattern- Sex Ratio.
- (ii) Legal, Political and Property Rights.
- (iii) Access to Education.

UNIT-IV **Women's Movement in Contemporary India:**

(a) Women Movement in India- Women Movements against Dowry & Rape

(b) Women and Political Participation in India-Status & Barriers, 73rd & 74th Amendment.

Recommended Readings :

1. Millet, Kate, *Sexual Politics*, New York, Doubleday, 1970.
2. Michele Barrett, *Women's Oppression Today*, London, Verso, 1980.
3. Lenin, V.I., *On the Emancipation of Women*, Moscow, Progress, 1981.
4. Eisenstein, Zillah, *Capitalist Patriarchy and the Case for Socialist Feminism*, New York, Longman, 1981 (also New York, Monthly Review Press, 1979).
5. Boserup, Easter, *Women's Role in Economic Development*, London, George Allen & Unwin, 1975.
6. Altback, E.M. (Ed.), *From Feminism to Liberation*, Cambridge, Massachusetts, Schenkman Hare Revised Ed., 1980.
7. Jayawardhane, Kumari (Ed.), *Feminism and Nationalism in the Third World*, New Delhi, 1987.

8. Phadnis, Urmilla and Malani Indira eds., *Women of the World : Illusion and Reality*, New Delhi, Vikas, 1978.

9. Desai, N., *Women in Modern India*, Bombay, Vora & Co., 1977.

10. Nanda, B.R. ed., *Indian Women from Purdah to Modernity*, New Delhi, Vikas, 1976.

11. *I.C.S.S.R., Status of Women's Committee Report*, New Delhi, ICSSR, 1975.

12. Mazumdar, Vina, *Towards Equality*, ICSSR, Delhi.

13. Desai, Neera and Krishanaraj, M., *Women and Society in India*, Delhi, Ajanta, 1987.

14. Chakaravarty, Shanti, *Rural Women's Claim to Priority*, New Delhi, C.W.D.S., 1986.

15. "Women's Struggles and Movement", Paper of Third National Conference, Chandigarh, IAWS.

16. Kaushik, S. (ed.), *Women's Oppression, Patterns and Perspective*, Vikas, New Delhi, 1984.

17. Kumar, Radha, *A History of Doing*, Kali Publications, New Delhi, 2006.

18. Gandhi, Nandita & Shah, Nandita, *The Issues at State*, New Delhi, Kali Publication, 1992.

19. Menon, Nivedita (ed.), *Gender & Politics in India*, New Delhi, Oxford University Press, 1999.

20. Rao, Anupama (ed.), *Gender & Caste*, Delhi, Sage Publications, 2005.

POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017-2018

SEMESTER- VI

VI SEMESTER : Option (i) — RESEARCH METHODS IN (POLITICAL SCIENCE) SOCIAL SCIENCES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper endeavors to introduce the students about the tools of research methodology into social sciences. The paper would enable the students to take up research after Master's degree.

UNIT-I Research in Social Science with reference to Political Science—Definition, Nature and Limitations.

UNIT-II Methods – Traditional and Scientific, Survey Research Methods : Observation, Interviews, Questionnaire, Content–Analysis.

UNIT-III
(a) Sample and Sampling Techniques.
(b) Measures of Central Tendency—Mean, Mode and Median.
(c) Data Processing—Coding Tabulation and Analysis.

UNIT-IV Research Design : Formulation of Research problem, Hypotheses, Objective, relevance of study, Literature Review, Methodology Report Writing.

Suggested Readings :

1. Goode and Hatt, *Methods in Social Research*, Auddond (McGraw - Hill), New York, 1952.
2. Pauline Yong, *Scientific Survey and Research*, New Delhi, 1968.
3. Arnold Brecht, *Political Theory*, Times of India Press, 1970.
4. Michael S. Lewis-Beck, ed., *The Encyclopedia of Social Science Research Methods*, New Delhi, Sage, 2004.
5. Keith F. Punch, *Introduction to Social Research*, London, Sage, 2005.

6. Shapiro, Ian, Rogers M. Smith and Tarek E. Masoud, *Problems and Methods in the Study of Politics, Cambridge* : Cambridge University Press, 2004.

7. Van Evera, Stephen, *Guide to Methods for Students of Political Science*, Ithaca : Cornell University Press, 1997.

8. Goertz, Gary, *Social Science Concepts : A User's Guide*, Princeton : Princeton University Press, 2006.

9. Creswell, John W., *Research Design : Qualitative, Quantitative, and Mixed Method Approaches :* Thousand Oaks, Calif : Sage Publications, 2003.

OR

VI SEMESTER : Option (ii) : MODERN POLITICAL IDEOLOGIES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper refers to the basic tenets of modern political ideologies.

UNIT-I **Liberalism :**
a) Classical and Modern Liberalism.
b) Neo Liberalism.

UNIT-II **Socialism :**
a) Marxian Socialism.
b) Democratic Socialism

UNIT-III
a) Anarchism.
b) Fascism

UNIT-IV **Gandhism**
a) Gandhi's Idea of State:
b) Social and Political Ideas of Gandhi.

Suggested Readings :

1. Bandhyopadhya, J., *Political and Social Thought of Gandhi*, Bombay, 1969.
2. George Lichtheim, Marxism : An Historical and Critical Study, Routledge and Kegan Paul, London, 1962.
3. Noel O' Sullivan, Conservation, St. Martin's Press, New York, 1976.
4. Manning, D.J., Liberalism, St. Martin's Press, New York, 1976.

OR

VI SEMESTER : Option (iii) — WESTERN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims to introduce to the students the major themes of Western Political Thought. This will be done by taking an in-depth study of the key thinkers of this tradition.

UNIT-I Hobbes.
- a) Nature of Man, State of Nature, Natural Laws.
- b) Social Contract.
- c) Individualism Vs. Absolutism.

UNIT-II Locke.
- a) Nature of Man, State of Nature, Natural Rights.
- b) Social Contract.
- c) Contribution of Locke to Liberalism.

UNIT-III Rousseau.
- a) State of Nature, Natural Man.
- b) Social Contract.
- c) Theory of General Will.

UNIT-IV Karl Marx.
- a) Historical Materialism, Economic Determinism.
- b) Theory of Surplus Value.
- c) Class Struggle.

Recommended Readings :

1. Sabine, G.H., *A History of Political Theory*, Bombay : Oxford & IBH, 1973.

2. Dunning, W.A., *A History of Political Theories*, 3 Vols., Allahabad : Central, 1973.

3. Sait, E.M. (ed.), *Masters of Political Thought*, 3 Vols., London : George and Harap, 1947.

4. William Ebenstien, *Great Political Thinkers—Plato to the Present*, OUP : New Delhi, 1966.

5. Jen Pike, Nigel Waaburton & Derek Matravers, *Reading Political Philosophy, Machiavelli to Mill*, London, Routledge, Open University, 2000.

6. Andrew Hacker, *Political Theory*, London, OUP, 1961.

7. David Boucher & Paul Kelly, *Political Thinkers, From Socrates to the Present*, Paperback U.K., 2003.

8. David Boucher & Paul Kelly, *The Social Contract*—from Hobbes to Rawls, Paperback, U.K., 1994.

References :

1. Rapheal, D.D., Hobbes, *Morals and Politics*, London, George Allen, 1978.

2. David Macdellan, *Marx*, London, Fontana Modern Masters Series, 1983.

3. Plamenatz, J., *Man and Society*, 2 Vols., New York, Longman, 1984.

4. Hall, J.C., Rousseau : *An Introduction to His Political Philosophy*, London, MacMillan, 1973.

5. John, Dunn, *The Political Thought of John Locke*, Cambridge, Cambridge University Press, 1969.

6. Roger, D. Masters, *The Political Philosophy of Rousseau*, Princeton, Princeton University Press, 1968.

7. Shlomo, Avineri, *The Social and Political Thought of Karl Marx*, New Delhi, S. Chand, 1968.

8. Jon Elster, *Making Sense of Marx*, Cambridge, Cambridge University Press, 1985.

9. Ernest Cassirer, *The Question of Jean Jacques Rousseau*, New Haven and London, Yale University Press, 1989.

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ECONOMICS

SEMESTER V

The candidates are required to study **one of the** following papers:

I Money and Banking.

II International Economics.

III Introduction to Econometrics.

Paper-I : MONEY AND BANKING

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective: Money and Banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude channels- market, non market, institutes and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutes in the process of growth and development. Accordingly, the paper on 'Economics of Money and banking' is an optimal interaction of monetary theory, banking and non- banking financial institutes, which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

(i) *The syllabus has been divided into four units.*

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions.It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two**questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

UNIT-I

Definition of Money, Money and Near Money Assets.
Supply of Money:Components, Determinants- High Powered Money and Money Multiplier, Measures of Supply of Money in India.

UNIT-II

Demand for Money: Classical Theory, Keynes Liquidity Preference Theory, Friedman's Restatement of Quantity Theory of Money.
Central Banking: Main Functions, Techniques of Monetary Management, Monetary Policy of Reserve Bank of India.

UNIT-III

Commercial Banking: Main Functions, Major Developments and Reforms in Indian Banking System since 1991.
Non-Banking Financial Institutions (NBFIs) – Role and Structure NBFIs in India.

UNIT-IV

International Monetary Fund- Features and Role.
World Bank: Features and Role.
Asian Development Bank: Features and Role.

Recommended Readings:

1. Diulio A. Eugene (latest Edition) : Theory and Problems of Money and Banking, International Edition (Schaum's Outline Series)
2. Gupta, S. B (2004) : Monetary Planning in India, S. Chand, New Delhi.
3. Khanna, Perminder (2005) : Advanced Study in Money and Policy : Relevance in the Indian Economy, Atlantic Publishers, New Delhi
4. Kulkarni, G (1999) : Modern Monetary Theory, McMillan, New Delhi
5. Laidler, D. E. W (1977) : The Demand for Money : Theories and Evidence, Allied Publishers, New Delhi.
6. Bofinger Peter (2001) : Monetary Policy: Goals, Institutions, Strategy and Instrument, Oxford University Press.

Supplementary Readings:

1. Reserve Bank of India Publications- (Latest).
2. Government of India: Economic Survey (latest)

Paper-II: INTERNATIONAL ECONOMICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital- both short-term and long-term- at the global level. The contents of the paper spread over the different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both as the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought the students writing assignments, tutorials and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to beof answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Pure Theory of International Trade:Theories of Absolute Advantage, Comparative Advantage andOpportunity Costs. Heckscher-Ohlin Theory. Factor Price Equalisation. Gains from Trade, their Measurement and Distribution. Terms of Trade, Secular Deterioration Hypothesis.

UNIT-II

Commercial Policy:The Theory of Tariffs, Optimum and Effective Rate of Tariff, Inter-relationship betweenTrade, Aid and Economic Development. The Theory of Economic Integration among Nations; Forms of Economic Integration. The Theory of Customs Union.

UNIT-III

Balance of Payments, Exchange Rate and Trade Structures:The Process of Adjustment in the Balance ofPayments. The Concept of Foreign Trade Multiplier. Fixed Vs. Flexible Exchange Rates and their Relative Merits and Demerits. Structure of Trade, Trade between Developing and Developed Countries. Unequal Exchange and its Impact on Balance of Payments. Current Problems of Trade and Finance of Developing Countries. Role of Multinational Corporations in the Developing Countries.

UNIT-IV

International Monetary System:IMF and International Monetary System, Present International Monetary System, problems of International Liquidity. Proposals for International Monetary Reforms. New International Economic Order.

Recommended Readings :

1. Soderston , B. O. (1994) : International Economics, 2nd Edition, Macmillan Press, London,
2. Salvatore, Dominick (latest edition) : International Economics, John Wiley & Sons.
3. Krugman P R &ObstifeldMaurice(latest edition) : International Economics – Theory and Policy, Addison- wesley.
4. Ghuman , Ranjit Singh (latest edition) : Antar-RashtriyaArthVigiyan, (Punjabi Medium) Punjabi University, Patiala.

Supplementary Readings :

1. Kindleberger, C. P. (1987) : International Economics, Richard Irwin, Homes wood, Illinois, Indian Edition.
2. Sir RaiHarrod (Trans. Pritam Singh Gill) : Antar-RashtriyaArthShastar, Punjabi University, Patiala.

Paper-III: - INTRODUCTION TO ECONOMETRICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: Application of economic theory need a reasonable understanding of economic relationship andstatistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant application of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous models.

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, is so far as possible, would be selected from everyday life/experience. The feedback would be sough through the students writing assignments and written examinations.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition and Scope of Econometrics. The Methodology of Economic Research. Specification and Estimation of an Econometric Model.
Single Equation Models*:*Ordinary Least Squares: Estimation and Properties of the Estimators

UNIT-II

Testing of Hypothesis*:*Basic Concepts; Type I and Type II errors. Simple and Composite Hypothesis.t and F tests. Maximum Likelihood Estimation.

UNIT-III

The General Linear Regression Model in Matrix Form: Estimation and Properties of the Estimators.
Tests of Significance of Coefficients. Partial Correlation Coefficients.
Multicollinearity:Its Detection and Solution.
Heteroscedasticity: Its Detection and Solution.

UNIT-IV

Dummy Variables*:*The dummy Variable Trap. Interpretation of Slope and Intercept.
Lagged Variables*:*Uses in Economics. Estimation Problems, Koyck Transformation, Partial and Stock Adjustment Models.

Recommended Readings :

1. Gujarati, Damodar (2007) : Basic Econometrics, McGraw Hill, New Delhi.
2. Ohnson, J. (1977) : Econometrics Methods, 2nd Edition, McGraw Hill, New

Supplementary Readings :

1. Intrilligator, M. D. (1978) : Econometric Models and Applications, Prentice Hall
2. Kendall, M. G. & A. Sturat (eds.) : Advanced Theory of Statistics, Vols. I & II, Griffin and Co., London.
3. Maddala, G. S. (1977) : Econometrics, New Delhi, McGraw Hill.
4. Wallis, K. F. (1973) : Topics in Applied Econometrics, London, Bray Hills

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ECONOMICS
SEMESTER VI

The candidates are required to study **one of the** following papers:

IV Environmental Economics
V Economics of Labour
VI Public Finance

Paper-IV : Environmental Economics

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our resources by optimally allocating them for future use.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Introduction to Environmental Economics: Introduction; the Economy and the Environment: Inter-Linkages; First Two Laws of Thermodynamics.
Economic Efficiency and Market Failures: Market Solution and Efficiency; Market Failures; Problem of Externalities; Public goods and Public bads; Common Property Recourse; Non-convexities; Asymmetric Information.

UNIT-II

Economic of Pollution*:* Damage Functions and Abatement Cost Functions; Marginal Decision; Optimal Level of Pollution; Market Solutions and Government Actions; Economic Incentives and least-Cost Solution; Command and Control Policies.

UNIT-III

Valuing the Environment: Economic valuation of Environment Goods: Types of Environmental Values; Monetary Valuation Techniques; Non-Monetary Valuation Techniques; Comparing Methodologies. The Environmental Kuznets Curve

UNIT-IV

Cost-Benefit Analysis and the Environment: The Theory of Cost Benefit Analysis; Idea of Discounting and Choice of Discount Rate; Framework for Cost – Benefit Analysis; Discounting and Future Generation.
International Environmental Issue: Economics of Climate Change: Trade & Environment.

Economic Growth and Sustainable Development: Economic Growth and Development; the Environmental Kuznets Curve; Economics of Sustainable Development.

International Environmental Issues: Economics of Climate Change; Trade and the Environment.

Recommended Readings :

1. Goodstein, E.S. (2002) : Economics and the Environment (3rd ed.) Prentice Hall.
2. Hanley, N., Shogern, J.F and White, B (1977) : Environmental Economics in Theory and Practice, Macmillan
3. Sankar, U. (ed) James, A.J., M.N. : Environmental Economics, Oxford University Press, New Delhi.
4. Murty and Smita Mishra (2006) : Murty and Smita Mishra (1999), Economics of Water Pollution- The Indian Experience, Oxford University Press, New Delhi
5. Varian. Hal R., (2006) : Intermedate Micro-Economics- A Modern Approach, 7th ed., East-West Press.
6. Cherry, S.N. and Vyasual, Vinod (2000) : Environmental Management- an Indian Perspectives, Macmillan, New Delhi.

PAPER- V: ECONOMICS OF LABOUR

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

COURSE OBJECTIVE: Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing "joblessness", the importance of issues such as employment and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India. The time–tested method of imparting verbal instructions through lectures would be used

The objective of the course is to provide students with the basic economic tools needed to understand and analyze how earnings are determined, how labour markets work and how various government policies may affect labour market.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit I

Nature and Scope of Labour Economics, Nature and Characteristics of Labour Markets in Developing Countries like India.
Theories of Wages, Concept of Minimum Wage, Living Wage and Fair Wage in Theories and Practice.

Unit II

Wage Determination in various Sectors- Rural, Urban, Organized, Unorganized and Informal Sectors.

Poverty and Unemployment in Developing Countries, Unemployment: Concept, Types and Employment Policy particularly in India.

Unit III

Impact of Rationalization, Technological Change and Modernization on Employment in Organized Private Industry and Public Sector; Employment in Agriculture Sector; Women and Child labour.

Unit IV

Role and Functions of Trade Unions, Growth, Pattern and Structure of Trade Unions in India, Achievements of Labour Unions, Collective Bargaining.
Industrial Disputes: Causes of Industrial Disputes, Their Settlement and Prevention Mechanism.

BOOKS RECOMMENDED:

1.	Binswanger, H. P. & M. R. Rosenzweig (eds.) (1984)	:	Contractual Arrangements, Employment, and Wages in Rural Labour Markets in Asia, Yale University Press, New Haven.
2.	Datt, G. (1996)	:	Bargaining Power, Wages and Employment; An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3.	Deshpande, L. K., P. R. Brahmananda and EAG Robinson (eds.) (1983)	:	Employment Policy in a Developing Economy, Vols. I & II, Macmillan, London.
4.	Deshpande, L. K. and J. C. Sandesara (eds.) (1970)	:	Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
5.	Deshpande, S. G. Standing and L. K. Deshpande (1998)	:	Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
6.	Foster, A. D. & M. R. Rosenberg (1993)	:	Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank, Washington D C.
7.	Campbell, R. McConnell and Stanley, L. A. Brue and D. A. Macpherson (2010)	:	Contemporary Labour Economics, 8th Ed. McGraw Hill Book

SUPPLEMENTARY READINGS:

1.	Hauseman, S. (1991)	:	Industrial Restructuring with Job Security: The Case of European Steel Harvard University Press, Cambridge, Mass.
2.	Hicks, J. R. (1932)	:	The Theory of Wages, Clarendon Press, Oxford.
3.	Lester, R. A. (1964)	:	Economics of Labour (2nd edition), Macmillan, New York
4.	McConnell, C. R. & S. L. Brue (1986)	:	Contemporary Labour Economics, McGraw- Hill, New York.
5.	McCormick, B. & Smith (eds.) (1968)	:	The Labour Market, Penguin, Harmondsworth
6.	Tyagi, B.P	:	Labour Economics and Social Welfare, Jai Parkash Nath and Co. (Latest edition)
7.	Pant, S C(1965)	:	Indian Labour Problems,Chaitanya Publishing House, Allahabad

Paper-VI: PUBLIC FINANCE

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Objectives: Role and function of the Government in an economy have been changing with the passage of time. The term' Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income etc. there are vast array of fiscal institutions- tax system, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existing of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

The student would be evaluated at the end of each semester through subjective type questions/answer (both short and essay type). The scripts would be evaluated by the examiners having adequate graduate teaching experience in the paper/option concern.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Principle of Public Finance – Subjective and Objective Criteria.
Theory of Public Expenditure*:*Maximum Social Advantage, Theory of Social Goods: Distinction between
Public, Private and Merit Goods. Public Expenditure and Economic Growth. Effects of Public Expenditure on Production, Distribution, Social Over-head Capital, Stability and Innovation. Criteria of Public Expenditure.

UNIT-II

Public Revenue*:*Approaches of Equity in Taxation:Benefits principle Cost of Service Principle, Ability toPay Theory. Effects of Taxation. Analysis of Major Taxes – Income Tax, Expenditure Tax, Corporation Tax, Wealth Tax, Excise Duties, Sales Tax, and Custom Duties. The concept of Taxable Capacity. Taxation in a Developing Economy. Fiscal Incidence: Theories of Tax Shifting, Concepts of Incidence, Measurement of Incidence.

UNIT-III

Public Debt:Role of Public Debt. Different Forms of Public Debt. Burden of Public Debt, Redemption of Public Debt. Debt Management.
Budgetary Policy*:*Functional and Economic Classification of budgets and their Uses. PerformanceBudgets. Budget as an Instrument of Mobilization and Chanalization of Resources and Redistribution of Income and Wealth.

UNIT-IV

Balance and Unbalanced Budgets.
Fiscal Federalism*:*Principles of Federal Finance.
Development Finance*:*Functional Finance vs. Development Finance.
Mobilisation of Financial Resources for Planned Developments.

Suggested Readings:

1. Buchanan J.M. : Public Finance in the Demostic Process (Collected works of James M Buchanan), Library Fund, USA.
2. Musgrave, R. A. (1959) : Theory of Public Finance, McGraw- Hill Publishers.
3. Musgrave R A. & Musgrave P B (5th edition) : Public Finance in Theory and Practice, Mc Hill Publishers
4. Taylor P.E (1949) : The Economics of Public Finance, Macmillan Publishers, New York.

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SOCIOLOGY

SEMESTER V

Methods and Techniques of Social Research

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 =18 marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

The students will be introduced with basic methods and techniques in social research. The objective of this course is to familiarize the students with the basic elements of scientific method, various methods of data collection and social measurement.

Course Content :

UNIT-I

Scientific Method : Features; Concepts; Stages of social research; Hypothesis.

UNIT-II

*Sampling Technique: Meaning P*opulation and Census, Sampling frame
Types of Sampling: Probability: Simple random/stratified random/cluster/multi-stage. Non–Probability: Accidental/Quota/Purposive; Sampling Error.

UNIT-III

Techniques of Data Collection : Observation, Participant and Non-Participant Observation, Interview Schedule and Questionnaire (Structured/Unstructured); Case study method.

UNIT-IV

Measurement : Levels and Problems, Measures of Central Tendency: Mean, Mode, Median.

Essential Readings :

1.	*Sellltiz, Claire et.al*	*:*	*Research Methods in Social Relations (Revised ed.), New York: Henry Hold & Co. (latest edition).*
2.	*Goode, W.J. & Hatt, P.K. (2006)*	*:*	*Methods in Social Research, Delhi, Surjeet Publications*
3.	*Young, P.V.*	*:*	*Scientific Social Surveys and Research, New Delhi: Prentice Hall of India Private Ltd., (1988)*
4.	*Mukerjee, P.N.*	*:*	*Methodology on Social Research: Dilemmas and Perspectives, New Delhi: Sage, 2000.*

Further Readings :

1.	*Festinger, L. & Katz, D.*	*:*	*Research Methods in Behavioural Science, New York: Dryden Press, (1953)*
2.	*Lindzey, Gardner & Aronson*	*:*	*The Handbook of Social Psychology (2nd ed.), Addison: Wesley Pub. Comp.,(1968)*
3.	*Robson, Colin*	*:*	*Real World Research, Oxford: Blackwell, (2000)*
4.	*Bryman Alman, (2014)*	*:*	*Social Research Methods, New Delhi, Oxford University Press*
5.	*Neuman, W.L.,(2007)*	*:*	*Social Research Methods : Qualitative and Quantitative Approaches, Delhi, Pearson Education*

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SOCIOLOGY
SEMESTER VI

Option (i) Social Demography

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Option (i) Social Demography

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The course exposes students to various components of population growth, data sources and basic theoretical problems of population. Concepts of mortality and fertility are discussed in general and with reference to India in particular. Students are apprised of the latest Population Policy in India.

Course Content :

UNIT-I

Population : Definition, Scope, Nature, Sources of Population Data-Census and Vital Registration.

UNIT-II

Population Theories : Malthusian theory of Population; Biological: Theory of Density Principle and Diet Theory; Social Theories: Social Capillarity and Theory of Diffusion: Theory of Demographic Transition.

UNIT-III

Concepts of Mortality : Causes of Mortality, Infant Mortality, Mortality Rate in India.

Fertility : Concept of Fertility, Factors affecting Fertility–Biological, Socio-Cultural and Psychological Fertility in India.

UNIT-IV

Population Policy in India, Female Foeticide (reference to PNDT Act).

Essential Readings :

1.	*Bhende, Asha & Kanitkar, Tara,(2014)*	*:*	*Principles of Population (revised ed.), Mumbai Himalaya Publishing House.*
2.	*Bogue, Donald, J.*	*:*	*Principles of Demography, New York: John Willey,(1969)*
3.	*Nam, Charles, P.*	*:*	*Population and Society,(1968)*
4.	*Premi, M.K.*	*:*	*An Introduction to Social Demography, Delhi: Vikas Publishing House, (1983)*
5.	*Weeks, J.R.*	*:*	*Population: An Introduction to Concepts & Issues, London: Wardworth Publishing Co., (1988)*
6.	*Raj Hans(2010)*	*:*	*Fundamentals of Demography, Delhi, Surjeet Publications*

Further Readings :

1.	*Bose, Ashish*	*:*	*India & The Asian Perspective, New Delhi: B.R. Publishing Corporation, (1993)*
2.	*Matras, Juda*	*:*	*A Sociological Approach, New Jersey: Prentice Hall, (1977)*
3.	*Government of India*	*:*	*National Population Policy (2000), Ministry of Health & Family Welfare, GOI.*
			(Latest Census Reports and Sample Registration Bulletins of the Government of India.)
4.	*Premi, M.K.*	*:*	*India's Population: Heading towards a Billion, Delhi: B.R. Publications, (1991)*
5.	*Dyson Tim,(2011)*	*:*	*Population and Development, The Demographic Transition,Jaipur, Rawat Publications*

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

To understand the contemporary social problems in society, the students are exposed to the basic concept of deviance, its theoretical perspectives and control mechanisms.

Course Content:

UNIT-I

Deviance : Definition, Concept (Relative and Absolute) Distinction between deviant behaviour and deviant role. Pathological theories (Biological and Psychological).

UNIT-II

Sociological Theories : Theories of social disorganization (C.H. Cooley, W.I. Thomas and Florian Znaniecki, W.F. Ogburn).

Structural-Functional Theories : Theory of Anomie (Emile Durkheim, Robert K. Merton), Differential Association (E. Sutherland and D.R. Cressey).

Interactionist Theories : Theory of Labelling (Edwin M. Lemert and Howard S. Becker).

UNIT-III

Controlling Deviance : Socialization - means and agencies, Social Control: means and agencies, Social codes and customs; Sympathy: passive and active.

UNIT-IV

Selected Problems of Deviance: Sex Deviance, Delinquency, White Collar Crimes, Cyber Crime.

Essential Readings :

1.	*Becker, Howard S.*	*:*	*Outsiders: Studies in the Sociology of Deviance, Glenco, Free Press, (1987)*
2.	*Ferrell, R. & V.L. Swigert [ed.]*	*:*	*Social Deviance, New York: J.B. Lippincott Co. (1975).*
3.	*Haralambos, M.*	*:*	*Sociology – Themes & Perspectives, Delhi, Oxford University Press,(1984)*
4.	*Kelly, Delos H.*	*:*	*Deviant Behaviour: Readings in Sociology of Deviance, New York: Martin's Press, (1979)*
5.	*Lawson, T & T. Heaton*	*:*	*Crime & Deviance, New Delhi : Macmillan, (1999)*
6.	*Metta, Spencer*	*:*	*Foundations of Modern Sociology, New Jersey: Prentice Hall Inc., Englewood Cliff, (1979)*
7.	*Michael Mc Kee and Ian Robertson*	*:*	*Social Problems, Toronto: Random House Inc., (1976)*
8.	*Thio, Alex*	*:*	*Deviant Behaviour, London : Houghton Mifflin, (1978)*
9.	*Ahuja, Ram,(2012)*	*:*	*Criminology, Jaipur Rawat Publications*
10.	*Ahuja, Ram,(2015)*	*:*	*Social Problems in India, Jaipur, Rawat Publications*

Further Readings :

1.	Erdwin. H. Pfuhl	:	*The Deviance Process,* New York: D.Van Nostrand Co., (1980)
2.	Ian Robertson	:	*Sociology,* New York: Publisher Inc. (1977)
3.	John, J. Grant	:	*Social Problems as Human Concern,* San Francisco: Body & Fraser Publishing Company, (1976)
4.	Rubington, Weinberg	:	*Studies of Social Problems,* New York: Oxford University Press, (1977)
5.	Rushing, William A. [ed.]	:	*Deviant Behavior & Social Process:* Rand McNally College Pub. Co., (1985)
6.	Bansal,S.K.(2013)	:	*Cyber Crime, New Delhi, APH Publications*
7.	Sharma,Rajendra K,(1988)	:	*Social Disorganization, New Delhi :Attantic Publications*
8.	Byrne, David,(2009)	:	*Social Exclusion, Jaipur, Rawat Publications*

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017 – 18
SEMESTER – V

Paper-A, Option (i) : PHILOSOPHY OF SCIENCE
OR
Paper-A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Paper-A Option (i) : PHILOSOPHY OF SCIENCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The aim of this paper is to analyse the concepts of philosophy and science, Einstein's Theory of Relativity i.e. space, time and relativity; Nature of observational language and theoretical language; causality, prediction and probability; Principle of Complimentarity.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

1. The Nature and Scope of Philosophy of Science. Relation between Philosophy and Science.
2. Einstein's Theory of Relativity : Space, time, reality.
3. Methodological character of theoretical concepts. Observational language, theoretical language, a criterion of significance of theoretical terms. Dispositional concepts, Difference between theoretical terms and pure dispositional terms.

UNIT-II

4. Causality, Prediction and Probability.
5. Principle of Causality.
6. Causality as the existence of Laws.

UNIT-III

7. Causal Law and Statistical Laws.
8. Induction and Probability.
9. Theories of Probability.

UNIT-IV

10. Rationality Debate & Theory Choice.
11. Popper & Kuhn

Essential Readings :

1. Bridgman, P.W. : The Logic of Modern Physics (New York : Macmillan, 1958).
2. Earnest Nagel : Structure of Science (Hackett Pub. Co., 1979).
3. Hans Reichenbac : Rise of Scientific Philosophy (California : University Press, 1994).

Suggested Readings :

1. Minnesota Studies in the Philosophy of Science, Minnesota Centre for Philosophy of Science, 1958.
2. Phillip Frank : *Philosophy of Science: The Link between Science and Philosophy* (Englewood Cliff : Prentice Hall, 1957).

OR

Paper – A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at understanding the nature of social and political philosophy and some of its fundamental concepts; its major social and political theories and Indian political thought.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

1. Nature and Scope of Social and Political Philosophy :

(a) Relation between Social and Political Philosophy and Social Sciences such as Sociology and Political Science with special emphasis on the distinction between Philosophy and Science.
(b) Empirical and Scientific study of society and politics as distinct from philosophical study of society and politics.

UNIT-II

2. Some Fundamental Concepts of Social and Political Philosophy :

(i) Distinction between Natural Facts and Social Facts.
(ii) Normative Aspects of Socio-Political Reality.
(iii) State and Civil Society.
(iv) Liberty, Equality and Fraternity.
(v) Social Change and Social Progress.
(vi) Tradition and Modernisation.
(vii) Power and Authority.
(viii) Reform and Revolution.
(ix) Justice.

UNIT-III

3. Major Social and Political Theories

(a) Liberalism.

(b) Egalitarianism.

(c) Anarchism.

UNIT-IV

4. Indian Political Thought : Chanakya, Vivekananda, Gandhi, Ambedkar.

Essential Readings :

1. Ambedkar, B.R. : *Writings and Speeches,* Government of Maharastra, Bombay., Vol. 18, 19 & 20, 2003/
2. Bhattacharyya, K.C. : Studies in Philosophy, Motilala (U.K.) Books of India, New Delhi, 1983.
3. Gautam, S.P. : *Samaj Darshan,* Haryana Sahitya Akademy, Chandigarh, 1991.
4. Tagore : *Religion of Man,* Rupa Publications, Paperback, New Delhi, 2002
5. Will Kymlica, Kamal Nayan Chaubey : Samkalin Rajniti – Darshan Ek Parichay, 2nd Ed. Pearson Delhi, 2010.
6. Complete Works of Swami Vivekananda (relevant portions) Advaita Ashram, Calcutta, 1957.

Suggested Readings :

1. Menon, Nivedita : Seeing like a Feminist, Zubaan New Delhi, 2013.
2. Miller, David : Political Philosophy, A very short introduction, Oxford University Press, New York, 2003

PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017 – 18
SEMESTER – VI

Paper -B, Option (i) : LOGIC

OR

Paper-B Option (ii) : PHILOSOPHY OF CULTURE

OR

Paper -B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at training the students in skills of critical reasoning by introducing laws of thought, criteria for validity of arguments, deductive and inductive reasoning.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

1. Nature and Scope of Logic.
2. Deductive Inference.
3. Laws of Thought.

UNIT-II

4. Aristotelian Classification of Propositions.
5. Immediate and Mediate Inference.
6. Syllogism.

UNIT-III

7. Truth Tables.
8. Propositional Calculus.
9. Quantifiers and Propositional Functions.
10. Predicate Calculus.

UNIT-IV

11. Inductive Logic.
12. Probability.
13. Scientific Method.
14. Law and Explanation

Essential Readings :

1. Irving Copi : *Introduction to Logic,* Prentice Hall, 2004.
2. Irving Copi *Symbolic Logic,* Prentice Hall, 1979.
3. Nagel and Cohen : *Introduction to Logic and Scientific Method,* Simon Publications, 2002.

Suggested Readings :

1. Russell : Principles of Mathematics (Allen & Unwin London), 1970.
2. Jean Necod : Foundations of Geometry and Induction (kegan Paul). 1970

OR

Paper- B Option (ii) : PHILOSOPHY OF CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims to introduce the problems like origin and meaning of culture, civilization, tradition, the role of ideology and Utopia, Indian cultural tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT – I

1. Origin and meaning of Culture.
2. Culture, Civilization and the Individual.

UNIT – II

3. Religion as an Apex of Culture.
4. Culture and Language.

UNIT – III

5. Culture, Tradition and Modernity. The metaphysical loss of Human.
6. Sources of Indian Culture Tradition.

UNIT – IV

7. Role of Science and Technology in Cultural Evolution.
8. Inter – Cultural understanding and Hermeneutic Tradition.

Essential Readings:

1.	Eliot	:	Notes towards definition of Culture, London, Faber & Faber (1962).
2.	Gadamer	:	Truth and method. Continum International, February (2005).
3.	G.C. Pandey	:	Meaning and Process of Culture. Shivlal Aggarwal & Co. Agra (1972).
4.	Sneh Pandit Ed.	:	Perspectives on Philosophy of Culture, Delhi, S. Chand (1980)
5.	Vellassery Sebastian & Geeta Manaktala:	:	Foundations of Indian Social Life: Cultural, Religious and Aesthetics. Booksurge Publishing U.S. (2008).
6.	Wittgenstein	:	Culture and Value. translated by Peter Winch, Oxford Blackwell (1980).

Suggested Readings :

1.	A.J. Toynbee	:	Civilization on Trial, Oxford University Press, 1948.
2.	Paul Ricouer	:	Time and Narrative published by University of Chicago Press, London 1984.

OR

Paper – B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims at familiarizing the students with the meaning and scope of Aesthetics, art and society, aesthetic experience according to the Western and Indian tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

1. Aesthetics, its meaning and scope.
2. Nature and function of art.

UNIT-II

3. The relation of art to society.

UNIT-III

4. Meaning and purpose of art in the Indian Tradition.

UNIT-IV

5. Nature of Aesthetic experience according to the Western and Indian traditions.

Essential Readings :

1. Hiriyanna : *Art Experience,* Karyalaya Publications, Mysore, 1954 .
2. Susan, L. Feagin and Patrick Maynard (ed.) : *Aesthetics,* Oxford University Press, 1997.

Suggested Readings :

1. Meredith : The Critique of Judgement by Immanuel Kant Tr., J.C., Oxford University, Press, 2007.
2. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-2018

SEMESTER V

PAPER: PSYCHOLOGICAL TESTING

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : *Introduction to Psychological Tests :*History of Psychological Testing; Nature of Psychological Tests. Classification of Tests; Use of Tests.

UNIT-II : *Item Writing and Item Analysis :*Characteristics of a Good Item; Various types of Items; Item Difficulty; Item Discrimination.

UNIT-III : *Reliability and Validity :Reliability :* Concept, Types, Factors Affecting Reliability. *Validity :* Concept, Types, Factors Affecting Validity; Relation between Reliability and Validity.

UNIT-IV : *Interpretation of Test Scores :Criterion Referenced Scores :* Content Referenced and Outcome Referenced Scores; Norms Referenced Scores; Concept of Norms, Types of Norms (Percentile Scale and T. Scale).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

Books Recommended

Suggested Readings :

1. Anastasi, A. (1998) : *Psychological Testing,* New York : Macmillan.

2. Gregory, R.J. (1996) : *Psychological Testing,* Singapore : Allyn and Bacon.

3. Guilford, J.P. and Fruchter, B. (1981):*Fundamental Statistics in Psychology and Education,* Singapore: McGraw Hill.

4. Guilford, J.P. (1954) : *Psychometric Methods,* New Delhi : Tata McGraw Hill.

Reference Books :

1. Freeman, F.S. (1962) : *Theory and Practice of Psychological Testing,* New Delhi : Oxford and IBH.

2. Cronbach, L.J. (1990) : *Essentials of Psychological Testing,* New York : Harper and Row.

3. Brown, F.G. (1976) : *Principles of Educational and Psychological Testing,* New York : Holt, Rinehart and Winston.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2017-2018

SEMESTER VI

PAPER: Counselling and Organizational Psychology

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : Concept of Counselling; Approaches to Counselling; Freudian, Experiential Client Centered, Gestalt, Existential, Cognitive Behaviour Therapy.

UNIT-II : Work Motivation: Early and Contemporary Theories.Strategies of Organizational Development.

UNIT-III : Concept and Nature of Health Protective Behaviour.Concept and types of Health Coronary Behaviour (Special reference to nicotine addiction and alcoholism).

UNIT-IV : Psychology of Exceptional Children with special reference to learning disabled and Gifted Children.

Books Recommended :

Suggested Readings :

1. Luthans, F. (1998) : *Organizational Behaviour,* New York : Irwin McGraw Hill.
2. Moorhead, G. and Griffin, R.W. (1999) : *Organizational Behaviour,* Delhi : AITBS.
3. Parikh, M.R. & Gupta, R. (2010) : *Organizational Behaviour, Tata McGraw Hill Education* Private *Limited,* New Delhi : West Patel Nagar.
4. Robbins, S.P. (2000) : *Organizational Behaviour,* New York : Prentice Hall of India.
5. Rao, S.N. (1992) : *Counselling and Guidance,* New Delhi : Tata McGraw Hill.
6. Nystul, M.S. (1999) : *Introduction to Counselling – An Art and Science Perspective,* Boston : Allyn and Bacon.
7. Brannon, L. and Feist, J. (2007): *Introduction to Health Psychology*. New Delhi: Thomson – Wadsworth.
8. Mohan, J. and Sehgal, M. (2006): *Health Psychology*. New Delhi: Abhijeet Publications.
9. Narayan, J.(2003) : *Educating Children with Learning Problems in Regular Schools*, Secunderabad : NIMH.
10. Raj, F. (2010) : Breaking Through: A Hand book for parents and teachers of children with Specific Learning Disabilities, Secunderabad: Vifa Publishers.

Reference Books :

1. Newstrom, J.W. and Davis K. (1998) : *Organizational Behaviour,* New Delhi : Tata McGraw Hill .
2. Woolfe, R., and Dryden, W. (Eds.) (1996) : *Handbook of Counselling Psychology,* New Delhi : Sage Publications.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2017

SEMESTER V

Paper : APPLIED GEOGRAPHY

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:
To understand the prevalent issues in environment, society and economy and to provide a geographical interpretation with special reference to India

Course Content:

Unit- I

Applied Geography: Meaning and concepts:

Meaning, nature , scope and significance of Applied Geography. Concept of planning region.

Regionalisation scheme with reference to economic regionalization. (20 lectures)

Unit- II

Applied Geography: Methods and techniques:

Cartographic techniques of dot, choropleth, graduated circle; quantitative methods and techniques of crop combination; Quantitative methods and techniques of graduated circles. (20 lectures)

Unit- III

Applied Geography: Contributions:

Industrial location theory of Weber and its application in industrial planning.

Christaller's Central Place Theory and its application in location of central places.

Von Thunen's Agricultural Location Theory and its application in agricultural location.

Perroux's Growth Pole Theory and its application in regional development planning.

Harris' Functional classification of urban centres. (30 lectures)

UNIT- IV

Land use studies: Rural and Urban.

Rural Land Use: Survey and Classification.

Urban Land Use : Survey and Classification. (20 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

Books Recommended

Essential Readings:

1.	Carter, H.	:	The Study of Urban Geography, Arnold-Heinemann, New Delhi, 1979.
2.	Chorley, R.J. & P. Haggett (Ed.)	:	Models in Geography, Methuen & Co., London, 1967.
3.	Jones, Alun	:	Fieldwork in Geography, Longman, Green Co., London, 1968.
4.	Stamp, L.D.	:	Applied Geography, Penguin Books, England, 1960.
5.	Singh, R.L. (Ed.)	:	Applied Geography, National Geographical Society of India,Department of Geography, B.H.U., Varanasi, India.

Further Readings:

1.	Dawson, J.A.	:	Geography, Teach Yourself Books, Hodder and Stoughton, UK 1983.
2.	Misra, R.P. and others	:	Regional Development Planning in India, Vikas, New Delhi.1974
3.	Misra, V.C. & others	:	Essays in Applied Geography, University of Sagar, India.1976

4. Sen Gupta, P. &Sadasyuk Galina : Economic Regionalization of India, Problems and Approaches, Registrar General Census of India.
5. Singh, Jasbir & Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill, New Delhi, 1998.
6. World Report, World Bank & OUP (Annual Report)

Pedagogy:

- Exposure to media.
- National Five Year Plan documents and publications related to planning.
- Field work related to land –use and other socio-economic issues.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2018
Semester VI

Any one of the following options:

Option (i)	**:**	**AGRICULTURAL GEOGRAPHY (An Elementary Course)**
Option (ii)	**:**	**POLITICAL GEOGRAPHY (An Elementary Course)**
Option (iii)	**:**	**ENVIRONMENTAL GEOGRAPHY (An Elementary Course)**

Option (i) AGRICULTURAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the concepts and development of agriculture;
- To examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialisation. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objective is also to discuss environmental, technological and social issues in agricultural sector with special reference to India.

Course Content:

Unit- I

Nature, scope and significance of agricultural geography.

General landuse classification.

Physical determinants of agricultural landuse: Relief, climate, soils.

Unit- II

Social and cultural determinants of agricultural landuse, land tenure, size and fragmentation of holdings and labour.

Economic determinants of agricultural landuse: Marketing facilities, transport facilities, tariff and import restrictions, price incentives, credit.

Unit-III

A critical review of Whittlesey's agricultural classification.

Characteristics and world patterns of the following:

Subsistence types of agriculture: Nomadic herding, shifting cultivation, rudimentary sedentary tillage, intensive subsistence tillage, subsistence crop and livestock farming.

Unit- IV

Commercial types of agriculture: livestock ranching, commercial plantation farming, commercial grain farming, mixed farming, commercial dairy farming.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each UNIT. The students will be required to attempt one question from each UNIT. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Alexander, J.W.: *Economic Geography*, Prentice Hall, Englewood Cliffs, latest Edition.
2. Husain, M. : *Systematic Agricultural Geography*, Inter-India Publications, New Delhi, 2000.
3. Singh, J. & Dhillon, S.S. : *Agricultural Geography*, Tata McGraw Hill Publishing New Delhi, 1994.

Further Readings:

1. Morgan, W.B. & Munton, R.J.C. : *Agricultural Geography*, Methuen, London, 1971.
2. Symons, L. : *Agricultural Geography*, G. Bell & Sons, London, 1964.

Pedagogy:

The teacher should impress the students the overall importance of agriculture in the global perspective. The world is fast changing and its impact is felt on agriculture. Population is increasing and demand of agricultural products is also on the increase. Contrary to it, the farm lands are decreasing, that necessitates infusion of technology in agricultural sector. It is causing environmental pollution. The teacher should interact with students on said issues. Examples from neighbouring areas may be given to the students for better perceptions.

Option (ii): POLITICAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the geographical factors which have a bearing on the political/ administrative organisation of space.
- To enhance awareness among the students of multi-dimensional nature of geo-political space.

Course Content:

Unit- I

Nature and scope of political geography, phases in the development of political geography. Physical elements of political geography: Location, size and shape, relief, climate, and seas and oceans.

Unit- II

Economic elements of political geography: Basic natural resources; food and power, minerals, industry, trade and transportation.

Human-cultural elements of political geography: Ethnographic structure of nations, language, religion, population, quantity and quality.

Unit- III

Concepts of frontiers and boundaries: Classification of boundaries.

Global distribution of political power: Views of Mackinder, Mahan and Spykman and their contemporary relevance.

Unit- IV

International tension: Identification of tension areas and factors contributing to tensions in different areas with special examples from Middle East and Indian Ocean.

Political Geography of the Indian Ocean.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. De Blij, H.J. Glassner, M. : *Systematic Political Geography*, John Wiley, New York, 1968.
2. Dikshit, R.D. : *Political Geography*: A Contemporary Perspective, Tata McGraw Hill, New Delhi, 1996.

Further Readings:

1. Adhikari, Sudeepta : *Political Geography*, Rawat, Jaipur, 1997
2. Muir, R. : *Modern Political Geography*, Macmillan, London,1981.
3. Prescott, J.R.V. : *Political Geography*, Methuen, London, 1992.
4. Prescott, J.R.V. : *The Geography of Frontiers & Boundaries*, Aldine Pvt. Ltd., Chicago, 1965.
5. Valkenberg, S.V. New& Stotz, Carl, L. : *Elements of Political Geography*, Prentice Hall of India, Delhi, 1963.

Pedagogy:

- Fieldwork to understand the political/administrative boundary configuration and people's problems and their perceptions.
- Consult political maps (large scale, small scale).
- Atlases and archival records.
- Collect relevant newspaper items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Option (iii): ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To understand the significance of environment and its interrelationship with man.
- To understand the importance of soil and factors responsible for erosion.
- The importance of energy sources, forest and wildlife and their preservation to be studied.

Course Content:

Unit-I

Environment and Geography: Relationship between geography and environment; definition and scope of environmental geography; significance of environmental studies.

The Environment: Characteristics, components and functioning; concept of healthy environment.
(6 + 6 = 12 lectures)

Unit- II

The Soil System: Origin and composition; horizons, texture, chemistry, factors influencing soil types; soil erosion, soil conservation; and soil pollution.
Energy: Energy flow in the ecosystem; environmental impact of both conventional and non-conventional energy sources. (6 + 4 = 10 lectures)

Unit- III

Forests: Significance; world reserves; deforestation; and conservation strategies.

Wildlife: Wildlife and environment relationship, regional distribution; conservation of wildlife; and wildlife in India. (5 + 5 = 10 lectures)

Unit- IV

Population and Environment: Basic issues, environmental impact of population growth and agenda for action.

Global Environmental Issues: Water contamination; atmospheric pollution; acid rain; noise pollution; and control strategies.

Legislative strategies, environmental issues and the international community; Rio-de-Janeiro Earth Summit of 1992; selected environmental protection laws in India; Environmental Protection Act, National Environmental Tribunal Act, Wildlife Protection Act, Forest Conservation Act, Air Act, Water Act. (6 + 6 + 6 = 18 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Adam, W.M. : *Green Development: Environment & Sustainability in the Third World*, Routledge, London, 1990.
2. Chandna, R.C. : *Environment Awareness*, Kalyani Publishers, New Delhi. Clarendon Press, Oxford, 1998. Also available in Hindi & Punjabi.
3. Chandna, R.C. : *Environmental Geography*, Kalyani Publishers, New Delhi, 2001.
4. Goudie, A.S. : *The Human Impact on Environment*, Blackwell, Oxford, 1993.

Further Readings:

1.	Ehrlich, Paul, R. et. al	:	*Ecoscience – Population, Resources and Environment*, Freeman and Co., San Francisco, 1977.
2.	Goudie, A.S.	:	*Environmental Change, Contemporary Problems in Geography*, Clarendon Press, Oxford, 1992.
3.	Pickering, K.T.	:	*An Introduction to Global Environmental Issues*, Routledge, London, 1994.
4.	Singh, Savinder Allahabad,	:	*Environmental Geography*, Paryag Pustak Bhawan, 1991.
5.	Strahler, A.N. & Strahler, L.A.	:	*Geography and Man's Environment*, John Wiley & Sons, New York.

Pedagogy:

- The interaction of teacher and students is must on issues related to environment, energy resources, forest and soil preservation.
- A field visit to those areas where soil erosion is a serious problem be arranged and methods of conservation be taught.

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PUBLIC ADMINISTRATION
SEMESTER -V

Paper- III : RESEARCH METHODS AND STATISTICS

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time : 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding about the nature and scope of Social Research, Methods of Social Research, data collection and data processing. It would also acquaint the students with basics of sampling and statistical methods including measures of central tendency, dispersion, correlation and Chi-Squares Test.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Meaning, Nature and Scope of Social Research.
Concepts; Hypotheses : Meaning, Types and Significance.
Research Design - Meaning, Types and Components.
Methods of Social Research - Experimental–Survey and Case Study.

UNIT-II

Methods of Data Collection—Documents, Observation, Interview and Questionnaire.
Data Processing-Editing, Coding and Tabulation, The Use of Computer.
Report Writing.

UNIT-III

Sampling-Meaning, Types, Merits and Demerits.
Frequency Distribution – Meaning and Steps.
Measures of Central Tendency – Mean, Median and Mode.

UNIT-IV

Measures of Dispersion –Standard Deviation.
Correlation – Karl Pearson.
Chi-Square

Essential Readings :

Goode, W.J., & Hatt, P.K. (1990). *Methods in Social Research.* U.S.A. : McGraw Hill.
Gupta ,S.P. (1987) . *Statistical Methods.* New Delhi : Sultan Chand .
Moser, C.A. & Kalton. G. (1979).*Survey Methods in Social Investigations.* London : ELBS
Seltiz,C.et al. (1964) . *Research Methods in Social Relations* . New York : Rinehart & Winston.

Further Readings :

Bowley, A. (1947). *Elements of Statistics* (6^{th} ed.) . New York : Staples.
Cohen, L. (1968) . *Statistical Method for Social Scientists* .New Delhi : Prentice Hall of India Private Ltd.
Ghosh., and Chowdhry. (2004). S*tatistics* (Rev. Enlarg. Ed.) Allahabad : Indian Press.

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PUBLIC ADMINISTRATION
SEMESTER-VI

PAPER IV : The candidates have to select one out of the following four options :

Option (i) : Organisation Behaviour
Option (ii) : Cooperative Administration in India
Option (iii) : Public Enterprise Management (with special reference to India)
Option (iv) : Environment Administration in India
Option (v) : Emerging Issues in Public Administration

Paper- IV : OPTION (i) : ORGANISATION BEHAVIOUR

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :
The objective of the paper is to give the student an in-depth insight into the various aspects and factors affecting individual, interpersonal and group behaviors in organisations. The key areas include study of human behavior and concepts like Attitudes, Morale, Leadership, Motivation and Organizational Change.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Organisation Behaviour : Concept and significance
Individual Behaviour : Concept; Nature; Individual Factors
Interpersonal Relations : Meaning; Dimensions; Factors

UNIT-II

Team Development : Importance; Types of Teams
Attitudes : Concept, Types
Morale : Concept; Significance; Building up High Morale

UNIT-III

Groups : Concept; Types
Leadership : Styles of Leadership
Motivation : Concept; Determinants

UNIT-IV

Organisational Change : Concept; Resistance to change
Organisational Development : Concept; Need; Techniques
Organisational Effectiveness : Concept; Approaches

Essential Readings :

Davis, K. (2001).*Organizational Behaviour* . NewYork: McGraw Hill.
Dubin, R. (1968). *Human Relations in Administration(*3rd ed.)*,* New Delhi: Prentice Hall.
Gupta, S. & Joshi, R. (2007).*Organizational Behaviour* . New Delhi: Kalyani Publishers.
Kolasa, B.J. (1969). *Introduction to Behavioural Sciences for Business.* New York: Wiley.
Prasad , L.M.(2000). *Organisational Behaviour*(3rd ed.).New Delhi: Sultan Chand
Sharma, K.K. & Sahni, P. (1988).*Organisational Behaviour* . New Delhi: Deep & Deep.

Paper- IV: OPTION (ii) : CO-OPERATIVE ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to acquaint the students with the evolution of cooperatives in India and its Principles. It will also deal with Legislation on Cooperatives, Registration, structure and Administration at the Union and State level. Further the students will gain an understanding of the forms and Role of Cooperatives, their managerial & personnel aspects.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Co-operation : Meaning, Significance and Evolution
Co-operative Principles
Co-operative Legislation : Government of India Act, 1912 and Punjab Co-operative Societies Act, 1961(as amended from time to time)

UNIT-II

Registration of a Co-operative Society
General Body, Board of Directors and Committees
Chief-Executive : Appointment, Functions and Role
Co-operative Administration at Union Level – Organisation and Functions

UNIT-III

Co-operative Department at State Level – Organisation and Functions
Registrar Co-operative Societies : Appointment and Role
Forms of Co-operatives : Role of Apex Federations and Primary Co-operatives
Co-operative Education

UNIT-IV

Human Resource Management : Recruitment and Training
Financial Management

Essential Readings :

Dubhashi, P.R. (1970) . *Principles and Philosophy of Cooperation* . Pune: VMNICM.
Goel, B.B. (1988). *Dynamics of Cooperative Administration* . Delhi: Deep and Deep.
Goel , S.L., & Goel, B.B. (1979). *Principles, Problems and Prospects of Co-operative Administration* .Delhi: Sterling.
Kamra, P.K. (1986) .*Cooperative Management* . Delhi: Deep and Deep.
Krishnaswami, O.R. (1978) . *Fundamentals of Cooperatives* .Delhi: S.Chand and Co.
Mathur, B.S.(1971). *Cooperation in India.* Agra: Sahitya Bhawan.

Further Readings :

Bhatia, B.S. (ed.). (1994). *Encyclopaedia of Cooperative Management.* New Delhi: Deep & Deep Publications Pvt. Ltd.
Dwivedi, R.C. (1982).*Democracy in Cooperative Movement.*New Delhi. National Cooperative Union of India.
Gill , M.S. (1983).*Agricultural Cooperatives* .Delhi: Vilas.
I.C.A. (1977).*Readings in Cooperative Management.*Delhi: ICA.
I.C.A. (1980).*Experts Consultation on Cooperative Member Education* . Delhi: ICA.
I.L.O.(n.d.).*Cooperative Management and Administration* .Geneva: I.L.O.
Puri, S.S.(1979). *Ends and Means of Cooperative Development* . Delhi: NCUI

Paper-IV: OPTION (iii): PUBLIC ENTERPRISE MANAGEMENT (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time :		3Hours

Objective of the Paper :

The objective of the paper is to give the student a detailed understanding of the concept, evolution, types, role and problems of public enterprises in India. It would also give an insight into legislative and government control over public enterprises, performance and reforms of the public enterprises and the concept of privatization.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Public Enterprise : Meaning and Evolution
Public Enterprises in India : Rationale and Role
Administrative and Managerial Problems of Public Enterprises

UNIT-II

Organisational Patterns: Departmental Undertakings, Public Corporation and Government Company
Board of Directors: Rationale, Constitution, Types and Functions

UNIT-III

Legislative Control over Public Enterprises
Government Control over Public Enterprises
Performance of Public Enterprises

UNIT-IV

Public Enterprise Reforms since 1991
Memorandum of Understanding
Privatization : Meaning, Rationale, Achievements and Failures

Essential Readings :

Dutt, Ruddra and Sundaram, K.P.M. (2009) .*Indian Economy* . New Delhi: S. Chand.
Khera, S.S. (1977) . *Government in Business* . Delhi : National.
Mathur, B.P. (1999) .*Public Enterprise Management* . New Delhi :Macmillan
Narain, Laxmi . (2005). *Public Enterprise Management and Privatisation* . New Delhi :S. Chand.
Parkash, Jagdish . (2002). *Administration of Public Enterprises in India* . Mumbai :Himalaya Publishing House.
Sengupta , N.K. (2007) . *Government and Business* . New Delhi :Vikas.

Further Readings:

Gedam, Ratnakar. (1995) . *Public Sector Management.*
Government of India. *Public Enterprises Survey, India, Ministry of Heavy Industry & Public Enterprises, Vol. 1, 2, 3* .DPE. New Delhi.
Gupta, K.R. (1975) . *Issues in Public Enterprises* . New Delhi: S.Chand.
Hanson , A.H. (1972).*Public Enterprises and Economic Development* . London : Routledge and Kegan.
Ramanadham, V.V.(1988). *The Working of Public Sector* . Bombay : Allied Publishers.
Ramanadham , V.V. *The Structure of Public Enterprises and Economics in India* . Bombay: Asia Publishing House.
United Nations. (1974). *Countries* . New York : V. N.

Paper-IV: OPTION (iv): ENVIRONMENT ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding of the concept and components of environment, environment administration and sustainable development. In addition, the students would be made aware of environment problems, threats and impact of development on environment. The student will also gain knowledge regarding the machinery for environment protection at the Union and State levels, Environmental Policy, priorities, global issues and role of NGOs in environment conservation would be dealt with.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Environment – Concept and Components
Environment Administration – Meaning, Nature and Scope
Sustainable Development – Concept, Issues and Strategy

UNIT-II

Environment Problems and Threats–Air, Water, Land, Human Settlements and Forests
Impact of Development, Urbanization and Industry on Environment
Organisation and Machinery of the Government at the Union Level for Environment Protection
Organisation and Machinery of the Government at the State Level for Environment Protection

UNIT-III

Pollution Control Boards–Organisation, Functions and Role

Environmental Policy with special reference to Water, Air and Forest; Constitutional Provisions; Legislative Measures

Environmental Priorities in India—Population Stabilisation; Forest Cover; Deforestation; Wildlife Protection; Recycling of Wastes

UNIT-IV

Environment and Global Issues— Conventions; Depletion of Ozone Layer; Global Warming

Environment Education, Awareness and Ethics; Role of NGOs in Environment Protection and Conservation

Essential Readings :

Chandana, R.C. (1998) .*Environment Awareness* . New Delhi : Kalyani.

Edmunds, S. and Latey, J. (1973). *Environmental administration* . New York : McGraw-Hill.

Nanda, V.K. (1997). *Environmental Education* .New Delhi : Anmol.

Sapru, R.K. (2002) . *Development administration* . New Delhi : Sterling.

Sapru ,R.K. (2004). *Public Policy* . New Delhi : Sterling.

Further Readings :

Agnihotri , Sheo Parkash. (1992). *Environment Conservation Management and Planning.* Allahabad : Chugh.

India, Centre for Science and Environment. (1982). *The state of India's Environment : A Citizen's Report* . New Delhi:Vishal Bhawan.

Kumar, Naresh.(1999) . *Air Pollution and Environment Protection : Legislative Policies, Judicial Trends and Social Perceptions* . New Delhi : Mittal.

Kumar, Naresh.(1999). *Air Pollution and Environment Protection:Legislative Policies,Judicial Trends and Social Perceptions* . New Delhi:Mittal

Monga, G.S. (2004).*Environment and D evelopment* . New Delhi : Deep and Deep.

Radha, S. and Sankhyan, A.S.(2004). *Environmental Challenges of the 21st Century . New Delhi:* Deep.

PAPER- IV: OPTION (V): Emerging Issues in Public Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to familiarize the students with the emerging issues in Indian Administration. At the end of the course the students will have an understanding of the concepts of disaster management, human rights, regulatory administration in India, consumer protection, right to information, new areas of governance in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Good governance – Concept and significance
E- governance – Concept and significance
Regulatory Administration - Concept and significance

Unit II

Transparency and Accountability in Administration – Significance
Mechanism – Social Audit, Results Framework Document (RFD)
Ethics and Integrity in Administration

Unit III

Human Rights - Concept and significance
Women Empowerment with special reference to National Mission for Empowerment of Women (NMEW)
Youth Empowerment with special reference to Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Unit IV

Sustainable Development - Concept and significance
Environment Administration - Concept and significance
Disaster Management - Concept and significance

Suggested Readings :

Arora , Ramesh K. (2013). *Ethical Governance in Business and government*. Jaipur : Aalekh Publishers.

Bhandari, Sunanda (2015).*MahilaSashaktikaranEvamRajkiyaYojanaye.* Jaipur: Ritu Publications.

Bystydzienski, Jill M. (2008).*Democratization & Women's Grassroot Movements.* JotiSekhon. Zubaan.

Centre for Good Governance.Social Audit Tool Kit,"n.d" from www.cgg.gov.in

Food & Agricultural Organization (F.A.O.*).A handbook for trainers on participatory local development: The Panchayat & Training Module on social Audit*

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006) .*Environmental Issues of Development.*AmbalaCantt, India: The Associated Publishers.

Goel, S.L. (2006).*Encyclopedia of Disaster Management*, Deep and Deep Publication Pvt. Ltd.

Government of India. *Guidelines for Results Framework Document(RFD).* "n.d" retrieved from www.performance.gov.in

Government of India. (2006,September). *Second ARC – Third Report (Crises Management: From Despair to Hope).*

Government of India.(2006,june) . *Second ARC – First Report (Right to Information- Master Key to Good Governance).*

Government of India. (2008,December). *Second ARC – Eleventh Report (Promoting e-governance: The Smart Way Forward).*

Government of India.Ministry *of Skill Development and Entrepreneurship-" n.d'' retrived from* www.skilldevelopment.gov.in/pmkvy.html

Government of India*. Ministry of Women & Child Development,* "n.d'' retreived from www.nmew.gov.in.

Government of India. *E-governance for Citizen Empowerment National Information Centre*. ''n.d''retreived from www.nic.in

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Verma, J.S. (2006). *The Universe of Human Rights.* Delhi: Universal Law Publishing Company.

Kumar, Abhishekand Tripathy, Pramod Kumar.*Skill Development in India – An Overview of Initiatives& Schemes.* New Delhi: Kanishka Publishers.

Mathur, B.P. (2014). *Ethics for Governance: Reinventing Public Services.* India: Routledge.

Jaswal, P.S.and Jaswal, Nishtha. (2000). *Environmental Law* . Pioneer Publications.

Palekar, S.A. (2012). *Development Administration*. New Delhi: PHI Learning Private Limited.

Manisha Priyam; Menon Krishna and Banerjee, Madhulika. (2009). *Human Rights, Gender and the Environment.* Pearson.

Trivedi, Priya Ranjan. (1999). *Encyclopedia of Ecology and Environment Volume 3 Environmental Education*. New Delhi :Indian Institute of Ecology and Environment.

Vayunandan, E. and Mathew, Dolly. (2003). *Good Governance Initiatives in India*. New Delhi : Prentice Hall of India.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – V

Note : The students shall have to opt for one paper for Semester - V examination out of the following two papers :

Outlines of Test :

Paper V : Archaeology

Paper VI : Spread of Indian Culture In Central Asia, China And Tibet

PAPER - V ARCHAEOLOGY

Total Marks : 100
Theory : 90
Internal assessment : 10
Time : 3 Hours

Objectives :

This course is a survey of the pre and proto-historic background to Indian history from the beginning of man to the early historical period. Excavated sites are studied for an insight into the growth of early Indian culture.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I : The Palaeolithic, Mesolithic and Neolithic cultural sequences in various parts of the Indian subcontinent.

UNIT-II : (a) The background and the phenomenon of the Harappan civilization.

(b) The Chalcolithic cultures of western and southern India.

UNIT-III : The beginning of iron technology and the Painted Grey Ware Culture.

UNIT-IV : Excavations of early historic cities of :

(a) Northern India and Gangetic doab : Taxila and Hastinapura.

(b) Eastern India : Sisupalgarh and Chandraketugarh.

(c) Southern India : Arikamedu and Brahmagiri.

Pedagogy of the Course Work :

The students are made familiar with prehistoric, proto historic and historical sites through field visits. Slides, photographs of relevant sites, their significance in establishing chronologies is also discussed in the class. Visits to museums is also an important aspect through which students are made familiar with the material evidence.

Essential Readings :

1. Agrawal, D.P. : *The Archaeology of India,* Select Book Service Syndicate, New Delhi, 1984.
2. Allchin, B. and F.R. : *The Rise of Civilization in India and Pakistan,*Cambridge University Press, New Delhi, 1989.
3. Fagan, Brian M. : *People of the Earth : An Introduction to World Prehistory,* Longman, Singapore, 2004.
4. Possehl, G. : *Ancient Cities of the Indus,* Vikas Publishers, New Delhi, 1979.
5. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
6. Roy, T.N. : *The Ganges Civilization,* Ramanand Vidya Bhawan, New Delhi, 1982
7. Tripathi, V. : *The Painted Grey Ware,* Concept Publisher Corporation, Delhi, 1975.

Paper VI: SPREAD OF INDIAN CULTURE IN CENTRAL ASIA, CHINA AND TIBET

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary aim of this paper is to make the students study the spread of Indian culture and ideas in Central Asia, China and Tibet, generally termed in history as 'Greater India'. This forms an important phase of India's contribution to the world culture.
2. **Pedagogy of the Course Work :**
   It is expected to acquaint the students with the background of Indian culture's spread and the factors responsible for it. While outlining the spread of Indian culture and religion, the spread of art, architecture and literature should also be taken care of. Visual aids wherever required should be used to familiarize students with Indian art and its influence in these countries.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

Spread of Indian Culture in the Central Asian States.

UNIT-II:

Introduction of Buddhism in China and the early contacts.

UNIT-III:

Chinese pilgrims in India – Fahien, Hiuen Tsang and I-Tsing.

UNIT-IV:

(a) Spread of Buddhism in Tibet up to 12th century A.D. with special reference to the missions of Padma Sambhava.
(b) Lamaism.

Essential Readings :

1. Bagchi, P.C. : *India and Central Asia,* National Council of Education Bengal, Calcutta, 1984.
2. Bapat, P.V. : *2500 Years of Buddhism,* South Asian Books, New Delhi, 1977.
3. Dougles, R : *China (The Story of the Nation),* Hesperidis, London, 1900, 2006.
4. Elliot, C. : *Hinduism and Buddhism,* Vols. II and III, Routledge, London, 1962.
5. Puri, B.N. : *Buddhism in Central Asia,* Motilal Banarsidass, Delhi, 1987.
6. Richardson, H.E. : *Tibet and its History,* Shambhara Publishers, London, 1961.
7. Upasak, C.S. : *History of Buddhism in Afghanistan,* Central Institute of Higher Tibetan Studies, Varanasi, 1990.
8. Waddell, A.L. : *Buddhism and Lamaism of Tibet* rpt., Vimar Publishing House, London, 1979.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – VI

Note : The students shall have to opt for one paper for Semester - VI examination out of the following two papers :

Outlines of Test :

Paper VII : Epigraphy and Numismatics

Paper VIII : Spread of Indian Culture in South-East Asia upto 12th Century A.D.

Paper-II : EPIGRAPHY AND NUMISMATICS

Total Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The paper is aimed to prepare students to handle the original source material – inscriptions and coins, which make the backbone of Ancient Indian History, as without the knowledge of epigraphy and numismatics, the subject cannot be mastered.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I

(a) Origin and antiquity of writing in India with special reference to the origin of Brahmi script.
(b) Origin and antiquity of coinage in India.

UNIT-II

(a) Ashokan inscriptions – Pillar Edicts I to IV; Girnar Rock Edicts I, II and XIII. (Both for study and decipherment).
(b) Besnagar Pillar inscription of Heliodorus; Nasik Cave Inscription of Queen Balasri; Sarnath Buddha Image inscription of Kanishka's year 3; Junagarh Rock inscription of Rudradaman I, Saka year 72 (Study only). Gupta inscriptions—Allahabad Pillar inscription of Samudragupta, Mehrauli

Iron Pillar inscription of Chandra, Bhitari Stone Pillar inscription of Skandagupta (Study only).

(c) Post-Gupta inscriptions : Mandasor Stone inscription of Malava Samvat 589, Banskhera Copper-plate of Harshavardhana, Pehowa inscription of Bhojadeva (Study only).

UNIT-III

(a) Coins as source of ancient Indian history.
(b) Study of Punch marked coins.

UNIT-IV

(a) Coins of the Kushanas.
(b) Coins of the Guptas.

Pedagogy of the Course Work:

Students should be familiarized with the details of the topics in the syllabus with stress on the contents of each topic. Visual aids like the photographs/slides of the coins and inscriptions should be used regularly. The decipherment of Asokan inscriptions should be taught with the help of plates and paleographic charts.

Essential Readings :

1. Allan, John : *Catalogue of the Coins of Ancient India,* Trustees of the British Museum, London, 1967.

2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, Varanasi, 1957.

3. Buhler, G. : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 2004.

4. Dani, A.H. : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 1997.

5. Gupta, P.L. : *Coins,* rpt. National Book Trust India, New Delhi, 2006.

6. Hultzsh, E. : *Corpus Inscriptionum Indicarum,* Vol. I, rpt., Archaeological Survey of India, Delhi, 1991.

Paper-VIII : SPREAD OF INDIAN CULTURE IN SOUTH-EAST ASIA UPTO 12TH CENTURY A.D.

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives :

This course enlightens the students about the spread of Indian culture in Burma, Indonesia, Combodia and Champa. In order to teach the students about the elements of Indian Culture, which made its impact

felt in those countries, it is, therefore, necessary to discuss the political history, art, architecture and religion of those regions.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I:

(a) Beginning of Indianisation in Burma.

(b) Art and Religion of Burma.

UNIT-II:

(a) Beginning of Indianisation in Indonesia.

(b) Study of Indo-Javanese Art.

UNIT-III:

(a) Beginning of Indianisation in Cambodia.

(b) Art of Cambodia.

UNIT-IV:

(a) Beginning of Indianisation in Champa.

(b) Study of Art and Archaeological remains of Champa.

Pedagogy of the Course Work :

The students are taught with the help of slides, photographs and maps. In addition to it, lectures, workshops, seminars, written assignments and class discussions, term papers etc. are essential parts of it. The students should be made familiar with the outline of the topics mentioned in above units.

Essential Readings:

1. Chatterji, B.R. : *History of Indonesia,* (Early and Medieval) Meenakshi Prakashan, Meerut,1967.
2. Chatterji, B.R. : *Indian Cultural Influence in Cambodia,* University of Calcutta, Calcutta, 1933.
3. Coedes, C. : *The Making of South East Asia,* University of California Press, London, 1966.
4. Coomaraswamy, A.K. : *History of Indian and Indonesian Art,* Kessinger Publishing, New Delhi, 1972.
5. Harrison, Brian, : *South East Asia, A Short History,* Macmillan Press, New York, 1966.
6. Majumdar, R.C. : *Hindu Colonies in the Far East,* K.L. Mukhopadhaya, Calcutta, 1944.
7. Majumdar, R.C. : *Suvarnadvipa, Ancient Indian Colonies in the Far East,* Modern Publication Syndicate, 1937.
8. Majumdar, R.C. : *Kambuja-Desa, or An Ancient Hindu Colony in Cambodia,* Lighting Source Incorporated, Madras, 1944.
9. Singhal, D.P. : *India and World Civilization,* Vols. I & II, Michigan State University Press, Calcutta, 1972.

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POLICE ADMINISTRATION

SEMESTER V

Semester V: Police Procedures and Investigation-I

(A) Course Objectives:

The course has been designed to impart students knowledge about the procedures followed and investigation done by the police after the incidence of crime. The students will be taught about the crime scene, its importance, inspection of crime scene and its preservation along with the investigation officer and his/ her role. Further the students would be made aware about investigation, interrogation and interview techniques with a focus on witnesses, women and juvenile offenders.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks)

(D) Course Content:

Unit-I

Investigating Officer: Power of observation and its importance in Investigation; and Qualities of investigating officer.

Unit-II

Crime Scene: importance of crime scene; inspection of crime scene; and preservation of crime scene.

Unit-III

Investigation; interrogation; and interviews.

Unit-IV

Examination of witnesses; interrogation of women accused; and interrogation of juvenile offenders.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 978.
5. International Association: Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, A.P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi,1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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POLICE ADMINISTRATION

SEMESTER VI

Semester VI: Police Procedures and Investigation-II

(A) Course Objectives:

The objective of this course is to introduce to the students about the use of scientific techniques in the field of investigation. After providing knowledge in death, types of death and bodily changes after death, the students would be imparted information on how to preserve finger prints, footprints, knowledge about handling of physical evidences, along with their packing and forwarding. In addition knowledge about the modern tools of investigation would also be provided.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Death; Types of death- death due to suffocation hanging, drowning, accident, suicide and murder. Bodily changes after death.

Unit-II

Preservation of finger prints, footprints, and blood at the scene of crime.

Unit-III

Physical evidence, handling packing and forwarding of physical evidence, and types of opinion to be obtained from physical evidence.

Unit-IV

Photography and its importance in police work; Polygraph; Brain mapping; and Narco Analysis.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 1978.
5. International Association : Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA, 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, P.H. Publishing Corporation, New Delhi,1999.

Further Readings

1.	Singh, S.P.	:	Combating Bio- terrorism with SpeciaL Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2.	Dutta, K.K.	:	Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3.	Ghosh, S.K. and Rustamji, K.F.	:	Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4.	Vadackumchery, James	:	Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5.	Vadackumchery, James	:	Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6.	Sharma, R	:	Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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MUSIC (VOCAL AND INSTRUMENTAL)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper:-(Theory)

Total Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Note: There will be 10 questions in all and a student will attempt five questions choosing at least one from each unit.

UNIT-I

1. Definition with full explanation of the following :-

   Sthai, Antra, Krintan, Badhat, Jod-Alap, Lag Daat, Jugalbandi, Layakaries (Adi, Kaudi, Biadi)

2. Establishment of Swaras on strings of Veena.

UNIT–II

1. Definition of Aesthetics in context of Indian Music

2. Rasa Sidhanta of Bharat

UNIT–III

1. Topics of Essay: - (i) Sangeet Sammelan

2. Knowledge of good qualities of a music performer (Vocalist or an Instrumentalist)

UNIT-IV

1. Elementary Knowledge of Harmonium,Tabla,Veena

UNIT-V

2. Description of Detailed & Non-detailed Ragas:-
   Detailed Raga :- i) Marwa (ii) Madhmad Sarang
   Non-detailed Raga: - (i) Sohni (ii) Megh
   Talas:- Tivra, Sultal

Paper B: Practical (Choice & Viva) **:** 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) One Dhamar in Gayaki Anga and /one drut gat in ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
- (i) Marwa
- (ii) M adhang Sarang

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
- (i) Sohni
- (ii) Megh

(c) Talas : Tivara, Sultal on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas.

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single .

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeetanjali	:	Pt. Onkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Saras Sangeet	:	Pradeep Kumar Dixit
4.	Aakashvani Evam Hindustani Shastriya Sangeet	:	Dr. Suchismita
5.	Sangeet Visharad	:	Basant
6.	Raag Parichay	:	Harish Chandra Srivastav
7.	Sangeet swarit	:	Dr. Ramanand Dwivedi
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper-:-Theory

Total Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

UNIT – I

1. Definition with full explanation of the following :-
   Kalavant,Vaggeykar, Swarsthan Niyam

UNIT-II

1. Essays:- i Role of Music in National Integration
   ii Lok Sangeet
   iii Music Appreciation

UNIT-III

1. Impact of Western Music on Indian Music
2. Study of Western Instruments:- Guitar, Keyboard, Octopad

UNIT-IV

1. Detailed study of Dakshini Music System of the following:-

   i Swara
   ii Raga
   iii Tala

UNIT-V

1. Description of Detailed & Non-detailed Ragas: -

   Detailed Raga: - (i) Patdeep
   (ii) Megh Malhar
   Non-detailed Ragas: - (i) Bhimpalasi
   (ii) Bahar
   Talas:- Tilwada, Adachautal

Paper B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
(i)	Tuning	:	5 Marks
(ii)	Capacity to play Talas on Tabla	:	2.5 Marks
(iii)	Capacity to play Harmonium	:	2.5 Marks
(iv)	Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) Tarana or one Fast Gat in Ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

(d) Ability to write notation of the Vilambit and Drut Gat of Ragas prescribed in the course:-
Patdeep, Megh Malhar

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Patdeep
(ii) Megh Malhar

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Bhimpalasi
(ii) Bahar

(c) Talas : Tilwada, Adachartala on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(d) Geet Ghazal

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1. Bhatkhande Sangeet Shastra	:	Pt. Bhatkhande
2. Abhinav Geetanjali	:	Pt. Ramashray Jth
3. Sangeetanjali	:	Pt. Onkar Nath Thakur
4. Raag Parichay	:	Harishchandra Srivastav
5. Sangeet Visharad	:	Basant
6. Sawars Sangeet	:	Pradeep Kumar Dixit
7. Sangeet Swarit	:	Dr. Ramanand Dwivedi
8. Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand
9. Art Education	:	Janardan Prasad

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HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Third year (SEMESTER SYSTEM) has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2017-18

SEMESTER-V

Paper V: Physics of Semiconductors

Unit I

Crystal Properties and Growth of Semiconductors: Semiconductor materials, Crystal lattices, Ge and Si crystal structure, production of electronic grade Si, Bulk crystal growth, Epitaxial growth.

Bonding forces and energy bands in solids, Metals, semiconductors and insulators, Direct and Indirect semiconductors, intrinsic and extrinsic semiconductors, compensation, Electrons and holes, effective mass, Fermi level, Conductivity and mobility, temperature dependence of Carrier concentration, effect of temperature, doping and field on mobility, Hall effect, Invariance of Fermi level at equilibrium.

Excess carriers in semiconductors: Optical absorption, Photoluminescence, Electroluminescence, Carrier lifetime and photoconductivity, photoconductive devices.

Unit II

Diffusion and drift of carriers: Einstein relation, built-in fields in semiconductors with different doping profiles, energy band diagrams. Steady state carrier injection, diffusion length, Haynes-Shockley experiment (qualitative discussion).

pn junction energy band diagrams, forward and reverse-biased junction, calculation of contact potential and depletion width in abrupt junction, diffusion and drift currents, Reverse-bias breakdown, Zener and Avalanche diode. Diffusion and depletion capacitance of pn junction, varactors.

Metal-semiconductor contacts, energy band diagrams of ohmic and rectifying contacts, Schottky diodes.

Recommended Books:

1. Solid State Electronic Devices: Ben Streetman, Sanjay Banerjee (Prentice Hall India, 2005).

Paper VI: Computational Physics

Note : The Computational Physics paper will consist of two parts (a) written examination of one hour duration and (b) Practical examination of two hours duration. Both the parts carry equal marks.

Unit I

C Programming Language

Types of Computer Systems and Operating Systems.
Introduction to Programming : Algorithms, Structured Programming. Basic idea of Compilers.
Data and Statements : Data Types. Constants and Variables. Mathematical, Relational, Logical and Bitwise Operators. Expressions and Statements. Block, Local and Global variables. Auto, Static and External Variables.
I/O Statements : printf, scanf, getc, getch, getchar, getche, etc.
Manipulators for Data Formatting: setw, width, endl and setprecision etc. ASCII Files I/O.
Preprocessor : #include and #define directives.
Control Statements :- If-statement. If-else Statement. Nested if Structure. Else-if Statement.
Ternary Operator. Goto Statement. Switch Statement. Unconditional and Conditional
Looping. While Loop. Do-while Loop. For Loop. Break and Continue Statements. Nested
Loops.
Arrays and Structures :- One and Two Dimensional Arrays. Idea of Structures, Strings and Pointers
Functions : Standard Library Functions and User-defined Functions.
Functions returning Values. Function Prototypes. Function Call by Value and by Reference.
Recursion.

Unit II

Design of algorithm and computer programs based on the numerical techniques read in Paper III "Statistics and Numerical Techniques".
Programs : (a) Data handling: find standard deviation, mean, variance, moments etc., (b) the least squared fitted curve for a data set, (c) roots of quadratic equations, (d) first order derivative at given x for a data set using Lagrange interpolation, (e) numerical integration on 1-D function using Simpson methods, (f) solving a differential equation using Euler/Runge-Kutta method, (g) Sum, Difference and Product of Matrices, (h) determinant of a matrix - its eigenvalues and eigenvectors.(h)Plotting and evaluation of mathematical functions.

Recommended Books:

1. Schaum's Outline of Programming with C, Byron Gottfried, McGraw-Hill.
2. Computer Programming in C, V. Rajaraman (Prentice Hall of India Pvt. Ltd.) (2006)
3. Computer Applications in Physics: S. Chandra (Narosa) (2008).
4. Computational Physics: R.C.Verma, P.K. Ahluwalia and K.C. Sharma (New Age) (2005).

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PHYSICS
SEMESTER-VI

Paper VII: Nuclear Radiations and Detection

Unit I

Radiation Sources:

Radioactive decays: Alpha decay, β^-, $\beta+$ and EC decays, Radioactivity units, gamma rays, Internal conversion, X-rays, Auger electron, Bremesstrahlung, Annhilation radiation.
Neutron sources- fission, radioisotope based sources and photoneutron sources, Accelerator based sources.
Radiation Interactions : Interaction of light and heavy Charged Particles, Stopping power, energy and range straggling.
Interaction of Fast Electrons - ionsation and radiative loss, backscattering.
Interaction of Gamma rays, photoelectric absorption, Compton scattering and pair production. Attenuation coefficient.
Interaction of Neutrons, Slowing down power, thermal neutrons.
Sources of Background: Natural radioactivity, Air borne radioactivity, Primary and secondary Cosmic rays.

Unit II

General Properties of Radiation Detectors: Modes of detector operation, Current mode, pulse mode, Pulse Height Spectra, Energy Resolution, Detection Efficiency, Dead Time-paralyzable and non-paralyzable models.
Radiation Detectors:
Ionization process in gases, Ion pair formation, fano factor, diffusion, charge transfer and recombination, Charge Migration and Collection.
Gas-filled detectors: Gas Multiplication, avalanche formation, Regions of detector operation.
Proportional Counters, fill gases and choice of geometry.
Geiger-Mueller counter, Fill Gases and Quenching mechanism, Recovery time and dead time, detection of charged particles, gamma and neutrons rays with G.M. counter.
Scintillation Detectors : Organic and Inorganic Scintillators; Characteristics and parameters associated with Gamma ray spectrum
Semiconductor detectors.
Detection of slow and fast neutrons by neutron-induced reactions.

Recommended Books:

1. Radiation detection and measurement: G.F. Knoll (Wiley, New York) (2000).

Paper VIII: Physics Practical

Note : The students are expected to perform any 6 experiments taking at least 3 from each section.

Unit I

1. Measurement of vacuum using the pirani/thermocouple gauge made using electric bulb filament.
2. To study Poisson and Gaussian distributions using a GM Counter.
3. To study absorption of gamma rays in Pb and Fe absorbers.
4. Strength of Alpha source using Solid state nuclear track detector.
5. To study regulated power supply and voltage multiplier circuits (using breadboard).

Unit II

6. To design an Astable multivibrator of given specifications using 555 Timer IC.
7. To design a monostable multivibrator of given specifications using 555 Timer IC and to measure the pulse-width of its output.
8. To study logic gates and clocked JK Master-Slave flip flops using IC's.
9. Study of photon intensity variation through crossed polariods and diffraction spectrum from diffraction grating using LDR/Photodiode.
10. To measure resistivity of semiconductor at different temperatures using four probe method and the deduce band gap of the semiconductor.

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CHEMISTRY

B.Sc. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2017

SEMESTER- V

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper V	:	Inorganic Chemistry-A	20	45	05
Paper VI	:	Physical Chemistry-A	20	45	05

Paper V: INORGANIC CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Inorganic Chains: (5 lectures)

(a) Chains : Catenation including heterocatenation, silicate minerals, intercalation, One dimensional sulphur-nitrogen conductor.

Unit II

Inorganic Rings and Cages : (5 lectures)

(a) Rings : Borazines, phosphazenes and phosphazene polymers.

(b) Cages : Simple cage molecules; Phosphorus–oxygen and phosphorus-sulphur cages; introduction to carboranes and metallocarboranes

Unit III

Organometallics-I : (5 lectures)

Formation and reactions (i) carbonylate ions (ii) metal-carbonyl hydrides & (iii) metal carbonyl halides.

Unit IV

Organometallics-II : (5 lectures)

Transition metal-carbon multiple bonds : Chemistry of :

Alkylidene Complexes.

Alkylidyne complexes including bridged molecules.

Metallocumulenes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
2. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
3. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
4. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VI: PHYSICAL CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Transport Properties-I *:* (5 Lectures)

Recapitulation of Collision Properties of gases such as collision cross section, collision diameter, collision number, collision frequency and mean free path.

Meaning of transport, Properties of gases, Flux, General equation of transport. Thermal conductivity, kinetic theory of thermal conductivity (derivation of the expression).

Unit-II

Transport Properties-II *:* (5 Lectures)

Viscosity of gases, kinetic theory of gas viscosity, (derivation of the expression). Measurement of gas viscosity, Diffusion Coefficient. Kinetic theory of diffusion in gases. (derivation of the expression).

Diffusion in liquids, theory of diffusion in liquids, diffusion in solutions, laws of diffusion.

Unit-III

Dynamic Electro-Chemistry : (5 Lectures)

Processes at electrodes. The electric double layer (Gouy-Chapman, Helmholtz and Stern models-qualitative ideas. The potential difference, Rate of charge transfer, Bulter Volmer equation, Tafel plot, Overpotential Polarisation, Polarography, Fuel cells, Corrosion, Inhibition of Corrosion.

Unit-IV

Surface Chemistry : (5 Lectures)

Interfacial region, types of interfaces, surface tension, thermodynamics of surfaces, plane interface, curved surfaces, Laplace and Kelvin equations including their derivation.
Gibbs Adsorption Equation and its Thermodynamic derivation, Wetting and adhesion in solid-liquid systems, contact angle, Capillary rise and surface tension. Surface Films on liquids.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
3. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
4. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
5. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
6. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

CHEMISTRY

SEMESTER VI

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
PaperVII	:	Inorganic Chemistry -B	20	45	05
PaperVIII	:	Physical Chemistry -B	20	45	05

Paper VII: INORGANIC CHEMISTRY-B

Total Marks : 50

Theory : 45

Internal Assessment : 5

Total Lectures : 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

(5lectures)

Complexes of aromatic systems with transition metals. M.O. description of bonding in Ferrocene.

Study of coordinative unsaturation, oxidative addition,

Unit-II (5 Lectures)

Insertion reactions in Organometallics.

Phenomenon of Fluxionality in Organometallics and its characterization.

Unit-III

Reaction Mechanism : (5 lectures)

Nature and classification of lignad substitution reactions, application of V.B. & C.F. theories to predict the substitution reactions. Mechanism of ligand replacement reactions, substitution in octahedral complexes acid hydrolysis, base hydrolysis, acid-catalysed, acid hydrolysis and acid hydrolysis for chelates.

Unit-IV (5 lectures)

Substitution in square planar complexes. The trans-effect & its Synthetic applications, M.O. theories and trans-effects. Electron transfer reactions & their mechanism. Molecular rearrangements, mechanistic pathways of substitution.

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

5. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
6. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
7. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
8. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VIII: PHYSICAL CHEMISTRY-B

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Colloids-I : (5 Lectures)

The colloidal state; preparation of colloidal solutions, Methods of purification of colloidal systems, dialysis, electro-dialysis, filtration, Ultra-filtration. Classification of colloidal systems, their typical properties with special reference to optical properties (Tyndall effect).

Unit-II

Colloids-II : (5 Lectures)

The Brownian movement. Electrokinetic phenomena, Stabilization of colloidal systems and theories of stability; zeta potential, Coagulation, Flocculation of colloids by electrolytes and its mechanism. Association Colloids, Micellar system, Emulsions and their types, HLB value of emulsifiers, Introduction to microemulsions.

Unit-III

Quantum Chemistry-I : (5 Lectures)

ATOMS : Schrodinger equation for multi-electron atoms, Need for approximate Solutions. Basic ideas of the Variation theorem and the Perturbation methods. Self-Consistent Field methods (Hertree and Hertree-Fock)- Elementary treatment only. Indistinguishability of Electrons. Pauli exclusion principle, two electron spin functions; Slater determinants and Pauli principle. New Atomic term symbols. Spin-orbit coupling (Total orbital momentum, multiplicity, total angular momentum) vector model of atom, Hund's rules, atomic spectra and Selection rules.

Unit-IV

Quantum Chemistry-II : (5 Lectures)

Molecules :

Schrodinger equation for molecules, Born-Oppenheimer approximation.Valence bond theory and Molecular Orbital theory as two approaches for approximate solution of Schrodinger equation LCAO-MO treatments of H_2 and Valence bond treatment of H_2 (complete solutions not required. Only wave functions to be discussed) Comparison of MO and VB treatments. Brief Introduction to the electronic structure for polyatomic molecules. Metals, Insulators and Semiconductors. Band Theory of Solids (elementary discussion).

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

7. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
8. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
9. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
10. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
11. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
12. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

BOTANY

B.Sc. (Honours) Botany Fifth and Sixth Semester Syllabus

(Examination 2017-2018)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A:	Biology of Cryptogams and Seed Plants	3 hrs.	36	4	40
Theory Paper-B:	Genetics, Plant Breeding, Biochemistry, Molecular Biology and Biotechnology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs	18	2	20
Sixth Semester					
Theory Paper- A:	Microbiology and Plant Pathology	3 hrs.	36	4	40
Theory Paper-B:	Systematics of Angiosperms and Environmental Biology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	2	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY

B.Sc. (Honours) Fifth Semester (Examination December, 2017)

PAPER-A: BIOLOGY OF CRYPTOGAMS AND SEED PLANTS

Max. Marks	:	40
Theory	:	36
Internal Assessment	:	04

Objective : The basic objective of this paper is to make the students understand the diversity in various life forms of plant kingdom. It provides knowledge about evolution of simpler forms to complex ones along with their morphology, anatomy and reproduction.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
BIOLOGY OF CRYPTOGAMS

Algae: Occurrence and distribution; thallus organization and evolutionary tendencies; ultrastructure of algal cell; criteria for classification, structure and life history of *Oedogonium* (Chlorophyceae), *Vaucheria* (Xanthophyceae), *Ectocarpus* (phaeophyceae), *Batrachospermum* (Rhodophyceae) and economic importance of algae.

Fungi: Occurrence and distribution; ultrastructure of fungal cell, cell wall composition, modern concepts in the classification of fungi; nutrition, reproduction, structure and life history of *Rhizopus* (Zygomycetes), *Peziza*, *Saccharomyces* (Ascomycetes), *Alternaria* (Deuteromycetes), *Agaricus* (Basidiomycetes); types of fungal spores and mode of their liberation and economic importance of fungi.

UNIT-II

Bryophytes: Comparative account of morphology, anatomy and reproduction in *Riccia, Marchantia, Anthoceros, Funaria*; evolution of sporophyte and gametophyte; classification, ecological aspects and economic importance.

Pteridophytes: The primary vascular plants; classification, comparative account of morphology, anatomy and reproduction in *Rhynia, Lycopodium, Selaginella, Equisetum, Marsilea, Pteris*; Telome theory; stelar evolution; heterospory and seed habit.

UNIT-III
SEED PLANTS

Phanerogams, the seed bearing plants: General characteristics and types.

The Living Cycads: Distribution; vegetative organography and anatomy; reproductive cycle –sporophytes and sporangia, gametophytes, fertilization, embryogeny and seed development of *Cycas*.

The Coniferales: General organography and anatomy; foliage leaves; storbilli and sporangia; reproductive cycle– sporogenesis, gametophytes, fertilization, embryogeny and seed development of *Pinus*.

The Gnetales: Habit and distribution; vegetative organography and anatomy; reproductive cycle – the storbilli, sporogenesis, male and female gametophytes, pollination, fertilization and embryogeny of *Ephedra*.

UNIT-IV

Alternatives for Reproduction: Vegetative and sexual reproduction.

Flower: Evolution, concept of flower as a modified determinate shoot and functions of flower.

Structure of Anther : Microsporogenesis: formation of pollen grains (male gametophyte); pollen germination; pollen tube growth.

Structure of Pistil**:** Ovules; megasporogenesis; development of embryo sac (female gametophyte).

Mechanisms and Agencies of Pollination: Pollen-stigma interaction; self-incompatibility; double fertilization, apomixis.

Seed and Fruit: Development of endosperm and embryo in monocotyledons and dicotyledons; storage of reserve materials and desiccation in seeds; dormancy and seed germination; fruit maturation; ripening and dispersal.

Suggested Readings

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 4th revised and enlarged edition. Vikas Publishing House, Delhi, India, 2000.
2. Bold, H.C., Alexopoulos, C.J. and Delevoryas, T. Morphology of Plant and Fungi (4th Edition), Harper and Foul Co., New York, 1980.
3. Cronquist, A. The evolution and classification of flowering plants, Thomas Nelson (Printers) Ltd., London and Edinburgh, 1968.
4. Delevoryas, Th. Plant Diversification, Modern Biology Series. Halt, Rinehart and Winston, New York, 1965.
5. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
6. Dube, H.C. An Introduction to Fungi, Vikas Publishing House Pvt. Ltd., Delhi, India, 1990.
7. Foster, A.S. and Gifford, A.E.M., Jr. The Comparative Morphology of Vascular Plants, Vakils, Peffer and Simons Pvt. Ltd, 1967.
8. Gifford, E.M. and Foster, A.S. Morphology and Evolution of Vascular Plants, W.H. Freeman & Co., New York, 1989.

9. Gilbert, M.S. Cryptogamic Botany, Vol. I & II (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1985.
10. Johri, B.M. Embryology of Angiosperms, Springer-Verlag, Berlin, 1984.
11. Kumar, H.D. Introductory Phycology, Affiliated East-West Press Ltd., New York, 1988.
12. Puri, P. Brophytes, Atmaram & Sons, Delhi, India, 1985.
13. Raghvan, V. Molecular Embryology of Flowering Plants, Cambridge University Press, New York, 1997.
14. Rangaswamy, G. and Mahadevan, A. Diseases of Crop Plants in India, Prentice Hall India Pvt. Ltd. New Delhi, India, 1999.
15. Singh, V, Pande, P.C. and Jain, D.K. Diversity of Microbes and Cryptogams, Rastogi Publications, Meerut, India, 2008.
16. Sporne, K.R. The Morphology of Angiosperms. B.I. Publication, Bombay, India, 1977.
17. Srivastava, H.N. Diversity of Microbes & Cryptogams, Vol. I, Pradeep Publications, Jalandhar, India, 2014.
18. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol.III, Pradeep Publications, Jalandhar, India, 2014.
19. Wilson, N.S. and Rothwell, G.W. Palaeobotany and the Evolution of Plants (2nd Edition), Cambridge University Press, UK, 1993.

Suggested Laboratory Exercises (Biology of Cryptogams)

1. Comparative study of algal genera with reference to the classes mentioned in theory.
2. Comparative study of fungal genera with reference to the classes mentioned in theory.
3. Comparative study of morphology, anatomy and reproductive structures in *Riccia, Marchantia, Anthoceros* and *Funaria.*
4. Comparative study of different members of Pteridophytes mentioned in the theory syllabus.
5. Comparative anatomical structure of stem/wood of Cycadales, Coniferales, Ephedrales, Gnetales and angiosperms, from sections and macerations.
6. Comparative structure of the male and female cones of Cycads (*Cycas*), Conifers (*Pinus*) and Ephedrales (*Ephedra*).
7. Comparative structure of leaf, leaf appendages, venation and stomata of gymnosperms and angiosperms.
8. Diversity in pollen grain structure among Cycads, Conifers, Ephedrales and angiosperms with respect to size, exine sculpturing, germ spore number, number of constituent cells and any other features.
9. Microsporogenesis and male gametophyte development in angiosperms through microtome sectioning and acetocarmine squash technique.
10. Pollen grain germination by hanging-drop and sitting-drop techniques in *Impatiens*, *Catharanthus roseus* (= *Vinca rosea*) or any other suitable material.
11. Diversity in the structure of stigma, style, stigmatic papillae and transmitting tissue of style.

BOTANY

SEMESTER – V

PAPER-B: GENETICS AND PLANT BREEDING, BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Objective: The course work of this paper deals with basic concepts of genetics, plant breeding, molecular biology and biotechnology. It deals with various types of plant reproduction and methods of plant improvement. It provides knowledge of molecular and cellular basis that would enable the students to understand the hereditary and evolutionary trends in plants kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
GENETICS

Cell division - Mitosis and Meiosis.

Mendel's Experiments and Principles of Inheritance; Backcross and test cross; gene interactions and modified dihybrid ratios – complementary, supplementary, duplicate and epistatic factors.

Quantitative Genetics: Quantitative traits and quantitative genetics; the multiple factor hypothesis; descriptive statistics.

Linkage and Recombination: Coupling and repulsion phases; two and three point testcrosses with their significance in chromosome mapping; interference and co-efficient of coincidence.

Maternal Influence on Inheritance: Shell coiling in snails and Kappa particles in *Paramecium*; cytoplasmic inheritance in yeast (mitochondria) and *Mirabilis jalapa* (plastids).

Alterations in the Genetic make up – changes at Genetic Level: Spontaneous and induced mutations; mutagens – types and mode of action; transitions, Transversions and frame-shift mutations; detection of mutations.

Alterations in Genetic makeup – changes in Chromosome Structure: Origin, types and effects of duplications, deletions, inversions and translocations; meiosis in structural heterozygotes.

Alterations in Genetic makeup – changes in Chromosome Number : Origin, types and effects of auto and allopolyploidy; origin and meiosis in nullisomics, monosomics and trisomics.

UNIT –II

PLANT BREEDING

Methods of Plant Improvement: Pure line and mass selection; hybridization in self and cross pollinated crops; introduction and acclimatization; hybrid vigour.

Mutations and polyploidy as methods of plant improvement.

UNIT-III

BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Nucleic Acids**:** Composition of nucleic acids and synthesis of nucleotides; DNA structure; A,B and Z forms of DNA; denaturation and renaturation of DNA; chromatin structure; DNA replication and recombination; DNA polymerases; different forms of RNA and their role.

Amino Acid and Protein Metabolism: Structure, characteristics and classification of amino acids; protein and non-protein amino acids; amino acid biosynthesis; GS/GOGAT cycle; transamination; peptide bond and polypeptide chain; primary, secondary, tertiary and quaternary structure of proteins; protein biosynthesis and its regulation; post-translational modification of proteins; protein targeting; protein degradation.

Carbohydrate Metabolism: Classification; structure of some representatives examples of monosaccharides, disaccharides, polysaccharides; stereoisomers, enantiomers and epimers; biosynthesis and degradation of sucrose and starch.

Lipid Metabolism: Saturated and unsaturated fatty acids; fatty acid biosynthesis; oxidation of fatty acids; storage and mobilization of fatty acids and lipids.

UNIT-IV

Gene Structure, Expression and Regulation: Gene organization in prokaryotes and eukaryotes; operon concept; gene regulation in prokaryotes and eukaryotes; inducible, repressible, positive and negative gene regulation; interrupted genes in eukaryotes; RNA splicing; mRNA stability.

Recombinant DNA Technology: Restriction endonucleases: prokaryotic and eukaryotic cloning vectors; genomic and cDNA libraries; southern and northern analysis; various techniques of gene mapping and DNA fingerprinting (RFLP, RAPD, AFLP); chromosome walking; polymerase chain reaction; DNA sequencing.

Plant Biotechnology: Cellular differentiation and totipotency; organogenesis and embryogenesis; protoplast isolation and culture; somatic hybridization; clonal propagation; genetic engineering of plants; vectors for gene delivery; selectable markers and reporter genes; methods of gene delivery; Agrobacterium – the natural genetic engineer; salient achievements in crop biotechnology (with suitable examples) and prospects.

Suggested Readings:

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. Molecular Biology of Cell, Garland Publishing Co., Inc., New York, USA, 1999.
2. Atherly, A.G., Girton, J.R. and McDonald. The Science of Genetics, Saunders College Publishing Co., Fort Worth, USA, 1999.
3. Bhatia, K.N. and Dhand, Neelam. Cell Biology and Genetics, Trueman Book Company, Jalandhar, India, 2013
4. Buchanan, B.B., Gruissem, W. and Jones, R.L. Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists, Maryland, USA, 2000.
5. Dennis, D.T., Turpin, D.H., Lefebvre, D.D. and Layzell, D.B. (eds). Plant Metabolism (2nd Edition), Longman, Essex, England, 1997.
6. Gardener, J., Simmons, H.J. and Snustad, D.P. Principles of Genetics (8th Edition), John Wiley & Sons, New York, 1991.
7. Gupta, P.K. Cytogenetics, Rastogi Publications. Shivaji Road, Meerut, India, 1995.
8. Gupta, P.K. Cytology, Genetics and Molecular Biology, Rastogi Publications. Shivaji Road, Meerut, India, 2009.
9. Gupta, P.K. Genetics, Rastogi Publications. Shivaji Road, Meerut, India, 1994.
10. Hartl, D.L. and Jones, E.W. Genetics: Principles and Analysis (4th Edition), Jones & Bartlett Publishers. Massachusetts, USA, 1998.
11. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology (2nd Edition), John Wiley and Sons, Chichester, England, 1999.
12. Lodish, H., Berk, A., Zipursky, S.L., Matsudaira, P., Baltimore, D. and Darnell, J. Molecular Cell Biology (4th Edition), W.H. Freeman and Co., New York, U.S.A, 2000.
13. Old, R.W. and Primrose, S.B. Principles of Gene Manipulation, Blackwell Scientific Publications, Oxford, UK, 1989.
14. Poehlmann, J.M. and Sleeper, D.R. Breeding Field Crops, Panima Publishing House, New Delhi, India, 1995.
15. Russel, P.J. Genetics (5th Edition), The Benjamin/Cummings Publishing Co., Inc., USA, 1998.
16. Sharma, J.R. Principles and Practice of Plant Breeding, Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1994.
17. Simmonds, N.W. Principles of Crop Improvement, Longman, London and New York, 1979.
18. Snustad, D.P. and Simmons, M.J. Principles of Genetics (2nd Edition), John Wiley & Sons, Inc., USA, 2000.
19. Srivastava, H.N. Cell Biology and Genetics, Vol.II, Pradeep Publications, Jalandhar, India, 2006.
20. Srivastava, H.N. Plant Physiology, Biochemistry and Biotechnology, Vol.V, Pradeep Publications, Jalandhar, India, 2013.
21. Verma, P.S. and Agarwal, V.K. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company (Reprint, 2010).

Suggested Laboratory Exercises:

1. Determination of chromosome count from dividing pollen mother cells and root tips.
2. Preparation of karyotypes from dividing root tip cells and pollen grains.
3. Determination of intraspecific variation in chromosome number from locally available taxa.

4. Correlation of floral structure with pollination system (e.g. *Salvia*, *Sesamum*, pea, *Lathyrus*, wheat, rice, maize).
5. Field exploration for detection of male sterile plants and estimation of their pollen fertility in locally grown crop plants e.g. *Sorghum*, tomato and *Linum*.
6. Estimation of pollen ovule ratio and its bearing on pollination system.
7. Emasculation and bagging of flowers of Brassicaceae, Poaceae, Papilionaceae, Malvaceae and Linaceae, pollinating them manually and estimating fruit and seed set.
8. Chemical tests to demonstrate the presence of starch, sugar, fat and protein in plant material.
9. To identify the amino acids in a mixture by resolving through paper chromatography or TLC.
10. To prepare the standard curve for protein and determine the protein content in unknown samples by Biuret method.
11. Colorimetric estimation of RNA using orcinol.
12. Colorimetric estimation of DNA using diphenyl amine.
13. Isolation of plant genomic DNA and its spooling.
14. Isolation of total RNA from plant tissue and its colorimetric estimation.
15. Preparation of tissue culture media, sterilization and inoculation of plant material.
16. Demonstration of techniques of in vitro culture of various explants.
17. Isolation of plant protoplasts (e.g. Tobacco, *Petunia*) using enzymes available commercially and estimation of their yield.

Note: In the practical classes, emphasis should be given on basic principles of spectro-photometry, chromatography, electrophoresis and rDNA technology and related fundamentals.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1 Identify classify & write illustrated morphological note on specimens A & B (unit I – III of paper A) 4
Q.2 Demonstrate and perform the experiment C (Biochemistry/Biotechnology) and show it to the examiner. 5
Q.3. Identify slides D & E giving at least two reasons for each. 4
Q.4 Practical note book 2
Q.5 Viva-Voce 3

BOTANY

B.Sc. (Honours) Sixth Semester (Examination May, 2018)

PAPER-A: MICROBIOLOGY AND PLANT PATHOLOGY

Objectives: The basic objective of this paper is to make students familiar with the systematic position of microorganisms, their ultrastructure, classification and industrial application. It also deals with the important aspects of plant diseases, their pathogens and disease management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
(MICROBIOLOGY)

General account of Microorganisms and their characteristics features.

Ultrastructure of Microorganisms: Prokaryotic microorganisms; fine structure of prokaryotic cell; eukaryotic microorganisms; viruses – properties and classification; characteristic features of host-virus interaction; bacteriophage T4; tobacco mosaic virus; general account of mycoplasma and actinomycetes.

Industrial Application of Microorganisms: Organic acids, alcohol, food processing, milk products, antibiotics and biopesticides.

UNIT-II

Genetic Recombination in Prokaryotes: Conjugation, transformation and transduction.

Role of Microorganisms in biogeochemical cycling of nitrogen and carbon; Biological N_2 fixation.

UNIT-III

(PLANT PATHOLOGY)

Major Diseases of Plants, their symptoms and Control : Blast and brown spot of rice, rust and smuts of wheat, downy mildew and green ear disease of bajra, white rust of crucifers, late blight of potato, wilt of pigeon pea, damping off seedlings of tomato/mustard/chillies, Tikka or leaf spot of groundnut, citrus die back, powdery mildews of cucurbits and grapes, red rot of sugarcane.

Plant Disease Management: Chemical, biological; IPM systems; development of transgenics; biopesticides; plant disease clinics.

UNIT-IV

Pathogen Attack and Defense Mechanisms: Physical, physiological, biochemical and molecular aspects.

Plant Disease Epidemiology: Transmission and spread of plant pathogens; disease cycles, epidemics; modeling and disease forecasting.

Suggested Readings:

1. Agrios, G.N. Plant Pathology, Academic Press, London, 1997.
2. Albajes, R. Gullino, M.L., Van Lenteren, J.C. and Elad, Y. Integrated Pest and Disease Management in Green house crops, Kluwer Academic Publishers, 2000.
3. Bridge, P. et al. Molecular Variability of Fungal Pathogens, CAB International, UK, 1998.
4. Bridge, P. et al. Application of PCR in Mycology, CAB International, UK, 1999.
5. Bridge, P., Moore, D.R. and Scott, P.R. Informational Technology, Plant Pathology and Biodiversity, CAB International, UK, 1998.
6. Clifton, A. Introduction to the Bacteria, McGraw Hill Co., New York, 1958.
7. Mandahar, C.L. Introduction to Plant Viruses, Chand & Co. Ltd., Delhi, India,1998.
8. Persley, G.J. Biotechnologies and Integrated Pest Management, CAB International, UK, 1996.
9. Skerritt, J.H. and Apples, R. New Diagnostics in Crop Sciences, CAB International, UK, 1995.

Suggested Laboratory Exercises

1. Calibration of microscope: determination of dimensions of microorganisms (suggested model organisms: yeast, lactobacilli, cyanobacteria).
2. Cultivation media for autotrophic and heterotrophic microorganisms (cleaning of glasswares, mineral media, complex media, solid media, sterilization).
3. Isolation of microorganisms: streaking on agar plates/pour plate method, isolation of clones, preservation.
4. Preparation of Winogradsky column using pond bottom mud, observations on temporal sequence of appearance of microbes. (visual appearance, microscopic observations)
5. Observation on virus infected plants (symptoms).
6. Fermentation by yeast (inverted tube method, use of different substrates, e.g. glucose, fructose, cane sugar, starch)
7. Study of histopathology of various plant diseases included in theory.
8. Isolation and culture of plant pathogens (e.g. *Colletotrichum, Fusarium, Alternaria*) and establishment of Koch's postulates and their pathogenicity.
9. Study on antagonism between isolated antagonists and plant pathogens and test of biological control.
10. Demonstration of the assay of prohibitins (phytoalexins).
11. Demonstration of biopesticides (essential oils, neem, turmeric and garlic) against some pathogens.

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BOTANY

SEMESTER – VI

PAPER-B: SYSTEMATICS OF ANGIOSPERMS AND ENVIRONMENTAL BIOLOGY

Objective: This paper deals with taxonomy and species concept of plants. It provides a knowledge about identification, nomenclature and classification which forms the basis of future research work. It also deals with inter-relations of plants and environment as well as various environmental problems, role of national and international organization in environmental management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

ANGIOSPERM SYSTEMATICS

Introduction : Aims and components of systematics, introduction to identification, nomenclature, phylogeny and classification.

Systematics in Practice: Importance of herbarium specimens and their preparation; role of herbaria and botanical gardens; documentation (floras, monographs, manuals, journals, abstracts, indices and dictionaries); keys for identification of plants.

Taxonomic Hierarchy: Taxonomic category, taxonomic groups; concepts of species, genus and family.

Botanical Nomenclature: Principles and rules; ranks and names; type method; principle of priority and its limitations; names of hybrids and cultivars; concept of biocode.

UNIT-II

General characters of Angiosperms.

Systems of Classification: Bentham and Hooker's system. Engler and Prantl's system and Takhtajan's system.

Modern Taxonomy: Supporting evidences/inputs for taxonomy; taxonomy in relation to anatomy, embryology, palynology, ecology, cytology (cytotaxonomy), secondary metabolites in plants (chemotaxonomy).

A brief account of following families: Ranunculaceae, Brassicaceae, Rutaceae, Fabaceae, Cucurbitaceae, Apiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

UNIT-III

ENVIRONMENTAL BIOLOGY

Introduction: Inter-relationship between the living world and the environment; the components and dynamism; homeostasis; relevance to man.

Earth as a System: The biosphere, the hydrosphere, the atmosphere and the lithosphere; components within biosphere (Biomes); parameters delimiting individual biomes.

The Environment: Soil, water and atmosphere – general account and adaptations.

Organismal Ecology/Biotic components: Individuals, species, population communities and their characteristics.

Ecosystems: Concepts of ecosystem; homeostasis; structure of ecosystem; functions of ecosystem; transfer of energy and minerals via grazing and detritus chains and role of micro-organisms; cycles (hydrologic, gaseous); role of humans in maintaining biogeochemical cycles.
Diversity of Ecosystem: Aquatic (fresh water); terrestrial (forest/grassland); man-made ecosystems.

UNIT-IV

Human Ecology and Ecological Management: The human population; renewable and non-renewable natural resources and their management; conservation of biodiversity; endangered species; conventional and non-conventional energy sources.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Suggested Readings

1. Barbour, M.G., Burk, J.H. and Pitts, W.D. Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.
2. Bhojwani, S.S. Plant Tissue Culture: Applications and Limitations, Elsevier Science Publishers, New York, USA, 1990.
3. Collins, H.A., and Edwards, S. Plant Cell Culture, Bios Scientific Publishers, Oxford, UK, 1998.
4. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
5. Hill, M.K. Understanding Environmental Pollution, Cambridge University Press, 1997.
6. Kormondy, E.J. Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, India, 1996.
7. Mackenzie, A. et al. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, India, 1999.
8. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.
9. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.
10. Odum, E.P. Basic Ecology. Saunders, Philadelphia, 1983.
11. Raghavan, V. Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, New York, USA, 1986.
12. Smith R.K. Ecology and Field Biology. Harper Collins, New York, 1996.

13. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol. III, Pradeep Publications, Jalandhar, India, 2014.
14. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture, Kluwer Academic Publishers, The Netherlands, 1994.

Suggested laboratory Exercises

Description of the following flowers belonging to the various families included in theory syllabus:

1. Ranunculaceae : *Ranunculus, Delphinium*
2. Brassicaceae : *Brassica, Iberis*
3. Rutaceae: *Citrus, Murraya*
4. Fabaceae: *Lathyrus, Cassia, Mimosa* and *Acacia*
5. Cucurbitaceae: *Luffa*
6. Apiaceae; *Coriandrum*
7. Asteraceae: *Helianthus, Ageratum, Sonchus.*
8. Asclepiadaceae: *Calotropis.*
9. Solanaceae: *Solanum, Petunia*
10. Lamiaceae: *Ocimum, Salvia*
11. Chenopodiaceae: *Chenopodium*
12. Euphorbiaceae: *Euphorbia, Phyllanthus*
13. Liliaceae: *Asphodelus, Asparagus*
14. Poaceae: *Avena, Triticum.*

Suggested laboratory Exercises (Environmental Biology)

1. Mechanical analysis of soils by sieve method
2. Determination of water holding capacity and field capacity of soil.
3. Determination of permeability (capillarity and percolation) of different types of soils.
4. Determination of species area curve by minimal quadrat size.
5. Analysis of the herbaceous vegetation for frequency, density and abundance.
6. Effect of tree canopy on the distribution of herbaceous vegetation.
7. Field visit: students should be taken for field visits to places of ecological/environmental interest. They should submit detailed report of the visit in the form of project report in the final practical examination for evaluation. The report shall carry marks.

Note to teachers:

The students are to be familiarized with the families listed above in the practical classes with representative's species or any other that may be available locally. However, questions pertaining to these may be asked in the theory examinations.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1	Describe specimen A in technical terms & proper sequence. Draw F.D and V.S of the flower. Cut T.S of ovary and V.S of the flower and show it to the examiner. Write its F.F. as well.	6
Q.2	Identify specimen B and write Histopathological note on it.	3
Q.3.	Identify slides C by giving at least two reasons.	2
Q.4	Field Diary	2
Q.5	Practical note book	2
Q.6	Viva-Voce	3

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ZOOLOGY
SEMESTER – V

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

PAPER II: AQUATIC BIOLOGY-I

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

Max. Marks	:	40
Theory Exam	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Structure and functions of testis, epididymis, vas deferens.

UNIT-II

Seminal vesicle and prostate gland.
Semen composition, sperm maturation and capacatation.

UNIT -III

Structure and functions of ovary, oviduct, uterus and vagina.

UNIT -IV

Oestrous and menstural cycles.
Fertilization, implantation, gestation, parturition and lactation.

Books Recommended :

1. Milt, J. and Everitt, B.J., *Essential of Reproduction,* Blackwell Scientific Publications,1985.

2. Genong, M., *Reproduction,* Saunders Intern. Publications, 1985.

3. Greep, R.O. and Astwood, E.B. (Eds.), *Handbook of Physiology,* Kluwer Academic/Plenum Publishers, New York, 2002.

4. Balin, H. and Glasser, S. (Eds.), *Reproductive Biology,* Excerpta Media, 1972.

5. Guyton, A.S., *Text Book of Medical Physiology,* 7th edition, Iquakushoinl/Saunders International Publications, 1994.

Paper-II : AQUATIC BIOLOGY

Max. Marks	:	40
Theory Exam	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

Note : Nine questions are to be set. Question No. 1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Physico-chemical characteristics of marine environment

UNIT -II

Zonation in marine habitat : Pelagic and benthic zone and their flora and fauna.

UNIT -III

Freshwater zonation in a lake and stream : Supralittoral, littoral, sublittoral, profundal & limnetic zones of a lake. Pool zone and rapid zone of a stream.

UNIT -IV

Classification of freshwater habitats : Streams ponds, lakes, marshes and swamps.

Suggested Books :

1. Ruttner, F., *Fundamentals of Limnology*, University of Tronto Press, Tronto, 1975.
2. Reid, G.K., and Wood, R.D., *Ecology of Inland Waters and Estuaries*, Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., *Limnology*, McGraw Hill Book Co., New York, 1952.
4. Jhingran, V.G., *Fish & Fisheries of India*, Hindustan Publications Corporation, Delhi, 1991.

PRACTICALS

Practical based on both theory papers I & II :

I. Demonstration of male and female reproductive systems and their associated glands in rat/rabbit through charts.
II. Histology of testis, epididymis, vas deferens, prostate, seminal vesicle, ovary, uterus and vagina through permanent slides.
III. Study of permanent slides of the vaginal smear of human menstrual cycle and rat/mice oestrous cycle.
IV. Determination of the different phases of the oestrous cycle in living rat through permanent slides.
V. Study of mammalian sperm through slides/charts.
VI. Histological examination of placenta through slides/charts.
VII. Freshwater zonation in lake/stream and study of different communities (plankton, nekton, neuston, benthos and lotic communities).

Scheme for Conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks

Note : 1. Practical will be of 4 hrs. duration.

1. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of given system and show to examiner/Spot parts of system on the charts/models. (3)

II Identification of phases of oestrous cycle. (1)

III Record biota in a given sample from a lake. Make labeled sketches and demonstrate them to the examiner. (2)

IV Examine the water sample for various communities from different zones of a lake and draw labelled sketches. (2)

V Identify the specimens/slides/charts A-D. Give reasons of the identification. (4)

VI. Note book and charts. (3)

VII. Viva-Voce. (3)

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ZOOLOGY

SEMESTER – VI

PAPER I: REPRODUCTWE BIOLOGY AND HUMAN WELFARE-II

PAPER II: AQUATIC BIOLOGY-II

PAPER I: REPRODUCTWE BIOLOGY AND HUMAN WELFARE-II

Max. Marks : 40
Theory Exam. : 36 marks
Internal Assessment : 4 marks
Time : 3 hrs.

Note : Nine questions are to be set. Question No. 1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT –I

Neuro-Hormonal Regulation of production of Gonadal and Gonadotropic hormones.

UNIT –II

Neuro-Hormonal Regulation of production of Hypothalamic factors and Structural behaviour.

UNIT –III

Fertility Regulation

Contraception and modern contraceptive technology-natural, mechanical, chemical immunological and surgical methods and Fertilization *in vitro* (Test tube baby).

UNIT -IV

Application of fertility regulation in live stock:

i. Artificial insemination in farm animals.
ii. Milk yield.
iii. Egg production in poultry.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Turner, C.P. & Bagnara, J.T., General Endocronology, Saunders Intern. Publications, 1984.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-II

Max. Marks : 40
Theory Exam. : 36 marks
Internal Assessment : 4 marks
Time : 3 hrs.

Note : Nine questions are to be set. Question No. 1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 marks each. Two questions are to be set from each unit. One question is to be attempted from each unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Ecosystem : Study of ecosystem with particular reference to the components of aquatic ecosystem. Food chains and food webs. Flow of energy in a food chain.

UNIT -II

Physico-chemical characteristics of freshwater environment : Temperature, light, current of water, density, pH, dissolved oxygen, carbon dioxide and nutrients.

UNIT -III

Productivity : Concepts of productivity, primary, secondary and tertiary productivity, yield and carrying capacity.

UNIT -IV

Ecological sucession : Succession, kinds of succession, changes in animal life during hydrarch concept of climax. Adaptations of aquatic organisms.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Odum, E.P., Fundamentals of Ecology, Saunders Co., Philadelphia, 2004.

PRACTICALS

Practical based on both theory papers I & II:

I. Study of permanent slides of mammalian ovary and testis.
II. Study of different techniques of contraception through charts/models/video clippings.
III. Study of artificial insemination, egg production through charts/models/video clippings.
IV. Study of components of lake ecosystem and grazing type of food chain.
V. Physico-chemical characteristics of freshwater environment. Temperature, Light, turbidity, current of water, density, pH, dissolved O_2, CO_2 and nutrients.
VI. Ecological succession in an aquatic habitat in the laboratory.

Scheme for Conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of techniques of contraception/artificial insemination. (3)

II Determine the physico-chemical factors in a given sample of fresh water. Write the procedure followed. (4)

III Draw labeled diagram of food chain (in aquatic/terrestrial environment) (2)

IV Identify the cells/part in slides A & B. Give reasons for identification and name the hormone secreted by it. (3)

V. Note book and charts. (3)

VI. Viva-Voce. (3)

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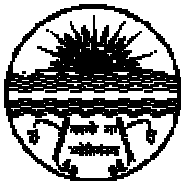

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 — enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

BACHELOR OF COMPUTER APPLICATIONS

(1st to 6th Semester)

FOR

2017 - 2018 SESSIONS

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Panjab University, Chandigarh

Scheme of Examination and Syllabus of BCA w.e.f. 2017-18

Bachelor of Computer Applications Semester – I

Paper Code	Title	L	T		Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-101	English(Compulsory)-A	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-102	Fundamentals of Mathematical Statistics	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-103	Computer Fundamentals and Computing Software	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-104	Problem Solving Through C	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-105	Lab based on BCA-16-103	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-106	Lab based on BCA-16-104	-	-	6	6	-	50	50	4 Hrs	2
	Environment, Road Safety Education & Violence against Women & Children									
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – II

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-201	English (Compulsory)-B	6	-	-	6	10	65	075	3 Hrs	3
BCA-16-202	Computer Organization	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-203	Fundamentals of Web Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-204	Object Oriented Programming using C++	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-205	Lab based on BCA-16-203	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-206	Lab based on BCA-16-204	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – III

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-301/ BCA-16-302	Punjabi-A/ History & Culture of Punjab – A	6	-	-	6	5	45	50	3 Hrs	3
BCA-16-303	Information System Design and Implementation	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-304	Computer Oriented Numerical Methods	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-305	Data Structures	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-306	Lab based on BCA-16-304	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-307	Lab based on BCA-16-305	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**35**	**340**	**375**		**16**

Bachelor of Computer Applications Semester – IV

Paper Code	Title	L	T	P	Total	Int	Ext	Total		Credits
BCA-16-401/ BCA-16-402	Punjabi-B/History & Culture of Punjab – B	6	-	-	6	5	45	50	3 Hrs	3
BCA-16-403	Software Project Management	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-404	Operating System Concepts and Linux	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-405	Database Management System	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-406	Lab based on BCA-16-404	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-407	Lab based on BCA-16-405	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**-**	**12**	**36**	**35**	**340**	**375**		**16**

Bachelor of Computer Applications - Fifth Semester

Paper Code	Paper Name	Theory & Practical Lectures	Univ. Exam. Marks	Int. Exam. Marks	Exam. Hours	Paper Code
18.	Entrepreneurship Development Programme	4	90	10	3	BCA-501
19.	Principles of Computer Graphics & Multimedia Technology	5	90	10	3	BCA-502
20.	Discrete Mathematics in Computer Science	5	90	10	3	BCA-503
21.	Computer Lab.: Based on BCA-502	5	90	10	4	BCA-504
Bachelor of Computer Applications - Sixth Semester						
22.	Web Programming	5	90	10	3	BCA-601
23.	Computer Organization	5	90	10	3	BCA-602
24	Computer Networks	5	90	10	3	BCA-603
24.	Minor Project and Seminar Based on BCA-601	5	90	10	4	BCA-604

***The Environment, Road Safety Education & Violence against Women & Children is a compulsory qualifying paper which the students have to study in the B.C.A. 1st year (2nd Semester). If the students failed in qualify the paper during 2nd Semester, he / she / they be allowed to appear / qualify the same in the 4th or 6th semester/s.**

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FIRST SEMESTER

FIRST SEMESTER

: **English (Compulsory) – A**

BCA-16-101

L	T	P	Cr	
6	-	-	3	

External Marks : 65
Internal Marks : 10

Time Duration : 3Hrs. **Number of Lectures : 60**

Semester I

Book Prescribed: **Colours of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (1& 2)
One essay type question on summary/Character/Incident (one out of two with internal choice)
10 marks

II) **Prose (1 to 3)**
Long essay type question on Summary/Theme(one out of two with internal choice)
10 marks

III) **Poetry** (1 to 6) **15 marks**

Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context (one out of two with internal choice) **5 marks**

Section B

1) Word formation from Prose and Stories and their use in sentences (5 out of 8)
10 marks

2) Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3) Translation from Hindi/Punjabi to English **5 marks**
(a small Paragraph)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Official, Business and Letters to the Editors **5 marks**

Fundamentals of Mathematical Statistics
: **BCA-16-102**

L	T	P	Cr	
6	**1**	**-**	**3**	**External Marks: 65** **Internal Marks: 10**

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the basic techniques Statistical Methods. After completing this course students will be able to solve various Financial, Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Basic Statistics: Types of Statistics, Different Statistical Techniques, Steps in Statistical Investigation, Uses and Limitations of statistics, Collection of Data: Sources of collecting primary and Secondary Data, Limitations of Secondary Data, Criteria of evaluating secondary data, Organization of data, Graphs of Grouped Frequency Distribution, Tabulation of Data, Parts of Table

Measures of Central Tendency: Kinds of measures of central tendency (statistical averages or averages):

Arithmetic Mean: Simple Arithmetic Mean, Methods of calculating Simple Arithmetic Mean, Arithmetic Mean in case of Individual Series, Discrete series and continuous series, Weighted Arithmetic Mean, Combined Arithmetic Mean.

Geometric Mean: Simple Geometric Mean , Methods of calculating Simple Geometric Mean, Geometric Mean in case of Individual Series, Discrete series and continuous series, Weighted Geometric Mean, Combined Geometric Mean.

Harmonic Mean: Simple Harmonic Mean ,Methods of calculating Simple Harmonic Mean, Harmonic Mean in case of Individual, Discrete series and continuous series, Weighted Harmonic Mean, Combined Harmonic Mean.

UNIT - II

Median: Methods of Calculating Median in case of Individual, Discrete series and continuous series

Partition Value: Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles

Mode: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series

Range: Computation of Range, Inter Quartile Range, Computation of Inter Quartile Range, Percentile Range and Computation of Percentile Range.

Mean Deviation, Computation of Mean Deviation, Standard Deviation, Calculation of Standard Deviation, Variance, Calculation of Standard Deviation for individual Series, Discrete Series and Continuous Series, Coefficient of Standard Deviation and coefficient of variation, Combined Standard Deviation, Correcting incorrect Standard Deviation

UNIT - III

Correlation Analysis : Correlation Analysis: Definition, Types of Correlation: Positive, Negative, Simple, Multiple, Partial, Total, Linear and Non-Linear. Need of Correlation Analysis, Correlation and Causation, Techniques for Measuring Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation: Correcting incorrect coefficient of correlation, calculating Karl Pearson's coefficient of correlation in case of grouped series, Probable Error, Coefficient of Determination, Spearman's coefficient of Correlation (Rank correlation): Calculation of Correct Coefficient of rank correlation, Difference between Rank Coefficient and Karl Pearson's coefficient of coefficient, Coefficient of concurrent deviation.

UNIT - IV

Regression Analysis (Linear Regression): Definition, Difference between Correlation and Regression, Types of Regression Analysis: Simple, Multiple, Partial, Total, Linear and Non-Linear, Objectives of Regression Analysis, Methods of obtaining regression analysis: Regression Lines, Regression Equations. Methods of obtaining regression equations: Normal Equations and Regression Coefficient, Properties of Regression Coefficient, Standard Error of Estimate, Regression Coefficient in case of Grouped Data, Uses of Regression Analysis and Limitations of Regression Analysis.

Suggested Readings:

1. Gupta S.C, Kapoor V.K. : Fundamentals of mathematical Statistics, Sultan Chand & Sons.
2. Gupta, S.P., 2003 : Statistical Methods, S. Chand.
3. Affi, A.A, 1979 : Statistical Analysis: A Computer Oriented Approach, Academic Press, Inc.

Computer Fundamentals and Computing Software

:

BCA-16-103

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: The objective of this course is to familiarize students with complete Fundamentals and the carriers commonly used computing software.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

Types of software: System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.

UNIT - II

Understanding Operating System using DOS : Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. Batch Files: Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

Understanding Graphical User Interface using Windows: Fundamentals of Windows, Types of Windows,. Anatomy of windows, Icons, Recycle bin, Operations on Folders, Registry of Windows: Basics, Editing; Control panel.

UNIT - III

Word Processing Package: Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools, word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, auto-formatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge, Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms.

UNIT - IV

Spreadsheet Package: Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes, Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, Printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros.

Presentation Packages: Basics of creating a presentation, Parts of main window, workspace views, creating a presentation, Incorporation of Animation.

Note: Any word processing, spreadsheet and presentation package may be used. Focus should be on open source software's.

Suggested Readings:

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications
3. Mathur Rajiv, 1995: DOS 6.2 Quick Reference, Galgotia.
4. OOoAuthors Team : Getting Started with OpenOffice.org 3.3, Friends of OpenDocument
5. Singleton, Roderick G.: OpenOffice.org User Guide.

Problem Solving Through C
: **BCA-16-104**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to make the student understand programming language concepts, mainly control structures, reading a set of data, stepwise refinement, function and arrays. After completion of this course, the student is expected to analyze the real life problem and write programs in 'C' language to solve problems. The main emphasis of the course is on problem solving aspect.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.
Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.
Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

UNIT - II

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.
Loop Control Structure: While and do-while, for loop and Nested for loop,
Case Control Structure: Decision using switch, Thegoto statement.
Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

UNIT - III

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function: Call by value and call by reference, Arrays of characters, Insertion and deletion operations, Searching the elements in an array, Using matrices in arrays, Passing an Entire Array to a Function.

Pointers: Pointer declaration, Address operator "&", Indirection operator "*", Pointer and arrays, Pointers and 2-Dimensional Arrays, Pointer to an Array, Passing 2-D array to a Function, Array of Pointers.
Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions.

UNIT - IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).
Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers, Union.
Files in C: Introduction, Opening and Closing files, Basic I/O operation on files.

Suggested Readings:

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading:

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

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SECOND SEMESTER

English (Compulsory) – B

:

BCA-16-201

L	T	P	Cr	
6	-	-	3	

External Marks : 65
Internal Marks : 10

Time Duration : 3Hrs. **Number of Lectures : 60**

Semester II

Book Prescribed: **Colour of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (3-5)
One essay type question on summary/Character/Incident (one out of two with internal choice) **10 marks**

2) **Prose (4-5)**
Long essay type question on Summary/Theme (one out of two with internal choice) **10 marks**

3) Poetry (7-11) **15marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context(one out of two with internal choice) **5 marks**

Section B

1) Paragraph Writing(Descriptive and Narrative) **10 marks**

2). Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3). Translation from Hindi/Punjabi to English **5 marks**
(isolated sentences)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Transformation of all types (5 out of 5) **5 marks**

Computer Organization
BCA-16-202

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to understand the basic organization of computer system and system maintenance.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Organisation: Evolution of Computers, Von Neumann Architecture, Combinatorial Blocks : Gates, Half Adder, Full Adder, Multiplexers, Decoders, Encoders; Sequential Building blocks : Flip Flops, Registers, Counters,
Information representation: codes, fixed and floating point representation
Arithmetic: Addition and subtraction for sign magnitude and 2's complement numbers, integer multiplication using Booth's algorithms

UNIT - II

Architecture of a Simple Processor: Architecture of 8086/8088 microprocessor, instruction set, Addressing Modes.
Instruction: Microinstructions: Register Transfer, Arithmetic, Logical and Shift, Types of Instructions, Instruction Cycle.
Interrupt: Types, Interrupt Cycle
I/O organization: Strobe based and Handshake based communication, DMA based data transfer;

UNIT - III

Memory Organisation: Memory Hierarchy, RAM (Static and Dynamic), ROM Associative memory, Cache memory organisation, Virtual memory organisation.
Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/ Output.

UNIT – IV

System Maintenance: Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection, prevention and protection from Viruses.

Suggested Readings:

Essential :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,

Further Reading :

2. P. Pal Choudhri, 1994. : Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 : Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.

Fundamentals of Web Programming

:

BCA-16-203

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to build and publish web sites using HTML, DHTML, CSS, JavaScript and Dreamweaver.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Terminology: Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL

HTML: Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.)

Lists: Unordered List, Ordered Lists, Definition lists

Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes

Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

Linking Documents: Anchor tag, External Document References, Internal Document References and Image Maps

Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

DHTML: Introduction to cascading style sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External

Forms: Attributes of Form element, Input element, The Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option

UNIT - III

Java Script: Introduction and Features of JavaScript, Writing JavaScript into HTML, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.

Other Built-In Objects in JavaScript: The String Object, The Math Object, The Date Object;

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UNIT - IV

Introduction to Dreamweaver: Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.
Web Hosting: Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools

Suggested Readings:

Essential :

1	Wanger & Wyke	:	Java Script Unleased, Pearson Education, New Delhi.
2	Bayross, Ivan :	:	HTML, DHTML, Java Script by BPB, Latest reprint
3	Schildt , Herbert	:	The Complete Reference Java 2, TMH, Latest reprint
4	Joseph Lowery	:	Adobe Dreamweaver CS5 Bible Paperback Edition

Further Reading :

5	Thomas Powell	:	HTML & CSS: The Complete Reference
6	John Pollock	:	JavaScript, A Beginner's Guide
7	Janine C. Warner	:	Dreamweaver CS5 For Dummies Paperback Edition
8	David Powers	:	The Essential Guide to Dreamweaver CS4

Object Oriented Programming using C++
: **BCA-16-204**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: By the end of the course, students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, and exploit advanced C++ techniques.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Principles of Object Oriented Programming (OOP): Introduction to OOP, Difference between OOP and Procedure Oriented Programming; Concepts: Object, Class, Encapsulation, Abstraction, Polymorphism and
Inheritance, Applications of OOP. Special operators: scope resolution operator, Member Dereferencing operators, Memory management operators, Manipulators and Type cast operator
Structure of a C++ Program and Classes and Objects : Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions; Class Function Definition: Member Function definition inside the class declaration and outside the class declaration.

UNIT - II

Friend function, inline function, Static members, Function Overloading, Arrays within a class. Arrays of Objects; Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects.
Constructors: Declaration and Definition, Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use.
Operator Overloading & Type Conversion: Conversion from basic type to user defined type, User defined to basic type and one user defined conversion to another user defined type.

UNIT - III

Inheritance: Extending Classes Concept of inheritance, Base class, Defining derived classes, Visibility modes : Public, Private, Protected ;Types of Inheritance: Single inheritance : Privately derived, Publicly derived; Making a protected member inheritable, multilevel inheritance, multiple Inheritance and ambiguity of multiple inheritance, Hierarchal Inheritance, Hybrid, Nesting of classes.

Polymorphism: Definition, Application and demonstration of Data Abstraction, Encapsulation and Polymorphism. Early Binding, Polymorphism with pointers, Virtual Functions, Late binding, pure virtual functions.

UNIT - IV

Exception Handling: Definition, Exception Handling Mechanism : Throwing mechanism and Catching Mechanism, Rethrowing an Exception

File Processing : Opening and closing of file, Binary file operations, structures and file operations, classes and file operations, Random file processing.

Suggested Readings :

Essential :

1. E. Balaguruswamy, 2008 : Object Oriented Programming with C++, TMH.

Further Reading :

2. Bjarne Stroustrup, 2009 : The C++ Programming Language, Addison-Wesley Publishing Company.
3. Robert Lafore, 2003 : Object Oriented Programming in Turbo C++, Galgotia Pub.
4. Salaria, R. S. : Object Oriented Programming Using C++, Khanna Book Publishing Co. (P.) Ltd., New Delhi.

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN AND CHILDREN (SEMESTER – II)

:

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermi composting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.

7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL
:

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361

(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

Unit IV (Drug Abuse)

:

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.
    - A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) Concept and overview : what are drugs and what constitutes drug abuse? Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3, 4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.

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THIRD SEMESTER

ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

: ਦਸੰਬਰ 2●17 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ,
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
   (ਭਾਈ ਵੀਰ ਸਿੰਘ- ਗੁਲਾਬ ਦਾ ਫੁੱਲ ਤੋੜਨ ਵਾਲੇ ਨੂੰ, ਵਿਛੋੜਾ-ਵਸਲ, ਖੇੜਾ, ਪੂਰਨ ਸਿੰਘ- ਜਵਾਨ ਪੰਜਾਬ, ਸਮੁੰਦਰ ਕਿਨਾਰੇ ਮੈਂ ਉਡੀਕਾਂ, ਗਰਾਂ ਦਾ ਮਿਹਨਤੀ ਬਲਦ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ- ਰਾਧਾ ਸੰਦੇਸ਼, ਏਕੇ ਦੀ ਬਰਕਤ, ਪੰਜਾਬੀ ਦਾ ਸੁਪਨਾ, ਮੋਹਨ ਸਿੰਘ- ਮਾਂ, ਦੇਸ਼ ਪਿਆਰ, ਹਵਾ ਦਾ ਜੀਵਨ ਅਤੇ ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ- ਆਖਾਂ ਵਾਰਸ ਸ਼ਾਹ ਨੂੰ, ਸੱਤ ਵਰ੍ਹੇ ਅਤੇ ਅਸ਼ੋਕਾ ਚੇਤੀ ਕਵਿਤਾਵਾਂ)
2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
   (ਏਹੁ ਨਿਦੋਸਾ ਮਾਰੀਐ, ਸਵਰਗ ਦੀ ਝਲਕ, ਮਾਮਲਾ, ਉਜਾੜ, ਬਸ਼ੀਰਾ ਅਤੇ ਰੱਬ ਤੇ ਰੁੱਤਾਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (3 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ.ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਸੁਜਾਨ ਸਿੰਘ, ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ ਅਤੇ ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਲੇਖ : ਸਮਾਜਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਆਮ ਵਾਕਫ਼ੀ ਨਾਲ ਸੰਬੰਧਤ (500 ਸ਼ਬਦਾਂ ਤੱਕ)	7 ਅੰਕ
6.	ਸ਼ਬਦ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜਾਂ ਵਿੱਚੋਂ 7)	7 ਅੰਕ
7.	ਵਾਕ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਵਾਕਾਂ ਵਿੱਚੋਂ 8)	8 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

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HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas

5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi,1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala, 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.:A Social, Cultural and Economic History of India, Vol. II, and Das, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi up
B. to class 10th.
C. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
D. Foreigners

Information System Design and Implementation
BCA-16-303

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students about the various aspects of Information Systems to be developed, their analysis and design. The motive is to aware the learners about pre requisite of software development and associated paradigms. After completing this course students will be able to analyse and design information systems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Systems Concepts and Information Systems Environment: Definition and characteristics of a system. Elements of a system Environment: Boundaries and interface. Types of systems: Physical or Abstract Systems, Open and Closed System, Man - made information systems.

The System Development Life Cycle: Introduction to various phases-Recognition of Need, Feasibility Study, Analysis, Design, Implementation, Post– Implementation and Maintenance.

The Role of System Analyst: Skills of a System Analyst, various roles of the Analyst.

UNIT - II

System Planning and the Initial Investigation: Bases for planning in system analysis, Initial investigation, determining the users information requirements, Problem definition and Project Initiation, Background Analysis, Fact Finding, Fact Analysis, Determination of Feasibility.

Information Gathering: Introduction, Information Gathering tools: Review of Literature, Procedures and forms. On -site observation. Interviews and questionnaires.

Tools of Structured Analysis: Various tools of structured analysis: Data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table, Pros and cons of each tools.

UNIT - III

Feasibility Study: System Performance-statement of Constraints, Identification of Specific System Objectives, description of Outputs. Feasibility Study – Feasibility considerations, Steps in feasibility analysis. Feasibility Report.

System Design: The Process of Design-Logical and Physical Design, Design methodologies: Structured design, Functional Decomposition

System Testing and Quality Assurance: Testing, System testing, Quality assurance and its goals in its system life cycle, Levels of quality assurance, Trends in testing.

UNIT - IV

Implementation and Software Maintenance: Introduction, Conversion- Activity network for Conversion, File Conversion, User Training: Elements of user Training Post implementation review. Software Maintenance - Primary activities of a Maintenance Procedure, Reducing Maintenance Costs.

Hardware and Software Selection: Types of Software, Procedure for Hardware/Software selection: Major phases in selection, Evaluation and Validation, Vendor Selection, Post – Installation Review. Software selection- Criteria for Software Selection, the evaluation process.

Suggested Readings:

Essential :

1. E.M. Awad: Systems Analysis and Design,Galgotia Publications(P)Ltd.

Further Reading :

2. Hardgrave Bill C., Siau Keng, Chiang Roger H.L., Systems Analysis and Design : Techniques, Methodologies, Approaches and Architectures 1st Edition, M.E. Sharpe Publications.

Computer Oriented Numerical Methods

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BCA-16-304

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the essential techniques of Numerical Methods. After completing this course students will be able to solve various Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Data Representation and Computer Arithmetic: Introduction, Concept of Exact and Approximate Numbers, Concept of Significant digits, Representation of Numbers in Memory, Storage of Integer Numbers: Signed Representation, 1's Complement Representation, 2's Complement Representation, Floating Point Numbers and their storage, Floating Point Arithmetic, Normalization and their consequences, Errors, Measures of Accuracy: Absolute Error, Relative Error and Percentage Error, Error types: Data Errors, Truncation Errors, Round-Off Errors, Computational Errors, Rules, Relationship between Relative Error and Significant digits and Error Propagation: Error Propagation in Addition Operation, Subtraction Operation, Multiplication Operation and Division Operation.

UNIT - II

Solution of Non-Linear Equations: Introduction, Types of Non-Linear Equations: Polynomial Equations, Transcendental Equations, Methods of Finding Solutions of Non-Linear equations: Direct Method, Iterative Method.
Iterative Methods: Bisection Method, False-Position Method, Secant Method, Newton - Raphson Methods, Zeros of a polynomial using Birge – Vieta Method. Convergence of Iterative Methods: Convergence of Bisection Method, Convergence of False Position Method, Convergence of Newton- Raphson Method, Convergence of Secant Method, Comparison between Iterative Methods.

Simultaneous Linear Equations: Solution of Simultaneous Linear Equations using Direct and Iterative Methods: Direct Methods: Gauss – Elimination Method, Gauss-Jordan Method, Concept of Pivoting, Iterative Method: Gauss-Seidal Method.

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UNIT - III

Interpolation: Introduction, Lagrange Interpolation, Inverse Interpolation, Finite Differences: Forward Differences, Backward Differences, Divided Differences, Difference Tables: Forward Difference Table, Backward Difference Table, Divided Difference Table, Observations regarding Difference Tables, Newton's Method of Interpolation: Newton' s Forward Difference Interpolation Formula, Newton' s Backward Difference Interpolation Formula, Newton' s Divided Difference Interpolation Formula.

Numerical Integration: Introduction, Newton-Cotes Integration Formulae: Trapezoidal Rule, Simpson's 1/3rd Rule, Simpson's 3/8th Rule.

UNIT - IV

Approximation: Approximation of functions: Taylor Series Representation, Chebyshev Polynomials.
Solution of Ordinary Differential Equations: Introduction**,** Euler's Method, Runga–Kutta Methods: 2nd order & 4th order, Predictor Corrector Methods: Modified Euler's Method.

Suggested Readings:

Essential :

1. Salaria,R.S. : Computer Oriented Numerical Methods,5th Edition, Khanna Book Publishing Co. (P.) Ltd., New Delhi

Further Reading :

2. Rajaraman,V.,2004 : Computer Programming in C, Prentice Hall of India.
3. S.S. Shastry : Introductory Methods of Numerical Analysis
4. H.C. Saxena : Finite differences and Numerical Analysis

Data Structures

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BCA-16-305

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students various data structures and the basic operations performed using them. At the end of course the student will have complete knowledge of data structures, thus will be able to use them for solving real world problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures.
Arrays: Introduction, Types of Array, Memory representation, Applications and operations.
Stacks: Introduction, memory representation, Applications and operations

UNIT - II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation.
Queue: Introduction, Types, Memory Representation and Applications.

UNIT - III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree.
Graphs: Introduction, Memory Representation, Graph Traversal (DFS and BFS)

UNIT - IV

Searching: Binary and Linear Search;
Sorting: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.
Comparison of various Searching and Sorting algorithms.

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Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Reading :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.
3. Salaria, R. S. : Data Structures & Algorithm Using C, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
4. Salaria, R. S., Test Your Skills in Data Structures, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
5. Sofat Sanjeev, Data Structure with C and C++, Khanna Book Publishing Co.
6. Patel, R.B., Expert Data Structure in C, Khanna Book Publishing Co.

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FOURTH SEMESTER

ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

: ਅਪ੍ਰੈਲ /ਮਈ 2●18 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
(ਫ਼ੀਰੋਜ਼ਦੀਨ ਸ਼ਰਫ਼- ਪੰਜਾਬ, ਭਾਰਤ, ਮਾਂ ਦਾ ਦਿਲ, ਨੰਦ ਲਾਲ ਨੂਰਪੁਰੀ- ਭੋਲਾ ਪੰਛੀ, ਚੁੰਮ ਚੁੰਮ ਰਖੋ, ਸ਼ੌਕਣ ਮੇਲੇ ਦੀ, ਸ਼ਿਵ ਕੁਮਾਰ- ਲੱਛੀ ਕੁੜੀ, ਕੀ ਪੁੱਛਦਿਉ ਹਾਲ ਫ਼ਕੀਰਾਂ ਦਾ, ਬਿਰਹੜਾ, ਪਾਸ਼- ਇਨਕਾਰ, ਅਸੀਂ ਲੜਾਂਗੇ ਸਾਥੀ, ਗੀਤ, ਸੁਰਜੀਤ ਪਾਤਰ- ਖ਼ਤਾਂ ਦੀ ਉਡੀਕ, ਗ਼ਜ਼ਲ (ਕੋਈ ਡਾਲੀਆਂ 'ਚੋਂ) ਅਤੇ ਗ਼ਜ਼ਲ (ਮੇਰਾ ਸੂਰਜ ਡੁਬਿਆ ਹੈ) ਕਵਿਤਾਵਾਂ)

2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
(ਗਧੀ ਵਾਲਾ, ਕੁਰਸੀ, ਬਾਕੀ ਸਭ ਸੁੱਖ-ਸਾਂਦ ਹੈ, ਰੋਹੀ ਬੀਆਬਾਨ, ਜਿੱਥੋਂ ਸੂਰਜ ਉੱਗਦਾ ਹੈ ਅਤੇ ਪਰਛਾਵੇਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (4 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਸ਼ਿਵ ਕੁਮਾਰ, ਪਾਸ਼, ਸੁਰਜੀਤ ਪਾਤਰ, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਰਘੁਬੀਰ ਢੰਡ ਅਤੇ ਵਰਿਆਮ ਸੰਧੂ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਕਾਲਜ ਨਾਲ ਸਬੰਧਤ ਪ੍ਰੈਸ-ਨੋਟ (2 ਵਿਚੋਂ 1)	8 ਅੰਕ
6.	ਕਾਰੋਬਾਰੀ ਇਸ਼ਤਿਹਾਰ (2 ਵਿਚੋਂ 1)	7 ਅੰਕ
7.	ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	7 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

:

HISTORY AND CULTURE OF PUNJAB-II

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in the Modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab, Board of Administration
2. Western Education: Growth of Education and rise of middle classes
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP(Physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.

Software Project Management
: **BCA-16-403**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students important concepts, terms related to various phases during the development of a software project. At the end of the course the student will be able to apply software project management techniques to manage a software project.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Software Project Management and Process Groups: Introduction to project and project management, role of a project manager in project management, a system view of project management, Stakeholders of Project, Project phases and product life cycles, Evolution of software economics, Improving software economics: reducing product size, software processes, team effectiveness, automation through software environments, Principles of modern software management.

UNIT - II

Project Management Framework: Project Management Framework, Software Tools for Project Management, Issues in Project Staff Acquisition and Team formation and Development, Model based software architectures, Workflows of the process, Checkpoints of the process.
Project Integration: Integration Management: Project selection, project management plans, project execution, project monitoring and controlling, integrated change control;

UNIT - III

Scope Management: Scope Management: project scope statement, Work breakdown structures, Scope verification and scope control, Process instrumentation and seven core metrics.
Software management disciplines: Iterative process planning, Project organizations and responsibilities, Process automation.

UNIT - IV

Project Scheduling: Time Management; Importance of Project Schedules, Sequencing and Scheduling Activity, Project Network Diagrams, PERT/CPM, Gantt charts, Critical chain scheduling.

Cost Management: Project Cost Management - Importance and Principles of Project Cost Management, Resource Planning, Cost Estimating Techniques and. Expert Judgment, Estimating by Analogy, COCOMO Model, Cost Budgeting and Control

Suggested Readings :

Essential :

1. Kathy Schwalbe, Information Technology Project management, Thomson Publication.
2. Bob Hughes and Mike Cotterell, Software Project Management, Tata McGraw-Hill.

Further Reading :

3. Walker Royce, Software Project Management - A Unified, Addison-Wesley.
4. Pankaj Jalote, Software Project Management in Practice, Pearson Education.
5. S.A. Kelkar, Software Project Management, A Concise Study, Prentice-Hall India.

Operating System Concepts and Linux
: **BCA-16-404**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the module is to create skills of students in operating systems concepts and Linux commands.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, its needs and services, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling

UNIT - II

Deadlocks: Necessary and sufficient conditions for Deadlocks, Introduction to methods for handling deadlocks, deadlock detection and recovery

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

UNIT - III

Introduction to Linux: Linux's shell, Kernel, Features of Linux, History, Minimum system requirements, Boot and Root disks , Starting and stopping Linux system, passwords, logging in and out, terminal Handling commands: who, Understanding wildcards, Environment variables.

Understanding I/O Redirection and Piping: Introduction, cut, paste, sort, tee; Introduction to Regular Expressions and grep .

Using file system: Introduction to common types of files, Filenames, Introduction to different types of directories: Parent, Subdirectory, Home directory; rules to name a directory, Important directories in Linux File System, Absolute and relative filenames,

creating files and directories, listing files (ls), pwd, moving and copying files (mv, cp), moving directories, . Removing files and directories, using wildcards with files and directories, File and directory permissions using relative and absolute methods, Changing group ownership, umask settings

UNIT - IV

Process Management: Types of processes, ps, bg, fg, nice, kill.
Understanding System Administration activities: Superuser (su) command, Taking backups using tar, Managing disk space, Mounting and Un-mounting file system, Managing users, Managing printers with lpd, mknod, lpc, lpq, lprm.
Vi editor: starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text.

Suggested Readings:

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.
2. John Goerzen: Linux Programming Bible, IDG Books, New Delhi, 2000.

Further Reading :

3. Brinch, Hansen, Operating System Principles, Prentice Hall of India
4. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delh.
5. Sumitabha Das: Your Unix - The Ultimate Guide, TMH, 2000.

Database Management System
: **BCA-16-405**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving the students the insight of the underlying concepts of database management system and implement them using Database software.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach.
Data Base Systems Concepts and Architecture: Data Models, Schemas and Instances, DBMS architecture and Data Independence, Data base languages & Interfaces, DBMS functions and component modules.
Entity Relationship Model: Entity Types, Entity Sets, Attributes & Keys, Relationships, Relationship Types, Roles and Structural Constraints, Design issues, weak entity types, E-R Diagrams. Design of an E-R Database Schema, Reduction of an E-R Schema to Tables.

UNIT - II

Relational Data Model : Relational model concepts, Integrity constraints over Relations, Relational Algebra - Basic Operations.
Conventional Data Models : An overview of Network and Hierarchical Data Models.
Relational Data Base Design : Functional Dependencies, Decomposition, Desirable properties of decomposition, Normal forms based on primary keys (1 NF, 2 NF, 3 NF and BC NF).
RDBMS: Terminology, The 12 Rules (Codd's Rule) for an RDBMS.

UNIT - III

Understanding SQL-1: Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval

of rows, Working with Null Values, Matching a pattern from a table, ordering the result of a Query Aggregate Functions, Grouping the Result of a Query, creation and deletion of Views, Managing privileges with Grant and Revoke Command, COMMIT and ROLLBACK, Functions: Character Functions, Date Functions, Group Functions

UNIT - IV

Understanding SQL-II: Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries

PL/SQL: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Conditional and Iterative Control, Cursor Management in PL/SQL, Implicit/explicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions, Database Trigger, types of triggers, dropping triggers, storage for triggers.

Suggested Readings:

Essential

1. Elmasri & Navathe: Fundamentals of Database systems, 3rd Edition, Addison Wesley, New Delhi.
2. Ivan Bayross : SQL, PL/SQL-The Program Language of ORACLE, BPB Publication, New Delhi.

Further Reading :

3. Korth & Silberschatz : Database System Concept, 4th Edition, McGraw Hill International Edition.
4. Raghu Ramakrishnan & Johannes Gehrke: Database Management Systems, 2nd edition, Mcgraw Hill International Edition.
5. C.J.Date : An Introduction to Data bases Systems 7th Edition, Addison Wesley, New Delhi.
6. Bipin C.Desai : An Introduction to Database System, Galgotia Publication, New Delhi
7. Abbey, Abramson & Corey : Oracle 8i-A Beginner's Guide Tata McGraw Hill Publishing Company Ltd.

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FIFTH SEMESTER

SYLLABI AND COURSES OF READING FOR
BACHELOR OF COMPUTER APPLICATIONS

Paper Code : BCA – 501
Paper Title : Entrepreneurship Development Programme
Theory Marks : 90 Number of Lectures : 100 (45 minutes duration)

Objectives : EDP aims at training various target groups in entrepreneurial traits so that they obtain adequate information, motivation and guidance in setting up their own enterprises.

In order to maintain a homogeneous nature of participating groups, EDP focuses on rural entrepreneurs, women, SC/ST and minority communities etc.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT – I

1. Project Formulation : Need, Scope and approaches for project formulation; structure of project report; study and analysis of sample project report; preparation of a project report; Techno- economic feasibility of the project.

(No. of Periods : 25)

UNIT – II

2. Finance & Accounting : Working capital assessment, its management & exercise thereon; Assessment of fixed capital and exercise thereon; Capital budgeting; Product costing and cost consciousness. Financial ratios and their significance; Break-even analysis; Credit institutions and financing procedures; Books of accounts, financial statements & fund flow analysis.

(No. of Periods : 25)

UNIT – III

3. Managing the Enterprise : Resource management – men, material, money and machines;
Personnel management, Office management.

E-Commerce: Introduction to E-Commerce, Benefits, Impact of E-Commerce, Classification of E- Commerce, Application of E-Commerce.

(No. of Periods : 25)

UNIT - IV

4. Rules & Regulations: Licensing and Registration procedure; Appreciation of important provisions of Factory Act, Shops & Commercial Establishment Act; Sales of Goods Act, Partnership Act; Contract Act; Income Tax, Sales Tax and Excise rules; Insurance.

(No. of Periods : 25)

Suggested Readings :

1	Sinha, A.K, 1983.	:	Project Engineering & Management, Vikas Publishing House Pvt. Ltd., 1983.
2.	Srivastava, U. K., 1981	:	Project Planning, Financing, Implementation & Evaluation, Indian Institute of Management, Ahmedabad,1981.
3.	Kuchhal, S. C., 1982	:	Financial Management - An Analytical and Conceptual
4.	Mohan, 1982	:	Principles of Management Accounting, Mohan & Goyal, Agra Sahitya Bhavan,1982.
5.	Saroja, 1979	:	Management of Small Scale Industries, Seth Publishers, Bombay, 1979.
6.	Vepa Ram K., 1984	:	How to Succeed in Small Industry, Vikas Publishing House, New Delhi, 1984.
7.	Bare Acts	:	Central Sales Tax Act, State Sales Tax Act, Central Excise Act and Customs Act.
8.	Bhagwati Prasad, 1972	:	Law and Practice of Income Tax in India, Navman Prakashan.
9.	Gulshan, S. S., 1979	:	A Text Book of Commercial Law, S. Chand & Co.
10.	Gupta, B. P., 1986	:	Industrial Relations, (PHD Chamber of Commerce & Inds.).

Paper Code : BCA - 502
Paper Title : Principles of Computer Graphics & Multimedia Technology
Theory Marks : 90

Number of Lectures : 100
(45 minutes duration)

Objectives :

- To study the various graphical techniques..
- To study the multimedia concepts and various I/O technologies.
- To enable the students to develop creative graphics based programs.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Computer Graphics :

1. A Survey of Computer Graphics :
   Computer Aided Design, Presentation Graphics, Computer art, Entertainment, Education and Training, Visualization, Image Pressing, Graphical User Interfaces.
   (No. of Periods : 15)
2. Overview of Graphics Systems :
   Video Display Devices, Raster Scan Systems, Random Scan Systems. Coloring technique : Beam Penetration, Shadow Mask. Graphics Monitors:Plasma Panel, LED,LCD. Properties of Display Devices :
   Persistence , Resolution, Aspect Ratio. and Workstations, Input Devices, Hard-copy devices, Graphics Software. Interactive Graphics, Passive Graphics.
   (No. of Periods : 10)

UNIT - II

3. Studying the Features and Developing Computer Graphics Using Standard Graphics packages like Auto CAD and Photoscape.
   AutoCAD: Features, Workspace, Commands to draw line, Polyline, rectangle, polygon, circle, spline, hatch; Modification Commands: Erase, copy, move, mirror, scale, Pan, Zoom, esc, cl, trim; Layer, Dimension, image rotation, area calculation.
   (No. of Periods : 10)

4. Developing Computer Graphics Using 'C' : Input-output primitives, Setting character and text attributes, Changing line styles, Using fill styles to fill images.

   Use the above primitives to develop programs like drawing concentric circles, Ellipses, Sine surves, Histograms, Pie charts and human face. (No. of Periods : 15)

UNIT - III

Multimedia Technology :

5. Multimedia in use : Introducing multimedia, uses of multimedia.

6. Technology System Components, Multimedia Platforms, Development Tools, Image, Audio, Video, Storage for multimedia and Communications.

7. Applications :
   Multimedia in the Real World, Training and Education, Image Processing.

(No. of Periods : 25)

UNIT - IV

8. IMAGE : Introduction, Digital Image, Image Redundancies (Spatial, Spectral, Temporal); Image Compression: lossy and lossless compression Techniques, Run Length Encoding algorithm, Huffman Encoding Algorithm, Discrete Cosine Transform (DCT), Image, video and audio Formats.

9. Studying features and use of Multimedia Image Processing authoring tools like Photoshop and Macromedia Director.

(No. of Periods : 25)

Suggested Readings :

Essential :

1. Hearn and Backe, 1997 : Computer Graphics, Second Edition, PHI, New Delhi.

2. Judith Jeffcoate, 2007 : Multimedia in Practice, Technology and Applications, PHI.

Further Reading :

3. Kanetkar Yashwant, 2003 : Graphics Under 'C', BPB Publications.

4. Judith Jeffcoate, 2007 : Multimedia in Practice, Technology and Applications, PHI.

5. Foley, Vandom, Fenier, Hughes, 1996 : Computer Graphics, Principles and Practice, IV Edition in 'C'; Addison Wesley Publishers.

6. Ian R. Sinclair, 1994 : Multimedia on the PC (with CDROM), BPB Publications.

7. Hillman, David, 1998 : Multimedia Technology and Applications, ITP.

8. Vaughan, Tay, 2008 : Multimedia Making it Work, Osborne Publishers.

9. Kelly & Bootle, 1989 : Turbo 'C', BPB Publications.

Paper Code	:	BCA – 503	
Paper Title	:	Discrete Mathematics in Computer Science	
Theory Marks	:	90	Number of Lectures : 100 (45 minutes duration)

Objectives : Student will learn and revise the knowledge acquired previously. Logic, Relations and Functions, Algebric Functions and Graph Theory will be introduced in this course.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

1. Set Theory : Relations and Functions : Set Notation and Description, subset, basic set operations, Venn Diagrams, laws of set theory, partitions of sets, min sets, duality principle, basic definitions of relations and functions, graphics of relations, properties of relations: injective, surjective and bijective functions, compositions.

2. Recurrence : Recurrence Relations and Recursive Algorithms – Linear-Recurrence Relations with Constant Coefficients; Homogeneous Solutions : Particular Solution, Total Solution, Solution by the Method of Generating functions.

(No. of Periods : 25)

UNIT - II

3. Graph Theory : Graph and planar graphs – Basic Terminology, Multi-graphs, Weighted Graphs, Paths and Circuits, Shortest Paths, Eulerian Paths and Circuits. Travelling Salesman Problem, Planar Graphs.

(No. of Periods : 25)

UNIT - III

4. Automata Theory : Finite State Machines–Equivalent Machines, Finite State Machines as language Recognizers; Analysis of Algorithms - Time Complexity, Complexity of Problems.

5. Boolean Algebra : Lattices and Algebraic Structures; Duality. Distributive and Complemented Lattices, Boolean Lattices and Boolean Algebra.

(No. of Periods : 25)

UNIT - IV

6. Boolean Functions and Expressions, Propositional Calculus, Design and Implementation of Digital Networks, Switching Circuits.

(No. of Periods : 10)

7. Algebra of Logic : Proposition of logic operations, truth tables and propositions generated by set, equivalence and implication laws of logic, mathematical system, propositions over a universe, mathematical induction, quantifiers.

(No. of Periods : 15)

Suggested Readings :

1. Doerr, A. and Kenneth, L., : Applied Discrete Structures for Computer Science, 1989 Galgotia Publications Pvt. Ltd.
2. Liu, C. L., 1985 : Elements of Discrete Mathematics, McGraw Hill.
3. Seymour Lipschutz and Lipson, : 2000 Solved Problems in Discrete Mathematics, McGraw- Hill. 1992

Paper Code : BCA - 504

Paper Title : Computer Lab.-1 : Based on BCA - 502

Theory Marks : 90

SIXTH SEMESTER

Paper Code : BCA - 601
Paper Title : Web Programming
Theory Marks : 90 **Number of Lectures : 100**
(45 minutes duration)

Objectives : This course will help the student to design & develop websites using HTML. Javascript and JAVA programming language.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. Review of forms in HTML, *Introduction to cascading style sheets (CSS), defining and applying CSS.*
Java Script: Features, tokens, data types, variables, operations, control structs, likes, strings arrays, functions, core language, objects, client side objects, event handling. Applications related to client side form validation.

(No. of Periods : 25)

UNIT - II

2. Fundamentals of Java: Java Vs. C++, Byte Code, Java virtual machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructions, method overloading. *String handling.*
Inheritance : Basics, member access, using super to call super class constructors, creating a multi level hierarchy, method overriding, dynamic method dispatch, using abstract classes, using Final.

(No. of Periods : 25)

UNIT - III

3. Packages and Interfaces: Defining a package, understanding CLASSPATH, Access protection: Importing packages, Interfaces, Defining an Interface, Implementing Interfaces, Applying Interfaces, Variables in Interfaces.

Exception Handling: Fundamentals, Exception types, Using Try and Catch, Multiple Try and Catch clauses, Nested Try statements, Built–in exceptions.

(No. of Periods : 25)

UNIT - IV

4. Multi-threaded Programming: The Java Thread model, Thread priorities, Synchronizations, Messaging. The thread class and runnable interface, The Main Thread : Creating a Thread, Implementing Runnable, Extending Thread, Creating Multiple Threads, Thread Priorities; Synchronizations : Methods, Statements, Inter Thread Communication, Deadlock, Suspending, Resuming and Stopping Threads.

   I/O Applets : I/O Basics : Streams, The predefined streams; Reading console I/P, Writing console O/P. The print writer class; Reading and Writing files.
   Applet fundamentals, Using AWT controls: AWT Classes, Adding and Removing Controls,Responding to Controls, Controls and their classes, Graphics and Text , Layout Managers: Understanding Layout Manager, FlowLayout, BorderLayout, GridLayout, CardLayout. Menus,-Event handling: Two Event Handling Mechanisms, Delegation Event Model (Events, Event Sources, Event Classes, Event Listeners, Sorces of Events, Event Listener Interfaces, Handling Mouse and Keyboard Events.

(No. of Periods : 25)

Suggested Readings :

Essential :

1. Schildt Herbert : Java 2: The Complete Reference,4th Edition,TMH, N.Delhi.
2. Wanger & Wyke, 2000 : Java Script Unleased, Techmedia, New Delhi, 2000.

Further Reading :

3. Daniel Dang, 2010 : An Introduction to Java Programming, PHI, New Delhi.
4. Balaguruswamy, E., 1998 : Programming with Java, A Primer, TMH, New Delhi.

Paper Code : BCA - 602
Paper Title : Computer Organisation
Theory Marks : 90
Number of Lectures : (45 minutes duration)

Objectives : This course will enable the student to understand the basic organization of computer system and system maintenance.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

1. **Computer Organisation** : Evolution of Computers, Stored program concept and Von Neumann Architecture, Information representation and codes, Combinatorial Blocks : Gates, Multiplexers, Decoders, Encoders, Sequential Building blocks : Flip Flops, Registers, Counters, Arithmetic algorithms : Addition and substraction for signed magnitude and 2's complement numbers, integer multiplication using shift and add, Booth's algorithms, Integer and floating point representation.

(No. of Periods : 25)

UNIT - II

2. **Architecture of a Simple Processor** : An instruction set, Addressing Modes, Instruction formats, Instruction execution in terms of Microinstructions, Concept of interrupt and simple I/O organisation, I/O organization : Strobe based and Handshake based communication, Vector and priority interrupts, DMA based data transfer; CPU organisation with large registers, Stacks and handling of interrupts and subroutines. Concept of Bus, data movement among registers, data movement from/to memory.

(No. of Periods : 25)

UNIT - III

3. **Memory Organisation** : RAM, Basic cell of static and dynamic RAM, Building large memories using chips, Associative memory, Cache memory organisation, Virtual memory organisation. Assembly Language Programming : Machine and assembly language, Pseudo operations, subroutines in assembly language, Assembly language programs:-To add/subtract two numbers, Program to input/output one character, Program to demonstrate the use of subroutines. Register Transfer Language and micro-operations; Language to represent conditional data transfer, Arithmetic and logical operations along with register transfer.

(No. of Periods : 25)

UNIT - IV

4. **System Maintenance,** Physical Inspection of a PC and internal cards, Diagnostics on a PC, Functional description of various modules and cards. *PC Doctor, Norton, Simantac,Steps of Diagnostics*. Viruses, Types of viruses. *Detection, Protection and Cure of Viruses on a PC*.

(No. of Periods : 25)

Suggested Readings :

Essential :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,

Further Reading :

2. P. Pal Choudhri, 1994. Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.
5. Rao, P.V.S. 2008 : Computer System Architecture, PHI, 1ST Edition

Paper Code : BCA – 603
Paper Title : Computer Networks
Theory Marks : 90 **Number of Lectures : 60**
(45 minutes duration)

Objectives : As part of this course, students will be introduced to computer networks and data communication paradigms, network models and standards, network protocols and their use and wireless technologies.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

1. Introduction to Data Communication: Data Communication fundamentals, Simplex, Half-Duplex, Full-Duplex
   Network definition, Network Hardware and Software, Network Topologies, Uses of Computer Networks, OSI reference model, TCP/IP Reference Model. Comparison of OSI & TCP/IP reference model.

2. Physical Layer: Transmission Media, Switching, ISDN & its services, Multiplexing, Modems.

(No. of Periods: 15)

UNIT - II

3. Data Link Layer : Design Issue, Error Detection & Correction Codes, Elementary Data Link Protocols, Static & Dynamic Channel Allocation, Introduction to IEEE standards, Sliding Window Protocols: One-bit Sliding Window Protocol, Go Back n, Selective Repeat.

(No. of Periods: 15)

UNIT - III

4. Network Layer : Design issues, Routing Algorithms: Shortest path routing, Flooding, Flow-Based Routing, Distance Vector Routing, Link State Routing, Hierarchical Routing, Broadcast & Multicast routing. Congestion Control Algorithms & internetworking, Network Layer in The Internet: The IP Protocol, IP Addresses, Subnets, IPv4 and IPv6.

(No. of Periods: 15)

UNIT - IV

5. Application Layer : Network Security & Privacy, Data Compression & Cryptography, Electronic Mail, Remote Login, File Transfer.

(No. of Periods: 15)

Suggested Readings :

Essential :

1. Tannenbaum, A.S., 2003 : Computer Networks, Prentice Hall.

Further Reading :

2. Stallings, William, 2008 : Local and Metropolution Area Networks : An Introduction, Macmillian Publishing Co.

3. Black : Data Network, Prentice Hall of India.

BCA : 604 Minor Project and Seminar

Paper Code : BCA – 604
Paper Title : Based on BCA – 601
Theory Marks : 90

Project and Seminar must be taken up from the real life problems. Marks for these are to be given on the basis of Programming Style, User friendly I/O, on-line help and documentation (user Manual). This work will carry 100 marks, (90 Marks for Project and Seminar Viva; and 10 Marks for Internal Assessment).

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PANJAB UNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. (HONOURS) BIOTECHNOLOGY

Semester System

EXAMINATIONS 2017-2018

--:O:--

B.Sc. (Hons.) Biotechnology (Semester System) Examinations 2017-2018

B.Sc. (Hons.) 1st year (1st Semester)

Sr. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-I-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-I--II-T	50	-	-
3.	Mathematics / A Life Sciences -B	BIOT-Sem-I-III-TA/TB	75	BIOT-Sem-I-III-PA/PB	25
4.	Chemistry	BIOT-Sem-I-IV-T	75	BIOT- Sem -I-IV-P	25
5	Physics	BIOT-Sem-I-V-T	75	BIOT-Sem-I-V-P	25
6	Introduction to Biotechnology	BIOT-Sem-I-VI-T	75	BIOT-Sem-I-VI- P	25

Total Marks = 500

B.Sc. (Hons.) 1st year (2nd Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

The Environment, Road Safety Education and Violence Against Women & Children is a compulsory qualifying paper, which the students have to study in the B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he /she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

B.Sc. (Hons.) 2nd year (3rd Semester)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Biochemistry	BIOT-Sem-III-I-T	75	BIOT-Sem-III-I-P	25
2.	Genetics	BIOT-Sem-III-II-T	75	BIOT-Sem-III-II-P	25
3.	Immunology-I	BIOT-Sem-III-III-T	75	BIOT-Sem-III-III-P	25
4.	Plant Tissue Culture	BIOT-Sem-III-IV-T	75	BIOT-Sem-III-IV-P	25
5.	Animal Cell Culture	BIOT-Sem-III-V-T	75	BIOT-Sem-III-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 3rd year (5th Semester)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Enzymology	BIOT-Sem-V-II-T	75	BIOT-Sem-V-II-P	25
3.	Environmental Biotechnology	BIOT-Sem-V-III-T	75	BIOT-Sem-V-III-P	25
4.	Tools in Bioinformatics	BIOT-Sem-V-IV-T	75	BIOT-Sem-V-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreseurship	BIOT-Sem-V-V-T	100	--------	

Total Marks = 500

B.Sc. (Hons.) 3rd year (6th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-VI-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-VI-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-VI-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-VI-IV-P	25
5.	On Job Training	----	--	BIOT-Sem-VI-V-P	100

Total Marks = 500

B.Sc. (Hons.) 1st year (1st Semester)

Sr. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-I-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-I--II-T	50	-	-
3.	Mathematics / A Life Sciences -B	BIOT-Sem-I-III-TA/TB	75	BIOT-Sem-I-III-PA/PB	25
4.	Chemistry	BIOT-Sem-I-IV-T	75	BIOT- Sem -I-IV-P	25
5	Physics	BIOT-Sem-I-V-T	75	BIOT-Sem-I-V-P	25
6	Introduction to Biotechnology	BIOT-Sem-I-VI-T	75	BIOT-Sem-I-VI- P	25

Total Marks = 500

Paper: English
Code No: BIOT-Sem-I-I-T

Semester I
Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I
Prose: Chapters 1-4
Drama: Dramas 1-2
Unit II
Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:
Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which, a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**.

This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. **5 marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5.Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6 One short question to test the students' understanding of various aspects of Business Communication. **5 Marks**

BIOT - Sem-I--II-T

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਦਸੰਬਰ 2●17 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

Course Title : PUNJABI Course Number : 111

ਕੁੱਲ ਅੰਕ : 50
ਲਿਖਤੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ
ਪੱਤਰ-ਵਿਹਾਰ
ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ),
ਸੰਪਾਦਕ : ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਵਿਤਾ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	3+5 = 8 ਅੰਕ
ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਵਿਤਾਵਾਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿੱਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	7 ਅੰਕ
ਵਿਆਕਰਣ:	(3+3+4=10 ਅੰਕ)
ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
ੲ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

BIOT - Sem-I--II-T

OR

HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.:A Social, Cultural and Economic History of India, Vol. II, and Das, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Paper: Mathematics **Theory: 67 Marks**
Code No: BIOT-Sem-I-III-TA **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Mathematics

- To study the different concepts of limits, differentiation, integration and calculus so as to apply these concepts in biotechnology.
- To learn solutions to quadratic, cubic equations, differential equation, linear equation and thus study the applications in biotechnology.

Paper: Mathematics

UNIT – I

Numbers

Different kinds of numbers, integer, rational and irrational, surds and their properties, Fractional indices.

Complex numbers, conjugate, modulus and argument of a complex number.

UNIT – II

Set, relation and function

Set, product sets, relations, functions (polynomials, trignometric, exponential), graphical representation of functions

Limit

Sequences, limits of sequences, series, limits of functions

Unit III

Calculus

Differentiation: Calculating gradients of chords first and higher order derivatives. Applications increasing and decreasing functions, maximum and minimum points, Derivatives as rates of change.

Integration

Finding a function from its derivative, definite integral, indefinite integral, calculating areas for bounded regions.

Differential Equations

Forming differential equations solving first order differential equation and second order differential equation with constant co-efficients, growth equation, applications.

UNIT – IV

Linear Programming
Elementary statistics
Representation of Data: Discrete data, continuous data, histogram, polygons, frequency curves, The Mean, variability of data-The standard deviation, Median, quintiles, percentile
Skewness

Reference Books:
1. Arya J.C, Lardner R.W (1990). Mathematics for the biological sciences(Prentice Hall. International, New Delhi).
2. Mathematics: Text book for class XI & XII (2006) (National Council ofEducation Research and Training, New Delhi).

Mathematics (Practicals)

Practical : 22 Marks
Internal Ass.: 3 Marks

1. Computation of mean, variance and standard deviation using given (preferably biological) data (2 to 3 practicals).
2. Sets (Venn-Diagram, Union, Intersection, Difference of sets, Symmetric Difference of sets, Complement of sets) (2 practicals).
3. Relations (graphical representation of relation from set A to set B or set A to set A) (1 practical).
4. Histogram, frequency polygon, ogives, pie chart, bar diagrams (2 to 3 practical).
5. Solving linear programming problem using graphical methods (2 practical).

Paper: Life Sciences **BIOT-Sem-I-III-TB**
Theory: 67 Marks
Internal Ass.: 8 Marks

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Life Sciences

- To increase scientific vocabulary and understanding of a variety of life science concepts.
- To learn about the anatomy and physiology of animals and animal systems.
- To study ecology and ecosystems.

Unit-I

An introduction to life on earth.
Plant Anatomy and Physiology:-
Structure of land plants.
Nutrition and Transport phenomena in plants.

Plant reproduction and development.
Plant responses to the environment.

Unit-II

Ecology:- Community interactions.
Ecosystems:- Definition and components.
Food chain and food web.
Habitat.
Ecological succession.
Types of succession.
Animal behaviour:-Definition and learning.

Unit-III

Animal Anatomy and Physiology:-
Homeostasis and organization of animal body.
Circulation.
Respiration.
Nutrition and digestion.
Urinary system and homeostasis.
The immune response.

Unit-IV

Animal Anatomy and Physiology:-
The endocrine system.
Nervous system.
The senses.
Action and support by the muscles and skeleton system.
Reproduction.

Reference Books:

1. Life Sciences (2001) by Rastogi and Dubey, S. Chand & Co., New Delhi.
2. Basics of Biotechnology–I: Introduction to Life Sciences (2005) by Sobti& Sharma, Vishal Publishing Co. Jalandhar.
3. Ecology- Principles and applications (2004) by Chapman and Reiss, Cambridge University Press, Cambridge, U.K.
4. Microbial Ecology- fundamentals and applications, (2000) by R. Atlas and R. Bartha, Benjamin / Cummings Science Publishing, California.
5. Animal Physiology (2008) by R. C. Sobti, Narosa publishing house Pvt. ltd, New Delhi.

BIOT-Sem-I-III-PB **Life Sciences (Practical)**

Practical : 22 Marks
Internal Ass.: 3 Marks

1. To study cell structure from onion leaf peels.
2. To study ultra structure of cell organelles through photographs.
3. To study digestive, Respiratory, Circulatory, Endocrine and Reproductive system of Human body through charts/ model.

4. Study of the slides/specimens and identification with reasons – Bacteria, oscillatoria, Spirogyra, Rhizopus, Mushroom, yeast, liverwort, moss, fern, lichen, one monocotyledon and dicotyledon.
5. Study of the slides/specimens and identification with reasons –Amoeba, Hydra, Tapeworm, Roundworm, Earthworm, Cockroach, Pila, Starfish, Shark Labeo, Frog, Lizard, Pigeon and Rabbit.

Paper: Chemistry **Theory: 67 marks**
Code No: BIOT-Sem-I-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn the concepts of chemical thermodynamics, chemical equilibrium and their applications.
- To learn about compounds of carbon , their sources, mechanism of reactions and utility in daily life
- To study concepts of stereochemistry and spectra of organic molecules.

UNIT – I

a) **Chemical bonding:** Elementary treatment of valence bond theory and molecular orbital theory. Ionic bonding, multiple bonds, multi-center bonds, metallic bonding.hydrogen bonding and its significance.

b) **Periodic properties:** Position of elements in the periodic table,effective nuclear charge and its calculation, atomic and ionic radii, ionization energy, electron affinity, electronegativity. Trends in periodic table and application in predicting and explaining the chemical behavior.

c) **Molecular Spectroscopy:** Difference between atomic and molecular spectroscopy, absorption and emission spectroscopy, regions of electromagnetic spectrum. Infrared and Raman spectra, basic principle and information from Infrared and Raman spectra.Principle of NMR, chemical shift values and its applications. Importance of mass spectroscopy in chemistry and biology

UNIT – II

a) **Solutions:** Ideal and non- ideal solutions, method of expression concentrations of solution, activity and activity coefficients, dilute solution, Osmotic pressure, its law and measurements, Elevation of boiling point and depression of freezing points.

b) **Chemical kinetics:** Scope, rate of reaction, influencing factors such as concentration, temperature, pressure, solvent *etc*. theories of chemical kinetics. Arrhenius equation, concept of activation energy.

UNIT – III

a) **Photochemistry:**
Absorption of light, Lambert-Beer Law, Photochemical principles: Stark-Einstein Law of Photochemical equivalence, Quantum yield of photochemical reaction (with example). Fluorescence and Phosphorescence.

b) **Coordination compounds:** Introduction, Wener's coordination theory, naming of coordination compounds, isomerism and stereochemistry in coordination compounds

UNIT – IV

a) **Fundamentals:** inductive effect electromeric effect, resonance, hyperconjugation, types of reagents, electrophiles and nucleophiles, types of organic reaction intermediates, carbocations, free radicals, carbenes (with example). Nomenclature and classification of Alkyl halide, method of formation, chemical reaction, mechanisms and stereochemistry of nucleophillic substitution reaction of Alkyl halides,SN_2, and SN_1 reaction with energy diagram.

b) **Carboxylic Acids and derivatives:** Structure of carboxylic acids and derivatives. Acidity of carboxylic acids, effects of substitution on acidic strengths, chemical properties of carboxylic acids. HVZ reaction with mechanism. Relative stability and reactivity and reactivity of acid chloride, esters, anhydrides, amides, mechanism of esterification.

Reference Books:

1. Bruce H Mahan (1987). University Chemistry Edition 3rd (Narosa Publishers).
2. R. T. Morrison, R. N. Boyd (2001). Organic Chemistry (Prentice-Hall of India Pvt. Ltd).
3. J.D Lee. (2008). Concise Inorganic Chemistry, (Wiley-India).
4. B. R. Puri, L. R. Sharma. (1989). Principles of inorganic chemistry (Shoban Lal Nagin Chand and Co).
5. Walter J Moore (1986). Basic physical chemistry (Prentice Hall of India).

BIOT-Sem-I-IV-P **Chemistry (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Inorganic qualitative analysis
2. Four ions including interfering ions.
3. Iodimetry and Iodometry
4. Redox titrations using ceric sulphate, potassium dichromate and potassium permanganate
5. Complexometric titration using EDTA of Ca^{++}, Mg^{++} and Zn^{++}
6 Analysis of a given organic compound (solid): Elemental Analysis,

Reference Books:

1. L. Saland (1989). Practical chemistry labs: A resource manual (Walch Education).
2. J. Leonard, B. Lygo, G. Procter (1998). Advanced practical organicchemistry. (CRC publications).
3. P. Kelter, M. Mosher, A. Scott (2008). Chemistry: The practical science(Publisher Houghton Mifflin).
4. G. Svehla (1996). Vogel's quantitative inorganic analysis (Prentice Hall)

Paper: Physics **Theory: 67 Marks**
Code No: BIOT-Sem-I-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Physics is one of the important basic sciences and Biotechnology is based upon these. Introduction to basic course of Physics will enhance the grasping of subject.

UNIT – I

Science, Physics and Life Sciences- An introduction to apparent differences and the underlying overlap (atomic nature of matter). Units of measurement and ranges (from the smallest to the largest known) for different physical quantities viz. mass, length, time, current, temperature, luminosity, etc. with suitable examples from bio/physical sciences.

UNIT – II

Coulomb's law for point charges; electric field due to point charge and electric dipole (on axial line and equator line), electric flux; Gauss's theorem and its applications (line of charge and sheet of charge).

Electric potential due to point charge, group of charges and dipole (on axial line and equatorial line), potential difference as line integral of electric field, capacitance; series and parallel arrangements, energy stored in the electric field of capacitor, current, current density, equation of continuity, Ohm's law in vector form.

UNIT - III

Interference of waves, phase and path differences, theory of interference fringes, Young's experiment, coherent sources, Llyod's mirror, Fresnel Biprism, intensities of maxima and minima.

Diffraction of light, rectilinear propagation, Fresnel and Fraunhofer diffraction, Fraunhofer diffraction at single slit, Rayleigh criterion for resolving power, Resolving power of telescope and microscope, Compound Microscope (Principle, construction, ray diagram, formula for magnifying power), fluorescent microscope(concept only), Polarization, introduction.

UNIT – IV

Quantum theory of light, X-rays diffraction, Compton effect, Bragg's law, de Broglie wave equation, phase velocity and group velocity, electron microscope, Uncertainty Principle (statement only), applications of Uncertainty Principle (particle in a box, existence of electron in Nucleus and atom).

Radioactivity and its laws ; half-life and mean life, uses of radioactivity.

Reference Books:
1. H.S. Hans & S.P. Puri : Mechanics (Tata Mcgraw Hill 1984)
2. Electricity and Magnetism : Berkeley physics course vol. II.
3. AjoyGhatak : Optics (Tata Mcgraw Hill 2004)
4. Jenkins &White : Fundamental of optics (Tata Mcgraw Hill 1991)
5. D.P. Khandelwal : Text book of optics and atomic physics (Himalaya Pub. 2005)
6. Arthur Beiser : Modern Physics (Tata Mcgraw Hill 1981)

BIOT-Sem-I-V-P **Physics (Practical)** **Practical : 22 Marks**
Internal Ass.: 3 Marks

Introduction and practice the concepts of proper measurement, data recording, and data presentation; stress to be laid on use of proper units, least count, error & its propagation, graph plotting & least square fitting. (Simple measuring devices available in the lab may be used to create basic data).

1. Resolving power of Telescope/Microscope.
2. Rotation of the plane of polarization of a solution using a Polarimeter.
3. Use of C.R.O. as a display & measuring device.
4. Capacitance by flashing and quenching of a neon lamp.

Reference Books:
1. Laboratory Manual of Physics for Undergraduate classes by D. P. Khandelwal
2. B.Sc. Physics Practicals by C. L. Arora.

Paper: Introduction to Biotechnology **Theory: 67 Marks**
Code No: BIOT-Sem-I-VI-T **Internal Ass.: 8 Marks**
Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -
This course will introduce the basic concepts of biotechnology to the students. They will learn about the history of biotechnology; the foundations of modern biotechnology; the role of biotechnology in fermentation industry, environment and modern medicine and the ethical implications of biotechnology.

Unit-I

Advent, scope and basics of biotechnology
Bacteria as workhorses of biotechnology; *E. coli* as the model bacterium

Yeast and fungi in Biotechnology
Introduction to multicellular organisms as research models: *Drosophila melanogaster*, *Caenorhabditis elegans*, *Daniorerio*, *Musmusculus*
Arabidopsis thaliana as model for plant genetics,
Role of viruses and bacteriophages in biotechnology

Unit-II

Structure and function of the cell: the basic unit of life
Prokaryotic and Eukaryotic cells
Biomolecules in a cell (DNA, RNA and proteins)
Introduction to genomics, transcriptomics, proteomics and metabolomics; bioinformatics and its role in biotechnology.
Introduction to basic techniques like sterilization, centrifugation, electrophoresis, chromatography, sonication.
Fundamentals of recombinant DNA technology: Restriction Enzymes, Vectors and their properties.

Unit-III

Applications of biotechnology: today and tomorrow
Basics of Biotechnology in fermentation and pharmaceutical processes.
Green technology to control pollution.
Role of biotechnology in diagnostics, introduction to gene therapy.

Unit-IV

Biotechnology and society: genetically modified organisms (GMOs) - transgenic plants and animals and their applications in biotechnology.
Public concerns and risks associated with genetic engineering: Bioterrorism and biowarfare.
Ethical, social and legal implications of biotechnology.

Reference Books:

1. Comprehensive Biotechnology, Murray Moo-Young, 2nd edition (2011), Pergamon Press.
2. Introduction to Biotechnology, William J. Thieman& Michael A. Palladino, 3rd edition (2012), Benjamin Cummings.
3. Biotechnology Expanding Horizons, BD Singh, 4th edition (2012), Kalyani Publishers.
4. The Ethics of Biotechnology (Biotechnology in the 21st Century), Jonathan Morris, Chelsea House Pub (L), 1st edition (2005).
5. Biotechnology, Applying the Genetic Revolution, David P. Clark & Nanette J. Pazdernik, 1st edition (2008), Academic Cell.
6. Molecular Biotechnology, Sandy B. Primrose, 2nd edition (1991), Blackwell Scientific Publications, ISBN.
7. Biotechnology: Demystifying the concepts, David Bourgaize, Thomas R. Jewell & Rodolfo G. Buiser, 1stedition(1999), Benjamin Cummings.
8. Ethical Issues in Biotechnology, Richard Sherlock & John D. Morrey, 1st edition (2002), Rowman & Littlefield Publishers.

BIOT-Sem-I-VI-P

Introduction to Biotechnology (Practical) **Practical : 22 Marks**
Internal Ass.: 3 Marks

1. Introduction and use of basic equipments in a biotechnology laboratory (Auto-pipettes, pH meter, centrifuges, light microscope, electrophoretic apparatus, vortex mixer, magnetic stirrer, rocker, laminar hoods, autoclave, sonicator)
2. Handling and disposal of hazardous reagents (acids, carcinogenic chemicals like acrylamide, ethidium bromide) and concept of chemical hoods
3. Good laboratory practices followed in biotechnology laboratory (sterility, DNAse/ RNAse free space, separate area for protein work, possible means of contamination and its control etc)
4. Cell disruption and cell lysis of animal/plant/bacterial cell
5. Separation and estimation of extracellular and intracellular proteins
6. Quantification of nucleic acids by colorimetry (orcinol)
7. Introduction to bioinformatic tools used in biotechnology

Semester – II

B.Sc. (Hons.) 1st year (2nd Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

ENVIRONMENT, ROAD SAFETY EDUCATION AND VIOLENCE AGAINST WOMEN AND CHILDREN (SEMESTER – II)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A

(kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

Unit IV (Drug Abuse)

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

The paper/Topic "Drug Abuse: Problem, Prevention and Management" having 2 credit/50 marks (40 theory+10 Internal) at undergraduate level, as a fourth part of the paper 'Environment, Road Safety Education and Violence against Women and Children' from the academic session 2017-18.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.

- A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) **Concept and overview :** what are drugs and what constitutes drug abuse? Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) **Types of drugs often abused and their effects**

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3,4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.

Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.

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Paper: English
Code No: BIOT-Sem-II-I-T

Semester II

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the Internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 5-8
Drama: Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae; short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.,

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for an Interview & Group Discussion etc

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Leaning, the marks obtained by them out of 40 will be proportionately increased out of 50.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which , a student will be expected to attempt any four. **Two** from **Prose** and **two** from

Drama. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. 5 **marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribe (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 Short Survey Report (150-200 words) with internal choice**.** **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6 Definition/Format of modern forms of communication to be tested.

ਸਮੈਸਟਰ ਦੂਜਾ

ਅਪ੍ਰੈਲ / ਮਈ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਲਿਖਤੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ
2. ਪੱਤਰ-ਵਿਹਾਰ
3. ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ)
ਸੰਪਾਦਕ : ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

1.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	3+5 = 8 ਅੰਕ
3.	ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਹਾਣੀਆਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿੱਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
4.	ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	7 ਅੰਕ
5.	ਵਿਆਕਰਣ:	(3+3+4=10 ਅੰਕ)
	ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
	ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
	ੲ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
6.	ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਹਾਣੀਕਾਰਾਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

SEMESTER II

HISTORY AND CULTURE OF PUNJAB-II

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in the Modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab, Board of Administration
2. Western Education: Growth of Education and rise of middle classes
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP(Physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Paper: Statistics & Computer Fundamentals **Theory: 67 Marks**
Code No: BIOT-Sem-II-III-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn applications of statistics in the field of biology.
- To study concepts of probability, averages, distributions, tests of deviations, correlation and linear regression.
- To learn to design experiments and analysis of results by tests of significance or analysis of variance.

UNIT – I

An introduction, types of data, collection, classification and tabulation of the primary data, secondary data, discrete data and continuous data, diagramatic and graphical representation of grouped data, frequency distribution {univariate and bivariate},cumulative frequency distribution and their graphical representation, histogram frequency polygon.

Concept of central tendency or location and their measures, partition values: quantiles, deciles and percentiles, dispersion and their measures, relative dispersion.

UNIT – II

Binomial distribution, Poisson distribution as a limiting form of binomial distribution and properties of these distributions, moments, moment generation function, cumulate generating function, geometric distribution and exponential distribution and properties ofthese distributions.
Normal distribution
Correlation and regression analysis
Hypothesis testing
Markov models
Cluster analysis

- Nearest neighbor search
- Search using stem numbers
- Search using text signature

Concepts of Probability.

UNIT – III

Computers: General introduction to computers, organization of computers, digital and analogue computers, computers algorithms.
Introduction to computers and its uses: Milestones in hardware andsoftware-batch oriented/online/real time applications.

Compute as systems: Basic concepts, stored programs, functional units andtheir interrelation-communication with computer.

UNIT – IV

Data storage devices:
Primary storage: Storage address and capacity, type of memory.
Secondary storage devices: Magnetic tape-data representation and R/W; Magnetic disks, fixed and removable, data representation and R/W; Floppy and hard disks, optical disks CD-Rom, mass storage devices.
Input/output devices: Key-tape/diskette devices, light pin Mouse, joystick, source data automation.
Printed outputs: Serial, line, page, printers, plotters, voice response units.

Reference Books:

1. P.N. Arora & P.K. Malhotra (1996).Biostatistics (Himalaya PublishingHouse, Mumbai).
2. Sokal&Rohlf(1973). Introduction to biostatistics (Toppan Co. Japan).
3. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics: Anintroduction (Springer).
4. P.K. Sinha (2004). Computer fundamentals (BPB).
5. Suresh K. Basandra (2008). Computers today (Galgotia Publications Pvt.Ltd., New Delhi).

BIOT-Sem-II-III-T

Statistics and Computer Fundamentals (Practical) **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Presentation of data by frequency tables, diagrams and graphs.
2. Calculation of measures of central tendencies, skewness and Kurtosis.
3. Calculation of dispersion.
4. Fitting of binomial distribution and Poisson distribution.
5. Probability
6. Basics of computer: Basic commands-File creation, copying, moving and deleting in DOS & windows, Using e-mail, browsers, search engines.

Reference Books:

1. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics:An introduction (Springer).
2. P.K. Sinha (2004). Computer fundamentals (BPB).
3. Suresh K. Basandra (2008). Computers today (Galgotia PublicationsPvt. Ltd., New Delhi).

Paper: Basic Biochemistry **Theory: 67 Marks**
Code No: BIOT-Sem-II-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

To make student conversant with the biochemical aspect of cell, chemical structure & function of various biomolecules.

UNIT – I

Water: Physico chemical properties of water, dissociation and association constants. pH and buffers, pI, pka, Henderson Hasselbatch equation and its implications.

Carbohydrates: Structure of important mono, di-, oligo- and polysaccharides, glycoproteins, peptidoglycan, glycolipids and lipopolysaccharides. Reaction of monosaccharides.

UNIT II

Lipids: Classification of lipids and fatty acids, general functions of major lipid subclasses, acylglycerols, phosphoglycerols, phosphoglycerides, sphingolipids, glycosphingolipids and terpenes, sterols, steroids: Prostaglandins.

UNIT – III

Vitamins and hormones: Types of vitamins and their chemistry, vitamins as cofactors, steroids and peptide hormones.

UNIT IV

Proteins: Structure of amino acids, nonprotein and rare amino acids and their chemical reactions. Structural organization of proteins (primary, secondary, tertiary and quaternary domain structure), protein classification and function. Forces stabilizing primary, secondary and tertiary structure.

Reference Books:

1. Lehninger A.L., Nelson D.L. and Cox M.M. (2005).Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson Publishers).
4. G.L. Zubay, W.W. Parson, D.E. Vance. (1995). Principles of biochemistry:Student study art notebook (Wm.C. Brown).
5. Bucke C. (1999). Carbohydrate biotechnology protocols (Humana Press).
6. H.R. Horton, A.J. Scism, L.A. Moran, R.S. Ochs, J.D Rawn, K.G. Scrimgeour. (2006). Principles of biochemistry (Prentice Hall).

BIOT-Sem-II-IV-P **Basic Biochemistry (Practical)** **Practical: 25 Marks**
Internal Ass.: 3 Marks

1. Preparation of physiological buffers.
2. Verification of Beer-Lamberts law for p-nitrophenol.
3. Determination of pKa value of p-nitrophenol.
4. Estimation of carbohydrates in given solution by Anthrone method.
5. The determination of acid value and saponifaction value of a fat.
6. Methods of protein estimation.

Paper: Cell Biology **Theory: 67 Marks**
Code No: BIOT-Sem-II-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

- To understand the detailed overview of eukaryotic cell and its inner components
- To understand the processes of cell transport and cell locomotion
- Introduction to stem cells and their applications

Practical skills will be imparted to the students through critically designed practical related to the subjects.

Unit I

Cell as a basic unit of living systems: the cell theory, pre-cellular evolution, artificial creation of "cells", broad classification and ultrastructure of cell types (PPLOs, Bacteria, eukaryotic microbes, plant and animal cells), tissue, organ and organism at different level of organization of other genetically similar cells; biochemical composition of cells (proteins, lipids, carbohydrates, nucleic acids and metabolic pool).

Ultrastructure of cell membrane and cell organelle: structure and function of cell organelles, ultrastrucure of cell membrane, cytosol, golgi bodies, vacuoles, endoplasmic reticulum (rough and smooth), ribosomes, cytoskeletal structures (actin microtubules etc), mitochondria, chloroplast, lysosomes, peroxisomes, nucleus (nuclear membrane, nucleoplasm, nucleolus)

Unit II

Cellular transport: Passive & active transport, permeases, sodium, potassium, Calcium, ATPase pumps, lysosomal and vacuolar membrane, ATP dependent proton pumps, co-transport, symport, antiport, transport into prokaryotic cells, endocytosis and exocytosis, entry of viruses and toxins into cells.

Unit III

Cell locomotion: Amoeboid, Flagellar and Ciliar.

Chromosomes: discovery, morphology, chemical composition, structural organization of chromatids, centromere, telomere, chromatin, nucleosome organization, euchromatin and heterochromatin, special chromosomes (polytene, lampbrush chromosomes), banding patterns in human chromosomes.

Unit IV

Basics of stem cells: Introduction to concepts in stem cell biology, Cell differentiation in multicellular organisms: (renewal, potency: Totipotent, pleuripotent, multipotent); types of stem cells: early embryonic stem cells, blastocyst embryonic stem cells, fetal stem cells, umbilical cord stem cells, adult stem cells; applications; ethical issues related to stem cells.

Reference Books:

1. The World of the Cell (2008) Becker, Klein Smith & Hardin Pearson education Inc
2. Cell and Molecular Biology (2010) E.D.P De Robertis and E.M.F. De Robertis, Jr.
3. Molecular Cell Biology (2007) Lodish et al. Freeman & Co
4. Molecular Biology of the Cell (2007) Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter.
5. The Cell: A Molecular Approach (2013) Geoffrey M. Cooper and Robert E. Hausman
6. Cells and Cell Function: Advanced Level (2007) Sally Morgan
7. Stem Cells: An Insider's Guide (2013) Paul Knoepfler

BIOT-Sem-II-V-P **Paper: Cell Biology (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. To study the parts and function of a light microscope
2. To prepare a wet mount of onion peel for microscopy
3. Counting of cells using haemocytometer
4. Subcellular fractionation of spinach cells
5. To study cell locomotion of amoeba
6. To study flagellar motility in bacteria by hanging drop technique
7. To study cell transport in cell membrane by following experiments
    1) Diffusion through artificial membrane: transport of albumin and glucose solution through dialysis bag.
    2) To study the effect of membrane disrupting agents in beet root
8. Quantitative analysis of cell membrane lipids by TLC

Paper: General Microbiology **Theory: 67 Marks**
Code No: BIOT-Sem-II-VI-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

Microbes play significant role in understanding medical science and industries so study of microbes from basic to advance level, with understanding of biochemistry, cell structure and application makes this paper significant.

UNIT – I

History of Microbiology: A. Leewenhook, L. Pasteur, R. Koch, J. Lister, J.Tyndall, Koch postulates, discovery of antibiotics.

Principle of microscopy: Bright field, dark field, phase contrast, fluorescent, electron microscopy.

UNIT – II

Microbial classification: Bacteria, fungi

Morphology of bacteria, viruses and fungi with major emphasis on bacterial structure specially cell wall. Gram positive and Gram negative bacteria. Microbial spores, sporulation/ germination process.

UNIT – III

Microbial growth, nutritional biodiversity, phases of growth, generation time, growth rate, monoauxic, diauxic and synchronous growth. Chemostat

Physical and chemical agents to kill microbes, sterilization and pasteurization processes.

UNIT –IV

Normal micro flora in human/ animals. Types of microbial pathogens and diseases caused by them. Microbial interactions like symbiosis and antibiosis. Host defense mechanism against pathogens.

Reference Books:

1. Tortora, G.J., Funke, B.R. and Case, C.L. (2009) Microbiology: An introduction (Benjamin/ Cummings publishing company, Inc).
2. R. Y. Stanier, M. Doudoroff, E. A. Adelberg (1999). General microbiology (MacMillian Press London).
3. M.J. Pelczar, E.C. Sun Chan, N.R. Krieg (2007). Microbiology (Tata McGraw Hill Publication, New Delhi). 5th edition.
4. H.G. Schlegel, C.Zaborosch, M. Kogut (1993).General microbiology (Cambridge University Press).
5. S.C. Prescott, C.G. Dunn (1959). Industrial microbiology (McGraw- Hill).
6. Purohit, S.S. (2003). Microbiology: Fundamentals and applications (Agrobios, India)
7. Postgate, J.R. (2000). Microbes and man (Cambridge University Press).

BIOT-Sem-II-VI-P General Microbiology (Practicals) Practical: 22 Marks
Internal Ass.: 3 Marks

1. Cleaning of glass wares, preparation of media, cotton plugging and sterilization.
2. Isolation of microorganisms from air, water and soil samples.
3. Dilution and pour plating techniques.
4. Gram staining, spore staining, motility
5. Growth curve of microorganisms.
6. Antibiotics sensitivity of microbes using antibiotic discs.
7. Testing of water quality.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual, (Pearson Benjamin Cummings).

SEMESTER 3rd

B.Sc. (Hons.) 2nd year (3rd Semester)

Paper: Biochemistry
Course No.: BIOT-Sem-III-I-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To familiarize the students with the biochemical activities taking place at cellular level, highlighting the enzymatic reactions, metabolic pathways and biochemical aspect.*

Unit- I

Metabolism: Metabolic pathways, biochemical reaction mechanism, energy rich metabolites. Coupled reactions, substrate level phosphorylation. Importance of ATP: Structural basis of high phosphoryl transfer potential of ATP. Sources of cellular energy, activated carriers. Regulation and evolution of metabolic pathways.

Unit- II

Carbohydrate metabolism: Biosynthesis and degradation of glucose; feeder pathways of glycolysis; Kreb cycle, amphibolic nature of the Kreb's cycle; regulation of Krebs cycle, regulation of gluconegenesis. Glycogen metabolism.
Mitochondrial electron transport chain, oxidative phosphorylation; regulation of ATP synthesis.

Unit- III

Lipid Metabolism: Biosynthesis and degradation of fatty acids; β oxidation of saturated, unsaturated and polyunsaturated fatty acids. Formation of ketone bodies, their function and physiological significance. Fatty acid synthesis: multifunctional enzyme complex in eukaryotes, function of citrate. Regulation of fatty acid metabolism.
Cholesterol metabolism: Biosynthesis of cholesterol and its regulation.

Unit- IV

Amino acid metabolism: Biosynthesis of nutritionally non-essential amino acids; catabolism of carbon skeleton of amino acids. Conversion of amino acids to specialized products; amino acids as precursors of porphyrins, bile pigments and biogenic amines.
Nucleic acid metabolism: Biosynthesis of purine and pyrimidine nucleotides; salvage reactions. Catabolism of purines and pyrimidines, urea cycle.

Reference Books:

1. Lehninger A.L., Nelson D.L., Cox M.M. (2005). Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson).
4. Voet D., Voet, J.G. (2004).Biochemistry (John Wiley & Sons).
5. Voet, D., Voet, J.G. and Pratt, C.W. (2008). Fundamentals of biochemistry: Life at the molecular level (John Wiley & Sons).

BIOT-Sem-III-I-P Biochemistry (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Estimation of DNA by the diphenylamine reaction.
2. Determination of reducing sugars using 3, 5-dinitrosalicylic acid and Benedict's test.
3. Determination of iodine number of fat.
4. Determination of extinction coefficient of nucleic acids.
5. Biuret assay for protein estimation.
6. Quantitative estimation of amino acids using ninhydrin reaction.
7. Estimation of RNA by means of orcinol reaction.

Paper: Genetics
Course No.: BIOT-Sem-III-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The focus of this course is on the science of heredity with emphasis on the basics of Mendelian and molecular genetics. It will familiarize students with chromosome organization, linkage, chromosome mapping, chromosome aberrations, mutations and microbial genetics.*

Unit – I

Mendelian laws of inheritance, Sex determination in drosophila, plants and animals, sex linkage, Non-disjunction as a proof of chromosomal theory of inheritance. Numerical chromosome aberration polyploidy, aneuploidy, Chromosomal aberrations: duplications, inversions, translocations, position effects.

Unit – II

Gene interactions, sex linked inheritance. Crossing over: molecular mechanism and cytological proof, Recombination, linkage, gene mapping, Three point testcross, interference, coincidence, recombination frequencies, Tetrad analysis, somatic cell hybridization for gene linkage studies, Hereditary defects.

Unit – III

Population genetics: Hardy-Weinberg equilibrium, gene and genotypic frequencies,Chi- square test, probability, pedigree analysis.

Mutation: Spontaneous versus induced mutations, types of mutations, mutagenic agents: Physical, chemical and radiation, molecular basis of mutations, mechanisms of DNA repair, mutations frequency, correlation between mutagenicity and carcinogenicity,

Unit – IV

Basic microbial genetics: Conjugation, transduction, transformation, isolation of auxotrophs, replica plating techniques, analysis of mutations in biochemical pathway, one gene – one enzyme hypothesis. Extra chromosomal inheritance: mitochondrial and chloroplast genetic systems.

Reference Books:

1. Birge, E.A. (2006). Bacterial and bacteriophage genetics (Springer).
2. Dale J., Park S. (2005) Molecular genetics of bacteria (John Wiley and SonsInc).
3. Freifelder, D. (2005). Molecular biology (Jones and Bartlett).
4. Synder, L., Champness W. (2007). Molecular genetics of bacteria (ASM Press).
5. Turn N.J, Trempy J.E. (2006). Fundamental bacterial genetics (Wiley Blackwell).
6. T.A. Baker, J.D. Watson, S. Bell. (2004). Molecular biology of the gene (Benjamin B. Cummings).
7. A.J.F. Griffiths, S.R. Wessler, R.C. Lewontin, S.B. Carroll (2007). Introduction to genetic analysis (W.H.Freeman & Co Ltd).
8. Strickberger M.W. (2006) 3rd edition. Genetics (Macmillan).
9. Verma P.S (2012)Genetics (S.Chand & Company Ltd.)
10. Sanders M.F. and Bowman J.L.(2012) Genetic Analysis (Pearsons)

BIOT-Sem-III-II-P **Genetics (Practical)**

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Examination of permanent slides of various stages of mitosis and meiosis and different types of chromosomes.
2. Demonstration of law of segregation and independent assortment (use of dried peas, colored peas, capsules *etc*.).
3. Numerical for segregation and independent assortment.

4. Use of Chi-square for prediction of phenotype/genotype frequencies of parents from progeny and vice-versa, epistasis.
5. Detection of blood groups (ABO & Rh factors).
6. Calculation of variance in respect of pod length and number of seeds/pod.
7. Calculation of gene frequencies and random mating (colored beads, capsules).
8. Dermatographics: Palm print taking and finger tip patterns.

Paper: Immunology-I
Course No.: BIOT-Sem-III-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: *To understand general aspects of immune system like different components of the immune system, Generation and functions of these components, Knowledge of basic immunological techniques*.

Unit-I

1. Introduction
i) Overviews of immune system – Historical perspectives
ii) Innate and acquired immunity
iii) Clonal nature of immune response.

2. Cells of the immune system : Hematopoiesis and differentiation, lymphocyte trafficking, B-lymphocytes, T-lymphocytes, macrophages, dendritic cells, Natural killer cells and lymphocyte activated killer cells, eosinophils, neutrophils & mast cells.

Unit-II

3. **Organs of the immune system :** Primary and secondary lymphoid organs, systemic function of immune system.
4. **Lymphocyte Trafficking**: Cell surface proteins, Cell Adhesion molecules (Integrin, Selectin, Cadherin family and Ig Superfamily).
5. **Antigen** – Immunogenicity Vs. antigenicity, factors effecting immunogeneticity, nature of immunogen, epitopes, heptans and antigenicity, pattern recognition receptors.

Unit-III

6. **Immunoglobulins:** Structure of antibody, antibody effector function, antibody classes and biological activities, antigenic determinants on Immunoglobulins, Immunoglobulins superfamilies.
7. **Major histocompatibility complex:** General organization and inheritance, MHC molecules and genes, genetic map, cellular distribution, regulation of MHC expression and disease susceptibility, antigen presentation.

Unit-IV

8. **Hybridoma Technology:** Production of Monoclonal Antibodies, applications of polyclonal and monoclonal antibodies.
9. **Antigen–Antibody interactions** : Strength of interaction, cross reactivity, antibody affinity, avidity. Antigen-antibody interactions as tools for research and diagnosis: precipitation and agglutination reactions, immunodiffusion, immunoelectrophoresis, immunoassays, Enzyme linked immunosorbent assay (ELISA), Radioimmunoassay (RIA), western blot, Immunofluorescence.

Reference Books:

1. Kuby Immunology (2006) by Thomas J. Kindt, Richard A. Goldsby, Barbara A. Osborne, Janis Kuby (W.H. Freeman).
2. Immunology- A short course (2009) by Richard Coico, Geoffrey Sunshine (Wiley Blackwell).
3. Fundamentals of immunology (1999) by William Paul (Lippincott Williams & Wilkins).
4. Immunology (2001) by Ivan Maurice Roitt, Jonathan Brostoff, David K. Male (Mosby).
5. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) WH Freeman & Co. New York; 2006.
6. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley Blackwell; 2011.

BIOT-Sem-III-III-P Basic Immunology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Lymphoid organs and their microscopic organization.
2. Differential leucocytes count.
3. Separation of serum from blood.
4. Separation of plasma from blood.
5. Ouchterlony Double Diffusion
6. Radial immuno diffusion test using specific antibody and antigen.
7. Agglutination (Blood group testing).

Paper: Plant Tissue Culture
Course No.: BIOT-Sem-III-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To introduce the students with fundamentals and applications of plant tissue culture. This course will expose students to the methods of culturing, maintaining and regenerating plants species.*

Unit – I

Cellular totipotency and differentiation in plants.
Plant Culture Media and their composition.
Sterilization techniques for glassware and tissue culture media.
Micropropagation: Establishment of aseptic culture, various stages, advantages and disadvantages.

Unit –II

Organogenesis; somatic embryogenesis; somaclonal variation, its genetic basis and application in crop improvement. Cell/callus line selection for resistance to herbicide, stress and diseases. Role of tissue culture in rapid clonal propagation, production of pathogen - free plants and "synthetic seeds" haploid and Triploid plant production & their application.

Unit – III

Protoplast and somatic hybridization: Isolation, culture and plant regeneration, protoplast fusion, identification and characterization of somatic hybrids, applications of protoplast hybridization technology.

Unit – IV

Secondary metabolites: Secondary Plant products from cultured cells and their industrial applications.
Cryopreservation of germplasm: Short term and long term conservation of plant genetic resources, *In situ* and *Ex situ* conservation of plants

Reference Books:

1. Razdan, M.K. (2007). Introduction to plant tissue culture (India Book House Pvt. Ltd).
2. Narayanaswamy, S (1994). Plant cell and tissue culture (Tata Mc-Graw Hill Publishing Co.Ltd, New Delhi).
3. Rudolf, E. (1994). Plant cell biotechnology (Spinger Verlag).
4. Bhojwani, S.S., Razdan, M.K. (1996), Plant tissue culture: Theory and practice (Elsevier Science, Netherlands).

5. Gamborg, O.L., Phillips, G.C. (1995). Plant cell, tissue and organ culture: Fundamental methods (Illustrated, Publisher Springer).
6. HS Chawla (2003). Plant biotechnology: A practical approach (Science Publishers, USA). Plant Tissue Culture and Biotechnology

BIOT-Sem-III-IV-P Plant Tissue Culture (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Laboratory design set up for a plant tissue culture laboratory.
2. How to clean glass/plastic ware.
3. Preparation of complex nutrient medium (Murashige and Skoog's medium).
4. To select, prune, sterilize and prepare an explant for culture.
5. To culture different explants for raising callus cultures.
6. Significance of growth hormones in culture medium.
7. To demonstrate various steps of micropropagation.

Paper: Animal Cell Culture
Course No.: BIOT-Sem-III-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the field of Animal cell-culturing and its importance to mankind. The students will also learn the techniques involved in animal cell culture.*

Unit – I

History of development of cell cultures, natural surroundings for animal cells, simulating natural conditions for animal cells, metabolic capabilities of animal cells.

Biology of cultured cells : The culture environment, cell adhesion, proliferation, differentiation, signaling, evolution of cell lines. Equipments and materials for animal cell culture technology.

Unit II

Introduction to the balanced salt solutions and simple growth medium. Brief discussion on the chemical, physical and metabolic functions of different constituents of culture medium. Role of carbon dioxide. Role of serum and supplements.

Serum & protein free defined media and their application.

Animal cell culture Techniques: Dispersion and disruption of tissues; primary cultures, anchorage and non-anchorage dependent cells; secondary culture, transformed animal cells.

Unit – III

Established/continuous cell lines, commonly used animal cell lines, their origin and characteristics. Maintenance and growth kinetics of cells in culture, differentiation of cells,
Measurement of growth and viability of cells in culture. Cytotoxicity assays & their applications,

Unit – IV

Characterization of Cell lines and their authentication, Cell fusion and production of monoclonal antibodies.
Transformation and immortalization, cryopreservation.
Bio-Safety & Bioethics.

Reference Books:

1. R. Ian Freshney, (2010) 6th Edition, Wiley-Blackwell. Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications
2. P.R. Yadav and Rajeev Tyagi, Discovery Publishing House, (2006) Biotechnology of Animal Tissues
3. Julio, E., Celis. (2006) Cell Biology. A laboratory handbook, Vol. I-IV (Elsevier Academic)
4. Butler, M (1996) Mammalian cell biotechnology. A practical approach (IRL, Oxford University Press)
5. Gareth, E.J. (Edition Illustrated, Humana Press) (1996) Human cell culture protocols.

BIOT-Sem-III-V-P Animal Cell Culture (Practical)

Practical : 20 marks
Int. assessment : 05marks
Total : 25 marks
Time : 3 hours

1. Fumigation of animal cell culture laboratories.
2. Maintenance of aseptic conditions and sterilization method.
3. Preparation of Minimal Essential Growth medium for cell culture.
4. Isolation of lymphocytes for culturing.
5. Checking availability of cells by Teypan blue
6. Determination of cell count

B.Sc. (Hons.) 2nd year (4th Semester)

Paper: Immunology-II
Course No.: BIOT-Sem-IV-I-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the principles of advanced Immunology, both at the molecular and cellular levels.*

Unit-I

1. **B Cell Activation, Differentiation:** B-Cell Activation and Proliferation, In Vivo Sites for Induction of Humoral Responses, T-dependent and T-independent antigens.
2. **Organization and expression of Immunoglobulins gene:** Genetic model, multigene organization, generation of antibody diversity.

Unit-II

3. **Receptors and Signaling:** T-Cell Receptors: Structure and Roles, T-Cell Receptor Complex.
4. **T-Cell Maturation, Activation, and Differentiation**: Thymic Selection of the T-Cell Repertoire, T_H-Cell Activation, T-Cell Differentiation, Cell Death and T-Cell populations, Peripheral-T-Cells.
5. **Complement system:** Function, Components- Classic, Alternative, Mannose binding proteins, activation, Regulation of the Complement System, Biological Consequences of Complement Activation.

Unit-III

6. **Hypersensitivity:** Type I, Type II, Type III and Type IV Hypersensitivity reactions and their implications.
7. **Autoimmunity:** Organ specific autoimmune diseases : Hashimoto's Thyroditis, Insulin-dependent Diabetes Mellitus, Grave's disease, Mysthenia Gravis.
   Systemic Autoimmune Disease: Systemic lupus Erythematosuns (SLE).

Unit-IV

8. **Transplantation immunology-** Immunologic Basis of Graft Rejection, Clinical Manifestations of Graft Rejection, General Immunosuppressive Therapy, Specific Immunosuppressive Therapy, Immune Tolerance to Allografts, Clinical Transplantation
9. **Vaccines and Vaccination** – principles of vaccination, passive & active immunization, immunization programs, adjuvants, bacterial vaccines, viral vaccines, polysaccharide vaccines, DNA vaccines, recombinant vaccines, vaccines to other infectious agents, tumor vaccines.

Reference Books:

1. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) W.H. Freeman & Co. New York; 2006.
2. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley-Blackwell; 2011
3. Peakman M, Vergani D, Pyne DJ, Woodward M. Basic and clinical immunology. (1st Ed.) Churchill Livingstone; 1997.
4. Roitt I, Brostoff J, Male D. Immunology. (6th Ed.) Harcourt Health Sciences, 2001.
5. Clinical Immunology and serology: A laboratory perspective (1997) by Stevens C.D (F A Dacis Company, Phialadelphia).

BIOT-Sem-IV-I-P Immunology-II (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Performing enzyme linked immunosorbent assay (ELISA).
2. Rocket immuno-electrophoresis for antigen antibody interaction.
3. Isolation of mononuclear cells from peripheral blood and viability test by dye exclusion methods.
4. Total leucocyte count (TLC).
5. Isolation of IgG from serum.

Paper: Biophysical and Biochemical Techniques
Course No.: BIOT-Sem-IV-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To enable the students learn important tools and techniques based on biophysical and biochemical principles so that they can understand application of these techniques in biotechnology*

Unit – I

Principle, working and applications of Spectrophotometry (UV& visible) and spectroflourimetry, Atomic absorption spectrophotometry: Equipment used and applications
Infrared and Raman spectroscopy. ORD and circular dichroism, Nuclear Magnetic Resonance and Electron Spin Resonance spectroscopy, Magnetic Resonance Imaging.
Electrophoresis: Principle, types & applications.

Unit – II

Microscopy: Properties; Light and Bright field Microscopy, Dark field Microscopy; Phase contrast, Fluorescent and Confocal microscopy,
Electron microscopy: Scanning and Transmission Electron Microscopy.
Centrifugation: Principle, types & applications.

Unit – III

Crystallography: Physical basis of crystallization; formation of crystals; Mounting of crystals
X-ray diffraction: Braggs law; Diffraction of x-rays by crystals
Overview of chromatography; Gas chromatography and HPLC

Unit – IV

Radioisotope techniques: Radiotracers; GM counter, proportional and scintillation counters, autoradiography.

Mass spectrometry: Physical basis; Instrument used; ionization modes; Applications
Collaboration of MS with other techniques: GCMS and LCMS.

Reference Books:

1. K Wilson, J Walker (2000) Principles and techniques of biochemistry and Molecular Biology Seventh Edition, (Cambridge University Press).
2. SR Mikkelsen, E Cortin (2004). Bioanalytical Chemistry (2004) (John Wiley & Sons)
3. David Sheehan (2009). Physical Biochemistry: Principles and Applications, Second Edition. (John Wiley & Sons)
4. P. Carmona, R. Navarro, A, Hernanz (1997) Spectroscopy of biological molecules: Modern trends (Illustrated, Publisher Springer)
5. Bernard Valeur (2001). Molecular fluorescence: Principles and application (Wiley-VCH).Plenum USA].
6. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).
7. Bansal, D.D., K Hardori, R & Gupta, M.M. (1985). Practical biochemistry (Standard Publication, Chandigarh).

BIOT-Sem-IV-II-P Biophysical And Biochemical Techniques (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25marks
Time : 3 hours

1. Identification of the provided sample using some of the spectroscopic techniques.
2. Quantitative analysis by UV/Visible spectrophotometry.
3. Use and care of light microscope.
4. Demonstration of radioisotopic techniques
5. Gel filtration chromatography

Paper: Plant Biotechnology
Course No.: BIOT-Sem-IV-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: The objective of this course is to familiarize the students with different aspects of plant molecular biotechnology and techniques for plant genetic manipulations.

Unit – I

Genetic material of plant cells with an introduction to chloroplast and mitochondrial DNA.
Plant Promoter, Plant Selection markers and reporter genes.
Transformation of plant cells; different type of vectors including viral vectors and their benefits.

Unit –II

Modes of gene delivery in plants: Particle bombardment, electroporation, microinjection; Advantages and disadvantages
Agrobacterium mediated gene transfer, natural pathogen mode of infection,
vir gene functions, Ti / Ri plasmids, Screening and selection of transformants, PCR and hybridization methods; Transgene selection and silencing; Generation and maintenance of transgenic plants.

Unit – III

Transgenic plants: Genetic modification of plants for herbicide resistance, Pest resistance, virus resistance Bacterial and fungal resistance. Delayed fruit ripening, improved protein composition. Bt cotton, golden rice and some others as examples.

Unit – IV

Plant cell as factories for production of industrial enzymes, biodegradable plastics, antibodies, edible vaccines; manipulation of metabolic pathways for production of fatty acids, industrial oils, terpenoids, flavanoids.

Reference Books:

1. Draper, J.R., Scott. P., Armitage, R. Walden (1988). Plant Genetic Transformation and Gene Expression – A Laboratory Manual. Blackwell Scientific Publications, Oxford.
2. Ashihara et al. (2011) Plant Metabolism and Biotechnology, John Wiley & Sons, Ltd. ISBN: 978-0- 470-74703-2
3. Old, R.W., and Primrose, S.B. (2004). Principles of Gene Manipulation : An Introduction to Genetic Engineering. Blackwell Scientific Publications, Oxford.
4. Peter J. Lea and Richard C. Leegood, Plant Biochemistry and Molecular Biology, Wiley Publishing.
5. Singh R.P. & Jaiwal P.K. (2003) Plant Genetic Engineering Vol. 1 – 4. SCI Tech Publishing LLC, U.S.A.
6. Gupta, P.K. (1990). An Introduction to Biotechnology, Rastogi Publications, Meerut.

BIOT-Sem-IV-III-P Plant Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Aseptic culture techniques for establishment and maintenance of cultures
2. Preparation of stock solutions of MS basal medium and plant growth regulator stocks.
3. Micropropagation of Tobacco plant by leaf disc culture.
4. Isolation of plant genomic DNA by modified CTAB method.
5. DNA check run by Agarose Electrophoresis.
6. Agrobacterium tumefaciens-mediated plant transformation.

Paper: Animal Biotechnology
Course No.: BIOT-Sem-IV-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the advances in the field of Animal and their importance to mankind.*

Unit-I

Organotypic and histotypic cultures: *Organotypic culture:* Gas and nutrient exchange, structure integrity, growth, differentiation, advantages and applications. Methods, advantages and applications of histotypic culture.
Three dimensional culture and tissue engineering: Concept of tissue engineering, components of tissue engineering, cells imaging in 3D construct.

Unit-II

In vitro **fertilization (IVF)** in Humans and Embryo Transfer in Livestock.
Cell culture based vaccines: Cells as virus host/cell culture based vaccines, cells as protein factory/cell expression system and cells as antigen presenter/personalized vaccine.
Scaling up of the animal cell culture: different methods of scale up at laboratory and industrial level.

Unit-III

Transgenic animals and their applications: Concept of transgenics, Methods of gene transfer, selection of clone containing DNA insert and application of transgenic animals (Food, environment, recombinant proteins, drugs *etc.*). Safety and ethical issues of transgenic animals.

Unit-IV

Production of various products of human use using animal cell culture:
Antibiotics production
Human Growth factors
Insulin and other Hormones

Essential Readings:

1. Culture of animal cells (2009). RI Freshney, Sixth ed. John Willey & Sons.
2. Culture of animal cells: A manual of basic technique and specialized applications. John Wiley & Sons, (2011).
3. Animal cell culture and technology by Michaelis Butler. BIOS Scientific Publisher (2003).
4. Animal cell biotechnology XVI 2nd Edition (2007) by Ralf Partner Humana Press.

5. Textbook of animal biotechnology (2012) by B Singh**,** S K Gautam**,** and M S Chauhan..
7. Principles of tissue engineering by Robert Lanza, Robert Langer, Joseph P. Vacanti. Academic Press, (2011) - Science - 1344 pages.
8. Transgenic animal technology, 2nd Edition: A Laboratory Handbook by Carl A. Pinkert. Academic Press; 2nd edition (2002).

BIOT-Sem-IV-IV-P Animal Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Growing the cell monolayers, *in vitro*.
2. Trypsinization of the monolayers and cell counting using hemocytometer.
3. To check the viability of the cells using Trypan Blue dye exclusion assay.
4. Checking the cytotoxicity of the compounds using MTT Assay.

Paper: Agro & Industrial Biotechnology
Course No.: BIOT-Sem-IV-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the concepts of agriculture as industry. This course will help students to understand the application of fundamental concepts like transgenic approaches to improve crop plants, microbial culture maintenance, and metabolite purification at industrial level.*

Unit I

Basic concept of agriculture as industry: Industrially important microbes, its screening, selection and identification.

Maintenance and preservation of industrially important microbial cultures.

Differences between microbial industrial process and chemical industrial process.

Unit II

Improvement programme of industrial microbes, mutational programme of penicillin producing microorganisms, selection pressure in maintaining the hyper producer, lowering of production due to reversal of mutations, media formulation and process optimization of industrial and agro industrial microbes.

Unit III

Microbes in agro industries and industrial biotechnology: Introduction of primary and secondary metabolites, production of vitamin B12, alcohol, wine, beer, cheese, bread, citric acid, gluconic acid, antibiotics (penicillin), enzymes (amylases, cellulases, lipases and proteases) and their industrial applications.

Unit IV

Emerging technologies in agro industries: production of vermiculture, composting, herbicides and biopesticides, production of biofertilizers: Blue green algae, azolla, fungi, mycorrhiza (VAM), bacteria – *Azospirrilum*, microbial biotransformations, single cell proteins (bacterial, fungal and algal).

Reference Books:

1. Marwaha, S.S., Arora, J.K. (2003). Biotechnological strategies in agro-Processing (Asiatech publishers Inc. New Delhi, India).
2. Stanbury, P.F., Whitaker A. (2011) 2nd edition. Principles of fermentation technology.
3. Singh, BD. (2008). Biotechnology: Expanding horizons (Kalyani Publishers, India).
4. Patel A.H. (2007). Industrial microbiology (New Age International Publishers).
5. Loessner, J. M, Jay J.M, D.A. Golden (2005). Modern food microbiology (Golden Springer).
6. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-IV-V-P Agro & Industrial Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Counting of Microbial cells by serial dilution techniques (Spread plate and pour plate).
2. Measurement of bacterial size.
3. Screening of industrial enzymes (cellulase, protease, amylase *etc.*) from different soil samples.
4. Production of enzymes by submerged and solid state fermentation.

B.Sc. Hons. Biotechnology 3rd year (5th Semester)

BIOT-Sem-V-I-T MOLECULAR BIOLOGY

Theory : 67 marks
Int. asset : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks except compulsory question.**
- **Five questions to be attempted.**
- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**

Objective: *This course of Molecular Biology will introduce the students with structure of various nucleic acids and detailed molecular mechanisms of gene expression.*

UNIT-I

1. DNA: Chemical composition of DNA DNA structure-single stranded DNA, detailed account of double stranded DNA, BDNA, Z.DNA and other structural forms and their importance.
2. Genome organization in prokaryotes**:** Molecular nature of the genetic material, Composition and structure of prokaryotic DNA and RNA.
3. Genome organization in eukaryotes: Composition and structure of eukaryotic DNA and RNA. Characteristic features of highly repetitive DNA, Tandem repetitive DNA and Mini and microsatellite DNA and Insertional elements and their role and importance

UNIT-II

4. DNA replication: Prokaryotic DNA replication; replication origin and site and structure and DNA Ter regions and structure. DNA polymerases, composition and features, replication factors and the mechanism of replication, leading strand and lagging strand synthesis, procesessivity and fidelity. Replication of single stranded DNA, M13 viral DNA.
5. Eukaryotic DNA replication; origins, replication initiation complexes and their assembly, licensing factors, DNA polymerases and their composition, telomerase and mode of action, replication factors, disassembly of chromatin components and reassembly during replication.

UNIT-III

6. Gene Expression: Overview of central dogma
7. RNAs: types, rRNAs; Structural features of rRNAs- prokaryotic and eukaryotic. tRNAs: structural features, their anticodon feature. mRNAs- prokaryotic and eukaryotic mRNAs, structural features,

8. Transcription: regulatory elements and mechanism of transcription regulation in prokaryotes and eukaryotes

UNIT IV

9. Translation: Overview and mechanism of translation process in prokaryotes, characteristics of the genetic code, structure and charging of tRNA,

10. Gene Regulation: Regulation of gene expression in response to environmental conditions. Operon concept- the Lactose and the Tryptophan operon.

REFERENCE BOOKS:

Lewin, B., 2004, Genes VIII, Oxford Univ. Press, Noida, India.
Ingraham, John.L.2004, Introduction to Microbiology, 3 Ed., Thomson brocks/Cole Inc.
Malacinski, George M., 2005, Freifelder's. Essentials of Molecular Biology, Narosa Publishing House, ND.
Karp, Gerald, 2005, Cell and Molecular Biology, Wiley International, USA.
Snusted and Simmons, 2006, Principles of genetics, John Wiley and Sons, Inc
Brown, T.A, 2007, Genomes 3, Garland Science.
Weaver R.F., Molecular biology (2005), McGraw

BIOT-Sem-V-I-P: MOLECULAR BIOLOGY (Practical)

Practical : 20 marks
Int. assessment : 05marks
Total : 25 marks
Time : 3 hours

1. Preparation of Reagents for DNA isolation.
2. DNA isolation from plants.
3. Agarose gel electrophoresis of DNA.
4. Plasmid DNA isolation.
5. Isolation of genomic DNA from Bacteria.
6. Restriction digestion of DNA.

Reference Books:

Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbor.

BIOT-Sem-V-II-T Paper: ENZYMOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the world of enzymes, their structure and mode of action at various cellular metabolism and their applications in Biotechnology.*

UNIT – I
Structure and functions of enzymes: Historical background and general properties of enzymes, concept of active centre, binding sites, stereo specificity and ES complex formation, activation energy, Evidences for enzyme-substrate complex; Lock and key, Induced fit and Transition state hypotheses, Coenzymes and Cofactors- Prosthetic group, coenzymes involved in different metabolic pathways.

UNIT – II
Factors Affecting the Enzyme Activity: Concentration, pH and temperature. Kinetics of a single substrate enzyme catalysed reaction, derivation of Michealis-Menten Equation, significance of Km value, Vmax, Turnover number, Kcat. Enzyme activity, international units, specific activity,
Enzymes as thrombolytic agents, Anti-inflammatory agents, streptokinase, Isoenzymes

UNIT-III
Enzyme Regulation: Feedback inhibition, Allosteric Regulation, Covalent Modification and Proteolytic Activation. Organization of enzymes in the cell, localization, enzymes in membranes. Acid-base catalysis, covalent catalysis, Metal ion catalysis, multienzyme complexes and ribozymes, catalytic antibodies, Allosteric enzymes.

UNIT – IV
Applications of Enzymes: Immobilized enzymes, industrial applications of immobilized enzymes, Thermophilic enzymes, amylases, lipases, Proteolytic enzymes in meat and leather industry, enzymes used in fermentation processes, cellulose degrading enzymes, Metal degrading enzymes.

Reference Books:

1. Fundamentals of Enzymology : Nicholas Price & Lewis Stevens
2. Biochemistry text books by Stryer, Voet and Lehninger
3. Methods in enzymology Vol.185 (1990) Gene Expression technology edited by D.V. Goeddel (Academic Press Inc. San Diego).
4. Enzymes: biochemistry, biotechnology and clinical chemistry (2001) by Trevor Palmer (Horwood).
5. Fundamentals of enzymology: The cell and molecular biology of catalytic proteins (2003) by Nicholas C. Price, Lewis Stevens, Lewis Stevens published (Oxford University Press, USA).
6. Principles and reactions of protein extraction, purification, and characterization (2004) edited by Hafiz Ahmed PhD (CRC, Taylor Francis Group).

BIOT-Sem-V-II-P: ENZYMOLOGY (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Estimation of enzyme activity.
2. To study the Effect of pH on activity of enzyme.
3. To study the Effect of temperature on activity of enzyme.
4. To study the effect of substrate concentration on enzyme activity.
5. To estimate Km and Vmax of an enzyme and plot Line-Weaver Burk plot.

Reference Books:

An introduction to practical biochemistry (2004) by Plummer D.T. (Tata McGraw Hill Publishers Co. Ltd., New Delhi).

1. Practical Enzymology (2004) By Hans Bisswanger (Wiley- VCH, Weinheim)
2. Introductory practical biochemistry (2005) by S.K. Sawhney, Randhir Singh (Alpha Science International).

BIOT-Sem-V-III-T : ENVIRONMENTAL BIOTECHNOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The course focuses on an introduction to environment, major threats to environment by various polluting agents and the remedies for the same, incorporating design and monitoring of waste treatment processes. As well as learning environmental technology fundamentals, with special focus on biological treatment processes, environmental management. The course is use of biotechnology to design cleaner manufacturing processes and to solve pollution problems. It is ideal for under graduates just embarking on their career, or scientists and engineers who have been working for a few years and wish to develop their career in this direction.*

UNIT-I

Basics of Environment and Environmental pollution, air, water, soil and noise.
Air – Types, Sources & Effects,
Soil - Physicochemical and bacteriological analysis of soil, soil pollutants (fertilizers, insecticides fungicides, pesticides).
Noise pollution, its control and impact on human health.
Renewable and Non Renewable resources. and their Environmental Impacts.
Modern Fuels (gasohol, hydrogen and solar energy) and their Environmental Impacts.

UNIT-II

Water pollution and its management: Measurement of water, pollution, sources of water pollution. Microbiology of waste water treatment, aerobic processes, activated sludge, oxidation ponds, trickling filters, and rotating biological contactors.

Anaerobic processes: Anaerobic digesters, upward flow anaerobic sludge blanket reactors.

UNIT-III

Bioremediation of contaminated soil and its applications

Degradation of pesticides and other toxic chemicals by microorganism. Integrated Pest management

Biofertilizers for clean environment– Nitrogen fixing microorganism, enrichment of the soil with assimilable nitrogen

UNIT IV

Introduction to solid waste and municipal solid waste management: Sources, types, composition.

Bioabsorption of metals:- Role of Microorganisms in biosorption and bioleaching. ,

Enrichment of ores by microorganisms

Bioindicators for detection of pollution

References Books:

1. Environmental Biotechnology: Principles and applications Bruce, E. Rittmann and Perry L.Mc. Corty, Mc. Graw Hill Publications, New York, 2000.
2. Environmental Biotechnology 2nd Edition, Alan Scragg, 2005, Oxford University Press.
3.Environmental Biotechnology (2007) S.K. Agarwal APH Publishing Corporation.
4. Wastewater engineering–Treatment, disposal and reuse (2009) by Metcalf and Eddy, Inc. (Tata Mc Graw Hill, New Delhi).
5. Comprehensive biotechnology (2004) by Murray Moo Young, Alan T Bull, Howard Dalton, Set 4 Vol (Elsevier India P Ltd).
6. Comprehensive biotechnology: The principles and regulation of biotechnology in industry, agriculture and medicine (1985) by Charles L Cooney, Arthur E Humphrey, Vol.2 (Pergamon Press).
7. Environmental chemistry (2006) by Anil Kumar De (New Age International (P) Ltd).
8. Introduction to biodeterioration (2004) by D. Allsopp, Kenneth J. Seal, Christine C. Gaylarde (Cambridge University Press).

BIOT-Sem-V-III-P ENVIRONMENTAL BIOTECHNOLOGY(Practical)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Detection of coli forms for determination of the purity of potable water.
2. Determination of chlorine in water
3. Determination of total alkalinity of water
4. Determination of dissolved oxygen concentration of water sample.
5. Determination of biological oxygen demand (BOD) of a sewage sample.
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Isolation of phosphate solubilizing microorganisms from soil.

Reference Books:

1. Microbiology: A laboratory manual (2007) by Cappuccino J.G and Sherman N. (Publisher Pearson Benjamin Cummings).
2. Biotechnology Laboratory Manual by Swamy, P.M. Rastogi Publications (2008).
3. Practical Microbiology by Dr R.C. Dubey and D.K. Maheshwari, S.Chand Publications.

BIOT-Sem-V-IV-T TOOLS IN BIOINFORMATICS

Theory : 67 marks
Int. assessment: 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course of introduces the students to an advanced field of biotechnology which will give an insight how to handle the enormous data generated in biology in silico and the in silico tools applied to decipher and analyze the data.*

UNIT – I

Introduction to Bioinformatics, Biological Databases and Sequence analysis
Introduction, overview and needs of bioinformatics technology.
Primary Databases: Primary Sequence database i.e. GenBank & EMBL.
Secondary Databases: SwissProt/TrEMBL, Pfam.
Molecular Structure Databases: Protein Data Bank (PDB), SCOP, CATH. Understanding the structure of each database and using it on the web.

UNIT – II

Sequence Alignment:
Introduction to sequence alignment and its applications.
Pair wise sequence alignment: Concept of global and local alignment, Dot Plot, algorithm for pair wise sequence alignment (Needleman Wunsch, Smith-watterman methods), Introduction to BLAST, types of BLAST, algorithm of BLAST and interpretation of its result.
Substitution matrices: Introduction to substitution matrices: PAM and BLOSUM matrices, concept of log odd ratio.

Multiple sequence alignment: Methods of multiple sequence alignment. Introduction to consensus sequences, motifs and profiles.

UNIT – III

Phylogenetic Analysis: Introduction to phylogenetic analysis and its application, phylogenetic tree topologies, methods of phylogenetic tree construction and tools.

Genome Annotation: Concept of genome annotation, methods of gene identification. Tools of gene identification: GenScan and Glimmer.

UNIT IV

Protein Structure Prediction: Concepts and strategies of protein structure prediction, methods of secondary structure prediction, and methods of protein tertiary structure prediction. Structure visualization tool – RasMol.

BIOT-Sem-V-IV-P: TOOLS IN BIOINFORMATICS (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Searching literatures over PubMed.
2. Performing DOTPLOT on web.
3. Retrieving amino acid and nucleotide sequence from sequence databases using Entrez.
4. Performing BLASTp/n and interpreting its results.
5. Performing PSI-BLAST.
6. Performing multiple sequence alignment using Clustalw.
7. Finding ORF in nucleotide sequence using NCBI ORF FINDER
8. Using GenScan to identify exons in nucleotide sequence.
9. Download protein structure form PDB and visualize it using RasMol.

BIOT-Sem-V-V-T INTELLECTUAL PROPERTY RIGHTS AND ETHICAL ISSUES IN BIOTECHNOLOGY AND ENTERPRENEURSHIP

Theory : 90 marks
Int. assessment : 10 marks
Total : 100marks

Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks except compulsory question.**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**
- **Five questions to be attempted.**
- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**

Objective: *To introduce the students to intellectual rights and how to use the current intellectual property system to protect and commercialize their biotechnological invention. This course also covers the ethical issues, controversies and social-ethical impact of biotechnology on society.*

UNIT – I

IPR: Introduction to Intellectual Property Rights. Tangible and intangible property. Patents: Introduction to patent law and brief history (early GATT and TRIPS), conditions for patentability; procedure for obtaining patents, patent filing through PCT, rights of a patentee; patent infringements and litigation.

Indian patent laws and amendments. Patents from an international perspective.

UNIT- II

Design, copyright and Trademark:

Copyright: Registration procedure and copyright authorities; assignment and transfer of copyright, copyright infringement and exceptions to infringement; software copyright.

Designs: Introduction to the law on industrial designs; registration and piracy; international perspective; commercial exploitation and infringement.

Trademark: Importance, Registration, Trademark infringement and piracy.

UNIT – III

Patenting in biotechnology: Biotechnology patents and its economic, ethical and depository considerations.

Patentable subject matter and legal aspects of transfer of biotechnology in India. Other multilateral treaties & International conventions – Paris convention, CBD, UPOV, PGRFA.

Writing a patent specification.

Information sources in patent literature search.

UNIT – IV

Entrepreneurship:

Entrepreneur and its types, Women Entrepreneurship. Selection of a product, Product line design and development processes, economics on material and energy requirement, stock the product and release the same for making

The basic regulations of excise: Demand for a given product, feasibility of its production under given constraints of raw material, energy input, financial situations export potential.

Reference Books:

1. J.E. Smith (2004). Biotechnology (Cambridge Univ. Press).
2. V. Santaniello (2000). Agriculture and intellectual property rights: economic institutional, and implementation issues in biotechnology (Edition illustrated Publisher CABI).
3. Thackerey, A (ed) (1998). Private science: Biotechnology and the rise of the molecular sciences (Univ. of Pennsylvania Press, Phil).
4. Inderpal Singh and Baljinder Kaur (2006) Patent law and Entrepreneurship. Kalyani Publishers, India

B.Sc. (Hons.)3rd year (6th Semester)

BIOT-Sem-VI-I-T Paper: GENETIC ENGINEERING

Theory: 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours

Objectives: *Genetic engineering refers to the process of manipulating the characteristics and functions of the original genes of an organism. The objective of this process is to introduce new physiological and physical features or characteristics. The students will learn how the genes can be cut and paste from one organism to another and what are its implications.*

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT-I

1. Introduction to genetic engineering. Why gene cloning and DNA analysis is important. . How to clone a gene - What is clone, Overview of the procedure

2. Tools in Recombinant DNA Technology:

Restriction and modifying enzymes, Type I , Type II and Type III enzymes and their characteristic features; restriction sequences, isoschizomers, rare cutting enzymes, enzyme cutting similar sequence in different manner.

DNA Modifying enzymes: Characteristics and applications of Nucleases – DNase and RNase, DNA-Pol I, Klenow fragment, T4DNA polymerase, T7 DNA polymerase, T4 Polynucleotide kinase, Phosphatase, Reverse transcriptase, Taq polymerase and Ligase. Terminal deoxy ribonucleotidyl transferase.

3. **Polymerase Chain Reaction**: Types and applications

UNIT II

Basic biology of plasmids and Phage vectors Basic features of plasmids, plasmid classification, Bacteriophage λ, lytic & lysogeny, Promoter control circuits. linear and circular forms of lambda vector, DNA cloning with single stranded DNA vectors.

DNA cloning vectors Cloning vectors for E. coli- Nomenclature, pBR 322, pBR 327, pUC 8, pGEM3Z. insertion and replacement vectors; Vectors based on M13. Methods of identification of recombinants: Insertional inactivation, blue/white selection. Cloning vectors for yeast- YEp, YIp, YRp.

Advanced Vectors: cosmid, phagemid, Bacterial Artificial Chromosomes (BACs), shuttle vectors, yeast artificial chromosomes.

UNIT-III

Preparation of genomic and cDNA library: Partial digests, Choice of vectors, Construction and Evaluation of a genomic library. cDNA library: mRNA enrichment, cDNA synthesis,Random, arrayed and Ordered library.

Finding The Right Clone: Gene identification, Nucleic acid hybridization,screening Procedure, Probe selection, immuno screening, functional complementation. Southern blotting, northern blotting.

Preparation of nucleic acid probes: DNA and RNA labeling techniques, nick translation , random priming, end labelling, radioactive and non- radioactive labels.

UNIT-IV

Site directed mutagenesis (cassette , primer extension, RT, real time, multiplex, inverse),

DNA sequencing (Maxam-Gilbert, Sanger, pyro).

Production of Protein from Cloned Genes: Special vectors for expression of foreign genes in *E. coli,* General problems with the production of recombinant protein in *E. coli.* Production of recombinant protein by eukaryotic cells.

Suggested readings:

1. Recombinant DNA by Watson, J.D. et.al., 1993, Scientific American Books, New York.
2. Principles of Gene Manipulation by Old., R.W. and Primrose, S.B., 2004, Blackwell Publishing, UK.
3. Methods in Gene Technology by Dale, J.N., 1994, JAI Press Ltd. London, England.
4. Recombinant Principles of gene manipulation and genomics, primrose & Twyman 2006, Blackwell, U.K.
5. Gene cloning and DNA analysis: An introduction by T.A. Brown (5th Ed.) 2006, Blackwell Science Ltd.
6. Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar,

BIOT-Sem-VI-I-P : GENETIC ENGINEERING (PRACTICAL)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Demonstration of PCR.
2. Demonstration of Southern blotting.
3. Preparation of competent cells.
4. Transformation of competent cells and blue/white selection.
5. Spectrophotometer analysis of DNA.

BIOT-Sem-VI-II-T: BIOPROCESS ENGINEERING AND TECHNOLOGY

Theory : 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours
Objectives:

The objective of this course is to make the student conversant with basic concepts of bioprocesses, design of fermenter along with growth and product formation in various types of processes. Important concept of down streaming and waste water will also be discussed as important component of fermentation economics

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.

- **Five questions to be attempted.**

• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Unit – I

Fundamental principles of biochemical engineering
Sterilization of air and media sterilization, design of batch sterilization process.
Del factor, sterilization cycle, continuous sterilization process

Unit – II

Microbial growth kinetics Simple kinetics of microbial growth (Batch and Continuous) yield coefficient, doubling time, specific growth rate, internal and external feedback systems, metabolic and Biomass productivities, effect of temperature and pH on the product formation

Unit – III

Design of fermenter:
Components of Fermenter, Aseptic operation of the fermenters, control and measurement equipment of fermenters, pH and DO probes, impeller and spargers,

Unit – IV

Downstream processing
Removal of microbial cells and other solid materials, foam separations, filtration, industrial filters, centrifugations and industrial centrifuges, cell Disruption, aqueous two phase extraction system, super critical extraction, whole broth process.
Waste water treatment for fermentation process

Reference Books:

1. Madigan, M.T., Martinko, J.M, P.V. Dunlap, T.D. Brock, D.P. Clark (2008). Brock biology of mMicroorganisms (Pearson Benjamin Cummings).
2. Prescott, L.M. Harley, J.P., Klein, D.A. (2001). Microbiology (McGraw-Hill, Boston).
3. Schaechter, M., Ingraham, J.L., Neidhardt, F.C., (2006). Microbe (ASM Press, Washington, DC).
4. Prescott, L.M. (1999). Microbiology with microbes in motion (McGraw-Hill).
5. Bailey J.E., Ollis, D.F. (1986). Biochemical engineering fundamentals (McGraw-Hill).
6. Schuler, M.L., Kargi F. (2002). Bioprocess engineering: Basic concepts (Prentice hall PTR, Upper Saddle River NY).

BIOT-Sem-VI-II-P:

BIOPROCESS ENGINEERING AND TECHNOLOGY (Practicals)

Practical: 20 marks
Int. assessment: 05 marks
Total: 25 marks
Time: 3 hours

1. Demonstration of components and sterilization of fermenters and other accessories.
2. Determination of doubling time, yield coefficient for growth of microorganism.
3. Effect of temperature and pH on growth and product formation.
4. Determination of Specific growth rate and maximum specific growth rate
5. Cell disruption by Sonicator
6. Demonstration of normal flow and cross flow filtration process

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory (Pearson Benjamin Cummings).
2. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).

BIOT-Sem-VI-III-T : FOOD BIOTECHNOLOGY

Theory: 67 marks
Int. assessment: 08 marks
Total: 75 marks
Time: 3 hours

Objective : *To enable the students aware of the various prospects of biotechnology in the development of various food products and to make them conversant with food contamination and preservation techniques*

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT – I

Food and Microorganisms: History and scope of Food biotechnology, food as substrates for microbes, factors affecting growth of microorganisms, Detection of microorganisms in food: procedure for microbial analysis; Qualitative methods to isolate pathogenic microorganisms, and quantitative methods for microbial enumeration: direct, indirect and standard methods, test for

bacterial toxins in foods; Rapid and advanced estimation methods (Immunoassays, nucleic acid probe) for detection of pathogens. Applications of enzymes in food technology.

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UNIT – II

Principles of food preservation: Physical, chemical, and biological methods of preservations.

Contamination, preservation and spoilage of different kind of foods: Milk and milk products (milk, yoghurt and cheese), beverages (beer, wine, tea and coffee), meat and fish products

UNIT – III

Food adulterants and food additives: Major food adulterants, types and their methods of assay, food additives their function and uses, flavoring agents, coloring agents and vitamins as food additives.

Fermented foods and their production: Bakers yeast, Bread, cheese, yoghurt, tofu, and alcoholic beverages (beer and wine)

Production of algal, fungal and other microbial proteins(SCP)

Probiotics, prebiotics,fortified and biofortified foods, functional foods

Genetically modified food (Golden rice, Favr savr tomato, protato, pomato etc)

UNIT –IV

Food and water borne diseases: Shigellosis, Salmonellosis, Cholera.

Food borne intoxications: *Staphylococcal, Bacillus and Clostridium botulinum*

Exotoxins and Endotoxins, their mechanism of action

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Reference Books:

1. Frazier W.C., Westhoff, D.C. (Ed). (1988). Food microbiology (McGraw-Hill).
2. Admas, M.R., Moss, M.O (2005). Food microbiology (Edition 3, Illustrated Publisher Royal Society of Chemistry).
3. SriLakshmi B. (2003) Food science (New Age International Publishers, India).
4. Jay J.M., M.J. Loessner, D.A. Golden. (2005). Modern food microbiology (Edition 7, Illustrated Publisher Springer).
5. B. Sivasankar (2004). Food processing and preservation (PHI Private Ltd, New Delhi).
6. Michael P. Doyle (1989). Food borne bacterial pathogens (Edition illustrated, Publisher Marcel Dekker).

BIOT-Sem-VI-III-P: FOOD BIOTECHNOLOGY (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Isolation and identification of microorganisms in spoiled food (fungi and bacteria).
2. Inhibitory effect of low temperature on microbial growth.
3. Production and estimation of ethanol.
4. Estimation of lactose in milk.
5. Methylene blue reductase test (MBRT) for determination of quality of milk.
6. Plating the milk samples for microbial contamination.
7. Demonstration for the identification of mushrooms by spore prints.
8. Checking the effect of pasteurization of milk by alkaline phosphatase.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-VI-IV-T: GENOMICS AND PROTEOMICS

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks except compulsory question.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course emphasizes on the detail study of genomes, their mapping and sequencing techniques and using various data bases to study their structure and how they can be related to proteome. They will be also introduced to various tools for proteomics and its application.*

UNIT I

Introduction to Genomics, DNA sequencing methods – manual & automated: Maxam & Gilbert and Sangers method. Pyrosequencing, Genome Sequencing: Shotgun & Hierarchical (clone contig) methods, Tools for sequencing projects: Genome sequence assembly software.

UNIT II

Managing and Distributing Genome Data: Web based servers and softwares for genome analysis: ENSEMBL, VISTA, UCSC Genome Browser, NCBI genome. Selected Model Organisms' Genomes and Databases.

UNIT III

Introduction to protein structure, Chemical properties of proteins. Physical interactions that determine the property of proteins. Short-range interactions, electrostatic forces, van der waal interactions, hydrogen bonds, Hydrophobic interactions. Determination of sizes (Sedimentation analysis, gel filteration, SDS-PAGE); Native PAGE, Determination of covalent structures – Edman degradation.

UNIT IV

Introduction to Proteomics, Analysis of proteomes. 2D-PAGE. Sample preparation, solubilization, reduction, resolution. Reproducibility of 2D-PAGE. Mass spectrometry based methods for protein identification. De novo sequencing using mass spectrometric data.

BIOT-Sem-VI-IV-P: GENOMICS AND PROTEOMICS (PRACTICALS)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Use of SNP databases at NCBI and other sites.
2. Use of OMIM database
3. Detection of Open Reading Frames using ORF Finder
4. Proteomics 2D PAGE database
5. Softwares for Protein localization.
6. Hydropathy plots
7. Native PAGE
8. SDS-PAGE

Reference Books:

1. Genes IX by Benjamin Lewin, Johns and Bartlett Publisher, 2006.
2. Modern Biotechnology, 2nd Edition, S.B. Primrose, Blackwell Publishing, 1987.
3. Molecular Biotechnology: Principles and Applications of Recombinant DNA, 4th Edition, B.R. Glick, J.J. Pasternak and C.L. Patten, 2010.
4. Russell, P. J. (2009). iGenetics- A Molecular Approach. III Edition. Benjamin Cummings.
5. Molecular Cloning: A Laboratory Manual (3rd Edition) Sambrook and Russell Vol. I to III, 1989.
6. Principles of Gene Manipulation 6th Edition, S.B.Primrose, R.M.Twyman and R.W. Old. Blackwell Science, 2001.
7. Snustad, D.P., Simmons, M.J. (2009). Principles of Genetics. V Edition. John Wiley and Sons Inc. 3. Klug, W.S., Cummings, M.R., Spencer, C.A. (2009). Concepts of Genetics. IX Edition. Benjamin Cummings.

BIOT-Sem-VI-V-P ON JOB TRAINING MARKS: 100

The students are supposed to undergo four to six weeks practical training in industries/institutes during the summer vacations after 4th semester for which the reports will be submitted by the students in 6th semester and will be evaluated by three teacher evaluating committee.

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Panjab University, Chandigarh-160014(India)
(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI FOR

M. Sc. BOTANY

(TWO YEARS COURSE)

SEMESTER SYSTEM

EXAMINATIONS 2017-18

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M. Sc. BOTANY (TWO- YEAR COURSE) SEMESTER SYSTEM EXAMINATIONS, 2017–18

FIRST SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
I	- Phycology	75 (60A+ 15 HT*)	25 (20+5HT*)
II	- Bryology	75 (60A+ 15 HT *)	25 (20+5HT*)
III	- Mycology and Microbiology	75 (60A+ 15 HT*)	25 (20+5HT*)
IV	- A) Computer Applications & Biostatistics B) Lab. Techniques	75 (60A+ 15 HT*)	25 (20+5HT*)
V-	Anatomy of Angiosperms	75 (60A+ 15 HT *)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 = 500		

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT* : House Test

SECOND SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
VI	- Pteridophytes	75 (60A+ 15 HT)	25 (20+5HT*)
VII	- Gymnosperms	75 (60A+ 15 HT)	25 (20+5HT*)
VIII	- Angiosperm Morphology, Taxonomy and Phylogeny	75 (60A+ 15 HT)	25 (20+5HT*)
IX	- Reproductive Biology of Angiosperms	75 (60A+ 15 HT)	25 (20+5HT*)
X	- Plant Pathology	75 (60A+ 15 HT)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 =		**500**

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT * : House Test.

Second year

THIRD SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XI	- Molecular Biology	75 (60A+ 15 HT*)	25 (20+5HT*)
XII	- Plant Physiology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIII	- Biotechnology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIV	- Cytogenetics	75 (60A+ 15 HT*)	25 (20+5HT*)
XV	Ecology and Environment	75 (60A + 15 HT*)	25 (20+5HT*)
Total Marks		**375**	**125**

GRAND TOTAL OF MARKS: 375 + 125 = 500

TEACHING HOURS: THEORY : 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

Fourth Semester

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XVI	- Plant Biochemistry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVII	- Forestry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVIII	- Genetics and Plant Breeding	75 (60A+ 15 HT*)	25 (20+5HT*)
XIX	- Plant Resource, Utilization and Conservation	75 (60A+ 15 HT*)	25 (20+5HT*)
XX -	A) Research Project/Field Study Report	---	60
	B) Seminar	---	40
	Total Marks	**300**	**200**

GRAND TOTAL OF MARKS: 300 + 200 = 500

TEACHING HOURS : THEORY : 18 Hours per week

PRACTICAL : 16 Hours per week for a group of 10 students

HT* : House Test.

*** The duration of each paper for the examination is 3 hours**

FIRST YEAR
1st and 2nd SEMESTERS

FIRST SEMESTER

PAPER I: PHYCOLOGY

Objective of the paper is to impart knowledge about Algae on various aspects like Classification, Life cycles, Thallus organization and Reproduction in various groups; Evolution, Habitats and Economic importance of algae.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical, the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Criteria for algal classification (pigments, reserve food, flagella, chloroplasts, pyrenoids, eye spots, endoplasmic reticular membrane etc.); Comparative account of important systems of classification (Fritsch, Round , Chapman and Lee).
2. Salient features : Cell structure, thallus organization, reproduction and broad classification of i) Cyanophyta ii) Xanthophyta iii) Bacillariophyta iv) Dinophyta.

UNIT-II

3. Salient features : Cell structure, thallus organization , reproduction and broad classification of v) Chlorophyta vi) Phaeophyta vii) Cryptophyta and viii) Rhodophyta .

UNIT-III

4. Diversity in algal habitats (terrestrial, freshwater and marine).
5. Thallus organization in algae including evolutionary trends.
6. Reproduction (vegetative, asexual and sexual), origin and evolution of sex, life cycles.
7. Current concepts and relationships of protochlorophycean algae.

UNIT-IV

8. Rhythms and bioluminescence in dinoflagellates.
9. Economic importance of algae (algal biofertilizers , algal blooms, algae as food and feed , uses in industries etc.)
10. Algae in Biotechnology.

PRACTICALS **Max. Marks :20**

1. Algal collections from different habitats and their identification.

2. Morphology and reproductive stages of following genera:

***Cyanophyta** : Chroococcus, Microcystis, Oscillatoria, Lyngbya, Nostoc, Anabaena, Gloetrichia, Cylindrospermum, Scytonema*.

Chlorophyta: *Volvox, Hydrodictyon, Chlorella, Pediastrum, Scenedesmus, Oedogonium, Bulbochaete, Cosmarium, Closterium, Zygnema, Sphaeroplea, Cladophora, Pithophora, Spirogyra, Caulerpa, Codium, Valonia, Halimeda, Acetabularia, Chara, Nitella, Coleochaete, Dreparnaldia.*

Xanthophyta *: Vaucheria, Botrydium.*

Bacillariophyta *: Pinnularia, Synedra, Navicula, Cyclotella.*

Phaeophyta : *Ectocarpus, Fucus, Laminaria, Dictyota, Desmortestia, Sporochnus, Sargassum.*

Rhodophyta : *Erythrotrichia, Porphyra, Nemalion, Batrachospermum, Corallina, Gelidium, Polysiphonia*

SUGGESTED READINGS

1. Ahluwalia, A.S. (Ed.). *Phycology: Principles, Processes and Applications.* Daya Publishing House, New Delhi. 2003.
2. Bold, H.C. and M. J. Wynne. *Introduction to the Algae : Structure and Reproduction.* Prentice Hall , Englewood Cliffs, New Jersey. / PHI, New Delhi. 706 pp. 1978 .
3. Carr, N. G. and B.A. Whitton (Eds.). *The Biology of Cyanobacteria.* Blackwell Scientific Publications, Oxford. 1982.
4. Chapman, V.J. and D.J. Chapman. *The Algae.* ELBS and Macmillan , NY. 1977.
5. Fritsch, F.E. *The Structure and Reproduction of Algae (Vol. I and II).* Vikas Publishing House Pvt., Ltd., New Delhi. 1979.
6. Grahm, L.E. and L.W. Wilcox. *Algae.* Prentice Hall, U.S.A. 2000.
7. Grahm,L.J. and L.Wilcox. *Algae.* 2nd Ed. Benjamin Cummings (Pearson), San Francisco, CA. 720 pp. 2009.
8. Kumar, H.D. *Introductory Phycology.* 2nd Ed. Affiliated East-West Press, New Delhi.651 pp. 1999.
9. Lee, R.E. *Phycology*. 4th Ed. Cambridge University Press, London. 2008.
10. Round, F. E. *The Biology of Algae.*2nd Ed. Edward Arnold Ltd., London. 278 pp. 1973.
11. South, G.R. and A. Whittick. *Introduction to Phycology.* Blackwell Scientific Pub, Oxford. 368 pp. 1987.
12. Smith, J. E. *Biotechnology.* 2nd Edition. Edward Arnold, London. 1988.
13. Trainer, F.R. *Introductory Phycology.* John Wiley and Sons, New York. 1978.
14. Van Den Hock, C., D. G. Mann and H. M. Jahns. *Algae: An Introduction to Phycology.* Cambridge University Press, Cambridge. 1995.

PAPER II : BRYOLOGY

Objective of the paper is to impart knowledge about Bryophytes on various aspects like Classification, structural organization and developmental studies of gametophyte and sporophyte in various groups; Ecology, Water relations, Chemistry, Cytology, Fossil bryophytes, Origin and evolution, Experimental studies and Economic Importance.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class room. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25 (20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics of Bryophytes: Systems of classification with salient features of Anthcerotophytina, Hepatophytina and Muscophytina.
2. Structure and development of sex organs in Bryophytes.
3. Economic Importance of Bryophytes.
4. Ecology of Bryophytes: Habitats, Growth forms, Bryophytes as Pollution Indicators.
5. Water Relations: Drought Tolerance ; Dessication and Rehydration ; Ectohydric ,Endohydric and Mixohydric mosses.

UNIT-II

6. Comparative structural organization of gametophyte and sporophyte; Asexual reproductive structures; distribution of sex organs; protective structures associated with archegonia and developing sporogonia; spore and elaters / peristome teeth ; spore dispersal mechanisms and spore germination in
    a) **Hornworts** (Anthocerotales)
    b) **Liverworts** (Calobryales, Jungermanniales, Metzgeriales, Marchantiales, Monocleales and Sphaerocarpales.)

UNIT-III

    c) **Mosses** (Sphagnopsida, Andreaeopsida – *Andreaea* and *Takakia* , Archidiopsida, and Peristomiopsida -- Tetraphidae, Buxbaumidae, Polytrichidae and Bryidae).

7. Experimental studies: Effect of various factors on protonemal differentiation and bud formation; Apogamy and Apospory.

UNIT-IV

8. Chemistry of Bryophytes: A brief account of distribution of various organic compounds in different groups of Bryophytes ; Chemistry in relation to taxonomy.
9. Cytological studies in Bryophytes: Chromosome numbers in major groups of Bryophytes, Polyploidy in brief, m-chromosomes and sex-chromosomes, Cytology in relation to taxonomy.
10. Fossil Bryophytes (A brief account).
11. Origin of Bryophytes.

PRACTICALS **Max. Marks : 20**

1. Structural details of *Marchantia, Asterella, Plagiochasma, Targionia, Pellia, Frullania, Porella, Notothylas, Anthoceros, Sphagnum, Pogonatum, Barbula, Bryum and Entodon* and *Thuidium.*
2. Study of diagnostic features of following genera: *Dumortiera, Athalamia, Conocephalum, Cryptomitrium, Reboulia, Riccia, Riccardia, Metzgeria, Blasia, Sewardiella, Plagiochila, Fissidens , Atrichum , Mnium* and *Thuidium.*
3. Field trips to familiarize with natural habitats, growth forms and diversity of bryophytes.
4. To study permanent slides / photographs of m-Chromosomes and Sex- chromosomes.

SUGGESTED READINGS

1. Chopra, R.N. and P. K. Kumra. *Biology of Bryophytes*. Wiley Eastern Ltd., New Delhi. 350 pp.1988.
2. Chopra, R.S. *Taxonomy of Indian mosses.* CSIR, New Delhi. 631 pp. 1975.
3. Chopra, R.S. and S.S. Kumar. *Mosses of Western Himalayas and adjacent Plains*. Chronica Botanica, New Delhi. 142 pp. 1981.
4. Dyer, A. F. and J. G. Duckett.(Eds.). *The Experimental Biology of Bryophytes.* Academic press, London. 281 pp. 1984.
5. Goffinet, B. and A.J. Shaw. *Bryophyte Biology*.2nd Ed. Cambridge Univ. Press, Cambridge. 580 pp. 2009.
6. Kashyap, S.R.. *Liverworts of Western Himalayas and the Punjab plains. Vols I II.* Researchco Publications, New Delhi. 1932
7. Kumar, S.S. *An approach towards Phylogenetic Classification of Mosses*. Jour. Hattori Bot. Lab. Nichinan , Japan. 1984.
8. Rashid, A. *An Introduction to Bryophyta*. Ist Ed. Vikas Publishing House Pvt. Ltd., New Delhi. 298 pp. 1998.
9. Richardson, D.H.S. *Biology of Mosses.* Blackwell Scientific Publications, Oxford. 219 pp.1981.
10. Schofield, W.B. *Introduction to Bryology.* Macmillan Publishing Co., New York.431 pp. 1983.
11. Schuster, R.M. (Ed.). *New Manual of Bryology. Vols. I & II.* Jour. Hattori Bot. Lab.,Nichinan, Japan.1295 pp. 1983-84.
12. Vashishta, B.R., A.K. Sinha and A. Kumar. *Bryophyta.* S. Chand & Co. Ltd., New Delhi. 488 pp. 2003.
13. Watson, E.V. *The Structure and Life of Bryophytes*. Hutchinson UniversityLibrary, London. 192 pp. 1964.

PAPER III : MYCOLOGY AND MICROBIOLOGY

Objective of the paper is to impart knowledge about Classification , Mycelium, Reproduction in various groups of Fungi.; Nomenclature , Classification , Structure, reproduction, importance of Bacteria, Viruses, MLOs, Spiroplasmas, Viroids, Mycoviruses; Translocation and distribution in host plants , infection, replication and transmission of plant viruses.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Recent trends in the classification of Fungi.
2. General account of Myxomycota, Oomycota and Chytidriomycota

UNIT-II

3. General account of Zygomycota, Ascomycota , Basidiomycota and anamorphic fungi.

UNIT-III

4. Tissue systems in Fungi.
5. Types of Centrum development in Ascomycota.
6. Heterokaryosis and Parasexuality.
7. Mycorrhizal application in agriculture and plant growth.

UNIT-IV

8. Nomenclature, classification, morphology, translocation and distribution in host plants, infection, replication and transmission of plant viruses.
9. Nomenclature, classification, structure, reproduction, nutrition and economic importance of Eubacteria ; General account of Archaebacteria.
10. Brief account of MLOs, Spiroplasma, Viroids and Mycoviruses.

PRACTICALS

Max. Marks: 20

1. Study of morphological and reproductive structures of following genera :
   MYXOMYCOTA: *Stemonitis, Physarum.*
   OOMYCOTA: *Saprolegnia, Albugo, Peronospora, Phytophthora***,** *Bremia.*
   CHYTIDRIOMYCOTA: *Synchitrium, Allomyces, Blastocladia.*
   ZYGOMYCOTA: *Mucor, Rhizopus, Pilobolus.*
   ASCOMYCOTA: *Protomyces, Aspergillus, Penicillium, Claviceps, Phyllactinia, Xylaria, Morchella, Peziza*
   BASIDIOMYCOTA: *Puccinia, Melampsora, Agaricus, Ustilago, Polyporus, Ganoderma, Cyathus, Hydnum , Geasterum.*
   ANAMORPHIC FUNGI: *Fusarium, Cercospora, Colletotrichum, Alternaria, Helminthosporium.*
2. Preparation of media to isolate fungi, bacteria and other microbes.
3. Isolation of *Rhizobium* from legume root nodules.
4. Sensitivity tests of bacteria using different antibiotics.

SUGGESTED READINGS

1. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
2. Bilgrami, K.S. and R.N.Verma. *Physiology of Fungi.*2nd Ed. Vikas Publication House, New Delhi.

3. Bos, L.. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1992.
4. Burnett, J.H. *Fundamentals of Mycology.* Edward Arnold, London. 673 pp.1976.
5. Gibbs, A.J. and B.D.Harrison. *Plant Virology:* The Principles. John Wiley and Sons, NY. 1979.
6. Mandahar, C.L. *Introduction to Plant Viruses*. 2nd Ed. S. Chand & Co. Ltd., New Delhi. 1987.
7. Mathews, R.E.F. *Plant Virology.* 2nd Ed., Academic Press, London. 897 pp. 1981.
8. Moore, D., Robson, G.D. and Trinci, A.P.J. 21st Century Guide book of Fungi, Cambridge University Press, N.Y. 2011.
9. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. *Microbiology.*5th Ed. Tata McGraw Hill, New Delhi. 2007.
10. Powar, C.B. and H.F.Daginawala. *General Microbiology , Vols. I & II.* 2nd Ed. Himalaya Publishing House, New Delhi. 1995.
11. Schlegel , H.S. *General Microbiology*.7th Ed. Cambridge University Press, Cambridge. 676 pp. 1993.
12. Sharma, P.D. *The Fungi* . 2nd Ed. Rastogi Publications, Meerut. 2004.
13. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.
14. Sinha, U. and S. Srivastava. *An Introduction to Bacteria.* Vikas Publi House, New Delhi. 1983.
15. Smith, K.M. *Plant Viruses.* 6th Ed. Chapman Hall, London. 251 pp. 1977.
16. Stanier, R.Y. *General Microbiology. 5th Ed.* Macmillan Press Ltd. 704 pp. 2008.
17. Webster, C.J. *Introduction to Fungi. 3rd.*, Cambridge University Press, Cambridge. 841 pp. 2007.

PAPER IV : A) COMPUTER APPLICATIONS AND BIOSTATISTICS

B) LABORATORY TECHNIQUES

Objective: Now-a-days life sciences have become interdisciplinary. The aim of this paper is to converse and train the students with different modern biological and physico-chemical techniques employed in the study of biological materials.

This paper also aims to impart basic knowledge of Computer (Computer Hardware, software and programming languages etc.) and Biostatistics and use the information in analyzing the biological data.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector, LCD projector etc. The students also make group discussions in the class rooms. In practical the students learn the working of different instruments and computer.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

SECTION A : COMPUTER APPLICATIONS AND BIOSTATISTICS

UNIT-I

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.

3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

UNIT-II

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chi square – test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation; Simple & multiple regression.

SUGGESTED READINGS

1. Daniel, W.W. *Biostatistics: A Foundation for analysis in the Health Sciences*.7th Ed. John Wiley and Sons, New York. 2006.
2. Dunn, O.J. and V.A. Clark . *Basic Statistics: A primer for Biomedical Science.* John Wiley and Sons , New York. 255 pp. 2009.
3. Goon, A.M., M.K.Gupta and B.Dasgupta. *Fundamentals of Statistics*.Vol. I. World Press, Kolkotta. 1983.
4. Hunt, R. and J. Shelly. *Computer and Common Sense.*4th Ed. Prentice Hall, India. 224 pp. 2002.
4 Kanetker, Y. *Let us ' C '* . 8th Ed. B.P.B. Publication .474 pp. 2006.
5 Rajaraman,V. *Computer Programming in FORTRAN . 90 and 95.* Prentice Hall, India. 364 pp.2004
6 Rajaraman, V. and T. Radhakrishanan. *An Introduction to Digital Computers.* 5th Ed. Prentice Hall, India.528 pp. 2004.
7 Sinha, P.K. *Computer Fundamentals.* 4th Ed. B.P.B. Publication. 404 pp. 2003.

SECTION B : LABORATORY TECHNIQUES

UNIT-III

1. Principles and applications of Light, Phase Contrast, Fluorescence, Scanning and Transmission Electron Microscopy.
2. Principles and applications of Tracer Techniques in Biology: Radioactive Isotopes and Half Life of isotopes ; Autoradiography.
3. pH metery – Principles and applications.
4. Principles, procedure and application of Paper Chromatography, Thin Layer Chromatography , Gel filtration, Ion Exchange and Affinity Chromatography, High Pressure Liquid Chromatography.

UNIT-IV

5. Electrophoresis and Isoelectric focusing: Principle , working and applications of Electrophoresis.
6. Colorimetery and Spectrophotometery: Lambert Beer Law, Basic components, applications.
7. Centrifugation : Technique and principles; Preparative and Analytical Centrifugation.

PRACTICALS **Max. Marks :20**

1. Data collection, presentation, plots, Chi-square test, Goodness of fit, determination of correlation coefficient.
2. Genomic DNA isolation .
3. DNA and Protein analysis by Gel electrophoresis.
4. To demonstrate Beer's law using different dyes.

5. Preparation of Phosphate Buffers of different pH values.
6. Practicals pertaining to Chromatographic techniques: Column Chromatography (Exclusion and Affinity Chromatography), Paper Chromatography and Thin Layer Chromatography.
7. Practicals pertaining to centrifugation.

SUGGESTED READINGS

1. Plummer, D.T. *An Introduction to Practical Biochemistry*. Tata McGraw Hill Publishing Ltd., New Delhi.352pp. 1994.
2. Potter, G.W.H. *Analysis of Biomolecules : An introduction to Principles, Instrumentation and Techniques*. Chapman and Hall, London.252pp. 1995.
3. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K.390pp. 2001.
4. Sawhney, S.K. and R. Singh. *Introductory Practical Biochemistry.* Narosa Publishing House, New Delhi.470pp. 2002.
5. Wilson, K. and J. Walker. *Principles and Techniques of Practical Biochemistry.* Cambridge University Press, Cambridge.784pp. 2000.

PAPER V : ANATOMY OF ANGIOSPERMS

Objective: This paper deals with the structure, origin, differentiation and phylogeny of meristems cell, tissues and organs of the plant body.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Camera Lucida, Computer and Image Projecting system and permanent glass slides of plant materials

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Shoot Development :**Various theories regarding the organization and activity of shoot apical meristem (SAM) ; Transition to flowering , Floral meristem and Floral development in *Arabidopsis* and *Antirrhinum* .
2. **Root development:** Organization of Root Apical Meristem (RAM) ; Vascular tissue differentiation; lateral roots .

UNIT-II

3. **Leaf growth and differentiation**: Phyllotaxy, Leaf development , differentiation of epidermis (with special reference to stomata and trichomes) and mesophyll , Kranz Anatomy and Leaf abscission.

UNIT-III

4. Structure, differentiation and phylogeny of Xylem; Reaction wood.
5. Structure, differentiation and phylogeny of Phloem

UNIT-IV

6. Transfer Cells.
7. Structure and activity of vascular and cork cambium.
8. Seed coat anatomy with reference to legumes and cereals.

PRACTICALS

Max. Marks : 20

1. Study of anomalous type of secondary growth through transverse sections.
2. Maceration of wood.
3. Study of living shoot apices .
4. Study of cyto-histological zonation in the shoot apical meristem and. examination of shoot apices in both T.S. and L.S. to show the origin and arrangement of leaf primordia.
5. Study of V.S. of various types of leaves.
6. Study of leaf epidermis.
7. Study of T.S. of Seed Coat.

SUGGESTED READINGS

1. Beck, C.D. *An Introduction to Plant Structure and Development: Plant Anatomy for the 21st Century.* Cambridge Univ. Press,. 452 pp. 2009.
2. Burgess, J. *An Introduction to Plant Cell Development.* Cambridge Univ. Press, Cambridge. 266 pp. 1985.
3. Dawes, C.J. *Biological Techniques in Electron Microscopy.* Barnes and Noble, Inc., NY. 193 pp. 1971.
4. Esau, K. *Anatomy of Seed Plants*. John Wiley, New York. 550 pp. 1977.
5. Fahn, A. *Plant Anatomy.* 3rd Ed. Pergamon Press, Oxford. 544 pp. 1989.
6. Howell, S.H. *Molecular Genetics of Plant Development.* Cambridge Univ. Press, Cambridge. 388 pp. 1998.
7. Jane, F.W. *The Structure of Wood.* 2nd Ed. Adam and Charles Black, London. 478 pp. 1970 .
8. Leins, P., S.C.Tucker and P.K.Endress. *Aspects of floral development.*J. Cramer, Germany. 239 pp. 1988.
9. Lyndon, R.F. *Plant Development, the Cellular Basis.* Unwin Hyman, London. 320 pp. 1990.
10. Mauseth, J.D. Plant Anatomy. Ist Ed. Bejamin Cumming
11. Metcalfe, C.R. and L. Chalk. *Anatomy of the Dicotyledons. Vol. I : Systematic Anatomy the leaf and stem.* 2nd Ed. Oxford Univ. Press, USA. 304 pp. 1950.
12. Ray, F.E. and S.E.Eichhorn. *Esau's Plant Anatomy : Meristems, Cells and Tissues of the Plant Body: their Structure, Function and Development.* 3rd Ed. Wiley-Lis . 624 pp. 2006.
13. Steeves, T.A. and I. M. Sussex. *Patterns in Plant Development.* 2nd Ed. Cambridge Univ. Press, Cambridge. 408 pp. 1989.
14. Vijayraghwan, M.R. and A.R. Shukla. *Histochemistry- Theory and Practice*. Bishan Singh & Mohinder Pal , Dehradun. 1990.

SECOND SEMESTER

PAPER VI : PTERIDOPHYTES

Objective of the paper is to impart knowledge about Pteridophytes on various aspects like Classification, Structural organization and Developmental studies of sporophyte and gametophyte of extant and extinct Pteridophytes, Economic importance , Cytological and Experimental studies.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In the practical the students make observations and work on the plant materials (including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics, The emerging concepts and Classification of pteridophytes.
2. Geological Time Table ; Fossils- their types , formation and methods of study ;Calculation of age of rocks / fossils.
3. Distribution , habitat , range , organography, external and internal morphology of sporophyte , spores and their mechanism of dispersal , gametophytic generation and sexuality and embryogeny of following classes of Pteridophytes with reference to the genera mentioned :

A: PSILOPSIDA

i) Rhyniales : *Rhynia, Horneophyton, Yarravia, Cooksonia*
ii) Trimerophytales : *Trimerophyton, Psilophyton*
iii) Zosterophyllales : Zosterophyllum , *Kaulangiophyton, Crenaticaulis, Sawdonia*

B: PSILOTOPSIDA

Psilotales : *Psilotum* and *Tmesipteris* ; A discussion on the systematic position of this group in pteridophytes.

UNIT-II

C: LYCOPSIDA

i) Protolepidodendrales : *Drepanophycus, Asteroxylon, Protolepidodendron,*
ii) Lycopodiales : *Lycopodium,* A brief account of *Phylloglossum*
iii) Lepidodendrales : *Stigmaria*
Family Lepidodendraceae , Family Bothrodendraceae,
Family Sigillariaceae, Family Pleuromeiaceae
iv) Isoetales : *Isoetes, Nathorstiana* , Brief account of *Stylites*
v) Selaginellales : *Selaginella* (A brief account)

D: SPHENOPSIDA

i) Hyeniales : *Hyenia*

ii) Sphenophyllales : *Sphenophyllum, Shenophyllostachys, Eviostachya, Cheirostrobus*
iii) Calamitales : *Asterocalamites, Protocalamites, Calamites, Calamostachys,Paleostachys*
iv) Equisetales : *Equisetum* (A brief account)

UNIT-III

E: PTEROPSIDA

a) Primofilices
i) Cladoxylales : *Cladoxylon, Pseudosporochnus*
ii) Coenopteridales : *Stauropteris, Botryopteris, Rhacophyton*

b) Eusporangiatae
i) Marattiales: *Psaronius, Angiopteris, Marattia*
ii) Ophioglossales : *Ophioglossum, Botrychium , Helminthostachys*

c) Osmundidae : Osmundales – *Osmunda*

d) Leptospangiatae
i) Marsileales : A brief account
ii) Salviniales : *Salvinia, Azolla*
iii) Filicales: General account of sporophyte morphology, stellar organization, soral and sporangial characters, gametophytes and embryogeny.

UNIT-IV

4. Apogamy and Apospory
5. Reproductive Biology of ferns.
6. Heterospory and its significance.
7. Cytological evolution and Species Concepts – Cytological evolutionary role of polyploidy in the evolution of pteridophytes.
8. Economic importance of Pteridophytes

PRACTICALS **Max. Marks :20**

1. Study of morphology and anatomy of vegetative and reproductive organs using cleared whole mounts, sections , macerations and permanent preparations of following living genera : *Psilotum, Lycopodium, Isoetes, Selaginella, Equisetum, Angiopteris, Ophioglossum, Botrychium, Osmunda, Marsilea, Salvinia, Azolla, Lygodium, Hymenophyllum, Cyathea, Pteris, Asplenium, Dryopteris, Polystichum, Adiantum, Polypodium,* and *Lepisorus.*
2. Study of some fossil pteridophytes through specimens and permanent slides .
3. Preparation of permanent slides / charts.
4. Field trips to familiarize with the diversity of pteridophytes in their natural habitats.

SUGGESTED READINGS

1. Bierhorst, D.W. *Morphology of Vascular Plants.* The MacMillan, New York. 1971.
2. Bold, H.C., C.J. Alexopolous and T. Delevoryas. *Morphology of Plants and Fungi*.4th Ed. Harper and Row Publishers,Inc., New York. 819 pp. 1980.
3. Chandra, S. and M. Srivastava(Eds.). *Pteridology in the New Millenium.* Kluwer Acad. Publishers, Dordrecht / Boston / London.544 pp. 2003.
4. Dyer, A.F. *The Experimental Biology of Ferns.* Academic Press, London. 1979.
5. Foster, A.S. and E.M. Gifford. *Comparative Morphology of Vascular Plants. 2nd Ed.* W.H. Freeman and Co., San Francisco. 1974.
6. Gifford,E.M. and A.S.Foster. *Morphology and Evolution of Vascular Plants*.3rd Ed. W.H.Freeman & Co., New York. 1989.

7. Khullar, S.P. *An Illustrated fern Flora of West Himalayas. Vols. I & II.* International Book Distributors, Dehradun.506pp & 544 pp. 2000.
8. Kubitzki, K. *The Families and Genera of Vascular Plants, Vol. I. Pteridophytes and Gymnosperms.* Kramer, K.U. and P.S. Green (Ed.). Narcosa Publishing House, New Delhi. 1991.
9. Lovis, J.D. *Evolutionary Patterns and Processes in Ferns* . Advances in Botanical Research 4: 229-415. 1977.
10. Mehra, P.N. and A.Gupta. *Gametophytes of Himalayan Ferns.* Publisher: Mehra, P.N., Botany Department, P.U., Chandigarh. 1986.
11. Nayar, B.K. and S. Kaur. *Gametophytes of homosporous ferns*. Bot. Rev. 37 : 295 – 396. 1971.
12. Parihar, N.S. *An Introduction to Embryophyta Vol. II, Pteridophytes*. Central Book Depot, Allahbad. 1965.
13. Pryer, K.M., H.Schneider, A.R.Smith, R.Cranfill, P.G.Wolf, J.S.Hunt and S.D.Sipes. Horsetails and Ferns are a monophyletic group and the closest living relatives to seed plants. Nature 409: 618-622. 2001.
14. Pryer, K.M., E.Schuettpelz, P.G.Wolf, H.Schneider, A.R.Smith and R.Cranfill. Phylogeny and evolution of Ferns (Monilophytes) with a focus on the early leptosporangiate divergences. American Jour. Of Botany 91 (10) : 1582-1598. 2004.
15. Raghavan, V. *Developmental Biology of Fern Gametophytes (Developmental and Cell Biology Series).* Cambridge Univ. Press, Cambridge. 384 pp. 1989.
16. Ranker, T. and Haufler, C.H. (Eds.). *The Biology and Evolution of Ferns and Lycophytes*. Cambridge Univ. Press, Cambridge, New York. 500 pp. 2008.
17. Rashid, A. *An Introduction to Pteridophyta* . Vikas Publishing House Pvt. Ltd., New Delhi. 426 pp.1999.
18. Sporne, K.R. *The Morphology of Pteridophytes.* Hutchinson University Library , London./ B.I. Publications, Bombay / Delhi / Madras. 192 pp. 1982.

PAPER VII : GYMNOSPERMS

Objective of the paper is to impart knowledge about Gymnosperms on various aspects like classification, structural organization and developmental studies of sporophyte and gametophyte of extant and extinct Gymnosperms, Economic importance , Cytological studies and Phytogeography.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials(including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics and Classification of Gymnosperms (Broad outlines).

2. Detailed study of the vegetative morphology, reproductive organs, structure and evolution of the following orders and families (with reference to the genera mentioned)

I . CLASS : PROGYMNOSPERMOPSIDA

i) ORDER : ANEUROPHYTALES
   Family: Aneurophytaceae : *Aneurophyton, Tetraxylopteris, Triloboxylon, Proteokalon*

ii) ORDER : PROTOPITYALES
   Family : Protopityaceae : *Protopitys*

iii) ORDER : ARCHAEOPTERIDALES
   Family : Archaeopteridaceae : *Archaeopteris*

UNIT-II

II. CLASS : CYCADOPSIDA

i) ORDER : PTERIDOSPERMALES
   a) Family Lyginopteridaceae : *Lyginopteris, Lagenostoma, Telangium, Crossotheca*
   b) Family Glossopteridaceae : *Vertebraria, Glossopteris,*
   c) Family Medullosaceae : *Medullosa, Codonotheca Pachytesta,Whittleseya, Goldenbergia*
   d) Family Caytoniaceae : *Sagenopteris, Caytonia*

ii) ORDER : BENNETTITALES (CYCADEOIDEALES)
   a) Family Bennettitaceae (= Cycadeoideaceae) : *Bennettites* (= *Cycadeoidea*)
   b) Family Williamsoniaceae : *Williamsonia*
   c) Family Wiellandiellaceae : *Wielandiella, Williamsoniella*

iii) ORDER : CYCADALES
   a) Family Cycadaceae : *Macrozamia, Zamia*

iv) ORDER : PENTOXYLALES
   a) Family Pentoxylaceae : *Pentoxylon, Nepanioxylon, Carnoconites, Sahnia*

UNIT-III

III CLASS : CONIFEROPSIDA

i) ORDER : CORDAITALES
   Family Cordaitaceae : *Cordaites, Cordianthus, Mitrospermum*

ii) ORDER : CONIFERALES
   a) General account with reference to the families : Pinaceae, Taxodiaceae, Podocarpaceae, Cephalotaxaceae, Araucariaceae, Sciadopityaceae
   b) Range of form, structure and evolution of Female Cones in Coniferales

iii) ORDER : GINKGOALES
   Family Ginkgoaceae : *Ginkgo*

iv) ORDER : TAXALES
   Family Taxaceae : *Taxus*

IV CLASS : GNETOPSIDA

i) ORDER : GNETALES
   a) Family Gnetaceae : *Gnetum*
   b) Family Welwitschiaceae : *Welwitschia*

UNIT-IV

3. Male gametophytes in Gymnosperms.
4. Distribution of Living Gymnosperms in India.
5. Structure and Evolution of Archegonium in Gymnosperms.
6. General survey of cytology of Gymnosperms .
7. Economic importance of gymnosperms.

PRACTICALS **Max. Marks : 20**

1. Study of morphology and anatomy of vegetative and reproductive parts of *Cycas, Zamia, Cedrus, Abies, Pinus, Picea, Cupressus, Cryptomeria, Agathis, Araucaria, Taxodium Taxus, Cephalotaxus , Ginkgo, Ephedra* and *Gnetum.*
2. Study of some Fossil Gymnosperms through specimens and permanent slides.
3. Field trips to familiarize various gymnosperms in nature and field identification of Indian Gymnosperms.
4. Preparation of permanent slides / charts.

SUGGESTED READINGS

1. Andrews, H.N.Jr.. *Studies in Paleobotany* . John Wiley and Sons, New York.487 pp. 1961.
2. Arnold , C.A. *An Introduction to Paleobotany*. McGraw Hill, New York. 433 pp. 1947.
3. Beck,C.E. *Gymnosperm Phylogeny*. Bot. Rev. 51 : 176-294. 1985.
4. Bhatnagar, D.W. *Morphology of Vascular Plants.* The Macmillan and Co., New York. 1971.
5. Bhatnagar, S.P. and A.Moitra. *Gymnosperms*. New Age International Ltd., New Delhi. 470 pp. 2000..
6. Bierhorst, D.W. *Morphology of Vascular Plants.* The Macmillan and Co., New York. 1971.
7. Chamberlain, C.J. *Gymnosperms : Structure and Evolution* . University of Chicago Press, Chicago. 484 pp. 1935.
8. Coulter, J.M. and C.J. Chamberlain. *Morphology of Gymnosperms*. Univ. of Chicago Press , Chicago. 1917.
9. Dallimore, W. and A.B.Jackson . *A Handbook of Coniferae and Ginkgoaceae . 4th Ed.* Edward Arnold and Co., London. 1966.
10. Delevoryas, T. *Morphology and Evolution of Fossil Plants.* Holt, Rinehart and Winston, New York. 1962.
11. Foster, A.S. and E.M. Gifford. *Comparative Morphology of Vascular Plants. 2nd Ed.* W.H. Freeman and Co. , San Francisco. 1974.
12. Meyen, S.V.. *Basic features of Gymnosperms, Systematics and Phyogeny as evidenced by the Fossil Record.* Bot. Rev. 50 : 1-112. 1984
13. Rothwell, G.W. *The Role of Comparative Morphology and Anatomy in interpreting the Systematics of Fossil Gymnosperms*. Bot. Rev. 51 : 318-327. 1985.
14. Sharma, O.P. and S. Dixit. *Gymnosperms*. Pragti Prakashan, Meerut. 344 pp. 2002.
15. Sporne, K.R. *The Morphology of Gymnosperms.* Hutchinson Univ. Library, London. 216 pp. 1974.

PAPER VIII : ANGIOSPERM MORPHOLOGY, TAXONOMY AND PHYLOGENY

Objective of the paper is to impart knowledge about Angiosperms on various aspects like Taxonomy, Phylogeny, Classification, Botanical gardens, Herbaria, Floras, Manuals, Periodicals and Botanical Survey of India and Biodiversity and structural organization of vegetative and reproductive organs of various groups.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students study flowers of different families.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Principles of Plant Classification with emphasis on modern tools of taxonomy ; Taxonomy as a SYNTHETIC DISCIPLINE , Numerical Taxonomy, Chemotaxonomy, Serology and Taxonomy, Biosystematics.
2. Taxonomic literature, General Indexes, Floras, Manuals, Important periodicals with emphasis on Indian floristics.
3. Important Botanical Gardens and Herbaria.
4. Botanical Survey of India – its organization and role.
5. Botanical Nomenclature and International Code of Botanical Nomenclature.

UNIT-II

6. Phylogenetic systems of classification - Hutchinson , Cronquist , Takhtajan , Dahlgren and Thorne.
7. Phylogeny of Angiosperms : Origin, Evolution and inter-relationship of dicots and monocots.

UNIT-III

8. Salient features of following families:

(a) DICOTYLEDONS

Ranunculaceae, Magnoliaceae , Fumariaceae, Cruciferae, Papaveraceae, Capparidaceae, Caryophyllaceae, Malvaceae, Sterculiaceae, Rutaceae, Meliaceae, Rhamnaceae, Anacardiaceae, Leguminosae, Rosaceae, Combretaceae, Myrtaceae, Solanaceae , Lythraceae, Cucurbitaceae, Cactaceae, Umbelliferae, Compositae, Primulaceae, Oleaceae, Asclepediaceae, Apocynaceae, Boraginaceae, Scrophulariaceae, Bignoniaceae, Acanthaceae, Labiatae Verbenaceae, Amaranthaceae, Polygoniaceae, Nyctaginaceae, Euphorbiaceae, and Cannabinaceae.

UNIT-IV

(b) MONOCOTYLEDONS:

Orchidaceae, Cannaceae, Amaryllidaceae, Liliaceae, Palmae, Araceae, Cyperaceae and Graminae.

9. The Species Concept , Taxonomic hierarchies : Species, Genus, Family and other Categories.
10. Concepts of phytogeography : Endemism, Hotspots and hottest hotspots ; Plant Explorations; Invasions and Introductions.
11. Evolution of Stamen and Carpel.

PRACTICALS **Max. Marks : 20**

1. Study of morphology, primitive and advanced characters of cultivated and wild representatives of various families. Study of basic structure of flower, variations, floral parts in detail, floral symmetry, insertion of floral parts etc.
2. Location of key characters and use of keys to derive families.
3. Field study of angiosperms in different types of habitats and preparation of Plant album.
4. Training in using floras for identification of specimens described in field or class.

SUGGESTED READINGS

1. Benson, L.D. Plant Taxonomy : Methods and Principles. Ronald Press, New York. 1962.
2. Collet, H. *Flora Simalensis*. Thacker and Spink , Calcutta and Simla (reprinted 1971). 652 pp. 1902.
3. Cronquist, A. *The evolution and classification of flowering plants.* Houghton Miffin , Boston. 556 pp. 1968.
4. Cronquist, A. *An integrated system of classification of flowering plants.* Columbia University Press, Columbia. 1262 pp. 1981.
5. Davis, P.H. and V.H. Heywood.. *Principles of Angiosperm Taxonomy*. Van Nostrand Reinhold, New York. 558 pp. 1973.
6. Eames, A.J. *Morphology of Angiosperms*. McGraw – Hill Inc., New York. 518 pp. 1961.
7. Gupta, R.K. *Systematic Botany*. Atma Ram and Sons, New Delhi. 1981.
8. Hutchinson, J. *The families of flowering plants. Vol. I , II*. Clarendon Press, Oxford. 968 pp. 1959.
9. Lawrence, H.M. *Taxonomy of Vascular plants.* MacMillan, New York. 823 pp. 1951.
10. Naik, V.N.. *Taxonomy of Angiosperms.* Tata McGraw Hill, New Delhi. 304 pp. 1984
11. Pandey, S.N. and S.P. Misra. Taxonomy of Angiosperms. Ane Books, India. 620 pp. 2008.
12. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology : A Laboratory Manual*. Springer-Verlag, Berlin. 1992.
13. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen : Structure and Function.* Wiley Eastern Ltd.. New Delhi. 1985.
14. Singh, G. *Plant Systematics : Theoty and Practice.* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi. 359 pp. 1999.
15. Sharma, O.P. Plant Taxonomy. Tata McGraw Hill Publishing Co. Pvt. Ltd., New Delhi.482 pp. 2002.
16. Sneath, P.H.A. and R.R.Sokal. *Numerical Taxonomy.* W.H. Freeman , San Franscisco. 1973.
17. Solbring, O.T. *Principles and Methods of Plant Biosystematics* . The MacMillan Co., New York. 1970.
18. Sporne, K.R. *The Morphology of Angiosperms*. B.I. Publication, Bombay, Calcutta, Delhi. 207 pp. 1986.
19. Stace ,C.A. *Plant Taxonomy and Biosystematics.* Contemporary Biology Series, Edward Arnold, London. 1984.
20. Subramaniam, N.S. Modern Plant Taxonomy. Vikas Publishing House Pvt. Ltd., Delhi.494 pp. 2007.
21. Takhtajan, A.E. *Flowering plants : Origin and dispersal.* Oliver and Boyd Ltd.. , Edinburg. 1969.

PAPER IX : REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

Objective of the paper is to impart knowledge about various biological aspects of reproduction in Angiosperms like structure of male and female Gametophyte, Palynology, Pollination, Pollen-pistil interaction, Self incompatibility, Apomixis, Fertilization, Endosperm, Embryo and Seed formation.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the reproductive parts of the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Apomixis**: Types and evolutionary significance.
2. **Male Gametophyte:** Structure of anthers; Microsporogenesis; Role of tapetum; Pollen development; Sperm dimorphism.
3. **Palynology:** Pollen wall structure; Male sterility; Hybrid seed production; Pollen viability and storage.

UNIT-II

4. **Female Gametophye** : Ovule development ; Megasporogenesis; organization of Embryo sac, structure of embryo sac cells.
5. **Pollination , Pollen-pistil interaction and fertilization :** Floral characteristics; Pollination mechanisms and vectors ; breeding systems; structure of the pistil ; Pollen-stigma interactions and pollen tube growth and guidance.

UNIT-III

6. Sporophytic and gametophytic self – incompatibility(cytological , biochemical and molecular aspects).
7. Double fertilization, *in vitro* fertilization.

UNIT-IV

8. **Endosperm**: Development and types.
9. **Embryo**: Development of embryo in Monocots and Dicots.
10. **Seed**: Structure and formation.

PRACTICALS

Max. Marks: 20

1. Study of microsporogenesis and gametogenesis in sections of anthers.
2. Examination of modes of anther dehiscence and collection of pollen grains for microscopic examination (maize , grasses, *Cannabis sativa, Crotolaria, Tradescantia, Brassica, Petunia, Solanum melongena* etc.

3. Tests for pollen viability using stains and *in vitro* germination . Pollen germination using hanging drop and sitting drop cultures, suspension culture and surface culture.
4. Study of ovules in cleared preparations ; study of monosporic , bisporic and tetrasporic types of embryo sac development and embryos through examination of permanent stained serial sections
5. Field study of several types of flowers with different pollination mechanisms (Wind pollination, Bee / butterfly pollination, Bird pollination).

SUGGESTED READINGS

1. Bhojwani, S.S. and S.P. Bhatnagar. *The Embryology of Angiosperms. 4th ed.* Vikas Publishing House , New Delhi.357 pp. 2000.
2. Johri, B.M. (Ed.) . *Embryology of Angiosperms.* Springer-Verlag, Berlin. 830 pp. 1985.
3. Maheshwari, P. *Recent advances in Embryology of Angiosperms.* Int. Soc. Pl. Morphologists, Delhi. 463 pp. 1963.
4. Raghavan, V. *Embryogenesis in Angiosperms – A Developmental and Experimental Study*. Cambridge University, Cambridge. 303 pp. 1986.
5. Raghvan, V. *Molecular Embryology of flowering plants.* Cambridge Univ. Press, Cambridge.690 pp. 1998.
6. Raghvan, V. *Developmental Biology of Flowoering plants.* Springer- Verlag, New York. 354 pp. 1999.
7. Raven, P.H., R. F. Evert and S.E. Eichhorn. *Biology of plants. 7thEd.* W. H. Freeman & Co., New York. 944 pp. 2004.
8. Sedgely, M. and A.R. Griffin. *Sexual Reproduction of Tree crops.* AP, London. 1989.
9. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen: Structure and Function.* Wiley Eastern Ltd. New Delhi. 337 pp. 1985.
10. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology: A Laboratory Manual*. SV Berlin. 1992.
11. Swamy, B.G.L. and K.Y. Krishnamurthy. *From flower to fruit: Embryology of Flowering plants.* Tata McGraw-Hill, New Delhi. 1980.

PAPER X : PLANT PATHOLOGY

Objective of the paper is to impart knowledge on various aspects of Plant Pathology like Symptomatology, Defence mechanisms, Host Parasite interactions, Role of enzymes and toxins in pathogenesis, Nutrition of fungi and Disease forecasting . It also aims to study the Etiology, Epidemiology and Control of different plant diseases caused by Fungi and other micro-organisms.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and study the diseased specimens using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Symptomatology in Fungal infections of plants.
2. Role of enzymes and toxins in pathogenesis.
3. Defense mechanism.
4. Host-parasite interactions.

UNIT-II

5. Disease forecasting and assessment.
6. Disease control.
7. Nutrition in Fungi.

UNIT-III

8. Etiology , epidemiology and control of following diseases:

   i) Paddy: Paddy Blast, Brown Leaf Spot, Bacterial Blight
   ii) Wheat: Rusts, Bunt and Smuts, Tundu Disease
   iii) Sugarcane: Red Rot, Smut
   iv) Grapes: Downy and Powdry Mildews
   v) Peach: Leaf Curl
   vi) Groundnut: Tikka disease
   vii) Apple: Apple Scab
   viii) Mustard : White Rust, Downy Mildew
   ix) Potato : Early and Late Blight, Wart Disease
   x) Linseed : Rust
   xi) Damping off of the seedlings
   xii) Ergot of Rye

UNIT-IV

9. Diseases caused by plant viruses, MLOs, Spiroplasma, Viroids and Mycoviruses: General symptoms and Principles of Control.

PRACTICALS

Max. Marks: 20

1. Study of plant diseases mentioned in Theory syllabus.
2. Isolation, purification and single spore culture of pathogens.

SUGGESTED READINGS

1. Agrios, G.N. *Plant Pathology.* 5th Ed. Elsevier Acadmic Press, San Diego. 922 pp. 2005.
2. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
3. Bilgrami, K.S. and H.C. Dube. *A Textbook of Modern Plant Pathology.* Vikas Publishing House, New Delhi. 1990.
4. Bilgrami,K.S. and R.N.Verma. *Physiology of Fungi.* 2nd Ed. Vikas Publ House, NewDelhi.1994.
5. Bos, L. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1978.
6. Burnett, J.H. *Fundamentals of Mycology.* 2nd Ed. Edward Arnold, London. 673 pp.1976.
7. Gibbs, A.J. and B.D.Harrison. *Plant Virology:* The Principles. John Wiley and Sons, NY. 292 pp. 1979.
8. Mandahar, C.L. *Introduction to Plant Viruses*. 2nd Ed. S. Chand & Co. Ltd., New Delhi. 568pp. 1987.

9. Mathews, R.E.F. *Plant Virology.* 2nd Ed.,Academic Press, London. 897 pp. 1981.
10. Mehrotra, R.S. and A. Aggarwal. *Plant Pathology.*2nd Ed. Tata McGraw Hill Co. Ltd., New Delhi. 846 pp. 2003.
11. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. 2007. *Microbiology.* 5th Ed. Tata McGraw Hill Co., New Delhi.
12. Powar, C.B. and H.F.Daginawala. *General Microbiology , Vols. I & II.* 2nd Ed. Himalaya Publishing House, New Delhi. 1995.
13. Schlegel , H.S. *General Microbiology*.7th Ed. Cambridge University Press, Cambridge. 676 pp. 1993.
14. Sharma, P.D. *Plant Pathology.* Rastogi Publications, Meerut. 1998.
15. Sharma, P.D. *The Fungi and allied organisms* . Ist Ed. Alpha Science International Ltd. 300 pp. 2005.
16. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.
17. Sinha, U. and S. Srivastava. *An Introduction to Bacteria.* Vikas Publishing House, New Delhi. 1983.
18. Smith, K.M. *Plant Viruses.* 6th Ed. Chapman Hall, London. 251 pp. 1977.
19. Stanier, R.Y. *General Microbiology.* 5th Ed. Macmillan Co., London. 704 pp. 2008.
20. Webster, C.J. *Introduction to Fungi.* 2nd Ed., Cambridge University Press, Cambridge. 424 pp. 1980.

Second Year

THIRD SEMESTER

PAPER XI : MOLECULAR BIOLOGY

Objective of the paper is to impart knowledge about various aspects of Molecular Biology like Chemical nature and Biosynthesis of Genetic material, Mechanism of Translation, Control function of genes, Cancer, Antigens, Cell cycle and Apoptosis.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students learn techniques of histochemical localization, extraction and estimation of DNA, RNA and Protein and Antigen- antibody reaction

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Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Cell cycle and Apoptosis & control mechanisms** : Role of cyclins and cyclin dependent kinases, mechanism of programmed cell death.
2. **Chemical Nature of Genetic Material** : Nomenclature, composition and structure of nucleic acids; three dimensional structure of DNA (Prokaryotes, eukaryotes and viral); shape of DNA studied from various physico-chemical properties *(A-, B- , Z-DNA)* ; Structure and functions of different types of RNA ; Biosynthesis of Nucleotides and Biological importance of the nucleotides.

UNIT-II

3. Mechanism of Nucleic Acid Biosynthesis :

a) Replication of DNA (Double-stranded and single stranded); rolling circle model of replication; types of DNA polymerase, DNA topoisomerase, DNA ligase, DNAase, Reverse transcriptase

b) Biosynthesis of different types of RNA: Transcription factors and machinery, Formation of Initiation complex, Transcription activators and repressors, RNA polymerases, elongation and

termination, RNA Processing : RNA editing, Splicing, Polyadenylation, Capping ; RNA transport.

UNIT-III

4. **Mechanism of Translation :** Structure of ribosomes; initiation, elongation and termination of polypeptide chain; Translational proof reading; post-translational processing of polypeptide chain; Inhibitor of protein synthesis .
5. **Control Functions of the Gene :** Constitutive and induced genes; Regulatory genes, structural genes and repressors; Regulation of gene expression in phages; Regulation of gene expression in Prokaryotes; operon model, Role of cAMP in the transcription of operon, lactose and arabinose operons; Regulation of gene expression in eukaryotes, histone, non-histone proteins; different models of control, translation enzymatic and hormonal control.

UNIT-IV

6. **Cancer :** Biochemistry and molecular biology of cancer, Genetic rearrangements in progenitor cells, Oncogenes and Tumour suppressing genes, Cancer and Cell cycle , Virus induced cancer , Metastasis, Interaction of cancer cells with normal cells, Apoptosis, Therapeutic interventions of uncontrolled cell growth, Chemical carcinogenesis.
7. **Antigen :** Structure and functions of different clauses of immunoglobulins; Primary and Secondary immune response; lymphocytes and accessory cells; Humoral and Cell Mediated Immunity ; MHC; Mechanism of Immune response and generation of immunological diversity; Genetic control of immune response, Effector mechanisms; Application of Immunological principles (Vaccines and
Diagnostics).

PRACTICALS

Max. Marks: 20

1. Histochemical localization of DNA, RNA and Proteins.
2. To draw a standard curve of proteins
3. Estimation of protein content of plant tissues by Lowry's method.
4. Extraction and estimation of DNA contents of plant material.
5. Extraction and estimation of RNA contents of plant material.
6. Demonstration of Antigen – Antibody reactions.

SUGGESTED READINGS

1. Buchnan, B.B., W. Gruissem and R.L. Jones. *Biochemistry and Molecular Biology of Plants.* American Society of Plant Physiologists, Rockville, Maryland. 2000.
2. Grierson, D. & S.N. Covey. *Plant Molecular Biology*. 2nd Ed. Blackie Acedemic and Professionals, London.233 pp. 1988.
3. Gupta, P.K.. *Cell and Molecular Biology*. Rastogi Publication, Meerut.940pp. 2004
4. Karp, G. *Cell and Molecular Biology.* John Wiley & Sons, U.S.A.854pp. 1999.
5. Kindt, T.A., R.A. Goldsby and B.A. *Osborne. Immunology.* W.H. Freeman and Co., NY. 574pp. 2007.
6. Lea, P.& C. R.C. Leegood (ed.). *Plant Biochemistry and Molecular Biology.* 2nd Ed. John Wiley & Sons, New York.384 pp. 1999.
7. Lehninger, A. *Principles of Biochemistry.* Worth Publishers, New York.1013pp. 1993.
8. Lewin, B. *Gene VIII.* Pearson Education International, Philadelphia.1027pp. 2004.
9. Lodish, H., A. Berk, S.L. Zipursky, P. Matsudaira, D. Baltimore and J. Darnell. *Molecular Cell Biology*. 4th Ed.W.H. Freeman & Co., U.S.A.1188 pp. 2000.
10. Nelson, D.L. & M.M. Cox. *Lehninger Principles of Biochemistry*. 5th Ed. W.H.Freeman Publishers. 1100 pp. 2008.
11. Robert, D.D. *Cell Biology – A Molecular Approach.* Allyn and Bacon, Inc. 1978.
12. Robertis de, C.D.P. and E.M.S. de Robertis. *Cell and Molecular Biology.* Lea and Febiger**,** Philadelphia. 733pp.1998.
13. Voet, D. and J.G. Voet. *Biochemistry. 2nd Ed.* John Wiley & Sons Inc.1591pp. 2006.
14. Watson, J.D., T.A.Baker, S.P.Bell, A,Gann, M.Levine and R.Losick. *Molecular Biology of the Gene.* Pearson Education Pvt. Ltd., Delhi.732pp. 2004.
15. Wilson, K. and J. Walker. *Practical Biochemistry : Principles and Techniques*. Cambridge University Press, Cambridge.784pp. 2000.

PAPER XII : PLANT PHYSIOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Physiology like Cellular organelles, Membranes, Water relations of plants, Inorganic nutrition , Photosynthesis, Respiration, Nitrogen metabolism, Phytohormones, Growth, Stress physiology and Role of plant physiology in agriculture.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Structural organization and function of intracellular organelles** : Cell wall, Nucleus, mitochondria, Endoplasmic Reticulum, Golgi bodies, Peroxisomes, Lysosomes, Vacuoles, Plastids, Structure and function of cytoskeleton and its role in motility.
2. **Membrane structure and function** : Structure of model membrane, Lipid bilayer and membrane protein, diffusion, osmosis, ion channels, active transport, ion pumps, mechanism of sorting and regulation of intracellular transport, electrical properties of membranes.
3. **Water Relations of Plants :** Modern thermodynamic concepts of physical state of water in plant cells and tissues, movement of water in the Soil – Plant – Atmosphere Continuum. Transpiration, stomatal control and mechanism of guard cell movement.

UNIT-II

4. **Inorganic Nutrition :** Occurrence, availability and physiological roles of various elements, ion uptake and active and passive transport, Role of calmodulin, phloem transport.
5. **Photosynthesis :** Energy pathways in photosynthesis, Chloroplast as an energy transducing organelle, composition and characterization of photosystems I and II, electron flow through cyclic and non-cyclic photophosphorylation, pathway of CO_2 Fixation, differences between C_3 and C_4 photosynthesis, different kinds of C_4 pathways, CAM pathway – occurrence, biochemical events, and adaptive advantage. Regulation of photorespiration, Factors affecting photosynthesis, photorespiration and photophosphorylation.
6. **Respiration** *:* Glycolysis, Krebs cycle and Electron Transport Chain (Cytochrome System), Gluconeogenesis, Factors affecting respiration.

UNIT-III

7. **Nitrogen Metabolism :** Nitrogen fixation of free living and symbiotic organisms, mechanism of Nitrogen fixation, Soil nitrogen sources, nitrogen uptake and assimilation, nitrate reductase system and induction, Light substrate-controlled induction, interrelationship between photosynthesis and nitrogen metabolism, transport of nitrogen in plants.
8. **Phytohormones :** Auxins, gibberellins, cytokinins, abscissins and ethylene : their transport, biosynthesis, physiological roles and mechanism of action; phenols, synthetic regulators, retardants and inhibitors.

UNIT-IV

9. **Growth :** Process, phases and dynamics of growth. External and internal factors affecting growth, growth and yield analysis, Source – Sink relationship, photoperiodism, phytochrome, endogenous rhythms, tropisms. Seed and bud dormancy and germination.
10. **Stress Physiology :** Mechanism of plant response to water (low and high), temperature (low and high), Salt (Salinity and Alkalinity) and biotic stresses (Pathogens and insects).
11. Applications of Plant Physiology in Agriculture.

PRACTICALS

Max. Marks : 20

1. Experiments pertaining to photosynthesis, respiration and water relations.
2. Determination of water potential by various methods.
3. Determination of Chlorophyll a and Chlrophyll b ratio in C3 and C4 plants.
4. Spectroscopic determination of Chrophyll a , Chlorophyll b , Carotenoids and Anthocyanin under varied environmental conditions.
5. Experimental study of hormonal effects in plant material.
6. Bioassays of hormones.
7. Study of seed germination as effected by different factors.
8. Experimental study of stress physiology.

SUGGESTED READINGS

1. Bidwell, R.G.S. *Plant physiology*.2nd Ed. MacMillan Publishing Co. Inc., New York.633 pp. 1979.
2. Buchanan, B.B., W.Gruissem and R.L. Jones. *Biochemistry and Molecular Biology of Plants.* American Society of Plant Physiologists, Maryland, USA. 2000.
3. Devlin, R.M., and F.H. Witham. *Plant Physiology*. C.B.S. Publishers, New Delhi. 258 pp. 1986.
4. Hopkins, W.G.(ed) *Introduction to Plant Physiology*. C.B.S. John Wiley & Sons Inc. USA. 560 pp. 2003.
6. Kramer, P.J. *Plant and Soil Water Relations.* T.M.H. Publishers. 1980.
7. Lawlor, D.W. *Photosynthesis.* 3rd ed.Viva Books Pvt. Ltd., New Delhi.386 pp. 2001.
8. Levitt, J. *Responses of Plants to Environmental Stresses(Physiological Ecology): Chilling,freezing and high temperature stress*. 2nd Ed. Acad. Press, London.497 pp. 1980.
9. Malik, C.P. *Plant Physiology*. 3rd Ed. Kalyani Publishers India. 2002.
10. Moore, T.S. *Biochemistry and Physiology of Plant Harmones.* Narosa/Springer,Verlag. 350 pp. 1989.
11. Nobel, P.S. *Physiochemical and Environmental Plant Physiology*. 4th Ed. Academic Press, San Diego, USA. 2009.
12. Noggle, G.R. and G.J. Fritz. *Introductory Plant Physiology*. 2nd Ed. Prentice Hall of India Pvt. Ltd., New Delhi. 1991.
13. Salisbury, F.B. and C.Ross. *Plant Physiology*.4th Ed. CBS Publisher and Distributors.682 pp. 1992.

14. Singhal, G.S., G. Renger, S.K. Sopory, K.D. Irrgang & Govindjee. *Concepts in Photobiology : Photosynthesis and Photomorphogenesis.* Narosa Publishing House, New Delhi. 1999.
15. Taiz, L. and E. Zeiger.. *Plant Physiology*. 4th ed. Sinauer Associates Inc. Publishers, Massachusetts, USA.700 pp. 2006.

PAPER XIII : BIOTECHNOLOGY

Objective: of the paper is to impart knowledge about various aspects of Plant Biotechnology like Concept, Scope, Tools, Tissue Culture Techniques, Protoplast Culture and Somatic Hybridization, Anther and Pollen Culture, Recombinant DNA Technology, Biosensors and Application of Biotechnology in Medicines , Agriculture, Transgenic plants , Industry and Pollution control etc.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)
THEORY Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **History and Scope of Biotechnology and tools.**
2. **Tissue Culture Techniques**: Introduction to the techniques of plant tissue culture, concept of cellular totipotency, Nutritional requirements, cell and organ differentiation, Somaclonal variation, Somatic embryogenesis, Mentor pollen technology, Embryo culture, Embyro rescue, Germplasm storage including Cryopreservation.

UNIT-II

3. **Protoplast Culture and Somatic Hybridization :** Isolation of protoplasts, culture and fusion methods, selection of fusion products, production of hybrids and cybrids.
4. **Anther and Pollen Culture** : Culture procedures for the induction of haploids, media and nutritional requirements, significance of haploids.

UNIT-III

5. **Recombinant DNA Technology :** Isolation and purification of DNA from plant cells, DNA sequencing, DNA engineering through cutting and joining DNA molecules, Restriction Endonucleases, Ligases.
6. **Application of Biotechnology** in Medicines, Agriculture, Transgenic production and role in Human Welfare.

UNIT-IV

7. **Scope and applications of Microbes** *in* (a) Agriculture with special reference to Biological N_2 fixation, (b) Industry Fermentation (Ethanol, Cheese, Curd) (c) Food (Single Cell Protein), (d) Pollution (degradation of pesticides and Hydrocarbons) and (e) Biogas Production.
8. **Biosensors** : Principles of detection and Applications.
9. **Biosafety and IPR** (a) Objectives of biosafety, guidelines, risk assessment, containment and planned introduction of GMOs and GEMs (b) Intellectual property and protection of IPR, protection of Biotechnological inventions, PBR and management of IPR.

PRACTICALS **Max. Marks :20**

1. Composition and preparation of various culture media :
(a) Knop's medium, (b) Knudson's medium, (c) Moore's medium (d) Murashige & Skoog's medium.
2. Inoculation of Plant Materials, leaf, root, stem.
3. Demonstration and or experimentation to study callus induction, organogenesis, plant regeneration, anther culture, embryo culture, protoplast isolation and fusion *in vitro*.
4. Visit to university/regional laboratories for demonstration of modern instruments employed in recent biotechnological techniques.

SUGGESTED READINGS

1. Bajaj, Y.P.S. *Biotechnology in Agriculture and Forestry Plant Protoplasts and Genetic Engineering I.*, Springer Verlag, Berlin. 1989.
2. Balasubramaniam, D., K.Dharmalingam, C.F.A. Bryce, J.Green and K.Kunthala. *Concepts in Biotechnology.* University Press (India) Ltd., Hyderabad. 1996.
3. Bhojwani, S.S. & M.K. Razdan. *Plant Tissue Culture – Theory and Practices.*5th Ed. Elsevier Science Pub. Co. Inc., New York.776pp. 2005.
4. Bull, A.T., G. Holt & M.D. Lilly. *Biotechnology (International Trends and Perspectives).* Oxford & IBH Puublishing Co. Pvt. Ltd.75pp. 1982.
5. Butcher, D.N. & D.S. Ingram. *Plant Tissue Culture,* Edward Arnold Ltd., U.K. 1976.
6. Evans, D.A., W.R. Sharp, P.V. Ammirato & Y. Yamada(Ed.). *Handbook of Plant Cell Culture.* Vol. I Coolier MacMillan Publishing Co.USA. 970pp. 1983.
7. Gupta, P.K.. *Biotechnology and Genomics.* Rastogi Publication Meerut.796 pp. 2004
8. Ignacimuthu, S.J. *Basic Biotechnology.* Tata McGraw Hill Pub. Co. Ltd., New Delhi.284 pp. 1995.
9. Kumar, H.D. *A Text of Biotechnology.* E.W.P., New Delhi.639 pp. 1998.
10. Murary, David R. (Ed.). *Advanced Methods in Plant Breeding and Biotechnology.* Redwood Press Ltd., Melksham.384pp. 1991.
11. Ratledge, C. and B. Kristiansen.. Basic Biotechnology. Cambridge University Press, Cambridge. 568 pp. 2001
12. Razdan, M.K. *An Introduction to Plant Tissue Culture.* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.397 pp. 2001.
13. Reinert, J. and M.M Yeoman. *Plant Cell and Tissue Culture-A Laboratory Manual,* Springer Verlag, Berlin. 83pp. 1982.
14. Singh, B.D. *Biotechnology.* Kalyani Publishers, New Delhi.574 pp. 2004.
15. Singh, B.D. *Biotechnology: Expanding Horizon.* Kalyani Publishers, New Delhi.860 pp. 2007.
16. Smith, R.H. *Plant Tissue Culture, Technique and Experiments.*2nd Ed. Academic Press, New York.231pp. 2000.

17. Street, H.E. *Plant Tissue and Cell Culture*, Blackwell Scientific Publications, London. 504 pp. 1973.

PAPER XIV: CYTOGENETICS

Objective of the paper is to impart knowledge about various aspects of Cytogenetics like Chromatin organization, types of chromosomes and karyotype, Structural and numerical changes in chromosomes, Molecular cytogenetics, Restriction mapping, Alien gene transfer, Transposons, Mutations, DNA Damage and DNA Repair mechanisms.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study different types of chromosomes, mitosis and meiosis of diploids. They also study the meiosis of polyploids and translocation heterozygotes.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Chromatin Organization :** Chromosome structure and packaging of DNA; Molecular organization of centromere and telomere; nucleolus and ribosomal RNA genes; Unique and Repetitive DNA ; Euchromatin and heterochromatin.

2. **Karyotype** : Karyotype analysis ; Karyotype evolution; Various banding techniques and their uses ;

3. **Specialized types of chromosome** : polytene, lampbrush, B- chromosomes and sex chromosomes.

UNIT-II

4. **Structural changes in Chromosomes :** Origin, meiosis and breeding behaviour and evolutionary significance of Duplication, Deficiency, Inversion and Translocation heterozygotes; Translocation tester sets; Robertsonian translocations ; B-A translocations.

5. **Numerical Changes in Chromosomes:** Origin, occurrence, production and meiosis of Haploids, Aneuploids and Euploids; origins and production of Autopolyploids; chromosome and chromatid segregation; Allopolyploids; types, genome constitution and analysis; induction and characterization of Trisomics and Monosomics; Use of monosomics and trisomics in chromosome mapping.

UNIT-III

6. **Restriction Maps and Molecular Genetic Maps:** Restriction mapping RFLP as marker for mapping; chromosome walking; *in situ* hybridization as an aid in physical mapping of chromosome, FISH, GISH; chromosome jumping; Random amplified polymorphic DNA and AFLP techniques.

7. **Molecular Cytogenetics :** Nuclear DNA contents; C-value paradox, cot curve and its significance; Southern Northern and Western Blotting Techniques, Polymerase Chain Reaction.

8. **Alien Gene Transfer through Chromosome Manipulations :** Transfer of whole genome, transfer of individual chromosomes and chromosome segments; methods for detecting alien chromatin, production, characterization and utility of alien addition and substitution lines.

UNIT-IV

9. **Transposable Elements in prokaryotes and eukaryotes**: Cut and Paste transposons, Replicative transposons and Retrotransposons ;Mutations induced by transposons.

10. **Mutations :** Spontaneous and induced mutations; physical and chemical mutagens; molecular basis of gene mutations, site-directed mutagenesis.

11. **DNA damage and repair mechanisms**: Sources and types of DNA damage. Light dependent repair, Base Excision repair, Nucleotide Excision repair, Mismatch repair, Double- strand breaks repair and Error-prone repair; Prokaryotic SOS response and Eukaryotic transcriptional response to DNA damage.

PRACTICALS

Max. Marks : 20

1. Study of meiosis through materials *Allium, Phlox, Chrysanthemum, Delphinium, Papaper* etc.
2. Mitotic studies and Karyotype analysis.
3. Linear differentiation of chromosomes through banding techniques, such as G-banding, C-banding and Q-banding (Photographs/Slides).
4. Orcein and Feulgen staining of the salivary gland chromosomes of *Chironomas and Drosophila* (Photographs/Slides).
5. Study of B chromosomes using maize or any other appropriate material.
6. Induction of polyploidy using colchicines, different methods of the application of colchicines.
7. Effect of induced and spontaneous polyploidy on plant phenotype, meiosis, pollen and seed fertility and fruit set.
8. Meiosis of complex translocation heterozygotes.

SUGGESTED READINGS

1. Alberts, B., D. Lewis, M. Raff, K. Roberts & J.D. Watson. *Molecular Biology of the Cell*. 5th Ed. Garland Publishing Inc., New York. 1392 pp. 2007.
2. Brown, T.A. *Genomes.* 3rd Ed. John Wiley & Sons, U.S.A. 750 pp. 2006.
3. Griffiths, A.J.F., W.M. Gelbart and J.H. Lewontin. *Modern Genetic Analysis.* 2nd Ed. W.H. Freeman & Company, U.S.A. 2002.
4. Gupta, P.K. *Genetics.* Rastogi Publication, Meerut.611 pp. 1995.
5. Gupta, P.K. *Cytogenetics*. Rastogi Publication, Meerut.418 pp. 2004.
6. Hayward, M.D., M.O. Basemark and I. Romagosa. *Plant Breeding : Principles and Prospects.* Chapman and Hall, U.K.576 pp. 1993.
7. Khush, G.S. 1974. *Cytogenetics of Aneuploids.* Academic press, New York
8. Lewin, B. *Genes VIII.* Pearson Prentice Hall, U.S.A. 1027 pp. 2004.
9. Poehlman, J.M. & D.A. Sleper. *Breeding field crops.* Iowa State Press, USA.444 pp. 1995.
10. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* 6th Ed. Wiley-Blackwell Publ., U.K. 390 pp. 2002.
11. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.* 5th Ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.
12. Swanson, C.P., W.J. Young & T. Merz. *Cytogenetics : The Chromosomes in Division, Inheritance and Evolution.* Prentice Hall, Englwood Cliffs, New Jersey.577 pp. 1981.
13. Schulz-Schaeffer, J. *Cytogenetics.*2nd Ed. Springer-Verlag, Berlin. 446 pp. 1980.

PAPER XV : ECOLOGY AND ENVIRONMENT

Objective of the paper is to impart knowledge about various aspects of Ecology and Environment like Plant Communities and Ecosystems, Population Ecology, Biosphere Reserves, Biogeochemical cycles, Biodiversity and its conservation strategies, Pollution, Natural Resources and Non-conventional sources of energy, Climate change, Global Warming, Ozone depletion, Alien plant's invasion and Weed management.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study the soil samples for pH, conductivity, water holding capacity etc. They also study the ecosystems using Quadrat methods.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole

syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Environment & Ecosystem:** Concept and Principles.
2. **Population Ecology:** Characteristics of a population, Population growth curve, Population regulation, Life history strategies, Concept of metapopulation – Demes and dispersal, Intrdemic extinctions, Age structured populations.
3. **Plant Communities:** Definition, quantitative characters of Plant Communities. Different sampling techniques to study quantitative characters of plant communities.

UNIT-II

4. **Biosphere Reserve :** The concept, Major functions, Nilgiri Biosphere Reserve (a brief account)
5. **Bio-Geochemical Cycles:** General account types, brief account of the following bio-geochemical cycles: Carbon cycle, Nitrogen cycle, Phosphorus cycle and Sulphur cycle.
6. **Biodiversity:** Concept, level, measuring of biodiversity; significance in terms of economic, spiritual, scientific, educational, ecological and genetical values; reasons for depletion, magnitude, distribution and conservation strategies; diversity loss from monoculture plantations.

UNIT-III

7. **Pollution:** Definition, different types of pollutants. **Air pollution;** different pollutants of air, control of Air pollution; **Water pollution** : different sources of water pollution, control of water pollution; **Land pollution** : sources, control of land pollution ; Bioremediation and Phytoremediation.
8. **Management and Conservation of Natural Resources :** Aims and objectives of conservation; renewable and non-renewable resources; special interest and total ecosystem conservation policy; maintenance of ecological processes; management of agriculture, forest and soil; preservation of plant genetic diversity; conservation strategies required at national and international level, sustainable development.
9. **Non Conventional Sources of Energy:** Solar Energy, Hydro Power, Wind Power, Biogas, Geothermal Energy, Ocean Thermal Energy, Tidal Energy, Wind Energy.

UNIT-IV

10. **Ozone Depletion:** Reasons and its effects on plants, methods to check ozone depletion.
11. **Invasion of Alien Plants;** Concept, ecological impact and management
12. **Global Warming and Climate Change :** Reasons, effects and the techniques used to control global warming.

13. **Weed Management :** The impact, use and ecological role of weeds in agro-ecosystems, weed characteristics related to success; Major weeds of the world; Ecological approach to weed management, Problems of the weeds; Allelopathy, its mode and Exploitation in weed management.

PRACTICALS

Max. Marks : 20

1. Techniques for collection of soil samples. Chemical analysis of soil samples taken from different types of soils and to assess their suitability for healthy plant growth.
2. To determine soil pH, conductivity, soil texture and water holding capacity of soil.
3. Chemical analysis of underground water samples taken from different depths and to assess its suitability for healthy plant growth.
4. To work out the size of the quadrat and number of Quadrats required to study the ecosystem of a given locality.
5. To determine density, abundance and frequency of species by quadrat method.
6. To determine the Importance Value Index (IVI) and Species Diversity Index of grassland ecosystem.
7. To study the stomatal behaviour in response to herbicides and pesticides.

SUGGESTED READINGS

1. Altieri, M.A. & M. Liebman. *Weed Management in Agro-Ecosystems- Ecological Approaches.* CRC Press, Florida, U.S.A. 1988.
2. Begon, M., H. John and C.R.Townsend. *Ecology : Individuals, Populations and Communities.* 2nd Ed. Blackwell Science, USA. 943 pp. 1995.
3. Botkin, O. & E. Keller. *Environmental Science.* John Wiley, New York, USA. 752 pp. 1995.
4. Chapman, J.L.& M.J. Reiss. *Ecology Principles and Applications.* Cambridge Univ. Press. 293 pp. 1995.
5. Dash, M.C. *Fundamentals of Ecology.* Tata McGraw Hill, New Delhi. 525 pp. 1994.
6. Engler, E.D. & B.F. Smith. *Environmental Science.* WCB Publishers, Iowa, U.S.A. 1992.
7. Frankel, O.H., A.H.D. Brown and J.J. Burdon. *The Conservation of Plant Biodiversity.* Cambridge Univ. Press, Cambridge, U.K. 299 pp. 1995.
8. Karmondy, E.J. *Concepts of Ecology. 4th Ed.*. Prentice-Hall of India Pvt. Ltd., New Delhi. 559 pp. 2007.
9. King, L.J. *Biology and Control of weeds.* Wiley Eastern Private Reprints. 526 pp. 1974.
10. Kohli, R.K., O.R. Batish & A.K. Aggarwal (Eds.). *Parthenium hysterophorus* (Congress grass) – An Annotated Book of Abstracts, ESI, Chandigarh. 1993.
11. Kohli, R.K., N. Jerath & Dazy Rani (Eds.). *Some Facets of Biodiversity*. SES Pub. & PSCST Publication, Chandigarh, India. 1996.
12. Kohli, R.K, H.P. Singh and D.R. Batish. *Allelopathy in Agroecosystem.* Haworth Press, NY. 447 pp. 2001.
13. Kohli, R.K., S. Jose, H.P. Singh, D.R. Batish. *Invasive Plants &Forest Ecosystems.* CRC Press NY. 2009.

14. Kohli, R.K., K.S.Arya & Atul (Eds.). *Agroforestry & Environment.* DNAES Pub., Chandigarh. 1996.
15. Kumar, H.D. *Modern Concepts of Ecology*. Vikas Publ. House, New Delhi. 293 pp. 1996.
16. Newman, E.1. *Applied Ecology.* Blackwell, U.K. 1994.
17. Odum, F.P. *Fundamentals of Ecology.* 3rd Ed. W.B. Saunders & Co. Philadephia, U.S.A. 534 pp. 1971.
18. Odum, P.E. and W.G. Barret. *Fundamentals of Ecology.* Thomson Books / Cole, U.S.A. 2007.
19. Pandey, B.N. and G.K. Kulkarni. *Biodiversity and Environment.* APH Publishing Corporation, New Delhi. 2006.
20. Ramakrishanan, P.S. *Ecology of Biological Invasion in the Tropics.* International Scientific Publications, New Delhi. 195 pp. 1991.
21. Rana, S.V.S. *Essentials of Ecology and Environmental Sciences*. Prentice Hall of India Pvt. Ltd., New Delhi. 488 pp. 2007.
22. Rice, E.L. *Allelopathy.* Academic Press Inc., U.S.A. 442 pp. 1987.
23 Smith, K.L. *Ecology and Field Biology.* Harfer Collions, New York. 720 pp. 1996.
24. Shukla, R.S.&P.S. Chandel. *Plant Ecology and Soil Science.* S.Chand & Company Ltd., ND.552 pp. 1993.
25. Sharma, P.D. *Ecology and Environment.* Rastogi Publications, Shivaji Road, Meerut. 660 pp. 1996.
26. Singh, HP, D.R. Batish, R.K. Kohli. *Handbook of Sustainable Weed Management.* Haworth Publishers, NY. 2006.
27. Stiling, P. *Ecology : Theories and Applications.* Prentice Hall of India Pvt. Ltd., New Delhi. 2004.
28. Thakur, C. *Weed Science.* Metropolean Book Co. Ltd. India. 482 pp. 1984.
29. Treshow, M. *Air Pollution and Plant Life.* John Wiley, New York, U.S.A. 486 pp. 1984.
30. Wild, A. *Soil and Environment – An Introduction.* Cambridge University Press, U.K. 308 pp. 1993.

FOURTH SEMESTER

PAPER XVI: PLANT BIOCHEMISTRY

Objective of the paper is to impart knowledge about various aspects of Plant Biochemistry like Bioenergetics, Role of Water, Structure, types, properties and metabolism of Amino acids and Proteins, Enzymes, Carbohydrates and Lipids ; Compounds of energy transfer and Redox reactions, Catabolism and Generation of phosphate bond energy ; Vitamins and Secondary metabolites.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Bioenergetics:** Concept of free energy changes, Laws of Thermodynamics, Exergonic and Endergonic Reactions, Entropy and Energy, Free Energy and Equilibrium Constant, Redox potential.

2. **Water:** Its effects on Dissolved Biomolecules : Weak intereactions in aqueous systems, Ionization of water Weak acids and Weak bases; Buffering against pH changes in biological systems, Henderson-Hassalbach equation. The fitness of the aqueous environment for living organisms.

UNIT-II

3. **Amino acids and Proteins:** Structure types, properties and Metabolism of Amino acids; Primary, Secondary, Tertiary and Quatenary structure of proteins; domains, motif and folds; stability of protein structure ; Classification of proteins based on composition, solubility function; Reverse turns and Ramachandran plot.
4. **Enzymes:** Nomenclature and Classification; Enzyme Kinetics; Mode and Mechanism of Enzyme Action ,Enzyme Regulation, Activators, Inhibitors and Isoenzymes : Allosteric enzymes.

UNIT-III

5. **Carbohydrates:** Classification, composition and structure of Carbohydrates (Polysaccharides, Glycoproteins and Peptidoglycan), Stereoisomerism, Transformation of Carbohydrates, Synthesis and degradation of Sucrose, Starch, Cellulose.

6. **Lipids:** Classification, Structure and functions; Biosynthesis of Fatty Acids.

7. **Compounds of Energy Transfer and Redox Reactions:**

   a. Compounds of Energy Transfer *:* Adenosine Triphosphate, Uridine Triphosphate. Cytidine Triphosphate, Guanosine Triphosphate.

   b. Compounds of Redox Reactions *:* Nicotinamide Adenine Dinucleotide (NAD). Nicotinamide Adenine Dinucleotide Phosphate (NADP), flavin Mononucleotide (FMN), Flavin Adenine Dinucleotide (FAD), Ascorbic Acid, Coenzyme, Cytochromes.

UNIT-IV

8. **Catabolism and Generation of Phosphate Bond Energy:** Sites and mechanism of Oxidative phosphorylation; Processes generating substrates for Oxidative Phosphorylation, Coupled Reactions, Group Transfer, Biological energy Transducers ; Oxidation of Carbohydrates (Regulation and Mechanism of T.C.A. cycle) and Oxidation of fats.

9. **Vitamins:** Structure, and functions of Thiamine, Riboflavin, Nicotinic Acid, Pantothenic Acid, Pyridoxine, Biotin, Folic Acid, Vitamin B12 , Ascorbic Acid, Vitamin A , D , E and K.

10. **Secondary Metabolites:** Biosynthesis of terpenes and phenols and alkaloids and their role.

PRACTICALS

Max. Marks : 20

1. Detection of reducing, non reducing and total sugars: Molisch test, Fehling's test, Benedict's test, Barafoed's test, Saliwnoffs test and Iodine test.

2. Quantitative estimation of total carbohydrates by anthrone reagent. Preparation of potato starch, its microscopic structure and solubility test. Histochemical localization of starch.
3. Qualitative tests of protein like Biuret test, Xanthoproteic test, Ninhydrin test.

4. Quantitative estimation of amino acid and phenols by using Spectrophotometer.

SUGGESTED READINGS

1. Conn, E.E., P.K Stumpf., G.Bruening and R.H.Doi. *Outlines of Biochemistry.* 5th Ed. Wiley, India. 712 pp. 2006.
2. Deb, A.C. *Fundamental of Biochemistry*. 9th ed. New Central Book Agency Pvt. Ltd., Kolkutta. 664 pp. 2008.
3. Dey, P.M. and J.B. Harborne. *Plant Biochemistry.* Academic Press, London. 554 pp. 1997.
4. Hames, D. and Cooper, N. *Biochemistry*. Garland Science Publishers, U.S.A. 2008.
5. Jain, J.L., N. Jain and S. Jain. *Fundamentals of Biochemistry.* S. Chand & Co. Ltd., New Delhi. 1264 pp. 2007.
6. Lehninger, A. *Principles of Biochemistry.* Worth Publishers. 1011 pp. 1982.
7. Malik, C.P. and M.B. Singh. *Plant Enzymology and Histoenzymology.* Kalyani Publishers. 1980.
8. Mathews, K. Vanhold and Ahren. Biochemistry. Pearson Edu. Pvt. Ltd., New Delhi. 2003.
9. Nelson, D.L. & M.M. Cox. *Lehninger's Principles of Biochemistry*. 5th Ed. W.H.Freeman & Co., USA. 1100 pp. 2008.
10. Palmer, T. *Enzymes Biochemistry,Biotechnology ,Clinical Chemistry.* Affiliated East – West Press Pvt. Ltd. 2004.
11. Plummer, D.T. *An Introduction to Practical Biochemistry.*2nd Ed. T.M.H. Publishing Co., New Delhi. 352pp.1979.
12. Prince, N.C and L. Stevens. *Fundamentals of Enzymology.* Oxford University Press, Oxford. 1984.
13. Stumpf, P.K. and E.E. Conn. *The Biochemistry of Plants – A Comprehensive Treatise.* Academic Press, London. 1981.
14. Voet, D. and J.G. Voet. *Biochemistry.* 3rd Ed. John Wiley & Sons_Inc. 1264 pp. 2008.

PAPER XVII: FORESTRY

Objective of the paper is to impart knowledge about various aspects of Forestry like Silviculture, Forest Protection, Social and Urban Forestry, Forest Laws, Conservation of Forests, Types of Forests and Effects of forests.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students measure the diameter and height of trees. They study anatomy, moisture contents and specific gravity of common timber trees of Punjab. They also take an account of the nearest natural forest visited by them.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Silviculture:** Definition, Regeneration : Types, Natural regeneration from seeds (different factors on which regeneration depends, seedlings establishment period), Regeneration from vegetative parts (Coppice, Root suckers, Cuttings, Layering, Grafting, Budding, Pollarding, Lopping and Pruning); Nursery making.

2. **Forest Protection:** Protection, causes and control of forest fires; Major diseases of forest plants.

UNIT-II

3. **Social and Urban Forestry:** Social forestry - Non commercial farm forestry, scope and limitations of Non commercial forestry, community forestry, scope and limitations of community forestry, social land allocation programmes (Taungya system). Economic benefits of social forestry, Urban forestry.

4. **Forest Laws and Forest Conservation:** Salient features of the Indian Forest Act 1972 (preliminary, reserved forests, protected forests), different methods employed for conservation of forests.

UNIT-III

5. **Forests Types:** Climate of India, different climatic regions of India. Central characters and distribution of the different forest types of India, Mensuration.

UNIT-IV

6. **Forest Effects :** General effects of forests on climate, control of runoff, effects on snow, soil erosion, wild life, pollution control, nutrient cycling, social values and ecotourism, economic values, floods, green belts and control of temperature.

PRACTICALS

Max. Marks : 20

1. To measure diameter at breast height (dbh), diameter over bark (dob) and diameter under bark (dub) and girth of trees.
2. To measure height of standing trees by Abney's level. .
3. To determine the moisture content, specific gravity and weight density of common timber trees of Punjab.
4. To compare the anatomy of Hard wood and soft wood .
5. Students should be taken to nearest natural forests and they should prepare a field report regarding the following points :
   Height above Sea level, Mean annual rain fall and temperature, Soil texture, soil pH, Topography Dominant tree species and the general characters of the forest (Distribution of trees in different storeys, ground flora, nature of leaf fall, average height of dominant tree species etc.) The students will submit the field report.
6. Propagation studies on important common forest trees of Punjab regarding Height and diameter increments (under similar soil conditions) at two months intervals under natural conditions of day length and temperature for young tree saplings of known age and represent the results in a graphic form.
7. Visit to the nearby forest nursery.

SUGGESTED READINGS

1. Batish, D.R., R.K. Kohli, S. Jose and H.P. Singh. *Ecological Basis of Agroforestry*. CRC Press NY. 400 pp. 2008.
2. Chaturvedi, A.N. *Forest Mensuration.* International Book Distributors, Dehradun. 403 pp. 1982.
3. Dwivedi, A.P. *A Text Book of Silviculture.* International Book Distributors, Dehradun. 505 pp. 2006.
4. Gopikumar, K., S. Gopakumar and E.V.Anoop. *Forest Nursery and Tree Husbandry*. International Book Distributors, Dehradun. 169 pp. 2003.
5. Jha, L.K. *Forestry for Rural Development.* APH Publishing Corporation, NewDelhi. 669 pp. 1996.
6. Khosla, P.K. and R.K.Kohli. *Social Forestry for Rural Development.* I.S.T.S. Solan, India. 1988.
7. Kohli, R.K., K.S. Arya, H.P. Singh and H.S. Dhillon. *Tree Directory of Chandigarh*. DNAES, Chandigarh, India. 1994.
8. Negi, S.S. *Forest Fires.* International Book Distributors, Dehradun. 164 pp. 2000.
9. Negi, S.S. *Elements of General Silviculture*. International Book Distributors, Dehradun. 316 pp. 2003.
10. Negi, S.S. *Hand Book of Forest Ecology and Biology*. Internat BookDistributors, Dehradun. 268 pp. 2004.
11. Puri, G.S., Gupta, R.K. Mehr-Homji, V.M. and Puri, S. *Forest Ecology.* Vol. 2, Oxford & IBH, New Delhi. 708 pp. 1989.
12. Plant Wealth of India. *Proc. Indian Science Academy,* B-63. 1997.
13. Rangarajan, M. *Fencing the Forest* . Oxford University Press, New Delhi. 1996.
14. Sahni, K.C. *The Book of Indian Trees, 2nd Ed.* Oxford Univ. Press, Mumbai. 2000.
15. Stoddard, C.H. *Essentials of Forestry Practice.* R.P.C., New York, U.S.A. 407 pp. 1959.
16. Teylor, C.J. *Tropical Forestry.* Oxford Univ. Press, Oxford, U.K. 1962.
17. Thakur, C. *Weed Science*. Metropolitan Book Co. Ltd. 495 pp. 1984.
18. Trivedi, P.R. and K.N. Sudarshan. *Forest Management*. Discovery Publi. House, New Delhi. 242 pp. 1996.

PAPER XVIII : GENETICS AND PLANT BREEDING

Objective of the paper is to impart knowledge about various aspects of Genetics like Linkage, Gene Mapping, Microbial Genetics, Quantitative Genetics, Population Genetics and Human Genetics. The paper also deals with various methods of breeding in plants reproducing sexually and asexually.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. The students make analysis of different problems relating to genetics.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Allelism and Linkage**: Multiple Allele, Pseudo-alleles, Complementation tests, Pleiotropy, Genomic imprinting, Penetrance and Expressivity, Phenocopy, Linkage and Crossing over, Sex Linkage, Sex limited and Sex influenced characters.

2. **Genetic Recombination and Gene Mapping methods** : Recombination, Molecular Mechanism of Recombination, Role of RecA and RecBCD enzymes, Site-specific recombination, Linkage maps, Tetrad analysis - Centromere mapping in linear tetrads and Analysis of unordered tetrads.

UNIT-II

3. **Extrachromosomal Inheritance** *:* The Genetics of mitochondria and chloroplasts.

4. **Microbial Genetics***:* Mapping the bacteriophage genome; phage phenotypes; genetic recombination in phage; genetic transformation, conjugation and transduction in bacteria

5. **Multigene families:** Multigene families and their evolution.

UNIT-III

6. **Quantitative Genetics :** Polygenic inheritance, Heritability and its measurements, QTL mapping.
7. **Human Genetics :** Pedigree analysis, Lod score for linkage testing, Genetic disorders.
8. **Population Genetics :** Gene pool, Gene frequency, Hardy- Weinberg Law , Concepts and rate of change in gene frequency through mutation, natural selection and migration ; random genetic drift.

UNIT-IV

9. **Principles of Plant Breeding :** Principles and objectives ;important conventional methods of breeding of self and cross pollinated crops, Heterosis and Hybrid vigour, Utility of hybrids in Genetics and Plant Breeding.
10. **Asexual Breeding Systems** : Methods of breeding of vegetatively propagated crops; Non-conventional methods; polyploidy ; gene variability.
11. **Male Sterility :** Concept, Genetic control and Breeding utility.

PRACTICALS

Max. Marks : 20

1. Study of problems on Mendelian Genetics , Gene Interactions, Multiple alleles and Multiple gene inheritance.
2. To test the Genetic Hypothesis by Chi- Square Test and study goodness of fit.
3. Preparation of Linkage Maps in Diploids using three point test cross method.
4. Tetrad analysis and Centromere mapping in ordered and unordered tetrads.
5. Pedigree analysis.
6. Problems relating to Population genetics.

SUGGESTED READINGS

1. Atherly, A.G., J.R. Girton & J.F. McDonald. *The Science of Genetics.* Saunders College Publishing Fort Worth, U.S.A. 1999.
2. Brooker, R.J. *Genetics.* Addison-Wesley. Longman Publication. U.S.A. 1999.
3. Brown, T.A. *Genetics : A Molecular Approach.*3rd Ed. Chapman & Hall, U.S.A. 469 pp.1999.
4. Griffiths, A.J.F., W.M. Gelbart & J.H. Lewontin. *Modern Genetic Analysis.* 2nd Ed W.H. Freeman & Company, U.S.A. 2002.
5. Gupta, P.K. *Genetics.* Rastogi Publication, Meerut. 611 pp. 1995.
6. Hartl, D.L. & E.W. Jones. *Genetics : Principles and Analysis.* 4th Ed. Jones and Bartlett Publishers, Massachussets, U.S.A. 840 pp.1998.
7. Lewin, B. *Gene VIII.* Pearson Prentice Hall, USA.1027 pp.2004.
8. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K. 390 pp. 2001.
9. Russell, P.J. *Genetics.* 5th Ed. Addison Wesley Longman, California, U.S.A. 805 pp. 1998.

10. Sinnott, E.W., L.C. Dunn & T. Dobzhansky. *Principles of Genetics.* 5th Ed. Tata McGraw Hill Book Co., New Delhi. 459 pp. 1973.
11. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.*5th ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.
12. Stickberger, M.W. *Genetics*, 2nd ed., MacMillan, New York. 842 pp. 1977.
13. Weaver, R.F.& P.W. Hedrick. *Genetics.* 3rd Ed. William C. Brown Publishers, U.S.A. 656 pp. 1997.

PAPER XIX : PLANT RESOURCE, UTILIZATION AND CONSERVATION

Objective of the paper is to impart knowledge about various economic aspects of plants like Origin of Agriculture; Origin, Distribution, Types, Botany ,Cultivation, Harvesting and Uses of different Cereals, Fruits, Vegetables, Spices, Beverages and Legumes; Medicinal plants and Insecticides; Uses of important plant products like Gums , Tannins, Vegetable oils and fats, Fibres and Wood ; Unexploited plants of economic value and Genetic resources and their conservation.

Teaching methodology include delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical students study morphology, anatomy and histochemistry of cereals, vegetables, fruits , spices and oil yielding plants.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Origin of Agriculture.

2. World Centres of Primary diversity of domesticated plants: The Indo-Burmese Centre, Plant Introductions and Secondary Centres.
3. Origin, Distribution, Types, Botany, Cultivation, Harvesting and uses of Wheat and Rice.
4. History, Botany, Breeding, Cultivation and uses of following fruits and vegetables: Citrus, Mango, Apple, Banana, Potato, Alliums, Cabbage, Spinach, Tomato, Brinjal and Sweet Potato.

UNIT-II

5. **General Account of the Spices:** Ginger, Turmeric, Cinnamon, Clove, Umbelliferous spices and Peppers.
6. **Beverage Plants:** Source and general account of Tea and Coffee.
7. **Legumes:** Origin, Botany, Cultivation and uses of Pigeon pea, Chick pea, Cluster bean, French bean etc.
8. **Medicinal Plants and Insecticides:** History and classification of drugs, antibiotics, plants as sources of drugs, parts used, composition and uses. Insecticides of plant origin, Pyrethrum and Rotenone.

UNIT-III

9. **Gums:** Important commercial gums and their uses.
10. **Tannins and Dyes:** Sources and their uses.
11. **Vegetable Oils and Fats:** Distinction between fatty and essential oils. Drying (Soyabean and linseed), nondrying (Groundnut and Mustard oil) and Semi drying (cottonseed and Sunflower oil) oils and their uses.
12. **Fibres:** Classification, uses, type of fibres - Soft fibres, Hard fibres, Surface fibres, Brush fibres and Braiding fibres.

UNIT-IV

13. **Wood and its Uses:** Soft woods and hard woods, wood as fuel, construction material (Pilings, Veneers, Plywood), wood containers (cooperage), chemically derived products and wood distillation.
14. Unexploited plants of potential economic value; plants as a source of renewable energy.
15. Genetic Resources and their conservation.

PRACTICALS

Max. Marks : 20

1. Morphology, Anatomy, Microchemical tests of stored food materials of Wheat, Rice, Chick Pea, Potato, Sweet Potato; Comparison of Starch grains of Wheat, Rice, Potato and Mung.
2. Morphology of fruits and vegetables pertaining to theory syllabus.
3. Histochemical tests for cellulose, cutin, suberin, hemicellulose, fat, oils, proteins and starch.
4. Morphology and microscopic structure of umbelliferous fruits, turmeric and clove.
5. Vegetable Oils : Mustard, groundnut, soya bean, coconut, sunflower, castor; Morphology, microscopic structure of the oil yielding tissues, tests for oil.
6. Prepare a list of 10 important sources of firewood and timber in your locality. Give their local names, scientific names and families to which they belong. Mention their properties.
7. The students should be taken to a recognized Botanical Garden or a Museum to show different plants of economic importance.

SUGGESTED READINGS

1. Anonymous. *National Gene Bank*: Indian Heritage on Plant Genetic resources (Booklet). National Bureau of Plant Genetic Resource, New Delhi. 1997.
2. Cobley, L.S. and W.M. Steels. *An Introduction to the Botany of Tropical Crop Plants.3rd Ed.* The English Language Book Society and Longman, London. 1979.
3. Bole, P.V. and Y. Vaghani. *Filed Guide to Common Indian Trees.* Oxford University Press, Mumbai. 125 pp. 1991.
4. Chandel, K.P.S., G. Shukla and N. Sharma. *Biodiversity in Medicinal and Aromatic Plants in India: Conservation and Utilization.* National Bureau of Plant Genetic Resources, New Delhi. 1996.
5. Conway, G. and V.W.Rattan. *The Doubly Green Revolution. Food for all in the 21st Century*. Cornell Univ. Press. 360 pp. 1999.
6. Dastur, J.F. *Medicinal Plants of India and Pakistan.*3rd Ed. Meyerbooks. 1985.
7. Frankel, O.H., A.H.D. Brown and J.J. Burdon. *The Conservation of Plant Diversity*. Cambridge University Press, Cambridge, U.K. 1995.
8. Hill, A.F. *Economic Botany.* McGraw Hill Book Co. Inc., New York. 640 pp. 1986.
9. Kirtikar, K.R. & D.D. Basu. *Indian Medicinal Plants.* Vols. I & II. 2nd Ed. Lalit Mohan Basu, Allahabad. 1953.
10. Kochhar, S.L. *Economic Botany of the Tropics*.2nd Ed. MacMillan India Ltd., Delhi. 476 pp. 1998.
11. Leonard, W.H. & J.H. Martin. *Cereal Crops.* MacMillan Co., New York, USA. 824 pp. 1963.
12. Parry, J.W. *Spices, Morphology, History and Chemistry.* 2nd Ed.Vol. I. Chemical Publishing Co. Inc., New York. London, Food Trade Press. 605pp. 1969.
13. Parry, J.W. *Spices, Morphology, History and Chemistry.* 2nd Ed.Vol. II. Chemical Publishing Co. Inc., New York. London, Food Trade Press. 200 pp. 1969.

14. Council for Scientific & Industrial Research. *The Useful Plants of India.* Publications and Information Directorate, CSIR, New Delhi. 1986.

PAPER-XX: RESEARCH PROJECT / FIELD STUDY REPORT AND SEMINAR

This paper aims at inculcating the aptitude for research in the students so that after completing their postgraduate course they can opt for M. Phil. and / or Ph.D. courses.

Field study provides the students an opportunity to study the plant diversity in their natural habitats.

The purpose of presenting seminar is to train the students to prepare the topic and to deliver it before the students and teachers using the recent tools like Computer, CDs, LCD projector etc. This would instill a sense of confidence in the students to deliver lectures in classrooms and to present any paper before the academicians and scientists.

Max. Marks : 100

A): RESEARCH PROJECT/FIELD STUDY REPORT

Max. Marks: 60

RESEARCH PROJECT

The students will be given a small research project under the guidance of a supervisor which will be evaluated by a panel of two examiners.

OR

FIELD STUDY REPORT

The students will visit the field for study of plants pertaining to Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms. The students will also submit a Field Study Report on the flora of the place visited by them.

A panel of 2-3 examiners will evaluate the field study report.

B): SEMINAR **Max. Marks: 40**

The Seminar will be presented by all the students and it will be compulsory for all the students to attend the seminars.

The break-up of 40 marks will be as under:-

1.	Presentation	30
2.	Contents	10

Every seminar will be evaluated by a team of two examiners individually and the average of marks awarded by these examiners will be considered as the "Marks obtained".

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE SYLLABI FOR

M. Sc. INFORMATION TECHNOLOGY

(SEMESTER SYSTEM)

EXAMINATIONS 2017 - 2018

--:O:--

PANJAB UNIVERSITY, CHANDIGARH

Outlines of Tests, Syllabi and Courses of Reading for M. Sc. Information Technology (Two Year Degree Programme) for Session 2017 - 2018.

FIRST YEAR					
		FIRST SEMESTER			
Paper Code	**Paper Name**	**Theory & Practical Lectures**	**Univ. Exam. Marks**	**Int. Exam. Marks**	**Exam. Hours**
MS-66	Linux Administration and Programming	6	80	20	3
MS-61	Software Engineering	6	80	20	3
MS-62	Computer Algorithms	6	80	20	3
MS-42	Operating System Concepts	6	80	20	3
MS-63	Minor Project Based on 66	6	80	20	3
MS-64	Minor Project Based on 62	6	80	20	3
		SECOND SEMESTER			
MS-45	Advance Java and Network Programming	6	80	20	3
MS-65	E- Commerce and Emerging Trends	6	80	20	3
MS-60	Advanced Database System and MySQL	6	80	20	3
MS-67	Artificial Intelligence	6	80	20	3
MS-27	SEMINAR	2	-	50	
MS-56	Minor Project Based on MS-45& MS-60	6	80	20	3
MS-68	Minor Project Based on MS-67	6	80	20	3
SECOND YEAR		**THIRD SEMESTER**			
MS-32	.NET Framework and C#	6	80	20	3
MS-69	Theory of Computation	6	80	50	3
MS-39	Computer Graphics	6	80	20	3
MS-14	Systems Approach to Management and Optimization Techniques	6	80	20	3
MS-18	SEMINAR	2	-	50	
MS-33	Minor Project Based on MS-32	6	80	20	3
MS-59	Minor Project Based on MS- 39	6	80	20	3
		FOURTH SEMESTER			
MS-21	**Major Project**		**320**	**80**	

The project period will be of 6 months duration.

The project will involve development of application/system software in industrial/ commercial/ scientific environment

The report should consist of the following :

- Cover page including Project title, Name of the student, Name of the Department and Names of the Project Guides (both External and Internal).
- Acknowledgements.
- Certificates from company and department duly signed by external guide, Principal and internal guide.
- Contents with page numbers.
- Introduction (includes background and application or importance of the project)
- Objectives
- **System Analysis** System Feasibility study
- Software requirement specifications
- Design with system flowcharts and input/output design.
- Implementation and Testing

- Hardware and software used
- Listing of well commented programs with result/output or detailed algorithms with input and output.

Further scope of the project

- Bibliography
- Appendices (any other information related to project)

Each student should observe the following norms while submitting the synopsis/thesis for the Project :

(a) Use both sides of the paper instead of only single side.

(b) Use one and half interline spacing in the te xt (instead of double space)

(c) Stop using a blank sheet before the page, carrying figure or table.

(d) Try to insert figure/table in the text page itself (instead of using a fresh page for it, each time.)

Students must consult/inform the internal guides regarding the progress of their work at least once in 20 days. It is the duty of the student to be in touch with his internal guide. The student must prepare 5 copies of the report including one copy for self. The remaining four are to be submitted before 31st May every year as per the following :

1. Main Library
2. Department Library
3. Internal Guide
4. Company

One softcopy of the work is to be submitted to the concerned head of the department/institution along with the report. The student must present his/ her work in 15 minutes mainly focusing on his/her contribution with the help of slides followed by demonstration of the practical work done. The project Viva will be completed before 15th June every year exact dates will be informed before 31st May every year.

An external examiner, internal examiner and the internal guide will conduct project viva.

SEMESTER I

Paper Code: MS - 66
Paper Title: Linux System Administration and Programming
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objective: This course enables students to get familiar with Linux system, its commands, files & directories, system, shell programming, PERL programming and system administration. After the completion of this course, student will be able to:

- Work in the Linux environment for Linux server administration
- Write the shell programs, PERL programs and C-program with system calls

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT –I

1. **Introduction to Linux:** Functions of an **o**perating system, Linux's History, different flavors of Linux, Minimum System Requirements for installing Linux: Using LILO; Linux's fdisk.

2. **Using Linux:** Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords; Linux Error Messages, Search Paths, Input and Output Redirection, Man pages, Wildcards: * and ?, Environment Variables, process Commands: ps, kill, su command; GREP pattern searching command, vi text-editor.

UNIT-II

3. **Using the File System** : Files Overview, Common types of files, file and directory management commands, Absolute and relative filenames; pwd, cd, rm, cat, mkdir, mv, cp;, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc.

4. **File and Directory Permissions**: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; Bourne Again Shell (BASH): Command-line Completion, Wildcards, Command History, Aliases, Pipelines, setting shell prompts, Job control, Customizing bash,bash variables.

UNIT-III

5. **Shell Programming:** Creating and Running Shell Programs, Using variables, Positional Parameters and other built-in Shell Variables; importance of quotation marks, test Command, Conditional Statements: if Statement, case Statement; Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions.
6. **Linux for System Administrators:** System Administration Basics, The root Account, Starting and Stopping the System; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, Checking file Systems, Compressing files with gzip and compress: Using tar, Backups, Setting the Login Message, Setting of DNS, Ping, WWW, and e-mail.

UNIT-IV

7. **PERL:** Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless

Statements, for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators.

8. **System Calls:** C as System Programming Language, I/O system calls – umask(); create(); open(); read(); write(); lseek(); dup(); link(); access(); chmod(); chown(); Process management system calls; fork(); getpid(); getppid(); exit(); wait(); sleep() ; Signal system calls – kill(); signal().

REFERENCES:

1. Tim Parker: Linux Unleashed, Techmedia Publishing House.
2. Norton, P.: Complete guide to LINUX, Techmedia.
3. Komarinski, M.: LINUX System Administration Handbook, AW.
4. John Goerzen: Linux Programming Bible, IDG Books, New Delhi.
5. Venkateshmurthy, M.G.: Introduction to Unix& Shell Programming, Pearson Education.
6. Linux Network Administration Guide by Tery Dawson, Gregor N. Purdy, Tony Bautts – Oreilly.
7. Stones, Richard and Mathew Neil: Beginning Linux Programming, 3rd Edition, Wrox.
8. Jones, Tim: GNU/Linux Application Programming, Wiley India Pvt. Ltd.

Paper Code: MS - 61

Paper Title: Software Engineering
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand Software Configuration Managements Tools and Techniques. After the completion of this paper, student will be able to

- Use principles, concepts, methods, and techniques of the software engineering approach to produce quality software.
- Apply software engineering principles and practices in the planning and development of an actual software product.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Software Engineering:** Definition, Software Engineering goals, Characteristics of well-engineered software, Software Process Models: Waterfall Model, Prototyping Model, Spiral Model, RAD, AgileModelling.
2. **Software Requirement Specification (SRS):** Software Requirements, Definition of SRS, Characteristics of SRS, Components of SRS, Designing of SRS.
3. **System Analysis:** Principles of Structures Analysis, DFDs, E-R Diagrams, Data Dictionary.

UNIT - II

4. **Software Design:** Design Objectives, Design Principles, Concepts, Design Process, Design Methodologies: Structured Design, Modular Design, Object Oriented Design, User Interface Design and its elements and its Characteristics.

5. **Software Project Planning & Scheduling:** Objectives, Decomposition techniques, Planning and Scheduling Tools: GANTT Chart, PERT Chart, Critical Path Method and Work Breakdown Structure; Cost estimation, Cost estimation Models: Single Variable Model, COCOMO Model; Software Risks, Risk Assessment.

UNIT – III

6. Software Metrics**:** Role of Metrics and Measurement, Types of Software Metrics: Product Metrics, Software Size Metrics: LOC and Function Points, Process Metrics, People Metrics**.**
7. System Maintenance and Reliability**:** Maintenance and its types; Factors Affecting Software Reliability, Software Reliability vs Hardware Reliability, Software Reliability Metrics.

UNIT-IV

8. **Software Testing Techniques:** Introduction to Software Testing Process, Objectives of Software Testing. BBT & its Techniques: Boundary Value Analysis, Equivalence Class Testing, and Cause- Effect Graph, White-Box Testing and its Techniques: Domain and Boundary Testing, Logic Based Testing, Data Flow Testing and Basic Path Testing.
9. **Software Testing Strategies:** Characteristics, Integration Testing, Functional Testing, Object Oriented Testing, Alpha and Beta Testing.

REFERENCES:

1. Pressman : Software Engineering, Tata-McGraw Hill Publishing House.
2. Sommerville, I: Software Engineering, Pearson Education.
3. Rajib Mall: Fundamentals of Software Engineering, PHI Learning Pvt. Limited
4. Jalota, Pankaj: An integrated approach to Software Engineering, Narosa Publishing Company.
5. Ali Behforooz : Software Engineering Fundamentals, Oxford University Press. Frederick J.H
6. William E. Perry, WILEY: Effective methods for Software Testing
7. Gill, Nasib Singh: Software Engineering: Software reliability, Testing and Quality Assurance. Khanna Book Publishing

Paper Code: MS – 62
Paper Title: Computer Algorithm
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L P 6 8

Objective:
The objective of the module is to create skills in students to design and analyze algorithms. After studying this subject students will be able to

- Understand algorithms and give theoretical estimates for the resources needed by any algorithm.
- Analyze Algorithms.
- Have an empirical approach to gauge the comparative performance of a given set of algorithms.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Data Structures**: Definition, Types of Data Structures, Stacks and its operations(Push, Pop), Queue and its operations (Insert, Delete), Tree (Binary Tree, General Tree and its Traversal), Graph(Types and its Traversal).
2. **Algorithms and Analysis:**Definition; Analysing algorithms; space and time complexity, Asymptotic Notation (O, Ω, θ) practical complexities, Best, average and worst case performance of algorithms, examples, Recursive algorithms, Introduction to recurrence relations.

UNIT – II

3. **Divide and Conquer:** General method, Binary search, Merge sort, Quick sort, Selection problem, Strassen's matrix multiplication and analysis of these problems.

4. **Greedy Method:** General Method, Knapsack problem, Job sequencing with deadlines, Minimum spanning Trees (Prim's Algorithm, Kruskal's Algorithm), Single source shortest paths and analysis of these problems.

UNIT - III

5. **Dynamic Programming:** General method, Optimal binary search trees, 0/1 Knapsack, the traveling salesperson problem, Single Source Shortest Path Problem (Bellman Ford Algorithm), All pair shortest path problem (Floyd's Algorithm).

6. **Back Tracking:** General method, N queen's problem, Graph coloring, Hamiltonian cycles, Analysis of these problems.

UNIT - IV

7. **Branch-And-Bound:** General Method, 0/1 Knapsack, Traveling Salesperson problems.

8. **NP-hard and NP-complete problems:** Basic concepts, Statement of Cook's Theorem, Satisfiability SAT, Examples of NP-hard graph [Clique Decision Problem, Chromatic Number Decision Problem] and NP-scheduling problems [Scheduling Identical Processors, Job Shop Scheduling].

REFERENCES:

1. Lipschutz, Seymour, 1986: Theory & Problems of Data Structures, Schaum Series.
2. Horowitz, Ellis and Sahni, Sartaj: Fundamentals of Computer Algorithms, Galgotia Publications.

3. Aho, A.V., Hopcroft, J.E., Ullman, J.D.: The Design and Analysis of Computer Algorithms, Addison-Wesley.
4. Goodman, S.E. &Hedetniemi: Introduction to the Design and Analysis of Algorithms, McGraw-Hill Book Comp.
5. Knuth, D. E.: Fundamental of Algorithms: The Art of Computer Programming, Vol.-1, NareshPubl.House.
6. Brassad, Gilles and Bartley, Paul: Fundamentals of Algorithms, Prentice Hall of India.

Paper Code: MS - 42

Paper Title: Operating System Concepts
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L P 6 0

Objectives: This course enables students to understand **the concepts of Operating System.** After the completion of this paper, student will be able to

- Manage various processes and use the scheduling algorithms.
- Handle the deadlock conditions.
- Manage the files on the disk with effective outcome.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Operating System:** History, Structure of OS, Functions/ Operations of OS, Types: Single User, Multi-user, Simple Batch Processing, Multiprogramming, Multitasking, Parallel systems, Distributed system, Real time system.
2. **Process Management:** Process, Process state, Process Control Block; Process scheduling: Scheduling queues, Schedulers, Context switch; Operation on process: Process creation and termination; interrupt mechanism, threads, Scheduling Algorithms: Pre-emptive and non preemptive scheduling, FCFS, SJFS, RRS, priority scheduling, Multilevel queue scheduling, Multilevel feedback queue scheduling, Inter process communication: Shared memory systems, Message passing systems.

UNIT - II

3. **Process Synchronization:** Concurrent Processes, Race condition, Shared data; Critical section problem: Mutual exclusion, Progress, Bounded waiting; Software solution: Busy form of waiting, lock and unlock primitives, Dekker's algorithm, Peterson's solution, Baker's Algorithm; Synchronization: Semaphores, Monitors, Reader Writer Problem, Producer Consumer Problem, Dinning Philosopher Problem.
4. **System Deadlock:** System Model; Deadlock Characterization: Necessary conditions, Resource Allocation graph; Deadlock prevention: Mutual Exclusion, Hold and Wait, No Preemption, Circular wait; Deadlock Avoidance: Safe state, unsafe state, Resource Allocation graph Algorithm, Banker's Algorithm; Deadlock Detection & Recovery from deadlock: Wait-for-graph

UNIT - III

5. **Memory Management:** Hierarchy of memory types, Cache memory: Types: Associative memory, direct mapped, set associative.
6. **Memory Allocation:** Address binding, Address Space, Memory Protection, Contiguous and Non-Contiguous allocation, Swapping, Fragmentation; Paging: Protection, Shared pages, Techniques for structuring of page table; Segmentation: Segmentation with paging; Virtual Memory: Demand paging; Page replacement Algorithms: FIFO, Optimal, LRU, LFU, MFU, Working set, Thrashing;

UNIT - IV

7. **Storage Management:** File(s): Attributes, Operations, Types, Structure; Access Methods: Sequential, Direct access, Index; Directory Structure: Single level, Two level, Tree Structured, Acyclic Graph; File System mounting; File sharing; Protection: Types of access, access control.
8. **File system** structure, File system implementation, Directory implementation, Allocation methods: Contiguous Allocation, Linked Allocation, Indexed Allocation; Disk scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Disk management; Swap space management; RAID.

REFERENCES:

1. Galvin P.B., Silberschatz A., Gagne G.: Operating System Concepts, Wiley Publications.
2. Deitel, H.M.: An Introduction to Operating System, Addision-Wesley Publishing Company.
3. Milenkovic, M.: Operating System - Concepts and Design, McGraw-Hill International Editions.
4. Madnick and Donovan: Operating System, McGraw-Hill Publishing Company.
5. Hansen P. Brineh: Operating System Principles, Prentice-Hall India.

SEMESTER II

Paper Code: MS - 45
Paper Title: Advance Java and Network Programming.
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L P 6 4

Objectives: This paper enables student to enhance the programming skills using object oriented programming approaches. After the completion of this paper, student will be able to

- To create enterprise and standard applications Java.
- To develop web applications with database support.
- To develop client server based applications.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Review of Java Basics:** Applets, Multithreading, AWT Controls, Event Handling.
2. **Swing:** Features, components, Swing vs AWT, swing containers, controls, using Dialogs, sliders, progress bars, tables, creating user interface using swing.

UNIT-II

3. **Java Database Connectivity:** Connectivity model, Java. SQL package, JDBC Exception classes, Database connectivity, Data manipulation and navigation, Using PreparedStatement, creating database applications
4. **Java RMI:** Distributed object technologies, RMI architecture, creating RMI applications.

UNIT-III

5. **Java Servlets:** Servlets vs CGI, Servlet Lifecycle, creating and running servlets.
6. **Networking:** Networking basics, Client / server model, Java and the Net, TCP/IP client sockets, TCP/IP server sockets, Inet Address, URL, Data grams, creating networking applications.

UNIT-IV

7. **Java Beans :** Component architecture, Components, Advantages of Beans, Bean Developer kit (BDK), JAR files, introspection, developing Beans, Using Bound properties, The Java Beans API, Introduction to EJB (Enterprise Java Beans),Types of EJB, Uses of EJB.
8. **Java Server Pages:** Introduction, JSP Architecture, JSP Elements: Implicit Objects, Comments, Directives, Action Elements, Scripting Elements., developing simple Web Applications.

REFERENCES:

1. Schildt, Herbert: The Complete Reference Java 2, TMH.
2. Ivan Bayross: Web Enabled Commercial Application Development using Java 2.0, BPB.
3. Cornell, Gary and Horstmann Cay S.: Core Java, Vol I and Vol II, Sun Microsystems Press.
4. Keogh, James: J2EE: The Complete Reference.
5. Martin Bond, Debbie Law, Andy Longshaw, Dan Haywood, PeterRoxburgh: SAMS: Teach Yourself J2EE in 21 days, Pearson.
6. Java 6 Programming Black Book, Kogent Solution Inc., Dream Tech Press.

Paper Code: MS – 65
Paper Title: E-Commerce and Emerging Trends
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L P 6 0

Objectives: This course enables students to be familiar with Fundamentals of Electronic Commerce and Emerging Technologies such as Parallel Computing, Cloud Computing, Grid Computing, Mobile Computing, and Concept of Big Data.
Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Electronic Commerce:** Traditional Commerce vs Electronic Commerce, Types of E-Commerce, E-Commerce infrastructure: Hardware and Software requirements, **Electronic Data Interchange (EDI):** EDI enabled procurement process and its benefits; Components of EDI system: EDI standards, EDI software, communication networks;**Electronic Payment Methods:** Types of Electronic Payment Systems, Digital Token Based Electronic Payment Systems, Smart cards and Electronic payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic payment Systems.

2. **Issues in E-commerce:** The legal and policy environment of E-Commerce; Intellectual Property, advertising and consumer protection; Copyright Law; Patent Law; Network Security and Firewalls; Client-Server Network Security Threats; Data and Message Security; Encrypted Documents and E-mail; Digital Signatures.

UNIT-II

4. **Business Intelligence:** Introduction to Business Intelligence, Digital data and its types – structured, semi-structured and unstructured, Introduction to Online Transaction Processing (OLTP), Online Analytical Processing (OLAP), Different OLAP architectures: MOLAP, ROLAP, HOLAP, Comparison of OLTP and OLAP. BI Definitions and need, BI Component Framework, Business Applications of BI.

5. **Case Studies:** Supply Chain management, Banking, Online Reservation Systems, Online Publishing

UNIT-III

6. Parallel Computing: Introduction and use, Flynn's Classical Taxonomy: SISD, SIMD, MISD, MIMD; Parallel Computer Memory Architectures: Shared Memory, Distributed Memory, Hybrid Distributed-Shared Memory; Parallel Programming Models: Shared Memory Model, Threads Model, Distributed Memory/Message Passing Model, Data Parallel Model, Hybrid Model, SPMD and MPMP, Introduction to Parallel Virtual Machine and Message Passing Interface, Supercomputers.
7. Cloud Computing: Introduction and use, Architecture, Service Models: infrastructure as a service, platform as a service, and software as a service;

UNIT-IV

8. Grid computing: Introduction and benefits, virtual organisations, grid Architecture and its relationship to other distributed technologies, grid application areas.

9. Mobile Computing : Definition, Guided Transmission, Unguided Transmission; Mobile computing architecture, Mobile Devices, Mobile System Networks: Cellular, WLAN, Ad hoc networks; Introduction to : GSM,CDMA,GPRS,EDGE; Introduction to Mobile Databases; Mobile Applications; Mobile Application Languages; features of Mobile Operating system: Palm OS , Symbian, Android.

REFERENCES :

1. Ravi KalaKota and Andrew B. Whinston: Frontiers of Electronic Commerce, Addison Wesley 1996
2. Kamlesh K. Bajaj and Debjani Nag: E-Commerce The Cutting Edge of Business, McGraw Hill Education.
3. R. N. Prasad and Seema Acharya , Fundamentals of Business Analytics , Wiley 2011
4. M. Sasikumar, Dinesh Shikhare, P. Ravi Prakash: Introduction to Parallel Processing, PHI.
5. Barry Wilkinson, Michael Allen, Parallel Programming: Techniques and Applications Using Networked Workstations and Parallel Computers, Pearson Education.
6. Joshy Joseph, Craig Fellenstein : Grid Computing, Pearson Education.
7. ZarekNabrzyski, Jennifer M. Schopf, Jan Weglarz: Grid Resource Management - State of the Art and Future Trends, Kluwer Academic Publishers.
8. Kamal, Raj, Mobile Computing, Oxford Higher Education.
9. Perkins, Mobile Computing, Pearson Education.
10. Jochen Schiller: "Mobile Communications", PHI/Pearson Education.

Paper Title : Advanced Database Programming & MySQL
Paper Code: MS-60
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs**.
Number of Lectures: 90 (45 Minutes dduration)

Objectives:
The course aims at providing the students through insight on few DBMS principles and practices. Students will learn and implement the operations for making and using databases with help of SQL and PL/SQL.
Note :

i) The Question Paper will consist of Four Units.
ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii) The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv) All questions carry equal marks unless specified.

UNIT – I

1. **Database Management Systems**: Definition, Characteristics, Advantages of Using DBMS Approach, Classification of DBMSs, Data Models, Database Schema and Instance, Three Schema Architecture, Data Independence – Physical and Logical data Independence.
2. **Entity- relationship model**: Entities, Relationships, Representation of entities, attributes, Representation of relationship set, Generalization, aggregation.
3. **Normalization**: Functional Dependency, Full Functional Dependency, Partial Dependency, Transitive Dependency, Normal Forms– 1NF, 2NF, 3NF, BCNF, Multi-valued Dependency.

UNIT – II

4**. Relational Algebra and Relational Calculus**: Relational Algebra: Operations- Union, Intersection, Difference, Cartesian product, Projection, Selection, Division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.
5. **Transaction and Concurrency control**: Concept of transaction, ACID properties, Serializibility, States of transaction, Concurrency control: Locking techniques, Time stamp based protocols, Granularity of data items, Deadlock.

UNIT – III

6. **MySQL**: Introduction; Why MySql; Tools provided with MySQL; MySQL Architectural Terminology;Databases:Creating, Selecting, Dropping and Altering Databases; Tables: Creating, dropping, Altering, Indexing Tables; Adding new rows, Retrieving Information, Deleting or Updating Existing rows; Obtaining MySQL Metadata; Joins; Subqueries; Views; Multiple Tables Deletion and Updation; Foriegn Keys and Referential Integrity; MySQL Data Types; Sequences.

UNIT – IV

10.**Data Warehousing**: Introduction; Features; Data modeling for Data Warehousing; Building Data warehouse; Comparison between Data Warehouse and DBMS Metadata; Problems and issues in Data Warehouse.
11. **Data Mining**: Overview; Goals of Data Mining; Techniques: Association rules(Market Basket Algorithm, Apriori Algorithm); Classification: Decision Tree, Induction Algorithm; Applications of Data Mining.

References:

1. Elmarsi & Navathe, “Fundamentals of Database Systems” 4th Edition, 2004.
2. Jiawei Han and MichelineKamber,"Data Mining: Concepts and Techniques", Elsvier.
3. William H. Inmon, "Building the Data Warehouse",Fourth Edition, Willey.
4. C.J.Date “Introduction to database system”, 8th Edition, Galgotia Publications, 2004.
5. Paul DuBois, "MySQL Developer's Library", Fourth Edition, Addison Wesley.
6. Bipin C. Desai, An Introduction to Database System
7. Silberschatz, Korth, Sudershan “Database System Concepts” 4th Edition, McGraw Hill Education, 2002.
8. Ivan Bayross, “SQL/PLSQL: The Programming Language of Oracle, 3rd Revised Edition, 2006

Paper Code: MS - 67

Paper Title: Artificial Intelligence
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L P 6 8

Objectives: The paper enables students to understand Artificial Intelligence techniques and the language LISP. After the completion of this paper, student will be able to

- Apply standard AI techniques to solve problems.
- Characterize the Knowledge Acquisition
- Differentiate various expert systems
- Write programs of AI using LISP

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Artificial Intelligence (AI)** : Introduction and Applications, History of AI from Alan Turing and developments in AI, application areas; Criteria for success; Problem Characteristics; Problem representation-State space representation, problem reduction representation, production system; Introduction to agents, intelligent software systems, Applications, Intelligent architectures, components of intelligent agent based distributed systems.
2. **Search and Control Strategies:** Data driven and goal driven search; Uninformed search- Breadth -first Search and Depth-First Search methods; Heuristic Search Techniques - Hill Climbing, Best first Search, A*, AO*, Constraint satisfaction and means-ends analysis techniques.

UNIT - II

3. **Knowledge Representation** : Information and Knowledge, Knowledge Acquisition and Manipulation, Issues in Knowledge Representation, Knowledge Representation Methods, Propositional Logic and First Order Predicate Logic, Resolution: Definition, Conversion to ClauseForm, Resolution in Propositional and Predicate Logic, Unification and Resolution Principle; Horn's Clauses, Semantic Networks, Partitioned Semantic Nets, Frames, Scripts and Conceptual Dependencies.
4. **Game Playing:**Minimax Search Procedure, Adding Alpha-Beta Cutoffs.

UNIT - III

5. **Expert Systems** : Definition and Applications, Characteristics of Expert systems, Architecture of a typical Expert System, Expert System Shells, Building an Expert System, Case studies of Expert Systems like MYCIN, Specific Application of AI.
6. **Natural Language understandingand Processing**: Complexity of the problem, Syntactic processing: Grammars and Parsers, Augmented Transition Networks; Semantic Analysis: Semantic Grammars, Case Grammars; Discourse and Pragmatic processing:Using Focus in Understanding, Modeling Beliefs; Introduction to Perception :Vision using Low-Level and High-Level Image Features and Action: Navigation and Manipulation.

UNIT - IV

7. AI Language PROLOG: Features of Prolog, Elementary Data Types, Compound objects in Prolog, Writing simple program in Prolog, Understanding Default flow control of the Prolog Program, Controlling Program Flow with cut and fail, List Manipulation, String manipulation, Arithmetic Operators and evaluation of Arithmetic expressions, Input /Output statement. Some simple example problems: Tower of Hanoi, Sorted Tree Dictionary, Sorting, Searching Graphs, Searching aMaze.

REFERENCES:

1. Rich Elaine and Knight Kevin: Artificial Intelligence; Tata-McGraw Hill Company, New Delhi.
2. George F Luger; William A. Stubblefield: Artificial Intelligence; Structures and Strategies for Complex problem solving, Pearson Education.
3. Patterson, Dan W.: Introduction to Artificial Intelligence and Expert Systems, Prentice-Hall of India Pvt. Ltd., New Delhi.
4. W.F. Clofisin and C.S. Mellish, "Programming in PROLOG", Narosa Publishing Co.
5. SanjivaNath, "Turbo PROLOG", Galgotia Publications Pvt. Ltd.
6. Bharti&Chaitany: Natural Language Processing, PHI.
7. Russel, Sturat&Norviig, Peter: Artificial Intelligence; A modern Approach; Person Education Pvt. Ltd.

SEMESTER – III

Paper Code: MS - 32
Paper Title: .NET FRAMEWORK AND C#
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L P 6 8

Objectives: This course aims at making a student capable of developing console, windows and web applications using C# on .NET platform.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Introduction to .NET environment:** The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach.
2. **Introduction to C#** :Introducing C#, Overview of C#, Literals, Variables, Data Types, Operators, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, Enumerations, difference between C++ and C#, difference between Java and C#.

UNIT-II

3. **Object Oriented Aspects of C#** : Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Errors and Exceptions.
4. **I/O and Object Serialization:** I/O: System. I/O, Streams, TextWriter, TextReader, BinaryWriter, Binary Reader, File Stream, File; Serialisation: Binary, SOAP, XML and Custom Serialisation.

UNIT-III

5. **Writing Windows Forms Applications and Deploying Windows Forms Applications**:
Writing Windows Forms Applications: Understanding Windows Forms, Window form controls, Menus, MDI Forms, Using Inheritance in Windows Forms, Using Common Dialog Controls, Deploying Windows Forms Applications: Introduction to deployment, Click Once deployment, Creating an Installation Package for project.
6. **Writing ASP .NET applications and Deploying ASP .NET Applications:** Introduction to ASP.NET, Using Validation Controls, Managing State in ASP.NET Web Applications, Deploying ASP.NET Applications with Windows Installer.

UNIT-IV

7. **Accessing Data with ADO .NET:** ADO .NET Architecture, Components, Database, DataReader, DataAdapter, DataSet, Viewing data using Data Grid View Control, Creating Applications.

REFERENCES:

1. Jones, Bradley L.: Sams Teach Yourself C# in 21 Days.
2. Balagurusamy, E.: Programming in C#, Tata McGraw-Hill.
3. Liberty, J.: Programming C#, O'Reilly.
4. Schildt, Herbert: The Complete Reference: C#, Tata McGraw-Hill.
5. Robinson: Professional C#, Wrox Press.
6. Jason Beres: SAMS Teach Yourself Visual Studio.Net in 21 days.
7. Watsel, Nagel, Pedersen, Reid, Skinne, White: Beginning Microsoft Visual C#, Wrox Publications.

Paper Title: THEORY OF COMPUTATION
Paper Code: MS - 69
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs**.
Number of Lectures: 90 (45 minutes duration)

Objectives:
The goal of this course is to provide students with an understanding of basic concepts of Theory of Computation.

Note :
(i) The Question paper will consist of Four Units.
(ii) Examiner will set total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii) The students are required to attempt one question from each unit and the compulsory question.
(iv) All questions carry equal marks.

UNIT I

1. **Theory of Automata**: Definition, Description of Automata, Transition Systems, Language, Grammar, Deterministic & Non-Deterministic Finite State Machines, Equivalence of DFA and NDFA, Finite State Machine with output (Moore Machine and Meally Machine), Conversion of Moore Machine to Meally Machine & vice-versa, Minimization of Finite Automata.
2. **Formal Languages**: Chomsky Classification of Languages, Languages and their Relations, Languages and Automata.

UNIT II

3. **Regular Sets and Regular Grammars**: Regular Expressions, Finite Automata and Regular Expressions, Conversion of NDFA to DFA, Arden's Theorem, Construction of FA equivalent to Regular Expression, Equivalence of two Finite Automata, Equivalence of two Regular Expressions, Pumping lemma for Regular Sets and applications, Closure Properties of Regular Sets, Construction of Regular Grammar generating Transition System for a DFA, Construction of Transition System accepting Language for a Regular Grammar , limitations of finite state machine.

UNIT III

4. **Context Free Languages**: Context free grammar, Simplification of Context Free Grammars, Normal Forms for Context Free Grammers: Chomsky Normal Form, Greibach Normal Form, Pumping Lemma, CYK algorithm.
5. **PDA**: Push down stack machine, Design of deterministic and non-deterministic push-down stack, Parser design.

UNIT IV

6. **LR(K) Grammars**: Properties of LR(K) Grammar, Closure properties of Languages.
7. **Turing Machine**: Turing machine definition and design of Turing Machine, Church-Turing Thesis, Variations of Turing Machines, combining Turing machine, Universal Turing Machine, Post Machine, Chomsky Hierarchy, Halting problem, Post Correspondence problem.

References:

1. Mishra, K.L.P and Chandrasekaran, N.: Theory of Computer Science, Automata, Languages and Computation.
2. Lewis, Harry R. and Papadimitriou, Christos H.: Theory of Computation, Prentice Hall of India, 1996.
3. Hopcroft, John E. and Ullman, Jefrey D.: Introduction to Automata Theory, Languages and Computation, Addison-Wesley Publishing Company Inc.
4. Brady, J.M.: Theory of Computer Science, Wiley.
5. A.V. Aho, J.E. Hopcroft and J.D. Ullman, 'Introduction to Automata, Languages and Computations, Addison Wesley, 1980.
6. M.Davis and E.J. Weyuker 'Computability, Complexity and Languages' Academic Press, 1982.

Paper Code: MS – 39
Paper Title: Computer Graphics
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives:
This paper enables students to understand graphics hardware and various 2D and 3D algorithms. After the completion of this paper, student will be able to:
- Implement the principles and commonly used paradigms and techniques of computer graphics.
- Use OpenGL proficiently using C / C++.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer Graphics**: Overview of Graphics Systems, Display Devices, Display Processors, Character Generation; Interactive graphical techniques; Positioning, (Elastic or Rubber Band lines, Inking, zooming, panning)
2. **Raster Scan Graphics**: Line Drawing algorithms-Direct method, DDA and Bresenham's; Circle drawing algorithm- 2-point, 4-point, trigonometric method, 8-point, Bresenham method, Bresenham Midpoint method.

UNIT - II

3. **Two Dimensional Geometric Transformation & Viewing**: homogeneous coordinate system; Basic Transformations- Translation, Rotation, Scaling, Reflection, Shear, composite transformation like- Rotation about an Arbitrary Point, Reflection through an Arbitrary Line; transformation of points and unit square.
4. **Clipping: Point clipping Line clipping algorithms**: Cohen-Sutherland and Liang-Barsky, Polygon Clipping; Window to viewport coordinate transformation.

UNIT - III

5.**Graphics Programming using C/C++**: Basic Graphical functions; Mouse Programming, Graphic Languages: Primitives (Constants, actions, operators, variables), display subroutines, plotting and geometric transformations, Concept of Animation, Saving, Loading and Printing graphics images from/to disk. Animated algorithms for sorting, Towers of Hanoi.
6. **Open GL using C/C++**: Geometric Primitives and Attributes; Viewing; Color; Lighting, Animation**.**

UNIT - IV

2. **Three Dimensional Concepts & Object Representations**: Three Dimensional Display Methods, Parallel Projection, Perspective Projection; Translation, Rotation, Scaling, Composite Transformation; Hidden line and surface elimination-Z-buffer, back face, scan line, depth sorting.
3. **Shading-**Modelling light intensities- flat shading, gouraud shading, phong shading. Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces.

REFERENCES:

1. Giloi, W.K.:Interactive Computer Graphics; Prentice-Hall India Ltd.
2. Newman, W., Sproul, R.F.: Principles of Interactive Computer Graphics, McGraw- Hill.
3. Rogers, D.F.: Procedural Elements for Computer Graphics, McGraw-Hill.
4. Foley, J.D., Van Dam A.: Fundamentals of Interactive Computer Graphics, Addison-Wesley.
5. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
6. Roy, Plastock, Theory & Problems of Computer Graphics, Schaum Series
7. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
8. Dave Shreiner, Mason W., Jackie N., Tom Davis; The OpenGL Programming Guide – The Red Book, Addision-Wesley.

Paper Code: MS – 14
Paper Title: Systems Approach to Management and Optimization Techniques
Maximum Marks: 100 (Ext ernal : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

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Objective: This course enables students to be familiar with different types of Info systems, basics of DR and its practical problems.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Concepts of Computer Based Systems**: Data, Information, Information Systems, Model of computer based information system; Introduction to Management Information System, Decision Support System and Knowledge Based Systems.
2. **Accounting Information System**: Characteristics, sample system, subsystems for filling customer order, order replenishment stock, performing general ledger processes; features and use of Accounting Information System Package-Tally.
3. **Marketing Information System**: Basic concepts, model, subsystems including Marketing Research, Marketing Intelligence, Product, Place, Promotion and Pricing subsystems.

UNIT-II

4. **Manufacturing Information System**: Model and subsystems including Accounting information, Industrial Engineering, Inventory, Quality and Cost Subsystems.
5. **Financial Information System**: Model and Subsystems including Forecasting, Funds Management and Control Subsystems.
6. **Human Resources Information Systems**: Model and Subsystems including human resources research, human resources intelligence, HRIS Database, HRIS output.

UNIT-III

7. **Basics of Operations Research (OR)**: Origin and Development of OR, Characteristics of OR, Models in OR, OR and Decision Making, Role of Computers in OR, Limitations of OR.
8. **Linear Programming**: Mathematical Formulation, Graphical and Simplex method, Duality in Linear programming, Dual Simplex Method, The Revised Simplex Method, Sensitivity Analysis.

UNIT-IV

9. **Special types of Linear Programming problems**: Transportation and Assignment problems.
10. **Integer Programming**: Introduction, Branch and Bound Techniques, Binary Linear Programming, Assignment & Traveling salesman problems.
11. **Dynamic Programming**: Deterministic & Probabilistic Dynamic Programming.

REFERENCES

1. Basandra, Suresh K. : Computer Systems Today, Wheeler Publishing
2. Murdick, R.G. & Ross J.E. & Claggtt J.R.: Information Systems for Modern Management, Prentice Hall
3. Swarup, Kanti, Gupta, P.K. & Manmohan: Operations Research, Sultan Chand & Sons.
4. Gupta, Prem Kumar & Hira, D.S.: Operations Research.
5. Rao, S. S.: Introduction to Optimization: Theory & Applications, Wiley Eastern.
6. Taha, H.A.: Operations Research – An Introduction, McMillan Publishing Company
7. S.D. Sharma: Operation Research, Sultan Chand & Sons.

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM) 2015-2016.

FIRST SEMESTER

		Marks
Paper - I :	Structure and Functions of Invertebrates - I	80
	Practical based on Paper - I	20
Paper - II :	Lower Chordates. Comparative Anatomy of Vertebrates -I	80
	Practical based on Paper-II	20
Paper III :	Animal Physiology	80
	Practical based on Paper III	20
Paper IV :	Ecology and Animal Behaviour	80
	Practical based on Paper IV	20
Paper V :	Biostatistics and Computer Application	80
	Practical based on Paper V	20

SECOND SEMESTER

Paper VI :	Structure and Functions of Invertebrates - II	80
	Practical based on Paper - VI	20
Paper VII :	Comparative Anatomy of Vertebrates -II	80
	Practical based on Paper-VII	20
Paper VIII :	Biosystematics and Evolution	80
	Practical based on Paper-VIII	20
Paper IX :	Endocrinology and Neural Physiology	80
	Practical based on Paper IX	20
Paper X :	Immunology	80
	Practical based on Paper X	20

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM)

THIRD SEMESTER

Paper XI :	Developmental Biology -I	80
	Practical based on paper XI	20
Paper XII :	Biochemistry,	80
	Practical based on Paper XII	20
Paper XIII :	Cell and Molecular Biology	80
	Practical based on Paper-XIII	20
Paper XIV :	Instrumentation and Methodology	80
	Practical based on Paper XIV	20
Paper XV :	Advances in Entomology	80
	Practical based on Paper XV	20

FOUR SEMESTER

Paper XVI :	Developmental Biology -II	80
	Practical based on paper XVI	20
Paper XVII :	Advances in Parasitology	80
	Practical based on Paper XVII	20
Paper XVIII :	Advances in Fish and Fisheries	80
	Practical based on Paper XVIII	20
Paper XIX :	Environmental Biology & Wild life	80
	Practical based on Paper XIX	20
Paper XX :	Cytogenetics and Molecular Genetics	80
	Practical based on Paper-XX	20

PAPER-I : STRUCTURE AND FUNCTIONS OF INVERTEBRATES -I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates.

UNIT-I

1. Phylum Protozoa : General organisation of Protozoa with special reference to feeding, locomotory organelles and locomotion, reproduction, parasitism and pathogenic protozoans.

2. Phylum Porifera : General organisation of phylum Porifera with special reference to canal system, skeleton and development.

3. Phylum Coelenterata : General organisation of phylum Coelenterata with special reference to polymorphism, corals and coral reefs, development and alternation of generation.

UNIT-II

4. Phylum Platyhelminthes : General organisation of phylum Platyhelminthes with special reference to body wall, digestive system, excretory system and reproductive system. Development and life cycles of *Fasciola, Schistosoma, Taenia* and *Echinococcus*.

5. Phylum Aschelminthes : General organisation of phylum Aschelminthes. Life cycle of *Ascaris lumbricoides. Wuchereria bancrofti*, *Dracunculus medinensis.*

Note: Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - I

Classification upto orders and study of the specimens mentioned against each phylum with ecological note.

1. Protozoa.
   a. Permanent stained preparation from the culture of *Amoeba, Euglena Paramecium* and *Vorticella*.

   b. Prepared slides of *Amoeba, Trypanosoma, Euglena, Noctiluca, Eimeria, Monocystis, Paramecium* (binary fission), *Paramecium* (conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus,* Radiolarian oozes and Foraminiferan oozes.

2. Porifera
   a. Specimens : *Scypha, Grantia, Spongilla, Euplectella, Hyalonema, Euspongia.*
   b. Prepared slides : Spicules, Gemmules, *Sycon* (T.S and L.S).
   c. Preparation of permanent slides : Gemmules and Spicules.

3. Coelenterata
   a. Specimens: *Porpita, Velella, Physalia, Aurelia, Metridium, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia, Gorgonia* and *Pennatula*.
   b. Prepared slides : *Hydra* (W.M.), T.S. through regions of testis and ovary, *Obelia* (colony, medusa and polyp), *Sertularia, Plumularia, Tubularia Bougainvillea, Aurelia, Pennaria*.
   c. Preparation of permanent slides : *Hydra, Obelia, Sertularia* and *Plumularia*.

4. Platyhelminthes
   a. Specimens : *Planaria, Dugesia, Fasciola, Taenia*, and *Echinococcus.*
   b. Slides : *Fasciola* (miracidium, sporocyst, redia and cercaria), scolex and proglottids of *Taenia* (Mature and gravid L.S. & T.S.).
   c. Stained preparation of : Amphistome, proglottid of a cestode.

5. Aschelminthes
   a. Specimens : *Ascaris* (Male and female)
   b. Slides : *Ascaris* (T.S. of male and female gravid).

6. Project based on general information on animals, selecting at least one representative from each phylum.

BOOKS RECOMMENDED

1. *Invertebrates* Vols.I, II, III, IV & V by **L.H. Hyman**, Mcgraw Hill, New York; 1940-51.
2. *Text book of Zoology* by **Marshall, A.J. and Williams, W.D**. American Elsevier Pub. Co., New York; 1962.
3. *Invertebrates Structure and function* by **Barrington. E.J.W.** English Language Book Society & Nelson; 1969.
4. *Protozoology* by **Kudo, R.R.**, Books and Periodicals Corp. New Delhi, India.; 1986.

5. *Introduction to Animal Parasitology* by **J.D. Smyth. Hodder & Stoughton**, London; 1976.

PAPER - II : LOWER CHORDATES. COMPARATIVE ANATOMY OF VERTEBRATES - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of protochordates.
To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT - I

Introduction to chordates. *Organisation* and affinities of *Herdmania* and *Amphioxus*.

Comparative account of following systems of the vertebrates with evolutionary trends from Pisces to Mammals.

Integumentary system : Integument and its derivatives.
Skeletal system : Chondrocranium, Splanchnocranium, Dermatocranium, Jaw suspension.

UNIT-II

Digestive system : Alimentary canal and associated glands. (Types of teeth, dental formulae and functions, Types of stomach, small and large intestines, Glands : Salivary, gastric, Pancreas and liver).
Circulatory system : Evolution of heart & aortic arches in different classes of vertebrates.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper II (MZL 6052)

1. Classification upto orders, except Pisces and Aves, where classification upto subclasses is required. Habits, habitats, external characters and economic importance (if any) of the following animals:

Chondrichthyes : *Zygaena, Pristis, Narcine, Trygon, Rhinobatus, Chimaera.*
Actinopterygii : *Polypterus, Acipenser, Lepidosteus, Muraena, Mystus, Catla. Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea*.
Dipneusti (Dipnoi) : *Protopterus* (Lung fish)
Amphibia : *Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva. *Triton, Salamandra, Hyla, Rhacophorus*.
Reptilia : *Hemidactylus,,Calotes, Draco, Varanus, Phrynosoma, Chamaeleon.*
Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis, Chelone and *Testudo*.

2. Demonstration of dissection of *Labeo* through video clipping/models/charts: Digestive and Reproductive systems
Circulatory system: heart, afferent and efferent branchial arteries.
Nervous system: cranial nerves and internal ear.
3. Study of the skeleton of Labeo, *Rana* and *Varanus.*
4. Study of histology of different organs of frog through permanent slides.
5. Study of poison apparatus in snakes through charts.
6. Project based on general information on animals selecting atleast one representative from each class/Parental care.

BOOKS RECOMMENDED

1. *A Text Book of Zoology*, Vol.II Vertebrates by **Marshall, A.J. MacMillan** & Co. Ltd., New York; 1972.
2. *Anatomy of Chordates* by **Weichert, C.K. McGraw** Hill Book Co. Inc. London; 1958.
3. *Biology of Vertebrates* by **Walter, H.E. and Sayles, L.P. McMillan** Co. New York; 1949.
4. *Comparative Anatomy of Vertebrates* by **Kent, G.C. Torpen** Co.Ltd., Tokyo; 1954.
5. *Anatomy of Comparative Vertebrates*. **Hyman, L.H. Satish** serial Pub. House; 2004.

PAPER III : ANIMAL PHYSIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to know about all the physiological processes going on in animal/human body.

UNIT – I

Nutrition : Chemistry, metabolic role and sources of vitamins & deficiency diseases due to them. Biological significance and regulation of minerals and deficiency diseases due to them. Physiology of digestion.

Circulation : Chemistry of blood components and their functional significance; origin, formation, molecular regulation and maturation of RBCs and WBCs; biochemistry of haemoglobin and myoglobin; biochemical interconversions during blood coagulation and homeostasis. Cardiac cycle and its regulatory mechanisms. Cardiac output and the factors that affect cardiac output, micro circulation, blood pressure, factors influencing blood pressure and its regulation.

Respiration : Concept of respiration, mechanism of breathing; biochemistry of respiratory exchange; transport of respiratory gases; regulatory mechanisms (humoral and neural) of respiration, respiratory acidosis, alkalosis and regulation of pH.

UNIT – II

Excretion : Concept of excretion and nitrogenous wastes; functional anatomy of renal unit; biophysical and chemical mechanisms of ultrafiltration, reabsorption and secretion, transport mechanisms, urine formation & regulatory control of sugar, urea, Na^+, K^+ and H^+; role of kidneys in regulation of acid-base balance and osmoregulation, counter current mechanism.

Physiology of Muscles : Types of muscles and their components; Molecular organization of myosin, role of heavy and light meromyosin, molecular organization of actin; interaction of actin and myosin, ATPase activity of myosin, power-stroke, ATP binding and hydrolysis; role of troponin and tropomyosin and Ca^{++} in regulation of muscle contraction. contraction of smooth muscles, role of phosphorylation, Ca^{++} and kinases; role of actin and myosin in eukaryotic cells (microtubles and microfilaments).

Stress Physiology Physiological adaptations in response to high, low ambient temperature, physiological adaptation at high altitude and in deep sea environment.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper III

1. To demonstrate that the optimum activity of salivary amylase is pH dependent.
2. Estimation of Haemoglobin.
3. Determination of TLC, DLC & RBC.
4. Determination of bleeding and clotting time.
5. Determination of blood groups.
6. Measurement of blood pressure.
7. Estimation of ESR.
8. To study the effect of exercise on cardiovascular and respiratory systems.
9. To estimate the glucose level in blood of mammal, Haematocrit.

BOOKS RECOMMENDED

1. *Text Book of Medical Physiology* (7th ed.) by **Guyton, A.X**., Saunders Company; 1986.
2. *Physiological Basis of Medical Practice* (11th ed.) Best, **J.P., Best and Taylor's William and Wilkins**; 1985.
3. *General and Comparative Physiology, Adaptation and Environment,* 3rd ed. **Hoar, W.S.** Cambridge University, Press; 1985.
4. *Human Physiology* , **Vander, A.J., Sherman, J.H. and Luciana, D.S. McGraw** Hill Publ. Co.; 1990.
5. *Human Physiology: The Basis of Medicine* **Gillian P. and Christopher D. R.** Oxford University Press; 2001.

PAPER IV : ECOLOGY AND ANIMAL BEHAVIOUR

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the habitat and interactions of diverse animal groups with their environement.
To acquaint the students with characteristic behavioural aspects of animal life.

UNIT – I : ECOLOGY

1. **Introduction** : Definition, subdivision & scope of ecology.
2. **Abiotic Factors** : Temperature, light and soil as ecological factors.
3. **Principles of limiting factors** : Liebig's law of minimum, Shelfords law of tolerance and the combined concept of limiting factors.
4. **Ecosystem** : Definition, components,food chain & food web, energy flow through ecosystem, ecological pyramids, Major ecosystems of the world.
5. **Biogeochemical Cycles** : Definition, different types of gaseous and sedimentary biogeochemical cycles.
6. **Population** : Characteristics, ecological niche
7. **Biotic community** : Characteristics of biotic community, ecological niche.
8. **Ecological succession** : Definition, types of succession, Xerarch & Hydrarch concept of climax community, theories of succession.
9. **Ecological Adaptations** : Desert, aerial, fusorial and aquatic adaptations in animals.

UNIT – II : ANIMAL BEHAVIOUR

1. Feeding
2. Learning, reasoning, instinctive and motivative behaviour.
3. Social and sexual behavior of animals
4. Circadian rhythms
5. Mimicry and Protective colouration – Definition, types of mimicry with examples.
6. Migration of fishes and birds.
7. Parental care
8. Intra and interspecific relationships.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IV

1. To study the phototactic behaviour of an insect.
2. To study the geotactic behaviour of an insect.
3. To study nesting behaviour in birds.
4. To study the soil fauna.
5. To determine the pH of the soil.
6. To determine the moisture content of soil
7. To determine the salinity of the soil.
8. To study desert adaptations in animals.
9. To study aquatic adaptation in animals.
10. To study aerial adaptation in animals.
11. To study inter specific relationships.
12. To study the biotic components of an ecosystem.

BOOKS RECOMMENDED

1. *Fundamentals of Ecology* by **E.P. Odum**, Saunders College Publishing, Philadelphia; 1971.
2. *Natural Resources Conservation : An Ecological Approach* by **Qwen, O.S.** MacMillan Publ. Co. New York ; 1994.
3. *Ecology* by **Kreb J. C. & Harper**, Row Publ. New York; 1982.
4. *Principles of Animal Behaviour* by **Dugatkin, L. A. & Norton, W.W.** New York; 2004.
5. *Animal Behaviour (Ethology)* by **Aggarwal, V.K. S.** Chand Pub.; 2010.
6. *Handbook of Ethological Methods* 2nd ed. by **Lehner, P. N.** Cambridge University Press, Cambridge; 1996.

PAPER V : BIOSTATISTICS & COMPUTER APPLICATIONS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course

To acquaint the students of basic statistics applicable in biological studies.
To make the students computer literate to be able to use the vast store of knowledge on the internet and to be able to use computers for studies.

UNIT-I (Biostatistics)

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, poisson and normal.
5. Tests of statistical significance (Chi square - test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. coefficient of correlation; simple & multiple regression.

UNIT-II (Computer Applications)

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practical based on theory paper V

1. Calculation of dispersion
2. Calculation of measure of central tendency
3. Fitting of binomial distribution
4. Fitting of poisson distribution
5. Tests of statistical significance
6. Write programme to demonstrate conditional statements using C language.
7. To perform mail merge.

8. Use of Excel and Power point.
9. Use of E-mail and internet.

BOOKS RECOMMENDED

1. *Biostatistics : A Foundation for analysis in the Health Sciences* by **Daniel, W.W.** John Wiley and Sons, New York; 1983.
2. *Basic Statistics : A primer for Biomedical Science* by **Dunn, O.J. and Clark, V.A.** John Wilety and Sons, New York; 2001.
3. *Fundamentals of Statistics.* Vol.I *(*8th ed.) by **Goon, A.M., Gupta , M.K. and Dasgupta, B.** World press Kolkata; 2005.
4. *Computer and Common Sense* by **Hunt, R. and Shelly, J.** Prentice Hall; 1983
5. *Let us 'C'* (13th ed.). **Kanetker, Y.** B PB Publication; 2013
6. *Computer Programming in FORTRAN IV* by **Rajaraman, V.** Prentice Hall; 1974
7. *An Introduction to Digital Computers* by **Rajaraman, V. and Radhakrishanan ,T.** Prentice Hall; 2004.
8. *Computer Fundamentals* (6rd ed) by **Sinha P.K. and Sinha, P.** BPB. Publication; 2007
9. *Introduction to Biostatistics (A Textbook of Biometry)* by **Banerjee, P.K. S.** Chand and company Ltd.; 2007.

SECOND SEMESTER

PAPER-VI : STRUCTURE AND FUNCTIONS OF INVERTEBRATES –II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates including minor phyla.

UNIT-I

1. Phylum Annelida : General organisation of phylum Annelida with special reference to segmentation, digestive, excretory and reproductive systems.

2. Phylum Arthrpoda : General organisation of Arthrpoda. Larval forms of crustaceans. Modifications of mouth parts, wings and legs of insects. Social organisation of insects (Termites, honey bees and ants).

UNIT-II

3. Phylum Mollusca : General organisation of Mollusca with special reference to feeding, respiration and shell diversity, podium or foot in Mollusca, torsion and detorsion in Gastropoda.

4. Phylum Echinodermata : General organisation of Echinodermata, comparative account of water vascular system, haemal and perihaemal systems, larval forms in Echinodermata

5. Minor Phyla : Concept and significance. Organisation and general characters of different minor phyla. Rotifera, Gastrotricha, Kinorhyncha and Nematomorpha.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - VI

1. Annelida
   a. Demonstration of dissection of Earthworm (Digestive, Nervous and Reproductive systems) through video clippings/models/charts

b. Specimens : *Nereis,Heteronereis, Polynoe, Tubifex, Eunice, Aphrodite, Chaetopterus, Arenicola, Pontobdella, Amphitrite* and *Hirudinaria.*

c. Prepared slides : Earthworm (T.S. typhlosolar region, setae, pharyngeal nephridium, septal nephridium, integumentary nephridium). *Nereis* (Parapodium),Leech (T.S. through different regions).

2. Arthropoda
   a. Demonstration of dissection of *Palaemon* (Appendages, Digestive, Nervous and Reproductive systems) through video clippings/ models / charts.
   b. Specimens : *Peripatus, Lepisma*, Cockroach, Grasshopper, Praying mantis, Earwig, Dragonfly, Termite (queen and other castes), Ant, Butterfly, Moth, Beetles, Wasp, Honeybee,Crab, Prawn, *Lepas*, *Balanus, Apus, Limulus,* Scorpion, Spider, Millepede and Centipede.
   c. Prepared slides : Body louse, Bed-bug, Rat flea, *Cypris, Cyclops*, *Daphnia*, trachea of insects, gill and statocyst of Prawn. Trachea of insect, mouthparts of Cockroach, Mosquito, Honeybee, Housefly and Butterfly,
3. Mollusca
   a. Demonstration of dissection of *Anodonta* (Digestive and Nervous systems) through video clippings/models/charts.
   b. Specimens :*Anodonta, Mytilus, Pholas, Pecten, Haliotis, Aplysia, Doris, Limax, Pila, Sepia,Octopus, Nautilus, Chiton* and *Dentalium*.
   c. Prepared Slides : Glochidium larva, radula *of Pila*, gill lamina of *Anodonta*.
4. Echinodermata
   a. Demonstration of anatomy of *Asterias* through charts/model/ video clipping.
   b. Specimens : *Asterias, Echinus, Cucumaria, Antedon, Ophiothrix.*
   c. Prepared slides : T.S. arm of Starfish, tube feet and larval forms of echinodermata

5. Project based on general information on animals selecting atleast one representative from each phylum.

Note : Candidates will be required to submit duly signed note books of practical record.

BOOKS RECOMMENDED

1. *Invertebrates* Vols.I, II, III, IV & V by **L.H. Hyman**, Mcgraw Hill, New York; 1940- 51.
2. *Text book of Zoology* by **Marshall, A.J.,Williams, W.D. and Parker, T.J.** American Elsevier Pub. Co. New York; 1962- 72.
3. *Invertebrates Structure and function* **by Barrington, E.J.W.** English Language Book Society & Nelson, U.K.; 1969.
4. *Imm's Text Book of Entomology* by **Richards and Davies**. Methuen & Co. Ltd. EP Dutton & Co. Inc.New York; 1983.
5. *Principles of Insect Morphology* by **Snodgrass, R.E.**. Mcgraw Hill, New York; 1935.

6. *The Insects : Structure and Function* by **Chapman, R.F.** English Language Book Soc. & Hodder and Sloughton, G. Britain; 1978.

PAPER-VII : COMPARATIVE ANATOMY OF VERTEBRATES – II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT-I

Comparative account of the following systems of the vertebrates with evolutionary trends found Pisces to Mammals :

Respiratory system : Respiratory organs.
Types of respiratory mechanisms (gills, lungs, skin and accessory respiratory organs).

Urinogenital system : Succession of kidney (archinephros, pronephros, mesonephros, and metanephros), osmoregulation, evolution of gonads and urinogenital ducts.

UNIT-II

Nervous system : Comparative account and evolution of brain, spinal cord and cranial nerves.

Sense organs : Chemoreceptors, photoreceptors and mechanoreceptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VII

1. Aves : *Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
2. Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus, Loris, Macaca,Manis, Hystrix, Funambulus, Panthera, Canis, Herpestes, Capra,Pteropus*.
3. To study the skeleton of *Gallus, Oryctolagus*.
4. Demonstration of dissection of chick and white rat through video clipping/models/charts.
   Chick : Digestive, arterial, venous and urinogenital systems.
   White rat : Digestive, arterial, venous and urinogenital systems.
5. Study of the histology of different organs of frog and rat/rabbit through permanent stained slides.
6. Project based on general information on animals selecting atleast one representative from each class/Bird migration.

BOOKS RECOMMENDED

1. *A Text Book of Zoology*, Vol.II Vertebrates by **A.J. Marshall**, MacMillan & Co. Ltd., New York; 1972.
2. *Anatomy of Chordates* by **C.K. Weichert**, McGraw Hill Book Co. Inc. London; 1958.
3. *Biology of Vertebrates* by **H.E. Walter and L.P. Sayles**, McMillan Co. New York; 1949.
4. *Comparative Anatomy of Vertebrates* by **G.C. Kent**, Torpen Co.Ltd., Tokyo; 1954.
5. *Anatomy of Comparative Vertebrates* by **Hyman, L. H.** Satish Serial Pub. House; 2004.

PAPER VIII : BIOSYSTEMATICS AND EVOLUTION

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to identify, classify and name the organisms according to international code of Zoological nomenclature.

To acquaint the students with different type of keys. To make the students understand the concept of speciation, origin of life and evolution.

UNIT-I

1. Definitions and perspectives of systematics, classification and taxonomy, goals and importance of taxonomy.
2. Procedures of taxonomy -identification, classification, nomenclature, phena, taxa, category.
3. Key and its significance.
4. Higher taxa and Linnean hierarchy.
5. Qualitative and quantitative methods of analysis of variations
6. History and theories of classification.
7. International code of Zoological nomenclature-principles, objectives and rules for nomenclature, type system and priority for different taxa.
8. Population structure of species.
9. Polytypic species, race, variety, cline, subspecies, semispecies, super species.
10. Speciation.
11. Species concepts - Typological species concept, nominalistic species concept, biological species concept, evolutionary species concept.
12. Difficulties in applying biological species concept.

UNIT- II

1. Mutation theory of evolution: mutations, variations and natural selection; modern concept and interpretation of evolution and future of evolutionary process, sexual selection and co-evolution.
2. Interrelationship among different phyla of Invertebrates and their evolutionary significance.
3. Origin of Vertebrates: Pisces, Amphibia, Reptilia, Aves and Mammalia.
4. Ancestry of man, horse, camel and elephant.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to

be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VIII

1. Use of key to identify the fishes of the region, representing different families.
2. Methods of describing common insects representing different orders, with particular reference to the recording of taxonomic characters.
3. Study of ancestory of man, horse, camel and elephant through charts/models.
4. Visit to a Fossil park/Geology and Anthropology museums.
5. Study of origin of invertebrate and vertebrate groups through charts.

BOOKS RECOMMENDED

1. *Genetics and the origin of species* by **T. Dobzhansky**, Columbia University Press; 1951.
2. *Principles of Systematic Zoology* by **E. Mayr**, Tata McGraw Hill Publishing Co. Ltd., New Delhi; 1976.
3. *Taxonomy* by **R.E. Blackwelder**, John Wiley & Sons, New York; 1967.
4. *Organic Evolution* by **Lull**, MacMillan Co., New York; 1947.
5. *Time, life and Man* by **R.A. Stirton**, John Wiley and Sons, New York; 1959.
6. *Evolution of the Vertebrates* by **E.H. Colbert**, Willy Eastern Ltd., New Delhi; 1969.

PAPER IX : ENDOCRINOLOGY AND NEURAL PHYSIOLOGY (MZL 7001)

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT- I

Endocrinology : Chemical nature of hormones, steroid hormones, amino acid derived hormones, catecholamines and peptide hormones.

Mechanism of hormone action, steroid hormone-receptor interactions and signal transduction.

Autocrine, paracrine and telocrine regulation of hormones.

Hormonal imbalance.

Pineal-hypothalmo-hypophyseal-gonadal axis.

Hormonal elaborations of pancreas, adrenals, thyroid, parathyroid and their role in regulation of carbohydrate, lipid, protein, calcium and phosphorus metabolism.

Hormones of gastro-intestinal tract.

Prostaglandins, their synthesis and biological functions.

Endocrine control of spermatogenesis and oogenesis in vertebrates.

Endocrine control of folliculogenesis in mammals.

UNIT-II

Nervous system and sense organs : Neuron as the basic unit of nerve physiology; methyl-accepting chemotoxis proteins and chemotactic signals of the plasma membrane; Na^+ and K^+ permeability and action potentials, structure of Na^+ and K^+ channels.

Neurotransmitters : Molecular mechanism of acetylcholine, catecholamine, serotonin, γ-amino butyric and glycine neurotransmitters, acetylcholine receptor channels and their inhibitors; retinal rod cell excitation and molecular biology of visual cycle, colour vision. Power of accommodation, myopia, hypermetropia, astigmatism, cataract, glaucoma. Mechanisms of auditory and olfactory responses. Gustatory receptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IX

1. To identify the stage of oestrous cycle.
2. To show the endocrine glands in rat through charts/models/video clipping.
3. To study the histology of endocrine glands through permanent stained slides.
4. To study the corrective measures for myopia, hypermetropia, astigmatism, cataract.
5. To study the structure of eye, ear and different types of neurons through charts/models.

BOOKS RECOMMENDED

1. *General Endocrinology* by **Turner, C.D. and Bagnars**, W.B. Saunders Company; 1976.
2. *Comparative Endocrinology of Invertebrates* by **Highnam, K.C.** and Hill, L. Enwaral Arnold Ltd., London; 1981.
3. *Endocrinology* by Golds -**Worthy, G.J. Robinson, J. and Mordue**, W. John Wiley and Sons, New York; 1981.
4. *An Introduction to Invertebrates Endocrinology* by **Tombes, A.S.** Academic Press, New York; 1970.
5. *Comparative Vertebrate Endocrinology* by **Bentley, P.J.** Cambridge Univ. Press; 1998.
6. *Endocrinology* (4^{th} ed) by. **Hadley, M. E.** Prentice Hall; 1996.

PAPER X : IMMUNOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the defense mechanisms of animals/bodies.

UNIT-I

1. Organs and cells of the immune system and their functions : primary and secondary lymphoid organs, lymphocytes, mononuclear cells and granulocytic cells.
2. Antigens : Factors affecting immunogenicity, B and T cell epitopes, haptens and adjuvants.
3. Immunoglobulins :Basic and fine structure of Immunoglobulins, biological activities of different classes of Immunoglobulins.
4. Cellular and Humoral immune response -Role of T and B lymphocytes, Primary and secondary immune response.

UNIT-II

5. Major Histocompatibility Complex : MHC molecules and genes,regulation of MHC expression, its relation to immune responsiveness and disease susceptibility.
6. Complement System : Complement activation, regulation and biological effects mediated by complement components.
7. Antigen Antibody Interactions : Precipitation & agglutination reactions, radioimmunoassay, ELISA, Immuno fluorescence, Western blotting, Southern and Northern blotting. Immunoprecipitation and flow cytometry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper X

1. To study the agglutination reaction by typing of human blood into A,B, AB, O and Rh factor.
2. To study the different types of white cells in a stained blood film of a normal individual and compare with that of a diseased individual (allergy, parasitic infection etc.).
3. To study the sections of different lymphoid organs thymus, spleen, lymph node, intestine etc. from prepared slides.
4. To demonstrate Ouchterlony diffusion assay through Kit .

BOOKS RECOMMENDED

1. *Kuby Immunology* (6th ed.) by **Kindt, T.J., Golds, R.A. and Osbome, B.A.** WH Freeman Publishers; 2007.
2. *Essential Immunology* by **Roitt, I.M.** Mosby Harcourt Publishers; 2001.
3. *Immunology : A short course* by **Benjamini, E. Coico, R. and Sunshine, G.** Wiley Liss Publishers; 2000.
5. *Fundamental Immunology* by **Paul, W.E.** Lippincott Raven Publishers; 1998.
6. *Immunology : An Introduction* by **Tizard,I.R.** Thomson Publishers; 1998.
7. *Immnunbiology* (6th ed) **Jameway, C., Travers, P. Walport, M. and shlomchik, M.** Taylor and Francis group; 2004.

PAPER XI : DEVELOPMENTAL BIOLOGY - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the pattern of development at molecular level.

UNIT - I

1. Basic concepts of Development : Potency, commitment, specificiation, induction, instructive and permissive interactions, competence, determination and differentiation.
2. Molecular basis of differentiation, transdifferentiation and dedifferentiation. Pattern formation in *Drosophila*, Amphibian, Chick and *C. elegans*
3. Cleavage patterns and fate maps of Tunicate, *Drosophila*, Amphibia, Chick and *C. elegans*.
4. Gene regulation in Development in *Drosophila*.

UNIT – II

1. Gametogenesis in animals.
2. Molecular events during fertilization.
3. Zygote formation, blastula formation and embryonic fields. Gastrulation and formation of germ layers in animals.
4. Regeneration.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XI

1. To study the different stages of development in frog and chick through permanent slides.
2. To study the spermatogenesis of rat and grasshopper throughslides/charts/photographs.
3. Types of eggs in animals through charts/photographs/models.

BOOKS RECOMMENDED

1. *An Introduction to Embryology* by **Balinsky, B. I.**, Saunders, Philadelphia;1981.
2. *Major Problems in Developmental Biology* by **Urspaung, H.**, Academic Press, New York; 1972.
3. *The Control of Gene Expression in Animal Development* by **Gurdon, J. B.,** Harvard University, Press, Oxford;1974.
4. *Gene activity in Early Development* by **Davdson, E. H.,** Academic Press, London; 1977.
5. *Development Biology*, 8th edition by **Gilbert, S. F.,** Sinauer Associators Inc. Publishers; 2006.
6. *Developmental Biology*, 2nd edition by **Browder, L.W**., Saunders College Publishing, New York;1984.

PAPER XII : BIOCHEMISTRY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of various metabolite in animal body.

UNIT-I

Carbohydrates : General structure, chemical properties & classification. Homo and heteropolysaccharides, bacterial polysaccharides, mucopolysaccharides, biological functions of polysaccharides. Glycolysis, TCA cycle, phosphogluconate pathway and glycogenolysis. Bioenergetics of Carbohydrate matabolism.

Lipids : General structure and chemical properties of simple lipids. Structure and function of phospholipids. Biological functions & structure of cholesterol and steroid hormones. Oxidation of fatty acids; biosynthesis of saturated and unsaturated fatty acids.

UNIT-II

Proteins : Amino acids and their properties, Protein structure and shape. Ramachandran Plot. Nucleic acids and protein interaction. Conjugated proteins: Lipoproteins, glycoproteins, nucleoproteins. Biosynthesis of purines and pyrimidines. miRNA.

Enzymes : Enzyme kinetics, mode of action of enzyme and biochemical role of coenzymes and isoenzymes, effect of enzyme concentration, effect of substrate concentration and pH on enzyme activity, allosteric enzymes, feed back inhibition, covalent modifications, irreversible and reversible. Ribozyme and abzyme.

Electron transport chain : Mechanism of oxidative phosphorylation (Mitochondrial), inhibitors of electron transport chain Inhibitors and uncouplers of mitochondrial oxidative phosphorylation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XII

1. Estimation of alkaline and acid phosphatases in the liver procured from local market.
2. Quantitative estimation of glycogen, cholesterol protein in tissue procured from local market.
3. Qualitative estimation of carbohydrates, lipids and protein in tissue procured from local market.

BOOKS RECOMMENDED

1. *Practical Biochemistry* by **Beckatt, A. H. and Stenlake, J. B.**, the Athlone Press, London; 1988.
2. *Practical Biochemistry* by *Application to Biochemistry and Molecular Biology*; **Freefelder, D.**, W. H. Freeman Company, New York; 1982.
3. *Practical Biochemistry: Principles and techniques*, 5th edition by **Wilson, K. and John W.**, Cambridge University Press; 2000.
4. *Immunology* by **Kuby, J.**, W.H. Freeman and Company, New York; 2000.
5. *Molecular Biology of the Cell* by **Alberts, B. and others**; Garland Science, New York; 2002.
6. *Cells* by **Lewin, B. and others**; Jones and Bartlett Publishers, Canada; 2007.
7. *Lehninger-Principles of Biochemistry*, 4th edition by **Nelson D. & Cox, M.**, W. H. Freeman and Company, New York; 2005.
8. *Outlines of Biochemistry,* 5th edition by **Conn, E. E., Stump, F. and others**; John Wiley and Sons; New York; 2006.
9. *Biochemistry,* 5th edition by **Stryer, L., Berg, J. M., and Tymoczko, J. L., W.H.** Freeman and Company, New York; 2006.
10. *Biochemistry*, 3rd edition by **Voet, D., and Voet, J. G.**, John Wiley and Sons; New York; 2004.

Paper - XIII : CELL AND MOLECULAR BIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

UNIT- I

1. Fixation and staining techniques : Non -chemical and chemical fixatives, chemistry of staining of acidic and basic dyes.
2. Structure and functions of cell and its organelles (nucleus, plasma membrane, mitochondria, golgi bodies, endoplasmic reticulum, ribosomes and lysosomes).
3. Plasma membrane : Structure and organisation of membranes, glycoconjugates and proteins in membrane system, ion transport, Na+/K+ATPase, model membranes, liposomes.
4. Protein sorting in ER, golgi and targeting of proteins to Mitochondria, secretory and endocytotic pathway.

UNIT- II

1. Cell-Cell signalling : Cell surface receptors, Second messenger system, MAP kinase pathways, Signalling from plasma membrane to nucleus.
2. Cytoskeletal elements : Microtubules and microfilaments.
3. Cell division : Cell Cycle, molecular basis of cell division, mitotic apparatus, modification and abnormalities of cell division, chromosome movement (forces of cell division).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIII

1. Study of permanent histological slides of testis and ovaries of insects/ mice/rat.
2. Basis of reaction and demonstration of the sites of proteins, nucleic acids, lipids & carbohydrates in ovaries of insects/rat/mice through slides and photographs.
3. Study of stages of mitosis and meiosis from permanent slides from animal and plant materials through slides/charts/photographs.

BOOKS RECOMMENDED

1. *Cell and Molecular Biology*, 8th edition by **De Robertis, E.D.P. & De Robertis**, Jr. E.M.F; Saunders & Co. Philadelphia; 1995.
2. *Cell Biology*, 3rd edition by **C.B. Powar**, Himalaya Publishing House., Bombay; 1984.
3. *Advances in Cell and Molecular Biology* by **Dupraw, E.J.**, Academic Press, New York & London;1971.
4. *Cell Biology* by **Pollard, T.D., Earnshan, W.C.**, Saunders & Co. Philadelphia; 2002.
5. *The Cell: A Molecular Approach*, 5th edition by **Cooper G.M. and Hausman, R. E.**, Sinauer Associates, Sunderland (MA); 2009.
6. *Molecular Biology of the Cell*, 5th edition by **Alberts B. and others**; Gerald Science, New York; 2008.
7. *Cell and Molecular Biology*: *Concepts and Experiments*, 5th edition by **Karp, G**., John Wiley & Sons, New York; 1996.
8. *Molecular Cell Biology* by **Lodish and others**, W.H. Freeman, New York; 2008.

Paper XIV : INSTRUMENTATION AND METHODOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Microscopy : Principle, structural parts and applications of compound microscope, phase – contrast microscope, fluorescence microscope, interference microscope, polarization microscope, dark field microscope, transmission electron microscope and scanning electron microscope.

Cell fractionation method : Principle of centrifugation and ultracentrifugation, different types of ultracentrifugations (in brief) and their applications, structural parts of an analytical ultracentrifuge, ultracentrifugation and buoyant density.

Spectrophotometry : Principle and structural parts of a colorimeter and a spectrophotometer and their applications.

Chromatography : Principles of chromatography, paper chromatography, thin layer chromatography, gas chromatography, gel permeation chromatography, ion exchange chromatography, high pressure liquid chromatography, affinity chromatography.

UNIT-II

Electrophoresis : Principles of electrophoresis, (brief introduction to paper electrophoresis, polyacrylamide gel electrophoresis, disc gel electrophoresis,) SDS-PAGE, agarose gel electrophoresis, isoelectric focussing, applications of electrophoresis, Phage DNA, detection of plasmids, separation of DNA molecules.

Polymerase chain reaction (PCR) and its application.

Tissue culture techniques : Introduction to basic culture technique in cell culture, organ culture, Aseptic techniques, sterilization technique, specialized culture technique, , Monolayer culture, suspension culture, leucocyte cultures. factors affecting cell growth *in vitro.*

Radioisotopes : Principles and applications of tracer techniques in biology, radiation dosimetry, radioactive isotopes and half life of isotopes, liquid scintillation counter, principles and applications of autoradiography and cerenekov radiation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIV

1. To study the parts of the compound microscope and phase-contrast microscope and their maintenance.
2. To study the living material under the phase contrast microscope.
3. Finding out the diameter, area and circumference with the help of stage micrometer and oculometer.
4. To sketch the diagram of any tissue with the help of camera lucida and to draw its magnification line.
5. Demonstration of section cutting and mounting of sections on the grid for SEM and TEM. Demonstration of SEM & TEM in the CIL lab., P.U., Chandigarh.
6. Demonstration of working of ultracentrifuge.
7. Demonstration of the working of PCR and Western blotting, Deptt. of Zoology, P.U., Chandigarh.
8. To separate a sample of amino acid with the help of paper chromatography.
9. Demonstration of SDS-PAGE, Agarose gel electrophoresis.

BOOKS RECOMMENDED

1. *Fundamentals of Radiography* by **Bacq, Z.M. and Alexender, P.**, Pergamon Press, London; 1989.
2. *Phase Microscopy: Principle and Applications* by **Benett, A.H. and Usterbere, H.**, John Wiley & Sons, London; 1951.
3. *Biological Techniques for Transmission and Scanning Electron Microscopy* by **Dawes, C.J.**, Ladd Research Industries, Burlington; 1981.
4. *Culture of Animal Cell: A manual of basic techniques* by **Freshrey, R.I. and Allen, R.**, Lis Inc., New York; 1983.
5. *The Principles and Practice of Electron Microscopy* by **Watt, I.M.**, Cambridge University Press; 1985.
6. *Flow Cytometry: A Practical Approach,* 3rd edition by **Michael G**.O., Oxford University Press; 2000.
7. *In-vitro Cultivation of Animal Cells* (Biotol) by **Currell B.C.** and others, Elsevier Applied Science Publishers; 2004.

PAPER : XV ADVANCES IN ENTOMOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students aware of various pests of food crops and food products and various insect control methods.
To educate the students about economic importance and techniques of Apiculture and sericulture

UNIT-I

1. Salient features with suitable examples of the various insect orders : Thysanura, Odonata, Isoptera, Orthoptera, Hemiptera, Coleoptera, Lepidoptera, Hymenoptera and Diptera.
2. Strucure and function of the following systems in insects :
   a. Digestive System
   b. Respiratory System
   c. Nervous System
   d. Reproductive System
3. Post embryonic development and types of metamorphosis in insects. Structural modifications in the larvae & pupae.
4. Parthenogenesis in insects.
5. Effect of temperature and photopteriod on the lives of insects, details of onset, termination and significance of diapause.

UNIT-II

1. Plant host-insect interaction.
2. Practices of Sericulture, Apiculture & Lac culture
3. Systematic position, habits, nature of damage and outlines of the life cycles of following pests of crops, vegetables & fruits.

A. CROPS

Cotton :

(i) *Pectinophora gossypiella* (Pink boll worm)
(ii) *Bemisia tabaci* (Cotton white fly)
(iii *Dysdercus cingulatus* (Red cotton bug)

Sugarcane

(i) *Pyrilla perpusilla* (Sugarcane leaf hopper)
(ii) *Scirpophaga nivella* (Sugarcane top borer)

Paddy

(i) *Hieroglyphus banian* (Rice grass hopper)
(ii) *Leptocorisa varicornis* (Gundhi bug)

Wheat
(i) *Tanymecus indicus* (Ghujhia weevil)
(ii) *Sesamia inferens* (Wheat stem borer)

B. VEGETABLES
(i) *Dacus cucurbitae* (Pumpkin fruit fly)
(ii) *Raphidopalpa foveicollis* (Red pumkin beetle)

C. FRUITS
(i) *Drosicha mangifera* (Mango mealy bug)
(ii) *Diaphorina citri* (Citrus psylla)

3. Pests of stored food products with particular reference to their systematic position, habits, nature of damage caused by them along with the outlines of their life cycles :
(i) *Callosobruchus maculatus* (Pulse beetle)
(ii) *Sitophilus oryzae* (Rice weevil)
(iii) *Tribolium castaneum* (Rust red floor beetle)
(iv) *Sitotroga cerealella* (Angoumois grain moth).

4. Insect control :
(a) Chemical control : Categories of pesticides, important examples, their application and mode of action; Insect repellents and attractants.
(b) Biological Control : Principles, History, use of parasites, predators and pathogens.
(c) Integrated Pest Management (IPM).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XV

1. Study of insect biodiversity in natural environment and preparation of project based on the observation.
2. Identification marks and taxonomic status of insect pests of crops vegetables, fruits and stored products mentioned in theory syllabus.
3. Demonstration of dissection of insects for the study of following systems through charts/models/video clippings. :
   a. Digestive System
   b. Nervous System
   c. Reproductive System.
4. Systematic position upto family and ecology of the following medical and veterinary pests :
   a. *Anopheles* b. *Culex* c. *Aedes* d. Blowfly e. Botfly f. Horsefly g. Fleshfly.
5. Introduction to apiculture practices and handling of Beehives.
6. Study of male and female external genitalia of insects through permanent slides.

7. Study of different types of larvae and pupae with the help of charts/ photographs/ diagrams.

BOOKS RECOMMENDED

1. *General Entomology*, by **Mani, M. S.,** Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi; 1990.
2. *The Insects, Structure & Function* by **Chapman, R.F.,** Hodder and Sloughton edication Ltd., Britain; 1978.
3. *Imm's General Text Book of Entomology*, 10th edition by **Richard, O.W. and R.G. Davies**, Chapman and Hall, London, New York; 1997.
4. *Honey bees and their management in India* by **Mishra R.C.**, ICAR Publications; 1995.
5. *Agricultural Pests of India and South East Asia* by **Attwal, A.S.** Kalyani Publishers, New Delhi; 1991.
6. *Insects and Mites of Crops in India* by Nair, M.R.G.K., ICAR, New Delhi; 1975.
7. *Economic and Applied Entomology* by **Kumar and Nigam**, Emkay Publications, Delhi; 2000.
8. *Destructive and Useful Insects: Their Habits and Control* **by Metcalf C.L.** McGraw-Hill Publications, New York; 1951.
9. *Integrated Pest Management* by **Dent, D**., Chapman & Hall Publishers; 1995.
10. *Insect Pheromones and Their Use in Pest Management* by **Sevens H. and Jones**, **J.M.**, Chapman Hall Publishers; 1998.
11. *Beekeeping for Profit and Pleasure* by **Webb, A. and Duncan, F. M.**, Agrobios (India); 2004.
12. *Textbook of Applied Entomology* by **Srivastava, P.**, Vol.1. Kalyani Publishers;, New Delhi; 2005.

FOURTH SEMESTER

PAPER XVI : DEVELOPMENTAL BIOLOGY - II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT – I

1. Organogenesis : Vulva formation in *C. elegans,* Eye lens induction. Epitheliomesenchymal interactions, Differentiation of neuron.
2. Primary and secondary embryonic induction, chemical nature of evocators.
3. Introduction to stem cells, stem cell related disorders, gene therapy.
4. Metamorphosis.

UNIT – II

I Teratogenesis : Critical period dose, classes of cytotoxic teratogens, human teratogenesis.
2. Totipotency & nuclear transfer experiment.
3. Cell surface adhesion, inter cellular adhesion, adhesive molecules - cadherins.
4. Environmental evolution and animal development: Environmental cues and effects, malformations and disruptions, changing evolution through development modularity, developmental constraints.
5. Sex determination.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVI

1. To prepare the permanent stained slides of developing stages from fertilized egg of hen.
2. To study different larvae in invertebrates from permanent slides.
3. To study through PS of larvae of invertebrates (Redia, Cercaria, Arthropod larvae, Glochidium larva).

BOOKS RECOMMENDED

1. *An Introduction to Embryology* by **Balinsky, B.I.**, Saunders, Philadelphia;1981.
2. *Major Problems in Developmental Biology* by **Urspaung, H.**, Academic Press, New York; 1972.
3. *The Control of Gene Expression in Animal Development* by **Gurdon, J.B.,** Harvard University, Press, Oxford;1974.
4. *Gene activity in Early Development* by **Davdson, E.H.,** Academic Press, London; 1977.
5. *Development Biology*, 8th edition by **Gilbert, S.F.,** Sinauer Associators Inc. Publishers; 2006.
6. *Developmental Biology*, 2nd edition by **Browder, L.W**., Saunders College Publishing, New York;1984.

PAPER XVII : ADVANCES IN PARASITOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To introduce the students to various pathogens causing diseases and the reactions of the body against them.

UNIT-I

1. Introduction to Parasitology, different types of animal associations : definitions; Parasitism, Mutualism, Hyperparasitism
2. Parasite Host Specificity : Kinds of parasite host specificity, specificity factors related to infection and growth.
3. Molecular, Cellular and Physiological basis of Host Parasite Relationship in Protozoans, trematode, cestode and nematode parasites.

UNIT-II

1. Immunity to Parasites : Brief account of immunity to malaria, leishmaniasis, trypanosomiasis, schistosomiasis and ascariasis.
2. Vectors - Brief account of various insect vectors of human parasitic infections.
3. Parasite Transmission : Introduction, mechanism, circardian rhythm.
4. Ecology of parasites : Ecological niche, host size, and parasite numbus, biological control, role of metazoan parasites in transmission of microbial infection.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVII

1. To study the protozoans and helminth parasites infecting frog, toad and common household insects through slides/charts.
2. To study the helminth parasites infecting gut of the sheep and goat obtained from slaughter house.
3. To study the parasites from stained blood smears - *Leishmania, Plasmodium* and *Trypanosoma*.
4. To study the vectors of different parasitic infections (Mosquito, ticks, sandfly etc.).

BOOKS RECOMMENDED

1. *Parasitology : The Biology of Animal Parasites,* 5th edition by **Noble, E.R. and Noble, G.A.**, Lea & Febiger, Philadelphia; 1982.
2. *Physiology of Parasites* by **Chapell, L.H.,** Blackie, Glosgow, London; 1979.
3. *Immunology of Infection* by **Kaufmann**, **S.,** Academic Press; 1999.
4. *An Introduction to Animal Parasitology* by **Smyth, J.D.**, Hodder & Stoughton, London; 1976.

PAPER : XVIII : ADVANCES IN FISH AND FISHERIES

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with aquatic animal life and its economic importance.

UNIT-I

1. Introduction: History and scope of aquaculture, Different kinds of aquaculture-traditional, extensive, intensive, semi-intensive, flow through and re-circulatory.
2. Criteria for candidate species selection and criteria for site selection for various culture practices, Farming methods: ponds, lens, cages, raceway, raft, rope, monoculture, polyculture, sewage fed culture and organic aquaculture.
3. Principle of composite fish culture, Composite fish culture of endemic and exotic fishes in India.
4. Limnological parameters: influence of the environmental parameters on fish abundance and distribution, aquaculture and other anthropogenic activities on fish populations.
5. Induced breeding: History, technique, different kinds of hatcheries and advantages of induced breeding in fishes. Use of synthetic chemicals for induced breeding.
6. Ecological classification of aquatic organisms other than fishes.
7. Characteristics of lotic environment (river/stream) as per zonation, major abiotic and biotic factors in a stream/river affecting the body form in hillstream fishes, Body form in hillstream fishes.
8. Productivity: Concept of productivity, estimation of primary productivity by different methods and classification of water bodies on the basis of productivity.

UNIT-II

1. Major and minor constituents of fish including minerals and trace elements in fish. Post mortem changes in fish- rigor mortis, autolysis, auto-oxidation and their significance, biochemical and microbial spoilage of fish.
2. Fish diseases: Fungal, bacterial, protozoan, worm and crustacean diseases of fishes.
3. Principles of fish preservation, Preservation of fish by curing (drying, salting and smoking), Chilling and freezing of fish, canning of fish and fish products. Fish transportation and marketing
4. Biological pollution-algal blooms and their affect on fish production, Biological and chemical control of algal blooms.
5. Concept of Transgenic organisms, GMO's and bio-safety regulations.
6. Concept of stock, DNA markers in stock identification: Allozymes, RFLP, RAPD, AFLP, Microsatellites, EST's, SNPs, Type I and Type II markers, mtDNA and nuclear DNA markers.
7. Age and growth determination in fishes using hard parts such as scales, opercular bones etc.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVIII

1. To estimate the dissolved oxygen in water.
2. To estimate the pH of water.
3. To estimate the phosphate of water.
4. To determine the BOD of water.
5. To study the benthic organisms.
6. To study the different types of fishing gears.
7. To study the Indian culturable fishes.
8. To study the Exotic culturable fishes.

BOOKS RECOMMENDED

1. *Fish and Fisheries of India* by **Jhingran, V.G.**, Hindustan Publishing Corporation, New Delhi; 1991.
2. *Aquaculture Production FAO Fisheries Circular No. 815* by Rev.FAO Rome; 1991.
3. *Aquaculture in Asia* by **Joseph, M.M.,** Asian Fisheries Society, Mangalore; 1990.
4. *Inland Fisheries of India*, Vol.I & II by **Talwar P.K. and Jhingran A.G.**, Oxford & IBH, New Delhi; 1991.
5. *Freshwater Fishery Biology* by **Lagler, K.F.**, Wm. C. Brown Company Dubuque, Iowa; 1969.
6. *Methods for Assessment of Fish Production in Freshwaters* by **Bagenal, T.B.,** IBP Handbook No.3, Blackwell Scientific Publications Ltd., Oxford; 1970.
7. *Fundamentals of Ecology* by **Odum, E.P.**, W.B. Saunders Co. Philadelphia; 1971.
8. *Limnology* by **Welch, P.S.,** McGraw Hill Book Co., New York; 1952.
9. *Limnology* by **Watzel, R.G**., W.B. Saunders Co. Philadelphia; 1983.
10. *The Biology of Polluted Waters* by **Hynes, H.B.N.,** Liverpool University Press, Liverpool; 1978.
11. *Fundamentals of Limnology* by **Ruttner, F.**, University Press Toronto, 1975.
12. *Fishes: An Introduction to Ichthyology* by **Moyle, P.B.** and **Cedh, J.C.**, Prentice Hall Inc. Jersey USA; 1986.
13. *Fishery Development* by **Agarwal, S.C.** and **Johal, M.S.**, Narendra Publishing House, Delhi; 2004.
14. *History of Fishes* by **Norman, J.,** Ernst Brown, London; 1999.
15. *Biology of fishes* by **Kyle H.M.,** Biotech. Books, New Delhi; 2007.
16. *Freshwater Ecology : Concepts and environmental applications* by Dodds, Walter K. Academic Press. USA; 2002.
17. *The Biology of fishes: New Introduction by Dr. Vijay Dev Singh* by M. Hary. Kyle. Biotech. Books, New Delhi; 2007.
18. *Fish Management and Aquatic Environment* by **Kumar, A.** and **Dubey, P.**, Daya Publishing House, New Delhi; 2006.

PAPER XIX : ENVIRONMENTAL BIOLOGY AND WILD LIFE

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To educate the students about the basic environmental phenomena like pollution, ecosystem, biogeochemical cycles, etc.
To educate the students about the importance of wild life conservation.

UNIT-I

1. **Environmental pollution** : Causes impact and control measures of air, water and noise pollution, management of wastes, Environment Protection Act 1986.
2. **Natural resources** : Natural resources and their conservation.
3. **Energy resources** : Study of renewable and non-renewable energy resources. Non conventional energy resources.
4. **Environmental education** : Goals, objectives, and methods of teaching of environmental education.
5. **Ecosystem dynamics and management**: Stability and complexity of ecosystems. Speciation and extinctions, environmental impact assessment, sustainable development.

UNIT-II

1. **Zoogeography** : Zoogeographical regions and their fauna.
2. **Wildlife of India** : Different types with references to animals, causes of depletion, significance and conservation of wildlife.
3. **Sanctuaries and National Parks**: Location and Important fauna of the sanctuaries and national parks of India.
4. **Wildlife Projects**: Tiger Project, Crocodile Breeding Project, Hangul project, Gir lion Sanctuary project.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIX

1. To study the distribution of animals through zoogeographical maps.
2. A visit to a zoological park to study different wild animals and make a report.
3. To estimate the alkalinity of water.
4. To estimate the chlorides of water.
5. To estimate the nitrates of water.
6. To study the different types of phytoplankton.

7. To study the different types of zooplankton.

BOOKS RECOMMENDED

1. *Environment Pollution* by **Dix, H.M.** John Wiley & Sons Publications, New York; 1984.
2. *Environmental Studies* by **Botkin, D.B.** and **Keller, E.A.**, Merill Publ. Co.Toronto, London, 1987.
3. *Wildlife in India* by **Saharia, V.B.,** Natraj Publishers, Deharadun; 1998.
4. *Wildlife Biology* by **Dasmann, R.F.,**Wiley Eastern Ltd., New York; 1982.

Paper XX : CYTOGENETICS AND MOLECULAR GENETICS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students understand the genetic code, structure of chromosome, molecular basis of gene expression and regulation, mutation and genetic engineering.

To clarify the concept of population of genetics to the students through Hardy-weinberg law.

UNIT-I

1. Chromosome structure and function : Law of DNA constancy and C. value paradox. Specialized chromosomes (Salivary gland and Lampbrush chromosomes).
2. Molecular mutation : Molecular basis of mutation, physical and chemical mutagens, radiation mutagenesis, site directed mutagenesis, target theory.
3. Regulation of gene function : Operon hypothesis; Pro and eukaryotic operons; Induction and repression;Complex gene clusters.
4. Hardy Weinberg Law and Calculation of gene frequencies.

UNIT-II

1. Linkage and genetic maps.
2. Dosage compensation.
3. Properties of genetic code, mutations in genetic code, Wobble's hypothesis.
4. Fine structure of gene, Eukaryotic genome organization (structure of chromatin, coding and non-coding sequences, and satellite DNA); DNA damage and repair, DNA replication, amplification and rearrangements.
5. Organization of transcriptional units; Mechanism of transcription of prokaryotes and eukaryotes; RNA processing (capping, polyadenylation, splicing, introns and exons); ribonucleoproteins, structure of mRNA.
6. Protein synthesis.
7. Principles and methods of genetic engineering and gene targeting; applications in agriculture, health and industry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XX

1. Preparation of chromosomes from onion root tip for mitosis by squash method.

2. Study of salivary gland chromosomes of larvae of chironomus/Drosophila from permanent slides.
3. Study of metaphase karyotypes from photographs/permanent slides of Drosophila, grasshopper and man/rat.
3. Study of sex-chromatin Bars body from human buccal mucosa.
4. Demonstration of monohybrid and dihybrid cross, Co-dominance, Incomplete dominance and Epistasis with the help of beads and photographs.
5. Study of genetic disorders with the help of photographs.
6. Study of structural and numerical alteration of chromosomes: deletion, duplication, inversion, translocation and ploidy with the help of photographs.

BOOKS RECOMMENDED

1. *Genetics,* 3rd edition by **Goodenough, U.**, Saunders College Pub., Philadelphia; 1984.
2. *Cytogenetics - The Chromosome in Division, Inheritance and Evolution,* 2nd edition by **Swanson, C.P., Merz, T. and Young, W.J.,** Prentice Hall, Inc., London; 1982.
3. *Principles of Genetics*, 7th edition by **Gardner, E.J. and Shustad, D.P.**, John Wiley, New York; 1984.
4. *Genetics - A survey of the Principles of Heredity*, 3rd edition by **Winchester, A.M.**, Oxford and IBH Publishing Co. Pvt. Ltd.; 1972.
5. *Genetics: A text book for University students,* 3rd edition by **Gupta, P.K.**, Rastogi Publications, Meerut; 1996.
6. *Cytology, Genetics and Molecular Biology* by **Gupta, P.K.**, Rastogi Publications, Meerut, 1991.
7. *Genetics*, 3rd edition by **Strickberger, M.W.**, Macmillan Publishers, New York; 1985.
8. *Eukaryotic Chromosomes* by **Bostock, C.J. and Sumner, A.T.**, Amsterdam North Holland; 1978.
9. *Principles of Genetics*, 3rd edition, by **Sinnott, E.W. and Dunn, L.C.,** McGraw-Hill, New York; 1939.
10. *The Science of Genetics* by **William, H. and Yost, H. T.**, Prentice Hall, Inc., London; 1977.
11. *Handbook of Molecular Cytology* by **Lima-De-Faria**, **A.**, North Holland Publishing Company, Amsterdam, London; 1969.
12. *Principles of Genetics*, 2nd edition by **Snustad, D.P. and Simmons, M.J.** John Wiley & Sons; 2002.
13. *Genetics: A Molecular Approach,* 3rd edition, **Brown, T.A.**, Chapman and Hall, London; 1998.
14. *iGenetics: A Molecular Approach*, 2nd edition, **Russell, P.A.**, Benjamin Cummings; 2006.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT & COMMERCE

SYLLABI

FOR

M.COM. [SEMESTER SYSTEM] EXAMINATIONS, 2017-18

(For Regular College/University/USOL Students)

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SCHEME, SYLLABI AND COURSES OF READING FOR M. COM. (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2017-2018

Note : 1. The duration of the examination in each subject will be 3 hours.

2. Maximum marks for external/written examination are 80 marks and Internal Assessment is 20 marks.

3. **The marks for Internal Assessment will be divided as Follows:**

For Regular Students

(a) Attendance : 20%

(b) Written Assignments : 30%

(c) Mid Semester Test : 50%

For University School of Open Learning (USOL) Students:

100% Internal Assessment will be based on Written Assignments

N. B.: Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University.

INSTRUCTIONS TO THE PAPER SETTERS :

IF THERE ARE TWO UNITS : Set 10 questions in all. Five questions from each unit. The students are required to answer five questions in all selecting at least 2 questions from each unit.

IF THERE ARE THREE UNITS : Set 10 questions in all. Three or four questions from each unit. The students are required to answer five questions in all selecting at least one question and not more than two from each unit.

IF THERE ARE FOUR UNITS : Set 10 questions in all. Two or three questions from each unit. The students are required to answer five questions in all selecting at least one question from each unit.

IF THERE ARE FIVE UNITS : Set 10 questions in all. Two questions from each unit. The students are required to attempt five questions in all selecting one question from each unit.

SCHEME OF EXAMINATION

SEMESTER-I

Paper 1	**M.C.101**	MANAGERIAL ECONOMICS	100 Marks
Paper 2	**M.C.102**	QUANTITATIVE METHODS FOR BUSINESS	100 Marks
Paper 3	**M.C.103**	MODERN ACCOUNTING THEORY & REPORTING PRACTICES	100 Marks
Paper 4	**M.C.104**	ORGANISATION THEORY AND BEHAVIOUR	100 Marks
Paper 5	**M.C.105**	MARKETING MANAGEMENT	100 Marks
Paper 6	**M.C.106**	MANAGEMENT INFORMATION SYSTEM	100 Marks
Paper 7	**M.C.107**	WORKSHOP ON IT APPLICATIONS IN COMMERCE (For Regular Students Only)	100 Marks
	M.C.107 A	IT APPLICATIONS IN COMMERCE (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-II

Paper 1	**M.C.201**	BUSINESS ENVIRONMENT	100 Marks
Paper 2	**M.C.202**	RESEARCH METHODOLOGY IN COMMERCE	100 Marks
Paper 3	**M.C.203**	FINANCIAL MANAGEMENT AND POLICY	100 Marks
Paper 4	**M.C.204**	PRODUCTION AND MATERIALS MANAGEMENT	100 Marks
Paper 5	**M.C.205**	OPERATIONS RESEARCH	100 Marks
Paper 6	**M.C.206**	BUSINESS POLICY & STRATEGIC MANAGEMENT	100 Marks
Paper 7	**M.C.207**	SUMMER TRAINING REPORT AND VIVA VOCE (For Regular College Students)	100 Marks
	M.C.207 A	ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (For USOL Students Only)	100 Marks
		OR	
	M.C.207 B	FINANCIAL SERVICES (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-III

Paper 1	**M.C.301**	BUSINESS PERFORMANCE MEASUREMENT	100 Marks
Paper 2	**M.C.302**	TAX PLANNING AND MANAGEMENT	100 Marks

For Paper 3, Paper 4, Paper 5, Paper 6 Students has to select two groups from the given groups A to F having two papers each. (MC. 303 to MC. 314)

Paper-3		Select Group from A-F	100 Marks
Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7			
	M.C.315	MC. 315-WORKSHOP ON FINANCIAL MARKETS AND INSTRUMENTS (For Regular Students Only)	100 Marks
	M.C.315 A	FINANCIAL MARKETS AND INSTRUMENTS (Theory paper For USOL Students Only)	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 303	Integrated Marketing Communication & Brand Equity	100 Marks
MC. 304	Marketing Research	100 Marks

Group B: Human Resource Management

MC. 305	Human Resource Development	100 Marks
MC. 306	Industrial Relations	100 Marks

Group C: International Business

MC. 307	Indiaôs Foreign Trade and Investment	100 Marks
MC. 308	Management of International Business Operations	100 Marks

Group D: Accounting & Finance

MC. 309	Strategic Cost Management	100 Marks
MC. 310	International Accounting	100 Marks

Group E: Applied Economics

MC. 311	Industrial Economics	100 Marks
MC. 312	Applied Econometrics	100 Marks

Group F: Banking and Insurance

MC. 313	Bank Management	100 Marks
MC. 314	Insurance Management	100 Marks

SEMESTER-IV

Paper 1	**M.C.401**	PROJECT PLANNING AND CONTROL	100 Marks
Paper 2	**M.C.402**	KNOWLEDGE MANAGEMENT	100 Marks
Paper 3	**M.C.403**	BUSINESS ETHICS AND CORPORATE GOVERNANCE	100 Marks

Every student has to select any one group from the two groups selected in the third semester (Selected group in the 4th semester will be having three papers) (MC. 404 to MC. 421)

Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7	**M.C.422**	COMPREHENSIVE VIVA-VOCE	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 404	Advertising and Sales Management	100 Marks
MC. 405	Services Marketing	100 Marks
MC. 406	Consumer Behavior	100 Marks

Group B: Human Resource Management

MC. 407	Organizational Change and Development	100 Marks
MC. 408	Training and Development	100 Marks
MC. 409	Compensation Management	100 Marks

Group C: International Business

MC. 410	International Business Environment	100 Marks
MC. 411	Global Financial Management	100 Marks
MC. 412	International Marketing Management	100 Marks

Group D: Accounting & Finance

MC. 413	Advanced Corporate Accounting	100 Marks
MC. 414	Security Analysis and Portfolio Management	100 Marks
MC. 415	Advanced Auditing	100 Marks

Group E: Applied Economics

MC. 416	Macro Economic Analysis and Policy	100 Marks
MC. 417	Economics of Services	100 Marks
MC. 418	World Trading System	100 Marks

Group F: Banking and Insurance

MC. 419	Bank Legislation	100 Marks
MC. 420	Risk Management	100 Marks
MC. 421	Actuarial Practice	100 Marks

SEMESTER-I

PAPER 1: MC. 101- MANAGERIAL ECONOMICS

Objective: The objective of the course is to acquaint students with the concepts of microï economic theory and their use in business decision making. The effort is to make them capable of using various concepts to deal with business problems in a global economic environment.

UNIT-I

Nature and scope of managerial economics, relationship with economic theory, decision sciences, and functional areas of business; Theory of the Firm: Reasons for existence of the firms & their functions, the objective and value of the firm, constraints on the operation of the firms, limitations of the theory of the firm; Nature & Functions of Profits: Business vs. Economic Profits, theories of profit, functions of profit; Tools of Analysis: Marginal Analysis, Optimization, Decision and Game Theory - Concepts; The International Framework of Managerial Economics.

UNIT-II

The demand for a commodity: Individualôs demand, Market demand, and the firm demand; Price, Income & Cross elasticity of demand; Using elasticityôs in managerial decisions; Theories of consumer behavior.

UNIT-III

Pricing Practices and Risk Analysis**:** Price and Output relationship under different market structures; Pricing Theories; Pricing of multiple products; Price discrimination - International price discrimination & Dumping, Transfer Pricing; Risk and Uncertainties in managerial decision making; Measuring risk with probability distribution; Utility Theory and risk aversion.

UNIT-IV

Technological change and the global market economy: Impact of technological change on productivity, labor and market structure; Industrial innovation and technology and technological environmental forecasting.

Reference Books:

1. Koutsyiannis, A., Modern Microeconomics, Macmillan Press Ltd.
2. Varian, Micro-Economic Analysis (ed. 3), Norton.
3. Pindyck Robert S. and Daniel L. Rubinfeld, Micro Economics, Third Edition, Prentice Hall of India, New Delhi.
4. Madala, G.S. and Ellen Miller, Micro Economics, Theory and Applications, McGraw Hill Book Company, New York.
5. Gould, John P., Edward P. Lazear, Micro-Economic Theory, Richard D. Irwin, Inc., Homewood Illinois.
6. Sen Anindya, Micro-Economics: Theory and Applications , Oxford University Press, New Delhi.
7. Tirole J., The Theory of Industrial Organization, Cambridge MIT Press.

PAPER 2: MC. 102 - QUANTITATIVE METHODS FOR BUSINESS

Objective: The objective of the course is to acquaint students with some of the important statistical techniques for managerial decision making. The emphasis will be on their applications to business and economic situations.

UNIT-I

Probability and Probability Distribution: Definitions - Probability Rules ï Application of Probability Rules- Conditional Probability- Bayes theorem- Random Variable and Probability Distributions; Binomial Distribution- Poisson Distribution and Normal Distribution.

UNIT-II

Statistical Estimation and hypothesis testing: Introduction to Hypothesis testing ï Meaning of Population, sample and sampling distribution - parameters and statistics - Central limit theorem - Concept of Standard Error - Confidential limits - Estimation of population parameters - properties of a good estimator - Point and interval estimation ï Hypothesis Formulation and testing procedure - Type I and Type II errors - one tail and two tail tests - Sampling of Attributes - Estimation and testing Number and Proportions of Successes, Difference between two proportions.

UNIT-III

Sampling Variables : Large Samples - Difference between large and small samples - Estimating population mean - testing the significance of Mean - Significance of the difference between means of two samples - Significance between the standard deviations of two samples - Small Samples -âô test - fixing fiducial limits to population mean ï testing the significance of the mean - testing the significance of the difference between two independent means - testing the significance of the difference between two dependent means- F test - meaning - Applications of F test - ANOVA - Assumptions - Procedure - one way and two-way analysis of variance.

UNIT-IV

Statistical Quality Control - Introduction - Chance and Assignable Causes of Variation Uses of SQC - Process Control and Product Control- Control Charts - Control Charts for Variables -X: Chart ï Range chart ï Standard deviation chart - Control charts for attributes - C chart -p chart - np chart. Decision Tree Analysis ï Decision Making under Uncertainties.

Reference Books:

1. Levin, R.I. and D.S. Rubin: Statistics for Management, Prentice-Hall of India.
2. S.C. Gupta : Fundamentals of Statistics, Himalaya Publishing House, New Delhi.
3. Anderson Quantitative Methods for Business Decision, Thomson.

4. Barry Render, Ralph M. Stair Jr., Michael E. Hanna: Quantitative Analysis for Management, Prentice Hall of India.
5. Anderson, Introduction to Management Science: Quantitative Techniques for Decision Making, Thomson.
6. D.C. Sancheti & V.K. Kapoor : Statistics, Sultan Chand & Sons, New Delhi.
7. Sharma, J.K.: Operations Research ï Theory & Applications, Macmillan India Ltd.
8. Gupta, S.P: Statistical Methods, S. Chand & Sons, New Delhi.

PAPER 3: MC. 103 - MODERN ACCOUNTING THEORY & REPORTING PRACTICES

Objective: In view of the convergence of the Indian Accounting Standards with the IFRS, it is desirable to equip the students with the required knowledge of International financial reporting standards and practices. The students are expected to achieve a clear conceptual understanding of the IFRS and possess sufficient knowledge expected out of an expert.

UNIT-I

The Regulatory and Financial Reporting Framework: The International Accounting Standards Board (IASB)-The role and the standard setting process. Progress towards international harmonization. The IASB-Framework for the Preparation and Presentation of Financial Statements; The first time adoption of international financial reporting standards : Objective of financial statements, Qualitative characteristics of financial statements, Elements of financial statements, Recognition and measurement of elements of financial statements, Fair value basis of measurement, Concepts of capital and capital maintenance.

UNIT-II

Elements of financial statements as per International Financial Reporting Standards: (a) Property, plant and equipment (b). Intangible assets inventories (c). Construction contracts (d). Liabilities (e). Financial instruments (f). Provisions and contingencies (g). Employment and post-employment benefits (h). Accounting for tax (i). Accounting for agriculture (j). Share based payment (k). IFRS- 6: Exploration for and evaluation of mineral resources.

UNIT-III

Presentation and additional disclosures as per International Financial Reporting Standards (a). Events after the balance sheet date (b). Earnings per share (c). Related party disclosures (d). Interim financial reporting (e). Effects of changes in foreign exchange rates (f.) Segment reporting.

UNIT-IV

Preparation of external financial reports for single entities as per International Standards (a) Income statements and discontinuing operations (b) Cash flow statements (c) Statement of changes in equity

(d) Preparation of external financial reports for combined entities and joint ventures (e) Definitions of subsidiaries, investments in associates and joint ventures (f) Exclusions from consolidations (g) Preparation of consolidated balance sheets and income statements (h) Equity accounting (i) Proportionate consolidation and joint ventures.

Reference Books:

1. Elliott, B. & Elliott, J. (2008), Financial Accounting and Reporting. 12th ed. Harlow: Pearson/Prentice Hall.
2. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting. London: Bloomsbury.
3. S. Agarwal, Manual of Accounting Standards, Snow White.
4. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.
5. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
8. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.

PAPER 4: MC. 104 - ORGANISATION THEORY AND BEHAVIOUR

Objective: The objective of the course is to develop a theoretical understanding among students about the structure and behavior of organization as it develops over time. The course will also make them capable of realizing the competitiveness for firms.

UNIT-I

Organizational Theories and Behaviour: Classical, Neo - classical and Contemporary. Authority, Power, status, formal and informal structure. Flat and Tall structures. Bureaucratization of organizations. Organizational Behaviour Concepts, determinants, models, challenges and opportunities of OB. Transaction cost and organizational behaviours. Contributing disciplines to the OB. Individual Behaviour: Foundations of individual behaviour, values, attitudes, personality and emotions. Theory X and Theory Y, Chris Argyris behaviour patterns, Perceptual process.

UNIT-II

Group Decision making and Communication: Concept and nature of decision making process, Individual versus group decision making, Nominal group technique and Delphi technique, models of communication, communication effectiveness in organizations. Feedback, TA, Johari Window. Motivation: Need hierarchy, Maslowôs Need Hierarchy, Two factor theory, Contemporary theories of motivation (ERG, Cognitive evaluation, goal setting, and equity) expectancy model. Behaviour modification, Motivation and organizational Effectiveness.

UNIT-III

Leadership, Power and Conflict: Concept and theories, Behavioral approach, Situational approach, Leadership effectiveness, Contemporary issues in leadership. Power and conflict. Bases of Power, power tactics, sources of conflict patterns, levels and conflict resolution strategies. Transactional Analysis (TA) - Work Stress.

UNIT- IV

Organizational Culture, Organizational Development and Stress Management: Concept and determinants of organizational culture, Organizational Development: Concept and intervention techniques. Individual and organizational factors to stress, Consequences of stress on individual and organization, management of stress. Case Studies: Some cases of real business world are required to be discussed.

Reference Books:

1. Stephen Robbins, Organisational Behaviour, Pearson Education.
2. Fred Luthans, Organizational Behavior, McGraw Hill.
3. Wagner, Organizational Behavour, Thomson Learning.
4. S.S. Khanka, Organisational Behaviour, S.Chand & Co., New Delhi .
5. Dr. S. Shajahan & Linu Shajahan, Organisational Behaviour, New Age International Publishers, New Delhi.
6. Hellriegel, D & J.W. Slocam, Organizational Behavior, Thomson Learning.
7. McSchane, Organization Behavior, TMH.
8. New Storm Davis Organisation Behavior, THM, New Delhi.
9. Slocum, Fundamentals of Organizational Behavior, Thompson Press (Indian Edition).

PAPER 5: MC. 105 - MARKETING MANAGEMENT

Objective: The objective of the course is to familiarize the students with the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm.

UNIT-I

Introduction to Marketing Management**;** Marketing - Meaning and approaches, Role of Marketing in Organizations, 4Ps & beyond, Marketing Challenges, Marketing Process and Marketing Planning, Marketing information system.

UNIT –II

Analyzing Market Opportunities ; Analyzing the Marketing Environment- Economic, Demographic, Social, Cultural, Technical, Political & Legal Buying Behaviour- Consumer, Business & Industrial Measuring and Forecasting Market Demand.

UNIT –III

Product management**:** Product - Meaning and Classifications, New Product Development. Managing Product Life Cycles, Brand Strategies and Management. Managing Service - Idea, Institution, Person, Place and Event.

UNIT–IV

Pricing, Distribution and Promotion Pricing- Influencing factors, Approaches, Strategies and Programmes. Channels of Distribution and Logistics. Promotion Strategies - Advertising, Sales Promotion & Public Relations.

Reference Books:

1. Kotler, Philip: Marketing Management Analysis, Planning Implementation and Control (Prentice Hall of India, N. Delhi, 2005).
2. Kotler, Keller, Koshy & Jha: Marketing Management, Pearson Education, N. Delhi.
3. Stone, Marilyn A. & John, Desmond: Fundamentals of Marketing, Routledge, UK.
4. Kumar and Minakshi, Marketing Management, Vikas Publ. House, New Delhi.
5. Kurtz : Principles of Marketing, Cengage Learning India Pvt. Ltd., New Delhi.
6. Stern, Luis W. & El-Ansary, Adel I: Marketing Channels, Prentice Hall of India, N. Delhi.
7. Markin, Ram: Marketing Strategy and Management, John Willey & Sons.
8. Kelly, E.J.& Lazer, William: Managerial Marketing ï Perspectives, Richard D. Irwin Inc, Illinois.

PAPER 6: MC. 106 - MANAGEMENT INFORMATION SYSTEM

Objective: The objective of the paper is to offer a comprehensive overview of Management information systems (MIS). It will explore technical, strategic and tactical issues related to MIS. Basic concepts in analyzing and designing information systems will be presented.

UNIT-I

MIS Definition - Characteristics - Evolution of MIS: Concepts; framework for understanding and designing MIS in an organization; MIS and other related disciplines: MIS and Management Accounting,

MIS and Computer Science, MIS and OR, MIS and Organizational Behavior, MIS and Management. Concept of information : definition, features, types, process of generation and communication; quality of information; information overload; techniques for managing overload; summarizing; filtering; inferences and message routing. System concepts : definition, types and characteristics of system-control in systems: feedback: positive and negative; negative feedback control system, input, process and output control; law of requisite variety.

UNIT-II

Structure of MIS: Basic structural concepts: formal and informal information systems; public and private information systems; multiple approaches to the structure of MIS: Operational elements (physical components, process, outputs for users), activity subsystems, functional subsystems and decision support ï synthesis of multiple approaches into a conceptual structure for MIS.

UNIT-III

Information systems: Transaction Processing Systems, Office Automation Systems, Information Reporting Systems, Decision Support Systems, Executive Support Systems, Expert systems.

UNIT-IV

Systems Development and Implementation: System development methodologies; SDLC approach; prototyping approach and user development approach - Systems Analysis; Systems Design; Concepts of database and database design; system implementation; management of information system projects; system documentation ï information system audit. Security of information resources; threats to information resources; security systems for risk management. Enterprise Resource Planning Systems ï Features-ERP Modules - implementation of ERP.

Reference Books:

1. OôBrien, James A: Management Information Systems, Tata McGraw Hill, New Delhi.
2. George M. Scott: Management Information Systems, McGraw Hill Book Company, New Delhi.
3. Schultheis, Robert and Summer, Mary: Management Information Systems, Tata McGraw Hill, New Delhi.
4. Gordon B Davis, et. El: Management Information Systems, Prentice Hall of India, New Delhi.
5. Kenneth C.Laudon and Jane P. Laudon: Management Information Systems ï Managing the Digital Firm, Pearson Education Asia, New Delhi.
6. Effy Oz, Management Information Systems, Vikas Publishing House, New Delhi.
7. Haag, Cummings and Mccubbrey: Management Information Systems for the Information Age, Tata McGraw Hill, New Delhi.
8. Post, Gerald V and Anderson, David L: Management Information Systems, Tata McGraw Hill, New Delhi.
9. Alex Leon: Enterprise Resource Planning ï Tata McGraw-Hill, New Delhi.

PAPER 7: MC. 107 - WORKSHOP ON IT APPLICATIONS IN COMMERCE

(For Regular Students studying in Colleges/University Department Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas - An Overview of Management Science and Quantitative Analysis: The Management Science Process - Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet- Understanding basic features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios - Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database-features- components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing- Data mining. Features of RDBMS -Database design and application development ï Tables- creation- relationships- Forms designing forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (e) Presentation session of the students on the assigned project.

Reference Books:

1. Hoffer, Jeffrey A, Marry B. Prescott, and Fred R. McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi.
3. Novathe and Elmasri: Fundamentals of Database Systems, Addison Wesley.

4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.

5. Ullmann, Jeffry D, Principles of Database Systems, Galgotia, New Delhi.

6. Post, Gerald V., Database Management Systems, Tata McGraw Hill.

7. Stephan G Powell and Kenneth R Baker Management Science, Art of Modeling with Spread Sheets, Wiley India(p) Ltd., New Delhi.

8. Elmasri and Nawathe- Fundamental of Database Systems, Pearson Education Asia, New Delhi.

PAPER 7: MC. - 107A - IT APPLICATIONS IN COMMERCE

(For USOL Students Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas- An Overview of Management Science and Quantitative Analysis: The Management Science Process-Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet - Understanding Basic Features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios- Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database ï features - components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing-Data mining. Features of RDBMS -Database design and application development ï Tables- creation-relationships- Forms designing, forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Reference Books:

1. Hoffer, Jeffrey A, Marry B.Prescott, and Fred R.McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi .
3. Novathe and Elmasri : Fundamentals of Database Systems, Addison Wesley.
4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.
5. Ullmann, Jeffry D. : Principles of Database Systems, Galgotia, New Delhi.
6. Post, Gerald V. : Database Management Systems, Tata McGraw Hill.
7. Stephan G Powell and Kenneth R Baker : Management Science ï Art of Modeling with Spread Sheets - -, Wiley India (P)Ltd., New Delhi.
8. Elmasri and Nawathe : Fundamental of Database Systems- Pearson Education Asia, New Delhi.

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SEMESTER-II

PAPER 1: MC. 201 - BUSINESS ENVIRONMENT

Objective: The objective of the course is to acquaint students with the concepts of macro ï economics and the macro environment in which a business organization operates. The course would also make the student capable of analyzing and understanding the macro economic policies of the government implemented from time to time and assess their impact on business.

UNIT-I

Business Environment: Cultural, social, political, technological, economic and legal environment - scanning - techniques of environmental forecasting - SWOT ï Internal environment - their impact on policy formulation.

UNIT-II

Economic reforms in India - Liberalization - privatization and globalization ï Competitive Strength of Indian industry - Impact of liberalization policy on different sectors ï Foreign Investments policy in India. Multi-national corporations - Their participation in India ï Their strategies, competitive strengths policies and performance.

UNIT-III

Industrial Policies: A brief review of industrial policies since independence, Industrial policy of 1991 and recent developments, Policy on foreign direct investment in Indian industry. Fiscal Policy: Public revenues, public expenditure, public debt, development activities financed by public expenditure, an evaluation of recent fiscal policy of Government of India ï Monetary Policy: Demand for and supply of money, Objectives of monetary and credit policy, recent trends - Role of Finance Commission. Integration of Worldôs economies and its impact on Indian Business.

UNIT-IV

Money and Capital market: Features and components of Indian Financial system, objectives, features and structure of Money market and capital market, recent developments - Stock Exchanges, Investor Protection and Role of SEBI. Legal Framework: Consumer Protection Act, 1986, Right to Information and Right to Service Acts and its implications for business.

Reference Books:

1. Wheelen, Concepts of Strategic Management and Business Policy, Pearson Education, New Delhi.
2. William Gluck & L R Jauch, Business Policy & Strategic Management, McGraw-Hill., New Delhi.
3. Kazhmi Azhar , Business Policy, TMH.

4. Gupta, Liberalisation - Its Impact on Indian Economy, Macmillan.
5. K.V.Sivayya and VBM Das: Indian Industrial Economy, Sultan Chand Publishers, Delhi.
6. Suresh Bedi: Business Environment, Excel, New Delhi.
7. Francis Cherunilam: Business Environment - Text & Cases, Himalayan Publishing House, Mumbai.
8. M. Adhikari: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
9. Prof. Laxmi Narain : Globalization , Liberalization and Privatization of Public Enterprises, Sultan Chand & Co., New Delhi.
10. Pandey, G.N., Environmental Management, Vikas Publishing House.

PAPER 2: MC. 202 - RESEARCH METHODOLOGY IN COMMERCE

Objective: The objective of this paper is to impart knowledge about various stages of the research processes and their application in Commerce and Management Education.

UNIT-I

Introduction: - Meaning of the Research ï Qualities of a research worker ï Scientific Method ï Definition ï stages of scientific study ï Different steps in scientific study ï Logical Methods ï Inductive & Deductive Methods ï Nature of the Phenomena & the use of the scientific methods. Approach to a Research Project **:-** Purpose of Research ï Functions in Research ï Research Programme ï Problem solving through research /financial aspects of research ï Research Design (Selective topic, Coverage, Hypothesis) ï Sources of Information ï Nature of study ï Definition of terms ï Techniques of study ï Collection, Analysis & presentation of the data ï Testing hypothesis ï Stating results.

UNIT-II

Use of the Library: - Finding the correct sources of information ï Uses of books, periodicals & encyclopedia ï Taking down notes ï Collection & organization of Material. Research Method :- Sampling Method ï Observation Method ï Case Study Method ï Interview Method ï Survey Method ï Experimental Method ï Questionnaire Method - Library Method ï Documentary Method ï Suitable Combination & Selection of Method ï advantages, disadvantages & limitations of methods.

UNIT-III

Presentation of Information:-Analysis of information ï Classification, tabulation & interpretation ï Presentation of data & its application ï Pictorial presentation ï Composition of information (quotation, footnotes, bibliography - tables, standards, abbreviations) - style of writing. Coordinating contents :- Front matter (blank sheet, title page, dedication, preface, table of contents, list of tables, list of figures, list of appendices etc.) ï Text proper (Chapter wise information) ï Back matter (appendices, glossary, bibliography, index, blank sheet).

UNIT-IV

Multivariate analysis ï an overview of dependence and interdependence methods (multiple regression, discriminate analysis, conjoint analysis, factor analysis, cluster analysis); research report; ingredients and constructions of research report ï procedure of preparation of reference and bibliography. Research Findings and Preparation and writing of a Research Report: - Benefits of implementation of actual research findings ï carrying forward the studies ï Management of research unit ï Preparation and writing of a ôResearch Reportô.

Reference Books:

1. Methods of Social Survey and Research, S. R. Bajpai, Kitab Ghar, Kanpur.
2. Zikmund, Millian G., Business Research Methods, Thomson Learning, Bombay.
3. Cooper, Donald R. and Pamels Schindler, Business Research Methods, Tata McGraw Hills, New Delhi.
4. Geode, Millian J. & Paul K. Hatl, Methods in Research Methods, Tata McGraw Hills, New Delhi.
5. Shekhran, Uma, Business Research Method, Miley Education, Singapore.
6. Kothari, C.R., Research Methodology- Methods and Techniques, New Age International Publishers.

PAPER 3: MC. 203 - FINANCIAL MANAGEMENT AND POLICY

Objective: The objective of the course is to acquaint the students with the basic analytical techniques and methods of financial management of business firms. The course also provides students the exposure to certain sophisticated and analytical techniques that are used for taking financial policy decisions.

UNIT-I

Financial management - Scope, finance functions and its organization, objectives of financial management; time value of money; sources of long term finance. Financial Forecasting: Sales Forecast Preparation of Performa Income Statement and Balance Sheet Growth and External Funds Requirement (EFR).

UNIT- II

Investment decisions; importance, difficulties, determining cash flows, methods of capital budgeting; risk analysis (risk adjusted discount rate methods and certainly equivalent methods) cost of different sources of raising capital; weighted average cost of capital.

UNIT- III

Capital Structure decisions - Leverage: Measuring and analyzing the implications of Leverage Operating Leverage, Financial Leverage and Total Leverage; capital structure theories - NI, NOI, traditional and M-M theories; Capital Structure Policy: Business & Financial Risk, A Total Risk Perspective Business & Financial Risk, A Market Risk Perspective Determinants of Capital Structure Decision Approach to Estimating the Target Capital Structure Variations in Capital Structures, EBIT / EPS Analysis and ROI/ROE Analysis.

UNIT- IV

Determinants of dividend models - Walter, Gordon & M.M. models. Working Capital ï Meaning, need, determinants; estimation of working capital need; management of cash; inventory & receivable.

Reference Books:

1. Pandey, I.M. Financial Management, Vikas Publishing House, New Delhi.
2. Khan M.Y. and Jain P.K. Financial Management, Tata McGraw Hill, New Delhi.
3. Keown, Arthu J., Martin, John D., Petty, J. William and Scott, David F., Financial Management, Pearson Education.
4. Chandra, Prasanna, Financial Management, TMH, New Delhi.
5. Van Horn, James C., Financial Management and Policy, Prentice Hall of India.
6. Brigaham & Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.
7. Kishore, R., Financial Management, Taxmans Publishing House, New Delhi.

PAPER 4: MC. 204 - PRODUCTION AND MATERIALS MANAGEMENT

Objective: To impart knowledge regarding production and management techniques, process, tools, and acquaint the students with the knowledge of marketing functions, techniques and strategies.

UNIT-I

Introduction to Production Management - Nature, Scope, Importance and Functions Materials Management - Evolution, Importance, Scope and Objectives - Interface with other functions. Introduction of Inventory Control, Static Inventory problem under risk. Dynamic Model under risk, policy coordinated, Replacement with discount. Introduction to purchasing, Functions of purchasing, procedure of purchasing, Selection Sources of Supply, Negotiation with Suppliers.

UNIT-II

Price determination; Price Cost Analysis, Quality determination and control value analysis. Scope & functions of operations management, Forecasting of demand. Delphi. Methods, Statistical Quality Control Technique.

UNIT-III

Facilities Location & Layout ï Strategic importance - Factors affecting location & layout - Installation of facilities ï Single location, multi-location decisions. Principles and Types of Facilities Layout. Importance and Functions of Production Planning & Control. Introduction to PERT / CPM - Network Crashing.

UNIT-IV

Productivity - Work Study - Objectives, Scope and Uses - Methods Study ï Flow process chart, Flow diagram & Process mapping - Work Measurement - Elements ï Performance Rating - Allowances - Standard Time - Synthetic Time Standards ï Work Sampling.

Reference Books:

1. Alan Mulemann, John Oakland, Keith Locker, ôProduction and Operations Managementô Macmillan India Ltd.
2. Datta, A.K., Materials Management : Procedures, Text and Cases, Prentice Hall of India.
3. Gaither, Operations Management , Thomas Learning.
4. S.A. ShunwalIa *&* Patel, Production and Operations Management, Himalaya Publishing.
5. R. Panneerselvan, Production and Operations Management, Prentice Hall of India.
6. P. Saravanavel, S. Sumathi, Production and Materials Management, Margham Publication.
7. Mukhoipadhyay, Production Planning and Control, TMH.

PAPER 5: MC. 205 - OPERATIONS RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operations Research: Evolution, methodology and role in decision making; Linear programming: Meaning, assumptions, advantages, scope and limitations: Formulation of Problem and its solution by graphical and simplex methods (Including Big M Method and Two Phase Simplex Method); special cases in simplex method; infeasibility, degeneracy, unboundedness and multiple optimal solutions; duality. Dual Simplex Method.

UNIT-II

Transportation problems including transshipment problems; Special cases in transportation problems; unbalanced problems, degeneracy; maximization objective and multiple optimal solutions; assignment problems including travelling salesmanôs problem. Special cases in assignment problems; unbalanced problems, maximization objective and multiple optimal solutions.

UNIT-III

PERT/CPM: Difference between PERT and CPM, network construction, calculating EST, EFT, LST, LFT and floats, probability considerations in PERT, time cost trade off. Decision theory: decision making under uncertainty and risk, Bayesian analysis, decision trees. Replacement problem (Individual and Group replacement problems both).

UNIT-IV

Game theory, pure and mixed strategy games; principle of dominance; two person zero sum game; Queuing theory: concept, assumptions and applications; analysis of queue system, Poisson distributed arrivals and exponentially distributed service time model (MMI and MMK); simulation; meaning, process, advantages, limitations and applications.

Reference Books:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
3. Vohra, N.D., Quantitative Techniques in Management, Tata McGraw Hills Publishing Company Ltd., New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

PAPER 6: MC. 206 - BUSINESS POLICY & STRATEGIC MANAGEMENT

Objective: The objective of the course is to help the students develop an understanding of the basic inputs in making and implementing corporate strategic decisions and also familiarize them with the issues and practices involved.

UNIT-I

Strategic Management - An Introduction - Evolution of business policy as a discipline - Strategy and the

Quest for Competitive Advantage: Military origins of strategy ï Evolution - Concept and Characteristics of strategic management ï Defining strategy ï Mintzerbgôs 5Ps of strategy ï Corporate, Business and Functional Levels of strategy - Strategic Management Process.

UNIT-II

Strategic Options Porterôs Generic Strategies Integration Strategies, Intensive Strategies. Diversification and Differentiation Strategies, Functional Strategy - Manufacturing, Financial, Marketing, Human Resource, Research & Development. Strategic Intent & Strategy Formulation: Vision, mission and purpose ï Business definition, objectives and goals ï Stakeholders in business and their roles in strategic management ï Corporate Social Responsibility, Ethical and Social Considerations in Strategy Development.

UNIT-III

Strategy implementation - Project implementation ï Procedural implementation ï Resource Allocation ï Organization Structure ï Matching structure and strategy. Behavioral issues in implementation ï Corporate culture ï Mc Kinseyôs 7s Framework - Concepts of Learning Organization. Strategy Evaluation - Importance - Symptoms of malfunctioning of strategy - Organization anarchies - Operations Control and Strategic Control - Measurement of performance - Analyzing variances - Role of organizational systems in evaluation.

UNIT-IV

New Business Models and strategies for Internet Economy: Shaping characteristics of E-Commerce environment ï E-Commerce Business Model and Strategies ï Internet Strategies for Traditional Business ï Key success factors in E-Commerce ï Virtual Value Chain. Cases in strategic management. A minimum of 10 cases encompassing the above topics to be analyzed and discussed in the class. Cases to be incorporated in the Question Paper.

Reference Books:

1. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting & Executing Strategy ï The Quest for Competitive Advantage, Tata McGraw Hill.
2. Ranjan Das, Crafting the Strategy: Concepts and Cases in Strategic Management, Tata McGraw Hill.
3. Henry, Mintzberg, Bruce, Ahlstrand and Joseph, Lampel, Strategy Safari, Free Press, New York.
4. Gary, Hamel and Prahalad, C. K.. Competing for the Future, HBS Press.
5. Ed. C.A. Montgomery, M.E. Porter, Strategy ï Seeking and Securing Competitive Advantage, Harvard Business Review Publications.
6. Peter F. Drucker, Managing in a Time of Great Change, Truman Talley Books/Plume Penguin Group.
7. Kazmi, A, Business Policy and Strategic Management, Tata Mcgraw Hill, New Delhi.
8. Wheelen, T.L. and Hunger, J.D, Strategic Management and Business Policy, Pearson Education, (LPE), New Delhi.

Paper 7: MC. 207- SUMMER TRAINING REPORT AND VIVA VOCE

(For Regular Students Only)

After the Completion of Second Semester Examination the students will go on 6-8 Weeks summer training in various Industrial undertakings, banking and financial services institutions, and Retail Sector organizations, undertake a project there to study a particular problem and file three copies of summer training report within 15 days completion of the training. The student has to file a certificate of completion of training issued by training organization. A VIVA-VOCE Examination will be conducted by the External examiner appointed by the University on the problems undertaken in the summer training report. Principal of the College/Chairperson of the Department must appoint one internal supervisor for the guidance of the student regarding the Summer Training Project. The List of the internal supervisors so appointed must be communicated to the Controller of examination within 10 days from the date of appointment. The Internal supervisor will also be acting as Internal Examiner at the time of Conduct of VIVA-VOCE and sit with External Examiner.

PAPER 7: MC. 207-A - ENTREPRENEURSHIP DEVELOPMENT & PROJECT MANAGEMENT

(For USOL Students Only)

Objective: The purpose of this paper is to prepare a ground where the students view Entrepreneurship as a desirable and feasible career option. In particular the paper seeks to build the necessary competencies and motivation for a career in Entrepreneurship.

UNIT-I

Foundations of Entrepreneurship Development: Concept and Need of Entrepreneurship Development, Definition of Entrepreneur, Entrepreneurship, Innovation, Invention, Creativity, Business Idea, Opportunities through change. Concepts of Entrepreneur, Manager, Intrapreneur / Corporate Entrepreneur ï comparative study - Roles, Responsibilities, Career opportunities. Entrepreneurship as a career, Entrepreneurship as a style of management, The changing role of the entrepreneur: mid career dilemmas ï Closing the window: Sustaining Competitiveness - Maintaining competitive advantage.

UNIT-II

Theories of Entrepreneurship: Innovation Theory by Schumpeter & Imitating Theory of High Achievement by McClelland ,X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen Influences on development.

UNIT-III

Project Management Technical, Financial, Marketing Personnel and Management feasibility Reports Financial schemes offered by various financial institutions like Commercial Banks, IDBI, ICICI, SIDBI, SFCs, Venture Capital Funding, Angle Capitalist.

UNIT-IV

Entrepreneurship Development and Government Role of Central Government and State Government in promoting Entrepreneurship with various incentives, subsidies, grants etc. ï with special reference to ôExport oriented unitesô Role of the following agencies in the Entrepreneurship Development DIC ï District Industrial Center, SISI ï Small Industries Services Institute, EDII ï Entrepreneurship Development Institute of India NIESBUD ï National Institute of Entrepreneurship and Small Business Development. NEDB ï National Entrepreneurship Development Board.

Recommended Books:-

1. Brandt, Steven C., The 10 Commandments for Building a Growth Company, Macmillan Business Books, Delhi.
2. Bhide, Amar V., The Origin and Evolution of New Business, Oxford University Press, New York.
3. Dollinger M.J., ôEntrepreneurship Strategies and Resourcesô, 3rd edition, Pearson Education, New Delhi.
4. Desai, Vasant Dr., Management of Small Scale Enterprises, Himalaya Publishing House, New Delhi.
5. Taneja, Gupta, Entrepreneur Development New Venture Creation, 2nd ed., Galgotia Publishing Company.
6. Holt, David H., Entrepreneurship: Strategies and Resources, Illinois, Irwin.
7. Panda, Shiba Charan, Entrepreneurship Development, New Delhi, Anmol Publications.
8. Patel, V.G., The Seven Business Crises and How to Beat Them, Tata-Mcgraw, New Delhi.

OR

PAPER 7: MC. 207-B - FINANCIAL SERVICES

(For USOL Students Only)

Objective: To provide insight to the structure, working and problems of financial, system in India as well as to enable students to appreciate and understand the concepts, mechanism and utility of different financial services.

UNIT – I

An overview of Indian financial system: Introduction, structure, components and mechanism of the financial system. Financial Services: An overview. Introduction to SEBI.

UNIT–II

Merchant Banking: Functions and SEBI regulations and Non Fund-based and Fund-based activities including role in mobilization of funds. Depository Services in India (including regulatory aspects).

UNIT–III

Leasing - Introduction, financial evaluation of lease from lessorôs and lesseeôs point of view, lease structuring, Tax, legal and accounting aspects especially in Indian context. Factoring: Features, process and agreement for factoring.

UNIT–IV

Mutual Fund: Introduction, management, regulations, working, and Indian experiences. Credit Rating: Concepts, functions and process of debt rating and SEBI regulations.

REFERENCES:

1.	L.M. Bhole	Financial Institutions and Markets
2.	J.C. Verna	Merchant Banking Organisation and Management
3.	Lalit K. Bansal	Merchant Banking and Financial Services
4.	M.Y.Khan	Financial Services
5.	V.A. Avadhani	Investment and Securities Markets in India.
6.	S. Ramesh & Arun Gupta	Venture Capital and Indian Financial Sector.

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SEMESTER-III

PAPER 1: MC. 301 - BUSINESS PERFORMANCE MEASUREMENT

Objective: The objective of this paper is to make the students familiar with the performance measurement techniques for business.

UNIT-I

Corporate Performance Measurement - Need and Importance; Historical Overview; Product Costing in price estimates and profit management; Techniques to measure and enhance profitability and quality of products and services; Activity Based Management, Target and Kaizen costing; benchmarking and environmental costing; Flexible Budgeting, and Activity Based Budgeting.

UNIT-II

Setting of performance goals and incentives, and the use of diagnostic tools and control; systems to achieve the goals; Strategic Profitability Analysis; Measuring performance using Economic Value Added (EVA) methodology; Comparison between Return on Investment (ROI) and EVA methodology of measuring performance.

UNIT-III

Measurement of Corporate Performance through Balanced Scorecard and its value creation potential;. Rationality behind balance score card; performance dimensions of the balance score card; Throughput Accounting; Comparison of Activity Based Costing.

UNIT-IV

Information Systems aspects of management control; Control-needs of Information flow, and its consolidation in multi-locational setting; Management Control System and its applications; Responsibility Accounting - Meaning and Methodology, types of responsibility centres, organizational structure of responsibility centres; objectives and methods of transfer pricing, pricing corporate services and administration of transfer pricing.

Reference Books:

1. Anthomu, R.N. and Govindrajan, V., Management Control System, Tata McGraw-Hill New Delhi.
2. Atkinson, A., R.S. Kaplan and S.M. Young, Management Accounting (4th ed). New Jersey: Prentice Hall
3. Friedlob, George T, Lydia, L.F., Essentials of Corporate Performance Measurement, John Wiley and Sons inc.
4. Manzoni, Alex, Islam Sardar, M.N, Performance Measurement in Corporate Governance, Springer
5. Simon, R., Performance Measurement and Control System for Implementing strategy-Text and Cases, Prentice Hall
6. Merchant, K and Van-der-stede, W.A., Management Control System: Performance Evaluation and Incentives, Prentice Hall.
7. Marvin T. Howell, Actionable Performance Measurement - A Key to Success, American Society for Quality, Quality Press, Milwaukee.
8. Merchant, K.A., Modern Management Control System: Text and Cases, Pearson Education Inc.

PAPER 2: MC. 302 - TAX PLANNING AND MANAGEMENT

Objective : The aim of this course is to familiarize the student with major latest provisions of the Indian tax laws and related judicial pronouncements pertaining to corporate enterprises having implications for various aspects of Corporate planning with a view to derive maximum possible tax benefits admissible under the law.

UNIT-I

Structure of Direct and Indirect Taxes in India. Concepts, Significance and Problems of Tax Planning, Tax Avoidance and Tax Evasion ï Recognized methods of Tax Planning : Ensuring maximum claims for deduction for companies with special emphasis on depreciation allowance, expenses of scientific research, amortization of preliminary expenses and amounts not claimed otherwise. Taking advantages of available reliefs, rebates and tax free sources of income.

UNIT-II

Definition of various kinds of companies - Meaning of company under IT Act. Residential status of companies and implications for Tax Planning. Assessment of companies including carry forward and set off of losses.

UNIT-III

Tax implications in planning of business unit as Proprietorship, Partnership, Pvt. Ltd. & Public Ltd. Tax planning in the context of exemptions, incentives, export promotions & various deductions under Chapterï VI of Income Tax Act. Setting up of a new Industrial Establishment: location aspects; nature of business; planning for tax holiday benefits. Specific management decisions such as (1) make or buy; (2) own or lease, (3) repair or replace; (4) export vs. local sale; (5) shut down or continue; (6) expand or contract.

UNIT-IV

An overview of goods and service tax: Introduction to GST, reasons for introducing GST, pros and cons of GST. Registration procedure of trader / service provider under GST. Levy and collection of CGST/SGST under GST. Composite levy scheme of GST. Levy and collection of IGST. Input tax credit and relief to consumers and traders under GST. Applicable rates of tax on various goods and services under GST.

Reference Books:

1. Singhania, V.K.: Direct Taxes: Laws and Practice , Taxman N. Delhi.
2. Singhania, V.K. : Direct Tax planning and Management Taxman N. Delhi.
3. Prasad, Bhagabati: Direct Tax Law & Practice, New Age Publ., N. Delhi.
4. Merhotra, H.C.: Direct Taxes Planning, Sahitya Bhavan, Agra.
5. Srinivas, E.A.: Corporate Tax Planning, TMG, New Delhi.
6. Lakhotia, R.N. Corporate Tax Planning, Vision Publications, N. Delhi
7. Ahuja, Girish & Gupta, Ravi: Systematic Approach to Income tax.
   Goods and Service Tax Act,2017

SEMESTER-III (ELECTIVES)
GROUP A: MARKETING

MC. 303 - INTEGRATED MARKETING COMMUNICATION & BRAND EQUITY

Objective: The objective is to introduce the students to the integrated role of promotion techniques with the special emphasis on advertising.

UNIT-I

Marketing communication; functional areas of marketing communication; integrated marketing communication; types of advertising agencies; media partners and their role; compensating the advertising agencies; agency evaluation; brands - its meaning; creating and maintaining the brand; selecting desired brand position; developing brand identification; creating a brand image; creating and maintaining brand relationship with customers; brand-customer touch points; prospects and customers; AIDA model; think/feer/do models; brand decision making process; attitude formation and attitude change; brand likeability.

UNIT-II

Branding concepts; branding challenges and opportunities; brand equity concept; strategic brand management process; customer based equity; building a strong brand and its implications; identifying and establishing brand positioning; defining and establishing brand values; internal branding.

UNIT-III

Campaign planning; IMC planning process; internal marketing; segmenting and targeting; types of segmentation; message and profitability targeting; digitization of brand information; customer database; building relationship through data management; developing creative message strategy; process of developing IMC message strategy; methods of getting creative ideas; brand-message execution; copywriting; writing for point and electronic media; print layout and design; executional and strategic consistency.

UNIT-IV

Media classification; media strength and weakness; wireless communication; e-mail marketing; website marketing; integrating online brand communication; media planning; consumer sales promotion; sales promotion tools; determining consumer sales promotion strength and limitations of sales promotion; trade promotion; trade promotion for new products and existing brands; trade promotion strategies; objectives of co-marketing communication.

Reference Books:

1. Duncan, Tom; Principles of Advertising and IMC; Tata McGraw Hill, New Delhi.
2. Clow, Kenneth & Baack, Donald; Integrated Advertising, Promotion and Marketing Communication; Pearson Education, New Delhi.
3. Belch, George and Belch, Michael; Advertising and Promotion; Tata McGraw Hill, New Delhi.
4. Wells, William, Burnett, John ad Moriarty, Sandra; Advertising Principles and Practice; Pearson Education; New Delhi.
5. Jethwaney, Jaishree and Jjain, Shruti; Advertising Management; Oxford University Press; New Delhi.

MC. 304 - MARKETING RESEARCH

Objective: The course aims at exposing the students to the concept, tools and techniques of marketing research and developing their skills to be able to apply research techniques to aid marketing decision making.

UNIT I

Introduction : Meaning, nature and importance of marketing research; Marketing research and scientific method; Research reliability and validity; Problems in conducting marketing research; Marketing Information System (MIS); Ways of conducting marketing research; Syndicated research. Marketing Research Process: Steps involved in conducting marketing research; Problem identification; Determining information needs; Developing marketing research proposal.

UNIT II

Research Design : Meaning and importance; Types of research designs ï explorative, descriptive and conclusive researches; Secondary data ï sources, uses and limitations; Primary data collection methods ï questioning techniques and observation methods; Online data sources and research; Questionnaire preparation. Sample Design and Field Work : Defining universe and sampling unit; Determining sampling frame; Probability and non - probability sampling methods; Sample size determination; Field work and data collection ï sampling and non-sampling errors.

UNIT III

Data Analysis and Report Preparation: Data editing, coding tabulation and graphical presentation; Univariate and multivariate data analyses techniques and their applications in marketing research; Report preparation, presentation and follow - up. Marketing Research Applications: Consumer research ï behaviour and motivation research, attitude measurement and scaling techniques.

UNIT IV

Product research; Advertising research; Marketing and sales forecasting; Sales analysis. Marketing Research in India: Status, organization and developments; Ethical issues in marketing research.

Suggested Readings:

1. Harper W. Boyd, Ralph Westfall and Stanley F. Stasch, Marketing Research: Text and Cases.
2. Malhotra, Naresh K., Marketing Research, 5th Ed., Prentice Hall of India.
3. Cooper, Donald R. and Pamela S. Schindler, Marketing Research, Tata McGraw Hill.
4. Paul E. Green, et.al., Research for Marketing Decisions, Prentice-Hall of India Pvt. Ltd, New Delhi.
5. Donald S. Tull and Del I. Hawkins, Marketing Research: Measurement and Methods, Prentice-Hall of India Pvt. Ltd., New Delhi.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 305 – HUMAN RESOURCE DEVELOPMENT

Objective: The objective of the course is to make student aware of the concepts, techniques and practices of human resource development. This course is intended to make students capable of applying the principles and techniques as professionals in organizations they work for.

UNIT I

Human resource development: Concept and evolution, human resource mobilizations, HRD Conceptual base, strategic interventions in HRD sector and target groups, HRD mechanisms, processes and outcomes, HRD instruments, HRD. HRD and Management: Attitude of top management towards HRD, Motivational aspects of HRD, Trends and Practices, Line manager and HRD.

UNIT II

HRD Activities: HRD culture and climate, Elements of HRD climate, measurement of HRD climate, factors to HRD climate, Determinant needs, developmental supervisor, HRD for Workers: HRD mechanisms for workers, Role of trade unions.

UNIT III

HRD in Organizations: Government organizations, educational institutions, armed forces, police and industry, private sectors and public sectors units.

UNIT IV

Emerging Issues in HRD: Creating awareness and commitment to HRD, Industrial relations and HRD, Utilization of HRD efforts, Future of HRD, International comparison of HRD (Commonalities and differences).

Reference Books:

1. Werner, Jon M. and Randy L. Desimone, Human Resource Development, South-Western Educational Publishing.
2. Nadler, L (ed), Corporate Human Resources Development, Van Nostrand Reinhold.
3. Parek V. and T.V. Rao, Designing and Planning Human Resource Systems, Oxford and IBH, New Delhi.
4. Strategic HRM ï Jeffery Mello, Thompson Publication, New Delhi.
5. Strategic HRM- Charles Greer, Pearson Education Asia , New Delhi.
6. Strategic HRM-Michael Armstrong, Kogan Page, London.
7. Strategic HRM- Agrwal, Oxford University Press , New Delhi.
8. Human Resource Management- Garry Dessler, PHI, New Delhi.

MC. 306 – INDUSTRIAL RELATIONS

Objective: The objective of the course is to make student aware of the concept of industrial relations. The course will make them understand the importance of industrial relations for an organization and how these relations provide dynamics to organizations.

UNIT I

Industrial Relations: Concepts and scope, Historical development, Unilatarist, Pluralist and Marxist perspective of IR. Trade Unionism: role of trade unions, trade union in India, national level federations, Goals and objectives of unions and union leadership, weaknesses in trade unions, trade unions, politics and government. Theories of trade unionism. Cross cultural aspects of union management relations.

UNIT II

Trade Union Act 1926: An overview. Union recognition; de-unionization strategies. Union Management Relations: conceptual framework, union management perspectives, organizational factors affecting union management relations. Public policies and union management relations, role of state, constitution and labour policies, ILO, Major events and international issues, changes affecting HR/IR perspectives, perspectives in India.

UNIT III

Industrial Democracy: Concepts and scopes of industrial democracy, Workerôs participation: Strategy, practices, behavioral science input/contribution and models. Rationale for participation, Issues in participation, strategies for making participation work and making participation more effective. Methods of industrial relation machinery in India; Statutory and non-statutory methods of industrial dispute resolution; Conciliation, mediation, arbitration and adjudication.

UNIT IV

Comparative Industrial Relations: Principles of comparative analysis, variables of comparative analysis (culture, values, ideologies, politico-economic structure). Experience of UK, Yugoslavia, West Germany, Scandinavian countries and Japan. Managing Industrial Relations: Regulatory mechanisms, employee discipline, suspension, dismissal and retrenchment, employee grievance handling, Collective bargaining, negotiation skills, industrial conflict resolution. Labour Welfare: Rationale need and requirements.

Reference Books:

1. Katz, Harry, Thomas A. Kochan, & A. J.S. Colvin, An Introduction to Collective Bargaining and Industrial Relations, The McGraw Hill Companies.
2. C.S. Venkat Ratnam, Industrial Relations: Text and Cases, Oxford University Press, Delhi.
3. Michael Salamon, Industrial Relations: Theory & Practice , Pearson Higher Education.
4. Farnham and Limlott, J., Understanding Industrial Relations Cassell.

GROUP C : INTERNATIONAL BUSINESS

MC. 307 - INDIA'S FOREIGN TRADE AND INVESTMENT

Objective: The objective of this course is to acquaint the students with structure and policy framework of Indiaôs foreign trade and investments.

UNIT I

Indiaôs Foreign Trade: Pattern and Structure of Indiaôs foreign trade; Indiaôs trade in service; Terms of trade; India on the world trading map; Analysis of thrust export products and markets. Foreign Trade Policy and Economic Relations: Policy making body and regulatory framework; Trends and developments in Indiaôs foreign trade policy; Bilateralism and multilateralism in Indiaôs trade relations; India and WTO, WTO and emerging trading environment, Indiaôs trade and economic relations with EU and other regional groupings; India and regional economic cooperation in South Asia.

UNIT II

Export Promotion Measures and Facilities: Export promotion measures and schemes; Export and trading houses, Import facilities for exports; Export processing/special economic zones (EPZs/SEZs) and 100% EOUs ï Policy framework and operational aspect. Institutional Arrangements and Infrastructure Support: Export promotion councils, Commodity boards/export development authorities; other service organizations; Infrastructure Support ï Transportation and warehousing infrastructure, Indian ports and shipping system.

UNIT III

Procedural and Documentary Framework ï An Overview: Trade operations and documentation; Procedure for getting started in export ï import business. Trade contract and INCO terms; Export payment terms and UCDPC; quality inspection; Excise and customs clearance. Foreign Trade Finance and Insurance: Pre - shipment and post-shipment finance; Sources and schemes of foreign trade finance; Exim Bank and foreign trade finance; Coverage of Credit, transit, commercial and political risks; ECGC and risk coverage.

UNIT IV

Foreign Exchange facilities and Regulations; Foreign exchange facilities and exchange rate mechanism; Regulatory framework ï FEMA and its objectives and provisions; Other acts and regulations. Foreign Investments: Indiaôs foreign investment policy and flows: Indiaôs investments abroad ï pattern and structure; Indian Joint ventures in foreign countries and their operations. Balance of Payment Account: Indiaôs Balance of Payment account and adjustment policies; foreign reserves and debt situation.

Reference Books:

1. Ministry of Commerce, Export Import Policy, Government of India, New Delhi.
2. Ministry of Commerce, Handbook of Procedures, Vols. I and II, Government of India, New Delhi.
3. Customs and Excise Laws, Various issues.
4. Nayyar Deepak, Foreign Trade Sector, Planning and Industrialisation in India, in Terance J. Byres (ed.), The State Development Planning and Liberalisation in India, Delhi.
5. Nayyar Deepak, Indiaôs Exports and Export Policies in 1960, Cambridge University Press. Meier G.M., Trade Policy and Development in Scott Maurice and Deepak Lal.
6. Public Policy and Economic Development ï Essays in Honour of lan Little, Oxford.
7. Nayyar Deepak, Indiaôs Export Performance 1970-85, Underlying Factors and Constraints, in Robert E.B. Lucas and Gustav F. Pipanek (ed.), Indian Economy Recent Development and Future Prospects, New Delhi.

MC. 308 - MANAGEMENT OF INTERNATIONAL BUSINESS OPERATIONS

Objective: The course intends to acquaint the students with the management of international business operations of a business firm.

UNIT I

International Business Management: Complexities and issues; Approaches to international management; Cross -cultural values and business management; Foreign market entry mode decisions and level of international involvement; International management orientation; International business management -A strategic perspective. International Planning: Environmental scanning and monito ring; Resource allocation and portfolio compositions of a global firm; Linkages and synergies among business units across borders; Locus of decision making; Headquarter ï subsidiary relationships in international business enterprises; International management information system.

UNIT II

Organizational and Control Aspects of International Operations: Organizational design and structure of international companies; Managing communication across cultures; Co-ordinating and controlling international business operations. International Production and Procurement: International production and location decisions; Procurement for international operations ï International sourcing World class manufacturing and international quality standards; Supply chain management and global business operations.

UNIT III

International Marketing Management: International Market segmentation, targeting and positioning; International marketing mix planning ï Product, price, promotion and distribution decisions. Management of International Financial Operations; International capital budgeting and portfolio investment decisions; International capital structure decision, International working capital management, International accounting and taxation issues.

UNIT IV

International Human Resource Management: Selection, training and development of people in international firms; Compensation and reward systems among international firms; Motivation and leadership in international firms. International Business Negotiations: Process and skills; Management of International Collaborative Arrangements.

Reference Books:

1. Danoes, John D. Radebaugh, Lee H., and Daniel P. Sullivan, International Business: Environment and Operations, Prentice Hall.
2. Griffin, Ricky W. and Pustay, Michael W., International Business: A Managerial Perspective, Prentice Hal.
3. Hill, Charles, W.L., International Business, McGraw Hill Company, New York.
4. Ball, Donald, Wendall H. McCulloch, Miachel Geringer, Michael S. Minor and Jeanne M. McNett, International Business: The Challenge of Global Competition, McGraw Hill Co.

GROUP D: ACCOUNTING AND FINANCE

MC. 309 - STRATEGIC COST MANAGEMENT

Objective: This course aims to acquaint the students with concepts and various aspects of cost management from strategic perspective.

UNIT-I

Conceptual framework of SCM, environmental influences in cost management practices, role of SCM in strategic positioning; cost management tools-life cycle costing, target costing, kaizen costing, JIT & theory of constraints, BPR and bench marking.

UNIT-II

Nature of activity-based costing (ABC); benefits and limitations of ABC; limitation of volume-based costing system, indicates of ABC; activity hierarchic; cost drivers; designing an ABC system, Activity-based management; operational and strategic application of ABC; customer profitability analysis, process value analysis, financial measures of activity efficiency; Nature of value-chain analysis; activity analysis an linkage analysis; application of linkage analysis in cost reduction and value addition.

UNIT-III

Functional-based planning and control; budgeting ï nature, administration and effectiveness; budgeting cycle; activity-based budgeting; kaizen approach; ZBB; performance budgeting; human aspects of budgeting; responsibility centers and financial control - nature and role of responsibility centers; accounting and evaluation of responsibility centers, measuring the performance of investment centre ï ROI, RI, EVA; transfer pricing and its applications.

UNIT-IV

Strategic-based performance measurement system: Balanced score card-prospective and limitations; establishing objectives and performance measures in different perspectives of balance score card; productivity measurement and control; productivity efficiency; partial and total productivity measurement; measuring changes in activity and process efficiency; quality cost management and reporting.

Reference Books:

1. Drury, Colin, Management Accounting and Control, Thomson Learning.
2. Horngren, Datar Foster, Cost Accounting, Pearson Education.
3. Hansen and Mowen, Cost Mangement, Thomson Learning.
4. Kaplan, Atkinson and Young, Management Accounting, Pearson Education.
5. Kaplan, Atkinson, Advanced Management Accounting, Pearson Education.
6. Anthony, Robert N., and Vijay, Management Control System, McGraw Hill.

MC. 310 - INTERNATIONAL ACCOUNTING

Objective: The objective of this course is to develop some conceptual knowledge and Understanding of international accounting issues among students. In addition, this course makes students capable of tackling issues in prevailing regulatory environments.

UNIT-I

International Dimensions of accounting and control: Multinational enterprise, Inter-nationalisation of capital markets, Internationalization of accounting profession. Operational and conceptual issue. Foreign currency translations, methods and practices.

UNIT-II

Specific Reporting Issues: Regulatory Disclosure Requirements; Foreign Operations Disclosure; Social Responsibility Disclosures. Managerial Accounting Issues: Strategic Planning; Management Control Systems; Performance Evaluation of foreign operations.

UNIT-III

International Accounting Standard Board and International Financial Reporting Standards (IFRS): Advantages, supporting and deterring forces; International and Regional Efforts in Standard Setting; International Standards setting process, Harmonization; Financial Statement Analysis of companies and countries differences in accounting principles, foreign currency statements and Ratio Analysis.

UNIT-IV

Transfer pricing, methods, objectives, strategies. Emerging issues in International Accounting.

Reference Books:

1. Radebaugh L. H. and S.J. Gray, International Accounting, and Multinational Enterprises, John Wiley & Sons.
2. Sandagaran S.M., International Accounting, South Western.
3. Gray, S.J., International Accounting and Transnational Decisions , Butterworth, London, U.K.
4. Holzer H. Peter, International Accounting, Horper and Row Publishers, New York.
5. Frederick D.S. Choi and Gary K. Meek, International Accounting, Pearson Education.
6. Shirin Rathore, International Accounting, Prentice Hall of India.

GROUP E: APPLIED ECONOMICS

MC. 311 - INDUSTRIAL ECONOMICS

Objective: The objective of the course is to acquaint students of economic concepts as applied to industrial behaviour. The course makes student capable to analyse and take decisions in respect of a firmôs or industryôs operations.

UNIT-I

Scope and Methods of Industrial Economics: Objectives of Industrial Economics, Firms, Industry and Markets. Industrial and Market Structure: Pattern of Industrial Structure, Industrial inter-dependence, Structure and performance, determinants of Market -Structure.

UNIT-II

Economies of size: Economies of size, vertical and horizontal integration, diversification, economies of scale and scope. Merger, acquisition and takeover, innovation, export led industrialization. Economies of location and spatial structure. Economics of ownership structure.

UNIT-III

Economics of Non-Price Decision of firm: Research and Development and Innovation: R & D expenditure decision, Financing R &D, Relationship between R & D and valuation, Economics of R & D, Structure of Market and R & D, Transfer of Technology.

UNIT-IV

Performance measurement: Profitability, Productivity and capacity utilization, Accounting measure and growth. Perfect and workable competition. State intervention in private sector, legal and institutional framework, competition policy, public policy and development of corporate sector.

Reference Books:

1. Divine P.J., N. Lee, R.M. Jones and W.J. Tyson, An Introduction to Industrial Economics, Anmol Publications.
2. Hay, A. Donald and Derek J. Morris, Industrial Economics: Theory and Evidence, Oxford University Press.
3. Scherer F.M. and David Ross, Industrial Market Structure and Economic Performance, Houghton Miffin Company, Boston.
4. Mukherjee, Dilip (Ed.), Indian Industry, Policies and Performance, Oxford University, Calcutta, India.
5. Seth, V.K. and A.K. Seth, Dynamics of Labour Absorption in Industry, Deep and Deep Publication, New Delhi.
6. Koutsoyiannis A., Economics of Non-Price Decision of Firms, Macmillan 1980, London.
7. Seth, V.K., Capacity Utilisation Industrial: Theory and Evidence, Deep and Deep Publisher, New Delhi.
8. Nayyar Deepak (ed.), Industrial Growth and Stagnation: The Debate in India , Sameeksha, Trust, Bombay.

MC. 312 - APPLIED ECONOMETRICS

Objective: The objective of the course is to acquaint students of the methodology of econometrics and make them capable of applying it to business problems. The emphasis will be on application aspects with theoretical understanding.

UNIT-I

Basic Concepts: Definition and scope of econometrics; model specification; desirable qualities of models; evaluating an econometric model; Random variables, stochastic variables and the stochastic error term; probability distributions (review); estimators, desirable qualities of a good estimator; maximum likelihood estimators (definition). The multiple regression model; The 3 variable model; partial regression and correlation coefficients; assumptions of the classical linear model; Derivation of Ordinary Least Squares Estimators; Properties of OLS estimators, OLS AS BLUE; Variances and Standard deviations; Goodness of fit: R -squared and adjusted R-squared; Tests of significance t and F tests; Hypothesis testing involving more than one parameter; Forecasting; Evaluation of Forecasts; Mean Squared error, RMS error.

UNIT-II

Extensions of the basic linear model: 1) Model transformable to linear form: Estimation of elasticity by log-linear models; Growth rates by semi -log models; linear -log models; polynomial regression models (espquadratic). 2) Qualitative variables: Qualitative independent variables and dependent variables (into only); applications of dummy variables; Time dummy, intercept dummy and structural change.

UNIT-III

Relaxing the assumptions of the basic linear model: 1) Multicollinearity: Perfect and imperfect multicollinearity; consequences of multicollinearity, detection and solution. 2) Heteroscedasticity: Nature and Causes; Consequences; Detection by graphical analysis of residuals and Parks test; Solution of Heteroscedasticity: Weighted Lease Squares. 3) Autocorrelation: nature and causes; Consequences; Detection by graphical analysis and D-W Test, Solution for AR. 4) Error in measurement. 5) Specification bias. 6) Simultaneous Equation Bias.

UNIT-IV

Estimation and specifications: Demand, Sales, Cost, Production and Consumption functions. Simultaneous equation system: Identification and Estimation of the model.

Reference Books:

1. Pindyck R.S. and D. Rubinfied, Econometric Theory and Models, McGraw Hill.
2. Gujarati, D.E., Essentials of Econometrics, McGraw Hill.
3. Koutsoyiannis, A., Theory of Econometrics, 3rd ed., Macmillan.
4. Julia Malden, Application of Econometrics, Hartiage Publishers.
5. Johnston, J., Econometric Methods, McGraw Hill Book Company, New Delhi.
6. Judge George G. et. al. Introduction to the Theory Practice of Econometric, John Wiley and Sons, New York.
7. Pesaran M. Hashem and Peter Schmiod (Ed.), Handbook of Applied Econometric, Vol. I & II Blackwell Publishers.
8. Intricigalor Michael D., Ronal G. Bodkin, Cheng Hsiao, Econometric Models, Techniques and Applications, Prentice Hall.

GROUP F: BANKING AND INSURANCE

MC. 313 - BANK MANAGEMENT

UNIT-I

Banking structure in India - banking functions and services - Foreign commercial banks - Private commercial banks - capital adequacy. Principles of lending - financial adequacy assessing the borrower - project appraisal - structural and Infrastructural analysis ï legal formalities - follow up loans, asset management companies.

UNIT-II

Non Performing Assets (NPAs) - Early Warning Signals - Management of NPAs - Remedies Available - Recent Measures - loan recovery tribunals - Provisions of Revenue Recovery Act.

UNIT-III

Investment management - priorities in allocation of bank funds - investment in governments securities - maturity and yield - quality and diversification, profitability management - profit planning.

UNIT-IV

Traditional Banking vs. E-Banking - facets of E-Banking - Internet Procurement - E - Banking Transaction - Electronic Delivery Channels - Truncated Cheque ï Complete Centralized Solution - Features of CCS - Advances of E-Banking - Constraints in E-Banking - Security Measures.

Reference Books :

1. Varshney, PN. Banking Law & Practice, Sultan Chand, New Delhi.
2. S.N.Maheswari, Banking Law & Practice, Ludhiana, Kalyani Publications.
3. Vasant Desai, Principles of Bank Management, Mumbai, Himalaya Publications.
4. K.Subramanian, Banking Reforms in India, TMH, New Delhi.
5. Joseph Sinkey, Commercial Bank Financial Bank Financial Management, Pearson Education (Prentice Hall)
6. E.Gordon and Dr. K. Natarajan, Banking Theory Law and Practice ï Himalaya Publishing House.

MC. 314 - INSURANCE MANAGEMENT

Objective: This course aims at a familiarizing the participants with the concept of insurance, the risk and its management, various insurance policies and their structure along with the legal dimensions involved. This course also aims at providing the knowledge of Insurance Companyôs Management.

UNIT-I

Conceptual Framework: Risk, Peril and hazard, classification and burden of risk. Insurance as a device to hedge risk. Elements of insurable risk. Development life. Functions of Insurer, Government as Insurer and a regular. Structure of Indian Insurance Industry. Principles and Practices of General Insurance: Meaning, Functions and Scope of Fire, Engineering, Accident, Marine and Aviation Insurance. Fire Insurance ï Types of Policies ï Floating Policies and Declaration Policies; Endorsements and Clauses ï Fire Protection System, Discounts ï Special Rating of Large Industrial Risks.

UNIT-II

Industrial Risk Insurance. Consequential Loss Insurance ï Standard Consequential Loss Policy Form ï Conditions. Engineering Insurance: Machinery Breakdown Insurance ï Contractors All risks Insurance and various other policies ï Miscellaneous Annual Policies ï Advance Loss of Profits Insurance. Motor Insurance ï type of: Vehicles and their Policies ï Rules & Regulations ï Policy Forms. Public Liability Policy: Professional Indemnities ï Employersô Liability Insurance. Personal Accident: Scope of Various covers. Miscellaneous (Accident) Insurance: Fidelity Guarantees and Bonds ï Burglary Insurance ï Money-in-transit Insurance, Bankerôs Indemnity Insurance and other important insurance covers.

UNIT-III

Aviation insurance: Special Features ï types of Cover, Marine Insurance including Inland Rail/Road transit insurance. Life and Health Insurance: Life Insurance and annuities broad classification of Life insurances, special purpose policies; Family income, Family maintenance, Family policy, Joint Life Policies, Classes of life insurance, Health Insurance: Medical Insurance Types of Health Insurance Coverages, types of losses covered. Health insurance contract. Buying a health insurance policy.

UNIT-IV

Legal frame work of Insurance: Insurance and Law of Contracts, characteristics of an Insurance Contract, Interpretation of the Contract, Doctrine of informal Warranties and beneficent interpretation, Exclusion of Coverageôs. Organization and Administration of Insurance: Management Organization: Departmentalisation, marketing, Claims, and loss control, underwriting and pricing of insurance, retention and re-insurance; Financial Structure, reserves of property and liabilities of insurer, earned surplus and profitability, Insurerôs Investments, Financial Reporting.

References Books:

1. W.A. Dinsdale, ñElements of Insuranceò, Pitaman, 1971.
2. Dorfman Marks S., ñIntroduction to Risk Management and Insuranceò, 5th Edition, Prentice Hall Inc., Englewood Cliffs N.J .
3. Nicholas Legh ï Jones, John Birds and David Owen, ñMacGillivray on Insurance Lawò, 11th Edition, Sweet & Maxwell, London, 2008.
4. Denis Riley, ñConsequential Loss Insurance and Claimsò, 4th edition, London: Sweet & Maxwell, 1977.

PAPER 7: MC. 315 - WORKSHOP ON FINANCIAL MARKETS & INSTRUMENTS
(For Regular Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT – I

Indian Financial System: Constituents, Functions of the Financial System Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System.

UNIT – II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits, Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT – III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT – IV

Innovative Financial Instruments and Financial Services: Bonds, features and innovations : Ex-interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System, Tata McGraw, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi
4. Desai, V: Indian Financial System and Development (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services, Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds, (Business Publications Inc.)
7. Dietrich, J.K: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K : Development of Indiaõs Financial System, Sarup & Sons.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (d) Presentation session of the students on the assigned project.

PAPER 7: MC. 315-A - FINANCIAL MARKETS & INSTRUMENTS
(For USOL Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT–I

Indian Financial System: Constituents, Functions of the Financial System, Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System

UNIT–II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange Market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT–III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE, Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT–IV

Innovative Financial Instruments and Financial Services: Bonds features and innovations: Ex- interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System , Tata McGraw Hill, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi.
4. Desai, V: Indian Financial System and Development. (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services , Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds (Business Publications Inc.
7. Dietrich, J.K.: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K: Development of Indiaôs Financial System, Sarup & Sons.

SEMESTER-IV

PAPER 1: MC. 401 – PROJECT PLANNING AND CONTROL

Objective: The objective of the course is to provide the student with skills necessary to create, plan and control a new Enterprise.

UNIT – I

Project Identification, Formulation and Planning : Understanding environment for business opportunities Idea generation, short listing and selection of product/service stages in Venture Appraisal- Technical, Financial, Economic and Social Appraisal Location, Factory Design and Layout. Commercial vs. National Profitability Social Cost - Benefit Analysis (broader concept only). Feasibility Report Preparation for new Enterprise - format and contents.

UNIT – II

Market and Financial Appraisal : Market Survey ï Design, Data Sources and Methodology, Market Segmentation and product differentiation, Forecasting Future demand and Distribution Analysis, Preparation of the Sales Plan and Report Estimation of Financial Requirement.

UNIT – III

Application of Capital Budgeting Techniques, Risk and Uncertainty Analysis for the new enterprise, Planning Capital Structure and Financing Project Financial viability Study.

UNIT – IV

Project Implementation and Management : Project Organisation and Control Network Analysis ï PERT & CPM Cost and Time Over-run Project Follow up and Monitoring.

Reference Books:

1. Chandra, Prasanna : Project Prepartation, Appraisal and Implementation, Tata Mc Graw Hill, N. Delhi.
2. Desai, Vasant : Entrepreneurial Development, Vol.II Project Formulation Appraisal and Financing for Small Industry, Himalaya Publ. N. Delhi.
3. Nicholas : Project Management for Business and Technology: Principles and Practice (Prentice Hall of India, N. Delhi.
4. Pitala : Project Appraisal Techniques, Oxford & IBH Publication.
5. Yound, Trevour L. : Planning and Implementing Project, Sterling Publishing Ltd.
6. Krishnan and Moorthy : Text Book of Project Management, Mac Millan India Ltd.
7. Singh, Narendra : Project Management & Control, Himalaya Publ., N. Delhi.

PAPER: 2 MC. 402 - KNOWLEDGE MANAGEMENT

Objective: The main aim of the course is to create awareness amongst the students to know the details of Knowledge Management in the changing scenario and its significance in framing the business strategy.

UNIT-I

Concept of knowledge, Major Philosophical Schools, Knowledge in economic and management theories, Knowledge as competitive resource, Knowledge intensive organization, Knowledge value chain.

UNIT-II

Knowledge management systems, Barriers to knowledge sharing, Expert systems.

UNIT-III

Knowledge creation as a tool of excellence, tacit and explicit knowledge, Models of knowledge creation process, Critical enabling conditions, Cross leveraging knowledge.

UNIT-IV

Knowledge management strategy and business strategy, Knowledge architecture, Organizational design for knowledge management, Role of Top and Middle management, Knowledge based reward systems.

Reference Books:

1. Devenport, T. H. and Prusak, L. : Working Knowledge; How Organizations Manage What They Know; Harvard Business School Process.
2. Dorothy Leonard Barton : Well Springs of Knowledge, Harvard Business Process.
3. John Sparrow : Knowledge in Organisations, Sage Publications..
4. J.W. Cortada, and J. A. Woods : Knowledge Management Year Book 1999-2000, Butterworth.
5. Richard Huseman and Jon Goodman : Leading with Knowledge, Sage.
6. Ikujiro Nonako and Hirotaka Tekeuchi : Knowledge Creating Company, OUP.
7. Madhukan Shukla : Competing Through Knowledge, Response Books.

PAPER 3: MC. 403 – BUSINESS ETHICS AND CORPORATE GOVERNANCE

UNIT-I

Business Ethics: Introduction to Business Ethics, Ethics, Morals & Values, Concepts of Utilitarianism and Universalism ï Theory of rights, theory of Justice ï Virtue ethics ï ethics of care ï Law and Ethics. The Nature of Ethics in Management Business Standards and Values, Value Orientation of the Firm. Typical Problems in Business Ethics: Environmental Pollution & Society, Marketing Ethics (in Products, Pricing, Promotion and Place) and Consumer protection ï Ethics in Human Resources management (Recruitment and promotion policies, Working Conditions,, Down Sizing Workforce), Ethical issues at the top management, Ethics in financial markets and investor protection ï Ethical responsibility towards competitors and business partners.

UNIT-II

Complexity of Ethical Issues: Conflicts in decision making from ethical and economic point of view, Ethical Dilemma, Solving ethical dilemma Managerial integrity and decision making. Ethical Leadership: Personal Integrity and self development ï wisdom based leadership. Corporate Governance: History of Corporate form and models, Corporate Objectives and goals, Ownership pattern ï Issues in managing public limited firms ï Agency problems. Nature & Evolution of Corporate Governance: Global and National Perspectives ï Global Corporate Governance models, Anglo American and Relationship model (Germany, Japan and France) Claims of Various Stakeholders, Why governance ï Changes in eighties Cadbury Report, Hampel Report and OECD Committee Recommendations ï SOX Act.

UNIT-III

Internal Corporate Governance Mechanism: Board of Directorsð Functional Committees of Board; Code of conduct, whistle blowers. External Corporate Governance Mechanism: Regulators, Gate keepers, Institutional Investors, Corporate raiders, Corporate Governance Ratings Corporate Governance in India: corporate form in India 50s to 90s ï developments in Corporate Governance in India in nineties and 2000s ï CII, Kumaramangalam, Narayanamoorthy, Naresh Chandra, JJ Irani Committee reports ï Legal and Regulatory Changes ï introduction and modification of Clause 49, Corporate governance in practice in India .

UNIT-IV

Cases:

1. A Dent in Wal Martôs Public Image - The PR Strategy.
2. China Aviation Oilôs Collapse: Singapore INCôs challenges.
3. Child labor in Coca Industry.
4. Obesity Concerns: Burger Kings Product Revenges.
5. Bhopal Gas Tragedy

Source

(a) Case Studies for Managers, Vol. II, IBSPCD
(b) BECG Main Reference Book

Reference Books:

1. Velasquez, M. G., Business Ethics: Concepts and Cases, Prentice Hall of India.
2. Monks, R. / Minow, N. Corporate Governance, Blackwell.
3. Banks, Eric., Corporate Governance, John Wiley.
4. Fernando, A C., Corporate Governance, Pearson Education.
5. N. Gopalsamy : Corporate Governance : The New Paradigm, Wheeler Pub., New Delhi.
6. Surendar Kumar : Corporate Governance : A Question of Ethics, Galgotia Pub., New Delhi.
7. N. Balasubramanian : Corporate Boards and Governance, Sterling Pub., New Delhi.
8. Harvard Business Review : Harvard Business Review on Corporate Governance, Boston Harvard Business School.

SEMESTER IV (ELECTIVES) GROUP A: MARKETING MANAGEMENT

MC. 404 - ADVERTISING AND SALES MANAGEMENT

Objective: The course aims at enabling the students to develop an in-depth understanding of the modern concepts and latest techniques of advertising and personal selling and sales force Management which constitute a fast -growing area of marketing.

UNIT-I

Advertising: Communication Basics: Role of communication; Communication process and flows; Planning the promotion mix; Advertising: Nature and importance; Advertising and the economy; Advertising and publicity; Advertising management process ï an overview; Determining target audience; Advertising objectives and positioning decisions; Advertising budget decisions. Message Decision: Determining advertising message; Developing advertising copy ï Headline main copy, logo, illustration, appeal, layout, creativity in advertising.

UNIT-II

Advertising through the internet; Media selection; Media scheduling. Organization of Advertising Operations: In -house vs. advertising agency arrangements; Managing advertising agency relations; valuation of advertisement and campaign effectiveness ï Before - and ï after advertising tests and techniques. Advertising in India; Social and regulatory aspects of advertising. Recent developments and issues in advertising.

UNIT-III

Sales Management: Fundamentals of Personal Selling: Nature and importance of Selling; Types of selling; Personal selling, salesmanship and sales management; Process of effective selling; Strategic Sales management. Sales Planning: Setting personal selling objective; Market analysis and sales forecasting; Sales budget; Sales territory; Sales quota.

UNIT-IV

Sales Organization: Organization structure; relationship of sales department with other departments; Distribution networks relationship. Sales Force Management: Recruitment and selection; training and development; motivating, supervising and compensating sales personnel; Controlling the sales effort; Evaluation of sales personnel; Sales and cost analysis. Ethical and legal aspects of selling.

Reference Books:

1. Aaker, David A., Rajeev Batra and John G. Mayers, Advertising Management, Prentice Hall of India, New Delhi.
2. Belch,. George and Michael Belch, Advertising and Promotion : An Integrated Marketing Communications Perspective , McGraw Hill.
3. Mandell, Maurice, Advertising , Prentice- Hall of India, New Delhi.
4. Still, Richard R. Edward W. Cundiff and Norman A.P.Govoni, Sales Management: Decisions, Strategies and Cases, Prentice Hall of India, New Delhi.
5. Anderson B. Robert, Professional Selling, Prentice-Hall Inc.
6. Spiro, Rosann, William J. Stanton and Greg Richo, Management of a Sales Force, McGraw Hill/Irwin.
7. Pederson Carlton A/, Miburn D. Wright, Barton A., Weitz, Selling Principles and Methods, Richard D. Irwin, Illinois.

MC. 405 - SERVICES MARKETING

Objective: To understand the service product and key elements of services marketing mix. Another objective deals with managing the service delivery process and the implementation of services marketing.

UNIT-I

Introduction to services marketing: role of services marketing; consumer behaviour in service encounters; customer interaction, purchase process, needs and expectations of customers; positioning services in competitive markets; search for competitive advantages; market segmentation, positioning vis-à-vis competitors.

UNIT-II

Creating the service product: Identifying and classifying supplementary services, planning and branding service-products, new service development; designing communication mix; branding and communication; effective pricing objectives and foundations for setting prices; distributing services; options for service delivery, place and time decisions, delivery in cyberspace, role of intermediaries.

UNIT-III

Designing and managing service processes; service process redesign, customer misbehavior; balancing demand and capacity: fluctuations in demand, capacity constrain, planning the service environment; consumer responses to and dimensions of service environment; managing people for service advantage: service leadership and culture.

UNIT-IV

Managing relationship and building loyalty; customer-firm relationship, analyzing and managing customer base; customer management relationship system in services marketing; customer feedback and service recovery; customer complaining behaviour, principles and responses to effective service recovery, service quality and the gap model, measuring and improving service quality, defining, measuring and improving service productivity; organizing for service leadership; search for synergy in service management, creating a leading service organization.

Reference Books:

1. Lovelock, Christopher, Wirtz, Jocken and Chatterjee, Jayanta; Services Marketing - People, Technology, Strategy; Pearson Education; New Delhi.
2. Zeithaml, Valarie A. & Bitner, Mary Jo, Services Marketing ï Integrating Customer Focus Across the Firm; Tata McGraw Hill, New Delhi.
3. Rao, K., Rama Mohana, Services Marketing, Pearson Education, New Delhi.
4. Hoffman & Bateson, Essentials of Service Marketing; Thomson Asia Ptc. Ltd., New Delhi.
5. Rampal, M.K. & Gupta, S.L., Services Marketing; Galgotia Publications; New Delhi.
6. Shanker Ravi, Services Marketing ï The Indian Perspective, Excel Books, New Delhi.

MC. 406 - CONSUMER BEHAVIOUR

Objective: Knowledge of consumer behaviour is a prerequisite for developing effective marketing strategy. The purpose of the course is to provide an in-depth understanding of the consumer and industrial buying processes and their determinants as relevant for marketing decision making.

UNIT-I

Consumer Behaviour: Importance and nature of consumer behaviour; Types of consumers and their role; Consumer buying process and determinants; Changing profile of Indian consumers.

UNIT-II

Individual Differences in Consumers: Needs and motivation; Perception; Attitude and attitude change; Learning and learning theories; Personality and life style analysis.

UNIT-III

External determinants of Consumer Behaviour: Family and its influence on consumer buying behaviour; Group and their influences; Social class; Culture and sub-culture.

UNIT-IV

Models of consumer behaviour; Business buying behaviour. Cross-cultural dimensions of consumer behaviour; Consumer research ï complexities and issues.

Reference Books:

1. Schiffman, L.G. and L.L. Kanuk, Consumer Behaviour, Pearson, Ltd., New Delhi.
2. Engel, J.F., Roser D. Blackwell and Paul W. Miniard, Consumer Behaviour, Cengage Learning.
3. Peter, J. Paul, and Jerry C. Olson, Consumer Behaviour and Marketing Strategy, McGraw Hill.
4. Assael, H., Consumer Behaviour and Marketing Action, Cengage Learning.
5. Hawkins Dell, Roger J. Best, Kenneth A. Conej, Consumer Behaviour, Building Marketing Strategy.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 407 - ORGANISATIONAL CHANGE AND DEVELOPMENT

Objective: This course is designed to provide I depth understanding of behavioural interventions and enable the students to apply these intervention for building individual, team, system, systems and process related competencies and helping organizational to achieve peak performance and become self sustaining.

UNIT-I

Organizational Change - Meaning, nature, types; theories of planned change; Organizational development ï nature and characteristics; process of organizational development.

UNIT-II

Human Process Interventions - T-group, process consultation, third party interventions, team building; organizational confrontation meeting, coaching and mentoring, role focused interventions.

UNIT-III

Techno structural Interventions - Restructuring organization, reengineering, employee involvement, work design; Strategic Interventions ï Organisation and environment relationships, organization transformation.

UNIT-IV

Contemporary issues and applications ï Organizational development in global context, organizational development in service sector, OD Practioners ï role, competencies requirement, professional ethics and value and experiences; future trends in OD.

Reference Books:

1. Cummings, Thomas G. and Christopher G. Worley, Organisation Development and Change, Thomson Learning.
2. Ramnarayan S., T.V. Rao and Kuldeep Singh, Organisation Development Interventions and Strategies, Response Books, New Delhi.
3. French, Wendell L. and Lecil H. Bell, Organisation Development, PHI, New Delhi.
4. Chowdhury, Subir, Organisation 21C, Pearson Education.

MC. 408 - TRAINING AND DEVELOPMENT

Objective: The objective of the course is to familiarize the students with basic concepts and principles of Training and Development of Human Resource and train them to understand the learning environment of a firm. The knowledge so obtained will make them capable of providing training to Human Resource of a business firm.

UNIT-I

Conceptual Framework: The functions of training, relationship of training to organizational and individual goals, Factors effecting successful training process, Skills of a successful trainer ï Internal and external trainer. Training and Learning: The learning process, learning curve, principles of learning, training guidelines, experience versus training, kinds of training, system approach to training, programmed instruction, transfer of training.

UNIT-II

Training Needs Assessment and Curriculum Development: Identification of Training and Development needs, training needs assessment - various approaches (the job and the Individual), Advantages and disadvantages of basic needs assessment techniques.

UNIT-III

Assessing curriculum needs, curriculum standards, matching organizational training needs, Developing training materials. Training Methods: Three Stages of training (Preparatory, implementation and follow - up stage), On the job and off -the job methods,, experiential versus non-experiential methods.

UNIT-IV

Evaluation of Training and Development, and Emerging Pattern: Reasons of evaluating training, Criteria for evaluation, problems of evaluation, steps involved in evaluation, methods for training evaluation, analysis and costing of training. Emerging Pattern of Training and development in India.

Reference Books:

1. Prior John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Donald F. Michalak and Edwin G. Yager, Making the Training Process Work, Harper and Row, New York.
3. Jack J. Phillips, Handbook of Training Evaluation and Measurement Methods , 3rd Edition,
   Houston, Gulf Publishing Co.
4. Lynton R., Pareek, U., Training for Development, 2nd Edition, New Delhi, Vistaar.

MC. 409 - COMPENSATION MANAGEMENT

Objective: This course is designed to promote understanding in issues related to compensation in corporate sector and impart skills in designing, analyzing and restructuring compensation management system, policies and strategies.

UNIT-I

Role of compensation in organization: Economic and behavioural theories related to compensation; strategic perspectives of compensation; compensation as motivational tool; compensation policy.

UNIT-II

Internal and external equities in compensation system; determining the worth of jobs; understanding inter and intra-industry compensation differentials, designing pay structure and administrating compensation package; understanding different components of compensation package like fringe benefits, incentives and retirement plans; pay for performance plans.

UNIT-III

Compensation of special group: Corporate Directors, Chief Executives, Senior Managers; components of executive compensation package; compensation of professionals and knowledge workers, R&D staff, sales compensation plan, international compensation.

UNIT-IV

Statutory provisions governing different components of reward system; working of different institutions related to reward system like wage boards, pay commissions, role of trade unions in compensation management; tax planning.

Reference Books:

1. Milkovich, George T. and Newman J.M., Compensation, Tata McGraw Hill.
2. Henderson, R.O., Compensation Management, Pearson Education.
3. Martocchio, J.J., Strategic Compensation, Pearson Education.
4. Armstong, M. and Murlis H., Reward Management, Kogan Page, UK.
5. Singh, B.D., Compensation Reward Management, Excel Books, New Delhi.

GROUP C: INTERNATIONAL BUSINESS

MC. 410 - INTERNATIONAL BUSINESS ENVIRONMENT

UNIT-I

An Overview of International Business Environment ï Economic environment ï political and regulatory environment ï demographic environment ï social, cultural and technological environment, International Economic Environment ï Regional integration and trade blocks ï Types of integration ï theory of customs union, European union ï regional groupings ï integration of developing countries ï SAARC, SAPTA, international commodity agreements ï quota agreements ï Cartels ï Bilateral & Multi lateral contracts ï Economic institutions ï International Monetary Funds (IMF) ï World Bank, Asian Development Bank, UNCTAD, UNIDO, International Trade Centre, WTO, GATT, GATS, TRIM, TRIPS.

UNIT-II

International Trade and Investment Theory - Historical developments of Modern Trade theory ï Investment theories ï Theory of capital movements ï Market imperfections ï Internationalisation ï Appropriability ï Location specific advantage ï eclectic. International Trade and Payments: Government Influence on Trade: Trade in merchandise ï Trade in services ï Global sourcing ï degree of dependence ï balance of payments ï trade and BOP of India. Cultural contacts of global management ï Understanding the role of culture ï communicating across cultures ï cross cultural negotiations and decision making.

UNIT-III

International Investment : Types and significance of foreign investments ï factors affecting international investment ï growth and dispersion of FDI ï cross border mergers and acquisitions ï foreign investment in India ï The New Policy ï EURO/ADR issuesï M&Aï Indian companies going global. Multi National Corporation : Definition and Meaning ï Importance and dominance of MNCs ï Code of conduct ï MNCs in India ï Transfer of Technology ï global competitiveness ï indicators of competitiveness - competitive advantage of nations ï Technology and Global competitiveness.

UNIT-IV

International Monetary System and Foreign Exchange Marketing: The Pre- Bretton Woodôs period, Break down of Bretton Wood system and emergence of EMS, EU and EURO. Social Responsibilities and Ethics, MNE Social Responsibilities, Efficiencies, Perspectives, Ethics, Technological Perspective, Foreign Corrupt Practices Act.

Reference Books:

1. The International Business Environment by Anant K. Sundaram / J. Stewart Black-Prentice Hall
2. International Business environments and Operations, John Daniel, Lee H Radebaugh, Daniel P Sulivan- Pearson Education.
3. International Management Managing Across Borders and Cultures, Fourth Edition by Helen Deresky ï PHI
4. Dynamics of Successful International Business Negotiations by Robert T. Moran, William G. Stripp ï JAICO
5. The International Environment of Business by Gerald M. Meierï Oxford Press.

MC. 411 - GLOBAL FINANCIAL MANAGEMENT

UNIT-I

Global Financial Environment : Financial Goal and Corporate Governance - Macro & Micro Intõl. Finance, - Intõl Monetary System & Crisis - Balance of Payment. Foreign Exchange Theory and Market: The Foreign Exchange Market and Problem, The Foregin Exchange Rate Determination.

UNIT-II

Foreign Currency Derivatives: Forward, Future and Option Market, PPP, IRP IFE, and International Parity Condition: International Triangula Arbitrage-Covered Interest Arbitrage.

UNIT-III

Forex Exposure & Risk Management - Transaction, Operating/Economy & Translation/Accounting Exposure - Currency Hedging Strategy. Transaction Exposure Management : - International Financial Engineering; Working Capital Management in Multinational Corporations.

UNIT-IV

Financing the Global Firm : - Global Cost of Capital & Available of Capital ï Sourcing Equity Globally - Financing Structure & International Debt - International Portfolio Theory - FDI Theory & Strategy.

Reference Books:

1. Madura J. : International Corporate Finance, 8th Edition, South Western Publishing Company.
2. Alan C. Shapiro, Multinational Financial Management, 6th Edition, Prentice-Hall International Inc.
3. Solnik, B. McLeavey, D. : Global Investment, 6th edition, Pearson Addison Wesley.
4. Richard M. Levich, International Financial Market, Prices and Polices , McGraw-Hill.
5. Hamdy Hady, Manajemen Keuangan Internasional edisi 3, YAI dan PT. Hecca Mitra Utama.

MC. 412 - INTERNATIONAL MARKETING MANAGEMENT

UNIT-I

Introduction: Basic Concepts of International Marketing, Definition and Dimensions of International Markets, Differences Between Domestic and International Marketing, Benefits of International Marketing, EPRG Framework in International Marketing, Changes of Development into Global Marketing.

UNIT-II

Environment of International Business: Introduction, Political and Legal Environment, Cultural Environment, Financial and Monetary Environment. Indian Foreign Trade: Indian Trade Policy, Recent Transit in Indiaגs Foreign Trade, Export Assistance, Institutional Infrastructure for Export Promotion in India, EXIM Policy of India.

UNIT-III

Identification of Foreign Markets: Product Planning for Exports, Export Pricing, Market Entry and Overseas Distribution System, Promoting Products, Internationally Role of WTO .

UNIT-IV

Overseas Market research, Marketing Plan for Exports, New Techniques in International Marketing, International Sub-Contracting, Joint Ventures, Multinationals Exports Finance, Risk Export Documents and Procedures.

Reference Books :

1. R. Srinivasan, International Marketing, Prentice Hall of India, New Delhi.
2. Onkvisit & Shaw ï International Marketing: Analysis and Strategy. (PHI)
3. Keegan, Global Marketing Management, PHI.
4. Rathore & Rathore, International Marketing, Himalaya Publishing , New Delhi.
5. Gitman, Global Marketing, Pearson.
6. Francis Chernnilam, International Marketing, Himalaya Publishing Home.

GROUP D: ACCOUNTING & FINANCE

MC.413: ADVANCED CORPORATE ACCOUNTING

Objectives: Corporation is the most important part of the economic development of a company. With pace of development of the emerging scenario, the corporate accounting is also becoming little bit tougher. This paper will enable the students to learn the advanced accounting in the field of corporate world.

UNIT-I

Business Acquisition and Conversion of partnership into limited company and Limited Liability Partnership (LLP): Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company ï with and without same set of books Amalgamation of firms, accounting in the books transferor and transferee firm.

Investment Accounts : Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.

UNIT-II

Company Merger and Reconstruction: Amalgamation, Absorption and Reconstructionï Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (both for amalgamation in the nature of Merger and of Purchase); inter-company transactions (including inter-company share holding). Internal reconstruction ï meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction.

UNIT-III

Valuation: Goodwill ï Valuation using different methods i.e., Average Profit, Super Profit, Capitalization and Annuity. Shares ï Valuation using different methods: Intrinsic, Earnings, Dividend Yield, Earnings-Price, Cum-div and Ex-div, Majority and Minority view and Fair Value.

UNIT-IV

Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest ï Basic principles and preparation of CBS; CBS with loss balance of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intergroup Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding).

Reference Books:

1. Sukla, Grewal, Gupta, Advanced Accountancy, Vol. II, S. Chand.
2. R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand.
3. Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing.
4. Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication.
5. Hanif & Mukherjee, Corporate Accounting, TMH.
6. L.S.Porwal, Accounting Theory, Tata Mcgraw Hill.
7. Gokul Sinha, Accounting Theory & Management Accounting.
8. B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
9. Frank Wood, Business Accounting Vol II, Pearson.
10. V.K.Goyal, Corporate Accounting, Excel Books.

MC. 414 - SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: To enable the students to understand various techniques of analysis used in investment decisions, portfolio analysis and efficient portfolio management.

UNIT-I

Security Market Analysis: Investment environment, Types of return and risk; Sources of risk Technical Analysis, Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis.

UNIT-II

Forms of Market Efficiency and Valuation of Securities : Random Walk Theory Form of Market efficiency Analysis of Bond/ Debentures: Valuation of bonds Analysis of risk in bonds-duration and convexity Valuation of Equity and Options.

UNIT-III

Portfolio Analysis : Portfolio Management ï Meaning, Evaluation & Role Risk & Return of a Portfolio, Risk Diversification Markowtiz Risk-Return Optimisation Single Index Model-Portfolio Tufel Risk. Portfolio Market Risk, Portfolio Unique Risk Sharpeôs Optimisation Solution.

UNIT-IV

Portfolio: Theory, Construction & Evaluation : Capital Market Theory - CAPM, Risk Free Lending Borrowing Arbitrage Pricing Theory Techniques of Portfolio Construction Active and Passive portfolio management, Bond portfolio management strategies - passive, semi-active and active along with immunization strategies Portfolio Performance Evaluation.

Reference Books:

1. Fuller & Farrel: Modern Investment & Security Analysis, McGraw Hill.
2. Strong, Robert. A: Portfolio Management Handbook, Jaico Publishing House, Delhi.
3. Singh, Preeti: Investment Analysis, Himalaya Publishing House.
4. Jordan & Fischer: Security Analysis & Portfolio Management, Prentice Hall India, N. Delhi.
5. Avadhani, V.A: Security Analysis & Portfolio Management.(Himalaya Publishing House).

MC. 415 - ADVANCED AUDITING

Objectives: The basic purpose of this paper is to provide in-depth knowledge of the auditing contemporary issues particularly related to the company audit.

UNIT-I

Company Audit: Qualification, Disqualification, Appointment, Removal, Remuneration of Auditors. Audit Ceiling-Status, Power, Duties and Liabilities of auditors. Branch Audit - Joint Audit - Special Audit. Maintenance of Books of Account ï Related Party Disclosures- Segment Reporting. Divisible Profit, Dividend and Depreciation (Companies Act, Standards on Accounting, Legal Decisions and Auditorôs Responsibility). Representations by Management - Contents of Annual Report (A Brief Idea).

UNIT-II

Audit Report and Certificate: Definition - Distinction between Report and Certificate - Types of Reports/Opinion 35 (Clean, Qualified, Disclaimer, Negative and Piecemeal) Contents of Audit Report (As per Companies Act and Standards on auditing). True and Fair View (Concept and Guiding Factors)- Materiality(Concepts and Relevance) - Limited Review- Disclosures. Certificate on Corporate Governance- Cash Flow Statement Reporting.

UNIT-III

Audit of Different Institutions: Banks - Legislation Relevant to Audit of Banks, Approach to Bank Audit, Internal Control Evaluation, Non-Performance Assets (Concept, Provisions), Long Form Audit Report. Insurance Companies - Legislation Relevant to Audit of Insurance Companies (Life and General Insurance), Review of Internal Control, Audit Report (Matters as per IRDA). Educational Institutions and Hospital Features and Basic Principles of Government Audit - Local Bodies and Non-Profit Seeking Organizations (including NGOs). Comptroller and Auditor General and its Constitutional Role. Investigation Meaning, Purpose - Distinction between Investigation and Auditing Approach to Investigation - Types of Investigations. Assessing a Business (Due Diligence Review, Valuation). Investigations to Detect Fraud, Misappropriations and Defalcations - Investigations with respect to Business Combinations.

UNIT-IV

Other Thrust Areas: Cost Audit - Concepts, Objectives, Advantages, Relevant Provisions of Comp. Act. Management Audit - Tax Audit - Systems Audit - Social Audit-Environment Audit Energy Audit - Forensic Audit-Peer review (Concepts, Objectives and Regulatory Requirements). Ethics in Auditing ï Auditorôs Independence. Auditing in CIS Environment. Standards on Auditing (Concepts, Purpose and Present Position as to Number and Title as issued by ICAI).

Note: Topics to be studied with reference to Standards on Auditing and Accounting including Applicable Indian Financial Reporting Standards.

Reference Books :

1. Gupta, Kamal, Contemporary Auditing, TMH.
2. Tandon, B.N., Principles of Auditing, S. Chand & Co.
3. Sharma, T.R., Auditing Principles & Problems, Sahitya Bhavan, Agra.
4. Spicer & Pegler, Practical Auditing.
5. Woolf, Emile, Auditing Today.
6. Basu, Sanjib Kumar, Fundamentals of Auditing, Pearson.
7. Auditing Assurance Standards and Guidelines issued by ICAI.

GROUP E: APPLIED ECONOMICS

MC. 416 - MACRO ECONOMIC ANALYSIS AND POLICY

Objectives: The Course seeks to provide grounding in basic macroeconomic theory and policy, with a focus on applications, especially in context of developing economies like India.

UNIT-I

Basic accounting concepts and tools in closed and open economies: National income accounting, nominal and real exchange rates and balance of payments, Keynesian theory of the short-run : Analysis of fiscal and monetary policies in the closed and open economy IS-LM models, including the Mundell-Fleming model, Interest rates in open and closed economies: Yield curve, covered and uncovered interest parity condition.

UNIT-II

The labour market and policy analysis in the medium and long run : AS-AD analysis, Analysis of inflation and unemployment : The Phillips curve; theories of unemployment conditional convergence.

UNIT-III

Theory of business cycles, Classical theories of economic growth : The Solow model; evidence on convergence and Theories of endogenous growth.

UNIT-IV

Open economy analysis : Models of currency crisis, exchange rate volatility. Expectations theory and financial markets, including rational expectations model.

Reference Books:

1. Blanchard, O. , Macroeconomics, Pearson Education, New Delhi .
2. Abel, A.S. and B.S. Bernanke, Macroeconomics, New Delhi Pearson Education.
3. Barro, R. and X. Sala-i-Martin , Economic Growth, India, Prentice Hall.
4. De Souza, E. , Macroeconomics, Pearson Education, New Delhi.
5. Dornbusch. R., S. Fischer and R. Start, Macroeconomics, Tata Mc Graw Hill, New Delhi .
6. Jones, C., Introduction to Economic Growth, W.W. Norton, New York.
7. Keynes, J., The General Theory of Employment, Interest and Money, New York Harcourt.
8. Krugman, P. and M. Obstfeld, International Economics, New Delhi, Addison Wesley .

MC. 417- ECONOMICS OF SERVICES

Objective: The objective of this paper is to acquint the students with the economics of various kinds of services and its related issues.

UNIT-I

Introduction: Basic concepts of services, trade in services, classification of services (CPC), economic growth and structural shifts in favour of services, cost disease hypothesis and its implications on growth, empirical evidence, service sector in India, causes of growth, implications of the service sector growth for long run growth.

UNIT-II

Economics of education: Micro theories of education, Beckerôs theory, Mincerian equation, over education, measuring micro effects of education, signaling theory of education, new growth theories and macro economic effects of education, human resources and human capital development empirical evidence government policies, government funding and issues, PPP in education, the case for universal, free, primary education, structure of higher education and problems of its financing in India, other issues in education policy; Health: Economic dimensions of health care - demand and supply of health care, Grossmanôs model of health care services, determinants of health - poverty, malnutrition, illiteracy and lack of information, Micro effects of health, health dimensions of macro economics development; health policy, financing of health care and resource constraints, inequalities in health - class and gender perspectives, institutional issues in health care delivery, economics of health insurance, community based health insurance.

UNIT-III

Economics of Infrastructure services : Role of infrastructure in economic development, natural monopoly and economics of infrastructure regulation, rate of return regulation, performance based regulation, pricing for infrastructure sector, role of subsidies, restructuring and privatisation of infrastructure sector with special reference to India, reform acts, competition in infrastructure sector, issues in infrastructure finance, modes of project financing, development of infrastructure projects - BOO, BOOT, BOLT etc.

UNIT-IV

Economics of ICT: ICT industry: An introduction, growth of the global ICT industry, measuring the impact of ICT, impact of IT on economic performance and trade, Impact of ICT on markets and society at large, direct and indirect macroeconomic impact on growth, theory and empirical evidence, specificities of information markets and network goods, need for specific sectoral regulation (discussions on case studies), familiarity with e-governance. The evolution of the sectoral regulation since the liberalisation of the Telecommunicat ions market in 1998 in India.

Reference Books/Journals:

1. Dasgupta S. and Singh A., Will services be the new engine of economic growth in India, working paper No. 310, Centre for business research, University of Cambridge, UK. Wolff A. (2005): The service economy in OECD countries, STI working paper 2005/3, statistical analysis of science, technology and industry.
2. Gordon J. and Gupta P., Understanding Indiaôs services revolution, working paper, IMF
3. Banga R. , Role of services in the growth Process, a survey, New Delhi, CRIER ÅGovernment of India (2005): Report on the CABE committee on autonomy of higher education institutions, ministry of human resource development
4. NCAER (2006):E readiness report , India

MC. 418 - WORLD TRADING SYSTEM

UNIT-I

Basic economic principles relating to international trade mercantilism, Comparative advantage and gains from trade, Factor endowments and trade patterns, Qualifications to the case for free trade, reciprocity, the optimal tariff, infant industries, strategic trade theory, revenue-raising considerations, and national security considerations.

UNIT-II

Evolution of the multilateral trading system under GATT : Emergence of discriminatory trade policies in the inter-war years leading up to the Bretton Woods Conference in 1944, The formation the GATT ï the Havana Charter and the failed attempt to establish the International Trade Organisation, Core principles of the GATT (MFN and national treatment), GATT and its changing character during the 1950s and 1960s, The emergence of the idea of special and differential treatment for developing countries and non-reciprocity, Exceptions to the GATT rules ï textiles and agriculture ï their implications, maturing of the GATT during the 1970s, GATT and the Uruguay Round.

UNIT-III

Analysis of the covered Agreements of the WTO: Agriculture, non-agricultural market access, rules, anti-dumping, subsidies, safeguards, trade facilitation, services, trips, environment, dispute settlement, attempts to expand the remit of the WTO, investment (MAI), labour standards.

UNIT-IV

Challenges to the Multilateral Trading System: The rise of regional trading agreements and free trade areas (FTAs), Relationship with the multilateral trading system, A ñspaghetti bowlò syndrome?, North-South FTAs and South-South FTAs, US unilateralism, Use of Section.

Reference Books:

1. Das B.L, The World Trade Organisation, A Guide to the Framework for International Trade, London and New York : Zed books and TWN.
2. Hoda A., Developing Countries in the International Trading System, New Delhi: Allied.
3. Aggarwal A., Anti-dumping and Developing Countries, An Introduction, New Delhi, Oxford University Press.
4. Kumar, S. : Trade in Services: Advantage, New Delhi , Bookwell Publications.
5. Marchetti J. and Roy M., Opening Markets for Trade in Services, London, Cambridge University Press.

GROUP F: BANKING AND INSURANCE

MC. 419-BANK LEGISLATION

Objective: The objective of this course is to apprise the students with the banking law and practice and develop an understanding of various laws affecting banks.

UNIT-I

Evolution of banking law : Banking Regulation Act, 1949; Reserve Bank of India Act, Bank Nationalization Act, 1969; A Study of Negotiable Instruments Act, 1881 based on case law.

UNIT-II

Banker and customer relations : Banks as borrowers; cheques - payment of customers cheques: collecting banker and customers accounts.

UNIT-III

Employment of funds; Guarantees; Advances secured by collateral securities; Advances against goods and documents of title to goods; Analysis of banks balance sheet, Electronic funds transfer and other electronic payments; Internet banking.

UNIT-IV

The Foreign exchange Management Act, 1999, Provisions relating to: Preliminary (Sec 1-2), Regulation and Management of Foreign Exchange (Sec 3 to 9). Authorized person (Section 10 to 12) Contravention and penalties (Section 13 to 15) Adjudication and Appeal (Sections 16 to 21 and sections 34-35) Directorate of enforcement (section 36 to 38).

Reference Books :

1. P.N. Varshney : Banking Law and Practice.
2. B.M. Lall Nigam : Banking Law and Practice.
3. Tannan : Banking Law and Practice in India.
4. Tax mann : Bankerôs Manual.
5. Diwan, Prag and Sunil Sharma : Electronic Commerceï A Managerôs Guide to E. Business, Varity Books International, Delhi.
6. V.K. Jain and Hemlata : Electronic and Mobile Commerce, Cyber-tech Pub. New Delhi. Uppal, K.K., Chawla, A.S. & Chawla & Malhotra Keshav : Banking Towards 21st Century, Published by Deep and Deep Publications, New Delhi.

MC.420-RISK MANAGEMENT

Objective: To provide an understanding and an appreciation of the principles and practices of risk management in order to enable production of the optimum strategy for the handling of risk in an organisation.

UNIT-I

Nature and Sources of Financial Risk: Introduction to Financial Risks, definition, including: Business Risk, Operational Risk, Financial Risk (market risk, credit risk, liquidity risk), Legal Risk; Introduction to risk management; Principles, essential features and objectives of risk management; Function and duties of a risk manager and the risk management department of a company; Content and purposes of a companyôs risk management philosophy, statement, manual and report; Location and structure risk management within the organizational structure; Risk and Return.

UNIT-II

Process of Risk Management; Techniques used in identifying sources of risk ; Quantitative and qualitative techniques used to identify and assess potential risks to an organization and the advantages and disadvantages of each technique. Techniques for gathering data. Methods of measuring, representing and comparing data for analysis and the relative advantages of each method. Probability theory, the ways in which probabilities are derived and their uses. Application of probability distribution.

UNIT-III

Risk Measurement and Control: The measurement of risk, Controlling risk: With insurance and without insurance. Objective and techniques of loss control management ï Property, Security, Employee and Liability risk control; Features of a contingency plan. Disaster Recovery, Crisis Management and Business Continuity.

UNIT-IV

Value at Risk (VaR): Meaning, Measuring Value at Risk Monte Carlo Simulatio-, application of VaR, Hedging- Concepts and Types; Hedging Process - Initiation, Monitoring, closing and roll over. Risk Management Information System (RMIS) - fundamental concepts, Evolution of RMIS, components, potential benefits and limitations of RMIS, Designing RMI, Implementing RMIS

Reference Books :

1. Redja, Principles of Risk Management and Insurance ,Pearson Education, N. Delhi.
2. Marrison The Fundamentals of Risk Mangement, Tata Mc Graw Hill, N. Delhi.
3. John C. Hull, Fundamentals of Futures & Options Markets (Prentice Hall.
4. Jorian, Phillippe Value at Risk: The New Benchmark for Managing Financial Risk McGraw-Hill.
5. Saunders, A. and M. Cornett., Financial Institutions Management: A Risk Management Approach, 6th ed. Boston: McGraw-Hill.
6. Harrington, S. and G. Niehaus. Risk Management and Insurance, McGraw-Hill.
7. Rivai, V., A. Veithzal, and F. Idroes. Bank and Financial Institutions Management: Conventional and Sharia System. Jakarta: Rajawali Pers.

MC. 421-ACTUARIAL SCIENCES

Objective: The purpose of this course is to equip the student with the principles and techniques of actuarial practice. The paper requires at least a prior general knowledge of mathematics and statistics.

UNIT-I

Basic Mathematics: Basic functions, Annuities - certain, Loans repayable by installments, Simple methods of determining the rate of interest in a transaction, Capital redemption assurance, Valuation of simple loans and debentures.

UNIT-II

Life Contingencies: Mortality tables, Elementary functions, the central death rate, Single life annuities and assurances, Commutation columns, Temporary and deferred annuities and assurances, Conversion tables.

UNIT-III

Special annuities and assurances, Periodical payments, Complete annuities, Policy value, Select and other tables.

UNIT-IV

Joint-life Annuities and Assurances: Value of and premiums for joint -life and contingent annuities and assurances.

Reference Books:

1. Donald D.W.A. ñCompound Interest and Annuities ï Certainò, 2nd Ed., Cambridge [Eng.] Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press.
2. R.E. Underwood, ñThe Elements of Actuarial Science ò, 4th Edition, Pitman.
3. Harry Freeman, ñMathematics for Actuarial Students ò, Cambridge at the University Press.

MC. 422- COMPREHENSIVE VIVA-VOCE

The Comprehensive VIVA-VOCE will be conducted at the end of the 4th Semester by the External Examiner appointed by the University. The VIVA-VOCE will be based on the content of the subjects studied by the student during the all four semesters.

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FACULTY OF LANGUAGES

SYLLABI

FOR

M.A. English

(Semester System)

Examinations, 2017-18

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNALASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. English(Semester System)
(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students:

   (i) Terminal Evaluation : 80 %
   (ii) Continuous Assessment : 20 %
   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class,term papers,attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below:

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
	Total:		**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under:

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment .Thus, whatever marks are secured by a student out of 20% marks,will be carried forward and added to his/her score out of 80% ,i.e.the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations,by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES:

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For the private candidates,who have not been assessed earlier for internal assessment,the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note(ii) in the question paper.

(iii)In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card(D.M.C.).

OUTLINES OF TESTS, SALLABI AND COURSES OF READING FOR M.A. ENGLISH SEMESTER I AND II FOR THE SESSION 2017-18

Objectives:

To help the students develop literary sensibility, critical thinking, and sharp, penetrating understanding of a wide range of literary texts, literary history, literary criticism/theory, and English Language/ELT.

General Notes:

1. There will be two semesters in a year with four compulsory papers in each semester.

2. Each paper shall carry 100 marks (80 marks for end-term written examination, 20 for internal assessment). The end term exam.shall be of 3 hours duration.

3. There shall be one question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes shall be context based. Though the nature of notes shall vary from course to course, efforts shall be made to cover a range of terms/concepts/trends/movements specific to the course.

4. There shall be four essay-type questions of 15 marks each (to be answered in about 600 words each), one question with internal choice will be set from each of the four prescribed texts/units.

OUTLINES OF TESTS, SALLABI AND COURSES OF READING FOR M.A. ENGLISH SEMESTER I AND II FOR THE SESSION 2017-18

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

M.A. PART-I

SEMESTER-I

PAPER-I: LITERARY CRITICISM - I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Mimetic and Expressive theory of Art, Catharsis, Hamartia, Three Unities, Ars Poetica, Sublime, Apologie for Poetry, Decorum, Humanism, Objective Correlative, Dissociation of Sensibility, Fancy and Imagination, Synaesthesia, Disinterestedness, Impersonal Theory of Poetry.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	Aristotle	:	*Poetics* (Chapters i-xvi)
Unit 2.	William Wordsworth	:	Preface to the *Lyrical Ballads* (1800)
Unit 3.	Matthew Arnold	:	"The Study of Poetry"
Unit 4.	T.S. Eliot	:	"Tradition and the Individual Talent"

The essays of Wordsworth, Arnold, and Eliot are available in *English Critical Texts* edited by Enright and Chickera.

Suggested Reading:

1. David Daiches: *Critical Approaches to Literature,* 2nd ed., Hyderabad: Orient Longman, 2001.
2. F. L. Lucas: *Tragedy in Relation to Aristotle's Poetics,* New Delhi: Allied Publishers, 1970.
3. Humphrey House: *Aristotle's Poetics,* Ludhiana: Kalyani Publishers, 1970.
4. M. H. Abrams: *A Glossary of Literary Terms,* Singapore: Harcourt Asia Pvt. Ltd., 2000.
5. Rene Wellek: *A History of Modern Criticism: 1750-1950,* Vols. I-IV, London: Jonathan Cape, 1958.
6. M.A.R. Habib: *A History of Literary Criticism: From Plato to the Present,* Oxford: Blackwell, 2005.
7. Boris Ford (ed.): *The Pelican Guide to Literary Criticism: From Dryden to Johnson,*Vol 4, London: Pelican, 1980.
8. ….*The Pelican Guide to Literary Criticism: From Blake to Byron*, Vol 5, London: Pelican, 1980.
9. Harry Blamires: *A History of Literary Criticism,* Delhi: Macmillan, 2001.
10. Patricia Waugh: *Literary Theory & Criticism: An Oxford Guide,* Delhi: OUP, 2006.
11. M.S. Nagarajan: *English Literary Criticism & Theory: An Introductory History,* Hyderabad: Orient Longman, 2006.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-II: BRITISH POETRY- I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Neo-classicism, Metaphysical Poetry, Victorian Temper, Victorian Compromise, Mock Epic, Heroic Couplet, Negative Capability, Supernaturalism in Romantic Poetry. The French Revolution, The Pre-Raphaelites, Humanism, Romantic Revival, Dramatic Monologue, Dissociation of Sensibility, Pathetic Fallacy.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	John Donne	:	"Satyre: Of Religion". "The Good-Morrow" "The Canonization" "At the Round Earth's Imagin'd Corners" Batter My Heart, Three-Person'd God"
Unit 2.	Alexander Pope	:	"The Rape of the Lock"
Unit 3.	John Keats	:	"Ode to a Nightingale" "Ode on a Grecian Urn" "Ode on Melancholy" "To Autumn" "Ode to Psyche"
Unit 4.	Robert Browning	:	"My Last Duchess" "Andrea del Sarto" "The Last Ride Together" "Rabbi Ben Ezra" "The Grammarian's Funeral"

Suggested Reading:

1. Joan Bennett : *Five Metaphysical Poets,* Cambridge: Cambridge University Press, 1964.
2. Helen Gardner ed. : *John Donne: A Collection of Critical Essays* (*Twentieth Century Views Series)* New Delhi: Prentice Hall India Ltd., 1979.
3. George Williamson : *A Reader's Guide to the Metaphysical Poets,* Yugoslavia: Thomas & Hudson, 1988.
4. Abrams, M.H. : *English Romantic Poets: Modern Essays in Criticism,* 2nd ed., Oxford: Oxford University Press, 1975.
5. Fraser, G.S. ed. : *Keats: The Odes* (*Case Book Series),* London: Macmillan, 1971.
6. Stuart M. Sperry : *Keats: The Poet,* New Jersey: Princeton University Press, 1973.
7. Earl R. Wasserman : *The Finer Tone: Keats' Major Poems,* Baltimore: The John Hopkins Press, 1967.
8. Walter Jackson Bate (ed.) : *Keats: A Collection of Critical Essays,* New Delhi: Prentice Hall India Pvt. Ltd., 1978.
9. Drew, P. (ed.) : *Robert Browning: A Collection of Critical Essays,* New Delhi: Macmillan, 1985.
10. J.R. Watson (ed.) :*Browning: Men and Women and OtherPoems* (Case Book Series), New Delhi: Macmillan, 1986.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER III: BRITISH DRAMA-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Liturgical Plays, Mystery and Miracle Plays, Morality Play, Chester Play, Interludes, Shakespearean Tragedy, Tragic Hero, University Wits, Shakespearean Comedy, Blank Verse, Marlowean Hero, Restoration Comedy, Comedy of Humours, Comedy of Manners, Heroic Tragedy.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	Christopher Marlowe	:	*Doctor Faustus*
Unit 2.	William Shakespeare	:	*King Lear*
Unit 3.	Richard Sheridan	:	*The School for Scandal*
Unit 4.	George Bernard Shaw	:	*Pygmalion*

Suggested Reading:

1.	Clifford Leech	:	*Marlowe; A Collection of Critical Essays* (*Twentieth Century Views Series),* New Delhi: Prentice Hall India, 1978.
2.	Judith O'Neill	:	*Critics on Marlowe,* London: Allen &Unwin, 1969.
3.	Ghanshiam Sharma (ed.)	:	*Reinterpretations of Marlowe's Faustus: A Collection of Critical Essays,* New Delhi: Doaba House, 1984.
4.	A. C. Bradley	:	*Shakespearean Tragedy: Lectures on Hamlet, Othello, King Lear, Macbeth,* New Delhi: Dodo Press, 2009.
5.	Ralph J. Kaufmann	:	*Elizabethan Drama: Modern Essays in Criticism,* Oxford: Oxford University Press, 1970.
6.	Alfred Harbage	:	*Shakespeare: The Tragedies: A Collection of Critical Essays,* New Delhi: Pearson, 2005.
7.	Janet Adelman (ed.)	:	*Twentieth Century Interpretations of King Lear,* New Delhi: Prentice-Hall India, 1980.
8.	James Morwood& David Crane, (Ed.)	:	*Sheridan Studies*, Cambridge: Cambridge University Press, 1996.
9.	Eric Bentley	:	*Bernard Shaw,* London: Limelight Editions, 1985.
10.	Colin Wilson	:	*Bernard Shaw, A Reassessment*, Athenum, 1969.
11.	G. E. Brown	:	*George Bernard Shaw,* London: Evans Brothers, 1970.
12.	Christopher Innes (ed.)	:	*Cambridge Companion to George Bernard Shaw,* Cambridge: Cambridge University Press, 2006.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-IV: BRITISH FICTION-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Reform Bill of 1832, Industrialism, Picaresque Novel, Comic Epic in Prose, Realism, Burlesque, Omniscient Author, Flat and Round Characters, Sentimental Novel, Gothic Novel, Utilitariansim, Social Novel, Historical Novel, Epistolary Novel. The Novel of Ideas.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1. Henry Fielding : *Joseph Andrews*

Unit 2. Charles Dickens : *Hard Times*

Unit 3. Charlotte Bronte : *Jane Eyre*

Unit 4. Thomas Hardy : *Jude, the Obscure*

Suggested Reading:

1. Terry Eagleton : *The English Novel: An Introduction,* Oxford: Blackwell, 2005.
2. Martin C. Battestin : *The Moral Basis of Fielding's Art: A Study of Joseph Andrews,* Connecticut: Wesleyan University Press, 1967.
3. R. Paulson : *Henry Fielding: A Collection of Critical Essays* (*Twentieth Century Views Series),* New Delhi: Prentice Hall India, 1976.
4. Alberto J. Rivero : *Critical Essays on Henry Fielding,* London: Barnes & Noble, 1998.
5. Jill Campbell : *Natural Masques: Gender and Identity in Fielding's Plays and Novels,* Stanford: Stanford University Press, 1995.
6. Edward Gray (ed.) : *20th Century Interpretations of Hard Times: A Collection of Critical Essays,* New Delhi: Prentice Hall Pvt. Ltd., 1969.
7. Harold Bloom (ed.) : *Modern Critical Interpretations: Charles Dickens'Hard Times,* New York: Chelsea House, 1987.
8. Philip Collins (ed.) : *Dickens' Hard Times: A Critical Heritage,* London: Routledge &Kegan Paul, 1971.
9. Judith O'Neill (ed.) : *Critics on Charlotte Bronte & Emily Bronte*, Miami: University of Miami Press, 1979.
10. Miriam Allott (ed.) : *Charlotte Bronte: Jane Eyre*. Casebook Series.
11. Jill Karson : *Readings on Jane Eyre*, San Diego, CA: Green Haven Press, 2000.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

SEMESTER-II

PAPER-I: LITERARY CRITICISM-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Ontological Criticism, Chicago Critics, Irony and Paradox in New Criticism, Tension, Texture, Point of View, Id/Ego/Superego, Oedipus Complex, Archetypal Motifs, Shadow/Anima/Persona, Collective Unconscious, New Historicism, Ideology, Base and Superstructure, Hegemony.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Formalist Approach

Unit 2. Psychological Approach

Unit 3. Mythological and Archetypal Approach

Unit 4. "Literature and History" (First Chapter of Terry Eagleton's *Marxism& Literary Criticism)*

Units 1, 2 and 3 are based on corresponding sections from Wilfred Guerin et al, ed., *A Handbook of Critical Approaches to Literature*

Suggested Reading:

1. William K Wimsatt and Cleanth Brooks: *Literary Criticism: A Short History,* New Delhi: Oxford & IBH Pub. Co., 1974.
2. David Robey& Ann Jefferson: *Modern Literary Theory: A Comparative Introduction,* London: Batsford, 1986.
3. Harry Blamires: *A History of Literary Criticism,* Delhi: Macmillan, 2001.
4. M.A.R. Habib: *A History of Literary Criticism: From Plato to the Present,* Oxford: Blackwell, 2005.
5. M.S. Nagarajan: *English Literary Criticism & Theory: An Introductory History,* Hyderabad: Orient Longman, 2006.
6. Patricia Waugh: *Literary Theory & Criticism: An Oxford Guide,* New Delhi: Oxford University Press, 2006.
7. Frank Lentricchia: *After the New Criticism,*Chicago: Chicago University Press, 1980.
8. Hans Bertens: *Literary Theory: The Basics,* New York: Routledge, 2003.
9. Peter Barry: *Beginning Theory: An Introduction to Literary & Cultural Theories,* 2nd ed., Manchester: Manchester University Press, 2004.
10. Raman Selden: *A Reader's Guide to Contemporary Literary Theory,* New Delhi: Pearson, 2006.
11. John Crowe Ransom: *The New Criticism,* New York: New Directions, 1941.
12. I.A. Richards: *Practical Criticism,* London: Routledge & Paul, 1964.
13. Terry Eagleton: *Marxism and Literary Criticism,* London: University of California Press, 1976.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-II: BRITISH POETRY-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Objective Correlative, Modernism, Post-Modernism, Impact of World Wars on Twentieth-Century Literature, War Poets, Imagism, Dadaism, Surrealism, Impressionism, Expressionism, Naturalism,. Existentialism, Movement Poets, Confessional Poets, Irish Literary Revival.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1	W. B. Yeats	:	"Adam's Curse" "Easter 1916" "The Second Coming" "A Prayer for My Daughter" "Sailing to Byzantium" "The Circus Animals' Desertion"
Unit 2	T. S. Eliot	:	"The Love Song of J. Alfred Prufrock" "The Hollowmen"
Unit 3	W. H. Auden	:	"In Memory of W. B. Yeats" " Musee des Beaux Arts" "September 1, 1939" "Shield of Achilles" "Funeral Blues"
Unit 4	Ted Hughes	:	"The Jaguar" "Hawk Roosting" "Thrushes" "Crow Alights' "Crow's Last Stand"

Suggested Reading:

1. David A. Moody: *The Cambridge Companion to T.S. Eliot,* Cambridge: Cambridge University Press, 2003.
2. Bernard Bergonzi: *T. S. Eliot* (Masters of World Literature), London: Macmillan, 1978.
3. Helen Gardner: *The Art of T.S. Eliot,* New Delhi: Penguin, 1988.
4. John Lucas: *Modern English Poetry – from Hardy to Hughes: A Critical Survey,* London, Batsford Ltd., 1986.
5. Edward Maline: *A Preface to Yeats,* London: Longman Group Ltd., 1983.
6. Jon Stallworthy (ed.): *Yeats' Last Poems* (Casebook Series), New Delhi: Macmillan, 1968.
7. Keith Sagar: *The Art of Ted Hughes,* Cambridge: Cambridge University Press, 1975.
8. Stephen Spender: *Eliot* (Fontana Modern Masters), Glasgow: William Collins & Sons Ltd., 1967.
9. Terry Gifford, Neil Roberts: *Ted Hughes: A Critical Study,* London: Faber & Faber, 1981.
10. Edward Mendelson: *Early Auden,* London: Faber & Faber, 1999.
11. Stan Smith, *Cambridge Companion to W.H. Auden,* Cambridge: Cambridge University Press, 2004.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-III: BRITISH DRAMA-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

The Drama of Absurd, The Great depression, Realism in Drama, Drama of Ideas, Impressionism, Poetic Drama, Pastiche, Problem Plays, Thesis Play, Romanticism in Modern Drama, Symbolism in Drama, Theatre of Cruelty, Alienation Effect, Kitchen Sink Drama, Irish Movement.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1. T. S. Eliot : *Murder in the Cathedral*

Unit 2. Samuel Beckett : *Waiting for Godot*

Unit 3. John Osborne : *Look Back in Anger*

Unit 4. Tom Stoppard : *Rosencrantz and Guildenstern are Dead*

Suggested Reading:

1. Christopher Innes, *Modern British Drama: The Twentieth Century*, 2nd edition, Cambridge: Cambridge University Press, 2002.
2. Hugh Kenner: *A Reader's Guide to Samuel Beckett,* New York: Grove Press, 1961.
3. John Fletcher: *Samuel Beckett's Art*, London: Chatto and Windus, 1967.
4. Ruby Cohn, *A Casebook on 'Waiting for Godot'*, New York: Grove Press, 1967.
5. Ronald Hayman, *Samuel Beckett*, London: Heinemann, 1968.
6. John Russell Taylor: *Anger and After: A Guide to the New British Drama*, London: Methuen, 1969.
7. Kenneth Allsop: *The Angry Decade: A Survey of the Cultural Revolt of the 1950s*, London: John Good Child Publishers, 1984.
8. John Russell Brown (ed.): *A Short Guide to Modern British Drama*, London: Barnes & Noble, 1983.
9. Michael Anderson, *Anger and Detachment: A Study of Arden, Osborne and Pinter*, London: Pitman, 1976.
10. Ronald Hayman: *John Osborne* (Contemporary Playwrights Series), London: Heinemann Educational, 1970.
11. Harold Bloom, (ed.): *Tom Stoppard* [Bloom's Major Dramatists], New York: Chelsea House, 2003.
12. Katherine E. Kelly (ed.): *The Cambridge Companion to Tom Stoppard,* Cambridge: Cambridge University Press, 2001.
13. Jenkins, Anthony: *The Theatre of Tom Stoppard,* Austin: University of Texas Press, 2003.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-IV: BRITISH FICTION-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Stream of Consciousness, Modernism, the Bloomsbury Group, Psychological Realism, Anti Hero, Naturalism, Autobiographical Novel, Psychological Novel, Development of evolutionary Sciences, Bildungsroman, Lyrical Novel, Transitional Novel, Metafiction, Twentieth Century Realism, Colonial Consciousness in Twentieth Century Novel.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts:

Unit 1. D. H. Lawrence : *Sons and Lovers*

Unit 2. Virginia Woolf : *Mrs. Dalloway*

Unit 3. Joseph Conrad : *Heart of Darkness*

Unit 4. William Golding : *Lord of the Flies*

Suggested Reading:

1. Bernard Bergonzi, *Reading the Thirties: Texts and Contexts,* Pittsburgh: Pittsburgh University Press, 1978.
2. George M. Johnson, *Dynamic Psychology in Modern British Fiction,* London: Palgrave Macmillan, 2005.
3. Geoff Dyer, *Out of Sheer Rage: Wrestling with D.H. Lawrence,* North Point Press, 1999.
4. Anne Fernihough, *The Cambridge Companion to D.H. Lawrence*, Cambridge University Press, 2001.
5. Keith Sagar, *D.H. Lawrence: Life into Art,* New York: Penguin, 1986.
6. Jeremy Hawthorn, *Virginia Woolf'sMrs. Dalloway: A Study in Alienation,* Sussex University Press, 1975.
7. Harold Bloom, *Virginia Woolf's Mrs. Dalloway* (Bloom's Modern Critical Interpretations), London: Chelsea House Publications, 1988.
8. Richard Adams: *Heart of Darkness*. London: Penguin, 1991.
9. Harold Bloom, (ed.): *Marlow,* New York: Chelsea House, 1992.
10. Robert Burden: *Heart of Darkness*, London: Macmillan Educational, 1991.

M.A. PART-II

SEMESTER-III

PAPER-I: LITERARY THEORY-I

Objectives:

The paper provides an important study of literary theory as an intellectual and critical activity 1960 onwards. Central to this course is the analysis of some of the major critical contributions to this area which form a benchmark in understanding the dynamics of literary/critical methods. The course takes up major strands of modern literary theory and provides a conceptual context for an understanding of the function and practice of modern literary and cultural criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of literary theory 1960 onwards, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Roland Barthes: "The Death of the Author" from Roland Barthes, *Image, Music, Text* (London: Flamingo, 1977): 142-48. Also in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 166-72.

Unit-2 Wolfgang Iser: "The Reading Process: a Phenomenological Approach" from David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988).

Unit-3 M. H. Abrams: "The Deconstructive Angel" (from David Lodge (ed.) *Modern Criticism and Theory: A Reader,* London and New York: Longman, 1988).

Unit-4 Raymond Williams: "Base and Superstructure"; and "Dominant, Residual andEmergent." From Raymond Williams, *Marxism & Literature* (Oxford: Oxford University Press, 1977): 75-82 and 121-27.

Suggested Reading:

1. Peter Barry: *Beginning Theory*, Manchester and New York: Manchester University Press, 1995.

2. Raman Selden:*A Reader's Guide to Contemporary Literary Theory*, New Jersey: Prentice-Hall, 1985.

3. Ann Jefferson & David Robey, eds., :*Modern Literary Theory,* New York: Barnes and Noble, 1982.

4. Terry Eagleton: *Literary Theory: An Introduction*, Minneapolis: University of Minnesota Press, 1983.

5. …. *Marxism and Literary Criticism,* Berkeley and Los Angeles: University of California Press, 1976.

6. Krishnaswamy et al.: *Contemporary Literary Theory: A Student's Companion*, New Delhi: Macmillan, 2000.

7. Jonathan Culler: *Barthes*, Great Britain: Fontana, 1983.

8. Jeremy Hawthorn, *A Concise Glossary of Contemporary Literary Theory*, London: Edward Arnold, 1992.

9. Stuart Sim, ed., *AZ: Guide to Modern Literary and Cultural Theorists*, London: Harvester Wheatsheaf, 1995.

10.John Sturrock: *The Word from Paris: Essays on Modern French Thinkers and Writers*, London: Verso, 1998.

PAPER-II: INDIAN WRITING IN ENGLISH

Objectives:

The focus of this paper is the study of Indian contribution to literature in English, from the early advent of English in India to contemporary writing in English. The history and development of Indian Writing in English is scrutinized with reference to the Indian Nationalist Movement, the philosophical thinking of political and social leaders/activists like Mahatma Gandhi, Pandit Jawahar Lal Nehru, Raja Rammohan Roy and others. The issues raised by diasporic movements across the globe, post coloniality and the emergence of modern India is also a part of the study of this paper.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of Indian writing in English, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Raja Rao **:** *Kanthapura*

Unit II: This unit will have three poets and there will be three poems by each :

(a) Agha Shahid Ali **:** "Farewell", "Ghazal", ("Where are you now ?") and "The Country without a Post Office". Available in *The Country without a Post Office,* Delhi. Ravi Dayal, 2000, Ist Indian Edition.

(b) A. K. Ramanujan **:** "Small-Scale Reflections on a Great House"; "Obituary", "Love Poem for Wife 1." Available in R. Parthasarathy ed., *Ten Twentieth Century Indian Poets* (Delhi: Oxford University Press, 1976).

(c) ImtiazDharkar **:** "Purdah I", "Grace" and "Prayer", Available in ImtiazDharkar, *Purdah and Other Poems,* Delhi: Oxford University Press, 1989.

Unit III: Amitav Ghosh **:** *The Shadow Lines* (Delhi: Ravi Dayal, 1988).

Unit IV: Mahesh Dattani **:** *Final Solutions* (New Delhi: Penguin, 2005).

Suggested Reading:

1. K. R. S. Iyengar, *Indian Writing in English*, New Delhi: Sterling, 1985.

2. Bruce, King, *Modern Indian Poetry in English*, New Delhi: Oxford University Press, 1987.

3. A. K. Mehrotra ed., *An Illustrated History of Indian Literature in English*, New Delhi: Permanent Black, 2003.

4. TabishKhair, *Babu Fictions*, Delhi: Oxford University Press, 2006.

5. Meenakshi Mukherjee, *Twice Born Fiction*, New Delhi: Heinemann, 1971.

6 Meenakshi Mukherjee,*The Perishable Empire: Essays on Indian Writing in English*, New Delhi: Oxford University Press, 2000).

7. M. K. Naik ed., *Aspects of Indian Writing in English*, Delhi: Macmillan, 1979.

8. S. Tharu and K. Lalitha, *Women Writing in India: 600BC to the Present*, 2 Vols., New Delhi: Oxford University Press, 1995.

9. V. Raghavan and Nagendra, *An Introduction to Indian Poetics*, Bombay: Macmillan, 1970.

10. G. N. Devy, ed., *Indian Literary Criticism: Theory and Interpretation*, Hyderabad: Orient Longman, 2004.

PAPER- III (Opt. i): POST-COLONIAL STUDIES I (ECS II PCS I)

Objectives: To familiarize the students with theoretical concepts related to the literatures of the 'new' world - Asian, African, Australian, Caribbean, Latin American, Canadian - which have long remained ignored; to foreground issues such as history, class, race, gender, nation, culture, marginality, diasporic consciousness, etc., emphasizing the emergent nature of literary productions from decolonized communities.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt four out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed units :

Prescribed Texts:

Unit-I. ENGLISH LITERARY STUDIES (with reference to English in India)

1. Thomas Babington Macaulay, 'Indian Education: Minute of the 2nd of February, 1835', in G. M. Young (ed.), *Macaulay: Prose and Poetry*, Cambridge, MA: Harvard University Press, 1967:719-30.

2. Gauri Viswanathan, Introduction to *Masks of Conquest*, New York: Columbia University Press, 1989: 1-22.

Unit-II. CULTURAL IDENTITY AND THE NATION

1. Ernest Renan, 'What is a Nation?' in Homi K. Bhabha, ed. *Nation and Narration*, London and New York: Routledge, 1990: 8-22.

2. Frantz Fanon, 'On National Culture' from *The Wretched of the Earth*, Harmondsworth: Penguin, 1967: 166-99.

Unit-III. DEFINING FORCES: GENDER AND RACE

1. Chandra Talpade Mohanty, 'Under Western Eyes', in Patrick Williams and Laura Chrisman, eds., *Colonial Discourse and Postcolonial Theory: A Reader*, New York: Harvester Wheatsheaf, 1993: 196-220.

2. Introducing Gayatri Spivak: Woman as subaltern, subject-positions, postcolonial feminism.

3. Race: Background, classification of races, Social Darwinism and imperial practice, social construction of race; race and ethnicity.

Unit IV. CULTURAL IDENTITY AND DIASPORA

1. Stuart Hall, 'Cultural Identity and Diaspora' in Jonathan Rutherford ed., *Identity: Community, Culture, Difference* (London: Lawrence and Wishart, 1990): 222-37. Also in Padmini Mongia, *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996): 110-21.

2. Introducing HomiBhabha: Concepts of ambivalence and hybridity.

Suggested Reading:

1. John McLeod, *Beginning Postcolonialism*, Manchester and New York: Manchester University Press, 2000.
2. Ania Loomba, *Colonialism/Postcolonialism*, London and New York: Routledge, 1998.
3. Rumina Sethi, *The Politics of Postcolonialism: Empire, Nation and Resistance*, London: Pluto, 2011.
4. Robert J. C. Young, *Postcolonialism*: *A Very Short Introduction*, Oxford: Oxford University Press, 2003.
5. Leela Gandhi, *PostcolonialTheory*, Oxford: Oxford University Press, 1988.
6. Rajeswari Sunder Rajan (ed.), *The Lie of the Land: English Literary Studies in India*, Delhi: Oxford University Press, 1992.
7. Benedict Anderson,*Imagined Communities*, London: Verso, 1983.
8. Rumina Sethi, *Myths of the Nation: National Identity and Literary Representation*, Oxford: Clarendon, 1999.
9. Homi K. Bhabha, *The Location of Culture*, London and New York: Routledge, 1994.
10. Kumkum Sangari and Sudesh Vaid (eds.), *Recasting Women*, New Delhi: Kali, 1989.

PAPER-III (Opt. ii): LINGUISTICS-I (ECS II LIN I)

Objectives :

This paper is aimed to provide an introduction to the studies of language in modern times. Students are made to be aware of developments in the field of Linguistics in the 20th Century, and develop an understanding of the nature of language study through a scientific and analytical approach. An understanding of the concepts in modern Linguistics is an essential objective and the approach to be adopted is that of clear explication of linguistic thought and of the levels of linguistic analysis.

Pattern of examination
There shall be one compulsory question of 20 marks, comprising of short notes from all the units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question with internal choice will be set from each of the four units. The questions from Units 1 & 2 would be Essay Type. The questions from Units 3 & 4 would be exercises (Phonetic Transcription of words with primary stress, and morphological analysis) and short notes.

Content

Unit 1. Language - nature and functions (arbitrariness of sign, speech and writing, animal and human language, conventionality, system of systems). The earlier study of language – historical, comparative approaches, a brief history of linguistics.

Unit 2. The growth of Modern Linguistics:– The descriptive approach, Linguistics as a Science. The early structuralists, anthropologists - Boas, Sapir, Whorf' The contribution of Bloomfield. Ferdinand de Saussure and Dichotomies; Langue and Parole, Syntagmatic and Paradigmatic relationships, synchronic and diachronic approaches.Branches of Linguistics; Psycholinguistics and Neurolinguistics, Sociolinguistics and the study of the variation in language, particularly, dialect, accent and register.

Unit 3. Levels of linguistic analysis I - Phonetics (speech organs, description and classification of sounds, IPA system, phonemes, allophones, minimal pairs); Morphology (free and bound morphemes, allomorphs, zero morphemes, morphophonemics).

Unit 4. The Phonology of English - the description and classification of English Vowels and consonants, syllable structure, word stress. Transcription of English words, marking stress. Weak forms, assimilation and elision in connected speech, basic patterns of intonation.

Word formation in English; derivation, affixation , compounds.

Suggested Reading:

1. Yule, G., *The Study of Language*, Cambridge: Cambridge University Press, 2009.
2. Radford, A., *Linguistics: An Introduction*, Cambridge: Cambridge University Press, 1999.
3. Culler Jonathan, *Saussure*, London: Fontana Modern Classics, 1978.
4. Crystal, D., *Linguistics*, Harmondsworth: Penguin, 1980.
5. Sethi, J. and Dhamija, P.V, *Course in Phonetics and Spoken English*, New Delhi.
6. Syal and Jindal, *Introduction to Linguistics: Language, Grammar and Semantics*, revised Ed., New Delhi: Prentice Hall of India, 2007.
7. Lyons, J., *Language and Linguistics*, Cambridge: CUP, 1982.
8. Roach, P., *English Phonetics and Phonology: A Practical Course*, Prentice Hall of India, 1995.
9. Gimson, A.C., *Introduction to the Pronunciation of English*, London: Arnold, 1988.
10. Fromkin, Rodman and Hyams, *An Introduction to Language* 7th Ed., 11 Thomson Wadworth. Thomsan Asia, Singapore, reprinted in India 2004.
11. Conrad and Leech, *A Student Grammar of Spoken and Written English*, London: Longman.
12. Bauer, L., *Introducing Linguistic Morphology*, CUP, 2002.

PAPER-III (opt. iii) AMERICAN LITERATURE I
(AMERICAN FICTION FROM 1800 TO THE PRESENT)

Objective:

The course examines changes in the American narrative from 1800 to the present and considers what might be distinctly "American" about American literature. It focuses on the historical and cultural influences, literary movements, the short story and novel as distinct genres and on major literary figures. It explores literature that reveals and emerges from multiple perspectives such as those of race, gender, ethnicity, socio-economic class and historical period.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of American fiction, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I : (19^{th} Century Short Fiction)
- (a) Edgar Allan Poe, "The Fall of the House of Usher" (Norton)
- (b) Nathaniel Hawthorne, "Rappaccini's Daughter" (Norton)
- (c) Stephen Crane, "The Open Boat" (Doubleday Press)

Unit II : (Twentieth Century Short Fiction)
- (a) Ernest Hemingway, "The Snows of Kilimanjaro" (Norton)
- (b) William Faulkner, "A Rose for Emily" (Random House)
- (c) Joyce Carol Oates, "Scenes of Passion and Despair" (Oxford)

Unit III : Toni Morrison, *The Bluest Eye* (Vintage)

Unit IV : Don DeLillo, *White Noise* (Penguin)

Suggested Reading:

1. Kenneth Silverman, ed., *New Essays on Poe's Major Tales* (Cambridge University Press, 1992).
2. Charles E. May, *Edgar Allan Poe: A Study of the Short Fiction (*Twayne Series,1991).
3. Albert V. Frank, ed., *Critical Essays on Hawthorne's Short Stories (*Twayne, 1993).
4. Chester L. Wolford, *Stephen Crane:A Study of the Short Fiction* (Twayne, 1989).
5. Paul Smith ed., *New Essays on Hemingway's Short Fiction (*Cambridge University Press, 1985).
6. Joseph M. Flora, *Ernest Hemingway: A Study of the Short Fiction (*Twayne, 1983).
7. Hans H. Skei, *The Art of Brevity: Excursions in Short Fiction Theory and Analysis (*South Carolina Press, 2004).
8. Linden Peach ed., *Toni Morrison: Contemporary Critical Essays* (Casebook Series, 1998).
9. Nancy Peterson, *Toni Morrison: Critical and Theoretical Approaches (*John Hopkins University Press, 1997).
10. Tim Engels & Hugh Ruppersburg eds., *Critical Essays on Don DeLillo,* GK Hall, 2000.

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY I

Objective:

This paper shall focus singularly on Indian Poetics - its various schools and theories so as to provide an alternative perspective of Literary Theory from an indigenous perch. The corpus of Indian Poetics is very rich and multivalent; the paper shall however deal with basic concepts and would therefore be introductory in nature and scope. The prescribed texts are available in English translation and there is no dearth of secondary material also. The students would be encouraged to take a critical view of our own 'poetics' and its relevance in the postcolonial contexts.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Text

Unit I

Rasa – Siddhanta with special reference to Bharatmuni, "On Natya and Rasa: Aesthetics of Dramatic experience" from the *Natyashastra,* anthologized inG.N.Devy's edited book *Indian Literary Criticism* (Hyderabad; Orient Longman, 2002).

Unit II

Dhvani –Siddhanta with special reference to Anandvardhana, "Dhvani: Structure of Meaning" from *Dhvanyaloka,* anthologized in G.N. Devy's edited book *Indian Literary Criticism*(Hyderabad, Orient Longman, 2002).

Unit III

Vakrokti-Siddhanta with special reference to Kuntaka, "Language of Poetry and Metaphor" from *Vakrokti-Jivita*, anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002).

Unit IV

A.K.Ramanujan, "*On Ancient Tamil Poetics*" anthologized in G.N. Devy's edited book *Indian Literary Criticism*(Hyderabad, Orient Longman, 2002).

Suggested Reading:

Rajan, P.K., *Indian Literary Criticism in English*: *Critics, Texts, Issues,* Delhi & Jaipur: Rawat, 2004.

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures*, London: OUP, 1992.

Devi, G.N., *In Another Tongue: Essays on Indian English Literature*, Delhi: MacMillan, 1993.

_____ and Dallmayr Fred, *Between Traditions and Modernity: India's Search for Identity*, Delhi; Sage, 1998.

Chari, V.K., *Sanskrit Criticism*, Delhi: MotilalBanarsidas, 1993.

Sethuraman, V. Ed., *Indian Aesthetics: An Introduction*, Delhi: MacMillan 1992.

Rao, Raja, *The Meaning of India*, Delhi: Vision Books, 1996.

Mukherjee, Meenakshi, *The Perishable Empire: Essays on Indian Writing in English*, Delhi: OUP , 2000.

_____, *Reality and Realism*: *The Novel and Society in India*, Delhi: OUP, 1985.

Sunder Rajan, Rajeswari, Ed., *The Lie of the Land: English Literary Studies in India*, Delhi: OUP, 1991.

Gauri, Viswanathan, *Masks of Conquest: Literary Study and British Rule in India*, New York: Colombia University Press, 1989.

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literatures* (Mysore, Dhvanyaloka, 1984.

Rayan, Krishna, *The Burning Bush: Suggestion in Indian Literature*, Delhi: B.R. Publishing, 1988.

_____, *Text and Sub-text* (Delhi, Arnold Heinemann, 1989).

_____, *Sahitya, A Theory for Indian Critical Practice*, Delhi: Arnold Heinemann, 1991.

Paranjape, Makarand Ed., *Nativism:Essays in Criticism*, Delhi: Sahitya Akademi, 1998.

Krishna, Daya, *Indian Philosophy: A Counter-Perspective*, Delhi: OUP 1991.

Krishnamoorthy, K., *Essays in Sanskrit Criticism*, Dharwar: Karnatak Univ., 1964.

Kane, P.B., *History of Sanskrit Poetics*, Delhi: Motilal Banarasidass, 1971, 4th ed.

PAPER IV (Opt.i): CULTURAL STUDIES-I

Objectives:

The course combines a thorough training in critical and cultural studies with a diverse range of advanced options offering you scope to configure and appropriate programme of study that meets your needs. At a historical juncture of incessant theoretical discourse when English Departments are being structurally reconstituted, cultural studies becomes significant as a course that focuses on criticism as a social and cultural practice in the 20th Century. An English education is now less a concern of familiar Western Course and more a confrontation with the diversity of transnational cultural schemes and texts. Such a task sets out to situate literature in relation to culture and within larger cultural formations. The main aim of this course is to examine literary studies as a self-conscious pursuit of a 'critical' definition of culture.

The programme is designed to provide grounding in the theoretical debates that inform contemporary investigations in a number of areas, such as society, subjectivity, ethnicity, aesthetics, postmodern experience and cultural history. The insights and analyses of late twentieth-century forms of critique – psychoanalysis, deconstruction, and ideological and political thought – are employed to assess some key concepts of interdisciplinary study. Working within multiple contextual formations in a globalized world, the course explains the need for ongoing contest and struggle to understand ideology of mass culture and hegemony with the necessity of achieving cultural knowledge of ordinary people vs. the elites, thus drawing the student closer to a bewildering variety of local and trans-cultural politics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: What is Culture?

1. T.S. Eliot, "The Three Senses of Culture", from *Notes Towards the Definition of Culture*, London: Faber and Faber, 1948. 21-34.

2. Raymond Williams, 'Culture is Ordinary', in *The Routledge Critical and Cultural Theory Reader*. Ed. Neil Badmington and Julia Thomas, London & New York, Routledge.

Unit II: Culture Studies

Richard Johnson, "What is Cultural Studies Anyway?", in *What is Cultural Studies?: A Reader*, Ed. John Storey, London & New York: Arnold, 1976. 75-114.

Unit III: Culture as Discourse

1. Eric Hobsbawm, "Introduction: Inventing Tradition", in *The Invention of Tradition*. Eds. Eric Hobsbawm and Terence Ranger, Cambridge: Cambridge University Press, 1997 rpt. 1-14.

2. Clifford Geertz, "Thick Description: Toward an Interpretive Theory of Culture" from *The Interpretation of Cultures: Selected Essays of Clifford Geertz*, Basic Books, 1973. 3-30.

Unit IV: Representation and Ideology

1. Stuart Hall, "The Work of Representation", in *Representation: Cultural Representations and Signifying Practices* Ed. Stuart Hall, London: Sage, 1997, 15-64.

2. Louis Althusser, "From 'Ideology and Ideological State Apparatuses'" in Anthony Easthope and Kate McGowan ed., *A Critical and Cultural Theory Reader* (Open University Press).

Suggested Reading:

Ali Rattansi and Sallie Westwood Eds., *Racism, Modernity and Identity: On the Western Front,* Oxford: Polity Press, 1994.

AshisNandy, *The Secret Politics of Our Desires: Innocence, Culpability, and Indian Popular Cinema, London:* Zed, 1999).

Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature,* London: Free Association Books, 1991.

Graeme Turner, *British Cultural Studies***,** London: Routledge, London, 1990.

John Rajchman Ed., *The Identity in Question*, London: Routledge, 1995.

John Storey Ed., *What is Cultural Studies?: A Reader,* London: Edward Arnold,1996.

Malcolm Waters, *Globalization*, London: Routledge, 1995.

Stuart Hall, *Critical Dialogues in Cultural Studies*, London: Penguin, 1996.

Richard Hoggart, *The Uses of Literacy*, London: Penguin, 1958.

Ziauddin Sardar and Jerome Ravetz, *Cyberfutures*: *Culture and Politics on the Information Superhighway*, London: Pluto Press,1966.

PAPER IV (Opt. ii): APPLIED LINGUISTICS I

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Prescribed Content:

Unit 1: Linguistics and Language Teaching- Behaviourist, mentalist and cognitivist views of language learning. The difference between learning the first and the second language. Second language acquisition.The Monitor model.

Unit 2: The Language Learner: Interlanguage. Learners' errors as strategies of learning, Types of errors, The significance of error analysis. Universal grammar. Acculturation. Individual differences in learning-age, motivation, attitude and aptitude.

Unit 3: The notion of communicative competence. Varieties of language - social and regional dialects, pidgins and creoles, register. The significance of language variation in teaching and learning language.

Unit 4: Application of linguistics to the study of literary style: A few literary texts to be taken as examples to illustrate features of literary language-deviation, foregrounding, parallelism and poetic diction.

Suggested Reading:

1. Yule, George, *The Study of Language,* New Delhi: Cambridge University Press, 2006.
2. Kirkpatrick, Andy, *World Englishes: Implications for International Communication and English Language Teaching*, U.K.: Cambridge University Press, 2007.
3. Corder, S. Pit, *Introducing Applied Linguistics*, U.K.: Penguin, 1993.
4. Krishnaswamy and Sriraman, *Applied Linguistics*, Delhi: OUP, 1998.
5. Long, Michael H. and Doughty, Catherine J., *The Handbook of Second Language Acquisition*, U.K.: 2005.
6. Downes, William, *Language and Society*, U.K.: Cambridge University Press, 1998.
7. Ellis, Rod, *Understanding Second Language Acquisition*, U.K.: OUP, 1998.
8. Mc Laughlin, Barry, *Theories of Second Language Learning*, U.K.: Edward Arnold, 1988.
9. Skehan, Peter, *Individual Differences in Second Language Learning*, U.S.: Arnold, 1989.
10. Leech, G.N., *A Linguistic Guide to English Poetry*, London: Longman, 1967.

PAPER IV (Opt. iii): WORLD POETRY /NOVEL IN TRANSLATION

Objectives:

The paper provides an interesting study of world poetry and novel with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping students develop ways of approaching, understanding and interpreting classics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1**.**Dante's *Inferno*(Penguin)
Unit-2. Cervantes' *Don Quixote* (Penguin)
Unit-3. Maxim Gorky's *Mother* (Moscow: Popular Publications)
Unit-4. (i) Pablo Neruda: 'A Song of Despair,' 'Enigmas' 'Brown & Agile Child' from *Collected Poems of Pablo Naruda.*
(ii) Octavio Paz: 'A Tree Within,' 'No More Cliches' 'Tomb of Amir Khusru' from *Collected Poems of Octavia Paz.*
(iii) Joseph Brodsky: 'Elegy,' Odysseus to Telemachus,' 'Folk Tune' from *Collected Poems of Joseph Brodsky.*

Suggested Reading:

1. Robert S. Haller, Trans. & Ed., *Literary Criticism of Dante Alighieri*, Lincoln: University of Nebraska Press, 1973).

2. Michael Caesar, *Dante: The Critical Heritage*, Routledge, 1995, pp 288, 383, 412, 631.

3. Peter S. Hawkins and Rachel Jacoff, ed., *The Poet's Dante: Twentieth-Century Responses*, New York: Farrar, 2001.

4. Brooks, Jeffrey, "Readers and Reading at the End of the Tsarist Era," from *Literature and Society in Imperial Russia, 1800-1914*, ed. William Mills Todd III, Stanford: Stanford University Press, 1978.

5. Brooks, Jeffrey, *When Russia Learned to Read: Literacy and Popular Literature, 1861-1917,*Princeton: Princeton University Press, 1985.

6. Bruckner, A., *A Literary History of Russia,* ed. Ellis H. Minns, trans. H. Havelock, London: T. Fisher Unwin, 1908.

7. Troyat, Henri, *Gorky,*trans. Lowell Blaw, New York: Crown Publishers, 1989.

8. Levin, Dan, *Stormy Petrel: The Life and Work of Maxim Gorky*, New York: Appleton-Century, 1965,ed.

PAPER-IV (Opt. iv)SHAKESPEARE-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to **Social and Literary aspects of the age of Shakespeare**: The English Renaissance. The Reformation, The Rise of Regular Comedy and Tragedy. Neo-classical Comedy, Shakespearean Comedy, Shakespearean Tragedy, the Sonnets, Globe Theatre, Shakespearean Stage, the Groundlings.

The following texts for detailed study:

1. Sonnet nos.: 12 – "When I do count the clock that tells the time"
   19 – "Devouring Time, blunt thou the lion's paws"
   29 – "When in Disgrace with Fortune and men's eyes"
   32 – "If thou survive my well-contented day"
   46 – "Mine eye and heart are at a mortal War"
   55 --"Not marble nor the gilded monuments"
   65 – "Since brass, nor stone, nor earth, nor boundless sea"
   71 – "No longer mourn for me when I am dead"
   147 – "My love is as a fever, longing still"
   152 – "In loving thee thou knowest I am forsworn"
2. *Henry IV- Part I*
3. *Twelfth Night*
4. *The Taming of The Shrew*

Suggested Reading:

1. B.Ford (Ed.) : *The Age of Shakespeare,* London: Penguin, 1982.
2. H.B.Charlton : *Shakespearean Comedy,* London: Methuen & Co. Ltd., 1959.
3. L.C. Knights : *An Approach to Hamlet,* London: Chatto and Windus, 1960.
4. G.W. Knights : *The Imperial Theme,* London: Methuen & Co. Ltd., 1951.
5. Alfred Harbage (ed.) : *20th Century Views on Shakespeare: The Tragedies,* Englewood Cliffs, Prentice Hall, 1964.
6. Robert Speaight : *Nature in Shakespearean Tragedies,* London : Hollis & Carter, 1955.
7. Sigurd Burckhardt : *Shakespearean Meanings,* New Jersey: Princeton Uni. Press, 1968.
8. S. Schoenbaum : *WilliamShakespeare: A Compact Documentary Life.*
9. AniaLoomba& Martin Orkin : *Post-colonial Shakespeare*- London and New York: Routledge, 1998.
10. Stanley Wells : *An Oxford Anthology of Shakespeare*. New York: Oxford University Press, 1989.
11. Gabriel Egan : *Shakespeare,* Edinburgh: Edinburgh University Press, 2007.
12. SukantaChaudhuri (ed.) : *Shakespeare without English,* Delhi: Pearson Education, 2006.
13. Thomas Cartelli and Katherine Rowe : *New Wave Shakespeare on Screen* (U.K.: Polity Press, 2007.
14. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England,* Berkeley: Univ. of California Press, 1988.

15. Cristina Malcolmson : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare*, Ithaca: Cornell University Press, 1991.

16. Alexander Legatt : *Shakespeare's Comedy of Love,* London: Methuen, 1974.

17. Jean, Howard and PhyllisRackin : *Engendering a Nation: A Feminist Account of Shakespeare's English Histories,* London, Routledge, 1997.

18. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two,* Buckingham: Open University Press, 1995.

19. Kenneth Muir : *Shakespeare's Sonnets*, U.K. George Allen &Unwin Ltd., 1982.

20. Richard B. Sewall : *The Vision of Tragedy*, New Haven : Yale University Press, 1959.

SEMESTER-IV

PAPER-I: LITERARY THEORY-II

Objectives:

The paper, which is a continuation of Paper I of semester III, introduces students to some more aspects of Literary Theory. In this semester, students will be introduced to new theorists in the field of New Historicism Postcolonial Theory and Feminist Criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Stephen Greenblatt "Counterhistory and Anecdote" in Catherine Gallagher and Stephen Greenblatt *Practicing New Historicism* (London: University of Chicago Press, 2000): 49-74.

Unit 2. The following three excerpts from The Postcolonial Studies Reader edited by Ashcroft, Griffiths, and Tiffin (Routledge 1995)

i) Gayatri Spivak: "Can the Subaltern Speak", 24-28.
ii) Homi Bhabha: "Signs Taken for Wonders", 29-35.
iii) Edward Said: "Orientalism", 87-91.

Unit 3. Elaine Showalter: "Feminist Criticism in the Wilderness" in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 331-53.

Unit 4. Aijaz Ahmed: "The Politics of Literary Postcoloniality" in Padmini Mongia ed. *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996) 276-93. and New York: Longman, 1988), 399-410.

Suggested Reading:

1. Pam Morris, *Literature and Feminism*, Oxford: Blackwell, 1993.

2. Jorge Larrain: *Ideology and Cultural Identity*, Oxford: Polity, 1994.

3. Moyra Haslett: *Marxist Literary and Cultural Theories*, London: Macmillan, 2000.

4. Arthur Asa Berger: *Cultural Criticism: A Primer of Key Concepts*, California: Sage, 1995.

5. Stevi Jackson and Jackie Jones, *Contemporary Feminist Theories,* New York: New York UniversityPress, 1998.

6. Virginia Woolf, *A Room of One's Own*, London: Harcourt, 1929.

7. Roman De La Campa, E. Ann Kaplan and Michael Sprinker, eds., *Late Imperial Culture*, London andNew York: Verso.

8. Neil Lazarus, ed., *The Cambridge Companion to Postcolonial Literary Studies*, Cambridge: Cambridge University Press, 2004.

9. Dirlik, Arif, 'The Postcolonial Aura: Third World Capitalism in the Age of Global Capitalism,' *Critical Inquiry*, Vol. 20 (1994): 328-56.

10. Bill Ashcroft and Pal Ahluwalia, *Edward Said: The Paradox of Identity*, London and New York: Routledge, 1999.

PAPER II: INDIAN WRITING IN TRANSLATION

Objectives:

There is a wealth of literature in various regional languages of India, which of late has been translated into English. The main purpose of the course would be to introduce students to the native varieties of literature. The range of texts, taken from different language-literatures, is enormous, foreclosing the possibilities of forging any essentialized idea of India. The Indianness of Indian writings, more often mapped through Indian English writings, stands questioned and challenged by the emerging corpus of the translated works. Each language-literature has its own specific forms, genres and literary stylesto which students would be exposed through a select list of texts/ books.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Novel

Fakir Mohan Senapati, *Six Acres and a Third*, Trans. Rabi Shankar Mishra, Satya P. Mohanty, Jatindra K. Nayak, et al., Delhi: Penguin, 2006.

Unit II: Short Stories

1. Prem Chand, "The Shroud," Available in *The World of Premchand: Selected Short Stories*, Trans. & Ed. by David Rubin, Delhi: Oxford University Press, 2001: 233-40.

2. Mahasweta Devi, "Draupadi," Available in *Breast Storie*s. Trans. Gayatri Chakravorty Spivak, Calcutta: Seagull, 1997: 19-38.
3. UrmilPawar. "A Childhood Tale." Trans. Jahnavi Phalkey and Keerti Ramchandra, *Translating Caste,* Ed. Tapan Basu, Delhi: Katha, 2002: 43-55.

Unit III: Drama

Girish Karnad, *Tughlaq*, Delhi: Oxford University Press, 1975.

Unit IV:Poetry

1. Faiz Ahmad Faiz. "Don't Ask Me for that Love Again", "A Prison Evening", "We who were Executed" and "In Search of Vanished Blood." Available in *The Rebel's Silhouette*. 3rd Impression. Trans. Agha Shahid Ali, Delhi: Oxford University Press, 2005.

2. NamdeoDhasal. "Hunger", "I Slew the Seven Horses of the Chariot of the Sun" translated by DilipChitre, Delhi: Narayana, 2007, from the collection *Namdeo Dhasal: Poet of the Underworld.*

3. Suryakant Tripathi 'Nirala'. "Remembering Saroj." Available in *A Season on the Earth: Selected Poems of Nirala*. Trans. & Ed. David Rubin, Delhi: Oxford University Press, 2003.

Suggested Reading:

1. Meenakshi Mukherjee, *Realism and Reality: The Novel and Society in India*, Delhi: Oxford University Press, 1994 rpt.

2. Sheldon I. Pollock (ed.), *Literary Cultures in History: Reconstructions from South Asia*, California: Univ. of California Press, 2003.

3. K. Satchidanandan, *Indian Literature: Positions and Propositions*, Delhi: Pencraft, 1999.

4. Sisir Kumar Das (ed.), *History of Indian Literature*, Vol I-X, Delhi: Sahitya Akademi, 1995.

5. Priya Joshi, *In Another Country*, Delhi: Oxford University Press, 2002.

6. K.M. George, *Comparative Indian Literature*, Delhi: Macmillan, 1984.

7. Sujit Mukherjee, *A Dictionary of Indian Literature: Beginnings-1850*, Hyderabad: Orient Blackswan, 1999.

8. G.N.Devy, *After Amnesia*, Hyderabad: Orient Longman, 1992.
   -------, Of Many Heroes, Hyderabad: Orient Longman, 1998.

9. Tutun Mukherjee, ed., *Girish Karnad's Plays: Performance and Critical Perspectives*, Delhi: Pencraft, 2008.

10. Ananda Lal, ed., *Theaters of India: A Concise Companion*, Delhi: Oxford University Press, 2009.

PAPER-III (opt. i): POSTCOLONIAL STUDIES-II

Objectives: The course concerns New Literatures in English which will introduce students to some major issues and problems common to such literatures. After centuries of colonial rule and British Literature, we find that decolonization has shown that there are simply too many writers and writing, new nations and old hegemonies to be scrutinized. This course attempts to familiarize students to literatures of the 'new' world – African, Asian, Caribbean and Canadian – which have remained outside discourse making for a long time. The course is introduced as a revisionary discipline which primarily focuses on interrogating the Western canon.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Chinua Achebe, *Things Fall Apart* (Oxford: Heinemann, 1958).

Unit-2 Salman Rushdie, *Midnight's Children* (New York: Avon, 1980).

Unit-3 Jean Rhys, *Wide Sargasso Sea* (London: Penguin, 1968).

Unit-4 Margaret Atwood, *Surfacing* (Canada: McClelland and Stewart, 1972).

Suggested Reading:

1. Margaret Atwood, *Survival:A Thematic Guide to Canadian Literature* (Southport: McClelland and Stewart, 1972).

2. Bill Ashcroft, et al, eds., *The Post-Colonial Studies Reader* (London and New York: Routledge, 2006).

3. Diana Brydon and Helen Tiffin, *Decolonising Fictions* (Sydney: Dangaroo, 1993).

4. Homi K. Bhabha, *Nation and Narration* (London and New York: Routledge, 1990).

5. Bill Ashcroft, Gareth Griffiths and Helen Tiffin, *Key Concepts in Post-Colonial Studies* (London and New York: Routledge, 1998).

6. Timothy Brennan, *Salman Rushdie and the Third World* (New York: St. Martin's Press, 1989).

7. Thomas F. Staley, *Jean Rhys: A Critical Study* (London: Palgrave Macmillan, 1979).

8. Pierrette Frickey, *Critical Perspectives on Jean Rhys* (Washington DC: Three Continents Press, 1990).

9. Bruce King, ed., *The New National and Postcolonial Literatures: An Introduction* (Oxford: Clarendon, 1996).

10. G. D. Killam, *The Novels of Chinua Achebe*. Studies in African LiteratureSeries.(London: Heinemann, 1978).

PAPER-III (opt. ii): LINGUISTICS-II

Objectives:

This course is aimed at an understanding of the development of the English language and structure of modern English. Many of the Latin-based rules and prescriptive approaches to English language have given way to a descriptive account of the language at all levels. The course is expected to familiarize students with the developments in the English language up to the present.

Pattern of examination

One compulsory question of 20 marks comprising of short notes from all units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question each with internal choice will be set from each of the four units.

Content:

Unit 1. Levels of Linguistics Analysis II: The study of grammar-traditional (the latinate fallacy, the semantic fallacy) structural (IC analysis, NP and VP, phrase structure rules, practice of the diagram for analyzing sentence structure) transformational generative grammar with reference to Chomsky's distinction between deep and surface structures, kernel sentences and transformations and familiarity with some important transformational rules, lexical restrictions.

Unit 2. The Grammar of English – Basic sentence patterns in English, Description of the structure of Noun Phrase, Verb Phrase, Adjective and Adverbial Phrase in English (with practical exercises). Some types of complex sentences. Sentence connection and cohesion in English.

Unit 3. Levels of Linguistic Analysis III: Theories of semantics, Synonymy hyponymy, entailment, polysemy, ambiguity (with examples from the semantics of English).

Unit 4. Diachronic changes in English- sound and spelling change and the influence of other languages on English. The development of English grammars and dictionaries.English as global language-varieties of English in Britain and around the world with special reference to Indian English.

Suggested Reading:

1. Palmer, F., *Grammar* (Cambridge ,Cambridge Univ. Press, 1983).

2. Lyons, J., *Chomsky* (London, Fontana Modern Classics, 1983).

3. Krishnaswamy and Verma, *Modern Linguistics* (Delhi, OUP,1988).

4. Biber, Conrad and Leech, *A Student Grammar of Spoken and Written English*, London, Longman, 1999.

5. Leech, Svartvik, Quirk and Greenbaum, *A Comprehensive Grammar of the English Language* (London, Longman, 1988).

6. Knowles, G., *A Cultural History of the English Language (* London, Longman, 1998).

7. Bauer, Laurie, *Watching English Language* (London, Longman, 1994).

8. Crystal, D., *English as a Global Language (*Cambridge, CUP,1997)

9. Kachru, B., *TheIndianization of English* (New Delhi, OUP, 1988)

10. Wells, J., *Accents of English ,Vol.I The British Isles and Vol. II- Beyond the British Isles* (Cambridge, Cambridge Univ. Press, 1990)

PAPER III (opt. iii): AMERICAN LITERATURE-II

Objectives: The course explores the genres of poetry and drama focusing on major American texts that have left their mark on the culture. The works selected engage with class structures, racial, ethnic, sexual and gender relations as well as questions of national identity. They represent major developments in style, content, focus and language of American Poetry and Drama.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Texts for Study:

Unit I:	Walt Whitman	:	"Song of Myself" "Crossing Brooklyn Ferry" "Out of the Cradle Endlessly Rocking" "Song of the Open Road" (Norton)
Unit II:	Robert Frost	:	"Birches" "Mending Wall" "After Apple Picking" "Stopping by Woods on a Snowy Evening" "Design" "Directive" (Norton)
Unit III:	Eugene O'Neill	:	*The Hairy Ape* (East West Press)
Unit IV:	Arthur Miller	:	*The Crucible* (Allied Press)

Suggested Reading:

Jay Grossman, ed., *Breaking Bounds: Whitman and Cultural Studies (*Oxford University Press,1996).

Robert K. Martin, *The Continuing Presence of Walt Whitman: The Life after the Life* (Iowa Press, 1992).

Kenneth Price, ed., *Walt Whitman* (Cambridge University Press, 1996).

Philip L. Gerber, *Robert Frost* (Twayne,1982).

Jesse Zuba, *Robert Frost*, (Chelsea House, 2003).

Normand Berlin, *Eugene O'Neill* (Grove Press,1982).

James J. Martine, ed., *The Plays of O'Neill: A New Perspective* (GK Hall, 1985).

James J. Martine, *The Crucible: Politics, Property and Pretense (*Twayne, 1993).

John H. Ferres, ed., *Twentieth Century Interpretations of The Crucible,* 1972.

C.W.E. Bigsby, *A Critical Introduction to Twentieth Century Drama* (Cambridge University Press, 1982).

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY II

Objective:

This paper is an extension of the paper on Indian Literary Criticism introduced in Semester III. Here the focus would be on Twentieth Century texts and Literary Interventions. Right from the days of the Freedom Movement, Indian Literary Criticism has increasingly taken political turns and twists. At one level attempts were made to de-colonize literary theory by way of excavating schools and theories of the ancient past, at another level, the endeavour was to search for critical alternatives from within the historical past. While in the previous paper, the thrust is on well-evolved and taxonomically rich critical frames of *rasa, dhavni*and *vakrokti*. Here the emphasis is on theoretical debate about the possibilities of multiple critical authorizes that exist in Indian Culture.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

The paper consists of four Units:

Unit I:

1. Ananda Coomaraswamy, "*The Dance of Shiva"* (Delhi: Munshi Ram Manohar Lal Publishers, 1999 ed).

2. Tagore, "*The True Nature of Literature",* Rabindranath Tagore: *Selected Writings on Literature and Language*, edited by Sisir Kumar Das and Sukanta Chaudhuri (Delhi: Oxford, 2001).

Unit II :

1. G.N.Devy, "After Amnesia", *After Amnesia:Tradition and Change in Indian Literary Criticism* (Hyderabad, Orient Longman,1992)

2. Bhalchandra Nemade, "*Nativism in Literature"*, Translated and Edited by Arvind Dixit and Makarand Paranjape, Nativism: Essays in Criticism *(*Delhi Sahitya Akademi).

Unit III :

a. Bhikhu Parekh, "Indianisation of Autobiography", *Colonialism, Tradition and Reform* (Delhi, Saga, 1989).
2. G.D. Devy, *"*Two Paradigms of History", *Of Many Heroes* (Hyderabad: Orient Longman, 1998).

Unit IV:

1. SharanKumar Limbale, "Dalit Literature and Aesthetics" in *Towards an Aesthetics of Dalit Literature* (Delhi: Orient Blackswan, 2004).

2. Kancha Ilaiah, "Towards the Dalitization of Nation" in Wages of Freedom: Fifty Years of Indian Nation-State, edited by Partha Chatterjee (Delhi: OUP, 1998).

Suggested Reading:

Rajan, P.K., *Indian Literary Criticism in English*; *Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London; OUP, 1992).

Devi, G.N., *In Another Tongue* (Delhi, MacMillan, 1993).

_____ and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).

Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banrasidas, 1993).

Sethuraman, V.Ed., *Indian Aesthetics: An Introduction* (Delhi, MacMillan, 1992).

Rao, Raja, *The Meaning of India* (Delhi: Vision Books, 1996).

Dangle Arjun Ed., *Poisoned Bread* (Hyderabad, Orient Longman, 1992).

Mukherjee, Meenakshi, *The Perishable Empire*(Delhi, OUP, 2000)

_____, Reality and Realism (Delhi, OUP, 1983)

Suder Rajan, Rajeswari, Ed., *The Lie of the Land* (Delhi, OUP, 1991).

Gauri, Viswanathan, *Masks of Conquest* (New York, Colombia University Press, 1989)

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literature* (Mysore; Dhavanyaloka, 1984).

Rayan, Krishna, *The Burning Bush*(Delhi; B.R. Publishing, 1989).

_____.*Text and Sub-Text* (Delhi; Arnold Heinemann, 1989).

_____. *Sahitya; A Theory* (Delhi; Arnold Heinemann, 1991).

Paranjape, Makarand, Ed., *Nativism;Essays in Criticism* (Delhi; Sahitya Akademi, 1998).

Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi; OUP, 1991).

Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ. 1964).

Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasi Das, 1971, 4th ed.).

PAPER-IV (Opt. i) CULTURAL STUDIES-II

Objectives:

The multiple nuances of culture would be unfolded through a conceptual study of its emerging configurations. The paper enables us to appreciate the processes of culture as it enters new mediums of films, computer, internet and cybernetics. There would be a pedagogical shift as the students would be taught the prescribed essays through every-day examples. The pedagogic practice would nudge the students towards interdisciplinary studies viewing other subject areas in relation to literature, and for that matter, any text.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Mass Culture

Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction", from *Illuminations*, London: Fontana Press, 1992 ed. 211-244.

Unit II: Culture Industry

1. Adorno, "Free Time", from *The Culture Industry: Selected Essays on Mass Culture*, Ed. J.M.Bernstein, London and New York: Routledge, 1991, 187-197.

2. Habermas, "From a Culture-Debating to a Culture-Consuming Public", in *The Structural Transformation of the Public Sphere*, Polity Press, 1989, 159-175.

Unit III: Virtual Culture

1. Jean Baudrillard, "Simulacra and Simulations", in *Jean Baudrillard: Selected Writings*, Ed. Mark Poster, Polity, 2001, 169-187.

2. Paul Virilio, "Foreword" to *Desert Screen: War at the Speed of Light*, London: Continuum, 2005, 1-16.

Unit IV: Popular Culture/ Subculture

1. Stuart Hall, "Notes on Deconstructing 'the Popular'", from *Popular Culture: A Reader*, Eds. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 64-71.

2. Dick Hebdige, "Subculture", from *Popular Culture: A Reader*, Eds. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 355-371.

Suggested Reading:

1. Aijaz Ahmad, *In Theory*, London: Verso 1992.

2. Amartya Sen, *The Argumentative Indian: Writings on Indian History, Culture and Identity*, Great Britain: Penguin, 2005.

3. Antonio Gramsci, *Selections from the Prison Notebooks*, London: Lawrence & Wishart,1971.

4. Cornel West, *Beyond Eurocentrism and Multiculturalism* , 2 Volumes, Monroe: Common Courage Press, Monroe,1993.

5. E.P. Thompson, *The Making of the English Working Class*, London: Penguin, 1978.

6. Glenn Jordan and Chris Weedon, *Cultural Politics*, Oxford: Blackwell, 1995.

7. Jill Forbes and Michael Kelly Eds., *French Cultural Studies*, Oxford, Oxford UP, 1995.

8. Lawrence Grossberg, Cary Nelson and Paula Treicher Eds., *Cultural Studies*, London: Routledge,1992.

9. Louis Althusser, *Reading Capital*, London: New Left Books, 1970.

10. Manuel Alvarado and John Thompson Eds.,*The Media Reader*, London: BFI, 1990.

11. Stanley Aronowitz, Barbara Matinson and Michael Menser Eds., *Techno-Science and Cyber-Culture*, London: Routledge, 1996.

PAPER-IV (Opt. ii): APPLIED LINGUISTICS-II

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Contents:

Unit 1: Approaches and methods in language teaching – Direct, Grammar Translation, Audio-lingual, Structural-situational and Communicative Language Teaching, The Communicative Approach, Brief Historical overview of English Language Teaching with reference to the Problematic of Teaching English in India (Pre and Post Independence Language Policies, Multilingualism, mother tongue influence, choice of a model for teaching).

Unit 2: Approaches to teaching Skills: LSR W, vocabulary and grammar at primary, secondary and tertiary/ advanced levels. Practical exercises in each of the skill areas. Making a language syllabus: needs analysis. Teaching of English for specific purposes.

Unit 3: Testing Language - Principles, relationship between teaching and testing, wash back effect, purposes and types of tests. Evaluation: Criteria, grading and determining levels of proficiency.

Unit 4: Materials for Teaching : Principles of selection, gradation and presentation; course books, work books, teachers' manuals, grammar, dictionaries. The use of a language corpus. The role of literature in language teaching.

Suggested Reading:

1. Tickoo, M.L., *Teaching and Learning English*, New Delhi: Orient Black Swan, 2003.

2. Howatt, A.P.R. and Widdowson, H.G., *A History of English Language Teaching*, China: Oxford University Press, 2004.

3. Larsen-Freeman, Diane, *Techniques and Principles in Language Teaching*, New Delhi: Oxford University Press, 2008.

4. Richards, Jack C. and Rodgers, Theodore S., *Approaches and Methods in Language Teaching*, U.K.: Cambridge University Press, 2005.

5. Krishnaswamy, N. and Krishnaswamy, L., *The Story of English in India*, New Delhi: Foundation Books, 2006.

6. Hughes, Arthur, *Testing for Language Teachers*, U.K.: Cambridge University Press, 2003.

7. Norrish, J**.,** *Language Learners and their Errors*, Hong Kong: MacMillan, 1983.

8. Agnihotri, R.K. and Khanna, A.L., *Problematising English in India*, New Delhi: Sage, 1995.

PAPER IV (Opt. iii): WORLD DRAMA IN TRANSLATION

Objectives:

The paper provides an interesting study of world drama with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping them develop ways of approaching, understanding and interpreting classics. This paper complements the other paper on *World Poetry/Novel in Translation.*

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 : Sophocles: *King Oedipus* (Penguin)

Unit-2 : Henrik Ibsen: *Ghosts* (Pearson)

Unit-3 : Anton Chekhov: *The Cherry Orchard* (Penguin)

Unit-4 : Luigi Pirandello: *Six Characters in Search of an Author* (Collected Works of Pirandello)

Suggested Reading:

1. John Gassner : *Masters of the Drama,* U.S.A.: Dover Publications, 1954.
2. Barrett H. Clark and George Freedley :*A History of Modern Drama,* New York: Appleton Century – Crofts, Inc., 1947.
3. Travis Bogard and W.I. Oliver,eds. :*Modern Drama - Essays in Criticism,* London: OUP, 1965.
4. M.C. Bradbrook :*Ibsen: The Norwegian, a Revaluation,* London: Chatto and Windus, 1966
5. Rolf Fjelde, ed. : *Ibsen:A Collection of Critical Essays,* Englewood Cliffs: Prentice Hall, 1965.
6. David Magarshack :*Chekhov : The Dramatist*, 1952.
7. Beverley Hahn : *Chekhov: A Study of the Major Stories & Plays,* London: Cambridge University Press, 1977.
8. Arnold P. Hinchliffe : *The Absurd,* London: Methuen, 1969.
9. James Vinson :*Contemporary Dramatists*, London: St. James Press, 1973.

PAPER-IV (Opt. iv)SHAKESPEARE-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to Social and Literary aspects of the Age of Shakespeare:

History Plays, the Sonnet, tragi-comedies, Shakespeare's longer poems, First Folio, Holinshed's Chronicles, the Fool in Shakespeare's plays, Shakespeare's contemporaries, the University Wits, Marlowe's Mighty Line.

Texts for detailed study:

1. *Hamlet*
2. *Antony and Cleopatra*
3. *Macbeth*
4. *The Winter's Tale*

Suggested Reading:

1. B.Ford (ed.) : *The Age of Shakespeare,* London: Penguin Books Ltd., 1982
2. A.C.Bradley : *Shakespearean Tragedy,* London*:* Macmillian and Co. Limited,1950.
3. G.W.Knights : *The Shakespearean Tempest,* London: Methuen & Co. Ltd. 1953.
4. Harry Levin : *The Question of Hamlet,* London: Oxford Uni. Press, 1978.
5. Alfred Harbage (ed.) : *Shakespeare, The Tragedies: A Collection of Critical Essays.20th Century Views on Shakespearean Tragedies,* Englewood Cliffs: Prentice Hall, 1964.
6. Matthew N. Proser : *The Heroic Image in five Shakespearean Tragedies,* New Jersey: Princeton Univ. Press, 1965.
7. Arthur Sewell : *Character and Society in Shakespeare,* Oxford: Clarendon Press, 1951.
8. Robert Speaight : *Nature in Shakespearean Tragedy,* London: Hollis & Carter, 1955.
9. Sigurd Burckhardt : *Shakespearean Meanings,* New Jersey:Princeton Uni. Press, 1968.
10. AniaLoomba, Martin Orkin (eds.) : *Post-colonial Shakespeares,* London and New York: Routledge, 1998.
11. Stanley Wells and Lena Cower Orlin : *Shakespeare: An Oxford Guide,* Oxford: OUP, 2003.
12. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England,* Berkeley: Univ. of California Press, 1988.
13. Valerie Wayne (ed.) : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare,* Ithaca: Cornell University Press, 1991.
14. Alexander Leggatt : *Shakespeare's Comedy of Love,* London: Methuen, 1974.
15. Jean Howard and Phyllis Rackin (eds.) : *Engendering a Nation: A Feminist Account of Shakespeare's English Histories,* London: Routledge, 1997.
16. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two,* Buckingham: Open University Press, 1995.

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FACULTY OF ARTS

SYLLABI

FOR

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) EXAMINATIONS, 2017-2018

- : 0:-

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. Political Science (Semester System)
(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %
   (ii) Continuous Assessment : 20 %
   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
		Total :	**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES :

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.
(iii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.
(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card (D.M.C.).

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF POLITICAL SCIENCE FOR M.A. (Semester System) i.e. 1st and 3rd SEMESTERS NOVEMBER/DECEMBER, 2017 AND 2nd and 4th SEMESTERS APRIL/MAY, 2018 EXAMINATIONS

Outlines of Test

Note : Each paper/course shall carry 4 credits/100 marks.

A semester shall have at least 60 hours of lectures and 15 hours of seminars in the papers included in the syllabus.

FIRST SEMESTER

Course I : Western Political Thought-I

Course II : Key Concepts in Political Analysis

Course III : Indian Politics : Institutions at work (Compulsory)

Course IV : International Relations : An Historical Overview

SECOND SEMESTER

Course V : Western Political Thought (II)

Course VI : Comparative Politics : Understanding Advanced Industrial Societies

Course VII : Indian Politics : Political Processes (Compulsory)

Course VIII : Theories of International Relations

THIRD SEMESTER

Course IX : Indian Political Thought-I (Compulsory)

Course X : Comparative Politics-II : Understanding Developing Societies (Compulsory)

Or

Comparative Political Systems with special reference to USA, UK, China, Japan & Switzerland (Compulsory)

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) International Organization

Option (b) Transnational Actors in International Politics

Option (c) Politics of Development in India

Option (d) Peace and Conflict Resolution

Option (e) Rethinking Geopolitics : Criactial Perspectives

Option (f) Theories of Development

Option (g) Public International Law-I

Course XII : ***The candidates are required to offer any one of the following courses :***

Option (a) Democracy in India

Option (b) Government & Politics of India's Neighbours (Pakistan, Bangladesh, Nepal and Sri Lanka).

Option (c) Women and Politics in India

Option (d) Rights : Ideas and Movements

Option (e) Nationalism : Theory and Context

Option (f) New Political Geography in Comparative Perspective

Option (g) Policies and Politics of Development in India

Option (h) Public Administration

FOURTH SEMESTER

Course XIII : Indian Political Thought-II (Compulsory)

Course XIV : Foreign Policy of India (Compulsory)

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) Parties and Electoral Politics in India

Option (b) State Politics in India

Option (c) Decentralized Governance and Local Level Institutions in India

Option (d) Political Sociology with special reference to India

Option (e) Representing "India" : Geopolitical Imaginations

Option (f) Dalit Movements and Issues in India

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) Feminist Political Theory

Option (b) Major themes in Recent Political Philosophy

Option (c) Readings in the Philosophy of Resistance and Liberation

Option (d) Contemporary Debates in 20^{th} Century Marxism

Option (e) Introducing Federalism

Option (f) Public International Law-II

FIRST SEMESTER

Course I : WESTERN POLITICAL THOUGHT-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students to the major themes of western political thought. This will be done by undertaking an in-depth study of the key thinkers of this tradition.

Unit-I
1. Plato.
2. Aristotle.

Unit- II
1. St. Augustine.
2. St. Thomas Aquinas.

Unit-III

1. Machiavelli.
2. Hobbes.

Unit-IV
1. Locke.
2. Rousseau.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following secondary literature :

General Text Books :

1. Dunning, W.A., *A History of Political Theories,* Allahabad (any edition).
2. Ebenstein, William, *Great Political Thinkers,* IBH, Oxford (any edition).
3. Sabine, G.H., *A History of Political Theory,* Oxford and IBH, Bombay (any edition).
4. Russell, Bertand, *History of Western Philosophy,* Simon and Schuster, New York (any edition).
5. Strauss, Leo and Joseph Cropsey, *History of Political Philosophy,* Rand McNally, 1968.

Suggested Readings :

1. Allen, J.W., *A History of Political Thought in the Sixteenth Century,* Methuen, London, 1964 (Ch. II Machiavelli).
2. Bakshi, O.P., *Politics and Prejudice : Notes on Aristotle's Political Theory,* University of Delhi,1975.
3. Barker, E., "Introduction" in E. Barker (ed.), *The Politics of Aristotle,* OUP, Oxford.
4. Barker, E., *Greek Political Theory : Plato and His Predecessors,* Methuen, London, 1947.
5. Barnes, Jonathan, *Articles on Aristotle, Vol. 2, Ethics and Politics,* Duckworth, London, 1977.
6. Berlin, Isaiah, *The Originality of Machiavelli in I. Berlin, Against the Current,* OUP, Oxford, 1981.
7. Brian R. Nelson, *Western Political Thought,* Pearson, Delhi, 2004.
8. Brown, Keith C. (ed.), *Hobbes Studies,* Basil Blackwell, 1965.
9. Cole, G.D.H. (Translator), *The Social Contract and Discourses* by Jean Jacques Rousseau (Author) J.H. Brumfitt (Revised), London, Everyman's Library, 1993.
10. Colletti, Lucio, "Rousseau as Critic of Civil Society" in Lucio Colletti ed. From Rousseau to Lenin, OUP, Delhi, 1978.
11. Croix, GEM De Ste, *The Class Struggle in the Ancient Greek World,* Duckworth, London, 1981.
12. Crombie, I.M., *An Examination of Plato's Doctrines,* Vol. I R.K.P., London, 1962.
13. Cross, R.C. & A.B. Woozley, *Plato's Republic,* Macmillan, 1964.
14. Deane, Herbert, A., *The Politics and Social Ideas of St. Augustine,* Columbia University Press, New York, 1963.
15. Dunn, John, Locke, *Past Masters Series,* OUP, Oxford, 1984, Chs. 1 & 2.
16. Dunn, John, *The Political Thought of John Locke,* Cambridge University Press, Cambridge, 1969.
17. Filed, G.C., *The Philosophy of Plato,* London, 1969.
18. Gilby, Thomas, B., *The Political Thought of Thomas Aquinas,* University of Chicago Press, Chicago,1958.
19. Grimsley, Ronald, *The Philosophy of Rousseau,* OUP, London, 1973.
20. Hall, J.C., *Rousseau, Introduction to His Political Philosophy,* Macmillan, 1971.
21. Levinson, R.B., *In Defence of Plato,* Harvard University Press, Harvard, 1953.
22. Macpherson, C.B., "Introduction" in C.B. Macpherson (ed.), *Leviathan of Hobbes,* Penguin, Harmondsworth, 1968.
23. Macpherson, C.B., *Political Theory of Possessive Individualism, Hobbes to Locke,* OUP, London, 1962.
24. Masters, Roger D., *The Political Philosophy of Rousseau,* Princeton, 1968.
25. Muglan, R., *Aristotle's Political Theory,* Clarendon, Oxford, 1977.
26. Newman, N.L., *The Political Thought of Aristotle,* 4 Vols., Clarendon, Oxford, 1887-1902.
27. Pocock, J., *The Machiavellian Moment,* Princeton, 1975.
28. Popper, Karl, *The Open Society and Its Enemies,* Vol. I : The Spell of Plato, R.K.P., London, 1945.
29. Raphael, D.D., *Hobbes : Morals and Politics,* George Allen & Unwin, London, 1977.
30. Skinner, Q., *Machiavelli, Past Masters Series,* OUP, Oxford, 1981.
31. Skinners, Q., *Foundations of Modern Political Thought, Vol. 1 : The Rennaissance,* Cambridge University Press, Cambridge, 1978 (Chs. 4, 5, 6).

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Course II : KEY CONCEPTS IN POLITICAL ANALYSIS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course aims at introducing students to the key concepts which are the building blocks of political analysis. Each concept will be studied in terms of the main debates over its nature and scope in the discipline and its relationship with other concepts. After dong this course, the student will be able to discern the conceptural debates which underlie political phenomena.

Unit-I

What is Political? – Conflict, Class, Public and the Private
Power –Three Dimensional View of Power, Power as Influence, Exploitation, Hegemony, Power/Knowledge

Unit-II

State- Political Authority and Political Obligation, Modern State, State-Society relationship, Governmentality

Civil Society- Civil society and market, public sphere, civic virtue; community and civil society, State/civil society relationship

Unit III

Democracy- Who should rule and why? Protective, Pluralist and Radical democracy, Representation and Participation, Democracy and difference

Liberty – Negative and positive models, Civil and Political liberty, Freedom of expression, Alienation, Social conditioning and self realization

Unit-IV

Equality and Justice – Why equality; Equality of What; Universality and difference, Care
Rights- Natural, legal rights, human rights; Three generations of rights, Individual and group rights

Essential Readings:-

1. Andrew Heywood, *Political Theory*, Palgrave Macmillan, 2004 (Third Edition)
2. Andrew Heywood, *Politics*, Palgrave Macmillan, 2013 (Fourth Edition)
3. Rajeev Bhargava and Ashok Acharya (ed)*Political Theory: An Introduction* (Available in Hindi translation), Pearson Education, 2008
4. Andrew Vincent, *Modern Political Ideologies*, Wiley-Blackwell, 2010 (Third Edition)
5. Will Kymlicka, *Contemporary Political Philosophy* (Available in Hindi translation), OUP, 2002 (Second Edition)
6. Dudley Knowles, *Political Philosophy*, Routledge, 2001
7. Jonathan Wolff, *An Introduction to Political Philosophy*, OUP, 1996
8. John Dryzek, Bonnie Honig and Anne Phillips (eds), *The Oxford Handbook of Political Theory*, OUP, 2008
9. Jean Hampton, *Political Philosophy*, New Delhi, Oxford University Press, 1998

Suggested Readings:-

1. Adrian Leftwich: *What is Politics: The Activity and Its Study*, Polity Press, 2004
2. Amartya Sen, "Equality of What?" in S.M.McMurrin, ed., *The Tanner Lectures on Human Values*, Cambridge University Press, 1980, pp 195220.
3. Bhikhu Parekh, "Equality in a Multicultural Society", in *Rethinking Multiculturalism*, Palgrave, 2000
4. Colin Gordon et.al, eds., *The Foucault Effect: Studies in Governmentality*, University of Chicago Press, 1991
5. Craig Calhoun, "Civil Society and Public Sphere", in *Public Culture*, Vol 5, No2,1995.
6. David Held, *Models of Democracy*, Polity, 2006 (Third Edition)
7. David Held, *Political Theory and the Modern State*, Polity Press, 1989
8. David Miller: *The Liberty Reader*, Paradigm Publishers, 2006
9. John Rawls,' Justice as Fairness: Political not Metaphysical', *Philosophy and Public Affairs*, Vol 14 (3), 1985.
10. Michael Walzer, "Complex Equality", in *Spheres of Justice: A Defence of Pluralism and Equality*, Martin Robertson, 1983
11. Noberto Bobbio, 'Gramsci and the conception of civil society' in Chantal Mouffe (ed)*Gramsci and Marxist Theory*, Routledge,1979.
12. Robert Nozick, "Distributive Justice", in *Anarchy, State and Utopia*, Oxford, Blackwell, 1974
13. Ronald Dworkin, 'What is Equality? Part I: Equality of Welfare', *Philosophy and Public Affairs*, Vol 10/3, 1981
14. Ronald Dworkin, 'What is Equality? Part II: Equality of Resources', *Philosophy and Public Affairs*, Vol 10/4, 1981.
15. Selma Sevenhuijsen, 'The Place of Care: The Relevance of the Feminist Ethic of Care for Social Policy' in *Feminist Theory*, 4(2), 2003.
16. Simone Chambers and Will Kymlicka, eds., *Alternative Conceptions of Civil Society*, Princeton University Press, 2002.
17. Steven Lukes, *Power*: *A Radical Critique*, Palgrave Macmillan, 2005.

Semester-I

Course-III - Indian Politics: Institutions at Work (compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course:: Recent India has witnessed a major thrust in the study of India's political and economic processes. An important component of many such studies has been to refer to the relevant constitutional and institutional aspects. Such studies, sensitive to the constitutional experiences of a 'new democracy', have enriched themselves by undertaking an in-depth analysis of the way the constitutional provisions have been put into practice and also by making an attempt to explore the core ideas that guided the constitution-makers during the deliberations in the Constituent Assembly. The paper aims at making the students aware of the text of the Constitution of India, important debates and the way the institutions have worked over the last more than six and half decades.

1. Making of Political Institutions
a) Constituent Assembly Debates: Secularism, Rights
b) Preamble, Fundamental Rights and the Directive Principles of State Policy
c) Constitutional Amendments related to Right to Property: Nature, Problems and Politics

2. Federal Institutions
a) Strong Centre Framework: Reading Relevant Constitutional Text
b) Autonomy and Devolution: Sarkaria Commission Recommendations
c) Local Self Government: Politics of Decentralization

3. Executive and Legislature
a) President and Prime Minister: Modes of exercise of powers
b) Governors and Chief Ministers: Changing Role and Institutional Relationship
c) Union Parliament: Composition, Powers, Reservations and Parliamentary Committees

4. Judicial Power and Rule of Law
a) Supreme Court: Jurisdictions
b) Judicial Independence, Judicial Review
c) Judicial Activism, Public Interest Litigation
d) Election Commission of India and Electoral Reforms

Essential Readings

- Austin, Granville, *The Indian Constitution: Cornerstone of a Nation*, Oxford University Press, Delhi, 1966.
- Austin, Granville, *Working a Democratic Constitution: A History of the Indian Experience*, Oxford University Press, Delhi, 1999.
- Basu, D.D., *Introduction to the Constitution of India*, Lexis Nexis, Gurgaon, 2015.
- Bhargava, Rajeev, ed., *Politics and Ethics of the Indian Constitution*, Oxford University Press, New Delhi, 2008.
- Brass, Paul R., *The Politics of India since Independence*, Cambridge University Press, London, 1994.
- Chaube, S. K., *Constituent Assembly of India, Springboard of Revolution*, People's Publishing House, New Delhi, 1973.
- Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
- Hasan, Zoya et al., eds., *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, New Delhi, 2002.
- Kapur, Devesh and Pratap B Mehta (eds.) *Public Institutions in India: Performance and Design*, Oxford University Press, New Delhi, 2007.

Suggested Readings:-

Unit 1

1. Arora, Balveer and Douglas Verney**,** eds., *Multiple Identities in a Single State*: *Indian*
2. Bandyopadhyay, Sekhar (ed.) *Nationalist Movement in India*, Oxford University Press, New Delhi, 2009.
3. Constituent Assembly Debates (Selections).
4. *Federalism in Comparative Perspective*, Konark Publishers, New Delhi, 1995.
5. Mehta, Pratap Bhanu, *The Burden of Democracy*, Penguin, New Delhi, 2003
6. Mehta, V. R. and Thomas Pantham (ed.), *Political Ideas in Modern India*, Delhi, Sage, 2006.
7. Mukherji, Nirmal and Balveer Arora, eds., *Federalism in India: Origins and Development*, Vikas Publishing House, New Delhi, 1992.
8. Rao Shiva B., *The Framing of India's Constitution, A Study and Select Documents*, Tripathi, Bombay, 1968.
9. Saez, Lawrence, *Federalism without a Centre*: *The Impact of Political and Economic Reforms on India's Federal System*, Sage, New Delhi, 2002.

Unit 2

1. Baxi Upendra, *The Supreme Court in Indian Politics*, Eastern Book Company, New Delhi, 1980.
2. Baxi, Upendra, *Courage Craft and Contention: The Indian Supreme Court in the*
3. *Eighties*, N.M. Tripathi, Bombay, 1985.
4. Kashyap Subash, ed., *Constitutional Reforms*: *Problems, Prospects and Perspectives*, Radha Publications, New Delhi, 2004.
5. Kripal B.N. et al., eds., *Supreme but not Infallible*: *Essays in Honour of the Supreme Court of India*, Oxford University Press, New Delhi, 2000.
6. Sathe S.P., *Judicial Activism in India: Transgressing Borders and Enforcing Limits*, Oxford University Press, New Delhi, 2002.
7. Singh Ujjwal Kumar, *State, Democracy and AntiTerror Laws*, Sage Publications, New Delhi, 2007.

Unit 3

1. *2002 Jammu and Kashmir Assembly*, Penguin, New Delhi, 2004.
2. Bhagat A.K., *Elections and Electoral Reforms*, Vikas Publications, New Delhi, 1996.
3. Bhambhri, C.P., *The Indian Prime Minister: A Framework for Political Analysis*, The Indian Law Institute, New Delhi.
4. *Change*, Vol II, Oxford University Press, New Delhi, 2008.
5. Konark Publishers, New Delhi, 1996.
6. Lyngdoh J. M., *Chronicle of an Impossible Election*: *The Election Commission and the*
7. Manor James, ed., *Nehru to the Nineties: The Changing Office of Prime Minister in India*, Viking Press, New Delhi, 1994.
8. Mehra Ajay K. and V. A. Pai Panandiker, *The Indian Cabinet: A Study in Governance*,
9. Morris Jones W.H., *Parliament in India*, University of Pennsylvania Press, Philadelphia,
10. Noorani, A G, *Constitutional Questions in India: The President, Parliament and the States*, Oxford University press, New Delhi, 2002.
11. PA, 1957.
12. Rudolph Lloyd and Susanne, *The Realm of Institutions*: *State Formation and Institutional*

Unit 4

1. 2001.
2. Baxi, Upendra and Bhikhu Parekh (ed.), *Crisis and Change in Contemporary India*, Sage, New Delhi, 1994.
3. Dhavan, Oxford University Press, Delhi, 1989.
4. Frankel Francine et al., eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
5. Galanter Marc, *Law and Society in Modern India*, edited with an introduction by Rajeev
6. Hardgrave Robert L., *India*: *Government and Politics in a Developing Nation*, Harcourt,
7. Jovanovich, New York, 1980.
8. Kaushik, Susheela (ed.), *Indian Government and Politics* (Hindi), Directorate of Hindi Implementation, Delhi University, 1990.
9. Keith A.B., *Constitutional History of India*, Methuen and Co, London, 1936.
10. Khan, Rasheeduddin (ed.), *Rethinking Indian Federalism, Indian Institute of Advanced Studies*, Shimla, 1997
11. Kohli Atul, ed., *The Success of India's Democracy*, Cambridge University Press, London,
12. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Cambridge University Press, Cambridge, 1991.
13. Noorani A.G., *Constitutional Questions in India*: *The President, Parliament and the States*, Oxford University Press, Delhi, 2000.
14. Palkivala, N.A., *Our Constitution Defaced and Defiled*, Macmillan, Delhi, 1974.
15. Pylee M.V., *India's Constitution*, Asia Publishing House, New Delhi, 1962.
16. Rao K.V. and K.M. Munshi, *Parliamentary Democracy of India*, The World Press Private Ltd, Calcutta, 1965.
17. Sudarshan, R., 'The Political Consequences of Constitutional Discourse' in T.V. Satyamurthy (ed.), *State and Nation in the Context of Social Change*, Vol. I, OUP, Delhi, 1997.
18. Thakur, Ramesh, *The Government and Politics of India*, London, Macmillan Press, 1986
19. Vora, Rajendra and Suhas Palshikar (eds.), *Indian Democracy: Meanings and Practices*, Sage, New Delhi, 2003.
20. Weiner Myron, *The Indian Paradox*: *Essays in Indian Politics*, edited by Ashutosh Varshney, Sage Publications, New Delhi, 1989.

Journals to be Consulted

- ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues only on web)
- ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm

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Course IV : INTERNATIONAL RELATIONS : AN HISTORICAL OVERVIEW

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The purpose of this paper is to provide an historical overview of major developments in International Relations since the beginning of the twentieth century.

Unit-I

Crisis and Collapse of the 19th Century International System.
Two World Wars : Their causes and consequences.
Decolonization, rise and decline of third worldism.

Unit-II

Emerging of super powers, forms and phases of Bioplarity in the cold war.
Nuclear Politics : Issues of Proliferation, Discrimination and Hegemony.

Unit-III

Collapse of the Socialist Bloc : Alternative interpretation of its causes, consequences and future possibilities. End of cold war.
Emerging Issues in a Changing World : Ethnicity, environment, sustainable development, gender & peace.

Unit-IV

Emerging world order. Globalization, Regionalism and Trading,Trading blocks (NAFTA, APEC, EU & SAPTA) Changing role of IMF and The World Bank : Structural Adjustment Programmes. Transformation Facilities and Conditionalties, world trade organization.

Essential Reading

1. Rumki Basu, *International Politics: Concepts, Theories and Issues, SAGE,* 2012.
2. John Baylis, Steve Smith, Patricia Owens, *The Globalization of World Politics: An Introduction to International Relations,* Oxford University press, 2014.
3. Peter Calvocoressi, *World of Politics since 1945,* Longman, 1989 edn.

4. Christian Reus-Smit and Duncan Snidal, The Oxford Handbook of International Relations, OUP, 2010.
5. Mark V. Kaupp Paul R. Viotti, *International Relations And World Politics: Security, Economy, Identity* , Prentice Hall- Gale, 1996.
6. V. N. Khanna, *International Relations*, S.Chand (G/L) & Company Ltd; Fifth edition 2013

Suggested Readings :

1. Eric Hobsbawm, *Age of Extremes, The Short Twentieth Century,* 1914-91, Viking, 1995.
2. Paul Kennedy, *The Rise and Fall of Great Powers : Economic Change and Military Conflict from 1500 to 2000,* Fontana, 1988.
3. Paul Kennedy, *Preparing for the Twenty-First Century,* Indus, Harper Collins, 1993.
4. Kanta Ahuja *et al* (ed.), *Regime Transformations and Global Realignments* : Indo-European Dialogue *on Post-Cold War World,* Sage, 1993.
5. Peter Calvocoressi, *World of Politics Since 1945,* Longman, 1989 edn.
6. R. Giplin, *The Political Economy of International Relations,* Princeton, 1987.
7. Rama S. Melkote and A. Narasimha Rao, *International Relations,* Sterling, 1992.
8. R. Stubbs and G.R.D. Underhill, *Political Economy and the Changing Global Order,* Macmillan, 1994.
9. G. Hastedt (ed.), *One World, Many Voices : Global Perspectives on Political Issues,* Prentice Hall, 1995.
10. J.A. Camilleri and J. Falk, *The End of Sovereignty : The Politics of a Shrinking and Fragmenting World,* Edward Elgar, 1992.
11. Bhupinder Brar, *Explaining Communist Crises,* Ajanta, 1994.
12. Richard Little and Michael Smith (eds.), *Perspectives on World Politics,* Routledge, 2006.
13. Chris Brown, *Understanding International Relations,* Palgrave, 2001.
14. Peter Calvocoressi, *World Politics : 1945-2000,* Pearson Education, 2005.

SECOND SEMESTER

Course V : WESTERN POLITICAL THOUGHT (II)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students the major themes of western political thought. For this purpose, the paper undertakes a study of the key thinkers of this tradition.

Unit-I

1. Jeremy Bentham.
2. J.S. Mill.

Unit-II

1. Hegel.
2. Karl Marx.

Unit-III

1. Antonio Gramsci .
2. Herbert Marcuse.

Unit-IV

1. Hannah Arendt.
2. John Rawls.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following literature :

1. Plamenatz, John, *The English Utilitarians,* Basin Blackwell, Oxford, 1949.
2. Thakurdas, Frank, *The English Utilitarians and Idealists,* Vishal, Delhi, 1978.
3. Brinton, Crane, *English Political Thought in the 19th Century,* Havard University Press, 1954.

Suggested Readings :

1. Parekh, Bhikhu, *Bentham's Political Thought,* Barnes, and Noble, New York, 1973.
2. Marcuse, H., *Reason and Revolution : Hegel and the Rise of Social Theory,* RKP, London, 1955.
3. Evans, Michael, *Karl Marx*, George Allen & Unwin, 1975.
4. Kolakowski, Leszek, *Main Currents of Marxism, Vol. I,* The Founders, OUP, Oxford, 1978.
5. Cohen, G.A., *Karl Marx's Theory of History : A Defence,* Clarendon, Oxford, 1978.
6. Avineri, Shlomo, *The Social and Political Thought of Karl Marx,* S. Chand, New Delhi, 1968.
7. Ollman, Bertell, *Alienation : Marx's Concept of Man in Capitalist Society,* Cambridge University Press, Cambridge, 1977.
8. Althusser, Louis, *For Marx,* New Left Books, 1977.
9. Bottomore, T.B. (ed.), *A Dictionary of Marxist Thought,* Blackwell, Oxford, 1983.
10. Hoare, Q. and Smith, G.N. (ed.), *Selection from the Prison Notebooks of Antonio Gramsci,* International Publishers, New York, 1971.
11. Mouffe, C. (ed.), *Gramsci and Marxist Theory,* Routledge, 1979.
12. Sassoon, Anne, S., *Gramsci's Politics,* Croom Helm, London, 1980.
13. Arendt, Hannah, *The Origins of Totalitarianism,* Harcourt Brace, New York, 1951.
14. Arendt, Hannah, *The Human Conditions,* Chicago, University Press, Chicago, 1958.
15. Canovan, Margaret, *The Political Thought of Hannah Arendt,* Harcourt Brace, New York, 1974.
16. Parekh, Bhikhu C., *Hannah Arendt and the Search for A New Political Philosophy,* Humanities Press, Atlantic Highlands, 1991.
17. Rawls, John, *A Theory of Justice,* Oxford University Press, Oxford, 1971.
18. Rawls, John, *Political Liberalism,* Columbia University Press, New York, 1993.
19. Marcuse, Herbert, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society,* Beacon, Boston, 1964.
20. Anthony de Crespigny and Kenneth Minogue, *Contemporary Political Philosophers,* Dodd, Mead, and Company, New York, 1975.
21. Bhikhu, Parekh, *Contemporary Political Thinkers,* Martin Robbertson, Oxford, 1982.

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Course VI : COMPARATIVE POLITICS-I : UNDERSTANDING ADVANCED INDUSTRIAL SOCIETIES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial societies, and this will be undertaken in a comparative framework.

Unit-I

Comparative Politics : Meaning , Significance, Evolution, Nature and Content.
Comparative Method : Problems of comparative political analysis.

Unit-II

Modernity in Western Societies : meaning, evolution of modernity since the Christian era, nature and forms-political , social , economic and cultural.
Recent Debates: Modernity and class, Modernity and gender.

Unit-III

State and Civil Society : Theories and recent debates.
Constitutionalism : Theory and Practice in Contemporary States.

Unit-IV

Understanding Culture and Social change : Political Culture and Political Socialisation.
Political Participation and Representation : Political parties, Pressure groups and new social movements.

Readings :

Students are advised to see the relevant entries in the following reference books—

Seymour Martin Lipset (ed. in chief). The Encyclopedia of Democracy, Volumes I, II and III, Routledge, London, 1955; Vernon Bogdanor (ed.), The Blackwell Encyclopedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Specific Readings :

1. Almond, G., 'The Return to the State', *American Political Science Review,* 82, No. 3, September, 1998.
2. Caramani, Daniele, *Comparative Politics*, OUP, New Delhi.
3. Carnoy, Martin, *The State and Political Theory,* Princeton University Press, Princeton, 2016 (1984)
4. Chandhoke, Neera, "Limits of Comparative Political Analysis," *Economic and Political Weekly,* Vol. XXXI, No. 4, January 27, 1996.
5. Chilcote, Ronald, *Comparative Politics: The Search for a Paradigm Reconsidered,* Westview, Boulder (Second Edition), 1994.
6. Hague, Rod, Martin Harrop and Shaun Breslin, *Comparative Government and Politics: An Introduction,* Macmillan, London, 1993
7. Jessop, B., *State Theory : Putting Capitalist States in their Place,* Polity Press, Cambridge, 1990.
8. Johary, J.C. , *Comparative Politics*, Sterling Publisher, New Delhi, 2011.
9. Synder, R. (2001). 'Scaling Down: The Subnational Comparative Method'. *Studies in Comparative International Developmen*t. 36(1): 93-110
10. Tillin, Louis (2013). 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2): 235-240.

Suggested Readings

1. Almond, G.A., and S. Verba (eds.), *The Civic Culture Revisited,* Little Brown, Boston, 1980.
2. Almond, Gabriel G. Bingham Powell, Kaare Strom and Russel T. Dalton, *Comparative Politics Today,* Pearson Education, Delhi, 2005.
3. Anthias, Floyas and Nira Yuval-Davis, *Racialized Boundaries, Race, Nation, Gender, Colour and Class and the Anti-Racist Struggle,* Routledge, London, 1992.
4. Ball, A., and F. Millward, *Pressure Politics in Industrial Societies,* Macmillan, London, 1986.
5. Bellamy, Richard and Dario Castiglone (ed.), *Constitutionalism in Transformations : European and Theoretical Perspectives, Political Studies Vol. XLIV,* Special Issue, 1996.
6. Block, F., 'Beyond Relative Autonomy' in Ralph Miliband and John Saville (eds.), *The Socialist Register*, Merlin, London, 1980.
7. Blondel, J., *The Discipline of Politics*, Butterworth, London, 1981.
8. Bogdanor, V., (ed.), *Constitutions in Democratic Politics,* Gower, Aldershot, 1988.
9. Bombwall, K.R., *World Constitutions,* Modern Publishers, Ambala, 1980.
10. Calvert, Peter, *Revolution and Counter Revolution,* Open University Press, Milton Keynes, 1990.
11. Cammack, P., 'Statism, New Institutionalism and Marxism' in Ralph Miliband and Leo Panitch (eds.), *The Socialist Register*, Merlin, London, 1990.
12. Cantori, Louis J., and Andrew H. Ziegler (eds.), *Comparative Politics in the Post-Behavioural Era,* Lynne Rienner Publisher, Boulder, 1988.
13. Cigler, C., and B. Loomis (eds.), *Interest Group Politics, Congressional Quarterly* Press, Washington DC, 1985.
14. Dalton, Russel, J., "Comparative Politics of the Industrial Democracies : From the Golden Age to Island Hopping" in William Crotty (ed.), *Comparative Politics Policy and International Relations,* Northwestern University Press, Evanstone, 1991.

15. Dalton, Russell and Manfred Kurchler (eds.), *Challenging the Political Order,* New York, 1990.
16. Dogan, Mattei and Ali Kazancigilli (eds.), *Comparing Nations, Concepts, Strategies, Substance*, Blackwell, Oxford, 1994.
17. Dogan, Mattei and Dominique Pelassy, *How to Compare Nations, Strategies in Comparative Politics,* Chatham House, 1984 (Indian reprint) Vision Books, New Delhi, 1988.
18. Dunleavy, P., and B. O' Leary, *Theories of the State*, Macmillan, London, 1987.
19. Easton, David, 'The Political System Beyond the State', *Political Theory, No. 3*, 1981.
20. Eckstein, Harry and David E., Apter (ed.), *Comparative Politics, A Reader,* The Free Press of Glencoe, Collier-Macmillan, London, 1993.
21. Elster, Jon, 'Ways of Constitution-making' in Axel Hadenius (ed.), *Democracy's Victory and Crisis,* Cambridge University Press, Cambridge, 1997.
22. Evans Peter B., P.D. Rueschemeyer and T. Skocpol (ed.), *Bring the State Back in,* Cambridge University Press, Cambridge, 1985.
23. Gellner, E., 'Civil Society in Historical Context', *International Social Science Journal, No. 129,*1991.
24. Gellner, Ernest, *Nations and Nationalism,* Blackwell, Oxford, 1983.
25. Gibbins, J., (ed.), *Contemporary Political Culture : Politics in a Post-Modern Age,* Sage, London,1989.
26. Glazer, N., and D. Moynihan (eds.), *Ethnicity: Theory and Experience*, Harward University Press,Cambridge, 1975.
27. Graham, B.D., *Representation and Party Politics: A Comparative Perspective*, OUP, Oxford, 1990.
28. Hall, Stuart and Bram Gieben, *Formations of Modernity*, Polity, Cambridge, 1992.
29. Hawkesworth, Mary and Maurice, Kogan (ed.), *Encyclopedia of Government and Politics*, Routledge, London, 1992.
30. Held, D., *Political Theory and the Modern State*, Polity Press, Cambridge, 1989, 1990.
31. Hobsbawm, Eric, *Nations and Nationalism since 1780,* Cambridge, 1991.
32. Hoffman, J., *State Power and Democracy*, Wheatsheaf, Sussex, 1988.
33. Hutchinson, J., and A.D. Smith (eds.), *Nationalism,* OUP, Oxford, 1994.
34. Lane, J.E., *Constitutions in Political Theory*, Manchester University Press, Manchester, 1996.
35. Lane, Jan-Erik and Svante Ersson, *Comparative Politics : An Introduction and New Approach*, Polity, Cambridge, 1994, (Ch. 1, Comparative Approaches, Ch. 6, The Logic to Model Building in Comparative Government).
36. LaPalombara, Joseph and Myron Weiner (ed.), *Political Parties and Political Development,* Princeton University Press, Princeton, 1966.
37. Larrain, Jorge, *Theories of Development*, Polity, Cambridge, 1989. 1.12 Mohanty, Manoranjan, "Moving the Centre in the Comparative Study of Politics, An Approach to Creative Theory", Unpublished Paper (Photostat copy in Political Science Departmental Library, Panjab University).
38. Michael G. Ruskin, Robert L. Cord, James A. Medeiros and Walter S. Jones (eds.), *Political Science: An Introduction,* Prentice Hall, New Jersey, 2005.
39. Miliband, Ralph, *The State in Capitalist Societies,* Weidenfeld and Nicolson, London, 1968.
40. Moore Jr., Barrington, *Social Origins of Dictatorship and Democracy : Lord and Peasant in the Making of the Modern World,* Penguin, 1967.

41. Mueller-Rommel, F. (ed.), *New Politics in Western Europe,* Boulder, 1989.
42. Nordlinger, E., 'The Return to the State, Critique', *American Political Science Review,* Vol. 82, 3 September, 1988.
43. Preuss, Ulrich, K., 'Constitutionalism – Meaning, Endangerment, Sustainability' in Satish Saberwal and Heiko Sievers (ed.), *Rules, Laws, Constitutions,* Sage, New Delhi, 1998.
44. Sartori, G., *Parties and Party Systems: A Framework for Analysis,* Cambridge University Press, Cambridge, 1976.
45. Sartori, Giovanni, 'Compare Why and How, Comparing, Miscomparing and the Comparative Method' in Mattei Dogan and Ali Kazancigil (ed.) *Comparing Nations,* Blackwell, Oxford, 1994, Pp. 14-34.Wiarda, H. J., *New Directions in Comparative Politics,* Westview Press, Boulder, 1991.
46. Skocpol, Theda, *States and Social Revolutions: A Comparative Analysis of France, Russia nad China,* Cambridge University Press, Cambridge, 1979.
47. Smith, A.D., *The Ethnic Origins of Nation,* Basil Blackwell, Oxford, 1986.
48. Taylor, Charles, 'Modes of Civil Society', *Public Culture, Vol. 3,* No. 1, Fall 1990.
49. Wilson, G., *Interest Groups,* Blackwell, Oxford, 1990.

Course VII : INDIAN POLITICS : POLITICAL PROCESSES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course aims to introduce students to politics in India as it has evolved after decolonization. The themes discussed during the course will be those that are crucial to the understanding of the way political processes in the largest democracy of the world unfold in varying form. The paper takes up the issues for discussion related to the way democratic politics in India has evolved and been shaped in an underdeveloped, multi-ethnic setting along the lines of caste, class, and linguistic and religious identities. It also focuses on the way India's democratic state has fared in promoting economic development, both growth and equity.

1. ***Democratic Politics in Independent India***
a) Legacies of the Nationalist Movement.
b) Challenges of Democratic Transition and Consolidation
c) Nature of Indian State: Class, Gender

2. ***Political Parties and Electoral Politics***
a) Evolution and Shifts in Party System: Dominant Party System, Its Breakdown
b) Electoral Politics: Emerging Trends Since 1990's

3. ***Caste, Religion and Region***
a) Caste and Politics: Rise of Dalit and Backward Caste Politics
b) Religion and Politics: Secularism, Communalism and Rise of Hindutva
c) Region and Politics: Linguistic Identities and Reorganization of States; Politics of New States

4. ***State, Economy and Development***
a) Development Planning Model: Concept, Strategies, Policies, and Critique
b) Economic Transition: Causal Explanations
c) New Economic Policies: Social implications for the Weaker Sections in the Society

Essential Readings

1. Brass, Paul, *The Politics of India since Independence*, Cambridge University Press, Cambridge, 1994, Introduction.
2. Chandhoke, Neera and Praveen Priyadarshi, *Contemporary India: Economy, Society, Politics*, Pearson Education, New Delhi, 2009
3. Corbridge, Stuart and John Harriss, *Reinventing India*, Oxford University Press, Delhi, 2000.
4. deSouza, Peter and E Sridharan, *India's Political Parties*, New Delhi, Sage, 2007.
5. Francine, Frankel, et al, eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
6. Jayal, Niraja Gopal, ed., *Democracy in India*, Oxford University Press, New Delhi, 2001.
7. Kaviraj Sudipta, *The Trajectories of the Indian State*, Permanent Black, New Delhi, 2010.
8. Kohli, Atul, ed., *The Success of India's Democracy*, Cambridge University Press, Cambridge, 2001.
9. Mehta, Pratap Bhanu and Niraja Gopal Jayal, *The Oxford Companion to Politics of India*, New Delhi, Oxford University Press, 2010.
10. Menon, Nivedita, *Gender and Politics in India*, Delhi, Oxford University Press, 2001.
11. Morris-Jones W.H., *The Government and Politics in India*, B.I. Publications, New Delhi,
12. Mukherji, Rahul, *India's Economic Transition: The Politics of Reforms, Oxford* University *Press, New Delhi, 2014.*
13. Varshney, Ashutosh, *Battles Half Won: India's Improbable Democracy. Penguin, New Delhi, 2014.*

Suggested Readings

Unit 1

1. Chhibber, Pradeep, *Democracy without Associations*, University of Michigan Press, Michigan, 1999.
2. Dubey, Abhay Kumar (ed.), *Loktantra Ke Saat Adhaya*, Vaani Prakashan, Delhi, 2002.
3. Hasan, Zoya, E. Sridharan and R. Sudarshan (eds.), *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, Delhi, 2002.
4. Jenkins, Rob, *Democratic politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
5. Kaviraj, Sudipta, "A Critique of the Passive Revolution", *Economic and Political Weekly*, Vol. 23, No. 45/47, Special Number, Nov. 1988.
6. Kaviraj, Sudipta, "The Culture of Representative Democracy" in Partha Chatterjee (ed.), *Wages of freedom, Fifty Years of the Indian Nation-State*, OUP, Delhi, 1988.
7. Kohli, Atul, *India's democracy: An Analysis of Changing State-Society Relations*, Princeton University Press, Princeton, 1988.
8. Kothari, Rajni, "The Democratic Experiment" in Partha Chatterjee (ed.), *Wages of Freedom, Fifty Years of the Indian Nation-State*, OUP, Delhi, 1998.
9. Mehta, Pratap Bhanu, *Burden of Democracy*, Penguin, New Delhi, 2004.
10. Morris –Jones, W. H., *Politics Mainly Indian*, Orient Longman, New Delhi, 1978.
11. Nayyar, Deepak, 'Economic Development and Political Democracy-Interaction of Economics and Politics in Independent India', *Economic and Political Weekly, 33(49*), 5 December, 1998.
12. Nayyar, Deepak, 'Economic Growth in Independent India', *Economic and Political Weekly*, 41(15), 15 April, 2006.

13. Rudolph, Lloyd and Susanne, *In Pursuit of Lakshmi*: *Political Economy of the State in India*, University of Chicago Press, Chicago, 1987.
14. Satyamurthy, T.V., ed., *State and Nation in the Context of Social Change*, vol. l, Oxford University Press, Delhi, l994.
15. Vora, Rajendra and Suhas Palshikar, eds, *Indian Democracy: Meanings and Practices*, Sage, New Delhi, 2004.

Unit 2

1. Adeney, Katherine and Saez Lawrence, eds., *Coalition Politics and Hindu Nationalism*, Routledge, London, 2005.
2. Brass, Paul R. and Marcus F. Franda, (eds), *Radical Politics in South Asia*, MIT Press, Cambridge, 1973.
3. Hansen, Thomas and Jaffrelot Christophe, eds., *The BJP and the Compulsions of Politics in India*, Oxford University Press, New Delhi, 1998.
4. Hasan, Zoya ed., *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
5. Kothari, Rajni, *State against Democracy: In Search of Humane Governance*, Ajanta, Delhi, 1988.
6. Mehra, Ajay K., Khanna, D.D., and Gert W. Kueck, eds., *Political Parties and Party Systems*, Sage, New Delhi, 2003.
7. Weiner, Myron, *Party Politics in India: The Development of a Multiparty System*, Princeton University Press, New Jersey, 1957.
8. Yadav, Yogendra and Suhas Palshikar (eds) Political Parties and Elections in Indian States :1990-2003, *Journal of Indian School of Political Economy*, 2003.

Unit 3

1. Agarwal Bina, ed., *Structures of Patriarchy*: *State, Community and Household in Modernizing Asia*, Kali for Women, New Delhi, 1988.
2. Bardhan, Pranab, *The Political Economy of Development in India*, Oxford University Press, New Delhi, 1998.
3. Baruah, Sanjeeb (ed.) *Ethnonationalism in India: A Reader*, Oxford University Press, New Delhi, 2010.
4. Baruah, Sanjeeb, *India against Itself*: *Assam and the Politics of Nationality*, Oxford University Press, New Delhi, 2003.
5. Bhargava, Rajeev, ed., *Secularism and Its Critics*, Oxford University Press, New Delhi, 1998.
6. Brass, Paul, *Language, Religion and Politics in North India*, Cambridge University Press, London, 1974.
7. Fernandes, Leela, *India's New Middle Class*: *Democratic Politics in an Era of Economic Reform*, University of Minnesota Press, 2006.
8. Frankel, Francine and M.S.A. Rao, eds., *Dominance and State Power in India*: *Decline of a Social Order*, Oxford University Press, New Delhi, 1989.
9. Ganguly, Sumit (ed.) The State of India's Democracy, Oxford University Press, New Delhi, 2009.
10. Guru, Gopal (ed.), *Humiliation: Claims and Context*, Oxford University Press, New Delhi, 2009.
11. Jaffrelot, Christophe, *India's Silent Revolution: The Rise of the Low Castes in Northern Indian States*, Permanent Black, Delhi, 2003.
12. Jaffrelot, Christophe, *The Hindu Nationalist Movement and Indian Politics, 1925 to the 1990s*, Penguin Books, New Delhi, 1996.
13. Jenkins, Rob (ed.), *Regional Reflections: Company Politics across India's States,* Oxford University Press, New Delhi, 2004.
14. Kanungo, Pralay, *RSS's Tryst with Politics: from Hedgewar to Sudarshan,* Manohar, Delhi, 2002.
15. King, Robert D., *Nehru and Language Politics in India*, Oxford University Press, Delhi, 1995.

16. Kohli, Atul and Prerna Singh, edited, Handbook of Indian Politics, Routledge Press, 2013
17. Mcguire, John and Ian Copland (eds) *Hindu Nationalism and Governance*, Oxford University Press, Delhi, 2008.
18. Menon, Nivedita ed., *Gender and Politics in India*, Oxford University Press, New Delhi,
19. Misra B.B., *The Indian Middle Class- Their Growth in Modern Times*, Oxford University Press, Delhi, 1978.
20. Mohanty, Manoranjan ed., *Caste, Class and Gender*, Sage, Delhi, 2000.
21. Pai Sudha, *Dalit Assertion and the Unfinished Democratic Revolution*: *The Bahujan Samaj Party in Uttar Pradesh*, Sage, New Delhi, 2002.
22. Pai, Sudha , ed., *Handbook on Politics in the Indian States Regions, Political Parties and Economic Reforms,* Oxford University Press, New Delhi, 2013.
23. Prakash, Amit, *Jharkhand*: *Politics of Development and Identity*, Orient Longman, Hyderabad, 2001.
24. Samaddar, Ranabir, *The Politics of Autonomy: Indian Experience*, Sage, New Delhi, 2005.
25. Sarangi, Asha (ed.) *Language and Politics in India*, Oxford University Press, New Delhi, 2010.
26. Sathyamurthy T.V. ed., *Region, Religion, Caste, Gender and Culture in India*, Oxford University Press, Oxford, 1998.
27. Shah Ghanshyam ed., *Dalit Identity and Politics*, Sage, New Delhi, 2001.
28. Vanaik, Achin, *Communalism Contested: Religion, Modernity and Secularization,* Vistaar Publications, New Delhi, 1997.
29. Weiner Myron, *Sons of the Soil*: *Migration and Ethnic Conflict in India,* Oxford University Press, New Delhi, 1987.
30. Wilkinson, Steven I (ed.) *Religious Politics and Communal Violence*, Oxford University Press, New Delhi, 2007.

Unit 4

1. Bardhan, Pranab, *The Political Economy of Development in India,* Oxford University Press, Delhi, Revised Edition, 1997.
2. Brar, Bhupinder and Pampa Mukherjee, eds, *Facing Globality: Politics of resistance, Relocation and Reinvention in India*, New Delhi, Oxford University Press, 2012.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and the Politics of Identity in India* , Pearson-Longman, New Delhi , 2008.
4. Chatterjee Partha, ed., *Wages of Freedom*: *Fifty Years of the Indian Nation State*, Oxford University Press, New Delhi 1998.
5. Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
6. Frankel, Francine R., *India's Political Economy,* 1947-2004, 2nd edition, Oxford University Press, New Delhi, 2005.
7. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, OUP, Delhi, 1999
8. Kaviraj Sudipta, *The Enchantment of Democracy and India*, Permanent Black, New Delhi, 2010.
9. Kohli, Atul, *Democracy and Development in India: From Socialism to Pro-business,* Oxford University Press, New Delhi, 2010.
10. Kohli, Atul, *Poverty amid Plenty in the New India*, Oxford University Press, New Delhi, 2012.
11. Lakshman, Narayan, *Patrons of the Poor: Caste Politics and Policy Making in India,* Oxford University Press, New Delhi, 2011.
12. Mooji, Jos, *The Politics of Economic Reforms in India,* Sage, New Delhi, 2005.
13. Nayar, Baldev Raj (ed.) Globalization and Politics in India, Oxford University Press, New Delhi, 2010.

14. Patnaik, Prabhat, "Political Strategies of Economic Development," in Partha Chatterjee, ed., *Wages of Freedom, Fifty Years of the Indian Nation-State* Oxford University Press, New Delhi, 1998.
15. Rudolph, L. and Susanne Rudolph, *In Pursuit of Lakshmi: The Political Economy of Indian States*, Orient Longman, Delhi, 1988.
16. Shah, Ghanshyam, ed., *State and Social Movements*, Sage, Delhi, 1999.

Journals/Newspapers to be Consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web also check on JSTOR)
2. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
3. ***Studies In Indian Politics, Sage Journal***
4. ***The Hindu and Indian Express***

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Course-VIII : Theories of International Relations

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Rational of the Course

The key objective of this course is to provide a comprehensive overview of the major theories in IR, covering the entire disciplinary spectrum from mainstream approaches such as realism, liberalism and constructivism to critical approaches such as postcolonialism, postmodernism and feminism. Whereas the course content remains largely theoretical, both historical and contemporary practices are taken as illustrative examples, particularly illuminating non-Western perspectives. This course is expected to act as a catalyst for students to think creatively and critically in search of 'global' International Relations that is inclusive of non-Western perspectives and traditions.

The course has four units and each unit is presented with the help of key concepts. Each unit has essential readings that offer a basic introduction to the topic. Students are advised to familiarize themselves with the essential readings before the lecture and follow up with the specified recommended readings. During class discussion, they will be expected to critically evaluate the essential readings and attempt to uncover all possible nuances of an argument.

Course Outlines

I: Introducing Practice-Theory Interface:

International practices, disciplinary lineage of IR, role and significance of theory, units and levels of analysis, practices of IR

II: Mainstream IR Theories:

Realism **(**national interest, national power, national security, security dilemma, balance of power, structural realism, defensive/offensive realism**);** *Liberalism* (interdependence**,** neoliberal institutionalism, commercial liberalism, democratic peace theory, international law, regimes, world public opinion).

III. Constructivism and the 'English School':

Identity, social construction of knowledge and the construction of social reality

IV: Critical IR theories and Non-Western Perspectives:

Marxism, poststructuralism, postmodernism, postcolonialism, feminism, ecological, 'global'IR

READINGS

Unit I

Essential Readings:

Adler, E. and Pouliot, V. (2011) 'International Practices', *International Theory*, 3(1): 1-36.

Brown, C. and Ainley, K. (2005) 3rd Edition, *Understanding International Relations Houndmills*: Palgrave Macmillan.

Snyder, J. (2004) 'One World, Rival Theories', *Foreign Policy*, 145: 52–62.

Walt, S. M. (1998) 'International Relations: One World, Many Theories,'*Foreign Policy*(Spring 1998): 29-46.

Recommended Readings:

Donnelly, J. (2015) 'The Discourse of Anarchy in IR', *International Theory: A Journal of International Politics, Law and Philosophy*, 7(3): 393-425.

Holsti, K.J. (1998) 'Scholarship in an Era of Anxiety: The Study of International Politics during the Cold War', *Review of International Studies* 24(5): 17-46.

Sørensen, G. S. (1998) 'IR Theory after the Cold War', *Review of International Studies*, 24(5): 83-100.

Unit II

Essential Readings

Doyle, M. (1997) *Ways of War and Peace: Realism, Liberalism, and Socialism*, New York: W.W. Norton & Company.

Jackson, R. and Sørensen, G. (2007) *Introduction to International Relations: Theories and Approaches*, Oxford: Oxford University Press.

Keohane, R. O. and Nye, J. S. (2001) *Power and Interdependence*, Pearson, 4th edition.

Dunne, T. and Schmidt, B. (2008), 'Realism', in John Baylis et al. (eds.), *The Globalization of World Politics*, 3rded., Oxford: Oxford University Press.

Dunne, T. (2008), 'Liberalism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

Morgenthau, H. J. (1948) *Politics among Nations: The Struggle for Power and Peace*, New York: Alfred Knopf.

Vasquez, J.A. (1998) *The Power of Power Politics: From Classical Realism to Neotraditionalism*, Cambridge: Cambridge University Press.

Waltz, K. (2010)*Theory of International Politics*, Reading: MA: Addison-Wesley. *First Edition*.

Recommended Readings

Baldwin, D. ed. (1993) *Neorealism and Neoliberalism: The Contemporary Debate*, New York: Columbia University Press.

Keohane, R. O. ed. (1986) *Neorealism and Its Critics*, New York: Columbia University Press.

Mearsheimer, J. (2001)*The Tragedy of Great Power Politics*, New York: Norton, pp. 1-28.

Moravcsik, A. and Legro, J. (1999), 'Is Anybody Still a Realist?'*International Security*, 24 (2): 5-55.

Schroeder, P. (1994), 'Historical Reality vs. Neo-realist Theory', *International Security*, 19 (1): 108-148.

Schweller, R. (1992), 'Domestic Structure and Preventive War: Are Democracies More Pacific?'*World Politics*, 44 (2): 235-269

Unit III

Essential Readings:

Barnett, M. (2008), 'Constructivism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

Buzan, B. (2001), 'The English School: An Underexploited Resource in IR', *Review of International Studies*, 27 (3): 471-488.

Dunne, T. (2008), 'The English School' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.

Hurd, I. (2008) 'Constructivism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of International Relations*, Oxford: Oxford University Press: 298–316.

Wendt, A. (1992) 'Anarchy Is What States Make of It: the Social Construction of Power Politics,' *International Organization*, 46: 391-425.

Recommended Readings:

Bull, H. and Watson, A. (eds.) (1985) *The Expansion of International Society*, Oxford: Clarendon Press.

Bull, H. (1977) *The Anarchical Society: A Study of Order in World Politics*, New York: Columbia University Press.

Buzan, B. and Little, R. (2000)*International Systems in World History: Remaking the Study of International Relations*, New York: Oxford University Press.

Emanuel, A. (2002) 'Constructivism and International Relations' in Walter Carlsnaes, Thomas Rise and Simmons (eds.) *Handbook of International Relations*, London: Sage.

Guzzini, S. (1993) 'Structural Power: the Limits of Neorealist Analysis,'*International Organization*, 43 (3): 443-478.

Little, R. (2003), 'The English School vs. American Realism: A Meeting of Minds or Divided by a Common Language?' *Review of International Studies*, 29: 443-460.

Linklater, A. (2005) 'The English School' in Scott Burchill et al. (eds.)*Theories of International Relations*, Hampshire: Palgrave Macmillan

Ted Hopf, T. (1998) 'The Promise of Constructivism in IR Theory,'*International Security*, Vol. 23, No. 1 (Summer 1998): 171-200.

Unit IV

Essential Readings:

Bajpai, K. and Mallavarapu, S. (2005) *International Relations in India: Bringing Theory Back Home*, New Delhi: Orient Blackswan.

Derian, J.D. (1995) *International Theory: Critical Investigations*, Houndmills: Macmillan.

Linklater, A. (1990) *Beyond Realism and Marxism: Critical Theory and International Relations*, Houndmills: Macmillan.

Neuman, S.G. (1998) *International Relations Theory and the Third World*, Houndmills: Macmillan.

Smith, S. and Owens, P. (2008), "Alternative Approaches to International Theory: Feminism", in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

Tickner, J. A. and Sjoberg, L. (eds.) (2011), *Twenty Years of Feminist International Relations: A Conversation about the Past, Present and Future*. London and New York: Routledge.

Burke, A. (2008), 'Postmodernism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.

Hobson, J. (2012) *The Eurocentric Conception of World: Western International Theory, 1760-2010*, Cambridge: Cambridge University Press.

Acharya, A. and Buzan, B. (2009) *Non-Western International Relations Theory: Perspectives On and Beyond Asia*, London: Routledge.

Neumann, Stephanie (ed.) (1998), International Relations and the Third World, New York: St. Martins Press.

Ling, L. H. M. (2002) *Post Colonial International Relations*: *Conquest and Desire between Asia and the West*, Palgrave Macmillan.

Tickner, A. B. and Wæver, O. (2009) *International Relations Scholarship Around the World*, London: Routledge.

Recommended Readings:

Devetak, R. (1996) 'Critical Theory', in Scott Burchill et al., *Theories of International Relations*, New York: St. Martinís: 145-178.

Mohammed, A. (2002) 'Inequality and Theorizing in International Relations: The Case for Subaltern Realism', *International Studies Review*, 4:2: 27-48.

Linklater, A. (1996) 'The Achievements of Critical Theory' in Steve Smith, Ken Booth and Marysia Zalewski (eds.) *International Theory: Positivism and Beyond*, Cambridge: Cambridge University Press.

THIRD SEMESTER

Course IX : INDIAN POLITICAL THOUGHT-I (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper aims to introduce students to different discourses in the domain of Indian Political Thought. It includes historical roots, medieval socio-cultural traditions, renaissance and nationalist narratives.

Unit-I

Historical Roots and Medieval Socio-Cultural Traditions:

1. Dharmashastra and Arthashastra Traditions.
2. Bhakti and Sufi challenges to Hegemonic Religious Traditions.

Unit-II

Indian Renaissance and Social Reform Movements.

1. Meaning, Nature and Critical evaluation with Special reference to gender, caste and modernity.
2. Raja Rammohan Roy, Sir Syed Ahmed Khan, Pandita Ramabai, Jyotiba Phule.

Unit-III

Indian Liberalism and Nation-building:

Nehru, Tagore, Ranade, Gokhale

Unit-IV

Religious Nationalism :

1. Vivekananda, Tilak, Aurobindo and Savarkar.
2. Iqbal and Jinnah.

General Readings :

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century from Naroji to Nehru* (London : OUP, 1971).
2. Brown, D.M. (ed.), *The White Umbrella : Indian Political Thought from Manu to Gandhiji* (Bombay, Jaico, 1970).

3. Dallamayr, F.R. and Devy, G.N. (eds.), *Between Tradition and Modernity : India's Search for Identity* (London, Sage, 1998).

4. Dalton, D.G., *Indian Idea of Freedom* (Gurgaon, Academic Press, 1982).

5. Doctor, Adhi H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).

6. Karunakaran, K.P., *Religion and Political Awakening in India* (Meerut, Meenakshi, 1969), 2nd Edition.

7. Mahadevan, T.M.P. and G.V. Saroja, *Contemporary Indian Philosophy* (New Delhi, Sterling, 1981).

8. Mehta, V.R., *Foundations of Indian Political Thought* (New Delhi, Manohar, 1996).

9. Naravane, V.S., *Modern Indian Thought* (Bombay, Asia, 1964).

10. Pantham, Thomas and K.L., Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

11. Verma, V.P., *Modern Indian Political Thought* (Agra, Laxminarayan, 1996), Eleventh Revised Edition).

12. Verma, V.P., *Ancient and Medieval Indian Political Thought* (Agra, 1996).

13. Nandy, Ashis, *The Intimate Enemy : Loss and Recovery of Self under Colonialism*, Delhi, Oxford, 1983.

14. Guha, Ramachandra, 'The Absent Liberal', *Economic and Political Weekly*, December 15 2001.

15. Christopher Jaffrelot (edited), *Hindu Nationalism: A Reader*, Ranikhet, Permanent Black, 2007.

16. Quayum, Mohammad A, *'Imagining "One World": Rabindranath Tagore's Critique of Nationalism',* Interdisciplinary Literary Studies, Vol 7, No 2, Spring 2006.

17. Jahanbegloo, Ramin, 'Tagore and the Idea of Civilization', *India International Centre Quarterly*, Vol 34, No. 1, Summer, 2007.

18. Chakravarti, Uma, *Rewriting History: The Lives and the Times of Pandita Ramabai*, Delhi, Kali for Women, 1998.

19. Kosambi, Meera, 'Women, Emancipation and Equality: Pandita Ramabai's Contribution to Women's Cause', *Economic and Political Weekly*, October 29, 1988.

20. Lamba Rinku, 'Bringing the State Back in, Yet Again: The Debate on Socio-religious Reform in Late-Nineteenth-Century India', *Comparative Studies of South Asia, Africa and the Middle East*, Volume 29, Number 2, 2009.

21. Zachariah, Bhikhu, *'Nehru'* Routledge, 2004

22. Parekh, Bhikhu, 'Nehru and the National Philosophy of India', *Economic and Political Weekly*, Janurary 5 1991

23. Deshpande G. P. (ed.), *Selected Writings of Jotirao Phule, Delhi, Leftword Books*, 2002.

24. Omvedt, Gail, *Seeking Begumpura*, Delhi, Navayana, 2008.

25. Gopal, S, 'The Formative Ideology of Jawaharlal Nehru', *Economic and Political Weekly*, May 22 1976.

Suggested Readings :

1. Altekar, A.S., *State and Government in Ancient India* (Patna, Motilal Banarasi Dass, 1971), 3rd Edition.
2. Chausalkar, Ashok, 'Politics of Arthashastra Tradition', *Indian Journal of Political Science*, January-March, 1981.
3. Chaudhri, R.K., *Kautilya's Political Ideas and Institutions* (Varanasi, Chowkhamba Sanskrit Series, 1971).
4. Ghoshal, U.N., *A History of Indian Political Ideas* (London, OUP, 1959).
5. Jayaswal, K.P., *Hindu Polity* (Bangalore, 1978), 5th Edition.
6. Kangle, R.P., *The Kautilya Arthashastra Parts-I-III* (Delhi, Motilal Banarasidass, 1986).
7. Kohli, Ritu, *Kautilya's Political Theory* (New Delhi, Deep and Deep, 1995).
8. Parekh, Bhikhu, 'Some Reflections on Hindu Tradition of Political Thought' in Pantham and Deutsch (ed.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
9. Prasad, Beni, *Theory of Government in Ancient India* (Allahabad, Center Book, 1968), 2nd Revised Edition.
10. Ray, B.N., *Tradition and Innovation in Indian Political Thought* (Delhi, Ajanta, 1998).
11. Saletore, B.A., *Ancient Indian Political Thought and Institutions* (Bombay, Asia, 1963).
12. Singh, N.P., *Political Ideas and Ideals in the Mahabharata* (Bombay, Popular Prakashan, 1976).
13. Spellman, J., *The Political Theory of Ancient India* (Oxford, Clarendon Press, 1964).
14. Vanna, V.P., *Studies in Hindu Political Thought and Its Metaphysical Foundation* (Delhi : Motilal Banarasidass, 1954).
15. Anand, B.S., *Baba Farid* (New Delhi, Sahitya Akademy, 1975).
16. Bains, J.S., 'Political Ideas of Guru Nanak', *Indian Journal of Political Science,* 1962.
17. 'Political Ideas of Guru Gobind Singh', IIAS, *Sikhism and Indian Society*, Shimla, 1967.
18. Bihari, Bankey, *Sufism Mystics and Yogis of India* (Bombay, Bhartiya Vidya, Bhawan, 1962).
19. Kohli, S.S., *Bule Shah* (Sahitya Academy, 1987).
20. Majumdar, A.K., *Bhakti Renaissance* (Bombay, Bhartiya Vidya Bhawan, 1965).
21. Muller, Max, *Ram Mohan to Ramakrishna* (Calcutta, Susil, 1952).

22. Vaudeville, C., *A Weaver Named Kabir* (Delhi, OUP, 1997).

23. Westcott, G.H., *Kabir and the Kabir Panth* (Calcutta, Susil, 1953).

24. Aurobindo, Sri, *The Renaissance in India in Dallmayer*, Fred and G.N., Devy (ed.), 1998.

25. Bishop, Donald H. (ed.), *Thinkers of Indian Renaissance* (New Delhi, Wiley, 1982).

26. De, Barun, A Historical Critique of Renaissance Analogues for Nineteenth Century India, in Barun De (ed.), *Perspectives in Social Sciences I*, (Calcutta, 1977).

27. Majumdar, B.B., *History of Indian Social and Political Ideas* (Calcutta, Firma, KLM, 1996).

28. Mehta, V.R., 'Renaissance and the Beginning of Modern Thought', Ch. 8 in his *Foundations of Indian Political Thought* (New Delhi, Manohar, 1992).

29. Sarma, D.S., *The Renaissance of Hinduism in the Nineteenth and Twentieth Centuries* (Varanasi, Banaras Hindu University, 1944).

30. Vyas, K.C., *The Social Renaissance in India* (Bombay, Vohra and Company, 1957).

31. Zacharis, H.C.E., *Renascent India : From Rammohan Roy to Mohandas Gandhi* (London, George Allen and Unwin, 1933).

32. Buch, M.R., *Rise and Growth of Indian Liberalism* (Baroda, 1938).

33. Chakravarti, Uma, *Rewriting History : The Life and Times of Pandita Ramabai* (New Delhi, Kali for Women, 1998).

34. Chakravarti, Uma, *Gender, Class and Nation—Ramabai and the Critique of Brahmanical Patriarchy* (Delhi, OUP, 1998).

35. Joshi, V.C. (ed.), *Rammohan Roy and the Process of Modernisation in India* (Delhi, Vikas, 1975).

36. Kosambi, Meera, 'Indian Response to Christianity, Church and Colonialism : Case of Pandita Ramabai', *Economic and Political Weekly*, 24-31, October, 1992.

37. Mansani, R.P., *Dadabhai Naoroji : The Grand Old Man of India* (London, George Allen and Unwin, 1939).

38. Nanda, B.R., *Gokhale : The Indian Moderates and the British Raj* (Delhi, OUP, 1998).

39. Tucker, Richard P., *Ranade and the Roots of Indian Nationalism* (Bombay : Popular Prakashan, 1977).

40. Vora, Rajendra, 'Two Strands of Indian Liberalism : Ideas of Ranade and Phule' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

41. Aurobindo, Sri, *On Nationalism* (Pondicherry, Sri Aurobindo Ashram, 1965).

42. *Bankim–Tilak –Dayananda*, (Calcutta : Aryan, 1940).

43. Banerjee Sumanta, 'Hindutva – Ideology and Social Psychology', *Economic and Political Weekly*, 19 January, 1991).

44. Basu, Tapan, *et al* (eds.), *Khaki Shorts and Saffron Flags* (New Delhi, Oriented Longman, 1991).

45. Bose, N.S., *Swami Vivekananda* (New Delhi, Sahitya Akadami, 1994).
46. Dixit, Prabha, 'The Ideology of Hindu Nationalism' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
47. Embree, A.T., *Utopias in Conflict, Religion and Nationalism in Modern India* (Delhi, OUP, 1991).
48. Graham, B., *Hindu Nationalism and Indian Politics* (Cambridge, Cambridge University Press, 1990).
49. Heehs, Peter (ed.), *Essential Writings of Sri Aurobindo* (Delhi, OUP, 1998).
50. Joshi, V.C., *Aurobindo : An Interpretation* (Delhi, 1973).
51. Kaviraj, Sudipto, *The Unhappy Consciousness : Bankimchandra Chattopadhyaya and the Formation of Nationalist Discourse in India* (Delhi, OUP, 1995).
52. Savarkar, V.D., *"Hindutva Or Who is a Hindu"?* (Bombay, Veer Savarkar Prakashan, 1923).
53. Segupta, S.C., *Bankim Chandra Chatterjee* (New Delhi, Sahitya Akademi, 1982).
54. Shay, T.L., *Legacy of Lokmanya : Political Philosophy of Bal Gangadhar Tilak* (London, OUP, 1956).
55. Singh, Karan, *Prophet of Indian Nationalism* (Bombay, Bhartiya Vidya Bhawan, 1970).
56. Baljon, J.M.S., *The Reforms and Religious Ideas of Sir Sayyid Ahmad Khan* (Leiden : E.J. Bill, 1949).
57. Banerjee, A.C., *Two Nations : The Philosophy of Muslim Nationalism* (New Delhi, Concept, 1980).
58. Dar, B.A., *A Study of Iqbal's Philosophy* (Lahore, Md. Ashraf, 1933).
59. Hamid, Abdul, *Muslim Separatism in India* (London, OUP, 1967).
60. Hasan, Mushirul (ed.), *India's Partition : Process, Strategy and Mobilization* (Delhi, OUP, 1993).
61. Hussain, M. Hadi, *Syed Ahmed Khan : Pioneer of Indian Resurgence* (Lahore, Institute of Islamic Culture, 1970).
62. Imam, Zafar, *Muslims in India* (New Delhi : Orient Longman, 1975).
63. Mohammed, Shan, *Sir Syed Ahmad Khan : A Political Biography* (Meerut, Meenakshi Prakashan, 1969).
64. Mujahid, Sharif, *Quaid-i-Azam-Jinnah : Studies in Interpretation* (Delhi, B.R., 1985).
65. Naim, C.M. (ed.), *Iqbal, Jinnah and Pakistan* (Delhi, Jinnah Publi. House, 1982).
66. Shakir, Moin, 'Dynamic of Muslim Political Thought' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
67. Brohi, A.K., *Iqbal and The Concept of Islamic Socialism* (Karachi, Al-Karimi, 1967).
68. Hussain, Raiz, *Iqbal, Poet and His Politics* (New Delhi, Uppal Pub. House, 1987).
69. Burney, S.M., *Iqbal : Poet-Patriot of India* (New Delhi, Vikas, 1987).
70. Masud, Mohamad K. and Mumtaz Liaqat, *Iqbal Through Western Eyes (*Sterling, 1989).
71. Malik, Hafeez, *Iqbal : Poet-Philosopher of Pakistan* (New York : Columbia University Press, 1971).

Course X : COMPARATIVE POLITICS (II) : UNDERSTANDING DEVELOPING SOCIETIES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with key issues and debates in comparative politics with special reference to developing societies.

Unit-I

Approaches to the politics of developing countries :

- Political Sociology. –Systems theory, structural functionalism, political Culture, political development and institutionalism
- Political Economy. – Modernisation Theory, Dependency Theory and World System Analysis
- Alternative Approaches. New Institutional approach

Unit-II

- *Colonialism and Its Impact :* Politics, Economy and Culture.
- Nationalism and Anti-colonial Movement : Ideology, social base, strategies of mobilization and outcome with refrence to India, China and Latin America(creole nationalism)

Unit-III

- *Civil Society :* Ethnic, National and Regional identities.
- *Globalisation :* Definitin, difference between old and new, Its impact on the Developing World.

Unit-IV

- State- Nature of the state in Developing world with reference to Hamza Alavi, J.S. Saul and Colin Leys work, Political regimes- military, Islamic , etc ,
- Constitutionalism and Political parties,.

Essential Readings

1. Alavi, H., *The State in Post-Colonial Societies: Pakistan and Bangladesh*, New Left Review, No. 74, 1972.
2. Allen, C. and G. Willams (eds.), *Sociology of* 'Developing Societies', Sub-Saharan Africa, Macmillan, London, 1982.
3. Cammack, Paul, David Pool and William Tordoff, *Third World Politics: A Comparative Introduction*, John Hopkins University Press, Baltimore, 1993.
4. Caramani, Daniele, *Comparative Politics*, Oxford University Press, Oxford, 2014.
5. Clapham,C., Third World Politics: An Introduction, Routledge, London 1985.
6. Dickovick, J. Tyler and Jonathan Eastwood, *Comparative Politics: Integrating Theories*, Methods, and Cases, Oxford University press, Oxford, 2014.
7. Eckstein, Harry and David, E. Apter, *Comparative Politics : A Reader*, The Free Press of Glencoe, London, 1994
8. Manor, James (ed.), *Third World Politics*, Longman, London, 1991.
9. Mohanty, Manorajan, P. Mukherji with O. Tornquist, *People's Rights, Social Movements and the State in the Third World*, Sage, New Delhi, 1998.
10. Randall, V., *Political Parties in the Third World*, Sage, London, 1988.
11. Smith, Anthony D., *State and Nation in the Third World: The Western State and African Nationalism*, Wheatsheaf, Sussex, 1983.

Students are advised to see the relevant entries in the following reference books Seymour Martin Lipset (ed. in chief). The Encylopaedia of Democracy, Volumes I, II and III, Routledge, London, 1995 : Vernon Bogdanor (ed.). The Blackwell Encyclopaedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to the Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Suggested Readings

1. . Alavi, Hamza and Teodor Shanin (eds.), *Introduction to the Sociology* of 'Developing Societies', Macmillan, London, 1982.
2. Amin, Samir, 'Social Movements at the Periphery' in P. Wignaraja (ed.), *New Social Movements in the South*, Zed, London, 1993.
3. Archetti, E. et al., *Latin America*, Macmillan, London, 1987.
4. Ayoade, J.A., 'States Without Citizens: An Emerging African Phenomenon' in D. Rothchild and N. Chazan (ed.), *The Precious Balance : State and Society in Africa*, Westview Press, Boulder, Colorado, 1988.
5. Bayart, J.F., 'Civil Society in Africa' in Chabal, P. (ed.), *Political Domination in Africa : Reflections on the Limits of Power*, Cambridge University Press, Cambridge, 1986.
6. Berger, M., 'The End of the Third World', *Third World Quarterly*, Vol. 15, No. 2, 1994.
7. Bratton, M., and Van der Walle, N., 'Towards Governance in Africa : Popular Demands and State Responses' in G. Hayden and M. Bratton (eds.), *Governance and Politics in Africa*, Boulder, Colorado, 1991.

8. Callaghy, T., 'Vision and Politics in the Transformation of the Global, Political Economy : Lessons from the Second and the Third World's in R. Slater, Schutz, B. and Dorr, S. (eds.), *Global Transformation and the Third World*, L. Rienner Pub., Boulder, Colorado, 1993.
9. Chabal, P., Introduction : 'Thinking About Politics in Africa', in Chabal, P. (eds.), *Political Domination in Africa : Reflections on the Limits of Power*, Cambridge University Press, Cambridge, 1986.
10. Chezan, N., 'Between Liberalism and Statism : African Political Cultures and Democracy' in Diamond, Larry (ed.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
11. Diamond, L., 'Introduction : Political Culture and Democracy', in L. Diamond (eds.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
12. Diamond, L., 'The Globalisation of Democracy' in Slater, R., Shutz, B., and Dorr, S. (ed.), *Global Transformation and the Third World*, L. Rienner, Boulder, Colorado, 1993.
13. Dixon, Chris and Michael J. Heffernan (eds.), *Colonialism and Development in the Contemporary World*, Mansell, New York, 1991.
14. Eliott, Carolyn, *Civil Society : A Reader*, Oxford University Press, New Delhi, 2003.
15. Engles, Dagmar, and Shula Marks (eds.), *Contesting Colonial Hegemony : State and Society in Africa and India*, British Academic Press, London (1994).
16. Fatton, R., *Predatory Rule, State and Civil Society in Africa*, L. Rienner, Boulder, Colorado, 1992.
17. Frank, A.G., *Capitalism and Underdevelopment in Latin America*, Penguin, Harmondsworth, 1971(Kumar, Ashutosh, 'Hamza Alavi and Post-Colonial State', *Economic and Political Weekly*, August 7, 2004).
18. Garreton, M.A., 'Political Democratisation in Latin America and the Crisis of Paradigms' in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
19. Geddes, Barbara 'Paradigms and Sand Castles in Comparative Politics of Developing Areas' in Crotty, William (ed.), *Comparative Politics, Policy and International Relations*, Northwestern University Press, Evanston, 1991.
20. Hawthorn, G., "Waiting for a Text?" Comparing 'Third World Politics in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
21. Haynes, Jeff, *Third World Politics, A Concise Introduction*, Blackwell, Oxford, 1996.
22. Huntington, S., *Political Order in Changing Societies*, Yale University Press, New Haven, 1968.
23. Huntington, S., The Third Wave, Democratisation in the Late Twentieth Century, University of Oklohoma Press, Norman, 1991.
24. Jayaram, N., On Civil Society : Issues and Perspective, Sage Publications, New Delhi, 2005.
25. Kamrava, M., Politics and Society in the Third World, Routledge, London, 1993.
26. Kaviraj, S., 'On State, Society and Discourse in India' in Manor, J. (ed.), Rethinking Third World Politics, Addison-Wesley Longman, London, 1993.
27. Luckham, R., 'Introduction : The Military, The Developmental State and Social Forces in Asia and the Pacific : Issues for Comparative Analysis' in Selochan, V. (ed.), The Military, The State, and Development in Asia and Pacific, Westview, Boulder, 1991.

28. Mamdani, M., T, Mkandawire, and E. Wamba-dia-Wamba, 'Social Movements and Democracy in Africa' in Wignaraja, P. (ed.), *New Social Movements in the South*, Zed Books, London, 1993.
29. Migdal, J., *Strong Societies and Weak States : State Society Relations and State Capabilities in the Third World*, Princeton University Press, Princeton, 1988.
30. Mitra, S. (ed.), *The Post-Colonial State in Asia*, Wheatsheaf, Hemel Hampstead, 1990.
31. Mouzelis, N., *Politics in the Semi-Periphery*, Macmillan, London, 1986.
32. Nkruman, K., *Neo-colonialism : The Last Stage of Capitalism*, Nelson, London, 1965.
33. O'Donnell, G., *Modernisation and Bureaucratic Authoritarianism, Institute of International Studies*, Berkeley, 1973. O' Donnell, G., Authoritarian Rule : Prospects for Democracy, John Hopkins University Press, Baltimore, 1973.
34. Parpart, J., 'Women and the State in Africa'; in D. Rothchild and N. Chazan (eds.), *The Precarious Balance : State and Society in Africa*, Westview, Boulder, 1988.
35. Potter, D., "Democratisation in Asia" in D. Held (ed.), *Prospects for Democracy : North, South, East, West*, Polity, Cambridge, 1985.
36. Pye, L., *Asian Power and Politics : The Culture Dimension of Authority*, Harvard University Press, Cambridge, 1985.
37. Randall, V., and Theobold, R., *Political Change and Underdevelopment : A Critical Introduction to Third World Politics*, Macmillan, London, 1985.
38. Rudolph, S., 'State Formation in Asia – Prolegemenon to a Comparative Study', *Journal of Asian Studies*, 46, 4, 1987.
39. Saul, John S., 'The State in Post-Colonial Societies : Tanzania' in Ralph Miliband and John Saville (ed.), *The Socialist Register*, Merlin, London, 1974.
40. Sisson, R., 'Culture and Democratisation in India' in Diamond, L. (ed.), *Political Culture and Democracy in Developing Countries*, Lynne Reiner, Boulder, 1993.
41. Smith, B.C., *Understanding Third World Politics, Theories of Political Change and Development*, Palgrave Macmillan, Basingstoke, 2003.
42. Taylor, Peter, J., 'The Legacy of Imperialism' in Dixon Chris and Michael, J Heffernan (eds.), *Colonialism and Development in the Contemporary World*, Mansell, New York, 1991.
43. Thomas, Clive, Y., *The Rise of the Authoritarian State in Peripheral Societies*, Monthly Review Press, New York, 1980.
44. West, David "New Social Movements" in Gerald F. Gaus and Chandran Kukathas, Handbook of Political Theory, Sage, London, 2004.

OR

Course X : COMPARATIVE POLITICAL SYSTEMS WITH SPECIAL REFERENCE TO USA, UK, CHINA, JAPAN AND SWITZERLAND (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting **one question** from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debate in comparative politics with special reference to USA, UK, China, Japan and Switzerland.

UNIT-I

(i) Historical Antecedent of Contemporary Political Systems.
(ii) Evolution of the Constitution and Constitutional Systems.

UNIT-II

(i) Executive
(ii) Legislature

UNIT-III

(i) Political Parties
(ii) Pressure Groups

UNIT-IV

(i) Elections, Electoral Process
(ii) Political Participation, Voting Behavior

Books Recommended :

1. Jean Blondel : *An Introduction to Comparative Government,* Praeger, 1969.
2. G. Almond and B. Powell : *Comparative Politics* : *A Development Approach*, Little Brown, 1966.
3. Robert Ward & Roy Macrides (Eds.) : *Modern Political Systems*, Prentice Hall, 1972.
4. M. Irish & J.W. Protho : *The Politics of American Democracy*, Prentice Hall, 1968.
5. D. J. Weller : *The Government of Politics of Communist China*, Hutchinson, 1970.

6. Peter Bormhead : *Britains Developing Constitution,* St. Martin's Press,1974.
7. John P. Mackintosh : *The Government and Politics of Britain,* Hutchinson, 1971.
8. P.J. Madgwick : *Introduction to British Politics,* Hutchinson, 1971.
9. A.H. Birch : *The British System of Government,* Allen & Unwin, 1980.
10. Lucian Pye : *The Spirit of Chinese Politics,* Cambridge, 1970.
11. Richard Rose : *Studies in British Politics,* Macmillan, 1966.
12. Shanti Swarup : *A Study of the Chinese Communist Movement (only Introduction),* Clarendon, 1966.
13. Robert Wesson : *Communism and Communist Systems,* Prentice-Hall, 1978.
14. Richard H. Solomon : *Mao's Revolution and the Chinese Political Culture,* Oxford University, 1971.

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) : INTERNATIONAL ORGANISATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is designed to introduce the students to the relevance and functioning of international organizations in Contemporary World Politics. It takes up for the purpose a detailed study of some of the major specialized international agencies under the auspices of the United Nations.

UNIT-I

Evolution of International Organisation.

Theoretical approaches to the study of international organization : Classical, neo-realist, functionalist, conflict resolution, world society approach and the Marxist approach.

UNIT-II

Role and function of :

(i) International government organization.

(ii) International non-governmental organization.

Making of the United Nations : Its purpose, principles and structure.
United Nations and maintenance of international peace and security, collective security and its alternative.

UNIT-III

Major specialized agencies : ILO, UNESCO, WHO, FAO.
United Nations and Human Rights.

UNIT-IV

United Nations in the Post-Cold War Era :
UN and disarmament, revision of UN Charter, UN and emerging deterioration in international relations.
Limitations and constraints.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty First Century : Unique Contexts, Enduring Patterns* (New Jersey, Prentice Hall, 2003).
3. A. LeRoy Bennett, *International Organization : Principles and Issues* (New Jersey, Prentice Hall, 1991).
4. B.N. Mehrish, *International Organisations : Structures and Processes* (Jallandhar, Vishal Publications, 1996).
5. Shambhavi Vendantam, *United Nations : Putting Words to Work* (New Delhi, Vikash, 1996).
6. K. P. Saksena, *Reforming the United Nations : The Challenge of Relevance* (New Delhi, Sage, 1993).
7. C. Archer, *International Organisations* (London, Routledge, 1992).
8. P. R. Baehr and L. Gordenker, *The United Nations in 1990s* (Hamshire, Macmillan, 1994).
9. Boutros-Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
10. Abi-Saab Georgeas (ed.), *The Concept of International Organisation* (Paris, UNESCO, 1981).
11. Thomas G. Wein, David P. Forsyth, Roger A. Coate, *The United Nations and Changing World Politics* (Boulder, Westview Press, 1994).
12. William Burch, *The Evolution of the United Nations Peace Keeping : Case Studies and Comparative Analysis* (St. Martin Press, 1993).
13. Paul Taylor and A.R.J. Groom (eds.), *International Organisation : A Conceptual Approach* (London, Frances Printer, 1978).
14. J.W. Burton, *World Society* (London, Cambridge University Press, 1972).
15. Freidrich Kratochwil and Edward Mansfield (eds.), *International Organisation : A Reader* (New York, Harper Collins, 1994).

Option (b) : TRANSNATIONAL ACTORS IN INTERNATIONAL POLITICS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course is designed to introduce the students to the changing dynamics of the emerging world order in which various transnational actors have come to play an increasingly important role in shaping the responses of the state actors to some of the most crucial issues in contemporary history.

UNIT -I

The politics of terminology : From "Non-state actors" to "Transnational actors".
Limitations of state-centric framework and emergence of transnational actors.

UNIT -II

Theorizing different types of transnational actors in International Politics.
Transnational companies; Regional economic groupings; strategic and security actors; Non-legitimate groups and liberation movements; and Non-governmental organizations.

UNIT -III

Post-War Economy and the International Monetary System : International Monetary Fund and World Bank.
Dynamics of Regional Integration : European experience.
Beyond Europe: The global rise of regionalism (special reference to ASEAN and SAARC).

UNIT -IV

Cartelization of Natural Resources in the Age of Globalization : OPEC.
Issues and challenges in international environmental politics.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. R. O. Keohane and J. S. Nye (eds.), *Transnational Relations and World Politics* (Cambridge Mass: Harvard University Press, 1972).

3. T.G. Weiss and L. Gordenker (eds.), *NGOs, the UN and Global Governance* (Boulder, Colo. : Lynne Rienner, 1996).
4. P. Willets (ed.), *Pressure Groups in the Global System : The Transnational Relations of Issue-Oriented Non-Governmental Organizations* (London : Pinter, 1982).
5. P. Willets (ed.), *'The Conscience of the World' : The Influence of Non-Governmental Organizations in the UN System* (London: Hurst and Co., 1996).
6. T. Risse-Kappen (ed.), *Bringing Transnational Relations Back In* (Cambridge : Cambridge University Press, 1995).
7. J. N. Rosenau, *The Study of Global Interdependence : Essays on the Transnationalisation of the World Affairs* (London : Pinter, 1990).
8. A.J.R. Groom and P. Taylor, *Frameworks for International Co-operation* (London : Pinter, 1990).
9. Michael Nicholson, *International Relations : A Concise Introduction*, Second Edition (New York: Palgrave, Macmillan, 2002).
10. Robert Keohane, *International Institutions and State Power : Essays in International Relations Theory* (Boulder: Westview, 1989).
11. John Madeley, *Big Business, Poor Peoples: The Impact of Transnational Corporations in the World's Poor* (London: Zed Books, 1999).
12. Joel Krieger (ed.), *The Oxford Companion to the Politics of the World* (New York : Oxford University Press, 1993).
13. John E. Spero and Jeffery A. Hart, *The Politics of International Economic Relations*, 5th ed. (New York, St. Martin's Press, 1997).
14. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty-First Century : Unique Contexts, Enduring Patterns*, (New Jersey : Prentice Hall, 2003).

Option (c) : POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper attempts to understand development issues and problems in India with reference to theoretical advances in development studies.

UNIT -I

Development, meaning and changing conceptions.
Economic growth.
Human development.
Sustainable development.

UNIT -II

Theory of the Developmentalist State.
Impact of Development on the Political Process.
Development Strategies and State Policies in India – Priorities, Strategies, Target Groups.

UNIT -III

Socio-Economic Problems and Developmental Issues in India.
Poverty, Social Backwardness and Disparities.
Displacement, Resettlement and Environmental degradation.

UNIT -IV

Democratic decentralization and development in India.
Developmental Interventions, Non Governmental Initiatives and Empowerment.
Globalization, Changing Policies, Strategies and their implications in India.

Readings :

1. Bardhan, Pranab, 1984, *The Political Economy of Development in India*, New York, Blackwell.
2. Jalan, Bimal (ed.) 1992, *The Indian Economy : Problems and Prospects*, New Delhi, Viking.
3. Cassen, Robert and Vijay Joshi (eds.), 1992, *India : The Future of Economic Reform*, New Delhi, Oxford University Press.
4. Dreze, Jean & Amartya Sen, 1995, *India : Economic Development & Social Opportunity*, Delhi, Oxford University Press.
5. Frankel Francis et. al (eds.) 2000, *Transforming India : Social and Political Dynamics of Democracy*, Delhi, Oxford University Press.
6. Jayal, Niraja Gopal (ed.) 2001, *Democracy in India*, New Delhi, Oxford University Press.
7. Kaviraj Sudipta, 1987, "Dilemmas of Democratic Development in India" in Adrian Leftwich ed. *Democracy and Development Theory and Practice*, Cambridge, Polity Press.
8. Kohli Atul, 1987, *The State and Poverty in India : The Politics of Reform*, Cambridge, Cambridge University Press.
9. Lewis, John P., 1995, *Governance and Reform : Essays in Indian Political Economy*, Delhi, Oxford University Press.

10. Mathur Kuldeep (ed.) 1996, *Development Policy and Administration*, Delhi, Sage Publications.

11. Satyamurthy, T.V., 1999, *Social Change and Political Discourse in Indian Structures of Power, Movements of Resistance*, Delhi, Oxford University Press.

12. Sen Amartya, 2000, *Development as Freedom*, Delhi, Oxford University Press.

Option (d) : PEACE AND CONFLICT RESOLUTION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to introduce students to the meaning and contending approaches in the discipline of peace and conflict studies. It also brings into broader context the concept and theories of conflict and conflict resolution and the different strategies and tactics of non-violent resolutions.

UNIT-I

Peace Studies :

1. Meaning, scope and approaches.
2. Peace-keeping, Peace-making, Peace-building and post-peace confidence building measures.

UNIT-II

Peace Movements :

1. Civil Rights Movements.
2. Green Peace Movements.

UNIT-III

Conflict and Conflict Resolution : Conceptual and Epistemological dimensions:

1. Conflict: Typologies and Causes.
2. Conflict Resolution: Meaning and Scope.

UNIT-IV

Conflict Resolution and Transformation : General Strategies and Tactics :

1. Pacific Methods (Mediation, Arbitration and Adjudication), and Analytical problem solving approach (notably of John Burton).
2. Non-Violent techniques of conflict resolution (Gandhian).

Recommended Books :

1. Bondurant, J.V., *Conquest of Violence* (London, Princeton Uni. Press, 1958).
2. Coser, L., *The Function of Social Conflict* (N.Y., The Free Press, 1956).
3. Simmel, G., *Conflict and the Web of Group-Affiliation* (New York, 1955).
4. Weber, Thomas, *Conflict Resolution and Gandhian Ethics* (New Delhi, Gandhi Peace Foundation, 1991).
5. Wallensteen, Peter (ed.), *Peace Research : Achievements and Challenges* (Boulder & London, Westview Press, 1988).
6. Holsti, K.J., "Paths to Peace ? Theories of Conflict Resolution and Realities of International Politics," in Thakur, Ramesh (ed.), *International Conflict Resolution* (Boulder and London, Westview Press, 1988).
7. Galtung, J., *Peace by Peaceful Means* (London, Sage, 1996).
8. Galtung, J., *The Way is the Goal : Gandhi Today* (Ahmedabad, Gujarat, Vidyapeeth, 1992).
9. Boulding, Elise (ed.), *New Agenda for Peace Research* (Boulder and London, Lynee Reimer, 1992).
10. Boutras, Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
11. Burton, J. Dukes, Frank, *Conflict : Practices in Management, Settlement and Resolution* (London, Macmillan, 1990).
12. Sandole, Dennis, J.D. and Merwe, Hugo Van der (ed.), *Conflict Resolution Theory and Practice* (New York, Manchester University Press, 1993).

Option (e) : RETHINKING GEOPOLITICS : CRITICAL PERSPECTIVES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on the premise that geopolitics needs to be re-conceptualized as twenty-first century unfolds. The intention is to rethink and radicalize its components 'geo' and 'politics' so that the self-evident character and nuance of the sign 'geopolitics' can be conceptualized and pluralized. Once conceptualized in a critical way as a problematic of geopolitics or geographical politics, geopolitics becomes a much broader social and cultural phenomena that is normally described and understood by the geopolitical tradition of 'wise-men' statecraft.

UNIT-I

Modern Geopolitical Imagination and Visualizing Global Space : Blocks, Worlds and Zones of identity and difference.
Epochs of Geopolitics (Imperial Geopolitics, Cold War Geopolitics, and the Geopolitics of the 'New World Order'.

UNIT-II

Twenty-First Century Geopolitics (End of History? The Clash of Civilizations?).
National Identity and Geopolitical Visions (USA, Russia, India and Pakistan).

UNIT-III

The Geopolitics of Global Dangers ('rogue states', the 'coming anarchy', diseases and disasters).
The Geopolitics of Terror (with special reference to 11 September and its aftermath).

UNIT-IV

Critical Geopolitics (anti-geopolitics, social movements and alternative political geographies).
Gender and Geopolitics.

Suggested Readings :

1. Andrew Herod, Gearoid O Tuathail and Susan M. Roberts (eds.), An *Unruly World ? Globalisation, Governance and Geography*, London and New York : Routledge, 1998.
2. Ciro, E., Zoppe (ed.), *Charles Zorgbibe* : *On Geopolitics, Classical and Nuclear,* Boston, Nijhoff, 1985.
3. David, Hoosan (ed.), *Geography and National Identity*, Oxford, U.K. and Cambridge : USA : Blackwell, 1994.
4. Geoffrey, Parker, *Geopolitics : Past, Present and Future,* London and Washington : Pinter, 1998.
5. Gertjan, Dijkink, *National Identity and Geopolitical Visions*, London, New York : Routledge, 1996.
6. Gearoid, O. Tuathail, *Critical Geopolitics : The Politics of Writing Global Space*, London and New York : Routledge, 1996.
7. Gearoid, O. Tuathail, Simon Dalby and Paul Routledge (ed.), *The Geopolitics Reader*, London and New York, Routledge, 1998.
8. Gearoid, O. Tuathail, Simon Dalby (eds.), *Rethinking Geopolitics*, London and New York : Routledge, 1998.

9. Sloan, G.R., *Geopolitics in United States Strategic Policy, 1890-1987*, Brighton Wheatsheaf Books, 1988.
10. Jan Nederveen Pieterse, *World Orders in the Making : Humanitarian Intervention and Beyond*, Houndmills, Macmillan, 1998.
11. Jan Nijman, *The Geopolitics of Power and Conflict : Superpowers in the International Systems*, London and New York : Belhaven Press, 1993.
12. John, Agnew and Stuart Corbridge, *Mastering Space, Hegemony, Territory and Political Economy*, London, New York : Routledge, 1995.
13. John, Agnew, *Geopolitics : Revisioning World Politics*, London and New York : Routledge, 1998.
14. Klaus, John Dodds, "Geopolitics, Cartography and the State in South America," *Political Geography* 12 (4), July 1993 : 361-381.
15. Kurt Mills, *Human Rights in the Emerging Global Order, A New Sovereignty*, Houndmills : Macmillan Press Limited, 1998.
16. Mathew, B. Fielden, "The Geopolitics of Aid : The Provision and Termination of Aid to Afghan Refugees in North West Frontier Province, Pakistan," *Political Geography*, 1998, 17 (4) : 459-487.
17. Simon, Dalby, *Creating the Second Cold War*, London : Pinter, 1990.

Journals :

1. *Geopolitics* (see Special Issue on "11 September and its Aftermath : The Geopolitics of Terror", Volume 8, Number 3, September 1998.
2. Agnew, J., "American Hegemony into American Empire", *Antipode*, 35(5) : 871-885, 2003.
3. Gregory, D., *The Colonial Present*, Oxford: Blackwell, 2004.
4. Kelly, P., "A Critique of Critical Geopolitics", *Geopolitics*, 11 (1) : 24-53, 2006.

Option (f) : THEORIES OF DEVELOPMENT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This Course introduces students to the significant ways in which development has been conceptualised. It tracks the main grounds on which mainstream models of development have been critiqued and the key issues facing contemporary development theory.

UNIT-I

Development as economic growth–capitalist and socialist models.
Theories of modernisation.
Neo-liberalism and globalisation.
Role of the state, welfare and redistribution.

UNIT-II

Dependency, Underdevelopment and world system analysis.
Human development–Basic Needs, capability approach, rights based approaches.
Notion of social capital.

UNIT-III

Ecology and Nature, Sustainable Development.
Gender and Development.
Culture and Development.
Impact of Postmodernism on Development studies and the Post development rejection of Development.

UNIT-IV

Issues in Development studies today

1. Aid, Role of Non-government Organisations and International Agencies.
2. Democracy and Development.
3. Displacement.
4. Poverty.

Reading List :

1. G. Rist, *A History of Development*, London, Zed Books, 1997.
2. J. Crush, *Power of Development*, Routledge, 1995.
3. Ashis Nandy, *Bonfire of Creeds*, New Delhi, OUP, 2004.
4. Richard Peet and Elaine Hartwick, *Theories of Development*, New Delhi, Rawat, 2005.
5. Jan Nederveen Pieterse, *Development Theory, Constructions/Deconstructions*, New Delhi, Vistaar, 2001.
6. Naila Kabeer, *Reversed Realities, Gender Hierarchies in Development Thought*, W.W. Norton & Co., 1994.
7. R.W. Shenton and M.P. Cowan, *Doctrines of Development*, Routledge, 1996.
8. Nalini Visvanathan (Co-ordinator), Lynn Duggan, Laurie Nisonoff & Nan Wiegersma (Eds.), *The Women, Gender and Development Reader*, Zubaan Books.

9. Kriemild Saunders (Ed.), *Feminist Post-Development Thought : Rethinking Modernity, Post-colonialism and Representation*, Zubaan Books.

10. M. Rahnema & V. Bawtree (Eds.), *The Postdevelopment Reader*, New York, Zed Books, 1997.

11. Wolfgang Sachs, *The Development Dictionary,* Zed Books, London, 1992.

12. Amartya Sen, *Development as Freedom*, New Delhi, OUP, 2002.

13. John Hariss, *Depoliticising Development*, Leftword Books, New Delhi, 2001.

14. Susanne Schech, Jane Haggis, *Culture and Development : A Critical Reader*, Blackwell, 2000.

Option (g) : PUBLIC INTERNATIONAL LAW-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper introduces the students to the fundamentals and various other aspects of Public International Law.

Unit-I : Introducing International Law

Definition, basis and nature.
Distinction between Private International Law and Public International Law.

Sources.
Subjects of International Law – States, Individual and the International Institutions.
Relation of International Law to Municipal Law.

Unit-II : Law of Peace

Intervention.
Recognition – Theories, Modes and Consequences.
State Responsibility.
State Succession.

Unit-III : Force and International Law

Disputes :

Settlement by peaceful means.

Settlement through the agencies – U.N. and the International Court of Justice.

Settlement through means of short of war.

War :

General Laws of Warfare (Land, Maritime and Air)

Geneva Conventions.

War Crimes.

Neutrality

Blockade, Contraband and Prize Courts.

Unit-IV : International Transactions

Diplomatic Agents.

Consuls.

Treaties.

Books

1. Aggarwal, H.O. (2014), *International Law & Human Rights.* Jain Book Agency, New Delhi.
2. Cassese, Antonio (2005), *International Law.* Oxford University Press, USA.
3. Clapham, Andrew (2012), *Brierly's Law of Nations : An Introduction to the Role of International Law in International Relations.* Oxford University Press, USA.
4. Crawford, James (2013), *Brownlie's Principles of Public International Law.* Oxford University Press, USA.
5. Crawford, James and Koskenniemi, Martti (2012), *The Cambridge Companion to International Law (Cambridge Companions to Law).* Oxford University Press, USA.
6. Dixon, Martin (2013), *Textbook on International Law.* Oxford University Press, USA.
7. Evans, Malcolm (2010*), International Law.* Oxford University Press, USA.
8. Gray, Christine (2004), *International Law and the Use of Force.* Oxford University Press, USA.
9. Janis, Mark W. (2003), *An Introduction to International Law (Introduction to Law Series).* Oxford University Press, USA.
10. Lowe, Vaughan (2007), *International Law (Clarendon Law Series*). Oxford University Press, USA.
11. Malanczuk, Peter (1997), *Akehurst's Modern Introduction to International Law.* Routledge.
12. Shaw, Malcolm (2014), *International Law.* Cambridge University Press.
13. Tandon, M.P. and Anand, V.K. (2012), *International Law & Human Rights*. Jain Book Depot.

Journals

- *American Journal of International Law* (AJIL), American Society of International Law, 1907.
- Brooklyn Journal of International Law
- *European Journal of International Law* (EJIL) : European University Institute, 1990.
- *Indian Journal of International Law* : Indian Society of International Law, 1960.
- *International and Comparative Law Quarterly* (ICLQ), British Institute of International and Comparative Law, 1952.
- *Journal de droit international* (Clunet): founded by Edouard Clunet in 1874; now published by Lexis Nexis.
- *Recueil des Cours / Collected Courses,* Hague Academy of International Law, 1923.
- *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht, or Heidelberg Journal of International Law, (*ZaoRV / HJIL*):* Max Planck Inst. for Comparative Public Law and International Law, 1929.

Key websites

Listed below are a few key websites of the American Society of International Law:

- Electronic Resource Guide (ERG): the American Society of International Law's guide to international law resources on the web, arranged in subject-based chapters.
- Eagle-i : gateway to law websites, including international law sites, provided by IALS Library
- Electronic Information System for International Law (EISIL) : gateway to international law websites, provided by the American Society of International Law.
- International Law Commission (ILC): this UN body develops and codifies international law; its website provides ILC publications from 1949 onwards, and a research guide.
- *Researching Public International Law:* substantial, detailed research guide by Kent McKeever, Director of the Arthur W. Diamond Law Library at Columbia University in the US (last updated 2006).
- UN International Law page: information, resources and links relating to the UN's work in the field of international law
- UN Treaty Collection: free access to the UN Treaty Series, League of Nations Treaty Series and related information.
- United Nations Documents: gateway to the documentation of the UN General Assembly, Security Council, Secretariat and other UN bodies. (See also the IALS UN Research Guide.)
- World LII Internaational Law Library: free collection of treaties, international court decisions, journals and other international law materials.

Oxford's unrivalled reference works available online

Oxford Scholarly Authorities on International Law

Online

Access the product: http://opil.ouplaw.com/home/OSAIL

Virginia Journal of International Law

Course XII : ***The candidates are required to offer any one of the following courses :***
Option (a) : DEMOCRACY IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : The paper aims at enabling the students to understand and reflect upon the theory and practice of democracy in India.

Unit-I

Prefiguring Indian Democracy.
Indian Democracy : Colonial Inheritance.
Idea of Democracy : Constituent Assembly Debates.
State of Democracy in Contemporary India.

Unit-II

Democracy and Development.
Development Planning.
Economic Reforms.

Unit-III

Identities and Rights : Mobilisation and Contestation.
Gender.
Minority Rights.
Dalits and Backward Classes.

Unit-IV

Political Institutions and Democratic Consolidation.
Indian Federalism in Transition.
Democracy and Decentralisation : Panchayati Raj.
Representation, Participation and Electoral Politics.

Selected Readings :

1. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India : Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).
2. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.), *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).
3. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).
4. Kuldeep Mathur (ed.), *Development Policy and Administration* (New Delhi : Sage, 1996).
5. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi: Sage, 2002).
6. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence*, (New Delhi : Oxford, 1998).
7. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 : 1251-68.
8. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II-The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 : 1361-70.
9. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India*, (New Delhi : Oxford, 2001).
10. Rajendra Vohra and Suhas Palishkar, *Indian Democracy : Meanings and Practices*, (New Delhi : Sage, 2004).
11. Peter Ronald deSouza (ed.), *Contemporary India : Transitions* (New Delhi : Sage, 2000).
12. Pratap Bhanu Mehta, *The Burden of Democracy* (New Delhi : Penguin, 2003).
13. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004* (New Delhi : Oxford, 2005), 2nd Edition.
14. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution : The Bahujan Samaj Party in Uttar Pradesh* (New Delhi : Sage, 2002).
15. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003), 2nd Edition.
16. Madhu Purinima Kishwar, *Deepening Democracy : Challenges of Governance and Globalisation in India* (New Delhi : Oxford, 2005).
17. Abhay Kumar Dubey, *Loktantra Ke Saat Adhyaya* (Delhi : Vani, 2002).
18. Abhay Kumar Dubey, *Bharat Ka Bhumandalikaran* (Delhi : Vani, 2003).

Option (b) : GOVERNMENT & POLITICS OF INDIA'S NEIGHBOURS (PAKISTAN, BANGLADESH, NEPAL AND SRI LANKA)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims at introducing the students to some of the dominant issues in South Asia and their long-term implications on bilateral relations among the states of the region. A critical assessment of India's role in the region is the special focus of this course.

UNIT–I

Impact of Geography, History and Lingo-cultural influences on the Government and Politics of India's neighbours.

Major political institutions and political parties in these countries.

UNIT–II

Social change, ethnicity and demography's impact on politics with special reference to forces of modernization and religious fundamentalism.

Political economy of the neighbouring states and its equation with globalization and liberalisation processes.

UNIT–III

Internal Conflict in South Asia : Causes and Dynamics.

UNIT–IV

India as a factor in the politics of these countries with emphasis on bilateral relations and multilateral SAARC.

Suggested Readings

1. Sugata Bose and Ayesha Jalal, *Modern South Asia : History, Culture, Political Economy* (New Delhi, Oxford University Press, 2004).
2. S. Mahmud Ali, *The Fearful State : Power, People and Internal War in South Asia* (London, Zed Books, 1993).
3. Paul R. Brass, *The Politics of South Asia since Independence* (Cambridge, Cambridge University Press, 1990).
4. Dipankar Gupta, *The Context of Ethnicity : Sikh Identity in a Comparative Perspective* (New Delhi, Oxford University Press, 1996).

5. Ashutosh Varshney, *Ethnic Conflict and Civic Life : Hindus and Muslims in India* (New Delhi, Oxford University Press, 2005).
6. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India* (New Delhi, Oxford University Press, 2001).
7. Tapan K. Bose and Rita Manchanda (eds.), *States, Citizens and Outsiders : The Uprooted Peoples of South Asia* (Kathmandu, South Asian Forum for Human Rights, 1997).
8. Ranabir Samaddar, *The Marginal Nation : Transborder Migration from Bangladesh to West Bengal* (New Delhi, Sage Publications, 1999).
9. Sanjeev Baruah, *Durable Disorder : Understanding the Politics of Northeast India* (New Delhi, Oxford University Press, 2005).
10. Urmila Phadnis, *Ethnicity in South Asia* (New Delhi, South Asian Publishers, 1986).
11. Urmila Phadnis, Kalim Bahadur, S.D. Muni (eds.), *Domestic Conflicts in South Asia : Political Dimensions*, Vol. I (New Delhi, South Asian Publishers, 1986).
12. Urmila Phadnis, S.D Muni, Kalim Bahadur, *Domestic Conflicts in South Asia : Economic and Ethnic Dimensions*, Vol. II (New Delhi, South Asian Publishers, 1986).
13. Veena Kukreja, *Civil-Military Relations in South Asia* (New Delhi, Sage Publications, 1991).
14. Ponna Wignaraja and Akmal Hussain, *The Challenge in South Asia : Development, Democracy and Regional Cooperation* (New Delhi, Sage Publications, 1989).
15. Paul R. Brass, *Ethnicity and Nationalism : Theory and Comparison* (New Delhi, Sage Publications, 1991).

Option (c) : WOMEN AND POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course looks at Indian politics through the lens of gender and draws attention to the main themes and debates regarding gender in modern India. It undertakes an analysis of the issues raised by the women's movement in India and the Indian state. In doing so, it will examine the debates on nationalism, social reform, law, citizenship, development, environment and explore inter-sectionality of identities and structures in India. It is an interdisciplinary course which draws on the academic domain of feminist studies.

Unit 1

Social reform and national movements- debate on the position of women; modernity, colonialism and patriarchy; Gandhi and women
Modern Indian State- Institutional and legal provisions, Equality provisions, Family and the state

Unit 2

Women's movement in Contemporary India – Phases, key campaigns,autonomy, relationship with political parties and critical assessment
Violence - Law, Sexualities, State; Public and private violence, Censorship

Unit 3

Community, Identity and Citizenship
Gender and Caste- Reservations for women, Ambedkar, Periyar, Dalit feminism
Gender and Religion- Personal Laws, UCC Debate, Partition, Communalism

Unit 4

Gender and Development: Impact of development policies, Employment and work, ecology and gender
Human development- Health, education

Essential Readings:

1. Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
2. Mary John (ed) *Women's Studies in India: A Reader,* Penguin, 2008
3. Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
4. Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
5. Radha Kumar, *A History of Doing*, Kali for Women, 1997

Suggested Readings

Unit 1

1. Anupama Roy, *Gendered Citizenship*,('The Womanly Vote'), Orient Blackswan, 2005
2. Bina Agarwal, 'The Family in Public Policy', in Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
3. Brinda Bose, *Gender and Censorship*, Women Unlimited, 2006
4. Geraldine Forbes, Women in Modern India, OUP, 2008
5. Janaki Nair, *Women and Law in Colonial India*, Kali for Women, 1996
6. Joanna Liddle and Rama Joshi, 'Gender and Imperialism in British India', *EPW*
7. Kameshwari Jandhyala, State Initiatives, *Seminar*, September 2001
8. Kumkum Sangari and Sudesh Vaid (ed) *Recasting Women* (Chapters by Uma Chakravarti – Whatever Happened to the Vedic Dasi, Partha Chatterjee- Nationalist Resolution of the Women's Question), kali for Women, 1990
9. Leela Kasturi and Vina Mazumdar (ed) *Women and Indian Nationalism*, (Introduction), Vikas Publishing House, 1994
10. Madhu Kishwar, Gandhi on Women, *EPW*, 5 October 1985
11. Rajeshwari Sunder Rajan, *The Scandal of the State*, (Introduction), Permanent Black, 2003
12. Ratna Kaur and Brenda Crossman, 'On Women, Equality and the Constitution' in Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999

13. Sadhna Arya, 'National Commission for Women, An Overview of its Performance', *EPW*, May 4 2013
14. Sujata Patel, 'Construction and Reconstruction of Woman in Gandhi', *EPW*, 20 February 1988
15. Sumit Sarkar and Tanika Sarkar (ed) *Women and Social Reform* (Introduction),

Unit 2

1. Arvind Narrain, ' The Verma Committee: Alchemizing anger to hope', Kafila.org
2. Gail Omvedt, 'Women's Movement: Some ideological Debates' in Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
3. Indira Jaising, 'Bringing Rights Home: Review of the Campaign for a Law on Domestic Violence', *EPW*, Oct 31 2009
4. Jayati Ghosh, 'Violence against Women: Economic Reforms and Increasing Insecurities', 29 January 2008 (http://www.macroscan.org/cur/jan08/cur290108Violence.htm)
5. Madhu Mehra, 'Taking Stock of the new Anti Rape Law', Kafila.org
6. Nivedita Menon, 'Conundrum of Agency in Sexual Violence' January 2014, Kafila.org
7. Nivedita Menon, 'Rights, Bodies and Law' in Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
8. Radha Kumar, *A History of Doing* (Chapters 6-11), Kali for Women, 1997
9. Srimati Basu, 'The Politics of Giving: Dowry and Inheritance as Feminist Issues' in Basu (ed)*Dowry and Inheritance*, Women Unlimited, 2005
10. Susie Tharu and Tejaswini Niranjana, 'Problems for a Contemporary Theory of Gender' in Nivedita Menon, *Gender and Politics in India*, OUP, 1999
11. V Geetha, 'Periyar, Women and an Ethic of Citizenship' in Anupama Rao (ed) *Gender and Caste*, Women Unlimited, 2003
12. Veena Das, 'Sexual Violence, Discursive Formations and the State', *EPW*, Special Issue, Sepetember 1996

Unit 3

1. Bina Agarwal, 'A Field of One's Own' in Srimati Basu (ed) Dowry and Inheritance
2. Bina Agarwal, 'Landmark Step to Gender Equality', *The Hindu*,September 25 2005
3. Flavia Agnes, 'Economic Rights of Women in Muslim Law', *EPW*, Oct 12 1992
4. Gopal Guru, 'Dalit Women Talk Differently', *EPW*, Oct 14 1995
5. Janaki Abraham , 'Contingent Caste Endogamy and Patriarchy', *EPW*, Jan 11 2014
6. Meena Dhanda (ed) *Reservations for Women* (Introduction), Women Unlimited, 2008
7. Nida Kirmani, 'Claiming their Space: Muslim Women's Networks and Women's Movement in India', *Journal of International Women's Studies*, Nov 2009.
8. Nivedita Menon, 'Elusive Woman: Feminism and Women's Reservation Bill in Dhanda (ed)
9. Nivedita Menon, 'Uniform Civil Code: The Women's Movement Perspective', kafila.org
10. Pratima Pardeshi, 'Ambedkar and women's liberation', *the Dalit*, March-April 2002
11. R. Geetha, 'Panchayat Raj Institution and Women's Reservation' in Dhanda (ed)
12. Rajeshwari Sunder Rajan, 'Women between Community and State' in Rajan (ed) *The Scandal of the State*
13. Sharmila Rege, (ed) *Against the Madness of Manu*(Introduction), Navayana Books, 2013

14. Sharmila Rege, 'Dalit Women talk Differently: A Critique of 'Difference' and towards a Dalit Feminist Standpoint', *EPW,* Oct 31 1998
15. Tanika Sarkar, 'Women, Community and Nation' in Jaffrey and Basu (ed)
16. V. Geetha, 'Of Bodily Love and Hurt' in Mary E John and Janaki Nair (eds) *A Question of Silence: The Sexual Economies of Modern India,* Kali for Women, 1998
17. Zoya Hasan, 'Gender Politics, Legal Reform, and the Muslim Community in India' in Patricia Jaffrey and Amrita Basu (ed)*Appropriating Gender: Women's Activism and Politicized Religion in South Asia,* Routledge, 1998

Unit 4

1. Besty Hartmann and Mohan Rao, 'India's Population Programme', *EPW,* Oct 31 2015
2. Bina Agarwal, 'The Gender and Environment Debate' in N.Menon (ed) *Gender and Politics in India,* OUP, 1999
3. Dipta Bhog, 'Gender and Curriculum', *EPW,* April 27 2002
4. Executive Summary of the National Focus Group on Education, NCERT 2005
5. Geeta Nambissan, 'Integrating Gender Concerns', *Seminar,* April 2004
6. Harini Narayan, 'Women's Health, Population Control and Collective Action', *EPW,* Febuary 19, 2011
7. Indrani Mazumdar, Neetha N, 'Gender Dimensions: Employment Trends in India, 1993-94 to 2009-10, *EPW,* 22 October 2011
8. Kalpana Vishwanath, 'Whose Body, Whose Health' *Seminar,* Sept 2001
9. Kalyani Menon-Sen and Kalpana Kannabiran, "Microcredit: Magic Bullet or Poison Pill' in Michele Kelley and Deepika D'Souza (eds) *The World Bank in India,* Orient Blackswan, 2010
10. Leela Kasturi, 'Development, Patriarchy and Politics: Indian Women in the Political Process 1947-92', Occasional Paper, CWDS.
11. Maitrayee Chaudhuri, 'Citizens, Workers and emblems of Culture: An analysis of the First Plan Document on women', *Contributions to Indian Sociology,* 29 (no 1 and 2), 1995
12. Mary E John, 'Gender and Development in India, 1970s-1990s', *EPW,* Nov 23 1996
13. Mary E John, 'Reframing Globalisation: Perspectives from the Women's Movement' EPW, March 7 2009
14. Nirmala Banerjee, 'Whatever Happened to the Dreams of Modernity?' *EPW,* April 25, 1998.
15. NIrmala Buch, 'State Welfare Policy and Women, 1950-1975', *EPW,* 25 April 1998
16. Padmini Swaminathan (ed) Women and Work: Essays from EPW (Introduction), Orient Blackswan, 2012
17. Saheli Women's Resource Centre, 'Reproductive Rights in the Indian Context' (Also available in Hindi)
18. Sujatha Gothoskar, 'The Plight of Domestic Workers', *EPW,* June 1 2013.

Option (d) : RIGHTS : IDEAS AND MOVEMENTS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the various ways in which the notion of rights has been conceptualized in theory and the debates emerging from the rights-based movements.

Unit-I

Notions of Rights : Philosophical foundations, historical developments and normative framework (natural rights, civil rights, democratic rights and human rights).

Unit-II

Contextualizing Rights : Debate on universalism and cultural relativism of rights.
Development debates and human rights.

Unit-III

Human Rights Movements : Ideology and social basis of civil liberties and democratic rights movements in India : National Human Rights Commission; International Human Rights Movement – ideology and social basis.

Unit-IV

Current Challenges : State and rights of citizens (child, women, rights of victims of repression); community rights (minorities, ethnic groups), rights of migrants, displaced people and refugees.

Suggested Readings :

1. Arnold, Christopher, *Ideas and Ideology : Human Rights*, Edward Arnold, 1978.
2. Baviskar, Amita, *In the Belly of the River : Tribal Conflicts Over Development in the Valley*, OUP, Delhi, 1995.
3. Bose, Tapan K. and Rita Manchanda, States, Citizens and Outsiders : The Uprooted Peoples of South Asia, *South Asia Forum for Human Rights*, Kathmandu, 1998.
4. Butalia, Urvashi, *The Other Side of Silence : Voices from the Partition of India*, Viking, Delhi, 1998.

5. Claude, Richard Pieree and Burns H. Weston, *Human* Rights in the World Community : Issues and Actions, University of Pennsylvania Press, Philadelphia, 1989.
6. Dubois, M, "The Governance of the Third World : A Foucauldian Perspective on Power Relations in Development", *Alternatives, 16, 1, Winter,* 1991.
7. Freeden, Michael, *Rights, World View,* Delhi, 1998.
8. Gordenker, Leon, *Refugees in International Politics,* Columbia University Press, New York, 1987.
9. Gudwin-Gill, Guy S., *The Refugee in International Law,* Clarendon, Oxford, 1983.
10. Kochler, Hans, "The Concept of the Nation and the Question of Nationalism : The Traditional "Nation State" vs. a Multiculture 'Community State' in Michael Dunne and Tizianno Bonazzi (eds.) *Citizenship and Rights in Multicultural Societies,* Keele University Press, Keele, 1995.
11. Kothari, Smitu and Harsh Sethi (ed.), *Rethinking Human Rights, Challenges for Theory and Action,* Lokayan, 1989.
12. Kothari, Smitu, "The Human Rights Movement in India," *Social Action,* January-March, 1990, Pp. 1-15.
13. Kumar, Radha, *Divide and Fall? Bosnia in the Annals of Partition,* Verso, London, 1997.
14. Kymlicka, Will, *Multicultural Citizenship: A Liberal Theory of Minority Rights,* Clarendon, Oxford, 1996.
15. Donnelly, Jack, *The Concept of Human Rights,* Croom Helm, London, 1985.
16. Macfarlane, L. J., *The Theory and Practice of Human Rights,* Maurice Temple Smith, London, 1985.
17. Macpherson, C. B., "Problems of Human Rights in the Twentieth Century in C.B. Macpherson, *The Rise and Fall of Economic Justice,* OUP, Oxford, 1987.
18. Mills, Kurt, *Human Rights in the Emerging Global Order,* Palgrave Macmillan, 1998.

19. Mohanty, Manoranjan, Partha Nath Mukherji with Olle Tornquist (ed.), *People's Rights, Social Movements and the State in the Third World,* Sage, New Delhi, 1998.
20. Mani, S. D. and Lok Raj Baral (eds.), *Refugees and Regional Security in South Asia,* Konark, New Delhi, 1996.
21. Paraguli, P., "Power and Knowledge in Development Discourse : New Social Movements and State in India," *International Social Science Journal,* 127, February, 1991.
22. Ray, Ashwini, "Civil Rights Movement and Social Struggle in India", *Economic and Political Weekly,* Vol. XXI, No. 28, 12 July, 1986.
23. Rentein, Alison Dundes, *International Human Rights : Universalism vs Relativism,* Sage, 1990.
24. Rubin, B., "Civil Liberties Movements in India : New Approaches to the State", Asian Survey, Vol. 27, 1987, Pp. 371-92.
25. Singh, Pritam, "Sectarianism and Human Rights Discourse : The Politics of Human Rights in the Post-Colonial Punjab" in Michael R. Anderson and Sumit Guha (eds.), *Changing Concepts of Rights and Justice in South Asia,* OUP, Delhi, 1998.
26. Staunhagen, Rodalfo, *The Ethnic Question : Conflicts, Development and Human Rights,* United Nations University Press, Tokyo, 1990.
27. Steriner, Henry J. and Philip Alston, *International Human Rights in Context : Law, Politics and Morals,* Clarendon Press, Oxford, 1996.
28. Tambiah, Stanley, J., *Levelling Crowds : Ethnonationalist Conflicts and Collective Violence in South Asia,* Vistaar Publications, New Delhi, 1997.
29. UNESCO, *Violation of Human Rights : Possible Rights of Recourse and Forms of Resistance,* 1984.

30. UNHCR, *The State of the World's Refugees – A Humanitarian Agenda*, OUP, Oxford, (Latest edition).
31. Vincent, R. J., (ed.), *Foreign Policy and Human Rights*, Cambridge University Press, Cambridge, 1986.
32. Weiner, Myron, *The Global Migration Crisis : Challenge to States and to Human Rights*, Harper Collins, New York, 1995.
33. Wilmer, Frank, *The Indigenous Voice in World Politics : Since Time Immemorial*, Sage, Newbury Park, 1993.
34. Young, Iris, Marion, *Justice and the Politics of Difference*, Princeton University Press, Princeton, 1990.
35. Zolberg, Aristide R., Astri Suhyke and Sergio Aguayo, *Escape From Violence : Conflict and the Refugee Crisis in the Developing World*, OUP, New York, 1989.

Option (e) : NATIONALISM : THEORY AND CONTEXT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
(iii) The question paper will include the following instructions for the candidates:

(a) The first question is compulsory. It contains 15 questions covering the entire syllabus. The candidates are required to attempt any 10 of them, providing answers to each question in about 25 to 30 words. Each question carries 2 marks.

(b)The remaining question paper consists of 4 units. Each unit carries two questions. The candidates are required to answer one question from each Unit. Each question carries 15 marks.

OBJECTIVES:- This paper examines various theories of nationalism by placing them in the context of their origin. In the process, it examines the concept of nation, its relationshipwith other identities and new challenges it faces in the age of globalization.

UNIT-I

Nation, State and Nation-State: Conceptual Distinctions and Interrelationships.
Origins and Development of Nationalism: European and non-European contexts.
Various forms of nationalism.

UNIT-II

Primordialist theories of nationalism: socio-biological approach (Pierre van der Berghe); culturalist approach (Edward Shils and Clifford Geertz); perennialism (Adrian Hastings).Ethnosymbolist theories: (John Armstrong, Anthony D. Smith).
Modernist theories: nationalism as politics (JohnBreuilly, Paul R. Brass, Erich Hobsbawm); nationalism as social transformation (Ernest Gellner, Benedict Anderson).

UNIT-III

Marxist approach (Marx, Lenin, Rosa Luxemburg, Otto Bauer). Neo-Marxist approaches (tom Nairn, Michael Hector).
Feminstapproach (Nira Yuval-Davis).

UNIT-IV

Postcolonial theory (ParthaChatterjee).
Nationalism and Globalisation

ESSENTIAL READINGS

1. Hutchinson, J. and A.D. Smith (eds.), *Nationalism*,OUP, Oxford, 1994.
2. Ozkirimli, Umut, *Theories Of Nationalism: A Critical Introduction* (second edition), Palgrave Macmillan, New York,2010.

SUGGESTED READINGS

1. Alter, P., Nationalism, Edward Arnold, London, 1989.
2. Anderson, Benedict, *ImaginedCommunities: Reflection on the Origins and Spread of Nationalism*, Verso, London, 1991.
3. Anthiyas, Floya and Nira Yuval-Divas, *Women and the Nation-State*, Macmillan, London, 1989.
4. Balibar, Etienne and Immanuel Wallerstein, *Race, Nation, Class: Ambiguous Identities*, Verso, London, 1991.
5. Chatterjee, Partha, *The Nation and its Fragments*, Oxford University Press, 1994.
6. Connor, Walker, *The National Question in Marxist-Leninist Theory and Strategy*, Princeton University Press, Princeton, 1994.
7. Featherstone, Mike (ed.), *Global Culture: Nationalism, Globalization and Modernity*, Sage, London, 1990.
8. Gellner, Ernest, *Nations and Nationalism*, Blackwell, Oxford, 1983.
9. Hechter, Michael, *Internal Colonialism: The Celtic Fringe in British National Development, 1536-1966*, Routledge and Kegan Paul, London, 1975.
10. Hobsbawm, E.J., *Nations and Nationalism since 1780, Programme, Myth and Reality*, Cambridge University Press, Cambridge, 1990.
11. Ignatieff, Michael, *Blood and Belonging, Journeys into the Nationalism*, BBC Books and Chatto and Windus, London, 1993.
12. Jayawardena, K., *Feminism and Nationalism in the Third World*, New Delhi, 1986.
13. McGraw, A.G. et al (ed.), *Global Politics :Globalization and the Nation-State*, Polity, Oxford, 1992.
14. Nairn, Tom, *The Break-up of Britain: Crisis and Neo-Nationalism*, New Left Books, London, 1977.
15. Smith, Anthony, D., *The Ethnic Origins of Nations*, Blackwell, Oxford, 1986.
16. Smith, Anthony, D., *Theories of Nationalism*, Duckworth, London, 1971
17. Tiech, Mikulas and Roy Porter (eds.), *The National Question in Europe in Historical Context*, Cambridge University Press, Cambridge, 1993
18. Williams, Patrick and Laura Chrisman (eds.), *Colonial Discourse and Post-Colonial Theory*, A Reader, Harvester Wheatsheaf, London, 1993.

Option (f) : NEW POLITICAL GEOGRAPHY IN COMPARATIVE PERSPECTIVE

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : Political Geography is concerned with the reciprocal impact of spatial patterns, features and structures, and political ideas, institutions. Above all, it focuses on the twin ideas of territory and territoriality. This course is based on the premise that with the Post-World War era coming to a decisive end, a new political geography –one offering fresh perspectives on the relationship between geography and politics—is in the making. Such a political geography recognizes that spatial patterns of political processes are not confined only to national boundaries. The nation-state is a part of a globalizing world, and the resultant geopolitical map contains nested regions with over-lapping boundaries. It is equally important to examine the geopolitical economy of so-called 'resource wars', that is armed conflicts revolving to a significant degree over the pursuit or possession of critical materials. The course will draw upon a number of case studies from different parts of the globe (especially Afro-Asia, Polar Regions and the Indian Ocean region) to enable students develop a better understanding of the politics of space and spaces of politics.

Unit-I

Understanding Key Concepts : Power, Territory/Territoriality, Space and Spatiality.
Globalization and the Regionalization : Integration and Fragmentation.

Unit-II

Territory and the Power of Ethnic Nationalism.
The Geopolitics of 'Resource Wars'.

Unit-III

Environmental Geopolitics and Sustainability (with special reference to the polar regions).
International Migration, Refugee Flows and Diasporas.

Unit-IV

New States and the Geopolitical Transition (with special reference to Central Asian Republics).
Changing nature and role of international boundaries and border regions.

Suggested Readings

1. David Slater, "Geopolitical Imaginations Across the North-South Divide : Issues of Difference, Development and Power," *Political Geography 16 (8)*, November 1997 : 631-654.
2. Ghazi Flah, "The Spatial Manifestation of Threat : Israelis and Palestinian Seek a 'Good' Border," *Political Geography*, 1995, 14 (8) : 689-706.
3. Ian Bremmer and Ray Taras (eds.), *New States, New Politics : Building the Post-Soviet Nations*, Cambridge : Cambridge University Press, 1997.
4. Leif Ohlsson (ed.), *Hydropolitics : Conflicts Over Water as a Development Constraint*, Dhaka University Press Limited, 1996.
5. Linda Weiss, *The Myth of the Powerless State : Governing the Economy in a Global Era*, Cambridge : Polity Press, 1998.
6. Malcolm Anderson, *Frontiers : Territory and State Formation in the Modern World*, Cambridge, Polity Press, 1996.
7. Mekonnen Tesfahuney, "Mobility, Racism and Geopolitics", *Political Geography*, 1998, 17 (5), 499-515.
8. Ramesh Dutta Dikshit, *Development in Political Geography : A Century of Progress*, New Delhi : Sage, 1997.
9. Robert Bennett and Robert Estall (eds.), *Global Change and Challenge : Geography for the 1990s*, London, New York : Routledge, 1991.
10. Sanjay Chaturvedi, *The Polar Regions : A Political Geography*, Chichester : John Wiley & Sons, 1996.
11. Sarah A. Radcliff, "Frontiers and Popular Nationhood : Geographies of Identity in the 1995 Ecuador-Peru-Border Dispute," *Political Geography*, 1998, 17 (3) : 273-293.
12. Stanley D. Brunn & Thomas R. Leinbach (eds.), *Collapsing Space & Time : Geographical Aspects of Communication & Information*, London : Harper Collins Academic, 1991.
13. Tapan K. Bose and Rita Manchanda, *State, Citizens and Outsiders : The Uprooted Peoples of South Asia*, Kathmandu : South Asia Forum for Human Rights, 1997.
14 Vladimir Kolossov and Andrei Treivish, "The Political Geography of European Minorities : Past and Future", *Political Geography*, 1998 : 17 (5) : 517-534.
15 Rajat Ganguli, *Kin State Intervention in Ethnic Conflicts : Lessons from South Asia*, New Delhi : Sage Publications, 1998.
16 Feroz Ahmed, *Ethnicity and Politics in Pakistan*, Karachi : Oxford University Press, 1998.
17 Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism : Essays North-South*, Delhi : Oxford University Press, 1997.
18 Stephen Castles & Mark J. Miller, *The Age of Migration : International Population Movements in the Modern World*, Houndmills, MacMillan, 1998 (Second Edition)
19 Agnew, J., *Making Political Geography*, London : Arnold, 2002.
20 Blackwell, M., *Political Geography*, London : Routledge, 2002.

21 Cox, K.R., *Political Geography: Territory, State and Society*, Oxford : Blackwell, 2002.

22 Dodds, K., *Geopolitics in a Changing World*, Harlow : Pearson Education, 2000.

23 Glassner, M. and Fahrer, C., *Political Geography*, Chichester : John Wiley & Sons, 2003.

24 Jones, M., *An Introduction to Political Geography*, London : Routledge, 2004.

25 Loughlin, John O. *Dictionary of Geopolitics*, Westport : Greenwood Press.

26 Painter, J., *Politics, Geography and 'Political Geography'*, London : Arnold, 1995.

27 Tuathail, G.O., Dalby, S. and Routledge, P., *The Geopolitics Reader*, London : Routledge, 2007.

28 Rumley, D. and Chaturvedi, S., *Energy Security and the Indian Ocean Region*, New Delhi : South Asian Publishers, 2005.

Journals

Political Geography.
Progress in Human Geography.

*Geopolitics** A Frank Cass Journal, (see in particular *Special Issue* on "The Geopolitics of Resource Wars", Volume 9, number 1, Spring 2004 : Special Issue on "Boundaries, Territory and Post-Modernity, Volume 3, Number 1, Summer 1998).

*Note : This journal is also available on line at Panjab University library website.

Option (g) : POLICIES AND POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper familiarises students with the various trajectories of the Indian development experience and their interaction with politics since independence.

Unit-I

The Colonial Experience.
National Movement : Debates on Development.
Planning and its precursors.

Unit-II

Agriculture and the Institutional Strategy.
Politics of land reforms.
New Agricultural Policy.
Green Revolution and the Rise of agrarian power/capitalism.

Unit-III

Politics of industrial Policy.
State and Business : Labour, Import Substitution and Nationalisation.
Politics of business groups.

Unit-IV

Economic Reforms : Background, Scope and Content.
Political Economy of Reforms.
Economic Reforms, Democracy and Electoral Politics.

Readings

1. Amit Bhaduri and Deepak Nayar, *The Intelligent Person's Guide to Liberalisation* (New Delhi : Penguin, 1996).

2. Ashutosh Varshney, *Democracy, Development and the Countryside : Urban-Rural Struggles in India*, (Cambridge : Cambridge University Press, 1995).

3. Atul Kohli, 'Politics of Economic Liberalisation in India', *World Development* 17(3), 1989 : 305-28.

4. Atul Kohli, The Politics of Economic Growth in India, 1980-2005: Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 :1251-68.

5. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II- The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 :1361-70.

6. Atul Kohli, *The State and Poverty in India : The Politics of Reform* (Cambridge : Cambridge University Press, 1987).

7. Baldev Raj Nayar, *Globalisation and Nationalism : The Changing Balance in India's Economic Policy*, 1950-2000 (New Delhi: Sage, 2001).

8. Baldev Raj Nayar, *India's Mixed Economy : The Role of Ideology and Interest in its Development* (Bombay : Popular Prakashan, 1989).

9. Baldev Raj Nayar, "Policy and Performance under Democratic Coalitions : India's United Front Government and Economic Reforms, 1996-98", *Journal of Commonwealth and Comparative Politics*, 37(2) July 1999 : 22-56.

10. Bimal Jalan (ed.), *Indian Economy : Problems and Prospects*, (New Delhi : Oxford, 1993).

11. Bipan Chandra, *The Rise and Growth of Economic Nationalism in India*.

12. Deepak Naayar, 'Economic Development and Political Democracy : Interaction of Economics and Politics in Independent India', *Economic and Political Weekly* 39(21) : 2079-31.

13. Dige Jorgen Pedersen, 'Explaining Economic Liberalisation in India : State and Society Perspectives', *World Development*, 28(2) 2000 : 265–82.

14. Donald Horowitz, 'Is there a third-world policy process', *Policy Sciences*, 22, 1989 : 197–212.

15. E. Sridharan, "Economic Liberalisation and India's Political Economy : Towards a Paradigm Synthesis", *Journal of Commonwealth and Comparative Politics*, 31(3), November, 1993.

16. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004*, (New Delhi : Oxford, 2005) 2nd Edition.

17. G. Thimmaiah, 'The Political Economy of Populist Programmes', *Journal of Indian School of Political Economy*, 8(1),1996 : 40–63.

18. Ian Little and Vijay Joshi (eds.), *India's Economic Reforms*, 1964-91, (Delhi : Oxford, 1998).

19. Isher Judge Ahluwalia, *Industrial Growth in India : Stagnation since the Mid-Sixties* (Delhi : Oxford, 1985).

20. Jagdish Bhagwati, *India in Transition : Freeing the Economy*, (New Delhi : Oxford, 1993).

21. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.) *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).

22. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).

23. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi : Sage, 2002).

24. Lloyd Rudolph and Susanne Rudolph, *In Pursuit of Lakshmi : The Political Economy of the Indian State* (Chicago : Chicago University Press, 1987).

25. Mark Robinson and Gordon White (ed.), *Democratic Developmental State* (Delhi, 1998).

26. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India: Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).

27. Pradeep Chhibber, 'Political Parties, Electoral Competition, Government Expenditures and Economic Reforms in India', *Journal of Development Studies*, 32(1), 1995 : 74–96.

28. Pranab, Bardhan, *The Political Economy of Development in India* (expanded edition with an epilogue on the Political Economy of Reform in India) (New Delhi, Oxford, 1998).

29. Rob Jenkins, *Democratic Politics and Economic Reform in India* (Cambridge University Press, New Delhi, 1999).

30. Robert Cassen and Vijay Joshi (eds.), *India : The Future of Economic Reforms* (New Delhi : Oxford, 1995).

31. Robert Wade, 'The Market for Public Office : Why the Indian State is not Better at Development', *World Development*, 13(4), 1985 : 467–97.

32. Sanjay Kumar, 'Impact of Economic Reforms on Indian Electorate', *Economic and Political Weekly* 39(16): 1621-30.

33. Stanley Kochanek, 'Liberalisation and Business Lobbying in India', *Journal of Commonwealth and Comparative Politics* 34(3), 1996: 155–73.

34. Stanley Kochanek, 'The Transformation of Interest Politics in India', *Pacific Affairs*, 68 (4), 1996 : 529–50.

35. Stanley Kochanek, *Business and Politics in India* (Berkeley : University of California Press, 1974).

36. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003) 2nd Edition.

37. Sukhamoy Chakravarthy, *Development Planning : The Indian Experience* (New Delhi : Oxford, 1987).

38. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence* (New Delhi: Oxford, 1998).

39. Terence J. Byres (ed.), *The State, Development Planning and Liberalisation in India* (New Delhi : Oxford, 1997).

40. Vanita Shastri, 'The Politics of Economic Liberalization in India', *Contemporary South Asia*, 6(1), 1997 : 27–56.

41. Vivek Chibber : *Locked in Place : State Building and Late Industrialisation in India*, (New Delhi : Tulika, 2004).

Course XII: Option (h) : PUBLIC ADMINISTRATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper will introduce students to different aspects of public administration with special reference to India.

UNIT-I

Development of Public Administration as a discipline – Basic concepts of administration – Nature and Scope – private and public administration – control over Administration, Executive, Legislative, Judiciary.

UNIT-II

Principles of Organization : Line & Staff Agencies
Type of Organization : Formal & Informal
Forms of Organization, Departmental, Public Corporation and Board.

UNIT-III

Personnel Administration, Bureaucracy and Civil Service, Recruitment, Promotion, Training and Civil Service Neutrality.

Financial Administration : Importance of Fiscal Management Budgetary Process in India. The Finance Ministry, Organization and Functions, Budgetary Control – Financial Committees of Parliament – Public Account Committee and Estimate Committee – Audit in India, Comptroller and Auditor General.

UNIT-IV

Administration Law, Delegated Legislation : Need for Delegation, Delegated Legislation in India; Parliamentary Control of Delegated Legislation.

Administration Tribunals : Emergence and significance of Administrative Tribunals, Judiciary and Administrative Tribunals.

Administrative Improvement and Reforms ; Lok Pal and Lok Ayukta.

Books Recommended :

1. M. P. Sharma & B.L. Sadana : *Public Administration in Theory and Practice*, Kitab Mahal, 2004.
2. C.P. Bhambari : *Administration in Changing Society*, National, 1978.
3. C.P. Bhambari : *Public Administration (Theory and Practice),* J.P.Nath & Co., 1972.
4. A. Avasthi and S. Maheshwari : *Public Administration,* Lakshmi Narain Agarwal, 1966.
5. Ramesh K. Arora : *Comparative Public Administration : An Ecological Perspective, Associate Publishing House, 1972.*
6. R.S. Milne : *Concepts and Models in Public Administration,* IIPA, 1966.
7. Chester Barnard : *The Functions of the Executive,* Cambridge, 1928.
8. J.S. Bhalla : *Public Enterprise in U.K., U.S.A., and India,* 1969.
9. Lee, Hahn Been and Samonte, Abelardo G. (eds) : *Administration Reforms in Asia, EROPA, 1970, See Particularly J.N. Khosla " Administration Reforms in Asia",* pp 270-286.
10. Pfiffner & Sherwood : *Administrative Organisation, Prentice-Hall, 1968.*
11. Amitai Etzioni : *Modern Organisation, Prentice Hall, 1972.*
12. Edwin B. Flippo : *Principles of Personnel Management (Fourth Edition), McGraw-Hill, Kogakusha Ltd., 1976.*
13. HPA : *Personnel Administration-Implementing the Reforms, IIPA, 1967.*
14. Administrative Reforms Commission Report on Personnel Administration (New Delhi : 2010)
15. C.P. Bhambri : *Public Administration (Theory and Practice (Meerut : Educational Published 21th edition 2010)*
16. Mohit Bhattacharya : *Public Administration (Calcutta : World Press, 2000)*
17. S. L. Kaushik and Pardeep Sahni (eds.) : *Public Administration in India : Emerging Trends (Allahabad : Kitab Mehal, 2007)*
18. William A. Niskanen : *Bureaucracy and Representative Government (Chicago: Atherton, 2007)*

FOURTH SEMESTER

Course XIII : INDIAN POLITICAL THOUGHT-II (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the major themes of Indian Political Thought particularly during the Indian National Movement through a study of the contribution of key thinkers during this period.

Unit-I

- M.K. Gandhi : Politics of Non-violence.
- Satyagraha and Swaraj.
- Sarvodaya.

Unit-II

- Challenging Brahminical Discourse : B.R. Ambedkar.
- Critique of Brahminical Hinduism.
- Class, Caste and Democracy.

Unit-III

- Politics and Philosophy of M. N. Roy : Theory of Radical Humanism, Roy-Lenin Controversy.
- The Ideology of Communist Movement in India.

Unit-IV

- Indian Socialist Tradition : Jawaharlal Nehru, R.M. Lohia and Jayprakash Narayan.

Essential Readings

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century : From Naoroji to Nehru* (London, OUP,1971).
2. Bali, D.R., *Modern Indian Thought* (New Delhi, Sterling, 1980).
3. Baxi Uppendra & Parekh, B. (eds.), *Crisis and Change in Contemporary India* (New Delhi, Sage, 1995). Doctor, A.H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).
4. Brown, D.M., *Nationalist Movement : Indian Political Thought from Ranade to Bhave* (Berkeley : University of California Press, 1965).
5. Pantham, Thomas and Deutsch, K.L. (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
6. Pantham, Thomas, *Political Theories and Social Reconstruction* (New Delhi, Sage, 1995).
7. Parekh, B. and Pantham, Thomas (eds.), *Political Discourse: Exploration in Indian and Western Political*
8. Parel, Anthony J. & Keith Ronald C. (eds.), *Contemporary Political Philosophy* (New Delhi, Sage, 1992). Vanna, V.P., *Modern Indian Political Thought* (Agra : Lakshami Narain, 1996), 11th Revised Edition. *Thought* (New Delhi, Sage, 1987).

Specific Readings

1. Arooran, A. N., *Tamil Renaissance and Dravdian Nationalism,* 1905-44 (Madurai : Koodal, 1980).
2. Chandra, Bipan (ed.), *The Indian Left : Critical Appraisal* (New Delhi, Vikas, 1983).
3. Chatterjee, Partha, *Nationalist Thought and The Colonial World* (Delhi : OUP, 1986).
4. Chatterji, Bhola, *Conflict in J. P.'s Politics* (New Delhi : Ankur, 1984).
5. Dalton, Dennis, "The Ideology of Sarvodaya" in *Pantham and Deutsch,* 1986.
6. Das, M. N., *Political Philosophy of Nehru* (London : George Allen and Unwin, 1961).
7. Dasgupta, Biplab, *The Naxalite Movement* (Bombay, Allied, 1974).
8. Doctor, Adi H., "Low Caste Protest Movements in 19th and 20th Century Maharashtra : A Study of Jyotirao Phule and B. R. Ambedkar," *Indian Journal of Social Science,* IV (2), April-June, 1991.
9. Gard, R.A., *Buddhist Political Thought : A Bibliography* (Washington : School of Advanced International Studies, 1952).
10. Ghatak, B.K. (ed.), *Dr. Ambedkar's Thought* (New Delhi : APH, 1997).
11. Ghose, Shankar, *Socialism and Communism in India* (Bombay, Allied, 1971).
12. Guha, Ranjit, "Dominance Without Hegemony and its Historiography" in Guha (ed.), *Subaltern Studies VI* (Delhi : OUP, 1989).
13. Gupta, S. D., *Comintern, India and the Colonial Question* (Calcutta : K. P. Bagichi, 1980).
14. Haiah, Kancha, "Towards the Dalitaization of the Nation in Partha Chatterjee" (ed.), *Wages of Freedom* (Delhi : OUP, 1988).
15. Irschik, F., *Politics and Social Conflict in South Asia : The Non-Brahmin Movement and Tamil Separatism,* 1916-29 (Berkeley : University of California Press, 1969).
16. Iyer, Raghavan, *The Moral and Political Thought of Mahatma Gandhi* (Delhi : OUP, 1973).
17. Jatava, D. R., *The Political Philosophy of B. R. Ambedkar* (Agra Phoenic, 1965).
18. Josh, Bhagwan, *Struggle for Hegemony in India, 1920-1947,* Vol., II : 1934-41 (New Delhi : Sage, 1992).

19. Juergensmeyer, Mark, "Shoring up the Saint : Some Suggestions for Improving Satyagraha" in John, Hick and Lamont, C. Hempel (eds.), *Gandhi's Significance for Today* (London : Macmillan, 1989).
20. Kantowsky, D., *Sarvodaya : The Other Development* (New Delhi : Vikas, 1980).
21. Kaviraj, Sudipta, "The Heteronomous Radicalism of M. N. Roy" in *Pantham and Deutsch,* 1986.
22. Keer, Dhanajayay, *Dr. Ambedkar : Life and Mission* (Bombay : Popular Parkashan, 1964).
23. Martyshin, Orest, *Jawaharlal Nehru and His Political Views* (Moscow : Progress, 1989).
24. Mehrotra, N. C., *Lohia : A Study (*Delhi *:* Atma Ram and Sons, 1978).
25. Mohanty, Manoranjan, "Ideology and Strategy of the Communist Movement in India" in *Pantham and Deutsch,* 1986.
26. Mukherjee, Partha N., "Sarvodaya After Gandhi" in Ramashray Roy (ed.), *Contemporary Crisis in Gandhi* (Delhi : Discovery, 1986).
27. Nagaraj, D. R., "A Tibetian Dog, The Silent Sadhus and Peasants of Champaran Notes on Violence, Non-Violence and Counter-Violence in Gandhi" in Ramashray Roy (ed.), *Gandhi and the Present Global Crisis* (Shimla : IIAS, 1996).
28. Nandy, Ashis, "From Outside the Imperium : Gandhi's Cultural Critique of the West" in *Roy,* 1986.
29. O'Hanlon, Rosalind, *Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in Nineteenth Century Western India* (London : Cambridge, University Press, 1985).
30. Omvedt Gail, *Dalits and the Democratic Revolution : Dr. Ambedkar and the Dalit Movement in Colonial India* (Delhi : Sage, 1994).
31. Omvedt, Gail, *Cultural Revolution in a Colonial Society : The Non-Brahman Movement in Western India 1873 to 1940* (Bombay : SSET, 1976).
32. Omvedt, Gail, *Dalit Visions* (New Delhi : Orient Longman, 1995).
33. Ostergaard, Geoffrey, "The Gandhian Movement in India since the Death of Gandhi" in *Hick and Hempel,* 1989.
34. Overstree, G. D. and Marshall Windmiller, *Communism in India* (Bombay, Perennial Press, 1969).
35. Pantham Thomas, "Understanding Nehru's Political Ideology" in Amal Ray (et. al.) (eds.), *The Nehru Legacy : An Appraiser* (Delhi : Oxford and IBH, 1991).
36. Pantham, Thomas, "Gandhi's Quest for Non-Violent Political Philosophy" in L. Rouner (ed.), *Celebrating Peace* (Notre Dame, University of Notre Dame Press, 1991).
37. Pantham, Thomas, "Gandhi's Theory of Non-Violence : His Reply to the Terrorist" in Neol O'Sullivan (ed.), *The Theory and Practice of Terrorism* (Sussex, 1986).
38. Pantham, Thomas, "Habermas's Practical Discourse and Gandhi's Satyagraha" in *Parekh and Pantham,* 1987.
39. Pantham, Thomas, "Postrelativism in Emancipatory Thought : The Significance of Gandhi's Swaraj and Satyagraha", in Sheth, D.L. and Nandy, Ashis (eds.), *The Multiverse of Democracy* (Delhi : OUP, 1997).
40. Pantham, Thomas, Parekh, Bhikhu, *Gandhi's Political Philosophy* (London, Macmillan, 1989).
41. Pillai, R. C., "The Political Thought of Jawaharlal Nehru" in *Pantham and Duetsch,* 1986.
42. Prasad, Bimal, *Jayprakash Narayan : Quest and Legacy* (New Delhi, Vikas, 1982).
43. Prasad, N. (ed.), *J. P. and Social Change* (Delhi, Radiant, 1982).
44. Prasad, R. A., *Socialist Thought in Modern India* (Delhi : Meenakshi, 1974).

45. Ram, Mohan, *Indian Communism : Split Within a Split,* (New Delhi : Vikas, 1969).
46. Rao, K. Raghavendra, "Communication Against Communication : The Gandhian Critique of Modern Civilization in Hind Swaraj" in *Parekh and Pantham, 1987.*
47. Ray, Sibnarayan (ed.), *M. N. Roy : Philosopher Revolutionary* (Delhi, Ajanta, 1995).
48. Roy, M. N., *New Humanism* (Calcutta : Renaissance, 1953).
49. Roy, Samaren, *M. N. Roy : A Political Biography* (Hyderabad : Orient Longman, 1997).
50. Seth, Sanjay, *Marxist Theory and Nationalist Politics : The Ease of Colonial India* (New Delhi : Sage, 1995).
51. Sinha, L. P., *The Left Wing in India* (Muzaffarpur, New Publishers, 1965).
52. Srinivasan, R., "The Ideological Genesis of the Dravidian Movement", *Indo-British Review,* January-June, 1987.
53. Srivastava, R.K., "Sarvodaya; Vision and Reality" in Roy, 1986.
54. *The Philosophy and Practice of Radical Humanism* (New Delhi : Radical Humanist Association, 1970).
55. Yopadgtata, P.C., "A Celebration of the Gandhian Alternative", *Economic and Political Weekly,* 2nd December, 1989.
56. Zelliot, Eleanor, "The Social and Political Thought of B. R. Ambedkar" in *Pantham and Deutsch,* 1986.

Course XIV : FOREIGN POLICY OF INDIA (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course tries to underline the changes, which the shifting nature of world order has induced into the more enduring elements and themes of Indian foreign policy. At the same time, India's growing assertion on the world stage as an important international actor is assessed in the light of its role in various global regimes.

Unit –I: Making of Indian Foreign Policy

1. Legacies and Actors
2. Principal Phases of Indian Foreign Policy
3. Transition from Nehruvianism to Neoliberalism

Unit-II: India's Economic Foreign Policy

4. Global Setting: IMF, WB, and WTO
5. Regional Setting: SAARC and Beyond

Unit–III: India's Strategic Foreign Poicy

6. India's Strategic concerns at global and regional level
7. India's Nuclear Policy

Unit-IV: India's Environmental Policy:

8. Climate Change
9. Energy Security

Essential Readings

1. C Raja Mohan , *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).
2. A. Appadorai and M. S. Rajan, *India's Foreign Policy and Relations* (South Asian Publishers, 1988).
3. Achin Vanaik, *India in a Changing World* (Orient Longman, 1995).
4. C. Raja Mohan, *Modi's World*: *Expanding India's Sphere of Influence* (Harper Collins, 2015).
5. David Malone, C. Rajamohan, Srinath Raghavan (Eds.), *The Oxford Handbook of Indian Foreign Policy* (Oxford Handbooks 2015).
6. Imtiaz Ahmed (ed.), *Indian Foreign Polic* (Delhi , Vikas Publishing House, 1993).
7. J. N. Dixit, *Makers of Indian Foreign Policy: From Raja Ram Mohan Roy to Yashwant Sinha*, 2003. (New Delhi: Harper Collins, 2003)
8. J.N. Dixit, *Indian Foreign Policy, 1947-2003* (New Delhi, D. K. Publications, 2003).
9. Kanti Bajpai and Harish V. Pant (eds.), *India's Foreign Policy*: *A Reader* (Oxford University Press, 2013)
10. Kanti Bajpai, *India and the world*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.
11. Kanti P. Bajpai and Amitabh Mattoo eds., *Securing India: Strategic Thought and Practice*, (New Delhi, Manohar Publishers, 1996).
12. Muchkund Dubey, *India's Foreign Policy: Coping with the Changing World* (Pearson, 2012)
13. R. S. Yadav, Bhartiya Videsh Niti (Hindi Edition).
14. Sumit Ganguly, *Indian Foreign Policy* (Oxford India Short Introductions Series, 2015).
15. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century*, New Delhi, 2012
16. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century*, New Delhi, 2012
17. V. P. Dutt, *India's Foreign Policy* (New Delhi, Vikas, 1984).

Suggested Readings

1. A. Kapur and A. J. Wilson, *The Foreign Policy of India and her Neighbours*, (Basingstroke: Macmillan, 1996).
2. A.P. Rana, *The Imperatives of Non-Alignment*: *A Conceptual Study of India's Foreign Policy Strategy in the Nehru Period*, (Macmillan, 1976).

3. Bimal Prasad (ed.), *Indian Foreign Policy* (New Delhi, Vikas).

4. C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).

5. Harish Kapur, *India's Foreign Policy, 1947-1992*: *Shadows and Substance* (New Delhi, Sage, 1994).

6. Iqbal Singh, *Between Two Fires: Towards an Understanding of Nehru's Foreign policy,* (Hyderabad: Orient Longman, 1998).

7. Itty Abraham, *The Making of the Indian Atomic Bomb, Science, Secrecy and the Postcolonial State*, (Zed Books, 1998).

8. J. N. Dixit, *Indian Foreign Policy and its Neighbours* (New Delhi, Gyan Books, 2001).

9. J.N. Dixit, *Across Borders: Fifty Years of India's Foreign Policy* (New Delhi, Picus Books, 1998).

10. J.N. Dixit, *My South Block Years: Memoirs of a Foreign Secretary*, (New Delhi, UBSPD), 1996.

11. K. Subrahmanyam, "Nehru and the India-China Conflict of 1962", in *Indian Foreign Policy: The Nehru Years*, ed. B.R. Nanda, (New Delhi, Vikas, 1976)`.

12. Lalit Mansingh et al. (eds), *Indian Foreign policy: Agenda for the 21st Century* (New Delhi: Konark Publishers, 1997).

13. M. S. Rajan, *India and International Affairs: A Collection of Essays* (New Delhi, Lancers Books, 1999).

14. M.J. Akbar, *Nehru: The Making of India*, (London, Penguin Books, 1988).

15. N. Jayapalan, *Foreign Policy of India* (Delhi, Atlantic, 2001).

16. Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

17. Robert W. Bradnock, *India's Foreign Policy Since 1971*. (London, Pinter Publishers, 1990.

18. Ronald, Inden, *Imaging India* (Cambridge, MA, Blackwell, 1992).

19. Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York, Simon and Schuster, 1996).

20. Stepehn D. Krasner, *Structural Conflicts: The Third World Against Global Liberation* (Berkeley, University of California Press, 1985).

21. Sumit Ganguly, *Indian Defence Policy*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.

22. Surjit Mansingh, *India's Search for Power, Indira Gandhi's Foreign Policy, 1966-1982* (Delhi, Sage, 1984.)

23. V. P. Dutt, *India's Foreign in a Changing World* (New Delhi, Vikas, 1999).

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) : PARTIES AND ELECTORAL POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
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The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : It helps the students to understand the evolution and transformation of political parties in India. It also analyses different issues that impinge on party politics and challenges posed by parties and party system to Indian democracy.

Unit-I

Political Parties and Party Politics in Contemporary India :

- A political, sociological and economic analysis.
- Federalism, regionalism and political parties.
- Party system in transition.

Unit-II

National Political Parties :

- Ideology and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-III

Regional and State Parties :

- Origin and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-IV

Electoral Politics in India :

- Role of Social cleavages and elections.
- Electoral reforms and the Electoral process.
- New Social Movements, NGOs and their impact on political parties.

Selected Readings

1. Chatterjee, Partha (Ed.), *State and Politics in India*, OUP, 1999.
2. Hasan, Zoya, (Ed.), *Parties and Party Politics in India*, New Delhi, Oxford, 2001.
3. Mehra, Ajay Kumar, D.D. Khanna and Gert W. Kueck (Ed.) , *Political Parties and Party Systems*, Sage Publications, New Delhi, 2003.
4. Mitra, Subrata K. and V.B. Singh, *Democracy and Social Change in India : A Cross Sectional Analysis of the National Electorate*, Sage, 1999.
5. Kohli, Atul, *Centralization and Powerlessness : India's Democracy in a Comprehensive Perspective* in Midgal, Joe, Atul Kohli and Vivenne Shue (Eds.) , *State Power and Social Forces*, Cambridge University Press, 1994.
6. Roy, Ramashray and Paul Wallace (Eds.), *India's 1999, Elections and 20th Century Politics*, Sage, New Delhi, 2003.
7. Vora, Rajendra and Suhas Palshikar (Eds.), *Indian Democracy*, Sage, New Delhi, 2003.

Option (b) : STATE POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
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There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: There is much recognition and appreciation of the regional states to be viewed as important political and economic units for developing a theoretical framework for analysing politics and economy undergoing a transition in recent India. The regional states are being considered as critical to the understanding of the issues pertaining to emergent national politics and economy. This course aims to explore the multiple dimensions of state as well as sub-state level politics in India in a comparative perspective.

Unit -I

A Theory of State Politics in India

a. Rise of State Politics as an Autonomous Discipline: Survey of Literature
b. Beyond Nation-State: Framing Regional Politics in India

Unit-II

Language, Region and Federal Polity

a. Reorganization of States in Independent India: 1953-1999
b. Recent Demands for New States: Shifting Bases
c. Politics of Autonomy/Self-determination: Punjab, Jammu and Kashmir
d. Regionalization of Politics: State Level Parties, Coalitional Politics at the State Level

Unit -III

Dalit and Backward Classes Movements

a. Tamil Nadu : Dravidian Movement and Lower Castes Assertion
b. Uttar Pradesh: Lower and Middle Castes Political Assertion
c. Punjab: Ad-Dharm Movement, Dalit Cultural Assertion

Unit-IV

Regional Roots of Development Politics in India: State Level Experiences

a. State, Political Regimes and Social Welfare Policy: Stark Variations across the States
b. Agrarian Politics in the States: Green Revolution, Farmers' Movements, Farmers' Suicides
c. Politics of Economic Reforms and Growing Spatial Disparity: Regional States and Sub-Regions

Essential Readings

1. Frankel, Francine and M.S.A. Rao, eds, *Dominance and State Power in Modern India,*
2. Jenkins, Rob, *Regional Reflections: Comparing Politics across India's States, Oxford* University Press, New Delhi, 2004.
3. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions*, Routledge, New Delhi, 2011.
4. Narain, Iqbal, ed., *State Politics in India*, Meenakshi Prakashan, Meerut, 1976.
5. Pai, Sudha , *Handbook on Politics in the Indian States Regions, Political Parties and Economic Reforms (*Ed.). Oxford University Press, New Delhi, 2013.
6. Weiner, Myron, ed., *State Politics in India*, Princeton University Press, New Jersey, 1968.
7. Wood John R, ed., *State Politics in Contemporary India: Crisis or Continuity*, Westview Press, Boulder, 1984.

Suggested Readings:

Unit 1

1. Crane, Robert I. (ed.), *Regions and Regionalism in South Asian Studies: An Exploratory Study*, Duke University Monograph series, 1967.
2. Fadia, B., *State Politics in India*, Radiant Publishers, New Delhi, 1984.
3. Gould, W. *Hindu Nationalism and the Language of Politics in Late Colonial India*, Cambridge University Press, Cambridge, New York, 2004.
4. Heller, Patrick, 'Degrees of Democracy: Some Comparative Lessons from India', *World Politics*, 52, July, 2000. 484-519.
5. Iyer, L., 'Direct versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, 92(4), 2010, 693–713.
6. Jacob, Suraj, 'Towards a Comparative Sub-national Perspective on India', *Studies in Indian Politics*, December 2015 vol. 3 no. 2 229-246
7. Kailash, K. K., 'Varieties of Comparative State Politics Research in India', Seminar, 620, 2011, 66-71.
8. Kohli, Atul and Prerna Singh (eds.), *Handbook of Indian Politics*, Routledge, London, 2013.
9. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions*, Routledge, New Delhi, 2011.
10. Markovits, C., *A History of Modern India*, 1480–1950, Anthem, London, 2002.

11. Pai, Sudha, *State Politics New Dimensions: Party System, Liberalization and Politics of Identity.* Shipra Publications, New Delhi, 1999.
12. Palshikar, Suhas and Rajeswari Deshpande, 'Redefining State Politics in India', 2009, http://www.lokniti.org/newsletter/theme_note.pdf
13. Shastri, Sandeep and K. C. Suri and Yogendra Yadav, eds., *Electoral Politics in Indian States*, Oxford University Press, New Delhi, 2009.
14. Sinha, Aseema, 'Scaling Up: Beyond the Sub-national Comparative Method for India', *Studies in Indian Politics*, 3(1), June, 2015, 128-133.
15. Synder, Richard, 'Scaling Down: The Subnational Comparative Method', *Studies in Comparative International Development*, 36(1), March, 2001, 93-110
16. Tillin, Louise, 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2), December, 2013, 235-240.

Unit 2

1. Ahmed, B., 'Elections and Party Politics in India: A Symposium'. *Asian Survey* 10(11), November, 979–92, 1970.
2. Bose, Sumantra, *States, Nations, Sovereignty: Sri Lanka, India and the Tamil Eelam Movement*, Sage, New Delhi, 1999.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and Politics of Identity in India*, Pearson-Longman, New Delhi, 2008.
4. Brass, Paul R, *Language Religion and Politics in North India*, Cambridge University Press, 1974.
5. Chadha Behera, Navneeta, *State, Identity and Violence; Jammu, Kashmir and Ladakh*, Manohar, New Delhi, 2000.
6. Chandra, K. and S. Wilkinson, 'Measuring the Effect of 'Ethnicity,' Comparative Political Studies 41(4–5), 2008, 515–63.
7. Chandra, K. *Why Ethnic Parties Succeed: A Comparative Study of the Bahujan Samaj Party Across Indian States*, Cambridge University Press, New York, 2000.
8. Chhibber, Pradeep K. and I. Nooruddin, 'Do Party Systems Count? The Number of Parties and Government Performance in the Indian States', *Comparative Political Studies*, 37(2), 2004, 152–87
9. Dasgupta, J., *Language Conflict and National Development: Group Politics and National Language Policy in India*, University of California Press, Berkeley, 1970.
10. Jaffrelot, Christophe and Sanjay Kumar, eds, *Rise of the Plebeians: The Changing Face of Indian Legislative Assemblies*, New Delhi, Routledge, 2009.
11. Kailash, K.K., 'Federal Calculations in State Level Coalition Governments', *India Review*, 10(3), July–September, 2011, 246–282.
12. Kudasia, Gyanesh, *Region, Nation, "Heartland": Uttar Pradesh in India's Body Politic*, New Delhi, Sage, 2006.
13. Mawdsley, Emma, 'Redrawing the Body Politic: Federalism, Regionalism and the Creation of New States in India', *Journal of Commonwealth and Comparative Politics*, 40(3): pp. 34-54.
14. Robinson, John, 'Regionalizing India: Uttarakhand and the Politics of Creating States', *South Asia: Journal of South Asian Studies*, 24(2):189-212, 2001.
15. Samaddar, Ranabir, ed., *The Politics of Autonomy: Indian Experiences*, Sage, New Delhi, 2005.
16. Sarangi, Asha, ed., *Language and Politics in India*, Oxford University Press, New Delhi, 2009.
17. Stepan, Alfred, J. Linz, and Yogendra Yadav, *Crafting State-Nations: India and Other Multinational Democracies*, Johns Hopkins University Press, Baltimore, 2011.
18. Wallace, Paul, ed., Region *and Nation in India*, Oxford University Press, Delhi, 1985.

19. Wilkinson, Steven, *Electoral Competition and Ethnic Violence in India*. Cambridge University Press, Cambridge and New York, 2004

Unit 3

1. Deliege, R., *The World of the "Untouchables": Paraiyars of Tamil Nadu*, Oxford University Press, New Delhi, 1997.
2. Geeta, V., Rajdurai, 'Dalits and Non-Brahmin Consciousness in Colonial Tamil Nadu' *Economic and Political Weekly*, 28(39), September 25, 1993.
3. Hasan, Zoya, *Dominance and Mobilization: Rural Politics in Western Uttar Pradesh 1930-1980*, New Delhi, 1989.
4. Irschick, E. F., *Politics and Social Conflict in South India, the Non-Brahman Movement and Tamil Separatism*, 1916–1929. University of California Press, Berkeley and Los Angeles, 1969.
5. Jaffrelot, Christophe, *India's Silent Revolution the Rise of the Low Castes in North Indian Politics, Permanent* Black, New Delhi, 2003.
6. Jayal, Niraja Gopal, '*Federal Anxieties, Democratic Desires: The Politics of Governance Reform in Two Indian States'*, LSE, London, 2006. www.crisisstates.com.
7. Kumar, Ashutosh, 'Deras as Sites of Electoral Mobilization in Indian Punjab: Explaining Why Political Parties Do Flock to the Deras', *Asian Ethnicity*, Routledge, London, 17(3): 335-350, (June), 2014.
8. Pai, Sudha , *Dalit Assertion*, Short Introduction, Oxford University Press, 2013.
9. Pai, Sudha, *Dalit Assertion and the Unfinished Democratic Revolution: The BSP in Uttar Pradesh*, Sage Publications, New Delhi, 2002.
10. Pandey, Gyan, *The Construction of Communalism in Colonial North India*, Oxford University Press, Delhi, 1990.
11. Pandian, M. S. S., *Brahmin & Non-Brahmin: Genealogies of the Tamil Political Present*, New Delhi: Permanent Black, 2003.
12. Ram, Ronki (2016) 'Religion, identity and empowerment: the making of Ravidassia Dharm (Dalit Religion) in contemporary Punjab', in Knut A. Jacobsen (ed.) *Routledge Handbook of Contemporary India*. 371-83. London: Routledge.
13. Ram, Ronki, 'Social Exclusion, Resistance and Deras: Exploring the Myth of Casteless Sikh Society in Punjab', *Economic and Political Weekly*, 42(40), October 6-12, 2007, 4066-74.
14. Ram, Ronki, 'Untouchability in India with a Difference: Ad Dharm, Dalit Assertion and Caste Conflicts in Punjab', *Asian Survey*, XLIV (6), November-December 2004, 895-912
15. Shah, Ghanshyam, *Caste and Democratic Politics in India*, Anthem Press, London, 2004.
16. Subramanian, Narendra, *Ethnicity and Populist Mobilization: Political Parties, Citizens and Democracy in South India*, Oxford University Press, Delhi, 1999.
17. Varshney, Ashutosh, 'Is India Becoming More Democratic?' *The Journal of Asian Studies*, 59(1), 2000.
18. Yadav, Yogendra and Suhas Palshikar, 'From Hegemony to Convergence: Party System and Electoral Politics in the Indian States, 1952-2002', in Peter Ronald deSouza and E. Sridharan (eds) *India's Political Parties*, Sage, New Delhi, 2006.
19. Yadav, Yogendra and Suhas Palshikar, 'Ten Theses on State Politics in India', *Seminar*, 591, November, 2008

20. Yadav, Yogendra, 'India's Third Electoral System: 1989-1999', *Economic and Political Weekly*, 34(34-35), 1999, 2393-99
21. Yadav, Yogendra, 'Reconfiguration in Indian Politics: State Assembly Elections 1993-1995, *Economic and Political Weekly*, 31(2), January 13, 1996.

Unit 4

1. Ahluwalia, Montek Singh 'Economic Performance of States in Post-Reforms Period', *Economic and Political Weekly*, 6 May, 2000.
2. Bhalla, G.S. ed., *Economic Liberalization and Indian Agriculture*, Institute for Studies in Industrial Development, New Delhi, 1994.
3. Corbridge, Stuart, Glynn Williams, Rene Veron and Manoj Srivastava, *Seeing the State*, Cambridge University Press, New Delhi, 2008.
4. Dasgupta, Biplab, *The New Agrarian Technology and India,* Geneva UN, 1977.
5. Datt, G. and M. Ravallion, 'Is India's Economic Growth Leaving the Poor Behind?' *Journal of Economic Perspectives*, 16(3), 2002, 89–108.
6. Dreze, Jean & Amartya Sen, *India: Development and Participation*, Oxford University Press, Delhi, 2002.
7. Dreze, Jean & Amartya Sen, Indian *Development: Selected Regional Perspectives*, Oxford University Press, Delhi, 1998.
8. Frankel, Francine & M.S.A Rao (eds.) *Dominance and State Power in India*, Oxford University Press, New Delhi, 2 Vols. 1989, 1990.
9. Harriss, John, 'Comparing Political Regimes across Indian States: A Preliminary Essay, *Economic and Political Weekly*, November 27, 1999, 3367-3377.
10. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
11. Joshi, Vijay and I.E. Little, *India's Economic Reforms: 1991-2001*, Oxford University Press, New Delhi, 1996.
12. Kohli, Atul, 'Politics of Economic Growth in India, 1985-2005; Part 1: The 1980's and Part 11: The 1990's and Beyond', *Economic and Political Weekly*, April 1, 2007.
13. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Oxford University Press, Delhi, 1991.
14. Kohli, Atul, *The State and Poverty in India*, Cambridge University Press, Cambridge, 1987.
15. Kohli, Atul, *The Success of India's Democracy,* Cambridge; Cambridge University Press, New York, 2001.
16. Mitra, Subrata K., *The Puzzle of India's Governance: Culture, Context and Comparative Theory*, Routledge, London, 2006.
17. Mooij, Jos, ed., *The Politics of Economic Reforms in India*, Sage, New Delhi, 2005.
18. Paul, Samuel, and KS Sridhar, The Paradox of India's North–South Divide: **Lessons** from the States and Regions, New Delhi, Sage, 2016.
19. Prakash, Amit, *Jharkhand: Politics of Development and Identity*, Orient Longman, Hyderabad, 2002.
20. Rao, Govinda and Nirvikar Singh , *Political Economy of Federalism in India*, Oxford University Press, New Delhi, 2006.

21. Sachs, Jeffrey, Ashutosh Varshney, and Nirupam Bajpai, eds., *India in the Era of Economic Reforms***,** Oxford University Press, New Delhi, 1999.
22. Singh, Jagpal, *Capitalism and Dependence; Agrarian Politics in Western Uttar Pradesh, 1951-1991*, Manohar, New Delhi, 1992.
23. Singh, P. (2015). *How Solidarity Works for Welfare: Subnationalism and Social Development in India*, New York: Cambridge University Press
24. Sinha, Aseema, 'Ideas, Interests, and Institutions in Policy Change: A Comparison of West Bengal and Gujarat' in Jenkins, Rob , ed., *Regional Reflections: Comparing Politics across India's States*, New Delhi, Oxford University Press, Delhi, 2004.
25. Sinha, Aseema, *The Regional Roots of Developmental Politics in India: A Divided Leviathan*, Indiana University Press, Bloomington and Indianapolis, 2005.
26. Tillin L. & Deshpande, R. & Kailash, KK (Eds) (2016). *Politics of Welfare*: *Comparisons across Indian States*, Oxford, Oxford University Press.
27. Varshney, Ashutosh, Democracy, Development, and the Countryside: Urban-Rural Struggles in India. Cambridge University Press, Cambridge, 1998.

Journals/ Newsmagazine/Newspapers to be consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web. Also check on JSTOR)
2. ***Front Line***
3. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
4. ***Studies in Indian Politics***
5. ***The Hindu and Indian Express***

Option (c): DECENTRALIZED GOVERNANCE AND LOCAL LEVEL INSTITUTIONS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice i.e. attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with the concept of decentralized and democratic governance in India, both theoretically and at the level of institutional functioning at the local level. The emphasis of the course is on the process of democratic governance in both at the grassroots.

Unit-I

- Democratic Decentralization in India : Issues and Perspectives.
- Decentralization & Contemporary concerns—globalization and changing role of the state.

Unit-II

- Planning Urban Development – approaches, policies & programs.
- Urban local governance – Institutional aspects and functioning of urban local bodies with special reference to 74th Amendment.

Unit-III

- Planning Rural development—approaches, policies and programmes.
- Democracy at the grassroots—Growth, Development and functioning of PRI from 1952 to present.

Unit-IV

- Relationship between rural and urban local institutions.
- Role of NGOs in local governance & development.
- Challenges of Governance at the local level-autonomy, finance, personnel, participation.

Readings

1. Abdul, Aziz, *Decentralised Planning*, New Delhi, Sage, 1993.
2. Bose, Ashish, *National Commission on Urbanization*, Ministry of Urban Development, New Delhi, 1988.
3. Behra, M.C., *Globalising Rural Development*, Sage, Delhi, 2006.
4. Handy, Femida, Meenaz Kassuu, Suzanne Fervey (eds.), *Grass-Roots NGOs by Women for Women*, Sage, New Delhi, 2006.
5. Kumar, Girish, *Local Democracy in India*, Sage, Delhi, 2006.
6. Issaac Thomas & Richard W. Franke, *Local Government and Development : People's Campaign for Decentralized Planning in Kerala*, Delhi, Leftword, 2000.
7. Jain, L.C., Krishnamurthy, B.V. and Tripathi, P.M., *Grass without Roots : Rural Development Under Government Auspices*, New Delhi, Sage, 1987.
8. Maddick Henry, *Panchayati Raj : A Study of Rural Local Government in India*, London, Longman, 1970.
9. Mathur, O.M. (ed.), *India : The Challenge of Urban Governance*, New Delhi, National Institute of Public Finance & Policy, 1999.
10. Mishra, B.B., *District Administration and Rural Development in India*, Delhi, Oxford University Press, 1983.
11. Mukherjee Amitava, *Decentralization : Panchayats in the Nineties*, New Delhi, Vikas, 1994.

12. Prasad Kamta, *Planning and Poverty Alleviation*, New Delhi, Agricole, 1985.
13. Ravillion, M. and G. Datt, *Growth and Poverty in Rural India*, Washington D.C., World Bank, 1995.
14. Sen, Amartya, *Development as Freedom*, Delhi, Oxford University Press, 2000.
15. Chaturvedi, T.N. and Jain, R.B., *Panchayati Raj* (New Delhi, IIPA, 1981).
16. Bhattacharya, Mohit, *Municipal Government—Problems and Prospects* (Delhi Research Publications).
17. Jha, S.N. and Mathur, P.C., *Decentralization and Local Politics*, Sage, 1999.

Option (d) : POLITICAL SOCIOLOGY WITH SPECIAL REFERENCE TO INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: This paper aims at highlighting some of the major areas in the domain of political sociology with reference to India. The paper intends to familiarize the students with the social, cultural and economic structures of power in the Indian society and their mechanism of functioning in a critical perspective.

Unit I

Political Sociology : Thematic Concerns :

1. Nature, meaning and scope.
2. Historical Development.

Unit II

Social Stratification :

1. Concepts and Theoretical Contexts (Marx, Dahrendorf, Weber, and L. Dumont).
2. Caste, Class and Power.

Unit III

Conflict Formation :

1. Theoretical dimensions (Simmel, Coser, Marx and Dahrendorf).
2. Caste and Communal conflicts.

Unit IV

Political Sociology of Agrarian Relations :

1. Zamindari Abolition and Land Reforms.
2. Pressure Groups : Farmers and Labourers.

Books Recommended

1. Effrat, Andrew, *Perspective on Political Sociology*, New York, The Bobbs-Merrill, 1972.
2. Dowse, Robert E. & Hughes, John A., *Political Sociology*, London, John Wiley, 1975.
3. Horowitz, *Foundations of Political Sociology*, New York, Harper & Row, 1972.
4. Das, Hari Hara and Choudhary, B.C., *Introduction to Sociology*, New Delhi, Vikas, 1997.
5. Tumin, M.M., *Social Stratification*, New Jersey, Prentice Hall, 1978.
6. Gupta, Dipankar (ed.), *Social Stratification*, Delhi, OUP, 1991.
7. Scott, John, *Stratification and Power*, Cambridge, Polity, 1996.
8. Sharma, K.L., *Social Stratification in India*, New Delhi, Sage, 1997.
9. Singh, Yogendra, *Social Change in India*, New Delhi, Har Anand, 1993.
10. Layder, Derek, *Understanding Social Theory*, London, Sage, 1996.
11. Jaiswal, Suvira, *Caste : Origin, Function and Dimensions of Change*, Delhi, Manohar, 1998.
12. Srinivas, M.N., *Social Change in Modern India*, New Delhi, 1969.
13. Runciman, W.S., *Social Science and Political Theory*, Cambridge, 1971.
14. Lukes, *Steven, Power : A Radical View*, Hong Kong, Macmillan, 1974.
15. Barnes, Barry, *The Nature of Power*, Cambridge, Polity, 1988.

Option (e) : REPRESENTING 'INDIA' : GEOPOLITICAL IMAGINATIONS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course investigates how India has been represented by groups and individuals, political elites and the dominant institutions and intellectuals of statecraft. It intends to probe how a variety of geopolitical imaginations have come to compete with one another, as different actors seek to implant maps of meaning, relevance and order on to highly complex and dynamic political universe they inhabit, observe, try to understand and sometimes even desire to dominate. How various geopolitical idioms, myths and representational practices have been used to inscribe something called India and endow that entity with a content, history, meaning and trajectory. The intention of this course is exploratory and not normative.

Unit-I

1. Pre-colonial India : An Overview.
2. India in British Colonial Imagination.

Unit-II

3. Partition of British India and its Legacies.
4. Integration of Princely States.

Unit-III

5. The India Diaspora : Dynamics and Dilemmas of Migration.
6. Gender in Indian Geopolitics.

Unit-IV

7. Nationalist Constructions of India's Identity (with special reference to Nehru and Savarkar).
8. Rise of Hindutva and the Search for Alternative Geopolitical Imaginations.

Suggested Readings

1. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* I (4) : 53-71.
2. Bhargava, R. (ed.) (1998), *'Secularism and Its Critics' :* Delhi, Oxford University Press.
3. Bose, Sugata (1997), "Nation as Mother : Representations and Contestations of 'India' in Bengali Literature and Culture", in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press, 50-75.
4. Bose, Sumantra (1997), "Hindu Nationalism" and the Crisis of the Indian State : A Theoretical Perspective in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press.
5. Brecher, M. (1968), *India and World Politics : Krishna Menon's View of the World,* London : Oxford University Press.
6. Butalia, Urvashi (1998), *The Other Side of Silence,* New Delhi : Viking.
7. Cohn, B.S. (1997), *Colonialism and Its Forms of Knowledge : The British in India,* Delhi : Oxford University Press.
8. Dijkink, G. (1996), *National Identity and Geopolitical Visions : Maps of Pride and Pain,* London : Routledge.

9. Fisher, M. H. (1993), *The Politics of the British Annexation of India 1757-1857,* Delhi : Oxford University Press.
10. Graham, B. (1993), *Hindu Nationalism and Indian Politics : The Origins and Development of the Bharatiya Jana Sangh,* Cambridge, Cambridge University Press.
11. Hasan, M. (1996), "The Myth of Unity : Colonial and National Narratives" in D. Ludden (ed.) *Making India Hindu, Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
12. Jalal, A. (1997), "Exploding Communalism : The Politics of Muslim Identity in South Asia", in S. Bose and A. Jalal (eds.), Nationalism, Democracy and Development : State and Politics in India, Calcutta : Oxford University Press : 76-103.
13. Kakar, Sudhir (1995), *The Colours of Violence,* New Delhi : Penguin Books.
14. Kumar, R. (1997), "State Formation in India : Retrospect and Prospect", in M. Doornbos and S. Kaviraj (eds.), *Dynamics of State Formation : India and Europe Compared,* New Delhi : Sage : 359-409.
15. Katzenstein, M. F., Mehta, U. S. and Thakkar, U. (1998), "The Rebirth of Shiv Sena in Maharashtra : the Symbiosis of Discursive and Institutional Power" in A. Basu, and A. Kohli (eds.), *Community Conflicts and the State in India,* Delhi : Oxford University Press : 215-238.
16. Kaviraj, Sudhir (1993), "The Imaginary Institution of India," in P. Chatterjee and G. Pandey (eds.), *Subaltern Studies,* Delhi : OUP, Vol. VII : 1-39.
17. Kaviraj, S. (1994), "Crisis of the Nation-State in India," *Political Studies,* XLII : 115-129.
18. Kaviraj, S. (1997), "On The Structure of Nationalist Discourse", in T. V. Sathyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi : Oxford University Press.
19. Khilnani, S. (1998), *The Idea of India,* London : Penguin Books.
20. Kothari, R. (1997), "Fragments of a Discourse : Towards Conceptualization", in T.V. Sathyamurthi (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
21. Kothari, R. (1998), *Communalism in Indian Politics,* Ahmedabad, Rainbow Publishers Limited.
22. Krishna, B. (1995), *Sardar Vallabbhai Patel : India's Iron Man,* New Delhi : Indus.
23. Krishna, S. (1994), "Cartrographic Anxiety: Mapping the Body Politics in India," *Alternatives 19 : 507-521.*
24. Larson, G. J. (1997), *India's Agony Over Religion,* Delhi, Oxford University Press.
25. Ludden, D. (1996) (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
26. Mahanta, A. (1977), "The Indian State and Patriarchy" in T. V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
27. Malik, Y.K. and Singh, Y.B. (1994), *Hindu Nationalists in India : The Rise of the Bharatiya Janata Party,* New Delhi, Vistaar Publications.
28. Mayo, Katherine (1928), *Mother India,* New York : Harcourt Brace and Company.
29. Metcalf, T. R. (1995), *Ideologies of the Raj,* Cambridge : Cambridge University Press (The New Cambridge History of India).
30. Nandy, A. H., Trivedi, S. Mayaram and Yagnik, A. (eds.) (1995), *Creating a Nationality : The Ramjanambhumi Movement and the Fear of the Self,* Delhi : Oxford University Press.
31. Nehru, J. (1936), *An Autobiography,* London, John Lane.

32. Nehru, J. (1981), *The Discovery of India,* New Delhi : Jawaharlal Nehru Memorial Fund, Oxford University Press (First Published 1946 by the Signet Press, Calcutta).
33. Nehru, J. (1956), *Independence and After : A Collection of Speeches* 1946-1949, Delhi : Government of India.
34. Pandey, G. (1990), *The Construction of Communalism in Colonial North India,* Delhi, Oxford University Press.
35. Pandey, G. (1994) "The Prose of Otherness," *Subaltern Studies* (Delhi, OUP, Vol. VIII).
36. Parker, G. (1998), "Geopolitical Perspectives on India and Indian Foreign Policy" in The Ford Foundation Lectures in International Relations Studies, Departmental of Political Science, The Maharaja Sayajirao University of Baroda.
37. Pattanaik, D. D. (1998), *Hindu Nationalism in India : Conceptual Foundation,* New Delhi : Deep and Deep Publications.
38. Radhakrishnan, R. (1992), "Nationalism, Gender, and the Narrative of Identity" in Andrew Parker et al (eds.), *Nationalism and Sexuality,* New York, Sage.
39. Sarkar, T. (1996), "Imagining Hindurastra : the Hindu and the Muslim in Bankim Chandra's Writings" in D. Ludden (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
40. Sarkar, T. (1992), "The Hindu Wife and the Hindu Nation : Domesticity and Nationalism in Nineteenth Century Bengal," *Studies in History* (Sage, Delhi) 8 (2).
41. Savarkar, V. D. (1969), Hindutva, Bombay, Savarkar Prakashan 5th Edn.
42. Sen, A. (1998a), "On Interpreting India's Past" in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press (Oxford India Paperbacks).
43. Sen, A. (1998b), "Secularism and its Discontents" in Bhargava, R. (ed.), *Secularism and its Critics,* Delhi : Oxford University Press.
44. Varshney, A. (1993), "Contesting Meanings : India's National Identity, Hindu Nationalism, and the Politics of Anxiety", *Daedalus, 122, 3 : 227-261.*
45. Van Hear, N. (1998), *New Diasporas : The Mass Exodus, Dispersal and Regrouping of Migrant Communities,* London, UCL Press.
46. Weiner, M. (1997), "Minority Identity", in S. Kaviraj (ed.), *Politics in India,* Delhi, Oxford University Press : pp 241-254.
47. Ali, D., 1999, *Invoking the Past : The Uses of History in South Asia,* New Delhi : Oxford University Press.
48. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* 1(4) : 53-71.
49. Bianchini, B., Chaturvedi, S., Ivekovic, R. and Samaddar, R., 2005, *Partitions : Reshaping Minds and States,* London : Frank Cass.
50. Chaturvedi, S., 2000, "Representing Post-Colonial India: Inclusive/Exclusive Imaginations" in David Atkinson and Klaus Dodds (eds), *Geopolitical Traditions : Critical Histories of a Century of Geopolitical Thought,* London : Routledge.
51. Chaturvedi, S., 2005, "Diaspora in India's Geopolitical Visions : Linkages, Categories and Contestations", *Asian Affairs : An American Review,* 32(3).

52. Deshpande, S., 2003, *Contemporary India : A Sociological View*, New Delhi : Viking.
53. Jayaram, N., 2004 (ed.), *The Indian Diaspora : Dynamics of Migration*, Delhi : Sage.
54. Krishna, S., 1999, Post-*Colonial Anxieties : India, Sri Lanka and the Question of Nationhood*, Minneapolis : University of Minnesota Press.
55. Ludden, D., 2002, *India and South Asia : A Short History*, Oxford : One World.
56. Sen, A., 2006, *Identity and Violence : The Illusion of Destiny*, London : Allen Lane/Penguin.
57. Sen, A., 2005, *Argumentative Indian Writings on Indian History, Culture and Identity*, London : Allen Lane/Penguin.

Option (f): Dalit Movements and Issues in India

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: The purpose of this paper is to make students familiar with major Dalit Movements and issues in India.

UNIT-I

Anti-Caste and Adi Movements in the Colonial period-I
Jotiba Phuleand Satyashodhak Samaj,
Mangoo Ram andAd-Dharm Movement,
Periyar and Self-Respect Movement

UNIT-II

Anti-Caste Movements in the Colonial period-II
Dalit Movement and B.R.Ambedkar
Caste and Untouchability
Democracy and Repsentation of Minorities

UNIT-III

Politics of Assertion and Representationin Independent India

Republican Party of India
Dalit Panthers
Bahujan Samaj Party

UNIT-IV

Dalits and Contemporary Issues

Reservation and Politics of Inclusion
Dalits and Globalization
Dalit Women's Issues

Essentail Readings

1. *Aditya Nigam, "In search of a Bourgeoisie: Dalit politics enters a New Phase."* Economic and Political Weekly, *March 30, 2002, pp. 1190-1193.*
2. *Aditya Nigam, "Secularism, Modernity, National: Epistemology of the Dalit Critique."* Economic and Political Weekly, *November 25, 2000.*
3. Aryama and SukhadeoThorat (ed.), *Ambedkar in Retrospect: Essays in Economics, Politics & Society*, Rawat Publications, New Delhi, 2007.
4. *B.L.Mungekar, "Globalization and the Dalits."* Radical Humanist, *65(1): April 2001: 9-10.*
5. B.R.Ambedkar, *Dr. Babasaheb Ambedkar: Writings and Speeches*, Vol.1-17 (compiled by Vasant Moon), Education Department, Government of Maharashtra, Bombay.
6. Christophe Jaffrelot,*India's Silent Revolution the Rise of the Low Castes in North Indian Politics,* Permanent Black,New Delhi, 2003.
7. Dhananjay Keer, *Dr. Ambedkar Life and Mission*, Popular Prakashan, Bombay1991.
8. *Dipankar Gupta, "Positive Discrimination and the Question of Fraternity: Contrasting Ambedkar and Mandal on Reservation."* Economic and Political Weekly, *32(31): 2 August 1997.*
9. Eleanor Zelliot, Ambedkar *and Mahar Movement.* University of Pennsylvania, 1982.
10. Eleanor Zelliot, *From Untouchable to Dalit: Essay on Ambedkar Movement.* Manohar: New Delhi, 1992.
11. G.P. Deshpande, (ed) *Selected Writings of Jotirao Phule*, Left World: New Delhi, 2002.
12. Gail Omvedit, *Dalits and Democratic Revolution: Dr. Ambedkar and Dalit Movement in Colonial India.* Sage*:* New Delhi, 1994.
13. *Gail Omvedt, "Peasants, Dalits and Women: Democracy and India's New Social Movements."* Journal of Contemporary Asia: *24 (1): 1994.*
14. *Gail Omvedt*, Ambedkar Towards an Enlightened India. Penguin: New Delhi, 2004.
15. Gail Omvedt, *Cultural Revolt in a Colonial Society: The Non – Brahman Movement in Western India.* Scientific Socialist Education Trust: Bombay, 1976.
16. Gail Omvedt, *Dalit Vision.* Orient Longman: New Delhi, 1996 first Published 1995.

Suggested Readings

1. Geeta, V., Rajdurai 1993 "Dalits and Non-BrahminConsciousness in ColonialTamil Nadu" *Economic and Political Weekly*,28(39), September 25.
2. *George Mathew, "Will Reservation Ensure Participation."* Social Welfare: *42 (5-6): August-September, 1995.*
3. Harish K. Puri, (ed.) *Dalits in Regional Context. Rawat*: New Delhi, 2004.
4. *J. Mencher, "The Caste System Upside Down,"* Current Anthropology*: 15: 469-93: 1974.*
5. J.Massey, *Downtrodden: The Struggle of Indian Dalits for Identity, Solidarity and Liberation.* WCC Publications: Geneva, 1997.
6. Jaffrelot, Christophe, *Dr.Ambedkar and Untouchability*. Permanent black: New Delhi, 2004.
7. Mark Juergensmeyer, *Religious Rebels in Punjab: The Social Vision Of Untouchables*. Ajanta: Delhi, 1988.
8. Michael Mahar, (ed) *The Untouchables in Contemporary India*. University of Arizona press, 1972.
9. *N.S.Gehlot, "Dr. Ambedkar, Mahatma Gandhi and Dalit movement,"* Indian Journal of Political Science, *54(3-4): July-December 1993.*
10. *Pradeep Kumar, "Reservation within Reservations: Real Dalit Bahujans,"* Economic and Political Weekly, *15 September 2001, 3305-3307.*
11. *Ramaswamy R. Iyer, "Towards Clarity on Reservation Question,"* Economic and Political Weekly, *26(9) and 10: 2-9 March 1991.*
12. Ramnarayan Rawat, "Making Claims for Power: A New Agenda In Dalit Politics of Uttar Pradesh, 1946-48", Modern Asian Studies, Vol. 37, No. 3, 2003.
13. *Ronki Ram, "From servitude to assertion: Ambedkar's Subalterns Approach to Nationalism and Dalit liberation."* Social Sciences Research Journal, *Vol. 9, November 2, 2001, p.160.*
14. Rosalind O' Hanlon, *Caste, Conflict and Ideology: Mahatma Phule and Low Caste Protest in the 19th Centurary*, CUP, 1985.
15. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution.The Bahujan Samajwadi Party in Uttar Pradesh.*, Sage : New Delhi, 2002.
16. *V. Geetha, and S.V. Rajadurai. "Dalits and non-Brahmin Consciousness in Colonial Tamil Nadu*." Economic and Political Weekly, *28(3): 25 September 1993.*
17. *V. Jha, "Stages in History of Untouchables,"* Indian Historical Review, *2: 1975: 14-31*.
18. Valrian Rodrigues, (ed) *The Essential Writings of B.R. Ambedkar*, Oxford: New York,2002.
19. *Webster, John C.B. "Understanding the Modern Dalit Movement."* Sociological Bulletin *45 (2): September 1996.*

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) : FEMINIST POLITICAL THEORY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course aims to introduce students to the major interventions of feminism in political theory. After introducing students to the feminist critique of mainstream political theory and the key conceptual categories in feminism, this course in the latter units examines 5 main issues to understand the major debates within various strands of feminism.

Unit-I

Feminism and the redefinition of the Political.
Feminist critiques of mainstream political theory.

Unit-II

Key Feminist concepts—Patriarchy, Sex-Gender distinction, Production and Reproduction.
Destabilizing the category of 'woman'.

Unit-III

Key Issues in Feminist theory 1.
Abortion.
Pornography.

Unit-IV

Key Issues in Feminist theory 2.
Race/Religion/Culture.
Anti-Militarism.

Reading List

1. Anne Philips, *Engendering Democracy*, Cambridge, Polity Press, 1991.
2. Allison Jagger, *Feminist Politics and Human Nature*, Rowman & Allanheld, 1983.
3. Judith Butler, *Gender Trouble : Feminism and the Subversion of Identity*, New York, Routledge, 1990.
4. Carole Pateman, *The Sexual Contract*, Stanford University Press, 1989.
5. Iris Marion Young, *Justice and the Politics of Difference*, Princeton University Press, 1990.
6. Kate Millet, *Sexual Politics*, Granada Publishing, 1969.
7. Simone de Beauvoir, *The Second Sex*, 1949 (translated by H.M. Parshley, Penguin 1972).
8. Germaine Greer, The Female Eunuch, 1970.
9. Nancy Fraser and Linda J. Nicholson, Social Criticism without Philosophy : An Encounter between Feminism and Postmodernism in *Theory Culture Society*, 1988; 5.
10. Susan Moller Okin : *Women in Western Political Thought*, Princeton, Princeton University Press, 1979.

Option (b) : MAJOR THEMES IN RECENT POLITICAL PHILOSOPHY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the questionpaper as follows:
The syllabus has been divided into four units.
There shall be 9 questions in all.

The first question is compulsory and shall be short answer type containing 15 short questions spread over the wholesyllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each.

Rest of the paper shall contain 4 units. Each unit shall have two questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course is intended to be a companion to the compulsory courses on Western Political Thought and Key Concepts in Political Theory. It carries forward the discussion by focusing on themes and concerns which have occupied debates particularly since the late twentieth century.

Unit-I

1. Environmentalism.
2. Pacifism.

Unit-II

3. Feminism.
4. Multiculturism.

Unit-III

5. Neo-liberalism.
6. Post Marxism.

Unit-IV

7. Postcolonialism.
8. Postmodernism.

ESSENTIAL READINGS:

Relevant portions from the following textbooks and histories:

1. Colin Farelly, Contemporary Political Theory, Sage, 2004.
2. Gerald F. Gaus and ChandranKukathas, Handbook of Political Theory, Sage, 2004.
3. R.E. Goodin and P. Petit, A Companion to Contemporary Political Philosophy, Blackwell, 1995.
4. Terence Ball and Richard Bellamy (ed.), The Cambridge History of Twentieth Century Political Thought, Cambridge University Press (CUP), 2003.
5. Will Kymlicka, Contemporary Political Theory : An Introduction, OUP, 2002

SUGGESTED READINGS

Environmentalism:

6. John Dryzek and Scholberg, Debating the Earth : The Environmental Politics Reader, OUP, 1998.
7. Lorraine Eliot, Global Politics of Environment, Macmillan, 1998.
8. Ramchandra Guha and Juan Martinez-Alier, Varieties of Environmentalism: Essays on North and South, OUP, 1998.

Pacifism:

9. Allen Eickelmann, Eric Nelson and Tom Lansford, Violence, Pacifism and Cultural Transformation, Ashgate, 2005.
10. Peter Brock and Nigel Young, Pacifism in the Twentieth Century, Syracuse Univ. Press, 1999.

Feminism:

11. Alison Jaggar and Iris Marion Oung (ed.), A Companion to Feminist Philosophy, Blackwell, 1998.
12. Anne Phillips (ed.), Feminism and Politics, OUP, 1998.
13. Judith Butler and J.W. Scott (ed.), Feminists Theories : The Political, Routledge, 1992.

Multiculturalism:

14. Bhikhu Parekh, Rethinking Multiculturalism, Palgrave, 2006.
15. GurpreetMahajan, The Multicultural Path, Sage, 2002.

Neoliberalism:

16. Alfredo Saad-Filho and Deborah Johnson (eds.), Neo-Liberalism: A Critical Reader, Pluto Press, 2005.
17. David Harvey, A Brief History of Neo-Liberalism, OUP, 2005.

Post- Marxism:

18. Stuart Sim, Post Marxism: An Intellectual History, Routledge, 2000.

Postmodernism:

19. David Harvey, TheCondition of Postmodernity, Basil, Blackwell, 1989.
20. David Lyon, Postmodernity, Viva Books, 2002.

Postcolonialism:

21. Bill Ashcroft, Gareth Griffins and Helen Zigfin (eds.), The Postcolonial Studies Reader,Routledge, 2006.
22. ZiauddinSardar, Orientalism, Viva Books, 2002

Option (c) : READINGS IN THE PHILOSOPHY OF RESISTANCE AND LIBERATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on original texts. It seeks to study the ideas of resistance through the writings of the following Political Philosophers :

Unit-I

Gandhi : *Hind Swaraj* (1909), (Ahmedabad, Navjivan Trust, 1938).

Unit-II

Frantz Fanon : *The Wretched of the Earth* (London, Pluto Press, 1986).

Unit-III

Ernesto Che Guevara : *The Guerrilla Warfare*, with an Introduction and Case Studies by Brian Loveman and Thomas M. Davies, JR. (Lanchester University Press, 1985).

Unit-IV

Stokely Carmichael : *Black Power: The Politics of Liberation in America*, 1967.

Suggested Readings

1. Horace B. Davis, "Social Classes and the Formation of Nations : Fanon, Cabral and the African National Struggle" in Horace B. Davis, *Toward A Marxist Theory of Nationalism* (New York, Monthly Review Press, 1978, pp. 202-239).
2. Homi Bhabha, "Remembering Fanon: Self, Psyche and the Colonial Condition", Foreword to Frantz Fanon, *Black Skin, White Masks* (London, Pluto Press, 1986).
3. Irene Gentizier, *Frantz Fanon – A Critical Study* (New York, Vintage, 1973).
4. Renate Zahar, *Frantz Fanon : Colonialism and Alienation* (New York, Monthly Review Press, 1975).
5. Aristide R. Zolberg, "Frantz Fanon" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).

6. Ashis Nandy, "Oppression and Human Liberation: Towards a Post-Gandhian Utopia", in Thomas Pantham and Karl Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage Publications, 1986).
7. Anthony J. Parel (ed.), *Hind Swaraj and Other Writings*, Cambridge University Press, New Delhi, Foundation Books, 1997).
8. Donald C. Hodges (ed.), *The Legacy of Che Guevara* (London, Thames and Hudson, 1977).
9. Michael Lowy, *The Marxism of Che Guevara : Philosophy, Economics and Revolutionary Warfare*, (New York, Monthly Review Press, 1973)
10. Renneth Minogue, "Che Guevara" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
11. George Feaver, "Black Power", in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
12. Stokely Carmichael, "Black Power", in David Cooper (ed.), *The Dialectics of Liberation*, Harmondsworth, Penguin, 1968.
13. Frantz Fanon, *The Wretched of the Earth* (Harmondsworth, Penguin, 1967).
14. Deborah Wyrick, *Fanon for Beginners* (Hyderabad, Orient Longman, 1998).
15. Sergio Sinay, *Che for Beginners* (Hyderabad, Orient Longman, 1997).

Option (d) : CONTEMPORARY DEBATES IN THE 20TH CENTURY MARXISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to familiarize students with the Marxist engagement with critical issues in the late twentieth century.

Unit-I

Structure and Agency : Marxian Debates.

Unit-II

Feminism and Marxism : Production, Reproduction and Power.

Unit-III

Environmentalism and Marxism, Capitalism, Colonialism, Socialism and Environmental Degradation.

Unit-IV

Nationalism, Internationalism and Marxism.
Globalization and Marxist Critique.

Readings :

(Students are expected to consult the journals *Monthly Review, New Left Review* and *Socialist Register* regularly).

1. Groz, A., *Farewell to the Working Class*, Pluto Press, London, 1982.
2. Barret, Michele, *Women's Oppression Today : Problems in Marxist Feminist Analysis*, Verso, London, 1980.
3. Landes, Joan, 'Marxism and the Women Question' in Sonia Kruks, Rayana Rapp and Marilyn B. Young (ed.), *Promissory Notes : Women in the Transition to Socialism*, Monthly Review Press, New York, 1989.
4. Mies, Maria, *Patriarchy and Accumulation on a World Scale*, Zed Books, London, 1986.
5. Mies, Maria, 'World Economy, Patriarchy and Accumulation' in Nelly Stromquist (ed.), *Women in the Third World*, Garland, New York, 1998.
6. Bahro, Rudolph, *From Red to Green*, 1984.
7. Foster, John Bellamy, *The Vulnerable Planet, A Short Economic History of the Environment*, Monthly Review Press, New York, 1994 (Indian Reprint) Cornerstone Publication, Kharagpur, 1999.
8. Foster, John Bellamy, *Marx's Ecology : Materialism and Nature,* Monthly Review Press, New York, 2000.
9. Harvey, David, 'The Nature of Environment : Dialectics of Social and Environmental Change' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Marlin Press, London, 1993.
10. Pratt, Larry and Wendy Montgomery, 'Green Imperialism, Pollution, Penitence, Profits in Leo Panitch (ed.), *Socialist Register*, Marlin Press, London and K.P. Bagchi & Compnay, Calcutta, 1997.
11. Davis, Horace B., *Toward a Marxist Theory of Nationalism*, Monthly Review Press, New York, 1978.
12. Lowy, Michael, 'Why Nationalism?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Marlin Press, London, 1993.
13. Munck, R., *The Difficult Dialogue, Marxism and Nationalism*, Zed, London, 1986.
14. Magdoff, Harry, 'Globalisation –To What End?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Merlin Press, London, 1992.

Option (e) : INTRODUCING FEDERALISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces certain key concepts and issues in federalism. The aim of the paper is to enable the student to obtain a broad perspective on federalism in a comparative perspective and to evaluate its utility as a tool for accommodating diversity.

Unit-I

The Essence of the Federal Idea.
Core features of Federations.
Models and variants of Federalism : Successive Waves.
Presidential and Parliamentary variant.

Unit-II

Approaches and Paths to Federalism.
Institutionalist Explanations of Origins.
Society-Centred Theories.
The William Riker- Alfred Stepan debate.

Unit-III

Federal Democracy and the Articulation of Diversity.
Federalism as a device for accommodating groups and interests.
Centralisation and Decentralisation in Federal Systems.
Asymmetric Federalism : India and Canada.

Unit-IV

The Making and Unmaking of Federal Systems.
Stress and Strains of Federalism : Failed Federations : USSR, Czechoslovakia, Yugoslavia.
New, Emerging, Incipient and Federal-type Solutions : South Africa, Belgium, Spain, Sri Lanka and the European Union.
Relevance of Federalism in a globalising world.

Readings

1. Alfred Stepan, "Federalism and Democracy : Beyond the US Model," *Journal of Democracy,* 1999, 10 : 4, 19-34.
2. Alfred Stepan, "Russian Federalism in Comparative Perspective," *Post-Soviet Affairs,* 2000b, 16 : 2, 133-176.
3. Alfred Stepan, *Arguing Comparative Politics* (Oxford : Oxford University Press, 2001).
4. Andrea Bosco (ed.), *The Federal Idea : The History of Federalism Since 1945* (London: Lothian Foundation Press, 1992).
5. Arendt Lijphart, 1977, *Democracy in Plural Societies: A Comparative Exploration*, New Haven, London, Yale University Press.
6. Arend Lijphart, Ronald Rogowski and R. Kent Weaver, "Separation of Powers and Cleavage Management," in *Do Institutions Matter,* R. Kent Weaver and Bert A. Rockman (Brookings, 1997), 302-344.
7. Balveer Arora, and Douglas V. Verney, 1995, *Multiple Identities in a Single State : Indian Federalism in Comparative Perspective,* New Delhi : Konark Publishers.
8. Bertus de Villiers (ed.), *Evaluating Federal Systems* (Cape Town : Jutta & Co., 1994).
9. Birch, A.H., 'Approaches to the Study of Federalism,' *Political Studies,* 1966, 14(1), 15-33.
10. C.D. Tarlton 1965, "Symmetry and Asymmetry as Elements of Federalism : A Theoretical Speculation," *The Journal of Politics,* 27.
11. Carol Skalnik Leff, "Democratization and Disintegration in Multinational States : The Break up of the Communist Federations," *World Politics,* 1999, 51, 205-35.
12. Daniel J. Elazar, "From Statism to Federalism - A Paradigm Shift," *International Political Science Review,* 1996 17(4), 417-429.
13. Daniel J. Elazar, "International and Comparative Federalism," *PS : Political Science and Politics,* 1993 (June).
14. Daniel J. Elazar, Federalism, in David Sills (ed.), *International Encyclopaedia of Social Sciences* (New York : Macmillan, 1968) 353-367.
15. Daniel J. Elazar, *Exploring Federalism* (Tuscaloosa : University of Alabama Press, 1987).
16. Graham Smith (ed.), *Federalism : The Multiethnic Challenge* (New York : Longman, 1995).
17. Graham Smith, "Russia Multiculturalism and Federal Justice," *Europe-Asia Studies,* 1998, 50(8), 1393-1411.
18. J. Coakley, 1994, "Approaches to the Resolution of Ethnic Conflict : The Strategy of Non-territorial Autonomy", *International Political Science Review,* Vol. 15, No. 3: 297-314.
19. Juan Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation : Southern Europe, South America and Post-Communist Europe,* (Baltimore, Johns Hopkins University Press, 1996).
20. Juan Linz and Alfred Stepan, "Political Identities and Electoral Consequences : Spain, the Soviet Union and Yugoslavia," *Daedalus,* 1992, 121.
21. Ivo Duchacek, *Comparative Federalism,* (Lanham Md : Reissued by University Press of America, 1987).
22. K.C. Wheare, *Federal Government,* Second Edition, London and New York : Oxford University Press, pp.1-34 (1951).

23. Michael Burgess and Alain-G. Gagnon (ed.), *Comparative Federalism and Federation* (Harvester: Wheatsheaf) (1993).

24. Michael Stein (1971), "Federal Political Systems and Federal Societies", in J. Peter Meekison (ed.), Canadian Federalism : Myth or Reality?, Second Edition, Toronto: Methuen, 37-48.

25. Peter C. Ordershook, "Russia's Party System : Is Russian Federalism Viable?" *Post-Soviet Affairs,*1996, 12(3), 195-217.

26. Richard Gunther and Anthony Mughan, "Political Institutions and Cleavage Management" in *Do Institutions Matter,* R. Kent Weaver and Bert A. Rockman (Brookings), 1997, 272-301.

27. Robert Agranoff (ed.) (1999), *Accommodating Diversity : Asymmetry in Federal States,* Baden-Baden: Nomos.

28. Robert Sharlet, "The Prospects for Federalism in Russian Constitutional Politics," *Publius* 1994, 24 (Spring), 115-127.

29. Ronald L. Watts, "Canada : Three Decades of Periodic Federal Crises," *International Political Science Review,* 1996 17(4), 353-371.

30. Ronald L. Watts, "Intergovernmental Relations : Conceptual Issues", in Norman Levy and Chris Tapscott (ed.), *Intergovernmental Relations in South Africa : The Challenges of Co-operative Government* (West Cape : IDASA, 2001) 22-42.

31. Ronald L. Watts, *Comparing Federal Systems in the 1990s* (Institute of Intergovernmental Relations, Queens University Ontario, 1999).

32. Ronald L. Watts, "Asymmetrical Decentralization : Functional or Dysfunctional", *Indian Journal of Federalism,* 2004, 1-42.

33. Steven Solnick, "Will Russia Survive? Centre and Periphery in the Russian Federation," in Barnett R. Rubin and Jack Snyder (ed.), *Post-Soviet Political Order : Conflict and State Building* (London: Routledge, 1998), 58-80.

34. William Riker, "Federalism", in Fred I. Greenstein and Nelson W. Polsby (eds.), *Handbook of Political Science : Governmental Institutions and Processes,* Vol. 5 : (Reading : Addison-Wesley, 1975), 93-172.

35. William S. Livingston (1952), "A Note on the Nature of Federalism", *Political Science Quarterly,* 67, 81-95.

36. Peter C. Ordeshook and Olga Shvetsova, "Federalism and Constitutional Design", *Journal of Democracy,* 8.1 (1997) 27-42.

Option (f) : PUBLIC INTERNATIONAL LAW-II

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This paper introduces the students to certain specific subjects and the recent trends of Public International Law.

Unit-I : States in general

State Territory :

Land Territory, National Waters, Territorial Sea, Air-Space and Subsoil under Earth, Modes of acquiring and losing State Territory.

State Jurisdiction :

Territorial Jurisdiction
Jurisdiction on High Seas
Jurisdiction on Aircraft
Jurisdiction on Antarctica and Outer-Space

Unit-II : Law of the Sea

The First and the Second United Nations Conference on the Law of the Sea

Third United Nations Conference on the Law of the Sea (UNCLOS III)

Convention on the Law of the Sea, 1982

Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (1994).

Unit-III : Individual in International Law

Nationality
Aliens
Extradition
Asylum
Human Rights

Unit-IV : Recent Trends

Recent Trends and the changing structure of International Law

Feminist Perspectives of International Law

Some new approaches to the study of International Law

The conflicts of Political Ideologies and the universality of International Law with particular reference to the Communist Approach to International Law, the Third and Fourth World Countries and International Law.

Books Recommended

1. Stark, J.G., *Introduction to International Law,* Butterworths, 1963.
2. Wolfgang Friedmann, *The Changing Structure of International Law,* Columbia University Press, 1964.
3. Gerhard Von Glahn, *Law Among Nations : An Introduction to Public International Law,* Longman, 1966.
4. D.P. O'Connell, *International Law,* Stevens and Sons, 1965, 2 Vols.
5. Richard A. Falk, *The Status of Law in International Society,* Princeton University Press, 1970, pp 447-539.
6. Anand, R.P., *Asian States and the Development of Universal International Law,* Vikas, 1972.
7. Anand, R.P., *New States and International Laws,* Vikas, 1972.
8. Ian Brownlie, *Principles of Public International Law,* Oxford University Press, 1973.
9. Grigory Tunkin, *Contemporary International Law,* Progress Publishers, 1969.
10. Corbett, P.E., *The Growth of World Law,* Princeton, 1971.
11. Quincy Wright, *Contemporary International Law : A Balance Sheet,* Random House, 1963.
12. *Journals :* (i) American Journal of International Law
    (ii) Indian Journal of International Law
13. Dallmeyer, G. Droninda (ed.), Reconceiving Reality : Women and International Law, American Society of International Law, 1999.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. PUBLIC ADMINISTRATION (Semester System)

EXAMINATIONS, 2017-2018

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

Note :

A candidate for M.A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he/she has completed the prescribed courses in an affiliated college or the department concerned of this University.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES OF Public Administration

(Semester System)

1. (i) Terminal Evaluation 80%
   (ii) Continuous Assessment 20%
   (iii) Continuous Assessment may include Written Assignment, Snap Test, Participation in class discussions , Term Paper, Attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:
      (a) Written Test (one per semester): 25 (reduced to 5)
      (b) Snap Test : 25 (reduced to 5)
      (c) Term Paper/s : 25 (reduced to 5)
      (d) Participation in Class Discussions: 15 (reduced to 3)
      (e) Attendance: 10 (reduced to 2)*

   Total: 100 reduced to 20 (50 will be reduced to 10 in case of papers with Max Marks 50)

   *Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

   Attendance Component Mark/s for Theory Papers
   (a) 75% and above up to 85%: 1
   (b) Above 85%: 2

2. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the subject and, thus he/she shall have to secure pass marks total of Internal Continuous Assessment and University examinations.

3. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the examination on the Performa obtainable from the Examination Branch.

4. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes will be shown separately in the Detailed-Marks-Card (D.M.C.)

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF PUBLIC ADMINISTRATION FOR M.A.(PBLIC ADMINISTRATION) SEMESTER SYSTEM (2017-18)

The M.A. Programme in Public Administration is job oriented, multi-disciplinary and the Curriculum integrates theoretical and practical perspectives in the field of Public Administration. The sequence of the courses has been scientifically planned in a manner that they constitute building-blocks for four groups of specialization.

The Programme is being run on Semester System. Each paper is of four (4) credits except for papers V and VI in Semester I and Semester II that are of two (2) credits each. A candidate must successfully complete 20 credits at the end of 2nd Semester to join the 3rd Semester and 28 credits at the end of the 3rd Semester to enable him to join the 4th Semester. There will be six contact hours per week (4 lectures and two tutorials per 4 credits).

The specialized groups are:

Group A: Applied Development Administration (with special reference to India)
Group B: Economic Administration (with special reference to India)
Group C: Human Resource Management (with special reference to India)
Group D: Administrative Management (with special reference to India)

Pedagogy: The pedagogy is designed to nurture the attributes of intellectual inquiry, scholarship, research and writing. This will include lectures, seminars, class discussion, term papers and other writing assignments, presentations,role play, case studies, field visits etc. and will be Information and Communication Technology supported.The use of this methods should equip the student with listening,writing and presentation skills along with the capacity for analysis and evaluation .Peer evaluation, people skills,navigating public spaces,leadership and team workwill be the skills expected to develop and to ready the student for the world of work.

Semester-I

Papers

I Administrative Theory
II Organisational Behaviour
III Public Financial Administration
IV Public Personnel Administration
V Indian Economic System
VI Indian Social System

Semester-II

Papers

I Administrative Thought
II Research Methods
III Public Policy and Administration
IV Administrative Law
V Indian Political System
VI Indian Administrative System

Semester-III

Note: Students of all the Groups have to take a total of 5 papers including the 3 compulsory papers.

Papers

I Development Administration **(Compulsory for all groups)**

Group A: Applied Development Administration (with special reference to India)

II Social Policy and Welfare Administration **(Compulsory)**
III People's Empowerment and Rural Governance **(Compulsory)**
IV Disaster Management
V Administration of Non-Government Organisations
VI Public Health Policy and Administration
VII Comparative Public Administration
VIII Dissertation

Group B: Economic Administration (with special reference to India)

II Economic Administration **(Compulsory)**
III Company and Cooperative Law **(Compulsory)**
IV Human Resource Management
V Financial Management
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Group C: Human Resource Management (with special reference to India)

II Social Policy and Welfare Administration
III Labour Economics **(Compulsory)**
IV Human Resource Management **(Compulsory)**
V Administration of Non-Government Organisations
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Group D: Administrative Management (with special reference to India)

II Administrative and Office Management **(Compulsory)**
III Management of Disciplinary Proceedings
IV Human Resource Management
V Administration of Non-Government Organisations **(Compulsory)**
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Semester –IV

Note: Students of all the Groups have to take a total of 5 papers including the 3 compulsory papers.

Papers

I Emerging Areas in Public Administration **(Compulsory for all groups)**

Group A: Applied Development Administration (with special reference to India)

II Education Policy and Administration **(Compulsory)**
III People's Empowerment and Urban Governance **(Compulsory)**
IV Police Administration
V International Administration
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group B: Economic Administration (with special reference to India)

II Public Enterprise Management **(Compulsory)**
III Marketing Management
IV Industrial Relations
V Project Management **(Compulsory)**
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group C: Human Resource Management (with special reference to India)

II Labour Laws **(Compulsory)**
III Organisational Psychology **(Compulsory)**
IV Industrial Relations
V Labour Policy and Administration
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group D: Administrative Management (with special reference to India)

II Techniques of Administrative Improvement **(Compulsory)**
III Organisational Psychology
IV Industrial Relations
V Project Management
VI Information Technology and Computer Applications in Public Administration **(Compulsory)**
VII Ethics in Public Administration

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-18)
Semester-I

Paper I – Administrative Theory

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper will familiarize the students with the basic concepts of Public Administration in developed and developing countries. In addition, the course will also cover new areas and developments in the field of Public Administration particularly E-Governance, Good Governance, New Public Administration. The paper will also cover various theories of organization.Apart from regular classroom teaching ,special talks/lecturesfrom experts as well as practitioners from the civil service will be organized to establish links between theory and practice and develop student's critical skills.

UNIT-I

Nature, Scope and Role of Public Administration in Developed and Developing Countries.
Evolution and Development of Public Administration: New Public Administration; New Public Management; Public Choice and Principle Agent Theories.

UNIT-II

Theories of Organisation: Classical, Bureaucratic, Human Relations, Behavioural and Systems.
Principles of Organisation: Hierarchy, Span of Control, Unity of Command, Communication, Centralisation and Decentralisation.

UNIT-III

The Chief Executive: Types, Functions and Role.
Line and Staff Agencies; Headquarter and Field relationships.
Accountability of Administration – Legislative, Executive and Judicial.

UNIT-IV

Citizen and Administration Interface: Concept and Philosophy; Citizen Charter
Administrative Reforms: Concept and Philosophy.
Good Governance – Concept and Rationale
E – Governance: Concept; Rationale; Significance.
Performance Measurement in Government

List of Readings

Arora,R.K. (Ed.).(1979*). Perspective in Administrative Theory*. New Delhi: Associated.

Bhambri, C.P.(2010).*Public Administration Theory and Practice (*21th ed.).Meerut: Educational Publishers.

Bhattacharya, M. (2000). *Public Administration*. Calcutta: World Press.

Blumenthal, S.C. (1960). *Management Information System*: *A Framework for Planning and Development*, (5th ed.). Englewood Cliffs NJ: Prentice Hall.

Drucker, P. F. (1999*). Management: Tasks, Responsibilities, Practices*. Bombay: Allied Publishers.

Etzioni, A. (1995). *Modern Organizations* New Delhi: Prentice Hall.

Golembiewsky, R.T. (1977). *Public Administration as a Developing Discipline* (2nd ed.). New York: Marcel, Publisher CRC Press.

Government of India, Cabinet Secretariat.*Performance Management*. Retrieved from http://performance.gov.in/RFD.html

Gross, B. (1964.). *The Managing of Organisations*. London: Free Press.

Henry, N. (2012). *Public Administration and Public Affairs* (12th ed.). New Jersey: Prentice Hall.

Herseay, P., & Blanchard, K.H. (2007). *Management of Organisational Behaviour*: (5th ed.)

New Delhi.

Hicks, H. G., & Gutlet, R. C. (2008). *Organisations : Theory and Behaviour* (2nd ed.) New York: McGraw Hill.

Kaushik, S.L.,& Sahni, P. (Eds.). (1983). *Public Administration in India: Emerging Trends*. Allahabad: Kitab Mahal.

Koontz, H. & O'Donnell, C. (1986). *Principles of Management*. 4th edition. Tokyo: McGraw Hill.

Krislov, S. (2010). *Representative Bureaucracy*.Englewood Cliffs, NJ: Prentice Hall.

Newman, W.M., Summer, C., & Warren, E. (1976*). Management: Concepts, Behaviour and Practice* New Delhi: Prentice Hall.

Nigro, F. A., & Nigro, C. (1989). Modern Public Administration (7th ed.). New York: Lloyd Harper and Row.

Niskanen, W. A. (2007). *Bureaucracy and Representative Government*. Chicago: Atherton.

Osborne, D., & Gaebler, T. (l993). *Re-inventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. New York: Addison Wesley.

Pfiffiner, J., & Sherwood, F. (1984). *Administrative Organization*. New Delhi: Prentice Hall.

Tullock, G. (1987). *The Politics of Bureaucracy*. Washington, DC: Public Affairs Press

Vickers, J.S., & Yarrow, G. K. (1997). *Privatization: An Economic Analysis* (7th ed.). Cambridge: MIT Press.

Paper II – Organisational Behaviour

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper:

The paper will help the student develop an understanding of human behavior in the workplace from an individual , group and organizational perspective .Course material will be supplemented by activities like role play, case study discussions and interaction with experts .Public speaking, critical thinking, group work, presentation skills will be developed during these activities**.**

UNIT-I

Organization Behaviour: Concept and Rationale.
Organisational Goals: Concept; Types.
Management by Objectives: Concept; Rationale; Steps.
Team building: Concept; Types of Teams.

UNIT-II

Decision Making: Concept; Types and Process.
Leadership: Concept; Theories – Trait; Situational; Behavioural.
Motivation: Concept; Theories – Needs Hierarchy; Motivation –Hygiene; Theory X-Theory Y.

UNIT-III

Group Dynamics: Concept, Types and Dynamics of Group Formation.
Conflict and Negotiations: Concept, Rationale and Strategies.
Organisational Change: Concept; Process; Resistance to change.

UNIT-IV

Foundations of Organizational Structure: Designing and contingent Factors.
Organisational Effectiveness: Concept and Approaches.
Organisational Development: Concept and Rationale.

List of Readings

Blanchard,K. and Blanchard,H.(2009). *Management of Organisational Behaviour*(9th ed.).Washington: Pearson Higher Education.

Cook,C., Hunsaker, P., & Coffey, R.(2001)., *Management and Organisational Behaviour* .New York: McGraw Hill.

Davis,K., Newstrom ,J.W.et al.(2010). *Organisation Behaviour: Human Behaviour at Work* (13th ed.). New York: McGraw Hill.

Hofstede,G., & Garratt,B.(2003).*Cultures and Organisations: Inter Cultural Cooperation and its Importance for Survival* .New York: Profile Books.

Judge,T.(2009) .*Concepts, Controversies and Applications*(13th ed.) .New Delhi: Pearson

Mcshane,S.,& Glinow,M.V.(2009). *Organisation Behaviour*(5th ed.). New York: McGraw Hill.

Nicholson,N.(1988).*Encyclopaedic Dictionary of OB.London*: Blackwell Publishers.

Saiyadain, M.S.(2006). *Organisational Behaviour*(2nd ed.). New Delhi: Tata McGraw Hill.

Paper III – Public Financial Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper seeks to familiarize the students of Public Administration regarding various aspects of financial administration, particularly Budgeting in India. In addition, the students would be made aware of the role of Comptroller and Auditor General, mobilisation of resources and fiscal federalism.Diverse teaching pedagogies like class room lectures,discussion,seminars, budgeting excercises etc. will be used to deliver course content.At the end of the course, the student will be able to present reports and develop analytical skill regarding the monetary and fiscal system in India.

UNIT-I

Meaning and Significance of Public Finance and Public Financial Administration.
Budget: Concept, Principles and Budget as an Instrument of Financial Administration, Public Policy and Management.

UNIT-II

Concept and Types of Budgets: Traditional Budgeting; Performance Budgeting, Zero-Base Budgeting.
Budget Preparation, Authorisation and Execution with special reference to India.

UNIT-III

Union Ministry of Finance : Organisation, Functions and Role
Significance of Monetary and Fiscal Policy
Union-State Financial Relations
Finance Commission; Composition, Role and functions.

UNIT-IV

Legislative Control over Finances with special reference to parliamentary committees.
Concept of Audit: Role of Comptroller and Auditor General.
Resource Mobilization: Tax and Non-Tax Sources, Public Borrowings and Deficit Financing

List of Readings

Burkhead. J. (1956). *Government Budgeting*. New York: Wiley Sons.

Chand, P. (2010). *Control of Public Expenditure in India* (2nd ed.).New Delhi: Allied Publishers.
Chand, P. (2010). *Performance Budgeting* (2nd ed.). New Delhi: Allied Publishers.
Gupta, B.N. (2006). *Indian Federal Finance and Budgetary Policy*. Allahabad: Chaitanya Publishing House.
Indian Administrative Reforms Commission. (1969).*Report on:* (i)*Financial Administration (ii)Finance, Accounts and Audit (iii)Centre-State Relations.* New Delhi: Manager of Publications, Government of India.
Indian Institute of Public Administration. (1983).Special Number on Administrative Accountability Vol.XXIX (3). New Delhi.
Lall, G.S. (1979). *Public Finance and Financial Administration in India*. New Delhi: Kapoor
Sury, M.M. (1990). *Government Budgeting in India.* New Delhi: Commonwealth Publishers
Thavaraj, M.J.K.. (2001). *Financial Administration in India* (6th ed.). (Delhi, Sultan Chand.

Paper IV – Public Personnel Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The syllabus of the paper attempts to familiarize the students with the concept of Public Personnel Administration, carrier systems and classification in India , various aspects of Human Resource Development ,civil services, rules of service,code of conduct and ethics,disciplinary action , negotiation machinery etc. Presentations, interactions with experts,case studies and discussions will be used for delivery of course content.The student will develop group work, leadership and analytical skills.

UNIT-I

Meaning and Significance of Public Personnel Administration
Role of Public Services
Career Systems – Concept and Types
Position Classification – Concept and Bases

UNIT-II

Concepts and Significance: Human Resource Development, Human Resource Planning, Recruitment, Training, Promotion and Performance Appraisal.

UNIT-III

Constitutional Provisions with regard to Civil Services in India
Pay Commissions in India
Union Public Service Commission (UPSC): Role and Functions

UNIT-IV

Administrative Ethics; Code of Conduct
Disciplinary Action
Employer-Employee Relations: Staff Associations and Union; Joint Consultative and Negotiation Machinery

List of Readings

Bhayana, S.S. and Singh S. (2016). *Public Personnel and Financial Administration* , 4th Ed. Jalandhar: New Academics.

Davar, Rustom S. (2008). *Personnel Management and Industrial Relations in India.* 2nd Edition. New Delhi: Vikas Publishing House.

Flippo, E. (2008). *Principles of Personnel Management.* 4th Edition. Kogakusha: McGraw Hill.

Goel, S.L. and Rajneesh, S. (2002). *Public Personnel Administration.* New Delhi: Sterling.

Government of India. (1988). *Report of the Commission on Centre-State Relations*. Nasik: General Manager.

Government of India, 2nd Administrative Reforms Commission . (2010). *10th Report: Refurbishing of Personnel Administration – Scaling New Heights.* New Delhi: Manager of Publications.

Koontz, H. and O'Donnell, Cyril.(2008). *Principles on Management*. , 5th Ed. Tokyo: McGraw Hill.

Pigors, P. and Myers, C.A. (1969). *Personnel Administration: A Point of View and a Method*. 6th Edition. Kogakusha: McGraw Hill.

Rouse, John E. (2008). *Public Administration in American Society*. Michigan: Gale Research.

Saxena, A.P. (2010). *Training and Development in Government*. New Delhi.

Stahl, O. Glenn. (1971). Public Personnel Administration. 6th Edition. New Delhi: Oxford and IBH Publishing.

United Nations. (2008). *New Approaches to Personnel Policy for Development*. New York.

Paper V – Indian Economic System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: Basic knowledge of Economics is pre-requisite for students to have better understanding of the subject of Public Administration .Thus the paper aims at making the students familiar with some of the core and relevant topics of Economic,especially their relevance for the student of administration.Learning outcomes also include some familiarity of the learners with select concepts of Economics and understanding of select field of Economics having bearing on Public Policy and Governance.Peadagogical tools will include lectures,Term Paper/Assignment, Presentations, Seminars and use of Information and Communication Technology.

UNIT-I

Relevance of Economics to Public Administration
Concepts: Market Mechanism, Perfect Competition, Monopoly, Monopolistic Competition, National Income
Concept and Features: Free Market Economy; Centrally Planned Economy; Mixed Economy

UNIT-II

Features of the Indian Economy
Growth and Structure of the Indian Economy
Indian Economic Reforms: Concept, Rationale and Evaluation

List of Readings

Ahuja, H. L.(2010).*Modern Economics* .New Delhi: S. Chand.

Dutt,R and Sundram, K.P.M.(2010).*Indian Economy* .New Delhi: S. Chand.

Halm, G.N.(1951).*Economic System-Comparative Analysis* .New York: Rinehart.

Koutsoyiannis, A.(1979).*Modern Micro-Economics*. Macmillan Press Ltd.

Lipsey, Richard G.(1971).*An Introduction to Positive Economics* .London: English Language Book Society.

Mote, V.L. and A,E.T.(1982).*Managerial Economics: Concepts and Cases* .New Delhi: Tata McGraw Hill.

Mukherji,S.(2003).*Modern Economic Theory* .New Delhi: Prentice Hall of India Pvt. Ltd.

Samuelson, Paul A.(2006).*Economics*. Tokyo: McGraw-Hill, New Delhi.

Shapiro, Edward.(2005).*Macro-Economics Analysis* .New Delhi: Galgotia Publications.

Stonier, Alfred W. & Hague, Douglas C.(2004).*A Text Book of Economic Theory* . Singapore: Pearson Education Pvt. Ltd. Indian Branch.

Paper VI – Indian Social System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper:

The endeavour is to make the student understand the multi-disciplinary nature of the subject of Public Administration and the relationship between Sociology and Public Administration.The students will be apprised about the basic concepts of social structure, social change in contemporary Indian Society and social tensions and their relevance in the field of Public Administration. Apart from the lecture methods, presentations and documentaries (audio-visual aids),case studies and special lectures by experts will be organized.The students will develop public speaking and analytical skills to understand Indian Society and link this with social policy and administration.

UNIT-I

Relevance of Sociology to Public Administration
Concept and Elements of Social Structure: Groups; Status and Role; Norms and Values.
Social Stratification: Caste, Class - Difference and Convergence.
Social Institutions: Marriage and Family.

UNIT-II

Social Change: Concept; Sources; Resistance
Social Change in Contemporary Indian Society
Social Tensions and Resolutions – Communalism, Regionalism and Violent Class Struggle

List of Readings

Dube, S.C.(2009).*Modernization and Development: The Search for Alternative Paradigms* . 2nd Ed.New Delhi: Sage Publishers,

Kuppuswamy, B.(2006).*Social Change in India.* Delhi:Konark Publisher Pvt. Ltd.

Mendelbaum ,David G.(1972).*Society in India* .Bombay: Popular Prakashan.

Moore, W.E.(1965).*Social Change* .New York: Prentice Hall.

Singh,Y.(1986).*Indian Sociology: Social Conditioning and Emerging Concerns* .New Delhi:Vistaar Publications.

Smelser, Neil J.(1970).*Introduction to Sociology.* New York: Willey.

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-2018)
Semester-II

Paper I – Administrative Thought

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper attempts to make the students of Public Administration aware of various theories and thoughts of various classical, neo-classical and modern thinkers in the area of administration and organization. The study of this paper will equip the students with the deep understanding of historical evolution of administrative thought, various conceptualizations and their application. Pedagogy will include lectures, assignment writing and presentations.

UNIT-I

Woodrow Wilson; F.W. Taylor;Henri Fayol; Luther Gulick and L. B. Urwick

UNIT-II

Max Weber; Elton Mayo; Mary Parker Follett; Chester I. Barnard

UNIT- III

Chris Argyris; Frederick Herzberg; Renesis Likert; Herbert A. Simon

UNIT-IV

Fred Riggs; Peter F. Drucker; Mahatma Gandhi; Kautilya

List of Readings

Allen, V.L. (1975). *Social Analysis.* London: Longman

Blau, P.M. (1987). Bureaucracy in Modern Society. New York: Random House.

Etzioni, A. (1964). *Modern Organisations*. New Delhi: Prentice Hall.

Foucault, M. (1975). *Discipline and Punishment*. Hammondsworth: Penguin.

George, C.S. (1974). *The History of Management Thought*. New Delhi: Prentice Hall.

Gross, B. (1968). Organisations and their Managing. New York: Free Press.

Hofstede, G. & Kassem, M.S. (1976). *European Contributions to Organisation Theory. Assen*:

Van Gorcum.

Jerzy, Z. (1922). *History of Social Thought*. West post: Greenwood.

Mouzelis, N.P. (2009). *Organization and Bureaucracy – An Analysis of Modern Theories*. London: Routledge.

Peters, T. (1994*). Liberation Management*.New York: Fawcett Columbine.

Pollard, H. R. (1978). *Further Development in Management Thought*. London Heinemann

Pollard, S. (1965). *The Genesis of Modern Management*. London: Arnold.
Prasad, D.R. & Prasad, V.S. (1989*). Administrative Thinkers*. New Delhi: Sterling.
Pugh D.S., Hickson D.J, & Hinings C.R.(2007). *Writers on Organisations* .Harmondsworth : Penguin.

Silverman, D. (2008). *The Theory of Organisations*. London: Heinemann.

Waldo D. (1948). *The Administrative State*. New York: Ronald.

Wren, D.A. (2009). *The Evolution of Management Thought*. New York: Ronald.

Paper II - Research Methods

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper aims to acquaint the student with the knowledge of philosophy, rationale and methodology of conducting good quality research in social sciences with special reference to Public Administration. The major objective of this paper is to prepare students for undertaking quality research at Masters' level in the form of Masters' Dissertation as well as subsequent research leading to the award of M.Phil/PhD Degree as well as pursuing research as a career. Enabling learners to look at contemporary relevant problems critically in the area of social science research, including Public Administration, and finding empirical solutions for the same. The course seeks to equip students in structuring research design, formulating research questions/hypotheses besides endowing them with the knowledge of how to collect data and analyze it with the help of suitable statistical techniques. The course also intends to train students in report writing. Pedagogy will include lectures, Term Paper/Assignment, Presentations, Seminars and Use of Information and Communication Technology. .

UNIT-I

Nature of Science and Scientific Method
Types of Research: Fundamental; Applied; Evaluative
Qualitative Research: Concepts and Significance
Basic Elements of Research - Research Problem: Selection and Formulation; Review of Literature;

UNIT-II

Concepts – Definition and Functions
Hypotheses: Definition; Features and Types and Testing Procedures
Research Design: Definition, Contents and Types
Survey Research and Case Study Method

UNIT-III

Sampling: Concept and Types
Methods of Data Collection: Documents, Observation, Interview and Questionnaire
Data Processing: Editing, Coding and Tabulation
Graphic Representation

UNIT-IV

Measures of Central Tendency: Mean, Median and Mode
Dispersion
Linear and Rank Correlation, Chi-Square ($\dot{x}^2$)
Report Writing

List of Readings

Bowley , A.L.(1937). *Elements of Statistics* .New York: Staples Press Inc.
Goode,W.J. and Hatt,P.K.(2006).*Methods in Social Research* .McGraw Hill Series.
Gupta, S.P.(2001).*Statistical Methods* .New Delhi: Sultan Chand and Sons.
Miller,D.C. and Salkind,N.J.(1981).*Handbook of Research Design and Social Measurement*. New Delhi: Sage .
Moser, C.A. and Kalton, G.(1993).Survey *Methods in Social Investigation*.London: The English Language Book Society and Heinemann .
Nachmias,D. & Nachmias,C.(1981).*Research Methods in the Social Sciences*. New York: St. Martin's Press.
Seltiz,C .& Cook,S.W.(1964). *Research Methods in Social Relations*. New York: Holt Rinehart and Winston.
Spiegal,M.R.(2008).*Theory and Problems of Statistics* .New York: Mc Graw-Hill .
Young,P.V.(2007).*Scientific Social Research and Surveys*.India: Asia Publishing House.

Paper III – Public Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Course: This core course on Public Policy comprehensively introduces the concept and significance of public policy, the history of policy sciences and the public policy process. At the end of the course the student will have an understanding of the growth of policy sciences, the significance and different stages of the public policy process in terms of the theoretical formulations as well as the working of this process with special reference to India.The pedagogical tools used will include lectures,case studies,policy analysis excercises,seminars and presentations.Thus, the student will develop critical understanding of the policy process as well as capacity to undertake policy analysis in substantive areas of public policy.

UNIT-I

Public Policy: Concept, Significance and Scope; Evolution of Policy Sciences
Policy Transfer: Concept, Rationale and Types: (Copying, Adaptation, Hybridization and Synthesis).
Policy Analysis: Concept and Significance; Approaches with special reference to the Incrementalist and Rationalist Paradigms

UNIT-II

Public Policy Making Process: Role of Legislature, Executive and Judiciary; Planning Machinery
Other Stakeholders in Policy-making: Political Parties, Interest Groups, Mass-media, Civil Society, and International Agencies.

UNIT-III

Public Policy Implementation, Monitoring and Control: Approaches to Policy Implementation; Role of Executive (with special reference to Bureaucracy), Legislature, Judiciary, Non-Governmental Organisations, Pressure Groups; Major Issues and Problems in Policy Implementation.

UNIT-IV

Policy Evaluation: Approaches to Policy Evaluation and Policy Impact; Criteria for Evaluation; Role of Staff, CAG, Parliamentary and Departmental Committees in Evaluation; Problems in policy evaluation.

List of Readings

Anderson, J E. (2005). *Public Policy Making*. Sixth ed. New York: Houghton Mifflin Co.

Ayyar, Vaidyanathan R V. (2009). *Public Policy Making in India*. N. Delhi: Pearson.
Basu, D.D. *Constitution of India*. 20th Edition. New Delhi: Prentice Hall of India.

Dolowitz, D.P. and Marsh, D. (January). Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance: An International Journal of Policy and Administration,* 13, No. 1, 5-24.

Dubhashi, P.R. (1986). Policy and Performance. New Delhi: Sage Publications.

Dye, T. (2002). *Understanding Public Policy*. New Delhi: Pearson Education Singapore (Pte) Ltd.

Henry, N. (2009). *Public Administration and Public Affairs*. Eleventh Edition. New Jersey: Prentice Hall.

Madan, K.D. et. al. (1982). *Policy Making in Government*. New Delhi: Publications Division, Government of India.

Mathur, K. (1996). *Development Policy and Administration*. New Delhi: Sage.

Munger, M.C. (2000). *Analysing Policy: Choices, Conflicts and Practices*. New York: W.W. Norton & Company.

Nagel, S.S.(1991). *Public Policy: Goals, Means and Methods*. NewYork: St. Martin Press.

Nedley, *A. Policy Transfer and the Developing-Country Experience Gap: Taking a Southern Perspective*. "n.d". http://www.york.ac.uk/ depts/poli/news/sem3esrc.htm.

Page, E.C. *Future Governance and the Literature on Policy Transfer Lesson Drawing*. "n.d". http://www.hull.ac.uk/futgov/Papers/EdPag Paper1.pdf)

Rabin J., Hidreth, W & Miller, G. (2007). Handbook of Public Administration . Third edition. Florida: Taylor & Francis Group.

Rose, R.(1993). *Lesson-Drawing in Public Policy: A Guide to Learning Across Time and Space*. New Jersey: Chatham House.

Sapru, R.K. *Public Policy: Art and Craft of Policy Analysis*. 2nd Edition. New Delhi: Prentice Hall of India learning.

Stone, D. *Learning Lessons, Policy Transfer and the International Diffusion of Policy Ideas*. "n.d" http:// poli.haifa.ac.il/~levi/res/stone-2000.pdf

Paper IV - Administrative Law

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Administrative Law is an integral part of Public Administration, a very significant ingredient to run the administration. The student is expected to develop an understanding of the various components of administrative law along with the principles of natural justice, Rule of Law, administrative legislation, adjudication and much more. In this paper the most important pedagogical toll is the study and analysis of case law. By the end of the course, a student should be able to specify the significance of administrative law, rule of law and the quasi-legislative, quasi-judicial procedures within administration.

UNIT-I

Meaning, Growth and Scope of Administrative Law
Distinction between Constitutional Law and Administrative Law
Droit Administratif
Concept of Rule of Law and Principles of Natural Justice

UNIT-II

Delegated Legislation: Need, Classification and Safeguards
Judicial Review of Administrative Action: Principles and Modes
Liability of the Administration; Contract and Tort

UNIT-III

Administrative Tribunals: Concept, Rationale and Types
Central Administrative Tribunal: Structure, Function and Role
Central Vigilance Commission: Structure, Functions, Role and Significance

UNIT-IV

Institution of Ombudsman: Concept and Genesis
Lok Pal and Lok Ayukta in India: Significance, Functions and Role
Fundamentals of Departmental Proceedings: Suspension, Charge sheet, Enquiry and Penalties.

List of Readings

Chhabra, S.(1990).*Administrative Tribunals* .New Delhi: Deep and Deep.
Diwan,P.(2007) .*Indian Constitution* . 2nd ed. Allahabad: Law Agency,.
Kagzi, M.C.J.(2008).*Indian Administrative law* . 2nd edition .Delhi: Metropolitan,.
Massey, I.P.(2008).*Administrative Law* .New Delhi: Eastern Book Company.
Mehta, S.M.(1990).*Indian Constitutional law* .New Delhi: Deep and Deep.
Sathe, S.P.(1998).*Administrative Law* . 6th Edition. Bombay: Tripathi,.
Sharma,S.K.(2007).*Directive Principles and Fundamental Rights* .New Delhi: Deep and Deep.
Swami,P.M.(1989).*Swami's Manual of Disciplinary Proceedings for Central Government Employees* .Madras:Swami Publishers.

Paper V – Indian Political System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50(out of which 10 marks are for internal assessment). Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.

- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper attempts to familiarize the students of Public Administration with the basic features of Indian Constitution, particularly those having relevance for the administrative set up in India. The students will also be familiarized with the institutions that make up the political system. Class room teaching, lectures by experts,seminars and field trips will form the pedagogical scheme of instruction.

UNIT-I

Unitary and Federal Features of the Indian Constitution
Political Executive at the Union Level: President, Prime Minister and Council of Ministers
Union Legislature - Lok Sabha and Rajya Sabha: Composition and Functions
Judiciary: Supreme Court; Judicial Review; Judicial Reforms.

UNIT-II

Stakeholders in the Political System: Political Parties; Pressure Groups; Interest Groups; Civil Society
Election Commission: Structure, Functions and Role
Electoral Reforms

List of Readings

Almond,G.A. and Coleman,J.S.(1966).*The Politics of Developing Area* .Princeton University Press.

Badyal, J.S.(1993).*Indian Political System* .Jalandhar: Sohal Lal Khanna, 5th ed.

Basu,D.D.(2008).*Introduction to the Constitution of India*.20th edition.New Delhi: Wadhwa and Company.

Hyman,H.H.(1972).*Political Socialization: A Study in the Psychology of Political Behavior* .New Delhi: American Publishing.

Narain,I (ed.)(1976).*State Politics in India* .Meerut, Meenakshi.

Palmer,N.D.(1961).*Indian Political System* .London: George Allen and Unwin Ltd.

Palmer,N.D.(1976).*Elections and Political Development: The South Asian Experience*.Vikas Publishing House.

Pye,Lucian.(1966).*Aspects of Political Developments*.Boston: Little Brown.

Paper VI – Indian Administrative System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50(out of which 10 marks are for internal assessment). Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units - Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.

- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The student will gain an understanding of the administrative set up and structure at the Centre level in addition to critical areas like headquarter field, centre –state relations and generalist/specialist relationship. The students will also be familiarized with the teaching, lectures by experts, seminars and field trips will form the pedagogical scheme of instruction.

UNIT-I

Central Secretariat: Structure, Functions and Role
Cabinet Secretariat: Significance, Functions and Role
Prime Minister Office: Significance, Functions and Role
Head Quarter- Field Relationships

UNIT-II

Centre-State Relations: Legislative and Administrative
Relationship between Political and Permanent Executive
Generalist and Specialist in Administration
Indian Administration: Problems and Challenges

List of Readings

Arora,R.K. and Goyal,R.(1997).*Indian Public Administration* .New Delhi: Vishwa Parkashan

Austin,G.(2009).*Indian Constitution* .Oxford: Claredon.

Avasthi and Avasthi.(2001).*Indian Administration* .Agra: Luxmi Narain Aggarwal.

Basu,D.D.(2008).*Introduction to the Constitution of India*.20th edition.New Delhi: Wadhwa and Company.

Maheshwari,S.(2001).*Indian Administration* . 6th edition .New Delhi: Macmillan.

Singh,H (ed.).(2008).*Indian Administration* .Jaipur: Aalekh Publishers.

Singh,M and Singh,H.(1989)*Public Administration in India* .New Delhi: Sterling Publishers.

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-18)

Semester III (Groups A, B, C and D)

Paper-I: Development Administration (Compulsory Paper for all Groups)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: In the third semester, the student will be exposed to the core area of Development Administration, besides being offered opportunities for pursuing individual applied areas of interest through elective courses. The aim of the paper is to provide introductory knowledge and skills needed to formulate, analyze and evaluate policy considerations, besides implementation, related to various dimensions of Development Administration. Through coverage of interdisciplinary topics students gain a holistic theoretical insight of the specialized areas of the course, namely, concept and significance of development, Sustainable Development and Development Administration, categorization of developing and developed worlds, planning, Public Enterprises, Population, United Nations, Role of Bureaucracy, Administrative Capability and People's Participation. Lectures, class room discussions, presentations and field trips will deepen the understanding and analytical and presentation skills of the student.

UNIT-I

Concept and Significance of Development
Sustainable Development: Concept and Significance
Development Administration: Concept and Significance
Main Characteristics of Developed and Developing Countries

UNIT-II

Administrative Capability and Development Administration
Organization for Development Planning a Centre, State and District Levels
Role of United Nations System in Development

UNIT-III

Public Enterprises: Concept and Rationale
Forms of Organisation: Departmental Undertakings, Statutory Corporations and Government Companies
Industrial Policies: 1956, 1991 and major subsequent developments

UNIT-IV

Population Policy and Development
Role of Bureaucracy in Development
People's Participation in Development
Women and Development

List of Readings

Basu, R. (1993).*The United Nations – Structure and Functions of an International Organisation*, New Delhi: Sterling.

Bava, N.J. (1997). *Non- Governmental Organisations in Development: Theory and Practice*. Ed. New Delhi: Kanishka.

Bhattacharya, M. (2001). *Development Administration*. New Delhi: Jawahar Publishers.

Dhar, P.K. (2007). *Indian Economy – Its Growing Dimensions*. New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). *Development Administration: From Underdevelopment to Sustainable Development*. London: Macmillan.

Mathur, H.M. (1986). *Administering Development in the Third World: Constraints and Choices*. New Delhi: Sage.

Mathur, K. (1996). *Development Policy and Administration*. Ed. New Delhi: Sage.

Parikh, K.S. (1999). *Indian Development Report*. Ed. Delhi: Oxford.

Patnaik, P. (January 2015). From the Planning Commission to the NITI Aayog. *Economic and Political* Weekly. L. (4).

Planning Commission. *Five Year Plan Documents*. New Delhi: Government of India.

Rao, M.G. (2015). Role and Functions of NITI Aayog. *Economic and Political Weekly*, L (4).

Rattan, V. (1997). *Women and Child Development Programme Administration*. Vol.1: Women and Child Development and Sustainable Human development. Vol.II: Integrated Child Development Services Programme Administration. New Delhi: S. Chand.

Riggs, F.W. (1970). *Frontiers of Development Administration*. Ed. Durham: Duke University Press.

Sapru, R.K. (2002). *Development Administration*. New Delhi: Sterling Publishers.

Singh, N. (February 2015). NITI Aayog and Indian Fiscal Federalism. *Yojana*.

Singh, A. (2000). *The Politics of Environment Administration.* New Delhi: Galgotia Publishing Company.

Subramaniam, V. (1990). *Public Administration in Third World*. London: Greenwood.

Sharma & Verma. (1985). *Comparative Public Administration*. New Delhi: IIPA.

Shah, R.R. (September 2014). Reorienting the Plan Process and Revitalising the Planning Commission. *Economic and Political Weekly*. XLIX (37).

United Nations (1975). *Development Administration, Current Approaches and Trends in Public Administration for National Development.* New York.

United Nations (1985). *Enhancing Capabilities for Administrative Reforms in Developing Countries.* New York.

United Nations (1971). *Administration of Development Programmes and Projects; Some Major Issues*. New York.

Verma, S.P. & Sharma, S.K. (1984). *Development Administration*. Ed. New Delhi: IIPA.

Weidner, E. (1970). *Development Administration in Asia*. Ed. Durham : Duke University Press.

Semester III (Group A)

Paper II: Social Policy and Welfare Administration
(Common in Groups A&C; compulsory for Group A)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The paper attempts to familiarize the students with various aspects of social welfare in India by emphasizing on policy, programmes and administration of the weaker sections, the administrative set up and the legislations in this area.The students will learn about various policies and programmes for welfare of women, children and other disadvantaged groups as well as the role of non-governmental organizations in social welfare and its administration. Class room teaching and field visits with written assignments and presentations will form the pedagogical scheme of instruction.

Unit-I

Social Welfare: Concept and Significance
Welfare State: Concept and Philosophy
Social Welfare Administration: Nature, Scope and Significance

Unit-II

Social Legislation in India: An Overview
Protection of Women from Domestic Violence Act, 2005
The Juvenile Justice (Care and Protection of Children) Act, 2013

Unit-III

Organisation and Functions of Union Ministry of Social Justice and Empowerment;
State Social Welfare Department; Central Social Welfare Board; State Social Welfare Board
Role of NGOs/Voluntary Organisations for Social Welfare

Unit-IV

Policy, Programmes and Administration for Welfare of SC/ST
Policy, Programmes and Administration for Welfare of Women and Children
Policy, Programmes and Administration for Welfare of Aged
Policy, Programmes and Administration for Welfare of Drug Addicts

List of Readings

Bulsara, J.F. & Verma (2006). *Perspective in Social Welfare in India*. New Delhi: S. Chand & Co.

Chowdhary, D.P. (1976). *Social Welfare Administration.* Delhi : Atma Ram and Sons.

Encyclopedia of Social Change. Vol. 5. New Delhi: Anmol Publishers.

Friedlander, W. & Apte, R. (2006). *Introduction to Social Welfare.* 5th Ed. New Delhi: Prentice Hall.

Gangrade, K.D. *Social Legislation in India*. Delhi: Concept Publishing House.

Madan, G.R. (2006). *Indian Social Problems*. Vol. II: Social Work. New Delhi: Allied Publishers Ltd.

Ministry of Information and Broadcasting (1987). *Encyclopedia of Social Welfare in India*. Vol. IV. New Delhi: GOI Publications Devision.

Ministry of Social Justice & Empowerment Govt. of India, Recent Annual Reports

Planning Commission (2007-12). Eleventh Five Year Plan. New Delhi: Government of India.

Relevant Acts of Parliament and Reports of Commission, Committees & Study Teams

Research, Reference and Training Division (2010). *A Reference Manual*. New Delhi: GOI Publications Division.

Robson, W. A. (1976). *Welfare State and Welfare Society*: Illusion and Reality. 2nd ed. London: Allen and Unwin,.

Roy, K. (2000). *Women and Child Development*. New Delhi: Commonwealth Publishers.

Sachdeva. D.R. (2009). *Social Welfare Administration*. Allahabad: Kitab Mahal.

Sankhdher, M.M. (1995). *Welfare State.* New Delhi: Deep & Deep.

Semester III (Group A)

Paper III: People's Empowerment and Rural Governance (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: India is predominantly a poor country.Empowering rural people and rural local bodies is quite significant to strengthen our base-social,economic and political.The student needs to be fully familiarized with the nature of rural local institutions and the steps towards rural upliftment. The important pedagogical tools in this paper include field visits to have a feel of the rural realities and working of the rural local.The students should be able to elaborate the structure and working of rural local bodies and the working of rural development programmes.Assignments and presentations will be used to review the understanding of the student.

UNIT-I

People's Empowerment: Concept; Rationale; Strategies
Evolution of Panchayati Raj in India with special focus on the 73rd Constitutional Amendment
Working on Panchayati Raj in India: Issues, Problems and Remedies

UNIT-II

Rural Government in India

(i)	Gram Sabha	:	Composition, Functions, Finances and Role
(ii)	Gram Panchayat	:	Composition, Finances, Functions and Role
(iii)	Panchayat Samiti	:	Composition, Finances, Functions and Role
iv)	Zila Parishad	:	Composition, Finances, Functions and Role

UNIT-III

State Election Commission: Composition, Functions and Role with special reference to Rural Local Bodies
Personnel Administration in Rural Governance: Role and Functions of Panchayat Secretary, Block Development and Panchayat Officer and District Development and Panchayat Officer
State Finance Commission: Composition, Functions and Role with special reference to Rural Local Bodies

UNIT-IV

Rural Development and Poverty Alleviation Schemes – National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGA)
Role of Cooperatives in Rural Development
Rural Problems and Challenges

List of Readings

Arora, R.K. & Goyal, R. (1996*). Indian Public Administration*. New Delhi:Vishwa Prakashan.
Aziz, A. (1996). *Decentralised Governance in Asian Countries*. Ed. New Delhi: Sage.
Bhadouria, B.D.S. & Dubey, V.P. (1989). *Panchayati Raj and Rural Development* New Delhi: Commonwealth Publishers.
Bhayana, S.S. & Singh, S. (1991).*Local Government in India*. Jalandhar: New Academic Publishing Company.
Burns, D. et. al. (1994). *The Politics of Decentralisation: Revitalising Local Democracy*. London: Macmillan.
Chaturvedi, T. N. & Datta, A. (1984). *Local Government.* New Delhi: IIPA.
Cheema, G.S. & Ponoinelli D. (1983). *Decentralisation and Development Policy Implementation in Developing Countries*. Ed. London: Sage.
Hochgesang, T.W. (1994). *Rural Local Self-Government in India*. Hyderabad: NIRD.
Khanna, B.S. (1992). Rural Development in South Asia. 4 Volumes. New Delhi: Deep and Deep.
Maheshwari, S.R.(2003). *Local Government in India*. Agra: Lakshmi Narain Aggarwal.
Mathew, G. (1994). *Panchayati Raj in India: From Legislation to Movement*. New Delhi:ISS.
Mathur, S.N.(1997). *Nyaya Panchayats as Instruments of Justice*. New Delhi: ISS.
Mishra, S.N.(1986). *Panchayati Raj Bureaucracy and Rural Development*. New Delhi: IIPA.
Mishra, S.N. (1996). *New Panchayati Raj in Action*. New Delhi: Mittal Publication.
Oakley, P et. al. (1984). *Approaches to Participation in Rural Development*. Geneva: I.C.O.
Oakley, P. *Projects with People: The Practice of Participation in Rural Development*. Geneva: I.L.O.
Oommen, M.A. & Datta, A. (1995*). Panchayats and their Finance*. New Delhi: ISS.
Oommen, M.A. (1995). *Devolution of Resources from the State to the Panchayati Institutions.* New Delhi: ISS.

Semester III (Group A)

Paper-IV: Disaster Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper has been introduced for the students of Public Administration to make them aware about different types of disasters and their management in India. Apart from developing and understanding of the strategy for disaster course will develop leadership and management skills of the disaster management .Case studies, role plays , mock drills, field visits, documentaries and interaction with experts in the field of disaster menegement will form the pedagogical scheme of instruction.

UNIT-I

Disaster: Concept & Dimensions
Natural Disasters: Earthquakes, Volcanic Eruptions, Floods, Cyclones, Climate Change
Man-made Disasters: Anthropogenic, Soil degradation, Desertification, Deforestation

UNIT-II

Disaster Management Act 2005
Organisational Framework for Disaster Administration in India at the Union, State and Local levels (including Nodal Agency, National Disaster Management, Authority, State Authority)

UNIT-III

Role of Information and Communication Technology Systems in Disaster Management
Interstate and International Cooperation for Disaster Management
Role of NGOs and Army in Disaster Management

UNIT-IV

Disaster Risk Reduction – Sustainable Development
Disaster Preparedness; Relief and Rehabilitation
Disaster Management Training

List of Readings

Anderson, J.(2008).*Public Policy Making: An Introduction*.5th ed.. Boston: Houghton-Mifflin.

Asian Development Bank.(1991). *Disaster Mitigation in Asia and the Pacific* .Manila: ADB.
Dynamics of the Emergency Management System.*Public Administration Review*.56(3)235-244.

Goel, S.L.(2006).*Encyclopedia of Disaster Management*.New Delhi: Deep and Deep.

Govt. of India/UNDP.(2002-07).*Disaster Risk Management Programme (2002-07): Community Based Disaster Preparedness and Risk Reduction through Participation of Committees and Local Self Governments* www.ndmindia.nic.in/EQProjects/goiundp2.0.pdf

Monappa,K.C.(2004).*Disaster Preparedness*. New Delhi .Akshay Public Agencies.

Narayan, B.(2009).*Disaster Management*. New Delhi .A.P.H. Publishing Corporation.

Princen T.Y.(1994).*Environmental NGO's in World Politics*.London: Routledge.
Sahni,P. Ariyabandu, M. Malagoda,M.(2003).*Disaster Risk Reduction in South Asia*.New Delhi: Prentice Hall.
Satendra and Sharma,V.K.(2004).*Sustainable Rural Development for Disaster Management*.New Delhi.

Schnneider, Saundra K.(2009).*Flirting With Disaster: Public Management in Crisis Situations* NY.

Wamsley, Gary L. and Aaron D. (May/June 1996).Escalating in a Quagmire: Changing.

Semester III (Group A)
Paper - V: Administration of Non-Government Organisations
(Common in Groups A, C & D; Compulsory for group D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objectives of the Course: This Paper is designed to prepare future NGO and Public Administrators to understand the theoretical conceptualization of the NGO and the NGO Sector in the framework of a developing economy and society.Lectures, case study analysis,presentations and field trips will be used to teach this course. At the end of the course the student will have an understanding of the commonly adopted organizational forms and governance structures pertaining to NGOs; issues of governance, capacity building and accountability; funding sources, making grant applications and project proposals; and also gain an understanding of the NGO-Government interface and its impact on the working of NGOs. Case studies of three international and domestic NGOs will further deepen the understanding and equip them to work as managers in the NGO Sector in combination with the other papers in this programme..

UNIT-I

Non Governmental Organisations (NGOs): Concept, Rationale and Scope
National Policy on the Voluntary Sector 2007
NGO-Government Interface in India with special reference to the Planning Commission, Ministries and Departments

UNIT-II

Organisational Forms and Governance Structures of NGOs: Trust; Society; Company
NGO-Government & NGO-Private sector partnerships: Rationale and practice
Sources of NGO Funding; Government and Foreign Grants: Eligibility, Requirements & Procedures with special reference to Foreign Contributions

UNIT-III

Issues of Governance; Capacity Building; Autonomy; Ethics
Accountability of NGOs: Rationale, Mechanisms and Problems
Formulation of a Welfare/Development Project Proposal including Monitoring and Evaluation arrangements

UNIT-IV

Case Studies:
Self Employed Women's Association (SEWA): Organisation, Functions and Working
Red Cross Society of India: Organisation, Functions and Working
Voluntary Action Network India (VANI)
OXFAM India

List of Readings

Bava N. (ed.) (1997). *Non-Government Organisations in Development: Theory and Practice*. New Delhi: Kanishka Publishers.

Chatterjee A. (1998). *NGOs: An Alternative Democracy in Hiranmay Karlekar Independent India: The First Fifty Years*. New Delhi: Indian Council for Cultural Relations and Oxford University Press.

Dantwala. M.L. Sethi Harsh and Pravin Visaria (eds.) (1998) *Social Change Through Voluntary Action.* New Delhi. Sage Publications.

Eleventh Five Year Plan (2007-12). Planning Commission, New Delhi.

Gangrade. K.D. and Jain S. (1995). NGOs: *Retrospect and Prospect*. New Delhi: Friedrich Ebert Stiftung.

Government of India (1994). An Action Plan to bring about Collaborative Relationship between Voluntary Organizations and Government. CAPART. New Delhi. Government of India. http:pcserver.nic.in/ngo/reports.aspx

Handy. C. (1990). *Understanding Voluntary Organizations – How to make them Function Effectively* London: Penguin Books.

Indian Red Cross http://www.indianredcross.org/

Jain R.B. (1995). *NGOs in Development Perspective*. New Delhi: Vivek Prakashan. Self Employed Women's Association http;//www.sewa.org/

Jain. N. (2009). *Handbook for NGOs: An Encyclopaedia for Non-Governmental Organisations and Voluntary Agencies*. (I & II). New Delhi. Nabhi Publications.

Kalima ,R.(1992).*Where Women Are Leaders: The Sewa Movement in India* .New Delhi:Vistaar Publications.

Mohanty, M. and Singh,A.Voluntarism and Government: Policy, Programme and Assistance, Voluntary Action Network India (VANI), http:pcserver.nic.in/ngo/reports.aspx

Nanavaty Meher and Kulkarni P.(1998). *NGOs in the Changing Scenario* .New Delhi. Uppal Publishing House.

OXFAM India .www.oxfamindia.org.

Planning Commission .(2002).*Proceedings of the All India Conference On The Role Of The Voluntary Sector In National Development*. http:pcserver.nic.in/ngo/reports.aspx

Prasad.K. (ed.).(2000).*NGOs and socio-Economic Development Opportunities* .New Delhi: Deep and Deep Publications Pvt. Ltd.

Report of the Steering Committee on Voluntary Sector for The Eleventh five-year Plan (Planning Commission (2007) .New Delhi,http://planningcommission.nic.in

Report of the Steering Committee on Voluntary Sector for The Tenth five-year Plan (Planning Commission(2002).New Delhi. http:pcserver.nic.in/ngo/reports.aspx

Smith-Sreen,P.(1995).Accountability in Development Organisations : Experiences of Women Organisations in India (New Delhi: Sage Publication,

Voluntary Action Network India .www. Vaniindia.org.(VANI)

Voluntary Organisations Database and Reports http:pcserver.nic.in/ngo/

Semester III (Group A)
Paper VI: Public Health Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Course: The paper prepares students in the area by exposing them to theoretical issues related to the challenges of Public Health Administration besides implementation. The students will understand healthcare policies and programmes including organizational set up at the union, state and local levels. Focussed study of some health care programmes is included besides the concept of hospital management.The study of structure and role of the National Institute of Health and Family Welfare and Medical Council of India and the World Health Organization (WHO) will inform the students of the national and international institutional structures of health administration.Special seminars and workshops will be organized to impart specialist knowledge to students.Field trips will also be organized to expose the student to health administration on the ground.

UNIT – I

Public Health Administration - Nature, Significance and Scope
Challenges of Public Health Administration
Implementation and Evaluation of Healthcare Policies and Programmes

UNIT – II

Union Ministry of Health and Family Welfare: Organization, Functions and Role
Health Administration at the State Level: Organization, Functions and Role of Department of Health
Administration of Primary Healthcare at the Local Level

UNIT – III

Healthcare Programmes in India - Family Welfare Programme; Reproductive Child Healthcare; Immunization Programme; National Rural Health Mission (NRHM)
Hospital Management: Organization, Function and Role

UNIT – IV

National Institute of Health and Family Welfare: Structure, Functions and Role
Medical Council of India: Structure, Functions and Role
WHO: Structure, Functions and Role in Asia

List of Readings

Ballabh.,C.(2007).*Health Care Services in Hospital*.New Delhi, Alfa Publication.
Ghosh.B.(1948).*A treatise on Hygiene and Public Health*.Calcutta: Scientific Publishing Company.
Goel. S.L.(1980).*Health Care Administration*.New Delhi: Sterling Publishers.
Goel.S.L.(2010).*Organisational Structure of Health Care System and Hospital Administration* .New Delhi, Deep & Deep Publishers Pvt. Ltd.
Hanlon John.H.(2008).*Principles of Public Health Administration*. St. Louis: C.V. Mosley Co.
Mahal.A. Debroy B. and Bhandari.L .(2010).India Health Report, 2010.New Delhi. BS Books.
Report of the Health Survey and Planning Committee(1959-61).
Sanjivi. K.S.(2007).*Planning India's Health* .Orient Longman.

Semester III – (Group A)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)
INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper provides an opportunity for students to acquire a deep knowledge and understanding of the concepts, approaches, indices and models used in the study of Comparative Public Administration. It will equip the student to apply the comparative approach through the theoretical formulations studied in Unit I to the economic, social, political and administrative systems and their working in the countries listed in the latter units. The universal configuration of groupings - G-20, SAARC, BRICS - has been adopted for a comprehensive case coverage to be studied in the current international scenario. The case study approach will be adopted for analysis. Teaching and learning will be through lectures, seminars, group work and presentations.

Unit I

Comparative Public Administration: Meaning, Significance, Scope, and Evolution
Approaches of Comparative Public Administration with special reference to the Bureaucratic Approach; the General Systems Approach; Structural-Functional and Ecological Approach.
Models of Comparative Public Administration with special reference to the Agraria - Industria Model; Prismatic Model.
Characteristics of Administrative systems in developed and developing countries.

Unit II

G-20 COUNTRIES
Political and Administrative Systems of U.S.A., U.K., France and Germany

Unit III

SAARC COUNTRIES
Political and Administrative Systems of India, Pakistan, Afghanistan and Bangladesh

Unit IV

BRICS COUNTRIES

Political and Administrative Systems of Brazil, Russia, South Africa, China

List of Readings

Almond, G., & Powell. G.B. (1972). *Comparative Politics: A Developmental Approach.* New Delhi: Amerind.

Arora, R.K. (1972). *Comparative Public Administration: An Ecological Perspective*. New Delhi: Associated Publishing House.

Arora, R.K., & Sharma, S. (Eds.). (1992). *Comparative and Development Administration; Ideas and Actions*. Jaipur: Arihand Centre for Administrative Change.

Bhatt, A., & Ranjan, R. (2010). *Comparative Government and Politics* (1st ed.). New Delhi: Anmol Publications Pvt. Ltd.

Chaturvedi, T.N. (1994). *Tulnatmak Lok Prashashan*. Jaipur: College Book Depot.
Farazmand, A. (Eds.). (2001). *Handbook of Comparative and Development Public Administration* (2nd ed.). New York: Marcell Dekker Inc.
Heady, F. (2001). *Public Administration: A Comparative Perspective* (6th ed.). New York: Marcel Dekker Inc.
Nadkarni, V. & Noonan, N. C. (Eds.). (2013). *Emerging Powers in a Comparative Perspective: The Political and Economic Rise of the BRIC Countries.* USA*:* Bloomsbury Academic.
Public Administration Review. (2007). *Special Issue on Comparative Public Administration*. New Delhi.
Ray, S.N. (2004). *Modern Comparative Politics: Approaches, Methods and Issues*. New Delhi: Prentice Hall of India.
Riggs, F.W. (1961). *The Ecology of Public Administration*. Bombay; Asia Publishing House.
Riggs, F.W. (1964). *Administration in Developing Countries: The Theory of Prismatic Society*. Boston: Houghton Mifflin Co.

Internet Sources

[Online] Available from http://news.bbc.co.uk/1/hi/country_profiles/default.stm
[Online] Available from https://www.cia.gov/library/publications/the-world-factbook/index.html
[Online] Available http://www.nationmaster.com/

Indicators/ Indices

- Democracy Audits: http://worldaudit.org/
- Economist Intelligence Unit Livability Index (Cities): www.eiu.com/
- Failed States Index: http://www.fundforpeace.org/global/?q=fsi
- Freedom Index: http://www.socialprogressimperative.org/
- Global Peace Index: http://www.visionofhumanity.org/
- Human Development Index: http://hdr.undp.org/en/statistics/
- Legatum Prosperity Index: http://www.prosperity.com/
- Transparency International Corruption Indexes: http://www.transparency.org/policy_research/surveys_indices
- World Bank Indicators Database (multiple economic and social indicators): http://data.worldbank.org/indicator
- Worldwide Governance Indicators (WGI): http://info.worldbank.org/governance/wgi/index.asp
- World values survey: http://www.worldvaluessurvey.org/index_organization

Semester III – (Group A)
Paper-VIII: Dissertation
(Common to Groups A, B, C & D)

(i) Dissertation option of only those students will be considered who apply for it within 15 days of normal admission to Semester III (i.e. without late fee) provided that such students have obtained at least 50% marks in the aggregate of Semester I and II.

(ii) Students for dissertation will be selected on the basis of merit in M.A. I. Selected students will be notified of the acceptance of dissertation as option within 20 days from the date of normal admissions.

(iii) Students opting for dissertation will submit the title and brief synopsis of their dissertation within four weeks from the date of notification to them, but not later than 15th November of the respective year, to be placed before the Postgraduate Board of Studies for approval.

(iv) Each student opting for dissertation from University School of Open Learning will have to be in contact with the supervisor for a minimum of eight weeks.

(v) All candidates opting for dissertation will submit the thesis one week prior to the commencement of final examination.

(vi) Panel of examiners for this course will be appointed by the PG Board of Studies.

(vii) The evaluation of the dissertation will be by an External Examiner and an Internal Examiner. The average of the marks awarded by these examiners will be sent confidentially to the Examination Branch through the Chairperson. If the difference between the two is more than 15 marks, a third examiner will be appointed. The marks awarded by the third examiner will be final.

Semester-III (Group B)
Paper-II: Economic Administration (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper would be compulsory for the students specializing in Economic Administration (with special reference to India) and during the course of study they will be familiarized with the economic models of the government, industrial policies and economic legislations. In addition, the students would be taught about the promotional role of state by referring to various promotional and infrastructural public sector undertakings. Apart from regular classroom teaching,special talks/lectures from experts as well practitioners from the civil service/industry will be organized to establish links between theory and practice and develop the student's critical skills.

Unit-I

Economic Administration: Nature and Scope
Market Failure: The Rationale for Government Intervention
Misuses of the Theory of Market Failure
State versus Market Debate

Unit-II

Economic Models of Government
Monetary Policy: Concept, Objectives, Instruments and Administration
Fiscal Policy: Concept, Objectives, Instruments and administration

Unit-III

Economic Legislation: Rationale, Philosophy and Overview
Industrial (Development and Regulation) Act, 1951
Foreign Exchange Management Act, 1999
Competition Act 2002

Unit-IV

Industrial Policy Resolutions, 1956 and New Industrial Policy, 1991
Promotional Role of State:

- Industrial Finance Corporation of India (IFCI): Organisational Structure, Objectives and Role;
- Industrial Development Bank of India (IDBI): Organisational Structure, Objectives and Role;
- Small Industries Development Bank of India (SIDBI): Organisational Structure, Objectives and Role

List of Readings

Bailey,S.J.(2001).Public Sector Economics: Theory, Policy and Practice(2nd ed.) .London: Palgrave.
Govt. of India .Five Year Plan Documents
Jha, L.K.(1986) .*Economic Administration in India – Retrospects and Prospect* .New Delhi: IIPA.
Kuchhal, S.C. (1989) .*Industrial Economy of India* .Allahabad:Chaitanya Publishing House.
Marathey, S.S. (1986).*Regulation and Development* .New Delhi: Sage Publications.
Mishra, S.K. and Puri, V.K.(2010).*Indian Economy : Its Development Experience* . New Delhi: Himalaya Publishing House.
Ramanadham, V.V.(1965).*The Working of Public Sector* .Bombay: Allied Publishers.
Taxmann's .(2009).*Economic Laws* .New Delhi: Taxmann Publications (P) Ltd.
United Nations .(1974).*Organisation, Management and Supervision of Public Enterprises in Developing Countries* .New York: U.N.
World Bank.(1995)*Bureaucrats in Business : The Economics and Politics of Government Ownership* .New York: World Bank.

Semester III (Group B)

Paper-III: Company and Cooperative Law (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The present paper is designed to educate the students about the structure, types and characteristics of a Company and a Co-operative. Besides making the students familiar with the capital structure, it would give them the insight of various sources of Finances. It would also give them insight about various aspects of cooperatives.Case study analysis will be anintegral part of class room pedagogy.

Unit-I

Company: Meaning, Nature and Characteristics; Types and Advantages
Incorporation: Meaning, Procedure
Memorandum of Association and Articles of Association

Unit-II

Prospectus: Meaning, contents, Statement in lieu of prospectus, Liabilities for Mis-statement
Share Capital: Meaning, Nature and Types, Allotment and Transfer of Shares
Debentures: Meaning, Types

Unit-III

Company Management - Appointment, Powers and Duties of the Board of Directors
Meetings: Kinds, Procedure
Winding up of Companies: Types, Procedure; Role of National Company Law Tribunal
Company Law in a Computerized Environment: E–filing

Unit-IV

Co-operatives: Concept, Significance and Types
Cooperative Legislation in India
Procedure for Registration of a Society
Registrar: Powers, Duties and Role

List of Readings

Bedi, R.D..(1981).*Theory, History and Practice of Cooperation*.Meerut : Loyal Book Depot.
Bhandari, M.C.(2015).*Guide to Company Law Procedures* (Vol.3) .Agra: Wadhwa and Company.
Goel, B.B.(1984).Cooperative Management and Administration.New Delhi : Deep and Deep Publications.
Govt. of India.Act and Statute (As Amended) The Companies Act, 2013.

Gower, L.C.B.(1954). *Principles of Modern Company Law*.London: Stevens and Sons Limited.
Kuchhal, M.C. and Kuchhal, V.(2013).*Modern Indian Company Law*(27th ed.). New Delhi:(Publishers)
Mamoria, C.B. and Saxena, R.D.(1973).*Cooperation in India* .Bombay: Kitab Mahal.
Nainta, R.P.(2004).*Laws Relating to Cooperative Societies : A Commentary*. Mayur Enterprise.
Shah, S.M.(1975).*Lectures on Company Law* .Bombay:Tripathi Pvt. Ltd.
Singh,A .*Company Law* . Lucknow: Eastern Book.
Taxmann's(2015). *Comparative Study of Companies Act 2013 and Companies Act 1956*. New Delhi: Taxmann Publications Private Limited.

Semester III (Groups B)
Paper IV – Human Resource Management
(Common in Groups B, C & D; compulsory for Group C)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The course on Human Resource Management (HRM) is designed to enhance the learning of student regarding the basic concepts and frameworks of HRM and understand the roles that HRM plays in the effective functioning of Public Enterprises. .The knowledge regarding these will be imparted through diverse teaching pedagogies like class room, lectures, case studies , discussions, presentations and assignments where students will examine and discuss about different companies and HRM practices adopted by them.At the end of this course the students will be able to discuss the relevance of HR policy, organizational structure, HR systems (manpower planning , recruitment, wage systems, fringe benefits etc.) and organizational culture.

UNIT-I

Human Resource Management: Concept and Significance
Manpower Planning: Concept, Significance and Steps
Job Analysis and Job Description: Concept and Significance

UNIT-II

Recruitment: Concept, Sources; Methods and Modes
Promotion: Concept, Types
Training – Concept, Types, Techniques
Employee Appraisal: Concept and Techniques

UNIT-III

Wages: Concept, Types and Determinants
Job Evaluation: Concept and Techniques
Fringe Benefits: Concepts and Types

UNIT-IV

Industrial Accidents: Concepts, Causes and Remedies
Employee Turnover: Concept, Causes and Remedies
Absenteeism: Concept, Causes and Prevention

List of Readings

Aggarwal, R.D.(1973).*Dynamics of Personnel Management in India* .New Delhi: Tata McGraw Hill.

Aswathappa, K.(2008).Human Resources and Personnel Management .New Delhi: Tata McGraw Hill.

Davar,R.S.(2008).*Personnel Management and Industrial Relations in India*(2nd ed.).Vikas Publishing House.

Flippo,E.(1976).*Principles of Personnel Management* (4th ed.).New York.McGraw Hill.

Ghosh, P.(2006).*Personnel Administration in India* .Sudha Publications.

Mamoria, C.B.(2008).*Personnel Management(*23rd ed.) New Delhi: Himalaya Publishing House,

Pigors,P & Myers,C(2008).*Personnel Administration: A Point and a Method* (6th ed.) .New York:McGraw Hill

Rao, V.S.P.(2008).*Human Resource Management* .New Delhi: Excel Books.

Yoder,D.(2008).*Personnel Management and Industrial Relations* (7th ed.). New Delhi: Prentice Hall of India.

Semester III (Group B)
Paper V – Financial Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective: To provide an understanding of the function, the roles, the goals and the processes financial management of public enterprises, covering the sourcing of finances and their issues in Investment and Operations. The students will acquire the skills for Financial Management analysis which are very essential for decision making. Case study, discussion method and exercises will be important pedagogical tools.

Unit-I

Nature and Problems of Financial Management in Public Enterprises and Non-Credit Cooperatives;
Government control over Finances
Appointment of financial advisors
Functions of Finance Manager in Modern Age.

Unit-II

Traditional and Modern Measures of Financial Performance: ROI, Earning Price Ratio, SVA, EVA and MVA
Concept and Approaches of Capital Structure Decision: NI, NOI, Traditional and Modigliani Miller Approach
Sources of Funds- Short Term and Long-Term

Unit-III

Cost of Capital-Equity, Preference Capital, Debt and Retained Earnings
Investment decision: appraisal of project; concept, process & techniques of capital budgeting and its applications
Risk and uncertainty in capital budgeting

Unit-IV

Overview of Working Capital Decision: Concept, Components, Factors Affecting Working Capital Requirement
Management of Cash, Inventory and Receivables
Cost-Volume-Profit Analysis for Management Decisions; Calculation of Breakeven Point, Contribution Margin Analysis, Margin of Safety, Profit Volume Ratios

List of Readings

Damodaran, A. (2001). *Corporate Finance: Theory & Practice*. John Wiley and Sons, Inc.
Gitman, L.J. (2007). *Principles of Managerial Finance*. Pearson Education.
Horne, V. (2002). *Financial Management and Policy.* Pearson Education.
James, C. V. (2002). *Financial Management and Policy*, Prentice Hall.
Khan, M.Y. & Jain, P.K. (1982). *Financial Management*. Tata McGraw Hill.
Knott, G. (2004). *Financial Management.* Palgrave Macmillan.
Pandey, I.M. (2015). *Financial Management*, Vikas Publications.
Prasanna, C. (2008). *Fundamentals of Financial Management*, Tata McGraw Hill.
Srivastava, R & Misra, A. (2008). *Financial Management*. Oxford Publishing.

Semester III (Group B)
Paper VI: Corporate Governance
(Common in Groups B, C &D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The objective of this paper is to acquaint the student with the concept of corporate governance and theories of corporate governance. The student will also be instructed about the various aspects of corporate governance with focus on ethics, corporate social responsibility and current issues and problems, primarily focusing on India.

Unit-I

Corporate Governance: Concept & Rationale
Theories of Corporate Governance: Stakeholders Theory: Agency Theory; Sociological Theory
Principles of Corporate Governance with special reference to Principles of Organisation for Economic Co-operation and Development (OECD)

Unit-II

Corporate Governance: Issues and Challenges
Corporate Governance and Ethics
Corporate Social Responsibility

Unit-III

Rights and Privileges of Share Holders and Investors
Board of Directors: Types; Composition & Functions
CEO: Appointment, Functions & Role

Unit-IV

Evolution of Corporate Governance in India
Corporate Governance in Public Enterprises
Corporate Governance in India and Future Trends

List of Readings

Bansal, C.L. (2005).*Corporate Governance – Law Practice &Procedures with Case Studies* .New Delhi: Taxmann Allied Services Pvt. Ltd.

Bhatia ,S.K.(2004).*Business Ethics and Corporate Governance* .New Delhi: Deep and Deep Publication Pvt. Ltd.

Dewan, S.M.(2006).*Corporate Governance in Public Sector Enterprises*.New Delhi: Doeling Kindersley India Pvt. Ltd.

Fernando ,A.C.(2009). *Corporate Governance – Principles, Policies & Practices* (3rd ed.).India:Dorling Kindersley Pvt. Ltd.

Gopalsamy, N.(1998). *Corporate Governance – The New Paradigm*.New Delhi: Wheeler Publishing.

Hazarika,A.(1999).Corporate Governance – Balancing Value Creation & Obligation in Oil industry .New Delhi: Tata McGraw Hill Publishing Company Ltd.

Kumar,S.(2002).*Corporate Governance – A Question of Ethics* .New Delhi:Galgotia Publishing Company.

Mathur ,U.C.(2005).*Corporate Governance and Business Ethics* .New Delhi: Macmillan India Ltd.

Millin,C.A.(2007).*Corporate Governance* .New Delhi: Oxford University Press.

Prasad,D.(2006).*Corporate Governance*.New Delhi: Prentice Hall of India Pvt. Ltd.

Reddy, Y.R.K.& Raju,E.(2000). *Corporate Governance in Banking & Finance* .New Delhi: Tata McGraw Hill Publishing Company Ltd..

Sehgal, M.K.(2004). *Corporate Governance & Restructuring of Industries* (Ambala: Wisdom Publications.

Singh, S.(2005).*Corporate Governance – Global Concepts &Practices* .New Delhi: Excel Books.

Vives,X.(2000).*Corporate Governance Theoretical & Empirical Perspectives* .USA.Cambridge University Press.

Williams,A.(2007)Corporate *Governance* .Mumbai : Jaico Publishing House.

Semester III – (Group B)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group B)
Paper-VIII: Dissertation
(Common in Groups A, B, C & D)

Semester III (Group C)
Paper –II: Social Policy and Welfare Administration
(Common in Groups A & C)

Semester III (Group C)
Paper III – Labour Economics (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: By the end of the course the student will be able to comprehend the various dimensions of labour in a complex labour economy like India. This includes problems of labour, wage fixation and conditions in the labour market. Tools to be employed for the effective teaching of the subject include case study method, audio visuals techniques, brainstorming on various issues, power point presentation, expert talks by professionals from industry etc. Use of these tools will develop the analytical and presentation skills and enhance the knowledge quotient of the students.

UNIT-I

Labour Economics: Nature and Scope
Concept of Labour as a factor of Production
General Features and Problems of Labour in Developing and Developed Countries
Unemployment: Meaning, Causes and Remedies

UNIT-II

Wage Differentials: Intra-Industry, Inter-Industry, Inter-Management and Occupational
Systems of Incentives: Monetary and Non-monetary
Problems of Rationalization and Automation
Factors Governing Slow Structural Changes in the Sectoral Composition of Labour Force in India

UNIT-III

Agricultural Labour: Problems and Issues
Industrial Labour: Problems and Issues
Labour in the Unorganised Sector: Problems and Issues
Issues pertaining to problems in service sector India

UNIT-IV

Wage-Policy and Regulation: Need for State Regulation of Wages, Methods of Wage Regulation Machinery for Wage Fixation
Overview of Economic Reforms and Labour in India with special reference to structural adjustment programme and privatization

List of Readings

Arya,P.P. & Tandon B.B.(2003).*Economics reforms in India*.New Delhi:Deep & Deep publications pvt. Ltd.
Banga,R.(2005).*Critical Issues in India's service-led growth*.Working paper no. 171. New Delhi:Indian council for research on international economic relations.
Bhagoliwal,N.T.(1982).*Economics of Labour and Industrial Relations* .Agra: Sahitya Bhawan.
Borjas, J Georg.(2012).*Labour Economics*.New Delhi, McGraw-Hill Higher Education.
Butler, Arthur D.(1961).*Labour Economics and Institutions* .New Delhi : Amerind Publishing Co.Pvt.Ltd.
Dutt,R & Sundaram, K.P.M.(2011).*Indian Economy* (62nd ed.).New Delhi: S. Chand& Co ltd.,
Elliot,F.R.(1990).*Labour Economics: A comparative Text .UK* :McGraw Hill.
Government of India.(1969).*Report of the National Commission on Labour.*
Joshi,V.M.(1919).*Labour Economics & Labour Problems*.New Delhi: Atlantic.
Mamoria,B.C.(1991).*Dynamics of Industrial Relations* .Bombay: Himalaya.
Misra,N.S.(1994).*An Introduction to Labour and Industrial Laws* .Agra:Sahitya Bhawan.
Mukherjee,A.(2013).The Service Sector in India.Working paper no. 352.Manila, Philippines:Asian Development Bank.
Reddy,.J.R.(2004).*Economics of Labour*.New Delhi: APH Publishing Corporation.
Sharma,K.A.(2006).*Labour Economics*.New Delhi:Anmol Publications.

Semester III – Group (C)
Paper IV: Human Resource Management (Compulsory)
(Common in Groups B, C & D, compulsory for Group C)

Semester III – (Group (C)
Paper V: Administration of Non-Government Organisations
(Common in Groups A, C &D; compulsory for Group D)

Semester III (Group C)
Paper VI: Corporate Governance
(Common in Groups B, C & D)

Semester III – (Group C)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group (C)
Paper-VIII: Dissertation
(Common in Groups A, B, C & D)

Semester III (Group D)
Paper II: Administrative and Office Management (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Administrative efficiency has, at its core, the systematization of organization and procedures thereby evolving work systems that are appropriate and procedures that eliminate unnecessary delays and allow the office work to be done effectively and at a reasonable cost. The objective of the course is to train the student to look at the setting up and working of an efficient and cost-effective office by familiarizing him with the core areas and issues of office administration.

UNIT-I

Administrative and Office Management: Nature and scope
Office organization: Role, functions and qualifications of office supervisor/office manager
Office layout and Space management

UNIT-II

Physical and Psychological factors in the office – colour, light, noise, air-conditioning, safety
Office Furniture, Machines and Equipment
Office Stationery and Supplies: standardization and codification; purchase, receipt, issue, disposal; store layout and store accounting

UNIT-III

Office communication: Role, Types & Means; handling incoming and outgoing mail
Records Management: Features of good records management; Filing, Classification and Indexing of records; Records Retention Schedules; Preservation of records and Disposal of unwanted records; Centralized and Decentralized record keeping systems

UNIT-IV

Office procedure and office manuals; forms designing and control
Quantitative and Qualitative office work control
Statutory and other Meetings: Drafting, Circulation, Preparation of agenda; Preparation and Confirmation of minutes and proceedings of meetings

List of Readings

Carl , Heyel.(1972).*Handbook of Office Management and Administrative Services*.New York: Mc Graw Hill.
Chopra, K. R.(2008).*Office Management* .Mumbai: Himalaya Books.
G,Whitehead,.(1982) .*Office Practice Made Simple*.London: The English Language Book Society.
Ghosh, Prasanta K.(2003).Office Management: Principles and Practice. (New Delhi: Sultan Chand & Sons .
Gopalkrishan, P.(1999). *Handbook of Materials Management* .New Delhi: Prentice Hall of India.
K,Zane and Qiible.(1977).*Introduction to Administrative Office Management* .Cambridge: Winthrop. Publishers.
K.R.Shrma, K. Shashi and Nayyar ,Sushil.(2002*).Office Management* .Ludhiana: Kalyani Publishers.
N.P, Reddy and R.H. Appannaiah.(1990).*Office Organisation and Management* .New Delhi: Himalaya Publishing House.
R.G.Terry.(1958).*Office Management and Control: The Administrative Managing of Information* .Irwin: Home Wood.
Rachel ,Littlefield.(1981).*Management of Office Operations* .New Delhi: Prentice Hall.

Robinson,M.E & I.H.W. Leffingwel .(1986).*Text Book of Office Management*.N.Delhi: McGraw Hill.
S.Gadkari.(1997).*Office Management for Public Administration-Principles and Techniques* .N. Delhi: Concept Publishing Company.

Semester III – Group (D)
Paper III: Management of Disciplinary Proceedings

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper covers an important area of Public Administration relating to Disciplinary Proceedings and the remedies available to public servants in India. The students would be made familiar with the procedures of enquiries, punishments and application of other legal measures. Apart from lectures case study method will be used to explain different proceedings to the students.

UNIT-I

Disciplinary Proceedings: Concept and Significance
Position of Public Servants under the Constitution and Statutes
Meaning and Scope of Reasonable Opportunity
Conduct Rules

UNIT-II

Major Punishments: Suspension; Dismissal; and Termination
Minor Punishments: Censure; Withdrawal of Promotion and Incentives; Pay Recovery
Fundamentals of Departmental Enquiries

UNIT-III

Role and Scope of Rules of Natural Justice in Disciplinary Proceedings
Corruption/Embezzlement in Public Services
Application of Legal Measures

UNIT-IV

Remedies for Public Servants against Unconstitutional and Illegal Actions of the State

1) Departmental Remedies
2) Tribunal Remedies
3) Ombudsmanic Remedies
4) Court Remedies

List of Readings

Basu , D.D.(2008).Constitution of India .New Delhi: Wadhwa and Company Law Publishers.

Ghaiye,R.K. (1988).*Law and Procedure of Departmental Enquiries* .Lucknow: Eastern Book Company.

Government of India(1987).Administrative Tribunals Act, 1985 with Rules Central Administrative Tribunal (Procedure) Rules.

Jain,N.S and and Jain,P.M(1979).*Principles of Administrative Law* .Nagpur: Wadhwa and Company.

KrishnaN ,Rama V.P. (1974).*Guide to Departmental Enquiries against Government Servants*. Andhra Law Times.

Maheshwari,R.S.(2002).Administrative Reforms in India .New Delhi: Macmillan India Ltd.

Massey,P.I.(1985).*Administrative Law* .Lucknow: Eastern Book Co.

Muthuswamy,P. (1993).Swamy's manual on Disciplinary Proceedings .Madras: Swamy Publishers.

Saxena,R,D.(1987).*Ombudsman-Lokpal* .New Delhi: Deep and Deep Publication.

Sharma, B. Girhar.(1981). *Implementation of Ombudsman Plan in India* .New Delhi: Ashish Publishing House.
Singh, Balbir and Kagzi,J.C.M.(1979).*A Case book of Administrative Law* .New Delhi: Metropolitan Book Company Ltd.
Wade, R.W.R. (1994).*Administrative Law* .Oxford: Clarendon

Semester III – Group (D)
Paper IV: Human Resource Management
(Common in Groups B, C & D ; compulsory for Group C)

Semester III – Group (D)
Paper V: Administration of Non-Government Organisations (Compulsory)
(Common in Groups A, C &D; compulsory for Group D)

Semester III (Group D)
Paper VI: Corporate Governance
(Common in Groups B, C &D)

Semester III – (Group D)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group (D)
Paper-VIII: Dissertation
(Common in Groups A, B, C &D)

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-2018)
Semester IV (Groups A, B, C and D)

Paper I: Emerging Areas in Public Administration (Compulsory Paper for all Groups)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: An awareness of the concept, legislation and administrative setup of the key areas of environment, consumer protection, human rights and regulatory administration will help the students to solve problems to help public in their community. Apart from lectures, diverse teaching pedagogy like case study, video-screening, class room presentations be used to familiarize the students with new frontiers in Public Administration. The course will develop valuable sills of public speaking, critical thinking and leadership amongst students which are necessary in all areas of life.

Unit-I: Environmental Administration

Environmental Administration: Concept and Significance
The Environment (Protection) Act, 1986
Central Pollution Control Board: Organisation, Functions and Role.
Punjab Pollution Control Board: Organisation, Functions and Role

Unit-II: Consumer Protection and Administration

Consumer Protection: Concept and Significance
Consumer Protection Act, 1986 (with amendments)
Administrative Setup of the Consumer Disputes
Redressal Agencies: National, State and District Level

Unit-III: Human Rights and Administration

Human Rights: Concepts and Significance
Universal Declaration of Human Rights 1948
National Human Rights Commission: Organisation, Functions and Role
Punjab state Human Rights Commission: Organisation, Functions and Role

Unit-IV: Regulatory Administration

Regulatory Administration: Concept and Significance
Telecom Regulatory Authority of India: Structure, Functions and Role
Insurance Regulatory and Development Authority of India: Structure, Functions and Role
Central Electricity Regulation Commission: Structure, Functions and Role.

List of Readings
Semester IV (Groups A, B, C and D)

Paper I: Emerging Areas in Public Administration (Compulsory Paper for all Groups)

List of Readings

Subbian, Adaikkalam. (2006).*Human Rights: Philosophy, Promotion, Protection and Perspectives.* Ambala Cantt,India: The Associated Publishers.

Gambhir, Cheena. (2007). *Consumer Protection Administration*. New Delhi: Deep & Deep Publications.

Byrne, J. O' Darren. (2004).*Human Rights: An Introduction. Singapore*. Delhi: Pearson Education.

Rosenbloom, David. (1989). *Public Administration: Understanding Management Politics and Law in the Public Sect*or. New York: McGraw Hills Book Company.

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006). *Environmental Issues of Development*. Ambala Cantt, India: The Associated Publishers.

Singla, Gurnax. (1993). *Law of Consumer Protection*. Jaipur: Bharat Law Publications.

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Symonides, Janusz. (2002). *Human Rights: Concepts and Standards*. New Delhi: Rawat Publications.

Verma, J.S. (2006). *The Universe of Human Rights*. Delhi: Universal Law Publishing Company.

Narain, Laxmi. (2005). *Public Enterprise Management and Privatization*. New Delhi: S. Chand & Company Ltd.

Ansari, M.R. (2006). *Protecting Human Rights*. New Delhi: Maxford Books.

Jaswal, P.S. &Jaswal, Nishtha. (2000). *Environmental Law*. Pioneer Publications.

Mukund, RajanGobind. (1997). *Global Environmental Policies*. Oxford University Press.

Sarkar, S.K. (2002). Ed. Srivastava, Leena. *Reforms in the Infrastructure Sectors*:*Next Steps.* Tata Energy Research Institute.

Chary, S.N. &Vyasalu, Vinod. (2000). *Environment Management and Indian Perspectiv*e. Macmillan.

Sunder, S. & Sarkar,S.K.(2000). *Framework for Infrastructure Regulation*. Tata Energy Research Institute Press.

Aggarwal, V. K. (1993). *Consumer Protection Law &Practice*. New Delhi: BLH Publishers Ltd.

Ramanadham, V.V. (1989). *Privatization in Developing Countries*. London: Routledge.

Semester IV (Group A)
Paper II: Education Policy and Administration (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The basic objective of this paper is to familiarize the students with the concepts of various systems of education and educational administration in India. In particular, the paper covers the provisions of the National Policy on Education, Five Year Plans and Sarv Shiksha Abhiyan. The organizational set up for administration of education and various agencies would also be taught.

UNIT – I

Educational Administration: Concept, Significance and Scope
Concepts: Universalization of Elementary Education, Non-Formal Education, Vocationalization of Secondary Education, Autonomous Colleges
Problems and Challenges of Educational Administration

UNIT – II

National Policy on Education, 1986 as modified in 1992 (Plan of Action, 1992)
Education and Five-Year Plans: Approaches, Priorities and Investments; RTE
Main Features, Organisation and administration of an Indian University

UNIT – III

Organization and Administration of Education at the Central Level with special reference to the Department of Education
University Grants Commission: Structure, Functions and Role
National Council of Educational Research and Training: Structure, Functions and Role

UNIT – IV

Socio-economic Problems of Educational Development – Equality of Opportunity Employment and Productivity, Nation Building and Citizenship; Globalization and Education
Implementation and Evaluation of Sarva Siksha Abhiyan

List of Readings

Goel, S.L.(1994).*Education Policy and Administration*.New Delhi: Deep and Deep Publication.
Government of India.(1966).*Report of the Education Commission*. Selected Chapters.
Lulla, B.P. and Murty, S.K.(1976*).Essentials of Educational Administration*.Mohindra Capital Publishers.
Mukerji, S.N.(1962).*Administration of Education, Planning and Finance* .Baroda: Acharya Book Depot.
Naik, J.P.(1975).*Policy and Performance in Indian Education* .New Delhi: Orient Longman.
Naik, J.P.(1975).*Quantity, Quality and Equality in Indian Education*.Bombay: Allied Publishers.

Semester IV (Group A)
Paper -III: People's Empowerment and Urban Governance (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Local Self-government is the government next door. Urban citizens are affected in various ways by the nature and working of their respective local government institutions. The students, after the course, should have a fairly good understanding of the urban affairs, problems and challenges, various urban development programmes and the setup of urban local bodies. The students should be able to critically evaluate the functioning of these institution and various programmes and should be able to make constructive suggestions. The essential pedagogical tool in this paper should be discussion, quiz, field studies and presentations.

UNIT-I

Urbanisation and Urban Challenges in India
Issues in Urban Development Policy including small cities
Problems of Development of Small and Medium Towns
Evolution of Urban Local Government in India with special focus on the 74th Constitutional Amendment Act.

UNIT-II

Urban Local Bodies in India:
Municipal Corporation: Structure, Composition, Functions and Role
Municipal Council and Nagar Panchayat: Structure, Composition, Functions and Role
Relationship between Deliberative and Executive wings
Role of other Urban Bodies: Cantonment Boards; Improvement Trusts; Development Authorities.

UNIT-III

Urban Finance: Sources and Problems
State Finance Commission: Composition, Functions and Role with special reference to Urban Local Bodies
Personnel Administration in Urban Governance: Role and Functions of Municipal Commissioner; Executive Officer
Provincialisation of Municipal Services

UNIT-IV

National Rural Livelihood Mission (NRLM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
Problems and Challenges of Rural–Urban Relationship
State Control over Local Government Institutions

List of Readings

Arora,K. Ramesh & Goyal,Rajni.(1996).*Indian public Administration* . Delhi: Vishwa Prakashan.
Aziz, Abdul.(1996).*Decentralised Governance in Asian Countries* .New Delhi: Sage.
Bhattacharya, Mohit.(1976).*Management of Urban Government in India* .New Delhi: Uppal.
Bhayana, Sahib Singh and Singh, Swinder(1991).*Local Government in India*.Jalandhar: New Academic Publishing Company.
Burns, Danny.(1994) Ed.. al.*The Politics of Decentralisation: Revitalising Local Democracy* London: Macmillan.
Chaturvedi, T.N. and Datta, Abhijit.(1984).*Local Government* .New Delhi: IIPA.
Cheema, G. & Ponoinelli D. (1983*).Decentralisation and Development Policy Implementation in Developing Countries* .London: Sage.
Kaushik,S. L.(1986).*Leadership in Urban Government in India* .Allahabad: Kitab Mahal.
Maheshwari, S.L.(2003).*Local Government in India* .Agra: Lakshmi Narain Aggarwal.
Singh, Charanjeev & Kaushik, Meenu.(2005).*Urban Poverty and Its Alleviation Programmes* . Chandigarh: APH.

Sivaramakrishanan, K.C. (1993). Ed. al. *Urbanisation in India: Basic Services and People's Participation* .New Delhi: ISS.

Semester IV (Group A)

Paper IV: Police Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: The students will understand the complex role of police in contemporary society. Pedagogical tools to be used by teachers include: short films, role plays, field visits, case studies, visits to police stations. The students will develop analytical and critical skills and develop an understanding of working of police administration.

Unit-I

Police Administration: Evolution; Concept and Significance; Police: Powers and Functions
Reforms in Police Administration after Independence
Crime: Types, Causes and Remedies

Unit-II

Police set up at National Level: Organisation, Functions and Role
Police set up at State Level: Organisation, Functions and Role
Police set up at District Level: Organisation, Functions and Role
Police set up at Local Level: Organisation, Functions and Role

Unit-III

Police Personnel IPS and State Police Service
Recruitment, Promotion, Training, Conduct and Discipline

Unit-IV

Community Policing: Concept, Role and Significance
Police and Human Rights: Emerging Issues and Challenges
Police and Women

List of Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books

Ghosh, G.(2010).*Re-legitimizing Indian Police* .New Delhi: Radha Publication.

Ghosh,S.(1973). *Police Administration: Organisation and Procedure* .Eastern Law House.

Ghosh, S.K. and Hummer, Don .(2008). *Encyclopaedia of Police in India.* Volume I. New York: Taylor & Francis Group.

Hunter ,R. D. Barker,T & Mayhall,P.D.(2010*). Police Community Relations and the Administration of Justice.*Prentice Hall.

Jim,R & Rustamji, K.F.(1993).*Handbook of Police Administration*, CRC Press. New Delhi : Ashish Publishing House.

Rohtagi,M.(2007). *Spy System in Ancient India* .New Delhi: Gyan Books Pvt. Ltd.

Rohit ,C.(2009). *Policing Reinvention Strategies in a Marketing Framework*. New Delhi:Sage Publication.

Subramaniam, K.S.(2009). *Political Violence and the Police in India*.SAGE Publications, India.

Srivastava, A.(1999).*Role of Police in a Changing Society*. New Delhi: A.P.H. Publishing .

Swanson,C.R. , Territo,L. & Taylor,R.W.(2011). *Police Administration:Structures ,processes ,and behavior* .Prentice Hall.

Semester-IV (Group A)
Paper-V: International Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: The paper is designed to acquaint the students both with the theoretical and practical aspects including the origin, objectives, historical legacy and the role of International Administration in the global framework. A focused study of various institutions and agencies related to international administration includes functions and role of WTO, IMF, SAARC, ASEAN, UNESCAO, UNICEF, ILO, WHO, UNDP besides covering the United Nations, its Secretariat and main aspects of Globalization and Global Governance.

Unit-I

International Administration: Origin, Objectives and Role of United Nations: Historical Legacy and Evaluation
United Nation: Organisation, Functions and Role

Unit-II

International Institutions: Functions, Role and Problems of WTO (World Trade Organisation)
World Bank (WB) and International Monetary Fund (IMF)
Regional Institutions: Functions, Role and Problems of SAARC and ASEAN

Unit-III

UN Secretariat: Organisation, Functions and Working
Future of the United Nations
Globalization and Global Governance

Unit-IV

Machinery to Settle International Disputes
Organs and Specialized Agencies of the United Nations: Function, Programmes and Role with special reference to UNESCO, UNICEF, ILO, WHO, UNDP

List of Readings

Cable, V.(1999).*Globalization and global governance* .London: Royal Institute of International Affairs.
Goel, S.L. (1976).*International Administration* .New Delhi: Sterling Publishers.
Narsimhan, C.V.(1988).*The United Nations: an inside view* .New Delhi: United Nations Publications.www.un.org/ www.saarc-sec.org/ www.ilo.org/ www.aseansec.org/
Saksena, K.P.(1993*).Reforming the United Nation: the challenge of relevance* .New Delhi: Sage Publications.

Semester IV – Group A
Paper VI: Information Technology and Computer Applications in Public Administration
(Common in Groups A, B, C & D; compulsory for Group D))

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: This paper is designed to introduce the student to the basic aspects of information technology and develop an understanding of the ways in which this technology can be adopted and adapted in public administration. The student will ultimately be in a position to understand and integrate the technology and the human resource input requirements for designing effective management information systems, e-governance applications and structural arrangements mindful of the issues of security and ethics.

UNIT-I

Meaning, Role, Evolution of Management Information Systems
Components and activities of an Information System
Operations and Management Classification of Information Systems; MIS and Decision Making
Building and Maintaining Information Systems; The Information Systems Department

UNIT-II

General Model of a Computer System; Understanding Input devices; Output Devices; Primary and Secondary Storage Devices and Media; CPUs
Operating System Basics; PC Operating Systems; OS and User Interface (Windows XP)
Hardware; Software; Types of Software
Networking; Local and Wide Area Networks

UNIT-III

Word Processing Software: Uses, Interface and Special Features. (Using MS Word)
Spread Sheet Software: Uses, Interface and Special Features. (Using MS Excel)
Data Base Management Software: Uses, Interface and Special Features. (Using MS Access)
Introduction to the Internet; Internet basics (Using Internet Explorer)

UNIT-IV

E - Governance: Concept, Significance and Scope
Computer Applications in Public Administration
Computer Security, Crime and Ethics

List of Readings

Basandra, S.K.,(1999).Computers Today .New Delhi: Galgotia Publishers Pvt. Ltd.

Bedi, K., Singh, P. & Srivastava, S.(2001).*Government@net* .New Delhi: Sage Publications.

Bhatnagar, S.(2004).*E Government: From Vision to Implementation (A Practical Guide with Case Studies.* New Delhi: Sage Publications.

Brien, J & Marakas, G. M.(2011).Management Information Systems . India: Tata McGraw Hill Publishing Company Limited .

Davis, G. B., Olson &Margrethe, A.(1985). *Management Information Systems: Conceptual Foundations, Structure and Development* .New York: Tata McGraw Hill.

Hodson, P.(1998).*Local Area Networks.* New Delhi: BPB Retreived from http://www.msoffice-tutorial-training.com/

Laudon, K. C. & Laudon, J. P.(2011,12th ed). *Management Information Systems: Managing the Digital Firm* .New Delhi: Pearson Education .

Leon, A & Leon, M.(1999).*Introduction to Computers* .New Delhi: Vikas Publishing House Pvt. Ltd.

Lucas, H. C. Jr.(2000).*Information Technology for Management* .New Delhi: Tata McGraw-Hill.

Murdick,R., Ross,C., Joel E. & Claggett, J. R.(1984). *Information Systems for Modern and Management* .New Delhi: Prentice Hall.

Norton, P.(2006).*Introduction to Computers* New Delhi: Tata Publications.

Saxena, S.(2009).*A First Course in Computers: Based on Windows XP and Office XP .New Delhi:* Vikas Publishing Pvt. Ltd.

Semester IV – Group A
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The aim of the paper is to acquaint the students with the concept and philosophy of ethics with special reference to ethics in public life and accountability of public services in India. The paper through teaching in case studies will enhance the problem solving skills on situations relating to integrity, probity in public life and problem solving approach to various issues and conflicts face by him in dealing with society. The students will learn to effectively communicate ethics and governance concepts and arguments in a logical manner.

Unit I

Ethics: Concept and Significance; Importance of Ethical Values in Public Life
Contribution of Kautilya, Vivekananda and Mahatma Gandhi to Ethics in Administration
Contribution of Western Administrative Thinkers to Ethics with special reference to Plato and Immanuel Kant

Unit II

Ethics and Human Interface: Essence, Determinants and Consequences of Ethics in Human Actions
Significance of human values and Attitudes in Ethical Development
Morality: Concept and Issues in Public service

Unit III

Ethics in Public Life: Civil Service Neutrality and Anonymity
Significance of Ethical and Moral Values in Governance
Code of Ethics and Code of Conduct for Civil Services in India

Unit IV

Probity in Governance- Corruption: Concept and Causes; Mechanism for Fighting Corruption
Work Culture- Concept, Significance and Characteristics of a good work culture;
Case Studies relating to Ethics in Public Administration

List of Readings

Arora, R. K.(2008).*Ethics in governance: innovations issues and instrumentalities.* Jaipur :Rawat.

Bhargava,R. (2006).*Politics and ethics of the Indian Constitution*. New Delhi: OUP.

Chaturvedi, T. N. (Ed.)(1996). *Ethics in public life*. New Delhi: IIPA.

Fox,W.(2009).*A theory of general ethics – human relationships, nature, and the built environment*.New Delhi: PHI Learning.

Ghere,R.K. and Frederickson,H.G. (Eds.) . (2007). *Ethics in Public Management*. New Delhi: PHI Learning.

Godbole,M.(2003).*Public accountability and transparency: the imperatives of good governance.* New Delhi: Orient Longman.

Hooja,R.(2008).*Corruption, ethics and accountability essays by an administrator*. New Delhi: IIPA

Huberts, L. W.J.C.et.al. (2008). *Ethics and integrity of governance: Perspectives across frontiers* (New horizons in public policy series). California :Edward Elgar Publishers.

Martinez,J.M.*Public administration ethics for the 21st century* .Santa Barbara:ABC-CLIO.

Mathur, B.P.(2014).*Ethics for governance: Reinventing public services*.New Delhi: Routledge Taylor and Francis Group.

Menzel,D.C.(2010).*Ethics moments in government* (American Society of Public Administration)Boca Raton:CRC.

Sawshilya,A.(2012).*Ethics and governance*.New Delhi: Pearson Education.

Second Administrative Reforms Commission (2007). *Ethics in Governance*. New Delhi: GOI.

Sheeran,P.J.(2006).*Ethics in public administration – a philosophical approach*. Jaipur: Rawat. .

Semester IV (Group B)
Paper II: Public Enterprise Management (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: This paper covers various aspects of Public Sector and Public Sector Undertakings in India. In particular, the paper covers various forms of organization, governing boards, privatization and performance of central public sector enterprises in India. Course material will be supplemented by activities like case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

Unit-I

Public Enterprise: Concept, Rationale and Objectives
Role of Public Sector in the Indian Economy
Organisational Forms: Departmental Undertaking; Public Corporation; and Government Company

Unit-II

Governing Boards: Types, Functions, Size and Composition
Legislative Control over Public Enterprises
Ministrial Control over Public Enterprises

Unit-III

Pricing and Public Enterprises
Public Sector Reforms: Rationale; Performance Contract System/Memorandum of Understanding (MOU)
Professionalisation of Boards of Governance in India

Unit-IV

Disinvestment: Objectives, Methods, Machinery and Assessment
Privatisation: Theory, Objectives, Methods, Procedure, and Assessment; Lessons from the U.K. Experience
Contracting Out: Concept & Rationale; Contracting Out Local Services

List of Readings

Bailey,S.J.(2001).Public sector economics: theory, policy and practice . ***2nd*** ed.London: Palgrave.

Bos,D. (1991) Privatization: a theoretical treatment .Oxford: Oxford University Press.

Dubhashi, P.R.(1976). Economics, planning and public administration.Bombay: Somaiya Publications, Pvt. Ltd.

Administrative Reforms Commission.(1967).Report on Public Undertof study team on public sector undertakings .New Delhi: Gocernment of India.

Gupta, K.R.(1975).Issues in public enterprises. ***2nd*** ed.New Delhi: S.Chand.

Hanson , A.H. (1972) .Public enterprises and economic development .London: Routledge and Kegan.

Jha,L.K.(1986). Economic administration in India – retrospects and prospect .New Delhi: IIPA.

Khera, S.S(1977).Government in business .New Delhi: National Publishing House

Kuchhal ,S.C. (1976). Industrial Economy of India .Allahabad: Chaitanya Publishing House

Marathe, S.S.(2008).Regulation and development .New Delhi: Sage Publishers.

Narain,L.(1980).Principles and practices of public enterprises management .New Delhi: S. Chand.

Planning Commission .Five year plan documents.GOI.

Ramanadham, V.V.(1988).The working of public sector .Bombay: Allied Publishers.

United Nations Organisation.(1974). Management and supervision of public enterprises in developing countries .New York: V.N.

United Nations (1970). Measures for improving the performances of public enterprises in developing countries .New York: V.N.

Vickers, J. and Yarrow, G.(1988).Privatization: an economic analysis .Cambridge: **MIT Press.**

World Bank.(1995).Bureaucrats in business – the economics and politics of government ownership.New York: World Bank.

Semester IV (Group B)
Paper III: Marketing Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: The objective of the paper is to make learners understand the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm in VUCA (Volatile, Uncertain, Complex and Ambiguous) business environment. The students will acquire critical thinking, advertising and product pricing skills at the end of this course.

Unit-I

Introduction to Marketing Management: Meaning, Nature and Scope of Marketing
Marketing Philosophies
Marketing Management Process
Concept of marketing mix-4P and 7P

Unit-II

Consumer and Organisation Buyer Behaviour
Market Segmentation, Targeting and Positioning
Product Planning: Product concept, types of products, Major Product Decision and Product Life Cycle
Brand Management

Unit-III

Product Pricing Decision: Pricing Process, Policies and Strategies
Distribution Channel Decision: Types and function of intermediaries, selection and management of intermediaries
Promotion: Communication Process
Promotion Tools: Advertising, Personal Selling, Publicity and Sales Promotion

Unit-IV

Marketing Organisation and Control: Organising for marketing, Marketing Implementation & Control
Ethics in Marketing
Emerging Trends and Issues in Marketing: Consumerism, Rural Marketing, Societal Marketing, Online Marketing, Green Marketing, Retail Marketing, Customer Relation Marketing

List of Readings

Bhasin, M.L.(1991).*Indian marketing: the case studies* .New Delhi: Anmol Publishers.
Bose, B. S.(1998).*Handbook of marketing management* .Mumbai: Himalaya Publishing House.
Chowdhary, N. & Chowdhary, M.(2005).*Textbook of Marketing Services: The Indian Experience* .New Delhi: Macmillan.
Giles, G.B.(1982).*Marketing* .London: The English Language Book Society.
Gopalaswamy, T.P.(1997).*Rural marketing: environment, problems and strategies* .Delhi: Vikas Publishing House Ltd.
Hanson, W. A. & Kalyanam K.(2007).*Internet marketing and e-commerce* .Singapore: South Western College Pub.
Kotler, P.Marketing Management: *Analysis,Planning,Implementation & Control* .New Delhi: Prentice Hall of India.
Kotler, P.(2001).*Kotler on marketing: how to create, win and dominate markets* .Great Britain: Simon & Schuster .
Kotler, P.*Marketing management: a South Asian perspective* .New Delhi: Pearson Education.
Kumar, S. R.(2001).*Marketing Nugggets: Conceptual Dimensions in Marketing* .New Delhi: Vikas Publishing House Ltd.
Kurian V.(1997).*Unfinished Dream .New Delhi*: Tata McGraw Hill.
Molenaar, C.N.A.(2002).*Future of marketing: practical strategies for marketers in the post-internet age* .Great Britain: Pearson Education Ltd.
Michael, J.E.,Bruce,J.W. & William ,J.S.(2001) *Marketing Marketing*, New Delhi: Tata McGraw Hill .
Perreault W.D.& Jerome,E.M.(2013).*Basic Marketing*, New Delhi: Tata McGraw Hill .

Pride, W.M. and Ferrell,O.C.(2016).*Marketing:Concept and Strategies*,Delhi: Biztantra Press.
Ramaswamy,V.S. & Namakumari, S.(2002).*Marketing Management:Planning, Control*.New Delhi: Macmillan Press.
William,J.S.,Etzel ,M.J.& Walker, B.(2004).*Marketing*.Japan:McGraw Hill Kogakusha Ltd.
Zikmund,A.()Marketing,Mumbai:Thomson Learning.

Semester IV (Group B)
Paper IV – Industrial Relations
(Common in Groups B, C & D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper covers a very important area of governance of industrial undertakings in India i.e. concept and approaches of Industrial Relations. The course will also make the students familiar with industrial conflicts and their settlement; various aspects of trade unions; participative management; structure and functioning of International Labour Organisation (I.L.O.), etc.

UNIT-I

Industrial Relations: Concept and Significance
Complaints and Grievance: Concept; machinery for grievance handling
Approaches to Industrial Relations

UNIT-II

Industrial Conflicts: Concepts, Causes and Remedies
Machinery for the Settlement of Industrial Disputes:
Conciliation
Arbitration
Adjudication
Collective Bargaining

UNIT-III

Trade Unions: Concept, Origin, Types and Functions
Theories of Trade Unions
Registration and Recognition of Trade Unions

UNIT-IV

Participative Management: Concept, Objectives and Types
Schemes of Employee Participation in India
International Labour Organisation (I.L.O.) – Structure; Objectives

List of Readings

Aggarwal, R.D.(1973).*Dynamics of Personnel Management in India* .New Delhi: Tata McGraw Hill.

Aswathappa, K.(2007).*Human Resources and Personnel Management* .New Delhi: Tata McGraw Hill.

Davar, Rustam S..(1997).Personnel Management and Industrial Relations in India .New Delhi:Vikas Publishing House.

Ghosh, P.(1969),*Personnel Administration in India* .Bengaluru:Sudha Publications.

Mamoria, C.B. and Gankar, S.V.(2003).*Personnel Management*.New Delhi: Himalaya Publishing House.

Mamoria, C.B. Mamoria, S. and Gankar, S.V.(1997).*Dynamics of Industrial Relations in India* .New Delhi: Himalaya Publishing House.

).

Sen ,Ratna(2003). *Industrial Relations in India: Shifting Paradigms* .New Delhi: Macmillan.

Semester IV – Groups B
Paper V: Project Management (Compulsory)
(Common in Groups B &D; compulsory in Group B)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: Project Management continues to grow as a profession. Project management techniques are now used outside the traditional project industries and a management-by-project approach has increasingly been adopted in development projects funded by the UN, World Bank and other international agencies; it is also sought to be adopted in government funded welfare and development projects. The relevance of the course is derived from this context and the objectives are to impart a deep understanding of all the stages of project management and the techniques supporting project management.

UNIT-I

Project Management: Organisation, Planning including Prerequisites for Successful Project Implementation and Control
Project Planning: Resource Allocation Framework; Generation and Screening of Project Ideas

UNIT-II

Project Analysis: Market and Demand Analysis; Technical Analysis; Financial Analysis
Project Selection I: Project Appraisal Criteria – Project Cash Flow; Time Value of Money; Cost of Capital

UNIT-III

Project Selection II
Project Risk Analysis;
Social cost benefit analysis: Rationale and approaches;
Shadow Pricing applications in India

UNIT-IV

Project Implementation
Project Management Techniques: Network Analysis (PERT/CPM),
Project Monitoring and Review: Integrated Cost Planning and Budgeting; Monitoring Information; Reporting System and Evaluation

List of Readings

Burke, Rory(2004).*Project Management: Planning and Control Techniques* .Singapore: John Wiley & Sons Asia (Pvt. Ltd.).
Choudhry, Sadan(1988).*Project Scheduling and Monitoring in Practice*. Delhi: South Asian Publishers.
Clifton, David S. and Fyefe, David E.(1977).*Project Feasibility Analysis*.New York: John Wiley.
Harrison, F.L.(1992)*Advance Project Management* .London: Gower, 2nd ed.
Little, I.M.D. and Mirlees, J.A.(1976).*Project Appraisal and Planning for Development Countries* London : Heinemann Educational Books.
Lock, Dennis(2007).*Project Management*.England: Gower.
Planning Commission(1975).*Guidelines for Preparation of Feasibility Reports of Industrial Projects* .Delhi: Government of India.
Prasanna, Chandra(1995).*Projects: Preparation; Appraisal, Implementation* .Tata McGraw Hill.
Srinath, L.S.(1996).*PERT and CPM-Principles and Applications* .New Delhi: Affiliated East-West Press.
UNIDO(1978).*Guide to Practical Project Appraisal: Social Benefits Cost Analysis, Project Formulation and Evaluation* .Delhi: Oxford and IBH.

Semester IV (Group B)

Paper VI: Information Technology and Computer Applications in Public Administration (Common in Groups A, B, C & D; compulsory in Group D)

Semester IV – Group B
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)
Semester IV (Group C)
Paper-II: Labour Laws (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper covers five major labour legislations in India which are crucial for harmonious employer-employee relations. The detailed provisions of these legislations with reference to the cases would be taught to the students.

UNIT-I

Industrial Disputes Act, 1947

(a) Introduction and Definitions
(b) Authorities under the Act
(c) Notice of Change
(d) Reference of Disputes to Boards, Courts of Tribunals
(e) Procedure, powers and duties of authorities
(f) Strikes and Lock-outs
(g) Lay-off and Retrenchment
(h) Penalties
(i) Miscellaneous Provisions

UNIT-II

Factories Act, 1948

a) Introduction and definitions
b) Inspecting Staff
c) Health
d) Safety
e) Welfare
f) Working Hours of Adults
g) Employment of young persons
h) Annual Leave with wages
i) Penalties and Procedures

UNIT-III

The Workmen's Compensation Act, 1923

a. Introduction and definitions
b. Employer's Liability and amount of compensation
c. Commissioner's Powers and functions

UNIT-IV

The Minimum Wages Act, 1948

a. Introduction and Definitions
b. Fixation of minimum rates of wages
c. Miscellaneous provisions

List of Readings

Kumar, Anil.(2003).*Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*.New Delhi: Deep and Deep.

Malhotra, O.P.(1985).*The Law of Industrial Disputes (Vol. I and II)*, Mumbai: N.M.Tripathi Private Limited.

Mishra, S.N.(2010).*An Introduction to Labour and Industrial Laws* .Delhi: Pioneer Books.

Rao, E.M.(2004).*Industrial Jurisprudence* .New Delhi: Lexis Nexis.

Reddy, R. Jayaprakash.(2004).*Labour Legislation*.New Delhi: APH.

Sharma, A.M.(2004).*Industrial Jurisprudence and Legislation*.Mumbai: Himalaya Publishing House.

Srivastava, K.D.(1948).*Commentaries on the Factories Act, 1948*(3rd ed.)Chandigarh : Eastern Book.

Srivastava, K.D.(1976).*The Industrial Employment Standing Orders Act, 1946 together with rules* . Chandigarh : Eastern Book.

Semester IV (Group C)
Paper III– Organizational Psychology
(Common to Group C & D; compulsory in Group C)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The paper will make the students familiar with the basic concepts of Organisational Psychology. Functional aspects of Organizational Psychology like human relations, employment, attitudes, groups, personality and work stress would be taught to the students. Course material will be supplemented by activities like role play, case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

UNIT-I

Organisational and Industrial Psychology: Concept, Nature and Scope
Human Relations: Concept, Features and Hawthorne Experiments
Employee Needs: Concept, Hierarchy of Needs and Need Satisfaction

UNIT-II

Attitude: Concept, Nature and Significance
Industrial Morale: Concept, Nature and Determinants
Motivation of Industrial Employees: Concept and Determinants

UNIT-III

Personality: Concept, Significance and Types
Job Satisfaction: Concept, Significance and Determinants
Groups: Concept, Types and Inter-Group Relations

UNIT-IV

Fatigue: Concept, Causes and Remedies
Monotony and Boredom: Concept, Causes and Effects
Work Stress and its Management

List of Readings

Brown, J.A.C.(1954).*The Social Psychology of Industry* .Penguin.
Ganguli, H.C.(1983).*Structure and Process of Organization* .Asia Publishing House.
Katz and Kahn.(1979).*Social Psychology of Organizations* .Wiley Easter.
Norman R.F.Maier.(1970).*Psychology in Industry* .Oxford and IBH.
Schein, Edgar.(1988).Organizational Psychology .Prentice Hall.
Stephan P. Robbins, Seema Sanghi, Timothy Judge .(2009). *Organizational Behaviour: Concepts, Controversies and Applications* .New Delhi: Pearson 13th Edition.

Semester IV (Group C)
Paper IV- Industrial Relations
(Common in Group B, C & D)

Semester IV (Group C)
Paper V - Labour Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: By the end of the semester the student will be able to comprehend various concepts and dimensions related to labour policy and administration,, employee welfare and will become fully acquainted with the institutional structure dealing with labour administration at both union and state levels in India. Tools to be employed for the effective teaching of the subject include case study method, audio visuals techniques, brainstorming on various issues, power point presentation, study visits to the industries etc. Use of these tools will develop the analytical skills and enhance the knowledge quotient of the students. This will lead to the overall personality and skill development of the students.

UNIT-I

State and Labour: Theoretical Aspects
Indian Labour: Characteristics
Industrialisation and Growth of Indian Labour

UNIT-II

Evolution of Labour Policy in India
Labour Policy and Five Year Plans
Labour Policy with special reference to Terms and Conditions of Employment; Industrial Relations and Wages

UNIT-III

Organisation, Functions and Role of Union Ministry of Labour and Employment; Labour Bureau and Directorate General of Labour Welfare of Government of India
Labour Department at the State Level

UNIT-IV

Labour Policy and Legislation in India
Employee Welfare: Concepts; Significance; Approaches
2nd National Commission on Labour

List of Readings

Bhagoliwal T.N.(1982).*Economics of Labour and Industrial Relations* .Agra: Sahitya Bhawan.
Government of India.(1969).*Report of the National Commission on Labour*.
Jagdish (ed.)(2004).*Labour Welfare Administration: Theories and Legal Provisions* .New Delhi:Akansha.
Kumar Anil.(2003).*Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*.New Delhi: Deep and Deep Publication.

Mamkoottam, Kuriakose. (2003).*Labour and Change: Essays on Globalisation, Technological Change in Labour in India .New* Delhi: Response Book.
Mamoria, C.B.(1991).*Dynamics of Industrial Relations* .Bombay: Himalaya.
Misra, S.N.(2002).*An Introduction to Labour and Industrial Laws* .Allahabad: Allahabad Law Agency, 2nd edition .

Semester IV (Group C)
Paper VI – Information Technology and Computer Applications in Public Administration
(Common in Group A, B, C & D; compulsory in Group D)

Semester IV – Group C
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

Semester IV – Group D
Paper II: Techniques of Administrative Improvement (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: Administrative improvement is an important aspect of administrative management. The objectives of this course are to comprehensively deal with the varied reference points leading to promoting administrative efficiency. The students will therefore gain an understanding of the ways in which change can be managed in an organization at the operations and policy planning levels. A thorough study of the reports of the Government of India Commissions on Administrative Improvement and Reforms and the working of the O&M Division of the Government of India will link the theoretical and operational aspects of administrative improvement in public administration.

UNIT-I

Work Study in Administration: Paper work simplification; Method study
Work Measurement; Standardization and Work Norms

UNIT-II

Organisation Analysis and Development of Organisational Structure
Techniques of Materials Management: ABC, VED, SDE and FSN Analysis

UNIT-III

Management of Change; Innovations in Management
Quality Circles; Total Quality Management
Management by Objectives

UNIT-IV

Working of O and M Division in the Government of India
The Sixth Pay Commission's recommendations on Administrative Improvement
The ARCs' and Administrative Improvement in Indian Administration

List of Readings

Armstrong, Michael.(1995).*Handbook of Management Techniques* .New Delhi: Excel Books.
Currie, R. and Faraday.(1972).*Work Study* .London: Pitman.
Gopalkrishan, P.(1999).*Handbook of Materials Management* .New Delhi: Prentice Hall of India.
Government of India. *Management in Government*. Quarterly Journal published by the Department of Personnel and Administrative Reform :Administrative Reforms Wing.
Government of India.(2008).*Second Administrative Reforms Commission Reports*.
Government of India.(2008). *Ministry of Personnel, Public Grievances and Pension*. Department of Personnel and Training: Report of Sixth Pay Commission.
I.L.O.(2008).Introduction to Work Study .Oxford & IBN Publishing Co. Pvt. Ltd.
Maheshwari, S. R.(2002).*Administrative Reforms in India* .New Delhi: Macmillan India Ltd.
Maheshwari, S. R.(2006).Indian Administration .New Delhi: Orient Longman Private Limited.
Reddin, W.J.(1971).*Effective Management by Objectives* .New York : McGraw Hill.
Srinath, L.S.(1996).*PERT and CPM-Principles and Applications* .New Delhi: Affiliated East-West Press.
United Nations.(1972).*Use of Modern Management Techniques in the Public Administration of Developing Countries* .New York.

Semester IV (Group D)
Paper III – Organisational Psychology
(Common in Groups C & D; compulsory in Group C)

Semester IV (Group D)
Paper IV– Industrial Relations
(Common in Groups B, C & D)

Semester IV (Group D)
Paper V– Project Management
(Common in Groups B &D; compulsory in Group B)

Semester IV (Group D)
Paper VI: Information Technology and Computer Applications in Public Administration (Compulsory)
(Common in Group A, B, C &D; compulsory in Group D)

Semester IV – Group D
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. SOCIOLOGY (SEMESTER SYSTEM)

EXAMINATIONS , 2017-18

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Note :

A candidate for M. A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he / she has completed the prescribed courses in an affiliated college or the Department concerned of this University.

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES of Sociology (Semester System)
(*Effective from the First Year Admissions for the Academic Session 2010-11)*

1. The Syndicate has approved the following Guidelines, Mode of Testing and Evaluation including Continuous Internal Assessment of students:

(i)	Terminal Evaluation	80%
(ii)	Continuous Assessment	20%

(iii) Continuous Assessment may include Written Test, Snap Test, Participation in Discussions in the class, Term Paper, Attendance etc.

(iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:

(a)	Written Test (one per semester)	:	25	(reduced to 5)
(b)	Snap Test	:	25	(reduced to 5)
(c)	Term Paper/s	:	25	(reduced to 5)
(d)	Participation in Class Discussions	:	15	(reduced to 3)
(e)	Attendance	:	10	(reduced to 2)*

Total: 100 reduced to 20

*Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

Attendance Component			Mark/s for Theory Papers
(a)	75% and above up to 85%	:	1
(b)	Above 85%	:	2

2. **In the case of Paper SOC R 439: Methods & Techniques in Social Research:**

The system of evaluation for Internal Assessment shall be based on field work–data collection, report writing and presentation of report. The break-up of the marks shall be as under:

Data Collection	:	25	(reduced to 5)
Report Writing	:	50	(reduced to 10)
Presentation of Report	:	25	(reduced to 5)
Total		**100 reduced to 20**	

<u>Note:</u> " In view of the peculiarity of distance education courses, students admitted to USOL in M.A. Sociology (Semesters I to IV) shall be given Internal Assessment for all the courses, including SOC-R-439 (3rd Semester), on the basis of Assignments as in the previous system."

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the particular subject and, thus he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the Proforma obtainable from the Examination Branch.

5. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2006 will be shown separately in the Detailed-Marks-Card (D.M.C.)

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READINGS IN THE SUBJECT OF SOCIOLOGY FOR M.A. I & III SEMESTERS EXAMINATIONS, NOVEMBER / DECEMBER, 2017 AND II & IV SEMESTER EXAMINATIONS, APRIL/MAY, 2018.

SCHEME FOR OPTING COURSES

SEMESTER-I		
Course no.	**Title**	
SOC R 411	History of Social Thought	
SOC R 412	Sociology of Family and Gender	
SOC R 413	Sociology of Development	
SOC R 414	Social Stratification: Concepts & Theories	
SEMESTER-II		
SOC R 425	Positivistic Sociological Theories	
SOC R 426	Methodology of Social Research	
SOC O 521	Population and Society	
SOC O 621	Social Dimensions of Development	
SOC O 721	Sociology of Urban Settlements	
SOC O 821	Structural Moorings of Gender Oppression	
SOC O 921	Peasants and Rural Society In India	
SOC O 922	Organizational Theory and Behaviour	
SOC O 923	Basic Social Statistics	
SEMESTER-III		
SOC R 438	Interpretive Sociological Theories	
SOC R 439	Methods & Techniques in Social Research	
SOC O 532	Basic Methods in Population Studies	
SOC O 632	Social Development in India	
SOC O 633	Rural Development in India	
SOC O 732	Problems of Urban India	
SOC O 832	Family in Cross Cultural Perspective	
SOC O 931	Sociology of Aging	
SOC O 932	Organizational Structure and Development	
SOC O 933	Sociology of Deviance: Concepts and Theories	

SOC O 934 Sociology of Crime
SOC O 935/945 Dissertation (III and IV Semesters)*
SOC O 936 Advanced Social Statistics

SEMESTER-IV

SOC R 440 Perspectives on Indian Society
SOC O 543 Determinants and Consequences of Population Growth
SOC O 544/744 Sociology of Human Migration
SOC O 644 Environmental Crisis and Sustainable Development
SOC O 645 Entrepreneurship and Development
SOC O 743 Cities, Urban Planning and Development
SOC O 843 Family Dynamics in Contemporary India
SOC O 844 Gender and Development
SOC O 941 Fundamentals of Industrial Sociology
SOC O 942 Social Problems
SOC O 943 Political Sociology
SOC O 944 Sociology of Marginalized Communities
SOC O 945/935 Dissertation (IIIrd and IVth semesters)*
SOC O 946 Media and Culture

There will be **two** categories of courses and each course will be of 4 credits.

(1) SOC R level are Required or Compulsory Courses.
(2) SOC O level are Open Courses (including Dissertation).

The students will be required to complete 64 credit hour courses successfully in the total duration of four semesters. The break up of the credit hours is as follows:

	Course Category	**No. of Courses to be completed**	**Credits**
1.	Required or Compulsory Courses (SOC R level)	9	9x4= 36
2.	Open Courses (SOC O level)	7	7x4= 28
		Total credits	**64**

Each student shall take up all four Required Courses in the First Semester. In the Second Semester, in addition to two Required Courses, each student shall opt for two Open Courses out of those offered in that particular Semester. In the Third Semester again, in addition to two Required Courses, each student shall opt for two Open Courses, out of those offered during that Semester, including Field Dissertation, depending upon his/her eligibility for the same. In the Fourth Semester, apart from one Required Course,

each student shall opt for three Open Courses (two in case he/she already has dissertation)*.

***Note: Since the Semester system in M.A. Sociology is just being introduced in colleges from the session 2011-12, SOC O 935/945 Dissertation shall continue to be offered only in the Department and USOL. Its introduction in the colleges shall be subject to approval by the concerned university authorities as per university norms.**

Further, offering of Optional Courses by the Department/College will depend upon the availability of faculty for teaching the course(s). In this way, the candidates will exercise their choice in the following manner:

Semester	Required Course	Open Course
I	4	-
II	2	2
III	2	2
IV	1	3
	9	**7**

***Note**: The Dissertation (SOC O 935/945) will carry 8 credits (200 marks) and will spread over two Semesters, i.e. Semesters III and IV. Only those students who have scored 480 marks during the 1st year (1st and 2nd semesters), taking not more than a total of 32 credits, will be allowed to take up dissertation.

In Colleges affiliated to Panjab University offering M.A. (Semester System) in Sociology,

" There will be six contact hours per week (4 lectures and 2 tutorials)."

Areas of Specialization

There are four Areas of Specialization within the Open Courses. These are:

1. Development Studies
2. Population Studies
3. Family & Gender Studies
4. Urban Studies

A candidate who successfully completes at least 3 Open Courses during M.A. programme in one of these four areas of specialization, will be issued a Certificate of Specialization in that area.

For the purpose of providing specialization, various courses have been grouped under the areas as follows:

1. **Development Studies**
   i) SOC O 621: Social Dimensions of Development (Sem. II)
   ii) SOC O 632: Social Development in India (Sem. III)
   iii) SOC O 633: Rural Development in India (Sem. III)
   iv) SOC O 644: Environmental Crisis and Sustainable Development (Sem. IV)
   v) SOC O 645: Entrepreneurship and Development (Sem. IV)
   vi) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   vii) SOC O 844: Gender and Development (Sem. IV)
2. **Population Studies**

   i) SOC O 521: Population and Society (Sem. II)
   ii) SOC O 532: Basic Methods in Population Studies (Sem. III)
   iii) SOC O 543: Determinants and Consequences of Population Growth (Sem. IV)
   iv) SOC O 544/744: Sociology of Human Migration (Sem. IV)

3. **Family and Gender Studies**

   i) SOC O 821: Structural Moorings of Gender Oppression . (Sem. II)
   ii) SOC O 832: Family in Cross-Cultural Perspective (Sem. III)
   iii) SOC O 843: Family Dynamics in Contemporary India (Sem. IV)
   iv) SOC O 844: Gender and Development (Sem. IV)

4. **Urban Studies**

   i) SOC O 721: Sociology of Urban Settlements (Sem. II)
   ii) SOC O 732: Problems of Urban India (Sem. III)
   iii) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   iv) SOC O 744/544: Sociology of Human Migration (Sem. IV)

Thrust Areas

- **Sustainable Development** (in the context of Globalization, Information, Communication and Technology)
- **Family and Gender Studies**
- **Population, Health and Aging**
- **Social Control and Deviance** (with special reference to Activism, Terrorism and Cyber Crime)

Additional Areas of Interest

Social Development, Deviance & Social Problems, Development and Social Change, Urban Studies, Peasant and Rural Studies, State and Society

M.A. (SOCIOLOGY) SYLLABI AND COURSES OF READING

SEMESTER-I

SOC R 411: HISTORY OF SOCIAL THOUGHT

Objective:

1. To introduce students to historical evolution of sociological thought.
2. To sensitize students to a detailed study of Classical Sociologists, i.e. Karl Marx, Max Weber and Emile Durkheim.
3. To apply the formulation of these thinkers to contemporary issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to the maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline:

Unit-I

A brief review of Enlightenment Thought with special reference to Rousseau; and of the Conservative Reaction to it, with special reference to St. Simon and Auguste Comte.

Unit-II

Karl Marx: Methodology - the concepts of Totality: Dialectical analysis of History, Species-Being, Human Praxis.

Basic Concepts: Means, Relations and Modes of Production: Base and Super-structure; Contradiction; Exploitation; Alienation.

Epochs of social development with special reference to Capitalism; Classes and Class Conflict.

Unit-III

Max Weber: Methodology-Verstehen, Value-Neutrality and Objectivity, Generality and the Ideal Type; Adequate Causation.

Basic concepts: Social action and its Types, social relationships; Power, Domination and Legitimate Order.

Protestant Ethic and the Spirit of Capitalism; the Rationalization process, Bureaucracy, distribution of Power and Social Stratification.

Unit-IV

Emile Durkheim: Methodology-the nature of Social Facts and their Causation.

Basic concepts: Individual and Collective Conscience, Social Solidarity and Anomie; the Sacred, the Profane and the nature of Religion, Suicide as social fact.

Mechanical to Organic Solidarity, Differentiation and Social Division of Labour, the Rise of Capitalism.

Suggested Readings

1. Aron, Raymond, (Reprint 1990), *Main Currents in Sociological Thought* (Vols. I & II), London, Pelican.

2. Avineri S. (1970) *The Social and Political Thought of Karl Marx*, London, Cambridge University Press.

3. Bendix R. (1960) Max Weber: *An Intellectual Portrait*, New York, Doubleday.

4. Durkheim E. (1960) *The Division of Labour in Society*, Illinois, Free Press of Gilencoe.

5. Giddens, Anthony (1971) *Capitalism and Modern Social Theory*, London, Cambridge, U. Press.

6. Irving M. Zeitlin (1969) *Ideology and the Development of Sociological Theory*, New Delhi, Prentice Hall.

7. Marx, K. and Engels F. (1971), *The Manifesto of the Communist Party*, Moscow, Progress Publishers.

8. Max Weber (1965), *Protestant Ethic and the Spirit of Capitalism*, London, Allen & Unwin.

Additional Readings

1. Ritzer, George, (1996) *Sociological Theory*, London, Sage Publications.

2. Hughes, John A. et. al., (1995), *Understanding Classical Sociology* - Marx, Weber and Durkheim, London, Sage Publications.

3. Pampel Fred C., (2000) *Sociological Lives and Ideas*: *An Introduction to the Classical Theorists*, N.Y., Worth Publishers.

SOC R 412: SOCIOLOGY OF FAMILY AND GENDER

Objective

This course is aimed at sensitizing the students regarding the basic concepts and approaches used for explaining and understanding family and gender. It also aims at sensitizing students about the process of gender socialization within the framework of family. Finally, it exposes the student to specific problems and legal provisions made available to counter these problems relating to gender inequality in the Indian context.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Approaches to Family

Concepts-Family, Household and Domestic function;

Approaches- Structural Functional, Conflict, Symbolic-Interactionist, Exchange and Feminist

Unit-II

Concept and Construction of Gender

i) Concepts- Sex, Gender, Gender-Identity and Gender-roles

ii) Basic understanding of Patriarchy, Masculinity and Femininity, Gender Socialization and Gender Stereotyping through the institutions of family, education, work media and religion.

Unit-III

Approaches to Gender

Feminism: Meaning; Liberal, Radical, Socialist-Marxist and Post Modernist Feminisms

Unit-IV

Gender Equality through Legislation (in Indian Context)

i) Dimensions of Gender Inequality: Female Foeticide, Neglect of Girl Child and Bride Burning and Status of Elderly Women.

ii) Brief introduction to PNDT Act, Dowry Prohibition Act and Domestic Violence Act.

Suggested Readings

1. Bender, Donald R. (1970) 'A Refinement of the Concept of Household: Families, Co-residence and Domestic Functions', *American Anthropologist*, Vol.32,No.1, PP 1-15.

2. Chanana, Karuna (1988) *Socialization, Education and Women: Explorations in Gender-Identity*, New Delhi: Orient Longman.

3. Lipman, Jean Blumen (1984), *Gender-Roles and Power*, New Jersey, Prentice Hall Inc.

4. Oakely, Ann (1972 *Sex, Gender and Society*, London : Harper & Row Pub.

5. Patel, Tulsi (2005), *The Family in India: Structure And Practice*, New Delhi: Sage Publications.

6. Saradamoni K.(ed) (1992), *Finding the Household: Conceptual and Methodological Issues*, New Delhi: Sage Publication.

7. Shah. A.M. (1973), *The Household Dimension of Family*, New Delhi: Orient Longman.

8. White James M. & David M. Klein (2002), *Family Theories*. Thousand Oaks: Sage Publications (Second Edition).

9. Wood, Julia T (1999*), Gendered Lives.* London: Wadsworth Pub. Company (Third Edition).

10. Wykes, Maggie and Barrie, Gunter (2005) *The Media and Body Image*, New Delhi: Sage Publications.

Additional Readings

1. Bare Acts: PNDT Act, Dowry Prohibition Act, Protection of Women Against Domestic Violence Act, Hindu Succession Act.
2. Burr, Wersley R. et.al (1997), *Contemporary Theories about Family*, New York: Free Press.
3. Das, Man Singh & Gupta, Vijay Kumar (eds.) (1995), *Gender Roles and Family Analysis*, New Delhi: M.D. Pub.

4. Dube, Leela (1997), *Women and Kinship: Contemporary Perspectives on Gender in South and South-East Asia*, Tokyo: United Nations Univ. Press.

5. Hofstede, Geert and Associates (1998*), Masculinity and Femininity*, Thousand Oaks: Sage Publication.

6. Lancy, Lobo (1992), 'Household and Family among Thakurs in a North Village', *Sociological Bulletin*, Vol. 41, No. 1&2, pp 46-66.

7. Lengermann, Patrician M. & Jill Niebrugge-Brantley (1996) 'Contemporary Feminist Theory', in George Ritzer, *Sociological Theory,* (Fourth Edition), pp. 436-486, New York : McGraw-Hill.

8. Thorne, Barrie & Marilyn Yalom (eds.) (1982), *Rethinking the Family: Some Feminist Questions*, New York: Longman.

9. Weitz, Shirley (1977), *Sex-Roles*, London: George Allen & Unwin.

SOC R 413: SOCIOLOGY OF DEVELOPMENT

Objective

Keeping in view the relevance of the theme of development, especially in the less developed societies, this course aims (a) to familiarize the students with the various ways that development has been conceptualized; (b) to critically evaluate the modernization theory in its economic, sociological, social-psychological and political forms; (c) to provide a review of the underdevelopment theory given by the Latin American political economists; and (d) to re-assess the various paths to development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development: The concept and its changing connotations (liberal and socialist);
Operational Indicators.

Unit-II

Modernization Theories:

Economic (Gunnar Myrdal, W. W. Rostow);
Sociological (Neil J. Smelser, Daniel Lerner,
Social-Psychological (David C. McClelland, Everett E. Hagen);
Political (Gabriel A. Almond & James S. Coleman);
Their Critical Assessment

Unit-III

Theories of Underdevelopment: Centre-
Periphery (A. G. Frank, Samir Amin);

Unequal exchange (Paul Baran); World system (Immanuel Wallerstein);
Their Critical Assessment

Unit-IV

Paths of Development:

Capitalist, Socialist, Mixed;
Globalization as a Strategy of Development.

Suggested Readings

1. Coleman, J. (1968), "Modernization: Political Aspect", in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences* Vols. 9 & 10 (L-M), London: MacMillan.

2. Desai, Vandana and Robert B Potter, (2008), *The Companion to Development Studies*, London: Hodder Arnold Publication.

3. Gray, J. (1969), "The Economics of Maoism" in H. Bernstein (ed.)

   Underdevelopment and Development-The Third World Today, N.Y.: Penguin Pub. (pp. 254-273).

4. Harrison D. (1988), *The Sociology of Modernization and Development*, New Delhi: Routledge.

5. Horowitz, I. L. (1966), *Three Worlds of Development*, N.Y.: Oxford University Press (Selected chapters).

6. Lerner, D. (1968), "Modernization: Social Aspects" in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences*, Vols. 9 & 10 (L-M) (pp. 387-394), London: MacMillan.
7. McMichael, Philip (2008), *Development and Social Change: A Global Perspective*, Newbury Park, CA: Pine Forge Press.
8. Mehta, S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
9. Myrdal, Gunnar (1968), *An Approach to Asian Drama*, Harmondsworth: Penguin.
10. Ness, G. D. (1970), *Sociology of Economics Development: A Reader*, N.Y.: Harper and Row (Selected Chapters).
11. Pandey, R. (1985), *Sociology of Development*, New Delhi: Mittal Pub.
12. Pandey, R. (1986), *Sociology of Underdevelopment*, New Delhi: Mittal Pub.
13. Parsons, Talcott (1966), *Societies: Evolutionary and Comparative Perspectives*, Englewood Cliffs, N. J.: Prentice-Hall, (pp. 20-29).
14. Sabbarwal, Sherry (2010), "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
15. Sharma, S. L. (1980), Criteria of Social Development, *Journal of Social Action*, Jan.-March.
16. Sharma, S. L. (1986), *Development: Socio-Cultural Dimensions*, Jaipur: Rawat (Chapter I).
17. Smelser, N. J. (1968), *Essays in Sociological Explanation*, Englewood Cliffs, N. J.: Prentice-Hall, (Chapter 6).
18. Walby, Sylvia (2009), *Globalization and Inequalities: Complexity and Contested Modernities*, Newbury Park, CA: Pine Forge Press.
19. Went, Robert (2000), *Globalization: Neo-Liberal Challenge, Radical Responses*. London: Pluto Press.

Additional Readings

1. Abraham, M. F. (1990), *Modern Sociological Theory: An Introduction*. New Delhi: OUP.
2. Apter, D. (1987), *Rethinking Development*, London: Sage.
3. Blomstrom, M. and B. Hettne (1984), *Development Theory in Transition*, London: Zed Books.
4. Desai, A. R. (1983), *India's Path of Development: A Marxist Approach*. New Delhi, OUP.
5. iddens, A. (1990), *The Consequences of Modernity*, Cambridge: Polity Press.
6. Haq, Mahbub Ul (1995), *Reflections on Human Development*, New Delhi: OUP.
7. Larrain, J. (1991), *Theories of Development: Capitalism, Colonialism and Dependency*, Cambridge, Polity Press.
8. Leeson, P. F. and Minogue, M. (eds.) (1988), *Perspectives on Development: Cross-Disciplinary Themes in Development*, Manchester: Manchester University Press.
9. Mehta, S.R. (2010), New Understanding of Indian Society: Incounters with Sociology, Shimla, Indian Institute of Advanced Study.
10. Mehta, Rani and Mehta, S.R. (2010), Social Transformation of an Island Nation: Development Wonder in Mauritius, New Delhi, Kalpaz Publications.
11. Schuurman, F. J. (1993), *Beyond the Impasse: New Directions in Development Theory*, London: Zed Books.

SOC R 414: SOCIAL STRATIFICATION: CONCEPTS & THEORIES

Objective

1. To sensitize students about elements of discrimination, exploitation, inequality and prevalence of hierarchies in everyday life.

2. To give a background of important sociological concepts.
3. To give theoretical formulations of important thinkers like Max Weber, Karl Marx, Talcott Parsons, Davis and Moore and Ralph Dahrendorf.
4. To sensitize students in terms of understanding contemporary formulations like the emerging of middle class and changing dimensions of caste and class.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts

Inequality, Differentiation; Ranking, Hierarchy and Social Stratification

Dimensions of Social Stratification

Caste, Class, Race, Ethnicity and Gender

Unit-II

Theoretical Formulations:

i) Functional Theory: Davis and Moore; Critique
ii) Conflict Theory: Karl Marx, R. Dahrendorf
iii) Multidimensional Theory: Max Weber

Unit-III

Emerging Class System

Class, Middle Class, New Middle Class

Correlates of Social Class: Occupation, Education and Income

Unit-IV

Changing Caste System
Change and Continuity in Caste in India
Resurgence of Caste (with special reference to Politics and Khap Panchayats)
Affirmative Action with regard to Scheduled Castes.

Suggested Readings

1. Beteille, Andre (1977) *Inequality Among Men*, Delhi, Oxford University Press.
2. Bendix, R & S. M. Lipset (eds.) (1970) *Class, Status and Power*, London, Routledge & Kegan Paul.
3. Beteille, Andre (ed.) (1969) *Social Inequality*, Penguin Books.
4. Cottrell, Allin (1984) *Social Classes in Marxist Theory*, London, Routledge & Kegan Paul.
5. Culvert, P (1982) *The Concept of Class*, London, Hutchison.
6. D'Souza V. S. (1981) *Inequality and its Perpetuation*, Delhi, Manohar Publication.
7. Eisenstadt, S. N. (1971) *Social Differentiation and Stratification*, London, Scott, Foresman & Co.
8. Giddens A. (1980*) The Class Structure of the Advanced Societies*, London, Unwin Hyman.
9. Gupta, Dipankar (ed) (1991) *Social Stratification*, Delhi, OUP.
10. Johnson, D. L. (1982*) Class and Social Development: A New Theory of the Middle Class*, Baverly Hills, Sage Pub.
11. Malik, S. C. (1986) *Determinants of Social Status in India*, Delhi, Motilal Banarsidas.
12. Sharma, K. L. (1986) *Social Stratification in India*, New Delhi, Manohar.
13. Srinivas, M. N., ed. (1996) *Caste: Its Twentieth Century Avatar*, New Delhi, Viking.
14. Singh G. (1985) *The New Middle Class in India: A Sociological Analysis*, Jaipur, Rawat Publication.
15. Singh, Yogendra (1977) *Social Stratification & Social Change*, Delhi. Manohar Publication.
16. Tumin, M. M. (1978) *Social Stratification*, Prentice Hall.

Additional Readings

1. Beteille, Andre (2002) *Equality and Universality: Essays in Political Theory*, Delhi, OUP.

2. Beteille, Andre (2002) *The Antinomies of Society*, Delhi, OUP.

3. Johnson, D. L. (ed.) (1985) *Middle Classes in Dependent Countries*, Beverly Hills, Sage Publication.

4. Lane, David (1982) *The End of Social Inequality*, New York, George Allen & Unwin.

5. Lloyd, Peter (1983) *The Third World Proletariat*, Boston, George Allen & Unwin.

6. Meale, R. S. (1984) *History and Class*, Oxford, Basic Blackwell.

7. Stinchcombe, A. L. (1986) *Stratification and Organization,* Cambridge, Cambridge University Press.

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SEMESTER-II

SOC R 425: POSITIVISTIC SOCIOLOGICAL THEORIES

Objectives

This course exposes the students to the writings of sociologists constituting the School of Positivistic Theories who actually treat Sociology as a natural science. It also includes the more recent theories such as Structuration, Post-structuralism, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Positivism: Definition; Contribution of Auguste Comte, Emile Durkheim
Functionalism: Definition; Anthropological functionalism–Radcliffe-Brown, Malinowski

Unit-II

Structural-Functionalism: Talcott Parsons
Functional analysis of Robert K.Merton
Neo-Functionalism: Jeffrey Alexander, Paul Colomy

Unit-III

Structuralism: Levi-Strauss
Structural Marxism: Louis Althusser
Structuration: Anthony Giddens

Unit-IV

Conflict Theories: Karl Marx, Ralf Dahrendorf, Randall Collins

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2002) *Contemporary Sociological Theory*, California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory*, California, Pine Forge Press.
3. Alexander, J. (1985) *Neofunctionalism*, Beverley Hills, California, Sage.
4. Alexander, J. (1982) *Theoretical Logic in Sociology*, Berkeley, California, University of California Press.
5. Bauman, Z. (1976) *Towards a Critical Sociology: An Essay on Commonsense and Emancipation*, London, Routledge and Kegan Paul.
6. Clarke, S. (1981) *The Foundation of Structuralism*, Brighton, Harvest Press.
7. Colomy, P. (ed.) (1990*) Functionalist Sociology*, London, Edward Elgar.
8. Colomy, P. (ed.) (1990*) Neofunctionalist Sociology*, London, Edward Elgar.
9. Craib, Ian (1984) *Modern Social Theory*, Brighton, Harvester Press.
10. Derek, Layder (2006) *Understanding Social Theory*, New Delhi: Sage Publications.
11. Giddens, A. (1987) *Social Theory and Modern Sociology*, Cambridge, Polity Press.
12. Giddens, A. and J.H. Turner (1987) *Social Theory Today*, Cambridge, Polity Press.
13. Helle, H.J. and S.N. Eisenstadt (eds.) (1985*) Macro-Sociological Theory*, London, Sage.
14. Lane, M. (ed.) (1970) *Structuralism: A Reader*, London, Jonathan Cape.
15. Ritzer, G. (1988*) Sociological Theory*, N.Y., McGraw-Hill.
16. Turner, J.H. (1978) *The Structure of Sociological Theory*, Homewood, Dorsey Press.

Additional Readings

1. Craib, Ian (1992) *Modern Social Theory: From Parsons to Habermas*, London, Harvester Press.
2. Collins, Randall (1997) *Sociological Theory*, Jaipur, Rawat.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat.
4. Westby, David L. (1991) *The Growth of Sociological Theory*, New Jersey: Prentice Hall.
5. Zeitlin, I.M. (1998) *Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat.

SOC R 426: METHODOLOGY OF SOCIAL RESEARCH

Objective

This course familiarizes the students with the major Epistemological Schools in methodology of social sciences. It will also acquaint the students with the basic elements of social research and the major problems confronted by social scientists in arriving at objectivity and value neutrality.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Major Epistemological Schools in Methodology in Social Research

Positivistic and Interpretive; Rationalism and Empiricism; Objectivism and Constructivism

Unit-II

Major Methodological Dilemmas in Social Research

Subjectivity and Objectivity
Value neutrality
Methodological Individualism versus Methodological Collectivism
Limits of Quantification in Social Research
Logic of Triangulation

Unit-III

Sampling

Meaning and Importance
Universe, Population, Sampling Frame, Sampling Error
Types of Sampling:
- Probability Sampling- Meaning, Types, Advantages and Disadvantages
- Non- Probability Sampling- Meaning, Types, Advantages and Disadvantages
- Theoretical Sampling

Unit-IV

Qualitative Research

Ethnography, Participatory Research, Action Research, Interviewing as Conversation, Narratives, Grounded theory, Naturalistic Inquiry, Strengths and Weaknesses of Qualitative Research.

Suggested Readings

1. Bernard, H. Russell (2000) *Social Research Method — Qualitative and Quantitative Approaches*, New Delhi, Sage Publication India Pvt. Ltd.
2. Bryman, Alan (2001) *Social Research Methods,* New York, Oxford University Press.
3. Cicourel, A.V. (1964), *Method and Measurement in Sociology,* Glencoe, Free Press.
4. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
5. Mukherjee, Partha N. (2000), *Methodology in Social Research*, New Delhi: Sage Publication.
6. Strauss, Anselm (1990) *Basics of Qualitative Research Grounded Theory Procedures and Techniques*, New Delhi: Sage Publication. —

Additional Readings

1. Bose, P. K. (1997) "Problems and Paradoxes of Inductive Social Science: A Critique of Ramkrishna Mukherjee", *Sociological Bulletin*, 46 (2), Sept.

2. Bryant, G.A., (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Hanmond, Michael, Howarth, Jane and Keat, Russel (1991) *Understanding Phenomenology*, Basil Blackwell.
4. Himmelstrand, Ulf (1986) *The Sociology of Structure and Action*, New Delhi, Sage Publication.
5. Hindess, Barry (1977*) Philosophy and Methodology in Social Sciences*. The Harvester Press.
6. Jenks, Chris (ed.) (1998) *Core Sociological Dichotomies*, New Delhi, Sage Publication.

SOC O 521: POPULATION AND SOCIETY

Objective

The course intends to discuss the inter-linkages between size, growth, composition and quality of population with societal components. It introduces the students to the importance of population issues in ancient thought to modern times. The course would include theoretical contributions from Malthusian-Neo-Malthusian, Marxian-Neo-Marxian and Developmentalist perspectives. Discussion will focus mainly on issues in India but of course in comparative context at the global and regional levels.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Population and Society:

Development of Early Thought- A Brief view from Roman, Greek, Chinese, Arabian and Indian writings.

Emergence of ideas from these thoughts on Population Equilibrium, Optimum Population, Population Control, Regulating Population through the institution of Marriage, Family and the State

Unit-II

Theoretical Contribution:

Malthus and Neo-Malthusian
Marxian and Neo-Marxian
Demographic Transition
Family Planning and Developmentalist Perspectives
Middle Path Approach

Unit-III

Trends of Population Growth at Global and Regional level and Future Growth.
Trends of Population Growth in India:

Pre and Post Independence Period, Future Growth by mid of 21st century.
Distribution of Population by Regional Balances.

Compositions of Population by Age, Gender, Rural-Urban, Education, and Broad Industrial Classification Categories.

Unit-IV

Towards Population Stabilization in India: Population Policy 2000 –Goals and Strategies
Continuity and Change from earlier Population Policy in the Post Independent India.
Reproductive & Child Health Approach.

Suggested Readings

1. Bhende, Asha & Tara Kanitkar (1999) *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, Donald J. (1969) *The Principles of Demography*, N.,Y. John Wiley.
3. Bose, Ashish (1991) *Demographic Diversity in India*, Delhi, B.R. Publishing.
4. Census of India (2001), Paper 2 (Rural-Urban Totals).
5. Chambliss, R. (1954), *Social Thought: From Hammurabi to Comte,* New York, Dryden Press.
6. Haberland, Nicole and Diana Measham (eds.) (2002) *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning,* New

York, Population Council.

7. *International Encyclopaedia of Population*, 2 Vols.
8. Kleinmann, Davis S. (1980) *Human Adaptation and Population Growth: A Non-Malthusian Perspective*, New York, Monclairef.
9. Nam, Charles (1968) *Population and Society*, Boston, Houghton, Miffin Co.
10. *National Population Policy (2000),* Government of India.
11. Pachauri, S. (ed.) (1999), *Implementing Reproductive Health Agenda in India: the Beginning*, New Delhi, Population Council.
12. Petersen, William (ed.) (1972*), Readings in Population*. N.Y., Macmillan.
13. Population Studies, (1996) *Golden Jubilee Special Issue*, Great Britain (select papers).
14. Premi, M.K. (1991), *India's Population: Heading Towards a Billion*, Delhi, B.R. Publishing.
15. Sen, Amartya and Jean Dreze (1996), *Indian Development*, Oxford University Press.
16. Simon, Julian L. (1981), *The Ultimate Resource*, Princeton, Princeton University Press.
17. U.N., (1973) *Determinants and Consequences of Population Growth*, (Chapter-Introduction), NY.
18. U.N. (2002) *World Population Reports*, N.Y.

Additional Readings

1. Agarwala, S.N. (1984), *Population,* New Delhi: National Book Trust, India.
2. Agarwala, S.N. (1977), *India's Population Problems*, New Delhi: Tata McGraw Hill.
3. Hans,Raj (2001), *Fundamentals of Demography*, New Delhi: Surjeet Publications.
4. Kulkarni, P.M. (2000), "Prospective Changes in the size and structure of India's Population – Implications of PFI Projections up to 2051" *in Millennium Conference on Population, Development and Environment Nexus*, New Delhi: PHD Chamber of Commerce and Industry.
5. Panandikar, V.A Pai (2000), "India's Demography and Democracy", in *Millennium Conference on Population, Development and Environment Nexus,*
   New Delhi: PHD Chamber of Commerce and Industry.
6. Thompson, Warren, S. (1953), *Population Problems*, New York: McGraw-Hill.

SOC O 621: SOCIAL DIMENSIONS OF DEVELOPMENT

Objective

Economic development in society cannot remain unaffected by social-structural factors. Similarly, the social structure, too, is influenced by economic growth and modernization. With this in view, the present paper (a) provides the Gandhian, Marxist, Ecological, Post-modernist, Feminist and Sociological critiques of the economic growth and modernization models of development; (b) discusses how structural factors like caste,

tradition, religion and population can impede or facilitate development; (c) examines how economic development and modernization can, in turn, lead to problems related to ethnicity, disparity, displacement and (d) discuss some of the new trends in development studies.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Critiques of Economic Paradigm of Development:

Gandhian, Marxist, Post-Modernist, Ecological, Feminist, and Sociological

Unit-II

Social-Structural and Cultural Factors in Economic Development:

Caste, Religion, Population, Traditions and Values

Unit-III

Socio-Cultural Consequences of Economic Development: Disparity, Displacement and Resettlement, Ethnic Resurgence, Erosion of Traditions and Values.

Unit-IV

New Directions in the Understanding of Development:
Ethical Development, Capability Approach (Amartya Sen)
New Modernity and Risk Society (Ulrich Beck)
Human Rights and Development (Peter Uvin)

Inclusive Development
Millennium Development Goals (UNDP)

Suggested Readings

1. Biswas, S. C. (ed.) (1969) *Gandhi, Theory and Practice: Social Impact and Contemporary Relevance*, Shimla, IIAS. (Articles by V. Palshikar & Raj Krishna).
2. Boyne, Roy (2003) *Risk (Concepts in the Social Sciences)*, Berkshire: Open University Press.
3. Cernea, M. M. (1988) "Involuntary Resettlement and Development" *Finance and Development*, Sept. (pp.) 44-46.
4. Desai, Vandana and Robert B Potter, (2008) *The Companion to Development Studies*, London: A Hodder Arnold Publication.
5. Development and Populations, Special Issue (1990) *Yojana*, Vol. 34, Nos. 1 & 2, Jan. 26.
6. Dube, S. C. (1958) *India's Changing Villages: Human Factors in Community Development*, London: Routledge & Kegan Paul (Chapter 6).
7. Ferreira, Francisco H. G. and Michael Walton (2006) *World Development Report: Equity and Development*, Washington DC: World Bank & N.Y.: Oxford University Press.
8. Mehta, Rani (2014) Sociology and Environmental Sustainability, Jaipur, Rawat Publications.
9. Mishra, G. P., D. M. Diwakar and Ashok Mathur (2006) *Deprivation and Inclusive Development*, Lucknow: New Royal Book Co.
10. Pieterse, Jan Nederveen (2010) *Development Theory*, Newbury Park, CA: Pine Forge Press.
11. Quinlivan, Gary and Antony Davies (2003) "Ethical Development and the Social Impact of Globalization", *International Journal on World Peace*, Vol. 20.
12. Rao, M. S. A. (1969) "Religion and Economic Development" *Sociological Bulletin*, Vol. XVIII, No. 1, March (pp.1-15).
13. Sabbarwal, Sherry (2010) "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
14. Sardar Sarovar Project: Review of Resettlement and Rehabilitation in Maharashtra (1993) report by the Tata Institute of Social Sciences, in *Economic and Political Weekly*, Aug. 21, (pp. 1705-1714).
15. Sen, Amartya (2000) *Development as Freedom*. Oxford: Oxford University Press.
16. Sharma, S. L. (1994) "Salience of Ethnicity in Modernization: Evidence from India", *Sociological Bulletin*, Vol. 39, Nos. 1 & 2 (pp. 33-51).
17. Sharma, S.L. (1988) "Modernization of Indian Society: A Symbolic Intreractionist Perspective", *The Journal of Sociological Studies*, Vol.7, Jan. (pp.10-33).
18. Sinha, D. and S. R. Kao (eds.) (1988) *Social Values and Development*, New Delhi: Sage (Introduction and Chapter I).
19. "Sustainable Development" Special Issue (1991) *The European Journal of Development Research*, Vol. 3, No. I June.
20. UN, (2007) *Globalization and Inclusive Development (Note by the UNCTAD Secretariat)*, Geneva: United Nations Pub.

21. UN, (2009) *Millennium Development Goals Report 2009*, N.Y.: United Nations Publication.
22. Uvin, Peter (2004) *Human Rights and Development*, West Hartford, Connecticut: Kumarian Press.

Additional Readings

1. Apthorpe, Raymond, J. and A. Krahl (1986) *Development Studies: Critique and Renewal*, Leiden, the Netherlands: Brill.
2. Chakraborty, M. (1987) "Resettlement of Large Dams Oustees in India" in *People and Dams, Published by the Society for Participatory Research in Asia*, New Delhi.
3. Foster, G. M. (1973) *Traditional Societies and Technological Change*, New Delhi: Allied Pub. (Chapter 5).
4. Giddens, A. (1996) "Global Problems and Ecological Crisis" in *Introduction to Sociology*, IInd edition, New York: W.W. Norton & Co.
5. Momsen, J. (1991) *Women and Development in the Third World*, N.Y.: Routledge.
6. Nusebaum, Martha (1993) *The Quality of Life*, Oxford: Oxford University Press.
7. Pieterse, J. N. (ed.) (1992) *Emancipations, Modern and Postmodern*, London: Sage.
8. Pimpley, P. N., "Development and Downward Social Mobility in Independent India", Unpublished Monograph.
9. Sabbarwal, Sherry (1992-93) "Ethnicity: A Critical Review of the Conceptions and Perspectives", *Social Science Research Journal*, Vol. 1, Nos. 1 & 2, March-Sept., 1992-93.
10. Sharma S. L. (1986) *Development: Socio-cultural Dimensions*; Jaipur: Rawat Publications (Chapters 1, 7, 8, 9).
11. Sharma, S. L. (1989), "Social Development: Reflection on the Concept and the Indian Experience", *Guru Nanak Journal of Sociology*, Vol.10, Nos. 1 & 2 (pp. 37-55).

SOC O 721: SOCIOLOGY OF URBAN SETTLEMENTS

Objective

This course has been devised to introduce the students to the history of urban settlements and emergence of Urban Sociology as a discipline. The course would acquaint the students with the basic concepts, approaches and theoretical formulations relating to urban typology, urban ecology, urbanism etc., with a special focus on the diverse experiences of western and non-western, particularly Indian, regions. This course will provide the basic understanding to the students who wish to specialize in urban sociology.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Urbanization in Historical Perspective

Emergence of Urban Settlements
Urbanization in Developed and Developing Countries
Suburbanization
Pre-industrial, Industrial and Post-industrial and Colonial city
Metropolitan and Mega city

Unit-II

Approaches to Urban Society

Ecological-Classical Neo-Classical and Socio-Cultural
Technological and Demographic
Urbanism as a Way of Life
Rural-Urban Continuum
Marxist Approach to City

Unit-III

Internal Structure of Cities
Concentric-Zone Theory, Star theory, Sector theory, Multiple-Nuclei theory
Location of Cities

Central Place theory, Break-in-transportation, Specialized
Functions Urban Primacy and Rank-Size Rule.

Unit-IV

Urban Functions

Basic and Non-basic Functions
Generative and Parasitic Cities.
Functional Classification of Cities
Cultural Role of Cities

Suggested Readings

1. Castells, Manuel, (1997), *The Urban Question*, London, Edward Arnold.
2. Gill, Rajesh, (2009) *The Contemporary Indian Urban Society — Gender, Ethnicity and Governance*, Jaipur, Rawat Publication.
3. Gill, Rajesh (1989), "Some Issues in the Conceptualization of Urbanism", *Journal of Sociological Studies*, Vol. 8, Jan., 75-85.
4. Gill, Rajesh, (2000), 'Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization', *Sociological Bulletin*, Vol. 49, No. 2, September, pp. 211-228.
5. Guglar, Joseph (ed.), (1988), *Urbanization of the Third World*, Oxford, Oxford University Press.
6. Hatt, P.K. and Reiss, A.J. (eds.) (1951), *Cities and Society*, Illinois, The Free Press.
7. Lewis, Oscar, (1970), *"Further Observations on the Folk-Urban Continuum and Urbanization with special reference to Mexico City",* in Hauser and Schnore (eds.), *The Study of Urbanization*, New York, John Wiley and Sons.
8. Redfield, Robert and Milton B. Singer, (1954), "Cultural Role of Cities", in *Economic Development and Cultural Change*, Vol. 3, 53-73.
9. Sjoberg, Gideon, (1960), *The Pre-Industrial City*, Illinois, The Free Press.
10. Theodorson, G.A. (ed), (1982), Urban Patterns, Studies in Human Ecology, University Press.
11. Theodorson, George, (1961), *Studies in Human Ecology, Evanstow*, Harper and Row.
12. Weber, Max, (1960), *The City*, Translated by Martindale, London, Heinemann.
13. Wirth, Louis, (1938), "Urbanism as a Way of Life", *American Journal of Sociology*, Vol. 44, 1-24.

Additional Readings

1. Ficker, V.B. & H.S. Graves, (1971), *Social Science and Urban Crisis*, New York, The Macmillan Company.
2. Flanagan, William G., (1990), *Urban Sociology, Images and Structure*. Boston, Allyn and Bacon.
3. Gans, Herbert J., (1968), "*Urbanism and Sub-Urbanism as ways of Life: A Re-evaluation of Definitions*" in Sylvia F. Fava (ed.), *Urbanism in World Perspective*, New York, Thomas Y. Crowell Co.
4. Hoselitz, Bert F., (1960), *Sociological Aspects of Economic Growth*, Illinois, Free Press.
5. Spates, James, (1982), *The Sociology of Cities*, New York, St. Martin Press.

SOC O 821: STRUCTURAL MOORINGS OF GENDER OPPRESSION

Objective

The course aims at understanding the social-structural underpinnings of gender oppression persisting in India and worldwide. The agenda of gender empowerment fails to yield the desired outcomes because of structural impediments which are, nevertheless, difficult to overcome. On the one hand, there is the socially given identity of 'otherness' of the woman and on the other, there are contested spaces and processes of self-identity formation. Various contemporary issues, perspectives and challenges in feminist scholarship, movements, agency and empowerment will be explored in a holistic framework through the course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Unit-I

Social construction of gender: Structural myths of femininity and masculinity. Patriarchy and gendered division of labour.

Reflections on structural gender inequity in nature-culture debates.

Unit-II

Approaches to gender:
Liberal feminism.
Marxist, Radical and Socialist feminisms.
Dalit feminism

Unit-III

International Conventions with special reference to CEDAW Reports: Govt. of India, 2000 & 2007 (Articles 2 & 3)

Gendering the Human Development Indices: Recasting the Gender Development Index and the Gender Empowerment Measure for India: Govt. of India, 2009.

Women's movement in India

Unit-IV

Status of Women in India: critical appraisal of status reports

Work-participation and Sexual Harassment at the Workplace (Prevention, Prohibition and Redressal) Act, 2013

Gender Narratives in Indian Epics: Sita and Draupadi

Suggested Readings

1. Agarwal, Bina (ed.), 1994, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge, Cambridge University Press.
2. Agarwal, Bina (ed.), 1998, *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi, Kali for Women.
3. Beauvoir, Simone de, 1989, *The Second Sex*, New York, Vintage Books.
4. Blumberg, Rae Lesser (ed.), 1991, *Gender, Family and Economy: The Triple Overlap*, California, Sage.
5. Bose, Mandakranta, 2000, *Faces of the Feminine in Ancient, Medieval and Modern India*, New Delhi, OUP.
6. Butler, Judith, 1999, *Gender Trouble: Feminism and the Subversion of Identity*, New York, Routledge.
7. Cohen, Beth (ed.), 1995, *The Distaff Side: Representing the Female in Homer's 'Odyssey'*, New York, OUP.
8. Collins, Patricia Hill, 2000, *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*, New York, Routledge.
9. Friedan, Betty, 1984, *The Feminine Mystique*, New York, Dell Publications.
10. Grogan, Sarah, 1999, *Body Image: Understanding Body Dissatisfaction in Men, Women and Children*, New York, Routledge.
11. Hooks, Bell, 2000, *Feminist Theory: From Margin To Center*, London, Pluto Press.
12. Jackson, Stevi & Jackie Jones, 1998, *Contemporary Feminist Theories*, Edinburgh, Edinburgh University Press.

13. Kalleberg, Arne L. & Rachael A. Rosenfield, 1990, *"Work in the Family and the Labour Market: Cross-national Reciprocal Analysis."* In *Journal of Marriage and Family*, Vol. 52, No. 2 (May), pp. 331-346.
14. Kimmel, Michael S., 2000, *The Gendered Society*, New York, OUP.
15. Lerner, Gerda, 1986, *The Creation of Patriarchy*, Oxford, OUP.
16. Leslie, Julia, 1991, *Roles and Rituals for Hindu Women*, Madison, Fairleigh University Press.
17. Lorber, Judith & Susan A. Farrell (eds.), 1991, *The Social Construction of Gender*, California, Sage.
18. Mandelker, Amy, 1993, *Framing Anna Karenina: Tolstoy, the Woman Question and the Victorian Novel*, Columbus, Ohio State University Press.
19. Mazumdar, Vina, 1979, *Symbols of Power: Studies on the Political Status of Women in India*, Mumbai, Allied Publishers.
20. Mies, Maria, 1980, *Indian Women and Patriarchy*, New Delhi, Concept.
21. Oakley, Ann, 1985, *Sex, Gender and Society*, London, Gower.
22. Omvedt, Gail, 1990, *Violence Against Women: New Movements and New Theories in India*, New Delhi, Kali for Women.
23. Ray, Raka, 2002, *Fields of Protest: Women's Movements in India*, New Delhi, Kali for Women.
24. Rege, Sharmila, 2006,*Writing Caste/ Writing Gender: Narrating Dalit Women's Testimonies*, New Delhi, Zubaan.
25. Roman, Leslie G. & Linda Eyre (eds.), 1997, *Dangerous Territories: Struggles for Difference and Equality in Education*, New York, Routledge.
26. Weitz, Rose (ed.), 1998, *The Politics of Women's Bodies: Sexuality, Appearance and Behaviour*, New York, OUP.

Additional Readings

1. Agnes, Flavia, Sudhir Chandra & Monmayee Basu (eds.), 2004, *Women and Law in India*, New Delhi, OUP.
2. Desai, Neera & Maitreyi Krishnaraj (eds.), 1987, *Women and Society in India*, New Delhi, Ajanta.
3. Desai, Neera (ed.), 1988, *A Decade of the Women's Movement in India*, New Delhi, Himalaya.
4. Leslie, Julia (ed.), 2000, *Invented Identities: The Interplay of Gender, Religion and Politics in India*, New Delhi, OUP.
5. Shulamith, Firestone, 2003, *The Dialectic of Sex : The Case For Feminist Revolution*, New York, Farrar, Straus and Giroux.

SOC O 921: PEASANTS AND RURAL SOCIETY IN INDIA

Objective

The basic purpose of the course is to apprise the students about the basic differences of rural sociology *vis-a-vis* the urban sociology, and the crucial role played by the peasantry therein. Also how the traditional social institutions, agricultural economy and the caste system together build up social structure which is entirely different from the ideal market-oriented capitalist institutions. The course would also throw light on the nature of changes taking place in the rural social structure after the presentation of money and market economy linked to the global capital.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Significance of the study of Rural Society as a separate subject
Basic concepts/definition: Peasant, Rural Society, Village and Indian Village.
Rural Social Institutions: Family, Kinship, Class, Tribe, Caste System, Jajmani System, Religion, Political Institutions and Factions.

Unit-II

Rural India under the British rule:
Introduction of limited Land Reforms

Introduction of Commercial Crops and their Social and Political Repercussion
Introduction of Modern Industry and New Rural-Urban Linkages

Social Transformation in Independent India:
Shift from Feudal to Capitalist form of Agriculture and Change in Social Structure.
Role of Land Reforms
Role of Peasant Movement

Unit-III

Globalization and Crises of Rural Society
Impact on Economy
Impact on Social Institutions

Unit-IV

Emerging Social Ecology
Democratic Process and Caste-Ethnic Relations
Panchayati Raj Institutions and Neo-Village Republics

Suggested Readings

1. Desai, A.R. (1977) *Rural Sociology in India,* Bombay: Popular Prakashan.
2. Frankel, F.R. and Rao, M.S.A. (1989) *Dominance and State Power in Modern India*, Bombay: OUP.
3. Mencher, J.P, (1983) *Social Anthropology of Peasantry*, Part-III, OUP.
4. Mishra, Rajeeb (2006) *Voluntary Sector and Rural Development: Concepts, Practice and New Approach to Remove Rural Poverty,* New Delhi, Rawat Publications.
5. Omvedt, Gail (ed.) (1982) *Land, Caste and Politics in India*, Delhi: OUP.
6. Reddy, A.Vinayak and Charyulu, M.Yadagira. (Eds.). (2008). *Rural Development in India: Politics and Initiatives,* New Delhi, New Century.
7. Shanin, Theodor (ed.), (1987) *Peasants and Peasant Society*, New Delhi: Penguin.

Additional Readings

1. Appadurai, Arjun, (1996) *Modernity at Large: Cultural Dimensions of Globalization*; New Delhi, OUP
2. Beck, Ulrich (2000) *What is Globalization?* London: Polity.
3. Berch, Berberogue, ed. (1992) *Class, State and Development in India,* New Delhi: Sage Publications.
4. Thorner, D and Thorner, E. (1962) *Land and Labour in India,* Bombay: Asia Publications.
5. Walter, C. Neala, (1990) *Developing Rural India: Policies, Politics and Progress*, New Delhi, Allied Publishers.

SOC O 922: ORGANIZATIONAL THEORY AND BEHAVIOUR

Objective

The course provides (a) an introduction to the concept of organization; (b) discusses the various theoretical approaches to organizations; (c) familiarizes the student with the concepts of organizational ideologies and culture; and (d) focuses on the behavioral dimensions in organizations.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Organization:

Definition, Features and Typologies based on Function, Regulation, Technology and Structure and Environment

Unit-II

Theoretical Perspectives:

Classical – Marx, Weber, Taylor (Scientific Management);

Neo-Classical – Human Relations approach with special reference to the Hawthorne studies;

Modern – Systemic (closed, open and socio-technical systems approach by the Tavistock School) and Interactional (Goffman and the total institution)

Unit-III

Organizational Ideologies and Culture:

Ideologies – Structuralism, Psychologism, Consensualism, Welfarism and Legalism; Culture- sub-cultures and socialization

Unit-IV

Behaviour in Organizations:

Job satisfaction, Job Commitment, Decision making and Stress Management

Suggested Readings

1. Baron, Robert A. (1976) *Behavior in Organizations*, N.Y.: John Wiley.
2. Beach, L. R. (1997) *Psychology of Decision Making: People in Organizations*, Thousand Oaks: Sage.
3. Biddle, D. and R. Evenden (2000) *Human Aspects of Management*, New Delhi: JAICO Publishing House.
4. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: OUP
5. Eldridge, J. E. T. & A. D. Crombie (1974) *A Sociology of Organization*, London: Nelson.
6. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London: Sage Publications.
7. Pestonjee, D. M. (1999) *Stress and Coping: The Indian Experience*, New Delhi: Sage.
8. Robbins, S. P. (1999) *Organization Theory: Structure, Designs and Applications*, New Delhi: Prentice-Hall.
9. Wieland, George F. & R. A. Ullrich (1976) *Organizations: Behavior, Design and Change*, Homewood, Illinois: Richard D. Irwin Inc.

Additional Readings

1. Blau, P. M. & W. R. Scott (1963) *Formal Organizations: A Comparative Approach*, London: Routledge and Kegan-Paul.
2. Blumberg R. L. (1987) *Organizations in Contemporary Society*, Englewood Cliffs: N. J. Prentice Hall Inc.
3. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.
4. Etzioni, A. (eds.) (1969) *A Sociological Reader on Complex Organizations*, 2nd ed., N.Y.: Hold & Reinhard & Winston.
5. Etzioni, A. (1972) *Modern Organizations*, N. Delhi: E.E.E. Prentice-Hall of India.
6. Hall, Richard H. (1972) *Organizations: Structure and Process*, 2nd ed., Englewood Cliffs: N.J. Prentice Hall Inc.
7. Litterer, J. A. (ed.) (1969) *Organizations: Structure and Behavior*, N.Y.: Wiley & Sons.
8. Porter, L. W. *et al.* (1975) *Behavior in Organizations*, N.Y.: McGraw Hill.

9. Reitz, H. J. (1977) *Behavior in Organizations*, Homewood Illinois: Richard D. Irwin.
10. Sharma, K. L. (1981) *Voluntary Business Associations in Organizational Frame*, Department of Sociology: Panjab University, Chandigarh.
11. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 923: BASIC SOCIAL STATISTICS

Objective

This paper is designed to familiarize the students about basic statistical concepts, quantitative techniques for description and induction of sociological data. In the first and second units, students are introduced to measures of central tendency and measures of dispersion, bivariate distribution, etc. The third unit includes measures of association, probability, standard scores, etc. In the last unit, students are exposed to various inferential methods.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** (Theory portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable Electronic Calculators and Statistical Tables is permitted for the examination.

Course Outline

Unit-I

Statistics in Social Analysis - Functions of Statistics in social analysis, Limitations of

Statistics

Variables-discrete and continuous, quantitative and qualitative; independent and dependent

Levels of measurement-Nominal, ordinal and interval

Frequency distribution, grouping error, cumulative frequency distribution, Arithmetic mean, median and mode

Unit-II

Range, semi-interquartile range, average absolute deviation, variance, standard deviation, coefficient of variation, Symmetry and Kurtosis

Bivariate distributions-Bivariate contingency tables, rules for percentaging bivariate frequency tables

Unit-III

Measures of Association-Lambda, Cramer's V, Spearman's rank correlation, Gamma and Pearson's product moment correlation coefficient

Elements of probability- 'a priori' & empirical probability, properties of probability Normal probability distribution, area under the normal curve, standard scores, use of standard scores

Unit-IV

Statistical Inference-Simple random sampling, sample and universe, statistic and parameter, sampling distribution, standard error of statistic, level of significance, critical region

Tests of significance-Z and `t' tests for significance of mean (2 independent samples); Chi-square test for AXB contingency table.

Suggested Readings

1. Blalock, H.M. (1979*) Social Statistics*, New York, McGraw Hill Book Company.

2. Loether, H.J. and Tavish, Mac D.G. (1974) *Descriptive Statistics for Sociologists: An Introduction*, Boston, Allyn and Bacon, Inc.

3. Mark Sirkin R. (1995) *Statistics for the Social Sciences*, London, Sage Publications.

4. Muller John and Kar. F. Schusseller and Herbert, L. Costner, *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.

5. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

6. Weiss, Roberts (1968) *Statistics in Social Research*, New York John Wiley & Sons, Inc.

Additional Readings

1. Jane, L. Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*; Sage Publications: London.

2. Deshpande, J.V., Gore, A.P., Shanubhogve (1995), *Statistical Analysis of Nominal Data*: New Age International Publishers: New Delhi.

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SEMESTER-III

SOC R 438: INTERPRETIVE SOCIOLOGICAL THEORIES

Objective

This course sensitizes the students to the works and ideas of sociologists who have contributed to the perspective of Interpretive Sociology, as against the Positivistic sociology. It focuses on the work of Action theorists, Interactionist theorists and the scholars belonging to the Frankfurt School of Critical Theory.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Action Theories : Max Weber, Talcott Parsons

Unit-II

Symbolic Interactionism : G.H. Mead, H. Blumer

Phenomenology : E. Husserl, A. Schutz

Unit-III

Dramaturgy : E. Goffman

Ethnomethodology : H. Garfinkel

Unit-IV

Critical Theory : J. Habermas

H. Marcuse

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory*, California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A., (2002) *Contemporary Sociological Theory*, California, Pine Forge Press.
3. Alexander, J. (1982) *Positivism: Presuppositions and Current Controversies*, Vol. I of Theoretical Logic in Sociology, Barkeley and Los Angeles, University of California Press.
4. Bernstein, R.J. (ed.) (1985) *Habermas and Modernity*, Cambridge Polity Press.
5. Blumer, H. (1969) *Symbolic Interactionism*, Englewood Cliffs, Prentice Hall.
6. Craib, Ian (1984) *Modern Social Theory*, Brigton, Harvestor Press.
7. Douglas, J. (ed.) (1971) *Understanding Everyday Life*, London, Routeledge & Kegan Paul.
8. Garfinkel, H. (1984*), Studies in Ethnomethodology*, Cambridge, Polity Press.
9. Giddens. A. (1987*) Social Theory and Modern Sociology*, Cambridge, Polity Press.
10. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
11. Goffman, E. (1959) *The Presentation of Self in Everyday Life*, New York, Doubleday.
12. Gurwitsch, A. (1962) "The Commonsense World as Social Reality", *Social Research*, 28-1, 71-93.
13. Habermas, J. (1984) *Theory of Communicative Action*, Cambridge, Polity Press.
14. Heritage, John C. (1987) "Ëthnomethodology" in A. Giddens and Turner (eds.), *Social Theory Today*, Cambridge Policy Press, 347-382.

15. Heritage, J. (1989) *Garfinkel and Ethnomethodology*, Cambridge, Polity Press.

16. Joas, H. (1987) "Symbolic Interactionism" in A. Giddens and J. H. Turner (eds.) *Social Theory Today*, Cambridge, Polity Press, 82-115.

17. Natanson, M. (1970) "Phenomenology and Typification: A Study in the Philosophy of A. Schutz", *Social Research* 37 (1), 1-22.

18. Parsons, Talcott, (1951) *The Social System*, Glencoe, III, The Free Press.

19. Weber, Max (1947) *The Theory of Social and Economic Organization*, Glencoe, III, The Free Press.

20. Zaner, R. M. (1961) "Theory of Intersubjectivity: Alfred Schutz", *Social Research*, 28-1, 1-17.

Additional Readings

1. Collins, Randall (1997*) Sociological Theory*, Jaipur, Rawat Publications.
2. Elliott, Anthony and Bryan S. Turner (eds.) (2001) *Profiles in Contemporary Social Theory*, London, Sage Publications.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat Publications.
4. Zeitlin, I.M. (1998*) Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat Publications.

SOC R 439: METHODS AND TECHNIQUES IN SOCIAL RESEARCH

Objective

Students in this Semester are supposed to do field work as a part of this Course. Hence, the Course familiarizes the students with basic elements of scientific method, apart from the process of field work, data collection and finally report writing. This course trains the students as to how to draw influences and conclusions out of empirical research.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the

candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Scientific Method:

i) Definition and Aims: Explanation; Generalization; Prediction; Control
ii) Basic Elements: Concepts, Constructs, Hypotheses, Fact, Theory
iii) Induction and Deduction

Unit-II

Research Design:

- Exploratory, Descriptive, Experimental, Quasi-experimental, Comparative, Longitudinal and Panel studies
- Problems of Experimental Studies in Social Research.

Unit-III

Measurement and Scaling:

- Measurement: Meaning, Levels, Indices, Operationalization, Problems
- Scaling Techniques - Thurstone, Likert, Guttman and Bogardus Scales Reliability and Validity of Scales.

Unit-IV

Field Work:
Meaning and Uses
Techniques of Data Collection:

- Observation: Structured and Unstructured; Participant and Non-Participant;
- Interview Schedule: Structured and Unstructured
- Interview: Types; Advantages and Disadvantages
- Questionnaire: Types, Advantages and Disadvantages
- Case Study; Content Analysis;
- Data Analysis: Coding, Tabulation and Report Writing

Suggested Readings

1. Bailey, K. D., (1997) *Methods of Social Research*, New York, The Free Press.
2. Bernard, H. Russell (2000) *Social Research Methods – Qualitative and Quantitative Approaches*, New Delhi, Sage Publications India Pvt. Ltd.
3. Colin, R. (2000) *Real World Research* Oxford, Blackwell,

4. Goode, W.J. and Hatt P.K. (1952), *Methods in Social Research*, New York: McGraw Hill, International Students Edition.
5. Kerlinger, Fred N. (1973), *Foundations of Behavioural Research*, New York, Holt, Rinehart & Winston, INC.
6. Moser and Kalton (1980) Survey *Methods in Social Investigation.* Heinemann Educational Books.
7. Punch, K. F, (1998) *Introduction of Social Research, Quantitative & Qualitative Approach*, New Delhi, Sage Robson,
8. Seltiz, Claire, et.al. (1959) *Research Methods in Social Relations,* New York, Henry Holt & Co.
9. Tashakkori, A. and Charles Teddlie, (2003) *Handbook of Mixed Methods,* New Delhi, Sage.
10. Tim, May, (2001) *Social Research: Issues, Methods and Process*. Buckingham, Open University Press.

Additional Readings

1. *Barly, Kenneth, D. (1978) Methods of Social Research,* New York. The Free Press.
2. Bryant, G.A. (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Giddens, Anthony, (1974), *Positivism and Sociology*, London: Hienmann.
4. Hindess, Barry (1977) *Philosophy and Methodology in Social Sciences*,
5. The Harvester Press.
6. Madge, John, (1976) *The Tools of Social Science*, London, Longman.

SOC O 532: BASIC METHODS IN POPULATION STUDIES

Objective

To understand the basic dynamics of population, it is important to have basic knowledge of demographic methods. This course prepares the students to explore the sources of demographic data, learn basic techniques to handle these data and develop measures to understand changes in population size, fertility, mortality and marriage.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Sources of Demographic Data: Census, Civil Registration, Population Surveys, and UN Sources of Demographic Data. Nature and Quality of these Data Sources.

Changes in Population Size: Intercensal Change, Average Annual Growth Rate, Linear Growth Rate, Geometric Growth Rate, Exponential Growth Rate; Interpolation and Extrapolation.

Unit-II

Population Composition and Distribution: Literacy Rate, Rural-Urban, Labour Force Participation Rate.

Age and Sex Composition: Problems related to Age Data, Age Distribution, Age Heaping Effects, and Adjustment of Age Data. Dependency Ratios. Construction of Age-sex pyramids, Sex Ratio.

Unit-III

Measures of Mortality: Computation of Crude Death Rate, Age-Specific Death Rates; Infant Mortality Rate, Perinatal, Neonatal, Post-Neonatal Mortality Rate. Direct and Indirect Standardized Death Rate.

Life-Table Method: Types of Life Tables, Basic Columns of Life Tables and their computation. Relationship between various life-table columns, Life Table Stationary Population. Application of Life Table approach.

Unit-IV

Measures of Fertility: Computation of Crude Birth Rate and its uses, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate, Child Woman Ratio

Contraceptive Prevalence Rate, Abortion Rate & Foetal Wastage

Measure of Marriage & Divorce: Crude Marriage Rate, Divorce Rate. Mean and Median

Age at Marriage from Census and Survey Data.

Suggested Readings

1. Census of India, *Age and Life Tables*, Series of India, Paper 2 , GOI, 1974.
2. Hanp, Arthur and Thomas, T. (2001*) Population Reference Bureaus,* Population Handbook, 4th ed., Washington, PR3.
3. Mishra, Bhaskar D. (1993) *Introduction to the Study of Population.* New Delhi, National Book Population Reference Bureau, Trust (Latest Edition)
4. Shryock, Henry S. Jacob S. Siegel and Others (1976) *Methods and Materials of Demography.* (Condensed Edition) Harcourt Brace, Academic Press.
5. Spiegelman, Mortimer, (1968) *Introduction to Demography,* Cambridge, Harvard University Press.
6. *UN Manuals* Nos. 1, 2 & 3, United Nations.

Additional Readings

1. Cox, Peter (1959), *Demography,* London: Cambridge University.
2. Haupt, A. and Kane, T. (1998), *Population Handbook*, Washington DC, Population Reference Bureau.
3. Newell, Colin (1988), *Methods and Models in Demography*, London, Belhaven Press.

SOC O 632: SOCIAL DEVELOPMENT IN INDIA

Objective

This paper examines the development process in India focusing mainly on the issues of

(a) the India State and planned development; (b) the role of voluntary sector in India's development; (c) the assessment of the problems of, and measures taken to improve the conditions of the underprivileged groups such as the SCs, STs and BCs; and (d) to consider the phenomenon of globalization and its consequences for the Indian society.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short

answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Social Development: Concept, Meaning and Indicators
Indian State and Social Development:Historical Overview and present status

Unit-II
Voluntary Sector and Development: Voluntary sector organizations, their Potential and Limitations as Agencies of Social Transformation; Some Case Studies; Issues in Voluntary Sector

Unit-III
Development of Disadvantaged Groups: Problems of Scheduled Castes (SCs), Scheduled Tribes (STs) and Backward Classes (BCs); Compensatory Discrimination through Constitutional and Legal measures; Development Schemes for SCs, STs and BCs; Commissions and their Recommendations: Mandal Commission and the Reservation Debate; Sociological Appraisal of the Development Policies for STs, SCs and BCs

Unit-IV
Globalization and its Social Implications in India: Impact on Agriculture and Labour; Repercussions for Women and Youth.

Suggested Readings

1. Basu, A. R. (1985) *Tribal Development Programmes and Administration in India*, New Delhi: National Book Organization. (Chapters 2 & 15)
2. Basu, D. K. and R. Sisson (eds.) (1986) *Social and Economic Development in India: A Re-assessment*, New Delhi: Sage, (Chapters by Ser & Galanter).
3. Chitnis, Suma (1981) *A Long Way to Go: Report of a Survey of Scheduled Caste High School and College Students*, New Delhi: Allied Pub. (pp. 107-143).
4. Choudhary, K. (1990) "Reservations: A Systematic Compulsion", *Mainstream*, March 3. (pp. 23-26)
5. Conference Number on "Economic Restructuring in India and Labor" (1992) *The Indian Journal of Labor Economics*, Vol. 35, No. 4. Oct-Dec.

6. Desai A. R. (1985) *India's Path of Development: A Marxist Approach*, Bombay: Popular Prakashan (Chapter 2).
7. GO, (1993) "Farmers Movement: Fighting for Liberalization", *Economic and Political Weekly*, December 11 (pp. 2708-2710)
8. Jain, Devaki, (1980) *Quest for Power: Five Indian Case Studies*, Ghaziabad, Vikas
9. Jena, N. A. (1994) "An Inquiry into Popular Participation", *Participation and Governance*, Vol. I, No. I, July (pp.8-17)
10. Khan, Murtaz Ali (1980) *Scheduled Castes and Their Status*, New Delhi: ICSSR, (Introduction)
11. McPhail, T. L. (1992) "Electronic Colonialism and the World Information Order" in A. Giddens (ed.) *Human Societies: A Reader, Cambridge*, Polity Press (pp.289-291)
12. Mehta , S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
13. Misra, S. K. and V. K. Puri (1994) *Indian Economy: Its Development Experience*, Bombay: Himalaya Pub.
14. Mowli, V. C. (ed.) (1990) *Role of Voluntary Organizations in Social Development*, New Delhi: Sterling Pub. (Preface & Conclusion)
15. Petras, James (1994) "Cultural Imperialism in Late 20th Century", *Economic and Political Weekly*, Aug. 6 (pp. 2070-2073)
16. Pimpley, P. N. (1988) *Voluntaristic Approach to Development*, Unpublished Monograph.
17. Rajput, Pam and H. L. Swarup (eds.) (1994) *Women and Globalization: Reflections, Options and Strategies*, New Delhi: Ashish Pub. House.
18. Rao, V. M. (1994) "Agriculture and Liberalization: Some Implications for Development Policies", *Economic and Political Weekly*, April 16-23 (pp.999-1003)
19. Redelift, Michael (1984) *Development and the Environmental Crisis: Red or Green Alternatives?* London: Methuen Inc.
20. Sabbarwal, S. (1997) "Ecological and Socio-Economic Consequences of International Tourism for the Less Developed Countries" in S. R. Mehta (ed.) *Poverty, Population and Sustainable Development: Essays in Honour of Professor V. S. D'Souza*, Jaipur: Rawat.
21. Schchiananda (1977) *Harijan Elite: A Study of their Status, Network, Mobility and Role in Social Transformation*, New Delhi: Thomson Press (Chapter 6).
22. Shankar, K. (1989) "Planning Ethos in India", *Mainstream*, Sept. 23 (pp.7-8)
23. Sharma, S. L. (1992) "Social Action Groups as harbingers of Silent Revolution", *Economic and Political Weekly*, Vol. 27, No. 47
24. Singh, A. K. (1984) *Tribal Development in India*, New Delhi: Amar Prakashan, Chapters 2, 7 & 8
25. Singh, S. N. (1994) *Reservations: Problems and Prospects*, New Delhi: Uppal Pub. House, (Introduction & Chapter 3)
26. "Sustainable Development", Special Issue (1991), *The European Journal of Development Research*, Vol. 3, No. 1, June
27. "Symposium on Implications of Globalization" (1995) *Sociological Bulletin*, Vol. 44, (Articles by Mathew, Panini & Pathy)

28. Yadav, K. C. (1994) *India's Unequal Citizens: A Study of OBCs*, New Delhi: Manohar Pub. (Introduction & Chapters 3 & 5).

Additional Readings

1. Appadurai, A. (1997) *Modernity at Large: the Cultural Dimensions of Globalization*, New Delhi: OUP
2. Dereze, J. and Amartya Sen (1996) *India: Economic Development and Social Opportunity*, New Delhi: OUP
3. Keily, R. and P. Marflet (eds.) (1998) *Globalization and the Third World*, London: Routledge.
4. Peet, R. (1991) *Global Capitalism: Theories of Societal Development*, Routledge
5. Waters, M., (1995) *Globalization*, New York: Routledge & Kegan Paul.

SOC O 633: RURAL DEVELOPMENT IN INDIA

Objective

The objective of the course is to familiarize the students with the history of rural development in India, role of the state and farmers in it, and the impact of Market forces on agriculture.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Perspectives on Rural Development:
Liberal, Marxist, Gandhian

Unit-II

State and Rural Development: Land Reforms
Community Development Programs
State and Alleviation of Rural Poverty through Various Programs: SGSY, IAY, EAS, JRY. etc.
State and Education of Rural Masses
Role of Panchayati Raj Institutions

Unit-III

Rural Development and the Role of Peasant Movements:
Pre-Independence Period: Tribal Revolts, Kisan Sabha, Gandhi and Peasants and Telangana Uprising
Post-Independence Period: Tenant Movement, Naxalite Movement and Fresh move for Land Reforms, Farmers Movement.

Unit-IV

Rural Development and the Market Forces:
Green Revolution and its Impact on Rural Society
Globalization, Commercialization of Agriculture,
Impact on Non-Farm Employment and Distributive Justice
W.T.O. and the Process of Marginalization
Challenges of Sustainable Rural Development

Suggested Readings

1. Berch, Berberogue, (ed.) (1992) *Class, State and Development in India*, New Delhi, Sage Publications.
2. Desai, A.R. (ed.) (1979) *Peasant Struggles in India*, Bombay: Oxford University Press.
3. Desai, A.R (ed.) (1986) *Agrarian Struggles in India after Independence*, Oxford University Press.
4. Desai, A.R. (1977) *Rural Sociology in India*, Bombay, Popular.
5. Dhanagre, D.N. (1983) *Peasant Movements in India*, Delhi: Oxford Univ. Press.
6. Nadkarni, M.V. (1987) *Farmers' Movement in India*, Delhi, Allied Publishers.

7. Radhakrishana, P. (1989) *Peasant Struggles: Land Reforms and Social Change in Malabar 1836-1982,* New Delhi: Sage.
8. Shah, Ghanshyam (1990) *Social Movements in India: A Review of Literature*, New Delhi: Sage.
9. Singh, K.S. (1982) *Tribal Movements in India*, New Delhi: Mandra.

Additional Readings

1. Franda Marcus (1979), *India's Rural Development: An Assessment of Alternatives*, London: Indian Univ. Press.
2. Hoogvelt, Ankie (1998) *The Sociology of Development*, London: Macmillan.
3. Jain, L.C. (1979) *Grass Without Roots- Rural Development Under Government*, New Delhi: Sage.
4. Mehta, S.R. (1984) *Rural Development: Policies and Programmes*, New Delhi: Sage Publications.
5. Rao, S.K. (ed.) (1981) *Rural Development in India: Some Facets*, Hyderabad: NIRD.
6. Rao, S.V. (1985) *Education and Rural Development*, New Delhi: Sage Publications.
7. Rao, V.M. and Aziz, Abdul (1989) *Poverty Alleviation in India-Programme and Action*, New Delhi: Ashish.

SOC O 732: PROBLEMS OF URBAN INDIA

Objective

This course familiarizes the students with the contemporary urban situation in India, apart from the historical trends and patterns of urbanization in India. Focus shall be on the recently emerging urban problems and the approaches which have been used to tackle them. The students will be exposed to the most pertinent issues and controversies relating to urban population of India, so as to enable them to develop research problems for further specialization in the given area.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

India's Urbanization

Historical account of Urbanization in India:
Trends and Pattern, Features
Urbanism and Urbanization, Over-urbanization
Rural-Urban Migration. Urban Informal Sector, Tertiarization
Mega Cities of India

Unit-II

Urban Basic Services

Definition, Intra and Inter-City variations:
Water Supply, Power, Sanitation and Sewerage, Solid Waste Management, Education, Health, etc.

Environmental Pollution

Cities and Pollution, Causes, Types and Remedies.
Urban Transport and Traffic Management.

Unit-III

Approaches to Urban Management

Approaches:
Public Provision, Privatization and People's Participation,
Community Participation- Strengths and Weaknesses.
Lessons from Empirical Cases

Unit-IV

Urban Poverty in India

Concept of Urban Poverty; Theoretical Explanations- Structural and Cultural,
Economic and non economic indicators.

Culture of Poverty, Critique.

Empirical situation of Urban poverty in India, Housing, Slums, Features of Indian slums and Causes, Women and Child Poverty.

Suggested Readings

1. Bose, Ashish, (1994). *India's Urban Population- 1991 Census Data.* New Delhi, Wheeler Publishing Co. Ltd.

2. Bose, Ashish (1970). *Urbanization in India: An Inventory of Source Materials,* Bombay, Academic Books Ltd.

3. Census of India, every successive Report.

4. Dentler, Robert A., (1977). *Urban Problems, Perspectives and Solutions*. Chicago, Rand, McNally College Publishing Co.

5. D'Souza, Victor S., (1979). "Socio-Cultural Marginality: A Theory of Urban Slums and Poverty in Cities", in *Sociological Bulletin,* Vol. 28, Nos. 1-2.

6. Flanagan, William G. (1990). *Urban Sociology, Images and Structure.* Boston, Allyn and Bacon.

7. Gill, Rajesh (2009). *The Contemporary Indian Urban Society: Ethnicity, Gender and Governance*. New Delhi, Bookwell.

8. Gill, Rajesh 1993. "Urban Poverty in India: Theoretical Understanding and Policy Implications", in *Urban India.* Vol. XIII, July-Dec., No. 2.

9. Gill, Rajesh 1997. "Issues and Perspectives on Urban Poverty: The Indian Experience" in *Urban India,* Vol. XVII, Jan.-June/July-Dec. Nos. 1&2.

10. Misra, R.P. and K. Misra.1998. Million Cities of India. New Delhi, Sustainable Development Foundation.

11. Sovani, N.V. 1966. *Urbanization and Urban India.* Bombay, Asia Publishing House.

12. Tiwari, Vinod K. and Rao, W.P. (eds.) 1986. Indian Cities-Ecological Perspectives. New Delhi, Concept Publishing House.

13. Wratten, Ellen 1995. "What is Urban Poverty? Definitions and Characteristics". In *Environment and Urbanization*. Vol. 7 No.1.

Additional Readings

1. Garber, Judity A. & Turner, R.S. (eds.) 1995. *Gender in Urban Research*. Urban Annual Review, Sage Publications.

2. Gill, Rajesh 2000. "Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization?", in *Sociological Bulletin.* Vol. 49, No. 2, Sept.

3. Gill, Rajesh 1999. "Seventy-Fourth Constitution Amendment and Political Empowerment of Women in Punjab: A Study in Urban Governance", in *Urban India*, XIX(1).

4. Misra, R.P. and Misra, Kamlesh, 1998. *Million Cities of India.* New Delhi, Sustainable Development Foundation.

5. Mohanty, Bidyut (ed.) 1993. *Urbanization in Developing Countries, Basic Services and Community Participation.* New Delhi, Concept Publishing Company.
6. National Institute of Urban Affairs, 1988. *State of India's Urbanization.* New Delhi, NIUA.

7. National Commission on Urbanization 1988, *Report*, Vols. 1&2.

8. Pactone, Michael 1990. *Urban Problems-An Applied Urban Analysis.* London, Routledge.

9. Press, Irwin and Smith, M.F. *Urban Place and Process-Readings in The Anthropology of Cities.*

10. Ramachandran, R. 1989. *Urbanization and Urban Systems in India.* New Delhi, Oxford University Press.

11. Rao, M.S.A. 1974. *Urban Sociology in India, Reader and Source Book.* New Delhi, Orient Longmans Ltd.

12. Spates, James. 1982. *The Sociology of Cities*. New York, St. Martin Press.

13. Wit, J.W. 1996. *Poverty, Policy and Politics in Madras Slums-Dynamics of Survival, Gender and Leadership.* The Hague, Institute of Social Sciences, Development Studies, Sage.

SOC O 832: FAMILY IN CROSS-CULTURAL PERSPECTIVE

Objective

Students' exposure to this course intends to facilitate their comparative understanding of family and gender relations in different societies. Another aim is to make the students aware whether the family is the basic institution in all societies and whether family as an institution is near the point of extinction or restructuring itself and as a consequence many alternative lifestyles to traditional marriage and family living are emerging.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Family and Gender-Relations

In Highly-Developed, Developing and Under-Developed Countries

- Japan, Belgium
- India, Iran, Brazil
- Afghanistan and Ethiopia

Unit-II

Universality of Family

- Family As a Universal Social Institution- Views of Bronislaw Malinowski, George Murdock, Talcott Parsons, Norman W. Bell and Ezra F. Vogel

- Fate of Family among the Blacks in The Islands of West Indies, Parts of Central America and the U.S.A.;
  The Nayars of Central Kerala in India.

Unit-III

Emerging Alternative Lifestyles

- Singlehood – Never Married
- Cohabitation – Living Together Without Marriage

- Single parent – Male/Female Headed Households
- Group Living – Communes (The Kibbutz of Israel)

Unit-IV

Future of Family in the light of

- Gender Equity
- Ageing
- Migration

Suggested Readings

1. Allen, Katherine (1990) *Single Women/Family Ties*, New Delhi: Sage Publications.

2. Bell Norman W. and Eza F. Vogel (1986) *A Modern Introduction to the Family* (Revised edition), New York: The Free Press.

3. Bender, David L. and Gray E. McCuen (eds.) (1972) *Is Family Obsolete*? Minnesota: Green Heaven Press.

4. Boh Katja and et. al (1990) *Changing Patterns of European Family Life*, New York: Routledge

5. Chakraborty, Krishna (2002) *Family in India*, New Delhi: Rawat Publications.

6. Das Man Singh & Clinton K. Jesser (eds) (1980) *The Family in Latin America*, New Delhi: Vikas Publishing House Pvt. Ltd.

7. Das Man Singh (ed.) (1990) *Family in the Muslim World*, Delhi: M.D. Publications.

8. Hereda, Rudolf C. and Mathas, Edward (1995) *Family in Changing World: Women, Children and Strategies of Intervention*, New Delhi: Indian Social Institute.

9. Leeder, Alaine, (2004) *The Family in Global Perspective*. New Delhi: Sage Publications.

10. Macklin, Eleanord D and Roger H. Rubin (1983) *Contemporary Families and Alternative Life Styles*, New Delhi. Sage Publications.

11. Vardhan Ranjay (1999) Female Headed Households in Patriarchal Society: A Sociological Study, Delhi, Indian Publishers Distributors

Additional Readings

1. Aidala, Angela A. (1989) 'Communes and Changing Family Norms', *Journal of Family Issues,* Vol. 10, No. 3, (Sept), PP 311-338.

2. Allan, Graham (1984) *Family Life: Domestic Roles and Social Organization*, New York: Basil Blackwell.

3. Bharat, Shalini (1984) 'Single-Parent Families- Consequences for Single Parents', *Indian Journal of Social Work,* Vol XLIX, No. 3, PP 227-238.

4. Bumpass, Larry L. James. A. Sweet and Andrew Cherlin (1991) 'The Role of Cohabitation in Declining Rates of Marriage', *Journal of Marriage and Family*, Vol. 53. No. 4, (Nov.), PP 913-927.

5. Uberoi, Patricia (ed.) (1993) *Family, Kinship and Marriage in India*, Delhi: Oxford University Press.

6. Vardhan Ranjay (2008) Single Women: A Study of Spinsters, Delhi, Indian Publishers Distributors

SOC O 931: SOCIOLOGY OF AGING

Objective

Owing to breakdown of traditional values and institutional framework in societies such as India, the aged are facing a number of socio-economic and psycho-medical problems. The worldwide trends indicate that the proportion of aged people in the populations of different societies is ever increasing. This has far reaching implications for the societies across the world. Social scientists are looking at this issue as a matter of serious concern. So, there is an urgent need to study the aged to understand their plight and problems, to study the problems created by increasing aging population as well as to formulate possible interventions for their welfare. This course is an attempt in this direction.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Aging:

- Biological & Physiological, Social and Psychological Aging
- Myths and Facts about Old Age
- Demographic Dimensions of the Elderly

Unit-II

Sociological Perspectives of Aging

Micro-Perspectives:

- Role Theory (Aging and the Individual),
- Activity Theory,
- Disengagement Theory,

Macro Perspectives:

- Modernization Theory,
- Age Stratification Theory,
- Political Economy Theory

Unit-III

Society, Family and Aging:

- Status of the Aged in the Family-Urban and Rural Settings.
- Neglect and Abuse of Elderly in Family.
- Aged in Different Societies- Tribal, Traditional, and Modern.
- Status and Treatment which they get in Traditional Hindu Society.

Unit-IV

Problems of aged and Rehabilitation:

- Economic, Social, Physical and Psychological Problems.
- Emerging Factors Responsible for Aggravating Problems of the Aged.
- Strategies for Coping with the Problems of the Aged, Social Security Schemes and other Developmental Programmes.

Suggested Readings

1. Bose, A. & Gangrade, K.D. eds. (1988) *Aging in India*, New Delhi: O.U.P.
2. Bhatia, H.S. (1983) *Aging and Society*, Udaipur: Aryan Publishers.
3. Dandekar, Kumudini (1996)*The Elderly in India,* New Delhi: Sage Pub. Pvt. Ltd.
4. Desai, Murli & Siva Raju (2000) *Gerontological Social Work in India: Some issues & Perspectives*, New Delhi: B.R. Pub Corp.
5. Donald , Cowgill (1972) *Aging & Modernization*, New York: Meredith Corp.
6. Sharma, M.L.; and Dak, M.K. (1987) *Aging in India*, Delhi: Ajanta Pub.
7. Wilson, Gail (2000) *Understanding Old Age: Critical and Global Perspectives*, New Delhi, Sage Publications.

Additional Readings

1. Cohen, Lawrence (1999) *No Aging in India: Modernity, Senility and the Family,* New Delhi: O.U.P.
2. Dandekar, Kumudini (1993), 'The Aged, their Problems and Social Interventions in Maharashtra', *Economic and Political Weekly*, Vol. XXVII, No. 23, June 5, pp. 1189-94.
3. Rajan, S. Irudaya, Mishra, V.S. and Sarma, P. Sankara, (1999), *India's Elderly: Burden or Challenge?*, New Delhi, Sage Publications.
4. Sati, P.N. (1988*) Retired and Aged People*, Delhi, Mittal Publications.

SOC O 932: ORGANIZATIONAL STRUCTURE AND DEVELOPMENT

Objective

This course focuses on a) the structural dimensions of organization; b) the phenomena of organizational power and environment; c) the emerging salience of information technology in organizational communication; and d) the processes of organizational change and development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Organizational Structure and Goals:

Structural Dimensions – Complexity, Centralization, Bureaucratization, Professionalization; Goals – Types, Goal Multiplicity and Goal Conflict, Goal Succession and Displacement

Unit-II

Organizational Regime and Environment:

Leadership – Definition, Theories and Styles

Power in Organizations – Authority (Weber)

Power and Compliance (Etzioni)

Environment – Definition and Types

Unit-III

Communication and Information Technology in Organizations:

Communication – Formal and Informal networks

Role of Information Technology (IT) in Modern Organizations

Unit-IV

Planned Change and Organizational Development (OD):

Definition, Nature and Approaches

The Process and Techniques of OD – Systemic and Interpersonal

Suggested Readings

1. Bhatnagar, Subhash (2000) *Information and Communication: Technology in Development*, New Delhi: Sage Publications.
2. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: Oxford University Press.
3. Fiedler, F. E. (1967) *A Theory of Leadership Effectiveness*. N.Y.: McGraw-Hill.
4. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London, Sage.
5. Kaur, K. P. (1993) *The Professional Management in Industrial Organizations*. New Delhi: Deep and Deep.
6. Luthans, F. (2000) *Organizational Behavior*, Boston, Irwin McGraw-Hill.
7. Manuel, C. (1996) *The Rise of Network Society*. London: Blackwell.
8. Marguilies, N. and A. Raja (eds.) (1978) *Conceptual Foundations of Organizational Development*. N.Y.: McGraw-Hill.
9. Melkote, S. (2001) *Communication for Development in the Third World*. New Delhi: Sage.
10. Sabbarwal, S. (1990) *Organizational Approach to Environmental Control*. New Delhi: Ashish Pub.
11. Sharma, R. A. (2000) *Organizational Theory and Behavior* (2nd edition), New Delhi: Tata McGraw-Hill.
12. Singh, N. (2000) *Human Relations and Organizational Behavior*, New Delhi, Deep and Deep.
13. Zrkocrzy, P. and N. Heap (1995) *Information Technology*. N.Y.: Pitman.

Additional Readings

1. Blumberg, R. L. (1987) *Organizations in Contemporary Society*, Englewood: Cliffs, N. J.: Prentice-Hall.

2. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.

3. Gross, E. (1969) "The Definition of Organizational Goals" *British Journal of Sociology*, Vol. 20, (pp 277-294).

4. Harlow, D. N. & J. J. Hall, Richard H. (1972) *Organizations: Structures and Process*, N. Y.: Wiley.

5. Haralambos, M. (1980) *Sociology: Themes and Perspectives*, New Delhi: Oxford University Press.

6. Litterer J. A. (1969) *Organizational Structure and Behavior*, N.Y.: Wiley.

7. Perrow, C. (1961) "The Analysis of Goals in Complex Organizations", *American Journal of Sociology*, Vol. 66, pp 335-341.

8. Sabbarwal, S. (1988) "Approaches to Organizational Structure and Effectiveness", *Sociological Bulletin*, 37 (1 & 2) March-September.

9. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 933: SOCIOLOGY OF DEVIANCE: CONCEPTS AND THEORIES

Objective

This paper aims at sensitizing the students regarding the concept of deviance and its related terms. Students will also be made aware of different explanations of deviance ranging from pathological to interactionist perspectives.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Deviant Behaviour:

Definition, Concept – Relative/Absolute.

Distinction between Deviant Behaviour and Deviant-Role

Pathological Perspective of Deviance – Biological and Psychological theories.

Unit-II

Social Disorganization and Value-Conflict Perspective:

Causes of Social Disorganization
Theories of Social Disorganization:

C.H. Cooley, W.I. Thomas and Florian Znaniechi, W.F. Ogburn.
Theory of Conflict of Values: Richard C. Fuller & Richard R. Myers.

Unit-III

Structural-Functional Perspective:

Theory of Anomie: Emile Durkheim and Robert K. Merton

Theory of Differential Association: Edwin Sutherland and Donald R. Cressey.

Unit-IV

Inter-actionist Perspective:

Theory of Labelling: Edwin M. Lemert and Howard S. Becker Social and Psychological Effects of Labelling for Primary and Secondary Deviance, Social Consequences of Stigma

Impediments to Labelling.

Suggested Readings

1. Aggleton, Peter (1987) *Deviance,* New York: Tavistock Publication.

2. Becker, H. and Aluin Boskoff (eds.) (1989) *Modern Sociological Theory: In Continuity and Change,* New York: Dryden.

3. Downes, David and Rock Paul (1982*) Understanding Deviance: A Guide to the Sociology of Crime and Rule-Breaking,* Oxford Clarendon Press.

4. Edwin H (1980) *The Deviance Process*, New York: D. Van Vost & Co.
5. Kelly Delos H (1979) *Deviant-Behaviour: Readings in the Sociology of Deviance.* New York: Martin's Press

6. Schur, Edwin M (1971) *Labelling Deviant Behaviour: Its Sociological Implications,* New York : Harper & Row Pub.

7. Singh R.G. (1985*) Sociology of Deviance*, New Delhi: Jain Sons Publications.
8. Thio, Alex (1978) *Deviant Behaviour*. London: Houghton Mifflin Co.

Additional Readings

1. Becker, Howard S. (1963) *Outsiders: Studies in the Sociology of Deviance*, Glenco: Free Press.

2. Gibbons, Don C. (1978) *Society, Crime and Criminal Careers* (3rd ed.) New Delhi: Prentice-Hall of India Pvt. Ltd.

3. Gove, Wolter R (ed) (1980) *The Labelling of Deviance* (2nd ed.) London : Sage Publications.

4. Reid Sue Titus (1976) *Crime and Criminology* Illionois: The Dryden Press.

5. Wolfgand, Marvin and E. Franco Ferrachtti (1982) *The Sub-Culture of Violence.* Beverly Hills: Sage Publications.

SOC O 934: SOCIOLOGY OF CRIME

Objective

This course is designed to acquaint the students with concepts and perspectives used to explain the criminal behaviour. Students will be introduced to the eruption of different forms of crime and the significant advances made towards its control and prevention and correctional measures.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Perspectives:

Deviance, Juvenile delinquency and Crime

Legal, Behavioral and Sociological Definitions of
Crime Classical and Positive Schools of Criminology

Biological, Psychological and Sociological Approaches (Conflict, Structural-Functional and Symbolic-Interactionist)

Unit-II

Major Forms of Crime:

Violent Crime: Homicide and Aggravated Assault

Property Offences: Economic and Property Crimes

Public Order Offenses: Crime against Moral and Political Order
Crimes involving Abuse of Power: White Collar and Corporate Crime

Unit-III

Punishment in Relation to Crime:

Theories of Punishment: Retributive, Deterrent and Reformative
Penology in India and Indian Penal Code

Types of Punishment: Capital punishment, transportation, imprisonment, forfeiture of property, fine, whipping

Unit-IV

Correctional Programmes:

Significance and Forms of Correctional Programmes: Prison based, Community based. Prison based Correction: New Delhi Model of Correction.

Community based Correction: Probation, Parole, After-care and Rehabilitation.

Suggested Readings

1. Agarwal, Rajendra Saran & Sarvesh Kumar (eds.) (1986) *Crimes & Punishment in New Perspective*, Delhi: Mittal Publication.

2. Ahuja, Ram (2000) *Criminology*, Jaipur: Rawat Publications.

3. Bhatnagar, R.R. (1990) *Crimes in India: Problems and Policy*, New Delhi: Ashish Publications.

4. Crow, Iain (2001) *Treatment and Rehabilitation of Offenders,* London: Sage Publications.

5. Lilly, J.Robert., Cullen, Francis .T and Ball, Richard A. (2007). *Criminological Theory: Context and Consequences*, Sage Publications, Thousand Oaks.

6. Prasad, R.S.(2004). Cyber Crime and Introduction, ICFAI Univ, Hederabad.

7. Sharma, Ram Nath (1993) *Crime and Penology: Social Disorganization and Social Problems*, Delhi, Surjeet Publications.

8. Singha, Radhika (1999) *Despotism in Law: Crime and Justice in Early Colonial India*, New Delhi, O.U.P.

9. Sutherland, Edwin H & Donald R. Cressey (1968) *Principles of Criminology*, Bombay, The Times of India Press.

10. Weisburd, Dand & Kip Schlegal (1990) *White-Collar Crime Reconsidered*, Boston: Northeastern University Press.

Additional Readings

1. Devasia, V.V. (1993) *Criminology, Victimology and Corrections*, Delhi: Ashish Publications.

2. Doongaji, Damayanti (1986) *Crime and Punishment in Ancient Hindu Society*, Delhi, Ajanta Publications.

3. Dutta, N.K.(1989) *Origin and Development of Criminal Justice in India*, New Delhi: Deep and Deep Publications.

4. Gill, S.S. (1998*) The Pathology of Corruption*, New Delhi: Harper Collins Publishers.

5. Gilsinan, James F. (1989) *Criminology and Public Policy: An Introduction*, Englewood Cliffs, Prentice Hall.

6. Mathur, Krishan Mohan (1996) *Crime, Human Rights and National Security*, New Delhi: Gyan Publication House.

7. Meier, Robert F. (1988) *Crime and Society*, Boston, Allyn & Bacon.

8. Ministry of Home Affairs (1998) *Crime in India*, New Delhi, Government of India.

SOC O 935/945: DISSERTATION (3rd and 4th Semesters)

SOC O 936: ADVANCED SOCIAL STATISTICS

Objective

The course is aimed at introducing the students with advanced statistical techniques for multivariate analysis of sociological data. In the first two units the students are familiarized with various aspects of simple and multiple regression analysis including coefficient of determination, correction-ratio, point-biserial correction, partial correlation etc. The last two units include discussion on Path analysis and various parametric and non- parametric tests of significance.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** (Theory Portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable electronic calculators and Statistical Tables is permitted for the examination.

Course outline

Unit-I

Linear Regression, Least Squares Method, Estimating the Intercept and Slope of the Linear Regression Model

Standard Error of the Estimate and its Uses, Zero-Order Correlation by Least Squares Method

Coefficient of Determination, Correlation and Causation, Ecological Fallacy of Correlation, Correlation-Ratio, Point Biserial Correlation.

Unit-II

Multiple Regression, Multiple Regression Equations, Multiple Collinearity, Interpretation of Regression Coefficient, Confidence Interval for the Estimate of Multiple Regression, Multiple Correlation, Properties of Multiple Correlation Coefficient, Coefficient of Multiple Determination, First order Partial Correlation.

Unit-III

Path Analysis, Formulation of Recursive, Fully Recursive Path Models, Estimation of Path Coefficients (No numerical questions to be set in the question paper on path analysis)

Parametric tests-One way analysis of variance for means, t-test for means (related samples), z-test for proportions (One Sample and Two Independent Samples)

Unit-IV

Non-Parametric Tests of Significance

Distinction between Parametric and Non-Parametric Tests, Kruskal Wallis One Way Analysis of Variance, Friedman Two–Way Analysis of Variance, Kolmogorov Smirnov Test (Two Independent Samples), Mann-Whitney-U Test, Wilcoxon Matched-Pairs-signed-Ranks Test.

Suggested Readings

1. Alexander Von Eye, Chrisof Schustee (1998) *Regression Analysis for Social Sciences,*USA, Academic Press.

2. Blalock, H.M. (1979) *Social Statistics,*New York, McGraw Hill Book Company.

3. Joseph F. Hair, Rolph E. Anderson Ronald L. Tatham (1987), *Multivariate Data Analysis with Readings*, New York, Macmillan Publishing Company.

4. Kothari C.R. (1984) *Quantitative Techniques*, New Delhi, Vikas Publishing House, Pvt. Ltd.

5. Morris Hamburg (1983) *Statistical Analysis for Decision Making*. San Diego, Harcourt Brace Jovanovich Pubs.

6. Muller John and Karl, F. Schuseller and Herbert, L. Costner (1977), *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.

7. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

Additional Readings

1. Marl Sirkin, R. (1995), *Statistics for the Social Science;* London, Sage Publications.

2. Jane, J., Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*, London, Sage Publications.

SEMESTER –IV

SOC R 440: PERSPECTIVES ON INDIAN SOCIETY

Objective

This paper aims to acquaint the students with some of the sociological perspectives which have been developed to study the Indian Society. The course aims at giving a chronological view on studies of Indian society. Introducing the students to important Indian Sociologists and their monographs; It further hopes to help the students formulate a link between their theoretical background and examples from the field and to sensitize students about important Indian Social Institutions: Family, Village and Caste, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Indological: G.S. Ghurye, P.N. Prabhu.

Structuralist: Dumont, Louis & Pocock, David, Mckim Marriot.

Unit-II

Structural Functionalist: M.N. Srinivas, S.C. Dube, Yogendra Singh.

Unit-III

Conflict and Subaltern: B.R. Ambedkar, D.P. Mukherji, A.R. Desai.

Unit-IV

Current Issues in Indian Sociology: Indianization/Indegenization, Contextualization

Suggested Readings

1. Ahmad, Imtiaz (1972) 'For a Sociology of India', *Contributions to Indian Sociology*, 6:172-8.
2. Ambedkar, B.R. (1948) *The Untouchables: Who Were They and Why They Became Untouchable*s, Delhi, Amrit Book Company.
3. Atal, Yogesh (2003). *Indian Sociology from Where to Where: Footnotes to the History of the Discipline.* Jaipur, Rawat Publications.
4. Atal, Yogesh (1993). *Understanding Indian Society: Festschrift in Honour of Professor S.C.Dube.* New Delhi, Har-Anand Publications.
5. Bailey, F.G. (1959) 'For a Sociology of India', *Contributions to Indian Sociology*, 3, 88-101.
6. Beteille, Andre (1974) 'Sociology and Ethnosociology', *International Social Science Journal*, 24(4) 703-4.

7. Burghart, R (1983) 'For a Sociology of India: An Intracultural Approach to the Study of Hindu Society', Contributions to Indian Sociology, 17 (2): 275-93.

8. Das, Veena (ed.) (2004). *Handbook of Indian Sociology.* New Delhi, Oxford University Press.

9. Desai, A.R. (1976*) Social Background of Indian Nationalism*, Bombay, Popular Prakashan.

10. Dhanagare, D.N. (1993) *Themes and Perspectives in Indian Sociology*. Jaipur, Rawat Publications.

11. Dube, S.C. (1959) *Indian Villages,* London, Routledge & Kegan Paul Ltd.

12. Dumont, Louis and Pocock, D. (eds.) (1960). *Contibutions to Indian Sociology.* Paris, Monton.

13. Dumont, L. & Pocock (1960) 'For a Sociology of India: A Rejoinder To Dr. Bailey', Contributions to Indian Sociology, 4:82-9.

14. Dumont, Louis (1970) *Home-Hierarchicus: Caste System and its Implications,* Delhi: Vikas Publications.

15. Ghurye, G.S. (1957*) Caste and Class in India*, Bombay, Popular Book Depot.

16. Gill, Rajesh.(2007). Let Sociology be Sociology**,** in *Sociological Bulletin*, Vol. 56, No. 3, Sept.-Dec. 2007, pp. 430-34.

17. Jodhka S.S. (1998) 'From Book View' to 'Field View': Social Anthropological Constructions of the Indian Village', *Oxford Development Studies*, Vol.26 No.3, 1998.

18. Marriot, Mackim (1994) *India Through Hindu Categories*, Delhi: Sage Publication.

19. Mukerjee, Ramakrishna (1979) *Sociology of Indian Sociology*, Bombay, Allied.
20. Mukherji, D.P. (1958) *Diversities*, Delhi Peoples Publishing House.
21. Mukherji, D.P. (1979). *Sociology of Indian Culture.* Jaipur, Rawat Publications.

22. Omvedt, Gail (1994) *Dalits and the Democratic Revolution*. New Delhi, Sage Publications.

23. Oommen, T.K. (1986) *Indian Sociology: Reflections and Interpretations.* Bombay, Popular Prakashan.

24. Patel Sujata (1998), 'The Nostalgia for the Village: M.N. Srinivas and the Making of Indian Social Anthropology', *South Asia,* Vol.XXI, No.1, pp-49-61.

25. Prabhu, P.N. (1954) *Hindu Social Organization*, Bombay, Popular Book Depot.

26. Pramanick, S.N. (1994) *Sociology of G.S. Ghurye: Concerns*, New Delhi, Vistaar Publication.

27. Ram, Nandu (1999), *Beyond Ambedkar*, New Delhi, Har Anand Publishers.

28. Singh, Yogendra (1973) *Modernization of Indian Tradition*, Jaipur, Rawat Publications.

29. Singh, Yogendra (1986) *Indian Sociology: Social Conditioning and Emerging Concerns*, New Delhi, Vistaar Publications.

30. Singh, Yogendra (1984). *Image of Man: Ideology and Theory in Indian Sociology.* Delhi, Chanakya.

31. Srinivas, M.N. (1952*) Religion and Society Among the Coorgs of South India*, London, Asia.

32. Srinivas, M.N. (1970) 'Sociology and Sociologists in India Today', *Sociological Bulletin* 19(1): 1-10.

33. Unnithan, T.K.N., Deva, Indra and Singh, Yogendra (eds.) (1965). *Towards a Sociology of Culture in India: Essays in Honour of Professor D.P.Mukherji.* New Delhi, Prentice Hall.

Additional Readings

1. Madan, T.N. (1977) 'The Dialectic of Tradition and Modernity in the Sociology of D.P. Mukerji', *Sociological Bulletin*, Vol.26 (2) 155-76.

2. Marriot, Mckim (1955) *Village India: Studies in the Little Community*, Chicago, The University of Chicago Press.

3. Oommen, T.K. (2007) *Knowledge and Society: Situating Sociology and Social Anthropology.* New Delhi, Oxford University Press.

4. Srinivas, M.N. (1970) *Social Change in Modern India*, Barkeley, California University Press.

5. Unnithan, T.K. N., Singh, Y. Singhi Narendra and Indra Deva (eds.) (1967) *Sociology for India,* New Delhi, Prentice Hall

6. Srinivas, M.N. (1976) *The Remembered Village*, Delhi, Oxford University Press.
7. Srinivas, M.N. (1980) *Social Structure*, Delhi, Hindustan Publishing Corporation.

SOC O 543: DETERMINANTS AND CONSEQUENCES OF POPULATION GROWTH

Objective

The course mainly focuses to sensitize students about a) the effect of population growth on development processes; b) Differential mortality and fertility patterns in the developed and the developing countries; c) Population distribution patterns in India; and d) the various programmes implemented for regulating population in India.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Relationship between Population, Development, Environment and Society in the context of Population Size, Composition and Distribution of Population

Factors affecting Age, Structure and Sex Compositions; Demographic, Social and Economic implications

Unit-II

Mortality Patterns in Developed and Developing Countries:

General Mortality, Infant and Child Mortality, Morality Differentials, Determinants of Mortality and Cause of deaths. Consequences of Declining Mortality for demographic and social structures

Unit-III

Fertility Patterns and Trends in Developed and Developing Countries, Crude Birth Rates and Total Fertility Rates, Net Reproduction Rate, Theoretical Understanding of the Biosocial, Socio-cultural, Social-psychological and Socio-demographic factors affecting Fertility. Fertility Differentials, Consequences of Fertility Decline for Demographic and Social Structures

Unit-IV

Population Distribution Patterns in India- Regional Level, Rural-Urban, Socio-economic and demographic factors associated with population distribution.

Consequences of Population Redistribution on Demographic and Social Structures.

Regulating Population in India: National Family Welfare Programme
Reproductive and Child Health Programme

Strategies for Implementation and Overall Impact
MTP and PNDT Act- Correcting the Gender Bias.

Suggested Readings

1. Bhende, Asha and Tara Kanitkar (1999), *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, D.J. (1969) *Principles of Demography*, N.Y,John Wiley.
3. Bose, A. (1991) *Demographic Diversity in India*. Delhi, B.R. Publications.
4. Cassen, D. (1978), *India, Population Economy and Society*, London, MacMillan.
5. Ersheng GAO (2003), *Reproductive Health , Gender and Development*, Delhi, B.R.Publishing Corporation.
6. Jain, A.K. and Visaria (eds.) (1988), *Infant Mortality in India. Differentials and Determinants,* Sage Publications.
7. Kaistha, K.C. and Satish Sharma (1998), *Population, Environment and Spatial Mobility*, New Delhi, Gyan Publications.
8. Mahadevan, K. (1989*) Fertility Policies from Asian Countries*, Delhi, Sage.
9. Matras, Juda (1977) *Introduction to Population*, New Jersey, Prentice Hall, Inc.
10. Mitra, Ashok (1978) *India's Population, Aspects of Quality Control*, 2 Vols.
11. MOHFW, GOI, *Cause of Death Statistics* (Annual Issues).

12. *National Family Health Survey, India* (1994) (2000) Bombay, IIPS.
13. *PNDT Act* (1996) GOI.

14. Prasad, Narendra (2001), *Population Growth and Child Labour*, New Delhi, Kanishka Publishers.

15. Premi, M.K. (1991), *India's Population: Heading towards a Billion,* Delhi, B.R. Publications.

16. Retherford, Robert D. & T.K. Roy (2003) *Factors Affecting Sex Selective Abortions in India and 17 Major States*, NFHS Report No.21, Mumbai, IIPS.

17. Sen, Amartya (1982) *Choice, Welfare and Measurement*, Oxford Univ.Press.
18. Sen, Amartya & Jean Dreze (1996) *Indian Development*, Oxford Univ.Press.

19. Srinivas, M.N. (1977) *Culture and Human Fertility in India,* Delhi, Oxford Univ. Press.

20. Singh, K.P. (1986) *Correlates of Fertility Behaviour: A Study of Rural Communities in Punjab and Haryana*, New Delhi, Concept Publishing House, 205p.

21. Sinha, P. N (2001), *Population Growth and Global Stability*, New Delhi, Author's Press.

22. Tandon, Usha (2003). *Population Law: An Instrument for Population Stabilization*, New Delhi, Deep and Deep Publications Pvt. Ltd.

23. U.N. (1987) *Fertility Behaviour in the Context of Development* (P.S. No. 100).
24. United Nations (1987) *World Population Policies*, Monitoring Report Vol. II

Additional Readings

1. Dyson, T. and Crook, N. (eds.) (1984), *India's Demography: Essays on the Contemporary Population*, New Delhi, South Asian Publishers Pvt. Ltd.

2. D'Souza, V.S. (1984), *Economic Development, Social Structure and Population Growth*, New Delhi, Sage Publications.

3. Finkle, L. Jason and C. Anson McIntesh, (1994), (eds.), *The New Politics of Population: Conflict and Consequences in Family Planning*, New York, The Population Council.

4. Mc Nicoll, Geoffrey and Mead Cain, (1990), *Rural Development and Population: Institutions and Policy*, New York, Oxford University Press (The Population Council, New York).

5. Mehta, S.R. (1997), (ed.), *Poverty, Population and Sustainable Development*, Jaipur, Rawat Publications.

6. Mehta, Rani (2014) Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications, pp 29-168.

SOC O 544/744: SOCIOLOGY OF HUMAN MIGRATION

Objective

The aim of this course is to explore how migration as a social demographic process has a bearing on the processes of urbanization and social integration. It attempts to discuss the need to address the problems associated with large influx of immigrants into cities, within the country and trans-nationally, leading to crises of physical infrastructure and conflict situations. Also, it aims to appreciate the positive consequences of migration in terms of its capacity to enrich various cultures.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Migration	:	Conventional View and Changing Conception
Migration Data	:	Sources and Problems relating to Measurement.

Unit-II

Major Typologies	:	Spatial, Temporal, Purposive and Stream Criteria.
Broad Trends and Patterns	:	At Global Level with special reference to India.

Unit-III

Theoretical Formulations:	Classical, Socio-economic & Developmental (Contributions of Revenstein, Stouffer, Everett Lee, Lewis, Harris and Todaro, Zelinski, Davis and Push-Pull Factor theory).
Determinants of Migration:	Ecological, Demographic, Social, Economic and Political

Unit-IV

Consequences of Migration:	International context – Brain-Drain and Critique: Internal context- Social, Economic and Political
Migration Policy:	Need and Challenges

Suggested Readings

1. Balan, Jorge (ed.), 1981), *Why People Move*, Paris, Unesco Press.
2. Chaudhuri, I.R., (1993), *Migration and Remittances: Inter-Urban and Rural-Urban Linkages*, New Delhi, Sage Publications.
3. Connel, John & Others, (1970), *Migration from Rural Areas: Evidence from Village Studies*, Oxford University Press, Delhi.
4. Dutoit, B.M. and H.I. Safa, (1975), *Migration and Urbanization Models and Adaptive Strategies*, The Hague, Mouton.

5. Findley, Sally, (1982), *Migration Surveys, Methodologies,* A Review of Designs, IUSSP, No.2

6. Hugo, H., (1982), 'Circular Migration in Indonesia', *Population and Development Review*, Vol 8, No. 1, March, pp-59-83.

7. Kaistha, K.C., (1987), 'Migration Patterns in Development Transition of Rural Areas', *Population Geography* (1 & 2), June-December.
8. Kosinski, L.A. & K.K. Mandood Elahi, (1985), *Population Redistribution and Development in South Asia*, Boston, D. Reidel Pub. Co.
9. Kosinski L. and Prothero R. (1974) *People on the Move: Studies on Internal Migration*, London, Methuen.
10. Oberoi, A. S. & H. K.M. Singh, (1982), *Causes and Consequences of Internal Migration: Studies from Indian Punjab*, Delhi, OUP.
11. Oberoi, A.S. & Others, (1989), *Determinants and Consequences of Internal Migration in India: Studies in Bihar, Kerala and Uttar Pradesh*, Delhi, OUP.
12. Bogue, D.J., (1969), Principles of Demography, New York, John Wiley & Sons.
13. Prother, R.M. & Chapman Murray (eds.), 1985, *Circulation in Third World Countries*, London, Routledge & Kegan Paul.
14. Rao, M.S.A., (1986), *Studies in Migration*, Delhi, Manohar.
15. UN (1984) *Population Distribution, Migration and Development. Proceedings of* the Expert Group on Population Distribution Migration and Development, Hammamat (Tunisia) March 21-25, 1983.
16. U.N. (1994) *Population Distribution and Migration* (Particularly Papers by Castals, S. 'Process of Integration of Migrant Communities' and Rogge, I.R. 'Changing Solutions to Refugee Movement'.
17. Weiner, Myron, (1978), *Sons of Soil: Migration and Ethnic Conflict in India*, New Jersey, Princeton University Press.

Additional Readings

1. Brettel, Caroline & James Hollifield, (2000), *Migration Theory: Talking Across Disciplines*,New York, Routledge.
2. Hazari, Bharat R. & Pasquale M., (2001*), Migration, Unemployment and Trade*, Boston, Kluwer Academic Publishers.
3. Indra, Doreen (ed.), (1998*), Engendering Forced Migration: Theory and Practice*, New York, Berghahn Books.

4. Lucassen, Jan & Lucassen, Leo, (1997), *Migration, Migration History, History: Old Paradigms and New Perspectives*, University of Bern Publications, Bern.
5. Manning, Patrick, (2005), *Migration in World History*, London, Cambridge University Press.
6. Sharpe, Pamela, (2001), *Women, Gender and Labour Migration: Historical and Global Perspectives*, New York, Routledge.

SOC O 644: ENVIRONMENTAL CRISIS AND SUSTAINABLE DEVELOPMENT

Objective

The course focuses on the discussion of the environment–society interface keeping the following objectives in view (a) to familiarize the student with the crisis of environmental degradation both at the global and national levels; (b) to focus on the environmental problems in India; (c) to highlight the role of environmental movements in ecological protection; and (d) to discuss some of the measures necessary for environmental preservation.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development and Environmental Degradation:
Meaning of Environment; Environment and Society;
Problems and Environmental Consequences

Unit-II

Environment Situation in India:
Environmental Problems in India – Extent, Causes and Solutions; Environmental Policy in India.

Unit-III

Environmental Movements:
Role of voluntary organizations and popular participation in environmental protection and preservation; The Chipko Movement, Movements against Narmada Valley and Tehri

Dam projects, Sukhomajri Experiment, Protest against Mining in Doon Valley; Eco-feminism; Public Interest Litigation (PIL) and Judicial Activism.

Unit-IV

Sustainable Development: Towards a Sound Environmental Policy;

Environmental Education; Social Forestry and Afforestation Program; Biogas and Renewable Energy Program; Efficient Water Management Programs; Use of Appropriate Technology.

Suggested Readings

1. Deoria, R.S. et al. (1990) *Man, Development and Environment*. N. Delhi: Ashish Publications.
2. Katyal, J and M. Satake (1989) *Environmental Pollution*. New Delhi: Anmol Pub.
3. Khoshoo, T.N. (1986) *Environmental Priorities in India and Sustainable Development*. New Delhi: Indian Science Congress Association.
4. Mahesh, K and B. Bhattacharya (eds.), (1999) *Judging the Judges*. N. Delhi: Gyan Publications.
5. Mehta, Rani (2014), Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications.
6. Raza, Mehdi (ed.), (1992) *Development and Ecology*. Jaipur: Rawat.
7. Rasure, K.A. (2007) , *Environment and Sustainable Developmen*t , New Delhi, Serial Publications, VOL. I,II,III.
8. Spaargaren G. et al (2000) (ed.), *Environment and Global Modernity*, New Delhi, Sage Publications India Pvt. Ltd.
9. Singh,R.B. (2002) (ed.) *Human Dimensions of Sustainable Development*, New Delhi, Rawat Publications.
10. Sharma, S.L. (1993) "Managing Environmental Crisis – Regulatory vis-à-vis Participatory Approach" in J.L. Rastogi and Bidhi Chand (eds.) *Management and Business Education*. Jaipur: Rawat Publications.
11. Shiva, Vandana, (1988) *Staying Alive – Women, Ecology and Survival in India*. New Delhi: Kali for Women.
12. Singh, Gian (1991) Environmental Deterioration in India – Causes and Control. New Delhi: Agricole.
13. Tewari, K.M. (1989) *Social Forestry in India*. Dehradun: Natraj Publishers.
14. Wilson, D. (ed.) (1984) *The Environmental Crisis*, London: Hinemann.

Additional Readings

1. Bandhu, Desh (ed.), (1981) *Environmental Management*, Dehradun, Natraj Publishers.
2. Bandhu, Desh and N.L. Ramanathan (eds.) (1982) *Education For Environmental Planning and Conservation*, Dehradun, Natraj Publishers.
3. Bharadwaj, H.R. (1997) *Lawyers and Judges*, New Delhi, Konark Pub.
4. Chaudhary, Jayasri R.(2001). *An Introduction to Development and Regional Planning*, New Delhi, Orient Longman.
5. Ehrlich, P. R. et al., (1973) *Human Ecology- Problems and Solutions*, San Francisco, W.H. Freeman and Co.
6. Kothari, Ashish et al. (eds.), (1998) *Communities and Conservation*, New Delhi, Sage Publications.
7. Mehta, Rani (2011) "Sustainable Development in Mauritius: Issues and Implications," New Delhi, Contributions to Indian Social Science, IASSI, Vol. 30, No. 2, April-June.

8. Pawar, S.N. and R.B. Patil (eds.) (1998) *Sociology of Environment*, Jaipur, Rawat

9. Sheth, Pravin (1997) *Environmentalism – Politics, Ecology and Development*, Jaipur, Rawat Publications.

SOC O 645: ENTREPRENEURSHIP AND DEVELOPMENT

Objective

This course is acquainting the students with various theoretical developments in the area of entrepreneurship and their implication for action programs. Accordingly, first two units deal with various theories and development of entrepreneurship in different communities and groups. The other two units deal with the implication of theories for action programs and development of Entrepreneurship Development Program (EDPs) and interaction of entrepreneurs with business environment.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Entrepreneur and Entrepreneurship:
Concept, Functions: Growth of Entrepreneurship with special reference to India
Theories of Entrepreneurship: Max Weber, David McClelland, E. E. Hagen, B. E. Hoselitz and Schumpeter

Unit-II

Entrepreneurship among Social Groups
Business Communities: Samurai Community in Japan, Filipino and Chinese in Philippines; Parsees, Marwaris, Ramgarhias, Ravidasias and Business Communities in South India; Social Groups: Women, Tribals, Scheduled Castes

Unit-III

Development of an Entrepreneur
Implication of Theories for Action Program and Development of Entrepreneurs through Training and Entrepreneurship Development Program (EDPs).

Unit-IV

Entrepreneurship and Environment:
General Environment, Typology of Environment, Role of Business Associations in Controlling the Environment.

Suggested Readings

1. Akhouri, M. M. P. *et al.* (1987) *Trainers' Manual on Developing Entrepreneurial Motivation*, New Delhi: National Institute for Entrepreneurship and Small Business Development.
2. Bansal, C. L. (1993) *Entrepreneurship and Small Business Management*, Delhi, Har Anand Publications.
3. Bhatia, B. S. and Batra, G. S. (2001) *Entrepreneurship and Small Business Management*, New Delhi: Deep and Deep Publications, Pvt. Ltd.
4. Bisht, N. S. *et al.* (1989) *Entrepreneurship: Reflections and Investigations*, Allahabad: Chugh Pub.
5. Guha, A. (1984) "More about Parsi-Seths, their roots, Entrepreneurship and Compradoe Role", *Economic and Political Weekly*, Vol. IX, No.3, June, pp 1660-18.
6. Hagen, E. E. (1962) *On the Theory of Social Change*, Bombay: Vakils, Feff and Simpson.
7. Hoselitz, B. F. (1952) "Entrepreneurship and Economic Growth" *American Journal of Economics and Sociology*, Vol.12 (1).
8. Hoselitz, B. F. (1960) *Sociological Aspects of Economic Growth*, London: Collier- McMillan.
9. Kaur, K. P. (1992) *Professional Management in Industrial Organizations*, New Delhi: Deep & Deep Publications.
10. Kaur, K. P. (1995) "Role of Trade Associations in Entrepreneurial Development", *SEDME*, Vol. XXII, No.3.
11. Kelbagh, Chetana (ed.), (1991) *Women and Development, Women in Enterprise and Profession*, Vol. III, New Delhi: Discovery Publishing House.
12. Kilby, P. (1971) *Entrepreneurship and Economic Development*, N.Y.: Free, Free Press.

13. Kirchhoff B. A. *et al.* (eds.) (1988) *Frontiers of Entrepreneurship Research*, Wellesley: Babson College.
14. Leibenstein, H. (1968) "Entrepreneurship and Development", *American Economic Review*, LVIII (2), May.
15. McClelland, D. C. (1961) *The Achieving Society*, N.Y.: Van Nostrand Co.
16. Pruthi, S. P. S. (1972) *Economic and Managerial Environment in India*, Bombay: Progressive Corp.
17. Sabbarwal, S. (1990) *Organizational Approach to Environment Control*, N. Delhi: Ashish Publications.
18. Sabherwal, Satish (1976) *Mobile Man*, New Delhi: Vikas Publishing House. Pvt. Ltd.
19. Schumpeter, J. A. (1959) *The Theory of Economic Development*, Cambridge: Harvard Univ. Press.
20. Sharma, K. L. & H. Singh (1980) *Entrepreneurial Growth and Development: Programmes in Northern India*, New Delhi: Abhinay Publications.
21. Sharma, K. L. (1981) *Voluntary Business Associations*, Chandigarh: Panjab University.
22. Sharma, K. L. (1988) "Community and Entrepreneurship", *Eastern Anthropologist*, 42 (3).
23. Tandon, B. C. (1975) *Environment and Entrepreneurs*, Allahabad: Chugh Pub.
24. Weber, Max (1947) *Theory of Social and Economic Organization*: tr. by A. R. Henderson and Talcott Parsons (ed.), Oxford: Oxford University Press.

Additional Readings

1. Rathore, B. S. and J. S. Saini (eds.) (2007) *A Handbook of Entrepreneurship*, Panchkula: Aapaga.
2. Hagen, E. E. (1980) *The Economics of Development*, Illinois: Irwin, Inc., Homewood.
3. Schumpeter, J. A. (1939) *Business Cycles: A Theoretical, Historical and Statistical Analysis of Capitalist Process*, London: McGraw Hill.
4. Weber, Max (1965) *The Protest and Ethic and the Spirit of Capitalism*, Tr. by Talcott Parsons, London: Union.
5. Weber, Max (1968) *Economy and Society*, New York: Bedminster Press.

SOC O 743: CITIES, URBAN PLANNING AND DEVELOPMENT

Objective

This is the third course in the specialization of Urban Sociology offered to MA students from second through fourth semesters. It is presumed that by now the students has the basic understanding of the conceptual and theoretical formulations in urban sociology,

with specific relation to India's experience as compared to the Western. In this course the student shall be apprised with the contemporary and emerging conceptual and empirical developments in the area of urban planning and development, especially with an emphasis upon the shift from mere town and physical planning to social planning, decentralization etc. manifested both at global and national agenda.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Urban Planning

Physical and Town Planning, Zoning, Master Plan;
Critique of Conventional Urban Planning;
Concept of Social Planning and its Implications on Urban Planning;
People's Participation in Urban Planning and Development; Decentralization and Democratization in Urban Planning.

Unit-II

Cities and Urban Development

U.N. Conventions on Human Settlements and Global Agenda;
Urban Renewal and Urban Redevelopment;
Sustainable, Humane, Child-Friendly, Eco-Friendly Cities;
From Urban Development to Sustainable Urban Development and its Features;

Unit-III

Urban Planning in India

Critical Appraisal of Slum Rehabilitation Schemes

Critical Appraisal of Urban Poverty Alleviation Programs.
Critical Appraisal of 74th Constitutional Amendment Act and its Salient Features

Unit-IV

Cities and Culture

Cities and Cultural Change (with reference to Georg Simmel, Louis Wirth and C. Fischer)

Cities and Consumerism
Cities and Ethnicity

Suggested Readings

1. Ali, Sabir, (1990), *Slums Within Slums- A Study of Resettlement Colonies in Delhi*, New Delhi, HarAnand and Vikas.
2. Breese, Gerald and Whiteman, Dorothy E, (eds.), (1953), *An Approach to Urban Planning*, Princeton, Princeton University Press.
3. Castells, Manuel, (1977). *The Urban Question*, London, Edward Arnold Publishers Ltd.
4. Castells, Manuel, (1975), 1968, Is there an Urban Sociology? Reprinted in Urban *Sociology: Critical Essays* (ed.) by C. Pickvance, New York, St. Martin's Press. Pp. 33-59.
5. Flanagan, William, (1993), Contemporary Urban Sociology, Cambridge, Cambridge University Press.
6. Gill, Rajesh, (2009). *The Contemporary Indian Urban Society -Ethnicity, Gender and Governance.* New Delhi, Bookwell Publishers.
7. Gill, Rajesh, (2003)'. Planning Urban Settlements for People: A Social Agenda', in *Urban India*, Vol. XXIII, No. I, Jan.-June 2003.
8. Harvey, D. (1999), "The City in a Globalizing World" (ed.) by Charles Lemerit (2004), *Social Theory: Multicultural and Classical Readings*, U.S.A., Westview Press.
9. Jo Beall (ed.), (1997), *A City for All- Valuing Difference and Working with Diversity*, London, Zed Books Ltd.
10. Lo, Fu Chen and Yeung, Yue-man (eds.),(1998), *Globalization and the World of Large Cities*, Tokyo, United Nations University Press.
11. Miles, S. and Miles, M., (2004). *Consuming Cities.* New York, MacMillan.
12. Report of National Commission on Urbanization, (1988), Vols. 1&2.
13. Sassen, S. (1991). *The Global City*, Princeton, Princeton University Press.

14. Satterthwaite, D. (2007), "When People Live Mostly in the Cities" *The Hindu*, January 18.
15. Simmel, Georg, (1990). 2nd Edition. *The Philosophy of Money,* trans. by T. Bottomore and D. Frisby (ed.) D. Frisby. London, Routledge.
16. Simmel, Georg, (1964). "The Metropolis and Mental Life" in K. Wolff (ed.), *The Sociology of Georg Simmel,* New York, Free Press. (Org. 1905).
17. Uner, Kirdar (ed.), (1997), *Cities Fit For People*, New York, United Nations.
18. Weber, Max, (1958), *The City*, Chicago, Free Press.

Additional Readings

1. Chandoke, Neera, (1991). "The Post Colonial City", *Economic and Political Weekly*, Mumbai, December 14, pp. 2868-2873.
2. Fagence, Michael, (1977), *Citizen Participation in Planning*, Oxford, Pergamon Press.
3. Gill, Rajesh, (1991), *Slums as Urban Villages- A Comparative Study in Two Cities*, Jaipur, Rawat Publications.
4. Mumford, Lewis, (1961). *The City in History.* New York, Harcourt, Brace and World.
5. Sarin, Madhu, 1975, *Planning and the Urban Poor: The Chandigarh Experience*, London, School of Environmental Studies.
6. Saunders, P. 1981, *Social Theory and the Urban Question*, London, Hutchison & Co. Ltd.
7. Short, J.R., 1996, *The Urban Order- An Introduction to Cities, Culture and Power*, Blackwell Publishers.
8. Southall, Adian, 1998, *The City in Time and Space,* Cambridge, Cambridge University Press.

SOC O 843: FAMILY DYNAMICS IN CONTEMPORARY INDIA

Objective

In this course students will be enabled to have a grasp of the changing marriage and family patterns in India. The course will be addressing to the impact of technological and economic factors on family and how family has responded to these by undergoingchanges in its Form, Structure and Functions, which in turn influence the values and role-relations within the family. Students will be further acquainted with the family's failure in coping with the pressures of modern life.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marriage Patterns

Traditional and Contemporary Patterns from Vedic times to Modern time.

- Changing Patterns of Marriage Alliance.
- Increasing Age at Marriage, its Socio-economic and Cultural Determinants, Regional Variations and Demographic Consequences.

Unit-II

Trends in Family Type

- Regional Variation in Family Type and its Socio-cultural Correlates.
- Joint Family: Its Structural & Functional Aspects, Changing forms of Joint family – Nuclearization.
- Changing Status and Role of the Women and the Aged.

Unit-III

Family Values and Role-Relations

- Familial Values : Familism vs. Individualism.
- Dyadic Relations : Changing Filial (Parent and Child), Fraternal (Siblings-Brother and Sister, Brother and Brother, Sister and Sister),

Unit-IV

Family Disintegration

Marital Maladjustment.

- Factors Responsible for Disintegration of Joint and Nuclear family.
- Desertion and Divorce: their Extent, Causes and Consequences.

Suggested Readings

1. Apte, Usha M. (1978) *The Sacrament of Marriage in Hindu Society*, Delhi : Ajanta Publications.

2. Chakrabortty, Krishna (2002) *Family in India*, New Delhi : Rawat Publications.
3. Kolenda, Pauline (1987*) Regional Differences in Family Structure in India*, Jaipur Rawat Publications.
4. Lal, A.K. (1990*) The Urban Family, A Study of Hindu Social System*, New Delhi: Concept Publishing Company.
5. Madan, T.N. (1989) *Family and Kinship* (2nd Edition), Delhi: Oxford University Press.
6. Mandelbaum, David G. (1970) *Society in India: Continuity and Change* (Vol.1), Bombay: Popular Parkashan.
7. Pandey, Rajendra (1994) *Social Problems of Contemporary India*, (Chapter-12), New Delhi: Ashish Publishing House.
8. Pernau,Maragrit, Ahmed, Imtiaz and Helmut, Redfield (2003) *Family and Gender:Changing Values in Germany and India*, New Delhi: Sage Publications.
9. Pothen S. (1980) *Divorce: Its Causes and Consequences in Hindu Society*, Delhi: Shakti Books.
10. Reddy, M.M. Krishna (1998) *Marriage, Population and Society*, New Delhi: Kanishka Publishers.
11. Shah, A.M. (1998) *The Family in India: Critical Essays*, New Delhi: Orient Longman.
12. Singh, J.P. (2003) 'Nuclearisation of Household and Family in Urban India', *Sociological Bulletin*, Vol.52, No.1, PP: 53-70.
13. Sinha, Raghvir (1993) *Dynamics of Change in the Modern Family*, New Delhi: Concept Publishing Company.

Additional Readings

1. Audinarayana N. & R. Rajasree (1995) 'Cultural Determinants of Age at Marriage', *The Journal of Family Welfare*, Vol. 4, No.1, pp.8-14.
2. Augustin, John S. (1982) *The Indian Family in Transition*, New Delhi: Vikas Publishing House.

3. Basu, Monmayee (2003) *Hindu Women and Marriage Law from Sacrament to Contract*, New Delhi: O.U.P.
4. Chauhan, Abha (2003) 'Kinship Principles and the Patterns of Marriage Alliance: The Meos of Mewat', *Sociological Bulletin*, Vol.52, No.1, pp: 71-90.
5. Goode, William J.(1970) *World Revolution & Family Patterns*, New York: Free Press.
6. Kapoor, Promila (1974) *The Changing Status of Working Women in India*, New Delhi: Vikas Publishing House.
7. Madan, T.N. (1993) 'The Hindu Family and Development', in P. Uberoi (ed.), *Family, Kinship and Marriage*, Delhi: Oxford University Press.
8. Sharma, Bela Rani (1997) *Women: Marriage, Family and Divorce*, Jaipur: Mangal Deep Publication.

9. Sinha, Durganand, Henry and S.R. Rao (1988) *Social Values & Development: Asian Perspective*, New Delhi: Sage Publications.
10. Vatuk, Sylvia (1972) *Kinship and Urbanization: White Collar Migration in North India*, London: University of California Press.

SOC O 844: GENDER AND DEVELOPMENT

Objective

This paper largely focuses on India attempts to establish a link between Development and Gender. It will particularly focus on different perspectives and schemes adopted for promoting Gender and Development. Secondly, it will highlight the biases inherent in most developmental policies which have been detrimental to women. Thirdly, it will look at changes taking place in gender relations particularly in the area of work. The focus will be on women and work; differentials and role conflict in family due to changing equations. Lastly, it will take an overview of indicators of issues related to Discrimination, Exploitation and Oppression.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

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The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit I

Women in Development , Women and Development, Gender and Development (WID , WAD, GAD)
Gender Equality and Inequality in Productivity and work
Family compulsions and other factors affecting gender related choices or priorities of work, Role conflict among Women
Indicators of Low status of Women

Unit-II

Perspectives on Gender and Development

- Welfarist, Developmentalist and Empowerment.
- Empowerment: Paradigms and Paradoxes.
- Changing status of Women in India, Precolonial, Colonial and Post-Colonial.
- Measures to uplift women's status.

Unit III

Measures to Improve Gender Relations

- Special Schemes and Strategies for Women's Development in India
- Voluntary sector and Women's Development.
- Women in Sectoral Development: Education, Health, Agriculture and Industry.

Unit-IV

- Globalisation and Women's Development
- Development Policies- Liberalization and Globalization: their Impact on Women.
- Environment, Development and Gender: Deforestation, Environmental Degradation and Feminization of Poverty.
- Women in Panchayati Raj Institutions and Urban Local Bodies: 73rd and 74th Constitutional Amendments.

Suggested Readings

1. Arya, Sadhna (2000) *Women, Gender Equality and the State*, Delhi: New Deep and Deep Publication.
2. Forbes, Geraldine (1998) *Women in Modern India*, Cambridge University Press.
3. Ghadially, Rehana (1988) *Women in Indian Society*, New Delhi; Sage.
4. Laxmi Devi (1998*) Women and Development*, New Delhi. Anmol Publications.
5. Manchanda, Rita (2001) *Women, War and Peace in South Asia: From Victimhood to Agency,* New Delhi: Sage Publication.
6. Seth, Mira (2001) *Women and Development*, New Delhi: Sage Publications.
7. Suchitra, Anant, Ramani Rao and Kabita Kappor, *Women at Work in India*, Ministry of Labour, GOI.

Additional Readings

1. Aggarwal, Bina (1988) *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi: Kali for Women.
2. Ahooja, Patel, Krishna (1995) *Women and Development*, New Delhi: Ashish Publishing House.
3. Chafeltz, Saltrman, Janet (1999) *Gender Equity–An Integrated Theory of Stability and Change,* New Delhi: Sage Publications.

4. Gulati, Leela (1982) *Profiles in Poverty*. New Delhi, Hindustan Publishing Corporation.
5. Heyser, Noeleen and Sen, Gita (1994) *Gender, Economic Growth and Poverty*, New Delhi: Kali for Women.
6. Krishnaraj Maitraeyi (1988) *Women and Development: The Indian Experience*, New Delhi: Subheda Publications.
7. Kumari, Abhilesha and Sabina Kidwai (1997) *Crossing the Sacred Line, Womens' Search for Political Power*, New Delhi: Orient Longman.
8. Maheshwari, S.R. (2002) *Local Government in India*, (New Delhi: Uppal Book Store).
9. Mazumdar, Vina (1979) *Symbols of Power: Studies on the Political Status of Women in India*, New Delhi: Allied.
10. Myers, Kristen Anderson (1998) *Feminist Foundations–Towards Transforming Sociology*, New Delhi: Sage.
11. Powell, Gang N. (1995) *Handbook of Gender and Work*, New Delhi: Sage Publications.
12. Rajput, Pam and Swarup, Hemlata (1994) *Women and Globalization*, New Delhi: Ashish Publishers.
13. Sangari Kumkum and Uma, Chakravarty (ed.) (1998), *From Myths to Markets*, Shimla, IIAS.
14. Shiva,Vandana (1988) *Staying Alive*, New Delhi: Kali for Women.
15. Staggenborg, Suzanne (1998) *Gender, Family and Social Movements,* New Delhi: Forge Press.
16. Vaid S,K Sangpari (1989) *Recasting Women: Essays in Colonial History*, New Delhi: Kali for Women.
17. Venkatashwara, Sandhya, (1995) *Environment, Development and the Gender Gap*, New Delhi: Sage Publications.

SOC O 941: FUNDAMENTALS OF INDUSTRIAL SOCIOLOGY

Objective

This paper aims to familiarize the students to the nature of industrial sociology highlighting (a) the theories relating to industry, organization and trade unionism; (b) industrialization and its impact on social institutions; (c) the issues related to industrial conflict with special emphasis on the role of trade unions; and (d) to assess the impact of globalization on industry.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit- I

Industrial Sociology: Nature and scope
Theories– Marx (Alienation), Taylor (Scientific Management), Mayo (Human Relations), Marcuse (One Dimensional Man)
Types of Productive Systems– Cottage, Guild, Domestic, Factory
Industrial Roles – Worker, Foreman, Line and Staff, Specialist.

Unit- II

Industrialization and Social Institutions:
Impact on Family, Education and Stratification; Work and Leisure

Unit- III

Industrial Conflict and Employee Participation:
Trade Unions: Managerial and Conflict Theories; Strike as a Bargaining Tool

Unit- IV

Globalization and Industry:
Fordism vs. Flexible Specialization
Globalization and Industrial Relations
Emergence of Multi National Companies (MNCs)
Technological Revolution and Impact on Industry and Society

Suggested Readings

1. Bain, G. S. (ed.) (1984) *Industrial Relations in Britain*. London: Basil Blackwell.
2. Dosi, G. (1984) *Technological Change and Industrial Transformation*. N.Y.: St. Martins Press.
3. Eldridge, John *et al.* (1991) *Industrial Sociology and Economic Crisis*. N.Y.: Harvester Wheatsheaf.

4. Jorgenson, D. W. and K. J. Stroh (1999) "Information Technology and Growth", American Economic Review, 89 (109-115).
5. Kalleberg, A. L. and I. Berg (1987) *Work and Industry*, N.Y. Plennum.
6. Moses, J. A. (1990) *Trade Union Theory from Marx to Walesa*, N.Y.: Berg.
7. Parker, Stanley (1976) *The Sociology of Leisure*. London: George Affer & Union Ud.
8. Pojek, Chris (1985) *Capitalism and Leisure Theory*, London: Tavistock.
9. Schnieder, E. V. (1972) *Industrial Sociology*, London: Harper and Row.
10. Southall R. (ed.) (1988) *Trade Unions and the New Industrialization of the Third World*, London: Zed Books.
11. Watson, K. T. (1995) *Sociology, Work and Industry*. London: Routledge and Kegan Paul.

Additional Readings

1. Burns, Tom (Ed) (1969) *Industrial Man*, Harmondsworth: Penguin Books.
2. Caplow, Theodore (1965) *The Sociology of Work*, N. Y.: McGraw Hill Book Co., Chapter 6.
3. Faunce, William, A. (ed) (1967) *Readings in Industrial Sociology*, Appleton: Century, Crof & Gisbel.
4. Miller, D. and W. H. Form (1964) *Industrial Sociology*, Second Ed. London: Harper and Row.
5. Parker, S. R. *et al.* (1977) *The Sociology of Industry*, London: George Allen and Unwin.
6. Pascual, Gisbert (1972) *Fundamentals of Industrial Sociology*, New Delhi: Tata McGraw Hill.
7. Ramaswamy E. A. & Uma Ramaswamy (1981) *Industry and Labour: An Introduction*, Delhi: Oxford University Press .

SOC O 942: SOCIAL PROBLEMS

Objective

Over the years, India's social problems have become difficult, intricate and hydra-headed, pervading the entire social, economic, cultural and demographic structure. Keeping this in view, this paper aims at introducing the students to the concept and various perspectives on social problems. It also aims at providing detailed knowledge about specific social problems ranging from socio-cultural problems to socio-demographic problems.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept and Sociological Perspectives:

- Definition
- How and When an Issue becomes a Social Problem
- Subjective Definition and Objective Condition
- Stages in its Development
- Assumptions of Social Problems.

Perspectives on Social Problems**:**
Functional Perspective
Conflict Perspective
Symbolic Interactionist Perspective

Unit-II

Socio-Cultural Problems:
- Corruption
- Sex-Deviation
- Dowry

Unit-III

Socio-Economic and Structural Problems
- Poverty
- Unemployment
- Drug-addiction

Unit-IV

Socio-Demographic Problems:

- Child Labour
- Problems of the Elderly
- Physically Challenged

Suggested Readings

1. Aziz, Abdul (1994) Poverty, *Alleviation in India: Policies and Programes*, New Delhi: Ashish Publication.
2. Bajpai, P.K. (1992) *Youth, Education and Unemployment*, New Delhi: Ashish Pub.House.
3. Ghosh S.K. (1996) *The World of Prostitutes*, A.P.H. Publication Corporation.
4. Julian Joseph (1989) *Social Problems (6th edition)* New Jersey: Prentice Hall.
5. Kapoor.T. (1985) *Drug Epidemic among Indian Youth*, New Delhi: Mittal Pub.
6. Mani, D. Ram, (1988) *The Physically-Handicapped in India*, New Delhi: Shilpa Publications.
7. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
8. Murickan J. (ed.) (1989) *Poverty in India: Challenges & Responses*, Bangalore: Xavier Board Publication.
9. *Sharma, Vijay (1994) Protection* to Women in Matrimonial Home, New Delhi: Deep and Deep Publication.
10. Singh, Amarnath (1990) *Child Labour in India*, New Delhi: Shipra Publication.
11. Singhvi L.M (1977) *Unemployment Problems in India*, New Delhi: National Publishing House.
12. Srivastava C.P. (2001) *Corruption: India's Enemy within*, Delhi: MacMillan.
13. Teja M. K. (1993) Dowry: *A Study in Attitudes and Practices,* New Delhi: Inter India Publication.

Additional Readings

1. Sharma, R.K. (1998), *Social Problems and Welfare*, Atlantic Publishers: New Delhi.
2. Ahuja, Ram (2003), *Social Problems in India*, Rawat Publications: Jaipur.
3. Wilson, Gial (2000), Understanding Old Age: Critical and Global Perspective: New Delhi: Sage Publications.

SOC O 943: POLITICAL SOCIOLOGY

Objective

The course expects to familiarize the students with the relationship between the state and social structure. How power is central to any social institution is another important focus of the course. After the theoretical introduction, the course would finally focus on the Indian state and civil society including the various institutions. What role did the social movements play in the democratization of the Indian society would also be the part of the discussion.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Meaning and Scope of Political Sociology;
Concepts of State, Civil Society, Power, Social Caste, Varna, Structure and Nation.

Unit-II

Socio-economic Conditions and the Nature of Political Institutions:
Authoritarian State, Theocratic State, Military State, Democratic State

Unit-III

Sociology of Power, Nature and Form of Power; Power and Authority
Theories of Political Power; Elite, Structural-Functional and Marxist

Unit-IV

Thematic Concerns in Indian Political Sociology:
Varna, Caste and Kinship
State and Civil Society, State and Social Structure, State and Nation-building
Movements of Resistance.

Suggested Readings

1. Barrington Moore, Jr. (1966) *Social Bases of Dictatorship and Democracy,* Boston: Beacon Press.

2. Bottomore, T. (1979) *Political Sociology,* Ambika, Bombay: B.I.

3. Chakraborty, Salyabrata (Eds.). (2005*). Political Sociology*, Macmillan, New Delhi.
4. Kothari, R. (1970*) Caste in Indian Politics*, New Delhi: Orient Longman.
5. Lukes, Steven (1974*) Power: A Radical View*, Hong Kong, Macmillan.
6. Motwani, K., Saksena, RD. (Eds.) (2009). Sociology of Politics: Theoretical Perspectives, New Delhi, Cosmo.
7. Phadnis, U. and Ganguly, R. (2001) *Ethnicity and Nation Building in South Asia*, New Delhi: Sage.
8. Pizzorni, A. (ed) (1971) *Political Sociology*: Penguin
9. Rathod, P.B., (2005). *Fundamentals of Political Sociology,* Jaipur, ABD Publication.
10. Verma, R.P., (2001). *Dynamics of Political Sociology*, New Delhi, Rajat.

Additional Readings

1. Quigley, D. (1999) *Interpretation of Caste*, Delhi: Oxford.
2. Martin, Roderick (1977*) The Sociology of Power*, New Delhi, London, Routledge and Kegan Paul.
3. Munek, R. (2002) *Globalization and Labour*, Delhi: Madhyam Brs.

SOC O 944: SOCIOLOGY OF MARGINALIZED COMMUNITIES

Objective

The course aims at sensitizing the students to the significance of the sociological study of Dalits, tribals and other sub-alteran groups. The focus would be on communities/groups suffering poverty, deprivation and discrimination.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marginalization and its Socio-economic Indices:
Poverty, Relative Isolation, Deprivation, Exploitation, Discrimination, Educational Backwardness; Inequality
A Critical View of the Caste System
Untouchability: Historical and Social Roots.

Unit-II

The Social Structure and Culture of marginalized communities:
The Status of SCs, STs, Nomadic Castes and Tribes and De-Notified Tribes; Problems; Social Mobility; Development; Identity Formation.

Unit-III

Perspectives on Marginalization:
Role of Ideology in Marginalization

The views of Jotirao Phule, Periyar, Babasaheb Ambedkar, Ram Manohar Lohiya.

Unit-IV

(a) Social Movements among Marginalized Communities: Nature and Dynamics; Perspectives on Social Movements: Protest, Reform: Role of Christian Missionaries in Social Reform Movements; Role of NGOs.

(b) Marginalization and Affirmative Action: Constitutional Provisions; Implementation; Impact on Marginalized Communities; Limitations; Critical Review.

Suggested Readings

1. Beteille, Andre (1981) *Backward Classes and the New Social Order*, Delhi: Oxford University Press.

2. Beteille, Andre (1992) *The Backward Classes in Contemporary India*, Delhi: Oxford University Press.

3. Charsley, S.R. and G.K. Karanth (1998) (eds.) *Challenging Untouchability*, Delhi: Sage Publications.

4. Chako, M. Priyaram. (2005). *Tribal Communities and Social Change*, New Delhi: Sage Publications.

5. Chaudhuri, S.N. (1988) *Changing Status of Depressed Castes in Contemporary India*, Delhi: Daya Publishing House.

6. Gupta, Dipankar (1991) *Social Stratification*, New Delhi: Oxford University Press.

7. Jogdand, P.G. (2000) *New Economic Policy and Dalits*, Jaipur: Rawat Publications.

8. Narayan, Badri. (2006). *Women Heroes and Dalit Asssertion In North India: Cultural Identity and Politics*, New Delhi: Sage Publications.

9. Singha, Roy (2004), (ed.), *Social Development and the Empowerment of Marginalized Groups. Perspectives and Strategies* New Delhi: Sage Publications.

10. Srikrishna, S., Samudrala and Anil Kumar. (Eds.). (2007). *Dalits and Human Rights*, New Delhi: Serial Publication.

Additional Readings

1. Gore, M.S. (1993) *The Social Context of an Ideology: The Social and Political Thoughts of Babasaheb Ambedkar*, New Delhi : Sage.

2. Jogdand P.C. (1991) *Dalit Movement in Maharastra*, New Delhi: Kanak Publications, 1991.

3. Mahajan, Gurpreet (1998) *Democracy, Difference and Social Justice*, New Delhi: Oxford University Press.

4. Mehta, Rani (2011), "Globalization and Human Rights of the Marginalised Groups: A Sociological Perspective," Amritsar, Guru Nanak Journal of Sociology, GNDU, Vol. 32, Nos. 1&2.

5. Omvedt, Gail (1995): *Dalit Visions: The Anti-Caste Movement and the Construction of an Indian Identity*, New Delhi: Orient Longman.

6. Omvedt, Gail (1999) *Dalits and the Democratic Revolution*, New Delhi: Sage.

7. Oommen, T.K. (1990*) Protest and Change: Studies in Social Movements*, Delhi: Sage Publications.

8. Robb, Peter (1993) (eds.*) Dalit Movements and the Meeting of labour in India*, Delhi: Sage Publications.

9. Shah, Ghansham (1990) *Social Movements in India: a Review of Literature*, Delhi: Sage Publications.

10. Shah, Ghansham (2002*), Dalit Identity and Politics*, New Delhi: Sage.

11. Singh, K.S. (1988) *The Scheduled Castes*, Delhi: Anthropological Survey of India.

12. Singh K.S. (1995) *The Scheduled Tribes*, Delhi: Oxford University Press.

13. Zelliot, Eleanor (1995) *From Untouchable to Dalit: Essays on the Ambedkar Movement*, New Delhi: Manohar

SOC O 945/935: DISSERTATION (IIIrd and IVth Semesters)

SOC O 946: MEDIA AND CULTURE

Objective

This course has been designed to provide a sociological perspective on the role of popular culture and mass media in modern society. It focuses on the phenomena of communication, mass media, popular culture, especially in the Indian context, and their relationship with the globalization process since all these together play a major role in shaping the society.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks

Course Outline

Unit-I

Communication: Definition, Process, Functions and Types

Approaches to Communication

Factors influencing Communication

Mass Media – Print and Electronic

Unit-II

Culture: Popular Culture, Mass Culture, Folk Culture, Elite Culture; Mass Media and Culture; Theoretical Perspectives on Popular Culture and the Media.

Unit-III

Globalization, Mass Media and Culture – Diffusion of global culture through the mass media and its impact on society – social values, youth, family, consumerism, food, clothes, entertainment; Dissemination of awareness by media on social issues – violence, stereotypes, gender issues.

Unit-IV

Media and the Indian society – Satellite television and its impact; Impact of Social Media

Suggested Readings

1. Axford, B. and R. Huggins (2001) *New Media and Politics*, London, Sage Publications.
2. Curren, J. and M. Gurevitch (1991) (eds.), *Mass Media and Society*, London, Edward Arnold.
3. Dwyer, R. and C. Pinney (2001) (eds.*), Pleasure and the Nation: The History, Politics and Consumption of Public Culture in India,* New Delhi, Oxford University Press.
4. French, D. and Michael Richard (2000) (eds.), *Television in Contemporary Asia*, London, Sage.
5. Garnham, Nicholas, (2000*) Emancipation: the Media and Modernity,* New Delhi, Oxford University Press.
6. Gunaratne, S. (2000) (ed.), *Handbook of the Media in Asia,* London, Sage.
7. Mitra, A. (1993) *Television and Popular Culture in India,* New Delhi, Sage Publications.
8. Page, D and W. Crawley (2001) *Satellites over South Asia*, London, Sage Publications.
9. Preston, P. (2001) *Reshaping Communications,* Cambridge, Cambridge University Press.
10. Real, M.R. (1996) Exploring Media Culture: A Guide, New Delhi, Sage.
11. Singhal, A. and E.M. Rogers (2000) *India's Communication Revolution*, New Delhi, Sage Publications.

Additional Readings

1. Chakravarty, Sunita S. (2000) *National Identity in Indian Popular Cinema 1947-87*, New Delhi, Oxford University Press.
2. Croteau, David and W. Hoynes (1997) *Media/Society: Industries, Images and Audiences*, London, Pine Forge Press.
3. Johnson, K. (2000) *Television and Social Change in Rural India*, London, Sage.
4. Mankekar, P. (2000) *Screening Culture, Viewing Politics: Television, Womanhood and Nation in Modern India*, New Delhi, Oxford University Press.
5. Gupta, Nilanjana (1998) *Switching Channels: Ideologies of Television in India*, New Delhi, Oxford University Press.
6. Melkote, S.R. and H.L. Steeves (2001) *Communication for Development in the Third World: Theory and Practice for Empowerment*, London, Sage Publications.

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PANJAB UNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab Univerasity Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

POSTGRADUATE DIPLOMA IN CHEMICAL ANALYSIS OF FOOD

(SEMESTER SYSTEM)

EXAMINATIONS 2011- 2012

--:O:--

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR POSTGRADUATE DIPLOMA IN CHEMICAL ANALYSIS OF FOOD FOR THE EXMINATIONS OF 2011-2012

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Outline of Tests

There will be two semesters in a year. Examination will be held at the end of each semester.

Total Marks: 300

There will be two theory papers and one practical paper in each semester.

1st Semester

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours.

Semester I

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Foods: As source of Energy, energy value of foods, uses of foods in the body, digestion, absorption and transport. [10]

Unit-II

Chemistry of Fats and Oils: Composition-saturated and unsaturated fatty acids. Functions and storage in the body and Physio-chemical properties. An idea about soaps, detergents, emulsions and emulsifiers. [10]

Unit-III

Carbohydrates I: Composition and classification, storage in the body, biological functions of some monosaccharides and disaccharides (glucose, fructose, Sucrose, Maltose and lactose). [10]

Unit-IV

Carbohydrates II: Biological functions of some polysaccharides (starch and cellulose). Important chemical and biological reactions, Other sweetening agents: Saccharin, Aspartame. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. *Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.*

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Adulterants I: Food Colours

-Food colors and Additives.
- Kinds of colors used.
-Water soluble food colors. **[10]**

Unit-II

Food Adulterants II: Dyes and preservatives

-Dyes: Permitted and non-permitted dyes.
-Identification of Dyes by Spot Test.
-Preservatives, Organic preservatives-Dyes-Percentage-Definition and classification.
[10]

Unit-III

Milk and Milk Products:
Composition, Classification, Processing, Natural Aspects of mild, curd, paneer, khoa, cheese, ice-cream and various kinds of processed milk. **[10]**

Unit-IV

Beverages:
Tea, coffee, chocolate, cocoa powder, processing (in brief), chemical constituents, Good and Bad effects of alcoholic and non-alcoholic beverages. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearson *Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. *Handbook of Analysis and Quality Control for fruit and vegetable products*
6. *The Preservation of Food Adulteration Act, 1954*, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Simple physical and chemical tests to determine quality and detect adulterants in the following:

(i) Milk and Milk products
(ii) Oils and fats
(iii) Spices and condiments
(iv) Food grains
(v) Flours
(vi) Canned Foods
(vii) Cane Sugar, Saccharin and Vegetable
(viii) Beverages Alcoholic, Non-Alcoholic

(40)

II. Principles and Techniques of separation methods, chromatography (TLC)

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

Semester II

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Amino Acids and Proteins: Composition, sources, functions and deficiency symptoms, Physio-Chemical properties. Denaturation of proteins during processing, Chemical Analysis of proteins. [10]

Unit-II

Cereals and Pulses: Brief introduction to cereals and pulses, composition and nutritional aspects. [10]

Unit-III

Some Important Vitamins I: Fat soluble-Vitamins (A, D, E and K). Sources, structures and biological importance. [10]

Unit-IV

Some Important Vitamins II: Water soluble vitamin (Ascorbic Acid, thiamin, Riboflavin, B-Complex as B_6, Folic Acid). Sources, structures and biological importance. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. *Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.*

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Analysis I: Sampling Technique**,** Preparation of Sample**,** General Physical methods of analysis of Foods (i) Bactometaric (ii) Refractometry (iii) Polarimetery and Polarography (iv) Chromatography (v) UV-Visible. [10]

Unit-II

Food Analysis II: General chemical Methods:

-Proximate Principle
-Specific Gravity method
-Ash and Types
-Total protein and Non-Protein N
-Total Fat and different kinds of Lipids
-Total carbohydrate, starch, mono/disaccharides. [10]

Unit-III

Canned Foods: Chemical composition and quality criterian of canned foods.

Spices and Condiments: Composition and Nature **[10]**

Unit-IV

Legal Aspects of food Adulteration and Prevention

- Standards of food quality.
- Permissible limits of food preservatives in ,milk, spices, beverages and canned foods.
- Procuring and analysis of food items for confirming adulteration.
- Power and duties of Public Analyst and food Inspectors.
- Prevention of food adulteration. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearson *Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. *Handbook of Analysis and Quality Control for fruit and vegetable products*
6. *The Preservation of Food Adulteration Act, 1954*, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Determination of Acid value, iodine Value and Saponification Value.

(20)

II. (a) Visit to chemical/Food laboratories of Industry related to get students acquainted with various aspects of Chemical analysis of Foods.

(b) To prepare and submit a report on the said visit (200-300 words).

(c) Periodical Examination of students by asking viva-voce.

(20)

III. Continuous assessment based on Regularity, House Tests and Attendance.

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

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FACULTY OF SCIENCE

SYLLABI FOR

POSTGRADUATE DIPLOMA

IN

COMPUTER APPLICATIONS

FOR

EXAMINATIONS 2017–2018
(SEMESTER SYSTEM)

--:O:-

Outline of the Syllabi and Courses for Post Graduate Diploma in Computer Applications for Examination – 2017 -2018 (Semester System).

FIRST YEAR (SEMESTER –I)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/ Weeks	Exam. Marks	Int. Ass. Marks	Total Marks	Exam Hours
PGD-1101	Computer Fundamentals	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1102	Computer Programming using C	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1103	DataBase Management System	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1104	Data Communications and Networks	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-1105	Lab1 (Based on PGD-1101 & PGD-1102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-1106	Lab2 (Based on PGD-1103)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
TOTAL PERIODS =42						**TOTAL MARKS = 450**		

FIRST YEAR (SEMESTER –II)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/weeks	Exam. Marks	Int. Ass. Marks	Total Marks	Exam Hours
PGD-2101	Object Oriented Concepts Using JAVA	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2102	Web Technologies	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2103	Software Engineering	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2104	Computer Based Accounting	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-2105	Lab3 (Practical based on PGD-2101)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-2106	Lab4 (Practical based on PGD-2102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-2107	**Project Work :** Project will involve Development of Business Application / Web Site	**0**	**0**	**6**	**0**	**--**	**100**	**--**
TOTAL PERIODS =48						**TOTAL MARKS = 550**		

Note: Pass Marks 40% marks in Theory, Internal Assessment, and Practical separately.
50% marks for Project Work.
50% marks in Aggregate to qualify the examinations.

SEMESTER –I

Paper Title : Computer Fundamentals
Paper Code : PGD - 1101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to familiarize students with basic concepts related to Computers, DOS, Windows, Linux and application software's like Word-processing, Spreadsheet Software and Presentation Software.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation
Input/Output devices.

UNIT - II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT - III

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.

   Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
   Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
   Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
   Clipart: Using clip art, Creating Word Art
   Mail merge: Creating merged envelops, creating merged mailing labels

UNIT - IV

7. **Spreadsheet Software:**
   Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

   Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

   Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

   Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. **Presentation Software**:
   Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References :

1.	Basandra, S.K	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K,	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M,	Computers Today by McGraw Hill, New York
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron,	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper Title : Computer Programming Using C
Paper Code : PGD - 1102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with programming concepts of 'C' including functions, Arrays, strings etc.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes**: automatic, external, static, register
5. **Preprocessor**: #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT – II

6. **Functions**: library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions
8. **Pointer**s: Definition, Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers, array of pointers

UNIT – III

9. **Strings:** Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
10. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures
11. **Unions**: Declaring a Union, Accessing elements of a type union.

UNIT – IV

12. **Console Input/Output:** Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
13. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File.

References:		
1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series.N.D. TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications,
4.	Salaria, R. S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper Title : Data Base Management System
Paper Code : PGD - 1103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Database concepts and SQL.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Data Base Concept:** Data Base Vs File Oriented Approach, Basic DBMS terminology, Data Independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantages and Disadvantages of DBMS. Distributed Databases, Structure and Design of Distributed Databases.

2. **Data Base Design:** Introduction to Data Models, Entity Relationship Model, Entities, Attributes, E-R Diagrams, Conceptual Design of a relational data base model.

UNIT – II

3. **Relational Model:** Storage organization for Relations, Relational Algebra, Relational Calculus, Functional dependencies, multivalued dependencies, Candidate Key and Primary Key in a Relation, Foreign Keys, Normalization - Introduction, 1NF, Partial Dependencies, 2N, data Anomalies in 2NF Relations, Transitive Dependencies 3NF

3. **Database Security:** Database Security and Integrity: Data security risks, Password-related threats, Protecting the data within the database- database privileges, system privileges and object privileges, granting and revoking privileges and Roles. Concurrency: locking techniques for concurrency control.
Recovery: Causes of failures, recovery from failures, Log based recovery, checkpoints

UNIT - III

4. **Understanding SQL-1:** Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a

table, Functions: Character Functions, Date Functions, Group Functions, Ordering the result of a Query Aggregate Functions, Grouping the Result of a Query.

UNIT - IV

5. **Understanding SQL-II:** Definition and Advantages of Views, Creating and Altering Views, Using Views, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries, Define Transaction, COMMIT and ROLLBACK,

References:		
1.	Desai, B.C.	An Introduction to Database Systems, Galgotia Pub. New Delhi
2.	Date, C. J.	Database Systems Vol. I & II, Narosa Publ., New Delhi (Indian student ed.)
3.	Henry F. Korth, Abraham,	Database System Concepts, McGraw Hill Inc., New York International ed
4.	Mukhi, Vijay	Mastering Oracle, BPB Publication, NewDelhi
5.	James T. Perry	Understanding ORACLE, BPB Publications
6.	O'Reilly	Oracle PL/SQL Programming, Shroff Publications Mumbai
7.	Rowski, Bob	Oracle Client server Computing, BPB publications

Paper Title : Data Communications and Networks
Paper Code : PGD - 1104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Layered structure of Networks and working of different Layered.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Introduction to Computer networks and applications:** Network Structure and Architecture, Network Hardware and Software (protocol hierarchies, design issues for layers, interfaces and services: connection oriented and connection less), Network structure and architecture-point to point, multicast, broadcast, Classification of networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) , LAN topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). Network Connecting Devices: Repeaters, Hubs, Bridges, Routers, Gateways and Switches, Network Reference models: OSI model, TCP / IP model. Comparison between OSI and TCP/IP.

UNIT – II

2. **Introduction to Data Communication**: Analog Signal, Digital Signal, Analog vs Digital Communication; Band Width Limitation, Data rate of a channel; Physical Layer: Transmission media: Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, Telephone system, modems. Modulation techniques: AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM

UNIT – III

3. **The Data Link Layer:** Design Issues, Error Detection and Correction: Nature of errors, Parity Check, CRC, Hamming Code, Elementary Data Link Protocols: Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sliding windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.

UNIT – IV

4. **The Network Layer:** Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast, Hierarchical Routing),

Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket); Internetworking: tunneling, Internet Routing, fragmentation.

References :		
1.	Tanenbaum, Andrew S.	Computer Networks, PHI.
2.	Behrouz A. Forouzan	Data Communication & Networking, TMH
3.	Stalling William Maxwell	Data and Computer Communication, Macmillan International edition.
4.	McGoven, Tom	Data Communication Concepts& Applications", (Prentice Hall)

Title : Lab1(Based on PGD - 1101 and PGD - 1102)

Paper Code : PGD-PR-1105

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1101 and PGD- 1102

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title : Lab2(Based on PGD -1103)

Paper Code : PGD-PR-1106

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1103.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

SEMESTER -II

Paper Title : Object Oriented Concepts Using JAVA
Paper Code : PGD - 2101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with Object Oriented concepts including inheritance, visibility control etc. using JAVA programming language.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **OOPs concepts**: Basic Concepts of Object-Oriented Programming (Objects and Classes, Data abstraction and encapsulation, Inheritance, Polymorphism, Dynamic binding, Message communication), difference between procedure oriented and object oriented approach, Benefits of OOP's; Applications of OOP's, Object-Oriented languages.

2. **Object oriented programming with JAVA**: Byte code, Java virtual machine, Java Development Kit, java tokens, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, method overloading, static members

UNIT – II

3. **Inheritance:** Defining a subclass, subclass constructor, multilevel inheritance, Hirerchical inheritance.Overriding methods, Final variables, methods, and classes, Abstract Methods and Classes.
4. **Visibility Control**: Public access, friendly access, protected access, private access, private protected access.
5. **Arrays:** One dimensional array, declaration, creation and initialization of arrays, Array length, Two dimensional array

UNIT – III

6. **Strings**: String arrays, String methods, String Buffer class
7. **Interfaces:** Defining interfaces, Extending Interfaces, Implementing Interfaces. Accessing Interface variables
8. **Packages:** Java API packages, Defining a package, Creating and Accessing

packages, Adding class to a package, Hiding Classes.

9. **Multithreaded Programming**: Creating Thread, Extending the Thread class, Stopping and Blocking a Thread, Life cycle of a Thread.

UNIT – IV

10. **Errors and Exception Handling**: Fundamentals, error types, exception types, using Try and catch, finally statement, Built–in exceptions.
11. **Applet Programming**: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets

References:		
1.	Balaguruswamy, E.	Fundamentals of Java
2.	Daniel Dang	An Introduction to Java Programming, PHI, New Delhi
3.	Deitel & Dietel	JAVA, How to Program, Pearson Education Asia
4.	Liang	An Introduction to Java Programming PHI

Paper Title : Web Technologies
Paper Code : PGD - 2102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : This course familiarizes students with concepts of HTML, CSS, JAVA Scripts and PHP.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Introduction to HTML/DHTML:** Brief history of HTML, Building blocks of HTML, lists, links, images, image map, tables, frames, forms
2. **Introduction to cascading style sheets (CSS):** Introduction to Style Sheets, Types of style Sheets-Inline, embedded and external style sheets.

UNIT – II

3. **Fundamentals of Javascript:** Features, tokens, data types, variables, operations, control constructs, strings, arrays, functions, Document Object Model, event handling. Applications related to client side form validation.
4. **Javascript Objects**: Core language objects, The String Object, The Math Object, and The Date Object; User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects

UNIT – III

5. **Introduction to PHP:** Embedding PHP code in a Web Page, Basic Syntax, Defining variable and constant, PHP Data types, Operators and Expressions
6. **Control Structures:** Making Decisions, Doing Repetitive task with looping, File inclusion statements.
7. **Functions**: Defining a function, Call by value and Call by reference, recursive function, Library functions
8. **String**s: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function.

UNIT – IV

9. **Arrays:** Anatomy of an Array, Creating index based and Associative array, Accessing array Element, Looping with associative array using each() and foreach(), Some useful Library function: current(), next(), prev(), reset(), end(). **Working with Forms:** Super global variables, super global array, Importing and accessing user input, Combine HTML and PHP code.

10. **Working with files and Directories**: Opening, closing, Coping, renaming and deleting a file, working with directories, File Uploading & Downloading

References:		
1.	Phillips	Using HTML, PHI
2.	Bayross, Ivan	HTMLl,DHTML, Javascript by BPB
3.	Wanger & Wyke	Java Script Unleased, Techmedia, New Delhi.
4.	Steve Suehring	PHP6 and MYSQL Bible, Wiley India edition
5.	Steven Holzner	PHP:The complete Reference, Tata McGraw Hill
6	Kelvin Tetroi	Programming PHP

Paper Title : Software Engineering
Paper Code : PGD -2103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : This course make students understand concepts related to Software Engineering including process model, project management, design and testing.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

1. **Software Engineering Fundamentals**: Characteristics, Components, Applications, principles of software engineering, skills of software engineer.
2. **Software Process Models**: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, win Win Spiral Model

UNIT – II

3. **Software Project Management**: Software Project management Plan(SPMP), Project scheduling Techniques- Work Breakdown Structure(WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM)
4. **Software Project Estimation and risk Management**: Problem-based estimation, Process based estimation, Cost Estimation Model- COCOMO Model, Software Risks, software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS

UNIT – III

5. **Software Design**: Software Design Process, Design Failures and Remedies
6. **Structured Analysis and Design tools:** Structured Analysis and Structured Design (SASD)-Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary(DD), Entity-Relationship diagram(ERD)

UNIT – IV

7. **Software Testing**: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing

8. **Software Quality and Maintenance**: Software quality attributes, Factors affecting Software Quality, Aims of Software Maintenance, Types of Software Maintenance, Software Maintenance Costs.

References:		
1.	Fairley	Software Engineering Concepts, McGraw Hill
2.	Lewis, T.G.	Software Engineering, McGraw Hill.
3.	Meyers, G.	The Art of Software Testing, Wiley-Inter-Science
4.	Hibbard, P.G	Constructing Quality Software, North Holland Publication
5.	Shere, Kenneth	Software Engineering & Management, Prentice Hall
6	Deutsch, Willis	Software Quality Engineering : A Total Technical and Management Approach, Prentice Hall.
7.	Doug Bell, Ian Murrey and John Pugh	Software Engineering: A Programming Approach, Prentice Hall
8.	Pressman:	Software Engineering, Tata McGraw Hill
9.	Ghazzi, Carlo	Fundamentals of Software Engineering, PHI

Paper Title : Computer Based Accounting
Paper Code : PGD - 2104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration : 60 Lectures of one hour each.

Objective : This course make students understand accounting principle and computerized accounting.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

Accounting: Principles, concepts and conventions, double entry system of accounting, introduction of basic books of accounts of sole proprietary concern, control accounts for debtors and creditors, closing of books of accounts and preparation of trial balance.

Final Accounts: Trading, profit and loss accounts and balance sheet of sole proprietary concern with normal closing entries.

UNIT – II

Introduction to Manufacturing Account, final accounts of partnership firms, limited company.

Introduction to Computerized Financial Accounting, coding logic and codes rquired,master files, Transaction files, Introduction to documents used data collection, processing of different files, outputs obtained

UNIT – III

Introduction to Computerized Inventory Control, types of inventory and associated documents, Inventory reports-nature and types, Inventory Control : ABC and Ageing analysis, Methods of Stock validation : LIFO, FIFO, actual bases, Interfacing Inventory with Financial Accounting, Purchasing Sub-Systems, Sales Order processing.

UNIT – IV

Introduction to Computerized Payroll & Invoicing Applications, Exposure to Structure, Processing and Reports, Interfacing these applications to financial Accounting.

Use of Accounting package Tally: Introduction to Tally, Groups, Ledgers, Vouchers, Orders, Cost Centers and Categories, Stock, Reports in Tally

References:	
Kellock, J., 1972	Elements of Accounting, Heinemann 1st ed., London
Rockley, L.E., 1970	Finance for the Non-Accountant 2nd. Edition, London : Business Book.
Levy and Sarnat, 1991	Principle of Financial Management, Prentice-Hall, International, PHI.
Arnold, 1984	Financial Accounting, Prentice-Hall, International (Paperback Edition).
Horngren and Sundem, 2010	Introduction to FinancialAccounting, Prentice-Hall International (Paperback Ediion) N.D: PHI
Murthy, U.S.	Management Finance, 2nd. Edition, Vakils Fefers & Simons Ltd
Van Home, James, C., 2004	Financial Management & Policy, Prentice Inc
Pandey, I.M., 1979	Financial Management, Vikas Publication, 6th Rev. ed., N. Delhi

Paper Title: Lab3 (Based on PGD- 2101)

Paper Code: PGD-PR-2105

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD -2101.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Lab4 (Based on PGD- 2102)

Paper Code: PGD-PR-2106

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on **PGD- 2102**

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Project Work.

Paper Code: PGD-2107 **Max. Marks: 100**

Major Project on any database application using any database development tool is to be developed/ Development of a Web Site using Database connectivity

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SYLLABUS
PG DIPLOMA IN CYBER CRIME
(Semester System)

Detail Marks

i) 1st Semester = 400
ii) 2nd Semester = 400
Grand Total = 800

SCHEME OF THE COURSE

1st Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–101	General Forensic Science-I	80	20	100
PGDCR–102	Computer Basics	80	20	100
PGDCR–103	Intellectual Property Rights & International Treaties	80	20	100
PGDCR–104 (Practical)	Basic Computer Skills	80	20	100

Total = 400

2nd Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–201	Computer Forensics	80	20	100
PGDCR–202	Cyber Crime and Information Technology Act	80	20	100
PGDCR–203	Computer Forensics Analysis	80	20	100
PGDCR–204	Project/Dissertation	Project : 80	Viva: 20	100

Total = 400

FIRST SEMESTER

PGDCR-101: GENERAL FORENSIC SCINECE-I

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Nature, Need (social changes, anonymity, technical knowledge, wide field, better evidence, Alternatives), Functions & Development of Forensic Science, Laws and Principles governing Forensic Science, Forensic Science set-up in India, Forensic Science Institutions.
Problem of Proofs (General, Scientific Evidence & Proof, Investigative Problems, Scientific Aspects, Legal Problems)

Unit-II

Expert testimony (The expert, Report, Illustrations, language, The Prosecution counsel, Defence Counsel, The court (Fallacies about expert evidence), Time element

Unit-III

Indian legal systems: The Indian Evidence Act, Indian Constitution, **Cr PC and their relevant sections pertaining to admissibility of Evidence**, Expert evidence, Examination of expert etc., Reports admissible, The evidence, Insufficient evidence, **Case Law pertaining to digital Evidence in various courts of Law.**

Unit-IV

Scene of occurrence, Importance, The problems, Location, Evaluation (Protection, Photography, Sketching, Search), Scene management, Documentation. **Systematic examination of scene of occurrence and recovery of hardware (special mention of digital crime form remote where law of the land may not be applicable).**

Text/ References:

1. Sharma, B.R 1990, Forensic Science in Criminal Investigation and Trial. Central Law Agency, Allahabad.
2. Saferstein, R., 1976, Criminalistics : An Introduction to Forensic Science
3. Saferstein, R., 1982, Forensic Science Hand Book I & II, Printice Hall : N. Jersey
4. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
5. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London
6. Kirk, P.I, 1953, Crime in Investigation. Interscience Publishers : New York

PGDCR–102: COMPUTER BASICS

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Computers and Law, Principles of Computer: Memory and processor address and data buses, stored program concept, Motherboards, Word processing and graphic file formats. Boot sequence, Operating system, **Windows, Linux, internet, working and issues related to security of network, layers of network, firewalls, antivirus and other malwares.**
Input/Output (I/O): Standard (I/O) devices, unformatted (character and string) and formatted (scan and print) (I/O) functions, **Memory hierarchy and cache memory.**

Unit-II

Computer Languages: Brief history and general structure, stages of development of a program, Basic building blocks of computer language. Overview of C language
Data types: Constant and variable, declaring variables, storage classes, different types of expressions and their evaluation, **Database management system (DBMS).**

Unit-III

Data files: Introduction to data files, different ways of file processing (standard I/O and system I/O), Description of various library function for file handling, updating files, programming examples to illustrate the processing of files
Methods of storing data: number systems, character codes, record structures, file formats and file signatures.

Unit-IV

Biometrics: Fingerprint and Hand Geometry, Facial and Voice Recognition, Eye Biometrics: Iris and Retina Scanning, Biometric crimes**, Concept and working of Aadhaar.**

Text/ References:

1. Rajaraman V., Fundamentals of computers, 4th edition, Prentice hall of India Pvt. Ltd, 2007
2. Kanetker Y., Let us C, BPB Publishers 8th edition 2007
3. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
4. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London

PGDCR–103: INTELLECTUAL PROPERTY RIGHTS & INTERNATIONAL TREATIES

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Introduction to Intellectual Property Rights, WIPO, WTO, GATT, TRIPS, Berne convention, Universal Copyright Convention, Copyright Treaty (WCT), Copyright Act 1957, Trades Marks Act, Plagiarism

Unit-II

Principles of Data Security/Protection, Jurisdictional issues, Retention of electronic-data, Transactional Data Flow

Unit-III

International Treaties: PCT, PLT, SPLT, Washington Treaty

Unit-IV

Indian Patent Act, Definition, violation and antidote, Application of Patents to IT e.g. Patents for computer softwares, Patents for electronic trade, Patent Search on internet Patent websites of US and other countries, Distinctions in claims, Vetting of patents, IT related patents in India

Text/ References:

1. Handbook of Cyber and E–Commerce Laws – Bakshi P.M. & Suri R.K.
2. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a
3. Networked World, Wiley Publishing, 2002.
4. Textbook of Intellectual Property Rights, Prixit Bansal

PGDCR–104: PRACTICALS

Lectures: 4 Hrs. / Week **Practical: 80 Marks**

1. **Working of Widows environment and Linux,**
2. **Internal and external Commands of DOS.**
3. **Network commands like ping**
4. **Tracing of an email.**
5. **Reading of source code.**
6. **Trial versions of various tools**
7. **Photoshop image processing**
8. **Retrieval of deleted data.**
9. Working with internet like browsing, chatting, and social networking sites etc.

SECOND SEMESTER

PGDCR-201: COMPUTER FORENSICS

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit-I

Computer Crimes (Nature, Motives, Characteristics, Investigative Impediments), Traditional computer crime, recognizing and defining computer crime, Phreakers, Evolution in hacking community, Theft of Intellectual Property

Unit-II

Classification (Information Piracy and vandalism, Theft of information services, organised crime, Infringement of copy right, Theft, wire tapping, data destruction, virus, spy software, money laundering, electronic fund transfer, electronic personation, hackers, software piracy

Unit-III

Contemporary computer crime, Neo-Traditional crime, Web based criminal activity, Terrorism & organised crime: Introduction, Terror online, Terrorism & crime, organised crime, **image processing, morphing**.

Unit-IV

Computer Criminals (Employees, Computer Experts, other computer criminals, handling, Laws, legislation), **preventative measure**.

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
3. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
4. Hand book of computer crime investigation, Eoghan Casey, Elsevier.
5. Digital evidence and computer crime-Forensic science, computers and the internet, Casey, Academic press.
6. Ashbourn, J.: Practical Biometrics – From Aspiration to Implementation, Springer Verlag, 2004.
7. Bolle, R.M., Connell, J.H., Pankanti, S., Ratha, N.K., Senior, AW.: Guide to Biometrics, Springer Verlag, 2004.
8. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a Networked World, Wiley Publishing, 2002.
9. M. Erbschloe, J. R. Vacca: Information Warfare: How to Survive Cyber Attacks (McGraw-Hili Prof. 2001.)

PGDCR-202: CYBER CRIME AND INFORMATION TECHNOLOGY ACT

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit I

Internet: Evolution, Advantages and Disadvantages of Internet Technology, Netizens and Cyber Space, Cyber Law and its components, Cyber crimes and classification

Unit II

Information Technology Act 2000 Amended by the Information Technology (Amendment) Act, 2008

Need, Aims, Objectives and Applications (Section 1)

Definitions

- Computer [Section 2(i)]
- Computer Network [Section 2(j)]
- Computer Resource [Section 2(k)]
- Computer System [Section 2(i)]
- E-record [Section 2(t)]
- Information [Section 2(v)]
- Asymmetric crypto system [Section 2(f)]

Digital Signature, Electronic Signature [Section 3 & 3A]

Attribution, Acknowledgement and Dispatch of e-record [Sections 11 – 13]

The controller of Certifying Authorities (CCA) [Sections 17 – 29]

Unit III

Certifying Authority [Sections 30 – 34]

Cyber Crime: (i) Cyber contraventions and penalty [Sections 43 – 45]
(ii) Offences [Sections 65 – 77]
Extra-territorial jurisdiction, Cognizable and Bailable offences [Sections 75, 77 – 77B]

Unit IV

Investigation and procedure of search and seizure [Sections 78 & 80], Intermediary and its liability [Section 2(1)(w) and 279), Examiner of Evidence [Section 79A], Grey areas of IT Act 2000, Jurisdiction: National and International Cases

Text/References:

1. Cyber laws- Singh Y., 5th edition (2012) Universal Law Publishing Company
2. Cyber Crime- Bansal S.K., (2011) APH Publishing Corporation
3. Forensic Science in Criminal Investigation and Trial- Sharma B.R., 4th edition (2009)
4. Cyber Laws, E-commerce & M-Commerce- Ahmed T., (2012) APH Publishing Corporation
5. Handbook of Cyber and E-Commerce Laws- Bakshi P.M., Suri R.K., (2002) Bharat's Publishing House
6. Taxman's Law of Information Technology (Cyber Law)- Mittal D.P., (2000) New Taxman Allied Services Pvt. Ltd., New Delhi

PGDCR–203: **COMPUTER FORENSICS TOOLS**

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Electronic evidence, Discovery of electronic evidence, documentation, chain of custody, authorization, evidence collection, packaging and transportation, storage of evidence

Unit-II

Cyber forensic tools & utility: Coroner's Toolkit, EnCase Forensic, Forensic toolkit, i2 Analyst's Notebook, LogLogic LX2000, ProDiscover Incident Response.

Unit-III

Internet investigations (e-mail, IRC, chatting sites, social networking sites etc.); IP addresses and domain names; Investigative methods, Digital Evidence

Unit-IV

Prevention: The basics, access (password cards, biometrics), Secrecy, Integrity, computer data backups, Risk Management, **cryptography, stegnography.**

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer evidence-Collection and preservation, Christopher L.T. Brown, FireWall Media, New Delhi.
3. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
4. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
5. Cyber crime, Doughless Thomas and Brian D.Loader.
6. A practical guide to LINUX, Sober.
7. Computer forensics-Incident response essentials, Warren G.Kruse IIand Jay G.Heiser., Addison Wesley.
8. Cyber crime investigation field guide, Bruce Middleton, Auerbach publications.
9. A. Blyth and G. L. Kovacich, "Information Assurance", Springer, 2005.

PGDCR–204: PROJECT/DISSERTATION
Lectures: 4 Hrs/ Week **Marks: 100 Marks**

Project Based on Computer forensic, Network Security, information Security, cyber crime etc., Case Studies related to IPR Cyber world and Electronic Commerce.

Instruction for Examiners

1. **For the theory examination a total of 9 questions will be set, two from each unit I, II, III, IV. There will be one compulsory question of eight to ten short answer type questions covering the whole syllabus. There will be no choice in compulsory question.**
2. **Students will be required to attempt five questions choosing one question from each of the unit I, II, III, IV and the compulsory question.**
3. **All question will carry equal marks**

PANJAB UNIVERSITY, CHANDIGARH

SYLLABI

FOR

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING

Examination

2013-14

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING, SESSION 2013-2014

I. The duration of the course leading to the Post Graduate Diploma in Guidance & Counseling shall be one year. The 1examation shall be divided into **two semesters**. The examinations in first semester and second semester shall ordinarily be in the months of December and May/June respectively or on such other dates as may be fixed by the Syndicate.

II. Every candidate shall pay his examination fee for each Semester at the time of admission to the course, along with other charges, i.e., tuition fee etc.

2. The minimum qualification for admission to first semester of the course shall be

(a) A Bachelor's/Postgraduate degree in any discipline of the University or a degree of any other University which has been recognized by the Syndicate as equivalent thereto with not less than **45%** marks in the aggregate.

3. Provided that in case of candidates having Bachelors degree of the university through modern India languages [Hindi/Urdu/Punjabi (gurmukhi Script)] and /or in a classical language (Sanskrit/ Persian/Arabic) or degree of any other university obtained in the same manner recognized by the syndicate, **45%** marks in the aggregate shall be calculated by

taking into account full percentage of marks in all the papers in language excluding the additional optional paper, English and the elective subject taken together.

(b) Preference will be given to the candidates possessing Bachelor of Education (B.Ed), Nursery Teacher Training (NTT) or ETT (with a B.A, Degree).or Fee structure as approved by Syndicate

4. The first semester examination shall be open to a regular student who
(i) has been on the rolls of the University Department/Principal of the College during one semester preceding the first semester examination; and

(ii) has attended not less than 75 percent of the lectures, seminars, case discussions, case conferences, internship sessions, practicum's etc

5. The second semester examination shall be open to a regular student who:

a) Has been on the rolls of the university department of education/principal of the college of education during one semester preceding the second semester examination

b) Has attended not less than 75% of lectures, seminars, case discussion. Syndicate sessions, field trips, project work etc for each papers and

c) Has passed the first semester examination or is covered under 'Reappear' Regulations 10.

6. The minimum number of marks to pass the examination in each semester shall be-(i) 35% in each paper in the University examination separately as well as jointly with internal assessment;
(i) 35% in the seminar, project and viva-voce;
(ii) 50% in the aggregate of(i) and (ii) above.

6.1 Grace marks shall be given @ one percent of the aggregate marks of the University examination for each semester. A candidate may avail of the grace marks either in the aggregate or in one or more papers as may be to his advantage. Grace marks shall, however, be given only for passing the examination or for earning the higher division and not for passing the examination with distinction.

7. A candidate who fails in the First semester but has secured at least 35% marks separately as well as Jointly with internal assessment in not less than 50% of the papers prescribed for that semester shall be permitted to continue his studies in the second semester but he will be required to reappear in the next May/June examination in such papers in which he had failed in the December examination, simultaneously with the second semester examination. If he fails to pass the first semester examination even in the second attempt his result for the second semester examination snail be cancelled and he will be required to leave the course.

(b) A candidate who fails in second semester examination but had secured at least 35% marks separately as well as jointly with internal assessment In not less than 50% papers prescribed for that semester shall be allowed to reappear in such papers in which he had failed in April examination in special examination to be held in August but not before the expiry of six weeks from the date of declaration of the result.

(c) A candidate who fails to clear the second semester examination even in the special examination held in August shall be given one more chance. He may appear either in December of the same year or in May/June examination next year in such papers in which he had failed in the special examination held in August.

A candidate who is unable to clear the second semester examination even after availing of the second chance as specified above shall be required to leave the course.

8. If a candidate is required to reappear in a paper, which has 75% internal assessment, he will be given one more opportunity to qualify in that paper without attending a fresh course. This work assignment may be determined by the Head of the University Department/Principal of the College.

9. A candidate who failed in the Ist or 2nd semester examination and is not covered under the ' Reappear' regulations may be given one more chance and allowed to appear In the next regular examination without attending a fresh course of lectures but he will have to repeat the entire examination. If a candidate fails to pass in a semester examination even after the second

attempt he will be required to leave the course.

10. Successful candidates shall be classified as under;

(i) Those who obtain 75% or more of the total First Division with aggregate marks in al! the semester examination taken together Distinction

(ii) Those who obtain 60% or more of the aggregate marks but less than 75% marks in all the semester examinations taken together. First Division.

(iii) Those who obtain below 60% of the aggregate marks in all the Second Division semester examinations taken together.

Rules

I. Proposed number of seats are 40.

I. I The head of the University Department/Principal of the College shall forward to the Controller of Examinations at least five weeks before the commencement of the examination for each semester a list of the students along with their admission forms and fees who have satisfied the requirements of regulations and are qualified to appear in the examination.

1.2 Whenever the application or fee of the candidate is received more than three days after the last date prescribed by the University. She/he shall pay an additional fee as fixed by the Syndicate, provided that such application shall be entertained only up to three weeks before the commencement of the examination.

2. Every candidate shall be examined in the subjects as laid down in the syllabus prescribed from time to time. Seminar, Project and Workshop will be assessed internally on 100% basis. Viva-Voce shall be conducted jointly by the internal and external examiners.

The Head of the University Department/Principal of the College shall forward these marks on the basis of periodical tests, written assignment, case discussion, Syndicate sessions, field trips etc., to the Controller of Examinations at least one week before the commencement of the examination.

3. The Head of the University Department/Principal of the College will preserve the records on the basis of which the internal assessment awards have been prepared for inspection, if needed by the University, up to six months from the date of declaration of the results.

Project reports shall be submitted to the Head of the University department/Principal of the College at least)0 days before the commencement of the examination. Reports received after the prescribed date shall not be accepted.

4. A deficiency up to 10 per cent lectures may be condoned by the Head of the University Department/Principal of the College.

4.1 The second semester examination shall be open to a regular student who-

(a) has been on the rolls of the University Department/Principal of the College during one semester

preceding the second semester examination;

(b) has attended not less than 75% of lectures, seminars, case studies, case conferences, internship sessions, practicum's etc., for each paper; (a deficiency up to 10% may be condoned by the Head of the University Department/Principal of the College); &

(c) has passed the First Semester examination or is covered under ' Reappear' Regulation 10.

5. The medium of instruction and examination shall be English, Hindi & Punjabi

6. The internal assessment awards of a candidate who fails in the examination shall be carried forward.

7. As soon as possible after the termination of the examination, the Controller of Examinations shall publish a list of the candidates who has passed.

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING Session-2013-2014

The Post Graduate diploma aims to create a supportive and collaborative learning environment for students from diverse backgrounds and cultures to acquire knowledge, attitudes, and skills essential in the practice of guidance and counseling- The course will also help the students to become exemplary in applying essential guidance and counseling knowledge and skills in a variety of settings with individuals from diverse backgrounds.

Goals and Objectives

Post graduate diploma in guidance and counseling will enable the students to:

1. Have the knowledge, personal attitudes and skills to provide effective guidance counseling and developmental services to clients diverse In age, gender and socioeconomic status

2. Have a strong Identity as professional counselors with a commitment to future development and possession of effective networking skills.

3. Have research and program evaluation skills that include development of research and program evaluation questions, selection of appropriate methodologies for collecting and analyzing data.

4 Have the skills to primarily deliver developmental and preventative services using individual as well as small and large group interventions to children with different abilities.

5. Have the ability to go beyond providing individual services and have skills to lead teams of teaching professionals developing and providing a comprehensive set of services as needed by the client population.

6. Have skills to advocate For student client issues and to foster productive organizational change.

7. Have a vision of career planning as a developmental process and to provide individual guidance and counseling and skills training to facilitate decision-making and to work with developmental life transitions.

8. Have the knowledge and skills to use, technology resources in professional practice and in research and to understand the application of ethical practice to use of assessment and information management tools.

Course Details

Duration of the Course

The duration of the course will be in one year in two semesters.

Theory

The course consists of core components in theory of guidance and counseling processes and procedures and psychological assessments.

Practical work

The course includes intensive training in practical / field work integrated with theory components

Internship

The course has an input of two weeks' internship programme.

Details

Total no of papers is	6(100 marks each)
Total Marks	600 (100 X 6)
Internal assessment	25 percent in each paper
External evaluation	75 percent in each paper

Note: For Evaluation

1. A total of 5 questions are to be attempted in each paper. There will be 4 questions (One from each unit) and one question of short notes.
2. Each question will carry 15 marks
3. There will be internal choice in first 4 questions
4. Questions of Short notes will be spread over 4 Units. There will be no choice in fifth question related to short notes
5. There will be house test in each of the first five papers carrying 25 marks each by way of internal assessment
6. There will be Viva voce (external) test in Paper VI carrying 25 marks. The internal assessment of Paper VI will be based on supervised practical work carrying 75 marks in which case study and internship will carry 30 marks each. Career conference and career exhibition will be of 15 marks

Paper I INTRODUCTION TO GUIDANCE

(Semester-I)

OBJECTIVES:

The course contents In this paper will enable the students:

1. To understand the meaning, principles, needs and types of guidance
2. To have a detailed knowledge about various guidance services
3. To organize guidance programme in elementary and secondary schools
4. To develop skills in using technology for guidance purpose

COURSE CONTENTS

Unit I MEANING, TYPES & EMERGING TRENDS OF GUIDANCE

1. Meaning, aims, principles, and needs of Guidance
2. Types of guidance: Personal, Social, Educational, Career, Leisure time, Health and guidance for children with different abilities.
3. Emerging trends of Guidance

Unit II COMPONENTS AND ORGANISATION OF GUIDANCE SERVICES

1. Individual Inventory service
2. Information service
3. Counseling service
4. Placement & Follow-up service

Unit III ORGANIZATION OF GUIDANCE PROGRAM

1. Essential requisites of Guidance Programme
2. Organization of guidance programme for elementary schools
3. Organization of guidance programme for secondary schools
4. Role of teachers, guidance personnel in organizing of the guidance programs.
5. Management of resources in guidance programme.

Unit IV INFORMATION TECHNOLOGY AND GUIDANCE

(THEORY AND PRACTICAL)

I. Skill of using Information Technology and Internet
II. Use online testing services, guidance services for education and career information
III. Resource sharing.

PRACT1CUM/ WORK BASED LEARNING

I. Plan, organize and disseminate any one service using different mediums and methods e.g. Posters, pamphlets, multimedia presentation, interactive sessions, talks, workshops etc.

Paper II INTRODUCTION TO COUNSELLING

OBJECTIVES:

The contents in this paper will help the students:

I. To understand the meaning, types and techniques of counseling

2. To learn about theories of counseling

3. To develop counseling skills in conducting counseling sessions

4. To learn about new emerging areas of counselling

COURSE CONTENTS

Unit I THEORETICAL FOUNDATION OF COUNSELLING

1. Meaning, historical development and Importance of counselling
2. Types: Individual and Group counseling.
3. Approaches of counselling: Directive, Non directive. Eclectic counseling.
4. Techniques in counseling: Testing and Non Testing techniques
5. The counselor-Qualities of effective counselor, self renewal: preventive burnout, ethical standards and legal considerations in counselling

Unit II THEORIES OF COUNSELLING

The theoretical beginnings, goals and therapeutic process of following theories of counselling:

1. Psychoanalytical theory (Freud, Jung)

2. Self concept/actualization theory (Rogers, Maslow)

3. Trait theory (Cattell)

4. Rational emotive theory (Albert Ellis)

5. Indian therapeutic approach (Patanjali's Yoga therapy)

6. Behavioristic (Skinners. Pavlov)

Unit III ADJUSTMENT AND MENTAL HEALTH

1. Meaning and process of adjustment, adjustment mechanisms, adjustment problems of children and adolescents.
2. Causes of maladjustment, physical, emotional, mental and social.
3. Differences between adjusted and maladjusted adolescents, criteria of good mental health, role of counselor in developing good mental health
4. Echniques of stress management, conflict resolution and mediation and violence prevention programs and models

Unit IV COUNSELLING SKILLS

I. Building Trust: Listening, attending, building rapport, demonstrating empathy, observing
II. Interview: types of Interview, procedure of conducting interview: preparation, process, interpretation, recording, termination
III. Speciation concerns in counseling Substance abuse. Drug addition. HIV AIDS; Child abuse (trauma), internet and technological abuse. Gerontology. Counseling for aging population); Life long learning; Preparation for family life (parenting and child rearing)
IV. Professional interest and trends.

'PRACTICUM/ WORK BASED LEARNING

Conduct individual and group counseling sessions using non-testing techniques & counseling Skills in the classroom/groups & prepare a report.

PAPER III EDUCATIONAL AND PSYCHOLOGICAL APPRAISAL

OBJECTIVES:

After going through the contents in this paper the students will be able:

I. To understand the concept of educational and psychological appraisal

II. To know the criteria of selection of a test and characteristics of a good test

III. To learn to administer and interpret psychological tests to know the Individual abilities and personality aspects

IV. To make appropriate use of achievement and diagnostic test in locating learning difficulties

V. To master elementary statistics and apply it in student's appraisal

COURSE CONTENTS

Unit I PSYCHOLOGICAL TESTING

1. History of Psychological Testing
2. The nature and uses of psychological tests
3. Test standardization: procedure, reliability and validity
4. Interpretation test scores: Qualitative and Quantitative
5. Ethical and social issues in testing

Unit II ADMINISTRATION AND INTERPRETATION OF STANDARDIZED PSYCHOLOGICAL TEST

1 Intelligence. Verbal, Non-Verbal & Performance tests

2. Personality: Self report inventories, projective tests, scales, 'situational test.

3. Aptitudes: Differential & Specific abilities (DAT, Music, Art, Science. Maths, Teaching).

4. Interests: Educational and Vocational

5. Attitudes: Diversities (Religion, Culture, and language)

Unit III ACHIEVEMENT AND DIAGNOSTIC TESTS

1. Achievement test: Use of teacher made and standardized subject specific tests
2. Diagnostic test: Learning difficulties; Behaviour problems
3. Administration and interpretation of achievement and diagnostic tests.

Unit IV ELEMENTARY STATISTICS

1. Descriptive statistics: measurers of central tendency, percentiles, measures of variability
2. Pearson's Product Moment & Spearman's Rank order correlation
3. Normal probability curve and its applications
4. Inferential statistics: parametric techniques (z test, t test and ANOVA (one way) and non parametric techniques (chi-square test and median test)

PRACTICUM/ WORK BASED LEARNING

- Preparation of a profile of one subject client using the above tests
- Preparation of one achievement test

PAPER IV- COUNSELING CHILDREN AND ADOLESCENTS WITH DIFFERENT ABILITIES

(Semester-II)

OBJECTIVES:

The contents of this course will enable the students to master the techniques of:

1. Understanding the needs and problems of children and adolescents with exceptional abilities
2. Identification of academic, social, emotional and vocational problems of students
3. Conducting individual and group counselling
4. Preparing case history, doing case analysis and preparing profile of the case.

COURSE CONTENTS

Unit- I

TYPES, NEEDS AND PROBLEMS OF SPECIAL CHILDREN

1. Concept of different abilities & their types
2. Needs & Problems of children with different abilities
3. Needs and problems of adolescents with deferent abilities
4. Importance of counseling; of students with different abilities and counseling of parents, family and peers

Unit II IDENTIFICATION AND DIAGNOSIS OF PROBLEM AREAS

1. Identification of personal, social & academic problems of children (5-12 years) at elementary level
2. Identification of academic, social & vocational needs & problems of adolescents (13 to 18 yrs) at secondary level
3. Diagnosis of Problem areas
4. Meaning and types Stress and its causes

Unit III INTERVENTION PROGRAMMES

1. Individual and group counseling for children for emotional, social, behavioural and academic problems
2. Individual & group counseling the adolescents for emotional, social, academic & vocational problems
3. Relaxation strategies, yoga & meditation therapies for children and adolescents for reducing stress and problems
4. Personal management skills (eg. Time, self management etc)

Unit IV- CASE STUDY

I. Concept, importance and types of case studies.

2 Components and step followed in case study

3. Group discussions initiated by the teacher with regard to I of minimum) case studies of the following areas problems:

- Academic Problems (Learning difficulties, choice of subjects
- Class room problems (Discipline/ behaviour)
- Giftedness (Gifted underachiever, academically gifted at least in one subject)
- Slow learner/educationally backward child
- Emotional/social problem (Adjustment)
- Attention deficit hyperactive (ADH) Children
- Problem of Decision making (Choice of career)
- Visual/ auditory/ Speech challenged

- Orthopedically challenged,
- Mentally challenged
- Learning Disabled

PRACTICUM/ WORK BASED LEARNING

Preparation of a case profile of a student with different abilities • Case conference.

Paper V CAREER EDUCATION

OBJECTIVES:

The contents of this course will enable the students:

- To get a comprehensive introduction to career education through historical background
- To develop an understanding of the current trends and issues in career education
- To study decision-making and how the process applies to career planning.
- "To study the relationships among work, family, and leisure.
- To identify career issues related to special students.
- To be able to use the Internet and online guidance services
- To overview methods of disseminating and using career information, including computer-based delivery systems (Internet).

COURSE CONTENTS

Unit-I

-CAREER DEVELOPMENT

- Meaning and historical development of career counseling
- Stages of career development
- Career development and human conditions
- Identifying and analyzing life career themes and career talents ."
- Emerging world of work careers and need for career education

Unit II THEORIES OF CAREER DEVELOPMENT

1. Super's theory of vocational development
2. Tiedman and O'hara's theory of career development
3. Williamson's Trait theory
4. Ginzberg and Associates theory of occupational development
5. Roe's theory of career choice
6. Relationship of career theories to career planning

Unit-III CONDITIONS GIVING RISE TO CAREER GUIDANCE & CAREER EDUCATION

1. Changing economic conditions of society & the impact of labour market
2. Psycho-social conditions of the individuals
3. Advancement of technology and survival skills
4. Problems pertaining to work, family, education, and leisure

Unit IV- CAREER CHOICE AND DECISION MAKING

1. Career maturity: concept: and factors
2. Empowering students in career decision making (strategies)
3. Matching career talents with career decision making
4. Guidance for developing life goals & choices

PRACTICUM/ WORK BASED LEARNING

1. A visit to a educational/vocational career center
2. Preparation of a research based project report of an emerging career. The project may include the following information along with any other: • The Profession • Work Environment'• Main Areas • Training Required Skills and attitude • Entry • Education Required • Eligibility • Institutes • Job Prospects • Remuneration • Pressures • Future Prospects "Related Careers" Any Other

Paper VI SUPERVISED PRACTICUM / 1NTERNSHIP/ WORK BASED LEARNING

OBJECTIVES:

The supervised practical work will train and enhance the student's skills:

1. In identifying the problems of an individual with the help of selecting, administering appropriate test, interpreting the data, preparing the complete history and profile of the case
2. To interpret/ diagnose the case problem and select an appropriate intervention for helping the case in adjustment/

development of relevant life goals and making appropriate choices

3. To be attached to a school /an institution or an agency with an onsite counselor

COURSE CONTENTS

Case Study

- Field work: Identification of 4 cases out of the following areas through testing and referrals: (collection of data)
- Academic Problems (Learning difficulties, choice of subjects)
- Class room problems (Discipline/ behaviour)
- Giftedness (Gifted underachiever, academically gifted at least in one subject)
- Slow learner/ educationally backward child
- ''Emotional/social problem (Adjustment)
- Attention deficit hyperactive (ADH) problems
- Problem of Decision making (Choice of a career)
- Visual/auditory/Speech challenged
- Orthopedically challenged
- Mentally challenged
- Learning disabled

2 Case preparation and case analysis of the four selected cases

3. Case conference with fellow students
4. Intervention (use of appropriate guidance/ counseling strategies)
5. Written report of the cases

Career Conference

The students will plan and organize career talks and career exhibitions

Internship

The course has an input of two weeks' internship programme. Trainees are required to have an attachment with a school or an jnstitution or an agency under an experienced onsite counsellor for the stipulated period. During the period of internship, the trainees would plan and undertake work related to planning and execution of guidance and counselling activities including counselling casework. They will prepare a project report of the apprenticeship work done by them and with the reviewed learning outcomes by the onsite counselor and the supervisor and submit the same for evaluation.

SUGGESTED READINGS

Paper-II

Arbuckale, D.S. (1965) Counseling: Philosophy, theory and practice. Boston Ailyn and Bacon

Paper-II

Carroll, Michael & Walton Michael, Ed- (1997). Handbook of counseling in organizations. New Delhi: SAGE Publications India Pvt Ltd.

Paper-I, II & IV

Chandra Ramesh, (2002). Guidance and counselling. Delhi:

Paper-IV

Kalpaz Publications S/Cruickshank, W.M. (1963). Psychology of

Exceptional Children and Youth. N.Y. Prentice Hal!

Paper-I

Dash, Nibedita (2004). Secondary School organization, Guidance and Educational Technology. New Delhi; Dominant Publishers and Distributors-Dressel, RL (1976). A Handbook of Academic Evaluation. London. Jossey-/Bass Publishers

Paper-III

Garret.H.E. (1981) Statistics in education and Psychology. Bombay. Vakils Feffer and Simons LTD

Paper-II, IV

Geldard, Kathryn & Geldard, David (1997). Counselling children- A practical Introduction. New Delhi: Sega publications

Paper-II, IV & V

Gladdinos, S.T. (2009). Counseling- A Comprehensive Profession. Pearson Publications libson R.L. & Mitchell M.H (2008) Introduction to Counseling and guidance. Pearson Publication.

Paper-III

Gregory, R.J. (2004). Psychological Testing: History Principles and Application. N.Y Pearson Education Group

Paper-I

Jones, Arthur J, (1970). Principles of Guidance Sixth Edition. New Delhi: Tata McGraw Publishing Company Ltd.

Paper-I &II

Knapp, Robert H, (I953). Practical Guidance Methods for Counselors, Teachers and Administrators. New York: McGraw Hill Book Company, Inc

Paper-I &II

Kochhar, S.K. (I996). Guidance and counselling in colleges ad universities. New Delhi: Sterling Publishers Pvt Ltd.

Paper-II

Lapworth, Phil, Sills Charlotte & Fish Sue, (2001). Integration in counselling & Psychotherapy- Developing a personal approach. London: SAGE publications

Paper-II
Lazarus, R. (1969) Patterns of Adjustment and human Effectiveness. N.Y, McGraw hill

Paper-I
Lytton, Hugh & Craft Maurice, Ed. (1974). Guidance and counselling in British schools- A discussion of current issues. London: Edward Arnold (Publishers) Ltd

Paper-III

Noll et al (1979). Introduction to Education and Measurement. Boston Houghton Mifflin Co.

Paper-IV

Panda ,K.C.(2004) Education of the Exceptional Children) New Delhi, Vikas Publishing House Pvt. LTD

Paper-V

Paper- Pandit, J.L. (1970) The World of Work. (INDIA) Orient Longman

Paper-II

Palmer, Stephen, dainow Sheila and Milner Pat, (1996). Counselling- The BAC counselling reader. New Delhi: Sega Publications

Paper-II

Patterson, C.H. (1973) Theories of Counseling and Psychotherapy. N.Y. Harper and Raw

Paper-I

Qureshi. Hasnain (2004). Educational Counselling. New Delhi: Anmol Publications Pvt Ltd.

Paper-I &II

Safaya, B,N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications

Scott, M.J. & Stradling, S.G, (2001) Counseling for

Posttraumatice Stress Disorder. London; Sage Publication

Paper-II

Shatter. L.F&Shoben, E.J. (1970) The Psychology of Adjustment, Boston, Houghton Mifflin

Paper-III

Shah. R.K. (2002). Educational Testing and Measurement. Jaipur- INDIA, Pointer Publishers

Paper-I

Sharma, Ram Nath & Sharma Rachana, (2004). Guidance and counseling in India. New Del hi Atlantic Publishers and Distributors

Paper-V

Sharma, Shashi Prabha (2004).Career Guidane and counseling. New Delhi: Kanishka Publishers, Distributors

Paper-I

Sharma, Tara Chand (2002). Modern methods of guidance and counselling. New Delhi: sarup & Sons

Paper-I & V

Sharma, Yogendra K. (2004). Principles of educational and vocational guidance. New Delhi: Kanishka Publishers. Distributors

Paper-I & V

Sharma. Yogendra K- (2004). Text book of Educational Psycghology. New Delhi: Kanishka Publishers. Distributors

Paper-II

Sharma, A.S. (2000). Counseling Psychology. New Delhi: Commonwealth Publisher

Paper-II &V

Sherrzer. Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston

Paper-I

Shenzer, Bruce & Stone Shelly C (1996). Fundamentals of guidance. Third Ed. London: Houghton Mifflin Company Boston

Paper-V

Sinha. Neelam (I996). Strategies, Issues and Concepts in Vocational Education. New Delhi: Common Wealth Publishers Yadav, M.S. & Govinda, R. (1977). Educational Evaluation-A package of Auto-instructions Material. Ahmedabad: Sahitya Mudranalaya

SUGGESTED READINGS

PAPER-I

Chadra Ramesh, (2002). Guidance and counseling. Delhi: Kalpaz Publications.

Dash, Nibedita (2004). Secondary School organization, Guidace and Educational Technology,New Delhi: Dominat Publishers and Distributors.

Dressel, P.L. (1976). A Handbook of Academic Evaluation. London. Jossey-/ Bass Publishers

Jones, Arthur j, (1970). Principles of Guidance Sixth Edition. New Delhi: Tata McGraw Publishing Company Ltd.

Knapp, Robert H. (1953). Practical Guidance Methods for Counselors, Teahers and Administrators. New York: McGraw-Hill Book Company, Inc

Kochhar, S.K. (1996). Guidance and counselling in colleges and universities. New Delhi: Sterling Publishers Pvt. Ltd.

Lytton, Hugh & Craft Maurice, Ed. (1974). Guidance and counselling in British schools- A discussion of current issues. London: Edward Arnold, Publishers Ltd.

Qureshi, Hasnain (2004) Educational Counselling. New Dehli: Anmol Publications Pvt. Ltd.

Safaya, B.N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications.

Sharma, Ram Nath & Sharma Rachana, (2004). Guidance and Counselling in India. New Delhi: Atlantic Publishers and Distributors.

Sharma, Tara Chand (2002) Modern Methods of Guidance and Counselling New Delhi: Sarup & Sons

Sharam, Yogendra k (2004). Principles of educational and vocational guidance. New Delhi: Kanishka Publishers, Distributors.

Sertzer, Bruce & Stone Shelly C (1996). Fundamentals of guidance, Third Ed. London: Houghton Mifflin Company Boston.

PAPER-II

Arbuckale, D.S. (1965) Counseling: Philosophy, theory and practice. Boston Allyn and Bacon

Carroll, Michael & Walton Michael, Ed.(1997). Handbook of counseling in organizations. New Delhi: SAGE Publications. India Pvt. Ltd.

Chandra Ramesh, (2002). Guidance and counselling. Delhi: Kalpaz Publications.

Geldard, Kathryn & Geldard, David (1997). Counselling children- A practical Introduction. New Delhi: Sega Publications.

Gibson, R.L. & Mitchell M.H.(2008). Introduction to Counselling and Guidance. New Delhi: Pearson Publications.

Gladding, S.T. (2004) Counselling- A Comprehensive Profession. New Delhi: Pearson Publications.

Gregory, R.J. (2004). Psychological Testing: History Principles and Application. N.Y. Pearson Education Group.

Knapp, Robert H. (1953). Practical Guidance Methods for Counselors, Teahers and Administrators. New York: McGraw- Hill Book Company, Inc

Kochhar, S.K. (1996). Guidance and cunselling in colleges ad universities. New Delhi: Sterling Publishers Pvt. Ltd.

Lapworth, Phil, Sills Charlotte & Fish Sue, (2001). Integration in counselling & Psychotherapy- Developing a Personal approach. London: SAGE Publications.

Lazarus, R. (1969) Patterns of Adjustment and human Effectiveness. N.Y., McGraw hill.

Palmer, Stephen, dainow Sheila and Milner Pat, (1996). Counselling- The BAC counselling reader. New Delhi: Sega Publications.

Patterson, C.H. (1973) Theories of Counseling and Psychotherapy. N.Y. Harper and Raw

Safaya, B.N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications.

Shaffer, L.F. & Shoben, E.J. (1970) The Psychology of Adjustment, Boston, Houghton Mifflin

Sharma, A.S. (2000). Counseling Psychology. New Delhi: Commonwealth Publisher.

Shertzer, Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston.

Paper- III

Garret, H.E. (1981) Statistics in education and Psychology. Bombay. Vakils Feffer and Simons LTD

Noll et al (1979). Introduction to Education and Measurement. Boston Houghton Mifflin Co.

Shah. R.K. (2002). Educational Testing and Measurement . Jaipur. INDIA, Pointer Publishers.

Paper-IV

Chandra Ramesh, (2002). Guidance and counselling. Delhi: Kalpaz Publications.

Cruickshank, W.M. (1963). Psychology of Exceptional Children and Youth. N.Y. Prentice Hall.

Geldard, Kathryn & Geldard, David (1997). Counselling Children-A practical Introduction. New Delhi: Sega publications.

Gladding, S.T. (2004) Counselling- A Comprehensive Profession. New Delhi: Pearson Publications.

Panda, K.C. (2004) Education of the Exceptional Children, New Delhi, Vikas Publishing House Pvt. Ltd.

Paper-V

Gladding S.T. (2004). Counselling- A Comprehensive Profession: New Delhi: Pearson Publications.

Pandit, J.L. (1970) The World of Work. (INDIA) Orient Longman

Sharma, Shashi Prabha (2004) . Career Guidance and Counseling. New Delhi : Kanishks Publishes, Distributors.

Sharma, Yogendra K. (2004).Principles of educational and vocational guidance.

Sharma, Yogendra K. (2004). Text book of Educational Psychology. New Delhi: Kanishka Publishers, Distributors.

Shertzer, Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston.

Sinha, Neelam (1996). Strategies, Issues and Concepts in Vocational Education. New Delhi: Common Wealth Publishers.

PANJAB UNIVERSITY, CHANDIGARH

(Estted. under the Panjab University Act VII of 1947- enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

POSTGRADUATE DIPLOMA

IN

MASS COMMUNICATION

(SEMESTER SYSTEM)

EXAMINATIONS, 2017-18

PANJAB UNIVERSITY, CHANDIGARH

Outlines of tests, syllabi and courses of reading for Post-Graduate Diploma in Mass Communication (Semester System) for the examination 2017-18.

SEMESTER I

NOTE: **There will be four theory papers each carrying 100 marks in each semester. One practical assignment of 50 marks is compulsory in each semester.**

PGDMC	101	Introduction to Mass Communication
PGDMC	102	Print Media
PGDMC	103	Electronic Media
PGDMC	104	Advertising and Public Relations
PGDMC	105	Practical Assignments

SEMESTER II

PGDMC	106	Introduction to Mass Communication
PGDMC	107	Print Media
PGDMC	108	Electronic Media
PGDMC	109	Advertising and Public Relations
PGDMC	110	Practical Assignments

NOTE: The assignments are required to be submitted in the portfolio 20 days before the commencement of the theory exams as mentioned in the Academic Calendar. No assignment will be accepted thereafter and the candidates' defaulter in this regard will not be issue the roll numbers for the theory papers.

Post-Graduate Diploma in Mass Communication

FIRST SEMESTER

PGDMC 101: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Communication: Meaning & Definition of communication; Functions of communication; Modern & Classical.

Unit -II

- Process & elements of communication; Forms of communication – Intrapersonal, Interpersonal, Group (public, crowd, small & large group); mass communications importance & characteristics.

Unit – III

- Theories & Models of Mass Communication: Meaning & Definition; Models: S-R,
- Shannon & Weaver, Laswell formula, Osgood & Schramm.

Unit - IV

- Two – step flow; Diffusion of Innovations; four rings of defences

ESSENTIAL READINGS:

1. Everett M. Rogers, (1976), *Communication and Development*. Beverly Hills, Sage Publications.
2. E.S. Herman & Noam Chomsky, (1994), *Manufacturing Consent*, Vintage.
3. Berelson, Bernard & Janowitz, Morris (ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York.
4. Carwright, Dorwin & Zander, Alvin (ed.), (1968), *Group Dynamics Tavistock*, London.
5. McQuail, Denis, (1994), *Mass Communication Theory,* SAGE, London.
6. McQuail, Denis (ed.), (1976), *Sociology of Mass Communication*. Penguin, London.

7. Rogers, Evertt M. (ed), (1982), Communication & Development. SAGE, Beverly Hills.
8. Sage, (1981 onwards), *Mass Communication Year Books*. SAGE, Beverly Hills.
9. Schramm, Wilbur, (1975), *Men, Messages & Media*. Harper & Row, New York.
10. Schramm, Wilbur (ed.), (1963), *Mass Communication*. University of Illinois Press, Illinois.
11. Schramm, Wilbur (ed.), (1955), The Process and Effects of Mass Communication, University of Illinois Press, Urban.
12. Schramm, Wilbur, (1957), *Responsibility in Mass Communication*. Harper & Row, New York.
13. Wood, Ronald N., (1983), *Mass Media & the Individual,* West Publishing Co., Minnesota.

ADDITIONAL READINGS:

1. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
2. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.,
3. Keval J. Kumar, Jaico, (1995), Mass Communications in India, Publishing House.
4. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
5. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
6. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
7. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

PGDMC 102: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing and editing. To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. To help the students to understand the finer aspects of reporting for print media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

News	:	Definition, Concept, Elements, Values, Sources, Making and Maintaining sources, Structure – 5 Ws and IH, Inverted Pyramid Pattern, Different Types and styles of lead writing.

Unit –II

Principles of Reporting	:	Role and Responsibilities of Reporting staff, Concept of Beats.

Unit – III

Interviews	:	Types, purposes, techniques, preparation, skills.
Writing	:	News analysis, Features, Articles, Editorials.

Unit- IV

Subbing & Editing	:	Significance and Principles; Subbing Symbols; Brief introduction to DTP.

ESSENTIAL READINGS:

1. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
2. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D.
3. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D.
4. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey.
5. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D.
6. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D.
7. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
8. Barns, Margarita, (1940), Indian Press, George Allen & Unwin, London.
9. Basu, Durgada, (1982), The Law of the Press in India, Prentice-Hall, New Delhi.
10. Cheney, William, (1955), Freedom of the Press, Harcourt-Brace, New York.
11. Eliott, Deni (ed.), (1986), Responsible Journalism, Sage Beverly Hills.
12. Herd, Harold, (1976), The March of Journalism, Greenwood Press, Connecticut.
13. Karkhanis, Sharad, (1981), Indian Politics & Role of the Press, Vikas Publishers, New Delhi.

ADDITIONAL READINGS:

1. Wray, Cheryl Sloan, (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group.
2. Hay and Vicky, (1991), *The Essential Feature: Writing for Newspapers and Magazines*, Columbia University Press.
3. Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books.
4. Harrington, Walt. Ed, (1997), *Intimate Journalism: The Art and Craft of Reporting Everyday Life*, Sage Publications, Sage Publications, N.Y.
5. Metzler, Ken, (1996), *Creative Interviewing: The Writer's Guide to Gathering Information by Asking Questions*, Allyn and Bacon Inc.

PGDMC 103: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes;

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

RADIO

Brief History of Radio in India

Characteristics of Radio

Radio as Mass Medium : Role, reach and future.

All India Radio : Organizational structure.

Unit – II

Different types of Radio Programmes : Interviews, talks, discussion, radio-features.

Unit-III

TELEVISION

Brief History of Television in India

Characteristics of Television

Television as a Mass Medium : Role, reach and future.

Doordarshan : Organizational Structure.

Unit -IV

Different types of TV programmes : Interviews, discussions, TV documentary.

ESSENTIAL READINGS:

1. Govt. of India, (1966), *Radio and Television: Report of the Committee of Broadcasting and Information.*

2. Govt. of India, (1978), *Akash Bharti (Report of The Working Group of Autonomy for Akashvani & Doordarshan)* 2 Volumes. Publications Division, Min. of 1 & B.

3. Govt. of India, (1985), *An Indian Personality for Television: (Report of The Working Group On Software for Doordarshan)* Min I & B.

4. Govt. of India, (1968), *Radio and Television (Report of The Committee on Broadcasting and Information),* Publications Division, Min. of I & B.

5. Barnouw, Erik, (1978), *The Sponsor*, Oxford University Press, New York.

6. Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice*, Routledge, New York.

7. Shrivastava, K.M., (1989), *Radio and TV Journalism*, Sterling Publishers, New Delhi.

8. Cohler, David Keith, (1985), *Broadcast Journalism*, Prentice-Hall, New Jersey.

9. Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*, Rajat Publications, New Delhi.

10. Fedler, Fred, bender, John R., Davenport, Huanda, Drager, Michael W., (2005), *Reporting for the Media*, Oxford University Press, New York.

11. Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi.

ADDITIONAL READINGS:

1. Cohen, Akilia A, (1987), *The Television News Interview*, SAGE, New Delhi.

2. Caywood, Clark L., (2004), *The Handbook of Strategic Public Relations and Integrated Communications*, Tata McGraw Hill, New York.

3. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications, Tata McGraw Hill, New York.

4. Shrivastava, K.M, (2005), *Broadcast Journalism in the 21st century New Dawn Press Group*, New Delhi.

PGDMC 104: ADVERTISING AND PUBLIC RELATIONS Marks = 100

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Definition, scope and concept of Advertising
- Advertising in marketing – mix; concept of IMC
- Major types of Advertising : Classified; classified display; display
- Carrier and Non – carrier media of advertising

Unit -II

- Advertising Media: Newspaper, Magazines, Radio, TV, Internet, Outdoor, Transit, Direct Mail, P-O-P; characteristics of individual media and their advertising features.

Unit – III

- PR: Definition and Role.
- PR vis-à-vis Publicity, propaganda, advertising, PR in Marketing Mix, Brief introduction to Integrated Marketing Communication.
- Organisation; different types of organisation; Importance of Communication within organisation, different types of channels of communications.

Unit - IV

- Publics in PR: Internal & External & their importance
- Code of Ethics in PR

ESSENTIAL READINGS:

1. David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson.
2. David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman.
3. Subroto Sengupta, (1990), *Positioning,* New Delhi, Tata-Mcgraw Hill.
4. Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.
5. J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books.
6. Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School.
7. Dorothy Cohen, (1972), *Advertising.* NY, Wiley.
8. Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956.
9. Fraser P. Seital, (1984), The Practice of Public Relations. 2nd ed., Columbus Bell & Howell Co.

ADDITIONAL READINGS:

1. John Lee, (1968), Diplomatic. Persuaders, N.Y. Wiley.
2. Black, Marwin & Harlow, Rex, (1985), Practical Public Relations. Harper & Bros.; New York.
3. Black, Sam, (1978), Practical Public Relations Pitman, London.
4. Black, Sam, (1972), Role of Public Relations in Management. Pitman, London.
5. Bowman, Pat & Ellis, Nigel (ed.), (1985), Handbook of Public Relations. George Harrap & Co., Ltd., London.

PGDMC-105 Practical Assignments Marks : 50

S. NO.	ASSIGNMENTS	NOS.	MARKS
1	News Stories – Covering major events in your areas	4	8
2	Interviews of prominent persons	2	8
3	Translation of News Story: English to Hindi/Punjabi	1	4
4	Translation of News Story: Hindi/Punjabi to English	1	4
5	Identify Classified & Classified Display ads, Display ads; Product ad; Institutional ad; Transit ad, Outdoor ad, Direct Mail ad, POP ad	1	8
6	Review of any radio programme (current affairs/news bulletin/ interview based programme/feature/talk shows/ song-based programme etc.)	1	4
7	Feature Writing	1	6
8	Dummy of two pages of a Newspaper	1	8
	TOTAL		**50**

Post-Graduate Diploma in Mass Communication

SECOND SEMESTER

PGDMC 106: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Theories of Mass Communication

Unit-I

- Agenda –setting; Uses & gratification.

Unit-II

- Characteristics of various media of mass communication: Print, Electronic, Traditional.

Unit-III

- Media Systems: Authoritarian theory; Libertarian theory; Social – Responsibility Theory

Unit -IV

- Totalitarian theory; Development Media Hypothesis, Democratic – Participant Media Hypothesis.

Course of reading is as same as in the paper in Semester -I

PGDMC 107: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing, editing and design; To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. The paper is also design to familiarize students with various laws pertaining to the media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

Editorial department set - up	:	Criteria for judging news copy. Organizational structure of the editorial department of a newspaper.
News room organization	:	Functions of News Editor, Chief Sub – Editor and Sub – Editor

Unit – II

Headline	:	Mechanics of headline writing; typographical patterns; purposes; kinds of headlines; Dummy; page – make – up.
Photo – editing	:	Selection; editing and cropping of pictures; placement of photographs. Writing captions.

Unit - III

Role & Responsibilities of Journalists	:	Code of ethics for journalists (Press Council of India).

Unit – IV

Press Laws	:	Copyright Act, Law of Defamation, Contempt of Court, Official Secrets Act, Right to Information Act. Contempt of Legislature, Law of Obscenity.

Course of reading is as same as in the paper in Semester -I

PGDMC 108: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes; To equip the students with the skill to camera shot composition, camera movements and basic steps of program production.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Organisational structure of NSD in Dordarshan & AIR.
- Characteristics of Radio & TV.
- Structure and preparation of a Television Bulletin (gathering, condensing, compiling and presenting TV news).
- Basics principles of writing news for Radio & TV
- News packages.

Unit – II

- Basics of TV script, Writing, Different types of scripts (Narrative Style, split page, camera script)
- Above & below the line function in TV production.

Unit – III

- Basic camera shots, camera movements, competition & transitions.

Unit – IV

- Basics of Programmes Editing: Linear and Non-Linear Editing.
- Basic process of programme production: Pre-production, production, post-production.

Course of reading is as same as in the paper in Semester -I

PGDMC 109: ADVERTISING AND PUBLIC RELATIONS **Marks = 100**

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Advertising Copy Writing: Definition; principles; do's & don'ts; U.S.P.; AIDA formula.
- Advertising layout and Design: Design vocabulary & Design principles; and stages of layout.

Unit-II

- Advertising Agency: Structure and Functions
- Advertising Campaign: Brief Introduction.
- Code of Ethics of Advertising in India.

Unit – III

- PR tools: House Journals; pamphlets; brochures; Newsletter; bill boards; press conferences, Cable TV, Exhibitions; internet, mobile.

Unit - IV

- Brief introduction to PR process; Fact Finding & Feedback, Planning & programming, communication & action, evaluation.

Course of reading is as same as in the paper in Semester -I

PGMC- 110: PRACTICAL ASSIGNMENTS **Marks: 50**

S. NO.	ASSIGNMENTS	NOS.	MARKS
1.	Photo caption Writing	1	4
2.	Press Release	2	6
3.	Script writing for radio news of five minutes	1	8
4.	Script writing for TV news of five minutes	1	8
5.	Write a story board of a half minute TV commercial	1	4
6.	Print Advertisements Analysis		
	a) Classified	2	4
	b) Display Classified	2	4
	c) Display	2	4
7.	Brochure	2	8
	TOTAL		**50**

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 – enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT AND COMMERCE

SYLLABI

FOR

B.Com. (General & Hons.)
(Semester System)
For the Examinations 2018-2019

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SCHEME OF B.Com COURSE (General and Hons.)

Semester – I

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 101 A **BCM 101 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 102	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 103	**INTERDISCIPLINARY** PSYCHOLOGY FOR MANAGERS	100	5	1
BCM 104	BUSINESS ECONOMICS-I	100	5	1
BCM 105	PRINCIPLES OF FINANCIAL ACOUNTING**	100	5	1
BCM 106	COMMERCIAL LAWS	100	5	1
BCM 107	PRINCIPLES AND PRACTICES OF MANAGEMENT	100	5	1

Semester – II

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 201 A **BCM 201 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 202	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 203	**INTERDISCIPLINARY** E-COMMERCE	100	5	1
BCM 204	BUSINESS ECONOMICS-II	100	5	1
BCM 205	CORPORATE ACOUNTING**	100	5	1
BCM 206	BUSINESS LAWS	100	5	1
BCM 207	HUMAN RESOURCE MANAGEMENT	100	5	1
	ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE*	100+50		

Semester – III

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 301	**INTERDISCIPLINARY** ISSUES IN INDIAN COMMERCE	100	5	1
BCM 302	COST ACCOUNTING**	100	5	1
BCM 303	COMPANY LAW	100	5	
BCM 304	BUSINESS MATHEMATICS AND STATISTICS **	100	5	1
BCM 305	BANKING AND INSURANCE	100	5	1
BCM 306	GOODS AND SERVICES TAX (GST)**	100	5	1

Semester-IV

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 401	**INTERDISCIPLINARY** SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	100	5	1
BCM 402	ADVANCED ACCOUNTING**	100	5	1
BCM 403	AUDITING AND SECRETARIAL PRACTICE	100	5	1
BCM 404	COST MANAGEMENT**	100	5	1
BCM 405	MARKETING MANAGEMENT	100	5	1
BCM 406	QUANTITATIVE TECHNIQUES AND METHODS**	100	5	1

Semester-V

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T)Per Week***
BCM 501	INCOME TAX LAW**	100	5	1
BCM 502	MANAGEMENT ACCOUNTING**	100	5	1
BCM 503	INDIAN ECONOMY	100	5	1
BCM 504	PRODUCTION AND OPERATION MANAGEMENT	100	5	1
BCM 505	ENTREPRENEURSHIP AND SMALL BUSINESS	100	5	1
BCM 506	FINANCIAL MARKETS AND SERVICES	100	5	1

Semester-VI

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 601	DIRECT TAX LAWS**	100	5	1
BCM 602	FINANCIAL MANAGEMENT	100	5	1
BCM 603	ISSUES IN FINANCIAL REPORTING	100	5	1
BCM 604	SOCIAL AND BUSINESS ETHICS	100	5	1
BCM 605	OPERATIONAL RESEARCH**	100	5	1
BCM 606	SECTORAL ASPECTS OF INDIAN ECONOMY	100	5	1

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./BBA 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/ they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

** the strength of B.Com. unit shall be 70. There will be tutorials only in the papers which have been highlighted with asterisk**.

***Each unit of B.com. will be divided into 3-groups for the purpose of Tutorials.

Scheme of Examination

B.Com. Honours

A student can pursue Honours course in B.Com. by taking up one paper each in four semesters beginning with 3rd semester in any one of the following four streams. Option of any stream once exercised cannot be changed subsequently.

1. Accounting & Finance

1. **BCH 307:** Accounting Theory and Reporting Practices	3rd Semester
2. **BCH 407:** Contemporary Issues in Accounting	4th Semester
3. **BCH 507:**Strategic Financial Management	5th Semester
4. **BCH607:**Investment Management	6th Semester

2. Economics

1. **BCH 308:** Development Economics	3rd Semester
2. **BCH 408:** Industrial Economics	4th Semester
3. **BCH 508:** Money and Banking	5th Semester
4. **BCH 608:** International Economics	6th Semester

3. Management Studies

1. **BCH 309:** Advertising & Brand Management	3rd Semester
2. **BCH 409:** Consumer Behaviour	4th Semester
3. **BCH 509:** Compensation Management	5th Semester
4. **BCH 609:** Training & Development	6th Semester

4. Banking

1. **BCH 310:** Bank Management	3rd Semester
2. **BCH 410:** Bank Legislation	4th Semester
3. **BCH 510:** Electronic Banking and Risk Management	5th Semester
4. **BCH 610:** Bank Marketing	6th Semester

SYLLABI FOR B.COM FOR THE EXAMINATION OF 2018-19 ONWARDS

Note :

1. Examination in each subject for B.Com will be of 3 hours duration.
2. There will be no objective type questions.
3. Students are required to have the knowledge of the developments in the subject up to 6 months before the examination.
4. Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University/College to the examinees.
5. Tutorials classes will be held as notified in the Scheme of Examination for the session 2014-15 and 2015 onwards.
6. The following categories of the students shall be entitled to take the option of History and Culture of Punjab in lieu of Punjabi as compulsory subject:
   (a) Students who have not studied Punjabi up to Class 10^{th}.
   (b) Wards of defence personnel and Central government employee/employees, who are transferable on all India basis.
   (c) Foreigners.
7. 20% marks in each paper will be internal assessment based on the following parameters:
   a. Mid-Semester Test : 50%
   b. Academic Activity : 30%
      (Seminar, Project &Assignments)
   c. Attendance : 20%

INSTRUCTIONS FOR THE PAPER SETTERS

Note : The question paper of each subject covering the entire course shall be divided into three sections :

Section A (20 marks)
This section will have 6 short answer questions from the entire syllabus. Students are required to attempt 4 questions from this section. Each question will carry 5 marks; the total weightage being 20 marks.

Section B (30 marks)
This section will consist of essay type/numerical questions from Unit I of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Section C (30 marks)
This section will consist of essay type/numerical questions from Unit II of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Important Note : In all numerical papers the paper setter is required to set numerical questions as follows:

Section A :	Four numerical questions out of six questions.
Section B and C:	At least two numerical questions out of four questions.

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

SEMESTER-I

BCM101 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Essay Writing on National and International Problems.	10 marks
3.	Translation of Business Advertisement from English to Punjabi	05 marks
4.	Correct-Incorrect words	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi,
   Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 1 to 6
2. List of words of Business Vocabulary attached (A to H)

Themes and Units:

1.	Two questions from the book **Galiey Chikkarh Door Ghar** (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2×4=08 marks
3.	Essay (1 out of 4) (National and International Problems)	10 marks
4.	Translation of Business Advertisement from English to Punjabi	05 marks
5.	Correct-Incorrect words (5 words out of 8)	05 marks
6.	Business Vocabulary (5 words out of 8)	05 marks

phHekwH Gkr gfjbk

;w;No gfjbk

Business Vocabulary

1.	Acceptance	**gtkBrh, ;thfesh**
2.	Access	**gju**
3.	Account	**byk**
4.	Accountant	**bykeko**
5.	Account Book	**tjh yksk**
6.	Acknowledgement	**gju o;hd**
7.	Advance	**gôrh**
8.	Alternative Cost	**ftebgh bkrs**
9.	Amalgamation	**;fwôoD**
10.	Amortization of Debts	**eof÷nK dk feôs tko Grskb**
11.	Amortization of fixed Assets	**nub ;gsh dh feôs tko gosh**
12.	Annuity	**tkofôeh**
13.	Anticipated Prices	**nBwkfBs ehwsK**
14.	Arbitration	**;kb;h, ftubrh**
15.	Assessed Tax	**fBoXkos eo**
16.	Assets	**;gsh**
17.	Assets and Liabilities	**bDdkohnK ns dDdkohnK**
18.	Authorized Capital	**nfXekfos gih**
19.	Audit	**byk gVskb**
20.	Audit Staff	**byk gVskb nwbk**
21.	Average	**n;s**
22.	Average Productivity	**n;s Tsgkdesk**
23.	Average Income	**n;s nkwdB**
24.	Back Log	**fgSbk pekfJnk**
25.	Balance Sheet	**ôô ;koDh**
26.	Bankrupt	**fdtkbhnk**
27.	Barter	**t;s tNKdok**
28.	Beneficial	**bkGdkfJe**
29.	Bilateral Agreement	**d fXoh ;wMsk**
30.	Bill of Exchange	**jvh**
31.	Bond	**foDFgso**
32.	Book Value	**feskph wb**
33.	Book Keeping	**tjh yksk**
34.	Break-Even Point	**;wkB fpd**
35.	Breach of Trust	**nwkBs ftu fõnkBs**
36.	Broker	**dbkb**

37.	Capital Account	gihrs yksk
38.	Capital Expenditure	gih og you
39.	Capital Formation	gih fBowkD
40.	Capital Investment	gih fBtô
41.	Capital Gains	gih og bkG
42.	Capital Goods	gih og t;sK
43.	Cash Account	oeV yksk
44.	Cash Balance	Bed pekfJnk
45.	Cash Book	oeV tjh
46.	Census	iBrDBk
47.	Circulating Capital	wkoehN ftu bZrh gih
48.	Commerce	ekwo;, tDi, tgko
49.	Commercial Capital	tDih gih
50.	Commodity	TgGrsk t;s
51.	Company	egBh
52.	Competition	gsh:rsk
53.	Corporation	fBrw
54.	Cost Account	bkrs byk
55.	Cost of Production	TsgkdB dh bkrs
56.	Current Account	ukb yksk
57.	Current Liabilities	ubs dDdkohnK
58.	Debenture	foD gZso
59.	Debt Management	foDFgpX
60.	deduct	eNsh
61.	Deferred Payment	;Efrs Grskb
62.	Deflation	wZdok ft;chsh
63.	Demand for payment	ndkfJrh bJh wr
64.	Demonstration Effect	gdoôBh gGkt
65.	Depreciation	wZb xNkJh
66.	Depression	nkofEe wdk
67.	Devaluation	eo;h dk ntwbD
68.	Discount Rate	eNsh do
69.	Disinvestment	ftfBtô
70.	Dividend	bkGFnô
71.	Distribution	ftsoD
72.	Documentary proof	d;skt÷h ;ps
73.	Double Entry	djok fJdoki
74.	Draftsman	Beôk Bth;
75.	Economic Indicator	nkofEe ;ue

76.	Entrepreneur	**T[dwh**
77.	Excise Duty	**Tsgk dB eo**
78.	Export Tax	**fBo:ks eo**
79.	Expenditure	**you**
80.	Fair Trade	**Tfus tgko**
81.	Finance	**ft[s**
82.	Finance affairs	**ft[sh wkwb**
83.	Financial Penalty	**ft[sh dv**
84.	Fine Paper	**T[sw j[vh**
85.	Firm	**cow**
86.	Firm Offer	**g[eh gôeô**
87.	Fiscal Policy	**ft[sh Bhsh**
88.	Fiscal Year	**ft[sh ;kb**
89.	Fixed Capital	**;EkJh g[ih**
90.	Fixed Costs	**;EkJh you**
91.	Floatation	**eo÷k ukb[eoBk**
92.	Foreign Exchange	**ft dôh w[dok**
93.	Fringe Benefits	**Tgob[bkG**
94.	Glut	**Gowko**
95.	Goods Account	**wkb byk**
96.	Gross Profit	**e[b bkG**
97.	Hidden Tax	**b[gs eo**
98.	Hoarding	**÷yhokpk÷h**
99.	Holding Company	**fB:soe egBh**
100.	Human Capital	**wB[yh g[ih**

BCM101 B HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. and Das, :A Social, Cultural and Economic History of India, Vol. II, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

BCM 102: ENGLISH AND BUSINESS COMMUNICATION SKILLS

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens,** ed., K.A. Kalia (Oxford University Press), The relevant sections, however, are as follows:

I.	The Model Millionaire	: *Oscar Wilde*
II.	The Gift of the Magi	: *O. Henry*
III.	The Judgement-seat of Vikramaditya	: *Sister Nivedita*
IV.	Fur	: *Saki*
V.	A. Marriage Proposal	: *Anton Chekhov*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end. Unit II shall consist of the following sub-units:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: Letters of all kinds, tender notices, auction notices, public notices; memos and advertisements relating to sales/marketing.

Practical Work: To impart the skills of Personal Interview and public speaking like Declamation and Debate.

Practical Work:

There will be viva-voce examination of 10 marks which will include Debate, Declamation and Personal Interview.

Note : *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 Marks
Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, be based upon the prescribed text **Ten Mighty Pens.**	10 Marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q. 3.	It shall consist of an Unseen Passage for Comprehension (not more than 300 words), with minimum five questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 Marks
Q. 4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 Marks
Section II *(Based upon Unit II)*		
Q. 5.	This question shall test a students' ability to write business letter of various kinds (in not more than 250 words). There will be Internal Choice in the question.	10 Marks
Q. 6.	This question shall be on Memos, Tender Notices/Auction Notices/Public Notices/ Advertisements.(have to attempt four of 5 marks each)	20 Marks 5x4=20
Q.7.	Two short questions to test the students' understanding of various aspects of business communication.	10 Marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *Textbook of Business Communication,* Anjali Kalkar, R.B. Suryawanshi, Amlanjyoti Sengupta,, Hyderbad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM103: PSYCHOLOGY FOR MANAGERS

Objective: The objective of the paper is to provide broad understanding about basic concepts and techniques of human behaviour to the students.

UNIT- I

Introduction: Concepts, Definitions; Need and Importance of Organisational Behaviour for Managers, Contributing Disciplines of OB. Nature and Scope, Organisational Behaviour Models.

Individual Behaviour: Introduction and Meaning, Factors Affecting Individual Behaviour, Models of Individual Behaviour

Personality: Meaning, Characteristics, Determinants and Theories of Personality

Perception: Nature & Importance, Perception Process, Perceptual Selectivity, Perceptual Organization, Perpetual Errors and Distortions.

Attitudes and Values: Components, Sources and Measurement of Attitudes. Concept, Sources and Types of Values.

UNIT II:

Motivation: Meaning and Importance of Motivation, Theories of Motivation, Morale.

Inter Personal Behaviour and Transactional Analysis (TA).

Leadership: Definition, Importance, Leadership Styles, Models and Theories of Leadership .

Stress Management: Concept, Sources of Stress, Work Stressors, Consequences, Prevention and Management of Stress.

Conflict Management: Traditional vis-a-vis Modern View of Conflict, Types and Causes of Conflict, Conflict Resolution.

Reference books:

1. Robbins, Stephens P., Organisational Behaviour
2. French, W and C. Bell, Organisational Development
3. Davis, Keith, Human Behaviour at Work: Organisational Behaviour
4. Luthans, Fred, Organisational Behaviour
5. Harold Weihrich, Koontz, Essentials of Management
6. Robbins, Stephens P., Organisational Behaviour Concepts, controversies and Applications.

BCM 104: BUSINESS ECONOMICS-I

Objective: To study the basic concepts of microeconomics relevant for Business decision making and helping the students to understand the application of economic principles in business management

UNIT – I

Consumer Behaviour

Utility Approach: Meaning, Types, Relationship between Marginal Utility and Total Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium, Derivation of Demand Curve.

Indifference Curve Approach: Properties, Consumer Equilibrium, Price Effect, Income Effect, Substitution Effect, Price Effect a combination of Income Effect and Substitution Effect.

Law of Demand

Elasticity of Demand: Definitions, Types, Measurement, Factors and Importance.

Demand Forecasting

UNIT-II

Production and Revenue

Production Function : Laws of Returns, Law of Variable Proportion and Returns to Scale.

Cost and Cost Curves : Concept of Nominal Real Economic Implicit, Explicit and Opportunity Cost, Cost Curve under Short-run and Long-run, Relationship between Average Cost and Marginal Cost.

Revenue Curves : Concept of Total Average and Marginal Revenue under different Market Conditions, Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Perfect Competition: Features, Equilibrium of Firm, Equilibrium of Industry, Role of Time element in Price Determination.

Monopoly: Feature, Equilibrium of Firm/Industry, Price Discrimination and Its Types.

Monopolistic Combination: Features, Price-Output Policy of the Firm. Selling Cost, Meaning, Effects, Equilibrium of Firm with respect to Selling Cost.

Oligopoly: Features, Price Leadership, Collusive Oligopoly, Kinky Demand Curve Analysis

Reference books:

1. Dwivedi, D.N. Managerial Economics, 7th Edition, Vikas Publishing House.
2. Salvatore, D. Managerial Economics in a Global Economy, 6th Edition, Oxford University Press.
3. Peterson, L. and Jain Managerial Eco., 4th Edition, Pearson Education.
4. A. Kontsoyianis; Modern Micro-Economics.
5. M. Adhikary ; Business Economics.

BCM 105: PRINCIPLES OF FINANCIAL ACOUNTING

Objective: The objective of this paper is to help students to acquire conceptual knowledge of financial accounting and to impart skills for recording various kinds of business transactions.

UNIT – I

Generally Accepted Accounting Principles (GAAP): Accounting Concepts and Conventions: their Nature, Purposes and Limitations. Financial Accounting Standards: Transition from IAS to IFRS.

Financial Statements of Sole Proprietor and Partnership Firm (with adjustments): Income Statement, Balance Sheet

Branch Accounting: Dependent and Independent Branches (Excluding Foreign Branches).

Departmental Accounting: Meaning, Needs, Advantages, Apportionment of Expenses, Inter Departmental Transfers and Provision for Unrealised Profit.

UNIT – II

Accounting for Consignment.

Accounting for Joint Venture.

Accounting for Dissolution of Partnership Firm; Insolvency of Partners(excluding Sale to a Company) and Piecemeal Distribution.

Royalty Accounts

Practical work:

1 . Preparation of List of Accounting Standards and IFRS.

2. Comparison of US GAPP with Indian Accounting Standards.

Reference books:

1. Shukla and Grewal ï Advanced Accounting, S. Chand Publication, New Delhi.
2. R.L. Gupta and V.K. Gupta - Advanced Accounting, Sultan Chand Publication, New Delhi.
3. T.S. Reddy & A. Murthy ï Financial Accounting, Margham Publications, Chennai.
4. P.C. Tulsian ï Financial Accounting, S.Chand and Sons.

BCM 106: COMMERCIAL LAW

Objective: The main objective of the paper is to acquaint the students with general Commercial Laws.

UNIT I

Indian Contract Act, 1872: Definition & Nature of Contract, Classification; Offer & Acceptance; Consideration; Capacity of Parties; Free Consent; Legality of Objectives; Void Agreements; Performance of Contracts; Discharge of Contract; Contingent Contracts; Quasi Contracts; Remedies for Breach of Contract.

UNIT II

Special Contracts: Indemnity & Guarantee; Bailment & Pledge; Contract of Agency.

Right to Information Act, 2005: Definitions, Right to Information & Obligations of Public Authorities, The Central & State Information Commission, Power & Functions of the Information Commissions, Appeal & Penalties.

The Consumer Protection Act, 1986: Introduction, Objectives Commencement & Application, Definitions, Salient Features, Grievance Redressal Machinery.

Reference books:

1. Avtar Singh : The Principles of Mercantile Law
2. M.C. Kuchhal : Business Law
3. N.D. Kapoor : Business Law
4. P.R. Chandra : Business Law, Galgotia, New Delhi
5. Gogna : Mercantile Law, S. Chand
6. M.S. Shukla : Business Law, Sultan Chand.

BCM 107: PRINCIPLES AND PRACTICES OF MANAGEMENT

Objective: The objective of the paper is to help the students in understanding the process of business management and its functions.

UNIT I

Management: Nature, Definitions, Scope, Levels, Process and Significance of Management. Development of Management Thoughts: Classical, Neo-Classical Systems, Contingency and Contemporary Approaches to Management (Drucker, Porter, Prahalad, Senge and Tom Peters)

Planning: Concept, Process, Nature, Steps in Planning, Significance and Types. Decision Making: Concept and Process, Types of Decisions, Management By Objectives (MBO).

Organization: Concept, Nature, Process, Significance, Types, Organisational Structure, Committees, Span of Control. Authority and Responsibility. Delegation, Decentralization and Departmentation.

UNIT II

Direction: Concept, Features, Importance and Limitations of Direction. Elements of Direction- Supervision, Motivation, Leadership and Communication

Coordination: Concept, Features, Importance and Limitations of Coordination. Internal and External Coordination

Control: Concept, Features, Importance and Limitations of Control. Control Process. Essentials of a Good Control System. Techniques of Control. Relationship between Planning and Control

Reference books:

1. Peter F. Drucker, ôThe Practice of Managementô
2. Weihrich and Koontz, ôEssentials of Managementô
3. Stoner and Freeman, ôManagementô
4. David R Hampton, ôModern Managementô
5. Stephen P Robbins, David A DeCenzo, ôFundamentals of Management, Essential Concepts and Applicationsô

SEMESTER-II

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

BCM201 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Business Correspondence : Letters	10 marks
3.	Punctuation	05 marks
4.	Business Advertisement	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi, Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 7 to 12.
2. List of words of Business Vocabulary attached (I to Z)

Themes and Units:

1.	Two questions from the book Galiey Chikkarh Door Ghar. (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2 x 4=08 marks
3.	Business Correspondence : Letters	10 marks
4.	Punctuation	05 marks
5.	Business Advertisement (Punjabi)	05 marks
6.	Business Vocabulary	05 marks

Suggested Readings
Punjabi Viyakaran by Dr. Harkirat Singh, Punjab State University Text-book Board, Chandigarh.

phHekwH Gkr gfjbk

;w;No dik

Business Vocabulary

1.	Imperfect Market	**ngoD wvh**
2.	Imports	**nk:ks**
3.	Import Duty	**nk:ks eo**
4.	Imputed Income	**nkofgs nkwdB**
5.	Imprest Account	**;oekoh gôrh byk**
6.	Income Statement	**nkwdB fuzmk**
7.	Index of Profit	**bkG ;ue**
8.	Income Tax	**nkwdB eo**
9.	Inflation	**wdok ;chsh**
10.	Intangible Assets	**n;Eb bDdkohnK**
11.	Investment	**fBtô**
12.	Invoice	**phue**
13.	Jobber	**;Nke nkVsh**
14.	Job Casting	**bkrs fBoXkoD**
15.	Joint Venture	**;KMk Tzdw**
16.	Labour	**feos**
17.	Laissez Fair	**yzbh ftt;Ek**
18.	Lease Holding Building and Property	**gzNôs fJwkos ns ikfJdkd**
19.	Ledger	**õksk**
20.	Ledger Folio	**yksk gBk**
21.	Liabilities	**dDdkohnK**
22.	Liquidator	**fBoXkoe**
23.	Market	**wvh**
24.	Marketable Goods	**fteD:rt;sK**
25.	Mechanization	**wôhBheoB**
26.	Mercantilism	**tgkotkd**
27.	Monetary System	**wzdok gpX**
28.	Money of Account	**by dh wzdok**
29.	Monopoly	**JekfXeko**
30.	Mortgage	**ofjD,froth**
31.	Net Investment	**fBob fBtô**
32.	Net Profit	**fBob bkG**
33.	Notice of Stoppage	**oe ;uBk**
34.	Office Expenses Account	**døsoh õou byk**

35.	Open Market Operations	y[bk wvh ft jko
36.	Over Due	fwnkd g[rh
37.	Over Head Cost	p[Mh bkrs
38.	Partnership	fj[;dkoh, ;KMhdkoh
39.	Payable Accounts	dD:r by
40.	Preference Shares	soihjh fj[;
41.	Premium	ghwhnw
42.	Price Control	ehws fB:soD
43.	Production	T[sgkdB
44.	Profit Margin	bkG nô
45.	Proprietor	;gsh wkbe
46.	Quasi Negotiable Instrument	noX ft[eoh:r j[vh
47.	Quotation	w[b ;[uh
48.	Rate of Exchange	tNKdok do
49.	Ready Delivery	fsnko wkb
50.	Real Wages	tk;sfte widoh
51.	Rebate	SN, eNsh
52.	Recession	nkofEe wdh dk do
53.	Receivable Accounts	bD:r by
54.	Redemption of Mortgage	ofjD Sv[kTDk
55.	Receipts and Payment Account	gkgsh ns ndkfJrh byk
56.	Rent	feokfJnk
57.	Rent Account	brkB byk, feokfJnk byk
58.	Reserve Price	oky th ehws
59.	Revenue	nkwdB
60.	Sales Tax	ft[eoh eo
61.	Sales Transfer Order	ft[eoh fJsekb j[ew
62.	Security Bond	iwkBsBkwk
63.	Service Goods	;[tk t;sK
64.	Shares	ôno, fj[;
65.	Share Capital	ôno g[h
66.	Share Holder	fj[;dko
67.	Share Market	ôno pkiko
68.	Short Bills	nbgekbh j[vhnK
69.	Slump	wdk
70.	Sole Proprietorship	Jeb wkbeh
71.	Speculation	;[Nk nB[wkB
72.	Statutory Company	ekB[B nXhB ;Ekfgs egBh
73.	Stipulated	fBôfus ehsk

74.	Stock	Gvko, ;Nke
75.	Stock Exchange	ôno pkiko
76.	Subsidiary Company	;jkfJe egBh
77.	Surety	÷kwB
78.	Tariff	do ;uh
79.	Tax Exemption	eo SN
80.	Tax Base	eo nkXko
81.	Tax Evasion	eo uoh
82.	Tax Equity	eo ;wBhsh
83.	Tender	Nvo
84.	Tender money	Nvo dh oew
85.	Terms of Payment	Gr skB dhnK ôosK
86.	Terms of Trade	tgko dhnK ôosK
87.	Trademark	wkoek
88.	Transactions	;d, bD dD
89.	Transfer Book	fJsekb yksk
90.	Under Value	xÍN wÍbneD
91.	Unproductive Expenditure	nD-TgikT you
92.	Unproductive Labour	nD-TgikT feos
93.	Validity Period	gwkfDs fwnkd
94.	Vertical Integration	;wog ;xNB
95.	Wages	widoh
96.	Wages Account	Tios byk
97.	Wage Goods	widoh t;sK
98.	Wage Book	Tios tjh
99.	Wharf age	TsokJh
100.	Write Off	tÍN yks gkTDk
101.	Working Capital	ubs gih
102.	Yield	Tgi
103.	Zero Rate of Interest	ftnki dh ÷ho do

Semester II

BCM201 B HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements ï non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.

BCM 202 : ENGLISH AND BUSINESS COMUNICATION

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens** Issues ed. K.A. Kalia (Oxford University Press).

The relevant sections, however, are as follows:

I. Chandalika: *Rabindranath Tagore*
II. A Bachelor's Complaint of the Behaviour of Married People: *Charles Lamb*
III. El Dorado: *R.L. Stevenson*
IV. Bores : *E.V. Lucas*
V. The Art of the Essayist : *A.C. Benson*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end, Unit II shall consist of the following sub-units:

Writing Skills: This section shall focus on business précis-writing, curriculum vitae; short formal reports (not exceeding 200 words).

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of e-mails, Fax Messages, Teleconferencing, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for Group Discussion etc.

Practical Work: To impart skills of Group Discussion.

Practical Work: There will be viva-voce examination of 10 marks which will include Group Discussion. The students will appear in the group of 10 students for viva-voce.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Section I *(It is text-based and corresponds to Unit I in the syllabus)*

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 marks

Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, and be based upon the prescribed text **Ten Mighty Pens.**	10 marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q.3.	It shall consist of **an Unseen Passage for Comprehension** (not more than 300 words), with minimum six questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 marks
Q.4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 marks
Section II *(Based upon Unit II)*		
Q.5.	The students shall be asked to write a short survey report on a situation, incident, business problem, or the possibility of starting a new commercial venture (in about 150-200 words). The students shall be given an internal choice in this question.	10 marks
Q.6.	This will test the students' ability to write a Précis. A passage of about 200 words shall be given and the students shall have to write a précis of about 70 words (including the title).	10 marks
Q.7.	Definition/format of Modern forms of communication to be tested- Listening - Non verbal communication, e-mail, fax, teleconferencing etc.	10 marks
Q.8.	Curriculum Vitae	10 marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM 203: E- COMMERCE

Objective: The objective of this paper is to provide fundamental knowledge to the students about E-Commerce so that they can better perform in any area of operation and can excel in the field of commerce with IT specialization.

UNIT I

Electronic Commerce Framework, History, Basics and Tools of E-Commerce, Comparison of Web-based with Traditional Business; Growth of E-Commerce ï Present and potential.

E-Business : Meaning, Importance, Models Based on the Relationships of Transacting Parties (B2B, B2C, C2C and C2B), Present Status of E-Commerce in India, Regulatory Aspects of E-Commerce.

UNIT II

Changing Structure of Organisation ï The Impact of E-Commerce on Various Business Sectors such as Entertainment, Education, Health Services, Publishing and Financial Services. Socio-Economic Impacts of E-Commerce.

Electronic Payment System: Types of Payment System ð E-Cash and Currency Servers, E-Cheques, Credit Cards, Smart Cards, Electronic Purses and Debit Cards. Electronic Data Interchange, Digital Signatures, Cryptography, Interoperatibility and Intercompatibility.

Reference books:

1. Diwan, Prag and Sushil Sharma: Electronic Commerce, A Managerôs Guide to E,Business Vanity Books International, Delhi.
2. Kalakota, Ravi and Shinston Andrew B: Frontiers of Eletronic Commerce, Addision Wesley.
3. Minoli and Minoli: Web Commerce Technology Handbook, Tata McGraw Hill, New Delhi.
4. Schneider, Gray P.: Electronic Commerce, Course Technology, Delhi.

BCM 204: BUSINESS ECONOMICS-II

Objective: The paper aims at providing the knowledge of basic concepts of the distribution and modern tools of macro-economic analysis.

UNIT-I

Distribution

Wages : Meaning, Types, Marginal Productivity Theory of Wages, Modern Theory of Wages.
Rent: Meaning ,Types, Ricardian Theory of Rent, Modern Theory of Rent, Quasi- Rent.
Interest: Meaning, Types, Classical Theory of Interest, Neo-Classical Theory of Interest, Liquidity Preference Theory of Interest.
Profits: Nature, Types, Dynamic Theory of Profits, Innovation Theory of Profits, Risks Bearing Theory of Profit, Uncertainty Bearing Theory of Profits.
National Income: Meaning, Concepts of National Income, Measurement of National Income, Difficulties in Its Measurements, Its Significance.

UNIT- II

Sayôs Law of Market: Meaning, Implications,
Classical Theory of Income Output and Employment:
Keynesian Theory of Employment.
Effective Demand: Determination, Importance
Consumption Function: Meaning, Factors Influencing Consumption Function, Average and Marginal Propensities to Consume, Propensity to Save, Psychological Law of Consumption and its Importance.
Marginal Efficiency of Capital: Meaning, Determinants, Theory of Secular Stagnation.
Investment: Meaning, Types, Factors Affecting Investment, Importance of Investment, Measures to Raise Private Investment.
Multiplier: Meaning, Keynesian Income or Investment Multiplier, Leakages, Uses, Limitations of Multiplier, Multiplier and Under-Developed Countries.

Reference books:

1.Shapiro. E	Macroeconomic analysis Galotia publications, New Delhi.
2.Eugene Diulio	Macro economics, 4th Edition, Tata McGraw Hills, Publishing Col. Ltd, New Delhi.
3.Dornbusch R, Fisher, S and Startz, R	Macro Economics, 8th Edition, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
4.Ackley,G.	Macroeconomics: Theory and Policy, Macmillan, New York

BCM 205: CORPORATE ACCOUNTING

Objective: To provide knowledge about basic corporate accounting with the relevant accounting standards.

UNIT 1

Issue, Forfeiture, Reissue and Buy-Back of Shares,

Redemption of Preference Shares.

Right Issue and Bonus Shares.

Final Accounts of Companies (including Managerial Remuneration & Profit Prior to Incorporation),

UNIT II

Underwriting of Shares and Debentures.

Issue and Redemption of Debentures.

Accounts of Banking Companies

Accounts of Insurance Companies.

Note : Accounting Standards are to be covered along with topics.

Practical Work:

1. Preparation of Final Accounts of Companies and critical evaluation.
2. Comparison of annual reports of companies and disclosures norms.

Reference books:

1. R.L. Gupta and M. Radhaswamy ï Advanced accounts ï Sultan Chand.
2. Shukla Garewal and Gupta ï Advanced accounts ï S.Chand, New Delhi.
3. D. Chanderbose ï Advanced Accounting, Vol. I, PHI Learning Pvt. Ltd.
4. T.S. Reddy and A. Murthy ï Corporate Accounting, Margham Publications, Chennai.

BCM 206: BUSINESS LAWS

Objective: The main objective of the paper is to acquaint the students about Business Laws.

UNIT– I

Sale of Goods Act, 1930: Contract of Sale of Goods, Conditions & Warranties; Transfer of Ownership; Performance of the Contract: Remedial Measures; Auctionable Claims.

Negotiable Instruments Act, 1881: Definition, Acceptance and Negotiation, Rights and Liabilities of Parties, Dishonor of Negotiable Instrument, Hundis, Bankers and Customers.

UNIT- II

Factories Act, 1948: Objectives; Definitions; Approval; Licensing & Registration of Factories; The Inspecting Staff Health; Safety Welfare; Working Hours of Adults; Employment of Women; Child Labour ï Issues and Challenges; Leave with Wages; Penalties & Procedure Supplemental.

The Industrial Disputes Act, 1947: Scope & Object; Definitions; Authorities; Notice of Change; Reference of Disputes; Procedure; Powers & Duties of Authorities; Award & Settlement; Strikes & Lockouts; Lay-off & Retrenchment etc.

Reference books:

1. Malik, K.L., Industrial Laws and Labour Laws, Eastern Book Company, Lucknow.
2. Kumar, H.L., Digest of Labour Cases, Universal Law Publishing Co P Ltd, New Delhi
3. Srivastava, S.C., Industrial Relations &Labour Laws, Vikas Publishing House (P) Ltd.
4. Sharma, J.P., Simplified Approach to Labour Laws, Bharat Law House (P) Ltd., New Delhi.
5. Sharma, J.P., Industrial Laws, Taxmann, New Delhi.

BCM 207: HUMAN RESOURCE MANAGEMENT

Objective: The objective of the paper is to familiarize the students with the different aspects of managing human resource in the organization.

UNIT – I

Human Resource Management: Introduction, Meaning and Definitions, Brief History, Nature, Functions, Importance and Limitations of HRM. Contemporary Challenges in HRM.

Human Resource Planning; Introduction, Definitions, Features, Need for HR Planning, Objectives, Process, Factors affecting HR Planning, Types, Benefits, Problems in HR Planning and Way for Effective HR Planning.

Job Analysis and Job Design: Introduction, Objectives, Benefits, Process, Techniques and Problems in Job Analysis. Job Design- Meaning, Objectives and Techniques of Job Design.

Recruitment and Selection: Meaning and Definitions, Importance and Purpose, Process, Factors Affecting Recruitment, Sources of Recruitment, Methods, Constraints and Challenges of Recruitment. Recent Trends in Recruitment. Selection: Meaning and Definition, Selection Process and Methods.

Placement and Induction: Meaning and Problems in Placement. Induction: Meaning, Objectives, Contents, Elements, Procedure and Problems in Induction.

UNIT – II

Training and Development: Concepts, Importance, Identification of Training Needs. Types of Training: On the Job and Off the Job Methods of Training. Designing and Evaluation of Training Programmes. Meaning of Development, Difference between Training and Development.

Performance Appraisal: Concept, Objectives, Methods of Performance Appraisal; How to Make it Effective.

Internal Mobility and Transfers: Promotions, Demotions and Other Forms of Separations, Definitions, Purpose, and Basis of Promotions. Transfer: Definitions, Purpose, Types and Transfer Policy.

Compensation Management: Concept, Methods of Wage payments and Incentive Plans, Fringe Benefits.

Reference books:

1. Dessler, Personnel Human Resource Management, Prentice Hall of India.
2. D A DeCenzo and S P Robbins, Personnel/ Human Resource Management, Prentice Hall of India.
3. Ian Beardwell and Len Holden, Human Resource Management, Macmillan.
4. Wendell French, The Personnel Management Process, Houghton Mifflin Co., Boston...
5. M S Saiyadain, Human Resource Management, Tata McGraw

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE

UNIT I (Environment)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere ï lithosphere, hydrosphere, atmosphere; Natural resources ï their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil ï a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems ï soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste managementï open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food;

uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering ï Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in
(b) www.punjabpolice.gov.in
(c) www.haryanapolice.gov.in
(d) **www.hppolice.nic.in**

SYLLABUS ON "VIOLENCE AGAINST WOMEN/CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II
Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women ï domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children ï physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death ï Section 304B;
Rape ï Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty ï Section 498A;
Insult to Modesty ï The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 ï (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions ï Sections 319 to 326;
Acid Attacks ï Sections 326A and 326B;
Female Infanticide ï Section 312, Section 313 of Indian Penal Code (Causing miscarriage without womenôs consent) and section 314;
Sexual Harassment ï For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 ï Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ï Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361

(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/**HRLN**India/a-life-free-from-**violence**
http://hrln.org/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

Unit IV (Drug Abuse)

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.

    - A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) Concept and overview : what are drugs? Meaning of use, misuse and abuse of drugs. Misuse of prescription drugs with special emphasis on antibiotics and steroids. Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin (óChittaô/ óBrown Sugarô), pethidine, oxycodone.

Hallucinogens: cannabis [óBhangô, marijuana (óGanjaô), hashish (óCharasô), hash oil]. MDMA (3, 4- methylenedioxy methamphetamine) /õEcstasyô/ óMollyô. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Causes and consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, Public Policies and Programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).

9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.
10. NCERT(2010). Training Resource Materials (Adolescence Education Programme)

SEMESTER-III

BCM 301: ISSUES IN INDIAN COMMERCE

Objective: To enable the students to acquire basic knowledge of different issues faced in progress and prospects of commerce in India.

UNIT-I

Foreign Direct Investment: Concept, Historical Perspective, Incentives for Attracting Foreign Capital, Implication for Indian industry, Role of Foreign Investment Promotion Board (FIPB) ï Automatic Route and Sectoral Limits, Difference between FDI and Foreign Portfolio Investment (FPI).

ñMake in Indiaò An Initiative of Government of India, Objectives, Sectors in Focus and Issues & Challenges ahead.

Technology in Commerce: Features, Impact, Management and Status of Technology and Impact of Technology on Commerce in India.

International Finance: Introduction, Need, Importance, Sources-External Commercial (FCCBs) Borrowings (ECB), American Depository Receipt (ADR), Global Depository Receipt (GDR).

UNIT-II

Infrastructure: Growth of Infrastructure- Energy, Transport and Communication. Public-Private Partnership (PPP) in Infrastructure Development in India, Bottlenecks, Models - Built Operate and Transfer (BOT), Built Operate Levy and Transfer (BOLT), Special Economic Zones (SEZs).

Stock Exchanges in India: Organisation, Nature, Functions, Benefits, Growth, Trading in Stock Markets- Electronic Trading, Listing and Role of SEBI, Commodity Exchanges in India.

Corporate Debt Restructuring: Concept, Importance, Methods, Corporate Scams and Regulatory Authorities-Serious Fraud Investigation Office (SFIO), Investors; Protection in India- Importance, Need, and Initiatives by the Central Government.

Recent Trends in Credit Rating Services in India- Role of ICRA and CRISIL.

Reference books:

1. Indian Economy - Datt and Sundharam, S Chand and Co. New Delhi
2. Indian Economy - M.B. Shukla, Taxman Publication, New Delhi
3. India Transport Report, National Transport Development Committee Report, Routledge, Tolstoy Marg, New Delhi
4. Financial Markets Institutions and Financial Services, C Gomez ï Prentice-Hall.
5. Principles of Business Organisation, by Y.K. Bhushan, Sultan Chand & Co, New Delhi
6. Guruswamy. S ï Global Financial Institutions, Tata Mcgraw Hills India.
8. Khan ï my Indian Financial Systems - Tata Mcgraw Hills India.
9. Website of Make in India

BCM 302: COST ACCOUNTING

Objective: The objective of this paper is to help the students to acquire conceptual knowledge of cost accounting and elements of cost.

UNIT – I

Introduction: Nature, Scope and Advantages of Cost Accounting, Installation of Costing System, Difference between Cost and Financial Accounting, Classification of Costs.

Material: Purchase, Storage and Control of Material, Stock Levels, Inventory, Control Techniques. Methods of Pricing Material Issues.

Labour: Meaning and Components of Labour Cost. Concept, Accounting and Control of Idle time and Overtime. Methods of Wage Payment and Incentive Plans, Labour Turnover .

UNIT – II

Overheads: Collection, Classification, Allocation, Apportionment and Absorption of Overheads (Primary and Secondary Distribution), Machine Hour Rate.

Preparation of Cost Sheet, Operation Costing, Service Costing.

Cost Ledger Accounting, Integral Accounting, Reconciliation of Cost and Financial Accounts.

Practical Work:
Use of software package to obtain cost accounting output like: Analysis of Cost- Centre wise and Element wise, Allocation and Apportionment of Overheads, Preparation of Cost Sheet.

Reference books:

1. Banerjee Bhabatosh: Cost Accounting, Phi Learning
2. Saxena and Vashist: Cost Accounting, Sultan Chand and Sons.
3. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
4. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 303: COMPANY LAW

Objective: The objective of this paper is to help the students understand various provisions of Companies Act 2013.

UNIT - I

Introduction: Characteristics of a Company, Concept of Lifting of Corporate Veil, Emerging Types of Companies.

Formation of Company ï Promotion & Registration, Pre-incorporation Contract and Provisional Contracts.

Memorandum of Association, Articles of Association, Doctrine of Constructive Notice, Doctrine of Ultra-Vires, Doctrine of Indoor Management,

Prospectus and Statement in Lieu of Prospectus, Red-Herring Prospectus.

Share Capital ï Kinds of Shares, Book Building Process, Information Memorandum, Dematerlisation of Shares, ASBA System, Transfer & Transmission of Shares, Buyback of Shares.

UNIT- II

Members and Shareholders ï Their Rights and Duties.

Management ï Directors, Classification of Directors, Disqualification, Appointment, Legal Position, Powers and Duties, Disclosures of Interest, Removal of Directors, Board Meetings, Other Managerial Personnel and Remuneration, Digital Signatures of Directors.

Winding Up-Concept and Modes.

Practical Work: Teacher should use Internet and Communication Technology to give students demo regarding procedure of Online Filing of Documents for Registration of Company, obtaining Director Identity Number (DIN), Corporate Identity Number (CIN), etc. Students should be apprised of National Company Law Tribunal (NCLT), Insider Trading, Rating Agencies, etc. Practical Training about Notice of Meeting, Agenda, Quorum, Proxy, Reports, Minutes of Meeting, Resolutions, etc. The teacher should use simulation method and will hold at least One Statutory Meeting, One Annual General Meeting, One Extra-ordinary Meeting and One Board Meeting.

Reference books:

1. Kannal, S., & V.S. Sowrirajan, ñ*Company Law Procedure*ò, Taxmanôs Allied Services (P)Ltd., New Delhi (Latest Edn).
2. Ramaiya, A., ñ*A Ramaiya's Guide to Companies Act*ò, Lexis Nexis ButterworthsWadhwa, Nagpur.
3. Singh, Harpal, ñ*Indian Company Law*ò, Galgotia Publishing, Delhi.
4. Singh, Avtar, ñCompany Lawò, Eastern Book Company, Lucknow

BCM 304: BUSINESS MATHEMATICS AND STATISTICS

Objective: The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions.

UNIT I

Matrices and Determinants: Definition of a Matrix. Types of Matrices; Algebra of Matrices; Properties of Determinants; Calculation of Values of Determinants upto Third Order, Ad-Joint of a Matrix, Elementary Row or Column Operations; Inverse of a Matrix. Solution of a System of Linear Equations having Unique Solution and Involving not More Than Three Variables.

Differentiation ï Idea of Simple Derivative of different Functions (excluding trigonometric function).
Maxima and Minima of Functions of One Variable only

UNIT II

Introduction: Statistics as a Subject; Statistical Data: Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data.

Analysis of Univariate Data: Construction of a Frequency Distribution; Concept of Central Tendency and Dispersion-and Their Measures; Measures of Skewness; Concept of Kurtosis.
Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend
Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate); Tests of Adequacy; Chain-Base Index Numbers; Base Shifting, Splicing, and Deflecting; Problems in Constructing Index Numbers; Consumer Price Index.

Practical work: Collection, Classification and Presentation of data using Microsoft Excel

Reference books:

1. Dowling E.T.: Mathematics for Economics; Shaum Series, McGraw Hill, London.
2. Holden: Mathematics for Business and Economics; Macmillan India, New Delhi.
3. Kapoor, V.K.: Business Mathematics; Sultan Chand & Sons, Delhi.
4. Vohra, N.D.: Quantitative Techniques in Management; Tata McGraw Hill, New Delhi.
5. Aczel, Amir D.: Complete Business Statistics, Irwin.
6. Chou-Ya-Lun: Statistical Analysis, Holt, Rinchart and Winslon.
7. Heinz, Kohler: Statistics for Business & Economics, Harper Collins.
8. Levin, Richard I.& David S Rubin: Statistics for Management, Prentice Hall of India, Delhi.

BCM 305: BANKING AND INSURANCE

Objective: To acquaint the students with Indian Banking and Insurance industry.

UNIT – I

Indian Banking System: Introduction, Concept, Types of Banks and Structure of Banking System, Functions of Commercial Banks, The Reserve Bank of India: Management and Structure, Functions of RBI, Monetary Policies and Techniques of Credit Control.

Reforms in Indian Banking: Overview, Recommendations of Narasimham Committee, Verma Panel Report, Basel II Norms, Capital Adequacy Ratio (CAR), Revised NPA Norms- Grievance Mechanism and Banking Ombudsman, Impact of Reforms.

Emerging Trends in Banking: Concept of E-Banking, Mobile Banking, Electronic Fund Transfer- (RTGS & NEFT) and Core Banking. RBI Guidelines on Internet Banking, Challenges faced by Indian Banking, Cheque Truncation System.

UNIT – II

Insurance: Concept, Nature of Insurance, Functions of Insurance, Types of Insurance (Life and Non-Life), Importance of Insurance, Principles of Insurance Contract-Features of Life and Non-life Insurance.

Insurance and IRDA: IRDA Act 1999, Provisions, Duties, Powers and Functions of IRDA, Composition and Grievance Mechanism and Insurance Ombudsman.

Reference books:

1. M N Mishra, S B Mishra: Insurance Principles & Practice, Sultan Chand and Sons.
2. James L Athearn: Risk and Insurance, West Publication Co.
3. NaliniPravaTripathy and Prabir Pal: Insurance Theory and Practice, Prentice Hall India.
4. PAS Mani: Life Insurance in India, Western Printers and Publication. Insurance & Risk Management ï Dr. P.K.Gupta,Himalaya Publishing House, Delhi.
5. Banking Law and Practice Maheshwari, S.N. and Maheshwari, S.K.,Kalyani Publishers, New Delhi.
6. Emerging Trends in the Banking Sector, Mittal R.K., Saini A.K. &Dhingra Sanjay, Macmillan, New Delhi.
7. MadhuVij: Management of Financial Institutions in India, Anmol Publications.
8. U.C. Patnaik: Rural Banking in India, Anmol Publications.
9. Vasanth Desai: Nature and Problems of Commercial Banking in India, Himalaya Publishing House.
10. V.K. Gupta: Management of Financial Institutions in India, Radha Publications
11. G. Ramesh Babu: Management of Financial Institutions in India, Craft Publishing Company.
12. Vasanth Desai: Indian Banking, Nature and Problems, Himalaya Publications House.

BCM-306: GOODS AND SERVICE TAX

Objective: Understanding of Basics of GST

Unit I

Tax Structure in India, Direct and Indirect Taxes, Overview of Goods and Services Tax, Implementation of GST, Reasons for GST introduction, Pros and cons of GST,Registration procedure under GST, CGST/ SGST Act, 2017,Classes of officers under GST, their appointment and powers; Levy and collection of CGST/ SGST; Composition Levy scheme;Timeand Value of supply, valuation in GST (basics),Tax invoice, credit and debit notes.

Unit II

IGST Act, 2017: Definitions, Supplies in the course of inter-State trade or commerce, Supplies in the course of intra-State trade or commerce, Levy and collection of IGST, power to grant exemption from tax, place of supply under IGST; Input tax credit;Returns under GST;Refund of tax; offences and penalties, Prosecution and Appeals under GST, GST Portal: GST Eco system,GST suvidha provider.

References

1. The Central Goods and Services Tax Act, 2017 of Ministry of Law and Justice (Legislative Department) 12th April, 2017) published in The Gazette of India dated 12th April, 2017.
2. Taxmannôs GST Ready Reckoner Updated till 18th June, 2017.
3. Taxmannôs GST Manual-Enforced w.e.f. 1.7.2017.
4. GST Ready Reckoner by CA Kesha R Garg, Bharat Law House, Delhi.
5. Goods and Services Tax in India -----Notifications by Government of India
6. GST Bill 2012
7. Integrated Goods and Services Tax Act 2017

SEMESTER-IV

BCM 401: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: The paper aims at providing the students a comprehensive knowledge about security analysis and portfolio management and equipping for taking profitable investment decisions.

UNIT – I

Investment ï Meaning, Nature, Objectives and Process. Investment Avenues/ Alternatives. Investment Philosophy, Value Investing and Growth Investing, Investment Strategy, Individual and Institutional Investors.

Security Analysis ï Meaning, Risk and Return, Types and Measurement of Risk, Risk and Return Trade Off.

Investment Analysis : Fundamental Analysis ï Economic, Industry and Company Analysis.

Technical Analysis. Fundamental v/s Technical Analysis.

UNIT – II

Portfolio Management ï Concept, Portfolio Management Schemes, Portfolio Theories, Capital Market Line, Marvkowitz Model, Sharpe Model, Jensen and Treynor Model, Capital Asset Pricing Model, Arbitrage Pricing Theory, Efficient Market Theory, Security Market Line.

Portfolio Performance Evaluation and Revision.
Global Investing ï Benefits and Options for Global Investment.

Reference books:

1. Fischer & Jordan, Security Analysis and Portfolio Management, Prentice Hall India.
2. Punithavathy Pandian, Security Analysis and Portfolio Management, Vikas Publishing House Pvt. Ltd.
3. Martin Pring, Technical Analysis Explained, McGraw Hill.
4. V. A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House.
5. French, Don, Security and Portfolio Analysis, Merril Publishing Co.
6. Preeti Singh, Investment Management, Himalaya Publishing.
7. Devin S., Portfolio Management, Prentice Hall.
8. Cheney, Muses, Fundamentals of Investments
9. V. K. Bhalla, Portfolio Analysis and Management, Sultan Chand & Sons

BCM 402: ADVANCED ACCOUNTING

Objective: To provide knowledge to students about advanced accounting problems with the relevant Indian Accounting Standards.

UNIT-I

Valuation of Shares and Goodwill.

Insurance Claims.

Accounting for Hire- Purchase and Instalment System

Investment Accounts.

UNIT-II

Accounting for Amalgamation, Absorption(Excluding Inter-Holding) & External and Internal Reconstructions.

Accounts of Holding Companies-Preparation of CBS, Mutual Owings- Revaluation of Assests - Bonus Issue (Excluding Cross Holdings).

Liquidation of Companies.

Practical work:

1. Designing Scheme of Internal Reconstruction.

2. Case Studies on Mergers and Acquisitions.

Reference books:

1. Sehgal A. and Sehgal D., ñAdvanced Accountingò, Taxman Publications Pvt Ltd., New Delhi.
2. Shukla, M.C., Grewal T.S. and Gupta S.C: ñCorporate Accountingò, S. Chand and Co., New Delhi.
3. Gupta R.L, and Radhaswamy M, ñCorporate Accountingò, Sultan Chand and Sons, New Delhi.
4. Goyal V.K., ñCorporate Accountingò, Excel Books, New Delhi.
5. Maheshwari S.N., and Maheshwari S.K., ñCorporate Accountingò, Vikas Publication,New Delhi.
6. Gupta N.and Sharma C., ñCorporate Accountingò, Ane Books Pvt Ltd,New Delhi

BCM403: AUDITING AND SECRETARIAL PRACTICE

Objective: The objective of the paper is to help the students in understanding concepts and issues in Auditing and Secretarial Practice.

UNIT-I

Auditing: Introduction, Meaning, Objectives, Basic Principles, Classifications, Advantages and Limitations of Audit. Investigation, Difference between Audit and Investigation: Audit Program, Audit Evidence, Internal Control, Internal Check and Internal Audit.

Vouching ï Definition ï Features ï Examining Vouchers - Vouching of Cash book ï Vouching of Trading Transactions.

Verification and Valuation of Assets & Liabilities
Company Auditor - Qualifications and Disqualifications ï Appointment - Removal, Remuneration, Rights, Duties and Liabilities, Auditorôs Report - Contents and Types Company Auditor Report Order (CARO).

UNIT – II

Secretarial Practice: Definition of Company Secretary, Qualification of Company Secretary, Appointment, Dismissal, Duties & Liability for Offences of Company Secretaries. Position and Role of Company Secretaries, Company Secretary in Practice.

Procedure for Statutory Meeting and its fate under New Companies Act 2013, Annual General Meeting, Extra Ordinary General Meeting, Director, Board and Committee Meetings, Meaning and Types of Motions and Resolution, Minutes, Role of Company Secretary before, during and after Meetings.

Practical Work :

a) Practical Work on Vouching and Audit Report Preparation.
b) Preparing of Minutes, Motions and Resolutions, Holding of Meetings.

Reference books:

1. Dinkar, P., ñ*Principles and Practice of Auditing",* Sultan Chand and Sons, New Delhi.
2. Institute of Chartered Accountants of India: ôô*Auditing and Assurance Standards*ôõ, ICAI,
3. Gupta, K., and Arora, A., ñ*Fundamentals of Auditing,*ò, Tata Mc-Graw Hill, Publishing Co. Ltd., New Delhi.
4. Ghatalia, S.V.: ñ*Practical Auditing,*ò, Allied Publishers Private Ltd., New Delhi.
5. Kapoor, N.D., ñSecretarial Practiceò Sultan Chand and sons.
6. Kuchal,M.C., ñSecretarial Practiceò, Vikas Publishing.

BCM 404: COST MANAGEMENT

Objective: The objective of the paper is to acquaint the students with the various methods of cost determination and tools and techniques of cost control.

UNIT – I

Cost Management: Need Significance and Different Areas of Cost Management and Application.

Methods of Cost Determination: Job Costing, Batch Costing, Contract Costing, Uniform Costing and Inter Firm Costing, Process Costing (including joint and by- products).

Contemporary Concepts: Activity Based Costing, Target Costing, Life Cycle Costing, Value Chain Analysis.

UNIT – II

Techniques for Cost Control:

Marginal Costing, Cost, Volume; Profit Analysis and Decision Making; Differential Costing and Absorption Costing.

Budgeting and Budgetary Control: Concepts, Objectives, Limitations, Types of Budgets, Zero Base Budgeting.

Standard Costing, Analysis of Variance.

Practical Work:

Use of software package to obtain cost accounting output like: Fixed and Variable Cost, Break Even Point, P/V Analysis, Preparation of budgets.

Reference books:

1. Edward Blocher, David Stoul-GaryCokins: Cost Management,McGraw Hill
2. Jawahar Lal: Advance Management Accounting, S.Chand and Company Ltd.
3. M. Ravi Kishore: Cost Management, Taxman Publications.
4. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
5. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 405: MARKETING MANAGEMENT

Objective: The paper aims at making students to understand the basic concepts, philosophies, process and techniques of marketing.

UNIT – I

Introduction to Marketing: Meaning, Nature and Scope of Marketing, Marketing Concepts and Philosophies, Marketing Process, Marketing Mix.
Marketing Information System: Meaning and Components, Marketing Research Process.
Consumer Buying Behaviour: Factors Influencing Buying Behaviour, Buying Decision Process.
Market Segmentation: Levels and Patterns of Market Segmentation, Basis, Major Segmentation Variables for Consumer Markets, Concepts of Market Targeting and Positioning.
Product Planning and Market Strategies: Product Life Cycle, New Product Development, Product Concepts and Classification, Branding, Packaging and Labeling.

UNIT – II

Pricing Decision: Pricing Policies and Strategies.
Distribution Decisions: Channel Design Decisions, Major Channel Alternatives, Channels Management Decision, Causes and Managing Channel Conflict, Physical Distribution.
Promotion Decisions: Communication Process.

Promotion Tools: Advertising (Steps Involved in Designing and Advertising Programme), Sales Promotions, Public Relations, Personal Selling.
Issues in Marketing in a Developing Economy, Rural Marketing.

Reference books:

1. Czinkota, M.R. and Kotabe.M., *Marketing Management,* Vikas Publishing, New Delhi.
2. Kotler, P., *Marketing Management: Analysis, Planning, Implementation & Control*, Prentice Hall of India, New Delhi.
3. Perreault, W.D. and Jerome, E.M.., *Basic Marketing*, Tata McGraw Hill, New Delh.
4. Ramaswamy, V.S. and Namakumari, S., *Marketing Management: Planning, Control*, MacMillan Press, New Delhi.
5. Zikmund, A., *Marketing,* Thomson Learning, Mumbai.

BCM 406: QUANTITATIVE TECHNIQUES AND METHODS

Objective: The objective of the paper is to acquaint the student with the various quantitative techniques and methods used in managerial decisions.

UNIT I

Quantitative Techniques: Introduction and Use in Business

Theory of Probability: Introduction, Definitions and Use of Addition and Multiplicative Theorem, Conditional Probability. Probability-Distribution: Binomial-Distribution, Poisson-Distribution, Normal-Distribution

Linear Programming: Meaning, Advantages, Limitations, Basic Terminology, Formulation of Linear Programming Problem, Graphic Solution of Linear Programming Problem; Business Application of Linear Programming.

UNIT II

Interpolation and Extrapolation

Correlation: Meaning, Types, Methods-Scattered Diagram, Karl Pearsonôs Coefficient of Correlation, Rank Correlation and Concurrent Deviation Method.

Regression: Meaning and Significance, Difference Between Correlation and Regression, Simple Linear Regression and Estimation of Parameters (Slope and Intercept).

Practical Work: Use of Microsoft Excel in Solving Simple Data Analysis.

Reference books:

1. Dowling E. Mathematical Methods for Business and Economics, McGraw Hill
2. K. Sydsaeter, P. Hammond Essential Mathematics for Economic Analysis, Pearson
3. Chiang Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill
4. Renshaw, G. Maths for Economics. Oxford: Oxford University Press.
5. Spiegel M. and Stephens L. Schaumôs Outline of Statistics, McGraw Hill
6. Lind D. Basic Statistics for Business and Economics, McGraw Hill
7. Dougherty, C. Introduction to Econometrics. Oxford: Oxford University Press.
8. Vogelvang, B. Econometrics: Theory and Applications with E-Views. London Pearson.

SEMESTER-V

BCM 501: INCOME TAX LAW

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Introduction, Important Definitions: Assessee, Person, Income, Total Income, Assessment Year & Previous Year. Agricultural Income & its assessment. Residence & Tax Liability (Basis of Charge). Capital & Revenue. Exempted Incomes.

Income from Salaries, Income from House Property.

UNIT – II

Profits and Gains of Business and Profession including Depreciation, Capital gains, Income from Other Sources.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Preparation of Form 16 and 16A
2. Preparation and Filling of ITR Forms
3. Preparation of PAN Form

Suggested Readings:

1. Studentsô Guide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts ï Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax ï Dr. Garish Ahuja & Dr. Ravi Gupta

   (Bharat Publications, New Delhi)

BCM 502: MANAGEMENT ACCOUNTING

Objective: To study the basic concepts of Management Accounting relevant in Business and helping the students to understand the usage of Accounting in Financial Management.

Unit-I

Origin Concept, Nature and Scope of Management Accounting, Distinction between Management Accounting and Financial Accounting. Nature, Importance and Limitations of Financial Statements, Tools of Financial Analysis-Trend Analysis, Common Size Financial Statements and Comparative Financial Statements, Ratio Analysis.

Unit-II

Fund Flow Statement, Cash Flow Statement (AS-3). Price Level Accounting, Social Accounting, Human Resource Accounting (Concept only), Responsibility Accounting: Concepts, Steps in Responsibility Accounting and Advantages of Responsibility Accounting.

***Practical*:** Use of various software packages to obtain different Management Accounting outputs like : (i) Fund Flow Statement, (ii) Ratio Analysis, (iii) Cash Forecasting.

Reference books:

1. Anthony Robert, Reece, Principles of Management Accounting; Richard D. Irwin Inc. Illinois.
2. Khan M.Y. and Jain P.K., Management Accounting; Tata McGraw Hill, New Delhi.
3. Kaplan R.S. and Atkinson A.A., Advanced Management Accounting, Prentice India International, New Delhi.
4. Dr. S.N. Maheshwari : Principles of Management Accounting, Sultan Chand & Sons, New Delhi
5. I.M. Pandey : Management Accounting, Vikas Publication
6. Debarshi Bhattachharya : Management Accounting, Pearson Publication

BCM 503: INDIAN ECONOMY

Unit – I

i) State of Indian Economy at the time of Independence.

ii) Nature of Indian Economy.

iii) Features and Appraisal of Economic Reforms Programme.

iv) Comparing Development Experience of Economies of India and China.

v) National Income of India ï Estimates, Inter-regional Variations in National Income.

vi) Demographic Features of Indian Population, Demographic Dividend.

Unit – II

i) Indian Public Finance: The Indian Tax Structure, Public Expenditure, Public Debt.

ii) Capital Market: Growth, Problems and Reforms since 1991.

iii) External Sector: Contemporary Problems of Indiaôs International trade. Balance of Payments Position, Foreign Trade Policy.

iv) Economic Planning in India ï Objectives, Achievements and Failures, Latest Five Year Plan in India, NITI Aayog.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 ï Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy ï Problems and Prospects, Viking, New Delhi.
3. Ahluwalia, I.J. and Little, IMD(eds.) 1998: Indiaôs Economic Reforms and Development. (Essays in Honour of Manmohan Singh), OUP, New Delhi
4. Nagraj, R.2006: Aspects of Indiaôs Economic Growth and Reforms, academic Foundations, New Delhi.
5. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
6. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
7. Dhar, P.K.: Indian Economy ï Its Growing Dimensions (Latest Edition), Kalyani Publishers
8. Economic Survey: Government of India, Latest Issue
9. Economic and Political Weekly: Various Issues

BCM 504: PRODUCTION AND OPERATION MANAGEMENT

Objectives: The objective of this course is to enable the students to understand the concepts of production and operations management of an industrial undertaking.

Unit-I

Introduction of Production and Operational Management: Meaning, Objectives and Scope. Strategic Planning and Demand Forecasting. Production Process and Analysis. Capacity Planning and Management. New Product/ Service Design and Development. Facility Location. Facility Layout. Production Planning and Control Techniques- Sequencing (Processing in Job through Two Machines) and Network Analysis - PERT/CPM (including Crashing).

Unit-II

Work Measurement and Work Study: Methods, Analysis and various Charts, Time Study and Principles of Motion Economy. Purchase Management. Inventory Management Fundamentals : Economic Order Quantity, Quantity Discount, Reorder Level, Lead Time, Safety Stock, JIT. Supply Chain Management: Concept & Components of Supply Chain, Activities in Supply Chain Management, Logistics Management.

Suggested Readings:

1. B. Mahadevan ñOperations Management Theory & Practiceò, Pearson Education.

2. Kanishka Bedi , ñProduction & Operations Managementò, Oxford Higher Education.

3. L.J. Krajewski & L.P. Ritzman ñOperations Management Processes & Value Chainsò, Pearson Education.

4. B.S. Goel ñProduction Operation Managementò.

5. Richard B Chase, F Robert Jacobs, Nicholas J Aquilano and Nitin K Agarwal , ñOperations Management ï For Competitive Advantageò, The McGraw Hill Companies.

BCM 505: ENTREPRENEURSHIP AND SMALL BUSINESS

Objectives:- The basic objective of this course is to help the learners understand various issues involved in setting up a private enterprise and develop required entrepreneurial skills in economic development. It also aims to motivate students to opt for entrepreneurship and self-employment as alternate career options.

UNIT- I

Entrepreneurship- Concept and Theories; Entrepreneur- Meaning and Characteristics: Leadership, Risk taking, Decision making, Motivation, Innovation.

Women Entrepreneurship- Problems Faced, Suggestions, Role of Government to promote Women Entrepreneurship; Socio- economic Environment.

Business Planning; Entrepreneurial Development Programmes- their Relevance and Achievement, Role of Government in Organizing EDPs.

UNIT- II

Small Scale Business-Seed Bed of Entrepreneurship; Business Venture- Its Concept; Setting up a Small Scale Enterprise.

Product Planning and Management; Marketing Management; Growth and Diversification Strategies.

Role of Small Business in the National Economy; Small Business and Modern Technology.

Tax Considerations/ Benefits to Small Scale Units; SSI Exemptions.

Suggested readings

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House, Delhi.
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd., Singapore.
4. Chandra, Ravi (2003). Entrepreneurial Success: A Psychological Study. Sterling Publication Pvt. Ltd., New Delhi.
5. . Balaraju, Theduri (2004). Entrepreneurship Development: An Analytical Study. Akansha Publishing House, Uttam Nagar, New Delhi.
6. David, Otes (2004). A Guide to Entrepreneurship. Jaico Books Publishing House, Delhi.
7. Taneja (2004). Entrepreneurship. Galgotia Publishers

BCM 506: FINANCIAL MARKETS AND SERVICES

Objective: To familiarize the students with the traditional and modern financial and services.

UNIT I

Financial Markets: Meaning, Functions and Types.

Money Market: Meaning, Characteristics, Structure, Participants, Growth of Indian Money Market, Components of Money Market, Call Money Market, Acceptance Market, Bills Market, Commercial Paper Market. Certificates of Deposits Market in India.

Capital Market: Nature and Role, Functions, Distinction between Money market and Capital Market, Primary Market, Secondary market, Operational Mechanism of Capital Market.

UNIT II

Financial Services: Meaning, Characteristics, Importance and Kinds of Financial services, Financial Services and Economic Environment, Players in Financial services. Merchant Banking: Concept, Evolution and Functions of Merchant banks.

Mutual Funds: Concept, Types, Advantages, Problems of Mutual Funds in India, Constitution and Management of Mutual Funds.

Exchange Traded Funds, Factoring.

Suggested readings

1.Financial Markets: A BeginnersôModule, Workbook from NSE
2. Mutual Fund: A BeginnersôModule, Workbook from NSE
3. Gurusamy, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
4.. Saunders, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
5. Thummuluri, Siddaiah, Financial Services, 1st edition, Pearson Education.
6. Khan, Indian Financial Systems, 6th edition, Tata McGraw Hill

BCM 601: DIRECT TAX LAWS

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Deemed Incomes and Clubbing of Incomes (Aggregation of Incomes), Set-off and Carry Forward of Losses, Deductions to be made in Computing the Total Income, Rebate & Relief.

Assessment of Individual.

UNIT – II

Assessments of HUF, Association of Persons & Firm.

Income Tax Authorities, Procedure of Assessment (Practical aspects of Filing of Return to be stressed), Penalties, Deduction & Collection of Tax at Source, Advance Payment of Tax, Appeals & Revision.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Filing of return by an Individual, HUF & Firm.

2. Filling and Submission of TDS Form.

Suggested Readings:

1. StudentsôGuide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts ï Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax ï Dr. Garish Ahuja & Dr. Ravi Gupta (Bharat Publications, New Delhi)

BCM 602: FINANCIAL MANAGEMENT

Objective: The objective of the paper is to familiarize the students with Principles and Practices of Financial Management.

UNIT- I

Financial Management: Meaning, Scope and Objectives of Financial Management, Time Value of Money- Compounding Techniques and Discounting Techniques. Capital Budgeting, Evaluation of Projects (excluding Risk and Uncertainty, Implications of Normal, Initial and Terminal Depreciation and Balancing Charge). Cost of Capital: Determination of Cost of Capital, Components of Cost of Capital.

UNIT- II

Sources of Corporate Finance, SEBI Guidelines for Raising Corporate Finance. Capital Structure, Meaning, Types of Leverage, Determinants of Capital Structure. Theories of Capital Structure. Working Capital Management and Its Estimation (Excluding Cash, Receivable and Inventory Management). Dividend Policy- Relevance and Irrelevance Theories.

Reference books:

1. J C Van Horne, ñFinancial Management and Policyò, 12th Edition, New Delhi, Prentice Hall of India
2. J C Van Horne, J W Wachowicz, Jr. ñFundamentals of Financial Managementò 13th Edition, Prentice Hall of India
3. Prasanna Chandra, ñFinancial Managementô Tata McGraw Hill.
4. Khan and Jain, ñFinancial Management- Text and Problemsò 2nd Edition, Tata McGraw Hillô
5. R A Brealey and S C Myers, ñPrinciples of Corporate Financeò, Tata McGraw Hill, 7th Edition
6. I M Pandey, ñFinancial Managementò, Vikas Publishing House, 9th Edition

BCM 603: ISSUES IN FINANCIAL REPORTING

Objectives: The main objective of this subject is to provide knowledge to the students about developments in financial reporting, and understanding of reporting issues at the national and international level.

Unit I

Financial reporting: Nature and Objectives, Benefits, Users of Financial Reports. General Purpose and Specific Purpose Report. Qualitative Characteristics of Accounting Information.

Conceptual Framework of Financial Reporting: FASB and IASB

International Financial Reporting Standards (IFRS): Role of IASB, Arguments for Global Conversion. Achievements of IASB and Obstacles in Conversion. Required Disclosures as per IFRS.

Unit II

Issues in Corporate Financial Reporting - Accounting for Changing Price Level, Social Reporting, Human Resource Accounting.

Indian Accounting Standard with reference to Segment Reporting, Interim Reporting, Leases and Intangible Assets.

Difference between IFRS and Indian Accounting Standards. US GAAP.

Recent Trends in Financial Reporting in the Indian context

Suggested Readings:

1. E.S. Hendriksen, Accounting Theory, Richard D. Irwin.

2. M.W.E. Glautier and B. Underdown, Accounting Theory and Practice.

3. Ahmed Riahi Belkaoui, Accounting Theory, Thomson Learning.

4. Henry I- Wolk, Jere R. Francis and Michael G- Tearney, Accounting Theory: A Conceptual and Institutional Approach, South Western Publishing Co.

5. Robert Bloom and Pieter T. Elagers, Accounting Theory and Policy, Harcourt Brace Joranovich.

6. L.S. Porwal, Accounting Theory, McGraw Hill Education (India) Ltd.

7. Jawahar Lal, Accounting Theory and Practice, Himalaya Publishing House, New Delhi.

BCM604: SOCIAL AND BUSINESS ETHICS

Objectives: The course aims to educate that how the adoption of Business Ethics by organizations not only discourages corporate wrong-doing, but also contributes substantially in the achievement of corporate excellence.

Unit-I

Business Ethics, Definition, Nature, Purpose, Ethical Issues in Management, Causes of Unethical Behaviour, Ethical Abuse-Values, Morals and Business Ethics-Levels of Business Ethics, Myths of Business Ethics, Relationship between Value, Morals and Ethics., Conflict of Interest.
Ethics at Workplace: Individual in Organisation, Gender Issues, Harassment, Discrimination.
Ethics in Accounting &Finance, Marketing and Consumer Protection- Importance, Problems and Issues.

Unit –II

Whistle Blower Policies-Meaning, Importance and Issues.
Corporate Social Responsibility under Company Act 2013.
Ethical Issues in Corporate Governance.
Environmental Issues-Protection of Natural Environment, Prevention of Pollution, Depletion and Conservation of Natural resources.

Suggested Readings:

1. Chakraborty , S.K. : ,Foundations of management Work - Contributions from Indian Thought: Himalaya Publishing House Delhi
2. Griffiths , B. : Themarriage of East and West , colling London
3. Gandhi , M.K. : The Study of My Experience with Truth, Navjivan Publishing House , Ahmedabad
4. Velasquez , M.G. : Business Ethics 5. Sekhar , R.C. : Ethical Choices in Business .

BCM 605: OPERATIONAL RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operational Researchð Meaning, Significance and Scope. Introduction to Linear Programming, Formulation of Linear Programmingð Problem, Graphical Method, Simplex Method. Duality in Linear Programming, Definition of Dual Problem, General Rules in Converting any Primal into its Dual, Transportation Problem, Assignment Problem.

UNIT-II

Decision Theory: Decision Making under Uncertainty and Risk, Decision Trees. Replacement Problem (Individual and Group replacement Problems both). Games Theory : Two Persons Zero Sum Games, Pure Strategies, Mixed Strategies. Simulation; Meaning, Process, Advantages, Limitations and Applications.

Practical Work :

Use of Linear Programming in Industry.

Suggested Readings:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

BCM 606: SECTORAL ASPECTS OF INDIAN ECONOMY

Objectives: This course will provide insight into the various sectoral aspects of indian economy

Unit – I

i) Agriculture: Features, Agricultural Productivity and Income, Rural Indebtedness, Agricultural Marketing, Agricultural Finance and Agricultural Policy, New Development in Agriculture ï Contract Farming, Organic Farming and Corporate Farming.

ii) Industrial Development during the Planning Period, Industrial Policy of Govt. of India, National manufacturing policy, Small Scale and Cottage industries in India: Importance, problems and Govt. Policy, Large Scale Industries ï Iron & Steel, Cement and Petrochemicals.

Unit – II

i) Services Sector in India: Growth and Contribution of Services in India in Pre and Post Reform Period, Role and Problems of Public and Private Sector in India

ii) Problems of Indian Economy: Poverty, Unemployment, Inflation, Unequal distribution of Income and Wealth, Inter-State disparities in the Pattern of Development.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 ï Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy ï Problems and Prospects, Viking, New Delhi.
3. Nagraj, R.2006: Aspects of Indiaôs Economic Growth and Reforms, academic Foundations, New Delhi.
4. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
5. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
6. Dhar, P.K.: Indian Economy ï Its Growing Dimensions (Latest Edition), Kalyani Publishers
7. Economic Survey: Government of India, Latest Issue
8. Economic and Political Weekly: Various Issues

B.COM. (HONS.) 3rd SEMESTER

BCH 307: ACCOUNTING THEORY AND REPORTING PRACTICES

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding accounting theory.

UNIT-I

The History and Development of Accounting, Nature and Uses of Accounting, Traditional Approaches to the Formulation of An Accounting Theory, Regulatory Approach to the Formulation of An Accounting Theory; The Events, Behavioural and Human Information Processing Approach.

Unit –II

The Predictive and Positive Approaches to the Formulation of Accounting Theory, A Conceptual Framework for Financial Accounting and Reporting. The Structure of Accounting Theory, Alternatives Asset-Valuation and Income Determination Models.

Reference Books:

1. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
2. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
3. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting.
4. Elliott, B. & Elliott, J., Financial Accounting and Reporting. Harlow
5. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. S. Agarwal, Manual of Accounting Standards, Snow White.
8. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.

BCH 308: DEVELOPMENT ECONOMICS

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding economic development and growth.

UNIT-1

Concept of Economic Development, Distinction between Growth and Development, Various Traditional and Modern Criteria to Measure Development, Determinants of Development, Balanced vs. Unbalanced Growth,

Concept of Sustainable Development, Importance, Indices of Development,

Classical Theories of Development-Adam Smith, Karl Marks and Schumpeter, Rostowós Stages of Growth, Kaldor Model of Growth.

UNIT-II

Economic Development Since Independence, Indiaôs Five Years Plans- Objectives, Strategies, Achievements and Constraints,
Models in Economic Planning- Harrod-Domar Model, Mahalanobis Model,
Role of State and Capital Formation in Economic Development, Growth and Distribution Trends and Policies regarding Poverty; Inequality and Unemployment in India,

Reference Books:

1. Agarwala, A.N. and S.P. Singh, Economics of Underdevelopment, Oxford University Press, London.
2. Misra, S. K. and Puri, Economics of Development and Planning, Mumbai: Himalaya Publishers.
3. Meier, Gerald M. and James E. Rauch, Leading Issues in Economic Development, Oxford University Press, New Delhi.
4. Todaro, M.P., Economic Development in the Third World, Longman, New York.
5. Salvatore, D. and E. Dowling: Development Economics, Schaum's, Outline Series in Economics, McGraw Hill, New York.

BCH 309: ADVERTISING AND BRAND MANAGEMENT

Objective: The objective of the paper is to provide an understanding of the principles of advertising and brand management.

UNIT - I

Advertising: Introduction, Scope, Importance in Business : Role of Advertising in Social and Economic Development of India: Ethics in Indian Advertising. Advertising and Consumer Behaviour; Setting Advertising Objectives, DAGMAR; Determining Advertising Budgets; Advertising Planning and Strategy, Creative Strategy Development and Implementation. Role of Integrated Marketing Communication in the Marketing Programme; Process of Marketing Communication; Definition and Scope of Advertising Management; Determination of Target Audience. Media Planning: Setting Media Objectives; Developing Media Strategies, Evaluation of Different Media and Media Selection; Media Buying; Measuring Advertising Effectiveness.

UNIT – II

Brand-Concept: Nature and Importance of Brand; Brand vs. Generics, Brand Life Cycle, Brand Name and Brand Management; Brand Identity: Conceiving, Planning and Executing (Aaker Model), Brand Loyalty, Measures of Loyalty; Brand Equity: Concepts and Measures of Brand Equity-Cost, Price and Consumer Based Methods; Sustaining Brand Equity; Brand Personality: Definition of Brand Personality, Measures of Personality, Formulation of Brand Personality; Brand Image Vs Brand Personality. Brand Positioning: Concepts and Definitions, Repositioning, Celebrity Endorsement, Brand Extension; Differential Advantage: Strategies for Competitive Advantage, Brand Pyramid; Branding in different sectors; Role of Information in Brand Management; Role of e-Communities in Brand Management.

Reference Books:

1. Arens W.A. Contemporary Advertising, Tata Mc Graw Hill, New Delhi

2. Batra. R. Myers, J.G. and Aaker D.A., Advertising management, prentice hall of India, New Delhi

BCH 310: BANK MANAGEMENT

Objectives: The paper aims at acquainting the students, the concepts of Bank Management and relevant aspects.

UNIT – I

Banking Structure in India ï Banks and Regulatory Environment ï Analysis of Balance Sheet and Profit and Loss Account ï Financial Performance Analysis with Ratios ï RBI and its role on Bank Performance ï Banks and Risk Management, Types of Risks in Banking Industries ï Risk and Return ï Profitability ï Liquidity ï Solvency Trace off ï Project Appraisal ï Capital Adequacy Norms ï MIM ï Interest and Non ï Interest Income ï Lending Principles.

UNIT – II

NPA ï Provisions, Types, Impact on Profitability. Warning Signals ï NPA Management ï How to Overcome NPA ï Recent Measures by Regulatory Authority ï Debt Recovery Tribunal ï Provisions of Revenue Recovery Act ï Portfolio Management in Banks ï Allocation of Bank Funds ï Investment Avenues for Banks ï Asset Liability Management ï Models ï Importance ï SARFESI Act ï Information and Communication Technology and Bank Management.

Reference Books:

1. Donald,F., R. Gup Benten E., Kolari, J.W., *Commercial Banking The Management of Risk*, South Western Thomson Learning
2. Justin,P. and Padmalatha, S.,*Management of Banking and Financial Service*s, Pearson Education
3. Timothy,K.W. and MacDonald, *Bank Management*, The Dryden Press, Hascourt College Publisher

B.COM. (HONOURS) 4th SEMESTER

BCH407: CONTEMPORARY ISSUES IN ACCOUNTING

Objective: The paper aims at acquainting students with the contemporary issues in accounting.

UNIT – I

Role of International Accounting Standard Committee in Harmonisation of Divergent Accounting Practices.

Accounting for Human Resources.

Accounting for Price-Level Changes.

Accounting for Financial Instruments.

UNIT – II

Segment Reporting, Interim Reporting.

Forensic Accounting ï Introduction ï Historical Background, Essentials ï Role of Forensic Accountant ï Forensic Accounting in India.

Corporate Accountability Reporting- Basics of Sustainability Reporting- Social Reporting and Performance Reporting.

Accounting for Brand Equity ï Introduction, Types of Brands, Objectives ï Models, Environment Accounting.

Reference Books: -

1. L S Porwal. Tata McGraw-Hill Education, .
2. Hendriksen, Irwin Professional Publishing; 5 Sub edition, .
3. Accounting theory and practice / M.W.E. Glautier, B. Underdown Glautier, M. W.(Michel William Edgard).

BCH 408: INDUSTRIAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about concepts, theories and policies regarding industrial structure and growth.

Unit - I

Industrial Economics - Meaning, Scope, Need and Significance,

Pattern and Phases of Industrial Growth and Changes in Industrial Structure, Role of Industry in Economic Development,

Theories of Industrial Location- Weber, Sargent Florence, Factors Influencing Location of Industries, Localization and Decentralization on Industriesm, Industrial Productivity and Efficiency, Measures Required for Improving Productivity and Efficiency

Unit - II

Role of Industrialization in Economic Development, Factors for and Against Industrial Development, Problems of Industrialization in Developing Countries,

Industrial Finance in India- Scope, Importance and Sources, Industrial Growth in India during Plans, Impact of Economic Reforms on India's Industrial Growth,

Indiaôs Industrial Policies, Role and Performance of Public Sector Enterprises, Privatization of Public Sector Undertakings in India,

Performance and Problems of Micro, Small, Medium Enterprises in India

Reference Books:

1. Ahluwalia I.J., ôIndustrial Growth in India,ô Oxford University Press, New Delhi Barthwal R.R., ôIndustrial Economics,ô Wiley Eastern Ltd., New Delh
2. Cherunilam, F. ,ôIndustrial Economics: Indian Perspectiveô, Himalaya Publishing House, Mumbai.
3. Desai, B. , ôIndustrial Economics in India,ô Himalaya Publishing House, Mumbai
4. Hay, D. and D.J. Morries , Industrial Economy; Theory and Evidence, Oxford University Press, New Delhi
5. Kuchhal, S.C.,ôIndustrial Economy of India,ô Chaitanya Publishing House, Allahabad
6. Thakur, Srinivas V. , ôIndustrialization and Economic Developmentô Popular Parkashan, Mumbai

BCH 409 : CONSUMER BEHAVIOUR

Objective: The paper aims at enabling students to understand the process of consumer behaviour, the various external and internal factors that influence consumer behaviour and to apply the concept to the development of marketing strategy.

UNIT- I

Introduction to Consumer Behavior: Scope and Relevance of Consumer Behavior Studies; Buying Decision Process; Basic Model of Consumer Behavior; Problem Recognition ï Methods of Problem Solving; Information Search, Alternative Evaluation and Selection, Outlet Selection and Purchase, Post Purchase Behavior and Customer Satisfaction, Role of Involvement. Individual Determinants of Consumer Behaviour: Role of Motivation; Personality and Self Concept; Attention and Perception; Consumer Learning; Consumer Attitudes ï Formation and Change; Consumer Values and Lifestyles. External Determinants of Consumer Behavior: Influence of Culture and Subculture; Social Class; Reference Groups and Family Influences; Diffusion of Innovations.

UNIT- II

Consumer Decision Process: Problem Recognition; Search and Evaluation of Alternatives; Purchase Process; Post Purchase Behaviour and Cognitive Dissonance. Models of Consumer Behaviour; Researching Consumer Behaviour; Online Customer Behaviour. Diversity of Consumer Behaviour; Role of Consumer Behaviour in Marketing Strategy.

Reference Books:

1. Schiffman L.G. and Kanuk L.L., Consumer Behaviour, 9th Edition, Prentice Hall of India, New Delhi
2. Assel Henry, Consumer Behaviour, Biztantra, New Delhi.
3. Hawkins, D. I. & Roger, J. B. and Kenneth, A.C. . Consumer Behaviour-Building
4. Satish Batra & S. H. H. Kazmi: Consumer Behavior Text & Cases (Excel)

BCH 410: BANK LEGISLATION

Objective: The paper aims to acquire knowledge about the legal & regulatory framework of the banking system and the various laws and enactments.

UNIT –I

Evolution of Banking Laws in India- Provisions of Banking Regulation Act, 1949 ï Its Amendments. Reserve Bank of India Act, 1934 ï Role and Functions of RBI-Credit Control Techniques- Indian Evidence Act- Negotiable Instruments Act 1881. Payments and Settlements Systems Act 2007 and Amendments.

UNIT-II

Special Features of Recovery of Debts due to Banks and Financial Institutions Act, 1993, The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002, Grievance Mechanism and Banking Ombudsman- Lok-Adalats- Banking Codes and Standard Boards Board- Debts Recovery Tribunals.

Reference Books:

1. Banking Regulation Act, 1949.
2. RBI, Act, 1934.
3. J.N. Jain and R.K. Jain: Modern Banking and Insurance, Deep and Deep Publications.
4. R.K. Mittal, A.K. Sahni and Sanjay Dhingra: Emerging Trends in the Banking Sector, Macmillan.
5. Arundeep Singh and N.S. Toor: Legal and Regulatory Aspects of Banking, Skylark Publications.
6. John C. Hull: Risk Management and Financial Institutions, Pearson Education.

B.COM. HONOURS
5th Semester

BCH 507: STRATEGIC FINANCIAL MANAGEMENT

OBJECTIVE: This Course aims at enabling the students to understand various financial management concepts and to apply financial management theories and techniques for strategic decision making and informed analysis. It aims at enabling students to manage basic corporate finance transactions besides investing more profitably and operate more efficiently.

.UNIT-I

Introduction to Strategic Financial Management. Interface of Financial Policy and Strategic Management. Significant references for Strategic Financial Management. Strategic Business Unit. Financing Choices and Decisions: Differences in Financing of Venture Firm, Mature Companies and Firms in High Growth Stage, Deal Structuring and Pricing, IPOs and their Under-pricing. Asset -stripping. Investment Appraisal Techniques, Capital Rationing, Impact of Inflation on Capital Budgeting Decisions.

UNIT-II

Financial aspects of Corporate Restructuring. Monitoring the Restructuring Process. Leveraged Buyouts (LBOs), Management Buyouts (MBOs), Spin Offs and Asset Divestitures Financial Engineering. Financial Innovation: Relevance, Drivers and Implications. Ethical Aspects of Strategic Financial Management. Financial Aspects of Supply Chain Management and Distribution Chain Management. Innovative Approach to Internal Cost-Profit Analysis. Valuation of a Business Enterprise.

Suggested Readings:

1. Allen, D: An Introduction to Strategic Financial Management, CIMA/Kogan Page, London.
2. Brealey, Richard A. and Myers, Stewart C, Principles of Corporate Finance, Tata McGraw Hill.
3. Chandra, Prasanna: Financial Management, Tata McGraw Hill, Delhi.
4. Damodaran, Aswath, Valuation, John Wiley & Sons.
5. Foster, George, Financial Statement Analysis, Pearson Education Hampton, Jone, Financial Decision Making, PHI, New Delhi.
6. Grinblatt, Mark and Titman, Sheridan, Financial Markets and Corporate Strategy, Tata McGraw Hill.
7. Jakhotiya,Dr.Girish: Strategic Financial Management, Vikas Publishing House Limited.
8. Kaplan, Robert S., and Cooper, Robin: Cost & effect: Using integrated cost systems to drive profitability and performance, Harvard Business Press.

BCH 508: Money and Banking

Objectives: This course exposes students to the theory and functioning of the monetary and banking sectors of the economy.

Unit –I

Money- Concept, Functions, Measures;
Fisherôs Transactions Approach to the Quantity Theory of Money; Cambridge Cash- Balances Approach;
Keynes Demand Theory of Money; Friedmanôs Theory of Demand for Money;
Theory of Money Supply- H- Theory of Money;
Inflation- Concept, Types, Demand-Pull inflation, Cost-Push Inflation, Philips Curve, Structural Inflation in the Less Developed Countries;

Unit-II

Bank- Meaning, Functions, Liabilities and Assets;
Commercial banks; Co-operative banks; Development banks; Non-Bank Financial Intermediaries (NBFIs); Unregulated Credit Markets;
Reserve Bank of India- Goals, Current Monetary Policy;
Banking Sector Reforms in India

Suggested Readings:

1. Suraj B. Gupta, Monetary Economics: Institutions, Theory and Policy, S. Chand & Company Ltd.
2. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
3. Michael R. Baye and Dennis W. Jansen, Money, Banking, and Financial Markets: An Economics Approach, Houghton Mifflin Company, U.S.A.
4. F.S. Mishkin, The Economics of Money Banking and Financial Markets Business School Edition, Pearson India.
5. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill,
6. L. M. Bhole, Collected Papers on Money, Interest and Monetary Policy, Amani International Publishers.
7. Economic Survey, Ministry of Finance, Government of India, Latest edition
8. www.rbi.org.in

BCH 509: COMPENSATION MANAGEMENT

Objective: To enable the students to design and administer a compensation system that rewards employees fairly while satisfying customer demands and permitting the organization to operate profitably.

Unit I

Compensation Management - Concept, Principles and Practices; Theories of Compensation; Compensation in a Knowledge Based World. Foundations of Compensation - Performance Evaluation, Job Evaluation - Job Grading and Job Design; Executive Compensation. Compensation and Organizational Strategy- Monetary and Non-Monetary Rewards; Fringe Benefits, Developing Strategic Compensation Alternatives; Challenges of Compensation Design and Compensation Policies in India.

Unit II

Components of Compensation -Basic Pay, D.A., Incentives Plans, Profit Sharing Schemes, Provident fund, Gratuity and Pension. Payroll Accounting -Tax planning, Tax Efficient Compensation Package. International Compensation Management - Components and Approaches .Compensation Laws- Payment of Wages Act, Payment of Gratuity Act, Employees State Insurance Act, and Workmenôs Compensation Act.

Suggested Readings:

1. Venkataratnam, C.S., and B. K. Srivastava,óPersonnel Management and Human Resourcesô, Tata McGraw Hill.
2. Thomas, J. Bergman, V.G. Scarpllo and F.S. Hills.óCompensation Decision Makingô, Dryden Press.
3. Dunn, J.D. and F. M. Rachal, óWage and Salary Administration: Total Compensation Systemô, McGraw Hill, New York.
4. Armstrong, M. and HellenMurlis,óReward Management-A handbook of Remuneration Strategyô.
5. Henderson, Richard I., óCompensation Management in a Knowledge Based worldô, Pearson Education.
6. Bhattacharya, Mousumi S. and Sengupta, Nilanjai, óCompensation Managementô, Excel Books.

BCH 510: Electronic Banking and Risk Management

Objective: To provide an understanding and an appreciation of Electronic Banking and of Risk Management in order to enable the optimum strategy for the handling of risk in banks.

Unit-I

Electronic Bankingï Core Banking ï Electronic Products, On line Banking ï Facilities provided and Security Issues, Cheque Truncation, Microfiche, Phone and Mobile Banking Electronic Funds Transfer Systems ï Plain Messages (Telex or Data Communication) ï Structured Messages (SWIFT, etc...) ï RTGS, NEFT, Information Technology ï Current Trends ï Bank Net, RBI Net, Data Net, Nicnet, Iï net, Eï mail, etc.ï Role and Uses of Technology Up-gradation ï Global Developments in Banking Technology Impact of Technology on Banks ï Effect on Customers and Service Quality ï Computer Audit ï Information System Audit.

Unit-II

Risk Management: Types of Risks in BANKS, Risk Management Framework in Banks: Enterprise ï wide Risk Management in Banks; Elements of Risk Management Framework; Systematic Risk Management in Banks; Different Measures of Measuring Risks; Risk Management ï Process and Techniques for Assessment and Management. Assetï liability Management in Banks, Role of RBI. Information System Security and Disaster Management.

Suggested Readings:

1. Marrison, Christopher Ian, ñThe fundamentals of risk measurementò, New York: McGrw Hill.

2. Marshall, Christopher Lee, ñMeasuring and Managing Operational Risks in Financial Institutions: Tools, Techniques, and Other Resourcesò, Singapore, New York: John Wiley.

3. MacDonald and Koch, ñManagement of Bankingò, Thomson, London.

4. Bidani, S.N., ñBanking Risksò, Vision Books. 5. Joshi, V.C. and Joshi, V.V., ñManaging Indian Banksò, Sage Publications.88

B.COM. (HONOURS)

6th Semester

BCH607: INVESTMENT MANAGEMENT

Objective and expected outcome of the course: This course provides a broad overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general. It aims at enabling the students to get theoretical and practical background in the field of investments, financial markets, valuation of investment and different investment strategies. Students will know the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.

Unit - I

Introduction to Investment Management

Financial System in India ï Money Market, Capital Market, Debt Market, Need for correlating these ï Bullion Market and Foreign Exchange Market.

Organization and Functioning of Securities Markets in India ï Nature and Function, Organizational Structure, Role and Function of Primary Market and Secondary Markets, Type of Market Transactions based upon ï Long and Short Orders, Size of Order, Price Limit of Orders, Time limit of orders, Special type of orders and order execution. Margin Trading.

Valuation of Securities ï Valuation of Bonds, Valuation of Debentures, Valuation of Preference Shares, Valuation of Equity Shares and Share Valuation: CAPM Model.

UNIT - II

Market Indices ï Concept, Method of Computing Indiaôs Leading Stock Indices, Overview of various Benchmark Indices, Market capitalization Indices, Sectoral Indices and Broad market Indices.

Security Credit Rating ï Introduction, Factors Affecting Assigned Ratings, Credit Rating Agencies in India, Functions, Approaches and Framework Used and Business Models, Benefits of Credit Rating, Regulatory Concerns.

Risk Management Through Derivatives – Introduction to Derivatives Market and Securities, Forward and Future Contracts ï Overview, Hedging, Optimal Hedge Ratio, Valuation, Application and Strategies. Options ï Overview, Valuation Models and Strategies. Swaps.

Investing in Alternative Asset Classes - Hedge Funds, Characteristics of a Hedge Fund, Hedge Fund Strategies, Risk Arbitrage Investing, Hedge Fund Performance, Private Equity and Venture Capital.

Suggested Readings:

1. Babu.Dr.G.Ramesh, Portfolio Management including Security Analysis,Concept Publishing Company.

2. Dr.Raganatham M&Madhumathi R. Investment analysis Portfolio management. Person Education, New Delhi.

3. Dr.BhallaV.K.Investment Management, S.Chand and Company, New Delhi.

4. Fisher & Jordan, Security analysis and portfolio management, Prentice Hall of India, New Delhi.

5. Rustagi R.P, Investments Analysis and Portfolio management, Sultan Chand & Sons, New Delhi.

6. Sharpe, William and Gordon, Investments ï Prentice hall of India, New Delhi.

BCH 608: INTERNATIONAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about International Economics.

Unit-I

Adam Smithôs Absolute Advantage Theory; Ricardoôs Comparative Advantage Theory; Heckscher-Ohlin Theory of Trade; Terms of Trade

Free Trade vs Protection, Rationale of Protection Policy in Developing Countries, Barrier Tarriffs, Quotas to Trade.

Unit-II

Balance of Payments: Definitions and Concepts- Balance of Trade, Balance of Payments on Current Account, Balance of Payments on Capital Account, Autonomous and Accommodating Capital Flows; Causes and Measures to Correct the Disequilibrium

Exchange Rate: Meaning and Its determination; Fixed vs Flexible Exchange Rate, Theories of Exchange Rate: BoPs Theory, PPP Theory.

Suggested Readings:

1. H.G. Mannur, International Economics, Vikas Publishing House Pvt Ltd.
2. Bo Sodersten, International Economics, Macmillan Publishers Ltd.
3. Bo Sodersten and Geoffrey Reed, International Economics, St. Martinôs Press.
4. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
5. Dominic Salvatore, International Economics, John Wiley and Sons Inc.
6. Economic Survey, Ministry of Finance, Government of India, Latest edition.

BCH 609: TRAINING & DEVELOPMENT

Objectives: This Course aims at educating students regarding the concept of training and development in an organization.

UNIT – I

Introduction to Training Concept: Definition, Meaning, Need For Training, Importance Of Training, Objectives Of Training, Process Of Training: Steps In Training

Concept of Training Need; Identification of Training Need, Methods of Training and Techniques of Training, On the Job, Off the Job, Lecture, Role Play , Case Study, Vestibule Training, Simulation Techniques, in Basket Exercise, Syndicate Method, T- Group Training, Psychological Lab, Business Game, Activity Based Training, Programme Instruction Training, Choosing the Right Training Techniques.

UNIT – II

Designing Training and Development Programs: Organisation of Training and Development Programs, Training Design, Kinds of Training and Development Programs- Competence Based and Role Based Training; Orientation and Socialization

Evaluation of Training and Development Effectiveness: Reasons for Evaluating Training and Development Programs, Problems in Evaluation; Methods of Evaluating Effectiveness of Training Efforts.

Suggested Readings:

1. Prior, John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Noe, Raymond A., and Amitabh Deo Kodwani, Employee Training and Development, Tata McGraw Hill.
3. Blanchard, P. N. & Thacker, W. J. (1998). Effective Training: Systems, Strategies and Practices. Prentice Hall, New Jersey.
4. Raymond Noe, A. (2005). Employees Training and Developmentò, McGraw Hill Publication.
5. Bhatia, S.K ñTraining And Developmentò.

BCH 610: BANK MARKETING

Objective: The paper aims at acquainting the students application of marketing functions in banks, being directed at providing services to satisfy customers financial (and other related) needs and wants, more effectively and efficiently.

UNIT–I

Introduction of Marketing and Key Conceptsï Definition Marketing and Market, Four Elements in Marketing Mix and Their inter-relationship. Marketing Planningï Micro and Macro Factors influencing the Market for an Organisation, Bank Marketing and Marketing Mix, Bank Distribution. The art of Customer Service as Applied to Banking. Customer Behaviour in Banking, Banking Consumer and Market Segmentationï Mass Marketing, Multiple Marketing, Steps in Strategy Formulation, Marketing Research in Bankingï Types of Dataï Primary and Secondary, Uses of Marketing Research. Relationship Marketing in Banking, Competitive Analysis in Banking.

UNIT–II

Bankôs Product Strategyï Core, Value Added, Fundamental and Augmented Products, Product Item and Product Line , Difference between Product and Service , The Concept of Product/Service Delivery in Banking, Pricing Strategies and Its Applications in Bankingï ï Elasticity of Demand , Break Even Analysis, Different Types of Products and Key Variables Banking Promotion Strategyï The Communication Process, Goals of Communication, Steps in Developing Effective Communication, Selling and Organising for Sales and Selling to Corporate Clientsï Meaning of Corporate Clients, Relationship and Transaction Banking, Bank Organisation for large Corporate Clients, International Bank Marketing.

Suggested Readings:

1. Chacko, Oommen and Grewal, Rajendra, ñMarketing of Banking Servicesò.
MacMillan India Ltd
2. Bank Marketing Association, ñBank Marketingò, The Association
3. Reidenbach, R. Eric and Pitts, Robert E, ñEffective bank marketing: issues, Techniques and Applicationsò,1987, Bank Administration Institute.

DEPARTMENT OF PHYSICAL EDUCATION

FACULTY OF EDUCATION
(PANJAB UNIVERSITY CHANDIGARH)

SYLLABUS FOR
BACHELOR OF PHYSICAL EDUCATION (B.P.Ed)
(SEMESTER SYSTEM)

SESSION: 2018-2019

PREAMBLE:

The Bachelor of Physical Education (B.P.Ed) – Two Years (Four Semesters) Programme is meant for preparing quality teacher in Physical Education for Secondary Schools.

VISION

In line with the University mission, the Department has the aim of educating the "whole-person" and to produce quality teachers to serve as administrators in the profession of physical education and sports. Through improving our academic programme and services to the University and local community, we pledge to continually strive for academic excellence and to maintain our leadership role in our profession.

MISSION

1. To produce quality physical education teachers for imparting instructions in the subject of physical education.
2. To make people aware about the benefits of physical activity through extension lectures and demonstrations.
3. To provide excellent research and teaching in Physical Education in order to promote and develop the health and well being of people.
4. To promote health through specific physical activities, prescribed by a specialized physical educationalist.
5. To collaborate with the different organizations which are involved in promoting the quality life of the human beings i.e., educational institutions and NGOs.
6. To provide harmonious and stimulated academic environment for the promotion of quality teaching and research in the department.
7. To provide opportunity to faculty and students of the department for their self evaluations, accountability, autonomy and innovations in the area of physical education and sports.
8. To concentrate on quality research in the area of health, physical education and sports.
9. To introduce consultancy and training programmes for different educational institutions and other organizations for the conduct of sports and fitness events.
10. To update the curriculum and syllabi as per global needs and challenges.

OBJECTIVES:

This programme shall strive to achieve the following objectives:

General Objectives:

1. To enable teacher to understand the nature, purpose and philosophy of physical education at secondary stage.
2. To prepare teachers of physical education with broader educational perspective.
3. To develop for potentialities and organizing physical education programmes and activities.
4. To develop capacity to organized leisure and recreational activities.
5. To empower them to inspire their students to actively participate in physical and yogic exercises.
6. To enable teachers to develop personality, character, willpower, democratic values and positive games and sports.
7. To make teachers capable of imparting basic knowledge about health, hygiene and nutrition
8. To develop skills and competencies to organized school and community games and sports.
9. To cultivate the spirit of sportsmanship, mental and physical alertness, scientific temper and optimism.
10. To promote mental health, power of self- decision and self control, correct judgment and action emotional stability and equanimity, respect for others and acceptance of authority and rules
11. To promote appreciation and interest for indigenous games , sports and yogic exercises
12. To create awareness about health and hygiene in the community.

Specific Objectives

1. To lay down a sound foundation for higher and advance studies in Physical Education in India.
2. To produce quality teachers in physical education.
3. To prepare students for advance coaching Diplomas in disciplines – Athletics, Gymnastics, Hockey, Swimming, Basketball, Football etc.
4. To fulfill the eligibility criteria of Foreign Universities to get admission in post graduate courses abroad since it is a basic and global programme.
5. To generate employment in the fields of Health Fitness and Gym- Management, Physiotherapy, Journalism, Aquatics and Yoga.
6. To provide opportunity to talented students to excel in sports and become outstanding sports persons.
7. To promote mass participation in Physical Education activities (Games, Sports Displays etc) through intra – mural and Extra- mural programmes.

OUTLINES OF TESTS, SYLLABI AND COURSES FOR THE BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.) EXAMINATION (SEMESTER SYSTEM) FOR THE SESSION: 2018-2019

The course of instruction for the B.P.Ed Examination consists of three parts as under:

PART – I	Theory Papers	1600 Marks
PART – II	Practical Course (Skill and Prowess)	800 Marks
PART – III	Practice of Teaching	800 Marks
		Total: 3200

Marks

Note I:

- *Part-I will be evaluated externally.*
- *Part-II will be evaluated by a panel of three internal examiners appointed by the Chairman/Principal of the Department/Institution.*
- *Part-III will be evaluated with one external and one internal examiner.*

Successful candidate shall be classified as follows:

	Pass	Third Division	Second Division	First Division	Distinction
Part-I: Theory	35%	Less than 50% marks in Aggregate	50%	60%	75%
Part-II: Practical Course (Skill and Prowess)	40%	Less than 50% marks in Aggregate	50%	60%	75%
Part-III: Practice of Teaching	40%	Less than 50% marks in Aggregate	50%	60%	75%

Note: Since this is a professional course aimed at improving the standard of games and sports, it is essential that special attention be given to the practical aspect of Track and Field, Games and Sports. Therefore, specified 20 hours per week must be devoted to the practical teaching.

SEMESTER-I
PART–I: THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
I.	CC-101	History, Principles and Foundation of Physical Education	68	4	20	80	100
II.	CC-102	Anatomy and Physiology	68	4	20	80	100
III.	CC-103	Educational Technology and Methods of Teaching in Physical Education	68	4	20	80	100
Elective Course (Any One)							
IV.	EC-101	Olympic Movement	68	4	20	80	100
	EC-102	Officiating and Coaching					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-101	Track and Field (Sprints, Shot-Put, Long Jump, Relays)	68	4	40	-	40
	PC-102	Swimming, Gymnastics	68	4	20+20	-	40
	PC-103	Calisthenics, Dumb-bells, Opening and Closing Ceremonies of Sports Events	68	4	40	-	40
	PC-104	Basketball, Football, Kabaddi, Kho-Kho	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
.	PT-101	Movement Lesson (A) Action Song (B) Motion Story	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons in the movement lesson and 05 officiating lessons in schools. The candidate shall prepare a note book covering action song and motion story lessons which shall carry (20+20) 40 marks.

Paper –I (CC-101)
HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT 1: INTRODUCTION
- Meaning, Definition and Scope of Physical Education
- Aims and Objective of Physical Education
- Importance of Physical Education in present era.
- Misconceptions about Physical Education.
- Relationship of Physical Education with General Education.
- Physical Education as an Art and Science.

UNIT- 2 HISTORICAL DEVELOPMENT OF PHYSICAL EDUCATION IN INDIA
- Indus Valley Civilization Period. (3250 BC 2500 BC)
- Vedic Period (2500 BC 600 BC)
- Early Hindu Period (600 BC 320 AD) and Later Hindu Period (320 AD 1000 AD)
- British Period (Before 1947)
- Physical Education in India (After 1947)
- Y.M.C.A. and its contributions.

UNIT- 3 FOUNDATION OF PHYSICAL EDUCATION
- Philosophical foundation:
  - Idealism
  - Pragmatism
  - Naturalism
  - Realism
  - Humanism and Existentialism
- Fitness and wellness movement in the contemporary perspectives
- Sports for all and its role in the maintenance and promotion of fitness.

UNIT-4 PRINCIPLES OF PHYSICAL EDUCATION
- Biological
  - Growth and development
  - Age and gender characteristics
  - Body Types
  - Anthropometric differences
- Psychological
  - Learning types, learning curve
  - Laws and principles of learning
  - Attitude, interest, emotions and sentiments
- Sociological
  - Society and culture
  - Leadership
  - Social integration and cohesiveness

REFERENCES:

1. Barow, H.M. (1971). *Man and His Movement*-Principles of Physical Education, Philadelphia, Lea and Febiger.
2. Bucher, C.A. (1972). *Foundations of Physical Education*, St. Louis; C.V. Mosby Co.
3. Kamlesh, M.L. (2004). *Principles and History of Physical Education and Sports,* Friends Publications (India), New Delhi.
4. Mohan, V. M. (1969). Principles of physical education. Delhi: Metropolitan Book Depot
5. Khan, E.A. (1964). *History of Physical Education,* Scientific Book Company. Patna.
6. Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
7. Obertuffer (1970). Delbert physical education. New York: Harper & Brothers Publisher.
8. Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
9. William, J. F. (1964). The principles of physical education. Philadelphia: W.B. Saunders Co.

Paper –II (CC-102)
ANATOMY AND PHYSIOLOGY

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: ANATOMY AND PHYSIOLOGY

- Introduction of Anatomy and physiology and its importance in the field of physical education and sports.
- Introduction of Cell and Tissue.
- The arrangement of the skeleton Function - of the skeleton Ribs and Vertebral column and the extremities.
- Joints of the body and their types
- Gender differences in the skeleton.

UNIT-II: SYSTEMS OF HUMAN BODY

- **Blood and circulatory system:** Constituents of blood and their function Blood groups and blood transfusion, clotting of blood, the structure of the heart-properties of the heart muscle, circulation of blood, cardiac cycle, blood pressure, Cardiac output.
- **The Respiratory system:** The Respiratory passage the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.
- **The Digestive system:** structure and functions of the digestive system, Digestive organs, Metabolism,
- **Excretory system:** Structure and functions of the kidneys and the skin.
- **The Endocrine glands:** Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.
- **Nervous systems:** Function of the Autonomic nervous system and Central nervous system. Reflex Action,

UNIT-III: NEUROMUSCULAR JUNCTIONS

- Muscles: Types of muscles, Properties and functions.
- Neuromuscular junction
- Fuel for muscular activity
- Role of oxygen- oxygen debt, second wind, vital capacity.
- Fatigue: Meaning and sites of fatigue.

UNIT-IV: EFFECTS OF EXERCISE ON VARIOUS SYSTEMS

- Effect of exercise and training on cardiovascular system.
- Effect of exercise and training on respiratory system.
- Effect of exercise and training on muscular system
- Physiological concept of physical fitness, warming up, conditioning.

REFERENCES:

1. Gupta, A. P. (2010). Anatomy *and physiology.* Agra: SumitPrakashan.
2. Hoeger, Werner W.K, Hoegen,Sharon A. (2004). Principles and Labs for fitness and wellness.
3. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication,1982.
4. Moorthy, A. M. (2014). *Anatomy physiology and health education.*Karaikudi: Madalayam Publications.
5. Pearce. E. (1989). Anatomy and Physiology for Nurses, Delhi, Oxford University Press.
6. Richardson, Seano, Anderson, Mark B. (2008). Overtraining Athletes: Personal Journey in Sports.
7. Wilmore, Jack H and Costill, David L. (1994).Physiology of Sports and Exercise. Human Kinetics.

Paper –III (CC-103)
EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION
- Education and Education Technology: Meaning and Definitions.
- Types of Education: Formal, Informal and Non- Formal education.
- Teaching: Meaning and Principles of teaching.
- Importance of technological devices used for imparting knowledge.

UNIT II TEACHING METHODS AND PRESENTATION TECHNIQUES
- Teaching Methods: Lecture method, Command method, Demonstration method, Imitation method, project method, Whole method, Whole- part- whole method, Part method, , At will method etc.
- Factors affecting teaching methods.
- Presentation Techniques: Personal and technical preparation, Steps of presentation.
- Types of class formations and Methods of classification of students.

UNIT III TEACHING AIDS
- Teaching Aids: Meaning, Importance, types of teaching aids.
- Criteria for selecting teaching aids.
- Team Teaching: Meaning, Principles and advantage of team teaching.
- Difference between Teaching Methods and Teaching Aid.

UNIT IV LESSON PLANNING AND TEACHING INNOVATIONS
- Lesson Planning: Meaning, Importance and Types
- Principles of lesson plans.
- Micro Teaching: Meaning, steps of micro teaching, advantages and principles
- Simulation Teaching: Meaning, Types and steps of simulation teaching.

REFERENCES:
1. Bhardwaj (2003).A *New media of educational planning*.New Delhi:Sarup of Sons.
2. Brar, R.S & Kanwar,S., (2008). Teaching Methodology and Education Technology in Physical Education, Kalyani Publisher, New Delhi.
3. Kochar, S.K. (2014). *Methods and techniques of teaching.* New Delhi: Sterling Publishers.
4. M.L. Kamlesh & Sangral, M..S., (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
5. Walia, J.S. (1999). *Principles and methods of education.*Jullandhar:Paul Publishers.

Paper –IV (EC-101)
OLYMPIC MOVEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I ORIGIN OF OLYMPIC MOVEMENT
- Philosophy of Olympic movement
- The early history of the Olympic movement
- The significant stages in the development of the modern Olympic movement
- Educational and cultural values of Olympic movement

UNIT IIMODERN OLYMPIC GAMES
- Significance of Olympic Ideals, Olympic Rings, Olympic Flag
- Olympic Protocol for member countries
- Olympic Code of Ethics
- Olympism in action
- Sports for All

UNIT III DIFFERENT OLYMPIC GAMES
- Para Olympic Games
- Summer Olympics
- Winter Olympics
- Youth Olympic Games

UNIT IV COMMITTEES OF OLYMPIC GAMES
- International Olympic Committee - Structure and Functions
- National Olympic committees and their role in Olympic movement
- Olympic commission and their functions
- Olympic medal winners of India

REFERENCES:
1. Osborne, M. P. (2004). *Magictree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York:* Random House Books for Young Readers.
2. Burbank, J. M., Andranovich, G. D. &Heying Boulder, C. H. (2001).Olympic dreams: the impact of mega-events on local politics: Lynne Rienner.

Paper –IV (EC-102)
OFFICIATING AND COACHING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION OF OFFICIATING AND COACHING
- Concept of officiating and coaching
- Importance and principles of officiating
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

UNIT- II: COACH AS A MENTOR
- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching

UNIT- III: DUTIES OF OFFICIAL
- Duties of official in general, pre, during and post game.
- Philosophy of officiating
- Mechanics of officiating position, singles and movement etc.
- Ethics of officiating

UNIT- IV: QUALITIES AND QUALIFICATIONS OF COACH AND OFFICIAL
- Qualities and qualification of coach and official
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments, preparation of TA, DA bills
- Integrity and values of sports

REFERENCES:
1. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
2. Dyson, G. H. (1963).*The mechanics of athletics*. London: University of London Press Ltd.
3. Singer, R. N. (1972).*Coaching, athletic & psychology*. New York: M.C. Graw Hill.
4. Brar. T. S. (2002). Officiating techniques in Track and Field, Gwalior. Bhargava Press.
5. De Souza A. J. (1999).Track Geography and Field Sites. Chennai. DBAC Sports Envisions.
6. Mortensen, J. and Cooper J. M. (1963). Track & Field for coach & athlete,. Prentice Hall Inc., Englewood Cliffs.

SEMESTER-II
PART – I THEORY PAPERS

Paper	Course Code	Subject	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
V.	CC-201	Yoga Education	68	4	20	80	100
VI.	CC-202	Health Education and Environmental Studies	68	4	20	80	100
VII.	CC-203	Organization and Administration	68	4	20	80	100
Elective Course (Any One)							
VIII.	EC-201	Contemporary issues in Physical Education, Fitness and Wellness	68	4	20	80	100
	EC-202	Sports Nutrition and Weight Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-201	Track and Field (Middle Distance Races, Hurdles, Discus Throw, High Jump)	68	4	40	-	40
	PC-202	Swimming, Gymnastics	68	4	20+20	-	40
	PC-203	Aerobics, Lezium, Indian Clubs,	68	4	40	-	40
	PC-204	Hockey, Volleyball, Handball, Softball,	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-201	(A) General Lesson (B) Theory Lesson	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (General and Theory Lessons) and 05 officiating lessons in schools. The candidate shall prepare a note book covering General and Theory Lessons which shall carry (20+20) 40 marks.

Paper –V (CC-201)
YOGA EDUCATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION
- Meaning and Definition of Yoga
- Aims and Objectives of Yoga
- Yoga in Early Upanisads
- The Yoga Sutra: General Consideration
- Need and Importance of Yoga in Physical Education and Sports

UNIT II: FOUNDATION OF YOGA
- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga

UNIT - III ASANAS
- Effect of Asanas and Pranayama on various system of the body
- Classification of asanas with special reference to physical education and sports
- Influences of relaxtive, meditative posture on various system of the body
- Types of Bandhas and mudras
- Type of kriyas

UNIT IV YOGA EDUCATION
- Basic, applied and action research in Yoga
- Difference between yogic practices and physical exercises
- Yoga education centers in India and abroad
- Competitions in Yogasanas

REFERENCES:
1. Brown, F. Y.,(2000). *How to use yoga*. Delhi:Sports Publication.
2. Gharote, M. L. & Ganguly, H.(1988). *Teaching methods for yogic practices*. Lonawala: Kaixydahmoe.
3. Rajjan, S. M. (1985). *Yoga strengthening of relaxation for sports man.* New Delhi: Allied Publishers.
4. Shankar,G. (1998) *Holistic approach of yoga.* New Delhi:Aditya Publishers.
5. Shekar,K. C., (2003).*Yoga for health*. Delhi: Khel Sahitya Kendra.

Paper –VI (CC-202)
HEALTH EDUCATION AND ENVIRONMENT STUDIES

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

Unit I Health Education

- Concept, Dimensions, Spectrum and Determinants of Health
- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene

Unit II Health Problems in India

- Communicable and Non Communicable Diseases
- Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive Population,
- Personal and Environmental Hygiene for schools
- Objective of school health service, Role of health education in schools
- Health Services Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

Unit III Environmental Science

- Definition, Scope, Need and Importance of environmental studies.
- Concept of environmental education, Historical background of environmental education,
- Celebration of various days in relation with environment.
- Plastic recycling & probation of plastic bag / cover.
- Role of school in environmental conservation and sustainable development.

Unit IV Natural Resources and related environmental issues:

- Water resources, food resources and Land resources
- Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- Management of environment and Govt. policies , Role of pollution control board.

REFERENCES:

1. Agrawal, K.C. (2001). *Environmental biology*. Bikaner: Nidhi publishers Ltd.
2. Beotra, Alka (2001). Drug Education Handbook on Drug Abuse in Sports. Mumbai: Applied Nutrition Sciences.
3. Frank, H. &Walter, H. (1976). *Turners school health education*. Saint Louis: The C.V. Mosby Company.
4. Odum, E.P. (1971). *Fundamental of ecology*. U.S.A.: W.B. Saunders Co.
5. Pande, P. K. (1987). Outline of Sports Medicine, New Delhi : Jaypee Brothers.
6. Roy, Steven and Richard, Irvin (1983). Sports Medicine ,N.J. : Englewood Cliff.
7. Sharma, N.P.(2005). Sharir Rachna Tatha Sharir Kriya Vigyan . New Delhi : Khel Sahitya Kendra.

Paper –VII (CC-203)
ORGANIZATION AND ADMINISTRATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: ORGANIZATION AND ADMINISTRATION

- Meaning and importance of Organization and Administration in physical education.
- Qualification and Responsibilities of Physical Education teacher and pupil leader.
- Planning and their basic principles,
- Program planning: Meaning, Importance, Principles of program planning in physical education.
- Functions of Management: Planning, organizing, staffing, directing, communicating, co-ordination, controlling, evaluating and innovating.

UNIT II: OFFICE MANAGEMENT, RECORD, REGISTER & BUDGET

- Office Management: Meaning, definition, functions and kinds of office management
- Records and Registers: Maintenance of attendance Register, stock register, cash register, physical efficiency record, Medical examination Record.
- Budget: Meaning, Importance of Budget making,
- Criteria of a good Budget, Sources of Income, Expenditure, Preparation of Budget.

UNITIII: FACILITIES, & TIME-TABLE MANAGEMENT

- Facilities and equipment management: Types of facilities; Infrastructure-indoor, out door.
- Playfields: Area, Location, layout and care
- Equipment: Need, importance, purchase, care and maintenance.
- Time Table Management: Meaning, Need, Importance and Factor affecting time table.

UNITIV: COMPETITION ORGANIZATION

- Tournament and its importance.
- Types of Tournament and its organization structure - Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament, consolation tournaments and challenge Tournament.
- Organization structure of Athletic Meet.
- Sports Event Intramurals & Extramural Tournament planning.

REFERENCES:

1. Bucher, C. A. (1985). *Administration of Physical Education and Athletic programme.*St. Lolis: The C.V. Hosby Co.
2. M.L. Kamlesh and M.S. Sangral (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
3. Sharma, V.M. & Tiwari, R.H. (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
4. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press.
5. Tirunarayan and Hariharan (1985). Methods in Physical education M.S C.T. & S. H. Allagappa College of Physical Education, Karaikuddi U.

Paper –VIII (EC-201)
CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I CONCEPT OF PHYSICAL EDUCATION AND FITNESS
- Definition, Aims and Objectives of Physical Education, fitness and Wellness
- Importance and Scope of fitness and wellness
- Modern concept of Physical fitness and Wellness
- Physical Education and its Relevance in Inter Disciplinary Context.

UNIT II FITNESS, WELLNESS AND LIFESTYLE
- Fitness Types of Fitness and Components of Fitness
- Understanding of Wellness
- Modern Lifestyle and Hypo kinetic Diseases Prevention and Management
- Physical Activity and Health Benefits

UNIT III PRINCIPLES OF EXERCISE PROGRAM
- Means of Fitness development aerobic and anaerobic exercises
- Exercises and Heart rate Zones for various aerobic exercise intensities
- Concept of free weight Vs Machine, Sets and Repetition etc
- Concept of designing different fitness training program for different age group.

UNIT IV SAFETY EDUCATION AND FITNESS PROMOTION
- Health and Safety in Daily Life
- First Aid and Emergency Care
- Common Injuries and their Management

REFERENCES:
1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). Sport *medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G. (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

Paper –VIII (EC-202)
SPORTS NUTRITION AND WEIGHT MANAGEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS NUTRITION

- Meaning and Definition of Sports Nutrition
- Basic Nutrition guidelines
- Role of nutrition in sports
- Factor to consider for developing nutrition plan

UNIT II NUTRIENTS: INGESTION TO ENERGY METABOLISM

- Carbohydrates, Protein, Fat Meaning, classification and its function
- Role of carbohydrates, Fat and protein during exercise
- Vitamins, Minerals, Water Meaning, classification and its function
- Role of hydration during exercise, water balance, Nutrition daily caloric requirement and expenditure.

UNIT III NUTRITION AND WEIGHT MANAGEMENT

- Meaning of weight management Concept of weight management in modern era Factor affecting weight management and values of weight management
- Concept of BMI (Body mass index), Obesity and its hazard, Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss
- Obesity Definition, meaning and types of obesity,
- Health Risks Associated with Obesity, Obesity - Causes and Solutions for Overcoming Obesity.

UNIT IV STEPS OF PLANNING OF WEIGHT MANAGEMENT

- Nutrition Daily calorie intake and expenditure, Determination of desirable body weight
- Balanced diet for Indian School Children, Maintaining a Healthy Lifestyle
- Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss

REFERENCES:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6).
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a keycomponent of successful weight loss maintenance.*Obesity(Silver Spring). 15*(12).
3. Chu, S.Y. & Kim, L. J.(2007). Maternal obesity and risk of stillbirth: a metaanalysis. Am J ObstetGynecol, 197(3).
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. N Engl J Med,356(21).
5. Dixon, J.B., & O'Brien, P.E., Playfair, J. (2006). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized.

SEMESTER-III
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
IX.	CC-301	Computer Application in Physical Education	68	4	20	80	100
X	CC-302	Sports Psychology and Sociology	68	4	20	80	100
XI	CC-303	Sports Training	68	4	20	80	100
Elective Course (Any One)							
XII.	EC-301	Sports Medicine, Physiotherapy, and rehabilitation	68	4	20	80	100
	EC-302	Curriculum Design					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-301	Track and Field (Long Distance Races, Javelin Throw, Triple Jump, Steeple Chase)	68	4	40	-	40
	PC-302	Swimming, Gymnastics	68	4	20+20	-	40
	PC-303	Folk Dances	68	4	40	-	40
	PC-304	Cricket, Badminton, Table-Tennis, Lawn-Tennis	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-301	Teaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (Games, Track & Field) and 05 officiating lessons in schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –IX (CC-301)
COMPUTER APPLICATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION TO COMPUTER
- Meaning, need and importance of information and communication technology (ICT). Application of Computers in Physical Education
- Components of computer, input and output device
- Application software used in Physical Education and sports

UNIT II: MS WORD
- Introduction to MS Word
- Creating, saving and opening a document
- Formatting Editing features Drawing table
- Page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes

UNIT III: MS EXCEL
- Introduction to MS Excel
- Creating, saving and opening spreadsheet
- Creating formulas
- Format and editing features adjusting columns width and row height understanding charts.

UNIT IV: MS POWER POINT
- Introduction to MS Power Point
- Creating, saving and opening a ppt. file
- Format and editing features slide show, design, inserting slide number
- Picture, graph, table
- Preparation of Power point presentations

REFERANCES:
1. Irtegov, D.(2004). *Operating system fundamentals*. Firewall Media.
2. Milke, M. (2007). *Absolute beginners guide to computer basics*. Pearson Education Asia.
3. Barrett, R. (2007). Administrator's Guide to Microsoft Office 2007 servers.
4. Eric, L. Einspruch (2005). AN Introductory Guide to SPSS for Windows, Sage.
5. Kilman, Shin (1995). *SPSS GUIDE* Mc Graw – Hill Higher Education.
6. Murray, K. (2007). Faster smarter Microsoft office XP: Take charge of your Microsoft office programme.

Paper –X (CC-302)
SPORTS PSYCHOLOGY AND SOCIOLOGY

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT -I: INTRODUCTION

- Meaning, Importance and scope of Educational and Sports Psychology
- General characteristics of Various Stages of growth and development
- Types and nature of individual differences; Factors responsible -Heredity And environment
- Psycho-sociological aspects of Human behavior in relation to physical education and sports

UNIT-II: SPORTS PSYCHOLOGY

- Nature of learning, theories of learning, Laws of learning,
- Plateau in Learning; & transfer of training
- Meaning and definition of personality, characteristics of personality,
- Dimension of personality, Personality and Sports performance
- Nature of motivation: Factors influencing motivation; Motivation and techniques and its impact on sports performance.
- Mental Preparation Strategies: Attention focus, Self- talk, Relaxation, Imaginary.
- Aggression and Sports, Meaning and nature of anxiety, Kinds of anxiety
- Meaning and nature of stress; Types of stress, Anxiety, Stress, Arousal and their effects on sports performance

UNIT-III: RELATION BETWEEN SOCIAL SCIENCE AND PHYSICAL EDUCATION.

- Orthodoxy, customs, Tradition and Physical Education.
- Festivals and Physical Education.
- Socialization through Physical Education.
- Social Group life, Social conglomeration and Social group, Primary group and Remote group.

UNIT-4 CULTURE: MEANING AND IMPORTANCE.

- Features of culture,
- Importance of culture.
- Effects of culture on people life style.
- Different methods of studying Observation/ Inspection method, Questionnaire method, Interview method

REFERENCES:

1. Ball, D. W. & Loy, J. W. (1975). Sport *and social order; Contribution to the sociology of sport.* London: Addison Wesley Publishing Co., Inc.
2. Kamlesh, M.L. (1998). Psychology in physical education and sport. New Delhi: Metropolitan Book Co.
3. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1981). Sports culture and society. Philadelphia: Lea &Febiger.
4. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sport and social system. London: Addison Wesley Publishing Company Inc.
5. Skinnner, C. E.(1984). Education psychology. New Delhi: Prentice Hall of India.
6. William, F. O.& Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt Ltd.

Paper –XI (CC-303)
SPORTS TRAINING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS TRAINING

- Meaning and Definition of Sports Training ○ Aim and Objective of Sports Training
- Principles of Sports Training
- System of Sports Training Basic Performance, Good Performance and High Performance Training

UNIT II TRAINING COMPONENTS

- Strength Mean and Methods of Strength Development
- Speed Mean and Methods of Speed Development
- Endurance - Mean and Methods of Endurance Development
- Coordination Mean and Methods of coordination Development
- Flexibility Mean and Methods of Flexibility Development

UNIT III TRAINING PROCESS

- Training Load- Definition and Types of Training Load
- Principles of Intensity and Volume of stimulus
- Technical Training Meaning and Methods of Technique Training
- Tactical Training Meaning and Methods of Tactical Training

UNIT IV TRAINING PROGRAMMING AND PLANNING

- Periodization Meaning and types of Periodization
- Aim and Content of Periods Preparatory, Competition, Transitional etc.
- Planning Training session
- Talent Identification and Development

REFERENCES:

1. Bompa, Tudor, O. (1999). Periodisations Training for sports: Human Kinetic (U.S.A).
2. Dick, W. F. (1980). *Sports training principles.*London: Lepus Books.
3. Dick. W. Frank. (1980). *Sports Training Principles*, London: Lepus Birks.
4. Harre . Dictrich. (1982). *Principles of Sports Training*. Beslin : Sportulag.
5. Harre, D. (1982). *Principles of sports training.*Berlin: Sporulated.
6. Singh, Hardyal (1991). *Science of Sports Training*. D, V, S Publications. New Delhi.
7. Uppal, A.K. (1999). S*ports Training.*New Delhi: Friends Publication.

Paper –XII (EC-301)
SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: - SPORTS MEDICINE:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education
- Prevention of injuries in sports Common sports injuries Diagnosis
- First Aid - Treatment - Laceration Blisters Contusion - Strain Sprain Fracture Dislocation and Cramps Bandages Types of Bandages trapping and supports.

UNIT-II: PHYSIOTHERAPY

- Definition Guiding principles of physiotherapy, Importance of physiotherapy, Introduction and demonstration of treatments - Electrotherapy infrared rays Ultraviolet rays short wave diathermy ultrasonic rays.

UNIT-III: HYDROTHERAPY:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast Bath, Whirlpool Bath Steam Bath Sauna Bath Hot Water Fomentation Massage: History of Massage Classification of Manipulation (Swedish System) physiological Effect of Massage.

UNIT-IV: THERAPEUTIC EXERCISE:

- Definition and Scope Principles of Therapeutic Exercise Classification, Effects and uses of Therapeutic exercise passive Movements (Relaxed, Forced and passive - stretching) active movements (concentric, Eccentric and static) application of the therapeutic exercise: Free Mobility Exercise Shoulder, Elbow Wrist and Finger Joints Hips, Knee, ankle and Foot joints Trunk. Head and Neck exercises.

REFERENCES:

1. Christine, M. D. (1999). *Physiology of sports and exercise*.USA: Human Kinetics.
2. Conley, M.(2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005). *Drugs in sports,* (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D.(1979). A *dictionary for physical educators.* In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.
5. Jeyaprakash, C. S. (2003). Sports Medicine, J.P. Brothers Pub., New Delhi.
6. Khanna, G.L. (1990). *Exercise physiology & sports medicine*. Delhi:Lucky Enterprises.
7. Pandey, P.K. (1987). Outline *of sports medicine*, New Delhi: J.P. Brothers Pub.,1987.

Paper –XII (EC-302)
CURRICULUM DISIGN

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I MODERN CONCEPT OF THE CURRICULUM

- Need and importance of curriculum, Need and importance of curriculum development, the role of the teacher in curriculum development.
- Factors affecting curriculum - Social factors - Personnel qualifications - Climatic consideration - Equipment and facilities -Time suitability of hours.
- National and Professional policies, Research finding

UNIT II BASIC GUIDE LINE FOR CURRICULUM CONSTRUCTION; CONTEST (SELECTION AND EXPANSION).

- Focalization
- Socialization
- Individualization
- Sequence and operation
- Steps in curriculum construction.

UNIT III CURRICULUM-OLD AND NEW CONCEPTS, MECHANICS OF CURRICULUM PLANNING.

- Basic principles of curriculum construction.
- Curriculum Design, Meaning, Importance and factors affecting curriculum design.
- Principles of Curriculum design according to the needs of the students and state and national level policies.
- Role of Teachers

UNIT IV Under-graduate preparation of professional preparation.

- Areas of Health education, Physical education and Recreation.
- Curriculum design-Experience of Education, Field and Laboratory.
- Teaching practice.
- Professional Competencies to be developed-Facilities and special resources for library, laboratory and other facilities.

REFERENCES:

1. Barrow, H. M. (1983). *Man and movement: principles of physical education*. Philadelphia: Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby & Company.
3. Cassidy, R. (1986). *Curriculum development in physical education*. New York: Harper & Company.

SEMESTER-IV
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
XIII.	CC-401	Measurement and Evaluation in Physical Education	68	4	20	80	100
XIV.	CC-402	Kinesiology and Biomechanics	68	4	20	80	100
XV.	CC-403	Research and Statistics in Physical Education	68	4	20	80	100
Elective Course (Any One)							
XVI.	EC-401	Theory of Sports and Games	68	4	20	80	100
	EC-402	Sports Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-401	Track and Field (Race Walk, Road Race, Hammer throw, Pole Vault)	68	4	40	-	40
	PC-402	Swimming, Gymnastics	68	4	20+20	-	40
	PC-403	Mass Demonstrations	68	4	40	-	40
	PC-404	Wrestling, Judo, Boxing, Kabaddi (circle Style)	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-401	Coaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each trainee will be required to take a minimum of 10 supervised lessons (Games, Track & Field) and 05 officiating lessons in schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –XIII (CC-401)
MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I INTRODUCTION TO TEST & MEASUREMENT & EVALUATION
- Meaning of Test & Measurement & Evaluation in Physical Education
- Need & Importance of Test & Measurement & Evaluation in Physical Education
- Principles of Evaluation

UNIT-II CRITERIA, CLASSIFICATION AND ADMINISTRATION OF TEST
- Criteria of good Test
- Criteria of tests, scientific authenticity (reliability, objectivity, validity and availability of norms)
- Type and classification of Test
- Administration of test

UNIT- III PHYSICAL FITNESS TESTS
- AAHPER youth fitness test
- National physical Fitness Test
- Indiana Motor Fitness Test
- JCR test

UNIT- IV SPORTS SKILL TESTS
- Lockhart and McPherson badminton test
- Johnson basketball test
- McDonald soccer test
- S.A.I volleyball test

REFERENCES:
1. Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark.
2. Barron, H. M., & Mchee, R. (1997). *A practical approach to measurement in physical education*. Philadelphia: Lea and Febiger.
3. Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi: D.V.S. Publications.
4. Mathews, D.K. (1973). Measurement in physical education, Philadelphia: W.B.Sounders Compnay.

5. Pheasant, S.(1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
6. Phillips, D. A., &Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Willey and Sons.
7. Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

Paper –XIV (CC-402)
KINESIOLOGY AND BIOMECHANICS

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO KINESIOLOGY AND SPORTS BIOMECHANICS

- Meaning and Definition of Kinesiology and Sports Biomechanics
- Importance of Kinesiology and Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- Terminology of Fundamental Movements
- Fundamental concepts of following terms Axes and Planes, Centre of Gravity, Equilibrium, Line of Gravity

UNIT II FUNDAMENTAL CONCEPT OF ANATOMY AND PHYSIOLOGY

- Classification of Joints and Muscles
- Types of Muscle Contractions
- Posture Meaning, Types and Importance of good posture.
- Fundamental concepts of following terms- Angle of Pull, All or None Law, Reciprocal Innovation

UNIT III MECHANICAL CONCEPTS

- Force - Meaning, definition, types and its application to sports activities
- Lever - Meaning, definition, types and its application to human body.
- Newtons Laws of Motion Meaning, definition and its application to sports activities.
- Projectile Factors influencing projectile trajectory.

UNIT IV KINEMATICS AND KINETICS OF HUMAN MOVEMENT

- Linear Kinematics Distance and Displacement, speed and velocity, Acceleration
- Angular kinematics Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.
- Linear Kinetics Inertia, Mass, Momentum, Friction.
- Angular Kinetics Moment of inertia ,Couple, Stability.

REFERENCES:

1. Bunn, J. W. (1972).*Scientific principles of coaching.* Englewood Cliffs, N.J.: Prentice Hall Inc.
2. Hay, J. G. & Reid, J. G.(1982).*The anatomical and mechanical basis of human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
3. Hay, J. G. & Reid, J. G.(1988).*Anatomy, mechanics and human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
4. Hay, J. G. (1970).*The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc. Simonian, C. (1911).*Fundamentalsof sport biomechanics.* Englewood Cliffs, N.J.: Prentice Hall Inc.

Paper –XV (CC-403)
RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO RESEARCH

- Definition of Research
- Need and importance of Research in Physical Education and Sports.
- Scope of Research in Physical Education & Sports.
- Classification of Research
- Research Problem, Meaning of the term, Location and criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations.

UNIT II SURVEY OF RELATED LITERATURE

- Need for surveying related literature.
- Literature Sources, Library Reading
- Research Proposal, Meaning and Significance of Research Proposal.
- Preparation of Research proposal / project.
- Research Report: A group project is to be undertaken by a small batch of students under the supervision of a teacher, wherein it is expected to survey school facilities of physical education, health assessment programme evaluation, fitness status of the students, staff and other stakeholders etc. and submit the report to the institution.

UNIT-III BASICS OF STATISTICAL ANALYSIS

- Statistics: Meaning, Definition, Nature and Importance
- Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables
- Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram

UNIT- IVSTATISTICAL MODELS IN PHYSICAL EDUCATION AND SPORTS

- Measures of Central Tendency: Mean, Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data
- Measures of Variability: Meaning, importance, computing from group and ungroup data
- Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data

REFERENCES:

1. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc. +
2. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
3. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
4. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
5. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
6. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

Paper –XVI (EC-401)
THEORY OF SPORTS AND GAMES

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: GENERAL INTRODUCTION OF SPECIALIZED GAMES AND SPORTS

Athletics, Badminton, Basketball, Cricket, Football, Gymnastic, Hockey, Handball, Kabaddi, Kho-Kho, Tennis, Volleyball and Yoga.

Each game or sports to be dealt under the following heads

○ History and development of the Game and Sports ○ Ground preparation, dimensions and marking ○ Standard equipment and their specifications ○ Ethics of sports and sportsmanship

UNIT-II: SCIENTIFIC PRINCIPLES OF COACHING: (Particular Sports And Game Specific)

○ Motion Types of motion and Displacement, Speed, Velocity, Acceleration, Distance and Newtons Law of motions.
○ Force Friction, Centripetal and Centrifugal force, Principles of force.
○ Equilibrium and its types ○ Lever and its types
○ Sports Training Aims, Principles and characteristics.
○ Training load Components, Principles of load, Over Load (causes and symptoms).

UNIT-III: PHYSICAL FITNESS COMPONENTS: (Particular Sports and Game Specific)

○ Speed and its types
o Strength and its types ○ Endurance and its types
○ Flexibility and its types
○ Coordinative ability and its types
○ Training methods: Development of components of physical fitness and motor fitness through following training methods (continuous method, interval method, circuit method, fartlek /speed play and weight training)

UNIT-IV: CONDITIONING EXERCISES AND WARMING UP

○ Concept of Conditioning and warming up.
○ Role of weight training in games and sports.
○ Teaching of fundamental skill & their mastery (technique, tactic and different phases of skill acquisition).
○ Recreational and Lead up games
○ Strategy Offence and defense, Principles of offence and defense.

REFERENCES:

1. Bunn, J. W. (1968). *The art of officiating sports*. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). *Scientific principles of coaching.* Englewood cliffs N. J. Prentice Hall.
3. Dyson, G. H. (1963). *The mechanics of athletics*. London: University of London Press Ltd.
4. Lawther, J.D. (1965). *Psychology of coaching.* New York: Pre. Hall.
5. Singer, R. N. (1972). *Coaching, athletic & psychology*. New York: M.C. Graw Hill.

Paper –XVI (EC-402)
SPORTS MANAGEMENT

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I

- Nature and Concept of Sports Management.
- Progressive concept of Sports management.
- The purpose and scope of Sports Management.
- Essential skills of Sports Management.
- Qualities and competencies required for the Sports Manager.
- Event Management in physical education and sports.

UNIT-II

- Meaning and Definition of leadership
- Leadership style and method.
- Elements of leadership.
- Forms of Leadership.
    - Autocratic
    - Laissez-faire
    - Democratic
    - Benevolent Dictator
- Qualities of administrative leader.
- Preparation of administrative leader.
- Leadership and Organizational performance.

UNIT-III

- Sports Management in Schools, colleges and Universities.
- Factors affecting planning ○ Planning a school or college sports programme.
- Directing of school or college sports programme.
- Controlling a school, college and university sports programme.
    - Developing performance standard
    - Establishing a reporting system
    - Evaluation
    - The reward/punishment system

UNIT-IV

- Financial management in Physical Education & sports in schools, Colleges and Universities.
- Budget Importance, Criteria of good budget,
- Steps of Budget making
- Principles of budgeting

REFERENCES:

1. Ashton, D. (1968).Administration of physical education for women.New York: The Ronal Press
2. Bucher, C.A. (1978). Administration of physical education and athletic programme. 7th Edition, St. Louis: The C.V. Mosby Co.
3. Daughtrey, G. & Woods, J.B. (1976). Physical education and intramural programmes, organisation and administration. Philadelphia U.S.A. : W.B. Sounders Cp.
4. Earl, F. Z,& Gary, W. B. (1963).Management competency development in sports and physical education. Philadelphia: W. Lea and Febiger.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) FIRST YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2018-2019

(SEMESTER : FIRST AND SECOND)

i.e

First Semester : November/December, 2018
Second Semester : April/May, 2019

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SCHEME FOR OPTING SUBJECTS
B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM)
EXAMINATION, 2018-2019

B.A. (General) 1st Year (Semester System) study programme consists of three compulsory subjects and three elective subjects :

Compulsory subjects :

(a) Punjabi
OR
History & Culture of Punjab

(b) English

(c) Environment, Road Safety Education, Violence against Women/Children and Drug Abuse ***

Elective Subjects : A student is required to take up 3 elective subjects in all, selecting *not more than one subject* from any of the following sets of combinations. :

1. English, Hindi, Punjabi, ** Bengali, Urdu, Persian, ** Tamil, French,** Arabic, Russian, German, ** Kannada, ** Malayalam, ** Telugu.
2. Economics, Defence & Strategic Studies, Fine Arts, Education, Adult Education, History of Art.
3. History, Mathematics.
4. Public Administration, Home Science, Gandhian Studies, Philosophy.
5. Political Science, * Statistics, Applied Statistics; Indian Classical Dance, Human Rights and Duties.
6. Sanskrit, Physical Education, Ancient Indian History, Culture & Archaeology, Psychology, Geography.
7. Computer Science, Agriculture, Sociology.
8. Music (Instrumental), Women's Studies, Music (Tabla), Environment Conservation, Religious and Sikh Studies
9. Music (Vocal), Police Administration, Journalism & Mass Communication.

Note: *The students can opt. only two elective subjects from the following :*
Music (Instrumental), Music (Vocal), Music (Tabla) and Indian Classical Dance.

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* Statistics can be opted only with Mathematics

** The Syllabus of Tamil, Telugu, Kannada, Malayalam, Arabic & Bengali Languages are **kept in abeyance**

*** This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

10. ** *Elective Vocational Subject (one of the following) :* *Pre-requisite subject at +2 level*

1.	Mass Communication –Video Production	Any
2.	Functional English	English
3.	Advertising, Sales Promotion & Sales Management	Any
4.	Foreign Trade, Practices and Procedures	Preferably with Economics or Commerce
5.	Office Management & Secretarial Practice	Any
6.	Computer Applications	Preferably Computer
7.	Functional Hindi	Hindi
8.	Tax Procedures & Practices	Accountancy/Business Studies
9.	Principles and Practice of Insurance	Any
10.	Information Technology	Any
11.	Fashion Designing	Any
12.	Early Childhood Care & Education	Any

**A student who opts for Computer Science as an Elective subject shall not take up Computer Applications/Information Technology as Elective Vocational subject and vice-versa.

Note :- Syllabus for the Subject at Sr. No. 1 is not framed.

FOR B.SC. (GENERAL) CANDIDATES :

(Besides the compulsory subject, a student shall offer any three elective subjects)

A	*Elective Vocational Subject*	*Other Two Elective Subjects*	*Pre-requisite subjects at +2 level*
1.	Clinical Nutrition Dietetics	Chemistry, Physics & Botany	PCB*
2.	Bio-Technology	Chemistry, Botany or Zoology	PCB
3.	Seed Technology	Botany, Chemistry	PCB
4.	Industrial Fish & Fishery	Zoology, Chemistry	PCB
5.	Instrumentation	Physics, Mathematics	PCM
6.	Mass Communication Video Production	Any two Science Subjects	Any
7.	Electronic Equipment Maintenance **(Kept In Abeyance)**	Physics, Chemistry/Maths.	PCM
8.	Computer Applications	Any two Science Subjects	Preferably Computer
9.	Industrial Chemistry	Chem., Maths./Botany/Zoology	PCM/B
10.	Industrial Microbiology	Chemistry and Botany or Zoology	PCB
11.	Food Science & Quality Control **(Kept In Abeyance)**	Chemistry and Botany/Zoology	PCB
12.	Information Technology	Any	Any

B			
13.	Bioinformatics, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
14.	Biotechnology, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
15.	Electronics : Physics + Electronics +Mathematics	:	PCM
	OR		
	Chemistry + Electronics + Computer Science		
16.	1. Agriculture, Botany & Zoology	:	PCB
	2. Agriculture, Biotechnology, Botany/Zoology	:	PCB
	3. Agriculture, Microbiology, Chemistry/Botany/Zoology	:	PCB
	4. Agriculture, Chemistry, Physics/Botany/Zoology	:	PCB

* P stands for Physics, C stands for Chemistry, B for Biology and M for Mathematics.
** B for Botany.
*** Z for Zoology

Note :- Syllabus for the Subject at Sr. No. 1, 3, 4, 5 and 6 are not framed.

Guidelines for continuous internal assessment (10%) for regular students of Under-Graduate courses (semester system):

Criteria for Internal Assessment:

(i)	Class test	=	5%
(ii)	Academic Activities (Seminar, Project, Assignment)	=	3%
(iii)	Attendance	=	2%

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be proportionately be increased to maximum marks of the paper in lieu of internal assessment.

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) i.e. FIRST SEMESTER NOVEMBER/DECEMBER 2018 AND SECOND SEMESTER APRIL/MAY 2019, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – I

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Text Prescribed :

English at Work, (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 1-4
Prose Chapters = 1-4

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type questions from Prose in not more than 100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Paragraph Writing (Descriptive and Narrative) ***One*** out of ***three*** to be attempted **05 marks**

Q.5. Comprehension of passage from Prose text **05 marks**

Q.6 Grammar - Voice, Determiners, Modals, Antonyms **10 marks**

Q.7. Translation from Vernacular to English. ***Four*** out of ***Six*** sentences (only tense based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ENGLISH (Compulsory)

SEMESTER – II

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Text Prescribed :

English at Work (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 5-8
Prose Chapters = 5-8

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type question from Prose in not more than100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Letter Writing (Personal only) **05 marks**

Q.5. Grammar : Narration, Preposition, Conjunctions, Synonyms **10 marks**

Q.6 Comprehension of Unseen Passage **05 marks**

Q.7. Translation from Hindi to English. ***Four*** out of ***six*** sentences (only idiom based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ਪੰਜਾਬੀ (ਲਾਜਮੀ)

ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਲੇਖ ਰਚਨਾ 10 ਅੰਕ
3. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਾਵਿ-ਸੁਮੇਲ**, (ਸੰਪਾਦਕ) ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ ।
(ਹਰਭਜਨ ਸਿੰਘ ਹੁੰਦਲ ਅਤੇ ਹਰਭਜਨ ਸਿੰਘ ਰੈਨੂ ਸਿਲੇਬਸ ਵਿਚ ਨਹੀਂ ਹਨ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਕਾਵਿ-ਸੁਮੇਲ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 5 ਅੰਕ

(ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਂਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋਂ ਇਕ) 5+5= 10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਪ੍ਰਸ਼ਨਾ ਵਿਚੋਂ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1= 5 ਅੰਕ

3. ਲੇਖ ਰਚਨਾ (500 ਸ਼ਬਦਾਂ ਵਿਚ) ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ 10 ਅੰਕ
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ

5. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 6 ਅੰਕ

(i) ਵਿਆਕਰਨ : ਵਿਆਕਰਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹਤੱਵ ਤੇ ਤੱਤ (ਵਾਕ ਪ੍ਰਬੰਧ, ਰੂਪ ਪ੍ਰਬੰਧ, ਧੁਨੀ ਪ੍ਰਬੰਧ ਤੇ ਲਿਖਤ ਪ੍ਰਬੰਧ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ) (ਦੋ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨਾ ਹੈ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ) 2+2= 4 ਅੰਕ

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਭਾਗ ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁਲ ਅੰਕ: 50
ਲਿਖਤੀ ਅੰਕ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ — 10 ਅੰਕ
3. ਮੁਹਾਵਰੇ — 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਥਾ ਕਹਾਣੀ**, (ਸੰਪਾਦਕ) ਡਾ ਧਨਵੰਤ ਕੌਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਕਥਾ ਕਹਾਣੀ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 4+6= 10 ਅੰਕ

   (ਅ) ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚ ਸੰਮਲਿਤ ਕਹਾਣੀਆਂ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਣ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ

2. ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ।) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 5×1= 5 ਅੰਕ

3 ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ ਲਿਖਣਾ (ਸਾਹਿਤਕ, ਸੱਭਿਆਚਾਰਕ ਤੇ ਖੇਡ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ) — 10 ਅੰਕ

4 ਮੁਹਾਵਰੇ : ਅਰਥ ਦਸ ਕੇ ਵਾਕ ਬਣਾਉਣੇ (ਸੱਤ ਵਿਚੋਂ ਕੋਈ ਪੰਜ ਕਰਨੇ) (ਮੁਹਾਵਰੇ ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ਵਿਚੋਂ ਹੀ ਪੁੱਛੇ ਜਾਣ) — 5 ਅੰਕ

5 ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ

(i) ਧੁਨੀ ਤੇ ਧੁਨੀ ਗ੍ਰਾਮ : ਧੁਨੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੰਡੀ ਤੇ ਅਖੰਡੀ ਧੁਨੀਆਂ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ)
ਪੰਜਾਬੀ ਸਵਰ ਧੁਨੀਆਂ ਤੇ ਵਿਅੰਜਨ ਧੁਨੀਆਂ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ । (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ , 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ' , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ' , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ' , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3= 9 ਪੀਰੀਅਡ ।

HISTORY AND CULTURE OF PUNJAB

(For B.A. Candidates Only)

B.A. (General) 1st SEMESTER EXAMINATION

Paper: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO PRE-MAURYAN PERIOD

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 06 marks

   Explanatory Note : 04 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper I:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives : To introduce the students to the history of the Early History of the region.

Pedagogy : Lectures, library work and discussions.

Unit-I

I. Ancient Punjab : Physical features; impact on history.

II. Historical Sources : Literary; archaeological.

III. Harappan Culture : Extent and town planning.

Unit-II

IV. Harappan Culture : Social, Economic and Religious life; causes of disappearance.

V. Rig Vedic Age : The rise of Indo Aryans; main features of life in the early Vedic Age.

VI. Later Vedic Age : Political, Social, Economic and Religious life of later Vedic Aryans.

Unit-III

VII. Caste System : Origin and evolution.

VIII. The Epics : Historical importance of Ramayan and Mahabharat.

IX. Political Condition on eve of Alexander's invasion.

Unit-IV

X. Impact of Alexander's invasion on social and cultural life.

XI. Position of women : Harappan, early Vedic and later Vedic Age.

XII. Important Historical places of Punjab : Mohenjodaro, Harappa, Kotla Nihang Khan, Sanghol, Banawali, Taxila, Indraprastha, Hastinapur, Kurukshetra, Srinagar, Purusapura, Sakala.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

Note : The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.

(b) Ward of/and Defence Personnel and Central Government Employee/Employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(For B.A. Candidates Only)

B.A. (General) 2nd SEMESTER EXAMINATION

Paper : HISTORY AND CULTURE OF PUNJAB FROM MAURYAN TIMES TO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. One question from Unit IV shall be set on the map.

Explanation :

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

5. The distribution of marks for the map question would be as under :

Map	:	06 marks
Explanatory Note	:	04 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

6. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives : To introduce the students to the history of the early history of the region.

Pedagogy : Lectures, library work and discussions.

Unit-I

I. The Mauryan Empire : Social, Economic and religious life.

II. Buddhism and Jainism : Impact on Punjab with special reference to 4th Buddhist Council.

III. The Kushanas : Impact of Kanishka's rule on Punjab.

Unit-II

IV. Gandhara School of Art : Salient features..

V. The Guptas : Cultural and scientific developments.

VI. Position of Women : Under the Mauryas, the Guptas and the Vardhanas.

Unit-III

VII. Depiction of Punjab in the accounts of Chinese travelers. Fahien and Hwen Tsang.

VIII. Main developments in literature.

IX. Education : Significant developments; Taxila.

Unit-IV

X. Society and Culture on the eve of the Turkish invasion of Punjab.

XI. Punjab in the Kitab-ul-Hind of Alberuni.

XII. Important Historical places : Lahore, Multan Bathinda, Uchh, Jalandhar, Thanesar, Kangra, Taxila, Kundalvana, Pehowa, Thatta.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

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(a) That the students have not studied Punjabi upto class 10th.

(b) Ward of/and Defence Personnel and Central Government employee/employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(All Candidates other than B.A.)

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Life in Vedic Age: socio-economic and religious;
3. Growth of Jainism and Buddhism in Panjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Guptas
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development- Manji, Masand, Sangat and Pangat
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur and its impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions - rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab):
    Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. And Das,M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, Delhi 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of/and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

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HISTORY AND CULTURE OF PUNJAB
(All Candidates other than B.A.)
SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES
INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab; Board of Administration.
2. Western Education: Growth of Education and rise of middle classes.
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of print technology; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising of 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal- Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP (physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuswant : A History of the Sikhs, vol I: 1469-1839, oxford University Press, Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das, M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Environment, Road Safety Education, Violence against Women/Children and Drug Abuse

SEMESTER II

Part - I (Environment)

Note: *The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.*

1. **Environment Concept :**
Introduction, concept of biosphere—lithosphere, hydrosphere, atmosphere; Natural resources—their need and types; principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. **Atmosphere :**
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. **Hydrosphere :**
Types of aquatic systems. Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. **Lithosphere :**
Earth crust, Soil—a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. **Forests :**
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. **Conservation of Environment :**
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems—soil, water, air, wildlife, forests.

7. **Management of Solid Waste :**
Merits and demerits of different ways of solid waste management—open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. **Indoor Environment :**
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. **Global Environmental Issues :**
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. **Indian Laws on Environment :**
Indian laws pertaining to Environmental protection : Environment (Protection) Act, 1986; General information about Laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. **Biodiversity :**
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. **Noise and Microbial Pollution :**
Pollution due to noise and microbes and their effects.

13. **Human Population and Environment :**
Population growth and family welfare programme, Human Health, HIV/AIDS, Human rights.

14. **Social Issues :**
Environmental Ethics : Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. **Local Environmental Issues :**
Environmental problems in rural and urban areas, Problem of Congress grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practicals:

Depending on the available facility in the college, a visit to Vermicomposting units or any other such non-poluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern :

A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deducation for wrong answer or unattempted question), and of 1 hour duration.

The students have to obtain 33% marks to quality the paper. The marks are not added/included in the final mark sheet.

Part - II (Road Safety Education)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination : 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

Part - III (Violence against Women / Children)

1. **Concept and Types of Violence:** Meaning and Definiton of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. **Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:**

Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376(A), 376B, 376C, 376D and 376E;
Cruelty - Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve- teasing. These are Sections 294, 354 and 509 of Indian Penal Code. Section 509 of the Indian Penal Code defines (Word, gesture or act intended to insult the modesty of a women), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty).
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. **Protective Laws for Women:**

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. **Protective Provisions of IPC regarding Sexual Violence against Children:**

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305(abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 **The Protection of Children from Sexual Offences Act, 2012:** An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women*, New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/HRLNIndia/a-life-free-from-violence
http://hrln.rg/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

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Part – IV (Drug Abuse: Problem, Prevention and Management)

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three years of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.

- A visit to drug de-addiction centre could also be undertaken

Course Content

UNIT I: Problem of Substance/Drug Abuse

a) Concept and overview : What are drugs? Meaning of use, misuse and abuse of drugs. Misuse of prescription drugs with special emphasis on antibiotics and steroids. Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: Tobacco. Amphetamines: dl-amphetamine(Benzedrine®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®). Benzodiazepenes: diazepam (Valium®), alprazolam (Xanax®), flunitrazepam (Rohypnol®).

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: Cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3,4-methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: Cough/Cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and Correction fluid (whitener).

UNIT II: Causes and consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristics and features of proneness. Signs and symptoms of drug abuse. Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of Drug De-addiction Centres. Role of family, school and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). *Drugs and Drugs Policy: The control of consciousness alterartion.* New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). *Drug epidemic among Indian Youth*, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
4. Ahuja, R (2003). *Social problems in India*, Rawat Publications, Jaipur
5. *2003 National Household survey of Alcohol and Drug Abuse*. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. *World Drug Report*, (Updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. *The Narcotic Drugs and Psychotropic substances Act,* 1985. (New Delhi: Universal, 2012).
9. Government of India (2015). *Scheme of assistance for prevention and alcoholism and substance (drugs) abuse and for social defence services-Guidelines.* Ministry of social Justice and Empowerment. New Delhi.
10. NCERT (2010). Training Resource Materials (Adolescence Education Programme)

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ENGLISH (Elective)

SEMESTER –I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Units from **Fluency in English** Ed., Promodini Verma**,** Mukti Sanyal, Tulika Prasad, New Delhi: Macmillan India, 2009 (**the prescribed text)** are recommended for **First Semester:**

Units: 1, 3, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17

Literary Terms: Ballad, Sonnet, Ode, Lyric, Elegy, Dramatic Monologue, Interior Monologue, Blank Verse, Free Verse, Mock-Epic, Metaphysical Conceit, Negative Capability, Egotistical Sublime, Fancy, Imagination, Irony, Paradox, Ambiguity, Alliteration, Assonance, Imagery.

Testing Pattern:

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do five in not more than 50-60 words. (15 marks)

Q.2. The examiner will set twelve short questions (to be answered in not more than 30-40 words) from **Fluency in English (the prescribed text),** out of which a student shall be expected to attempt any *ten.* (15 marks)

Q.3. The examiner shall give two passages from the anthology **Fluency in English** along with five questions. The students shall be expected to attempt only one passage of the two. In other words, this question shall have internal choice. This question shall test the comprehension, critical acumen and the presentation skills of a student. (15 marks)

Section -B

Q.4. Letter Writing (Official) (10marks)

Q.5. Applied Grammar:

(a) Voice, Direct/Indirect, Transformation of Sentences (simple, complex, compound) (15 marks)

(b) Articles, Preposition, Conjunctions (10 marks)

Q.6. Vocabulary:

Antonyms/Synonyms, Use of words/phrases in sentences (10 marks)

ENGLISH (Elective)

SEMESTER –II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Essays, Stories and Plays from the prescribed book **'A Collection of Essays, Short Stories & One Act Plays,** Ed., R.K Kaushik & S.C. Bhatia, New Delhi, OUP, 2006. (**Included in Section -A**) are recommended for **Second Semester:**

Essays 1-6
Stories 1-6
Plays 1-4

Literary terms/concepts*: Prose, Essay, Expository Essay, Analytical /Argumentative Essay, Lyrical Essay, Descriptive Essay, Imaginative Essay, Philosophical Essay, Short Story, Long Story, Drama, Dramatic Plot, Character, Incident, Setting, Structure, Tragedy, Comedy, Tragi-comedy*

Testing Pattern:

Q. 1. Literary terms/concepts (Five out of Eight) (15 marks)

Q. 2. Ten short questions to be attempted out of fourteen, based on **A Collection of Essays, Short Stories and One Act Plays'** (each to be answered in not more than 30-40 words.) (15 marks)

Q. 3. Long questions *five out of seven*, again based on **A Collection of Essays, Short Stories and One Act Plays' (**each to be answered in not more than 100-120 words) . (15 marks)

Section -B

Q. 4. Paragraph Writing (based on outline, a situation, a string of questions etc.) (15 marks)

Q. 5. Applied Grammar-

(a) Corrections (10 marks)
(b) Use of the same words as different parts of speech (10 marks)

Q. 6. Translation from Vernacular into English (10 sentences only) (10 marks)

OR

(For foreign students, a paragraph on any one of the two given topics, preferably, proverbs or idioms**)**

हिन्दी (ऐच्छिक)
सेमेस्टर-1

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1 कवितालोक :

सं. डॉ. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित।

इन चार कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई है-

कबीर, रैदास, गुरुनानक देव, सूरदास।

(क) 5-5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होंगी। कुल 4 संदर्भ पूछे जाएँगे। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल 2 प्रश्न पूछे जाएँगे। अंक : 06

इस खंड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछे जायेंगे। उत्तरों की शब्द-सीमा 200 होगी।

2 सजीव कहानियाँ :

सं. डॉ. लक्ष्मीचन्द्र खुराना, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित। निम्नलिखित सात कहानियाँ पाठ्यक्रम में हैं :-
शतरंज के खिलाड़ी, ममता, अशिक्षित का हृदय, मौत के मुँह में, व्याय मंत्री, गुलाब, सभ्य-असभ्य।

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी। कुल 4 व्याख्याएँ पूछी जाएँगी। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। इस खंड में कथावस्तु, चरित्र-चित्रण एवं उद्देश्य से संबंधित कुल दो प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की शब्द-सीमा 200 तक होगी। अंक : 06

3 तीन-तीन अंकों के तीन लघु-उत्तरापेक्षी प्रश्न करने होंगे। अंक : 09

कुल 6 प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की सीमा 50 शब्दों तक होगी। ये प्रश्न इस पत्र के पूर्वोक्त दो खंडों (कवितालोक एवं सजीव कहानियाँ) पर आधारित होंगे।

4 हिन्दी-साहित्य का इतिहास : अंक : 07

आदिकाल (अपभ्रंश साहित्य को छोड़कर) से निम्नलिखित शीर्षकों पर आधारित प्रश्न पूछे जाएँगे।

आदिकाल का नामकरण, काल-सीमा, परिस्थितियाँ, प्रवृतियाँ और पृथ्वीराज रासो तथा बीसलदेव रासो का परिचय।

7 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगे। (शब्द-सीमा 200)

5 वस्तुनिष्ठ प्रश्न अंक : 10

इस पत्र के पूर्वोक्त तीनों खंडों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगे।

6 समीक्षा सिद्धान्त : अंक : 07

कहानी :- परिभाषा, तत्त्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगे। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200)

7 व्यावहारिक व्याकरण : अंक : 20

(क) विपरीतार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ख) समानार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ग) शब्द-शोधन और वाक्य-शोधन (सात में से पाँच करने होगे।) 5 अंक

(घ) वाक्यांश के लिए एक शब्द (सात में से पाँच करने होगे।) 5 अंक

8 परिभाषिक शब्दावली (सलग्न शब्दावली) अंक : 5

कुल आठ में से पाँच के उतर देने होगे।

9 आंतरिक मूल्यांकन : अंक : 10

सहायक पुस्तकें :

हिन्दी साहित्य का इतिहास : कुसुम वर्मा

निर्देश : छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होगे।

पारिभाषिक शब्दावली

	A	
1.	Abbreviation	संक्षिप्ति
2.	Absence	अनुपस्थिति, गैरहाजिरी
3.	Accommodation	आवास
4.	Advice	परामर्श, सलाह, सूचना, संज्ञापन
5.	Allegiance	निष्ठा
6.	Alteration	परिवर्तन, हेर-फेर
7.	Amendation	संशोधन
8.	Appendix	परिशिष्ट
9.	Assistant	सहायक
10.	Attendance	उपस्थिति, हाजिरी
	B	
11.	Basic pay	मूल वेतन
12.	Birth Date	जन्म तिथि, जन्म की तारीख़
13.	Block	खंड, ब्लाक
14.	Board	बोर्ड, मंडल
15.	Break in Service	सेवा में व्यवधान
16.	By Hand	दस्ती
	C	
17.	Cancel	रद्द करना
18.	Clarification	स्पष्टीकरण
19	Closing Balance	अंत-शेष, रोकड़ बाकी
20.	Committee	समिति
21.	Competence	सक्षमता
22	Conference	सम्मेलन
23.	Confirmation	पुष्टि
24.	Consolidated fund	समेकित निधि
25.	Conveyance allowance	वाहन भत्ता
26.	Corruption	भ्रष्टाचार
27.	Covering letter	सहपत्र

	D	
28.	Dealing Assistant	संबंधित सहायक
29.	Dearness Allowance	मंहगाई भत्ता
30.	Department	विभाग
31.	Deputy Secretary	उपसचिव
32.	Dissent	विसम्मति, विमति, (विधि), अहसमति
33.	Duplicate	अनुलिपि, दूसरी प्रति
34.	Duration	अवधि
35.	Duty	ड्यूटी, काम, कार्य, कर्त्तव्य, भार, शुल्क
	E	
36.	Encashment	भुनाना, तुड़ाना
37.	Entry	प्रविष्टि, इंदराज, प्रवेश
38.	Evidence	साक्ष्य, गवाही, प्रमाण
39.	Expert	विशेषज्ञ
40.	Export	निर्यात
41.	Extract	उद्धरण
	F	
42.	Fitness Certificate	स्वस्थता प्रमाणपत्र, योग्यता प्रमाणपत्र
43.	Fresh Receipt (F.R.)	नई आवती
44.	Further Action	आगे की कार्रवाई, अगली कार्यवाही
	G	
45.	General Manager	प्रधान प्रबंधक, महाप्रबंधक
46.	General Meeting	साधारण सभा, साधारण बैठक
47.	Grant-in-aid	सहायता-अनुदान
48.	Guidance	मार्गदर्शन, निर्देशन
	H	
49	Head Clerk	प्रधान लिपिक, हैड कलर्क
50.	Head of Account	लेखा-शीर्ष
51.	Head office	प्रधान कार्यालय
52.	Head Quarter	मुख्यालय
53.	Holiday	अवकाश

I

54.	Immediate officer	आसन्न अधिकारी
55.	Import	आयात
56.	Increment	वेतन-वृद्धि
57.	Inquiry	पूछताछ, जाँच
58.	Inspector	निरीक्षक
59.	Instruction	अनुदेश, हिदायत
60.	Instructor	अनुदेशक
61.	Interpretation	निर्वचन, व्याख्या
62.	Intimation	प्रज्ञापन, सूचना, इत्तिला
63.	Investigation	अन्वेषण, तफतीश, जाँच-पड़ताल
64.	Irrelevant	असंबद्ध, विसंगत
65.	Issue	(संज्ञा) निर्गम, प्रश्न, मसला, (क्रिया) जारी करना, भेजना, देना

J

66.	Job	नौकरी, जाँच, कार्य
67.	Joining Date	कार्यग्रहण-तारीख, कार्यारम्भ-तारीख
68.	Joint Secretary	संयुक्त सचिव

L

69.	Labour Welfare	श्रम-कल्याण
70.	Leave Salary	छुट्टी का वेतन
71.	Leave Vacancy	अवकाश-रिक्ति
72.	Length of Service	सेवाकाल

हिन्दी (ऐच्छिक)
सेमेस्टर-2

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1. कवितालोक :

सं. डा. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित ।
इन तीन कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई हैं
मीरांबाई, तुलसीदास, गिरिध्र कविराय

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी । कुल 4 व्याख्याएँ पूछी जाएँगी। अंक-10
(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल 2 प्रश्न पूछे जाएँगे। अंक-06

इस खण्ड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछें जायेंगे। उतर की शब्द सीमा 200 होगी।

2. झांसी की रानी- वृंदावनलाल वर्मा, मयूर प्रकाशन, झांसी । अंक-16

नामकरण, कथावस्तु, चरित्र-चित्रण, उद्देश्य के आधर पर चार समीक्षात्मक प्रश्न पूछे जाएँगे, जिनमें से 8 अंको के कोई दो प्रश्न करने होंगे। (शब्द- सीमा 200-250)

3. हिन्दी साहित्य का इतिहास :
भक्तिकाल :- निम्न शीर्षकों पर आधारित 2 प्रश्न पूछें जाएँगें। एक का उतर देना होगा। (शब्द-सीमा 200) अंक-08
भक्तिकाल की परिस्थितियाँ, सन्तकाव्य, प्रेमाख्यानकाव्य, रामकाव्य और कृष्ण काव्य की विशेषताएँ, कबीर, जायसी, तुलसी और सूरदास

4. वस्तुनिष्ठ प्रश्न अंक-10
इस पत्र के पूर्वोक्त तीनों खण्डों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उतर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5. समीक्षा सिद्धान्त
उपन्यास:-परिभाषा, तत्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगें। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200) अंक-07

6. मुहावरे और लोकोक्तियाँ (सात में से पाँच के उतर देने होंगे।) अंक-10

7. निर्धारित विषय पर अनुच्छेद-लेखन (तीन में से एक प्रश्न करना होगा।) अंक-10

8. निजी पत्र-लेखन (दो में से एक प्रश्न करना होगा) अंक-08

9. पारिभाषिक शब्दावली-(संलग्न शब्दावली) अंक-05

आंतरिक मूल्यांकन अंक-10

निर्देश :-छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।

	M	
1..	Management	प्रबंध
2.	Medical	चिकित्सा
3.	Medical Leave	चिकित्सा-छुट्टी
4.	Medical Officer	चिकित्सा-अधिकारी
5.	Messenger	संदेशवाहक
6.	Ministry	मंत्रालय, मंत्रिमंडल
7.	Modification	संशोधन, रूपांतर
8.	Most Immediate	अति-तात्कालिक
	N	
9.	Nationality	राष्ट्रीयता
10.	Necessary Action	आवश्यक कार्रवाई
11.	Negligence	उपेक्षा, प्रमाद, गफलत
12.	No-Objection	अनापत्ति
13.	Non-Official	गैर-सरकारी, अशासकीय
	O	
14.	Obedience	आज्ञापालन, आज्ञानुवर्तन
15.	Objection	आपत्ति
16.	Offence	अपराध
17.	Offer	प्रस्ताव
18.	Office	कार्यालय, दफतर, पद
19.	Office Copy	कार्यालय-प्रति, दफतर की प्रति
20.	Office Hours	कार्यालय-समय
21.	Office Order	कार्यालय-आदेश
22.	Officer	अधिकारी, अफसर
23.	Officer-in-charge	प्रभारी अधिकारी
24.	Officiating	स्थानापन्न
25.	Option	विकल्प
26.	Original Copy	मूल प्रति
27.	Outstanding	बकाया
28.	Overtime	समयोपरि, अतिरिक्त समय
	P	
29.	Part Time	अंशकालिक
30.	Pay	वेतन

31.	Payment	अदायगी
32.	Penalty	दंड, अर्थ-दंड, जुर्माना
33.	Pending	अनिर्णीत पड़ा हुआ, रूका हुआ, लंबित
34.	Pension	पेंशन
35.	Planning	योजना, योजना बनाना
36.	Proceedings	कार्यवाही
37.	Proposal	प्रस्ताव
38.	Publicity	प्रचार
39.	Postpone	स्थगित करना, मुल्तवी करना
	Q	
40.	Qualification	अर्हता, योग्यता
41.	Quarterly	त्रैमासिक
	R	
42.	Rectification	परिशोधन
43.	Reference	संदर्भ, निर्देश, हवाला
44.	Remark	विचार, अभ्युक्ति
45.	Remuneration	पारिश्रमिक, मेहनताना
46.	Renewal	नवीनीकरण
47.	Revenue	राजस्व
	S	
48.	Satisfactory	संतोषजनक
49.	Scrutiny	संवीक्षा
50.	Seal	मुद्रा, मोहर
51.	Secret	गुप्त, गुप्त बात
52.	Security	प्रतिभूति, सुरक्षा
53.	Seniority	वरिष्ठता
54.	State Government	राज्य सरकार
55.	Stores	सामान, सामग्री, भंडार
56.	Summary	सारांश, संक्षेप
57.	Superintendent	अधीक्षक
58.	Supervisor	पर्यवेक्षक
	T	
59.	Target	लक्ष्य
60.	Technical	तकनीकी
61.	Testimonial	शंसापत्र
62.	Tour	दौरा
63.	Training	प्रशिक्षण
64.	Translation	अनुवाद

65.	Travelling Allowance	यात्रा-भत्ता
	U	
66.	Under Secretary	अवर-सचिव
67.	Unemployment	बेकारी, बेरोजगारी
68.	Unofficial Letter	अशासकीय पत्र
69.	Up-to-date	अद्यतन
	V	
70.	Verification	सत्यापन
71.	Violation	अतिक्रमण
	W	
72.	Waiting list	प्रतीक्षा-सूची
73.	Warning	चेतावनी
74.	Working days	कार्य-दिवस, काम के दिन
75.	Working Hours	कार्य-समय, काम के घंटे
76.	Working Knowledge	कार्य-साधक-ज्ञान
77.	Write off	बट्टे-खाते डालना
	Z	
78.	Zone	जोन, अंचल

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਜਨਰਲ ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ : 100
ਲਿਖਤੀ : 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 10
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ	25 ਅੰਕ
2.	ਪੰਜਾਬੀ ਇਕਾਂਗੀ	25 ਅੰਕ
3.	ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ)	20 ਅੰਕ
4.	ਭਾਸ਼ਾ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	10 ਅੰਕ
5.	ਸਾਹਿਤ ਦੇ ਰੂਪ	10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਬਾਵਾ ਬਲਵੰਤ, ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ, ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ, ਡਾ. ਜਗਤਾਰ)

2. **ਛੇ ਦਰਸ਼ਨ**, ਸੰਤ ਸਿੰਘ ਸੇਖੋ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ। ('ਨਿਸ਼ਾਂਤ ਬਾਗ ਵਿੱਚ' ਇਕਾਂਗੀ ਨੂੰ ਛੱਡ ਕੇ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	**(ੳ)**	'**ਨਕਸ਼ ਨੁਹਾਰ**' ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	**10 ਅੰਕ**
	(ਅ)	'ਛੇ ਦਰਸ਼ਨ' ਇਕਾਂਗੀ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
2.	(ੳ)	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
	(ਅ)	ਇਕਾਂਗੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ)	10 ਅੰਕ
3.	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		2 x 5=10 ਅੰਕ
4.	**ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਕਵਿਤਾ, ਨਾਟਕ ਤੇ ਇਕਾਂਗੀ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		5 x 4=20 ਅੰਕ
5.	ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਮਹਤੱਵ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ
6.	ਸਾਹਿਤ ਦੇ ਰੂਪ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਤੱਤ ਕਵਿਤਾ, ਗੀਤ, ਗ਼ਜ਼ਲ, ਇਕਾਂਗੀ, ਨਾਵਲ, ਕਹਾਣੀ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ **ਨੋਟ** : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਵਲ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਆਲੋਚਨਾ — 10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਪਾਸ਼, ਸੰਤ ਰਾਮ ਉਦਾਸੀ, ਸੁਰਜੀਤ ਪਾਤਰ, ਜਸਵੰਤ ਦੀਦ, ਨਵਤੇਜ ਭਾਰਤੀ, ਸੁਖਵਿੰਦਰ ਅੰਮ੍ਰਿਤ, ਦਰਸ਼ਨ ਬੁਲੰਦਵੀ, ਜਸਵਿੰਦਰ, ਸੁਖਪਾਲ)
2. **ਦੁਆਬਾ,** ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਨਕਸ਼ ਨੁਹਾਰ ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਦੁਆਬਾ ਨਾਵਲ ਵਿਚੋਂ ਪ੍ਰਮੁੱਖ ਘਟਨਾਵਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਵਲ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ)
   (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਵਲ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਨਾਵਲ, ਕਹਾਣੀ ਤੇ ਸਫ਼ਰਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : — 10 ਅੰਕ
   (ੳ) ਧੁਨੀ ਸੰਪਰਦਾਇ (ਅ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ)
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)
6. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਤੱਤ — 10 ਅੰਕ
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪੱਤੀ ਤੇ ਵਿਕਾਸ, ਡਾ. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕ੍ਰਿਪਾਲ ਸਿੰਘ ਕਸੇਲ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
5. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.) 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
6. ਜੱਗੀ, ਰਤਨ ਸਿੰਘ (ਡਾ.). ਸਾਹਿਤ ਦੇ ਰੂਪ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
8. ਸ਼ੈਰੀ ਸਿੰਘ ਤੇ ਬ੍ਰਹਮ ਜਗਦੀਸ਼ (ਪ੍ਰੋ.), ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
9. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

संस्कृत (इलैक्टिव)
सेमेस्टर–1

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT - I

(क) **अपरीक्षितकारकम्** (1-4 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) **नीतिशतकम्** (1-25 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

UNIT – II

(ग) **व्यावहारिक संस्कृत शब्दावलीः** शरीरांग, फल एवं सब्जियाँ सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. अगूंठा-अङ्गुष्ठः	2. आँख-चक्षुः, लोचनम्, नेत्रम्, नयनम्	3. अंगुली-अङ्गुलिः
4. ओठ-ओष्ठः	5. कमर-श्रोणिः, कटिः	6. कलाई-मणिबन्ध:
7. कान-कर्णः, श्रोत्रम्	8. गर्दन-ग्रीवा	9. घुटना-जानुः
10. जीभ-जिह्वा, रसना	11. दाँत-दन्तः, दशनः	12. नाक-घ्राणम्, नासिका
13. पेट-कुक्षिः, उदरम्	14. बांह-बाहुः, भुजः	15. भौं-भ्रूः

16. माथा-ललाटम्
17. शरीर-गात्रम्, शरीरम्
18. अंगूर-द्राक्षा
19. अमरूद-आम्रलम्
20. आम-आम्रम्
21. काजू-काजवम्
22. किशमिश-शुष्कद्राक्षा
23. खजूर-खर्जूरम्
24. जामुन-जम्बूफलम्
25. तरबूज-तारबूजम्
26. खरबूजा-खर्बुजम्
27. नारियल-नारिकेलम्
28. लीची-लीचिका
29. सेव-सेवम्
30. अंजीर-अंजीरम्
31. नारंगी-नारंगम्
32. बेल-बिल्वम्, श्रीफलम्
33. बेर-बदरीफलम्
34. मेवा-शुष्कफलम्
35. आलू-आलुः
36. ककडी-कर्कटी
37. करेला-कारवेल्लम्
38. गोभी-गोजिह्वा
39. टमाटर-रक्ताङ्गम्
40. टिंडा-टिंडिशः
41. धनिया-धान्यकम्
42. पालक-पालकीर्ः
43. प्याज-पलाण्डुः
44. वैंगन-वंगनः
45. भिंडी-भिंडकः
46. मिर्च-मरीचम्
47. मूली-मूलकम्
48. लहसून-लशुनम्
49. शलगम-श्वेतकन्दः
50. साग-शाकः

UNIT-III

(घ) वर्णों के उच्चारण स्थान **4x1=4अंक**

(ङ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

अत्र, तत्र, कुत्र, यत्र, अन्यत्र, सर्वत्र एकत्र, इतः, ततः, कुतः, कदा, तदा, यदा, सदा, तथा, यथा

(च) संख्या (गणना) वाची शब्द (1 से 50 तक (पाँच शब्द) **5x1=5अंक**

(छ) सामान्य- ज्ञान - तिथि, नक्षत्र, योग, करण, वार **5अंक**

(ज) स्वर सन्धि (पाँच सन्धियाँ प्रष्टव्य) **5x1=5अंक**

UNIT-IV

(झ) शब्दरूप : राम, लता, फल, मुनि, मति, नदी (दो शब्दरूप प्रष्टव्य) **2x4=8अंक**

(ञ) धातुरूप : पत, गम, पठ्, क्रीड, वद्, पा (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में, दो धातुरूप प्रष्टव्य) **2x4=8अंक**

UNIT-V

(ट) हिन्दी से संस्कृत में अनुवाद (5 वाक्य) **5x1=5अंक**

सहायक पुस्तकें – 1. अपरीक्षितकारकम्(विष्णुशर्मा)। 2. नीतिशतकम् (भर्तृहरि)। 3. शीघ्रबोध, चौखम्बा, वाराणसी।

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संस्कृत (इलैक्टिव)
सेमेस्टर–2

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) अपरीक्षितकारकम् (5-8 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) नीतिशतकम् (26-50 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

(ग) व्यावहारिक संस्कृत शब्दावली : पशु, पक्षी एवं वनस्पति सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. ऊँट-उष्ट्रः	2. खरगोश-शशकः	3. गधा-गर्दभः, खरः
4. गाय-गौः	5. गीदड़-श्रृगालः	6. गैंडा-गण्डकः
7. घोड़ा-अश्वः, घोटकः	8. चूहा - मूषकः	9. छिपकली-ललन्तिका
10. नेवला-नकुलः	11. बन्दर-वानरः, कपिः	12. बकरा-अजः
13. बिल्ली-मार्जारी	14. बैल-बलदः, बलीवर्दः, वृषभः	15. भैंस-महिषी
16. शेर-सिंहः	17. हाथी-गजः, दन्ती, करी	18. हिरन-मृगः, हरिणः, कुरंगः
19. उल्लू-उलुकः, कौशिकः	20. कबूतर-कपोतः, पारावतः	21. कोयल-कोकिलः

22. कौवा-काकः	23. गीध-गृधः	24. चकवा-चक्रवाकः
25. चिड़िया-चटका	26. तोता - शुकः	27. पपीहा-चातकः
28. बगला-बकः	29. बतख-वर्तकः, वर्तिका	30. बाज-श्येनः
31. मोर-मयूरः	32. मुर्गा-कुक्कुटः	33. हंस-हंसः
34. सारस-सारसः	35. आंवला-आमलकी	36. आम(वृक्ष)-आम्रः
37. जामुन (वृक्ष)-जम्बूः	38. नारियल (वृक्ष)-नारिकेलः	39. नीम-निम्बः
40. पीपल-अश्वत्थः	41. बेल (वृक्ष)-बिल्वः	42. गुलाब-स्थलपद्मम्
43. कमल-कुवलयम्, पुण्डरीकम्, पद्मम्	44. गेंदा-गन्धपुष्पम्	45. चमेली-मालती
46. चम्पा-चम्पकः	47. पराग-मकरन्दः	48. रात की रानी-रजनीगन्धा
49. पत्ता-पत्रम्, पर्णम्	50. लता-व्रततिः, वीरुत्	

(घ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

कथम्, अद्यः, श्वः, ह्यः, परश्वः, सद्यः, पुरतः, पृष्ठतः, वामतः, दक्षिणतः, नीचै, उच्चैः, बहिः, अन्तः

(ङ) संख्या (गणना) वाची शब्द (51 से 100 तक) पाँच शब्द **5x1=5अंक**

(च) सामान्य- ज्ञान (राशि, मास, ग्रह एवं दश दिशाओं के नाम) **5अंक**

(छ) शब्दरूप : गुरु, पितृ, मातृ, भवत्, अस्मद्, युष्मद् (दो शब्दरूप प्रष्टव्य) **2x5=10अंक**

(ज) धातुरूप : लिख्, नी, दृश्, भू, त्यज्, स्मृ धातु (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में दो धातुरूप प्रष्टव्य) **10अंक**

(झ) हिन्दी से संस्कृत में अनुवाद (10 वाक्य) **5x2=10अंक**

सहायक पुस्तकें – अपरीक्षितकारकम् (विष्णुशर्मा)। नीतिशतकम् (भर्तृहरि)। शीघ्रबोध, चौखम्बा वाराणसी।

URDU (Elective)

SEMESTER - I

Essay and Composition:

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Essay 30 marks

Unit-II

Letter/ Application 20 marks

Unit-III

Mutazad Alfaz, Mutaradif Alfaz, Wahid aur Jama, Tazkeer-o-Taanees 20 marks

Unit-IV

Muhaware, Correction of words/ sentences 20 marks

Books Recommended:

1. Guldasta-e- mazameen -Insha pardazi Part II by Dr. Arif Mohd. Khan, published by Educational Book House, AMU Market, Aligarh.
2. Urdu Qaedah-mae- Intekhaab Nasar-o-nazm by Dr. Haroon Ayub.

URDU (Elective)

SEMESTER - II

Prose and Poetry

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Explanation of Prose Passages from : 30 marks
Urdu Zuban Hamari, Mirza Ghalib ki Seerat, Darogha ki Panchon Ghee mein, Nasooh ki Bimari.

Unit-II

Explanation of Ghazal verses from : 20 marks
Muhammed Valiullah Vali, Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Faiz Ahmed Faiz, Raghupati Sahay Firaq Gorakhpuri, Jigar Moradabadi.

Unit-III

Explanation of Nazm verses from : 20 marks
Ajanta, Taj Mahal, Kashmir, Shikast-e-zindan ka khwab, Dastan Shahzade ke ghayab hone ki, Farzi latifa, Ek chehlum par, Clerk.

Unit-IV

Summary of poem or a lesson from prose and poetry (given in Unit I & III) 20 marks

Books Prescribed

Urdu Nisab Part II, published by Educational Book House, A.M.U. Market, Aligarh.

PERSIAN (Elective)

Note : There will be one paper in each Semester i.e. 1st and 2nd Semester of 90 marks each and Internal Assessment 10 marks each Semester for the session of 2018 -19 .

SEMESTER-I

Paper-A – Prose:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Translation of two passages into English, Urdu, Punjabi, Hindi or Persian. (Out of three question 2 have to be attempted)	Marks: 30
2.	Explanation of Hikayat or Intekhab into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the Hikayat from Gulistan-e-Saadi into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the authors.	Marks: 20

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. Complete Prose section.
   Hafiz Maulavi Mohd. Ayyub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Ilahabad.

PERSIAN (Elective)

SEMESTER-II

Paper-B – Poetry:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Explanation of poems into English, Urdu, Punjabi, Hindi or Persian (Out of three poems comprising five Ashaar two have to be attempted)	Marks: 30
2.	Explanation of the theme of the poem into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the poem into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the poets.	Marks: 20

Only the following poems from the book Guldasta-ye-Farsi:

(1) **انتخاب از سعدی**

شنیدم که در وقت نزع روان
شنیدم که دا رای فرخ تبار
مشتاقی وصبوری از حد گزشت یارا

(2) **غزلیات حافظ**

دوش وقت سحرا از غصه نجاتم دادند
دل می رود زدستم صاحب دلان خدار

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. From Hissa-ye-Nazm.
   Hafiz Maulavi Mohd. Ayub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Allahabad.

FRENCH (Elective)

SEMESTER - I

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. — 20 marks

2. Comprehension of an unseen text (easier than the prescribed textbook). Ten questions to be put and answered in French. — 10 marks

3. Translation from English into French and from French into English of a passage or short sentences based on the vocabulary of the prescribed textbook. — 10+10 marks

4. Questions on applied grammar, including conjugation of verbs in applied form, pertaining to the text book. — 30 marks

5. Write a dialogue of 150 words on the topics covered in the syllabus. — 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 1-6) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Semester.

2. All questions are to be asked and answered in French (except questions on translation).

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (Elective)

SEMESTER – II

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 70 marks
Internal Assessment : 10 marks
Viva : 20 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. 20 marks

2. Comprehension of an unseen text. Ten questions to be put and answered in French. 10 marks

3. Questions on applied grammar, including conjugation of verbs in applied form pertaining to the text book. 30 marks

4. Write an essay/composition of 150 words on any topic covered in the syllabus 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 7-8) Version Originale-2 (Units 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie, Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Year.

2. All questions are to be asked and answered in French

Viva:	**20 marks**
Reading	10 marks
Seen	05 marks
Unseen	05 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory**.**
2. The theory paper would be proportionately marked out of 80 as there is no internal assessment.

GERMAN (Elective)

SEMESTER – I

Summary

Max. Marks	:	100 marks(Total)
Paper-A (Theory)	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 1-15 upto page 78 (5 questions) : 50 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1": Chapters 1-15 upto page 78 (3 out of 4 questions to be attempted) : 20 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 20 marks

i. Gefunden (Goethe)
ii. Da ich ein Knabe war (Hölderlin)
iii. Sehnsucht (Eichendorff)

Internal Assessment : 1**0 marks (Total)**

- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 1-15 upto page 78.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary Book:

"Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 1-15.

GERMAN (Elective)

SEMESTER –II

Summary

Max. Marks	:	100 marks(Total)
End-Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) Examination	:	30 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 16-30 (5 questions) : 30 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1" : Chapters 16-30 (3 out of 4 questions to be attempted) : 15 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 15 marks

i. Die Lorelei (Heine)
ii. Sommerbild (Hebbel)
iii. Abendlied (Keller)

Oral (viva-voce) Examination : 30 marks (Total)

i. Easy conversation in German
ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : 10 marks (Total)

i. Continuous Evaluation
ii. Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 16-30.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary book:

i. "Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 16-30.

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RUSSIAN (Elective)

SEMESTER - I

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks	**:**	**100**
Theory	**:**	**90 marks**
Internal Assessment (For regular students)	**:**	**10 marks**
Maximum Time	**:**	**3 hrs.**

1. Translation from simple Russian into English/Hindi/Punjabi (about 120 words) **15 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 100 words). **15 Marks**

3. Simple applied grammar: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

4. Questions on prescribed texts in Russian: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

5. Composition (One out of three) on the following topics: **15 Marks**
   1. My family. 2. My day. 3. Our class. 4. Working day.

6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper: **15 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi.(Lessons 1-15)

Books recommended for additional reading

1. A. K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.

2. S. Khavronina: Russian in Exercise,1978.

3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.

4. Dictionaries : English -Russian dictionary.
   Russian -English dictionary.

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RUSSIAN (Elective)
SEMESTER - II

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks : 70
Theory : 60 marks
Internal Assessment : 10 marks
(For regular students)
Maximum Time : 3 hrs.

1. Translation from simple Russian into English/Hindi/Punjabi (about 80 words) **10 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 75 words). **10 Marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) (Covered in Lessons 16-31, Wagner) **12 Marks**

4. Questions on prescribed texts in Russian: 4 questions out of 6 (2 marks each) (Covered in Lessons 16-31, Wagner) **08 Marks**

5. Composition (One out of three) on the following topics: **10 Marks**
   1. Our city. 2. Our flat. 3. An evening party. 4. Birthday.

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper: **10 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 16-31)

Books recommended for additional reading

1. A.K.Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S. Khavronina: Russian in Exercise,1978.
3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.
4. Dictionaries: English -Russian dictionary.
   Russian -English dictionary.

Oral/ Practical **Maximum Marks: 30**

Reading of text(s) and conversation in simple Russian.

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 6-31)

SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabus for B.A.(GENERAL)
FIRST YEAR (SEMESTER SYSTEM) SYLLABUS has been
KEPT IN ABEYANCE

PHYSICAL EDUCATION

SEMESTER-I

THEORY :

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks, i.e two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Education :

- Meaning and concept of Education

Physical Education :

- Meaning and definition of Physical Education, its aim and objectives.
- Need and importance of Physical Education in the Modern Society and its relationship with other subjects.

History of Physical Education :

- Pre and Post Independence Development of Physical Education in India.

UNIT-III 12 Marks

Olympic Games, Asian Games & Common Wealth Games :

- Ancient Olympic Games.
- Modern Olympic Games.
- Asian Games; and
- Common Wealth Games.

UNIT-IV 12 Marks

Sports Schemes, National Institutions of Sports and National and International Governing Bodies of Olympic Games :

- Raj Kumari Amrit Kaur Coaching Scheme.
- Netaji Subash National Institute of Sports, Patiala (NSNIS, Patiala).
- Sports Authority of India (SAI).
- Indian Olympic Association (IOA).
- International Olympic Committee (IOC).

UNIT-V 12 Marks

Basics of Handball :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna Awardees of the game.

References :

1. Barrow, H. M. (1983) : *"Man and Movements : Principles of Physical Education",* Philadelphia, Lea and Febiger.
2. Brar, R.S. Walia, R., Gill, M., Kanwar, S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of physical education"* Kalyani Publisher, Ludhiana, Punjab.
3. Bucher, C. A. (1979) : *"Foundations of Physical Education,"* St. Louis C.V. Mosby Company.
4. Chauhan, S.S. (1985) : *"Advanced Educational Psychology",* New Print-India Pvt. Ltd., Sahibabad, U.P.
5. Khan, E. A. (1964) : *"History of Physical Education,"* Scientific Book Company.

6. Murti K. & Ram, P. N. (1990) : *"Educational Dimensions of Physical Education",* 2nd Revised Edition, Print India, New Delhi.

7. Moslon (1976) : *"The Olympian",* Olympic House, Canada.

8. Puni, A.T. (1980) : *"Sports Psychology",* An abridged Translated by G.S.Sandhu, NIS, Patiala.

9. Sharma, P.D. (1996) : *"Olympics : Athens to Atlanta, 1896-1996",* Friends Publications (India) Delhi.

10. Sheldon, W.H. (1940) : *"The Varieties of Human Physique",* New York, Harper and Row Publishers.

11. Singh, Ajmer et al (2000) : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana.

12. Skinner, C. E. (1964) : *"Educational Psychology",* 4th edition, Prentice Hall of India Pvt. Ltd.

13. Narayanan T. C. and Hariharan S. (1975) : *"An Analytical History of Physical Education",* South India Press, Karaikudi.

PRACTICAL

Max. Marks : 35
Practical : 30
Internal Assessment : 05

ATHLETICS

Sprints (Types of Start and Finish) :

(a) Crouch start-fixing of starting blocks, getting in and off the block, emphasizing on body position, need of starting blocks in a sprint race.

(b) Practice of starts with starting blocks using proper commands.

(c) Training the students for correct running style.

(d) Practice of Finishing the sprint with different techniques.

(e) Rules and Regulations of Sprint races.

Middle Distance, Long Distance and Walking Events :

(a) Marking of standard tracks, width of lanes and starting points for various races.
(b) Practical of Standing Start.
(c) Correct running and walking style, emphasis on proper body position and foot placement.
(d) Running tactics.
(e) Rules of competition.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under :

Athletics 15 marks, participation and achievement in Athletics 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover, in the absence of proper facilities required for the events mentioned above may prove to be injurious/ fatal to the students.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher /class for each semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

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PHYSICAL EDUCATION

SEMESTER-II

THEORY

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is **compulsory.** It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks i.e., two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Cell:

- Meaning and definition of Anatomy & Physiology, Structure and Functions of a cell.

Skeletal System :

- Meaning and functions of skeletal system.
- Types of Bones and names of various bones of the body.

Muscular System :

- Introduction of Muscular system, structure and function of muscular system.
- Effect of short and long duration physical Exercise on the muscular system.

UNIT-III 12 Marks

Warming up, Cooling down and Physical Fitness :

- Warming up and cooling down in sports and its singnificance
- Meaning, definition and components of Physical Fitness.
- Influence of age, sex, body composition, diet, climate, exercise and training on Physical Fitness.

Kho-kho:

- History of the game
- Basic fundamentals
- Equipment and specifications
- Marking/layout of court
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play); and
- Major tournaments and Arjuna Awardees of the game

UNIT-IV 12 Marks

Health & Health Education :

- Meaning and definition of health.
- Meaning, definition, objectives, scope, principles and importance of Health Education.
- Personal hygiene, its meaning and importance.

First Aid :

- Meaning and importance of First Aid in Physical Education and Sports with special reference to Drowning, Dislocation of a joint, Fracture of bone, Sprain and Strain.

UNIT-V 12 Marks

Biological Basis of Physical Education :

- Growth and Development, Differences between growth and development.
- Factors affecting growth and development.
- Heredity and Environment and its effects on Growth and Development.
- Various stages of growth and development.

References :

1. Brar, R.S. Walia, R., Gill, M., Kanwar,S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of Physical Education"* Kalyani Publisher, Ludhiana Punjab.
2. Chaurasia, B.D. (1981) : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition.
3. Dandiya, P.C., Jafer, Z., Y.K. & Afifa J. (1996) : *"Health Education and Community Pharmacy",* Vallabh Prakashan, Pitampura, New Delhi.
4. Marley, W.P. (1982) : *"Health and Physical Fitness",* CBS College Publishing.
5. Mathews, D.K. and Fox, E.L. (1976) : *"The Physiological Basis of Physical Education & Athletics*", Second Edition, W.B. Saunders Co., Philadelphia.
6. Park, J.E. & Park, K. (1985) : *"Text Book of Preventive and Social Medicine",* 10th Edition, Banarasi Dass Bhanot, Jabalpur, India.
7. Rose & Wilson (1981) : *"Foundations of Anatomy and Physiology",* 5th Edition.
8. Sampath, K. & Maheshwar B.U. (1999) : *"Human Anatomy & Physiology",* First Edition, Birla Publications, Delhi.
9. Dinshaw, S.F. (1997) : *Fighting fit for ever.* The Marine Sports Publishing Division, Bombay.
10. Shaphard, R.J. (1978) : *"The Fit Athlete",* Oxford University Press.
11. Larry, S.G. (1982) : *Essential of exercise physiology.* Surjeet Publications, Delhi, First Indian Print.
12. Singh, Ajmer et. al. (2000) : *Modern text book of physical education, health and sports,* Kalyani Publishers, Ludhiana.
13. Wilmore, J. H. (1997) : *"Athletic Training and Physical Fitness",* Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Messachusetts.

PRACTICAL

Max. Marks : 35
Practical : 30 marks
Internal Assessment : 05 marks

Games :

Note : Volleyball or Kabaddi (NS) and any one game of the choice of the student (other than the two) which should be confined to the list of games approved by the Association of Indian Universities.

Volleyball

(a) Measurements (volleyball court, net, poles, antenna and ball).
(b) Number and position of players and officials.
(c) Types of service (under arm service, side arm service and tennis service).
(d) Types of passes (under hand and over head pass).
(e) Rules of the game.

OR

Kabaddi (NS)

(a) Measurements (Kabaddi court for men and women).
(b) Number of players and officials.
(c) Fundamental offensive skills, touching with hand, leg thrust, front kick, side kick, Mule kick, jump and dive counter.
(d) Defensive Skill (wrist catch, normal grip, ankle catch, knee catch and chain formation).
(e) Tactics : (a) getting bonus point (b) counter to bonus line crossing (c) Delaying tactics for getting lona.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under : Games 15 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. The choice of games by the students shall be confined to the list of games approved by the Association of Indian Universities.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher/class semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

EDUCATION

SEMESTER – I

PAPER : EDUCATION AND SOCIETY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV and; 75 words for each short answer type question in Unit V) for answer.

Objectives :

To enable the students to understand :

1. The Meaning, Nature and Scope of Education along with its types.
2. Functions of Education in light of its aims.
3. Role of Education viz-a-viz present day needs.

Course Contents :

UNIT-I : (a) Meaning and Nature of Education : Education as a Socio-Political Process and Developmental Process.
(b) Informal, Formal and Non-Formal Education.

UNIT-II : (a) Aims of Education – Individual, Social, Vocational and Democratic.
(b) Functions of Education – Individual Development, Transmission of Cultural Heritage and Education for Social Change.

UNIT-III : (a) Education for Democratic Citizenship.
(b) National Integration and International Understanding.

UNIT-IV : (a) Value Education –Meaning of Values, their Development
(b) Transactional Strategies.

Books Recommended :

1. Bhatia, K.K. and Narang, C.L. : *Teacher and Education in Emerging Indian Society,* Tandon Publishers, Ludhiana, 2002.
2. Bhatia, K.K. and Sharma, S. : *Bhartiya Shiksha Ki Adhunik Samasyaein,* Parkash *et al* Bros., Ludhiana, 1986.
3. Bhatnagar, Suresh : *Kothari Commission Recommendations and Evaluation with a Text on National Policy on Education,* Loyal Book Depot, Meerut, 1982.
4. Govt. of India : *National Policy on Education,* Ministry of Human Resource Development, New Delhi, 1986.
5. Govt. of India, Ministry of Education : *Report of Education Commission (1964-66)—Education and National Development.*
6. Govt. of India, Ministry of Education : *Report of Secondary Education Commission* (1952-53), New Delhi.
7. Gupta, S.P. : *Sikhya de Sidhant ate Takneekan,* Hans Book Depot, Faridkot, 1989.
8. Kansal, M.R. : *Sikhya de Sidhant,* Punjab State University Text Book Board, Chandigarh.
9. Mathur, S. S. : *Shiksha Sidhant,* Vinod Pustak Mandir, Agra, 1981.
10. Sharma, T.R. : *Sikhya de Sidhant,* Punjabi University, Patiala.
11. Safaya, R.N. : *Principles and Techniques of Education,* Dhanpat Rai & Sons, Jallandhar.
12. Yadav, H. S. et al : *Adhunik Bhartiya Smaj Mein Shiksha,* Tandon Publishers, Ludhiana, 1995.
13. Yadav & Yadav : *Education in the Emerging Indian Society,* Tandon Publications, Ludhiana.

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EDUCATION
SEMESTER – II

PAPER : EDUCATION AND HUMAN DEVELOPMENT

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV; and 75 words for each short answer type question in Unit V) for answer.

Objectives :

To make the students understand :

1. The meaning, scope and uses of psychology in education.
2. Human growth and development upto the stage of childhood.
3. Meaning, purpose of learning and factors influencing learning.
4. The concept of intelligence - its meaning and measurements.
5. Causes and significance of individual differences.

Course Contents :

UNIT-I : (a) *Educational Psychology :* Meaning, Nature and Scope.
(b) Individual Differences – Causes, Significance and Educational Implications.

UNIT-II : (a) Nature of Human Growth and Development – Physical, Mental, Emotional and Social.
(b) *Stages of Human Development :* Infancy and Childhood, their Needs, Significance and Problems.

UNIT-III : (a) *Learning :* Meaning and Definition.
(b) Theories of Learning - Trial and Error by Thorndike and Classical Conditioning by Pavlov.

UNIT-IV : (a) *Intelligence :* Meaning, Types
(b) Measurement of Intelligence.

Books Recommended :

1. Aggarwal, J.C. : *Essentials of Educational Psychology,* Vikas Publishing House, Private Ltd., New Delhi, 1995.
2. Bhatia, H.R. : *A Textbook of Educational Psychology,* Asia Publishing House, New Delhi, 1977.
3. Bhatnagar, S. : *Shiksha Manovigyan,* International Publishing House, Meerut, 1977.
4. Dhingra, R. : *Educational Psychology and Guidance,* Punjab Katab Ghar, Jallandhar.
5. Kagan, J. and Lang, C. : *Psychology and Education,* Harcourt Brace Jovanovich, Inc., New York, 1978.
6. Kundu, D. : *Modern Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1974.
7. Kuppuswamy, B. : *Advanced Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1994.
8. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
9. Mathur, S.S. : *Educational Psychology,* Vinod Pustak Mandir, Agra, 1998.
10. Sandhu, I.K. and Kaur, A. : *Shikhya Manovigyan,* Punjabi University, Patiala, 1976.
11. Walia, J. S. : *Foundations of Educational Psychology,* Paul Publishers, Jallandhar, 2001.

ADULT EDUCATION

SEMESTER-I

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	03Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 9 marks each. Unit V will consist of **6** short answer type questions which will cover the entire syllabus uniformly and will carry 9 marks in all. Each short question will carry 1½ marks comprising 6 question.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of 8 in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question.

OBJECTIVES OF THE COURSE :

The main objectives of the paper are :

1. To introduce students with meaning, scope and components of adult education.
2. To provide an overview of history of adult education.
3. To equip students with objectives, strategies and implementation of National Literacy Mission's Programs.
4. To acquaint students with structuring of teaching – learning environment for an adult learner.
5. To explain to students the various forms of Adult Education.

THEORY :-

UNIT-I : *Adult Education :* Concept, Meaning, Brief History during Post-Independence Period.

UNIT-II : Scope and Components of Adult Education i.e. Literacy, Numeracy, Awareness and Functionality.

UNIT-III : *National Literacy Mission :* Objectives, Strategies and Implementation.

UNIT-IV : Sakshar Bhart Mission- Objectives Strategies and Implementation.

PRACTICAL/ FIELD WORK:

Participation of the students in the following and preparation of Project Report :

Survey of the Village/Area : General information regarding the village; its Economic, Social and Cultural Activities : Needs and Problems.

The break up of 50 marks allotted to practical is as under :	*External*	*Internal*
(i) Viva-Voce	15 marks	
(ii) Written questions based on the Project	10 marks	5
(iii) Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended:

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*
5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*
6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.
7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.
9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.
10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.
11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.
12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.
13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

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ADULT EDUCATION

SEMESTER-II

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	3 Hours

UNIT-I : *Structuring Teaching Learning Environment for Adult Learners :* Identification of Areas. Survey of the Community, Identification of Learners.

UNIT-II : Campaign for enrolment of Adult Learning, enrolment of the learners and day-to-day functioning of Adult Education Centre, Involvement of Community & Developmental Agencies.

UNIT-III : Various forms of Adult Education i.e. Social Education, Community Education.

UNIT-IV : Basic Education and Life Long Education.

PRACTICAL/FIELD WORK :

Participation of the students in the following and preparation of Project Report :

1. Preparation of profile of the area.
2. Organization of Adult Education Centres for Basic Literacy Development.

The break up of 50 marks allotted to practical is as under :

		External	*Internal*
(i)	Viva-Voce	15 marks	
(ii)	Written questions based on the Project	10 marks	5
(iii)	Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended :

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*

5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*

6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.

7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.

8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.

9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.

10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.

11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.

12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.

13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

MUSIC (Vocal)

SEMESTER – I

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section of Practical Class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**

6. The candidate can take vocal music along with Instrumental Music/Tabla.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)				45 Marks
PRACTICAL (20 minute's duration)				45 Marks
(i)	Choice & Viva	:	35 Marks	
(ii)	Harmonium	:	05 Marks	
(iii)	Tabla	:	05 Marks	
Internal Assessment (Theory + Practical) (05+05)				10 Marks
			Total :	**100 Marks**

THEORY

Unit-I

1. Bhatkhande Notation System in Modern Period.
2. Elementary knowledge of Raga
3. Different Jaties of Ragas of ***the Present Raga System*** of North Indian Music

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words): Shruti, Swara (Shudh & Vikrit), Saptak, Alankar
2. Life sketch and contribution of Pandit V.N. Bhatkhande.
3. Sangeet: (Definition and Importance)

Unit-III

1. Brief description of Tanpura.
2. Definitions and types of Khayal.

Unit-IV

1. Notation & b r i e f d escription of Ragas prescribed in the course with Alap and Taans:- Alhaiya Bilawal, Bhopali
2. Notation & Description of Talas prescribed in the course:- Teentala, Dadra (Single & Double)

NOTE :- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: - Alhaiya Bilawal, Bhopali
2. One Sargamgeet in any of the prescribed ragas
3. Ability to play Dadra Tala on Tabla
4. Ability to recite bols of the tala prescribed in the course in Thah and Dugun by hand:-Teen tala, Dadra
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swaras and sing alongwith it.
6. Ability to sing national Anthem

Books Recommended:

1.	Sangeet Bodh	:	Paranjpe, Shartchandra Shridhar.
2.	Sangeet Shastra Vigyan	:	Panna Lal Madan.
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	Sangeet Sar Part (I)	:	Mrs. Veena Mankaran
5.	Raga Vigyan, Part I to IV	:	Pt. V.N. Patwardhan.
6.	Hamare Sangeet Ratan	:	Sangeet Karayalaya, Hathras.
7.	Sangeetanjali Part I to IV	:	Pt. Onkar Nath Thakur.
8.	Kramik Pustak Mallika Part I to III	:	Pt. V.N. Bhatkhande.
9.	Raag Parichay Part I,II,III	:	Sh. H.C. Srivastav.
10.	Sangeet Kaumudi Part II	:	V.S. Nigam.
11.	Sangeet Shastra Darpan Part II	:	Shanti Goverdhan.

MUSIC (Vocal)

SEMESTER-II

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto10 students in one section of Practical Class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**
6. The candidate can take vocal music along with Instrumental Music/Tabla.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
(i) Choice & Viva :	35 Marks
(ii) Harmonium :	05 Marks
(iii) Tabla :	05 Marks
Internal Assessment (Theory + Practical) (05 + 05) :	10 Marks

THEORY

Unit-I

1. Knowledge of Bhatkhande Thaat Paddhati
2. Study of Naad
3. Various developments (in brief) in the History of North Indian Music of Modern Period.

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words):

   Matra, Avartan, Sam, Tali, Khali, Vibhag, Aroh, Avaroh

2. Elementary knowledge of the Gun Dosh of Gayak

Unit-III

1. Elementary knowledge of the Laya & Taal in Music
2. Brief life sketch and contributions of : Pt. Vishnu Digambar Paluskar.

Unit-IV

Notation and Description of the prescribed Ragas and Talas :-

1. To write one drut khyal in each of the following ragas:- Yaman, Kafi with Alap and Taans
2. To write one bada khyal in any raga of the syllabus with Alap and Taans
3. To write the notation of Talas:- Ektal, Kehrwa.
4. To write the description of ragas of the syllabus

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Tala.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas : -Yaman, Kafi
2. One Vilambit Khayal in any of the prescribed Ragas.
3. Ability to play Teen Tala on Tabla
4. Ability to recite bols of the talas prescribed in the course in Thah and Dugun by hand:- Ek tal, Kehrwa
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swars and sing along with it.

Books Recommended:

1.	*Sangeet Bodh*	:	Paranjpe, Shartchandra Shridhar.
2.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	*Sangeet Sar Part (I)*	:	Mrs. Veena Mankaran.
5.	*Raga Vigyan, Part I to IV*	:	Pt. V.N. Patwardhan.
6.	*Hamare Sangeet Ratan*	:	Sangeet Karayalaya, Hathras.
7.	*Sangeetanjali Part I to IV*	:	Pt. Onkar Nath Thakur.
8.	*Kramik Pustak Mallika Part I to III*	:	Pt. V.N. Bhatkhande.
9.	*Raag Parichay Part I,II,III*	:	Sh. H.C. Srivastav.
10.	*Sangeet Kaumudi Part II*	:	V.S. Nigam.
11.	*Sangeet Shastra Darpan Part II*	:	Shanti Goverdhan.

MUSIC (Instrumental)

SEMESTER-I

GENERAL INSTRUCTIONS :-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i)	Viva	:	35 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla	:	05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit – I

1. Elementary knowledge of Raga
2. Sangeet (Definition & importance)
3. Different Jaties of Ragas of the Present Raga System of North Indian Music.

Unit – II

1. Elementary knowledge of the following terms: (not more than 100 words) :
   Swara, Saptak, Alankar. Aron, Avroh, Pakad, Thaat
2. Elementary knowledge of Bhatkhande Notation System.

Unit – III

1. Brief description of your own instrument.
2. Definition and types of Gat (Razakhani and Maseetkhani).

Unit – IV

Notation and Description of the prescribed Ragas and Talas :

1. Rag Bhopali (one Razakhani gat)
2. To write Alankars.
3. To write the notation of Tala (Dadra & Teental) with dugun layakaries

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. Demonstration of different Alankars of Shudh & Vikrit Swaras on your instrument.
2. One Razakhani gat of raga Bhopali
3. Knowledge of the non-detailed raga : Deshkar (only Aroh-Avroh and Pakad).
4. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries: Dadra, Teental .
5. Ability to play Shudh-Swaras on Harmonium.
6. Ability to play Dadra tala on tabla.

Books Recommended

1.	*Rag Parichaya Part II and III*	:	H.C. Srivastava.
2.	*Sangeet Kaumudi Part-II (Punjabi)*	:	V.S. Nigam
3.	*Sitar Marg, Part-II*	:	S. Bandopadhya.
4.	*Sangeet Sar, Part-I*	:	Mrs. Veena Mankaran.
5.	*Sangeetanjali, Part I & IV*	:	Pt. Onkar Nath Thakur.
6.	*Sangeet Manjusha*	:	Dr. Indrani Chakravarti.
7.	Sangeet Shastra Vigyan	:	Sh. Panna Lal Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna Lal Madan

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MUSIC (Instrumental)

SEMESTER-II

GENERAL INSTRUCTIONS

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i) Viva : 35 Marks

(ii) Harmonium : 05 Marks

(iii) Tabla : 05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit-I

1. Various developments (in brief) in the History of Indian Music of Modern Period.
2. Knowledge of Bhatkhande That Paddhati.
3. Study of Nada

Unit-II

1. Elementary knowledge of the following terms (not more than 100 words) :
   Matra, Avartan, Sam, Tali, Khali and Vibhag
2. Study of various bols of Mizrab,Tora , Jhala

Unit-III

1. Elementary knowledge of Laya and Taal in Music
2. Brief life sketches and their contributions to Indian Music of the following great masters :-
   (i) Pt. Ravi Shanker
   (ii) Pt. V.N. Bhatkhande

Unit-IV

Definition and description of the prescribed Ragas and Tala :- Yaman , Kafi

1. One Maseetkhani Gat in any prescribed raga and talas :-Yaman , Kafi
2. To write the notation of Razakhani Gat of rag Kafi and Yaman with atleast four todas
3. Write in notation Jhaptala, Keharva Tala with dugan layakaries.

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. One Maseetkhani Gat in any raga of your syllabus.
2. Razakhani gats with toras & Jhala in the following ragas :-Kafi, Yaman
3. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries :Talas : Jhaptal & Keharva
4. Ability to play Teen tala on Tabla
5. Ability to play Aroh, Avron of Raag Yaman & Kafi on Harmonium.
6. Ability to play National Anthem on your own instrument.

Books Recommended:

1.	Rag Parichaya Part II and III	:	H.C. Srivastava
2.	Sangeet Kaumudi Part-II (Punjabi)	:	V.S. Nigam
3.	Sitar Marg Part-II	:	S. Bandopadhya
4.	Sangeet Sar, Part-I	:	Mrs. Veena Mankaran
5.	Sangeetanjali, Part I & IV	:	Pt. Onkar Nath Thakur
6.	Sangeet Manjusha	:	Dr. Indrani Chakravarti
7.	Sangeet Shastra Vigyan	:	Sh. Panna La Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna La Madan

MUSIC (Tabla)

SEMESTER – I

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-I. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

Paper-B: **PRACTICAL** (20 minute's duration). : 45 Marks

(i)	Viva	30 Marks
(ii)	Harmonium	05 Marks
(iii)	Tabla (Tuning)	05 Marks
(iv)	Padhant on Hand	05 Marks

Internal Assessment (Theory+Practical) (5+5) 10 Marks

Total: 100 Marks

Paper-A THEORY

UNIT-I

1. Brief history of Tabla
2. Elementry knowledge of Taal
3. Sangeet (definition & Importance).

UNIT-II

1. Definitions : Sam, Tali, Khali, Vibhag, Bol, Theka, Avartan, Thah, Dugun
2. Brief description of Tabla.
3. Description of playing techniques of ten vernas.

UNIT-III

1. Life sketches and contributions of the following:-
    a. Ustad Siddhar Khan
    b. Miyan Kadar Baksh
    c. Pt. Chatur Lal

UNIT-IV

1. Ability to write in notation the composition prescribed Taal: (Teentaal, Chautal, Kehrva) Quaida, Simple Tukra, Tihai
2. To write description of Taal of the syllabus.
3. To write the notation of Taal in Single and Double.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B PRACTICAL

1. Taals Prescribed Teen Taal, Chautaal, Kehrwa
2. Laggi in Kehrwa Taal and its variety.
3. Teen Taal (Peshkara, Two Paltas, Two Kaydas, Two Mukhra)
4. Chautaal (Theka in Thah and Dugun)
5. Practice of playing the above Taals with Vocal and Instrumental performances.
6. Ability to play Nagma/Lehra on Harmonium in Teen Taal.

Books Recommended:

1. Taal Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadhya : M.P. Sharma
5. Hamare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

MUSIC (Tabla)

SEMESTER-II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A:	**THEORY** (3 Hours duration)	:	45 Marks
Paper-B:	**PRACTICAL** (20 minutes duration).	:	45 Marks
(i)	Viva	:	30 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla (Tuning)	:	05 Marks
(iv)	Padhant on Hand	:	05 Marks
Internal Assessment (Theory & Practical) (5+5)		:	10 Marks
	Total	:	**100 Marks**

Paper-A Theory

UNIT- I

1. Origin and development of Tabla
2. Definition of Baaj and Chhand.
3. Brief description of Bhatkhande Taal notation system.

UNIT- II

1. Importance of Taal in music.
2. Elementary knowledge of the following musical terms (not more than 100 words)
   Matra, Laya (Vilambit, Madya, Drut) Tukra, Ateet, Anagat
3. Gharana:- Definition and importance in the context of Tabla.

UNIT- III

1. Life sketches and contributions of the following:-
   a. Ustad Allah Rakha Khan.
   b. Ustad Ahmad Jaan Thirkava.
   c. Pt. Samta Parshad (Gudai Maharaj)

UNIT- IV

1. Teental, Ektaal, Dadra.
2. To write description of Taals of your syllabus.
3. To write the notation of Taal in Single Double and Chaugun

UNIT- V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Taals prescribed Dadra, Ektaal, Teen Taal
2. Laggi in Dadra and Kehrwa Taal.
3. Ektaal (One Qaida, Two Tukra, Two Tihai, One Paran)
4. Teentaal (One Rela, One Chakradar Paran, One Tukra, One Mohra)
5. Practice of Dholak playing in Kehrwa Taal.
6. Ability to play Nagma/Lehra on Harmonium in Ektaal.
7. Tuning of Tabla.

Books Recommended:

1. Tala Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadya : M.P. Sharma
5. Harmare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

MUSIC (Indian Classical Dance)

SEMESTER-I

GENERAL INSTRUCTIONS:

1 In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2 There would be upto ten students in one section in practical class.
3 There would not be more than eight students in a batch for practical examination.
4 No electronic Instruments will be allowed for lehra in practical examination
5 The candidate can take Dance along with Vocal music.
6 The candidate can also take instrumental music with Dance.
7 While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8 In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

Internal assessment (Theory and Practical) (5 + 5) 10 Marks

Paper-A : Theory

Unit –I

1. Origin of Tandava
2. Four Neck movements
3. Eight eye glances

Unit-II

1. Defination of Mudra. Explain Asamyukta Mudras based on Abhinaya Darpan.
2. Definition of the following terms:
   Tora, Salami, Theka, Tehai, Amad.
3. Brief study of Kathak Dance in Ancient period .

Unit-III

1. Definition of folk Dance.
2. A study of folk dances of Punjab, their costumes and background music.
3. A study of folk dance of Haryana, their costumes and background music.

Unit-IV

1. Notation of Tatkar and Theka in Ekgun, Dugun and Chaugun laykaries.
2. Notation of Amad, Tukra, Salami, Tora and Tihai in Teentaal.
3. Notation of Nagma in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Practical: Paper-B

(A) Teen Taal:

i)Tatkar in Ekgun, Dugun and Chaugun laykaries. Theka and Tatkar with Ekgun. Dugun and Chaugun Layakaries

ii) Salami - 1
iii) Amad - 1
iv) Tora - 4
v) Tihai - 1
vi) Tukra - 1

B) Practical of all the technical part in Teentaal on hand
C) Theka of Teentaal on hand in Ekgun and Dugun laykaries
D) Theka of Teentaal on table.

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MUSIC (Indian Classical Dance)

SEMESTER –II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
Internal assessment (Theory and Practical) (5 + 5)	10 Marks

Paper-A: THEORY

Unit –I

1. Study of Lasya Dance.
2. Six Eyebrow movements.
3. Nine Head movements.

Unit-II

1. Detail knowledge of Samyukta Mudras based on Abhinaya Darpan.
2. Essential characteristics of Bharatnatyam.
3. Detailed study of Kathak in mughal period.

Unit-III

1. Brief study of Abhinaya and its various parts.
2. Life sketch of Pt. Narayan Prasad.
3. Definition of Nritta, Nritya and Natya.

Unit IV

1. Notation of Theka of Jhaptaal in Ekgun, Dugun and Chougun layakaries.
2. Notation of Tatkar, Tora, Amad and Paran and Chakardar Paran in Jhaptaal.
3. Notation of Tatkar, Thaat, Tora, Tehai and Kavit in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

(A) Teen Taal:

i)	Tatkar in teentaal in Ekgun, Dugun and Chougun layakaries.		
ii)	Thaat	-	1
iii)	Tora	-	2
iv)	Kavit	-	1
v)	Tihai	-	1

(B) Jhaptaal:-

i)	Tatkar in Ekgun, Dugun and Chaugun layakaries.		
ii)	Tora	-	2
iii)	Amad	-	1
iv)	Paran	-	1
v)	Chakardar paran	-	1

(C) Practice of prescribed material in both the taals on hand.

(D) Practical knowledge of Samyukta Mudras.

(E) Ability to play nagma in teentaal on Harmonium.

(F) Ability to play theka of Jhaptaal on Tabla.

FINE ARTS

SEMESTER – I

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

Instruction to paper-setters

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Pre-historic paintings from Bhim–Betka .
- Ajanta Cave Painting: Shaddanta Jataka, Padmapani, Avalokitesvara, Dying Princess, Mahajanaka Jataka, Decorative ceiling panels from Cave No. 2.

Unit-II : History of Indian Sculpture

- Indus Valley Civilization - Seals, Metal Dancing Girl, Red Sandstone Torso, Bust of Priest from Mohenjodaro.
- Mauryan Art: Rampurva Bull Capital, Lion Capital from Sarnath, Didarganj Yakshi.

Unit-III : History of Western Art

- Pre-historic Art - Wounded Bison (Altamira), Venus of Willendorf.
- Egyptian Art - Palette of King Narmer, Seated Scribe.
- Greek Art - Standing Youth, Discobolus, Laocoon Group.

Unit-IV : Definition of Key Terms and General Concepts

- Colour: Colour Theory, Colour wheel, Colour terminology and meaning of colour, Line - different types of lines and its meaning, Perspective: Linear and Aerial, Foreshortening.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks: 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects and to study the proportion, volume and rhythmic relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Pencil, charcoal or Pastel colours.
4. Size : ½ Imperial sheet

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Pencil Shading, charcoal
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

1. Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
2. Medium : Pencil Sketching or Pastel, Pencil colours.
3. Size : ½ Imperial sheet

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).

Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

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FINE ARTS

SEMESTER – II

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

INSTRUCTIONS TO PAPER-SETTERS

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Sittanavasal - Lotus Pond.
- Eastern Indian Miniature Painting with special reference to Ashtasahasrika Prajnaparamita.
- Western Indian Miniature Painting with special reference to Nativity of Mahavira from Palm-leaf manuscripts.

Unit-II : History of Indian Sculpture

- Bharhut - Dream of Queen Maya, Yakshas and Yakshini figures.
- Amravati - The Great Departure, Subjugation of Nalagiri.

Unit-III : History of Western Art

- Roman Art - Augustus of Primaporta, Arch of Titus.
- Byzantine Art – Mosaic: Emperor Justinian and his Attendants in S. Vitale.
- Gothic Art - Madonna Enthroned by Duccio, The Lamentation by Giotto.

Unit-IV : Definition of Key Terms and General Concepts

Mural - Fresco and Tempera techniques, Miniature, Chiaroscuro (light-shade), Sculpture in round and in relief.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitons and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks : 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects to study proportion, volume and rhythmic : relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Oil, acrylic or water colours.
4. Size : ½ Imperial sheet or Canvas Pad

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Charcoal or Pastels (Monochrome)
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.

1. Medium : Oil, acrylic or water colours.
2. Size : ½ Imperial sheet or Canvas pad

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).
Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.

2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

HISTORY OF ART

SEMESTER – I

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

HISTORY OF INDIAN PAINTING AND SCULPTURE Max. Marks : 100
Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Study of Indian Painting :

Unit-I

(a) Pre-historic Painting.

(b) *Ajanta :* Early Period, Classical Period and Post-Classical Period.

Unit-II

(a) Bagh

(b) Badami.

(c) Sittanavasal.

(d) Ellora.

Study of Indian Sculpture :

Unit-III

(a) Indus Valley Civilization.

(b) Mauryan Period.

(c) Bharhut.

(d) Sanchi.

Unit-IV

(a) Amaravati.

(b) Nagarjunikonda.

(c) Mathura under the Kushanas.

(d) Gandharan Art.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Reprint Corporation, New Delhi, 1983.

2. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

3. Gupte and Mahajan : *Ajanta, Ellora and Aurangabad Caves,* D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.

4. Rowland, Benjamin : *The Art and Architecture of India,* Penguin Books, Great Britain, 1959.

5. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.

6. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.

7. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.

8. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART

SEMESTER – II

Max. Marks : 100
Time : 3 Hours

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

STUDY OF WESTERN PAINTING AND SCULPTURE (from the earliest times to ca. 1400 A.D.) and Theory and Principles of Art Appreciation

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Western Art :

Unit-I

(a) Pre-historic Painting.

(b) Egyptian Art.

Unit-II

(a) Greek Art.

(b) Roman Art.

Unit-III

(a) Art of Early Christian Period.

(b) Byzantine Period.

(c) Gothic Period.

Unit-IV

Explanation through illustrations of the concept of :

(a) Space, Line, Colour, Form, Texture, Light and Shade, Design, Balance, Harmony, Composition, Perspective, Foreshortening.

(b) Mural, Fresco and Tempera techniques.

Pedagogy :

The students are expected to familiarize themselves with the art form as seen from the books, slides and related films.

Suggested Readings :

1. Read, Herbert : *Meaning of Art,* Faber & Faber, London, 1972.
2. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
3. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
4. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – I

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-I : HISTORY AND CULTURE OF INDIA FROM THE INDUS VALLEY CIVILIZATION TO 321 B.C.

Objectives :

The paper is a survey of the proto-historic and historic background to Indian history from the Harappan Civilization to 321 BC.

Pedagogy of the Course Work :

Students are familiarized with sources and with methods of reconstructing ancient history. An attempt is made to view the events in their situational context, locating the interconnection of social, economic and political developments, as far as their sources permit.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hours duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of the Harappan Civilization.

   (b) Location of the 16 Mahajanapadas.

   (c) Alexander's Indian campaign.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I

Sources of Ancient Indian history: Harappan Civilization: origin; extent; urban features and decline.

UNIT-II

Vedic Civilization (Rig Vedic and Later Vedic Period): society; polity; economy; culture and religion.

UNIT-III

The Sixteen Mahajanapadas with special reference to the rise of Magadha (from Bimbisara to the fall of the Nandas); The rise of Buddhism and Jainism.

UNIT-IV

The Iranian and Macedonian invasions: political and cultural impact on the Indian subcontinent.

Essential Readings :

1. Basham, A.L. : *The Wonder that was India,* Rupa, Mumbai, 1971.
2. Chakravarti, Ranabir *Exploring Early India: Upto C.AD 1300* Ratna Sagar, New Delhi 2016.
3. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
4. Majumdar, R.C. et al : *The Vedic Age,Vol.I, Bombay;* Bhartiya Vidya Bhavan, Mumbai, 1971.
5. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
6. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed. Oxford, New Delhi, 2011.
7. Sharma, R.S. *Material Culture and Social Formation in Ancient India*, Machmillan, Delhi, 1983
8. Singh, Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century),* Pearson Education, Delhi, 2009
9. Thapar, R. : *A History of India,* Vol. I: *From Origins to 1300*, Penguin, 1990.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER – II

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-II : HISTORY AND CULTURE OF INDIA FROM THE MAURYAS TO 319 A.D.

Objectives :

This course deals with the political and cultural history of India from Mauryas to the Post Kushana period.

Pedagogy of the Course Work :

The students are taught with the help of slides, photographs, topographical maps and political maps. In addition to it, lectures, workshops and seminars are arranged to facilitate the students to understand the subject in a better way.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.
4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
5. The map question shall have the following topics :
   (a) Extent of the Mauryan empire.
   (b) Location of Ashokan inscriptions.
   (c) Extent of Kanishka's empire.
6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I :

The Mauryan empire: sources; political and cultural relations; administrative organization; society and economy; Ashoka's dhamma; downfall of the Mauryan empire.

UNIT-II:

Sungas, Kanvas and Satvahanas: survey of the sources; political overview; society and economy; culture and religion.

UNIT-III:

The Indo Greeks, Shakas and Parthians: survey of the sources; polity; society and economy.

UNIT-IV:

Kushana and Post-Kushana Period: survey of the sources; social; political; economic; cultural and religious conditions.

Essential Readings :

1. Bongard Levin, G. : *Mauryan India,* Sterling, Delhi, 1985.
2. Chakravarti, Ranabir *Exploring Early India: Upto C.AD 1300* Ratna Sagar, New Delhi 2016.
3. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
4. Majumdar, R.C. et al, eds. : *The History and Culture of the Indian People,* Bhartiya Vidya Bhawan, Mumbai, 1951.
5. Mukherjee, B.N. : *The Rise and Fall of the Kushana Empire,* Firma KLM, Calcutta, 1988.
6. Narain, A.K. : *The Indo–Greeks,* Claerendon Press, Oxford, 1957.
7. Nilakantha Sastri, K.A. (ed.) : *The Age of the Nandas and Mauryas,* Motilal Banarsidass, New Delhi, 1988.
8. Raychaudhuri, H.C. : *The Political History of Ancient India,* Oxford, New Delhi, 2011
9. Shastri, A.M. : *Early History of the Deccan, Sandeep Prakashan,* New Delhi, 1987.
10. Shrimali, K.N. : *Prachin Bharat Ka Itihas,* Karyanvaya Nideshalay, Delhi University , Delhi 2009.
11. Singh Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century*), Pearson Education, Delhi, 2009.
12. Thapar, R. : *Ashoka and the Decline of the Mauryas,* Oxford, New Delhi, 2012.
13. Thapar Romila : *The Penguin History of Early India from the origin to AD 1300,* Penguin Books, New Delhi, 2002.

DEFENCE & STRATEGIC STUDIES

SEMESTER – I

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

PAPER : CONCEPT OF WARFARE

M. Marks : 70
Time : 3 Hrs.

Objective : This paper deals with the conceptual aspects of warfare focuses on the various aspects of warfare from conventional to Nuclear age.

SECTION-I

1. War : Its definition concept and evolution.
2. Principles of War, Historical Development, Meaning & Importance.

SECTION-II

3. Modern War : Meaning, Historical Development, Features and Humanization of War.
4. Non-Conventional Warfare with reference to Guerrilla War : Its Origin, Principles and Techniques.
5. Asymmetric Warfare

SECTION-III

6. Nuclear War, Beginning of Nuclear Era, Effects of Nuclear explosions, Nuclear strategy, Deterrence, Missiles and their classification.

SECTION-IV

7. Psychological aspects of war, Leadership, Motivation, Morale, Discipline, Panic and Fear.
8. Information Warfare.

Books Recommended :

1. Bernard, Brodie, Strategy in the Missile Age Rand Corp., Santa Monica, 2007.
2. Boring, E., Psychology in the Armed Services, National Academics, Washington 1945.
3. Clausewitz Von Carl, On War, Wilder Publications, United States, 2008.
4. Fuller, J.F.C, Armament and History, Da Press, New York,1998 .
5. Fuller, J.F.C., The Conduct of War, N.J. Rutgers University Press, New Brunswick, 1961.
6. Gerald, J., Defence Psychology, Pergamon Press, Michigan, 2008.
7. Harkabi Y., Nuclear War and Nuclear Peace, Transaction Publishers,Piscataway, New Jersey, 2008.
8. Hart, Liddle, Strategy of Indirect Approach, BiblioBazaar, 2011 Washington, 1945.
9. JFR Jacob, Surrender at Dacca, Birth of a Nation, Manohar Publishers & Distributors, New Delhi, 1997.
10. Malkasian Carter, A History of Modern Wars of Attrition, Greenwood Publishing Group, 2002.
11. May Larry, Emily Crookston, War: Eassy in Political Philosophy, Cambridge University Press, 2008.
12. Montgomery, A History of Warfare, Cleveland world Publishers,1968.
13. Palit, D.K., War in the Deterrent Age, Gardners Books, Delhi 2006.
14. Tripathi, K.S., Evolution of Nuclear Strategy, Vikas Publication, Delhi,1970.
15. Waelder Robert, Psychological aspects of war and peace, Geneva research Centre, Geneva, 1939.

Paper : <u>PRACTICAL</u> Total Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on Computer.

SECTION-A, Practical Test

Marks: 10

Note :

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Conventional Signs*:* Military and Geographical.
2. Introduction to Topographical Maps*:* Definition, features, classification, enlargement and reduction of maps.
3. Grid System*:* Four figure, six figure and eight figure map, references.

SECTION-B

Marks: 10

1. Practical Record	5 marks
2. Viva-Voce	5 marks

(Students be asked to prepare on current topics of general interest)

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DEFENCE & STRATEGIC STUDIES

SEMESTER – II

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : INTERNATIONAL RELATIONS, STRATEGIC ASPECTS

M. Marks : 70
Time : 3 Hrs.

Objective : This paper focuses on the various attributes of international relations and its role in maintaining peace & security.

SECTION-I

1. International Relations: Meaning, concept and its relationship with strategic aspects.
2. National interest and war: Definition of national interest & its relationship with security; War as an instrument of National Policy.

SECTION-II

3. Balance of Power: Meaning, Historical Development, Evaluation and its functioning.
4. Cold War: Definition, Cause and Means, Diplomatic, Psychological, Economic effects and Perspective.

SECTION-III

5. Collective Security: Meaning and Concept, Role of United Nations Organization in maintaining Collective Security.

SECTION-IV

6. Disarmament and Arms Control, Meaning and Concept, Efforts by UNO towards its achievement.

Books Recommended:

1. Flemming, D.F., *The Cold War and its Origin,* Doubleday, University of Michigan, United States, 1961.
2. Gaddis Lewis John, *The Cold War,* Penguin, UK, 2011.
3. Goldblat Jozef, *Arms Control: The New Guide to Negotiations and Agreements with New CD-ROM Supplement,* SAGE, London, 2002.
4. Griffiths Martin, *International Relations: The Key Concepts,* Psychology Press, 2002.
5. Joseph , Frankel , *The Making of Foreign Policy,* Oxford University Press, Oxford, 1963.
6. Knapp, W., *A History of War and Peace,* Oxford University Press, Oxford, 1967.
7. Kumar, Mahendra, *Theoretical Aspects of International Politics,* University of Notre Dame Press, Notre Dame, Ind., 1959
8. Lawrence Robert M., *Arms Control and Disarmament,* Burgers, 1973.
9. Lucas, *A History of Cold War,* Bloomsbury Publishing London, 2008.
10. Morgenthau, H., *Politics Among Nations,* McGraw-Hill New York, 1993.
11. Morton, Halperin , *Limited War in the Nuclear Age,* Greenwood Press, Michigan, 1978.
12. Orakhelashvili Alexander, *Collective Security,* Oxford University Press, UK, 2011.
13. Sarooshi Dan, *The United Nations and the Development of Collective Security: The Delegation by the UN Security Council of Its Chapter VII Powers,* Oxford University Press, UK, 1999.
14. Sheehan Michael J., *The Balance of Power: History and Theory,* Taylor & Francis, 1996.
15. Qamar, Hasanan, *Psychology for the Fighting Man,* Penguin Books, U.K, 1943.

Paper-B: PRACTICAL Total Marks : 20
Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A, Practical Test

Marks: 10

Note:

1. There will be three questions in all and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Distance and Scale*:* Definition, types, methods of representing scale, inters conversion of statement, into representative fraction, construction of simple scale line and comparative scale lines.

2. Directions*:* Types of North, finding out True North, direction by equal altitude method, Watch method, Map method and Compass method.

3. Service Protector: Its type and uses.

SECTION-B

Marks: 10

1. Practical Record 5 marks
2. Viva-Voce 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER – I

PAPER : HISTORY OF INDIA UPTO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit– IV in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of the Ancient period in Indian History.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Major Sources of History : Literary and travel accounts; Archaeological findings; inscriptions; coins.

II. Harappan Civilization : Extent, town planning; social economic and religious life.

III. Life in Vedic Age: Political and Economic; social and religious.

UNIT II

IV. Republics and Kingdoms 600-321 B.C.: Mahajanpadas; the rise of Magadha.

V. Jainism and Buddhism : Life and teachings of Vardhman Mahavir; Life and teachings of Gautam Buddha.

VI The Mauryan Empire : Central and Provinicial Administration; revenue, judicial and local administration; Ashoka's Dhamma.

UNIT III

VII Post Mauryan Period : Decline of Mauryas and Kanishka and his achievements.

VIII. The Gupta Empire : The rise of Guptas and social, economic, cultural and scientific Developments under Guptas.

IX. The Rise of Southern Kingdoms: Administration Under Pallavas; Rashtrakutas; Chalukyas.

UNIT IV

X. Regional Kingdoms in the North : Administration under Harsh Vardhana; origin of Rajputs.

XI South Indian States: Administration under Cholas; Taxation and trade under Pandayas.

XII Map :

(i) Map on important Historical places: Ajanta, Bodhgaya, Ellora, Harrappa, Indraprastha, Kalibangan, Kalinga , Kannauj, Lothal, Nalanda, Patliputra, Sanchi , Sopara, Taxila, Ujjain, Varanasi.

(ii) Extent of Harappan Civilization.

(iii) Mauryan Kingdom under Ashoka.

Reading List :

1. Basham, A.L. : *The Wonder That Was India,* Calcutta : Rupa & Co., 1992.
2. Jha, D.N. : *Ancient India : An Historical Outline,* Delhi : Manohar, 2nd Rev. Ed., 2005.
3. Sharma, R.S. : *India's Ancient Past,* Delhi : OUP, 2005.
4. Sharma, R.S. : *Parambhik Bharat Ka Parichay,* Delhi : Orient Black Swan, 2007 (Hindi Medium).
5. Thapar, Romila : *Early India from the Origin to A.D. 1300,* Penguin, 2002.
6. Noboru, Karashima : *Concise History of South India, OUP, Delhi.*
7. Chakravarty Ranbir : *Exploring Early India*

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HISTORY

SEMESTER – II

PAPER : HISTORY OF INDIA 1200-1750 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (For Paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit– IV in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of Medieval India.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Establishment of Turkish rule under Muizuddin of Ghor; Consolidation under Iltutmish and Balban.

II. The Khaljis : Administration; agrarian and market reforms of Alauddin Khailji.

III. The Tughlaqs : Muhammad Bin Tughlaq's administrative experiments and its impact, Feroz Shah Tughluq's administrative and economic reforms.

UNIT II

IV. Vijaynagar Kingdom : Establishment; Administration and Economy.

V. Formation of the Mughal Empire : Political condition of India on the eve of Babur's invasions; conquests and causes of his success.

VI. The Afghans : Establishment of Afghan power under Sher Shah Suri; administrative reforms.

UNIT III

VII. The Mughal Empire : Central and Provincial administration; Land revenue system.

VIII. The Mughal Empire : Mansabdari system; Jagirdari System.

IX. Debates on the Decline of the Mughal Empire.

UNIT IV

X. The Rise of the Marathas : conquests of Shivaji; administration.

XI. Evolution and main features : Bhakti movement; Sufism.

XII. MAP :

(i) Important Historical places : Lahore, Delhi, Agra, Mathura, Fatehpur Sikri, Chittor, Jaipur, Udaipur, Panipat, Lucknow, Ahmednagar, Poona, Surat, Golkonda, Bijapur, Daulatabad,

(ii) Extent of Empire under Allauddin Khalji.

(iii) Mughal Empire in 1707.

Reading List :

1. Alam, Muzaffar and Sanjay Subrahmanyam : The Mughal State 1526-1750, New Delhi : Oxford University Press, 1998.
2. Chandra, Satish : Medieval India from Sultanate to the Mughals (1206-1526), New Delhi : Har-Anand Publications Pvt. Ltd., 1997.
3. Chandra, Satish : Medieval India from Sultanate to the Mughals, Part -II Mughal Empire (1526-1748).
4. Chandra, Satish : Essays on Medieval Indian History, New Delhi : Oxford University Press, 1987.
5. Chandra, Satish : History of Medieval India, Delhi : Orient Black Swan, 2007 (Hindi Medium).
6. Habib, Irfan : Medieval India : The Study of Civilization, New Delhi : National Book Trust, India, 2008.
7. Ray Chaudhri Tapan and Irfan Habib : The Cambridge Economic History of India, Vol. I., c. 1200-c.1750, New Delhi : Orient Longman, 2007.
8. Rizvi, S.A.A. : The Wonder That Was India, Vol. II, 1200-1700, New Delhi : Rupa & Co., 1996.
9. Singh, Navtej : Madhkalin Bharat, National Book Trust (Punjabi)

POLITICAL SCIENCE

SEMESTER – I

POLITICAL THEORY-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The objective of this paper is to introduce first year undergraduate students to some of the basic aspects, concepts and themes in the discipline of Political Science.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Political Sciene :* Meaning, Definition and Scope.

2. Relationship of Political Science with Economics, History and Sociology.

Unit-II

1. *The State :* Definition, Elements and its Distinction from Government and Society.

2. *Theories of the Origin of State :* Social Contract, Historical/Evolutionary.

Unit-III

1. *State :* Liberal, Marxian and Gandhian View.
2. *Welfare State :* Liberal and Socialist Perspective.

Unit-IV

1. *Sovereignty :* Definition, Attributes/ Characteristics and Types.
2. *Theories of Sovereignty :* Monistic and Pluralistic.
3. *Political System : a)* Meaning & Characteristics.
   Political System : b) Functions according to David Easton & Almond & Powell.

Books Recommended :

1. J.C. Johri : *Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2. A.C. Kapoor : *Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3. O.P. Gauba : *An Introduction to Political Theory,* Macmillan India Ltd., New Delhi, 2009.
4. Andrew Heywood : *Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5. Robert A. Dahl & Bruce S. Finebric Kner : *Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6. Frank Bealey, Richard Chapman and Michael Sheehan : *Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7. Andrew Heywood : *Political Theory : An Introduction,* MacMillan Press, London, 1999.
8. Aron I. Skoble & Fiber R. Maclian (eds.) : *Political Philosophy : Essential Selections,* Pearson Education, 1999.
9. Andrew Heywood : *Politics,* Macmillan, London, 1997.
10. M.P. Jain : *Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11. S.P. Verma : Modern *Political Theory,* General Publishing House, New Delhi. 1983.

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POLITICAL SCIENCE

SEMESTER – II

POLITICAL THEORY-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The aim of this paper is to deepen and expand the knowledge of the student in Political Science. It introduces higher level concepts and themes in political theory. It will provide students with the tools to engage with some key political issues of our times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Power, Authority, Legitimacy :* Meaning and Characteristics.
2. *Political Culture :* Meaning, Characteristics and Types.
3. *Political Socialisation :* Meaning, Characteristics and Agencies.

Unit-II

1. *Rights & Duties :* Meaning, Types and Co-relation between the two.
2. *Universal Declaration of Human Rights:* Meaning of Human Rights, Nature and Characteristics.

Unit-III

1. *Liberty :* Meaning, Types & its Safeguards.
2. *Equality :* Meaning, Types and Relationship between Liberty and Equality.
3. *Justice :* Meaning and its various Dimensions.

Unit-IV

1. *Social Change :* Meaning, Characteristics and Factors.
2. *Democracy :* Meaning, types, necessary conditions for the success of Democracy.
3. *Theories of Democracy:* Elite and Marxian.

Books Recommended :

1.	J.C. Johri	:	*Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2.	A.C. Kapoor	:	*Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3.	O.P. Gauba	:	*An Introduction to Political Theory,* MacMillan India Ltd., New Delhi, 2009.
4.	Andrew Heywood	:	*Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5.	Robert A. Dahl & Bruce S. Finebric Kner	:	*Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6.	Frank Bealey, Richard Chapman and Michael Sheehan	:	*Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7.	Andrew Heywood	:	*Political Theory : An Introduction,* MacMillan Press, London, 1999.
8.	Aron I. Skoble & Fiber R. Maclian (eds.)	:	*Political Philosophy, Essential Selections,* Pearson Education, 1999.
9.	Andrew Heywood	:	*Politics,* Macmillan, London, 1997.
10.	M.P. Jain	:	*Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11.	S.P. Verma	:	*Modern Political Theory,* General Publishing House, New Delhi, 1983.

ECONOMICS

SEMESTER – I

Paper : MICRO ECONOMICS

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objective :

Microeconomics is concerned with the analysis of economic phenomena from the perspective of the individual. The course covers the basic concepts and tools needed to undertake the analysis of such problems that arise due to the law of scarcity. The course also aims at introduction of the functioning of competitive and noncompetitive product markets and performance of the markets for resources. The students are expected to develop rudimentary understanding of how and why consumers, firms, and markets in the economy function the way they do.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction : Definition, Meaning, Nature and Scope of Economics.

Theory of Demand and consumer Behaviuor : Utility Analysis and Indifference Curve Analysis. Law of Demand and its Exceptions, Elasticity of Demand and its measurement, Consumer Surplus and its measurement.

Unit-II

Theory of Production and Costs: Concept, Law of Variable Proportions and Laws of Returns to Scale, Cost Concepts and Cost Curves in Short and Long periods (Traditional Theory of Costs).
Market Forms and Revenue: Behaviour of Average Revenue and Marginal Revenue under Perfect Competition and Imperfect Competition. Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Unit-III

Price and Output Determination: Price and Output Determination of the Firm and Industry under Perfect Competition, Monopoly and Monopolistic Competition in Short and Long run, Concept of Discriminating Monopoly.

Unit-IV

Distribution: Marginal Productivity and Modern Theories of Wage Determination, Ricardian and Modern Theories of Rent. Classical and Loanable Funds Theory of Interest, Risk and Uncertainty theories of Profit.

Recommended Readings:

1. Chaudhary, Kalyanjit Roy(2012) : Modern Micro Economics, Vol. I & II Bookland Publishers, New Delhi.
2. Chopra, P.N., Singh, Joginder & Grewal, P.S. (Punjabi Medium) (Latest Edition) : Price Theory and Distrubution, Kalyani Publishers, Ludhiana.
3. Lipsey, R.G. & Crystal, K.A.(2011) : Principles of Economics, Oxford University Press, New Delhi.
4. Samuelson, P.A. (trans. Piar Singh) (1972) : Arth-Shastar Ek Prarmbhik Vishleshan, Punjabi University, Patiala
5. Stonier, A.W.. & Hague, D.C. (2005) : A Text Book of Economic Theory.

Supplementary Readings:

1. Ahuja, H.. (2012) : Advanced Economic Theory, S.Chand & Co., New Delhi.
2. Chopra, P.N.(2012) : Micro Economics Theory and Welfare Economics, Kalyani Publishers, New Delhi.
3. Dwivedi, D.N. (2012) : Microeconomics-Theory and Applications, Pearson Education Delhi.
4. Pindyck, Robert, S., Rubinfeld Dainel, L. and Mehta, P.L. (2013) : Microeconomics, Prentice Hall of India, New Delhi.
5. Ray, N.C. (1980) : An Introduction to Microeconomics, The Macmillan, New Delhi.
6. Robinson, John (Trans.) (Latest Edition) : Apuran Prityogita Di Arhiki, Punjabi University, Patiala.
7. Salvatore, D (2009) : Micro Economics: Theory & Applications, Oxford University Press, New York.
8. Singh, H.K. Manmohan (Trans Vashisht, Om Parkash) (1971) : Mang Sidhant Ate Mishrat Arth-Vivstha Vich Arthik Ganana, Punjabi University, Patiala.

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ECONOMICS

SEMESTER – II

Paper : MACRO ECONOMICS

Max. Marks	: 100
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 hours

Course Objective:

This paper aims to familiarize the student with the generally accepted principles of macroeconomics. It deals with aggregates i.e. consumers as a whole, producers as a whole, exporters and importers as a whole, the effects of government spending and taxation, and the monetary policy of the central bank. The course includes the basic theories of determination of income, consumption, investment, employment, money and interest, inflation, Monetary and Fiscal policies, and business cycles.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type question i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidate shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction: Nature, Meaning and Scope of Macro-Economics.

Consumption Function:
Average and Marginal Propensity to Consume, Keynes' Psychological Law of Consumption.
Investment Function:
Types of Investment, Investment Demand Schedule and Factors Affecting Investment Decisions, Marginal Efficiency of Capital, Static and Dynamic Multiplier.

Unit-II

Determination of Income and Employment:
Classical and Keynesian Theories of Income, Output and Employment, Say's Law of Markets. Principle of Effective Demand.

Unit-III

Money and Banking:
Money : Definition, Functions and Role
Quantity Theory of Money: Fisher's Equation and Cambridge Equation, Keynesian Liquidity Preference Theory.
Banking: Major Functions of Commercial Banks and Process of Credit Creation.

Unit-IV

Inflation and Macro-Economic Policies:
Cost-push and Demand-pull Theories of Inflation, Measures to Control Inflation. Monetary and Fiscal Policies for Stabilization.

Trade Cycle: Meaning and Phases.

Recommended Readings:

1. Dernburg, T.F. & McDougal, D.M.(1983) : Macro Economics, McGraw Hill, New York.
2. Ghuman, Ranjit Singh (latest edition) : Antar-Rashtriya Arth Vigyan, Punjabi University, Patiala.
3. Shapiro, E. (1996) : Macroeconomic Analysis, Galgotia Pub.(P) Ltd., New Delhi.
4. Sharma, O.P. (Punjabi Medium) (latest edition) : Macro Economics, Punjabi University, Patiala.
5. Vaish, M.C. (2010) : Macro Economic Theory, Oxford Unversity, Press, New Delhi.

Supplementary Readings:

1. Ackley, Gardner (1985) : Macro Economic Theory, McMillan, New York.
2. Ahuja, H.L. (2004) : Macroeconomics Theory and Policy, S.Chand Pub. New Delhi.
3. Baird, C.W. (1982) : Elements of Modern Economics, West Publishing Company.
4. Dwivedi, D.N. (2012) : Macroeconomics-Theory and Policy, Tata McGraw Hill Publication House, New Delhi.

SOCIOLOGY

SEMESTER - I

FUNDAMENTALS OF SOCIOLOGY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper aims at introducing Fundamentals of Sociology to the beginners of the subjec, the basic understanding about Sociology as a discipline. Study of various terms, concepts and processes will help students in formulating a Sociological Viewpoint and an easy comprehension of the discipline at later stages.

Course Content :

Unit-I

Introduction to Sociology: Origin and Development; Nature and Significance.

Relationship of Sociology with other Social Sciences –Anthropology, History and Psychology.

Unit-II

Understanding Society: Meaning, Characteristics, Theories of Origin of Society – Organic and Social-Contract. Relationship between Individual and Society.

Social Groups - Meaning, Characteristics and Classification Primary and Secondary Groups Ingroups & Outgroups, Reference Group.

Unit-III

Culture: Meaning and Features, Culture and Civilization, Cultural Lag, Acculturation, Assimilation, Cultural Pluralism.

Dimensions of Culture: Cultural Trait, Cultural Patterns, Cultural Complexes, Cultural Relativism.

Unit-IV

Socialization: Meaning, Stages, Agencies and Theories of Mead and Cooley.
Social Control: Meaning, Types and Agencies – Formal and Informal

Essential Readings:

1. *Bhushan Vidya & Sachdeva D.D. (2014)* : *An Introduction of Sociology Kitab Maaal, Allahabad*
2. *Bottomore, T.B. (1975)* : *Introduction to Sociology, Bombay : Blackie and Sons.*
3. *Bottomore, T.B. (1975)* : *Sociology : A Guide to Problems and Literature (Hindi and English), Bombay : Blackie and Sons.*
4. *Davis, Kingsley (1978)* : *Human Society, London : MacMillan Company.*
5. *Dube, S.C. (1990)* : *Understanding Society - A Text Book, NCERT.*
6. *Maciver, R.M. and C.H. Page* : *Society, London : MacMillan Company.*
7. *Macionis, John, J. (2005)* : *Society: The Basics, New York : Prentice Hall.*
8. *Madhurima (2015)* : *Readings in Sociology – Semester-1, Jalandhar : New Academic Publishing House (All Mediums).*
9. *Rao, Shankar, C.N. (2013)* : *Sociology—Primary Principles of Sociology. S.S. Chand and Company Ltd.*
10. *Sharma, R.N. (2001)* : *Samajshastra Ke Sidhant, New Delhi: Atlantic Publishers.*

Further Readings :

1. *Broom, L. and P. Selznick (1968)* : *Sociology, New York : Harper and Row.*
2. *Berger, Peter L. (1998)* : *Invitation to Sociology : A Humanistic Perspective, U.S.A. : Pelican Books.*
3. *Giddens, Anthony Sutton Philip M (2013)* : *Sociology : Seventh Edition, Polity press*
4. *Haralambos, M. (2010) Heald R.M.* : *Sociology : Themes & Perspectives, New Delhi : Oxford University Press.*
5. *Harlombos & Holborn (2014)* : *Sociology : Themes & Perspectives Collins Education E Editing Work*
6. *Schaefer, Richard, T. and Robert P. Lamm (1999)* : *Sociology, New Delhi : Tata-McGraw Hill.*

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SOCIOLOGY

SEMESTER - II

SOCIOLOGY STRATIFICATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

All over the world, social groups are differentiated from one another and often ranked in terms of certain criteria. In this paper, students are exposed to the theoretical understanding of social stratification. In the Indian context, it is pertinent to apprise the students of the concept of social mobility and various factors that contribute to it. The major purpose of this course is to prepare the students to understand the hierarchical structure of groups in various societies and help them understand the social mobility.

Course Content

Unit-I

Social Stratification – Meaning, feature and functions; Inequalities – Social and Natural.
Elements : Differentiation, Hierarchy, Ranking, Reward, Evaluation.

Unit-II

Theories of Social Stratification :
Functionalist – Davis and Moore.

Conflict – Marx.
Class, Status, Party – Weber.

Unit-III

Forms of Social stratification: Caste, Class, Race and Gender. Interface between caste and class.

Unit-IV

Social Mobility – Meaning, types, factors.
Indicators – Education, Occupation, Income.

Essential Readings :

1. Bendix, R. & Lipset, S.M. (1974) : *Class, Status & Power : Social Stratification in Comparative Perspective,* London : Routledge & Kegan Paul.
2. Ghurye, G.S. (1983) : *Caste, Class and Occupation,* Bombay : Popular Prakashan.
3. Giddens, Anthony (2001) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
6. Sharma, K.L. (1980) : *Essays in Social Stratification*, Jaipur : Rawat.
7. Tumin, M. (1987) : *Social Stratification,* New Delhi : Prentice Hall.
8. Sharma K.L. (2009) : *Social Inequality in India, Jaipur Rawat Publication*

Further Readings :

1. Beteille, Andre (ed.) (1978) : *Social Inequality,* Auckland : Penguin Books.
2. Beteille, Andre (1996) : "Varna & Jati", *Sociological Bulletin,* Vol. 45, No. 1 (March) Pages 15-27.
3. Culvert (1982) : *The Concept of Class*, London : Hutchinson.
4. Gupta, Dipankar (2008) : *Social Stratification*, New Delhi : Oxford University Press.
5. Hughes, John *et al* (1995) : *Understanding Classical Sociology,* Marx, Weber & Durkheim, London : Sage.
6. Richardson, C.J. (1977) : *Contemporary Social Mobility*, L and Francies Printer.
7. Inglis David & John Bone (ed) (2006) : Social Stratification Dimensions of Social Stratification Caste ethnicity & Gender Taylor & Francis
8. Levine, Rhona (ed) (2006) : Social class & Stratification Rowman & Littlefield Publishers.
9. Singh, Yogendra, (2006) : Social Stratification and Change in India, New Delhi
10. Ritzer, George (2012) : Sociological Theory, Manohar Publication Tata McGrew Hill Education Private Limited, New Delhi
11. Mac Ion's John J, Plummmer Ken, (2014) : Sociology: A Global Introduction, New Delhi, Pearson
12. Samdna Peter (1990) : Social class & Stratification Routledge, N.Y.
13. Giddens, Anthony & Sutton W.Philip (2007) : Sociology: Introductory Readings Polity Press, Malden: M.A.
14. Schaefer, Richard, T. (2010) : Sociology: A brief Introductions Tata Mcgraw Hill., N.Y.

PUBLIC ADMINISTRATION

SEMESTER - I

PAPER : ADMINISTRATIVE THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	03 Hours

Objective of the Paper :

The objective of this paper is to acquaint the student with the basic concepts and principles of public administration. In addition, the paper would trace the evolution of public administration and its relationship with other social sciences.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning, Nature, Scope and Significance of Public Administration; Public and Private Administration; Public Administration as a Science or an Art; Relationship of Public Administration with other Social Sciences; Evolution of Public Administration since 1887.

Unit-II

Organization: Meaning, Types: Formal and Informal Organization
Forms of Organization: Department, Public Corporation, Government Company.
Principles of Organization: Hierarchy, Span of Control, Unity of Command, Authority and Responsibility.

Unit-III

Chief Executive- Types, functions and Role
Line, Staff and Auxiliary Agencies
Centralisation and Decentralisation
Decision Making: Meaning, types and process

Unit-IV

Coordination: Concept, Methods and Hindrances
Communication: Concept, Process and Barriers
Supervison: Concept and Methods
Leadership: Concept, Styles, Qualities of a Good Administrator

Essential Readings

Awasthi, A. and Maheshwari, S.R. (2011). *Public Administration*. Agra: Laxmi Narain Aggarwal Publication.

Basu, Rumki (1990). *Introduction to Public Administration*. New Delhi: Sterling Publishers.

Basu, Rumki (2008). *Public Administration: Theory and Concept*. New Delhi: Sterling Publishers.

Bhattacharya, Mohit (2002). *Public Administration: Structure, Process and Behaviour*. Calcutta: World Press.

Bhattacharya, Mohit (2012). *New Horizons of Public Administration*. New Delhi: Jawahar Publishers & Distributers.

Fadia, B.L. and Fadia, Kuldeep (2011). *Public Administration: Administrative Theories and Concepts*. Agra: Sahitya Bhawan Publication

Goel, S.L. (2003). *Public Administration: Theory and Practice*. New Delhi: Deep &Deep Publishers.

Mahajan, Chander Mohan. *Elements of Public Administration*, Patiala: Publication Bureau (Panjabi) Punjabi University.

Nigro, Felix A. and Nigro, Llyod G. (1970). *Modern Public Administration*. New York: Harper and Row.

Ojha, Pundrik and Sharma, Kiran (2009). *Public Administration: Theory and Practice* Jalandhar: Raj Publishers.

Puri,K.K .(2004). *Elements of Public Administration*. Jalandhar: Bharat Prakash

Sapru, R.K. (2008). *Administrative Theories and Management Thought*. New Delhi: Prentice-Hall of India.

Sharma, M.P. and Sadana, B.L. (2009). *Public Administration in Theory and Practice*. Allahabad: Kitab Mahal.

Singh, Sahib and Singh, Swinder (2015). *Public Administration: Theory and* Practice. Jalandhar: New Academic Publishing Co.

Further Readings

Gladden, E.N. (1964). *An Introduction to Public* Administration. London: Staples Press.

Golembiewski, Robert T. (1977). *Public Administration as a Developing Discipline*. New York: Marcel Dekker.

Henry, Nicholas (2012). *Public Administration and Public Affairs (12th ed.)*. New Delhi: Prentice Hall of India Pvt. Ltd.

Koontz, H. and O' Donnel, Cyril (1972).*Principles of Management: An Analysis of Managerial Functions*. New York: McGraw Hill

Naidu, S.P. (2005). *Public Administration concept and Theories*. New Delhi, New Age International Publication.

Ojha, Pundrik and Sharma, Kiran (2012). *Public Administration: Theory and Practice.* Jalandhar: Raj Publishers.

Pfiffner John, M. and Presthus, R.Vance (1953). *Public Administration*. New York: Ronald Press.

Pfiffner, John M. and Sherwood, Frank P. (1960). *Administrative Organization*. New Delhi: Prentice Hall.

Phillip, A.T. and Rao. K.H. Sivaji (1989). *Indian Government and Politics.* New Delhi: Sterling Publishers.

Self, Peter. (1972). *Administrative Theories and Politics.* London: George Allen and Unwin.

PUBLIC ADMINISTRATION

SEMESTER - II

PAPER : : INDIAN ADMINISTRATION

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of Indian administration particularly the functioning of executive, legislature and judiciary at the union and state levels. It would also make them aware of the bureaucratic set up at these levels.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Features of Indian Administration
Union Executive: President; Prime Minister, and Council of Ministers
Union Legislature: Lok Sabha – Composition, Functions and Role: Rajya Sabha – Composition, Functions and Role

Unit-II

State Executive: Governor, Chief Minister and State Council of Ministers
State-Legislature: Legislative Assembly and Legislative Council – Composition, Functions and Role
Centre-State Relations: Administrative and Legislative

Unit-III

Union and State Judiciary: Supreme Court – Composition, Functions and Role
High Court – Composition, Functions and Role
Control over Administration: Legislative and Judicial
Delegated Legislation: Meaning, Reasons and Safeguards

Unit-IV

Cabinet Secretariat– Composition, Functions and Role
State Secretariat– Composition, Functions and Role
District Administration: Structure and Functions

Essential Readings

Arora, Ramesh. K and Chaturvedi, Geeta (2000). *Indian Public Administration: Institution and Issues.* New Delhi: WishwasPrakashan.

Awasthi, A. (1980). *Central Administration*. New Delhi: Tata McGraw Hill.

Fadia, B.L. and Fadia, Kuldeep (2011). *Indian Administration.* Agra: SahityaBhawan Publication.

Maheshwari, S.R. (1979). *State Government in India*. New Delhi: Mac. Millan.

Maheshwari, S.R. (2001). *Indian Administration*. New Delhi: Orient Longman.

Puri, K.K. (2006). *Indian Administration*. Jalandhar: Bharat Prakashan

Sapru, R.K. (2001). *Indian Administration*. Ludhiana: Kalyani Publishers.

Sharma, P.D. and Sharma, B.M. (2009).*Indian Administration Retrospect and Prospect*. Jaipur: Rawat Publication.

Singh, Sahib and Singh, Swinder (2007). *Public Administration: Theory and Practice*. Jalandhar: New Academic Publishing Co.

Further Readings

Government of India (2009). *Organisational Structure of Government of India - Fifteenth Report*. New Delhi: Second Administrative Reforms Commission.

Government of India (2009). *State and District Administration - Thirteenth Report*. New Delhi: Second Administrative Reforms Commission.

Pylee, M.V. (1965). *Constitutional Government in India*. Bombay: Asia Publishing House

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PHILOSOPHY

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

Paper : ELEMENTS OF PHILOSOPHY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS & OBJECTIVES :

The aim of this paper is to familiarize the students with the subject, its branches, problems and methods. The contents of this paper provide the students with a wider canvas about tackling day-to-day problems from a larger perspective.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be 9 questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidates shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature of Philosophy (Introduction).
2. Problems of Philosophy with special focus on social equality, self knowledge and rationality.
3. Methods of Philosophy : Critical and Reflective approach.

Unit-II

4. Introduction to main branches of Philosophy : Metaphysics, Epistemology, Ethics, Social Philosophy and Aesthetics (The interrelation between the branches will be focused).
5. Relation of Philosophy with Science and Religion.
6. Nature of Art and Aesthetic Experience

Unit-III

7. Ethics and Social Philosophy : Good life and Good Society.
8. Morality in Public and Private life.
9. Individual and Society.

Unit-IV

11. Justice : Virtue, Fairness, Equality.
12. Tolerance : Respect for Cultural Pluralism and Social diversities.
13. Caste System in India : Jyoti Ba Phule, Gandhi, Ambedkar.

Essential Readings :

1. G.L. Chandramani : Hitopadesa, Jaico Publishing House, 1995.
2. Mandukya Upanisad, Yamuna Prasad Tripathi : Varanasi Bhartiya Vidya Prakashan, 1966.
3. Narvane, V.S. : Modern Indian Thought, Orient Longman Publishers, 1978.
4. Titus, H.H. : Living Issues in Philosophy, Oxford University, 1993.
5. Amartya Sen : The Idea of Justice, The Belknap Press of Harvard University Press Cambridge, Massachusetts, 2009.
6. Calvin Lewis Pinchin : Issues in Philosophy, Palgrave Macmillan, London, 2nd Ed. December, 2004.
7. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

Suggested Readings :

1. Aesop's Fables : Penguin Books, Harmondsworth, 1998.
2. Dr. B.R. Ambedkar : Annihilation of Caste, Navayana Publishers, New Delhi, 1936.
3. Jyotiba Phule : Gulamgiri (The Slavery), Hindi Translator S. Murti, Cultural Publishers, Lucknow, 3rd Ed. 1994.
4. Narayana Hitopadesa : Translated from Sanskrit by A.B.D. Haksar, Penguin Books, 1998.

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PHILOSOPHY

SEMESTER-II

Paper : LOGIC

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS AND OBJECTIVES :

This paper aims at a systematic study of the Science of Logic which is the most effective means of developing logical abstract thinking in us. It tries to provide students with a mastery of Logic so that they can think in clearer terms and be less prone to error.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be **9** questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidate shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature, Scope and Utility of Logic.
2. Terms and Propositions : Kinds of Terms, Connotation and Denotation of Terms. Aristotle's classification of proposition (Square of Opposition—Contradictories), Contraries, Sub-Contraries and Sub-Alterns.

Unit-II

3. Laws of Thought : Identity, Contradiction, Excluded Middle and Sufficient Reason.
4. Argument : Immediate Inference and Mediate Inference. Some kinds of immediate inference : Conversion, Obversion, Contraposition, Inversion.

Unit-III

5. Categorical Syllogism : The Structure and Rules of validity of Pure Categorical Syllogism, Figures and moods, Fallacies of Syllogism.
6. Introduction to Truth-Tables, Negation, Conjunction, Disjunction, Implications and Equivalences.

Unit-IV

7. Nature of Induction : Distinction between Deduction and Induction.
8. Kinds of Induction.
9. Causation : Nature of Cause, Plurality of Causes.

Essential Readings :

1.	Copi, I. M.	:	Introduction to Logic (N.Y., Macmillan, 1972, Hindi Translation available); London : Routledge and Kegan Paul.
2.	Copi, Irvin M.	:	Introduction to Symbolic Logic (Prentice Hall of India), New Delhi, 1998.
3.	Cohen and Nagel	:	Introduction to Logic and Scientific Method (Allied Publishers), New Delhi, 2000.

Suggested Readings :

1.	Alice Ambrose, Morris Lazerowitz	:	Fundamentals of Symbolic Logic, revised ed., Holt, Rinehart and Winston, New York, 1962.
2.	F.H. Bradley	:	The Principles of Logic, Oxford University Press, London, 1950.
3.	John Dewey	:	Logic, Henry Holt and Company, New York, 1938.

PSYCHOLOGY

SEMESTER –I

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-I

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Nature of Psychology, Goals and Branches of Psychology, Historical Evolution of Psychology, Development of Psychology in India.

Unit II

Emotions : Definition and Concept of Emotions, Types of Emotions, Theories of Emotions (James–Lange, Cannon Bard, Schacter-Singer Theory.), Introduction to Emotion Intelligence.

Unit III

Method of Psychology: Experimental Method, Observation Method.
Sampling Techniques, Survey Method.

Unit IV

Motivation: Definition, Nature, Concept. Types of Motives (Physiological, Psychological, Social): Theories of Motivation: Humanistic (Maslow), Need Theories (McClelland and Murray).

Note: The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Level of Aspiration.
2. Facial Expressions in Emotions
3. Public Opinion Survey.
4. Measurement of Motivation
5. Zeigarnik Effect
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2003). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (2014). Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966). Statistics in Psychology and Education, New Delhi : Vakils, Feffer and Simons.
6. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Rinehart and Winston.
7. Morgan, C.T., King, R.A., J.R. Weisz and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
8. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

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PSYCHOLOGY

SEMESTER –II

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-II

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Personality – Concept, Trait Theories (Eysenck, Costa and MCrae), Psychoanalytic Theory (Freud).

Humanistic Theory (Rogers). Measurement of Personality, (Self Report Measures, Projective Techniques and Behavioural Assessment)

Unit II

Statistics: Graphical Representation of Data: Measures of Central Tendency and Variability.

Correlation - Meaning of Correlation, Rank Order and Product Moment-Correlation and Interpretation.

Unit III

Development: Concept, Heredity and Environmental Influences. Theories of Development : Erickson, Psychosocial Theory, Piaget's theory of Cognitive Development.

Unit IV

Intelligence : Concept, Theories of Intelligence: Spearman, Thurstone, Cattell, Guilford. Measurement of Intelligence (Verbal and Non Verbal Test and Individual and Group Tests).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Verbal Test of Intelligence
2. Non Verbal Test of Intelligence
3. Performance Test of Intelligence.
4. McCosta & Crae NEO Big Five Personality Inventory.
5. Interest Inventory.
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2002). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1996). Understanding Psychology, New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer and Simons.
6. Guilford, J.P., and Fruchter, B. (1981). Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000). Introduction to Psychology. New Delhi: Kalyani.
8. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Holy, Tinvsty snf Eindyon.
9. Morgan, C.T., King, R.A., Weisz ,J.R. and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
10. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

GEOGRAPHY

SEMESTER - I

Paper-I : PHYSICAL GEOGRAPHY-I : Geomorphology

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

The course aims to familiarize the students with the fundamental concepts in physical geography, essentially geomorphology.

Course Content:

UNIT-I

Nature & Scope of Geography: Place of Physical Geography within the discipline of Geography, Divisions of Physical Geography (Geomorphology, Climatology Oceanography and Biogeography). (8 lectures)

Interior of the Earth: Constitution, Isostasy, Continental Drift (with special reference to Wegener's Theory and Plate Tectonics). (12 lectures)

UNIT-II

Movements of the Earth : Orogenic and Epeirogenic (with special reference to Geosyncline theory); landforms resulting from forces of Compression and Tension; Earthquakes and Volcanoes (causes, types and distribution) (20 lectures)

UNIT-III

Rocks: Origin, classification and characteristics. (8 lectures)

Major Land Forms: Mountains, plateaus and plains in the world. (10 lectures)

UNIT-IV

Geomorphic Agents and Landscapes: Fluvial, Glacial, Aeolian, Coastal and Karst. (22 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.
   The paper-setter must put note (5) in the question paper

List of Readings :

Essential Readings:

1. Blij, H.J. De & Petor O. Muller : *Physical Geography of the Global Environment,* John Wiley & Sons, Inc., New York, 1996.
2. Bryant, R.H. : *Physical Geography*, Rupa Publications India Pvt. Ltd., New Delhi, 2011.
3. Hussain, Majid : *Fundamentals of Physical Geography (3rd Edition),* Rawat Publication, Jaipur, 2011.
4. Hyndman, D. and D. Hyndman : *Natural Hazards and Disasters (2nd Edition),* Brooks/Cole Cengage Learning, Belmont, USA, 2009.
5. Khan, Nizamuddin : *An Introduction to Physical Geography*, Concept Publishing Company, New Delhi, 2001.
6. Lal, D.S. : *Physical Geography,* Sharda Pustak Bhawan, Allahabad, 2012.
7. Monkhouse, F.J. : *Principles of Physical Geography (8th Edition),* Hodder & Stoughton, London, UK, 1975
8. Pal, Saroj K. : *Physical Geography of India : A Study in Regional Earth Sciences,* Orient Longman, Calcutta, 1998.
9. Petersen, J.F., D. Sack and R.E. Gabler : *Physical Geography (10th Edition)*, Brooks/Cole Cengage Learning, Belmont, USA, 2011
10. Singh, Savindra : *Physical Geography,* Gyanodya Prakashan, Gorakhpur, 2012.
11. Strahler, Alan H. and Arthur N. Strahler : *Modern Physical Geography,* John Wiley, New York, 2003.

Further Readings:

1. Bunnett, R.B. : *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
2. Dayal, P. : *A Text Book of Geomorphology*, Shukla Book Depot, Patna, 1995.
3. Dury, G.H. : *The Face of the Earth,* Penguin, England, 1973.
4. Gass, I.G. : *Understanding the Earth,* The Artemis Press, Sussex, 1973.
5. Gautam, Alka *Geomorphology,* Sharda Pustak Bhawan, Allahabad, 2012.
6. Kaur, Dhian : *The Earth,* Kalyani Publishers, Ludhiana, 2000.
7. Kale, V. and Gupta, A. : *Elements of Geomorphology,* Oxford University Press, Calcutta, 2001.
8. Mamoria, C.P. and Niati, J.L. : *Bhautic Bhoogol Ke Tatwa* (in Hindi), Agra, 1976.
9. Singh, Savindra : *Geomorphology,* Prayag Pustak Bhawan, Allahabad, 2004.
10. Sparks, B.W. : *Geomorphology,* Longman, London, 1986.
11. Thornbury, W.D. : *Principles of Geomorphology,* Second Edition, Wiley Eastern Ltd., New Delhi, 1993.

Pedagogy:

- Use of Audio-visual aids, maps, diagrams and other forms of illustrations especially in the Indian context are recommended.
- Relevant educational field trips must be arranged to illustrate the theory being taught.

Paper-II: CARTOGRAPHY-I Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (5+5)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography.
- To explain the elements of Map (Scale and Orientation) and steps in Map making.
- To introduce relief representation.

Course Content:

UNIT-I

Maps: Brief history of map making and types of maps.

Geometry of the Earth: Latitude, Longitude (Time Zones and International Date Line), Size and Shape of the Earth. (3 lectures, 6 lab sessions)

UNIT-II

Scales: Methods of representing scale;
Methods of construction of Graphic scales: Plain, Comparative, Time and Diagonal.
(6 lectures, 12 Lab. sessions)

UNIT-III

Directions and Bearings: Plotting of a course, True North, Magnetic North, finding True North with the Pole star, a watch and a rod; Bearing and its conversion. (6 lectures, 12 Lab. sessions)

UNIT-IV

Representation of Relief: Hill-shading, Hachures, and Layer Tints, Spot heights, Benchmarks, Contours.
(6 lectures, 12 Lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be in about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL.They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper.

List of Readings

Essential Readings:

1. Dink, Phyllis: *Map Work*, Atma Ram & Sons, 1962.
2. Khullar, D.R.: *Essentials of Practical Geography*, New Academic Publishing Company, Jalandhar, 2003.
3. Mishra, R.P. & Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
4. Sarkar, Asish: Practical Geography: A Systematic Approach (2nd Edition), Orient BlackSwan, Hyderabad, 2011.
5. Singh, Gopal: *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
6. Singh, R.L. & P.B. Singh: *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Bagulia, A.M.: *Practical Geography*, Anmol Publications Pvt. Limited, New Delhi, 2006.
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
3. Rather, G.M.: *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011.
4. Robinson et al.: *Elements of Cartography (6th Edition)*, Wiley India Pvt. Ltd., New Delhi, 2009.

Pedagogy:

- The use of topographical sheets of Survey of India
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

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GEOGRAPHY

SEMESTER - II

Paper-III: PHYSICAL GEOGRAPHY-II: Climatology & Oceanography

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To acquaint the students with the elements and attributes of climatology and oceanography
- To underscore the role of climate in human life
- To emphasize the significance of oceans within the global environmental system

Course Content:

UNIT-I

Definition of Climatology: Concepts of Climate and Weather, Nature and Scope of Climatology. (2 Lectures)
Climate: Elements and Controls. (4 Lectures)
Physical Structure of the Atmosphere: Troposphere, Tropopause, Stratosphere, Ozonosphere, Mesosphere, Thermosphere and Exosphere (attributes of these layers). (6 Lectures)
Physical and Chemical Composition of the Atmosphere: Dust particles, Vapour Particles, Active gases, Inert gases. (2 Lectures)
Insolation and Temperature: Distribution of Insolation (horizontal); Distribution of Temperature (vertical, horizontal, annual, seasonal and diurnal) (6 Lectures)

UNIT-II

Atmospheric Pressure and Wind Distribution: Atmospheric disturbances: Tropical Cyclones, Temperate Cyclones and Anticyclones. (8 Lectures)
Atmospheric Moisture: Condensation forms: cloud, dew, fog, frost and snow. (8 Lectures)
Precipitation: forms and types, world patterns (spatial and seasonal).
Introduction to Koppen's classification of world climate (4 lectures)
Role of Climate in Human Life : Atmospheric pollution and global warming: causes, consequences and measures of control (4 lectures)

UNIT-III

Oceanography : Definition, Nature and Scope (5 lectures)
Topography of the Ocean Basins; Continental Shelf, Continental Slope, Abyssal Plain, Ridges, Deeps and Trenches (5 lectures)
Temperature and Salinity of ocean waters: World patterns and controlling factors (6 lectures)

UNIT-IV

Movements of Oceanic Waters: Waves, Tides and Currents; Surface currents of the oceans;
Role of Ocean Currents in heat distribution over the globe. (10 lectures)
Marine Deposits and Corals: Origin and types. (10 lectures)

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be about 25 words. Each part will carry 2 marks (Total 20 marks).

2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks. These will be in addition to the compulsory question I.

3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.

4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (5) in the question paper.

Essential Readings :

1. Critchfield, H.J. : *General Climatology,* Prentice Hall of India Private Ltd., New Delhi, 1975
2. Frederick K. and Edward J. Tarbuck : The Atmosphere: An Introduction to Meteorology, Prentice Hall of India Pvt. Ltd., New Delhi, 1995.
3. Hess Darrel, Dennis G Tasa : Mcknight's Physical Geography: A Landscape Appreciation (2011).
4. Khan, N. : *An Introduction to Physical Geography,* Concept, New Delhi, 2001.
5. Lal, D.S. : *Climatology,* Chaitanya Publishing House, Allahabad, 2009.
6. Sharma, R.C and Vatal, M : *Oceanography for Geographers*, Chetnya, Allahabad, 2005.
7. Singh, Malkit : Dimensions in Physical Geography, Rasmeet Parkashan, Jalandhar 2012.
8. Singh, Savindra : *Climatology,* Prayag Pustak Bhavan, Allahabad, 2004.
9. Trewartha, G.T. Delhi, : *An Introduction to Climate,* McGraw Hill Book Co., New International Student Edition, 1980.

Further Readings :

1. Bhutani, Smita : *Our Atmosphere,* Edited by R.C. Chandna, Kalyani Publishers, Ludhiana, Delhi, 2000.
2. Bunnett, R.B. *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
3. Gross, Grant M. : *Oceanography : A View of the Earth*, Prentice Hall, New Jersey, 1975.
4. Monkhouse, F.J. : *The Principles of Physical Geography*, University of London Press, London, 1959.
5. Pattersen, S. : *Introduction to Meteorology,* McGraw Hill Book Co., London, 2011
6. Stringer, E.T. : *Foundations of Climatology*, Surjeet Publications, Delhi, 1982.

Pedagogy:

- Conscious effort be made to make the students aware of the significance of climate and oceans to human life.
- Use of Slides, photographs and documentaries on climates and oceans strongly recommended.

Paper-IV: CARTOGRAPHY-II Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (10+10)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography
- To explain the elements of Map (Scale and Orientation) and steps in Map making
- To introduce relief representation and weather symbolization on maps

COURSE CONTENT

UNIT-I

Brief History of Cartography
Elements of Map Design (6 lectures, 12lab sessions)

UNIT-II

Enlargement and Reduction of Maps: Graphic methods – Square and Similar Triangles.
Introduction to concept of Global Positioning System (GPS).

(6 lectures, 12 Lab. sessions)

UNIT-III

Interpretation of Indian Weather Maps: General introduction to the study of weather maps, the scheme of weather symbols including Beaufort's scale employed in Indian Daily Weather Maps.

(6 lectures, 12 lab. sessions)

UNIT-IV

Weather in India: Summer season (period of summer monsoon), winter season, Weather Forecasting through the study of weather maps and recent advances in weather forecasting.

(6 lectures, 12 lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question I.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper

Essential Readings :

1. Mishra, R.P. & Ramesh, A. : *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
2. Singh, Gopal : *Mapwork and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 1995.
3. Singh, R.L. & Singh : *Mapwork and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.
4. Dink, Phyllis : *Mapwork*, Atma Ram & Sons, Latest Edition, 1962.
5. Anderle, R : *The Global Positioning System, Royal* Society of London, 1998.
6. Kulkarni, M.N : *The GPS and Its Applications, Training,* Volume GPS Training Course, Civil Engg. Dept., I.I.T. Bombay, 9-19 May, 2000.
7. Hoffman-Wellenhof, B. et. al.: *GPS Theory and Practice,* $4^{th\ Rev}$. Edition, Springer Wien, New York.

Further Readings:

1. Monkhouse, F.J. & Wilkinson, H.R. : *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
2. Robinson, A.H. & Randall, D. Sale: *Elements of Cartography*, John Wiley & Sons, New York (Sixth Edition), 1995.
3. Colombo, O.L. & Watkins, M.M.: *Satellite Positioning in US National Report to IUGG,* on Geodesy, 1991.
4. King, R.W. & Others: *Surveying with GPS,* University of New South Wales, Australia,1985.
5. Kulkarni, M.N.: *GPS from an Indian Perspective,* GIM International Journal, GITC Publication, The Netherlands, Vol. 14, Oct., pp. 43-45. (2000a).
6. Mueller, I.I.: *Global and Regional Geodynamics,* IAG Symposia 101, Springer Verlag, 1989.
7. Wells, D.E.: *Guideto GPS Positioning, Canadian* GPS Association, New Brunswick, Canada, 1988.

Pedagogy :

- The use of topographical sheets of Survey of India and weather maps.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

GANDHIAN STUDIES
SEMESTER –I

MAHATMA GANDHI: FAMILY AND EARLY LIFE (INDIA, ENGLAND AND SOUTH AFRICA)

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives :

The paper is designed to acquaint the students with the early life of Mahatma Gandhi in India and in London.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Family and Schooling

a) Family Background – Parents, Rambha & others
b) Neighbourhood and Early Impact
c) Schooling
d) Influence of Indian Scriptures

UNIT-II

As a Law Student in London

a) Dilemma Before Going to London
b) As a Law Student
c) Vegetarianism
d) Self-transformation and Home Coming

UNIT-III

Gandhi in South Africa

a) Journey to South Africa
b) Encounter with Racial Discrimination/Apartheid
c) Conditions of Indians in South Africa
d) Birth of Satyagraha

UNIT-IV

Satyagraha in Practice

a) Disfranchisement of Indians
b) Establishment of Natal Indian Congress
c) Asiatic Law Amendment Ordinance
d) Home Coming

ESSENTIAL READINGS:

1 Bhattacharyya, Buddhadeva : *Evolution of the Political Philosophy of Gandhi* (Calcutta: Calcutta Book House), 1969.

2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.

3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 1986, 1995, 2004 editions.

4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1987.

5. Gandhi, M.K. : *Hind Swaraj (*Ahmedabad: Navajivan Publishing House), 1992.

6. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi : Deep & Deep Publication), 2001.

7. Mishra, Anil Dutta : *Reading Gandhi* (New Delhi: Dorling Kindersley Pearson), 2012.

8. Nanda, B.R. : *Mahatma Gandhi - A Biography* (London: George Allen and Unwin), 1976.

FURTHER READINGS:

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.

2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.

3. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.

4. Nanda, B.R. : *Making of a Nation: India's Road to Independence* (New Delhi: Harper Collins), 1998.

5. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997 edition.

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GANDHIAN STUDIES

SEMESTER –II

GANDHI IN FREEDOM STRUGGLE - SOUTH AFRICA AND INDIA

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives:

The paper is designed to acquaint the students with life in South Africa and struggle against racial discrimination.

Pedagogy of the Course Work :

90% Lectures (including expert lectures).
10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Struggle for Human Rights in South Africa

a) Green Pamphlet
b) Indian Opinion
c) Visit to London
d) Interaction and Confrontation : Race & Caste

UNIT-II

Establishing Ashrams

a) Experience of Community Life in South Africa
b) Phoenix Settlement
c) Tolstoy Farm
d) Return to India

UNIT-III

Western Influences-I

a) Influence of John Ruskin
b) Influence of Henry David Thoreau
c) Influence of Leo Tolstoy
d) Influence of Emerson

UNIT-IV

Gandhi's entry into Indian Politics

a) Early Political Activities
b) Champaran Satyagrah
c) Kheda Satyagrah
d) Ahmadabad Mill Strike

Essential Readings:

1. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
3. Fischer, Louis : *Life of Mahatma Gandhi* (New York: Harper and Row), 1983.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001.
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992.
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999.
7. Kripalani, J.B. : *Mahatma Gandhi, His Life and Thought* (New Delhi: Publications Division, Ministry of Information and Broadcasting), 1971.
8. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi: Deep & Deep Publication), 2001.
9. Nanda, B.R. : *Making of a Nation : India's Road to Independence(New Delhi: Harper Collins), 1998.*
10. Parekh, Bhikhu : *Gandhi's Political Philosophy: A Critical Examination* (Delhi: Ajanta), 1989.

Further Readings :

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.
2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.
3. Bondurant, John V. : *Conquest of Violence: The Gandhian Philosophy of Conflict* (Bombay : Oxford University Press), 1959.
4. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
5. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.
6. Ganguly, Debjani & Docker, John (eds.). : *Rethinking Gandhi and Non-violence Relationlity Global Perspective* (New Delhi: Orient Blackswan Pvt.,), 2009.
7. Nanda, B.R. : *Mahatma Gandhi- A Biography (London :George Allen and Unwin), 1976.*
8. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997, edition.

JOURNALISM & MASS COMMUNICATION

SEMESTER –I

INTRODUCTION TO MASS COMMUNICATION - I

Max. Marks	:	100
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will introduce to the students the general concepts and historical viewpoints in communication and media. The students would also get an understanding of the basic models communication and gain an understanding of the current scenario of media industry in India.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Definition, nature and concept of communication; types of communication: intra; inter; group and mass.

Unit-II : Basic models of mass communication : S-R model; Schramm's Model; Model based on Lasswell formula; Mathematical Model.

Unit-III : Early Press History in India (1782-1947); Role of nationalist newspapers in freedom struggle; Laws to curb press freedom before Indian independence; Role of press in Post Independence era (1947-1975); Role of Press during Emergency (1975-1977); Press in modern India (1978-present)

Unit-IV : Brief overview of media industry in India with emphasis on growth of

- Press
- Radio
- TV
- New Media

PRACTICALS

Max. Marks : 20 Marks

1. Project on any one aspect of communication : 1 0 Marks
2. Case study of any one early newspaper : 1 0 Marks

Books Recommended:

Essential Reading :

1. Wilbur Schramm, (1960), *Mass Communication*, 2nd ed. Urbana, University of Illinois Pr.
2. Wilbur Schramm, (1953), *Process & Effects of Mass Communication*, Urbana, University of Illinois Press.
3. Lee Richardson, (1969), *Dimensions of Communication*, N.Y. Appleton- Century-Croft.
4. Kenneth K. Anderson, 1972, *Introduction of Communication: Theory and Practice*. Menlo Park, Cummings Pub. Co.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd..
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading:

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, NY
3. Blumler, Jay G & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- II

PAPER : INTRODUCTION TO MASS COMMUNICATION-II

Max. Marks	**:**	**100**
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives:

This course will introduce students to the basic terminology of various forms of mass media as well as folk and new media. They will also be apprised with application areas such as Advertising & Public Relations.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Basic terms, concepts, definitions and nature of Print, TV and Radio Journalism.

Unit-II : Folk Media: Types, reach and relevance.

Unit-III : New Media: Cyberspace as a source of information, communication and entertainment.

Unit-IV : Definition, role of Advertising and Public Relations.

PRACTICALS

Max. Marks : 20 Marks

1.	Case study of any one newspaper, radio station or TV channel	:	10 Marks
2.	Project on either folk or new media	:	10 Marks

Books Recommended:

Essential Reading :

1. Luthra, H.P., 1984, *Indian Broadcasting*. Publications Division, Min. of I & B.
2. Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi.
3. Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd., New Delhi.
4. Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth Publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading :

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, N.Y.
3. Blumler, Jay G. & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.
5. Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London.
6. Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher.
7. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York.
8. Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

POLICE ADMINISTRATION

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

PAPER : POLICE ADMINISTRATION IN INDIA

(A) Course Objectives :

The principal objective of this paper is to acquaint the students with the features of Indian Police Administration along with its history and growth. Considerable attention has been paid to the concept and significance of reforms in Police Administration with special reference to reform initiatives after independence. The endeavor of the course would be to familiarize the students with the Police Administration at the Union Level with special focus on the Union Ministry of Home Affairs and Central Armed Police Forces .The powers functions and role of Police at Union, State, District and Police Station level will also be discussed.

(B) Pedagogy of the Course Work :

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words . The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 =18 marks).
- Rest of the paper shall contain 4 Units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit-I

Concept, Role and Significance of Police; Origin and development of Police in Ancient, Medieval and British Period. Police Reforms in India after Independence.

Unit-II

Organization and Working of Union Ministry of Home Affairs; Organization and Working of Central Police Organizations with special reference to Central Bureau of Investigation (CBI); Intelligence Bureau (IB); Bureau of Police Research and Development (BPR & D); and National Crime Records Bureau (NCRB).

Unit-III

Origin, Structure and Working of Central Armed Police Forces (CAPFs) with Special Reference to BSF, CRPF, ITBP , CISF and SSB.

Unit-IV

Organization and Working of Police Administration at the State Level, District Level and Police Station Level. Commissionerate System of Policing.

Essential Readings:

1. Gupta, Anandswarup : The Police in British India: 1861-1947, Bureau of Police Research & Development, New Delhi, 2007.
2. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
3. Sharma, P. D. : Indian Police – A Developmental Approach, Research Publications, New Delhi, 1977.
4. Sen, Shankar : Indian Police Today, Ashish Publishing House, New Delhi, 1994.
5. K.P Singh : Police Gyan Vigyan, Bright Law House, New Delhi, 2004.

Further Readings:

1. Vadackumchery, James : National Police Commission: Issues for Rethinking, APH Publishing Corporation, New Delhi, 1998.
2. Saxena, Anil K. : Professionalism in Indian Police, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Chaturvedi, J.C. : Police Administration and Investigation of Crime, Isha Books, Delhi, 2006.
4. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.

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POLICE ADMINISTRATION

SEMESTER – II

Paper : CONSTITUTION OF INDIA

(A) Course Objectives:

The objective of this course is to give an overview to the students the basic information about the Constitution of India. The students would be taught concepts such as Preamble, Citizenship, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties. They are made to understand the political executive at the union and state level; the union and state legislature and judiciary at the Union and in the state. In addition, efforts would be made to discuss the mechanism available for ensuring police accountability.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :
(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit – I

Preamble, Citizenship, Fundamental Rights, Restrictions of Police Rights, Directive Principles of State Policy & Fundamental Duties.

Unit – II

Executive at the Union Level; President, Prime Minister and Council of Ministers; Union Legislature: Lok Sabha and Rajya Sabha; Judiciary at the Union Level: Supreme Court.

Unit-III

Executive at the State Level; Governor, Chief Minister and Council of Ministers. State Legislature: Vidhan Sabha and Vidhan Parishad. Judiciary in the State : High Court and Subordinate Courts.

Unit – IV

Public Accountability of Police through Constitutional and statutory bodies: National Commission for Schedule Caste, National Commission for Schedule Tribes, National Commission for Women, National Human Rights Commission. National Commission on Protection of Child Rights.

Essential Readings:

1.	Ramesh K. Arora and Rajni Goyal	:	Indian Public Administration: Institutions and Issues, Wishwa Prakashan, New Delhi, 1997.
2.	Avasthi and Avasthi	:	Indian Administration, Lakshmi Narain Agarwal, Agra, 1995.
3.	Norman D. Palmer	:	The Indian Political System, Houghton Hiffin, New York, 1975.
4.	Iqbal Narain (Ed.)	:	State Politics in India, Meenakshi Publications, Meerut, 1976.
5.	Granville Austin	:	The Indian Constitution : Cornerstone of a Nation, Oxford University Press, London, 1966.
6.	Sriram Maheshwari	:	State Government in India, Macmillan, New Delhi, 2000.

Further Readings :

1.	Bambri, C. P.	:	The Indian State – 50 Years, Shipra Publications, Delhi, 1977.
2.	Singh, Hoshiar (Ed.)	:	Indian Administration, Aalekh Publishers, Jaipur, 1990.
3.	Pye, Lucian W. and Sidney Verba (Eds.)	:	Political Culture and Political Development, Princeton University Press, New Jersey, USA, 1965.

WOMEN'S STUDIES

SEMESTER–I

Paper- : FOUNDATIONAL CONCEPTS IN WOMEN'S STUDIES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : The objective of this course is to conscientise the students about some of the key concepts in women's studies, their meaning from a feminist and gender perspective with special reference to India.

Course Contents :

Unit I: Gender

- Sex and Gender : Definition and Difference
- Gender Stereotypes: Genesis and Persistence through Family, School and Peer Group
- Social Construction of Gender: From infancy to Adulthood to Old age

Unit II: Patriarchy

- Definition and Origin of Patriarchy
- Manifestations of Patriarchy:
  - (a) Preference for Male Child
  - (b) Discrimination against girl-child and women in the family
  - (c) Violence against Women
  - (d) Discrimination against Women at the Workplace

Unit III: Empowerment

- Definition
- Types of Empowerment:
  - (a) Social – with reference to women's role in marriage and family
  - (b) Political – 73rd and 74th Constitutional Amendment Acts
  - (c) Economic – Employment and Property Rights

Unit IV: Women's Studies

- (a) Definition,
- (b) Rationale for Women's Studies,
- (c) Evolution of Women's Studies,
- (d) Women's Studies as a discipline.

NOTE:

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

1. Anderson, Margaret : *Thinking About Women,* Macmillan, New York, 1993.
2. Bhasin, Kamla : *What is Patriarchy?,* Kali for Women, New Delhi, 1994.
3. Bhasin, Kamla : *Understanding Gender,* Kali for Women, New Delhi, 2000.
4. Connel, R.W. : *Gender,* Polity, Cambridge, 2002.
5. Jain, Devaki and Rajput, Pam (eds.) : *Narratives from the Women's Studies Family,* Sage, New Delhi, 2003.
6. Poonacha, Veena : *Understanding Women's Studies*, RCWS, SNDT University, Mumbai, 1999.
7. Singh, Umesh Pratap, Garg, Rajesh Kumar and Nigam, Vivek Kumar : *Women Empowerment : Dimension and Direction,* Adhyayan Publishers and Distributors, New Delhi, 2012.
8. Woodward, Kath : *The Short Guide of Gender,* Rawat Publications, Jaipur, 2012.
9. Viz. M., Bhatia, M. and S.(eds) : *Women Studies in India: A Journey of 25 Years*, Rawat Publications, Jaipur, 2014

Further Readings :

1. Aravamudan, Gita : *Disappearing Daughters : The Tragedy of Female Foeticide,* Penguin, New Delhi, 2007.
2. Lerner, Gerda : *The Creation of Patriarchy,* Oxford University Press, New Delhi, 1986.
3. Lorber, Judith and Farell, Susan A. (ed.) : *The Social Construction of Gender,* Sage, New Delhi, 1991.
4. Makwana Ramesh H. : *Women Empowerment through Panchayati Raj,* ABD Publishers, Jaipur, New Delhi, 2012
5. Mies, Maria : *Indian Women and Patriarchy,* Concept Publishing Company, New Delhi, 1980.
6. Rajput, Pam & Kaur, Manvinder : "Women's Studies in Higher Education in India: Some Reflections", *Samyukta,* Vol. III, No.1, January, 2003.

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WOMEN'S STUDIES

SEMESTER -II

Paper : STATUS OF WOMEN IN INDIA-I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: The status of women in India has changed over time in relation to historical and cultural realities, levels of consciousness, perceptions and actions of individual women, women's groups and finally State initiatives. This course first aims to acquaint the student with women in the Indian tradition from ancient times to the present, a tradition which has arisen out of the heterogeneity of experience. Further it aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Course Contents

Unit I : Status of women in India in a historical perspective:

(a) Ancient India
(b) Medieval India
(c) Modern India

Unit II: Women and Family

(a) Origin of the family
(b) Types of family
(c) Gender Division of labour in family
(d) Female headed households

Unit III: Women, Religion and Caste

(a) Religion: Women's Status in major Indian religions - Hinduism, Islam, Sikhism, Christianity
(b) Caste: Introduction to caste system in India; Caste and Gender

Unit IV: Violence against Women

(a) Violence against Women: Definition as given by the United Nations
(b) Prevalent forms of violence against Women :

- Domestic violence
- Rape and Molestation
- Sexual Harassment
- Dowry Related Violence

NOTE:

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal, Banarsidass, Delhi, 1959.
2. Bader, Clarisse : *Women in Ancient India: Moral and Literary Studies,* Anmol Pub., Delhi, 1987.
3. Chatterjee, Meera : *A Report on Indian Women from Birth to Twenty*, NIPCCD, New Delhi, 1999.
4. Gopalan, Sarala and Shiva, Mira : *National Profile on Women, Health and Development,* VHAI, & WHO, 2000.
5. Gopalan, Sarala : *Towards Equality – The Unfinished Agenda : Status of Women in India-2001,* National Commission for Women, New Delhi, 2002.
6. Menon-Sen, Kalayani and Shiva Kumar, A.K. : *Women in India! How Free? How Equal?,* Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.
7. *National Human Development Report, 2001,* Planning Commission, Govt. of India, March, 2002.
8. Pruthi, Raj Kumar, Devi, Rameshwari and Pruthi, Romila, (eds.) : *Status and Position of Women: In Ancient, Medieval and Modern India,* Mangal Deep, Jaipur, 2001.
9. Sagade, J. : *Child marriage in India: Socio-Legal and Human Rights Dimensions,* Oxford University Press, New Delhi, 2012.

Further Readings :

1. Ali, Azra Asghar : *The Emergence of Feminism Among Indian Muslim Women,* 1920-1947, Oxford, Karachi, 2000.
2. Anand, Meena : *Dalit Women : Fear and Discrimination,* Isha Books, Delhi, 2005.
3. Bhattacharya, Rinki (eds.) : *Behind Closed Doors: Domestic Violence in India,* Sage, New Delhi 2004.
4. Choudhary, Prem : *Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India,* OUP, New Delhi, 2007.
5. Desai, Neera and Krishnaraj, Maithreyi (eds.) : *Women and Society in India,* Ajanta Publication, New Delhi, 1987.
6. Goodman, Jacqueline : *Global Perspectives on Gender and Work : Readings and Interpretations Reprint,* Rowman and Little Field Publishers, New York, Toronto Plymouth, UK, 2012.
7. Jacobson, Doranne and Wadley, Susan S. : *Women in India: Two Perspectives,* Manohar, New Delhi, 1986.
8. Kumar, Hajira (ed.) : *Status of Muslim Women in India,* Aakar Books, Delhi, 2002.
9. Mohanti, Bedabati : *Violence Against Women : An Analysis of Contemporary Realities,* Kanishka Publications, New Delhi, 2005.
10. Mohini Giri, V. : *Deprived Devis : Women's Unequal Status in Society,* Gyan, New Delhi, 2006.
11. Nagar, N.S. : *Changing Status of Indian Women,* Vista International Pub., Delhi, 2008.
12. Rajawat, Mamta : *Dalit Women: Issues and Perspectives,* Anmol Pub., New Delhi, 2005.
13. Thomas, P. : *Indian Women Through the Ages,* Asia Publishing House, Bombay, 1964.
14. Yadav, Ravi Prakash and Barsa Kumar Chandradeep : *Women Workers in India,* New Century Publications, New Delhi, India, 2012.

HUMAN RIGHTS AND DUTIES

SEMESTER-I

Paper : HUMAN RIGHTS AND DUTIES : CONCEPTUAL UNDERSTANDING

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objective :

The course is designed to provide adequate theoretical understanding about humans rights and duties. It purports to develop a broad understanding of human rights and duties, awareness about the theoretical origins of human rights and their correlation with governance issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72

UNIT-I

THE CONCEPT OF HUMAN RIGHTS:

- Meaning and nature of Human Rights
- Classification of Rights
- The Concept of Human Rights

UNIT-II

CONCEPT OF HUMAN DUTIES:

- Meaning and nature of Human Duties; Moral, ethical, social, economic, political and cultural universal
- Classification of Human Duties: Individual, family, Community, Nation-State, Human kind and Mother Earth.
- Relationship between Rights and Duties.

UNIT-III

INTRODUCTION TO THEORIES OF HUMAN RIGHTS:

- Natural Rights Theory
- Liberal Theory of Rights,
- Legal/ positivist Theory of Rights
- Marxist Theory of Rights.
- Feminist Theory of Rights

UNIT-IV

DEMOCRATIC GOVERNANCE:

- Democracy and People's participation.
- Rule of Law: Non-arbitraries.
- Role of Civil Society

Essential Readings:

1. Brundlad Report : *Our Common future,* (1986) Oxford.
2. David Robert son : *A Dictionary of Human Rights,* (2004) Europa Publications, London.
3. Darren, J.O. Byrne : *Human Rights: An Introduction*, Pearson, (2005) Education Pvt. Ltd., Singapore.
4. Ian Brownlie, et al. (eds.): *Basic Documents on Human Rights,* (2006) Oxford
5. Jayapalan, N. : *Human Rights,* Atlantic Publishers, (2000) New Delhi.
6. Kalpana Kammabiran : C*rafting Human Rights Cultures* (2006), NALSAR University of Law, Hyderabad.
7. Gandhi, P.R. (ed.) : *Blackstone's International Human Rights Documents,* (2001) University, Delhi.

Further Readings

1. Baxi Upendra (ed.) : *The Right to be Human ,* (1987) *Lancer International,* New Delhi.
2. Sanajaoba, N. : *Human Rights in the New Millennium,* (2000) Manas Publications, New Delhi
3. Tripathi, Mani B.N. : *Jurisprudence,* (2008) *Faridabad*: Allahbad Law Agency
4. Lakhani, M.V. : *Studies in Juris Prudence*, (2013), Tech Publications New Delhi: Cyber

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HUMAN RIGHTS AND DUTIES

SEMESTER-II

Paper : HUMAN RIGHTS : INTERNATIONAL DIMENSIONS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

This paper purports to deal with promotion and protection of human rights in the international context, particularly in the UN bodies. It aims to create awareness regarding the Universal Declaration of Human Rights, 1948, significant Covenants along with the Optional Protocols.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e. 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72 marks

UNIT-I

INTERNATIONAL NORMS AND MECHANISMS:

- League of Nations
- The United Nations Charter and the development of Human Rights.

UNIT-II

INTERNATIONAL BILL OF RIGHTS:

- Universal Declaration of Human Rights (UDHR), 1948
- International Covenant on Civil and Political Rights (ICCPR), 1966; Optional Protocol
- International Covenant on Economic Social and Cultural Rights (ICESCR), 1966; Optional Protocol

UNIT-III

HUMAN RIGHTS AND UNITED NATIONS BODIES (I):

- UN General Assembly
- Economic and Social Council (ECOSOC)
- UN Human Rights Council

UNIT-IV

HUMAN RIGHTS AND UNITED NATIONS BODIES (II):

- International Labour Organization (ILO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Health Organization (WHO)

Essential Readings:

1. Philip (ed.) : *United Nations and Human Rights* (1966), Clearndon Press, Oxford.
2. Henry Steiner J. et al (eds.) : *International Human Rights in Context* (1966), Chapter 10, Clarendon Press, Oxford.
3. Saxena, J.N. et al (ed.) : *United Nations for Better World* (1986), Lancers Books, New Delhi.
4. Henkin Louis : *International Bill of Rights: The Covenant on Civil and Political Rights* (1981), Columbia University Press, New York.
5. Krasno Jean A. : *The United Nations* (2005), Viva books, New Delhi.
6. Lauterpacht, Hersch : *An International Bill of the Right of Man* (1945), Columbia University Press, New York.
7. Morsink, Johannes : *The Universal Declaration of Human Rights : Origins, Drafting and Intent* (1999), University of Pennsylania Press, Philadelphia

Further Readings

8. UN Centre for Human Rights : *International Human Rights Standards for Law Enforcement*(1966), World Campaign for Human Rights, Geneva.
9 Kapoor, S.K. : *Human Rights,* (2005) Allahabad Central Law Agency:
10 Aggarwal, H.O : *International Law and Human Rights*, (2008) Central Allahabad Law Agency:

RELIGIOUS AND SIKH STUDIES

SEMESTER- I

PAPER-I, HINDUISM

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious and Sikh Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course as one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness regarding the origin, features and teachings of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9x2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4x18).

Course Contents

Unit. I. Vaishnavism : origin, development; features and institutions

Unit. II. Shaivism: origin, development; features and institutions

Unit. III. Shaktism: origin, development; features and institutions

Unit. IV. Bhakti Movement in India: growth and development; with special reference to Ramanuj and Chaitanya

Essential Readings:

1. Bhandarkar, R.G., *Vaishnavism, Shaivism and Minor Religious Systems*, Varanasi 1965.
2. Jayaswal, Suvira, *the Origin and Development of Vaishnavism*, New Delhi, 1981.
3. Majumdar, A.K., Chaitanya, *His Life and Doctrine: A Study in Vaishnaism,* Bombay: Bhartiya Vidya Bhavan, 1969.
4. Sharma, Krishna, *Bhakti and the Bhakti Movement: A New Perspective*, New Delhi: Munshiram Manoharlal, 1987.
5. ਉਪਾਧਿਆਇ **ਬਲਦੇਵ, *ਭਾਰਤੀ ਦਰਸ਼ਨ ਕੀ ਰੂਪਰੇਖਾ*** (ਹਿੰਦੀ), ਪ੍ਰਕਾਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ,2016 ਪੇਪਰ ਬੈਕ.
6. **ਸਿੰਘ ਸਰਬਜਿੰਦਰ, ਡਾ.**(ਸੰਪਾ.) **'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪਤ੍ਰਿਕਾ**
7. ਸਿਨਹਾ, ਹਰੇਂਦ੍ਰ ਪ੍ਰਸਾਦ (ਡਾ.), *ਧਰਮ ਦਰਸ਼ਨ ਕੀ ਰੂਪ ਰੇਖਾ,* ਮੋਤੀਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ, 1985.
8. **ਦੱਤਾ ਅਤੇ ਚੈਟਰਜੀ, *ਭਾਰਤੀ ਦਰਸ਼ਨ*** (ਹਿੰਦੀ), ਪਬਲੀਕੇਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ, 1973
9. **ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: 'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●5**
11 ਨਿਰਾਕਾਰੀ, ਆਰ. ਡੀ. *ਭਾਰਤੀ ਦਰਸ਼ਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1994.
12 ਪੰਨੂੰ, ਹਰਪਾਲ ਸਿੰਘ (ਡਾ.), *ਭਾਰਤ ਦੇ ਪੁਰਾਤਨ ਧਰਮ*, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2000.
13 ਮਿਸ਼ਰ, ਉਮੇਸ਼ (ਡਾ.), *ਭਾਰਤੀ ਦਰਸ਼ਨ, ਉਤਰ ਪ੍ਰਦੇਸ਼,* ਹਿੰਦੀ ਸੰਸਥਾਨ, ਲਖਨਊ, 2003.

Further readings:

- Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

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RELIGIOUS AND SIKH STUDIES

SEMESTER- II

PAPER-II NEW FAITHS AND SAINTS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit I. Jainism: Life and Teachings of Mahavira ; origin and development of Jainism

Unit. II. Buddhism: Life and Teachings of Lord Buddha; origin and development of Buddhism

Unit. III. Sant Kabir: Life, Teachings and Contribution

Unit. IV. Sant Ravidas: Life, Teachings and Contribution

Essential Readings:

1. Chatterjee, Asim Kumar, *A Comprehensive History of Jainism,* Delhi: Munshilal Manoharlal Publishers, 2000.
2. Dutt R.C., *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983.
3. Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.
4 Vandeville, Charlotte, *A Weaver Named Kabir*, Oxford: India Paperbacks, 1997.
5 ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ' ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●9
6 ਸਿੰਗਲ, ਧਰਮ ਪਾਲ ਡਾ., *ਗੁਰੂ ਰਵਿਦਾਸ, ਜੀਵਨ ਤੇ ਵਿਚਾਰ,* ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ, 2●●1
7 ਸਰਾਓ, ਕਰਮਤੇਜ ਸਿੰਘ, *ਪ੍ਰਾਚੀਨ ਭਾਰਤੀ ਬੁੱਧ ਧਰਮ: ਉਦਭਵ, ਵਿਕਾਸ ਤੇ ਪਤਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2007.
8 ਕੁਮਾਰ ਲਾਲ ਬਸੰਤ, *'ਸਮਕਾਲੀ ਭਾਰਤੀ ਦਰਸ਼ਨ*, ਮੋਤੀ ਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ 2●●6 (ਹਿੰਦੀ)
9 ਜੋਸ਼ੀ, ਐਲ. ਐਮ., (ਸੰਪਾ.), *ਧੱਮਪੱਦ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1990.
10 ਬ੍ਰਹਮਜਗਦੀਸ਼ ਸਿੰਘ, *ਸੰਤ ਕਬੀਰ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਬਾਣੀ,* ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●2
11 ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: *'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ* ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●1

Further readings:

1. Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.
2. Lopez, Jr., Donald S. (Ed.) *Buddhism in Practice,* New Delhi, 1998.
3. Vandeville, Charlotte, *Myths, Saints and Legends in Medieval India*, Delhi: Oxford University Press, 1999.

HOME SCIENCE

SEMESTER- I

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	40	10	1	3	40	10	100
									Total :	**100**

Note : 1. Each Practical group will have 12-15 students.

PAPER : FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I (a) Meaning & Importance of Home Science.
(b) Functions of Home.

II (a) Home Scientist as an Entrepreneur.
(b) Agencies promoting Entrepreneurship- Commercial Banks, District Industries, Co-operative Societes.

Section B

III Interior Decoration

(a) Elements of Art - Line, Form, Pattern, Texture, Colour, Light and Space.
(b) Principles of Art in relation to interior decoration - Harmony, Balance, Rhythm, Proportion & Emphasis.

IV Colour

(a) Characteristics of colour
(b) Colour wheel
(c) Colour schemes

Section C

V Hygiene & Health

(a) Definition of Hygiene, Health
(b) Definition of infection, sources, carrier and control
(c) Definition and types of immunity.
(d) Immunization schedule

VI Causes & Spread of following diseases.

(a) Caused by insects – Malaria & Dengue
(b) Conveyed by ingestion – Enteric Fever, Cholera, Dysentery & Diarrhea
(c) Spread by droplet infection- chickenpox, measles, mumps & TB.
(d) Sexually transmitted diseases -AIDS.

Section D

VII Food Hygiene

(a) Definition
(b) Hygiene during preparation, service and storage of food.
(c) Domestic purification of water-
- Aquaguard
- Reverse Osmosis

VIII Food Adulteration

(a) Definition
(b) Common food adulterants and their effects on health.
(c) Household Methods of testing food adulteration.

PRACTICAL

Max. Marks : 50 Marks
Practical Theory : 40 Marks
Inter. Asses. : 10 Marks
Time : 3 hours per week.

1. Floor Decoration - Making of Alpana and Rangoli for different occasions.
2. Methods of detecting adulteration in any five foods such as ghee, castor sugar, milk, honey, red chili powder, tea leaves, turmeric powder etc.
3. Table setting, Table manners and Napkin foldings.
4. Making of a Chart/Model/Poster of Colour Wheel or Colour Schemes.
5. Survey of 5 households to study Immunisation schedule.

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HOME SCIENCE
SEMESTER- II

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	40	10	1	3	40	10	100
									Total :	**100**

Note: 1. Each Practical group will have 12-15 students.

PAPER: FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I. Resources

(a) Introduction
(b) Classification

II. Time Management

(a) Steps in making time plans.
(b) Tools in time management- peak loads, work curves and rest periods.

III. Money Management
(a) Types of Income
(b) Budget- Types, Advantages and limitations of budgeting, factors affecting budget, basic steps in planning of budget.
(c) Means of supplementing family income.

IV. Energy Management

(a) Fatigue – Types, Symptoms & Effects.
(b) Work Simplification (Mundel)

Section B

V. Furniture

(a) Factors affecting selection of furniture.
(b) Furniture requirement and arrangement for different rooms.
(1) Master Bedroom
(2) Drawing Room
(3) Dining Room
(4) Children's Room

VI. Flower Arrangement
(a) Definition and Types
(b) Principles of art in flower arrangement
(c) Material and Essential equipment used in Flower Arrangement.

Section C

VII. The Home maker as a Consumer
(a) Concept and objectives of Consumer Education.
(b) Rights and responsibilities of a Consumer.
(c) Malpractices in the production of consumer goods.
(d) Consumer guides- Standardized marks, labels, packaging, media and consumer redressal forum.

VII. Health Education
(a) Aims and Objectives
(b) Scope
(c) Importance

Section D

IX. Digestive System
(a) Diagram of Alimentary Canal
(b) Functions of mouth, stomach, intestines (Small and Large)
(c) Digestion of Carbohydrates, proteins and fats.

X. Simple first aid for burns, poisoning, electric shock, bleeding, drowning, fainting, fractures, insect bite, snake bite, nose bleeding, sunstroke, sprain, heart attack.

PRACTICAL

Max. Marks : 50 Marks
Practical : 40 Marks
Inter. Asses. : 10 Marks
Time : 3 hours per week.

1. Making of fresh flower arrangement for a corner and centre table.
2. Introduction to basic first aid techniques.
3. Cleaning & Polishing of household metals: brass, copper, silver, iron, aluminium, plastic and nonstick ware.
4. Cleaning and polishing of Wooden Furniture.
5. Cleaning of Glass windowpanes.

References

1. Anna Hong Rutt : *Home Furnishing,* Wiley Eastern Ltd., New Delhi, 1973.
2. Hazel Thompson, Criag old Day Rush : *Home with character,* Univesal Book Stall, Delhi, Kanpur 1969.
3. Betty Pepis : *Interior Decoration A to Z,* Doubleday & Co., Inc. New York, 1965.
4. Ray Faulkiner, Sarah Faulkner : *Inside Today's Home,* Holt, Rinehart & Winston, 1973.
5. R.S. Deshpandae : *Modern Ideal Home for India,* United Book Corporation, Poona, 1983.
6. R.S. Deshpandae : *Build your own Home,* United Book Corporation, Poon, 1983.
7. M.A. Varghese, N.M. Ogale, K. Srinivisan : *Home Management,* Wiley Eastern Ltd., 1985.
8. The Educational Planning Group, Delhi : *Home Management,* Arya Publishing House, New Delhi, 1986.
9. Stella Sournderaj : *A text book of Household Arts,* Orient Longman Ltd., 1974.
10. A Margaret Kaye : *A Student Hand Book of Housewifery,* J.M. Dent and Sons Ltd., London, 1958.
11. Ball, Vetrio Kloss : *Art of Interior Design,* The Macmillan Co., New York, 1962.
12. Goldstein H.I. and Goldstein V. : *Art in Everyday Life,* Macmillan, New York, 1964.
13. Swanson, Betty : *Introduction to Home Management,* Macmillan Co., New York, 1981.
14. Julia Elements : *101 ideas for flower arrangement,* C. Arthur Persons Ltd., London, 1963.
15. Halse A.O. : *The Use of Colour in Interior,* Mcgraw Hill Book Co., New York, 1961.
16. Walter Ian Fischman, Richerd Demsbe, William Bernard: *Basic Home Repairs,* A Grosset Super Good Life Book Publishers, New York, 1975.
17. Saxena, R. R. (1990) *Social and Preventive Medicine,* CBS Publishers and Distributors, Delhi.
18. Selman, A. C. (1992) *Health & Longevity,* Oriental watchman Publishing house, Park, Poona, India.
19. Bedi, Y. P. : *Hygiene and Public Health.*
20. Pearce Evelyn. C., Anatomy and Physiology for Nurses, Oxford University.
21. Best, Charles, H.and Taylor, N.B., The Living Body – A Text in Human Physiology, Asia Publishing House.
22. Phadke : Aids to Hygiene
23. Bhatia, B.C. and Sri P.N. (1968), Elementary Hygiene, Oriental Longman.
24. Seetharam, (2005) *An Introduction to Family Resource Management*, CBS Publishers and Distributors, Delhi.
25. Kaur and Macneil, (1994), *Theory and Practice of Home Science*, Subject Publication, New Delhi.

Journals

1. Indian Journal of Home Science, Home Science Association of India, Sri Avinashilingam Home Science College for Women, Coimbatore.
2. Inside Outside, Edited and Published by Malika Sarabhai, Wadia Building, 19/21 Dalal Street, Bombay.
3. Journal of Home Economics, American Home, A Venue, NW Wahington.

ENVIRONMENT CONSERVATION

SEMESTER – I

Paper : ENVIRONMENT AND FORESTRY

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	65	10	25	-	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:
There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : ENVIRONMENT AND FORESTRY

UNIT-I

Environment: **Definition, Scope & importance** of Environment. A brief introduction of Physical & biological environment.

Ecosystem: Concept of Ecosystem, Biotic & abiotic components, food chain, food web trophic levels, types of ecosystems, terrestrial and aquatic. Biogeochemical cycles - nitrogen, carbon, phosphorous and sulphur cycle.

UNIT-II

Natural Resources: Definition, type of natural resources (Renewable and nonrenewable natural resources) and the policies of their conservation. Energy resources; Fossil fuel, Alternative source of energy (Solar energy, wind power, geothermal energy, dung energy and wood energy.

UNIT-III

Forestry: Forestry, Concept, types of forests in India & the world. Deforestation, reforestation and afforestation. Major and minor forest products. Reasons of forest destruction and its impact on Environment. Community forestry, Farm forestry, Social forestry and Agroforestry.

UNIT-IV

Indoor Environment: Pollution of the in house environment pollutants in the offices, workplaces (School, Bus stand, College and Kitchens). Environmental problems linked to urban and rural lifestyle, Adulterants; Food adulterants (Wheat flour, milk, red chili powder, mustard oil, desi ghee, sweets, artificial sweetness, dyes, food allergens).

PRACTICAL

(*Based on theory paper*)

Laboratory work: Tests of food adulterants.

Study the forest products with help of charts and specimens.

Survey reports of indoor environmental pollutants and local forests.

A visit to forest to study different components of these ecosystems.

Books Recommended :

1. Purochit, S.S., Shammi, Q.J. & Agarwal, A.K. : Text Book of Environment Sciences, Saraswati Pub., Jodhpur, 2007.
2. Dhaliwal, G.S & Kukul, S.S. : Essentials of Environmental Sciences, Kalyani Pub., Ludhiana, 2008.
3. Chundawat, B.S. & Gautam, S.K : Text Book of Agroforestry, Raju Primalai, New Delhi. 2006.
4. Chandna, R.C. : Environmental Geography, Kalyani Pub., Ludhiana, 2006.
5. Sagreiya, K.P. : Forests and Forestry, National Book Trust, New Delhi, 2007.
6. Ralhon, P.K., Dhaliwal, G.S. & Avtar Singh : The Forests-Production and Management, Kalyani Pub., Ludhiana.
7. Arora, S. : Fundamentals of Environmental Biology, Kalyani Pub., Ludhiana, 2008.
8. Dwivedi, A.P. : Forestry in India, Surya Publications, Dehradun, 1993.

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ENVIRONMENT CONSERVATION

SEMESTER – II

PAPER : SOIL AND WATER POLLUTION

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	68	7	22	3	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:

There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : SOIL AND WATER POLLUTION

UNIT-I

Lithosphere: Meaning of Soil profile, its components, types of soil, physical-chemical properties of soil.

Soil Fertility: Micro-and macro-nutrients, technique of testing soil sample. Methods of increasing soil fertility, merits and demerits of fertilizers, role of soil microorganisms.

UNIT-II

Degradation of soil: Soil erosion (Water and Wind erosion) causes of effect of erosion. Soil pollution: Different types of soil pollutants (Chemicals, Pesticides, Fertilizers & manure, discarded material. Pollution and control measures.

UNIT-III

Hydrosphere: Major sources and uses of water. Overutilization of surface & ground water, floods, drought. Conflicts over water. Potable water, its characteristics. Water cycle (Global and Biological)

UNIT-IV

Water pollution: Definition, Types & Sources of water pollution, its consequences and control measures. Different types of diseases due to water pollution. Treatment of wastewater by green method (Root-zone technology), Marine pollution - a brief account.

PRACTICAL

Determination of soil pH

Use of Portable Kit

Determination of organic matter in soil

Determination of $CaCO_3$ in soil.

Determination of available Nitrogen in soil.

Identification of different fertilizers.

Determination of pH of water.

Determination of organic carbon.

Determination of microbial carbon.

Determination of available Nitrogen.

Determination of dissolved Oxygen, BOD.

Determination of hardness and alkalinity of water.

Survey reports of different water samples in local and adjoining areas and interpretation of water test report.

Books Recommended

1. Singh, R.A. : Soil Physical Analysis, Kalyani Publishers, Delhi, India, 1989.
2. Rao, Sitaram : Introduction to Soil Forestry, Oxford and IBH, New Delhi, 1979.
3. Gupta, P.K. : A Handbook of Soil Fertilizer and Manure, Agrobios, Jodhpur, India, 2003.
4. Miller, R.W. and Donahue, R.L. : Soils in our Environment , Prentice Hall, USA, 1995.
5. Mahajan, S.P. : Air Pollution, Control, TERI Press, Delhi, India, 2009
6. Kudeshia, V.P. : Water Pollution, Prgati Parkashan, New Delhi, India, 2009
7. Hooja, R. : Management of water for Agriculture: Irrigation, Watersheds, and Drainage, Rawat Publications, India, 2009.
8. Goel, P.K. : Water Pollution: Causes, Effects and Control, New Age International Publishers, New Delhi, 2006
9. Ramachandra, T.V. : Soil and Groundwater Production from Agricultural Activities, TERI Press, New Delhi, India, 2006

MATHEMATICS

SEMESTER – I

Paper-I : PLANE GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes in two dimensions: Shifting of origin, rotation of axes, invariants.

Pair of Straight Lines :
Joint equation of pair of straight lines and angle between them, Condition of parallelism and perpendicularity, Joint equation of the angle bisectors, Joint equation of lines joining origin to the intersection of a line and a curve.

Circle :
General equation of circle, Circle through intersection of two lines, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, angle of intersection and orthogonality, power of a point w.r.t. circle, radical axis, co-axial family of circles, limiting points.

Unit-II

Conic :
General equation of a conic, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, diameter. Conjugate diameters of ellipse and hyperbola, special properties of parabola, ellipse and hyperbola, conjugate hyperbola, asymptotes of hyperbola, rectangular hyperbola. Indentification of conic in general second degree equations.

References :

1. S. L. Loney : *The Elements of Coordinate Geometry,* Macmillan and Company, London, 2nd Edition 2007.
2. P.K. Jain and Khalil Ahmad : *A Text Book of Analytical Geometry of Two Dimensions, Wiley Eastern Ltd., 1999.*
3. Erwin Kreyszig : *Advanced Engineering Mathematics, John Wiley & Sons,1999.*
4. Gorakh Prasad and H.C. Gupta : *Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahabad, 1955.*

Paper-II : CALCULUS - I

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Properties of real numbers :
Order property of real numbers, bounds, l.u.b. and g.l.b. order completeness property of real numbers, archimedian property of real numbers.

Limits:
ε - δ definition of the limit of a function, basic properties of limits, infinite limits, indeterminate forms.

Continuity:
Continuous functions, types of discontinuities, continuity of composite functions, continuity of $|f(x)|$, sign of a function in a neighborhood of a point of continuity, intermediate value theorem, maximum and minimum value theorem.

Unit-II

Mean value theorems:
Rolle's Theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, their geometric interpretation and applications, Taylor's theorem, Maclaurin's theorem with various form of remainders and their applications.

Hyperbolic, inverse hyperbolic functions of a real variable and their derivatives, successive differentiations, Leibnitz's theorem.

References :

1. J. D. Murray & M . R. Spiegel : *Theory and Problems of Advanced Calculus,* Schaum's Outline Series, Schaum Publishing Co., New York.
2. P.K. Jain and S. K. Kaushik : *An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.*
3. Gorakh Prasad : *Differential Calculus, Pothishala Private Ltd., Allahabad.*
4. G.B. Thomas & R.L. Finney : *Calculus and Analytic Geometry (Ninth Edition), Pearson Publication.*
5. Shanti Narayan and P.K. Mittal : *Differential Calculus, Edition 2006, S. Chand & Co., New Delhi.*

Paper III: TRIGONOMETRY AND MATRICES

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

D'Moivre's theorem, application of D'Moivre's theorem including primitive n^{th} root of unity. Expansions of $\sin n\theta$, $\cos n\theta$, $\sin^n \theta$, $\cos^n \theta$ ($n \in N$). The exponential, logarithmic, direct and inverse circular and hyperbolic functions of a complex variable. Summation of series including Gregory Series.

Unit-II

Hermitian and skew-hermitian matrices, linear dependence of row and column vectors, row rank, column rank and rank of a matrix and their equivalence. Theorems on consistency of a system of linear equations (both homogeneous and non-homogeneous). Eigen-values, eigen-vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix. Diagonalization.

References:

1. K.B. Datta : *Matrix and Linear Algebra*, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.
2. S. R. Knight and H.S. Hall : *Higher Algebra, H.M. Publications, 1994.*
3. R.S. Verma and K.S. Shukla : *Text Book on Trigonometry, Pothishala Pvt. Ltd., Allahabad.*
4. Shanti Narayan and P.K. Mittal : *A Text Book of Matrices, S. Chand & Co., New Delhi, Revised Edition, 2007.*

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MATHEMATICS

SEMESTER – II

Paper-I : SOLID GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes:
Shifting of origin and rotation of axes.

Sphere:
Section of a sphere and a plane, spheres through a given circle, intersection of a line and a sphere, tangent line, tangent plane, angle of intersection of two spheres and condition of orthogonality, power of a point w.r.t. a sphere, radical axis, radical center, co-axial family of spheres, limiting points.

Cylinder:
Cylinder as a surface generated by a line moving parallel to a fixed line and through a fixed curve, different kinds of cylinders such as right circular, elliptic, parabolic and hyperbolic cylinders in standard forms, enveloping cylinders.

Unit-II

Cone:
Cone with a vertex at the origin as the graph of a homogeneous equation of second degree in x,y,z, cone as a surface generated by a line passing through a fixed curve and a fixed point outside the plane of the curve, reciprocal cones, right circular and elliptic cones, right circular cone as a surface of revolution obtained by rotating the curve in a plane about an axis, enveloping cones.

Conicoid:
Equations of ellipsoid, hyperboloid and paraboloid in standard form. Reduction of second degree equation in three variables in standard form.

References:

1. P.K.Jain and Khalil Ahmad : A Text Book of Analytical Geometry of Three Dimensions, Wiley Eastern Ltd., 1999.
2. Shanti Narayan and P. K. Mittal : Analytical Solid Geometry, Seventeenth Revised Edition, S. Chand & Co., New Delhi, 2006.
3. R.J.T. Bill : Elementary Treatise on Coordinate Geometry of Three Dimensions, Macmillan India Ltd., 1994.

Paper-II : CALCULUS - II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Concavity, convexity and points of inflexion, Multiple points, Asymptotes, Tracing of curves (Cartesian and parametric co-ordinates only).

Curvature:
Curvature of a curve at a point, radius of curvature of cartesian, parametric, polar curves and for implicit functions , evolute and involute, chord of curvature.

Unit-II

Integral calculus:
Integration of hyperbolic and inverse hyperbolic functions. Reduction Formulae.

Numerical Integration: Trapezoidal, Prismoidal and Simpson Rules.

Application of definite integral: Summation of Series, Quadrature, rectification, volumes and surfaces of solids of revolution (Cartesian co-ordinates only)

References:

1. G. B. Thomas & R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
2. Gabriel Klambauer : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
3. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.
4. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co. New Delhi, 2000.

Paper III: THEORY OF EQUATIONS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Euclid's algorithm, synthetic division, roots and their multiplicity. Complex roots of real polynomials occur in conjugate pairs with same multiplicity. Relation between roots and co-efficients. Transformation of equations. Descartes' Rule of Signs.

Unit-II

Newton's method of divisors, Solution of cubic and bi-quadratic equations, Cardan's method of solving a cubic, discriminant and nature of roots of real cubic, trigonometric solutions of a real cubic with real roots. Descarte's and Ferrari's method for a bi-quadratic.

References:

1. S.R. Knight and H.S. Hall : Higher Algebra, H. M. Publications, 1994.

2. Chandrika Prasad : Text Book on Algebra and Theory of Equations, Pothishala Private Ltd., Allahabad.

COMPUTER SCIENCE

SEMESTER-I

SCHEME OF EXAMINATION

FIRST SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS01	**Theory-A**	**Computer Fundamentals**	**3**	**30**	**5**	**35**
Paper –CS02	**Theory-B**	**PC Software**	**3**	**30**	**5**	**35**
Paper – PCS01	**Practical-C**	**Practical Based on Paper – CS01**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS01 : Computer Fundamentals

Objective : To teach the students the fundamentals of computer related to its hardware & software.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

UNIT –II

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

UNIT – III

Types of software: System and Application software; **Programming Languages**: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison. **Range of Applications**: Scientific, Word Processing, Spread Sheets, E-commerce, Business, Educational, Industrial, National level weather forecasting, Remote Sensing, Planning Multilingual Applications.

UNIT – IV

Operating Systems : Components of Operating System; Functions of Operating System; Types of Operating System; Linux/Dos/Windows. **Computers and Communication**: Single user, multi-user, workstation, and client server systems. Computer networks, Network protocols. LAN, WAN, Services offered by Internet.

Suggested Readings :

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications

Paper-CS02: PC Software

Objective : To teach the basic functionality of Disk Operating System & Windows. To impart detailed knowledge for creating word processing, spreadsheet & presentation documents.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Concept of files and directories; Disk Operating System: DOS, System Files, types of DOS commands: Internal and External commands: Introduction to AUTOEXEC.BAT, Directory commands: XCOPY, DEL, RENAME, ATTRIB, BACKUP, RESTORE, FIND, SYS; General commands: TYPE, DATE, TIME, PROMPT; Batch Files, Wild Cards, Line Editor.

UNIT – II

Introduction to graphical user interface, window operating system, Anatomy of windows, organizing folders and files, recycle bin, my computer, windows explorer, control panel.

UNIT – III

Word Processing : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement; Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Sorting blocks, Adjusting Margins and Hyphenating Documents, Creating Master Documents, Creating Data Source, Merging Documents, Using Mail merge feature for labels and envelops; Inserting Pictures, Tables, Working with equations.

UNIT – IV

Spread Sheet : Worksheet overview, Row, Column, Cells, Menus, Creating Worksheet, Opening, Saving, Printing Worksheets; Calculations, Auto fill, Working with Formulae, Data Formatting (number formatting, date formatting), Working with Ranges, Establishing Worksheet links; Creating, Sorting and Filtering Data Base; Creating chart, Adding Titles, Legends etc. to charts, Printing Charts, Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons, Functions (Statistical, Financial, Mathematical, String, Date and Time).

MS-Power Point: Creating, Saving, Printing Presentation; Selecting Design Templates, Animations and Transitions, Auto Content Wizard.

Suggested Readings :

1. Ludd Robbins : *Mastering DOS.*
2. Alan R. Miller : *The ABC's of DOS-6.2.*
3. Richard Allen King : *MS-DOS H. B.*
4. Gilbert Held : *IBM PC and PCXT User's Reference Manual.*
5. Cowart, Robert : *Using Microsoft Windows 2000 Professional,* Que Publishing, 2000.
6. Taxali, Ravikant : *PC Software Made Simple,* New Delhi.
7. Mansfield, Ron : *Compact Guide to Windows, Word & Excel.*

Paper – PCS01 : Practical : Practicals Based on Paper CS02

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COMPUTER SCIENCE
SEMESTER-II

SCHEME OF EXAMINATION

SECOND SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS03	**Theory-A**	**Operating System Concepts**	**3**	**30**	**5**	**35**
Paper –CS04	**Theory-B**	**C Programming**	**3**	**30**	**5**	**35**
Paper – PCS02	**Practical-C**	**Practical Based on Paper – CS04**	**3**	**30**	**--**	**30**

Paper-CS03: Operating System Concepts

Objective : To teach the students various operating system concepts relating to managing processes, memory and deadlocks.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, need of operating system and functions of operating system, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems; Structure of Operating System;

UNIT - II

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling.

UNIT - III

Deadlocks: Introduction, Necessary and sufficient conditions for Deadlocks, Resource allocation graph, Introduction to methods for handling deadlocks, deadlock prevention, deadlock avoidance: Banker Algorithm, deadlock detection and recovery.

UNIT - IV

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

Suggested Readings :

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.

Further Reading :

2. Brinch, Hansen, Operating System Principles, Prentice Hall of India
3. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delhi

Paper-CS04 : C Programming

Objective : To teach the student basic constructs of 'C' programming language and enable them to create 'C' based applications.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.

Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.

UNIT – II

Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.

Loop Control Structure: While and do-while, for loop and Nested for loop,

Case Control Structure: Decision using switch, The goto statement.

UNIT – III

Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function.

UNIT – IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).

Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Union, Difference between Structure and Union .

Suggested Readings :

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading :

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

Paper – PCS02 : Practical : Practical Based on Paper CS04.

STATISTICS

SEMESTER - I

Note :
1. A candidate shall offer this subject in B.A./B .Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. There are two papers code named papers 101 and 102 in the subject of Statistics in B.A./B.Sc. 1st Semester. These are to be taught simultaneously throughout the Semester.
3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 101: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-I

Max. Marks	:	75
Theory	:	65
Internal Assessment	:	10
Time	:	3 Hours

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach. This course will lay the foundation to probability theory of outcomes of real life random experiments. The focus will be on theoretical as well as practical approach.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical tables and log tables will be provided on request.

Unit-I

Important Concepts in Probability: Random experiment, trial, sample point and sample space, definition of an event, mutually exclusive, exhaustive, independent and equally likely events. Definition of probability – classical and relative frequency approach to probability, their demerits and axiomatic approach to probability. Properties of probability based on axiomatic approach, conditional probability, Bayes' theorem and its applications (concepts and simple applications).

Random Variables: Definition of discrete random variables, probability mass function, continuous random variable, probability density function, illustrations of random variables and their properties, distribution function and its properties, expectation of a random variable and its properties – moments, (only definition), moment generating function. Two dimensional random variables- joint, marginal and conditional distributions . Distribution of random variables.

Unit-II

Collection of Data: Primary data – designing a questionnaire and a schedule. Secondary data- its major sources including some government publications. Concept of a Statistical Population and samples from a population; qualitative and quantitative data; discrete and continuous data.

Presentation of Data: Diagrammatic representations of data, frequency distribution, graphical representation, histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display, Box and whisker plot.

Analysis of Quantitative Data: univariate data concepts of central tendency, dispersion and relative dispersion, skewness and kurtosis and their measures including those based on quartiles and moments. Sheppard's correction for moments (without derivation).

Suggested Readings

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications*. Addison Wesley.

2. Goon A.M., Gupta M.K., Dasgupta.B. (2005) :*Fundamentals of Statistics*, Vol. I, World Press, Calcutta.

3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics* (7th edition) Wiley.

Additional Readings

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.

2. Miller, I. and Miller, M. (2002) : John E. Freunds's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.

3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.

4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.

5. Lipshut Z, S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.

6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper-102 : PRACTICAL (SEMESTER-I)

Maximum Marks : 25
Time Allowed : 3 Hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Presentation of data by Frequency tables
2. Diagrams: Bar, Multiple Bar, Stacked Bar, Line and Pie
3. Graphs: histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display
4. Measures of central tendency
5. Measures of dispersion
6. Measures of Skewness
7. Box and Whisker Plot
8. Measures of Kurtosis.

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STATISTICS

SEMESTER-II

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. There are two papers code named papers 103 and 104 in the subject of Statistics in B.A./B.Sc. 2nd semester. These are to be taught simultaneously throughout the semester.

3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 103: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-II

Maximum Marks : 75
Theory : 65
Internal Assessment : 10
Time allowed : 3 hours

Objective: This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.
The objective of the course is to make the students conversant with various techniques used in analysis of data.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical **tables** and log tables will be provided on request.

Unit-I

Standard Univariate Distributions and their Properties: Discrete uniform, Binominal, Poisson, Hyper geometric, Geometric and negative binomial distributions, uniform, normal , exponential, gamma, beta distributions.

Bivariate normal distribution and associated marginal and conditional probability distributions (without derivation).

Chebyshev's inequality and its applications, statements and applications of weak law of large numbers, and Central Limit Theorems (De-moivre's – Laplace and Lindeberg -Levy).

Unit-II

Bivariate Data: scatter diagram, product moment correlation coefficient, properties and coefficient of determination. Spearman's rank correlation coefficient. Simple linear regression and its properties, principle of least square, fitting of linear regression and related results

Multivariate Data: multiple and partial correlation in three variables. (only results no derivations).

Analysis of Categorical Data (using 2x2 contingency table): consistency of categorical data independence and association of attributes. Various measures of association:-Yule coefficient, coefficient of colligation & coefficient V_{AB}.

References:

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications.* Addison Wesley.
2. Goon A.M., Gupta M.K., Das Gupta.B. (2005) : *Fundamentals of Statistics*, Vol. I, World Press, Calcutta.
3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics*: A Foundation for analysis in the Health Sciences, Tenth Edition, Wiley

Additional References:

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.
2. Miller, I. and Miller, M. (2002) : John E. Frends's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.
3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.
4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.
5. Lipshut Z,S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.
6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper - 104: PRACTICAL (Semester-II)

Maximum Marks: 25
Time allowed : 3 hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Product Moment Correlation.
2. Spearman's rank correlation
3. Linear Regression of two variables.
4. Fitting of Curves (reducible to linear form) by the least square method.
5. Multiple and Partial correlations
6. Fitting of Binomial, Poisson and Normal distributions

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APPLIED STATISTICS

SEMESTER - I

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 101AS in B.A. /B.Sc. Semester-I having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 101AS: MATHEMATICAL METHODS – I

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective: The objective of the course is to provide knowledge of the basic concepts in Calculus, Trigonometry, Algebra and Geometry.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I (CALCULUS AND TRIGONOMETRY)

Limits and continuity of functions, derivatives and their geometrical interpretations. Applications of derivatives to maxima and minima, exponential and logarithmic functions, integrals of functions of one variable, geometrical interpretation of integral as area, integration of standard functions, integration by substitution and parts.

Trigonometry: Definition of an angle, its various measures and relations between them, graphs circular functions.

UNIT-II (ALGEBRA AND GEOMETRY)

The solution of linear and quadratic equations in one variable, arithmetic, geometric and harmonic progressions, permutations and combinations, principle of induction, Binomial theorem for positive integral index.

Elementary Analytical Geometry: Equations of straight line, parabola, and hyperbola.

Books Recommended

1. Allen, R.G.D (2006) : Mathematical Analysis for Economists, Chapter-II (Units 2.1, 2.2, 2.8), Chapter-III (Units 3.1, 3.6), Chapter – IV (Units 4.1, 4.7), Chapter VI (Units 6.1 – 6.8), Chapter VII, Chapter VIII (Unit 8.2), Chapter IX (Units 9.1 – 9.4), Macmillan Delhi.

2. Gurhard Tintner (1970) : Mathematics and Statistics for Economists Chapter – VI., Rinehart : New York

3. Loney, S.L. (2010) : Plane Trigonometry, Part – I, Chapter – I (Units I to 22), Part – II, Chapter V (Units 61, 65),Aitbs Publishers, India.

Additional references:

1. Arye, F. Jr. (1999) : First Year College Mathematics (Schaum's Series).Mc Graw Hill, New York.

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APPLIED STATISTICS

SEMESTER – II

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2 The candidate opted for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 102AS in B.A./B.Sc. Semester-II having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 102AS: PROBABILITY

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective:. This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculators are allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I

Random experiments, sample space, events probability, Finite sample spaces, equally likely outcomes, conditional probability, Bayes theorem, independent events, random variables, discrete and continuous probability density functions.

UNIT –II

Expectation and variance of random variable.
Binomial, Poisson, geometric, hypergeometric, uniform, exponential and normal distribution

Books Prescribed

1. P.L.Meyer , (1971) : Introductory Probability and Statistical Applications, Addison Wesley, chapters 1, 2, 3, 4, 5, 8 and 9.

2. Goon, A.M., Gupta, M.K. & Dasgupta,B (2005). : Fundamentals of Statistics, Vol. I. The world press private Ltd.

3. Murray Spiegel, John Schiller & A. Srinivasan (2002) : Schaum's Easy outline of Probability and Statistics, Mc Graw Hill, New York.

Additional References:

1. Sheldon M. Ross (2009) : Introduction to Probability Models, Academic Press: San Diego.

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PHYSICS

B.Sc. (GENERAL) FIRST YEAR (1st and 2nd Semester) EXAMINATION, 2018-19

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3 (three) marks for the Internal assessment. **The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the second semester examination.**
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper as well as practical paper will be three hours.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems/exercises in the question paper should be 25-30%.
6. Student will attempt two questions from each Unit (I-II) and any six parts of question seven.
7. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

Papers, marks and teaching hours allocation :

Paper A :	Mechanics	Total Teaching hrs. 30
Paper B :	Vibrations, Waves and EM Theory	Total Teaching hrs. 30
Paper C :	Electricity and Magnetism	Total Teaching hrs. 30
	Physics Practicals	Total Teaching hrs. 45

* marks allotted for internal assessment.

PHYSICS

SEMESTER – I

Paper A: MECHANICS-I (30 Hrs.)

UNIT-I

Cartesian and spherical polar co-ordinate systems, Two- and three-dimensional coordinate systems, area, volume, displacement, velocity, and acceleration in these systems, solid angle.
Centre of mass, linear momentum, angular momentum, torque, potential energy and kinetic energy of a system of particles.
Relationship of conservation laws of linear momentum, angular momentum and energy, and symmetries of space and time.

UNIT-II

Various forces in nature, relative strengths and spatial dependence,
Motion under force obeying inverse square law, equivalent one body problem.
Motion under central forces, equation of motion under central force, equation of orbit and turning points, Kepler's Laws.
Elastic collision in Lab. and C.M. systems, relationships of velocities, angles, and kinetic energies in these two systems, cross section of elastic scattering, Rutherford scattering.

Books Suggested :

Essential Readings :

1. Mechanics, H.S. Hans & S.P. Puri.
2. Mechanics, Berkeley, Vol. I, C. Kittle.

Further Readings :

1. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
2. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-I (30 Hrs.)

UNIT-I

Simple harmonic motion, energy of a SHM, Compound Pendulum, Torsional Pendulum, Electrical Oscillations, Transverse Vibrations of a mass on a string, composition of two perpendicular SHM of same period and of period in ratio 1: 2. Decay of free vibrations due to damping, differential equation of motion, types of damping, determination of damping co-efficient; Logarithmic decrement, relaxation time and Q- Factor. Electromagnetic damping (Electrical oscillator).

UNIT-II

Differential equation for forced mechanical and electrical oscillators, Transient and steady state behaviour. Displacement and velocity variation with driving force frequency, variation of phase with frequency, resonance. Power supplied to an oscillator and its variation with frequency. Q-value and band width. Q-value as an amplification factor. Stiffness, coupled oscillators, Normal co-ordinates and normal modes of vibration, Inductance coupling of electrical oscillators.

Books Suggested :

Essential Readings :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper–C : ELECTRICITY AND MAGNETISM-I (30 Hrs.)

UNIT-I

Basic ideas of Vector Calculus, Gradient, Divergence, curl in Cartesian coordinates and their useful relations, physical significance and applications, Conservative field, Greens's theorem in a plane, Laplacian in Rectangular coordinates. Stoke's theorem, Gauss's divergence theorem, Coulomb's Law for point charges and continuous distribution of charges, electric field due to dipole, line charge, charged ring, circular disc and sheet of charge, Gauss's Law and its differential form.

UNIT-II

Work and potential difference, Potential difference as line integral of field, Electric potential due to dipole and quadrupole and its applications in Electrostatic field, Electric field as gradient of scalar potential, curl $\mathbf{E} = 0$. Calculation of $\mathbf{E}$ due to a point charge and dipole from potential. Poisson and Laplace's equation, Concept of electrical images. Calculation of electric potential and field due to a point charge placed near an infinitely conducting sheet.

Polarisation of matter, atomic and molecular dipoles, induced dipole moment and atomic polarizability. Electric susceptibility and polarization vector. Relation $K= 1 + \chi$, Gauss's law for dielectrics. Displacement vector, Div. $\mathbf{D} = 0$, Energy stored in dielectric medium.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism* by A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The activities given in the section "Analysis of Experimental Data" are compulsory for all the students in the First semester.

The students are required to perform all the Nine experiments from each of the Units I and Unit II. The Practical examination will be held along with the second semester examinations.

The aim of project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepara a project report of about 10 pages. Assessment of the project work will be done on the basis of effort put in the execution of the project, report prepared, and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section-A will consist of 4 experiments from each of Unit I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section–A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **12**.
7. In a single group, no experiment to be allotted to more than three examinees in the group.

Analysis of Experimental Data (Compulsory for all students in first semester):

Objectives :

(i) Knowledge of propagation of errors.
(ii) Knowledge of significant figures, Determination of standard deviation and probable error and their use in interpretation of the experimental result.
(iii) Familiarity with the method of least square fitting of experimental data to a curve.

LIST OF EXPERIMENTS :

UNIT-I

MECHANICS

I. Measurements :

Objectives :

(i) Measurements of time, length, thickness and curvature, pressure, humidity
(ii) Concepts of least count, horizontal, vertical and angular alignments

Activities :

(i) To measure internal/external diameter of a hollow cylinder using Vernier calipers
(ii) To measure thickness of wire
(iii) To measure curvature of a lens
(iv) To measure pressure using Barometer
(v) To measure humidity using dry and wet thermometer

II. Rotation :

Objectives :

(i) Study of rotational motion.
(ii) Establishing relationship between different quantities.

Activities :

(i) To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).

(ii) To establish relationship between torque and angular acceleration using fly wheel.

III. One-Dimensional Collisions :

Objectives :

(i) Conservation of linear momentum and kinetic energy in elastic collisions.
(ii) Dependence of fraction of kinetic energy transferred on the masses of colliding bodies.
(iii) Idea of coefficient of restitution.

Activities :

To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.

IV. Compound Pendulum :

Objectives :

(i) Idea of equivalent simple pendulum.
(ii) Concepts of centre of suspension and oscillation.
(iii) Dependence of time period on moment of Inertia .
(iv) Radius of gyration.
(v) Determination of g.

Activities :

(i) Measure time period as a function of distance of centre of suspension (oscillation) from centre of mass, plot relevant graphs, determine radius of gyration and acceleration due to gravity.
(ii) Find the value of g by Katers' or Bar pendulum.

V. Torsion Pendulum :

Objectives :

(i) Idea of torsional vibration, dependence of time period on M.O.I. and restoring torque.
(ii) Modulus of rigidity.

Activity :

Measure time period of oscillation of a Maxwell needle and determine modulus of rigidity of the material of a given wire.

VI. Damped Oscillator :

Objectives :

(i) Study damped oscillations.
(ii) Coefficient of damping, quality factor etc.

Activities :

To measure/obtain logarithmic decrement, coefficient of damping, relaxation time, and quality factor of a damped simple pendulum.

VII. Elasticity :

Objective :

Knowledge of elastic constants and related quantities.

Activities :

(i) Study of bending of beams and determination of Young's Modulus.
(ii) Determination of Poisson's ratio for rubber/plastic.

VIII. Standing waves :

Objective :

Standing waves on a string and in air.

Activities :

(i) Melde's experiment.
(ii) Kundt's tube.

IX. Viscosity :

Objective :

Knowledge of viscosity of liquids.

Activity :

Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.

Computer based activities : Elementary C language programs, flowcharts and their interpretation.

1. To print out all natural even/odd numbers from a given series of natural numbers.
2. Numerical solution of equations of motion.
3. To calculate first ten prime numbers.

UNIT-II

ELECTRICITY AND MAGNETISM

I. Objective :

Measurement of resistance, voltage, current and electric energy.

Activities :

(i) To use a multimeter for measuring AC and DC voltage and resistance.
(ii) Measurement of resistance of LDR - To study inverse-square law (concept of solid angle and inverse square law) using linear LDR and light source.
(iii) Observations and measurements using an Electric energy meter. To find wattage of given bulb or heater.
(iv) To study the efficiency of an electric kettle or heater element with varying input voltage.

II. Low Resistance Measurements :

Objectives :

(i) Inadequacy of Wheatstone bridge to measure low resistances.
(ii) Acquaintance with a method of measuring low resistances.

Activity :

To determine low resistance with Carey Fosters Bridge.

III. Magnetic Field :

Objectives :

(i) Familiarity with the magnetic field produced by a solenoid.
(ii) Dependence of solenoidal field on number of turns and current.
(iii) Permeability of air.

Activities :

To study the magnetic field produced by a current carrying solenoid using a search coil and calculate permeability of air.

IV. Electromagnetic Induction :

Objective :

Verification of laws of electromagnetic induction.

Activity :

To study the induced e.m.f. as function of the velocity of the magnet.

V. Magnetism and current :
Objectives and Activities :

Force on a conductor carrying current in a magnetic field.

VI. LCR Circuits :

Objective :

Study of phase relationship between currents and voltages in ac circuits.

Activity :

Study of phase relationships using impedance triangle for LCR circuit and calculate impedance.

VII. Resonant Circuits :

Objective :

Concepts of resonance and Q-value.

Activities :

(i) Resonance in a series LCR circuits for different R-value and calculate Q-value.
(ii) Resonance in a parallel LCR circuits for different R-value and calculate Q-value.
(iii) To determine the dielectric constant of a solid by resonance method.

VIII. Capacitance :

Objectives :

(i) Measurement of capacitance, dielectric constant.
(ii) Concept of time constant and time base circuit.
(iii) Knowledge of a-c Bridges.

Activities :

(i) Capacitance by flashing and quenching of a neon lamp.
(ii) Measurement of capacitance, determination of permittivity of a medium, air and relative permittivity by De-Sauty's bridge.

IX. Self Inductance :

Objectives :

(i) Knowledge of a-c bridges.
(ii) Concept of self-inductance.

Activities :

(i) To determine L using Anderson Bridge.

Computer based activities: Elementary C language programs, flowchart and their interpretation.

1. To rearrange a list of numbers in ascending and descending orders.
2. To compile a frequency distribution and evaluate moments such as mean; standard deviation etc.
3. To evaluate sum of finite series and the area under a curve.

Texts and Reference Books :

1. *"B.Sc. Practical Physics by C.L. Arora, S.Chand & Co. (2014).*
2. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
3. *"Programming with C, Schaum series"* by Byron Gottfried & Jitender Chhabra

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PHYSICS

SEMESTER–II

Paper A : MECHANICS – II

UNIT-I

Rigid Body motion; Rotational motion, principal moments and Axes, Euler's equations, precession and elementary gyroscope.
Galilean transformations and Invariance, Transformation equations for inertial frames inclined to each other, Non-Inertial frames. Fictitious forces in a rotating frames of reference, Centrifugal and Coriolis forces due to rotation of earth, Foucault's pendulum.
Concept of stationery universal frame of reference and ether, Michelson-Morley experiment and its results.

UNIT-II

Postulates of special theory of relativity, Lorentz transformations, Kinematical consequences of Lorentz transformations – length contraction and time dilation, Twin paradox, Transformation of velocities, Simultaneity of relativity, Velocity of light in moving fluid, Relativistic Doppler effect.
Variation of mass with velocity, mass-energy equivalence, rest mass in an inelastic collision, relativistic momentum & energy, their transformation, concepts of Minkowski space, four vector formulation.

Books Suggested :

Essential Readings :

1. Mechanics, Berkeley, Vol. I, C. Kittle.
2. Mechanics, H.S. Hans & S.P. Puri.

Further Readings :

1. *Mechanics & Relativity (3rd Edition)*, Vidwan Singh Soni (PHI Learning, New Delhi, 2013)
2. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
3. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).
4. *Basic Concepts of Relativity,* R.H. Good (East-West Press, New Delhi, 1974).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-II (30 Hrs.)

UNIT-I

Waves in physical media, Wave equation and its solution, Types of waves, particle velocity, acceleration and energy in progressive waves. Longitudinal waves on a rod.
Transverse waves on a string, characteristic impedance of a string, Waves in absorbing media.
Reflection and Transmission of transverse waves on a string at discontinuity, Reflection and transmission of energy.
Reflection and transmission of longitudinal waves at a boundary.
Standing wave ratio, Impedance matching, Energy of vibrating string. Wave and group velocity.

UNIT-II

Physical interpretation of Maxwell's equations, E.M. waves and wave equation in a medium having finite permeability, permittivity and conductivity. Energy flow due to EM wave - Poynting vector, Impedance of a dielectric to EM waves. EM waves in a conducting medium and skin depth. Impedance and Refractive index of a dielectric and a conductor.
Reflection and transmission of EM waves at a boundary of two dielectric media for normal and oblique incidence.
Reflection of EM waves from the surface of a conductor at normal incidence.

Essential Readings :

Books Suggested :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.
3. *EM Waves and Radiating Systems* by Edward C. Jordan and K.G. Balmain, Prentice Hall.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper-C: ELECTRICITY AND MAGNETISM-II (30 Hrs.)

UNIT-I

Current and current density, equation of continuity. Microscopic form of Ohm's Law ($\mathbf{J} = \sigma\mathbf{E}$) and conductivity. Failure of Ohm's Law. Invariance of charge. **E** in different frames of reference. Field of a point charge moving with constant velocity. Force between parallel currents.
Behaviour of various substances in magnetic field. Definition of M and H and their relation to free and bound currents. Permeability and susceptibility and their interrelationship. B-H curve and energy loss in hysteresis, Langevin theory of diamagnetism.

UNIT-II

Lorentz's force. Definition of **B**. Biot Savart's Law and its application to long straight wire, circular current loop and solenoid. Ampere's Circuital law and its application. Divergence and curl of **B**. Hall effect, expression and co-efficient. Vector potential, Definition and derivation, current density— definition, its use in calculation of change in magnetic field at a current sheet. Energy stored in magnetic field, Faraday's Law of EM induction, Displacement current, Mutual inductance and reciprocity theorem. Self inductance for solenoid.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism,* A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The Practical examination will be held along with the second semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester I.

CHEMISTRY
SEMESTER – I

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
I	Inorganic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
II	Organic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
III	Physical Chemistry-A	30	3 periods per week	22 + 3 internal assessment
IV	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper 1 – INORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Atomic Structure

Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, Schrodinger wave equation, significance of Ψ and Ψ^2, quantum numbers, radial and angular wave functions and probability distribution curves, shapes of *s*, *p*, *d* orbitals. Aufbau and Pauli exclusion principles, Hund's multiplicity rule. Electronic configurations of the elements and ions.

UNIT-II (7 Hrs.)

Periodic Properties

Position of elements in the periodic table; effective nuclear charge and its Calculations Atomic and ionic radii, ionization energy, electron affinity and electronegativity – definition, methods of determination or evaluation, trends in periodic table and applications in predicting and explaining the chemical behaviour.

UNIT-III (7 Hrs.)

Chemistry of Noble Gases and *s*-Block Elements

Chemical properties of the noble gases, chemistry of xenon, structure and bonding in xenon compounds. Comparative study, diagonal relationships, salient features of hydrides, solvation and complexation tendencies including their function in biosystems, an introduction to alkyls and aryls.

UNIT-IV (8 Hrs.)

Chemical Bonding-I

Covalent Bond – Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions. BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, $SnCl_2$, XeF_4, BF_4^-, PF_6^-, $SnCl_6^{2-}$. Valence shell electron pair repulsion (VSEPR) theory to NH_3, H_3O^+, SF_4, ClF_3, ICl_2^- and H_2O. MO theory, homonuclear (elements and ions of 1st and 2nd row), and heteronuclear (BO, CN, CO^+, NO^+, CO, CN^-), diatomic molecules. Percentage ionic character from dipole moment and electronegativity difference.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-II: ORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Structure and Bonding:
Hybridization, bond lengths and bond angles, bond energy, localized and delocalized chemical bond, Van der Waals interactions, resonance, hyperconjugation, aromaticity, inductive and field effects, hydrogen bonding.

Mechanism of Organic Reactions:
Curved arrow notation, drawing electron movements with arrows, half-headed and double-headed arrows, homolytic and heterolytic bond breaking. Types of reagents-electrophiles and nucleophiles. Types of organic reactions. Energy considerations.

Reactive intermediates-Carbocations, carbanions, free radicals, carbenes, arynes and nitrenes (with examples). Assigning formal charges on intermediates and other ionic species.

Methods of determination of reaction mechanism (product analysis, intermediates, isotope effects, kinetic and stereochemical studies).

UNIT –II (7 Hrs.)

Alkanes and Cycloalkanes:
Isomerism in alkanes, sources, methods of formation (with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acids), physical properties and chemical reactions of alkanes
Mechanism of free radical halogenation of alkanes: Orientation, reactivity and selectivity. Cycloalkanes – nomenclature, methods of formation, chemical reactions, Baeyer's strain theory and its limitation. Ring strain in small rings (cyclopropane and cyclobutane), theory of strainless rings. The case of cyclopropane ring: banana bonds

UNIT-III (8 Hrs.)

Stereochemistry of Organic Compounds I:
Concept of isomerism, Types of isomerism.
Optical isomerism – Elements of symmetry, molecular chirality, enantiomers, stereogenic center, optical activity, properties of enantiomers, chiral and achiral molecules with two stereogenic centers, diastereomers, threo and erythro diastereomers, meso compounds, resolution of enantiomers, inversion, retention and racemization.

Relative and absolute configuration, sequence rules, D & L and R & S systems of nomenclature.

UNIT-IV **(7 Hrs.)**

Stereochemistry of Organic Compounds II:

Geometric isomerism: Determination of configuration of geometric isomers. E & Z system of nomenclature, geometric isomerism in oximes and alicyclic compounds.

Conformational isomerism – Conformational analysis of ethane and n-butane; conformations of cyclohexane, axial and equatorial bonds, conformation of mono and disubstituted cyclohexane derivatives. Newman projection and Sawhorse formulae, Fischer and flying wedge formulae.

Difference between configuration and conformation.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
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iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-III: PHYSICAL CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills**.**

UNIT-I (8 Hrs.)

Mathematical Concepts and Evaluation of Analytical Data:

Logarithmic relations, curve sketching, linear graphs and calculation of slopes, differentiation and integration of functions like e^x, x^n, sin x, log x; maxima and minima, partial differentiation and reciprocity relations.

Terms of mean and median, precision and accuracy in chemical analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, linear least squares curve fitting, types of errors, standard deviation.

UNIT-II (7 Hrs.)

Gaseous States:

Postulates of kinetic theory of gases, deviation from ideal behavior, Van der Waal's equation of state.

Critical Phenomena: PV isotherms of real gases, continuity of states, the isotherms of Van der Waal's equation, relationship between critical constants and Van der Waal's constants, the law of corresponding states, reduced equation of state.

Molecular Velocities*:* Root mean square, average and most probable velocities. Qualitative discussion of the Maxwell's distribution of molecular velocities, collision number, mean free path and collision diameter. Liquification of gases (based on Joule-Thomson effect).

UNIT-III (8 Hrs.)

Chemical Kinetics-I

Chemical kinetics and its scope, rate of a reaction, factors influencing the rate of a reaction- concentration, temperature, pressure, solvent, light, catalyst. Concentration dependence of rates, mathematical characteristics of simple chemical reactions – zero order, first order, second order, pseudo order, half life and mean life. Determination of the order of reaction – differential method, method of integration, method of half life period and isolation method.

Radioactive decay as a first order phenomenon.

UNIT-IV (7 Hrs.)

Chemical Kinetics-II

Theories of Chemical Kinetics: Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

Simple collision theory based on hard sphere model, transition state theory (equilibrium hypothesis). Expression for the rate constant based on equilibrium constant and thermodynamic aspects.

Catalysis and general characteristics of catalytic reactions, Homogeneous catalysis, acid-base catalysis and enzyme catalysis including their mechanisms, Michaelis Menten equation for enzyme catalysis and its mechanism.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-IV: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

INORGANIC CHEMISTRY

(a) QUALITATIVE ANALYSIS:

Semimicro Analysis, cation analysis, separation and identification of ions from groups I, II, III, IV, V and VI. Anion analysis (4 ions).

Instruction to Examiners: Four ions with no interference (anions such as PO_4^{3-}, BO^{3-}_3 and similar anions like Cl^-, Br^-, I^- etc. and cattons from the same group) may not be given.

(b) QUANTITATIVE ANALYSIS:

Volumetric titrations involving acid-base, $KMnO_4$ and $K_2Cr_2O_7$.

There are three experiments - one involving acid-base titrations, one involving $KMnO_4$ and one involving $K_2Cr_2O_7$.

1. Determination of strength of Na_2Co_3 solution by titrating it against a standard solution of HCl.
2. Determination of molarity of $KMnO_4$ solution by titrating it against a standard solution of Oxalic acid.
3. Standarise the given $K_2Cr_2O_7$ solution by titrating it against a standard solution of Mohr's Salt.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Qualitative Analysis : 10 marks

Q.No. II. Quantitative Analysis : 06 marks

Q.No. III. Viva-Voce :03 marks

Ask three questions (1 marks each) related to chemistry practicals. :03 marks

Q.No. IV. Note Book

Books Suggested (Laboratory Courses)

1. Svehla, Vogel's Qualitative Inorganic Analysis (revised); 7th edition Pubs: Orient Longman, 1996.
2. Bassett, J., Denney, R.C., Jeffery, G.H., Mendham, J., Vogel's Textbook of Quantitative Inorganic Analysis (revised); 4th edition, 1978.
3. Palmer, W.G., Experimental Inorganic Chemistry; 1st edition, Pubs: Cambridge, 1954.
4. Brauer, Handbook of Preparative Inorganic Chemistry; 2nd edition, Pubs: Academic Press, 1963, Vol. I, & 1965, Vol. II.
5. Audrieth, L.F., Inorganic Synthesis; Pubs: McGraw Hill, 1950, Vol. 3rd; E.G. Rochow, 1960 Vol. VI; J. Kleinberg, 1963, Vol. 7; S.Y. Tyree, 1967 ,Vol.9; E.L. Muetterties, 1967, Vol.10; W.L. Jolly 1986, Vol 11; R.W. Parry 1970, Vol. 12; F.A. Cotton 1972, Vol. 13; A.G. Mac Diarmid, 1977, Vol. 17.
6. Bansal, R.K., Laboratory Manual of Organic chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

CHEMISTRY
SEMESTER –II

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
V	Inorganic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VI	Organic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VII	Physical Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VIII	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper V – INORGANIC CHEMISTRY –B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Chemical Bonding-II

Ionic Solids – Concept of close packing., Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF_2 and antifluorite), radius ratio rule and coordination number, limitation of radius ratio rule, lattice defects, semiconductors.

UNIT-II (8 Hrs.)

Chemical Bonding-III

Lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids, polarizing power and polarisability of ions, Fajan's rule. Metallic bond-free electron, valence bond and band theories. Weak Interactions – Hydrogen bonding, Van der Waals forces.

UNIT-III (7 Hrs.)

***p*-Block Elements-I**

Comparative study (including diagonal relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane and higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.

UNIT-IV (8 Hrs.)

***p*-Block Elements-II**

Comparative study of groups 15-17 elements, compounds like hydrides, oxides, oxyacids and halides of groups 15-17, silicates (structural principle), tetrasulphur tetranitride, basic properties of halogens, interhalogens and polyhalides.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-VI: ORGANIC CHEMISTRY-B

Time: 3 Hrs.

Max. Marks: 22+3

30 Hrs. (2 Hrs/week)

3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Alkenes, Cycloalkenes

Nomenclature of alkenes, methods of formation, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides, regioselectivity in alcohol dehydration. The Saytzeff's Rule, Hofmann elimination, physical properties and relative stabilities of alkenes.

Chemical reactions of alkenes – mechanisms involved in hydrogenation, electrophilic and free radical additions, Markownikoff's rule, hydroboration – oxidation, oxymercuration-reduction. Epoxidation, ozonolysis, hydration, hydroxylation and oxidation with $KMnO_4$. Polymerization of alkenes. Substitution at the allylic and vinylic positions of alkenes. Industrial applications of ethylene and propene.

UNIT-II (7 Hrs.)

Dienes and Alkynes

Methods of formation, conformation and chemical reactions of cycloalkenes.

Nomenclature and classification of dienes : Isolated, conjugated and cumulated dienes. Structure of allenes and butadiene, methods of formation, polymerization. Chemical reactions – 1,2 and 1,4 additions, Diels-Alder reaction.

Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation, metal-ammonia reductions, oxidation and polymerization.

UNIT-III (8 Hrs.)

Arenes and Aromaticity:

Nomenclature of benzene derivatives. The aryl group, Aromatic nucleus and side chain, Structure of benzene : Molecular formula and Kekule structure. Stability and carbon-carbon bond lengths of benzene, resonance structure, MO picture.

Aromaticity: The Huckel rule, aromatic ions.

Aromatic electrophilic substitution – General pattern of the mechanism, role of σ and π – complexes. Mechanism of nitration, halogenation, sulphonation, mercuration and Friedel-Crafts reaction. Energy profile diagrams. Activating and deactivating substituents, orientation and ortho/para ratio. Side chain reactions of benzene derivatives. Methods of formation and chemical reactions of alkylbenzenes, alkynyl benzenes and biphenyl.

UNIT-IV **(7 Hrs.)**

Alkyl and Aryl Halides

Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms of nucleophilic substitution reactions of alkyl halides, S_N2 and S_N1 reactions with energy profile diagrams.

Polyhalogen compounds : chloroform, carbon tetrachloride.

Methods of formation of aryl halides, nuclear and side chain reactions. The addition-elimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions.

Relative relativities of alkyl halides vs. allyl, vinyl and aryl halides.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-VII: PHYSICAL CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30Hrs.
(2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Thermodynamics-I:

Definition of Thermodynamic Terms: System, surroundings etc. Types of systems, intensive and extensive properties. State and path functions and their differentials. Thermodynamic process. Concept of heat and work.

First Law of Thermodynamics: Statement, definition of internal energy and enthalpy, Heat capacity, heat capacities at constant volume and pressure and their relationship. Joule's Law-Joule-Thomson coefficient and inversion temperature. Calculations of w, q, dU & dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process.

UNIT-II (7 Hrs.)

Thermochemistry:

Standard state, standard enthalpy of formation-Hess's Law of constant Heat Summation and its applications. Heat of reaction at constant pressure and at constant volume. Enthalpy of neutralization. Bond dissociation energy and its calculation from thermo-chemical data, temperature dependence of enthalpy. Kirchoff's equation.

UNIT- III (7 Hrs.)

Colloidal State:

Definition of colloids, classification of colloids.

Solids in liquids (sols): Properties –kinetic, optical and electrical; stability of colloids, protective action, Hardy-Schulze rules, gold number.

Liquids in liquids (emulsions) : Types of emulsions, preparation. Emulsifier.

Liquids in solids (gels): Classification, preparation and properties, inhibition, general applications of colloids.

UNIT-IV (8 Hrs.)

Solutions, Dilute Solutions and Colligative Properties:

Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

Dilute solution, colligative properties, Raoult's law, relative lowering of vapour pressure, molecular weight determination. Osmosis, law of osmotic pressure and its measurement, determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point, Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression of freezing point. Experimental methods for determining various colligative properties.

Abnormal molar mass, degree of dissociation and association of solutes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
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iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

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2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-VIII: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

ORGANIC CHEMISTRY AND GREEN CHEMISTRY PRACTICALS
Crystallization and determination of melting points

Concept of induction of crystallization

1. Phthalic acid from hot water (using fluted filter paper and stemless funnel).
2. Acetanilide from boiling water.
3. Benzoic acid from water

PHYSICAL CHEMISTRY

1. Refractive indices
   Determine the Refractive indices of given liquids (water, acetone, methanol, ethylacetate, cyclohexane) by Abbe's refractometer & calculate their specific refractions.
2. Viscosity
   To determine the viscosity of Brine Solution (20%), n-Butyl alcohol, cyclohexane
3. Surface Tension
   To determine the surface tension of Brine Solution (20%), n-Butyl alcohol, cyclohexane

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Physical Chemistry : 10 marks
Q.No. II. Organic Chemistry : 06 marks
Q.No. III. Viva-Voce : 03 marks
Ask three questions (1 marks each) related to chemistry practicals.

Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition Pubs: R. Chand & Co., New Delhi, 2002.
2. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1998.
3. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

SEMESTER-I

First Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A	Plant Diversity-I	3 hrs.	36	04	40
Theory Paper-B	Cell Biology	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Second Semester					
Theory Paper –A	Plant Diversity-II	3hrs	36	04	40
Theory Paper-B	Genetics	3hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3hrs.	18	02	20
		Total			**200**

Note: 1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

Paper-A: PLANT DIVERSITY-I

Objective: The basic objective of this paper is to make students aware about the diversity in various life forms of plant kingdom. It gives an idea about the most simple group of plants. A systematic study of algae and fungi included in this group would familiarize students not only with structural differentiation but also provide an insight about the heterotrophic and autotrophic modes of nutrition in the plant kingdom. This paper in fact forms the basis of any advance study in Botany.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bacteria: Salient features, types and cell structure.

Algae: General Characters; systematic position, structure and life history of *Oscillatoria* (Cyanophyceae) *Volvox*, *Cladophora* (Chlorophyceae); *Vaucheria* (Xanthophyceae).

UNIT-II

Systematic position, structure and life history of *Dictyota* (Phaeophyceae); *Batrachospermum* (Rhodophyceae) and economic importance of algae.

UNIT-III

Fungi: General characters; systematic position, structure and life history of *Albugo* (White rust of crucifers: *Albugo candida*), *Rhizopus* and *Saccharomyces*.

UNIT-IV

Systematic position, structure and life history of *Agaricus*, *Ustilago* (Loose smut of wheat: *Ustilago tritici*), *Puccinia* (Black rust of wheat: *Puccinia graminis tritici*), *Colletotrichum* (Red rot of sugarcane: *Colletotrichum falcatum*); general account of Lichens and their economic importance.

Suggested Readings :

1. Alexopoulos, C. J. Mims, C. W`. and Blackwell, M. 1996. Introductory Mycology. John Wiley and Sons, Inc. USA.
2. Dube, H.C. 1990. An Introduction to Fungi. Vikas Publishing House Pvt. Ltd., Delhi.
3. Goyal, J. P. Dhand, Neelam and Saini, Aruna. 2011. Foundations of Botany. Trueman Book Company Jalandhar.
4. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi.
5. Sharma, O.P. 1992. Text Book of Thallophytes, McMillan India Ltd., New Delhi.
6. Sharma, P.D. 1991. The Fungi. Rastogi & Co., Meerut.
7. Smith, G.M. 1971. Cryptogamic Botany. Vol. 1, Algae & Fungi, Tata McGraw Hill Publishing Co. New Delhi.
8. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
9. Srivastava, H.N. 2013. Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
10. Vishishta, B. R. 1999. Botany for Degree Students. Algae. S. Chand and Company Ltd., New Delhi.
11. Vishishta, B. R. 1999. Botany for Degree Students. Fungi. S. Chand and Company Ltd., New Delhi.

Paper-B: Cell Biology

Objective: This paper deals with the basic structural unit of life i.e. Cell & its organelles. It provides an insight into structural and cytological basis of functional differentiation in plants. Coupled with the study of prokaryotic and eukaryotic diversity of life forms included in Paper-A, the course material of this paper gives an idea about cellular, molecular and biochemical basis of such differentiation.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Ultrastructure and functions of a typical plant cell and its organelles: Nucleus, Mitochondrion, Plastids, Ribosome, Endoplasmic reticulum, Golgi apparatus, Lysosomes; Structure and functions of cell wall and plasma membrane: fluid mosaic model only.

UNIT-II

Physical structure of chromosome; Giant chromosomes: Polytene and Lampbrush chromosomes; Chromosomal alterations (deletion, duplication, inversion, translocation) and their importance; Variations in chromosome number, (aneuploidy and polyploidy) introduction and their importance.

UNIT-III

Cell divisions: Mitosis and Meiosis in plants and their significance, Synaptonemal complex, DNA: Structure (Watson and Crick model), Nucleosome, types of DNA and role of DNA, Replication of DNA.

UNIT-IV

Structure and concept of gene: One gene-one enzyme hypothesis; Genetic Code: Characteristics, exceptions, Wobble hypothesis; RNA: Structure and types; Transcription and translation; Regulation of gene expression in prokaryotes (Lac operon and Tryptophan operon) and in eukaryotes (a brief account).

Suggested Readings :

1. Alberts, B., Gray, D. Lewis, J. Raff, M., Roberts, K. and Watson, I.D. 1999. Molecular Biology of Cell. Garland Publishing Co., Inc., New York, USA.
2. Bhatia, K.N. and Dhand Neelam. 2013. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. A Text-book of Cell and Molecular Biology. Rastogi Publications, Meerut, India.
4. Kleinsmith, L.J. and Kish, V.M. 1995. Principles of Cell and Molecular Biology (2nd edition). Harper Collins College Publishers, New York, USA.
5. Lodish, H., Berk, A., Zipursky, S.L. Matsudaira, P., Baltimor, D. and Darnell, J. 2000. Molecular Cell Biology. W.H. Freeman & Co., New York, USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Wolfe, S.L. 1993. Molecular and Cell Biology. Wadsworth Publishing Co., California, USA.

Suggested laboratory exercises for First Semester :

1. Study of morphology of various genera included in algae and fungi.
2. Study of Crustose, Foliose and Fructicose types of Lichen thalli.
3. Histopathological study of White rust of crucifers, Loose smut of wheat, Black rust of wheat and Red rot of sugarcane.
4. To study cell structure from onion leaf peels; demonostration of staining and mounting method.
5. Preparation of temporary slides to show different stages of mitosis from root tips of *Allium cepa* and *A. sativum.*
6. Preparation of temporary slides to show different stages of meiosis from floral buds of *Allium/Brassica*.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1. Identify and write illustrated morphological note on specimens A and B. 05
2. Prepare a squash mount of specimen C to show the stage of cell division visible in the slide and show it to the examiner. Identify it giving at least one reason. Draw the stage of cell division and show it to the examiner. 05
3. Identify and the slides D and E giving at least two reasons for each. 04

1. Practical Note-book 02
2. Viva-voce 02

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BOTANY

SEMESTER – II

Paper-A: Plant Diversity-II

Objective: The basic objective of this paper is to make the students aware about the diversity in various life forms of plant kingdom. It gives an idea about how different life forms have evolved from simpler to complex ones. A sequential study ranging from Bryophytes (the amphibians of plant kingdom) and then to Pteridophytes -the first vascular land plants, would enable students to have a broad prospective of evolutionary trends in plant kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bryophyta: General characters; systematic position, structure, reproduction and life cycle of *Marchantia* and *Riccia* (Hepaticopsida) excluding developmental stages.

UNIT-II

Systematic position, structure, reproduction and life cycle of *Anthoceros* (Anthocerotopsida) and *Funaria* (Bryopsida) excluding developmental stages.

UNIT–III

Pteridophyta: General characters; systematic position, structure, reproduction and life cycle of *Rhynia* (Psilophytopsida) and *Selaginella* (Lycopsida) excluding developmental stages.

UNIT-IV

Systematic position, structure, reproduction and life cycle of *Equisetum* (Sphenopsida) and *Pteris* (Pteropsida) excluding developmental stages.

Suggested Readings

1. Goyal, J. P. Dhand, Neelam and Saini, Aruna 2011. Foundations of Botany. Trueman Book Company Jalandhar.
2. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi
3. Puri, P. 1980. Bryophyta. Atma Ram & Sons, Delhi.
4. Sharma, O.P. 1990. Text Book of Pteridophyta, McGraw Hill Publishing Co., New Delhi.
5. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
6. Smith, G.M. 1971. Cryptogamic Botany. Vol. II, Bryophytes and Pteridophytes, Tata McGraw Hill Publishing Co., New Delhi.
7. Srivastava, H.N. 2013.Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
8. Vishishta, B. R. 1999. Botany for Degree Students. Bryophyta. S. Chand and Company Ltd., New Delhi.

Paper-B : Genetics

Objective: This paper deals with various aspects of hereditary trends observed in successive generations. It provides an insight into genetic basis of such evolutionary trends in plants. Coupled with the study of variations in life forms included in Paper A, the course material of Paper B provides an idea about the important role that genetics plays in structural and functional differentiation of plants.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Mendelism : Mendel's experiments and results, Mendel's Laws of Dominance, Segregation and Independent assortment; Linkage: complete and incomplete linkage, linkage groups, linkage maps, importance of linkage, cytological interpretation of Mendelism.

UNIT-II

Non-allelic Gene Interactions: Dominant and recessive epistasis, supplementary genes, complementary genes, quantitative or polygenic inheritance, duplicate genes. Allelic gene interactions: Incomplete dominance, codominance, multiple alleles, pleiotropic genes.

UNIT-III

Chromosome theory of heredity, parallelism between chromosome and Mendelian factors, Sex linked inheritance; Characteristics and examples (Haemophilia, colour-blindness); Cytoplasmic or extranuclear inheritance: mitochondrial and plastid DNA; plastid inheritance in *Mirabilis*, mitochondrial inheritance in Yeast.

UNIT–IV

Genetic variations: Continuous and Discontinuous; Mutations: characteristics, types, importance, factors affecting mutations; Mutagens: Physical and chemical, mechanism of gene mutations; DNA damage and repair: Types of damage (Single base change and structural distortion), types of repair system in prokaryotes and eukaryotes.

Suggested Readings :

1. Atherly, A.G., Girton, J.R. and McDonald, J.F. 1999. The Science of Genetics. Saunders College Publishing, Fort Worth, USA.
2. Bhatia, K. N. and Dhand Neelam 2013.. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. Genetics. Rastogi Publications, Meerut, India.
4. Russel, P.J. 1998. Genetics. The Benjamin/Cummings. Publishing Co. Inc., USA.
5. Snustad, D.P. and Simmons, M.J. 2000. Principles of Genetics, John Wiley & Sons, Inc., USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Stent, G.S. 1986. Molecular Genetics. CBS Publications.

Suggested laboratory exercises for Second Semester:

1. Study of morphology of various genera mentioned in Bryophyta and Pteridophyta.

2. I. Preparation of permanent stained slides of :

Marchantia	(V.S. Thallus)	*Selaginella*	(T.S. Stem)
Riccia	(V.S. Thallus)		
Anthoceros	(V.S. Thallus)	*Equisetum*	(T.S. Aerial stem passing through internode)
Funaria	(T.S. Stem)	*Pteris*	(T.S. Petiole and leaflet)

II. Study through permanent slides:

Marchantia

i) L.S. Antheridiophore
ii) L.S. Archegoniophore
iii) L.S. Mature sporogonium

Riccia

L.S. Mature sporogonium

Anthoceros

i) T.S. Thallus passing through antheridia
ii) T.S. Thallus passing through archegonia
iii) L.S. Mature sporogonium.

Funaria

i) L.S. Male receptacle
ii) L.S. Female receptacle
iii) L.S. Capsule
iv) Primary protonema

Selaginella

L.S. Sporangiferous spike

Equisetum

i) L.S. Strobilus
ii) T.S. Strobilus

Pteris

Mature prothallus

3. Problems related to Mendalism and gene interactions.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1. Cut T.S., stain and make a permanent mount of specimen A. Identify, draw its labelled diagram and 06 show the slide to the examiner.
2. Problem related to Mendalism or gene interaction (to be announced by the examiner). 04
3. Identify the slides B and C giving at least two reasons for each. 04
4. *Viva-voce* & Practical Note-book. 2+2= 04

ZOOLOGY

FIRST SEMESTER

		Time	Theory	Internal Assessment	Marks
Paper-I :	Biodiversity & Cell Biology – I	3 hrs.	36	4	40
Paper-II:	Biodiversity & Cell Biology – II	3 hrs.	36	4	40
Practical:	One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
				Total marks :	100

SECOND SEMESTER

		Time	Theory	Internal Assessment	Marks
Paper-I :	Biodiversity & Ecology - I	3 hrs.	36	4	40
Paper-II:	Biodiversity & Ecology - II	3 hrs.	36	4	40
Practical:	One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
				Total marks :	100

Note : The number of hours for Theory and Practical per week shall be 6 and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Semester-I and Semester-II in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

ZOOLOGY

FIRST SEMESTER

PAPER–I : BIODIVERSITY & CELL BIOLOGY-I (ZOO. 01)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following protozoan types :
Amoeba, Paramecium and Plasmodium.

Classification up to orders with ecological notes and economic importance (if any) of the following :
Entamoeba, Trypanosoma, Giardia, Noctiluca, Eimeria, Opalina,Vorticella, Balantidium and Nyctotherus.

UNIT – II

Detailed study of the following animal types :

Parazoa (Porifera) : Sycon (*Scypha*)
Cnidaria (Coelenterata) : *Obelia*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Parazoa (Porifera) : *Grantia, Euplectella, Hyalonema and Spongilla*

Cnidaria (Coelenterata) : *Hydra, Sertularia, Plumularia, Obelia, Tubularia, Bougainvillea, Porpita, Velella, Physalia, Rhizostoma Millipora, Aurelia, Alcyonium, Tubipora, Zoanthus, Metridium, Madrepora, Favia, Fungia and Astrangia.*

UNIT – III

Methods in Cell Biology : Principles and applications of light (simple, compound & phase contrast) and electron (SEM & TEM) microscopes
Fixation & fixatives, staining techniques. (simple and double staining)

Organisation of Cell : Concept of Prokaryotic and Eukaryotic cell, extra nuclear and nuclear organization of cell.

Plasma membrane : Structure with particular references to Fluid Mosaic Model, Osmosis, active and passive transport, endocytosis and exocytosis.

UNIT – IV

Endoplasmic reticulum	:	Structure, types, associated enzymes and functions.
Mitochondria in	:	Structure, mitochondrial enzymes and the role of mitochondria respiration. Mitochondrial DNA.
Golgi complex	:	Structure, associated enzymes and functions.

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A molecular approach – G. M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PAPER–II : BIODIVERSITY & CELL BIOLOGY - II (ZOO. 102)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

UNIT – I

Detailed study of the following animal types :

Platyhelminthes : *Fasciola,Taenia*

Aschelminthes : *Ascaris*

Parasitic adaptations in Helminths

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Platyhelminthes : *Dugesia, Schistosoma and Echinococcus.*

Aschelminthes : *Ascaris, Oxyuris, Wuchereria.*

UNIT – II

Detailed study of the following animal type :

Annelida : *Pheretima*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Annelida : *Nereis, Polynoe, Eunice, Arenicola, Aphrodite, Amphitrite, Chaetopterus, Tubifex and Pontobdella.*

UNIT – III

Lysosomes : Lysosomal enzymes, Polymorphism and functions.

Ribosomes : Types of ribosomes, their structure and functions.

Centrosome : Structure and functions.

UNIT-IV

Nucleus : Structure and functions of nuclear membrane, nucleolus and chromosomes.

Euchromatin & Heterochromatin

An elementary idea of cell cancer, transformation in Cancer : Introduction, difference between normal and Cancer cells, types of basic idea of transformation.

An elementary idea of cellular basis of immunity : Cellular & Humoral immunity. Elementary idea of cells & organs of immune system .

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A Molecular approach – G.M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PRACTICALS : Practical based on Theory Papers ZOO-101 & ZOO-102 (ZOO-151)

1. Examination of cultures of *Euglena* and *Paramecium.*
2. Classification upto orders with ecological notes and economic importance, if any, of the following animals :
   Slides : *Amoeba, Euglena, Trypanosoma, Noctiluca, Eimeria, Monocystis, Paramoecium* (Binary fission and conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus & Polystomella.*

Parazoa (Porifera) : Specimens: *Sycon, Grantia, Euplectella, Hyalonema, Spongilla, Euspongia.*

Cnidaria (Coelenterata)	(a)	Specimens : *Porpita, Velella, Physalia, Aurelia, Rhizostoma Metridium, Millipora, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia and Astrangia.*
	(b)	Slides : *Hydra* (W.M.) *Hydra* with buds. *Obelia* (colony and medusa). *Sertularia, Plumularia, Tubularia, Bougainvillea* and *Aurelia larva.*
Aschelminthes	:	*Ascaris* (male and female), *Trichinella, Ancylostoma.*
Platyhelminthes	(a)	Specimens : *Dugesia, Fasciola, Taenia, Echinococcus.*
	(b)	Slides : Miracidium, Sporocyst, Redia, Cercaria of *Fasciola*, Scolex and Proglottids of *Taenia* (mature and gravid).
Annelida	:	*Pheretima, Nereis, Heteronereis, Polynoe, Eunice, Aphrodite, Chaetopterus, Arenicola, Tubifex* and *Pontobdella.*

3. Study of the following permanent stained preparations :
   - L.S. and T.S. *Sycon,* gemmules, spicules and spongin fibres of a sponge.
   - T.S. *Hydra* (Testis and ovary region).
   - T.S. *Pheretima* (Pharyngeal and typhlosolar regions); setae, septal nephridia, spermathecae and ovary of *Pheretima*
   - T.S. *Fasciola* (Different regions).
   - T.S. *Ascaris* (Male & female).

4. Preparation of the following slides :
   Temporary preparation of *Paramecium*, Euglena and vorticella.

5. Demonstration of dissection of earthworm through video clipping/models/charts ets.

6. Make a preparation of sex-chromatin from buccal smear.

7 . Introduction to the following through photographs/lab. visits :
   - Gel electrophoresis, TEM & SEM, ultrastructure of cell organelles.

8. Study of slide of striated muscle fibre and Animal cell.

Note : . Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labelled sketch of the any given system and show to examiner/Spot any four parts of anatomy in given models/charts. 2 marks

2. Make a temporary mount of the material "A". Identify and draw its labelled sketch and show it to the examiner. 1 marks

3.Identify the slides (B-C) and give two important reasons for each identification. 3 marks

4.Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks

5. Identify the cell organelle through photograph and give two important reasons for Identification/Buccal smear/striated muscle fibre/paper chromatography. 2 marks

6.Viva voce 2 marks

7.Practical records and chart 2 marks

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ZOOLOGY

SECOND SEMESTER

Paper- I : BIODIVERSITY & ECOLOGY - I (ZOO-201)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type Questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Detailed study of the following animal types :

Arthropoda : *Periplaneata*
Social organizations in insects (honey bee and termite).

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Arthropoda : *Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper) *Gryllus* (Cricket), *Mantis* (Preying Mantis), *Cicada, Forficula* (Earwig), *Cimex*, *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth).

UNIT –II

Detailed study of the following animal types :

Arthropoda : Prawn (*Palaemon*)
Life cycle of *Anopheles* and *Culex*.

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Peripatus, Prawn, Lobster, *Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

UNIT – III

Ecology	:	Subdivisions and Scope of ecology.
Ecosystem	:	Components, ecological energetics, food web, introduction to major ecosystems of the world.
Ecological factors	:	Temperature, light and soil as ecological factors.

UNIT – IV

Nutrients	:	Biogeochemical cycles & concept of limiting factors.
Ecological Adaptations	:	Morphological, physiological and behavioural adaptations in animals in different habitats.
Population	:	Characteristics and regulation of population.

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

Paper-II BIODIVERSITY & ECOLOGY - II (ZOO-202)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following animal type :

Mollusca : *Pila*

Classification up to orders with ecological notes and economic importance (if any)

Mollusca : *Chiton, Anodonta, Mytilus, Ostrea, Cardium, Pholas, Solen* (Razor Fish), *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus and Dentalium*

UNIT – II

Detailed study of the following animal types :

Echinodermata : *Asterias*, Echinoderm Larvae.
Hemichordata : *Balanoglossus*, External characters and affinities.

Classification up to orders with ecological notes and economic importance (if any)

Echinodermata : *Echinus, Cucumaria, Ophiothrix, Antedon and Asterias.*
Hemichordata : *Balanoglossus.*

UNIT – III

Inter and intra ecological relationships : Competition, predation, parasitism, commensalism, ammensalism & mutualism

Biotic community : Characteristics, ecological succession, ecological niche.

UNIT – IV

Natural resources : Renewable and nonrenewable natural resources and their conservations.

Environmental Degradation : Causes, impact and control of environmental pollution. (Air, Water, Land, Noise)

Wildlife conservation : Basic concepts

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

PRACTICALS : Practical based on Theory Papers ZOO-201 & ZOO-202 (ZOO 152)

1. Classification upto orders with ecological notes and economic importance, if any, of the following animals :

   Arthropoda : *Peripatus, Palaemon, Lobster, Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper), *Gryllus* (Cricket), *Mantis* (Praying Mantis) *Cicada, Forficula* (Earwig), *Scarabaeus (*Dung beetle), *Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth), *Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

   Mollusca : *Anodonta, Mytilus, Ostrea, Cardium,Pholas, Solen* (Razorfish) *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus shell* (Complete and T.S.), *Chiton and Dentalium.*

   Echinodermata : *Asterias, Echinus, Ophiothrix* and *Antedon Cucumaria*

   Hemichordata : *Balanoglossus*.

2. Study of the following permanent stained preparations :
   Trachea, mouth parts of *Periplaneta*
   Radula and osphradium of *Pila*.
   T.S. Star fish (Arm).

3. Demonstration of dissection of the following animals through video clippings/charts/models:
   Periplaneta : Digestive and nervous systems; mouth parts and trachea.
   Pila : Pallial complex, digestive and nervous systems, Radula.
4. Study of animal adaptations with the help of specimens, charts and models.
5. Study of Zoogeographical regions and their fauna.
6. Study of biotic components of an ecosystem.
7. Study of different types of nests in birds.
8. Study & preparation of zoogeographical charts/maps.

Note: Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled diagram of any given system of an animal and explain it to the examiner Sketch and demonstrate it to the examiner. 2 marks
2. Identify the slides (A-C) and give two important reasons for each identification. 3 marks
3. Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks
4. Identify the type of adaptation/type of nest/biotic components with a short note. 1 marks
5. Mark Zoogeographical region on the given physical map along with endemic fauna and climate. 2 marks
6. Viva voce 2 marks
7. Practical record, charts/maps and project report of excursion to a place of zoological interest 2 marks

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BIOCHEMISTRY
Semester I

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper-A: Carbohydrates and Lipids **Marks: 45+5**

(*Three periods per week)*

Objective: To learn about biomolecules, their structure and functional significance.

SECTION-I

(Lectures: 6)

Introduction to biochemistry and its scope. Water: physical properties, as a biological solvent and structure of water,dissociation of water. pH and pOH, buffer solution. Henderson Hasselbalch equation, acid-base indicators, buffers and physiologically important buffers, dialysis and osmosis.

SECTION-II

(Lectures: 8)

Definition and classification of carbohydrates. Fischer and Haworth structures of carbohydrates. Stereoisomerism, and mutarotation. Anomeric forms of monosaccharides. Derivatives of monosaccharides (glycosides, deoxysugars,amino sugars and other derivatives of biological importance). Oligosaccharides of biological importance (structure of maltose, lactose, sucrose, cellobiose, trehalose, raffinose). Characteristic reactions of monosaccharides: reactions with hydrazine, hydrogen cyanide, hydroxylamine; reduction and oxidation of sugars; periodic acid oxidation; action of alkali upon sugars; acylation and methylation of sugars. Homo-and hetero-polysaccharides (structures of amylose, amylopectin, starch, inulin, pectins, dextrins, glycogen, cellulose, chitin). GAGs as components of connective tissue.Polysaccharides of bacterial cell wall, glycoproteins

SECTION-III

(Lectures: 8)

Definition and classification of fatty acids (saturated and unsaturated). Essential fatty acids. Important reactions of functional groups present in fatty acids. Characteristics of fatty acids and fats (saponification, iodine, acid, acetyl and peroxide values). Refractive index, m. p., b.p. and their relation to molecular size. Properties of glycerol. Fats as source of energy. Waxes.Structures, characteristics and functions of lipids: triacylglycerols, phospholipids: lecithins (Phosphotidylcholines), lysolecithins, cephalins (phosphotidylethanolamines), phosphatidylserines, Phosphatidyl inositol, sphingomyelins, plasmalogens), cerebrosides, gangliosides, sulfatides.

SECTION-IV

(Lectures: 6)

Lipoproteins– composition, classification and biological functions. Liposomes.
Terpenes and steroids – Terpenes of biological significance e.g. carotenes, phytol. Cholesterol and other animal sterols. Colour reactions of sterols. Sterols of yeast and fungi (mycosterols). Phytosterols. Steroidal hormones. Bile acids.
Structure and properties of eicosanoids-prostaglandins, leukotrienes, thromboxanes, prostacyclins

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay Edition,	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

1. Qualitative tests for carbohydrates.
2. Estimation of carbohydrate by anthrone method.
3. Estimation of ascorbic acid by dye method.
4. Verification of Beer-Lambert law for nitrophenol or cobalt chloride.
5. Qualitative tests for cholesterol and lipids
6. Determination of saponification value of fats
7. Determination of iodine value of fats.
8. Estimation of phospholipids by vanillin method.

Paper-B: Nitrogen containing Biomolecules Marks: 45+5

SECTION–I

(Lectures: 7)

Amino acids: common structural features. Stereoisomerism and RS system of designating optical isomers. Classification based on the nature of "R" groups. Amino acids present in proteins and non-protein amino acids.

Specialized role of amino acids. Physical and chemical properties of amino acids. Titration of amino acids. Rigid and planar nature of a peptide bond. Folding of peptide chains into regular repeating structures (α helix, β pleated sheets). β -turn in polypeptides. Chemical synthesis of polypeptides. Biologically active peptides.

SECTION–II

(Lectures: 8)

Proteins: levels of protein structure. Determination of primary structure of proteins. Forces stabilizing structure and shape of proteins. Native proteins and their conformations. Behaviour of proteins in solutions. Salting in & salting out of proteins. Denaturation of proteins. Structural and functional diversity of proteins, fibrous proteins (keratins, collagen & elastin), globular proteins (hemoglobin, myoglobin) and conjugated proteins.

SECTION-III

(Lectures: 8)

Nucleic Acids: structure and properties of purine and pyrimidine bases. Nucleosides and nucleotides. Biologically important nucleotides. Double helical model of DNA and forces responsible for it. Different forms of DNA (A,B and Z type), denaturation of DNA. Physical and chemical properties of nucleic acids. Chemical and enzymatic hydrolysis of nucleic acids. Sequencing of polynucleotides. Types of RNA and ribozyme.

SECTION-IV

(Lectures: 6)

Porphyrins: porphyrin nucleus and classification of porphyrins. Heme and other metalloporphyrins occurring in nature. Detection of porphyrins spectrophotometrically and by fluorescence. Chemical nature and physiological significance of bile pigments.

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay Edition,	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

1. Qualitative tests for Amino acids and proteins
2.Titration curve for amino acids and determination of pKa value.
3. Estimation of:
    (a) Amino acids by ninhydrin method.
    (b) Protein by biuret and Lowery method
    (c) DNA by diphenylamine method
    (d) RNA by orcinol method
4. Spectrophotometic measurements of DNA and RNA solutions

BIOCHEMISTRY
Semester II

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper- A: Biochemical Techniques **Marks: 45+5**

Credit: 3+0+0
Objective: To learn various biochemical techniques

Section-I

(Lectures: 7)

Beer-Lambert's law. Light absorption and its transmittance. Determination and application of extinction coefficient. Applications of following spectroscopic techniques in elucidating structure of Biomolecules:- visible, U.V., Infra-red and fluorescence spectroscopy

Section-II

(Lectures: 8)

Chromatography: general principles, distribution coefficient, partition chromatography-normal phase and reverse phase liquid chromatography. Modes of chromatography-column, thin layer and paper chromatography. Principles, matrices and applications of gel permeation, adsorption, ion exchange and affinity chromatography.Gas chromatography (GC) and High Performance Liquid Chromatography (HPLC).

Section-III

(Lectures: 7)

Various centrifugation techniques and their applications in Biochemistry.Preparative and analytical ultracentrifugation procedures.Application of partial specific volume, diffusion coefficient and viscosity measurements in the study of macromolecules of biochemical importance.

Section-IV

(Lectures: 8)

Electrophoresis: General principle, support media, types of electrophoresis.
Electrophoresis of proteins: native and SDS-PAGE. Isoelectric focusing, 2D-PAGE, detection and recovery of proteins.Molecular weight determination.Immuno electrophoresis. Electrophoresis of nucleic acid: agarose-gel electrophoresis of DNA and RNA, pulsed-field gel electrophoresis, Northern and Southern transfer procedure.

SUGGESTED BOOKS

1. Biochemical Techniques: Theory and practice by Robyt, J.F. and White, B.J, 1987, Brooke/Cole Publishing Company, California.
2. Principles and techniques of Biochemistry & Molecular biology by K Wilson & J Walker 6th Ed.Cambridge University press
3. Fundamentals of analytical chemistry by Skoog /West/Holter/Crouch Thompson/Brooks/Cole

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

I. Estimation of proteins using UV absorbance and biuret method.
II. Estimation of proteins using Lowry/Bradford method.
III. Isoelectric pH of casein.
IV. Ammonium sulphate fractionation of serum proteins.
V. Separation of albumin from serum using anion-exchange chromatography.
VI. SDS-PAGE analysis of proteins.

Paper-B: Enzymes and Bioenergetics **Marks: 45+5**

Objective: To learn principles of thermodynamics, nature of enzymes, their mode of action and enzyme kinetics

SECTION-I

(Lecture: 7)

Introduction to enzymes.General characteristics of enzymes.IUB system of nomenclature and classification of enzymes.Prosthetic group.Holoenzyme, apoenzyme, cofactors, isoenzymes and their clinical significance and zymogens, coenzymes (NAD/NADP,FMN/FAD, coenzyme A,TPP, pyridoxal phosphate, tetrahydrofolate) and their biochemical functions, assay of enzyme activity, units of enzyme activity. Active site of enzymes

SECTION-II

(Lectures: 8)

Enzymes as catalysts. Theories of enzymes catalysis: proximity and orientation effects, acid base catalysis, covalent catalysis. Role of metals in enzyme catalysis
Monomeric enzymes, oligomeric enzymes & multienzyme complexes.Mechanism of action of chymotrypsin and pyruvate dehydrogenase.

SECTION-III

(Lectures: 8)

Factors affecting velocity of enzyme catalysed reactions: enzyme concentration, pH and temperature. Michaelis-Menten equation.Determination of Km and its significance.
Enzyme inhibition: Various types of enzyme inhibitions. Determination of Ki value.Enzyme inhibitors and their importance.Introduction to multisubstrate enzymes. Allosteric enzymes and enzyme regulation.

SECTION-IV

(Lectures: 8)

Concepts of bioenergetics, principles of thermodynamics & their application in Biochemistry, concept of free energy.Biological oxidations.Redox potential. ATP and High energy phosphate compounds: introduction, phosphate group transfer potential, enzymes and co-enzymes involved in oxidations and reductions. Mitochondrial electron transport chain and oxidative phosphorylation.Substrate level phosphorylation, mechanism of oxidative phosphorylation.

Books Recommended:

1. J.R. Whitaker	:	Principles of Enzymology for the Food Sciences, 2nd Ed., Marcel Dekker, Inc., New York.
2. J.E. Bell and E.T. Bell	:	Protein and Enzymes, Prentice Hall Inc, New Jersey.
3. Berg J. M, LubertStryer	:	Bio-chemistry, W.F. Freeman and Co., New York, Edition 7th, 2002.
4. Nelson D.L & Cox M. M.	:	Principles of Bio-chemistry, Worth Publishers, Inc., New York, edition 4th 2005.
5. Conn E.E &Stumpf P.K.	:	Outlines of Bio-chemistry, Bruening & Doi John Wiley & Sons.
6. T. Palmer	:	Enzymes: Biochemistry, Biotechnology and Clinical chemistry, 2nd Ed. (2008) Affiliated East-West press Pvt. Ltd. New Delhi.

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

I. Preparation of casein from milk
II. Determination of achromatic point of saliva
III. (a) Assay of serum alkaline phosphatase activity.
(b) Effect of pH on enzyme activity.
(c) Effect of temperature on enzyme activity and determination of energy of activation.
(d) Effect of substrate concentration on enzyme activity and determination of Km.
IV. Inhibition of alkaline phosphatase by EDTA.
V. Demonstration of potato polyphenoloxidase activity.

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INTRODUCTION TO COMPUTER SCIENCE
(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module I while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III.

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lecturers per week	Max. Marks			Exam Hours
	First Semester			Ext.	Int.		
1	A	Fundamentals of Information Technology	6	25	5	30	3
2	C	Practical on Paper – A	6	-	-	20	3
	Second Semester			Ext.	Int.		
3	B	Computer Programming Using C	6	25	5	30	3
4	D	Practical on Paper – B	6	-	-	20	3

SEMESTER I

Paper A
Paper Title: Fundamentals Of Information Technology
Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

Objective : To familiarize students with basic concepts of Computer and Information Technology, Students will get understanding of concepts related to operating systems and application softwares.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.
2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
   ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation. Input/Output devices.

UNIT-II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.
4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin
5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
   Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT-III

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.
   Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
   Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
   Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
   Clipart: Using clip art, Creating Word Art
   Mail merge: Creating merged envelops, creating merged mailing labels

UNIT-IV

7. **Spreadsheet Software:**
   Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

   Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

   Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

   Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts
8. **Presentation Software**:
   Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References:

1.	Basandra, S.K.	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K.	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K.	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M.	Computers Todays by McGraw Hill, New York, 3rd ed., N.Y. Int. ed.
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron.	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper – C : Practical on Paper - A

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

INTRODUCTION TO COMPUTER SCIENCE

SEMESTER II

Paper B
Paper Title: Computer Programming Using C

Max. Marks : 25 **Time : 3 Hrs**
Theory: Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60
Objective : To make student understand programming concepts of 'C' language including functions, arrays, input/output etc.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Input/Output, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes:** automatic, external, static, register
5. **Preprocessor:** #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT-II

6. **Functions:** library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions

UNIT-III

8. **Strings**: Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
9. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures

UNIT-IV

10. **Console Input/Output**: Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
11. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File, Text Files and Binary Files.

References:

1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi, 8th Edition.
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series, N.D., TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications.
4.	Salaria, R.S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper – D : Practical on Paper - B

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

MICROBIOLOGY

B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-19

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

Semester-I

Scheme of Examination	*Duration*	*Marks*
Theory	6 hrs.	75 (60+15*)
MIC 101 : Fundamentals of Microbiology-I	3 hrs.	37.5 (30+7.5*)
MIC 102 : Microbial Physiology—Metabolism-I	3 hrs.	37.5 (30+7.5*)
Practical		
One Practical pertaining to the entire syllabus included in Theory Papers MIC 101 and MIC 102	6 hrs.	25 (20+5*)

Semester-II

Theory	6 hrs.	75 (60+15*)
MIC 201 : Fundamentals of Microbiology-II	3 hrs.	37.5 (30+7.5*)
MIC 202 : Microbial Physiology—Metabolism-II	3 hrs.	37.5 (30+7.5*)
Practical		
One Practical pertaining to the entire syllabus included in Theory Papers MIC 201 and MIC 202	6 hrs.	25 (20+5*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY
SEMESTER-I
OUTLINES OF TESTS AND SYLLABI
MIC 101 : FUNDAMENTALS OF MICROBIOLOGY-I

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. History, development, scope and applications of Microbiology.
2. Methods of Microbiology isolation of pure cultures, theory and practice of sterilization.
3. Nature of Microbial World : Prokaryotes and eukaryotes, growth pattern in microbes.

SECTION-B

1. Morphology and fine structure of bacteria, fungi, actinomycetes and algae.
2. Organization of cell wall, cell membrane, flagella and capsules in bacteria.
3. Morphogenesis in bacteria, formation of spores and cysts.

SECTION-C

1. Recombinant DNA technology: genetic engineering and gene cloning in micro-organisms.
2. Strategies of genetic engineering: Restriction enzymes, vectors and plasmids.

SECTION-D

1. Microorganism Association with Vascular Plants : Rhizosphere and Rhizoplane microorganisms and Mycorrhizae.
2. Nitrogen fixation : Symbiotic and nonsymbiotic and biofertilizers.
3. Biopesticides.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M. Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008).

MIC 102 : MICROBIAL PHYSIOLOGY—METABOLISM-I

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objectives :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth and enzymes.

SECTION-A

1. Microbial Nutrition : Requirements for Growth. Physical requirement (temperature, pH, osmotic pressure), chemical requirements (C, N, S, P, O).
2. Culture Media : Chemically defined media, complex media, anaerobic growth media, selective & differential media, and enrichment culture. Cultivation of Aerobes and Anaerobes.

SECTION-B

1. Enzymes : Chemical and physical properties of enzymes.
2. Classification and nomenclature of Enzymes.
3. Factors affecting enzyme activity.

SECTION-C

Microbial Metabolism :

1. Respiration and fermentation.
2. Glycolysis.
3. Pentose Phosphate pathway
4. The Entner Doudoroff pathway.
5. Tricarboxylic acid cycle.
6. Glyoxylate cycle.

SECTION-D

Bacterial Genetics:

1. Conjugation.
2. Transformation.
3. Transduction (generalized transduction, specialized transduction).
4. The Regulation of Gene Expression : Lac operon, tryptophan operon. Recommended

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Text Book of Microbiology, S. Chand and Company.

PRACTICALS

MAX. MARKS	**:**	**25 MARKS**
THEORY	**:**	**20 MARKS**
INTERNAL ASSESSMENT	**:**	**5 MARKS**
TIME	**:**	**3 HOURS**

1. Preparation of culture media, spread plates, pour plates, selective media, differential media.
2. Separation of pure cultures and study the effect of selective nutrients on prokaryotes.
3. Isolation of Soil Bacteria, Soil Fungi, Soil Actinomycetes.
4. Selective media for Soil microflora and use of growth factors, Study of Rhizosphere interactions, Quantitative measurements of Soil nutrients and Rhizosphere microflora and preparation of starter cultures of Rhizobium, Azotobacter.
5. Measurement of Soil Enzymes.
6. Use of ultraviolet light for its germicidal effect.
7. The replica plating technique.
8. Effect of temperature, Osmotic pressure, energy source etc. on growth of prokaryotes.

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MICROBIOLOGY
SEMESTER-II

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

MIC 201 : FUNDAMENTALS OF MICROBIOLOGY-II

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objectives :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. Microscopic examination of micro-organism, bright field microscopy, dark field microscopy, phase contrast microscopy and electron microscopy.
2. Staining of microbes, theory of Gram staining.

SECTION-B

1. Animal Viruses : Morphology, cultivation and viral disease cycle.
2. Bacteriophages : Morphology, multiplication, detection and enumeration.
3. Biotransformation of
   (a) D-Sorbitol to L-Sorbose. (b) Antibiotics. (c) Steroids.

SECTION-C

Genetic engineering for human welfare :

1. Production of pharmaceuticals.
2. Insect pest control.
3. Use of Genetically Engineered Microorganisms (GEMs) for control of pollution.

SECTION-D

1. Biogeochemical Cycling—Carbon cycle, Nitrogen cycle, Phosphorus and Sulphur cycle with role of microorganisms.

2. Sewage (waste-water) treatment, chemical characteristics, microbiological characteristics, waste water treatment processes.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M. Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008).

MIC 202 : MICROBIAL PHYSIOLOGY—METABOLISM-II

MAX. MARKS	**:**	**37.5 MARKS**
THEORY	**:**	**30 MARKS**
INTERNAL ASSESSMENT	**:**	**7.5 MARKS**
TIME	**:**	**3 HOURS**

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth and enzymes.

SECTION-A

1. Microbial Growth : Growth in population, bacterial growth curve, mathematical nature and expression.
2. Factors affecting growth in microorganisms.
3. Methods for measurement of growth in microorganisms.

SECTION-B

1. Mechanisms of enzymes action.
2. Inhibition, control and regulation of enzyme activity.
3. Enzyme kinetics : Michaelis-Menten equation.

SECTION-C

Microbial Metabolism :

1. Catabolism of lipids and proteins.
2. Beta oxidation.
3. Electron transport chain.
4. Biochemical mechanisms of generation of ATP.

SECTION-D

Microbial Utilization of Energy & Biosynthesis :

1. Transport of nutrient by bacteria.
2. Synthesis of Amino Acids : Glutamate, lysine, glutamine, serine, arginine family.
3. Structures and biosynthesis of cell wall peptidoglycan.
4. Biosynthesis of Carbohydrates (gluconeogenesis) & Phospholipids.
   Replication of DNA molecules, Transcription & Translation (process of protein synthesis).

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), *Microbes and Man,* Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), *A Text Book of Microbiology,* S. Chand and Company.

PRACTICALS

MAX. MARKS	**:**	**25 MARKS**
THEORY	**:**	**20 MARKS**
INTERNAL ASSESSMENT	**:**	**5 MARKS**
TIME	**:**	**3 HOURS**

1. Use of microscope in examination of unstained bacteria, fungi, algae, parasites and stained cell preparations including simple staining, Gram's staining, acid fast staining, capsule staining, spore staining using prokaryotic and eukaryotic cells, hanging drop preparation.
2. Presumptive, confirmed and completed tests for safety of water supplies.
3. Relation of free oxygen to microbial growth, monitoring of dissolved oxygen in various effluents.
4. Determination of COD in Industrial effluents.
5. Effects of antimetabolites on Microbial culture (Inhibition by Sulfanilamide).
6. Determination of Water Activity of various substrates and assay of surface active agents.
7. Turbidimetric/spectrophotometric monitoring of growth using liquid cultures.
8. Efficiency of photosynthesis in photoautotrophs.

ELECTRONICS

(KEPT IN ABEYANCE FOR THE EXAMINATION, 2018-19)

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AGRICULTURE

SEMESTER-I

Paper-I : Basics of Agricultural Botany & Forestry (THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week : 1. Theory - Six of 45 minutes duration each.
2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Plant Morphology - Root, Stem, Leaf - Their types and modifications.

Inflorescence - Types and classification.

Flower - Parts and their functions.

Fruit - Types and classification.

Unit-II

Pollination - Types, Significance, Emasculation, Techniques, mode of Reproduction and their significance

Life cycle of a typical angiosperm. Objectives of Plant Breeding, introduction to self – Incompatibility.

Unit-III

Cultivation practices including soil requirements, Water requirements, Improved varieties of the region for:

Cereals - Wheat, Rice, Maize.

Fibres – Cotton, Jute.

Oil Crops - Sarson, Soyabean.

Fruits - Mango, Grapes, Citrus, Sapota.

Unit-IV

Importance of forests, Important forest trees of India and status of forestry in Punjab, its significance.

Raising of Nurseries for forestry.

Social forestry: Definition, concept & its significance.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Study of root, stem, leaf modifications.

Raising of crops/visit to farms/fields to have knowledge of various agricultural tools, implements, and methods of crop production of related area.

Visit to Fruit and Forest nurseries.

Performance of emasculation techniques.

Books Recommended:

1. ICAR : *Hand Book of Agriculture,* New Delhi (2008).
2. S.S. Sinha, P. Gupta and A.K. Gupta : *Hand Book of Agricultural Science,* Kalyani Publishers, Ludhiana (2009).
3. P.A.U., Ludhiana (2010). : Rabi Crops *Package of Practices,*
4. P.A.U., Ludhiana (2010). : Kharif Crops *Package of Practices,*
5. Bhatia : *Elementary Biology,* Trumen Publishers, Jalandhar (2010).
6. Alan Stephens : *Dictionary of Agriculture,* Universal Book Stall, New Delhi (1998).
7. Chidda Singh, Prem Singh and Rajbir Singh : *Modern Techniques of Raising Field Crops,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2009).
8. B.S. Chundawat and S.K. Gautam : *Text Book of Agroforestry,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2006).

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AGRICULTURE

SEMESTER-II

Paper-II: Agricultural Economics and Agronomy (THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week: 1. Theory - Six of 45 minutes duration each.

2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural Banking, Agricultural Loans – Its various types, repayment mode, form filling for agricultural loans.

National policy for agricultural loans.

Agriculture credit cards.

Fundamentals of land measurements and land revenue

Unit-II

Various legal aspects of import and export of raw crop and crop products.

Quarantine laws.

Fundamentals of agricultural economics.

Psychological pressure on farmer and villagers of different classes.

Unit-III

Storage of vegetables, Fruits, Grains at local and large level.

Vegetable and fruit preservation.

Unit-IV

Soil types, Management, Improvement and Amendments.

Soil Testing.

Fundamental of fertilizers and manures.

Important fertilizers and their uses.

Nitrogen fixation.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Visit to Agricultural, Rural Banks to have basic knowledge of loan processing and recovery.

Identification of financial problems of a village.

Identification and collection of fertilizers.

Preservation of fruits and vegetables in Pickle, Jam, Jellies, Squash and Sauce forms.

Books Recommended:

1. K.T. Acharya : *Every Day Indian Processed Foods,* National Book Trust, New Delhi (2008).
2. Malkit Nagi and Satinder Bajaj : *Home Preservation of Fruit and Vegetables,* P.A.U., Ludhiana (2008).
3. ICAR : *Hand Book of Agriculture,* New Delhi.
4. T.D. Biswas and S.K. Mukherjee : *Text Book of Soil Sciences,* Kalyani Publishers, Ludhiana (2008).
5. Girdhari Lal, G.S. Siddappa and G.L. Tandon : *Preservation of Fruit and Vegetables,* ICAR Publication, New Delhi (2008)
6. Das and Gupta : *Manures and Fertilizers,* Kalyani Publishers, Ludhiana (1999).

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) SECOND YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2018-2019

(SEMESTER : THIRD AND FOURTH)

i.e

Third Semester **:** ***November/December, 2018***
Fourth Semester **:** ***April/May, 2019***

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2018 AND FOURTH SEMESTER APRIL/MAY 2019, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – III

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Objective:

- To teach finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G Damodar, D Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Ode to Autumn

ii. The Road Not Taken

iii. Money Madness

iv. I, Too

Prose Section:

i. Mr. Know All

ii. Film Making

iii. Not Just Oranges

iv. A Tale on Advertising

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section-B

Q.4. Note making (**one** out of **two** is to be attempted) 4 marks
(The examiner will set **two** paragraphs based on the prescribed text for note making. The students be asked to attempt any **one** of the **two**).

Q.5. Grammer:

i. Non finite verbs 5 marks
ii. Punctuation (A short paragraph) 5 marks
iii. Do as directed (based on transformation of sentences) 10 marks

(The examiner will set **three** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities, students have done in the class are adequately covered.)

ENGLISH (Compulsory)

SEMESTER – IV

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Objective:

- To Teach Finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill.
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G. Damodar, D. Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Goodbye Party for Miss Pushpa T.S.

ii. I Will Embrace Only the Sun

iii. Refugee Mother and Child

iv. This is a Photograph of Me

Prose Section:

i. On Shaking Hands

ii. No Man is an Island

iii. Freedom of the Press

iv. An Except From Decolonizing the Mind

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section – B

Q.4. Paragraph writing (based on post-reading activities suggested in the prescribed texts)
One out of **three** is to attempted. 5 marks
(The examiner will set **three** topics for paragraphs writing from the post reading activities suggested in the prescribed texts. While selecting this question, special care must be taken to borrow ideas from the text or suitably modify them so as to identify viable topics that the students of B.A.(compulsory)can easily handle.)

Q.5. Report writing (with internal choice) 4 marks
(The examiner will give information about some social issue, an event/incident, some topic of current affairs etc. and will ask the students to write a report in about 100 words on the given topic. The information can also be given in form of a dialogue on some issue of general interest. The examiner will set this question with an internal choice).

Q.6. Grammer:
i. Using nouns as verbs or vice-versa 5 marks
ii. Combining pairs of sentences using words given in the brackets 5 marks
iii. Text-based Idioms and Phrases 5 marks
(The examiner will set **four** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities students have done in the class are adequately covered.)

****

ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-III

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 1-4
Drama : Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical work:-

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and one from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5. Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6. One short question to test the students' understanding of various aspects of Business Communication.

5 marks

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ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-IV

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 5-8
Drama : Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae, short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations.Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication. How to Prepare for an Interview & Group Discussion etc.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any four, **Two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and **one** from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. Short Survey Report (150-200 words) with internal choice. **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6. Definition/Format of modern forms of communication to be tested.
(e-mail, fax, videoconferencing) **5 marks**

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ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਬਾਰੇ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਚਿੱਠੀ ਪੱਤਰ — 8 ਅੰਕ
3. ਪੰਜਾਬੀ ਭਾਸ਼ਾ — 7 ਅੰਕ
4. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. ਪੰਜ-ਆਬ, (ਸੰਪਾ.) ਪ੍ਰੋ. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਪੰਜ -ਆਬ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ) — 4+6=10 ਅੰਕ
   (ਅ) ਨਿਬੰਧਾਂ ਦੀ ਪੁਸਤਕ ਵਿਚ ਆਏ ਸਭਿਆਚਾਰਕ ਸੰਕਲਪਾਂ (ਇਸ਼ਟ, ਅਖਾਣ, ਲੋਕਗੀਤ, ਵਿਰਾਸਤੀ ਖੇਡਾਂ, ਲੋਕ ਵਿਸ਼ਵਾਸ, ਮੇਲੇ, ਤਿਉਹਾਰ, ਗਿੱਧਾ, ਲੋਕ ਚਿਕਿਤਸਾ ਤੇ ਲੋਕਧਾਰਾ) ਬਾਰੇ ਪ੍ਰਸ਼ਨ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 5 ਅੰਕ
2. 'ਪੰਜ-ਆਬ' ਪੁਸਤਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 1 x 5= 5 ਅੰਕ
3. ਚਿੱਠੀ ਪੱਤਰ (ਦਫ਼ਤਰੀ, ਵਪਾਰਕ, ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਮਸਲਿਆਂ ਬਾਰੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ) (ਦੋ ਵਿਚੋਂ ਇਕ) — 8 ਅੰਕ
4. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਜਨਮ , ਵਿਕਾਸ ਤੇ ਵਰਤਮਾਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 7 ਅੰਕ
5. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ
   (i) ਸ਼ਬਦ ਤੇ ਸ਼ਬਦ ਰਚਨਾ:ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ, ਭਾਵੰਸ਼: ਬੰਦ ਤੇ ਖੁੱਲ੍ਹੇ ਭਾਵੰਸ਼, ਧਾਤੂ ਤੇ ਵਧੇਤਰ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)
   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
   ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਇਕਾਂਗੀ ਤੇ ਨਾਟਕ	20 ਅੰਕ
2.	ਪੈਰ੍ਹੇ ਦਾ ਅਨੁਵਾਦ (ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ)	8 ਅੰਕ
3.	ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਛੇ ਛੱਲਾਂ (ਸੰਪਾ.) ਡਾ.ਆਤਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਕੱਲਰ, ਸਵਰਾਜਬੀਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ)	‘ਛੇ ਛੱਲਾਂ’ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	4+6 =10 ਅੰਕ
	(ਅ)	‘ਛੇ ਛੱਲਾਂ’ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਨ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	5 ਅੰਕ
2.		ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ ਕਰਨੇ)	1 x 5=5 ਅੰਕ
3.		ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ (ਲਗਭਗ 100 ਸ਼ਬਦਾਂ ਵਿਚ)	8 ਅੰਕ
4.		ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
		ਨੋਟ: ਉਪਭਾਸ਼ਾਵਾਂ ਉਪਰ ਸਵਾਲ ਸਿਰਫ ਪੂਰਬੀ ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ (ਮਾਝੀ, ਮਲਵਈ, ਦੁਆਬੀ ਤੇ ਪੁਆਧੀ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਪੁੱਛਿਆ ਜਾਵੇ। (ਦੋ ਵਿਚੋਂ ਇਕ)	
5.		ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	6 ਅੰਕ
		(i) ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਕੋਸ਼ਗਤ ਤੇ ਵਿਆਕਰਨਕ ਸ਼ਬਦ, ਵਿਕਾਰੀ ਤੇ ਅਵਿਕਾਰੀ ਸ਼ਬਦ, ਸਧਾਰਨ,ਸਮਾਸੀ ਤੇ ਮਿਸ਼ਰਤ, ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨੇਮ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	
		(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ	2+2= 4 ਅੰਕ
		ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ।(ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋਂ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ:
1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

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HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-III

INSTRUCTIONS FOR THE PAPER–SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER 3 AND 4)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 mark each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **HISTORY AND CULTURE OF PUNJAB 1200-C- 1700 A.D**

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the region during medieval times.
Pedagogy: Lectures, library work and discussions.

Unit-I

1. Society and Culture in Punjab during the Turko-Afghan rule
2. The Punjab under the Great Mughals
3. Guru Nanak : His teachings, concept of Langar and Sangat

Unit-II

4. Salient features of the Bhakti movement
5. Main Features of Sufism in Punjab
6 Development of Sikhism (1539-1581): Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das for the development of Sikhism

Unit III

7. Transformation of Sikhism : Compilation of Adi-Granth; Martyrdom of Guru Arjan Dev
8. Guru Hargobind's New policy
9. Martyrdom of Guru Tegh Bahadur

Unit IV

10. Foundation of the Khalsa
11. Post Khalsa activities of Guru Gobind Singh
12. MAP: Important Historical Places Delhi; Lahore; Sarhind; Multan; Kartarpur; Amritsar; Kiratpur; Tarn Taran; Anandpur Sahib; Fatehgarh Sahib; Paonta Sahib; Machhiwara; Muktsar

Suggested Readings:

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER 3 AND 4)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

5. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

6. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: HISTORY AND CULTURE OF PUNJAB 18TH AND EARLY 19TH CENTURIES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the region in the later medieval period.
Pedagogy: Lectures, library work and discussions.

Unit I

1. Banda Bahadur and his achievements
2. Sikh Struggle for Sovereignity from 1716-1765
3. Role of Dal Khalsa, Rakhi, Gurmata and Misls

Unit II

4. Ranjit Singh's rise to Power
5. Civil and Military administration
6. Relations with the British

Unit-III

7. Political Developments 1839-1845
8. Anglo-Sikh Wars
9. Annexation of the Punjab

Unit-IV

10. New Developments in literature, art and architecture in the Punjab region
11. Social life with special reference to the position of women, fairs, festivals, folk music, dance and games in the Punjab.
12. MAP Important Historical Places Lohgarh; Sarhind; Gujranwala; Lahore; Amritsar; Multan; Peshawar; Sialkot; Ferozepore; Ambala; Gujrat; Mudki; Ludhiana.

Suggested Readings :

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

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ENGLISH (Elective)

SEMESTER-III

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

William Shakespeare: *The Merchant of Venice*

LITERARY TERMS:

Drama, Myth of Dionysus, Liturgical Drama, Miracle Plays, Mystery Plays, Interlude, Mimesis, Catharsis, Tragic Hero, Organic Unity, Revenge Tragedy, Poetic Drama, Verse Drama, Myth & Drama, Ritual & Drama, Yaksgana, Theory, Indian Theory of Drama, Puppetry, Ardhnarishwra.

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks
2. Reference to the Context from the prescribed play. 15 marks
   (*The examiner will set three passages/stanzas from the prescribed play. The students will attempt any two out of these three.*)
3. Long answer type question in about 300-350 words form the prescribed text. One out of two is to be attempted. 15 marks

Section - B

4. Dialogue writing
(*The examiner will set one descriptive passage of about 300-400 words and ask the students to re-write the same in dialogue form. The examiner, however, must ensure that the passage can easily be converted into dialogue form.*) 10 marks

5. Identifying figures of speech in sentences (unseen):
Simile, Metaphor, Alliteration, Assonance. 10 marks
(*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Idioms and Phrases 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
(The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

ENGLISH (Elective)

SEMESTER IV

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

An Anthology of English Verse
Ed. Department of English, Deen Dayal Upadhayaya, Gorakhpur University. New Delhi: OUP, 2004

Prescribed poems:

i. John Donne: *The Sun Rising*
ii. Alexander Pope: *From Essay on Man*
iii. Thomas Gray: *Elegy Written in the Country Churchyard*
iv. William Blake: *The Tiger*
v. William Wordsworth: *Tintern Abbey*
vi. John Keats: *Ode to a Nightingale*
vii. Tennyson: *Ulysses*
viii. Browning: *My Last Duchess*
ix. Matthew Arnold: *To Marguerite*
x. Hopkins: *Pied Beauty*
xi. A. K. Ramanujan: *History*
xii. W.B. Yeats: *A Prayer for my Daughter*
xiii. T.S. Eliot: *Journey of the Magi*
xiv. Thomas Hardy: *The Darkling Thrush*
xv. Philip Larkin: *The Trees*

LITERARY TERMS:

Allegory, Allusion, Antithesis, Epic, Epithet, Hyperbole, Internal Rhyme, Rhyme Royal, Terza Rima Metaphor, Metonymy, Medias Res, Oxymoron, Mood, Tone, Personification, Stanza, Spenserian Stanza, Satire, Free paragraph

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks

2. Short answer type question in about 50-60 words from the prescribed text. Five out of seven are to be attempted. 15 marks

3. Long answer type of questions in about 100-120 words from the prescribed text. Three out of five are to be attempted. 15 marks

Section – B

4. Precis Writing 10 marks

5. Identifying figures of speech in sentences (unseen)
   Metonymy, Epithet, Oxymoron, Epigram, Metonymy 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Choose the correct meaning of the word 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

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हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–3

पूर्णांक : 90+10=100

समय : 3 घण्टे

1. **तरंगिणी– मनोहर लाल आनन्द, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो, चण्डीगढ़।**
निम्नलिखित कवि पाठ्यक्रम में निध रित है:–
मैथिलीशरण गुप्त, जयशंकर प्रसाद, सूर्यकान्त त्रिपाठी निराला, सुमित्रानन्दन पन्त

   क) 5–5 अंकों की दो सन्दर्भ–सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाऐंगी। अंक–10

   ख) कवि–परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जायेंगे। 8 अंकों का एक ही प्रश्न करना होगा। प्रत्येक उत्तर की शब्द सीमा 200 होगी। अंक–08

2. **एक सत्य हरिश्चन्द्र– डॉ0 लक्ष्मीनारायण लाल, राजपाल एण्ड सन्ज, नई दिल्ली।**

   क) संदर्भ सहित व्याख्या के लिए दो प्रश्न पूछे जाएँगे; उत्तर एक का ही देना होगा। अंक–05

   ख) पात्रों के चरित्र–चित्रण, तत्वों के आधार पर नाटक की समीक्षा तथा समस्या संबंधी दो प्रश्न पूछे जायेंगें। 8 अंकों का एक ही प्रश्न करना होगा। (शब्द–सीमा 200) अंक–08

3. **इस खण्ड में 3–3 अंकों के तीन लघुत्तरी प्रश्नों के उत्तर देने होंगे। कुल 6 प्रश्न पूछे जायेंगे। ये प्रश्न इस पत्र के पूर्वोक्त दो खण्डों (तरंगिणी व एक सत्य हरिश्चन्द्र) पर आधारित होंगे। (शब्द–सीमा 50) अंक–09**

4. **हिन्दी साहित्य का इतिहास– रीतिकाल : (केवल काव्य–खंड) अंक–08**
रीतिकाल की परिस्थितियाँ, नामकरण, सीमा–निर्धारण, प्रवृतियाँ रीतिबद्ध और रीतिमुक्त काव्य की प्रमुख विशेषताएँ, प्रमुख कवि– केशव, बिहारी, घनानंद, के संबंध में 8 अंकों का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगें। (शब्द–सीमा 200–250)

5. **वस्तुनिष्ठ प्रश्न** **अंक–10**

इस पत्र के पूर्वोक्त तीनों खण्डों के आधर पर 1–1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

6. **समीक्षा सिद्धान्त– केवल 'नाटक'** **अंक–07**

परिभाषा, तत्व और वर्गीकरण पर आधरित नाटक से संबंध्ति दो प्रश्न पूछे जायेंगे। जिनमें से 7 अंकों का एक प्रश्न करना होगा। (शब्द सीमा 200)

7. **व्यावहारिक व्याकरण–** **अंक–15**

क)	**समाकृति, भिन्नार्थक शब्द–युग्म**	**3)**	**(चार में से तीन)**
ख)	**स्वर–सन्धि एवं व्यंजन–संधि**	**3)**	
ग)	**सन्धि–विच्छेद(केवल व्यावहारिक)**	**3)**	**(चार में से तीन)**
घ)	**वाक्य–शोध्न**	**3)**	**(चार में से तीन)**
ड.)	**विराम–चिह्न**	**3)**	

8. **तकनीकी शब्दावली (केवल प्रशासकीय शब्दावली)** **अंक–10**

(सलंग्न शब्दावली)

15 में से 10 का उत्तर देना होगा।

आंतरिक मूल्यांकन– **अंक–10**

निर्देश :–छह लेक्चर Text **के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।**

प्रशासनिक शब्दावली

1.	Acceptance	**स्वीकृति**
2.	Account	**लेखा, खाता, हिसाब**
3.	Accuse	**अभियोग लगाना**
4.	Acknowledge (fact etc.)	**अभिस्वीकार करना, मानना कबूल करना**
5.	Acknowledgement due	**रसीद, पावती सहित**
6.	Addressee	**पाने वाला**
7.	Adjournment	**स्थगन**
8.	Administration	**प्रशासन**
9.	Admissible	**ग्राह्य, स्वीकार्य**

10.	Affidavit	शपथ लेना, हलफनामा
11.	Agent	अभिकर्ता, एजेन्ट
12.	Agitation	आन्दोलन
13.	Agreement	करार, अनुबंध,सहमति
14.	Allowance	भत्ता
15.	Amenity	सुख-सुविधा
16.	Anti-Corruption Officer	भ्रष्टाचार निरोध अध्किारी
17.	Appeal	अपील, अपील करना
18.	Appointment	नियुक्ति
19.	Appoint	नियुक्ति करना
20.	Approval	अनुमोदन
21.	Article	अनुच्छेद, नियम,वस्तु
22.	Association	संघ, समाज, संगम
23.	At Par	सममूल्य पर
24.	Attendant	परिचर
25.	Attestation	साक्ष्यांकन, अनुप्रमाणन
26.	Audit	लेखा परीक्षा
27.	Ballot Paper	मतपत्र, मतपर्ची
28.	Ban	प्रतिबंध, रोक, पाबंदी
29.	Bonafide	सद्भावी, वास्तविक, असली
30.	Book –Fair	पुस्तक मेला
31.	Bureau	कार्यालय, ब्यूरो
32.	Cabinet	मंत्री मंडल
33.	Candidate	अभ्य ार्थी, प्रार्थी, उम्मीदवार
34.	Care-taker	रखवाला, अवधायक
35.	Cashier	रोकड़िया
36.	Censure	निंदा प्रस्ताव, परिनिंदा
37.	Certificate of Medical Fitness	आरोग्य प्रमाण-पत्र
38.	Character Certificate	चरित्र प्रमाण-पत्र
39.	Charge Sheet	आरोप पत्र, फर्द, जुर्म
40.	Circular	परिपत्र, गशती-चिट्ठी
41.	Circulation of Traffic	यातायात परिचालन
42.	Circus	क्रीड़ा रंग, रंगमंडप
43.	Citation	प्रशास्ति, उद्धरण, अनुलेखन
44.	City Booking Office	नगर टिकट घर, नगर बुकिंग-कार्यालय

45.	City Compensatory Allowance	नगर भत्ता
46.	Civil	नागरिक
47.	Civil Pole	नगर निर्वाचन
48.	Civil Sense	नागरिक भावना
49.	Civil-air-craft	असैनिक वायुयान
50.	Claimant	दावेदार, दावी
51.	Collector	समाहर्ता, संग्रहक, संकलनकर्ता,कलेक्टर
52.	Colony	बस्ती, उपनिवेश
53.	Colosal	विशाल, वृहत्काय
54.	Colour Blindness	वर्णान्धता
55.	Communique	विज्ञप्ति
56.	Complaint	शिकायत
57.	Complementary	पूरक
58.	Completion Report	समापन रिपोर्ट
59.	Certified Copy	प्रमाणित प्रतिलिपि
60.	Complementary Copy	उपहार प्रति,मानार्थ प्रति
61.	Composite	मिला जुला, सम्मिश्रण संशिष्ट
62.	Comprehension	व्यापक कार्य बोध
63.	Contingencies	आकस्मिक व्यय
64.	Contractor	ठेकदार, संविदाकार
65.	Confiscate	जब्त करना, अधिहरण करना
66.	Corporation	निगम
67.	Custody	अभिरक्षा
68.	Decorum	शिष्टता, शालीनता
69.	Defacto	वस्तुतः
70.	Defaulter	त्रुटिकारी, चूक करने वाला,बाकीदार
71.	Defendant	प्रतिवादी
72.	Depreciation Charge	मूल्यह्रास प्रभार,अवक्षय प्रभार
73.	Design	अभिकल्प, अभिकल्पना,रुपांकन, डिज़ाइन
74.	Dispatch	प्रेषण,रवानगी, प्रेषित करना, रवाना करना
75.	Dignitary	उच्च पदधरी, महिमान्वित
76.	Director	निदेशक
77.	Disbursement	संवितरण
78.	Discipline	अनुशासन
79.	Discrepancy	विसंगति, गलती
80.	Discretion	विवेक, विवेकाधिकार

81.	Dissent	विसम्मति, असहमति
82.	Disqualified	अयोग्य
83.	Division	विभाजन, मंडल, श्रेणी, प्रभाग, डिवीजन
84.	Eligible	पात्रता, प्राप्त,पात्र
85.	Emergency	आपात, आपात्–स्थिति, आपतिक
86.	Emigrant	उत्प्रवासी
87.	Employment	रोजगार, नौकरी, नियोजन
88.	Employment Exchange	रोजगार कार्यालय, रोजगार दफतर
89.	Employment Officer	रोजगार अधि कारी
90.	Enquiry	पूछताछ,जाँच
91.	Enrolment Number	नामांकन संख्या
92.	Enrolled	नामांकित
93.	Evacuee	निष्क्रान्त
94.	Executive Engineer	कार्यपालक अभियन्ता, कार्यपाल इंजीनियर
95.	Faculty	संकाय
96.	Finance	वित्त, रूपया लगाना
97.	Gazetted Officer	राजपत्रित अधिकारी
98.	Gazetteer	राजविवरणिका
99.	Gazetted post	राजपत्रित पद
100.	Grant	अनुदान, स्वीकार करना
101.	Incentive	प्रोत्साहन
102.	Index	सूचक, अनुक्रमणी
103.	Initials	आद्यक्षर
104.	Insured Letter	बीमा किया हुआ पत्रा
105.	Interim	अन्तरिम
106.	Intelligence	गुप्तवार्ता, आसूचना
107.	Intelligentia	प्रबुद्ध वर्ग, बुद्धिजीवी वर्ग
108.	Intensive reading	गहन पठन
109.	Intention	अभिप्राय, आशय
110.	Judgment	निर्णय
111.	Jurisdiction	अधिकार– क्षेत्र
112.	Ledger	खाता
113.	Lessee	पट्टेदार
114.	Liaision Officer	संपर्क अधिकारी
115.	Maintenance	अनुरक्षण, भरण–पोषण, रख–रखाव
116.	Major	व्यस्क, बालिग, मेजर,प्राप्तत्य

117.	Manager	प्रबंधक, व्यवस्थापक, मैनेजर
118.	Minor	अवस्यक, नाबालिग, अप्राप्तव्य
119.	Monopoly	एकाधिकारी, एकाधिपत्य
120.	Motion	प्रस्ताव
121.	Nationalization	राष्ट्रीयकरण
122.	Negotiation	संधिवार्ता, समझौते की बातचीत
123.	Note of Dissent	विसन्मति लेख, असहमति लेख
124.	Notification	अधिसूचना
125.	Oath Commissioner	शपथ आयुक्त
126.	Offender	अपराधी
127.	Permissible	अनुभेय, अनुज्ञेय,क्षम्य
128.	Planning Commission	योजना आयोग
129.	Precedence	पूर्वता, अग्रता
130.	Procedure	कार्यविधि
131.	Public	सार्वजनिक,आम,सरकारी,लोक
132.	Quorum	गणपूर्ति, कोरम
133.	Receipt	पावती, प्राप्ति रसीद
134.	Recruitment	भर्ती
135.	Receiver	पानेवाला
136.	Reminder	स्मरण–पत्र
137.	Representative	प्रतिनिधि
138.	Senior	वरिष्ठ, ज्येष्ठ
139.	Sine die	अनिश्चित काल के लिए
140.	Statutory	कानुनी, विधिक,संविधिक
141.	Stenographer	आशुलिपिक
142.	Subordinate	अधीन, अधीनस्थ
143.	Tender	निविदा,टेंडर
144.	Transfer	बदली, स्थानांतरण, अंतरण
145.	Treasurer	कोषपाल
146.	Unofficial	अशासकीय
147.	Vacancy	रिक्ति
148.	Vigilance Officer	सतर्कता अधिकारी, निगरानी अधिकारी
149.	Warrant	अधिपत्र, वारंट

हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–4

पूर्णांक : 90+10=100
समय : 3 घण्टे

1. तंरगिणी–मनोहर लाल आनन्द, पंजाब विश्व विद्यालय, पब्लिकेशन ब्यूरो, चण्डीगढ़ से प्रकाशित निम्न कवि पाठ्यक्रम में निध रित हैः–
महादेवी वर्मा, अज्ञेय, धर्मवीर भारती।

   क) 5–5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाएंगी। **अंक–10**

   ख) कवि परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जाएंगे। 8 अंको का एक प्रश्न करना होगा। उत्तर सीमा 200 शब्दों की होगी। **अंक–08**

2. आदर्श एकांकी संग्रह – सं. डॉ0 संसार चन्द्र, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो चण्डीगढ़ द्वारा प्रकाशित

   क) एकांकी के तत्वों के आधार पर समीक्षात्मक प्रश्न (सार–लेखन, चरित्र–चित्रण, उद्देश्य संबंधी) दो प्रश्न पूछे जायेंगे। 8 अंकों का एक प्रश्न करना होगा। **अंक–08**

   ख) संदर्भ सहित व्याख्या नहीं पूछी जाएगी।

3. हिन्दी साहित्य का इतिहास : आधुनिक काल (केवल काव्य–खण्ड)
आधुनिक काल के भारतेन्दु–युग, द्विवेदी युग,छायावाद, प्रगतिवाद, प्रयोगवाद और नई कविता की केवल प्रमुख प्रवृतियों से संबंधित 10 अंको का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगें। (शब्द सीमा–सीमा 250) **अंक–10**

4. वस्तुनिष्ठ प्रश्न **अंक–10**
इस पत्रा के पूर्वोक्त तीन खण्डों के आधार पर एक–एक अंक के दस वस्तुनिष्ठ प्रश्न करने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5.	**संलग्न 50 टिप्पणियों का अभ्यास :** **पूछी गई दस टिप्पणियों में से पाँच का उत्तर देना होगा।**	**अंक–10**
6.	**समीक्षा सिद्धान्त : केवल 'एंकाकी'** **एकांकी के तत्व, परिभाषा और वर्गीकरण से संबंधित दो प्रश्न पूछे जाएँगें। 10 अंको का केवल एक प्रश्न करना होगा। शब्द–सीमा 250)**	**अंक–10**
7.	**सार लेखन**	**अंक–8**
8.	**शासकीय पत्र लेखन (दो में से एक)**	**अंक–8**
9.	**विस्तारण**	**अंक–8**
	आंतरिक मूल्यांकन	**अंक–10**

निर्देश : 6 लेक्चर Text **के और 3 लेक्चर व्याकरण के अनिवार्य होंगे।**

50 टिप्पणियाँ

1.	A brief note is placed below	**संक्षिप्त टिप्पणी नीचे प्रस्तुत है ।**
2.	Acknowledge receipt of this	**इसकी पावती भेजिए ।**
3.	Action as proposed may be taken	**यथा प्रस्तावित कार्यवाही की जाए।**
4.	Agenda of the meeting is put up	**बैठक की कार्यसूची प्रस्तुत है ।**
5.	Application may be rejected	**आवेदन अस्वीकार कर दिया जाए ।**
6.	Approved as proposed	**प्रस्ताव के अनुसार अनुमोदित**
7.	Administrative approval may be obtained	**प्रशासनिक अनुमोदन प्राप्त किया जाए ।**
8.	Await reply	**उत्तर की प्रतीक्षा करें ।**
9.	Await further report	**और विवरण की प्रतीक्षा करें ।**
10.	Ascertain this position please	**कृपया स्थिति का पता लगायें ।**
11.	Amended draft is submitted for approval	**संशोध्ति प्रारूप अवलोकनार्थ प्रस्तुत हैं ।**
12.	Brief resume of the case is given below	**मामले का संक्षिप्त सार नीचे दिया गया है।**
13.	Call for explanation	**स्पष्टीकरण माँगे**
14.	Call for report	**रिपोर्ट मँगवाए ।**
15.	Comply with the orders	**आदेशों का पालन करें ।**
16.	Clarify the position please	**कृपया स्थिति का स्पष्ट करें ।**
17-	Copy enclosed for ready reference	**सुलभ संदर्भ के लिए प्रतिलिपि संलग्न है ।**
18.	Copy is enclosed	**प्रतिलिपि संलग्न है ।**

19.	Copy forwarded for information and Necessary action	प्रतिलिपि सूचनार्थ एवं आवश्यक कार्यवाही के लिए प्रषित है ।
20.	Case may be kept pending	मामले को अभी अनिर्णीत रखा जाए ।
21.	Delay should be avoided	विलम्ब न किया जाए।
22.	Disciplinary proceedings may be initiated	आनुशासनिक कार्यवाही शुरू की जाए ।
23.	Draft reply is put up	उत्तर का मसौदा प्रस्तुत है
24.	Enquiry may be conducted	जाँच की जाएं
25.	Expedite action	शीघ्र कार्यवाही करें ।
26.	Explanation may be called for	स्पष्टीकरण माँगा जाए ।
27.	Facts for the case may be put up	मामलों के तथ्य प्रस्तुत करें ।
28.	For perusal and return	देखकर लौटाने के लिए
29.	For comments please	कृपया टिप्पणी दें ।
30.	For sympathetic consideration	सहानुभुतिपूर्ण विचार के लिए।
31.	Forwarded and recommended	प्रेषित और संस्तुत।
32.	I concur with the proposal	मैं इस प्रस्ताव से अपनी सहमति प्रकट करता हूँ।
33.	I have no remarks to offer	मुझे कोई टिप्पणी नहीं करनी हैं ।
34.	Inform all concerned	सभी संबंध्ति व्यक्तियों को सूचित करें ।
35.	Issue a circular	परिपत्र जारी करें ।
36.	Keep pending	निर्णय के लिए रोक रखें ।
37.	Kindly accord sanction	कृपया स्वीकृति दीजिए ।
38.	Kindly confirm	कृपया पुष्टि करें।
39.	Matter is under consideration	मामला विचाराधीन है ।
40.	No action is necessary	कोई कार्यवाही अपेक्षित नहीं है
41.	Needful has been done	आवश्यक कार्यवाही की गई है ।
42.	Order may be issued	आदेश जारी किया जाए ।
43.	Please see the proceeding notes	कृपया पिछली टिप्पणियाँ देख लें ।
44.	Put up the relevant papers	संबध्ति कागज प्रस्तुत करें ।
45.	Reminder may be sent	अनुस्मारक भेजा जाए ।
46.	Report compliance immediately	अनुपालन करके तुरन्त सूचित करें ।
47.	Specific reason may be given	विशिष्ट कारण दिया जाए ।
48.	Submitted for information	सूचना के लिए प्रस्तुत है ।
49.	This may be treated as confident	इसे गोपनीय समझा जाए ।
50.	Verified and found correct	जाँचा और सही पाया ।

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ) ਭਾਗ ਦੂਜਾ, ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ — 25 ਅੰਕ
2. ਸਫ਼ਰਨਾਮੇ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਬਾਬਾ ਵਜੀਦ, ਅਲੀ ਹੈਦਰ, ਸੱਯਦ ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਸੱਯਦ ਵਾਰਿਸ ਸ਼ਾਹ, ਨਜਾਬਤ ਅਤੇ ਪੀਰ ਮੁਹੰਮਦ)
2. ਸੱਚੋ ਸੱਚ , ਅਮਰੀਕਾ ਦਾ ਸਫ਼ਰਨਾਮਾ, ਨਰਿੰਦਰ ਸਿੰਘ ਕਪੂਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ‘ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ’ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ –ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ‘ਸੱਚੋ ਸੱਚ’ ਅਮਰੀਕਾ ਦਾ ਸਫ਼ਰਨਾਮਾ ਪੁਸਤਕ ਦੇ ਆਧਾਰ ਉੱਤੇ ਪ੍ਰਮੁੱਖ ਥਾਵਾਂ ਤੇ ਘਟਨਾਵਾਂ ਦੇ ਵੇਰਵੇ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਸਫ਼ਰਨਾਮੇ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਸਫ਼ਰਨਾਮੇ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ: ਤੱਕ ਸੂਫ਼ੀ ਕਾਵਿ-ਧਾਰਾ ਤੇ ਕਿੱਸਾ – ਕਾਵਿ ਧਾਰਾ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਚਾਰ – ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ), ਰਸ ਸੰਪ੍ਰਦਾਇ, ਵਕ੍ਰੋਕਤੀ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ: ਟਕਸਾਲੀ ਭਾਸ਼ਾ, ਵਿਅਕਤੀ ਭਾਸ਼ਾ, ਅਪਭਾਸ਼ਾ, ਗੁਪਤ ਭਾਸ਼ਾ, ਰਜਿਸਟਰ, ਪਿਜ਼ਨ ਤੇ ਕ੍ਰਿਓਲ (ਚਾਰ ਵਿਚੋਂ ਦੋ) — 10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ) ਭਾਗ ਦੂਜਾ, ਅਪ੍ਰੈਲ/ ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ 25 ਅੰਕ
2. ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) 20 ਅੰਕ
4. ਸਾਹਿਤ ਆਲੋਚਨਾ 10 ਅੰਕ
5. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਹਾਸ਼ਮ ਸ਼ਾਹ, ਕਵੀ ਸੋਂਧਾ, ਕਾਦਰਯਾਰ, ਸ਼ਾਹ ਮੁਹੰਮਦ ਅਤੇ ਭਗਵਾਨ ਸਿੰਘ)
2. ਕਥਾ –ਪ੍ਰਵਾਹ (ਸੰਪਾ.) ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਨਿਰਧਾਰਤ ਕਾਵਿ-ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ- ਬੰਦ ਦੀ ਵਿਹਾਰਕ ਸਮੀਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
2. (ੳ) ਕਥਾ-ਪ੍ਰਵਾਹ ਪੁਸਤਕ ਵਿਚੋਂ ਘਟਨਾਵਾਂ , ਥੀਮ, ਪਾਤਰ ਚਿਤਰਨ ਤੇ ਕਥਾ ਜੁਗਤਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ:) ਵਾਰ ਕਾਵਿ, ਜੰਗਨਾਮਾ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) 5 x 4=20 ਅੰਕ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਤੇ ਸਮਾਜ, ਸਾਹਿਤ ਤੇ ਸਖ਼ਸ਼ੀਅਤ, ਸਾਹਿਤ ਤੇ ਸ਼ੈਲੀ, ਸਾਹਿਤ ਤੇ ਮਨੋਵਿਗਿਆਨ, ਸਾਹਿਤ ਤੇ ਵਿਗਿਆਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
6. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਉਪਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਭਾਸ਼ਾ ਤੇ ਉਪਭਾਸ਼ਾ, ਉਪਭਾਸ਼ਾ ਦੀਆਂ ਪਛਾਣ ਵਿਧੀਆਂ। 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
5. ਸੰਘਾ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿੱਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਉਹੀ, 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
10. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

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संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष

SEMESTER-III

Paper - Sanskrit : **श्रीमद्भगवद्गीता एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को भारतीय दर्शन के अद्वितीय ग्रन्थ रत्न श्रीमद्भगवद्गीता (चतुर्थ अध्याय) में प्रतिपादित निष्काम कर्मयोग, समत्व योग में स्थित योगी पुरुषों का आचरण एवं उनकी महिमा, विभिन्न प्रकार के ज्ञानयज्ञ तथा ज्ञान का महत्त्व इत्यादि विषयों का अध्ययन करवाना ।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) गीता (चतुर्थ - अध्याय) (दो सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **2x10= 20 अंक**

(ख) गीता (चतुर्थ अध्याय) पर आधारित समीक्षात्मक लघुप्रश्न **05 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : वस्त्र, आभूषण एवं श्रृंगारपरक (15 में से 10 शब्दों की संस्कृत) **10x 1 = 10 अंक**

1. कंबल-कम्बलः	2. कुरता-कञ्चुकः	3. कोट-प्रावारः
4. चादर-प्रच्छदः, शय्याच्छादनम्	5. जूता-उपानत्	6. तकिया-उपधानम्
7. दरी-आस्तरणम्	8. दुपट्टा-उत्तरीयम्	9. धोती-अधोवस्त्रम्,
10. पगड़ी-शिरस्त्रम् उष्णीकम्	11. परदा-यवनिका	12. पायजामा-पादयामः
13. पैंट-आप्रपदीनम्	14. रुमाल-करवस्त्रम्	15. शेरवानी-प्रावारकम्
16. साड़ी-साटिका	17. स्वेटर-उर्णावरकम्	18. कपड़ा-वस्त्रम्, वसनम्, चीरम्
19. अंगूठी-अङ्गुलीयकम्, मुद्रिका	20. कंगना-कंकणः	21. कान की बाली-कुण्डलम्
22. गहना-अलङ्कारः, आभरणम्	23. घुंघरू -किंकिणी	24. चूड़ी-काचवलयः, काचवलयम्
25. नथ-छोलिका	26. पाजेब-नूपुरः, नूपुरम्	27. बाजूबंद (ब्रेस लेट)-केयूरम्
28. हार-हारः	29. सोने का कड़ा-कटकः	30. आयना (शीशा)-दर्पणः, आदर्शः

31. इत्र (सैंट)-गन्धतैलम्	32. उबटन - उद्वर्तनम्	33. कंघी-प्रसाधनी
34. काजल-अञ्जनम्, कज्जलम्	35. क्रीम-शरः	36. ड्रेसिंग टेबल-शृंगारफलकम्
37. तिलक-तिलकम्	38. दाँत का ब्रुश-दन्तधावनम्,दन्तकूर्चः	39. नेल पोलिश-नखरंजनम्
40. बिन्दी-बिन्दुकः	41. पाउडर-चूर्णकम्	42. मंजन-दन्तचूर्णम्
43. मेहदी-मञ्जिष्ठा	44. लिपस्टिक-ओष्ठरंजनम्	45. साबुन-फेनिलम्, फेनकम्
46.. सिंदूर-सिन्दूरम्	47. दांत कूरेदने की सूई-दन्तशोधनी	48. महावर-अलक्तका
49. रूज-कपोलरंजनम्	50. सिंगारदान-शृंगारधानम् , शृंगारपिटकम्	

UNIT-III

(घ) व्यञ्जन सन्धि **5x1=05अंक**

(ङ) द्वन्द्व- समास **5x1=05अंक**

(च) तद्धित प्रत्यय : अण् , मतुप् , तरप् , तमप् - केवल उदाहरण ही प्रष्टव्य हैं) **5x1=05अंक**

UNIT-IV

(छ) शब्दरूप : तत् , एतत् , यत्(तीनों लिंगों में) राजन् तथा चन्द्रमस् **2x5=10अंक**

(ज) धातुरूप : अस् , दा, कुप् , शक् , प्रच्छ्, मिल् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(झ) छन्द : अनुष्टुप् , वंशस्थ, इन्द्रवज्रा, उपेन्द्रवज्रा, उपजाति (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **2x5=10अंक**

UNIT-V

(ञ) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष

SEMESTER-IV

Paper - Sanskrit : **नाटक एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- संस्कृत नाट्यविद्या के स्वरूप और प्रवृत्तियों से परिचित कराना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) दूतवाक्यम् - भास (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **3x10=30 अंक**

(ख) समीक्षात्मक लघु प्रश्न, पात्र चरित्र चित्रण, लेखक परिचय, रचनाएँ व दूतवाक्यम् की विषयवस्तु **5 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : अन्न, भोजन एवं तत्सम्बद्ध पात्र (15 में से 10 शब्दों की संस्कृत) **10x1=10 अंक**

1. अरहर-आढकी
2. उडद-माषः
3. गेहूँ-गोधूमः
4. गेहूँ का आटा - गोधूमचूर्णः
5. चना-चणकः
6. जौ-यवः
7. चावल-तण्डुलः, व्रीहिः
8. ज्वार-यवनालः
9. तिल-तिलः
10. दाल-द्विदलम्
11. धान-धान्यम्, शालिः
12. बाजरा-प्रियङ्गुः
13. बेसन-चणकचूर्णम्
14. मसूर-मसूरः
15. मूंग-मुद्गः
16. सत्तु-सक्तुः
17. सरसों-सर्षपः
18. हल्दी-हरिद्रा
19. अचार-सन्धितम्
20. गरम भोजन-उष्णभोजनम्
21. खिचडी-कृशरः
22. चटनी-अवलेहः
23. चिकना-चिक्कणम्
24. ठंडाभोजन-शीतभोजनम्
25. भरता-भर्ता
26. भात-ओदनः, ओदनम्
27. मट्ठा-तक्रम्
28. रसोई-रसवती, पाकशाला, महानस
29. रायता-राज्यक्तम्
30. रोटी-रोटिका
31. शक्कर-शर्करा
32. समोसा-समोषः
33. सौंफ-मधुरः
34. हींग-हिंगुः
35. अंगीठी-हसन्ती
36. कटोरा-कटोरम्
37. कडाही-कटाहः, स्वेदनी
38. कांच का गिलास - काचकंसम्, काचचषकः

39. गिलास-कंसम् , चषकः	40. घड़ा-घटः, कुम्भः	41. चम्मच-चमसः
42. चीमठा-सन्दंशः	43. टब-द्रोणी	44. थाली-स्थालिका, थालिका
45. प्लेट - शरावः	46. बाल्टी-उदञ्चनम्	47. लोटा-करकः
48. स्टोव-उद्ध्मानम्	49. बेलन-वेलनम्	50. चाकू-छुरिका

UNIT-III

(घ) तत्पुरुष - समास 5x1=05अंक

(ङ) कृदन्त प्रत्यय : क्त, क्तवतु , क्त्वा तथा तुमुन् प्रत्यय 5x1=05अंक

(गम् , पठ् , पत् , क्रीड् , वद् , पा, लिख् , नी, दृश् , भू , त्यज् , स्मृ , अस् , दा, कुप् , शक् , प्रच्छ् , मिल् , कृ , क्री , ग्रह , ज्ञा , श्रु , कथ् - इन धातुओं के योग में)

(च) शब्दरूप : किम् व सर्व (तीनों लिंगों में), महत् व बलवत् (पुलिङ्ग में) एवं कति 2x5=10अंक

UNIT-IV

(छ) धातुरूप : कृ, क्रीञ् , ग्रह् , ज्ञा, श्रु तथा कथ् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) 2x5=10अंक

(ज) कारक (केवल सामान्य नियम-अशुद्ध वाक्यों को शुद्ध करना) 5x1=05अंक

UNIT-V

(छ) छन्द : शिखरिणी, मन्दाक्रान्ता, मालिनी, वसन्ततिलका तथा भुजंगप्रयात (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) 10अंक

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

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URDU (Elective)

SEMESTER-III

Prose and Poetry

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

i. Explanation of Verses(Ghazaliat) :
Mir Taqi Mir, Khwaja Mir Dard, Ibrahim Zauq, Mirza Asadullah Khan Ghalib, Momin Khan Momin, Hasrat Mohani, Raghupati Sahay Firaq Gorakhpuri.

20 marks

ii. Explanation of Nazms:
Search Results

Allama Iqbal	-	Chand aur Tare, Mulla aur Bahisht
Nazir Akbrabadi	-	Mele ki Sair
Brij Narayan Chakbast	-	Ramayan ka ek Scene

10 marks

Unit-II

Explanation of prose:

Mir Amman	-	Sair Pehle Darvesh Ki	
Sir Syed Ahmed Khan	-	Sarab-e-hayat	
Farahatullah Baig	-	Murda Badast Zinda Ast	
Munshi Prem Chand	-	Roshni	
Rashid-ul-Kheri	-	Toonfan-e-Hayat Ka Ek warq	30 marks

Unit-III

Central idea of a lesson or nazm (from Unit I & II above) 15 marks

Unit-IV

Introduction and literary contribution of the poets & prose writers
Poets: Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Nazir Akbarabadi
Prose writers : Sir Syed Ahmed Khan, Altaf Hussain Hali, Munshi Prem Chand 15 marks

Books Prescribed:

1. Khyaban-e-Adab by, Azimul Haq Junedi, Educational BookHouse, AMU Market, Aligarh.

URDU (Elective)

SEMESTER-IV

Novel: Ek Chadar Maili Si

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

Novel - One question each on its Plot and Characters 30 marks

Unit-II

Explanation of Paragraph from Novel 30 marks

Unit-III

Rajinder Singh Bedi Ki Novel Nigari Ki Khususiyat

Or

Novel Ke Ajza-e-Tarkibi 15 marks

Unit-IV

Unseen paragraph (candidate will be asked three questions from it) 15 marks

Books Prescribed :

1. Ek Chadar Maili Si, by Rajinder Singh Bedi.

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PERSIAN (Elective)
SEMESTER-III

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2017-18.

Paper-A : Prose

Marks : 90
Internal Assessment : 10
Time : 3 hours

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye-Kutah.	20 marks
4.	Simple direct questions on the life and works of the authors.	30 marks

Books prescribed

Nisabe Jadide Farsi
(Published By Jayyad Press Ballimaran Delhi)
Only following portions from Prose Section.

i. Intekhab-e-Sarzamin-e-Hind-Ali Asghar Hikmat.

ii. Dastan-e-Kutah by Mohammad Hejazi.

PERSIAN (Elective)

SEMESTER-IV

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2017-18.

Paper-B : Poetry

Marks : 90
Internal Assessment : 10
Time : 3 hours

Distribution of marks :

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Central idea of the poem.	20 marks
4.	Simple direct questions on the life and works of the poets as prescribed in the text.	30 marks

Books prescribed

Nisab-e-Jadeed-e-Farsi(Published by Jayyad Press Ballimaran, Delhi). Only following portions from Prose Section.

Az Gzalliyat-e-Hafiz

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.

Saaqi Benur Badah Bar Afrooz Jam-e- Maa.

Doosh deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:

Jan Ze Tan Burdi-o- Dar Jaani Hunooz.

Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

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FRENCH (ELECTIVE)

SEMESTER-III

WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 Marks

II (a) Questions (including General and based on Civilization) from the prescribed Text book (of 3 marks each). 15 Marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 20 Marks

(c) Composition based on the subject or theme from the text. 10 Marks

(d) Comprehension of an unseen text .
Ten questions to be put in French and to be answered in French. 10 Marks

III Prose:
Direct simple questions based on the prescribed text (Saison-2, Dossier 0-4) to be asked and answered in French, Questions should be of 5 marks each. 20 Marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Saison-2 (Dossier 0-4) Méthode de Français par Marie-Noëlle Cocton, Anneline Dintilhac, Dorothée Dupleix, Delphine de Ripaux, Anouchka Oliveira, Les Editions Didier, 2014

- Livre de I' élève
- Cahier d' exercices

Poetry:

Comprehension, explanation, literary, appreciation and criticism of the poems.

The following 5 poems to be studied:

1. PIERRE DE RONSARD
   Recueil : *Odes*
   Mignonne, allons voir si la rose

http://poesie.webnet.fr/lesgrandsclassiques/poemes

2. Victor HUGO
   Recueil **:** *Les contemplations*
   Demain, dès l'aube

http://poesie.webnet.fr/lesgrandsclassiques/poemes

3. Jacques PREVERT
   Recueil : *Paroles*
   Le cancre

http://www.unjourunpoeme.fr/poeme/le-cancre

4. Jacques PREVERT
   Recueil : *Paroles*
   Déjeuner du Matin

https://vivelapoesie.wordpress.com/

5. Paul VERLAINE
   Il pleure dans mon cœur

http://poesie.webnet.fr/lesgrandsclassiques/poemes/paul verlaine

Prose:- Tintin Au Tibet, Casterman

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. 3rd Semester.

2. All questions are to be asked and answered in French.

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (ELECTIVE)

SEMESTER-IV

CREATIVE WRITING AND EXPRESSION, GRAMMAR IN CONTEXT

Max. Marks	:	100
Theory	:	60 Marks
Internal Assessment	:	10 Marks
Viva	:	30 Marks
Time	:	3 hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 Marks

II Prose:
Direct simple questions based on the prescribed text (Saison-2, Dossier 5- 9) to be asked and answered in French, Questions should be of 5 marks each. 15 Marks

III (a) Questions (including General and based on Civilisation) from the prescribed Text book (3 marks each). 15 Marks
(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 15 Marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Saison-2 Dossier(5- 9) Méthode de Français par Marie-Noëlle Cocton, Anneline Dintilhac, Dorothée Dupleix, Delphine de Ripaux, Anouchka Oliveira, Les Editions Didier, 2014

- Livre de I' élève
- Cahier d' exercices

Poetry:

To be studied: Comprehension, explanation, literary appreciation of the poems.

The following 5 poems to be studied:

1. Charles BAUDELAIRE
   Recueil **:** *Fleurs du mal*
   L' Albatros

https://fleursdumal.org/poem/200

2. Charles BAUDELAIRE
   Recueil **:** *Fleurs du mal*
   L'Homme et la mer
http://www.eternels-eclairs.fr/poemes-baudelaire

3. Alphonse de LAMARTINE
   Recueil **:** *Nouvelles méditations poétiques*
   Le papillon
http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Gérard de NERVAL
   Recueil : *Odelettes*
   Le point noir
http://poesie.webnet.fr/lesgrandsclassiques/poemes

5. Jean-Pierre Claris de FLORIAN
   Recueil : *Chanson*
   Plaisir d'amour
http://poesie.webnet.fr/lesgrandsclassiques/poemes

Prose:- Raymond Queneau 'Excercices de style …'
All questions are to be asked and answered in French.

Viva:	**30 Marks**
Reading :	
Seen	10 Marks
Unseen	10 Marks
Conversation	10 Marks

For the information of private candidates:

1. Viva is compulsory

2. The theory paper would be proportionately marked out of 70 as there is no internal assessment.

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GERMAN (Elective)

SEMESTER-III

Summary

Max. Marks	:	100 marks (Total)
Paper-A(Theory)	:	90 marks
Internal Assessment	:	10 marks

Paper A-Theory: 90 marks
Time: 3 hours
Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks) conforming to prescribed text-book "Lagune-2": Chapters1-17 upto page 87 50 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-2": Chapters 1-17 upto page 87 20 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book "Texte zum Lesen und Nacherzählen", from pages 1-12 20 marks

Internal Assessment **10 marks(Total)**

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 1-17 upto page 87.
ii. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, upto page 12.

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters1-17

GERMAN (Elective)

SEMESTER-IV

Summary

Max. Marks	:	100marks(Total)
End Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) examination	:	30 marks
Internal Assessment	:	10 marks

Paper B-Theory : 60 marks(Total)

Time : 3 hours

Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks)confirming to prescribed text-book "Lagune-2": Chapters 18-34 30 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed text-book "Lagune-2": Chapters 18-34 15 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book " Texte zum Lesen und Nacherzählen", from pages 12-21 15 marks

Oral (viva-voce) Examination : 30 marks(Total)

i. Conversation in German
ii. Reading of a simple unseen text and answering questions there-on

Internal Assessment : 10 marks(Total)

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

iii. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 18-34.
iv. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, page 12-21.

Supplementary book:

ii. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 18-34

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RUSSIAN (Elective)

SEMESTER-III

Paper-A (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 100**
			Theory	**: 90 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) **15 marks**
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) **15 marks**
3. Simple applied grammar: 3 question out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
4. Question on prescribed texts in Russian : 3 questions out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
5. Composition (One out of three) on the following topics: **15 marks**
   1. My friend 2. My Country 3. My favorite writer 4. Our Library
6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper **15 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 31-37)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary
   Russian-English dictionary

RUSSIAN (Elective)
SEMESTER-IV

Paper-B (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 70**
			Theory	**: 60 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 80 words) **10 marks**

2. Translation from simple English/Hindi/Punjabi into Russian (about 75 words) **10 marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) **12 marks**
(Covered in Lessons 38-45, Wagner)

4. Questions on prescribed texts in Russian : 4 questions out of 6 **08 marks**
(2 marks each)
(Covered in Lessons 38-45, Wagner)

5. Composition (One out of three) on the following topics: **10 marks**
1. Our City 2. Our University 3. A Cultural evening 4. Journey/Excursion

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper **10 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 38-45)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary.
Russian-English dictionary.

(iii) **Oral/Practical** **Maximum Marks:30**

Reading of text(s) and conversation in simple Russian

1. V. N. Wagner: Russian, PPH, New Delhi.(Lessons 31-45)

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SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabi for B.A.(GENERAL)
SECOND YEAR (SEMESTER SYSTEM) has been
KEPT IN ABEYANCE

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PHYSICAL EDUCATION

B.A. (GENERAL) THIRD SEMESTER EXAMINATION, 2018

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Psychological Basis of Physical Education :

- Meaning of Psychology and Sports Psychology.
- Psychological factors effecting physical performance.
- Meaning of Learning.
- Laws of Learning.
- Learning curve, its types, characteristics and implications in Physical Education and Sports.
- Psychological characteristics and problems of an adolescent.
- The role of Physical Education and Sports in solving the problems of an adolescent.

UNIT-III 12 Marks

Motivation:

- Meaning, definitions, types and methods of motivation.
- Importance of motivation in Physical Education and Sports.

Transfer of Training:

- Meaning, definitions, types and factors affecting transfer of training.

UNIT-IV 12 Marks

Personality:

- Meaning, definitions, characteristics, dimensions and traits of personality.
- Factors affecting development of personality (Heredity and Environment).
- Role of physical activities in Personality Development.

Sports and Socialization:

- Meaning and definitions of socialization, socialization through sports.

UNIT-V 12 Marks

Politics, Economy, Media and Sports Performance :

- Role of politics and economy in the promotion of games and sports.
- Role of media in promotion of sports.
- Causes of deterioration and suggestions for the improvement of Sports Performance.

Softball:

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of field.
- Rules and regulations (number of players, number of officials required and general rules of play).
- Major tournaments of the game.

References :

1. Blair Jones & Simpson :*"Educational Psychology ",* The MacMillan Co., New York, 1962.
2. Brown, R. : *"Social Psychology",* Free Press, New York, 1965.
3. Bucher, Charles A. : *"Foundations of Physical Education",* St. Louis, 1979, The C.V. Mosby Company.
4. Conger, J.J.: "*Adolescence and Youth : Psychological Development in a Changing World,"* 22nd Edition, 1977, Harper and Row, New York.

5. Cratty, B.J.: *" Psychology and Physical Activity"*, Englewood Cliffs, N.J., Prentice Hall, 1968

6. Hollander, E.P.: *" Principles and Methods of Social Psychology"*, New York, 1971, Oxford University Press.
7. Linsa, M.I., *"Child-Adults, Peers : Patterns Communication",* Progress Publishers, Moscow, 1985.
8. Linggren, H.E.: *" Educational Psychology in the Class Room"*, John Wiley & Sons, New York, 1962.

9. Loy, John W. and Kenyon Gerald, S. *: "Sport, Cultural and Society : A Reader on the Sociology of Sport",* London, 1969, The MacMillan Co.
10. Hurlock, E.B. : *"Adolescent Development",* Appleton Century Crofts, New York,1956.

11. Rushall, Brent S. and Siedentop : *"The Development and Control of Behaviour in Sport and Physical Daryl Education"*, Philadelphia, 1972, Lea and Febiger.
12. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

13. Singh, Ajmer et. al. : *Modern Text Books of Physical Education, Health and Sports,* Kalyani Publishers, Ludhiana, 2000.
14. Talamini, John T. and Page & Charles, H. : *"Sport & Society – An Anthology",* Boston, 1973, Little Brown Co.
15. Walia, J.S. : *"Foundations of Educational Psychology",* Paul Publishers, Jalandhar City, 1992.

16. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Massachusetts.

PRACTICAL

Max.Marks : 35
Practical : 30
Internal assessment: 5

ATHLETICS

a) History of athletics
b) List of track and field events
c) Marking of standard track, width of lanes and starting points for various races.

LONG JUMP:

(a) Approach run (b) Take off (c) Flight (d) Landing (e) Brief information of various styles and practice of any one style depending upon the facilities available (f) Rules and regulations of the long jump.

PHYSICAL FITNESS TESTS:

More emphasis shall be given on physical fitness with regard to specific physical fitness components (Endurance and Strength).

Test 1 : ENDURANCE : 9/12 min. run and walk test.
Test 2 : STRENGTH : Standing broad jump test.

Division of Practical Marks*:* Marks for each activity shall be divided as under:

Athletics 10 Marks, Participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory and practical papers shall consist of 65 and 35 marks each.
5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students :***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods :***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. ***Teaching Work Load :***

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. ***Division of Marks (Theory and Practical) :***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

PHYSICAL EDUCATION
B.A. (GENERAL) FOURTH SEMESTER EXAMINATION, 2019

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Respiratory System :

- Meaning of Respiration, types of Respiration, Organs of the Respiratory System.
- Functions of the Respiratory System. Vital capacity and its measurement.
- Mechanism and Neural Control of Respiration.

Digestive System :

- Meaning, Importance and Organs of Digestive System.
- Functions, processes, mechanism and nerve regulators of Digestive System.

UNIT-III 12 Marks

Circulatory System :

- Meaning of the circulatory system.
- Heart, its structure, functions and control of the heart rate.
- Various types of blood vessels and their functions.
- Cardiac Cycle.

Blood :

- Meaning, functions and composition of blood.
- Maintenance of blood supply.
- Blood groups and their importance.
- Blood Clotting.

UNIT-IV 12 Marks

Communicable Diseases :

Meaning of a communicable disease. Communicable diseases such as HIV/AIDS, Viral Hepatitis—A, B & C and Tetanus, their modes of transmission and methods of prevention.

Yoga:

- Meaning and aim of Yoga.
- Meaning, Principles and Importance of Asanas.
- Meditative poses (Padamasna, Vajrasana, and Sukhasana), their technique, precautions and effects/advantages.
- Cultural poses (Savasna, Halasana, Bhujangasana Sarvangasana, and Dhanurasana), their technique, precautions and effects/advantages.

Basics of Tennis :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking / layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna awardees of the game.

UNIT-V 12 Marks

Sports Injuries :

- Basis of Sports Injuries.
- Common Sports Injuries, such as sprains, strains, fracture, dislocation, abrasions, contusion, bruise, tennis elbow. Their causes, preventive and remedial measures.
- Treatment and care (RICE) of sports injuries.

Disability and Rehabilitation :

- Meaning, types, causes and preventive measures of disability.
- Problems of the disabled. Physical Activity and health for disabled.
- Meaning and scope of Rehabilitation.

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.
2. Dandiya, P.C., Jafer, Z.Y. K. and Jafer Afifa: *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.
3. Govt. of India : *"Occupational Diseases : A Guide to Recognition and Notification",* Chief Adviser Factories, Ministry of Labour and Employment, New Delhi, 1955.
4. Park, J.E. & Park, K. : *"Text Book of Preventive and Social Medicine",* 10th Edition, 1985, Banarsi Dass Bhanot, Jabalpur, India.
5. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Assistant Professors",* Lend : Edward Arnold Ltd., 1983.
6. Rao, M.N. and Lundgren, N.P.V. : *"A Review of Occupational Health Research in India",* ICMR, New Delhi, 1955.
7. Rose & Wilson : *"Foundations of Anatomy and Physiology",* 5th Edition, 1981, Reprinted in 1985.
8. Winter Griffith, H. : *"Complete Guide to Sports Injuries",* First Indian Edition, 1989, Metropolitan Book Co. Pvt. Ltd., New Delhi.
9. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999- 2000, Birla Publications, Delhi.
10. Singh, Ajmer et. al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.
11. Smith, Olive and F. Guthrie : *"Rehabilitation and Remedial Exercise",* Bailliere, Tindall and Cox Limited, London, 1949.
12. Sri Anand : *"The Complete Book of Yoga : Harmony of Body and Minds",* Orient Paper Back, New Delhi, 1980.
13. Staford, T. & Ellen Davis Kelly : *"Preventive and Corrective Physical Education",* Third Edition, 1958, Ronald Press Co., New York.
14. Swami Kuvalyananda : *"Kaivalyadhama",* Lonavala, Bombay, 1933.
15. Vijayendra Pratap : *"A Teacher's Guide for Beginning Yoga",* First Edition, 1987, Sky Foundations, Philadelphia, Pennsylavania, U.S.A.
16. World Health Organisation : *"Health Hazards of the Human Environment",* Geneva,1962.

PRACTICAL

Max. Marks	:	35
Practical	:	30
Internal Assessment	:	05

GAMES

Basketball or Ball badminton and any other one game of the choice of the student.

Basketball

(a) Measurements (Basket ball ground).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental and basic skills.

Football

(a) Measurements (Field & ball).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental Skills.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.
(ii) This subject should be offered to the normal students (not to disabled one).
(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.
(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students:***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. ***Infrastructure/facilities and Supporting personnel:***

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods:***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6.Teaching Work Load:

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. ***Division of Marks (Theory and Practical):***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper-III : FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer type question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from Units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV; and 75 words for each short answer type in Unit V.

Objectives :

1. To acquaint the students with major foundations underlying Education.
2. To enable the students to understand the concept of Philosophy of Education.
3. To enable the students to understand the concept of Educational Sociology and Educational Technology.
4. To enable the students to understand major Philosophies and their Educational implications.

COURSE CONTENTS :

UNIT-I

Philosophical, Sociological, and Technological Foundations of Education—Concept and their Role in Education.

UNIT-II

Philosophy of Education – Definition, Nature and Scope.

Difference between Educational Philosophy and Philosophy of Education.

UNIT-III

Educational Sociology – Definition, Nature and Scope.

Information and Communication Technology—Role in Education.

UNIT-IV

Major Philosophies of the World—Idealism, Naturalism and Pragmatism—Main Features and their Contribution to Education.

Books Recommended :

1. Aggarwal, J.C. : *Theory and Principles of Education,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

2. Bhatia, K.K. and Narang, C.L. : *Philosophical and Sociological Bases of Education,* Tondon Publications, Ludhiana, 2002.

3. Sataya, R.N. and Shaida, B.D. : *Development of Educational Thought and Practice,* Dhanpat Rai Publishing Company (P.), New Delhi, 1996.

4. Taneja, V.R. : *Foundations of Education,* Mohindra Capital Publishers, Panchkula, 1998.

5. Singh, K. : *Vidiyak Manovigian,* Gujral Book Depot, Patiala, 1999.

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-IV

Paper-IV : PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in Unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for Units I, II, III, IV and 75 words for each short answer question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV and 75 words for short answer type question in Unit V.

Objectives :

1. To enable the students to understand the perspective roles of heredity and environment in educational development of a child.
2. To enable the students to understand the concept of personality and its place in Education.
3. To make the students familiar with the concept of Special Education; the special needs of the Gifted, Backward and Delinquent Children and their Educational implications.
4. To make the students familiar with the concepts of Emotions, Stress and Stress management among adolescents.

COURSE CONTENTS :

UNIT-I

Difference between Psychology and Educational Psychology, Significance of Educational Psychology.

Heredity and Environment – Concepts and their role in Educational development.

UNIT-II

Personality : Concept, Assessment and its Educational Implications.

UNIT-III

Special Education : Meaning and Concept.

Types of Exceptional Children with special reference to the Gifted, Backward and Delinquents (Their Characteristics and Educational Implications).

UNIT-IV

Emotions and Stress – Concept, Types of Stress (Physical, Psychological and Social), Stress Management with Special Reference to Adolescents.

Books Recommended :

1. Batra, Promod : *Simple Ways to Manage Stress,* Think Inc., Delhi, 1997.

2. Carewell, M., Clark, L. & Meldrum, C. : *Psychology,* Harper Collins Publishers Ltd., London, 2000.

3. Clare, Sylvia : *Emotions –Releasing Your Child's Potential,* UBS Publishers and Distributors, New Delhi, 2003.

4. Chauhan, S.S. : *Advanced Educational Psychology,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

5. Dhaliwal, A.S. : *Vidyak Mnovigian,* Punjabi University, Patiala, 2001.

6. Dutt, Sunil & Sodhi, G.S. : *Teaching Learning – A Process Approach,* Samir Publications, Chandigarh, 1995.

7. Goleman Daniel : *Emotional Intelligence,* Baanam Books, New York, 1995.

8. Kirk, Semual : *Educating the Exceptional Child,* I.B.H. Publishing Co., Calcutta, 1992.

9. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.

10. Panda, K.C. : *Education of Exceptional Children,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

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ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-2019

Semester –III

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To acquaint students with the psychology of adult learner and the strategies employed to motivate them.

2. To impart knowledge to students on adult characteristics and their psychology.

3. To impart knowledge on suitability of teaching – learning material and audio visual material used by new – literates, preraks and Nodal Prerakes.

4. To acquaint students with various agencies involved in adult education program.

5. To provide knowledge to students regarding concept, need, methods and procedures involved in monitoring process.

6. To impart knowledge to students on the concept, meaning, scope and significance of Adult Education.

7. To acquaint students with the knowledge, how adult education play an important role in social and economic development.

THEORY

UNIT I

(i) Characteristics of Adult and Psychology of Adult Learners involved in Adult Literacy Program.

(ii) Roll of Motivational Strategies in Adult Educational Program.

UNIT II

(i) Suitability of Teaching – Learning and Audio – Visual Material used for Neo-Literates.

(ii) Suitability of Training Material for Preraks and Nodal Preraks.

UNIT III

(i) Agencies of Adult Education: Government, Private.

(ii) Monitoring of Adult Education Program: The Paradigm Content, General Consideration, Need for Monitoring.

UNIT IV

(i) Meaning of Adult Education, its Scope, Aims and Significance.

(ii) Role of Adult Education in Social and Economic Development.

Practical/Field Work:

Max Marks : 50 Marks
External : 45 Marks
Internal : 5 Marks

Participation of the Students in the following:

1. Survey of the Area - A brief report.
2. Planning and Organization of Awareness Generating Activities for Adults.

ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-2019
Semester –IV

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To provide an overview on History of Adult Education in India.
2. To impart knowledge to students on various Target Groups involved Under Adult Literacy Programs.
3. To expose students with the Teaching Learning Methodologies for teaching Adults.
4. To acquaint students with the Role and Responsibilities assumed by Preraks and Nodal Preraks.
5. To expose students with Concepts and Strategies involved under Total Literacy Campaign.
6. To acquaint students with the knowledge of various agencies involved in Adult Education Programs.
7. To expose students with the Preparation and Planning of Continuing Education and Awareness Generating Programs.
8. To impart knowledge to students on Linkage of Adult Education with Development.

THEORY

UNIT-I

(i) History of Adult Education in India.

(ii) Target Groups involved under Adult Education Programs.

UNIT-II

(i) Methodology of Teaching Adults in Adult Literacy Programs

(ii) Role of Preraks and Nodal Preraks in Adult Education.

UNIT-III

(i) Total Literacy Campaign : Its Concept and Strategies.

(ii) Agencies Involved under Adult Education : Government and Non-Government.

UNIT-IV

(i) Preparation and Planning of Adult Education Programs : Continuing Education and Awareness Generating Programs.

(ii) Adult Education and its Linkage with Development.

Practical/Field Work:

Max Marks	:	50 Marks
External	:	45 Marks
Internal	:	5 Marks

Participation of the Students in the following:

1. Visits to the 5 Government and Non-Government Agencies – A brief Report in the form of file to be submitted in the practical exam.

2. Preparation of Teaching – Learning Aids used for Teaching Adults.

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MUSIC (Vocal)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto ten students in one section in practical class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. The candidate can take vocal music along with instrumental music.

6. The candidate can also take instrumental music with tabla.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit**. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: Practical (20 minutes duration)			: 45 marks
(i) Viva		: 35 marks	
(ii) Harmonium		: 05 marks	
(iii) Tabla		: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Brief knowledge of Gram.
2. Kanth Sadhana.
3. Gharana: definition and importance

Unit–II

1 Knowledge of Alap, and its various forms.
2 Explain the following: - Upaj, Mukhda, Bol-Baant, Khatka, Murki, Kan.
3 Knowledge of Lakshans of Ragas in Modern Period.

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.

(i) Ustad Alladiya Khan
(ii) Pt. Bhimsen Joshi
(iii) Sh. Krishan Rao Shankar Pandit.

Unit–IV

1 Description and Notations of the prescribed Ragas and Talas : -

(i) To write drut khyal in any one of the prescribed ragas :-Malkauns, Bhairav with Alap and Taans
(ii) To write prescribed ragas of the syllabus with Alap and Taans
(iii) To write the notation of Tala :- Jhaptala, Chartala (single & double)
(iv) To write the description of detailed and non detailed Ragas: Chandrakauns, Kalingda.

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas:Malkauns, Bhairav.
2. One lakshana geet/ Sargam geet in any prescribed ragas
3. Ability to play Kehrva on Tabla
4. Ability to recite following talas by hand: Tilwada, Chartala
5. Ability to play on Harmonium at least three alankaras based on Shudh swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Chandrakauns, Kalingda.
8. Ability to sing one Drut khayal of your course with harmonium.

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	Sangeet Kala ka Itihas	:	Panna Lal Madan

MUSIC (Vocal)

SEMESTER-IV

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. The candidate can take vocal music along with instrumental music.

5. The candidate can also take instrumental music with Tabla.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**		: 45 marks
Paper-B:	**Practical** (20 minutes duration)		: 45 marks
	(i) Viva	: 35 marks	
	(ii) Harmonium	: 05 marks	
	(iii) Tabla	: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical development (in brief) of North Indian Music during the Medieval Period.
2. Brief knowledge of Murchhana.
3. Importance of Notation system.

Unit-II

1. Importance of Tanpura and Sahayak Nada
2. Varieties of Gamak
3. Explain the following :- Meend, Bol-Alap, andolan, boltana, Badat.

Unit-III

1. Brief life sketches of great masters of music and their contributions:
   i) Ustad Amir Khan Sahib
   ii) Ustad Faiyaz Khan Sahib
   iii) Pt. Onkar Nath Thakur

Unit-IV

1. Description and Notations of the prescribed Ragas and Talas :-
   i) To write in notation a drut khyal in any one of the prescribed Raga of the syllabus:- Bihag, Bhimplasi
   ii) To write in notation a vilambit khyal in any prescribed raga of the syllabus.
   iii) To write the notations of Talas: Roopak, Tilwada (Single & Double)
   iv) To write the description of Ragas :- Non detailed: Maru Bihag, Dhani

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: Bihag, Bhimplasi.
2. One vilambit Khayal in any of the detailed ragas prescribed in the course with extempore alaps and tanas.
3. Ability to play Ek taal on Tabla
4. Ability to recite following talas by hand: Tilwada, Roopak
5. Ability to play on Harmonium at least three Alankaras based on komal and Teevra Swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Maru Bihag, Dhani
8. Ability to sing one Drut khayal of your course with harmonium

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper A : THEORY (3 Hours duration) **(Duration 45 minutes 06 practical + 02 Theory periods per week)**		:	45 marks
Paper-B: PRACTICAL (20 minutes duration)		:	45 marks
(i) Viva	: 35 marks		
(ii) Harmonium	: 05 marks		
(iii) Tabla	: 05 marks		
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1 Ghamak and its varieties.
2 Brief knowledge of Gram.
3 Gun and Dosh of Vadak.

Unit–II

1. Gharana (definition and importance)
2 Knowledge of Alap, and its various forms.
3. Knowledge of Avirbhav and Tirobhav, Alaptav- Bahutav

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.
(i) Ustad Inayat Khan
(ii) Ustad Allaudin Khan
(iii) Pt. Vishnu Digambar Pluskar

Unit–IV

Description and Notation of the prescribed Ragas of Syllabus: -
1. To write one Drut Gat (in any prescribed raga of your course with Toras)
2. Description and notation of Raga:- Bihag, Bhimplasi with todas
3. Notation of Ektal and Rupak tala with dugun layakaries

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas :
Bihag, Bhimplasi
2. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad : Maru Bihag, Patdeep
3. Use of one swara meend and kan.
4. Ability to play teen tala on Tabla
5. Ability to sing three alankras of Shudh swaras with the help of harmonium.
6. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Ektala, Rupak

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: PRACTICAL (20 minutes duration)			: 45 marks
(i) Viva		:	35 marks
(ii) Harmonium		:	05 marks
(iii) Tabla		:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical developments in North Indian Music during Medieval period.
2. Brief knowledge of Murchhana system
3. Classification of Indian Musical Instruments

Unit-II

1. A Study of Shuddh, Chhaya Lag and Sankiran Ragas
2. Time theory of Indian Ragas
3. Definitions and explanations of the musical terms (not more than 100 words):-
   Kampan, Meend, Ghaseet, Zamzama, Krintan

Unit–III

1. Brief life sketches of great masters of music and their contributions:
   - i) Ustad Vilayat Khan
   - ii) Ustad Abdul Halim Zafar Khan
   - iii) Smt. Annapurna Devi Ji

Unit–IV

Description and Notation of the prescribed Raga of syllabus :-

- i) To write one Maseetkhani Gat (in any prescribed raga of your course.
- ii) To write the notation of Razakhani Gat of with Toras: Raga Madhuwanti, Hamir
- iii) To write the notation of Tivra and Dhamar with dugun

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carrying 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Maseetkhani Gat in any raga from your course
2. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas:- Hamir, Madhuwanti.
3. One Madhya laya gat with alap and todas in any prescribed raga other than teentala.
4. Knowledge of the following Non-detailed Raga: Aroh, Avroh and Pakad : Multani, Kedar
5. Use of two swara meend and kan.
6. Ability to play Jhaptala on Tabla
7. Ability to sing three alankars of komal and teevra swaras with the help of harmonium.
8. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Tivra, Dhamar

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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Music (Tabla)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-III. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	30	marks
(ii)	Harmonium	:	05	marks
(iii)	Tabla (Tuning)		05	marks
(iv)	Padhant on Hand	:	05	marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

1. Origin of Tala
2. Classification of musical instruments.
3. Study of Delhi Gharana

UNIT-II

1. Elementary knowledge of the following musical terms (not more than 100 words)

   Mukhda, Tihai, Muhra, Uthan
2. Study of dus Pranas of Taal
3. Classification of Taal (Margi & Deshi)

UNIT-III

1. Life sketches and contributions of the following:-
   a. Ustad Amir Hussain Khan
   b. Ustad Bahadur Singh
   c. Abdul Latif Ahmad Khan

UNIT-IV

1. Jhaptaal, Rupak, Sultaal
2. To write the description of Taals of your course
3. To write the notation of Taal in Single, Double, Tigun & Chougun

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Proper Badhat of following Talas on Tabla Jhaptal, Sultal, Rupak
2. Improvisation of laggi in Kehrva
3. Jhaptal- Peshkar, Two Palatas, Two quaida and Two Palatas, One simple Tukra
4. Sultal – Thah, Dugun & Chaugun
5. Practical Knowledge of Khemta Taal
6. Ability to play Nagma on Harmonium in Jhaptal
7. Tuning of Tabla

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras.
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla.
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-I	:	G.C. Srivastava

Ten Books recommended other than already recommended
Aakrosh By : G.C. Srivastava

Music (Tabla)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-IV. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	: 30	marks
(ii)	Harmonium	: 05	marks
(iii)	Tabla (Tuning)	05	marks
(iv)	Padhant on Hand	: 05	marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

1. Laya and Layakaries
2. Folk Taal instruments of Punjab.
3. Brief description of Pt. V.D. Pulaskar Taal notation system.

UNIT-II

1. Elementary knowledge of the following (not more than 100 words)

   Rela, Paran, Gat, Kayda, Chakrdar Paran
2. Elementary knowledge of karnatka Taal system
3. Study of Ajarada Gharana

UNIT-III

1. Life sketches and contributions of the following:-
   a. Ustad Habibuddin Khan
   b. Ustad Natthu Khan
   c. Pt. Kanthe Maharaj

UNIT-IV

1. Tivra, Rupak, Aada-Chartaal
2. To write descriptions of Taals of your syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chougun and aad

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Proper Badhat of following Talas on Tabla :Rupak, Tivra, Ada-chartaal.
2. Improvisation of laggi in Dadra
3. Rupak- Peshkar, Two Palatas, One quaida and two Paltas, One Mohra
4. Teental – Two Rela with Two Paltas, Two Charkraddar Paran, One Charkrdaar Tukra
5. Practical Knowledge of Playing above taalas with vocal & instrumental music performance
6. Ability to play Nagma on Harmonium in Rupak
7. Tuning of Tabla

Note:- It is understood that candidate must have knowledge of tala of Semester 3rd also.

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras.
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla.
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-I	:	G.C. Srivastava

Ten Books recommended other than already recommended
Aakrosh By : G.C. Srivastava

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Music (Indian Classical Dance)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-2019

SEMESTER-III

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Kasak-Masak, Bharramri, Chari, Astooti
2. Present status of Kathak Dance.
3. Survey of essential characteristics of Manipuri Dance.

Unit-II

1 . Life Sketch of Pt. Shambhu Maharaj
2. Importance of Gayan and Vadan in Kathak Dance
3. Guru Shishya Prampra

Unit-III

1. Comparision of Classical and Folk Dance.
2. Folk Dance of Himachal.
3. Brief. Study of Rasa.

Unit-IV

1. Theka and Bol Tatkar in Ekgun,Dugun and Chaugun layakaries of Ada Chautal, Ektaal and Teental
2. Notation of Salami, Amad,Tora and Tihai in Ada Chautaal.
3. Notation of Thaat, Amad, Tora and Paran in Teentaal.
4. Write Nagma in Teental and Adachautaal.
5. Theka and Tatkar of Ektaal in Ekgun, Dugun and Chougun layakaries.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

I. Ada Chautal:

1.	Theka and Tatkar with Ekgun, Dugun and Chaugun Layakaries.		
2.	Salami	:	1
3.	Tora	:	2
4.	Amad	:	1
5.	Nagma	:	1
6.	Tihai	:	1

II. Teentaal

1.	Tatkar with Ekgun, Dugun and Chaugun Layakaries		
2.	Thaat	:	1
3.	Amad	:	1
4.	Tora	:	2
5.	Paran	:	2
6.	Nagma	:	1
7.	Ektaal:		
8.	Theka		
9.	Tatkar		

III. One Gat of Ghunghat

IV. Padhant of above mentioned material on hand in teen taal and Ada chautaal

V. Ability of play Nagma in teentaal

VI. Theka of Ektaal in Ekgun Layakari on hand

VII. Practical Demonstration of Gidha.

Music (Indian Classical Dance)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

General Instructions:

1. In case of private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Gati, Paran, Tisrajali Paran, Chatusrajati Paran, Premlu.
2. Brief knowledge of Kathakali.
3. Importance of Ghungroo in Kathak Dance

Unit-II

1. Gharanas of Kathak Dance and their comparison
2. Merits and demerits of Kathak Dance
3. Contribution of Pt. Rajender Gangani ji in the field of Kathak Dance

Unit-III

1. Knowledge of thumri
2. Knowledge of Chhau Nritya.
3. Knowledge of different Instruments used in Kathak Dance.

Unit-IV

1. Notation of Theka and Bol-Tatkar in Ekgun, Dugun and chaugun layakaries in Ada chautaal, Teentaal and Ektaal.
2. Notation of Chakardar Tora Chakardar paran, Kavit, Tihai and Nagma in Teentaal.
3. Write Tihai, Thaat, Paran, Chakardar Paran, Kavit and Nagma.
4. Theka of Ektaal in Ekgun, Dugun and Chaugun layakaries with Tihai, Tora and Amad.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

I. Adachautal

1. Tatkar with Ekgun, Dwigun and Chaugun Layakari
2. Paran : 1
3. Chakardary Paran : 1
4. Thaat : 1
5. Tihai : 1
6. Kavit : 1

II. Teentaal

1. Tatkar with Ekgun, Dugun, Chaugun and Athgun layakaries.
2. Kavit : 1
3. Chakardar Tora : 1
4. Chakardar Paran : 1
5. Tihai : 1
6. Nagma : 1
7. Ektaal
8. Amad : 1
9. Tora : 1
10. Tihai : 1

III. One Gat Nikas of Mataki
IV. Padhant of above mentioned material in teen taal and Ada Chautaal on hand
V. Ability to play Nagma in Ada Chautaal
VI. Theka of Ekgun and Dwigun Layakaries of above mentioned taals.
VII. Practical Demonstration of a Bhangra steps.

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FINE ARTS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper A : Theory (History of Art) **Max. Marks : 54**

Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions. Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Western Indian Minitaure Painting -- Decorative Designs and Paintings of the 1439 Kalpasutra Manuscript.
- Pre Mughal Paingting -- Chaurapanchashika and Nimat Nama Manuscript Paintings

Unit-II : History of Indian Sculpture

- Gandhara –Fasting Buddha and Mahaparinirvana of Buddha
- Mathura –Portraits of the Kushana Kings.
- Sarnath –Seated Buddha.
- Sultanganj –Bronze Buddha.

Unit-III : History of Western Art

- Early Renaissance : Masaccio-Expulsion; Holy Trinity.
- High Renaissance: Leonardo Da Vinci – Last Supper; Michelangelo—Creation of Adam from the Sistine ceiling; Pieta.
- Northern Renaissance : Durer – Knight, Death and the Devil.

Unit-IV : Definition of Key Terms and General Concepts

- Composition – Volume, Texture, Space, Unity, Harmony, Rhythm, Proportion.
- Six Limbs of Indian Painting.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

		Max. Marks	*Max. Time*
1.	Landscape Painting (on the spot)	30	5 hours
2.	Life Sketching	30	5 hours
3.	Poster & Book Cover Design or Clay Modelling	30	5 hours
		Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

FINE ARTS

SEMESTER-IV

Paper A : Theory (History of Art) **Max. Marks : 54**
Time : 3 Hours

Objectives :
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus. Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions.
   Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Mughal Paintings of Hamza-Nama ; South Kensington Akbar Nama ; Jahangiri Portraits and illustrations of birds and animals.
- Deccani Paintings –Tarif-i-Hussain-Shahi from Ahmednagar ; Najam-ul-Ulum from Bijapur.

Unit-II : History of Indian Sculpture

- Deogarh –Vishnu Anantashayana.
- Ellora—Ravana Shaking Mount Kailasha.
- Mahabalipuram –Descent of Ganges (Kiratarjuniyam panel).

Unit-III : History of Western Art

- Baroque : Rubens –Garden of Love.
- Neo-Classicism and Romanticism : David –The Death of Socrates; Constable-The Haywain.
- Realism : Courbet –Artist's Studio.

Unit-IV : Definition of Key Terms and General Concepts

- Art and Craft ; Design ; Mosaic ; Tribal Art ; Folk Art ; Piece-mould ; Waste-mould.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

		Max. Marks	*Max. Time*
1.	Landscape Painting (on the spot)	30	5 hours
2.	Life Sketching	30	5 hours
3.	Poster & Book Cover Design or Clay Modelling	30	5 hours
		Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

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HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF INDIAN PAINTING (from ca. 9th century to ca. 1800 A.D.) AND SCULPTURE (from ca. 4th century A.D. to ca. 6th century A.D.)

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I

Development of Miniature Painting :

(a) Eastern Indian.

(b) Western Indian.

Unit-II

Painting under the Mughals :

(a) Akbar.

(b) Jahangir.

(c) Shahjahan.

Unit-III

Indian Miniature Painting :

(a) Rajasthani Schools—Mewar, Bundi, Kishangarh.

(b) Pahari Schools—Basohli, Guler, Kangra.

Unit-IV

Indian Sculpture in the Classical Phase :

Sculpture under the Guptas – Mathura, Sarnath, Deogarh, Ajanta.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : *The History and Culture of Indian People, Vols. I, II and III* (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Goswamy, B.N. & E. Fischer : *Pahari Masters : Court Painters of Northern India,* Museum Reitberg, Zurich Switzerland, 1992.
4. Khandalvala, Karl : *Pahari Miniature Painting,* The New Book Co. Pvt. Ltd., Bombay, 1958.
5. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
6. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
7. Barrett, D. and Gray, B. : *Painting of India,* The World Publishing Co., Ohio, 1963.
8. Brown, Percy : *Indian Painting under the Mughals,* Cosmo Publications, New Delhi, 1981.
9. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-IV

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF EUROPEAN PAINTING AND SCULPTURE (from 1300 A.D. to ca. 1850 A.D.) and THEORY AND PRINCIPLES OF ART APPRECIATION

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of European Painting and Sculpture

(a) Early Renaissance–Masaccio, Donatello.

(b) High Renaissance–Lenoardo Da Vinci, Michelangelo, Raphael, Titian.

Unit-II: Baroque Period

Caravaggio, Rubens, Rembrandt, Bernini, Claude Lorrain.

Unit-III:

(a) Neo-Classicism and Romanticism–David, Ingres, John Constable, W. Turner.

(b) Realism–Courbet.

Unit-IV : Theory and Principles of Art Appreciation

(a) Definition of the term Miniature Painting

(b) Six limbs of Indian Painting (Shadanga) and their manifestations in actual works.

(c) Indian concept of primary colours and their symbolic meaning.

(d) Indian theory of Rasa, Bhava and Beauty.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
2. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
3. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.
4. Turner, Jane (ed.) : *The Dictionary of Art,* Macmillan Publishers Limited, New York, 1996.
5. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
6. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
7. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
8. Murray, Peter and Linda Murray : *A Dictionary of Art & Artists,* Penguin Reference Book, Great Britain, 1959.
9. Rowland Benjamin (Jr.) : *Art in East and West,* Beacon Press, Toronto, 1964.
10. Ray, Niharanjan : *An Approach to Indian Art,* Publication Bureau, P.U., Chandigarh, 1974.
11. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper-III : HISTORY AND CULTURE OF INDIA FROM 320 A.D. TO 650 A.D.

Objectives :

The main objective of this paper is to make students do a detailed study of the political history and cultural development starting from the Gupta period till the death of Harsha.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :
   (a) Extent of Chandragupta II's empire.
   (b) Extent of Harsha's empire.
   (c) Distribution of monuments of the Gupta-Vakataka period.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper-setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

UNIT-I

1. (a) Political condition of Northern India on the eve of the rise of the Guptas.
   (b) Foundation of the Gupta Empire.

2. The Imperial Gupta rulers.

UNIT-II

1. Decline of the Gupta Empire.
2. The Gupta Administration.
3. Cultural and Economic Achievements during the Gupta period.

UNIT-III

1. The Vakatakas of the Deccan.
2. The Huna Invasions and their impact.

UNIT-IV

1. The Aulikaras of Daspura, the Maukharis and the Later Guptas, Pallavas and Chalukyas of Badami, Vatapi.
2. The Pushyabhutis of Thanesar : Political and Cultural survey.

Pedagogy of the Course Work :
The students are expected to have an idea of the original sources for the reconstruction of the history of the period. Maps and transparencies should be put to use for better understanding by the students.

Essential Readings :

1. Agrawal, Ashvini : *Rise & Fall of the Imperial Guptas,* Motilal Banarsidass, Delhi, 1989.
2. Altekar, A.S. & Majumdar, R.C. : *The Vakataka-Gupta Age,* rpt., Motilal Banarsidass, Delhi, 2006.
3. Goyal, S.R., : *The Imperial Guptas: A Multidisciplinary Political Study,* Kusum-anjali Book World, Jodhpur, 2005
4. Majumdar, R.C. & Dasgupta, K.K. (Eds.) : *The Comprehensive History of India, Vol. III,* Pt. 1, People Publishing House, Delhi 1981, (Chapters Dealing with the Gupta and the Post Gupta History).
5. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
6. Mookerji, R.K. : *The Gupta Empire,* Motilal Banarsidass, Delhi, 1989.
7. Thaplyal, K.K. : *The Imperial* Guptas: *A political History*, Aryan Books *International*, New Delhi, 2012
8. Tripathi, R.S. : *History of Ancient India,* rpt., Delhi, 1977.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

Paper-IV : HISTORY AND CULTURE OF INDIA FROM 650 A.D. TO 1200 A.D.

Objectives :

The primary objective of this paper is to acquaint the students about the political development in India after the death of Harsha. A detailed study of the various dynasties ruling in the different parts of our country will be made.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of Pratihara Empire.

   (b) Distribution of Temples—Lingaraja, Konark, Jagannath, Kandariya Mahadev, Parsvanath, Lakshman, Osian, Mahabalipuram.

   (c) Important Centres of Education—Nalanda, Ujjain, Pushpagiri, Nagarjunakonda.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper- setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

UNIT-I :

1. Pratiharas
2. Palas

UNIT-II :

1. Paramaras
2. Chahamanas

UNIT-III :

1. Gahadavalas
2. Chandellas

UNIT-IV :

1. Rashtrakutas
2. Cholas.

Pedagogy of the Course Work :

The students should be given an outline of the original sources that help to reconstruct the political history of the dynasties and the kings. Slides and transparencies should be used in the class room lectures.

Essential Readings :

1.	Altekar, A.S.	:	*Rastrakutas and Their Times,* 2nd ed. Oriental Book Agency, Poona, 1967.
2.	Bhatia, Pratipal	:	*The Paramaras,* Munshiram Manoharlal,New Delhi, 1970.
3.	Chakravarti, Ranbir	:	*Exploring Early India upto C. AD 1300,* Machmillan, 2010
4	Majumdar, R.C.	:	*Ancient India,* rpt., Manohar, Delhi, 2003
5.	Majumdar, R.C.	:	*History & Culture of Indian People,* Vol. IV, *The Age of Imperial Kanauj,* Bhartiya Vidya Bhawan, Bombay, 1955 (Relevant Chapters) Vol. V, *The Struggle for Empire,* Bombay 1957 (Relevant Chapters).
6.	Puri, B.N.	:	*The History of the Gurjara-Pratiharas, Manohar,* Delhi, 1986.
7.	Ray, H.C.	:	*Dynastic History of India,* 2 Vols, Calcutta 1931,1936.
8.	Sastri, K.A.N.	:	*A History of South India, 4th ed.* Oxford University Press, Madras, 1976.
9.	Tripathi, R.S.	:	*History of Kanauj, to the Muslim Conquest, 4th ed.,* Motilal Banarsidass, Delhi, 1989.

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DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE IN INDIA

M. Marks : 70
Time : 3 Hrs.

Objective :

This paper deals with the salient features of Indian warfare with emphasis on Military Organization, Battle techniques and Leadership.

SECTION-I

1. Battle of Hydaspes and Alexander's Art of War.
2. Kautilya's Philosophy of War.

SECTION-II

3. Military Organizations and Battle Techniques of Rajputs and Turks with particular reference to Battle of Tarrain, 1192 A.D.
4. Military Organizations and Battle Techniques of Mughals and Afghans with particular reference to First Battle of Panipat, 1526 A.D.

SECTION-III

5. Battle techniques of Southern Muslim Sultans with particular reference to Battle of Talikota, 1565 A.D.
6. Military Organization and Battle Techniques of Marathas under Shivaji.

SECTION-IV

1. Military organization and Battle Techniques of Sikh Army under Maharaja Ranjit Singh.
2. Warfare under East India Company with particular reference to Battle of Assaye 1803 A.D. and Chilianwala 1849 A.D.
3. Indian Armed Forces 1858 to 1947: General Evolution and Development (A Broad Perspective).

Books Recommended :

1. Bajwa, F.S., The Military Systems of Sikhs, Motilal Banarsidas Delhi, 1964.
2. Dass, S.T., An Introduction to the Art of War, Sagar Publications, Delhi, 1970.
3. Erskin, Memories of Babur, Biblio Bazaar, 2012.
4. JFC, Fuller, Generalship of Alexander, The Great, Eyre and Spottiswoode, 1958.
5. Kangle, K.P., Kautilya's Arthshastra, Motilal Banarsidas Publishers Pvt. Ltd., Delhi, 1986.
6. Majumdar, B.K., Military Systems in Ancient India, Firma K.L. Mukopadhayay Publishers, Delhi, 1960.
7. Mallesan, Decisive Battle of India, Read Books Design, 2010.
8. Nath, Rajendra, Military Leadership in India, Vedic Period to Indo-Pak Wars, Lancers Books, California, 1990.
9. Sarkar, J.N., Military History of India, Orient Longmans, Virginia, 1960.
10. Sen., S.N., Military System of the Marathas, Orient Longmans, Michigan, 1958.
11. Sharma, Gautam, Indian Army through the Ages, Allied Publishers, University of Michigan, 1966.
12. Singh, Gurcharan, Battles of Panipat, Army Educational Stores, 1966.
13. William, Irvin, Army of the Indian Mughals, Low Price Publishers, 1994.

Paper: **PRACTICAL**

Max. Marks : 20
Time: 1 hrs

Note:

1. There will be of 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A Practical Test

Marks : 10

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Bearing: Definition, Types and Inter conversion of Bearing in detail.
2. Liquid Prismatic Compass: Features and Funcitons of its various parts.
3. Determination of Individual Compass Error

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva Voce Marks : 5

DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question form each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students.. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE

M. Marks : 70
Time : 3 Hours

SECTION-I

1. Military Organizations and Battle techniques of Macedonians and Persians with particular reference to Battles of Arbella, 331 B.C.
2. Military Organization and Battle Technique of Romans and Carthagenians with particular reference to the Battles of Cannae, 216 B.C.
3. Military Organizations and Battle Techniques of Barbarians with particular reference to Battle of Adrianople, 378 A.D.

SECTION-II

4. Military Organizations and Battle Techniques of the English and French with reference to the Battle of Hastings, 1066 A.D.
5. The Mongol Art of War under Changez Khan and his successors.

SECTION-III

6. Industrial revolution and its Impact on Weapons, Communications and Tactics.
7. Elements and Principles of Napoleonic Warfare.

SECTION-IV

8. Naval Warfare with particular reference to the Battle of Trafalgar, 1805.
9. American Civil War (1861-65) : Causes and Events.

Books Recommended :

1. Barrie and Rackett, The Ancient Art of War Vols. I & II., Barrie and Rockliff, 1957.
2. Bullock, H., Military History of the Western World,Vol. 1, Da Capo Press, 1978.
3. Fuller, JFC, Armament and History, Da Capo Press, New York, 1998.
4. Fuller, JFC, Conduct of War, Eyre & Spottiswoode (Publisher) Ltd., Great Britain, 1962.
5. Fuller, JFC, Machine Warfare, the Infantry Journal, University of Michigan, 1943.
6. Fuller, JFC, Military History of the Western World, Da Capo Press, New York, 1987.
7. Montgomery, F.M., A History of Warfare, World Publication Co. The University of Michigan, 1968.
8. Montress, L., War through the Ages, Harper & Brothers, Indiana University, New York, 1987.

Paper : PRACTICAL

Max. Marks : 20

Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical.For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A : Practical Test

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Setting of Map: With Compass and without Compass.
2. Marching by Compass: To set the Compas in a particular direction for Night March.
3. Finding position on the Maps: Determine One's and Enemy's position on the Map by Resection and Intersection method.

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva-Voce Marks : 5

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HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) One question from Unit IV shall be set on the map.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (iii) in the question paper.

Explanation :

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

Map	:	10 marks
Explanatory Note	:	08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper-setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF INDIA, 1750-1964 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : To introduce the students to the broad developments in the history of India in Modern times.

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Foundation of British Rule : Circumstances leading to the battles of Plassey and Buxar and their significance; Reforms of Warren Hastings.
2. Administrative Reforms : Reforms of Cornwallis, William Bentinck and Dalhousie.
3. The Uprising of 1857 : Political, socio-religious, economic and immediate causes; failure; results.

Unit-II

4. Economic Changes : British Agrarian policies and commercialization of agriculture; rural indebtedness; Growth of modern industry; theory of economic drain.
5. Socio-Religious Reform Movements : Brahmo Samaj; Aligarh Movement; Arya Samaj; Ramakrishna Mission.
6. Depressed Classes Movement : Contribution of Jyotiba Phule, Dr.B.R. Ambedkar and Mahatma Gandhi.

Unit-III

7. Growth of Political Consciousness : Foundation and growth of the Indian National Congress from 1885-1905; Growth of Nationalism 1905-1919.
8. Indian National Movement : Circumstances leading to the non-cooperation movement 1920-1922; the Civil Disobedience Movement.
9. Rise of Communal Politics : Factors responsible for the growth of communal politics; Separate electorate; Muslim League and Pakistan Resolution.

Unit-IV

10. Towards Partition and Independence : Quit India Movement; British proposals for independence; Indian Independence Act of 1947.
11. Significant Developments after Independence,1947- 64 : Making of the constitution; integration of princely states; the reorganisation of states.
12. Map:
    (a) Important Historical Places – Delhi, Calcutta, Madras, Bombay, Goa, Surat, Plassey, Buxar, Gwalior, Jhansi, Hyderabad, Sabarmati, Amritsar, Lucknow, Lahore and Aligarh.
    (b) Extent of the British Empire in 1856.
    (c) Republic of India in 1950.

Books Recommended :

1. Abdul Kalam Azad, *Azadi Ki Kahani* (Hindi Medium), Delhi : Orient Black Swan, 2007.
2. Bandyopadhyay, Sekhar, *From Plassey to Partition : A History of Modern India,* Delhi : Orient Black Swan, 2007 (Also available in Hindi Medium).
3. Chandra, Bipan, *Communalism in Modern India,* Delhi : Vikas Publishers, 1987.
4. Chandra, Bipan *et al., India's Struggle for Independence, 1875-1947,* Delhi : Viking/Penguin Books,1989.
5. Chandra, Bipan, *Aitihasik Sangharsh – EPIC Struggle* (Hindi Medium), Delhi : Orient Black Swan, 2007.
6. Nanda, B.R., *Making of a Nation : India's Road to Independence,* New Delhi : Harper-Collins, 1998.
7. Gopal, S, (Pbi)

HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-2019

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(i) One question from Unit IV shall be set on the map.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Explanation:

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under :
Map : 10 marks
Explanatory Note : 08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF THE PUNJAB, 1469-1849 A.D.

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objectives : To introduce the students to the broad developments in the history of the Punjab from the mid 15^{th} to the mid 19^{th} century i.e. the medieval period

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Teachings of Guru Nanak, Development of Sikh Institutions : langar, manji, masand, gurdwara
2. Compilation of the Adi Granth; causes and significance of the martyrdom of Guru Arjan Dev.
3. Guru Hargobind's new policy and its justification; martyrdom of Guru Tegh Bahadur and its significance.

Unit-II

4. Circumstances leading to the creation of Khalsa and its significance; the new injunctions and symbols of the Khalsa.
5. Establishment of independent rule under Banda Bahadur; socio-economic transformation.
6. Role of Rakhi, Gurmata and Dal Khalsa in 18th century polity; emergence of autonomous chiefs.

Unit-III

7. Unification under Ranjit Singh; expansion of the Kingdom of Lahore
8. Civil & Provincial administration;Land Revenue system under Maharaja Ranjit Singh
9. Social Structure in the early 19th century Punjab

Unit-IV

10. Anglo-Sikh relations upto 1839; political developments 1839-1849.
11. First Anglo-Sikh war; second Anglo-Sikh war and the annexation of the Punjab.
12. Map :
    (a) Important Historical Places – Amritsar, Goindwal, Anandpur Sahib, Chamkaur Sahib, Kiratpur, Kartarpur, Paonta Sahib, Sirhind, Muktsar, Tarn Taran, Lahore, Machhiwara, Ropar, Multan and Peshawar.
    (b) Battles of Banda Bahadur. (location)
    (c) Kingdom of Lahore(Boundaries)

Note : In case, a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

Books Recommended :

1. Banerjee, I.B., *Evolution of the Khalsa,* 2 Vols., Calcutta : A Mukherjee & Co., 1979 (2nd edn.).
2. Banga, Indu (ed.), *Five Punjabi Centuries : Polity, Economy, Society and Culture c. 1500-1900,* New Delhi : Manohar, 1997.
3. Fauja Singh, *State and Society under Maharaja Ranjit Singh,*Master Publishers, Delhi.
4. Grewal, J.S., *The Sikhs of the Punjab : The New Cambridge History of India,* New Delhi : Cambridge University Press, 1999 (2nd edn.).
5. Khushwant singh*, A History of the Sikhs* Volume I and II
6. McLeod, W.H., *Sikhs and Sikhism,* New Delhi : Oxford University Press, 2000.
7. Sinha, N.K., *Rise of the Sikh Power,* Calcutta : A Mukherjee & Co., 1973
8. Teja Singh and Ganda Singh, *A Short History of the Sikhs,1469-1765* ,Vol.I, Patiala : Punjabi University, 1983.

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POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

INDIAN GOVERNMENT AND POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives: This paper provides students with a basic knowledge of the fundamental elements and institutions of government, politics and processes in India at both the centre and state levels.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Basic Features of Indian Constitution.
2. Preamble and its perceptions.
3. Indian Federalism- Meaning & its features.
4. Centre State Relations (Legislative, Administrative & Financial)

Unit-II

1. Fundamental Rights (Art14-Art 32)- Meaning, Explanation, Criticism & Importance.
2. Fundamental Duties- Meaning, Explanation, Evaluation (Criticism & Importance).
3. Directive Principals of State Policy (Art 36- Art 51)- Liberal, Socialist, International, Gandhian- Meaning, Explanation, Sanctions, Criticism & Importance

Unit-III

1. President : Election, powers, position and changing role.
2. Parliament : Composition, powers and role.
3. Cabinet –
   a) Parliamentary features
   b) Prime Minister : Election, powers, position and changing role.
4. Supreme Court : Composition, powers & Judicial Review.

Unit-IV

1. Governor : Appointment, powers and role.
2. State Legislature : Composition, powers and role of Legislative Assembly/Vidhan Sabha.
3. Council of Ministers and Chief Minister : Election, powers, position and role.
4. High Court : Composition, powers and its role.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.
20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.
21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.
22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.
23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.
24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.
25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.
26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

INDIAN POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours.

Objectives :

The aim of this paper is to enrich the student's understanding of the working of the Indian political system with reference to political parties, the party system, elections and voting behaviour. Units III and IV of the paper examine in detail certain key issues and debates in contemporary India.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Nature of party system in India : A critical evaluation.
2. National Political Parties [Indian National Congress, BJP, CPI, CPI(M), BSP] : Ideology, Policy and Programmes
3. Regional Political Parties (SAD, DMK, AIDMK) : Ideology, Policy and Programmes.

Unit-II

1. The Election Commission : A critical evaluation and electoral reforms in India.
2. Pressure Groups in Indian Politics- Types & Role
3. Voting Behaviour in India – its Determinants.

Unit-III

1. Emerging Trends in Indian Politics.
2. Role of Caste, Religion in Indian Politics.
3. Regionalism in Indian Politics-its causes & impact.

Unit-IV

1. Basic principles and determinants of Indian Foreign Policy.
2. Non-alignment : Meaning and Nature.
3. Non-alignment Movement- its Relevance.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.

20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.

21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.

22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.

23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.

24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.

25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.

26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

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ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper : PUBLIC FINANCE AND INTERNATIONAL ECONOMICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective : The primary course objective is to introduce the students to the basics of public finance and international trade. The first two units aim to introduce students to the primary functions of government to generate resources from the people and to spend money improving their lives. The last two units are concerned with basic theories of international trade and commercial policies, balance of payments, determination of exchange rates and role of international financial institutions.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Introduction to Public Finance : Nature, Scope and its Importance.

Public Expenditure: Canons, Principle of Maximum Social Advantage, Wagner's Law, Wiseman Peacock Hypothesis. Causes for the Recent Growth of Public Expenditure in India.

Taxation : Classification and Canons, Characteristics of a Good Tax System.

Unit-II

Incidence and Impact of Taxation : Demand and Supply Theory.
Taxable Capacity : Absolute and Relative Capacity, Determinants of Taxable Capacity.
Public Debt : Its types and Role, Burden of debt and Methods of its Redemption.
Deficit Financing : Objectives and Limitations.

Unit-III

Pure Theory of International Trade : Classical and Heckscher - Ohlin Theories, The Theory of Reciprocal Demand.

Terms of Trade : Concept and Types

Commercial Policy : Free Trade Vs. Protection, Regional Blocks: ASEAN, SAFTA Problems and prospects. Impact of W.T.O. on Less Developed Countries.

Unit-IV

Balance of Payments: Meaning, Concept and Components of Balance of Payments. Disequilibrium in the Balance of Payments : Causes and Measures to corret the disequilibrium

Exchange Rate : Meaning and its Determination, Fixed Vs. Flexible Rate of Exchange and Purchasing Power Parity Theory.

IMF and IBRD : Objectives, Working and Achievements.

Recommended Readings :

1. Musgrave, A.R. & Musgrave, P.B. (2011) : *Public Finance in Theory and Practice,* McGraw Hills, International Students' Edition.
2. Kindleberger, C.P. (1987) : *International Economics,* Richard Irwin Homewood, Illiois, Indian Edition
3. Sharma, O.P. (latest edition) : *Sarvjnik Vit,* Punjabi University, Patiala.
4. Ghuman, Ranjit Singh (latest edition) : *Antar-Rashtriya Arth Vigyan,* Punjabi University, Patiala.
5. Soderston B.O. (1994) : *International Economics,* McMillan Press Ltd.

Supplementary Reading :

1. Bhatia, H.L. (2008) : *Public Finance*, Vikas Publishing House Pvt. Ltd.
2. Dalton, H. (1978) : *Principles of Public Finance,* Routledge and Kegan Paul, London.
3. Tyagi, B.P. (1994) : *Public Finance,* Jai Prakash Math & Co, Meerut.

ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

Semester-IV

Paper : QUANTITATIVE METHODS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective :

The objective of the course is to train the students in the use of basic mathematical and statistical tools in analyzing various economic phenomenons. It deals with the design of how data is presented, the analysis of the data, and the drawing of conclusions from the data. The course aims to improve decision-making accuracy of the students and enabling them to test new ideas.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

1. There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 09 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.
2. Use of simple calculator is allowed.
3. The paper setter may in general stick to the distribution of marks of 1/3 to theory and 2/3 to numericals.

Unit-I

Elementary Idea of Sets and Functions : Simple and Partial Derivatives, Differentiation of Simple functions – Polynomial (x) and Exponential functions. Maxima and Minima of functions of one variable only. Their Applications of Micro and Macro Economics.

Unit-II

Matrices : Definition and Types, Operations (Sum, Difference, Product and Transpose), Adjoint and Inverse of a matrix (upto $3 \cdot 3$), Solution of Equations (upto 3) by Matrix Methods and Crammer's rule.
Measures of Central Tendency : Mean, Median, Partition Values, Mode, Measures of Dispersion, Skewness.

Unit-III

Correlation Analysis—Karl Pearson's (except grouped data) and Spearman's formula, Simple Regression Analysis.
Interpolation – Binomial, Expansion, Newton's (Advancing Difference Method) and Lagrange's Method.

Unit-IV

Index Numbers : Concepts, Problems and Importance, Simple Index Number, Lespeyre's and Fisher's Index Numbers only (among weighted index numbers), Reversibility Tests.
Time Series Analysis : Components of Time Series, Determination of Trend, Least Square and Moving Average Method.

Books Recommended

1. Archibald, G. C. and Lipsey, R. G. (1977) : *An Introduction to a Mathematical Treatment of Economics,* English Language Book Society, Weidenfeld and Nicolson.

2. Gupta, S.C. (1992) : Fundamentals of Statics, Mumbai, Himalaya Publishing House.

3. Kandoi, Balwant (2011) : Mathematics for Business and Economics with Applications, in 2 Vol., Himalaya, Mumbai.

4. Sanchati, D. C. & Kapoor, V. K. (1987) : *Business Mathematics,* Sultan Chand & Sons, New Delhi.

5. Yamane, Taro (1972) : Economists, Prentice Hall, New Delhi.

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

SOCIAL STRUCTURE AND SOCIAL CHANGE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper basically introduces students both to conceptual and some theoretical understanding of social structure and social change. Students are introduced to characteristics and elements of social structure and to understand the meaning, process and factors of social change.

Course Content

Unit-I

Social Structure : Meaning, Characteristics, Elements – Status, Role, Power and Prestige. Norms and Values.

Unit-II

Social Change : Meaning and Features.
Types of Social Change : Evolution (Comte), Revolution (Marx), Development – Changing Connotations.

Unit-III

Factors of Social Change: Economic, Demographic, Education, Legislative, Scientific and Technological

Unit-IV

Processes of Social Change : Sanskritization, Westernization, Modernization and Secularization, Globalization and its impact on Society.

Essential Readings :

1.	Bierstedt, Robert (1970)	:	*Social Order,* New York : McGraw Hill.
2.	Haferkand, H. and Smelser, N.J. (1992)	:	*Social Change and Modernity,* Berkeley : University of California Press.
3.	Macionis, John, J. (2005)	:	*Society : The Basics,* New York : Prentice Hall.
4.	Madhurima (2016)	:	*Readings in Sociology – Semester-II,* Jalandhar : New Academic Publishing House (All Mediums).
5.	Moore, Wilbert (2004)	:	*Social Change*, New Delhi, Prentice Hall.
6.	Singh, Yogendra (1993)	:	*Social Change in India,* New Delhi : Haranand Publications.
7.	Srinivas, M.N. (1963)	:	*Social Change in Modern India,* Berkeley : University of California Press.

Further Readings :

1.	Radcliffe-Brown, A.R. (1979)	:	*Structure and Function in Primitive Society*, London : Routledge and Kegan paul.
2.	Haralambos, M. (1998)	:	*Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
3.	Talcott, Parsons (1959)	:	*Social System*, London : Tavistock Publications.
4.	Singh, Yogendra (1996)	:	"Sociology and the Emerging Challenge of Change", *Sociological Bulletin,* Volume 45, No. 1, March, Page 1-14.
5.	Singer, M. (1972)	:	*When a Great Tradition Modernizes : An Anthropological Approach to Indian Civilization,* New York : Praeger Publishers.
6.	Yogendra Singh, (2008)	:	Social Change in India, New Delhi, Har Anand Publications
7.	Srinivas, M.N., (2011)	:	Social Change in Modern India, Hyderabad, Orient Black Swan
8.	Kuppu (Swamy, B, 2001)	:	Social Change in India, Delhi, Konark

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER IV

SOCIAL INSTITUTIONS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective:

In this paper, social institution as a concept is introduced to the students. Study of various institutions which are foundations of human society, will help students to look at society in an objective and analytical way.

Course Work

Unit-I

Institutions – Meaning, Features; Normative and Relational aspects of Institutions.
Types – Social, Political, Economic and Cultural.
Difference of Institutions with Society Community and Association

Unit-II

Social Institutions :
Marriage –Types : Monogamy and Polygamy; Rules of Mate Selection, Contemporary Trends.
Family – Meaning, Types, Structure, Function; Development Cycle and Changing Trends.
Kinship – Meaning, Significance and a Brief Understanding of Incest, Consanguinity, Affinity, Clan, Lineage, Contemporary Trends.

Unit-III

Political Institutions – State, Government and Political Parties – Features and Functions.
Economic Institutions – Features and Functions, Property, Division of Labour (Emile Durkheim).

Unit-IV

Cultural Institutions – Religion : Meaning elements, Types, Functions (Emile Durkheim & Max Weber),Dysfunctions

Essential Readings :

1. Christensen, H.(ed.) (1964) : *Handbook of Marriage & Family,* New Delhi: Allyn and Bacon.
2. Fox, Robin (1967) : *Kinship and Marriage : An Anthropological Perspective; Baltimore : Penguin Books.*
3. Giddens, Anthony (2013) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Johnson, Harry, M. (1998) : *Sociology : A Systematic Introduction*, Delhi : Allied Publishers.
6. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
7. Giddens, Anthony & Sutton W. Philip (2010) : *Sociology : Introductory Readings,* U.K.: Polity Press.
8. Schacfer, Richard, T.(2010) : *Sociology : A Brief Introductions,* N.Y.: Tata McGraw Hill.

Further Readings :

1. K.M. Kapadia (1996) : *Marriage & Family in India, Delhi, Oxford University Press*
2. Bronislaw Malinowski (1944) : *A Scientific Theory of Culture & other Essay (ed.) Huntington Cairns, C Hapel Hall,* The University of North Caroliva Press.
3. Particia Uberoi (1997) : *Family, Kinship & Marriage in India, New Delhi, Oxford University Press*
4. Max Weber (1968) : *The Protestant Ethic and the Spirit of Capitalism-R.H. Tawney (ed.) Unvwin University, Book London.*
5. Radcliff Brown, A.R. (1979) : *Structure and Functions in Primitive Society, London: Routledge and Kegan Paul.*
6. Madan, T.N.(2002) : *Religion in India, Delhi-Oxfored UniversityPress,Atal,yogesh,2012,Sociology,Delhi ;Pearson*
7. Marlom bos & Holborn,(2016) : *Cociology Themes and perspectives,London, Collins*
8. Madan, T.N.,(2001) : *Family and Kinship,New Delhi, Oxford University Press*
9. Froer, Peggy,(2010) : *Religious Divisions and Social Conflict,New Delhi, Esha Beteille*

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PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER – III

PAPER : PERSONNEL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of this paper is to give the student an in-depth understanding of various aspects of public personnel administration particularly recruitment, training and promotion. Contemporary issues like grievance redressal machinery, corruption, morale etc. concerning administration of human resources in government will also be examined.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

For Private/University School of Open Learning (USOL) students who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.
The Paper-Setter must put note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Personnel Administration – Meaning and Significance.
Bureaucracy: Meaning, Characteristics, Demerits and Remedies.
Civil Service: Meaning, Features and Role.
Position and Rank Classification Systems: Significance and Features

Unit-II

Recruitment: Meaning, Methods and Problems.
Recruitment System of Higher Civil Services in India.
UPSC: Composition, Functions and Role.
SPSC: Composition, Functions and Role.

Unit-III

Training – Meaning, Types, Methods, Training of Higher Civil Services in India.
Conduct, Discipline and Ethics in Public Services.
Promotion: Meaning, Significance and Principles.

Unit-IV

Morale, Causes of Low Morale and Measures for Improvement.
Corruption in Administration - Causes and Remedies.
Administrative Tribunals: Meaning, Types, Advantages and Disadvantages.

Essential Readings :

Davar , R.S.(1976). *Personnel Management and Industrial Relations* . NewDelhi : Vikas Publishers.

Goel, S.L.(2008).*Public Personnel Administration* . New Delhi : Sterling Publishers.

Stahl,O.G.(1975).*Public Personnel Administration.* New Delhi : Oxford and IBH Publications.

Tyagi, A.R.(2001).*Public Administration: Principles and Practice* .Delhi: Atma Ram and Sons Publishers.

Further Readings :

Government of India, Administrative Reforms Commission(1967). *Report on Personnel Administration.* New Delhi : Manager of Publications.

Government of India, 2nd Administrative Reforms Commission.(2010) *10th Report :Refurbishing of Personal Administration – Scaling New Heights.* New Delhi : Manager of Publications.

Indian Institute of Public Administration(1970). *Personnel Adminstration*.New Delhi : IIPA.

Paul Pigors and C.A. Myers(1973). *Personnel Administration : A Point of View and Method.*

New York:McGraw Hill.

Sinha , V.M. (1986).*Personnel Administration.* Jaipur : RBSA.

PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

PAPER : FINANCIAL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of financial administration like budgeting, auditing, centre-state financial relations etc. It would also make them aware of: institutions like ministry of finance, union finance commission, parliamentary committees; and concepts like direct taxes, indirect taxes, deficit financing, public debt.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Financial Administration: Meaning and Significance .
Aspects of Public Finance.
Budget: Meaning, Types and Principles.
Budget: Preparation and Enactment.

Unit-II

Union Ministry of Finance: Organisation, Functions and Role.
Centre-State Financial Relations.
Union Finance Commission: Composition and Functions.

Unit-III

Audit: Concept, Objectives and Types.
Comptroller and Auditor General of India(CAGI) : Appointment, Functions and Role.
Concepts: Deficit Financing, Fiscal Deficit, Public Debt and Public Expenditure.

Unit-IV

Legislative Control over Finance.
Public Accounts Committee:Composition, Functions and Role.
Estimates Committee:Composition, Functions and Role.

Essential Readings

Goel,S.L.,(1993).*Financial Management and Administration.* New Delhi: Sterling Publication.

Lall,G.S..*Financial Administration in India* .Delhi: H.P.J.Kapoor, 4th ed.

Mookerjee ,S.S. *Indian Public Finance and Financial Administration* . New Delhi.

S.Sahib and S.Swinder.(2016)*Public Personnel and Financial Administration* Jalandhar: New Academic Publishers Co.

Thavaraj,M.J.K.(1978).*Financial Administration of India* . New Delhi: Sultan Chand Publications.

Further Readings

Government of India, 2nd ARC .14th Report-*Strengthening Financial Management System.*

Government of India,Administrative Reforms Commission.(1967). *Report on Financial Administration*. New Delhi : Manager of Publications.

Government of India,Administrative Reforms Commission. *Report on Financial Accounts and Audit* (1967). New Delhi.

Government of India,Administrative Reforms Commission(1967).*Report on Centre-State Relations*. New Delhi : Manager of Publications.

Mahajan S. and Mahajan,A.(2014). *Financial Administration in India*. Delhi : PHI Learning Private Limited.
Sinha, R.K.(1986). *Centre-State Financial Relations in India: Various Aspects, Irritants, Framework for Action* .New Delhi: Deep & Deep Publications.

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

Outlines of tests, syllabi and courses of reading

SEMESTER-III

Paper : INDIAN ETHICS (Theory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper highlights the ethical philosophies propounded in the different Indian Philosophical Systems. It exposes the students to the main tenets of Buddhism, Sikhism, Gandhism, Gita and Vedic Culture.

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical Philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

1. Salient Features of Indian Ethics with reference to Purusartha : Yuga Dharma and Sanatan Dharma.
2. Varna Vyastha and Ashrama Dharma : A Contemporary Analysis.
3. Concept of Sreyas and Preyas.

Unit-II

4. Buddhist Ethics : Four Noble Truths, Eight Noble Paths, Ahimsa and Karma Bhava Chakra, Sila.
5. Jaina Ethics : Triratnas.
6. Sikh Ethics : Hukum, Nirbhau, Nirvair, Parupkar, Sewa and Sahaj.

Unit-III

7. Gandhi : Ahimsa, Satyagraha and Antyodaya.
8. Gita : Anasakta Karma, Lok Samgraha, Sva-Dharma.

Unit-IV

9. Yoga and Stress Management : Definition of Yoga, Ashtanga Yoga.
10. Yoga : Yama, Niyama, Asana, Pranayama, Pratyahara, Dharna, Dhyan, Samadhi.

Essential Readings :

1. Avtar Singh : Ethics of the Sikhs, Punjabi University, Patiala, 1970.
2. I. C. Sharma : Ethical Philosophies of India, George Allen and Unwin, London, 1965.
3. S. K. Maitra : The Ethics of the Hindus, Asian Publication Services, New Delhi, 1956.
4. Vivekananda : Raj Yoga, Advaita Ashram., 1896.

Suggested Readings :

1. Surama Dasgupta : Development of Moral Philosophy in India, Munshi Ram Manoharlal Pub., New Delhi, 1994.
2. Four chapters on Freedom, Commentary on the Yoga Sutras of Patanjali, Swami Satyananda Saraswati Yoga Publications Trust, Munger, Bihar-Chapter II Section 29 onwards, Chapter III—Sections 1 to 6.

PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER – IV

Paper: WESTERN ETHICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

1. The Nature of Ethics : Virtues and Goodness, its concerns, Relation of Ethics with Aesthetics, Psychology and Religion.
2. The notion of Truth, Beauty & Goodness, Reflective Customary Morality.
3. Object of Moral Judgement : Actions, Intentions, Situations and Character.

Unit-II

4. Virtue Ethics : Aristotle.
5. Categorical Ethics : Kant.
6. Concepts of love, sin and freedom in Christian Tradition.

Unit-III

7. Teleological Ethics :
   - (i) Hedonism
   - (ii) Utilitarianism :
     - (a) Mill
     - (b) Bentham

Unit-IV

8. Moral Rights of Foetus and Female Foeticide.
9. Sexual harassment and Gender Justice.
10. Environmental Ethics : Pollution, Land Degradation and Organic Farming and Global Warming.

Essential Readings :

1.	Aristotle	:	Nicomachean Ethics, Dordrecht : D. Reidel, Penguin Harmondsworth, 2001.
2.	Peter Singer	:	Practical Ethics (Second Edition), Cambridge University Press, 1995.
3.	Ved Parkash Verma	:	Neeti Shastra (in Hindi), Allied Publishers (New Delhi, 1987).
4.	William Lillie	:	An Introduction to Ethics (London, Matheun, 1957).

Suggested Readings :

1.	J.D. Mcbbott	:	An Introduction to Ethics, London : Hutchinson, 1966.
2.	John Hospers	:	Human Conduct : An Introduction to the Problems of Ethics, N.Y., Harcourt, 1961.
3.	Rosaline Hursthome	:	Virtue Ethics, New York, Harcourt, 1961.
4.	W. Frankena	:	Ethics, Englewood Cliffs, Prentice Hall, New Delhi, India, 1994.

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PSYCHOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in experimental psychology. The students would also get an understanding of the Nervous System, Psychophysics, Learning. This course will also give an insight into psychophysics, statistics and cognitive aspects of Psychology.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper: EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

The Nervous System: Structure and functioning of the neuron; division of nervous system – Central Nervous System and Peripheral Nervous System; Structure and functioning of the brain.

Unit II

Sensation

Concept and types; Vision-The Visual Stimulus, Structure and Functioning of the Eye , Theories of Colour Vision; Audition: The Auditory Stimulus,Structure and Functioning of the Ear, Theories of Hearing.

Unit III

Psychophysics

Thresholds; Psychophysical Methods of Limits, Constant stimuli and Average Error.

Unit IV

Learning

Concept, Classical Conditioning, Operant Conditioning, Observational Learning.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Two Point Threshold
2. Muller Lyer Illusion
3. Differential Threshold
4. Method of Paired Comparison
5. Maze Learning
6. Bilateral Transfer of Training

Suggested Readings :

1. Baron, R.A. (2003): Psychology. New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology. Delhi: Pearson.
3. Das, J.P. (1998): The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1998) : Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
6. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
7. Guilford, J.P. and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education. Singapore: McGraw Hill.
8. Kerlinger, F. N. (1964) : Foundations of Behavioural Research. New York: Rinehart and Winston.
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology. Singapore: McGraw Hill.

PSYCHOLOGY

SEMESTER-IV

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in General Psychology. The students would also get an understanding of the principles and theories in different areas like Sensation, Perception and Thinking. The course also introduces the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Memory
Sensory Register; Short-Term and Long -Term Memory; Levels of Processing; Measurement of Memory; Forgetting with special reference to retro-active and pro-active inhibition

Unit II

Perception:Concepts , Types of Perception of Form,Space and Movement
Attention: Nature, Types anf Factors.

Unit III

Thinking :Nature, Tool & Types and Factors
Problem Solving: Nature ,Stages and Factors.
Creativity: Concept; Torrance's Theory of Creativity.

Unit IV

Statistics
Normal Probability Distribution: Properties and Applications: Hypothesis Testing – Type I and Type II Errors; Chi-square Test Application to one – way and Two-way classifications.

Note : The use of non-programmable calculators and statistical tables are allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Division of Attention
2. Span of Attention
3. Comparing Recall and Recognition as Measures of Memory
4. Retroactive Interference
5. Concept Formation.

Suggested Readings:

1. Baron, R.A. (2003): *Psychology,* New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology, Delhi: Pearson.
3. Das , J.P. (1998):The Working Mind: An Introduction to Psychology, New Delhi: Sage.
4. Feldman, R.S. (1998) :Understanding Psychology, New Delhi: Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer And Simons.
6. Guilford, J.P., and Fruchter, B. (1981):Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000) : Introduction to Psychology, New Delhi: Kalyani
8. Kerlinger, F.N. (1964): Foundations of Behavioural Research, New York Holy, Rinehart and Wintson
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987): Introduction to Psychology, Singapore: McGraw Hill

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GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-III

Paper –V: GEOGRAPHY OF INDIA

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

To foster an understanding of the physical and cultural landscape of India and its spatial diversity

Course Content

Unit-I

Introduction: India in the context of South Asia, Asia and the World. (05 lectures)
Physiography: Relief, drainage, climate, vegetation, soils. (15 lectures)

Unit-II

Agriculture: Characteristics and problems of Indian agriculture; irrigation, major crops (rice, wheat, maize, sugarcane, cotton, jute and tea), Food security with special reference to India. (15 lectures)
Natural hazards in India: Flood, Drought and Earthquake. (05 lectures)

Unit III

Population: Distribution and density, Growth, Migration, Urbanization (05 lectures)
Mineral and Power Resources: Iron ore, manganese, mica, copper and gold; Coal, Petroleum, Hydroelectricity and Non- conventional Power resources. (15 lectures)

Unit IV

Industries: Distribution and localization factors of major industries (Iron and Steel, Cotton Textiles, Sugar, Fertilizers, Automobile). (15 lectures)
Trade &Transport: Rail, Road, Airways and Waterways; International Trade (05 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests,(5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance(2%).
6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings:

Essential Reading:

1. Deshpande, C.D. : *India: A Regional Interpretation,* Indian Council of Social Science Research, New Delhi, 1992.
2. Johnson, B.L.C. : *India: Resources and Development,* Arnold Heinemann, London, 1980.
3. Johnson, B.L.C. : *South Asia,* Heinemann, London, 1981.
4. Khullar, D.R. : *India: A Comprehensive Geography,* Kalyani Publishers, New Delhi, 2011.
5. Majid Hussain : *Geography of India*, Tata McGraw-Hill, Delhi, 2013.
6. Spate, O.H.K. and ATA : *India & Pakistan*: *Land, People and Economy,* Methuen, London, Learmonth, 1967.
7. Tiwari, R.C : *Geography of India,* Pravalika Publications, Allahabad, 2013.

Further Readings :

1. Singh, Gopal : *A Geography of India,* Atma Ram & Sons, New Delhi, 1995
2. Singh, Jagdish : *India: A Comprehensive Systematic Geography,* Gyanodaya Prakashan, Gorakhpur, 2nd Edition, 2003.
3. Singh, R.L. : *India: A Regional Geography (Ed.),* National Geographical Society of India, Varanasi, 1971.
4. Singh, Savindra : *Environmental Geography,* Pravalika Publications, Allahabad, 2014
5. Sharma, T.C. and O. : *Economic and Commercial Geography of India,* Vikas Publishing, House, New Delhi, 2005.
6. Tirtha, Ranjit & Gopal Krishan : *Emerging India,* Conpub Ann Arbour Publishers, Michigan, 1992.

Pedagogy:

- Use of visual aids especially maps.
- Students should be encouraged to use an atlas in the classrooms.
- Audio-video shows on different parts of India.

Paper-VI: CARTOGRAPHY-III

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives:

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Nature of Geographic Data: Spatial and Attribute (Climatic, Population, Agriculture and Industrial)
Symbolization & Scaling of Geographical Data: Point, Line and Area

(4 lectures, 4 lab sessions)

UNIT-II

Choice, Use and Representation of Data using Point Symbols: Columnar Diagrams (Simple, Multiple, Compound, Percentage); Dot, Circle and Sphere

(6 lectures, 12 lab sessions)

UNIT-III

Choice, Use and Representation of the following Point Symbols: Graphs (Line Graph, Climograph, Hythergraph, Ergograph, Wind Rose, Combined and Bar Graph)

(8 lectures, 20 lab sessions)

UNIT-IV

Choice, Use and Representation of Data using: Line Symbols (Isopleth and Flow Lines); and Area Symbols (Choropleth)

(6 lectures, 12 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.

2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.

3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.

6. Three hours Practical Classes in a week are compulsory.

7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.

10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.

11. For practical classes, the number of students in one group shall not exceed fifteen.

12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Khullar, D.R. : *Essentials of Practical Geography, New Academic Publishig Co.*, Jalandhar, 2009.
2. Robinson, A.H. : *Elements of Cartography, 6th Edition*, John Wiley, New York, 2009.
3. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
4. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
5. Singh, R.L. & P.B. Singh : *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
4. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- The students need to be trained in the use of symbols to depict various geographic data.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

Paper-VII: GEOGRAPHY OF PUNJAB

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To understand the regional setting of Punjab state in detail through physical and political maps.
- To examine the cultural patterns of the regions.
- To study the distribution of major crops, industries and transport links in the state.
- To understand the intra regional variations in select aspects.

Course Content:

Unit –I

Introduction: Location, Evolution, Cultural Regions (Majha, Doaba & Malwa) and Administrative Divisions of the State. (15 lectures)

Unit –II

Physical Base: Relief, Drainage, Climate, Soils and Vegetation (12 lectures)
Resources: Mineral and Power; Water with special reference to river water sharing. (8 lectures)

Unit-III

Agriculture: Main Characteristics and Problems; Agro-climatic Regions; Green Revolution & its Ecological Implications; Irrigation; Main crops (wheat, rice, cotton, sugarcane) and their distribution, Livestock and dairying. (20 lectures)

Unit –IV

Population: Distribution, Density, Growth, Migration, Sex Ratio, Urbanization. (7 lectures)
Industries: Main characteristics, Distribution Patterns of Major Industries (Cotton Textile, Sugar, Hosiery Engineering) Industrial Concentration, Problems of Industrialization. (15 lectures)
Trade &Transport: Road, Rail and Air Transport; Inter-State Trade. (3 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests, (5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance (2%).

6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings

Essential Readings:

1. Mankoo, Darshan Singh : *Geography of Punjab, 4th Edition,* Kalyani Publishers, Ludhaina 2009.
2. Mavi, H.S. & Tiwana, D.S. : *Geography of Punjab*, National Book Trust, Delhi, 1993.
3. Singh, Jaspal : *Geography of Punjab,* Twenty First Century Publications, Patiala, 2014
4. Singh, Malkit : *Geography of Punjab*, Rashmeet Parkashan, Jalandhar, 2004

Further Readings:

1. Deshpande ,C.D. : *India: A Regional Interpretation* , Indian Council of Social Science Research, New Delhi, 1992.
2. Economic and Statistical Organization of Punjab : *Statistical Abstract of Punjab*, Economic and Statistical Organization of Punjab, Chandigarh, 2014
3. Gosal, G.S. & Gopal Krishan : *Regional Disparities in Level of Socio-Economic Development in Punjab*, Vishal Publications, Kurukshetra , 1984.
4. Gupta S.P. : *The Punjab: An Overview*, ESS PEE Publications, Chandigarh, 2004.
5. Kahlon, Simrit : *Punjab: regional reflections,* Man and Development, 29 (2), 2007.
6. Singh Pritam : *Punjab Economy: The Emerging Patterns*, Enkay Publishers, New Delhi, 1995.
7. Singh, R.L. : *India: A Regional Geography (Ed)*, National Geographical Society of India, 1990, Reprint.
8. Spate, O.H.K. & Learmonth A.T.A. : *India and Pakistan: A General and Regional Geography*, Methuen, London, 1967

Pedagogy

- Extensive and intensive use of maps to understand the regional setting.
- A component of field visit to some areas of each region may be planned for effective understanding of the region.

Paper-VIII: CARTOGRAPHY-IV

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives :

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Topographical Maps: Nomenclature (Classification), Study and Interpretation; Significance and Application in Geographical Studies

(4 lectures, 4 lab sessions)

UNIT-II

Profiles: Serial, Composite, Superimposed and Projected
Longitudinal and Transverse; Profiles of rivers

(8 lectures, 16 lab sessions)

UNIT-III

Elementary Remote Sensing : Definition, Concept, History, Application Areas and Types of platforms

(10 lectures, 8 lab sessions)

UNIT-IV

Introduction to Concept of GIS and Computer Cartography.
Definition, Development, Database (Spatial and Non Spatial) GIS Components (Hardware & Software) and Application.
Preparation of Line Graphs, Bars and Pie Charts using Computers.

(10 lectures, 10 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. For college students, a separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.
3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared by the University for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Three hours Practical Classes in a week are compulsory.
7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.
11. For practical classes, the number of students in one group shall not exceed fifteen.
12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Bhatta, Basudeb : *Remote Sensing and GIS,* Oxford, 2nd Edition, New Delhi, 2011
2. Guha, P.K. : *Remote Sensing For The Beginner,* East-West Press, 3rd Edition, New Delhi, 2013..
3. Khullar, D.R. : Essentials of Practical Geography, New Academic Publishing Co., Jalandhar, 2009.
4. Robinson, A.H. : *Elements of Cartography, 6th Edition,* John Wiley, New York, 2009.
5. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
6. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
7. Singh, R.L. & Singh, P.B. : *Map Work and Practical Geography, Central Book Depot, Raghunandan Allahabad, 2007.*

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Joseph, George : *Fundamentals of Remote Sensing,* Universities Press (India) Private Limited, 2nd Edition, Hyderabad, 2005
4. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
5. Panda, B.C. : *Remote Sensing: Principles and Applications,* Viva Books, New Delhi, 2008
6. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- They should learn to comprehend the topographical maps by deriving slopes and drawing profiles.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

SOCIAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Social Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Social Thought

1. Truth
2. Non-violence
3. Sarvodaya

UNIT-II

Man and State

4. Human Rights
5. Ideal Society, State and Rama Rajya

UNIT-III

Gandhi and Ethics

6. Education
7. Theory of Civilization
8. Morality and Religion

UNIT-IV

Gandhi and Social Justice

9. Drive against Untouchability :
   (a) Caste System
   (b) Communal Award
   (c) Poona Pact

10. Women Empowerment

Essential Readings :

1. Bandyopadhyaya, J. : *Social and Political Thought of Mahatma Gandhi,* (Bombay : Allied Publisher) 1969.
2. Bharathi, K.S. : *Social and Political Thought of Mahatma Gandhi* (New Delhi : Concept) 1995.
3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navjivan Publishing House), 2001
4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
5. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
6. Mishra, Anil Dutta : *Reading Gandhi,* (New Delhi : Pearson), 2012
7. Varma, V.P. : *Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1998.

Further Readings :

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.
3.	Suda, J.P.	:	*Main Currents of Social and Political Thought of Modern India,* Vol. II, Meerut (K. Nath & Co.) 1973.
4.	Unnithan, T.K.N.	:	*Gandhi and Social Change,* New Delhi (Arnold Heinemann India), 1973.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

POLITICAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Political Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Political Thought

1. Truth & Non-violence
2. Theory of Ends & Means
3. State : Ideal Society and State

UNIT-II

Democracy & Decentralization

4. Panchayat Raj/Gram Swaraj
5. Freedom & Equality
6. Rights and Duties

UNIT-III

Religion and Politics

7. Satyagraha : Meaning, Essentials, Forms & Significance
8. Satyagraha & Passive Resistance
9. Spiritualization of Politics

UNIT-IV

Contemporary Relevance

10. Communal Harmony
11. Assessment and Contemporary Relevance

Essential Readings

1. Bhattacharyya, Buddhadeva : *Evolution of Political Thought of Gandhi,* Calcutta: Calcutta Book House, 1969.
2. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
3. Dhawan, G.N. : *Political Philosophy of Mahatma Gandhi,* Ahmedabad (Navajivan Publishing House) 1990, 4th Edition.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
7. Mishra, Anil Dutta : *Reading Gandhi,* New Delhi (Dorling Kindersley, Pearson), 2012
8. Varma, V.P. : *The Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1981.

Further Readings:

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Iyer, Raghaavan N.	:	*The Moral & Political Thought of Mahatma Gandhi, London,* Oxford University Press, 1973.
3.	Mishra, Anil Dutta (ed.)	:	Perspectives on Human Rights (New Delhi, Radha Publications)2002.
4.	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

PRINT JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives:

This course will introduce students to the basic techniques of sourcing news stairs and features. They will also be trained in the art and science of writing and presenting print media content.

B. Pedagogy of the Course Work:

80 % Lectures (including expert lectures).

20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Definition, nature and types of news and features; sourcing news and features.

Unit-II: Writing techniques and styles of news reports and features.

Unit-III: Role and responsibility of a sub-editor; basic editing techniques for copy and pictures; importance and writing of headlines.

Unit-IV: Introduction to typography and design principles; page make up using publishing software

PRACTICALS

Max. Marks : 20

1. Prepare a Current Affairs file of news & features . : 20 Marks

Books Recommended :

ESSENTIAL READING

1 Mencher, Melvin, , (1989), *Basic News Writing: W.M.C*. Brown Publishers, New York

2 Metz, William, (1990), *News Writing: From Lead to 30*. 3rd Edition, Prentice-Hall Inc., New Jersey

3 Rivers, William. L , (1991), *Freelancer and Staff Writer: Newspaper Features and Magazine Articles*, Wadsworth Publishing Co.

4 Alexander Louis , (1987), *Beyond the Facts: A Guide to the Art of Feature Writing*. Gulf Publishing Co.

5 Garrison, B, (1999), *Profession of Feature Writing.* New Jersey: Lawrence Erlbaum Assoc

6 Aamidor, A., (1999), *Real Feature Writing*. New Jersey: Lawrence Erlbaum Assoc

7 Blundell, William. E , (1998), *The Art and Craft of Feature Writing*, Plume Inc.

8 Garrison, Bruce , (1998), *Professional Feature Writing*, Laurence Eribaum Assoc

9 Bean, Erik , (1999) , *Writing for Publication*, Deadline Communications

10 Krantz, Marshall , (1996), *Ideas and Research*, Writers' Digest Books

11 Bruce D. Itule, Dougles A Anderson, (2006), *News Writing and Reporting for Today's Media*, McGraw Hill

12 Melvin Mencher, (2007), *News Reporting & Writing*, McGraw Hill

13 Tim Harrower, (2006), *Inside Reporting, A Practical guide to the Craft of Journalism*, McGraw Hill.

14 Stephen G. Bloom, (2002), *Writing Narrative Journalism : Inside the Writers mind*, Iowa Sate University Press.

ADDITIONAL READING

1 Kennedy, A , (1992), *Beyond the Inverted Pyramid*, Bradford Books

2 Bowles, D., & Borden, (2000), *Creative Editing*, (3rd ed.) Belmont, CA: Wadsworth

3 Elbow Peter, (1998), Writing *with Power*. Oxford University Press. N.Y

4 Johnson, C., (2005), *21st Century: Feature Writing*. New York: Allyn and Bacon

5 Wray, Cheryl Sloan , (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group

6 Wilbur, R., (1995), *Magazine feature writing*. New York: St. Martin's Press

7 Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books

8 Greene, B., (1988), *Handbook of Magazine Article Writing*. Cincinnati, OH: Writer's Digest

9 Wray, C., (2005), *Writing for Magazines*, (2nd ed.). Boston: McGraw Hill.

10 Ward, H., (1993), *Magazine and Feature Writing*. Mountain View, CA: Mayfield Publishing.

11 Wells, Gordon , (1997), *The Craft of Writing Articles*, Allison and Burby Inc.

12 Hennessey, Brendan, (1997), *Writing Feature Articles: A Practical Guide to Methods and Markets*, Focal Press.

13 Friedlander, Edward. J , (1999), *Feature Writing for Newspapers and Magazines: The Pursuit of Excellence*, Addison-Wesley Publishing Co.

14 Bell, James Scott,(2008), *Revision and Self Editing (Write great Fiction),* Writers Digest Books, New York,

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER- IV

RADIO & TV JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives :

The course will introduce students to the basic techniques of writing & presenting for the radio and TV medium.

B. Pedagogy of the Course Work :
80 % lectures (including expert lectures).
20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Basic principles of gathering, treatment and presentation of news for Radio; Basic principles of gathering, treatment and presentation of news for Television

Unit-II: Reporting and writing for Radio and TV; Pronunciation and modulation in Radio/TV reporting: Pitch, volume, tempo, vitality.

Unit-III: Basic introduction to audio/video production & its stages (pre-production, production, post production).

Unit-IV: Basic camera shots and language of camera movements.

PRACTICALS

Max. Marks : 20

1. Compilation of 5-minute weekly TV news bulletins — 10 Marks
2. Compilation of 10-minute weekly radio bulletins. — 10 Marks

ESSENTIAL READING

1 Chatterji,P.C. , (1991), *Broadcasting in India*. SAGE, New Delhi

2 Luthra, H.P., 1984, *Indian Broadcasting.* Publications Division, Min. of I & B.

3 Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi,

4 Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd.., New Delhi,

5 Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey

6 Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice,* Routledge, New York

7 Shrivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publishers, New Delhi.

8 Cohler, David Keith, (1985), *Broadcast Journalism*. Prentice-Hall, New Jersey.

9 Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*. Rajat Publications, New Delhi.

10 Fedler, Fred, bender, John R., Davenport, huanda, Drager, Michael W., (2005), *Reporting for the media.* Oxford University Press, New York.

11 Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi,

12 Cohen, Akilia A, (1987), *The Television News Interview.* SAGE, New Delhi,

13 Shrivastava, K.M., (2005), *Broadcast Journalism in the 21st century* new Dawn Press Group, New Delhi,

14 Fulding, Ken, (1990), Introduction *to Television Production*, Longman, New York,

ADDITIONAL READING

1 Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London

2 Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher

3 Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York,

4 Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

5 Fulding, Ken, (1990), Introduction to Television Production, Longman, New York.

6 Cohen,Akiba N., (1987), The Television News Interview, SAGE, Beverly Hills.

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POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Police Personnel Administration

(A) Course Objectives:

The objective of this course is to give inputs to the students on the various aspects of personnel relevant to police administration. Effort is made to impart knowledge to the candidates about the meaning, nature, scope and significance of Police Personnel Administration in India. In addition, job analysis, job description, pay policy, compensation and fringe benefits have been discussed. Further, the recruitment, training and promotion system in Police Service in India has been included in the syllabus. The students are also taught about the performance appraisal, police ethics, corruption in police, code of conduct and discipline along with doctrine of pleasure.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Police Personnel Administration; Significance of Police Personnel Administration in India; Career System in Police Administration.

Unit-II

Job Analysis and Job Description of Police Personnel – Concept and Significance; Pay Policy, Compensation and Fringe Benefits.

Unit-III

Recruitment: Meaning and Methods; Recruitment of Police Personnel in India; Training: Meaning and Types; Training of IPS Officers and State Police Services in India; Promotion: Meaning and Principles; Promotion of Police Personnel in India.

Unit-IV

Performance Appraisal; Police Ethics and Code of Conduct; Corruption – Meaning and Causes; Corruption in Police Force; Disciplinary Actions; Doctrine of Pleasure – Safeguards against Arbitrary Punishment.

Essential Readings:

1. Administrative Reforms Commission : Report on Personnel Administration, 11th Report, Government of India, New Delhi.
2. Goel, S.L. : Public Personnel Administration, Deep & Deep Publication Pvt. Ltd., New Delhi, 2006.
3. Mamoria, C.B. : Personnel Management, Himalaya Publishing House, Mumbai, 2007.
4. Zehra, Kaneez : Training of I.P.S., Ashish Publishing House, New Delhi, 1993.
5. Muthuswamy, P. : Swamy's Manual on Disciplinary Proceedings, Swamy Publishers (p) Ltd., Madras, 1986.

Further Readings

1. Saxena, A.P. : Training and Development in Government, The Indian Institute of Public Administration, New Delhi, 1974.
2. Singh, Sahib Bhayana, Singh, Swinder and Dogra, R.K. : Public Personnel and Financial Administration, New Academics, Jalandhar, 1990.
3. Ghosh, P. : Personnel Administration in India, Sudha Publications Private Limited, New Delhi, 1973.

POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

Law and Order Administration

(A) Course Objectives:

The principal objective of the syllabi is to acquaint the students with the basics of Law and Order Administration in India. Specifically, the students will be imparted the knowledge about the meaning, nature, scope and significance of Law and Order Administration in India along with some basic issues and emerging patterns. The endeavour is to discuss in detail the role and significance of Primary and Auxiliary Agencies of Law and Order Administration. Further, the role of Law and Order Administration in crowd management, communal riots, agrarian and industrial conflicts has also been discussed. The students are also taught about the challenges before Law and Order Administration. In addition, the concept of National Security along with challenges to it, in contemporary terms have been included in the syllabus.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Law and Order Administration; Significance of Law and Order Administration in India; Law and Order Administration – Some Basic Issues and Emerging Patterns.

Unit-II

Role, Significance and interrelationships of Law and Order Administration Agencies at the District level : The Police; Civil Administration; Court of Law; Prisons; and Health.

Unit-III

Role of Law and Order Administration in Crowd Management, Communal Riots and Industrial & Agrarian Conflicts. Challenges before Law and Order Administration.

Unit-IV

National Security: Concept and Significance. Challenges to National Security in India – Contemporary Issues.

Essential Readings:

1. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.
2. Sharma, K.K. : Law and Order Administration, National Book Organization, New Delhi, 1985.
3. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
4. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume - I, Ashish Publishing House, New Delhi, 1993.
5. Bharti, Dalbir : *Police Evam Log: Donon ke Adhikar Va Zimmedarian,* A.P.H. Publishing Corporation, New Delhi, 2007.
6. Singh, Yogendra : Social Change in India: Crisis and Resilience, Har-Anand Publications Pvt. Ltd., New Delhi, 2007.

Further Readings

1. Mayhall, Pamela D.et.al. : Police-Community Relations and the Administration of Justice, Prentice-Hall Inc., New Jersey, 1995.
2. Ghosh, S.K. : Keeping the Peace: For Whom the Bell Tolls (Police Then and Now), Ashish Publishing House, New Delhi, 1989.
3. Vadackumchery, James & Kattakayam, John : Human Behaviour and Law Enforcement, Ashish Publishing House, New Delhi, 1995.
4. Owens, R.Glynn and Ashcraft, J. Barrie : Violence: A Guide for the Caring Professions, Croom Helm, New Hampshire, USA, 1985.
5. Singh, K.P. ` : Police Gyan Vigyan, The Bright Law House Delhi, 2003.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper : FEMINIST THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :
This course offers the prominent theories that feminists have formulated to explain the matrix of gender inequality from the nineteenth century to the present. It further seeks to introduce the student to the key debates within feminist theories as well as the shifts in feminism.

Note : The students are expected to have a general understanding of the various strands of feminism and not of any specific feminist thinker in this course.

Course Contents :

Unit-I : Feminism

(a) Definition,

(b) Emergence of Feminism with special focus on

- Women in French Revolution,
- Suffrage Movement in the U.S.A. (with reference to Seneca Falls Convention and Declaration of Sentiments),
- Suffrage Movement in the U.K.

(c) Three waves of Feminism.

Unit-II : Strands of Feminism-I

(a) Liberal Feminism,

(b) Socialist Feminism,

(c) Marxist Feminism.

Unit-III : Strands of Feminism-II

(a) Radical Feminism

(b) Post modern Feminism

(c) Psycho-analytic Feminism (Freudian).

Unit-IV : Strands of Feminism-III

(a) Black Feminism

(b) Cultural Feminism

(c) Eco-Feminism.

NOTE :

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

Agarwal, Bina, **The Gender and Environment Debate: Lessons from India, Feminist Studies,** Vol. 18, No.1, Spring 1992, pp 119-158.

Anderson, Margaret, **Thinking About Women,** Macmillan, New York, 1993.

Beasley, Chris, **What is Feminism?,** Sage, London, 1999.

Bell Hooks, **Ain't I a Woman: Black Women and Feminism,** Pluto Press, London, 1982.

Bhasin, K. and Khan, N.S., **Feminism and its Relevance in South Asia, Women Unlimited**, New Delhi, 2013

Chatterjee, Mohini, **Feminism and Gender Equality,** Aavishkar, Jaipur, 2005.

Collins, Patricia Hill, **Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment,** Routledge, New York, 1999.

Desai, Leela, **Issues in Feminism,** Pointer Pub., Jaipur, 2004.

Geetha, V., **Theorizing Feminism,** Stree, Kolkata, 2012.

Molyneux, Maxinne and Steiberg, Deborah Lynn, **Mies and Shiva's Ecofeminism: A New Testament, Feminist Review,** No. 49, Spring 1995, pp 86-107.

Further Readings :

1. Banks, Olive, **Faces of Feminism: A Study of Feminism as a Social Movement,** St. Martin's Press, New York, 1981.

2. Freeman, Jo (ed.), **Women: A Feminist Perspective,** Palo Alto, California : Mayfield, 1975.

3. Kosambi, Meera, **Crossing Thresholds: Feminist Essays in Social History**, Permanent Black, New Delhi, 2007.

4. Mishra, Binod (ed.), **Critical Responses to Feminism,** Sapru & Sons, New Delhi, 2006.

5. Shukla, Bhaskar A., **Feminism : From Mary Wollstonecraft to Betty Friedan,** Sapru & Sons, New Delhi, 2007.

6. Spender, Dale, **Feminist Theorists: Three Centuries of Women's Intellectual Traditions,** The Women's Press, London, 1982.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

Paper : Status of Women in India – II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective : This course aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Unit-I : Demographic Trends

(a) Sex Ratio, Age Specific Sex Ratio : Trends

(b) Change in Sex Ratio : Causes and Consequences

(c) Fertility Rates

(d) Definitions: Infant Mortality Rate, Child Mortality Rate, Total Mortality Rate, Maternal Mortality Rate, Causes of Gender Differentials in Mortality Rates

Unit-II : Women and Education

(a) Gender Gaps in Literacy Rates, School Enrolment and Dropout Rates and Right to Education

(b) Women in Higher Education : Gender Gaps

(c) Obstacles to Women's Education : Socio Cultural, Economic and Infrastructural

Unit-III : Women and Health

(a) Definition : Health & Reproductive Health

(b) Factors affecting Women's Health Status

(c) Issues relating to women's health status : Nutritional health status of women and girl child in India.

Unit-IV : Women and Work :

(a) Changing definition

(b) Gender differential in Work Participation Rates

(c) Sexual Division of Labour

(d) Sexual Harassment at the Workplace

(e) Obstacles to Women's Workforce Participation : Cultural, Skill development etc.

NOTE :

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

1. Chatterjee, Meera , **A Report on Indian Women from Birth to Twenty,** NIPCCD, New Delhi, 1999.

2. Gopalan, Sarala and Shiva, Mira, **National Profile on Women, Health and Development,** VHAI & WHO, 2000.

3. Gopalan, Sarala, **Towards Equality - The Unfinished Agenda : Status of Women in India -2001,** National Commission for Women, New Delhi, 2002.

4. Menon-Sen, Kalayani and Shiva Kumar, A.K., **Women in India ! How Free?, How Equal?** Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.

5. **National Human Development Report, 2001**, Planning Commission, Govt. of India, March, 2002.

Further Readings :

1. Ali, Aruna Asaf, **Resurgence of Indian Women,** Nehru Memorial Museum and Library, New Delhi, Radiant ,1991.

2. Ali, Azra Asghar, **The Emergence of Feminism Among Indian Muslim Women,** 1920-1947, Oxford, Karachi, 2000.

3. Anand, Meena **Dalit Women : Fear and Discrimination,** Isha Books, Delhi, 2005.

4. Bhattacharya, Rinki (ed.), **Behind Closed Doors : Domestic Violence in India,** Sage, New Delhi, 2004.

5. Choudhary, Prem, **Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India**, OUP, New Delhi, 2007.

6. Desai, Neera and Krishnaraj, Maithreyi (ed.), **Women and Society in India**, Ajanta Publication, New Delhi, 1987.

7. Kumar, Hajira (ed.), **Status of Muslim Women in India**, Aakar Books, Delhi, 2002.

8. Mohanti, Bedabati, **Violence Against Women: An Analysis of Contemporary Realities**, Kanishka Publication, New Delhi, 2005.

9. Mohini, Giri, V., **Deprived Devis : Women's Unequal Status in Society Gyan**, New Delhi, 2006.

10. Rajawat, Mamta, **Dalit Women : Issues and Perspectives**, Anmol Pub, New Delhi, 2006.

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HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

PAPER : HUMAN RIGHTS & DUTIES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:
The course is designed to make students aware about the human rights and duties framework in India. An attempt has been made to deal the issue within the ambit of evolution of the concepts of human rights and duties; Constitutional structure and Implementation mechanisms.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: EVOLUTIONARY PHASE

(i) Evolution of the concept of Human Rights in India
(ii) The notion and significance of Duties in India
(iii) Values and relevance of composite culture of India: non-violence; secularism and fraternity

UNIT II: CONSTITUTIONAL FRAMEWORK

(i) The Preamble
(ii) Fundamental Rights
(iii) Directive Principles of State Policy
(iv) Fundamental Duties

UNIT III: KEY AREAS IN THE CONTEMPORARY PHASE

(i) Right to food security
(ii) Right to Education
(iii) Right to Information
(iv) Right to clear environment

UNIT IV: IMPLEMENTATION OF HUMAN RIGHTS

(i) Constitutional Machinery: Role of Judiciary
(ii) Statuary Machinery: National Human Rights Commission and State Human Rights Commissions

Essential Readings:

1. Brownlie Ian, et al.(eds), *Basic Documents on Human Rights*, (2006) Oxford.

2. Gandhi, P.R. (ed), *Blackstone's International Human Rights Documents* (2001),Universal, Delhi.

3. David Robertson, *A Dictionary of Human Rights*, Europa Publications, (2004), London.

4. Basu, D.D., *Introduction to the Constitution of India,* (1997), New Delhi: Prentice Hall of India.

5. Henry J. Steiner, et al., (eds.), *International Human Rights in Context*, Chapter 10, (1996) Clarendon Press, Oxford.

6. Brundland Report, *Our Common Future,* (1986), Oxford.

Further Readings:

1. Kapoor, S.K:, *Human Rights under International Law and Indian Law*, (2014) Central Law Publications, Allahabad.

2. Kapoor, S.K:, *Human Rights under International Law*, (2009) Central Law Publications, Allahabad.

3. Paul, R.C., *Situation of Human Rights in India,* (2000) Commonwealth New Delhi: Publishers.

4. Rao, Ashiwini, *Status of Human Rights in India*, (2010) New Delhi, Pacific.

5. South Asian Human Rights Documentation Centre : *Human Rights and Humanitarian Law,* (2008) South Asian Human Rights Documentation Centre, New Delhi.

6. South Asian Human Rights Documentation Centre: *Introducing Human Rights,* New Delhi, (2006) South Asian Human Rights Documentation Centre, New Delhi.

HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

PAPER : HUMAN RIGHTS ISSUES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:

The Paper deals with a few specific issues in India along with some key responses emerging from the Indian society for the protection and Promotion of human rights.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: HUMAN RIGHTS & LABOUR

(i) Bonded Labour
(ii) Unorganized labour
(iii) Child Labour

UNIT II: STRUCTURAL PROBLEMS AND IMPACT ON HUMAN RIGHTS

(i) Poverty
(ii) Illiteracy
(iii) Unemployment

UNIT II: HUMAN RIGHTS & CRIMINAL JUSTICE

(i) Concept of Criminal Justice System in India
(ii) Rights of the accused
(iii) Rights of the victim

UNIT IV: SOCIAL AUDITING FOR HUMAN RIGHTS

(i) Definition, significance of social auditing
(ii) Agent of Social Auditing including Human Rights Defenders
(iii) Role of Media in social auditing
(iv) Role of Civil Society in social auditing

Essential Readings:

1. Amita Agarwal, *Human Rights for Survival of Civilization*, (2004), Kalinga Publications, Delhi.

2. V.R.Krishna lyer, *Human rights – A judge's Miscellany,* (1995) B. R. Publishing Corporation, Delhi.

3. Satish C. Shastri(ed), *Human Rights, Development and Environmental Law: An Anthology,* (2007), Jain Book Agency, Delhi.

4. Kalpana Kannabiran, *Crafting Human Rights Cultures*, (2006), NALSAR University of Law.

5. Upendra Baxi (ed.), *The Right to be Human*, (1987), Lancer International, New Delhi.

6. R.C.Mishra, *Human Rights and Policing*, Authors Press, (2005), New Delhi.

Further Readings:

1. K.I. Vibhute, *Criminal Justice A Human Rights Perspective of the Criminal Justice Process in India*, (2004), Eastern Book Company, Lucknow.

2. Khanna, S.K., *Children and the Human Rights,* (1998), Commonwealth, New Delhi.

3. Pandit Kamalkar, Human Rights and Criminal Justice, (2010), Asia Law House, Hyderbad.

4. Pachauri, S.K., *Children and Human Rights,* (1999), APH Publications, Delhi.

5. Pachauri, S.K. *Women and Human Rights,* (1999), APH Publications, New Delhi.

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RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

PAPER- III, SIKH RELIGION AND HISTORY

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs.

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Life, Teachings and Contribution: Guru Nanak Dev, Guru Angad Dev, Guru Amar Das, Guru Ram Das and Guru Arjun Dev; Martyrdom of Guru Arjan Dev.

Unit - II

Life, Teachings and Contribution: Guru Hargobind, Guru Har Rai, Guru Harkrishan,Guru Teg Bahadur and Guru Gobind Singh; Martyrdom of Guru Tegh Bahadur.

Unit - III

Life, Teachings and Contribution:Bhagats and Bhatts

Unit - IV

Compilation of the *Adi Granth*; Foundation of the Khalsa

Essential Readings

- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ, ਡਾ. (ਮੁਖ ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀਕਾਰ ਵਿਸ਼ੇਸ਼ ਅੰਕ-57 ਮਾਰਚ 2●●3, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅਜਮੇਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਪ੍ਰਗਟਯੋ ਖਾਲਸਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਰਾਜਿੰਦਰ ਸਿੰਘ ਜਾਲੀ, ਸਿਖ ਇਤਿਹਾਸ ਦੀਆਂ ਝਲਕੀਆਂ, ਜਾਲੀ ਲਿਟਰੇਟਚਰ ਹਾਊਸ ਦਿੱਲੀ-ਅਮਰੀਕਾ
- ਹਰਚਰਨ ਸਿੰਘ, ਡਾ., ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਨਾਨਕ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ , ਡਾ. , ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀ ਸੰਪਾਦਨਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਡਾ. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿਲੋ, ਗੁਰੂ ਰਾਮਦਾਸ, ਰੂਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਅੰਮ੍ਰਿਤ ਲਾਲ ਪਾਲ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ- ਜੀਵਨ ਤੇ ਬਾਣੀ, ਸੰਗਮ ਪਬਲੀਕੇਸ਼ਨ
- ਗੁਰਮੁਖ ਸਿੰਘ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ: ਜੀਵਨ ਦਰਸ਼ਨ ਤੇ ਬਾਣੀ, ਰੁਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਸਤਿਬੀਰ ਸਿੰਘ, 'ਗੁਰ ਭਾਰੀ' ਜੀਵਨੀ ਗੁਰੂ ਹਰਿਗੋਬਿੰਦ ਜੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਅਮਰਦਾਸ- ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).
- Grewal, J.S., *Guru Nanak in History*, Chandigarh: Panjab University, 1979.
- Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: Oxford University Press, 1968.
- G.S. Talib: *Guru Nanak; His personality & Vision*

Further Reading

- ਇੰਦੂਭੂਸ਼ਨ ਬੈਨਰਜੀ, ਖਾਲਸੇ ਦੀ ਉਤਪਤੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਿਆਰ ਸਿੰਘ, (ਸੰਪਾ.) ਸ੍ਰੀ ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ (ਫਾਰਸੀ ਸਰੋਤ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਡਾ. ਗੁਰਸ਼ਰਨ ਜੱਗੀ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਬਾਣੀ, ਗੁਰਮਤ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ
- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).
- Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

PAPER- IV SIKH LITERATURE AND INSTITUTIONS

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Unity of Guruship; Institution of Gurdwara

Unit -II

Different sects within the Sikh Movement (Udasis, Minas, Dhirmalya , Ram Raiyas) origin and development

Unit - III

Study of *Japji* and *Chandi Di Var* (Message and Formation)

Unit - IV

Study of Janam Sakhis; Tika; Parmarath; Gost. (Definition and Features) (Two out of three)

Essential Readings

- ਨਰਿੰਦਰ ਕੌਰ ਭਾਟੀਆ ਅਤੇ ਜਸਵਿੰਦਰ ਕੌਰ ਢਿਲੋਂ, ਡਾ. (ਸੰਪਾ.) ਪ੍ਰਮੁੱਖ ਸਿੱਖ ਸੰਸਥਾਵਾਂ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਤਾਰਨ ਸਿੰਘ, ਗੁਰਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਦਰਸ਼ਨ ਸਿੰਘ, ਡਾ., ਧਰਮ ਅਧਿਐਨ ਅਤੇ ਸਿੱਖ ਅਧਿਐਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਜਪੁਜੀ, ਵਿਚਾਰਧਾਰਾ, ਪ੍ਰਬੰਧ ਤੇ ਪਾਠ, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਰਾਮ ਸਿੰਘ, ਡਾ. ਜਪੁਜੀ ਦੇ ਪੰਜ ਖੰਡ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ, ਚੰਡੀ ਦੀ ਵਾਰ, ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
- ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਚੰਡੀ ਦੀ ਵਾਰ, ਗੁਰਮਤਿ ਪ੍ਰਕਾਸ਼ਨ ਪਟਿਆਲਾ
- ਹਰਬੰਸ ਸਿੰਘ ਗਿਆਨੀ, ਚੰਡੀ ਦੀ ਵਾਰ ਸਟੀਕ, ਸਹਿਗਲ ਪ੍ਰਿੰਟਿਰਜ਼ ਜਲੰਧਰ

Further Reading

- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Grewal, J.S., *Sikh Ideology, Polity and Social Order*, New Delhi: Manohar, 1996.
- Mcleod, W.H., *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999.
- Jagraj Singh: A complete guide to Sikhism, Unistar Chandigarh, 2011

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ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper : Air Pollution and Climate Change

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Paper : AIR POLLUTION AND CLIMATE CHANGE

Unit-I

Atmosphere: Composition of atmosphere, Air Pollution: Sources, Classification (Natural and anthropogenic sources; primary and secondary pollutants), Smoke, Smog, Particulate Matter and Acid rain. Effects of air pollution on human health, plants, animals and material. Air (Prevention and Control of Pollution) Act, 1981.

Unit-II

Green House Effect: Definition, Green house gases, Sources of green house effect, Global Warming.

Stratospheric ozone layer depletion. Role of agriculture to green house effect (paddy and livestock, biomass burning) in GHE.

Unit-III

Noise pollution: Definition, Sources, Noise standards, Silence Zones, Consequences of noise pollution.

Radioactive Pollution: Definition**,** Sources, effect on human health.

Mineral Resources: Types and Importance of minerals; Mineral extraction and environmental problems (limestone mining in Moussourie hills, coal mining in Jharkhand).

Unit-IV

Control: Measures and techniques to control air pollution in vehicles and industries, Green building concept, CDM (Clean Development Mechanism), Carbon sequestration. Control of noise pollution.

PRACTICAL

To monitor the level of Dust fall, SPM in surrounding atmosphere.

To monitor the level of NOx and SO_2 in surrounding atmosphere.

To prepare a survey report on different sources causing air pollution in local area.

To prepare a survey report on noise pollution in your locality.

To visit, collect data and prepare report regarding air and water pollution from sugar mill, thermal plant, cement factory in the adjoining area like Nawanshahr, Ropar, and Hoshiarpur.

ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

Paper : SOLID WASTE AND DISASTER MANAGEMENT

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Unit-I

Solid waste: Sources, nature and characteristics; categories of solid waste, Biodegradable and non-biodegradable waste; Plastic nuisance. Solid waste disposal: Sanitary landfills, Composting, optimum conditions for composting, Pyrolysis, Incineration and Refuse Derived Fuels. Fly Ash utilization, MSW Handling Rules, 2000.

Unit-II

Natural disasters: Floods, earthquakes, Tsunami, land slides, drought, forest fire and Tropical cyclones.

Disaster management: pre-disaster phase, actual disaster phase, post- disaster phase.

Unit-III

Bioenergy and waste water treatment: Biogas plant: Construction and working of biogas plants, its advantages and disadvantages. Vermi-culture and Vermi-composting, Biofertilisers, Biofuels.

Waste water treatment (STP and ETP), A brief account of primary, secondary and tertiary treatment.

Unit-IV

Organic farming: Definition, Need of Organic Farming, Methods: Soil management, weed management, control of pests. Its advantages. Organic Food, its benefits.

Waste lands: Definition, Categories of waste lands, Desertification, ways of reclamation.

PRACTICAL

A visit to Composting/Vermicomposting Unit.

To prepare a survey report of municipal waste of your city (Generation to disposal).

Classify the waste of your municipality waste (Source based and Waste based)

To visit any landfill site and prepare a tour report.

To prepare a list of herbicides / pesticides / insecticides commonly used in this area

To make a list of various botanical pesticides available in the market

Assignments/project as assigned by the teacher

Books Recommended

1. Critchfield, Howard J., General Climatology, Second Edition, Prentice-Hall, Inc., 1982.
2. Houghton, J., Global Warming, The Complete Briefing, 3rd Edition, Cambridge Univ. Press, 2006.
3. Hill, M. K., Understanding Environmental Pollution, Cambridge Univ. Press, 2008.
4. Malsin, M., Global Warming, A Very Short Introduction, Oxford Univ. Press, 2009
5. Tchobanogloas, G., Integrated Solid Waste Management: Engineering, Principle and Management. McGraw Hill, USA. 1993.
6. Singh, H.M., Solid Waste Management. Alfa Publications, Delhi. 2010.
7. Bhatnagar R.K. & Palta R.K., Earthworm Vermin Culture & Vermi Composting, Kalyani, Pub. 2007.
8. Ranganathan L.S, Vermi biotechnology: From Soil Health to Human Health, Updesh Purodit Pub. Jodhpur, 2006.
9. Aggarwal, A. K., Water Pollution, APH Publications, New Delhi, 2008.
10. American Public Health Association, Standard Methods for Examination of Water and Wastewater, APHA, New York, 2003.
11. Sengupta, B., John, S. & Abraham, T. Forth Estate, A Handbook on Air, Water and Land Pollution. IDMA Foundation for Sustainable Development and BR Publications Corporation, Delhi. 2006.
12. Aggarwal, A. K., Noise Pollution. APH Publications, New Delhi, 2008.
13. Veeresh, G. K., Organic Farming. Foundation Books, Delhi, 2006.
14. Gehlot, D., Organic Farming: Components and Management, Agrobios, Jodhpur, 2010.
15. Singh, K. K. & Aleyer, L., Disaster Management: Manmade Disasters. APH Publications. 2010.
16. Dhunna, M., Disaster Management, Vayu Education of India, Delhi, 2009.
16. Sharma & Sharma, Natural Disasters, APH Publications, 2009.
17. Dara, S.S., A Textbook of Environmental Chemistry. 2nd Edition. S. Chand & Company Ltd., Ram Nagar, New Delhi, 2010.

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HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER- III

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	6	40	10	1	6	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-III

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Equipment & supplies used for Clothing construction - their use & care
2. Sewing Machine :
   (a) Parts of Sewing Machine and its accessories.
   (b) Common defects in sewing machine & their remedies.
   (c) Care of Sewing Machine.

SECTION-B

1. Recording of body measurements & care to be taken while taking body measurements.
2. Preparation of fabric for construction- shrinking and straightening.
3. Tools of Drafting, Steps involved in drafting from measurement to garment construction, points to be kept in mind while making a draft.
4. Terms used in construction i.e. Seam Allowance, Ease, Selvedge, Dart, Grain line, Stay stitching.

SECTION-C

1. Classification of textile fibres
2. Manufacture and Properties of fibres:
   Cotton, Silk, Wool, Nylon.

SECTION-D

1. Different types of yarns:

   Simple, Novelty and Textured Yarns.

2. Fabric Construction –
   (A) Weaving - Parts of a loom, Process of weaving & Types
      a. Simple weaves – Plain, Rib, Basket
      b. Twill weaves
      c. Satin weave & Sateen weave

   (B) Knitting, Felting and Bonding.

(SEMESTER-III)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 40
Internal Assessment : 10
Time : 6 periods/week

1. Make samples of the following :

(a) Tacking, running stitch, hemming, Back Stitch, Fasteners using buttonhole stitch

(b) Seams—Flat seam, Counter hem, Mantua maker, French Seam & Run & Fell seam.

(c) Processes—Continuous wrap, two piece placket opening, pleats, gathers into a band, tucks.

(d) Joining- shaped facing on V neck line & piping on round neck.

2. Embroidery—any "10" fancy stitches.

3. Drafting of the following:

(a) Jangia
(b) Bloomer
(c) Child's bodice block
(d) Sleeve- Plain sleeve, Puff sleeve
(e) Collars- Baby, Cape & Peter Pan

4. Construction of following :

(a) Jangia
(b) Bloomer
(c) Gathered frock with any sleeve and collar.

HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER- IV

SEMESTER-IV

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	6	40	10	1	6	40	10	100
									Total :	**100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-IV

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 40
Int. Ass. : 10
Periods : 6 Hours/8 periods per Week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of 8 objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Elements of art such as colour, form, texture, shape and line
2. Principles of design such as Harmony, Balance, Rhythm, Emphasis, Proportion in relation to clothing

SECTION-B

1. Introduction to Fashion, Fad and Style.
2. Selection of suitable clothes for following age groups :
   Infants, Toddlers, School going children, Adolescents, Adults, Elderly.
3. Care & Storage of garments of cotton, wool, silk.

SECTION-C

1. Bleaches- Oxidising, reducing bleaches & their suitability to different fabrics.
2. Finishing- types & importance. Different Finishes- Sizing, Desizing, Calendering, Sanforising, Mercerization, Crease resistant, Water proof & Water repellent, Flame resistant & Flame proof.

SECTION-D

1. Application of colour on fabrics
   (a) Dyeing-Simple dyeing of cotton
   (b) Resist-Tie, Dye and Batik
2. Printing-Block printing, screen printing, roller printing
3. Methods of Laundry/Washing.

(SEMESTER-IV)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 40
Internal Assessment : 10
Time : 6 periods/week

1. Laundry :

   (a) Testing of cotton, wool silk and nylon by burning test.
   (b) Stain Removal : Rust, Coffee, Tea, Paint, Nail Polish, Lipstick, Perfume, Blood, Boot Polish, Ink (Ball Pen), Curry and Juice.

2. Laundry & finishing of following garments :

   *Cotton : Salwar, Kameez.

   *Synthetic : Gathered Frock/Pleated Skirt.

   *Woollen : Cardigan/Pullovers.

   * Spot cleaning of a Shawl.

3. Preparation of samples of Tie and Dye & Block Printing.
4. Drafting and construction of the following garments:
   a. Petticoat
   b. Lady's kameez and salwar

5. Project on Care Labels of Garments or Market survey of Laundry Products.

Reference Books :

1. Singer Sewing Book, Mary Brocks Bichen, McGraw Hill Book Company, Inc., New York, Toronto, London, 1953.

2. Basic Processes & Clothing Construction, Sherie Doongaji & Raushni Deshpande, Raaj Prakashan, New Delhi (Fourth Revised edition).

3. Pattern Drafting Vol. III, Dress Making, Kamakura—Shobo Publishing Co. Ltd., Tokyo, Japan, 1972 (Fifth Edition).

4. A Manual of Children Clothing, Savitri Pandit, Orient Longmans Ltd., Bombay, 1967.

5. Practical Dress Design, Principles of Fitting and Pattern Making, Mabel D. Erwin, The Macmillan Company, New York, Ninth Printing, 1966.

6. Indian Embroidery, Its Variegated Charms, Savitri Pandit, Faculty of Home Sciences, Baroda, 1976, First Edition.

7. The Basic Book of Sewing, Eve Harlow Pub. Octopids Books Ltd., London.

8. Simple Dress Making 2, Maureen Guddsworthy Pub. Mills & Boon Ltd., London.

9. Encyclopaedia of Dress Making, Pub. Marshall Caven Dish Books Ltd., London.

10. Textile Fabrics and their Selection, Isable B. Wingate Prentice Hall, Inc., Englewood Cliffs, N.J., 1970.

11. Fundamentals of Textiles and their Care, Susheela Dantyagi, Orient Longmans, Bombay, Calcutta, Madras, New Delhi, Reprinted, 1968.

12. Household Textiles and Laundry Work, Durga Deulkar, Atma Ram & Sons, New Delhi, 1973.

13. Ideas for Fabric Printing and Dyeing Gooch, Peter H. Charles Cribner's, New York, 1974.

14. Encyclopaedia of Textiles, Fabrics, Grayson Martin, John Wiley, New York, 1984.

15. Tie-Dyed Textiles of India—Veronica Murphy & Rosemary Crill, Pub. Mapiu Publishing Pvt. Ltd., Ahmedabad.

16. Fashion and Textile Design, Neelima.

17. Printing and Washing of Textile, Neelima

18. Handbook of Fashion and Textile Designing, R. K. Sahu.

19. Traditional Embroidery of India, Shailajan D. Naik.

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MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper-I : ADVANCED CALCULUS-I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note :

1. The syllabus has been split into two Units : Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions in all selecting at least two questions from each unit. Each question will be of 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorials.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Limit and continuity of functions of two and three variables. Partial differentiation. Change of variables. Partial derivation and differentiability of real-valued functions of two and three variables. Schwarz and Young's theorem. Statements of Inverse and implicit function theorems and applications.

Vector differentiation, Gradient, Divergence and Curl with their properties and applications.

Unit-II

Euler's theorem on homogeneous functions. Taylor's theorem for functions of two and three variables. Jacobians. Envelopes. Evolutes. Maxima, minima and saddle points of functions of two and three variables. Lagrange's multiplier method.

References

1. Gabriel Klaumber : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
2. T.M. Apostol : Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
3. R.R.Goldberg : Real Analysis, Oxford & I.B.H. Publishing Co., New Delhi, 1970.
4. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.
5. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6. Gorakh Prasad : Differential Calculus, Pothishala Pvt.Ltd., Allahabad.

7.	J. D. Murray & M. R. Spiegel	:	Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
8.	S.C.Malik	:	Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
9.	Shanti Narayan	:	A Course of Mathematical Analysis, S. Chand and Company, New Delhi
10.	J. D. Murray & M.R. Spiegel	:	Vector Analysis, Schaum Publishing Company, New York.
11.	N.Saram and S.N. Nigam	:	Introduction to Vector Analysis, Pothishala Pvt. Ltd., Allahabad.
12.	Shanti Narayan	:	A Text Book of Vector Calculus, S. Chand & Co., New Delhi.

Paper II : DIFFERENTIAL EQUATIONS- I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Exact differential equations. First order and higher degree equations solvable for x, y, p. Clairaut's form. Singular solution as an envelope of general solutions. Geometrical meaning of a differential equation. Orthogonal trajectories. Linear differential equations with constant coefficients.

Unit-II

Linear differential equations with variable coefficients- Cauchy and Legendre Equations. Linear differential equations of second order- transformation of the equation by changing the dependent variable/the independent variable, methods of variation of parameters and reduction of order. Simultaneous Differential Equations

References

1.	Erwin Kreyszig	:	Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2.	D.A. Murray	:	Introductory Course on Differential Equations, Orient Longmen, (India), 1967.
3.	A.R. Forsyth	:	A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4.	Ross, S.L.	:	Differential Equations, John Willey & Sons, 2004.

Paper III : STATICS

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Basic notions. Composition and resolution of concurrent forces – Parallelogram law of forces, Components of a force in given directions, Resolved parts of a force, Resultant of any number of coplanar concurrent forces, Equilibrium conditions for coplanar concurrent forces, equilbrium of a body resting on a smooth inclined plane. Equilibrium of three forces acting at a point – Triangle law of forces, $\lambda - \mu$ theorem, Lami's theorem. Parallel Forces.

Unit-II

Moments and Couples – Moment of a force about a point and a line, Centre of Parallel forces, theorems on moment of a couple, Equivalent couples, Varignon's theorem, generalized theorem of moments, resultant of a force and a couple, resolution of a force into a force and a couple, reduction of a system of coplanar forces to a force and a couple. Equilibrium conditions for any number of coplanar non-concurrent forces.

Friction: Definition and nature of friction, laws of friction, equilibrium of a particle on a rough plane, Problems on ladders, rods, spheres and circles.

References

1. S.L. Loney : Statics, Macmillan and Company, London.
2. R.S. Verma : A Text Book on Statics, Pothishala Pvt. Ltd., Allahabad.
3. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics, S. Chand and Company
4. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.

MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

Paper I: ADVANCED CALCULUS II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Definition of a sequence, Bounds of a sequence, Convergent, divergent and oscillatory sequences, Algebra of limits, Monotonic Sequences, Cauchy's theorems on limits, Subsequences, Bolzano-Weirstrass Theorem, Cauchy's convergence criterion.

Sequential continuity and Uniform continuity of functions of single variable.

Unit-II

Series of non-negative terms, P-Test, Comparison tests, Cauchy's integral test, Cauchy's Root test, Ratio tests, Kummer's Test, D'Alembert's test, Raabe's test, De Morgan and Bertrand's test, Gauss Test, Logarithmic test, Alternating series, Leibnitz's theorem, Absolute and conditional convergence, Rearrangement of absolutely convergent series, Riemann's rearrangement theorem.

References

1. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi 1997.
2. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi 2000.
3. J. D. Murray & M.R. Spiegel : Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
4. S.C.Malik : Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
5. O.E.Stanaitis : An Introduction to Sequences, Series and Improper Integrals, Holden – Dey, Inc., San Francisco, California.
6. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.
7. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper II : DIFFERENTIAL EQUATIONS- II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Series solution of differential equations-Power Series method, Bessel and Legendre equations.

Bessel functions of First and Second kind. Legendre function. Generating function. Recurrence relation and orthogonality of Bessel and Legendre function.

Partial Differential Equations: Origin of first order Partial Differential Equations, Linear Equation of first order, Integral surfaces passing through a given curve, surfaces orthogonal to a given system of surfaces.

Unit-II

Inverse Laplace transforms- Linearity property, Shifting properties, Change of Scale Property. Inverse Laplace transforms of derivatives and integrals, Convolution theorem.

Applications of Laplace Transforms - Solution of differential equations with constant coefficients, Solution of differential equations with variable coefficients, Solution of simultaneous differential equations.

Laplace Transformation-Linearity of the Laplace transformation. Existence theorem for Laplace transformations, Shifting Theorems, Laplace transforms of derivatives and integrals, Multiplication of t^n, Division by t.

References

1. Erwin Kreyszig : Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2. D.A. Murray : Introductory Course on Differential Equations, Orient Longmen, (India) 1967.
3. A.R. Forsyth : A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4. Sneddon, I.N. : Elements of Partial Differential Equations, McGraw Hill, 1957.
5. J. D. Murray & M. R. Spiegel : Schaum Series, Laplace Transforms.
6. Ross, S.L. : Differential Equations, John Willey & Sons, 2004.

Paper III : DYNAMICS

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

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Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.

3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.

4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Motion of a particle with constant acceleration, acceleration of falling bodies, motion under gravity, motion of a body projected vertically upwards: Newton's Laws of Motion, Motion of two particles connected by a string, motion along a smooth inclined plane, constrained motion along a smooth inclined plane. Variable acceleration: Simple harmonic motion, elastic string.

Unit-II

Curvilinear motion of a particle in a plane: Definition of velocity and acceleration, projectiles, motion in a circle.

Work, power, conservative fields and the potential energy, work done against gravity, potential energy of a gravitational field.

Relative motion, relative displacement, velocity and acceleration, motion relative to a rotating frame of reference.

Linear momentum, angular momentum, conservation of angular momentum, impulsive forces, principle of impulse and momentum, motion with respect to centre of mass of a system of particles, collisions of elastic bodies, loss of energy during impact.

References

1.	S.L. Loney	:	An Elementary Treatise on the Dynamics of a Particle and of Rigid bodies, Cambridge University Press, 1956.
2.	K.R.Chaudhery and A.C.Aggarwal	:	Elements of Mechanics, Statics and Dynamics. S Chand and Company
3.	S. L. Loney	:	The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.
4.	Donald T. GreenWood	:	Principles of Dynamics, Second Edition, Prentice Hall of India.
5.	M . Ray	:	A Text Book on Dynamics , S. Chand and Company- 1989

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COMPUTER SCIENCE
SEMESTER-III

SCHEME OF EXAMINATION

THIRD SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS05	**Theory-A**	**Computer Organization**	**3**	**30**	**5**	**35**
Paper –CS06	**Theory-B**	**Object Oriented Programming using (C++)**	**3**	**30**	**5**	**35**
Paper – PCS03	**Practical-C**	**Practical Based on Paper – CS06**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS05 : Computer Organization

Objective : To teach the students the basics of computer organization, Microprocessor & basic know how about system maintenance.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Representation of Information : Number system: Binary, Decimal, Hexadecimal, Octal; Conversions; integer and floating point representation, character codes (ASCII, EBCDIC), error detection and correction codes: Parity bit method, Hamming code; Boolean algebra.

UNIT – II

*Basic Building Blocks :*Combinatorial logic design : Gates, Half Adder, Full Adder, Encoder, Decoder, Multiplexer : Sequential Building Block : Flip-Flops, Registers, Counters: Synchronous and Asynchronous Counters, Bus.

Microinstructions : Register Transfer, Arithmetic, Logical and Shift Operations; Instruction : Instruction Format, Instruction Cycle; Interrrupt: Interrupt types, Interrupt Cycle.

UNIT – III

Micrprocessor : Architecture of 8086/8088 Processor Model; Instruction Set; Addressing Modes: Registgers used in Mircoprocessor.

Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/Output.

UNIT – IV

System Maintenance : Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, types of displays and other peripheral devices, installing software; Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection of Viruses, Protection from Viruses.

Suggested Readings :

Essential :

1. Mano, M.M. : *Computer System Architecture,* 3rd Ed., Dec., 1998, PHI.

Further Reading :

2. Tannenbaum, A.S. : *Structured Computer Organization,* 3rd Ed., Oct., 1993, PHI.

3. Gear, C.W. : *Computer Organisation and Programming,* McGraw Hill, 1975.

4. Langholz, G., Grancioni, J. & Kandel, A. : *Elements of Computer Organization,* Prentice Hall International, 1988.

5. Hayes : *Computer Architecture and Organization,* McGraw Hill, International Edition.

6. Sloan, M.E. : *Computer Hardware and Organization,* 2nd Edition, Galgotia Pvt. Ltd.

Paper-CS06 : Object Oriented Programming (using C++)

Objective : To teach the students the implementation of various object oriented programming concepts through C++ programming

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts of Object Oriented Programming(OOP) : Object, Class, Encapsulation, Data Hiding, Inheritance, Polymorphism. Analysis and design of system using Object Oriented Approach, Benefit of OOPs.

Structure of a C++ Program : Include files, Declaration of class, Main function, I/O streams.

Classes : Class Declaration : Data Members, Member Functions, Private and Public members, data hiding and encapsulation, arrays within a class.

Objects : Creating Objects, Accessing class data members, Accessing member functions, Methods of passing arguments to functions.

UNIT – II

Object Concepts: Arrays of Objects, Objects as function arguments: Pass by value, Pass by Reference, Pointers to Objects.

Functions in C++ : Member function definition inside the class declaration and outside the class declaration, scope resolution operator, Private and Public member function, Nesting of member functions, Static and Friend functions.

UNIT – III

Constructors and Destructors: Constructors: Declaration and Definition, Default Constructors, Parameterized Constructors, Copy Constructors. *Destructors*: Definition and use.

Inheritance – Extending Classes : Concept of inheritance, base class, derived class, defining derived classes, visibility modes, private, public, protected; single inheritance : privately derived, publicly derived; making a protected member inheritable, access control to private and protected members by member functions of a derived class, multilevel inheritance, nesting of classes.

UNIT – IV

Polymorphism : Definition, types, Function overloading, Operator Overloading, Virtual functions and pure virtual functions.

Suggested Readings :

Essential :

1. Stroustrup : ***The C ++ Programming Language,*** **Addison Wesley.**
2. E. Balaguruswamy : ***Object Oriented Programming with C++,*** **TMH.**

Further Reading :

3. Robert Lafore : ***OOP in Turbo C++,*** **Galgotia.**
4. Herbert Schildt : ***Schildt's Advanced Win 95 Prog. in C & C++,*** **TMH.**
5. Herbert Schildt : ***C++ The Complete Reference,*** **TMH.**

Paper – PCS03 : Practical Based on Paper CS06

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COMPUTER SCIENCE
SEMESTER-IV

SCHEME OF EXAMINATION

FOURTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS07	**Theory-A**	**Database Concepts**	**3**	**30**	**5**	**35**
Paper –CS08	**Theory-B**	**Data Structures**	**3**	**30**	**5**	**35**
Paper – PCS04	**Practical-C**	**Practical Based on Paper – CS08**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS07: Database Concepts

Objective : To teach the underlying concepts of database system in depth to students.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach; Data Independence.

UNIT – II

Relational Data Model: Relational model concepts, Integrity constraints over Relations, Conventional Data Models : An overview of Network and Hierarchical Data Models. The 12 Rules (Codd's Rule) for an RDBMS; Entity Relationship model.

UNIT – III

Relational Algebra and Calculus: Storage Organization for Relations, Relational Algebra: Operations - union, intersection, difference, Cartesian product, projection, selection, division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

UNIT – IV

Advance concepts: Client-Server Architecture, 3-tier Architecture of database, Distributed databases, Normalization: First, second and third Normal Form, Boyce Codd Normal Form; Database Integrity: entity and referential; Security: , Concurrency, Recovery

Suggested Reading

Essential :

1. Date, C.J., 1981 : *An Introduction to Data Base Systems,* Vols. I and II, Addison-Wesley.

Further Readings

2. Ullman, Jeffrey D., : *Principles of Data Base Systems,* 2nd Edition, Galgotia Publ. Pvt. Ltd. 1982.
3. Whittington, R.P. : *Data Base System Engineering,* Clavendon Press.
4. Pratt, P., 1987 : *Data Base Systems Management and Design,* Boyd and Fraser Publ.
Comp.

Paper-CS08 : Data Structures

Objective : To teach the students various data structures and operations performed on them using algorithms. The students will be capable to implement these operations using any programming language.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures; **Arrays**: Introduction, Types of Array, Memory representation, Applications and operations. **Stacks**: Introduction, memory representation, Applications and operations

UNIT – II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation; **Queue**: Introduction, Types, Memory Representation and Applications.

UNIT – III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Binary Search tree; **Graphs**: Introduction, Memory Representation, Graph Traversal (DFS and BFS)

UNIT – IV

Searching: Binary and Linear Search; **Sorting**: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Readings :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.

Paper – PCS04 : Practical Based on Paper CS08 – Implement Data Structures Operations using C / C++.

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STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Note :

1. A candidate shall offer these subjects in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers with codes 201 and 202 in the subject of Statistics in B.A./B.Sc. 3rd semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (of 45 minutes each) for theory per week and 4 lectures (of 45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 201 : STATISTICAL INFERENCE

Maximum Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to provide a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Concept of a statistic and its sampling distribution. Point estimate of a parameter, concept of unbiasedness, consistency, efficiency and sufficiency (only the definitions and examples). Maximum likelihood estimation (standard distributions) Standard errors of sample mean and sample proportion. Sampling distribution of sum of independent binomial and Poisson random variables. Independence of sample mean and variance in random sampling from a normal distribution (without derivation).

Statements and sampling distributions of chi-square, t & F distributions and their relationships.

UNIT-II

Statistical Tests and Interval Estimation : Null and alternative hypothesis, two types of errors, level of significance and p-value. Testing for the mean and variance of a normal distribution, testing of equality of means and variances of two univariate normal distributions, and their related confidence intervals. Testing the significance of sample correlation coefficient.

Large Sample Tests : Use of central limit theorem for testing and interval estimation of a single mean and a single proportion, difference of two means and two proportions. Fisher's Z-transformation and its uses. Chi-square test for goodness of fit and testing of independence of attributes, Yale's correction.

References :

1. Goon A.M., Gupta M.K., Dasgupta. B. (2005) : Fundamentals of Statistics, Vol. I, World Press, Calcutta.
2. Miller, I. and Miller, M. (2002) : John E. Freund's Mathematical Statistics (6^{th} addition, low price edition), Prentice Hall of India.

Additional References :

1. Mood A.M., Graybill F.A. and Boes D.C. (1974) : Introduction to the Theory of Statistics, McGraw Hill.
2. Bhat B.R., Srivenkatramana T and Rao Madhava K.S. (1997) : Statistics : A Beginner's Text, Vol. I, New Age International (P) Ltd.
3. Snedecor G.W and Cochran W.G. (1967) : Statistical Methods. lowa State University Press.
4. Spiegel, M.R , Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4^{th} edition) Tata McGraw Hill Education Private Limited

Paper- 202: PRACTICAL (SEMESTER-III)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce : 5 marks; record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks in three hours' duration.

1. Drawing random samples from standard distributions : Uniform, Exponential and Normal.
2. Tests of significance based on t, chi-square and F for one sample, two samples and paired sample problems; significance of correlation coefficient. Use of Z-Transformation for testing $\rho = \rho_0$.
3. Large sample tests for means and proportions, tests of goodness of fit and independence of attributes in contingency tables.
4. Confidence intervals for one and two sample problems (mean, variance and proportion).

STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-IV

Note :

1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer this subject in B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers code named papers 203 and 204 in the subject of Statistics in B.A./B.Sc. 4th semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 203 : SAMPLE SURVEYS, DESIGN AND ANALYSIS OF EXPERIMENTS

Maximum Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of this course is to acquaint the students about the need & merits of sampling over census and the implementation of various sampling schemes along with their merits, demerits and comparisons in appropriate practical situations. The students will get exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Concepts of population and sample, need for sampling, census and sample surveys, basic concepts in sampling. Sample selection and sample size. Sampling and non-sampling errors.

Some basic sampling methods for estimation of population mean, variance and standard error of estimates : simple random sampling (SRS) with and without replacement, stratified random sampling under various allocations and systematic sampling.

UNIT-II

Linear Models : concepts of fixed effect, random effect and mixed effect models. Analysis of variance for one way, two-way (with one observation per cell and with multiple but equal observations per cell) classifications under the fixed effect models.

Need for design of experiment, three fundamental principles of design, basic designs-CRD, RBD, LSD and their analysis.

References:

1. Goon A.M., Gupta M.K., Das Gupta. B. (2005) : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Singh, D. and Chaudhary, F.S (1986). : Theory and Analysis of Sample Survey Designs, John Wiley and sons.

Additional References:

1. Sukhatme, B.V (1984) : Sample Survey Methods and Its Applications, Indian Society of Agricultural Statistics.
2. Murthy M.N (1967) : Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
3. Sampath S. (2000) : Sampling Theory and Methods, Narosa Publishing House.
4. Dass M.N. and Giri (1986) : Design and Analysis of Experiments, Springer Verlag.
5. Cochran W.G. and Cox G.M (1992) : Experimental Designs, John Wiley and Sons.
6. Montgomery, D. C. (2000) : Design and Analysis of Experiment, John Wiley, New York.

Paper - 204: PRACTICAL (SEMESTER-IV)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce : 5 marks; record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Selection of sample and determination of sample size : Simple random sampling (SRS), stratified SRS, allocation problems in stratified SRS and systematic sampling.
2. Analysis of variance for one-way and two-way classifications. Analysis of CRD, RBD and LSD.

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APPLIED STATISTICS

SEMESTER-III

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 201AS in B.A./B.Sc. Semester-III having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

PAPER - 201AS: MATHEMATICAL METHODS - II

Maximum Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to provide an exposure to the Coordinate Geometry of three dimensions, Calculus of several variables and theory of Matrices.

Note : There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.

UNIT-I

Coordinate Geometry of 3 Dimensions : Cartesian, spherical coordinates, equations of line, plane, sphere and ellipsoid.

Matrices and Linear Algebra : Determinants, algebra of matrices, rank of a matrix, inverse of a matrix, symmetric matrices (upto 4×4 matrices only).

UNIT-II

Matrices and Linear Algebra : Systems of Linear equations and their solutions.

Calculus of Several Variables : Functions of two variables, Partial derivatives and double integrals. Applications to evaluation of area.

Books Prescribed

1. Ayres F. (1999) : First Year College Mathematics, Schaum Series, Mc Graw Hill, New York.

2. Ayres F. (1980) : Matrices, Schaum Series, Mc Graw Hill, New York.

Books suggested for supplementary Reading

1. Kindle J.H. (1990) : Analytical Geometry, Schaum Series, Mc Graw Hill, New York.

2. Ayres F. (1999) : Calculus, Schaum Series, Mc Graw Hill, New York.

3. Spiegel M.R. (2002) : Advanced Calculus, Schaum Series, Mc Graw Hill, New York.

APPLIED STATISTICS

SEMESTER-IV

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 202AS in the subject of Applied Statistics in B.A./B.Sc. Semester IV, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

PAPER- 202AS: STATISTICAL METHODS

Maximum Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach.

Note :
1. There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Compilation, classification, tabulation and diagrammatic representation of statistical data. Concepts of Statistical population, random sample and frequency curve, measures of location, dispersion, skewness and kurtosis.

Two dimensional random variable, joint probability distributions, marginal and conditional probability distributions, conditional expectation, covariance and correlation coefficient.

UNIT-II

Measures of association and contingency, correlation and linear-regression involving two variables. Bivariate normal distributions.

Statement of weak law of large numbers and central limit theorem for independent and identical random variables. Sampling distributions of means, chi-square, t and F in sampling from normal populations (without proof).

Books recommended

1. Goon, A.M., Gupta, M.K. and Dasgupta, B (2005). : Fundamentals of Statistics, Vol.1 Chapter 1 to 6, 9, 10, 13 (only the relevant portion from these chapters as suggested by the body of the syllabus).

2. P.L.Meyer, (1971) : Introductory Probability and Statistical Applications, Addison Wesley. American Pub. Co.

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PHYSICS

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2018-19

General Instructions for teachers, students and paper setters:

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The Practical examination is of 25 marks including 3 (three) marks for the Internal assessment. The exams will be conducted every semester.

2. The number of lectures per week will be three for each theory paper and six for practicals.

3. The examination time for each theory paper as well as practical paper will be three hours.

4. Each theory paper will consist of seven questions comprising of three sections. First two sections will comprise of three questions from each of Units I and II of syllabus, and the third section will comprise of one compulsory question of ten short answer type parts covering whole syllabus. The question paper will be set for 44 marks - All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory questions. After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

7. External examiners will be sent for Practical examinations.

PHYSICS

SEMESTER-III

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – I	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –I	Total Teaching hrs. 30
Paper C	:	Quantum Physics-I	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-I (30 Hrs.)

UNIT-I

Basic ideas of Statistical Physics, Scope of Statistical Physics, basic ideas about probability, distribution of four distinguishable particles in two compartments of equal size. Concept of macrostates, microstates, thermodynamic probability, effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability, equilibrium state of dynamic system, distribution of distinguishable n particles in k compartments of unequal sizes.

UNIT-II

Phase space and its division into elementary cells, three kinds of statistics. The basic approach in the three statistics. Maxwell-Boltzman statistics applied to an ideal gas in equilibrium, experimental verification of Maxwell-Boltzman's law of distribution of molecular speeds.
Need of quantum statistics--B.E. statistics, derivation of Planck's law of radiation, deduction of Wien's displacement law and Stefan's law from Planck's law, F.D. statistics, Comparison of M.B., B.E. and F.D. statistics.

Books Suggested :

Essential Readings :

1. "*Statistical Physics and Thermodynamics*", V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar).
2. "*A Treatise on Heat*" Saha and Srivastava (Indian Press, Ahmedabad, 1972).

Further Readings:

1. *Thermal Physics* by C. Kittel & H. Kroemer, CBS Pub., 1987.
2. *Thermal Physics*, S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-I **(30 Hrs.)**

UNIT-I

Interference : Concept of coherence, spatial and temporal coherence, coherence time, coherence length, area of coherence. Conditions for observing interference fringes. Interference by wavefront division and amplitude division. Young's double slit experiment. Lloyd's mirror and Fresnel's biprism, phase change on reflection. Newton's rings,Michelson interferometer—working, principle and nature of fringes. Interference in thin films, Role of interference in anti-reflection. Multiple beam interference, Fabry-Perot interferometer, nature of fringes, finesse.

UNIT-II

Diffraction : Huygen-Fresnal theory half period zones, zone plates. Distinction between Fresnel and Fraunhofer diffraction. Fraunhofer diffraction due to single slit and intensity distribution,double slits & multiple slits(qualitative). Fraunhofer diffraction at rectangular (qualitative discussion)and circular apertures. Effects of diffraction in optical imaging, resolving power of microscope and telescope, diffraction grating, its use as a spectroscopic element, resolving power, Moire's fringes.

Polarization : Concept and analytical treatment of unpolarised, plane polarized and elliptically polarized light. Double refraction, Nicol prism, sheet polarisers, retardation plates. Production and analysis of polarized light (quarter and half wave plates).

Books Suggested :

Essential Readings:

1. *Optics*, Jenkins and White, McGraw Hill.
2. *Optics*, Ajoy Ghatak, McMillan India.
3. *Physics for Degree Students,* C. L. Arora and P .S. Hemne, S. Chand & Co., 2014.

Further Readings:

1. *Optics*, Born and Wolf, Pergamon.

Paper-C : QUANTUM PHYSICS-I (30 Hrs.)

UNIT-I

Formalism of Wave Mechanics :

(i) Plancks's formula of Black body radiation and energy quantization,
Wave-particle duality – Photoelectric effect, X-ray diffraction, Compton effect, Pair production, Photon and gravity.
De Brogile waves, wave packet, Phase velocity and Group velocity, Electron microscope, Particle in a box, Particle diffraction, Davisson-Germer experiment, Interferferometry with particles.
Uncertainty principle with illustrations, Principle of complementarity. (Chapters 2 and 3 of book 1 or Chapters 1-3 of book 2)

(ii) Quantum mechanics, Wave equation, Plausible arguments leading to time-dependent Schrodinger equations, Born's interpretation of Wave function, complex character, continuity and boundary conditions, probability interpretation, normalization, Probabilty current, Probability conservation equation, Principle of superposition.

(iii) Fundamental postulates of quantum mechanics. Eigenvalues and eigenfunctions. Operator formalism, Position, momentum and energy operators, expectation values, Ehrenfest theorem, Hermitian operators.

(Chapter 5 of book 1 and book 2)

UNIT-II

Problems in One and Three Dimensions :

(a) Steady-state Schrodinger equation, Appliction to stationary states for one dimension, Potential step. potential barrier, Tunnel effect examples, Scanning Tunneling microscope, rectangular potential well, Linear harmonic oscillator.

(Chapter 5 of book 1 and book 2)

(ii) Schrödinger equation for spherically symmetric potential, spherical harmonics, hydrogen atom energy levels and eigenfunctions, Principal, Orbital and Magnetic quantum numbers, Electron probability density.

(Chapter 6 of book 1 and book 2)

Books Suggested :

Essential Readings :

1. *Concept of Modern Physics, A. Beiser, S. Mahajan and S. R. Choudhury, Tata McGraw Hill, 6th Edition.*
2. *Quantum Physics of Atoms, Molecular, R. Eisberg & R.Resnick, Second Edition, John Wiley, 2002.*
3. *Physics for Degree Students, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014*

Further Readings :

1. *Modern Physics,* J. Bernstein, P.M. Fishbane, S.G. Gasiorowicz, Pearson, 2000.
2. *Elements of Modern Physics*, S.H. Patil, McGraw Hill, 1998.
3. *Quantum Mechanics*, E. Merzbacaher, II Ed., John Wiley.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II .The Practical examination will be held along with the fourth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment,fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

UNIT-I

A. Statistical Physics and Thermodynamics :

I. To study adiabatic expansion of a gas.

II. To measure thermal expansion of crystal using interference fringes.

III. To measure thermal conductivity in poor conductor by Lee's method.

IV. Thermo emf calibration, comparison.

V. Total radiation law, temperature dependence of radiation.

VI. To study Probability distribution using coloured dice, coins.

B. Optics and Lasers :

VII. To determine the refractive index of a liquid using spectrometer.

VIII. To determine the Cauchy's constants.

IX. To study the refractive index of a doubly refracting prism.

X. Study of rotation of plane of polarization with a polarimeter.

XI. To determine the wave length of a given light using biprism.

Exercises :

1. To measure the thermo e.m.f.
2. To determine the heating efficiency of an electric kettle with varying voltages.
3. To measure the angle of rotation of plane of polarization for the given liquid.
4. To determine the least count and setup the spectrometer for minimum deviation position of the prism.

Computer Based Activities : Elementary C language programs.

1. Motion of particle in a central force field.
2. Calculation of days between two dates of a year.
3. To check if triangle exists and the type of the triangle.

UNIT-II

C. Optics and Lasers :

I. To determine the wave length and dispersive power using plane diffraction grating (use Hg source).

II. To determine the resolving power of a telescope.

III. To determine the resolving power of a grating.

IV. Set up Newton's rings to determine wave length of sodium light.

V. To measure an inaccessible height using sextant.

VI. To determine the principal points of a lens system.

VII. To determine the divergence and wave length of a given laser source.

D. Quantum Physics:

VIII. To study the Photoelectric effect and determine the value of Planck's constant.

IX. To study the gas discharge spectrum of hydrogen.

X. To study the absorption spectra of iodine vapours.

XI. To determine the ionization potential of mercury.

Exercises :

1. To measure the diameter of Newton's rings.
2. Study of variation of light intensity using photovoltaic cell/inverse square law.
3. To determine the angle of wedge using interference method.
4. To measure the angle of elevation of a tall building.

Computer Based Activities : Elementary C language programs.

1. To find the sum of the sine and cosine series and print out the curve.
2. To find Sum and Product of Matrices
3. Motion of a projectile using computer simulation.

Text and Reference Books :

1. *A Laboratory Manual of Physics for Undergraduate Classes,* D.P. Khandelwal.
2. *B.Sc. Practical Physics, C.L.* Arora (S. Chand) & Co. (2014)
3. *Numerical Analysis* by C. Dixon.
4. *Programming with C, Schaum series* by Byron Gottfried & Jitender Chhabra.

PHYSICS

SEMESTER – IV

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – II	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –II	Total Teaching hrs. 30
Paper C	:	Quantum Physics-II	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-II (30 Hrs.)

UNIT-I

Statistical definition of entropy, change of entropy of a system, additive nature of entropy, law of increase of entropy, reversible and irreversible processes with examples. Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder.
Brief review of the terms and Laws of Thermodynamics, Carnot's Cycle. Entropy changes in Carnot's Cycle. Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path in a P.V. diagram, entropy of a perfect gas. Equation of state of ideal gas from simple statistical consideration. Heat death of the universe.

UNIT-II

Derivation of Maxwell's thermodynamical relations and applications, cooling produced by adiabatic stretching, adiabatic compression, change of internal energy with volume. Expression for (C_p-C_v), change of state and Clayperon Equation. Thermodynamical treatment of Joule-Thomson effect. Use of Joule-Thomson effect for liquification of helium. Production of very low temperature by adiabatic demagnetisation.

Books Suggested :

Essential Readings:

1. *"Statistical Physics and Thermodynamics",* V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar)
2. *"A Treatise on Heat"* Saha and Srivastava (Indian Press, Ahmedabad, 1972.)

Further Readings :

1. *Thermal Physics by C.* Kittel & H. Kroemer, CBS Pub., 1987
2. *Thermal Physics,* S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-II **(30 Hrs.)**

UNIT-I

Laser Fundamentals :
Interacation of light with matter : Absorption, spontaneous emission, stimulated emission, Wave mechanical explanation, Properties of Spectral Lines, Temporal and spatial coherence, Charatertistics of stimulated emission, Einstein coefficients and their relations, Light amplification and threshold condition ,Population inversion, Kinetics of optical absorption (qualitative account only), Qualitative account of Collisional broadening, Doppler broadening & Natural broadening, Mechanism of Luminescence.
Lasing action, Components of Laser, Elementary theory of optical cavity, longitudinal and transverse modes, Principal pumping schemes, Three level and four level laser schemes.

UNIT-II

Laser Systems : Types of lasers, Ruby and Nd : YAG lasers. He–Ne, Dye and CO_2 lasers – construction, mode of creating population inversion and output characteristics.
Applications of lasers—a general outline, Holography. Principle, recording of hologram and reconstruction of image.
Fiber Optics : Photonics, Optical fibre, Construction, Numerical aperture, acceptance angle, skip distance, Step index fibre – single mode and multimode, Graded index fibre, Losses in optical fibre, Material losses and Rayleigh scattering, bending losses, Intermodal and intramodal dispersion.
Splicing techniques, Optical fibre based communication system, Medical applications.

Books Suggested :

Essential Readings :

1. *Laser Fundamentals,* W.T. Silfvast, Foundation Books.
2. *Lasers and Non-linear Optics,* B.B. Laud, Wiley Eastern Limited.
3. *A text book of Optics,* Subtahmanyam N., Lal B. and Avadhanulu, M. N., S. Chand & Co., 2012.
4. *Optical Fiber Communication,* Keiser, MH.

Further Readings :

1. *Lasers,* Svelto Pergmon.

Paper-C : QUANTUM PHYSICS-II (30 Hrs.)

UNIT-I

Radiative transitions, selection rules and life times,
Spectrum of hydrogen atom.
Normal Neeman effect and experiment, Degeneracy of H-atom energy levels, fine structure, Electron angular momentum, Larmor's frequency, electron spin angular momentum, Exclusive principle, Stern-Gerlach experiment, spin-orbit coupling, electron magnetic moment, total angular momentum, Hyperfine structure, examples of one electron systems, Anomalous Zeeman effect, Lande-g factor (sodium D-lines). Paschen-Back Effect, Stark Effect.

(Chapters 6 & 7 of Book 1, Chapters 8-10 of Book 2)

UNIT-II

Symmetric and Antisymmetric wave functions, exclusion principle, Many electron atoms, Slater determinant, Electronic configurations, Hund's rule, Spin-Orbit coupling, L-S coupling, J-J couplings, term symbols. Atomic spectra of H, Na, He and Hg, selection rules.

X-ray spectra, nomenclature, Selection rules, Mosley law, Auger effect.

Molecular bonding, H_2^+ ion and H_2 molecules, Complex molecules, molecular spectra, selection rules, symmetric structures, rotational vibrational levels and spectra of diatomic molecules,vibration-rotation spectra, electronic spectra of molecules, Franck Condon principle, fluorescence and phosphorescence, Raman Effect, Magnetic resonance experiments.

(Chapters 7 & 8 of Book 1, Chapter 12 of Book 2)

Books Suggested :

Essential Readings :

1. *Concepts of Modern Physics,* A. Beiser, S. Mahajan and S. R. Choudhary, Tata McGraw Hill, 6th Edition.
2. *Quantum Physics of Atoms, Molecular,* R. Eisberg & R. Resnick, Second Edition, John Wiley, 2002.
3. *Physics for Degree Students,* C.L. Arora and P.S. Hemne, S.Chand & Co., 2014.
4. *Elements of Modern Physics,* S.H. Patil, McGraw Hill, 1998.

Further Readings :

1. *Fundamentals of Molecular Spectroscopy,* C.N . Banwell, T.M.H., 1972
2. *Atomic and Molecular Spectra*, Rajkumar (Kedarnath Ramnath Prakashan, Meerut).
3. *Atomic Spectra,* H.G. Kuhn, Academic Press, N.Y.

PHYSICS PRACTICALS

The Practical examination will be held along with the fourth semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester III.

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CHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

Scheme of Teaching and Examination

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Total Marks

SEMESTER-III- 100

SEMESTER-IV- 100

200

CHEMISTRY

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-IX: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Chemistry of Elements of First Transition Series:
Characteristic properties of *d*-block elements.

Properties of the elements of the first transition series, their simple compounds and complexes, illustrating relative stability of their oxidation states, coordination number and geometry.

UNIT-II **(7 Hrs.)**

Chemistry of Elements of Second and Third Transition Series:
General characteristics, comparative treatment with their 3*d*-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and stereochemistry.

UNIT-III **(8 Hrs.)**

Chemistry of Coordination Compounds-I
Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds

UNIT-IV **(7 Hrs.)**

Chemistry of Coordination Compounds-II
Valence bond theory of transition metal complexes. Properties of Coordination compounds i.e. magenetic properties, colours (Qualitative approach only), use of coordination compounds.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-X: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Alcohols and Phenols:

Classification and nomenclature

Monohydric alcohols-Nomenclature, methods of formation by reduction of aldehydes, ketones, carboxylic acids and esters. Hydrogen bonding. Acidic nature. Reactions of alcohols. Dihydric and Trihydric alcohols-Nomenclature, methods of formation, chemical reactions of vicinal glycols and glycerol.

Preparation of phenols, physical properties and acidic character. Comparative acidic strengths of alcohols and phenols, resonance stabilization of phenoxide ion. Reactions of phenols-electrophilic aromatic substitution, acylation and carboxylation. Mechanisms of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, and Reimer-Tiemann reaction.

UNIT-II **(8 Hrs.)**

Aldehydes and Ketones I

Nomenclature and structure of the carbonyl group. Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids. Physical properties.

UNIT-III **(7 Hrs.)**

Aldehydes and Ketones-II

Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol, Perkin and Knoevenagel condensations. Condensation with ammonia and its derivatives. Wittig reaction, Mannich reaction.

Use of acetals as protecting group. Oxidation of aldehydes, Baeyer-Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen, Wolff-Kishner, $LiAlH_4$ and $NaBH_4$ reductions.

UNIT-IV

Carboxylic Acids: **(7 Hrs.)**

Nomenclature, structure and bonding, physical properties, acidity of carboxylic acids, effects of substitutions on acid strength. Preparations of carboxylic acids. Reactions of carboxylic acids. Hell-Volhard-Zelinsky reaction. Synthesis of acid chlorides, esters and amides, Reduction of carboxylic acids. Mechanism of decarboxylation. Methods of formation and chemical reactions of halo acids. Hydroxyl acids: Malic, tartaric and citric acids(structural features only).

Methods of formation and chemical reactions of unsaturated monocarboxylic acids.

Dicarboxylic acids: Methods of formation and effects of heat and hydrating agents.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.
4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XI: PHYSICAL CHEMISTRY-A

Time : 3 Hrs.
Max. Marks:22+3
60 Hrs. (2 Hrs./Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Liquid State:
Intermolecular forces, structure of liquids (a qualitative description).
Structural differences between solids, liquids and gases.
Liquid Crystals : Difference between liquid crystal, solid and liquid. Classification, structure of nematic and cholestric phases. Thermography and seven segment cell.

UNIT-II **(7 Hrs.)**

Chemical Equilibrium:
Equilibrium constant and free energy. Thermodynamic derivation of law of mass of mass action. Le - Chatelier's principle.
Reaction isotherm and Reaction isochore-Clapeyron equation and Clausius –Clapeyron equation, applications.

UNIT-III **(8 Hrs.)**

Thermodynamics-II:
Second Law of Thermodynamics: Need for the law, different statements of the law, Carnot cycle and its efficiency, Carnot theorem. Thermodynamic scale of temperature.

Concept of Entropy: Entropy as a state function, entropy as a function of V & T, entropy as a function of P & T, entropy change in physical change, Clausius inequality, entropy as a criteria of spontaneity and equilibrium. Entropy change in ideal gases and mixing of gases.

UNIT-IV (7 Hrs.)

Thermodynamics-III:

Third Law of Thermodynamics: Nernst heat theorem, statement and concept of residual entropy, evaluation of absolute entropy from heat capacity data. Gibbs and Helmholtz functions; Gibbs function (G) and Helmholtz functions (A) as thermodynamic quantities, A & G as criteria for thermodynamic equilibrium and spontaneity, their advantage over entropy change. Variation of G and A with P, V and T.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XII: LABORATORY PRACTICALS

Max. Marks:22+3

Inorganic Chemistry **6 Periods/week**

Quantitative Analysis

Volumetric Analysis:

a) Estimation of calcium content in chalk as calcium oxalate by permanganometry.
b) Estimation of hardness of water by EDTA.
c) Estimation of ferrous and ferric by dichromate method.
d) Estimation of copper using sodium thiosulphate

Gravimetric Analysis

Analysis of Cu as CuSCN and Ni as Ni (dimethylgyoxime)$_2$.

Physical Chemistry

Thermochemistry:

a) To determine the solubility of benzoic acid at different temperatures and to determine ΔH of the dissolution process.
b) To determine the enthalpy of neutralization of a weak acid/weak base versus strong base/strong acid and determine the enthalpy of ionization of the weak acid/weak base. pH of a Buffer solution, Determination of ionization constant of a weak acid.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Inorganic Chemistry	: 09 marks
Q.No. II. Physical Chemistry	: 06 marks
Q.No. III. Viva-Voce	: 04 marks
Ask four questions (2 marks each) related to chemistry practicals.	
Q.No. IV. Note Book	: 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs:Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R. Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

CHEMISTRY

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-XIII: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Chemistry of Lanthanide Elements:
Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

Chemistry of Actinides:
General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from U, similarities between the later actinides and the later lanthanides.

UNIT-II (7 Hrs.)

Acids and Bases:
Arrhenius, Bronsted-Lowry, the Lux-Flood, solvent system and Lewis concepts of acids and bases.

UNIT-III (8 Hrs.)

Oxidation and Reduction:
Use of redox potential data – analysis of redox cycle, redox stability in water – Frost, Latimer and Pourbaix diagrams. Principles involved in the extraction of the elements.

UNIT-IV (7 Hrs.)

Non-aqueous Solvents:
Physical properties of a solvent, types of solvents and their general characteristics, reactions in non-aqueous solvents with reference to liquid NH_3 and liquid SO_2.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-XIV: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Carboxylic Acid Derivatives:
Structure and nomenclature of acid chlorides, esters, amides and acid anhydrides. Relative stability & reactivity of acyl derivatives. Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution.

Preparation of carboxylic acid derivatives, chemical reactions. Mechanisms of esterification and hydrolysis (acidic and basic).

UNIT-II (8 Hrs.)

Ethers , Epoxides Fats, Oils and Detergents:
Nomenclature of ether and methods of their formation, physical properties. Chemical reaction-cleavage and autoxidation, Ziesel's method.

Synthesis of epoxides. Acid and base-catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides.

Natural fats, edible and industrial oils of vegetable origin, common fatty acids, glycerides, hydrogenation of unsaturated oils. Saponification value, iodine value, acid value. Soaps, synthetic detergents; alkyl and aryl sulphonates.

UNIT-III (7 Hrs.)

Organic Compounds of Nitrogen:
Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanisms of nucleophilic substitution in nitroarenes and their reductions in acidic, neutral and alkaline media. Picric acid.

Structure and nomenclature of amines, physical properties. Stereochemistry of amines, Separation of a mixture of primary, secondary and tertiary amines. Structural features effecting basicity of amines. Amine salts as phase-transfer catalysis. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel-phthalimide reaction, Hofmann bromamide reaction.

UNIT-IV

Heterocyclic Compounds: **(7 Hrs.)**

Introduction: Moleculer Orbital picture and aromatic character of pyrrole, furan, thiophene, pyridine. Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution. Mechanism of nucleophilic substitution reactions in pyridine derivatives.Comparision of basicity of pyridine, piperidine and pyrrole.

Introduction to condensed-five and six-membered heterocycles. Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis. Skraup synthesis and Bischler-Napieralski synthesis. Mechanism of electrophilic substitution reactions of indole, quinoline and isoquinoline.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

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Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.

4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.

5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XV: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Phase equilibrium:

Statement and meaning of the terms – phase, component and degree of freedom, derivation of Gibbs phase rule, phase equilibria of one component system—water, CO_2 and S systems.

Phase equilibria of two component system –solid –liquid equilibria, simple eutectic – Bi-Cd system, desiliverisation of lead.

Solid solutions—compound formation with congruent melting point (Mg-Zn) and incongruent melting point, (NaCl-H_2O) system. Freezing mixtures, acetone-dry ice.

Partially Miscible Liquids –Phenol-water, trimethylamine – water, nicotine –water systems.

Nernst distribution law-thermodynamic derivation, applications.

UNIT-II (7 Hrs.)

Electrochemistry –I:

Electrical transport –Conduction in metals and in electrolyte solutions, specific conductance and equivalent conductance, measurement of equivalent conductance, variation of equivalent and specific conductance with dilution.

Migration of ions and Kohlrausch Law, Arrhennius theory of electrolyte dissociation and its limitations, weak and strong electrolytes, Ostwald's dilution law, its uses and limitations. Debye-Huckel-Onsager's equation for strong electrolytes (elementary treatment only). Transport number, definition and determination by Hittorf method and moving boundary method.

UNIT-III (8 Hrs.)

Electrochemistry-II:

Types of reversible electrodes – gas metal – ion, metal –insoluble salt – anion and redox electrodes. Electrode reactions, Nernst equation, derivation of cell E.M.F. and single electrode potential, standard hydrogen electrode – reference electrodes – standard electrode potential, sign conventions, electrochemical series and its significance.

UNIT-IV **(7 Hrs.)**

Electrolytic and Galvanic cells – reversible and irreversible cells, conventional representation of electrochemical cells.

E.M.F. of a cell and its measurements. Computation of cell E.M.F. Calculation of thermodynamic quantities of cell reactions (ΔG, ΔH and K), Polarization, over potential and hydrogen overvoltage.
Concentration cell with and without transport, liquid junction potential, application of concentration cells, valency of ions, solubility product and activity coefficient, potentiometric titrations.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each..

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XVI LABORATORY PRACTICALS

Max. Marks: 22+3
6 Periods/week

Organic Chemistry

Laboratory Techniques:

a) Determination of R_f values and identification of organic compounds. Separation of isometric mixture of Ortho and paranitroaniline using hexane and ethyl acetate (8.5 : 1.5) by thin layer chromatography.

b) Extraction of caffeine from tea leaves.

Qualitative Analysis:

Detection of elements (N, S and halogens) and functional groups (phenolic, carboxylic, carbonyl, esters, carbohydrates, amines, amides, nitro and anilide), in simple organic compounds.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Organic Chemistry: (analysis of organic compound) : 09 marks
Q.No II. TLC experiment, Extraction of caffeine) : 06 marks
Q.No. III. Viva-Voce : 04 marks
Ask four questions (2 marks each) related to chemistry practicals.
Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs : Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2018-19

Third Semester		**Time**	**Theory**	**Int Assess.**	**Max Marks**
Theory Paper-A:	Diversity of Seed Plants and their Systematics-I	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-I	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Fourth Semester					
Theory Paper-A:	Diversity of Seed Plants and their Systematics-II	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-II	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY
SEMESTER-III

THEORY PAPER- A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS- I

Objective: This paper deals with highly advance and evolved group of plants with naked seeds i.e. Gymnosperms. The course work of this paper gives a fair idea about the general features, economic importance and study of fossil as well as living gymnosperms.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various plant forms.

UNIT-I

General characteristics and economic importance of gymnosperms; differences between gymnosperms and angiosperms; differences between manoxylic and pycnoxylic wood.

UNIT-II

Fossil gymnosperms : Brief account of fossils , their formation and types (excluding details).
Lyginopteris: Introduction, external structure of stem; internal structure of primary stem, root and leaf; reproduction.
Williamsonia: Introduction, external morphology; internal structure; reproductive organs, male and female flowers.

UNIT-III

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of *Cycas*.

UNIT-IV

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of:

a) *Pinus*
b) *Ephedra*

Suggested Reading:

1. Bhatnagar, S.P. and Moitra, A. Gymnosperms, New Age International Limited, New Delhi, 1996.
2. Chopra, G.L. Text book of Gymnosperms, S. Nagin, Delhi, 1976.
3. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012
4. Pandey, B.P. College Botany, Vol. II., S. Chand & Company Ltd., New Delhi, 1994.
5. Singh, V., Pande, P.C. and Jain, D.K., A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
6. Sporne, K.R. The Morphology of Gymnosperms, Hutchinson & Co (Publishers) Ltd., London, 1965.
7. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III., Pradeep Publications, Jalandhar, 2014.

PAPER –B: STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-I

Objective: This paper deals with the basic body plan and diversity in flowering plant forms. The course work of this paper covers vegetative and reproductive morphology of these plants and will familiarize the students with plants bearing the enclosed seeds.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

The basic body plan of a flowering plant.
Diversity in plant form in annuals, biennials and perennials.
Root system: Tap root and adventitious root system and their various types; structural and anatomical modifications for storage, respiration and reproduction.

UNIT-II

Stem : Modifications of aerial and underground stem.
Leaf: Venation, phyllotaxy, simple and compound leaves, functions and modifications; internal structure (dicot and monocot leaves).

UNIT-III

Flower : As a modified shoot, functions; structure of anther and pistil; structure and development of male and female gametophytes.

UNIT-IV

Double fertilization and its significance; different types of ovules and embryo-sacs.

Suggested Reading:

1. Bhojwani, S.S. and Bhatnagar, S.P., The Embryology of Angiosperms, 5th edition. Vikas Publishing House Pvt. Ltd., Delhi, 2009.

2. Goyal J.P. and Saini, A., Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

3. Pandey, S.N., Chadha, A., Plant Anatomy and Embryology, Vikas Publishing House Pvt. Ltd., Delhi, 1996.

4. Singh, V. Plant Anatomy and Embryology of Angiosperms, Global Media Publications, Delhi 2010.

5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

6. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.

Suggested laboratory exercises:

1. *Cycas*:
   - i) Habit, armour of leaf bases on the stem, young and old foliage leaves, scale leaves, male cone, megasporophyll, seed.
   - ii) Preparation of permanent stained slides of *Cycas* (T.S. leaflet, rachis and coralloid root).

2. *Pinus*:
   - i) Dwarf shoot; Male cone; Female cones (first year, second year and third year); Seed.
   - ii) Preparation of permanent slide of T.S. needle and pollen grains.
   - iii) Study through permanent slides :
     - a) L.S. male cone
     - b) L.S. female cone
     - c) L.S. ovule

3. *Ephedra*:
   - i) Habit and structure of male and female cones
   - ii) Preparation of permanent slide of T.S. stem (young).
   - iii) Study through permanent slides:
     - a) L.S. female cone
     - b) L.S. male cone

4. Modifications of underground stem and leaf modifications.

5. Study through permanent slides :
   i) V.S. dicot leaf
   ii) V.S. monocot leaf

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify, draw its well labeled diagram and show it to the examiner. 6

2. Identify, write illustrated morphological note on specimen B (from gymnosperms) and C from underground stem/leaf modifications. 4

3. Identify slides D and E giving at least two reasons. 4

4. Practical note book and *Viva-voce* 2+2=4

BOTANY
SEMESTER-IV

PAPER-A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS-II

Objectives: This paper deals with highly advance and evolved group of plants i.e. Angiosperms. The study of gradual transition from seedless plants to seed plants would make students familiar with origin of structural and functional complexity in plant kingdom. The systematics part of this paper is in fact backbone of the study of Botany. Without having knowledge of taxonomy and species concept, no further research work can be pursued. The identification, nomenclature and classification of the concerned plants make the first step of any research work in Botany.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various families of flowering plants.

UNIT-I

General characters of Angiosperms. Plant nomenclature and International Code of Botanical Nomenclature : Common names and scientific names, principles and rules; taxonomic ranks; type concept (Holotype, Isotype, Syntype, Paratype, Lectotype, Neotype and Topotype); principle of priority, aims and objectives of plant taxonomy.

A brief account of Bentham and Hooker's System of classification, its merits and demerits.

UNIT-II

Terminology pertaining to floral description.

General account and diagnostic features of the following families (excluding economic importance) :

Liliaceae	:	*Asphodelus/Asparagus*
Gramineae (Poaceae)	:	*Triticum*
Ranunculaceae	:	*Ranunculus* and *Delphinium*
Brassicaceae	:	*Brassica*

UNIT-III

General account and diagnostic features of the following families (excluding economic importance):

Rutaceae	:	*Citrus* and *Murraya*
Malvaceae	:	*Hibiscus*
Fabaceae	:	*Lathyrus, Cassia* and *Acacia*
Umbelliferae (Apiaceae)	:	*Coriandrum*

UNIT-IV

General account and diagnostic features of the following families (excluding economic importance) :

Compositae (Asteraceae)	:	*Helianthus/Ageratum*
Asclepiadaceae	:	*Calotropis*
Solanaceae	:	*Solanum* and *Petunia*
Labiatae (Lamiaceae)	:	*Ocimum*
Chenopodiaceae	:	*Chenopodium*

Suggested Readings:

1. Chopra, G.L. Angiosperms: Systematic and Life Cycle, Pradeep Publications, Jalandhar, 1987.
2. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012.
3. Maheshwari, J.K. Flora of Delhi, CSIR, New Delhi, 1963.
4. Singh, G. Plant Systematics: Theory and Practice, Oxford and IBH Pvt. Ltd., New Delhi, 1999.
5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
6. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III, Pradeep Publications, Jalandhar, 2006.
7. Vasishta, P.C. Taxonomy of Angiosperms. R. Chand & Co., New Delhi, 1997.

PAPER-B: **STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-II**

Objectives: This paper deals with structure development and reproduction in flowering plants – the most fascinating group of plants on earth. The course material of this paper deals with internal structure of various plant parts, their growth patterns and abnormalities in structural development. The vast range of variation found in this group of plants provides a platform to students for acquiring basic knowledge of flowering plants which makes a foundation of applied branches like horticulture, floriculture, olericulture and arboriculture.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Tissue systems: Meristematic, shoot apex, root apex; simple and complex permanent tissues, special tissues; internal structure of primary dicot stem & root (*Helianthus*); secondary growth in dicot stem & root (*Helianthus*); internal structure of monocot stem & root (*Zea mays*); differences between dicot stem and monocot stem; differences between dicot root and monocot root.

UNIT-II

Anomalous stem structure in *Boerhaavia*, *Nyctanthes*, *Mirabilis* and *Dracaena*.
Various methods of vegetative propagation; micropropagation, basic technique and its importance.

UNIT-III

Types of pollination, advantages and disadvantages of self and cross-pollination; contrivances for self and cross-pollination, various agencies to bring about cross-pollination, characters of flowers pollinated by different agencies.

UNIT-IV

Seed formation: Development of endosperm and embryo. Fruit development, maturation and parthenocarpy. Significance of seed: Suspended animation; ecological adaptation and dispersal strategies.

Suggested Readings:.

1. Esau, K. Anatomy of Seed Plants, 2nd edition, John Wiley & Sons, New York, 1977.
2. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.
3. Goyal J.P. and Saini, A. Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.
4. Singh, V. Pande, P.C. and Jain, D.K. A Text book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.
5. Srivastava, H.N.. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.
6. Vasishta, P.C. A Text book of Plant Anatomy, S. Nagin & Co., Delhi, 1979.

Suggested Laboratory Exercises:

1. Preparation of permanent stained slides to show:

    a. Anomalous internal structure of stem in *Boerhaavia, Nyctanthes, Mirabilis* and *Dracaena*.
    b. T.S. dicot stem & root (*Helianthus*)
    c. T.S. monocot stem & root (*Zea mays*)
    d. Types of Placentation

2. Description of flowers in technical terms, drawing F.D., V.S. , T.S. ovary, writing F.F. and reference to their respective families of the genera mentioned in different families in theory syllabus.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify and draw its well labeled diagram and show it to the examiner. 5

2. Describe specimen B or C in technical terms and proper sequence. Draw F.D. and V.S. of flower B or C. Cut T.S. of ovary and V.S. of flower and show them to the examiner. Write F.F. also. Refer specimen B or C to its respective family. 5

3. Identify slides D and E giving at least one reason. 2

4. Practical note book 2

5. Plant Album 2

6. *Viva-voce* 2

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ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper I	:	Biodiversity (Chordates) & Evolution-I	40	(36+ 4) marks
Paper II	:	Biochemistry & Physiology-I	40	(36 + 4) marks
Practical		(Covering the entire syllabus) of 4 hours duration	20	(18+ 2) marks
		Total :	**100 marks**	

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE :

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER–I : BIODIVERSITY (CHORDATES) & EVOLUTION-I (ZOO 301)

Max. Marks	:	40
Theory Exam.	:	36 Marks
Internal Assessment	:	4 Marks
Time	:	3 Hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Chordates – Origin, Parental care and migration.
Protochordates –Urochordata-Type Study – *Herdmania* except development,
Cephalochordata- Type Study – *Amphioxus* (except development)

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Protochordates	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa, Oikopleura & Branchiostoma (*excluding development*).*

UNIT-II

Cyclostomata – External Characters of *Petromyzon* & affinities of Cyclostomata
Pisces- Scales & fins, Type study-*Labeo*.

Cyclostomata	:	*Myxine, Petromyzon* & *Ammocoetes* larva.
Chondrichthyes	:	*Zygaena*(Hammer headed shark), *Pristis* (saw fish), *Narcine* (electric ray), *Trygon*, *Rhinobatus* and *Chimaera*(rabbit fish).
Actinopterygii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus* (lung fish)

UNIT-III

Amphibia – Type study-Hoplobatrachus Tigerinus.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Amblystoma* and its Axolotl Larva, *Triton, Salamandra, Hyla, Rhacophorus.*

UNIT-IV

Concept and evidences of organic evolution.
Theories of organic evolution.
Origin of life.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.

4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.

5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt. Ltd., 1993.

PAPER II : BIOCHEMISTRY AND PHYSIOLOGY-I (ZOO 302)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Biochemistry and its scope;
Carbohydrates, proteins, lipids and nucleic acids: their classifications and functions.

UNIT-II

Enzymes : Nature, nomenclature, mode of action, their classification, coenzymes and cofactors.

Carbohydrate metabolism : The Embden Meyerhoff, Parnas pathway (glycolysis), the tricarboxylic acid cycle, the hexose monophosphate shunt**,** glycogenesis and glycogenolysis.

UNIT-III

Digestion : Digestion of dietary constituents, regulation of digestive processes and absorption. extra and intra cellular digestion, enzymatic digestion and symbiotic digestion.

Respiration : Exchange and transport of respiratory gases, Oxygen dissociation curve of haemoglobin, Bohr effect, chloride shift, Haldane effect and control of breathing.

UNIT-IV

Blood : Composition and functions of blood and lymph. Function of hemoglobin, blood clotting. Blood groups including Rh. Factor.

Heart : Origin and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, blood pressure and micro-circulation.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.
2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.
3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990
4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 301 & 302 (ZOO 251)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Urochordata	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa & Oikopleura.*
Cephalochordata	:	*Amphioxus.*
Cyclostomata	:	*Myxine, Petromyzon & Ammocoetes* Larva.
Chondrinchthyes	:	*Zygaena* (Hammer headed shark), *Pristis* (Saw fish), *Narcine* (Electric ray), *Trygon*, *Rhinobatus* and *Chimaera* (Rabbit fish).
Actinoptergii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, cheneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus*
Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva, *Triton, Salamandra, Hyla, Rhacophorus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Herdmania	:	General anatomy
Labeo	:	Digestive**,** reproductive systems, heart, afferent and efferent branchial arteries and cranial nerves.

3. Study of the skeleton of *Labeo, Hoplobatrachus Tigerinus*(frog)
4. Study of the following prepared slides :
   T.S. *Amphioxus* through various regions.
   Spicules & pharynx of *Herdmania* & pharynx of *Amphioxus.*
5. Study of the following prepared slides :
   Histology of frog (compound tissues).
6. Recording of blood pressure of man
7. Demonstration of equipment used for estimating haemoglobin content.
8. Demonstrate the presence of amylase in saliva, denaturation by pH and temperature.
9. Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides F-H giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-IV

Paper I: Biodiversity (Chordates) & Evolution – II	40 (36 + 4) marks
Paper II : Biochemistry & Animal Physiology-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER – I : BIODIVERSITY (CHORDATES) & EVOLUTION- II (ZOO 401)

UNIT-I

Reptilia- Type study-*Uromastix*, Poisonous and non-poisonous snakes, Poison apparatus in snakes.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Reptilia : *Chelone*(turtle) and *Testudo*(Tortoise), *Hemidactylus* (wall lizard), *Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis* and Alligator.

UNIT-II

Aves-Type study-Pigeon, Flight adaptations in birds.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Aves : *Ardea, Milvus, Pavo, Tyto, Alcedo, Eudynamis* and *Casuarius*.

UNIT- III

Mammals-Type study-Rat, Dentition in mammals.

Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus* (Kangaroo), *Loris, Macaca, Manis* (Scaly ant eater), *Hystrix* (porcupine), *Funambulus* (Squirrel) *Panthera, Canis,Herpestes* (Mongoose), *Capra, Pteropus*.

UNIT-IV

Concept of micro, macro and mega-evolution.
Biological concept of species.
Fossils and dating of fossils.
Evolution of man.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.
4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.
5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt.Ltd., 1993.

PAPER II : BIOCHEMISTRY AND PHYSIOLOGY-II (ZOO 402)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Lipid metabolism : B-oxidation of fatty acids, fate of glycerol and gluconeogenesis, interaction of carbohydrates and lipids, lipogenesis in tissues, ketosis.

UNIT-II

Protein metabolism : Metabolism of amino acids (Oxidative deamination, transamination and decarboxylation), hydrolysis of proteins and Ornithine cycle).

UNIT-III

Excretion : Structure and types of nephron, urine formation, osmoregulation and counter current mechanism, composition of urine.

Muscles : Ultrastructure, chemical and physiological basis of skeletal muscle contraction.

UNIT-IV

Neural Integration : Structure of neuron, resting membrane potential, origin and propagation of impulse along the axon, synapse and myoneural junction.

Endocrine System : Structure, hormones and functions of thyroid, parathyroid, adrenal, pineal, hypothalamus, pituitary, pancreas, gonads, thymus, hormones of alimentary canal and kidney.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.

2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.

3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990

4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 401 & 402 (ZOO 252)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Reptilia	:	*Chelone*(Turtle) and *Testudo* (Tortoise), *Hemidactylus, Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera,Crocodilus, Gavialis.*
Aves	:	*Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
Mammalia	:	*Ornithorhynchus, Echidna, Didelphis, Macropus,Loris, Macaca, Manis, Hystrix, Funambulus,Panthera, Canis, Herpestes,Capra,Pteropus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Chick	:	Digestive, arterial, venous and urinogenital systems.
White Rat	:	Digestive, arterial, venous and urinogenital systems.

3. Study of the skeleton of *Varanus, Gallus* and Rat/ *Oryctolagus* (Rabbit).
4. Study of the following prepared slides :
   Histology of rat/rabbit (compound tissues)
5. Study of blood smear of a mammal.
6. Identification of food stuffs:starch, glucose, proteins and fats in solution.
7. Demonstration of osmosis and diffusion.
8. Analysis of urine for urea, chloride, glucose and uric acid.
9. An idea of location of endocrine glands in mammals through charts / models/ video clippings
10. Tracing of human evolution through models.

Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides D & E giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

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BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Carbohydrate & Lipid metabolism **Marks: 45+5**

Objective: To learn about digestion and absorption of carbohydrates and lipids and major metabolic pathways pertaining to them.

SECTION-I

(Lectures 8)

Metabolic pathways of carbohydrates, glycolysis and alcoholic fermentation, the pentose phosphate pathway, metabolism of fructose, galactose, TCA cycle and pyruvate dehydrogenase complex.

SECTION-II

(Lectures 8)

Glucuronate and glyoxylate pathway, gluconeogenesis,cori cycle, glycogenolysis & glycogenesis, biosynthesis of starch and ascorbic acid.

SECTION-III

(Lectures 7)

beta-Oxidation of fatty acids including odd chain fatty acids. Alpha and omega oxidation of fatty acids. Formation and utilization of ketone bodies. Biosynthesis of saturated and unsaturated fatty acids.

SECTION-IV

(Lectures 7)

Biosynthesis and degradation of phospholipids and triglycerides.Cholesterol biosynthetic pathway. Biosynthesis of cerebrosides; sulfatides and gangliosides. Biosynthesis of prostaglandins, thromboxanes, leukotrienes, lipooxins and prostacyclins.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey& D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Grannerand V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

Paper B: Protein & Nucleic acid metabolism **Marks: 45+5**

Objective: To learn major metabolic pathways pertaining to nitrogenous compounds proteins & nucleic acids.

SECTION-I

(Lectures 6)

Digestion & absorption of proteins, nitrogen balance, general reactions of amino acids: deamination, transamination and decarboxylation. Urea cycle.

SECTION-II

(Lectures 8)

Catabolism of carbon skeletons of amino acids: glycine, alanine, serine and threonine, phenylalanine and tyrosine, tryptophan, histidine, leucine, valine and isoleucine, cysteine and methionine, lysine, glutamic acid and glutamine, aspartic acid and asparagine.

SECTION-III

(Lectures7)

Biosynthesis of nutritionally non-essential amino acids : glutamate and glutamine, aspartate and asparagine, proline, alanine, cysteine & selenocysteine, tyrosine, serine, glycine. conversion of amino acids to specialized products : polyamines, catecholamines, glutathione, creatinine, melanin, serotonin.

SECTION-IV

(Lectures 9)

Nucleic Acids

Degradation and biosynthesis of purines and pyrimidines nucleotides, salvage pathway, formation of deoxyribonucleotides, biosynthesis and degradation of heme. Disorders of purine & pyrimidine metabolism, anticancer drugs.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey & D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Separation of serum and plasma.

2. Estimation of blood glucose by the methods of (i) Folin Wu (ii) Nelson Somogyi.

3. Separation and identification of amino acids by Paper chromatography

4. Seperation of lipids by Thin layer chromatography.

5. Estimation of Ca2+ in serum.

6. Estimation of total cholesterol in serum.

7. Estimation of total lipids in serum by Vanillin method.

8. Estimation of pyruvic acid.

9. Estimation of creatinine

10.Colorimetric estimation of inorganic phosphate

BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2018-19
SEMESTER-IV

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Advanced Biochemical Techniques **Marks: 45+5**

Objective: To understand the principles and applications of cell biology techniques, spectroscopic, radioisotopic & spectrometry techniques.

SECTION-I

(Lectures: 8)

General Laboratory Techniques:

Membrane/ultra filtration, dialysis, diffusion, surface tension, viscosity and their applications to biological systems. Cell biology techniques: microbial, animal and plant cell/tissue culture, cell disruption/homogenization/sonication, cell sorting, cell counting, cryopreservation.

SECTION-II

(Lectures: 6)

Fluorescence spectroscopy: principle, applications of fluorescence activated cell sorting (FACS), different fluorescence in situ hybridization (FISH), fluorescence immunoassay.

SECTION-III

Radio isotopic techniques: **(Lectures: 10)**

Nature of isotopes and radioisotopes. Radioactive decay. Properties of radioactive emissions. Units of radioactivity. Techniques used to measure radioactivity; GM counter and liquid scintillation counting and gamma counter. Labelling of biochemical compounds and autoradiography. Use of radioactive tracers in the study of enzyme reaction mechanisms and metabolic pathways. Radioimmuno assay. Biological hazards of radiation and safety measures in handling radioisotopes.

SECTION-IV

(Lectures: 6)

Nuclear magnetic resonance (NMR) and Electron spin resonance (ESR) : theory, applications. atomic spectrometry; mass spectrometry: matrix assisted desorption ionization (MALDI)

Books Suggested:

1. Biochemical Techniques – Theory and Practice by John. F. Robyt and Bernard J. White Cole Publishing Co. (U.S.A.).
2. Physical Biochemistry: Application to Biochemistry and Molecular Biology by David Freifelder W.H. Freeman and Company (U.S.A.).
3. A Biologist's Guide to Principles and Techniques of Practical Biochemistry by K.H. Goulding and Keith Wilson, Edward Arnold (U.K.), Ltd.

Paper B: Membrane Biochemistry **Marks: 50**

Objective: to make students aware of structural and functional aspects of membranes. Highlighting the significance of their compositional heterogeneity and to various cell functions.

SECTION-I

(Lectures 7)

Introduction: membrane structure and organization: physical and biological models of membranes structure. Protein- lipid interactions in membranes, fluid mosaic model of membrane structure, its merits and demerits. Constituents of biological membranes in prokaryotes and eukaryotes. Asymmetry of biomembranes. Structure of RBC membrane.

SECTION –II

(Lectures 7)

Membrane dynamics: Physical properties of membrane lipids, membrane fluidity, Phase transitions, cytological biochemical probes and methods to study membrane fluids. Membrane transport: Typical properties of membrane transport, passive diffusion, facilitative diffusion, Carrier mediated active transport. Role of Na, K- ATPase.Ca-ATPase & H^+-ATPase. Ionophores and siderophores, structure and functions.

SECTION –III

(Lectures 8)

Membrane analysis: isolation and characterization of cell membrane, criteria of membrane purity. Solubilization of membranes and their reconstitution. Labeling of membrane probes and determination of transbilayer distribution of membrane components. Liposomes: unilamelar and multilamelar vesicles. Methods of their preparation, characterization and their applications in targeting drugs and gene therapy.

SECTION –IV

(Lectures 8)

Biogenesis and turnover of membranes: Synthesis of membrane components and their trafficking, signal hypothesis, coated vesicles. Regulation and coordination of membrane component synthesis. Membrane disorders: erythrocyte deformities, transport disorders. Disorders of membrane lipids

Books Suggested

1. Jain, MK. Introduction to Biological membranes, John Wiley and sons New York, 1988
2. Vance, DE & Vance JE, Biochemistry of lipids and Biomembranes, Benzamin Cummings, 1985
3. Jones MN & Chapman D. Micelles monolayers and biomembranes, Wiley-Lis New York, 1995
4. Lodish H. Molecular Cell biology, WH Freeman and Company, 2013
5. Various review articles.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Electrophoresis of nucleic acids.
2. Gram staining of cells.
3. Cell fractionation and cell isolation estimation of marker enzyme
4. Paper chromatography of carbohydrates.
5. Cell counting/counting viability.
6. Demonstration of hypotonic ,hypertonic and osmotic media.
7. Preparation of starch from potato and its hydrolysis by salivary amylase.
8. Haemocytometer

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MICROBIOLOGY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2018-19

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

SEMESTER-III

Scheme of Examination			Duration	Marks
THEORY			**6 hrs.**	**75(33+33+9*)**
MIC 301	**:**	**Introduction to Medical Microbiology-I**	**3 hrs.**	**37.5(33+4.5*)**
MIC 302	**:**	**Introductory Immunology-I**	**3 hrs.**	**37.5(33+4.5*)**
PRACTICAL				
One Practical pertaining to the entire syllabus included in Theory Papers MIC 301 and MIC 302			**3 hrs.**	**25(20+5*)**

Semester-IV

THEORY			**6 hrs.**	**75(33+33+9*)**
MIC 401	**:**	**Introduction to Medical Microbiology-II**	**3 hrs.**	**37.5(33+4.5*)**
MIC 402	**:**	**Introductory Immunology-II**	**3 hrs.**	**37.5(33+4.5*)**
PRACTICAL				
One Practical pertaining to the entire syllabus included in Theory Papers MIC 401 and MIC 402			**3 hrs.**	**25(20+5*)**

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY
SEMESTER-III

MIC 301 : INTRODUCTION TO MEDICAL MICROBIOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Brief introduction to terminology of infectious diseases, Frequency of disease, Recognition of infectious disease, Infectious disease cycle.

Section B

Nomenclature and classification of microbes of medical importance, criteria of classification

Section C

Microbial adherence, Active penetration into body, Passive penetration into body, Microbial production of enzymes in the body.

Section D

Development of chemotherapy, General characteristics of antimicrobial drugs, Determining level of antimicrobial activity, Mechanism of action of antimicrobial drugs, Factors influencing the effectiveness of antimicrobial drugs.

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 302 : INTRODUCTORY IMMUNOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction and history of immunology, Non-specific defence; Physical barriers, Chemical barriers, Cellular, Phagocytosis, Inflammatory barriers, Inflammation, Fever, Types of Immunity, Active and Passive Immunity, Immunological memory

Section B

Humoral Immune Response, Antibodies/ Immunoglobulins, Structure, function and type of antibodies

Section C

Cell Mediated Immune System (CMI), Mechanism of CMI, Types of effector T cells, Helper T cells, Suppressor T cells, Cytotoxic T cells, Killer T cells, Interactions between T and B lymphocytes

Section D

Antigen-antibody interactions,: Precipitation reaction, Immunodiffusion test, Counter current Immuno electrophoresis, Complement fixation tests

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

PRACTICAL

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Staining- Gram staining, Albert and ZNCF staining
2. Isolation and maintenance of pure cultures
3. Physiological characteristics of bacteria and its use for their identification
4. Assay of antimicrobials
5. Preparation of serum/plasma

MICROBIOLOGY

SEMESTER IV

MIC 401 : INTRODUCTION TO MEDICAL MICROBIOLOGY-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Virulence and mode of transmission, Emerging and reemerging infectious diseases, Global travel and health considerations, Nosocomial infections

Section B

Origin of normal flora, Germ free and gnotobiotic life, Distribution and occurrence of Normal flora of skin, eye, respiratory tract, mouth, intestinal tract and genitourinary tract

Section C

Events in infection following penetration, Microbial virulence factors

Section D

Antibacterial drugs viz. sulphonamides, Quinolones, Penicillins, Cephalosporins, Tetracyclines, Erythromycin, and Chloramphenicol, Drug resistance, Antifungal and antiviral drugs

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 402 : INTRODUCTORY IMMUNOLOGY-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Primary and secondary lymphoid organs, Mucosa associated lymphoid tissues (MALT), Cutaneous associated lymphoid tissues (CALT), Lymphocyte traffic, Cells of Immune system, Antigens; Factors affecting Immunogenicity, Epitopes, Haptens

Section B

Antigenic combining regions of antibodies, Factors influencing antibody production, Genetic model, Multigene organisation, Generation of antibody diversity

Section C

Cytokines, Lymphokines, Colony stimulating factors, Tumour necrosis factors, Interferons, Accessory cells (Macrophages), the complement system, Classical and alternate pathway, HLA, Monoclonal antibody technology and its applications

Section D

Antigen-antibody Interactions: Widal test, Wasserman's test, Weil-Felix reaction, Western blotting, Types of Vaccines

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

PRACTICAL

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Sterilization- Introduction to autoclave, hot air oven, filter sterilization
2. Demonstration of Immune organs in dissected animals
3. Demonstration of Immune cells in smears prepared from Immune organs
4. Complement fixation
5. Antigen-antibody interactions:
   -Agglutination
   -Precipitation
   -Blood grouping
   -Immunodiffusion

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ELECTRONICS

(KEPT IN ABEYANCE)

****

AGRICULTURE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2018-19

SEMESTER-III

Paper – III : Agricultural Diversification and Machinery

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration each.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1. The syllabus of this paper has been diveided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural aid on works :
Dairy
Poultry
Fishery
Mushroom Cultivation
Animal Husbandry
Bee Keeping

Unit-II

Maintenance of grassy lawns and flower beds.
Raising of winter and summer ornamental flowers (rose, gladioli, dahlias, dianthus, foliage plants).
Fundamentals of landscape of an educational institute, factory, panchayat lands and office buildings.

Unit-III

Introduction to medicinal, aromatic and spice plants.
Growing of non-conventional plants.
Basic idea of Gentically Modified crops.
Fundamentals of land measurements and land revenue.

Unit-IV

Important parts of the tractor, combine, thresher and their maintenance.
Study of various agricultural tools and implements.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Poultry Farms, Fish Ponds, Apiary, Dairy Farms
Raising various ornamental flowers of different seasons
Maintenance of grassy lawns
Study the parts of engines, tractor and combine

Books :

1. Agriculture Engineering Vol.I and Vol. II, A. M. Michae, T.P. Ojha, 2006, Jain Brothers, New Delhi.
2. Mushroom Growing, 1997, H. S. Garcha, P. A. U., Ludhiana.
3. Hand Book of Agriculture, 2008, ICAR, New Delhi.
4. Farm Machinery, An Approach, S.C. Jain and Grace Philips, 2006, Standard Publishers, Distributors, New Delhi.
5. Fundamentals of Dairy Chemistry, Wong, Jenness, Keeney and Marth, 1998, CBS Publishers and Distributors, New Delhi.
6. Milk and Milk Products, Clarence Henry Eckles, Willes Barnes Combs and Harold Macy, Delhi, 2006, Tata McGraw Hill Publishing Company Limited, New Delhi.
7. Introduction to Plant Biotechnology, H. S. Chawla, 2008, Oxford and IBH Publishing Company Pvt. Ltd., New Delhi 2.
8. Plant Biotechnology, B. D. Singh, 2009, Kalyani Publishers, Ludhiana.
9. Aquarium and Fish Keeping, C. B. L. Srivastava, 2006, Kitab Mahal Allahabad.
10. Medicinal Plants of India, R. Zafar, 2006, CBS Publishers and Distributors, New Delhi.
11. Spices and Condiments, J. S. Pruthi, 2008, National Book Trust, New Delhi.

AGRICULTURE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2018-19
SEMESTER-IV

Paper – IV : Cultivation Practices of Vegetables, Timber and basic statistical methods

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1 The syllabus of this paper has been divided into four units.

2 Question paper shall comprise of 9 question in all.

3 Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.

4 Units I, II, III and IV shall have two questions each from respective Units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.

5 Total five questions are to be attempted.

Unit – I

Tillage, Fundamentals and Principles of Tillage, Zero Tillage, Tillage Implements.

Unit – II

Cultivation Practices of Potato, Tomato; Bhindi, Cabbage; Onion and Asparagus

Unit – III

What are Timbers and Lumbers ?
Raising of Dalbergia; Tectona; Poplar; and Eucalyptus

Unit- IV

Statistical Methods for Agricultural workers including Mean, Mode, Median, Chi-Square, Standard Deviation.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Agricultural Farms for Fundamental Aspects of Tillage
Raising Forest Nursery
Cultivation of Seasonal Vegetables
Numerical Problems of Statistics

Books :

1. Principles of Agronomy**,** T. Yellamanda Reddy and G. H. Sankara Reddy, 2008, Kalyani Publishers, Ludhiana.

2. Statistical Methods for Agricultural Workers, V.G. Panse and P.V. Sukhatme, 1997, ICAR, New Delhi.

3. Modern Techniques for Raising Field Crops, Chidda Singh, Prem Singh and Rajbir Singh, 2009, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

4. Vegetable Crops of India, P.C. Das, 1998, Kalyani Publishers, Ludhiana.

5. Potato Cultivation, 1998, Nandpuri and Kumar, P.A.U., Ludhiana.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATIONS, 2018 -2019

(SEMESTER : FIFTH AND SIX)

i.e

Fifth Semester : November/December, 2018
Sixth Semester : April/May, 2019

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PANJAB UNIVERSITY, CHANDIGARH
OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) i.e. FIFTH SEMESTER NOVEMBER/DECEMBER 2018 AND SIXTH SEMESTER APRIL/MAY 2019, EXAMINATIONS.

ENGLISH (Compulsory)
(For B.A. Candidates Only)
SEMESTER V

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

Note:

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.

(ii) Section A shall deal with the text and Section B with composition and grammar.

(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan), **Panjab University Edition.**

Unit I to III (Unit II- Chapter 'Emotional Intelligence' deleted)

Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five** selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting, at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4. Write an essay (in not more than 500 words), choosing one topic out of the given **four**. A wide range of topics should be given and in this respect ideas may be drawn from the prescribed text. **10Marks**

Q.5. (a) Antonyms –***ten*** out of ***fifteen*** **. 5 Marks**

(b) Correct the sentences- ***ten*** out of ***fifteen.*** **5 Marks**

……..

ENGLISH (Compulsory)
(For B.A. Candidates Only)
SEMESTER VI

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.
(ii) Section A shall deal with the text and Section B with composition and grammar.
(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan) , **Panjab University Edition.**

Unit IV-VI
Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas. **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five**, selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4.A question on Précis writing shall be set, without any internal choice. For this purpose, the passage chosen should be simple, lucid and coherent and must not exceed 240-250 words. **10 Marks**

Q.5 (a) Idioms and Phrases to be used in sentences. ***ten*** out of ***fifteen*** **5 marks**

(b) One word substitution – ***ten*** out of ***fifteen*** **5 Marks**

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
(ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ)
(ਬੀਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ **)**

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਪੈਰ੍ਹਾ ਰਚਨਾ 8 ਅੰਕ
3. ਲਿਪੀ 7 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ (ਸੰਪਾ) ਅਤਰ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

   (ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋ ਇਕ) 5+5=10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5+1 = 5 ਅੰਕ

3. ਪੈਰ੍ਹਾ ਰਚਨਾ (ਲਗਪਗ 250 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
(ਮਨੁੱਖੀ ਸੁਭਾਅ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਜੀਵਨ ਦੇ ਹਲਕੇ ਫ਼ੁਲਕੇ ਵਿਸ਼ਿਆ ਨਾਲ ਸੰਬੰਧਤ)
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7ਅੰਕ
ਲਿਪੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਜਨਮ ਤੇ ਵਿਕਾਸ,

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ

   (i) ਵਾਕੰਸ਼, ਨਾਂਵ ਵਾਕੰਸ਼ ਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪਛਾਣ 6 ਅੰਕ

   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

.....

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਨਾਵਲ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਅਖ਼ਬਾਰ ਲਈ ਪ੍ਰੈਸ ਨੋਟ	10 ਅੰਕ
3.	ਗੁਰਮੁਖੀ ਲਿਪੀ	5 ਅੰਕ
4.	ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. **ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ**, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

(ਅ) ਨਾਵਲ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ ਤੇ ਪਾਤਰ ਚਿਤਰਨ (ਦੋ ਵਿਚੋ ਇਕ) 10 ਅੰਕ

2 ਨਾਵਲ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1 = 5 ਅੰਕ

3. ਅਖ਼ਬਾਰਾਂ ਲਈ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨੇ : ਕਾਲਜ ਦੀਆਂ ਸਾਹਿਤਕ, ਸਭਿਆਚਾਰਕ, ਖੇਡਾਂ ਅਤੇ ਅਕਾਦਮਿਕ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ ਸਰਗਰਮੀਆਂ ਬਾਰੇ। (ਲਗਪਗ 200 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
ਨੋਟ : ਸਿਰਫ਼ ਇਕ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨ ਲਈ ਹੀ ਕਿਹਾ ਜਾਵੇ

4. ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7 ਅੰਕ

ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਨਾਮਕਰਣ, ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਲਈ ਅਨੁਕੂਲਤਾ, ਪ੍ਰਮੁੱਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਲਿਖਣ ਵਿਧੀ (ਆਰਥੋਗ੍ਰਾਫ਼ੀ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਸਵਾਲ)

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ
(i) ਵਾਕ ਤੇ ਉਪਵਾਕ ਦੀ ਪਰਿਭਾਸ਼ਾ: ਵਾਕ ਬਣਤਰ ਤੇ ਕਾਰਜ
ਬਣਤਰ: ਸਧਾਰਨ, ਸੰਯੁਕਤ ਤੇ ਮਿਸ਼ਰਤ ਵਾਕ
ਕਾਰਜ: ਪ੍ਰਸ਼ਨਵਾਚੀ, ਆਗਿਆਵਾਚੀ ਤੇ ਬਿਆਨੀਆ ਵਾਕ 6 ਅੰਕ

(ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), 'ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ', ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜ੍ਹ ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ , 1999.
2. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ(ਡਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997
3. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ', ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ,ਅੰਮ੍ਰਿਤਸਰ,2012.
4. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. ਬਰਾੜ ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ', ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ,2008.
6. ਧਾਲੀਵਾਲ ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
7. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER V

PAPER: HISTORY AND CULTURE OF PUNJAB: COLONIAL PERIOD
INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

Objectives: To introduce the students to the history of the history of the region and the impact of colonial rule.

Pedagogy: Lectures, library work and discussions.

UNIT 1

1. Early British Administration: Board of Administration 1849-1853; Reforms under John Lawrence
2. Colonial Policy: Agriculture; Trade & Industry
3. Spread of Modern Education

UNIT II

4. Impact of Socio-Religious Reform Movements: Namdharis; Singh Sabha
5. Impact of Socio-Religious Reform Movements: Arya Samaj; Ahmediyas
6. Uprising of 1907: Causes and Consequences

UNIT III

7. Ghadar Movement: Origin and Activities
8. Jallianwala Bagh: Circumstances and Consequences
9. Gurudwara Reform Movement: Causes and Consequences

UNIT IV

10. Response to Non Co-operation ; Civil Disobedience
11. Partition : Circumstances; Impact
12. Map:, Delhi, Amritsar, Lahore, Lyallpur, Montgomery, Jaito, Nankana Sahib, Khemkaran, Tarn Taran, Jalandhar, Sargodha, Sialkot, Ambala,

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	Khushwant Singh	*A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi,1991.
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991.

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER VI

PAPER: HISTORY AND CULTURE OF PUNJAB: POST INDEPENDENCE PERIOD

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

Objectives: To introduce the students to the history of the history of the region in the post 1947 period.

Pedagogy: Lectures, library work and discussions.

UNIT 1

1. Migration and its Socio-Economic impact
2. Rehabilitation and Resettlement
3. Demand for Punjabi Suba; Reorganization Act 1966

UNIT II

4. Green Revolution and its impact
5. Development of Education
6. Political and Economic Development post 1966

UNIT III

7. Issues of Boundary; water; Chandigarh
8. Socio-Economic Development in the 1980's
9. Operation Bluestar and its impact

UNIT IV

10. New Social issues-gender discrimination, drug menace, farmer suicide
11. Development of Punjabi literature :Bhai Vir Singh; Shiv Kumar Batalvi;Amrita Pritam
12. Map: Delhi,Amritsar,Khemkaran,TarnTaran,Jalandhar, Ambala,Ludhiana,Panipat, Karnal,Qadian, Gurdaspur,Hissar, Chandigarh.

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	R.S. Johar, and J.S. Khanna	*Studies in Punjab Economy,* GNDU, Amritsar, 1983
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy,Chandigarh, 1991.

ENGLISH (ELECTIVE)

SEMESTER V

Max.Marks 100
Written 90
Int. Assessment 10

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding.The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II .**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

1. Modern Indian Literature: Poems and Short Stories, Edited by the Dept. of , University of Delhi, OUP, 2007 New Delhi.

Section I

(Literary terms/Concepts: *Literatures Indian Languages, Colonialism, Post-colonial, Multicultural Society: Orientalism, Hybridity, Ideology, Gender, Race, Class, Caste, Nation, Importance of Translation in India, Methods of Translation)*

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do *five.* 15 marks

Q.2 The examiner will set seven short questions (each to be answered in 60-80 words) based on Modern Indian Literature: Poems and Short stories out of which the students shall be required to attempt only *five.* 15 marks

Q.3. There will be three long questions, out of which two long questions are to be answered each in about 180-200 words. These questions shall be based on *Modern Indian Literature: Poems and Short Stories.* 15 marks

Section II

Q.4 Note-making (A passage of about 1000 words is to be given for this Purpose) 15 marks

Q.5. An unseen passage for Comprehension (about 1000 words again) With ten multiple choice questions is to be given. 15 marks

Q.6 Applied Grammar:

(a) 5 Pairs of words to be used in sentences. (altar/alter/compliment/complement etc.) (1x5=5 marks)

(b) First find one word for many and then use it in a sentence. 5 marks

(c) First change the form of nouns/verbs/adjectives and then make sentences. (1x5=5 marks)

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ENGLISH (ELECTIVE)

SEMESTER VI

Max.Marks	**100**
Written	**90**
Int. Assessment	**10**

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding. The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II.**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

R.K.Narayan's Novel: The Guide

SECTION I

(Literary Concepts/Terms: *Fiction, Non-fiction, Narrative, Bildungsroman, Picaresque Novel, Novel of Sensibility, Historical Romance, Gothic Novel, Realistic Novel, Psychological Novel, Political Novel, Regional Novel, Point of View, Omniscient Author, First Person Narrator, Stream of Consciousness, Protagonist/ antagonist, Plot/Story, Character, Structure)*

Q.1	Literary terms/concepts (*five out of eight*)	15 marks
Q.2.	Short question based on the prescribed novel, *Five out of Seven* (each in 60-80 words).	15 marks
Q.3	Long questions based on the novel *three out of five* dealing with the incidents, theme(s) Character(s), symbols etc.(each in 180-200 words)	15 marks

SECTION II

Q.4	Essay on any one (out of the given four) topic of international importance (in about 700 words)	20 marks
Q.5.	Report-writing (in about 300 words) on an incident/situation , conference/seminar, problem/state of education/poverty /unemployment or similar issues.	10 marks
Q.6.	Translation from Hindi/Punjabi into English (Passage of about 400 words)	
	OR	
	Paragraph on any *one* out of the *two* given topics (for foreign students only)	15 marks

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हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य तृतीय वर्ष) सेमेस्टर-5

पूर्णांक **90+10=100**
समय- 3 घंटे

1. **कुरुक्षेत्र**

रामधारी सिंह 'दिनकर' प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।

(क) 6-6 अंकों की दो संदर्भ सहित व्याख्याएं करनी होगी। कुल चार काव्यांश दिए जायेंगे।

(ख) 15 अंकों का एक आलोचनात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगे। अंक-27

2. **समीक्षा सिद्धांत :**

क. काव्य की परिभाषा तथा भेद, महाकाव्य, खंडकाव्य, गीतिकाव्य की परिभाषा तथा विशेषताएँ

ख. गद्य विधाएं-निबंध, संस्मरण, जीवनी तथा आत्मकथा के स्वरूप और तत्वों का सामान्य परिचय। अंक-30

उपर्युक्त खंडों क ख में से संबंधित 15-15 अंकों के चार प्रश्न पूछे जाएंगे इनमें से केवल दो के उत्तर देने होंगे ।

3 **अलंकार :**

केवल निम्नलिखित अलंकार निर्धारित हैं।
अनुप्रास, यमक, श्लेष, वकोक्ति, उपमा, रूपक, अतिशयोक्ति, विरोधभास, उत्प्रेक्षा, प्रतीप । 6 X 3=18

4 **लघूत्तरापेक्षी :**

प्रथम दो खंडों (कुरुक्षेत्र एवं समीक्षा सिद्धांत) में से पांच-पांच अंक के तीन प्रश्न करने होंगे, 6 प्रश्न पूछे जाएंगे । (शब्द सीमा - 50 शब्द) अंक-15

5. **आंतरिक मूल्यांकन** अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य) (तृतीय वर्ष) सेमेस्टर-6

पूर्णांक **90**+10=100
समय- 3 घंटे

1. निबंध लेखन (केवल साहित्यिक और सामाजिक विषयों पर) अंक-20
कुल आठ निबंधों में से किसी एक विषय पर लिखने के लिए कहा जाएगा।

2. गद्य फुलवारी, सम्पादक डॉ0 शहाबुद्दीन शेख, प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।
केवल निम्नलिखित पाठ निर्धारित है । अंक-16

'आसुओं की होली' (प्रेमचंद), 'अकेली' (मन्नु भंडारी), 'चीफ की दावत' (भीष्म साहनी)
'सुभान खाँ' (रामवृक्ष बेनीपुरी) 'भाभी' (महादेवी वर्मा), 'सदाचार का ताबीज (हरिशंकर परसाई), महात्मा गांधी' (रामकुमार वर्मा), 'मैं घोबी हू¡' शिवपूजन सहाय), 'गप-शप' (नामवर सिंह), 'जमनोत्री की यात्रा' (विष्णु प्रभाकर)

(क) 6 अंकों की एक सन्दर्भ सहित व्याख्या करनी होगी । कुल दो व्याख्याँए पूछी जाएंगी ।

(ख) 10 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल दो प्रश्न पूछे जाएंगे ।

3. हिन्दी साहित्य का इतिहास अंक-24
केवल निम्नलिखित गद्य-विधाओं का उद्भव और विकास : उपन्यास, कहानी,
नाटक, निबंध, आत्मकथा, जीवनी, संस्मरण, रेखाचित्र ।
इन गद्य- विधाओं में से 12-12 अंकों के कम से कम चार प्रश्न पूछे जाएंगे,
छात्रों को केवल दो प्रश्नों के उत्तर लिखने होंगे ।

4. छन्द-परिचय- निम्नलिखित छन्द निर्धारित हैं । अंक-15
दोहा, सोरठा, चौपाई, रोला, कुण्डलियां, सवैया, द्रुतविलम्बित, हरिगीतिका, उपेन्द्रवज्रा, इन्द्रवज्रा ।
पाँच छन्दों के लक्षण और उदाहरण पूछे जाएंगे, जिनमें से तीन का उत्तर देना होगा ।

5. हिन्दी भाषा और उसकी लिपि अंक-10
देवनागरी लिपि : विकास, गुण दोष, सुधार के उपाय 10 अंकों के कुल दो प्रश्न पूछे जाएंगे, जिनमें से केवल एक प्रश्न का उत्तर देना होगा ।

6. निमन्त्रण पत्र, प्रेस, विज्ञप्ति, विज्ञापन का प्रारूप तैयार करना । अंक-5
दो प्रश्न पूछे जाएंगे, छात्राों को एक प्रश्न का उत्तर देना होगा।

आंतरिक मूल्याकंन अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

संस्कृत (इलैक्टिव)
5th Semester

Paper - Sanskrit : **उपनिषद्, रामायण, शब्दावली व व्याकरण** पूर्णांकः 90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा। उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।-
- ईश्वर, त्याग, कर्म, विद्या, अविद्या, सम्भूति, असम्भूति आदि औपनिषदिक विषयों का अध्ययन कराना।
- आदि काव्य वाल्मीकि रामायण तथा लौकिक काव्य के सौन्दर्य का दिग्दर्शन कराना।
- संस्कृत के समृद्ध शब्दभण्डार द्वारा छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT - I

(क) ईशोपनिषद्

(1) मन्त्र/मन्त्रांश का अनुवाद एवं व्याख्या 1x10=10अंक

(2) समीक्षात्मक प्रश्न / सूक्ति व्याख्या 1x10=10अंक

(ख) वाल्मीकिरामायण (सुन्दरकाण्ड, सर्ग-15, गीता प्रैस गोरखपुर) श्लोक व्याख्या 2x7½=15अंक

UNIT - II

(ग) व्यावहारिक संस्कृत शब्दावली : वाद्य, खेल एवं युद्ध सम्बन्धी (15 में से 10 शब्दों की संस्कृत) 1x10=10अंक

1. उतार – अवरोहः	2. चढ़ाव-आरोह	3. जलतरंग-जलतरङ्गः
4. ढिंढोरा - डिण्डिमः	5. ढोल - पटहः	6. ढोलकः - ढोलक
7. तवला - मुरजः	8. तानपुरा - तानपुराः	9. तुरही (शहनाई) - तूर्यम्
10. नगाड़ा - दुन्दुभिः	11. पियानो - तन्त्रीवाद्यम्	12. बांसुरी - मुरली
13. मंजीरा-मञ्जीरम्	14. सारंगी (वायलिन)-सारंगी	15. सितार-वीणा
16. हारमोनियम-मनोहारिवाद्यम्	17. गेंद-कन्दुकः	18. टेनिस का खेल-टेनिस-क्रीडा
19. नेट-जालम्	20. फुटबाल-पादकन्दुकः	21. बैड मिंटन-पत्रिक्रीडा
22. मैच-क्रीडाप्रतियोगिता	23. रेफरी-निर्णायकः	24. रैकेट-काष्ठपरिष्करः
25. बालीबालक्षेपकन्दुकः	26. हाकी का खेल-यष्टिक्रीडा	27. बिगुल-संज्ञाशंखः
28. कोमलस्वर-मन्द्रः स्वरः	29. तीव्रस्वर-तारःस्वरः	30. मध्यमस्वर- मध्यः, मध्यस्वरः

31.एटमबम-परमाणु अस्त्रम्	32. क्वच-वर्मन्	33.कृपाण-असिः
34. गण्डासा-तोमरः	35. गदा- गदा	36. गोली-गुलिका
37. छावनी-शिविरम्	38. टीयर गैस-धूम्रास्त्रम्	39. तेप-शतघ्नी
40. जल सेनापति-भूसेनाध्यक्षः	41. थल सेनापति- भूसेनाध्यक्षः	42. वायुसेनापति-वायुसेनाध्यक्षः
43. धनुष- धनुः, कोदण्डः, चापम्, कार्मुकम्	44. पिस्तौल-लघुभुशुण्डिः	45. बन्दूक-भूशुण्डिः
46. बम-आग्नेयास्त्रम्	47. हाइड्रोजन बम-जलपरमाण्वस्त्रम्	48. बारूद-अग्निचूर्णम्
49. लड़ाई का जहाज-युद्धपोतः	50.लड़ाई का विमान-युद्धविमानम्	

UNIT - III

(घ) विसर्ग सन्धि 5x1=5अंक

(ङ) अव्ययीभाव समास 5x1=5अंक

(च) अलंकार : उपमा, उ॰ प्रेक्षा, रूपक, विभावना, विशेषोक्ति तथा विरोधाभास 2x7½=15अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT - IV

(छ) वैदिक इतिहास (लघु प्रश्न/टिप्पणी) 2x5=10अंक

(i) वेदों का सामान्य परचिय

(ii) वेदांग साहित्य का सामान्य परिचय

UNIT - V

(ज) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य)

5x2=10अंक

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संस्कृत (इलैक्टिव)

6th Semester

Paper - Sanskrit : **लौकिक काव्य, इतिहास, निबन्ध व व्याकरण** पूर्णांकः90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा। उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- लौकिक काव्य के रचनासौष्ठव से परिचय कराना।
- संस्कृत के समृद्ध शब्दभण्डार से छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT-I

(क) रघुवंश (प्रथम सर्ग) - कालिदास

i) श्लोकों का सप्रसंग अनुवाद व व्याख्या 2x10=20अंक

ii) सूक्ति-सप्रंसग व्याख्या (तीन में से एक) 1x10=10अंक

UNIT-II

(ख) संस्कृत शब्दावली : सम्बन्धसूचक एवं प्रशासनिक शब्द 10x1=10अंक

1.पिता/माता - जनकः, /जननी	2. चाचा, चाची-पितृव्यः, पितृव्या
3. पति, पत्नी-पतिः, पत्नी (भार्या, जाया)	4. नाना, नानी-मातामहः, मातामही
5. छोटा भाई, बड़ा भाई-अनुजः, अग्रजः	6. दादा, दादी-पितामहः, पितामही
7. पुत्र, पुत्री-पुत्रः/आत्मजः, पुत्री/आत्मजा	8. जीजा-भगिनीपतिः
9. जंवाई (दामाद)-जामाता	10. देवर, देवरानी-देवरः, याता
11. मामा, मामी-मातुलः, मातुली	12. साला, साली-श्यालः (स्यालः), श्याली (स्याली)
13. सास, ससुर-श्वश्रूः, श्वशुरः	14. समधी (कुडम), समधिन (कुडमनी) -सम्बन्धी, सम्बन्धिनी
15. पोता, पोती-पौत्रः, पौत्री	16. भतीजा, भतीजी-भ्रातृपुत्रः /भ्रातृव्यः, भ्रातृपुत्री /भ्रातृव्या
17. भानजा, भानजी-भागिनेयः, भागिनेयी	18. चचेरा भाई, चचेरी बहिन-पितृव्यपुत्रः, पितृव्यपुत्री
19. भाभी-भ्रातृजाया	20. Administration-प्रशासनम्
21.Appeal-निवेदनम्	22. Approval-अनुमोदनम्

23. Ban-प्रतिबन्धः
24. Cabinet-मन्त्रिमण्डलम्
25. Corporation-निगमः
26. Director-निदेशकः
27. Employment-आजीविका, वृत्तिः
28. Initials-आद्यक्षरम्
29. Judgement-निर्णयः
30. Gazetted Officer-राजपत्रिताधिकारी
31. Notification-अधिसूचना
32. Procedure-कार्यविधिः
33. Receipt-प्राप्तिः
34. Senior-वरिष्ठः
35. Subordinate-अधीनस्थः
36. Transfer-स्थानान्तरणम्
37. Vacancy-रिक्तिः
38. Character Certificate-चरित्रप्रमाणपत्रम्
39. Civic-नागरिकः

(ii) पंजाबी में प्रयुक्त संस्कृत के तत्सम तथा तद्भव शब्दों की सूची 10x1=10अंक

संस्कृत शब्द	पंजाबी शब्द	संस्कृत शब्द	पंजाबी शब्द
1. चिरम्-(विलम्ब, देरी, दीर्घकाल)	चिर	21. रटितम् (रटा हुआ)	रटंत
2. वेला (समय, अवसर)	बेला	22. लोहितम् (खून)	लहूं
3. शाकः (हरि सब्जी)	साग	23. वसितम्, वसितिः (वस्ती)	वसूं, वसों
4. कर्करम् (ढेला, कंकर)	कंकर	24. हृदयम् (हृदय, दिल)	हिउं, हियां
5. चतुष्कम् (चौंक)	चौंक, चौंका	25. श्वश्रूः (सास)	सस्सू
6. द्वयम् (दो, जोड़ा)	दोह	26. वधूः (बहू)	वहू
7. धावनम् (धोना)	धावण	27. अद्य (आज)	अज्ज
8. नखम् (नाखून)	नउंह, नहुं, नौंह	28. अर्ध (आधा)	अद्धा
9. निषिद्धम् (बुरा, अपवित्र)	नखिंध	29. उच्चैः (ऊँचा)	उच्चा
10. नीलम् (एक रत्न)	नीलम, लीलम	30. कदा (कब)	कद
11. पदम् (पैर)	पउं	31. तदा (तब)	तद
12. नयनम् (नेत्र)	नैणूं	32. यदा (जब)	जद
13. पुच्छम् (पूंछ)	पूंछ	33. कृतः (किया)	कीत्ता
14. बाल्यम् (बचपन)	बालम	34. चन्द्रः (चांद)	चन्द
15. बीजम् (बीज)	बीं, बीउं	35. त्वम् (तुम)	तूं
16. भयम् (डर)	भैं, भउं, भंऊ	36. निम्बः (नीम)	निम्म
17. माषम् (उड़द)	मांह, महां	37. पिप्पलः (पीप	पिप्पल

18. मनःघटितम् (स्वकल्पित)	मनघडंत	38. बलदः (बैल)	बलद, बौलद
19. मुखम् (मुंह)	मूंह, मूं	39. हस्तः (हाथ)	हत्थ
20. युगलम् (जोड़ा)	जुगलां	40. सर्वः (सब)	सब्भ

UNIT-III

(ग)णिजन्त व सन्नन्त प्रयोग (प्रथम पुरुष का एकवचन ही प्रष्टव्य है।) 5x1= 5 अंक

(i) णिच् प्रत्यय केवल भू, पठ्, हस्, गम्, कृ, अधिइङ्, खाद्, चल्, नश्, व नम् धातु से ही प्रष्टव्य हैं।

(ii) सन् प्रत्यय केवल स्वप्, घ्रा, पठ्, कृ, गम्, मृ, मुच्, दा, तृ तथा भू धातु से ही प्रष्टव्य हैं।

(घ)बहुव्रीहि समास 5x1= 5 अंक

(ङ)अंलकार : अनुप्रास, यमक, अर्थान्तरन्यास, श्लेष, अतिशयोक्ति व दृष्टान्त 2x5=10 अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT-IV

(च)लौकिक संस्कृत साहित्य के निम्नलिखित लेखकों की कृतियों का परिचय 2x5= 10 अंक

(भास, कालिदास, भवभूति, बाणभट्ट, माघ, भर्तृहरि व दण्डी)

UNIT-V

(छ)संस्कृत निबन्ध (तीन में से एक विषय पर दस पंक्तयों में) 1x10=10अंक

विषय – संस्कृतभाषाया महत्त्वम्, मम प्रियः कविः, मम प्रियं पुस्तकम्, दीपावली, सत्संगतिः तथा पर्यावरणसुरक्षा)

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਥੀਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਦੇ ਰੂਪ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

(ਨਿਰਧਾਰਤ ਕਵੀ : ਸ਼ੇਖ ਫਰੀਦ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ, ਗਰੂ ਅਰਜਨ ਦੇਵ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ, ਭਾਈ ਗੁਰਦਾਸ)

2. ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ, ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) 'ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ' ਨਾਟਕ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਟਕ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) (ਦੋ ਵਿਚੋ ਇੱਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 2x5 = 10 ਅੰਕ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ)** : ਗੁਰਮਤਿ, ਵਾਰ ਕਾਵਿ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4 =20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: ਰੀਤੀ ਸੰਪ੍ਰਦਾਇ, ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਸਾਹਿਤ ਦੇ ਰੂਪ : ਜਨਮਸਾਖੀ, ਸ਼ਲੋਕ, ਕਾਫ਼ੀ, ਕਿੱਸਾ, ਵਾਰ, ਸੀਹਰਫ਼ੀ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਪੱਛਮੀਂ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
(ਨਿਰਧਾਰਤ ਕਵੀ: ਸ਼ਾਹ ਹੁਸੈਨ, ਦਮੋਦਰ, ਹਾਫਿਜ਼ ਬਰਖੁਰਦਾਰ, ਮਿਰਜ਼ਾ ਸਾਹਿਬਾ
2. ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼, (;ਜ਼ਗਕਓ) ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
(ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਤੇ ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼ ਪਾਠ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ-ਬੰਦ / ਵਾਰਤਕ ਅੰਸ਼ਾਂ ਦੀ ਵਿਹਾਰਕ ਆਲੋਚਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
(ਅ) ਨਿਬੰਧ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਿਬੰਧ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 2x5 = 10 ਅੰਕ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ)** : ਸੂਫੀ, ਕਿੱਸਾ ਤੇ ਜੰਗਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5x4 = 20 ਅੰਕ
5. ਪੱਛਮੀਂ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ੳ) ਅਰਸਤੂ ਦਕ ਅਨੁਕਰਣ ਸਿਧਾਂਤ (ਅ) ਮਨੋਵਿਸ਼ਲੇਸ਼ਣੀ ਵਿਧੀ (ਏ) ਮਾਰਕਸਵਾਦ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੇਤਰ ਤੇ ਹੋਰ ਵਿਗਿਆਨਾਂ ਨਾਲ ਸੰਬੰਧ (ਮਨੋ ਵਿਗਿਆਨ, ਸਮਾਜ ਵਿਗਿਆਨ ਤੇ ਮਾਨਵ ਵਿਗਿਆਨ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਈਸ਼ਰ ਸਿੰਘ ਤਾਂਘ, ਪੱਛਮੀਂ ਸਮੀਖਿਆ ਦੇ ਸਿਧਾਂਤ, ਦੀਪ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਸ਼ਹਿਰ।
5. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), 'ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
6. ਹਰਿਭਜਨ ਸਿੰਘ, ਅਧਿਅਨ ਤੇ ਅਧਿਆਪਨ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਧਾਲੀਵਾਲ,ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ' ,ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

URDU (ELECTIVE)
SEMESTER-V

Theory **90 Marks**
Internal Assessment **10 Marks**
Time: 3 Hours

Paper-A

Unit-I

Explanation of prose passage from following lessons: 30 Marks

1.
- Ek khuda parast shahzadi (Meer Amman)
- Shahzade ke pahle safar ka aaghaz (Rajab Ali Baig Suroor)
- Guzra hua zamana (Sir Syed Ahmed Khan)
- Qatil ki maa (Prem Chand)

Unit-II

2. (i) Explanation of Verses from following ghazals 30 Marks
- Jo is shor se Meer rota rahega (Meer Taqi Meer)
- Maqdur nahin uski tajalli ke bayan ka (Sauda)
- Tohmaten chand apne zimme dhar chale (Khawaja Mir Dard)
- Dil-e-nadan tujhe hua kya hai (Mirza Asdullah Khan Ghalib)
- Tamannaon mein uljhaya gaya hun (Shad Azimabadi)
- Duniya meri bala jane, mahngi ya sasti hai (Fani Badayuni)
- Na jane ashk se aankhon mein kyon hain aaye hue (Firaq Gorakhpuri)
- Mauje gul, mauje saba, mauje sehar lagti hai (Jam Nisar Akhtar)

(ii) Explanation of verses from following nazams
- Daastan shehzade ke ghayab hone ki (Meer Hassan)
- Aadmi Nama (Nazeer Akbar Abadi)
- Badli Ka Chand (Josh Malihabadi)
- Raat aur rail (Asrar-ul Haq Majaz)
- Kutte (Faiz Ahmed Faiz)

Unit-III

3. Summary of a lesson or a poem from Unit I and II 15 Marks

Unit-IV

4. Question on the basis of the following forms of prose and poetry 15 Marks

1. Ghazal 2. Nazam 3.Qasida 4.Novel 5.Afsana

Books Prescribed:
Shaoore Adab: Intikhab Nasar-o-nazam,Maktaba Jamia,New Delhi

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URDU (ELECTIVE)
SEMESTER-VI

Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Paper-B

Short story and literary history of Urdu literature

Unit-I

1. Urdu adab ki ibtida aur irtiqa 30 Marks
2. Fort William College Ki adabi khidmaat

Unit-II

Contribution of Urdu Poetry with special reference to: 30 Marks

- Asadullah Khan Ghalib
- Brij Narayan Chakbast
- Allama Iqbal
- Faiz Ahmad Faiz

Unit-III

Contribution of Urdu prose with special reference to: 15 Marks

- Sir Syed Ahmed Khan
- Altaf Husain Hali
- Quratulain Haider
- Ismat Chughtai

Unit-IV

Urdu Afsane Inshaiye 15 Marks

- Bhola
- Hajj e Akbar
- Manzoor
- Election

Book Prescribed:
Tarikh-e-Adab Urdu by, Dr.Ram Babu Saxena
Afsane Inshaiye aur drame, compiled by Mohammad Qasim Siddiqui,
Education Book House Aligarh

Books Recommended:
Tarikh-e-Adab Urdu, by Dr. Aijaz Hussain

PERSIAN (ELECTIVE)
SEMESTER-V

There will be two Paper Setters/Examiner.

PAPER-A : PROSE

Marks: 90
TIME : 3 Hrs
Internal Assessment : 10

1.	Translation of text pieces into English,Hindi,Urdu, Panjabi or Persian.	20 Marks
2.	Explanation of text pieces into English,Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye- Kuath	20 Marks
4.	Simple direct questions on the life works of the authors	20 Marks
5.	Short notes.	10 Marks
	Total:-	90 marks

Books prescribed:

Nisabe Jadide Farsi (Published By Jayyad Ballimaran, Delhi) Only following portion from Prose Section.

(i) Intekhab Sarzamin-e-Hindi-Ali Asghar Hikmat,P.33-60
(ii) Dastanha-ye-Kutah:-
  (a) Azzan-e- Maghrib by Saeed Nafisi.
  (b) Khukushi By Mohd. Hijazi.

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PERSIAN (ELECTIVE)
SEMESTER-VI

Paper-B POETRY

Marks 90
Time 3 Hours
Internal Assessment 10

1.	Translation of text pieces into English, Hindi,Urdu, Panjabi Or Persian.	20 Marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Central idea of the poem	20 Marks
4.	Simple direct questions on the life works of the Poets	20 Marks
5.	Short notes.	10 Marks
	Total:	90 Marks

Books Prescribed:

Nisabe Jadide Farsi(Published by Jayyad Ballimaran, Delhi). Only following portions form poetry section:-

Az Gzalliyat-e-Hafiz:

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.
Saaqi Benur Badah Bar Afrooz Jam-e-Maa.
Doosh Deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:
Jan Ze Tan Burdi-o-Dar Jaani Hunooz.
Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

Masanaviy-e-Maulana Rum:
Deed Musa Yek Shabani Rah Be Rah.
Wahi Aamad Suy-e-Musa Az Khusa

Wassayad-e-Urfi
Dar Wasf-e-Kashmir

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FRENCH (ELECTIVE)

B.A. /B.SC.(GENERAL) THIRD YEAR (SEMESTER SYSTEM) SYLLABUS, 2018-2019

SEMESTER-5TH

INTRODUCTION TO FRENCH DRAMA, POETRY AND PROSE

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

I Literary Master Pieces, Drama, *Ma Vie n'est plus un roman*, Michel Déon 25 Marks

Questions on character sketches and Critical appreciation of the drama to be asked and answered in French.

II Selected Reading-Poetry 25 Marks
Questions, explanations of stanzas of poems and central ideas, critical appreciation and summaries of the poems to be asked and answered in French.

III Text Book : Version Originale-3 (Units 8-9) Version Originale-4 (Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) General questions to be based on the prescribed text.(4 questions of 5 marks each) 20 Marks

(b) Questions on French civilization in the form of fill in the blanks, multiple choice and short answers of 1-2 sentences. 20 Marks

I Courses of Reading :

Drama : *Ma Vie n'est plus un roman*, Michel Déon de L'Académie française, Editions Gallimard, 1987

II Poetry :

1. Pierre de Ronsard
   Quand vous serez bien vieille

https://www.poetica.fr/poeme-90/pierre-ronsard

2. Jean de la Fontaine
   Recueil : Livre I, Fable n° 1
   La Cigale et la Fourmi

www.lesfables.fr

3. Arthur RIMBAUD
   Recueil : Poésies
   Le dormeur du val
http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Raymond RADIGUET
   Recueil : *Poèmes divers*
   Sur la mort d' une rose
http://poesie.webnet.fr/lesgrandsclassiques/poemes

5. Guillaume APOLLINAIRE
   Recueil : *Alcools*
   La blanche neige
https://www.poetica.fr/poeme-782/guillaume-apollinaire

Text Books for Reference :

1. French Poetry for students by A.W. Bains.
2. Le Français et la Vie-Tome III G. Mauger/M.Bruezier .
4. Collection Littéraire XIX & XX Siècle-Nouveaux classiques Larousse.
5. Les Textes français -XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

CHOICE TO BE GIVEN IN ALL QUESTIONS

Note for Private Candidates: -The theory paper would be marked proportionately out of 100 as there is no internal assessment.

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FRENCH (ELECTIVE)

SEMESTER-6th

FRENCH POETRY, APPLIED GRAMMAR, CREATIVE WRITING AND VIVA-VOCE

Max. Marks	: 100
Theory	: 60 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

1.	Summary, explanation and analysis of prescribed poems	20 Marks
2.	A composition on a topic within the textbook of about 200-300 words	15 Marks
3.	Questions on applied grammar [Questions to be based on grammar section of Prose - Version Originale-3 (Units 8-9) Version Originale-4(Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil Pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.	25 Marks
4.	**Viva-Voce:**	
1.	Dictation of an unseen passage of about 100 words.	10 Marks
2.	Conversation (general)	10 Marks
3.	Reading (Unseen passage)	10 Marks

Courses of Reading:

Poetry: The following five poems are to be studied:

1. Alfred De MUSSET
   Recueil : *Premières poésies*
   Sonnet : Que j'aime le premier frisson d'hiver

http://poesie.webnet.fr/lesgrandsclassiques/poemes

2. Victor HUGO
   Recueil : Les quatre vents de l'esprit
   Cent mille hommes, criblés d'obus et de mitraille

http://poesie.webnet.fr/lesgrandsclassiques/poemes

3. Alphonse de LAMARTINE
   Recueil : M*éditations poétiques*
   L'Automne

http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Théophile GAUTIER
   Premier sourire du printemps

http://poesie.webnet.fr/lesgrandsclassiques/poemes/theophile_gautier

5. Jean –Baptiste CLEMENT
Le temps des cerises

http://poesie.webnet.fr/lesgrandsclassiques/poemes

Comprehension, explanation, literary appreciation and criticism of the poems to be studied.

Note : 1. The latest syllabus should be strictly followed.
2. Choice should be given in questions.

Text Books for Reference:

1. French Poetry for students by - A.W. Bains.
2. Le francais et la Vie-Tome III G. Mauger/M.Bruezier.
3. Collection Litteraire XIX & XX Siecle-Nouveaux classique Larousse.
4. Poèmes choisis-A de. Musset, Edition-Nouveaux classiques Larousse.
5. Les Textes français- XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

Courses of Reading :

Version Originale-3 (Units 8-9) Version Originale-4 (Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil Pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

N.B. : (1) The latest syllabus to be followed strictly and the question paper should be of B.A.III level.
(2) Choice in questions must be given.
(3) Eight periods of one hour weekly – Six hours for text and two hours for composition.
(4) The composition and the unseen passages should be based on the vocabulary and grammar covered till B.A. III.
(5) The paper will be set and answered in French (except Translation).

Note for Private Candidates: - The theory paper would be marked proportionately out of 70 as there is no internal assessment.

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GERMAN (Elective)
Semester - V

Summary

Max. Marks :100 marks(Total)
Paper – A (Theory) : 90 marks
Internal Assessment: 10 marks

Paper A - Theory : **90 marks**

Time: 3 hours

Note: Use of dictionary is allowed

i. Explanation and interpretation of any **two** poems or **three** stanzas from the prescribed book "German Verse" (Kulkarni & Chapekar) : 30 marks

- i. Hyperions Schicksalslied (Hölderlin)
- ii. Der Karussel (Rilke)
- iii. Des Schiffers Traum (Arndt)
- iv. Der Zauberlehrling (Goethe)
- v. Ganymed (Goethe)
- vi. Einkehr (Uhland)

ii. Characterization / Literary questions (2) on the prescribed drama "Andorra" (Max Frisch) : 30 marks

iii. Translation of unseen text/s from German into English : 30 marks

5.2 **Internal Assessment** : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "German Verse" (Kulkarni & Chapekar)
ii. "Andorra" (Max Frisch)

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GERMAN (Elective)

Semester - VI

Summary

Max. Marks: 100 marks (Total)
End-semester Exam Paper-B (Theory) : 60 marks
Oral (viva-voce) examination : 30 marks
Internal Assessment : 10 marks

Paper B - Theory		:	**60 marks (Total)**
	Time Note: Use of dictionary is allowed	:	3 hours
i.	Translation of unseen text/s from German into English	:	20 marks
ii.	Translation of unseen text/s from English into German	:	10 marks
iii.	Characterization / Literary questions (2 out of 3) on the prescribed novel "Der Verdacht" (Dürrenmatt)	:	30 marks

Oral (viva-voce) Examination : 30 marks (Total)

i. Conversation in German

ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbooks:

i. "Deutsche Texte zum Übersetzen", Max Hueber Verlag.
ii. "Der Verdacht" (Dürrenmatt)

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Russian (Elective)
SEMESTER -V

Paper –Option (i) (General Translation & Grammar): Written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) Cases(Nouns, Pronouns, Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes). 20 Marks

Note: Use of dictionaries is allowed.

OR

Paper: Option(ii) (Scientific & technical Translation & Grammar): written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian (Scientific & technical material) into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) 20 Marks

   Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes).

Note: Use of dictionaries is allowed.

Extra material to be provided by the department.

RUSSIAN (ELECTIVE)
SEMESTER -VI

Paper : Written (Literature)
Maximum Time : 3 hrs.

Maximum Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Biographies of Russian writers from prescribed text books **20 marks**

Biographies 2 out of 4 (10 marks each)

A.S.Pushkin
N.V.Gogol
A.P.Chekhov
M.Gorky
Leo Tolstoy
Chigiz Aitmatov
Konstantin Paustovsky

2. Literary works

(2 Question out of 4(10 marks each) on the following works: **20 marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

3.

a/ Reference to the context (Poetry): **10 marks**

a) Nyane	A.S.Pushkin
b) V Sibri	A.S.Pushkin
c) Parus	M.V.Lermontov

Poetry paragraph from the text studied (1 out of 2)

b/ Reference to the context (Prose): **10 Marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

Prose paragraph from the text studied (1 out of 2)

iii) Oral/Practical **30 marks**

Practical (Dissertation: Independent translation of about 2500 words from Russian literary, socio-political, popular science texts into English/Hindi/Punjabi) **15 marks**

OR

Verbal Narration in Russian on any two of the following topics:
1.Biography of any Indian/Russian personality 2. Native state 3. My favorite Russian Literary work.
4. Russia 5. India 6. Sport, 7. India-Russia commercial/Trade Relation.

General Conversation **15 marks**

Books Recommended for additional reading

N.S.Burlakov & C.N. Chakravarti : A Cherstomathy of Russian Literature. 1970
Nikolai Bannikov; Three centuries of Russian Literature. Progress Publishers, Moscow,1980.
A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
T.E. Pecherista : DOROGI – Stories by Soviet writers Russian language,Moscow,1979.
S Khavronnia: Russian in Exercise, 1978.
I Pulkina: RUSSIAN A Practical Grammar with Exercise. Russky Yazik. Pub. H.Moscow.
Dictionaries: English-Russian dictionary.
Russian-English dictionary
B.I.Balin and R.M.Bakaya: An Introductory Russian course for students of Science and technology, Asia publishing house, Delhi (For Scientific & technical Translation group)

Note: Extra materials to be provided by the department.

FOLLOWING SUBJECTS ARE KEPT IN ABEYANCE:-

1. **ARABIC (ELECTIVE)**
2. **BENGALI (ELECTIVE)**
3. **TAMIL (ELECTIVE)**
4. **KANNADA (ELECTIVE)**
5. **MALAYALAM (ELECTIVE)**
6. **TELUGU (ELECTIVE)**

PHYSICAL EDUCATION

B.A. /B.Sc. (GENERAL) FIFTH SEMESTER EXAMINATION (2018-19)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Play:

– Meaning and Definition of Play.
– Various theories of play and their significance in Physical Education and Sports.

Recreation:

– Meaning, definition, characteristics, aim, objectives and types of recreation and recreational activities.
– Significance of recreation in the modern society.
– Recreation providing agencies.

UNIT-III **12** Marks

Competitions:

– Meaning, importance and conduct of intramural and extramural competitions.
– Meaning and types of tournament and their merits and demerits.
– Draw of fixtures of various tournaments.

Camps:

– Meaning, aim and objectives of the camp.
– Advantages of camping/outdoor education.
– Types and agencies promoting camping.
– Organization of camps and factors affecting its organization.
– Educative values of a camp.

Athletic Meet:

– Organization of an athletic meet.
– Importance/significance of an athletic meet.

UNIT-IV **12** Marks

Posture:

– Meaning, types and importance of a good posture.
– Causes, preventive and remedial measures of a poor posture.

Postural Deformities:

– Postural deformities (Kyphosis, lordosis, scoliosis and flat foot), their causes, preventive and remedial measures.

Physical Activities and their effects on various physical parameters and vice versa:

– Physical activities/training and their effects on aging, body composition, and obesity.
– General problems of obesity.
– Health related risk factors of obesity.
– Obesity and physical activity.
– Causes, preventive and remedial measures of obesity.

UNIT-V **12** Marks

Massage:

– Brief history of massage.
– Meaning and definition of massage.
– Principles/guidelines for massage.
– Types of massage and their benefits.
– Effects of massage on skin, blood circulation, nervous system and muscles.

Basics of Cricket:

History of the game
Basic fundamentals
Equipment and specifications
Marking / layout of field
Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
Major tournaments and Arjuna awardees of the game.

References :

1. Bell, A.J. : *"Massage and the Physiotherapist : Physiotherapy",* 1964.

2. Butler, G.D. : *"Introduction to Community Recreation",* McGraw Hill Book Company, Inc. New York, 1959.

3. Garinder, M. Dena : *"The Principles of Exercise Therapy",* Fourth Edition, 1985, CBS Publishers and Distributors, Delhi.

4. Gladys Scott, M. : *"Analysis of Human Motion",* 2nd Edition, 1970, Eurasia Publishing House Pvt. Ltd., New Delhi.

5. Lee Joseph : *"Play in Education, National Recreation Association",* New York, 1942.

6. Meyer, Herold D., and Charles K. Brightbill : *"Recreation Administration : A Guide to its Practices",* Prentice Hall Inc., Englewood Cliffs, N.J., 1956.

7. Mitchell, Elmer D., and Bernard S. Mason : *"Theory of Play",* The Ronald Press Co., New York, 1948.

8. Nash, Jay B. : *"Philosophy of Recreation and Leisure",* The C.V. Mosby Co., St. Louis, 1953.

9. Parameswara Ram, N. : *"Kinesiology – Physical Education and Sports",* Parkash Brothers – Educational Publishers, 1988.

10. Piscopo, John and Baley, James A. : *"Kinesiology : The Science of Movement",* John Wiley & Sons, Inc., 1981.

11. Singh, Ajmer *et.al.* : *Modern Text Book of Physical Education, Health and Sports* Kalyani Publishers, Ludhiana, 2000.

12. Struna, Monika and Church, Connie : *"Self Massage : Touch Techniques of Relax, Soothe and Stimulate your Body",* Hutchinson & Co. Ltd., London, 1983.

13. Tirunarayanan, C. Hariharasarma, S. : *"Methods in Physical Education",* The South India Press, Karaikudi.

14. Wilmore, Jack H. : *"Atheltic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc. 470, Atlantic Avenue, Boston Massachusetts.

15. Wood, Elizabeth C. and Becker, Paul D. : *"Beard's Massage",* Third Edition, 1981, W.B. Saunders Company, Philadelphia, P.A.

PRACTICAL

Max. Marks : 35 Marks
Practical : 30 Marks
Internal assessment : 5 Marks

ATHLETICS

(a) History of athletics

(b) List of track and field events

(c) Marking of standard track, width of lanes and starting points for various races.

6. THROWS:

Throws (Shot-put or Discuss Throw or Javelin Throw) and one event of the choice of the student.

(a) **Shot-put** (The holding the stance, the glide, the delivery and the reverse or the recovery).

OR

Discuss Throw (The handhold, the initial stance, the preliminary swings, turn the delivery and the reverse or the recovery).

OR

Javelin Throw (The grip, the carry, the run way approach, the last five strides, the delivery, the reverse or the recovery).

(b) Measurements of equipment and the throwing circles or the approach run, the arc and the throwing area/the sectors.

2. PHYSICAL FITNESS TESTS: More emphasis shall be given on variety of physical exercises for the development of Flexibility and strength components of physical fitness.

Test 1- Flexibility: Sit and reach test

Test 2- Strength: Medicine Ball Throw.

Division of Practical Marks: Marks for each activity shall be divided as under:

Athletics and Physical fitness 15 marks, Participation and achievement in sports/games 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.

3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.

4. The theory and practical papers shall consist of 65 and 35 marks each.

5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.

6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.

7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections:*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students :*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods :*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load :*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. *Division of Marks (Theory and Practical) :*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

PHYSICAL EDUCATION

B.A. / B.Sc. (GENERAL) SIXTH SEMESTER EXAMINATION (2018-19)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(a) There shall be nine questions in all, spread over Five Units.
(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.
(c) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.
(d) All questions/units will carry equal marks.
(e) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Nervous System:

– Meaning of Nervous System.
– Main organs of Nervous System and their functions.
– Reflex action and Reciprocal Innervations.
– Functional classification of Nervous System.

Excretory System:

– Meaning of Excretory System.
– Main organs of Excretory System and their structure and functions.

Endocrine System:

– Meaning of **Endocrine System**.
– Meaning of Glands, their location and functions/Harmones produced by them.

UNIT-III **12** Marks

Sports Training,

– Meaning, definition, aim, objective, characteristics and principles of sports training.

General Physiological concept:

– Physiological concepts such as vital capacity, second wind, stitch in the side and its causes.
– Definition of oxygen debt/excess post exercise oxygen consumption (EPOC) and its implication.
– Meaning definition and types of fatigue.
– Muscular contractions such as isotonic, isometric, eccentric and isokinetic.
– Meaning of Blood pressure, Hypertension: Its causes, effects and treatment, exercise and Hypertension.

Effects of Physical Exercise / Training on body systems:

– Effects of Physical exercise/Training on muscular, respiratory and circulatory systems of the body.

UNIT-IV **12** Marks

Carrier aspects in Physical Education:

– Carrier options in Physical Education.
– Different avenues in Physical Education.
– Self assessment for carrier choices.
– Courses and institutions available for Physical Education profession.

UNIT-V **12** Marks

Coach:

– Coaching, coaching philosophy, definition of a coach.
– Qualification and characteristics of a coach.
– Responsibilities of a coach.

Basics of Table Tennis:

– History of the game
– Basic fundamentals
– Equipment and specifications
– Marking / layout of T.T Table
– Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
– Major tournaments and Arjuna awardees of the game

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.

2. Dandiya, P.C., Jafer, Z.Y.K. and Jafer Afifa : *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.

3. Dick, Frank, W. : *"Sports Training Principles",* Lepus Books, London, 1980.

4. Jensen, C.R. and Fisher, A.G. : *"Scientific Basis of Athletic Conditioning",* Lea and Febiger, Philadelphia, 1979.

5. Matveyer, L. : *"Fundamentals of Sports Training",* Mir Publication, Moscow, 1981.

6. Mathews, D.K. and Fox, E.L. : *"The Physiological Basis of Physical Education & Athletics",* Second Edition, W.B. Saunders Co., Philadelphia, 1976.

7. McArdle, William D., Katch Frank I., and Katch, Victor, L.

: *"Exercise Physiology : Energy, Nutrition and Human Performance",* Lea and Febiger, Philadelphia, 1981.

8. Morgan, R.E. and Adamson, G.T. : *"Circuit Training",* Bell and Sons, London, 1958.

9. Morehouse, L.E. and Miller, A.T. : *"Physiology of Exercise",* The C.V. Mosby Co., St. Louis, 1965.

10. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Teachers",* Lend Edward Arnolod Ltd., 1983.

11. Rose & Wilson : *"Foundations of Anatomy and Physiology*, 5th Edition,1981, Reprinted in 1985.

12. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999-2000, Birla Publications, Delhi.

13. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

14. Shaver, Larry G. : *"Essential of Exercise Physiology",* Surjeet Publications, Delhi First Indian Print, 1982.

15. Singh, Ajmer, Et.al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.

16. Singh, Hardyal : *"Sports Training-General Theory and Methods",* Netaji Subhash National Institute of Sports, Patiala, 1984.

17. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",*1977, Allyn and Bacon, Incl., 470, Atlantic Avenue Boston, Massachusetts.

PRACTICAL

Max Marks : 35
Practical : 30
Internal assessment : 5

GAMES

(Badminton or Hockey and any other one game of the choice of the student).

Badminton:

(a) Measurement (Badminton Court, Net, Racket and Shuttle cock) for singles and doubles.
(b) Number of players and officials.
(c) Holding the racket and shuttle cock.
(d) Types of Service: High and Low.
(e) Types of Strokes: fore hand, back hand, over head.
(f) Shots: Smash, Lob shot, net shot, dive shot.
(g) Rules and regulations of the game.

Hockey :

(a) Measurements (Hockey ground, goalpost, hockey stick, ball and flags) for men and women.
(b) Number and position of players and officials.
(c) Fundamental skills (grip, hitting, stopping dribbling, push, scoop and flick).
(d) Rules and regulations of the game.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections :*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students:*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods:*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load:*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. *Division of Marks (Theory and Practical):*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2018-19

SEMESTER –V

Paper- : INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

GENERAL INSTRUCTIONS FOR THE CANDIDATE:

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. The students are required to attempt **6** short answer type questions out of **8** in Unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives:

1. To enable the students to know about History of Indian Education.
2. To enable the students to understand the problems of pre-primary Education.
3. To make the students familiar with the concept of Universalization of Elementary Education and its problems.
4. To make the students familiar with the constitutional provisions of Education and role of different agencies in Education.

Course Contents :

UNIT-I : Education in the ancient and medieval period of Indian History.

UNIT-II : Current status and problems of pre-primary education. Public schools and their future.

UNIT-III : Importance of Elementary Education.
Universalization of Elementary Education. Problems of Elementary Education and Role of the State in Elementary Education.
Sarav Sikhiya Abhiyan – Concept, Objectives & Implementation.

UNIT-IV : Constitutional Provisions of Education.
Provisions for Education of Weaker Sections of Society.

Books Recommended :

1. Kaur, Kuldip : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh Centre for Research in Rural and Industrial Development, 1985.
2. Narula and Naik, J.I. : *Bharat Wich Vidyak Sikhya Da Itihas,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi 1953.
4. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-65), New Delhi, 1966.
5. Kochhar, S.K. : *Pivotal Issue of Education,* New Delhi, Sterling Publisher, 1984.
6. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* New Delhi, 1986.
7. Govt. of India : *Seventh Five Year Plan,* New Delhi.
8. Govt. of India : *Challenges of Education, A Policy Perspective,* New Delhi, 1986.
9. Sodhi, T.S. : *Bharti Sikhya Ate Us Diyan Samasiyavan,* Bawa Publications, Patiala.
10. Govt. of India, Ministry of Human Resource Development : *National Policy on Education, Programme of Action*, New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2018-19

SEMESTER –VI

PAPER : MODERN INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To make the students familiar with the structure of Secondary Education in India.
2. To enable the students to know about different policies of education.
3. To make the students familiar with the problems of education for 21st century.
4. To enable the students to know about the need and importance of vocationalisation of education.
5. To enable the students to know about Adult, Continuing and Environmental Education.

Course Contents :

UNIT-I : Secondary Education – Structure, Recommendations of Kothari Education Commission and National Policy of Education.

RMSA(Rashtriya Madhmik Shiksha Abhiyan) – Concept Objectives and Implementation.

UNIT-II: Implementation of National Policy of Education of 1986 and 1992.

Education in the Twelveth Five Year Plan.

Problems and Prospects of Education for the 21st century.

UNIT-III : Vocationalisation of Education – Meaning, Need and Importance.

Aims, Objectives and Problems of Secondary Education.

Role of different Agencies – NCERT, NCTE AND DIET.

UNIT-IV : Adult, Continuing and Distance Education.

Environmental Education, ICT in Education.

Books Recommended :

1. Narula & Naik, J.P. : *Bharat Wich Vidyak Sikhya Da Ithas,* Patiala, Punjabi University.
2. Sharma, T.R. : *Bharti Sikhya Dian Samasiyan,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.
4. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi, 1953.
5. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-66), New Delhi, 1966.
6. Kochhar, S.K. : *Pivotal Issues in Education,* New Delhi, Sterling Publishers, 1984.
7. Kaur, K. : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh : Centre for Research in Rural and Industrial Development, 1985.
8. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* New Delhi, 1986.
9. Govt. of India : *Seventh Five Year Plan,* New Delhi.
10. Govt. of India : *Challenge of Education : A Policy Perspective,* New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992

ADULT EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

Max. Marks	:	100
Theory	:	40 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND FOR THE CANDIDATE:

The question paper will consist of five Units: I, II, III, IV and V. Units II, III, IV and V will have two questions from the respective units of the syllabus and will carry 8 marks each. The students are requested to attempt **one** question from each Unit i.e. (II, III, IV and V). Unit I will consist of **eight** short answer type questions which will cover the entire syllabus and is compulsory and carrying one mark for each question.

OBJECTIVES OF THE COURSE :

The objectives of the paper are :

1. To expose students to the concept, importance and scope of continuing education.
2. To acquaint students with the basis of life skills education, its concept, meaning and its various forms.
3. To expose students with life long learning and its future perspectives.
4. To equip students with role of universities in adult and continuing education programs.
5. To explain students extension as third dimension.

ADULT EDUCATION
SEMESTER-V

THEORY :

UNIT-I

Adult and Continuing E ducation:

(a) Adult Literacy in reference to National Literacy Mission 1985, its objectives.
(b) Continuing Education : Concept, Importance, Scope and Objectives

UNIT-II

Saakhshar Bharat Mission 2009.

(a) Saakhshar Bharat Mission 2009, its targets and specific objectives.

(b) Flexi Approach to Saakhshar Bharat Mission 2009 and Continuing Education.

UNIT-III

Life Long Learning

(a) Life Long Learning - Concept, Needs, Scope, Strategies.

(b) Its Implications and Future Perspectives.

UNIT-IV

Extension Education

(a) Extension Education – The Third Dimension.

(b) Its Major Thrust Areas, Programs and Activities.

PRACTICAL/FIELD WORK **50 marks**

1. Organisation of T wo Awareness Generating Programs and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

ADULT EDUCATION
SEMESTER-VI

UNIT-I

Adult and Continuing Education:

(a) Different types of Programes in Continuing Education

(b) Role of Universities in Adult & Continuing Education.

UNIT-II

Life Skills

(a) Life skill Education – its meaning and Concept.

(b) NCERT CORE LIFE SKILLS
Problem-Solving, Decision-Making, Empathy, Creative-Thinking, Critical-Thinking, Stress Management, Time Management, Emotional Security, Communication Skills, Recreation Skills

UNIT-III

National Policy on Skill Development 2015.

(a) National Policy on Skill and Entrepreneurial Development 2015, its objectives and targets.

(b) Its Policy Frame Work, Governance and Financing.

UNIT-IV

Extension Education

(a) Swachh Bharat Mission-Objectives, Targets.

(b) Women Empowerment Challenges and Issues, Its Need and Importance.

PRACTICAL/FIELD WORK **50 marks**

1. Organization of Two Extension Lectures in Slum/Village and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

Books Recommended

1. Singh, Madan: Companion to Adult Educators
National Literacy Mission
Director of Adult Education
Ministry of Human Resource
Development,
Dept. of Adult Education, New
Delhi, 1999
2. Suriakanthi, A. : Perspectives of Continuing
Education, Dept. of Adult,
Continuing Education &
Extension,
Gandhi Gram Rural University,
Gandhi Gram, 2007
3. Parthasarathy, K. : Facets of Adult and Continuing
Education, School of Education,
Centre for Adult, Continuing
Education & Extension,
Bharathidasan University
Trichirappatti, 2006
4. Parthasarathy, K. : Population Education and Youth
Development, School of Education,
Centre for Adult, Continuing
Education and Extionsion,
Barathidasan University,
Trichirappatti, 2007
5. Alan Rogers : Teaching Adults, Sterling Publishers
Pvt. Ltd., New Delhi, 1989
6. Mohanty J. : Adult & Non formal Education,
Deep Publications, New Delhi, 1993
7.U.G.C. Guidelines. (X and XI Plan) : University Grants Commission,
for Adult, Continuing Education and Extension New Delhi

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MUSIC (Vocal)

SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent**.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	: 45 marks
Paper-B:	**Practical** (20 minutes duration)	: 45 marks
	(i) Viva	: 35 marks
	(ii) Harmonium	: 05 marks
	(iii) Tabla	: 05 marks
Internal Assessment (Theory + Practical)	(05 +05)	: 10 marks
	Total :	**100 marks**

Paper-A : THEORY (Duration 45 minutes 02 Theory per week)

UNIT-I

1. Explain the following Gayan Shaillies:-Tappa, Dharupad, Tarana.
2. Special features of time Theory of Indian Ragas
3. Raganga Paddhti

UNIT-II

Detailed study of the following:-

1. Manch- Pradarshan
2. Professions in Music
3. Lok Sangeet of Punjab

UNIT-III

Contribution in detail and life sketches in brief of the following: -

1. Pt. Kumar Gandharv
2. Smt. Gangu Bai Hangal
3. Ustad Bade Gulam Ali Khan Sahib

UNIT-IV

Description and Notation of the prescribed Ragas:-

1. To write notation of Vilambit / Drut khyal in the prescribed Ragas with Alaps and Taans : -Vrindavani Sarang, Asavari
2. To write notations of Talas in Ekgun & Dugun of :- Jhumra, Sultala
3. To write the description of Ragas:- Non-detailed Ragas:Des, Jaunpuri

NOTE: Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: -Vrindavani Sarang & Asavari
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dharupad in proper style.
4. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
5. Ability to play Jhaptal on Tabla.
6. Ability to recite the following Talas in Thah, Dugun by hand:-Jhumra, Sultala
7. Ability to sing any two Drut Khayals of your course on Harmonium.
8. Knowledge of non-detailed Ragas:
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Des, Jaunpuri.
9. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*		Panna Lal Madan

MUSIC (Vocal)
SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	: 45 marks
Paper-B:	**Practical** (20 minutes duration)	: 45 marks
(iv)	Viva	: 35 marks
(v)	Harmonium	: 05 marks
(vi)	Tabla	: 05 marks
Internal Assessment (Theory + Practical)	(05 +05)	: 10 marks
	Total	**: 100 marks**

Paper-A: THEORY (Duration 45 minutes 02 Theory per week)

UNIT –I

1. General History of Indian Music i.e. from Bharat to Sharangdev
2. Explain the following Gayan Shaillies: - Dhamar, Bhajan , Shabad, Thumri
3. Varieties of Tana

UNIT –II

Contribution in detail and life sketches in brief of the following great masters:-

1. Ustad Vilayat Hussain Khan
2. Pt. Dalip Chandra Bedi
3. Pt. V. N. Patvardhan

UNIT-III

Detailed study of the following:-

1. Role of Akashwani and Doordarshan towards the popularisation of Indian Classical Music
2. Role of Electronic mediums (Basic Instruments) i.e Electronic, Tabla, Tanpura
3. Sansthagat Sangeet Shikshan Pranali

UNIT-IV

Description and Notations of the prescribed Ragas and Talas :-

1. To write in notation of Vilambit gat / drut khyal in the prescribed Ragas with Alap & Taans:-- Madhuwanti & Darbari- kanada.
2. To write in notations of talas:-Deepchandi, Dhamar (Single + Double)
3. To write the description of Ragas:- Non detailed Ragas: Multani, Adana

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

Paper-B : PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: Madhuwanti & Darbari Kanhada
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dhamar in proper style.
4. One Tarana in any of the detailed Ragas prescribed in the course.
5. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
6. Ability to play Chartala on Tabla.
7. Ability to recite the following Talas in Thah, Dugun by hand: Deepchandi & Dhamar
8. Ability to sing any two Drut Khayals of your course on Harmonium.
9. Knowledge of non-detailed Ragas :
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Multani & Adana
10. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*		Panna Lal Madan

MUSIC (Instrumental)

SEMESTER-V

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. **There should not be more than eight students in a batch for practical examination.**
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i) Viva : 35 marks

(ii) Gayan : 05 marks

(iii) Tabla : 05 marks

Internal Assessment (Theory + Practical) : 05+05 = 10 marks

Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. Explain & define the different Vadan Shaillies (Styles) of your own instrument.
2. Historical development of Indian Musical Scale.
3. Varieties of Tana / Tora

UNIT-II

1. Importance of Laya and Tala in Music
2. Folk Instruments of Punjab.
3. Future of Instrumental Music.

UNIT-III

Brief life sketches and their contributions:-

1. Ustad Bismillah Khan
2. Ustad Hafiz Ali Khan
3. Pt. Nikhil Banerji

UNIT-IV

Notations and Description of ragas and Talas:- Multani, Jai Jaiwanti

1. To write one Maseetkhani Gat with Todas
2. To write Razakhani Gat with Todas of ragas Multani, Jaijaiwanti
3. To write single and double of Tala :- Deepchandi, Tilwada
4. Non- detailed raga:- Madhuwanti, Chhayanat

NOTE: -Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ Description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas : Multani, Jaijaiwanti
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:-Madhuwanti, Chhayanat
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Deepchandi, Tilwada.
5. Ability to play Dhamar on Tabla.
6. One Dhun.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan,Ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1. Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2. Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3. Rag Parichaya Part III & IV	:	H.C. Shrivastava.
4 *Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5. *Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6. *Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7. Sangeet Granth atey Bharti Sangeet Da Itihas	:	Chander Kanta, Khosla

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MUSIC (Instrumental)
SEMESTER-VI

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45marks

(i)	Viva	:	35 marks
(ii)	Gayan	:	05 marks
(iii)	Tabla	:	05 marks
	Internal Assessment (Theory + Practical)	:	05+05 = 10 marks
			Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. General History of Indian Music i.e. from Bharata to Sharangdeva
2. Notational System, origin and development
3. Knowledge of Uttari and Dakshani Sangeet Paddhati

UNIT-II

1. The life Sketches and contributions of the following great musicians :-
   (i) Dr. Lal Mani Mishra
   (ii) Dr. Panna Lal Ghosh
   (iii) Smt. Sharan Rani

UNIT-III

Essays:-

(i) Chitrpat Sangeet Mein Vadyon Ki Bhoomika.
(ii) Role of the Akashvani and Doordarshan in popularizing Instrumental Music.
(iii) Manch Pradarshan

UNIT-IV

Notation and Description of the prescribed Ragas and Talas:-

1. Ragas:- Mian-Ki-Todi, Mian Malhar.
2. Talas :- Sultal, Adachartal
3. Non detail Raga :- Gujri -Todi, Bahar

- To write one maseetkhnai Gat with todas in any prescribed rag
- To write a Razakhani Gat with Todas
- To write single and double of prescribed Talas
- To write the description of detailed and non detailed raga

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas: Mian-Ki-Todi, Mian- Malhar
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:Gujri-Todi, Bahar
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Adachautal, Sultal.
5. Ability to play Tilwada on Tabla.
6. One Sitarkhani gat with toras in any prescribed ragas.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan, ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
4	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla

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MUSIC (TABLA)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-V. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: THEORY (3 Hours duration)		: 45 marks
Paper-B: PRACTICAL (20 minute's duration)		: 45 marks
(i)	Viva	: 30 marks
(ii)	Harmonium	: 05 marks
(iii)	Tabla (Tuning)	: 05 marks
(iv)	Padhant on Hand	: 05 marks
Internal Assessment (Theory & Practical) (5+5)		: 10 marks
	Total	**: 100 marks**

Paper-A Theory

UNIT-I

1. Gun- Dosh of Tabla Vadak.
2. Various development of Tabla in 19th and 20th Century.
3. Comparative study of Pt. V.N. Bhatkhande and Pt. V.D. Pulaskar Taal notation system

UNIT-II

1. Elementary knowledge of the following (not more than 100 words)
   Kriya, Kaal Palta, Laggi, Baant, Peshkaar
2. Use of Taals in accompaniment with Gayan and Vadan shailies
3. Study of Farrukhabad and Punjab Gharana

UNIT-III

1. Life sketches and contribution of the following:-
   a. Pt. Ram Sahai
   b. Pt. Anokhe Lal Mishra
   c. Pt. Bhairav Sahai
   d.

UNIT-IV

1. Teentaal, Jhaptaal, Rupak, Aada-Chartaal, Tilvara, Punjabi taal
2. To write description of Taal of your syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chaugun, Aad and Kuaad

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL

1. Playing of Talas prescribed in the course:- Ada Chautal, Tilwara and Punjabi Tala
2. Playing proper Badhat of Ada-Chautal, Teentala
3. Playing all the prescribed Talas with Vocal and Instrumental performances as well as solo items.
4. Tuning of Tabla/Pakhawaj
5. Practical knowledge of the following in the prescribed Talas:
   (i) Ada chartala:- simple Paran, Mukhra, Mohra, Uthan
   (ii) Rupak /Teevra:- Peshkar, Quaida, Palta, Rela, Paran.

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

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MUSIC (TABLA)
SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-VI. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: THEORY (3 Hours duration) : 45 marks

Paper-B: PRACTICAL (20 minute's duration) : 45 marks

i)	Viva	:	30 marks
ii)	Harmonium	:	05 marks
iii)	Tabla (Tuning)	:	05 marks
iv)	Padhant on Hand	:	05 marks

Internal Assessment (Theory & Practical) (5+5) : 10 marks

Total **: 100 marks**

Paper-A Theory

UNIT-I

1. Detailed study of the following:-
   a. Manch Pardarshan
   b. Profession in music (Tabla)
   c. Comparative study of North Indian and Karnatka Taal system

UNIT-II

1. Elementary knowledge of the following (not more than 100 words)
   Gat, Quida, Laggi, Baaj, Ladi, Farmaishi, Chhakardar, Paran
2. Role of electronic instrument in the context of rhythm.
3. Study of Lucknow and Banaras Gharana.

UNIT-III

1. Life sketches and contributions of the following:-
   a. Pt. Viroo Mishra
   b. Pt. Kishan Maharaj
   c. Ustad Zakir Hussan

UNIT-IV

1. Dhamar, Aada-chautaal, Jhaptaal
2. To write description of Taal of the syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chaugun, Aad, Kuaad, Biaad Layakaris

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Playing of Talas prescribed in the course:- Dhamar, Ada Chartala and Jhaptala
2. Playing proper Badhat of Dhamar:- Ada Chartala and Jhaptala
3. Playing all the prescribed Talas with Vocal and Instrumental performance as well as solo item.
4. Tuning of Tabla/Pakhawaj
5. Practical knowledge of the following in the prescribed Talas:
   (i) Dhamar:-Chakardar Paran, Farmaishi Paran, Tukra
   (ii) Tilwara:-Vilambit, Theka with accompaniment in Vocal

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe
7.	Taal Prasson	:	Chhote Lal Mishra
8.	Avanaddha Vadhya	:	M.P. Sharma

INDIAN CLASSICAL DANCE
SEMESTER –V

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

PAPER-A THEORY

Unit –I

1. Defination the following terms:
   Kataksh, Ang, Upang, Pratyanga, Hela.
2. Origin of Taal and its ten pranas.
3. Technique of Indian Ballet.

Unit-II

1. Dance and Nature
2. Brief study of Natya Shastra
3. Brief study of Natak Bheda

Unit-III

1. Essential characteristics of Mohini Attam.
2. Brief note on Bhave.
3. Brief note on Folk Dances of Rajasthan.

Unit-IV

1. Description of Teen Tala anad Sawari and Dhamar
2. Notation of Theka, Bol Tatkar, thaat, Amad, Chakardar, Tora, Tihai and Premelu and Nagma in Teen Taal.
3. Notation of Theka, Bol, Tatkar, Tihai, Amad, Paran, Chakardar, Paran, Tukra, Kavit and Nagma in Sawari Tala.
4. Notation of Theka, Bol -Tatkar and Tihai in Dhamar.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 minutes 06 periods per week)

Unit - I

1. Swari Tala
   b) Theka
   c) Bol Tatkar
   d) Tukra - 2
   e) Amad - 1
   f) Chakardar Paran - 1
   g) Tihai - 1
   h) Paran - 1
   i) Nagma - 1
   j) Kavit - 1

Teen Taal:

2. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Thaat - 1
   d) Amad - 1
   e) Chakardar Tora - 1
   f) Tihai - 1
   g) Premula - 1
   h) Nagma - 1

3. Dhamar Taal:

   I Tatkar
   II Tihai

4. a) Knowledge of Folk Dance of Rajasthani practically
   b) Play Theka of Sawari on Tabla
   c) Gat Nikas of Ghungat and Matki
   d) All the practical work on Hand

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INDIAN CLASSICAL DANCE

SEMESTER –VI

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

Paper-A Theory

Unit- I

1. History of Kathak Dance.
2. Brief study of Nayika Bheda.
3. Knowledge of Dakshini Taal System.

Unit-II

1. Essential characteristics of Odissi.
2. Loka Dharmi and Natya Dharmi.
3. Life sketch of Achhan Maharaj Ji.

Unit III

1. Brief study of Abhinaya Darpan.
2. Dance and Fine Arts.
3. History of Stage.

Unit IV

1. Description of Dhamar with Theka, Two Toras, Tihai, Amad and Pakshiparan.
2. Notation of Theka, Amad, Tihai, Tora, Kavit and Chatusjati paran in Teen Taal.
3. Notation of Theka, Paran, Chakardar Paran, Tisarjati Paran, Kavit in Sawari Taal.
4. Nagma, Bol Tatkar in Dhamar, Teen Taal and Sawari.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical (Duration 45 minutes, 06 periods per week)

1. Dhamar (Matra 14)
   a) Bol Tatkar
   b) Theka
   c) Toras-
   d) Tihai-1
   e) Pakshiparan
   f) Amad

2. Swari Tala (Matra 15)
   a) Theka
   b) Bol Tatkar
   c) Paran-1
   d) Chakardar Paran-1
   e) Tisarjati Paran-1
   f) Kavit-1

3. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Amad -1
   d) Tihai -1
   e) Tora - 2
   f) Kavit -1
   g) Chatusjati paran

4. a) Knowledge of Sammi Dance practically
   b) Play Theka of Dhamar on Tabla
   c) Gat Nikas of Murli and Ghungat
   d) All the practical work on Hand
   e) Gat Bhava (Panghat ki Chhed Chhaad).

BOOKS RECOMMENDED:

1.	Kathak	:	Sunil Kothari
2.	Bhartiya Sanskriti mein Kathak Parampara	:	Mandavi Singh
3.	Bharatiya Nritya Kala	:	Keshav Chander Verma
4.	Dance in Thumri	:	Projesh Banerji
5.	Dances of Asia	:	Kiets Sakakibera
6.	Kathak Darpan	:	T. R. Azad
7.	Kathak Nritya Shiksha Part - I & Part - II	:	Puru Dadhich
8.	Natya Shashstra of Bharatmuni	:	
9.	Abhinaya Darpan aur Geet – Gobind	:	Dr. Laxmi Narayan Garg
10.	Abhinaya Darpan	:	Dr. Aarohi Walia
11.	Nritya Abhigyan	:	Shobha Koser
12.	Kathak Gyaneshwari	:	T. R. Azad
13.	Bhartiya Lok Nritye Mein Haryana aur Rajasthan	:	Neera Sharma
14.	Etihasik Paripeksh Mein Kathak Nritya	:	Maya Tak
15.	Kathak	:	Shikha Khare
16.	Bhartiye Sangeet Vadya	:	Lal Mani Mishra
17.	Kathak Kalpdrum	:	Dr. Chetna Jyotshi
18.	Indian Art	:	K. Bharatha Iyer
19.	Indian Sculpture and Painting	:	E.B. Havell
20.	Fine Art	:	Kulwant Singh
21.	Indian Sculpture	:	Stella Kramrish
22.	Sculpture in India	:	Dr. N. L. Mathur
23.	Kala Wahegure di	:	Shobha Singh

FINE ARTS

B.A./ B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER V

THEORY

Paper A : History of Art **Max. Marks : 54**
Max. Time : 3 hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Rajasthani Painting – Chavand Raagmala from Mewar, Raag-Raagini from Bundi and Nayika from Kishangarh
- Pahari Painting – Ramayana from Basohli, Gita-Govinda from Kangra

Unit II : History of Indian Sculpture

- Mahabalipuram – Maheshasuramardini
- Elephanta – Ardhanarishwara
- Chola Bronzes – Nataraja and Parvati Images

Unit III : History of Western Art

- Beginning of Modern Painting – Manet
- Impressionism – Monet
- Neo Impressionism-Seurat
- Post Impressionism-Van Gogh

Unit IV : Definition of Key terms, General Concepts and Techniques

- Form and Content, Art and Religion, Art and Society, Tradition, Modernity

Pedagogy:

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

FINE ARTS
SEMESTER VI

THEORY

Paper A : History of Art **Max. Marks : 54**
Max.Time : 3hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Company Painting
- Folk Style – Kalighat and Maithili

Unit II : History of Indian Sculpture

- Khajuraho – Mother and Child
- Konark – Musician Figures
- Sravanbelgola – Bahubali

Unit III : History of Western Art

- Expressionism – Edvard Munch
- Fauvism-Matisse
- Cubism-Picasso

Unit IV : Definition of Key terms, General Concepts and Techniques

- Beauty, Rasa and Bhava, Gestures, Postures and Movements, Stained Glass, Cire-perdue (lost-wax casting)

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

HISTORY OF ART

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER - V

History of Indian Painting (from ca. 1800 to the present times) and Sculpture (from ca. 600 to 1300 A.D.)

Max.Marks: 100
Time: 3 Hr

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Indian Painting

Unit-I

- Company painting.
- Early oil painters - Raja Ravi Verma.
- Bengal School with special reference to Abanindranath Tagore

Unit-II

- New Trends: Nandlal Bose, Rabindranath Tagore, Gaganendranath Tagore, Jamini Roy, Amrita Shergil, D.P. Roy Chowdhury, Sobha Singh, M.F.Hussain, Satish Gujral.

History of Indian Sculpture

Unit-III

- Sculptures of Pala and Sena Period - Bengal, Bihar, Orissa

Unit-IV

- Pratihara Sculpture of Central and Western India.
- Chola Sculpture in Stone & Bronze

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Archer, W.G : India and Modern Art, George Allen & Unwin Limited, London, 1959.
- Archer, M. & Archer W.G. : Indian Painting for the British, 1770-1880, Oxford University Press, London, 1955.
- Chaitanya, Krishna : A History of Indian Painting, The Modern Period, Abhinav Publications, New Delhi, 1994.
- Appasamy, Jaya : Abanindranath Tagore and the Art of his Times, Lalit Kala Akademi, New Delhi, 1968.
- Mago, P.N. : Contemporary Art in India, A Perspective, National Book Trust of India, New Delhi, 2000.
- …… : Lalit Kala Monographs, Lalit Kala **Akademi, Delhi.**
- Journals and Periodicals : Lalit Kala Contemporary, Roopa-lekha, Marg.
- Parimoo, Ratan : The Paintings of the Three Tagores, Maharaja Sayajirao University, Baroda, 1973.
- Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
- Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
- Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART
SEMESTER-VI

History of European Painting and Sculpture (from ca. 1850 A.D. onwards), and Theory and Principles of Art Appreciation.

Max.Marks: 100
Time: 3 Hrs

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set 9 **questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of European Painting and Sculpture

Unit-I

- Impressionism - Monet, Degas, Renoir.
- Post-impressionism - Van Gogh, Cezanne, Gauguin.

Unit-II

- Cubism - Picasso, Braque
- Expressionism - Munch, Nolde.
- Abstract Art - Kandinsky
- Abstract Expressionism - Jackson Pollock.

Theory and Principles of Art Appreciation

Unit-III

- Function of Art.
- A brief study of Indian and Western approaches to Art.

Unit-IV
Explanation of the term

- Form, Content, Abstraction, Modernity, Contemporaneity, Pointillism, Collage, Lithograph, Etching and Ready-made with the help of relevant examples.

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
- Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
- Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
- Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.
- Ray, Niharanjan : An Approach to Indian Art, Publication Bureau, P.U., Chandigarh, 1974.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
- Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.

ANCIENT INDIAN HISTORY, CULTURE AND ARCHAEOLOGY
SEMESTER V

Paper-V (VOCATIONAL) : EXCAVATIONS, MONUMENTS AND SCULPTURES IN STONE AND BRONZE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives :

The primary objective of this paper is to prepare the students to become professional archaeologists through the study of various excavated archaeological sites, monuments and antiquities such as stone and bronze sculptures. The study of this paper is also designed for preparing students to take higher and advanced study in the subject.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
3. The map question shall have the following topics :
   (a) Location of important archaeological sites mentioned in Unit I.
   (b) Location of important monuments mentioned in Unit II.
   (c) Location/Provenance of important sculptures mentioned in Units III and IV.
4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice, i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.
5. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I:

Excavations : (Note: Instructions will be confined only to the location of the site and important results obtained). Kalibangan, Lothal Mitathal, Sugh, Sanghol, Inamgaon, Atranjikhera, Sisupalgarh, Nagarjunkonda.

UNIT-II:

Monuments : Asokan Pillars, Stupa of Sanchi, Rock-cut-architecture of Ajanta and Ellora, Temples: Kandariya, Mahadev, Lingaraja, Jagannath, Konark, Hoyasalesvara and Brihadesvara.

UNIT-III:

Sculptures : Stone-Harappan, Rampurva Ashokan Bull, Didarganj Yakshi, Katra Buddha, Sarnath Seated Buddha, Gomatesvara at Sravanavelagola, Maheshamurti, (Elephanta), Krishna holding Govardhana (Halebid), Sun Image of Konark, Kasia reclining Buddha (Mahaparinirvana).

UNIT-IV:

Bronze : Sultanganj Buddha, Nalanda Image of Balarama and Buddha, Kurkihar Avalokitesvara, Indra and Padmapani from Nepal, Tanjore (Chola), Nataraja, Balakrishna Kaliyadamana and Somaskanda Murti.

Pedagogy of the Course Work :

It is expected to familiarize students with brief outline of the topics with the help of visual aids like slides and transparencies. Field work trips to museums and sites may also be undertaken.

Essential Readings :

1. Agrawala, V.S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
2. Allchin, B. and Allchin, F.R. : *The Rise of Civilization in India and Pakistan,* Cambridge University, Cambridge, 1982.
3. Bajpai, K.D. : *Five Phases of Indian Art,* Vidya Prakashan Jodhpur, 1991.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* Vol-1, rpt. D.B. Tara Gorevala sons, Bombay, 1971
5. Lal, B.B. : *The Early Civilization of South Asia,* Aryan Books, *New* Delhi, 1997.
6. Saraswati, S.K. : *A Survey of Indian Sculpture,* 2nd ed. Munshiram Manoharlal, New Delhi 1975.
7. Upinder Singh : *A Hisotyr of Ancienty and Early Medieval India,* Pearson, New Delhi, 2009.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER VI

Paper-VI: EPIGRAPHY AND NUMISMATICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

This course makes the students aware of major scripts of Ancient India and their origin and development upto 6th century A.D. Antiquity and art treasure laws are also taught. It also provides knowledge about the origin and antiquity of Punchmarked coins; tribal coins; Yaudheyas, Kunindas, Agra, Audumbaras and Malavas; Kushana and Gupta coins.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The question on map shall consist of the location of the sites of important inscriptions of Asoka.
3. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate will attempt one question from each unit. Each question shall carry 18 marks.
4. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (4) in the question paper.

UNIT-I:

(a) Epigraphy : Major scripts of Ancient India.

(b) Their origin and development up to 6th century A.D.

UNIT-II:

Rock and pillar edicts of Asoka.

UNIT-III:

(a) Origin and Antiquity of Punchmarked coins.

(b) Origin and date of Tribal coins : Yaudheyas, Kunindas, Agra, Audumbaras and Malavas.

UNIT-IV:

(a) Kushana Coins.
(b) Gupta Coins.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs and maps. In addition to it, special lectures, workshops, seminars, written assignments, class discussions, and term papers, should be included in the teaching work.

Essential Readings :

1 Allan, John : *Catalogue of Coins of Ancient India,* Vol.I, rpt., Delhi, 1974.

2. Altekar, A.S. : *Coinage of the Gupta Empire and its imitations,* Numismatic Society of India, BHU, Varanasi, 1957.
Varanasi, 1957.

3. Chattopadhya, B. : *The Age of Kushanas,* A Numismatic Study, Calcutta, 1970.

4. Gupta, P.L. : *Coins,* rpt., National Book Trust, New Delhi, 2006.

5 Hultzsch, E. : *Corpus Inscriptionum Indicarum,* Vol.I, rpt. Archaeological Survey of India, Delhi, 1991.

6. Pandey, R.B. : *Indian Palaeography,* Munshiram Manoharlal, Banaras, 1952.

7. Dani A.H. : *Indian Palaeography,* Munshiram Manoharlal, New Delhi, 1997.

DEFENCE & STRATEGIC STUDIES

SEMESTER –V

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper - NATIONAL SECURITY: CONCEPTIONAL ASPECTS

M. Marks: 70
Time: 3 hours

Objective :

This paper deals with the conceptual aspects of national security and the role of economy & military organizations in furthering national pursuits.

SECTION -I

1. National Security: Definition and Concept.
2. Elements of National Security: Geography, Mineral Resources, Economic Stability, Military preparedness, Socio-Political Factors, Science and Technology.

SECTION -II

3. Collective Security Arrangements: Security Relevance of UN in the modern context, Role of NATO in the Post Cold War era.

SECTION -III

4. Regional groupings: SAARC, ASEAN and BIMSTEC (Aims and Objectives of the three Alliances to be discussed).

SECTION -IV

5. Non-Aligned Movement and National Security: History, Features, Problems and Achievements.

Books Recommended

1. Abhyankar, M.G., Defence Principles and Organisation, Usha Publications, Longmans, Michigan, 1966.
2. Aditya, Chibber , National Security Doctrine, Lancers International, New Delhi, 1990.
3. Alva, Myrdal , The Game of Disarmament, Pantheon Books, New York ,1982.
4. Bandhyopadhyay, J., India's Foreign Policy Making, Allied Publishers Private Ltd., Mumbai, 1970.
5. Choudhary, Subrata Roy, Military Alliances and Neutrality in War and Peace, Orient Longmans, Bombay, 1966.
6. Hadley Arthur T., The Nation's Safety and Arms Control, Viking Press, University of Michigan, 1961.
7. Hans, J. Margenthau , Politics Among Nations, McGraw-Hill, New York, 1993.
8. Misra, K.P., Studies in Indian Foreign Policy, Vikas Publications, Delhi, 1969.
9. Rana, A.P., The Imperative of Non-Alignment, McMillan Cop. of India, 1976.
10. Shah, A.B., India's Defence and Foreign Policies, Manaktalas , 1966.
11. Singh, Jasbir, Indian Defence Year Book 2012-13, Natraj Publishers, Dehradun, 2001.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Relief features and their representation on Map.
2. Degree of Slopes, Gradients and Inter-visibility of Points.
3. Study of Field Craft with reference to the following:

   (a) Ground
   (b) Cover
   (c) Camouflage
   (d) Observation

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

DEFENCE & STRATEGIC STUDIES

SEMESTER –VI

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper: NATIONAL SECURITY OF INDIA

M. Marks: 70
Time : 3 hours

Objective - This paper covers the various factors related to National Security in India.

SECTION -I

1. India's Security Problems since 1947:
   (a) Geo-political effects of Partition: Boundaries and Frontiers.
   (b) Integration of States: J & K, Junagarh, Hyderabad and Goa.
   (c) An overview of India's Security problems related to Pakistan and China.

SECTION -II

2. Indian Ocean and India's Maritime Security.
3. Nuclear Policy of India: History, Evolution and Policy options.

SECTION -III

4. Internal Dimensions of India's National Security with particular reference to Insurgency, Terrorism and Low Intensity Conflict.
5. Disaster Management in India and the role of Civil Defence.

SECTION -IV

6. Economic Mobilization for National Defence.
7. Planning and Production for National Defence with particular reference to India's Defence Production and DRDO.
8. Higher Defence Organization in India

Books Recommended

1. Barnawal, S.P., Military Year Book, A Guide Publication, New Delhi, 2012.
2. Chopra, Maharaj, K., India the Search for Power: India and the Indian Ocean, Lalwani Publication House, Delhi, 1969.
3. Cohen Stephen, P. , The Indian Army, Oxford University Press, New Delhi,1990.
4. Kaul, Ravi, India's Strategic Spectrum, Chanakya Publishing House, Delhi, 1969.
5. Kavic, L.J., India's Quest for Security, Cambridge University Press, London,1967.
6. Klaus, Knorr, War Potential of the Nation, Greenwood Press, Northwestern University, 1979.
7. Khera, S.S. , India's Defence Problem, Orient Longmans, University of California,1968.
8. Kohli, S.N., Sea Power in the Indian Ocean, Tata McGraw Hill, Delhi, 1978.
9. Misra, R.N., Indian Ocean and India's Security, Mittal Publications, Delhi, 1986.
10. Pathak, K.K., Nuclear Policy of India, Gitanjali Prakashan, Delhi, 1980.
11. Panikkar, K.M.
    (i) Defence Problems of India.
    (ii) India and the Indian Ocean, G.Allen & Unwin, Ltd., 1945.
12. Rao, PVR, Defence Without Drift, Popular Prakashan, Delhi, 1970.
13. Rao, Rama, (i) Self Reliance and Security, Radiant , University of Michigan,1984.
    (ii) Role of Defence Production, Radiant, University of Michigan, 1984.
14. Singh, Bhupinder, Textbook of Defence Studies (Part III Punjabi), B.C. Publishers, Patiala,1983.
15. Singh, Jasbir, Defence Year Book, 2012-13, Natraj Publication, Dehradun, 2001.
16. Singh, Jasjit , Nuclear India, Knowledge World, Delhi, 1998.
17. Singh, Jaswant , Defending Indian Hemisphere , McMillan, Basingstoke, 1998.
18. Thomas, Raju G.C., The Defence of India (A Budgetary Perspectives), McMillan, Delhi, 1970.
19. Subrahmanyam, K.
    (i) Indian Security Perspectives, ABC Publishing House, New Delhi,1982
    (ii) Planning for Defence.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Tactical Formations: Section and Platoon.
2. Application of Fire: Fire Control, Fire Control Orders and Sequence of Fire Control Orders.
3. Military Messages: Verbal and Written.

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER- V

PAPER: HISTORY OF PUNJAB 1849-1966

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the impact of the colonial period on the region

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. British Administration: new structure; formation and achievements of Board of Administration
2. British Agrarian Policy; commercialisation of agriculture
3. Developments in Irrigation; transport and communication

UNIT-II:

4. Growth of Modern Education
5. Socio-Religious Reform- main ideas of Namdharis; Singh Sabha; Arya Samaj;Ad Dharam Movement.
6. Political awakening: agitation of 1907; Ghadar Movement

UNIT-III:

7. Growth of Political consciousness: Jallian wala bagh; Gurudwara Reform Movement
8. Circumstance leading to partition.
9. Rehabilitation and resettlement

UNIT –IV:

10. Punjabi Suba Movement and Reorganisation Act 1966
11. Agricultural development: Green Revolution; Land reforms
12. Map : Ambala, Amritsar, Delhi, Hissar , Jaito, Jalandhar, Khem Karan, Kurukshetra, Ludhiana, Lahore, Lyallpur, Nankana Sahib, Sargodha, Tarn Taran

Reading List:

1. Fauja Singh (ed.) : *History and Culture of the Punjab, Part II*, Publication Bureau, Punjabi University, Patiala, 1987.

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. It would also form the basis for one to two sentence answer questions.

2. Fauja Singh : *Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3. J.S. Grewal : *The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4. Khushwant Singh : *A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi, 1991.
5. Satya, M. Rai : *Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6. P.N. Chopra, B.N. Puri and M.N. Das : *A Social,Cultural & Economic History of India,* Vol. III, Macmillan, Delhi, 1974.
7. K.C. Yadav and S.M. Fogat : *Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991
8. R.S. Johar, and J.S Khanna : *Studies in Punjab Economy,* GNDU, Amritsar, 1983.
9. Monica Das Gupta, T.N. Krishna & Lincon C. Chen : *Women's Health in India, Risk and Vulnerability*, Oxford, OUP, 1998.

HISTORY

SEMESTER-VI

PAPER: WORLD HISTORY 18TH - 20TH CENTURY

INSTRUCTIONS FOR THE PAPER – SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **World History 1761 - 1956**

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the modern period in World history.

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. The American Revolution; causes and consequences
2. The French Revolution-causes and impact; Continental System of Napoleon
3. Congress of Vienna 1815-motives, provisions, significance

UNIT-II:

4. The Industrial Era-causes of origin, new inventions, impact on society
5. Unification of Italy and Germany
6. New Imperialism 1871-1914

UNIT-III:

7. World War I: Division of Europe into two blocks, causes, Paris Peace Conference
8. Russian Revolution 1917- causes and impact
9. Nationalism and Communism in China- causes of revolution of 1911 and its impact; causes and consequences of revolution of 1949

UNIT–IV:

10. Mejie restoration and modernization in Japan
11. World War II; causes and consequences
12. World Map: Beijing, Berlin, Boston, Cairo, Constantinople, Frankfurt, Geneva, London, Moscow, Nagasaki, Nanking, Paris, Rome, Tokyo, Trafalgar, Vienna, Waterloo.

Suggested Readings

1. Davis, H.A. : *An Outline History of The World,* OUP, 1964, 4th Edition.
2. Garraty John A. & Peter Gay (ed.) : *The University History of the World,* United Kingdom : New Orchard Edition, 1985.
3. Gupta, P.S. : *Europe Ka Itihas,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1996 (Hindi Medium).
4. Hinsley, F.H. (ed.) : *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.
5. Stavrianos, L.S. : *The World Since 1500,* Delhi : Prentice Hall of India, 1965.
6. Ashworth, W. : *A Short History of the International Economy, 1850-1950,* London : Longmans, 1954.
7. Brecher, Michael : *The Foreign Policy System of Israel, Toronto* : Oxford University Press, 1972.
8. Chabod, Fredrico : *History of Italian Fascism,* London : Weidenfeld, 1961.
9. Gupta, P.S. : *Adhunik Paschim Ka Uday,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1997 (Hindi Medium).
10. Garraty John A. & Peter Gay (ed.) : *The Columbia History of the World,* United Kingdom : New Orchard Edition, 1985.

POLITICAL SCIENCE
SEMESTER - V

COMPARATIVE POLITICAL SYSTEMS (UK AND USA)

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The purpose of this paper is to serve as an introduction to the field of comparative politics. It provides a broad overview of the field of comparative politics and examines some key approaches. The major part of the paper is devoted to understanding and analyzing the origins and working of two political systems, the UK and the USA. The student will not only become familiar with the working of these two political systems but also understand how the concepts of comparative politics can be used to understand real world politics.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit–4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I: Theoretical Framework

(i) Meaning, Nature and Scope of Comparative Government and Politics
(ii) Comparative Method.

Unit-II: U.K.

(i) The British Political System - Salient Features and Conventions.

(ii) Executive
   (a) Monarchy:- Difference b/w King and Crown, Powers of Crown, Nominal and Real position Justification of Monarchy
   (b) Features of Parliamentary/ Cabinet Government
   (c) Prime Minster:- Composition, Powers, Position and Role

   Legislature
   (a) House of Lords:- Composition, Powers, Criticism & Utility
   (b) House of Commons:- Composition, Powers, Mutual relations between House of Lords and House of Commons

(iii) Judiciary
   (a) Organisation of Courts in U.K.
   (b) Rule of Law.

Unit-III : U.S.A.

(i) The Constitutional framework of U.S.

(i) Salient features
(ii) Separation of Powers & Checks & Balances
(iii) Federal System- Meaning, Features, Tendency towards Centralisation and its future.

(ii) Executive

(i) Elections of U.S. President

(ii) Composition, Powers & Position of U.S. President.

Legislature/Congress

(i) House of Representative- Composition, Power, House of Representative is the weakest chamber
(ii) Senate – Composition, Powers, Most Powerful Second Chamber, Mutual relations b/w House of Representative & Senate

Judiciary

(i) Supreme Court - Organisation, Composition, Powers & its Role.
(ii) Power of Judicial review

Unit-IV

(i) Political Parties and Interest/Pressure Groups of U.K- Nature & Role.
(ii) Political Parties and Interest/ Pressure Groups of U.S.A. - Nature & Role.

Books Recommended :

1. Hague and Harrop : *Comparative Government and Politics*, Palgrave, New York, 2001.
2. V.N. Khanna Comp., : *Comparative Study of Government and Politics*, S. Chand and New Delhi 1999.
3. Andrew Heywood : *Politics*, Macmillan Palgrave, New York, 1997.
4. A.C. Kapoor : *Select Constitutions*, S. Chand and Company, New Delhi 1995.
5. Vishnu Bhagwan and Vidya Bhushan : World Constitutions, Sterling Publisher, New Delhi 1993.
6. J.C. Johari : *Major Modern Political Systems*, Vishal Publication, Delhi 1986.
7. J.C. Johari : *Comparative Politics*, Sterling Publishers, New Delhi 1982.
8. K.R. Bombwall Ambala : *Major Contemporary Constitutional Systems*, Modern Publication, Cantt 1978.
9. Mackintosh London, : *The Government and Politics of Britain*, Hutchinson and Comp., 1977.
10. Herman Finer London, : *Theory and Practice of Modern Government*, Theuen and Comp., 1963.

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POLITICAL SCIENCE

SEMESTER-VI

INTERNATIONAL POLITICS : THEORY AND PRACTICE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : This paper provides students with an overview of the broad theories and concepts used to understand international politics. It also examines key issues in contemporary global history from an international politics perspective.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (2) in the question paper.

Unit-I

1. Meaning, Nature and Scope of International Politics.
2. Realist and Idealist approaches to International Politics.

Unit-II

1. National Power : Its Elements and Limitations.
2. Balance of Power - Its critical evaluation.
3. Collective Security –Meaning & Feature, Difference between Balance of Power & Collective Security

Unit-III

1. Bipolar, Unipolar and Multi-Polar World.
2. Nature of Emerging World Order.

Unit-IV

1. Regional Organisations : SAARC and EU.
2. New International Economic Order (NIEO).

Books Recommended :

1. H. Bull, *The Anarchical Society : A Study of Order in World Politics,* London, Macmillan 2002.
2. John Baylis and Steve Smith, *The Globalisation of World Politics,* OUP, Oxford, 2001.
3. A. Roberts, "The UN and International Security"*, Survival*, Vol. 35, No. 1, Spring 1993.
4. A. Hurell, "Collective Security and International Order Revision", *International Relations*, Vol. II,No. 1, April 1992.
5. S.P. Verma, *International System and the Third World,* New Delhi, Vikas, 1988.
6. H.J. Morgenthau, *Politics Among Nations : The Struggle for Power and Peace*, 6th Edn., revised by K.W. Thompson, New York, Alfred Knopf, 1985.
6. S.H. Hoffman (ed.), *Contemporary Theory in International Relations,* Massachusetts, Addison-Wesley, 1979.
8. N.D. Palmer and H. Perkins, *International Relations,* Calcutta Scientific Book Company, 1971.
9. J. Frankel, *The Making of Foreign Policy,* London, Oxford University Press, 1963.
10. E.H. Carr, *Conditions of Peace,* New York, The Macmillan Company, 1944.
11. E.H. Carr, *The Twenty Year Crisis,* London, Macmillan, 1939.

ECONOMICS

B.A./B.Sc.(GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER - V

ECONOMICS OF DEVELOPMENT

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The primary course objective is to introduce the students to the basic features, determinants, and theories and strategies of development of underdeveloped economies. It also introduces students to the theory of how control and direction of economic activity by a central public authority can be used as an alternative to market by the underdeveloped economies.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Economic Growth and Development- Concept and Measurement. Main Features of an Underdeveloped Economy.
Determinants of Economic Development. Capital Formation:It's Source, Nurkse's Thesis of Disguised Unemployment. Lewis Theory of Unlimited Supply of Labour.

Unit-II

Classical Model of Growth; HarrodDomar Model of EconomicGrowth; One Sector Neo-classical Model of Growth. Solow Model of Growth. *Dualism :* Social and Technological.

Unit-III

Theory of Big Push. Leibenstein's Critical MinimumEffect Thesis. Strategies of Economic Development:Balanced Vs. Unbalanced Growth. Rostow's Theory of Stages of Growth.

Unit-IV

Theory of Planning in Developing Countries:Need, Objectives, Strategies and Problems of Planning. Price Mechanism and Planning. Investment Criteria. Choice of Technique. Emerging Strategies: Export Promotion and Import Substitution Strategy.

Books Recommended :

1 Higgins, Benjamin (1994) : Economic Development : Principles, Problems and Policies, Norton Publisher, New York.

2 Meier, G.M. (1995) : Leading Issues in Economic Development, Oxford University Press, New York.

3 Meier, G. M. and Rauch, James E. (2006) : Leading Issues in Economic Development, Eighth Edition, Oxford University Press

4 Nurkse, R. (1992) : Problems of Capital Formation in Underdeveloped Countries, Oxford University, Press

5 Rostow, W. W. (1960) : Stages of Economic Growth, Cambridge University Press.

6 Thirlwal, A P (2011) : Economics of Development, Palgrave Macmillan Publishers, UK.

Supplementary Readings:

Todaro, Michael. P (1989) : Economic Development in the Third World, Orient Longman, London.PalgraveMacMillan,UK

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ECONOMICS

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER- VI

INDIAN ECONOMY

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The objective of the paper is to familiarize the students with the features and characteristics of the Indian Economy. It also includes performance and problems of Industrial development, Indian tax structure, external trade and balance of payments, and objectives, strategy and performance of Indian planning. The course aims to develop analytical understanding of the students by exposing them to the basic issues of the Indian economy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Indian Economy on the Eve of Independence. Features and Characteristics of Indian Economy since Independence: Agriculture: Importance of Agriculture; Causes of Backwardness and Low productivity; New Agricultural Strategy, Green Revolution and Critical Evaluation with Special Reference to Environmental Degradation; Land Reforms: Need, Implementation and Evaluation.

Unit-II

Industry: Problems of Industrial Development; Public and Private Sector; Industrial Policy since 1956 with Special Emphasis on Recent Trends of Liberalization; Role and Problems of Small and Large Scale Industries in the era of Globlisation. Major Large Scale Industries: Iron& Steel, Cotton Textile, Petroleum & I.T.

Unit-III

Principal Features of Indian Tax Structure. Division of Financial Recourses between Centre and the States. Direction and Composition of Exports and Imports and Changes there in since Economic Reforms; Balance of Payment problems; Critical Evaluation of the Role of MNCs in India.

Unit-IV

Planning: Importance, Objectives, Strategy and Achievements of Indian Planning; Critical Evaluation of the Latest Five Year Plan (Plan wise details to be excluded); Major Indian Economic Problems: Inflation, Unemployment and Poverty; Introduction to Consumer Education and Consumer Protection (elementary ideas).

Books Recommended :

1 Dhar, P.K : Indian Economy, Kalyani Publishers, Ludhiana. (Latest Edition)

2 Gill, K : Evolution of Indian Economy, NCERT, New Delhi.

3 Aggarwal, A N Indian Economy, Wiley Eastern Ltd. (Latest Edition).

4 Datt, Rudder & Sundram, KPM : Indian Economy, S. Chand & Co. (Latest Edition)

5 Soni .R. N. : Leading Issues in Agriculture Economics , Sohan Lal Nagin Chand & Sons.

6 Ghosh. A (Trans. Avtar Narinder Singh) : Bhartiy Arth Vivshta (Punjabi University, Patiala).

7 Singh, Chander Gupt : Bharti Arth Shastar (PunjabiUniversity, Patiala).

8 Mishra, S.K. & Puri, V.K. (English & Hindi Medium) : Indian Economy, Himalaya Publishing House, Mumbai (Latest Edition).

9 Tondon, B.B. & Tondon, K.K : Indian Economy, Tata McGraw Hills Pub. Co., New Delhi(1998).

Supplementary Readings:

1. Government of India: Five Year Plan (latest).
2. Government of India: Economic Survey (latest).

SOCIOLOGY

B.A. /B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER - V

SOCIETY IN INDIA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper–setter must put note (iii) in the question paper.

Objective

The objective of this paper is to present a comprehensive view of Indian Society. The students are exposed to the tribal, rural and urban societies and are presented with the social structure and social institutions to understand these segments of Indian Society. Through this paper, the students are also introduced to the problems of the underprivileged in Indian Society.

Course Content

Unit-I

Tribal Society: Meaning, Characteristics; Classification of tribes.

Institutional Features: Family, Marriage, Economy and Changing trends.

Unit-II

Rural Society: Meaning; Characteristics.

Institutional Features : Family, Marriage; Economy and Polity (Village Panchayat); Changing Trends.

Unit-III

Urban Society : Meaning and characteristics, Concepts of urbanization and urbanism;

Institutional features; Urban family - features and changes; Economy; Voluntary associations; Slums.

Unit-IV

Under-privileged Sections—Women, Physically Disabled, Scheduled Castes and Scheduled Tribes: Measures to improve their status.

Essential Readings:

1. Bose, N.K. (1980) : *Tribal Life in India,* National Book Trust.
2. Desai, A.R. (1969) : *Rural Sociology in India,* Bombay: Popular Prakashan.
3. Desai, A.R. (2006) : *Social Background of Indian Nationalism, Mumbai Popular Prakashan*
4. Lal, S.N. & Nahar, U.R. (1992) : *Rural Social Transformations,* Jaipur : Rawat.
5. Madan & Majumdar (1989) : *An Introduction to Social Anthropology,* New Delhi: National Publications (Hindi & English).
6. Madhurima (2009) : *Readings in Sociology-Part-3*, Jalandhar: New Academic Publishing House [All Mediums].
7. Mandelbaum, G. (1970) : *Society in India,* Bombay: Popular Prakashan (Hindi & English).
8. Sen, Pujan Kumar,(2012) : *Indian Society:Continuity and Change Pearson, New Delhi*
7. Shah, Ghanshyam (ed.) (2002) : *Caste & Democratic Politics in India,* New Delhi: Permanent Black.
8. Sharma, R.K. (2004) : *Indian Society: Institutions & Change,* New Delhi: Atlantic Publications.
9. Singh, K.S. (2002) : *The Scheduled Castes*, New Delhi: Oxford University Press.

Further Readings:

1. Ahuja, Ram (2015) : *Social Problems in India,* Jaipur, Rawat Publications.
2. Mahajan, Sanjeev (2004) : *Gramin Samajshastra,* New Delhi: Arjun Publishing House.
3. Punit, A.E. (1978) : *Social Systems in Rural India,* New Delhi: Sterling Publications.
4 Rao, M.S., Chandrashekar Bhatt, L.N. Kelkar (eds.) (1991) : *A Reader in Urban Sociology,* New Delhi: Orient Longman.
5. Shah, D.S. & Sisodia, Y.S. (ed.) (2004) : *Tribal Issues in India,* Jaipur: Rawat Publications.
6. Singh, K. Suresh (2001) : *The Scheduled Tribes,* New Delhi: Oxford University Press.
7. Vardhan,Ranjay, (2008) : Single Women, A Study of Spinsters, Delhi, Indian Publishers Distributors

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SOCIOLOGY

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER -VI

DISORGANISATION AND EMERGING PROBLEMS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective

This paper exposes the students to social disorganization, its levels and current problems. It helps students to understand social realities and also equips them to utilize their knowledge in various theoretical and practical exercises.

Course Content

Unit-I

Social Disorganization : Concepts and Levels –Personal, Familial and Societal.

Unit-II

Personal Problems: Problems of Adolescence; Alcoholism; Drug Addiction, Suicide.

Unit-III

Familial Problems: Domestic Violence, Violence against Children; Female Headed Households; Problems of Working Women.

Unit-IV

Societal Problems : Poverty; Corruption; Problems of the Aged, Cyber Crime

Essential Readings:

1. *Ahuja, Ram (2015)* : *Social Problems in India, Jaipur: Rawat Publications.*
2. *Elliot, H.V. & Merill, F. (1950)* : *Social Disorganization, New York: Harper Brothers.*
3. *Gill, S.S. (1998)* : *Pathology of Corruption, New Delhi: Harper Collins.*
4. *Macionis, John J. (2005)* : *Social Problems, New York: Prentice Hall.*
5. *Madan, G.R. (1978)* : *Indian Social Problems, New Delhi: Allied Publishers.*
6. *Mitra, S.M. (2005)* : *Indian Problems, New Delhi: Eastern Book Corporation.*
7. *Mohan, J. & Sehgal, M. (2004)* : *Youth & Drugs, New Delhi: Abhijit Publications.*
8. *Narasaiah, M.L. (2005)* : *Poverty & Environment, New Delhi: Discovery Publishing House.*
9. *Rai, Bhartiya (2004)* : *Samajik Samasyaein, New Delhi: Arjun Publishing House.*
10. *Shankar Rao,(2015)* : *Indian Social Problems: A Sociological Perspective,S. Chand & Company, New Delhi*
11. *Vardhan, Ranjay (1999)* : *Female Headed Households in Patriarchal Society: A Sociological Study, Delhi: Indian Publishers Distributors.*

Further Readings:

1. *Chakraborty, Rajgopal Dhar (2004)* : *The Greying of India : Population, Ageing in the Context of Asia, New Delhi : Sage.*
2. *Mahajan, Amarjit & Madhurima (1994)* : *Family Violence and Abuse in India, New Delhi : Deep and Deep Publications.*
3. *Natrajan, P.S. (2003)* : *"A Theory of Indian Communalism" in Think India Quarterly, Vol. 6, No. 3, July-Sept.*
4. *Pavrala, Vinod (1996)* : *Interpreting Corruption, New Delhi : Sage.*
5. *Phandaris, Urmila (1989)* : *Ethnicity and Nation Building in South Asia, New Delhi: Sage.*
6. *Shankar Rao, C.N. (2007)* : *Indian Society, Delhi: S. Chand and Company.*
7. *Bansal,S.K.(2013)* : *Cyber Crime, New Delhi,APJ Publications*
8. *Pendse Neelkanth Ganjan, Sarkar Sukanta,(2015)* : *Social Problems in India, Delhi,Kalpur Publications*

PUBLIC ADMINISTRATION

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER -V

PAPER: LOCAL GOVERNMENT (WITH SPECIAL REFERENCE TO PUNJAB

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of the concept, significance and evolution of local government in India. It would also acquaint them with the pattern and working of divisional and district administration. The key areas covered are the types, structure, functions, finances and personnel of rural and urban local governments. It would also include the concept of state control over local bodies, provincialisation and rural-urban relationship with reference to Punjab.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and Significance of Local Government
Evolution of Local Government since 1882
Role of Deputy Commissioner; Divisional Commissioner
Rural and Urban Development: Dimensions and Issues

Unit-II

The 73rd Constitutional Amendment – Provisions and its Impact
Gram Sabha – Composition Functions and Powers
Panchayati Raj Institutions in Punjab – Structure, Functions, Sources of Finances and Personnel

Unit-III

The 74th Constitutional Amendment – Provisions and its Impact
Urban Local Bodies – Structure, Functions and Sources of Finance
Mayor – Position, Functions and Powers
Municipal Commissioner – Position, Functions and Powers

Unit-IV

State Control over Local Bodies
State Finance Commission: Composition, Functions and Role
Provincialisation of Municipal Services
Rural- Urban Relationship – Challenges and Remedies

Essential Readings:

Goel, S.L. & Ramesh, S. (2003). *Panchayati Raj in India* .New Delhi: Deep & Deep Publishers.
Hochgesang, T.W. (1994). Rural Local Self -Government in India.Hyderabad: NIRD.
Maheshwari, S.R. (2002). *Local Government in India*. Agra : L.N. Aggawal.
Puri, K.K. and.Barara, G.S.(2008) *Local Government in India*. Jalandhar: Bharat Prakashan.
Sahib, S & Singh, S. (2000). *Local Government in India*. Jalandhar: New Academic Publishers.

Further Readings

Government of India, Second Administrative Reforms Commission, 6th Report – Local Governance

Khanna, B.S. (1991). *Rural Developments in South Asia.*New Delhi: Deep & Deep Publications.

Singh, H.B. (2003). *Revitalised Urban Administration in India*. Delhi: Kalpaz Publishers.

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PUBLIC ADMINISTRATION

SEMESTER - VI

PAPER: DEVELOPMENT ADMINISTRATION (WITH SPECIAL REFERENCE TO PUNJAB)

Max. Marks : 100
Theory : 90 Marks
Internal assessment: 10 Marks
Time : 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the concept & significance of development administration, features of developed & developing countries, planning machinery at Centre & State level and the emergence of India as a welfare state. The paper would also give an understanding about the concept, forms, role and problems of public enterprises as well as the working of select Union Ministries and agencies in Welfare and Development Administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Development: Meaning, Features and Aspects
Development Administration: Meaning, Nature, Scope and Significance
Features of Developed and Developing Countries

Unit-II

India as a Welfare State.
Planning: Meaning, Objectives and Significance
Planning Machinery in India at National, State and Local

Unit-III

Public Enterprises: Concept and Forms
Role of Public Enterprises in Economic Development
Managerial Problems of Public Enterprises
Public Enterprise Reforms since 1991; Concept of Privatisation

Unit-IV

Administration of Rural Development at the local level
Education and Development; Role of State Administration in Primary and Secondary Education
Health and Development; Role of the Ministry of Health and Family Welfare
Role of Voluntary Sector in Development

Essential Readings

Bava, N.J. (1997). *Non-Governmental Organisations in Development: Theory and Practice*.Ed. New Delhi: Kanishka

Dhar, P.K. (2007). *Indian Economy-Its Growing Dimensions*.New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). Development Administration: From Underdevelopment to Sustainable Development. London: Macmillan.

Mathur, B.P. (1999). *Public Enterprise Management* .Macmillan India: New Delhi.

Sapru, R.K. (2003). 2nd Ed. *Development Administration.* New Delhi: Sterling Publishers.

Singh, S. & Singh S. (2010). *Public Administration: Development and Local Administration*. Jalandhar: New Academic Publishers.

Website of Ministry of Health and Family Welfare: mohfw.gov.in/

Website of Planning Commission: planningcommission.nic.in/data/ngo/npvol07.pdf

Further Readings

Goel, S.L. (2003). *Advanced Public Administration*. New Delhi: Deep & Deep Publications.

Jain, R.B. (2002). *Public Administration in India – 21st Century Challenges for Good Governance.* Delhi: Deep & Deep Publications Pvt. Ltd.

Parikh, S. & Radhakrishna, R. (2002). *Indian Development Report* .Indira Gandhi Institute of Development. New Delhi: Oxford University Press.

Rao, Vasudeva. B.S. (2007). *Rural Development Strategies & Role of Institutions*; *Issue Innovations and Initiatives.* Ambala: The Associated Publishers.

Rattan,V.(1997). *Women and Child Development Programme Administration.* New Delhi: S. Chand.

Srivastava, S.P. (1998). *The Development Debate: Critical Perspectives.* Jaipur & New Delhi: Rawat Publications.

PHILOSOPHY

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER – V

PAPER : INDIAN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper discusses the main epistemological and metaphysical issues as discussed in the various Indian Philosophical Systems.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit–I

1. Salient features of Indian Epistemology and Metaphysics.
2. Concept of Prama and Pramana according to Nyaya
   - i) Pratyaksa
   - ii) Anumana
   - iii) Sabda
   - iv) Upamana
   - v) Arthapatti
   - vi) Anuplabdhi

Unit–II

3. Materialism (Swabhava vada) of Charvakas.
4. Anekantavada of Jainism.
5. Aryasatyas, Pratityasamutpada of Buddhism.

Unit–III

6. Concept of Self and Consciousness with special reference to Mandukya Upanishads.
7. Advaita Vedanta : Sankara on Brahman and Maya.

Unit - IV

8. Samkhya. : Theory of Causation. (Satkaryavada)
9. Vaisesika : Nature and kinds of Padartha (Categories)
10. Sikhism : Nature of Ultimate Reality, Mand and the World.

Essential Readings:

1. Chatterjee, S.C. & Datta, D.M. : An Introduction to Indian Philosophy (Calcutta University, Calcutta, 1993).
2. Hiriyanna, M. : Outlines of Indian Philosophy (Allen and Unwin, London, 1999) (Hindi Translation Available), London: Allen.
3. Tarka-Samgraha of Annambhatta (Poona-Bhandarkar Oriental Research Institute, Poone, 1992).

Suggested Readings:

1. Ananikana : A Nyaya Manual, Ed. Sri. Krishna Sarma, Adyar Library and Research, Chennai, 1991.
2. Chatterjee, S.C. : The Nyaya Theory of Knowledge (University of Calcutta, Calcutta, 1995).
3. Panchapagesha Sastri : The Philosophy of Aesthetic Pleasure (Annamalai University, 1999).
4. Complete Works of Swami Vivekananda (relevant portions), (Advaita Ashram, Calcutta), 1957.

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PHILOSOPHY

SEMESTER – VI

PAPER : WESTERN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives:

This paper aims at exposing the students to main epistemological and metaphysical theories and problems of western philosophy. It also deals with basic themes of existentialism, logical positivism and analytical philosophy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I

1. Nature of Philosophy with special reference to Metaphysics and Epistemology (introductory).
2. Materialism : Mechanical and Dialectical.
3. Idealism : Objective (Plato), Subjective (Berkeley).

Unit-II

1. Nature of Knowledge : Knowing subject, Act of knowing and object of Knowledge.
2. Theories of Truth : Coherence, Correspondence and Pragmatic

Unit-III

3. Theories of Knowledge :

   (a) Rationalism.

   (b) Empiricism.

   (c) Transcendentalism of Kant.

Unit-IV

4. Universal and Particulars : Concept of Being (Parmenides) and Becoming (Heraclites).
5. Substance (Spinoza) Causality (Hume).
6. Existentialism : Being in itself; Being for itself; Choice and Freedom.

Essential Readings :

1.	Ewing, A.C.	:	Fundamental Questions of Philosophy (London : Routledge & Kegan Paul, 1999).
2.	Titus, H.H.	:	Living Issues in Philosophy, Prentice Hall Pub. (New Delhi : Eurasia Pub. House, 4th ed., 1999).
3.	Macquire, John		Existentialism, Philosophical Library, New York, 1949.

Suggested Readings :

1.	Ayer, A.J.	:	Twentieth Century Philosophy, Penguin Books, Harmondsworth, 2002.
2.	Ayer, A.J.		Language, Truth and Logic, Soft Cover ISBN 0486200108, Dover Publications, 1969.
3.	Korner, Stephen	:	Fundamental Questions of Philosophy (Penguin), Harmondsworth, 2002.

PSYCHOLOGY

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER - V

Objectives :

(I) The course will enable the students to get an introductory knowledge about Clinical Psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: CLINICAL PSYCHOLOGY

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be Compulsory question. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Nature and Criteria of abnormality, *Viewpoints Regarding Abnormality:* Historical, Psychodynamic, Behavioural, Cognitive, Humanistic and Interpersonal;

UNIT-II : *Causes of Abnormal Behaviour:* Biological, Psychological and Sociocultural Causes.

UNIT-III : *Stress:* Concept of Stress; Types of Stressors; Etiology of Stress; Coping Strategies: Problem Focussed and Emotion Focussed, Effects of Stress.

UNIT-IV : *Significance of Statistics :* Mean, Standard Deviation, Correlation. Significance of Difference Between Means (Correlated and Uncorrelated).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. The use of Biofeedback.
2. Presumptive Stressful Life Event Scale.
3. Adjustment Inventory.
4. Mental Health Inventory.
5. Sentence Completion Test.
6. Word Association Test.

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003).*Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) . *Abnormal Psychology,* New York : John Wiley and Sons.

3. Feldman, R.S. (2014).*Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

4. Garrett, H. E. (1966) . *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons.

5. Guilford, J.P., and Fruchter, B. (1981) . *Fundamental Statistics in Psychology and Education.* Singapore: McGraw Hill.

6. Sarason, B.R. & Sarason, I.G. *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_Prentice Hall of India.

7. Singh, A.K.(1986).*Tests, measurements and research methods in behavioural sciences.*Tata McGraw Hill.

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PSYCHOLOGY
SEMESTER - VI

Objectives :

(I) This course will enable the students to get an introductory knowledge about Clinical psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: BEHAVIOURAL DISORDERS

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :
The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry14 marks and shall be Compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Anxiety Based Disorders viz. Phobia; OCD; Panic; Generalized Anxiety Disorder. Conversion Disorders, Dissociative Disorders : Types, Symptoms and Etiology.

UNIT-II : *Mood Disorders :* Types, Symptoms and Etiology.

UNIT-III : *Schizophrenia Types :* Symptoms and Etiology.

UNIT-IV : *Psychotherapies :* Psychodynamic Therapy, Behaviour Therapy, Cognitive- Behaviour Therapy, Humanistic Therapy.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. Clinical Interview.
2. TAT.
3. Depression Inventory (Beck).
4. State Trait Anxiety Inventory
5. Self Efficacy
6. Aggression Scale

Books Recommended:

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003) : *Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) : *Abnormal Psychology,* New York : John Wiley and Sons.

3. Garrett, H. E. (1966) : *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons

Reference Books

1. Feldman, R.S. (2014) : *Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

2. Guilford, J.P. and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education* Singapore: McGraw Hill.

3. Sarason, B.R. & Sarason, I.G. : *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_ Prentice Hall of India.

GEOGRAPHY
SEMESTER-V

Paper-IX: WORLD REGIONAL GEOGRAPHY- I

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:

To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:

Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to Regional Groupings (European Union, North Atlantic Treaty Organization, North American Free Trade Agreement and Commonwealth of Independent States).

UNIT-I

(i) Anglo America (20 lectures)

UNIT-II

(ii) Latin America (20 lectures)

UNIT-III

(iii) Europe (20 lectures)

UNIT-IV

(iv) Russia & Commonwealth of Independent States (30 lectures)

(v) Oceania

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words each. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 Marks) and (iii) attendance (2marks).

7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 7 in the question paper.

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective*. Prentis Hall, New Jersy, 1995.
2. Blij, Harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cairns, G. O. et. al. : *Australia. Macmillan Co.* New York, 1962.
4. Coysh, A. W. and M. E. Tomlinson : *The Southern Continents.* University Tutorial Press, London, 1980.
5. English, Paul Ward & James, A.Miller : *World Regional Geography: A Question of Place, John Wiley*, New York, 1989.
6. Gilbert, Alan : *Latin American Development: A Geographical Perspective.* Hanswoodsworth Penguin, Middlesex, London, 1974.
7. Gottmann, Jean : *A Geography of Europe. Harrape & Co*. London, 1969.
8. Gregory, J. S. ed. : *The Geography of USSR*. Novosti Press Agency, Moscow, 1985.
9. Hudson, F. S. : *North America. Mc. Donald & Evans*, Fly Mouth, 1975.
10. Jackson, Richard H. & Lloyd E.Hudman : *World Regional Geography: Issues for Today, John Wiley*, New York, 1991.
11. Kromm, D. E. : *World Regional Geography, Saunders Publishing*, New York, 1980.
12. Malmstorm, V. H. Englewood Cliffs : *Geography of Europe: A Regional Analysis*. Prentice Hall, New York, 1991.
13. Patterson, J. H. : *North America. Oxford University Press,* New York, 1995.
14. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando, 1998.

Further Readings:

1. Don R. Hoy (Ed.) 1980. : *Essentials of Geography and Development,* Macmillan, New York,
2. Hussain, Majid : *World Regional Geography, Rawat Publications*, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the Wold, Kalyani Publishers,* Ludhiana, 2009.
4. Tikkha, R. N., Bali, P.K. and Sekhon, M. S. : *World Regional Geography,* New Academic Publishers, 2007.
5. Singh, Malkit : *World Regional Geography,* Rasmeet Prakashan, Jalandhar, 2009.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents.Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - X: MAP PROJECTIONS

Max. Marks: 30
Time: 3 hours

Distribution of Marks:

(i) Written paper of three hours covering entire syllabus shall be held for students of USOL. For others it shall be at respective colleges. 20 marks

(ii) Practical Record relating to Map Projections and Viva voce on Practical Record relating to Map Projections. 10 marks

Objective:

- To provide an analytical understanding of use of common map projections.

Course Content:

Unit- I

Map Projections:
General introduction , classification of projections, general principles of identification and choice of projections.
(6 lectures)

Unit- II

Construction, properties and limitations of following projections

Cylindrical : Simple, Equal area, Mercator's (4 lectures, 6 lab. sessions)

Unit- III

Construction, properties and limitations of following projections

Conical : One Standard Parallel, Two Standard Parallel , Bonne's, Polyconic and International
(4 lectures, 6 lab. sessions)

Unit- IV

Construction, properties and limitations of following projections

Zenithals : Gnomonic, Stereographic, Orthographic, Equidistant and Equal Area (Polar cases only)
Conventional : Sinusoidal and Molleweide's (normal cases only) (7 lectures, 7 lab. sessions)

Note:

1. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of geography in the college.

3. Evaluation of Practical Record and Field Report will be done at the time of viva-voce examination.A minimum of 20 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in practical record and field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Practical Record.

6. A fresh practical note book shall be prepared by failed /improvement candidates.

7 For Practical classes, the number of students in one group shall not exceed fifteen.

8. There will be 3 hours of teaching per week for this paper.

9. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 9 in the question paper.

Books Recommended

Essential Readings

1. Kellaway, George P. : *Map Projections*, Methuen and Co., London. Year 1956
2. Steers, J.A. : *Map Projections*, University of London Press, London,1957 Year .
3. Garnett, William : *Map Projections,* George Phillip and Sons, London.

Essential Readings

3. Singh, R.L & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

Basic fundamentals of map projections are introduced by demonstration of construction exercises in class.

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GEOGRAPHY
SEMESTER-VI

Paper-XI: WORLD REGIONAL GEOGRAPHY- II

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 hours

Objectives:
To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:
Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to regional groupings (South Asian Association of Regional Cooperation, Association of South East Asian Nations, Organization of Petroleum Exporting Countries and Organization of African Unity).

UNIT-I

(i) East Asia (20 lectures)

UNIT-II

(ii) South East Asia (iii) South Asia. (30 lectures)

UNIT-III

(iv) Middle East and North Africa (20 lectures)

UNIT-IV

(v) Africa South of Sahara (20 lectures)

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 marks) and (iii) attendance (2 marks).
7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. (**The paper setter must put note 7 in the question paper.)**

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective.* Prentis Hall,New Jersy, 1995.
2. Blij, harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cressy, G. B. : *Asia's Land and People*. McGraw Hill, London, 1963.
4. Dobby, E. H. G. : *South East Asia*. University of London Press, London, 1980.
5. English, Paul Ward & James, A. : *World Regional Geography: A Question of Place*,John Miller Wiley, New York, 1989.
6. Fisher, W. B. : *The Middle East.* Methuen, London, 1978.
7. Ginsburg, Norton. Ed. : *The Pattern of Asia*. Englewood Cliffs, New Jersey, 1958.
8. Hance, William, A. : *The Geography of Modern Africa*. Columbia University Press, London, 1965.
9. Jackson, Richard H. & Lloyd E. Hudman : *World Regional Geography: Issues for Today*, John Wiley, New York, 1991.
10. Kromm, D. E. : *World Regional Geography,* Saunders Publishing, New York, 1980.
11. Prichard, J.M. : *Africa,* Longman, London, 1981.
12. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando,1998.
13. Spencer, J. E. and L. T. William : *Asia, East by South: A Cultural Geography.* John Willey & Sons, New York, 1971.
14. Spate, O. H. K. and A. T. A. Learmonth : *India and Pakistan: A General and Regional Geography*,Methuen, London, 1967.

Further Readings:

1. Don R. Hoy (Ed.) : *Essentials of Geography and Development*, Macmillan, New York, 1980.
2. Hussain, Majid : *World Regional Geography*, Rawat Publications, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the World*, Kalyani Publishers, Ludhiana, 2009.
4. Singh, Malkit : *World Regional Geography*, Rasmeet Prakashan, Jalandhar, 2009.
5. Tikkha, R. N., Bali, P.K. and Sekhon, M. S : *World Regional Geography*, New Academic Publishers, 2007.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents. Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - XII: FIELD SURVEY BASED REPORT

Max. Marks: 30
Time : 3 hours

- To acquaint the students with the importance of field work as one of the methodologies in geography.
- To familiarise the students about pre-field work and post-field work i.e. data processing and analysis and writing of field work report.

Distribution of Marks

i) Viva-Voce : 10 Marks ii) Field Report: 20 Marks

Fieldwork (Theory):

(i) Role of fieldwork in Geography.

(ii) Scale of study and fieldwork methodology.

(iii) Methods of collecting primary data : Observation, Interview and Questionnaire and Measurement.

(iv) Methods of field study of: a farm, a village, and a town. (20 lectures)

Note: The teachers should familiarize the students in the class before collection of primary data for preparation of field work.

Fieldwork (Practical): A field report of minimum 20 pages will be prepared based on primary data on problems such as (a) local market survey, (b) service area of school/ or hospital; (c) traffic flow, and (d) socio-economic characteristics of student's village/ mohalla/ sector.

(25 lab. Sessions)

Note:

1. There will be no written paper for USOL and college students.
2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher the Geography in the college.
3. Evaluation of Field Report will be done at the time of viva-voce examination. There will be no laboratory exercise at that time.
4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Field Report with the University School of Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Field Report will be evaluated by two examiners (including at least one from the USOL).
5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Field Report. .
6. All students are required to submit a practical record based on theoretical component listed as fieldwork (theory)
7. A fresh field report shall be prepared by failed /improvement candidates.
8. For Practical classes, the number of students in one group shall not exceed fifteen.
9. There will be 3 hours of teaching per week for this paper.
10. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 10 in the question paper.

Books Recommended

Essential Readings

1. Jones, P.A. : *Fieldwork in Geography*, Longman, London, 1968.
2. Archer, J.E. & Dalton, T.H. : *Fieldwork in Geography,* E.T. Bastford Ltd., London, 1968.
3. Singh, Gopal : *Mapwork and Practical Geography*, Surjeet Book Depot, Delhi,1993.

Further Readings

1. Hudson, F.S. : *A Geography of Settlements*, MacDonald, London, 1970.
2. Singh, L.R. & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

The students need to be trained to collect primary data, its processing and cartographic representation through taking up field exercises.

GANDHIAN STUDIES

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER-V

ECONOMIC THOUGHT OF MAHATMA GANDHI

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the Economic Thought of Mahatma Gandhi.

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:
1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Bases of Gandhian Economic Thought

1. Indian Influences on Gandhi's Economic Thought
2. Western Influences on Gandhi's Economic Thought
3. Fundamental Principles of Gandhi's Economic Thought

UNIT-II- Critique of Mechanization

4. Gandhi's Views on Machinery
5. Labour-Capital Relations
6. Theory of Trusteeship
7. Gandhi & Role of Corporate Social Resposibility

UNIT-III-Essence of Gandhian Economy

8. Doctrine of Swadeshi
9. Bread Labour
10. Concept of Wantlessness
11. Concept of Sarvodaya

UNIT-IV-Gandhi and Contemporary Idealogies

12. Gandhi's Views on Communism
13. Gandhi on Capitalism
14. Gandhian Socialism
15. Relevance of Gandhi's views in Globalized World

ESSENTIAL READINGS:

1. Biswas, S.C.(ed.) : *Gandhi: Theory and Practice, Social Impact and Contemporary Relevance* (Shimla: Indian Institute of Advanced Studies), 1960, pp.183-247.

2. Dasgupta, Ajit, K. : *Gandhi's Economic Thought* (London: Routledge), 1996.

3. Diwan, Romesh & Lutz : *Essays in Gandhian Economics* (Delhi: Gandhi Peace Foundation),1985.

4. Kumarappa, J.C. : *Gandhian Economic Thought* (Varanasi: Sarva Seva Sangh), 1962.

5. Mehta, Usha : *The Multi-Dimensional Thought of Mahatma Gandhi* (Mumbai : Mani Bhavan Gandhi Sangrahalaya), 2008.

6. Sethi, J.D. : *International Economic Disorder, A Theory of Economic Darwinism & A Gandhian Solution*, (Shimla: Indian Institute of Advanced Studies), 1996.

FURTHER READINGS

1. Dantwala,M.L. : *Gandhism Reconsidered* (Bombay: Padma Publications Publications), 1945.

2. Gandhi, M.K. : *Hind Swaraj or Indian Home Rule* (Ahmedabad: Navajivan Publishing House), 1982 edition.

3. Mehta, J. K. : *A Philosophical Interpretation of Economics* (London: Oxford University Press), 1956.

4. Schumacher, E.F. : *Small is Beautiful* (London: Abacus), 1989.

5. Sethi, J.D. : *Gandhi Today* (New Delhi: Vikas Publishing House), 1976.

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GANDHIAN STUDIES

SEMESTER-VI

Peace and Conflict Resolution

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the understanding of the concept of Peace and different methods of Conflict Resolution

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:

1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Understanding Peace

1. Meaning & basic components of Peace
2. Approaches to Peace
3. Obstacles to Peace
4. Gandhi's approach to Peace

UNIT-II- Peace Movements

1. Social Movements-Environment, Women, Dalit
2. NGOs
3. Civil Right movements in United States

UNIT-III-Understanding Conflict

1. Concept of Conflict
2. Causes of Conflicts
3. Types of Conflicts

UNIT-IV- Methods and Agencies of Conflict Resolution

1. Pacific methods of Conflict Resolution
2. Peace making
3. U.N. Peace Keeping & Peace Building

ESSENTIAL READINGS:

1. Barash, David, P. : *Approaches to Peace: A Reader in Peace Studies* (New York: Oxford University Press), 2000.
2. Brock, Peter : *Mahatma Gandhi & Mother India, Essay on Gandhi's Non-Violence & Nationalism* (Ahmedabad: Navajivan Publishing House), 1983.
3. Brock, Peter : *Twentieth Century Pacifism* (New York: Van-Nostrand Reinhold Company), 1970.
4. Galtung, Johan : *Peace by Peaceful Means* (New Delhi: Sage Publications), 1996.
5. Gultung, Johan : *The Struggle for Peace* (Ahmedabad: Peace Research Centre, Gujarat Vidyapeeth), 1984.
6. Melasuo, Tuomo (ed.) : *National Movements and World Peace* (U.S.A.: Avebury-Aldershot Brook),
7. Misra, R.P. : *Gandhian Model of Development and World Peace* (New Delhi: Concept Publishers), 1988.
8. Murty, K. S : *Quest for Peace* (Delhi: Ajanta), 1986.
9.. Murty, K. S. and Boughet, A.C. : *Studies in the Problems of Peace* (Bombay: Asia Publishers), 1960.
10. Peter, Wallen Steen (ed.) : *Peace Research: Achievements and Challenges* (London: West View), 1988.
11. Rennie, Linda and Preagar, Forcey (eds.) : *Peace: Meanings, Politics and Strategies* (London: West View),1986.
12. Sethi, J. D. : *Gandhian Critique of Western Peace Movement* (Delhi: Chanakya), 1989.
13. Sharp, Gene : *Politics of Non-Violent Action* (Boston: Sergent Publications), 1973.
14. Bondurant, J.V. : *Conquest of Violence* (Bombay: *O.U.P*), 1959.
15. Burton, J.W. : *Global Conflict* (London: Wheatsheef),1984.
16. Burton, John (ed.) : *Conflict Resolution and Preventive Human Needs Theory* (New York: St. Martin Press), 1990.
17. Chernyak, Yefim : *Ambient Conflicts* (Delhi: Progress Press), 1987.
18. Conlon, D.E. : "The Mediation-Intervention, Discussion-Towards an Integrated Perspective". *Negotiation Journal*, Vol. 4, No.2 of 1988, pp. 143-148.
19. Galtung, Johan : "Institutionalized Conflict Resolution-A Theoretical Paradigm*" Journal of Peace Research*, 1965, pp 348-395
20. Khanna, D.D. & Kueck Gert W. (eds.) : *Conflict Resolution, Human Rights and Democracy* (New Delhi: Shipra Publications), 2003
21. Kriesberg, Louis : *Social Conflicts* (Englewood Cliffs: Prentice Hall), 1982.
22. Kulkarni, V.B. : *Conflict in Indian Society* (Bombay: Bhartiya Vidya Bhavan), 1987
23. Shridharani, K.L. : *War Without Violence* (Bombay: Bhartiya Vidya Bhavan),1962.
24. Thakur, Ramesh : *International Conflict Resolution* (Bombay: West View),1998.
25. Weber, Thomas : *Conflict Resolution & Gandhian Ethics* (New Delhi: Gandhi Peace Foundation), 1991.

FURTHER READINGS:

1.	Danesh, H.B.	:	"Towards on Integrative Theory of Peace Education", *Journal of Peace Education*, Vol. 3, No.1, 2006.
2.	Elsie Boulding	:	"Peace Culture" in *Encyclopedia of Violence, Peace and Conflict* (San Diego: Academic Press), 1999.
3.	Kant , Immaunel	:	*Perpetual Peace: A Philosophical Essay* (London: Swan Sunne), 1902.
4.	UNESCO	:	*From a Culture of Violence to a Culture of Peace* (Paris: UNESCO), 1996.
5.	Azar, E.E. & Buitor J.W. (ed.)	:	*International Conflict Resolution: Theory & Practice (Brighton: Wheatsheef), 1986.*
6.	Burton, J.W.	:	*Conflict Resolution & Prevention (Basingstoke: Macmillan),1990.*
7.	Darby J. & Mac. Ginty R.	:	*Contemporary Peace Making (Palgrave: Macmillan), 2002.*
8.	Juergensmeyer, Mart	:	*Gandhi Way: A Handbook of Conflict Resolution (Berkeley: University of California Press), 2002.*
9.	Kriesbery, Lawis	:	*International Conflict Resolution (New Heven: Yale University Press), 1992.*
10.	Mitchell, C.R.	:	*Handbook of Conflict Resolution: An Problem Solving Approach (London), 1996.*
11.	Ramsbothan D. & Miall, H.	:	*Contemporary Conflict Management (New York : Blackwell), 2005.*
12.	Sustac, Zeno & Claudin Ignet	:	*Alternative Ways of Solving Conflicts (ADR) (New Delhi: Promila and Co. Publishers), 2001.*

JOURNALISM & MASS COMMUNICATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2018-19
SEMESTER V

MEDIA MANAGEMENT, ETHICS AND LAWS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :
The course will introduce the students to the basic structure of media organizations and the regulatory framework and laws of the journalistic profession.

B. Pedagogy of the Course Work:
80% Lectures (including expert lectures)
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be 9 questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I
Types of ownership patterns: Sole Proprietorship, Partnership, Joint Stock Company, Conglomerate, Chain, Trust/Societies/Associations, Cross Media Ownership

Unit II
Basic principles of Management given by Henry Fayoland their applications in media organistions,Organistional structure of Large Daily Newspaper,Radio Station and TV Station.

Unit III
Freedom of speech and expression [Article 19(1)(a) and 19(2)] Press Council of India guidelines for Ethical conduct.

Unit IV
Brief overview of: Right to Information Act, Copyright Act, Law of Defamation, Law of Obscenity, Contempt of Court, Contempt of Legislature

PRACTICALS **Max. Marks : 20**

1	Case study of any one type of ownership pattern of Indian media organizations.	20 Marks

Books Recommended

ESSENTIAL READING

1. Kohli Vanita ,(2003), *The Indian Media Business*, Sage.
2. Ganaratne Shelton ,(2000) *Handbook of the media*, Sage
3. Kothari Gulab (1995) *Newspaper Management in India*, DK Publishers, New Delhi
4. Frank Thayer(1954) *Newspaper Business management*, Prentice hall Inc, New York
5. Trilok N Sindhwani (1975), *Newspaper Economics and management*, Ankur publishing House, New Delhi.
6. John Mcmanus (1994), *Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
7. Edward S. Herman and Robert W. McChesney(1997), *The Global media: New missionaries of corporate capitalism* , Madhyam Books, New Delhi
8. Edward S. Herman and Robert W. McChesney(2002) *Manufacturing Consent: The political economy of mass media*, Random House,
9. Bagdikian Ben H,(2004), *The New Media Monopoly*,.Beacon Press
10. Redmond James and Trager Robert, (2004),*Balancing on the Wire: The Art of Managing Media Organizations*, 2nd ed., Atomic Dog
11. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
12. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D
13. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D
14. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey
15. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D
16. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D
17. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
18. Christians, Clifford and Traber, Michael, (1997), Communication Ethics and Universal Values, Sage Publications, N.D
19. Sharma, S.R , (1996), *Democracy and the Press*, Radha Publications, N.D.
20. Padhy, K.S., (1991), *Battle for Freedom of Press in India*, Academic Foundation, N.D

ADDITIONAL READING

1. McManus John (1994),*Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
2. Underwood Doug(1993),*When MBA's Rule the Newsroom: How the Marketers and Managers are Reshaping Today's Media*, Columbia University Press
3. Neuharth Al(1989),*Confessions of an S.O.B.,* Doubleday
4. Mackay Harvey(1988),*Swim With the Sharks without Being Eaten Alive*, Wm. Morrow & Co
5. Adarsh Kumar Varma (2003), *12 ½, Management Mantras of Journalism*, Kanishka Publishers, New Delhi
6. Mehta, Vinod, (1999), *Mr. Editor, How Close are you to the PM*, Konark Publishers, N.D.Shamsi N Afeque, (2006*), Media Organisation And Management*, Anmol Publications Pvt Ltd, New Delhi
7. Aggarwal, S.K., (1993), *Media and Ethics*, Sipra Publications, N.D.Stephen Lacy, George Sylvie, Robert H. Wicks, Jan LeBlanc Wicks, Ardyth Broadrick Sohn, (2003), *Media management: A Casebook Approach, Lea's Communication Series* , Lawrence Erlbaum Associates
8. Chauhan, Swati and Chandra, Navin, (1997), *Journalism Today: Principles, Practices and Challenges,* Kanishka Publishers, N.D.
9. Tharyam, P., (1999), *Good News, Bad News*, Punnoose Tharyam, N.D.
10. Fineman, Martha.A ed, (1997), *Feminism, Media and the Law,* Oxford University Press. N.Y.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- VI

ADVERTISING & PUBLIC RELATIONS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :
The course will make students conversant with strategic communication by imparting training in writing advertising copy and press releases amongst other tools.

B. Pedagogy of the Course Work :
80 % lectures (including expert lectures).
20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I
Definition & types of advertising; Place of Advertising in marketing mix; Advertising agency - structure and functions

Unit-II
Concept & definition of advertising copy; Elements of a typical advertisement; Basic principles of writing advertising copy;

Unit –III
Concepts & types of Public in PR; Brief introduction to Public Relations in Public & Private Sector; PR Agency: Structure & Functions

Unit – IV
Brief introduction to PR tools & Media Relations

PRACTICALS

Max. Marks : 20

1	Portfolio of five self-designed advertisements	10 marks
2	Prepare a file of PR tools used by anyone organization	10 marks

Books Recommended

ESSENTIAL READING

1 David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson

2 David Ogilvy, *The Unpublished David Ogilvy*

3 David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman

4 Subroto Sengupta, *Cases in Advertising and Communication Marketing*

5 Subroto Sengupta, (1990), *Positioning* (New Delhi, Tata-Mcgraw Hill

6 Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.

7 J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books

8 Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School

9 Dorothy Cohen, (1972), *Advertising.* NY, Wiley

10 Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956

11 Scott M. Cutlip & A.H. Genter, (1964), *Effective Public Relations*. 3rd ed. ,Englishwood Cliffs, Prentice-hall

12 Fraser P. Seital, (1984), *The Practice of Public Relations*. 2nd ed., Columbus Bell & Howell Co.

13 S.K. Roy, (1974), *Corporate Image of India*. New Delhi, Sh. Ram Center

14 Krishnachander Lehiri, *Publicity: Art and Literature with special reference to India*.

15 John Lee, (1968), *Diplomatic.* Persuaders, N.Y. Wiley.

16 Rajendra, *Lok Sampark* (Haryana Hindi Granth Academy, Chandigarh)

17 Dilgir, H.S., *Lok Sampark-Sanchar Atay Sandhan* (Kala Darpan Prakashan Chandigarh)

18 Mehta, D.S., *Handbook of Public Relations in India*, (Allied Publishers, New Delhi.)

19 Black, Marwin & Harlow, Rex, (1985), *Practical Public Relations*. Harper & Bros.; New York

20 Black, Sam, (1978), *Practical Public Relations Pitman*, London.

ADDITIONAL READING

1 Bajpai, Shailaja & Unikrishnan, Namita, (1996), *The Impact of Television Advertising on children*. SAGE, ND

2 Berelson, Bernard & Janowitz, Morris (Ed.), (1996), *Reader in Public Opinion & Communication*. The Free Press, New York

3 Berman, Ronald, (1981), *Advertising & Social Change*. SAGE, Newbury Park

4 Burke, Kenneth, (1946), *A grammar of motives*. Prentice-hall Englewood Cliffs

5 Burke, Kenneth, (1950), *A Rhetoric of motive*. Prentice-hall Englewood Cliffs

6 Cannon, Tom, (1973), *Advertising Research: Intertext-Books*, London

7 Agarwala-Rogers, Rekha & Rogers, Everett M., (1976), *Communication in Organisations*. The Free Press, Toronto

8 Berelson, Bernard & Janowitz, Morris (Ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York

9 Brembeck Winston & Howell, William, (1976), *Persuasion,* Prentice Hall, New Jersey

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POLICE ADMINISTRATION
SEMESTER - V

Organisational Behaviour With Special Reference to Police Administration

(A) Course Objectives:

The objective of this course is to familiarize the students with the concept, nature and significance of organizational behavior with special reference to police administration. The course also aims to discuss the foundations and models of organisational behavior. In particular, the students would be taught the concepts such as motivation, morale, leadership, communication, decision-making, and transactional analysis. Further, the inputs regarding the concept and rationale of organizational change and organizational development would be imparted to the students.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of:

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Organisational Behaviour: Concept, Nature and Significance. Foundations of Organisational Behaviour – Scientific Management, Human Relations, Systems and Contingency. Models of Organisational Behaviour.

Unit-II

Motivation: Concept; and Theories – Maslow's Need Hierarchy and McGregor's Theory X & Y. Morale: Concept; and Factors to Build-up Morale in India Police. Leadership: Concept, Theories – Trait and Situational; and Qualities.

Unit-III

Communication: Concept, Process, Types and Barriers. Communication Modes in Indian Police. Decision-Making: Concept; Types; and Simon's Rational Comprehensive Theory. Transactional Analysis: Meaning; and Types of Transactions.

Unit-IV

Organizational Change: Concept; Rationale; and Resistance to Change. Organisational Development: Concept and Rationale.

Essential Readings:

1. Prasad, L.M. : Organisation Behaviour, Sultan Chand & Sons, New Delhi, 2008.
2. Aswathappa, K. : Organisational Behaviour, 7th Edition, Himalaya Publishing House, New Delhi, 2007.
3. Moorhead, Gregory & Ricky W. Griffin : Organizational Behaviour: Managing People & Organizations, Biztantra, New Delhi, 2005.
4. Robbins, Stephen P. : Organizational Behaviour, Prentice-Hall of India Private Limited, New Delhi, 2001.
5. Sharma, K.K. & : Organisation Behaviour, Deep & Deep Sahni, Pradeep Publishers, New Delhi,1988.
6. Dubin, Robert : Human Relations in Administration, Prentice-Hall of India Private Limited, New Delhi, 1968.
7. George, C. S. : History of Management Thought, Prentice-Hall of India Private Limited, New Delhi.
8. Simon, Herbert A. : Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation, Macmillan, New York, 1976.
9. Sapru, R. K. : Theories of Administration, S. Chand, New Delhi, 1996.
10. Maheshwari, S. R. : Administrative Thinkers, MacMillan, New Delhi, Latest Edition.
11. Saiyadain, Mirza S. : Organisational Behaviour, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2006.
12. McShane, Steven L.; Glinow, Mary Ann Von; & Sharma, Radha R. : Organisational Behaviour, Tata McGraw-Hill, Publishing Company Ltd., New Delhi, 2006.

Further Readings

1. Argyris, Chris : Personality and Organisation: The Conflict Between System and the Individual, Harper and Row, New York, 1957.
2. Argyris, Chris : Integrating Individual and Organisation, Wiley, New York, 1964.
3. Mayo, Elton : The Social Problems of an Industrial Civilisation, Routledge and Kegan Paul Limited, London, 1957.
4. Hicks, Herbert G. : The Management of Organisation: a system and human resource approach, McGraw Hill, New York,1972.
5. Vadackumchery, James : Police Leadership: The Inside Story, APH Publishing Corporation, New Delhi, 1999.
6. Pugh, D. S. (ed.) : Organisation Theory, Penguin Books, Harmondsworth, 2nd Edition, 1984.

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POLICE ADMINISTRATION
SEMESTER- VI

Law and Police Administration

(A) Course Objectives:

The police system in India has to work within the ambit of legal framework laid down by the Constitution and by the enacted laws. The major responsibility of the police is to ensure the implementation of such laws. The course has been designed to impart knowledge to the students on the laws governing the 'prevention and detection of crime' which is laid down as the primary duty in the Indian Police Act 1861. The endeavour of the course is to familiarize the students with the main provisions of the Indian Penal Code 1860, the offences under it and the offences affecting the human body. In addition, meaning and definition of terms covered under Section 2 relevant to the police administration along with the powers of the police officer have been discussed.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

THE INDIAN PENAL CODE 1860: MAIN PROVISIONS

(i) Jurisdiction (Sections 1-5)
(ii) General Explanations (Sections 6-52-A)
(iii) Punishments (Sections 53, 53A, 54, 55, 60, 63, 73)
(iv) Joint & Constructive Liability Section 34 & Section149

Unit-II

Offences under the Indian Penal Code 1860

(i) Abetment (Section 107 & 108)
(ii) Criminal Conspiracy (Sections 120-A, 120-B)
(iii) Offences against the State (Sections 121, 121-A, 124-A)
(iv) Offences Against Public Tranquility (Sections 141-147)

Unit-III

Offences Affecting Human Body

-Culpable Homicide (Section 299) & Murder (Section 300)
-Causing death by rash and negligent act (Section 304A)
-Dowry Death (Section 304B)
-Hurt (Section 319), Grievous Hurt (Section 320)
-Wrongful Restraint and Wrongful Confinement (Sections 339, 340)
-Assault (Section 351)
-Sexual Harassment (Sections 354 A, 354 B, 354 C & 354 D)
-Kidnapping and Abduction (Sections 359-362)
-Rape (Sections 375, 376 A to D)

Unit-IV

Classification of offences in CRPC:

-Bailable and non-bailable offence;
-Cognizable and non-cognizable offence;
-Compoundable offences;
-Summons Case;
-Warrant Case;

Role of Police Officer:

-Lodging of First Information Report (Section 154) & Effects of Refusal to lodge FIR
-Police investigation
-Arrest (Section 41) & Rights of Arrested Persons
-Search (Section 165)

Essential Readings:

1. Tandon, Mahesh : The Indian Penal Code, Allahabad Law Agency, Prasad & Tandon, Rajesh Latest Edition.
2. Gandhi, B. M. : Indian Penal Code, Eastern Book Company, 2nd Edition.
3. Bhattacharya, T. : Indian Penal Code, Central Law Agency, Allahabad, 2007.
4. Mishra, S.N. : Indian Penal Code, Central Law Publications, Allahabad, 2007.
5. The Indian Penal Code : Bare Act with Short Notes, Universal Law Publishing Co. Pvt. Ltd., Delhi, 2008.

Further Readings

1. Lal, Rattan and Dhiraj Lal : Indian Penal Code
2. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.

WOMEN'S STUDIES

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER - V

PAPER: NATIONAL AND INTERNATIONAL INITIATIVES FOR WOMEN

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objective: This course aims to conscientise the students about the efforts made by national and international organizations, both governmental and non-governmental, towards women's empowerment and increased participation in social, economic and political life. The course exposes the student particularly to the U.N. initiatives in empowering women, putting an end to age old discrimination against them.

Course Contents

Unit I – Constitution of India and Women's Rights:

a) Fundamental rights and women's rights: de jure and de facto position
b) Directive Principles of State Policy and women's rights with special reference to Articles 39, 42, 43 and 44
c) Factors inhibiting effective implementation of Constitutional provisions

Unit II – Women and Law in India:

a) Dowry Prohibition Act, 1961 (as amended in 1984 & 1986);
b) Protection of Women from Domestic Violence Act, 2005,
c) Women's Rights in Property as Coparcener (as per 2005 Amendment of Hindu Succession Act, 1956)

Unit III – UN Conferences on Women:

a) Mexico (1975)
b) Copenhagen (1980)
c) Nairobi (1985)
d) Beijing (1995)
e) Beijing +5 (2000)
f) Beijing + 10 (2005)

Unit IV – UN Conventions for Women and Children:

a) Convention on the Political Rights of Women 1952
b) Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) 1979
c) Convention on the Rights of the Child (CRC), 1990.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

Aggarwal, Nomita : **Women and Law in India**, New Century Publication, Delhi, 2002.

Basu,D.D. : **Introduction to The Constitution of India**, Wadhwa & Co. Agra, 2001.

Jain, Devaki : **Women Development and the UN: A Sixty Year Quest for Equality and Justice**, Orient Longman, Delhi, 2006.

Shukla, Surinder : **United Nations and Empowerment of Women**, Arun Pub. House, Chandigarh, 2009.

United Nations and The Advancement of Women *(*1945-1996), United Nations Publication, 1996.

Further Readings:

Diwan, Paras : **Dowry and Protection to Married Women**, Deep and Deep Publication, New Delhi, 1987.

Ghosh, S. K. : Women in Changing Society, Ashish Publishing House, New Delhi, 1984.

Ratra, Amiteshwar; Parveen Kaur & Chhikara,Sudha : **Marriage and Family: In Diverse and Changing Scenario,** Deep & Deep, New Delhi, 2006.

Singh, Indu Prakash : Women, law and Social Change in India, Radiant, New Delhi, 1989.

Readings in Hindi:

Anthony,M.J. : **Kanooni Salha**, Hind Pocket Books, New Delhi, 2006.

Bansal, Bandna **Panchayati Raj Mein Mahila Bhagyadari**, Kalpaz Pub., New Delhi, 2004.

Gupta, Kamlesh Kumar : **Bharatiya Mahilayen Shoshan**, Utpidan avam Adhikar, Book Enclave, Jaipur, 2005.

Natani, Prakash : **Mahila Jagriti aur Kanoon**, Aavishkar Pub., Jaipur, Narayan 2005.

Natani, Prakash Narayan : **Manavadhikar avam Mahilayen**, sublime Pub., Delhi, 2005.

Sanyukt Rashtr, Karavahi Hatu Ghushana-Patra Tatha Beijing Ghushana, Campewell Publication, New Delhi, 1995.

Mathew, D.P. : **Hindu Vivaha Aur Talaq**, Indian Social Institute, New Delhi, 1986.

Mathew, D.P. : **Atam Raksha**, New Delhi, 1984.

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WOMEN'S STUDIES

SEMESTER-VI

PAPER : WOMEN'S DEVELOPMENT AND EMPOWERMENT IN INDIA

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objectives: This paper focuses on the issues related to the process of development and its impact on women, particularly in the context of a developing nation like India. The attempt is to equip the student to understand the major aspects of critique of development through a gender lens in its global and local contexts.

Course Contents

Unit I – Concept of Development

- Changing concept from Growth to Development;
- Human Centric Development;
- Why is gender a development issue?
- Indices of development: Human Development Index (HDI), Gender Development Index (GDI), Gender Empowerment Measure (GEM)

Unit II – Strategies for Women's Development

- Women in Development (WID), Women and Development (WAD) and Gender and Development (GAD),
- Empowerment and Sustainable Development;
- Microcredit

Unit III - Policy Initiatives

- Changing approaches from welfare to development to empowerment with special reference to Five Year Plans (First to Eleventh Plan)
- National Policy for Empowerment of Women

Unit IV – Implementation Machinery

- Social Welfare Boards,
- National Commission for Women (NCW),
- Ministry of Women and Child Development (MOWCD),
- National Institute of Public Cooperation and Child Development (NIPCCD)

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units.

  Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

ESSENTIAL READINGS

Ahooja-Patel, Krishna : **Women and Development**, Ashish Publishing House New Delhi, 1995.

Govt. of India, Five Year Plans (1st to 11th), Planning Commission, New Delhi.

Gupte, Shakuntla : **Women Development in India**, Anmol Pub, New Delhi, 2005.

Mathu, Anuradha (ed) : **Facets of Women's Development**, Kalpaz Pub, Delhi, 2006.

South Asia Human Development Reports 2000 and 2004, Mahbub ul Haq Human Development Centre.

UNDP Human Development Reports, 1995-2007.

Further Readings

Heyzer, Noeleen and Gita,(ed.), : **Gender, Economic Growth and Poverty**, Kali for Sen, Women, New Delhi, 1994.

Jain, Devaki : **Development as if Women Mattered**, Monograph, ISS, New Delhi,1983.

Krishanaraj, Maitreyi, Subhada : **Women and Development: The Indian Experience**, Publishers.

Rajput, Pam & Swarup 1994. : **Women and Globalization**, Ashish Pub. House, New, Delhi, Hemlata (ed.),

Reddy, V Narayana et al (eds), : **Women in Development: Challenges and Achievements,** Serials Pub, Delhi, 2005.

Singh, Gopal : **Economic Empowerment of Rural Women in India,** et al (eds) RBSA Pub, Jaipur, 2003.

Verma, S.B, Jiloka, S.K. U.K, Kushwah, K.J, (eds), : **Rural Women Empowerment,** Cambridge Univ Press, & 2005.

Readings in Hindi:

Kumar, Raj (ed.) : **Bhartiya Mahila**, Arjun Publishing, New Delhi, 2003.

Sarawat, Sawapnal : **Mahila Vikas AK Paridrashay**, Nayanprakashan, New Delhi,

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HUMAN RIGHTS & DUTIES

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER-V

PAPER: HUMAN RIGHTS RESPONSES TO SELECT PROBLEMS INTERNATIONAL AND NATIONAL PERSPECTIVE

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with a few select problems that have been addressed internationally through the UN Conventions to ensure protection of human rights. The objective is to regard to problems such as racial discrimination; custodial violence; and socially vulnerable groups including women, children, Specially-Abled and Internally Displaced Persons.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: (i) for written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9 x 2 = 18 marks. (ii) In addition to it, Question Nos. II to IX will consist of long answer of long answer (easy) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4 x 18 = 72 marks.

UNIT-I

Racial Discrimination: International Convention and Related Mechanism

(a) Convention on the prevention and punishment of the Crime of Genocide, 1948.
(b) International Convention on Elimination of All Forms of Racial Discrimination 1965.
(c) Refugees and the Refugee Convention, 1951

UNIT –II

Custodial Violence and Safeguards:

(a) Custodial Violence a
  (i) Torture and Death in Police Custody
  (ii) Fake Encounters and Enforced Disappearances
  (iii) Human Indignity against Women and Children

(b) Convention against Torture and Other Cruel and Human of Degrading Treatment or Punishment, 1984.

UNIT-III

Social Vulnerability and Protection –I: Women and Children

(a) Understanding Discrimination and Violence against Women and Children
(b) Convention on the Elimination of All Forms of Discrimination against Women, 1979.
(c) Convention on the Rights of the Child, 1989.
(d) Human Trafficking and United Nations Convention against Transnational Organized Crime, 2000

UNIT- IV

Social Vulnerability and Protection- II: Aged, Specially-Abled and Internally Displaced Persons.

(a) Problems of Aged and specially – Abled Persons.
(b) Convention of the Rights of Persons with Disabilities, 2006.
(c) International Mechanism for the Rights of the Aged.
(d) Internally Displaced Persons and Related Mechanism.

References:

Essential Readings:

1. Addlakha, Renu and Blume, Stuart et. Al: Disability and Society: A Reader, orient BlackSwan, Hyderabad, 2009.
2. Aggarwal, H.O: *Human Rights*, Central Law Publications, Allahbad, 2010.
3. Aggarwal, H.O: *International Law and Human Rights,* Central Law Publications, New Delhi, 2010.
4. Ahuja, Ram: *Social Problems in India*, Rawat jaipur, 2009.
5. Biswal, Tapan: *Human Rights*, *Gender and Environment,* New Delhi: Viva, 2006.
6. Kapoor, SK.: *Human Rights under International Law*, Central Law Publications, Allahabad, 2009.
7. Karna, G.N.: *Disability Studies in India: Retrospect and Prospect*, New Delhi: Gyan Publishing House, 2001.
8. Lauterpacht, Hersch: *An International Bill of the Rights of the Man*, New York: Columbia University Press, 1945.
9. South Asian Human Rights Documentation Centre: *Human Rights and Humanitarian Law,* South Asian Human Rights Documentation Centre, New Delhi, 2008.
10. Wolf, Sherry: *Sexuality and Socialism*: History, Politics, Theory of LGBT Liberalization, Chicago: Haymarket Books, 2009.

Further Reading:

1. Langley, Winstore E.: Encyclopedia of Human Rights Issues Since 1945, London: Fitzroy Dearborn Publishers, 1999.
2. Pachauri, S.K. : Children and Human Rigths , New Delhi: APH Publications, 1999.
3. *Pacuhauri, S.K: Women and Human Rights, New Delhi: APH Publications, 1999.*
4. *Rao, Mamta: Law Relating to Women and Children, Eastern Book Company, Lucknow, 2008.*
5. *Verma, R.S.: Human Rights: Burning Issues of the World, Volumes I, II and III. Delhi: Radiant Publishers, 2000.*
6. *Karna, G.N: United Nations and the Rights of Disabled Persons: A Study in Indian Perspective, New Delhi: APH Publishing Co. , 1999.*

HUMAN RIGHTS & DUTIES
SEMESTER-VI

PAPER: REGIONAL HUMAN RIGHTS INSTRUMENTS, STANDARDS AND MECHANISM

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with key features of regional human rights standards and mechanisms. The objectives of the paper are twofold. Firstly, it is familiarize the students that regional initiatives complement the international initiatives in promoting and protecting human rights. Secondly, it is to train students to locate countries of the specific region on an outline map of the world.

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES: Note: (i) for the written appear, the students will be required to attempt five questions in all. Questions No. I will be compulsory comprising of 12 short answers type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9x2 =18 marks. (ii) In addition to it. Questions Nos. II to IX will consist of long answer (essay) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4x18=72 marks per Unit where students will be asked to located countries that are party to the Regional Conventions or have either ratified specific Conventions or have not ratified the given Conventions on the attached world outline map.

UNIT-I

Europe:

(a) European Convention on the Protection of Human Rights (ECHR), 1950.
(b) European Social Charter (ESC), 1961 (Revised 1996)
(c) Charter of Fundamental Rights of the European Union, 2000.

UNIT-II

Americas:

(a) American Convention on Human Rights (ACHR), 1969.
(b) Inter-American Convention to Prevent and Punish Torture,1985
(c) Inter-American Convention on Forced Disappearance of Persons, 1994.

UNIT-III

Africa and Arab

(a) African harter on Human and Peoples' Rights (Banjul Charter), 1981
(b) Convention Regarding the Specific aspects of Refugee Problem in Africa
(c) Arab Charter on Human Rights, 2004

UNIT-IV

South and South-East Asia

(a) SARC Conventions: (i) Conventions on Regional Arrangements for the Promotion of Child Welfare in South Asia and Convention on Preventing and Combating the Trafficking in Women and Children for Prostitution
(b) ASEAN Charter on Rights, 2007.

REFERENCES:

Essential Readings:

1. Aggarwal, H.O.: *Human Rights, Central Law Publications*, Allahabad, 2010.
2. Aggarwal, H.O.: *International Law and Human Rights*, Central Law Publications, New Delhi, 2010.
3. Chodhury, A.R. and Bhuiyan, J.H.: *An introduction to international Human Rights* Law. Brill, 2010
4. Kappor, S.K: *Human Rights Under International Law, Central Law Publications* Allahbad, 2009.
5. Jacobs, Francis G and R.C.A White: *The European Convention on Human Rights*, Oxford: Clarendon University Press, 1996.

Further Readings:

1. Arora, Lalit Kumar: *Major Human Rights Instruments*, Isha Book, New Delhi, 2006.
2 .Vincent O. Orlu Nmehielle: *The African Human Rights System: it's Law Practice and Institutions*, Kluwer Law International, The Netherlands, 2001.
3. South Asia Human Rights Documentation Centre: *Human Rights and Humanitarian Law, South Asian Human Rights Documentation Centre*, New Delhi, 2008.
4. Sarkar, Sukanta: Human Rights Violations of Minorities, Anmol Publications, New Delhi, 2015.

RELIGIOUS & SIKH STUDIES

SEMESTER- V

Max. Marks: 100
Written : 90 marks
Internal : 10 marks

PAPER- V, RELIGIOUS REFORM MOVEMENTS IN MODERN INDIA

Objectives:

The course is designed for the students who want to pursue semester bases graduate degree programme with religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. 1 would carry 18 marks (9X2). In addition to it, Question No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4 X 18).

Course Contents:

Unit I. Brahmo Samaj and Arya Samaj: Leaders, Principles and Contribution

Unit II. Namdharis and Singh Sabha Movement: Leaders, Principles and Contribution

Unit III. Anjumans and Ahmadiyahs: Leaders, Principles and Contribution

Unit IV Swami Vivekanand; Sir Syed Ahmad Khan and Bhai Kahn Singh Nabha

Essential Readings

- ਤਾਰਨ ਸਿੰਘ, ਗੁਰ*ਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ ,* ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ ਪਟਿਆਲਾ
- ਡਾ. ਸਰਬਜਿੰਦਰ ਸਿੰਘ, (ਸੰਪਾ.) ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Farquhar, J.N., *Modern Religious Movements in India*

- Jones, K.W., *Arya Dharm,* Delhi: Manohar, 1989.
- Lavan, Spencer, *The Ahmadiyah Movement: A History and Prespactive,* Delhi: Manohar, 1974.
- Radice, William (ed.), *Swami Vivekananda and the Modernisation of Hinduism,* Delhi : OUP, 1998.
- Jones, K.W., *Socio Religious Reform Movements in British India,* New Cambridge History, Delhi: Foundation Books, Delhi, 1994.

Further Reading

- Sen, S.P., *Social and Religious Reform Movement in the 19th & 20th Century,* Calcutta: 1999.
- Banga, Indu, ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1900,* New Delhi: Manohar, 1997.
- Shan Muhammad, *Sir Syed Ahmad Khan: A Political Biography,* Meenakshi Prakshan.

RELIGIOUS & SIKH STUDIES

SEMESTER- VI

Max. Marks: 100
Written : 90 marks
Internal : 10 marks

PAPER-VI SEMITIC RELIGIONS

Objectives:

The course is designed for the students who want to pursue semester bases graduate degree programme with religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. 1 would carry 18 marks (9X2). In addition to it, Question No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4 X 18).

Course Contents:

Unit I Islam: origin and development in India

Unit II Sufi Tradition: origin and development in India

Unit III Christianity: origin and development in India

Unit IV Sects within Christianity: Catholics and Protestants

Essential Readings

- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ, 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ 'ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Mishra, Neeru, *Sufis and Sufism: Some Reflectons,* New Delhi: Manohar, 2004.
- Rizvi, S.A.A., A *History of Sufism in India,* Vol.1, New Delhi: Munshiram Manoharlal, 1997.

Further Readings

- Grewal, J.S., *Religious Movements and Institutions in Medival India,* PHISPC*, New Delhi:* Oxford University Press, 2006.
- Webster, John C.B. *The Christian Community and Change in 19th Century North India,* Delhi: Manohar, 1976.
- Frykenberg, Robert Eric, Christianity in India: From Beginnings to the Present, New York: OUP, 2010.

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COMPUTER SCIENCE
SEMESTER-V

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS09	**Theory-A**	**Project Management**	**3**	**30**	**5**	**35**
Paper –CS10	**Theory-B**	**Relational Database Management System**	**3**	**30**	**5**	**35**
Paper – PCS05	**Practical-C**	**Practical Based on Paper – CS10**	**3**	**30**	**--**	**30**

Paper Code: CS09

Paper Title: Project Management

Objective: The student will come to know how a project needs to established, organized , coordinated ,controlled and evaluated.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. Concepts of Project Management :
Concept of a project, Characteristic features of a project, Categories of project, Project life cycle phases, Project Management Concepts, Tools and Techniques for Project Management, Introduction of Computerised project management systems, Roles and Responsibilities of a Project Manager.

2. Establishing the Project :
Feasibility Report : Raw material survey, Demand study, Technical study, Location study; Financing Arrangements, Preparation of Cost Estimates, Finalisation of Project Implementation Schedule, Evaluation of the Project Profitability, Fixing the zero date.

UNIT II

3. Organizing human resource:
Delegation, Project organization: Matrix, Tax force and Totally projectized organization;

4. Organizing the Project:
Working of Systems, Design of Systems, Project Work System Design, Work Breakdown Structure, Project Execution Plan, Project Procedure Manual, Project Control System, Planning, Scheduling and Monitoring.

UNIT III

5. Project Directions, Coordination and Control:
Project Direction, Communications in a Project, Project Coordination, Project Control, Scope/Progress Control, Performance Control, Schedule Control, and Cost Control.

6. Project Management Performance:
Performance Indicators, Performance Improvement, Project Management Environment.

UNIT IV

7. Report Writing - I:
Characteristics of Reports, Importance of Reports, Types of Reports, Structure and layout of Reports: front matter, main body, back matter;Preparatory Steps to Writing Reports: Evaluation of material, Note making, Organising material, Principle of organisation, Making outline

8. Report Writing- II:
Elements of Style; Use of Illustrations: types; Writing the Report: Rough draft, Process of writing, Order of writing, Final draft, Check list for reports;SpecimenReports: technical report;

REFERENCES

1. Choudhary, S., 1988 : Project Management, Tata McGraw-Hill Publishing CompanyLimited, 1988 (Recommended as a text-book for the syllabus contents upto Unit III).
2. Sharma, R.C., and Krishna Mohan, 1996 : Business Correspondence and Report Writing, Second Edition, Tata McGraw-Hill Publishing Company Ltd., 1978 (Recommended as a text-book for the syllabus contents for Unit IV).
3. Gopalakrishnan, P. & Rama Moorthy, V.E., 1993. : Text Book of Project Management, Mac Million India Ltd.
4. Harrison, F.L., 1992. : Advanced Project Management, A Structured Approach (Third Edition), Metropolitan.
5. Srinath, I. S., 1989. : PERT & CPM, Principles and Applications, Third Edition, Affiliated East-West Press Pvt. Ltd.
6. Rodrigues, M.V., 1992 : Effective Business Communication, Concept Publishing Company, 1992.

Paper Code: CS10

Paper Title: Relational Database Management System

Objectives: This course will enable the student to get well versed with the SQL and PL/SQL concepts.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. Interactive SQL : SQL commands; Data Definition Language Commands; Data Manipulation Language Commands; Data types, Insertion of data into the tables; Viewing of data from the tables; Conditional viewing of data; Deletion operations; Updating the contents of the table; Modifying the structure of the table; Renaming table; Destroying tables.

2. Data Constraints: Types of Data Constraints; Column Level Constraints; Table Level Constraints; Null value concepts; The UNIQUE Constraint; The PRIMARY Constraint; The FOREIGN key Constraint; The CHECK Constraint; Viewing the User Constraint.

UNIT – II

3. SQL Operators and Functions: Arithmetic operators, Logical operators, Range searching, Pattern matching; Using DUAL, SYSDATE;SQL Functions: Group, Scalar, Aggregate, Numeric, String and Date Functions.

4. Grouping data from tables in SQL : GroupBy , Having clause, Subqueries, Collating Information: Equi Joins, Cartesian Joins, Outer Joins, Self Joins; SET Operators: Union, Intersect, Minus; Nested Queries.

UNIT III

5. Indexes: Creation, Types, Dropping an index; Introduction to Views, Manipulating the Base table(s) through views, Rules of DML Statements on Join Views, Dropping a View, Inline Views, Materialized Views.

6. Sequences: Creation, Reference and Alteration; Database Security and Privileges: Grant Command, Revoke Command, Application Privileges Management, COMMIT and ROLLBACK.

UNIT IV

7. PL/SQL-I: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL block structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data types, Variables and constants, Scope and visibility of a variable, Assignments and expressions, Operator precedence, Conditional and iterative control, SQL within PL/SQL, writing PL/SQL code.

8. PL/SQL-II: Cursor management in PL/SQL, Cursor manipulation, Implicit and Explicit cursor attributes, Exceptional Handling, Subprograms in PL/SQL, Procedure, Functions, and Triggers.

References:

1. Ivan Bayross: SQL, PL/SQL the programming language of oracle, BPB publications.
2. Kevin Loney :Oracle Complete Reference, McGraw-Hill
3. James T. Perry &Josesph G. Lateer: Understanding Oracle, BPB
4. Mukhi, Vijay 1992: Mastering Oracle 6.0, BPB Publications.

Paper – PCS05 : Practical Based on Paper CS10 – Relational Database Management System.

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COMPUTER SCIENCE
SEMESTER-VI

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS11	**Theory-A**	**E-Commerce**	**3**	**30**	**5**	**35**
Paper –CS12	**Theory-B**	**Web Programming**	**3**	**30**	**5**	**35**
Paper – PCS06	**Practical-C**	**Practical Based on Paper – CS12**	**3**	**30**	**--**	**30**

Paper Code: CS11

Paper Title: E-Commerce

Objective: To develop an understanding of concepts of E-Commerce

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. E-Commerce: Introduction, History, Motivation for E-Commerce, Types of Ecommerce, Advantages, Limitations, E-Commerce applications : Business-to-consumer, Business-to-Business, Consumer-to-Business, Consumer-to-Consumer, Business-within-Business.

2. Internet and www: Introduction, History, Benefits of www, Internet Service Providers, Web and Electronic commerce,Web architecture and its components, Interactive web applications, Web and database integration, Web software development tools, Search engines.

UNIT II

3. Website designing and hosting: Life cycle of website building, Website content andtraffic management, Working of ISPs, Choosing an ISP, Choosing and registering a domain name.

4. Implementation and Maintenance of E-Commerce: Implementation strategies, Maintenance strategies, Legal and Ethical issues in E-commerce.

UNIT III

5. Payment Systems : From Barter to money, Requirements of Internet-based payments,Electronic payment media : Credit cards, Debit cards, Smart cards, e-wallets, Issues and implications of payment systems, Latest trends in payment systems.

6. Marketing on the Internet: Internet marketing techniques and cycles, Attracting and Tracking customers, Pros and cons of online marketing.

UNIT IV

7. Firewalls and Network Security: Types of firewall, Gateways, Proxy Servers and its advantages and disadvantages; Transaction Security: Types of transaction, Requirements for transaction, Encryption: asymmetric and symmetric encryption; Digital signatures, Digital certificates, Implementation and management issues.

REFERENCES :

1. Kalakota Ravi & Andrew B. Whinston, 1997 : Electronic Commerce, A manager's Guide, Person Education.
2. Elias M. Awad, 2006 : Electronic Commerce from vision to fulfillment, PHI.
3. P.T. JOSEPH, S.J., 2015 : E-COMMERCE, Fifth Edition: AN INDIAN PERSPECTIVE, PHI.
4. PKenneth C, Landon, Carol Guercio Traver, 2010 : E-Commerce – Business Technology society, Pearson Education.

Paper Code: CS12

Paper Title: Web Programming

Objectives: This course will enable the student to build and publish web sites using HTML, CSS, JavaScript and PHP.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT - I

1. Basic Terminology : Web Server; Web Browser, Understanding Communication between a Browser and Web Server, Webpage, Website, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL.

2. HTML : HTML Program Structure, Paragraph Breaks, Line Breaks; Emphasizing Text: Heading Styles, Drawing Lines; Text Styles :Bold, Italics, Underline; Other Text Effects: Centering of text and images etc; Lists: Unordered List, Ordered Lists, Definition lists; Adding Graphics to HTML Documents using the Border, Width, Height and Align; Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

3. Linking Documents : Anchor tag, External Document References, Internal Document References and Image Maps; Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

4. DHTML: Introduction to Cascading Style Sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External; Forms: Attributes of Form element: Input element, Text Element, Password, Button, Submit Button, Reset Button, Checkbox, Radio, TextArea, Select and Option.

UNIT - III

5. JavaScript: Introduction and Features of JavaScript, Writing JavaScript into HTML,Tokens, Data Types, Variables, Operators, Control Constructs, Strings Arrays, Functions, Document Object Model, CoreLanguage Objects, Client Side Objects, Event Handling, Applications related to client side formvalidation, Built-In Objects in JavaScript: String Object, Math Object, Date Object;

UNIT - IV

6. Introduction to PHP : PHP Installation and Configuration; Naming files, Comments,Variables, Operators, Arrays, Flow Control Structures, More language basics; User-defined functions; Input validation, Working with Mathematical, String, Date and Time functions

REFERENCES

1. Bayross, Ivan : Wen enabled commercial applications development using HTML, Javascript , DHTML and PHP by BPB, Latest reprint
2. Wanger&Wyke : Java Script Unleased, Pearson Education, New Delhi.2
3. Thomas Powell : HTML & CSS: The Complete Reference
4. John Pollock : JavaScript, A Beginner's Guide
5. Steven Holzner PHP: The Complete Reference, Tata McGraw Hill
6 Kelvin Tetroi: Programming PHP , O'Reilly Media

Paper – PCS06 : Practical Based on Paper CS12 – Web Programming.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER-V

Paper: Biodiversity and Conservation

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question NO. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Biodiversity and Conservation

Section-I

Biodiversity: Definition, levels, importance, threats to biodiversity, hot spots of biodiversity in India. Environment Protection Act, 1986, Water (Prevention and Control of Pollution Act) 1974, Forest (Conservation) Act, 1980.

Section-II

Conservation: Causes of extinction of biodiversity**,** Strategies of conservation (in-situ and ex-situ). Protected Areas (National Parks, Sanctuaries and Biosphere reserves). Wild Life Protection Act, 1972.
Joint Forest Managemnt (JFM)

Section-III

Environmental Ethics: Role of religion in Environment Protection. Role of Indian tradition in environment conservation, Sustainable agriculture.
Different possible measures to make aware localties about environmental hazards and its remedies. Public Interest Litigation(PIL).

Section-IV

Cultivation Practices: Role of tree & plants in conservation; use of medicinal plants; cultivation methods *(Aloe vera, Calotropis (AK), Mentha, Ocimum*, Neem, *Ricinus, Jatropa, Accacia, Khair* (Katha).

Practical

Collection of local flora and fauna.
Study of vegetation of local area/college campus.
Collection of ten pests.
Identification of weeds.
Study of vegetation density by quadrat method
Plantation of medicinal plants**.**
Adaptation features of plants and animals.
Assignments/project as assigned by the teacher.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER -VI

Paper: Public Awareness and Environment Issues

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	05	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Public Awareness and Environment Issues

Section-I

Current Environmnet Issues: Climate Change, Global Warming, Population Explosion, Rain water harvesting, relamation of mining areas, impact of green revolution on environment with special referencve to Punab, Tehri Dam, Narmada Project, Bhopa Gas Tragedy, River Cleaning Project of Sant B.S. Seechewal (Punjab).

Section-II

Environmental Protection: Role of Non - Governmental Organizations (NGOs) in environmental protection (Chipko movement, For a Living Ganga by WWF, Transformation DTC fleet to CNG driven transport, Earth Hour, Green Peace (Nitrate Pollution in Punjab), KVM, Jaito). Role of individual in environment protection. Role of environmental education.

Section-III

Environmental Agencies: Role of International & National Agencies: UNEP, UNDP, WWF, MOEF, CPCB, in environment conservation and management.
A brief account on Ramsar convention, CITES (Convention on International Trade in Endangered Species), UNFCC, Montreal Protocol, Kyoto Protocol, Copenhagen Summit.

Section-IV

RS and GIS: Definition, Application in Environment**.**
Biostat: Mean mode, median, standard deviation, co-relation, Regression.

Practical

Public/Mass awareness programmes in different villages and their reports.
Survey report on different diseases based theory.
Visit to a dam to study its construction and working.
To visit any NGO working for environment.
To study various indoor pollutants in houses like LPG, AC, Paints, Polish, Cosmetics, Detergents, Shampoo, Hair dyes.
To study the different tools of stat in data interpretation.
Assignments/project as assigned by the teacher.

Books Recommended:

Jaswal & Jaswal	:	Environmental Law, APH Publications, New Delhi, 2006.
Khitoliya, R. K.	:	Environment Protection and Law, APH Publications, 2009.
Trivedi, R.K.	:	Handbook of Environmental Laws, Acts, Guidelines, Compliance and Standards, Vol. I & II, B.S. Publications, Hyderabad. 2004.
Srivastava, A.K.	:	Environmental Ethics, APH Publications, 2004.
Lillesand, T.M. and Kiefer, R.W.	:	Remote Sensing and Image Interpretation, John Wiley, Cambridge, 1987.
Fazal, S.	:	Remote Sensing Basics, Kalyani Pub. 2008.
Patel, A.N. & Singh, S.	:	Remote Sensing: Principles and Applications, Scientific Books, Jodhpur, 2009.
Jensen, J.	:	Remote Sensing of the Environment, Pearson Education, Prentice Hall, 2007.
CSE, Delhi	:	A Water Harvesting Manual, 2010.
Arora, P.N.	:	Biostatistics, Himalayan Pub. House, 2008.
Spencere, J.	:	Biodiversity: Beginners Guide, One World Publication, Oxford, 2009.
Chaudhari, A. B.	:	Biodiversity Endangered, Scientific Books, 2009.
Singh, Oraon & Prasad.	:	Medicinal Plants, APH Publications, 2009

HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2018-19
SEMESTER- V

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	40	10	1	3	40	10	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I. Importance and Functions of Food :

(a) Physiological; (b) Psychological; (c) Social

II. Food Constituents : Carbohydrates, Proteins and Fats—Functions, sources, requirements and deficiency.

III. Methods of Cooking : Boiling, Steaming, Frying, Baking, Roasting and Microwave cooking.

SECTION B

IV. Functions, recommended allowances, deficiency, excess and food sources of the following nutrients:

(a) Vitamins–A, B_1, B_2, B_3 , Vit. C, Vit. D.
(b) Minerals– Calcium, Phosphorous, Iron, Sodium, Iodine.

V. Balanced Diet

(a) Concept
(b) Classification of food based on the five/seven food groups.

SECTION-C

VI. Pregnancy

1. Signs and symptoms of pregnancy.
2. Discomforts and Complications.
3. Care during pregnancy
4. Preparation for delivery
5. Post natal care- Importance of breast feeding, bottle feeding, weaning and different types of weaning foods

VII. Methods of family planning

SECTION D

VIII Definition and importance of Child Development.

(a) Differences between growth and development;
(b) Principles of development.

IX Developmental tasks at various stages of development

PRACTICAL

Max. Marks	:	50
Practical	:	40
Int. Ass.	:	10
Teaching Periods	:	6 Periods/Week

I. Preparation of following dishes using various methods of cooking
   a. Soups- stimulating and nourishing (any two)
   b. Snacks- savory and sweet (two each)
   c. Salads- decorative and nutritious (two each)
   d. Bakery items (any two)
   e. Preparation with cereal pulse combination (any two)
   f. Desserts (any two)

II. Hot and cold beverages (at least two each).

III. Preparation of low cost nutritious recipes (at least two)

IV. Recipes- enhancing nutritive value (at least two)

V. Project

- Survey of Food Labels in order to study their nutritional facts

OR

- Survey of eating habits of five students

Reports to be submitted

List of Equipments for a practical group of 12-15 students :

1.	Gas Burners	15
2.	Cooking Range	01
3.	Ovens	05
4.	Mixers and Grinders	05
5.	Weighing Scales (for food)	05
6.	Gas Lighters	15
7.	Dustbin-Small	15-Big-1
8.	Vegetable Racks	02
9.	Plate Racks	15
10.	Storage Jars and Containers	25
11.	Refrigerator	01
12.	Icing Sets	05

Cooking Utensils

1.	Pressure Cooker	15
2.	Patila with Lid	30
3.	Kadahai	15
4.	Parat	15
5.	Tawa	15
6.	Chakla-Belna	15
7.	Grinding Stone	15
8.	Saucepans	15
9.	Karchhi	15
10.	Palta	15

11.	Poni	15
12.	Soup Strainers	15
13.	Sieves	15
14.	Enamel Bowls	15
15.	Baking Trays and Tins	15
16.	Cookie Trays	15
17.	Serving Trays	15
18.	Cutting Knives	15
19.	Peelers	15
20.	Jelly Moulds	15

Crockery and Cutlery

1.	Full Plates	30
2.	Half Plates	30
3.	Quarter Plates	30
4.	Cups & Saucers	30
5.	Soup Bowls	30
6.	Glasses	36
7.	Katoris (Vegetables Bowls)	30
8.	Dongas	30
9.	Forks	30
10.	Table Knives	30
11.	Table Spoons	48
12.	Tea Spoons	48
13.	Serving Spoons	24
14.	Tea Sets	05
15.	Dinner Sets	05
16.	Borosil Bowls	15
17.	Casseroles	15

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HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2018-19
SEMESTER- VI

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time In hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	40	10	1	3	40	10	100
									Total:	**100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : **50**
Theory : **40**
Int. Ass. : **10**
Periods : **6 Hours/8 periods per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I Food Preservation :
- (a) Definition, Importance & Principles.
- (b) Causes of food spoilage.
- (c) Household methods of food preservation—sun drying, use of salt, oil, spices, sugar & chemical preservatives.

II Meal Planning
- (a) Definition
- (b) Importance
- (c) Principles of meal planning (physiological, psychological and economical)

SECTION-B

III. Therapeutic Diets & Modification of Normal Diet:
- (a) Principles of therapeutic diets.
- (b) Concept of soft, bland, liquid diets with examples.

IV. Therapeutic diets in the following conditions with principles involved :
- (a) Fever
- (b) Diarrhoea
- (c) High blood pressure/ Hypertension
- (d) Diabetes Mellitus.

SECTION-C

VI. Emotional Development of the child from infancy up to 6 years
- (a) Characteristics of children's emotions.
- (b) Common childhood emotions—Fear, angers, jealousy, curiosity love and affection.

VII. Language Development.
- (a) Stages of language development.
- (b) Factors affecting language development

SECTION-D

VIII. Play
- (a) Significance of play.
- (b) Types of play.
- (c) Play materials/equipment required for various age groups.

IX. Common behavioural problems and their remedies—Bed wetting, thumb sucking, nail biting, temper tantrums.

PRACTICAL

Max. Marks	:	50
Practical	:	40
Int. Ass.	:	10
Teaching Periods	:	6 Periods/week

I Planning & Preparation of diets for the following :
- (a) Pre-Schooler;
- (b) School going/packed lunch;
- (c) Adolescent;
- (d) Pregnant and lactating woman.

II Cooking and serving of the following : Soft, liquid, fluid diets (two each)

III Preservation- preparation of pickle, jam, chutney and squash (one each)

IV Project

- Safety measures of play equipment
  OR
- Visit to a nursery school
  OR
- Preparation of any one play item

Reports to be submitted

- **List of Equipments for a practical group of 15 students : SAME AS OF SEMESTER V**

Reference Books :

1. *Applied Nutrition,* R. Rajalakshmi, Oxford & IBH Publishing Co. Pvt. Ltd., N. Delhi.
2. *Principles of Nutrition-Dietetics,* Dr. M. Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 88, Mysore Road, Bangalore.
3. *Food & Nutrition, Educational Planning Group,* Arya Publishing House, Karol Bagh, New Delhi-5.
4. *Normal and Therapeutic Nutrition,* Br Corinne, H. Robinson, Marlya R. Lowler, Macmillan Publishing Co., New York, Collier Macmillan Publishers, London.
5. *Textbook of Nutrition and Dietetics*. Kumud Khanna, Sharda Gupta, Santosh Jain Passi, Rama Seth, Ranjana Mahna, Seema Puri. 2nd Edition. Elite Publishing House Pvt Ltd 2013
6. *Diet Nutrition and Health*. Rakesh Mittal
7. *Diet and Nutrition*. Huma Zaidi
8. *Nutritive Value of Indian Foods,* G. Copalen, B.V. Rama Sastri, and S.C. Balasubramaniam, National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, India.
9. *Human Development,* Graing J. Graig, 5th Edition, 1989/Prentice Hall, Englewood Cliffs, New Jersey, 07632.
10. *The Modern Parents Guide to Baby & Child Care-Violet,* Broadribb, R. N.H.S. & Henry F. Loc. M.E., 1973 Macdonald's and Jane's London.
11. *Good House Keeping's Baby Book V—The Good Housekeeping,* 12th ed., 1959.
12. *Child Psychology.* Dr. Nisha Sharma
13. *These are your children—Dadys,* Gardner Jenkins and Helen Shacter, 4th ed., Scott, Foresman and Co., Glenview Illinios.
    Hurlock, E.B., *Child Development,* 6th ed., McGraw Hill International Book Company, 1978.

MATHEMATICS

SEMESTER V

Paper I : ANALYSIS - I

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Countable and uncountable sets.
Riemann integral, Integrability of continuous and monotonic functions, Properties of integrable functions, The fundamental theorem of integral calculus, Mean value theorems of integral calculus.
Beta and Gamma functions.

Unit-II

Improper integrals and their convergence, Comparison tests, Absolute and conditional convergence, Abel's and Dirichlet's tests, Frullani's integral.
Integral as a function of a parameter. Continuity, derivability and integrability of an integral of a function of a parameter.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa New Delhi, 1997.
5. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.
6. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
7. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
8. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.

Paper II: MODERN ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.

3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.

4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Groups, Subgroups, Lagrange's Theorem, Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems, Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of A_n, $n \geq 5$ (without proof).

Unit-II

Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings, Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings.

References :

1. S. Singh and Q. Zameerudin : *Modern Algebra*, 8th Edition, Vikas Publication, New Delhi.
2. I.N. Herstein : *Topics in Algebra*, Wiley Eastern Ltd., New Delhi.
3. J.A. Gallian : *Contemporary Abstract Algebra*, Narosa Publication House, New Delhi.
4. M. Artin : *Algebra*, Prentice Hall of India, New Delhi, 1994.

Paper III : PROBABILITY THEORY

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Review of notion of Probability, conditional Probability and independence, Bayes' Theorem.

Random Variables : Concept, probability density function, cumulative distribution function, discrete and continuous random variables, expectations, mean, variance, moment generating function, skewness and kurtosis.

Discrete Random Variables : Bernoulli random variable, binomial random variable, negative binomial random variable, geometric random variable, Poisson random variable.

SECTION B

Continuous Random Variables : Uniform random variable, exponential random variable, Beta random variable, Gamma random variable, Chi-square random variable, normal random variable.

Bivariate Random Variables : Joint distribution, joint and conditional distributions, Conditional Expectations, Independent random variables, the correlation coefficient, Bivariate normal distribution.

References

Ross, S.M. : Introduction to Probability Models (Sixth edition) Academic Press, 1997.

Hogg., R.V and Craig, A.T : Introduction to Mathematical Statistics, MacMillan, 2002.

I. Blake : An Introduction to Applied Probability, John Wiley & Sons,1979.

J. Pitman : Probability, Narosa,1993.

P. L. Meyer : Introductory Probability and Statistical Applications, 2nd Edition, Oxford and IBH Publishing Co

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MATHEMATICS
SEMESTER VI

Paper I : ANALYSIS - II

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Double and triple integrals : Double Integral over A Rectangle, Repeated Integrals in $\mathbf{R}^2$, Double Integrals over Bounded Non-rectangular Regions, Area of Bounded Regions in Plane, Double Integrals as Volumes, Change of Variables in Double Integrals, Change to Polar Coordinates, Area in Polar Coordinates, Triple Integral in Rectangular Coordinates, Triple Integrals over General Regions in $\mathbf{R}^3$, Repeated Integrals in $\mathbf{R}^3$, Volume of a Region in $\mathbf{R}^3$, Change of Variables in a Triple Integral to Cylindrical and Spherical Coordinates

Vector Integration : Line, Surface and Volume integration. Gauss divergence theorem, Stokes' theorem, Green's theorem.

Unit-II

Sequences and series of functions : Pointwise and uniform convergence, Cauchy criterion for uniform convergence, Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence, uniform convergence and continuity, uniform convergence and Riemann integration, uniform convergence and differentiation, Weierstrass approximation theorem(Statement only), Abel's and Taylor's theorems for power series.

Fourier series : Fourier expansion of piecewise monotonic functions, Fourier Series for Odd and Even Function, Half Range Series, Fourier Series in the Intervals $[0, 2\pi]$, $[-1, 1]$ and $[a, b]$.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.

5. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.

6. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.

7. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.

8. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.

Paper II : LINEAR ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Vectror Space : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors, Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements

Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations

Unit-II

Linear transformations and matrices, Change of basis.

Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value, Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix).

References :

1. K. Hoffman and R. Kunze : *Linear Algebra*, 2nd Edition, Prentice Hall, New Jersy, 1971.
2. P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, First Course in Linear Algebra (Wiley Eastern Delhi).
3. J. Gilbert and L. Gilbert: Linear Algebra and Matrix Theory (Academic Press).
4. I.N. Herstein, Topics in Algebra (Delhi Vikas).
5. V.Bist and V. Sahai, Linear Algebra (Narosa, Delhi).

Paper III : NUMERICAL ANALYSIS

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials.
Interpolation: Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation

Formulas using Difference.

Numerical Differentiation.
Numerical Quadrature: Newton-Cote's Formulas, Gauss Quadrature Formulas, Chebychev's Formulas.

SECTION B

Linear Equations: Direct Methods for Solving Systems of Linear Equations (Gauss Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, Gauss-Seidel, Relaxation Methods).
The Algebraic Eigenvalue problem: Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.
Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods.

References

1. C.E. Froberg : *Introduction to Numerical Analysis* (Second Edition),Addison-Wesley, 1979.
2. Melvin J. Maron : *Numerical Analysis : A Practical Approach,* Macmillan Publishing Co., Inc. New York, 1982.
3. M.K. Jain, S.R.K. Iyengar and R.K. Jain : *Numerical Methods for Scientific and Engineering Computation,* New Age International (P.) Ltd., 1999.
4. R.Y. Rubistein : *Simulation and the Monte Carlo Methods,* John Wiley, 1981.
5. D. J. Yakowitz : *Computational Probability and Simulation,* Addison-Wesley, 1977.
6. S.S. Sastry : *Introductory Methods of Numerical Analysis,* 3rd Edition (2000), Prentice Hall of India Pvt. Ltd., New Delhi.

STATISTICS
SEMESTER -V

Note:
1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc First and Second years.
3. There are two papers with codes 301 and 302 in the subject of Statistics in B.A./B.Sc., Semester -V. These are to be taught simultaneously throughout the Semester.
4. For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lecturers per week for theory and practical, shall be allotted for the teaching.

Paper 301: DEMOGRAPHY AND ECONOMIC STATISTICS

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of this course is to acquaint students with the basis concepts of Microeconomic theory and the analysis of Statistical concepts used in the context of economic set up. They will also be exposed to the basic concepts in Demography.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT - I

Sources of demographic data-census, vital statistical registers, adhoc surveys and hospital records. Measurement of mortality - crude death rate, specific death rates, standardized death rate, infant mortality rate and cause of death rate, complete life Table and its description. Measurement of fertility - crude birth rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate.

Economic time series, its different components, illustrations, additive and multiplicative models, determination of trend, growth curves (exponential and modified exponential), analysis of seasonal fluctuations, construction of seasonal indices.

UNIT - II

Index numbers**,** definition, Methods to construct price, quantity and value index numbers. Problems involved in the construction of index numbers, use of averages, simple aggregative and weighted average methods. Laspeyre's, Paasche's, Edgeworth - Marshall and Fisher's index numbers. Time and factor reversal tests of index numbers. Chain Base index numbers, Cost of living index number, interpretation and applications of index numbers.

Static laws of demand and supply, price elasticity of demand, Pareto distribution, log normal distribution and their properties.

References:

1. Goon A.M., Gupta M.K. Das Gupta, B.(2005) : Fundamentals of Statistics, Vol. II, World Press, Calcutta.

2. Srivastava O.S. (1983) : A Textbook of Demography, Vikas Publishing.

Additional References:

1. Croxton F.E and Cowden D.J. (1969) : Applied General Statistics, Prentice Hall of India.

2. Gupta and Mukhopadhyay P.P (1999) : Applied Statistics, Central Book Agency.

3. Gupta,S. C. & Kapoor,V. K (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

PAPER 302 :PRACTICAL (SEMESTER-V)

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Computing measures of mortality & fertility, construction of complete life table and examples involving users of life tables.
2. Construction of Index Numbers by Laspeyre's, Paasche's, Edgeworth-Marshall's and Fisher's methods.
3. Determination of trend, construction of seasonal indices in a time series.

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STATISTICS
SEMESTER -VI

Note:
1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc. First and Second years.
3. There are two papers with codes 303 and 304 in the subject of Statistics in B.A./B.Sc., Semester -VI. These are to be taught simultaneously throughout the Semester.
4. For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lecturers per week for theory and practical, shall be allotted for the teaching.

Paper 303: STATISTICAL QUALITY CONTROL AND COMPUTATIONAL TECHNIQUES

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: This course teaches the applications of Statistics to maintain quality in Engineering or industrial set up. Linear programming with applications in the management and administration of military, government, commercial, and industrial systems, is used to maximize the utility of limited resources. The objective is to acquaint the students with different techniques for optimization.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**

UNIT - I

Importance of Statistical methods in industrial research and practice, meaning of quality, quality assurance and process control. General theory of control charts, causes of variations in quality, control limits, sub-grouping summery of out of control criteria. Charts for variables - $\overline{X}$ and R charts. Charts for attributes - np, p, c and u - charts.

Principle of acceptance sampling- problem of lot acceptance, stipulation of good and bad lots, concepts of producer's and consumer's risks, AQL, LTPD, AOQL, ATI, ASN and OC functions. Single and double sampling plans and their ATI, ASN and OC functions.

UNIT - II

Difference tables and methods of interpolation, Newton's and Lagrange's methods of interpolation, divided differences, numerical differentiation and integration. Trapezoidal rule, Simpson's one third formula, iterative solution of linear equations by Gauss – Seidel Method.

Linear Programming: elementary theory of convex sets, definition of general linear programming problems (LPP), formulation of LPP, examples of LPP. Graphical and simplex methods of solving an LPP, artificial variables, duality of LPP ,Transportation problem (non-degenerate and balanced cases), initial basic feasible solution through North-West Corner Rule, Matrix Minima & VAN method.

References:

1. Goon, A.M, Gupta, M.K. and Dasgupta, B. (2005) : Fundamental of Statistics Vol. I. World Press, Calcutta.
2. Goon, A.M, Gupta, M.K. and Dasgupta, B. (2005) : Fundamental of Statistics Vol. II. World Press, Calcutta.
3. Jain M.K., Iyengar S.R.K. & Jain R.K. (2010) : Numerical Methods, 5th edition.
4. Montgomery, D.C (2001) : Introduction to Statistical Quality Control; Wiley
5. Swarup, K, Gupta, P.K. and Manmohan, M. (2008) : Operation research, Sultan Chand & Sons Educational Publishers New Delhi.

Additional References:

1. Grant E.L (1964) : Statistical Quality Control, McGraw Hill.
2. Duncan A.J (1974) : Quality Control and Industrial Statistics, Taraporewala and Sons.
3. Gass S.I. (1975) : Linear Programming Methods and Applications, McGraw Hill.
4. Rajaraman, V (1981) : Computer Oriented Numerical Methods, Prentice Hall.

PAPER 304 : PRACTICAL (SEMESTER –VI)

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Drawing of $\overline{X}$, R, np, p,c and u – charts, Drawing of OC, AOQ and ATI curves for single and double sampling plans for attributes.
2. Construction of difference tables, use of Newton, Lagrange and divided difference interpolation formulae, numerical evaluation of integrals using Trapezoidal and Simpson one-third formulae, solution of system of linear equations by Gauss – Seidel iterative method.
3. Formulation of LPP's and their duals. Solving LPP's by graphical and Simplex methods, solution of transportation problem.

APPLIED STATISTICS
FIFTH SEMESTER

Note: 1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/ or B.A./ B.Sc. Statistics.

2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.

3. There is one paper with code 301AS in the subject of Applied Statistics in B.A./B.Sc. Semester-V, having a total of 100 marks.

4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 301AS: ESTIMATION AND TESTING OF HYPOTHESIS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide

(i) a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.

(ii) exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.

(iii) an insight into Multivariate Techniques.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. **Simple non-programmable calculator is allowed.**

3. **Statistical tables and log tables will be provided on request.**

UNIT -I

Estimators and estimates, unbiased, consistent, efficient estimators. Methods of moments, maximum likelihood estimators for the parameters of Binomial, Poisson and normal distributions, confidence intervals.

Tests of a statistical hypothesis, two types of errors, power of a test, Tests for the parameters of Binomial, Poisson and normal distributions, Chi-squared tests of goodness of fit. Wilcoxon and sign test.

UNIT -II

Analysis of variance, one and two way classifications. Estimates of main effects, tests of significance for equality of effects.

Principles of design of experiments- Randomization, replication and local control. Completely randomized and randomized block designs.

Multivariate Techniques (upto 4 variables only). Estimators of mean vector and variance-covariance matrix of multivariate (upto 4) normal distribution, multiple regression, multiple correlation and partial correlation.

Book Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B (2005) : Fundamentals of Statistics, Vol. I Chapters: 14 to18 (only the relevant portion from these chapters as suggested in the syllabus)

2. Goon, A.M., Gupta, M.K. and Das Gupta, B (2005) : Fundamentals of Statistics, Vol. II, Chapters: 1, 2 (only the relevant portion from these chapters as suggested in the syllabus)

Additional references:

1. Daniel, W.W. and Cross C.L. (2013) : Biostatistics. A foundation for analysis in the health Sciences, (10^{th} edition) Wiley India: New Delhi.

2. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

APPLIED STATISTICS

SIXTH SEMESTER

Note: 1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/ or B.A./ B.Sc. Statistics.

2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.

3. There is one paper with code 302AS in the subject of Applied Statistics in B.A./B.Sc. Semester VI, having a total of 100 marks.

4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 302AS: ECONOMICS AND INDUSTRIAL STATISTICS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide an idea about different sampling methods, use of index numbers and time series. It also provides exposure to the knowledge about controlling quality in industry. Different measures used in demography are described.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. **Simple non-programmable calculator is allowed.**
3. **Statistical tables and log tables will be provided on request.**
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

UNIT-I

Sampling: Simple random and stratified sampling, optimum allocation in stratified sampling. Ratio and regression estimates.

Index Numbers: Index Numbers-as weighted averages, Price Index numbers, Quantity index numbers, Fisher's tests for index numbers.

Time Series: The four components of a time series, moving average, the Slutsky Yule effect, determination of trend by curve fitting and moving average methods.

UNIT –II

Quality Control: Construction, use and interpretation of control charts for mean, range, fraction defective and number of defects. Single sampling inspection plans. Concepts of producer's and consumer's risks, O.C. and A.O.Q. Curves.

Vital Statistics: Rates and ratios, crude death rate, age specific death rate, infant mortality rates, standardized death rates, direct and indirect methods. Measurement of fertility, crude birth rate, general, specific and total fertility rates. Standardized birth rates. Calendar Year rates.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B. (2005) : Fundamentals of Statistics, Vol. II, Ch. 3, 4, 6, 7, 9. (only the relevant portion from these chapters as suggested in the syllabus)

2. Daniel, W.W. and Cross C.L. (2013) : Biostatistics, A foundation for analysis in the health Sciences, Tenth edition Wiley India: New Delhi.

Additional References:

1. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

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PHYSICS

B.Sc. (GENERAL) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2018-19

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal assessment.
   The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the sixth semester examination.
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper will be three hours and it will be four hours for practicals.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems /exercises in the question paper should be 25-30%.
6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

PHYSICS

SEMESTER – V

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - I	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - I	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - I	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - I **(30 Hrs.)**

UNIT-I

Crystal structure: Symmetry operations for a two dimensional crystal. Two dimensional Bravais lattices, Three dimensional Bravais lattices, Basic primitive cells, Crystal planes and Miller indices, Diamond and NaCl structure. Crystal diffraction : Bragg's Law, Determination of crystal structure, Laue equations, Reciprocal lattices of SC, BCC and FCC, Bragg's law in reciprocal lattice, Brillouin zones and its derivation in two dimensions, structure factor and atomic form factor.

UNIT-II

Band Theory of solids, periodic potential and Bloch theorem, Kronig-Penney model, band gaps, band structures in conductors, direct and indirect semiconductors and insulators.
Free electron theory of metals, effective mass, drift current, mobility and conductivity (carrier concentration and mobility of carriers) and their variation with temperature in semi-conductors, Fermi level positions in intrinsic and extrinsic semiconductors, Wiedemann-Franz law, Hall effect in metals and semiconductors.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition, S.O.* Pillai, *New Age International Publishers.*
4. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - I (30 Hrs.)

UNIT-I

Concepts of current and voltage sources, Thevenin's theorem, Norton's theorem, Source conversion. CRO, Block diagram, construction and principle of working, Use of CRO for frequency, time period, special features of dual trace, phase measurements.

Energy band diagrams in semiconductors, Direct and indirect semiconductors, Formula to calculate Position of Fermi level in p and n semiconductors, Barrier formation, energy band diagram of p-n junction, Formula for Depletion width, Qualitative ides of current flow mechanism in forward and reverse biased diode, v-i characteristics, static and dynamic resistance, Depletion and diffusion capacitance, zener diode, LED, photodiode and solar cell.

(Book 1, Book 3)

UNIT-II

Diode circuits, Clipping circuits, Rectification: half wave, full wave and bridge rectifiers, filter circuits (C, LC and π filters), rectification efficiency and ripple factor in LC filter, voltage regulation circuit using zener diode, voltage multiplier circuits.
Bipolar Junction transistors : Structure and working, different currents in transistor, switching action. Characteristics of CB, CE and CC configurations, Active, cutoff and saturation regions.
Load line analysis of transistors, Q-point, Transistor biasing and stabilization of operating point, fixed bias, collector to base bias, bias circuit with emitter resistor, voltage divider biasing circuit.
Working ans analysis of CE amplifier using h-parameters, current, voltage and power gain, input and output impedance. Class A, B and C amplifiers.

(Book 1, Book 2)

Recommended Books :

Essential Readings :

1. Electronic Devices and Circuit Theory, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, *7th ed.* McGraw Hill
3. *Solid State Electronic Devices,* 6th Ed., Ben G. Streetman and S. Banerjee, Eastern Economy Edition.

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata Mc Graw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha, and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - I **(60 Hrs.)**

UNIT-I

General properties of Nuclei : Constituents of nucleus and their intrinsic properties, Quantitative facts about nuclear size, mass, density, binding energy and its variation with mass number, Wave mechanical properties of nucleus, angular momentum, parity; magnetic moment and electric moments of the nucleus. properties of nuclear forces and saturation, meson theory of nuclear forces
Nuclear Models : Liquid drop model, semi-empirical mass formula, most stable isobar.
Evidence for nuclear shell structure, Nuclear shell model, concept of mean field.

UNIT-II

Radioactive decay, Units of radioactivity (Ci and Bq), Successive disintegration, Natural radioactivity, Radioactive series, Carbon dating.
Alpha decay, energetic, alpha spectrum, Gamow's theory of alpha decay, Geiger-Nuttal rule.
Beta decay, Qualitative discussion of beta spectrum, Evidence of existence of Neutrino, Conservation of nuclear energy in Beta minus, Beta plus and Electron capture decays.
Gamma-ray emission, selection rules, Internal conversion.

Nuclear Reactions: Types, Concept of compound and direct (pickup and stripping) reactions, Reaction differential and integral cross section, units, conservation laws and kinematics, Q-value equation, Coulomb (Rutherford) scattering cross section and distance of nearest approach.
Energy classification of neutrons, Nuclear fission in reactors, Reactor facilities available in India, Nuclear fusion in stars.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.
2. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
3. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II . The Practical examination will be held along with the sixth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.

3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.

4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.

5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.

6. Number of candidates in a group for practical examination should not exceed 12.

7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

Note : Each student should perform ***at least Nine experiments*** in the laboratory.

UNIT-I

I CONDENSED MATTER PHYSICS:

(i) Measurement of reverse saturation current in p-n junction diode at various temperatures and to find the approximate value of energy gap.
(ii) To draw forward and reverse bias characteristics of a p-n junction diode and draw a load line.
(iii) Study of a diode as a clipping element.
(iv) To measure the magnetic susceptibility of $FeCl_2$ solution by Quincke's method.

II ELECTRONICS AND SOLID STATE DEVICES :

(v) To study the response of RC-circuit to various input voltages (square, sine and triangular).
(vi) To measure the efficiency and ripple factors for (a) Half-wave, (b) Full wave, and (c) Bridge rectifier circuits.
(vii) To study the reduction in the ripples in the rectified output with RC, LC and π-filters.
(viii) To draw the characteristics of a Zener diode and LED using constant current source.
(ix) To study the stabilization of output voltage of a power supply with Zener diode.
(x) To set up an oscillator and study its output on CRO for different V values.
(xi) To study the characteristics of a thermistor and find its parameters.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. Print a 2D array in spiral form.
2. To find determinant of a given matrix.
3. To find inverse of a given matrix.
4. To interpolate the data values from the given set.

UNIT-II

I CONDENSED MATTER PHYSICS:

(i) To trace the B-H curves for different materials using CRO and find the magnetic parameters from these.
(ii) To find the conductivity of a given semi-conductor crystal using four probe method.
(iii) To determine the Hall coefficient for a given semiconductor.

II ELECTRONICS AND SOLID STATE DEVICES :

(iv) To measure and plot Common Emitter Characteristics of a transistor (pnp or npn).
(v) To plot Common Base Characteristics and determine h-parameters of a given transistor.
(vi) To draw output and mutual characteristics of an FET and determine its parameters.
(vii) To study the gain of an amplifier at different frequencies and to find band-width and gain-band-width product.

III NUCLEAR PHYSICS :

(viii) To draw the Plateau of a GM counter and find its dead time.

(ix) To study the statistical fluctuations using GM counter.

(x) To study the absorption of beta-particles and determine the end point energy using GM counter. Also determine the absorption co-efficient (for aluminium) from it.

(xi) Verification of Rutherford Scattering experiment-mechanical analogue.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. To solve simultaneous equations by elimination method.
2. Fitting a straight line or a simple curve of a given data.
3. Convert a given integer into binary and octal/hexadecimal system and vice versa.

Text and Reference Books :

1. *"A Laboratory Manual of Physics for Undergraduate Classes" by D.P.* Khandelwal.
2. *"B.Sc. Practical Physics" by C.L. Arora, S. Chand & Co. (2014)*
3. *"Numerical Analysis" by C. Dixon*
4. *Programming with C,* Byron Gottfried & Jitender Chhabra, *Schaum series*

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PHYSICS

SEMESTER – VI

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - II	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - II	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - II	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - II (30 Hrs.)

UNIT-I

Lattice Dynamics : Lattice vibrations and phonons, Scattering of photons by phonons, Dynamics of a linear chain of similar atoms and chain of two types of atoms, optical and acoustic modes, Density of modes, Einstein and Debye theories of specific heats of solids.

Magnetic classification of materials (Dia, para, ferro, ferri, antiferro), Langevin theory of dia and paramagnetism, Quantum theory, Weiss's theory of Ferromagnetism, temperature dependence, hysteresis of ferromagnetic materials.

UNIT-II

Dielectric constant & polarizability, electric susceptibility, Clausius Mosotti equation, frequency dependence, ferroelectrics and Piezoelectrics.

Liquid crystals, various types and properties. Applications.

Superconductivity: Meisner effect, London's equation and penetration depth, critical magnetic field and temperature, DC and AC Josephson effect, BCS theory (formation of cooper pairs), ground state and energy gap.

Basic ideas of materials at nanoscale: Difference from bulk material properties, Nanoparticles, introduction to fabrication and characterization techniques, Carbon Nanostructures - nanotubes, grapheme. Applications of nanotechnology in various fields.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition,* S.O. Pillai, New Age International Publishers.
4. *Fundamental of Physics, Vol. II,* R.M.P. Jaiswal, S.K. Gupta and A. Rani, R. Chand and Co.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - II (30 Hrs.)

UNIT-I

Structure and working of JEFT, characteristics, drain and transconductance curve, FET amplifier and its voltage gain, Structure and working of MOSFET.
Feed back in amplifiers, voltage gain of negative feedback amplifier, advantages of negative voltage feedback, negative current feedback circuit, emitter follower.
Theory of sinusoidal oscillations, loop gain and phase, Lead-lag RC circuit, Wein bridge oscillator. Barkhausen criterion of sustained oscillations, positive feedback amplifier, LC oscillators, Colpitts and Hartley oscillators. (Book1, Book2)

UNIT-II

Operational amplifier (black box approach) : Characteristics of ideal and practical opamp 741, open-loop and closed-loop gain, characteristics and applications - inverting and non-inverting amplifiers, adder, subtractor, differentiator and integrator, Comparator, Timer IC555, pin diagram and its applications as astable and monostable multivibrator.

(Book1, Book2)

Analog and digital circuits, binary numbers, decimal to binary conversions, AND, OR, NOT gates, NAND NOR gates as universal gates, XOR and XNOR gates.
De Morgan's theorem, Simplification of logic circuit using Boolean algebra, Minterms and Maxterms, Conversion of a truth table into an equivalent logic circuit by Sum of products method. (Book 3)

Analog and digital communication systems, Amplitude and Frequency modulation, Power in AM wave, generation and detection, Brief account of Satellite communication, Sky-wave communication, and mobile communication.

Recommended Books :

Essential Readings :

1. *Electronic Devices and Circuit Theory*, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, 7th *ed.* McGraw Hill
3. Digital Principles and Applications, 7th Ed., A.P. Malvino, D.P. Leach and Saha, 2011, Tata McGraw Hill

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata McGraw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - II **(30 Hrs.)**

UNIT-I

Interaction of nuclear radiation with matter: Energy loss due to ionization (Bethe Bloch formula), Range and energy straggling, Energy loss of electrons and positrons, radiation loss by fast electrons, Bremsstrahlung, electron-positron annihilation, production of Cerenkov radiation,
Gamma-ray interaction with matter, photoelectric effect, Compton scattering, pair production (qualitative description).
Detectors for nuclear radiation: Gas-filled detectors, Ionization chamber, proportional counter, G.M. counter, Scintillation detector and Photomultiplier tube, Brief account of Semiconductor detectors.

UNIT-II

Particle Physics : Particle interactions : basic features and their exchange particles, Classification of elementary particles, properties, decay modes of leptons and mesons, Antiparticles, charge conjugation
Symmetries and Conservation principles, Lepton number, baryon number, Isospin, Hypercharge, Strangeness and charm, Gell-mann Nishijima formula
Concept of the quark model, color quantum number and gluons.
Origin and composition of Cosmic rays, Secondary cosmic rays, Effect of magnetic field of earth, Van Allen belts.
Particle accelerators: Cockcroft-Walton accelerator, Van-de Graaff generator, Tandem accelerator Linear accelerator, Cyclotron. Brief account of Syncrhrotron, Accelerator facilities available in India.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.
4. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.

Further Readings :

1. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
2. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The Practical examination will be held along with the sixth semester examinations.General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester V.

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

SEMESTER-6th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Total Marks

SEMESTER-5-100

SEMESTER-6-100

200

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*		*Teaching Hrs.*	*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XVII: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Metal – Ligand Bonding in Transition Metal Complexes:

Limitations of valence bond theory, an elementary idea of crystal – field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal – field parameters, Spectro chemical Series.

UNIT-II **(7 Hrs.)**

Thermodynamic and Kinetic Aspects of Metal Complexes :

A brief outline of thermodynamic and Kinetic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes.

UNIT-III **(8 Hrs.)**

Organometallic Chemistry:

Definition, nomenclature and classification of organometallic compounds. Preparation, properties, bonding and applications of alkyls and aryls of Li, Al , Hg, Sn and Ti, a brief account of metal – ethylenic complexes and homogeneous hydrogenation, mononuclear carbonyls and the nature of bonding in metal carbonyls

UNIT-IV **(7 Hrs.)**

Bioinorganic Chemistry:
Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin. Biological role of alkali and alkaline earth metal ions. Nitrogen fixation.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5. Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6. Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9. Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XVIII: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I

Electromagnetic Spectrum: Absorption Spectra –I: **(7 Hrs.)**
Ultraviolet (UV) absorption spectroscopy – Absorption laws (Beer – Lambert Law), molar absorptivity, presentation and analysis of UV spectra, types of electronic transitions, effect of conjugation. Concept of chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. UV spectra of conjugated enes and enones.

Woodward Fieser Rules and their applications in calculating maximum values of conjugated alkenes (cyclic as well as acyclic) and conjugated carbonyl compounds.

UNIT-II **(7 Hrs.)**

Electromagnetic Spectrum: Absorption Spectra-II:

Infrared (IR) absorption spectroscopy – Molecular vibrations, Hooke's law, selection rules, intensity and position of IR bands, measurement of IR spectrum, fingerprint region, characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds.

Problems pertaining to the structure elucidation of simple organic compounds using UV, IR and PMR spectroscopic techniques.

UNIT-III **(8 Hrs.)**

Spectroscopy:

Nuclear magnetic resonance (NMR) spectroscopy.
Proton magnetic resonance (^{1}H NMR) spectroscopy, nuclear shielding and deshielding, chemical shift and molecular structure, spin-spin splitting and coupling constants, area of signals, interpretation of PMR spectra of simple organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromoethane, ethyl acetate, toluene and acetophenone.

UNIT-IV **(8 Hrs.)**

Carbohydrates:

Classification and nomenclature. Monosaccharides, mechanism of osazone formation, interconversion of glucose and fructose, chain lengthening and chain shortening of aldoses. Configuration of monosaccharides. Erythro and threo diastereomers. Conversion of glucose into mannose. Formation of glycosides, ethers and esters. Determination of ring size of monosaccharides. Cyclic structure of D (+) – glucose. Mechanism of mutarotation.

Structure of ribose and deoxyribose.

An introduction to disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose) without involving structure determination.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5. Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XIX: PHYSICAL CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Elementary Quantum Mechanics-I:

Black-body radiation, Planck's radiation law, photoelectric effect, heat capacity of solids, Bohr's model of hydrogen atom (no derivation) and its defects, Compton effect.

De Broglie hypothesis, the Heisenberg's uncertainty principle, Sinusoidal wave equation, Hamiltonian operator, Schrodinger wave equation and its importance, physical interpretation of the wave function, postulates of quantum mechanics, particle in a one dimensional box.

Schrodinger wave equation for H-atom, separation into three equations (without derivation), quantum numbers and their importance, hydrogen like wave functions, radial wave functions, angular wave functions.

UNIT-II (7 Hrs.)

Elementary Quantum Mechanics-II:

Molecular orbital theory, basic ideas – criteria for forming M.O. from A.O., construction of M.O.'s by LCAO – H_2^+ ion. Calculation of energy levels from wave functions, physical picture of bonding and antibonding wave functions, concept of $\sigma, \sigma*, \pi, \pi*$ orbitals and their characteristics. Hybrid orbitals – sp, sp^2, sp^3; calculation of coefficients of A.O.'s used in these hybrid orbitals.

Introduction to valence bond model of H_2, comparison of M.O. and V.B. models.

UNIT-III (8 Hrs.)

Photochemistry-I:

Interaction of radiation with matter, difference between thermal and photochemical processes. Laws of Photochemistry: Grothus – Drapper law, Stark – Einstein law, Jablonski diagram depicting various processes occurring in the excited state.

UNIT-IV (7 Hrs.)

Photochemistry-II:

Qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions – energy transfer processes (simple examples).Photochemistry of carbonyl compounds and alkenes.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11. Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12. Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13. Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XX: LABORATORY PRACTICALS **Max. Marks: 22+3**

INORGANIC CHEMISTRY

Synthesis and Analysis: **6 Periods/ week**

(a) Preparation of sodium trioxalatoferrate (III), $Na_3[Fe(C_2O_4)_3]$ and determination of its composition by permaganometry.
(b) Preparation of copper tetraammine complex $[Cu(NH_3)_4]SO_4$.
(c) Preparation of cis-and trans-bisoxalatodiaqua chromate (III) ion.

Instrumentation

Solvent Extraction

Separation and estimation of Mg(II) and Fe(II).

PHYSICAL CHEMISTRY

Electrochemistry

(a) To determine the strength of the given acid conductometrically using standard alkali solution.

(b) To determine the solubility and solubility product of a sparingly soluble electrolyte conductomertircally.

(c) To study the saponification of ethyl acetate conductometrically.

(d) To determine the ionization constant of a weak acid conductometrically.

(e) To study the distribution of iodine between water and CCl_4.

(f) To study the distribution of benzoic acid between benzene and water.

Molecular Weight Determination

(a) Determination of molecular weight of a non – volatile solute by Rast method.

(b) Determination of the apparent degree of dissociation of an electrolyte (e.g. NaCl) in aqueous solution of the substance.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an inorganic complex : 7 marks

Q.No. 2. Physical Chemistry : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1. Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.
2. Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.
3. Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.
4. Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.
5. Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.
6. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.
7. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.
8. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.
9. Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.
10. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

CHEMISTRY
SEMESTER-6th
Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XXI: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course
To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Silicones and Phosphazenes:

Silicones and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.

UNIT-II (8 Hrs.)

Hard and Soft Acids and Bases (HSAB):

Classification of acids and bases as hard and soft Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, theoretical basis of hardness and softness, electronegativity and hardness and softness.

UNIT-III (8 Hrs.)

Electronic Spectra of Transition Metal Complexes:
Types of electronic transitions, L – S coupling, selection rules for *d-d* transitions, spectroscopic ground states, Orgel – energy level diagram for d^1 and d^9states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-IV **(7 Hrs.)**

Magnetic Properties of Transition Metal Complexes:

Types of magnetic behaviour, methods of determining magnetic susceptibility, spin-only formula. Correlation of μ_s and μ_{eff} values, orbital contribution to magnetic moments, application of magnetic moment data for 3*d*-metal complexes.

Instructions for paper setters and candidates:

i ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2 Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3 Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4 Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5 Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6 Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7 Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8 Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9 Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XXII: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Amino Acids, Peptides, Proteins and Nucleic Acids:

Classification, structure and stereochemistry of amino acids. Acid- base behavior, isoelectric point and electrophoresis. Preparation and reactions of α - amino acids.

Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid – phase peptide synthesis. Structures of peptides and proteins. Levels of protein structure. Protein denaturation/renaturation.

Nucleic Acids : Introduction. Constituents of nucleic acids. Ribonucleosides and ribonucleotides. The double helical Structure of DNA.

UNIT-II **(7 Hrs.)**

Synthetic Polymers:

Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler – Natta polymerization and vinyl polymers.

Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy resins and polyurethanes.

Natural and synthetic rubbers.

UNIT-III **(7 Hrs.)**

Organic Synthesis via Enolates:

Acidity of ά-hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.

UNIT-IV **(8 Hrs.)**

Organometallic Compounds:

Organomagnesium Compounds: The Grignard reagents – Formation, structure and chemical reactions.

Organozinc Compounds: Formation and Chemical reactions.

Organolithium Compounds: Formation and Chemical reactions.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1 Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2 Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3 Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4 Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5 Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6 Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XXIII: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Solid State-I:

Definition of space lattice, unit cell and Miller Indices

Laws of Crystallography – (i) Law of Constancy of Interfacial Angles, (ii) Law of Rationality of Indices, (iii) Law of Symmetry. Symmetry elements in crystals.

UNIT-II **(8 Hrs.)**

Solid State-II:

X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure of NaCl, KCl and CsCl (Laue's method and powder method). Applications of Powder diffraction for structure determination, Thermal and photochemical reaction in solid state

UNIT-III **(8 Hrs.)**

Spectroscopy :

Introduction : Electromagnetic radiation, regions of the spectrum, basic features of different spectrometers, statement of the Born-Oppenheimer approximation, degrees of freedom.

Rotational Spectrum:

Diatomic molecules. Energy levels of a rigid rotor (semi – classical principles), selection rules, spectral intensity, determination of bond length, qualitative description of non-rigid rotor, isotope effect.

UNIT-IV **(7 Hrs.)**

Vibrational Spectrum:

Infrared Spectrum : Energy levels of simple harmonic oscillator, selection rules, pure vibrational spectrum intensity, determination of force constant and qualitative relation of force constant and bond energies, effect of anharmonic motion and isotope on the spectrum, idea of vibrational frequencies of different functional groups. Raman Spectrum : Concept of polarizability, pure rotational and pure vibrational, Raman spectra of diatomic molecules, selection rules.

Electronic Spectrum:
Concept of potential energy curves for bonding and antibonding molecular orbitals, qualitative description of selection rules and Franck- Condon principle.

Qualitative description of σ, π – and n M.O., their energy levels and the respective transitions.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1 Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2 Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3 Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4 Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5 Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6 Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7 Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8 Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9 Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10 Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11 Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12 Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13 Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XXIV: LABORATORY PRACTICALS **Max. Marks: 22+3**

ORGANIC CHEMISTRY
Laboratory Techniques
Column Chromatography
Separation of fluorescein and methylene blue.
Separation of leaf pigments from spinach leaves.

Synthesis of Organic Compounds

(a) Aliphatic electrophilic substitution.
Preparation of iodoform from ethanol and acetone.

(b) Aromatic electrophilic substitution.
Nitration

Preparation of m-dinitrobenzene
Preparation of p-nitroacetanilide
Preparation of p-iodoaniline from aniline.
Preparation of methyl orange from N,N-dimethyl aniline and sulphanilic acid.

Halogenation

Preparation of p-bromoacetanilide

Preparation of 2,4,6 – tribromophenol

(c) Oxidation

Preparation of benzoic acid from toluene.

(d) Reduction

Preparation of aniline from nitrobenzene

Preparation of m-nitroaniline from m - dinitrobenzene

Stereochemical study of Organic Compounds via Models

R and S configuration of optical isomers.

E, Z configuration of geometrical isomers

Conformational analysis of cyclohexanes and substituted cyclohexanes.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an organic compound : 7 marks

Q.No. 2. Experiment based onLaboratory Technique : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1 Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.

2 Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.

3 Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.

4 Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.

5 Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.

6 Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

7 Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

8 Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

9 Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

10 Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

BOTANY

B.Sc. (General) Botany Fifth and Sixth Semester Syllabus (Examinations, 2018-2019)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper-A:	Plant Physiology-I	3 hrs.	36	04	40
Theory Paper-B:	Plant Ecology	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Sixth Semester					
Theory Paper-A:	Plant Physiology-II	3 hrs.	36	04	40
Theory Paper-B:	Economic Botany	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY

SEMESTER -V

THEORY PAPER- A: PLANT PHYSIOLOGY-I

Objectives: The basic aim of this paper is to familiarize the students with various concepts of functions and metabolism of plants. The course material of this paper would enable the students to correlate structural diversity of various plant forms with functional differentiation and its biological aspects including biological nitrogen fixation and mineral nutrition. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

UNIT-I

Plant Water Relations: Importance of water to plant life; physical properties of water; imbibition, diffusion, osmosis, plasmolysis and deplasmolysis, concept of osmotic potential, water potential and pressure potential; absorption of water, active and passive mechanism of water absorption; transport of water, mechanism and theories to explain ascent of sap; transpiration types, mechanism of opening and closing of stomata, mechanism of transpiration, factors affecting transpiration, antitranspirants.

UNIT-II

Mineral nutrition: Hydroponics and its importance; essential macro-and micro elements, essentiality criteria, deficiency symptoms and their role; mineral uptake; mechanism of mineral uptake (active, passive absorption and modern concepts).

UNIT-III

Nitrogen Metabolism: Biological nitrogen fixation; importance of nitrate reductase and its regulation; ammonia assimilation.

Lipid Metabolism: Structure and function of lipids; β – oxidation; saturated and unsaturated fatty acids.

UNIT-IV

Proteins: Classification, role and structure (primary, secondary and tertiary) of proteins.

Basics of enzymology: Discovery and nomenclature; classification, structure, properties, factors affecting enzyme activity, mechanism of enzyme action.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
3. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
4. Srivastava, H.N. Plant Physiology, Bio-chemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
5. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
6. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
7. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: PLANT ECOLOGY

Objective: The basic objective of this paper is to make students aware about the role of environment in causing structural and functional variation in plants. Since the present day problems of varied nature like pollution, Global Warming etc. are directly or indirectly related to ecology, it is more than desired to provide the students with knowledge of basic concepts of ecology.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Definition, scope, relationship with other sciences.

Plant Environment: Climatic, edaphic, topographic and biotic factors affecting growth and distribution of plants.

UNIT-II

Ecosystem : Concept, structure; abiotic and biotic components; trophic levels, food chain, food web, ecological pyramids, energy flow, biogeochemical cycles of carbon, nitrogen and water.

UNIT-III

Community Ecology: Community characteristics, frequency, density cover, life forms, biological spectrum; ecological succession – Hydrosere and Xerosere.

UNIT-IV

Applied Ecology :

a) Air, water and soil pollution and their control.

b) Conservation and management of natural resources. (renewable and non-renewable)

Suggested Readings

1. Kormondy, E.J. Concepts of Ecology. Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.
2. Odum, E. and Barrett, G.W. Fundamentals of Ecology, Cengage Learning Publisher, 2004.
3. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.
4. Saini A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
5. Sharma, P.D. Ecology and Environment, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To determine osmotic pressure of cell sap by plasmolytic method.
2. To demonstrate imbibition pressure using:
   i) Imbibition pressure apparatus.
   ii) Plaster of Paris cone.
3. To demonstrate osmosis through animal membrane/potato osmoscope.
4. To demonstrate plasmolysis and deplasmolysis.
5. To demonstrate mechanical and electrical adsorption.
6. To demonstrate the measurement of transpiration using simple potometer.
7. To demonstrate transpiration pull.
8. To study the effect of light intensity, and wind velocity on the rate of transpiration using Ganong's potometer.

9. To compare the rate of transpiration from the two sides of a leaf using :

   i) Vaseline method
   ii) Cobalt chloride method

10. To demonstrate the mechanism of opening and closing of stomata.

11. To demonstrate the path of ascent of sap.

Plant Ecology:

1. Study of ecological adaptations in external characters of :

   Hydrilla, Potamogeton, Ceratophyllum, Vallisneria, Lemna, Eichhornia Nelumbium, Calotropis, Nerium, Acacia, Zizyphus, Casuarina, Capparis, Asparagus, Ruscus, Opuntia, Euphorbia royleana.

2. To prepare permanent stained slide to show ecological adaptations in the internal structure of the following:

   a) T.S. stem of *Hydrilla*

   b) T.S. leaf and petiole of *Eichhornia*

   c) T.S. leaf and petiole of *Nelumbium*

   d) T.S. leaf of *Nerium*

   e) T.S. stem of *Casuarina* and *Capparis*

3. To determine soil pH using pH paper/solution/pH meter.

4. To determine water holding capacity of soil.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and cut T.S. of stem, leaf or petiole (to be announced by the examiner) of specimen B. Make its permanent stained slide and show it to the examiner. Draw its labelled diagram and write its morphological and anatomical characters of ecological importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

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BOTANY

SEMESTER -VI

PAPER-A: PLANT PHYSIOLOGY-II

Objectives: The main objective of this paper is to familiarize the students with growth and metabolic processes of the plants. It also deals with the plant development, differentiation and their regulatory mechanism along with basic concepts in tissue culture.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

UNIT-I

Photosynthesis: Significance, historical aspect; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems, cyclic and non- cyclic photophosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration; factors affecting photosynthesis; transport of organic substances: Mechanism of phloem transport, source-sink relationship, factors affecting translocation.

UNIT-II

Respiration: ATP – The biological energy currency; aerobic and anaerobic respiration; Krebs cycle; electron transport mechanism (Chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway; respiratory quotient.

UNIT-III

Growth and development: Definitions; phases of growth and development; kinetics of growth, factors affecting growth; plant movements; the concept of photoperiodism, physiology of flowering; florigen concept; roles of plant hormones– auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery.

UNIT-IV

Biotechnology: Functional definition; basic aspects of plant tissue culture, its applications and somatic hybridization.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Bhojwani, S.S. Plant Tissue Culture: applications and Limitations. Elsevier Science Publishers, New York, USA, 1990.
3. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
4. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
5. Srivastava, H.N. Plant Physiology, Biochemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
6. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
7. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
8. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: ECONOMIC BOTANY

Objective: The basic objective of this paper is aimed to give an insight into plant wealth such as medicinal plants; crop plants; beverages; spices; condiments; sugar; fiber; pulp & oil yielding plants of commercial & economic importance. Both the aspects of this paper give a sound basis of ecology and economic botany so that students can venture into fields like Environmental Biology, Conservation Biology, Forestry, Agriculture, Horticulture and Crop production etc.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Cereals (Wheat, Rice and Maize)
ii) Fibres (Cotton)
iii) Vegetables (Potato)

UNIT-II

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Fruits (Mango, Grapes, Lemon)
ii) Sugar-yielding plants (Sugarcane)
iii) Oil-yielding plants (Groundnut, Mustard)

UNIT-III

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Wheat, Maize, Rice, Moong, Gram (Food).
ii) Teak, Shisham, Deodar, Sal (Timbers).
iii) Cotton, Jute, Coir, Flax (Fibres).
iv) Fennel, Coriander, Turmeric, Ginger, Mint, Clove (Spices and Condiments).

UNIT-IV

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Bamboo, Eucalyptus (Pulp plants).
ii) Liquorice, Belladona, Aconite, Ashwagandha, Arjun, Poppy, Amla (Medicinal plants).
iii) Tea and Coffee (Beverages).

Forestry: Forest conservation, wood seasoning and its preservation.

Suggested Readings

1. Kochhar, S.L. Economic Botany in Tropics, (4th edition). Macmillan India Ltd., New Delhi, 2012.
2. Saini, A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
3. Sharma, O.P. Hill's Economic Botany (Late Dr. A.F. Hill, Adapted by O.P. Sharma). Tata McGraw Hill Co. Ltd., New Delhi, 1996.
4. Simpson B. and Ogorzaly, M. Economic Botany: Plants in our World (3rd edition). McGraw Hill Publisher, 2000.
5. Singh, V., Pande, P.C. and Jain, D.K. Economic Botany, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To demonstrate that chlorophyll is necessary for photosynthesis.
2. To demonstrate that light is necessary for photosynthesis.
3. To demonstrate that CO_2 is essential for photosynthesis.
4. To demonstrate evolution of oxygen during photosynthesis in an aquatic plant.
5. To study the effect of light intensity and CO_2 concentration on the rate of photosynthesis using an aquatic plant.
6. To demonstrate aerobic respiration using flask method.
7. To demonstrate anaerobic respiration in germinating seeds or yeast.
8. To demonstrate the activity of amylase.
9. To demonstrate the activity of catalase in plant tissue (germinating seeds).
10. To demonstrate phototropism.
11. To demonstrate geotropism using clinostat.
12. To test for the presence of starch, proteins, amino acids, and reducing sugars in plant material.

Economic Botany:

Identification and morphology of economically important part/s of crop plants mentioned below:

Cereals (wheat, rice); Fibres (cotton); Vegetables (potato); Fruits (mango, grapes, lemon); sugar-yielding plants (sugarcane) and oil-yielding plants (groundnut, mustard).

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and write illustrated morphological notes on specimens B & C giving their economic importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

ZOOLOGY
SEMESTER -V

Paper I: Developmental Biology	40 (36 +4) marks
Paper II: Applied Zoology-I	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester V,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: DEVELOPMENTAL BIOLOGY (ZOO-501)

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

UNIT-I

Gametogenesis with particular reference to differentiation of spermatozoa. Vitellogenesis, role of follicle/subtesticular cells in gametogenesis.
Egg maturation : egg membranes : polarity of egg.

UNIT-II

Fertilization, parthenogenesis.
Cleavage : Types of cleavage patterns depending upon amount and distribution of yolk and position of spindle. Blastula and types of blastula.

Fate maps of chick and frog embryos.

UNIT-III

Induction: cell to cell interactions: juxtacrine, paracrine, gap junctions; basic concepts of organizers and inducers and their role. Determination and differentiation.

Development up to three germ layers in *Herdmania, Amphioxus*, frog, chick and rabbit.

UNIT-IV

Foetal membranes, their formation and role.

Mammalian placenta – its formation, types and functions.

Metamorphosis in *Herdmania* and *Rana* (frog)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Ballinsky, B.I. — An Introduction to Embryology, 5th edition, Saunders Co., 1981.
2. Gilbert, S.F. — Developmental Biology, 10th ed.,Sinauer Ass., Inc. Publ., 2014.
3. Urspaung, H. — Major Problems in Developmental Biology, Academic Press, New York, 1966.
4. Gardner, E.J., Simmons, M.J. and Snustad, D.P — Principles of Genetics, 8thed., John Wiley and Sons, Inc. New York, 2004.
5. Wolport, Lewis — Principles of development, Oxford University press, Oxford, 2007

Practical based on Theory Paper

1. Study of the development of frog from permanent slides.
2. Window preparation and identification of stages of development in chick egg.
3. Study of the development of chick embryo from permanent slides up to 96 hours.
4. Study of the following permanent slides:
    a. Stages of gametogenesis, structure of egg and sperm of a mammal.
    b. Larva of *Herdmania*.
5. Study of metamorphosis of *Herdmania* and Frog through charts/video.

Paper II: APPLIED ZOOLOGY-I

Max. Marks	: 40
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-I
2. Economic Entomology and Pest Management-I
3. Inland Fisheries & Aquaculture-I

OPTION I: MEDICAL ZOOLOGY & MEDICAL LABORATORY TECHNOLOGY-I

(ZOO-502A)

UNIT-I

Introduction to parasitology (pertaining to various terminologies in use).
Brief introduction to pathogenic microbes. (Dengue, Chikangunya, Japanese encephalitis, tuberculosis).
Epidemic diseases, such as typhoid, cholera, small pox; their occurrence and eradication programmes.

UNIT-II

Brief accounts of life history, mode of infection and pathogenicity of the following pathogens with reference to man; prophylaxis and treatment:

Pathogenic protozoans : *Entamoeba, Trypanosoma, Leishmania, Giardia, Trichomonas* and *Plasmodium.*

UNIT-III

Pathogenic helminthes: *Fasciolopsis, Schistosoma, Echinococcus, Ancylostoma, Trichinella, Wuchereria, Dracunculus* and *Oxyuris*.

UNIT-IV

Life cycle, disease caused and control measures of arthropod vectors : *Anopheles stephensi, A culicifaces,Aedes aegypti, A. albopictus*, *Culex fatigans, C.tritaeniorhynchus*, *Mansonia* sp., *Xenopsylla cheopis,Pediculus*.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Chatterjee, K.D. : Parasitology, Protozoology and Helminthology, 13th ed., CSB Publishers and Distributors Pvt. Ltd., 2009.
2. Garcia, L.S. Diagnostic Medical Parasitology, 4th ed., ASM Press Washington, 2001.
3. Parija, S.C. Text book of Medical Parasitology, Protozoology and Helminthology, 1st edition, 2001.

Practicals based on Theory Paper ZOO-502A (ZOO-352A)

1. Introduction to Entomology to various orgers.Demonstration of parts of microscope, its functioning and care.
2. Study of permanent slides and specimens of parasitic protozoans, helminthes and arthropods mentioned in theory syllabus.

OPTION-II:ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-I (ZOO-502B)

UNIT-I

Comparative studies of mouth parts in Grasshopper, Honeybee, Butterfly, Red-Cotton bug, House fly and Mosquito.

Major modifications in the antennae and legs of insects.

Introduction to Entomology with various orders.

Development of Insects: Different type of metamorphosis along with a study of different kinds of larvae and pupae.

Systematic position, habits and nature of damage of the following pests of crops and vegetables :

I. Sugarcane :

1. Sugarcane leaf hopper (*Pyriliaperpusila*) alongwith life cycle and control measures.
2. Sugarcane top borer (*Scirpophaganivella*)
3. Sugarcane stem borer (*Chilotreainfuscatellus*)

II. Cotton :

1. Pink bollworm (*Pectinophoragossypiella*) alongwith life cycle and control measures.
2. Red cotton bug (*Dysdercuscinglulatus*)
3. Cotton grey weevil (*Mylloceruspmaculosus*)
4. Surface grasshopper (*Chrotogonustrachypterus*)
5. Cotton jassid (*Empoascadevastans*)

UNIT-II

III. Paddy :

1. Rice Gundhy Bug (*Leptocorisavaricornis*) alongwith life cycle and control measures.
2. Rice grasshopper (*Hieroglyphyusbanian*)
3. Rice Hispa (*Dicladispaarmigera*)

IV. Wheat :

1. Wheat stem borer (*Sesamiainferens*) alongwith life cycle and control measures.
2. Termites (*Microtermesobesi*)
3. Aphids (*Macrosiphummiscanthi*) Jassids (*Amrasca sp*.)

V. Vegetables :

1. Red pumpkin beetle (*Aulacophorafoveicollis*)
2. Pumpkin fruit fly (*Dacuscucurbitae*) alongwith life cycle and control measures.
3. Hadda beetle (*Epilachnavigintioctopunctata*)

UNIT-III

VI. Pests of Stored Grains : Systematic position, habits and nature of damage of the following pests of stored grains :

1. Pulse Beetle (*Callosobruchus maculates*) alongwith life cycle and control.
2. Rice weevil (*Sitophilus oryzae*)
3. Khapra beetle (*Trogodermagranarium*)
4. Rust red flour beetle (*Tribolumcastaneum*)
5. Lesser grain borer (*Rhizoperthadominica*)
6. Rice moth (*Corcyra cephalonica*)

UNIT-IV

Systematic position, disease caused and control of the following insects of Medical and Veterinary importance :

1. Mosquitoes (Aedes,Anopheles, Culex)
2. Sand fly (*Phlebotomus minutus*)
3. House fly (*Musca domestica*) along with life cycle of house fly.
4. Horse fly (*Tabanus striatus*)
5. Blow fly (*Calliphora erythrocephala*)
6. Warble fly (*Hypoderma lineatum*)
7. Poultry louse(*Menopon gallinae*)
8. Sucking louse/(*Haematopinus surysternus*)
9. Fleas (*Xenopsylla cheopis*)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Attwal, A.S., : Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991.
2. Nair, M.R.G.K. : Insects and Mites of Crops in India, ICAR, New Delhi, 1975.
3. Kumar, A. and Nigam, P.M. : Economic and Applied Entomology, Emkay Publications, 1991.
4. Matheson, R. : Medical Entomology, Comstock Publishing Company, Inc., 1950.
5. Metcalf, R.L. & Metcalf, R.A. : Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-502B (ZOO-352B)

1. External morphology and identification marks of the crops and vegetables pests : P*yrillaperpusilla* (Sugarcane leaf hopper), *Pectinophora gossypiella* (Pink bollworm), *Leptocorisa varicornis* (Gunbdhy bug) *Hieroglyphus banian* (Paddy grass hopper), *Dacus cucurbitae* (Pumpkin fruit fly).
2. External morphology and identification marks of the following stored grain pests : *Sitophilus oryzae* (Rice weevil), *Tribolium castaneum* (Rustred flour beetle), *Rhizopertha dominica* (Lesser grain borer/susri),*Trogoderma granarium* (Khapra beetle), *Callosobruchu smaculatus* (Pulse beetle/Dhora).
3. External morphology and identification marks of the following insects of Medical/Veterinary importance-Mosquitoes (*Culex, Anopheles and Aedes*), house fly (*Musca domestica*), blow fly (*Calliphora erythrocephala*), warble fly (*Hypoderma lineatum*) and horse fly (*Tabanus striatus*).
4. A study of different types of larvae and pupae of insects through slides, charts etc.
5. Project- Study of life cycle of any insect.

OPTION III: INLAND FISHERIES & AQUACULTURE-I (ZOO-502C)

UNIT-I

- Components of Aquaculture: Capture, Culture, Intensive, Extensive, Semi-Intensive, Pen Culture, Cage Culture.
- Morphology of a typical fish (Carp, Catfish, Eel, Perch)
- Culturable fishes: Characters of culturable fishes, Indian major carps, saltwater fishes, exotic species and air breathing fishes.

UNIT-II

- Structure of mouth of different fishes in relation to feeding habits
- Bionomics of *Labeorohita, CatlaCatla, Cirrhinusmrigala, Wallago attu.*
- Food value of Fish (Vitamins, Amino acids, Minerals etc.)

UNIT-III

- Exotic fishes: History, their introduction, morphology, their role in fish culture and impact on native fish fauna.
- Induced Breeding: History, technique, chemicals involved in induced breeding and impact on fish culture.

UNIT-IV

- Pond culture: Construction of pond, types of pond, hydrobiological factors of water and soil of a fish pond, fertilization of pond, maintenance of pond.
- Aquatic weeds and their control both biological and chemical.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1.	Jhingran, V.G. ,	:	Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2.	Day, F.	:	Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3.	Johal, M.S. &Tandon,	:	Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4.	Agarwal, S.C. &Johal M.S.	:	Fishery Development, Narendra Publishing House, Delhi, 1997.
5.	Johal, M.S. &Tandon K.K.	:	Fishes of Punjab, Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6.	Karl, F.L.	:	Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7.	Brian, R.M. &David W.W.(ed.).,	:	Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO-502C (ZOO-352C)

1. Morphology of a Carp, Cat fish and Perch.
2. Morphometric and meristic characters of a typical fish.
3. Identification of the following fishes using keys to the species :
   Notopterus n*otopterus*. ; *Labeo rohita, L. colbasu, L. bata, Cirrhinus mrigala, Catla catla, Puntius sarana, Tor putitora, Schizothorax richardsonii, Aorichthys seenghala, Wallago attu, Bagarius bagarius, Heterpneustus fossilis, Channamaruluis, C. striatus, Xenentondon cancila, Cyprinus carpio, Hypophthalmichthys molitrix,Ctenopharyngodon idellaus, Colisa fasciatus, Mastacembelus armatus.*

   For the identification of the fishes, the students can use already prepared keys or can prepare their own keys.

4. Determination of maturity stages (both male and female) of any commercial fish (preserved specimens) through slides/charts etc.
5. Preparation of permanant slides of phytoplanktons and zooplanktons which constitute the food of commercial fishes. Their identification and study of important characters.
6. Identification of common aquatic weeds of a fish pond.
7. Study of various exotic fishes (*Hypophthalmichthys molitrix, Ctenopharyngodon idellaus, Cyprinus carpio, Gambusia affinis, Salmo trutta fario, salmo gairdneri, gairdneri*) with respect to the purpose with which they were introduced.
8. Study of endemic culturable fish species *(Catla catla, Labeo rohita, Cirrhinus mrigala)*
9. Study of types of fins and scales.

Guidelines for the conduct of Practical Examinations:

Max. Marks : 20 marks
Practical Exam : 18 marks
Internal Assessment : 2 marks
Time : 4 hours

1. Identify the developmental stage of chick embryo by window preparation. 2.5
2. Identify the slides A , B& C. Give two reasons for each identification 4.5
3. Viva-Voce 2
4. Practical Note Book and Project Report 2

Option-I

5. To identify the specimens D, E&F. Write the disease caused by each and two reasons for their identification. 4.5
6. Identify the given instrument. Write about its uses and functions. 2.5

Option- II

5 To identify the specimens D, E & F belonging to crop and stored grain pests. Give one outstanding character of each. 4.5

6 Identify specimen/ slide G. Give its one outstanding morphological character and medical/ veterinary importance. 2.5

Option- III

5. Giving two identification features identify specimen D&E. 2

6. Identify specimen 'F'. Give the purpose for which this fish has been introduced. 1

7. Identify the slides G & H. Give one identification features of each. 2

8. Identify the weed 'I' and write its common identification features. 2

ZOOLOGY

SEMESTER -VI

Paper I: GENETICS	40 (36 +4) marks
Paper II: APPLIED ZOOLOGY-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note: The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester VI,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: GENETICS (ZOO-601)

UNIT-I

Mendelism and Mendeliar Ratios.
Modification of Mendelian ratios .
Non-allelic gene interaction, Modified F_2 ratios.

(9:7, 9:3:4, 9:3:3:1, 12:3:1, 13:3,15:1,9:6:1)

Gene modifications due to incomplete dominance, lethal factors (2:1), Pleiotropic genes.

Multiple Alleles : Blood group inheritance,eye colour in *Drosophila*, pseudo-allelism.

Multiple factors : Qualitative and quantitative characters, inheritance of quantitative traits (skin colour in man).

UNIT-II

Linkage, crossing over and recombination : Linkage, sex-linked characters, crossing over, frequency of crossing over, cytological basis of crossing over, synaptonemal complex. Recombination in Fungi, (tetrad analysis).
Gene and Genetic Code : Structure of nucleic acids (DNA & RNA). Replication of DNA and transcription.Expression of gene (protein synthesis in Prokaryotes and Eukaryotes).
Properties of genetic code, codon assignment, wobble hypothesis.
Extranuclear inheritance : Kappa particles in *Paramecium*.

UNIT-III

Mutations : Spontaneous and induced mutations, physical and chemical mutagens.
Detection of mutations in *Drosophila*. Inborn errors of metabolism in man (Phenylketonuria, Alcaptonuria, Albinism).Somatic mutations and carcinogenesis.
Regulation of gene expression in prokaryotes (Operon model) and in eukaryotes.

UNIT-IV

Population genetics : Equilibrium of gene frequencies and Hardy Weinberg Law.

Genetic recombination in bacteria (conjugation, transduction and transformation) plasmids.

Applied Genetics : Recombinant DNA,genetic cloning and its applications in medicine and agriculture, DNA finger printing.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. De Robertis, E.D.P. and De Robertis, E.M.F : Cell and Molecular Biology, W.B. Saunders Co., Philadelphia, 1995.
2. Powar, C.B. : Cell Biology, Himalaya Publishing House, Bombay, 1999.
3. Swanson, C.P., Merz, T. and Young, W.J Division, : Cytogenetics – The Chromosome in Inheritance and Evolution, Prentice Hall, 1981.
4. Gupta, P.K. : Cytology, Genetics and Molecular Biology, Rastogi Publishers, Meerut, 1993.
5. Chaudhry, S. and Sharma, A. : PV's Cytology& Ecology, S. Vikas& Co., Jallandhar, 2003.
6. Gardner, E. J., Simmons, M.J. and Snustad, D.P. : Priciples of Genetics, 8th ed., John Wiley and Sons, Inc., New York, 2004.

Practicals based on Theory Paper ZOO-601(ZOO-353)

1. Demonstration of Law of segregation, Independent assortment and epistasis (use of coloured beads or capsules etc.). Numericals for segregation and Independent assortment.
2. Segregation demonstration in preserved material (Maize).
3. Cytoplasmic inheritance in *Mirabilis jalapa*.
4. Inheritance of other human characteristics, ability to taste, PTC, thiourea.
5. Comparison of variance in respect of pod length and number of seeds/pods.
6. Calculation of gene frequencies and random mating (coloured beads or capsules).
7. Study of polytene chromosomes of *Chironomus*/*Drosophila* through photographs.
8. Dermatographics: Palm print taking and finger tip patterns.

Paper II: APPLIED ZOOLOGY-II

Max. Marks	:	40
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-II
2. Economic Entomology and Pest Management-II
3. Inland Fisheries & Aquaculture-II

OPTION I: MEDICAL ZOOLOGY AND MEDICAL LABORATORY TECHNOLOGY-II (ZOO-602A)

UNIT-I

Brief introduction to human defence mechanisms.
Humoral and cell mediated immune-response, Antigens-physical & chemical properties.

UNIT-II

Antibodies - structure and function of immunoglobulin M, G, A, E and D.
Antigen and antibody interactions :Serodiagnostic assays.
Vaccines and their types.

UNIT- III

Laboratory safety rules, hazards and precautions during sample collection and laboratory investigations.

Laboratory techniques: Colorimetry, Microscopy (student's and electron microscope), Autoclaving.,

Centrifugation, Spectrophotometry.

Haematology : Collection of blood (Venous and Capillary), Anticoagulants (merits and demerits),

Romanowsky's stains,

UNIT- IV

Bacteriology : Sterilisation, (dry heat, moist heat, autoclave, filtration), Disinfection, Staining techniques (gram's stain, AFB stain, etc), Culture media (Defined & Synthetic media & routine laboratory media), Bacterial culture (aerobic and anaerobic), Antibiotic sensitivity.

Biochemistry : Protein estimation, Estimation of blood urea, blood sugar and urine analysis.

Histopathology : Common fixatives and staining techniques, Histochemistry : Principle and method : Staining of carbohydrates, proteins and fats with bromo phenol blue, Periodic acid Schiff, Sudan Black blue and Feulgen reaction.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Baker, F.J. and Silverton, R.E.	:	Introduction to Medical Laboratory Technology, 6th edition, Butterworth and Co. Ltd., 1985.
2.	Cheesborough, M.	:	Medical Laboratory Technology for Tropical countries, 2nd edition, Butterworth and Co. Ltd., 1987.
3.	Talib, V.H.	:	Essential Laboratory Manual, Mehta Publishers, New Delhi, 1999.
4.	Goldsby, R.A., Kindt, T.J. Osborne, B.A. and Kuby, J	:	Immunology, 6th edition, Freeman, W.H. & Co., New York, U.S.A., 2007.

Practicals based on Theory Paper ZOO-602A (ZOO-354A)

1. Demonstration of safety rules in laboratory like proper handling of patients specimens and disposal of syringes, needles etc.
2. Demonstration of the use of autoclave, centrifuge and spectrophotometer.
3. Cleaning and sterilization of glassware using hot air oven, autoclave etc.
4. Demonstration of various equipments for the estimation of hemoglobin, WBC, RBC, ESR.
5. Estimation of sugar and protein in a sample.
6. Procedure of Fixation, embedding, cutting of tissue sections and their staining (Routine Haematoxylin and Eosin and special staining with BPB,PAS, SBB and Feulgen reaction) (Theory only).
7. Study of permanent slides-Thymus, spleen & lymph mode.

OPTION-II: ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-II (ZOO-602B)

UNIT-I

1. Sericulture

(i) Species of silkworm
(ii) Requirements of Sericulture Industry
(iii) Grainage Management
(iv) Pre and Post-cocoon processing (Stifling & Reeling)
(v) Diseases of silkworm.

UNIT-II

2. Apiculture

(i) Species of Honeybees
(ii) Flora for Apiculture
(iii) Methods & Appliances of Bee Keeping
(iv) Products - (a) Honey (b) Bee wax (c) Propolis (d) Pollen (e) Royal Jelly (f) Bee Venom
(v) Diseases of Honey bee

3. Lac Culture

(i) Species and varities of Lac insect
(ii) Host Plants
(iii) Cultivation of Lac
(iv) Processing of Lac
(v) Lac Industry
(vi) Enemies of Lac insect.

UNIT-III

I. **Chemical Control** : Types and Classification of Insecticides (a) Insecticides of plant origin with special reference to vicotine; Pyrethrum; Rotenone and Azadirachtin (b) Chlorinated Hydrocarbons insecticides with special reference to DDT; Toxaphene; BNC; Chlordane; Aldrin; Endrin and Endosulfan (c) Organophosphorus Insecticides with special reference toMalathion;TEPP; Parathion and DDVP (d) Carbamate Insecticides with reference to Carbaryl and Carbofuran (e) Fumigants with reference to Hydrogen cyanide; Methyl bromide; Ethylene dichloride; Carbon tetrachloride and Aluminium phosphide. Hazards of chemical control. List of banned pesticides.

UNIT-IV

II. **Recent methods of Pest Control**:

- **Biological Control** : History; Techniques in biological control, Agents of biological Control (a) Vertebrates (b) Nemathelminthes (c) Arthropods (d) Protozoan; Microbial control with the help of Bacteria, Virus and Fungi.
- **Integrated Pest Control**: Introduction of IPM: Pre-requisites; Implementation Strategy; Framework of IPM programme and perspectives in IPM.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Attwal, A.S.,	:	Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991
2.	Dent, D.	:	Integrated Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1995.
3.	Howse, P., Stevens, I. & Jones, O	:	Insect Pheromones and their use in Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1998.
4.	Mishra, R.C.	:	Honey Bees and their Management in India, ICAR Publication, New Delhi, 1995.
5.	Kumar, A. and Nigam, P.M.,	:	Economic and Applied Entomology, Emkay Publications, 1991.
6.	Metcalf, R.L. & Metcalf, R.A.	:	Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-602B (ZOO-354B)

1. Study of Mouth parts of honey bee, butterfly and red cotton bug from permanent mounts.
2. Study of different types of antennae, legs and wings through preserved specimens and permanent slides.
3. A study of life stages of silk worm, honey bees and lac insect.
4. Structure and working of common sprayers: Hand Compression sprayer, Knap sack sprayer.
5. Visit to apiary and godowns for study of infestation and project report.

OPTION III - INLAND FISHERIES & AQUACULTURE-II (ZOO-602C)

UNIT-I

- Fishing gears: Classification of the fishing gears according to the habitats in which they are being used, Electrical fishing.
- Culture systems: Monoculture and polyculture

UNIT-II

- Integrated fish farming: Duck-cum-fish farming, Dairy-cum-fish farming and Poultry-cum-fish farming.
- Pearl culture in India: Species used, implantation procedures, water quality requirements and economics
- Fish seed resources and their transport

UNIT-III

- Prawn culture: Culture of fresh water prawn, culture technology
- Cold water fisheries: Mahseer fisheries and trout fisheries
- Fish Diseases and their control: Viral, bacterial, fungal, protozoan, helminth, crustacean, diseases due to unhygienic conditions, diseases during transportation.

UNIT-IV

- Fish by-products
- Fish marketing
- Fish preservation: Principles of fish preservation, preservation by curing (Drying, Salting and Smoking), Chilling and freezing of fish, Canning of fish and fish products, Spoilage of fish, Rigor mortis

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1. Jhingran, V.G., : Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2. Day, F. : Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3. Johal, M.S. &Tandon, : Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4. Agarwal, S.C. &Johal M.S. : Fishery Development, Narendra Publishing House, Delhi, 1997.
5. Johal, M.S. &Tandon K.K. : Fishes of Punjab,Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6. Karl, F.L. : Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7. Brian, R.M. &David W.W.(ed.)., : Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

<u>Practicals based on Theory Paper</u> ZOO 602C (ZOO-354C)

1. Determination of food and feeding habits of locally available fishes on the basis of stomach analysis adopting the following methods :
   a. Frequency occurrence method
   b. Feeding intensity
   c. Point method.
2. Estimation of following chemical parameters of the water of a fish pond:
   a. Temperature
   b. pH
   c. Dissolved oxygen
   d. Phosphates
   e. Total dissolved solids
   f. Nitrates
   g. Hardness
   h. Chlorides
3. Visits to various fish ponds and fish market.
4. Study of various fresh water prawn species cultured in India.

Guidelines for the conduct of Practical Examinations

Max. Marks	: 20
Practical Exam	: 18 marks
Internal Assessment	: 2 marks
Time	: 4 hours

1. Demonstrate the law of independent assortment/segregation/epistasis from the material provided. Identify the characters involved showing the dominance/recessiveness of characters.

   OR

   Calculate the gene frequency from a known sample of characteristics using Hardy-Weinberg Law. 3
2. Make a dermatographic print of your finger tips or palm pattern and classify the various visible patterns with the help of diagrams and demonstrate it to the examiner. 3
3. Identification of polytene chromosomes from the photograph provided. 1
4. Viva-Voce 2
5. Practical Note Book and Project Report 2

Option-I

6. Identify the slide and give two reasons for identification. 2
7. Identify the instrument/apparatus (Autoclave/centrifuge/spectrophotometer/microtome etc.). Write about its uses and working. 2
8. Quantitative estimation of sugar/protein in the given sample 3

Option- II

9. Identification of mouth parts/antennae/legs/wings from charts/slides/specimens 2
10. Mention the type of larva/pupa/stages of life history of silkworm, honeybees, lac insect. Write a note on its external morphology. 2
11. Name the apparatus provided. Draw its well labeled diagram and explain its structure and working. 3

Option- III

12. Identify the gear 'A' and draw its well labeled diagram. 2
13. Identify specimens B & C giving one identification feature of each. 2
14. Determine the Temperature/pH/Dissolved oxygen/Phosphates/Total dissolved Solids/Nitrates/Hardness/Chlorides in given water sample. 1
15. Write the habit and habitat of given specimen (Cold water fish)'D'. 2

BIO-CHEMISTRY
SEMESTER V

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total no. of questions will be nine. All questions carry equal marks.
2. Q. no. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – I **Marks: 45+5**

Objective: To understand aspects of storage and expression of genetic information. Membrane structure and function.

SECTION-I

(Lectures: 10)

Experimental proof for DNA as genetic material. Watson-Crick model of DNA. A&Z-DNA, structure of chromatin topology of DNA & topoisomerases. Organization of genes in different genomes. Extra nuclear genomes.

SECTION-II

(Lectures: 10)

Types & biochemical basis of mutations, DNA replication: semiconservative, semicontinuous, bidirectional & from a unique origin. Enzymes & proteins of DNA replication. Mechanism of DNA repair, DNA recombination.

SECTION-III

(Lectures: 10)

Transcription in prokaryotes and eukaryotes: promoter sequences, initiation, elongation, Rho dependent and rho independent termination, regulation, processing, alternative splicing, mRNA editing & Inhibitors of transcription.

SECTION-IV

(Lectures: 10)

Translation in prokaryoties and eukaryoties: Genetic code, Wobble hypothesis, structure of tRNA, amino acid activation, initiation, elongation, termination and inhibitors of translation, post translational modification of proteins.

Books Suggested :

1. Biochemistry, 5th Ed., 2002., Berg, J. M. & L. Stryer, W.H. Freeman, San Francisco.
2. Molecular Biology by David Freifelder, 1987.
3. Genes XI, by Benjamin Lewin, 2014.
4. Molecular Cell Biology by James Darnell, Harvey Lodish and Davit Baltimore, 7th Edition, 2014.

Paper B: Applied Biochemistry – I **Marks: 45+5**

Objective: To understand general aspects of vitamins, hormones, nutrition, immunology, blood coagulation, muscle contraction and nerve impulse transmission.

SECTION-I

(Lectures: 10)

Vitamins: water soluble & fat soluble, their sources, structure & biochemical function. Role of Thiamine, Riboflavin, Niacin, Pyridoxine, Pantothenic Acid, biotin, folic acid and Ascorbic acid. Role of Vitamin A in the visual cycle, Role of Vitamin D, Vitamin E and Antioxidant theory, role of Vitamin K in Coagulation.

SECTION-II

(Lectures: 10)

Essential nutrients. Protein energy malnutrition, starvation and obesity. Respiratory quotient (R.Q.) of carbohydrates, proteins and lipids. Basic metabolic rate and factors influencing it. Specific dynamic action of foods.

SECTION-III

(Lectures: 10)

Biochemical principles of toxicology. Phase I reactions and cytochrome P 450 enzyme systems. Phase II reactions and various conjugation systems. Effects of nutritional status and metabolic induction on xenobiotic toxicity; importance of physico–chemical properties of toxic chemicals. Biochemical basis of organophosphate and carbamate pesticides toxicity.

SECTION-IV

(Lectures: 10)

Hormones: classes, modes of action, endocrine glands & their hormones. Hypothalmic and posterior pituitary hormones, Anterior pituitary hormones, PTH, Calcitonin, insulin, glucagon, steroid hormones, thyroid hormones.

Books Suggested :

1. Berg, J. M., Lubert Stryer *:* Bio-chemistry*,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. Biochemical Toxicology of Environmental Agents by A. De Bruin, Elsevier Pub.
4. Human Nutrition & Dietetics by R. Passmore & M.A. Eastwood.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Extraction of DNA
2. Estimation of DNA by diphenylamine method.
3. Effect of temperature on the Viscosity of DNA using Oswald's viscometer.
4. Assays of SGPT and SGOT in serum.
5. Extraction of RNA from yeast .
6. Estimation of RNA by Orcinol method.
7. Determination of total protein and A/G ratio in serum.
8. Separation of serum proteins using paper electrophoresis.
9. Demonstration of Western Blotting technique.

BIO-CHEMISTRY

SEMESTER -VI

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – II **Marks: 45+5**

Objective: To understand aspects of storage, expression and regulation of genetic information.

SECTION-I

(Lectures: 10)

Targetting of proteins to different cell organelles. Post & co-translational modification of proteins. DNA binding domains of protein. Regulation of prokaryotes gene expression. Concept of operon, regulation of lac operon, trp-operon, phage infection (lysogenic & lytic mode)

SECTION-II

(Lectures: 10)

Regulation of enkaryotic gene expression. transcription factors: Zn fingers and leucine zipper. Roles of RNA regulators. hormonal control of transcription.

SECTION-III

(Lectures: 10)

Gene cloning: different types of vectors, libraries & isolation of gene. Yeast gal gene and mat locus. Mechanism of development in Drosophila.

SECTION-IV

(Lectures: 10)

Analysing genome, genome size, genome sequencing, microarrays, DNA finger printing, SNPs and applications in diseases and forensic.

Books Suggested :

1. Freifelder's Essentilas of Molecular Biology Malacinski GM 4th edition Narosa New Delhi 2005
2. Molecular Biology of Gene Watson JD 7th edition 2007 CSH New York 2013.
3. Genes XI, Benzamin Lewin, 2014 Oxford press Oxford.
4. Molecular cell biology Lodish H et al 8th edition 2016 McMilian Publishers, London.
5. Genomes 3 Brown TA. Garland Science New York 2007.

Paper B: Applied Biochemistry – II **Marks: 45+5**

Objective: Providing the student a comprehensive knowledge of physiology with emphasis on immune system and techniques in use; blood, muscle and nerve. This course will explain and demonstrate important techniques being used for analysis of blood. It will also enable the students to understand how the fundamental systems work in tandem for keeping the body fit.

SECTION-I

(Lectures: 10)

Basics of immune system. Cells & organs involved in immune response. Molecules associated: antigen, hapten & immunoglobulins- their structure, properties & functions. Innate & adaptive responses. Complement system- types, mechanism & functions. Humoral & cell mediated immune responses.

Immunological techniques-their principle, method & applications: precipitation, agglutination, Immunofluorescence, radio-immunoassay (RIA), enzyme liked immunosorbent assay (ELISA) and immunoblotting.

SECTION-II

(Lectures: 10)

Blood: composition, groups, functions; coagulation. Anticoagulants. Hemoglobin- forms, roles and disorders: hemoglobinopathies, anaemia.Buffers in the body: acid base equilibrium. Systems responsible for maintenance of acid-base balance- erythrocytes, respiration, liver, kidneys. Disturbances in acid base balance and compensation.

SECTION-III

(Lectures: 10)

Muscle: basic components of muscle cell, arichitecture of muscular organization, types. Microscopic & electron microscopic structure-skeletal, smooth & cardiac. Role of muscle proteins & calcium.

Mechanism of skeletal and smooth muscle contraction and relaxation. Sliding filament theory. Excitation-contraction coupling.

SECTION-IV

(Lectures: 10)

Central nervous system, peripheral nervous system, action potential, neurotransmitters, synapses & nerve gases. Mechanism of nerve impulse transmission: structure, classification and functions of neurons and neuroglias. The resting membrane potential & action potential.

Properties of nerve fibers : excitability, conductivity, all or none law, accommodation, adaptation, summation, refractory period, indefatigability.

Synapses : types, structure, synaptic transmission of the impulse, synaptic potentials, neurotransmitters, cotransmitters, neuromodulators. The neuromuscular junction : structure, transmission, end-plate potential.

Books Suggested :

1. Berg, J. M., Lubert Stryer *:* Bio-chemistry*,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. Essential Immunology by Ivan M. Roitt, English Language Book Society (ELBS) 8th Ed.,1994.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1.Demonstration of western blotting

2. Use of different anticoagulants.

3. Estimation of haemoglobin in blood.

4.Demonstration of ELISA.

5. Determination of clotting time of blood.

6. Determination of proteins by dye binding assay.

7. Visualizing antigen-abtibody precipitation in gel.

8. Agglutination assay.

9. Separation of proteins by SDS-Polyacrylamine Gel Electrophoresis

10. Liver function tests.

11. Estimation of urea and creatinine.

MICROBIOLOGY

SEMESTER -V

THEORY		6 hrs	75 (33+33+9*)
MIC 501:	**Pathogenic Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 502:	**Food and Industrial Microbiology-I**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical pertaining to the entire syllabus included in Theory Papers MIC 501 and MIC 502 — 3 hrs — 25 (20+5*)

SEMESTER -VI

THEORY		6 hrs	75 (33+33+9*)
MIC 601:	**Pathogenic Microbiology-II**	3 hrs	37.5 (33+4.5*)
MIC 602:	**Food and Industrial Microbiology-II**	3 hrs	37.5 (33+4.5*)

PRACTICAL

One Practical pertaining to the entire syllabus included in Theory Papers MIC 601 and MIC 602 — 3 hrs — 25 (20+5*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

MIC 501-PATHOGENIC MICROBIOLOGY-I

SEMESTER- V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Streptococcus, Pneumococcus, Neisseria, Corynebacterium, Bacillus, Clostridium, Proteus*. The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Rabies, Polio, Small pox and Measles.

Section C

Introduction to Human mycotic infections viz Superficial, Cryptococcosis and Dermatophytosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz. amoebiasis, Kala-azar and Toxoplasmosis.

MICROBIOLOGY

MIC502-FOOD AND INDUSTRIAL MICROBIOLOGY-I

SEMESTER -V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Food as substrate for microorganisms, Nutritive value of food stuffs, Effect of Hydrogen ion concentration (pH), moisture requirement on food, Important food borne diseases viz. Staphylococcal intoxication, Botulism, Salmonellosis and Shigillosis.

Section B

Contamination, preservation and spoilage in various foods viz. cereal and cereal products (cereal grains, flour, bread, pasta, macroni), Sugar and sugar products (Maple, Syrup, Honey, Candy).

Section C

Production strains, Isolation and screening techniques, preservation and genetic modification of Industrial microorganisms.

Section D

Yeast (Baker's) and its uses, Fermentation of Beer, Wine and Alcohol.

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.

5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.
6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY

PRACTICAL

SEMESTER- V

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Identification of both Gram positive and Gram negative bacteria on the basis of:
   i) Morphology
   ii) Biochemical characteristics
   iii) Serological reactions
2. Demonstration of pathogens (Viruses, fungi, parasites) in permanent mounted slides
3. Demonstation of cysts/ ovas of Protozoa/ Helminths.
4. Demonstration of Laboratory grown fungi on Sabauraud's agar
5. Germ tube test for *Candida albicans*

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MICROBIOLOGY

MIC601-PATHOGENIC MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Shigella, Salmonella, Vibrio, Yersinia, Hemophilus*and *Mycobacterium.* The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Herpes, Influenza and AIDS

Section C

Introduction to Human mycotic infections viz Blastomycosis, Opportunistic mycosis; Candidiasis and Aspergillosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz.Ascariasis, Filariasis and Hook worm infections

MICROBIOLOGY
MIC602-FOOD AND INDUSTRIAL MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS:37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Qualitative and Quantitative analysis of food components (proteins, lipids, carbohydrates), Microbiological examination of food products including dairy products, food poisoning caused by bacteria and fungi.

Section B

Contamination, preservation and spoilage in various foods viz. Vegetables and fruits, Meat (Fresh meat, fresh beef, hamburger, fish), Milk and milk products (Cheese, butter)

Section C

Fermentation media, Characteristics of Ideal production media, Common substrates used in Ideal fermentations, Batch and continuous fermentations

Section D

Production of organic acids viz. acetic acid, lactic acid, propionic acid, butyric acid and mixed acids. Mass transfer in aerobic fermentations

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.
5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.

6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY
PRACTICAL
SEMESTER- VI

MAX. MARKS: 25 MARKS
PRACTICAL: 20 MARKS
INTERNAL ASSESSMENT: 5 MARKS
TIME: 3 HRS.

1. Demonstration of Fungi through normal saline/KOH preparation
2. Quantitative examination of microbial types in raw processed preserved food stuffs
3. Direct microscopic examination of bacteria in raw, pasteurised milk
4. Methylene reductase test for milk
5. Various biochemical tests and their importance in Food Microbiology

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ELECTRONICS

(Kept in Abeyance)

AGRICULTURE
B.A/B.Sc. 5th and 6th Semester System

SEMESTER-V

Paper-V: Agrodiversity and Physiology

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Unit I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

History of Agroforestry
Agroecological Zonification
Socioeconomic Aspects of Agroforestry
Agroforestry System for Small Holdings
Arid Land Agroforestry

Unit – II

Establishment of Orchard
Basic Cultural Practices
Elemental Role and Needs of Nutrients
Propagation – Principles and Techniques
Stock –Scion relationship and their incompatibility
Fruit Physiology

Unit – III

Respiration- Glycolysis, Citric Acid Cycle, Photorespiration
Photosynthesis – Light Reaction, Dark Reaction, C_4 – Cycle, CAM Plants
Growth Hormones and their role in Agriculture
Enzymes and Vitamins
Vernalization
Photoperiodism

Unit – IV

Intellectual Property Right
Informatics in Agriculture
Seed Production and Technology
Indigenous Technical Knowledge in Agriculture
Introduction to Crop Biotechnology
Agrobiodiversity

PRACTICAL

Max. Marks : 25 Marks
Practical : 20 Marks
Internal Assessment : 05 Marks

Planning an Orchard
Study of Agroforestry of Local Area
Scion- Stock relationship study
Study the effect of temperature and light duration on various crop plants of an area
Role of computer in Agriculture
GM crops and techniques
Study of Agrobiodiversity of Punjab

BOOKS

Plant Physiology, 2010 – K.N. Bhatia – Trumen Publishers, Jalandhar
Plant Physiology, 2010 – H.N. Srivasava – Pardeep Publishers, Jalandhar
Fruits – Ranjit Singh and S.K. Sexena - National Book Trust, New Delhi, 2008
Fruit Physiology – Amar Singh – Kalyani Publishers, Ludhiana, 1997

AGRICULTURE

SEMESTER-VI

Paper-VI: Insect Pests and Diseases of Crop

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 5 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

Plant Protection
Crop diseases ? How to control them?
Biological control, chemical control
Systemic fungicides
Weedicides
Compatibility of various fungicides and weedicides
Rodenticides

Unit – II

Diseases of Crop Plants
1. Crop-Wheat

Type of Disease	Name of Disease	Causal Organism
Fungal	Loose smut of Wheat	*Ustilago tritici*
Bacterial	Tundu disease of Wheat	*Corynebacterium tritici*
Viral	Chloris striate mosaic	Chloris striate mosaic virus (CSMV)

2. Crop- Rice

Type of Disease	Name of Disease	Causal Organism
Fungal	Blast of Rice	*Piricularia oryzae*
Bacterial	Bacterial Blight of Rice	*Xanthomonas oryzae*
Viral	Rice Tungro disease	Rice tungro Bacilliform virus (RTBV)

3. Crop- Maize

Type of Disease	Name of Disease	Causal Organism
Fungal	Black kernal rot	*Lasiodiplodia theorbrome*
Bacterial	Stalk rot of Maize	*Erwinia cartovora*
Viral	Maize chlorotic dwarf	Maize chlorotic dwarf virus (MCDV)

4. Crop-Citrus

Type of Disease	Name of Disease	Causal Organism
Fungal	Citrus black spot	*Guignardia citricarpa*
Bacterial	Citrus canker	*Xanthomonas citri*
Viral	Citrus Yellow Mosaic	Badnavirus

5. Crop-Grapes

Type of Disease	Name of Disease	Causal Organism
Fungal	Powdery Mildew of grapevine	*Unicinula nectator*
Bacterial	Crown gall	*Agrobacterium tumifaciens*
Viral	Cork bark	Grapevine virus B

6. Crop-Cotton

Type of Disease	Name of Disease	Causal Organism
Fungal	Cotton Rust	*Puccinia schedonnardii*
Bacterial	Bacterial Blight of Cotton	*Xanthomonas citri*
Viral	Leaf curl	Bigeminivirus or Cotton Leaf curl virus (CLCuV)

7. Vegetables

Type of Disease	Name of Disease	Causal Organism
Fungal	Late Blight of Potato	*Phytopthora infestans*
Bacterial	Bacterial canker of Tomato	*Clavibacter michiganensis*
Viral	Yellow vein mosaic of Bhindi	Yellow vein mosaic virus

8. Oil Crops: Mustard

Type of Disease	Name of Disease	Causal Organism
Fungal	White rust of crucifers	*Albugo candida*
Bacterial	Black rot of crucifers	*Xanthomonas campestris*
Viral	Rai Mosaic virus	Yellow Mosaic Virus

9. Oil Crops: Groundnut

Type of Disease	Name of Disease	Causal Organism
Fungal	Tikka Disease of groundnut	*Cercospora s*p.
Bacterial	Bacterial wilt	*Pseudomonas solanacearum*
Viral	Groundnut crinkle	Groundnut crinkle virus

Unit – III

General account of Insects and pests
Classification of Insects
Parts of Insect body
Control measures of Insect pests and diseases of crop

Unit – IV

Insect and nematode diseases of Cereal (Wheat, Maize, Rice) crops; Oil (Sunflower, Groundnut, Mustard) crops; Fruit (Mango, Guava, Citrus) crops

Vegetable crops

Rabi Crops	**Kharif Crops**
Green Peas	Chilli
Chick Peas (Cicer arientinum)	Okra
Onion (Allium cepa)	Bitter Gourd
Tomato (Solanum lycopersicum)	Bottle Gourd
Potato (Solanum tuberosum)	Brinjal

PRACTICAL

Max. Marks : 25 Marks
Practical : 20 Marks
Internal Assessment : 05 Marks

Study of all the diseases mentioned in theory
Symptoms and their control measures

Books

Plant Pathology – R.S. Singh, 2007 – Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi

Plant Pathology – R.S. Malhotra and Aggarwal, 2009 – Tata MacGraw Hill Publishing, New Delhi

Economic and Applied Entomolgy – Kumar and Nigam, 2008 - Emkay Publishing, New Delhi

Fungicides– Y.L. Naine and Thaplial, 2008 – Oxford and IBH Publishing Co. Pvt. Ltd., Calcutta, Bombay

Elements of Entomology – Rajendra Singh, 2007 – Rastogi Publications, Meerut

A Text book of Applied Entomology – Vol I and Vol II – Srivastva, 2007- Kalyani Publishers, Ludhiana

Indian Crop Pests - Kumar and Nigam, 2007 – Emkay Publishers, Allahabad

Integrated Pest Management – G.s. Dhaliwal and R. Arora, 2006 – Kalyani Publishers, Ludhiana

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
SECOND YEAR
(SEMESTER : THIRD AND FOURTH)
Examination, 2018-2019

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2018 AND FOURTH SEMESTER APRIL/MAY 2019, EXAMINATIONS.

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER -III

16th and 17th Century Literature

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1.	William Shakespeare	*Othello*	
2.	Francis Bacon	(i)	*Of Friendship.*
		(ii)	*Of Studies.*
3.	John Donne	(i)	*The Sun Rising.*
		(ii)	*The Canonization.*
		(iii)	*The Relique.*
		(iv)	*Hymn to God, The Father.*
4.	John Milton	The following poems :	
		(i)	*Of Man's First Disobedience.*
		(ii)	*On the Morning of Christ's Nativity.*
		(iii)	*On his blindness.*

Testing :
There will be **two Units-**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I
There will be one question on the literary movement of 16th & 17th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer with internal choice at Serial No. 1, 3 and 4. Students will attempt one passage from each writer.

(15 Marks)

Unit II
Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER – IV

18th and 19th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	Emily Bronte	Wuthering Heights.
2.	S. T. Coleridge	The following poems : (a) *Kubla Khan.* (b) *The Rime of the Ancient Mariner.*
3.	P.B. Shelley	The following poems : (a) *Ozymandias.* (b) *Ode to the West Wind.* (c) *To A Skylark.*
4.	Thomas Hardy	*Tess of the D'Urbenvilles.*

Testing :
There will be **two Units-**
Unit I will consist of compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I

There will be one question on the literary movement of 18th & 19th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer at serial No. 2 and 3 with internal choice. Students will attempt one passage from each author.

(15 Marks)

Unit II

Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2018-19

SEMESTER-III

प्रथम पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- उपनिषद् तथा नीति साहित्य द्वारा प्रतिपादित शाश्वत जीवन मूल्यों से छात्र को अवगत कराना तथा व्याकरण की संज्ञाओं का बोध कराना।

UNIT-I

(क) केनोपनिषद् (मन्त्र व्याख्या पाँच में से तीन - 3x 10=30अंक व **समीक्षात्मक** प्रश्न दो में से एक प्रश्न – 1x9=9अंक) 39अंक

UNIT-II

(ख) नीतिशतकम्

(श्लोक 51 से अन्त तक) (श्लोक व्याख्या पाँच में से तीन -3x10=30अंक व सूक्ति व्याख्या तीन में से एक - 1x9=9अंक) 39अंक

UNIT-III

(ग)संज्ञा प्रकरण (लघुसिधान्तकौमुदी) (6 में से 3 सूत्रार्थ) 3 x 4=12अंक 12अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2018-19

SEMESTER-IV

द्वितीय पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- विद्यार्थियों को संस्कृत नाट्य साहित्य के प्रमुख नाटककार भास अथवा कालिदास के समय, जीवनचक्र, काव्यसौन्दर्य, प्रकृतिचित्रण, प्रेम एवं सौन्दर्य-बोध, नाट्य-कला, पात्र-चरित्रचित्रण इत्यादि विषयों के विस्तृत अध्ययन के लिए प्रेरित करना।

(इस पत्र में छात्र **विकल्प - I** या **विकल्प - II** ग्रहण करेगा)।

विकल्प - I : भास पूर्णांक **-** 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) भास 2x15= 30 अंक

भास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख) स्वप्नवासवदत्तम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

अथवा

विकल्प - II : कालिदास पूर्णांक - 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) कालिदास 2x15=30 अंक

कालिदास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख)अभिज्ञान- शाकुन्तलम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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URDU

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER -III

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER I : Poetry and Prose

Unit – I

Diwan-e-Ghalib Radif Alif : 30 Marks

Explanation (Tashrih of first 30 Ghazaliyat)

Unit – II

Critical notes on Ghalib ki Qasida Nigari 15 Marks

Unit – III

Mirza Ghalib ki Khutut Nigari ki Khususiyat 30 Marks

Unit -IV

Mirza Ghalib ki Hayat aur Karname 15 Marks

Books Recommended:

1. Zikr-e-Ghalib, by Malik Ram, Tamal Printing Press, 1976.
2. Afkar-e-Ghalib, by Dr. Khalifa Abdur Rehman, 1973.
3. Ghalib Ki Maktoob Nigari, by Prof. Nazir Ahmad

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URDU

SEMESTER -IV

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER II : Essay (Literary)

Unit – I

Fort William College Ki Adabi Khidmat 25 Marks

Unit – II

Urdu Zaban ki Ibtida aur Irtiqa 20 Marks

Unit – III

Dabistan Luckhnow ki Khusiyat 20 Marks

Unit -IV

Dabistan Delhi ki Khusiyat 25 Marks

Books Recommended:

1. Urdu Adab Ki Tarikh, by Azeem-ul-Haq Junedi.
2. Tareekh-e-Adab-e-Urdu, by Prof. Noor-ul-Hasan Naqvi.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER -III

Paper : I **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

i) Ghaznzvid Period

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER -IV

Paper : II **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

1. Ereteqaye Zaban-o-Adabiyat-e-Farsi be Ahde Moghal dar Hind.

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

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ARABIC

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

(KEPT IN ABEYANCE)

FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

3rd Semester : APPLIED GRAMMAR AND DRAMA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

a)Drama

Comprehension, explanation and literary appreciation of the prescribed textbook. 50 Marks

Courses of Reading :

Molière , Le Bourgeois Gentilhomme—(Edition Bordas).

Grammar : 40 Marks

1. Applied Grammer . 15 Marks
2. Essay in French, subject or theme to be taken from the given text. 10 Marks
3. Precis or analysis of a given text. 15 Marks

N.B. 1. The latest syllabus will be followed and question paper should be of B.A.II (Hons.) level.

2. Choice in questions should be given.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

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FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

4th Semester : PROSE, APPLIED GRAMMAR & VIVA-VOCE

Max. Marks	:	100
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Applied Grammar: 25 Marks

Prose : 35 Marks

La Symphonie Pastorale, André Gide,
Comprehension, explanation and literary appreciation of the prescribed text.

Courses of Reading :
La Symphonie Pastorale, André Gide, (Edition Bordas) ou Nouveaux Classiques Larousse.

La Grammaire pour bien écrire, Bescherelle, Hatier, 1987.

Viva-Voce : **30 Marks**

(a) Dictation of an unseen passage of about 200 words based on the Vocabulary and grammar covered upto B.A.II. 10 Marks

(b) Oral questions and answers on a given text (unseen). 10 Marks

(c) General questions and reading. 10 Marks

N.B. : 1. All unseen passages shall be based on the vocabulary and grammar covered till the end of 3rd and 4th Semester courses.
2. All questions are to be asked and answered in French.
3. The latest syllabus must be followed.
4. Choice in questions must be given.
5. Question paper will be set according to B.A.II (Hons.) level.

For the information of private candidate :

1.Viva is compulsory.

2.The theory paper would be marked proportionately out of 70 as there is no internal assessment.

HINDI

बी.ए. (आनर्स) 2018–19 (द्वितीय वर्ष)

सेमेस्टर–तीन **पूर्णांक : 90+10=100**

समय : 3 घण्टे

1. **कवितावली : तुलसीदास (केवल सुन्दरकाण्ड)**

2. **भारत–भारती : मैथिलीशरण गुप्त**

   (क)दोनों काव्यकृतियों में से 12–12 अंकों की 4 व्याख्याएँ पूछी जाएँगी जिनमें से 2 व्याख्याएँ करनी होंगी। सन्दर्भ सहित व्याख्या के साथ–साथ काव्य–सौन्दर्य भी स्पष्ट करना होगा। अंक–24

   (ख) दोनों काव्य कृतियों में से 6 समीक्षात्मक प्रश्न पूछे जाएँगें जिनमें से 18–18 अंकों के तीन प्रश्न करने होंगे। अंक–54

   विशेष : प्रत्येक काव्य कृति में से एक प्रश्न करना अनिवार्य होगा।

3. **राष्ट्रीय भाषा हिन्दी : स्वरूप एवं महत्व अंक–12**

4. **आंतरिक मूल्यांकन अंक : 10**

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HINDI

बी.ए. (आनर्स) 2018–19

सेमेस्टर–चार **पूर्णांक : 90+10= 100**

समय : 3 घण्टे

1. **लहर : जयशंकर प्रसाद**

   क) **लहर में से 12–12 अंकों की 2 व्याख्याएँ पूछी जाएँगी जिनमें से एक पद्यांश की सप्रसंग व्याख्या करनी होगी। अंक–12**

   काव्य–सौन्दर्य भी स्पष्ट करना होगा।

   ख) **लहर काव्य कृति में से दो समीक्षात्मक प्रश्न पूछे जाएँगें। जिनमें से 16 अंक का एक प्रश्न करना होगा। अंक–16**

2. **अंग्रेजी से हिन्दी अनुवाद अंक–20**
3. **निबन्ध लेखन अंक–10**
4. **टिप्पण तथा प्रारूपण सम्बन्धी नियमों का सामान्य ज्ञान अंक–10**
5. **जन संचार–रेडियो, दूरदर्शन एवं समाचार पत्रों के लिए लेखन की विशिष्ट विधि अंक–10**
6. **हिन्दी के उपसर्ग–प्रत्यय अर्थ व प्रयोग तथा शब्द शोध अंक–12**

आन्तरिक मूल्यांकन अंक–10

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ਪੰਜਾਬੀ
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਦੂਜਾ (2018-19) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ - I

ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

ਆਧੁਨਿਕਤਾ, ਆਧੁਨਿਕ ਸੰਵੇਦਨਾ, ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

1. ਆਧੁਨਿਕਤਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਲੱਛਣ
3. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ : ਪ੍ਰਗਤੀਵਾਦੀ, ਪ੍ਰਯੋਗਸ਼ੀਲ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ
ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ

ਪੰਜਾਬੀ ਨਾਵਲ, ਕਵਿਤਾ, ਕਹਾਣੀ, ਸਵੈ-ਜੀਵਨੀ, ਨਾਟਕ
(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ
ਮੇਰੀ ਚੋਣਵੀਂ ਕਵਿਤਾ : ਪ੍ਰੋ ਮੋਹਨ ਸਿੰਘ
ਆਰਸੀ ਪਬਲੀਕੇਸ਼ਨ, ਦਿੱਲੀ

(ਵਿਸ਼ਾ- ਵਸਤੂ, ਕਾਵਿ-ਜੁਗਤਾਂ, ਕਾਵਿ-ਭਾਸ਼ਾ, ਕਾਵਿ-ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

ਪੰਜਾਬੀ
B.A. II (SEMESTER III) ਆਨਰਜ਼
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – ।।
ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਮੱਧਕਾਲ – ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਮੱਧਕਾਲੀ ਸੰਵੇਦਨਾ ਤੇ ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ
3. ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ :ਗੁਰਮਤਿ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਵਾਰ ਤੇ ਜੰਗਨਾਮਾ, ਜਨਮਸਾਖੀ, ਕਾਫ਼ੀ, ਬਾਰ੍ਹਮਾਂਹ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਪੂਰਨ ਭਗਤ : ਕਾਦਰਯਾਰ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿਸ਼ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼
ਅਪ੍ਰੈਲ / ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ –।।।
ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਪੰਜਾਬ ਦਾ ਬਟਵਾਰਾ : ਕਹਾਣੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਸੰਗ ਵਿੱਚ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦੇ ਪ੍ਰਮੁੱਖ ਸਾਹਿਤਕਾਰ : ਰਜਿੰਦਰ ਸਿੰਘ ਬੇਦੀ, ਭੀਸ਼ਮ ਸਾਹਨੀ, ਖੁਸ਼ਵੰਤ ਸਿੰਘ, ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਮੰਟੋ ਦੀਆਂ ਕਹਾਣੀਆਂ : ਸੰਪਾਦਕ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼
ਪ੍ਰਮੁੱਖ ਪੰਜ ਕਹਾਣੀਆਂ : ਟੋਭਾ ਟੇਕ ਸਿੰਘ
ਬੋਅ
ਬਾਪੂ ਗੋਪੀ ਨਾਥ
ਟੇਟਵਾਲ ਦਾ ਕੁੱਤਾ
ਧੂੰਆਂ
(ਵਿਸ਼ ਯਥਾਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਕਹਾਣੀ-ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ–IV
ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਅਤੇ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 — 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 — Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦੀ ਸਾਹਿਤਕ ਸਿਰਜਣਕਾਰੀ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮੁਨਸ਼ੀ ਪ੍ਰੇਮ ਚੰਦ, ਰਬਿੰਦਰ ਨਾਥ ਟੈਗੋਰ
ਮੁਲਕ ਰਾਜ ਅਨੰਦ, ਗਿਰੀਸ਼ ਕਰਨਾਰਡ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸੰਸਕਾਰ (ਨਾਵਲ) : ਯੂ ਆਰ ਅਨੰਤਮੂਰਤੀ (ਅਨੁਵਾਦਕ)
ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਨਾਵਲ–ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

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GERMAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER –III

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed novel "Der Richter und sein Henker" (Dürrenmatt) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 1-17 upto page 87 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstarße a.o. Chapters 1-17 upto page 87.

ii. "Der Richter und sein Henker" (Dürrenmatt)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 1-17

Summary

Max. Marks : 100 marks(Total)
Paper-2 (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory): 90 marks

Note : Use of dictionary is allowed

i.	Translation of an unseen text/s from German into English.	:	50 marks
ii.	Translation of an unseen text/s from English into German	:	20 Marks
iii.	Essay writing in German (about 250 words)	:	20 Marks

i. Ein Traum
ii. Eine Ferienreise
iii. Essen und Trinken
iv. Heutige Mode und Kleidung
v. Ein Fest (indisch/deutsch)

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessmet will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbook:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

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GERMAN

SEMESTER –IV

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed drama "Biedermann und die Brandstifter" (Max Frisch) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 18-34 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstraße a.o. Chapters 18-34.

ii. "Biedermann und die Brandstifter" (Max Frisch)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 18-34.

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory) : 90 marks

Note : Use of dictionary is allowed

i. Translation of an unseen text/s from German into English. : 50 marks

ii. Translation of an unseen text/s from English into German : 20 Marks

iii. Essay writing in German (about 250 words) : 20 Marks

i. Der Klimawandel
ii. Auf dem Markt
iii. Medien und Netzwerk
iv. Heutige Frau
v. Jugend und Gesellschaft

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch & Arbeitsbuch by Hartmut Aufderstraße a.o.

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DEFENCE & STRATEGIC STUDIES

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN -I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Military Geography of Pakistan : Its strategic importance, economic and industrial resources.
2. People and their characteristics.

SECTION-II

3. Outlines of history leading to the Birth of Pakistan.
4. Political Developments in Pakistan since 1947.
5. Role of Military in Pakistan's Politics.

SECTION-III

6. Foreign Policy of Pakistan (Basic Determinants).
7. Foreign Policy of Pakistan with regard to U.S.A. & Russia.

SECTION-IV

8. Pakistan's Foreign relations with its neighbours with particular reference to Afghanistan, India and Iran.

Books Recommended :

1. Akhtar, Jamna Das, *Political Conspiracies in Pakistan*, Delhi : Punjabi Pustak Bhandar, 1969
2. Britanninca., *The New Encyclopedia Britannica*, Chicago, II : Encyclopedia Britannica, Inc, 2005.
3. Burke, S.M., *Pakistan's Foreign Policy* : An Historical Analysis. [S.I.: s.n. Print]
4. Callerd, Keith B., Pakistan – A Political Study, London : Allen & Unwin, 1957.
5. Chopra, Surendra, *Perspectives on Pakistan's Foreign Policy*, Amritsar: Guru Nanak Dev University Press, 1983.
6. Cohen, Stephen P., *The Pakistan Army*, Berkeley: University of California Press, 1984.
7. Johnson, Allan G., *Privilege, Power, and Difference*, Boston, Mass: McGraw- Hill, 2006.
8. Khaliq, Sheikh Abdul, *Pakistan—Peace and War*, London : Regency Press, 1973.
9. Moon, Penderel, *Divide and Quit*, Delhi: Oxford University Press, 1998.
10. Sahni, Naresh Chander, *Political Struggle In Pakistan*, Jullundur City: New Academic Pub. Co., 1969, Print.
11. Sayeed, Khalid B., *Pakistan, The Formative Phase, 1857-1948*, London: Oxford University Press, 1968.
12. Sidhu, K.S., *Pakistan: Khetri Adhyayan*; Publication Bureau, Punjabi University Patiala, 1987.
13. Stephens, Ian. *Pakistan: New York* : Praeger, 1963.
14. Tayyeb Ali, and A Tayyeb. *Pakistan.* London [etc.] Oxford University Press, 1966.
15. Tinker, Hugh. *India and Pakistan*. New York: Frederick. A. Praeger, 1968.
16. Williams, L.F. Rushbrook. *The State of Pakistan*. London: Faber, 1966.
17. Ziring, Lawrence. *Pakistan In The Twentieth Century*, Karachi [u.a.]: Oxford University Press, 1998.
18. Ziring Lawrence, *The Ayub Khan Era,* Karachi: Paramount Publishing, 2009.

DEFENCE & STRATEGIC STUDIES

SEMESTER-IV

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Jammu and Kashmir Campaign 1947-48 : Causes, operations in brief and effects.
2. Indo-Pak War 1965 : Causes, operations in brief and effects.

SECTION-II

3. Indo-Pak War 1971 : Causes, operations in brief and effects.
4. 1999-Kargil War .

SECTION-III

5. Defence Potential of Pakistan.
6. Armed Forces of Pakistan.

SECTION-IV

7. Nuclear Policy of Pakistan.
8. Terrorism in Pakistan

Books Recommended :

1. Ayoob, Mohammed, and K. Subrahmanyam. *The Liberation War*, The University of Michigan: S.Chand, 1972.

2. Brines, Russell. The Indo-Pakistani Conflict, London: Pall Mall P., 1968.

3. Costa, Benedict. *Dismemberment of Pakistan*, Ludhiana: Kalyani Publisher,: 1972.

4. Dasgupta, C. *War and Diplomacy In Kashmir*, 1947-48. New Delhi: Sage, 2002.

5. Feldman, Herbert. *Revolution In Pakistan*. London: Oxford U.P., 1967, Print.

6. Feldman, Herbert. *The End and The Beginning*. London: Oxford University Press, 1975.

7. Gupta, K.R., *India-Pakistan Relations with Special Refernce to Kashmir*, New Delhi: Atlantic Publishers & Distributors, 2003.

8. Hackett, James T., *The Military Balance 2011*. Oxfordshire: Routledge, 2011.

9. Johri, Sita Ram. The Indo-Pak Conflict of 1965. Luckhnow: Himalaya Publications, 1967.

10. Kaul, Brij Mohan. Confrontation With Pakistan, Delhi: Vikas Publicaitons, 1971.

11. Khaliq, Sheikh Abdul, Pakistan, Peace and War, London: Regency Press, 1973.

12. Lachhman Singh., Indian Sword Strikes In East Pakistan. New Delhi: Vikas, 1979.

13. Mankekar, D. R. Pakistan Cut To Size, New Delhi: Indian Book Co, 1972. Print.

14. Mankekar, D.R. Twenty two Fateful Days. Bombay: Manaktalas, 1967. Print.

15. Nath, Rajendra. Military Leadership In India. New Delhi, India: Lancers Books, 1990.

16. Palit, D.K. The Lightning Campaign. New Delhi: Thomson Press (India), 1972.

17. Sahni, Naresh Chander, *Political Struggle in Pakistan*, Jullundur City: New Academic Pub. Co, 1969.

18. Sen. Lionel Protip. *Slender Was The Thread: Kashmir Confrontations, 1947-48*, Bombay: Orient Longmans, 1969.

19. Sethi, Surinder Singh. *The Decisive War: Emergence of a New Nation*. New Delhi: Sagar Publications, 1972.

20. Sidhu, K.S. *Pakistan: Khetri Adhyayan*: Publication Bureau, Punjabi University Patiala, 1987.

21. Sinha, S.K. *Operations Rescue*, New Delhi: Vision Books, 1977.

22. Ziring, Lawerence. *The Ayub Khan Era*. Karachi: Paramount Publishing, 2009.

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HISTORY

SYLLABUS OF B.A. (HONOURS) SEMESTER III/IV, 2018-19

Note : The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any two papers, one in Semester III and one in Semester IV according to the following :

Semester III

(i) Social and Cultural Trends in Ancient India.

OR

(ii) Social and Cultural Trends in Medieval India.

Semester IV

(ii) Social and Cultural Trends in Medieval India.

OR

(iii) Social and Cultural Trends in Modern India.

Note: Candidates CANNOT OPT FOR PAPER (ii) in BOTH Semesters.

(i) SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The paper-setter would avoid repetition between different types of question within one question paper.

Paper- SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Institutions: Varna, Jati, Ashrama and Samskara
2. Marginalized Sections of the Society: Shudras and slaves.

UNIT II

3. Women: Status and rights
4. Education: system of learning, Principal centres,

UNIT III

3. Early Religions : Harappan and Vedic
4. Protest Movements: Jainism and Buddhism

UNIT IV

5. Puranic Religions: Vaishnavism, Shaivism and Shaktism
6. Significant developments in art and architecture.

   (a) Styles of Temple Architecture: Nagara, Dravida and Vesara
   (b) Sculpture: Mauryan, Mathura, Gandhara and Gupta
   (c) Painting: Ajanta caves.

Recommended readings:

1. P.N.Prabhu, *Hindu Social Organisation*, Popular Prakashan, Bombay, 1979.
2. R.S.Sharma, *Surdas in Ancient India*, Motilal Banarasidas, Delhi, 1980.
3. K.Roy, Ed. *Women in Early Indian Societies*, Manohar, New Delhi,1999.
4. A.S. Altekar, *Education in Ancient India*, The Indian Book shop, Benaras, 1937.
5. S. Ratnagar, *Understanding Haraappa*, Tulika, New Delhi, 2001.
6. A.L. Basham, *The Wonder That Was India*, Rupa, Calcutta, 1992.
7. R.G. Bhandarkar, *Vaishnavism, Shaivism and Minor Religious Systems*, Indological Book House, Varanasi, 1965.
8. P.Brown, *History of Indian Architecture*, Vol. I Taraporevavala, Bombay 1965.
9. S.K. Saraswati, *Survey of Indian Sculpture*, Munshiram Manoharlal, New Delhi, 1975.
10. D.Barrett & B Grey, *Indian Painting* Skira, Lausanne, 1963.

(ii) SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper II: SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Conditions in the Delhi Sultanate: Nobles, theologians, slaves and other social groups; position of women; social customs and manners.
2. Devotional Movement: Vaishnavism in Bengal, the Gangetic Plain and Rajputana; the teachings and impact of Kabir and Guru Nanak

UNIT II

3. Mystical Dimensions of Islam: Organisation of the Chishti and Suhrawardi orders, with reference to their beliefs and practices.
4. Landmarks in Persian Historiography: The historical works of Ziauddin Barani and Abul Fazl.

UNIT III

5. State Intervention in the Socio-Religious Sphere: Akbar's liberal policy; his *Ibadat Khana* debates, the *mahzar* and breach with orthodox ulama; introduction of *Tauhid-i-Ilahi* and social reforms
6. Muslim Revivalist Movements: Salient features of the Mahdawi movement; socio-religious ideas of Sheikh Ahmad Sirhindi and their impact.

UNIT IV

7. Development of Literature: the devotional writings of Tulsidas, Ravidas and Namdev; the contribution of Malik Muhammad Jaisi; Abdur Rahim Khan-i-Khanan and Ras Khan.
8. Fine Arts in Mughal India: the development of architecture, painting and music during the sixteenth and seventeenth centuries.

Recommended Readings:

1. *K.M. Ashraf: Life and Conditions of the People of Hindustan,* Second Edition, Munshiram Manoharlal, New Delhi, 1970.
2. Satish Chandra*: Medieval India: From Sultanate to the Mughals*, Parts I & II, Haranand Publications (Rep.), New Delhi, 2003.
3. Peter Hardy*: Historians of Medieval India: Studies in Indo-Muslim Historical Writing*, First Indian Edition, Munshiram Manoharlal, New Delhi 1997.
4. Harbans Mukhia *: Historians and Historiography During the Reign of Akbar*, Vikas Publishing House, New Delhi 1976.
5. Khaliq Ahmad Nizami: *Religion and Politics in India During the Thirteenth Century*, New Edition, Oxford University Press, Delhi, 2001.
6. S.A.A. Razvi: *The Wonder That was India*, Part II, Twelfth Impression, Rupa and Company, New Delhi, 2002.
7. Mohammad Yasin: *A Social History of Islamic India*, Second Revised Edition, Munshiram Manoharlal, New Delhi, 1974

III. SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Socio-Cultural Trends in Early 19th Century: Religion, education and literature
2. Women Education: Aligarh Girls School; Kanya Maha Vidyalya.

UNIT II

3. Socio-Religious Reform Movements in Punjab and North- West: The Arya Samaj; Singh Sabhas and the Ahmadiyas
4. Socio-Religious Awakening in the Central Belt and Maharashtra: The Manav Dharma Sabha; the Prathana Samaj: the Rahnumai Mazdayesan Sabha (among Parsis)

UNIT III

5. Cultural Reorientation in the South: Annie Besant and the Theosophical Movement
6. The Marriage Reform Efforts: Legislative measures for the abolition of Sati and Female infanticide; contribution of reformers towards the promotion of widow-remarriage

UNIT IV

7. The Social Protest Movements: Role of Jyotiba Phule in Maharashtra; Swami Narayana Guru in Kerala; Mangoo Ram and the Ad Dharm Movement in Punjab.
8. The Literary Trends: Development of literature in Hindi; Bengali and Marathi languages.

Recommended Readings:

1. Kenneth W., Jones: *The New Cambridge History of India: Socio Religious Reform Movements in British India* (Cambridge, 1989).

2. R.C.Majumdar and Others (ed.): *British Paramountcy and Indian Renaissance*, Part II, Bhartiya Vidya Bhavan Series, Vol. X.

3. Robert D, Baird (ed.*): Religion in Modern India*, Manohar, New Delhi, 1981.

4. Gail Minault*: Secluded Scholars: Women's Education and Muslim Social Reform in Colonial India* New Delhi, O.U.P.1998.

5. Geraldine Forbes: *Women in Modern India* , Foundation Books, New Delhi, 1996.

6. Tara Chand *: History of the Freedom Movement in India*, Vol.II, New Delhi, 1967, Publication Division, G.O.I.

7. Mark Jurgensmeyer: *Religious Rebels in the Punjab*, Delhi, Ajanta, 1988.

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POLITICAL SCIENCE

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

Outlines of Test

Semester-III Option (i) : International Relations 1917-1945

OR

Option (ii) : Colonialism and Nationalism in Modern India

Semester-IV Option (i) : Western Political Thought

OR

Option (ii) : Comparative Politics

Syllabus and Courses of Reading :

Semester-III

OPTION (I) : INTERNATIONAL RELATIONS 1917-1945

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The essential concern of the course is with the period between the Bolshevik Revolution and the end of the Second World War. However, to facilitate better understanding of the developments during this period, it is very essential that the teacher familiarizes the students with the major currents of international politics immediately preceding the First World War as well as during the course of that war. Needless to say, no question will be asked on the period up to the Bolshevik Revolution.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Course Content :

Unit-I : *Nature of International Relations before and after World War-I :*

(a) Imperial confrontation & Concern for peace.
(b) Peace treaties & rise of International Organisation-League of Nation.

Unit-II : *Rise of Nationalism :*

(a) National Upsurge

(b) Search for colonies

Unit-III : *European Politics and the Post-War Settlement :*

(a) French quest for security and the German urge for equality.

(b) Britain and the European power system.

Unit-IV: *Origins of the Second World War, & International Organisation (United Nations) :*

(a) Alliances and counter-alliances.

(b) Failure of the League of Nations & Emergence of U.N.

(d) American Ambivalence.

Note : Questions to be asked on the Genesis itself and not on post-1945 developments related to the United Nations.

Suggested Readings :

1. Carr, E.H. : International Relations Between the Two World Wars (1919-1939), (London : Macmillan Press, 1973).
2. Northedge, F.S. : A Hundred Years of International Relations (London : Duchworth, 1971).
3. William Shirer : The Rise and Fall of the Third Reich, A History of Nazi Germany (London : Secker and Warburg, 1960).
4. Keswani, K.B. : International Relations : 1900 to Present Day (Bombay : Himalaya Publishing House, 2004).
5. Quicky Wright : A Study of War (Chicago : University of Chicago Press, 1942).
6. Goodrich, L.M., and Edward Hambro : Charter of the United Nations-Commentary and Documents (London: London Institute fo World Affairs, 1949).
7. Richard Little and Michael Smith (eds.) : *Perspective in World Politics (London: Routledge, 2006).*
8. Chris Brown : *Understanding International Relations (London, Palgrave, 2001).*

OR

OPTION (ii) COLONIALISM AND NATIONALISM IN MODERN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The paper aims at enabling the students about the nature and evolution of the Indian National Movement and constitutional development in colonial India.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Historical Foundations of National Movement :*

(a) Socio-Religious reform movements.

(i) Arya Samaj
(ii) Brahmo Samaj
(iii) Singh Sabha Movement
(iv) Tama Krishan Mission

Unit-II : (a) Origin and growth of Indian National Congress.

(b) Moderates and Extremists—Debates over objectives, ideology, strategy, social basis.

(c) Revolutionary Terrorism.

Unit-III : *Gandhi and Nationalist Movement in India :*

(a) Gandhi : Political strategy and new techniques of struggle.

(b) Non-Cooperation, Civil Disobedience and Quit India Movements.

Unit-IV : Landmarks in the devolution of power with special reference to Government of India Acts of

(i) 1909
(ii) 1919
(iii) 1935
(iv) Indian Independence Act 1947.

Suggested Readings :

1.	Sumit Sarkar	:	Modern India (Madras : Macmillan, 1995).
2.	Bipan Chandra	:	Essays on Colonialism (Delhi : Orient Longman, 2000).
3.	Thomas Pantham et al (ed.)	:	Modern Indian Political Thought (Delhi : Sage, 1986).
4.	Gail Omvedt	:	Dalit Visions –The Tract of the Times (Delhi : Orient Longman, 2002).
5.	Radha Kumar	:	History of Doing (Delhi : Kali for Women, 1995).
6.	Paul Brass	:	The Politics of India Since Independence (Delhi : Foundation Books, 1992).
7.	V.R. Mehta and Thomas Pantham, ed.	:	Political Ideas in Modern India, Thematic Exploration (Delhi : Sage, 2006).

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POLITICAL SCIENCE
Semester-IV

OPTION (i) WESTERN POLITICAL THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

This paper aims to introduce to the students the major themes of western political thought. This will be done by undertaking an indepth study of the key thinkers of this tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I	**:**	*Plato* : The Republic	-	Justice
			-	Philosopher-King
			-	Educations
			-	Communism of wives & property
Unit-II	**:**	*Plato* : The Statesman and the Laws	-	Ideal State
			-	Second Best State
Unit-III	**:**	*Aristotle* : The Politics	-	Inequality-Slavery, Women
			-	Nature of the State
			-	Classification of Constitutions
			-	Revolution
Unit-IV	**:**	*Machiavelli* : The Prince	-	Machiavelli as a Modern Political Thinker.
			-	Morality and Politics.
			-	Power and Statecraft.

Suggested Readings :

1. Sabine, G.H. : *A History of Political Theory* (Bombay : Oxford & IBH, 1973).
2. Dunning, W.A. : *A History of Political Theories,* 3 Vols. (Allahabad : Central, 1973).
3. Sait, E.M. (ed.) : *Masters of Political Thought*, 3 Vols. (London : George and Harap, 1947).
4. William Ebenstein : *Great Political Thinkers : Plato to Present*, 1966 (New Delhi : OUP, 2000).

Reference Books :

1. Ernest Barker : *Greek Political Theory : Plato and His Predecessors* (London : Methuen, 1978).
2. Mulgan, R. : *Aristotle's Political Theory* (Oxford : Clarendon, 1977).
3. Plamenatz, John *Man and Society,* 2 Vols. (New York : Longman, Latest Edition).
4. Quentin Skinner : *Machiavelli* (Oxford : OUP, 1981).
5. Raphael, D.D. : *Hobbes : Morals and Politics* (London : George Allen, 1978).
6. Hall, J.C. : *Rousseau : Introduction to His Political Philosophy* (London : Macmillan, 1971).
7. David Maclellan : *Marx : Fontana Modern Masters Series* (London : Fontana, 1986).

OR

OPTION (ii) C O M P A R A T I V E POLITICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :
The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial as well as developing societies and this will be undertaken in a comparative framework.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 **units**. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Approaches to Comparative Politics :*

(a) Political Sociology.

(b) Political Economy.

Unit-II : *Theories of Development :*

(a) Modernisation and Development Theories.

(b) Alternative Third World perspective on development.

Unit-III : *Political Participation and Representation :*

(a) Political Parties.

(b) Interest Groups and Pressure Groups.

(c) Political Elite.

Unit-IV : (a) Theories of State : Liberal, Marxist.

(b) Civil Society and New Social Movements.

Suggested Readings :

1. Andrew Heywood : *Politics* (London : Macmillan, 1997).

2. Mary Mank Sworth and Mourice Kogan (ed.) : *The Encyclopaedia of Government and Politics* (London : Routledge, 1992).

3. Rod Hague, Martin Harrop and Shaun Breslin : *Comparative Government and Politics : An Introduction* (London : Macmillan, 1998).

4. Gabriel Almond, G. Bingham Powell, Kaare Strom and Russel J. Dalton : *Comparative Politics Today* (Delhi : Pearson Education, 2005).

5. Ronald H. Chilcote : *Theories of Comparative Politics : The Search for a Paradigm Reconsidered* (Boulder : Westview Press, 1994).

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ECONOMICS

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

The candidates are required to study one paper out of the following three papers :

I Economics of Agriculture.

II History of Economic Thought.

III Economics of Population.

Paper–I : ECONOMICS OF AGRICULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Economics of Agriculture : Its nature and scope, Interdependence between agriculture and industry. Nature and problems of agricultural development in developing countries.

Unit-II

Transforming Traditional Agriculture : Ranis & Fei, Schultz and Meller's Models, Lewis model of unlimited supplies of labour.

Unit-III

Land reforms and system of farming. Farm size and productivity relationship. Agricultural price policy, Agricultural taxation (All these topics should deal with special reference to India).

Unit-IV

New agricultural strategy and Green Revolution. Problems of small farmers and agricultural labourers. Agricultural credit, marketable and marketed surplus. Surplus and its utilization. (All these topics would deal with special reference to India).

Recommended Readings:

1.	Eicher, C. & Witt, L. (1970)	:	Agriculture in Economic Development, Vera & Co., Bombay
2.	Frankel, Francis R. (1971)	:	India's Green Revolution-Economic Gains and Political Costs, Oxford University Press, Bombay
3.	Joshi, P.C. (1975)	:	:Land Reforms in India, Allied, Bombay, Part II, Sections I & II
4.	Khusro, A.M. (1968)	:	Readings in Agricultural Development, Allied, Bombay, Articles by : B.S. Minhas & T.N. Srinivasan, V.M. Dandekar, M.L. Dantwala, A.N. Khusro, T. Bergman, V.K.R.V. Rao.
5.	Meller, J.W. (1966)	:	The Economics of Agricultural Development, Vera & Co., Bombay
6.	Misra, S.K. & Puri, V.K. (2014)	:	Indian Economy, Himalaya Publishing House, Bombay
7.	Schultz, T.W. (1970)	:	Transforming Traditional Agriculture, Lyall Book Depot, Ludhiana
8.	Singh, Amarjit & Sadhu, A.N. (1986)	:	Agricultural Problems in India, Himalaya Publishing House, Bombay
9.	Soni,R.N. (1992)	:	Leading Issues in Agricultural Economics, Vishal Publisher, Jalandhar.
10.	Todaro, Michael P. (1987)	:	Economic Development in the Third World, Orient Longman, New Delhi
11.	Wadhva, Charan D. (1973)	:	Some Problems of India's Economic Policy, Tata McGraw Hills, Bombay, Part II: Articles-B,C,D, F and G

Supplementary Readings:

1.	Sameeksha Trust, Bombay	:	Various Issues : Economic and Political Weekly.
2.	Indian Society of Agricultural Economics, Bombay	:	Various Issues : Indian Journal of Agricultural Economics.

Paper -II : HISTORY OF ECONOMIC THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Pre-Classical Economic Thought : Mercantilism : Mercantilist ideas, regulations of economic life, leading theory of Mercantilist school, Physiocracy : ideas with special reference to Quesnay and Turgot.

Unit-II

Classical and Marxian Political Economy : The classical tradition : Adam Smith, Ricardo, J. S. Mill and Karl Marx on value, distribution and development.

Unit-III

Reaction Against Classicism : Socialist and Nationalist thinkers, Sismondi, Saint-Simon, Robert Brown and Fourier, Subjective School : Menger, Weiser and Bohm Bewark.

Unit-IV

Neo-Classical Economics : Main features.
Marshall : Scope of Economics, theory of firm, time-element, partial equilibrium analysis.
Keynes: Concept of effective demand, consumption, investment, inflationary gap.

Recommned Readings:

1. Blaug , M. (1968) : Economic Theory in Retrospect, Richard D. Irwin Inc. Illinois.
2. Gide & Rist (1964) : A History of Economic Doctrine, George G. Harper & Co. Ltd., London
3. Sweezy , P. M. (1991) : The Theory of Capitalist Development, K. P. Bagchi & Co., Calcutta,
4. Roll, Eric (1993) : History of Economic Thought, Oxford University Press, Calcutta..

Supplementary Readings :

1. Ghosh , B. N. & Ghosh, Rama (1988) : Concise History of Economic Thought, Himalaya Publishing House, Delhi .
2. Paul , R.R. (1979) : Classical Political Economy, Kalyani Publishers, Delhi..
3. Schumpeter , J.A. (1961) : History of Economic Analysis (Selected Portions), George Allen & Unwin, London,

Paper-III: Economics of Population

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT – I

Theories of Population: Malthus, optimum.
Demographic transition theory .
Population and Economic Development.

UNIT – II

Population Structure and Characteristics: Impact of Population growth on the age and gender structure
Fertility: Concepts of fertility transition. Measurement of fertility .
Mortality: Components and Measurement, Infant Mortality in India.

UNIT – III

Migration: Concepts, causes and consequences (economic and demographic) of migration.
Migration in India: Causes and Trends, Rural-Urban, Male-Female.
Urbanization: Concepts, Trends of Urbanization in India.

UNIT – IV

Growth and Structure of Indian Population.
Literacy: Literacy transition in India, pattern of literacy and literacy differentials in India.
Estimation of Population in India: Census, sampling and vital registration methods.
Population Policy in India since Independence.

Essential Readings:

Aggarwal, A. S. N. (1972)	:	India's Population Problem Tata McGraw Hills Co., Bombay.
Becker, G. (1960)	:	An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
Boserup, E. (1981)	:	Population and Technological Change University of Chicago Press, Chicago.
Bouge, D. J. (1971)	:	Principles of Demography, John Wiley, New York.
Bose, Ashish (1978)	:	India's Urbanization, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
Coale, A. and E. Hoover (1958)	:	Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects. Princeton University, Press, Princeton.
Chenery, H. and T.N. Srinivasan (eds.) (1989)	:	Handbook of Development Economics, Vol. 1 & 2, Elsevier, Amsterdam.
Chandna, R. C. (2000)	:	A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
Cox, Peter R. (1979)	:	Demography, Vikas Publishing House, New Delhi
Easterlin, R. A. (1968)	:	Population, Labour Force and Long Swings in Economic Growth: National Bureau of Economic Research, New York.
Ghosh, B. N. (ed.) (1987)	:	Studies in Population and Economic Development, Deep and Deep Publications, New Delhi
John R. Weeks (2002)	:	Population : An Introduction to Concepts and Issues (7^{th} edition), Wadsworth Publishing Company, New York.
Leibenstein, H. (1957)	:	Economic Backwardness and Economic Growth, New York, John Wiley and Sons
Govt. of India	:	Census Report, 2001.

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ECONOMICS

Semester-IV

The candidates are required to study one paper out of the following three papers :

I Industrial Economics.
II Economics of Public Enterprises.
III Theory of Statistics.

Paper-I : INDUSTRIAL ECONOMICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Scope and methods of Industrial Economics; Basic concepts of firm, industry and market; Organisational forms and alternative motives of the firms; Industrial structure and economic development.

Unit-II

Market Structure : Sellers concentration, product differentiation, conditions of entry and economies of scale, market structure and profitability.
Growth of Firms : Vertical integration, diversification, mergers and innovation; constraints on growth-demand, financial and managerial.

Unit-III

Theory of industrial location, contribution of Weber and Sergent Florence, centralized vs. balanced regional development, industrial concentration and dispersal in India.

Unit-IV

Industrial policy since independence, Industrial development under plans and reasons for deceleration of industrial growth, Growth of State industrialization in India.

Recommended Readings :

1. Barthwal, R. R. (2010) : Industrial Economics : An Introductory Text Book, New Age International Publisher (P.) Ltd., New Delhi.
2. Datt , Rudar & Sundharam K. P. M. (2012) : Indian Economy , S. Chand & Company.
3. Devine , P. J. et al. (1974) : An Introduction of Industrial Economics, George Allen & Unwin Ltd.,London.
4. Howe , W. Steward (1978) : Industrial Economics : An Applied Approach, The Macmillan Press Ltd.
5. Kuchhal, S. C. (1989) : Industrial Economy of India , Allahabad, Chaitanya Publishing House.

Supplementary Readings :

1. Ahluwalia , Ishar Judge (1985) : Industrial Growth in India : Stagnation Since Mid Sixties, Oxford University Press, Delhi.
2. Penrose, E. T. (1995) : The Theory of Growth of Firm, Oxford, Basil Blackwell.
3. Richardson, Harry W. (1969) : Elements of Regional Economics, Penguin Education.
4. Sivayya & Das (1978) : Indian Industrial Economy, S. Chand & Co., New Delhi
5. Smith, David M. (1971) : Industrial Location : An Economic Geographical Analysis, John Wiley & Sons Inc.

Paper II : ECONOMICS OF PUBLIC ENTERPRISES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Concepts : Role of public sector in socio-economic development, Rationale of public sector—multiple objectives of public enterprises and clash and complementarity in objectives. Historical perspective of public sector in India. Organisation of public enterprises – various forms and role.

Unit-II

Role of public sector financial institutions in the financing of public enterprises. Problems of management of working capital – Management of inventory, credit and cash financing of working capital.

Unit-III

Pricing in Public Sector : Basis and types of pricing policies, pricing practices, machinery of price fixation. Accountability and profitability of public sector – Causes of poor financial performance of public sector in India.

Unit-IV

Sources of funds of public enterprises – Debt and equity, Industrial relations and its importance, Industrial disputes : causes, effects and their settlements.

Recommended Readings :

1. Narain , Laxmi (1980) : Principles and Practices of Public Enterprises Management, S. Chand & Co.,New Delhi.
2. Narain , Laxmi (1982) : Public Enterprises in India, S. Chand & Co., New Delhi.
3. Institute of Public Enterprises (1967) : Organisation in Public Enterprises, Tripathi, Bombay.
4. Institute of Public Enterprises (latest edition) : Pricing and Investment in Public Enterprises, Oxford and IBH Publishing Co., New Delhi.

Supplementary Readings :

1. Bhalla , G. S. (1968) : Financial Administration of Nationalised Industry in U.K. and India, Meenakshi, Meerut.

2. Gupta, K. R. (1978) : Issues in Public Enterprises, S. Chand & Co., New Delhi.

Paper- III : THEORY OF STATISTICS

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT - I

*Moments & Expectation***:** Concept of random variables, Moments, Mathematical expectation, Moment Generating Function, Characteristic Function.
*Regression and Correlation***:** Multiple, Partial Regression and Correlation, Fitting of multiple regression by least squares technique
*Growth Curves***:** Properties, methods of estimation and applications of parabolic, geometric, exponential, modified exponential, Gompertz and logistic growth curves.

UNIT - II

Probability: Addition and Multiplication Theorems, Conditional Probability, Bays Theorem, Chebychev's Inequality, Central limit theorem
*Probability Distribution***:** General Characteristics and Applications of Binomial, Poisson and Normal Distribution.

UNIT - III

*Sampling & Sampling Distribution***:** Concept of sampling distribution, Types & Techniques of Sampling, Statistic vs Parameter.
Estimation: Point Estimation and Interval Estimation, Properties of Point Estimates, Maximum Likelihood Estimates.
Statistical Hypothesis: Two -tailed and one-tailed tests, Types I and II Errors, Level of significance, Critical Region.

UNIT - IV

*Large and small samples***:** Tests of significance based on Normal, 't' 'F' and 'Z' distributions. Testing the significance of means, proportions, correlation and regression coefficients and their interpretation. Elementary Knowledge of Analysis of Variance (one-way and two -way classification) and Analysis of Covariance.
*Non-Parametric Tests***:** Chi-square test and sign test.
Quality Control: Elementary Knowledge of quality Control and its simple application.

RECOMMENDED READINGS

1.	Croxton, F.E. & Cowden, D.J. (latest edition)	:	Applied General Statistics, Prentice Hall London and Prentice Hall of India.
2.	Gupta , S.C. &Kapoor, V.K. (1996)	:	Fundamentals of Applied Statistics, Sultan Chand & Sons, New Delhi
3.	Gupta, S.P. (1980)	:	Statistical Methods, Sultan Chand & Sons, New Delhi
4.	Kapoor, J.N. & H.C.Saxena (1976)	:	Mathematical Statistics, S. Chand & Co .Pvt. Ltd., New Delhi
5.	Mills, F.C. (1955)	:	Statistical Methods, Henry Hold & Co, New York
6.	Speigal, M.R. (1961)	:	Theory and Problems of Statistics
7.	Wonnacott , T. & Wonnacott, R. (1977)	:	Introductory Statistics for Business and Economics, John Willey & Sons.
8.	Yule, G.U. & Kendall, M.G. (1950)	:	An Introduction to Theory of Statistics (for theory of attributes)

SUPPLEMENTARY READINGS

1.	Carmal, P.H. (latest edition)	:	Applied Statistics for Economics, Sir Issac Pitman and Sons Ltd., London
2.	Chou, Ya-Lun (1975)	:	Statistical Analysis, Hold, Rinehart and Winston, New York.
3.	Freund, J.E. (1964)	:	Mathematical Statistics, Prentice Hall
4.	Freund,J.E. & William, F.J. (1979)	:	Modern Business Statistics, Prentice Hall, Englewood
5.	Grant, R.L. (1996)	:	Statistical Quality Control, McGraw Hill Book
6.	Hoel, P.G. (2007)	:	Elementary Statistics, John Wiley & Sons.
7.	Mood, A.M. & Graybill, F.A.(1963)	:	Introduction to the Theory of Statistics McGraw Hill.
8.	Yamane, Taro (1970)	:	Statistics: An Introductory Analysis, Harper and Rew, New York.

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SOCIOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER –III

SOCIAL THOUGHT (Compulsory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

Note

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper intends to familiarize the students with the contributions of major thinkers in classical Sociology and their continuing relevance to its contemporary concerns. This paper offers the Honours students with an understanding of the development of Sociology as a discipline, with a focus upon classical thinkers.

Course Content :

UNIT-I

Auguste Comte : Laws of Three Stages, Hierarchy of Sciences, Positivism.

UNIT-II

Emile Durkheim : Social facts and division of labour, social solidarity; suicide and religion.

UNIT-III

Max Weber : Social action, class, status and power, types of authority; Protestant ethic and the spirit of capitalism.

UNIT-IV

Karl Marx : Historical materialism; dialectical materialism; class conflict, capitalism and theory of social change.

Essential Readings:

1. *Coser, L.A. (1997) : Masters of Sociological Thought, New York : Harcourt Brace Jovonovich*
2. *Collins, Randall (1977) : Theoretical Sociology, Jaipur : Rawat Publications.*
3. *Raymond, Aron (1982) : Main Currents in Sociological Thought, Vols. I & II, Harmondsworth: Penguin Books.*
4. *Timasheff, N.S.(1967) : Sociological Theory : Its Nature and Growth, New York : Random House.*
5. *Zeitlin, I.M.(1987) : Ideology and the Development of Sociological Theory, New Jersey : Prentice Hall.*
6. *Stones Reb (ed) (2007) : Key Sociological Thinkers Palgrove, NY.: Macmillon*
7. *John A Hughes, W Sharrock Peter T. Martin(2004) : Understanding Classical Sociology Sage, Thousand Oak*
8. *Bert N Adams & R.A. Sydie (2002) : Classical Sociological Theory, Sage, New Delhi*
9. *Anthony Giddens & Philip W Sutton (2007) : Sociology: Introductory Readings Maldon: Polity Press*

Further Readings :

1. *Harlambos, M. (1984) : Sociology, Themes and Perspectives, Delhi : Oxford University Press.*
2. *Lemert, C. (ed.) (2004) : Social Theory – The Multicultural & Classical Readings, Jaipur : Rawat Publications.*
3. *Marx & Engles(1967) : The Communist Manifesto, Harmondsworth : Penguin Books.*
4. *Morrison, Ken, Marx, Durkheim, Weber (1995) : Formation of Modern Social Thought, London : Sage,*
5. *Sorokin, P. (1978) : Contemporary Sociological Theories, Ludhiana : Kalyani Publishers.*
6. *Judge, paramjit S, (2012) : Foundations of Classical Theory, New Delhi, Pearson*
7. *Kundu, Abhijit, (2012) : Sociological Theory, New Delhi, Pearson*

SOCIOLOGY

SEMESTER-IV

SOCIAL PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper exposes the honours students in Sociology to the related field - Social Psychology. The purpose of this paper is to introduce the basic concepts in Social Psychology, which have a bearing on the Social-Psychological understanding of social interaction, social groups, public opinion and leadership qualities. This course prepares the students to study social phenomena from social-psychological perspectives.

Course Content :

UNIT-I

Introduction – Nature, Scope, Application and Relationship of Social Psychology with Sociology.

UNIT-II

Perception, Motivation, Learning, Attitudes and their Measurement.

UNIT-III

Social Groups – Groups and Classification. Collective Behaviour : Crowd, Audience, Mob and their differences.

UNIT-IV

Propaganda and Public Opinion.
Leadership – Emergence, type and functions of leaders, leadership qualities.

Essential Readings:

1. *Curtis, Jack H. (1960)* : *Social Psychology, New York : McGraw Hill.*
2. *Fraser, C. & Burchell, B. (2001)* : *Introducing Social Psychology, Cambridge : Polity Press.*
3. *Kuppuswamy, B. (1980)* : *Social Psychology, Bombay, Asia Pub. House.*
4. *Krech, D. & Cretchfield, Richards (1948)* : *Theory & Problems of Social Psychology, New York : McGraw Hill, 1948.*
5. *Lindgren, H. Clay (1974)* : *An Introduction to Social Psychology, 2nd ed., New Delhi : Wiley Eastern.*
6. *Linde Smith, Strauss, A.R., Denzin, A.L. & Norman, D.(1988)* : *Social Psychology, New Jersey : Prentice Hall.*
7. *Perry, J.B. & Pugh, M.D.(1978)* : *Collective Behaviour : Response to Social Stress, Minnisotta : West Publishing Co.*

Further Readings

1. *Baron, Robert A, Branscombe Nyla R., Byrne Donn, Bhardwaj Gopa (2012)* : *Social Psychology, New Delhi, Pearson*
2. *Taylor, Shelley E., Pepla, Letitia Anne, Sears David O, (2006)* : *Social Psychology, New Delhi, Pearson*
3. *Patiwal, Suprithy, (2002)* : *Jaipur, RBSA Publication*

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PHILOSOPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER – III

Paper : CONTEMPORARY WESTERN PHILOSOPHY & CONTEMPORARY INDIAN THOUGHT AND CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives :

The aim of this paper is to acquaint students with the theories of different western contemporary philosophers and the problems of language, perception, meaning and truth, science and God; and to familiarize the students with Indian thought and culture according to Contemporary Indian thinkers.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

1. Idealism (Bradley).
2. Realism – Common Sense & Critical Realism (Moore, Russell & Putnam)

Unit-II

1. Language, Meaning & Truth.
2. Philosophy, Science & Religion.
3. Existentialism : Theistic and Atheistic Approaches.

Unit-III

1. Mahatma Gandhi & Tilak.
2. Ambedkar & M.N. Roy

Unit-IV

1. Sri Aurobindo
2. Swami Dayanand Saraswati, Swami Vivekananda.
3. Tagore

Essential Readings :

1. Inquiry into Meaning & Truth by Russell, Harper Collins, 1980.

2. Modern Indian Thought by V.S. Narvane, Asia, 1967.

3. Philosophy in the 20th Century by A.J. Ayer, London, Unwin, 1982.

Suggested Readings :

1. Contemporary Philosophy : Studies of Logical Positivism and Existentialism by F.C. Copleston, Continuum Intl. Pub. Group, 2003.

2. Religion of Man by Rabindranath Tagore., Macmillian Publishers, New York, 1931.

3. Srimad Bhagwad Gita Rahasya or Karma Yoga Sastra by B.G. Tilak, Manohar Book Pub., 2002, Delhi.

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PHILOSOPHY

SEMESTER – IV

Paper: STUDY OF A SPECIAL PHILOSOPHER

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives:

The aim of this paper is to make students study a philosopher indepth amongst the options offered.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain **4** units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

One out of the following Philosophers :

Option (i) : PLATO

Unit-I	:	Virtues : Wisdom, Courage, Temperance and Justice, Justice and Happiness : Is the just life happier than the unjust one
Unit-II	:	The meaning and purpose of education.
Unit-III	:	Nature of knowledge and its relation to sensation.
Unit-IV	:	Language and its relation to the world : Do names picture the objects named ?

OR

Option (ii) : ARISTOTLE

Unit-I	:	Form and Matter.
Unit-II	:	Aristotle's Ten Categories.
Unit-III	:	Four Causes and Change.
Unit-IV	:	Identity of Thought and Truth in the Active Reason.

OR

Option (iii) : IMMANUEL KANT

Unit-I : A –priori and A –posteriori judgements.

Unit-II : Nature of Space and Time.

Unit-III : Function of Categories and Significance of Antinomies.

Unit-IV : Refutation on the various proofs for the existence of God.

OR

Option (iv) : UPANISHADS

(Chandogya, Mandukya and Isa)

Unit-I : Mandukya's Treatment of 'Aum'. Symbol of Immanent and Transcendent aspects of Atman.

Unit-II : Philosophy of Being as instructed by Uddalaka Aruni in Chandogya Upanishad.

Unit-III : Nature of Atman in Isa Upanishad.

Unit-IV : Views of Upanishads on Brahman, Soul and World.

OR

Option (v) : SARTRE : Being and Nothingness

Unit-I : Being-in-itself and Being-for-itself.

Unit-II : Facticity.

Unit-III : Freedom, responsibility and badfaith.

Unit-IV : Being for Others, Existence of Others, the problem of embodiment.

OR

Option (vi) : NAGARJUNA

Unit-I : Concept of Sunya.

Unit-II : Sunyata and Pratiyasamutpada.

Unit-III : Logic and Reality.

Unit-IV : Dialectical System.

OR

Option (vii) : SAMKARA

Unit-I : Theory of Causation.

Unit-II : Prakriti as a Ultimate Cause.

Unit-III : Parinamavada Vs. Vivartavada.

Unit-IV : Refutation of Prakritikaranavada.

OR

Option (viii) : PATANJALI

Unit-I : Language and meaning.

Unit-II : Word-meaning relationship.

Unit-III : Purpose of grammar.

Unit-IV : Sabda as a Pramana.

Essential Readings :

1. Aristotle-Metaphysics Ed. & Tr. By John Washington and with an introduction by Sir David Ross (London : Dentsons, 1956).
2. Being & Nothingness by J.P. Sartre, Washington Square Press, 1993.
3. Cambridge Companion to Sartre ed. By Christina Howells, Cambridge University Press, 1992.
4. Cratylus in Plato's Dialogues, Plato, D.N. Sedley, Cambridge University Press, 2003, Cambridge, U.K..
5. Kant-Critique of Pure Reason : Norman Kemp Smith (Tr.) (London, Macmillan, 1952).
6. Nagarjuna-Madhyamika Karika, Stcherbatsky Theo : Conception of Buddhist Nirvana Delhi : Bharatiya Vidya Prakashan, 2003.
7. Patanjali : Mahabhasya, Chaps. I & II Gita Press, Gorakhpur, 1927
8. Plato-Republic, Theatetus, Cratylus In : B. Jowett (Tr.) Plato's Dialogues (New York : Random, 1937).
9. Republic, Hackett Publishing Company, Indian Polish, 1992, U.S.A.
10. Samkara, Brahmasutrabhasya : Tarka Pada (First four Sutras, Thibaut, Sacred Books of the East, Delhi, Motilal Banarasi Dass, 1956).
11. Theatetus, Plato, Robin H. Waterfield, Penguine Books, London, 2004.

Suggested Readings :

1. A Critical History of Greek Philosophy by W.T. Stace, Macmillan India Ltd., 1982.
2. PLATO by J.C.B. Gosling, Routledge & Kegan Paul, London, 1973.
3. Sartre, Jean Paul, Between Existentialism and Marxism (Translated by) John Mathews, Verso, New York, 2005.
4. Stephen Priest (Ed.), Jean Paul Sartre, Basic Writings, Routledge, London, 2007.
5. The Philosophy of Plato by Rupert C. Lodge, Routledge & Kegan Paul, London, 1956.
6. The Philosophy of Sankara's Advaita Vedanta, S.K. Chattopadhyaya, Sarop of Sons, 2000.

PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

PAPER : SOCIAL PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) Social Psychology course emphasizes the relationship between society and individuals. It also enables the students in understanding group dynamics, role of attitudes and leadership behaviour in the society.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit I : *Introduction :* Nature of Social Psychology, Methods of Research in Social Psychology.

Unit II : *Attitudes :* Concepts, Formation of Attitudes, Theories of Attitude Change; Measurement of Attitudes.

Unit III : *Leadership :* Functions of Leaders, Theories of Leadership (Trait Theories, Behavioural Theories, Fiedler's Contingency Model).

Unit IV : Applications of Social Psychology: Pro Social behavior, Bullying, Ragging.

Books Recommended :

Suggested Readings :

1. Baron, R.A. and Byrne, D. (2003) : Social Psychology : Understanding Human Interaction, New Delhi: Prentice Hall of India.

2. Robbins, S.P. (1998) zzzzzzzzzzzz Organizational Behaviour, New York : Prentice Hall of India.

3. Luthans, F. (1998) : Organizational Behaviour.New York : McGraw Hill.

4. Taylor, G.E. Peplau, L.A. and Sears, D.O. (2006) : Social Psychology, Delhi:Pearson.

Reference Books :

1. Lindgren, H.C. (1973) : Introduction of Social Psychology. New York : Wiley.

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PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER IV

Paper : RECENT PERSPECTIVES OF PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) This course aims at helping the students to appreciate the basic assumptions, principles and historical roots of modern scientific psychology. It will also help them to understand main theoretical perspective in psychology.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totaling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit- I : *Emotional Intelligence* : Concept and Theories (Goleman, Salovey and Meyer).

Unit-II: *Spirituality and Well Being* : Concept, Measurement and Relationship with Well Being.

Unit-III: *Stress and Coronary Heart Disease;* Concept, Symptoms, Role of Stress in Coronary Heart Disease.

Unit-IV: *Positive Emotions and Mental Health:* Forgiveness, Gratitude and Mental Health.

Books Recommended :

Suggested Readings

1. Crompton, W.C. (2005): An Introduction to Positive Psychology. Singapore: Thomson.

2. Snyder, C.R. and Lopez, S.J. (2005): Handbook of Positive Psychology. New York: Oxford University Press.

3. Brannon, L. and Feist, J. (2007): Introduction to Health Psychology. New Delhi. Thomson – Wadsworth.

4. Cohen, L.M., M.C. Chargue, D.E. and Colins, F.J.: The Health Psychology Handbook. New Delhi: Sage Publications.

5. Mohan, J. (2003) : Psychosocial Correlates of Coronary Artery Disease: A Monograph. New Delhi: Friends Publishers.

5. Mohan, J. and Sehgal , M. (2006) : Health Psychology. New Delhi: Abhijeet Publications.

7. Pestonjee, D.M. (2006): Stress and Coping: The Indian Experience. New Delhi: Sage Publications.

Reference Books:

1. Carr, A.(2004): Positive Psychology; The Science of Happiness and Human Strengths. New York: Brunner –Routledge.

2. Linley, P.A. and Joseph, S. (2004) : Positive Psychology in Practice. New York John Wiley and Sons.

3. Peterson, C. (2006): Positive Psychology. New York: Oxford University Press.

4. Friedman –Di, Mateo (1989): Health Psychology. New York: Prentice Hall.

5. Kaplan, R.M., Sallis, J.E. and Patterson, T.L. (1993): Health and Human Behaviour. New York: McGraw Hill.

6. Sarafino, P.E. (1998): Health Psychology: Biopsychosocial Interactions. New Delhi: John Wiley and Sons..

7. Taylor, S.E. (2006) : Health Psychology. New Delhi: John Wiley and Sons.

8. White, P. (2005): Biopsychosocial Medicine: An Integrated Appraoch to Understanding Illness, New Delhi: Oxford University Press.

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GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

Paper-I : THE NATURE OF GEOGRAPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

1. To introduce the students to the philosophical and methodological foundations of the subject and its place in the world of knowledge.
2. To familiarise them with the major landmarks in development of geographic thought at different periods of time.

Course Content :

UNIT-I

- Nature and Development of Geography as a Discipline.
- Contribution of Eratosthenes, Ptolemy, Humboldt, Ritter and Darwin.

UNIT-II

Concepts in Geography:

(i) Spatial Distribution (ii) Man-Environment Relationship (iii) Areal Differentiation and (iv) Spatial Organisation.

UNIT-III

Approaches:
Empirical/Theoretical, Systematic / Regional, Behavioural.

UNIT-IV

Schools of Thought:
Determinism, Possibilism, Neo Determinism, Humanism, Radicalism.

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.
3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings :

1. Husain, Majid. : *Evolution of Geographical Thought,* Rawat, Jaipur, 2001.
2. Martin, G.J. : *All Possible Worlds – A History of Geographical Ideas*, Oxford University Press, U.K., 2005.

Further Readings :

1. Adhikari, Sudeepta : *Fundamentals of Geographic Thought,* Chaitanya, Allahabad, 2004.
2. Dikshit, R.D. : *Geographical Thought : A Contextual History of Ideas*, Prentice Hall, New Delhi, 2000.
3. Hartshorne, Richard : *Perspectives on the Nature of Geography,* Rand, McNally and Co., Chicago, 1959.
4. Minshull, R. : *The Changing Nature of Geography,* Hutchinson University Library, London, 1970.

Pedagogy :

- Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of the subject.
- The students may be encouraged to collect information on any theme amenable to geographical interpretation.

GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER IV

Any one of the following optional courses :

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

OR

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The course is meant to provide an understanding of spatial and structural dimensions of population and the emerging issues. The course is further aimed at familiarising the students with global and regional level problems and also equip them for comprehending the Indian situation.

Course Content :

UNIT-I

Nature and scope of population geography, factors affecting distribution of population; present world pattern of population distribution. Density of population – various types of densities and their significance; broad spatial patterns of density of population in the world.

UNIT-II

Growth of population – Determinants of population growth; trends of population growth in developed and developing countries of the world.

Migration – Types, causes and consequences.

UNIT-III

Sex composition – Its determinants and world patterns.

Occupational structure – A comparative study of developed and developing countries.
Literacy–its determinants and world patterns.

UNIT-IV

Urbanization – Definition, process of urbanization; comparative study of urbanization in developed and developing countries.

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Special credit will be given to suitable use of maps.

4. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings:

Essential Readings :

1. Chandna, R.C. : *A Geography of Population*, Kalyani Publishers, Delhi, 1996.
2. Clarke, J.I. : *Population Geography,* Pergamon Press, Oxford, Latest Edition.

Further Readings :

1. Chandna, R.C. : *Jansankhya Bhoogol*, Kalyani Publishers, New Delhi, 1996.
2. Crook, N. : *Principles of Population and Development*, Pergamon, New York, 1997.
3. Jones, H.R. : *Population Geography*, Harper and Row, London, 1981.
4. Sundaram, K.V. & Nangia, S. (Eds.) : *Population Geography*, Heritage, New Delhi, 1986.
5. Trewartha, G.T. : *The Less Developed Realm – A Population Geography*, McGraw-Hill, New York, 1972.
6. Trewartha, G.T. : *The More Developed Realm : A Geography of its Population,* Pergamon Press, Oxford, 1979.

Pedagogy :

1. Use maps and atlases.
2. Students should be encouraged to read Population Clock.
3. Consult census publications.
4. Organised field work.
5. Organise discussions on population issues.

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

1. To understand the process of urbanization and origin, growth and classification of urban settlements with relevant theories and models.
2. To examine the changing economic base and structure of the contemporary cities.
3. To relate urbanisation process and the evolution of the urban system.
4. To examine the contemporary urban issues and suggest new urban planning and urban policy

Course Content :

UNIT-I

Definition, nature and scope of urban geography.

Definition of urban places.

Evolution of City through Historical Times : Ancient, medieval, modern.

UNIT-II

Site and situation of cities : Definition, importance, types.

Size and spacing of cities.

Ecological Processes : Centripetal and centrifugal forces, types of ecological processes.

UNIT-III

Internal structure of cities : Theories of internal structure and their evaluation, concentric zone theory, sector theory, multiple nuclei theory.

UNIT-IV

City – Region relations.

Umland of Cities : Definition, bases of demarcation, attributes.

Rural –Urban Fringe : Attributes and demarcation.

Note :

1. The compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each Unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings:

1. Carter, Harold : *The Study of Urban Geography*, Edward Arnold, London, Latest Edition.
2. Krishan, Gopal : *Nagar Bhugol,* Punjab State University Text Book Board, Chandigarh, 1974.
3. Mayer, H.M. and Kohn, L.F. (Eds.) : *Readings in Urban Geography*, University of Chicago Press, Chicago, 1964.

Further Readings :

1. Johnson, H.J. : *Urban Geography : An Introductory Analysis,* Pergamon Press, London, 1972.
2. Knox, Paul : *Urban Social Geography : An Introduction,* Longman, London, 1982.
3. Verma, LN : *Urban Geography :* Rawat Publications
4. Sidhartha K & Mukherjee S : *Cities Urbanization and Urban systems* Kisalaya Publications Pvt. Ltd., 2013.
5. Ramachandran, K : *Urbanisation and Urban Systems in India* Oxford University, Press, 1992.

Pedagogy :

- Awareness of data sources such as from Census of India, Town Planning organizations, and their applications to understand and evaluate the spatial patterns and the processes of urbanization should be highlighted in the class. This needs to be in form of selected case studies.
- Study of urban morphology and urban functions with special reference to selected towns need to be encouraged.
- Atlases and maps of NATMO and Census should be consulted and students should be given opportunity to participate in group discussions.

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PUBLIC ADMINISTRATION

SEMESTER -III

PAPER- I: ADMINISTRATIVE THOUGHT

Max. Marks: 100
Theory: 90 Marks
Internal assessment: 10 Marks
Time: 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of select ancient, classical, neo-classical and modern administrative thinkers and their contribution to administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Kautilya, M.K.Gandhi and Woodrow Wilson

Unit-II

Frederick W. Taylor, Henri Fayol, Luther Gulick and L.B.Urwick

Unit-III

Max Weber, Elton Mayo and M.P.Follet

Unit-IV

Herbert A. Simon, Abraham Maslow and Fred W. Riggs

Essential Readings

Bertram, M. Gross.(1964).*The Managing of Organisations: The Administrative Struggle* .London: Mac Millan Publishers.

Fred W, Rigg.(1964)..*Administration in Developing Countries* .Boston Houghton.

George, C.S.(1974).*History of Management Thought.*New Delhi: Prentice Hall.

Hooja, R & Arora, R. K. (2007).*Administrative Theories* .Jaipur: Rawat Publicaion.

Katariya,S.(2011). *Administrative Thinkers* .New Delhi: National Publishing House Jaipur.

Maheshwari ,S.R.(2003) . *Administrative Thinkers* .New Delhi: MacMillan.

Prasad & Prasad.(2007). *Administrative Thinkers* .New Delhi: Sterling Publishers,Reprint.

Sapru, R.K.(1996).*Theories of administration* .New Delhi: S. Chand.

Simon, A. Herbert.(1976). 3rd Ed. *Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation* . New York: Macmillan.

Sudha , G.S.(2004). *Management of History Thinkers*.Jaipur : R.B.S.A. Publishers .

Further Reading

Barnard, C. (1974).*The Functions of the Executive* . London: Oxford University Press.

Pugh, D. S. (1984). 2nd Ed. *Organisation Theory* .Harmondsworth :Penguin Books.

Rabin, J. & Others.(2007). 3rd Ed.*Handbook of Public Administration.* New York: Marcel Dekker.

Silverman, D.(1970).*The Theory of Organisation* . London: Heinemann.

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PUBLIC ADMINISTRATION

SEMESTER-IV

PAPER- II: The candidates have to select one out of the following three options:

Option (i) : Agricultural Administration in India
Option (ii) : Industrial Administration in India
Option (iii) : Police Administration
Option (iv) : Public Policy and Analysis

PAPER-II – Option (i): AGRICULTURAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth knowledge about the role of agriculture in the economic development of the country, role of technology in agricultural development, marketing of agricultural produce. It would also give understanding about the agricultural policies of the government and introduce the student to certain related issues like agricultural finance, agricultural education, research, and extension.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Role of Agriculture in Economic Development
Problems of Agricultural Development
Agriculture Policy

Unit-II

Agriculture Development under Five-Year Plans
Centre-State Relations in Agriculture
Agriculture Administration at the Central and State Levels

Unit-III

New Technology for the Development of Agriculture
Marketing of Agriculture Produce
Agriculture Finance and Rural Indebtedness

Unit-IV

Role of NABARD in Agricultural Development
Agricultural Education and Research
World Trade Organisation and Agriculture

Essential Readings

Chaudhary, P. (1972). *Readings in Indian Agricultural Development*. London: George Allen & Unwin.
Ghosh , R.N.(1977). *Agriculture in Economic Development with Special Reference to Punjab* . New Delhi: Vikas.
Mahajan , V.S. (1990). *Agriculture and Rural Economy in India.* New Delhi: Deep & Deep Publications.
Rao , C.H. Hanumantha.(1975). *Technological Change and Distribution of Gains in Indian Agriculture* . Delhi: Macmillan.

Further Readings

Government of India. (2007-2012). 11th Five Year Plan.
Government of India.(1976) . *National Commission on Agriculture* (*Reports)* .New Delhi: Manager of Publications.
Government of India.(Recent Year). Economy Survey. Ministry of Finance, Economic Division.
N.C.A.E.R. (1974). *Credit Recruitment for Agriculture.* New Delhi.
Planning Commission. 12th Plan Approach Paper

PAPER-II – Option (ii): INDUSTRIAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper: The objective of the paper is to give the student an insight and rationale into the concept of Industrialization, role of Public Enterprises in industrial development and the concepts of privatization and disinvestment. It would also give an understanding about the industrial policies of the government and introduce the student to certain related issues like industrial pollution, industrial sickness, and industrial dispersal.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Industrialization – Meaning, Objectives and Rationale
Role of Industry in Economic Development
Problems of Industrialization in India

UNIT-II

Industrial Policy Resolution of 1948 and 1956
New Industrial Policy of 1991
Industrial Finance – Sources, Problems and Remedies

UNIT-III

Role of Public Enterprises in Industrial Development of India
Privatization – Meaning, Methods, Merits and Demerits
Disinvestment – Meaning, Methods, Merits and Demerits

UNIT-IV

Industrial Pollution – Meaning, Types and its Impact on Environment
Industrial Sickness – Meaning, Extent and Magnitude, Causes and Remedies
Industrial Dispersal – Meaning and Policy Measures

Essential Readings

Aggarwal, A.N. (2001). *Indian Economy* .New Delhi : Vikas Publishing House.
Dutt,R. (2009).*Indian Economy* .New Delhi: S.Chand&Company Private Limited.
Kuchhal,S.C.(1983).*Industrial Economy of India.*Allahabad : Chaitnaya Publishing House.
Marathe,S.S.(1986).*Regulation and Development: The Indian Policy Experience of Controls over Industry* .New Delhi: Sage Publications.

Further Readings

Dhar,P.K.(2007).*Indian Economy : Its Growing Dimensions.*New Delhi: Kalyani Publishers.

Govt. of India.(2002). *Planning Commission*:*10th Five Year Plan 2002-2007* .New Delhi: Planning Commission.

Government of India.*Economic Survey* (Recent Years) Ministry of Finance, Economic Division.

Sivayya, K.V., & Dass, V.B.M. (2004).*Indian Industrial Economy* . New Delhi: S.Chand & Company Private Limited.

PAPER-II – Option (iii): Police Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the evolution of police system in India, need and importance of police in society, personnel aspects of police administration like recruitment, training, promotion, service conditions etc. It would also give an understanding about the expectations of the public from police and introduce the student to certain related issues like community policing, e-governance in police, attitudinal change in police services etc.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and significance of Police Administration
Evolution of Police Administration in India
Police Reforms in India

Unit-II

Organization and functions of Union Ministry of Home Affairs
Police Administration at State level
Police Administration at District level

Unit-III

Police Personnel Administration in India: Recruitment and Training of Police Personnel at Centre (IPS) and State level (SPS)
Service conditions and Discipline in Police Services

Unit-IV

The Concept and Need of Community Policing.
Concept & Importance of E-Governance in Police.
Attitudinal Change in Police: Concept, Significance and Methods.

Essential Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books.
Ghosh, S.K. & Rustamji, K.F.M. (1993,1994,1995).*Encyclopaedia of Police in India*, Vol. I-III. New Delhi:Light and Life Publishers.
Gupta,A. (2007).*The Police in British India 1861-1947.* New Delhi:Bureau of Police Research and Development.
James, V.D. (1998). *National Police Commission: Issues ForRethinking*. New Delhi: APH Publishing Corporation.
Muthuswamy, P. (1989). *Swamy's Manual on Disciplinary Proceedings. Chennai*: Swamy Publishers Ltd.
Stahl, O. G. (1975). *Public Personnel Administration.* New Delhi*:* Oxford & IBH Publishing Co.

PAPER-II-Option (iv) : Public Policy and Analysis

Max. Marks:	**100**
Theory:	**90 Marks**
Internal assessment:	**10 Marks**
Time:	**3 Hours**

Objective of the Paper:

The purpose of this course is to provide students an understanding of the basic concepts of public policy and the environment in which it operates .It attempts to help students understand and gain insights into the various stages in policy process with special reference to the social, political and administrative environment prevailing in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Public Policy - Meaning, Significance and Types
Distinction between Policy, Planning , Decision making and Goals; Policy Cycle
Policy Analysis- Meaning, Significance; Approaches to Policy Analysis

Unit-II

Public Policy Formulation:Models of Policy-Making:Incremental, Rational, Institutional
Role of Legislature, Executive, Judiciary, Political Parties in policy formulation

Unit-III

Public Policy Implementation :
Role of Executive, Legislature, Bureaucracy and Judiciary in Policy Implementation
Major problems in policy implementation

Unit IV

Policy Monitoring and Evaluation ; Criteria for Evaluation;
Problems in Policy Evaluation

Essential Readings

Birkland, Thomas A. (2005) .An introduction to the Policy Process: Theories , Concepts and Models of Public Policy Making M.E.Sharpe

Dye , Thomas (2002) Understanding Public Policy (New Delhi:Pearson Education Singapore (P) Ltd.,

Henry, Nicholas (2015) Public Administration and Public Affairs,(New Jersey:Prentice Hall,Twelfth Edition,

Mathur , Kuldeep (2013) .Public Policy and Politics in India:How Institutions Matter? (Oxford,

Manon, Vineetha (2014) Public Policy and Administration,Wisdom Press , New Delhi,

Sapru, R.K. Public Policy: Art and Craft of Policy Analysis (New Delhi: Prentice Hall of India, learning 2nd Edition.)

Furthur Readings

Anderson, J. E. (2005). *Public Policy Making (6th ed.)*. New York:Houghton Mifflin Co.

Ayyar, V. R.V. (2009). *Public Policy Making in India*.New Delhi:Pearson.

Frank. F, Miller, G. J., & Sidney, M.S. (2007).*Handbook of Public Policy Analysis Theory, Politics and Methods*, Boca Raton, Florida: CRC Press.

Nagel . S.S. (1991*)* . *Public Policy:Goals, Means and Methods*. New York: St. Martin Press.

Rabin J., Hildreth, W., & Miller, G. (2007).*Handbook of Public Administration (3rd ed.).*Florida: Taylor & Francis Group.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-19

SEMESTER-III

Note : **The students shall have to opt for one paper for Semester III examination out of the following two papers :**

OUTLINES OF TEST

Paper I : Social ideas and social life from the earliest times to 1000 A.D.

Paper-II : Economic ideas & economic life from the earliest times to 1000 A.D.

Paper-I : SOCIAL IDEAS AND SOCIAL LIFE FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary objective of this paper is to acquaint the students with the origin and development of social institutions and ideas so peculiar to Indian society. It will also made a survey of the social life of the people in ancient India.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology and contents of the sources mentioned above. The changing pattern in social life should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I

1. Sources : Vedic literature, Epics, *Manu Smriti* and *Kamsutra* of Vatsayayana.
2. Four Purusharthas; Sixteen Samsakaras.

UNIT-II

3. Origin and development of caste system.
4. Slavery in ancient India.
5. Stages of life—four asramas.

UNIT-III

6. Family life, law of inheritance.
7. Development of education in ancient India.
8. Dress, ornaments, foods and drinks.

UNIT-IV

9. Position of women in ancient India.
10. Institution of marriage.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal Banarsidass, Delhi, 1991.
2. Altekar, A.S. : *Education in Ancient India,*rpt. Gyan Publishing House, New Delhi 2009.
3. Banerji, S.C. : *Society in Ancient India,* D.K. Print World, New Delhi, 1997.
4. Basham, A.L. ed. : *Cultural History of India,* Oxford University Press, New Delhi, 1975.
5. Chanana, D.R. : *Slavery in Ancient India, as depicted in Pali and Sanskrit Texts,* New Age Printing Press, Delhi, 1960.
6. Ghurye, G.S. : *Caste and Class in India,* Popular Prakashan, Bombay, 1969.
7. Majumdar, B.P. : *Social and Economic History of North India,* Budh Prakashan, Calcutta, 1960
8. Mookerjee, R.K. : *Ancient Indian Education,* 3rd ed. Cosmo Publications, London, 1960.
9. Sharma, B.N. : *Social Life in Northern India,* Munshiram Manoharlal, Delhi, 1966.

Paper-II : ECONOMIC IDEAS & ECONOMIC LIFE FROM THE EARLIEST TIMES TO 1000 A. D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The main objective of this paper is to familiarize the students with economic ideas as contained in the secular and non-secular literature of our country. It will also make a survey of the economic life in ancient India to help the students to understand economic problems of the people.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology, authorship and contents of the sources mentioned above. The changing condition of agriculture, industries, and trade and commerce should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

1. Sources : Vedic literature, Epics, *Arthasastra* of Kautilya and *Nitisara* of Kamandaka.

2. Agriculture in ancient India, ownership of land.

UNIT-II:

3. Taxation.
4. Industries and industrial products in ancient India.

UNIT-III:

5. Types of labour and wages.
6. Introduction and development of coinage.

UNIT-IV:

7. Trade and Commerce in ancient India.
8. Guild System.
9. Trade routes and transport.

Essential Readings :

1.	Gopal, Lallanji	:	*Economic Life in Northern India* (700 to 1200 A.D.)Motilal Banarsidass, Delhi, 1965.
2.	Maity, S.K.	:	*Economic Life in North India in the Gupta Period,* Motilal Banarsidass, Calcutta, 1970.
3.	Majumdar, B.P.	:	*Social and Economic History of North India,* Firma KLM, Calcutta, 1960.
4.	Majumdar, R.C.	:	*Corporate Life in Ancient India,* Firma KLM, Calcutta, 1922.
5.	Moti Chandra	:	*Sarthavaha,* Shakti Malik Abhinav Publishers, Patna, 1953.
6.	Moti Chandra	:	*Trade and Trade Routes in Ancient India,* Shakti Malik Abhinav Publishers, Delhi, 1977.
7	Saletore, R.N.	:	*Early Indian Economic History,* N.M. Tripathi Publishers, Bombay, 1973.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER-IV

Note : **The students shall have to opt for one paper for Semester - IV examination out of the following two papers :**

OUTLINES OF TEST

Paper-III : Political ideas and institutions from the earliest times to 1000 A.D.

Paper-IV : History of Art and Architecture (Earliest times to C. 1000 A.D.)

Paper-III : POLITICAL IDEAS AND INSTITUTIONS FROM THE EARLIEST TIMES TO 1000 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The emphasis of this paper will be on the development of political ideas as enshrined in our secular and non-secular literature. It will also make a study of the administrative systems during various periods focusing on the ideologies of the kings.

2. **Pedagogy of the Course Work :**
The students are expected to know the broad rules laid down by the lawgivers and have knowledge of the administrative organization in different periods. They should be familiarized with the changing patterns of administrative set up at different times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

1. Sources *:* Vedic literature, Epics, the *Arthasastra* of Kautilya, *Smritis* of Manu and Yajnavalkya.
2. Political Institutions *:* State, King, Council of Ministers and Foreign Relations.

UNIT-II:

3. Administrative organization during the Vedic period.
4. Administrative Organisation under the Mauryas.

UNIT-III:

5. Administrative Organisation under the Kushanas.
6. Administrative Organisation under the Guptas.

UNIT-IV:

7. Administrative Organisation under the Pushyabhutis.
8. Administrative Organisation under the Cholas.

Essential Readings :

1. Altekar, A.S. : *State and Government in Ancient India,* Motilal Banarsidass,Delhi, 2002 .
2. Devhuti, D. : *Harsha, A Political Study,* Oxford University Press, New Delhi, 2001.
4. Ghoshal, U.N. : *A History of Indian Political Ideas: The Ancient period and the period of transition to the Middle Ages,* Oxford University Press, London, 1966.
5. Goyal, S.R. : *History of Imperial Guptas:* Central Book Depot, Allahabad, 1968.
6. Jayaswal, K.P. : *Hindu Polity,* Chowkhamba Sanskrit Pratisthan,Banglore, 2005.
7. Mukherjee, B.N. : *Rise and Fall of the Kushanas,* Firma KLM, Calcutta, 1988.
8. Prasad, Beni : *State in Ancient India,* Central Book Depot, Allahabad, 1974.
9. Satya Shrava : *The Sakas in India,* Motilal Banarsidass, New Delhi, 1981.
10. Sharma, R.S. : *Some Aspects of Political Ideas and Institutions in Ancient India,* Motilal Banarsidass , Delhi, 2001.
11. Shastri K.A.N. : *The Cholas, Madras, 1975; Chola Vansha,* New Delhi, 1979 (In Hindi).
12. Thapar, Romila : *The Mauryas Revisited,* K.P. Bagchi and Company, Calcutta, 1988.
13. Thapar, Romila : *Ashoka and the Decline of the Mauryas,* 2nd ed. Oxford University Press, New Delhi, 1977.

Paper IV: HISTORY OF ART AND ARCHITECTURE (EARLIEST TIMES TO C. 1000 A.D.)

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Total	:	3 Hours

Objectives :

The main objective of the paper is to acquaint the students with the architecture of ancient Buddhist and Hindu monuments, stone and bronze sculptures, that form an integral part of ancient history and heritage, for comprehensive understanding of the subject.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I:

(a) Harappan architecture

(b) Harappan sculptures.

UNIT-II:

(a) Stupa Architecture – Sanchi and Amaravati Stupas
(b) Rock-cut Architecture– Lomas Rishi, Ajanta and Ellora Caves

UNIT-III:

Temple Architecture :

(a) Gupta temples.
(b) *Nagara* – Chandella.
(c) *Dravida* – Chola.
(d) *Vesara* – Chalukya.

UNIT-IV:

Sculpture

(a) Early Period – Mauryan, Sunga and Kushanas.

(b) Gupta and Early Medieval – Gupta, Pala and Chola.

Pedagogy of the Course Work :

Besides giving an outline of the history and salient features of the topics enumerated in the syllabus, students should be thoroughly acquainted with important monuments and images in stone and bronze of each period. Important schools of art should also be taught. Constant help of visual aids like slides and transparencies should form integral part of teaching. Field work trips to museums and sites of monuments should be undertaken.

Essential Readings:

1. Agrawala, P.K. : *Gupta Temple Architecture,* Prithvi Prakashan, Varanasi, 1968.
2. Agrawala, V.S. : *Gupta Art,* U.P Historical Society, Lucknow, 1948.
3. Agrawala, V. S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* D.B. Taraporevala Sons, Bombay, 1971.
5. Dehejia, Vidya : *Early Buddhist Rock Temples : A Chronological Study,*Thomson and Hudson Ltd., London, 1972.
6. Gangoly, O.C. : *South Indian Bronzes,* Nababharat Publishers, Calcutta, 1978.
7. Harle, J.C. : *Gupta Sculpture,* Munshiram Manoharlal, New Delhi, 1996.
8. Huntington, S. : *The Art of Ancient India (Buddhist, Hindu, Jain),* Weather Hill, Tokyo, 1985.
9. Kramrisch, Stella : *Indian Scuplture, 2 Vols.,* Motilal Banarasidas, Delhi, 1981.
10. Krishna Deva : *Temples of North India,* National Book Trust India, New Delhi, 2000
11. Ray, Niharranjan : *Maurya and Sunga Art,* Indian Studies,Calcutta, 1965.
12. Rowland, R. : *The Art and Architecture of India,* Penguin Books, London, 1953.
13. Saraswati, S.K. : *Survey of Indian Sculpture, 2nd ed.,* Munshiram Manoharlal, New Delhi, 1975.
14. Srinivasan, K.R. : *Temples of South India,* National Book Trust, India,New Delhi, 1998.

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POLICE ADMINISTRATION

B.A. (HONOURS) 3rd Semester EXAMINATION, 2018-19

SEMESTER-III

Semester III : Police Administration and Crime

(A) Course Objectives:

The objective of this course is to introduce to the students, the Concept, Characteristics, and Causes of Crime. The endeavour also is to discuss the special forms of crime. Towards the end the students will be imparted knowledge relating to the role of Police in controlling crime.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit – I

Crime: Concept, Characteristics and Classification.
Causative factors of Crime.
Crime Statistics in India: Sources and Problems.

Unit- II

Organized Crime: Meaning, Characteristics and Types.
White Collar Crime: Meaning, Elements and Types.
Cyber Crime: Meaning, Causes and Types.

Unit- III

Crime Against Women: Concept, Incidence and Remedies.
Juvenile Delinquency: Meaning, Causes and Treatment.
Youth and Crime: Meaning, Characteristics and Trends.

Unit- IV

Drug related Crimes: Concept, Extent and Remedial Measures.
Custodial Crime: Concept, Extent and Remedial Measures.
Role of Police in Crime Control.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central law Publication, Allahabad, 2008.
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Siddique, Ahmad : Criminology- Problems and Perspectives, Eastern Books Co., Lucknow, 1993
4. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Gandhirajan, C. K : Organized Crime, A.P.H. Publishing Corp., New Delhi, 2004
2. Venugopal, Rao : Facets of Crime in India, Allied Publishers Private Limited, Bombay, 1967
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003

POLICE ADMINISTRATION

B.A. (HONOURS) 4th Semester EXAMINATION, 2018-19

SEMESTER-IV

Paper : Correctional Administration

(A) Course Objectives:

The Prime objective of this course is to familiarize the students with the meaning, nature , scope and principle of correctional administration. In addition the efforts are made to discuss with the students, Prison administration along with the alternative non-institutional methods of Probation and Parole elaborately.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72marks)

Unit- I

Meaning, Nature and Scope of Correctional Administration.
Punishment: Concept and Theories.
Forms of Punishment.

Unit- II

Probation: Concept and Development.
Parole: Concept and Development.
Prison: Concept and Origin.

Unit- III

Statutory Prisons in India.
Classification of Prisons in India.
Problems of Prisons in India.

Unit-IV

Prison Reforms in India.
Open Prisons: Concept, Origin and Advantages.
Prisons and Human Rights.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central Law Publication, Allahabad, 2008
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003
4. Davies, Martin : Prisoners of Society: Attitudes and After-Care.
5. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A. 2003
2. Hassine, Victor : Life without Parole: Living in Prison Today, Roxbury Publishing Company, California, 2004.
3. Carrbine, Eamonn. et.al. : Criminology: A Sociological Introduction, Routledge, London, 2005.
4. Pollock, Joyceiyn M. : Prisons and Prison Life : Costs and Consequences, Roxbury Publishing Company, California,2004.
5. Pachauri, S.K : Prisoners and Human Rights, A.P.H. Publishing Corporation, New Delhi, 1999.
6. Paluch (Jr.), James A. : A Life for a Life-Life Imprisonment: America's Other Death Penalty, Edited by Bernard, Thomas J. & Johnson, Robert, Roxbury Publishing Company, California, 2004.
7. Sharma, S.D. : Creative Activities and the Law: Human Rights Approach, Deep & Deep Publications, 2007.

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MUSIC (VOCAL AND INSTRUMENTAL)

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-III

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY

UNIT-I

1. Concept and characteristics of Raga Dhyan.
2. Role of computer to promote Indian Classical Music
3. A study of Jati Lakshan

UNIT-II

1. Detailed Study of Ghranas of the following:
   (a) Khayal Gayan
   (b) Sitar Vadan.

2. A study of the following:-
   Thumri, Maseetkhani, Razakhani Gat, Trivat

3. Brief Knowledge of the following:-
   Nada, Swara, Shruti, Nyas, Vadi, Laya & Tala.

UNIT-III

1. Shudha Vikrat Swaas of Bharat and Sharangdev
2. Study of Shruti, Chaturarna or Bharat and Sharngdev
3. Importance of Laya and Tala

UNIT-IV

1. Description and Comparative study of Detailed and Non-detailed Ragas :-
   (a) Detailed Ragas :-Hamir, Darbari
   (b) Non-detailed Ragas :-Adana, Kamod

2. Notation of Detailed Ragas and Talas
   i) Notation of Khayal/Gat
   ii) Notation of Tala prescribed in the syllabus
   Dhmar, Adachantal, Deepchandi

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper–II: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(b) One Dhrupad with different Layakaries in any detailed ragas 5 marks

OR

One Vilambit Gat in *Chautala* with different layakaries 5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Darbari.
(ii) Hamir.

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Adana.
(ii) Kamod.

(c) Talas : Jhaptal, Ektal and Teental on Tabla.

(i) One slow Khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 5 marks

(iii) Ability to recite Dhamar, Adachautal and Deepchandi talas in single. 2.5 marks.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Pranav Bharti	:	Pt. Onkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Gharanedaar Gayaki	:	Varman Rao H. Deshpanday
4.	Sangeetanjali	:	Pt. Onkar Nath Thakur
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet swarit	:	Dr. Ramakant Dwivedi
7.	Sangeet Chintan	:	Dr. Soubhagya Vardhan Brihaspati
8.	Bhartiya Sangeet Mein Vaigyanik Upakarano ka Prayog	:	Aneeta Gautam
9.	Saat Sur aur Sattairs Dayare	:	Shambu Nath Mishra
10.	Raag Parichay	:	Harish Chandra Srivastav
11.	Sangeet Prabodhika	:	Dr. Gyan Chand
12.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
13.	Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-IV

General Instructions

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY

UNIT-I

1. Detailed study of Gram
2. Detailed study of Murchhna

UNIT-II

3. Role of Electronic Media in Indian Classical Music
4. Music and Fine Arts

UNIT-III

1. A study of the following :-

   Sitarkhani Gat, Dhun, Chaturang, Dadra

2. Brief knowledge of the following with illustrations:-

   Vadi, Samvadi, Zamzama, Jod Alap, Gat, Avirbhav & Tirobhav

3. A Study of present raga Lakshan

UNIT-IV

1. Notation of Detailed Ragas and Talas
   A) i) Notation of Khayal/Gat
      ii) Notation of Tala prescribed in the syllabus: Tivra, Jhumra, Punjabi Theka

2. Non detailed Ragas
   B) i) Hamir
      ii) Vrindavani Sarang

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e., theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper–B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Kedar
(ii) Des

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Hamir
(ii) Vrindavani Sarang

(c) Talas : Chartal, Sultal and Tilwada on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeet swarit	:	Dr. Ramakant Dwivedi
2.	Sangeetanjali	:	Pt. Onkar Nath Thakur
3.	Abhinav Geetanjali	:	Pt. Ramashray Jha
4.	Sanchar Aur Sanchar Madhyam	:	Dr. Chandra Prakash Mishra
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet Visharad	:	Basant
7.	Raag Parichay	:	Harish Chandra Srivastav
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal
9.	Raag ka Udbhav Evam Vikas	:	

HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Second year has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2018-19

General Instructions for teachers, students and paper setters:

1. There will be two papers in each of the Semesters III-IV. Each of the papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The teaching hours for each theory paper are prescribed to be 30 hours and Physics Practical and Computational Physics are prescribed to be 60 hours.

2. The number of lectures per week will be three for each theory paper and six for practicals .

3. The examination time for each theory paper as well as Physics practical paper will be three hours.The Computational Physics paper will consist of two parts(a)written examination of one hour duration,and (b)Practical examination of two hours duration . Both the parts carry equal marks.

4. Each theory paper will consist of **seven** questions comprising of three sections .First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus.The question paper will be set for 44 marks-**All the questions in first and second sections will carry 9(nine) marks each and the compulsory question will carry 8 marks**. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question.**After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
   Computational Physics paper in Semester V will consist of two papers carrying equal marks:
   (a)Written examination of one and half hour duration common for all the students appearing in examination.
   (b)Practical examination of one and half hours duration Both the parts carry equal marks.

3. The numerical problems/exercises in the question paper should be 25-30%.

4. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Paper I : Physics of Vacuum and Low Temperature

Unit I

Basics of Vacuum Techniques: Introduction, classification of vacuum ranges, throughput, Pump speed, speed of exhaust, conductance, ultimate pressure, viscous flow, molecular flow.

Production of Low Pressures: Pump types, Gaede oil-sealed rotating vane pump, Diffusion pump, sputter ion pumps, Gettering, types of getters, Cryogenic pumps.

Measurement of Low Pressures: Types of gauges, Mcleod gauge, Pirani gauge, Measurement of ultrahigh vacuum, penning gauge.

Methodology of Vacuum systems: Vacuum system, Materials for vacuum system, cleaning and sealing of vacuum system, Leak detection and its location.

(Book 1 and Book 2)

Unit II

Production and Measurement of Low Temperatures: Various methods for refrigeration, Coefficient of performance, Liquefaction of gases, Joule-Thomson effect, Principle of regenerative cooling, liquefaction of H_2 and He, Liquefaction of nitrogen, Solidification of He. Liquid He II, Thermodynamics of λ-transition, Adiabatic demagnetization, Linde's method, Temperatures below 0.01K, Low temperature thermometry and techniques, Use of liquid air and other liquefied gases.

(Book 3 and Book 4)

Recommended Books:

1. Vacuum Technology: A. Roth (North Holland, 1990).
2. Vacuum Technology: A. Guthrie (John Wiley, 1963).
3. A Treatise on Heat: M.N. Saha and B.N. Srivastava (Indian Press, 1965).
4. Low Temperature Physics: C. Dewitt, B. Dreyfus and P.G. de Gennes (Gordon & Breach, 1962).

Paper II : Electronics

Unit I

Analog Electronics

Circuit Theory: Voltage sources, Current sources, Capacitors, Inductors, Linear circuits, KCL, KVL, Mesh and Node analysis, Level shifting, Thevenin and Norton equivalent circuits, Power and energy relationships in case of R, L and C, Maximum Power Transfer Theorem, Series and parallel connection of mutually coupled coil, Equivalent circuit of transformer. (Book 1)

Transducers : Electrical transducers, Resistive transducers – Resistive position transducer, Strain gauge, Resistance thermometer, Platinum thermometer, Thermistor. Inductive transducers – Differential output transducers, LVDT, Pressure inductive transducer. Capacitive transducers, Piezo electric load cell, Thermocouple transducers.

(Book 2)

Unit II

Digital Electronics

Number systems: Binary, Hexadecimal and octal number systems, Interconversions and Binary arithmetic, 2's complement arithmetic, Binary fractions and negative binary numbers, floating point representations, Codes, Error detecting and correcting codes.

Digital Principles and Logic: Digital signals, Positive and Negative Logic, Basic digital circuits, Basic Gates – NOT, OR, AND; Universal Logic gates: NOR, NAND; Exclusive-OR gate.

Combinational Logic Circuits – Boolean Laws and De Morgan's theorems, Sum of Product method, Product of sums method, Karnaugh map (up to 4 variables).

Sequential circuits: Flip-flops – RS, JK, D, clocked, race-around conditions in JK flip-flop, master slave JK, Shift registers: serial in serial out, serial in parallel out, parallel in parallel out (only up to 4 bits)

(Book 3 and Book 4)

Recommended Books:

1. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).
2. Electronic Instrumentation, H.S. Kalsi (Tata McGraw-Hill, 2004).
3. Modern Digital Electronics: R.P. Jain (Tata McGraw Hill, 2010).
4. Digital Principles and Applications : Malvino and Leach (Tata McGraw Hill, 2010).

PHYSICS

SEMESTER-IV

Paper III: Statistics and Numerical Techniques

Unit I

Statistics and Probability: Measures of central tendency, Arithmetic mean, median, mode, Geometric mean, Harmonic mean, Quartiles, deciles and percentiles.
Measures of dispersion : Standard deviation, mean deviation, semi-interquartile range, coefficient of variation, Moments, Skewness and Kurtosis.
Linear Correlation and Regression for Two Variables only.
Conditional probability, probability distributions, Mathematical expectation, Probability and Combinatorial analysis

(Book 1)

Counting Statistics and Error Prediction: Characterization of Data, Binomial, Normal and Poisson distributions and their applications, Estimation of the Precision of a Single Measurement, Measure of consistency of observed fluctuations with expected Statistical fluctuation, chi square, Error Propagation, Distribution of time intervals between successive random events.

(Book 2)

Unit II

Numerical Techniques:
Solution of Algebraic and Transcendental Equations: Bisection Method, Secant Method, Newton-Raphson Method.
Interpolation : Finite difference interpolation with equal intervals, Newton' Forward and Backward Interpolation Formulae, Interpolation with unequally spaced points, Lagrange's interpolation formula, Extrapolation.
Numerical integration by Trapezoidal, Weddle's and Simpson's rules, Romberg integration.
Numerical differentiation by Newtons's forward and backward difference formulae, divided difference formula.
Numerical solution of differential equations, Euler's and Runge-Kutta Method.
Method of least-squares fitting of straight line, parabola and exponential curves, least squares fitting for any non-linear function by iterative method.

(Book 3 and Book 4)

Recommended Books:

1. Schaum's Outlines Statistics: Murry R Spiegel and Larry J Stephens (Tata McGraw Hill Education Pvt. Ltd., 2011)
2. Radiation Detection and Measurement: G.F. Knoll (Wiley, New York) (2000).
3. Numerical Mathematical Analysis, J.B. Scarborough (Oxford Book Co. Kolkata) (1961).
4. Introductory *Methods* of *Numerical Analysis,* S.S. *Sastry*. PHI Learning Pvt. Ltd. (2005).
5. A First Course in Computational Physics: P.L. Devries (Wiley, New York) (1994).

Paper IV : Mathematical Physics

Unit I

Differential Equations : Methods of separation of variables; separation of Helmholtz equation in Cartesian, spherical and cylindrical coordinates. Laplace equation in various coordinate systems, Ordinary and singular points; Examples of partial differential equations in physics, Heat Flow in one and two Dimensions.

Series solution of differential equations - Power series solution about ordinary point and regular singular point.

Special Functions in Physics : Dirac delta function, properties of delta function. Gamma function, factorial notation and applications. Beta function.

(Book 1 and Book 2)

Unit II

Special polynomials in Physics :

Bessel's differential equation, Bessel functions of first kind, generating function, recurrence formulae, plots, zeros of Bessel functions and orthogonality.

Legendre's equation, Legendre's polynomials, plots, generating functions, recurrence relations, orthogonality, Series expansion of a function in terms of a complete set of Legendre functions, Rodrigues formula.

(Book 1 and Book 2)

Laplace transforms, Applications of Laplace transforms to derivatives and integrals, s-domain interpretation of passive circuit elements R, L and C; Analysis of simple circuits in s-domain, Transfer function, poles and zeros, Stability of circuit.

Recommended Books:

1. Mathematical Physics: P.K. Chatopadhyay (Wiley Eastern, New Delhi, 2005)
2. Mathematical methods for Physicists : G. Arfken and H.J. Weber (Academic Press, SanDiego, sixth edition, 2005)
3. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).

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CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2018-19
Outlines of Tests

SEMESTER - III

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper I	:	Organic Chemistry-A	20	22	03
Paper II	:	Analytical Chemistry-A	20	22	03

Paper I : ORGANIC CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hoffmann, Curtius, Lossen-similarities, advantages and stereochemistry at the migrating group, effect of migrating group on rate of reaction. Baeyer Villiger Rearrangement.

Unit-II

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hydroperoxide rearrangement–migratory aptitude, Brown, Pinacol, Wolff, Stevens, Wittig and Favorskii rearrangements-participation of groups such as –O–C–R, halogens, Aryl, and sigma bond, nonclassical carbocation.

Unit-III

Stereochemistry I: (05 Lectures)
Enantiomeric relationship, Diastereomeric relationship, Prochiral relationship. Conformational relationship in carbocyclic rings other than 5-membered, conformational effects on reactivity. Relationships between ring size and facility of ring closure.

Unit-IV

Stereochemistry II: (05 Lectures)

Hard Soft Acid Base principles: pka Values. Generation of Carbon Nucleophiles by Deprotonation, Regio selectivity and stereo selectivity in enolate formation, Medium effects, O versus C as site of alkylation, examples of Stork enamine reactions.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper II : ANALYTICAL CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Elementary Concepts I: (05 Lectures)

Qualitative and quantitative analysis, concepts and importance of quantitative analysis, choice of methods for analysis, sampling and theories of sampling, preparation of samples for analysis, calibration standards, solution concentrations in terms of various conventions, simple equilibrium calculations, calibration of analytical weights and glass wares, significance of calibration, role of instrumental methods of analysis in analytical chemistry.

Unit-II

Elementary Concepts II: (05 Lectures)

Terms of mean, medium, precision and accuracy in chemical analysis, types of errors in analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, least square curve fitting, propagation of errors, significant figure convention, standard deviations, confidence limits.

Theory of volumetric and gravimetric methods of analysis, primary and secondary standards, theory of indicators and their selection for titrations, precipitation methods, optimum conditions for precipitation, steps involved in gravimetric analysis, important organic precipitants.

Unit-III

Acid-Base Equilibria : (05 Lectures)

Acids and bases, ionization equilibria for weak monobasic acids, bases and related salts, acid base titration reagents and indicators for neutralization titrations, neutralization titrations for a strong acid with a strong base, polybasic acid with a strong base.

Unit-IV

Oxidation-Reduction Equilibria : (05 Lectures)

Oxidation-reduction reactions, reduction potentials, Nernst equation, oxidation-reduction titrations and curves, oxidation-reduction indicators, applications of oxidation-reduction techniques, determination of water by the Karl Fischer titration method.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2018-19
Outlines of Tests

SEMESTER - IV

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
Paper III	:	Organic Chemistry-B	20	22	03
Paper IV	:	Analytical Chemistry-B	20	22	03

Paper III : Organic Chemistry-B

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Organic Chemistry of Life I: (05 Lectures)

Nucleic Acids : Nucleosides; Pentoses, heterocyclic bases, nucleotide; Purines and phosphate, DNA and RNA Hydrogen bonding and DNA replication (heredity).

Unit-II

Organic Chemistry of Life I: (05 Lectures)

Enzymes, nomenclature of enzymes, characteristics of enzymes, coenzyme A and prosthetic group. Coenzyme derived from niacin and examples of redox reaction with it.

Unit-III

Pericyclic Reactions I : (05 Lectures)

Electrocyclic Reactions: Woodward and Hoffmann rules, correlation diagram for cyclobutene = butadiene interconversion, Frontier orbital theory. Examples of 4, 6 and 8 electron systems, stereochemical modes.

Cycloaddition Reactions : Woodward and Hoffmann rules, Frontier Molecular orbital theory for Dieis-Alder reaction.

Unit-IV

Pericyclic Reactions II: (05 Lectures)

(4+2) and (2+2) cycloadditions, exo and endo isomers, Examples Bicyclo (2, 2, 1) heptane and Bicyclo (2, 2, 2,) octane systems. Intramolecular Diels Alder reaction.

Sigmatropic Rearrangements: Woodward and Hoffmann rules, Frontier Molecular orbital for 1, 3; 1, 5 and 1, 7 shifts. Examples including vitamin D_2 formation from 7-dehydro cholesterol (Provitamin D_3).

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory questions carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper IV : ANALYTICAL CHEMISTRY-B:

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE:

To teach the fundamental concept of Chemistry and their applications, The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit- I

Precipitation Equilibria : (05 Lectures)

Solubility of precipitates, effect of competing equilibria on solubility of precipitates, separation of ions by control of concentration of precipitating reagents, effect of electrolyte concentration on solubility product, theory of precipitation titrations. The Vohlard and the Mohr's methods of analysis, adsorption indicators.

Unit-II

Complexation Equilibria : (05 Lectures)

Complexation, formation constants, EDTA equilibria, effect of pH on EDTA equilibria, complexometric titration curves, selection of indicators for complexometric titrations, applications of complexometric equilibria.

Unit-III

Solvent Extraction and Ion-Exchange Separation : (06 Lectures)

Basic concepts of solvent extraction, relationship between distribution coefficient, distribution ratio and per cent extraction, applications of extraction methods in analytical chemistry, ion-exchange processes, ion-exchange-resins, techniques and applications of ion-exchange separation, basic concepts of column and gas chromatography.

Unit-IV

Radioisotope Methodology and its Applications : (04 Lectures)

Radioactive isotopes, radioactive decay rates and half-life periods of radioactive isotopes, sample preparation in radiochemical measurements, background, dead-time and inefficiency corrections in radioactive measurements, isotope dilution method and its applications, radiometric-titrations, neutron activation analysis.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.
2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

BOTANY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

Third Semester

		Time	Theory	Int Assess.	Max Marks
Theory Paper-A :	Plant Physiology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – I	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20

Fourth Semester

Theory Paper-A :	Plant Ecology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – II	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			200

Note : 1. The number of teaching hours for theory and practical per session shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of nine questions. Question No. 1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

SEMESTER –III

Paper -A : PLANT PHYSIOLOGY

Objective :

The main objective of this paper is to make the students aware about various functions and metabolisms of plants. The course material of this paper would enable the students to understand gradual aspects of growth and development in plants along with concept of photoperiodism, role of hormones and photomorphogenesis.

Teaching Methodology :

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

Unit-I

Plant-Water Relations : Water transport processes; diffusion and osmosis; water potential and chemical potential; absorption of water, water transport through xylem; transpiration and its significance; factors affecting transpiration; mechanism of stomatal movement.

Mineral Nutrition : Criteria of essentiality of elements; macro-and micronutrients; role of essential elements; mineral deficiency symptoms and plant disorders; nutrient uptake and transport mechanisms; role of cell membrane, ion pumps and carriers.

Unit-II

Photosynthesis : Historical background and significance; structure of photosynthetic apparatus; photosynthetic pigments; accessory pigments and the photoprotective carotenoids; reaction center complexes; photochemical reactions; electron transport pathways in chloroplast membranes; photophosphorylation; the Calvin cycle; the C_4 carbon cycle; crassulacean acid metabolism; synthesis of starch and sucrose; photorespiration.

Transport of Organic Substances: Transport of photosynthates; source-sink relationships; the mechanism of translocation in the phloem; assimilate partitioning.

UNIT-III

Respiration : Glycolysis; the TCA cycle and its regulation; electron transport in mitochondria; oxidative phosphorylation; pentose phosphate pathway; cyanide-resistant respiration.

Nitrogen Metabolism : Biological nitrogen fixation; reduction of N_2 into ammonia; *nif* genes; regulation of nitrate reductase and nitrogenase; nitrate and ammonium assimilation.

Unit-IV

Growth and Development : General aspects – definitions, phases of growth; kinetics of growth; physiology of seed dormancy and seed germination; concept of photoperiodism; Physiology of flowering; the florigen concept and role of hormones; vernalization; senescence and fruit ripening; importance of respiratory climacteric; discovery, physiological role and mechanism of action of the phytohormones – auxins, cytokinins, gibberellins, abscisic acid and ethylene; photomorphogenesis; discovery of phytochromes and cryptochromes, their role and mechanism of actions; signal transduction – basic concept; plant movements – tropic and nastic; biological clocks.

Suggested Readings :

1. Copleand, R. A. Enzymes: A Practical Introduction to Structure, Mechanism and Data Analysis, VCH Publishers, New York, 1996.
2. Dryer, R.L. and Lata, G.F. Experimental Biochemistry, Oxford University Press, New York, 1989.
3. Galston, A.W. Life Processess In Plants, Scientific American Library, Springer-Verlag, New York USA, 1989.
4. Hooykaas, P.J.J., Hall M.A. and Libbenga, K.R. (eds.) Biochemistry and Molecular Biology of Plant Hormones, Elsevier, Amsterdam, The Netherlands, 1999.
5. Hopkins W.G. Introduction to Plant Physiology : John Wiley and Sons. Inc., New York, USA, 1995.
6. Moore, T.C. Research Experiences in Plant Physiology: A Laboratory Manual, Springer-Verlag, Berlin, 1974.
7. Moore, T.C. Biochemistry and Physiology of Plant Hormones (2nd edition), Springer-Verlag, New York, USA, 1989.
8. Salisbury. F.B. and Ross, C.W. Plant Physiology (4th edition), Wadsworth Pulishing Co., California, USA, 1992.
9. Srivastava, H.N. Plant Physiology, Biochemistry & Biotechnology, Vol. V, Pradeep Publications, Jalandhar, India, 2013.
10. Taiz, L. and Zeiger, E. Plant Physiologyy (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010.
11. Wilson, K. and Goulding, K.H. (eds.). A Biologist's Guide to Principles and Techniques of Practical Biochemistry, Edward Arnold, London, U.K., 1986.

Suggested Labortary exercises for Third Semester

1. To study the permeability of plasma membrane using different concentrations of organic solvents.
2. To study the effect of temperature on permeability of plasma membrane.
3. To extract enzymes and study their activity, e.g. amylase, lipase, acid phosphatase, catalase, peroxidase.
4. Effect of the following factors on enzyme activity :

   pH, temperature, enzyme and substrate concentration, heavy metals.
5. To extract and separate chloroplast pigments by solvent method and demonstrate fluorescence in chloroplast extracts.
6. To determine the osmotic potential of vascular sap by plasmolytic method.

7. To determine the water potential of given tissue (any tuber).
8. To determine stomatal Index, stomatal frequency and percentage of leaf area open through stomata. Also study the effect of ABA on stomatal closure.
9. Effect of carbon dioxide concentration on the rate of photosynthesis.
10. To demonstrate that oxygen is evolved during photosynthesis.

Paper -B: DEVELOPMENT OF PLANTS AND THEIR UTILIZATION-I

Objective:

This paper deals with internal structure of various plant parts, their growth and development patterns. It gives an insight into plant domestication and role of wild plants in ecosystem functioning.

Teaching Methodology:

Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Organization of the Higher Plant Body : The shoot and root systems; variation in habit and longevity; environmental influences.

UNIT-II

Meristems and Development : Shoot apical meristem, root apical meristem, lateral meristems and their functions. Range of form and structure of stem, leaf and root; their tissues and functions.

UNIT-III

Secondary Body of the Plant : Vascular cambium; secondary xylem (basic structure of wood); secondary phloem and periderm.

Unit-IV

Role of Wild Plants in Ecosystem Functioning : A general account.
Domestication of Plants : Primary and secondary centres of diversity; plant introduction.

Suggested Readings :

1. Carlquist, S. Comparative Wood Anatomy : Systematic, Ecological and Evolutionary Aspects of Dicotyledonous Wood, Springer-Verlag, Berlin, 1988.
2. Cutter, E.G. Cell and Tissues, Part I, Edward Arnold, London, 1969.

3. Cutter, E.G. Plant Anatomy: Experiment and Interpretation, Part II, Organs, Edward Arnold, London, 1971.

4. Esau, K. Anatomy of Seed Plants, 2nd Edition, John Wiley and Sons, New York, 1977.

5. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.

6. Fuller, K.W. and Gallon, J.R. Plant Products and New Technology, Clarendon Press, Oxford, New York, 1985.

7. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California, USA, 1998.

8. Nair, M.N.B. Wood Anatomy and Major Uses of Wood, Faculty of Forestry, University Putra Malaysia, 43400 Serdang, Selangor D.E. Malaysia, 1988.

9. Raghvan, V. Development Biology of Flowering Plants, Springer-Verlag, New York, 2000.

10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants,5th Edition, W. H. Freeman and Co., Worth Publishers, New York, 1999.

11. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV, Pradeep Publications, Jalandhar, India, 2007.

12. Goyal, J.P., Saini, Aruna. Angiosperms, Structure, Development and Reproduction, Trueman Company, Jalandhar, India, 2006.

13. Singh, V., Pande, P.C and Jain, D.K. Structure, Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, India, 2012.

Suggested Laboratory Exercises :

1. Study in the field of a large variety of herbaceous and perennials, both monocotyledonous and dicotyledonous, aquatic, mesophytic, xeromorphic plants, succulents, climbers, twiners, parasites, and trees with varied canopy architecture. Field diary to be prepared.

2. Morphology and anatomy of stems, roots and leaves using stained hand sections of permanent slides (tapioca, carrot, radish, onion, garlic, turnip, potato, etc.)

3. Study of vascular cambium in stem and root. Secondary growth. Examples of cambial variants and resultant secondary structures.

4. Preparation of world maps to show Vavilov's centres of origin of cultivated plants and Zhukovsky's concept of mega centres.

5. Preparation of maps showing the centres of primary diversity of important economic plants that originated in India and region of cultivation of plants introduced from the New World, Europe, Central Asia, Australia, Malaysia, China.

Guidelines for Botany Practical Examination:

Max. Marks:	**20**
Practical:	**18**
Int. Assessment:	**2**
Time:	**3 hrs.**

Q.1. Write procedure and precautions for Physiology experiment A. Perform the experiment, record observations calculation if any and results. Show the experiment to the examiner. 5

Q.2. Write illustrated morphological note on specimens B & C. 4

Q.3. Idenitfy slides D & E giving at least two identifying features for each. 4

Q.4. Practical Note book. 2

Q.5. Viva-Voce 3

BOTANY
SEMESTER-IV

PAPER-A: PLANT ECOLOGY

Objective: This paper deals with the role of environment in causing structural and functional variations in plants. It provides a broad idea about concept of population, community, ecosystem, ecological succession and role of plant indicators in environment monitoring.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT- I

Introduction : Holocoenotic nature of environment; limiting factors; ecological amplitude triggering factors (soil, water, atmosphere).

Ecological Adaptations: Concept, ecads, ecotypes and ecoclines; adaptations in relation to soil oligotrophy; adaptive significance of photosynthetic pathways.

Population : Concepts; density and pattern; idealized plant life history; population growth; carrying capacity; population regulation; r and k selection; population interactions.

UNIT- II

Community: Community characteristics and their measurement, species diversity (alpha, beta and gamma), niche.

Ecosystem : Concept, components and organisation, energy flow; ecological efficiencies; cycling of C, N and P; characterization and structure of ecosystem; the biotic and abiotic components, their inter-relationship; the processes within ecosystem, the trophic organisation; autotrophy, heterotrophy, parasitism, detritus, decomposition.

Ecological Succession : Mechanism and types; nature of climax; food chains and food webs; ecological pyramids.

UNIT- III

Flow of Energy and Materials : Flow of energy and materials within ecosystem; models of energy flow; ecosystem productivity; biogeochemical cycles; major types of ecosystems.

UNIT- IV

Plant Indicators and their role in Environmental Monitoring.

Phytogeography : General principles, vegetation of India.

Suggested Readings :

1. Barbour, M.G., Burk, J.H. and Pitts, W.D., Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.

2. Hill, M.K., Understanding Environmental Pollution, Cambridge University Press, 1997.

3. Kormondy, E.J., Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.

4. Mackenzie, A. et al., Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.

5. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.

6. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.

7. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.

8. Smith, R.K. Ecology and Field Biology, Harper Collins, New York, 1996.

9. Srivastava, H.N. Ecology and Utilization of Plants, Vol.VI Pradeep Publications, Jalandhar, India, 2012.

Suggested Labortary exercises:

1. To study ecological adaptations (morphological and anatomical) in plants (hydrophytes, xerophytes, epiphytes).

2. To determine minimum area of sampling unit (quadrat) for the study of grassland community.

3. To estimate Importance Value Index for grassland species.

4. To prepare maps of India with respect to (i) Major climate zones, (ii) Forest types, and (iii) Bio-geographical regions and to comment on these.

Paper -B : DEVELOPMENT OF PLANTS AND THEIR UTILIZATION – II

Objective :

The course work of this paper deals with utilization of plants. It would provide the students an idea about importance of various plant parts as well as plant wealth such as medicinal, crops and food plants, fibre and oil yielding plants, timber yielding and firewood species.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT-I

A General account of wheat, rice, maize, sorghum, bajra, potato and sugarcane.
Legumes : Chickpea (Bengal gram), red gram (arhar) – a general account.

UNIT-II

Vegetable Oil Sources : Mustard, groundnut, soyabean and coconut –a brief account.
Plant Fibres : Cotton, jute and coir.
Timber and Firewood Species : A general account of use of following trees:
Tectona, Dalbergia, Albizzia, Eucalyptus, Cedrus, Acacia, Shorea, Terminalia, Mangifera and Azadirachta.

UNIT -III

Medicinal Plants : A brief account of plant drugs and their chief constituents used in indigenous and allopathic systems of medicines viz. *Opium, Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrhiza, Phyllanthus amarus (P. fraternus), Allium sativum, Atropa belladonna and Aloe barbadense.*

Unit-IV

A brief account of the following:
Natual Rubber : *Hevea brasiliensis*
Essential Oils: *Cymbopogon sp., Eucalyptus, Jasminum, Geramium and Vetiveria.*
Insecticides : *Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum).*
Dyes : *Curcuma longa(turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigofera (Indigo) and Lawsonia inermis (mehndi).* Extraction of pigments.
Ornamental Plans : Familarity with seasonal and perennials grown in your locality.

Suggested Reading :

1. Kocchar, S.L., Economic Botany in Tropics, 2nd edition, Macmillan India Ltd., New Delhi, 1988.
2. Lyndon, R.F., Plant Development : The Cellular Basis, Unwin Hyman, London, 1990.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S., A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma O.P. Hill's Economic Botany, Tata McGraw Hill Publishing Company Ltd., New Delhi, India, 1996.
5. Simpson, B.B. and Conner-Ogorzaly, M., Economic Botany –Plants in Our World, McGraw Hill, New York, 1986.
6. Srivastava, H.N. Eology and Utilization of Plants, Vol. VI, Pradeep Publications, Jalandhar, India, 2012.
7. Steevas, T.A. and Sussex, I.M. Patterns in Plant Development, 2nd Edition, Cambridge University Press, Cambridge, 1989.
8. Thoms, P.Trees: Their Natural History Cambridge University Press, Cambridge, 2000.
9. Tippo, O. and Stern, W.L. Humanistic Botany, W.W. Norton, New York, 1977.
10. Vishnu Swarup, Ornatmental Horticulture, Macmillan India, Ltd., Neew Delhi India, 1997.

Suggested Laboratory Exercises

1. Study of vegetative and reproductive morphology and anatomy of wheat, rice, maize, sorghum, bajra, potato and sugarcane. Study of starch grains in these plants (except in sugarcane). Epidermal structure of sugarcane stem and leaves. Tests for sucrose.
2. Study of vegetative and floral morphology, and pod development in chickpea and red gram.
3. Study of structure of oil storing tissues in sectioned seeds of mustard, groundnut and soyabean, and coconut endosperm, using micro-chemical tests.
4. Study of wood anatomy of ring-porous, diffuse porous woods using hand sections or prepared slides. Understanding of wood anatomy using T.S., T.L.S. and R.L.S. in five timber yielding species (*Tectona, Dalbergia, Albizzia, Eucalyptus Cedrus, Acacia, Shorea, Terminalia, Mangifera, Azadirachta,* or any other depending on the location of the institution). Preparation of a list of 10 fire wood species in your region and their properties.
5. Study of 10 whole plants (live or from herbarium specimens) used as resources of drugs : (*Opium*, *Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrrhiza, Phyllanthus amarus (P. fraternus*), *Allium sativum, Atropa belladonna, , Aloe barbadense,* or any other important plants of your area.
6. Study of laticiferous system in the stem of *Hevea brasiliensis,* familiarization with whole plants (fresh or herbarium specimens of *Cymbopogon* sp., *Eucalyptus, Jasminum, Geranium and Vetiveria* (or any other local sources of essential oils).
7. Study of Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum) from live specimens. Sources of dyes : Curcuma longa (turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigo fera (indigo) and Lawsonia inermis (mehndi). Extraction of pigments.
8. Preparation of a list of trees and shrubs used as ornamentals alongwith their popular and scientific names. Seasons of flowering and brief description. Calendar of seasonals grown as bed plants, potted plants, house plants, flowers used for worship or ornamentation. This may be illustrated and presented as a term paper at the time of examination.

Guidelines for Botany Practical Examination

Max. Marks : 20
Practical : 18
Int. Assessment : 2
Time : 3 hrs.

1. Identify specimen A and write note on its ecological adaptations. 3
2. Identify and write illustrated morphological note on specimens B,C & D giving their economic importance. 6
3. Identify & write botanical name and family of specimens E & F. 4
4. Practical note book. 2
5. Vice-Voce . 3

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ZOOLOGY

B. Sc. (HONOURS) SEMESTER - III

PAPER I: ENVIRONMENTAL BIOLOGY-I

Max. Marks : 40
Theory Exam : 36 marks
Internal Assessment : 4 marks
Time : 3 hrs.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Environment :** Introduction and components.
2. **Ecological Concepts :** Ecosystem: Types food chains, food web, energy flow.

UNIT-II

3. **Biogeochemical cycles**
4. **Ecological succession**

UNIT-III

5. **Pollution: Types** - Air, water, land, thermal and noise pollution.

   (a) *Sources of Pollution :* Sewage, industrial wastes, silt, fertilizers, detergents, oils, pesticides, smoke, exhaust gases from automobiles, smog, acid rains, radioactive elements etc.

   (b) *Pollution in India:* Major polluted rivers and their sources of pollution, air pollution in major cities.

   (c) *Hazards of Pollution :* Effects of pollution on plants and animals.

UNIT-IV

6. (a) *Control of Pollution:* Primary, secondary and tertiary treatment, standards for the quality of drinking water.

   (b) Bioremediation

Suggested Readings :

1.	Odum, E.P.	:	Fundamentals of Ecology, W.B. Saunders Co., Philadelphia, 1971.
2.	Melanby, K.	:	The Biology of Pollution : Studies in Biology, No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3.	Louis, K.	:	River Pollution, Butterworths, 1969.
4.	Dix, H.M.	:	Environmental Pollution, Atmosphere, Land, Water and Noise, (Institution of Environmental Science) Wiley, 1981.
5.	Mani, M.S.	:	Ecology and Biogeography of India, Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6.	Kendeigh, S.C.	:	Ecology with Special Reference to Animals and Man, New Jersey, Prentice Hall Inc., 1974.

Paper II: MOLECULAR BIOLOGY-I

Max. Marks : 40
Theory Exam : 36 marks
Internal Assessment : 4 marks
Time : 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Introduction** : Scope and historical account from molecules to cells, prokaryotes to eukaryotes, unicellular to multicellular.
2. **Biomolecules** : Micro and Macro molecules Structure and function of carbohydrates, lipids, proteins and nucleic acids.

UNIT-II

3. **Carbohydrates** : Classification, structure of cellulose and glycogen.
4. **Lipids** : Classification, structure of ganglioside and steroids.

UNIT-III

5. **Proteins**: Classification, structure of amino acids, primary, secondary and tertiary structure of proteins, structure of hemoglobin and lysozyme.

UNIT-IV

6. **Nucleic Acids** : DNA. What genes are made of? Detailed structure of DNA Molecule, replication, RNA - various types, transcription, translation and involvement of RNAs in protein synthesis.

Books Recommended :

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Watson, J.D. : Molecular Biology of the Cell, Robert, K. & Garland Publications, New York, 1983
2. DeRobertis, E.M.F. Jr. : Essentials of Cell and Molecular Biology, Halt Saunders, Japan, 1981
3. DeRobertis, E.D.P. & DeRobertis, E.M.F. : Cell and Molecular Biology, 8th edition, Halt Saunders, Tokyo, 1987.
4. Gardner, E.J., Simmons, M.J. & Snustad, D.P : Principles of Genetics, John Wiley & Sons, New York, 2004.
5. Power, C.B. : Cell Biology, Himalayan, Publishing House, Bombay, 1981
6. Schleif, R. : Genetics and Molecular Biology, Addison-Wesley, Reading U.K, 1986
7. Villee, C.A., Selomon, E.P. & Davis, P.W, : Biology, Saunders College Publishing, New York, 1985
8. Watson, J.D. : Molecular Biology of the Gene, 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9. Barry, J.M. : Molecular Biology, Genes and Chemical Control of Living Cells, Prentice Hall, Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-III

Practical's based on both theory papers.

1. Estimation of D.O. of the given water sample (normal and polluted).
2. Estimation of total alkalinity of water sample (normal and polluted).
3. Estimation of chlorine of water sample (normal and polluted).
4. Estimation of Hardness of water sample (normal and polluted).
5. Estimation of NO3 of water sample (normal and polluted).
6. Estimation of PO4 of water sample (normal and polluted).
7. Analysis of the variations in protein contents in different organs of an animal procured from slaughter house.
8. Analysis of the species variations in amino acids requirements.
9. Demonstration of carbohydrate and proteins in a cell (Cytochemically).
10. Prepare a Project on national parks/sanctuaries/biosphere reserves.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) III Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks

I. Analyze the variations in protein contents in the organs of a given specimen. Write the procedure and show the reading to the examiner. (3)

II. Determine the physico-chemical factors (A) in given water sample from a lake. Write the procedures followed. (3)

III. Demonstrate cytochemically carbohydrates/protein in an eukaryotic cell. Write the procedure and show the preparation to the examiner. (3)

IV. Write a note on the project…… (2)

V. Viva-Voce. (3)

VI. Note Book and Charts. (4)

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2018-19

SEMESTER-IV

PAPER I : ENVIRONMENTAL BIOLOGY-II
PAPER II: MOLECULER BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

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PAPER I: ENVIRONMENTAL BIOLOGY-II

UNIT-I

1. **Biodiversity Conservation** (In-situ, Ex-situ)
2. **IUCN Red List Categories:** Critically Endangered, Endangered, Vulnerable, Rare, Least Concern

UNIT-II

3. **National Conservation Projects**
4. **National Biodiversity Act and Wild life Act**

UNIT-III

5. Ecology of Conservation:

(a) Conservation of Natural Resources: Water, land and minerals.

(b) *Aquaculture:* Pisciculture and management of ponds, extensive & intensive and integrated fish culture.

UNIT-IV

6. (a) Forest Ecology: Forest statistics of India, conservation of forests, management of forests for timber productions.
   (b) Agriculture :Weed control, crop rotation, green revolution, checking of soil erosion.
   (c) *Dedesertification:* Measures to control the advance of desert.

Suggested Readings :

1.	Odum, E.P.	:	Fundamentals of Ecology, W.B. Saunders Co., Philadelphia, 1971.
2.	Melanby, K.	:	The Biology of Pollution : Studies in Biology, No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3.	Louis, K.	:	River Pollution, Butterworths, 1969.
4.	Dix, H.M.	:	Environmental Pollution, Atmosphere, Land, Water and Noise, (Institution of Environmental Science) Wiley, 1981.
5.	Mani, M.S.	:	Ecology and Biogeography of India, Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6.	Kendeigh, S.C.	:	Ecology with Special Reference to Animals and Man, New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-II

UNIT-I

1. **Mutations :** Types of mutations, physical and chemical mutagens and their mode of action on DNA.

2. **Bioenergetics :** Types of energy and their transformation, first and second law of thermodynamics.

UNIT-II

3. Factors governing chemical reactions, generation and function of ATP, biocatalysts; role of enzymes in cellular reactions. Types of major enzymes, Apoptosis.

4. **Regulation of Gene Expression :** Concept of operon, induction and repression in Prokaryotes, gene regulation in eukaryotes.

UNIT-III

5. **Molecules of Cellular Defence :** Structure and function of antibody, major histocompatibility antigens, HLA system. Genetic basis of antibody diversity.

UNIT-IV

6. **Molecular Basis of Inborn Errors of Metabolism :** Genetic basis of carbohydrates and amino acid metabolism, galactosemia and Phenylketonuria.

7. **Recombinant DNA :** Restriction endonucleases, Plasmids, cloning of DNA, use of recombinant DNA technology.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	Molecular Biology of the Cell, Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	Essentials of Cell and Molecular Biology, Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	Cell and Molecular Biology, 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	Principles of Genetics, John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	Cell Biology, Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	Genetics and Molecular Biology, Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	Biology, Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	Molecular Biology of the Gene, 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	Molecular Biology, Genes and Chemical Control of Living Cells, Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-IV

Practical's based on both theory papers.

1. Biota of pond water and sewage/industrial effluent.
2. Effect of light and gravity on organism.
3. Study of littoral, limnetic, profundal communities.
4. Study of nucleic acids in tissues (Cytochemically).
5. Idea about viruses and bacteria through charts etc.
6. Preparation and study of onion root tip chromosomes.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) IV Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2marks

I. Record biota in the given sewage samples. Draw labeled sketches & demonstrare these to the examiner. (3)

II. Examine water sample for biotic communities from particular zone of lake, sketch and demonstrate. (3)

III. Identify the given chart/diagram. Write a brief note on it. (2)

IV. Study the effect of …… on the given animal. Write the procedure followed. (2)

V. Male a chromosomes preparations of the onion root tip. Draw a label diagram of any stage of mitosis and show it to the Examiner. (3)

VI. Viva-Voce. (2)

VII. Note Book and Charts. (3)

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B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE), 2018-19

SEMESTER-III

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There would not be more than eight students in one section in practical examination.
3) There would be upto eight students in one section in practical class.
4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5) No electronic Instruments will be allowed for lehra in practical examination.
6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 theory periods per week) : 45 Marks

Paper-A Theory

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 3 Hours

Unit-I

1. Define the following terms : Stuti, Thaat, Tehai, Gat, Bharamri
2. Nritta, Natya, Nritya
3. Head Movements

Unit-II

1. Contributions Acchan Maharaj in the field of dance
2. Life sketch of Guru Pt. Narayan Prasad.
3. Knowledge of Gharanas of Kathak Dance

Unit-III

1. Detailed knowledge of Folk dance of west Bengal.
2. Study of Abhinaya
3. Brief note on Kathak and Odissi.

Unit-IV

1. Description of Jhaptaal, Ektaal and Adachautaal
2. Writing of Ekgun, Dugun and Chogun of following talas: Teentala, Ektala, Jhaptala
3. Writing of notation: Thaat, Amad, Tihai, Tukra, Tisarjati paran, Palta, Kavit in : Teentala, Jhaptala, Ektala

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B Practical

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 20 minutes

1. Teentala: Tatkar in Ekgun, Dugun, Chaugun layakaries with two tihaies.
2. Ektala & Jhaptala: Thaat-2, Amad-2, Tihai-2, Tukras-2, Tisarjati paran-1, palta-1, kavit-1
3. Gat Nikas: Thaat and Mataki
4. Practical demonstration of Rajasthani dance
5. Practical knowledge of Asamyukta Mudras.
6. Ability to play Nagma in teentala
7. Recitation of all toras & tukras etc. on hand.

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE), 2018-19

SEMESTER-IV

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There would not be more than eight students in one section in practical examination.
3) There would be upto eight students in one section in practical class.
4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5) No electronic Instruments will be allowed for lehra in practical examination.
6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 theory periods per week) : 45 Marks

Paper-A Theory

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 3 Hours

Unit-I

1. Define the following terms: Uthaan, Chakardar Paran, Palta, Jati, Pakshi Paran
2. Ang, Upang, Pratyang
3. Eye Movements

Unit-II

1. Origin and development of Kathak Dance
2. Detailed study of Kathakali Dance
3. Prastutikran of Kathak

Unit-III

1. Detailed study of Chari
2. Study of Abhinaya Darpan
3. Dance and Literature

Unit-IV

1. Description of Dadra (6), Kehrva (8), Dhamar (14), Teentala (16)
2. Writing of Ekgun, Dugun, Chaugun of above mentioned talas with tehai
3. Writing in notation : Thaat, Amad, Tehai, Tora, Chakardar paran, Kavit and Premlu in Dhamar & teentala

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 20 minutes

1. Adachautala : Tatkar in Ekgun, Dugun, Chaugun layakaries with two tihaies.
2. Dhamar & Teentala: Thaat-2, Amad-2, Tihai-2, Toras-2, Paran-1, Kavit-1, Pramelu-1
3. Gat Nikas: Ghungat, Bansuri
4. Practical demonstration of Giddha
5. Practical knowledge of Sanyukta Mudras.
6. Ability to play Nagma on harmonium in teentala & dhamar
7. Recitation of all toras & tukras etc. on hand.

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
THIRD YEAR
(SEMESTER : FIFTH AND SIXTH)
Examination, 2018-2019

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE HONOURS SUBJECTS OF THE B.A./B.Sc. THIRD YEAR FOR THE EXAMINATION, 2018-2019

ENGLISH

SEMESTER V

PAPER : 20th Century Literature

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1. G.B. Shaw : *Arms and the Man.*
2. George Orwell : *Nineteen Eighty Four.*
3. D. H. Lawrence : *The Rainbow.*
4. W.B. Yeats :
   (i) *Among school Children*
   (ii) *The Second coming*
   (iii) *Lake of Isle Innisfree*

Testing :

There will be **Two Units.**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three

Unit I
There will be one question on the literary movement of 20th Century with internal choice

(15 marks)

There will be one question with reference to the context from writers at Serial No. 1 and 4. Two passages will be set from each writer with internal choice. Students will attempt one passage from each writer.

(15 Marks)

Unit II
There will be two essay type questions with internal choice on each of the four writers' texts. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

SEMESTER VI

PAPER : INDIAN WRITING IN ENGLISH

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1. Tagore : (i) *The Joureny*, (ii) *Sea Shore.*, (iii) *Maya* — *Selection from Geetanjali*
2. Mulk Raj Anand : *Coolie.*
3. R.K. Narayan : *The Vender of Sweets*
4. Kamla Dass : (i) *An Introduction* (ii) *Forest Fire* (iii) *The Freaks* (iv) *My Grandmother's House*

Testing :

1. There will be one question with reference to context. Two stanzas with internal choice will be set from Tagore and Kamla Dass. Students will attempt one stanza from each Poet.. (10 marks)
2. Four questions (one on each author) of 20 marks each will internal choice. (20 × 4 = 80 marks)

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संस्कृत

बी. ए. (आनर्स) तृतीय वर्ष परीक्षा, 2018-2019

SEMESTER-V

तृतीय पत्र : पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः–

विद्यार्थियों को काव्य के स्वरूप, प्रयोजन इत्यादि से अवगत करना । इसी के साथ ही पाणिनीय सूत्रों के माध्यम से कारक तथा स्त्री प्रत्ययों के अध्ययनोपरान्त संस्कृत लेखन के प्रति उत्साहित करना ।

UNIT-I

(क) साहित्यदर्पण–प्रथम परिच्छेद 40 अंक

UNIT-II

(ख) लघुसिद्धान्तकौमुदी– 30 अंक

(i) विभक्त्यर्थ (कारक–प्रकरण) 15 अंक

(ii) स्त्री–प्रत्यय 15 अंक

UNIT-III

(ग) संस्कृत में निबन्ध (इन विषयों पर– संस्कृतभाषा, परोपकारः, गीता, वेदानां महत्त्वम्, आदर्श–छात्रः)। 20 अंक

नोट – पत्र का अध्यापन समय–नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

संस्कृत

बी. ए. (आनर्स) तृतीय वर्ष परीक्षा, 2018-2019

SEMESTER-VI

चतुर्थ प्रश्न -पत्रः पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः-

उपनिषद् प्रतिपादित नचिकेता एवं यम के संवाद द्वारा विद्यार्थियों को रहस्यमय परमतत्त्व से परिचित कराना, इसके अतिरिक्त चतुर्वेद, ब्राह्मण तथा उपनिषद् ग्रन्थों के विषय-वस्तु का अध्ययन करवाना।

UNIT-I

(क) उपनिषद्-साहित्य 60 अंक

(i) कठोपनिषद्-(प्रथम अध्याय) अनुवाद एवं व्याख्या (6 में से 4 सन्दर्भ) 4×10 = 40 अंक

(ii) कठोपनिषद् से सम्बद्ध प्रश्न (2 में से 1 का उत्तर) 1×20 = 20 अंक

UNIT-II

(ख) वैदिक साहित्य का इतिहास 30 अंक

1. सहिंताएँ 2. ब्राह्मणग्रन्थ 3. उपनिषद 2×15 = 30 अंक

(विषय वस्तु से सम्बन्धित चार में से दो के उत्तर पूछे जायेगें) ।

नोट - पत्र का अध्यापन समय-नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

Books Recommended :

1. Sanskrit Drama : A.B. Keith.
2. Classical Sanskrit Literature : A.B. Keith.
3. A History of Sanskrit Literature : A.A. Macdone.
4. A History of Indian Literature, Vol. 1 : M. Vintenitz
5. History of Sanskrit Literature by V. Varadachari.
6. संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय
7. वैदिक साहित्य और संस्कृति : बलदेव उपाध्याय
8. संस्कृत वाड्मय का इतिहास : वाचस्पति गैरोला
9. संस्कृत साहित्य की रूपरेखा : चन्द्रशेखर पाण्डेय

Note : All books are available at the Chaukhamba Sanskrit Series, Chaukhamba, Varanasi and Motilal Banarasidas, Jawahar Nagar, Bunglow Road, Delhi.

PERSIAN

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-2019

SEMESTER V

PAPER-III : HISTORY OF PERSIAN LITERATURE

SAFIVID PERIOD

100 Marks

Time : 3 Hrs.

Books Recommended:

1. History of Persian Literature by Dr. Razazadeh Shafaq.
2. History of Persian Literature by Dr. Brown Vol. III.

PERSIAN

B.A.(HONOURS) THIRD YEAR EXAMINATION, 2018-2019

SEMESTER-VI

Paper-IV MODERN PERSIAN

100 Marks
Time : 3 Hrs

1. PROSE:
   (i) The following three short stories of Saeed-Nafisi
   (a) Azan-E-Maghrib
   (b) Khana-Ye-Pidari.
   (c) Janayat-E-Man

   (ii) The following three short stories of Mohammed Heijazi:
   (a) Khud Khusi.
   (b) Eedi.
   (c) Mah-e-man

Book Prescribed:

Nasib-Jadid-e-farsi, jayyed Press, Ballimaran, Delhi-6

2. POETRY:
   Quasidan
   1. Namund Namah by Bahar.
      "Dar Sher Band Mehro-Wafa Dilbari Namund."
   2. Ghazalliyat-E-Parveen Etisami by Mehdi Hameedi.
   3. Qataat by Mehdi Hameedi.

Books Recommended:

1. Barguzida-Ye-She'r-e-Farsi-Ye-Mu' aasir Part-I by Dr. Muneeb-al-Rehaman.
2. Edara-ye-Ulam-e-Islami, Danish gah-e-Islami,Aligarh.

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ARABIC

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

(Kept in Abeyance)

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FRENCH

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-2019

SEMESTER V

5th Semester: FRENCH LITERATURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

INTRODUCTION TO HISTORY OF FRENCH LITERATURE FROM 17th– 18th CENTURY

Questions should be asked strictly from the prescribed text book.

1. Five questions of 8 marks each based on History of French Literature — 40 Marks
2. Fill in the blanks or multiple choice questions on History of literature with maximum of 2 marks each. — 20 Marks

Poetry: Explanation, central idea, critical appreciation of poems — 30 Marks

1. L'amour et la folie (La Fontaine)
2. Le laboureur et ses enfants (La Fontaine)
3. Le lion et le rat (La Fontaine)
4. Le chêne et le Roseau (La Fontaine)
5. La Jeune veuve (La Fontaine)

Courses of Reading :

Memento de Littérature française, by Hélène, Publication Hatier, Profil Littèrature. Only from 17-18 centuries to be studied.

Note : 1. The latest syllabus should be followed.
2. Choice should be given in questions.

Reference Books :

1. Collection littéraire—Moyen age – 20eme siècle -Lagarde et Michard, Bordas.
2. Recueil de Textes littéraires français. Moyen Age -20eme siècle-Chassang et Senninger.
3. Moyen age -20eme siècle – Castex et. P. Surer, Hachette.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH

SEMESTER VI

6th SEMSETER-: HISTORY OF LITERATURE, POETRY &VIVA-VOCE

Max. Marks	: 100
Theory	: 70 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours
Viva-Voce	: 20 Marks

History of literature 19th-20thCentury:

Introduction to the History of French Literature 19th – 20th century.
Five questions of 8 marks each based on History of French Literature 40 Marks

Poetry: 30 Marks

Explanation, resume, central idea, critical appreciation of the poems

1. Les feuilles mortes (Jacques Prévert)
2. Chant d'automne (Baudelaire)
3. L'homme et la mer (Baudelaire)
4. Paysage(Baudelaire)
5. L'albatros (Baudelaire)

Viva-Voce 20 Marks

1. Dictation of an unseen passage of about 200 words. 10 Marks
2. Oral questions based on the dictation passage and also general questions 10 Marks

Note: Questions in all the papers shall be asked and answered in French only.

For the information of private candidates:

1 Viva is compulsory

2.The theory paper would be proportionately marked out of 80 as there is no internal assessment.

HINDI
(B.A. HONS. 3rd YEAR 5th SEMESTER 2018)

PAPER-III (A)

तृतीय पाठ्यचर्या **पूर्णांक – 90 + 10 = 100**

समय – तीन घंटे

1. **कहानियाँ : आधार चयन–भीष्म साहनी, आधार पब्लिकेशन, पंचकूला ।**
2. **संस्मरण : अतीत के चलचित्र – महादेवी वर्मा, राधकृष्ण प्रकाशन, नई दिल्ली ।**

(क) प्रस्तुत दोनों कृतियों में से 10/10 अंकों के 4 व्याख्यांश पूछे जाएंगे । छात्रों को केवल दो की संदर्भ एवं काव्य–सौन्दय सहित व्याख्या करनी होगी । 10+10=20

(ख) दोनों कृतियों में से 4 समीक्षात्मक प्रश्न पूछे जाएंगे । जिनमें से छात्रों को 15–15 अंको के दो प्रश्नों के उत्तर देने होंगे । 15+15=30

(प्रत्येक कृति में से एक प्रश्न अवश्य करना होगा)

(चरित्र, मूल संवेदना, तात्त्विक समीक्षा, उद्देश्य, भाषा–शैली)

3. **काव्यशास्त्र** **अंक–30**

(क) शब्द शक्तियाँ – परिभाषा और उदाहरण

(ख) बिम्ब – परिभाषा एवं स्वरुप

(ग) रस – परिचय, प्रकार, लक्षण और उदाहरण

(घ) प्रतीक – परिभाषा एवं स्वरुप

खंड तीन से संबंध्ति चारों उपखंडों (क ख ग घ) में से कुल मिलाकर 20–20 अंकों के चार प्रश्न पूछे जाएंगे जिनमें से छात्रों को किन्हीं दो के उत्तर देने होंगे ।

4. **दो–दो अंकों के 5 वस्तुनिष्ठ प्रश्न करने होंगे ।**
   8 प्रश्न पूछे जाएंगे । 5x2=10

5. **आंतरिक मूल्यांकन –** **अंक–10**

सहायक पुस्तकें :

1 **अन्धा युग : एक विवेचन, डॉ0 हरीश्चन्द्र वर्मा. नव भारती शंकर प्रतिष्ठान, नई दिल्ली**
2 **हिन्दी कहानी अन्तरंग परिचय : रामदरश मिश्र, नेशनल पब्लिकेषन, नई दिल्ली ।**
3 **हिन्दी कहानी अपनी जुबानी : डॉ0 इन्द्रनाथ मदान, संभावना पब्लिकेशन, हापुड ।**

HINDI
(B.A. HONS. 3rd YEAR 6th SEMESTER 2019)

PAPER-IV (B)

चतुर्थ पाठ्यचर्या

पूर्णांक–90+10=100

समय – तीन घंटे

1. **काव्य–नाटक : एक कण्ठ विषयायी–दुष्यंत कुमार, लोकभारती**

   (क) इस कृति में से 10–10 अंकों के दो व्याख्यांश पूछे जाएंगे,

   इनमें से एक करना होगा ।

   (ख) इस कृति में से 16–16 अंकों के दो समीक्षात्मक प्रश्न पूछे जाएंगे,

   इनमें से एक करना होगा । अंक–26

2. **छंद : भुजंगप्रयात, मालिनी, मंदाक्रान्ता, शिखरिणी, अहीर**

   मनव, बरवै । अंक–20

3. **अंलकार : अन्योक्ति, तुल्योगिता, उल्लेख, व्याजस्तुति,**
   अनन्वय, विभावना अंक–20

(छात्रों को पाँच–पाँच अंकों के 4 छंदो और पाँच–पाँच अंकों के चार अलंकारों के लक्षण तथा उदाहरण लिखने होंगे । प्राश्निक को दुगना विकल्प देना होगा)

4. **भाषा : अंक–24**

   (i) हिन्दी की प्रमुख बोलियां–क्षेत्र और विशेषताएं
   विशेषतः ब्रज, अवधी का परिचय

(ii) **मानक हिन्दी की संरचना–शब्द संरचना, रूप–सरंचना**
वाक्य संरचना

(iii) **क. राजभाषा हिन्दी का परिचय तथा वर्तमानस्थिति ।**
ख. देवनागरी लिपि का अनुमोदित मानक रूप ।

विशेष : खंड 4 में से 15–15 अंकों के कुल चार प्रश्न पूछे जाएंगे । जिनमें से छात्रों को दो के उत्तर देने होंगे ।

5. आंतरिक मूल्यांकन : अंक–10

सहायक पुस्तकें :–

1. **अन्धा युग : पथ और प्रदर्शन, जयदेव तनेजा, वाणी प्रकाशन, नई दिल्ली ।**
2. **अन्धा युग और भारती के अन्य नाट्य प्रयोग : जयदेव तनेजा, नचिकेता प्रकाशन, नई दिल्ली ।**
3. **काव्य के तत्त्व : आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद ।**

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2018–19) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਪੰਜਵਾਂ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਕਾਵਿ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪ੍ਰਯੋਜਨ
2. ਕਾਵਿ ਦੀ ਆਤਮਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਨਿਰਧਾਰਨ
3. ਕਾਵਿ ਦੇ ਤੱਤ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

1. ਧੁਨੀ ਸੰਪ੍ਰਦਾਇ
2. ਰਸ ਸੰਪ੍ਰਦਾਇ
3. ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਚੋਣਵੇ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਮਾਲੋਚਨਾ ਦਾ ਆਰੰਭ
2. ਨਾਮਕਰਣ
3. ਕਾਵਿ ਦਾ ਲੱਛਣ ਤੇ ਸਰੂਪ
4. ਕਾਵਿ ਤੇ ਸਾਹਿਤ
5. ਕਾਵਿ ਦੇ ਪ੍ਰਯੋਜਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2018–19) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2018 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਛੇਵਾਂ

ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਉਦੇਸ਼ ਅਤੇ ਖੇਤਰ
2. ਪੰਜਾਬੀ ਆਲੋਚਨਾ – ਆਰੰਭ ਤੇ ਵਿਕਾਸ
3. ਕਾਵਿ ਟਿੱਪਣੀਆਂ ਤੇ ਟੀਕਾਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਬਾਵਾ ਬੁੱਧ ਸਿੰਘ, ਕਿਸ਼ਨ ਸਿੰਘ, ਅਤਰ ਸਿੰਘ, ਹਰਿਭਜਨ ਸਿੰਘ।

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸਾਹਿਤਿਆਰਥ – ਸੰਤ ਸਿੰਘ ਸੇਖੋ (ਪੰਜ ਚੋਣਵੇ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਪੁਰਾਤਨ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
2. ਆਧੁਨਿਕ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
3. ਅਧਿਆਤਮਿਕ ਕਵਿਤਾ
4. ਕਵਿਤਾ ਤੇ ਸਮਾਜਕ ਆਲੋਚਨਾ
5. ਕਵਿਤਾ ਤੇ ਵਿਗਿਆਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2018–19) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ – ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਸੱਤਵਾਂ

ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਪ੍ਰਯੋਜਨ
2. ਅਨੁਕਰਨ, ਵਿਰੇਚਨ ਅਤੇ ਉੱਦਾਤ
3. ਤ੍ਰਾਸਦੀ/ਦੁਖਾਂਤ : ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪਲੈਟੋ, ਅਰਸਤੂ, ਲੌਂਜਾਈਨਸ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ

(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਸ਼ਾਸਤ੍ਰ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ ਤੇ ਜੀਵਨ
2. ਸਾਹਿਤ ਤੇ ਸਮਾਜ
3. ਸਾਹਿਤ ਤੇ ਵਿਅਕਤੀ
4. ਵਾਰਤਕ ਕਲਾ
5. ਨਿਬੰਧ ਤੇ ਸ਼ੈਲੀ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2018–19) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ–ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਅੱਠਵਾਂ

ਪੱਛਮੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ : ਉਦੇਸ਼ ਤੇ ਖੇਤਰ
2. ਪੱਛਮੀ ਆਲੋਚਨਾ : ਪ੍ਰਮੁੱਖ ਸਥਾਪਨਾਵਾਂ
3. ਵਿਚਾਰਧਾਰਾ ਤੇ ਸਾਹਿਤ, ਅਜਨਬੀਕਰਨ ਤੇ ਸਾਹਿਤਕ ਪਾਠ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮਾਰਕਸਵਾਦ, ਰੂਪਵਾਦ, ਮਨੋਵਿਸ਼ਲੇਸ਼ਣ, ਸੰਰਚਨਾਵਾਦ : ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਟੀ ਆਰ਼ ਵਿਨੋਦ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਆਲੋਚਨਾ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ (ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਾਰਜ ਤੇ ਕਰਤੱਵ)
2. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਚਾਰ
3. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਤਿਬੱਧਤਾ
4. ਸਾਹਿਤ ਅਤੇ ਸੁਤੰਤਰਤਾ
5. ਸਾਹਿਤ ਅਤੇ ਚਿਤੰਨ

(ਅੰਕ : 15)

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URDU

SEMESTER V

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- I Novelette

Unit-I

Novelette-‘ Dilruba’ Ka tanqidi Jayeza 25 marks

Unit-II

Plot aur Character 20 marks

Unit-III

‘Agle Janam Mohe Bitiya na Kijo’ ka tanqidi jayeza 25 marks

Unit –IV

Plot aur character 20 marks

Books Prescribed:-

1. ‘ Char Novelette’by Qurrat-ul-ain Hyder,Educational Book House,Aligarh.
2. ‘Beesveen Sadi mein Urdu Novel’ by Dr. Usuf Sarmast, Education Book House, Aligarh.

URDU

SEMESTER VI

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- II Novelette

Unit-I

Ismat Chughtai Ka Novelette 'Ziddi' Ka Plot 25 marks

Unit-II

Character 20 marks

Unit-III

Critical notes on Ismat Chughtai ki novel nigari ki khususiaat 25 marks

Unit –IV

Ismat Chughtai ki life history 20 marks

Books Prescribed:-

1. Novelette'Ziddi' by Ismat Chughtai,Education Book House, Aligarh
2. 'Beesveen Sadi mein Urdu Novel'by Dr. Usuf Sarmast, Education Book House, Aligarh.

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GERMAN

SEMESTER V

Summary

Max. Marks: 100 marks (Total)
Paper-1 (Theory): 90 marks
Internal Assessment: 10 marks

Paper – 1 (Theory): 90 marks (Total)
Time: 3 hours
Note: Use of dictionary is allowed

i. Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:

i. Aufklärung

ii. Sturm und Drang.

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Geschichte der deutschen Dichtung, Fricke/Klotz.

ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

GERMAN

Summary

Max. Marks: 100 marks (Total)
Paper-2 (Theory): 90 marks
Internal Assessment: 10 marks

Paper - 2 Essay and Translation (Theory): 90 marks

Time: 3 hours
Note: Use of dictionary is allowed

i. Translation of an unseen text/s from German into English : 50 marks

ii. Translation of an unseen text/s from English into German : 20 marks

iii. Essay writing in German (about 250 words) : 20 marks

i. Länder und Leute

ii. Ausbildung und Berufswege (Indien / Deutschland)

iii. Politik (Indien / Deutschland / Europa / Welt)

iv. Umzug und Einrichtung

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:
1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch by Hartmut Aufderstraße a.o.

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GERMAN

SEMESTER VI

Summary

Max. Marks: 100 marks (Total)
Written Paper (Theory): 90 marks
Internal Assessment: 10 marks

Written Paper (Theory): 90 marks (Total)

Time: 3 hours
Note: Use of dictionary is allowed

Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:
i. Klassik
ii. Romantik

Internal Assessment : 10 marks (Total)
- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:
i. Geschichte der deutschen Dichtung, Fricke/Klotz.
ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:
i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

Viva-voce (Oral exam)

Max. Marks : 100 marks (Total)

i. Reading, comprehension (question/answers) of an unseen text : 40 marks
ii. To speak on one of the given topics : 30 marks
iii. General conversation in German : 30 marks

Suggestions for preparation:
i. Magazine (Der Spiegel), Internet websites, Information on German-speaking countries etc.

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DEFENCE & STRATEGIC STUDIES
SEMESTER - V
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-19

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Paper : Area Studies China-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hrs.

Total Teaching Periods: 75

SECTION-I

1. Military Geography of China : Location, size and strategic importance.
2. Economic and Industrial resources (in brief).
3. Population, composition and characteristics of major ethnic groups.

SECTION-II

1. History of China in brief from the CH'IN to Manchus Dynasty.
2. Nationalist Revolution in China under Dr. Sun Yet Sen : Events and effects.

SECTION-III

1. Rise of Chiang Kai Shek.
2. The Nanking Government of China, long march in China.
3. The Civil War in brief.

SECTION-IV

1. Party-Army Relationship.
2. Communist party and its relationship with the Armed Forces.
3. Higher Defence Organisation.
4. Cultural Revolution.

BOOKS RECOMMENDED :

1.	Balance, Edger O.	:	The Red Army of China, Russell Square, London.
2.	Chatterji, B.R.	:	Modern China –A Short History, Meenakshi Printing, Meerut.
3.	Encyclopaedia of Britannica.		
4.	Gupta, R.S.	:	History of Modern China, Sterling Pub.
5.	Kapur, Harish	:	China in World Politics, Div. Pub., N.D.
6.	Liu, F.F.	:	A Military History of Modern China, Princeton Uni. Press.
7.	Mao Tse Tung	:	Communist Rule in China.
8.	Mc. Aleavy, Henry	:	The Modern History of China.
9.	Mitchison	:	Chinese Revolution.
10.	Nung Chen Li	:	The Political History of China, Princeton Uni. Press.
11.	Pelissier Roger	:	The Awakening of China, Secker and Warturg, London.
12.	Tregear, T.R.	:	A Geography of China, University of London.
13.	Wilson Dick	:	A Quarter of Mankind, Weidenfeld and Micholson Olson, London.

DEFENCE & STRATEGIC STUDIES
SEMESTER - VI
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-19

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Max. Marks : 100
Theory : 90 Marks
Int. Ass. : 10 Marks
Time : 3hrs

Total Teaching Periods: 75

Paper : Area Studies China-II

SECTION- I

SINO-INDIAN WAR (1962)

1. Events Leading to the war.
2. Operation in brief.
3. Lessions learnt

SECTION- II

1. Determinants of Chinese Foreign Policy.
2. China's Relations with India.
3. China's Relations with Pakistan and its impact on India.

SECTION–III

1. China's Relations with other neighbouring countries.
2. China's Relations with the U.S.A.
3. China's Relations with Russia.

SECTION-IV

1. Defence Potential of China.
2. China's Modernization Program.
3. China's Nuclear Weapon Development.

Books Recommended:

1. Dalvi, J.P. : Himalyan Blunder, Thackei' and Co., Bombay.
2. Griffith Samoul, B. : The Chinese People's Liberation Anny, Army Pub., N.D.
3. Kapur, Harish : China in World Politics, Div. Pub., N.D.
4. Mao TsiTung : CoIn;m~ist Rule ~Chin~. .
5. Sharma, B.L. : The Paklstan-'-Chma AXIS, Asia Pub., B~mbay.
6. Sinh~; K.K. : Problems of Defence of South and East Asia, Rawat Pub., Jaipur.
7. Tr~er N. Frank and : Twentieth Appraisal Year, Weidenfeld and Nicolson, London, William Genderson
8. Cassell & Company : Guerilla Warfare-Mac Tse- Tung & Guevera, Red Lion Sq.,London.

Journals: -

1. RAUSEN DATA : Problem of Communism.
2. Institute of Defence Studies & Analysis (India)
   i. Strategic Analysis.
   ii. Strategic Digest.
3. The China Quarterly.
4. The Institute of Strategic Studies, London. : Military Balance, IISS London.

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HISTORY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-19

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

SEMESTER V

Any one paper from the following:

(i) History of China

OR

(ii) History of Russia

(i) HISTORY OF CHINA:

Max. Marks:	**100**
Theory:	**90 Marks**
Internal Assessment:	**10 Marks**
Time	**3 hours**

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

CHINA IN THE 18TH CENTURY

1. Political and Economic Institutions
2. Social and Intellectual Conditions
3. Foreign Relations

UNIT-II

'OPENING' OF CHINA AND REBELLIONS

4. Canton Trade System, Opium Wars, Treaty Settlements
5. Taiping Revolution
6. Reform Movement of 1898

UNIT-III

REVOLUTION AND REFORM

7. Boxer Rebellion 1900
8. Intellectual, Social and Economic Change
9. Rise of Sun Yat Sen and Revolution

UNIT-IV

RISE OF THE REPUBLIC

10. Intellectual Revolution and National Unification
11. National Government 1928-37
12. Chinese People's Republic 1945-49

Recommended Readings:

1. Chesneaux, Jean Francoise Le : *China : From the Opium Wars to 1911 Revolution Vol.I.* Delhi : Khosla, 1978.
2. Hsu Immanuel : C.Y., *The Rise of Modern China*, New York : Oxford University Press, 1970.
3. Vinacke, Harold M. : *A History of the Far East in Modern Times*, New York : Appleton Century Crafts, 1961 (6th edn.).
4. Clyde, Paul Hibbert, : *The Far East : A History of the Impact of the West on Eastern Asia*, Englewood Cliffs, N.J. Prentice Hall : 1958 (3rd edn.).

(ii) HISTORY OF RUSSIA:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

1. *Liberalism and Reaction :* Alexander I; Nicholas I.
2. *Modernisation of Russia :* Alexander II; Alexander III & Nicholas II.

UNIT-II

3. *Russia and the Far East :* Interventions in China, Mongolia and Manchuria.

4. *Background of Russian Revolution 1905-1917 :* Revolution of 1905; Russia on the eve of the Revolution of 1917 – Polity, Society, Economy; Lenin's Contribution to the Revolution.

UNIT-III

5. *Causes of the Russian Revolution and its Aftermath :* The February Revolution and the Provisional Government, the Bolshevik (October Revolution), its impact on Russia and the World.

6. *Civil War :* Russian withdrawal from First World War; Peace of Brest Litovisk; Allied Intervention.

UNIT-IV

7. *The Soviet Economy :* War Communism; New Economic Policy and its impact.

8. *Planned Economy :* Weaning from the New Economic Policy and the First Five Year Plan.

Recommended Readings :

1. Barrington Moore (Jr.) : *The Social Origins of Dictatorship and Democracy.*
2. Paul Kennedy : *The Rise & Fall of Great Powers,* Fontana Press London, 1988.
3. Lionel Kochan : *The Making of Modern Russia,* Penguin Books, 1962.
4. Basil, Dymtrystyn : *History of Russia,* Prentice Hall, New Delhi, 1977.
5. E.H. Carr : *The Bolshevik Revolution,* Penguin Books Ltd., Victoria, 1971 (Reprint).
6. M.T. Florinsky : *Russia : A Short History,* Macmillan, London, 1971 (2nd ed.)

HISTORY

SEMESTER VI

Any one paper from the following :

(iii) Social Origins of Right And Left Wing Dictatorship Of Modern Times
OR
(iv) USA and the World c.1800-1960's

(iii) SOCIAL ORIGINS OF RIGHT AND LEFT WING DICTATORSHIP IN MODERN TIMES:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I: China

1. The Collapse of Imperial System, the emergence of War lords; the Kuomintang interlude; efforts at democracy and Capitalism.
2. The Peasant rebellions; Communist Revolutions; success against the Kuomintang

UNIT II: Russia

3. The Internal Collapse of the Tsarist Regime; Revolution of 1917- Feb/ March and October
4. The Establishment of a Communist Government; Forced industrialization and Collective Agriculture; Stalinist Totalitarianism.

UNIT III: Italy

5. Italy's problems with the Capitalist powers; Failure of Italian Democracy in Economic, Social and Foreign policy
6. The Fascist alternative: Ideology and the corporative state

UNIT IV: Germany

7. Germany's rise as a capitalist powers; Weimar republic and its failure.
8. The fascist stresses with western Europe; Nazi totalitarian programme.

Essential readings:

Barrington Moore : *Social Origins of Dictatorship and Democracy*, Penguin/Peregrine 1977. (reprint)

Reference Reading

Hannah Arendt : *The Origin of Totalitarianism*, Harcourt Brace, New York. 1951

F. Chabad : *A History of Italian Fascism* (Tr. Muricl Grindard) Weidenfeld and Nicolson, London 1961.

(iv) USA AND THE WORLD c.1800-1960's:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I

1. US Foreign Policy 1789-97-Response to French; issues with Britain; Jay's Treaty 1799; Pinckney's Treaty 1797; Peace with France
2. Diplomatic Achievements 1800-1820's-Louisiana Purchase; Settlement with Britain; Acquisition of Florida; non colonization of Alaska; liberation of Latin America; Monroe Doctrine
3. Industrial Revolution in America-expansion of transportation; manufacturing; foreign trade and shipping

UNIT II

4. Expansion to the West in the 1830's –Early settlement in the West; Texas question; migration to Oregon
5. Manifest Destiny –Annexation of Texas; Oregon Treaty; Relations with Mexico; conquest of California
6. USA as a World Power-Expansion in Pacific region; Dispute with Venezuela; Results of War with Spain 1898; Policy in Caribbean and Mexico; Open Door Policy in South East Asia

UNIT III

7. USA and World War I-US attitude to war, entry into the war; 14 point programme, role in Paris peace conference 1919
8. Foreign Policy 1920,s-30's- Washington Treaties, Locarno Treaty, Relations with Mexico, Change in 'Big Stick' Policy, Good Neighbour policy, reaction to Chinese situation
9. USA and World War II- US attitude, US aid to War and War Production, Pearl Harbour

UNIT IV

10. New World Order-US Peace Programme and United Nations, Relations with Soviet Union and Containment, Pan, American Conference 1945, post War Europe
11. US in East Asia-American response to China, Japan, Korea, Vietnam
12. US in Europe and West Asia-US and NATO, issues with Egypt, support to Israelis, Eisenhower Doctrine

Recommended readings:

1. Henry Bamford Parkes : *The United States of America: A History*, 1964 (Reprint), Scientific Book Agency, Calcutta, 1976.
2. Richard Current & Others : *History of United States: A Survey,* Alfred A. Knopf, New York,1965.
3. Julius W. Pratt : *A History of United States Foreign Policy,* Prentice Hall (Second Edition), New Jersey, 1965.
4. Allen, G.C., : *Japan's Economic Recovery*, London Oxford University Press, 1958 (Reprint 1960).
5. Beckman, George H : *The Modernization of China and Japan*, New York : Harper and Row, 1962.

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POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

Outlines of Tests, Syllabi and Courses of Reading

V SEMESTER : Option (i) International Relations since 1945.
OR
Option (ii) Modern Indian Political Thought.
OR
Option (iii) Women and Political Process.

VI SEMESTER : Option (i) Research Methods in (Political Science) Social Sciences.
OR
Option (ii) Modern Political Ideologies
OR
Option (iii) Western Political Thought.

V SEMESTER : Option (i) — INTERNATIONAL RELATIONS SINCE 1945

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims at mapping out some of the major transformations that have occurred in the realm of International Relations since 1945.

UNIT-I Post World War-II International Relations :

(a) Post War World Order.
(b) Emergence of Super Powers.

UNIT-II Democracy and Rise of IIIrd World :

(a) Non-Alignment: Meaning and Relevance.
(b) SAARC, European Union.

UNIT-III **Transformation in Post World War II International Relations :**

(a) Decline of Bipolarity.
(b) Nature of Emerging World Order.

UNIT-IV **New Global Scenario and International Relations:**

(a) Demand for New International Economic Order (NIEO)
(b) Issue of Global Terrorism.

Suggested Readings :

1. Peter Calvocoressi : *World Politics Since 1945*, London : Longman, 1945.
2. Budhraj, V.S. : *International Relations After Second World War* (in Hindi), Chandigarh, Haryana Sahitya Academy, 2000.
3. Keswani, K. B. : *International Relations in Modern World* (1900-1988), Bombay, Himalaya Publishing House, 1994.
4. Baylis and Steve Smith : *The Globalization of World Politics – An Introduction to International Relations*, Oxford, Oxford University Press, 2001.
5. Alan C. Lamborn and Joseph Lepgold : *World Politics into the Twenty First Century : Unique Context, Enduring Patterns*, New Jersey, Prentice Hall, 2003.

References :

1. Paul Kennedy : *The Rise and Fall of Great Power*, Fontana Press.
2. Henry Kissinger : *Diplomacy*, London, Simon & Soluster, 1994.
3. Paul R. Viotti & Mark V. Kauppi : *International Relations and World Politics : Security, Economy*, Identity Third Edition Pearson Education, 2007.
4. John Baylis and Steve Smith : *The Globalisation of World Politics* : An Introduction to International Relations, Second Edition, OUP, 2001.

OR

V SEMESTER : Option (ii) — MODERN INDIAN POLITICAL THOUGHT

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory

question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims at creating understanding about the evolution of political thought in modern India with special reference to the stated philosophers.

UNIT-I **Sir Syed Ahmed Khan :**
- (a) As a Nationalist.
- (b) Education.
- (c) Muslim Nationalism-As a Communalist.

UNIT-II **M.K. Gandhi :**
- (a) Satyagraha.
- (b) Swaraj.
- (c) Non-Violence.

UNIT-III **M.N. Roy :**
- (a) Radical Humanism - critique of Marxism
- (b) New Humanism

UNIT-IV **B.R. Ambedkar** :
- (a) Annihilation of Caste
- (b) Social Justice
- (c) Democracy : Political and Social

Recommended Readings:-

1. Thomas Pantham & Deutsch (ed.) : *Political Thought in Modern India*, New Delhi, Sage, 1986.
2. Majumdar, B.B. : *History of Indian Social and Political Ideas,* Calcutta: Bookland, 1967.

References :

1. Parekh, Bhikhu : *Colonialism, Tradition, Reform : Analysis of Gandhi's Political Discourse*, New Delhi, Sage, 1989.
2. Iyer, Raghvan (ed.) : *Moral and Political Thought of Mahatma Gandhi*, New York, Oxford, 1973.
3. Appadorai, A : *Indian Political Thinkers in the Twentieth Century*, Delhi, Oxford, 1972.
4. Jatava, D.R. : *The Political Philosophy of B.R. Ambedkar*, Delhi; Arya Phoenix, 1965.
5. Hussain, M. Hadi, Syed Ahmed Khan : *Pioneer of Indian Resurgence Lahore*, Institute of Islamic Culture, 1970.
6. Imam, Zafar, : *Muslims in India*, New Delhi : Orient Longman, 1975.

7.	Chattarjee, Partha	:	*Nationalist Thought and the Colonial World, Delhi* : OUP, 1986.
8.	Lyer, Raghavan	:	*The Moral and Political Thought of Mahatma Gandhi*, Delhi : OUP, 1973.
9.	Pantham, Thomas, Parekh,	:	*Gandhi's Political Philosophy*, London, Macmillan, 1989, Bhikhu.
10.	Ghatak, B.K. (ed.)	:	*Dr. Ambedkar's Thought*, New Delhi : APH, 1997.
11.	Keer, Dhanajayay, Dr. Ambedkar	:	*Life and Mission, Bombay* : Popular Parkashan, 1964.
12.	Zelliot, Eleanor	:	*The Social and Political Thought of B.R. Ambedkar in Pantham and Deutsch*, 1986.
13.	Roy, M.N.	:	*New Humanism,* Calcutta : Renaissance, 1953.
14.	Roy, M.N.	:	*The Philosophy and Practice of Radical Humanism*, New Delhi : Radical Humanist Association, 1970.
15.	Roy, Samaren, M.N. Roy	:	*A Political Biography*, Hyderabad : Orient Longman, 1997.
16.	Ray, Sibnarayan (ed.), M.N. Roy	:	*Philosopher Revolutionary*, Delhi, Ajanta, 1995.
17.	Seth, Sanjay	:	*Marxist Theory and Nationalist Politics, The Case of Colonical India*, New Delhi : Sage, 1995.
18.	B.R. Ambedkar (Author) and Arundhati Roy (Introduction)	:	*Annihilation of Caste: The Annoted Critcial Edition,* Navayana, Delhi, 2014.
19.	Chitkara, MG	:	*Dr. Ambedkar and Social Justice,* APH Publishing Corporation, 2002.
20.	Christophe Jaffrelot	:	*Dr. Ambedkar and Untouchability: Analysing and Fighting Caste,* Columbia University Press, 2015.
21.	Gail Omvedt	:	Ambedkar: Towards An Enlightened India, Penguin India, 2008.

OR

V SEMESTER : Option (iii) — WOMEN AND POLITICAL PROCESS

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims to introduce students to the key approaches of Feminist thought contemporary debates concerning women and politics in India. It will include an analysis of the Indian State, the role of women's movement and the major feminist issues in contemporary Indian politics.

UNIT-I **Theoretical Approaches to Women Studies :**

(a) Liberal Feminism.
(b) Marxist / Socialist Feminism .

UNIT-II **Rise of Women's Movement, its role in Contemporary Societies :**

Historical Legacy :

(a) French Revolution, Civil Rights and Suffrage Movements in the West.
(b) Role and Contribution of Women in Indian National Movement.

UNIT-III **Women and Society in India :**

(a) Evolution of Women's position in India – an historical overview-
  (i) Vedic period
  (ii) Medieval Period (Post Vedic Period)
  (iii) Modern Period
(b) Social Position:
  (i) Demographic pattern- Sex Ratio.
  (ii) Legal, Political and Property Rights.
  (iii) Access to Education.

UNIT-IV **Women's Movement in Contemporary India:**

(a) Women Movement in India- Women Movements against Dowry & Rape
(b) Women and Political Participation in India-Status & Barriers, 73rd & 74th Amendment.

Recommended Readings :

1. Millet, Kate, *Sexual Politics*, New York, Doubleday, 1970.
2. Michele Barrett, *Women's Oppression Today*, London, Verso, 1980.
3. Lenin, V.I., *On the Emancipation of Women*, Moscow, Progress, 1981.
4. Eisenstein, Zillah, *Capitalist Patriarchy and the Case for Socialist Feminism*, New York, Longman, 1981 (also New York, Monthly Review Press, 1979).
5. Boserup, Easter, *Women's Role in Economic Development*, London, George Allen & Unwin, 1975.
6. Altback, E.M. (Ed.), *From Feminism to Liberation*, Cambridge, Massachusetts, Schenkman Hare Revised Ed., 1980.
7. Jayawardhane, Kumari (Ed.), *Feminism and Nationalism in the Third World*, New Delhi, 1987.

8. Phadnis, Urmilla and Malani Indira eds., *Women of the World : Illusion and Reality*, New Delhi, Vikas, 1978.

9. Desai, N., *Women in Modern India*, Bombay, Vora & Co., 1977.

10. Nanda, B.R. ed., *Indian Women from Purdah to Modernity*, New Delhi, Vikas, 1976.

11. *I.C.S.S.R., Status of Women's Committee Report*, New Delhi, ICSSR, 1975.

12. Mazumdar, Vina, *Towards Equality*, ICSSR, Delhi.

13. Desai, Neera and Krishanaraj, M., *Women and Society in India*, Delhi, Ajanta, 1987.

14. Chakaravarty, Shanti, *Rural Women's Claim to Priority*, New Delhi, C.W.D.S., 1986.

15. "Women's Struggles and Movement", Paper of Third National Conference, Chandigarh, IAWS.

16. Kaushik, S. (ed.), *Women's Oppression, Patterns and Perspective*, Vikas, New Delhi, 1984.

17. Kumar, Radha, *A History of Doing*, Kali Publications, New Delhi, 2006.

18. Gandhi, Nandita & Shah, Nandita, *The Issues at State*, New Delhi, Kali Publication, 1992.

19. Menon, Nivedita (ed.), *Gender & Politics in India*, New Delhi, Oxford University Press, 1999.

20. Rao, Anupama (ed.), *Gender & Caste*, Delhi, Sage Publications, 2005.

POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018-2019

SEMESTER- VI

VI SEMESTER : Option (i) — RESEARCH METHODS IN (POLITICAL SCIENCE) SOCIAL SCIENCES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper endeavors to introduce the students about the tools of research methodology into social sciences. The paper would enable the students to take up research after Master's degree.

UNIT-I Research in Social Science with reference to Political Science—Definition, Nature and Limitations.

UNIT-II Methods – Traditional and Scientific, Survey Research Methods : Observation, Interviews, Questionnaire, Content–Analysis.

UNIT-III
(a) Sample and Sampling Techniques.
(b) Measures of Central Tendency—Mean, Mode and Median.
(c) Data Processing—Coding Tabulation and Analysis.

UNIT-IV Research Design : Formulation of Research problem, Hypotheses, Objective, relevance of study, Literature Review, Methodology Report Writing.

Suggested Readings :

1. Goode and Hatt, *Methods in Social Research*, Auddond (McGraw - Hill), New York, 1952.
2. Pauline Yong, *Scientific Survey and Research*, New Delhi, 1968.
3. Arnold Brecht, *Political Theory*, Times of India Press, 1970.
4. Michael S. Lewis-Beck, ed., *The Encyclopedia of Social Science Research Methods*, New Delhi, Sage, 2004.
5. Keith F. Punch, *Introduction to Social Research*, London, Sage, 2005.

6. Shapiro, Ian, Rogers M. Smith and Tarek E. Masoud, *Problems and Methods in the Study of Politics, Cambridge* : Cambridge University Press, 2004.

7. Van Evera, Stephen, *Guide to Methods for Students of Political Science*, Ithaca : Cornell University Press, 1997.

8. Goertz, Gary, *Social Science Concepts : A User's Guide*, Princeton : Princeton University Press, 2006.

9. Creswell, John W., *Research Design : Qualitative, Quantitative, and Mixed Method Approaches :* Thousand Oaks, Calif : Sage Publications, 2003.

OR

VI SEMESTER : Option (ii) : MODERN POLITICAL IDEOLOGIES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper refers to the basic tenets of modern political ideologies.

UNIT-I **Liberalism :**
a) Classical and Modern Liberalism.
b) Neo Liberalism.

UNIT-II **Socialism :**
a) Marxian Socialism.
b) Democratic Socialism

UNIT-III
a) Anarchism.
b) Fascism

UNIT-IV **Gandhism**
a) Gandhi's Idea of State:
b) Social and Political Ideas of Gandhi.

Suggested Readings :

1. Bandhyopadhya, J., *Political and Social Thought of Gandhi*, Bombay, 1969.
2. George Lichtheim, Marxism : An Historical and Critical Study, Routledge and Kegan Paul, London, 1962.
3. Noel O' Sullivan, Conservation, St. Martin's Press, New York, 1976.
4. Manning, D.J., Liberalism, St. Martin's Press, New York, 1976.

OR

VI SEMESTER : Option (iii) — WESTERN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims to introduce to the students the major themes of Western Political Thought. This will be done by taking an in-depth study of the key thinkers of this tradition.

UNIT-I Hobbes.
- a) Nature of Man, State of Nature, Natural Laws.
- b) Social Contract.
- c) Individualism Vs. Absolutism.

UNIT-II Locke.
- a) Nature of Man, State of Nature, Natural Rights.
- b) Social Contract.
- c) Contribution of Locke to Liberalism.

UNIT-III Rousseau.
- a) State of Nature, Natural Man.
- b) Social Contract.
- c) Theory of General Will.

UNIT-IV Karl Marx.
- a) Historical Materialism, Economic Determinism.
- b) Theory of Surplus Value.
- c) Class Struggle.

Recommended Readings :

1. Sabine, G.H., *A History of Political Theory*, Bombay : Oxford & IBH, 1973.

2. Dunning, W.A., *A History of Political Theories*, 3 Vols., Allahabad : Central, 1973.

3. Sait, E.M. (ed.), *Masters of Political Thought*, 3 Vols., London : George and Harap, 1947.

4. William Ebenstien, *Great Political Thinkers—Plato to the Present*, OUP : New Delhi, 1966.

5. Jen Pike, Nigel Waaburton & Derek Matravers, *Reading Political Philosophy, Machiavelli to Mill*, London, Routledge, Open University, 2000.

6. Andrew Hacker, *Political Theory*, London, OUP, 1961.

7. David Boucher & Paul Kelly, *Political Thinkers, From Socrates to the Present*, Paperback U.K., 2003.

8. David Boucher & Paul Kelly, *The Social Contract*—from Hobbes to Rawls, Paperback, U.K., 1994.

References :

1. Rapheal, D.D., Hobbes, *Morals and Politics*, London, George Allen, 1978.

2. David Macdellan, *Marx*, London, Fontana Modern Masters Series, 1983.

3. Plamenatz, J., *Man and Society*, 2 Vols., New York, Longman, 1984.

4. Hall, J.C., Rousseau : *An Introduction to His Political Philosophy*, London, MacMillan, 1973.

5. John, Dunn, *The Political Thought of John Locke*, Cambridge, Cambridge University Press, 1969.

6. Roger, D. Masters, *The Political Philosophy of Rousseau*, Princeton, Princeton University Press, 1968.

7. Shlomo, Avineri, *The Social and Political Thought of Karl Marx*, New Delhi, S. Chand, 1968.

8. Jon Elster, *Making Sense of Marx*, Cambridge, Cambridge University Press, 1985.

9. Ernest Cassirer, *The Question of Jean Jacques Rousseau*, New Haven and London, Yale University Press, 1989.

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ECONOMICS

SEMESTER V

The candidates are required to study **one of the** following papers:

I Money and Banking.

II International Economics.

III Introduction to Econometrics.

Paper-I : MONEY AND BANKING

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective: Money and Banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude channels- market, non market, institutes and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutes in the process of growth and development. Accordingly, the paper on 'Economics of Money and banking' is an optimal interaction of monetary theory, banking and non- banking financial institutes, which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

(i) *The syllabus has been divided into four units.*

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions.It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two**questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

UNIT-I

Definition of Money, Money and Near Money Assets.
Supply of Money:Components, Determinants- High Powered Money and Money Multiplier, Measures of Supply of Money in India.

UNIT-II

Demand for Money: Classical Theory, Keynes Liquidity Preference Theory, Friedman's Restatement of Quantity Theory of Money.
Central Banking: Main Functions, Techniques of Monetary Management, Monetary Policy of Reserve Bank of India.

UNIT-III

Commercial Banking: Main Functions, Major Developments and Reforms in Indian Banking System since 1991.
Non-Banking Financial Institutions (NBFIs) – Role and Structure NBFIs in India.

UNIT-IV

International Monetary Fund- Features and Role.
World Bank: Features and Role.
Asian Development Bank: Features and Role.

Recommended Readings:

1. Diulio A. Eugene (latest Edition) : Theory and Problems of Money and Banking, International Edition (Schaum's Outline Series)
2. Gupta, S. B (2004) : Monetary Planning in India, S. Chand, New Delhi.
3. Khanna, Perminder (2005) : Advanced Study in Money and Policy : Relevance in the Indian Economy, Atlantic Publishers, New Delhi
4. Kulkarni, G (1999) : Modern Monetary Theory, McMillan, New Delhi
5. Laidler, D. E. W (1977) : The Demand for Money : Theories and Evidence, Allied Publishers, New Delhi.
6. Bofinger Peter (2001) : Monetary Policy: Goals, Institutions, Strategy and Instrument, Oxford University Press.

Supplementary Readings:

1. Reserve Bank of India Publications- (Latest).
2. Government of India: Economic Survey (latest)

Paper-II: INTERNATIONAL ECONOMICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital- both short-term and long-term- at the global level. The contents of the paper spread over the different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both as the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought the students writing assignments, tutorials and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to beof answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Pure Theory of International Trade:Theories of Absolute Advantage, Comparative Advantage andOpportunity Costs. Heckscher-Ohlin Theory. Factor Price Equalisation. Gains from Trade, their Measurement and Distribution. Terms of Trade, Secular Deterioration Hypothesis.

UNIT-II

Commercial Policy:The Theory of Tariffs, Optimum and Effective Rate of Tariff, Inter-relationship betweenTrade, Aid and Economic Development. The Theory of Economic Integration among Nations; Forms of Economic Integration. The Theory of Customs Union.

UNIT-III

Balance of Payments, Exchange Rate and Trade Structures:The Process of Adjustment in the Balance ofPayments. The Concept of Foreign Trade Multiplier. Fixed Vs. Flexible Exchange Rates and their Relative Merits and Demerits. Structure of Trade, Trade between Developing and Developed Countries. Unequal Exchange and its Impact on Balance of Payments. Current Problems of Trade and Finance of Developing Countries. Role of Multinational Corporations in the Developing Countries.

UNIT-IV

International Monetary System:IMF and International Monetary System, Present International Monetary System, problems of International Liquidity. Proposals for International Monetary Reforms. New International Economic Order.

Recommended Readings :

1. Soderston , B. O. (1994) : International Economics, 2nd Edition, Macmillan Press, London,
2. Salvatore, Dominick (latest edition) : International Economics, John Wiley & Sons.
3. Krugman P R &ObstifeldMaurice(latest edition) : International Economics – Theory and Policy, Addison- wesley.
4. Ghuman , Ranjit Singh (latest edition) : Antar-RashtriyaArthVigiyan, (Punjabi Medium) Punjabi University, Patiala.

Supplementary Readings :

1. Kindleberger, C. P. (1987) : International Economics, Richard Irwin, Homes wood, Illinois, Indian Edition.
2. Sir RaiHarrod (Trans. Pritam Singh Gill) : Antar-RashtriyaArthShastar, Punjabi University, Patiala.

Paper-III: - INTRODUCTION TO ECONOMETRICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: Application of economic theory need a reasonable understanding of economic relationship andstatistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant application of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous models.

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, is so far as possible, would be selected from everyday life/experience. The feedback would be sough through the students writing assignments and written examinations.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition and Scope of Econometrics. The Methodology of Economic Research. Specification and Estimation of an Econometric Model.
Single Equation Models*:*Ordinary Least Squares: Estimation and Properties of the Estimators

UNIT-II

Testing of Hypothesis*:*Basic Concepts; Type I and Type II errors. Simple and Composite Hypothesis.t and F tests. Maximum Likelihood Estimation.

UNIT-III

The General Linear Regression Model in Matrix Form: Estimation and Properties of the Estimators.
Tests of Significance of Coefficients. Partial Correlation Coefficients.
Multicollinearity:Its Detection and Solution.
Heteroscedasticity: Its Detection and Solution.

UNIT-IV

Dummy Variables*:*The dummy Variable Trap. Interpretation of Slope and Intercept.
Lagged Variables*:*Uses in Economics. Estimation Problems, Koyck Transformation, Partial and Stock Adjustment Models.

Recommended Readings :

1. Gujarati, Damodar (2007) : Basic Econometrics, McGraw Hill, New Delhi.
2. Ohnson, J. (1977) : Econometrics Methods, 2nd Edition, McGraw Hill, New

Supplementary Readings :

1. Intrilligator, M. D. (1978) : Econometric Models and Applications, Prentice Hall
2. Kendall, M. G. & A. Sturat (eds.) : Advanced Theory of Statistics, Vols. I & II, Griffin and Co., London.
3. Maddala, G. S. (1977) : Econometrics, New Delhi, McGraw Hill.
4. Wallis, K. F. (1973) : Topics in Applied Econometrics, London, Bray Hills

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ECONOMICS
SEMESTER VI

The candidates are required to study **one of the** following papers:

IV Environmental Economics
V Economics of Labour
VI Public Finance

Paper-IV : Environmental Economics

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our resources by optimally allocating them for future use.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Introduction to Environmental Economics: Introduction; the Economy and the Environment: Inter-Linkages; First Two Laws of Thermodynamics.
Economic Efficiency and Market Failures: Market Solution and Efficiency; Market Failures; Problem of Externalities; Public goods and Public bads; Common Property Recourse; Non-convexities; Asymmetric Information.

UNIT-II

Economic of Pollution*:* Damage Functions and Abatement Cost Functions; Marginal Decision; Optimal Level of Pollution; Market Solutions and Government Actions; Economic Incentives and least-Cost Solution; Command and Control Policies.

UNIT-III

Valuing the Environment: Economic valuation of Environment Goods: Types of Environmental Values; Monetary Valuation Techniques; Non-Monetary Valuation Techniques; Comparing Methodologies. The Environmental Kuznets Curve

UNIT-IV

Cost-Benefit Analysis and the Environment: The Theory of Cost Benefit Analysis; Idea of Discounting and Choice of Discount Rate; Framework for Cost – Benefit Analysis; Discounting and Future Generation.
International Environmental Issue: Economics of Climate Change: Trade & Environment.

Economic Growth and Sustainable Development: Economic Growth and Development; the Environmental Kuznets Curve; Economics of Sustainable Development.

International Environmental Issues: Economics of Climate Change; Trade and the Environment.

Recommended Readings :

1. Goodstein, E.S. (2002) : Economics and the Environment (3rd ed.) Prentice Hall.
2. Hanley, N., Shogern, J.F and White, B (1977) : Environmental Economics in Theory and Practice, Macmillan
3. Sankar, U. (ed) James, A.J., M.N. : Environmental Economics, Oxford University Press, New Delhi.
4. Murty and Smita Mishra (2006) : Murty and Smita Mishra (1999), Economics of Water Pollution- The Indian Experience, Oxford University Press, New Delhi
5. Varian. Hal R., (2006) : Intermedate Micro-Economics- A Modern Approach, 7th ed., East-West Press.
6. Cherry, S.N. and Vyasual, Vinod (2000) : Environmental Management- an Indian Perspectives, Macmillan, New Delhi.

PAPER- V: ECONOMICS OF LABOUR

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

COURSE OBJECTIVE: Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing "joblessness", the importance of issues such as employment and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India. The time–tested method of imparting verbal instructions through lectures would be used

The objective of the course is to provide students with the basic economic tools needed to understand and analyze how earnings are determined, how labour markets work and how various government policies may affect labour market.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit I

Nature and Scope of Labour Economics, Nature and Characteristics of Labour Markets in Developing Countries like India.
Theories of Wages, Concept of Minimum Wage, Living Wage and Fair Wage in Theories and Practice.

Unit II

Wage Determination in various Sectors- Rural, Urban, Organized, Unorganized and Informal Sectors.

Poverty and Unemployment in Developing Countries, Unemployment: Concept, Types and Employment Policy particularly in India.

Unit III

Impact of Rationalization, Technological Change and Modernization on Employment in Organized Private Industry and Public Sector; Employment in Agriculture Sector; Women and Child labour.

Unit IV

Role and Functions of Trade Unions, Growth, Pattern and Structure of Trade Unions in India, Achievements of Labour Unions, Collective Bargaining.
Industrial Disputes: Causes of Industrial Disputes, Their Settlement and Prevention Mechanism.

BOOKS RECOMMENDED:

1.	Binswanger, H. P. & M. R. Rosenzweig (eds.) (1984)	:	Contractual Arrangements, Employment, and Wages in Rural Labour Markets in Asia, Yale University Press, New Haven.
2.	Datt, G. (1996)	:	Bargaining Power, Wages and Employment; An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3.	Deshpande, L. K., P. R. Brahmananda and EAG Robinson (eds.) (1983)	:	Employment Policy in a Developing Economy, Vols. I & II, Macmillan, London.
4.	Deshpande, L. K. and J. C. Sandesara (eds.) (1970)	:	Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
5.	Deshpande, S. G. Standing and L. K. Deshpande (1998)	:	Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
6.	Foster, A. D. & M. R. Rosenberg (1993)	:	Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank, Washington D C.
7.	Campbell, R. McConnell and Stanley, L. A. Brue and D. A. Macpherson (2010)	:	Contemporary Labour Economics, 8th Ed. McGraw Hill Book

SUPPLEMENTARY READINGS:

1.	Hauseman, S. (1991)	:	Industrial Restructuring with Job Security: The Case of European Steel Harvard University Press, Cambridge, Mass.
2.	Hicks, J. R. (1932)	:	The Theory of Wages, Clarendon Press, Oxford.
3.	Lester, R. A. (1964)	:	Economics of Labour (2nd edition), Macmillan, New York
4.	McConnell, C. R. & S. L. Brue (1986)	:	Contemporary Labour Economics, McGraw- Hill, New York.
5.	McCormick, B. & Smith (eds.) (1968)	:	The Labour Market, Penguin, Harmondsworth
6.	Tyagi, B.P	:	Labour Economics and Social Welfare, Jai Parkash Nath and Co. (Latest edition)
7.	Pant, S C(1965)	:	Indian Labour Problems,Chaitanya Publishing House, Allahabad

Paper-VI: PUBLIC FINANCE

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Objectives: Role and function of the Government in an economy have been changing with the passage of time. The term' Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income etc. there are vast array of fiscal institutions- tax system, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existing of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

The student would be evaluated at the end of each semester through subjective type questions/answer (both short and essay type). The scripts would be evaluated by the examiners having adequate graduate teaching experience in the paper/option concern.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Principle of Public Finance – Subjective and Objective Criteria.
Theory of Public Expenditure*:*Maximum Social Advantage, Theory of Social Goods: Distinction between
Public, Private and Merit Goods. Public Expenditure and Economic Growth. Effects of Public Expenditure on Production, Distribution, Social Over-head Capital, Stability and Innovation. Criteria of Public Expenditure.

UNIT-II

Public Revenue*:*Approaches of Equity in Taxation:Benefits principle Cost of Service Principle, Ability toPay Theory. Effects of Taxation. Analysis of Major Taxes – Income Tax, Expenditure Tax, Corporation Tax, Wealth Tax, Excise Duties, Sales Tax, and Custom Duties. The concept of Taxable Capacity. Taxation in a Developing Economy. Fiscal Incidence: Theories of Tax Shifting, Concepts of Incidence, Measurement of Incidence.

UNIT-III

Public Debt:Role of Public Debt. Different Forms of Public Debt. Burden of Public Debt, Redemption of Public Debt. Debt Management.
Budgetary Policy*:*Functional and Economic Classification of budgets and their Uses. PerformanceBudgets. Budget as an Instrument of Mobilization and Chanalization of Resources and Redistribution of Income and Wealth.

UNIT-IV

Balance and Unbalanced Budgets.
Fiscal Federalism*:*Principles of Federal Finance.
Development Finance*:*Functional Finance vs. Development Finance.
Mobilisation of Financial Resources for Planned Developments.

Suggested Readings:

1. Buchanan J.M. : Public Finance in the Demostic Process (Collected works of James M Buchanan), Library Fund, USA.
2. Musgrave, R. A. (1959) : Theory of Public Finance, McGraw- Hill Publishers.
3. Musgrave R A. & Musgrave P B (5th edition) : Public Finance in Theory and Practice, Mc Hill Publishers
4. Taylor P.E (1949) : The Economics of Public Finance, Macmillan Publishers, New York.

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SOCIOLOGY

SEMESTER V

Methods and Techniques of Social Research

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 =18 marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

The students will be introduced with basic methods and techniques in social research. The objective of this course is to familiarize the students with the basic elements of scientific method, various methods of data collection and social measurement.

Course Content :

UNIT-I

Scientific Method : Features; Concepts; Stages of social research; Hypothesis.

UNIT-II

*Sampling Technique: Meaning P*opulation and Census, Sampling frame
Types of Sampling: Probability: Simple random/stratified random/cluster/multi-stage. Non–Probability: Accidental/Quota/Purposive; Sampling Error.

UNIT-III

Techniques of Data Collection : Observation, Participant and Non-Participant Observation, Interview Schedule and Questionnaire (Structured/Unstructured); Case study method.

UNIT-IV

Measurement : Levels and Problems, Measures of Central Tendency: Mean, Mode, Median.

Essential Readings :

1.	*Sellltiz, Claire et.al*	*:*	*Research Methods in Social Relations (Revised ed.), New York: Henry Hold & Co. (latest edition).*
2.	*Goode, W.J. & Hatt, P.K. (2006)*	*:*	*Methods in Social Research, Delhi, Surjeet Publications*
3.	*Young, P.V.*	*:*	*Scientific Social Surveys and Research, New Delhi: Prentice Hall of India Private Ltd., (1988)*
4.	*Mukerjee, P.N.*	*:*	*Methodology on Social Research: Dilemmas and Perspectives, New Delhi: Sage, 2000.*

Further Readings :

1.	*Festinger, L. & Katz, D.*	*:*	*Research Methods in Behavioural Science, New York: Dryden Press, (1953)*
2.	*Lindzey, Gardner & Aronson*	*:*	*The Handbook of Social Psychology (2nd ed.), Addison: Wesley Pub. Comp.,(1968)*
3.	*Robson, Colin*	*:*	*Real World Research, Oxford: Blackwell, (2000)*
4.	*Bryman Alman, (2014)*	*:*	*Social Research Methods, New Delhi, Oxford University Press*
5.	*Neuman, W.L.,(2007)*	*:*	*Social Research Methods : Qualitative and Quantitative Approaches, Delhi, Pearson Education*

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SOCIOLOGY
SEMESTER VI

Option (i) Social Demography

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Option (i) Social Demography

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The course exposes students to various components of population growth, data sources and basic theoretical problems of population. Concepts of mortality and fertility are discussed in general and with reference to India in particular. Students are apprised of the latest Population Policy in India.

Course Content :

UNIT-I

Population : Definition, Scope, Nature, Sources of Population Data-Census and Vital Registration.

UNIT-II

Population Theories : Malthusian theory of Population; Biological: Theory of Density Principle and Diet Theory; Social Theories: Social Capillarity and Theory of Diffusion: Theory of Demographic Transition.

UNIT-III

Concepts of Mortality : Causes of Mortality, Infant Mortality, Mortality Rate in India.

Fertility : Concept of Fertility, Factors affecting Fertility–Biological, Socio-Cultural and Psychological Fertility in India.

UNIT-IV

Population Policy in India, Female Foeticide (reference to PNDT Act).

Essential Readings :

1.	*Bhende, Asha & Kanitkar, Tara,(2014)*	*:*	*Principles of Population (revised ed.), Mumbai Himalaya Publishing House.*
2.	*Bogue, Donald, J.*	*:*	*Principles of Demography, New York: John Willey,(1969)*
3.	*Nam, Charles, P.*	*:*	*Population and Society,(1968)*
4.	*Premi, M.K.*	*:*	*An Introduction to Social Demography, Delhi: Vikas Publishing House, (1983)*
5.	*Weeks, J.R.*	*:*	*Population: An Introduction to Concepts & Issues, London: Wardworth Publishing Co., (1988)*
6.	*Raj Hans(2010)*	*:*	*Fundamentals of Demography, Delhi, Surjeet Publications*

Further Readings :

1.	*Bose, Ashish*	*:*	*India & The Asian Perspective, New Delhi: B.R. Publishing Corporation, (1993)*
2.	*Matras, Juda*	*:*	*A Sociological Approach, New Jersey: Prentice Hall, (1977)*
3.	*Government of India*	*:*	*National Population Policy (2000), Ministry of Health & Family Welfare, GOI.*
			(Latest Census Reports and Sample Registration Bulletins of the Government of India.)
4.	*Premi, M.K.*	*:*	*India's Population: Heading towards a Billion, Delhi: B.R. Publications, (1991)*
5.	*Dyson Tim,(2011)*	*:*	*Population and Development, The Demographic Transition,Jaipur, Rawat Publications*

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

To understand the contemporary social problems in society, the students are exposed to the basic concept of deviance, its theoretical perspectives and control mechanisms.

Course Content:

UNIT-I

Deviance : Definition, Concept (Relative and Absolute) Distinction between deviant behaviour and deviant role. Pathological theories (Biological and Psychological).

UNIT-II

Sociological Theories : Theories of social disorganization (C.H. Cooley, W.I. Thomas and Florian Znaniecki, W.F. Ogburn).

Structural-Functional Theories : Theory of Anomie (Emile Durkheim, Robert K. Merton), Differential Association (E. Sutherland and D.R. Cressey).

Interactionist Theories : Theory of Labelling (Edwin M. Lemert and Howard S. Becker).

UNIT-III

Controlling Deviance : Socialization - means and agencies, Social Control: means and agencies, Social codes and customs; Sympathy: passive and active.

UNIT-IV

Selected Problems of Deviance: Sex Deviance, Delinquency, White Collar Crimes, Cyber Crime.

Essential Readings :

1.	*Becker, Howard S.*	*:*	*Outsiders: Studies in the Sociology of Deviance, Glenco, Free Press, (1987)*
2.	*Ferrell, R. & V.L. Swigert [ed.]*	*:*	*Social Deviance, New York: J.B. Lippincott Co. (1975).*
3.	*Haralambos, M.*	*:*	*Sociology – Themes & Perspectives, Delhi, Oxford University Press,(1984)*
4.	*Kelly, Delos H.*	*:*	*Deviant Behaviour: Readings in Sociology of Deviance, New York: Martin's Press, (1979)*
5.	*Lawson, T & T. Heaton*	*:*	*Crime & Deviance, New Delhi : Macmillan, (1999)*
6.	*Metta, Spencer*	*:*	*Foundations of Modern Sociology, New Jersey: Prentice Hall Inc., Englewood Cliff, (1979)*
7.	*Michael Mc Kee and Ian Robertson*	*:*	*Social Problems, Toronto: Random House Inc., (1976)*
8.	*Thio, Alex*	*:*	*Deviant Behaviour, London : Houghton Mifflin, (1978)*
9.	*Ahuja, Ram,(2012)*	*:*	*Criminology, Jaipur Rawat Publications*
10.	*Ahuja, Ram,(2015)*	*:*	*Social Problems in India, Jaipur, Rawat Publications*

Further Readings :

1.	Erdwin. H. Pfuhl	:	*The Deviance Process,* New York: D.Van Nostrand Co., (1980)
2.	Ian Robertson	:	*Sociology,* New York: Publisher Inc. (1977)
3.	John, J. Grant	:	*Social Problems as Human Concern,* San Francisco: Body & Fraser Publishing Company, (1976)
4.	Rubington, Weinberg	:	*Studies of Social Problems,* New York: Oxford University Press, (1977)
5.	Rushing, William A. [ed.]	:	*Deviant Behavior & Social Process:* Rand McNally College Pub. Co., (1985)
6.	Bansal,S.K.(2013)	:	*Cyber Crime, New Delhi, APH Publications*
7.	Sharma,Rajendra K,(1988)	:	*Social Disorganization, New Delhi :Attantic Publications*
8.	Byrne, David,(2009)	:	*Social Exclusion, Jaipur, Rawat Publications*

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-19
SEMESTER – V

Paper-A, Option (i) : PHILOSOPHY OF SCIENCE
OR
Paper-A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Paper-A Option (i) : PHILOSOPHY OF SCIENCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The aim of this paper is to analyse the concepts of philosophy and science, Einstein's Theory of Relativity i.e. space, time and relativity; Nature of observational language and theoretical language; causality, prediction and probability; Principle of Complimentarity.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

1. The Nature and Scope of Philosophy of Science. Relation between Philosophy and Science.
2. Einstein's Theory of Relativity : Space, time, reality.
3. Methodological character of theoretical concepts. Observational language, theoretical language, a criterion of significance of theoretical terms. Dispositional concepts, Difference between theoretical terms and pure dispositional terms.

UNIT-II

4. Causality, Prediction and Probability.
5. Principle of Causality.
6. Causality as the existence of Laws.

UNIT-III

7. Causal Law and Statistical Laws.
8. Induction and Probability.
9. Theories of Probability.

UNIT-IV

10. Rationality Debate & Theory Choice.
11. Popper & Kuhn

Essential Readings :

1. Bridgman, P.W. : The Logic of Modern Physics (New York : Macmillan, 1958).
2. Earnest Nagel : Structure of Science (Hackett Pub. Co., 1979).
3. Hans Reichenbac : Rise of Scientific Philosophy (California : University Press, 1994).

Suggested Readings :

1. Minnesota Studies in the Philosophy of Science, Minnesota Centre for Philosophy of Science, 1958.
2. Phillip Frank : *Philosophy of Science: The Link between Science and Philosophy* (Englewood Cliff : Prentice Hall, 1957).

OR

Paper – A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at understanding the nature of social and political philosophy and some of its fundamental concepts; its major social and political theories and Indian political thought.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

1. Nature and Scope of Social and Political Philosophy :

(a) Relation between Social and Political Philosophy and Social Sciences such as Sociology and Political Science with special emphasis on the distinction between Philosophy and Science.
(b) Empirical and Scientific study of society and politics as distinct from philosophical study of society and politics.

UNIT-II

2. Some Fundamental Concepts of Social and Political Philosophy :

(i) Distinction between Natural Facts and Social Facts.
(ii) Normative Aspects of Socio-Political Reality.
(iii) State and Civil Society.
(iv) Liberty, Equality and Fraternity.
(v) Social Change and Social Progress.
(vi) Tradition and Modernisation.
(vii) Power and Authority.
(viii) Reform and Revolution.
(ix) Justice.

UNIT-III

3. Major Social and Political Theories

(a) Liberalism.

(b) Egalitarianism.

(c) Anarchism.

UNIT-IV

4. Indian Political Thought : Chanakya, Vivekananda, Gandhi, Ambedkar.

Essential Readings :

1. Ambedkar, B.R. : *Writings and Speeches,* Government of Maharastra, Bombay., Vol. 18, 19 & 20, 2003/
2. Bhattacharyya, K.C. : Studies in Philosophy, Motilala (U.K.) Books of India, New Delhi, 1983.
3. Gautam, S.P. : *Samaj Darshan,* Haryana Sahitya Akademy, Chandigarh, 1991.
4. Tagore : *Religion of Man,* Rupa Publications, Paperback, New Delhi, 2002
5. Will Kymlica, Kamal Nayan Chaubey : Samkalin Rajniti – Darshan Ek Parichay, 2nd Ed. Pearson Delhi, 2010.
6. Complete Works of Swami Vivekananda (relevant portions) Advaita Ashram, Calcutta, 1957.

Suggested Readings :

1. Menon, Nivedita : Seeing like a Feminist, Zubaan New Delhi, 2013.
2. Miller, David : Political Philosophy, A very short introduction, Oxford University Press, New York, 2003

PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-19
SEMESTER – VI

Paper -B, Option (i) : LOGIC

OR

Paper-B Option (ii) : PHILOSOPHY OF CULTURE

OR

Paper -B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at training the students in skills of critical reasoning by introducing laws of thought, criteria for validity of arguments, deductive and inductive reasoning.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

1. Nature and Scope of Logic.
2. Deductive Inference.
3. Laws of Thought.

UNIT-II

4. Aristotelian Classification of Propositions.
5. Immediate and Mediate Inference.
6. Syllogism.

UNIT-III

7. Truth Tables.
8. Propositional Calculus.
9. Quantifiers and Propositional Functions.
10. Predicate Calculus.

UNIT-IV

11. Inductive Logic.
12. Probability.
13. Scientific Method.
14. Law and Explanation

Essential Readings :

1. Irving Copi : *Introduction to Logic,* Prentice Hall, 2004.
2. Irving Copi *Symbolic Logic,* Prentice Hall, 1979.
3. Nagel and Cohen : *Introduction to Logic and Scientific Method,* Simon Publications, 2002.

Suggested Readings :

1. Russell : Principles of Mathematics (Allen & Unwin London), 1970.
2. Jean Necod : Foundations of Geometry and Induction (kegan Paul). 1970

OR

Paper- B Option (ii) : PHILOSOPHY OF CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims to introduce the problems like origin and meaning of culture, civilization, tradition, the role of ideology and Utopia, Indian cultural tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT – I

1. Origin and meaning of Culture.
2. Culture, Civilization and the Individual.

UNIT – II

3. Religion as an Apex of Culture.
4. Culture and Language.

UNIT – III

5. Culture, Tradition and Modernity. The metaphysical loss of Human.
6. Sources of Indian Culture Tradition.

UNIT – IV

7. Role of Science and Technology in Cultural Evolution.
8. Inter – Cultural understanding and Hermeneutic Tradition.

Essential Readings:

1.	Eliot	:	Notes towards definition of Culture, London, Faber & Faber (1962).
2.	Gadamer	:	Truth and method. Continum International, February (2005).
3.	G.C. Pandey	:	Meaning and Process of Culture. Shivlal Aggarwal & Co. Agra (1972).
4.	Sneh Pandit Ed.	:	Perspectives on Philosophy of Culture, Delhi, S. Chand (1980)
5.	Vellassery Sebastian & Geeta Manaktala:	:	Foundations of Indian Social Life: Cultural, Religious and Aesthetics. Booksurge Publishing U.S. (2008).
6.	Wittgenstein	:	Culture and Value. translated by Peter Winch, Oxford Blackwell (1980).

Suggested Readings :

1.	A.J. Toynbee	:	Civilization on Trial, Oxford University Press, 1948.
2.	Paul Ricouer	:	Time and Narrative published by University of Chicago Press, London 1984.

OR

Paper – B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims at familiarizing the students with the meaning and scope of Aesthetics, art and society, aesthetic experience according to the Western and Indian tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

1. Aesthetics, its meaning and scope.
2. Nature and function of art.

UNIT-II

3. The relation of art to society.

UNIT-III

4. Meaning and purpose of art in the Indian Tradition.

UNIT-IV

5. Nature of Aesthetic experience according to the Western and Indian traditions.

Essential Readings :

1. Hiriyanna : *Art Experience,* Karyalaya Publications, Mysore, 1954 .
2. Susan, L. Feagin and Patrick Maynard (ed.) : *Aesthetics,* Oxford University Press, 1997.

Suggested Readings :

1. Meredith : The Critique of Judgement by Immanuel Kant Tr., J.C., Oxford University, Press, 2007.
2. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-2019

SEMESTER V

PAPER: PSYCHOLOGICAL TESTING

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : *Introduction to Psychological Tests :*History of Psychological Testing; Nature of Psychological Tests. Classification of Tests; Use of Tests.

UNIT-II : *Item Writing and Item Analysis :*Characteristics of a Good Item; Various types of Items; Item Difficulty; Item Discrimination.

UNIT-III : *Reliability and Validity :Reliability :* Concept, Types, Factors Affecting Reliability. *Validity :* Concept, Types, Factors Affecting Validity; Relation between Reliability and Validity.

UNIT-IV : *Interpretation of Test Scores :Criterion Referenced Scores :* Content Referenced and Outcome Referenced Scores; Norms Referenced Scores; Concept of Norms, Types of Norms (Percentile Scale and T. Scale).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

Books Recommended

Suggested Readings :

1. Anastasi, A. (1998) : *Psychological Testing,* New York : Macmillan.

2. Gregory, R.J. (1996) : *Psychological Testing,* Singapore : Allyn and Bacon.

3. Guilford, J.P. and Fruchter, B. (1981):*Fundamental Statistics in Psychology and Education,* Singapore: McGraw Hill.

4. Guilford, J.P. (1954) : *Psychometric Methods,* New Delhi : Tata McGraw Hill.

Reference Books :

1. Freeman, F.S. (1962) : *Theory and Practice of Psychological Testing,* New Delhi : Oxford and IBH.

2. Cronbach, L.J. (1990) : *Essentials of Psychological Testing,* New York : Harper and Row.

3. Brown, F.G. (1976) : *Principles of Educational and Psychological Testing,* New York : Holt, Rinehart and Winston.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2018-2019

SEMESTER VI

PAPER: Counselling and Organizational Psychology

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : Concept of Counselling; Approaches to Counselling; Freudian, Experiential Client Centered, Gestalt, Existential, Cognitive Behaviour Therapy.

UNIT-II : Work Motivation: Early and Contemporary Theories.Strategies of Organizational Development.

UNIT-III : Concept and Nature of Health Protective Behaviour.Concept and types of Health Coronary Behaviour (Special reference to nicotine addiction and alcoholism).

UNIT-IV : Psychology of Exceptional Children with special reference to learning disabled and Gifted Children.

Books Recommended :

Suggested Readings :

1. Luthans, F. (1998) : *Organizational Behaviour,* New York : Irwin McGraw Hill.
2. Moorhead, G. and Griffin, R.W. (1999) : *Organizational Behaviour,* Delhi : AITBS.
3. Parikh, M.R. & Gupta, R. (2010) : *Organizational Behaviour, Tata McGraw Hill Education* Private *Limited,* New Delhi : West Patel Nagar.
4. Robbins, S.P. (2000) : *Organizational Behaviour,* New York : Prentice Hall of India.
5. Rao, S.N. (1992) : *Counselling and Guidance,* New Delhi : Tata McGraw Hill.
6. Nystul, M.S. (1999) : *Introduction to Counselling – An Art and Science Perspective,* Boston : Allyn and Bacon.
7. Brannon, L. and Feist, J. (2007): *Introduction to Health Psychology*. New Delhi: Thomson – Wadsworth.
8. Mohan, J. and Sehgal, M. (2006): *Health Psychology*. New Delhi: Abhijeet Publications.
9. Narayan, J.(2003) : *Educating Children with Learning Problems in Regular Schools*, Secunderabad : NIMH.
10. Raj, F. (2010) : Breaking Through: A Hand book for parents and teachers of children with Specific Learning Disabilities, Secunderabad: Vifa Publishers.

Reference Books :

1. Newstrom, J.W. and Davis K. (1998) : *Organizational Behaviour,* New Delhi : Tata McGraw Hill .
2. Woolfe, R., and Dryden, W. (Eds.) (1996) : *Handbook of Counselling Psychology,* New Delhi : Sage Publications.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2018

SEMESTER V

Paper : APPLIED GEOGRAPHY

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:
To understand the prevalent issues in environment, society and economy and to provide a geographical interpretation with special reference to India

Course Content:

Unit- I

Applied Geography: Meaning and concepts:

Meaning, nature , scope and significance of Applied Geography. Concept of planning region.

Regionalisation scheme with reference to economic regionalization. (20 lectures)

Unit- II

Applied Geography: Methods and techniques:

Cartographic techniques of dot, choropleth, graduated circle; quantitative methods and techniques of crop combination; Quantitative methods and techniques of graduated circles. (20 lectures)

Unit- III

Applied Geography: Contributions:

Industrial location theory of Weber and its application in industrial planning.

Christaller's Central Place Theory and its application in location of central places.

Von Thunen's Agricultural Location Theory and its application in agricultural location.

Perroux's Growth Pole Theory and its application in regional development planning.

Harris' Functional classification of urban centres. (30 lectures)

UNIT- IV

Land use studies: Rural and Urban.

Rural Land Use: Survey and Classification.

Urban Land Use : Survey and Classification. (20 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

Books Recommended

Essential Readings:

1.	Carter, H.	:	The Study of Urban Geography, Arnold-Heinemann, New Delhi, 1979.
2.	Chorley, R.J. & P. Haggett (Ed.)	:	Models in Geography, Methuen & Co., London, 1967.
3.	Jones, Alun	:	Fieldwork in Geography, Longman, Green Co., London, 1968.
4.	Stamp, L.D.	:	Applied Geography, Penguin Books, England, 1960.
5.	Singh, R.L. (Ed.)	:	Applied Geography, National Geographical Society of India,Department of Geography, B.H.U., Varanasi, India.

Further Readings:

1.	Dawson, J.A.	:	Geography, Teach Yourself Books, Hodder and Stoughton, UK 1983.
2.	Misra, R.P. and others	:	Regional Development Planning in India, Vikas, New Delhi.1974
3.	Misra, V.C. & others	:	Essays in Applied Geography, University of Sagar, India.1976

4. Sen Gupta, P. &Sadasyuk Galina : Economic Regionalization of India, Problems and Approaches, Registrar General Census of India.
5. Singh, Jasbir & Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill, New Delhi, 1998.
6. World Report, World Bank & OUP (Annual Report)

Pedagogy:

- Exposure to media.
- National Five Year Plan documents and publications related to planning.
- Field work related to land –use and other socio-economic issues.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2019
Semester VI

Any one of the following options:

Option (i)	**:**	**AGRICULTURAL GEOGRAPHY (An Elementary Course)**
Option (ii)	**:**	**POLITICAL GEOGRAPHY (An Elementary Course)**
Option (iii)	**:**	**ENVIRONMENTAL GEOGRAPHY (An Elementary Course)**

Option (i) AGRICULTURAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the concepts and development of agriculture;
- To examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialisation. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objective is also to discuss environmental, technological and social issues in agricultural sector with special reference to India.

Course Content:

Unit- I

Nature, scope and significance of agricultural geography.

General landuse classification.

Physical determinants of agricultural landuse: Relief, climate, soils.

Unit- II

Social and cultural determinants of agricultural landuse, land tenure, size and fragmentation of holdings and labour.

Economic determinants of agricultural landuse: Marketing facilities, transport facilities, tariff and import restrictions, price incentives, credit.

Unit-III

A critical review of Whittlesey's agricultural classification.

Characteristics and world patterns of the following:

Subsistence types of agriculture: Nomadic herding, shifting cultivation, rudimentary sedentary tillage, intensive subsistence tillage, subsistence crop and livestock farming.

Unit- IV

Commercial types of agriculture: livestock ranching, commercial plantation farming, commercial grain farming, mixed farming, commercial dairy farming.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each UNIT. The students will be required to attempt one question from each UNIT. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Alexander, J.W.: *Economic Geography*, Prentice Hall, Englewood Cliffs, latest Edition.
2. Husain, M. : *Systematic Agricultural Geography*, Inter-India Publications, New Delhi, 2000.
3. Singh, J. & Dhillon, S.S. : *Agricultural Geography*, Tata McGraw Hill Publishing New Delhi, 1994.

Further Readings:

1. Morgan, W.B. & Munton, R.J.C. : *Agricultural Geography*, Methuen, London, 1971.
2. Symons, L. : *Agricultural Geography*, G. Bell & Sons, London, 1964.

Pedagogy:

The teacher should impress the students the overall importance of agriculture in the global perspective. The world is fast changing and its impact is felt on agriculture. Population is increasing and demand of agricultural products is also on the increase. Contrary to it, the farm lands are decreasing, that necessitates infusion of technology in agricultural sector. It is causing environmental pollution. The teacher should interact with students on said issues. Examples from neighbouring areas may be given to the students for better perceptions.

Option (ii): POLITICAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the geographical factors which have a bearing on the political/ administrative organisation of space.
- To enhance awareness among the students of multi-dimensional nature of geo-political space.

Course Content:

Unit- I

Nature and scope of political geography, phases in the development of political geography. Physical elements of political geography: Location, size and shape, relief, climate, and seas and oceans.

Unit- II

Economic elements of political geography: Basic natural resources; food and power, minerals, industry, trade and transportation.

Human-cultural elements of political geography: Ethnographic structure of nations, language, religion, population, quantity and quality.

Unit- III

Concepts of frontiers and boundaries: Classification of boundaries.

Global distribution of political power: Views of Mackinder, Mahan and Spykman and their contemporary relevance.

Unit- IV

International tension: Identification of tension areas and factors contributing to tensions in different areas with special examples from Middle East and Indian Ocean.

Political Geography of the Indian Ocean.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. De Blij, H.J. Glassner, M. : *Systematic Political Geography*, John Wiley, New York, 1968.
2. Dikshit, R.D. : *Political Geography*: A Contemporary Perspective, Tata McGraw Hill, New Delhi, 1996.

Further Readings:

1. Adhikari, Sudeepta : *Political Geography*, Rawat, Jaipur, 1997
2. Muir, R. : *Modern Political Geography*, Macmillan, London,1981.
3. Prescott, J.R.V. : *Political Geography*, Methuen, London, 1992.
4. Prescott, J.R.V. : *The Geography of Frontiers & Boundaries*, Aldine Pvt. Ltd., Chicago, 1965.
5. Valkenberg, S.V. New& Stotz, Carl, L. : *Elements of Political Geography*, Prentice Hall of India, Delhi, 1963.

Pedagogy:

- Fieldwork to understand the political/administrative boundary configuration and people's problems and their perceptions.
- Consult political maps (large scale, small scale).
- Atlases and archival records.
- Collect relevant newspaper items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Option (iii): ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To understand the significance of environment and its interrelationship with man.
- To understand the importance of soil and factors responsible for erosion.
- The importance of energy sources, forest and wildlife and their preservation to be studied.

Course Content:

Unit-I

Environment and Geography: Relationship between geography and environment; definition and scope of environmental geography; significance of environmental studies.

The Environment: Characteristics, components and functioning; concept of healthy environment.
(6 + 6 = 12 lectures)

Unit- II

The Soil System: Origin and composition; horizons, texture, chemistry, factors influencing soil types; soil erosion, soil conservation; and soil pollution.
Energy: Energy flow in the ecosystem; environmental impact of both conventional and non-conventional energy sources. (6 + 4 = 10 lectures)

Unit- III

Forests: Significance; world reserves; deforestation; and conservation strategies.

Wildlife: Wildlife and environment relationship, regional distribution; conservation of wildlife; and wildlife in India. (5 + 5 = 10 lectures)

Unit- IV

Population and Environment: Basic issues, environmental impact of population growth and agenda for action.

Global Environmental Issues: Water contamination; atmospheric pollution; acid rain; noise pollution; and control strategies.

Legislative strategies, environmental issues and the international community; Rio-de-Janeiro Earth Summit of 1992; selected environmental protection laws in India; Environmental Protection Act, National Environmental Tribunal Act, Wildlife Protection Act, Forest Conservation Act, Air Act, Water Act. (6 + 6 + 6 = 18 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Adam, W.M. : *Green Development: Environment & Sustainability in the Third World*, Routledge, London, 1990.
2. Chandna, R.C. : *Environment Awareness*, Kalyani Publishers, New Delhi. Clarendon Press, Oxford, 1998. Also available in Hindi & Punjabi.
3. Chandna, R.C. : *Environmental Geography*, Kalyani Publishers, New Delhi, 2001.
4. Goudie, A.S. : *The Human Impact on Environment*, Blackwell, Oxford, 1993.

Further Readings:

1.	Ehrlich, Paul, R. et. al	:	*Ecoscience – Population, Resources and Environment*, Freeman and Co., San Francisco, 1977.
2.	Goudie, A.S.	:	*Environmental Change, Contemporary Problems in Geography*, Clarendon Press, Oxford, 1992.
3.	Pickering, K.T.	:	*An Introduction to Global Environmental Issues*, Routledge, London, 1994.
4.	Singh, Savinder Allahabad,	:	*Environmental Geography*, Paryag Pustak Bhawan, 1991.
5.	Strahler, A.N. & Strahler, L.A.	:	*Geography and Man's Environment*, John Wiley & Sons, New York.

Pedagogy:

- The interaction of teacher and students is must on issues related to environment, energy resources, forest and soil preservation.
- A field visit to those areas where soil erosion is a serious problem be arranged and methods of conservation be taught.

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PUBLIC ADMINISTRATION
SEMESTER -V

Paper- III : RESEARCH METHODS AND STATISTICS

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time : 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding about the nature and scope of Social Research, Methods of Social Research, data collection and data processing. It would also acquaint the students with basics of sampling and statistical methods including measures of central tendency, dispersion, correlation and Chi-Squares Test.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Meaning, Nature and Scope of Social Research.
Concepts; Hypotheses : Meaning, Types and Significance.
Research Design - Meaning, Types and Components.
Methods of Social Research - Experimental–Survey and Case Study.

UNIT-II

Methods of Data Collection—Documents, Observation, Interview and Questionnaire.
Data Processing-Editing, Coding and Tabulation, The Use of Computer.
Report Writing.

UNIT-III

Sampling-Meaning, Types, Merits and Demerits.
Frequency Distribution – Meaning and Steps.
Measures of Central Tendency – Mean, Median and Mode.

UNIT-IV

Measures of Dispersion –Standard Deviation.
Correlation – Karl Pearson.
Chi-Square

Essential Readings :

Goode, W.J., & Hatt, P.K. (1990). *Methods in Social Research.* U.S.A. : McGraw Hill.
Gupta ,S.P. (1987) . *Statistical Methods.* New Delhi : Sultan Chand .
Moser, C.A. & Kalton. G. (1979).*Survey Methods in Social Investigations.* London : ELBS
Seltiz,C.et al. (1964) . *Research Methods in Social Relations* . New York : Rinehart & Winston.

Further Readings :

Bowley, A. (1947). *Elements of Statistics* (6th ed.) . New York : Staples.
Cohen, L. (1968) . *Statistical Method for Social Scientists* .New Delhi : Prentice Hall of India Private Ltd.
Ghosh., and Chowdhry. (2004). S*tatistics* (Rev. Enlarg. Ed.) Allahabad : Indian Press.

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PUBLIC ADMINISTRATION
SEMESTER-VI

PAPER IV : The candidates have to select one out of the following four options :

Option (i) : Organisation Behaviour
Option (ii) : Cooperative Administration in India
Option (iii) : Public Enterprise Management (with special reference to India)
Option (iv) : Environment Administration in India
Option (v) : Emerging Issues in Public Administration

Paper- IV : OPTION (i) : ORGANISATION BEHAVIOUR

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :
The objective of the paper is to give the student an in-depth insight into the various aspects and factors affecting individual, interpersonal and group behaviors in organisations. The key areas include study of human behavior and concepts like Attitudes, Morale, Leadership, Motivation and Organizational Change.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Organisation Behaviour : Concept and significance
Individual Behaviour : Concept; Nature; Individual Factors
Interpersonal Relations : Meaning; Dimensions; Factors

UNIT-II

Team Development : Importance; Types of Teams
Attitudes : Concept, Types
Morale : Concept; Significance; Building up High Morale

UNIT-III

Groups : Concept; Types
Leadership : Styles of Leadership
Motivation : Concept; Determinants

UNIT-IV

Organisational Change : Concept; Resistance to change
Organisational Development : Concept; Need; Techniques
Organisational Effectiveness : Concept; Approaches

Essential Readings :

Davis, K. (2001).*Organizational Behaviour* . NewYork: McGraw Hill.
Dubin, R. (1968). *Human Relations in Administration(*3rd ed.)*,* New Delhi: Prentice Hall.
Gupta, S. & Joshi, R. (2007).*Organizational Behaviour* . New Delhi: Kalyani Publishers.
Kolasa, B.J. (1969). *Introduction to Behavioural Sciences for Business.* New York: Wiley.
Prasad , L.M.(2000). *Organisational Behaviour*(3rd ed.).New Delhi: Sultan Chand
Sharma, K.K. & Sahni, P. (1988).*Organisational Behaviour* . New Delhi: Deep & Deep.

Paper- IV: OPTION (ii) : CO-OPERATIVE ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to acquaint the students with the evolution of cooperatives in India and its Principles. It will also deal with Legislation on Cooperatives, Registration, structure and Administration at the Union and State level. Further the students will gain an understanding of the forms and Role of Cooperatives, their managerial & personnel aspects.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Co-operation : Meaning, Significance and Evolution
Co-operative Principles
Co-operative Legislation : Government of India Act, 1912 and Punjab Co-operative Societies Act, 1961(as amended from time to time)

UNIT-II

Registration of a Co-operative Society
General Body, Board of Directors and Committees
Chief-Executive : Appointment, Functions and Role
Co-operative Administration at Union Level – Organisation and Functions

UNIT-III

Co-operative Department at State Level – Organisation and Functions
Registrar Co-operative Societies : Appointment and Role
Forms of Co-operatives : Role of Apex Federations and Primary Co-operatives
Co-operative Education

UNIT-IV

Human Resource Management : Recruitment and Training
Financial Management

Essential Readings :

Dubhashi, P.R. (1970) . *Principles and Philosophy of Cooperation* . Pune: VMNICM.
Goel, B.B. (1988). *Dynamics of Cooperative Administration* . Delhi: Deep and Deep.
Goel , S.L., & Goel, B.B. (1979). *Principles, Problems and Prospects of Co-operative Administration* .Delhi: Sterling.
Kamra, P.K. (1986) .*Cooperative Management* . Delhi: Deep and Deep.
Krishnaswami, O.R. (1978) . *Fundamentals of Cooperatives* .Delhi: S.Chand and Co.
Mathur, B.S.(1971). *Cooperation in India.* Agra: Sahitya Bhawan.

Further Readings :

Bhatia, B.S. (ed.). (1994). *Encyclopaedia of Cooperative Management.* New Delhi: Deep & Deep Publications Pvt. Ltd.
Dwivedi, R.C. (1982).*Democracy in Cooperative Movement.*New Delhi. National Cooperative Union of India.
Gill , M.S. (1983).*Agricultural Cooperatives* .Delhi: Vilas.
I.C.A. (1977).*Readings in Cooperative Management.*Delhi: ICA.
I.C.A. (1980).*Experts Consultation on Cooperative Member Education* . Delhi: ICA.
I.L.O.(n.d.).*Cooperative Management and Administration* .Geneva: I.L.O.
Puri, S.S.(1979). *Ends and Means of Cooperative Development* . Delhi: NCUI

Paper-IV: OPTION (iii): PUBLIC ENTERPRISE MANAGEMENT (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time :		3Hours

Objective of the Paper :

The objective of the paper is to give the student a detailed understanding of the concept, evolution, types, role and problems of public enterprises in India. It would also give an insight into legislative and government control over public enterprises, performance and reforms of the public enterprises and the concept of privatization.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Public Enterprise : Meaning and Evolution
Public Enterprises in India : Rationale and Role
Administrative and Managerial Problems of Public Enterprises

UNIT-II

Organisational Patterns: Departmental Undertakings, Public Corporation and Government Company
Board of Directors: Rationale, Constitution, Types and Functions

UNIT-III

Legislative Control over Public Enterprises
Government Control over Public Enterprises
Performance of Public Enterprises

UNIT-IV

Public Enterprise Reforms since 1991
Memorandum of Understanding
Privatization : Meaning, Rationale, Achievements and Failures

Essential Readings :

Dutt, Ruddra and Sundaram, K.P.M. (2009) .*Indian Economy* . New Delhi: S. Chand.
Khera, S.S. (1977) . *Government in Business* . Delhi : National.
Mathur, B.P. (1999) .*Public Enterprise Management* . New Delhi :Macmillan
Narain, Laxmi . (2005). *Public Enterprise Management and Privatisation* . New Delhi :S. Chand.
Parkash, Jagdish . (2002). *Administration of Public Enterprises in India* . Mumbai :Himalaya Publishing House.
Sengupta , N.K. (2007) . *Government and Business* . New Delhi :Vikas.

Further Readings:

Gedam, Ratnakar. (1995) . *Public Sector Management.*
Government of India. *Public Enterprises Survey, India, Ministry of Heavy Industry & Public Enterprises, Vol. 1, 2, 3* .DPE. New Delhi.
Gupta, K.R. (1975) . *Issues in Public Enterprises* . New Delhi: S.Chand.
Hanson , A.H. (1972).*Public Enterprises and Economic Development* . London : Routledge and Kegan.
Ramanadham, V.V.(1988). *The Working of Public Sector* . Bombay : Allied Publishers.
Ramanadham , V.V. *The Structure of Public Enterprises and Economics in India* . Bombay: Asia Publishing House.
United Nations. (1974). *Countries* . New York : V. N.

Paper-IV: OPTION (iv): ENVIRONMENT ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding of the concept and components of environment, environment administration and sustainable development. In addition, the students would be made aware of environment problems, threats and impact of development on environment. The student will also gain knowledge regarding the machinery for environment protection at the Union and State levels, Environmental Policy, priorities, global issues and role of NGOs in environment conservation would be dealt with.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Environment – Concept and Components
Environment Administration – Meaning, Nature and Scope
Sustainable Development – Concept, Issues and Strategy

UNIT-II

Environment Problems and Threats–Air, Water, Land, Human Settlements and Forests
Impact of Development, Urbanization and Industry on Environment
Organisation and Machinery of the Government at the Union Level for Environment Protection
Organisation and Machinery of the Government at the State Level for Environment Protection

UNIT-III

Pollution Control Boards–Organisation, Functions and Role

Environmental Policy with special reference to Water, Air and Forest; Constitutional Provisions; Legislative Measures

Environmental Priorities in India—Population Stabilisation; Forest Cover; Deforestation; Wildlife Protection; Recycling of Wastes

UNIT-IV

Environment and Global Issues— Conventions; Depletion of Ozone Layer; Global Warming

Environment Education, Awareness and Ethics; Role of NGOs in Environment Protection and Conservation

Essential Readings :

Chandana, R.C. (1998) .*Environment Awareness* . New Delhi : Kalyani.

Edmunds, S. and Latey, J. (1973). *Environmental administration* . New York : McGraw-Hill.

Nanda, V.K. (1997). *Environmental Education* .New Delhi : Anmol.

Sapru, R.K. (2002) . *Development administration* . New Delhi : Sterling.

Sapru ,R.K. (2004). *Public Policy* . New Delhi : Sterling.

Further Readings :

Agnihotri , Sheo Parkash. (1992). *Environment Conservation Management and Planning.* Allahabad : Chugh.

India, Centre for Science and Environment. (1982). *The state of India's Environment : A Citizen's Report* . New Delhi:Vishal Bhawan.

Kumar, Naresh.(1999) . *Air Pollution and Environment Protection : Legislative Policies, Judicial Trends and Social Perceptions* . New Delhi : Mittal.

Kumar, Naresh.(1999). *Air Pollution and Environment Protection:Legislative Policies,Judicial Trends and Social Perceptions* . New Delhi:Mittal

Monga, G.S. (2004).*Environment and D evelopment* . New Delhi : Deep and Deep.

Radha, S. and Sankhyan, A.S.(2004). *Environmental Challenges of the 21st Century . New Delhi:* Deep.

PAPER- IV: OPTION (V): Emerging Issues in Public Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to familiarize the students with the emerging issues in Indian Administration. At the end of the course the students will have an understanding of the concepts of disaster management, human rights, regulatory administration in India, consumer protection, right to information, new areas of governance in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Good governance – Concept and significance
E- governance – Concept and significance
Regulatory Administration - Concept and significance

Unit II

Transparency and Accountability in Administration – Significance
Mechanism – Social Audit, Results Framework Document (RFD)
Ethics and Integrity in Administration

Unit III

Human Rights - Concept and significance
Women Empowerment with special reference to National Mission for Empowerment of Women (NMEW)
Youth Empowerment with special reference to Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Unit IV

Sustainable Development - Concept and significance
Environment Administration - Concept and significance
Disaster Management - Concept and significance

Suggested Readings :

Arora , Ramesh K. (2013). *Ethical Governance in Business and government*. Jaipur : Aalekh Publishers.

Bhandari, Sunanda (2015).*MahilaSashaktikaranEvamRajkiyaYojanaye.* Jaipur: Ritu Publications.

Bystydzienski, Jill M. (2008).*Democratization & Women's Grassroot Movements.* JotiSekhon. Zubaan.

Centre for Good Governance.Social Audit Tool Kit,"n.d" from www.cgg.gov.in

Food & Agricultural Organization (F.A.O.*).A handbook for trainers on participatory local development: The Panchayat & Training Module on social Audit*

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006) .*Environmental Issues of Development.*AmbalaCantt, India: The Associated Publishers.

Goel, S.L. (2006).*Encyclopedia of Disaster Management*, Deep and Deep Publication Pvt. Ltd.

Government of India. *Guidelines for Results Framework Document(RFD).* "n.d" retrieved from www.performance.gov.in

Government of India. (2006,September). *Second ARC – Third Report (Crises Management: From Despair to Hope).*

Government of India.(2006,june) . *Second ARC – First Report (Right to Information- Master Key to Good Governance).*

Government of India. (2008,December). *Second ARC – Eleventh Report (Promoting e-governance: The Smart Way Forward).*

Government of India.Ministry *of Skill Development and Entrepreneurship-*" *n.d'' retrived from* www.skilldevelopment.gov.in/pmkvy.html

Government of India*. Ministry of Women & Child Development,* "n.d'' retreived from www.nmew.gov.in.

Government of India. *E-governance for Citizen Empowerment National Information Centre*. ''n.d''retreived from www.nic.in

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Verma, J.S. (2006). *The Universe of Human Rights.* Delhi: Universal Law Publishing Company.

Kumar, Abhishekand Tripathy, Pramod Kumar.*Skill Development in India – An Overview of Initiatives& Schemes.* New Delhi: Kanishka Publishers.

Mathur, B.P. (2014). *Ethics for Governance: Reinventing Public Services.* India: Routledge.

Jaswal, P.S.and Jaswal, Nishtha. (2000). *Environmental Law* . Pioneer Publications.

Palekar, S.A. (2012). *Development Administration*. New Delhi: PHI Learning Private Limited.

Manisha Priyam; Menon Krishna and Banerjee, Madhulika. (2009). *Human Rights, Gender and the Environment.* Pearson.

Trivedi, Priya Ranjan. (1999). *Encyclopedia of Ecology and Environment Volume 3 Environmental Education*. New Delhi :Indian Institute of Ecology and Environment.

Vayunandan, E. and Mathew, Dolly. (2003). *Good Governance Initiatives in India*. New Delhi : Prentice Hall of India.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – V

Note : The students shall have to opt for one paper for Semester - V examination out of the following two papers :

Outlines of Test :

Paper V : Archaeology

Paper VI : Spread of Indian Culture In Central Asia, China And Tibet

Paper-V: ARCHAEOLOGY

Total Marks	**: 100**
Theory	**: 90**
Internal assessment	**: 10**
Time	**: 3 Hours**

Objectives :

This course is a survey of the pre and proto-historic background to Indian history from the beginning of man to the early historical period. Excavated sites are studied for an insight into the growth of early Indian culture.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I:

The Palaeolithic, Mesolithic and Neolithic cultural sequences in various parts of the Indian subcontinent.

UNIT-II:

(a) The background and the phenomenon of the Harappan civilization.

(b) The Chalcolithic cultures of western and southern India

UNIT-III:

The beginning of iron technology and the Painted Grey Ware Culture.

UNIT-IV :

Excavations of early historic cities of :

(a) Northern India and Gangetic doab : Taxila and Hastinapura.

(b) Eastern India : Sisupalgarh and Chandraketugarh.

(c) Southern India : Arikamedu and Brahmagiri.

Pedagogy of the Course Work :

The students are made familiar with prehistoric, proto historic and historical sites through visits. Slides, photographs of relevant sites, their significance in establishing chronologies is also discussed in the class. Visits to museums is also an important aspect through which students are made familiar with the material evidence

Essential Readings :

1. Agrawal, D.P. : *The Archaeology of India,* Select Book Service Syndicate, New Delhi, 1984.
2. Allchin, B. and F.R. : *The Rise of Civilization in India and Pakistan,* Cambridge University Press, New Delhi, 1989.
3. Fagan, Brian M. : *People of the Earth : An Introduction to* Longman, Singapore, 2004.
4. Possehl, G. : *Ancient Cities of the Indus,* Vikas Publishers, New Delhi, 1979.
5. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
6. Roy, T.N. : *The Ganges Civilization a critical archaeological study of the painted grey ware and northern black polished ware periods of the ganga plains of India,* Ramanand Vidya Bhawan, New Delhi, 1983.
7. Tripathi, V. : *The Painted Grey Ware An Iron Age Culture of Northern India* Concept, Publisher Corporation, Delhi, 1976.

Paper VI: SPREAD OF INDIAN CULTURE IN CENTRAL ASIA, CHINA AND TIBET

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary aim of this paper is to make the students study the spread of Indian culture and ideas in Central Asia, China and Tibet, generally termed in history as 'Greater India'. This forms an important phase of India's contribution to the world culture.
2. **Pedagogy of the Course Work :**
   It is expected to acquaint the students with the background of Indian culture's spread and the factors responsible for it. While outlining the spread of Indian culture and religion, the spread of art, architecture and literature should also be taken care of. Visual aids wherever required should be used to familiarize students with Indian art and its influence in these countries.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

Spread of Indian Culture in the Central Asian States.

UNIT-II:

Introduction of Buddhism in China and the early contacts.

UNIT-III:

Chinese pilgrims in India – Fahien, Hiuen Tsang and I-Tsing.

UNIT-IV:

(a) Spread of Buddhism in Tibet up to 12th century A.D. with special reference to the missions of Padma Sambhava.
(b) Lamaism.

Essential Readings :

1. Bagchi, P.C. : *India and Central Asia,* National Council of Education Bengal, Calcutta, 1984.
2. Bapat, P.V. : *2500 Years of Buddhism,* South Asian Books, New Delhi, 1977.
3. Dougles, R : *China (The Story of the Nation),* Hesperidis, London, 1900, 2006.
4. Elliot, C. : *Hinduism and Buddhism,* Vols. II and III, Routledge, London, 1962.
5. Puri, B.N. : *Buddhism in Central Asia,* Motilal Banarsidass, Delhi, 1987.
6. Upasak, C.S. : *History of Buddhism in Afghanistan,* Central Institute of Higher Tibetan Studies, Varanasi, 1990.
7. Waddell, A.L. : *Buddhism and Lamaism of Tibet* rpt., Vimar Publishing House, London, 1979.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – VI

Note : The students shall have to opt for one paper for Semester - VI examination out of the following two papers :

Outlines of Test :

Paper VII : Epigraphy and Numismatics

Paper VIII : Spread of Indian Culture in South-East Asia upto 12th Century A.D.

Paper-VII : EPIGRAPHY AND NUMISMATICS

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives :

The paper is aimed to prepare students to handle the original source material – inscriptions and coins, which make the backbone of Ancient Indian History, as without the knowledge of epigraphy and numismatics, the subject cannot be mastered.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I:

(a) Origin and antiquity of writing in India with special reference to the origin of Brahmi script.

(b) Origin and antiquity of coinage in India.

UNIT-II:

(a) Ashokan inscriptions – Pillar Edicts I to IV; Girnar Rock Edicts I, II and XIII. (Both for study and decipherment).

(b) Besnagar Pillar inscription of Heliodorus; Nasik Cave Inscription of Queen Balasri; Sarnath Buddha Image inscription of Kanishka's year 3; Junagarh Rock inscription of Rudradaman I, Saka year 72. (Study only). Gupta inscriptions—Allahabad Pillar inscription of Samudragupta, Mehrauli Iron Pillar inscription of Chandra, Bhitari Stone Pillar inscription of Skandagupta (Study only).

(c) Post-Gupta inscriptions : Mandasor Stone inscription of Malava Samvat 589, Banskhera Copper-plate of Harshavardhana, Pehowa inscription of Bhojadeva (Study only).

UNIT-III:

(a) Coins as source of ancient Indian history.

(b) Study of Punch marked coins.

UNIT-IV:

(a) Coins of the Kushanas.

(b) Coins of the Guptas.

Pedagogy of the Course Work :

Students should be familiarized with the details of the topics in the syllabus with stress on the contents of each topic. Visual aids like the photographs/slides of the coins and inscriptions should be used regularly. The decipherment of Asokan inscriptions should be taught with the help of plates and paleographic charts.

Essential Readings :

1. Allan, John : *Catalogue of the Coins of Ancient India,* Trustees of the British Museum, London, 1967
2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, Varanasi, 1957.
3. Buhler, G., : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 2004
4. Dani, A.H., : *Indian Paleography*, Munshiram Manoharlal, New Delhi, 1997
5. Gupta, P.L. : *Coins,* rpt. National Book Trust India, .New Delhi, 2006.
6. Hultzsh, E. : *Corpus Inscriptionum Indicarum,* Vol. I, rpt., Archaeological Survey of India, Delhi, 1991.

Paper-VIII : SPREAD OF INDIAN CULTURE IN SOUTH-EAST ASIA UPTO 12TH CENTURY A.D.

Total Marks :	100
Theory :	90
Internal Assessment:	10
Time :	3 Hours

Objectives:

This course enlightens the students about the spread of Indian culture in Burma, Indonesia, Combodia and Champa. In order to teach the students about the elements of Indian Culture, which made its impact felt in those countries, it is, therefore, necessary to discuss the political history, art, architecture and religion of those regions.

Note :

1. The paper setter is required to set 9 questions in all.
2. The candidates are required to attempt five questions in all.
3. All questions shall carry equal marks.
4. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidates are required to attempt 9 short questions in about 25 to 30 words each. It shall carry 18 marks and shall be a **compulsory** question.
5. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit i.e. 4 in all, of 18 marks each.

UNIT-I:

(a) Beginning of Indianisation in Burma.

(b) Art and Religion of Burma.

UNIT-II:

(a) Beginning of Indianisation in Indonesia.

(b) Study of Indo-Javanese Art.

UNIT-III:

(a) Beginning of Indianisation in Cambodia.

(b) Art of Cambodia.

UNIT-IV:

(a) Beginning of Indianisation in Champa.

(b) Study of Art and Archaeological remains of Champa.

Pedagogy of the Course Work :

The students are taught with the help of slides, photographs and maps. In addition to it, lectures, workshops, seminars, written assignments and class discussions, term papers etc. are essential parts of it. The students should be made familiar with the outline of the topics mentioned in above units.

Essential Readings :

1. Chatterji, B.R. : *Indian Cultural Influence in Cambodia,* University of Calcutta, Calcutta, 1933.
2. Coedes, C. : *The Making of South East Asia,* University of California Press, London, 1966
3. Coomaraswamy, A.K. : *History of Indian and Indonesian Art,* Kessinger Publishing, New Delhi, 1972.
4. Harrison, Brian, : *South East Asia, A Short History,* Macmillan Press, New York, 1966 .
5. Majumdar, R.C. : *Hindu Colonies in the Far East,* K.L. Mukhopadhaya, Calcutta, 1944.
6. Majumdar, R.C. : *Suvarnadvipa, Ancient Indian Colonies in the Far East,* Modern Publication Syndicate, 1937.
7. Majumdar, R.C. : *Kambuja-Desa, or An Ancient Hindu Colony in Cambodia,* Lighting Source Incorporated, Madras, 1944.
8. Singhal, D.P. : *India and World Civilization,* Vols. I & II, Michigan State University Press, Calcutta, 1972.

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POLICE ADMINISTRATION

SEMESTER V

Semester V: Police Procedures and Investigation-I

(A) Course Objectives:

The course has been designed to impart students knowledge about the procedures followed and investigation done by the police after the incidence of crime. The students will be taught about the crime scene, its importance, inspection of crime scene and its preservation along with the investigation officer and his/ her role. Further the students would be made aware about investigation, interrogation and interview techniques with a focus on witnesses, women and juvenile offenders.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks)

(D) Course Content:

Unit-I

Investigating Officer: Power of observation and its importance in Investigation; and Qualities of investigating officer.

Unit-II

Crime Scene: importance of crime scene; inspection of crime scene; and preservation of crime scene.

Unit-III

Investigation; interrogation; and interviews.

Unit-IV

Examination of witnesses; interrogation of women accused; and interrogation of juvenile offenders.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 978.
5. International Association: Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, A.P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi,1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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POLICE ADMINISTRATION

SEMESTER VI

Semester VI: Police Procedures and Investigation-II

(A) Course Objectives:

The objective of this course is to introduce to the students about the use of scientific techniques in the field of investigation. After providing knowledge in death, types of death and bodily changes after death, the students would be imparted information on how to preserve finger prints, footprints, knowledge about handling of physical evidences, along with their packing and forwarding. In addition knowledge about the modern tools of investigation would also be provided.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Death; Types of death- death due to suffocation hanging, drowning, accident, suicide and murder. Bodily changes after death.

Unit-II

Preservation of finger prints, footprints, and blood at the scene of crime.

Unit-III

Physical evidence, handling packing and forwarding of physical evidence, and types of opinion to be obtained from physical evidence.

Unit-IV

Photography and its importance in police work; Polygraph; Brain mapping; and Narco Analysis.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 1978.
5. International Association : Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA, 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, P.H. Publishing Corporation, New Delhi,1999.

Further Readings

1.	Singh, S.P.	:	Combating Bio- terrorism with SpeciaL Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2.	Dutta, K.K.	:	Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3.	Ghosh, S.K. and Rustamji, K.F.	:	Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4.	Vadackumchery, James	:	Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5.	Vadackumchery, James	:	Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6.	Sharma, R	:	Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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MUSIC (VOCAL AND INSTRUMENTAL)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper:-(Theory)

Total Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Note: There will be 10 questions in all and a student will attempt five questions choosing at least one from each unit.

UNIT-I

1. Definition with full explanation of the following :-
   Sthai, Antra, Krintan, Badhat, Jod-Alap, Lag Daat, Jugalbandi, Layakaries (Adi, Kaudi, Biadi)
2. Establishment of Swaras on strings of Veena.

UNIT–II

1. Definition of Aesthetics in context of Indian Music
2. Rasa Sidhanta of Bharat

UNIT–III

1. Topics of Essay: - (i) Sangeet Sammelan
2. Knowledge of good qualities of a music performer (Vocalist or an Instrumentalist)
3. Elementary Knowledge of Harmonium, Tabla,Veena

UNIT-IV

1. Description of Detailed & Non-detailed Ragas:-
   1. Detailed Raga :-
      i) Marwa (ii) Madhmad Sarang
   2. Non-detailed Raga: -
      (i) Sohni (ii) Megh
   3. Talas:- Tivra, Sultal

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Paper B: Practical (Choice & Viva) **:** 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) One Dhamar in Gayaki Anga and /one drut gat in ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
- (i) Marwa
- (ii) M adhang Sarang

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
- (i) Sohni
- (ii) Megh

(c) Talas : Tivara, Sultal on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas.

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single .

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeetanjali	:	Pt. Onkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Saras Sangeet	:	Pradeep Kumar Dixit
4.	Aakashvani Evam Hindustani Shastriya Sangeet	:	Dr. Suchismita
5.	Sangeet Visharad	:	Basant
6.	Raag Parichay	:	Harish Chandra Srivastav
7.	Sangeet swarit	:	Dr. Ramanand Dwivedi
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper-:-Theory

Total Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

UNIT – I

1. Definition with full explanation of the following :-
   Kalavant,Vaggeykar, Swarsthan Niyam

UNIT-II

1. Essays:- i Role of Music in National Integration
   ii Lok Sangeet
   iii Music Appreciation

UNIT-III

1. Impact of Western Music on Indian Music
2. Study of Western Instruments:- Guitar, Keyboard, Octopad

1. Detailed study of Dakshini Music System of the following:-

   i Swara
   ii Raga
   iii Tala

UNIT-IV

1. Description of Detailed & Non-detailed Ragas: -

1. Detailed Raga: - (i) Patdeep
   (ii) Megh Malhar
2. Non-detailed Ragas: - (i) Bhimpalasi
   (ii) Bahar
3. Talas:- Tilwada, Adachautal

Unit -V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Paper B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) Tarana or one Fast Gat in Ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

(a) Ability to write notation of the Vilambit and Drut Gat of Ragas prescribed in the course:-
Patdeep, Megh Malhar

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Patdeep
(ii) Megh Malhar

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Bhimpalasi
(ii) Bahar

(c) Talas : Tilwada, Adachartala on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(d) Geet Ghazal

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1. Bhatkhande Sangeet Shastra	:	Pt. Bhatkhande
2. Abhinav Geetanjali	:	Pt. Ramashray Jth
3. Sangeetanjali	:	Pt. Onkar Nath Thakur
4. Raag Parichay	:	Harishchandra Srivastav
5. Sangeet Visharad	:	Basant
6. Sawars Sangeet	:	Pradeep Kumar Dixit
7. Sangeet Swarit	:	Dr. Ramanand Dwivedi
8. Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand
9. Art Education	:	Janardan Prasad

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HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Third year (SEMESTER SYSTEM) has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2018-19

SEMESTER-V

Paper V: Physics of Semiconductors

Unit I

Crystal Properties and Growth of Semiconductors: Semiconductor materials, Crystal lattices, Ge and Si crystal structure, production of electronic grade Si, Bulk crystal growth, Epitaxial growth.

Bonding forces and energy bands in solids, Metals, semiconductors and insulators, Direct and Indirect semiconductors, intrinsic and extrinsic semiconductors, compensation, Electrons and holes, effective mass, Fermi level, Conductivity and mobility, temperature dependence of Carrier concentration, effect of temperature, doping and field on mobility, Hall effect, Invariance of Fermi level at equilibrium.

Excess carriers in semiconductors: Optical absorption, Photoluminescence, Electroluminescence, Carrier lifetime and photoconductivity, photoconductive devices.

Unit II

Diffusion and drift of carriers: Einstein relation, built-in fields in semiconductors with different doping profiles, energy band diagrams. Steady state carrier injection, diffusion length, Haynes-Shockley experiment (qualitative discussion).

pn junction energy band diagrams, forward and reverse-biased junction, calculation of contact potential and depletion width in abrupt junction, diffusion and drift currents, Reverse-bias breakdown, Zener and Avalanche diode. Diffusion and depletion capacitance of pn junction, varactors.

Metal-semiconductor contacts, energy band diagrams of ohmic and rectifying contacts, Schottky diodes.

Recommended Books:

1. Solid State Electronic Devices: Ben Streetman, Sanjay Banerjee (Prentice Hall India, 2005).

Paper VI: Computational Physics

Note : The Computational Physics paper will consist of two parts (a) written examination of one hour duration and (b) Practical examination of two hours duration. Both the parts carry equal marks.

Unit I

C Programming Language

Types of Computer Systems and Operating Systems.
Introduction to Programming : Algorithms, Structured Programming. Basic idea of Compilers.
Data and Statements : Data Types. Constants and Variables. Mathematical, Relational, Logical and Bitwise Operators. Expressions and Statements. Block, Local and Global variables. Auto, Static and External Variables.
I/O Statements : printf, scanf, getc, getch, getchar, getche, etc.
Manipulators for Data Formatting: setw, width, endl and setprecision etc. ASCII Files I/O.
Preprocessor : #include and #define directives.
Control Statements :- If-statement. If-else Statement. Nested if Structure. Else-if Statement.
Ternary Operator. Goto Statement. Switch Statement. Unconditional and Conditional
Looping. While Loop. Do-while Loop. For Loop. Break and Continue Statements. Nested
Loops.
Arrays and Structures :- One and Two Dimensional Arrays. Idea of Structures, Strings and Pointers
Functions : Standard Library Functions and User-defined Functions.
Functions returning Values. Function Prototypes. Function Call by Value and by Reference.
Recursion.

Unit II

Design of algorithm and computer programs based on the numerical techniques read in Paper III "Statistics and Numerical Techniques".
Programs : (a) Data handling: find standard deviation, mean, variance, moments etc., (b) the least squared fitted curve for a data set, (c) roots of quadratic equations, (d) first order derivative at given x for a data set using Lagrange interpolation, (e) numerical integration on 1-D function using Simpson methods, (f) solving a differential equation using Euler/Runge-Kutta method, (g) Sum, Difference and Product of Matrices, (h) determinant of a matrix - its eigenvalues and eigenvectors.(h)Plotting and evaluation of mathematical functions.

Recommended Books:

1. Schaum's Outline of Programming with C, Byron Gottfried, McGraw-Hill.
2. Computer Programming in C, V. Rajaraman (Prentice Hall of India Pvt. Ltd.) (2006)
3. Computer Applications in Physics: S. Chandra (Narosa) (2008).
4. Computational Physics: R.C.Verma, P.K. Ahluwalia and K.C. Sharma (New Age) (2005).

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PHYSICS
SEMESTER-VI

Paper VII: Nuclear Radiations and Detection

Unit I

Radiation Sources:

Radioactive decays: Alpha decay, β^-, $\beta+$ and EC decays, Radioactivity units, gamma rays, Internal conversion, X-rays, Auger electron, Bremesstrahlung, Annhilation radiation.
Neutron sources- fission, radioisotope based sources and photoneutron sources, Accelerator based sources.
Radiation Interactions : Interaction of light and heavy Charged Particles, Stopping power, energy and range straggling.
Interaction of Fast Electrons - ionsation and radiative loss, backscattering.
Interaction of Gamma rays, photoelectric absorption, Compton scattering and pair production. Attenuation coefficient.
Interaction of Neutrons, Slowing down power, thermal neutrons.
Sources of Background: Natural radioactivity, Air borne radioactivity, Primary and secondary Cosmic rays.

Unit II

General Properties of Radiation Detectors: Modes of detector operation, Current mode, pulse mode, Pulse Height Spectra, Energy Resolution, Detection Efficiency, Dead Time-paralyzable and non-paralyzable models.
Radiation Detectors:
Ionization process in gases, Ion pair formation, fano factor, diffusion, charge transfer and recombination, Charge Migration and Collection.
Gas-filled detectors: Gas Multiplication, avalanche formation, Regions of detector operation.
Proportional Counters, fill gases and choice of geometry.
Geiger-Mueller counter, Fill Gases and Quenching mechanism, Recovery time and dead time, detection of charged particles, gamma and neutrons rays with G.M. counter.
Scintillation Detectors : Organic and Inorganic Scintillators; Characteristics and parameters associated with Gamma ray spectrum
Semiconductor detectors.
Detection of slow and fast neutrons by neutron-induced reactions.

Recommended Books:

1. Radiation detection and measurement: G.F. Knoll (Wiley, New York) (2000).

Paper VIII: Physics Practical

Note : The students are expected to perform any 6 experiments taking at least 3 from each section.

Unit I

1. Measurement of vacuum using the pirani/thermocouple gauge made using electric bulb filament.
2. To study Poisson and Gaussian distributions using a GM Counter.
3. To study absorption of gamma rays in Pb and Fe absorbers.
4. Strength of Alpha source using Solid state nuclear track detector.
5. To study regulated power supply and voltage multiplier circuits (using breadboard).

Unit II

6. To design an Astable multivibrator of given specifications using 555 Timer IC.
7. To design a monostable multivibrator of given specifications using 555 Timer IC and to measure the pulse-width of its output.
8. To study logic gates and clocked JK Master-Slave flip flops using IC's.
9. Study of photon intensity variation through crossed polariods and diffraction spectrum from diffraction grating using LDR/Photodiode.
10. To measure resistivity of semiconductor at different temperatures using four probe method and the deduce band gap of the semiconductor.

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CHEMISTRY

B.Sc. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2018

SEMESTER- V

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper V	:	Inorganic Chemistry-A	20	45	05
Paper VI	:	Physical Chemistry-A	20	45	05

Paper V: INORGANIC CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Inorganic Chains: (5 lectures)

(a) Chains : Catenation including heterocatenation, silicate minerals, intercalation, One dimensional sulphur-nitrogen conductor.

Unit II

Inorganic Rings and Cages : (5 lectures)

(a) Rings : Borazines, phosphazenes and phosphazene polymers.

(b) Cages : Simple cage molecules; Phosphorus–oxygen and phosphorus-sulphur cages; introduction to carboranes and metallocarboranes

Unit III

Organometallics-I : (5 lectures)

Formation and reactions (i) carbonylate ions (ii) metal-carbonyl hydrides & (iii) metal carbonyl halides.

Unit IV

Organometallics-II : (5 lectures)

Transition metal-carbon multiple bonds : Chemistry of :

Alkylidene Complexes.

Alkylidyne complexes including bridged molecules.

Metallocumulenes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
2. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
3. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
4. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VI: PHYSICAL CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Transport Properties-I *:* (5 Lectures)

Recapitulation of Collision Properties of gases such as collision cross section, collision diameter, collision number, collision frequency and mean free path.

Meaning of transport, Properties of gases, Flux, General equation of transport. Thermal conductivity, kinetic theory of thermal conductivity (derivation of the expression).

Unit-II

Transport Properties-II *:* (5 Lectures)

Viscosity of gases, kinetic theory of gas viscosity, (derivation of the expression). Measurement of gas viscosity, Diffusion Coefficient. Kinetic theory of diffusion in gases. (derivation of the expression).

Diffusion in liquids, theory of diffusion in liquids, diffusion in solutions, laws of diffusion.

Unit-III

Dynamic Electro-Chemistry : (5 Lectures)

Processes at electrodes. The electric double layer (Gouy-Chapman, Helmholtz and Stern models-qualitative ideas. The potential difference, Rate of charge transfer, Bulter Volmer equation, Tafel plot, Overpotential Polarisation, Polarography, Fuel cells, Corrosion, Inhibition of Corrosion.

Unit-IV

Surface Chemistry : (5 Lectures)

Interfacial region, types of interfaces, surface tension, thermodynamics of surfaces, plane interface, curved surfaces, Laplace and Kelvin equations including their derivation.
Gibbs Adsorption Equation and its Thermodynamic derivation, Wetting and adhesion in solid-liquid systems, contact angle, Capillary rise and surface tension. Surface Films on liquids.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. All questions carry equal marks.

Suggested Books:

1. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
3. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
4. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
5. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
6. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

CHEMISTRY

SEMESTER VI

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
PaperVII	:	Inorganic Chemistry -B	20	45	05
PaperVIII	:	Physical Chemistry -B	20	45	05

Paper VII: INORGANIC CHEMISTRY-B

Total Marks : 50

Theory : 45

Internal Assessment : 5

Total Lectures : 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

(5lectures)

Complexes of aromatic systems with transition metals. M.O. description of bonding in Ferrocene.

Study of coordinative unsaturation, oxidative addition,

Unit-II (5 Lectures)

Insertion reactions in Organometallics.

Phenomenon of Fluxionality in Organometallics and its characterization.

Unit-III

Reaction Mechanism : (5 lectures)

Nature and classification of lignad substitution reactions, application of V.B. & C.F. theories to predict the substitution reactions. Mechanism of ligand replacement reactions, substitution in octahedral complexes acid hydrolysis, base hydrolysis, acid-catalysed, acid hydrolysis and acid hydrolysis for chelates.

Unit-IV (5 lectures)

Substitution in square planar complexes. The trans-effect & its Synthetic applications, M.O. theories and trans-effects. Electron transfer reactions & their mechanism. Molecular rearrangements, mechanistic pathways of substitution.

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

5. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
6. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
7. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
8. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VIII: PHYSICAL CHEMISTRY-B

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Colloids-I : (5 Lectures)

The colloidal state; preparation of colloidal solutions, Methods of purification of colloidal systems, dialysis, electro-dialysis, filtration, Ultra-filtration. Classification of colloidal systems, their typical properties with special reference to optical properties (Tyndall effect).

Unit-II

Colloids-II : (5 Lectures)

The Brownian movement. Electrokinetic phenomena, Stabilization of colloidal systems and theories of stability; zeta potential, Coagulation, Flocculation of colloids by electrolytes and its mechanism. Association Colloids, Micellar system, Emulsions and their types, HLB value of emulsifiers, Introduction to microemulsions.

Unit-III

Quantum Chemistry-I : (5 Lectures)

ATOMS : Schrodinger equation for multi-electron atoms, Need for approximate Solutions. Basic ideas of the Variation theorem and the Perturbation methods. Self-Consistent Field methods (Hertree and Hertree-Fock)- Elementary treatment only. Indistinguishability of Electrons. Pauli exclusion principle, two electron spin functions; Slater determinants and Pauli principle. New Atomic term symbols. Spin-orbit coupling (Total orbital momentum, multiplicity, total angular momentum) vector model of atom, Hund's rules, atomic spectra and Selection rules.

Unit-IV

Quantum Chemistry-II : (5 Lectures)

Molecules :

Schrodinger equation for molecules, Born-Oppenheimer approximation.Valence bond theory and Molecular Orbital theory as two approaches for approximate solution of Schrodinger equation LCAO-MO treatments of H_2 and Valence bond treatment of H_2 (complete solutions not required. Only wave functions to be discussed) Comparison of MO and VB treatments. Brief Introduction to the electronic structure for polyatomic molecules. Metals, Insulators and Semiconductors. Band Theory of Solids (elementary discussion).

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

7. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
8. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
9. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
10. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
11. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
12. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

BOTANY

B.Sc. (Honours) Botany Fifth and Sixth Semester Syllabus

(Examination 2018-2019)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A:	Biology of Cryptogams and Seed Plants	3 hrs.	36	4	40
Theory Paper-B:	Genetics, Plant Breeding, Biochemistry, Molecular Biology and Biotechnology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs	18	2	20
Sixth Semester					
Theory Paper- A:	Microbiology and Plant Pathology	3 hrs.	36	4	40
Theory Paper-B:	Systematics of Angiosperms and Environmental Biology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	2	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

BOTANY

B.Sc. (Honours) Fifth Semester (Examination December, 2018)

PAPER-A: BIOLOGY OF CRYPTOGAMS AND SEED PLANTS

Max. Marks	:	40
Theory	:	36
Internal Assessment	:	04

Objective : The basic objective of this paper is to make the students understand the diversity in various life forms of plant kingdom. It provides knowledge about evolution of simpler forms to complex ones along with their morphology, anatomy and reproduction.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
BIOLOGY OF CRYPTOGAMS

Algae: Occurrence and distribution; thallus organization and evolutionary tendencies; ultrastructure of algal cell; criteria for classification, structure and life history of *Oedogonium* (Chlorophyceae), *Vaucheria* (Xanthophyceae), *Ectocarpus* (phaeophyceae), *Batrachospermum* (Rhodophyceae) and economic importance of algae.

Fungi: Occurrence and distribution; ultrastructure of fungal cell, cell wall composition, modern concepts in the classification of fungi; nutrition, reproduction, structure and life history of *Rhizopus* (Zygomycetes), *Peziza*, *Saccharomyces* (Ascomycetes), *Alternaria* (Deuteromycetes), *Agaricus* (Basidiomycetes); types of fungal spores and mode of their liberation and economic importance of fungi.

UNIT-II

Bryophytes: Comparative account of morphology, anatomy and reproduction in *Riccia, Marchantia, Anthoceros, Funaria*; evolution of sporophyte and gametophyte; classification, ecological aspects and economic importance.

Pteridophytes: The primary vascular plants; classification, comparative account of morphology, anatomy and reproduction in *Rhynia, Lycopodium, Selaginella, Equisetum, Marsilea, Pteris*; Telome theory; stelar evolution; heterospory and seed habit.

UNIT-III
SEED PLANTS

Phanerogams, the seed bearing plants: General characteristics and types.

The Living Cycads: Distribution; vegetative organography and anatomy; reproductive cycle –sporophytes and sporangia, gametophytes, fertilization, embryogeny and seed development of *Cycas*.

The Coniferales: General organography and anatomy; foliage leaves; storbilli and sporangia; reproductive cycle– sporogenesis, gametophytes, fertilization, embryogeny and seed development of *Pinus*.

The Gnetales: Habit and distribution; vegetative organography and anatomy; reproductive cycle – the storbilli, sporogenesis, male and female gametophytes, pollination, fertilization and embryogeny of *Ephedra*.

UNIT-IV

Alternatives for Reproduction: Vegetative and sexual reproduction.

Flower: Evolution, concept of flower as a modified determinate shoot and functions of flower.

Structure of Anther : Microsporogenesis: formation of pollen grains (male gametophyte); pollen germination; pollen tube growth.

Structure of Pistil**:** Ovules; megasporogenesis; development of embryo sac (female gametophyte).

Mechanisms and Agencies of Pollination: Pollen-stigma interaction; self-incompatibility; double fertilization, apomixis.

Seed and Fruit: Development of endosperm and embryo in monocotyledons and dicotyledons; storage of reserve materials and desiccation in seeds; dormancy and seed germination; fruit maturation; ripening and dispersal.

Suggested Readings

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 4th revised and enlarged edition. Vikas Publishing House, Delhi, India, 2000.
2. Bold, H.C., Alexopoulos, C.J. and Delevoryas, T. Morphology of Plant and Fungi (4th Edition), Harper and Foul Co., New York, 1980.
3. Cronquist, A. The evolution and classification of flowering plants, Thomas Nelson (Printers) Ltd., London and Edinburgh, 1968.
4. Delevoryas, Th. Plant Diversification, Modern Biology Series. Halt, Rinehart and Winston, New York, 1965.
5. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
6. Dube, H.C. An Introduction to Fungi, Vikas Publishing House Pvt. Ltd., Delhi, India, 1990.
7. Foster, A.S. and Gifford, A.E.M., Jr. The Comparative Morphology of Vascular Plants, Vakils, Peffer and Simons Pvt. Ltd, 1967.
8. Gifford, E.M. and Foster, A.S. Morphology and Evolution of Vascular Plants, W.H. Freeman & Co., New York, 1989.

9. Gilbert, M.S. Cryptogamic Botany, Vol. I & II (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1985.
10. Johri, B.M. Embryology of Angiosperms, Springer-Verlag, Berlin, 1984.
11. Kumar, H.D. Introductory Phycology, Affiliated East-West Press Ltd., New York, 1988.
12. Puri, P. Brophytes, Atmaram & Sons, Delhi, India, 1985.
13. Raghvan, V. Molecular Embryology of Flowering Plants, Cambridge University Press, New York, 1997.
14. Rangaswamy, G. and Mahadevan, A. Diseases of Crop Plants in India, Prentice Hall India Pvt. Ltd. New Delhi, India, 1999.
15. Singh, V, Pande, P.C. and Jain, D.K. Diversity of Microbes and Cryptogams, Rastogi Publications, Meerut, India, 2008.
16. Sporne, K.R. The Morphology of Angiosperms. B.I. Publication, Bombay, India, 1977.
17. Srivastava, H.N. Diversity of Microbes & Cryptogams, Vol. I, Pradeep Publications, Jalandhar, India, 2014.
18. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol.III, Pradeep Publications, Jalandhar, India, 2014.
19. Wilson, N.S. and Rothwell, G.W. Palaeobotany and the Evolution of Plants (2nd Edition), Cambridge University Press, UK, 1993.

Suggested Laboratory Exercises (Biology of Cryptogams)

1. Comparative study of algal genera with reference to the classes mentioned in theory.
2. Comparative study of fungal genera with reference to the classes mentioned in theory.
3. Comparative study of morphology, anatomy and reproductive structures in *Riccia, Marchantia, Anthoceros* and *Funaria.*
4. Comparative study of different members of Pteridophytes mentioned in the theory syllabus.
5. Comparative anatomical structure of stem/wood of Cycadales, Coniferales, Ephedrales, Gnetales and angiosperms, from sections and macerations.
6. Comparative structure of the male and female cones of Cycads (*Cycas*), Conifers (*Pinus*) and Ephedrales (*Ephedra*).
7. Comparative structure of leaf, leaf appendages, venation and stomata of gymnosperms and angiosperms.
8. Diversity in pollen grain structure among Cycads, Conifers, Ephedrales and angiosperms with respect to size, exine sculpturing, germ spore number, number of constituent cells and any other features.
9. Microsporogenesis and male gametophyte development in angiosperms through microtome sectioning and acetocarmine squash technique.
10. Pollen grain germination by hanging-drop and sitting-drop techniques in *Impatiens*, *Catharanthus roseus* (= *Vinca rosea*) or any other suitable material.
11. Diversity in the structure of stigma, style, stigmatic papillae and transmitting tissue of style.

BOTANY

SEMESTER – V

PAPER-B: GENETICS AND PLANT BREEDING, BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Objective: The course work of this paper deals with basic concepts of genetics, plant breeding, molecular biology and biotechnology. It deals with various types of plant reproduction and methods of plant improvement. It provides knowledge of molecular and cellular basis that would enable the students to understand the hereditary and evolutionary trends in plants kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
GENETICS

Cell division - Mitosis and Meiosis.

Mendel's Experiments and Principles of Inheritance; Backcross and test cross; gene interactions and modified dihybrid ratios – complementary, supplementary, duplicate and epistatic factors.

Quantitative Genetics: Quantitative traits and quantitative genetics; the multiple factor hypothesis; descriptive statistics.

Linkage and Recombination: Coupling and repulsion phases; two and three point testcrosses with their significance in chromosome mapping; interference and co-efficient of coincidence.

Maternal Influence on Inheritance: Shell coiling in snails and Kappa particles in *Paramecium*; cytoplasmic inheritance in yeast (mitochondria) and *Mirabilis jalapa* (plastids).

Alterations in the Genetic make up – changes at Genetic Level: Spontaneous and induced mutations; mutagens – types and mode of action; transitions, Transversions and frame-shift mutations; detection of mutations.

Alterations in Genetic makeup – changes in Chromosome Structure: Origin, types and effects of duplications, deletions, inversions and translocations; meiosis in structural heterozygotes.

Alterations in Genetic makeup – changes in Chromosome Number : Origin, types and effects of auto and allopolyploidy; origin and meiosis in nullisomics, monosomics and trisomics.

UNIT –II

PLANT BREEDING

Methods of Plant Improvement: Pure line and mass selection; hybridization in self and cross pollinated crops; introduction and acclimatization; hybrid vigour.

Mutations and polyploidy as methods of plant improvement.

UNIT-III

BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Nucleic Acids**:** Composition of nucleic acids and synthesis of nucleotides; DNA structure; A,B and Z forms of DNA; denaturation and renaturation of DNA; chromatin structure; DNA replication and recombination; DNA polymerases; different forms of RNA and their role.

Amino Acid and Protein Metabolism: Structure, characteristics and classification of amino acids; protein and non-protein amino acids; amino acid biosynthesis; GS/GOGAT cycle; transamination; peptide bond and polypeptide chain; primary, secondary, tertiary and quaternary structure of proteins; protein biosynthesis and its regulation; post-translational modification of proteins; protein targeting; protein degradation.

Carbohydrate Metabolism: Classification; structure of some representatives examples of monosaccharides, disaccharides, polysaccharides; stereoisomers, enantiomers and epimers; biosynthesis and degradation of sucrose and starch.

Lipid Metabolism: Saturated and unsaturated fatty acids; fatty acid biosynthesis; oxidation of fatty acids; storage and mobilization of fatty acids and lipids.

UNIT-IV

Gene Structure, Expression and Regulation: Gene organization in prokaryotes and eukaryotes; operon concept; gene regulation in prokaryotes and eukaryotes; inducible, repressible, positive and negative gene regulation; interrupted genes in eukaryotes; RNA splicing; mRNA stability.

Recombinant DNA Technology: Restriction endonucleases: prokaryotic and eukaryotic cloning vectors; genomic and cDNA libraries; southern and northern analysis; various techniques of gene mapping and DNA fingerprinting (RFLP, RAPD, AFLP); chromosome walking; polymerase chain reaction; DNA sequencing.

Plant Biotechnology: Cellular differentiation and totipotency; organogenesis and embryogenesis; protoplast isolation and culture; somatic hybridization; clonal propagation; genetic engineering of plants; vectors for gene delivery; selectable markers and reporter genes; methods of gene delivery; Agrobacterium – the natural genetic engineer; salient achievements in crop biotechnology (with suitable examples) and prospects.

Suggested Readings:

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. Molecular Biology of Cell, Garland Publishing Co., Inc., New York, USA, 1999.
2. Atherly, A.G., Girton, J.R. and McDonald. The Science of Genetics, Saunders College Publishing Co., Fort Worth, USA, 1999.
3. Bhatia, K.N. and Dhand, Neelam. Cell Biology and Genetics, Trueman Book Company, Jalandhar, India, 2013
4. Buchanan, B.B., Gruissem, W. and Jones, R.L. Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists, Maryland, USA, 2000.
5. Dennis, D.T., Turpin, D.H., Lefebvre, D.D. and Layzell, D.B. (eds). Plant Metabolism (2nd Edition), Longman, Essex, England, 1997.
6. Gardener, J., Simmons, H.J. and Snustad, D.P. Principles of Genetics (8th Edition), John Wiley & Sons, New York, 1991.
7. Gupta, P.K. Cytogenetics, Rastogi Publications. Shivaji Road, Meerut, India, 1995.
8. Gupta, P.K. Cytology, Genetics and Molecular Biology, Rastogi Publications. Shivaji Road, Meerut, India, 2009.
9. Gupta, P.K. Genetics, Rastogi Publications. Shivaji Road, Meerut, India, 1994.
10. Hartl, D.L. and Jones, E.W. Genetics: Principles and Analysis (4th Edition), Jones & Bartlett Publishers. Massachusetts, USA, 1998.
11. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology (2nd Edition), John Wiley and Sons, Chichester, England, 1999.
12. Lodish, H., Berk, A., Zipursky, S.L., Matsudaira, P., Baltimore, D. and Darnell, J. Molecular Cell Biology (4th Edition), W.H. Freeman and Co., New York, U.S.A, 2000.
13. Old, R.W. and Primrose, S.B. Principles of Gene Manipulation, Blackwell Scientific Publications, Oxford, UK, 1989.
14. Poehlmann, J.M. and Sleeper, D.R. Breeding Field Crops, Panima Publishing House, New Delhi, India, 1995.
15. Russel, P.J. Genetics (5th Edition), The Benjamin/Cummings Publishing Co., Inc., USA, 1998.
16. Sharma, J.R. Principles and Practice of Plant Breeding, Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1994.
17. Simmonds, N.W. Principles of Crop Improvement, Longman, London and New York, 1979.
18. Snustad, D.P. and Simmons, M.J. Principles of Genetics (2nd Edition), John Wiley & Sons, Inc., USA, 2000.
19. Srivastava, H.N. Cell Biology and Genetics, Vol.II, Pradeep Publications, Jalandhar, India, 2006.
20. Srivastava, H.N. Plant Physiology, Biochemistry and Biotechnology, Vol.V, Pradeep Publications, Jalandhar, India, 2013.
21. Verma, P.S. and Agarwal, V.K. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company (Reprint, 2010).

Suggested Laboratory Exercises:

1. Determination of chromosome count from dividing pollen mother cells and root tips.
2. Preparation of karyotypes from dividing root tip cells and pollen grains.
3. Determination of intraspecific variation in chromosome number from locally available taxa.

4. Correlation of floral structure with pollination system (e.g. *Salvia*, *Sesamum*, pea, *Lathyrus*, wheat, rice, maize).
5. Field exploration for detection of male sterile plants and estimation of their pollen fertility in locally grown crop plants e.g. *Sorghum*, tomato and *Linum*.
6. Estimation of pollen ovule ratio and its bearing on pollination system.
7. Emasculation and bagging of flowers of Brassicaceae, Poaceae, Papilionaceae, Malvaceae and Linaceae, pollinating them manually and estimating fruit and seed set.
8. Chemical tests to demonstrate the presence of starch, sugar, fat and protein in plant material.
9. To identify the amino acids in a mixture by resolving through paper chromatography or TLC.
10. To prepare the standard curve for protein and determine the protein content in unknown samples by Biuret method.
11. Colorimetric estimation of RNA using orcinol.
12. Colorimetric estimation of DNA using diphenyl amine.
13. Isolation of plant genomic DNA and its spooling.
14. Isolation of total RNA from plant tissue and its colorimetric estimation.
15. Preparation of tissue culture media, sterilization and inoculation of plant material.
16. Demonstration of techniques of in vitro culture of various explants.
17. Isolation of plant protoplasts (e.g. Tobacco, *Petunia*) using enzymes available commercially and estimation of their yield.

Note: In the practical classes, emphasis should be given on basic principles of spectro-photometry, chromatography, electrophoresis and rDNA technology and related fundamentals.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1 Identify classify & write illustrated morphological note on specimens A & B (unit I – III of paper A) 4
Q.2 Demonstrate and perform the experiment C (Biochemistry/Biotechnology) and show it to the examiner. 5
Q.3. Identify slides D & E giving at least two reasons for each. 4
Q.4 Practical note book 2
Q.5 Viva-Voce 3

BOTANY

B.Sc. (Honours) Sixth Semester (Examination May, 2019)

PAPER-A: MICROBIOLOGY AND PLANT PATHOLOGY

Objectives: The basic objective of this paper is to make students familiar with the systematic position of microorganisms, their ultrastructure, classification and industrial application. It also deals with the important aspects of plant diseases, their pathogens and disease management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
(MICROBIOLOGY)

General account of Microorganisms and their characteristics features.

Ultrastructure of Microorganisms: Prokaryotic microorganisms; fine structure of prokaryotic cell; eukaryotic microorganisms; viruses – properties and classification; characteristic features of host-virus interaction; bacteriophage T4; tobacco mosaic virus; general account of mycoplasma and actinomycetes.

Industrial Application of Microorganisms: Organic acids, alcohol, food processing, milk products, antibiotics and biopesticides.

UNIT-II

Genetic Recombination in Prokaryotes: Conjugation, transformation and transduction.

Role of Microorganisms in biogeochemical cycling of nitrogen and carbon; Biological N_2 fixation.

UNIT-III

(PLANT PATHOLOGY)

Major Diseases of Plants, their symptoms and Control : Blast and brown spot of rice, rust and smuts of wheat, downy mildew and green ear disease of bajra, white rust of crucifers, late blight of potato, wilt of pigeon pea, damping off seedlings of tomato/mustard/chillies, Tikka or leaf spot of groundnut, citrus die back, powdery mildews of cucurbits and grapes, red rot of sugarcane.

Plant Disease Management: Chemical, biological; IPM systems; development of transgenics; biopesticides; plant disease clinics.

UNIT-IV

Pathogen Attack and Defense Mechanisms: Physical, physiological, biochemical and molecular aspects.

Plant Disease Epidemiology: Transmission and spread of plant pathogens; disease cycles, epidemics; modeling and disease forecasting.

Suggested Readings:

1. Agrios, G.N. Plant Pathology, Academic Press, London, 1997.
2. Albajes, R. Gullino, M.L., Van Lenteren, J.C. and Elad, Y. Integrated Pest and Disease Management in Green house crops, Kluwer Academic Publishers, 2000.
3. Bridge, P. et al. Molecular Variability of Fungal Pathogens, CAB International, UK, 1998.
4. Bridge, P. et al. Application of PCR in Mycology, CAB International, UK, 1999.
5. Bridge, P., Moore, D.R. and Scott, P.R. Informational Technology, Plant Pathology and Biodiversity, CAB International, UK, 1998.
6. Clifton, A. Introduction to the Bacteria, McGraw Hill Co., New York, 1958.
7. Mandahar, C.L. Introduction to Plant Viruses, Chand & Co. Ltd., Delhi, India,1998.
8. Persley, G.J. Biotechnologies and Integrated Pest Management, CAB International, UK, 1996.
9. Skerritt, J.H. and Apples, R. New Diagnostics in Crop Sciences, CAB International, UK, 1995.

Suggested Laboratory Exercises

1. Calibration of microscope: determination of dimensions of microorganisms (suggested model organisms: yeast, lactobacilli, cyanobacteria).
2. Cultivation media for autotrophic and heterotrophic microorganisms (cleaning of glasswares, mineral media, complex media, solid media, sterilization).
3. Isolation of microorganisms: streaking on agar plates/pour plate method, isolation of clones, preservation.
4. Preparation of Winogradsky column using pond bottom mud, observations on temporal sequence of appearance of microbes. (visual appearance, microscopic observations)
5. Observation on virus infected plants (symptoms).
6. Fermentation by yeast (inverted tube method, use of different substrates, e.g. glucose, fructose, cane sugar, starch)
7. Study of histopathology of various plant diseases included in theory.
8. Isolation and culture of plant pathogens (e.g. *Colletotrichum, Fusarium, Alternaria*) and establishment of Koch's postulates and their pathogenicity.
9. Study on antagonism between isolated antagonists and plant pathogens and test of biological control.
10. Demonstration of the assay of prohibitins (phytoalexins).
11. Demonstration of biopesticides (essential oils, neem, turmeric and garlic) against some pathogens.

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BOTANY

SEMESTER – VI

PAPER-B: SYSTEMATICS OF ANGIOSPERMS AND ENVIRONMENTAL BIOLOGY

Objective: This paper deals with taxonomy and species concept of plants. It provides a knowledge about identification, nomenclature and classification which forms the basis of future research work. It also deals with inter-relations of plants and environment as well as various environmental problems, role of national and international organization in environmental management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

ANGIOSPERM SYSTEMATICS

Introduction : Aims and components of systematics, introduction to identification, nomenclature, phylogeny and classification.

Systematics in Practice: Importance of herbarium specimens and their preparation; role of herbaria and botanical gardens; documentation (floras, monographs, manuals, journals, abstracts, indices and dictionaries); keys for identification of plants.

Taxonomic Hierarchy: Taxonomic category, taxonomic groups; concepts of species, genus and family.

Botanical Nomenclature: Principles and rules; ranks and names; type method; principle of priority and its limitations; names of hybrids and cultivars; concept of biocode.

UNIT-II

General characters of Angiosperms.

Systems of Classification: Bentham and Hooker's system. Engler and Prantl's system and Takhtajan's system.

Modern Taxonomy: Supporting evidences/inputs for taxonomy; taxonomy in relation to anatomy, embryology, palynology, ecology, cytology (cytotaxonomy), secondary metabolites in plants (chemotaxonomy).

A brief account of following families: Ranunculaceae, Brassicaceae, Rutaceae, Fabaceae, Cucurbitaceae, Apiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

UNIT-III

ENVIRONMENTAL BIOLOGY

Introduction: Inter-relationship between the living world and the environment; the components and dynamism; homeostasis; relevance to man.

Earth as a System: The biosphere, the hydrosphere, the atmosphere and the lithosphere; components within biosphere (Biomes); parameters delimiting individual biomes.

The Environment: Soil, water and atmosphere – general account and adaptations.

Organismal Ecology/Biotic components: Individuals, species, population communities and their characteristics.

Ecosystems: Concepts of ecosystem; homeostasis; structure of ecosystem; functions of ecosystem; transfer of energy and minerals via grazing and detritus chains and role of micro-organisms; cycles (hydrologic, gaseous); role of humans in maintaining biogeochemical cycles.
Diversity of Ecosystem: Aquatic (fresh water); terrestrial (forest/grassland); man-made ecosystems.

UNIT-IV

Human Ecology and Ecological Management: The human population; renewable and non-renewable natural resources and their management; conservation of biodiversity; endangered species; conventional and non-conventional energy sources.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Suggested Readings

1. Barbour, M.G., Burk, J.H. and Pitts, W.D. Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.
2. Bhojwani, S.S. Plant Tissue Culture: Applications and Limitations, Elsevier Science Publishers, New York, USA, 1990.
3. Collins, H.A., and Edwards, S. Plant Cell Culture, Bios Scientific Publishers, Oxford, UK, 1998.
4. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
5. Hill, M.K. Understanding Environmental Pollution, Cambridge University Press, 1997.
6. Kormondy, E.J. Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, India, 1996.
7. Mackenzie, A. et al. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, India, 1999.
8. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.
9. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.
10. Odum, E.P. Basic Ecology. Saunders, Philadelphia, 1983.
11. Raghavan, V. Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, New York, USA, 1986.
12. Smith R.K. Ecology and Field Biology. Harper Collins, New York, 1996.

13. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol. III, Pradeep Publications, Jalandhar, India, 2014.
14. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture, Kluwer Academic Publishers, The Netherlands, 1994.

Suggested laboratory Exercises

Description of the following flowers belonging to the various families included in theory syllabus:

1. Ranunculaceae : *Ranunculus, Delphinium*
2. Brassicaceae : *Brassica, Iberis*
3. Rutaceae: *Citrus, Murraya*
4. Fabaceae: *Lathyrus, Cassia, Mimosa* and *Acacia*
5. Cucurbitaceae: *Luffa*
6. Apiaceae; *Coriandrum*
7. Asteraceae: *Helianthus, Ageratum, Sonchus.*
8. Asclepiadaceae: *Calotropis.*
9. Solanaceae: *Solanum, Petunia*
10. Lamiaceae: *Ocimum, Salvia*
11. Chenopodiaceae: *Chenopodium*
12. Euphorbiaceae: *Euphorbia, Phyllanthus*
13. Liliaceae: *Asphodelus, Asparagus*
14. Poaceae: *Avena, Triticum.*

Suggested laboratory Exercises (Environmental Biology)

1. Mechanical analysis of soils by sieve method
2. Determination of water holding capacity and field capacity of soil.
3. Determination of permeability (capillarity and percolation) of different types of soils.
4. Determination of species area curve by minimal quadrat size.
5. Analysis of the herbaceous vegetation for frequency, density and abundance.
6. Effect of tree canopy on the distribution of herbaceous vegetation.
7. Field visit: students should be taken for field visits to places of ecological/environmental interest. They should submit detailed report of the visit in the form of project report in the final practical examination for evaluation. The report shall carry marks.

Note to teachers:

The students are to be familiarized with the families listed above in the practical classes with representative's species or any other that may be available locally. However, questions pertaining to these may be asked in the theory examinations.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1	Describe specimen A in technical terms & proper sequence. Draw F.D and V.S of the flower. Cut T.S of ovary and V.S of the flower and show it to the examiner. Write its F.F. as well.	6
Q.2	Identify specimen B and write Histopathological note on it.	3
Q.3.	Identify slides C by giving at least two reasons.	2
Q.4	Field Diary	2
Q.5	Practical note book	2
Q.6	Viva-Voce	3

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ZOOLOGY

SEMESTER – V

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

PAPER II: AQUATIC BIOLOGY-I

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Structure and functions of testis, epididymis, vas deferens.

UNIT –II

Seminal vesicle and prostate gland.
Semen composition, sperm maturation and capacatation.

UNIT -III

Structure and functions of ovary, oviduct, uterus and vagina.

UNIT -IV

Oestrous and menstural cycles.
Fertilization, implantation, gestation, parturition and lactation.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Greep, R.O. & Astwood, E.B.,(Eds), Handbook of Physiology, Kluwer Academic/ Plenum Publishers, New York, 2002.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Physico-chemical characteristics of marine environment

UNIT -II

Zonation in marine habitat : Pelagic and benthic zone and their flora and fauna.

UNIT -III

Freshwater zonation in a lake and stream : Supralittoral, littoral, sublittoral, profundal & limnetic zones of a lake. Pool zone and rapid zone of a stream.

UNIT -IV

Classification of freshwater habitats : Streams ponds, lakes, marshes and swamps.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Jhingran, V.G., Fish & Fisheries of India, Hindustan Publications Corporation, Delhi, 1991.

PRACTICALS

Practical based on both theory papers I & II :

I. Demonstration of male and female reproductive systems and their associated glands in rat/rabbit through charts.
II. Histology of testis, epididymis, vas deferens, prostate, seminal vesicle, ovary, uterus and vagina through permanent slides..
III. Study of permanent slides of the vaginal smear of human menstrual cycle and rat/mice oestrous cycle.
IV. Determination of the different phases of the oestrous cycle in living rat through permanent slides.
V. Study of mammalian sperm through slides/charts.
VI. Histological examination of placenta through slides/charts.
VII. Freshwater zonation in lake/stream and study of different communities (plankton, nekton, neuston, benthos and lotic communities).

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

Note :
1. Practical will be of 4 hrs. duration.
2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I	Draw a labeled sketch of given system and show to examiner/Spot parts of system on the charts/models.	(3)
II	Identification of phases of oestrous cycle.	(1)
IV	Record biota in a given sample from a lake. Make labeled sketches and demonstrate them to the examiner.	(2)
V	Examine the water sample for various communities from different zones of a lake and draw labelled sketches.	(2)
VI	Identify the specimens/slides/charts A-D. Give reasons of the identification.	(4)
VII.	Note book and charts.	(3)
VIII.	Viva-Voce.	(3)

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ZOOLOGY

SEMESTER – VI

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

PAPER II: AQUATIC BIOLOGY-II

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT –I

Neuro-Hormonal Regulation of production of Gonadal and Gonadotropic hormones.

UNIT –II

Neuro-Hormonal Regulation of production of Hypothalamic factors and Structural behaviour.

UNIT –III

Fertility Regulation

Contraception and modern contraceptive technology-natural, mechanical, chemical immunological and surgical methods and Fertilization *in vitro* (Test tube baby).

UNIT -IV

Application of fertility regulation in live stock:

i. Artificial insemination in farm animals.
ii. Milk yield.
iii. Egg production in poultry.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Turner, C.P. & Bagnara, J.T., General Endocronology, Saunders Intern. Publications, 1984.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Ecosystem : Study of ecosystem with particular reference to the components of aquatic ecosystem. Food chains and food webs. Flow of energy in a food chain.

UNIT -II

Physico-chemical characteristics of freshwater environment : Temperature, light, current of water, density, pH, dissolved oxygen, carbon dioxide and nutrients.

UNIT -III

Productivity : Concepts of productivity, primary, secondary and tertiary productivity, yield and carrying capacity.

UNIT -IV

Ecological sucession : Succession, kinds of succession, changes in animal life during hydrarch concept of climax.
Adaptations of aquatic organisms.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Odum, E.P., Fundamentals of Ecology, Saunders Co., Philadelphia, 2004.

PRACTICALS

Practical based on both theory papers I & II:

I. Study of permanent slides of mammalian ovary and testis.
II. Study of different techniques of contraception through charts/models/video clippings.
III. Study of artificial insemination, egg production through charts/models/video clippings.
IV. Study of components of lake ecosystem and grazing type of food chain.
V. Physico-chemical characteristics of freshwater environment. Temperature, Light. turbidity, current of water, density, pH, dissolved O_2, CO_2 and nutrients.
VI. Ecological succession in an aquatic habitat in the laboratory.

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of techniques of contraception/artificial insemination. (3)

II Determine the physico-chemical factors in a given sample of fresh water. Write the procedure followed. (4)

III Draw labeled diagram of food chain (in aquatic/terrestrial environment) (2)

IV Identify the cells/part in slides A & B. Give reasons for identification and name the hormone secreted by it. (3)

V. Note book and charts (3)

VI. Viva-Voce. (3)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 — enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

BACHELOR OF COMPUTER APPLICATIONS (B.C.A)

(SEMESTER SYSTEM)
PART-I, II, III
(First to Sixth Semester)
FOR
2018 - 2019 SESSION

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Panjab University, Chandigarh

Scheme of Examination and Syllabus of BCA w.e.f. 2018 -19

Bachelor of Computer Applications Semester – I

Paper Code	Title	L	T		Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-101	English(Compulsory)-A	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-102	Fundamentals of Mathematical Statistics	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-103	Computer Fundamentals and Computing Software	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-104	Problem Solving Through C	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-105	Lab based on BCA-16-103	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-106	Lab based on BCA-16-104	-	-	6	6	-	50	50	4 Hrs	2
	Environment & Road Safety Education									
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – II

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-201	English (Compulsory)-B	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-202	Computer Organization	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-203	Fundamentals of Web Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-204	Object Oriented Programming using C++	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-205	Lab based on BCA-16-203	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-206	Lab based on BCA-16-204	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

***The Environment, Road Safety Education, Violence against Women/Children and Drug Abuse is a compulsory qualifying paper which the students have to study in the B.C.A. 1st year (2nd Semester). If the students failed in qualify the paper during 2nd Semester, he / she / they be allowed to appear / qualify the same in the 4th or 6th semester/s.**

Bachelor of Computer Applications Semester – III

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-301/ BCA-16-302	Punjabi-A/ History & Culture of Punjab – A	6	-	-	6	05	45	50	3 Hrs	2
BCA-16-303	Information System Design and Implementation	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-304	Computer Oriented Numerical Methods	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-305	Data Structures	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-306	Lab based on BCA-16-304	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-307	Lab based on BCA-16-305	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**35**	**340**	**375**		**15**

Bachelor of Computer Applications Semester – IV

Paper Code	Title	L	T	P	Total	Int	Ext	Total		Credits
BCA-16-401/ BCA-16-402	Punjabi-B/History & Culture of Punjab – B	6	-	-	6	05	45	50	3 Hrs	2
BCA-16-403	Software Project Management	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-404	Operating System Concepts and Linux	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-405	Database Management System	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-406	Lab based on BCA-16-404	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-407	Lab based on BCA-16-405	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**-**	**12**	**36**	**35**	**340**	**375**		**15**

Bachelor of Computer Applications Semester – V

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Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-501	Computer Networks	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-502	Discrete Mathematical Structure	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-503	Java Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-504	Web Application Development using PHP	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-505	Lab based on BCA-16-503	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-506	Lab based on BCA-16-504	-	-	6	6	-	50	50	4 Hrs	2
		24	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – VI

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-601	E-Commerce	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-602	Application Development using VB.Net	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-603	Computer Graphics and Multimedia Applications	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-604	Lab based on BCA-16-603	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-605	Major Project and Seminar	-	-	12	12	10	115	125		5
	Total	**18**	**-**	**18**	**36**	**40**	**360**	**400**		**16**

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FIRST SEMESTER

: **English (Compulsory) – A**
BCA-16-101

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Semester I

Book Prescribed: **Colours of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (1& 2)
One essay type question on summary/Character/Incident (one out of two with internal choice)
10 marks

II) **Prose (1 to 3)**
Long essay type question on Summary/Theme(one out of two with internal choice)
10 marks

III) **Poetry** (1 to 6) **15 marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context (one out of two with internal choice) **5 marks**

Section B

1) Word formation from Prose and Stories and their use in sentences (5 out of 8)
10 marks

2) Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3) Translation from Hindi/Punjabi to English **5 marks**
(a small Paragraph)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Official, Business and Letters to the Editors **5 marks**

Fundamentals of Mathematical Statistics
: **BCA-16-102**

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the basic techniques Statistical Methods. After completing this course students will be able to solve various Financial, Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Basic Statistics: Types of Statistics, Different Statistical Techniques, Steps in Statistical Investigation, Uses and Limitations of statistics, Collection of Data: Sources of collecting primary and Secondary Data, Limitations of Secondary Data, Criteria of evaluating secondary data, Organization of data, Graphs of Grouped Frequency Distribution, Tabulation of Data, Parts of Table

Measures of Central Tendency: Kinds of measures of central tendency (statistical averages or averages):

Arithmetic Mean: Simple Arithmetic Mean, Methods of calculating Simple Arithmetic Mean, Arithmetic Mean in case of Individual Series, Discrete series and continuous series, Weighted Arithmetic Mean, Combined Arithmetic Mean.

Geometric Mean: Simple Geometric Mean , Methods of calculating Simple Geometric Mean, Geometric Mean in case of Individual Series, Discrete series and continuous series, Weighted Geometric Mean, Combined Geometric Mean.

Harmonic Mean: Simple Harmonic Mean ,Methods of calculating Simple Harmonic Mean, Harmonic Mean in case of Individual, Discrete series and continuous series, Weighted Harmonic Mean, Combined Harmonic Mean.

UNIT - II

Median: Methods of Calculating Median in case of Individual, Discrete series and continuous series

Partition Value: Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles

Mode: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series

Range: Computation of Range, Inter Quartile Range, Computation of Inter Quartile Range, Percentile Range and Computation of Percentile Range.

Mean Deviation, Computation of Mean Deviation, Standard Deviation, Calculation of Standard Deviation, Variance, Calculation of Standard Deviation for individual Series, Discrete Series and Continuous Series, Coefficient of Standard Deviation and coefficient of variation, Combined Standard Deviation, Correcting incorrect Standard Deviation

UNIT - III

Correlation Analysis : Correlation Analysis: Definition, Types of Correlation: Positive, Negative, Simple, Multiple, Partial, Total, Linear and Non-Linear. Need of Correlation Analysis, Correlation and Causation, Techniques for Measuring Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation: Correcting incorrect coefficient of correlation, calculating Karl Pearson's coefficient of correlation in case of grouped series, Probable Error, Coefficient of Determination, Spearman's coefficient of Correlation (Rank correlation): Calculation of Correct Coefficient of rank correlation, Difference between Rank Coefficient and Karl Pearson's coefficient of coefficient, Coefficient of concurrent deviation.

UNIT - IV

Regression Analysis (Linear Regression): Definition, Difference between Correlation and Regression, Types of Regression Analysis: Simple, Multiple, Partial, Total, Linear and Non-Linear, Objectives of Regression Analysis, Methods of obtaining regression analysis: Regression Lines, Regression Equations. Methods of obtaining regression equations: Normal Equations and Regression Coefficient, Properties of Regression Coefficient, Standard Error of Estimate, Regression Coefficient in case of Grouped Data, Uses of Regression Analysis and Limitations of Regression Analysis.

Suggested Readings:

1. Gupta S.C, Kapoor V.K. : Fundamentals of mathematical Statistics, Sultan Chand & Sons.
2. Gupta, S.P., 2003 : Statistical Methods, S. Chand.
3. Affi, A.A, 1979 : Statistical Analysis: A Computer Oriented Approach, Academic Press, Inc.

Computer Fundamentals and Computing Software
: **BCA-16-103**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: The objective of this course is to familiarize students with complete Fundamentals and the carriers commonly used computing software.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

Types of software: System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.

UNIT - II

Understanding Operating System using DOS : Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. Batch Files: Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

Understanding Graphical User Interface using Windows: Fundamentals of Windows, Types of Windows, Anatomy of windows, Icons, Recycle bin, Operations on Folders, Registry of Windows: Basics, Editing; Control panel.

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UNIT - III

Word Processing Package: Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools, word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, auto-formatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge, Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms.

UNIT - IV

Spreadsheet Package: Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes, Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, Printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros.

Presentation Packages: Basics of creating a presentation, Parts of main window, workspace views, creating a presentation, Incorporation of Animation.

Note: Any word processing, spreadsheet and presentation package may be used. Focus should be on open source software's.

Suggested Readings:

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications
3. Mathur Rajiv, 1995: DOS 6.2 Quick Reference, Galgotia.
4. OOoAuthors Team : Getting Started with OpenOffice.org 3.3, Friends of OpenDocument
5. Singleton, Roderick G.: OpenOffice.org User Guide.

Problem Solving Through C
: **BCA-16-104**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to make the student understand programming language concepts, mainly control structures, reading a set of data, stepwise refinement, function and arrays. After completion of this course, the student is expected to analyze the real life problem and write programs in 'C' language to solve problems. The main emphasis of the course is on problem solving aspect.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.
Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.
Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

UNIT - II

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.
Loop Control Structure: While and do-while, for loop and Nested for loop,
Case Control Structure: Decision using switch, Thegoto statement.
Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

UNIT - III

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function: Call by value and call by reference, Arrays of characters, Insertion and deletion operations, Searching the elements in an array, Using matrices in arrays, Passing an Entire Array to a Function.

Pointers: Pointer declaration, Address operator "&", Indirection operator "*", Pointer and arrays, Pointers and 2-Dimensional Arrays, Pointer to an Array, Passing 2-D array to a Function, Array of Pointers.
Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions.

UNIT - IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).
Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers, Union.
Files in C: Introduction, Opening and Closing files, Basic I/O operation on files.

Suggested Readings:

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading:

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

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SECOND SEMESTER

English (Compulsory) – B
BCA-16-201

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L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Semester II

Book Prescribed: **Colour of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (3-5)
One essay type question on summary/Character/Incident (one out of two with internal choice) **10 marks**

2) **Prose (4-5)**
Long essay type question on Summary/Theme (one out of two with internal choice) **10 marks**

3) Poetry (7-11) **15marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context(one out of two with internal choice) **5 marks**

Section B

1) Paragraph Writing(Descriptive and Narrative) **10 marks**

2). Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3). Translation from Hindi/Punjabi to English **5 marks**
(isolated sentences)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Transformation of all types (5 out of 5) **5 marks**

Computer Organization
BCA-16-202

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to understand the basic organization of computer system and system maintenance.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Organisation: Evolution of Computers, Von Neumann Architecture, Combinatorial Blocks : Gates, Half Adder, Full Adder, Multiplexers, Decoders, Encoders; Sequential Building blocks : Flip Flops, Registers, Counters,
Information representation: codes, fixed and floating point representation
Arithmetic: Addition and subtraction for sign magnitude and 2's complement numbers, integer multiplication using Booth's algorithms

UNIT - II

Architecture of a Simple Processor: Architecture of 8086/8088 microprocessor, instruction set, Addressing Modes.
Instruction: Microinstructions: Register Transfer, Arithmetic, Logical and Shift, Types of Instructions, Instruction Cycle.
Interrupt: Types, Interrupt Cycle
I/O organization: Strobe based and Handshake based communication, DMA based data transfer;

UNIT - III

Memory Organisation: Memory Hierarchy, RAM (Static and Dynamic), ROM Associative memory, Cache memory organisation, Virtual memory organisation.
Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/ Output.

UNIT - IV

System Maintenance: Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection, prevention and protection from Viruses.

Suggested Readings:

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Essential :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,

Further Reading :

2. P. Pal Choudhri, 1994. : Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 : Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.

Fundamentals of Web Programming

: **BCA-16-203**

L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to build and publish web sites using HTML, DHTML, CSS, JavaScript and Dreamweaver.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Terminology: Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL

HTML: Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.)

Lists: Unordered List, Ordered Lists, Definition lists

Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes

Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

Linking Documents: Anchor tag, External Document References, Internal Document References and Image Maps

Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

DHTML: Introduction to cascading style sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External

Forms: Attributes of Form element, Input element, The Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option

UNIT - III

Java Script: Introduction and Features of JavaScript, Writing JavaScript into HTML, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.

Other Built-In Objects in JavaScript: The String Object, The Math Object, The Date Object;

UNIT - IV

:

Introduction to Dreamweaver: Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.

Web Hosting: Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools

Suggested Readings:

Essential :

1	Wanger & Wyke	:	Java Script Unleased, Pearson Education, New Delhi.
2	Bayross, Ivan :	:	HTML, DHTML, Java Script by BPB, Latest reprint
3	Schildt , Herbert	:	The Complete Reference Java 2, TMH, Latest reprint
4	Joseph Lowery	:	Adobe Dreamweaver CS5 Bible Paperback Edition

Further Reading :

5	Thomas Powell	:	HTML & CSS: The Complete Reference
6	John Pollock	:	JavaScript, A Beginner's Guide
7	Janine C. Warner	:	Dreamweaver CS5 For Dummies Paperback Edition
8	David Powers	:	The Essential Guide to Dreamweaver CS4

Object Oriented Programming using C++
: **BCA-16-204**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: By the end of the course, students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, and exploit advanced C++ techniques.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Principles of Object Oriented Programming (OOP): Introduction to OOP, Difference between OOP and Procedure Oriented Programming; Concepts: Object, Class, Encapsulation, Abstraction, Polymorphism and
Inheritance, Applications of OOP. Special operators: scope resolution operator, Member Dereferencing operators, Memory management operators, Manipulators and Type cast operator
Structure of a C++ Program and Classes and Objects : Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions; Class Function Definition: Member Function definition inside the class declaration and outside the class declaration.

UNIT - II

Friend function, inline function, Static members, Function Overloading, Arrays within a class. Arrays of Objects; Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects.
Constructors: Declaration and Definition, Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use.
Operator Overloading & Type Conversion: Conversion from basic type to user defined type, User defined to basic type and one user defined conversion to another user defined type.

UNIT - III

Inheritance: Extending Classes Concept of inheritance, Base class, Defining derived classes, Visibility modes : Public, Private, Protected ;Types of Inheritance: Single inheritance : Privately derived, Publicly derived; Making a protected member inheritable, multilevel

inheritance, multiple Inheritance and ambiguity of multiple inheritance, Hierarchal Inheritance, Hybrid, Nesting of classes.

Polymorphism: Definition, Application and demonstration of Data Abstraction, Encapsulation and Polymorphism. Early Binding, Polymorphism with pointers, Virtual Functions, Late binding, pure virtual functions.

UNIT - IV

Exception Handling: Definition, Exception Handling Mechanism : Throwing mechanism and Catching Mechanism, Rethrowing an Exception

File Processing : Opening and closing of file, Binary file operations, structures and file operations, classes and file operations, Random file processing.

Suggested Readings :

Essential :

1. E. Balaguruswamy, 2008 : Object Oriented Programming with C++, TMH.

Further Reading :

2. Bjarne Stroustrup, 2009 : The C++ Programming Language, Addison-Wesley Publishing Company.
3. Robert Lafore, 2003 : Object Oriented Programming in Turbo C++, Galgotia Pub.
4. Salaria, R. S. : Object Oriented Programming Using C++, Khanna Book Publishing Co. (P.) Ltd., New Delhi.

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/CHILDREN AND DRUG ABUSE(SEMESTER – II)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.
10. Indian Laws on Environment:

Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermi composting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.

9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL
:

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for

ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

Unit IV (Drug Abuse)

:

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.
    - A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) **Concept and overview :** what are drugs? Meaning of use, misuse and abuse of drugs. Misuse of prescription drugs with special emphasis on antibiotics and steroids. Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) **Types of drugs often abused and their effects**

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3, 4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.
10. NCERT(2010). Training Resource Materials (Adolescence Education Programme)

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THIRD SEMESTER

Punjabi – A
BCA-16-301

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ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਦਸੰਬਰ 2●18 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ,
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
   (ਭਾਈ ਵੀਰ ਸਿੰਘ- ਗੁਲਾਬ ਦਾ ਫੁੱਲ ਤੋੜਨ ਵਾਲੇ ਨੂੰ, ਵਿਛੋੜਾ-ਵਸਲ, ਖੇੜਾ, ਪੂਰਨ ਸਿੰਘ- ਜਵਾਨ ਪੰਜਾਬ, ਸਮੁੰਦਰ ਕਿਨਾਰੇ ਮੈਂ ਉਡੀਕਾਂ, ਗਰਾਂ ਦਾ ਮਿਹਨਤੀ ਬਲਦ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ- ਰਾਧਾ ਸੰਦੇਸ਼, ਏਕੇ ਦੀ ਬਰਕਤ, ਪੰਜਾਬੀ ਦਾ ਸੁਪਨਾ, ਮੋਹਨ ਸਿੰਘ- ਮਾਂ, ਦੇਸ਼ ਪਿਆਰ, ਹਵਾ ਦਾ ਜੀਵਨ ਅਤੇ ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ- ਆਖਾਂ ਵਾਰਸ ਸ਼ਾਹ ਨੂੰ, ਸੱਤ ਵਰ੍ਹੇ ਅਤੇ ਅਸ਼ੋਕਾ ਚੇਤੀ ਕਵਿਤਾਵਾਂ)
2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
   (ਏਹੁ ਨਿਦੋਸਾ ਮਾਰੀਐ, ਸਵਰਗ ਦੀ ਝਲਕ, ਮਾਮਲਾ, ਉਜਾੜ, ਬਸ਼ੀਰਾ ਅਤੇ ਰੱਬ ਤੇ ਰੁੱਤਾਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (3 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ.ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਸੁਜਾਨ ਸਿੰਘ, ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ ਅਤੇ ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਲੇਖ : ਸਮਾਜਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਆਮ ਵਾਕਫ਼ੀ ਨਾਲ ਸੰਬੰਧਤ (500 ਸ਼ਬਦਾਂ ਤੱਕ)	7 ਅੰਕ
6.	ਸ਼ਬਦ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜਾਂ ਵਿੱਚੋਂ 7)	7 ਅੰਕ
7.	ਵਾਕ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਵਾਕਾਂ ਵਿੱਚੋਂ 8)	8 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

HISTORY AND CULTURE OF PUNJAB – A
BCA-16-302

HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi,1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala, 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.:A Social, Cultural and Economic History of India, Vol. II, and Das, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi up
B. to class 10th.
C. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
D. Foreigners

Information System Design and Implementation

: **BCA-16-303**

L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students about the various aspects of Information Systems to be developed their analysis and design. The motive is to aware the learners about pre requisite of software development and associated paradigms. After completing this course students will be able to be analyse and design information systems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Systems Concepts and Information Systems Environment: Definition and characteristics of a system. Elements of a system Environment: Boundaries and interface. Types of systems: Physical or Abstract Systems, Open and Closed System, Man - made information systems.

The System Development Life Cycle: Introduction to various phases-Recognition of Need, Feasibility Study, Analysis, Design, Implementation, Post– Implementation and Maintenance.

The Role of System Analyst: Skills of a System Analyst, various roles of the Analyst.

UNIT - II

System Planning and the Initial Investigation: Bases for planning in system analysis, Initial investigation, determining the users information requirements, Problem definition and Project Initiation, Background Analysis, Fact Finding, Fact Analysis, Determination of Feasibility.

Information Gathering: Introduction, Information Gathering tools: Review of Literature, Procedures and forms. On -site observation. Interviews and questionnaires.

Tools of Structured Analysis: Various tools of structured analysis: Data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table, Pros and cons of each tools.

UNIT - III

Feasibility Study: System Performance-statement of Constraints, Identification of Specific System Objectives, description of Outputs. Feasibility Study – Feasibility considerations, Steps in feasibility analysis. Feasibility Report.

System Design: The Process of Design-Logical and Physical Design, Design methodologies: Structured design, Functional Decomposition

System Testing and Quality Assurance: Testing, System testing, Quality assurance and its goals in its system life cycle, Levels of quality assurance, Trends in testing.

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UNIT - IV

Implementation and Software Maintenance: Introduction, Conversion- Activity network for Conversion, File Conversion, User Training: Elements of user Training Post implementation review. Software Maintenance - Primary activities of a Maintenance Procedure, Reducing Maintenance Costs.

Hardware and Software Selection: Types of Software, Procedure for Hardware/Software selection: Major phases in selection, Evaluation and Validation, Vendor Selection, Post – Installation Review. Software selection- Criteria for Software Selection, the evaluation process.

Suggested Readings:

1. E.M. Awad: Systems Analysis and Design,Galgotia Publications(P)Ltd.

Further Reading :

2. Hardgrave Bill C. ,Siau Keng, Chiang Roger H.L., Systems Analysis and Design : Techniques, Methodologies, Approaches and Architectures 1st Edition, M.E. Sharpe Publications.

Computer Oriented Numerical Methods
: BCA-16-304 (Session 2018 – 2019)

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the essential techniques of Numerical Methods. After completing this course students will be able to solve various Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Non-programmable & Non-storage type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Introduction to differentiation, integration and matrix algebra.

(No. of Lectures – 05)

Data Representation and Computer Arithmetic: Introduction, Concept of Exact and Approximate Numbers, Concept of Significant digits, Representation of Numbers in Memory, Storage of Integer Numbers: Signed Representation, 1's Complement Representation, 2's Complement Representation, Floating Point Numbers and their storage, Floating Point Arithmetic, Normalization and their consequences, Errors, Measures of Accuracy: Absolute Error, Relative Error and Percentage Error, Error types: Data Errors, Truncation Errors, Round-Off Errors, Computational Errors, Rules, Relationship between Relative Error and Significant digits and Error Propagation: Error Propagation in Addition Operation, Subtraction Operation, Multiplication Operation and Division Operation.

(No. of Lectures – 10)

UNIT - II

Solution of Non-Linear Equations: Introduction, Types of Non-Linear Equations: Polynomial Equations, Transcendental Equations, Methods of Finding Solutions of Non-Linear equations: Direct Method, Iterative Method.

Iterative Methods: Bisection Method, False-Position Method, Secant Method, Newton - Raphson Methods, Zeros of a polynomial using Birge – Vieta Method. Convergence of Iterative Methods: Convergence of Bisection Method, Convergence of False Position Method, Convergence of Newton- Raphson Method, Convergence of Secant Method, Comparison between Iterative Methods.

(No. of Lectures – 08)

Simultaneous Linear Equations: Solution of Simultaneous Linear Equations using Direct and Iterative Methods: Direct Methods: Gauss – Elimination Method, Gauss-Jordan Method, Concept of Pivoting, Iterative Method: Gauss-Seidal Method.

(No. of Lectures – 07)

UNIT - III

Interpolation: Introduction, Lagrange Interpolation, Inverse Interpolation, Finite Differences: Forward Differences, Backward Differences, Divided Differences, Difference Tables: Forward Difference Table, Backward Difference Table, Divided Difference Table, Observations regarding Difference Tables, Newton's Method of Interpolation: Newton' s Forward Difference Interpolation Formula, Newton' s Backward Difference Interpolation Formula, Newton' s Divided Difference Interpolation Formula.

(No. of Lectures – 10)

Numerical Integration: Introduction, Newton-Cotes Integration Formulae: Trapezoidal Rule, Simpson's 1/3rd Rule, Simpson's 3/8th Rule.

(No. of Lectures – 05)

UNIT - IV

Approximation: Approximation of functions: Taylor Series Representation, Chebyshev Polynomials.

(No. of Lectures – 07)

Solution of Ordinary Differential Equations: Introduction**,** Euler's Method, Runga–Kutta Methods: 2nd order & 4th order, Predictor Corrector Methods: Modified Euler's Method.

(No. of Lectures – 08)

Suggested Readings:

Essential :

1. Salaria,R.S. : Computer Oriented Numerical Methods,5th Edition, Khanna Book Publishing Co. (P.) Ltd., New Delhi

Further Reading :

2. Rajaraman,V.,2004 : Computer Programming in C, Prentice Hall of India.
3. S.S. Shastry : Introductory Methods of Numerical Analysis
4. H.C. Saxena : Finite differences and Numerical Analysis

Data Structures
: **BCA-16-305**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students various data structures and the basic operations performed using them. At the end of course the student will have complete knowledge of data structures, thus will be able to use them for solving real world problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures.
Arrays: Introduction, Types of Array, Memory representation, Applications and operations.
Stacks: Introduction, memory representation, Applications and operations

UNIT - II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation.
Queue: Introduction, Types, Memory Representation and Applications.

UNIT - III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree.
Graphs: Introduction, Memory Representation, Graph Traversal (DFS and BFS)

UNIT - IV

Searching: Binary and Linear Search;
Sorting: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.
Comparison of various Searching and Sorting algorithms.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Reading :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.
3. Salaria, R. S. : Data Structures & Algorithm Using C, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
4. Salaria, R. S., Test Your Skills in Data Structures, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
5. Sofat Sanjeev, Data Structure with C and C++, Khanna Book Publishing Co.
6. Patel, R.B., Expert Data Structure in C, Khanna Book Publishing Co.

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FOURTH SEMESTER

Punjabi (Compulsory) – B
BCA-16-401

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ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਅਪ੍ਰੈਲ /ਮਈ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
(ਫ਼ੀਰੋਜ਼ਦੀਨ ਸ਼ਰਫ਼- ਪੰਜਾਬ, ਭਾਰਤ, ਮਾਂ ਦਾ ਦਿਲ, ਨੰਦ ਲਾਲ ਨੂਰਪੁਰੀ- ਭੋਲਾ ਪੰਛੀ, ਚੁੰਮ ਚੁੰਮ ਰਖੋ, ਸ਼ੌਕਣ ਮੇਲੇ ਦੀ, ਸ਼ਿਵ ਕੁਮਾਰ- ਲੱਛੀ ਕੁੜੀ, ਕੀ ਪੁੱਛਦਿਉ ਹਾਲ ਫ਼ਕੀਰਾਂ ਦਾ, ਬਿਰਹੜਾ, ਪਾਸ਼- ਇਨਕਾਰ, ਅਸੀਂ ਲੜਾਂਗੇ ਸਾਥੀ, ਗੀਤ, ਸੁਰਜੀਤ ਪਾਤਰ- ਖ਼ਤਾਂ ਦੀ ਉਡੀਕ, ਗ਼ਜ਼ਲ (ਕੋਈ ਡਾਲੀਆਂ 'ਚੋਂ) ਅਤੇ ਗ਼ਜ਼ਲ (ਮੇਰਾ ਸੂਰਜ ਡੁਬਿਆ ਹੈ) ਕਵਿਤਾਵਾਂ)

2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
(ਗਧੀ ਵਾਲਾ, ਕੁਰਸੀ, ਬਾਕੀ ਸਭ ਸੁੱਖ-ਸਾਂਦ ਹੈ, ਰੋਹੀ ਬੀਆਬਾਨ, ਜਿੱਥੋਂ ਸੂਰਜ ਉੱਗਦਾ ਹੈ ਅਤੇ ਪਰਛਾਵੇਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (4 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਸ਼ਿਵ ਕੁਮਾਰ, ਪਾਸ਼, ਸੁਰਜੀਤ ਪਾਤਰ, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਰਘੁਬੀਰ ਢੰਡ ਅਤੇ ਵਰਿਆਮ ਸੰਧੂ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਕਾਲਜ ਨਾਲ ਸਬੰਧਤ ਪ੍ਰੈਸ-ਨੋਟ (2 ਵਿਚੋਂ 1)	8 ਅੰਕ
6.	ਕਾਰੋਬਾਰੀ ਇਸ਼ਤਿਹਾਰ (2 ਵਿਚੋਂ 1)	7 ਅੰਕ
7.	ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	7 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

: **History and Culture of Punjab – B**
BCA-16-402

HISTORY AND CULTURE OF PUNJAB-II

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in the Modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab, Board of Administration
2. Western Education: Growth of Education and rise of middle classes
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP(Physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.

Software Project Management
: **BCA-16-403**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students important concepts, terms related to various phases during the development of a software project. At the end of the course the student will be able to apply software project management techniques to manage a software project.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Software Project Management and Process Groups: Introduction to project and project management, role of a project manager in project management, a system view of project management, Stakeholders of Project, Project phases and product life cycles, Evolution of software economics, Improving software economics: reducing product size, software processes, team effectiveness, automation through software environments, Principles of modern software management.

UNIT - II

Project Management Framework: Project Management Framework, Software Tools for Project Management, Issues in Project Staff Acquisition and Team formation and Development, Model based software architectures, Workflows of the process, Checkpoints of the process.

Project Integration: Integration Management: Project selection, project management plans, project execution, project monitoring and controlling, integrated change control;

UNIT - III

Scope Management: Scope Management: project scope statement, Work breakdown structures, Scope verification and scope control, Process instrumentation and seven core metrics.

Software management disciplines: Iterative process planning, Project organizations and responsibilities, Process automation.

UNIT - IV

Project Scheduling: Time Management; Importance of Project Schedules, Sequencing and Scheduling Activity, Project Network Diagrams, PERT/CPM, Gantt charts, Critical chain scheduling.

Cost Management: Project Cost Management - Importance and Principles of Project Cost Management, Resource Planning, Cost Estimating Techniques and. Expert Judgment, Estimating by Analogy, COCOMO Model, Cost Budgeting and Control

Suggested Readings :

Essential :

1. Kathy Schwalbe, Information Technology Project management, Thomson Publication.
2. Bob Hughes and Mike Cotterell, Software Project Management, Tata McGraw-Hill.

Further Reading :

3. Walker Royce, Software Project Management - A Unified, Addison-Wesley.
4. Pankaj Jalote, Software Project Management in Practice, Pearson Education.

- S.A. Kelkar, Software Project Management, A Concise Study, Prentice-Hall India.

: Operating System Concepts and Linux

BCA-16-404

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the module is to create skills of students in operating systems concepts and Linux commands.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, its needs and services, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling

UNIT - II

Deadlocks: Necessary and sufficient conditions for Deadlocks, Introduction to methods for handling deadlocks, deadlock detection and recovery

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

UNIT - III

Introduction to Linux: Linux's shell, Kernel, Features of Linux, History, Minimum system requirements, Boot and Root disks , Starting and stopping Linux system, passwords, logging in and out, terminal Handling commands: who, Understanding wildcards, Environment variables.

Understanding I/O Redirection and Piping: Introduction, cut, paste, sort, tee; Introduction to Regular Expressions and grep .

Using file system: Introduction to common types of files, Filenames, Introduction to different types of directories: Parent, Subdirectory, Home directory; rules to name a directory, Important directories in Linux File System, Absolute and relative filenames, creating files

and directories, listing files (ls), pwd, moving and copying files (mv, cp), moving directories, Removing files and directories, using wildcards with files and directories, File and directory permissions using relative and absolute methods, Changing group ownership, umask settings

UNIT - IV

Process Management: Types of processes, ps, bg, fg, nice, kill.
Understanding System Administration activities: Superuser (su) command, Taking backups using tar, Managing disk space, Mounting and Un-mounting file system, Managing users, Managing printers with lpd, mknod, lpc, lpq, lprm.
Vi editor: starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text.

Suggested Readings:

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.
2. John Goerzen: Linux Programming Bible, IDG Books, New Delhi, 2000.

Further Reading :

3. Brinch, Hansen, Operating System Principles, Prentice Hall of India
4. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delh.
5. Sumitabha Das: Your Unix - The Ultimate Guide, TMH, 2000.

Database Management System
: **BCA-16-405**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving the students the insight of the underlying concepts of database management system and **implement them using Database software.**

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach.
Data Base Systems Concepts and Architecture: Data Models, Schemas and Instances, DBMS architecture and Data Independence, Data base languages & Interfaces, DBMS functions and component modules.
Entity Relationship Model: Entity Types, Entity Sets, Attributes & Keys, Relationships, Relationship Types, Roles and Structural Constraints, Design issues, weak entity types, E-R Diagrams. Design of an E-R Database Schema, Reduction of an E-R Schema to Tables.

UNIT - II

Relational Data Model : Relational model concepts, Integrity constraints over Relations, Relational Algebra - Basic Operations.
Conventional Data Models : An overview of Network and Hierarchical Data Models.
Relational Data Base Design : Functional Dependencies, Decomposition, Desirable properties of decomposition, Normal forms based on primary keys (1 NF, 2 NF, 3 NF and BC NF).
RDBMS: Terminology, The 12 Rules (Codd's Rule) for an RDBMS.

UNIT - III

Understanding SQL-1: Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, ordering the result of a Query Aggregate Functions, Grouping the Result of a Query, creation and deletion of Views,

Managing privileges with Grant and Revoke Command, COMMIT and ROLLBACK, Functions: Character Functions, Date Functions, Group Functions

UNIT - IV

Understanding SQL-II: Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries

PL/SQL: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Conditional and Iterative Control, Cursor Management in PL/SQL, Implicit/explicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions, Database Trigger, types of triggers, dropping triggers, storage for triggers.

Suggested Readings:

Essential

1. Elmasri & Navathe: Fundamentals of Database systems, 3rd Edition, Addison Wesley, New Delhi.
2. Ivan Bayross : SQL, PL/SQL-The Program Language of ORACLE, BPB Publication, New Delhi.

Further Reading :

3. Korth & Silberschatz : Database System Concept, 4th Edition, McGraw Hill International Edition.
4. Raghu Ramakrishnan & Johannes Gehrke: Database Management Systems, 2nd edition, Mcgraw Hill International Edition.
5. C.J.Date : An Introduction to Data bases Systems 7th Edition, Addison Wesley, New Delhi.
6. Bipin C.Desai : An Introduction to Database System, Galgotia Publication, New Delhi
7. Abbey, Abramson & Corey : Oracle 8i-A Beginner's Guide Tata McGraw Hill Publishing Company Ltd.

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FIFTH SEMESTER

Computer Networks
BCA-16-501

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the course is to:

- Offer knowledge about computer network related hardware and software using a layered architecture.
- Provide good understanding of the concepts of network security, wireless and various emerging network technologies.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Network: Network Hardware and Software, Network Topologies, Uses of Computer Networks, OSI Reference Model, TCP/IP reference model, Comparison of OSI with TCP/IP model.

Physical Layer: Transmission media: Twisted pair, Coaxial cable, Fiber optics, Wireless Transmission (Radio, Microwave, and Infrared), Switching: Circuit Switching, Message Switching, Packet Switching & their comparisons. ISDN and its services, Multiplexing: Frequency Division, Time Division, Wave Length Division, MODEMS.

UNIT - II

Data Link Layer: Design Issue, Framing, Errors Detection and Correction Code: Check sum, CRC, Hamming code, Data Link Protocols for noisy and noiseless channels, Sliding Window Protocol: Stop and Wait ARQ, Go-back-N ARQ, Selective Repeat ARQ.

Medium Access Sub-Layer: Introduction to Static and Dynamic channel allocation, IEEE standards 802.3.

UNIT - III

Network Layer: Design Issues, network layer addressing, network layer datagram, IP addressed Classes. Sub netting-Sub network, Subnet mask, Routing Algorithm: Shortest Path Routing, Flooding, Broadcast and Multicast routing, Congestion control: Principles of Congestion Control, Congestion prevention policies, Leaky bucket and token bucket algorithms.

UNIT - IV

Application Layer: Domain Name system (DNS), DNS name space, DNS Servers, World Wide Web, HTTP, e-mail: Architecture and Services, Message Component, Multipurpose Internet Mail Extensions (MIME), Simple Mail Transfer Protocol (SMTP), Post Office Protocol (POP), Remote Login and File transfer protocol, Introduction to Network Security.

REFERENCES:

1. Andrew S. Tanenbaum, “Computer Networks”, Pearson Publication.
2. Behrouz A. Foroużan, “Data Communication and Networking”, Tata McGraw Hill.
3. Theodore S. Rappaport, “Wireless Communication: Principle and Practices”, Pearson Publication.
4. Charlie Kaufman, Radio Perlman, Mike Speciner, “Network Security”, PHI.
5. Mayank Dave,” Computer Networks”, Cengage Learning.

Discrete Mathematical Structure
BCA-16-502

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the course is to:

- Offer knowledge about computer network related hardware and software using a layered architecture.
- Provide good understanding of the concepts of network security, wireless and various emerging network technologies.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

Objectives : In this paper, Students will learn and be able to acquire the knowledge of Logic, Relations and Functions. Algebric Functions and Graph Theory will also be discussed in this paper.

UNIT - I

Set Theory : Relations and Functions : Set Notation and Description, subset, basic set operations, Venn Diagrams, laws of set theory, partitions of sets, min sets, duality principle, basic definitions of relations and functions, graphics of relations, properties of relations: injective, surjective and bijective functions, compositions.

UNIT - II

Recurrence : Recurrence Relations and Recursive Algorithms – Linear-Recurrence Relations with Constant Coefficients; Homogeneous Solutions : Particular Solution, Total Solution, Solution by the Method of Generating functions.

UNIT - III

Graph Theory : Graph and planar graphs – Basic Terminology, Multi-graphs, Weighted Graphs, Paths and Circuits, Shortest Paths, Eulerian Paths and Circuits. Travelling Salesman Problem, Planar Graphs.

UNIT - IV

Automata Theory : Finite State Machines–Equivalent Machines, Finite State Machines as language Recognizers; Analysis of Algorithms - Time Complexity, Complexity of Problems.

References :

1. Doerr,A.and Kenneth, L.,Applied Discrete Structures for Computer Science, 1989 Galgotia Publícations Pvt. Ltd.

2. Liu, C. L., 1985, Elements of Discrete Mathematics, McGraw Hill.

3. Seymour Lipschutz and Lipson, :2000 Solved Problems in Discrete Mathematics, McGraw- Hill., 1992

Java Programming
BCA-16-503

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving student knowledge about all the programming concepts of JAVA programming language.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT I

Java and the Internet: The Java programming language and its characteristics; Java development kit, Java run- time environment; Java compiler

Fundamentals of Java: Java Vs. C++, Byte Code, Java Virtual Machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructors, Garbage Collection, method overloading,

Inheritance: Different types of Inheritance, member access, using super keyword to call super class constructors, creating a multilevel hierarchy, method overriding, dynamic method dispatch, using abstract classes, using Final keyword.

UNIT II

I/O Basics: streams, the predefined streams; Reading console Input, Writing console Output.

Arrays and Strings: One-dimensional and two-dimensional Arrays, String Handling using String and StringBuffer class, String Functions.

Packages: Types of packages, defining a package, Importing packages, Access protection

Interfaces: Defining an Interface, Implementing Interfaces, Variables in Interfaces, Achieving multiple inheritance using interfaces, Interface and Abstract classes.

UNIT III

Exception Handling: Java Exception handling model, Types of exception, using Try and catch, Multiple Try and Catch clauses, Nested Try statements, finally block, user defined exceptions.

Multi-threaded Programming: The Java Thread model, the Thread class and Runnable interface, Creating a Thread using Runnable Interface and extending Thread, Creating Multiple Threads, Thread Priorities, Synchronizations: Methods, Statements, Inter Thread Communication, Deadlock, Suspending, Resuming and Stopping Threads.

Applet Programming: Introduction, Types of applet, Life Cycle, Incorporating an applet into web page using Applet Tag, running applets, using Graphics class and its methods to draw lines, rectangles, circles, ellipses, arcs and polygons.

UNIT IV

Using AWT controls: Introduction to AWT, Creating GUI Applications using AWT, AWT controls: Label, TextBox, TextArea, Check Boxes, Radio Buttons, Choice lists, Understanding Layout Managers: FlowLayout, BorderLayout, GridLayout; Introduction to Event handling using Delegation Event Model.
Introduction to Java Database Connectivity (JDBC): JDBC Architecture, JDBC Drivers, Java.SQL package, Connecting to the Database and performing basic database operation like Insert, Delete, Update and Select.

References:

1. Balaguruswamy, E. : Programming with Java, A Primer, TMH, New Delhi, Latest reprint.
2. Bayross, Ivan : Java 2 by BPB publication
3. Schildt , Herbert : The Complete Reference Java 2, TMH.

Web Application Development using PHP
BCA-16-504

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course enables students to do web programming using PHP and MySQL.It would enable them to develop websites and other web based applications.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Introduction to web applications: Client Side Scripting Vs Server Side Scripting, Understanding Web Servers: Local Servers and Remote Servers, Installing WAMP and configuring PHP environment, Static website Vs Dynamic website development, Embedding PHP code in Web Pages

PHP Basics: Tokens, Variables, Variable Scope, Constants, Data Types, number handling in PHP, operands, operators, expressions, operator precedence, comments, echo and Print statement

Control structures: Branching statements: if-else, ternary operator, switch; looping statements: while, do-while, for; file inclusion Statements

UNIT - II

Functions: Function definition, Creating and invoking user-defined functions, Formal parameters versus actual parameters, Function and variable scope, Recursion, Library functions

String Handling: interpolation with curly braces, characters and string indexes, string operators, heredoc, string functions, Formatting Strings, Comparing and searching Strings and substrings

Arrays: PHP Arrays, Creating Arrays, Accessing Array elements, Multidimensional Arrays, Inspecting Arrays, Deleting from Arrays, Iterating with each() and foreach(), Iterative functions: current(), next(), prev(), reset(), end()

UNIT - III

Forms: Working with HTML Form controls and PHP, Super global variables, super global array, importing user input, Accessing user input

Integrating PHP and Database: Connecting to database, Making SQL queries, Executing queries, Fetching data sets, Integrating Forms and Databases**:** Basic form submission to a database, editing data with an HTML form

UNIT - IV

Maintaining User State: Introduction to Cookies, Setting time in a cookie with PHP, Deleting a cookie, creating session cookie, Introduction to sessions, Starting a session,

Registering Session variables, working with session variables, Destroying session, passing session Ids , encoding and decoding session variables, increase session expire time, working of session without cookie.

Working with File System: Understanding PHP file permissions, Opening and closing a file, File reading and writing functions, File system and directory functions

References:

1. PHP6 and MySQL Bible, Steve Suehring, Wiley India edition, 2015 reprint
2. PHP: The Complete Reference, "Steven Holzner", Tata McGraw Hill
3. PHP6, Apache, MySQL Web development, Timothy Boronczyk, Wiley India edition
4. Programming PHP, Rasmus Lerdorf, Kevin Tetroi (O'Reilly, ISBN 1565926102).
5. PHP, MySQL, and JavaScript: A Step-By-Step Guide to Creating Dynamic Websites by Robin Nixon O'Reilly Media
6. Core PHP Programming. Leon Atkinson (Prentice Hall, ISBN 0130463469).

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SIXTH SEMESTER

E-Commerce
BCA-16-601

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to the process of electronic commerce and familiarizes students with the technology involved in it.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

An Overview of E-Commerce:
Definitions: E-commerce, E-business, difference between E-commerce and E-business, Problems with Traditional business systems, Aims of E-commerce, Types of E-commerce: B2B, B2C, C2C, B2G, G2H, G2C, Operational & Strategic benefits of E-commerce, Issues & Challenges in E-commerce.
Electronic Data Interchange (EDI): Definition; Traditional versus EDI enabled system for document exchange; Components of EDI: EDI Standards, EDI Software, Communication Networks; EDI Message Structure; EDI Notification Structure; EDI in India; EDI enabled procurement process; Benefits of EDI: Direct Benefits, Strategic Benefits; EDI Implementation issues; Legal Aspects

UNIT - II

Web based E-Commerce: Definition; Need for web based business, Steps in setting up business on Internet: Selection & registration of domain name, Website development : Planning a website, Steps for creating a website, Elements of a webpage, web authoring tools, Hosting a website: Website hosting considerations.
Online Promotion tools & techniques: Getting links to your site, banner advertisements & measuring advertisement effectiveness; Web Traffic Analysis: Hits, View pages, Visits and Other web-reporting tools, various measures, What is Search Engine optimization

UNIT - III

Electronic Payment Systems: E-cash: Purchasing & using of e-cash; Electronic Purses their loading with cash and use; E-cheque payment system; Online Third Party Verified Payment System through Credit & Debit Cards; ATM based cash disbursement system; Electronic Bill Payment System; Inter bank clearing system.

UNIT - IV

Mobile Commerce: Definition, Benefits of Mobile Commerce, Issues in Mobile Commerce, Mobile Commerce Framework
Applications of E-Commerce & Case Studies: Applications of e-commerce, Case studies in Retailing, Banking and e-governance; Cyber Crimes: Types, Cyber Forensics, Cyber crimes and IT Act - 2000.

References:

1. Bhasker, Bharat: Electronic Commerce: Framework, Technologies and Applications; Tata McGraw- Hill.
2. Bajaj, Kamlesh & Nag, Debjani: E-Commerce-The Cutting Edge of Business; Tata McGraw- Hill.
3. Young, Margaret Levine : The Complete Reference: Internet; Tata McGraw Hill.
4. KalaKota, Ravi & Whinston, Andrew B.: Frontiers of Electronic Commerce; Addison Wesley.
5. Stallings, William: Network Security Essentials: Applications & Standards; Pearson Education.
6. Minoli, Daniel & Minoli, Emma: Web Commerce Technology Handbook; Tata McGraw
   Hill.
7. Murthy CSV: e-Commerce: Concepts, Models, Strategies; Himalayas Publishing House.
8. Kosiur, David: Understanding E-Commerce; Microsoft Press.

Application Development using VB.Net
BCA-16-602

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The course is designed to enable the students to develop applications using event driven programming with VB.net (as front end) and accessing database at back end.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Overview of the Visual Studio .NET IDE: Introduction to .NET Framework and the Common Language Runtime, Introduction to Visual tudio.NET IDE: Menu Bar and Tool Bar, Solution Explorer, Toolbox, Using different controls of Toolbox and their commonly used properties and methods: TextBox, Label, Check Box, Radio Button, Button, Frame, List Box, Combo Box, Picture, Image, Shape, Drive, File, directory related controls, Introduction to Menus

UNIT - II

Basics of VB.Net: Constants, Variables, data types, assignment operator, Operators: Arithmetic, Relational and logical operators, Assignment operators, Control structures: If, if/then/else selection structures, Select case Multiple-selection structure, While, do while, do until, For/Next repetition structure

Procedures: Introduction, sub Procedures, function procedures, event procedures, commonly used Form events, msgBox function, InputBox function.

Arrays and Strings: declaring and allocating Arrays, Using Strings and String functions: len, right, left, ucase, lcase, ltrim, trim;

Control Arrays: Introduction, creating and using Control Arrays

UNIT - III

Writing ASP .NET applications and Deploying ASP .NET Applications: Introduction to ASP.NET, Difference between ASP and ASP.NET, Understanding Web Forms, Using Validation Controls : RequiredFieldValidator,RangeValidator,CompareValidator,RegularExpressionValidator,CustomValidator,ValidationSummary; , Managing State in ASP.NET Web Applications using Session object, Cookie and Query String ,Creating ASP.NET application, Deploying ASP.NET Applications with Windows Installer, Introduction to Web Services.

UNIT - IV

Accessing Data with ADO.NET: Understanding ADO.net, ADO.NET Object model: Connected model and Disconnected model, architecture, components, Understanding Provider classes, using Data Reader to read data from database, Data Adapter and Data sets, Using DataAdapter for Data Navigation and Data Manipulation, connecting to and querying a data source, using Data Grid view control with ADO.NET data sources.

Reference Books:

1. Dave Grundgeiger, Programming Visual Basic .NET, O'Reilly Publisher.
2. Michael McMillan, Object Oriented programming usning Visual Basic.Net, Cambridge University Press.
3. Cameron Wakefield Henk-Evert Sonder Wei Meng Lee, VB.NET Developer's Guide, Global Knowledge, Syngress Publishing.
4. Evangelos Petroutsos, Mastering Visual Basic .NET, SYBEX Publishing
5. Deitel, Visual Basic.NET How to Program, Pearson Education
6. Lowell Mauer, Teach Yourself more Visual Basic.net in 21 days, SAMS

Computer Graphics and Multimedia Applications
BCA-16-603

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective:

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Graphics: A Survey of Computer Graphics : Computer Aided Design, Presentation Graphics, Computer art, Entertainment, Education and Training, Visualization, Image Pressing, Graphical User Interfaces.
Overview of Graphics Systems: Video Display Devices, Cathode Ray Tube, CRT monitors, Flat panel displays: Plasma Panel display, Thin-film electroluminescent displays, LED, Liquid Crystal Displays (LCD), Raster Scan Systems, Random Scan Systems. Graphics Monitors and Workstations, Input Devices, Hard-copy devices, Graphics Software.

UNIT - II

Studying the Features and Developing Computer Graphics Using Standard Graphics package Auto CAD: Features and applications of AutoCAD, Interface, System Requirements, The X, Y coordinate system, Dimensioning, Drawing commands, Cleaning Up the drawing, Positioning Commands, Editing Commands, Construction Commands, Display Commands.
Developing Computer Graphics Using 'C': Input-output primitives, setting character and text attributes, changing line styles, Using fill styles to fill images. Use these primitives to develop programs like drawing concentric circles, Ellipses, Sine curves, Histograms, Pie charts and human face.

UNIT - III

Multimedia Applications: What is multimedia, Components of Multimedia, Need of Multimedia, Features of a Multimedia System, Benefits and problems of using Multimedia?
System Components: Multimedia system and a conventional system, Basic System components, Subsystems and functions of a Multimedia computer, Multimedia Add-on Cards. Applications: Multimedia in the Real World, Training and Education, Image Processing, Multimedia in home and office

Multimedia Platforms: Personal computer as a Multimedia System, Limitations of the early Personal Computer as a Multimedia System, The evolution of MPC, Hardware Platforms, Software Platforms.
Development Tools: Types of development tools, Commercial tools, Stages of Multimedia Application Development.

UNIT - IV

Image: Sources of image, Types of images, Basic editing operations, Introduction to Image Compression: Lossy and Lossless compression, Image file formats.
Audio: Hardware for Audio, Digital Audio, Audio editing operations, MIDI, Audio file formats
Video: Hardware Components of a Video System, introduction to Video compression, MPEG, Video file formats.
Storage for multimedia: magnetic media, Optical media, Compact disk specifications.
Studying features and use of Multimedia authoring tools like Photoshop and Macromedia Director.
Photoshop- Features, Interface, Toolbox, Color models, Layers, Filters
Macromedia Director- Features, Stage, Cast, Score, Control Panel, Sprite, Channels, Text Inspector, Tools for creating cast members

References

1. Hearn and Backer, Computer Graphics, Second Edition, PHI, New Delhi
2. Kanetkar Yashwant, Graphics Under 'C', BPB Publications
3. Judith Jeffcoate, Multimedia in Practice, Technology and Applications, PHI
4. Foley, Vandom, Fenier, Hughes, 'C'; Addison Wesley Publishers
5. Ian R. Sinclair, Multimedia on the PC (with CDROM), BPB Publications
6. Hillman, David, Multimedia Technology and Applications, ITP
7. Vaughan, Tay, Multimedia Making it Work, Osborne Publishers.
8. Ze-Nian, Li.Mark, S. Drew, Fundamentals of Multimedia, Pearson Education

PANJAB UNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. (Honors) in Biotechnology (Semester System)

1st to 6th Semester

EXAMINATIONS 2018-19

--:O:--

B.Sc. (Hons.) Biotechnology (Semester System) Examinations 2018-2019

B.Sc. (Hons.) 1st year (1st Semester) (July, 2018)

Sr. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-I-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-I--II-T	50	-	-
3.	Mathematics / A Life Sciences -B	BIOT-Sem-I-III-TA/TB	75	BIOT-Sem-I-III-PA/PB	25
4.	Chemistry	BIOT-Sem-I-IV-T	75	BIOT- Sem -I-IV-P	25
5	Physics	BIOT-Sem-I-V-T	75	BIOT-Sem-I-V-P	25
6	Introduction to Biotechnology	BIOT-Sem-I-VI-T	75	BIOT-Sem-I-VI- P	25

Total Marks = 500

B.Sc. (Hons.) 1st year (2nd Semester) (January, 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

Environment, Road Safety Education, Violence Against Women/Children & Drug Abuse is a compulsory qualifying paper, which the students have to study in the B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he /she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

B.Sc. (Hons.) 2nd year (3rd Semester) (July, 2018)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Biochemistry	BIOT-Sem-III-I-T	75	BIOT-Sem-III-I-P	25
2.	Genetics	BIOT-Sem-III-II-T	75	BIOT-Sem-III-II-P	25
3.	Immunology-I	BIOT-Sem-III-III-T	75	BIOT-Sem-III-III-P	25
4.	Plant Tissue Culture	BIOT-Sem-III-IV-T	75	BIOT-Sem-III-IV-P	25
5.	Animal Cell Culture	BIOT-Sem-III-V-T	75	BIOT-Sem-III-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester) (January, 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 3rd year (5th Semester) (July, 2018)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioanalytical tools	BIOT-Sem-V-II-T	75	BIOT-Sem-IV-II-P	25
3.	Environmental Biotechnology	BIOT-Sem-V-III-T	75	BIOT-Sem-IV-III-P	25
4.	Bioinformatics	BIOT-Sem-V-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Enzymology	BIOT-Sem-V-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 3rd year (6th Semester) (Jan, 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-V-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-IV-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreneurship	BIOT-Sem-VI-V-T	100		

Total Marks = 500

Paper: English
Code No: BIOT-Sem-I-I-T

Semester I

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 1-4
Drama: Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which, a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**.

This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. **5 marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5.Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6 One short question to test the students' understanding of various aspects of Business Communication. **5 Marks**

BIOT - Sem-I--II-T

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਦਸੰਬਰ 2●18 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

Course Title : PUNJABI Course Number : 111

ਕੁੱਲ ਅੰਕ : 50
ਲਿਖਤੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ
ਪੱਤਰ-ਵਿਹਾਰ
ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ),
ਸੰਪਾਦਕ : ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਵਿਤਾ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	3+5 = 8 ਅੰਕ
ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਵਿਤਾਵਾਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿੱਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	7 ਅੰਕ
ਵਿਆਕਰਣ:	(3+3+4=10 ਅੰਕ)
ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
ੲ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

BIOT - Sem-I--II-T

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Vedic Age: socio-economic life; development of caste; position of women.
3. Religion: vedic religion; impact of Buddhism and Jainism on the region.

UNIT II

4. Society and Culture c. 1000 A.D.: Socio-economic life; religious life; education
5. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

6. Society and Culture c. 1500A.D: socio-economic life under the Lodhis; religious beliefs and practices- Vainavism, Shaivism, Shaktism, Islam.

UNIT III

7. Sikhism: new ideology of Guru Nanak; evolution of Sikh community-guruship,manji,masand; new institutions-gurdwara, sangat-pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society: social unrest; emergence of new rulers-rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh: social mobility; painting and architecture; literature.
12. MAP: Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRam Manohar Lal, Delhi, 1966
7. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.
12. Hussain ,Yusuf 1973(rep.). : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay,

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Paper: Mathematics **Theory: 67 Marks**
Code No: BIOT-Sem-I-III-TA **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Mathematics

- To study the different concepts of limits, differentiation, integration and calculus so as to apply these concepts in biotechnology.
- To learn solutions to quadratic, cubic equations, differential equation, linear equation and thus study the applications in biotechnology.

Paper: Mathematics

UNIT – I

Numbers

Different kinds of numbers, integer, rational and irrational, surds and their properties, Fractional indices.

Complex numbers, conjugate, modulus and argument of a complex number.

UNIT – II

Set, relation and function

Set, product sets, relations, functions (polynomials, trignometric, exponential), graphical representation of functions

Limit

Sequences, limits of sequences, series, limits of functions

Unit III

Calculus

Differentiation: Calculating gradients of chords first and higher order derivatives. Applications increasing and decreasing functions, maximum and minimum points, Derivatives as rates of change.

Integration

Finding a function from its derivative, definite integral, indefinite integral, calculating areas for bounded regions.

Differential Equations

Forming differential equations solving first order differential equation and second order differential equation with constant co-efficients, growth equation, applications.

UNIT – IV

Linear Programming
Elementary statistics
Representation of Data: Discrete data, continuous data, histogram, polygons, frequency curves, The Mean, variability of data-The standard deviation, Median, quintiles, percentile
Skewness

Reference Books:
1. Arya J.C, Lardner R.W (1990). Mathematics for the biological sciences(Prentice Hall. International, New Delhi).
2. Mathematics: Text book for class XI & XII (2006) (National Council ofEducation Research and Training, New Delhi).

Mathematics (Practicals)

Practical : 22 Marks
Internal Ass.: 3 Marks

1. Computation of mean, variance and standard deviation using given (preferably biological) data (2 to 3 practicals).
2. Sets (Venn-Diagram, Union, Intersection, Difference of sets, Symmetric Difference of sets, Complement of sets) (2 practicals).
3. Relations (graphical representation of relation from set A to set B or set A to set A) (1 practical).
4. Histogram, frequency polygon, ogives, pie chart, bar diagrams (2 to 3 practical).
5. Solving linear programming problem using graphical methods (2 practical).

Paper: Life Sciences **BIOT-Sem-I-III-TB**
Theory: 67 Marks
Internal Ass.: 8 Marks

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Life Sciences

- To increase scientific vocabulary and understanding of a variety of life science concepts.
- To learn about the anatomy and physiology of animals and animal systems.
- To study ecology and ecosystems.

Unit-I

An introduction to life on earth.
Plant Anatomy and Physiology:-
Structure of land plants.
Nutrition and Transport phenomena in plants.

Plant reproduction and development.
Plant responses to the environment.

Unit-II

Ecology:- Community interactions.
Ecosystems:- Definition and components.
Food chain and food web.
Habitat.
Ecological succession.
Types of succession.
Animal behaviour:-Definition and learning.

Unit-III

Animal Anatomy and Physiology:-
Homeostasis and organization of animal body.
Circulation.
Respiration.
Nutrition and digestion.
Urinary system and homeostasis.
The immune response.

Unit-IV

Animal Anatomy and Physiology:-
The endocrine system.
Nervous system.
The senses.
Action and support by the muscles and skeleton system.
Reproduction.

Reference Books:

1. Life Sciences (2001) by Rastogi and Dubey, S. Chand & Co., New Delhi.
2. Basics of Biotechnology–I: Introduction to Life Sciences (2005) by Sobti& Sharma, Vishal Publishing Co. Jalandhar.
3. Ecology- Principles and applications (2004) by Chapman and Reiss, Cambridge University Press, Cambridge, U.K.
4. Microbial Ecology- fundamentals and applications, (2000) by R. Atlas and R. Bartha, Benjamin / Cummings Science Publishing, California.
5. Animal Physiology (2008) by R. C. Sobti, Narosa publishing house Pvt. ltd, New Delhi.

BIOT-Sem-I-III-PB **Life Sciences (Practical)**

Practical : 22 Marks
Internal Ass.: 3 Marks

1. To study cell structure from onion leaf peels.
2. To study ultra structure of cell organelles through photographs.
3. To study digestive, Respiratory, Circulatory, Endocrine and Reproductive system of Human body through charts/ model.

4. Study of the slides/specimens and identification with reasons – Bacteria, oscillatoria, Spirogyra, Rhizopus, Mushroom, yeast, liverwort, moss, fern, lichen, one monocotyledon and dicotyledon.
5. Study of the slides/specimens and identification with reasons –Amoeba, Hydra, Tapeworm, Roundworm, Earthworm, Cockroach, Pila, Starfish, Shark Labeo, Frog, Lizard, Pigeon and Rabbit.

Paper: Chemistry **Theory: 67 marks**
Code No: BIOT-Sem-I-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn the concepts of chemical thermodynamics, chemical equilibrium and their applications.
- To learn about compounds of carbon , their sources, mechanism of reactions and utility in daily life
- To study concepts of stereochemistry and spectra of organic molecules.

UNIT – I

a) **Chemical bonding:** Elementary treatment of valence bond theory and molecular orbital theory. Ionic bonding, multiple bonds, multi-center bonds, metallic bonding.hydrogen bonding and its significance.

b) **Periodic properties:** Position of elements in the periodic table,effective nuclear charge and its calculation, atomic and ionic radii, ionization energy, electron affinity, electronegativity. Trends in periodic table and application in predicting and explaining the chemical behavior.

c) **Molecular Spectroscopy:** Difference between atomic and molecular spectroscopy, absorption and emission spectroscopy, regions of electromagnetic spectrum. Infrared and Raman spectra, basic principle and information from Infrared and Raman spectra.Principle of NMR, chemical shift values and its applications. Importance of mass spectroscopy in chemistry and biology

UNIT – II

a) **Solutions:** Ideal and non- ideal solutions, method of expression concentrations of solution, activity and activity coefficients, dilute solution, Osmotic pressure, its law and measurements, Elevation of boiling point and depression of freezing points.

b) **Chemical kinetics:** Scope, rate of reaction, influencing factors such as concentration, temperature, pressure, solvent *etc*. theories of chemical kinetics. Arrhenius equation, concept of activation energy.

UNIT – III

a) **Photochemistry:**
Absorption of light, Lambert-Beer Law, Photochemical principles: Stark-Einstein Law of Photochemical equivalence, Quantum yield of photochemical reaction (with example). Fluorescence and Phosphorescence.

b) **Coordination compounds:** Introduction, Wener's coordination theory, naming of coordination compounds, isomerism and stereochemistry in coordination compounds

UNIT – IV

a) **Fundamentals:** inductive effect electromeric effect, resonance, hyperconjugation, types of reagents, electrophiles and nucleophiles, types of organic reaction intermediates, carbocations, free radicals, carbenes (with example). Nomenclature and classification of Alkyl halide, method of formation, chemical reaction, mechanisms and stereochemistry of nucleophillic substitution reaction of Alkyl halides,SN_2, and SN_1 reaction with energy diagram.

b) **Carboxylic Acids and derivatives:** Structure of carboxylic acids and derivatives. Acidity of carboxylic acids, effects of substitution on acidic strengths, chemical properties of carboxylic acids. HVZ reaction with mechanism. Relative stability and reactivity and reactivity of acid chloride, esters, anhydrides, amides, mechanism of esterification.

Reference Books:

1. Bruce H Mahan (1987). University Chemistry Edition 3rd (Narosa Publishers).
2. R. T. Morrison, R. N. Boyd (2001). Organic Chemistry (Prentice-Hall of India Pvt. Ltd).
3. J.D Lee. (2008). Concise Inorganic Chemistry, (Wiley-India).
4. B. R. Puri, L. R. Sharma. (1989). Principles of inorganic chemistry (Shoban Lal Nagin Chand and Co).
5. Walter J Moore (1986). Basic physical chemistry (Prentice Hall of India).

BIOT-Sem-I-IV-P **Chemistry (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Inorganic qualitative analysis
2. Four ions including interfering ions.
3. Iodimetry and Iodometry
4. Redox titrations using ceric sulphate, potassium dichromate and potassium permanganate
5. Complexometric titration using EDTA of Ca^{++}, Mg^{++} and Zn^{++}
6 Analysis of a given organic compound (solid): Elemental Analysis,

Reference Books:

1. L. Saland (1989). Practical chemistry labs: A resource manual (Walch Education).
2. J. Leonard, B. Lygo, G. Procter (1998). Advanced practical organicchemistry. (CRC publications).
3. P. Kelter, M. Mosher, A. Scott (2008). Chemistry: The practical science(Publisher Houghton Mifflin).
4. G. Svehla (1996). Vogel's quantitative inorganic analysis (Prentice Hall)

Paper: Physics **Theory: 67 Marks**
Code No: BIOT-Sem-I-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Physics is one of the important basic sciences and Biotechnology is based upon these. Introduction to basic course of Physics will enhance the grasping of subject.

UNIT – I

Science, Physics and Life Sciences- An introduction to apparent differences and the underlying overlap (atomic nature of matter). Units of measurement and ranges (from the smallest to the largest known) for different physical quantities viz. mass, length, time, current, temperature, luminosity, etc. with suitable examples from bio/physical sciences.

UNIT – II

Coulomb's law for point charges; electric field due to point charge and electric dipole (on axial line and equator line), electric flux; Gauss's theorem and its applications (line of charge and sheet of charge).

Electric potential due to point charge, group of charges and dipole (on axial line and equatorial line), potential difference as line integral of electric field, capacitance; series and parallel arrangements, energy stored in the electric field of capacitor, current, current density, equation of continuity, Ohm's law in vector form.

UNIT - III

Interference of waves, phase and path differences, theory of interference fringes, Young's experiment, coherent sources, Llyod's mirror, Fresnel Biprism, intensities of maxima and minima.

Diffraction of light, rectilinear propagation, Fresnel and Fraunhofer diffraction, Fraunhofer diffraction at single slit, Rayleigh criterion for resolving power, Resolving power of telescope and microscope, Compound Microscope (Principle, construction, ray diagram, formula for magnifying power), fluorescent microscope(concept only), Polarization, introduction.

UNIT – IV

Quantum theory of light, X-rays diffraction, Compton effect, Bragg's law, de Broglie wave equation, phase velocity and group velocity, electron microscope, Uncertainty Principle (statement only), applications of Uncertainty Principle (particle in a box, existence of electron in Nucleus and atom).

Radioactivity and its laws ; half-life and mean life, uses of radioactivity.

Reference Books:
1. H.S. Hans & S.P. Puri : Mechanics (Tata Mcgraw Hill 1984)
2. Electricity and Magnetism : Berkeley physics course vol. II.
3. AjoyGhatak : Optics (Tata Mcgraw Hill 2004)
4. Jenkins &White : Fundamental of optics (Tata Mcgraw Hill 1991)
5. D.P. Khandelwal : Text book of optics and atomic physics (Himalaya Pub. 2005)
6. Arthur Beiser : Modern Physics (Tata Mcgraw Hill 1981)

BIOT-Sem-I-V-P **Physics (Practical)** **Practical : 22 Marks**
Internal Ass.: 3 Marks

Introduction and practice the concepts of proper measurement, data recording, and data presentation; stress to be laid on use of proper units, least count, error & its propagation, graph plotting & least square fitting. (Simple measuring devices available in the lab may be used to create basic data).

1. Resolving power of Telescope/Microscope.
2. Rotation of the plane of polarization of a solution using a Polarimeter.
3. Use of C.R.O. as a display & measuring device.
4. Capacitance by flashing and quenching of a neon lamp.

Reference Books:
1. Laboratory Manual of Physics for Undergraduate classes by D. P. Khandelwal
2. B.Sc. Physics Practicals by C. L. Arora.

Paper: Introduction to Biotechnology **Theory: 67 Marks**
Code No: BIOT-Sem-I-VI-T **Internal Ass.: 8 Marks**
Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -
This course will introduce the basic concepts of biotechnology to the students. They will learn about the history of biotechnology; the foundations of modern biotechnology; the role of biotechnology in fermentation industry, environment and modern medicine and the ethical implications of biotechnology.

Unit-I

Advent, scope and basics of biotechnology
Bacteria as workhorses of biotechnology; *E. coli* as the model bacterium

Yeast and fungi in Biotechnology
Introduction to multicellular organisms as research models: *Drosophila melanogaster*, *Caenorhabditis elegans*, *Daniorerio*, *Musmusculus*
Arabidopsis thaliana as model for plant genetics,
Role of viruses and bacteriophages in biotechnology

Unit-II

Structure and function of the cell: the basic unit of life
Prokaryotic and Eukaryotic cells
Biomolecules in a cell (DNA, RNA and proteins)
Introduction to genomics, transcriptomics, proteomics and metabolomics; bioinformatics and its role in biotechnology.
Introduction to basic techniques like sterilization, centrifugation, electrophoresis, chromatography, sonication.
Fundamentals of recombinant DNA technology: Restriction Enzymes, Vectors and their properties.

Unit-III

Applications of biotechnology: today and tomorrow
Basics of Biotechnology in fermentation and pharmaceutical processes.
Green technology to control pollution.
Role of biotechnology in diagnostics, introduction to gene therapy.

Unit-IV

Biotechnology and society: genetically modified organisms (GMOs) - transgenic plants and animals and their applications in biotechnology.
Public concerns and risks associated with genetic engineering: Bioterrorism and biowarfare.
Ethical, social and legal implications of biotechnology.

Reference Books:

1. Comprehensive Biotechnology, Murray Moo-Young, 2nd edition (2011), Pergamon Press.
2. Introduction to Biotechnology, William J. Thieman& Michael A. Palladino, 3rd edition (2012), Benjamin Cummings.
3. Biotechnology Expanding Horizons, BD Singh, 4th edition (2012), Kalyani Publishers.
4. The Ethics of Biotechnology (Biotechnology in the 21st Century), Jonathan Morris, Chelsea House Pub (L), 1st edition (2005).
5. Biotechnology, Applying the Genetic Revolution, David P. Clark & Nanette J. Pazdernik, 1st edition (2008), Academic Cell.
6. Molecular Biotechnology, Sandy B. Primrose, 2nd edition (1991), Blackwell Scientific Publications, ISBN.
7. Biotechnology: Demystifying the concepts, David Bourgaize, Thomas R. Jewell & Rodolfo G. Buiser, 1stedition(1999), Benjamin Cummings.
8. Ethical Issues in Biotechnology, Richard Sherlock & John D. Morrey, 1st edition (2002), Rowman & Littlefield Publishers.

BIOT-Sem-I-VI-P

Introduction to Biotechnology (Practical) **Practical : 22 Marks**
Internal Ass.: 3 Marks

1. Introduction and use of basic equipments in a biotechnology laboratory (Auto-pipettes, pH meter, centrifuges, light microscope, electrophoretic apparatus, vortex mixer, magnetic stirrer, rocker, laminar hoods, autoclave, sonicator)
2. Handling and disposal of hazardous reagents (acids, carcinogenic chemicals like acrylamide, ethidium bromide) and concept of chemical hoods
3. Good laboratory practices followed in biotechnology laboratory (sterility, DNAse/ RNAse free space, separate area for protein work, possible means of contamination and its control etc)
4. Cell disruption and cell lysis of animal/plant/bacterial cell
5. Separation and estimation of extracellular and intracellular proteins
6. Quantification of nucleic acids by colorimetry (orcinol)
7. Introduction to bioinformatic tools used in biotechnology

Semester – II

B.Sc. (Hons.) 1st year (2nd Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/CHILDREN AND DRUG ABUSE (SEMESTER – II)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermi composting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN/CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A

(kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

Unit IV (Drug Abuse)

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.
    - A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) Concept and overview : what are drugs? Meaning of use, misuse and abuse of drugs. Misuse of prescription drugs with special emphasis on antibiotics and steroids. Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3, 4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.
10. NCERT(2010). Training Resource Materials (Adolescence Education Programme)

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Paper: English
Code No: BIOT-Sem-II-I-T

Semester II

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the Internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 5-8
Drama: Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:
Writing Skills: This section shall focus on précis-writing, curriculum vitae; short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.,

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for an Interview & Group Discussion etc

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Leaning, the marks obtained by them out of 40 will be proportionately increased out of 50.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which , a student will be expected to attempt any four. **Two** from **Prose** and **two** from

Drama. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. 5 **marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribe (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 Short Survey Report (150-200 words) with internal choice**.** **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6 Definition/Format of modern forms of communication to be tested.

ਸਮੈਸਟਰ ਦੂਜਾ

ਅਪ੍ਰੈਲ / ਮਈ 2●19 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਲਿਖਤੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ
2. ਪੱਤਰ-ਵਿਹਾਰ
3. ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ)
ਸੰਪਾਦਕ : ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

1.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	3+5 = 8 ਅੰਕ
3.	ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਹਾਣੀਆਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿੱਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
4.	ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (2 ਵਿਚੋਂ 1)	7 ਅੰਕ
5.	ਵਿਆਕਰਣ: ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ ੲ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	(3+3+4=10 ਅੰਕ)
6.	ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਹਾਣੀਕਾਰਾਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
   3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Paper: Statistics & Computer Fundamentals **Theory: 67 Marks**
Code No: BIOT-Sem-II-III-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn applications of statistics in the field of biology.
- To study concepts of probability, averages, distributions, tests of deviations, correlation and linear regression.
- To learn to design experiments and analysis of results by tests of significance or analysis of variance.

UNIT – I

An introduction, types of data, collection, classification and tabulation of the primary data, secondary data, discrete data and continuous data, diagramatic and graphical representation of grouped data, frequency distribution {univariate and bivariate},cumulative frequency distribution and their graphical representation, histogram frequency polygon.

Concept of central tendency or location and their measures, partition values: quantiles, deciles and percentiles, dispersion and their measures, relative dispersion.

UNIT – II

Binomial distribution, Poisson distribution as a limiting form of binomial distribution and properties of these distributions, moments, moment generation function, cumulate generating function, geometric distribution and exponential distribution and properties ofthese distributions.
Normal distribution
Correlation and regression analysis
Hypothesis testing
Markov models
Cluster analysis

- Nearest neighbor search
- Search using stem numbers
- Search using text signature

Concepts of Probability.

UNIT – III

Computers: General introduction to computers, organization of computers, digital and analogue computers, computers algorithms.

Introduction to computers and its uses: Milestones in hardware andsoftware-batch oriented/online/real time applications.
Compute as systems: Basic concepts, stored programs, functional units andtheir interrelation-communication with computer.

UNIT – IV

Data storage devices:
Primary storage: Storage address and capacity, type of memory.
Secondary storage devices: Magnetic tape-data representation and R/W; Magnetic disks, fixed and removable, data representation and R/W; Floppy and hard disks, optical disks CD-Rom, mass storage devices.
Input/output devices: Key-tape/diskette devices, light pin Mouse, joystick, source data automation.
Printed outputs: Serial, line, page, printers, plotters, voice response units.

Reference Books:

1. P.N. Arora & P.K. Malhotra (1996).Biostatistics (Himalaya PublishingHouse, Mumbai).
2. Sokal&Rohlf(1973). Introduction to biostatistics (Toppan Co. Japan).
3. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics: Anintroduction (Springer).
4. P.K. Sinha (2004). Computer fundamentals (BPB).
5. Suresh K. Basandra (2008). Computers today (Galgotia Publications Pvt.Ltd., New Delhi).

BIOT-Sem-II-III-T

Statistics and Computer Fundamentals (Practical) **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Presentation of data by frequency tables, diagrams and graphs.
2. Calculation of measures of central tendencies, skewness and Kurtosis.
3. Calculation of dispersion.
4. Fitting of binomial distribution and Poisson distribution.
5. Probability
6. Basics of computer: Basic commands-File creation, copying, moving and deleting in DOS & windows, Using e-mail, browsers, search engines.

Reference Books:

1. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics:An introduction (Springer).
2. P.K. Sinha (2004). Computer fundamentals (BPB).
3. Suresh K. Basandra (2008). Computers today (Galgotia PublicationsPvt. Ltd., New Delhi).

Paper: Basic Biochemistry **Theory: 67 Marks**
Code No: BIOT-Sem-II-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

To make student conversant with the biochemical aspect of cell, chemical structure & function of various biomolecules.

UNIT – I

Water: Physico chemical properties of water, dissociation and association constants. pH and buffers, pI, pka, Henderson Hasselbatch equation and its implications.

Carbohydrates: Structure of important mono, di-, oligo- and polysaccharides, glycoproteins, peptidoglycan, glycolipids and lipopolysaccharides. Reaction of monosaccharides.

UNIT II

Lipids: Classification of lipids and fatty acids, general functions of major lipid subclasses, acylglycerols, phosphoglycerols, phosphoglycerides, sphingolipids, glycosphingolipids and terpenes, sterols, steroids: Prostaglandins.

UNIT – III

Vitamins and hormones: Types of vitamins and their chemistry, vitamins as cofactors, steroids and peptide hormones.

UNIT IV

Proteins: Structure of amino acids, nonprotein and rare amino acids and their chemical reactions. Structural organization of proteins (primary, secondary, tertiary and quaternary domain structure), protein classification and function. Forces stabilizing primary, secondary and tertiary structure.

Reference Books:

1. Lehninger A.L., Nelson D.L. and Cox M.M. (2005).Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson Publishers).
4. G.L. Zubay, W.W. Parson, D.E. Vance. (1995). Principles of biochemistry:Student study art notebook (Wm.C. Brown).
5. Bucke C. (1999). Carbohydrate biotechnology protocols (Humana Press).
6. H.R. Horton, A.J. Scism, L.A. Moran, R.S. Ochs, J.D Rawn, K.G. Scrimgeour. (2006). Principles of biochemistry (Prentice Hall).

BIOT-Sem-II-IV-P Basic Biochemistry (Practical) Practical: 25 Marks
Internal Ass.: 3 Marks

1. Preparation of physiological buffers.
2. Verification of Beer-Lamberts law for p-nitrophenol.
3. Determination of pKa value of p-nitrophenol.
4. Estimation of carbohydrates in given solution by Anthrone method.
5. The determination of acid value and saponifaction value of a fat.
6. Methods of protein estimation.

Paper: Cell Biology **Theory: 67 Marks**
Code No: BIOT-Sem-II-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

- To understand the detailed overview of eukaryotic cell and its inner components
- To understand the processes of cell transport and cell locomotion
- Introduction to stem cells and their applications

Practical skills will be imparted to the students through critically designed practical related to the subjects.

Unit I

Cell as a basic unit of living systems: the cell theory, pre-cellular evolution, artificial creation of "cells", broad classification and ultrastructure of cell types (PPLOs, Bacteria, eukaryotic microbes, plant and animal cells), tissue, organ and organism at different level of organization of other genetically similar cells; biochemical composition of cells (proteins, lipids, carbohydrates, nucleic acids and metabolic pool).

Ultrastructure of cell membrane and cell organelle: structure and function of cell organelles, ultrastrucure of cell membrane, cytosol, golgi bodies, vacuoles, endoplasmic reticulum (rough and smooth), ribosomes, cytoskeletal structures (actin microtubules etc), mitochondria, chloroplast, lysosomes, peroxisomes, nucleus (nuclear membrane, nucleoplasm, nucleolus)

Unit II

Cellular transport: Passive & active transport, permeases, sodium, potassium, Calcium, ATPase pumps, lysosomal and vacuolar membrane, ATP dependent proton pumps, co-transport, symport,

antiport, transport into prokaryotic cells, endocytosis and exocytosis, entry of viruses and toxins into cells.

Unit III

Cell locomotion: Amoeboid, Flagellar and Ciliar.

Chromosomes: discovery, morphology, chemical composition, structural organization of chromatids, centromere, telomere, chromatin, nucleosome organization, euchromatin and heterochromatin, special chromosomes (polytene, lampbrush chromosomes), banding patterns in human chromosomes.

Unit IV

Basics of stem cells: Introduction to concepts in stem cell biology, Cell differentiation in multicellular organisms: (renewal, potency: Totipotent, pleuripotent, multipotent); types of stem cells: early embryonic stem cells, blastocyst embryonic stem cells, fetal stem cells, umbilical cord stem cells, adult stem cells; applications; ethical issues related to stem cells.

Reference Books:

1. The World of the Cell (2008) Becker, Klein Smith & Hardin Pearson education Inc
2. Cell and Molecular Biology (2010) E.D.P De Robertis and E.M.F. De Robertis, Jr.
3. Molecular Cell Biology (2007) Lodish et al. Freeman & Co
4. Molecular Biology of the Cell (2007) Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter.
5. The Cell: A Molecular Approach (2013) Geoffrey M. Cooper and Robert E. Hausman
6. Cells and Cell Function: Advanced Level (2007) Sally Morgan
7. Stem Cells: An Insider's Guide (2013) Paul Knoepfler

BIOT-Sem-II-V-P **Paper: Cell Biology (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. To study the parts and function of a light microscope
2. To prepare a wet mount of onion peel for microscopy
3. Counting of cells using haemocytometer
4. Subcellular fractionation of spinach cells
5. To study cell locomotion of amoeba
6. To study flagellar motility in bacteria by hanging drop technique
7. To study cell transport in cell membrane by following experiments
    1) Diffusion through artificial membrane: transport of albumin and glucose solution through dialysis bag.
    2) To study the effect of membrane disrupting agents in beet root
8. Quantitative analysis of cell membrane lipids by TLC

Paper: General Microbiology **Theory: 67 Marks**
Code No: BIOT-Sem-II-VI-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

Microbes play significant role in understanding medical science and industries so study of microbes from basic to advance level, with understanding of biochemistry, cell structure and application makes this paper significant.

UNIT – I

History of Microbiology: A. Leewenhook, L. Pasteur, R. Koch, J. Lister, J.Tyndall, Koch postulates, discovery of antibiotics.
Principle of microscopy: Bright field, dark field, phase contrast, fluorescent, electron microscopy.

UNIT – II

Microbial classification: Bacteria, fungi
Morphology of bacteria, viruses and fungi with major emphasis on bacterial structure specially cell wall. Gram positive and Gram negative bacteria. Microbial spores, sporulation/ germination process.

UNIT – III

Microbial growth, nutritional biodiversity, phases of growth, generation time, growth rate, monoauxic, diauxic and synchronous growth. Chemostat
Physical and chemical agents to kill microbes, sterilization and pasteurization processes.

UNIT –IV

Normal micro flora in human/ animals. Types of microbial pathogens and diseases caused by them. Microbial interactions like symbiosis and antibiosis. Host defense mechanism against pathogens.

Reference Books:

1. Tortora, G.J., Funke, B.R. and Case, C.L. (2009) Microbiology: An introduction (Benjamin/ Cummings publishing company, Inc).
2. R. Y. Stanier, M. Doudoroff, E. A. Adelberg (1999). General microbiology (MacMillian Press London).
3. M.J. Pelczar, E.C. Sun Chan, N.R. Krieg (2007). Microbiology (Tata McGraw Hill Publication, New Delhi). 5th edition.
4. H.G. Schlegel, C.Zaborosch, M. Kogut (1993).General microbiology (Cambridge University Press).
5. S.C. Prescott, C.G. Dunn (1959). Industrial microbiology (McGraw- Hill).
6. Purohit, S.S. (2003). Microbiology: Fundamentals and applications (Agrobios, India)
7. Postgate, J.R. (2000). Microbes and man (Cambridge University Press).

BIOT-Sem-II-VI-P General Microbiology (Practicals) Practical: 22 Marks
Internal Ass.: 3 Marks

1. Cleaning of glass wares, preparation of media, cotton plugging and sterilization.
2. Isolation of microorganisms from air, water and soil samples.
3. Dilution and pour plating techniques.
4. Gram staining, spore staining, motility
5. Growth curve of microorganisms.
6. Antibiotics sensitivity of microbes using antibiotic discs.
7. Testing of water quality.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual, (Pearson Benjamin Cummings).

B.Sc. (Hons.) 2nd year (3rd Semester)

Paper: Biochemistry
Course No.: BIOT-Sem-III-I-T

Theory : 67 marks
Internal assest : 08 marks
Total : 75 marks

Instructions for paper setters and candidates:-:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To familiarize the students with the biochemical activities taking place at cellular level, highlighting the enzymatic reactions, metabolic pathways and biochemical aspect.*

Unit- I

Metabolism: Metabolic pathways, biochemical reaction mechanism, energy rich metabolites. Coupled reactions, substrate level phosphorylation. Importance of ATP: Structural basis of high phosphoryl transfer potential of ATP. Sources of cellular energy, activated carriers. Regulation and evolution of metabolic pathways.

Unit- II

Carbohydrate metabolism: Biosynthesis and degradation of glucose; feeder pathways of glycolysis; Kreb cycle, amphibolic nature of the Kreb cycle; regulation of Kreb cycle, regulation of gluconegenesis. Glycogen metabolism.
Mitochondrial electron transport chain, oxidative phosphorylation; regulation of ATP synthesis.

Unit- III

Lipid Metabolism: Biosynthesis and degradation of fatty acids; β-oxidation of saturated, unsaturated and polyunsaturated fatty acids. Formation of ketone bodies, their function and physiological significance. Fatty acid synthesis: multifunctional enzyme complex in eukaryotes, function of citrate. Regulation of fatty acid metabolism.
Cholesterol metabolism: Biosynthesis of cholesterol and its regulation.

Unit- IV

Amino acid metabolism: Biosynthesis of nutritionally non-essential amino acids; catabolism of carbon skeleton of amino acids. Conversion of amino acids to specialized products; amino acids as precursors of porphyrins, bile pigments and biogenic amines.
Nucleic acid metabolism: Biosynthesis of purine and pyrimidine nucleotides; salvage reactions. Catabolism of purines and pyrimidines, urea cycle.

Reference Books:

1. Lehninger A.L., Nelson D.L., Cox M.M. (2005). Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson).

4. Voet D., Voet, J.G. (2004).Biochemistry (John Wiley & Sons).
5. Voet, D., Voet, J.G. and Pratt, C.W. (2008). Fundamentals of biochemistry: Life at the molecular level (John Wiley & Sons).

Biochemistry (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Estimation of DNA by the diphenylamine reaction.
2. Determination of reducing sugars using 3, 5-dinitrosalicylic acid and Benedict's test.
3. Determination of iodine number of fat.
4. Determination of extinction coefficient of nucleic acids.
5. Biuret assay for protein estimation..
6. Quantitative estimation of amino acids using ninhydrin reaction.
7. Estimation of RNA by means of orcinol reaction.

Paper: Genetics
Course No.: BIOT-Sem-III-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The focus of this course is on the science of heredity with emphasis on the basics of Mendelian and molecular genetics. It will familiarize students with chromosome organization, linkage, chromosome mapping, chromosome aberrations, mutations and microbial genetics.*

Unit – I

Mendelian laws of inheritance, Sex determination in drosophila, plants and animals, sex linkage, Non-disjunction as a proof of chromosomal theory of inheritance. Numerical chromosome aberrations: polyploidy, aneuploidy, Chromosomal aberrations: Delition, duplications, inversions, translocations, position effects.

Unit – II

Gene interactions, sex linked inheritance. Crossing over: molecular mechanism and cytological proof, Recombination, linkage, gene mapping, Three point testcross, interference, coincidence, recombination frequencies, Tetrad analysis, somatic cell hybridization for gene linkage studies, Hereditary defects.

Unit – III

Population genetics: Hardy-Weinberg equilibrium, gene and genotypic frequencies, Chi- square test, probability, pedigree analysis.

Mutation: Spontaneous versus induced mutations, types of mutations, mutagenic agents: Physical, chemical and radiation, molecular basis of mutations, mechanisms of DNA repair, mutations frequency, correlation between mutagenicity and carcinogenicity,

Unit – IV

Basic microbial genetics: Conjugation, transduction, transformation, isolation of auxotrophs, replica plating techniques, analysis of mutations in biochemical pathway, one gene – one enzyme hypothesis. Extra chromosomal inheritance: mitochondrial and chloroplast genetic systems.

Reference Books:

1. Birge, E.A. (2006). Bacterial and bacteriophage genetics (Springer).
2. Dale J., Park S. (2005) Molecular genetics of bacteria (John Wiley and SonsInc).
3. Freifelder, D. (2005). Molecular biology (Jones and Bartlett).
4. Synder, L., Champness W. (2007). Molecular genetics of bacteria (ASM Press).
5. Turn N.J, Trempy J.E. (2006). Fundamental bacterial genetics (Wiley Blackwell).
6. T.A. Baker, J.D. Watson, S. Bell. (2004). Molecular biology of the gene (Benjamin B. Cummings).
7. A.J.F. Griffiths, S.R. Wessler, R.C. Lewontin, S.B. Carroll (2007). Introduction to genetic analysis (W.H.Freeman & Co Ltd).
8. Strickberger M.W. (2006) 3rd edition. Genetics (Macmillan).
9. Verma P.S (2012)Genetics (S.Chand & Company Ltd.)
10. Sanders M.F. and Bowman J.L.(2012) Genetic Analysis (Pearsons)

Genetics (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Examination of permanent slides of various stages of mitosis and meiosis and different types of chromosomes.
2. Demonstration of law of segregation and independent assortment (use of dried peas, colored peas, capsules *etc*.).
3. Numerical for segregation and independent assortment.
4. Use of Chi-square for prediction of phenotype/genotype frequencies of parents from progeny and vice-versa, epistasis.
5. Detection of blood groups (ABO & Rh factors).
6. Calculation of variance in respect of pod length and number of seeds/pod.
7. Calculation of gene frequencies and random mating (colored beads, capsules).
8. Dermatographics: Palm print taking and finger tip patterns.

Paper: Immunology-I
Course No.: BIOT-Sem-III-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: *To understand general aspects of immune system like different components of the immune system, Generation and functions of these components, Knowledge of basic immunological techniques.*

Unit-I

1. Introduction
i) Overviews of immune system – Historical perspectives
ii) Innate and acquired immunity
iii) Clonal nature of immune response.

2. Cells of the immune system : Hematopoiesis and differentiation, lymphocyte trafficking, B-lymphocytes, T-lymphocytes, macrophages, dendritic cells, Natural killer cells and lymphocyte activated killer cells, eosinophils, neutrophils & mast cells.

Unit-II

3. **Organs of the immune system :** Primary and secondary lymphoid organs, systemic function of immune system.
4. **Lymphocyte Trafficking**: Cell surface proteins, Cell Adhesion molecules (Integrin, Selectin, Cadherin family and Ig Superfamily).
5. **Antigen** – Immunogenicity Vs. antigenicity, factors effecting immunogeniticity, nature of immunogen, epitopes, heptans and antigenicity, pattern recognition receptors.

Unit-III

6. **Immunoglobulins:** Structure of antibody, antibody effector function, antibody classes and biological activities, antigenic determinants on Immunoglobulins, Immunoglobulins superfamilies.
7. **Major histocompatibility complex:** General organization and inheritance, MHC molecules and genes, genetic map, cellular distribution, regulation of MHC expression and disease susceptibility, antigen presentation.

Unit-IV

8. **Hybridoma Technology:** Production of Monoclonal Antibodies, applications of polyclonal and monoclonal antibodies.
9. **Antigen–Antibody interactions** : Strength of interaction, cross reactivity, antibody affinity, avidity. Antigen-antibody interactions as tools for research and diagnosis: precipitation and agglutination reactions, immunodiffusion, immunoelectrophoresis, immunoassays, Enzyme linked immunosorbent assay (ELISA), Radioimmunoassay (RIA), western blot, Immunofluorescence.

Reference Books:

1. Kuby Immunology (2006) by Thomas J. Kindt, Richard A. Goldsby, Barbara A. Osborne, Janis Kuby (W.H. Freeman).
2. Immunology- A short course (2009) by Richard Coico, Geoffrey Sunshine (Wiley Blackwell).
3. Fundamentals of immunology (1999) by William Paul (Lippincott Williams & Wilkins).
4. Immunology (2001) by Ivan Maurice Roitt, Jonathan Brostoff, David K. Male (Mosby).
5. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) WH Freeman & Co. New York; 2006.
6. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley Blackwell; 2011.

Paper: Immunology-I (Practicals)
Course No.: BIOT-Sem-III-III-P

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Lymphoid organs and their microscopic organization.
2. Differential leucocytes count.
3. Separation of serum from blood.
4. Separation of plasma from blood.
5. Ouchterlony Double Diffusion
6. Radial immuno diffusion test using specific antibody and antigen.
7. Agglutination (Blood group testing).

Paper: Plant Tissue Culture
Course No.: BIOT-Sem-III-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To introduce the students with fundamentals and applications of plant tissue culture. This course will expose students to the methods of culturing, maintaining and regenerating plants species.*

Unit – I

Cellular totipotency and differentiation in plants.
Plant Culture Media and their composition.
Sterilization techniques for glassware and tissue culture media.
Micropropagation: Establishment of aseptic culture, various stages, advantages and disadvantages.

Unit –II

Organogenesis; somatic embryogenesis; somaclonal variation, its genetic basis and application in crop improvement. Cell/callus line selection for resistance to herbicide, stress and diseases. Role of tissue culture in rapid clonal propagation, production of pathogen - free plants and "synthetic seeds" haploid and Triploid plant production & their application.

Unit – III

Protoplast and somatic hybridization: Isolation, culture and plant regeneration, protoplast fusion, identification and characterization of somatic hybrids, applications of protoplast hybridization technology.

Unit – IV

Secondary metabolites: Secondary Plant products from cultured cells and their industrial applications.
Cryopreservation of germplasm: Short term and long term conservation of plant genetic resources, *In situ* and *Ex situ* conservation of plants

Reference Books:

1. Razdan, M.K. (2007). Introduction to plant tissue culture (India Book House Pvt. Ltd).

2. Narayanaswamy, S (1994). Plant cell and tissue culture (Tata Mc-Graw Hill Publishing Co.Ltd, New Delhi).
3. Rudolf, E. (1994). Plant cell biotechnology (Spinger Verlag).
4. Bhojwani, S.S., Razdan, M.K. (1996), Plant tissue culture: Theory and practice (Elsevier Science, Netherlands).
5. Gamborg, O.L., Phillips, G.C. (1995). Plant cell, tissue and organ culture: Fundamental methods (Illustrated, Publisher Springer).
6. HS Chawla (2003). Plant biotechnology: A practical approach (Science Publishers, USA). Plant Tissue Culture and Biotechnology

Plant Tissue Culture (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Laboratory design set up for a plant tissue culture laboratory.
2. How to clean glass/plastic ware.
3. Preparation of complex nutrient medium (Murashige and Skoog's medium).
4. To select, prune, sterilize and prepare an explant for culture.
5. To culture different explants for raising callus cultures.
6. Significance of growth hormones in culture medium.
7. To demonstrate various steps of micropropagation.

Paper: Animal Cell Culture
Course No.: BIOT-Sem-III-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the field of Animal cell-culturing and its importance to mankind. The students will also learn the techniques involved in animal cell culture.*

Unit – I

History of development of cell cultures, natural surroundings for animal cells, simulating natural conditions for animal cells, metabolic capabilities of animal cells.

Biology of cultured cells : The culture environment, cell adhesion, proliferation, differentiation, signaling, evolution of cell lines. Equipments and materials for animal cell culture technology.

Unit II

Introduction to the balanced salt solutions and simple growth medium. Brief discussion on the chemical, physical and metabolic functions of different constituents of culture medium. Role of carbon dioxide. Role of serum and supplements.

Serum & protein free defined media and their application.

Animal cell culture Techniques: Dispersion and disruption of tissues; primary cultures, anchorage and non-anchorage dependent cells; secondary culture, transformed animal cells.

Unit – III

Established/continuous cell lines, commonly used animal cell lines, their origin and characteristic. Maintenance and growth kinetics of cells in culture, differentiation of cells,
Measurement of growth and viability of cells in culture. Cytotoxicity assays & their applications,

Unit – IV

Characterization of Cell lines and their authentication, Cell fusion and production of monoclonal antibodies.
Transformation and immortalization, cryopreservation.
Bio-Safety & Bioethics.

Reference Books:

1. R. Ian Freshney, (2010) 6th Edition, Wiley-Blackwell. Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications
2. P.R. Yadav and Rajeev Tyagi, Discovery Publishing House, (2006) Biotechnology of Animal Tissues
3. Julio, E., Celis. (2006) Cell Biology. A laboratory handbook, Vol. I-IV (Elsevier Academic)
4. Butler, M (1996) Mammalian cell biotechnology. A practical approach (IRL, Oxford University Press)
5. Gareth, E.J. (Edition Illustrated, Humana Press) (1996) Human cell culture protocols.

Animal Cell Culture (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Fumigation of animal cell culture laboratories.
2. Maintenance of aseptic conditions and sterilization method.
3. Preparation of Minimal Essential Growth medium for cell culture.
4. Isolation of lymphocytes for culturing.

B.Sc. (Hons.) 2nd year (4th Semester) (January, 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester)

Paper: Immunology-II
Course No.: BIOT-Sem-IV-I-T

Theory : 65 marks
Int. assessment : 10 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the principles of advanced Immunology, both at the molecular and cellular levels.*

Unit-I

1. **B Cell Activation, Differentiation:** B-Cell Activation and Proliferation, In Vivo Sites for Induction of Humoral Responses, T-dependent and T-independent antigens.
2. **Organization and expression of Immunoglobulins gene:** Genetic model, multigene organization, generation of antibody diversity.

Unit-II

3. **Receptors and Signaling:** T-Cell Receptors: Structure and Roles, T-Cell Receptor Complex.
4. **T-Cell Maturation, Activation, and Differentiation**: Thymic Selection of the T-Cell Repertoire, T_H-Cell Activation, T-Cell Differentiation, Cell Death and T-Cell populations, Peripheral-T-Cells.
5. **Complement system:** Function, Components- Classic, Alternative, Mannose binding proteins, activation, Regulation of the Complement System, Biological Consequences of Complement Activation.

Unit-III

6. **Hypersensitivity:** Type I, Type II, Type III and Type IV Hypersensitivity reactions and their implications.
7. **Autoimmunity:** Organ specific autoimmune diseases : Hashimoto's Thyroditis, Insulin-dependent Diabetes Mellitus, Grave's disease, Mysthenia Gravis.
   Systemic Autoimmune Disease: Systemic lupus Erythmatosus (SLE).

Unit-IV

8. **Transplantation immunology-** Immunologic Basis of Graft Rejection, Clinical Manifestations of Graft Rejection, General Immunosuppressive Therapy, Specific Immunosuppressive Therapy, Immune Tolerance to Allografts, Clinical Transplantation
9. **Vaccines and Vaccination** – principles of vaccination, passive & active immunization, immunization programs, adjuvants, bacterial vaccines, viral vaccines, polysaccharide vaccines, DNA vaccines, recombinant vaccines, vaccines to other infectious agents, tumor vaccines.

Reference Books:

1. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) W.H. Freeman & Co. New York; 2006.
2. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley- Blackwell; 2011
3. Peakman M, Vergani D, Pyne DJ, Woodward M. Basic and clinical immunology. (1st Ed.) Churchill Livingstone; 1997.
4. Roitt I, Brostoff J, Male D. Immunology. (6th Ed.) Harcourt Health Sciences, 2001.

5. Clinical Immunology and serology: A laboratory perspective (1997) by Stevens C.D (F A Dacis Company, Phialadelphia).

Immunology-II (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Performing enzyme linked immunosorbent assay (ELISA).
2. Rocket immuno-electrophoresis for antigen antibody interaction.
3. Isolation of mononuclear cells from peripheral blood and viability test by dye exclusion methods.
4. Total leucocyte count (TLC).
5. Isolation of IgG from serum.

Paper: Biophysical and Biochemical Techniques
Course No.: BIOT-Sem-IV-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To enable the students learn important tools and techniques based on biophysical and biochemical principles so that they can understand application of these techniques in biotechnology*

Unit – I

Principle, working and applications of Spectrophotometry (UV& visible) and spectroflourimetry,
Atomic absorption spectrophotometry: Equipment used and applications
Infrared and Raman spectroscopy. ORD and circular dichroism, Nuclear Magnetic Resonance and Electron Spin Resonance spectroscopy, Magnetic Resonance Imaging.
Electrophoresis: Principle, types & applications.

Unit – II

Microscopy: Properties; Light and Bright field Microscopy, Dark field Microscopy; Phase contrast, Fluorescent and Confocal microscopy,
Electron microscopy: Scanning and Transmission Electron Microscopy.
Centrifugation: Principle, types & applications.

Unit – III

Crystallography: Physical basis of crystallization; formation of crystals; Mounting of crystals
X-ray diffraction: Braggs law; Diffraction of x-rays by crystals
Overview of chromatography; Gas chromatography and HPLC

Unit – IV

Radioisotope techniques: Radiotracers; GM counter, proportional and scintillation counters, autoradiography.
Mass spectrometry: Physical basis; Instrument used; ionization modes; Applications
Collaboration of MS with other techniques: GCMS and LCMS.

Reference Books:

1. K Wilson, J Walker (2000) Principles and techniques of biochemistry and Molecular Biology Seventh Edition, (Cambridge University Press).
2. SR Mikkelsen, E Cortin (2004). Bioanalytical Chemistry (2004) (John Wiley & Sons)
3. David Sheehan (2009). Physical Biochemistry: Principles and Applications, Second Edition. (John Wiley & Sons)
4. P. Carmona, R. Navarro, A, Hernanz (1997) Spectroscopy of biological molecules: Modern trends (Illustrated, Publisher Springer)
5. Bernard Valeur (2001). Molecular fluorescence: Principles and application (Wiley-VCH).Plenum USA].
6. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).
7. Bansal, D.D., K Hardori, R & Gupta, M.M. (1985). Practical biochemistry (Standard Publication, Chandigarh).

Biophysical And Biochemical Techniques (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25marks
Time : 3 hours

1. Identification of the provided sample using some of the spectroscopic techniques.
2. Quantitative analysis by UV/Visible spectrophotometry.
3. Use and care of light microscope.
4. Demonstration of radioisotopic techniques
5. Gel filtration chromatography

Paper: Plant Biotechnology
Course No.: BIOT-Sem-IV-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: The objective of this course is to familiarize the students with different aspects of plant molecular biotechnology and techniques for plant genetic manipulations.

Unit – I

Genetic material of plant cells with an introduction to chloroplast and mitochondrial DNA.
Plant Promoter, Plant Selection markers and reporter genes.
Transformation of plant cells; different type of vectors including viral vectors and their benefits.

Unit –II

Modes of gene delivery in plants: Particle bombardment, electroporation, microinjection; Advantages and disadvantages

Agrobacterium mediated gene transfer, natural pathogen mode of infection,

vir gene functions, Ti / Ri plasmids, Screening and selection of transformants, PCR and hybridization methods; Transgene selection and silencing; Generation and maintenance of transgenic plants.

Unit – III

Transgenic plants: Genetic modification of plants for herbicide resistance, Pest resistance, virus resistance Bacterial and fungal resistance. : Delayed fruit ripening, improved protein composition.

Bt cotton, golden rice and some others as examples.

Unit – IV

Plant cell as factories for production of industrial enzymes, biodegradable plastics, antibodies, edible vaccines; manipulation of metabolic pathways for production of fatty acids, industrial oils, terpenoids, flavanoids.

Reference Books:

1. Draper, J.R., Scott. P., Armitage, R. Walden (1988). Plant Genetic Transformation and Gene Expression – A Laboratory Manual. Blackwell Scientific Publications, Oxford.
2. Ashihara et al. (2011) Plant Metabolism and Biotechnology, John Wiley & Sons, Ltd. ISBN: 978-0-470-74703-2
3. Old, R.W., and Primrose, S.B. (2004). Principles of Gene Manipulation : An Introduction to Genetic Engineering. Blackwell Scientific Publications, Oxford.
4. Peter J. Lea and Richard C. Leegood, Plant Biochemistry and Molecular Biology, Wiley Publishing.
5. Singh R.P. & Jaiwal P.K. (2003) Plant Genetic Engineering Vol. 1 – 4. SCI Tech Publishing LLC, U.S.A.
6. Gupta, P.K. (1990). An Introduction to Biotechnology, Rastogi Publications, Meerut.

Plant Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Aseptic culture techniques for establishment and maintenance of cultures
2. Preparation of stock solutions of MS basal medium and plant growth regulator stocks.
3. Micropropagation of Tobacco plant by leaf disc culture.
4. Isolation of plant genomic DNA by modified CTAB method.
5. DNA check run by Agarose Electrophoresis.
6. Agrobacterium tumefaciens-mediated plant transformation.

Paper: Animal Biotechnology
Course No.: BIOT-Sem-IV-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the advances in the field of Animal and their importance to mankind.*

Unit-I

Organotypic and histotypic cultures: *Organotypic culture:* Gas and nutrient exchange, structure integrity, growth, differentiation, advantages and applications. Methods, advantages and applications of histotypic culture.

Three dimensional culture and tissue engineering: Concept of tissue engineering, components of tissue engineering, cells imaging in 3D construct.

Unit-II

In vitro **fertilization (IVF)** in Humans and Embryo Transfer in Livestock.

Cell culture based vaccines: Cells as virus host/cell culture based vaccines, cells as protein factory/cell expression system and cells as antigen presenter/personalized vaccine.

Scaling up of the animal cell culture: different methods of scale up at laboratory and industrial level.

Unit-III

Transgenic animals and their applications: Concept of transgenics, Methods of gene transfer, selection of clone containing DNA insert and application of transgenic animals (Food, environment, recombinant proteins, drugs *etc.*). Safety and ethical issues of transgenic animals.

Unit-IV

Production of various products of human use using animal cell culture:

Antibiotics production

Human Growth factors

Insulin and other Hormones

Essential Readings:

1. Culture of animal cells (2009). RI Freshney, Sixth ed. John Willey & Sons.
2. Culture of animal cells: A manual of basic technique and specialized applications. John Wiley & Sons, (2011).
3. Animal cell culture and technology by Michaelis Butler. BIOS Scientific Publisher (2003).
4. Animal cell biotechnology XVI 2nd Edition (2007) by Ralf Partner Humana Press.
5. Textbook of animal biotechnology (2012) by B Singh**,** S K Gautam**,** and M S Chauhan..
7. Principles of tissue engineering by Robert Lanza, Robert Langer, Joseph P. Vacanti. Academic Press, (2011) - Science - 1344 pages.
8. Transgenic animal technology, 2ndEdition: A Laboratory Handbook by Carl A. Pinkert. Academic Press; 2nd edition (2002).

Animal Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Growing the cell monolayers, *in vitro*.
2. Trypsinization of the monolayers and cell counting using hemocytometer.
3. To check the viability of the cells using Trypan Blue dye exclusion assay.
4. Checking the cytotoxicity of the compounds using MTT Assay.

Paper: Agro & Industrial Biotechnology
Course No.: BIOT-Sem-IV-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the concepts of agriculture as industry. This course will help students to understand the application of fundamental concepts like transgenic approaches to improve crop plants, microbial culture maintenance, and metabolite purification at industrial level.*

Unit I

Basic concept of agriculture as industry: Industrially important microbes, its screening, selection and identification.

Maintenance and preservation of industrially important microbial cultures.

Differences between microbial industrial process and chemical industrial process.

Unit II

Improvement programme of industrial microbes, mutational programme of penicillin producing microorganisms, selection pressure in maintaining the hyper producer, lowering of production due to reversal of mutations, media formulation and process optimization of industrial and agro industrial microbes.

Unit III

Microbes in agro industries and industrial biotechnology: Introduction of primary and secondary metabolites, production of vitamin B12, alcohol, wine, beer, cheese, bread, citric acid, gluconic acid, antibiotics (penicillin), enzymes (amylases, cellulases, lipases and proteases) and their industrial applications.

Unit IV

Emerging energy technologies in agro industries: production of vermiculture, composting, herbicides and biopesticides, production of biofertilizers: Blue green algae, azolla, fungi, mycorrhiza (VAM), bacteria – *Azospirrilum*, microbial biotransformations, single cell proteins (bacterial, fungal and algal).

Reference Books:

1. Marwaha, S.S., Arora, J.K. (2003). Biotechnological strategies in agro-Processing (Asiatech publishers Inc. New Delhi, India).
2. Stanbury, P.F., Whitaker A. (2011) 2nd edition. Principles of fermentation technology.
3. Singh, BD. (2008). Biotechnology: Expanding horizons (Kalyani Publishers, India).
4. Patel A.H. (2007). Industrial microbiology (New Age International Publishers).
5. Loessner, J. M, Jay J.M, D.A. Golden (2005). Modern food microbiology (Golden Springer).
6. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

Agro & Industrial Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Counting of Microbial cells by serial dilution techniques (Spread plate and pour plate).
2. Measurement of bacterial size.
3. Screening of industrial enzymes (cellulase, protease, amylase *etc.*) from different soil samples.
4. Production of enzymes by submerged and solid state fermentation.

B.Sc. (Hons.) 3rd year (5th Semester) (July, 2018)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioanalytical tools	BIOT-Sem-V-II-T	75	BIOT-Sem-IV-II-P	25
3.	Environmental Biotechnology	BIOT-Sem-V-III-T	75	BIOT-Sem-IV-III-P	25
4.	Bioinformatics	BIOT-Sem-V-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Enzymology	BIOT-Sem-V-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. Hons Biotechnology 3rd year (5th Semester)

BIOT-Sem-V-I-T MOLECULAR BIOLOGY

Theory : 67 marks
Int. asset : 08 marks
Total : 75 marks
Time : 3 hours

Objectives: To make the students understand the fundamental concepts which includes DNA structure, replication, transcription, translation, mutation, gene regulation.

UNIT-I

1. DNA: Chemical composition of DNA DNA structure-single stranded DNA, detailed account of double stranded DNA, BDNA, Z.DNA and other structural forms and their importance.
2. Genome organization in prokaryotes**:** Molecular nature of the genetic material, Composition and structure of prokaryotic DNA and RNA.
3. Genome organization in eukaryotes: Composition and structure of eukaryotic DNA and RNA. Characteristic features of highly repetitive DNA, Tandemly repetitive DNA and Mini and microsatellite DNA and Insertional elements and their role and importance

UNIT-II

4. DNA replication: Prokaryotic DNA replication; replication origin and site and structure and DNA Ter regions and structure. DNA polymerases, composition and features, replication factors and the mechanism of replication, leading strand and lagging strand synthesis, procesessivity and fidelity. Replication of single stranded DNA, M13 viral DNA.
5. Eukaryotic DNA replication; origins, replication initiation complexes and their assembly, licensing factors, DNA polymerases and their composition, telomerase and mode of action, replication factors, disassembly of chromatin components and reassembly during replication.

UNIT-III

6. Gene Expression: Overview of central dogma
7. RNAs: types, rRNAs; Structural features of rRNAs- prokaryotic and eukaryotic. tRNAs: structural features, their anticodon feature. mRNAs- prokaryotic and eukaryotic mRNAs, structural features,
8. Transcription: regulatory elements and mechanism of transcription regulation in prokaryotes and eukaryotes

UNIT IV

9. Translation: Overview and mechanism of translation process in prokaryotes, characteristics of the genetic code, structure and charging of tRNA,
10. Gene Regulation: Regulation of gene expression in response to environmental conditions. Operon concept- the Lactose and the Tryptophan operon.

REFERENCE BOOKS:

Lewin, B., 2004, Genes VIII, Oxford Univ. Press, Noida, India.
Ingraham, John.L.2004, Introduction to Microbiology, 3 Ed., Thomson brocks/Cole Inc.

Malacinski, George M., 2005, Freifelder's. Essentials of Molecular Biology, Narosa Publishing House, ND.
Karp, Gerald, 2005, Cell and Molecular Biology, Wiley International, USA.
Snusted and Simmons, 2006, Principles of genetics, John Wiley and Sons, Inc
Brown, T.A, 2007, Genomes 3, Garland Science.
Weaver R.F., Molecular biology (2005), McGraw

BIOT-Sem-V-I-T: Molecular Biology (Practical)

Practical : 20 marks
Int. assessment : 05marks
Total : 25 marks
Time : 3 hours

1. Preparation of Reagents for DNA isolation.
2. DNA isolation from plants.
3. Agarose gel electrophoresis of DNA.
4. Plasmid DNA isolation.
5. Isolation of genomic DNA from Bacteria.
6. Restriction digestion of DNA.

Reference Books:

Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar.

BIOT-Sem-V-II-T BIO-ANALYTICAL TOOLS

UNIT I

Simple microscopy, phase contrast microscopy, florescence and electron microscopy (TEM and SEM), pH meter, absorption and emission spectroscopy

UNIT II

Principle and law of absorption fluorimetry, colorimetry, spectrophotometry (visible, UV, infrared), centrifugation, cell fractionation techniques, isolation of sub-cellular organelles and particles.

UNIT III

Introduction to the principle of chromatography. Paper chromatography, thin layer chromatography, column chromatography: silica and gel filtration, affinity and ion exchange chromatography, gas chromatography, HPLC.

UNIT IV

Introduction to electrophoresis. Starch-gel, polyacrylamide gel (native and SDS-PAGE), agarose-gel electrophoresis, pulse field gel electrophoresis, immuno- electrophoresis, isoelectric focusing, Western blotting. Introduction to Biosensors and Nanotechnology and their applications.

BIOT-Sem-V-II-T BIO-ANALYTICAL TOOLS
PRACTICAL

1. Native gel electrophoresis of proteins
2. SDS-polyacrylamide slab gel electrophoresis of proteins under reducing conditions.

3. Preparation of the sub-cellular fractions of rat liver cells.
4. Preparation of protoplasts from leaves.
5. Separation of amino acids by paper chromatography.
6. To identify lipids in a given sample by TLC.
7. To verify the validity of Beer's law and determine the molar extinction coefficient of NADH.

SUGGESTED READING

1. Karp, G. 2010. Cell and Molecular Biology: Concepts and Experiments. 6th Edition. John Wiley& Sons. Inc.
2. De Robertis, E.D.P. and De Robertis, E.M.F. 2006. Cell and Molecular Biology. 8th edition. Lippincott Williams and Wilkins, Philadelphia.
3. Cooper, G.M. and Hausman, R.E. 2009. The Cell: A Molecular Approach. 5th edition. ASM Press & Sunderland, Washington, D.C.; Sinauer Associates, MA.
4. Becker, W.M., Kleinsmith, L.J., Hardin. J. and Bertoni, G. P. 2009 The World of the Cell.7th edition. Pearson Benjamin Cummings Publishing, San Francisco.

BIOT-Sem-V-III-T : ENVIRONMENTAL BIOTECHNOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective:

The course focuses on an introduction to environment, major threats to environment by various polluting agents and the remedies for the same, incorporating design and monitoring of waste treatment processes. As well as learning environmental technology fundamentals, with special focus on biological treatment processes, environmental management. The course is use of biotechnology to design cleaner manufacturing processes and to solve pollution problems. It is ideal for under graduates just embarking on their career, or scientists and engineers who have been working for a few years and wish to develop their career in this direction.

UNIT-I

Basics of Environment and Environmental pollution, air, water, soil and noise.
Air – Types, Sources & Effects,
Soil - Physicochemical and bacteriological analysis of soil, soil pollutants (fertilizers, insecticides fungicides, pesticides).
Noise pollution, its control and impact on human health.
Renewable and Non Renewable resources. and their Environmental Impacts.
Modern Fuels (gasohol, hydrogen and solar energy) and their Environmental Impacts.

UNIT-II

Water pollution and its management: Measurement of water, pollution, sources of water pollution.
Microbiology of waste water treatment, aerobic processes, activated sludge, oxidation ponds, trickling filters, and rotating biological contactors.
Anaerobic processes: Anaerobic digesters, upward flow anaerobic sludge blanket reactors.
General strategies for wastewaters treatment.

UNIT-III

Bioremediation of contaminated soil and its applications
Degradation of pesticides and other toxic chemicals by microorganism. Integrated Pest management
Biodegradation of environmental pollutants: pesticides, hydrocarbons, dye, etc.
Biofertilizers for clean environment– Nitrogen fixing microorganism, enrichment of the soil with assimilable nitrogen

UNIT IV

Introduction to solid waste and municipal solid waste management: Sources, types, composition.
Bioabsorption of metals:- Role of Microorganisms in biosorption and bioleaching. ,
Enrichment of ores by microorganisms
Bioindicators for detection of pollution

References Books:

1. Environmental Biotechnology: Principles and applications Bruce, E. Rittmann and Perry
L.Mc. Corty, Mc. Graw Hill Publications, New York, 2000.
2. Environmental Biotechnology 2nd Edition, Alan Scragg, 2005, Oxford University Press.
3.Environmental Biotechnology (2007) S.K. Agarwal APH Publishing Corporation.
4. Wastewater engineering–Treatment, disposal and reuse (2009) by Metcalf and Eddy, Inc. (Tata Mc Graw Hill, New Delhi).
5. Comprehensive biotechnology (2004) by Murray Moo Young, Alan T Bull, Howard Dalton, Set 4 Vol (Elsevier India P Ltd).
6. Comprehensive biotechnology: The principles and regulation of biotechnology in industry, agriculture and medicine (1985) by Charles L Cooney, Arthur E Humphrey, Vol.2 (Pergamon Press).
7. Environmental chemistry (2006) by Aniol Kumar De (New Age International (P) Ltd).
8. Introduction to biodeterioration (2004) by D. Allsopp, Kenneth J. Seal, Christine C. Gaylarde (Cambridge University Press).

Practical:- ENVIRONMENTAL BIOTECHNOLOGY
BIOT-Sem-V-III-T

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Detection of coli forms for determination of the purity of potable water.
2. Determination of chlorine in water
3. Determination of total alkalinity of water
4. Determination of dissolved oxygen concentration of water sample.

5. Determination of biological oxygen demand (BOD) of a sewage sample.
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Isolation of phosphate solubilizing microorganisms from soil.

Reference Books:

1. Microbiology: A laboratory manual (2007) by Cappuccino J.G and Sherman N. (Publisher Pearson Benjamin Cummings).
2. Biotechnology Laboratory Manual by Swamy, P.M. Rastogi Publications (2008).
3. Practical Microbiology by Dr R.C. Dubey and D.K. Maheshwari, S.Chand Publications.

BIOINFORMATICS

BIOT-Sem-V-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

UNIT – I

Introduction to Bioinformatics, Biological Databases and Sequence analysis

Introduction, overview and needs of bioinformatics technology.

Primary Databases: Primary Sequence database i.e. GenBank & EMBL.

Secondary Databases: SwissProt/TrEMBL, Pfam.

Molecular Structure Databases: Protein Data Bank (PDB), SCOP, CATH. Understanding the structure of each database and using it on the web.

UNIT – II

Sequence Alignment

Introduction to sequence alignment and its applications.

Pair wise sequence alignment: Concept of global and local alignment, Dot Plot, algorithm for pair wise sequence alignment (Needleman Wunsch, Smith-watterman methods), Introduction to BLAST, types of BLAST, algorithm of BLAST and interpretation of its result.

Substitution matrices: Introduction to substitution matrices: PAM and BLOSUM matrices, concept of log odd ratio.

Multiple sequence alignment: Methods of multiple sequence alignment. Introduction to consensus sequences, motifs and profiles.

UNIT – III

Phylogenetic Analysis: Introduction to phylogenetic analysis and its application, phylogenetic tree topologies, methods of phylogenetic tree construction and tools.

Genome Annotation: Concept of genome annotation, methods of gene identification. Tools of gene identification: GenScan and Glimmer.

UNIT IV

Protein Structure Prediction: Concepts and strategies of protein structure prediction, methods of secondary structure prediction, and methods of protein tertiary structure prediction. Structure visualization tool – RasMol.

BIOT-Sem-V-IV-P: BIOINFORMATICS (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Searching literatures over PubMed.
2. Performing DOTPLOT on web.
3. Retrieving amino acid and nucleotide sequence from sequence databases using Entrez.
4. Performing BLASTp/n and interpreting its results.
5. Performing PSI-BLAST.
6. Performing multiple sequence alignment using Clustalw.
7. Finding ORF in nucleotide sequence using NCBI ORF FINDER
8. Using GenScan to identify exons in nucleotide sequence.
9. Download protein structure form PDB and visualize it using RasMol.

BIOT-Sem-V-V-T **Paper: ENZYMOLOGY**

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

UNIT – I

Structure and functions of enzymes: Historical background and general properties of enzymes, concept of active centre, binding sites, stereo specificity and ES complex formation, activation energy, Evidences for enzyme-substrate complex; Lock and key, Induced fit and Transition state hypotheses, Coenzymes and Cofactors- Prosthetic group, coenzymes involved in different metabolic pathways.

UNIT – II

Factors Affecting the Enzyme Activity: Concentration, pH and temperature. Kinetics of a single substrate enzyme catalysed reaction, derivation of Michealis-Menten Equation, significance of Km value, Vmax, Turnover number, Kcat. Enzyme activity, international units, specific activity,
Enzymes as thrombolytic agents, Anti-inflammatory agents, streptokinase, Isoenzymes

UNIT-III

Enzyme Regulation: Feedback inhibition, Allosteric Regulation, Covalent Modification and Proteolytic Activation. Organization of enzymes in the cell, localization, enzymes in membranes. Acid-base catalysis,

covalent catalysis, Metal ion catalysis, multienzyme complexes and ribozymes, catalytic antibodies, Allosteric enzymes.

UNIT – IV

Applications of Enzymes: Immobilized enzymes, industrial applications of immobilized enzymes, Thermophilic enzymes, amylases, lipases, Proteolytic enzymes in meat and leather industry, enzymes used in fermentation processes, cellulose degrading enzymes, Metal degrading enzymes.

Reference Books:

1. Fundamentals of Enzymology : Nicholas Price & Lewis Stevens
2. Biochemistry text books by Stryer, Voet and Lehninger
3. Methods in enzymology Vol.185 (1990) Gene Expression technology edited by D.V. Goeddel (Academic Press Inc. San Diego).
4. Enzymes: biochemistry, biotechnology and clinical chemistry (2001) by Trevor Palmer (Horwood).
5. Fundamentals of enzymology: The cell and molecular biology of catalytic proteins (2003) by Nicholas C. Price, Lewis Stevens, Lewis Stevens published (Oxford University Press, USA).
6. Principles and reactions of protein extraction, purification, and characterization (2004) edited by Hafiz Ahmed PhD (CRC, Taylor Francis Group).

BIOT-Sem-V-V-P: Enzymology (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Estimation of enzyme activity.
2. To study the Effect of pH on activity of enzyme.
3. To study the Effect of temperature on activity of enzyme.
4. To study the effect of substrate concentration on enzyme activity.
5. To estimate Km and Vmax of an enzyme and plot Line-Weaver Burk plot.

Reference Books:

1. An introduction to practical biochemistry (2004) by Plummer D.T. (Tata McGraw Hill Publishers Co. Ltd., New Delhi).
2. Practical Enzymology (2004) By Hans Bisswanger (Wiley- VCH, Weinheim)
3. Introductory practical biochemistry (2005) by S.K. Sawhney, Randhir Singh (Alpha Science International).

B.Sc. (Hons.) 3rd year (6th Semester) (Jan 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-V-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-IV-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreneurship	BIOT-Sem-VI-V-T	100		

Total Marks = 500

B.Sc. (Hons.)3rd year (6th Semester)

BIOT-Sem-VI-I-T Paper: GENETIC ENGINEERING

: 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours

Objectives:
Genetic engineering refers to the process of manipulating the characteristics and functions of the original genes of an organism. The objective of this process is to introduce new physiological and physical features or characteristics. The students will learn how the genes can be cut and paste from one organism to another and what are its implications.

UNIT-I

1. Introduction to genetic engineering. Why gene cloning and DNA analysis is important. . How to clone a gene - What is clone, Overview of the procedure

2. Tools in Recombinant DNA Technology:
Restriction and modifying enzymes, Type I , Type II and Type III enzymes and their characteristic features; restriction sequences, isoschizomers, rare cutting enzymes, enzyme cutting similar sequence in different manner.

DNA Modifying enzymes: Characteristics and applications of Nucleases – DNase and RNase, DNA-Pol I, Klenow fragment, T4DNA polymerase, T7 DNA polymerase, T4 Polynucleotide kinase, Phosphatase, Reverse transcriptase, Taq polymerase and Ligase. Terminal deoxy ribonucleotidyl transferase.

3. **Polymerase Chain Reaction**: Types and applications

UNIT II

Basic biology of plasmids and Phage vectors Basic features of plasmids, plasmid classification, Bacteriophage λ, lytic & lysogeny, Promoter control circuits. linear and circular forms of lambda vector, DNA cloning with single stranded DNA vectors.

DNA cloning vectors Cloning vectors for E. coli- Nomenclature, pBR 322, pBR 327, pUC 8, pGEM3Z. insertion and replacement vectors; Vectors based on M13. Methods of identification of recombinants: Insertional inactivation, blue/white selection. Cloning vectors for yeast- YEp, YIp, YRp.

Advanced Vectors: cosmid, phagemid, Bacterial Artificial Chromosomes (BACs), shuttle vectors, yeast artificial chromosomes.

UNIT-III

Preparation of genomic and cDNA library: Partial digests, Choice of vectors, Construction and Evaluation of a genomic library. cDNA library: mRNA enrichment, cDNA synthesis, Random, arrayed and Ordered library.

Finding The Right Clone: Gene identification, Nucleic acid hybridization, screening Procedure, Probe selection, immuno screening, functional complementation. Southern blotting, northern blotting.

Preparation of nucleic acid probes: DNA and RNA labeling techniques, nick translation , random priming, end labelling, radioactive and non- radioactive labels.

UNIT-IV

Site directed mutagenesis (cassette , primer extension, RT, real time, multiplex, inverse),
DNA sequencing (Maxam-Gilbert, Sanger, pyro).
Production of Protein from Cloned Genes: Special vectors for expression of foreign genes in *E. coli,* General problems with the production of recombinant protein in *E. coli.* Production of recombinant protein by eukaryotic cells.

Suggested readings:

1. Recombinant DNA by Watson, J.D. et.al., 1993, Scientific American Books, New York.
2. Principles of Gene Manipulation by Old., R.W. and Primrose, S.B., 2004, Blackwell Publishing, UK.
3. Methods in Gene Technology by Dale, J.N., 1994, JAI Press Ltd. London, England.
4. Recombinant Principles of gene manipulation and genomics, primrose & Twyman 2006, Blackwell, U.K.
5. Gene cloning and DNA analysis: An introduction by T.A. Brown (5th Ed.) 2006, Blackwell Science Ltd.
6. Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar,

BIOT-Sem-VI-I-P : GENETIC ENGINEERING (PRACTICAL)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Demonstration of PCR.
2. Demonstration of Southern blotting.
3. Preparation of competent cells.
4. Transformation of competent cells and blue/white selection.
5. Spectrophotometer analysis of DNA.

BIOT-Sem-VI-II-T: BIOPROCESS ENGINEERING AND TECHNOLOGY

Theory : 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Unit – I

Fundamental principles of biochemical engineering.
Sterilization of air and media sterilization, design of batch sterilization process.
Del factor, sterilization cycle, continuous sterilization process

Unit – II

Microbial growth kinetics Simple kinetics of microbial growth (Batch and Continuous, Feed Back System), yield coefficient, doubling time, specific growth rate, internal and external feedback systems, metabolic and Biomass productivities, effect of temperature and pH on the product formation

Unit – III

Design of fermenter:

Components of Fermenter, Aseptic operation of the fermenters, control and measurement equipment of fermenters, pH and DO probes, impeller and spargers,

Unit – IV

Downstream processing

Removal of microbial cells and other solid materials, foam separations, filtration, industrial filters, centrifugations and industrial centrifuges, cell Disruption, aqueous two phase extraction system, super critical extraction, whole broth process.

Waste water treatment for fermentation process

Reference Books:

1. Madigan, M.T., Martinko, J.M, P.V. Dunlap, T.D. Brock, D.P. Clark (2008). Brock biology of mMicroorganisms (Pearson Benjamin Cummings).
2. Prescott, L.M. Harley, J.P., Klein, D.A. (2001). Microbiology (McGraw-Hill, Boston).
3. Schaechter, M., Ingraham, J.L., Neidhardt, F.C., (2006). Microbe (ASM Press, Washington, DC).
4. Prescott, L.M. (1999). Microbiology with microbes in motion (McGraw-Hill).
5. Bailey J.E., Ollis, D.F. (1986). Biochemical engineering fundamentals (McGraw-Hill).
6. Schuler, M.L., Kargi F. (2002). Bioprocess engineering: Basic concepts (Prentice hall PTR, Upper Saddle River NY).

BIOT-Sem-VI-II-P: Bioprocess Engineering and Technology (Practicals)

Practical: 20 marks
Int. assessment: 05 marks
Total: 25 marks
Time: 3 hours

1. Demonstration of components and sterilization of fermenters and other accessories.
2. Determination of doubling time, yield coefficient for growth of microorganism.
3. Effect of temperature and pH and growth and product formation.
4. Determination of Specific growth rate and maximum specific growth rate
5. Cell disruption by Sonicator
6. Demonstration of normal flow and cross flow filtration process.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory (Pearson Benjamin Cummings).
2. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).

BIOT-Sem-VI-III-T : FOOD BIOTECHNOLOGY

Theory: 67 marks
Int. assessment: 08 marks
Total: 75 marks
Time: 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks.

• Five questions to be attempted.

• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT – I

Food and Microorganisms: History and scope of Food biotechnology, food as substrates for microbes, factors affecting growth of microorganisms, Detection of microorganisms in food: Sampling plan & procedure for microbial analysis; Qualitative methods to isolate pathogenic microorganisms, test for bacterial toxins in foods; Quantitative methods for microbial enumeration: Direct enumeration, indirect estimations and standard and recommended methods; Applications of enzymes in food technology.

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UNIT – II

Principles of food preservation: Physical, chemical, and biological methods of preservations.

Contamination, preservation and spoilage of different kind of foods: Milk and milk products (milk, butter, yoghurt and cheese), beverages (beer, wine, tea and coffee), meat and fish products (sausages, vegetables and fruits.

UNIT – III

Food adulterants and food additives: Major food adulterants, types and their methods of assay, food additives their function and uses, flavoring agents, coloring agents and vitamins as food additives.

Fermented foods and their production: Bakers yeast, Bread, cheese, yoghurt, tofu, miso, tempeh, sauerkraut,meat and alcoholic beverages (beer and wine)

Production of algal, fungal and other microbial proteins(SCP and mushroom etc)

Probiotics, prebiotics,fortified and biofortified foods, functional foods, nutraceuticals, organic foods.

Genetically modified food (Golden rice, Favr savr tomato, protato, pomato etc)

UNIT –IV

Food and water borne diseases: Shigellosis, Salmonellosis, Cholera.

Food borne intoxications: *Staphylococcal, Bacillus and Clostridium botulinum*

Exotoxins and Endotoxins, their mechanism of action

Rapid and advanced estimation methods (Immunoassays, nucleic acid probe)for detection of pathogens.

Reference Books:

1. Frazier W.C., Westhoff, D.C. (Ed). (1988). Food microbiology (McGraw-Hill).

2. Admas, M.R., Moss, M.O (2005). Food microbiology (Edition 3, Illustrated Publisher Royal Society of Chemistry).

3. SriLakshmi B. (2003) Food science (New Age International Publishers, India).

4. Jay J.M., M.J. Loessner, D.A. Golden. (2005). Modern food microbiology (Edition 7,

Illustrated Publisher Springer).
5. B. Sivasankar (2004). Food processing and preservation (PHI Private Ltd, New Delhi).
6. Michael P. Doyle (1989). Food borne bacterial pathogens (Edition illustrated, Publisher Marcel Dekker).

BIOT-Sem-VI-III-P: FOOD BIOTECHNOLOGY (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Isolation and identification of microorganisms in spoiled food (fungi and bacteria).
2. Inhibitory effect of low temperature on microbial growth.
3. Production and estimation of ethanol.
4. Estimation of lactose in milk.
5. Methylene blue reductase test (MBRT) for determination of quality of milk.
6. Plating the milk samples for microbial contamination.
7. Demonstration for the identification of mushrooms by spore prints.
8. Checking the effect of pasteurization of milk by alkaline phosphatase.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-VI-IV-T: GENOMICS AND PROTEOMICS

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

- ***Set nine questions in all. All questions carry equal marks.***
- ***Five questions to be attempted.***
- ***Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).***
- ***Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.***

UNIT I

Introduction to Genomics, DNA sequencing methods – manual & automated: Maxam & Gilbert and Sangers method. Pyrosequencing, Genome Sequencing: Shotgun & Hierarchical (clone contig) methods, Computer tools for sequencing projects: Genome sequence assembly software.

UNIT II

Managing and Distributing Genome Data: Web based servers and softwares for genome analysis: ENSEMBL, VISTA, UCSC Genome Browser, NCBI genome. Selected Model Organisms' Genomes and Databases.

UNIT III

Introduction to protein structure, Chemical properties of proteins. Physical interactions that determine the property of proteins. Short-range interactions, electrostatic forces, van der waal interactions, hydrogen bonds, Hydrophobic interactions. Determination of sizes (Sedimentation analysis, gel filteration, SDS-PAGE); Native PAGE, Determination of covalent structures – Edman degradation.

UNIT IV

Introduction to Proteomics, Analysis of proteomes. 2D-PAGE. Sample preparation, solubilization, reduction, resolution. Reproducibility of 2D-PAGE. Mass spectrometry based methods for protein identification. De novo sequencing using mass spectrometric data.

PRACTICALS

1. Use of SNP databases at NCBI and other sites
2. Use of OMIM database
3. Detection of Open Reading Frames using ORF Finder
4. Proteomics 2D PAGE database
5. Softwares for Protein localization.
6. Hydropathy plots
7. Native PAGE
8. SDS-PAGE

SUGGESTED READING

1. Genes IX by Benjamin Lewin, Johns and Bartlett Publisher, 2006.
2. Modern Biotechnology, 2nd Edition, S.B. Primrose, Blackwell Publishing, 1987.
3. Molecular Biotechnology: Principles and Applications of Recombinant DNA, 4th Edition, B.R. Glick, J.J. Pasternak and C.L. Patten, 2010.
4. Russell, P. J. (2009). iGenetics- A Molecular Approach. III Edition. Benjamin Cummings.
5. Molecular Cloning: A Laboratory Manual (3rd Edition) Sambrook and Russell Vol. I to III, 1989.
6. Principles of Gene Manipulation 6th Edition, S.B.Primrose, R.M.Twyman and R.W. Old. Blackwell Science, 2001.
7. Snustad, D.P., Simmons, M.J. (2009). Principles of Genetics. V Edition. John Wiley and Sons Inc. 3. Klug, W.S., Cummings, M.R., Spencer, C.A. (2009). Concepts of Genetics. IX Edition. Benjamin Cummings.

BIOT-Sem-VI-V-T

INTELLECTUAL PROPERTY RIGHTS AND ETHICAL ISSUES IN BIOTECHNOLOGY AND ENTREPRENEURSHIP

Theory : 90 marks
Int. assessment : 10 marks
Total : 100marks
Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks.**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**
- **Five questions to be attempted.**

- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**

Objective: To introduce the students to intellectual rights and how to use the current intellectual property system to protect and commercialize their biotechnological invention. This course also covers the ethical issues, controversies and social-ethical impact of biotechnology on society.

UNIT – I

IPR: Introduction to Intellectual Property Rights. Tangible and intangible property. Patents: Introduction to patent law and brief history (early GATT and TRIPS), conditions for patentability; procedure for obtaining patents, patent filing through PCT, rights of a patentee; patent infringements and litigation.
Indian patent laws and amendments. Patents from an international perspective.

UNIT- II

Design, copyright and Trademark:
Copyright: Registration procedure and copyright authorities; assignment and transfer of copyright, copyright infringement and exceptions to infringement; software copyright.
Designs: Introduction to the law on industrial designs; registration and piracy; international perspective; commercial exploitation and infringement.
Trademark: Importance, Registration, Trademark infringement and piracy.

UNIT – III

Patenting in biotechnology: Biotechnology patents and its economic, ethical and depository considerations.
Patentable subject matter and legal aspects of transfer of biotechnology in India. Other multilateral treaties & International conventions – Paris convention, CBD, UPOV, PGRFA.
Writing a patent specification.
Information sources in patent literature search.

UNIT – IV

Entrepreneurship:
Entrepreneur and its types, Women Entrepreneurship. Selection of a product, Product line design and development processes, economics on material and energy requirement, stock the product and release the same for making
The basic regulations of excise: Demand for a given product, feasibility of its production under given constraints of raw material, energy input, financial situations export potential.

Reference Books:

1. J.E. Smith (2004). Biotechnology (Cambridge Univ. Press).
2. V. Santaniello (2000). Agriculture and intellectual property rights:
economic institutional, and implementation issues in biotechnology (Edition illustrated Publisher CABI).
3. Thackerey, A (ed) (1998). Private science: Biotechnology and the rise of the molecular sciences (Univ. of Pennsylvania Press, Phil).
4. Inderpal Singh and Baljinder Kaur (2006) Patent law and Entrepreneurship. Kalyani Publishers, India.

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI

AND

COURSES OF READING FOR M. Sc. BOTANY

(TWO YEARS COURSE)

SEMESTER SYSTEM

1ST TO 4TH SEMESTER

EXAMINATIONS of 2018-2019

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M. Sc. BOTANY (TWO- YEAR COURSE) SEMESTER SYSTEM EXAMINATIONS OF2018–19

FIRST SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
I	- Phycology	75 (60A+ 15 HT*)	25 (20+5HT*)
II	- Bryology	75 (60A+ 15 HT *)	25 (20+5HT*)
III	- Mycology and Microbiology	75 (60A+ 15 HT*)	25 (20+5HT*)
IV	- A) Computer Applications & Biostatistics B) Lab. Techniques	75 (60A+ 15 HT*)	25 (20+5HT*)
V-	Anatomy of Angiosperms	75 (60A+ 15 HT *)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 = 500		

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT* : House Test

SECOND SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
VI	- Pteridophytes	75 (60A+ 15 HT)	25 (20+5HT*)
VII	- Gymnosperms	75 (60A+ 15 HT)	25 (20+5HT*)
VIII	- Angiosperm Morphology, Taxonomy and Phylogeny	75 (60A+ 15 HT)	25 (20+5HT*)
IX	- Reproductive Biology of Angiosperms	75 (60A+ 15 HT)	25 (20+5HT*)
X	- Plant Pathology	75 (60A+ 15 HT)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 =		**500**

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT * : House Test.

SECOND YEAR

3rd and 4th SEMESTERS

THIRD SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XI	- Molecular Biology	75 (60A+ 15 HT*)	25 (20+5HT*)
XII	- Plant Physiology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIII	- Biotechnology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIV	- Cytogenetics	75 (60A+ 15 HT*)	25 (20+5HT*)
XV	- Ecology and Environment	75 (60A + 15 HT*)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS: 375 + 125 =		**500**

TEACHING HOURS: THEORY: 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

FOURTH SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XVI	- Plant Biochemistry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVII	- Forestry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVIII	- Genetics and Plant Breeding	75 (60A+ 15 HT*)	25 (20+5HT*)
XIX	- Plant Resource, Utilization and Conservation	75 (60A+ 15 HT*)	25 (20+5HT*)
XX -	A) Research Project/Field Study Report	---	60
	B) Seminar	---	40
	Total Marks	**300**	**200**
	GRAND TOTAL OF MARKS: 300 + 200 =		**500**

TEACHING HOURS : THEORY : 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

*** The duration of each paper for the examination is 3 hours**

FIRST SEMESTER
PAPER I: PHYCOLOGY

Objective of the paper is to impart knowledge about Algae on various aspects like Classification, Life cycles, Thallus organization and Reproduction in various groups; Evolution, Habitats and Economic importance of algae.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical, the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Criteria for algal classification (pigments, reserve food, flagella, chloroplasts, pyrenoids, eye spots, endoplasmic reticular membrane etc.); Comparative account of important systems of classification (Fritsch, Round, Chapman and Lee).
2. Salient features: Cell structure, thallus organization, reproduction and broad classification of i) Cyanophyta ii) Xanthophyta iii) Bacillariophyta iv) Dinophyta.

UNIT-II

3. Salient features : Cell structure, thallus organization , reproduction and broad classification of v) Chlorophyta vi) Phaeophyta vii) Cryptophyta and viii) Rhodophyta.

UNIT-III

4. Diversity in algal habitats (terrestrial, freshwater and marine).
5. Thallus organization in algae including evolutionary trends.
6. Reproduction (vegetative, asexual and sexual), origin and evolution of sex, life cycles.
7. Current concepts and relationships of protochlorophycean algae.

UNIT-IV

8. Rhythms and bioluminescence in dinoflagellates.
9. Economic importance of algae (algal biofertilizers , algal blooms, algae as food and feed , uses in industries etc.)
10. Algae in Biotechnology.

PRACTICALS

Max. Marks :20

1. Algal collections from different habitats and their identification.
2. Morphology and reproductive stages of following genera:

***Cyanophyta** : Chroococcus, Microcystis, Oscillatoria, Lyngbya, Nostoc, Anabaena, Gloetrichia, Cylindrospermum, Scytonema.*

Chlorophyta: *Volvox, Hydrodictyon, Chlorella, Pediastrum, Scenedesmus, Oedogonium, Bulbochaete, Cosmarium, Closterium, Zygnema, Sphaeroplea, Cladophora, Pithophora, Spirogyra, Caulerpa, Codium, Valonia, Halimeda, Acetabularia, Chara, Nitella, Coleochaete, Dreparnaldia.*

Xanthophyta *: Vaucheria, Botrydium.*

Bacillariophyta *: Pinnularia, Synedra, Navicula, Cyclotella.*

Phaeophyta : *Ectocarpus, Fucus, Laminaria, Dictyota, Desmortestia, Sporochnus, Sargassum.*

Rhodophyta : *Erythrotrichia, Porphyra, Nemalion, Batrachospermum, Corallina, Gelidium, Polysiphonia*

ESSENTIAL READINGS

.

1. Chapman, V.J. and D.J. Chapman. *The Algae.* ELBS and Macmillan , NY. 1977.
2. Lee, R. E., *Phycology,* Cambridge University Press, Cambridge, 2008
3. VanDen Hock, C., Mann, D.G. and Jahns, H. M. *Algae : An Introduction to Phycology,* Cambridge University Press, Cambridge, 1995.

SUGGESTED READINGS

1. Ahluwalia, A.S., (Ed.) *Phycology: Principles, Processes and Applications*, Daya Publishing House, New Delhi, 2003
2. Kumar, H.D., *Introductory Phycology,* East West Press, New Delhi, 1999
3. Lee, R.E. *Phycology*. 4th Ed. Cambridge University Press, London. 2008.

PAPER II : BRYOLOGY

Objective of the paper is to impart knowledge about Bryophytes on various aspects like Classification, structural organization and developmental studies of gametophyte and sporophyte in various groups; Ecology, Water relations, Chemistry, Cytology, Fossil bryophytes, Origin and evolution, Experimental studies and Economic Importance.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class room. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25 (20A+5HT)

THEORY

Max. Marks: 60

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics of Bryophytes: Systems of classification with salient features of Anthcerotophytina, Hepatophytina and Muscophytina.
2. Structure and development of sex organs in Bryophytes.
3. Economic Importance of Bryophytes.
4. Ecology of Bryophytes: Habitats, Growth forms, Bryophytes as Pollution Indicators.
5. Water Relations: Drought Tolerance ; Dessication and Rehydration ; Ectohydric ,Endohydric and Mixohydric mosses.

UNIT-II

6. Comparative structural organization of gametophyte and sporophyte; Asexual reproductive structures; distribution of sex organs; protective structures associated with archegonia and developing sporogonia; spore and elaters / peristome teeth ; spore dispersal mechanisms and spore germination in
    a) **Hornworts** (Anthocerotales)
    b) **Liverworts** (Calobryales, Jungermanniales, Metzgeriales, Marchantiales, Monocleales and Sphaerocarpales.)

UNIT-III

    c) **Mosses** (Sphagnopsida, Andreaeopsida – *Andreaea* and *Takakia* , Archidiopsida, and Peristomiopsida -- Tetraphidae, Buxbaumidae, Polytrichidae and Bryidae).

7. Experimental studies: Effect of various factors on protonemal differentiation and bud formation; Apogamy and Apospory.

UNIT-IV

8. Chemistry of Bryophytes: A brief account of distribution of various organic compounds in different groups of Bryophytes ; Chemistry in relation to taxonomy.
9. Cytological studies in Bryophytes: Chromosome numbers in major groups of Bryophytes, Polyploidy in brief, m-chromosomes and sex-chromosomes, Cytology in relation to taxonomy.
10. Fossil Bryophytes (A brief account).
11. Origin of Bryophytes.

PRACTICALS **Max. Marks : 20**

1. Structural details of *Marchantia, Asterella, Plagiochasma, Targionia, Pellia, Frullania, Porella, Notothylas, Anthoceros, Sphagnum, Pogonatum, Barbula, Bryum and Entodon* and *Thuidium.*
2. Study of diagnostic features of following genera: *Dumortiera, Athalamia, Conocephalum, Cryptomitrium, Reboulia, Riccia, Riccardia, Metzgeria, Blasia, Sewardiella, Plagiochila, Fissidens , Atrichum* , *Mnium* and *Thuidium.*
3. Field trips to familiarize with natural habitats, growth forms and diversity of bryophytes.
4. To study permanent slides / photographs of m-Chromosomes and Sex- chromosomes.

ESSENTIAL READINGS

1. Goffinet , B. and Shaw, A.J. *Bryophyte Biology*. Cambridge University Press, Cambridge, pp. 476, 2000.
2. Richardson, D. H. S. *Biology of Mosses*, Blackwell Scientific Publications, Oxford, pp. 220, 1981.
3. Schofield, W.B. *Introduction to Bryology*, Macmillan Publishing Company, New York, pp. 431, 1985.

SUGGESTED READINGS

1. Kashyap, S.R. *Liverworts of Western Himalayas and the Punjab plains. Vols I II.* Researchco Publications, New Delhi. 1932
2. Kumar, S.S. *An approach towards Phylogenetic Classification of Mosses*. Jour. Hattori Bot. Lab. Nichinan , Japan. 1984.
3. Rashid, A. *An Introduction to Bryophyta*. Ist Ed. Vikas Publishing House Pvt. Ltd., New Delhi. 298 pp. 1998.

PAPER III : MYCOLOGY AND MICROBIOLOGY

Objective of the paper is to impart knowledge about Classification, Mycelium, Reproduction in various groups of Fungi.; Nomenclature , Classification , Structure, reproduction, importance of Bacteria, Viruses, MLOs, Spiroplasmas, Viroids, Mycoviruses; Translocation and distribution in host plants, infection, replication and transmission of plant viruses.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Recent trends in the classification of Fungi.
2. General account of Myxomycota, Oomycota and Chytidriomycota

UNIT-II

3. General account of Zygomycota, Ascomycota , Basidiomycota and anamorphic fungi.

UNIT-III

4. Tissue systems in Fungi.
5. Types of Centrum development in Ascomycota.
6. Heterokaryosis and Parasexuality.
7. Mycorrhizal application in agriculture and plant growth.

UNIT-IV

8. Nomenclature, classification, morphology, translocation and distribution in host plants, infection, replication and transmission of plant viruses.
9. Nomenclature, classification, structure, reproduction, nutrition and economic importance of Eubacteria ; General account of Archaebacteria.
10. Brief account of MLOs, Spiroplasma, Viroids and Mycoviruses.

PRACTICALS

Max. Marks: 20

1. Study of morphological and reproductive structures of following genera :
   MYXOMYCOTA: *Stemonitis, Physarum.*
   OOMYCOTA: *Saprolegnia, Albugo, Peronospora, Phytophthora***,** *Bremia.*
   CHYTIDRIOMYCOTA: *Synchitrium, Allomyces, Blastocladia.*
   ZYGOMYCOTA: *Mucor, Rhizopus, Pilobolus.*
   ASCOMYCOTA: *Protomyces, Aspergillus, Penicillium, Claviceps, Phyllactinia, Xylaria, Morchella, Peziza*
   BASIDIOMYCOTA: *Puccinia, Melampsora, Agaricus, Ustilago, Polyporus, Ganoderma, Cyathus, Hydnum , Geasterum.*
   ANAMORPHIC FUNGI: *Fusarium, Cercospora, Colletotrichum, Alternaria, Helminthosporium.*
2. Preparation of media to isolate fungi, bacteria and other microbes.
3. Isolation of *Rhizobium* from legume root nodules.
4. Sensitivity tests of bacteria using different antibiotics.

SUGGESTED READINGS

1. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
2. Webster, J. and Webes R. *Introduction to Fungi*. Cambridge University Press, Cambridge 3rd Edition, 2007.
3. Bos, L. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1992

SUGGESTED READINGS

1. Bilgrami,K.S. and R.N.Verma. *Physiology of Fungi.*2nd Ed. Vikas Publication House, New Delhi
2. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. *Microbiology.* 5th Ed. Tata McGraw Hill, New Delhi. 2007.
3. Kendrick, B. *The Fifth Kingdom*. Focus Publishing, Newburyport, M.A. U.S.A, 2000

PAPER IV : A) COMPUTER APPLICATIONS AND BIOSTATISTICS

B) LABORATORY TECHNIQUES

Objective: Now-a-days life sciences have become interdisciplinary. The aim of this paper is to converse and train the students with different modern biological and physico-chemical techniques employed in the study of biological materials.

This paper also aims to impart basic knowledge of Computer (Computer Hardware, software and programming languages etc.) and Biostatistics and use the information in analyzing the biological data.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector, LCD projector etc. The students also make group discussions in the class rooms. In practical the students learn the working of different instruments and computer.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

SECTION A : COMPUTER APPLICATIONS AND BIOSTATISTICS

UNIT-I

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

UNIT-II

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chi square – test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation; Simple & multiple regression.

ESSENTIAL READINGS

1. Daniel, W.W. *Biostatistics: A foundation for Analysis in the Health Sciences*. Wiley and Sons, Singapore, 2006, pp. 755.
2. Kothari, C.R. *Research Methodology – Methods and Techniques*. 2nd revised ed. New Age International Publishers, India, 2009, pp.401.
3. Sinha, P.K. *Computer Fundamentals.* 4th Ed. B.P.B. Publication. 404 pp. 2003.

SUGGESTED READINGS

1. Hunt, R. and J. Shelly. *Computer and Common Sense.* 4th Ed. Prentice Hall, India. 224 pp. 2002
2. Dobbs, S. and Miller, J. *Statistics 1*. Cambridge University Press, UK, 2006, pp. 184
3 Dobbs, S. and Miller, J. *Statistics 2*. Cambridge University Press, UK, 2006, pp. 178.

SECTION B : LABORATORY TECHNIQUES

UNIT-III

1. Principles and applications of Light, Phase Contrast, Fluorescence, Scanning and Transmission Electron Microscopy.
2. Principles and applications of Tracer Techniques in Biology: Radioactive Isotopes and Half Life of isotopes; Autoradiography.
3. pH metery – Principles and applications.
4. Principles, procedure and application of Paper Chromatography, Thin Layer Chromatography , Gel filtration, Ion Exchange and Affinity Chromatography, High Pressure Liquid Chromatography.

UNIT-IV

5. Electrophoresis and Isoelectric focusing: Principle , working and applications of Electrophoresis.
6. Colorimetery and Spectrophotometery: Lambert Beer Law, Basic components, applications.
7. Centrifugation: Technique and principles; Preparative and Analytical Centrifugation.

PRACTICALS Max. Marks :20

1. Data collection, presentation, plots, Chi-square test, Goodness of fit, determination of correlation coefficient.
2. Genomic DNA isolation.
3. DNA and Protein analysis by Gel electrophoresis.
4. To demonstrate Beer's law using different dyes.
5. Preparation of Phosphate Buffers of different pH values.
6. Practicals pertaining to Chromatographic techniques: Column Chromatography (Exclusion and Affinity Chromatography), Paper Chromatography and Thin Layer Chromatography.
7. Practicals pertaining to centrifugation.

ESSENTIAL READINGS

1. Mahajan, B.K. *Methods in Biostatistics for Medical Students and Research Workers*. Jaypee Brothers Medical Publishers, India, 2006, pp. 341
2. Potter, G.W.H. *Analysis of Biomolecules : An introduction to Principles, Instrumentation and Techniques*. Chapman and Hall, London.252pp. 1995
3. Wilson, K. and J. Walker. *Principles and Techniques of Practical Biochemistry.* Cambridge University Press, Cambridge.784pp. 2000.

SUGGESTED READINGS

1. Plummer, D.T. *An Introduction to Practical Biochemistry*. Tata McGraw Hill Publishing Ltd., New Delhi.352pp. 1994.
2. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K.390pp. 2001.
3. Sawhney, S.K. and R. Singh. *Introductory Practical Biochemistry.* Narosa Publishing House, New Delhi.470pp. 2002.

PAPER V : ANATOMY OF ANGIOSPERMS

Objective: This paper deals with the structure, origin, differentiation and phylogeny of meristems cell, tissues and organs of the plant body.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Camera Lucida, Computer and Image Projecting system and permanent glass slides of plant materials

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Shoot Development :**Various theories regarding the organization and activity of shoot apical meristem (SAM) ; Transition to flowering , Floral meristem and Floral development in *Arabidopsis* and *Antirrhinum* .
2. **Root development:** Organization of Root Apical Meristem (RAM); Vascular tissue differentiation; lateral roots .

UNIT-II

3. **Leaf growth and differentiation**: Phyllotaxy, Leaf development , differentiation of epidermis (with special reference to stomata and trichomes) and mesophyll , Kranz Anatomy and Leaf abscission.

UNIT-III

4. Structure, differentiation and phylogeny of Xylem; Reaction wood.
5. Structure, differentiation and phylogeny of Phloem

UNIT-IV

6. Transfer Cells.
7. Structure and activity of vascular and cork cambium.
8. Seed coat anatomy with reference to legumes and cereals.

PRACTICALS

Max. Marks : 20

1. Study of anomalous type of secondary growth through transverse sections.
2. Maceration of wood.
3. Study of living shoot apices .
4. Study of cyto-histological zonation in the shoot apical meristem and. examination of shoot apices in both T.S. and L.S. to show the origin and arrangement of leaf primordia.
5. Study of V.S. of various types of leaves.
6. Study of leaf epidermis.
7. Study of T.S. of Seed Coat.

ESSENTIAL READINGS

1. Beck, C.D. *An Introduction to Plant Structure and Development: Plant Anatomy for the 21st Century.* Cambridge Univ. Press,. 452 pp. 2009.
2. Burgess, J. *An Introduction to Plant Cell Development.* Cambridge Univ. Press, Cambridge. 266 pp. 1985.
3. Fahn, A. *Plant Anatomy*. 3rd Ed. Pergamon Press, Oxford. 544 pp. 1989.

SUGGESTED READINGS

1. Esau, K. *Anatomy of Seed Plants*. John Wiley, New York. 550 pp. 1977.
2. Ray, F.E. and S.E.Eichhorn. *Esau's Plant Anatomy : Meristems, Cells and Tissues of the Plant Body: their Structure, Function and Development.* 3rd Ed. Wiley-Lis . 624 pp. 2006.
3. Steeves, T.A. and I. M. Sussex. *Patterns in Plant Development.* 2nd Ed. Cambridge Univ. Press, Cambridge. 408 pp. 1989.

SECOND SEMESTER

PAPER VI : PTERIDOPHYTES

Objective of the paper is to impart knowledge about Pteridophytes on various aspects like Classification, Structural organization and Developmental studies of sporophyte and gametophyte of extant and extinct Pteridophytes, Economic importance , Cytological and Experimental studies.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In the practical the students make observations and work on the plant materials (including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics, The emerging concepts and Classification of pteridophytes.
2. Geological Time Table ; Fossils- their types , formation and methods of study ;Calculation of age of rocks / fossils.
3. Distribution , habitat , range , organography, external and internal morphology of sporophyte , spores and their mechanism of dispersal , gametophytic generation and sexuality and embryogeny of following classes of Pteridophytes with reference to the genera mentioned :

A: PSILOPSIDA

i) Rhyniales : *Rhynia, Horneophyton, Yarravia, Cooksonia*

ii) Trimerophytales : *Trimerophyton, Psilophyton*

iii) Zosterophyllales : Zosterophyllum , *Kaulangiophyton, Crenaticaulis, Sawdonia*

B: PSILOTOPSIDA

Psilotales : *Psilotum* and *Tmesipteris* ; A discussion on the systematic position of this group in pteridophytes.

UNIT-II

C: LYCOPSIDA

i) Protolepidodendrales : *Drepanophycus, Asteroxylon, Protolepidodendron,*
ii) Lycopodiales : A brief account of *Lycopodium* and *Phylloglossum*
iii) Lepidodendrales : *Stigmaria*
Family Lepidodendraceae , Family Bothrodendraceae,
Family Sigillariaceae, Family Pleuromeiaceae
iv) Isoetales : *Isoetes, Nathorstiana* , Brief account of *Stylites*
v) Selaginellales : *Selaginella* (A brief account)

D: SPHENOPSIDA

i) Hyeniales : *Hyenia*
ii) Sphenophyllales : *Sphenophyllum, Shenophyllostachys, Eviostachya, Cheirostrobus*
iii) Calamitales : *Asterocalamites, Protocalamites, Calamites, Calamostachys,Paleostachys*
iv) Equisetales : *Equisetum* (A brief account)

UNIT-III

E: PTEROPSIDA

a) Primofilices
i) Cladoxylales : *Cladoxylon, Pseudosporochnus*
ii) Coenopteridales : *Stauropteris, Botryopteris, Rhacophyton*

b) Eusporangiatae
i) Marattiales: *Psaronius, Angiopteris, Marattia*
ii) Ophioglossales : *Ophioglossum, Botrychium , Helminthostachys*

c) Osmundidae : Osmundales – *Osmunda*

d) Leptospangiatae
i) Marsileales : A brief account
ii) Salviniales : *Salvinia, Azolla*
iii) Filicales: General account of sporophyte morphology, stellar organization, soral and sporangial characters, gametophytes and embryogeny.

UNIT-IV

4. Apogamy and Apospory
5. Reproductive Biology of ferns.
6. Heterospory and its significance.
7. Cytological evolution and Species Concepts – Cytological evolutionary role of polyploidy in the evolution of pteridophytes.
8. Economic importance of Pteridophytes
9.

PRACTICALS **Max. Marks :20**

1. Study of morphology and anatomy of vegetative and reproductive organs using cleared whole mounts, sections , macerations and permanent preparations of following living genera :
Psilotum, Lycopodium, Isoetes, Selaginella, Equisetum, Angiopteris, Ophioglossum, Botrychium, Osmunda, Marsilea, Salvinia, Azolla, Lygodium, Hymenophyllum,

Cyathea, Pteris, Asplenium, Dryopteris, Polystichum, Adiantum, Polypodium, and *Lepisorus.*

2. Study of some fossil pteridophytes through specimens and permanent slides .
3. Preparation of permanent slides / charts.
4. Field trips to familiarize with the diversity of pteridophytes in their natural habitats.

ESSENTIAL READINGS

1. Khullar, S.P. *An Illustrated Fern Flora of West Himalayas* (Vols. I and 2). International Book Distributors, Dehradun, 2000.
2. Rashid, A. A*n Introduction to Pteridophyta*. Vikas Publishers, New Delhi, 1999.
3. Sporne, K.R. *The Morphology of Pteridophytes*. B.I., Publications, Bombay, Delhi, Madras, 1982.

SUGGESTED READINGS

1. Parihar, N.S. *An Introduction to Embryophyta Vol. II, Pteridophytes*. Central Book Depot, Allahbad. 1965.
2. Pryer, K.M., H.Schneider, A.R.Smith, R.Cranfill, P.G.Wolf, J.S.Hunt and S.D.Sipes. *Horsetails and Ferns are a monophyletic group and the closest living relatives to seed plants*. Nature 409: 618-622, 2001.
3. Raghavan, V. *Developmental Biology of Fern Gametophytes (Developmental and Cell Biology Series).* Cambridge Univ. Press, Cambridge. 384 pp. 1989.

PAPER VII : GYMNOSPERMS

Objective of the paper is to impart knowledge about Gymnosperms on various aspects like classification, structural organization and developmental studies of sporophyte and gametophyte of extant and extinct Gymnosperms, Economic importance , Cytological studies and Phytogeography.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials(including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics and Classification of Gymnosperms (Broad outlines).
2. Detailed study of the vegetative morphology, reproductive organs, structure and evolution of the following orders and families (with reference to the genera mentioned)

I . CLASS : PROGYMNOSPERMOPSIDA

i) ORDER : ANEUROPHYTALES
Family: Aneurophytaceae : *Aneurophyton, Tetraxylopteris, Triloboxylon, Proteokalon*

ii) ORDER : PROTOPITYALES
Family : Protopityaceae : *Protopitys*

iii) ORDER : ARCHAEOPTERIDALES
Family : Archaeopteridaceae : *Archaeopteris*

UNIT-II

II. CLASS : CYCADOPSIDA

i) ORDER : PTERIDOSPERMALES
a) Family Lyginopteridaceae : *Lyginopteris, Lagenostoma, Telangium, Crossotheca*
b) Family Glossopteridaceae : *Vertebraria, Glossopteris,*
c) Family Medullosaceae : *Medullosa, Codonotheca Pachytesta,Whittleseya, Goldenbergia*
d) Family Caytoniaceae : *Sagenopteris, Caytonia*

ii) ORDER : BENNETTITALES (CYCADEOIDEALES)
a) Family Bennettitaceae (= Cycadeoideaceae) : *Bennettites* (= *Cycadeoidea*)
b) Family Williamsoniaceae : *Williamsonia*
c) Family Wiellandiellaceae : *Wielandiella, Williamsoniella*

iii) ORDER : CYCADALES
a) Family Cycadaceae : *Macrozamia, Zamia*

iv) ORDER : PENTOXYLALES
a) Family Pentoxylaceae : *Pentoxylon, Nepanioxylon, Carnoconites, Sahnia*

UNIT-III

III CLASS : CONIFEROPSIDA

i) ORDER : CORDAITALES
Family Cordaitaceae : *Cordaites, Cordianthus, Mitrospermum*

ii) ORDER : CONIFERALES
a) General account with reference to the families : Pinaceae, Taxodiaceae, Podocarpaceae, Cephalotaxaceae, Araucariaceae, Sciadopityaceae
b) Range of form, structure and evolution of Female Cones in Coniferales

iii) ORDER : GINKGOALES
Family Ginkgoaceae : *Ginkgo*

iv) ORDER : TAXALES
Family Taxaceae : *Taxus*

IV CLASS : GNETOPSIDA

i) ORDER : GNETALES
a) Family Gnetaceae : *Gnetum*
b) Family Welwitschiaceae : *Welwitschia*

UNIT-IV

3. Male gametophytes in Gymnosperms.
4. Distribution of Living Gymnosperms in India.
5. Structure and Evolution of Archegonium in Gymnosperms.
6. General survey of cytology of Gymnosperms .
7. Economic importance of gymnosperms.

PRACTICALS Max. Marks : 20

1. Study of morphology and anatomy of vegetative and reproductive parts of *Cycas, Zamia, Cedrus, Abies, Pinus, Picea, Cupressus, Cryptomeria, Agathis, Araucaria, Taxodium Taxus, Cephalotaxus , Ginkgo, Ephedra* and *Gnetum.*
2. Study of some Fossil Gymnosperms through specimens and permanent slides.
3. Field trips to familiarize various gymnosperms in nature and field identification of Indian Gymnosperms.
4. Preparation of permanent slides / charts.

ESSENTIAL READINGS

1 Beck, C. E. *Gymnosperm Phylogeny,* Bot. Rev., 51: 176-294, 1985.
2. Bhatnagar, S.P. and Moitra, A. *Gymnosperms*. New Age International Limited, New Delhi, 1996.
3. Sharma, O.P. ad Dixit, S. *Gymnosperms*. Pragati Prakashan, Meerut, 2001.

SUGGESTED READINGS

1. Meyen, S.V. *Basic Features of Gymnosperms, Systematics and Phylogeny as Evidenced by the Fossil Record,* Bot. Rev., 50 : 1-112, 1984.
2. Rothwell, G.W. *The Role of Comparative Morphology and Anatomy in Interpreting the Systematics of Fossil Gymnosperms*, Bot. Rev., 51: 318-327, 1985.
3. Sporne, K.R. *The Morphology of Gymnosperms,* B. I. Publications, Delhi, 1974

PAPER VIII : ANGIOSPERM MORPHOLOGY, TAXONOMY AND PHYLOGENY

Objective of the paper is to impart knowledge about Angiosperms on various aspects like Taxonomy, Phylogeny, Classification, Botanical gardens, Herbaria, Floras, Manuals, Periodicals and Botanical Survey of India and Biodiversity and structural organization of vegetative and reproductive organs of various groups.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students study flowers of different families.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the

whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Principles of Plant Classification with emphasis on modern tools of taxonomy ; Taxonomy as a SYNTHETIC DISCIPLINE , Numerical Taxonomy, Chemotaxonomy, Serology and Taxonomy, Biosystematics.
2. Taxonomic literature, General Indexes, Floras, Manuals, Important periodicals with emphasis on Indian floristics.
3. Important Botanical Gardens and Herbaria.
4. Botanical Survey of India – its organization and role.
5. Botanical Nomenclature and International Code of Botanical Nomenclature.

UNIT-II

6. Phylogenetic systems of classification - Hutchinson, Cronquist , Takhtajan , Dahlgren and Thorne.
7. Phylogeny of Angiosperms: Origin, Evolution and inter-relationship of dicots and monocots.

UNIT-III

8. Salient features of following families:

(a) DICOTYLEDONS

Ranunculaceae, Magnoliaceae , Fumariaceae, Cruciferae, Papaveraceae, Capparidaceae, Caryophyllaceae, Malvaceae, Sterculiaceae, Rutaceae, Meliaceae, Rhamnaceae, Anacardiaceae, Leguminosae, Rosaceae, Combretaceae, Myrtaceae, Solanaceae , Lythraceae, Cucurbitaceae, Cactaceae, Umbelliferae, Compositae, Primulaceae, Oleaceae, Asclepediaceae, Apocynaceae, Boraginaceae, Scrophulariaceae, Bignoniaceae, Acanthaceae, Labiatae Verbenaceae, Amaranthaceae, Polygoniaceae, Nyctaginaceae, Euphorbiaceae, and Cannabinaceae.

UNIT-IV

(b) MONOCOTYLEDONS:

Orchidaceae, Cannaceae, Amaryllidaceae, Liliaceae, Palmae, Araceae, Cyperaceae and Graminae.

9. The Species Concept, Taxonomic hierarchies : Species, Genus, Family and other Categories.
10. Evolution of Stamen and Carpel.

PRACTICALS **Max. Marks : 20**

1. Study of morphology, primitive and advanced characters of cultivated and wild representatives of various families. Study of basic structure of flower, variations, floral parts in detail, floral symmetry, insertion of floral parts etc.
2. Location of key characters and use of keys to derive families.
3. Field study of angiosperms in different types of habitats and preparation of Plant album.
4. Training in using floras for identification of specimens described in field or class.

ESSENTIAL READINGS

1. Cronquist, A. *An Integrated System of Classification of Flowering Plants.* Columbia University Press, Columbia. 1262 pp. 1981.
2. Eames, A.J. *Morphology of Angiosperms*. McGraw – Hill Inc., New York. 518 pp. 1961
3. Sporne, K.R. *The Morphology of Angiosperms*. B.I. Publication, Bombay, Calcutta, Delhi. 207 pp. 1986.

SUGGESTED READINGS

1. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology : A Laboratory Manual*. Springer-Verlag, Berlin. 1992.
2. Sharma, O.P. *Plant Taxonomy*. Tata McGraw Hill Publishing Co. Pvt. Ltd., New Delhi.482 pp. 2002.
3. Subramaniam, N.S. *Modern Plant Taxonomy*. Vikas Publishing House Pvt. Ltd., Delhi.494 pp. 2007.

PAPER IX: REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

Objective of the paper is to impart knowledge about various biological aspects of reproduction in Angiosperms like structure of male and female Gametophyte, Palynology, Pollination, Pollen-pistil interaction, Self incompatibility, Apomixis, Fertilization, Endosperm, Embryo and Seed formation.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the reproductive parts of the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Apomixis**: Types and evolutionary significance.
2. **Male Gametophyte:** Structure of anthers; Microsporogenesis; Role of tapetum; Pollen development; Sperm dimorphism.
3. **Palynology:** Pollen wall structure; Male sterility; Hybrid seed production; Pollen viability and storage.

UNIT-II

4. **Female Gametophye** : Ovule development ; Megasporogenesis; organization of Embryo sac, structure of embryo sac cells.
5. **Pollination, Pollen-pistil interaction and fertilization:** Floral characteristics; Pollination mechanisms and vectors ; breeding systems; structure of the pistil ; Pollen-stigma interactions and pollen tube growth and guidance.

UNIT-III

6. Sporophytic and gametophytic self – incompatibility (cytological , biochemical and molecular aspects).
7. Double fertilization, *in vitro* fertilization.

UNIT-IV

8. **Endosperm**: Development and types.
9. **Embryo**: Development of embryo in Monocots and Dicots.
10. **Seed**: Structure and formation.

PRACTICALS

Max. Marks: 20

1. Study of microsporogenesis and gametogenesis in sections of anthers.
2. Examination of modes of anther dehiscence and collection of pollen grains for microscopic examination (maize , grasses, *Cannabis sativa, Crotolaria, Tradescantia, Brassica, Petunia, Solanum melongena* etc.
3. Tests for pollen viability using stains and *in vitro* germination . Pollen germination using hanging drop and sitting drop cultures, suspension culture and surface culture.
4. Study of ovules in cleared preparations ; study of monosporic , bisporic and tetrasporic types of embryo sac development and embryos through examination of permanent stained serial sections
5. Field study of several types of flowers with different pollination mechanisms (Wind pollination, Bee / butterfly pollination, Bird pollination).

ESSENTIAL READINGS

1. Johri, B.M. (Ed.) . *Embryology of Angiosperms.* Springer-Verlag, Berlin. 830 pp. 1985.
2. Maheshwari, P. *Recent advances in Embryology of Angiosperms.* Int. Soc. Pl. Morphologists, Delhi. 463 pp. 1963.
3. Raghavan, V. *Embryogenesis in Angiosperms – A Developmental and Experimental Study*. Cambridge University, Cambridge. 303 pp. 1986.

SUGGESTED READINGS

1. Bhojwani, S.S. and S.P. Bhatnagar. *The Embryology of Angiosperms. 4th ed.* Vikas Publishing House , New Delhi.357 pp. 2000
2. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen: Structure and* Function. Wiley Eastern Ltd. New Delhi. 337 pp. 1985.
3. Swamy, B.G.L. and K.Y. Krishnamurthy. *From flower to fruit: Embryology of Flowering plants.* Tata McGraw-Hill, New Delhi. 1980.

PAPER X : PLANT PATHOLOGY

Objective of the paper is to impart knowledge on various aspects of Plant Pathology like Symptomatology, Defence mechanisms, Host Parasite interactions, Role of enzymes and toxins in pathogenesis, Nutrition of fungi and Disease forecasting . It also aims to study the Etiology, Epidemiology and Control of different plant diseases caused by Fungi and other micro-organisms.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and study the diseased specimens using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks: 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Symptomatology in Fungal infections of plants.
2. Role of enzymes and toxins in pathogenesis.
3. Defense mechanism.
4. Host-parasite interactions.

UNIT-II

5. Disease forecasting and assessment.
6. Disease control.
7. Nutrition in Fungi.

UNIT-III

8. Etiology , epidemiology and control of following diseases:

   i) Paddy: Paddy Blast, Brown Leaf Spot, Bacterial Blight
   ii) Wheat: Rusts, Bunt and Smuts, Tundu Disease
   iii) Sugarcane: Red Rot, Smut
   iv) Grapes: Downy and Powdry Mildews
   v) Peach: Leaf Curl
   vi) Groundnut: Tikka disease
   vii) Apple: Apple Scab
   viii) Mustard: White Rust, Downy Mildew
   ix) Potato: Early and Late Blight, Wart Disease
   x) Linseed: Rust
   xi) Damping off of the seedlings
   xii) Ergot of Rye

UNIT-IV

9. Diseases caused by plant viruses, MLOs, Spiroplasma, Viroids and Mycoviruses: General symptoms and Principles of Control.

PRACTICALS

Max. Marks: 20

1. Study of plant diseases mentioned in Theory syllabus.
2. Isolation, purification and single spore culture of pathogens.

ESSENTIAL READINGS

1. Agrios, G.N. *Plant Pathology*. Elsevier Academic Press, 2005, pp.922
2. Mehrotra, R.S. and Aggarwal, A. *Plant Pathology*, Publ., Tata McGraw Hill, 2003, pp. 846.
3. Sharma, P. D. *Plant Pathology*, Rastogi Publ., Meerut, 1998.
4.

SUGGESTED READINGS

1. Bilgrami, K.S. and Dube, H.C. *A Text Book of Modern Plant Pathology,* Vikas Publishing House, New Delhi, 1990, pp. 344
2. Sharma, P.D. *The Fungi and Allied Organisms* . Ist Ed. Alpha Science International Ltd., 300 2005.
3. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.

SECOND YEAR
THIRD SEMESTER

PAPER XI : MOLECULAR BIOLOGY

Objective of the paper is to impart knowledge about various aspects of Molecular Biology like Chemical nature and Biosynthesis of Genetic material, Mechanism of Translation, Control function of genes, Cancer, Antigens, Cell cycle and Apoptosis.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students learn techniques of histochemical localization, extraction and estimation of DNA, RNA and Protein and Antigen- antibody reaction.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Cell cycle and Apoptosis & control mechanisms**: Role of cyclins and cyclin dependent kinases, mechanism of programmed cell death.
2. **Chemical Nature of Genetic Material** : Nomenclature, composition and structure of nucleic acids; three dimensional structure of DNA (Prokaryotes, eukaryotes and viral); shape of DNA studied from various physico-chemical properties *(A-, B- , Z-DNA)* ; Structure and functions of different types of RNA ; Biosynthesis of Nucleotides and Biological importance of the nucleotides.

UNIT-II

3. Mechanism of Nucleic Acid Biosynthesis :

a) Replication of DNA (Double-stranded and single stranded); rolling circle model of replication; types of DNA polymerase, DNA topoisomerase, DNA ligase, DNAase, Reverse transcriptase.

b) Biosynthesis of different types of RNA: Transcription factors and machinery, Formation of Initiation complex, Transcription activators and repressors, RNA polymerases, elongation and termination, RNA Processing: RNA editing, Splicing, Polyadenylation, Capping ; RNA transport.

UNIT-III

4. **Mechanism of Translation:** Structure of ribosomes; initiation, elongation and termination of polypeptide chain; Translational proof reading; post-translational processing of polypeptide chain; Inhibitor of protein synthesis .
5. **Control Functions of the Gene :** Constitutive and induced genes; Regulatory genes, structural genes and repressors; Regulation of gene expression in phages; Regulation of gene expression in Prokaryotes; operon model, Role of cAMP in the transcription of operon, lactose and arabinose operons; Regulation of gene expression in eukaryotes, histone, non-histone proteins; different models of control, translation enzymatic and hormonal control.

UNIT-IV

6. **Cancer :** Biochemistry and molecular biology of cancer, Genetic rearrangements in progenitor cells, Oncogenes and Tumour suppressing genes, Cancer and Cell cycle , Virus induced cancer , Metastasis, Interaction of cancer cells with normal cells, Apoptosis, Therapeutic interventions of uncontrolled cell growth, Chemical carcinogenesis.
7. **Antigen :** Structure and functions of different clauses of immunoglobulins; Primary and Secondary immune response; lymphocytes and accessory cells; Humoral and Cell Mediated Immunity ; MHC; Mechanism of Immune response and generation of immunological diversity; Genetic control of immune response, Effector mechanisms; Application of Immunological principles (Vaccines and Diagnostics).

PRACTICALS Max. Marks: 20

1. Histochemical localization of DNA, RNA and Proteins.
2. To draw a standard curve of proteins
3. Estimation of protein content of plant tissues by Lowry's method.
4. Extraction and estimation of DNA contents of plant material.
5. Extraction and estimation of RNA contents of plant material.
6. Demonstration of Antigen – Antibody reactions.

ESSENTIAL READINGS

1. Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P. *Molecular Biology of the Cell* (5^{TH} Edition) Macmillan Publishers Ltd, New York, USA, 2005.
2. Cooper GM and Hausman RE. *The Cell: A Molecular Approach* **(6^{th} Edition)** ASM Press and Sinauer Associates, 2014.
3. Cox, M.M., Doudna J.A., O. Donnell M. *Molecular Biology: Principles and Practices* (1^{st} Edition). W.H. Freeman and Company, 2012.

SUGGESTED READINGS

1, Karp G. *Cell and Molecular Biology* (7^{th} Edition), J. Wiley & Sons, USA, 2013.
2. Nelson, D.L. & M.M. Cox. *Lehninger Principles of Biochemistry*. 5^{th} Ed. W.H. Freeman Publishers. 1100 pp. 2008.
3. Robertis de, C.D.P. and E.M.S. de Robertis. *Cell and Molecular Biology.* Lea and Febiger**,** Philadelphia. 733pp.

PAPER XII : PLANT PHYSIOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Physiology like Cellular organelles, Membranes, Water relations of plants, Inorganic nutrition , Photosynthesis, Respiration, Nitrogen metabolism, Phytohormones, Growth, Stress physiology and Role of plant physiology in agriculture.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Structural organization and function of intracellular organelles** : Cell wall, Nucleus, mitochondria, Endoplasmic Reticulum, Golgi bodies, Peroxisomes, Lysosomes, Vacuoles, Plastids, Structure and function of cytoskeleton and its role in motility.
2. **Membrane structure and function** : Structure of model membrane, Lipid bilayer and membrane protein, diffusion, osmosis, ion channels, active transport, ion pumps, mechanism of sorting and regulation of intracellular transport, electrical properties of membranes.
3. **Water Relations of Plants:** Modern thermodynamic concepts of physical state of water in plant cells and tissues, movement of water in the Soil – Plant – Atmosphere Continuum. Transpiration, stomatal control and mechanism of guard cell movement.

UNIT-II

4. **Inorganic Nutrition:** Occurrence, availability and physiological roles of *various* elements, ion uptake and active and passive transport, Role of calmodulin, phloem transport.
5. **Photosynthesis :** Energy pathways in photosynthesis, Chloroplast as an energy transducing organelle, composition and characterization of photosystems I and II, electron flow through cyclic and non-cyclic photophosphorylation, pathway of CO_2 Fixation, differences between C_3 and C_4 photosynthesis, different kinds of C_4 pathways, CAM pathway – occurrence, biochemical events, and adaptive advantage. Regulation of photorespiration, Factors affecting photosynthesis, photorespiration and photophosphorylation.
6. **Respiration***:* Glycolysis, Krebs cycle and Electron Transport Chain (Cytochrome System), Gluconeogenesis, Factors affecting respiration.

UNIT-III

7. **Nitrogen Metabolism :** Nitrogen fixation of free living and symbiotic organisms, mechanism of Nitrogen fixation, Soil nitrogen sources, nitrogen uptake and assimilation, nitrate reductase system and induction, Light substrate-controlled induction, interrelationship between photosynthesis and nitrogen metabolism, transport of nitrogen in plants.
8. **Phytohormones :** Auxins, gibberellins, cytokinins, abscissins and ethylene : their transport, biosynthesis, physiological roles and mechanism of action; phenols, synthetic regulators, retardants and inhibitors.

UNIT-IV

9. **Growth :** Process, phases and dynamics of growth. External and internal factors affecting growth, growth and yield analysis, Source – Sink relationship, photoperiodism, phytochrome, endogenous rhythms, tropisms. Seed and bud dormancy and germination.
10. **Stress Physiology:** Mechanism of plant response to water (low and high), temperature (low and high), Salt (Salinity and Alkalinity) and biotic stresses (Pathogens and insects).
11. Applications of Plant Physiology in Agriculture.

PRACTICALS

Max. Marks : 20

1. Experiments pertaining to photosynthesis, respiration and water relations.
2. Determination of water potential by various methods.
3. Determination of Chlorophyll a and Chlrophyll b ratio in C3 and C4 plants.
4. Spectroscopic determination of Chrophyll a , Chlorophyll b , Carotenoids and Anthocyanin under varied environmental conditions.
5. Experimental study of hormonal effects in plant material.
6. Bioassays of hormones.
7. Study of seed germination as effected by different factors.
8. Experimental study of stress physiology.

ESSENTIAL READINGS

1. Wilkins, M.B., *Advanced Plant Physiology,* Pitman, New York, 1984.
2. Taiz, L. and Zeiger, E. *Plant Physiology,* (5th Edition), Sinauer Associates, Inc., Massachusetts, USA, 2010.
3. Hopkins, W.G. *Introduction to Plant Physiology*, John Wiley & Sons, Inc., N.Y., USA, 1999.

SUGGESTED READINGS

1. Malik, C.P. *Plant Physiology*. 3rd Ed. Kalyani Publishers India. 2002.
2.. Noggle, G.R. and G.J. Fritz. *Introductory Plant Physiology*. 2nd Ed. Prentice Hall of India Pvt. Ltd., New Delhi. 1991.
3. Salisbury, F.B. and C.Ross. *Plant Physiology.*4th Ed. CBS Publisher and Distributors.682 pp. 1992

PAPER XIII: BIOTECHNOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Biotechnology like Concept, Scope, Tools, Tissue Culture Techniques, Protoplast Culture and Somatic Hybridization, Anther and Pollen Culture, Recombinant DNA Technology, Biosensors and Application of Biotechnology in Medicines , Agriculture, Transgenic plants , Industry and Pollution control etc.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **History and Scope of Biotechnology and tools.**
2. **Tissue Culture Techniques**: Introduction to the techniques of plant tissue culture, concept of cellular totipotency, Nutritional requirements, cell and organ differentiation, Somaclonal variation, Somatic embryogenesis, Mentor pollen technology, Embryo culture, Embyro rescue, Germplasm storage including Cryopreservation.

UNIT-II

3. **Protoplast Culture and Somatic Hybridization:** Isolation of protoplasts, culture and fusion methods, selection of fusion products, production of hybrids and cybrids.
4. **Anther and Pollen Culture***:* Culture procedures for the induction of haploids, media and nutritional requirements, significance of haploids.

UNIT-III

5. **Recombinant DNA Technology:** Isolation and purification of DNA from plant cells, DNA sequencing, DNA engineering through cutting and joining DNA molecules, Restriction Endonucleases, Ligases.
6. **Application of Biotechnology** in Medicines, Agriculture, Transgenic production and role in Human Welfare.

UNIT-IV

7. **Scope and applications of Microbes** *in* (a) Agriculture with special reference to Biological N_2 fixation, (b) Industry Fermentation (Ethanol, Cheese, Curd) (c) Food (Single Cell Protein), (d) Pollution (degradation of pesticides and Hydrocarbons) and (e) Biogas Production.
8. **Biosensors:** Principles of detection and Applications.
9. **Biosafety and IPR** (a) Objectives of biosafety, guidelines, risk assessment, containment and planned introduction of GMOs and GEMs (b) Intellectual property and protection of IPR, protection of Biotechnological inventions, PBR and management of IPR.

PRACTICALS **Max. Marks :20**

1. Composition and preparation of various culture media :

(a) Knop's medium, (b) Knudson's medium, (c) Moore's medium

2. (d) Murashige & Skoog's medium.
3. Inoculation of Plant Materials, , leaf, root, stem.
4. Demonstration and or experimentation to study callus induction, organogenesis, plant regeneration, anther culture, embryo culture, protoplast isolation and fusion *in vitro*.
5. Visit to university/regional laboratories for demonstration of modern instruments employed in recent biotechnological techniques.

ESSENTIAL READINGS

1. Bhojwani, S. S. and Razdan, M. K. *Plant Tissue Culture - Theory and Practice.* Elsevier Science Pub. Co. Inc., New York, pp. 471, 1983.
2. Old, R.W. and Primrose, S.B. *Principles of Gene Manipulation : An Introduction to Genetic Engineering.* Blackwell Scientific Publications, Oxford, pp. 403, 1985.
3. Street, H. E. *Plant Tissue and Cell Culture.* Blackwell Scientific Publications, London, pp. 614, 1973.

SUGGESTED READINGS

1. Bajaj, Y.P.S. *Biotechnology in Agriculture and Forestry Plant Protoplasts and Genetic Engineering I.,* Springer Verlag, Berlin. 1989.
2. Singh, B.D. *Biotechnology: Expanding Horizon.* Kalyani Publishers, New Delhi.860 pp. 2007.
3. Smith, R.H. *Plant Tissue Culture, Technique and Experiments.*2nd Ed. Academic Press, New York.231pp. 2000.

PAPER XIV : CYTOGENETICS

Objective of the paper is to impart knowledge about various aspects of Cytogenetics like Chromatin organization, types of chromosomes and karyotype, Structural and numerical changes in chromosomes, Molecular cytogenetics, Restriction mapping, Alien gene transfer, Transposons, Mutations , DNA Damage and DNA Repair mechanisms.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study different types of chromosomes, mitosis and meiosis of diploids. They also study the meiosis of polyploids and translocation heterozygotes.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Chromatin Organization:** Chromosome structure and packaging of **DNA**; Molecular organization of centromere and telomere; nucleolus and ribosomal RNA genes; Unique and Repetitive DNA ; Euchromatin and heterochromatin.
2. **Karyotype** : Karyotype analysis ; Karyotype evolution; Various banding techniques and their uses.
3. **Specialized types of chromosome**: polytene, lampbrush, B- chromosomes and sex chromosomes.

UNIT-II

4. **Structural changes in Chromosomes:** Origin, meiosis and breeding behaviour and evolutionary significance of Duplication, Deficiency, Inversion and Translocation heterozygotes ; Translocation tester sets; Robertsonian translocations ; B-A translocations.
5. **Numerical Changes in Chromosomes:** Origin, occurrence, production and meiosis of Haploids, Aneuploids and Euploids; origins and production of Autopolyploids; chromosome

and chromatid segregation; Allopolyploids; types, genome constitution and analysis; induction and characterization of Trisomics and Monosomics; Use of monosomics and trisomics in chromosome mapping.

UNIT-III

6. **Restriction Maps and Molecular Genetic Maps:** Restriction mapping RFLP as marker for mapping; chromosome walking; *in situ* hybridization as an aid in physical mapping of chromosome, FISH, GISH; chromosome jumping; Random amplified polymorphic DNA and AFLP techniques.
7. **Molecular Cytogenetics :** Nuclear DNA contents; C-value paradox, cot curve and its significance; Southern Northern and Western Blotting Techniques, Polymerase Chain Reaction.
8. **Alien Gene Transfer through Chromosome Manipulations:** Transfer of whole genome, transfer of individual chromosomes and chromosome segments; methods for detecting alien chromatin, production, characterization and utility of alien addition and substitution lines.

UNIT-IV

9. **Transposable Elements in prokaryotes and eukaryotes**: Cut and Paste transposons, Replicative transposons and Retrotransposons; Mutations induced by transposons.
10. **Mutations:** Spontaneous and induced mutations; physical and chemical mutagens; molecular Basis of gene mutations, site-directed mutagenesis.
11. **DNA damage and repair mechanisms**: Sources and types of DNA damage. Light dependent repair, Base Excision repair, Nucleotide Excision repair, Mismatch repair, Double- strand breaks Repair and Error-prone repair; Prokaryotic SOS response and Eukaryotic transcriptional response to DNA damage.

PRACTICALS

Max. Marks : 20

1. Study of meiosis through materials *Allium, Phlox, Chrysanthemum, Delphinium, Papaper* etc.
2. Mitotic studies and Karyotype analysis.
3. Linear differentiation of chromosomes through banding techniques, such as G-banding, C-banding and Q-banding (Photographs/Slides).
4. Orcein and Feulgen staining of the salivary gland chromosomes of *Chironomas and Drosophila* (Photographs/Slides).
5. Study of B chromosomes using maize or any other appropriate material.
6. Induction of polyploidy using colchicines, different methods of the application of colchicines.
7. Effect of induced and spontaneous polyploidy on plant phenotype, meiosis, pollen and seed fertility and fruit set.
8. Meiosis of complex translocation heterozygotes.

ESSENTIAL READINGS

1. Griffiths, A.J.F., W.M. Gelbart and J.H. Lewontin. *Modern Genetic Analysis.* 2nd ed. W.H. Freeman & Company, U.S.A. 2002.
2. Swanson, C.P., W.J. Young & T. Merz. *Cytogenetics: The Chromosomes in Division, Inheritance and Evolution.* Prentice Hall, Englwood Cliffs, New Jersey.577 pp. 1981.
3. Schulz-Schaeffer, J. *Cytogenetics.*2nd Ed. Springer-Verlag, Berlin. 446 pp. 1980.

SUGGESTED READINGS

1. Gupta, P.K. *Cytogenetics*. Rastogi Publication, Meerut.418 pp. 2004
2. Khush, G.S. 1974. *Cytogenetics of Aneuploids.* Academic press, New York
3. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.* 5th Ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.

PAPER XV: ECOLOGY AND ENVIRONMENT

Objective of the paper is to impart knowledge about various aspects of Ecology and Environment like Plant Communities and Ecosystems, Population Ecology, Biosphere Reserves, Biogeochemical cycles, Biodiversity and its conservation strategies, Pollution, Natural Resources and Non-conventional sources of energy, Climate change, Global Warming, Ozone depletion, Alien plant's invasion and Weed management.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study the soil samples for pH, conductivity, water holding capacity etc. They also study the ecosystems using Quadrat methods.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Environment & Ecosystem:** Concept and Principles.
2. **Population Ecology:** Characteristics of a population, Population growth curve, Population regulation, Life history strategies, Concept of metapopulation – Demes and dispersal, Intrdemic extinctions, Age structured populations.
3. **Plant Communities:** Definition, quantitative characters of Plant Communities. Different sampling techniques to study quantitative characters of plant communities.

UNIT-II

4. **Biosphere Reserve :** The concept, Major functions, Nilgiri Biosphere Reserve (a brief account)
5. **Bio-Geochemical Cycles:** General account types, brief account of the following bio-geochemical cycles: Carbon cycle, Nitrogen cycle, Phosphorus cycle and Sulphur cycle. .
6. **Biodiversity:** Concept, level, measuring of biodiversity; significance in terms of economic, spiritual, scientific, educational, ecological and genetical values; reasons for depletion, magnitude, distribution and conservation strategies; diversity loss from monoculture plantations. Concepts of phytogeography: Endemism, Hotspots and hottest hotspots; Plant Explorations; Invasions and Introductions.

UNIT-III

7. **Pollution:** Definition, different types of pollutants. **Air pollution;** different pollutants of air, control of Air pollution; **Water pollution** : different sources of water pollution, control of water pollution; **Land pollution** : sources, control of land pollution ; Bioremediation and Phytoremediation.

8. **Management and Conservation of Natural Resources :** Aims and objectives of conservation; renewable and non-renewable resources; special interest and total ecosystem conservation policy; maintenance of ecological processes; management of agriculture, forest and soil; preservation of plant genetic diversity; conservation strategies required at national and international level, sustainable development.
9. **Non Conventional Sources of Energy:** Solar Energy, Hydro Power, Wind Power, Biogas, Geothermal Energy, Ocean Thermal Energy, Tidal Energy, Wind Energy.

UNIT-IV

10. **Ozone Depletion:** Reasons and its effects on plants, methods to check ozone depletion.
11. **Invasion of Alien Plants;** Concept, ecological impact and management
12. **Global Warming and Climate Change:** Reasons, effects and the techniques used to control global warming.
13. **Weed Management:** The impact, use and ecological role of weeds in agro-ecosystems, weed characteristics related to success; Major weeds of the world; Ecological approach to weed management, Problems of the weeds; Allelopathy, its mode and Exploitation in weed management.

PRACTICALS

Max. Marks: 20

1. Techniques for collection of soil samples. Chemical analysis of soil samples taken from different types of soils and to assess their suitability for healthy plant growth.
2. To determine soil pH, conductivity, soil texture and water holding capacity of soil.
3. Chemical analysis of underground water samples taken from different depths and to assess its suitability for healthy plant growth.
4. To work out the size of the quadrat and number of Quadrats required to study the ecosystem of a given locality.
5. To determine density, abundance and frequency of species by quadrat method.
6. To determine the Importance Value Index (IVI) and Species Diversity Index of grassland ecosystem.
7. To study the stomatal behaviour in response to herbicides and pesticides.

ESSENTIAL READINGS

1. Primack, R.B. *Essentials of Conservation Biology*. Sinauer Associates, USA, 2010, pp. 601.
2. Singh, J.S., Singh, S.P. and Gupta, S.R. *Ecology, Environmental Science and Conservation*. S. Chand Publishing, India. 2015, pp. 929.
3. Stiling, P. *Ecology: Theories and Applications*. Prentice Hall, India, 2002, pp. 403

SUGGESTED READINGS

1. Odum, F.P. *Fundamentals of Ecology.* 3rd Ed. W.B. Saunders & Co. Philadephia, U.S.A. 534 pp. 1971.
2 Shukla, R.S.&P.S. Chandel. *Plant Ecology and Soil Science.* S.Chand & Company Ltd., ND.552 pp. 1993.
3. Sharma, P.D. *Ecology and Environment.* Rastogi Publications, Shivaji Road, Meerut, 660 pp. 1996.

FOURTH SEMESTER

PAPER XVI : PLANT BIOCHEMISTRY

Objective of the paper is to impart knowledge about various aspects of Plant Biochemistry like Bioenergetics, Role of Water, Structure, types, properties and metabolism of Amino acids and Proteins, Enzymes, Carbohydrates and Lipids ; Compounds of energy transfer and Redox reactions, Catabolism and Generation of phosphate bond energy ; Vitamins and Secondary metabolites.
Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Bioenergetics:** Concept of free energy changes, Laws of Thermodynamics, Exergonic and Endergonic Reactions, Entropy and Energy, Free Energy and Equilibrium Constant, Redox potential.
2. **Water:** Its effects on Dissolved Biomolecules : Weak intereactions in aqueous systems, Ionization of water Weak acids and Weak bases; Buffering against pH changes in biological systems, Henderson-Hassalbach equation. The fitness of the aqueous environment for living organisms.

UNIT-II

3. **Amino acids and Proteins:** Structure types, properties and Metabolism of Amino acids; Primary, Secondary, Tertiary and Quatenary structure of proteins ; domains, motif and folds; stability of protein structure ; Classification of proteins based on composition, solubility function; Reverse turns and Ramachandran plot.

4. **Enzymes:** Nomenclature and Classification; Enzyme Kinetics; Mode and Mechanism of Enzyme Action ,Enzyme Regulation, Activators, Inhibitors and Isoenzymes : Allosteric enzymes.

UNIT-III

5. **Carbohydrates:** Classification, composition and structure of Carbohydrates (Polysaccharides, Glycoproteins and Peptidoglycan), Stereoisomerism, Transformation of Carbohydrates, Synthesis and degradation of Sucrose, Starch, Cellulose.

6. **Lipids:** Classification, Structure and functions; Biosynthesis of Fatty Acids.

7. **Compounds of Energy Transfer and Redox Reactions:**
   a. Compounds of Energy Transfer *:* Adenosine Triphosphate, Uridine Triphosphate. Cytidine Triphosphate, Guanosine Triphosphate

b. Compounds of Redox Reactions *:* Nicotinamide Adenine Dinucleotide (NAD). Nicotinamide Adenine Dinucleotide Phosphate (NADP), flavin Mononucleotide (FMN), Flavin Adenine Dinucleotide (FAD), Ascorbic Acid, Coenzyme, Cytochromes.

UNIT-IV

8. **Catabolism and Generation of Phosphate Bond Energy:** Sites and mechanism of Oxidative phosphorylation; Processes generating substrates for Oxidative Phosphorylation, Coupled Reactions, Group Transfer, Biological energy Transducers ; Oxidation of Carbohydrates (Regulation and Mechanism of T.C.A. cycle) and Oxidation of fats.

9. **Vitamins:** Structure, and functions of Thiamine, Riboflavin, Nicotinic Acid, Pantothenic Acid, Pyridoxine, Biotin, Folic Acid, Vitamin B12 , Ascorbic Acid, Vitamin A , D , E and K.

10. **Secondary Metabolites:** Biosynthesis of terpenes and phenols and alkaloids and their role.

PRACTICALS **Max. Marks : 20**

1. Detection of reducing, non reducing and total sugars: Molisch test, Fehling's test, Benedict's test, Barafoed's test, Saliwnoffs test and Iodine test.
2. Quantitative estimation of total carbohydrates by anthrone reagent. Preparation of potato starch, its microscopic structure and solubility test. Histochemical localization of starch.
3. Qualitative tests of protein like Biuret test, Xanthoproteic test, Ninhydrin test.
4. Quantitative estimation of amino acid and phenols by using Spectrophotometer.

ESSENTIAL READINGS

1. Lehninger, A. *Principles of Biochemistry.* Worth Publishers, 1982.
2. Conn, E.E. and Stumpf, P.K *Outlines of Biochemistry.* 5th Ed. Academic Press, London, 1987.
3. Deb, A.C. *Fundamental of Biochemistry*. 9th ed. New Central Book Agency Pvt. Ltd., Kolkata, 2008.

SUGGESTED READINGS

1 Buchanan, Bob. B., Gruissem, W. and Russeel, L. Jones(eds.). *Biochemistry & Molecular Biology of Plants.* Wiley Publishers, USA. 1280pp. 2015.
2. Malik, C.P. and M.B. Singh. *Plant Enzymology and Histoenzymology.* Kalyani Publishers. 1980.
3. Nelson, D.L. & M.M. Cox. *Lehninger's Principles of Biochemistry*. 5th ed. W.H.Freeman & Co., USA. 1100 pp. 2008.

PAPER XVII: FORESTRY

Objective of the paper is to impart knowledge about various aspects of Forestry like Silviculture, Forest Protection, Social and Urban Forestry, Forest Laws, Conservation of Forests, Types of Forests and Effects of forests.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students measure the diameter and height of trees. They study anatomy, moisture contents and

specific gravity of common timber trees of Punjab. They also take an account of the nearest natural forest visited by them.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Silviculture:** Definition, Regeneration : Types, Natural regeneration from seeds (different factors on which regeneration depends, seedlings establishment period), Regeneration from vegetative parts (Coppice, Root suckers, Cuttings, Layering, Grafting, Budding, Pollarding, Lopping and Pruning); Nursery making.
2. **Forest Protection:** Protection, causes and control of forest fires; Major diseases of forest plants.

UNIT-II

3. **Social and Urban Forestry:** Social forestry - Non commercial farm forestry, scope and limitations of Non commercial forestry, community forestry, scope and limitations of community forestry, social land allocation programmes (Taungya system). Economic benefits of social forestry, Urban forestry.
4. **Forest Laws and Forest Conservation:** Salient features of the Indian Forest Act 1972 (preliminary, reserved forests, protected forests), different methods employed for conservation of forests.

UNIT-III

5. **Forests Types:** Climate of India, different climatic regions of India. Central characters and distribution of the different forest types of India, Mensuration.

UNIT-IV

6. **Forest Effects :** General effects of forests on climate, control of runoff, effects on snow, soil erosion, wild life, pollution control, nutrient cycling, social values and ecotourism, economic values, floods, green belts and control of temperature.

PRACTICALS

Max. Marks : 20

1. To measure diameter at breast height (dbh), diameter over bark (dob) and diameter under bark (dub) and girth of trees.
2. To measure height of standing trees by Abney's level. .
3. To determine the moisture content, specific gravity and weight density of common timber trees of Punjab.
4. To compare the anatomy of Hard wood and soft wood .
5. Students should be taken to nearest natural forests and they should prepare a field report regarding the following points :
   Height above Sea level, Mean annual rain fall and temperature, Soil texture, soil pH, Topography Dominant tree species and the general characters of the forest (Distribution of trees in different storeys, ground flora, nature of leaf fall, average height of dominant tree species etc.) The students will submit the field report.

6 Propagation studies on important common forest trees of Punjab regarding Height and diameter increments (under similar soil conditions) at two months intervals under natural conditions of day length and temperature for young tree saplings of known age and represent the results in a graphic form.
7 Visit to the nearby forest nursery.

ESSENTIAL READINGS

1. Chaturvedi, A.N. *Forest Mensuration.* International Book Distributors, Dehradun. 403 pp. 1982.
2. Dwivedi, A.P. *A Text Book of Silviculture.* International Book Distributors, Dehradun. 505 pp. 2006.
3. Gopikumar, K., S. Gopakumar and E.V.Anoop. *Forest Nursery and Tree Husbandry*. International Book Distributors, Dehradun, 169 pp. 2003.

SUGGESTED READINGS

1. Negi, S.S. *Elements of General Silviculture*. International Book Distributors, Dehradun. 316 pp. 2003.
2. Negi, S.S. *Hand Book of Forest Ecology and Biology*. Internat BookDistributors, Dehradun. 268 pp. 2004.
3. Puri, G.S., Gupta, R.K. Mehr-Homji, V.M. and Puri, S. *Forest Ecology.* Vol. 2, Oxford & IBH, New Delhi. 708 pp. 1989.

PAPER XVIII: GENETICS AND PLANT BREEDING

Objective of the paper is to impart knowledge about various aspects of Genetics like Linkage, Gene Mapping, Microbial Genetics, Quantitative Genetics, Population Genetics and Human Genetics. The paper also deals with various methods of breeding in plants reproducing sexually and asexually.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. The students make analysis of different problems relating to genetics.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Allelism and Linkage**: Multiple Allele, Pseudo-alleles, Complementation tests, Pleiotropy, Genomic imprinting, Penetrance and Expressivity, Phenocopy, Linkage and Crossing over, Sex Linkage, Sex limited and Sex influenced characters.
2. **Genetic Recombination and Gene Mapping methods** : Recombination, Molecular Mechanism of Recombination, Role of RecA and RecBCD enzymes, Site-specific recombination, Linkage maps, Tetrad analysis - Centromere mapping in linear tetrads and Analysis of unordered tetrads.

UNIT-II

3. **Extrachromosomal Inheritance** *:* The Genetics of mitochondria and chloroplasts.
4. **Microbial Genetics***:* Mapping the bacteriophage genome; phage phenotypes; genetic recombination in phage; genetic transformation, conjugation and transduction in bacteria
5. **Multigene families:** Multigene families and their evolution.

UNIT-III

6. **Quantitative Genetics:** Polygenic inheritance, Heritability and its measurements, QTL mapping.
7. **Human Genetics***:* Pedigree analysis, Lod score for linkage testing, Genetic disorders.
8. **Population Genetics :** Gene pool, Gene frequency, Hardy- Weinberg Law , Concepts and rate of change in gene frequency through mutation, natural selection and migration ; random genetic drift.

UNIT-IV

9. **Principles of Plant Breeding :** Principles and objectives; important conventional methods of breeding of self and cross pollinated crops, Heterosis and Hybrid vigour, Utility of hybrids in Genetics and Plant Breeding.
10. **Asexual Breeding Systems**: Methods of breeding of vegetatively propagated crops; Non-conventional methods; polyploidy; gene variability.
11. **Male Sterility:** Concept, Genetic control and Breeding utility.

PRACTICALS

Max. Marks : 20

1. Study of problems on Mendelian Genetics , Gene Interactions, Multiple alleles and Multiple gene inheritance.
2. To test the Genetic Hypothesis by Chi- Square Test and study goodness of fit.
3. Preparation of Linkage Maps in Diploids using three point test cross method.
4. Tetrad analysis and Centromere mapping in ordered and unordered tetrads.
5. Pedigree analysis.
6. Problems relating to Population genetics.

ESSENTIAL READINGS

1. Brooker, R.J. *Genetics.* Addison-Wesley. Longman Publication. U.S.A. 1999.
2. Poehlman, J.M., Sleper, D.A., *Breeding Field Crops,* AVI. Publ., U.S.A, 1995.
3. Snustad, D. P., Simmons, M.J., *Principles of Genetics,* J. Wiley and Sons, USA, 2003.

SUGGESTED READINGS

1. Hayward, M.D., Bosemark, M.O., Romagosa, I., *Plant Breeding: Principles and Prospects*, Chapman and Hall, U.K, 1993.
2. Stickberger, M.W. *Genetics*, 2nd ed., MacMillan, New York. 842 pp. 1977.
3. Weaver, R.F.& P.W. Hedrick. *Genetics.* 3rd Ed. William C. Brown Publishers, U.S.A. 656 pp. 1997.

PAPER XIX : PLANT RESOURCE, UTILIZATION AND CONSERVATION

Objective of the paper is to impart knowledge about various economic aspects of plants like Origin of Agriculture; Origin, Distribution, Types, Botany ,Cultivation, Harvesting and Uses of different Cereals, Fruits, Vegetables, Spices, Beverages and Legumes; Medicinal plants and Insecticides; Uses of

important plant products like Gums , Tannins, Vegetable oils and fats, Fibres and Wood ; Unexploited plants of economic value and Genetic resources and their conservation.

Teaching methodology include delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical students study morphology, anatomy and histochemistry of cereals, vegetables, fruits , spices and oil yielding plants.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Origin of Agriculture.
2. World Centres of Primary diversity of domesticated plants: The Indo-Burmese Centre, Plant Introductions and Secondary Centres.
3. Origin, Distribution, Types, Botany, Cultivation, Harvesting and uses of Wheat and Rice.
4. History, Botany, Breeding, Cultivation and uses of following fruits and vegetables: Citrus, Mango, Apple, Banana, Potato, Alliums, Cabbage, Spinach, Tomato, Brinjal and Sweet Potato.

UNIT-II

5. **General Account of the Spices:** Ginger, Turmeric, Cinnamon, Clove, Umbelliferous spices and Peppers.
6. **Beverage Plants:** Source and general account of Tea and Coffee.
7. **Legumes:** Origin, Botany, Cultivation and uses of Pigeon pea, Chick pea, Cluster bean, French bean etc.
8. **Medicinal Plants and Insecticides:** History and classification of drugs, antibiotics, plants as sources of drugs, parts used, composition and uses. Insecticides of plant origin, Pyrethrum and Rotenone.

UNIT-III

9. **Gums:** Important commercial gums and their uses.
10. **Tannins and Dyes:** Sources and their uses.
11. **Vegetable Oils and Fats:** Distinction between fatty and essential oils. Drying (Soyabean and linseed), nondrying (Groundnut and Mustard oil) and Semi drying (cottonseed and Sunflower oil) oils and their uses.
12. **Fibres:** Classification, uses, type of fibres - Soft fibres, Hard fibres, Surface fibres, Brush fibres and Braiding fibres.

UNIT-IV

13. **Wood and its Uses:** Soft woods and hard woods, wood as fuel, construction material (Pilings, Veneers, Plywood), wood containers (cooperage), chemically derived products and wood distillation.
14. Unexploited plants of potential economic value; plants as a source of renewable energy.
15. Genetic Resources and their conservation.

PRACTICALS

Max. Marks : 20

1. Morphology, Anatomy, Microchemical tests of stored food materials of Wheat, Rice, Chick Pea, Potato, Sweet Potato; Comparison of Starch grains of Wheat, Rice, Potato and Mung.
2. Morphology of fruits and vegetables pertaining to theory syllabus.
3. Histochemical tests for cellulose, cutin, suberin, hemicellulose, fat, oils, proteins and starch.
4. Morphology and microscopic structure of umbelliferous fruits, turmeric and clove.
5. Vegetable Oils: Mustard, groundnut, soya bean, coconut, sunflower, castor; Morphology, microscopic structure of the oil yielding tissues, tests for oil.
6. Prepare a list of 10 important sources of firewood and timber in your locality. Give their local names, scientific names and families to which they belong. Mention their properties.
7. The students should be taken to a recognized Botanical Garden or a Museum to show different plants of economic importance.

ESSENTIAL READINGS

1. Chrispeels, M.J. and Sadava, D. *Plants, Food and People*, W.H. Freeman and Co., San Francisco, 1977
2. Dastur, J.F. *Medicinal Plants of India and Pakistan.*3rd Ed. Meyerbooks. 1985
3. Simpson, B.B. and Conner-Ogorzaly. E.M. Economic Botany- Plants in Our World. McGraw-Hill Book Company, New York, 1986.

SUGGESTED READINGS

1. Kocchar, S.L. *Economic Botany of the Tropics*, 2nd edition, Macmillan India Ltd., Delhi, 1998.
2. Sharma, O.P., *Hill's Economic Botany* (Late Dr. A.F. Hill, adapted by O.P. Sharma), Tata McGraw Hill Co. Ltd., New Delhi, 1996.
3. Swaminathan, M.S. and Kocchar, S.L., (Eds.). *Plants and Society*, MacMillan Publications Ltd., London, 1989

PAPER-XX: RESEARCH PROJECT / FIELD STUDY REPORT AND SEMINAR

Max. Marks : 100

This paper aims at inculcating the aptitude for research in the students so that after completing their postgraduate course they can opt for M. Phil. and / or Ph.D. courses.

Field study provides the students an opportunity to study the plant diversity in their natural habitats.

The purpose of presenting seminar is to train the students to prepare the topic and to deliver it before the students and teachers using the recent tools like Computer, CDs, LCD projector etc. This would instill a sense of confidence in the students to deliver lectures in classrooms and to present any paper before the academicians and scientists.

A): RESEARCH PROJECT/FIELD STUDY REPORT

Max. Marks: 60

RESEARCH PROJECT

The students will be given a small research project under the guidance of a supervisor which will be evaluated by a panel of two examiners.

OR

FIELD STUDY REPORT

The students will visit the field for study of plants pertaining to Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms. The students will also submit a Field Study Report on the flora of the place visited by them.

A panel of 2-3 examiners will evaluate the field study report.

B): SEMINAR **Max. Marks: 40**

The Seminar will be presented by all the students and it will be compulsory for all the students to attend the seminars.

The break-up of 40 marks will be as under:-

1. Presentation 30
2. Contents 10

Every seminar will be evaluated by a team of two examiners individually and the average of marks awarded by these examiners will be considered as the "Marks obtained".

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Pan jab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

For

M.Sc. Two Year Course (Zoology)

EXAMINATION 2018-2019

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.Sc. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM) 2018-2019

FIRST SEMESTER

		Marks
Paper - I :	Structure and Functions of Invertebrates - I	80
	Practical based on Paper - I	20
Paper - II :	Lower Chordates. Comparative Anatomy of Vertebrates -I	80
	Practical based on Paper-II	20
Paper III :	Animal Physiology	80
	Practical based on Paper III	20
Paper IV :	Ecology and Animal Behaviour	80
	Practical based on Paper IV	20
Paper V :	Biostatistics and Computer Application	80
	Practical based on Paper V	20

SECOND SEMESTER

Paper VI :	Structure and Functions of Invertebrates - II	80
	Practical based on Paper - VI	20
Paper VII :	Comparative Anatomy of Vertebrates -II	80
	Practical based on Paper-VII	20
Paper VIII :	Biosystematics and Evolution	80
	Practical based on Paper-VIII	20
Paper IX :	Endocrinology and Neural Physiology	80
	Practical based on Paper IX	20
Paper X :	Immunology	80
	Practical based on Paper X	20

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM)

THIRD SEMESTER

Paper XI :	Developmental Biology -I	80
	Practical based on paper XI	20
Paper XII :	Biochemistry,	80
	Practical based on Paper XII	20
Paper XIII :	Cell and Molecular Biology	80
	Practical based on Paper-XIII	20
Paper XIV :	Instrumentation and Methodology	80
	Practical based on Paper XIV	20
Paper XV :	Advances in Entomology	80
	Practical based on Paper XV	20

FOUR SEMESTER

Paper XVI :	Developmental Biology -II	80
	Practical based on paper XVI	20
Paper XVII :	Advances in Parasitology	80
	Practical based on Paper XVII	20
Paper XVIII :	Advances in Fish and Fisheries	80
	Practical based on Paper XVIII	20
Paper XIX :	Environmental Biology & Wild life	80
	Practical based on Paper XIX	20
Paper XX :	Cytogenetics and Molecular Genetics	80
	Practical based on Paper-XX	20

PAPER-I : STRUCTURE AND FUNCTIONS OF INVERTEBRATES -I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment : 15
Annual Theory Exam. : 65
Practical : 20
Internal Assessment : 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates.

UNIT-I

1. Phylum Protozoa : General organisation of Protozoa with special reference to feeding, locomotory organelles and locomotion, reproduction, parasitism and pathogenic protozoans.

2. Phylum Porifera : General organisation of phylum Porifera with special reference to canal system, skeleton and development.

3. Phylum Coelenterata : General organisation of phylum Coelenterata with special reference to polymorphism, corals and coral reefs, development and alternation of generation.

UNIT-II

4. Phylum Platyhelminthes : General organisation of phylum Platyhelminthes with special reference to body wall, digestive system, excretory system and reproductive system. Development and life cycles of *Fasciola, Schistosoma, Taenia* and *Echinococcus*.

5. Phylum Aschelminthes : General organisation of phylum Aschelminthes. Life cycle of *Ascaris lumbricoides. Wuchereria bancrofti, Dracunculus medinensis.*

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - I

Classification upto orders and study of the specimens mentioned against each phylum with ecological note.

1. Protozoa.
   a. Permanent stained preparation from the culture of *Amoeba, Euglena Paramecium* and *Vorticella*.

   b. Prepared slides of *Amoeba, Trypanosoma, Euglena, Noctiluca, Eimeria, Monocystis, Paramecium* (binary fission), *Paramecium* (conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus,* Radiolarian oozes and Foraminiferan oozes.

2. Porifera
   a. Specimens : *Scypha, Grantia,Spongilla, Euplectella, Hyalonema, Euspongia.*
   b. Prepared slides : Spicules, gemmules, *Sycon* (T.S and L.S).
   c. Preparation of permanent slides : gemmules and spicules.

3. Coelenterata
   a. Specimens: *Porpita, Velella, Physalia, Aurelia, Metridium, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia, Gorgonia* and *Pennatula*.
   b. Prepared slides : *Hydra* (W.M.), T.S. through regions of testis and ovary, *Obelia* (colony, medusa and polyp), *Sertularia, Plumularia, Tubularia Bougainvillea, Aurelia, Pennaria*.
   c. Preparation of permanent slides : *Hydra, Obelia, Sertularia* and *Plumularia*.

4. Platyhelminthes
   a. Specimens : *Planaria, Dugesia, Fasciola, Taenia*, and *Echinococcus.*
   b. Slides : *Fasciola* (miracidium, sporocyst, redia and cercaria), scolex and proglottids of *Taenia* (Mature and gravid L.S. & T.S.).
   c. Stained preparation of : Amphistome, proglottid of a cestode.

5. Aschelminthes
   a. Specimens : *Ascaris* (Male and female)
   b. Slides : *Ascaris* (T.S. of male and female gravid).

6. Project based on general information on animals, selecting at least one representative from each phylum.

Books Recommended

1. *Invertebrates* Vols.I, II, III, IV & V by L.H. Hyman, Mcgraw Hill, New York (1940- 51)
2. *Text book of Zoology* by Marshall and Williams (1962).
3. *Invertebrates Structure and function* by E.J.W. Barrington. English Language Book Society & Nelson (1969).
4. *Protozoology* by Kudo, R.R., Books and Periodicals Corp.(India) New Delhi (1986).

5. *Introduction to Animal Parasitology* by J.D. Smyth. Hodder & Stoughton, London (1976).

PAPER - II : LOWER CHORDATES. COMPARATIVE ANATOMY OF VERTEBRATES - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of protochordates.
To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT - I

Introduction to chordates. *Organisation* and affinities of *Herdmania* and *Amphioxus*.

Comparative account of following systems of the vertebrates with evolutionary trends from Pisces to Mammals.

Integumentary system : Integument and its derivatives.
Skeletal system : Chondrocranium, Splanchnocranium, Dermatocranium, Jaw suspension.

UNIT-II

Digestive system : Alimentary canal and associated glands. (Types of teeth, dental formulae and functions, Types of stomach, small and large intestines, Glands : Salivary, gastric, Pancreas and liver).
Circulatory system : Evolution of heart & aortic arches in different classes of vertebrates.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper II (MZL 6052)

1. Classification upto orders, excepting pisces and Aves,where classification upto subclasses is required, Habits, Habitats, external characters and economic importance (if any) of the following animals:

Chondrichthyes : *Zygaena, Pristis, Narcine, Trygon, Rhinobatus, Chimaera.*
Actinopterygii : *Polypterus, Acipenser, Lepidosteus, Muraena, Mystus, Catla. Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea*.
Dipneusti (Dipnoi) : *Protopterus* (Lung fish)
Amphibia : *Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva. *Triton, Salamandra, Hyla, Rhacophorus*.

Reptilia : *Hemidactylus,,Calotes, Draco, Varanus, Phrynosoma, Chamaeleon.*
Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera, Crocodilus. Gavialis, Chelone and *Testudo*.

2. Demonstration of dissection of *Labeo* through video clipping/models/charts : Digestive and reproductive systems, Circulatory system : heart, afferent and efferent branchial arteries, Nervous system : cranial nerves and internal ear.

3. Study of the skeleton of *Labeo*, *Rana* and *Varanus.*
4. Study of histology of different organs of frog through permanent slides.
5. Study of poison apparatus in snakes through charts.
6. Project based on general information on animals selecting atleast one representative from each class/Parental care.

Books Recommended

1. *A Text Book of Zoology*, Vol.II Vertebrates by A.J. Marshall, MacMillan & Co. Ltd., New York (1972).
2. *Anatomy of Chordates* by C.K. Weichert, McGraw Hill Book Co. Inc. London (1958).
3. *Biology of Vertebrates* by H.E. Walter and L.P. Sayles, McMillan Co. New York (1949).
4. *Comparative Anatomy of Vertebrates* by G.C. Kent, Torpen Co.Ltd., Tokyo (1954).
5. Anatomy of Comparative Vertebrates. Hyman, Libbie Heneietta Satish secial pub. House 2004.

Paper III : Animal Physiology

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to know about all the physiological processes going on in animal/human body.
To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT – I

Nutrition : Chemistry, metabolic role and sources of vitamins & deficiency diseases due to them. Biological significance and regulation of minerals and deficiency diseases due to them. Physiology of digestion.

Circulation : Chemistry of blood components and their functional significance; origin, formation,molecular regulation and maturation of RBCs and WBCs; biochemistry of haemoglobin and myoglobin; biochemical interconversions during blood coagulation and homeostasis. Cardiac cycle and its regulatory mechanisms. Cardiac output and the factors that affect cardiac output, micro circulation, blood pressure, factors influencing blood pressure and its regulation.

Respiration : Concept of respiration, mechanism of breathing; biochemistry of respiratory exchange; Transport of respiratory gases; Regulatory mechanisms (humoral and neural) of respiration. Respiratory acidosis, alkalosis and regulation of pH.

UNIT – II

Excretion : Concept of excretion and nitrogenous wastes; functional anatomy of renal unit; biophysical and chemical mechanisms of ultrafiltration, reabsorption and secretion, transport mechanisms, urine formation & regulatory control of sugar, urea, Na^+ K^+, and H^+; Role of kidneys in regulation of acid-base balance and osmoregulation, counter current mechanism.

Physiology of Muscles : Types of muscles and their components; Molecular organization of myosin, role of heavy and light meromyosin, molecular organization of actin; interaction of actin and myosin, AT Pase activity of myosin, power-stroke, ATP binding and hydrolysis; Role of troponin and tropomyosin and Ca^{++} in regulation of muscle contraction. Contraction of smooth muscles, role of phosphorylation, Ca^{++} and kinases; Role of actin and myosin in eukaryotic cells (microtubles and microfilaments).

Stress Physiology Physiological adaptations in response to high, low ambient temperature, physiological adaptation at high altitude and in deep sea environment.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper III

1. To demonstrate that the optimum activity of salivary amylase is pH dependent.
2. Demonstration of estimation of Haemoglobin.
3. Demonstration of determination of TLC, DLC, RBC &Count.
4. Demonstration of determination of bleeding and clotting time.
5. Demonstration of determination of blood groups.
6. Demonstration of measurement of blood pressure.
7. Demonstration of estimation of ESR.
8. To study the effect of exercise on cardiovascular and respiratory systems.
9. Demonstration of estimation of the glucose level in blood of mammal, Haematocrit.

BOOKS RECOMMENDED

1. Guyton, A.X., Text Book of Medical Physiology, 7th edition, Saunders Company (1986).
2. Best, J.P., Best and Taylor's Physiological basis of medical practice, 11th ed. William and Wilkins (1985).
3. Hoar, W.S., General and Comparative Physiology, Adaptation and Environment, 3rd ed. Cambridge University, Press (1985).
4. Vander, A.J., Sherman, J.H. and Luciana, D.S., Human Physiology, McGraw Hill Publ. Co. (1990).
5. Gillian Pocock and Christopher D. Richards. Human Physiology. The Basis of Medicine Oxford University Press (2001).

PAPER IV : ECOLOGY AND ANIMAL BEHAVIOUR

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the habitat and interactions of diverse animal groups with their environement.
To acquaint the students with characteristic behavioural aspects of animal life.

UNIT – I : ECOLOGY

1. **Introduction** : Definition, subdivision & scope of ecology.
2. **Abiotic Factors** : Temperature, light and soil as ecological factors.
3. **Principles of limiting factors** : Liebig's law of minimum, Shelfords law of tolerance and the combined concept of limiting factors.
4. **Ecosystem** : Definition, components,food chain & food web, energy flow through ecosystem, ecological pyramids, Major ecosystems of the world.
5. **Biogeochemical Cycles** : Definition, different types of gaseous and sedimentary biogeochemical cycles.
6. **Population** : Characteristics, ecological niche
7. **Biotic community** : Characteristics of biotic community, ecological niche.
8. **Ecological succession** : Definition, types of succession, xerarch & Hydrarch concept of climax community, theories of succession.
9. **Ecological Adaptations** : Desert, aerial, fusorial and aquatic adaptations in animals.

UNIT – II : ANIMAL BEHAVIOUR

1. Feeding
2. Learning, reasoning, instinctive and motivative behaviour.
3. Social and sexual behavior of animals
4. Circadian rhythms
5. Mimicry and Protective colouration – Definition, types of mimicry with examples.
6. Migration of fishes and birds.
7. Parental care
8. Intra and interspecific relationships.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IV

1. To study the phototactic behaviour of an insect.
2. To study the geotactic behaviour of an insect.
3. To study nesting behaviour in birds.
4. To study the soil fauna.
5. To determine the pH of the soil.
6. To determine the moisture content of soil
7. To determine the salinity of the soil.
8. To study desert adaptations in animals.
9. To study aquatic adaptation in animals.
10. To study aereal adaptation in animals.
11. To study inter specific relationships.
12. To study the biotic components of an ecosystem.

Books recommended

1. Fundamentals of Ecology by E.P. Odum, Saunders College Publishing, Philadelphia, 1971.
2. Natural Resources Conservation : An Ecological Approach by O.S. Qwen, Mac Millan Publ. Co. N.T., 1994.
3. Ecology by Kreb J. Charles, Harper & Row Publ. New York, 1982.
4. *Principles of Animal Behaviour* by Dugatkin, Lee A, W.W. Norton, New York, 2004.
5. Animal Behaviour (Ethology) by V.K. Ahggarwal, 2010.
6. *Handbook of Ethological Methods* by Lehner, Phillip N, 2nd ed. Cambridge University Press, Cambridge, 1996.

Paper V : Biostatistics & Computer Applications

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course

To acquaint the students of basic statistics applicable in biological studies.

To make the students computer literate to be able to use the vast store of knowledge on the internet and to be able to use computers for studies.

UNIT-I (Biostatistics)

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of Central Tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence linuty.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chisquare - test, Z-test, F-test, Student t- Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation ; Simple & multiple regression.

UNIT-II (Computer Applications)

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practical based on theory paper V

1. Calculation of dispersion
2. Calculation of measure of central tendency
3. Fitting of Binomial distribution
4. Fitting of Poisson distribution
5. Tests of statistical significance
6. Write programme to demonstrate conditional statements using C language.
7. To perform mail merge.

8. Use of Excel and Power point.
9. Use of E-mail and internet.

Books Recommended

1. Daniel, W.W. 1983. Biostatistics : A Foundation for analysis in the Health Sciences. John Wiley and Sons, New York.
2. Dunn, O.J. and V.A. Clark. 2001. Basic Statistics : A primer for Biomedical Science. John Wilety and Sons, New York.
3. Goon, A.M., M.K. Gupta and B. Dasgupta. 1983. Fundamentals of Statistics. Vol.I.
4. Hunt, R. and J. Shelly. Computer and Common Sense. Prentice Hall.
5. Kanetker, Y. Let us 'C' B.P.B. Publication.
6. Rajaraman, V. Vomputer Programming in FORTRAN. IV. Prentice Hall.
7. Rajaraman, V. and T. Radhakrishanan. An Introduction to Digital Computers. Prentice Hall.
8. Sinha P.K. and Priti Sinha Computer Fundamentals. 3rd Ed. B.P.B. Publication.
9. Banerjee P.K. Introduction to Biostatistics (A Textbook of Biometry) S. Chand and company Ltd.

SECOND SEMESTER

PAPER-VI : STRUCTURE AND FUNCTIONS OF INVERTEBRATES –II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates including minor phyla.

UNIT-I

1. Phylum Annelida : General organisation of phylum Annelida with special reference to segmentation, digestive, excretory and reproductive systems.

2. Phylum Arthrpoda : General organisation of Arthrpoda. Larval forms of crustaceans. Modifications of mouth parts, wings and legs of insects. Social organisation of insects (Termites, honey bee and ants).

UNIT-II

3. Phylum Mollusca : General organisation of Mollusca with special reference to feeding, respiration and shell diversity, podium or foot in Mollusca, torsion and detorsion in Gastropoda.

4. Phylum Echinodermata : General organisation of Echinodermata, Comparative account of water vascular system, haemal and perihaemal systems, Larval forms in Echinodermata

5. Minor Phyla : Concept and significance. Organisation and general characters of different minor phyla. Rotifera, Gastrotricha, Kinorhyncha and Nematomorpha.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - VI

1. Annelida
   a. Demonstration of dissection of Earthworm (digestive, nervous and reproductive systems) through video clippings/models/charts.

b. Specimens : *Nereis,Heteronereis, Polynoe, Tubifex, Eunice, Aphrodite, Chaetopterus, Arenicola, Pontobdella, Amphitrite* and , *Hirudinaria.*

c. Prepared slides : Earthworm (T.S. typhlosolar region, setae, pharyngeal nephridium, septal nephridium, integumentary nephridium). *Nereis* (Parapodium),Leech (T.S.through different regions).

2. Arthropoda
   a. Demonstration of dissection of *Palaemon* (appendages,digestive, nervous and reproductive systems) through video clippings/models/charts..
   b. Specimens : *Peripatus, Lepisma*, Cockroach, Grasshopper, Praying mantis, Earwig, Dragonfly, Termite (queen and other castes), Ant, Butterfly, Moth, Beetles, Wasp, Honeybee,Crab, Prawn, *Lepas*, *Balanus, Apus, Limulus,* Scorpion, Spider, Millepede and Centipede.
   c. Prepared slides : Body louse, Bed-bug, Rat flea, *Cypris, Cyclops*, *Daphnia*, trachea of insects, gill and statocyst of Prawn. Trachea of insect, mouthparts of Cockroach, Mosquito, Honeybee, Housefly and butterfly,
3. Mollusca
   a. Demonstration of dissection of *Anodonta* (digestive and nervous systems) through video clippings/models/charts.
   b. Specimens :*Anodonta, Mytilus, Pholas, Pecten, Haliotis, Aplysia, Doris, Limax, Pila, Sepia,Octopus, Nautilus, Chiton* and *Dentalium*.
   c. Prepared Slides : Glochidium larva, radula *of Pila*, gill lamina of *Anodonta*.

4. Echinodermata
   a. Demonstration of anatomy of *Asterias* through charts/model/ video clipping.
   b. Specimens : *Asterias, Echinus, Cucumaria, Antedon, Ophiothrix.*
   c. Prepared slides : T.S. arm of Starfish, tube feet, larval forms of echinodermata

5. Project based on general information on animals selecting atleast one representative from each phylum.

Note : Candidates will be required to submit duly signed note books of practical record.

Books Recommended

1. *Invertebrates* Vols.I, II, III, IV & V by L.H. Hyman, Mcgraw Hill, New York (1940- 51)
2. *Text book of Zoology* by Marshall and Williams (1962).
3. *Invertebrates Structure and function* by E.J.W. Barrington. English Language Book Society & Nelson (1969).
4. *Imm's Text Book of Entomology* by Richards and Davies. Methuen & Co. Ltd. New York:EP Dutton & Co. Inc.(1983).
5. *Principles of Insect Morphology* by R.E. Snodgrass. Mcgraw Hill, New York (1935).
6. *The Insects : Structure and Function* by R.F. Chapman.English Language Book Soc. & Hodder and Sloughton, G. Britain (1978).

PAPER-VII : COMPARATIVE ANATOMY OF VERTEBRATES – II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT-I

Comparative account of the following systems of the vertebrates with evolutionary trends found pisces to mammals :

Respiratory system : Respiratory organs.
Types of respiratory mechanisms (gills, lungs, skin and accessory respiratory organs).

Urinogenital system : Succession of kidney (archinephros, pronephros, mesonephros, and metanephros), osmoregulation, evolution of gonads and urinogenital ducts.

UNIT-II

Nervous system : Comparative account and evolution of brain, spinal cord and cranial nerves.

Sense organs : Chemoreceptors, photoreceptors and mechanoreceptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VII

1. Aves : *Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
2. Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus, Loris, Macaca,Manis, Hystrix, Funambulus, Panthera, Canis, Herpestes, Capra,Pteropus*.
3. To study the skeleton of *Gallus, Oryctolagus*.
4. Demonstration of dissection of Chick and White Rat through video clipping/models/charts.
   Chick : Digestive, arterial, venous and urinogenital systems.
   White Rat : Digestive, arterial, venous and urinogenital systems.
5. Study of the histology of different organs of frog and rat/rabbit through permanent stained slides.
6. Project based on general information on animals selecting atleast one representative from each class/Bird migration.

Books Recommended

1. *A Text Book of Zoology*, Vol.II Vertebrates by A.J. Marshall, MacMillan & Co. Ltd., New York (1972).
2. *Anatomy of Chordates* by C.K. Weichert, McGraw Hill Book Co. Inc. London (1958).
3. *Biology of Vertebrates* by H.E. Walter and L.P. Sayles, McMillan Co. New York (1949).
4. *Comparative Anatomy of Vertebrates* by G.C. Kent, Torpen Co.Ltd., Tokyo (1954).
5. Anatomy of Comparative Vertebrates. Hyman, L. H. Satish Serial Pub. House 2004.

PAPER VIII : BIOSYSTEMATICS AND EVOLUTION

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to identify, classify and name the organisms according to international code of Zoological nomenclature.

To acquaint the students with different type of keys. To make the students understand the concept of speciation, origin of life and evolution.

UNIT-I

1. Definitions and perspectives of systematics, classification and taxonomy, goals and importance of taxonomy.
2. Procedures of taxonomy -identification, classification, nomenclature, phena, taxa, category.
3. Key and its significance.
4. Higher taxa and Linnean hierarchy
5. Qualitative and quantitative methods of analysis of variations
6. History and theories of classification
7. International code of Zoological nomenclature-principles, objectives and rules for nomenclature, type system and priority for different taxa.
8. Population structure of species
9. Polytypic species, race, variety, cline, subspecies, semispecies, super species.
10. Speciation.
11. Species concepts - Typological species concept, nominalistic species concept, biological species concept, evolutionary species concept.
12. Difficulties in applying biological species concept.

UNIT- II

1. Mutation theory of evolution : mutations, variations and natural selection; modern concept and interpretation of evolution and future of evolutionary process, sexual selection and co-evolution.
2. Interrelationship among different phyla of Invertebrates and their evolutionary significance.
3. Origin of vertebrates; Pisces, Amphibia, Reptilia, Aves and Mammalia.
4. Ancestry of man, horse, camel and elephant.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to

be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VIII

1. Use of key to identify the fishes of the region, representing different families.
2. Methods of describing common insects representing different orders, with particular reference to the recording of taxonomic characters.
3. Study of ancestory of man, horse, camel and elephant through charts/models.
4. Visit to a fossil park/Geology and Anthropology museums.
5. Study of origin of invertebrate and vertebrate groups through charts.

Books Recommended

1. Genetics and the origin of species by T. Dobzhansky, Columbia University Press (1951).
2. Principles of Systematic Zoology by E. Mayr, Tata McGraw Hill Publishing Co. Ltd., New Delhi (1976).
3. Taxonomy by R.E. Blackwelder, John Wiley & Sons, New York (1967).
4. Organic Evolution by Lull, MacMillan Co., New York (1947).
5. Time, life and man by R.A. Stirton, John Wiley and Sons, New York (1959).
6. Evolution of the Vertebrates by E.H. Colbert, Willy Eastern Ltd., New Delhi (1969).

Paper IX : Endocrinology and Neural Physiology (MZL 7001)

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT- I

Endocrinology : Chemical nature of hormones, steroid hormones, amino acid derived hormones, catecholamines and peptide hormones.

Mechanism of hormone action, steroid hormone-receptor interactions and signal transduction.

Autocrine, paracrine and telocrine regulation of hormones.

Pineal-hypothalmo-hypophyseal-gonadal axis.

Hormonal elaborations of Hypothalamus, pitutiary, pancreas, adrenals, thyroid, parathyroid and their role in regulation of carbohydrate, lipid, protein, calcium and phosphorus metabolism.

Hormones of gastro-intestinal tract.

Prostaglandins, their synthesis and biological functions.

Endocrine control of spermatogenesis, oogenesis and folliculogenesis in mammals.

UNIT-II

Nervous system and sense organs : Neuron as the basic unit of nerve physiology; Methyl-accepting chemotaxis proteins and chemotactic signals of the plasma membrane; Na^+ and K^+ permeability and action potentials, structure of Na^+ and K^+ channels.

Neurotransmitters : Molecular mechanism of acetylcholine, dopamine**,** serotonin γ-amino butyric and glycine neurotransmetters, acetylcholine receptor channels and their inhibitors; Retinal rod cell excitation and molecular biology of visual cycle, colour vision. Power of accommodation, myopia, hypermetropia, astigmatism, cataract, glaucoma. Mechanisms of auditory and olfactory responses. Gustatory receptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IX

1. To identify the stage of oestrous cycle through photographs and slides.
2. To show the endocrine glands in rat through charts/models/video clipping.
3. Preparation of permanent histology slides from testis, pancreas and adrenal of goat/sheep obtained from slaughter house.
4. To study the histology of endocrine glands.
5. To study the corrective measures for myopia, hypermetropia, astigmatism, cataract.
6. To study the structure of eye, ear and different types of neurons through charts/models.

BOOKS RECOMMENDED

1. Turner, C.D. and Bagnars, W.B., General Endocrinology, Saunders Company (1976).
2. Highnam, K.C. and Hill, L., Comparative Endocrinology of Invertebrates, Enwaral Arnold Ltd., London (1981).
3. Golds Worthy, G.J. Robinson, J. and Mordue, W., Endocrinology, John Wiley and Sons, New York (1981).
4. Tombes, A.S., An Introduction to Invertebrates Endocrinology, Academic Press, New York (1970).
5. Bentley, P.J., Comparative Vertebrate Endocrinology, Cambridge Univ. Press (1998).
6. Mac E. Hadley. Endocrinology. 4^{th} edition, Prentice Hall (1996).

PAPER X : IMMUNOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the defense mechanisms of animals/bodies.

UNIT-I

1. Organs and cells of the immune system and their functions : primary and secondary lymphoid organs, lymphocytes, mononuclear cells and granulocytic cells.
2. Antigens : Factors affecting immunogenicity, B and T cell epitopes, haptens and adjuvants.
3. Immunoglobulins :Basic and fine structure of Immunoglobulins, biological activities of different classes of Immunoglobulins.
4. Cellular and Humoral immune response -Role of T and B lymphocytes, Primary and secondary immune response.

UNIT-II

5. Major Histocompatibility Complex : MHC molecules and genes,regulation of MHC expression, its relation to immune responsiveness and disease susceptibility.
6. Complement System : Complement activation, regulation and biological effects mediated by complement components.
7. Antigen Antibody Interactions : Precipitation & agglutination reactions, radioimmunoassay, ELISA, Immuno fluorescence, Western blotting, Southern and Northern blotting. Immunoprecipitation and flow cytometry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper X

1. To demonstrate the agglutination reaction by typing of human blood into A,B, AB, O and Rh factor.
2. To demonstrate the different types of white cells in a stained blood film of a normal individual and compare with that of a diseased individual (allergy, parasitic infection etc.).
3. To study the sections of different lymphoid organs thymus, spleen, lymph node, intestine etc. from prepared slides.
4. To demonstrate Ouchterlony diffusion assay through Kit .
5. To demonstrate dot ELISA through kit.

Books recommended

1. Kuby Immunology (VI edition) by T.J. Kindt, R.A. Golds by and B.A. Osbome, W.H. Freeman Publishers (2007).
2. Essential Immunology by Roitt, I.M, Mosby, Harcourt Publishers (2001).
3. Immunology : A short course by E. Benjamini, R. Coico and G. Sunshine, Wiley Liss Publishers (2000).
5. Fundamental Immunology by W.E. Paul, Lippincott Raven Publishers (1998).
6. Immunology An Introduction by I.R.T. Zard, Thomson Publishers (1998).
7. Jameway, Charles. A – Immnunbiology – 6th ed. Luttmann, Werner & others – Immunology U.S.A., Academic Press.(2006).

THIRD SEMESTER

PAPER XI : DEVELOPMENTAL BIOLOGY - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the pattern of development at molecular level.
To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT - I

1. Basic concepts of Development : Potency, commitment, specificiation Induction, Instructive and permissive interactions, competence ,determination and differentiation.
2. Molecular basis of differentiation, transdifferentiation and dedifferentiation. Pattern formation in *Drosophila*, Amphibian, chick and *C. elegans*
3. Cleavage patterns and fate maps of Tunicate, *Drosophila*, Amphibia, chick and *C. elegans*.
4. Gene regulation in Development in *Drosophila*.

UNIT – II

1. Gametogenesis in animals.
2. Molecular events during fertilization.
3. Zygote formation, Blastula formation and embryonic fields. Gastrulation and formation of germ layers in animals.
4. Regeneration .

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XI

1. To study the different stages of development in frog and chick through permanent slides.
2. To study the spermatogenesis of rat and grasshopper through slides/charts./photographs.
3. Types of eggs in animals through charts/photographs/models.

Books recommended

1. An Introduction to Embryology by B.I. Balinsky, Saunders, Philadelphia (1981).
2. Major Problems in Developmental Biology by H. Urspaung, Academic Press, New York, (1972).
3. The Control of Gene Expression in Animal Development by J.B. Gurdon, Harvard University, Press, Oxford (1974)..
4. Gene activity in Early Development by Davdson, E.H. Academic Press, London (1977).
5. Development Biology by Scott .F. Gilbert, Sinauer Associators Inc. Publishers 8th edition (2006).
6. Development Biology (Vol.II) by Browder, L.W, Saunders (1984).

PAPER XII : BIOCHEMISTRY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of various metabolite in animal body. To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Carbohydrates : General structure, chemical properties & classification. Homo and heteropolysaccharides. Bacterial polysaccharides. Mucopolysaccharides. Biological functions of polysaccharides.

Glycolysis, TCA cycle, phosphogluconate pathway & glycogenolysis.

Bioenergetics of Carbohydrate matabolism.

Lipids : General structure and chemical properties of simple lipids. Structure and function of phospholipids. Biological functions & structure of cholesterol and steroid hormones.

Oxidation of fatty acids; biosynthesis of saturated and unsaturated fatty acids.

UNIT-II

Proteins : Amino acids and their properties, Protein structure and shape. Ramachandran Plot. Nucleic acids and protein interaction. Conjugated proteins : Lipoproteins, glycoproteins, nucleo proteins.

Biosynthesis of purines and pyrimidines. miRNA, Ramachandran plot.

Enzymes : Enzyme kinetics, mode of action of enzyme and biochemical role of coenzymes and isoenzymes, effect of enzyme concentration, effect of substrate concentration and pH on enzyme activity, allosteric enzymes, feed back inhibition, covalent modifications, irreversible and reversible. Ribozyme and Abzyme.

Electron transport chain : Mechanism of oxidative phosphorylation (Mitochondrial), inhibitors of electron transport chain Intibitors and uncouplers of mitochondrial oxidative phosphorylation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XII

1. Estimation of alkaline and acid phosphatases in the liver procured from local market.
2. Quantitative estimation of glycogen, cholesterol protein in tissue procured from local market.
3. Qualitative estimation of carbohydrates, lipids and protein in tissue procured from local market.

BOOKS RECOMMENDED:

1. Beckatt, A.H. and Stenlake, J.B., Practical Biochemistry, the Athlone Press, London (1988).
2. Freefelder, D, Practical Biochemistry : Application to Biochemistry and Molecular Biology, W.H.Freeman, (1982).
3. Wilson, Keith and Walker, John, Practical Biochemistry : Principles and techniques, 5th Edition Edited, Cambridge University Press (2000).
4. Kuby, Janis, Immunology, W.H. Freeman and Company (2000).
5. Alberts, Bruce and others Molecular Biology of the Cell. (2002)
6. Lewin, Benjamin and others Cells Canada Jonas and Bartle (2007).
7. Lehninger – Principles of Biochemistry & Bartle. Nelson & Cox. 4th edition. W H Freeman and Company, New York.
8. Eric E. Conn, Paul K. Stumf and others. Outlines of Biochemistry 5/E. John Wiley and Sons. (1995).
9. Jeremy M. Berg, John L. Tymoczko and lubert Stryer. Biochemistry. 5th edition W.H. Freeman and Company, New York (2006).
10. Donald Voet and J.G. Voet, Biochemistry, 3rd edition. John Wiley and Sons (2004).

Paper - XIII : CELL AND MOLECULAR BIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

To clarify the concept of population genetics to the students through Hardy-weinberg law.

UNIT- I

1. Fixation and staining techniques : Non -chemical and chemical fixatives, chemistry of staining of acidic and basic dyes.
2. Structure and functions of cell and its organelles (Nucleus, plasma membrane, mitochondria, Golgi bodies, endoplasmic reticulumn, ribosomes and lysosomes).
3. Plasma membrane : Structure and organisation of membranes, Glycoconjugates and proteins in membrane system,ion transport, Na+/K+ATPase, model membranes, liposomes.
4. Protein sorting in ER, Golgi and targeting of proteins to Mitochondria, secretory and endocytotic pathway.

UNIT- II

1. Cell-Cell signalling : Cell surface receptors, Second messenger system, MAP kinase pathways, Signalling from plasma membrane to nucleus.
2. Cytoskeletal elements : Microtubules and microfilaments.
3. Cell division : Cell Cycle, Molecular basis of cell division,mitotic apparatus, modification and abnormalities of cell division, chromosome movement (forces of cell division).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIII

1. Study of permanent histological slides of testis and ovaries of insects/ mice/rat.
2. Basis of reaction and demonstration of the sites of proteins, nucleic acids, lipids & carbohydrates in ovaries of insects/rat/mice through slides and photographs.
3. Study of stages of mitosis and meiosis from permanent slides from animal and plant materials through slides/charts/photographs.

Books recommended

1. Cell Biology and Molecular Biology by D.Robertis, EDP & DE Robertis E.M.F, 8th ed., Saunders & Co. Philadelphia (1995).
2. Cell Biology by C.B. Powar, 3rd ed., Himalaya Pub., Bombay (1984).
3. Advances in Cell and Molecular Biology by Dupraw, E.J., eds. Academic Press, New York & London (1971).
4. Cell Biology. Pollard, Thomas, D.S.Earnshan, William C. Saunders. USA. (2002).
5. The Cell : A Molecular Approach by Cooper GM & H 5th edition (2009).
6. Molecular Biology of the Cell, 5th edition by Alberts, John Raff. Roberts & Walter (2008).
7. Cell and Molecular Biology : Concepts and Experiments 5th edition by Gerald Karp. John Wiley and Saunders.
8. Molecular Cell Biology by Lodish *et. al*. W.H. Freeman Co. New York (2008).

Paper XIV : Instrumentation and Methodology

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Microscopy : Principle, structural parts and applications of compound microscope, phase – contrast microscope, fluorescence microscope, interference microscope, polarization microscope, dark field microscope, transmission electron microscope and scanning electron microscope.

Cell fractionation method : Principle of centrifugation and ultracentrifugation, different types of ultracentrifugations (in brief) and their applications, structural parts of an analytical ultracentrifuge, ultracentrifugation and buoyant density.

Spectrophotometry : Principle and structural parts of a colorimeter and a spectrophotometer and their applications.

Chromatography : Principles of chromatography, paper chromatography, thin layer chromatography, gas chromatography, gel permeation chromatography, ion exchange chromatography, high pressure liquid chromatography, affinity chromatography.

UNIT-II

Electrophoresis : Principles of electrophoresis, (Brief introduction to paper electrophoresis, polyacrylamide gel electrophoresis, disc gel electrophoresis,) SDS-PAGE, agarose gel electrophoresis, isoelectric focussing, applications of electrophoresis, Phage DNA, detection of plasmids, separation of DNA molecules.

Polymerase chain reaction (PCR) and its application.

Tissue culture techniques : Introduction to basic culture technique in Cell culture, organ culture, Aseptic techniques, sterilization technique, specialized culture technique, , Monolayer culture, suspension culture, leucocyte cultures. factors affecting cell growth *in vitro.*

Radioisotopes : Principles and applications of tracer techniques in biology, radiation dosimetry, radioactive isotopes and half life of isotopes, liquid scintillation counter, principles and applications of autoradiography and cerenekov radiation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIV

1. To study the parts of the compound microscope and phase-contrast microscope and their maintenance.
2. To study the living material under the phase contrast microscope.
3. Finding out the diameter, area and circumference with the help of stage micrometer and oculometer.
4. To sketch the diagram of any tissue with the help of camera lucida and to draw its magnification line.
5. Demonstration of section cutting and mounting of sections on the grid for SEM and TEM. Demonstration of SEM & TEM in the CIL lab., P.U., Chandigarh.
6. Demonstration of working of ultracentrifuge.
7. Demonstration of the working of PCR and Western blotting, Deptt. of Zoology, P.U., Chandigarh.
8. To separate a sample of amino acid with the help of paper chromatography.
9. Demonstration of SDS-PAGE, Agarose gel electrophoresis.

BOOKS RECOMMENDED:

1. Bacq, Z.M. and Alexender, P, Fundamentals of Radiography, Pergamon Press, London (1989).
2. Benett, A.H. and Usterbere, H, Phase Microscopy: Principle and applications, John Wiley and Sons, London (1951).
3. Dawes, C.J.,Techniques for Transmission and Scanning Electron Microscopy, Ladd Rew. Ind.,Inc.,Publishers (1981).
4. Freshrey, R.I. and Allen, R, Culture of Animal Cell : A manual of basic techniques, Lis Inc., New York. (1983).
5. Watt, J.M., The Principles and Practice of Electron Microscopy, Watt (1985).
6. Michael G, Flow Cytometry : A Practical Approach, 3rd Edition Edited Michael G. Ormerod Oxford University Press (2000).
7. In-vitro Cultivation of Animal Cells. BIOTOL, Elsevier (2004).

PAPER : XV ADVANCES IN ENTOMOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students aware of various pests of food crops and food products and various insect control methods.
To educate the students about economic importance and techniques of Apiculture and sericulture

UNIT-I

1. Salient features with suitable examples of the various insect orders : Thysanura, Odonata, Isoptera, Orthoptera, Hemiptera, Coleoptera, Lepidoptera, Hymenoptera and Diptera.
2. Strucure and function of the following systems in insects :
   a. Digestive System
   b. Respiratory System
   c. Nervous System
   d. Reproductive System
3. Post embryonic development and types of metamorphosis in insects. Structural modifications in the larvae & pupae.
4. Parthenogenesis in insects.
5. Effect of temperature and photopteriod on the lives of insects, details of onset, termination and significance of diapause.

UNIT-II

1. Plant host-insect interaction.
2. Practices of Sericulture, Apiculture & Lac culture
3. Systematic position, habits, nature of damage and outlines of the life cycles of following pests of crops, vegetables & fruits.

A. CROPS

Cotton :

(i) *Pectinophora gossypiella* (Pink boll worm)
(ii) *Bemisia tabaci* (Cotton white fly)
(iii *Dysdercus cingulatus* (Red cotton bug)

Sugarcane

(i) *Pyrilla perpusilla* (Sugarcane leaf hopper)
(ii) *Scirpophaga nivella* (Sugarcane top borer)

Paddy

(i) *Hieroglyphus banian* (Rice grass hopper)
(ii) *Leptocorisa varicornis* (Gundhi bug)

Wheat
(i) *Tanymecus indicus* (Ghujhia weevil)
(ii) *Sesamia inferens* (Wheat stem borer)

B. VEGETABLES
(i) *Dacus cucurbitae* (Pumpkin fruit fly)
(ii) *Raphidopalpa foveicollis* (Red pumkin beetle)

C. FRUITS
(i) *Drosicha mangifera* (Mango mealy bug)
(ii) *Diaphorina citri* (Citrus psylla)

3. Pests of stored food products with particular reference to their systematic position, habits, nature of damage caused by them along with the outlines of their life cycles :
(i) *Callosobruchus maculatus* (Pulse beetle)
(ii) *Sitophilus oryzae* (Rice weevil)
(iii) *Tribolium castaneum* (Rust red floor beetle)
(iv) *Sitotroga cerealella* (Angoumois grain moth).

4. Insect control :
(a) Chemical control : Categories of pesticides, important examples, their application and mode of action; Insect repellents and attractants.
(b) Biological Control : Principles, History, use of parasites, predators and pathogens.
(c) Integrated Pest Management (IPM).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XV

1. Study of insect biodiversity in natural environment and preparation of project based on the observation.
2. Identification marks and taxonomic status of insect pests of crops vegetables, fruits and stored products mentioned in theory syllabus.
3. Demonstration of dissection of insects for the study of following systems through charts/models/video clippings. :
   a. Digestive System
   b. Nervous System
   c. Reproductive System.
4. Systematic position upto family and ecology of the following medical and veterinary pests :
   a. *Anopheles* b. *Culex* c. *Aedes* D. Blow fly e. Bot fly f. Horse fly g. Flesh fly.
5. Introduction to apiculture practices and handling of Beehives in insects.
6. Study of male and female external genitalia of insects through permanent slides.

7. Study of different types of larvae and pupae with the help of charts/ photographs/ diagrams.

Books recommended

1. General Entomology, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, Calcutta, Bombay by M.S. Mani,1990.
2. The Insects, Structure & Function, English Language Book Society Hodder and Sloughton, G. Britain by R.F. Chapman,1978.
3. Imms Text Book of Entomology Methuen & Co. Ltd. New York: EP. Dutton & Co. INC. by Richards & Davies, 10th edition (1997).
4. Honey bees and their management in India, ICAR Publications by R.C. Mishra, 1995.
5. Agricultural Pests of India and South East Asia by A.S. Attwal, Kalyani Publishers, New Delhi, 1991.
6. Insects and Mites of Crops in India by MRGK. Nair, ICAR, N.Delhi, 1975.
7. Economic and Applied Entomology by Kumar and Nigam, Emkay Publications, Delhi, 2000.
8. Destructive and Useful Insects by Metcalf and Metcalf, McGraw Hill Publications, New York, 1951.
9. Integrated Pest Management by David Dent, Chapman & Hall, London, New York, Madras, 1995.
10. Insect Pheromones and their use in Pest Management by House Sevens and Jones, Chapman Hall,London, New York,Madras, 1998.
11. Beekeepy for Profile and Pleasure. Addison Webb. Agrobios, 2004.
12. Textbook of Applied Entomology. P. Srivastava. Vol.1. Kalyani Publishers, 2005.

FOURTH SEMESTER

PAPER XVI : DEVELOPMENTAL BIOLOGY - II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT – I

1. Organogenesis : Vulva formation in *C. elegans,* Eye lens induction. Epitheliomesenchymal interactions, Differentiation of neuron.
2. Primary and secondary embryonic induction, chemical nature of evocators.
3. Introduction to stem cells, stem cell related disorders, gene therapy.
4. Metamorphosis.

UNIT – II

I Teratogenesis : Critical period dose, classes of cytotoxic teratogens, human teratogenesis.
2. Totipotency & nuclear transfer experiment.
3. Cell surface adhesion, inter cellular adhesion, adhesive molecules - cadherins.
4. Environmental evolution and animal development: Environmental cues and effects, Malformations and disruptions, Changing evolution through development modularity, Developmental constraints.
5. Sex determination.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVI

1. To prepare the permanent stained slides of developing stages from fertilized egg of hen.
2. To study different larvae in invertebrates from permanent slides.
3. To study through PS of larvae of invertebrates (Redia, Cercaria, Arthropod larvae, Glochidium larva).

Books recommended

1. An Introduction to Embryology by B.I. Balinsky, Saunders, Philadelphia (1981).
2. Major Problems in Developmental Biology by H. Urspaung, Academic Press, New York, (1972).
3. The Control of Gene Expression in Animal Development by J.B. Gurdon, Harvard University, Press, Oxford (1974)..
4. Gene activity in Early Development by Davdson, E.H. Academic Press, London (1977).
5. Development Biology by Scott .F. Gilbert, Sinauer Associators Inc. Publishers 8th edition (2006).
6. Development Biology (Vol.II) by Browder, L.W, Saunders (1984).

PAPER XVII : ADVANCES IN PARASITOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To introduce the students to various pathogens causing diseases and the reactions of the body against them.

UNIT-I

1. Introduction to Parasitology, different types of animal associations : definitions; Parasitism, Mutualism, Hyperparasitism
2. Parasite Host Specificity : Kinds of parasite host specificity, specificity factors related to infection and growth.
3. Molecular, Celluclar and Physiological basis of Host Parasite Relationship : in Protozoans, trematode, cestode and nematode parasites.

UNIT-II

1. Immunity to Parasites : Brief account of immunity to malaria, leishmaniasis, trypanosomiasis, schistosomiasis and ascariasis.
2. Vectors - Brief account of various insect vectors of human parasitic infections.
3. Parasite Transmission : Introduction, mechanism, circardian rhythem.
4. Ecology of parasites : Ecological niche, host size, and parasite numbus, biological control, role of metazoan parasites in transmission of microbial infection.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVII

1. To study the protozoans and helminth parasites infecting frog, toad and common household insects through slides/charts.
2. To study the helminth parasites infecting gut of the sheep and goat obtained from slaughter house.
3. To study the parasites from stained blood smears - *Leishmania, Plasmodium* and *Trypanosoma*.
4. To study the vectors of different parasitic infections (Mosquito, ticks, sandfly etc.).

Books recommended

1. Parasitology : The Biology of Animal Parasites V edition by E.R. Noble and G.A. Noble, Lea & Febiger Philadelphia, 1982.
2. Physiology of Parasites by L.H. Chapell, Blackie, Glosgow, London, (1979).
3. Immunology of Infection by Kaufmann, Academic Press (1999).
4. An Introduction to Animal Parasitology by Smyth, J.D., Hodder & Stoughton, London (1976).

PAPER : XVIII : ADVANCES IN FISH AND FISHERIES

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with aquatic animal life and its economic importance.

UNIT-I

1. Introduction: History and scope of aquaculture, Different kinds of aquaculture-traditional, extensive, intensive, semi-intensive..
2. Criteria for candidate species selection and criteria for site selection for various culture practices, Farming methods: ponds, lens, cages, raceway, raft, rope, monoculture, polyculture, sewage fed culture and organic aquaculture.
3. Principle of composite fish culture, Composite fish culture of endemic and exotic fishes in India.
4. Limnological parameters: influence of the environmental parameters on fish abundance and distribution, aquaculture and other anthropogenic activities on fish populations.
5. Induced breeding: History, technique, different kinds of hatcheries and advantages of induced breeding in fishes. Use of synthetic chemicals for induced breeding.
6. Ecological classification of aquatic organisms other than fishes.
7. Characteristics of lotic environment (river/stream) as per zonation, major abiotic and biotic factors in a stream/river affecting the body form in hillstream fishes, Body form in hillstream fishes.
8. Productivity: Concept of productivity, estimation of primary productivity by different methods and classification of water bodies on the basis of productivity.

UNIT-II

1. Major and minor constituents of fish including minerals and trace elements in fish. Post mortem changes in fish- rigor mortis, autolysis, auto-oxidation and their significance, biochemical and microbial spoilage of fish.
2. Fish diseases: Fungal, bacterial, protozoan, worm and crustacean diseases of fishes.
3. Principles of fish preservation, Preservation of fish by curing (drying, salting and smoking), Chilling and freezing of fish, canning of fish and fish products. Fish transportation and marketing
4. Biological control of weeds/algal blooms using fishes.
5. Concept of Transgenic fish and bio-safety regulations.
6. Concept of molecular markers (mitochondrial//nuclear) with a brief description of different kinds of markers (RFLP, RAPD, AFLP, SSR or Microsatellite, SNP)
7. Hard parts used for age determination with advantages and disadvantages of each hard part.
8. Determination of growth of fish using length-weight equation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVIII

1. To estimate the dissolved oxygen in water.
2. To estimate the pH of water.
3. To estimate the phosphate of water.
4. To determine the BOD of water.
5. To study the benthic organisms.
6. To study the different types of fishing gears.
7. To study the Indian culturable fishes.
8. To study the Exotic culturable fishes.
9. Estimation of total alkalinity in a given water sample.
10. Estimation of total chlorides in a given water sample.
11. Estimation of total hardness in a given water sample.

Books recommended

1. Fish and Fisheries of India by V.G. Jhingran, Hindustan Publ. House, N. Delhi,1991.
2. Aquaculture Production FAO Fisheries Circular No.815 by FAO Rome,1991.
3. Aquaculture in Asia by M.M. Joseph, Asian Fisheries Soc., Mangalore, 1990.
4. Inland Fisheries of India Vol. I & II by P.K. Talwar and A.G. Jhingran, Oxford & IBH, New Delhi, 1991.
5. Freshwater Fishery Biology by K.F. Lagler, WmC. Brown Co. Publ. Dubuque, IOWA, 1969.
6. Methods for Assessment of Fish Production in Freshwaters, IBH Handbook No.3, Blackwell Scientific Publ., Oxford, 1970.
7. Fundamentals of Ecology by E.P. Odum, W.B. Saunders Co. Philadelphia, 1971.
8. Limnology by P.S. Welch McGraw Hill Book Co., New York, 1952.
9. Limnology by R.G. Watzel, R.G., W.B. Saunders Co Philadelphia, 1983.
10. The Biology of Polluted Waters by H.B.N. Hynes, Liverpool Univ. press, Liverpool, 1978.
11. Fundamentals of Limnology by F. Ruttner, Univ. Press Toronto, 1975.
12. Fishes : An Introduction to Ichthyology by P.B. Moyle and J.C. Cech. Prentice Hall Inc. Jersey USA, 1986.
13. Fishery Development by S.C. Agarwal and M.S. Johal. Narendra Publishing House, Delhi, 2004.
14. History of Fishes by J. Norman revised by P.H. Greenwood. Ernst Brown, London 1999.
15. Biology of Fishes by Kyle H.M. Biotech. Books, Delhi, 2007.
16. Freshwater Ecology : Concepts and environmental applications. Dodds, Walter K. Academic Press. USA., 2002.
17. The Biology of Fishes. New Introduction by Dr. Vijay Dev Singh. M. Hary. Kyle. Biotech. Books, 2007.
18. Fish Management and Aquatic Environment. Arvind Kumar and Pushplata Dukey. Daya Publishing House, 2006.

PAPER XIX : ENVIRONMENTAL BIOLOGY AND WILD LIFE

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To educate the students about the basic environmental phenomena like pollution, ecosystem, biogeochemical cycles, etc.
To educate the students about the importance of wild life conservation.

UNIT-I

1. **Environmental Pollution** : Causes impact and control measures of air, water and noise pollution, management of wastes, Environment Protection Act 1986.
2. **Natural resources** : Natural resources and their conservation.
3. **Energy resources** : Study of renewable and non-renewable energy resources. Non conventional energy resources.
4. **Environmental education** : Goals, objectives, and methods of teaching of environmental education.
5. **Ecosystem Dynamics and Management** :Stability and complexity of ecosystems. Speciation and extinctions, environmental impact assessment, sustainable development.

UNIT-II

1. **Zoogeography** : Zoogeographical regions and their fauna.
2. **Wildlife of India** : Different types with references to animals, causes of depletion, significance and conservation of wildlife.
3. **Sanctuaries and National Parks** : Location and Important fauna of the sanctuaries and national parks of India.
4. **Wildlife Projects** : Tiger Project, Crocodile Breeding Project, Hangul project, Gir lion Sanctuary project.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIX

1. To study the distribution of animals through zoogeographical maps.
2. A visit to a zoological park to study different wild animals and make a report.
3. To estimate the alkalinity of water.
4. To estimate the chlorides of water.
5. To estimate the nitrates of water.
6. To study the different types of phytoplankton.
7. To study the different types of zooplankton.

Books recommended

1. Environment Pollution by H.M. Dix, John Wiley Pub. N.Y.,1984.
2. Environmental Studies by D.B. Botkin and E.A. Keller, Merill Publ. Co.Toronto, London, 1987.
3. Wildlife in India by Saharia, V.B. Natraj Publ. Deharadun (U.P.).
4. Wildlife Biology by Raymond F Dasmann, Wiley Eastern Ltd.,New Delhi, 1982.

Paper XX : CYTOGENETICS AND MOLECULAR GENETICS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

To clarify the concept of population of genetics to the students through Hardy-weinberg law.

UNIT-I

1. Chromosome structure and function : Law of DNA constancy and C. value paradox. Specialized chromosomes (Salivary gland and Lampbrush chromosomes).
2. Molecular mutation : Molecular basis of mutation, physical and chemical mutagens, radiation mutagenesis, site directed mutagenesis, target theory.
3. Regulation of gene function : Operon hypothesis;Pro and eukaryotic operons;Induction and repression;Complex gene clusters.
4. Hardy Weinberg Law and Calculation of gene frequencies.

UNIT-II

1. Linkage and Genetic maps.
2. Dosage compensation.
3. Properties of Genetic code, mutations in genetic code, Wobble's hypothesis.
4. Fine structure of gene, Eukaryotic genome organization (structure of chromatin, coding and non-coding sequences, and satellite DNA); DNA damage and repair, DNA replication, amplification and rearrangements.
5. Organization of transcriptional units; Mechanism of transcription of prokaryotes and eukaryotes; RNA processing (capping, polyadenylation, splicing, introns and exons); Ribonucleoproteins, structure of mRNA.
6. Protein Synthesis.
7. Principles and methods of genetic engineering and Gene targeting; Applications in agriculture, health and industry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XX

1. Preparation of chromosomes from onion root tip for mitosis by squash method.
2. Study of salivary gland chromosomes of larvae of chironomus/Drosophila from permanent slides.
3. Study of metaphase karyotypes from photographs/permanent slides of Drosophila, grasshopper and man/rat.
3. Study of sex-chromatin Bars body from human buccal mucosa.
4. Demonstration of monohybrid and dihybrid cross, Co-dominance, Incomplete dominance and Epistasis with the help of beads and photographs.
5. Study of genetic disorders with the help of photographs.
6. Study of structural and numerical alteration of chromosomes : Deletion, duplication, inversion, translocation and ploidy with the help of photographs.

Books recommended

1. Genetics – U. Goodenough, IIIrd ed., Saunders College Pub., Philadelphia, (1984).
2. Cytogenetics - The Chromosome in Division, Inheritance and Evolution by C.P. Swanson, T. Merz and W.J. Young , IInd ed., Prentice Hall of India, New Delhi (1982).
3. Principles of Genetics by E.J. Gardner and D.P. Shustad, 7th ed., John Wiley, New York (1984).
4. Genetics - A survey of the Principles of Heredity by A.M. Winchestor, 3rd ed., Oxford and IBH Pub., Calcutta (1972).
5. Genetics: A text book for University students by P.K. Gupta, 3rd ed., Rastogi Pub., Meerut (1996).
6. Cytology, Genetics and Molecular Biology by P.K. Gupta, Rastogi Pub., Meerut (1991).
7. Genetics by Strickberger, Monroe W., 3rd ed., Macmillan Pub., New York, (1985).
8. Eukaryotic Chromosomes by Bostock, C.J. & Sumner, A.T., Amsterdam North Holland (1978).
9. Principles of Genetics by Sinnott, E.W. & Dunn, L.C., 3rd ed., McGraw-Hill, New York (1939).
10. Science of Genetics by Hexter, William and Yost, Henry T., Prentice Hall of India, New Delhi (1977).
11. Handbook of Molecular Cytology by Lima-De-Faria, A.ed. North Holland Publishing Company, Amsterdam, London(1969).
12. Principles of Genetics – 2nd edition. Snustad and Simmons. Joh Wiley & Sons.(2002)
13. Genetics. A Molecular Approach. T.A. Brown 3rd edition BIOS Scientific Publishers (2004).
14. Genetics. A Molecular Approach. Peter A. Russell. 2nd ed., Pearson. Benjamin Cummiy (2006).

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT & COMMERCE

SYLLABI

FOR

M.COM. [SEMESTER SYSTEM] EXAMINATIONS, 2017-18

(For Regular College/University/USOL Students)

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SCHEME, SYLLABI AND COURSES OF READING FOR M. COM. (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2017-2018

Note : 1. The duration of the examination in each subject will be 3 hours.

2. Maximum marks for external/written examination are 80 marks and Internal Assessment is 20 marks.

3. **The marks for Internal Assessment will be divided as Follows:**

For Regular Students

(a) Attendance : 20%

(b) Written Assignments : 30%

(c) Mid Semester Test : 50%

For University School of Open Learning (USOL) Students:

100% Internal Assessment will be based on Written Assignments

N. B.: Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University.

INSTRUCTIONS TO THE PAPER SETTERS :

IF THERE ARE TWO UNITS : Set 10 questions in all. Five questions from each unit. The students are required to answer five questions in all selecting at least 2 questions from each unit.

IF THERE ARE THREE UNITS : Set 10 questions in all. Three or four questions from each unit. The students are required to answer five questions in all selecting at least one question and not more than two from each unit.

IF THERE ARE FOUR UNITS : Set 10 questions in all. Two or three questions from each unit. The students are required to answer five questions in all selecting at least one question from each unit.

IF THERE ARE FIVE UNITS : Set 10 questions in all. Two questions from each unit. The students are required to attempt five questions in all selecting one question from each unit.

SCHEME OF EXAMINATION

SEMESTER-I

Paper 1	**M.C.101**	MANAGERIAL ECONOMICS	100 Marks
Paper 2	**M.C.102**	QUANTITATIVE METHODS FOR BUSINESS	100 Marks
Paper 3	**M.C.103**	MODERN ACCOUNTING THEORY & REPORTING PRACTICES	100 Marks
Paper 4	**M.C.104**	ORGANISATION THEORY AND BEHAVIOUR	100 Marks
Paper 5	**M.C.105**	MARKETING MANAGEMENT	100 Marks
Paper 6	**M.C.106**	MANAGEMENT INFORMATION SYSTEM	100 Marks
Paper 7	**M.C.107**	WORKSHOP ON IT APPLICATIONS IN COMMERCE (For Regular Students Only)	100 Marks
	M.C.107 A	IT APPLICATIONS IN COMMERCE (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-II

Paper 1	**M.C.201**	BUSINESS ENVIRONMENT	100 Marks
Paper 2	**M.C.202**	RESEARCH METHODOLOGY IN COMMERCE	100 Marks
Paper 3	**M.C.203**	FINANCIAL MANAGEMENT AND POLICY	100 Marks
Paper 4	**M.C.204**	PRODUCTION AND MATERIALS MANAGEMENT	100 Marks
Paper 5	**M.C.205**	OPERATIONS RESEARCH	100 Marks
Paper 6	**M.C.206**	BUSINESS POLICY & STRATEGIC MANAGEMENT	100 Marks
Paper 7	**M.C.207**	SUMMER TRAINING REPORT AND VIVA VOCE (For Regular College Students)	100 Marks
	M.C.207 A	ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (For USOL Students Only)	100 Marks
		OR	
	M.C.207 B	FINANCIAL SERVICES (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-III

Paper 1	**M.C.301**	BUSINESS PERFORMANCE MEASUREMENT	100 Marks
Paper 2	**M.C.302**	TAX PLANNING AND MANAGEMENT	100 Marks

For Paper 3, Paper 4, Paper 5, Paper 6 Students has to select two groups from the given groups A to F having two papers each. (MC. 303 to MC. 314)

Paper-3		Select Group from A-F	100 Marks
Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7			
	M.C.315	MC. 315-WORKSHOP ON FINANCIAL MARKETS AND INSTRUMENTS (For Regular Students Only)	100 Marks
	M.C.315 A	FINANCIAL MARKETS AND INSTRUMENTS (Theory paper For USOL Students Only)	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 303	Integrated Marketing Communication & Brand Equity	100 Marks
MC. 304	Marketing Research	100 Marks

Group B: Human Resource Management

MC. 305	Human Resource Development	100 Marks
MC. 306	Industrial Relations	100 Marks

Group C: International Business

MC. 307	Indiaôs Foreign Trade and Investment	100 Marks
MC. 308	Management of International Business Operations	100 Marks

Group D: Accounting & Finance

MC. 309	Strategic Cost Management	100 Marks
MC. 310	International Accounting	100 Marks

Group E: Applied Economics

MC. 311	Industrial Economics	100 Marks
MC. 312	Applied Econometrics	100 Marks

Group F: Banking and Insurance

MC. 313	Bank Management	100 Marks
MC. 314	Insurance Management	100 Marks

SEMESTER-IV

Paper 1	**M.C.401**	PROJECT PLANNING AND CONTROL	100 Marks
Paper 2	**M.C.402**	KNOWLEDGE MANAGEMENT	100 Marks
Paper 3	**M.C.403**	BUSINESS ETHICS AND CORPORATE GOVERNANCE	100 Marks

Every student has to select any one group from the two groups selected in the third semester (Selected group in the 4th semester will be having three papers) (MC. 404 to MC. 421)

Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7	**M.C.422**	COMPREHENSIVE VIVA-VOCE	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 404	Advertising and Sales Management	100 Marks
MC. 405	Services Marketing	100 Marks
MC. 406	Consumer Behavior	100 Marks

Group B: Human Resource Management

MC. 407	Organizational Change and Development	100 Marks
MC. 408	Training and Development	100 Marks
MC. 409	Compensation Management	100 Marks

Group C: International Business

MC. 410	International Business Environment	100 Marks
MC. 411	Global Financial Management	100 Marks
MC. 412	International Marketing Management	100 Marks

Group D: Accounting & Finance

MC. 413	Advanced Corporate Accounting	100 Marks
MC. 414	Security Analysis and Portfolio Management	100 Marks
MC. 415	Advanced Auditing	100 Marks

Group E: Applied Economics

MC. 416	Macro Economic Analysis and Policy	100 Marks
MC. 417	Economics of Services	100 Marks
MC. 418	World Trading System	100 Marks

Group F: Banking and Insurance

MC. 419	Bank Legislation	100 Marks
MC. 420	Risk Management	100 Marks
MC. 421	Actuarial Practice	100 Marks

SEMESTER-I

PAPER 1: MC. 101- MANAGERIAL ECONOMICS

Objective: The objective of the course is to acquaint students with the concepts of microï economic theory and their use in business decision making. The effort is to make them capable of using various concepts to deal with business problems in a global economic environment.

UNIT-I

Nature and scope of managerial economics, relationship with economic theory, decision sciences, and functional areas of business; Theory of the Firm: Reasons for existence of the firms & their functions, the objective and value of the firm, constraints on the operation of the firms, limitations of the theory of the firm; Nature & Functions of Profits: Business vs. Economic Profits, theories of profit, functions of profit; Tools of Analysis: Marginal Analysis, Optimization, Decision and Game Theory - Concepts; The International Framework of Managerial Economics.

UNIT-II

The demand for a commodity: Individualôs demand, Market demand, and the firm demand; Price, Income & Cross elasticity of demand; Using elasticityôs in managerial decisions; Theories of consumer behavior.

UNIT-III

Pricing Practices and Risk Analysis**:** Price and Output relationship under different market structures; Pricing Theories; Pricing of multiple products; Price discrimination - International price discrimination & Dumping, Transfer Pricing; Risk and Uncertainties in managerial decision making; Measuring risk with probability distribution; Utility Theory and risk aversion.

UNIT-IV

Technological change and the global market economy: Impact of technological change on productivity, labor and market structure; Industrial innovation and technology and technological environmental forecasting.

Reference Books:

1. Koutsyiannis, A., Modern Microeconomics, Macmillan Press Ltd.
2. Varian, Micro-Economic Analysis (ed. 3), Norton.
3. Pindyck Robert S. and Daniel L. Rubinfeld, Micro Economics, Third Edition, Prentice Hall of India, New Delhi.
4. Madala, G.S. and Ellen Miller, Micro Economics, Theory and Applications, McGraw Hill Book Company, New York.
5. Gould, John P., Edward P. Lazear, Micro-Economic Theory, Richard D. Irwin, Inc., Homewood Illinois.
6. Sen Anindya, Micro-Economics: Theory and Applications , Oxford University Press, New Delhi.
7. Tirole J., The Theory of Industrial Organization, Cambridge MIT Press.

PAPER 2: MC. 102 - QUANTITATIVE METHODS FOR BUSINESS

Objective: The objective of the course is to acquaint students with some of the important statistical techniques for managerial decision making. The emphasis will be on their applications to business and economic situations.

UNIT-I

Probability and Probability Distribution: Definitions - Probability Rules ï Application of Probability Rules- Conditional Probability- Bayes theorem- Random Variable and Probability Distributions; Binomial Distribution- Poisson Distribution and Normal Distribution.

UNIT-II

Statistical Estimation and hypothesis testing: Introduction to Hypothesis testing ï Meaning of Population, sample and sampling distribution - parameters and statistics - Central limit theorem - Concept of Standard Error - Confidential limits - Estimation of population parameters - properties of a good estimator - Point and interval estimation ï Hypothesis Formulation and testing procedure - Type I and Type II errors - one tail and two tail tests - Sampling of Attributes - Estimation and testing Number and Proportions of Successes, Difference between two proportions.

UNIT-III

Sampling Variables : Large Samples - Difference between large and small samples - Estimating population mean - testing the significance of Mean - Significance of the difference between means of two samples - Significance between the standard deviations of two samples - Small Samples -âô test - fixing fiducial limits to population mean ï testing the significance of the mean - testing the significance of the difference between two independent means - testing the significance of the difference between two dependent means- F test - meaning - Applications of F test - ANOVA - Assumptions - Procedure - one way and two-way analysis of variance.

UNIT-IV

Statistical Quality Control - Introduction - Chance and Assignable Causes of Variation Uses of SQC - Process Control and Product Control- Control Charts - Control Charts for Variables -X: Chart ï Range chart ï Standard deviation chart - Control charts for attributes - C chart -p chart - np chart. Decision Tree Analysis ï Decision Making under Uncertainties.

Reference Books:

1. Levin, R.I. and D.S. Rubin: Statistics for Management, Prentice-Hall of India.
2. S.C. Gupta : Fundamentals of Statistics, Himalaya Publishing House, New Delhi.
3. Anderson Quantitative Methods for Business Decision, Thomson.

4. Barry Render, Ralph M. Stair Jr., Michael E. Hanna: Quantitative Analysis for Management, Prentice Hall of India.
5. Anderson, Introduction to Management Science: Quantitative Techniques for Decision Making, Thomson.
6. D.C. Sancheti & V.K. Kapoor : Statistics, Sultan Chand & Sons, New Delhi.
7. Sharma, J.K.: Operations Research ï Theory & Applications, Macmillan India Ltd.
8. Gupta, S.P: Statistical Methods, S. Chand & Sons, New Delhi.

PAPER 3: MC. 103 - MODERN ACCOUNTING THEORY & REPORTING PRACTICES

Objective: In view of the convergence of the Indian Accounting Standards with the IFRS, it is desirable to equip the students with the required knowledge of International financial reporting standards and practices. The students are expected to achieve a clear conceptual understanding of the IFRS and possess sufficient knowledge expected out of an expert.

UNIT-I

The Regulatory and Financial Reporting Framework: The International Accounting Standards Board (IASB)-The role and the standard setting process. Progress towards international harmonization. The IASB-Framework for the Preparation and Presentation of Financial Statements; The first time adoption of international financial reporting standards : Objective of financial statements, Qualitative characteristics of financial statements, Elements of financial statements, Recognition and measurement of elements of financial statements, Fair value basis of measurement, Concepts of capital and capital maintenance.

UNIT-II

Elements of financial statements as per International Financial Reporting Standards: (a) Property, plant and equipment (b). Intangible assets inventories (c). Construction contracts (d). Liabilities (e). Financial instruments (f). Provisions and contingencies (g). Employment and post-employment benefits (h). Accounting for tax (i). Accounting for agriculture (j). Share based payment (k). IFRS- 6: Exploration for and evaluation of mineral resources.

UNIT-III

Presentation and additional disclosures as per International Financial Reporting Standards (a). Events after the balance sheet date (b). Earnings per share (c). Related party disclosures (d). Interim financial reporting (e). Effects of changes in foreign exchange rates (f.) Segment reporting.

UNIT-IV

Preparation of external financial reports for single entities as per International Standards (a) Income statements and discontinuing operations (b) Cash flow statements (c) Statement of changes in equity

(d) Preparation of external financial reports for combined entities and joint ventures (e) Definitions of subsidiaries, investments in associates and joint ventures (f) Exclusions from consolidations (g) Preparation of consolidated balance sheets and income statements (h) Equity accounting (i) Proportionate consolidation and joint ventures.

Reference Books:

1. Elliott, B. & Elliott, J. (2008), Financial Accounting and Reporting. 12th ed. Harlow: Pearson/Prentice Hall.
2. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting. London: Bloomsbury.
3. S. Agarwal, Manual of Accounting Standards, Snow White.
4. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.
5. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
8. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.

PAPER 4: MC. 104 - ORGANISATION THEORY AND BEHAVIOUR

Objective: The objective of the course is to develop a theoretical understanding among students about the structure and behavior of organization as it develops over time. The course will also make them capable of realizing the competitiveness for firms.

UNIT-I

Organizational Theories and Behaviour: Classical, Neo - classical and Contemporary. Authority, Power, status, formal and informal structure. Flat and Tall structures. Bureaucratization of organizations. Organizational Behaviour Concepts, determinants, models, challenges and opportunities of OB. Transaction cost and organizational behaviours. Contributing disciplines to the OB. Individual Behaviour: Foundations of individual behaviour, values, attitudes, personality and emotions. Theory X and Theory Y, Chris Argyris behaviour patterns, Perceptual process.

UNIT-II

Group Decision making and Communication: Concept and nature of decision making process, Individual versus group decision making, Nominal group technique and Delphi technique, models of communication, communication effectiveness in organizations. Feedback, TA, Johari Window. Motivation: Need hierarchy, Maslowôs Need Hierarchy, Two factor theory, Contemporary theories of motivation (ERG, Cognitive evaluation, goal setting, and equity) expectancy model. Behaviour modification, Motivation and organizational Effectiveness.

UNIT-III

Leadership, Power and Conflict: Concept and theories, Behavioral approach, Situational approach, Leadership effectiveness, Contemporary issues in leadership. Power and conflict. Bases of Power, power tactics, sources of conflict patterns, levels and conflict resolution strategies. Transactional Analysis (TA) - Work Stress.

UNIT- IV

Organizational Culture, Organizational Development and Stress Management: Concept and determinants of organizational culture, Organizational Development: Concept and intervention techniques. Individual and organizational factors to stress, Consequences of stress on individual and organization, management of stress. Case Studies: Some cases of real business world are required to be discussed.

Reference Books:

1. Stephen Robbins, Organisational Behaviour, Pearson Education.
2. Fred Luthans, Organizational Behavior, McGraw Hill.
3. Wagner, Organizational Behavour, Thomson Learning.
4. S.S. Khanka, Organisational Behaviour, S.Chand & Co., New Delhi .
5. Dr. S. Shajahan & Linu Shajahan, Organisational Behaviour, New Age International Publishers, New Delhi.
6. Hellriegel, D & J.W. Slocam, Organizational Behavior, Thomson Learning.
7. McSchane, Organization Behavior, TMH.
8. New Storm Davis Organisation Behavior, THM, New Delhi.
9. Slocum, Fundamentals of Organizational Behavior, Thompson Press (Indian Edition).

PAPER 5: MC. 105 - MARKETING MANAGEMENT

Objective: The objective of the course is to familiarize the students with the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm.

UNIT-I

Introduction to Marketing Management**;** Marketing - Meaning and approaches, Role of Marketing in Organizations, 4Ps & beyond, Marketing Challenges, Marketing Process and Marketing Planning, Marketing information system.

UNIT –II

Analyzing Market Opportunities ; Analyzing the Marketing Environment- Economic, Demographic, Social, Cultural, Technical, Political & Legal Buying Behaviour- Consumer, Business & Industrial Measuring and Forecasting Market Demand.

UNIT –III

Product management**:** Product - Meaning and Classifications, New Product Development. Managing Product Life Cycles, Brand Strategies and Management. Managing Service - Idea, Institution, Person, Place and Event.

UNIT–IV

Pricing, Distribution and Promotion Pricing- Influencing factors, Approaches, Strategies and Programmes. Channels of Distribution and Logistics. Promotion Strategies - Advertising, Sales Promotion & Public Relations.

Reference Books:

1. Kotler, Philip: Marketing Management Analysis, Planning Implementation and Control (Prentice Hall of India, N. Delhi, 2005).
2. Kotler, Keller, Koshy & Jha: Marketing Management, Pearson Education, N. Delhi.
3. Stone, Marilyn A. & John, Desmond: Fundamentals of Marketing, Routledge, UK.
4. Kumar and Minakshi, Marketing Management, Vikas Publ. House, New Delhi.
5. Kurtz : Principles of Marketing, Cengage Learning India Pvt. Ltd., New Delhi.
6. Stern, Luis W. & El-Ansary, Adel I: Marketing Channels, Prentice Hall of India, N. Delhi.
7. Markin, Ram: Marketing Strategy and Management, John Willey & Sons.
8. Kelly, E.J.& Lazer, William: Managerial Marketing ï Perspectives, Richard D. Irwin Inc, Illinois.

PAPER 6: MC. 106 - MANAGEMENT INFORMATION SYSTEM

Objective: The objective of the paper is to offer a comprehensive overview of Management information systems (MIS). It will explore technical, strategic and tactical issues related to MIS. Basic concepts in analyzing and designing information systems will be presented.

UNIT-I

MIS Definition - Characteristics - Evolution of MIS: Concepts; framework for understanding and designing MIS in an organization; MIS and other related disciplines: MIS and Management Accounting,

MIS and Computer Science, MIS and OR, MIS and Organizational Behavior, MIS and Management. Concept of information : definition, features, types, process of generation and communication; quality of information; information overload; techniques for managing overload; summarizing; filtering; inferences and message routing. System concepts : definition, types and characteristics of system-control in systems: feedback: positive and negative; negative feedback control system, input, process and output control; law of requisite variety.

UNIT-II

Structure of MIS: Basic structural concepts: formal and informal information systems; public and private information systems; multiple approaches to the structure of MIS: Operational elements (physical components, process, outputs for users), activity subsystems, functional subsystems and decision support ï synthesis of multiple approaches into a conceptual structure for MIS.

UNIT-III

Information systems: Transaction Processing Systems, Office Automation Systems, Information Reporting Systems, Decision Support Systems, Executive Support Systems, Expert systems.

UNIT-IV

Systems Development and Implementation: System development methodologies; SDLC approach; prototyping approach and user development approach - Systems Analysis; Systems Design; Concepts of database and database design; system implementation; management of information system projects; system documentation ï information system audit. Security of information resources; threats to information resources; security systems for risk management. Enterprise Resource Planning Systems ï Features-ERP Modules - implementation of ERP.

Reference Books:

1. OôBrien, James A: Management Information Systems, Tata McGraw Hill, New Delhi.
2. George M. Scott: Management Information Systems, McGraw Hill Book Company, New Delhi.
3. Schultheis, Robert and Summer, Mary: Management Information Systems, Tata McGraw Hill, New Delhi.
4. Gordon B Davis, et. El: Management Information Systems, Prentice Hall of India, New Delhi.
5. Kenneth C.Laudon and Jane P. Laudon: Management Information Systems ï Managing the Digital Firm, Pearson Education Asia, New Delhi.
6. Effy Oz, Management Information Systems, Vikas Publishing House, New Delhi.
7. Haag, Cummings and Mccubbrey: Management Information Systems for the Information Age, Tata McGraw Hill, New Delhi.
8. Post, Gerald V and Anderson, David L: Management Information Systems, Tata McGraw Hill, New Delhi.
9. Alex Leon: Enterprise Resource Planning ï Tata McGraw-Hill, New Delhi.

PAPER 7: MC. 107 - WORKSHOP ON IT APPLICATIONS IN COMMERCE

(For Regular Students studying in Colleges/University Department Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas - An Overview of Management Science and Quantitative Analysis: The Management Science Process - Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet- Understanding basic features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios - Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database-features- components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing- Data mining. Features of RDBMS -Database design and application development ï Tables- creation- relationships- Forms designing forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (e) Presentation session of the students on the assigned project.

Reference Books:

1. Hoffer, Jeffrey A, Marry B. Prescott, and Fred R. McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi.
3. Novathe and Elmasri: Fundamentals of Database Systems, Addison Wesley.

4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.

5. Ullmann, Jeffry D, Principles of Database Systems, Galgotia, New Delhi.

6. Post, Gerald V., Database Management Systems, Tata McGraw Hill.

7. Stephan G Powell and Kenneth R Baker Management Science, Art of Modeling with Spread Sheets, Wiley India(p) Ltd., New Delhi.

8. Elmasri and Nawathe- Fundamental of Database Systems, Pearson Education Asia, New Delhi.

PAPER 7: MC. - 107A - IT APPLICATIONS IN COMMERCE

(For USOL Students Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas- An Overview of Management Science and Quantitative Analysis: The Management Science Process-Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet - Understanding Basic Features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios- Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database ï features - components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing-Data mining. Features of RDBMS -Database design and application development ï Tables- creation-relationships- Forms designing, forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Reference Books:

1. Hoffer, Jeffrey A, Marry B.Prescott, and Fred R.McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi .
3. Novathe and Elmasri : Fundamentals of Database Systems, Addison Wesley.
4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.
5. Ullmann, Jeffry D. : Principles of Database Systems, Galgotia, New Delhi.
6. Post, Gerald V. : Database Management Systems, Tata McGraw Hill.
7. Stephan G Powell and Kenneth R Baker : Management Science ï Art of Modeling with Spread Sheets - -, Wiley India (P)Ltd., New Delhi.
8. Elmasri and Nawathe : Fundamental of Database Systems- Pearson Education Asia, New Delhi.

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SEMESTER-II

PAPER 1: MC. 201 - BUSINESS ENVIRONMENT

Objective: The objective of the course is to acquaint students with the concepts of macro ï economics and the macro environment in which a business organization operates. The course would also make the student capable of analyzing and understanding the macro economic policies of the government implemented from time to time and assess their impact on business.

UNIT-I

Business Environment: Cultural, social, political, technological, economic and legal environment - scanning - techniques of environmental forecasting - SWOT ï Internal environment - their impact on policy formulation.

UNIT-II

Economic reforms in India - Liberalization - privatization and globalization ï Competitive Strength of Indian industry - Impact of liberalization policy on different sectors ï Foreign Investments policy in India. Multi-national corporations - Their participation in India ï Their strategies, competitive strengths policies and performance.

UNIT-III

Industrial Policies: A brief review of industrial policies since independence, Industrial policy of 1991 and recent developments, Policy on foreign direct investment in Indian industry. Fiscal Policy: Public revenues, public expenditure, public debt, development activities financed by public expenditure, an evaluation of recent fiscal policy of Government of India ï Monetary Policy: Demand for and supply of money, Objectives of monetary and credit policy, recent trends - Role of Finance Commission. Integration of Worldôs economies and its impact on Indian Business.

UNIT-IV

Money and Capital market: Features and components of Indian Financial system, objectives, features and structure of Money market and capital market, recent developments - Stock Exchanges, Investor Protection and Role of SEBI. Legal Framework: Consumer Protection Act, 1986, Right to Information and Right to Service Acts and its implications for business.

Reference Books:

1. Wheelen, Concepts of Strategic Management and Business Policy, Pearson Education, New Delhi.
2. William Gluck & L R Jauch, Business Policy & Strategic Management, McGraw-Hill., New Delhi.
3. Kazhmi Azhar , Business Policy, TMH.

4. Gupta, Liberalisation - Its Impact on Indian Economy, Macmillan.
5. K.V.Sivayya and VBM Das: Indian Industrial Economy, Sultan Chand Publishers, Delhi.
6. Suresh Bedi: Business Environment, Excel, New Delhi.
7. Francis Cherunilam: Business Environment - Text & Cases, Himalayan Publishing House, Mumbai.
8. M. Adhikari: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
9. Prof. Laxmi Narain : Globalization , Liberalization and Privatization of Public Enterprises, Sultan Chand & Co., New Delhi.
10. Pandey, G.N., Environmental Management, Vikas Publishing House.

PAPER 2: MC. 202 - RESEARCH METHODOLOGY IN COMMERCE

Objective: The objective of this paper is to impart knowledge about various stages of the research processes and their application in Commerce and Management Education.

UNIT-I

Introduction: - Meaning of the Research ï Qualities of a research worker ï Scientific Method ï Definition ï stages of scientific study ï Different steps in scientific study ï Logical Methods ï Inductive & Deductive Methods ï Nature of the Phenomena & the use of the scientific methods. Approach to a Research Project **:-** Purpose of Research ï Functions in Research ï Research Programme ï Problem solving through research /financial aspects of research ï Research Design (Selective topic, Coverage, Hypothesis) ï Sources of Information ï Nature of study ï Definition of terms ï Techniques of study ï Collection, Analysis & presentation of the data ï Testing hypothesis ï Stating results.

UNIT-II

Use of the Library: - Finding the correct sources of information ï Uses of books, periodicals & encyclopedia ï Taking down notes ï Collection & organization of Material. Research Method :- Sampling Method ï Observation Method ï Case Study Method ï Interview Method ï Survey Method ï Experimental Method ï Questionnaire Method - Library Method ï Documentary Method ï Suitable Combination & Selection of Method ï advantages, disadvantages & limitations of methods.

UNIT-III

Presentation of Information:-Analysis of information ï Classification, tabulation & interpretation ï Presentation of data & its application ï Pictorial presentation ï Composition of information (quotation, footnotes, bibliography - tables, standards, abbreviations) - style of writing. Coordinating contents :- Front matter (blank sheet, title page, dedication, preface, table of contents, list of tables, list of figures, list of appendices etc.) ï Text proper (Chapter wise information) ï Back matter (appendices, glossary, bibliography, index, blank sheet).

UNIT-IV

Multivariate analysis ï an overview of dependence and interdependence methods (multiple regression, discriminate analysis, conjoint analysis, factor analysis, cluster analysis); research report; ingredients and constructions of research report ï procedure of preparation of reference and bibliography. Research Findings and Preparation and writing of a Research Report: - Benefits of implementation of actual research findings ï carrying forward the studies ï Management of research unit ï Preparation and writing of a ôResearch Reportô.

Reference Books:

1. Methods of Social Survey and Research, S. R. Bajpai, Kitab Ghar, Kanpur.
2. Zikmund, Millian G., Business Research Methods, Thomson Learning, Bombay.
3. Cooper, Donald R. and Pamels Schindler, Business Research Methods, Tata McGraw Hills, New Delhi.
4. Geode, Millian J. & Paul K. Hatl, Methods in Research Methods, Tata McGraw Hills, New Delhi.
5. Shekhran, Uma, Business Research Method, Miley Education, Singapore.
6. Kothari, C.R., Research Methodology- Methods and Techniques, New Age International Publishers.

PAPER 3: MC. 203 - FINANCIAL MANAGEMENT AND POLICY

Objective: The objective of the course is to acquaint the students with the basic analytical techniques and methods of financial management of business firms. The course also provides students the exposure to certain sophisticated and analytical techniques that are used for taking financial policy decisions.

UNIT-I

Financial management - Scope, finance functions and its organization, objectives of financial management; time value of money; sources of long term finance. Financial Forecasting: Sales Forecast Preparation of Performa Income Statement and Balance Sheet Growth and External Funds Requirement (EFR).

UNIT- II

Investment decisions; importance, difficulties, determining cash flows, methods of capital budgeting; risk analysis (risk adjusted discount rate methods and certainly equivalent methods) cost of different sources of raising capital; weighted average cost of capital.

UNIT- III

Capital Structure decisions - Leverage: Measuring and analyzing the implications of Leverage Operating Leverage, Financial Leverage and Total Leverage; capital structure theories - NI, NOI, traditional and M-M theories; Capital Structure Policy: Business & Financial Risk, A Total Risk Perspective Business & Financial Risk, A Market Risk Perspective Determinants of Capital Structure Decision Approach to Estimating the Target Capital Structure Variations in Capital Structures, EBIT / EPS Analysis and ROI/ROE Analysis.

UNIT- IV

Determinants of dividend models - Walter, Gordon & M.M. models. Working Capital ï Meaning, need, determinants; estimation of working capital need; management of cash; inventory & receivable.

Reference Books:

1. Pandey, I.M. Financial Management, Vikas Publishing House, New Delhi.
2. Khan M.Y. and Jain P.K. Financial Management, Tata McGraw Hill, New Delhi.
3. Keown, Arthu J., Martin, John D., Petty, J. William and Scott, David F., Financial Management, Pearson Education.
4. Chandra, Prasanna, Financial Management, TMH, New Delhi.
5. Van Horn, James C., Financial Management and Policy, Prentice Hall of India.
6. Brigaham & Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.
7. Kishore, R., Financial Management, Taxmans Publishing House, New Delhi.

PAPER 4: MC. 204 - PRODUCTION AND MATERIALS MANAGEMENT

Objective: To impart knowledge regarding production and management techniques, process, tools, and acquaint the students with the knowledge of marketing functions, techniques and strategies.

UNIT-I

Introduction to Production Management - Nature, Scope, Importance and Functions Materials Management - Evolution, Importance, Scope and Objectives - Interface with other functions. Introduction of Inventory Control, Static Inventory problem under risk. Dynamic Model under risk, policy coordinated, Replacement with discount. Introduction to purchasing, Functions of purchasing, procedure of purchasing, Selection Sources of Supply, Negotiation with Suppliers.

UNIT-II

Price determination; Price Cost Analysis, Quality determination and control value analysis. Scope & functions of operations management, Forecasting of demand. Delphi. Methods, Statistical Quality Control Technique.

UNIT-III

Facilities Location & Layout ï Strategic importance - Factors affecting location & layout - Installation of facilities ï Single location, multi-location decisions. Principles and Types of Facilities Layout. Importance and Functions of Production Planning & Control. Introduction to PERT / CPM - Network Crashing.

UNIT-IV

Productivity - Work Study - Objectives, Scope and Uses - Methods Study ï Flow process chart, Flow diagram & Process mapping - Work Measurement - Elements ï Performance Rating - Allowances - Standard Time - Synthetic Time Standards ï Work Sampling.

Reference Books:

1. Alan Mulemann, John Oakland, Keith Locker, ôProduction and Operations Managementô Macmillan India Ltd.
2. Datta, A.K., Materials Management : Procedures, Text and Cases, Prentice Hall of India.
3. Gaither, Operations Management , Thomas Learning.
4. S.A. ShunwalIa *&* Patel, Production and Operations Management, Himalaya Publishing.
5. R. Panneerselvan, Production and Operations Management, Prentice Hall of India.
6. P. Saravanavel, S. Sumathi, Production and Materials Management, Margham Publication.
7. Mukhoipadhyay, Production Planning and Control, TMH.

PAPER 5: MC. 205 - OPERATIONS RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operations Research: Evolution, methodology and role in decision making; Linear programming: Meaning, assumptions, advantages, scope and limitations: Formulation of Problem and its solution by graphical and simplex methods (Including Big M Method and Two Phase Simplex Method); special cases in simplex method; infeasibility, degeneracy, unboundedness and multiple optimal solutions; duality. Dual Simplex Method.

UNIT-II

Transportation problems including transshipment problems; Special cases in transportation problems; unbalanced problems, degeneracy; maximization objective and multiple optimal solutions; assignment problems including travelling salesmanôs problem. Special cases in assignment problems; unbalanced problems, maximization objective and multiple optimal solutions.

UNIT-III

PERT/CPM: Difference between PERT and CPM, network construction, calculating EST, EFT, LST, LFT and floats, probability considerations in PERT, time cost trade off. Decision theory: decision making under uncertainty and risk, Bayesian analysis, decision trees. Replacement problem (Individual and Group replacement problems both).

UNIT-IV

Game theory, pure and mixed strategy games; principle of dominance; two person zero sum game; Queuing theory: concept, assumptions and applications; analysis of queue system, Poisson distributed arrivals and exponentially distributed service time model (MMI and MMK); simulation; meaning, process, advantages, limitations and applications.

Reference Books:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
3. Vohra, N.D., Quantitative Techniques in Management, Tata McGraw Hills Publishing Company Ltd., New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

PAPER 6: MC. 206 - BUSINESS POLICY & STRATEGIC MANAGEMENT

Objective: The objective of the course is to help the students develop an understanding of the basic inputs in making and implementing corporate strategic decisions and also familiarize them with the issues and practices involved.

UNIT-I

Strategic Management - An Introduction - Evolution of business policy as a discipline - Strategy and the

Quest for Competitive Advantage: Military origins of strategy ï Evolution - Concept and Characteristics of strategic management ï Defining strategy ï Mintzerbgôs 5Ps of strategy ï Corporate, Business and Functional Levels of strategy - Strategic Management Process.

UNIT-II

Strategic Options Porterôs Generic Strategies Integration Strategies, Intensive Strategies. Diversification and Differentiation Strategies, Functional Strategy - Manufacturing, Financial, Marketing, Human Resource, Research & Development. Strategic Intent & Strategy Formulation: Vision, mission and purpose ï Business definition, objectives and goals ï Stakeholders in business and their roles in strategic management ï Corporate Social Responsibility, Ethical and Social Considerations in Strategy Development.

UNIT-III

Strategy implementation - Project implementation ï Procedural implementation ï Resource Allocation ï Organization Structure ï Matching structure and strategy. Behavioral issues in implementation ï Corporate culture ï Mc Kinseyôs 7s Framework - Concepts of Learning Organization. Strategy Evaluation - Importance - Symptoms of malfunctioning of strategy - Organization anarchies - Operations Control and Strategic Control - Measurement of performance - Analyzing variances - Role of organizational systems in evaluation.

UNIT-IV

New Business Models and strategies for Internet Economy: Shaping characteristics of E-Commerce environment ï E-Commerce Business Model and Strategies ï Internet Strategies for Traditional Business ï Key success factors in E-Commerce ï Virtual Value Chain. Cases in strategic management. A minimum of 10 cases encompassing the above topics to be analyzed and discussed in the class. Cases to be incorporated in the Question Paper.

Reference Books:

1. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting & Executing Strategy ï The Quest for Competitive Advantage, Tata McGraw Hill.
2. Ranjan Das, Crafting the Strategy: Concepts and Cases in Strategic Management, Tata McGraw Hill.
3. Henry, Mintzberg, Bruce, Ahlstrand and Joseph, Lampel, Strategy Safari, Free Press, New York.
4. Gary, Hamel and Prahalad, C. K.. Competing for the Future, HBS Press.
5. Ed. C.A. Montgomery, M.E. Porter, Strategy ï Seeking and Securing Competitive Advantage, Harvard Business Review Publications.
6. Peter F. Drucker, Managing in a Time of Great Change, Truman Talley Books/Plume Penguin Group.
7. Kazmi, A, Business Policy and Strategic Management, Tata Mcgraw Hill, New Delhi.
8. Wheelen, T.L. and Hunger, J.D, Strategic Management and Business Policy, Pearson Education, (LPE), New Delhi.

Paper 7: MC. 207- SUMMER TRAINING REPORT AND VIVA VOCE

(For Regular Students Only)

After the Completion of Second Semester Examination the students will go on 6-8 Weeks summer training in various Industrial undertakings, banking and financial services institutions, and Retail Sector organizations, undertake a project there to study a particular problem and file three copies of summer training report within 15 days completion of the training. The student has to file a certificate of completion of training issued by training organization. A VIVA-VOCE Examination will be conducted by the External examiner appointed by the University on the problems undertaken in the summer training report. Principal of the College/Chairperson of the Department must appoint one internal supervisor for the guidance of the student regarding the Summer Training Project. The List of the internal supervisors so appointed must be communicated to the Controller of examination within 10 days from the date of appointment. The Internal supervisor will also be acting as Internal Examiner at the time of Conduct of VIVA-VOCE and sit with External Examiner.

PAPER 7: MC. 207-A - ENTREPRENEURSHIP DEVELOPMENT & PROJECT MANAGEMENT

(For USOL Students Only)

Objective: The purpose of this paper is to prepare a ground where the students view Entrepreneurship as a desirable and feasible career option. In particular the paper seeks to build the necessary competencies and motivation for a career in Entrepreneurship.

UNIT-I

Foundations of Entrepreneurship Development: Concept and Need of Entrepreneurship Development, Definition of Entrepreneur, Entrepreneurship, Innovation, Invention, Creativity, Business Idea, Opportunities through change. Concepts of Entrepreneur, Manager, Intrapreneur / Corporate Entrepreneur ï comparative study - Roles, Responsibilities, Career opportunities. Entrepreneurship as a career, Entrepreneurship as a style of management, The changing role of the entrepreneur: mid career dilemmas ï Closing the window: Sustaining Competitiveness - Maintaining competitive advantage.

UNIT-II

Theories of Entrepreneurship: Innovation Theory by Schumpeter & Imitating Theory of High Achievement by McClelland ,X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen Influences on development.

UNIT-III

Project Management Technical, Financial, Marketing Personnel and Management feasibility Reports Financial schemes offered by various financial institutions like Commercial Banks, IDBI, ICICI, SIDBI, SFCs, Venture Capital Funding, Angle Capitalist.

UNIT-IV

Entrepreneurship Development and Government Role of Central Government and State Government in promoting Entrepreneurship with various incentives, subsidies, grants etc. ï with special reference to ôExport oriented unitesô Role of the following agencies in the Entrepreneurship Development DIC ï District Industrial Center, SISI ï Small Industries Services Institute, EDII ï Entrepreneurship Development Institute of India NIESBUD ï National Institute of Entrepreneurship and Small Business Development. NEDB ï National Entrepreneurship Development Board.

Recommended Books:-

1. Brandt, Steven C., The 10 Commandments for Building a Growth Company, Macmillan Business Books, Delhi.
2. Bhide, Amar V., The Origin and Evolution of New Business, Oxford University Press, New York.
3. Dollinger M.J., ôEntrepreneurship Strategies and Resourcesô, 3rd edition, Pearson Education, New Delhi.
4. Desai, Vasant Dr., Management of Small Scale Enterprises, Himalaya Publishing House, New Delhi.
5. Taneja, Gupta, Entrepreneur Development New Venture Creation, 2nd ed., Galgotia Publishing Company.
6. Holt, David H., Entrepreneurship: Strategies and Resources, Illinois, Irwin.
7. Panda, Shiba Charan, Entrepreneurship Development, New Delhi, Anmol Publications.
8. Patel, V.G., The Seven Business Crises and How to Beat Them, Tata-Mcgraw, New Delhi.

OR

PAPER 7: MC. 207-B - FINANCIAL SERVICES

(For USOL Students Only)

Objective: To provide insight to the structure, working and problems of financial, system in India as well as to enable students to appreciate and understand the concepts, mechanism and utility of different financial services.

UNIT – I

An overview of Indian financial system: Introduction, structure, components and mechanism of the financial system. Financial Services: An overview. Introduction to SEBI.

UNIT–II

Merchant Banking: Functions and SEBI regulations and Non Fund-based and Fund-based activities including role in mobilization of funds. Depository Services in India (including regulatory aspects).

UNIT–III

Leasing - Introduction, financial evaluation of lease from lessorôs and lesseeôs point of view, lease structuring, Tax, legal and accounting aspects especially in Indian context. Factoring: Features, process and agreement for factoring.

UNIT–IV

Mutual Fund: Introduction, management, regulations, working, and Indian experiences. Credit Rating: Concepts, functions and process of debt rating and SEBI regulations.

REFERENCES:

1.	L.M. Bhole	Financial Institutions and Markets
2.	J.C. Verna	Merchant Banking Organisation and Management
3.	Lalit K. Bansal	Merchant Banking and Financial Services
4.	M.Y.Khan	Financial Services
5.	V.A. Avadhani	Investment and Securities Markets in India.
6.	S. Ramesh & Arun Gupta	Venture Capital and Indian Financial Sector.

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SEMESTER-III

PAPER 1: MC. 301 - BUSINESS PERFORMANCE MEASUREMENT

Objective: The objective of this paper is to make the students familiar with the performance measurement techniques for business.

UNIT-I

Corporate Performance Measurement - Need and Importance; Historical Overview; Product Costing in price estimates and profit management; Techniques to measure and enhance profitability and quality of products and services; Activity Based Management, Target and Kaizen costing; benchmarking and environmental costing; Flexible Budgeting, and Activity Based Budgeting.

UNIT-II

Setting of performance goals and incentives, and the use of diagnostic tools and control; systems to achieve the goals; Strategic Profitability Analysis; Measuring performance using Economic Value Added (EVA) methodology; Comparison between Return on Investment (ROI) and EVA methodology of measuring performance.

UNIT-III

Measurement of Corporate Performance through Balanced Scorecard and its value creation potential;. Rationality behind balance score card; performance dimensions of the balance score card; Throughput Accounting; Comparison of Activity Based Costing.

UNIT-IV

Information Systems aspects of management control; Control-needs of Information flow, and its consolidation in multi-locational setting; Management Control System and its applications; Responsibility Accounting - Meaning and Methodology, types of responsibility centres, organizational structure of responsibility centres; objectives and methods of transfer pricing, pricing corporate services and administration of transfer pricing.

Reference Books:

1. Anthomu, R.N. and Govindrajan, V., Management Control System, Tata McGraw-Hill New Delhi.
2. Atkinson, A., R.S. Kaplan and S.M. Young, Management Accounting (4th ed). New Jersey: Prentice Hall
3. Friedlob, George T, Lydia, L.F., Essentials of Corporate Performance Measurement, John Wiley and Sons inc.
4. Manzoni, Alex, Islam Sardar, M.N, Performance Measurement in Corporate Governance, Springer
5. Simon, R., Performance Measurement and Control System for Implementing strategy-Text and Cases, Prentice Hall
6. Merchant, K and Van-der-stede, W.A., Management Control System: Performance Evaluation and Incentives, Prentice Hall.
7. Marvin T. Howell, Actionable Performance Measurement - A Key to Success, American Society for Quality, Quality Press, Milwaukee.
8. Merchant, K.A., Modern Management Control System: Text and Cases, Pearson Education Inc.

PAPER 2: MC. 302 - TAX PLANNING AND MANAGEMENT

Objective : The aim of this course is to familiarize the student with major latest provisions of the Indian tax laws and related judicial pronouncements pertaining to corporate enterprises having implications for various aspects of Corporate planning with a view to derive maximum possible tax benefits admissible under the law.

UNIT-I

Structure of Direct and Indirect Taxes in India. Concepts, Significance and Problems of Tax Planning, Tax Avoidance and Tax Evasion ï Recognized methods of Tax Planning : Ensuring maximum claims for deduction for companies with special emphasis on depreciation allowance, expenses of scientific research, amortization of preliminary expenses and amounts not claimed otherwise. Taking advantages of available reliefs, rebates and tax free sources of income.

UNIT-II

Definition of various kinds of companies - Meaning of company under IT Act. Residential status of companies and implications for Tax Planning. Assessment of companies including carry forward and set off of losses.

UNIT-III

Tax implications in planning of business unit as Proprietorship, Partnership, Pvt. Ltd. & Public Ltd. Tax planning in the context of exemptions, incentives, export promotions & various deductions under Chapterï VI of Income Tax Act. Setting up of a new Industrial Establishment: location aspects; nature of business; planning for tax holiday benefits. Specific management decisions such as (1) make or buy; (2) own or lease, (3) repair or replace; (4) export vs. local sale; (5) shut down or continue; (6) expand or contract.

UNIT-IV

An overview of goods and service tax: Introduction to GST, reasons for introducing GST, pros and cons of GST. Registration procedure of trader / service provider under GST. Levy and collection of CGST/SGST under GST. Composite levy scheme of GST. Levy and collection of IGST. Input tax credit and relief to consumers and traders under GST. Applicable rates of tax on various goods and services under GST.

Reference Books:

1. Singhania, V.K.: Direct Taxes: Laws and Practice , Taxman N. Delhi.
2. Singhania, V.K. : Direct Tax planning and Management Taxman N. Delhi.
3. Prasad, Bhagabati: Direct Tax Law & Practice, New Age Publ., N. Delhi.
4. Merhotra, H.C.: Direct Taxes Planning, Sahitya Bhavan, Agra.
5. Srinivas, E.A.: Corporate Tax Planning, TMG, New Delhi.
6. Lakhotia, R.N. Corporate Tax Planning, Vision Publications, N. Delhi
7. Ahuja, Girish & Gupta, Ravi: Systematic Approach to Income tax.
   Goods and Service Tax Act,2017

SEMESTER-III (ELECTIVES)
GROUP A: MARKETING

MC. 303 - INTEGRATED MARKETING COMMUNICATION & BRAND EQUITY

Objective: The objective is to introduce the students to the integrated role of promotion techniques with the special emphasis on advertising.

UNIT-I

Marketing communication; functional areas of marketing communication; integrated marketing communication; types of advertising agencies; media partners and their role; compensating the advertising agencies; agency evaluation; brands - its meaning; creating and maintaining the brand; selecting desired brand position; developing brand identification; creating a brand image; creating and maintaining brand relationship with customers; brand-customer touch points; prospects and customers; AIDA model; think/feer/do models; brand decision making process; attitude formation and attitude change; brand likeability.

UNIT-II

Branding concepts; branding challenges and opportunities; brand equity concept; strategic brand management process; customer based equity; building a strong brand and its implications; identifying and establishing brand positioning; defining and establishing brand values; internal branding.

UNIT-III

Campaign planning; IMC planning process; internal marketing; segmenting and targeting; types of segmentation; message and profitability targeting; digitization of brand information; customer database; building relationship through data management; developing creative message strategy; process of developing IMC message strategy; methods of getting creative ideas; brand-message execution; copywriting; writing for point and electronic media; print layout and design; executional and strategic consistency.

UNIT-IV

Media classification; media strength and weakness; wireless communication; e-mail marketing; website marketing; integrating online brand communication; media planning; consumer sales promotion; sales promotion tools; determining consumer sales promotion strength and limitations of sales promotion; trade promotion; trade promotion for new products and existing brands; trade promotion strategies; objectives of co-marketing communication.

Reference Books:

1. Duncan, Tom; Principles of Advertising and IMC; Tata McGraw Hill, New Delhi.
2. Clow, Kenneth & Baack, Donald; Integrated Advertising, Promotion and Marketing Communication; Pearson Education, New Delhi.
3. Belch, George and Belch, Michael; Advertising and Promotion; Tata McGraw Hill, New Delhi.
4. Wells, William, Burnett, John ad Moriarty, Sandra; Advertising Principles and Practice; Pearson Education; New Delhi.
5. Jethwaney, Jaishree and Jjain, Shruti; Advertising Management; Oxford University Press; New Delhi.

MC. 304 - MARKETING RESEARCH

Objective: The course aims at exposing the students to the concept, tools and techniques of marketing research and developing their skills to be able to apply research techniques to aid marketing decision making.

UNIT I

Introduction : Meaning, nature and importance of marketing research; Marketing research and scientific method; Research reliability and validity; Problems in conducting marketing research; Marketing Information System (MIS); Ways of conducting marketing research; Syndicated research. Marketing Research Process: Steps involved in conducting marketing research; Problem identification; Determining information needs; Developing marketing research proposal.

UNIT II

Research Design : Meaning and importance; Types of research designs ï explorative, descriptive and conclusive researches; Secondary data ï sources, uses and limitations; Primary data collection methods ï questioning techniques and observation methods; Online data sources and research; Questionnaire preparation. Sample Design and Field Work : Defining universe and sampling unit; Determining sampling frame; Probability and non - probability sampling methods; Sample size determination; Field work and data collection ï sampling and non-sampling errors.

UNIT III

Data Analysis and Report Preparation: Data editing, coding tabulation and graphical presentation; Univariate and multivariate data analyses techniques and their applications in marketing research; Report preparation, presentation and follow - up. Marketing Research Applications: Consumer research ï behaviour and motivation research, attitude measurement and scaling techniques.

UNIT IV

Product research; Advertising research; Marketing and sales forecasting; Sales analysis. Marketing Research in India: Status, organization and developments; Ethical issues in marketing research.

Suggested Readings:

1. Harper W. Boyd, Ralph Westfall and Stanley F. Stasch, Marketing Research: Text and Cases.
2. Malhotra, Naresh K., Marketing Research, 5th Ed., Prentice Hall of India.
3. Cooper, Donald R. and Pamela S. Schindler, Marketing Research, Tata McGraw Hill.
4. Paul E. Green, et.al., Research for Marketing Decisions, Prentice-Hall of India Pvt. Ltd, New Delhi.
5. Donald S. Tull and Del I. Hawkins, Marketing Research: Measurement and Methods, Prentice-Hall of India Pvt. Ltd., New Delhi.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 305 – HUMAN RESOURCE DEVELOPMENT

Objective: The objective of the course is to make student aware of the concepts, techniques and practices of human resource development. This course is intended to make students capable of applying the principles and techniques as professionals in organizations they work for.

UNIT I

Human resource development: Concept and evolution, human resource mobilizations, HRD Conceptual base, strategic interventions in HRD sector and target groups, HRD mechanisms, processes and outcomes, HRD instruments, HRD. HRD and Management: Attitude of top management towards HRD, Motivational aspects of HRD, Trends and Practices, Line manager and HRD.

UNIT II

HRD Activities: HRD culture and climate, Elements of HRD climate, measurement of HRD climate, factors to HRD climate, Determinant needs, developmental supervisor, HRD for Workers: HRD mechanisms for workers, Role of trade unions.

UNIT III

HRD in Organizations: Government organizations, educational institutions, armed forces, police and industry, private sectors and public sectors units.

UNIT IV

Emerging Issues in HRD: Creating awareness and commitment to HRD, Industrial relations and HRD, Utilization of HRD efforts, Future of HRD, International comparison of HRD (Commonalities and differences).

Reference Books:

1. Werner, Jon M. and Randy L. Desimone, Human Resource Development, South-Western Educational Publishing.
2. Nadler, L (ed), Corporate Human Resources Development, Van Nostrand Reinhold.
3. Parek V. and T.V. Rao, Designing and Planning Human Resource Systems, Oxford and IBH, New Delhi.
4. Strategic HRM ï Jeffery Mello, Thompson Publication, New Delhi.
5. Strategic HRM- Charles Greer, Pearson Education Asia , New Delhi.
6. Strategic HRM-Michael Armstrong, Kogan Page, London.
7. Strategic HRM- Agrwal, Oxford University Press , New Delhi.
8. Human Resource Management- Garry Dessler, PHI, New Delhi.

MC. 306 – INDUSTRIAL RELATIONS

Objective: The objective of the course is to make student aware of the concept of industrial relations. The course will make them understand the importance of industrial relations for an organization and how these relations provide dynamics to organizations.

UNIT I

Industrial Relations: Concepts and scope, Historical development, Unilatarist, Pluralist and Marxist perspective of IR. Trade Unionism: role of trade unions, trade union in India, national level federations, Goals and objectives of unions and union leadership, weaknesses in trade unions, trade unions, politics and government. Theories of trade unionism. Cross cultural aspects of union management relations.

UNIT II

Trade Union Act 1926: An overview. Union recognition; de-unionization strategies. Union Management Relations: conceptual framework, union management perspectives, organizational factors affecting union management relations. Public policies and union management relations, role of state, constitution and labour policies, ILO, Major events and international issues, changes affecting HR/IR perspectives, perspectives in India.

UNIT III

Industrial Democracy: Concepts and scopes of industrial democracy, Workerôs participation: Strategy, practices, behavioral science input/contribution and models. Rationale for participation, Issues in participation, strategies for making participation work and making participation more effective. Methods of industrial relation machinery in India; Statutory and non-statutory methods of industrial dispute resolution; Conciliation, mediation, arbitration and adjudication.

UNIT IV

Comparative Industrial Relations: Principles of comparative analysis, variables of comparative analysis (culture, values, ideologies, politico-economic structure). Experience of UK, Yugoslavia, West Germany, Scandinavian countries and Japan. Managing Industrial Relations: Regulatory mechanisms, employee discipline, suspension, dismissal and retrenchment, employee grievance handling, Collective bargaining, negotiation skills, industrial conflict resolution. Labour Welfare: Rationale need and requirements.

Reference Books:

1. Katz, Harry, Thomas A. Kochan, & A. J.S. Colvin, An Introduction to Collective Bargaining and Industrial Relations, The McGraw Hill Companies.
2. C.S. Venkat Ratnam, Industrial Relations: Text and Cases, Oxford University Press, Delhi.
3. Michael Salamon, Industrial Relations: Theory & Practice , Pearson Higher Education.
4. Farnham and Limlott, J., Understanding Industrial Relations Cassell.

GROUP C : INTERNATIONAL BUSINESS

MC. 307 - INDIA'S FOREIGN TRADE AND INVESTMENT

Objective: The objective of this course is to acquaint the students with structure and policy framework of Indiaôs foreign trade and investments.

UNIT I

Indiaôs Foreign Trade: Pattern and Structure of Indiaôs foreign trade; Indiaôs trade in service; Terms of trade; India on the world trading map; Analysis of thrust export products and markets. Foreign Trade Policy and Economic Relations: Policy making body and regulatory framework; Trends and developments in Indiaôs foreign trade policy; Bilateralism and multilateralism in Indiaôs trade relations; India and WTO, WTO and emerging trading environment, Indiaôs trade and economic relations with EU and other regional groupings; India and regional economic cooperation in South Asia.

UNIT II

Export Promotion Measures and Facilities: Export promotion measures and schemes; Export and trading houses, Import facilities for exports; Export processing/special economic zones (EPZs/SEZs) and 100% EOUs ï Policy framework and operational aspect. Institutional Arrangements and Infrastructure Support: Export promotion councils, Commodity boards/export development authorities; other service organizations; Infrastructure Support ï Transportation and warehousing infrastructure, Indian ports and shipping system.

UNIT III

Procedural and Documentary Framework ï An Overview: Trade operations and documentation; Procedure for getting started in export ï import business. Trade contract and INCO terms; Export payment terms and UCDPC; quality inspection; Excise and customs clearance. Foreign Trade Finance and Insurance: Pre - shipment and post-shipment finance; Sources and schemes of foreign trade finance; Exim Bank and foreign trade finance; Coverage of Credit, transit, commercial and political risks; ECGC and risk coverage.

UNIT IV

Foreign Exchange facilities and Regulations; Foreign exchange facilities and exchange rate mechanism; Regulatory framework ï FEMA and its objectives and provisions; Other acts and regulations. Foreign Investments: Indiaôs foreign investment policy and flows: Indiaôs investments abroad ï pattern and structure; Indian Joint ventures in foreign countries and their operations. Balance of Payment Account: Indiaôs Balance of Payment account and adjustment policies; foreign reserves and debt situation.

Reference Books:

1. Ministry of Commerce, Export Import Policy, Government of India, New Delhi.
2. Ministry of Commerce, Handbook of Procedures, Vols. I and II, Government of India, New Delhi.
3. Customs and Excise Laws, Various issues.
4. Nayyar Deepak, Foreign Trade Sector, Planning and Industrialisation in India, in Terance J. Byres (ed.), The State Development Planning and Liberalisation in India, Delhi.
5. Nayyar Deepak, Indiaôs Exports and Export Policies in 1960, Cambridge University Press. Meier G.M., Trade Policy and Development in Scott Maurice and Deepak Lal.
6. Public Policy and Economic Development ï Essays in Honour of lan Little, Oxford.
7. Nayyar Deepak, Indiaôs Export Performance 1970-85, Underlying Factors and Constraints, in Robert E.B. Lucas and Gustav F. Pipanek (ed.), Indian Economy Recent Development and Future Prospects, New Delhi.

MC. 308 - MANAGEMENT OF INTERNATIONAL BUSINESS OPERATIONS

Objective: The course intends to acquaint the students with the management of international business operations of a business firm.

UNIT I

International Business Management: Complexities and issues; Approaches to international management; Cross -cultural values and business management; Foreign market entry mode decisions and level of international involvement; International management orientation; International business management -A strategic perspective. International Planning: Environmental scanning and monito ring; Resource allocation and portfolio compositions of a global firm; Linkages and synergies among business units across borders; Locus of decision making; Headquarter ï subsidiary relationships in international business enterprises; International management information system.

UNIT II

Organizational and Control Aspects of International Operations: Organizational design and structure of international companies; Managing communication across cultures; Co-ordinating and controlling international business operations. International Production and Procurement: International production and location decisions; Procurement for international operations ï International sourcing World class manufacturing and international quality standards; Supply chain management and global business operations.

UNIT III

International Marketing Management: International Market segmentation, targeting and positioning; International marketing mix planning ï Product, price, promotion and distribution decisions. Management of International Financial Operations; International capital budgeting and portfolio investment decisions; International capital structure decision, International working capital management, International accounting and taxation issues.

UNIT IV

International Human Resource Management: Selection, training and development of people in international firms; Compensation and reward systems among international firms; Motivation and leadership in international firms. International Business Negotiations: Process and skills; Management of International Collaborative Arrangements.

Reference Books:

1. Danoes, John D. Radebaugh, Lee H., and Daniel P. Sullivan, International Business: Environment and Operations, Prentice Hall.
2. Griffin, Ricky W. and Pustay, Michael W., International Business: A Managerial Perspective, Prentice Hal.
3. Hill, Charles, W.L., International Business, McGraw Hill Company, New York.
4. Ball, Donald, Wendall H. McCulloch, Miachel Geringer, Michael S. Minor and Jeanne M. McNett, International Business: The Challenge of Global Competition, McGraw Hill Co.

GROUP D: ACCOUNTING AND FINANCE

MC. 309 - STRATEGIC COST MANAGEMENT

Objective: This course aims to acquaint the students with concepts and various aspects of cost management from strategic perspective.

UNIT-I

Conceptual framework of SCM, environmental influences in cost management practices, role of SCM in strategic positioning; cost management tools-life cycle costing, target costing, kaizen costing, JIT & theory of constraints, BPR and bench marking.

UNIT-II

Nature of activity-based costing (ABC); benefits and limitations of ABC; limitation of volume-based costing system, indicates of ABC; activity hierarchic; cost drivers; designing an ABC system, Activity-based management; operational and strategic application of ABC; customer profitability analysis, process value analysis, financial measures of activity efficiency; Nature of value-chain analysis; activity analysis an linkage analysis; application of linkage analysis in cost reduction and value addition.

UNIT-III

Functional-based planning and control; budgeting ï nature, administration and effectiveness; budgeting cycle; activity-based budgeting; kaizen approach; ZBB; performance budgeting; human aspects of budgeting; responsibility centers and financial control - nature and role of responsibility centers; accounting and evaluation of responsibility centers, measuring the performance of investment centre ï ROI, RI, EVA; transfer pricing and its applications.

UNIT-IV

Strategic-based performance measurement system: Balanced score card-prospective and limitations; establishing objectives and performance measures in different perspectives of balance score card; productivity measurement and control; productivity efficiency; partial and total productivity measurement; measuring changes in activity and process efficiency; quality cost management and reporting.

Reference Books:

1. Drury, Colin, Management Accounting and Control, Thomson Learning.
2. Horngren, Datar Foster, Cost Accounting, Pearson Education.
3. Hansen and Mowen, Cost Mangement, Thomson Learning.
4. Kaplan, Atkinson and Young, Management Accounting, Pearson Education.
5. Kaplan, Atkinson, Advanced Management Accounting, Pearson Education.
6. Anthony, Robert N., and Vijay, Management Control System, McGraw Hill.

MC. 310 - INTERNATIONAL ACCOUNTING

Objective: The objective of this course is to develop some conceptual knowledge and Understanding of international accounting issues among students. In addition, this course makes students capable of tackling issues in prevailing regulatory environments.

UNIT-I

International Dimensions of accounting and control: Multinational enterprise, Inter-nationalisation of capital markets, Internationalization of accounting profession. Operational and conceptual issue. Foreign currency translations, methods and practices.

UNIT-II

Specific Reporting Issues: Regulatory Disclosure Requirements; Foreign Operations Disclosure; Social Responsibility Disclosures. Managerial Accounting Issues: Strategic Planning; Management Control Systems; Performance Evaluation of foreign operations.

UNIT-III

International Accounting Standard Board and International Financial Reporting Standards (IFRS): Advantages, supporting and deterring forces; International and Regional Efforts in Standard Setting; International Standards setting process, Harmonization; Financial Statement Analysis of companies and countries differences in accounting principles, foreign currency statements and Ratio Analysis.

UNIT-IV

Transfer pricing, methods, objectives, strategies. Emerging issues in International Accounting.

Reference Books:

1. Radebaugh L. H. and S.J. Gray, International Accounting, and Multinational Enterprises, John Wiley & Sons.
2. Sandagaran S.M., International Accounting, South Western.
3. Gray, S.J., International Accounting and Transnational Decisions , Butterworth, London, U.K.
4. Holzer H. Peter, International Accounting, Horper and Row Publishers, New York.
5. Frederick D.S. Choi and Gary K. Meek, International Accounting, Pearson Education.
6. Shirin Rathore, International Accounting, Prentice Hall of India.

GROUP E: APPLIED ECONOMICS

MC. 311 - INDUSTRIAL ECONOMICS

Objective: The objective of the course is to acquaint students of economic concepts as applied to industrial behaviour. The course makes student capable to analyse and take decisions in respect of a firmôs or industryôs operations.

UNIT-I

Scope and Methods of Industrial Economics: Objectives of Industrial Economics, Firms, Industry and Markets. Industrial and Market Structure: Pattern of Industrial Structure, Industrial inter-dependence, Structure and performance, determinants of Market -Structure.

UNIT-II

Economies of size: Economies of size, vertical and horizontal integration, diversification, economies of scale and scope. Merger, acquisition and takeover, innovation, export led industrialization. Economies of location and spatial structure. Economics of ownership structure.

UNIT-III

Economics of Non-Price Decision of firm: Research and Development and Innovation: R & D expenditure decision, Financing R &D, Relationship between R & D and valuation, Economics of R & D, Structure of Market and R & D, Transfer of Technology.

UNIT-IV

Performance measurement: Profitability, Productivity and capacity utilization, Accounting measure and growth. Perfect and workable competition. State intervention in private sector, legal and institutional framework, competition policy, public policy and development of corporate sector.

Reference Books:

1. Divine P.J., N. Lee, R.M. Jones and W.J. Tyson, An Introduction to Industrial Economics, Anmol Publications.
2. Hay, A. Donald and Derek J. Morris, Industrial Economics: Theory and Evidence, Oxford University Press.
3. Scherer F.M. and David Ross, Industrial Market Structure and Economic Performance, Houghton Miffin Company, Boston.
4. Mukherjee, Dilip (Ed.), Indian Industry, Policies and Performance, Oxford University, Calcutta, India.
5. Seth, V.K. and A.K. Seth, Dynamics of Labour Absorption in Industry, Deep and Deep Publication, New Delhi.
6. Koutsoyiannis A., Economics of Non-Price Decision of Firms, Macmillan 1980, London.
7. Seth, V.K., Capacity Utilisation Industrial: Theory and Evidence, Deep and Deep Publisher, New Delhi.
8. Nayyar Deepak (ed.), Industrial Growth and Stagnation: The Debate in India , Sameeksha, Trust, Bombay.

MC. 312 - APPLIED ECONOMETRICS

Objective: The objective of the course is to acquaint students of the methodology of econometrics and make them capable of applying it to business problems. The emphasis will be on application aspects with theoretical understanding.

UNIT-I

Basic Concepts: Definition and scope of econometrics; model specification; desirable qualities of models; evaluating an econometric model; Random variables, stochastic variables and the stochastic error term; probability distributions (review); estimators, desirable qualities of a good estimator; maximum likelihood estimators (definition). The multiple regression model; The 3 variable model; partial regression and correlation coefficients; assumptions of the classical linear model; Derivation of Ordinary Least Squares Estimators; Properties of OLS estimators, OLS AS BLUE; Variances and Standard deviations; Goodness of fit: R -squared and adjusted R-squared; Tests of significance t and F tests; Hypothesis testing involving more than one parameter; Forecasting; Evaluation of Forecasts; Mean Squared error, RMS error.

UNIT-II

Extensions of the basic linear model: 1) Model transformable to linear form: Estimation of elasticity by log-linear models; Growth rates by semi -log models; linear -log models; polynomial regression models (espquadratic). 2) Qualitative variables: Qualitative independent variables and dependent variables (into only); applications of dummy variables; Time dummy, intercept dummy and structural change.

UNIT-III

Relaxing the assumptions of the basic linear model: 1) Multicollinearity: Perfect and imperfect multicollinearity; consequences of multicollinearity, detection and solution. 2) Heteroscedasticity: Nature and Causes; Consequences; Detection by graphical analysis of residuals and Parks test; Solution of Heteroscedasticity: Weighted Lease Squares. 3) Autocorrelation: nature and causes; Consequences; Detection by graphical analysis and D-W Test, Solution for AR. 4) Error in measurement. 5) Specification bias. 6) Simultaneous Equation Bias.

UNIT-IV

Estimation and specifications: Demand, Sales, Cost, Production and Consumption functions. Simultaneous equation system: Identification and Estimation of the model.

Reference Books:

1. Pindyck R.S. and D. Rubinfied, Econometric Theory and Models, McGraw Hill.
2. Gujarati, D.E., Essentials of Econometrics, McGraw Hill.
3. Koutsoyiannis, A., Theory of Econometrics, 3rd ed., Macmillan.
4. Julia Malden, Application of Econometrics, Hartiage Publishers.
5. Johnston, J., Econometric Methods, McGraw Hill Book Company, New Delhi.
6. Judge George G. et. al. Introduction to the Theory Practice of Econometric, John Wiley and Sons, New York.
7. Pesaran M. Hashem and Peter Schmiod (Ed.), Handbook of Applied Econometric, Vol. I & II Blackwell Publishers.
8. Intricigalor Michael D., Ronal G. Bodkin, Cheng Hsiao, Econometric Models, Techniques and Applications, Prentice Hall.

GROUP F: BANKING AND INSURANCE

MC. 313 - BANK MANAGEMENT

UNIT-I

Banking structure in India - banking functions and services - Foreign commercial banks - Private commercial banks - capital adequacy. Principles of lending - financial adequacy assessing the borrower - project appraisal - structural and Infrastructural analysis ï legal formalities - follow up loans, asset management companies.

UNIT-II

Non Performing Assets (NPAs) - Early Warning Signals - Management of NPAs - Remedies Available - Recent Measures - loan recovery tribunals - Provisions of Revenue Recovery Act.

UNIT-III

Investment management - priorities in allocation of bank funds - investment in governments securities - maturity and yield - quality and diversification, profitability management - profit planning.

UNIT-IV

Traditional Banking vs. E-Banking - facets of E-Banking - Internet Procurement - E - Banking Transaction - Electronic Delivery Channels - Truncated Cheque ï Complete Centralized Solution - Features of CCS - Advances of E-Banking - Constraints in E-Banking - Security Measures.

Reference Books :

1. Varshney, PN. Banking Law & Practice, Sultan Chand, New Delhi.
2. S.N.Maheswari, Banking Law & Practice, Ludhiana, Kalyani Publications.
3. Vasant Desai, Principles of Bank Management, Mumbai, Himalaya Publications.
4. K.Subramanian, Banking Reforms in India, TMH, New Delhi.
5. Joseph Sinkey, Commercial Bank Financial Bank Financial Management, Pearson Education (Prentice Hall)
6. E.Gordon and Dr. K. Natarajan, Banking Theory Law and Practice ï Himalaya Publishing House.

MC. 314 - INSURANCE MANAGEMENT

Objective: This course aims at a familiarizing the participants with the concept of insurance, the risk and its management, various insurance policies and their structure along with the legal dimensions involved. This course also aims at providing the knowledge of Insurance Companyôs Management.

UNIT-I

Conceptual Framework: Risk, Peril and hazard, classification and burden of risk. Insurance as a device to hedge risk. Elements of insurable risk. Development life. Functions of Insurer, Government as Insurer and a regular. Structure of Indian Insurance Industry. Principles and Practices of General Insurance: Meaning, Functions and Scope of Fire, Engineering, Accident, Marine and Aviation Insurance. Fire Insurance ï Types of Policies ï Floating Policies and Declaration Policies; Endorsements and Clauses ï Fire Protection System, Discounts ï Special Rating of Large Industrial Risks.

UNIT-II

Industrial Risk Insurance. Consequential Loss Insurance ï Standard Consequential Loss Policy Form ï Conditions. Engineering Insurance: Machinery Breakdown Insurance ï Contractors All risks Insurance and various other policies ï Miscellaneous Annual Policies ï Advance Loss of Profits Insurance. Motor Insurance ï type of: Vehicles and their Policies ï Rules & Regulations ï Policy Forms. Public Liability Policy: Professional Indemnities ï Employersô Liability Insurance. Personal Accident: Scope of Various covers. Miscellaneous (Accident) Insurance: Fidelity Guarantees and Bonds ï Burglary Insurance ï Money-in-transit Insurance, Bankerôs Indemnity Insurance and other important insurance covers.

UNIT-III

Aviation insurance: Special Features ï types of Cover, Marine Insurance including Inland Rail/Road transit insurance. Life and Health Insurance: Life Insurance and annuities broad classification of Life insurances, special purpose policies; Family income, Family maintenance, Family policy, Joint Life Policies, Classes of life insurance, Health Insurance: Medical Insurance Types of Health Insurance Coverages, types of losses covered. Health insurance contract. Buying a health insurance policy.

UNIT-IV

Legal frame work of Insurance: Insurance and Law of Contracts, characteristics of an Insurance Contract, Interpretation of the Contract, Doctrine of informal Warranties and beneficent interpretation, Exclusion of Coverageôs. Organization and Administration of Insurance: Management Organization: Departmentalisation, marketing, Claims, and loss control, underwriting and pricing of insurance, retention and re-insurance; Financial Structure, reserves of property and liabilities of insurer, earned surplus and profitability, Insurerôs Investments, Financial Reporting.

References Books:

1. W.A. Dinsdale, ñElements of Insuranceò, Pitaman, 1971.
2. Dorfman Marks S., ñIntroduction to Risk Management and Insuranceò, 5th Edition, Prentice Hall Inc., Englewood Cliffs N.J .
3. Nicholas Legh ï Jones, John Birds and David Owen, ñMacGillivray on Insurance Lawò, 11th Edition, Sweet & Maxwell, London, 2008.
4. Denis Riley, ñConsequential Loss Insurance and Claimsò, 4th edition, London: Sweet & Maxwell, 1977.

PAPER 7: MC. 315 - WORKSHOP ON FINANCIAL MARKETS & INSTRUMENTS
(For Regular Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT – I

Indian Financial System: Constituents, Functions of the Financial System Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System.

UNIT – II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits, Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT – III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT – IV

Innovative Financial Instruments and Financial Services: Bonds, features and innovations : Ex-interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System, Tata McGraw, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi
4. Desai, V: Indian Financial System and Development (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services, Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds, (Business Publications Inc.)
7. Dietrich, J.K: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K : Development of Indiaõs Financial System, Sarup & Sons.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (d) Presentation session of the students on the assigned project.

PAPER 7: MC. 315-A - FINANCIAL MARKETS & INSTRUMENTS
(For USOL Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT–I

Indian Financial System: Constituents, Functions of the Financial System, Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System

UNIT–II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange Market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT–III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE, Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT–IV

Innovative Financial Instruments and Financial Services: Bonds features and innovations: Ex- interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System , Tata McGraw Hill, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi.
4. Desai, V: Indian Financial System and Development. (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services , Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds (Business Publications Inc.
7. Dietrich, J.K.: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K: Development of Indiaôs Financial System, Sarup & Sons.

SEMESTER-IV

PAPER 1: MC. 401 – PROJECT PLANNING AND CONTROL

Objective: The objective of the course is to provide the student with skills necessary to create, plan and control a new Enterprise.

UNIT – I

Project Identification, Formulation and Planning : Understanding environment for business opportunities Idea generation, short listing and selection of product/service stages in Venture Appraisal- Technical, Financial, Economic and Social Appraisal Location, Factory Design and Layout. Commercial vs. National Profitability Social Cost - Benefit Analysis (broader concept only). Feasibility Report Preparation for new Enterprise - format and contents.

UNIT – II

Market and Financial Appraisal : Market Survey ï Design, Data Sources and Methodology, Market Segmentation and product differentiation, Forecasting Future demand and Distribution Analysis, Preparation of the Sales Plan and Report Estimation of Financial Requirement.

UNIT – III

Application of Capital Budgeting Techniques, Risk and Uncertainty Analysis for the new enterprise, Planning Capital Structure and Financing Project Financial viability Study.

UNIT – IV

Project Implementation and Management : Project Organisation and Control Network Analysis ï PERT & CPM Cost and Time Over-run Project Follow up and Monitoring.

Reference Books:

1. Chandra, Prasanna : Project Prepartation, Appraisal and Implementation, Tata Mc Graw Hill, N. Delhi.
2. Desai, Vasant : Entrepreneurial Development, Vol.II Project Formulation Appraisal and Financing for Small Industry, Himalaya Publ. N. Delhi.
3. Nicholas : Project Management for Business and Technology: Principles and Practice (Prentice Hall of India, N. Delhi.
4. Pitala : Project Appraisal Techniques, Oxford & IBH Publication.
5. Yound, Trevour L. : Planning and Implementing Project, Sterling Publishing Ltd.
6. Krishnan and Moorthy : Text Book of Project Management, Mac Millan India Ltd.
7. Singh, Narendra : Project Management & Control, Himalaya Publ., N. Delhi.

PAPER: 2 MC. 402 - KNOWLEDGE MANAGEMENT

Objective: The main aim of the course is to create awareness amongst the students to know the details of Knowledge Management in the changing scenario and its significance in framing the business strategy.

UNIT-I

Concept of knowledge, Major Philosophical Schools, Knowledge in economic and management theories, Knowledge as competitive resource, Knowledge intensive organization, Knowledge value chain.

UNIT-II

Knowledge management systems, Barriers to knowledge sharing, Expert systems.

UNIT-III

Knowledge creation as a tool of excellence, tacit and explicit knowledge, Models of knowledge creation process, Critical enabling conditions, Cross leveraging knowledge.

UNIT-IV

Knowledge management strategy and business strategy, Knowledge architecture, Organizational design for knowledge management, Role of Top and Middle management, Knowledge based reward systems.

Reference Books:

1. Devenport, T. H. and Prusak, L. : Working Knowledge; How Organizations Manage What They Know; Harvard Business School Process.
2. Dorothy Leonard Barton : Well Springs of Knowledge, Harvard Business Process.
3. John Sparrow : Knowledge in Organisations, Sage Publications..
4. J.W. Cortada, and J. A. Woods : Knowledge Management Year Book 1999-2000, Butterworth.
5. Richard Huseman and Jon Goodman : Leading with Knowledge, Sage.
6. Ikujiro Nonako and Hirotaka Tekeuchi : Knowledge Creating Company, OUP.
7. Madhukan Shukla : Competing Through Knowledge, Response Books.

PAPER 3: MC. 403 – BUSINESS ETHICS AND CORPORATE GOVERNANCE

UNIT-I

Business Ethics: Introduction to Business Ethics, Ethics, Morals & Values, Concepts of Utilitarianism and Universalism ï Theory of rights, theory of Justice ï Virtue ethics ï ethics of care ï Law and Ethics. The Nature of Ethics in Management Business Standards and Values, Value Orientation of the Firm. Typical Problems in Business Ethics: Environmental Pollution & Society, Marketing Ethics (in Products, Pricing, Promotion and Place) and Consumer protection ï Ethics in Human Resources management (Recruitment and promotion policies, Working Conditions,, Down Sizing Workforce), Ethical issues at the top management, Ethics in financial markets and investor protection ï Ethical responsibility towards competitors and business partners.

UNIT-II

Complexity of Ethical Issues: Conflicts in decision making from ethical and economic point of view, Ethical Dilemma, Solving ethical dilemma Managerial integrity and decision making. Ethical Leadership: Personal Integrity and self development ï wisdom based leadership. Corporate Governance: History of Corporate form and models, Corporate Objectives and goals, Ownership pattern ï Issues in managing public limited firms ï Agency problems. Nature & Evolution of Corporate Governance: Global and National Perspectives ï Global Corporate Governance models, Anglo American and Relationship model (Germany, Japan and France) Claims of Various Stakeholders, Why governance ï Changes in eighties Cadbury Report, Hampel Report and OECD Committee Recommendations ï SOX Act.

UNIT-III

Internal Corporate Governance Mechanism: Board of Directorsð Functional Committees of Board; Code of conduct, whistle blowers. External Corporate Governance Mechanism: Regulators, Gate keepers, Institutional Investors, Corporate raiders, Corporate Governance Ratings Corporate Governance in India: corporate form in India 50s to 90s ï developments in Corporate Governance in India in nineties and 2000s ï CII, Kumaramangalam, Narayanamoorthy, Naresh Chandra, JJ Irani Committee reports ï Legal and Regulatory Changes ï introduction and modification of Clause 49, Corporate governance in practice in India .

UNIT-IV

Cases:

1. A Dent in Wal Martôs Public Image - The PR Strategy.
2. China Aviation Oilôs Collapse: Singapore INCôs challenges.
3. Child labor in Coca Industry.
4. Obesity Concerns: Burger Kings Product Revenges.
5. Bhopal Gas Tragedy

Source

(a) Case Studies for Managers, Vol. II, IBSPCD
(b) BECG Main Reference Book

Reference Books:

1. Velasquez, M. G., Business Ethics: Concepts and Cases, Prentice Hall of India.
2. Monks, R. / Minow, N. Corporate Governance, Blackwell.
3. Banks, Eric., Corporate Governance, John Wiley.
4. Fernando, A C., Corporate Governance, Pearson Education.
5. N. Gopalsamy : Corporate Governance : The New Paradigm, Wheeler Pub., New Delhi.
6. Surendar Kumar : Corporate Governance : A Question of Ethics, Galgotia Pub., New Delhi.
7. N. Balasubramanian : Corporate Boards and Governance, Sterling Pub., New Delhi.
8. Harvard Business Review : Harvard Business Review on Corporate Governance, Boston Harvard Business School.

SEMESTER IV (ELECTIVES) GROUP A: MARKETING MANAGEMENT

MC. 404 - ADVERTISING AND SALES MANAGEMENT

Objective: The course aims at enabling the students to develop an in-depth understanding of the modern concepts and latest techniques of advertising and personal selling and sales force Management which constitute a fast -growing area of marketing.

UNIT-I

Advertising: Communication Basics: Role of communication; Communication process and flows; Planning the promotion mix; Advertising: Nature and importance; Advertising and the economy; Advertising and publicity; Advertising management process ï an overview; Determining target audience; Advertising objectives and positioning decisions; Advertising budget decisions. Message Decision: Determining advertising message; Developing advertising copy ï Headline main copy, logo, illustration, appeal, layout, creativity in advertising.

UNIT-II

Advertising through the internet; Media selection; Media scheduling. Organization of Advertising Operations: In -house vs. advertising agency arrangements; Managing advertising agency relations; valuation of advertisement and campaign effectiveness ï Before - and ï after advertising tests and techniques. Advertising in India; Social and regulatory aspects of advertising. Recent developments and issues in advertising.

UNIT-III

Sales Management: Fundamentals of Personal Selling: Nature and importance of Selling; Types of selling; Personal selling, salesmanship and sales management; Process of effective selling; Strategic Sales management. Sales Planning: Setting personal selling objective; Market analysis and sales forecasting; Sales budget; Sales territory; Sales quota.

UNIT-IV

Sales Organization: Organization structure; relationship of sales department with other departments; Distribution networks relationship. Sales Force Management: Recruitment and selection; training and development; motivating, supervising and compensating sales personnel; Controlling the sales effort; Evaluation of sales personnel; Sales and cost analysis. Ethical and legal aspects of selling.

Reference Books:

1. Aaker, David A., Rajeev Batra and John G. Mayers, Advertising Management, Prentice Hall of India, New Delhi.
2. Belch,. George and Michael Belch, Advertising and Promotion : An Integrated Marketing Communications Perspective , McGraw Hill.
3. Mandell, Maurice, Advertising , Prentice- Hall of India, New Delhi.
4. Still, Richard R. Edward W. Cundiff and Norman A.P.Govoni, Sales Management: Decisions, Strategies and Cases, Prentice Hall of India, New Delhi.
5. Anderson B. Robert, Professional Selling, Prentice-Hall Inc.
6. Spiro, Rosann, William J. Stanton and Greg Richo, Management of a Sales Force, McGraw Hill/Irwin.
7. Pederson Carlton A/, Miburn D. Wright, Barton A., Weitz, Selling Principles and Methods, Richard D. Irwin, Illinois.

MC. 405 - SERVICES MARKETING

Objective: To understand the service product and key elements of services marketing mix. Another objective deals with managing the service delivery process and the implementation of services marketing.

UNIT-I

Introduction to services marketing: role of services marketing; consumer behaviour in service encounters; customer interaction, purchase process, needs and expectations of customers; positioning services in competitive markets; search for competitive advantages; market segmentation, positioning vis-à-vis competitors.

UNIT-II

Creating the service product: Identifying and classifying supplementary services, planning and branding service-products, new service development; designing communication mix; branding and communication; effective pricing objectives and foundations for setting prices; distributing services; options for service delivery, place and time decisions, delivery in cyberspace, role of intermediaries.

UNIT-III

Designing and managing service processes; service process redesign, customer misbehavior; balancing demand and capacity: fluctuations in demand, capacity constrain, planning the service environment; consumer responses to and dimensions of service environment; managing people for service advantage: service leadership and culture.

UNIT-IV

Managing relationship and building loyalty; customer-firm relationship, analyzing and managing customer base; customer management relationship system in services marketing; customer feedback and service recovery; customer complaining behaviour, principles and responses to effective service recovery, service quality and the gap model, measuring and improving service quality, defining, measuring and improving service productivity; organizing for service leadership; search for synergy in service management, creating a leading service organization.

Reference Books:

1. Lovelock, Christopher, Wirtz, Jocken and Chatterjee, Jayanta; Services Marketing - People, Technology, Strategy; Pearson Education; New Delhi.
2. Zeithaml, Valarie A. & Bitner, Mary Jo, Services Marketing ï Integrating Customer Focus Across the Firm; Tata McGraw Hill, New Delhi.
3. Rao, K., Rama Mohana, Services Marketing, Pearson Education, New Delhi.
4. Hoffman & Bateson, Essentials of Service Marketing; Thomson Asia Ptc. Ltd., New Delhi.
5. Rampal, M.K. & Gupta, S.L., Services Marketing; Galgotia Publications; New Delhi.
6. Shanker Ravi, Services Marketing ï The Indian Perspective, Excel Books, New Delhi.

MC. 406 - CONSUMER BEHAVIOUR

Objective: Knowledge of consumer behaviour is a prerequisite for developing effective marketing strategy. The purpose of the course is to provide an in-depth understanding of the consumer and industrial buying processes and their determinants as relevant for marketing decision making.

UNIT-I

Consumer Behaviour: Importance and nature of consumer behaviour; Types of consumers and their role; Consumer buying process and determinants; Changing profile of Indian consumers.

UNIT-II

Individual Differences in Consumers: Needs and motivation; Perception; Attitude and attitude change; Learning and learning theories; Personality and life style analysis.

UNIT-III

External determinants of Consumer Behaviour: Family and its influence on consumer buying behaviour; Group and their influences; Social class; Culture and sub-culture.

UNIT-IV

Models of consumer behaviour; Business buying behaviour. Cross-cultural dimensions of consumer behaviour; Consumer research ï complexities and issues.

Reference Books:

1. Schiffman, L.G. and L.L. Kanuk, Consumer Behaviour, Pearson, Ltd., New Delhi.
2. Engel, J.F., Roser D. Blackwell and Paul W. Miniard, Consumer Behaviour, Cengage Learning.
3. Peter, J. Paul, and Jerry C. Olson, Consumer Behaviour and Marketing Strategy, McGraw Hill.
4. Assael, H., Consumer Behaviour and Marketing Action, Cengage Learning.
5. Hawkins Dell, Roger J. Best, Kenneth A. Conej, Consumer Behaviour, Building Marketing Strategy.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 407 - ORGANISATIONAL CHANGE AND DEVELOPMENT

Objective: This course is designed to provide I depth understanding of behavioural interventions and enable the students to apply these intervention for building individual, team, system, systems and process related competencies and helping organizational to achieve peak performance and become self sustaining.

UNIT-I

Organizational Change - Meaning, nature, types; theories of planned change; Organizational development ï nature and characteristics; process of organizational development.

UNIT-II

Human Process Interventions - T-group, process consultation, third party interventions, team building; organizational confrontation meeting, coaching and mentoring, role focused interventions.

UNIT-III

Techno structural Interventions - Restructuring organization, reengineering, employee involvement, work design; Strategic Interventions ï Organisation and environment relationships, organization transformation.

UNIT-IV

Contemporary issues and applications ï Organizational development in global context, organizational development in service sector, OD Practioners ï role, competencies requirement, professional ethics and value and experiences; future trends in OD.

Reference Books:

1. Cummings, Thomas G. and Christopher G. Worley, Organisation Development and Change, Thomson Learning.
2. Ramnarayan S., T.V. Rao and Kuldeep Singh, Organisation Development Interventions and Strategies, Response Books, New Delhi.
3. French, Wendell L. and Lecil H. Bell, Organisation Development, PHI, New Delhi.
4. Chowdhury, Subir, Organisation 21C, Pearson Education.

MC. 408 - TRAINING AND DEVELOPMENT

Objective: The objective of the course is to familiarize the students with basic concepts and principles of Training and Development of Human Resource and train them to understand the learning environment of a firm. The knowledge so obtained will make them capable of providing training to Human Resource of a business firm.

UNIT-I

Conceptual Framework: The functions of training, relationship of training to organizational and individual goals, Factors effecting successful training process, Skills of a successful trainer ï Internal and external trainer. Training and Learning: The learning process, learning curve, principles of learning, training guidelines, experience versus training, kinds of training, system approach to training, programmed instruction, transfer of training.

UNIT-II

Training Needs Assessment and Curriculum Development: Identification of Training and Development needs, training needs assessment - various approaches (the job and the Individual), Advantages and disadvantages of basic needs assessment techniques.

UNIT-III

Assessing curriculum needs, curriculum standards, matching organizational training needs, Developing training materials. Training Methods: Three Stages of training (Preparatory, implementation and follow - up stage), On the job and off -the job methods,, experiential versus non-experiential methods.

UNIT-IV

Evaluation of Training and Development, and Emerging Pattern: Reasons of evaluating training, Criteria for evaluation, problems of evaluation, steps involved in evaluation, methods for training evaluation, analysis and costing of training. Emerging Pattern of Training and development in India.

Reference Books:

1. Prior John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Donald F. Michalak and Edwin G. Yager, Making the Training Process Work, Harper and Row, New York.
3. Jack J. Phillips, Handbook of Training Evaluation and Measurement Methods , 3rd Edition,
   Houston, Gulf Publishing Co.
4. Lynton R., Pareek, U., Training for Development, 2nd Edition, New Delhi, Vistaar.

MC. 409 - COMPENSATION MANAGEMENT

Objective: This course is designed to promote understanding in issues related to compensation in corporate sector and impart skills in designing, analyzing and restructuring compensation management system, policies and strategies.

UNIT-I

Role of compensation in organization: Economic and behavioural theories related to compensation; strategic perspectives of compensation; compensation as motivational tool; compensation policy.

UNIT-II

Internal and external equities in compensation system; determining the worth of jobs; understanding inter and intra-industry compensation differentials, designing pay structure and administrating compensation package; understanding different components of compensation package like fringe benefits, incentives and retirement plans; pay for performance plans.

UNIT-III

Compensation of special group: Corporate Directors, Chief Executives, Senior Managers; components of executive compensation package; compensation of professionals and knowledge workers, R&D staff, sales compensation plan, international compensation.

UNIT-IV

Statutory provisions governing different components of reward system; working of different institutions related to reward system like wage boards, pay commissions, role of trade unions in compensation management; tax planning.

Reference Books:

1. Milkovich, George T. and Newman J.M., Compensation, Tata McGraw Hill.
2. Henderson, R.O., Compensation Management, Pearson Education.
3. Martocchio, J.J., Strategic Compensation, Pearson Education.
4. Armstong, M. and Murlis H., Reward Management, Kogan Page, UK.
5. Singh, B.D., Compensation Reward Management, Excel Books, New Delhi.

GROUP C: INTERNATIONAL BUSINESS

MC. 410 - INTERNATIONAL BUSINESS ENVIRONMENT

UNIT-I

An Overview of International Business Environment ï Economic environment ï political and regulatory environment ï demographic environment ï social, cultural and technological environment, International Economic Environment ï Regional integration and trade blocks ï Types of integration ï theory of customs union, European union ï regional groupings ï integration of developing countries ï SAARC, SAPTA, international commodity agreements ï quota agreements ï Cartels ï Bilateral & Multi lateral contracts ï Economic institutions ï International Monetary Funds (IMF) ï World Bank, Asian Development Bank, UNCTAD, UNIDO, International Trade Centre, WTO, GATT, GATS, TRIM, TRIPS.

UNIT-II

International Trade and Investment Theory - Historical developments of Modern Trade theory ï Investment theories ï Theory of capital movements ï Market imperfections ï Internationalisation ï Appropriability ï Location specific advantage ï eclectic. International Trade and Payments: Government Influence on Trade: Trade in merchandise ï Trade in services ï Global sourcing ï degree of dependence ï balance of payments ï trade and BOP of India. Cultural contacts of global management ï Understanding the role of culture ï communicating across cultures ï cross cultural negotiations and decision making.

UNIT-III

International Investment : Types and significance of foreign investments ï factors affecting international investment ï growth and dispersion of FDI ï cross border mergers and acquisitions ï foreign investment in India ï The New Policy ï EURO/ADR issuesï M&Aï Indian companies going global. Multi National Corporation : Definition and Meaning ï Importance and dominance of MNCs ï Code of conduct ï MNCs in India ï Transfer of Technology ï global competitiveness ï indicators of competitiveness - competitive advantage of nations ï Technology and Global competitiveness.

UNIT-IV

International Monetary System and Foreign Exchange Marketing: The Pre- Bretton Woodôs period, Break down of Bretton Wood system and emergence of EMS, EU and EURO. Social Responsibilities and Ethics, MNE Social Responsibilities, Efficiencies, Perspectives, Ethics, Technological Perspective, Foreign Corrupt Practices Act.

Reference Books:

1. The International Business Environment by Anant K. Sundaram / J. Stewart Black-Prentice Hall
2. International Business environments and Operations, John Daniel, Lee H Radebaugh, Daniel P Sulivan- Pearson Education.
3. International Management Managing Across Borders and Cultures, Fourth Edition by Helen Deresky ï PHI
4. Dynamics of Successful International Business Negotiations by Robert T. Moran, William G. Stripp ï JAICO
5. The International Environment of Business by Gerald M. Meierï Oxford Press.

MC. 411 - GLOBAL FINANCIAL MANAGEMENT

UNIT-I

Global Financial Environment : Financial Goal and Corporate Governance - Macro & Micro Intõl. Finance, - Intõl Monetary System & Crisis - Balance of Payment. Foreign Exchange Theory and Market: The Foreign Exchange Market and Problem, The Foregin Exchange Rate Determination.

UNIT-II

Foreign Currency Derivatives: Forward, Future and Option Market, PPP, IRP IFE, and International Parity Condition: International Triangula Arbitrage-Covered Interest Arbitrage.

UNIT-III

Forex Exposure & Risk Management - Transaction, Operating/Economy & Translation/Accounting Exposure - Currency Hedging Strategy. Transaction Exposure Management : - International Financial Engineering; Working Capital Management in Multinational Corporations.

UNIT-IV

Financing the Global Firm : - Global Cost of Capital & Available of Capital ï Sourcing Equity Globally - Financing Structure & International Debt - International Portfolio Theory - FDI Theory & Strategy.

Reference Books:

1. Madura J. : International Corporate Finance, 8th Edition, South Western Publishing Company.
2. Alan C. Shapiro, Multinational Financial Management, 6th Edition, Prentice-Hall International Inc.
3. Solnik, B. McLeavey, D. : Global Investment, 6th edition, Pearson Addison Wesley.
4. Richard M. Levich, International Financial Market, Prices and Polices , McGraw-Hill.
5. Hamdy Hady, Manajemen Keuangan Internasional edisi 3, YAI dan PT. Hecca Mitra Utama.

MC. 412 - INTERNATIONAL MARKETING MANAGEMENT

UNIT-I

Introduction: Basic Concepts of International Marketing, Definition and Dimensions of International Markets, Differences Between Domestic and International Marketing, Benefits of International Marketing, EPRG Framework in International Marketing, Changes of Development into Global Marketing.

UNIT-II

Environment of International Business: Introduction, Political and Legal Environment, Cultural Environment, Financial and Monetary Environment. Indian Foreign Trade: Indian Trade Policy, Recent Transit in Indiaגs Foreign Trade, Export Assistance, Institutional Infrastructure for Export Promotion in India, EXIM Policy of India.

UNIT-III

Identification of Foreign Markets: Product Planning for Exports, Export Pricing, Market Entry and Overseas Distribution System, Promoting Products, Internationally Role of WTO .

UNIT-IV

Overseas Market research, Marketing Plan for Exports, New Techniques in International Marketing, International Sub-Contracting, Joint Ventures, Multinationals Exports Finance, Risk Export Documents and Procedures.

Reference Books :

1. R. Srinivasan, International Marketing, Prentice Hall of India, New Delhi.
2. Onkvisit & Shaw ï International Marketing: Analysis and Strategy. (PHI)
3. Keegan, Global Marketing Management, PHI.
4. Rathore & Rathore, International Marketing, Himalaya Publishing , New Delhi.
5. Gitman, Global Marketing, Pearson.
6. Francis Chernnilam, International Marketing, Himalaya Publishing Home.

GROUP D: ACCOUNTING & FINANCE

MC.413: ADVANCED CORPORATE ACCOUNTING

Objectives: Corporation is the most important part of the economic development of a company. With pace of development of the emerging scenario, the corporate accounting is also becoming little bit tougher. This paper will enable the students to learn the advanced accounting in the field of corporate world.

UNIT-I

Business Acquisition and Conversion of partnership into limited company and Limited Liability Partnership (LLP): Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company ï with and without same set of books Amalgamation of firms, accounting in the books transferor and transferee firm.

Investment Accounts : Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.

UNIT-II

Company Merger and Reconstruction: Amalgamation, Absorption and Reconstructionï Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (both for amalgamation in the nature of Merger and of Purchase); inter-company transactions (including inter-company share holding). Internal reconstruction ï meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction.

UNIT-III

Valuation: Goodwill ï Valuation using different methods i.e., Average Profit, Super Profit, Capitalization and Annuity. Shares ï Valuation using different methods: Intrinsic, Earnings, Dividend Yield, Earnings-Price, Cum-div and Ex-div, Majority and Minority view and Fair Value.

UNIT-IV

Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest ï Basic principles and preparation of CBS; CBS with loss balance of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intergroup Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding).

Reference Books:

1. Sukla, Grewal, Gupta, Advanced Accountancy, Vol. II, S. Chand.
2. R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand.
3. Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing.
4. Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication.
5. Hanif & Mukherjee, Corporate Accounting, TMH.
6. L.S.Porwal, Accounting Theory, Tata Mcgraw Hill.
7. Gokul Sinha, Accounting Theory & Management Accounting.
8. B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
9. Frank Wood, Business Accounting Vol II, Pearson.
10. V.K.Goyal, Corporate Accounting, Excel Books.

MC. 414 - SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: To enable the students to understand various techniques of analysis used in investment decisions, portfolio analysis and efficient portfolio management.

UNIT-I

Security Market Analysis: Investment environment, Types of return and risk; Sources of risk Technical Analysis, Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis.

UNIT-II

Forms of Market Efficiency and Valuation of Securities : Random Walk Theory Form of Market efficiency Analysis of Bond/ Debentures: Valuation of bonds Analysis of risk in bonds-duration and convexity Valuation of Equity and Options.

UNIT-III

Portfolio Analysis : Portfolio Management ï Meaning, Evaluation & Role Risk & Return of a Portfolio, Risk Diversification Markowtiz Risk-Return Optimisation Single Index Model-Portfolio Tufel Risk. Portfolio Market Risk, Portfolio Unique Risk Sharpeôs Optimisation Solution.

UNIT-IV

Portfolio: Theory, Construction & Evaluation : Capital Market Theory - CAPM, Risk Free Lending Borrowing Arbitrage Pricing Theory Techniques of Portfolio Construction Active and Passive portfolio management, Bond portfolio management strategies - passive, semi-active and active along with immunization strategies Portfolio Performance Evaluation.

Reference Books:

1. Fuller & Farrel: Modern Investment & Security Analysis, McGraw Hill.
2. Strong, Robert. A: Portfolio Management Handbook, Jaico Publishing House, Delhi.
3. Singh, Preeti: Investment Analysis, Himalaya Publishing House.
4. Jordan & Fischer: Security Analysis & Portfolio Management, Prentice Hall India, N. Delhi.
5. Avadhani, V.A: Security Analysis & Portfolio Management.(Himalaya Publishing House).

MC. 415 - ADVANCED AUDITING

Objectives: The basic purpose of this paper is to provide in-depth knowledge of the auditing contemporary issues particularly related to the company audit.

UNIT-I

Company Audit: Qualification, Disqualification, Appointment, Removal, Remuneration of Auditors. Audit Ceiling-Status, Power, Duties and Liabilities of auditors. Branch Audit - Joint Audit - Special Audit. Maintenance of Books of Account ï Related Party Disclosures- Segment Reporting. Divisible Profit, Dividend and Depreciation (Companies Act, Standards on Accounting, Legal Decisions and Auditorôs Responsibility). Representations by Management - Contents of Annual Report (A Brief Idea).

UNIT-II

Audit Report and Certificate: Definition - Distinction between Report and Certificate - Types of Reports/Opinion 35 (Clean, Qualified, Disclaimer, Negative and Piecemeal) Contents of Audit Report (As per Companies Act and Standards on auditing). True and Fair View (Concept and Guiding Factors)- Materiality(Concepts and Relevance) - Limited Review- Disclosures. Certificate on Corporate Governance- Cash Flow Statement Reporting.

UNIT-III

Audit of Different Institutions: Banks - Legislation Relevant to Audit of Banks, Approach to Bank Audit, Internal Control Evaluation, Non-Performance Assets (Concept, Provisions), Long Form Audit Report. Insurance Companies - Legislation Relevant to Audit of Insurance Companies (Life and General Insurance), Review of Internal Control, Audit Report (Matters as per IRDA). Educational Institutions and Hospital Features and Basic Principles of Government Audit - Local Bodies and Non-Profit Seeking Organizations (including NGOs). Comptroller and Auditor General and its Constitutional Role. Investigation Meaning, Purpose - Distinction between Investigation and Auditing Approach to Investigation - Types of Investigations. Assessing a Business (Due Diligence Review, Valuation). Investigations to Detect Fraud, Misappropriations and Defalcations - Investigations with respect to Business Combinations.

UNIT-IV

Other Thrust Areas: Cost Audit - Concepts, Objectives, Advantages, Relevant Provisions of Comp. Act. Management Audit - Tax Audit - Systems Audit - Social Audit-Environment Audit Energy Audit - Forensic Audit-Peer review (Concepts, Objectives and Regulatory Requirements). Ethics in Auditing ï Auditorôs Independence. Auditing in CIS Environment. Standards on Auditing (Concepts, Purpose and Present Position as to Number and Title as issued by ICAI).

Note: Topics to be studied with reference to Standards on Auditing and Accounting including Applicable Indian Financial Reporting Standards.

Reference Books :

1. Gupta, Kamal, Contemporary Auditing, TMH.
2. Tandon, B.N., Principles of Auditing, S. Chand & Co.
3. Sharma, T.R., Auditing Principles & Problems, Sahitya Bhavan, Agra.
4. Spicer & Pegler, Practical Auditing.
5. Woolf, Emile, Auditing Today.
6. Basu, Sanjib Kumar, Fundamentals of Auditing, Pearson.
7. Auditing Assurance Standards and Guidelines issued by ICAI.

GROUP E: APPLIED ECONOMICS

MC. 416 - MACRO ECONOMIC ANALYSIS AND POLICY

Objectives: The Course seeks to provide grounding in basic macroeconomic theory and policy, with a focus on applications, especially in context of developing economies like India.

UNIT-I

Basic accounting concepts and tools in closed and open economies: National income accounting, nominal and real exchange rates and balance of payments, Keynesian theory of the short-run : Analysis of fiscal and monetary policies in the closed and open economy IS-LM models, including the Mundell-Fleming model, Interest rates in open and closed economies: Yield curve, covered and uncovered interest parity condition.

UNIT-II

The labour market and policy analysis in the medium and long run : AS-AD analysis, Analysis of inflation and unemployment : The Phillips curve; theories of unemployment conditional convergence.

UNIT-III

Theory of business cycles, Classical theories of economic growth : The Solow model; evidence on convergence and Theories of endogenous growth.

UNIT-IV

Open economy analysis : Models of currency crisis, exchange rate volatility. Expectations theory and financial markets, including rational expectations model.

Reference Books:

1. Blanchard, O. , Macroeconomics, Pearson Education, New Delhi .
2. Abel, A.S. and B.S. Bernanke, Macroeconomics, New Delhi Pearson Education.
3. Barro, R. and X. Sala-i-Martin , Economic Growth, India, Prentice Hall.
4. De Souza, E. , Macroeconomics, Pearson Education, New Delhi.
5. Dornbusch. R., S. Fischer and R. Start, Macroeconomics, Tata Mc Graw Hill, New Delhi .
6. Jones, C., Introduction to Economic Growth, W.W. Norton, New York.
7. Keynes, J., The General Theory of Employment, Interest and Money, New York Harcourt.
8. Krugman, P. and M. Obstfeld, International Economics, New Delhi, Addison Wesley .

MC. 417- ECONOMICS OF SERVICES

Objective: The objective of this paper is to acquint the students with the economics of various kinds of services and its related issues.

UNIT-I

Introduction: Basic concepts of services, trade in services, classification of services (CPC), economic growth and structural shifts in favour of services, cost disease hypothesis and its implications on growth, empirical evidence, service sector in India, causes of growth, implications of the service sector growth for long run growth.

UNIT-II

Economics of education: Micro theories of education, Beckerôs theory, Mincerian equation, over education, measuring micro effects of education, signaling theory of education, new growth theories and macro economic effects of education, human resources and human capital development empirical evidence government policies, government funding and issues, PPP in education, the case for universal, free, primary education, structure of higher education and problems of its financing in India, other issues in education policy; Health: Economic dimensions of health care - demand and supply of health care, Grossmanôs model of health care services, determinants of health - poverty, malnutrition, illiteracy and lack of information, Micro effects of health, health dimensions of macro economics development; health policy, financing of health care and resource constraints, inequalities in health - class and gender perspectives, institutional issues in health care delivery, economics of health insurance, community based health insurance.

UNIT-III

Economics of Infrastructure services : Role of infrastructure in economic development, natural monopoly and economics of infrastructure regulation, rate of return regulation, performance based regulation, pricing for infrastructure sector, role of subsidies, restructuring and privatisation of infrastructure sector with special reference to India, reform acts, competition in infrastructure sector, issues in infrastructure finance, modes of project financing, development of infrastructure projects - BOO, BOOT, BOLT etc.

UNIT-IV

Economics of ICT: ICT industry: An introduction, growth of the global ICT industry, measuring the impact of ICT, impact of IT on economic performance and trade, Impact of ICT on markets and society at large, direct and indirect macroeconomic impact on growth, theory and empirical evidence, specificities of information markets and network goods, need for specific sectoral regulation (discussions on case studies), familiarity with e-governance. The evolution of the sectoral regulation since the liberalisation of the Telecommunicat ions market in 1998 in India.

Reference Books/Journals:

1. Dasgupta S. and Singh A., Will services be the new engine of economic growth in India, working paper No. 310, Centre for business research, University of Cambridge, UK. Wolff A. (2005): The service economy in OECD countries, STI working paper 2005/3, statistical analysis of science, technology and industry.
2. Gordon J. and Gupta P., Understanding Indiaôs services revolution, working paper, IMF
3. Banga R. , Role of services in the growth Process, a survey, New Delhi, CRIER ÅGovernment of India (2005): Report on the CABE committee on autonomy of higher education institutions, ministry of human resource development
4. NCAER (2006):E readiness report , India

MC. 418 - WORLD TRADING SYSTEM

UNIT-I

Basic economic principles relating to international trade mercantilism, Comparative advantage and gains from trade, Factor endowments and trade patterns, Qualifications to the case for free trade, reciprocity, the optimal tariff, infant industries, strategic trade theory, revenue-raising considerations, and national security considerations.

UNIT-II

Evolution of the multilateral trading system under GATT : Emergence of discriminatory trade policies in the inter-war years leading up to the Bretton Woods Conference in 1944, The formation the GATT ï the Havana Charter and the failed attempt to establish the International Trade Organisation, Core principles of the GATT (MFN and national treatment), GATT and its changing character during the 1950s and 1960s, The emergence of the idea of special and differential treatment for developing countries and non-reciprocity, Exceptions to the GATT rules ï textiles and agriculture ï their implications, maturing of the GATT during the 1970s, GATT and the Uruguay Round.

UNIT-III

Analysis of the covered Agreements of the WTO: Agriculture, non-agricultural market access, rules, anti-dumping, subsidies, safeguards, trade facilitation, services, trips, environment, dispute settlement, attempts to expand the remit of the WTO, investment (MAI), labour standards.

UNIT-IV

Challenges to the Multilateral Trading System: The rise of regional trading agreements and free trade areas (FTAs), Relationship with the multilateral trading system, A ñspaghetti bowlò syndrome?, North-South FTAs and South-South FTAs, US unilateralism, Use of Section.

Reference Books:

1. Das B.L, The World Trade Organisation, A Guide to the Framework for International Trade, London and New York : Zed books and TWN.
2. Hoda A., Developing Countries in the International Trading System, New Delhi: Allied.
3. Aggarwal A., Anti-dumping and Developing Countries, An Introduction, New Delhi, Oxford University Press.
4. Kumar, S. : Trade in Services: Advantage, New Delhi , Bookwell Publications.
5. Marchetti J. and Roy M., Opening Markets for Trade in Services, London, Cambridge University Press.

GROUP F: BANKING AND INSURANCE

MC. 419-BANK LEGISLATION

Objective: The objective of this course is to apprise the students with the banking law and practice and develop an understanding of various laws affecting banks.

UNIT-I

Evolution of banking law : Banking Regulation Act, 1949; Reserve Bank of India Act, Bank Nationalization Act, 1969; A Study of Negotiable Instruments Act, 1881 based on case law.

UNIT-II

Banker and customer relations : Banks as borrowers; cheques - payment of customers cheques: collecting banker and customers accounts.

UNIT-III

Employment of funds; Guarantees; Advances secured by collateral securities; Advances against goods and documents of title to goods; Analysis of banks balance sheet, Electronic funds transfer and other electronic payments; Internet banking.

UNIT-IV

The Foreign exchange Management Act, 1999, Provisions relating to: Preliminary (Sec 1-2), Regulation and Management of Foreign Exchange (Sec 3 to 9). Authorized person (Section 10 to 12) Contravention and penalties (Section 13 to 15) Adjudication and Appeal (Sections 16 to 21 and sections 34-35) Directorate of enforcement (section 36 to 38).

Reference Books :

1. P.N. Varshney : Banking Law and Practice.
2. B.M. Lall Nigam : Banking Law and Practice.
3. Tannan : Banking Law and Practice in India.
4. Tax mann : Bankerôs Manual.
5. Diwan, Prag and Sunil Sharma : Electronic Commerceï A Managerôs Guide to E. Business, Varity Books International, Delhi.
6. V.K. Jain and Hemlata : Electronic and Mobile Commerce, Cyber-tech Pub. New Delhi. Uppal, K.K., Chawla, A.S. & Chawla & Malhotra Keshav : Banking Towards 21st Century, Published by Deep and Deep Publications, New Delhi.

MC.420-RISK MANAGEMENT

Objective: To provide an understanding and an appreciation of the principles and practices of risk management in order to enable production of the optimum strategy for the handling of risk in an organisation.

UNIT-I

Nature and Sources of Financial Risk: Introduction to Financial Risks, definition, including: Business Risk, Operational Risk, Financial Risk (market risk, credit risk, liquidity risk), Legal Risk; Introduction to risk management; Principles, essential features and objectives of risk management; Function and duties of a risk manager and the risk management department of a company; Content and purposes of a companyôs risk management philosophy, statement, manual and report; Location and structure risk management within the organizational structure; Risk and Return.

UNIT-II

Process of Risk Management; Techniques used in identifying sources of risk ; Quantitative and qualitative techniques used to identify and assess potential risks to an organization and the advantages and disadvantages of each technique. Techniques for gathering data. Methods of measuring, representing and comparing data for analysis and the relative advantages of each method. Probability theory, the ways in which probabilities are derived and their uses. Application of probability distribution.

UNIT-III

Risk Measurement and Control: The measurement of risk, Controlling risk: With insurance and without insurance. Objective and techniques of loss control management ï Property, Security, Employee and Liability risk control; Features of a contingency plan. Disaster Recovery, Crisis Management and Business Continuity.

UNIT-IV

Value at Risk (VaR): Meaning, Measuring Value at Risk Monte Carlo Simulatio-, application of VaR, Hedging- Concepts and Types; Hedging Process - Initiation, Monitoring, closing and roll over. Risk Management Information System (RMIS) - fundamental concepts, Evolution of RMIS, components, potential benefits and limitations of RMIS, Designing RMI, Implementing RMIS

Reference Books :

1. Redja, Principles of Risk Management and Insurance ,Pearson Education, N. Delhi.
2. Marrison The Fundamentals of Risk Mangement, Tata Mc Graw Hill, N. Delhi.
3. John C. Hull, Fundamentals of Futures & Options Markets (Prentice Hall.
4. Jorian, Phillippe Value at Risk: The New Benchmark for Managing Financial Risk McGraw-Hill.
5. Saunders, A. and M. Cornett., Financial Institutions Management: A Risk Management Approach, 6th ed. Boston: McGraw-Hill.
6. Harrington, S. and G. Niehaus. Risk Management and Insurance, McGraw-Hill.
7. Rivai, V., A. Veithzal, and F. Idroes. Bank and Financial Institutions Management: Conventional and Sharia System. Jakarta: Rajawali Pers.

MC. 421-ACTUARIAL SCIENCES

Objective: The purpose of this course is to equip the student with the principles and techniques of actuarial practice. The paper requires at least a prior general knowledge of mathematics and statistics.

UNIT-I

Basic Mathematics: Basic functions, Annuities - certain, Loans repayable by installments, Simple methods of determining the rate of interest in a transaction, Capital redemption assurance, Valuation of simple loans and debentures.

UNIT-II

Life Contingencies: Mortality tables, Elementary functions, the central death rate, Single life annuities and assurances, Commutation columns, Temporary and deferred annuities and assurances, Conversion tables.

UNIT-III

Special annuities and assurances, Periodical payments, Complete annuities, Policy value, Select and other tables.

UNIT-IV

Joint-life Annuities and Assurances: Value of and premiums for joint -life and contingent annuities and assurances.

Reference Books:

1. Donald D.W.A. ñCompound Interest and Annuities ï Certainò, 2nd Ed., Cambridge [Eng.] Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press.
2. R.E. Underwood, ñThe Elements of Actuarial Science ò, 4th Edition, Pitman.
3. Harry Freeman, ñMathematics for Actuarial Students ò, Cambridge at the University Press.

MC. 422- COMPREHENSIVE VIVA-VOCE

The Comprehensive VIVA-VOCE will be conducted at the end of the 4th Semester by the External Examiner appointed by the University. The VIVA-VOCE will be based on the content of the subjects studied by the student during the all four semesters.

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Published by **: Prof. A.K. Bhandari, Registrar, Panjab University, Chandigarh**

Department of Microbial Biotechnology (DMBT)

Panjab University

Chandigarh

Syllabus : 2018-2019, 2019-2020, 2020-2021

(M. Sc.)

SYLLABUS -2018-2019, 2019-2020, 2020-2021

M.Sc. Microbial Biotechnology

M.Sc. 1st year (1st Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Microbial Biodiversity and Physiology	MBT-101T	100	MBT-101 P	50	6
2.	Immunology and Immunotechnology	MBT-102T	100	MBT-102 P	50	6
3.	Genetics and Recombinant DNA Technology	MBT-103 T	100	MBT-103 P	50	6
4.	Microbial Biochemistry and Enzymology	MBT-104 T	100	MBT-104 P	50	6
5.	Bioprocess Engineering	MBT-105 T	100	MBT-105 P	50	6

Total Credits= 30
Total Marks = 750

M.Sc. 1st year (2nd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Medical Microbiology	MBT-201 T	100	MBT-201 P	50	6
2.	Molecular Biology	MBT-202 T	100	MBT-202 P	50	6
3.	Industrial Microbiology-1 (Health, Food, Enzymes)	MBT-203 T	100	MBT-203 P	50	6
4.	Bioinformatics & Biostatistics	MBT-204 T	100	MBT-204 P	50	6
5.	Intellectual Property Rights (IPR), Bioethics & Entrepreneurship	MBT-205 T	100	MBT-205 P	50	6

Total Credits= 30
Total Marks = 750

M.Sc. 2nd year (3rd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)	MBT-301 T	100	MBT-301 P	50	6
2.	Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)	MBT-302 T	100	MBT-302 P	50	6
3.	Bioinstruments and their Applications	MBT-303 T	100	MBT-303 P	50	6
4.	Microbial Identification, Diagnostics & Nanobiotechnology	MBT-304 T	100	MBT-304 P	50	6
5.	Tutorials	MBT-305 T	100	MBT-305 P	--	4

Total Credits= 28
Total Marks =700

M.Sc. 2nd year (4th Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Seminar & Tutorials	MBT-401 T	100	MBT-401 P	--	2 + 2
2.	Dissertation	MBT-402 T	350	MBT-402 P	--	14

Total Credits= 18
Total Marks = 450

Consolidation of Marks and Credits

Sr. No.	Class	Total Marks	Total No. of Credits
1.	M.Sc. 1st Yr	1500	60
2.	M.Sc. 2nd Yr	1150	46
Grand Total		**2650**	**106**

Department of Microbial Biotechnology (DMBT)

Syllabus
for
M.Sc. MICROBIAL BIOTECHNOLOGY
2018-2019, 2019-2020, 2020-2021

Semester I

1. MBT-101: Microbial Biodiversity and Physiology
2. MBT-102: Immunology and Immunotechnology
3. MBT-103: Genetics and Recombinant DNA Technology
4. MBT-104: Microbial Biochemistry and Enzymology
5. MBT-105: Bioprocess Engineering

Semester II

1. MBT-201: Medical Microbiology
2. MBT-202: Molecular Biology
3. MBT-203: Industrial Microbiology-1 (Health, Food, Enzymes)
4. MBT-204: Bioinformatics and Biostatistics
5. MBT-205: Intellectual Property Rights (IPR) Bioethics & Entrepreneurship

Semester III

1. MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)
2. MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)
3. MBT-303: Bioinstruments and their Applications
4. MBT- 304: Microbial Identification, Diagnostics & Nanobiotechnology
5. MBT-305: Tutorials

Semester IV

1. MBT-401: Seminars and Tutorials
2. MBT-402: Dissertation.

MBT-101: Microbial Biodiversity and Physiology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) the diversity of microbes, (ii) growth & nutrient requirements (iii) unique metabolic pathways.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit -I

1. Relevance of microbiology as a field of Biotechnology.
2. Historical milestones in Microbiology and Biotechnology
3. Structures and functions of bacteria, yeast and fungi.
4. Control of microbes by the use of physical and chemical agents.
5. Basic principles of evolution
6. Principles of protein stability

Unit – II

7. Biodiversity of

(a) Archaea
(b) Bacteria
(c) Fungi
(d) Algae
(e) Viruses
(f) Extremophiles

Unit – III

8. Nutritional requirements of microbes
9. Bacterial growth and its kinetics.
10. Chemostat, Turbidostat, Synchronous growth.
11. Mechanisms involved in transport of nutrients in microbes
12. Microbial interactions

Unit - IV

13. Brief introduction to common metabolic pathways.
14. Unique pathways of microbial metabolism: ED, PK pathways; Respiration; Fermentations; Amphibolic pathways; Anaplerotic reactions.
15. Bacterial cell wall biosynthesis
16. Integration of biochemical processes in the context of cells, tissues, and whole organisms

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Use of basic instruments in Microbiology (Light microscope, pH meter, Autoclave, Laminar flow chamber, Centrifuge, Spectrophotometer).
2. Staining of bacteria, yeast and fungi.
3. Purification of mixed cultures by streaking technique
4. Determination of viable count
5. Correlation of viable counting and optical density of cultures
6. Isolation of microbes from environment
7. Bacteriophage screening
8. Preparation of complex and synthetic medium.
9. Sterilization of liquid and solid items.
10. Storage of microbes

Suggested readings:

1. Microbial Biotechnology by A.R. Alagawadi, P.U. Krishnaraj, K.S. Jagadeesh, S. Kannaiyan. (2006) Publisher: Alpha Science Intl Ltd; First Edition (2006), ISBN-10: 8173197253 ISBN-13: 978-8173197253.

2. Prescott's Principles of Microbiology by Joanne Willey, Linda Sherwood, Chris Woolverton. (2017) Publisher: Mc Graw Hill Publisher. 10th Edition, 2017. ISBN10: 1259670953 | ISBN13: 9781259670954

3. Fundamentals of Microbiology by Jeffrey C. Pommerville. (2017). Publisher: Jones and Bartlett Learning. ISBN: 978-1-284100952
4. Microbiology: An Application Based Approach by Michael J. Pelczar. (2009) Publisher: Tata McGraw Hill Education Private Limited. ISBN:1283187299, 9781283187299

5. Essential Microbiology by Staurt Hogg. (2013). Publisher: John Wiley & Sons, Publishing, Second edition. 2013. ISBN: 978-1-119-97891-6

6. Bacterial Physiology and Metabolism by Byung Hong Kim, Geoffrey Michael Gadd. (2008).Publisher: Cambridge University Press Publishing. ISBN: 978-0-521-84636-3

7. Microbes: Concepts and Applications by Prakash S. Bisen, Mousumi Debnath, G. B. Prasad. (2012). John Wiley & Sons, Publishing. ISBN: 978-0-470-90594-4

MBT-102: Immunology and Immunotechnology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To introduce the students to (i) the basics of immune system (ii) the response of humansto foreign bodies (iii) the techniques involved in immunoassays (iv) vaccines*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Overview of the human immune response: adaptive and innate immunity; immune cells and immune organs
2. B cell biology: Development, selection, B cells as central players of humoral immunity
3. T cell biology: Development, thymic education, TCR rearrangement, basic functions of cells during immune response, T cells subsets
4. Immunoglobulins: Structure and functions of Immunoglobulins, Immunoglobulin rearrangement, molecular genetics of BCR generation
5. Antigens, haptens and adjuvants

Unit-II

6. Major Histocompatibility Complex (MHC): Structure, function and immunogenetics of MHC, MHC-TCR interactions, cell biology of antigen processing and presentation
7. Chemokine, cytokine and cell signaling: Their roles in activation and differentiation of cells of immune system, importance in response to pathogens
8. Immunological tolerance and autoimmunity
9. Hypersensitivity-mediated diseases

Unit-III

10. Antigen-antibody reactions, interaction, cross reactions, precipitation and agglutination
11. Radioimmunoassay, ELISA, Western blotting
12. Hybridomas and Monoclonal antibodies
13. Recent advances in immunological tools for diagnosis of diseases

Unit-IV

14. Immune response to infectious diseases: Responses to different classes of pathogens such as intracellular bacteria, viruses and extracellular and intracellular parasites
15. Vaccines and their types: killed and live, sub unit, recombinant, multivalent, DNA, edible vaccines
16. Cancer: immune-surveillance, tumorantigens, immunological intervention
17. Antibodies as immunotherapeutics
18. Cytokine therapy

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical*
Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Total Leukocyte Count (TLC) and Differential Leukocyte count (DLC) of blood samples
2. Isolation of peripheral blood mononuclear cells from blood samples
3. Determination of cell viability
4. Immunoassays
5. Animal handling
6. Routes of immunization
7. Drawing blood from animals

Suggested readings:

1. Kuby Immunology by Judith A. Owen, Jenni Punt, Sharon A. Stranford and Patricia P. Jones. 2013; Publisher: Macmillan Higher Education; 7th edition. ISBN-13: 978-14641-3784-6, ISBN-10: 1-4641-3784-6
2. Roitt's Essential Immunology by Peter J. Delves, Seamus J. Martin, Dennis R. Burton and Ivan M. Roitt. 2016; Publisher: Wiley-Blackwell; 13th edition. ISBN: 978-1-118-41577-1
3. Basic Immunology byAbul Abbas Andrew H. Lichtman Shiv Pillai. 2015; Publisher: Elsevier Health; 5th edition. ISBN: 9780323390828
4. Janeway'sImmunobiology by Kenneth Murphy. 2011; Publisher: Garland Science; 8th edition. ISBN: 9780815342434

MBT-103: Genetics and Recombinant DNA Technology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) genetics of microbes (ii) permanent changes in the genetic material (iii) techniques involved in the cloning of genetic elements*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Mendelian principles, concept of allele, multiple alleles, pseudoallele, co-dominance, incomplete dominance, gene interaction, pleiotropy, linkage, crossing over, sex-linked, sex-limited and sex-influenced characters.
2. Significance of genetic recombination
3. Homologous genetic recombination (Transformation, Transduction, Conjugation) and heterologous genetic recombination (IS, Tn, Mu phage)
4. Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers, mapping by using somatic cell hybrids

Unit - II

5. Mutations: Fluctuation test, Replica plating, Mutagenicity testing
6. Physical and chemical mutagens
7. Types of mutations
8. DNA Repair mechanisms

Unit – III

9. Host restriction/modification systems, Enzymes involved in gene cloning
10. Natural Plasmids and their types, Role of plasmids in transfer of genes
11. Plasmids as gene cloning vectors, Commercial vectors
12. Strategies involved in cloning of gene(s)
13. Construction of genomic, cDNA and meta-genomic libraries

Unit – IV

14. DNA sequencing
15. PCR and its applications and modifications
16. Phage display technology and its applications.
17. Yeast two-hybrid system and variants; Combinatorial library generation and use

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Isolation of chromosomal DNA
2. Isolation of plasmid
3. Preparation of competent cells
4. Transformation and Electroporation
5. Restriction digestion (complete and partial) of DNA
6. Cloning and expression of a gene in *E.coli*
7. Amplification of DNA by PCR

Suggested readings:

1. Principles of Genetics, by Eldon John Gardner, Michael J. Simmons, D. Peter Snustad. (Publisher: Wiley India; 8th Edition ISBN: 978-81-265-1043-6
2. Modern Microbial Genetics by Uldis N. Streips and Ronald E. Yasbin. (2002) Publisher: Wiley-Liss; 2nd edition, ISBN-10: 0471386650 ISBN-13: 978-0471386650
3. From Genes to Genomes: Concepts and Applications of DNA Technology by Jeremy W. Dale and Malcolm von Schantz. (2007), Publisher: Wiley-Interscience; 2nd edition ISBN-10: 0470017333, ISBN-13: 978-0470017333
4. Gene and Genome Technology: Principles and Applications of Recombinant DNA and Genomics by Sandy Primrose and Richard Twyman. (2007) Publisher: Blackwell Publishing Limited ISBN-10: 140515666X ISBN-13: 978-1405156660
5. Principles of Gene Manipulation and Genomics by Sandy Primrose, Richard Twyman, Bob Old, and Giuseppe Bertola. (2006) Publisher: Blackwell Publishing, Incorporated; 7th edition ISBN-10: 1405135441 ISBN-13: 978-1405135443
6. Manipulation and Expression of Recombinant DNA, by Sue Carson and Dominique Robertson. (2005) Publisher: Academic Press; 2nd edition, ISBN-10: 0120884186, ISBN-13: 978-0120884186
7. Gene Cloning and DNA Analysis: An Introduction by T. A. Brown. (2010) Publisher: Blackwell Publishing, Incorporated; 6th edition ISBN-9781405181730 (paperback) and 9781444334074 (hardback)
8. Recombinant DNA Technology by O.S. Reddi (2000), Publisher: Allied Publishers Pvt. Ltd. ISBN-10: 8170239958

MBT-104: Microbial Biochemistry and Enzymology

Total Marks: 100 (Exam-80 + Int. Asses. -20)

Objective: *To expose the students to (i) macromolecular interactions (ii) structure and functions of biomolecules (iii) enzymes: their functions, regulation and industrial applications*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Buffers and physiological buffers.
2. Thermodynamics and Principles of thermodynamics, free energy, enthalpy and entropy.
3. Macromolecular interactions: van-der waal's, hydrogen bonding, ionic, hydrophobic, covalent etc.
4. Structure and functions of Carbohydrates, Proteins, Lipids, Nucleotides(DNA, RNA) and Vitamins.
5. Conformation of proteins (secondary, tertiary and quaternary structure; domains; motifs and folds; Ramachandran plot).

Unit – II

6. Metabolism of Carbohydrates (Glycolysis, TCA, HMP, Gluconeogenesis).
7. Metabolism of Lipids (Fatty acid metabolism, Phospholipid metabolism, Cholesterol biosynthesis).

Unit – III

8. Metabolism of protein (Digestion of proteins, General reactions of amino acids, Fate of carbon skeletons of amino acids, Regulation of amino acid biosynthesis).
9. Electron transport chain and Oxidative phosphorylation.

Unit – IV

10 Enzymes: General distinctive features, nomenclature and industrial applications.
11. Enzyme kinetics, Factors affecting enzymatic activity
12. Allosteric enzymes, Different types of inhibitors/ modulators
13. Feed back inhibition and Feedback repression mechanisms.
14. Multienzyme complexes: advantage and examples.
15. Biocatalysis: Definition, chirality, advantages/disadvantages of biocatalysis over chemical catalysis, different types of biocatalysis.

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Qualitative and quantitative assay of Sugars.
2. Qualitative and quantitative assay of Proteins.
3. Qualitative and quantitative assay of Lipids.
4. Qualitative and quantitative assay of Nucleic acids.
5. Assay of enzymes.
6. Substrate specificity and efficiency of enzymatic catalysis.
7. Kinetics of enzyme catalyzed reactions.
8. Effect of pH and temperature on enzyme activity.
9. Enzyme immobilization.

Suggested readings:

1. Enzyme Kinetics and Mechanism by P. Cook (2007), Publisher: Garland Science; 1st edition ISBN-10: 0815341407 ISBN-13: 978-0815341406.
2. Enzymatic Reaction Mechanisms by Perry A. Frey and Adrian D. Hegeman (2006), Publisher: Oxford University Press, USA; 1st edition ISBN-10: 0195122585 ISBN-13: 978-0195122589.
3. Enzyme Kinetics: A Modern Approach by Alejandro G. Marangoni (2002) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471159859 ISBN-13: 978-0471159858.
4. Introduction to Biocatalysis Using Enzymes and Microorganisms by S. M. Roberts, Nicholas J. Turner, Andrew J. Willetts, and M. K. Turner (1995) Publisher: Cambridge University Press ISBN-10: 0521430704 ISBN-13: 978-0521430708.
5. Principles of Biochemistry by David L. Nelson, Michael M. Cox. (2008, 5th edition), Publisher: W. H. Freeman, ISBN-13: 978-0716771081, ISBN-10: 071677108X.

MBT-105: Bioprocess Engineering

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to the (i) bioreactor and its types (ii) production of bioactive molecules /cells in a bioreactor (iii) purification of bioactive molecules (iv) fermentation processes*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to a bioreactor design. Control panels of a bioreactor. Types of bioreactors. Kinetics of growth product formation and substrate utilization.
2. Operation of bio-reactors.

Unit – II

3. Mass and Heat Transfer in Bioreactors: Aeration and Agitation in Bioreactors, Concept of mass transfer correlation and scale up.

Unit – III

4. Up Stream Process (USP): Inoculum development, Media composition, Sterilization etc.
5. Down Stream Process (DSP): Cell disruptions, Flocculation, Filtration, Ultra filtration, Centrifugation, Ultracentrifugation, Chromatographic methods, two phase aqueous separations, solvent – solvent extraction, centrifugation, pre treatment, crystallization etc.
6. Characterization of protein structure and function

Unit – IV

7. Fermentations and Fermentative processes like Submerged, Solid state, Batch, Fed Batch, Continuous system etc.
8. Hygiene and safety in fermentation laboratory/processes.

Practicals

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Components and Operation of a Bioreactor
2. Batch fermentation in conical flask
3. Production of the enzyme/s in shake flask
4. Solid state fermentation
5. Fermentation strategies for proteins/polysaccharides
6. Purification strategies (simulation)

Suggested readings:

1. Biotransformations and Bioprocesses (Biotechnology and Bioprocessing Series). Mukesh Doble, Anil Kumar Kruthiventi and Vilas Ganjanan Gaikar (2004). Publisher: CRC; 1st edition, ISBN-10: 0824747755, ISBN-13: 978-0824747756.
2. Bioprocess Engineering Basic Concepts (2002).Publisher: Prentice Hall; 2nd ISBN-10: 8120321103 ISBN-13: 978-8120321106.
3. Principles of Fermentation Technology. P.F. Stanbury, A.Whitaker and S. Hall. (2001)
4. Bioprocess Engineering: Basic Concepts. Michael L, Shuler and Fikret Kargi (2001). Publisher: Prentice Hall PTR; 2nd edition ISBN-10: 0130819085, ISBN-13: 978-0130819086.
5. Solid-State Fermentation Bioreactors: Fundamentals of Design and Operation. David A. Mitchell, Nadia Krieger, and Marin Berovic (June 2006). Publisher: Springer; 1st edition ISBN-10: 3540312854, ISBN-13: 978-3540312857.
6. Bioreactors for Tissue Engineering: Principles, Design and Operation. Julian Chaudhuri and Mohamed Al-Rubeai (2005). Publisher: Springer; 1st edition.
7. Multiphase Bioreactor Design. Joaquim M.S. Cabral, Manuel Mota and Johannes (2001).Publisher: CRC ISBN-10: 0415272092, ISBN-13: 978-0415272094.

MBT-201: Medical Microbiology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To introduce the students to (i) Major infections in clinical settings (ii) Recent trends and topics in microbial pathogenesis (iii) Antimicrobial chemotherapy (iv)Drug resistance*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Human microbiome in health and disease
2. Revisiting the basic concepts of infectious diseases: host parasite relationship; molecular Koch postulates; modes of transmission; virulence and pathogenicity; pathogenesis of infectious diseases; microbial mechanisms for escaping the host defenses; measures of disease occurrence and outcome
3. Microbial toxins (exotoxins and endotoxins) and their cellular targets
4. Quorum sensing and microbial pathogenicity

Unit – II

5. *Staphylococcus* species as a pathogenetic enigma
6. Molecular pathogenesis of infections caused by intracellular bacteria, with an emphasis of *Salmonella*, *Shigella*, *Listeria monocytogenes* and *Rickettsia*
7. Immunopathology, with an emphasis on *Mycobacterium tuberculosis*
8. Virulence mechanisms of other bacterial pathogens including streptococci, *Corynebacterium diphtheriae, Bordetella pertussis*, *Bacillus anthracis, Vibrio cholerae,* pathogenic *E. coli*, *Clostridium botulinum, Clostridium tetani, Clostridium perfringens, Helicobacter pylori, Yersinia pestis, Brucella abortus, Treponema pallidum, Borrelia burgdorferi*

Unit – III

9. Overview of viral pathogens, including Herpesviridae, Orthomyxoviridae, Paramyxoviridae, Flaviviridae, Hepatitis viruses, Rabies virus, Rhinovirus, Norwalk virus, Papilloma virus, Polio virus; Prion diseases
10. Viruses that changed the world: HIV and Ebola
11. Common fungal infections
12. Pathophysiology of malaria, amoebiasis and giardiasis

Unit – IV

13. Antimicrobial drugs and their cellular targets
14. Antimicrobial susceptibility testing in clinical laboratories
15. Mechanisms of drug resistance in microbes
16. Microbial biofilms and their clinical implications

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Culture identification of representative Gram-positive bacterial pathogens: *Staphylococcus, Streptococcus*
2. Culture identification of representative Gram-negative bacteria: *E. coli*, *Salmonella, Shigella, Proteus, Klebsiella, Pseudomonas*
3. Culture identification of fungal pathogens (*Candida, Aspergillus*)
4. Antimicrobial susceptibility testing of pathogenic bacteria
5. Collection, handling and storage of clinical samples

Suggested Readings:

1. Mims' Medical Microbiology by Richard Goering, Hazel Dockrell, Mark Zuckerman, Ivan Roitt and Peter L. Chiodini. 2012; Publisher: Elsevier; 5th edition. ISBN: 9780723436010
2. Mims' Pathogenesis of Infectious Disease by Anthony Nash, Robert Dalziel and J. Fitzgerald. 2015; Publisher: Elsevier; 6th edition. ISBN: 9780123971883.
3. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases by Gerald Mandell, John Bennett and Raphael Dolin. 2009; Publisher: Elsevier; 7th edition. ISBN: 9781437720600, 9781455708727
4. Manual of Clinical Microbiology. Editors: James H. Jorgensen, Michael A. Pfaller, Karen C. Carroll, Guido Funke, Marie Louise Landry, Sandra S. Richter and David W. Warnock. 2015; Publisher: American Society for Microbiology Press; 11thedition. ISBN: 9781555817374
5. Ananthanarayan and Paniker's Textbook of Microbiology by Reba Kanungo. 2017; Publisher: Universities Press; 10th edition. ISBN: 9789386235251
6. Bailey & Scott's Diagnostic Microbiology by Patricia Tille. 2016; Publisher: Elsevier; 14th edition. ISBN: 9780323354820

MBT-202: Molecular Biology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to the mechanism of (i) DNA replication (ii) DNA transcription (iii) protein synthesis (iv) regulation of gene expression (v) signal transduction*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. DNA and its various forms, super coiling of DNA, DNA melting, repetitive sequences, c_ot and R_ot curves/analysis, C-value paradox, DNA protein interaction
2. Unit of DNA replication, enzymes involved in replication, origin and replication fork, fidelity of replication.
3. Replication of bacterial chromosome, chromosome structure and organization of genes on chromosome, operon context.
4. Replication of eukaryotic chromosomes, cell division and cell cycle

Unit-II

5. RNA synthesis and processing: transcription factors and machinery, formation of initiation complex, transcription activator and repressor, RNA polymerases, RNA capping, elongation, and termination, RNA processing, RNA editing, splicing, and polyadenylation, structure and function of different types of RNA, non coding RNA, RNA transport.

Unit – III

6. Protein synthesis and processing: Ribosome structure, genetic code, aminoacylation of tRNA, formation of initiation complex, initiation factors and their regulation, elongation and elongation factors, termination, translation proof-reading, translational inhibitors, Post-translational modification of proteins.
7. Control of gene expression at transcription and translation level

Unit – IV

8. Cell signaling: signal transduction pathways and their regulation, bacterial two-component systems, bacterial chemotaxis and quorum sensing.
9. Cancer Biology: Genetic rearrangements in progenitor cells, oncogenes, tumor suppressor genes, cancer and cell cycle, metastasis. Microbes in cancer: carcinogenesis and treatment
10. Gene silencing strategies and applications

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Spectrophotometric analysis of DNA
2. Isolation of RNA
3. Characterization of different types of RNA molecules
4. Construction of cDNA
5. Separation of *Escherichia coli* soluble proteins on non-denaturing gels.
6. Separation of *Escherichia coli* total proteins on denaturing gels.
7. Cell Proliferation/Cytotoxicity assays

Suggested readings:

1. Molecular Biology of the Gene, by James D. Watson, Tania A. Baker, Stephen P. Bell, and Alexander Gann (2007), Publisher: Benjamin Cummings; 6th edition ISBN-10: 080539592X ISBN-13: 978-0805395921
2. Fundamental Molecular Biology by Lizabeth A. Allison (2007), Publisher: Wiley-Blackwell; 1st edition ISBN-10: 1405103795 ISBN-13: 978-1405103794
3. Molecular Biology by Robert F. Weaver (2007) Publisher: Mcgraw-Hill College; 4th edition ISBN-10: 0072995246 ISBN-13: 978-0072995244
4. Cell and Molecular Biology: Concepts and Experiments by Gerald Karp (2013) Publisher: Wiley; 7th edition ISBN-10: 0470042176 ISBN-13: ISBN 13 978-1118-20673-7/978-1118-30179-1
5. Molecular Biology of the Cell by Bruce Alberts, Alexander Johnson, Julian Lewis, and Martin Raff Publisher: Garland Science; 5th edition, ISBN-10: 0815341059 ISBN-13: 978-081534105
6. Principles of Biochemistry by David L. Nelson, Michael M. Cox. (2008, 5th edition), Publisher: W. H. Freeman, ISBN-13: 978-0716771081, ISBN-10: 071677108X.

MBT-203: Industrial Microbiology- I (Health, Food, Enzymes)

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) Industrially important metabolites produced by microbes especially in the areas of health, food and enzymes (ii) immobilization of enzymes/cells*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Primary and Secondary metabolites of industrial importance.
2. Techniques involved in screening/detection of industrially important metabolites from microbes.
3. Pyruvate as the hub molecule
4. Microbial therapies and diagnostics

Unit - II

5. Biosynthesis and fermentation process involved in

(a) Health & Pharma- Antibiotics (Penicillin, Streptomycin,), Alkaloids (ergot, lysergic acid), Biotransformations (Steroids, chirals), Therapeutic proteins (Interferons, Insulin).

(b) Food and Beverages- Beer, Wine, Whisky, Vinegar

(c) Traditional fermented foods; Food additives: Vitamins, Bioflavors

Unit – III

6. Microbial Enzymes - Pharma related enzymes, Detergent enzymes, Processing of starch and related carbohydrates, Fruit juice production, Textile & leather manufacture, Treatment of wood pulp, Organic synthesis, Diagnostics

Unit – IV

7. Immobilization of enzymes and cells: Parameters for choosing a matrix for immobilization, types of methods for immobilizations. Applications of immobilization techniques.

Practicals:

Total Marks: 50 Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)

1. Screening of microbes for production of industrially important enzymes.
2. Optimization of conditions for optimal production of enzyme: - Media composition, Incubation temperature, Aeration, Incubation time.
3. Wine fermentation
4. Purification of antimicrobial metabolites from a microbe.
5. Enzyme immobilization
6. Design of fermentation processes for the production of fuels, chemicals and foodstuffs

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers. Doyle (2007). Publisher: American Society Microbiology; 3rd edition ISBN-10: 1555814077, ISBN-13: 978-1555814076.
2. Food Microbiology: An Introduction. Montville (2005). Publisher: American Society Microbiology; 1st edition ISBN-10: 1555813089, ISBN-13: 978-1555813086.
3. Environmental Microbiology: A Laboratory Manual. Ian L. Pepper and Charles P. Gerba(2004). Publisher: Academic Press; 2nd edition ISBN-10: 0125506562, ISBN-13: 978-0125506564.
4. Advances in Food & Nutrition Research. Steve Taylor (2003). Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479.
5. Environmental Microbiology. Raina M. Maier, Ian L. Pepper, and Charles P. Gerba(2000). Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705.
6. Applied Dairy Microbiology. Elmer H. Marth and James Steele (2001).Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367.
7. Peter F Drucker. Innovation and Entrepreneurship. Harper & Row, 1985
8. Prasanna Chandra- Projects: Preparation Appraisal and Super implementation. Tata Mc-Graw-Hill Co. Ltd
9. J.D. West & F.K. Levy. A management guide to PERT/CPM, Prentice Hall, India

MBT-204: Bioinformatics and Biostatistics

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) basic understanding of computers (ii) computational tools developed for understanding of genetic material and proteins*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I (Biostatistics)

1. Basic definitions and applications. Data collection and representation. Measure of central tendencies (Mean, Median and Mode) and dispersal; measure of variability (standard deviation, standard error, range, mean deviation, coefficient of variation); probability distributions (Binomial, Poisson and Normal), sampling distribution
2. Difference between parametric and non-parametric statistics, confidence interval, errors, levels of significance
3. Regression and correlation, t-test, analysis of variance, chi-square test
4. Basic introduction to Multivariate statistics

Unit – II (Biological databases)

5. Brief on programming languages commonly used in Biological Sciences
6. Database- introduction, Primary, Secondary and Tertiary databases; Type and kind of databases; Literature search (PUBMED and MEDLINE).
7. Nucleic acid (GenBank, EMBL *etc.*); Structural databases- PDB, PDBsum, NDB, CATH, SCOP etc. Motifs and Pattern Databases- PROSITE, Pfam, iPfam *etc.*
8. Protein databases (SWISS PROT, UNIPROT *etc.*); Structural databases- PDB, PDBsum, NDB, CATH, SCOP *etc*; Motifs and Pattern Databases- PROSITE, Pfam, *etc*.
9. Sequence retrieval (SRS, Entrez) and Data submission.

Unit – III (Sequence analysis)

10. Sequence alignment- introduction and concepts, Local and Global alignment concepts.
11. Similarity and Percent identity score (open, extended gap penalty). Multiple sequence alignment (MSA) - introduction and concepts. Types of multiple sequence alignment techniques. Description of major softwares (MSA, CLUSTAL variants (X, W2, OMEGA), PILEUP, T-Coffee, PROS, CONS).
12. Database Scanning and Sequence similarity searches. Algorithm of FASTA. Description of BLAST algorithm. Various BLAST programs (BLASTP, BLASTN, BLASTX, PHI-BLAST, PSI-BLAST etc).
13. Protein Structure: Classification, Structure Analysis, Secondary structure predictions, Comparative/Homology modeling, Modeling using Swiss Model Server.

Unit – IV (Genome analysis)

14. Introduction to genomes. Sequencing techniques. Sequencing of whole genomes
15. NextGen Sequencing (NGS); Assembling of genomes from short reads
16. Concept of Metagenomics;Types of repeats and repeat finding techniques; Structure of genes; Prediction of gene in prokaryotic and eukaryotic genomes (GENESCAN, GeneMark, GeneSeqer *etc.*); Promoter prediction in *E. coli* and in eukaryotes
17. Description of major gene prediction methods

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Sequence (DNA & Protein) alignments
2. Genome sequence studies
3. Designing ideal primers for amplification of genetic material
4. Deciphering 3-D structure of proteins
5. Designing inhibitors of enzymes

Suggested readings:

1. Understanding Bioinformatics by Marketa Zvelebil and Jeremy Baum (2007) Publisher: Garland Science; 1st edition ISBN-10: 0815340249, ISBN-13: 978-0815340249
2. Essential Bioinformatics by Jin Xiong (2006) Publisher: Cambridge University Press; 1st edition ISBN-10: 0521600820, ISBN-13: 978-0521600828
3. Bioinformatics: Sequence and Genome Analysis by David W. Mount (2004). Publisher: Cold Spring Harbor Laboratory Press; 2nd edition ISBN-10: 0879697121 ISBN-13: 978-0879697129
4. An Introduction to Bioinformatics Algorithms (Computational Molecular Biology) by Neil C. Jones and Pavel A. Pevzner (2004) Publisher: The MIT Press; 1st edition ISBN-10: 0262101068, ISBN-13: 978-0262101066
5. Bioinformatics: A Biologist's Guide to Biocomputing and the Internet by Stuart M. Brown (2000). Publisher: Eaton Publishing Company/Biotechniques Books ISBN-10: 188129918X, ISBN-13: 978-1881299189

MBT-205: Intellectual Property Rights (IPR), Bioethics and Entrepreneurship

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) understanding of patents (ii) filing of patents (iii) ethical and social issues in biotechnology*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Introduction: General Introduction
2. Patent Claims, the legal decision-making process
3. Ownership of Tangible and Intellectual Property.
4. Basic requirements of patentability, patentable subject matter, novelty and the Public Domain; Non-obviousness, Foreign Patents
5. Special issues in Biotechnology Patents: Disclosure Requirements, Ethical issues, Plant Biotechnology- UPOV and plant breeder's rights, Case studies/ experiences from developing and developed countries, IPR issues in the Indian context.
6. Contract law, IP reform, Policy implications of IP

Unit - II

7. Copyright and Patents; International Treaties and Conventions; Business Software Patents
8. Patent Litigation: Substantive and Procedural Aspects
9. IT Act, 2000 : Aims and Objectives; Overview of the Act; Jurisdiction; Role of Certifying Authority; Regulators under IT Act; Cyber Crime-offences and Contraventions; Grey Areas on IT Act.

Unit - III

10. Biotechnology and hunger: Challenges for the Indian Biotechnological research and industries.
11. The Cartagena protocol on biosafety
12. Social and ethical implication of biological weapons
13. Intersection of Biotechnology with globalization, trade, poverty, food security, and environmental sustainability

Unit - IV

14. Entrepreneurship: Need, scope, philosophy and classification. Creativity and Entrepreneurship. Entrepreneurship competencies and traits, factors affecting Entrepreneurship development
15. Functions of entrepreneurship, Entrepreneurship with the motive of economic growth, theory of social change, family structure, migration and enterprise.

16. Barriers to entrepreneurship, community and entrepreneurship.
17. Funding challenges for an entrepreneur, Business planning and investment pitch, Identify and evaluate business opportunities, Risk assessment and management Opportunities for entrepreneurship in emerging markets

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Searching of Indian Patent databases
2. Drafting and filing of Indian Patent application.
3. Searching of International Patent databases
4. Drafting and filing of International Patent application.
5. How to formulate well-structured research questions, recognize appropriate research methods, and assess research reports

Suggested readings:

1. Intellectual Property Rights in the Global Economy. Maskus, K.E. (2000), Publisher: Peterson Institute, ISBN 0881322822, pp. 1-266.
2. Intellectual property: patents, copyright, trade marks and allied rights. Cornish, W.R. (2003). Universal Law Publishing, Delhi. ISBN-10: 0421781203, pp. 1-895.
3. Intellectual Property Rights: Infringement and Remedies. Padmanabhan A. (2012).Publisher: Lexis Butterworths Wadhwa Inc. ISBN: 9788180387937. pp.1-638.
4. Access to Knowledge in the Age of Intellectual Property. Krikorian G, Kapczynski A. (2010). Publisher: Zone Books Inc. ISBN/ASIN: 9781890951,pp.1-640
5. The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company. Blanck, S and Dorf, B. (2012). K&S Ranch Inc., California, USA ISBN-10: 0984999302 | ISBN-13: 978-0984999309, pp.1-557.
6. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses Ries, E. (2011). Crown Publishing Group, New York, USA, ISBN 978-0-307-88789-4, pp.1-309

MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics & Metabolomics)

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to recent trends in the field of Microbial Genomics, Proteomics & Metabolomics.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to Microbial genomes
2. Genome sequencing of different microbes and their importance
3. Techniques for genome research (chromosome walking, RFLP etc.)
4. Application of microbial genomic variability for utilizing in human welfare (applications)
5. Phylogenetic relationships between various genera of microbes

Unit – II

6. Sequences as Biological Information - Cells obey the Laws of Chemistry and Physics
7. Evolution by Genome Expansion and Reduction
8. Metagenomics
9. Methods to Compare Genomes
10. Archaeal Genomics
11. Microbial Genome Annotation
12. Genomics for pathogenic microbes – Search for better vaccines

Unit – III

13. Introduction to microbial proteomics
14. Techniques for Proteome research (2 – D gel electrophoresis, DIGE, PROTOMAP, COFRADIC, MALDI-ToF, Protein purification work station)
15. Gel free Mass Spectrometry based microbial proteomics - methodology and application
16. Microbial pathogenesis at the proteome level
17. Proteome research for novel drug targets
18. Structural proteomics and computational analysis
19. Proteomics of Archaea
20. High throughput proteomic screening for novel enzymes

Unit – IV

21. Techniques for metabolic engineering
22. Genetic and epigenetic manipulation of useful microbes
23. Strain improvement methods and strategies - Classical *vs* metabolic engineering, developing/ emerging/ novel

24. Production and yield enhancement of valuable products (fuels, amino acids, drugs *etc*) by metabolic engineering

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. RAPD/RFLP/16S rRNA-sequencing of bacterial isolates (e.g., *Escherichia coli* isolates) and phylogenetic tree construction
2. Isolation of metagenomic DNA from soil or water source
3. Demonstration of 2-D gel electrophoresis
4. Demonstration of MALDI – ToF
5. Demonstration of DNA/Protein Microarray system
6. Practicals on Microbial Genomics/Proteomics/Metabolomics using computational tools
7. Comparison of genomes. Genome projects and sequence archive databases.

Suggested readings:

1. Microbial Proteomics: Functional Biology of Whole Organisms by Ian Humphery-Smith and Michael Hecker (2006) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471699756, ISBN-13: 978-0471699750
2. Microbial Genomics and Drug Discovery by Thomas J. Dougherty and Steven J. Projan (2003) Publisher: CRC; 1st ed. ISBN-10: 0824740416, ISBN-13: 978-0824740412
3. Metabolic Engineering by Sang Yup Lee and E. Terry Papoutsakis (1999) Publisher: CRC; 1st edition ISBN-10: 082477390X, ISBN-13: 978-0824773908
4. Advances in Microbial Biotechnology by Rajhi Gupta, Jagjit Singh, T.N. Lakhanpal, and J.P. Jewari (1999) Publisher: A.P.H. Pub. Corp. ISBN-10: 8176480789, ISBN-13: 978-8176480789
5. Discovering Genomics, Proteomics and Bioinformatics by A. Malcolm Campbell, Laurie J. Heyer Publisher: Pearson Education India; 2nd edition (2007) ISBN-10: 8131715590, ISBN-13: 978-8131715598

MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to (i) the benefits of microbes/their products in cleaning the environment (ii) large scale production of useful microbial biomass (iii) production of biofuels and chemicals (iv) useful protocols*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise of objective type/short notes covering the complete syllabus.*

Unit – I (Environment)

1. Waste water and effluent treatment,
2. Biodegradation of Xenobiotics, Bioremediation, Biomining
3. Biodegradable plastics
4. Bioinsecticides
5. Microbes as N and P Biofertilizers

Unit – II (Biomass)

6. Manufacture of Baker's yeast
7. Single cell protein production especially *Spirulina*
8. Mushroom cultivation especially *Agaricus bisporus*
9. Probiotics, Prebiotics, Synbiotics

Unit – III (Biofuels & Chemicals)

10. Biofuel production especially Ethanol, Butanol, Methane, Hydrogen, Electricity, Biodiesel
11. Organic acids especially Amino acids (glutamic acid, lysine), Citric acid, Acetic acid, Lactic acid
12. Microbial exopolysaccharides

Unit – IV (Protocols)

13. Good Lab Practices guidelines
14. Good Manufacturing Processes guidelines
15. Guidelines for use of recombinant microbes
16. Important Biotech companies of India and the World
17. Equipment validation, Analytical method validation, Process validation

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Estimation of BOD levels of a water sample
2. Isolation of P-solubilizers from the soil
3. Estimation of P-solubilizing activity of P-solubilizer
4. Isolation of *Lactobacilli* from milk/ curd
5. Production of bacteriocin by probiotics
6. Effect of temperature on the preparation of curd from milk
7. Effect of type of milk on the preparation of curd from milk

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers by Doyle (2007) Publisher: American Society Microbiolgy; 3rd edition ISBN-10: 1555814077 ISBN-13: 978-1555814076
2. Food Microbiology: An Introduction by Montville (2005) Publisher: American Society Microbiolgy; 1st edition. ISBN-10: 1555813089 ISBN-13:978-1555813086
3. Environmental Microbiology: A Laboratory Manual by Ian L. Pepper and Charles P. Gerba (2004) Publisher: Academic Press; 2nd edition ISBN-10: 0125506562 , ISBN-13: 978-0125506564
4. Advances in Food & Nutrition Research by Steve Taylor (2003) Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479
5. Environmental Microbiology by Raina M. Maier, Ian L. Pepper, and Charles P. Gerba (2000) Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705
6. Applied Dairy Microbiology, by Elmer H. Marth and James Steele (2001) Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367

MBT-303: Bioinstruments and their Applications

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To expose the students to the variety of instruments used in the study of Microbial Biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Microscopy: Light microscope, Field Microscope, Fluorescent microscope, Phase contrast microscope, AFM, SCM, TEM, SEM, STM.
2. Spectrophotometer: UV and Visible
3. Mass spectroscopy, Infrared and Raman spectroscopy. CD spectroscopy, NMR, ESR.

Unit - II

4. Centrifugation: Theory and its applications to biological systems, centrifuges, rotors-fixed angle/swing out, concept of vertical, buoyant density centrifugation.
5. Electrophoresis: Theory, different methods of electrophoresis for proteins and nucleic acids.

Unit – III

6. Chromatography: GC, Paper Chromatography, TLC, HPLC, FPLC,
7. Crystallography and X-Ray diffraction, Electron diffraction, Neutron diffraction.
8. Radioisotope techniques: radiotracers GM Counter, Proportional and Scintillation counters, autoradiography

Unit – IV

9. Protein purification workstation
10. GCMS, LCMS
11. MALDI-ToF

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practicals - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Operation of Microscopes: TEM, and SEM.
2. Running TLC; R_f value using TLC
3. Operation of Centrifuges (microfuge and high speed centrifuge and ultracentrifuge).
4. Operation of GC, HPLC
5. Operation of MS, LCMS, NMR.

Suggested Readings:

1. Advances in Chromatography. Eli Grushka and Nelu Grinberg (2007). Publisher: CRC: 1st edition. ISBN-10: 1420060252, ISBN-13: 978-1420060256, Volume 46.
2. Understanding NMR Spectroscopy. James Keeler (2005). Publisher: Wiley; 1st edition ISBN-10: 0470017872, ISBN-13: 978-0470017876.
3. Physical Principles of Electron Microscopy: An Introduction to TEM, SEM, and AEM. Ray F. Egerton (2005). Publisher: Springer; 1st ed.. ISBN-10: 0387258000, ISBN-13: 978-0387258003.
4. Fundamentals of Light Microscopy and Electronic Imaging. Douglas B. Murphy (2001). Publisher: Wiley-Liss; 1st edition ISBN-10: 047125391X, ISBN-13: 978-0471253914.
5. Principles and Techniques of Practical Biochemistry. Keith Wilson & John Walker(2000). Cambridge University Press.
6. Introduction to Spectroscopy. Donald L. Pavia, Gary M. Lampman, and George S. Kriz (2000). Publisher: Brooks Cole; 3rd edition. ISBN-10: 0030319617, ISBN-13: 978-0030319617.

MBT-304: Microbial Identification, Diagnostics and Nanobiotechnology

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *To introducethe students to (i) the various methods used in microbial identification & (ii) applications of nanotechnology in biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Principles of microbial diagnostics: conventional and molecular approaches
2. Microscopic examination: applications of light microscopy, fluorescent microscopy and electron microscopy in microbial identification
3. Serological diagnosis of infectious diseases
4. Automated detection systems: BACTEC, VITEK, FAME and Biolog

Unit - II

5. Nucleic-acid based detection: fluorescent in situ hybridization; line probe assay; PCR and its various types; transcription mediated amplification (TMA); nucleic acid sequence based amplification (NASBA); branched DNA (bDNA); Qβreplicase; hybrid capture
6. Epidemiological molecular typing: pulsed field gel electrophoresis, RFLP, RAPD and MLST
7. Flow cytometry and fluorescence-activated cell sorting
8. Microarray: types and applications

Unit – III

9. Basic components of a sensor
10. Types of biosensors and their applications
11. Biosensors in research and diagnostics
12. Lateral flow assays
13. Lab on a Chip technology

Unit – IV

14. Understanding Nanobiotechnology and its importance to society
15. Microbial nanoparticle production
16. Nanoparticles for biological applications
17. Luminiscent quantum dots for biological labeling

Practicals:

Total Marks: 50 *Int. Asses.-10. Based on the performance of the students during the practical Exam. – 40 (Practical - 20, Synopsis – 05, Notebook – 05, Viva voce – 10)*

1. Case studies in infectious disease diagnostics: clinical-case discussions and hands on
2. Chromogenic media for microbial identification
3. Microbial identification using VITEK, BACTEC, BIOLOGS and FAME (demonstration)
4. Microbial identification and typing by molecular methods
5. Practical on biosensors
6. Microbial synthesis of nanoparticles

Suggested readings:

1. Bailey & Scott's Diagnostic Microbiology by Patricia Tille. 2016; Publisher: Elsevier; 14th edition. ISBN: 9780323354820
2. Mackie &Mccartney Practical Medical Microbiology. Editors: J.G. Collee, A.G. Fraser, B.P. Marmion and A. Simmons. 1999; Publisher: Elsevier; 14th edition. ISBN: 9788131203934
3. Molecular Microbiology: Diagnostic Principles and Practice. Editors: David H. Persing, Fred C. Tenover, Randall T. Hayden, Margareta leven, Melissa B. Miller, Frederick S. Nolte, Yi-Wei Tang, Alex van Belkum. 2016; Publisher: American Society for Microbiology Press; 3rd edition. ISBN: 9781555819088
4. Nanotechnology in Diagnosis, Treatment and Prophylaxis of Infectious Diseases. Editors: MahendraRai and KaterynaKon. 2015; Publisher: Elsevier; 1st edition. ISBN: 9780128013175
5. Chemical Sensors and Biosensors by Brian R. Eggins. 2002. Publisher: Wiley; 1st edition. ISBN: 9780471899143
6. Nanobiotechnology: Concepts, Applications and Perspectives. Editors: C.M. Niemeyer, C.A. Mirkin. 2004. Publisher: Wiley; 1st edition. ISBN: 9783527306589
7. Nanobiotechnology II: More Concepts and Applications. Editors: C.A. Mirkin and C.M. Niemeyer. 2007. Publisher: Wiley; 1st edition. ISBN: 9783527316731
8. Handbook of Nanotechnology by Bharat Bhushan. 2010. Publisher: Springer; 3rd edition. ISBN:9783642025242

MBT-305: Tutorials

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *(i) To overcome the academic deficiencies of students and to expose the students to those parts of Microbial Biotechnology which have not been covered in the syllabus (ii) Invited lectures from experts.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Quantitative PCR: Theory, Practice, Problems and Solutions.
2. Myths and misconception about diseases e.g., Tuberculosis, Leprosy, Rabies, Anthrax, Brucellosis.
3. Giant viruses and Virophages: Characteristics and evolutionary implications.

Unit - II

4. Biosafety, biosecurity and dual use research of concern.
5. Biomedical waste management.
6. Exceptions to the classical bacterial definition.

Unit - III

7. Diversity of antimicrobial peptides.
8. Role of integrons in microbial drug resistance.
9. Non-Rhizobium PGPRs and their role in crop productivity.

Unit - IV

10. Radiations in diagnostics.
11. Phosphorescence, Florescence and Luminescence
12. Applications of non-aqueous enzymology

Suggested Readings:

1. Real-time PCR, M. Tevfik Dorak (ed.) (2006). Publisher: Taylor & Francis Group. ISBN: 0–203–96731–3 (Master e-book)/ 0-4153-7734-X(Print Edition). For recent updates on detection, instrumentation and application of quantitative PCR, refer to the websites of the major QPCR reagent and instrument providers
2. Disease information and advisory websites http://www.who.int/en/; http://www.cdc.gov/; http://www.keelpno.gr/; http://www.ncdc.gov.in/
3. Vasquez M, Hallam SJ, Raoult D and Abrahão J (Eds). (2016). Megaviromes [Special Section]. Current Opinion in Microbiology, 31:1-234 (ISSN 1369-5274)
4. Bio-Medical Waste Management Rules, 2016. Ministry of Environment, Forest and Climate Change, Government of India. [Published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i)]
5. Laboratory Biosafety Manual. 3rd edition. (2004) Publisher: World Health Organization, Geneva. ISBN 92 4 154650
6. http://www.dbtindia.nic.in/ (Policies and Regulations regarding Bio-Medical Waste Management)

7. Antimicrobial databases: http://aps.unmc.edu/AP/main.php; http://www.camp.bicnirrh.res.in/
8. Journals: Biotechnology Advances; Current opinion in Microbiology; Nature Biotechnology; Analytical chemistry; Critical reviews in Biotechnology; Critical reviews in Microbiology

MBT-401: Seminars and Tutorials

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *This course will help the students to know the type of research going on in various countries. It will also help the students in preparing, delivering and defending a 'talk'.*

The Internal assessment will be made from the attendance and the interaction of the student during the seminars and tutorials.

Students will be asked to deliver a talk on current issues pertaining to Microbiology, Biotechnology and other important topics. Some guest lectures will be arranged.

MBT-402: Dissertation

Total Marks: 350

Objective: *To prepare the students as how to carry out independent research work*

Each student will be given an independent research project. The evaluation will be based on the presentations, knowledge of the topic of research, quality of the compiled Dissertation.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. Under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF LANGUAGES

SYLLABI

FOR

M.A. English

(Semester System)

Examinations, 2017-18

-:o:-

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNALASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. English(Semester System)
(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students:

   (i) Terminal Evaluation : 80 %
   (ii) Continuous Assessment : 20 %
   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class,term papers,attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below:

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
	Total:		**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under:

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment .Thus, whatever marks are secured by a student out of 20% marks,will be carried forward and added to his/her score out of 80% ,i.e.the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations,by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES:

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For the private candidates,who have not been assessed earlier for internal assessment,the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note(ii) in the question paper.

(iii)In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card(D.M.C.).

OUTLINES OF TESTS, SALLABI AND COURSES OF READING FOR M.A. ENGLISH SEMESTER I AND II FOR THE SESSION 2017-18

Objectives:

To help the students develop literary sensibility, critical thinking, and sharp, penetrating understanding of a wide range of literary texts, literary history, literary criticism/theory, and English Language/ELT.

General Notes:

1. There will be two semesters in a year with four compulsory papers in each semester.

2. Each paper shall carry 100 marks (80 marks for end-term written examination, 20 for internal assessment). The end term exam.shall be of 3 hours duration.

3. There shall be one question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes shall be context based. Though the nature of notes shall vary from course to course, efforts shall be made to cover a range of terms/concepts/trends/movements specific to the course.

4. There shall be four essay-type questions of 15 marks each (to be answered in about 600 words each), one question with internal choice will be set from each of the four prescribed texts/units.

OUTLINES OF TESTS, SALLABI AND COURSES OF READING FOR M.A. ENGLISH SEMESTER I AND II FOR THE SESSION 2017-18

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

M.A. PART-I

SEMESTER-I

PAPER-I: LITERARY CRITICISM - I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Mimetic and Expressive theory of Art, Catharsis, Hamartia, Three Unities, Ars Poetica, Sublime, Apologie for Poetry, Decorum, Humanism, Objective Correlative, Dissociation of Sensibility, Fancy and Imagination, Synaesthesia, Disinterestedness, Impersonal Theory of Poetry.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	Aristotle	:	*Poetics* (Chapters i-xvi)
Unit 2.	William Wordsworth	:	Preface to the *Lyrical Ballads* (1800)
Unit 3.	Matthew Arnold	:	"The Study of Poetry"
Unit 4.	T.S. Eliot	:	"Tradition and the Individual Talent"

The essays of Wordsworth, Arnold, and Eliot are available in *English Critical Texts* edited by Enright and Chickera.

Suggested Reading:

1. David Daiches: *Critical Approaches to Literature,* 2nd ed., Hyderabad: Orient Longman, 2001.
2. F. L. Lucas: *Tragedy in Relation to Aristotle's Poetics,* New Delhi: Allied Publishers, 1970.
3. Humphrey House: *Aristotle's Poetics,* Ludhiana: Kalyani Publishers, 1970.
4. M. H. Abrams: *A Glossary of Literary Terms,* Singapore: Harcourt Asia Pvt. Ltd., 2000.
5. Rene Wellek: *A History of Modern Criticism: 1750-1950,* Vols. I-IV, London: Jonathan Cape, 1958.
6. M.A.R. Habib: *A History of Literary Criticism: From Plato to the Present,* Oxford: Blackwell, 2005.
7. Boris Ford (ed.): *The Pelican Guide to Literary Criticism: From Dryden to Johnson,*Vol 4, London: Pelican, 1980.
8. ….*The Pelican Guide to Literary Criticism: From Blake to Byron*, Vol 5, London: Pelican, 1980.
9. Harry Blamires: *A History of Literary Criticism,* Delhi: Macmillan, 2001.
10. Patricia Waugh: *Literary Theory & Criticism: An Oxford Guide,* Delhi: OUP, 2006.
11. M.S. Nagarajan: *English Literary Criticism & Theory: An Introductory History,* Hyderabad: Orient Longman, 2006.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-II: BRITISH POETRY- I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Neo-classicism, Metaphysical Poetry, Victorian Temper, Victorian Compromise, Mock Epic, Heroic Couplet, Negative Capability, Supernaturalism in Romantic Poetry. The French Revolution, The Pre-Raphaelites, Humanism, Romantic Revival, Dramatic Monologue, Dissociation of Sensibility, Pathetic Fallacy.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	John Donne	:	"Satyre: Of Religion". "The Good-Morrow" "The Canonization" "At the Round Earth's Imagin'd Corners" Batter My Heart, Three-Person'd God"
Unit 2.	Alexander Pope	:	"The Rape of the Lock"
Unit 3.	John Keats	:	"Ode to a Nightingale" "Ode on a Grecian Urn" "Ode on Melancholy" "To Autumn" "Ode to Psyche"
Unit 4.	Robert Browning	:	"My Last Duchess" "Andrea del Sarto" "The Last Ride Together" "Rabbi Ben Ezra" "The Grammarian's Funeral"

Suggested Reading:

1. Joan Bennett : *Five Metaphysical Poets,* Cambridge: Cambridge University Press, 1964.
2. Helen Gardner ed. : *John Donne: A Collection of Critical Essays* (*Twentieth Century Views Series)* New Delhi: Prentice Hall India Ltd., 1979.
3. George Williamson : *A Reader's Guide to the Metaphysical Poets,* Yugoslavia: Thomas & Hudson, 1988.
4. Abrams, M.H. : *English Romantic Poets: Modern Essays in Criticism,* 2nd ed., Oxford: Oxford University Press, 1975.
5. Fraser, G.S. ed. : *Keats: The Odes* (*Case Book Series),* London: Macmillan, 1971.
6. Stuart M. Sperry : *Keats: The Poet,* New Jersey: Princeton University Press, 1973.
7. Earl R. Wasserman : *The Finer Tone: Keats' Major Poems,* Baltimore: The John Hopkins Press, 1967.
8. Walter Jackson Bate (ed.) : *Keats: A Collection of Critical Essays,* New Delhi: Prentice Hall India Pvt. Ltd., 1978.
9. Drew, P. (ed.) : *Robert Browning: A Collection of Critical Essays,* New Delhi: Macmillan, 1985.
10. J.R. Watson (ed.) :*Browning: Men and Women and OtherPoems* (Case Book Series), New Delhi: Macmillan, 1986.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER III: BRITISH DRAMA-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Liturgical Plays, Mystery and Miracle Plays, Morality Play, Chester Play, Interludes, Shakespearean Tragedy, Tragic Hero, University Wits, Shakespearean Comedy, Blank Verse, Marlowean Hero, Restoration Comedy, Comedy of Humours, Comedy of Manners, Heroic Tragedy.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1.	Christopher Marlowe	:	*Doctor Faustus*
Unit 2.	William Shakespeare	:	*King Lear*
Unit 3.	Richard Sheridan	:	*The School for Scandal*
Unit 4.	George Bernard Shaw	:	*Pygmalion*

Suggested Reading:

1.	Clifford Leech	:	*Marlowe; A Collection of Critical Essays* (*Twentieth Century Views Series),* New Delhi: Prentice Hall India, 1978.
2.	Judith O'Neill	:	*Critics on Marlowe,* London: Allen &Unwin, 1969.
3.	Ghanshiam Sharma (ed.)	:	*Reinterpretations of Marlowe's Faustus: A Collection of Critical Essays,* New Delhi: Doaba House, 1984.
4.	A. C. Bradley	:	*Shakespearean Tragedy: Lectures on Hamlet, Othello, King Lear, Macbeth,* New Delhi: Dodo Press, 2009.
5.	Ralph J. Kaufmann	:	*Elizabethan Drama: Modern Essays in Criticism,* Oxford: Oxford University Press, 1970.
6.	Alfred Harbage	:	*Shakespeare: The Tragedies: A Collection of Critical Essays,* New Delhi: Pearson, 2005.
7.	Janet Adelman (ed.)	:	*Twentieth Century Interpretations of King Lear,* New Delhi: Prentice-Hall India, 1980.
8.	James Morwood& David Crane, (Ed.)	:	*Sheridan Studies*, Cambridge: Cambridge University Press, 1996.
9.	Eric Bentley	:	*Bernard Shaw,* London: Limelight Editions, 1985.
10.	Colin Wilson	:	*Bernard Shaw, A Reassessment*, Athenum, 1969.
11.	G. E. Brown	:	*George Bernard Shaw,* London: Evans Brothers, 1970.
12.	Christopher Innes (ed.)	:	*Cambridge Companion to George Bernard Shaw,* Cambridge: Cambridge University Press, 2006.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-IV: BRITISH FICTION-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Reform Bill of 1832, Industrialism, Picaresque Novel, Comic Epic in Prose, Realism, Burlesque, Omniscient Author, Flat and Round Characters, Sentimental Novel, Gothic Novel, Utilitariansim, Social Novel, Historical Novel, Epistolary Novel. The Novel of Ideas.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1. Henry Fielding : *Joseph Andrews*

Unit 2. Charles Dickens : *Hard Times*

Unit 3. Charlotte Bronte : *Jane Eyre*

Unit 4. Thomas Hardy : *Jude, the Obscure*

Suggested Reading:

1. Terry Eagleton : *The English Novel: An Introduction,* Oxford: Blackwell, 2005.
2. Martin C. Battestin : *The Moral Basis of Fielding's Art: A Study of Joseph Andrews,* Connecticut: Wesleyan University Press, 1967.
3. R. Paulson : *Henry Fielding: A Collection of Critical Essays* (*Twentieth Century Views Series),* New Delhi: Prentice Hall India, 1976.
4. Alberto J. Rivero : *Critical Essays on Henry Fielding,* London: Barnes & Noble, 1998.
5. Jill Campbell : *Natural Masques: Gender and Identity in Fielding's Plays and Novels,* Stanford: Stanford University Press, 1995.
6. Edward Gray (ed.) : *20th Century Interpretations of Hard Times: A Collection of Critical Essays,* New Delhi: Prentice Hall Pvt. Ltd., 1969.
7. Harold Bloom (ed.) : *Modern Critical Interpretations: Charles Dickens'Hard Times,* New York: Chelsea House, 1987.
8. Philip Collins (ed.) : *Dickens' Hard Times: A Critical Heritage,* London: Routledge &Kegan Paul, 1971.
9. Judith O'Neill (ed.) : *Critics on Charlotte Bronte & Emily Bronte*, Miami: University of Miami Press, 1979.
10. Miriam Allott (ed.) : *Charlotte Bronte: Jane Eyre*. Casebook Series.
11. Jill Karson : *Readings on Jane Eyre*, San Diego, CA: Green Haven Press, 2000.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

SEMESTER-II

PAPER-I: LITERARY CRITICISM-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Ontological Criticism, Chicago Critics, Irony and Paradox in New Criticism, Tension, Texture, Point of View, Id/Ego/Superego, Oedipus Complex, Archetypal Motifs, Shadow/Anima/Persona, Collective Unconscious, New Historicism, Ideology, Base and Superstructure, Hegemony.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Formalist Approach

Unit 2. Psychological Approach

Unit 3. Mythological and Archetypal Approach

Unit 4. "Literature and History" (First Chapter of Terry Eagleton's *Marxism& Literary Criticism)*

Units 1, 2 and 3 are based on corresponding sections from Wilfred Guerin et al, ed., *A Handbook of Critical Approaches to Literature*

Suggested Reading:

1. William K Wimsatt and Cleanth Brooks: *Literary Criticism: A Short History,* New Delhi: Oxford & IBH Pub. Co., 1974.
2. David Robey& Ann Jefferson: *Modern Literary Theory: A Comparative Introduction,* London: Batsford, 1986.
3. Harry Blamires: *A History of Literary Criticism,* Delhi: Macmillan, 2001.
4. M.A.R. Habib: *A History of Literary Criticism: From Plato to the Present,* Oxford: Blackwell, 2005.
5. M.S. Nagarajan: *English Literary Criticism & Theory: An Introductory History,* Hyderabad: Orient Longman, 2006.
6. Patricia Waugh: *Literary Theory & Criticism: An Oxford Guide,* New Delhi: Oxford University Press, 2006.
7. Frank Lentricchia: *After the New Criticism,*Chicago: Chicago University Press, 1980.
8. Hans Bertens: *Literary Theory: The Basics,* New York: Routledge, 2003.
9. Peter Barry: *Beginning Theory: An Introduction to Literary & Cultural Theories,* 2nd ed., Manchester: Manchester University Press, 2004.
10. Raman Selden: *A Reader's Guide to Contemporary Literary Theory,* New Delhi: Pearson, 2006.
11. John Crowe Ransom: *The New Criticism,* New York: New Directions, 1941.
12. I.A. Richards: *Practical Criticism,* London: Routledge & Paul, 1964.
13. Terry Eagleton: *Marxism and Literary Criticism,* London: University of California Press, 1976.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-II: BRITISH POETRY-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Objective Correlative, Modernism, Post-Modernism, Impact of World Wars on Twentieth-Century Literature, War Poets, Imagism, Dadaism, Surrealism, Impressionism, Expressionism, Naturalism,. Existentialism, Movement Poets, Confessional Poets, Irish Literary Revival.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1	W. B. Yeats	:	"Adam's Curse" "Easter 1916" "The Second Coming" "A Prayer for My Daughter" "Sailing to Byzantium" "The Circus Animals' Desertion"
Unit 2	T. S. Eliot	:	"The Love Song of J. Alfred Prufrock" "The Hollowmen"
Unit 3	W. H. Auden	:	"In Memory of W. B. Yeats" " Musee des Beaux Arts" "September 1, 1939" "Shield of Achilles" "Funeral Blues"
Unit 4	Ted Hughes	:	"The Jaguar" "Hawk Roosting" "Thrushes" "Crow Alights' "Crow's Last Stand"

Suggested Reading:

1. David A. Moody: *The Cambridge Companion to T.S. Eliot,* Cambridge: Cambridge University Press, 2003.
2. Bernard Bergonzi: *T. S. Eliot* (Masters of World Literature), London: Macmillan, 1978.
3. Helen Gardner: *The Art of T.S. Eliot,* New Delhi: Penguin, 1988.
4. John Lucas: *Modern English Poetry – from Hardy to Hughes: A Critical Survey,* London, Batsford Ltd., 1986.
5. Edward Maline: *A Preface to Yeats,* London: Longman Group Ltd., 1983.
6. Jon Stallworthy (ed.): *Yeats' Last Poems* (Casebook Series), New Delhi: Macmillan, 1968.
7. Keith Sagar: *The Art of Ted Hughes,* Cambridge: Cambridge University Press, 1975.
8. Stephen Spender: *Eliot* (Fontana Modern Masters), Glasgow: William Collins & Sons Ltd., 1967.
9. Terry Gifford, Neil Roberts: *Ted Hughes: A Critical Study,* London: Faber & Faber, 1981.
10. Edward Mendelson: *Early Auden,* London: Faber & Faber, 1999.
11. Stan Smith, *Cambridge Companion to W.H. Auden,* Cambridge: Cambridge University Press, 2004.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-III: BRITISH DRAMA-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

The Drama of Absurd, The Great depression, Realism in Drama, Drama of Ideas, Impressionism, Poetic Drama, Pastiche, Problem Plays, Thesis Play, Romanticism in Modern Drama, Symbolism in Drama, Theatre of Cruelty, Alienation Effect, Kitchen Sink Drama, Irish Movement.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Unit 1. T. S. Eliot : *Murder in the Cathedral*

Unit 2. Samuel Beckett : *Waiting for Godot*

Unit 3. John Osborne : *Look Back in Anger*

Unit 4. Tom Stoppard : *Rosencrantz and Guildenstern are Dead*

Suggested Reading:

1. Christopher Innes, *Modern British Drama: The Twentieth Century*, 2nd edition, Cambridge: Cambridge University Press, 2002.
2. Hugh Kenner: *A Reader's Guide to Samuel Beckett,* New York: Grove Press, 1961.
3. John Fletcher: *Samuel Beckett's Art*, London: Chatto and Windus, 1967.
4. Ruby Cohn, *A Casebook on 'Waiting for Godot'*, New York: Grove Press, 1967.
5. Ronald Hayman, *Samuel Beckett*, London: Heinemann, 1968.
6. John Russell Taylor: *Anger and After: A Guide to the New British Drama*, London: Methuen, 1969.
7. Kenneth Allsop: *The Angry Decade: A Survey of the Cultural Revolt of the 1950s*, London: John Good Child Publishers, 1984.
8. John Russell Brown (ed.): *A Short Guide to Modern British Drama*, London: Barnes & Noble, 1983.
9. Michael Anderson, *Anger and Detachment: A Study of Arden, Osborne and Pinter*, London: Pitman, 1976.
10. Ronald Hayman: *John Osborne* (Contemporary Playwrights Series), London: Heinemann Educational, 1970.
11. Harold Bloom, (ed.): *Tom Stoppard* [Bloom's Major Dramatists], New York: Chelsea House, 2003.
12. Katherine E. Kelly (ed.): *The Cambridge Companion to Tom Stoppard,* Cambridge: Cambridge University Press, 2001.
13. Jenkins, Anthony: *The Theatre of Tom Stoppard,* Austin: University of Texas Press, 2003.

Total Marks = 100
Theory = 80
Int. Assessment = 20
Time Allowed = 3hrs

PAPER-IV: BRITISH FICTION-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt **three** out of six short notes, to be answered in 200 words each. The short notes will be based on the following literary terms:

Stream of Consciousness, Modernism, the Bloomsbury Group, Psychological Realism, Anti Hero, Naturalism, Autobiographical Novel, Psychological Novel, Development of evolutionary Sciences, Bildungsroman, Lyrical Novel, Transitional Novel, Metafiction, Twentieth Century Realism, Colonial Consciousness in Twentieth Century Novel.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts:

Unit 1. D. H. Lawrence : *Sons and Lovers*

Unit 2. Virginia Woolf : *Mrs. Dalloway*

Unit 3. Joseph Conrad : *Heart of Darkness*

Unit 4. William Golding : *Lord of the Flies*

Suggested Reading:

1. Bernard Bergonzi, *Reading the Thirties: Texts and Contexts,* Pittsburgh: Pittsburgh University Press, 1978.
2. George M. Johnson, *Dynamic Psychology in Modern British Fiction,* London: Palgrave Macmillan, 2005.
3. Geoff Dyer, *Out of Sheer Rage: Wrestling with D.H. Lawrence,* North Point Press, 1999.
4. Anne Fernihough, *The Cambridge Companion to D.H. Lawrence*, Cambridge University Press, 2001.
5. Keith Sagar, *D.H. Lawrence: Life into Art,* New York: Penguin, 1986.
6. Jeremy Hawthorn, *Virginia Woolf'sMrs. Dalloway: A Study in Alienation,* Sussex University Press, 1975.
7. Harold Bloom, *Virginia Woolf's Mrs. Dalloway* (Bloom's Modern Critical Interpretations), London: Chelsea House Publications, 1988.
8. Richard Adams: *Heart of Darkness*. London: Penguin, 1991.
9. Harold Bloom, (ed.): *Marlow,* New York: Chelsea House, 1992.
10. Robert Burden: *Heart of Darkness*, London: Macmillan Educational, 1991.

M.A. PART-II

SEMESTER-III

PAPER-I: LITERARY THEORY-I

Objectives:

The paper provides an important study of literary theory as an intellectual and critical activity 1960 onwards. Central to this course is the analysis of some of the major critical contributions to this area which form a benchmark in understanding the dynamics of literary/critical methods. The course takes up major strands of modern literary theory and provides a conceptual context for an understanding of the function and practice of modern literary and cultural criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of literary theory 1960 onwards, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Roland Barthes: "The Death of the Author" from Roland Barthes, *Image, Music, Text* (London: Flamingo, 1977): 142-48. Also in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 166-72.

Unit-2 Wolfgang Iser: "The Reading Process: a Phenomenological Approach" from David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988).

Unit-3 M. H. Abrams: "The Deconstructive Angel" (from David Lodge (ed.) *Modern Criticism and Theory: A Reader,* London and New York: Longman, 1988).

Unit-4 Raymond Williams: "Base and Superstructure"; and "Dominant, Residual andEmergent." From Raymond Williams, *Marxism & Literature* (Oxford: Oxford University Press, 1977): 75-82 and 121-27.

Suggested Reading:

1. Peter Barry: *Beginning Theory*, Manchester and New York: Manchester University Press, 1995.

2. Raman Selden:*A Reader's Guide to Contemporary Literary Theory*, New Jersey: Prentice-Hall, 1985.

3. Ann Jefferson & David Robey, eds., :*Modern Literary Theory,* New York: Barnes and Noble, 1982.

4. Terry Eagleton: *Literary Theory: An Introduction*, Minneapolis: University of Minnesota Press, 1983.

5. …. *Marxism and Literary Criticism,* Berkeley and Los Angeles: University of California Press, 1976.

6. Krishnaswamy et al.: *Contemporary Literary Theory: A Student's Companion*, New Delhi: Macmillan, 2000.

7. Jonathan Culler: *Barthes*, Great Britain: Fontana, 1983.

8. Jeremy Hawthorn, *A Concise Glossary of Contemporary Literary Theory*, London: Edward Arnold, 1992.

9. Stuart Sim, ed., *AZ: Guide to Modern Literary and Cultural Theorists*, London: Harvester Wheatsheaf, 1995.

10.John Sturrock: *The Word from Paris: Essays on Modern French Thinkers and Writers*, London: Verso, 1998.

PAPER-II: INDIAN WRITING IN ENGLISH

Objectives:

The focus of this paper is the study of Indian contribution to literature in English, from the early advent of English in India to contemporary writing in English. The history and development of Indian Writing in English is scrutinized with reference to the Indian Nationalist Movement, the philosophical thinking of political and social leaders/activists like Mahatma Gandhi, Pandit Jawahar Lal Nehru, Raja Rammohan Roy and others. The issues raised by diasporic movements across the globe, post coloniality and the emergence of modern India is also a part of the study of this paper.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of Indian writing in English, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Raja Rao **:** *Kanthapura*

Unit II: This unit will have three poets and there will be three poems by each :

(a) Agha Shahid Ali **:** "Farewell", "Ghazal", ("Where are you now ?") and "The Country without a Post Office". Available in *The Country without a Post Office,* Delhi. Ravi Dayal, 2000, Ist Indian Edition.

(b) A. K. Ramanujan **:** "Small-Scale Reflections on a Great House"; "Obituary", "Love Poem for Wife 1." Available in R. Parthasarathy ed., *Ten Twentieth Century Indian Poets* (Delhi: Oxford University Press, 1976).

(c) ImtiazDharkar **:** "Purdah I", "Grace" and "Prayer", Available in ImtiazDharkar, *Purdah and Other Poems,* Delhi: Oxford University Press, 1989.

Unit III: Amitav Ghosh **:** *The Shadow Lines* (Delhi: Ravi Dayal, 1988).

Unit IV: Mahesh Dattani **:** *Final Solutions* (New Delhi: Penguin, 2005).

Suggested Reading:

1. K. R. S. Iyengar, *Indian Writing in English*, New Delhi: Sterling, 1985.

2. Bruce, King, *Modern Indian Poetry in English*, New Delhi: Oxford University Press, 1987.

3. A. K. Mehrotra ed., *An Illustrated History of Indian Literature in English*, New Delhi: Permanent Black, 2003.

4. TabishKhair, *Babu Fictions*, Delhi: Oxford University Press, 2006.

5. Meenakshi Mukherjee, *Twice Born Fiction*, New Delhi: Heinemann, 1971.

6 Meenakshi Mukherjee,*The Perishable Empire: Essays on Indian Writing in English*, New Delhi: Oxford University Press, 2000).

7. M. K. Naik ed., *Aspects of Indian Writing in English*, Delhi: Macmillan, 1979.

8. S. Tharu and K. Lalitha, *Women Writing in India: 600BC to the Present*, 2 Vols., New Delhi: Oxford University Press, 1995.

9. V. Raghavan and Nagendra, *An Introduction to Indian Poetics*, Bombay: Macmillan, 1970.

10. G. N. Devy, ed., *Indian Literary Criticism: Theory and Interpretation*, Hyderabad: Orient Longman, 2004.

PAPER- III (Opt. i): POST-COLONIAL STUDIES I (ECS II PCS I)

Objectives: To familiarize the students with theoretical concepts related to the literatures of the 'new' world - Asian, African, Australian, Caribbean, Latin American, Canadian - which have long remained ignored; to foreground issues such as history, class, race, gender, nation, culture, marginality, diasporic consciousness, etc., emphasizing the emergent nature of literary productions from decolonized communities.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt four out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed units :

Prescribed Texts:

Unit-I. ENGLISH LITERARY STUDIES (with reference to English in India)

1. Thomas Babington Macaulay, 'Indian Education: Minute of the 2nd of February, 1835', in G. M. Young (ed.), *Macaulay: Prose and Poetry*, Cambridge, MA: Harvard University Press, 1967:719-30.

2. Gauri Viswanathan, Introduction to *Masks of Conquest*, New York: Columbia University Press, 1989: 1-22.

Unit-II. CULTURAL IDENTITY AND THE NATION

1. Ernest Renan, 'What is a Nation?' in Homi K. Bhabha, ed. *Nation and Narration*, London and New York: Routledge, 1990: 8-22.

2. Frantz Fanon, 'On National Culture' from *The Wretched of the Earth*, Harmondsworth: Penguin, 1967: 166-99.

Unit-III. DEFINING FORCES: GENDER AND RACE

1. Chandra Talpade Mohanty, 'Under Western Eyes', in Patrick Williams and Laura Chrisman, eds., *Colonial Discourse and Postcolonial Theory: A Reader*, New York: Harvester Wheatsheaf, 1993: 196-220.

2. Introducing Gayatri Spivak: Woman as subaltern, subject-positions, postcolonial feminism.

3. Race: Background, classification of races, Social Darwinism and imperial practice, social construction of race; race and ethnicity.

Unit IV. CULTURAL IDENTITY AND DIASPORA

1. Stuart Hall, 'Cultural Identity and Diaspora' in Jonathan Rutherford ed., *Identity: Community, Culture, Difference* (London: Lawrence and Wishart, 1990): 222-37. Also in Padmini Mongia, *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996): 110-21.

2. Introducing HomiBhabha: Concepts of ambivalence and hybridity.

Suggested Reading:

1. John McLeod, *Beginning Postcolonialism*, Manchester and New York: Manchester University Press, 2000.
2. Ania Loomba, *Colonialism/Postcolonialism*, London and New York: Routledge, 1998.
3. Rumina Sethi, *The Politics of Postcolonialism: Empire, Nation and Resistance*, London: Pluto, 2011.
4. Robert J. C. Young, *Postcolonialism*: *A Very Short Introduction*, Oxford: Oxford University Press, 2003.
5. Leela Gandhi, *PostcolonialTheory*, Oxford: Oxford University Press, 1988.
6. Rajeswari Sunder Rajan (ed.), *The Lie of the Land: English Literary Studies in India*, Delhi: Oxford University Press, 1992.
7. Benedict Anderson,*Imagined Communities*, London: Verso, 1983.
8. Rumina Sethi, *Myths of the Nation: National Identity and Literary Representation*, Oxford: Clarendon, 1999.
9. Homi K. Bhabha, *The Location of Culture*, London and New York: Routledge, 1994.
10. Kumkum Sangari and Sudesh Vaid (eds.), *Recasting Women*, New Delhi: Kali, 1989.

PAPER-III (Opt. ii): LINGUISTICS-I (ECS II LIN I)

Objectives :

This paper is aimed to provide an introduction to the studies of language in modern times. Students are made to be aware of developments in the field of Linguistics in the 20th Century, and develop an understanding of the nature of language study through a scientific and analytical approach. An understanding of the concepts in modern Linguistics is an essential objective and the approach to be adopted is that of clear explication of linguistic thought and of the levels of linguistic analysis.

Pattern of examination
There shall be one compulsory question of 20 marks, comprising of short notes from all the units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question with internal choice will be set from each of the four units. The questions from Units 1 & 2 would be Essay Type. The questions from Units 3 & 4 would be exercises (Phonetic Transcription of words with primary stress, and morphological analysis) and short notes.

Content

Unit 1. Language - nature and functions (arbitrariness of sign, speech and writing, animal and human language, conventionality, system of systems). The earlier study of language – historical, comparative approaches, a brief history of linguistics.

Unit 2. The growth of Modern Linguistics:– The descriptive approach, Linguistics as a Science. The early structuralists, anthropologists - Boas, Sapir, Whorf' The contribution of Bloomfield. Ferdinand de Saussure and Dichotomies; Langue and Parole, Syntagmatic and Paradigmatic relationships, synchronic and diachronic approaches.Branches of Linguistics; Psycholinguistics and Neurolinguistics, Sociolinguistics and the study of the variation in language, particularly, dialect, accent and register.

Unit 3. Levels of linguistic analysis I - Phonetics (speech organs, description and classification of sounds, IPA system, phonemes, allophones, minimal pairs); Morphology (free and bound morphemes, allomorphs, zero morphemes, morphophonemics).

Unit 4. The Phonology of English - the description and classification of English Vowels and consonants, syllable structure, word stress. Transcription of English words, marking stress. Weak forms, assimilation and elision in connected speech, basic patterns of intonation.

Word formation in English; derivation, affixation , compounds.

Suggested Reading:

1. Yule, G., *The Study of Language*, Cambridge: Cambridge University Press, 2009.
2. Radford, A., *Linguistics: An Introduction*, Cambridge: Cambridge University Press, 1999.
3. Culler Jonathan, *Saussure*, London: Fontana Modern Classics, 1978.
4. Crystal, D., *Linguistics*, Harmondsworth: Penguin, 1980.
5. Sethi, J. and Dhamija, P.V, *Course in Phonetics and Spoken English*, New Delhi.
6. Syal and Jindal, *Introduction to Linguistics: Language, Grammar and Semantics*, revised Ed., New Delhi: Prentice Hall of India, 2007.
7. Lyons, J., *Language and Linguistics*, Cambridge: CUP, 1982.
8. Roach, P., *English Phonetics and Phonology: A Practical Course*, Prentice Hall of India, 1995.
9. Gimson, A.C., *Introduction to the Pronunciation of English*, London: Arnold, 1988.
10. Fromkin, Rodman and Hyams, *An Introduction to Language* 7th Ed., 11 Thomson Wadworth. Thomsan Asia, Singapore, reprinted in India 2004.
11. Conrad and Leech, *A Student Grammar of Spoken and Written English*, London: Longman.
12. Bauer, L., *Introducing Linguistic Morphology*, CUP, 2002.

PAPER-III (opt. iii) AMERICAN LITERATURE I
(AMERICAN FICTION FROM 1800 TO THE PRESENT)

Objective:

The course examines changes in the American narrative from 1800 to the present and considers what might be distinctly "American" about American literature. It focuses on the historical and cultural influences, literary movements, the short story and novel as distinct genres and on major literary figures. It explores literature that reveals and emerges from multiple perspectives such as those of race, gender, ethnicity, socio-economic class and historical period.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of American fiction, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I : (19^{th} Century Short Fiction)
- (a) Edgar Allan Poe, "The Fall of the House of Usher" (Norton)
- (b) Nathaniel Hawthorne, "Rappaccini's Daughter" (Norton)
- (c) Stephen Crane, "The Open Boat" (Doubleday Press)

Unit II : (Twentieth Century Short Fiction)
- (a) Ernest Hemingway, "The Snows of Kilimanjaro" (Norton)
- (b) William Faulkner, "A Rose for Emily" (Random House)
- (c) Joyce Carol Oates, "Scenes of Passion and Despair" (Oxford)

Unit III : Toni Morrison, *The Bluest Eye* (Vintage)

Unit IV : Don DeLillo, *White Noise* (Penguin)

Suggested Reading:

1. Kenneth Silverman, ed., *New Essays on Poe's Major Tales* (Cambridge University Press, 1992).
2. Charles E. May, *Edgar Allan Poe: A Study of the Short Fiction (*Twayne Series,1991).
3. Albert V. Frank, ed., *Critical Essays on Hawthorne's Short Stories (*Twayne, 1993).
4. Chester L. Wolford, *Stephen Crane:A Study of the Short Fiction* (Twayne, 1989).
5. Paul Smith ed., *New Essays on Hemingway's Short Fiction (*Cambridge University Press, 1985).
6. Joseph M. Flora, *Ernest Hemingway: A Study of the Short Fiction (*Twayne, 1983).
7. Hans H. Skei, *The Art of Brevity: Excursions in Short Fiction Theory and Analysis (*South Carolina Press, 2004).
8. Linden Peach ed., *Toni Morrison: Contemporary Critical Essays* (Casebook Series, 1998).
9. Nancy Peterson, *Toni Morrison: Critical and Theoretical Approaches (*John Hopkins University Press, 1997).
10. Tim Engels & Hugh Ruppersburg eds., *Critical Essays on Don DeLillo,* GK Hall, 2000.

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY I

Objective:

This paper shall focus singularly on Indian Poetics - its various schools and theories so as to provide an alternative perspective of Literary Theory from an indigenous perch. The corpus of Indian Poetics is very rich and multivalent; the paper shall however deal with basic concepts and would therefore be introductory in nature and scope. The prescribed texts are available in English translation and there is no dearth of secondary material also. The students would be encouraged to take a critical view of our own 'poetics' and its relevance in the postcolonial contexts.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Text

Unit I

Rasa – Siddhanta with special reference to Bharatmuni, "On Natya and Rasa: Aesthetics of Dramatic experience" from the *Natyashastra,* anthologized inG.N.Devy's edited book *Indian Literary Criticism* (Hyderabad; Orient Longman, 2002).

Unit II

Dhvani –Siddhanta with special reference to Anandvardhana, "Dhvani: Structure of Meaning" from *Dhvanyaloka,* anthologized in G.N. Devy's edited book *Indian Literary Criticism*(Hyderabad, Orient Longman, 2002).

Unit III

Vakrokti-Siddhanta with special reference to Kuntaka, "Language of Poetry and Metaphor" from *Vakrokti-Jivita*, anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002).

Unit IV

A.K.Ramanujan, "*On Ancient Tamil Poetics*" anthologized in G.N. Devy's edited book *Indian Literary Criticism*(Hyderabad, Orient Longman, 2002).

Suggested Reading:

Rajan, P.K., *Indian Literary Criticism in English*: *Critics, Texts, Issues,* Delhi & Jaipur: Rawat, 2004.

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures*, London: OUP, 1992.

Devi, G.N., *In Another Tongue: Essays on Indian English Literature*, Delhi: MacMillan, 1993.

_____ and Dallmayr Fred, *Between Traditions and Modernity: India's Search for Identity*, Delhi; Sage, 1998.

Chari, V.K., *Sanskrit Criticism*, Delhi: MotilalBanarsidas, 1993.

Sethuraman, V. Ed., *Indian Aesthetics: An Introduction*, Delhi: MacMillan 1992.

Rao, Raja, *The Meaning of India*, Delhi: Vision Books, 1996.

Mukherjee, Meenakshi, *The Perishable Empire: Essays on Indian Writing in English*, Delhi: OUP , 2000.

_____, *Reality and Realism*: *The Novel and Society in India*, Delhi: OUP, 1985.

Sunder Rajan, Rajeswari, Ed., *The Lie of the Land: English Literary Studies in India*, Delhi: OUP, 1991.

Gauri, Viswanathan, *Masks of Conquest: Literary Study and British Rule in India*, New York: Colombia University Press, 1989.

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literatures* (Mysore, Dhvanyaloka, 1984.

Rayan, Krishna, *The Burning Bush: Suggestion in Indian Literature*, Delhi: B.R. Publishing, 1988.

_____, *Text and Sub-text* (Delhi, Arnold Heinemann, 1989).

_____, *Sahitya, A Theory for Indian Critical Practice*, Delhi: Arnold Heinemann, 1991.

Paranjape, Makarand Ed., *Nativism:Essays in Criticism*, Delhi: Sahitya Akademi, 1998.

Krishna, Daya, *Indian Philosophy: A Counter-Perspective*, Delhi: OUP 1991.

Krishnamoorthy, K., *Essays in Sanskrit Criticism*, Dharwar: Karnatak Univ., 1964.

Kane, P.B., *History of Sanskrit Poetics*, Delhi: Motilal Banarasidass, 1971, 4th ed.

PAPER IV (Opt.i): CULTURAL STUDIES-I

Objectives:

The course combines a thorough training in critical and cultural studies with a diverse range of advanced options offering you scope to configure and appropriate programme of study that meets your needs. At a historical juncture of incessant theoretical discourse when English Departments are being structurally reconstituted, cultural studies becomes significant as a course that focuses on criticism as a social and cultural practice in the 20th Century. An English education is now less a concern of familiar Western Course and more a confrontation with the diversity of transnational cultural schemes and texts. Such a task sets out to situate literature in relation to culture and within larger cultural formations. The main aim of this course is to examine literary studies as a self-conscious pursuit of a 'critical' definition of culture.

The programme is designed to provide grounding in the theoretical debates that inform contemporary investigations in a number of areas, such as society, subjectivity, ethnicity, aesthetics, postmodern experience and cultural history. The insights and analyses of late twentieth-century forms of critique – psychoanalysis, deconstruction, and ideological and political thought – are employed to assess some key concepts of interdisciplinary study. Working within multiple contextual formations in a globalized world, the course explains the need for ongoing contest and struggle to understand ideology of mass culture and hegemony with the necessity of achieving cultural knowledge of ordinary people vs. the elites, thus drawing the student closer to a bewildering variety of local and trans-cultural politics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: What is Culture?

1. T.S. Eliot, "The Three Senses of Culture", from *Notes Towards the Definition of Culture*, London: Faber and Faber, 1948. 21-34.

2. Raymond Williams, 'Culture is Ordinary', in *The Routledge Critical and Cultural Theory Reader*. Ed. Neil Badmington and Julia Thomas, London & New York, Routledge.

Unit II: Culture Studies

Richard Johnson, "What is Cultural Studies Anyway?", in *What is Cultural Studies?: A Reader*, Ed. John Storey, London & New York: Arnold, 1976. 75-114.

Unit III: Culture as Discourse

1. Eric Hobsbawm, "Introduction: Inventing Tradition", in *The Invention of Tradition*. Eds. Eric Hobsbawm and Terence Ranger, Cambridge: Cambridge University Press, 1997 rpt. 1-14.

2. Clifford Geertz, "Thick Description: Toward an Interpretive Theory of Culture" from *The Interpretation of Cultures: Selected Essays of Clifford Geertz*, Basic Books, 1973. 3-30.

Unit IV: Representation and Ideology

1. Stuart Hall, "The Work of Representation", in *Representation: Cultural Representations and Signifying Practices* Ed. Stuart Hall, London: Sage, 1997, 15-64.

2. Louis Althusser, "From 'Ideology and Ideological State Apparatuses'" in Anthony Easthope and Kate McGowan ed., *A Critical and Cultural Theory Reader* (Open University Press).

Suggested Reading:

Ali Rattansi and Sallie Westwood Eds., *Racism, Modernity and Identity: On the Western Front,* Oxford: Polity Press, 1994.

AshisNandy, *The Secret Politics of Our Desires: Innocence, Culpability, and Indian Popular Cinema, London:* Zed, 1999).

Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature,* London: Free Association Books, 1991.

Graeme Turner, *British Cultural Studies***,** London: Routledge, London, 1990.

John Rajchman Ed., *The Identity in Question*, London: Routledge, 1995.

John Storey Ed., *What is Cultural Studies?: A Reader,* London: Edward Arnold,1996.

Malcolm Waters, *Globalization*, London: Routledge, 1995.

Stuart Hall, *Critical Dialogues in Cultural Studies*, London: Penguin, 1996.

Richard Hoggart, *The Uses of Literacy*, London: Penguin, 1958.

Ziauddin Sardar and Jerome Ravetz, *Cyberfutures*: *Culture and Politics on the Information Superhighway*, London: Pluto Press,1966.

PAPER IV (Opt. ii): APPLIED LINGUISTICS I

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Prescribed Content:

Unit 1: Linguistics and Language Teaching- Behaviourist, mentalist and cognitivist views of language learning. The difference between learning the first and the second language. Second language acquisition.The Monitor model.

Unit 2: The Language Learner: Interlanguage. Learners' errors as strategies of learning, Types of errors, The significance of error analysis. Universal grammar. Acculturation. Individual differences in learning-age, motivation, attitude and aptitude.

Unit 3: The notion of communicative competence. Varieties of language - social and regional dialects, pidgins and creoles, register. The significance of language variation in teaching and learning language.

Unit 4: Application of linguistics to the study of literary style: A few literary texts to be taken as examples to illustrate features of literary language-deviation, foregrounding, parallelism and poetic diction.

Suggested Reading:

1. Yule, George, *The Study of Language,* New Delhi: Cambridge University Press, 2006.
2. Kirkpatrick, Andy, *World Englishes: Implications for International Communication and English Language Teaching*, U.K.: Cambridge University Press, 2007.
3. Corder, S. Pit, *Introducing Applied Linguistics*, U.K.: Penguin, 1993.
4. Krishnaswamy and Sriraman, *Applied Linguistics*, Delhi: OUP, 1998.
5. Long, Michael H. and Doughty, Catherine J., *The Handbook of Second Language Acquisition*, U.K.: 2005.
6. Downes, William, *Language and Society*, U.K.: Cambridge University Press, 1998.
7. Ellis, Rod, *Understanding Second Language Acquisition*, U.K.: OUP, 1998.
8. Mc Laughlin, Barry, *Theories of Second Language Learning*, U.K.: Edward Arnold, 1988.
9. Skehan, Peter, *Individual Differences in Second Language Learning*, U.S.: Arnold, 1989.
10. Leech, G.N., *A Linguistic Guide to English Poetry*, London: Longman, 1967.

PAPER IV (Opt. iii): WORLD POETRY /NOVEL IN TRANSLATION

Objectives:

The paper provides an interesting study of world poetry and novel with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping students develop ways of approaching, understanding and interpreting classics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1**.**Dante's *Inferno*(Penguin)
Unit-2. Cervantes' *Don Quixote* (Penguin)
Unit-3. Maxim Gorky's *Mother* (Moscow: Popular Publications)
Unit-4. (i) Pablo Neruda: 'A Song of Despair,' 'Enigmas' 'Brown & Agile Child' from *Collected Poems of Pablo Naruda.*
(ii) Octavio Paz: 'A Tree Within,' 'No More Cliches' 'Tomb of Amir Khusru' from *Collected Poems of Octavia Paz.*
(iii) Joseph Brodsky: 'Elegy,' Odysseus to Telemachus,' 'Folk Tune' from *Collected Poems of Joseph Brodsky.*

Suggested Reading:

1. Robert S. Haller, Trans. & Ed., *Literary Criticism of Dante Alighieri*, Lincoln: University of Nebraska Press, 1973).

2. Michael Caesar, *Dante: The Critical Heritage*, Routledge, 1995, pp 288, 383, 412, 631.

3. Peter S. Hawkins and Rachel Jacoff, ed., *The Poet's Dante: Twentieth-Century Responses*, New York: Farrar, 2001.

4. Brooks, Jeffrey, "Readers and Reading at the End of the Tsarist Era," from *Literature and Society in Imperial Russia, 1800-1914*, ed. William Mills Todd III, Stanford: Stanford University Press, 1978.

5. Brooks, Jeffrey, *When Russia Learned to Read: Literacy and Popular Literature, 1861-1917,*Princeton: Princeton University Press, 1985.

6. Bruckner, A., *A Literary History of Russia,* ed. Ellis H. Minns, trans. H. Havelock, London: T. Fisher Unwin, 1908.

7. Troyat, Henri, *Gorky,*trans. Lowell Blaw, New York: Crown Publishers, 1989.

8. Levin, Dan, *Stormy Petrel: The Life and Work of Maxim Gorky*, New York: Appleton-Century, 1965,ed.

PAPER-IV (Opt. iv)SHAKESPEARE-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to **Social and Literary aspects of the age of Shakespeare**: The English Renaissance. The Reformation, The Rise of Regular Comedy and Tragedy. Neo-classical Comedy, Shakespearean Comedy, Shakespearean Tragedy, the Sonnets, Globe Theatre, Shakespearean Stage, the Groundlings.

The following texts for detailed study:

1. Sonnet nos.: 12 – "When I do count the clock that tells the time"
   19 – "Devouring Time, blunt thou the lion's paws"
   29 – "When in Disgrace with Fortune and men's eyes"
   32 – "If thou survive my well-contented day"
   46 – "Mine eye and heart are at a mortal War"
   55 --"Not marble nor the gilded monuments"
   65 – "Since brass, nor stone, nor earth, nor boundless sea"
   71 – "No longer mourn for me when I am dead"
   147 – "My love is as a fever, longing still"
   152 – "In loving thee thou knowest I am forsworn"
2. *Henry IV- Part I*
3. *Twelfth Night*
4. *The Taming of The Shrew*

Suggested Reading:

1. B.Ford (Ed.) : *The Age of Shakespeare,* London: Penguin, 1982.
2. H.B.Charlton : *Shakespearean Comedy,* London: Methuen & Co. Ltd., 1959.
3. L.C. Knights : *An Approach to Hamlet,* London: Chatto and Windus, 1960.
4. G.W. Knights : *The Imperial Theme,* London: Methuen & Co. Ltd., 1951.
5. Alfred Harbage (ed.) : *20th Century Views on Shakespeare: The Tragedies,* Englewood Cliffs, Prentice Hall, 1964.
6. Robert Speaight : *Nature in Shakespearean Tragedies,* London : Hollis & Carter, 1955.
7. Sigurd Burckhardt : *Shakespearean Meanings,* New Jersey: Princeton Uni. Press, 1968.
8. S. Schoenbaum : *WilliamShakespeare: A Compact Documentary Life.*
9. AniaLoomba& Martin Orkin : *Post-colonial Shakespeare*- London and New York: Routledge, 1998.
10. Stanley Wells : *An Oxford Anthology of Shakespeare*. New York: Oxford University Press, 1989.
11. Gabriel Egan : *Shakespeare,* Edinburgh: Edinburgh University Press, 2007.
12. SukantaChaudhuri (ed.) : *Shakespeare without English,* Delhi: Pearson Education, 2006.
13. Thomas Cartelli and Katherine Rowe : *New Wave Shakespeare on Screen* (U.K.: Polity Press, 2007.
14. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England,* Berkeley: Univ. of California Press, 1988.

15. Cristina Malcolmson : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare*, Ithaca: Cornell University Press, 1991.

16. Alexander Legatt : *Shakespeare's Comedy of Love,* London: Methuen, 1974.

17. Jean, Howard and PhyllisRackin : *Engendering a Nation: A Feminist Account of Shakespeare's English Histories,* London, Routledge, 1997.

18. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two,* Buckingham: Open University Press, 1995.

19. Kenneth Muir : *Shakespeare's Sonnets*, U.K. George Allen &Unwin Ltd., 1982.

20. Richard B. Sewall : *The Vision of Tragedy*, New Haven : Yale University Press, 1959.

SEMESTER-IV

PAPER-I: LITERARY THEORY-II

Objectives:

The paper, which is a continuation of Paper I of semester III, introduces students to some more aspects of Literary Theory. In this semester, students will be introduced to new theorists in the field of New Historicism Postcolonial Theory and Feminist Criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Stephen Greenblatt "Counterhistory and Anecdote" in Catherine Gallagher and Stephen Greenblatt *Practicing New Historicism* (London: University of Chicago Press, 2000): 49-74.

Unit 2. The following three excerpts from The Postcolonial Studies Reader edited by Ashcroft, Griffiths, and Tiffin (Routledge 1995)

i) Gayatri Spivak: "Can the Subaltern Speak", 24-28.
ii) Homi Bhabha: "Signs Taken for Wonders", 29-35.
iii) Edward Said: "Orientalism", 87-91.

Unit 3. Elaine Showalter: "Feminist Criticism in the Wilderness" in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 331-53.

Unit 4. Aijaz Ahmed: "The Politics of Literary Postcoloniality" in Padmini Mongia ed. *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996) 276-93. and New York: Longman, 1988), 399-410.

Suggested Reading:

1. Pam Morris, *Literature and Feminism*, Oxford: Blackwell, 1993.

2. Jorge Larrain: *Ideology and Cultural Identity*, Oxford: Polity, 1994.

3. Moyra Haslett: *Marxist Literary and Cultural Theories*, London: Macmillan, 2000.

4. Arthur Asa Berger: *Cultural Criticism: A Primer of Key Concepts*, California: Sage, 1995.

5. Stevi Jackson and Jackie Jones, *Contemporary Feminist Theories,* New York: New York UniversityPress, 1998.

6. Virginia Woolf, *A Room of One's Own*, London: Harcourt, 1929.

7. Roman De La Campa, E. Ann Kaplan and Michael Sprinker, eds., *Late Imperial Culture*, London andNew York: Verso.

8. Neil Lazarus, ed., *The Cambridge Companion to Postcolonial Literary Studies*, Cambridge: Cambridge University Press, 2004.

9. Dirlik, Arif, 'The Postcolonial Aura: Third World Capitalism in the Age of Global Capitalism,' *Critical Inquiry*, Vol. 20 (1994): 328-56.

10. Bill Ashcroft and Pal Ahluwalia, *Edward Said: The Paradox of Identity*, London and New York: Routledge, 1999.

PAPER II: INDIAN WRITING IN TRANSLATION

Objectives:

There is a wealth of literature in various regional languages of India, which of late has been translated into English. The main purpose of the course would be to introduce students to the native varieties of literature. The range of texts, taken from different language-literatures, is enormous, foreclosing the possibilities of forging any essentialized idea of India. The Indianness of Indian writings, more often mapped through Indian English writings, stands questioned and challenged by the emerging corpus of the translated works. Each language-literature has its own specific forms, genres and literary stylesto which students would be exposed through a select list of texts/ books.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Novel

Fakir Mohan Senapati, *Six Acres and a Third*, Trans. Rabi Shankar Mishra, Satya P. Mohanty, Jatindra K. Nayak, et al., Delhi: Penguin, 2006.

Unit II: Short Stories

1. Prem Chand, "The Shroud," Available in *The World of Premchand: Selected Short Stories*, Trans. & Ed. by David Rubin, Delhi: Oxford University Press, 2001: 233-40.

2. Mahasweta Devi, "Draupadi," Available in *Breast Storie*s. Trans. Gayatri Chakravorty Spivak, Calcutta: Seagull, 1997: 19-38.
3. UrmilPawar. "A Childhood Tale." Trans. Jahnavi Phalkey and Keerti Ramchandra, *Translating Caste,* Ed. Tapan Basu, Delhi: Katha, 2002: 43-55.

Unit III: Drama

Girish Karnad, *Tughlaq*, Delhi: Oxford University Press, 1975.

Unit IV:Poetry

1. Faiz Ahmad Faiz. "Don't Ask Me for that Love Again", "A Prison Evening", "We who were Executed" and "In Search of Vanished Blood." Available in *The Rebel's Silhouette*. 3rd Impression. Trans. Agha Shahid Ali, Delhi: Oxford University Press, 2005.

2. NamdeoDhasal. "Hunger", "I Slew the Seven Horses of the Chariot of the Sun" translated by DilipChitre, Delhi: Narayana, 2007, from the collection *Namdeo Dhasal: Poet of the Underworld.*

3. Suryakant Tripathi 'Nirala'. "Remembering Saroj." Available in *A Season on the Earth: Selected Poems of Nirala*. Trans. & Ed. David Rubin, Delhi: Oxford University Press, 2003.

Suggested Reading:

1. Meenakshi Mukherjee, *Realism and Reality: The Novel and Society in India*, Delhi: Oxford University Press, 1994 rpt.

2. Sheldon I. Pollock (ed.), *Literary Cultures in History: Reconstructions from South Asia*, California: Univ. of California Press, 2003.

3. K. Satchidanandan, *Indian Literature: Positions and Propositions*, Delhi: Pencraft, 1999.

4. Sisir Kumar Das (ed.), *History of Indian Literature*, Vol I-X, Delhi: Sahitya Akademi, 1995.

5. Priya Joshi, *In Another Country*, Delhi: Oxford University Press, 2002.

6. K.M. George, *Comparative Indian Literature*, Delhi: Macmillan, 1984.

7. Sujit Mukherjee, *A Dictionary of Indian Literature: Beginnings-1850*, Hyderabad: Orient Blackswan, 1999.

8. G.N.Devy, *After Amnesia*, Hyderabad: Orient Longman, 1992.
   -------, Of Many Heroes, Hyderabad: Orient Longman, 1998.

9. Tutun Mukherjee, ed., *Girish Karnad's Plays: Performance and Critical Perspectives*, Delhi: Pencraft, 2008.

10. Ananda Lal, ed., *Theaters of India: A Concise Companion*, Delhi: Oxford University Press, 2009.

PAPER-III (opt. i): POSTCOLONIAL STUDIES-II

Objectives: The course concerns New Literatures in English which will introduce students to some major issues and problems common to such literatures. After centuries of colonial rule and British Literature, we find that decolonization has shown that there are simply too many writers and writing, new nations and old hegemonies to be scrutinized. This course attempts to familiarize students to literatures of the 'new' world – African, Asian, Caribbean and Canadian – which have remained outside discourse making for a long time. The course is introduced as a revisionary discipline which primarily focuses on interrogating the Western canon.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Chinua Achebe, *Things Fall Apart* (Oxford: Heinemann, 1958).

Unit-2 Salman Rushdie, *Midnight's Children* (New York: Avon, 1980).

Unit-3 Jean Rhys, *Wide Sargasso Sea* (London: Penguin, 1968).

Unit-4 Margaret Atwood, *Surfacing* (Canada: McClelland and Stewart, 1972).

Suggested Reading:

1. Margaret Atwood, *Survival:A Thematic Guide to Canadian Literature* (Southport: McClelland and Stewart, 1972).

2. Bill Ashcroft, et al, eds., *The Post-Colonial Studies Reader* (London and New York: Routledge, 2006).

3. Diana Brydon and Helen Tiffin, *Decolonising Fictions* (Sydney: Dangaroo, 1993).

4. Homi K. Bhabha, *Nation and Narration* (London and New York: Routledge, 1990).

5. Bill Ashcroft, Gareth Griffiths and Helen Tiffin, *Key Concepts in Post-Colonial Studies* (London and New York: Routledge, 1998).

6. Timothy Brennan, *Salman Rushdie and the Third World* (New York: St. Martin's Press, 1989).

7. Thomas F. Staley, *Jean Rhys: A Critical Study* (London: Palgrave Macmillan, 1979).

8. Pierrette Frickey, *Critical Perspectives on Jean Rhys* (Washington DC: Three Continents Press, 1990).

9. Bruce King, ed., *The New National and Postcolonial Literatures: An Introduction* (Oxford: Clarendon, 1996).

10. G. D. Killam, *The Novels of Chinua Achebe*. Studies in African LiteratureSeries.(London: Heinemann, 1978).

PAPER-III (opt. ii): LINGUISTICS-II

Objectives:

This course is aimed at an understanding of the development of the English language and structure of modern English. Many of the Latin-based rules and prescriptive approaches to English language have given way to a descriptive account of the language at all levels. The course is expected to familiarize students with the developments in the English language up to the present.

Pattern of examination

One compulsory question of 20 marks comprising of short notes from all units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question each with internal choice will be set from each of the four units.

Content:

Unit 1. Levels of Linguistics Analysis II: The study of grammar-traditional (the latinate fallacy, the semantic fallacy) structural (IC analysis, NP and VP, phrase structure rules, practice of the diagram for analyzing sentence structure) transformational generative grammar with reference to Chomsky's distinction between deep and surface structures, kernel sentences and transformations and familiarity with some important transformational rules, lexical restrictions.

Unit 2. The Grammar of English – Basic sentence patterns in English, Description of the structure of Noun Phrase, Verb Phrase, Adjective and Adverbial Phrase in English (with practical exercises). Some types of complex sentences. Sentence connection and cohesion in English.

Unit 3. Levels of Linguistic Analysis III: Theories of semantics, Synonymy hyponymy, entailment, polysemy, ambiguity (with examples from the semantics of English).

Unit 4. Diachronic changes in English- sound and spelling change and the influence of other languages on English. The development of English grammars and dictionaries.English as global language-varieties of English in Britain and around the world with special reference to Indian English.

Suggested Reading:

1. Palmer, F., *Grammar* (Cambridge ,Cambridge Univ. Press, 1983).

2. Lyons, J., *Chomsky* (London, Fontana Modern Classics, 1983).

3. Krishnaswamy and Verma, *Modern Linguistics* (Delhi, OUP,1988).

4. Biber, Conrad and Leech, *A Student Grammar of Spoken and Written English*, London, Longman, 1999.

5. Leech, Svartvik, Quirk and Greenbaum, *A Comprehensive Grammar of the English Language* (London, Longman, 1988).

6. Knowles, G., *A Cultural History of the English Language (* London, Longman, 1998).

7. Bauer, Laurie, *Watching English Language* (London, Longman, 1994).

8. Crystal, D., *English as a Global Language (*Cambridge, CUP,1997)

9. Kachru, B., *TheIndianization of English* (New Delhi, OUP, 1988)

10. Wells, J., *Accents of English ,Vol.I The British Isles and Vol. II- Beyond the British Isles* (Cambridge, Cambridge Univ. Press, 1990)

PAPER III (opt. iii): AMERICAN LITERATURE-II

Objectives: The course explores the genres of poetry and drama focusing on major American texts that have left their mark on the culture. The works selected engage with class structures, racial, ethnic, sexual and gender relations as well as questions of national identity. They represent major developments in style, content, focus and language of American Poetry and Drama.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Texts for Study:

Unit I:	Walt Whitman	:	"Song of Myself" "Crossing Brooklyn Ferry" "Out of the Cradle Endlessly Rocking" "Song of the Open Road" (Norton)
Unit II:	Robert Frost	:	"Birches" "Mending Wall" "After Apple Picking" "Stopping by Woods on a Snowy Evening" "Design" "Directive" (Norton)
Unit III:	Eugene O'Neill	:	*The Hairy Ape* (East West Press)
Unit IV:	Arthur Miller	:	*The Crucible* (Allied Press)

Suggested Reading:

Jay Grossman, ed., *Breaking Bounds: Whitman and Cultural Studies (*Oxford University Press,1996).

Robert K. Martin, *The Continuing Presence of Walt Whitman: The Life after the Life* (Iowa Press, 1992).

Kenneth Price, ed., *Walt Whitman* (Cambridge University Press, 1996).

Philip L. Gerber, *Robert Frost* (Twayne,1982).

Jesse Zuba, *Robert Frost*, (Chelsea House, 2003).

Normand Berlin, *Eugene O'Neill* (Grove Press,1982).

James J. Martine, ed., *The Plays of O'Neill: A New Perspective* (GK Hall, 1985).

James J. Martine, *The Crucible: Politics, Property and Pretense (*Twayne, 1993).

John H. Ferres, ed., *Twentieth Century Interpretations of The Crucible,* 1972.

C.W.E. Bigsby, *A Critical Introduction to Twentieth Century Drama* (Cambridge University Press, 1982).

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY II

Objective:

This paper is an extension of the paper on Indian Literary Criticism introduced in Semester III. Here the focus would be on Twentieth Century texts and Literary Interventions. Right from the days of the Freedom Movement, Indian Literary Criticism has increasingly taken political turns and twists. At one level attempts were made to de-colonize literary theory by way of excavating schools and theories of the ancient past, at another level, the endeavour was to search for critical alternatives from within the historical past. While in the previous paper, the thrust is on well-evolved and taxonomically rich critical frames of *rasa, dhavni*and *vakrokti*. Here the emphasis is on theoretical debate about the possibilities of multiple critical authorizes that exist in Indian Culture.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

The paper consists of four Units:

Unit I:

1. Ananda Coomaraswamy, "*The Dance of Shiva"* (Delhi: Munshi Ram Manohar Lal Publishers, 1999 ed).

2. Tagore, "*The True Nature of Literature",* Rabindranath Tagore: *Selected Writings on Literature and Language*, edited by Sisir Kumar Das and Sukanta Chaudhuri (Delhi: Oxford, 2001).

Unit II :

1. G.N.Devy, "After Amnesia", *After Amnesia:Tradition and Change in Indian Literary Criticism* (Hyderabad, Orient Longman,1992)

2. Bhalchandra Nemade, "*Nativism in Literature"*, Translated and Edited by Arvind Dixit and Makarand Paranjape, Nativism: Essays in Criticism *(*Delhi Sahitya Akademi).

Unit III :

a. Bhikhu Parekh, "Indianisation of Autobiography", *Colonialism, Tradition and Reform* (Delhi, Saga, 1989).
2. G.D. Devy, *"*Two Paradigms of History", *Of Many Heroes* (Hyderabad: Orient Longman, 1998).

Unit IV:

1. SharanKumar Limbale, "Dalit Literature and Aesthetics" in *Towards an Aesthetics of Dalit Literature* (Delhi: Orient Blackswan, 2004).

2. Kancha Ilaiah, "Towards the Dalitization of Nation" in Wages of Freedom: Fifty Years of Indian Nation-State, edited by Partha Chatterjee (Delhi: OUP, 1998).

Suggested Reading:

Rajan, P.K., *Indian Literary Criticism in English*; *Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London; OUP, 1992).

Devi, G.N., *In Another Tongue* (Delhi, MacMillan, 1993).

_____ and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).

Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banrasidas, 1993).

Sethuraman, V.Ed., *Indian Aesthetics: An Introduction* (Delhi, MacMillan, 1992).

Rao, Raja, *The Meaning of India* (Delhi: Vision Books, 1996).

Dangle Arjun Ed., *Poisoned Bread* (Hyderabad, Orient Longman, 1992).

Mukherjee, Meenakshi, *The Perishable Empire*(Delhi, OUP, 2000)

_____, Reality and Realism (Delhi, OUP, 1983)

Suder Rajan, Rajeswari, Ed., *The Lie of the Land* (Delhi, OUP, 1991).

Gauri, Viswanathan, *Masks of Conquest* (New York, Colombia University Press, 1989)

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literature* (Mysore; Dhavanyaloka, 1984).

Rayan, Krishna, *The Burning Bush*(Delhi; B.R. Publishing, 1989).

_____.*Text and Sub-Text* (Delhi; Arnold Heinemann, 1989).

_____. *Sahitya; A Theory* (Delhi; Arnold Heinemann, 1991).

Paranjape, Makarand, Ed., *Nativism;Essays in Criticism* (Delhi; Sahitya Akademi, 1998).

Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi; OUP, 1991).

Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ. 1964).

Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasi Das, 1971, 4th ed.).

PAPER-IV (Opt. i) CULTURAL STUDIES-II

Objectives:

The multiple nuances of culture would be unfolded through a conceptual study of its emerging configurations. The paper enables us to appreciate the processes of culture as it enters new mediums of films, computer, internet and cybernetics. There would be a pedagogical shift as the students would be taught the prescribed essays through every-day examples. The pedagogic practice would nudge the students towards interdisciplinary studies viewing other subject areas in relation to literature, and for that matter, any text.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Mass Culture

Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction", from *Illuminations*, London: Fontana Press, 1992 ed. 211-244.

Unit II: Culture Industry

1. Adorno, "Free Time", from *The Culture Industry: Selected Essays on Mass Culture*, Ed. J.M.Bernstein, London and New York: Routledge, 1991, 187-197.

2. Habermas, "From a Culture-Debating to a Culture-Consuming Public", in *The Structural Transformation of the Public Sphere*, Polity Press, 1989, 159-175.

Unit III: Virtual Culture

1. Jean Baudrillard, "Simulacra and Simulations", in *Jean Baudrillard: Selected Writings*, Ed. Mark Poster, Polity, 2001, 169-187.

2. Paul Virilio, "Foreword" to *Desert Screen: War at the Speed of Light*, London: Continuum, 2005, 1-16.

Unit IV: Popular Culture/ Subculture

1. Stuart Hall, "Notes on Deconstructing 'the Popular'", from *Popular Culture: A Reader*, Eds. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 64-71.

2. Dick Hebdige, "Subculture", from *Popular Culture: A Reader*, Eds. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 355-371.

Suggested Reading:

1. Aijaz Ahmad, *In Theory*, London: Verso 1992.

2. Amartya Sen, *The Argumentative Indian: Writings on Indian History, Culture and Identity*, Great Britain: Penguin, 2005.

3. Antonio Gramsci, *Selections from the Prison Notebooks*, London: Lawrence & Wishart,1971.

4. Cornel West, *Beyond Eurocentrism and Multiculturalism* , 2 Volumes, Monroe: Common Courage Press, Monroe,1993.

5. E.P. Thompson, *The Making of the English Working Class*, London: Penguin, 1978.

6. Glenn Jordan and Chris Weedon, *Cultural Politics*, Oxford: Blackwell, 1995.

7. Jill Forbes and Michael Kelly Eds., *French Cultural Studies*, Oxford, Oxford UP, 1995.

8. Lawrence Grossberg, Cary Nelson and Paula Treicher Eds., *Cultural Studies*, London: Routledge,1992.

9. Louis Althusser, *Reading Capital*, London: New Left Books, 1970.

10. Manuel Alvarado and John Thompson Eds.,*The Media Reader*, London: BFI, 1990.

11. Stanley Aronowitz, Barbara Matinson and Michael Menser Eds., *Techno-Science and Cyber-Culture*, London: Routledge, 1996.

PAPER-IV (Opt. ii): APPLIED LINGUISTICS-II

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Contents:

Unit 1: Approaches and methods in language teaching – Direct, Grammar Translation, Audio-lingual, Structural-situational and Communicative Language Teaching, The Communicative Approach, Brief Historical overview of English Language Teaching with reference to the Problematic of Teaching English in India (Pre and Post Independence Language Policies, Multilingualism, mother tongue influence, choice of a model for teaching).

Unit 2: Approaches to teaching Skills: LSR W, vocabulary and grammar at primary, secondary and tertiary/ advanced levels. Practical exercises in each of the skill areas. Making a language syllabus: needs analysis. Teaching of English for specific purposes.

Unit 3: Testing Language - Principles, relationship between teaching and testing, wash back effect, purposes and types of tests. Evaluation: Criteria, grading and determining levels of proficiency.

Unit 4: Materials for Teaching : Principles of selection, gradation and presentation; course books, work books, teachers' manuals, grammar, dictionaries. The use of a language corpus. The role of literature in language teaching.

Suggested Reading:

1. Tickoo, M.L., *Teaching and Learning English*, New Delhi: Orient Black Swan, 2003.

2. Howatt, A.P.R. and Widdowson, H.G., *A History of English Language Teaching*, China: Oxford University Press, 2004.

3. Larsen-Freeman, Diane, *Techniques and Principles in Language Teaching*, New Delhi: Oxford University Press, 2008.

4. Richards, Jack C. and Rodgers, Theodore S., *Approaches and Methods in Language Teaching*, U.K.: Cambridge University Press, 2005.

5. Krishnaswamy, N. and Krishnaswamy, L., *The Story of English in India*, New Delhi: Foundation Books, 2006.

6. Hughes, Arthur, *Testing for Language Teachers*, U.K.: Cambridge University Press, 2003.

7. Norrish, J**.,** *Language Learners and their Errors*, Hong Kong: MacMillan, 1983.

8. Agnihotri, R.K. and Khanna, A.L., *Problematising English in India*, New Delhi: Sage, 1995.

PAPER IV (Opt. iii): WORLD DRAMA IN TRANSLATION

Objectives:

The paper provides an interesting study of world drama with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping them develop ways of approaching, understanding and interpreting classics. This paper complements the other paper on *World Poetry/Novel in Translation.*

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 : Sophocles: *King Oedipus* (Penguin)

Unit-2 : Henrik Ibsen: *Ghosts* (Pearson)

Unit-3 : Anton Chekhov: *The Cherry Orchard* (Penguin)

Unit-4 : Luigi Pirandello: *Six Characters in Search of an Author* (Collected Works of Pirandello)

Suggested Reading:

1. John Gassner : *Masters of the Drama,* U.S.A.: Dover Publications, 1954.
2. Barrett H. Clark and George Freedley :*A History of Modern Drama,* New York: Appleton Century – Crofts, Inc., 1947.
3. Travis Bogard and W.I. Oliver,eds. :*Modern Drama - Essays in Criticism,* London: OUP, 1965.
4. M.C. Bradbrook :*Ibsen: The Norwegian, a Revaluation,* London: Chatto and Windus, 1966
5. Rolf Fjelde, ed. : *Ibsen:A Collection of Critical Essays,* Englewood Cliffs: Prentice Hall, 1965.
6. David Magarshack :*Chekhov : The Dramatist*, 1952.
7. Beverley Hahn : *Chekhov: A Study of the Major Stories & Plays,* London: Cambridge University Press, 1977.
8. Arnold P. Hinchliffe : *The Absurd,* London: Methuen, 1969.
9. James Vinson :*Contemporary Dramatists*, London: St. James Press, 1973.

PAPER-IV (Opt. iv)SHAKESPEARE-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to Social and Literary aspects of the Age of Shakespeare:

History Plays, the Sonnet, tragi-comedies, Shakespeare's longer poems, First Folio, Holinshed's Chronicles, the Fool in Shakespeare's plays, Shakespeare's contemporaries, the University Wits, Marlowe's Mighty Line.

Texts for detailed study:

1. *Hamlet*
2. *Antony and Cleopatra*
3. *Macbeth*
4. *The Winter's Tale*

Suggested Reading:

1. B.Ford (ed.) : *The Age of Shakespeare,* London: Penguin Books Ltd., 1982
2. A.C.Bradley : *Shakespearean Tragedy,* London*:* Macmillian and Co. Limited,1950.
3. G.W.Knights : *The Shakespearean Tempest,* London: Methuen & Co. Ltd. 1953.
4. Harry Levin : *The Question of Hamlet,* London: Oxford Uni. Press, 1978.
5. Alfred Harbage (ed.) : *Shakespeare, The Tragedies: A Collection of Critical Essays.20th Century Views on Shakespearean Tragedies,* Englewood Cliffs: Prentice Hall, 1964.
6. Matthew N. Proser : *The Heroic Image in five Shakespearean Tragedies,* New Jersey: Princeton Univ. Press, 1965.
7. Arthur Sewell : *Character and Society in Shakespeare,* Oxford: Clarendon Press, 1951.
8. Robert Speaight : *Nature in Shakespearean Tragedy,* London: Hollis & Carter, 1955.
9. Sigurd Burckhardt : *Shakespearean Meanings,* New Jersey:Princeton Uni. Press, 1968.
10. AniaLoomba, Martin Orkin (eds.) : *Post-colonial Shakespeares,* London and New York: Routledge, 1998.
11. Stanley Wells and Lena Cower Orlin : *Shakespeare: An Oxford Guide,* Oxford: OUP, 2003.
12. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England,* Berkeley: Univ. of California Press, 1988.
13. Valerie Wayne (ed.) : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare,* Ithaca: Cornell University Press, 1991.
14. Alexander Leggatt : *Shakespeare's Comedy of Love,* London: Methuen, 1974.
15. Jean Howard and Phyllis Rackin (eds.) : *Engendering a Nation: A Feminist Account of Shakespeare's English Histories,* London: Routledge, 1997.
16. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two,* Buckingham: Open University Press, 1995.

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FACULTY OF ARTS

SYLLABI

FOR

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) EXAMINATIONS, 2018-2019

- : 0:-

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. Political Science (Semester System)

(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %

   (ii) Continuous Assessment : 20 %

   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.

   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
		Total :	**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES :

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

(iii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card (D.M.C.).

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF POLITICAL SCIENCE FOR M.A. (Semester System) i.e. 1st and 3rd SEMESTERS NOVEMBER/DECEMBER, 2018 AND 2nd and 4th SEMESTERS APRIL/MAY, 2019 EXAMINATIONS

Outlines of Test

Note : Each paper/course shall carry 4 credits/100 marks.

A semester shall have at least 60 hours of lectures and 15 hours of seminars in the papers included in the syllabus.

FIRST SEMESTER

Course I : Western Political Thought-I

Course II : Key Concepts in Political Analysis

Course III : Indian Politics : Institutions at work (Compulsory)

Course IV : International Relations : An Historical Overview

SECOND SEMESTER

Course V : Western Political Thought (II)

Course VI : Comparative Politics : Understanding Advanced Industrial Societies

Course VII : Indian Politics : Political Processes (Compulsory)

Course VIII : Theories of International Relations

THIRD SEMESTER

Course IX : Indian Political Thought-I (Compulsory)

Course X : Comparative Politics-II : Understanding Developing Societies (Compulsory)

Or

Comparative Political Systems with special reference to USA, UK, China, Japan & Switzerland (Compulsory)

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) International Organization

Option (b) Transnational Actors in International Politics

Option (c) Politics of Development in India

Option (d) Peace and Conflict Resolution

Option (e) Rethinking Geopolitics : Criactial Perspectives

Option (f) Theories of Development

Option (g) Public International Law-I

Course XII : ***The candidates are required to offer any one of the following courses :***

Option (a) Democracy in India

Option (b) Government & Politics of India's Neighbours (Pakistan, Bangladesh, Nepal and Sri Lanka).

Option (c) Women and Politics in India

Option (d) Rights : Ideas and Movements

Option (e) Nationalism : Theory and Context

Option (f) New Political Geography in Comparative Perspective

Option (g) Policies and Politics of Development in India

Option (h) Public Administration

FOURTH SEMESTER

Course XIII : Indian Political Thought-II (Compulsory)

Course XIV : Foreign Policy of India (Compulsory)

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) Parties and Electoral Politics in India

Option (b) State Politics in India

Option (c) Decentralized Governance and Local Level Institutions in India

Option (d) Political Sociology with special reference to India

Option (e) Representing "India" : Geopolitical Imaginations

Option (f) Dalit Movements and Issues in India

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) Feminist Political Theory

Option (b) Major themes in Recent Political Philosophy

Option (c) Readings in the Philosophy of Resistance and Liberation

Option (d) Contemporary Debates in 20^{th} Century Marxism

Option (e) Introducing Federalism

Option (f) Public International Law-II

FIRST SEMESTER

Course I : WESTERN POLITICAL THOUGHT-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students to the major themes of western political thought. This will be done by undertaking an in-depth study of the key thinkers of this tradition.

Unit-I
1. Plato.
2. Aristotle.

Unit- II
1. St. Augustine.
2. St. Thomas Aquinas.

Unit-III

1. Machiavelli.
2. Hobbes.

Unit-IV
1. Locke.
2. Rousseau.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following secondary literature :

General Text Books :

1. Dunning, W.A., *A History of Political Theories,* Allahabad (any edition).
2. Ebenstein, William, *Great Political Thinkers,* IBH, Oxford (any edition).
3. Sabine, G.H., *A History of Political Theory,* Oxford and IBH, Bombay (any edition).
4. Russell, Bertand, *History of Western Philosophy,* Simon and Schuster, New York (any edition).
5. Strauss, Leo and Joseph Cropsey, *History of Political Philosophy,* Rand McNally, 1968.

Suggested Readings :

1. Allen, J.W., *A History of Political Thought in the Sixteenth Century,* Methuen, London, 1964 (Ch. II Machiavelli).
2. Bakshi, O.P., *Politics and Prejudice : Notes on Aristotle's Political Theory,* University of Delhi,1975.
3. Barker, E., "Introduction" in E. Barker (ed.), *The Politics of Aristotle,* OUP, Oxford.
4. Barker, E., *Greek Political Theory : Plato and His Predecessors,* Methuen, London, 1947.
5. Barnes, Jonathan, *Articles on Aristotle, Vol. 2, Ethics and Politics,* Duckworth, London, 1977.
6. Berlin, Isaiah, *The Originality of Machiavelli in I. Berlin, Against the Current,* OUP, Oxford, 1981.
7. Brian R. Nelson, *Western Political Thought,* Pearson, Delhi, 2004.
8. Brown, Keith C. (ed.), *Hobbes Studies,* Basil Blackwell, 1965.
9. Cole, G.D.H. (Translator), *The Social Contract and Discourses* by Jean Jacques Rousseau (Author) J.H. Brumfitt (Revised), London, Everyman's Library, 1993.
10. Colletti, Lucio, "Rousseau as Critic of Civil Society" in Lucio Colletti ed. From Rousseau to Lenin, OUP, Delhi, 1978.
11. Croix, GEM De Ste, *The Class Struggle in the Ancient Greek World,* Duckworth, London, 1981.
12. Crombie, I.M., *An Examination of Plato's Doctrines,* Vol. I R.K.P., London, 1962.
13. Cross, R.C. & A.B. Woozley, *Plato's Republic,* Macmillan, 1964.
14. Deane, Herbert, A., *The Politics and Social Ideas of St. Augustine,* Columbia University Press, New York, 1963.
15. Dunn, John, Locke, *Past Masters Series*, OUP, Oxford, 1984, Chs. 1 & 2.
16. Dunn, John, *The Political Thought of John Locke,* Cambridge University Press, Cambridge, 1969.
17. Filed, G.C., *The Philosophy of Plato,* London, 1969.
18. Gilby, Thomas, B., *The Political Thought of Thomas Aquinas,* University of Chicago Press, Chicago,1958.
19. Grimsley, Ronald, *The Philosophy of Rousseau,* OUP, London, 1973.
20. Hall, J.C., *Rousseau, Introduction to His Political Philosophy,* Macmillan, 1971.
21. Levinson, R.B., *In Defence of Plato,* Harvard University Press, Harvard, 1953.
22. Macpherson, C.B., "Introduction" in C.B. Macpherson (ed.), *Leviathan of Hobbes,* Penguin, Harmondsworth, 1968.
23. Macpherson, C.B., *Political Theory of Possessive Individualism, Hobbes to Locke,* OUP, London, 1962.
24. Masters, Roger D., *The Political Philosophy of Rousseau,* Princeton, 1968.
25. Muglan, R., *Aristotle's Political Theory,* Clarendon, Oxford, 1977.
26. Newman, N.L., *The Political Thought of Aristotle,* 4 Vols., Clarendon, Oxford, 1887-1902.
27. Pocock, J., *The Machiavellian Moment,* Princeton, 1975.
28. Popper, Karl, *The Open Society and Its Enemies,* Vol. I : The Spell of Plato, R.K.P., London, 1945.
29. Raphael, D.D., *Hobbes : Morals and Politics,* George Allen & Unwin, London, 1977.
30. Skinner, Q., *Machiavelli, Past Masters Series,* OUP, Oxford, 1981.
31. Skinners, Q., *Foundations of Modern Political Thought, Vol. 1 : The Rennaissance,* Cambridge University Press, Cambridge, 1978 (Chs. 4, 5, 6).

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Course II : KEY CONCEPTS IN POLITICAL ANALYSIS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course aims at introducing students to the key concepts which are the building blocks of political analysis. Each concept will be studied in terms of the main debates over its nature and scope in the discipline and its relationship with other concepts. After dong this course, the student will be able to discern the conceptural debates which underlie political phenomena.

Unit-I

What is Political? – Conflict, Class, Public and the Private
Power –Three Dimensional View of Power, Power as Influence, Exploitation, Hegemony, Power/Knowledge

Unit-II

State- Political Authority and Political Obligation, Modern State, State-Society relationship, Governmentality

Civil Society- Civil society and market, public sphere, civic virtue; community and civil society, State/civil society relationship

Unit III

Democracy- Who should rule and why? Protective, Pluralist and Radical democracy, Representation and Participation, Democracy and difference

Liberty – Negative and positive models, Civil and Political liberty, Freedom of expression, Alienation, Social conditioning and self realization

Unit-IV

Equality and Justice – Why equality; Equality of What; Universality and difference, Care
Rights- Natural, legal rights, human rights; Three generations of rights, Individual and group rights

Essential Readings:-

1. Andrew Heywood, *Political Theory*, Palgrave Macmillan, 2004 (Third Edition)
2. Andrew Heywood, *Politics*, Palgrave Macmillan, 2013 (Fourth Edition)
3. Rajeev Bhargava and Ashok Acharya (ed)*Political Theory: An Introduction* (Available in Hindi translation), Pearson Education, 2008
4. Andrew Vincent, *Modern Political Ideologies,* Wiley-Blackwell, 2010 (Third Edition)
5. Will Kymlicka, *Contemporary Political Philosophy* (Available in Hindi translation), OUP, 2002 (Second Edition)
6. Dudley Knowles, *Political Philosophy*, Routledge, 2001
7. Jonathan Wolff, *An Introduction to Political Philosophy,* OUP, 1996
8. John Dryzek, Bonnie Honig and Anne Phillips (eds), *The Oxford Handbook of Political Theory,* OUP, 2008
9. Jean Hampton, *Political Philosophy*, New Delhi, Oxford University Press, 1998

Suggested Readings:-

1. Adrian Leftwich: *What is Politics: The Activity and Its Study,* Polity Press, 2004
2. Amartya Sen, "Equality of What?" in S.M.McMurrin, ed., *The Tanner Lectures on Human Values*, Cambridge University Press, 1980, pp 195220.
3. Bhikhu Parekh, "Equality in a Multicultural Society", in *Rethinking Multiculturalism*, Palgrave, 2000
4. Colin Gordon et.al, eds., *The Foucault Effect: Studies in Governmentality*, University of Chicago Press, 1991
5. Craig Calhoun, "Civil Society and Public Sphere", in *Public Culture*, Vol 5, No2,1995.
6. David Held, *Models of Democracy*, Polity, 2006 (Third Edition)
7. David Held, *Political Theory and the Modern State*, Polity Press, 1989
8. David Miller: *The Liberty Reader*, Paradigm Publishers, 2006
9. John Rawls,' Justice as Fairness: Political not Metaphysical', *Philosophy and Public Affairs,* Vol 14 (3), 1985.
10. Michael Walzer, "Complex Equality", in *Spheres of Justice: A Defence of Pluralism and Equality*, Martin Robertson, 1983
11. Noberto Bobbio, 'Gramsci and the conception of civil society' in Chantal Mouffe (ed)*Gramsci and Marxist Theory*, Routledge,1979.
12. Robert Nozick, "Distributive Justice", in *Anarchy, State and Utopia*, Oxford, Blackwell, 1974
13. Ronald Dworkin, 'What is Equality? Part I: Equality of Welfare', *Philosophy and Public Affairs*, Vol 10/3, 1981
14. Ronald Dworkin, 'What is Equality? Part II: Equality of Resources', *Philosophy and Public Affairs*, Vol 10/4, 1981.
15. Selma Sevenhuijsen, 'The Place of Care: The Relevance of the Feminist Ethic of Care for Social Policy' in *Feminist Theory*, 4(2), 2003.
16. Simone Chambers and Will Kymlicka, eds., *Alternative Conceptions of Civil Society*, Princeton University Press, 2002.
17. Steven Lukes, *Power*: *A Radical Critique*, Palgrave Macmillan, 2005.

Semester-I

Course-III - Indian Politics: Institutions at Work (compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course*:*: Recent India has witnessed a major thrust in the study of India's political and economic processes. An important component of many such studies has been to refer to the relevant constitutional and institutional aspects. Such studies, sensitive to the constitutional experiences of a 'new democracy', have enriched themselves by undertaking an in-depth analysis of the way the constitutional provisions have been put into practice and also by making an attempt to explore the core ideas that guided the constitution-makers during the deliberations in the Constituent Assembly. The paper aims at making the students aware of the text of the Constitution of India, important debates and the way the institutions have worked over the last more than six and half decades.

1. Making of Political Institutions
a) Constituent Assembly Debates: Secularism, Rights
b) Preamble, Fundamental Rights and the Directive Principles of State Policy
c) Constitutional Amendments related to Right to Property: Nature, Problems and Politics

2. Federal Institutions
a) Strong Centre Framework: Reading Relevant Constitutional Text
b) Autonomy and Devolution: Sarkaria Commission Recommendations
c) Local Self Government: Politics of Decentralization

3. Executive and Legislature
a) President and Prime Minister: Modes of exercise of powers
b) Governors and Chief Ministers: Changing Role and Institutional Relationship
c) Union Parliament: Composition, Powers, Reservations and Parliamentary Committees

4. Judicial Power and Rule of Law
a) Supreme Court: Jurisdictions
b) Judicial Independence, Judicial Review
c) Judicial Activism, Public Interest Litigation
d) Election Commission of India and Electoral Reforms

Essential Readings

- Austin, Granville, *The Indian Constitution: Cornerstone of a Nation*, Oxford University Press, Delhi, 1966.
- Austin, Granville, *Working a Democratic Constitution: A History of the Indian Experience*, Oxford University Press, Delhi, 1999.
- Basu, D.D., *Introduction to the Constitution of India*, Lexis Nexis, Gurgaon, 2015.
- Bhargava, Rajeev, ed., *Politics and Ethics of the Indian Constitution*, Oxford University Press, New Delhi, 2008.
- Brass, Paul R., *The Politics of India since Independence*, Cambridge University Press, London, 1994.
- Chaube, S. K., *Constituent Assembly of India, Springboard of Revolution,* People's Publishing House, New Delhi, 1973.
- Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
- Hasan, Zoya et al., eds., *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, New Delhi, 2002.
- Kapur, Devesh and Pratap B Mehta (eds.) *Public Institutions in India: Performance and Design*, Oxford University Press, New Delhi, 2007.

Suggested Readings:-

Unit 1

1. Arora, Balveer and Douglas Verney**,** eds., *Multiple Identities in a Single State*: *Indian*
2. Bandyopadhyay, Sekhar (ed.) *Nationalist Movement in India*, Oxford University Press, New Delhi, 2009.
3. Constituent Assembly Debates (Selections).
4. *Federalism in Comparative Perspective*, Konark Publishers, New Delhi, 1995.
5. Mehta, Pratap Bhanu, *The Burden of Democracy*, Penguin, New Delhi, 2003
6. Mehta, V. R. and Thomas Pantham (ed.), *Political Ideas in Modern India,* Delhi, Sage, 2006.
7. Mukherji, Nirmal and Balveer Arora, eds., *Federalism in India: Origins and Development*, Vikas Publishing House, New Delhi, 1992.
8. Rao Shiva B., *The Framing of India's Constitution, A Study and Select Documents*, Tripathi, Bombay, 1968.
9. Saez, Lawrence, *Federalism without a Centre*: *The Impact of Political and Economic Reforms on India's Federal System*, Sage, New Delhi, 2002.

Unit 2

1. Baxi Upendra, *The Supreme Court in Indian Politics*, Eastern Book Company, New Delhi, 1980.
2. Baxi, Upendra, *Courage Craft and Contention: The Indian Supreme Court in the*
3. *Eighties,* N.M. Tripathi, Bombay, 1985.
4. Kashyap Subash, ed., *Constitutional Reforms*: *Problems, Prospects and Perspectives*, Radha Publications, New Delhi, 2004.
5. Kripal B.N. et al., eds., *Supreme but not Infallible*: *Essays in Honour of the Supreme Court of India*, Oxford University Press, New Delhi, 2000.
6. Sathe S.P., *Judicial Activism in India: Transgressing Borders and Enforcing Limits*, Oxford University Press, New Delhi, 2002.
7. Singh Ujjwal Kumar, *State, Democracy and AntiTerror Laws*, Sage Publications, New Delhi, 2007.

Unit 3

1. *2002 Jammu and Kashmir Assembly*, Penguin, New Delhi, 2004.
2. Bhagat A.K., *Elections and Electoral Reforms*, Vikas Publications, New Delhi, 1996.
3. Bhambhri, C.P., *The Indian Prime Minister: A Framework for Political Analysis,* The Indian Law Institute, New Delhi.
4. *Change*, Vol II, Oxford University Press, New Delhi, 2008.
5. Konark Publishers, New Delhi, 1996.
6. Lyngdoh J. M., *Chronicle of an Impossible Election*: *The Election Commission and the*
7. Manor James, ed., *Nehru to the Nineties: The Changing Office of Prime Minister in India*, Viking Press, New Delhi, 1994.
8. Mehra Ajay K. and V. A. Pai Panandiker, *The Indian Cabinet: A Study in Governance***,**
9. Morris Jones W.H., *Parliament in India*, University of Pennsylvania Press, Philadelphia,
10. Noorani, A G, *Constitutional Questions in India: The President, Parliament and the States*, Oxford University press, New Delhi, 2002.
11. PA, 1957.
12. Rudolph Lloyd and Susanne, *The Realm of Institutions*: *State Formation and Institutional*

Unit 4

1. 2001.
2. Baxi, Upendra and Bhikhu Parekh (ed.), *Crisis and Change in Contemporary India,* Sage, New Delhi, 1994.
3. Dhavan, Oxford University Press, Delhi, 1989.
4. Frankel Francine et al., eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
5. Galanter Marc, *Law and Society in Modern India*, edited with an introduction by Rajeev
6. Hardgrave Robert L., *India*: *Government and Politics in a Developing Nation*, Harcourt,
7. Jovanovich, New York, 1980.
8. Kaushik, Susheela (ed.), *Indian Government and Politics* (Hindi), Directorate of Hindi Implementation, Delhi University, 1990.
9. Keith A.B., *Constitutional History of India*, Methuen and Co, London, 1936.
10. Khan, Rasheeduddin (ed.), *Rethinking Indian Federalism, Indian Institute of Advanced Studies,* Shimla, 1997
11. Kohli Atul, ed., *The Success of India's Democracy*, Cambridge University Press, London,
12. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Cambridge University Press, Cambridge, 1991.
13. Noorani A.G., *Constitutional Questions in India***:** *The President, Parliament and the States***,** Oxford University Press**,** Delhi, 2000.
14. Palkivala, N.A., *Our Constitution Defaced and Defiled,* Macmillan, Delhi, 1974.
15. Pylee M.V., *India's Constitution*, Asia Publishing House, New Delhi, 1962.
16. Rao K.V. and K.M. Munshi, *Parliamentary Democracy of India*, The World Press Private Ltd, Calcutta, 1965.
17. Sudarshan, R., 'The Political Consequences of Constitutional Discourse' in T.V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Vol. I, OUP, Delhi, 1997.
18. Thakur, Ramesh, *The Government and Politics of India,* London, Macmillan Press, 1986
19. Vora, Rajendra and Suhas Palshikar (eds.), *Indian Democracy: Meanings and Practices,* Sage, New Delhi, 2003.
20. Weiner Myron, *The Indian Paradox*: *Essays in Indian Politics*, edited by Ashutosh Varshney, Sage Publications, New Delhi, 1989.

Journals to be Consulted

- ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues only on web)
- ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm

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Course IV : INTERNATIONAL RELATIONS : AN HISTORICAL OVERVIEW

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The purpose of this paper is to provide an historical overview of major developments in International Relations since the beginning of the twentieth century.

Unit-I

Crisis and Collapse of the 19th Century International System.
Two World Wars : Their causes and consequences.
Decolonization, rise and decline of third worldism.

Unit-II

Emerging of super powers, forms and phases of Bioplarity in the cold war.
Nuclear Politics : Issues of Proliferation, Discrimination and Hegemony.

Unit-III

Collapse of the Socialist Bloc : Alternative interpretation of its causes, consequences and future possibilities. End of cold war.
Emerging Issues in a Changing World : Ethnicity, environment, sustainable development, gender & peace.

Unit-IV

Emerging world order. Globalization, Regionalism and Trading,Trading blocks (NAFTA, APEC, EU & SAPTA) Changing role of IMF and The World Bank : Structural Adjustment Programmes. Transformation Facilities and Conditionalties, world trade organization.

Essential Reading

1. Rumki Basu, *International Politics: Concepts, Theories and Issues, SAGE,* 2012.
2. John Baylis, Steve Smith, Patricia Owens, *The Globalization of World Politics: An Introduction to International Relations,* Oxford University press, 2014.
3. Peter Calvocoressi, *World of Politics since 1945,* Longman, 1989 edn.

4. Christian Reus-Smit and Duncan Snidal, The Oxford Handbook of International Relations, OUP, 2010.
5. Mark V. Kaupp Paul R. Viotti, *International Relations And World Politics: Security, Economy, Identity* , Prentice Hall- Gale, 1996.
6. V. N. Khanna, *International Relations*, S.Chand (G/L) & Company Ltd; Fifth edition 2013

Suggested Readings :

1. Eric Hobsbawm, *Age of Extremes, The Short Twentieth Century,* 1914-91, Viking, 1995.
2. Paul Kennedy, *The Rise and Fall of Great Powers : Economic Change and Military Conflict from 1500 to 2000,* Fontana, 1988.
3. Paul Kennedy, *Preparing for the Twenty-First Century,* Indus, Harper Collins, 1993.
4. Kanta Ahuja *et al* (ed.), *Regime Transformations and Global Realignments* : Indo-European Dialogue *on Post-Cold War World,* Sage, 1993.
5. Peter Calvocoressi, *World of Politics Since 1945,* Longman, 1989 edn.
6. R. Giplin, *The Political Economy of International Relations,* Princeton, 1987.
7. Rama S. Melkote and A. Narasimha Rao, *International Relations,* Sterling, 1992.
8. R. Stubbs and G.R.D. Underhill, *Political Economy and the Changing Global Order,* Macmillan, 1994.
9. G. Hastedt (ed.), *One World, Many Voices : Global Perspectives on Political Issues,* Prentice Hall, 1995.
10. J.A. Camilleri and J. Falk, *The End of Sovereignty : The Politics of a Shrinking and Fragmenting World,* Edward Elgar, 1992.
11. Bhupinder Brar, *Explaining Communist Crises,* Ajanta, 1994.
12. Richard Little and Michael Smith (eds.), *Perspectives on World Politics,* Routledge, 2006.
13. Chris Brown, *Understanding International Relations,* Palgrave, 2001.
14. Peter Calvocoressi, *World Politics : 1945-2000,* Pearson Education, 2005.

SECOND SEMESTER

Course V : WESTERN POLITICAL THOUGHT (II)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students the major themes of western political thought. For this purpose, the paper undertakes a study of the key thinkers of this tradition.

Unit-I

1. Jeremy Bentham.
2. J.S. Mill.

Unit-II

1. Hegel.
2. Karl Marx.

Unit-III

1. Antonio Gramsci .
2. Herbert Marcuse.

Unit-IV

1. Hannah Arendt.
2. John Rawls.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following literature :

1. Plamenatz, John, *The English Utilitarians,* Basin Blackwell, Oxford, 1949.
2. Thakurdas, Frank, *The English Utilitarians and Idealists,* Vishal, Delhi, 1978.
3. Brinton, Crane, *English Political Thought in the 19th Century,* Havard University Press, 1954.

Suggested Readings :

1. Parekh, Bhikhu, *Bentham's Political Thought,* Barnes, and Noble, New York, 1973.
2. Marcuse, H., *Reason and Revolution : Hegel and the Rise of Social Theory,* RKP, London, 1955.
3. Evans, Michael, *Karl Marx*, George Allen & Unwin, 1975.
4. Kolakowski, Leszek, *Main Currents of Marxism, Vol. I,* The Founders, OUP, Oxford, 1978.
5. Cohen, G.A., *Karl Marx's Theory of History : A Defence,* Clarendon, Oxford, 1978.
6. Avineri, Shlomo, *The Social and Political Thought of Karl Marx,* S. Chand, New Delhi, 1968.
7. Ollman, Bertell, *Alienation : Marx's Concept of Man in Capitalist Society,* Cambridge University Press, Cambridge, 1977.
8. Althusser, Louis, *For Marx,* New Left Books, 1977.
9. Bottomore, T.B. (ed.), *A Dictionary of Marxist Thought,* Blackwell, Oxford, 1983.
10. Hoare, Q. and Smith, G.N. (ed.), *Selection from the Prison Notebooks of Antonio Gramsci,* International Publishers, New York, 1971.
11. Mouffe, C. (ed.), *Gramsci and Marxist Theory,* Routledge, 1979.
12. Sassoon, Anne, S., *Gramsci's Politics,* Croom Helm, London, 1980.
13. Arendt, Hannah, *The Origins of Totalitarianism,* Harcourt Brace, New York, 1951.
14. Arendt, Hannah, *The Human Conditions,* Chicago, University Press, Chicago, 1958.
15. Canovan, Margaret, *The Political Thought of Hannah Arendt,* Harcourt Brace, New York, 1974.
16. Parekh, Bhikhu C., *Hannah Arendt and the Search for A New Political Philosophy,* Humanities Press, Atlantic Highlands, 1991.
17. Rawls, John, *A Theory of Justice,* Oxford University Press, Oxford, 1971.
18. Rawls, John, *Political Liberalism,* Columbia University Press, New York, 1993.
19. Marcuse, Herbert, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society,* Beacon, Boston, 1964.
20. Anthony de Crespigny and Kenneth Minogue, *Contemporary Political Philosophers,* Dodd, Mead, and Company, New York, 1975.
21. Bhikhu, Parekh, *Contemporary Political Thinkers,* Martin Robbertson, Oxford, 1982.

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Course VI : COMPARATIVE POLITICS-I : UNDERSTANDING ADVANCED INDUSTRIAL SOCIETIES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial societies, and this will be undertaken in a comparative framework.

Unit-I

Comparative Politics : Meaning , Significance, Evolution, Nature and Content.
Comparative Method : Problems of comparative political analysis.

Unit-II

Modernity in Western Societies : meaning, evolution of modernity since the Christian era, nature and forms-political , social , economic and cultural.
Recent Debates: Modernity and class, Modernity and gender.

Unit-III

State and Civil Society : Theories and recent debates.
Constitutionalism : Theory and Practice in Contemporary States.

Unit-IV

Understanding Culture and Social change : Political Culture and Political Socialisation.
Political Participation and Representation : Political parties, Pressure groups and new social movements.

Readings :

Students are advised to see the relevant entries in the following reference books—

Seymour Martin Lipset (ed. in chief). The Encyclopedia of Democracy, Volumes I, II and III, Routledge, London, 1955; Vernon Bogdanor (ed.), The Blackwell Encyclopedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Specific Readings :

1. Almond, G., 'The Return to the State', *American Political Science Review,* 82, No. 3, September, 1998.
2. Caramani, Daniele, *Comparative Politics*, OUP, New Delhi.
3. Carnoy, Martin, *The State and Political Theory,* Princeton University Press, Princeton, 2016 (1984)
4. Chandhoke, Neera, "Limits of Comparative Political Analysis," *Economic and Political Weekly,* Vol. XXXI, No. 4, January 27, 1996.
5. Chilcote, Ronald, *Comparative Politics: The Search for a Paradigm Reconsidered,* Westview, Boulder (Second Edition), 1994.
6. Hague, Rod, Martin Harrop and Shaun Breslin, *Comparative Government and Politics: An Introduction,* Macmillan, London, 1993
7. Jessop, B., *State Theory : Putting Capitalist States in their Place,* Polity Press, Cambridge, 1990.
8. Johary, J.C. , *Comparative Politics*, Sterling Publisher, New Delhi, 2011.
9. Synder, R. (2001). 'Scaling Down: The Subnational Comparative Method'. *Studies in Comparative International Developmen*t. 36(1): 93-110
10. Tillin, Louis (2013). 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2): 235-240.

Suggested Readings

1. Almond, G.A., and S. Verba (eds.), *The Civic Culture Revisited,* Little Brown, Boston, 1980.
2. Almond, Gabriel G. Bingham Powell, Kaare Strom and Russel T. Dalton, *Comparative Politics Today,* Pearson Education, Delhi, 2005.
3. Anthias, Floyas and Nira Yuval-Davis, *Racialized Boundaries, Race, Nation, Gender, Colour and Class and the Anti-Racist Struggle,* Routledge, London, 1992.
4. Ball, A., and F. Millward, *Pressure Politics in Industrial Societies,* Macmillan, London, 1986.
5. Bellamy, Richard and Dario Castiglone (ed.), *Constitutionalism in Transformations : European and Theoretical Perspectives, Political Studies Vol. XLIV,* Special Issue, 1996.
6. Block, F., 'Beyond Relative Autonomy' in Ralph Miliband and John Saville (eds.), *The Socialist Register,* Merlin, London, 1980.
7. Blondel, J., *The Discipline of Politics,* Butterworth, London, 1981.
8. Bogdanor, V., (ed.), *Constitutions in Democratic Politics,* Gower, Aldershot, 1988.
9. Bombwall, K.R., *World Constitutions,* Modern Publishers, Ambala, 1980.
10. Calvert, Peter, *Revolution and Counter Revolution,* Open University Press, Milton Keynes, 1990.
11. Cammack, P., 'Statism, New Institutionalism and Marxism' in Ralph Miliband and Leo Panitch (eds.), *The Socialist Register,* Merlin, London, 1990.
12. Cantori, Louis J., and Andrew H. Ziegler (eds.), *Comparative Politics in the Post-Behavioural Era,* Lynne Rienner Publisher, Boulder, 1988.
13. Cigler, C., and B. Loomis (eds.), *Interest Group Politics, Congressional Quarterly* Press, Washington DC, 1985.
14. Dalton, Russel, J., "Comparative Politics of the Industrial Democracies : From the Golden Age to Island Hopping" in William Crotty (ed.), *Comparative Politics Policy and International Relations,* Northwestern University Press, Evanstone, 1991.

15. Dalton, Russell and Manfred Kurchler (eds.), *Challenging the Political Order,* New York, 1990.
16. Dogan, Mattei and Ali Kazancigilli (eds.), *Comparing Nations, Concepts, Strategies, Substance,* Blackwell, Oxford, 1994.
17. Dogan, Mattei and Dominique Pelassy, *How to Compare Nations, Strategies in Comparative Politics,* Chatham House, 1984 (Indian reprint) Vision Books, New Delhi, 1988.
18. Dunleavy, P., and B. O' Leary, *Theories of the State,* Macmillan, London, 1987.
19. Easton, David, 'The Political System Beyond the State', *Political Theory, No. 3,* 1981.
20. Eckstein, Harry and David E., Apter (ed.), *Comparative Politics, A Reader,* The Free Press of Glencoe, Collier-Macmillan, London, 1993.
21. Elster, Jon, 'Ways of Constitution-making' in Axel Hadenius (ed.), *Democracy's Victory and Crisis,* Cambridge University Press, Cambridge, 1997.
22. Evans Peter B., P.D. Rueschemeyer and T. Skocpol (ed.), *Bring the State Back in,* Cambridge University Press, Cambridge, 1985.
23. Gellner, E., 'Civil Society in Historical Context', *International Social Science Journal, No. 129,*1991.
24. Gellner, Ernest, *Nations and Nationalism,* Blackwell, Oxford, 1983.
25. Gibbins, J., (ed.), *Contemporary Political Culture : Politics in a Post-Modern Age,* Sage, London,1989.
26. Glazer, N., and D. Moynihan (eds.), *Ethnicity: Theory and Experience,* Harward University Press,Cambridge, 1975.
27. Graham, B.D., *Representation and Party Politics: A Comparative Perspective,* OUP, Oxford, 1990.
28. Hall, Stuart and Bram Gieben, *Formations of Modernity,* Polity, Cambridge, 1992.
29. Hawkesworth, Mary and Maurice, Kogan (ed.), *Encyclopedia of Government and Politics,* Routledge, London, 1992.
30. Held, D., *Political Theory and the Modern State,* Polity Press, Cambridge, 1989, 1990.
31. Hobsbawm, Eric, *Nations and Nationalism since 1780,* Cambridge, 1991.
32. Hoffman, J., *State Power and Democracy,* Wheatsheaf, Sussex, 1988.
33. Hutchinson, J., and A.D. Smith (eds.), *Nationalism,* OUP, Oxford, 1994.
34. Lane, J.E., *Constitutions in Political Theory,* Manchester University Press, Manchester, 1996.
35. Lane, Jan-Erik and Svante Ersson, *Comparative Politics : An Introduction and New Approach,* Polity, Cambridge, 1994, (Ch. 1, Comparative Approaches, Ch. 6, The Logic to Model Building in Comparative Government).
36. LaPalombara, Joseph and Myron Weiner (ed.), *Political Parties and Political Development,* Princeton University Press, Princeton, 1966.
37. Larrain, Jorge, *Theories of Development,* Polity, Cambridge, 1989. 1.12 Mohanty, Manoranjan, "Moving the Centre in the Comparative Study of Politics, An Approach to Creative Theory", Unpublished Paper (Photostat copy in Political Science Departmental Library, Panjab University).
38. Michael G. Ruskin, Robert L. Cord, James A. Medeiros and Walter S. Jones (eds.), *Political Science: An Introduction,* Prentice Hall, New Jersey, 2005.
39. Miliband, Ralph, *The State in Capitalist Societies,* Weidenfeld and Nicolson, London, 1968.
40. Moore Jr., Barrington, *Social Origins of Dictatorship and Democracy : Lord and Peasant in the Making of the Modern World,* Penguin, 1967.

41. Mueller-Rommel, F. (ed.), *New Politics in Western Europe,* Boulder, 1989.
42. Nordlinger, E., 'The Return to the State, Critique', *American Political Science Review,* Vol. 82, 3 September, 1988.
43. Preuss, Ulrich, K., 'Constitutionalism – Meaning, Endangerment, Sustainability' in Satish Saberwal and Heiko Sievers (ed.), *Rules, Laws, Constitutions,* Sage, New Delhi, 1998.
44. Sartori, G., *Parties and Party Systems: A Framework for Analysis,* Cambridge University Press, Cambridge, 1976.
45. Sartori, Giovanni, 'Compare Why and How, Comparing, Miscomparing and the Comparative Method' in Mattei Dogan and Ali Kazancigil (ed.) *Comparing Nations,* Blackwell, Oxford, 1994, Pp. 14-34.Wiarda, H. J., *New Directions in Comparative Politics,* Westview Press, Boulder, 1991.
46. Skocpol, Theda, *States and Social Revolutions: A Comparative Analysis of France, Russia nad China,* Cambridge University Press, Cambridge, 1979.
47. Smith, A.D., *The Ethnic Origins of Nation,* Basil Blackwell, Oxford, 1986.
48. Taylor, Charles, 'Modes of Civil Society', *Public Culture, Vol. 3,* No. 1, Fall 1990.
49. Wilson, G., *Interest Groups,* Blackwell, Oxford, 1990.

Course VII : INDIAN POLITICS : POLITICAL PROCESSES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course aims to introduce students to politics in India as it has evolved after decolonization. The themes discussed during the course will be those that are crucial to the understanding of the way political processes in the largest democracy of the world unfold in varying form. The paper takes up the issues for discussion related to the way democratic politics in India has evolved and been shaped in an underdeveloped, multi-ethnic setting along the lines of caste, class, and linguistic and religious identities. It also focuses on the way India's democratic state has fared in promoting economic development, both growth and equity.

1. ***Democratic Politics in Independent India***
a) Legacies of the Nationalist Movement.
b) Challenges of Democratic Transition and Consolidation
c) Nature of Indian State: Class, Gender

2. ***Political Parties and Electoral Politics***
a) Evolution and Shifts in Party System: Dominant Party System, Its Breakdown
b) Electoral Politics: Emerging Trends Since 1990's

3. ***Caste, Religion and Region***
a) Caste and Politics: Rise of Dalit and Backward Caste Politics
b) Religion and Politics: Secularism, Communalism and Rise of Hindutva
c) Region and Politics: Linguistic Identities and Reorganization of States; Politics of New States

4. ***State, Economy and Development***
a) Development Planning Model: Concept, Strategies, Policies, and Critique
b) Economic Transition: Causal Explanations
c) New Economic Policies: Social implications for the Weaker Sections in the Society

Essential Readings

1. Brass, Paul, *The Politics of India since Independence*, Cambridge University Press, Cambridge, 1994, Introduction.
2. Chandhoke, Neera and Praveen Priyadarshi, *Contemporary India: Economy, Society, Politics,* Pearson Education, New Delhi, 2009
3. Corbridge, Stuart and John Harriss, *Reinventing India*, Oxford University Press, Delhi, 2000.
4. deSouza, Peter and E Sridharan, *India's Political Parties*, New Delhi, Sage, 2007.
5. Francine, Frankel, et al, eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
6. Jayal, Niraja Gopal, ed., *Democracy in India,* Oxford University Press, New Delhi, 2001.
7. Kaviraj Sudipta, *The Trajectories of the Indian State*, Permanent Black, New Delhi, 2010.
8. Kohli, Atul, ed., *The Success of India's Democracy*, Cambridge University Press, Cambridge, 2001.
9. Mehta, Pratap Bhanu and Niraja Gopal Jayal, *The Oxford Companion to Politics of India*, New Delhi, Oxford University Press, 2010.
10. Menon, Nivedita, *Gender and Politics in India*, Delhi, Oxford University Press, 2001.
11. Morris-Jones W.H., *The Government and Politics in India*, B.I. Publications, New Delhi,
12. Mukherji, Rahul, *India's Economic Transition: The Politics of Reforms*, *Oxford* University *Press, New Delhi, 2014.*
13. Varshney, Ashutosh, *Battles Half Won: India's Improbable Democracy*. *Penguin, New Delhi, 2014.*

Suggested Readings

Unit 1

1. Chhibber, Pradeep, *Democracy without Associations*, University of Michigan Press, Michigan, 1999.
2. Dubey, Abhay Kumar (ed.), *Loktantra Ke Saat Adhaya,* Vaani Prakashan, Delhi, 2002.
3. Hasan, Zoya, E. Sridharan and R. Sudarshan (eds.), *India's Living Constitution: Ideas, Practices, Controversies,* Permanent Black, Delhi, 2002.
4. Jenkins, Rob, *Democratic politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
5. Kaviraj, Sudipta, "A Critique of the Passive Revolution", *Economic and Political Weekly*, Vol. 23, No. 45/47, Special Number, Nov. 1988.
6. Kaviraj, Sudipta, "The Culture of Representative Democracy" in Partha Chatterjee (ed.), *Wages of freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1988.
7. Kohli, Atul, *India's democracy: An Analysis of Changing State-Society Relations*, Princeton University Press, Princeton, 1988.
8. Kothari, Rajni, "The Democratic Experiment" in Partha Chatterjee (ed.), *Wages of Freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1998.
9. Mehta, Pratap Bhanu, *Burden of Democracy,* Penguin, New Delhi, 2004.
10. Morris –Jones, W. H., *Politics Mainly Indian*, Orient Longman, New Delhi, 1978.
11. Nayyar, Deepak, 'Economic Development and Political Democracy-Interaction of Economics and Politics in Independent India', *Economic and Political Weekly, 33(49*), 5 December, 1998.
12. Nayyar, Deepak, 'Economic Growth in Independent India', *Economic and Political Weekly,* 41(15), 15 April, 2006.

13. Rudolph, Lloyd and Susanne, *In Pursuit of Lakshmi*: *Political Economy of the State in India*, University of Chicago Press, Chicago, 1987.
14. Satyamurthy, T.V., ed., *State and Nation in the Context of Social Change*, vol. l, Oxford University Press, Delhi, l994.
15. Vora, Rajendra and Suhas Palshikar, eds, *Indian Democracy: Meanings and Practices*, Sage, New Delhi, 2004.

Unit 2

1. Adeney, Katherine and Saez Lawrence, eds., *Coalition Politics and Hindu Nationalism*, Routledge, London, 2005.
2. Brass, Paul R. and Marcus F. Franda, (eds), *Radical Politics in South Asia*, MIT Press, Cambridge, 1973.
3. Hansen, Thomas and Jaffrelot Christophe, eds., *The BJP and the Compulsions of Politics in India,* Oxford University Press, New Delhi, 1998.
4. Hasan, Zoya ed., *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
5. Kothari, Rajni, *State against Democracy: In Search of Humane Governance*, Ajanta, Delhi, 1988.
6. Mehra, Ajay K., Khanna, D.D., and Gert W. Kueck, eds., *Political Parties and Party Systems,* Sage, New Delhi, 2003.
7. Weiner, Myron, *Party Politics in India: The Development of a Multiparty System,* Princeton University Press, New Jersey, 1957.
8. Yadav, Yogendra and Suhas Palshikar (eds) Political Parties and Elections in Indian States :1990-2003, *Journal of Indian School of Political Economy,* 2003.

Unit 3

1. Agarwal Bina, ed., *Structures of Patriarchy*: *State, Community and Household in Modernizing Asia*, Kali for Women, New Delhi, 1988.
2. Bardhan, Pranab*, The Political Economy of Development in India,* Oxford University Press, New Delhi, 1998.
3. Baruah, Sanjeeb (ed.) *Ethnonationalism in India: A Reader*, Oxford University Press, New Delhi, 2010.
4. Baruah, Sanjeeb, *India against Itself*: *Assam and the Politics of Nationality*, Oxford University Press, New Delhi, 2003.
5. Bhargava, Rajeev, ed., *Secularism and Its Critics*, Oxford University Press, New Delhi, 1998.
6. Brass, Paul, *Language, Religion and Politics in North India,* Cambridge University Press, London, 1974.
7. Fernandes, Leela, *India's New Middle Class*: *Democratic Politics in an Era of Economic Reform*, University of Minnesota Press, 2006.
8. Frankel, Francine and M.S.A. Rao, eds., *Dominance and State Power in India*: *Decline of a Social Order,* Oxford University Press, New Delhi, 1989.
9. Ganguly, Sumit (ed.) The State of India's Democracy, Oxford University Press, New Delhi, 2009.
10. Guru, Gopal (ed.), *Humiliation: Claims and Context*, Oxford University Press, New Delhi, 2009.
11. Jaffrelot, Christophe, *India's Silent Revolution: The Rise of the Low Castes in Northern Indian States,* Permanent Black, Delhi, 2003.
12. Jaffrelot, Christophe, *The Hindu Nationalist Movement and Indian Politics, 1925 to the 1990s,* Penguin Books, New Delhi, 1996.
13. Jenkins, Rob (ed.), *Regional Reflections: Company Politics across India's States,* Oxford University Press, New Delhi, 2004.
14. Kanungo, Pralay, *RSS's Tryst with Politics: from Hedgewar to Sudarshan,* Manohar, Delhi, 2002.
15. King, Robert D., *Nehru and Language Politics in India,* Oxford University Press, Delhi, 1995.

16. Kohli, Atul and Prerna Singh, edited, Handbook of Indian Politics, Routledge Press, 2013
17. Mcguire, John and Ian Copland (eds) *Hindu Nationalism and Governance*, Oxford University Press, Delhi, 2008.
18. Menon, Nivedita ed., *Gender and Politics in India*, Oxford University Press, New Delhi,
19. Misra B.B., *The Indian Middle Class- Their Growth in Modern Times*, Oxford University Press, Delhi, 1978.
20. Mohanty, Manoranjan ed., *Caste, Class and Gender*, Sage, Delhi, 2000.
21. Pai Sudha, *Dalit Assertion and the Unfinished Democratic Revolution*: *The Bahujan Samaj Party in Uttar Pradesh*, Sage, New Delhi, 2002.
22. Pai, Sudha , ed., *Handbook on Politics in the Indian States Regions*, *Political Parties and Economic Reforms,* Oxford University Press, New Delhi, 2013.
23. Prakash, Amit, *Jharkhand*: *Politics of Development and Identity*, Orient Longman, Hyderabad, 2001.
24. Samaddar, Ranabir, *The Politics of Autonomy: Indian Experience,* Sage, New Delhi, 2005.
25. Sarangi, Asha (ed.) *Language and Politics in India*, Oxford University Press, New Delhi, 2010.
26. Sathyamurthy T.V. ed., *Region, Religion, Caste, Gender and Culture in India*, Oxford University Press, Oxford, 1998.
27. Shah Ghanshyam ed., *Dalit Identity and Politics*, Sage, New Delhi, 2001.
28. Vanaik, Achin, *Communalism Contested: Religion, Modernity and Secularization,* Vistaar Publications, New Delhi, 1997.
29. Weiner Myron, *Sons of the Soil*: *Migration and Ethnic Conflict in India,* Oxford University Press, New Delhi, 1987.
30. Wilkinson, Steven I (ed.) *Religious Politics and Communal Violence*, Oxford University Press, New Delhi, 2007.

Unit 4

1. Bardhan, Pranab, *The Political Economy of Development in India,* Oxford University Press, Delhi, Revised Edition, 1997.
2. Brar, Bhupinder and Pampa Mukherjee, eds, *Facing Globality: Politics of resistance, Relocation and Reinvention in India,* New Delhi, Oxford University Press, 2012.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and the Politics of Identity in India* , Pearson-Longman, New Delhi , 2008.
4. Chatterjee Partha, ed., *Wages of Freedom*: *Fifty Years of the Indian Nation State*, Oxford University Press, New Delhi 1998.
5. Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
6. Frankel, Francine R., *India's Political Economy,* 1947-2004, 2nd edition, Oxford University Press, New Delhi, 2005.
7. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, OUP, Delhi, 1999
8. Kaviraj Sudipta, *The Enchantment of Democracy and India*, Permanent Black, New Delhi, 2010.
9. Kohli, Atul, *Democracy and Development in India: From Socialism to Pro-business,* Oxford University Press, New Delhi, 2010.
10. Kohli, Atul, *Poverty amid Plenty in the New India*, Oxford University Press, New Delhi, 2012.
11. Lakshman, Narayan, *Patrons of the Poor: Caste Politics and Policy Making in India,* Oxford University Press, New Delhi, 2011.
12. Mooji, Jos, *The Politics of Economic Reforms in India,* Sage, New Delhi, 2005.
13. Nayar, Baldev Raj (ed.) Globalization and Politics in India, Oxford University Press, New Delhi, 2010.

14. Patnaik, Prabhat, "Political Strategies of Economic Development," in Partha Chatterjee, ed., *Wages of Freedom, Fifty Years of the Indian Nation-State* Oxford University Press, New Delhi, 1998.
15. Rudolph, L. and Susanne Rudolph, *In Pursuit of Lakshmi: The Political Economy of Indian States,* Orient Longman, Delhi, 1988.
16. Shah, Ghanshyam, ed., *State and Social Movements,* Sage, Delhi, 1999.

Journals/Newspapers to be Consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web also check on JSTOR)
2. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
3. ***Studies In Indian Politics, Sage Journal***
4. ***The Hindu and Indian Express***

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Course-VIII : Theories of International Relations

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Rational of the Course

The key objective of this course is to provide a comprehensive overview of the major theories in IR, covering the entire disciplinary spectrum from mainstream approaches such as realism, liberalism and constructivism to critical approaches such as postcolonialism, postmodernism and feminism. Whereas the course content remains largely theoretical, both historical and contemporary practices are taken as illustrative examples, particularly illuminating non-Western perspectives. This course is expected to act as a catalyst for students to think creatively and critically in search of 'global' International Relations that is inclusive of non-Western perspectives and traditions.

The course has four units and each unit is presented with the help of key concepts. Each unit has essential readings that offer a basic introduction to the topic. Students are advised to familiarize themselves with the essential readings before the lecture and follow up with the specified recommended readings. During class discussion, they will be expected to critically evaluate the essential readings and attempt to uncover all possible nuances of an argument.

Course Outlines

I: Introducing Practice-Theory Interface:

International practices, disciplinary lineage of IR, role and significance of theory, units and levels of analysis, practices of IR

II: Mainstream IR Theories:

Realism **(**national interest, national power, national security, security dilemma, balance of power, structural realism, defensive/offensive realism**);** *Liberalism* (interdependence**,** neoliberal institutionalism, commercial liberalism, democratic peace theory, international law, regimes, world public opinion).

III. Constructivism and the 'English School':

Identity, social construction of knowledge and the construction of social reality

IV: Critical IR theories and Non-Western Perspectives:

Marxism, poststructuralism, postmodernism, postcolonialism, feminism, ecological, 'global'IR

READINGS

Unit I

Essential Readings:

Adler, E. and Pouliot, V. (2011) 'International Practices', *International Theory*, 3(1): 1-36.

Brown, C. and Ainley, K. (2005) 3rd Edition, *Understanding International Relations Houndmills*: Palgrave Macmillan.

Snyder, J. (2004) 'One World, Rival Theories', *Foreign Policy,* 145: 52–62.

Walt, S. M. (1998) 'International Relations: One World, Many Theories,'*Foreign Policy*(Spring 1998): 29-46.

Recommended Readings:

Donnelly, J. (2015) 'The Discourse of Anarchy in IR', *International Theory: A Journal of International Politics, Law and Philosophy*, 7(3): 393-425.

Holsti, K.J. (1998) 'Scholarship in an Era of Anxiety: The Study of International Politics during the Cold War', *Review of International Studies* 24(5): 17-46.

Sørensen, G. S. (1998) 'IR Theory after the Cold War', *Review of International Studies*, 24(5): 83-100.

Unit II

Essential Readings

Doyle, M. (1997) *Ways of War and Peace: Realism, Liberalism, and Socialism*, New York: W.W. Norton & Company.

Jackson, R. and Sørensen, G. (2007) *Introduction to International Relations: Theories and Approaches*, Oxford: Oxford University Press.

Keohane, R. O. and Nye, J. S. (2001) *Power and Interdependence*, Pearson, 4th edition.

Dunne, T. and Schmidt, B. (2008), 'Realism', in John Baylis et al. (eds.), *The Globalization of World Politics*, 3rded., Oxford: Oxford University Press.

Dunne, T. (2008), 'Liberalism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

Morgenthau, H. J. (1948) *Politics among Nations: The Struggle for Power and Peace*, New York: Alfred Knopf.

Vasquez, J.A. (1998) *The Power of Power Politics: From Classical Realism to Neotraditionalism*, Cambridge: Cambridge University Press.

Waltz, K. (2010)*Theory of International Politics*, Reading: MA: Addison-Wesley. *First Edition*.

Recommended Readings

Baldwin, D. ed. (1993) *Neorealism and Neoliberalism: The Contemporary Debate*, New York: Columbia University Press.

Keohane, R. O. ed. (1986) *Neorealism and Its Critics*, New York: Columbia University Press.

Mearsheimer, J. (2001)*The Tragedy of Great Power Politics*, New York: Norton, pp. 1-28.

Moravcsik, A. and Legro, J. (1999), 'Is Anybody Still a Realist?'*International Security*, 24 (2): 5-55.

Schroeder, P. (1994), 'Historical Reality vs. Neo-realist Theory', *International Security*, 19 (1): 108-148.

Schweller, R. (1992), 'Domestic Structure and Preventive War: Are Democracies More Pacific?'*World Politics*, 44 (2): 235-269

Unit III

Essential Readings:

Barnett, M. (2008), 'Constructivism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

Buzan, B. (2001), 'The English School: An Underexploited Resource in IR', *Review of International Studies*, 27 (3): 471-488.

Dunne, T. (2008), 'The English School' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.

Hurd, I. (2008) 'Constructivism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of International Relations*, Oxford: Oxford University Press: 298–316.

Wendt, A. (1992) 'Anarchy Is What States Make of It: the Social Construction of Power Politics,' *International Organization*, 46: 391-425.

Recommended Readings:

Bull, H. and Watson, A. (eds.) (1985) *The Expansion of International Society*, Oxford: Clarendon Press.

Bull, H. (1977) *The Anarchical Society: A Study of Order in World Politics*, New York: Columbia University Press.

Buzan, B. and Little, R. (2000)*International Systems in World History: Remaking the Study of International Relations*, New York: Oxford University Press.

Emanuel, A. (2002) 'Constructivism and International Relations' in Walter Carlsnaes, Thomas Rise and Simmons (eds.) *Handbook of International Relations*, London: Sage.

Guzzini, S. (1993) 'Structural Power: the Limits of Neorealist Analysis,'*International Organization*, 43 (3): 443-478.

Little, R. (2003), 'The English School vs. American Realism: A Meeting of Minds or Divided by a Common Language?' *Review of International Studies*, 29: 443-460.

Linklater, A. (2005) 'The English School' in Scott Burchill et al. (eds.)*Theories of International Relations*, Hampshire: Palgrave Macmillan

Ted Hopf, T. (1998) 'The Promise of Constructivism in IR Theory,'*International Security*, Vol. 23, No. 1 (Summer 1998): 171-200.

Unit IV

Essential Readings:

Bajpai, K. and Mallavarapu, S. (2005) *International Relations in India: Bringing Theory Back Home*, New Delhi: Orient Blackswan.

Derian, J.D. (1995) *International Theory: Critical Investigations*, Houndmills: Macmillan.

Linklater, A. (1990) *Beyond Realism and Marxism: Critical Theory and International Relations*, Houndmills: Macmillan.

Neuman, S.G. (1998) *International Relations Theory and the Third World*, Houndmills: Macmillan.

Smith, S. and Owens, P. (2008), "Alternative Approaches to International Theory: Feminism", in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

Tickner, J. A. and Sjoberg, L. (eds.) (2011), *Twenty Years of Feminist International Relations: A Conversation about the Past, Present and Future*. London and New York: Routledge.

Burke, A. (2008), 'Postmodernism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.

Hobson, J. (2012) *The Eurocentric Conception of World: Western International Theory, 1760-2010*, Cambridge: Cambridge University Press.

Acharya, A. and Buzan, B. (2009) *Non-Western International Relations Theory: Perspectives On and Beyond Asia*, London: Routledge.

Neumann, Stephanie (ed.) (1998), International Relations and the Third World, New York: St. Martins Press.

Ling, L. H. M. (2002) *Post Colonial International Relations*: *Conquest and Desire between Asia and the West*, Palgrave Macmillan.

Tickner, A. B. and Wæver, O. (2009) *International Relations Scholarship Around the World*, London: Routledge.

Recommended Readings:

Devetak, R. (1996) 'Critical Theory', in Scott Burchill et al., *Theories of International Relations*, New York: St. Martinís: 145-178.

Mohammed, A. (2002) 'Inequality and Theorizing in International Relations: The Case for Subaltern Realism', *International Studies Review*, 4:2: 27-48.

Linklater, A. (1996) 'The Achievements of Critical Theory' in Steve Smith, Ken Booth and Marysia Zalewski (eds.) *International Theory: Positivism and Beyond*, Cambridge: Cambridge University Press.

THIRD SEMESTER

Course IX : INDIAN POLITICAL THOUGHT-I (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper aims to introduce students to different discourses in the domain of Indian Political Thought. It includes historical roots, medieval socio-cultural traditions, renaissance and nationalist narratives.

Unit-I

Historical Roots and Medieval Socio-Cultural Traditions:

1. Dharmashastra and Arthashastra Traditions.
2. Bhakti and Sufi challenges to Hegemonic Religious Traditions.

Unit-II

Indian Renaissance and Social Reform Movements.

1. Meaning, Nature and Critical evaluation with Special reference to gender, caste and modernity.
2. Raja Rammohan Roy, Sir Syed Ahmed Khan, Pandita Ramabai, Jyotiba Phule.

Unit-III

Indian Liberalism and Nation-building:
Nehru, Tagore, Ranade, Gokhale

Unit-IV

Religious Nationalism :

1. Vivekananda, Tilak, Aurobindo and Savarkar.
2. Iqbal and Jinnah.

General Readings :

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century from Naroji to Nehru* (London : OUP, 1971).
2. Brown, D.M. (ed.), *The White Umbrella : Indian Political Thought from Manu to Gandhiji* (Bombay, Jaico, 1970).

3. Dallamayr, F.R. and Devy, G.N. (eds.), *Between Tradition and Modernity : India's Search for Identity* (London, Sage, 1998).

4. Dalton, D.G., *Indian Idea of Freedom* (Gurgaon, Academic Press, 1982).

5. Doctor, Adhi H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).

6. Karunakaran, K.P., *Religion and Political Awakening in India* (Meerut, Meenakshi, 1969), 2nd Edition.

7. Mahadevan, T.M.P. and G.V. Saroja, *Contemporary Indian Philosophy* (New Delhi, Sterling, 1981).

8. Mehta, V.R., *Foundations of Indian Political Thought* (New Delhi, Manohar, 1996).

9. Naravane, V.S., *Modern Indian Thought* (Bombay, Asia, 1964).

10. Pantham, Thomas and K.L., Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

11. Verma, V.P., *Modern Indian Political Thought* (Agra, Laxminarayan, 1996), Eleventh Revised Edition).

12. Verma, V.P., *Ancient and Medieval Indian Political Thought* (Agra, 1996).

13. Nandy, Ashis, *The Intimate Enemy : Loss and Recovery of Self under Colonialism*, Delhi, Oxford, 1983.

14. Guha, Ramachandra, 'The Absent Liberal', *Economic and Political Weekly,* December 15 2001.

15. Christopher Jaffrelot (edited), *Hindu Nationalism: A Reader,* Ranikhet, Permanent Black, 2007.

16. Quayum, Mohammad A, *'Imagining "One World": Rabindranath Tagore's Critique of Nationalism',* Interdisciplinary Literary Studies, Vol 7, No 2, Spring 2006.

17. Jahanbegloo, Ramin, 'Tagore and the Idea of Civilization', *India International Centre Quarterly,* Vol 34, No. 1, Summer, 2007.

18. Chakravarti, Uma, *Rewriting History: The Lives and the Times of Pandita Ramabai,* Delhi, Kali for Women, 1998.

19. Kosambi, Meera, 'Women, Emancipation and Equality: Pandita Ramabai's Contribution to Women's Cause', *Economic and Political Weekly,* October 29, 1988.

20. Lamba Rinku, 'Bringing the State Back in, Yet Again: The Debate on Socio-religious Reform in Late-Nineteenth-Century India', *Comparative Studies of South Asia, Africa and the Middle East,* Volume 29, Number 2, 2009.

21. Zachariah, Bhikhu, *'Nehru'* Routledge, 2004

22. Parekh, Bhikhu, 'Nehru and the National Philosophy of India', *Economic and Political Weekly*, Janurary 5 1991

23. Deshpande G. P. (ed.), *Selected Writings of Jotirao Phule, Delhi, Leftword Books,* 2002.

24. Omvedt, Gail, *Seeking Begumpura,* Delhi, Navayana, 2008.

25. Gopal, S, 'The Formative Ideology of Jawaharlal Nehru', *Economic and Political Weekly,* May 22 1976.

Suggested Readings :

1. Altekar, A.S., *State and Government in Ancient India* (Patna, Motilal Banarasi Dass, 1971), 3rd Edition.
2. Chausalkar, Ashok, 'Politics of Arthashastra Tradition', *Indian Journal of Political Science*, January-March, 1981.
3. Chaudhri, R.K., *Kautilya's Political Ideas and Institutions* (Varanasi, Chowkhamba Sanskrit Series, 1971).
4. Ghoshal, U.N., *A History of Indian Political Ideas* (London, OUP, 1959).
5. Jayaswal, K.P., *Hindu Polity* (Bangalore, 1978), 5th Edition.
6. Kangle, R.P., *The Kautilya Arthashastra Parts-I-III* (Delhi, Motilal Banarasidass, 1986).
7. Kohli, Ritu, *Kautilya's Political Theory* (New Delhi, Deep and Deep, 1995).
8. Parekh, Bhikhu, 'Some Reflections on Hindu Tradition of Political Thought' in Pantham and Deutsch (ed.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
9. Prasad, Beni, *Theory of Government in Ancient India* (Allahabad, Center Book, 1968), 2nd Revised Edition.
10. Ray, B.N., *Tradition and Innovation in Indian Political Thought* (Delhi, Ajanta, 1998).
11. Saletore, B.A., *Ancient Indian Political Thought and Institutions* (Bombay, Asia, 1963).
12. Singh, N.P., *Political Ideas and Ideals in the Mahabharata* (Bombay, Popular Prakashan, 1976).
13. Spellman, J., *The Political Theory of Ancient India* (Oxford, Clarendon Press, 1964).
14. Vanna, V.P., *Studies in Hindu Political Thought and Its Metaphysical Foundation* (Delhi : Motilal Banarasidass, 1954).
15. Anand, B.S., *Baba Farid* (New Delhi, Sahitya Akademy, 1975).
16. Bains, J.S., 'Political Ideas of Guru Nanak', *Indian Journal of Political Science,* 1962.
17. 'Political Ideas of Guru Gobind Singh', IIAS, *Sikhism and Indian Society*, Shimla, 1967.
18. Bihari, Bankey, *Sufism Mystics and Yogis of India* (Bombay, Bhartiya Vidya, Bhawan, 1962).
19. Kohli, S.S., *Bule Shah* (Sahitya Academy, 1987).
20. Majumdar, A.K., *Bhakti Renaissance* (Bombay, Bhartiya Vidya Bhawan, 1965).
21. Muller, Max, *Ram Mohan to Ramakrishna* (Calcutta, Susil, 1952).

22. Vaudeville, C., *A Weaver Named Kabir* (Delhi, OUP, 1997).

23. Westcott, G.H., *Kabir and the Kabir Panth* (Calcutta, Susil, 1953).

24. Aurobindo, Sri, *The Renaissance in India in Dallmayer,* Fred and G.N., Devy (ed.), 1998.

25. Bishop, Donald H. (ed.), *Thinkers of Indian Renaissance* (New Delhi, Wiley, 1982).

26. De, Barun, A Historical Critique of Renaissance Analogues for Nineteenth Century India, in Barun De (ed.), *Perspectives in Social Sciences I,* (Calcutta, 1977).

27. Majumdar, B.B., *History of Indian Social and Political Ideas* (Calcutta, Firma, KLM, 1996).

28. Mehta, V.R., 'Renaissance and the Beginning of Modern Thought', Ch. 8 in his *Foundations of Indian Political Thought* (New Delhi, Manohar, 1992).

29. Sarma, D.S., *The Renaissance of Hinduism in the Nineteenth and Twentieth Centuries* (Varanasi, Banaras Hindu University, 1944).

30. Vyas, K.C., *The Social Renaissance in India* (Bombay, Vohra and Company, 1957).

31. Zacharis, H.C.E., *Renascent India : From Rammohan Roy to Mohandas Gandhi* (London, George Allen and Unwin, 1933).

32. Buch, M.R., *Rise and Growth of Indian Liberalism* (Baroda, 1938).

33. Chakravarti, Uma, *Rewriting History : The Life and Times of Pandita Ramabai* (New Delhi, Kali for Women, 1998).

34. Chakravarti, Uma, *Gender, Class and Nation—Ramabai and the Critique of Brahmanical Patriarchy* (Delhi, OUP, 1998).

35. Joshi, V.C. (ed.), *Rammohan Roy and the Process of Modernisation in India* (Delhi, Vikas, 1975).

36. Kosambi, Meera, 'Indian Response to Christianity, Church and Colonialism : Case of Pandita Ramabai', *Economic and Political Weekly,* 24-31, October, 1992.

37. Mansani, R.P., *Dadabhai Naoroji : The Grand Old Man of India* (London, George Allen and Unwin, 1939).

38. Nanda, B.R., *Gokhale : The Indian Moderates and the British Raj* (Delhi, OUP, 1998).

39. Tucker, Richard P., *Ranade and the Roots of Indian Nationalism* (Bombay : Popular Prakashan, 1977).

40. Vora, Rajendra, 'Two Strands of Indian Liberalism : Ideas of Ranade and Phule' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

41. Aurobindo, Sri, *On Nationalism* (Pondicherry, Sri Aurobindo Ashram, 1965).

42. *Bankim–Tilak –Dayananda,* (Calcutta : Aryan, 1940).

43. Banerjee Sumanta, 'Hindutva – Ideology and Social Psychology', *Economic and Political Weekly,* 19 January, 1991).

44. Basu, Tapan, *et al* (eds.), *Khaki Shorts and Saffron Flags* (New Delhi, Oriented Longman, 1991).

45. Bose, N.S., *Swami Vivekananda* (New Delhi, Sahitya Akadami, 1994).
46. Dixit, Prabha, 'The Ideology of Hindu Nationalism' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
47. Embree, A.T., *Utopias in Conflict, Religion and Nationalism in Modern India* (Delhi, OUP, 1991).
48. Graham, B., *Hindu Nationalism and Indian Politics* (Cambridge, Cambridge University Press, 1990).
49. Heehs, Peter (ed.), *Essential Writings of Sri Aurobindo* (Delhi, OUP, 1998).
50. Joshi, V.C., *Aurobindo : An Interpretation* (Delhi, 1973).
51. Kaviraj, Sudipto, *The Unhappy Consciousness : Bankimchandra Chattopadhyaya and the Formation of Nationalist Discourse in India* (Delhi, OUP, 1995).
52. Savarkar, V.D., *"Hindutva Or Who is a Hindu"?* (Bombay, Veer Savarkar Prakashan, 1923).
53. Segupta, S.C., *Bankim Chandra Chatterjee* (New Delhi, Sahitya Akademi, 1982).
54. Shay, T.L., *Legacy of Lokmanya : Political Philosophy of Bal Gangadhar Tilak* (London, OUP, 1956).
55. Singh, Karan, *Prophet of Indian Nationalism* (Bombay, Bhartiya Vidya Bhawan, 1970).
56. Baljon, J.M.S., *The Reforms and Religious Ideas of Sir Sayyid Ahmad Khan* (Leiden : E.J. Bill, 1949).
57. Banerjee, A.C., *Two Nations : The Philosophy of Muslim Nationalism* (New Delhi, Concept, 1980).
58. Dar, B.A., *A Study of Iqbal's Philosophy* (Lahore, Md. Ashraf, 1933).
59. Hamid, Abdul, *Muslim Separatism in India* (London, OUP, 1967).
60. Hasan, Mushirul (ed.), *India's Partition : Process, Strategy and Mobilization* (Delhi, OUP, 1993).
61. Hussain, M. Hadi, *Syed Ahmed Khan : Pioneer of Indian Resurgence* (Lahore, Institute of Islamic Culture, 1970).
62. Imam, Zafar, *Muslims in India* (New Delhi : Orient Longman, 1975).
63. Mohammed, Shan, *Sir Syed Ahmad Khan : A Political Biography* (Meerut, Meenakshi Prakashan, 1969).
64. Mujahid, Sharif, *Quaid-i-Azam-Jinnah : Studies in Interpretation* (Delhi, B.R., 1985).
65. Naim, C.M. (ed.), *Iqbal, Jinnah and Pakistan* (Delhi, Jinnah Publi. House, 1982).
66. Shakir, Moin, 'Dynamic of Muslim Political Thought' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
67. Brohi, A.K., *Iqbal and The Concept of Islamic Socialism* (Karachi, Al-Karimi, 1967).
68. Hussain, Raiz, *Iqbal, Poet and His Politics* (New Delhi, Uppal Pub. House, 1987).
69. Burney, S.M., *Iqbal : Poet-Patriot of India* (New Delhi, Vikas, 1987).
70. Masud, Mohamad K. and Mumtaz Liaqat, *Iqbal Through Western Eyes (*Sterling, 1989).
71. Malik, Hafeez, *Iqbal : Poet-Philosopher of Pakistan* (New York : Columbia University Press, 1971).

Course X : COMPARATIVE POLITICS (II) : UNDERSTANDING DEVELOPING SOCIETIES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with key issues and debates in comparative politics with special reference to developing societies.

Unit-I

Approaches to the politics of developing countries :

- Political Sociology. –Systems theory, structural functionalism, political Culture, political development and institutionalism
- Political Economy. – Modernisation Theory, Dependency Theory and World System Analysis
- Alternative Approaches. New Institutional approach

Unit-II

- *Colonialism and Its Impact :* Politics, Economy and Culture.
- Nationalism and Anti-colonial Movement : Ideology, social base, strategies of mobilization and outcome with refrence to India, China and Latin America(creole nationalism)

Unit-III

- *Civil Society :* Ethnic, National and Regional identities.
- *Globalisation :* Definitin, difference between old and new, Its impact on the Developing World.

Unit-IV

- State- Nature of the state in Developing world with reference to Hamza Alavi, J.S. Saul and Colin Leys work, Political regimes- military, Islamic , etc ,
- Constitutionalism and Political parties,.

Essential Readings

1. Alavi, H., *The State in Post-Colonial Societies: Pakistan and Bangladesh*, New Left Review, No. 74, 1972.
2. Allen, C. and G. Willams (eds.), *Sociology of* 'Developing Societies', Sub-Saharan Africa, Macmillan, London, 1982.
3. Cammack, Paul, David Pool and William Tordoff, *Third World Politics: A Comparative Introduction*, John Hopkins University Press, Baltimore, 1993.
4. Caramani, Daniele, *Comparative Politics*, Oxford University Press, Oxford, 2014.
5. Clapham,C., Third World Politics: An Introduction, Routledge, London 1985.
6. Dickovick, J. Tyler and Jonathan Eastwood, *Comparative Politics: Integrating Theories,* Methods, and Cases, Oxford University press, Oxford, 2014.
7. Eckstein, Harry and David, E. Apter, *Comparative Politics : A Reader,* The Free Press of Glencoe, London, 1994
8. Manor, James (ed.), *Third World Politics*, Longman, London, 1991.
9. Mohanty, Manorajan, P. Mukherji with O. Tornquist, *People's Rights, Social Movements and the State in the Third World*, Sage, New Delhi, 1998.
10. Randall, V., *Political Parties in the Third World*, Sage, London, 1988.
11. Smith, Anthony D., *State and Nation in the Third World: The Western State and African Nationalism*, Wheatsheaf, Sussex, 1983.

Students are advised to see the relevant entries in the following reference books Seymour Martin Lipset (ed. in chief). The Encylopaedia of Democracy, Volumes I, II and III, Routledge, London, 1995 : Vernon Bogdanor (ed.). The Blackwell Encyclopaedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to the Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Suggested Readings

1. . Alavi, Hamza and Teodor Shanin (eds.), *Introduction to the Sociology* of 'Developing Societies', Macmillan, London, 1982.
2. Amin, Samir, 'Social Movements at the Periphery' in P. Wignaraja (ed.), *New Social Movements in the South*, Zed, London, 1993.
3. Archetti, E. et al., *Latin America*, Macmillan, London, 1987.
4. Ayoade, J.A., 'States Without Citizens: An Emerging African Phenomenon' in D. Rothchild and N. Chazan (ed.), *The Precious Balance : State and Society in Africa*, Westview Press, Boulder, Colorado, 1988.
5. Bayart, J.F., 'Civil Society in Africa' in Chabal, P. (ed.), *Political Domination in Africa : Reflections on the Limits of Power*, Cambridge University Press, Cambridge, 1986.
6. Berger, M., 'The End of the Third World', *Third World Quarterly*, Vol. 15, No. 2, 1994.
7. Bratton, M., and Van der Walle, N., 'Towards Governance in Africa : Popular Demands and State Responses' in G. Hayden and M. Bratton (eds.), *Governance and Politics in Africa*, Boulder, Colorado, 1991.

8. Callaghy, T., 'Vision and Politics in the Transformation of the Global, Political Economy : Lessons from the Second and the Third World's in R. Slater, Schutz, B. and Dorr, S. (eds.), *Global Transformation and the Third World*, L. Rienner Pub., Boulder, Colorado, 1993.
9. Chabal, P., Introduction : 'Thinking About Politics in Africa', in Chabal, P. (eds.), *Political Domination in Africa : Reflections on the Limits of Power,* Cambridge University Press, Cambridge, 1986.
10. Chezan, N., 'Between Liberalism and Statism : African Political Cultures and Democracy' in Diamond, Larry (ed.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
11. Diamond, L., 'Introduction : Political Culture and Democracy', in L. Diamond (eds.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
12. Diamond, L., 'The Globalisation of Democracy' in Slater, R., Shutz, B., and Dorr, S. (ed.), *Global Transformation and the Third World*, L. Rienner, Boulder, Colorado, 1993.
13. Dixon, Chris and Michael J. Heffernan (eds.), *Colonialism and Development in the Contemporary World*, Mansell, New York, 1991.
14. Eliott, Carolyn, *Civil Society : A Reader*, Oxford University Press, New Delhi, 2003.
15. Engles, Dagmar, and Shula Marks (eds.), *Contesting Colonial Hegemony : State and Society in Africa and India*, British Academic Press, London (1994).
16. Fatton, R., *Predatory Rule, State and Civil Society in Africa*, L. Rienner, Boulder, Colorado, 1992.
17. Frank, A.G., *Capitalism and Underdevelopment in Latin America*, Penguin, Harmondsworth, 1971(Kumar, Ashutosh, 'Hamza Alavi and Post-Colonial State', *Economic and Political Weekly*, August 7, 2004).
18. Garreton, M.A., 'Political Democratisation in Latin America and the Crisis of Paradigms' in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
19. Geddes, Barbara 'Paradigms and Sand Castles in Comparative Politics of Developing Areas' in Crotty, William (ed.), *Comparative Politics, Policy and International Relations*, Northwestern University Press, Evanston, 1991.
20. Hawthorn, G., "Waiting for a Text?" Comparing 'Third World Politics in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
21. Haynes, Jeff, *Third World Politics, A Concise Introduction,* Blackwell, Oxford, 1996.
22. Huntington, S., *Political Order in Changing Societies*, Yale University Press, New Haven, 1968.
23. Huntington, S., The Third Wave, Democratisation in the Late Twentieth Century, University of Oklohoma Press, Norman, 1991.
24. Jayaram, N., On Civil Society : Issues and Perspective, Sage Publications, New Delhi, 2005.
25. Kamrava, M., Politics and Society in the Third World, Routledge, London, 1993.
26. Kaviraj, S., 'On State, Society and Discourse in India' in Manor, J. (ed.), Rethinking Third World Politics, Addison-Wesley Longman, London, 1993.
27. Luckham, R., 'Introduction : The Military, The Developmental State and Social Forces in Asia and the Pacific : Issues for Comparative Analysis' in Selochan, V. (ed.), The Military, The State, and Development in Asia and Pacific, Westview, Boulder, 1991.

28. Mamdani, M., T, Mkandawire, and E. Wamba-dia-Wamba, 'Social Movements and Democracy in Africa' in Wignaraja, P. (ed.), *New Social Movements in the South*, Zed Books, London, 1993.
29. Migdal, J., *Strong Societies and Weak States : State Society Relations and State Capabilities in the Third World*, Princeton University Press, Princeton, 1988.
30. Mitra, S. (ed.), *The Post-Colonial State in Asia*, Wheatsheaf, Hemel Hampstead, 1990.
31. Mouzelis, N., *Politics in the Semi-Periphery*, Macmillan, London, 1986.
32. Nkruman, K., *Neo-colonialism : The Last Stage of Capitalism*, Nelson, London, 1965.
33. O'Donnell, G., *Modernisation and Bureaucratic Authoritarianism, Institute of International Studies*, Berkeley, 1973. O' Donnell, G., Authoritarian Rule : Prospects for Democracy, John Hopkins University Press, Baltimore, 1973.
34. Parpart, J., 'Women and the State in Africa'; in D. Rothchild and N. Chazan (eds.), *The Precarious Balance : State and Society in Africa*, Westview, Boulder, 1988.
35. Potter, D., "Democratisation in Asia" in D. Held (ed.), *Prospects for Democracy : North, South, East, West,* Polity, Cambridge, 1985.
36. Pye, L., *Asian Power and Politics : The Culture Dimension of Authority*, Harvard University Press, Cambridge, 1985.
37. Randall, V., and Theobold, R., *Political Change and Underdevelopment : A Critical Introduction to Third World Politics,* Macmillan, London, 1985.
38. Rudolph, S., 'State Formation in Asia – Prolegemenon to a Comparative Study', *Journal of Asian Studies*, 46, 4, 1987.
39. Saul, John S., 'The State in Post-Colonial Societies : Tanzania' in Ralph Miliband and John Saville (ed.), *The Socialist Register*, Merlin, London, 1974.
40. Sisson, R., 'Culture and Democratisation in India' in Diamond, L. (ed.), *Political Culture and Democracy in Developing Countries*, Lynne Reiner, Boulder, 1993.
41. Smith, B.C., *Understanding Third World Politics, Theories of Political Change and Development,* Palgrave Macmillan, Basingstoke, 2003.
42. Taylor, Peter, J., 'The Legacy of Imperialism' in Dixon Chris and Michael, J Heffernan (eds.), *Colonialism and Development in the Contemporary World,* Mansell, New York, 1991.
43. Thomas, Clive, Y., *The Rise of the Authoritarian State in Peripheral Societies*, Monthly Review Press, New York, 1980.
44. West, David "New Social Movements" in Gerald F. Gaus and Chandran Kukathas, Handbook of Political Theory, Sage, London, 2004.

OR

Course X : COMPARATIVE POLITICAL SYSTEMS WITH SPECIAL REFERENCE TO USA, UK, CHINA, JAPAN AND SWITZERLAND (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting **one question** from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debate in comparative politics with special reference to USA, UK, China, Japan and Switzerland.

UNIT-I

(i) Historical Antecedent of Contemporary Political Systems.
(ii) Evolution of the Constitution and Constitutional Systems.

UNIT-II

(i) Executive
(ii) Legislature

UNIT-III

(i) Political Parties
(ii) Pressure Groups

UNIT-IV

(i) Elections, Electoral Process
(ii) Political Participation, Voting Behavior

Books Recommended :

1. Jean Blondel : *An Introduction to Comparative Government,* Praeger, 1969.
2. G. Almond and B. Powell : *Comparative Politics* : *A Development Approach*, Little Brown, 1966.
3. Robert Ward & Roy Macrides (Eds.) : *Modern Political Systems*, Prentice Hall, 1972.
4. M. Irish & J.W. Protho : *The Politics of American Democracy*, Prentice Hall, 1968.
5. D. J. Weller : *The Government of Politics of Communist China*, Hutchinson, 1970.

6. Peter Bormhead : *Britains Developing Constitution,* St. Martin's Press,1974.
7. John P. Mackintosh : *The Government and Politics of Britain,* Hutchinson, 1971.
8. P.J. Madgwick : *Introduction to British Politics*, Hutchinson, 1971.
9. A.H. Birch : *The British System of Government*, Allen & Unwin, 1980.
10. Lucian Pye : *The Spirit of Chinese Politics*, Cambridge, 1970.
11. Richard Rose : *Studies in British Politics*, Macmillan, 1966.
12. Shanti Swarup : *A Study of the Chinese Communist Movement (only Introduction)*, Clarendon, 1966.
13. Robert Wesson : *Communism and Communist Systems*, Prentice-Hall, 1978.
14. Richard H. Solomon : *Mao's Revolution and the Chinese Political Culture*, Oxford University, 1971.

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) : INTERNATIONAL ORGANISATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is designed to introduce the students to the relevance and functioning of international organizations in Contemporary World Politics. It takes up for the purpose a detailed study of some of the major specialized international agencies under the auspices of the United Nations.

UNIT-I

Evolution of International Organisation.

Theoretical approaches to the study of international organization : Classical, neo-realist, functionalist, conflict resolution, world society approach and the Marxist approach.

UNIT-II

Role and function of :

(i) International government organization.

(ii) International non-governmental organization.

Making of the United Nations : Its purpose, principles and structure.
United Nations and maintenance of international peace and security, collective security and its alternative.

UNIT-III

Major specialized agencies : ILO, UNESCO, WHO, FAO.
United Nations and Human Rights.

UNIT-IV

United Nations in the Post-Cold War Era :
UN and disarmament, revision of UN Charter, UN and emerging deterioration in international relations.
Limitations and constraints.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty First Century : Unique Contexts, Enduring Patterns* (New Jersey, Prentice Hall, 2003).
3. A. LeRoy Bennett, *International Organization : Principles and Issues* (New Jersey, Prentice Hall, 1991).
4. B.N. Mehrish, *International Organisations : Structures and Processes* (Jallandhar, Vishal Publications, 1996).
5. Shambhavi Vendantam, *United Nations : Putting Words to Work* (New Delhi, Vikash, 1996).
6. K. P. Saksena, *Reforming the United Nations : The Challenge of Relevance* (New Delhi, Sage, 1993).
7. C. Archer, *International Organisations* (London, Routledge, 1992).
8. P. R. Baehr and L. Gordenker, *The United Nations in 1990s* (Hamshire, Macmillan, 1994).
9. Boutros-Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
10. Abi-Saab Georgeas (ed.), *The Concept of International Organisation* (Paris, UNESCO, 1981).
11. Thomas G. Wein, David P. Forsyth, Roger A. Coate, *The United Nations and Changing World Politics* (Boulder, Westview Press, 1994).
12. William Burch, *The Evolution of the United Nations Peace Keeping : Case Studies and Comparative Analysis* (St. Martin Press, 1993).
13. Paul Taylor and A.R.J. Groom (eds.), *International Organisation : A Conceptual Approach* (London, Frances Printer, 1978).
14. J.W. Burton, *World Society* (London, Cambridge University Press, 1972).
15. Freidrich Kratochwil and Edward Mansfield (eds.), *International Organisation : A Reader* (New York, Harper Collins, 1994).

Option (b) : TRANSNATIONAL ACTORS IN INTERNATIONAL POLITICS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course is designed to introduce the students to the changing dynamics of the emerging world order in which various transnational actors have come to play an increasingly important role in shaping the responses of the state actors to some of the most crucial issues in contemporary history.

UNIT -I

The politics of terminology : From "Non-state actors" to "Transnational actors".
Limitations of state-centric framework and emergence of transnational actors.

UNIT -II

Theorizing different types of transnational actors in International Politics.
Transnational companies; Regional economic groupings; strategic and security actors; Non-legitimate groups and liberation movements; and Non-governmental organizations.

UNIT -III

Post-War Economy and the International Monetary System : International Monetary Fund and World Bank.
Dynamics of Regional Integration : European experience.
Beyond Europe: The global rise of regionalism (special reference to ASEAN and SAARC).

UNIT -IV

Cartelization of Natural Resources in the Age of Globalization : OPEC.
Issues and challenges in international environmental politics.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. R. O. Keohane and J. S. Nye (eds.), *Transnational Relations and World Politics* (Cambridge Mass: Harvard University Press, 1972).

3. T.G. Weiss and L. Gordenker (eds.), *NGOs, the UN and Global Governance* (Boulder, Colo. : Lynne Rienner, 1996).
4. P. Willets (ed.), *Pressure Groups in the Global System : The Transnational Relations of Issue-Oriented Non-Governmental Organizations* (London : Pinter, 1982).
5. P. Willets (ed.), *'The Conscience of the World' : The Influence of Non-Governmental Organizations in the UN System* (London: Hurst and Co., 1996).
6. T. Risse-Kappen (ed.), *Bringing Transnational Relations Back In* (Cambridge : Cambridge University Press, 1995).
7. J. N. Rosenau, *The Study of Global Interdependence : Essays on the Transnationalisation of the World Affairs* (London : Pinter, 1990).
8. A.J.R. Groom and P. Taylor, *Frameworks for International Co-operation* (London : Pinter, 1990).
9. Michael Nicholson, *International Relations : A Concise Introduction*, Second Edition (New York: Palgrave, Macmillan, 2002).
10. Robert Keohane, *International Institutions and State Power : Essays in International Relations Theory* (Boulder: Westview, 1989).
11. John Madeley, *Big Business, Poor Peoples: The Impact of Transnational Corporations in the World's Poor* (London: Zed Books, 1999).
12. Joel Krieger (ed.), *The Oxford Companion to the Politics of the World* (New York : Oxford University Press, 1993).
13. John E. Spero and Jeffery A. Hart, *The Politics of International Economic Relations,* 5th ed. (New York, St. Martin's Press, 1997).
14. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty-First Century : Unique Contexts, Enduring Patterns*, (New Jersey : Prentice Hall, 2003).

Option (c) : POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper attempts to understand development issues and problems in India with reference to theoretical advances in development studies.

UNIT -I

Development, meaning and changing conceptions.
Economic growth.
Human development.
Sustainable development.

UNIT -II

Theory of the Developmentalist State.
Impact of Development on the Political Process.
Development Strategies and State Policies in India – Priorities, Strategies, Target Groups.

UNIT -III

Socio-Economic Problems and Developmental Issues in India.
Poverty, Social Backwardness and Disparities.
Displacement, Resettlement and Environmental degradation.

UNIT -IV

Democratic decentralization and development in India.
Developmental Interventions, Non Governmental Initiatives and Empowerment.
Globalization, Changing Policies, Strategies and their implications in India.

Readings :

1. Bardhan, Pranab, 1984*, The Political Economy of Development in India*, New York, Blackwell.
2. Jalan, Bimal (ed.) 1992, *The Indian Economy : Problems and Prospects*, New Delhi, Viking.
3. Cassen, Robert and Vijay Joshi (eds.), 1992, *India : The Future of Economic Reform*, New Delhi, Oxford University Press.
4. Dreze, Jean & Amartya Sen, 1995, *India : Economic Development & Social Opportunity*, Delhi, Oxford University Press.
5. Frankel Francis et. al (eds.) 2000, *Transforming India : Social and Political Dynamics of Democracy*, Delhi, Oxford University Press.
6. Jayal, Niraja Gopal (ed.) 2001, *Democracy in India*, New Delhi, Oxford University Press.
7. Kaviraj Sudipta, 1987, "Dilemmas of Democratic Development in India" in Adrian Leftwich ed. *Democracy and Development Theory and Practice*, Cambridge, Polity Press.
8. Kohli Atul, 1987, *The State and Poverty in India : The Politics of Reform*, Cambridge, Cambridge University Press.
9. Lewis, John P., 1995, *Governance and Reform : Essays in Indian Political Economy*, Delhi, Oxford University Press.

10. Mathur Kuldeep (ed.) 1996, *Development Policy and Administration*, Delhi, Sage Publications.

11. Satyamurthy, T.V., 1999, *Social Change and Political Discourse in Indian Structures of Power, Movements of Resistance,* Delhi, Oxford University Press.

12. Sen Amartya, 2000, *Development as Freedom*, Delhi, Oxford University Press.

Option (d) : PEACE AND CONFLICT RESOLUTION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to introduce students to the meaning and contending approaches in the discipline of peace and conflict studies. It also brings into broader context the concept and theories of conflict and conflict resolution and the different strategies and tactics of non-violent resolutions.

UNIT-I

Peace Studies :

1. Meaning, scope and approaches.
2. Peace-keeping, Peace-making, Peace-building and post-peace confidence building measures.

UNIT-II

Peace Movements :

1. Civil Rights Movements.
2. Green Peace Movements.

UNIT-III

Conflict and Conflict Resolution : Conceptual and Epistemological dimensions:

1. Conflict: Typologies and Causes.
2. Conflict Resolution: Meaning and Scope.

UNIT-IV

Conflict Resolution and Transformation : General Strategies and Tactics :

1. Pacific Methods (Mediation, Arbitration and Adjudication), and Analytical problem solving approach (notably of John Burton).
2. Non-Violent techniques of conflict resolution (Gandhian).

Recommended Books :

1. Bondurant, J.V., *Conquest of Violence* (London, Princeton Uni. Press, 1958).
2. Coser, L., *The Function of Social Conflict* (N.Y., The Free Press, 1956).
3. Simmel, G., *Conflict and the Web of Group-Affiliation* (New York, 1955).
4. Weber, Thomas, *Conflict Resolution and Gandhian Ethics* (New Delhi, Gandhi Peace Foundation, 1991).
5. Wallensteen, Peter (ed.), *Peace Research : Achievements and Challenges* (Boulder & London, Westview Press, 1988).
6. Holsti, K.J., "Paths to Peace ? Theories of Conflict Resolution and Realities of International Politics," in Thakur, Ramesh (ed.), *International Conflict Resolution* (Boulder and London, Westview Press, 1988).
7. Galtung, J., *Peace by Peaceful Means* (London, Sage, 1996).
8. Galtung, J., *The Way is the Goal : Gandhi Today* (Ahmedabad, Gujarat, Vidyapeeth, 1992).
9. Boulding, Elise (ed.), *New Agenda for Peace Research* (Boulder and London, Lynee Reimer, 1992).
10. Boutras, Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
11. Burton, J. Dukes, Frank, *Conflict : Practices in Management, Settlement and Resolution* (London, Macmillan, 1990).
12. Sandole, Dennis, J.D. and Merwe, Hugo Van der (ed.), *Conflict Resolution Theory and Practice* (New York, Manchester University Press, 1993).

Option (e) : RETHINKING GEOPOLITICS : CRITICAL PERSPECTIVES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on the premise that geopolitics needs to be re-conceptualized as twenty-first century unfolds. The intention is to rethink and radicalize its components 'geo' and 'politics' so that the self-evident character and nuance of the sign 'geopolitics' can be conceptualized and pluralized. Once conceptualized in a critical way as a problematic of geopolitics or geographical politics, geopolitics becomes a much broader social and cultural phenomena that is normally described and understood by the geopolitical tradition of 'wise-men' statecraft.

UNIT-I

Modern Geopolitical Imagination and Visualizing Global Space : Blocks, Worlds and Zones of identity and difference.
Epochs of Geopolitics (Imperial Geopolitics, Cold War Geopolitics, and the Geopolitics of the 'New World Order'.

UNIT-II

Twenty-First Century Geopolitics (End of History? The Clash of Civilizations?).
National Identity and Geopolitical Visions (USA, Russia, India and Pakistan).

UNIT-III

The Geopolitics of Global Dangers ('rogue states', the 'coming anarchy', diseases and disasters).
The Geopolitics of Terror (with special reference to 11 September and its aftermath).

UNIT-IV

Critical Geopolitics (anti-geopolitics, social movements and alternative political geographies).
Gender and Geopolitics.

Suggested Readings :

1. Andrew Herod, Gearoid O Tuathail and Susan M. Roberts (eds.), An *Unruly World ? Globalisation, Governance and Geography*, London and New York : Routledge, 1998.
2. Ciro, E., Zoppe (ed.), *Charles Zorgbibe* : *On Geopolitics, Classical and Nuclear,* Boston, Nijhoff, 1985.
3. David, Hoosan (ed.), *Geography and National Identity*, Oxford, U.K. and Cambridge : USA : Blackwell, 1994.
4. Geoffrey, Parker, *Geopolitics : Past, Present and Future*, London and Washington : Pinter, 1998.
5. Gertjan, Dijkink, *National Identity and Geopolitical Visions*, London, New York : Routledge, 1996.
6. Gearoid, O. Tuathail, *Critical Geopolitics : The Politics of Writing Global Space*, London and New York : Routledge, 1996.
7. Gearoid, O. Tuathail, Simon Dalby and Paul Routledge (ed.), *The Geopolitics Reader*, London and New York, Routledge, 1998.
8. Gearoid, O. Tuathail, Simon Dalby (eds.), *Rethinking Geopolitics,* London and New York : Routledge, 1998.

9. Sloan, G.R., *Geopolitics in United States Strategic Policy, 1890-1987*, Brighton Wheatsheaf Books, 1988.
10. Jan Nederveen Pieterse, *World Orders in the Making : Humanitarian Intervention and Beyond*, Houndmills, Macmillan, 1998.
11. Jan Nijman, *The Geopolitics of Power and Conflict : Superpowers in the International Systems*, London and New York : Belhaven Press, 1993.
12. John, Agnew and Stuart Corbridge, *Mastering Space, Hegemony, Territory and Political Economy*, London, New York : Routledge, 1995.
13. John, Agnew, *Geopolitics : Revisioning World Politics*, London and New York : Routledge, 1998.
14. Klaus, John Dodds, "Geopolitics, Cartography and the State in South America," *Political Geography* 12 (4), July 1993 : 361-381.
15. Kurt Mills, *Human Rights in the Emerging Global Order, A New Sovereignty*, Houndmills : Macmillan Press Limited, 1998.
16. Mathew, B. Fielden, "The Geopolitics of Aid : The Provision and Termination of Aid to Afghan Refugees in North West Frontier Province, Pakistan," *Political Geography*, 1998, 17 (4) : 459-487.
17. Simon, Dalby, *Creating the Second Cold War*, London : Pinter, 1990.

Journals :

1. *Geopolitics* (see Special Issue on "11 September and its Aftermath : The Geopolitics of Terror", Volume 8, Number 3, September 1998.
2. Agnew, J., "American Hegemony into American Empire", *Antipode*, 35(5) : 871-885, 2003.
3. Gregory, D., *The Colonial Present*, Oxford: Blackwell, 2004.
4. Kelly, P., "A Critique of Critical Geopolitics", *Geopolitics*, 11 (1) : 24-53, 2006.

Option (f) : THEORIES OF DEVELOPMENT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This Course introduces students to the significant ways in which development has been conceptualised. It tracks the main grounds on which mainstream models of development have been critiqued and the key issues facing contemporary development theory.

UNIT-I

Development as economic growth–capitalist and socialist models.
Theories of modernisation.
Neo-liberalism and globalisation.
Role of the state, welfare and redistribution.

UNIT-II

Dependency, Underdevelopment and world system analysis.
Human development–Basic Needs, capability approach, rights based approaches.
Notion of social capital.

UNIT-III

Ecology and Nature, Sustainable Development.
Gender and Development.
Culture and Development.
Impact of Postmodernism on Development studies and the Post development rejection of Development.

UNIT-IV

Issues in Development studies today

1. Aid, Role of Non-government Organisations and International Agencies.
2. Democracy and Development.
3. Displacement.
4. Poverty.

Reading List :

1. G. Rist, *A History of Development*, London, Zed Books, 1997.
2. J. Crush, *Power of Development*, Routledge, 1995.
3. Ashis Nandy, *Bonfire of Creeds*, New Delhi, OUP, 2004.
4. Richard Peet and Elaine Hartwick, *Theories of Development*, New Delhi, Rawat, 2005.
5. Jan Nederveen Pieterse, *Development Theory, Constructions/Deconstructions*, New Delhi, Vistaar, 2001.
6. Naila Kabeer, *Reversed Realities, Gender Hierarchies in Development Thought*, W.W. Norton & Co., 1994.
7. R.W. Shenton and M.P. Cowan, *Doctrines of Development*, Routledge, 1996.
8. Nalini Visvanathan (Co-ordinator), Lynn Duggan, Laurie Nisonoff & Nan Wiegersma (Eds.), *The Women, Gender and Development Reader*, Zubaan Books.

9. Kriemild Saunders (Ed.), *Feminist Post-Development Thought : Rethinking Modernity, Post-colonialism and Representation*, Zubaan Books.

10. M. Rahnema & V. Bawtree (Eds.), *The Postdevelopment Reader*, New York, Zed Books, 1997.

11. Wolfgang Sachs, *The Development Dictionary,* Zed Books, London, 1992.

12. Amartya Sen*, Development as Freedom*, New Delhi, OUP, 2002.

13. John Hariss, *Depoliticising Development*, Leftword Books, New Delhi, 2001.

14. Susanne Schech, Jane Haggis, *Culture and Development : A Critical Reader*, Blackwell, 2000.

Option (g) : PUBLIC INTERNATIONAL LAW-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper introduces the students to the fundamentals and various other aspects of Public International Law.

Unit-I : Introducing International Law

Definition, basis and nature.
Distinction between Private International Law and Public International Law.

Sources.
Subjects of International Law – States, Individual and the International Institutions.
Relation of International Law to Municipal Law.

Unit-II : Law of Peace

Intervention.
Recognition – Theories, Modes and Consequences.
State Responsibility.
State Succession.

Unit-III : Force and International Law

Disputes :

Settlement by peaceful means.

Settlement through the agencies – U.N. and the International Court of Justice.

Settlement through means of short of war.

War :

General Laws of Warfare (Land, Maritime and Air)

Geneva Conventions.

War Crimes.

Neutrality

Blockade, Contraband and Prize Courts.

Unit-IV : International Transactions

Diplomatic Agents.

Consuls.

Treaties.

Books

1. Aggarwal, H.O. (2014), *International Law & Human Rights.* Jain Book Agency, New Delhi.
2. Cassese, Antonio (2005), *International Law.* Oxford University Press, USA.
3. Clapham, Andrew (2012), *Brierly's Law of Nations : An Introduction to the Role of International Law in International Relations.* Oxford University Press, USA.
4. Crawford, James (2013), *Brownlie's Principles of Public International Law.* Oxford University Press, USA.
5. Crawford, James and Koskenniemi, Martti (2012), *The Cambridge Companion to International Law (Cambridge Companions to Law).* Oxford University Press, USA.
6. Dixon, Martin (2013), *Textbook on International Law.* Oxford University Press, USA.
7. Evans, Malcolm (2010*), International Law.* Oxford University Press, USA.
8. Gray, Christine (2004), *International Law and the Use of Force.* Oxford University Press, USA.
9. Janis, Mark W. (2003), *An Introduction to International Law (Introduction to Law Series).* Oxford University Press, USA.
10. Lowe, Vaughan (2007), *International Law (Clarendon Law Series*). Oxford University Press, USA.
11. Malanczuk, Peter (1997), *Akehurst's Modern Introduction to International Law.* Routledge.
12. Shaw, Malcolm (2014), *International Law.* Cambridge University Press.
13. Tandon, M.P. and Anand, V.K. (2012), *International Law & Human Rights*. Jain Book Depot.

Journals

- *American Journal of International Law* (AJIL), American Society of International Law, 1907.
- Brooklyn Journal of International Law
- *European Journal of International Law* (EJIL) : European University Institute, 1990.
- *Indian Journal of International Law* : Indian Society of International Law, 1960.
- *International and Comparative Law Quarterly* (ICLQ), British Institute of International and Comparative Law, 1952.
- *Journal de droit international* (Clunet): founded by Edouard Clunet in 1874; now published by Lexis Nexis.
- *Recueil des Cours / Collected Courses,* Hague Academy of International Law, 1923.
- *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht, or Heidelberg Journal of International Law, (*ZaoRV / HJIL*):* Max Planck Inst. for Comparative Public Law and International Law, 1929.

Key websites

Listed below are a few key websites of the American Society of International Law:

- Electronic Resource Guide (ERG): the American Society of International Law's guide to international law resources on the web, arranged in subject-based chapters.
- Eagle-i : gateway to law websites, including international law sites, provided by IALS Library
- Electronic Information System for International Law (EISIL) : gateway to international law websites, provided by the American Society of International Law.
- International Law Commission (ILC): this UN body develops and codifies international law; its website provides ILC publications from 1949 onwards, and a research guide.
- *Researching Public International Law:* substantial, detailed research guide by Kent McKeever, Director of the Arthur W. Diamond Law Library at Columbia University in the US (last updated 2006).
- UN International Law page: information, resources and links relating to the UN's work in the field of international law
- UN Treaty Collection: free access to the UN Treaty Series, League of Nations Treaty Series and related information.
- United Nations Documents: gateway to the documentation of the UN General Assembly, Security Council, Secretariat and other UN bodies. (See also the IALS UN Research Guide.)
- World LII Internaational Law Library: free collection of treaties, international court decisions, journals and other international law materials.

Oxford's unrivalled reference works available online

Oxford Scholarly Authorities on International Law

Online

Access the product: http://opil.ouplaw.com/home/OSAIL

Virginia Journal of International Law

Course XII : ***The candidates are required to offer any one of the following courses :***
Option (a) : DEMOCRACY IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : The paper aims at enabling the students to understand and reflect upon the theory and practice of democracy in India.

Unit-I

Prefiguring Indian Democracy.
Indian Democracy : Colonial Inheritance.
Idea of Democracy : Constituent Assembly Debates.
State of Democracy in Contemporary India.

Unit-II

Democracy and Development.
Development Planning.
Economic Reforms.

Unit-III

Identities and Rights : Mobilisation and Contestation.
Gender.
Minority Rights.
Dalits and Backward Classes.

Unit-IV

Political Institutions and Democratic Consolidation.
Indian Federalism in Transition.
Democracy and Decentralisation : Panchayati Raj.
Representation, Participation and Electoral Politics.

Selected Readings :

1. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India : Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).
2. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.), *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).
3. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).
4. Kuldeep Mathur (ed.), *Development Policy and Administration* (New Delhi : Sage, 1996).
5. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi: Sage, 2002).
6. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence*, (New Delhi : Oxford, 1998).
7. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 : 1251-68.
8. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II-The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 : 1361-70.
9. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India*, (New Delhi : Oxford, 2001).
10. Rajendra Vohra and Suhas Palishkar, *Indian Democracy : Meanings and Practices,* (New Delhi : Sage, 2004).
11. Peter Ronald deSouza (ed.), *Contemporary India : Transitions* (New Delhi : Sage, 2000).
12. Pratap Bhanu Mehta, *The Burden of Democracy* (New Delhi : Penguin, 2003).
13. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004* (New Delhi : Oxford, 2005), 2nd Edition.
14. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution : The Bahujan Samaj Party in Uttar Pradesh* (New Delhi : Sage, 2002).
15. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003), 2nd Edition.
16. Madhu Purinima Kishwar, *Deepening Democracy : Challenges of Governance and Globalisation in India* (New Delhi : Oxford, 2005).
17. Abhay Kumar Dubey, *Loktantra Ke Saat Adhyaya* (Delhi : Vani, 2002).
18. Abhay Kumar Dubey, *Bharat Ka Bhumandalikaran* (Delhi : Vani, 2003).

Option (b) : GOVERNMENT & POLITICS OF INDIA'S NEIGHBOURS (PAKISTAN, BANGLADESH, NEPAL AND SRI LANKA)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims at introducing the students to some of the dominant issues in South Asia and their long-term implications on bilateral relations among the states of the region. A critical assessment of India's role in the region is the special focus of this course.

UNIT–I

Impact of Geography, History and Lingo-cultural influences on the Government and Politics of India's neighbours.
Major political institutions and political parties in these countries.

UNIT–II

Social change, ethnicity and demography's impact on politics with special reference to forces of modernization and religious fundamentalism.
Political economy of the neighbouring states and its equation with globalization and liberalisation processes.

UNIT–III

Internal Conflict in South Asia : Causes and Dynamics.

UNIT–IV

India as a factor in the politics of these countries with emphasis on bilateral relations and multilateral SAARC.

Suggested Readings

1. Sugata Bose and Ayesha Jalal, *Modern South Asia : History, Culture, Political Economy* (New Delhi, Oxford University Press, 2004).
2. S. Mahmud Ali, *The Fearful State : Power, People and Internal War in South Asia* (London, Zed Books, 1993).
3. Paul R. Brass, *The Politics of South Asia since Independence* (Cambridge, Cambridge University Press, 1990).
4. Dipankar Gupta, *The Context of Ethnicity : Sikh Identity in a Comparative Perspective* (New Delhi, Oxford University Press, 1996).

5. Ashutosh Varshney, *Ethnic Conflict and Civic Life : Hindus and Muslims in India* (New Delhi, Oxford University Press, 2005).
6. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India* (New Delhi, Oxford University Press, 2001).
7. Tapan K. Bose and Rita Manchanda (eds.), *States, Citizens and Outsiders : The Uprooted Peoples of South Asia* (Kathmandu, South Asian Forum for Human Rights, 1997).
8. Ranabir Samaddar, *The Marginal Nation : Transborder Migration from Bangladesh to West Bengal* (New Delhi, Sage Publications, 1999).
9. Sanjeev Baruah, *Durable Disorder : Understanding the Politics of Northeast India* (New Delhi, Oxford University Press, 2005).
10. Urmila Phadnis, *Ethnicity in South Asia* (New Delhi, South Asian Publishers, 1986).
11. Urmila Phadnis, Kalim Bahadur, S.D. Muni (eds.), *Domestic Conflicts in South Asia : Political Dimensions,* Vol. I (New Delhi, South Asian Publishers, 1986).
12. Urmila Phadnis, S.D Muni, Kalim Bahadur, *Domestic Conflicts in South Asia : Economic and Ethnic Dimensions,* Vol. II (New Delhi, South Asian Publishers, 1986).
13. Veena Kukreja, *Civil-Military Relations in South Asia* (New Delhi, Sage Publications, 1991).
14. Ponna Wignaraja and Akmal Hussain, *The Challenge in South Asia : Development, Democracy and Regional Cooperation* (New Delhi, Sage Publications, 1989).
15. Paul R. Brass, *Ethnicity and Nationalism : Theory and Comparison* (New Delhi, Sage Publications, 1991).

Option (c) : WOMEN AND POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course looks at Indian politics through the lens of gender and draws attention to the main themes and debates regarding gender in modern India. It undertakes an analysis of the issues raised by the women's movement in India and the Indian state. In doing so, it will examine the debates on nationalism, social reform, law, citizenship, development, environment and explore inter-sectionality of identities and structures in India. It is an interdisciplinary course which draws on the academic domain of feminist studies.

Unit 1

Social reform and national movements- debate on the position of women; modernity, colonialism and patriarchy; Gandhi and women
Modern Indian State- Institutional and legal provisions, Equality provisions, Family and the state

Unit 2

Women's movement in Contemporary India – Phases, key campaigns,autonomy, relationship with political parties and critical assessment
Violence - Law, Sexualities, State; Public and private violence, Censorship

Unit 3

Community, Identity and Citizenship
Gender and Caste- Reservations for women, Ambedkar, Periyar, Dalit feminism
Gender and Religion- Personal Laws, UCC Debate, Partition, Communalism

Unit 4

Gender and Development: Impact of development policies, Employment and work, ecology and gender
Human development- Health, education

Essential Readings:

1. Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
2. Mary John (ed) *Women's Studies in India: A Reader,* Penguin, 2008
3. Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
4. Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
5. Radha Kumar, *A History of Doing*, Kali for Women, 1997

Suggested Readings

Unit 1

1. Anupama Roy, *Gendered Citizenship*,('The Womanly Vote'), Orient Blackswan, 2005
2. Bina Agarwal, 'The Family in Public Policy', in Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
3. Brinda Bose, *Gender and Censorship,* Women Unlimited, 2006
4. Geraldine Forbes, Women in Modern India, OUP, 2008
5. Janaki Nair, *Women and Law in Colonial India*, Kali for Women, 1996
6. Joanna Liddle and Rama Joshi, 'Gender and Imperialism in British India', *EPW*
7. Kameshwari Jandhyala, State Initiatives, *Seminar*, September 2001
8. Kumkum Sangari and Sudesh Vaid (ed) *Recasting Women* (Chapters by Uma Chakravarti – Whatever Happened to the Vedic Dasi, Partha Chatterjee- Nationalist Resolution of the Women's Question), kali for Women, 1990
9. Leela Kasturi and Vina Mazumdar (ed) *Women and Indian Nationalism*, (Introduction), Vikas Publishing House, 1994
10. Madhu Kishwar, Gandhi on Women, *EPW,* 5 October 1985
11. Rajeshwari Sunder Rajan, *The Scandal of the State*, (Introduction), Permanent Black, 2003
12. Ratna Kaur and Brenda Crossman, 'On Women, Equality and the Constitution' in Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999

13. Sadhna Arya, 'National Commission for Women, An Overview of its Performance', *EPW*, May 4 2013
14. Sujata Patel, 'Construction and Reconstruction of Woman in Gandhi', *EPW,* 20 February 1988
15. Sumit Sarkar and Tanika Sarkar (ed) *Women and Social Reform* (Introduction),

Unit 2

1. Arvind Narrain, ' The Verma Committee: Alchemizing anger to hope', Kafila.org
2. Gail Omvedt, 'Women's Movement: Some ideological Debates' in Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
3. Indira Jaising, 'Bringing Rights Home: Review of the Campaign for a Law on Domestic Violence', *EPW*, Oct 31 2009
4. Jayati Ghosh, 'Violence against Women: Economic Reforms and Increasing Insecurities', 29 January 2008 (http://www.macroscan.org/cur/jan08/cur290108Violence.htm)
5. Madhu Mehra, 'Taking Stock of the new Anti Rape Law', Kafila.org
6. Nivedita Menon, 'Conundrum of Agency in Sexual Violence' January 2014, Kafila.org
7. Nivedita Menon, 'Rights, Bodies and Law' in Nivedita Menon (ed) *Gender and Politics in India,* OUP, 1999
8. Radha Kumar, *A History of Doing* (Chapters 6-11), Kali for Women, 1997
9. Srimati Basu, 'The Politics of Giving: Dowry and Inheritance as Feminist Issues' in Basu (ed)*Dowry and Inheritance,* Women Unlimited, 2005
10. Susie Tharu and Tejaswini Niranjana, 'Problems for a Contemporary Theory of Gender' in Nivedita Menon, *Gender and Politics in India*, OUP, 1999
11. V Geetha, 'Periyar, Women and an Ethic of Citizenship' in Anupama Rao (ed) *Gender and Caste*, Women Unlimited, 2003
12. Veena Das, 'Sexual Violence, Discursive Formations and the State', *EPW,* Special Issue, Sepetember 1996

Unit 3

1. Bina Agarwal, 'A Field of One's Own' in Srimati Basu (ed) Dowry and Inheritance
2. Bina Agarwal, 'Landmark Step to Gender Equality', *The Hindu*,September 25 2005
3. Flavia Agnes, 'Economic Rights of Women in Muslim Law', *EPW*, Oct 12 1992
4. Gopal Guru, 'Dalit Women Talk Differently', *EPW*, Oct 14 1995
5. Janaki Abraham , 'Contingent Caste Endogamy and Patriarchy', *EPW*, Jan 11 2014
6. Meena Dhanda (ed) *Reservations for Women* (Introduction), Women Unlimited, 2008
7. Nida Kirmani, 'Claiming their Space: Muslim Women's Networks and Women's Movement in India', *Journal of International Women's Studies*, Nov 2009.
8. Nivedita Menon, 'Elusive Woman: Feminism and Women's Reservation Bill in Dhanda (ed)
9. Nivedita Menon, 'Uniform Civil Code: The Women's Movement Perspective', kafila.org
10. Pratima Pardeshi, 'Ambedkar and women's liberation', *the Dalit*, March-April 2002
11. R. Geetha, 'Panchayat Raj Institution and Women's Reservation' in Dhanda (ed)
12. Rajeshwari Sunder Rajan, 'Women between Community and State' in Rajan (ed) *The Scandal of the State*
13. Sharmila Rege, (ed) *Against the Madness of Manu*(Introduction), Navayana Books, 2013

14. Sharmila Rege, 'Dalit Women talk Differently: A Critique of 'Difference' and towards a Dalit Feminist Standpoint', *EPW*, Oct 31 1998
15. Tanika Sarkar, 'Women, Community and Nation' in Jaffrey and Basu (ed)
16. V. Geetha, 'Of Bodily Love and Hurt' in Mary E John and Janaki Nair (eds) *A Question of Silence: The Sexual Economies of Modern India,* Kali for Women, 1998
17. Zoya Hasan, 'Gender Politics, Legal Reform, and the Muslim Community in India' in Patricia Jaffrey and Amrita Basu (ed)*Appropriating Gender: Women's Activism and Politicized Religion in South Asia*, Routledge, 1998

Unit 4

1. Besty Hartmann and Mohan Rao, 'India's Population Programme', *EPW*, Oct 31 2015
2. Bina Agarwal, 'The Gender and Environment Debate' in N.Menon (ed) *Gender and Politics in India*, OUP, 1999
3. Dipta Bhog, 'Gender and Curriculum', *EPW*, April 27 2002
4. Executive Summary of the National Focus Group on Education, NCERT 2005
5. Geeta Nambissan, 'Integrating Gender Concerns', *Seminar*, April 2004
6. Harini Narayan, 'Women's Health, Population Control and Collective Action', *EPW*, Febuary 19, 2011
7. Indrani Mazumdar, Neetha N, 'Gender Dimensions: Employment Trends in India, 1993-94 to 2009-10, *EPW,* 22 October 2011
8. Kalpana Vishwanath, 'Whose Body, Whose Health' *Seminar*, Sept 2001
9. Kalyani Menon-Sen and Kalpana Kannabiran, "Microcredit: Magic Bullet or Poison Pill' in Michele Kelley and Deepika D'Souza (eds) *The World Bank in India,* Orient Blackswan, 2010
10. Leela Kasturi, 'Development, Patriarchy and Politics: Indian Women in the Political Process 1947-92', Occasional Paper, CWDS.
11. Maitrayee Chaudhuri, 'Citizens, Workers and emblems of Culture: An analysis of the First Plan Document on women', *Contributions to Indian Sociology,* 29 (no 1 and 2), 1995
12. Mary E John, 'Gender and Development in India, 1970s-1990s', *EPW*, Nov 23 1996
13. Mary E John, 'Reframing Globalisation: Perspectives from the Women's Movement' EPW, March 7 2009
14. Nirmala Banerjee, 'Whatever Happened to the Dreams of Modernity?' *EPW*, April 25, 1998.
15. NIrmala Buch, 'State Welfare Policy and Women, 1950-1975', *EPW*, 25 April 1998
16. Padmini Swaminathan (ed) Women and Work: Essays from EPW (Introduction), Orient Blackswan, 2012
17. Saheli Women's Resource Centre, 'Reproductive Rights in the Indian Context' (Also available in Hindi)
18. Sujatha Gothoskar, 'The Plight of Domestic Workers', *EPW*, June 1 2013.

Option (d) : RIGHTS : IDEAS AND MOVEMENTS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the various ways in which the notion of rights has been conceptualized in theory and the debates emerging from the rights-based movements.

Unit-I

Notions of Rights : Philosophical foundations, historical developments and normative framework (natural rights, civil rights, democratic rights and human rights).

Unit-II

Contextualizing Rights : Debate on universalism and cultural relativism of rights.
Development debates and human rights.

Unit-III

Human Rights Movements : Ideology and social basis of civil liberties and democratic rights movements in India : National Human Rights Commission; International Human Rights Movement – ideology and social basis.

Unit-IV

Current Challenges : State and rights of citizens (child, women, rights of victims of repression); community rights (minorities, ethnic groups), rights of migrants, displaced people and refugees.

Suggested Readings :

1. Arnold, Christopher, *Ideas and Ideology : Human Rights,* Edward Arnold, 1978.
2. Baviskar, Amita, *In the Belly of the River : Tribal Conflicts Over Development in the Valley,* OUP, Delhi, 1995.
3. Bose, Tapan K. and Rita Manchanda, States, Citizens and Outsiders : The Uprooted Peoples of South Asia, *South Asia Forum for Human Rights,* Kathmandu, 1998.
4. Butalia, Urvashi, *The Other Side of Silence : Voices from the Partition of India,* Viking, Delhi, 1998.

5. Claude, Richard Pieree and Burns H. Weston, *Human* Rights in the World Community : Issues and Actions, University of Pennsylvania Press, Philadelphia, 1989.
6. Dubois, M, "The Governance of the Third World : A Foucauldian Perspective on Power Relations in Development", *Alternatives, 16, 1, Winter,* 1991.
7. Freeden, Michael, *Rights, World View,* Delhi, 1998.
8. Gordenker, Leon, *Refugees in International Politics,* Columbia University Press, New York, 1987.
9. Gudwin-Gill, Guy S., *The Refugee in International Law,* Clarendon, Oxford, 1983.
10. Kochler, Hans, "The Concept of the Nation and the Question of Nationalism : The Traditional "Nation State" vs. a Multiculture 'Community State' in Michael Dunne and Tizianno Bonazzi (eds.) *Citizenship and Rights in Multicultural Societies,* Keele University Press, Keele, 1995.
11. Kothari, Smitu and Harsh Sethi (ed.), *Rethinking Human Rights, Challenges for Theory and Action,* Lokayan, 1989.
12. Kothari, Smitu, "The Human Rights Movement in India," *Social Action*, January-March, 1990, Pp. 1-15.
13. Kumar, Radha, *Divide and Fall? Bosnia in the Annals of Partition,* Verso, London, 1997.
14. Kymlicka, Will, *Multicultural Citizenship: A Liberal Theory of Minority Rights,* Clarendon, Oxford, 1996.
15. Donnelly, Jack, *The Concept of Human Rights,* Croom Helm, London, 1985.
16. Macfarlane, L. J., *The Theory and Practice of Human Rights,* Maurice Temple Smith, London, 1985.
17. Macpherson, C. B., "Problems of Human Rights in the Twentieth Century in C.B. Macpherson, *The Rise and Fall of Economic Justice,* OUP, Oxford, 1987.
18. Mills, Kurt, *Human Rights in the Emerging Global Order,* Palgrave Macmillan, 1998.

19. Mohanty, Manoranjan, Partha Nath Mukherji with Olle Tornquist (ed.), *People's Rights, Social Movements and the State in the Third World,* Sage, New Delhi, 1998.
20. Mani, S. D. and Lok Raj Baral (eds.), *Refugees and Regional Security in South Asia,* Konark, New Delhi, 1996.
21. Paraguli, P., "Power and Knowledge in Development Discourse : New Social Movements and State in India," *International Social Science Journal,* 127, February, 1991.
22. Ray, Ashwini, "Civil Rights Movement and Social Struggle in India", *Economic and Political Weekly,* Vol. XXI, No. 28, 12 July, 1986.
23. Rentein, Alison Dundes, *International Human Rights : Universalism vs Relativism,* Sage, 1990.
24. Rubin, B., "Civil Liberties Movements in India : New Approaches to the State", Asian Survey, Vol. 27, 1987, Pp. 371-92.
25. Singh, Pritam, "Sectarianism and Human Rights Discourse : The Politics of Human Rights in the Post-Colonial Punjab" in Michael R. Anderson and Sumit Guha (eds.), *Changing Concepts of Rights and Justice in South Asia,* OUP, Delhi, 1998.
26. Staunhagen, Rodalfo, *The Ethnic Question : Conflicts, Development and Human Rights,* United Nations University Press, Tokyo, 1990.
27. Steriner, Henry J. and Philip Alston, *International Human Rights in Context : Law, Politics and Morals,* Clarendon Press, Oxford, 1996.
28. Tambiah, Stanley, J., *Levelling Crowds : Ethnonationalist Conflicts and Collective Violence in South Asia,* Vistaar Publications, New Delhi, 1997.
29. UNESCO, *Violation of Human Rights : Possible Rights of Recourse and Forms of Resistance,* 1984.

30. UNHCR, *The State of the World's Refugees – A Humanitarian Agenda,* OUP, Oxford, (Latest edition).
31. Vincent, R. J., (ed.), *Foreign Policy and Human Rights,* Cambridge University Press, Cambridge, 1986.
32. Weiner, Myron, *The Global Migration Crisis : Challenge to States and to Human Rights,* Harper Collins, New York, 1995.
33. Wilmer, Frank, *The Indigenous Voice in World Politics : Since Time Immemorial,* Sage, Newbury Park, 1993.
34. Young, Iris, Marion, *Justice and the Politics of Difference,* Princeton University Press, Princeton, 1990.
35. Zolberg, Aristide R., Astri Suhyke and Sergio Aguayo, *Escape From Violence : Conflict and the Refugee Crisis in the Developing World,* OUP, New York, 1989.

Option (e) : NATIONALISM : THEORY AND CONTEXT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
(iii) The question paper will include the following instructions for the candidates:

(a) The first question is compulsory. It contains 15 questions covering the entire syllabus. The candidates are required to attempt any 10 of them, providing answers to each question in about 25 to 30 words. Each question carries 2 marks.

(b)The remaining question paper consists of 4 units. Each unit carries two questions. The candidates are required to answer one question from each Unit. Each question carries 15 marks.

OBJECTIVES:- This paper examines various theories of nationalism by placing them in the context of their origin. In the process, it examines the concept of nation, its relationshipwith other identities and new challenges it faces in the age of globalization.

UNIT-I

Nation, State and Nation-State: Conceptual Distinctions and Interrelationships.
Origins and Development of Nationalism: European and non-European contexts.
Various forms of nationalism.

UNIT-II

Primordialist theories of nationalism: socio-biological approach (Pierre van der Berghe); culturalist approach (Edward Shils and Clifford Geertz); perennialism (Adrian Hastings).Ethnosymbolist theories: (John Armstrong, Anthony D. Smith).
Modernist theories: nationalism as politics (JohnBreuilly, Paul R. Brass, Erich Hobsbawm); nationalism as social transformation (Ernest Gellner, Benedict Anderson).

UNIT-III

Marxist approach (Marx, Lenin, Rosa Luxemburg, Otto Bauer). Neo-Marxist approaches (tom Nairn, Michael Hector).
Feminstapproach (Nira Yuval-Davis).

UNIT-IV

Postcolonial theory (ParthaChatterjee).
Nationalism and Globalisation

ESSENTIAL READINGS

1. Hutchinson, J. and A.D. Smith (eds.), *Nationalism*,OUP, Oxford, 1994.
2. Ozkirimli, Umut, *Theories Of Nationalism: A Critical Introduction* (second edition), Palgrave Macmillan, New York,2010.

SUGGESTED READINGS

1. Alter, P., Nationalism, Edward Arnold, London, 1989.
2. Anderson, Benedict, *ImaginedCommunities: Reflection on the Origins and Spread of Nationalism*, Verso, London, 1991.
3. Anthiyas, Floya and Nira Yuval-Divas, *Women and the Nation-State*, Macmillan, London, 1989.
4. Balibar, Etienne and Immanuel Wallerstein, *Race, Nation, Class: Ambiguous Identities*, Verso, London, 1991.
5. Chatterjee, Partha, *The Nation and its Fragments*, Oxford University Press, 1994.
6. Connor, Walker, *The National Question in Marxist-Leninist Theory and Strategy*, Princeton University Press, Princeton, 1994.
7. Featherstone, Mike (ed.), *Global Culture: Nationalism, Globalization and Modernity,* Sage, London, 1990.
8. Gellner, Ernest, *Nations and Nationalism*, Blackwell, Oxford, 1983.
9. Hechter, Michael, *Internal Colonialism: The Celtic Fringe in British National Development, 1536-1966*, Routledge and Kegan Paul, London, 1975.
10. Hobsbawm, E.J., *Nations and Nationalism since 1780, Programme, Myth and Reality*, Cambridge University Press, Cambridge, 1990.
11. Ignatieff, Michael, *Blood and Belonging, Journeys into the Nationalism*, BBC Books and Chatto and Windus, London, 1993.
12. Jayawardena, K., *Feminism and Nationalism in the Third World*, New Delhi, 1986.
13. McGraw, A.G. et al (ed.), *Global Politics :Globalization and the Nation-State,* Polity, Oxford, 1992.
14. Nairn, Tom, *The Break-up of Britain: Crisis and Neo-Nationalism*, New Left Books, London, 1977.
15. Smith, Anthony, D., *The Ethnic Origins of Nations*, Blackwell, Oxford, 1986.
16. Smith, Anthony, D., *Theories of Nationalism*, Duckworth, London, 1971
17. Tiech, Mikulas and Roy Porter (eds.), *The National Question in Europe in Historical Context*, Cambridge University Press, Cambridge, 1993
18. Williams, Patrick and Laura Chrisman (eds.), *Colonial Discourse and Post-Colonial Theory*, A Reader, Harvester Wheatsheaf, London, 1993.

Option (f) : NEW POLITICAL GEOGRAPHY IN COMPARATIVE PERSPECTIVE

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : Political Geography is concerned with the reciprocal impact of spatial patterns, features and structures, and political ideas, institutions. Above all, it focuses on the twin ideas of territory and territoriality. This course is based on the premise that with the Post-World War era coming to a decisive end, a new political geography –one offering fresh perspectives on the relationship between geography and politics—is in the making. Such a political geography recognizes that spatial patterns of political processes are not confined only to national boundaries. The nation-state is a part of a globalizing world, and the resultant geopolitical map contains nested regions with over-lapping boundaries. It is equally important to examine the geopolitical economy of so-called 'resource wars', that is armed conflicts revolving to a significant degree over the pursuit or possession of critical materials. The course will draw upon a number of case studies from different parts of the globe (especially Afro-Asia, Polar Regions and the Indian Ocean region) to enable students develop a better understanding of the politics of space and spaces of politics.

Unit-I

Understanding Key Concepts : Power, Territory/Territoriality, Space and Spatiality.
Globalization and the Regionalization : Integration and Fragmentation.

Unit-II

Territory and the Power of Ethnic Nationalism.
The Geopolitics of 'Resource Wars'.

Unit-III

Environmental Geopolitics and Sustainability (with special reference to the polar regions).
International Migration, Refugee Flows and Diasporas.

Unit-IV

New States and the Geopolitical Transition (with special reference to Central Asian Republics).
Changing nature and role of international boundaries and border regions.

Suggested Readings

1. David Slater, "Geopolitical Imaginations Across the North-South Divide : Issues of Difference, Development and Power," *Political Geography 16 (8)*, November 1997 : 631-654.
2. Ghazi Flah, "The Spatial Manifestation of Threat : Israelis and Palestinian Seek a 'Good' Border," *Political Geography,* 1995, 14 (8) : 689-706.
3. Ian Bremmer and Ray Taras (eds.), *New States, New Politics : Building the Post-Soviet Nations*, Cambridge : Cambridge University Press, 1997.
4. Leif Ohlsson (ed.), *Hydropolitics : Conflicts Over Water as a Development Constraint*, Dhaka University Press Limited, 1996.
5. Linda Weiss, *The Myth of the Powerless State : Governing the Economy in a Global Era,* Cambridge : Polity Press, 1998.
6. Malcolm Anderson*, Frontiers : Territory and State Formation in the Modern World,* Cambridge, Polity Press, 1996.
7. Mekonnen Tesfahuney, "Mobility, Racism and Geopolitics", *Political Geography*, 1998, 17 (5), 499-515.
8. Ramesh Dutta Dikshit, *Development in Political Geography : A Century of Progress*, New Delhi : Sage, 1997.
9. Robert Bennett and Robert Estall (eds.), *Global Change and Challenge : Geography for the 1990s*, London, New York : Routledge, 1991.
10. Sanjay Chaturvedi, *The Polar Regions : A Political Geography*, Chichester : John Wiley & Sons, 1996.
11. Sarah A. Radcliff, "Frontiers and Popular Nationhood : Geographies of Identity in the 1995 Ecuador-Peru-Border Dispute," *Political Geography*, 1998, 17 (3) : 273-293.
12. Stanley D. Brunn & Thomas R. Leinbach (eds.), *Collapsing Space & Time : Geographical Aspects of Communication & Information*, London : Harper Collins Academic, 1991.
13. Tapan K. Bose and Rita Manchanda, *State, Citizens and Outsiders : The Uprooted Peoples of South Asia*, Kathmandu : South Asia Forum for Human Rights, 1997.
14 Vladimir Kolossov and Andrei Treivish, "The Political Geography of European Minorities : Past and Future", *Political Geography*, 1998 : 17 (5) : 517-534.
15 Rajat Ganguli, *Kin State Intervention in Ethnic Conflicts : Lessons from South Asia*, New Delhi : Sage Publications, 1998.
16 Feroz Ahmed, *Ethnicity and Politics in Pakistan*, Karachi : Oxford University Press, 1998.
17 Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism : Essays North-South,* Delhi : Oxford University Press, 1997.
18 Stephen Castles & Mark J. Miller, *The Age of Migration : International Population Movements in the Modern World,* Houndmills, MacMillan, 1998 (Second Edition)
19 Agnew, J., *Making Political Geography*, London : Arnold, 2002.
20 Blackwell, M., *Political Geography*, London : Routledge, 2002.

21 Cox, K.R., *Political Geography: Territory, State and Society*, Oxford : Blackwell, 2002.

22 Dodds, K., *Geopolitics in a Changing World*, Harlow : Pearson Education, 2000.

23 Glassner, M. and Fahrer, C., *Political Geography*, Chichester : John Wiley & Sons, 2003.

24 Jones, M., *An Introduction to Political Geography*, London : Routledge, 2004.

25 Loughlin, John O. *Dictionary of Geopolitics*, Westport : Greenwood Press.

26 Painter, J., *Politics, Geography and 'Political Geography'*, London : Arnold, 1995.

27 Tuathail, G.O., Dalby, S. and Routledge, P., *The Geopolitics Reader*, London : Routledge, 2007.

28 Rumley, D. and Chaturvedi, S., *Energy Security and the Indian Ocean Region*, New Delhi : South Asian Publishers, 2005.

Journals

Political Geography.
Progress in Human Geography.

*Geopolitics** A Frank Cass Journal, (see in particular *Special Issue* on "The Geopolitics of Resource Wars", Volume 9, number 1, Spring 2004 : Special Issue on "Boundaries, Territory and Post-Modernity, Volume 3, Number 1, Summer 1998).

*Note : This journal is also available on line at Panjab University library website.

Option (g) : POLICIES AND POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper familiarises students with the various trajectories of the Indian development experience and their interaction with politics since independence.

Unit-I

The Colonial Experience.
National Movement : Debates on Development.
Planning and its precursors.

Unit-II

Agriculture and the Institutional Strategy.
Politics of land reforms.
New Agricultural Policy.
Green Revolution and the Rise of agrarian power/capitalism.

Unit-III

Politics of industrial Policy.
State and Business : Labour, Import Substitution and Nationalisation.
Politics of business groups.

Unit-IV

Economic Reforms : Background, Scope and Content.
Political Economy of Reforms.
Economic Reforms, Democracy and Electoral Politics.

Readings

1. Amit Bhaduri and Deepak Nayar, *The Intelligent Person's Guide to Liberalisation* (New Delhi : Penguin, 1996).

2. Ashutosh Varshney, *Democracy, Development and the Countryside : Urban-Rural Struggles in India*, (Cambridge : Cambridge University Press, 1995).

3. Atul Kohli, 'Politics of Economic Liberalisation in India', *World Development* 17(3), 1989 : 305-28.

4. Atul Kohli, The Politics of Economic Growth in India, 1980-2005: Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 :1251-68.

5. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II- The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 :1361-70.

6. Atul Kohli, *The State and Poverty in India : The Politics of Reform* (Cambridge : Cambridge University Press, 1987).

7. Baldev Raj Nayar, *Globalisation and Nationalism : The Changing Balance in India's Economic Policy*, 1950-2000 (New Delhi: Sage, 2001).

8. Baldev Raj Nayar, *India's Mixed Economy : The Role of Ideology and Interest in its Development* (Bombay : Popular Prakashan, 1989).

9. Baldev Raj Nayar, "Policy and Performance under Democratic Coalitions : India's United Front Government and Economic Reforms, 1996-98", *Journal of Commonwealth and Comparative Politics*, 37(2) July 1999 : 22-56.

10. Bimal Jalan (ed.), *Indian Economy : Problems and Prospects*, (New Delhi : Oxford, 1993).

11. Bipan Chandra, *The Rise and Growth of Economic Nationalism in India.*

12. Deepak Naayar, 'Economic Development and Political Democracy : Interaction of Economics and Politics in Independent India', *Economic and Political Weekly* 39(21) : 2079-31.

13. Dige Jorgen Pedersen, 'Explaining Economic Liberalisation in India : State and Society Perspectives', *World Development*, 28(2) 2000 : 265–82.

14. Donald Horowitz, 'Is there a third-world policy process', *Policy Sciences*, 22, 1989 : 197–212.

15. E. Sridharan, "Economic Liberalisation and India's Political Economy : Towards a Paradigm Synthesis", *Journal of Commonwealth and Comparative Politics*, 31(3), November, 1993.

16. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004*, (New Delhi : Oxford, 2005) 2nd Edition.

17. G. Thimmaiah, 'The Political Economy of Populist Programmes', *Journal of Indian School of Political Economy*, 8(1),1996 : 40–63.

18. Ian Little and Vijay Joshi (eds.), *India's Economic Reforms*, 1964-91, (Delhi : Oxford, 1998).

19. Isher Judge Ahluwalia, *Industrial Growth in India : Stagnation since the Mid-Sixties* (Delhi : Oxford, 1985).

20. Jagdish Bhagwati, *India in Transition : Freeing the Economy*, (New Delhi : Oxford, 1993).

21. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.) *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).

22. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).

23. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi : Sage, 2002).

24. Lloyd Rudolph and Susanne Rudolph, *In Pursuit of Lakshmi : The Political Economy of the Indian State* (Chicago : Chicago University Press, 1987).

25. Mark Robinson and Gordon White (ed.), *Democratic Developmental State* (Delhi, 1998).

26. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India: Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).

27. Pradeep Chhibber, 'Political Parties, Electoral Competition, Government Expenditures and Economic Reforms in India', *Journal of Development Studies*, 32(1), 1995 : 74–96.

28. Pranab, Bardhan, *The Political Economy of Development in India* (expanded edition with an epilogue on the Political Economy of Reform in India) (New Delhi, Oxford, 1998).

29. Rob Jenkins, *Democratic Politics and Economic Reform in India* (Cambridge University Press, New Delhi, 1999).

30. Robert Cassen and Vijay Joshi (eds.), *India : The Future of Economic Reforms* (New Delhi : Oxford, 1995).

31. Robert Wade, 'The Market for Public Office : Why the Indian State is not Better at Development', *World Development*, 13(4), 1985 : 467–97.

32. Sanjay Kumar, 'Impact of Economic Reforms on Indian Electorate', *Economic and Political Weekly* 39(16): 1621-30.

33. Stanley Kochanek, 'Liberalisation and Business Lobbying in India', *Journal of Commonwealth and Comparative Politics* 34(3), 1996: 155–73.

34. Stanley Kochanek, 'The Transformation of Interest Politics in India', *Pacific Affairs*, 68 (4), 1996 : 529–50.

35. Stanley Kochanek, *Business and Politics in India* (Berkeley : University of California Press, 1974).

36. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003) 2nd Edition.

37. Sukhamoy Chakravarthy, *Development Planning : The Indian Experience* (New Delhi : Oxford, 1987).

38. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence* (New Delhi: Oxford, 1998).

39. Terence J. Byres (ed.), *The State, Development Planning and Liberalisation in India* (New Delhi : Oxford, 1997).

40. Vanita Shastri, 'The Politics of Economic Liberalization in India', *Contemporary South Asia*, 6(1), 1997 : 27–56.

41. Vivek Chibber : *Locked in Place : State Building and Late Industrialisation in India,* (New Delhi : Tulika, 2004).

Course XII: Option (h) : PUBLIC ADMINISTRATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper will introduce students to different aspects of public administration with special reference to India.

UNIT-I

Development of Public Administration as a discipline – Basic concepts of administration – Nature and Scope – private and public administration – control over Administration, Executive, Legislative, Judiciary.

UNIT-II

Principles of Organization : Line & Staff Agencies
Type of Organization : Formal & Informal
Forms of Organization, Departmental, Public Corporation and Board.

UNIT-III

Personnel Administration, Bureaucracy and Civil Service, Recruitment, Promotion, Training and Civil Service Neutrality.

Financial Administration : Importance of Fiscal Management Budgetary Process in India. The Finance Ministry, Organization and Functions, Budgetary Control – Financial Committees of Parliament – Public Account Committee and Estimate Committee – Audit in India, Comptroller and Auditor General.

UNIT-IV

Administration Law, Delegated Legislation : Need for Delegation, Delegated Legislation in India; Parliamentary Control of Delegated Legislation.

Administration Tribunals : Emergence and significance of Administrative Tribunals, Judiciary and Administrative Tribunals.

Administrative Improvement and Reforms ; Lok Pal and Lok Ayukta.

Books Recommended :

1. M. P. Sharma & B.L. Sadana : *Public Administration in Theory and Practice*, Kitab Mahal, 2004.
2. C.P. Bhambari : *Administration in Changing Society,* National, 1978.
3. C.P. Bhambari : *Public Administration (Theory and Practice),* J.P.Nath & Co., 1972.
4. A. Avasthi and S. Maheshwari : *Public Administration,* Lakshmi Narain Agarwal, 1966.
5. Ramesh K. Arora : *Comparative Public Administration : An Ecological Perspective, Associate Publishing House, 1972.*
6. R.S. Milne : *Concepts and Models in Public Administration,* IIPA, 1966.
7. Chester Barnard : *The Functions of the Executive,* Cambridge, 1928.
8. J.S. Bhalla : *Public Enterprise in U.K., U.S.A., and India,* 1969.
9. Lee, Hahn Been and Samonte, Abelardo G. (eds) : *Administration Reforms in Asia, EROPA, 1970, See Particularly J.N. Khosla " Administration Reforms in Asia",* pp 270-286.
10. Pfiffner & Sherwood : *Administrative Organisation, Prentice-Hall, 1968.*
11. Amitai Etzioni : *Modern Organisation, Prentice Hall, 1972.*
12. Edwin B. Flippo : *Principles of Personnel Management (Fourth Edition), McGraw-Hill, Kogakusha Ltd., 1976.*
13. HPA : *Personnel Administration-Implementing the Reforms, IIPA, 1967.*
14. Administrative Reforms Commission Report on Personnel Administration (New Delhi : 2010)
15. C.P. Bhambri : *Public Administration (Theory and Practice (Meerut : Educational Published 21th edition 2010)*
16. Mohit Bhattacharya : *Public Administration (Calcutta : World Press, 2000)*
17. S. L. Kaushik and Pardeep Sahni (eds.) : *Public Administration in India : Emerging Trends (Allahabad : Kitab Mehal, 2007)*
18. William A. Niskanen : *Bureaucracy and Representative Government (Chicago: Atherton, 2007)*

FOURTH SEMESTER

Course XIII : INDIAN POLITICAL THOUGHT-II (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the major themes of Indian Political Thought particularly during the Indian National Movement through a study of the contribution of key thinkers during this period.

Unit-I

- M.K. Gandhi : Politics of Non-violence.
- Satyagraha and Swaraj.
- Sarvodaya.

Unit-II

- Challenging Brahminical Discourse : B.R. Ambedkar.
- Critique of Brahminical Hinduism.
- Class, Caste and Democracy.

Unit-III

- Politics and Philosophy of M. N. Roy : Theory of Radical Humanism, Roy-Lenin Controversy.
- The Ideology of Communist Movement in India.

Unit-IV

- Indian Socialist Tradition : Jawaharlal Nehru, R.M. Lohia and Jayprakash Narayan.

Essential Readings

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century : From Naoroji to Nehru* (London, OUP,1971).
2. Bali, D.R., *Modern Indian Thought* (New Delhi, Sterling, 1980).
3. Baxi Uppendra & Parekh, B. (eds.), *Crisis and Change in Contemporary India* (New Delhi, Sage, 1995). Doctor, A.H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).
4. Brown, D.M., *Nationalist Movement : Indian Political Thought from Ranade to Bhave* (Berkeley : University of California Press, 1965).
5. Pantham, Thomas and Deutsch, K.L. (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
6. Pantham, Thomas, *Political Theories and Social Reconstruction* (New Delhi, Sage, 1995).
7. Parekh, B. and Pantham, Thomas (eds.), *Political Discourse: Exploration in Indian and Western Political*
8. Parel, Anthony J. & Keith Ronald C. (eds.), *Contemporary Political Philosophy* (New Delhi, Sage, 1992). Vanna, V.P., *Modern Indian Political Thought* (Agra : Lakshami Narain, 1996), 11th Revised Edition. *Thought* (New Delhi, Sage, 1987).

Specific Readings

1. Arooran, A. N., *Tamil Renaissance and Dravdian Nationalism,* 1905-44 (Madurai : Koodal, 1980).
2. Chandra, Bipan (ed.), *The Indian Left : Critical Appraisal* (New Delhi, Vikas, 1983).
3. Chatterjee, Partha, *Nationalist Thought and The Colonial World* (Delhi : OUP, 1986).
4. Chatterji, Bhola, *Conflict in J. P.'s Politics* (New Delhi : Ankur, 1984).
5. Dalton, Dennis, "The Ideology of Sarvodaya" in *Pantham and Deutsch,* 1986.
6. Das, M. N., *Political Philosophy of Nehru* (London : George Allen and Unwin, 1961).
7. Dasgupta, Biplab, *The Naxalite Movement* (Bombay, Allied, 1974).
8. Doctor, Adi H., "Low Caste Protest Movements in 19th and 20th Century Maharashtra : A Study of Jyotirao Phule and B. R. Ambedkar," *Indian Journal of Social Science,* IV (2), April-June, 1991.
9. Gard, R.A., *Buddhist Political Thought : A Bibliography* (Washington : School of Advanced International Studies, 1952).
10. Ghatak, B.K. (ed.), *Dr. Ambedkar's Thought* (New Delhi : APH, 1997).
11. Ghose, Shankar, *Socialism and Communism in India* (Bombay, Allied, 1971).
12. Guha, Ranjit, "Dominance Without Hegemony and its Historiography" in Guha (ed.), *Subaltern Studies VI* (Delhi : OUP, 1989).
13. Gupta, S. D., *Comintern, India and the Colonial Question* (Calcutta : K. P. Bagichi, 1980).
14. Haiah, Kancha, "Towards the Dalitaization of the Nation in Partha Chatterjee" (ed.), *Wages of Freedom* (Delhi : OUP, 1988).
15. Irschik, F., *Politics and Social Conflict in South Asia : The Non-Brahmin Movement and Tamil Separatism,* 1916-29 (Berkeley : University of California Press, 1969).
16. Iyer, Raghavan, *The Moral and Political Thought of Mahatma Gandhi* (Delhi : OUP, 1973).
17. Jatava, D. R., *The Political Philosophy of B. R. Ambedkar* (Agra Phoenic, 1965).
18. Josh, Bhagwan, *Struggle for Hegemony in India, 1920-1947,* Vol., II : 1934-41 (New Delhi : Sage, 1992).

19. Juergensmeyer, Mark, "Shoring up the Saint : Some Suggestions for Improving Satyagraha" in John, Hick and Lamont, C. Hempel (eds.), *Gandhi's Significance for Today* (London : Macmillan, 1989).
20. Kantowsky, D., *Sarvodaya : The Other Development* (New Delhi : Vikas, 1980).
21. Kaviraj, Sudipta, "The Heteronomous Radicalism of M. N. Roy" in *Pantham and Deutsch,* 1986.
22. Keer, Dhanajayay, *Dr. Ambedkar : Life and Mission* (Bombay : Popular Parkashan, 1964).
23. Martyshin, Orest, *Jawaharlal Nehru and His Political Views* (Moscow : Progress, 1989).
24. Mehrotra, N. C., *Lohia : A Study (*Delhi *:* Atma Ram and Sons, 1978).
25. Mohanty, Manoranjan, "Ideology and Strategy of the Communist Movement in India" in *Pantham and Deutsch,* 1986.
26. Mukherjee, Partha N., "Sarvodaya After Gandhi" in Ramashray Roy (ed.), *Contemporary Crisis in Gandhi* (Delhi : Discovery, 1986).
27. Nagaraj, D. R., "A Tibetian Dog, The Silent Sadhus and Peasants of Champaran Notes on Violence, Non-Violence and Counter-Violence in Gandhi" in Ramashray Roy (ed.), *Gandhi and the Present Global Crisis* (Shimla : IIAS, 1996).
28. Nandy, Ashis, "From Outside the Imperium : Gandhi's Cultural Critique of the West" in *Roy,* 1986.
29. O'Hanlon, Rosalind, *Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in Nineteenth Century Western India* (London : Cambridge, University Press, 1985).
30. Omvedt Gail, *Dalits and the Democratic Revolution : Dr. Ambedkar and the Dalit Movement in Colonial India* (Delhi : Sage, 1994).
31. Omvedt, Gail, *Cultural Revolution in a Colonial Society : The Non-Brahman Movement in Western India 1873 to 1940* (Bombay : SSET, 1976).
32. Omvedt, Gail, *Dalit Visions* (New Delhi : Orient Longman, 1995).
33. Ostergaard, Geoffrey, "The Gandhian Movement in India since the Death of Gandhi" in *Hick and Hempel,* 1989.
34. Overstree, G. D. and Marshall Windmiller, *Communism in India* (Bombay, Perennial Press, 1969).
35. Pantham Thomas, "Understanding Nehru's Political Ideology" in Amal Ray (et. al.) (eds.), *The Nehru Legacy : An Appraiser* (Delhi : Oxford and IBH, 1991).
36. Pantham, Thomas, "Gandhi's Quest for Non-Violent Political Philosophy" in L. Rouner (ed.), *Celebrating Peace* (Notre Dame, University of Notre Dame Press, 1991).
37. Pantham, Thomas, "Gandhi's Theory of Non-Violence : His Reply to the Terrorist" in Neol O'Sullivan (ed.), *The Theory and Practice of Terrorism* (Sussex, 1986).
38. Pantham, Thomas, "Habermas's Practical Discourse and Gandhi's Satyagraha" in *Parekh and Pantham,* 1987.
39. Pantham, Thomas, "Postrelativism in Emancipatory Thought : The Significance of Gandhi's Swaraj and Satyagraha", in Sheth, D.L. and Nandy, Ashis (eds.), *The Multiverse of Democracy* (Delhi : OUP, 1997).
40. Pantham, Thomas, Parekh, Bhikhu, *Gandhi's Political Philosophy* (London, Macmillan, 1989).
41. Pillai, R. C., "The Political Thought of Jawaharlal Nehru" in *Pantham and Duetsch,* 1986.
42. Prasad, Bimal, *Jayprakash Narayan : Quest and Legacy* (New Delhi, Vikas, 1982).
43. Prasad, N. (ed.), *J. P. and Social Change* (Delhi, Radiant, 1982).
44. Prasad, R. A., *Socialist Thought in Modern India* (Delhi : Meenakshi, 1974).

45. Ram, Mohan, *Indian Communism : Split Within a Split,* (New Delhi : Vikas, 1969).
46. Rao, K. Raghavendra, "Communication Against Communication : The Gandhian Critique of Modern Civilization in Hind Swaraj" in *Parekh and Pantham, 1987.*
47. Ray, Sibnarayan (ed.), *M. N. Roy : Philosopher Revolutionary* (Delhi, Ajanta, 1995).
48. Roy, M. N., *New Humanism* (Calcutta : Renaissance, 1953).
49. Roy, Samaren, *M. N. Roy : A Political Biography* (Hyderabad : Orient Longman, 1997).
50. Seth, Sanjay, *Marxist Theory and Nationalist Politics : The Ease of Colonial India* (New Delhi : Sage, 1995).
51. Sinha, L. P., *The Left Wing in India* (Muzaffarpur, New Publishers, 1965).
52. Srinivasan, R., "The Ideological Genesis of the Dravidian Movement", *Indo-British Review,* January-June, 1987.
53. Srivastava, R.K., "Sarvodaya; Vision and Reality" in Roy, 1986.
54. *The Philosophy and Practice of Radical Humanism* (New Delhi : Radical Humanist Association, 1970).
55. Yopadgtata, P.C., "A Celebration of the Gandhian Alternative", *Economic and Political Weekly,* 2nd December, 1989.
56. Zelliot, Eleanor, "The Social and Political Thought of B. R. Ambedkar" in *Pantham and Deutsch,* 1986.

Course XIV : FOREIGN POLICY OF INDIA (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course tries to underline the changes, which the shifting nature of world order has induced into the more enduring elements and themes of Indian foreign policy. At the same time, India's growing assertion on the world stage as an important international actor is assessed in the light of its role in various global regimes.

Unit –I: Making of Indian Foreign Policy

1. Legacies and Actors
2. Principal Phases of Indian Foreign Policy
3. Transition from Nehruvianism to Neoliberalism

Unit-II: India's Economic Foreign Policy

4. Global Setting: IMF, WB, and WTO
5. Regional Setting: SAARC and Beyond

Unit–III: India's Strategic Foreign Poicy

6. India's Strategic concerns at global and regional level
7. India's Nuclear Policy

Unit-IV: India's Environmental Policy:

8. Climate Change
9. Energy Security

Essential Readings

1. C Raja Mohan , *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).
2. A. Appadorai and M. S. Rajan, *India's Foreign Policy and Relations* (South Asian Publishers, 1988).
3. Achin Vanaik, *India in a Changing World* (Orient Longman, 1995).
4. C. Raja Mohan, *Modi's World*: *Expanding India's Sphere of Influence* (Harper Collins, 2015).
5. David Malone, C. Rajamohan, Srinath Raghavan (Eds.), *The Oxford Handbook of Indian Foreign Policy* (Oxford Handbooks 2015).
6. Imtiaz Ahmed (ed.), *Indian Foreign Polic* (Delhi , Vikas Publishing House, 1993).
7. J. N. Dixit, *Makers of Indian Foreign Policy: From Raja Ram Mohan Roy to Yashwant Sinha*, 2003. (New Delhi: Harper Collins, 2003)
8. J.N. Dixit, *Indian Foreign Policy, 1947-2003* (New Delhi, D. K. Publications, 2003).
9. Kanti Bajpai and Harish V. Pant (eds.), *India's Foreign Policy*: *A Reader* (Oxford University Press, 2013)
10. Kanti Bajpai, *India and the world*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.
11. Kanti P. Bajpai and Amitabh Mattoo eds., *Securing India: Strategic Thought and Practice*, (New Delhi, Manohar Publishers, 1996).
12. Muchkund Dubey, *India's Foreign Policy: Coping with the Changing World* (Pearson, 2012)
13. R. S. Yadav, Bhartiya Videsh Niti (Hindi Edition).
14. Sumit Ganguly, *Indian Foreign Policy* (Oxford India Short Introductions Series, 2015).
15. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
16. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
17. V. P. Dutt, *India's Foreign Policy* (New Delhi, Vikas, 1984).

Suggested Readings

1. A. Kapur and A. J. Wilson, *The Foreign Policy of India and her Neighbours*, (Basingstroke: Macmillan, 1996).
2. A.P. Rana, *The Imperatives of Non-Alignment*: *A Conceptual Study of India's Foreign Policy Strategy in the Nehru Period*, (Macmillan, 1976).

3. Bimal Prasad (ed.), *Indian Foreign Policy* (New Delhi, Vikas).

4. C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).

5. Harish Kapur, *India's Foreign Policy, 1947-1992*: *Shadows and Substance* (New Delhi, Sage, 1994).

6. Iqbal Singh, *Between Two Fires: Towards an Understanding of Nehru's Foreign policy,* (Hyderabad: Orient Longman, 1998).

7. Itty Abraham, *The Making of the Indian Atomic Bomb, Science, Secrecy and the Postcolonial State*, (Zed Books, 1998).

8. J. N. Dixit, *Indian Foreign Policy and its Neighbours* (New Delhi, Gyan Books, 2001).

9. J.N. Dixit, *Across Borders: Fifty Years of India's Foreign Policy* (New Delhi, Picus Books, 1998).

10. J.N. Dixit, *My South Block Years: Memoirs of a Foreign Secretary*, (New Delhi, UBSPD), 1996.

11. K. Subrahmanyam, "Nehru and the India-China Conflict of 1962", in *Indian Foreign Policy: The Nehru Years*, ed. B.R. Nanda, (New Delhi, Vikas, 1976)`.

12. Lalit Mansingh et al. (eds), *Indian Foreign policy: Agenda for the 21st Century* (New Delhi: Konark Publishers, 1997).

13. M. S. Rajan, *India and International Affairs: A Collection of Essays* (New Delhi, Lancers Books, 1999).

14. M.J. Akbar, *Nehru: The Making of India*, (London, Penguin Books, 1988).

15. N. Jayapalan, *Foreign Policy of India* (Delhi, Atlantic, 2001).

16. Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

17. Robert W. Bradnock, *India's Foreign Policy Since 1971*. (London, Pinter Publishers, 1990.

18. Ronald, Inden, *Imaging India* (Cambridge, MA, Blackwell, 1992).

19. Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York, Simon and Schuster, 1996).

20. Stepehn D. Krasner, *Structural Conflicts: The Third World Against Global Liberation* (Berkeley, University of California Press, 1985).

21. Sumit Ganguly, *Indian Defence Policy*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.

22. Surjit Mansingh, *India's Search for Power, Indira Gandhi's Foreign Policy, 1966-1982* (Delhi, Sage, 1984.)

23. V. P. Dutt, *India's Foreign in a Changing World* (New Delhi, Vikas, 1999).

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) : PARTIES AND ELECTORAL POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : It helps the students to understand the evolution and transformation of political parties in India. It also analyses different issues that impinge on party politics and challenges posed by parties and party system to Indian democracy.

Unit-I

Political Parties and Party Politics in Contemporary India :

- A political, sociological and economic analysis.
- Federalism, regionalism and political parties.
- Party system in transition.

Unit-II

National Political Parties :

- Ideology and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-III

Regional and State Parties :

- Origin and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-IV

Electoral Politics in India :

- Role of Social cleavages and elections.
- Electoral reforms and the Electoral process.
- New Social Movements, NGOs and their impact on political parties.

Selected Readings

1. Chatterjee, Partha (Ed.), *State and Politics in India*, OUP, 1999.
2. Hasan, Zoya, (Ed.), *Parties and Party Politics in India*, New Delhi, Oxford, 2001.
3. Mehra, Ajay Kumar, D.D. Khanna and Gert W. Kueck (Ed.) , *Political Parties and Party Systems*, Sage Publications, New Delhi, 2003.
4. Mitra, Subrata K. and V.B. Singh, *Democracy and Social Change in India : A Cross Sectional Analysis of the National Electorate*, Sage, 1999.
5. Kohli, Atul, *Centralization and Powerlessness : India's Democracy in a Comprehensive Perspective* in Midgal, Joe, Atul Kohli and Vivenne Shue (Eds.) , *State Power and Social Forces*, Cambridge University Press, 1994.
6. Roy, Ramashray and Paul Wallace (Eds.), *India's 1999, Elections and 20th Century Politics*, Sage, New Delhi, 2003.
7. Vora, Rajendra and Suhas Palshikar (Eds.), *Indian Democracy*, Sage, New Delhi, 2003.

Option (b) : STATE POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: There is much recognition and appreciation of the regional states to be viewed as important political and economic units for developing a theoretical framework for analysing politics and economy undergoing a transition in recent India. The regional states are being considered as critical to the understanding of the issues pertaining to emergent national politics and economy. This course aims to explore the multiple dimensions of state as well as sub-state level politics in India in a comparative perspective.

Unit -I

A Theory of State Politics in India

a. Rise of State Politics as an Autonomous Discipline: Survey of Literature
b. Beyond Nation-State: Framing Regional Politics in India

Unit-II

Language, Region and Federal Polity

a. Reorganization of States in Independent India: 1953-1999
b. Recent Demands for New States: Shifting Bases
c. Politics of Autonomy/Self-determination: Punjab, Jammu and Kashmir
d. Regionalization of Politics: State Level Parties, Coalitional Politics at the State Level

Unit -III

Dalit and Backward Classes Movements

a. Tamil Nadu : Dravidian Movement and Lower Castes Assertion
b. Uttar Pradesh: Lower and Middle Castes Political Assertion
c. Punjab: Ad-Dharm Movement, Dalit Cultural Assertion

Unit-IV

Regional Roots of Development Politics in India: State Level Experiences

a. State, Political Regimes and Social Welfare Policy: Stark Variations across the States
b. Agrarian Politics in the States: Green Revolution, Farmers' Movements, Farmers' Suicides
c. Politics of Economic Reforms and Growing Spatial Disparity: Regional States and Sub-Regions

Essential Readings

1. Frankel, Francine and M.S.A. Rao, eds, *Dominance and State Power in Modern India,*
2. Jenkins, Rob, *Regional Reflections: Comparing Politics across India's States, Oxford* University Press, New Delhi, 2004.
3. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
4. Narain, Iqbal, ed., *State Politics in India*, Meenakshi Prakashan, Meerut, 1976.
5. Pai, Sudha , *Handbook on Politics in the Indian States Regions, Political Parties and Economic Reforms (*Ed.). Oxford University Press, New Delhi, 2013.
6. Weiner, Myron, ed., *State Politics in India*, Princeton University Press, New Jersey, 1968.
7. Wood John R, ed., *State Politics in Contemporary India: Crisis or Continuity*, Westview Press, Boulder, 1984.

Suggested Readings:

Unit 1

1. Crane, Robert I. (ed.), *Regions and Regionalism in South Asian Studies: An Exploratory Study*, Duke University Monograph series, 1967.
2. Fadia, B., *State Politics in India*, Radiant Publishers, New Delhi, 1984.
3. Gould, W. *Hindu Nationalism and the Language of Politics in Late Colonial India*, Cambridge University Press, Cambridge, New York, 2004.
4. Heller, Patrick, 'Degrees of Democracy: Some Comparative Lessons from India', *World Politics*, 52, July, 2000. 484-519.
5. Iyer, L., 'Direct versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, 92(4), 2010, 693–713.
6. Jacob, Suraj, 'Towards a Comparative Sub-national Perspective on India', *Studies in Indian Politics*, December 2015 vol. 3 no. 2 229-246
7. Kailash, K. K., 'Varieties of Comparative State Politics Research in India', Seminar, 620, 2011, 66-71.
8. Kohli, Atul and Prerna Singh (eds.), *Handbook of Indian Politics*, Routledge, London, 2013.
9. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
10. Markovits, C., *A History of Modern India*, 1480–1950, Anthem, London, 2002.

11. Pai, Sudha, *State Politics New Dimensions: Party System, Liberalization and Politics of Identity.* Shipra Publications, New Delhi, 1999.
12. Palshikar, Suhas and Rajeswari Deshpande, 'Redefining State Politics in India', 2009, http://www.lokniti.org/newsletter/theme_note.pdf
13. Shastri, Sandeep and K. C. Suri and Yogendra Yadav, eds., *Electoral Politics in Indian States*, Oxford University Press, New Delhi, 2009.
14. Sinha, Aseema, 'Scaling Up: Beyond the Sub-national Comparative Method for India', *Studies in Indian Politics*, 3(1), June, 2015, 128-133.
15. Synder, Richard, 'Scaling Down: The Subnational Comparative Method', *Studies in Comparative International Development*, 36(1), March, 2001, 93-110
16. Tillin, Louise, 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2), December, 2013, 235-240.

Unit 2

1. Ahmed, B., 'Elections and Party Politics in India: A Symposium'. *Asian Survey* 10(11), November, 979–92, 1970.
2. Bose, Sumantra, *States, Nations, Sovereignty: Sri Lanka, India and the Tamil Eelam Movement*, Sage, New Delhi, 1999.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and Politics of Identity in India*, Pearson-Longman, New Delhi, 2008.
4. Brass, Paul R, *Language Religion and Politics in North India,* Cambridge University Press, 1974.
5. Chadha Behera, Navneeta, *State, Identity and Violence; Jammu, Kashmir and Ladakh*, Manohar, New Delhi, 2000.
6. Chandra, K. and S. Wilkinson, 'Measuring the Effect of 'Ethnicity,' Comparative Political Studies 41(4–5), 2008, 515–63.
7. Chandra, K. *Why Ethnic Parties Succeed: A Comparative Study of the Bahujan Samaj Party Across Indian States*, Cambridge University Press, New York, 2000.
8. Chhibber, Pradeep K. and I. Nooruddin, 'Do Party Systems Count? The Number of Parties and Government Performance in the Indian States', *Comparative Political Studies,* 37(2), 2004, 152–87
9. Dasgupta, J., *Language Conflict and National Development: Group Politics and National Language Policy in India,* University of California Press, Berkeley, 1970.
10. Jaffrelot, Christophe and Sanjay Kumar, eds, *Rise of the Plebeians: The Changing Face of Indian Legislative Assemblies*, New Delhi, Routledge, 2009.
11. Kailash, K.K., 'Federal Calculations in State Level Coalition Governments', *India Review*, 10(3), July–September, 2011, 246–282.
12. Kudasia, Gyanesh, *Region, Nation, "Heartland": Uttar Pradesh in India's Body Politic*, New Delhi, Sage, 2006.
13. Mawdsley, Emma, 'Redrawing the Body Politic: Federalism, Regionalism and the Creation of New States in India', *Journal of Commonwealth and Comparative Politics*, 40(3): pp. 34-54.
14. Robinson, John, 'Regionalizing India: Uttarakhand and the Politics of Creating States', *South Asia: Journal of South Asian Studies*, 24(2):189-212, 2001.
15. Samaddar, Ranabir, ed., *The Politics of Autonomy: Indian Experiences*, Sage, New Delhi, 2005.
16. Sarangi, Asha, ed., *Language and Politics in India,* Oxford University Press, New Delhi, 2009.
17. Stepan, Alfred, J. Linz, and Yogendra Yadav, *Crafting State-Nations: India and Other Multinational Democracies,* Johns Hopkins University Press, Baltimore, 2011.
18. Wallace, Paul, ed., Region *and Nation in India,* Oxford University Press, Delhi, 1985.

19. Wilkinson, Steven, *Electoral Competition and Ethnic Violence in India.* Cambridge University Press, Cambridge and New York, 2004

Unit 3

1. Deliege, R., *The World of the "Untouchables": Paraiyars of Tamil Nadu*, Oxford University Press, New Delhi, 1997.
2. Geeta, V., Rajdurai, 'Dalits and Non-Brahmin Consciousness in Colonial Tamil Nadu' *Economic and Political Weekly*, 28(39), September 25, 1993.
3. Hasan, Zoya, *Dominance and Mobilization: Rural Politics in Western Uttar Pradesh 1930-1980,* New Delhi, 1989.
4. Irschick, E. F., *Politics and Social Conflict in South India, the Non-Brahman Movement and Tamil Separatism*, 1916–1929. University of California Press, Berkeley and Los Angeles, 1969.
5. Jaffrelot, Christophe, *India's Silent Revolution the Rise of the Low Castes in North Indian Politics, Permanent* Black, New Delhi, 2003.
6. Jayal, Niraja Gopal, '*Federal Anxieties, Democratic Desires: The Politics of Governance Reform in Two Indian States'*, LSE, London, 2006. www.crisisstates.com.
7. Kumar, Ashutosh, 'Deras as Sites of Electoral Mobilization in Indian Punjab: Explaining Why Political Parties Do Flock to the Deras', *Asian Ethnicity*, Routledge, London, 17(3): 335-350, (June), 2014.
8. Pai, Sudha , *Dalit Assertion*, Short Introduction, Oxford University Press, 2013.
9. Pai, Sudha, *Dalit Assertion and the Unfinished Democratic Revolution: The BSP in Uttar Pradesh,* Sage Publications, New Delhi, 2002.
10. Pandey, Gyan, *The Construction of Communalism in Colonial North India*, Oxford University Press, Delhi, 1990.
11. Pandian, M. S. S., *Brahmin & Non-Brahmin: Genealogies of the Tamil Political Present,* New Delhi: Permanent Black, 2003.
12. Ram, Ronki (2016) 'Religion, identity and empowerment: the making of Ravidassia Dharm (Dalit Religion) in contemporary Punjab', in Knut A. Jacobsen (ed.) *Routledge Handbook of Contemporary India.* 371-83. London: Routledge.
13. Ram, Ronki, 'Social Exclusion, Resistance and Deras: Exploring the Myth of Casteless Sikh Society in Punjab', *Economic and Political Weekly*, 42(40), October 6-12, 2007, 4066-74.
14. Ram, Ronki, 'Untouchability in India with a Difference: Ad Dharm, Dalit Assertion and Caste Conflicts in Punjab', *Asian Survey*, XLIV (6), November-December 2004, 895-912
15. Shah, Ghanshyam, *Caste and Democratic Politics in India*, Anthem Press, London, 2004.
16. Subramanian, Narendra, *Ethnicity and Populist Mobilization: Political Parties, Citizens and Democracy in South India*, Oxford University Press, Delhi, 1999.
17. Varshney, Ashutosh, 'Is India Becoming More Democratic?' *The Journal of Asian Studies*, 59(1), 2000.
18. Yadav, Yogendra and Suhas Palshikar, 'From Hegemony to Convergence: Party System and Electoral Politics in the Indian States, 1952-2002', in Peter Ronald deSouza and E. Sridharan (eds) *India's Political Parties*, Sage, New Delhi, 2006.
19. Yadav, Yogendra and Suhas Palshikar, 'Ten Theses on State Politics in India', *Seminar*, 591, November, 2008

20. Yadav, Yogendra, 'India's Third Electoral System: 1989-1999', *Economic and Political Weekly*, 34(34-35), 1999, 2393-99
21. Yadav, Yogendra, 'Reconfiguration in Indian Politics: State Assembly Elections 1993-1995, *Economic and Political Weekly*, 31(2), January 13, 1996.

Unit 4

1. Ahluwalia, Montek Singh 'Economic Performance of States in Post-Reforms Period', *Economic and Political Weekly,* 6 May, 2000.
2. Bhalla, G.S. ed., *Economic Liberalization and Indian Agriculture,* Institute for Studies in Industrial Development, New Delhi, 1994.
3. Corbridge, Stuart, Glynn Williams, Rene Veron and Manoj Srivastava, *Seeing the State*, Cambridge University Press, New Delhi, 2008.
4. Dasgupta, Biplab, *The New Agrarian Technology and India,* Geneva UN, 1977.
5. Datt, G. and M. Ravallion, 'Is India's Economic Growth Leaving the Poor Behind?' *Journal of Economic Perspectives*, 16(3), 2002, 89–108.
6. Dreze, Jean & Amartya Sen, *India: Development and Participation*, Oxford University Press, Delhi, 2002.
7. Dreze, Jean & Amartya Sen, Indian *Development: Selected Regional Perspectives*, Oxford University Press, Delhi, 1998.
8. Frankel, Francine & M.S.A Rao (eds.) *Dominance and State Power in India,* Oxford University Press, New Delhi, 2 Vols. 1989, 1990.
9. Harriss, John, 'Comparing Political Regimes across Indian States: A Preliminary Essay, *Economic and Political Weekly*, November 27, 1999, 3367-3377.
10. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
11. Joshi, Vijay and I.E. Little, *India's Economic Reforms: 1991-2001*, Oxford University Press, New Delhi, 1996.
12. Kohli, Atul, 'Politics of Economic Growth in India, 1985-2005; Part 1: The 1980's and Part 11: The 1990's and Beyond', *Economic and Political Weekly*, April 1, 2007.
13. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Oxford University Press, Delhi, 1991.
14. Kohli, Atul, *The State and Poverty in India,* Cambridge University Press, Cambridge, 1987.
15. Kohli, Atul, *The Success of India's Democracy,* Cambridge; Cambridge University Press, New York, 2001.
16. Mitra, Subrata K., *The Puzzle of India's Governance: Culture, Context and Comparative Theory*, Routledge, London, 2006.
17. Mooij, Jos, ed., *The Politics of Economic Reforms in India*, Sage, New Delhi, 2005.
18. Paul, Samuel, and KS Sridhar, The Paradox of India's North–South Divide: **Lessons** from the States and Regions, New Delhi, Sage, 2016.
19. Prakash, Amit, *Jharkhand: Politics of Development and Identity*, Orient Longman, Hyderabad, 2002.
20. Rao, Govinda and Nirvikar Singh , *Political Economy of Federalism in India*, Oxford University Press, New Delhi, 2006.

21. Sachs, Jeffrey, Ashutosh Varshney, and Nirupam Bajpai, eds., *India in the Era of Economic Reforms***,** Oxford University Press, New Delhi, 1999.
22. Singh, Jagpal, *Capitalism and Dependence; Agrarian Politics in Western Uttar Pradesh, 1951-1991,* Manohar, New Delhi, 1992.
23. Singh, P. (2015). *How Solidarity Works for Welfare: Subnationalism and Social Development in India,* New York: Cambridge University Press
24. Sinha, Aseema, 'Ideas, Interests, and Institutions in Policy Change: A Comparison of West Bengal and Gujarat' in Jenkins, Rob , ed., *Regional Reflections: Comparing Politics across India's States*, New Delhi, Oxford University Press, Delhi, 2004.
25. Sinha, Aseema, *The Regional Roots of Developmental Politics in India: A Divided Leviathan*, Indiana University Press, Bloomington and Indianapolis, 2005.
26. Tillin L. & Deshpande, R. & Kailash, KK (Eds) (2016). *Politics of Welfare*: *Comparisons across Indian States*, Oxford, Oxford University Press.
27. Varshney, Ashutosh, Democracy, Development, and the Countryside: Urban-Rural Struggles in India. Cambridge University Press, Cambridge, 1998.

Journals/ Newsmagazine/Newspapers to be consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web. Also check on JSTOR)
2. ***Front Line***
3. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
4. ***Studies in Indian Politics***
5. ***The Hindu and Indian Express***

Option (c): DECENTRALIZED GOVERNANCE AND LOCAL LEVEL INSTITUTIONS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice i.e. attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with the concept of decentralized and democratic governance in India, both theoretically and at the level of institutional functioning at the local level. The emphasis of the course is on the process of democratic governance in both at the grassroots.

Unit-I

- Democratic Decentralization in India : Issues and Perspectives.
- Decentralization & Contemporary concerns—globalization and changing role of the state.

Unit-II

- Planning Urban Development – approaches, policies & programs.
- Urban local governance – Institutional aspects and functioning of urban local bodies with special reference to 74th Amendment.

Unit-III

- Planning Rural development—approaches, policies and programmes.
- Democracy at the grassroots—Growth, Development and functioning of PRI from 1952 to present.

Unit-IV

- Relationship between rural and urban local institutions.
- Role of NGOs in local governance & development.
- Challenges of Governance at the local level-autonomy, finance, personnel, participation.

Readings

1. Abdul, Aziz, *Decentralised Planning,* New Delhi, Sage, 1993.
2. Bose, Ashish, *National Commission on Urbanization,* Ministry of Urban Development, New Delhi, 1988.
3. Behra, M.C., *Globalising Rural Development*, Sage, Delhi, 2006.
4. Handy, Femida, Meenaz Kassuu, Suzanne Fervey (eds.), *Grass-Roots NGOs by Women for Women*, Sage, New Delhi, 2006.
5. Kumar, Girish, *Local Democracy in India*, Sage, Delhi, 2006.
6. Issaac Thomas & Richard W. Franke, *Local Government and Development : People's Campaign for Decentralized Planning in Kerala,* Delhi, Leftword, 2000.
7. Jain, L.C., Krishnamurthy, B.V. and Tripathi, P.M., *Grass without Roots : Rural Development Under Government Auspices,* New Delhi, Sage, 1987.
8. Maddick Henry, *Panchayati Raj : A Study of Rural Local Government in India,* London, Longman, 1970.
9. Mathur, O.M. (ed.), *India : The Challenge of Urban Governance,* New Delhi, National Institute of Public Finance & Policy, 1999.
10. Mishra, B.B., *District Administration and Rural Development in India,* Delhi, Oxford University Press, 1983.
11. Mukherjee Amitava, *Decentralization : Panchayats in the Nineties,* New Delhi, Vikas, 1994.

12. Prasad Kamta, *Planning and Poverty Alleviation,* New Delhi, Agricole, 1985.
13. Ravillion, M. and G. Datt, *Growth and Poverty in Rural India,* Washington D.C., World Bank, 1995.
14. Sen, Amartya, *Development as Freedom,* Delhi, Oxford University Press, 2000.
15. Chaturvedi, T.N. and Jain, R.B., *Panchayati Raj* (New Delhi, IIPA, 1981).
16. Bhattacharya, Mohit, *Municipal Government—Problems and Prospects* (Delhi Research Publications).
17. Jha, S.N. and Mathur, P.C., *Decentralization and Local Politics,* Sage, 1999.

Option (d) : POLITICAL SOCIOLOGY WITH SPECIAL REFERENCE TO INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: This paper aims at highlighting some of the major areas in the domain of political sociology with reference to India. The paper intends to familiarize the students with the social, cultural and economic structures of power in the Indian society and their mechanism of functioning in a critical perspective.

Unit I

Political Sociology : Thematic Concerns :

1. Nature, meaning and scope.
2. Historical Development.

Unit II

Social Stratification :

1. Concepts and Theoretical Contexts (Marx, Dahrendorf, Weber, and L. Dumont).
2. Caste, Class and Power.

Unit III

Conflict Formation :

1. Theoretical dimensions (Simmel, Coser, Marx and Dahrendorf).
2. Caste and Communal conflicts.

Unit IV

Political Sociology of Agrarian Relations :

1. Zamindari Abolition and Land Reforms.
2. Pressure Groups : Farmers and Labourers.

Books Recommended

1. Effrat, Andrew, *Perspective on Political Sociology*, New York, The Bobbs-Merrill, 1972.
2. Dowse, Robert E. & Hughes, John A., *Political Sociology*, London, John Wiley, 1975.
3. Horowitz, *Foundations of Political Sociology*, New York, Harper & Row, 1972.
4. Das, Hari Hara and Choudhary, B.C., *Introduction to Sociology*, New Delhi, Vikas, 1997.
5. Tumin, M.M., *Social Stratification*, New Jersey, Prentice Hall, 1978.
6. Gupta, Dipankar (ed.), *Social Stratification*, Delhi, OUP, 1991.
7. Scott, John, *Stratification and Power*, Cambridge, Polity, 1996.
8. Sharma, K.L., *Social Stratification in India*, New Delhi, Sage, 1997.
9. Singh, Yogendra, *Social Change in India*, New Delhi, Har Anand, 1993.
10. Layder, Derek, *Understanding Social Theory*, London, Sage, 1996.
11. Jaiswal, Suvira, *Caste : Origin, Function and Dimensions of Change*, Delhi, Manohar, 1998.
12. Srinivas, M.N., *Social Change in Modern India*, New Delhi, 1969.
13. Runciman, W.S., *Social Science and Political Theory*, Cambridge, 1971.
14. Lukes, *Steven, Power : A Radical View*, Hong Kong, Macmillan, 1974.
15. Barnes, Barry, *The Nature of Power*, Cambridge, Polity, 1988.

Option (e) : REPRESENTING 'INDIA' : GEOPOLITICAL IMAGINATIONS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course investigates how India has been represented by groups and individuals, political elites and the dominant institutions and intellectuals of statecraft. It intends to probe how a variety of geopolitical imaginations have come to compete with one another, as different actors seek to implant maps of meaning, relevance and order on to highly complex and dynamic political universe they inhabit, observe, try to understand and sometimes even desire to dominate. How various geopolitical idioms, myths and representational practices have been used to inscribe something called India and endow that entity with a content, history, meaning and trajectory. The intention of this course is exploratory and not normative.

Unit-I

1. Pre-colonial India : An Overview.
2. India in British Colonial Imagination.

Unit-II

3. Partition of British India and its Legacies.
4. Integration of Princely States.

Unit-III

5. The India Diaspora : Dynamics and Dilemmas of Migration.
6. Gender in Indian Geopolitics.

Unit-IV

7. Nationalist Constructions of India's Identity (with special reference to Nehru and Savarkar).
8. Rise of Hindutva and the Search for Alternative Geopolitical Imaginations.

Suggested Readings

1. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* I (4) : 53-71.
2. Bhargava, R. (ed.) (1998), *'Secularism and Its Critics' :* Delhi, Oxford University Press.
3. Bose, Sugata (1997), "Nation as Mother : Representations and Contestations of 'India' in Bengali Literature and Culture", in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press, 50-75.
4. Bose, Sumantra (1997), "Hindu Nationalism" and the Crisis of the Indian State : A Theoretical Perspective in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press.
5. Brecher, M. (1968), *India and World Politics : Krishna Menon's View of the World,* London : Oxford University Press.
6. Butalia, Urvashi (1998), *The Other Side of Silence,* New Delhi : Viking.
7. Cohn, B.S. (1997), *Colonialism and Its Forms of Knowledge : The British in India,* Delhi : Oxford University Press.
8. Dijkink, G. (1996), *National Identity and Geopolitical Visions : Maps of Pride and Pain,* London : Routledge.

9. Fisher, M. H. (1993), *The Politics of the British Annexation of India 1757-1857,* Delhi : Oxford University Press.
10. Graham, B. (1993), *Hindu Nationalism and Indian Politics : The Origins and Development of the Bharatiya Jana Sangh,* Cambridge, Cambridge University Press.
11. Hasan, M. (1996), "The Myth of Unity : Colonial and National Narratives" in D. Ludden (ed.) *Making India Hindu, Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
12. Jalal, A. (1997), "Exploding Communalism : The Politics of Muslim Identity in South Asia", in S. Bose and A. Jalal (eds.), Nationalism, Democracy and Development : State and Politics in India, Calcutta : Oxford University Press : 76-103.
13. Kakar, Sudhir (1995), *The Colours of Violence,* New Delhi : Penguin Books.
14. Kumar, R. (1997), "State Formation in India : Retrospect and Prospect", in M. Doornbos and S. Kaviraj (eds.), *Dynamics of State Formation : India and Europe Compared,* New Delhi : Sage : 359-409.
15. Katzenstein, M. F., Mehta, U. S. and Thakkar, U. (1998), "The Rebirth of Shiv Sena in Maharashtra : the Symbiosis of Discursive and Institutional Power" in A. Basu, and A. Kohli (eds.), *Community Conflicts and the State in India,* Delhi : Oxford University Press : 215-238.
16. Kaviraj, Sudhir (1993), "The Imaginary Institution of India," in P. Chatterjee and G. Pandey (eds.), *Subaltern Studies,* Delhi : OUP, Vol. VII : 1-39.
17. Kaviraj, S. (1994), "Crisis of the Nation-State in India," *Political Studies,* XLII : 115-129.
18. Kaviraj, S. (1997), "On The Structure of Nationalist Discourse", in T. V. Sathyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi : Oxford University Press.
19. Khilnani, S. (1998), *The Idea of India,* London : Penguin Books.
20. Kothari, R. (1997), "Fragments of a Discourse : Towards Conceptualization", in T.V. Sathyamurthi (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
21. Kothari, R. (1998), *Communalism in Indian Politics,* Ahmedabad, Rainbow Publishers Limited.
22. Krishna, B. (1995), *Sardar Vallabbhai Patel : India's Iron Man,* New Delhi : Indus.
23. Krishna, S. (1994), "Cartrographic Anxiety: Mapping the Body Politics in India," *Alternatives 19 : 507-521.*
24. Larson, G. J. (1997), *India's Agony Over Religion,* Delhi, Oxford University Press.
25. Ludden, D. (1996) (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
26. Mahanta, A. (1977), "The Indian State and Patriarchy" in T. V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
27. Malik, Y.K. and Singh, Y.B. (1994), *Hindu Nationalists in India : The Rise of the Bharatiya Janata Party,* New Delhi, Vistaar Publications.
28. Mayo, Katherine (1928), *Mother India,* New York : Harcourt Brace and Company.
29. Metcalf, T. R. (1995), *Ideologies of the Raj,* Cambridge : Cambridge University Press (The New Cambridge History of India).
30. Nandy, A. H., Trivedi, S. Mayaram and Yagnik, A. (eds.) (1995), *Creating a Nationality : The Ramjanambhumi Movement and the Fear of the Self,* Delhi : Oxford University Press.
31. Nehru, J. (1936), *An Autobiography,* London, John Lane.

32. Nehru, J. (1981), *The Discovery of India,* New Delhi : Jawaharlal Nehru Memorial Fund, Oxford University Press (First Published 1946 by the Signet Press, Calcutta).
33. Nehru, J. (1956), *Independence and After : A Collection of Speeches* 1946-1949, Delhi : Government of India.
34. Pandey, G. (1990), *The Construction of Communalism in Colonial North India,* Delhi, Oxford University Press.
35. Pandey, G. (1994) "The Prose of Otherness," *Subaltern Studies* (Delhi, OUP, Vol. VIII).
36. Parker, G. (1998), "Geopolitical Perspectives on India and Indian Foreign Policy" in The Ford Foundation Lectures in International Relations Studies, Departmental of Political Science, The Maharaja Sayajirao University of Baroda.
37. Pattanaik, D. D. (1998), *Hindu Nationalism in India : Conceptual Foundation,* New Delhi : Deep and Deep Publications.
38. Radhakrishnan, R. (1992), "Nationalism, Gender, and the Narrative of Identity" in Andrew Parker et al (eds.), *Nationalism and Sexuality,* New York, Sage.
39. Sarkar, T. (1996), "Imagining Hindurastra : the Hindu and the Muslim in Bankim Chandra's Writings" in D. Ludden (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
40. Sarkar, T. (1992), "The Hindu Wife and the Hindu Nation : Domesticity and Nationalism in Nineteenth Century Bengal," *Studies in History* (Sage, Delhi) 8 (2).
41. Savarkar, V. D. (1969), Hindutva, Bombay, Savarkar Prakashan 5th Edn.
42. Sen, A. (1998a), "On Interpreting India's Past" in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press (Oxford India Paperbacks).
43. Sen, A. (1998b), "Secularism and its Discontents" in Bhargava, R. (ed.), *Secularism and its Critics,* Delhi : Oxford University Press.
44. Varshney, A. (1993), "Contesting Meanings : India's National Identity, Hindu Nationalism, and the Politics of Anxiety", *Daedalus, 122, 3 : 227-261.*
45. Van Hear, N. (1998), *New Diasporas : The Mass Exodus, Dispersal and Regrouping of Migrant Communities,* London, UCL Press.
46. Weiner, M. (1997), "Minority Identity", in S. Kaviraj (ed.), *Politics in India,* Delhi, Oxford University Press : pp 241-254.
47. Ali, D., 1999, *Invoking the Past : The Uses of History in South Asia,* New Delhi : Oxford University Press.
48. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* 1(4) : 53-71.
49. Bianchini, B., Chaturvedi, S., Ivekovic, R. and Samaddar, R., 2005, *Partitions : Reshaping Minds and States,* London : Frank Cass.
50. Chaturvedi, S., 2000, "Representing Post-Colonial India: Inclusive/Exclusive Imaginations" in David Atkinson and Klaus Dodds (eds), *Geopolitical Traditions : Critical Histories of a Century of Geopolitical Thought,* London : Routledge.
51. Chaturvedi, S., 2005, "Diaspora in India's Geopolitical Visions : Linkages, Categories and Contestations", *Asian Affairs : An American Review,* 32(3).

52. Deshpande, S., 2003, *Contemporary India : A Sociological View,* New Delhi : Viking.
53. Jayaram, N., 2004 (ed.), *The Indian Diaspora : Dynamics of Migration,* Delhi : Sage.
54. Krishna, S., 1999, Post-*Colonial Anxieties : India, Sri Lanka and the Question of Nationhood,* Minneapolis : University of Minnesota Press.
55. Ludden, D., 2002, *India and South Asia : A Short History,* Oxford : One World.
56. Sen, A., 2006, *Identity and Violence : The Illusion of Destiny,* London : Allen Lane/Penguin.
57. Sen, A., 2005, *Argumentative Indian Writings on Indian History, Culture and Identity,* London : Allen Lane/Penguin.

Option (f): Dalit Movements and Issues in India

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: The purpose of this paper is to make students familiar with major Dalit Movements and issues in India.

UNIT-I

Anti-Caste and Adi Movements in the Colonial period-I
Jotiba Phuleand Satyashodhak Samaj,
Mangoo Ram andAd-Dharm Movement,
Periyar and Self-Respect Movement

UNIT-II

Anti-Caste Movements in the Colonial period-II
Dalit Movement and B.R.Ambedkar
Caste and Untouchability
Democracy and Repsentation of Minorities

UNIT-III

Politics of Assertion and Representationin Independent India

Republican Party of India
Dalit Panthers
Bahujan Samaj Party

UNIT-IV

Dalits and Contemporary Issues

Reservation and Politics of Inclusion
Dalits and Globalization
Dalit Women's Issues

Essentail Readings

1. *Aditya Nigam, "In search of a Bourgeoisie: Dalit politics enters a New Phase."* Economic and Political Weekly*, March 30, 2002, pp. 1190-1193.*
2. *Aditya Nigam, "Secularism, Modernity, National: Epistemology of the Dalit Critique."* Economic and Political Weekly*, November 25, 2000.*
3. Aryama and SukhadeoThorat (ed.), *Ambedkar in Retrospect: Essays in Economics, Politics & Society*, Rawat Publications, New Delhi, 2007.
4. *B.L.Mungekar, "Globalization and the Dalits."* Radical Humanist, *65(1): April 2001: 9-10.*
5. B.R.Ambedkar, *Dr. Babasaheb Ambedkar: Writings and Speeches*, Vol.1-17 (compiled by Vasant Moon), Education Department, Government of Maharashtra, Bombay.
6. Christophe Jaffrelot,*India's Silent Revolution the Rise of the Low Castes in North Indian Politics,* Permanent Black,New Delhi, 2003.
7. Dhananjay Keer, *Dr. Ambedkar Life and Mission*, Popular Prakashan, Bombay1991.
8. *Dipankar Gupta, "Positive Discrimination and the Question of Fraternity: Contrasting Ambedkar and Mandal on Reservation."* Economic and Political Weekly, *32(31): 2 August 1997.*
9. Eleanor Zelliot, Ambedkar *and Mahar Movement.* University of Pennsylvania, 1982.
10. Eleanor Zelliot, *From Untouchable to Dalit: Essay on Ambedkar Movement.* Manohar: New Delhi, 1992.
11. G.P. Deshpande, (ed) *Selected Writings of Jotirao Phule,* Left World: New Delhi, 2002.
12. Gail Omvedit, *Dalits and Democratic Revolution: Dr. Ambedkar and Dalit Movement in Colonial India.* Sage*:* New Delhi, 1994.
13. *Gail Omvedt, "Peasants, Dalits and Women: Democracy and India's New Social Movements."* Journal of Contemporary Asia: *24 (1): 1994.*
14. *Gail Omvedt*, Ambedkar Towards an Enlightened India*.* Penguin: New Delhi, 2004.
15. Gail Omvedt, *Cultural Revolt in a Colonial Society: The Non – Brahman Movement in Western India.* Scientific Socialist Education Trust: Bombay, 1976.
16. Gail Omvedt, *Dalit Vision.* Orient Longman: New Delhi, 1996 first Published 1995.

Suggested Readings

1. Geeta, V., Rajdurai 1993 "Dalits and Non-BrahminConsciousness in ColonialTamil Nadu" *Economic and Political Weekly*,28(39), September 25.
2. *George Mathew, "Will Reservation Ensure Participation."* Social Welfare: *42 (5-6): August-September, 1995.*
3. Harish K. Puri, (ed.) *Dalits in Regional Context. Rawat*: New Delhi, 2004.
4. *J. Mencher, "The Caste System Upside Down,"* Current Anthropology*: 15: 469-93: 1974.*
5. J.Massey, *Downtrodden: The Struggle of Indian Dalits for Identity, Solidarity and Liberation.* WCC Publications: Geneva, 1997.
6. Jaffrelot, Christophe, *Dr.Ambedkar and Untouchability*. Permanent black: New Delhi, 2004.
7. Mark Juergensmeyer, *Religious Rebels in Punjab: The Social Vision Of Untouchables*. Ajanta: Delhi, 1988.
8. Michael Mahar, (ed) *The Untouchables in Contemporary India*. University of Arizona press, 1972.
9. *N.S.Gehlot, "Dr. Ambedkar, Mahatma Gandhi and Dalit movement,"* Indian Journal of Political Science, *54(3-4): July-December 1993.*
10. *Pradeep Kumar, "Reservation within Reservations: Real Dalit Bahujans,"* Economic and Political Weekly*, 15 September 2001, 3305-3307.*
11. *Ramaswamy R. Iyer, "Towards Clarity on Reservation Question,"* Economic and Political Weekly*, 26(9) and 10: 2-9 March 1991.*
12. Ramnarayan Rawat, "Making Claims for Power: A New Agenda In Dalit Politics of Uttar Pradesh, 1946-48", Modern Asian Studies, Vol. 37, No. 3, 2003.
13. *Ronki Ram, "From servitude to assertion: Ambedkar's Subalterns Approach to Nationalism and Dalit liberation."* Social Sciences Research Journal, *Vol. 9, November 2, 2001, p.160.*
14. Rosalind O' Hanlon, *Caste, Conflict and Ideology: Mahatma Phule and Low Caste Protest in the 19th Centurary*, CUP, 1985.
15. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution.The Bahujan Samajwadi Party in Uttar Pradesh.*, Sage : New Delhi, 2002.
16. *V. Geetha, and S.V. Rajadurai. "Dalits and non-Brahmin Consciousness in Colonial Tamil Nadu*." Economic and Political Weekly*, 28(3): 25 September 1993.*
17. *V. Jha, "Stages in History of Untouchables,"* Indian Historical Review, *2: 1975: 14-31.*
18. Valrian Rodrigues, (ed) *The Essential Writings of B.R. Ambedkar*, Oxford: New York,2002.
19. *Webster, John C.B. "Understanding the Modern Dalit Movement."* Sociological Bulletin *45 (2): September 1996.*

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) : FEMINIST POLITICAL THEORY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course aims to introduce students to the major interventions of feminism in political theory. After introducing students to the feminist critique of mainstream political theory and the key conceptual categories in feminism, this course in the latter units examines 5 main issues to understand the major debates within various strands of feminism.

Unit-I

Feminism and the redefinition of the Political.
Feminist critiques of mainstream political theory.

Unit-II

Key Feminist concepts—Patriarchy, Sex-Gender distinction, Production and Reproduction.
Destabilizing the category of 'woman'.

Unit-III

Key Issues in Feminist theory 1.
Abortion.
Pornography.

Unit-IV

Key Issues in Feminist theory 2.
Race/Religion/Culture.
Anti-Militarism.

Reading List

1. Anne Philips, *Engendering Democracy,* Cambridge, Polity Press, 1991.
2. Allison Jagger, *Feminist Politics and Human Nature*, Rowman & Allanheld, 1983.
3. Judith Butler, *Gender Trouble : Feminism and the Subversion of Identity*, New York, Routledge, 1990.
4. Carole Pateman, *The Sexual Contract*, Stanford University Press, 1989.
5. Iris Marion Young, *Justice and the Politics of Difference*, Princeton University Press, 1990.
6. Kate Millet, *Sexual Politics*, Granada Publishing, 1969.
7. Simone de Beauvoir, *The Second Sex*, 1949 (translated by H.M. Parshley, Penguin 1972).
8. Germaine Greer, The Female Eunuch, 1970.
9. Nancy Fraser and Linda J. Nicholson, Social Criticism without Philosophy : An Encounter between Feminism and Postmodernism in *Theory Culture Society,* 1988; 5.
10. Susan Moller Okin : *Women in Western Political Thought*, Princeton, Princeton University Press, 1979.

Option (b) : MAJOR THEMES IN RECENT POLITICAL PHILOSOPHY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the questionpaper as follows:
The syllabus has been divided into four units.
There shall be 9 questions in all.

The first question is compulsory and shall be short answer type containing 15 short questions spread over the wholesyllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each.

Rest of the paper shall contain 4 units. Each unit shall have two questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course is intended to be a companion to the compulsory courses on Western Political Thought and Key Concepts in Political Theory. It carries forward the discussion by focusing on themes and concerns which have occupied debates particularly since the late twentieth century.

Unit-I

1. Environmentalism.
2. Pacifism.

Unit-II

3. Feminism.
4. Multiculturism.

Unit-III

5. Neo-liberalism.
6. Post Marxism.

Unit-IV

7. Postcolonialism.
8. Postmodernism.

ESSENTIAL READINGS:

Relevant portions from the following textbooks and histories:

1. Colin Farelly, Contemporary Political Theory, Sage, 2004.
2. Gerald F. Gaus and ChandranKukathas, Handbook of Political Theory, Sage, 2004.
3. R.E. Goodin and P. Petit, A Companion to Contemporary Political Philosophy, Blackwell, 1995.
4. Terence Ball and Richard Bellamy (ed.), The Cambridge History of Twentieth Century Political Thought, Cambridge University Press (CUP), 2003.
5. Will Kymlicka, Contemporary Political Theory : An Introduction, OUP, 2002

SUGGESTED READINGS

Environmentalism:

6. John Dryzek and Scholberg, Debating the Earth : The Environmental Politics Reader, OUP, 1998.
7. Lorraine Eliot, Global Politics of Environment, Macmillan, 1998.
8. Ramchandra Guha and Juan Martinez-Alier, Varieties of Environmentalism: Essays on North and South, OUP, 1998.

Pacifism:

9. Allen Eickelmann, Eric Nelson and Tom Lansford, Violence, Pacifism and Cultural Transformation, Ashgate, 2005.
10. Peter Brock and Nigel Young, Pacifism in the Twentieth Century, Syracuse Univ. Press, 1999.

Feminism:

11. Alison Jaggar and Iris Marion Oung (ed.), A Companion to Feminist Philosophy, Blackwell, 1998.
12. Anne Phillips (ed.), Feminism and Politics, OUP, 1998.
13. Judith Butler and J.W. Scott (ed.), Feminists Theories : The Political, Routledge, 1992.

Multiculturalism:

14. Bhikhu Parekh, Rethinking Multiculturalism, Palgrave, 2006.
15. GurpreetMahajan, The Multicultural Path, Sage, 2002.

Neoliberalism:

16. Alfredo Saad-Filho and Deborah Johnson (eds.), Neo-Liberalism: A Critical Reader, Pluto Press, 2005.
17. David Harvey, A Brief History of Neo-Liberalism, OUP, 2005.

Post- Marxism:

18. Stuart Sim, Post Marxism: An Intellectual History, Routledge, 2000.

Postmodernism:

19. David Harvey, TheCondition of Postmodernity, Basil, Blackwell, 1989.
20. David Lyon, Postmodernity, Viva Books, 2002.

Postcolonialism:

21. Bill Ashcroft, Gareth Griffins and Helen Zigfin (eds.), The Postcolonial Studies Reader,Routledge, 2006.
22. ZiauddinSardar, Orientalism, Viva Books, 2002

Option (c) : READINGS IN THE PHILOSOPHY OF RESISTANCE AND LIBERATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on original texts. It seeks to study the ideas of resistance through the writings of the following Political Philosophers :

Unit-I

Gandhi : *Hind Swaraj* (1909), (Ahmedabad, Navjivan Trust, 1938).

Unit-II

Frantz Fanon : *The Wretched of the Earth* (London, Pluto Press, 1986).

Unit-III

Ernesto Che Guevara : *The Guerrilla Warfare*, with an Introduction and Case Studies by Brian Loveman and Thomas M. Davies, JR. (Lanchester University Press, 1985).

Unit-IV

Stokely Carmichael : *Black Power: The Politics of Liberation in America*, 1967.

Suggested Readings

1. Horace B. Davis, "Social Classes and the Formation of Nations : Fanon, Cabral and the African National Struggle" in Horace B. Davis, *Toward A Marxist Theory of Nationalism* (New York, Monthly Review Press, 1978, pp. 202-239).
2. Homi Bhabha, "Remembering Fanon: Self, Psyche and the Colonial Condition", Foreword to Frantz Fanon, *Black Skin, White Masks* (London, Pluto Press, 1986).
3. Irene Gentizier, *Frantz Fanon – A Critical Study* (New York, Vintage, 1973).
4. Renate Zahar, *Frantz Fanon : Colonialism and Alienation* (New York, Monthly Review Press, 1975).
5. Aristide R. Zolberg, "Frantz Fanon" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).

6. Ashis Nandy, "Oppression and Human Liberation: Towards a Post-Gandhian Utopia", in Thomas Pantham and Karl Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage Publications, 1986).
7. Anthony J. Parel (ed.), *Hind Swaraj and Other Writings*, Cambridge University Press, New Delhi, Foundation Books, 1997).
8. Donald C. Hodges (ed.), *The Legacy of Che Guevara* (London, Thames and Hudson, 1977).
9. Michael Lowy, *The Marxism of Che Guevara : Philosophy, Economics and Revolutionary Warfare*, (New York, Monthly Review Press, 1973)
10. Renneth Minogue, "Che Guevara" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
11. George Feaver, "Black Power", in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
12. Stokely Carmichael, "Black Power", in David Cooper (ed.), *The Dialectics of Liberation*, Harmondsworth, Penguin, 1968.
13. Frantz Fanon, *The Wretched of the Earth* (Harmondsworth, Penguin, 1967).
14. Deborah Wyrick, *Fanon for Beginners* (Hyderabad, Orient Longman, 1998).
15. Sergio Sinay, *Che for Beginners* (Hyderabad, Orient Longman, 1997).

Option (d) : CONTEMPORARY DEBATES IN THE 20TH CENTURY MARXISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to familiarize students with the Marxist engagement with critical issues in the late twentieth century.

Unit-I

Structure and Agency : Marxian Debates.

Unit-II

Feminism and Marxism : Production, Reproduction and Power.

Unit-III

Environmentalism and Marxism, Capitalism, Colonialism, Socialism and Environmental Degradation.

Unit-IV

Nationalism, Internationalism and Marxism.
Globalization and Marxist Critique.

Readings :

(Students are expected to consult the journals *Monthly Review, New Left Review* and *Socialist Register* regularly).

1. Groz, A., *Farewell to the Working Class*, Pluto Press, London, 1982.
2. Barret, Michele, *Women's Oppression Today : Problems in Marxist Feminist Analysis*, Verso, London, 1980.
3. Landes, Joan, 'Marxism and the Women Question' in Sonia Kruks, Rayana Rapp and Marilyn B. Young (ed.), *Promissory Notes : Women in the Transition to Socialism,* Monthly Review Press, New York, 1989.
4. Mies, Maria, *Patriarchy and Accumulation on a World Scale*, Zed Books, London, 1986.
5. Mies, Maria, 'World Economy, Patriarchy and Accumulation' in Nelly Stromquist (ed.), *Women in the Third World*, Garland, New York, 1998.
6. Bahro, Rudolph, *From Red to Green*, 1984.
7. Foster, John Bellamy, *The Vulnerable Planet, A Short Economic History of the Environment,* Monthly Review Press, New York, 1994 (Indian Reprint) Cornerstone Publication, Kharagpur, 1999.
8. Foster, John Bellamy, *Marx's Ecology : Materialism and Nature,* Monthly Review Press, New York, 2000.
9. Harvey, David, 'The Nature of Environment : Dialectics of Social and Environmental Change' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register,* The Marlin Press, London, 1993.
10. Pratt, Larry and Wendy Montgomery, 'Green Imperialism, Pollution, Penitence, Profits in Leo Panitch (ed.), *Socialist Register*, Marlin Press, London and K.P. Bagchi & Compnay, Calcutta, 1997.
11. Davis, Horace B., *Toward a Marxist Theory of Nationalism,* Monthly Review Press, New York, 1978.
12. Lowy, Michael, 'Why Nationalism?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Marlin Press, London, 1993.
13. Munck, R., *The Difficult Dialogue, Marxism and Nationalism*, Zed, London, 1986.
14. Magdoff, Harry, 'Globalisation –To What End?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Merlin Press, London, 1992.

Option (e) : INTRODUCING FEDERALISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces certain key concepts and issues in federalism. The aim of the paper is to enable the student to obtain a broad perspective on federalism in a comparative perspective and to evaluate its utility as a tool for accommodating diversity.

Unit-I

The Essence of the Federal Idea.
Core features of Federations.
Models and variants of Federalism : Successive Waves.
Presidential and Parliamentary variant.

Unit-II

Approaches and Paths to Federalism.
Institutionalist Explanations of Origins.
Society-Centred Theories.
The William Riker- Alfred Stepan debate.

Unit-III

Federal Democracy and the Articulation of Diversity.
Federalism as a device for accommodating groups and interests.
Centralisation and Decentralisation in Federal Systems.
Asymmetric Federalism : India and Canada.

Unit-IV

The Making and Unmaking of Federal Systems.
Stress and Strains of Federalism : Failed Federations : USSR, Czechoslovakia, Yugoslavia.
New, Emerging, Incipient and Federal-type Solutions : South Africa, Belgium, Spain, Sri Lanka and the European Union.
Relevance of Federalism in a globalising world.

Readings

1. Alfred Stepan, "Federalism and Democracy : Beyond the US Model," *Journal of Democracy,* 1999, 10 : 4, 19-34.
2. Alfred Stepan, "Russian Federalism in Comparative Perspective," *Post-Soviet Affairs,* 2000b, 16 : 2, 133-176.
3. Alfred Stepan, *Arguing Comparative Politics* (Oxford : Oxford University Press, 2001).
4. Andrea Bosco (ed.), *The Federal Idea : The History of Federalism Since 1945* (London: Lothian Foundation Press, 1992).
5. Arendt Lijphart, 1977, *Democracy in Plural Societies: A Comparative Exploration,* New Haven, London, Yale University Press.
6. Arend Lijphart, Ronald Rogowski and R. Kent Weaver, "Separation of Powers and Cleavage Management," in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings, 1997), 302-344.
7. Balveer Arora, and Douglas V. Verney, 1995, *Multiple Identities in a Single State : Indian Federalism in Comparative Perspective,* New Delhi : Konark Publishers.
8. Bertus de Villiers (ed.), *Evaluating Federal Systems* (Cape Town : Jutta & Co., 1994).
9. Birch, A.H., 'Approaches to the Study of Federalism,' *Political Studies*, 1966, 14(1), 15-33.
10. C.D. Tarlton 1965, "Symmetry and Asymmetry as Elements of Federalism : A Theoretical Speculation," *The Journal of Politics*, 27.
11. Carol Skalnik Leff, "Democratization and Disintegration in Multinational States : The Break up of the Communist Federations," *World Politics*, 1999, 51, 205-35.
12. Daniel J. Elazar, "From Statism to Federalism - A Paradigm Shift," *International Political Science Review,* 1996 17(4), 417-429.
13. Daniel J. Elazar, "International and Comparative Federalism," *PS : Political Science and Politics*, 1993 (June).
14. Daniel J. Elazar, Federalism, in David Sills (ed.), *International Encyclopaedia of Social Sciences* (New York : Macmillan, 1968) 353-367.
15. Daniel J. Elazar, *Exploring Federalism* (Tuscaloosa : University of Alabama Press, 1987).
16. Graham Smith (ed.), *Federalism : The Multiethnic Challenge* (New York : Longman, 1995).
17. Graham Smith, "Russia Multiculturalism and Federal Justice," *Europe-Asia Studies*, 1998, 50(8), 1393-1411.
18. J. Coakley, 1994, "Approaches to the Resolution of Ethnic Conflict : The Strategy of Non-territorial Autonomy", *International Political Science Review*, Vol. 15, No. 3: 297-314.
19. Juan Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation : Southern Europe, South America and Post-Communist Europe*, (Baltimore, Johns Hopkins University Press, 1996).
20. Juan Linz and Alfred Stepan, "Political Identities and Electoral Consequences : Spain, the Soviet Union and Yugoslavia," *Daedalus*, 1992, 121.
21. Ivo Duchacek, *Comparative Federalism*, (Lanham Md : Reissued by University Press of America, 1987).
22. K.C. Wheare, *Federal Government*, Second Edition, London and New York : Oxford University Press, pp.1-34 (1951).

23. Michael Burgess and Alain-G. Gagnon (ed.), *Comparative Federalism and Federation* (Harvester: Wheatsheaf) (1993).

24. Michael Stein (1971), "Federal Political Systems and Federal Societies", in J. Peter Meekison (ed.), Canadian Federalism : Myth or Reality?, Second Edition, Toronto: Methuen, 37-48.

25. Peter C. Ordershook, "Russia's Party System : Is Russian Federalism Viable?" *Post-Soviet Affairs,*1996, 12(3), 195-217.

26. Richard Gunther and Anthony Mughan, "Political Institutions and Cleavage Management" in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings), 1997, 272-301.

27. Robert Agranoff (ed.) (1999), *Accommodating Diversity : Asymmetry in Federal States,* Baden-Baden: Nomos.

28. Robert Sharlet, "The Prospects for Federalism in Russian Constitutional Politics," *Publius* 1994, 24 (Spring), 115-127.

29. Ronald L. Watts, "Canada : Three Decades of Periodic Federal Crises," *International Political Science Review,* 1996 17(4), 353-371.

30. Ronald L. Watts, "Intergovernmental Relations : Conceptual Issues", in Norman Levy and Chris Tapscott (ed.), *Intergovernmental Relations in South Africa : The Challenges of Co-operative Government* (West Cape : IDASA, 2001) 22-42.

31. Ronald L. Watts, *Comparing Federal Systems in the 1990s* (Institute of Intergovernmental Relations, Queens University Ontario, 1999).

32. Ronald L. Watts, "Asymmetrical Decentralization : Functional or Dysfunctional", *Indian Journal of Federalism,* 2004, 1-42.

33. Steven Solnick, "Will Russia Survive? Centre and Periphery in the Russian Federation," in Barnett R. Rubin and Jack Snyder (ed.), *Post-Soviet Political Order : Conflict and State Building* (London: Routledge, 1998), 58-80.

34. William Riker, "Federalism", in Fred I. Greenstein and Nelson W. Polsby (eds.), *Handbook of Political Science : Governmental Institutions and Processes,* Vol. 5 : (Reading : Addison-Wesley, 1975), 93-172.

35. William S. Livingston (1952), "A Note on the Nature of Federalism", *Political Science Quarterly*, 67, 81-95.

36. Peter C. Ordeshook and Olga Shvetsova, "Federalism and Constitutional Design", *Journal of Democracy,* 8.1 (1997) 27-42.

Option (f) : PUBLIC INTERNATIONAL LAW-II

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This paper introduces the students to certain specific subjects and the recent trends of Public International Law.

Unit-I : States in general

State Territory :

Land Territory, National Waters, Territorial Sea, Air-Space and Subsoil under Earth, Modes of acquiring and losing State Territory.

State Jurisdiction :

Territorial Jurisdiction
Jurisdiction on High Seas
Jurisdiction on Aircraft
Jurisdiction on Antarctica and Outer-Space

Unit-II : Law of the Sea

The First and the Second United Nations Conference on the Law of the Sea

Third United Nations Conference on the Law of the Sea (UNCLOS III)

Convention on the Law of the Sea, 1982

Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (1994).

Unit-III : Individual in International Law

Nationality
Aliens
Extradition
Asylum
Human Rights

Unit-IV : Recent Trends

Recent Trends and the changing structure of International Law

Feminist Perspectives of International Law

Some new approaches to the study of International Law

The conflicts of Political Ideologies and the universality of International Law with particular reference to the Communist Approach to International Law, the Third and Fourth World Countries and International Law.

Books Recommended

1. Stark, J.G., *Introduction to International Law,* Butterworths, 1963.
2. Wolfgang Friedmann, *The Changing Structure of International Law,* Columbia University Press, 1964.
3. Gerhard Von Glahn, *Law Among Nations : An Introduction to Public International Law,* Longman, 1966.
4. D.P. O'Connell, *International Law,* Stevens and Sons, 1965, 2 Vols.
5. Richard A. Falk, *The Status of Law in International Society,* Princeton University Press, 1970, pp 447-539.
6. Anand, R.P., *Asian States and the Development of Universal International Law,* Vikas, 1972.
7. Anand, R.P., *New States and International Laws,* Vikas, 1972.
8. Ian Brownlie, *Principles of Public International Law,* Oxford University Press, 1973.
9. Grigory Tunkin, *Contemporary International Law,* Progress Publishers, 1969.
10. Corbett, P.E., *The Growth of World Law,* Princeton, 1971.
11. Quincy Wright, *Contemporary International Law : A Balance Sheet,* Random House, 1963.
12. *Journals :* (i) American Journal of International Law
    (ii) Indian Journal of International Law
13. Dallmeyer, G. Droninda (ed.), Reconceiving Reality : Women and International Law, American Society of International Law, 1999.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. PUBLIC ADMINISTRATION (Semester System)

EXAMINATIONS, 2017-2018

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

Note :

A candidate for M.A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he/she has completed the prescribed courses in an affiliated college or the department concerned of this University.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES OF Public Administration

(Semester System)

1. (i) Terminal Evaluation 80%
   (ii) Continuous Assessment 20%
   (iii) Continuous Assessment may include Written Assignment, Snap Test, Participation in class discussions , Term Paper, Attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:
      (a) Written Test (one per semester): 25 (reduced to 5)
      (b) Snap Test : 25 (reduced to 5)
      (c) Term Paper/s : 25 (reduced to 5)
      (d) Participation in Class Discussions: 15 (reduced to 3)
      (e) Attendance: 10 (reduced to 2)*

   Total: 100 reduced to 20 (50 will be reduced to 10 in case of papers with Max Marks 50)

   *Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

   Attendance Component Mark/s for Theory Papers
   (a) 75% and above up to 85%: 1
   (b) Above 85%: 2

2. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the subject and, thus he/she shall have to secure pass marks total of Internal Continuous Assessment and University examinations.

3. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the examination on the Performa obtainable from the Examination Branch.

4. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes will be shown separately in the Detailed-Marks-Card (D.M.C.)

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF PUBLIC ADMINISTRATION FOR M.A.(PBLIC ADMINISTRATION) SEMESTER SYSTEM (2017-18)

The M.A. Programme in Public Administration is job oriented, multi-disciplinary and the Curriculum integrates theoretical and practical perspectives in the field of Public Administration. The sequence of the courses has been scientifically planned in a manner that they constitute building-blocks for four groups of specialization.

The Programme is being run on Semester System. Each paper is of four (4) credits except for papers V and VI in Semester I and Semester II that are of two (2) credits each. A candidate must successfully complete 20 credits at the end of 2nd Semester to join the 3rd Semester and 28 credits at the end of the 3rd Semester to enable him to join the 4th Semester. There will be six contact hours per week (4 lectures and two tutorials per 4 credits).

The specialized groups are:

Group A: Applied Development Administration (with special reference to India)
Group B: Economic Administration (with special reference to India)
Group C: Human Resource Management (with special reference to India)
Group D: Administrative Management (with special reference to India)

Pedagogy: The pedagogy is designed to nurture the attributes of intellectual inquiry, scholarship, research and writing. This will include lectures, seminars, class discussion, term papers and other writing assignments, presentations,role play, case studies, field visits etc. and will be Information and Communication Technology supported.The use of this methods should equip the student with listening,writing and presentation skills along with the capacity for analysis and evaluation .Peer evaluation, people skills,navigating public spaces,leadership and team workwill be the skills expected to develop and to ready the student for the world of work.

Semester-I

Papers

I Administrative Theory
II Organisational Behaviour
III Public Financial Administration
IV Public Personnel Administration
V Indian Economic System
VI Indian Social System

Semester-II

Papers

I Administrative Thought
II Research Methods
III Public Policy and Administration
IV Administrative Law
V Indian Political System
VI Indian Administrative System

Semester-III

Note: Students of all the Groups have to take a total of 5 papers including the 3 compulsory papers.

Papers

I Development Administration **(Compulsory for all groups)**

Group A: Applied Development Administration (with special reference to India)

II Social Policy and Welfare Administration **(Compulsory)**
III People's Empowerment and Rural Governance **(Compulsory)**
IV Disaster Management
V Administration of Non-Government Organisations
VI Public Health Policy and Administration
VII Comparative Public Administration
VIII Dissertation

Group B: Economic Administration (with special reference to India)

II Economic Administration **(Compulsory)**
III Company and Cooperative Law **(Compulsory)**
IV Human Resource Management
V Financial Management
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Group C: Human Resource Management (with special reference to India)

II Social Policy and Welfare Administration
III Labour Economics **(Compulsory)**
IV Human Resource Management **(Compulsory)**
V Administration of Non-Government Organisations
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Group D: Administrative Management (with special reference to India)

II Administrative and Office Management **(Compulsory)**
III Management of Disciplinary Proceedings
IV Human Resource Management
V Administration of Non-Government Organisations **(Compulsory)**
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Semester –IV

Note: Students of all the Groups have to take a total of 5 papers including the 3 compulsory papers.

Papers

I Emerging Areas in Public Administration **(Compulsory for all groups)**

Group A: Applied Development Administration (with special reference to India)

II Education Policy and Administration **(Compulsory)**
III People's Empowerment and Urban Governance **(Compulsory)**
IV Police Administration
V International Administration
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group B: Economic Administration (with special reference to India)

II Public Enterprise Management **(Compulsory)**
III Marketing Management
IV Industrial Relations
V Project Management **(Compulsory)**
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group C: Human Resource Management (with special reference to India)

II Labour Laws **(Compulsory)**
III Organisational Psychology **(Compulsory)**
IV Industrial Relations
V Labour Policy and Administration
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group D: Administrative Management (with special reference to India)

II Techniques of Administrative Improvement **(Compulsory)**
III Organisational Psychology
IV Industrial Relations
V Project Management
VI Information Technology and Computer Applications in Public Administration **(Compulsory)**
VII Ethics in Public Administration

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-18)
Semester-I

Paper I – Administrative Theory

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper will familiarize the students with the basic concepts of Public Administration in developed and developing countries. In addition, the course will also cover new areas and developments in the field of Public Administration particularly E-Governance, Good Governance, New Public Administration. The paper will also cover various theories of organization.Apart from regular classroom teaching ,special talks/lecturesfrom experts as well as practitioners from the civil service will be organized to establish links between theory and practice and develop student's critical skills.

UNIT-I

Nature, Scope and Role of Public Administration in Developed and Developing Countries.
Evolution and Development of Public Administration: New Public Administration; New Public Management; Public Choice and Principle Agent Theories.

UNIT-II

Theories of Organisation: Classical, Bureaucratic, Human Relations, Behavioural and Systems.
Principles of Organisation: Hierarchy, Span of Control, Unity of Command, Communication, Centralisation and Decentralisation.

UNIT-III

The Chief Executive: Types, Functions and Role.
Line and Staff Agencies; Headquarter and Field relationships.
Accountability of Administration – Legislative, Executive and Judicial.

UNIT-IV

Citizen and Administration Interface: Concept and Philosophy; Citizen Charter
Administrative Reforms: Concept and Philosophy.
Good Governance – Concept and Rationale
E – Governance: Concept; Rationale; Significance.
Performance Measurement in Government

List of Readings

Arora,R.K. (Ed.).(1979*). Perspective in Administrative Theory*. New Delhi: Associated.

Bhambri, C.P.(2010).*Public Administration Theory and Practice (*21th ed.).Meerut: Educational Publishers.

Bhattacharya, M. (2000). *Public Administration*. Calcutta: World Press.

Blumenthal, S.C. (1960). *Management Information System*: *A Framework for Planning and Development*, (5th ed.). Englewood Cliffs NJ: Prentice Hall.

Drucker, P. F. (1999*). Management: Tasks, Responsibilities, Practices*. Bombay: Allied Publishers.

Etzioni, A. (1995). *Modern Organizations* New Delhi: Prentice Hall.

Golembiewsky, R.T. (1977). *Public Administration as a Developing Discipline* (2nd ed.). New York: Marcel, Publisher CRC Press.

Government of India, Cabinet Secretariat.*Performance Management*. Retrieved from http://performance.gov.in/RFD.html

Gross, B. (1964.). *The Managing of Organisations*. London: Free Press.

Henry, N. (2012). *Public Administration and Public Affairs* (12th ed.). New Jersey: Prentice Hall.

Herseay, P., & Blanchard, K.H. (2007). *Management of Organisational Behaviour*: (5th ed.)

New Delhi.

Hicks, H. G., & Gutlet, R. C. (2008). *Organisations : Theory and Behaviour* (2nd ed.) New York: McGraw Hill.

Kaushik, S.L.,& Sahni, P. (Eds.). (1983). *Public Administration in India: Emerging Trends*. Allahabad: Kitab Mahal.

Koontz, H. & O'Donnell, C. (1986). *Principles of Management*. 4th edition. Tokyo: McGraw Hill.

Krislov, S. (2010). *Representative Bureaucracy*.Englewood Cliffs, NJ: Prentice Hall.

Newman, W.M., Summer, C., & Warren, E. (1976*). Management: Concepts, Behaviour and Practice* New Delhi: Prentice Hall.

Nigro, F. A., & Nigro, C. (1989). Modern Public Administration (7th ed.). New York: Lloyd Harper and Row.

Niskanen, W. A. (2007). *Bureaucracy and Representative Government*. Chicago: Atherton.

Osborne, D., & Gaebler, T. (l993). *Re-inventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. New York: Addison Wesley.

Pfiffiner, J., & Sherwood, F. (1984). *Administrative Organization*. New Delhi: Prentice Hall.

Tullock, G. (1987). *The Politics of Bureaucracy*. Washington, DC: Public Affairs Press

Vickers, J.S., & Yarrow, G. K. (1997). *Privatization: An Economic Analysis* (7th ed.). Cambridge: MIT Press.

Paper II – Organisational Behaviour

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper:

The paper will help the student develop an understanding of human behavior in the workplace from an individual , group and organizational perspective .Course material will be supplemented by activities like role play, case study discussions and interaction with experts .Public speaking, critical thinking, group work, presentation skills will be developed during these activities**.**

UNIT-I

Organization Behaviour: Concept and Rationale.
Organisational Goals: Concept; Types.
Management by Objectives: Concept; Rationale; Steps.
Team building: Concept; Types of Teams.

UNIT-II

Decision Making: Concept; Types and Process.
Leadership: Concept; Theories – Trait; Situational; Behavioural.
Motivation: Concept; Theories – Needs Hierarchy; Motivation –Hygiene; Theory X-Theory Y.

UNIT-III

Group Dynamics: Concept, Types and Dynamics of Group Formation.
Conflict and Negotiations: Concept, Rationale and Strategies.
Organisational Change: Concept; Process; Resistance to change.

UNIT-IV

Foundations of Organizational Structure: Designing and contingent Factors.
Organisational Effectiveness: Concept and Approaches.
Organisational Development: Concept and Rationale.

List of Readings

Blanchard,K. and Blanchard,H.(2009). *Management of Organisational Behaviour*(9th ed.).Washington: Pearson Higher Education.

Cook,C., Hunsaker, P., & Coffey, R.(2001)., *Management and Organisational Behaviour* .New York: McGraw Hill.

Davis,K., Newstrom ,J.W.et al.(2010). *Organisation Behaviour: Human Behaviour at Work* (13th ed.). New York: McGraw Hill.

Hofstede,G., & Garratt,B.(2003).*Cultures and Organisations: Inter Cultural Cooperation and its Importance for Survival* .New York: Profile Books.

Judge,T.(2009) .*Concepts, Controversies and Applications*(13th ed.) .New Delhi: Pearson

Mcshane,S.,& Glinow,M.V.(2009). *Organisation Behaviour*(5th ed.). New York: McGraw Hill.

Nicholson,N.(1988).*Encyclopaedic Dictionary of OB.London*: Blackwell Publishers.

Saiyadain, M.S.(2006). *Organisational Behaviour*(2nd ed.). New Delhi: Tata McGraw Hill.

Paper III – Public Financial Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper seeks to familiarize the students of Public Administration regarding various aspects of financial administration, particularly Budgeting in India. In addition, the students would be made aware of the role of Comptroller and Auditor General, mobilisation of resources and fiscal federalism.Diverse teaching pedagogies like class room lectures,discussion,seminars, budgeting excercises etc. will be used to deliver course content.At the end of the course, the student will be able to present reports and develop analytical skill regarding the monetary and fiscal system in India.

UNIT-I

Meaning and Significance of Public Finance and Public Financial Administration.
Budget: Concept, Principles and Budget as an Instrument of Financial Administration, Public Policy and Management.

UNIT-II

Concept and Types of Budgets: Traditional Budgeting; Performance Budgeting, Zero-Base Budgeting.
Budget Preparation, Authorisation and Execution with special reference to India.

UNIT-III

Union Ministry of Finance : Organisation, Functions and Role
Significance of Monetary and Fiscal Policy
Union-State Financial Relations
Finance Commission; Composition, Role and functions.

UNIT-IV

Legislative Control over Finances with special reference to parliamentary committees.
Concept of Audit: Role of Comptroller and Auditor General.
Resource Mobilization: Tax and Non-Tax Sources, Public Borrowings and Deficit Financing

List of Readings

Burkhead. J. (1956). *Government Budgeting*. New York: Wiley Sons.

Chand, P. (2010). *Control of Public Expenditure in India* (2nd ed.).New Delhi: Allied Publishers.
Chand, P. (2010). *Performance Budgeting* (2nd ed.). New Delhi: Allied Publishers.
Gupta, B.N. (2006). *Indian Federal Finance and Budgetary Policy*. Allahabad: Chaitanya Publishing House.
Indian Administrative Reforms Commission. (1969).*Report on:* (i)*Financial Administration (ii)Finance, Accounts and Audit (iii)Centre-State Relations.* New Delhi: Manager of Publications, Government of India.
Indian Institute of Public Administration. (1983).Special Number on Administrative Accountability Vol.XXIX (3). New Delhi.
Lall, G.S. (1979). *Public Finance and Financial Administration in India*. New Delhi: Kapoor
Sury, M.M. (1990). *Government Budgeting in India.* New Delhi: Commonwealth Publishers
Thavaraj, M.J.K.. (2001). *Financial Administration in India* (6th ed.). (Delhi, Sultan Chand.

Paper IV – Public Personnel Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The syllabus of the paper attempts to familiarize the students with the concept of Public Personnel Administration, carrier systems and classification in India , various aspects of Human Resource Development ,civil services, rules of service,code of conduct and ethics,disciplinary action , negotiation machinery etc. Presentations, interactions with experts,case studies and discussions will be used for delivery of course content.The student will develop group work, leadership and analytical skills.

UNIT-I

Meaning and Significance of Public Personnel Administration
Role of Public Services
Career Systems – Concept and Types
Position Classification – Concept and Bases

UNIT-II

Concepts and Significance: Human Resource Development, Human Resource Planning, Recruitment, Training, Promotion and Performance Appraisal.

UNIT-III

Constitutional Provisions with regard to Civil Services in India
Pay Commissions in India
Union Public Service Commission (UPSC): Role and Functions

UNIT-IV

Administrative Ethics; Code of Conduct
Disciplinary Action
Employer-Employee Relations: Staff Associations and Union; Joint Consultative and Negotiation Machinery

List of Readings

Bhayana, S.S. and Singh S. (2016). *Public Personnel and Financial Administration* , 4th Ed. Jalandhar: New Academics.

Davar, Rustom S. (2008). *Personnel Management and Industrial Relations in India.* 2nd Edition. New Delhi: Vikas Publishing House.

Flippo, E. (2008). *Principles of Personnel Management.* 4th Edition. Kogakusha: McGraw Hill.

Goel, S.L. and Rajneesh, S. (2002). *Public Personnel Administration.* New Delhi: Sterling.

Government of India. (1988). *Report of the Commission on Centre-State Relations*. Nasik: General Manager.

Government of India, 2nd Administrative Reforms Commission . (2010). *10th Report: Refurbishing of Personnel Administration – Scaling New Heights.* New Delhi: Manager of Publications.

Koontz, H. and O'Donnell, Cyril.(2008). *Principles on Management*. , 5th Ed. Tokyo: McGraw Hill.

Pigors, P. and Myers, C.A. (1969). *Personnel Administration: A Point of View and a Method*. 6th Edition. Kogakusha: McGraw Hill.

Rouse, John E. (2008). *Public Administration in American Society*. Michigan: Gale Research.

Saxena, A.P. (2010). *Training and Development in Government*. New Delhi.

Stahl, O. Glenn. (1971). Public Personnel Administration. 6th Edition. New Delhi: Oxford and IBH Publishing.

United Nations. (2008). *New Approaches to Personnel Policy for Development*. New York.

Paper V – Indian Economic System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: Basic knowledge of Economics is pre-requisite for students to have better understanding of the subject of Public Administration .Thus the paper aims at making the students familiar with some of the core and relevant topics of Economic,especially their relevance for the student of administration.Learning outcomes also include some familiarity of the learners with select concepts of Economics and understanding of select field of Economics having bearing on Public Policy and Governance.Peadagogical tools will include lectures,Term Paper/Assignment, Presentations, Seminars and use of Information and Communication Technology.

UNIT-I

Relevance of Economics to Public Administration
Concepts: Market Mechanism, Perfect Competition, Monopoly, Monopolistic Competition, National Income
Concept and Features: Free Market Economy; Centrally Planned Economy; Mixed Economy

UNIT-II

Features of the Indian Economy
Growth and Structure of the Indian Economy
Indian Economic Reforms: Concept, Rationale and Evaluation

List of Readings

Ahuja, H. L.(2010).*Modern Economics* .New Delhi: S. Chand.

Dutt,R and Sundram, K.P.M.(2010).*Indian Economy* .New Delhi: S. Chand.

Halm, G.N.(1951).*Economic System-Comparative Analysis* .New York: Rinehart.

Koutsoyiannis, A.(1979).*Modern Micro-Economics*. Macmillan Press Ltd.

Lipsey, Richard G.(1971).*An Introduction to Positive Economics* .London: English Language Book Society.

Mote, V.L. and A,E.T.(1982).*Managerial Economics: Concepts and Cases* .New Delhi: Tata McGraw Hill.

Mukherji,S.(2003).*Modern Economic Theory* .New Delhi: Prentice Hall of India Pvt. Ltd.

Samuelson, Paul A.(2006).*Economics*. Tokyo: McGraw-Hill, New Delhi.

Shapiro, Edward.(2005).*Macro-Economics Analysis* .New Delhi: Galgotia Publications.

Stonier, Alfred W. & Hague, Douglas C.(2004).*A Text Book of Economic Theory* . Singapore: Pearson Education Pvt. Ltd. Indian Branch.

Paper VI – Indian Social System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper:

The endeavour is to make the student understand the multi-disciplinary nature of the subject of Public Administration and the relationship between Sociology and Public Administration.The students will be apprised about the basic concepts of social structure, social change in contemporary Indian Society and social tensions and their relevance in the field of Public Administration. Apart from the lecture methods, presentations and documentaries (audio-visual aids),case studies and special lectures by experts will be organized.The students will develop public speaking and analytical skills to understand Indian Society and link this with social policy and administration.

UNIT-I

Relevance of Sociology to Public Administration
Concept and Elements of Social Structure: Groups; Status and Role; Norms and Values.
Social Stratification: Caste, Class - Difference and Convergence.
Social Institutions: Marriage and Family.

UNIT-II

Social Change: Concept; Sources; Resistance
Social Change in Contemporary Indian Society
Social Tensions and Resolutions – Communalism, Regionalism and Violent Class Struggle

List of Readings

Dube, S.C.(2009).*Modernization and Development: The Search for Alternative Paradigms* . 2nd Ed.New Delhi: Sage Publishers,

Kuppuswamy, B.(2006).*Social Change in India.* Delhi:Konark Publisher Pvt. Ltd.

Mendelbaum ,David G.(1972).*Society in India* .Bombay: Popular Prakashan.

Moore, W.E.(1965).*Social Change* .New York: Prentice Hall.

Singh,Y.(1986).*Indian Sociology: Social Conditioning and Emerging Concerns* .New Delhi:Vistaar Publications.

Smelser, Neil J.(1970).*Introduction to Sociology.* New York: Willey.

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-2018)
Semester-II

Paper I – Administrative Thought

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper attempts to make the students of Public Administration aware of various theories and thoughts of various classical, neo-classical and modern thinkers in the area of administration and organization. The study of this paper will equip the students with the deep understanding of historical evolution of administrative thought, various conceptualizations and their application. Pedagogy will include lectures, assignment writing and presentations.

UNIT-I

Woodrow Wilson; F.W. Taylor;Henri Fayol; Luther Gulick and L. B. Urwick

UNIT-II

Max Weber; Elton Mayo; Mary Parker Follett; Chester I. Barnard

UNIT- III

Chris Argyris; Frederick Herzberg; Renesis Likert; Herbert A. Simon

UNIT-IV

Fred Riggs; Peter F. Drucker; Mahatma Gandhi; Kautilya

List of Readings

Allen, V.L. (1975). *Social Analysis.* London: Longman

Blau, P.M. (1987). Bureaucracy in Modern Society. New York: Random House.

Etzioni, A. (1964). *Modern Organisations*. New Delhi: Prentice Hall.

Foucault, M. (1975). *Discipline and Punishment*. Hammondsworth: Penguin.

George, C.S. (1974). *The History of Management Thought*. New Delhi: Prentice Hall.

Gross, B. (1968). Organisations and their Managing. New York: Free Press.

Hofstede, G. & Kassem, M.S. (1976). *European Contributions to Organisation Theory. Assen*:

Van Gorcum.

Jerzy, Z. (1922). *History of Social Thought*. West post: Greenwood.

Mouzelis, N.P. (2009). *Organization and Bureaucracy – An Analysis of Modern Theories*. London: Routledge.

Peters, T. (1994*). Liberation Management*.New York: Fawcett Columbine.

Pollard, H. R. (1978). *Further Development in Management Thought*. London Heinemann

Pollard, S. (1965). *The Genesis of Modern Management*. London: Arnold.
Prasad, D.R. & Prasad, V.S. (1989*). Administrative Thinkers*. New Delhi: Sterling.
Pugh D.S., Hickson D.J, & Hinings C.R.(2007). *Writers on Organisations* .Harmondsworth : Penguin.

Silverman, D. (2008). *The Theory of Organisations*. London: Heinemann.

Waldo D. (1948). *The Administrative State*. New York: Ronald.

Wren, D.A. (2009). *The Evolution of Management Thought*. New York: Ronald.

Paper II - Research Methods

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper aims to acquaint the student with the knowledge of philosophy, rationale and methodology of conducting good quality research in social sciences with special reference to Public Administration. The major objective of this paper is to prepare students for undertaking quality research at Masters' level in the form of Masters' Dissertation as well as subsequent research leading to the award of M.Phil/PhD Degree as well as pursuing research as a career. Enabling learners to look at contemporary relevant problems critically in the area of social science research, including Public Administration, and finding empirical solutions for the same. The course seeks to equip students in structuring research design, formulating research questions/hypotheses besides endowing them with the knowledge of how to collect data and analyze it with the help of suitable statistical techniques. The course also intends to train students in report writing. Pedagogy will include lectures, Term Paper/Assignment, Presentations, Seminars and Use of Information and Communication Technology. .

UNIT-I

Nature of Science and Scientific Method
Types of Research: Fundamental; Applied; Evaluative
Qualitative Research: Concepts and Significance
Basic Elements of Research - Research Problem: Selection and Formulation; Review of Literature;

UNIT-II

Concepts – Definition and Functions
Hypotheses: Definition; Features and Types and Testing Procedures
Research Design: Definition, Contents and Types
Survey Research and Case Study Method

UNIT-III

Sampling: Concept and Types
Methods of Data Collection: Documents, Observation, Interview and Questionnaire
Data Processing: Editing, Coding and Tabulation
Graphic Representation

UNIT-IV

Measures of Central Tendency: Mean, Median and Mode
Dispersion
Linear and Rank Correlation, Chi-Square ($\dot{x}^2$)
Report Writing

List of Readings

Bowley , A.L.(1937). *Elements of Statistics* .New York: Staples Press Inc.
Goode,W.J. and Hatt,P.K.(2006).*Methods in Social Research* .McGraw Hill Series.
Gupta, S.P.(2001).*Statistical Methods* .New Delhi: Sultan Chand and Sons.
Miller,D.C. and Salkind,N.J.(1981).*Handbook of Research Design and Social Measurement*. New Delhi: Sage .
Moser, C.A. and Kalton, G.(1993).Survey *Methods in Social Investigation*.London: The English Language Book Society and Heinemann .
Nachmias,D. & Nachmias,C.(1981).*Research Methods in the Social Sciences*. New York: St. Martin's Press.
Seltiz,C .& Cook,S.W.(1964). *Research Methods in Social Relations*. New York: Holt Rinehart and Winston.
Spiegal,M.R.(2008).*Theory and Problems of Statistics* .New York: Mc Graw-Hill .
Young,P.V.(2007).*Scientific Social Research and Surveys*.India: Asia Publishing House.

Paper III – Public Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Course: This core course on Public Policy comprehensively introduces the concept and significance of public policy, the history of policy sciences and the public policy process. At the end of the course the student will have an understanding of the growth of policy sciences, the significance and different stages of the public policy process in terms of the theoretical formulations as well as the working of this process with special reference to India.The pedagogical tools used will include lectures,case studies,policy analysis excercises,seminars and presentations.Thus, the student will develop critical understanding of the policy process as well as capacity to undertake policy analysis in substantive areas of public policy.

UNIT-I

Public Policy: Concept, Significance and Scope; Evolution of Policy Sciences
Policy Transfer: Concept, Rationale and Types: (Copying, Adaptation, Hybridization and Synthesis).
Policy Analysis: Concept and Significance; Approaches with special reference to the Incrementalist and Rationalist Paradigms

UNIT-II

Public Policy Making Process: Role of Legislature, Executive and Judiciary; Planning Machinery
Other Stakeholders in Policy-making: Political Parties, Interest Groups, Mass-media, Civil Society, and International Agencies.

UNIT-III

Public Policy Implementation, Monitoring and Control: Approaches to Policy Implementation; Role of Executive (with special reference to Bureaucracy), Legislature, Judiciary, Non-Governmental Organisations, Pressure Groups; Major Issues and Problems in Policy Implementation.

UNIT-IV

Policy Evaluation: Approaches to Policy Evaluation and Policy Impact; Criteria for Evaluation; Role of Staff, CAG, Parliamentary and Departmental Committees in Evaluation; Problems in policy evaluation.

List of Readings

Anderson, J E. (2005). *Public Policy Making*. Sixth ed. New York: Houghton Mifflin Co.

Ayyar, Vaidyanathan R V. (2009). *Public Policy Making in India*. N. Delhi: Pearson.
Basu, D.D. *Constitution of India*. 20th Edition. New Delhi: Prentice Hall of India.

Dolowitz, D.P. and Marsh, D. (January). Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance: An International Journal of Policy and Administration,* 13, No. 1, 5-24.

Dubhashi, P.R. (1986). Policy and Performance. New Delhi: Sage Publications.

Dye, T. (2002). *Understanding Public Policy*. New Delhi: Pearson Education Singapore (Pte) Ltd.

Henry, N. (2009). *Public Administration and Public Affairs*. Eleventh Edition. New Jersey: Prentice Hall.

Madan, K.D. et. al. (1982). *Policy Making in Government*. New Delhi: Publications Division, Government of India.

Mathur, K. (1996). *Development Policy and Administration*. New Delhi: Sage.

Munger, M.C. (2000). *Analysing Policy: Choices, Conflicts and Practices*. New York: W.W. Norton & Company.

Nagel, S.S.(1991). *Public Policy: Goals, Means and Methods*. NewYork: St. Martin Press.

Nedley, *A. Policy Transfer and the Developing-Country Experience Gap: Taking a Southern Perspective*. "n.d". http://www.york.ac.uk/ depts/poli/news/sem3esrc.htm.

Page, E.C. *Future Governance and the Literature on Policy Transfer Lesson Drawing*. "n.d". http://www.hull.ac.uk/futgov/Papers/EdPag Paper1.pdf)

Rabin J., Hidreth, W & Miller, G. (2007). Handbook of Public Administration . Third edition. Florida: Taylor & Francis Group.

Rose, R.(1993). *Lesson-Drawing in Public Policy: A Guide to Learning Across Time and Space*. New Jersey: Chatham House.

Sapru, R.K. *Public Policy: Art and Craft of Policy Analysis*. 2nd Edition. New Delhi: Prentice Hall of India learning.

Stone, D. *Learning Lessons, Policy Transfer and the International Diffusion of Policy Ideas*. "n.d" http:// poli.haifa.ac.il/~levi/res/stone-2000.pdf

Paper IV - Administrative Law

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Administrative Law is an integral part of Public Administration, a very significant ingredient to run the administration. The student is expected to develop an understanding of the various components of administrative law along with the principles of natural justice, Rule of Law, administrative legislation, adjudication and much more. In this paper the most important pedagogical toll is the study and analysis of case law. By the end of the course, a student should be able to specify the significance of administrative law, rule of law and the quasi-legislative, quasi-judicial procedures within administration.

UNIT-I

Meaning, Growth and Scope of Administrative Law
Distinction between Constitutional Law and Administrative Law
Droit Administratif
Concept of Rule of Law and Principles of Natural Justice

UNIT-II

Delegated Legislation: Need, Classification and Safeguards
Judicial Review of Administrative Action: Principles and Modes
Liability of the Administration; Contract and Tort

UNIT-III

Administrative Tribunals: Concept, Rationale and Types
Central Administrative Tribunal: Structure, Function and Role
Central Vigilance Commission: Structure, Functions, Role and Significance

UNIT-IV

Institution of Ombudsman: Concept and Genesis
Lok Pal and Lok Ayukta in India: Significance, Functions and Role
Fundamentals of Departmental Proceedings: Suspension, Charge sheet, Enquiry and Penalties.

List of Readings

Chhabra, S.(1990).*Administrative Tribunals* .New Delhi: Deep and Deep.
Diwan,P.(2007) .*Indian Constitution* . 2nd ed. Allahabad: Law Agency,.
Kagzi, M.C.J.(2008).*Indian Administrative law* . 2nd edition .Delhi: Metropolitan,.
Massey, I.P.(2008).*Administrative Law* .New Delhi: Eastern Book Company.
Mehta, S.M.(1990).*Indian Constitutional law* .New Delhi: Deep and Deep.
Sathe, S.P.(1998).*Administrative Law* . 6th Edition. Bombay: Tripathi,.
Sharma,S.K.(2007).*Directive Principles and Fundamental Rights* .New Delhi: Deep and Deep.
Swami,P.M.(1989).*Swami's Manual of Disciplinary Proceedings for Central Government Employees* .Madras:Swami Publishers.

Paper V – Indian Political System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50(out of which 10 marks are for internal assessment). Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.

- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper attempts to familiarize the students of Public Administration with the basic features of Indian Constitution, particularly those having relevance for the administrative set up in India. The students will also be familiarized with the institutions that make up the political system. Class room teaching, lectures by experts,seminars and field trips will form the pedagogical scheme of instruction.

UNIT-I

Unitary and Federal Features of the Indian Constitution
Political Executive at the Union Level: President, Prime Minister and Council of Ministers
Union Legislature - Lok Sabha and Rajya Sabha: Composition and Functions
Judiciary: Supreme Court; Judicial Review; Judicial Reforms.

UNIT-II

Stakeholders in the Political System: Political Parties; Pressure Groups; Interest Groups; Civil Society
Election Commission: Structure, Functions and Role
Electoral Reforms

List of Readings

Almond,G.A. and Coleman,J.S.(1966).*The Politics of Developing Area* .Princeton University Press.

Badyal, J.S.(1993).*Indian Political System* .Jalandhar: Sohal Lal Khanna, 5th ed.

Basu,D.D.(2008).*Introduction to the Constitution of India*.20th edition.New Delhi: Wadhwa and Company.

Hyman,H.H.(1972).*Political Socialization: A Study in the Psychology of Political Behavior* .New Delhi: American Publishing.

Narain,I (ed.)(1976).*State Politics in India* .Meerut, Meenakshi.

Palmer,N.D.(1961).*Indian Political System* .London: George Allen and Unwin Ltd.

Palmer,N.D.(1976).*Elections and Political Development: The South Asian Experience*.Vikas Publishing House.

Pye,Lucian.(1966).*Aspects of Political Developments*.Boston: Little Brown.

Paper VI – Indian Administrative System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50(out of which 10 marks are for internal assessment). Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units - Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.

- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The student will gain an understanding of the administrative set up and structure at the Centre level in addition to critical areas like headquarter field, centre –state relations and generalist/specialist relationship. The students will also be familiarized with the teaching, lectures by experts, seminars and field trips will form the pedagogical scheme of instruction.

UNIT-I

Central Secretariat: Structure, Functions and Role
Cabinet Secretariat: Significance, Functions and Role
Prime Minister Office: Significance, Functions and Role
Head Quarter- Field Relationships

UNIT-II

Centre-State Relations: Legislative and Administrative
Relationship between Political and Permanent Executive
Generalist and Specialist in Administration
Indian Administration: Problems and Challenges

List of Readings

Arora,R.K. and Goyal,R.(1997).*Indian Public Administration* .New Delhi: Vishwa Parkashan

Austin,G.(2009).*Indian Constitution* .Oxford: Claredon.

Avasthi and Avasthi.(2001).*Indian Administration* .Agra: Luxmi Narain Aggarwal.

Basu,D.D.(2008).*Introduction to the Constitution of India*.20th edition.New Delhi: Wadhwa and Company.

Maheshwari,S.(2001).*Indian Administration* . 6th edition .New Delhi: Macmillan.

Singh,H (ed.).(2008).*Indian Administration* .Jaipur: Aalekh Publishers.

Singh,M and Singh,H.(1989)*Public Administration in India* .New Delhi: Sterling Publishers.

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-18)

Semester III (Groups A, B, C and D)

Paper-I: Development Administration (Compulsory Paper for all Groups)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: In the third semester, the student will be exposed to the core area of Development Administration, besides being offered opportunities for pursuing individual applied areas of interest through elective courses. The aim of the paper is to provide introductory knowledge and skills needed to formulate, analyze and evaluate policy considerations, besides implementation, related to various dimensions of Development Administration. Through coverage of interdisciplinary topics students gain a holistic theoretical insight of the specialized areas of the course, namely, concept and significance of development, Sustainable Development and Development Administration, categorization of developing and developed worlds, planning, Public Enterprises, Population, United Nations, Role of Bureaucracy, Administrative Capability and People's Participation. Lectures, class room discussions, presentations and field trips will deepen the understanding and analytical and presentation skills of the student.

UNIT-I

Concept and Significance of Development
Sustainable Development: Concept and Significance
Development Administration: Concept and Significance
Main Characteristics of Developed and Developing Countries

UNIT-II

Administrative Capability and Development Administration
Organization for Development Planning a Centre, State and District Levels
Role of United Nations System in Development

UNIT-III

Public Enterprises: Concept and Rationale
Forms of Organisation: Departmental Undertakings, Statutory Corporations and Government Companies
Industrial Policies: 1956, 1991 and major subsequent developments

UNIT-IV

Population Policy and Development
Role of Bureaucracy in Development
People's Participation in Development
Women and Development

List of Readings

Basu, R. (1993).*The United Nations – Structure and Functions of an International Organisation*, New Delhi: Sterling.

Bava, N.J. (1997). *Non- Governmental Organisations in Development: Theory and Practice*. Ed. New Delhi: Kanishka.

Bhattacharya, M. (2001). *Development Administration*. New Delhi: Jawahar Publishers.

Dhar, P.K. (2007). *Indian Economy – Its Growing Dimensions*. New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). *Development Administration: From Underdevelopment to Sustainable Development*. London: Macmillan.

Mathur, H.M. (1986). *Administering Development in the Third World: Constraints and Choices*. New Delhi: Sage.

Mathur, K. (1996). *Development Policy and Administration*. Ed. New Delhi: Sage.

Parikh, K.S. (1999). *Indian Development Report*. Ed. Delhi: Oxford.

Patnaik, P. (January 2015). From the Planning Commission to the NITI Aayog. *Economic and Political* Weekly. L. (4).

Planning Commission. *Five Year Plan Documents*. New Delhi: Government of India.

Rao, M.G. (2015). Role and Functions of NITI Aayog. *Economic and Political Weekly*, L (4).

Rattan, V. (1997). *Women and Child Development Programme Administration*. Vol.1: Women and Child Development and Sustainable Human development. Vol.II: Integrated Child Development Services Programme Administration. New Delhi: S. Chand.

Riggs, F.W. (1970). *Frontiers of Development Administration*. Ed. Durham: Duke University Press.

Sapru, R.K. (2002). *Development Administration*. New Delhi: Sterling Publishers.

Singh, N. (February 2015). NITI Aayog and Indian Fiscal Federalism. *Yojana*.

Singh, A. (2000). *The Politics of Environment Administration.* New Delhi: Galgotia Publishing Company.

Subramaniam, V. (1990). *Public Administration in Third World*. London: Greenwood.

Sharma & Verma. (1985). *Comparative Public Administration*. New Delhi: IIPA.

Shah, R.R. (September 2014). Reorienting the Plan Process and Revitalising the Planning Commission. *Economic and Political Weekly*. XLIX (37).

United Nations (1975). *Development Administration, Current Approaches and Trends in Public Administration for National Development.* New York.

United Nations (1985). *Enhancing Capabilities for Administrative Reforms in Developing Countries.* New York.

United Nations (1971). *Administration of Development Programmes and Projects; Some Major Issues*. New York.

Verma, S.P. & Sharma, S.K. (1984). *Development Administration*. Ed. New Delhi: IIPA.

Weidner, E. (1970). *Development Administration in Asia*. Ed. Durham : Duke University Press.

Semester III (Group A)

Paper II: Social Policy and Welfare Administration
(Common in Groups A&C; compulsory for Group A)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The paper attempts to familiarize the students with various aspects of social welfare in India by emphasizing on policy, programmes and administration of the weaker sections, the administrative set up and the legislations in this area.The students will learn about various policies and programmes for welfare of women, children and other disadvantaged groups as well as the role of non-governmental organizations in social welfare and its administration. Class room teaching and field visits with written assignments and presentations will form the pedagogical scheme of instruction.

Unit-I

Social Welfare: Concept and Significance
Welfare State: Concept and Philosophy
Social Welfare Administration: Nature, Scope and Significance

Unit-II

Social Legislation in India: An Overview
Protection of Women from Domestic Violence Act, 2005
The Juvenile Justice (Care and Protection of Children) Act, 2013

Unit-III

Organisation and Functions of Union Ministry of Social Justice and Empowerment;
State Social Welfare Department; Central Social Welfare Board; State Social Welfare Board
Role of NGOs/Voluntary Organisations for Social Welfare

Unit-IV

Policy, Programmes and Administration for Welfare of SC/ST
Policy, Programmes and Administration for Welfare of Women and Children
Policy, Programmes and Administration for Welfare of Aged
Policy, Programmes and Administration for Welfare of Drug Addicts

List of Readings

Bulsara, J.F. & Verma (2006). *Perspective in Social Welfare in India*. New Delhi: S. Chand & Co.

Chowdhary, D.P. (1976). *Social Welfare Administration.* Delhi : Atma Ram and Sons.

Encyclopedia of Social Change. Vol. 5. New Delhi: Anmol Publishers.

Friedlander, W. & Apte, R. (2006). *Introduction to Social Welfare.* 5th Ed. New Delhi: Prentice Hall.

Gangrade, K.D. *Social Legislation in India*. Delhi: Concept Publishing House.

Madan, G.R. (2006). *Indian Social Problems*. Vol. II: Social Work. New Delhi: Allied Publishers Ltd.

Ministry of Information and Broadcasting (1987). *Encyclopedia of Social Welfare in India*. Vol. IV. New Delhi: GOI Publications Devision.

Ministry of Social Justice & Empowerment Govt. of India, Recent Annual Reports

Planning Commission (2007-12). Eleventh Five Year Plan. New Delhi: Government of India.

Relevant Acts of Parliament and Reports of Commission, Committees & Study Teams

Research, Reference and Training Division (2010). *A Reference Manual*. New Delhi: GOI Publications Division.

Robson, W. A. (1976). *Welfare State and Welfare Society*: Illusion and Reality. 2nd ed. London: Allen and Unwin,.

Roy, K. (2000). *Women and Child Development*. New Delhi: Commonwealth Publishers.

Sachdeva. D.R. (2009). *Social Welfare Administration*. Allahabad: Kitab Mahal.

Sankhdher, M.M. (1995). *Welfare State.* New Delhi: Deep & Deep.

Semester III (Group A)

Paper III: People's Empowerment and Rural Governance (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: India is predominantly a poor country.Empowering rural people and rural local bodies is quite significant to strengthen our base-social,economic and political.The student needs to be fully familiarized with the nature of rural local institutions and the steps towards rural upliftment. The important pedagogical tools in this paper include field visits to have a feel of the rural realities and working of the rural local.The students should be able to elaborate the structure and working of rural local bodies and the working of rural development programmes.Assignments and presentations will be used to review the understanding of the student.

UNIT-I

People's Empowerment: Concept; Rationale; Strategies
Evolution of Panchayati Raj in India with special focus on the 73rd Constitutional Amendment
Working on Panchayati Raj in India: Issues, Problems and Remedies

UNIT-II

Rural Government in India

(i)	Gram Sabha	:	Composition, Functions, Finances and Role
(ii)	Gram Panchayat	:	Composition, Finances, Functions and Role
(iii)	Panchayat Samiti	:	Composition, Finances, Functions and Role
iv)	Zila Parishad	:	Composition, Finances, Functions and Role

UNIT-III

State Election Commission: Composition, Functions and Role with special reference to Rural Local Bodies
Personnel Administration in Rural Governance: Role and Functions of Panchayat Secretary, Block Development and Panchayat Officer and District Development and Panchayat Officer
State Finance Commission: Composition, Functions and Role with special reference to Rural Local Bodies

UNIT-IV

Rural Development and Poverty Alleviation Schemes – National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGA)
Role of Cooperatives in Rural Development
Rural Problems and Challenges

List of Readings

Arora, R.K. & Goyal, R. (1996*). Indian Public Administration*. New Delhi:Vishwa Prakashan.
Aziz, A. (1996). *Decentralised Governance in Asian Countries*. Ed. New Delhi: Sage.
Bhadouria, B.D.S. & Dubey, V.P. (1989). *Panchayati Raj and Rural Development* New Delhi: Commonwealth Publishers.
Bhayana, S.S. & Singh, S. (1991).*Local Government in India*. Jalandhar: New Academic Publishing Company.
Burns, D. et. al. (1994). *The Politics of Decentralisation: Revitalising Local Democracy*. London: Macmillan.
Chaturvedi, T. N. & Datta, A. (1984). *Local Government.* New Delhi: IIPA.
Cheema, G.S. & Ponoinelli D. (1983). *Decentralisation and Development Policy Implementation in Developing Countries*. Ed. London: Sage.
Hochgesang, T.W. (1994). *Rural Local Self-Government in India*. Hyderabad: NIRD.
Khanna, B.S. (1992). Rural Development in South Asia. 4 Volumes. New Delhi: Deep and Deep.
Maheshwari, S.R.(2003). *Local Government in India*. Agra: Lakshmi Narain Aggarwal.
Mathew, G. (1994). *Panchayati Raj in India: From Legislation to Movement*. New Delhi:ISS.
Mathur, S.N.(1997). *Nyaya Panchayats as Instruments of Justice*. New Delhi: ISS.
Mishra, S.N.(1986). *Panchayati Raj Bureaucracy and Rural Development*. New Delhi: IIPA.
Mishra, S.N. (1996). *New Panchayati Raj in Action*. New Delhi: Mittal Publication.
Oakley, P et. al. (1984). *Approaches to Participation in Rural Development*. Geneva: I.C.O.
Oakley, P. *Projects with People: The Practice of Participation in Rural Development*. Geneva: I.L.O.
Oommen, M.A. & Datta, A. (1995*). Panchayats and their Finance*. New Delhi: ISS.
Oommen, M.A. (1995). *Devolution of Resources from the State to the Panchayati Institutions.* New Delhi: ISS.

Semester III (Group A)

Paper-IV: Disaster Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper has been introduced for the students of Public Administration to make them aware about different types of disasters and their management in India. Apart from developing and understanding of the strategy for disaster course will develop leadership and management skills of the disaster management .Case studies, role plays , mock drills, field visits, documentaries and interaction with experts in the field of disaster menegement will form the pedagogical scheme of instruction.

UNIT-I

Disaster: Concept & Dimensions
Natural Disasters: Earthquakes, Volcanic Eruptions, Floods, Cyclones, Climate Change
Man-made Disasters: Anthropogenic, Soil degradation, Desertification, Deforestation

UNIT-II

Disaster Management Act 2005
Organisational Framework for Disaster Administration in India at the Union, State and Local levels (including Nodal Agency, National Disaster Management, Authority, State Authority)

UNIT-III

Role of Information and Communication Technology Systems in Disaster Management
Interstate and International Cooperation for Disaster Management
Role of NGOs and Army in Disaster Management

UNIT-IV

Disaster Risk Reduction – Sustainable Development
Disaster Preparedness; Relief and Rehabilitation
Disaster Management Training

List of Readings

Anderson, J.(2008).*Public Policy Making: An Introduction*.5th ed.. Boston: Houghton-Mifflin.

Asian Development Bank.(1991). *Disaster Mitigation in Asia and the Pacific* .Manila: ADB.
Dynamics of the Emergency Management System.*Public Administration Review*.56(3)235-244.

Goel, S.L.(2006).*Encyclopedia of Disaster Management*.New Delhi: Deep and Deep.

Govt. of India/UNDP.(2002-07).*Disaster Risk Management Programme (2002-07): Community Based Disaster Preparedness and Risk Reduction through Participation of Committees and Local Self Governments* www.ndmindia.nic.in/EQProjects/goiundp2.0.pdf

Monappa,K.C.(2004).*Disaster Preparedness*. New Delhi .Akshay Public Agencies.

Narayan, B.(2009).*Disaster Management*. New Delhi .A.P.H. Publishing Corporation.

Princen T.Y.(1994).*Environmental NGO's in World Politics*.London: Routledge.
Sahni,P. Ariyabandu, M. Malagoda,M.(2003).*Disaster Risk Reduction in South Asia*.New Delhi: Prentice Hall.
Satendra and Sharma,V.K.(2004).*Sustainable Rural Development for Disaster Management*.New Delhi.

Schnneider, Saundra K.(2009).*Flirting With Disaster: Public Management in Crisis Situations* NY.

Wamsley, Gary L. and Aaron D. (May/June 1996).Escalating in a Quagmire: Changing.

Semester III (Group A)
Paper - V: Administration of Non-Government Organisations
(Common in Groups A, C & D; Compulsory for group D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objectives of the Course: This Paper is designed to prepare future NGO and Public Administrators to understand the theoretical conceptualization of the NGO and the NGO Sector in the framework of a developing economy and society.Lectures, case study analysis,presentations and field trips will be used to teach this course. At the end of the course the student will have an understanding of the commonly adopted organizational forms and governance structures pertaining to NGOs; issues of governance, capacity building and accountability; funding sources, making grant applications and project proposals; and also gain an understanding of the NGO-Government interface and its impact on the working of NGOs. Case studies of three international and domestic NGOs will further deepen the understanding and equip them to work as managers in the NGO Sector in combination with the other papers in this programme..

UNIT-I

Non Governmental Organisations (NGOs): Concept, Rationale and Scope
National Policy on the Voluntary Sector 2007
NGO-Government Interface in India with special reference to the Planning Commission, Ministries and Departments

UNIT-II

Organisational Forms and Governance Structures of NGOs: Trust; Society; Company
NGO-Government & NGO-Private sector partnerships: Rationale and practice
Sources of NGO Funding; Government and Foreign Grants: Eligibility, Requirements & Procedures with special reference to Foreign Contributions

UNIT-III

Issues of Governance; Capacity Building; Autonomy; Ethics
Accountability of NGOs: Rationale, Mechanisms and Problems
Formulation of a Welfare/Development Project Proposal including Monitoring and Evaluation arrangements

UNIT-IV

Case Studies:
Self Employed Women's Association (SEWA): Organisation, Functions and Working
Red Cross Society of India: Organisation, Functions and Working
Voluntary Action Network India (VANI)
OXFAM India

List of Readings

Bava N. (ed.) (1997). *Non-Government Organisations in Development: Theory and Practice*. New Delhi: Kanishka Publishers.

Chatterjee A. (1998). *NGOs: An Alternative Democracy in Hiranmay Karlekar Independent India: The First Fifty Years*. New Delhi: Indian Council for Cultural Relations and Oxford University Press.

Dantwala. M.L. Sethi Harsh and Pravin Visaria (eds.) (1998) *Social Change Through Voluntary Action.* New Delhi. Sage Publications.

Eleventh Five Year Plan (2007-12). Planning Commission, New Delhi.

Gangrade. K.D. and Jain S. (1995). NGOs: *Retrospect and Prospect*. New Delhi: Friedrich Ebert Stiftung.

Government of India (1994). An Action Plan to bring about Collaborative Relationship between Voluntary Organizations and Government. CAPART. New Delhi. Government of India. http:pcserver.nic.in/ngo/reports.aspx

Handy. C. (1990). *Understanding Voluntary Organizations – How to make them Function Effectively* London: Penguin Books.

Indian Red Cross http://www.indianredcross.org/

Jain R.B. (1995). *NGOs in Development Perspective*. New Delhi: Vivek Prakashan. Self Employed Women's Association http;//www.sewa.org/

Jain. N. (2009). *Handbook for NGOs: An Encyclopaedia for Non-Governmental Organisations and Voluntary Agencies*. (I & II). New Delhi. Nabhi Publications.

Kalima ,R.(1992).*Where Women Are Leaders: The Sewa Movement in India* .New Delhi:Vistaar Publications.

Mohanty, M. and Singh,A.Voluntarism and Government: Policy, Programme and Assistance, Voluntary Action Network India (VANI), http:pcserver.nic.in/ngo/reports.aspx

Nanavaty Meher and Kulkarni P.(1998). *NGOs in the Changing Scenario* .New Delhi. Uppal Publishing House.

OXFAM India .www.oxfamindia.org.

Planning Commission .(2002).*Proceedings of the All India Conference On The Role Of The Voluntary Sector In National Development*. http:pcserver.nic.in/ngo/reports.aspx

Prasad.K. (ed.).(2000).*NGOs and socio-Economic Development Opportunities* .New Delhi: Deep and Deep Publications Pvt. Ltd.

Report of the Steering Committee on Voluntary Sector for The Eleventh five-year Plan (Planning Commission (2007) .New Delhi,http://planningcommission.nic.in

Report of the Steering Committee on Voluntary Sector for The Tenth five-year Plan (Planning Commission(2002).New Delhi. http:pcserver.nic.in/ngo/reports.aspx

Smith-Sreen,P.(1995).Accountability in Development Organisations : Experiences of Women Organisations in India (New Delhi: Sage Publication,

Voluntary Action Network India .www. Vaniindia.org.(VANI)

Voluntary Organisations Database and Reports http:pcserver.nic.in/ngo/

Semester III (Group A)
Paper VI: Public Health Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Course: The paper prepares students in the area by exposing them to theoretical issues related to the challenges of Public Health Administration besides implementation. The students will understand healthcare policies and programmes including organizational set up at the union, state and local levels. Focussed study of some health care programmes is included besides the concept of hospital management.The study of structure and role of the National Institute of Health and Family Welfare and Medical Council of India and the World Health Organization (WHO) will inform the students of the national and international institutional structures of health administration.Special seminars and workshops will be organized to impart specialist knowledge to students.Field trips will also be organized to expose the student to health administration on the ground.

UNIT – I

Public Health Administration - Nature, Significance and Scope
Challenges of Public Health Administration
Implementation and Evaluation of Healthcare Policies and Programmes

UNIT – II

Union Ministry of Health and Family Welfare: Organization, Functions and Role
Health Administration at the State Level: Organization, Functions and Role of Department of Health
Administration of Primary Healthcare at the Local Level

UNIT – III

Healthcare Programmes in India - Family Welfare Programme; Reproductive Child Healthcare; Immunization Programme; National Rural Health Mission (NRHM)
Hospital Management: Organization, Function and Role

UNIT – IV

National Institute of Health and Family Welfare: Structure, Functions and Role
Medical Council of India: Structure, Functions and Role
WHO: Structure, Functions and Role in Asia

List of Readings

Ballabh.,C.(2007).*Health Care Services in Hospital*.New Delhi, Alfa Publication.
Ghosh.B.(1948).*A treatise on Hygiene and Public Health*.Calcutta: Scientific Publishing Company.
Goel. S.L.(1980).*Health Care Administration*.New Delhi: Sterling Publishers.
Goel.S.L.(2010).*Organisational Structure of Health Care System and Hospital Administration* .New Delhi, Deep & Deep Publishers Pvt. Ltd.
Hanlon John.H.(2008).*Principles of Public Health Administration*. St. Louis: C.V. Mosley Co.
Mahal.A. Debroy B. and Bhandari.L .(2010).India Health Report, 2010.New Delhi. BS Books.
Report of the Health Survey and Planning Committee(1959-61).
Sanjivi. K.S.(2007).*Planning India's Health* .Orient Longman.

Semester III – (Group A)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)
INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper provides an opportunity for students to acquire a deep knowledge and understanding of the concepts, approaches, indices and models used in the study of Comparative Public Administration. It will equip the student to apply the comparative approach through the theoretical formulations studied in Unit I to the economic, social, political and administrative systems and their working in the countries listed in the latter units. The universal configuration of groupings - G-20, SAARC, BRICS - has been adopted for a comprehensive case coverage to be studied in the current international scenario. The case study approach will be adopted for analysis. Teaching and learning will be through lectures, seminars, group work and presentations.

Unit I

Comparative Public Administration: Meaning, Significance, Scope, and Evolution
Approaches of Comparative Public Administration with special reference to the Bureaucratic Approach; the General Systems Approach; Structural-Functional and Ecological Approach.
Models of Comparative Public Administration with special reference to the Agraria - Industria Model; Prismatic Model.
Characteristics of Administrative systems in developed and developing countries.

Unit II

G-20 COUNTRIES
Political and Administrative Systems of U.S.A., U.K., France and Germany

Unit III

SAARC COUNTRIES
Political and Administrative Systems of India, Pakistan, Afghanistan and Bangladesh

Unit IV

BRICS COUNTRIES

Political and Administrative Systems of Brazil, Russia, South Africa, China

List of Readings

Almond, G., & Powell. G.B. (1972). *Comparative Politics: A Developmental Approach.* New Delhi: Amerind.

Arora, R.K. (1972). *Comparative Public Administration: An Ecological Perspective*. New Delhi: Associated Publishing House.

Arora, R.K., & Sharma, S. (Eds.). (1992). *Comparative and Development Administration; Ideas and Actions*. Jaipur: Arihand Centre for Administrative Change.

Bhatt, A., & Ranjan, R. (2010). *Comparative Government and Politics* (1st ed.). New Delhi: Anmol Publications Pvt. Ltd.

Chaturvedi, T.N. (1994). *Tulnatmak Lok Prashashan*. Jaipur: College Book Depot.
Farazmand, A. (Eds.). (2001). *Handbook of Comparative and Development Public Administration* (2nd ed.). New York: Marcell Dekker Inc.
Heady, F. (2001). *Public Administration: A Comparative Perspective* (6th ed.). New York: Marcel Dekker Inc.
Nadkarni, V. & Noonan, N. C. (Eds.). (2013). *Emerging Powers in a Comparative Perspective: The Political and Economic Rise of the BRIC Countries.* USA*:* Bloomsbury Academic.
Public Administration Review. (2007). *Special Issue on Comparative Public Administration*. New Delhi.
Ray, S.N. (2004). *Modern Comparative Politics: Approaches, Methods and Issues*. New Delhi: Prentice Hall of India.
Riggs, F.W. (1961). *The Ecology of Public Administration*. Bombay; Asia Publishing House.
Riggs, F.W. (1964). *Administration in Developing Countries: The Theory of Prismatic Society*. Boston: Houghton Mifflin Co.

Internet Sources

[Online] Available from http://news.bbc.co.uk/1/hi/country_profiles/default.stm
[Online] Available from https://www.cia.gov/library/publications/the-world-factbook/index.html
[Online] Available http://www.nationmaster.com/

Indicators/ Indices

- Democracy Audits: http://worldaudit.org/
- Economist Intelligence Unit Livability Index (Cities): www.eiu.com/
- Failed States Index: http://www.fundforpeace.org/global/?q=fsi
- Freedom Index: http://www.socialprogressimperative.org/
- Global Peace Index: http://www.visionofhumanity.org/
- Human Development Index: http://hdr.undp.org/en/statistics/
- Legatum Prosperity Index: http://www.prosperity.com/
- Transparency International Corruption Indexes: http://www.transparency.org/policy_research/surveys_indices
- World Bank Indicators Database (multiple economic and social indicators): http://data.worldbank.org/indicator
- Worldwide Governance Indicators (WGI): http://info.worldbank.org/governance/wgi/index.asp
- World values survey: http://www.worldvaluessurvey.org/index_organization

Semester III – (Group A)
Paper-VIII: Dissertation
(Common to Groups A, B, C & D)

(i) Dissertation option of only those students will be considered who apply for it within 15 days of normal admission to Semester III (i.e. without late fee) provided that such students have obtained at least 50% marks in the aggregate of Semester I and II.

(ii) Students for dissertation will be selected on the basis of merit in M.A. I. Selected students will be notified of the acceptance of dissertation as option within 20 days from the date of normal admissions.

(iii) Students opting for dissertation will submit the title and brief synopsis of their dissertation within four weeks from the date of notification to them, but not later than 15th November of the respective year, to be placed before the Postgraduate Board of Studies for approval.

(iv) Each student opting for dissertation from University School of Open Learning will have to be in contact with the supervisor for a minimum of eight weeks.

(v) All candidates opting for dissertation will submit the thesis one week prior to the commencement of final examination.

(vi) Panel of examiners for this course will be appointed by the PG Board of Studies.

(vii) The evaluation of the dissertation will be by an External Examiner and an Internal Examiner. The average of the marks awarded by these examiners will be sent confidentially to the Examination Branch through the Chairperson. If the difference between the two is more than 15 marks, a third examiner will be appointed. The marks awarded by the third examiner will be final.

Semester-III (Group B)
Paper-II: Economic Administration (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper would be compulsory for the students specializing in Economic Administration (with special reference to India) and during the course of study they will be familiarized with the economic models of the government, industrial policies and economic legislations. In addition, the students would be taught about the promotional role of state by referring to various promotional and infrastructural public sector undertakings. Apart from regular classroom teaching,special talks/lectures from experts as well practitioners from the civil service/industry will be organized to establish links between theory and practice and develop the student's critical skills.

Unit-I

Economic Administration: Nature and Scope
Market Failure: The Rationale for Government Intervention
Misuses of the Theory of Market Failure
State versus Market Debate

Unit-II

Economic Models of Government
Monetary Policy: Concept, Objectives, Instruments and Administration
Fiscal Policy: Concept, Objectives, Instruments and administration

Unit-III

Economic Legislation: Rationale, Philosophy and Overview
Industrial (Development and Regulation) Act, 1951
Foreign Exchange Management Act, 1999
Competition Act 2002

Unit-IV

Industrial Policy Resolutions, 1956 and New Industrial Policy, 1991
Promotional Role of State:

- Industrial Finance Corporation of India (IFCI): Organisational Structure, Objectives and Role;
- Industrial Development Bank of India (IDBI): Organisational Structure, Objectives and Role;
- Small Industries Development Bank of India (SIDBI): Organisational Structure, Objectives and Role

List of Readings

Bailey,S.J.(2001).Public Sector Economics: Theory, Policy and Practice(2nd ed.) .London: Palgrave.
Govt. of India .Five Year Plan Documents
Jha, L.K.(1986) .*Economic Administration in India – Retrospects and Prospect* .New Delhi: IIPA.
Kuchhal, S.C. (1989) .*Industrial Economy of India* .Allahabad:Chaitanya Publishing House.
Marathey, S.S. (1986).*Regulation and Development* .New Delhi: Sage Publications.
Mishra, S.K. and Puri, V.K.(2010).*Indian Economy : Its Development Experience* . New Delhi: Himalaya Publishing House.
Ramanadham, V.V.(1965).*The Working of Public Sector* .Bombay: Allied Publishers.
Taxmann's .(2009).*Economic Laws* .New Delhi: Taxmann Publications (P) Ltd.
United Nations .(1974).*Organisation, Management and Supervision of Public Enterprises in Developing Countries* .New York: U.N.
World Bank.(1995)*Bureaucrats in Business : The Economics and Politics of Government Ownership* .New York: World Bank.

Semester III (Group B)

Paper-III: Company and Cooperative Law (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The present paper is designed to educate the students about the structure, types and characteristics of a Company and a Co-operative. Besides making the students familiar with the capital structure, it would give them the insight of various sources of Finances. It would also give them insight about various aspects of cooperatives.Case study analysis will be anintegral part of class room pedagogy.

Unit-I

Company: Meaning, Nature and Characteristics; Types and Advantages
Incorporation: Meaning, Procedure
Memorandum of Association and Articles of Association

Unit-II

Prospectus: Meaning, contents, Statement in lieu of prospectus, Liabilities for Mis-statement
Share Capital: Meaning, Nature and Types, Allotment and Transfer of Shares
Debentures: Meaning, Types

Unit-III

Company Management - Appointment, Powers and Duties of the Board of Directors
Meetings: Kinds, Procedure
Winding up of Companies: Types, Procedure; Role of National Company Law Tribunal
Company Law in a Computerized Environment: E–filing

Unit-IV

Co-operatives: Concept, Significance and Types
Cooperative Legislation in India
Procedure for Registration of a Society
Registrar: Powers, Duties and Role

List of Readings

Bedi, R.D..(1981).*Theory, History and Practice of Cooperation*.Meerut : Loyal Book Depot.
Bhandari, M.C.(2015).*Guide to Company Law Procedures* (Vol.3) .Agra: Wadhwa and Company.
Goel, B.B.(1984).Cooperative Management and Administration.New Delhi : Deep and Deep Publications.
Govt. of India.Act and Statute (As Amended) The Companies Act, 2013.

Gower, L.C.B.(1954). *Principles of Modern Company Law*.London: Stevens and Sons Limited.
Kuchhal, M.C. and Kuchhal, V.(2013).*Modern Indian Company Law*(27th ed.). New Delhi:(Publishers)
Mamoria, C.B. and Saxena, R.D.(1973).*Cooperation in India* .Bombay: Kitab Mahal.
Nainta, R.P.(2004).*Laws Relating to Cooperative Societies : A Commentary*. Mayur Enterprise.
Shah, S.M.(1975).*Lectures on Company Law* .Bombay:Tripathi Pvt. Ltd.
Singh,A .*Company Law* . Lucknow: Eastern Book.
Taxmann's(2015). *Comparative Study of Companies Act 2013 and Companies Act 1956*. New Delhi: Taxmann Publications Private Limited.

Semester III (Groups B)
Paper IV – Human Resource Management
(Common in Groups B, C & D; compulsory for Group C)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The course on Human Resource Management (HRM) is designed to enhance the learning of student regarding the basic concepts and frameworks of HRM and understand the roles that HRM plays in the effective functioning of Public Enterprises. .The knowledge regarding these will be imparted through diverse teaching pedagogies like class room, lectures, case studies , discussions, presentations and assignments where students will examine and discuss about different companies and HRM practices adopted by them.At the end of this course the students will be able to discuss the relevance of HR policy, organizational structure, HR systems (manpower planning , recruitment, wage systems, fringe benefits etc.) and organizational culture.

UNIT-I

Human Resource Management: Concept and Significance
Manpower Planning: Concept, Significance and Steps
Job Analysis and Job Description: Concept and Significance

UNIT-II

Recruitment: Concept, Sources; Methods and Modes
Promotion: Concept, Types
Training – Concept, Types, Techniques
Employee Appraisal: Concept and Techniques

UNIT-III

Wages: Concept, Types and Determinants
Job Evaluation: Concept and Techniques
Fringe Benefits: Concepts and Types

UNIT-IV

Industrial Accidents: Concepts, Causes and Remedies
Employee Turnover: Concept, Causes and Remedies
Absenteeism: Concept, Causes and Prevention

List of Readings

Aggarwal, R.D.(1973).*Dynamics of Personnel Management in India* .New Delhi: Tata McGraw Hill.

Aswathappa, K.(2008).Human Resources and Personnel Management .New Delhi: Tata McGraw Hill.

Davar,R.S.(2008).*Personnel Management and Industrial Relations in India*(2nd ed.).Vikas Publishing House.

Flippo,E.(1976).*Principles of Personnel Management* (4th ed.).New York.McGraw Hill.

Ghosh, P.(2006).*Personnel Administration in India* .Sudha Publications.

Mamoria, C.B.(2008).*Personnel Management(*23rd ed.) New Delhi: Himalaya Publishing House,

Pigors,P & Myers,C(2008).*Personnel Administration: A Point and a Method* (6th ed.) .New York:McGraw Hill

Rao, V.S.P.(2008).*Human Resource Management* .New Delhi: Excel Books.

Yoder,D.(2008).*Personnel Management and Industrial Relations* (7th ed.). New Delhi: Prentice Hall of India.

Semester III (Group B)
Paper V – Financial Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective: To provide an understanding of the function, the roles, the goals and the processes financial management of public enterprises, covering the sourcing of finances and their issues in Investment and Operations. The students will acquire the skills for Financial Management analysis which are very essential for decision making. Case study, discussion method and exercises will be important pedagogical tools.

Unit-I

Nature and Problems of Financial Management in Public Enterprises and Non-Credit Cooperatives;
Government control over Finances
Appointment of financial advisors
Functions of Finance Manager in Modern Age.

Unit-II

Traditional and Modern Measures of Financial Performance: ROI, Earning Price Ratio, SVA, EVA and MVA
Concept and Approaches of Capital Structure Decision: NI, NOI, Traditional and Modigliani Miller Approach
Sources of Funds- Short Term and Long-Term

Unit-III

Cost of Capital-Equity, Preference Capital, Debt and Retained Earnings
Investment decision: appraisal of project; concept, process & techniques of capital budgeting and its applications
Risk and uncertainty in capital budgeting

Unit-IV

Overview of Working Capital Decision: Concept, Components, Factors Affecting Working Capital Requirement
Management of Cash, Inventory and Receivables
Cost-Volume-Profit Analysis for Management Decisions; Calculation of Breakeven Point, Contribution Margin Analysis, Margin of Safety, Profit Volume Ratios

List of Readings

Damodaran, A. (2001). *Corporate Finance: Theory & Practice*. John Wiley and Sons, Inc.
Gitman, L.J. (2007). *Principles of Managerial Finance*. Pearson Education.
Horne, V. (2002). *Financial Management and Policy.* Pearson Education.
James, C. V. (2002). *Financial Management and Policy*, Prentice Hall.
Khan, M.Y. & Jain, P.K. (1982). *Financial Management*. Tata McGraw Hill.
Knott, G. (2004). *Financial Management.* Palgrave Macmillan.
Pandey, I.M. (2015). *Financial Management*, Vikas Publications.
Prasanna, C. (2008). *Fundamentals of Financial Management*, Tata McGraw Hill.
Srivastava, R & Misra, A. (2008). *Financial Management*. Oxford Publishing.

Semester III (Group B)
Paper VI: Corporate Governance
(Common in Groups B, C &D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The objective of this paper is to acquaint the student with the concept of corporate governance and theories of corporate governance. The student will also be instructed about the various aspects of corporate governance with focus on ethics, corporate social responsibility and current issues and problems, primarily focusing on India.

Unit-I

Corporate Governance: Concept & Rationale
Theories of Corporate Governance: Stakeholders Theory: Agency Theory; Sociological Theory
Principles of Corporate Governance with special reference to Principles of Organisation for Economic Co-operation and Development (OECD)

Unit-II

Corporate Governance: Issues and Challenges
Corporate Governance and Ethics
Corporate Social Responsibility

Unit-III

Rights and Privileges of Share Holders and Investors
Board of Directors: Types; Composition & Functions
CEO: Appointment, Functions & Role

Unit-IV

Evolution of Corporate Governance in India
Corporate Governance in Public Enterprises
Corporate Governance in India and Future Trends

List of Readings

Bansal, C.L. (2005).*Corporate Governance – Law Practice &Procedures with Case Studies* .New Delhi: Taxmann Allied Services Pvt. Ltd.

Bhatia ,S.K.(2004).*Business Ethics and Corporate Governance* .New Delhi: Deep and Deep Publication Pvt. Ltd.

Dewan, S.M.(2006).*Corporate Governance in Public Sector Enterprises*.New Delhi: Doeling Kindersley India Pvt. Ltd.

Fernando ,A.C.(2009). *Corporate Governance – Principles, Policies & Practices* (3rd ed.).India:Dorling Kindersley Pvt. Ltd.

Gopalsamy, N.(1998). *Corporate Governance – The New Paradigm*.New Delhi: Wheeler Publishing.

Hazarika,A.(1999).Corporate Governance – Balancing Value Creation & Obligation in Oil industry .New Delhi: Tata McGraw Hill Publishing Company Ltd.

Kumar,S.(2002).*Corporate Governance – A Question of Ethics* .New Delhi:Galgotia Publishing Company.

Mathur ,U.C.(2005).*Corporate Governance and Business Ethics* .New Delhi: Macmillan India Ltd.

Millin,C.A.(2007).*Corporate Governance* .New Delhi: Oxford University Press.

Prasad,D.(2006).*Corporate Governance*.New Delhi: Prentice Hall of India Pvt. Ltd.

Reddy, Y.R.K.& Raju,E.(2000). *Corporate Governance in Banking & Finance* .New Delhi: Tata McGraw Hill Publishing Company Ltd..

Sehgal, M.K.(2004). *Corporate Governance & Restructuring of Industries* (Ambala: Wisdom Publications.

Singh, S.(2005).*Corporate Governance – Global Concepts &Practices* .New Delhi: Excel Books.

Vives,X.(2000).*Corporate Governance Theoretical & Empirical Perspectives* .USA.Cambridge University Press.

Williams,A.(2007)Corporate *Governance* .Mumbai : Jaico Publishing House.

Semester III – (Group B)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group B)
Paper-VIII: Dissertation
(Common in Groups A, B, C & D)

Semester III (Group C)
Paper –II: Social Policy and Welfare Administration
(Common in Groups A & C)

Semester III (Group C)
Paper III – Labour Economics (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: By the end of the course the student will be able to comprehend the various dimensions of labour in a complex labour economy like India. This includes problems of labour, wage fixation and conditions in the labour market. Tools to be employed for the effective teaching of the subject include case study method, audio visuals techniques, brainstorming on various issues, power point presentation, expert talks by professionals from industry etc. Use of these tools will develop the analytical and presentation skills and enhance the knowledge quotient of the students.

UNIT-I

Labour Economics: Nature and Scope
Concept of Labour as a factor of Production
General Features and Problems of Labour in Developing and Developed Countries
Unemployment: Meaning, Causes and Remedies

UNIT-II

Wage Differentials: Intra-Industry, Inter-Industry, Inter-Management and Occupational
Systems of Incentives: Monetary and Non-monetary
Problems of Rationalization and Automation
Factors Governing Slow Structural Changes in the Sectoral Composition of Labour Force in India

UNIT-III

Agricultural Labour: Problems and Issues
Industrial Labour: Problems and Issues
Labour in the Unorganised Sector: Problems and Issues
Issues pertaining to problems in service sector India

UNIT-IV

Wage-Policy and Regulation: Need for State Regulation of Wages, Methods of Wage Regulation Machinery for Wage Fixation
Overview of Economic Reforms and Labour in India with special reference to structural adjustment programme and privatization

List of Readings

Arya,P.P. & Tandon B.B.(2003).*Economics reforms in India*.New Delhi:Deep & Deep publications pvt. Ltd.
Banga,R.(2005).*Critical Issues in India's service-led growth*.Working paper no. 171. New Delhi:Indian council for research on international economic relations.
Bhagoliwal,N.T.(1982).*Economics of Labour and Industrial Relations* .Agra: Sahitya Bhawan.
Borjas, J Georg.(2012).*Labour Economics*.New Delhi, McGraw-Hill Higher Education.
Butler, Arthur D.(1961).*Labour Economics and Institutions* .New Delhi : Amerind Publishing Co.Pvt.Ltd.
Dutt,R & Sundaram, K.P.M.(2011).*Indian Economy* (62nd ed.).New Delhi: S. Chand& Co ltd.,
Elliot,F.R.(1990).*Labour Economics: A comparative Text .UK* :McGraw Hill.
Government of India.(1969).*Report of the National Commission on Labour.*
Joshi,V.M.(1919).*Labour Economics & Labour Problems*.New Delhi: Atlantic.
Mamoria,B.C.(1991).*Dynamics of Industrial Relations* .Bombay: Himalaya.
Misra,N.S.(1994).*An Introduction to Labour and Industrial Laws* .Agra:Sahitya Bhawan.
Mukherjee,A.(2013).The Service Sector in India.Working paper no. 352.Manila, Philippines:Asian Development Bank.
Reddy,.J.R.(2004).*Economics of Labour*.New Delhi: APH Publishing Corporation.
Sharma,K.A.(2006).*Labour Economics*.New Delhi:Anmol Publications.

Semester III – Group (C)
Paper IV: Human Resource Management (Compulsory)
(Common in Groups B, C & D, compulsory for Group C)

Semester III – (Group (C)
Paper V: Administration of Non-Government Organisations
(Common in Groups A, C &D; compulsory for Group D)

Semester III (Group C)
Paper VI: Corporate Governance
(Common in Groups B, C & D)

Semester III – (Group C)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group (C)
Paper-VIII: Dissertation
(Common in Groups A, B, C & D)

Semester III (Group D)
Paper II: Administrative and Office Management (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Administrative efficiency has, at its core, the systematization of organization and procedures thereby evolving work systems that are appropriate and procedures that eliminate unnecessary delays and allow the office work to be done effectively and at a reasonable cost. The objective of the course is to train the student to look at the setting up and working of an efficient and cost-effective office by familiarizing him with the core areas and issues of office administration.

UNIT-I

Administrative and Office Management: Nature and scope
Office organization: Role, functions and qualifications of office supervisor/office manager
Office layout and Space management

UNIT-II

Physical and Psychological factors in the office – colour, light, noise, air-conditioning, safety
Office Furniture, Machines and Equipment
Office Stationery and Supplies: standardization and codification; purchase, receipt, issue, disposal; store layout and store accounting

UNIT-III

Office communication: Role, Types & Means; handling incoming and outgoing mail
Records Management: Features of good records management; Filing, Classification and Indexing of records; Records Retention Schedules; Preservation of records and Disposal of unwanted records; Centralized and Decentralized record keeping systems

UNIT-IV

Office procedure and office manuals; forms designing and control
Quantitative and Qualitative office work control
Statutory and other Meetings: Drafting, Circulation, Preparation of agenda; Preparation and Confirmation of minutes and proceedings of meetings

List of Readings

Carl , Heyel.(1972).*Handbook of Office Management and Administrative Services*.New York: Mc Graw Hill.
Chopra, K. R.(2008).*Office Management* .Mumbai: Himalaya Books.
G,Whitehead,.(1982) .*Office Practice Made Simple*.London: The English Language Book Society.
Ghosh, Prasanta K.(2003).Office Management: Principles and Practice. (New Delhi: Sultan Chand & Sons .
Gopalkrishan, P.(1999). *Handbook of Materials Management* .New Delhi: Prentice Hall of India.
K,Zane and Qiible.(1977).*Introduction to Administrative Office Management* .Cambridge: Winthrop. Publishers.
K.R.Shrma, K. Shashi and Nayyar ,Sushil.(2002*).Office Management* .Ludhiana: Kalyani Publishers.
N.P, Reddy and R.H. Appannaiah.(1990).*Office Organisation and Management* .New Delhi: Himalaya Publishing House.
R.G.Terry.(1958).*Office Management and Control: The Administrative Managing of Information* .Irwin: Home Wood.
Rachel ,Littlefield.(1981).*Management of Office Operations* .New Delhi: Prentice Hall.

Robinson,M.E & I.H.W. Leffingwel .(1986).*Text Book of Office Management*.N.Delhi: McGraw Hill.
S.Gadkari.(1997).*Office Management for Public Administration-Principles and Techniques* .N. Delhi: Concept Publishing Company.

Semester III – Group (D)
Paper III: Management of Disciplinary Proceedings

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper covers an important area of Public Administration relating to Disciplinary Proceedings and the remedies available to public servants in India. The students would be made familiar with the procedures of enquiries, punishments and application of other legal measures. Apart from lectures case study method will be used to explain different proceedings to the students.

UNIT-I

Disciplinary Proceedings: Concept and Significance
Position of Public Servants under the Constitution and Statutes
Meaning and Scope of Reasonable Opportunity
Conduct Rules

UNIT-II

Major Punishments: Suspension; Dismissal; and Termination
Minor Punishments: Censure; Withdrawal of Promotion and Incentives; Pay Recovery
Fundamentals of Departmental Enquiries

UNIT-III

Role and Scope of Rules of Natural Justice in Disciplinary Proceedings
Corruption/Embezzlement in Public Services
Application of Legal Measures

UNIT-IV

Remedies for Public Servants against Unconstitutional and Illegal Actions of the State

1) Departmental Remedies
2) Tribunal Remedies
3) Ombudsmanic Remedies
4) Court Remedies

List of Readings

Basu , D.D.(2008).Constitution of India .New Delhi: Wadhwa and Company Law Publishers.

Ghaiye,R.K. (1988).*Law and Procedure of Departmental Enquiries* .Lucknow: Eastern Book Company.

Government of India(1987).Administrative Tribunals Act, 1985 with Rules Central Administrative Tribunal (Procedure) Rules.

Jain,N.S and and Jain,P.M(1979).*Principles of Administrative Law* .Nagpur: Wadhwa and Company.

KrishnaN ,Rama V.P. (1974).*Guide to Departmental Enquiries against Government Servants*. Andhra Law Times.

Maheshwari,R.S.(2002).Administrative Reforms in India .New Delhi: Macmillan India Ltd.

Massey,P.I.(1985).*Administrative Law* .Lucknow: Eastern Book Co.

Muthuswamy,P. (1993).Swamy's manual on Disciplinary Proceedings .Madras: Swamy Publishers.

Saxena,R,D.(1987).*Ombudsman-Lokpal* .New Delhi: Deep and Deep Publication.

Sharma, B. Girhar.(1981). *Implementation of Ombudsman Plan in India* .New Delhi: Ashish Publishing House.
Singh, Balbir and Kagzi,J.C.M.(1979).*A Case book of Administrative Law* .New Delhi: Metropolitan Book Company Ltd.
Wade, R.W.R. (1994).*Administrative Law* .Oxford: Clarendon

Semester III – Group (D)
Paper IV: Human Resource Management
(Common in Groups B, C & D ; compulsory for Group C)

Semester III – Group (D)
Paper V: Administration of Non-Government Organisations (Compulsory)
(Common in Groups A, C &D; compulsory for Group D)

Semester III (Group D)
Paper VI: Corporate Governance
(Common in Groups B, C &D)

Semester III – (Group D)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group (D)
Paper-VIII: Dissertation
(Common in Groups A, B, C &D)

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-2018)
Semester IV (Groups A, B, C and D)

Paper I: Emerging Areas in Public Administration (Compulsory Paper for all Groups)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: An awareness of the concept, legislation and administrative setup of the key areas of environment, consumer protection, human rights and regulatory administration will help the students to solve problems to help public in their community. Apart from lectures, diverse teaching pedagogy like case study, video-screening, class room presentations be used to familiarize the students with new frontiers in Public Administration. The course will develop valuable sills of public speaking, critical thinking and leadership amongst students which are necessary in all areas of life.

Unit-I: Environmental Administration

Environmental Administration: Concept and Significance
The Environment (Protection) Act, 1986
Central Pollution Control Board: Organisation, Functions and Role.
Punjab Pollution Control Board: Organisation, Functions and Role

Unit-II: Consumer Protection and Administration

Consumer Protection: Concept and Significance
Consumer Protection Act, 1986 (with amendments)
Administrative Setup of the Consumer Disputes
Redressal Agencies: National, State and District Level

Unit-III: Human Rights and Administration

Human Rights: Concepts and Significance
Universal Declaration of Human Rights 1948
National Human Rights Commission: Organisation, Functions and Role
Punjab state Human Rights Commission: Organisation, Functions and Role

Unit-IV: Regulatory Administration

Regulatory Administration: Concept and Significance
Telecom Regulatory Authority of India: Structure, Functions and Role
Insurance Regulatory and Development Authority of India: Structure, Functions and Role
Central Electricity Regulation Commission: Structure, Functions and Role.

List of Readings
Semester IV (Groups A, B, C and D)

Paper I: Emerging Areas in Public Administration (Compulsory Paper for all Groups)

List of Readings

Subbian, Adaikkalam. (2006).*Human Rights: Philosophy, Promotion, Protection and Perspectives.* Ambala Cantt,India: The Associated Publishers.

Gambhir, Cheena. (2007). *Consumer Protection Administration*. New Delhi: Deep & Deep Publications.

Byrne, J. O' Darren. (2004).*Human Rights: An Introduction. Singapore*. Delhi: Pearson Education.

Rosenbloom, David. (1989). *Public Administration: Understanding Management Politics and Law in the Public Sect*or. New York: McGraw Hills Book Company.

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006). *Environmental Issues of Development*. Ambala Cantt, India: The Associated Publishers.

Singla, Gurnax. (1993). *Law of Consumer Protection*. Jaipur: Bharat Law Publications.

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Symonides, Janusz. (2002). *Human Rights: Concepts and Standards*. New Delhi: Rawat Publications.

Verma, J.S. (2006). *The Universe of Human Rights*. Delhi: Universal Law Publishing Company.

Narain, Laxmi. (2005). *Public Enterprise Management and Privatization*. New Delhi: S. Chand & Company Ltd.

Ansari, M.R. (2006). *Protecting Human Rights*. New Delhi: Maxford Books.

Jaswal, P.S. &Jaswal, Nishtha. (2000). *Environmental Law*. Pioneer Publications.

Mukund, RajanGobind. (1997). *Global Environmental Policies*. Oxford University Press.

Sarkar, S.K. (2002). Ed. Srivastava, Leena. *Reforms in the Infrastructure Sectors*:*Next Steps.* Tata Energy Research Institute.

Chary, S.N. &Vyasalu, Vinod. (2000). *Environment Management and Indian Perspectiv*e. Macmillan.

Sunder, S. & Sarkar,S.K.(2000). *Framework for Infrastructure Regulation*. Tata Energy Research Institute Press.

Aggarwal, V. K. (1993). *Consumer Protection Law &Practice*. New Delhi: BLH Publishers Ltd.

Ramanadham, V.V. (1989). *Privatization in Developing Countries*. London: Routledge.

Semester IV (Group A)
Paper II: Education Policy and Administration (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The basic objective of this paper is to familiarize the students with the concepts of various systems of education and educational administration in India. In particular, the paper covers the provisions of the National Policy on Education, Five Year Plans and Sarv Shiksha Abhiyan. The organizational set up for administration of education and various agencies would also be taught.

UNIT – I

Educational Administration: Concept, Significance and Scope
Concepts: Universalization of Elementary Education, Non-Formal Education, Vocationalization of Secondary Education, Autonomous Colleges
Problems and Challenges of Educational Administration

UNIT – II

National Policy on Education, 1986 as modified in 1992 (Plan of Action, 1992)
Education and Five-Year Plans: Approaches, Priorities and Investments; RTE
Main Features, Organisation and administration of an Indian University

UNIT – III

Organization and Administration of Education at the Central Level with special reference to the Department of Education
University Grants Commission: Structure, Functions and Role
National Council of Educational Research and Training: Structure, Functions and Role

UNIT – IV

Socio-economic Problems of Educational Development – Equality of Opportunity Employment and Productivity, Nation Building and Citizenship; Globalization and Education
Implementation and Evaluation of Sarva Siksha Abhiyan

List of Readings

Goel, S.L.(1994).*Education Policy and Administration*.New Delhi: Deep and Deep Publication.
Government of India.(1966).*Report of the Education Commission*. Selected Chapters.
Lulla, B.P. and Murty, S.K.(1976*).Essentials of Educational Administration*.Mohindra Capital Publishers.
Mukerji, S.N.(1962).*Administration of Education, Planning and Finance* .Baroda: Acharya Book Depot.
Naik, J.P.(1975).*Policy and Performance in Indian Education* .New Delhi: Orient Longman.
Naik, J.P.(1975).*Quantity, Quality and Equality in Indian Education*.Bombay: Allied Publishers.

Semester IV (Group A)
Paper -III: People's Empowerment and Urban Governance (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Local Self-government is the government next door. Urban citizens are affected in various ways by the nature and working of their respective local government institutions. The students, after the course, should have a fairly good understanding of the urban affairs, problems and challenges, various urban development programmes and the setup of urban local bodies. The students should be able to critically evaluate the functioning of these institution and various programmes and should be able to make constructive suggestions. The essential pedagogical tool in this paper should be discussion, quiz, field studies and presentations.

UNIT-I

Urbanisation and Urban Challenges in India
Issues in Urban Development Policy including small cities
Problems of Development of Small and Medium Towns
Evolution of Urban Local Government in India with special focus on the 74th Constitutional Amendment Act.

UNIT-II

Urban Local Bodies in India:
Municipal Corporation: Structure, Composition, Functions and Role
Municipal Council and Nagar Panchayat: Structure, Composition, Functions and Role
Relationship between Deliberative and Executive wings
Role of other Urban Bodies: Cantonment Boards; Improvement Trusts; Development Authorities.

UNIT-III

Urban Finance: Sources and Problems
State Finance Commission: Composition, Functions and Role with special reference to Urban Local Bodies
Personnel Administration in Urban Governance: Role and Functions of Municipal Commissioner; Executive Officer
Provincialisation of Municipal Services

UNIT-IV

National Rural Livelihood Mission (NRLM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
Problems and Challenges of Rural–Urban Relationship
State Control over Local Government Institutions

List of Readings

Arora,K. Ramesh & Goyal,Rajni.(1996).*Indian public Administration* . Delhi: Vishwa Prakashan.
Aziz, Abdul.(1996).*Decentralised Governance in Asian Countries* .New Delhi: Sage.
Bhattacharya, Mohit.(1976).*Management of Urban Government in India* .New Delhi: Uppal.
Bhayana, Sahib Singh and Singh, Swinder(1991).*Local Government in India*.Jalandhar: New Academic Publishing Company.
Burns, Danny.(1994) Ed.. al.*The Politics of Decentralisation: Revitalising Local Democracy* London: Macmillan.
Chaturvedi, T.N. and Datta, Abhijit.(1984).*Local Government* .New Delhi: IIPA.
Cheema, G. & Ponoinelli D. (1983*).Decentralisation and Development Policy Implementation in Developing Countries* .London: Sage.
Kaushik,S. L.(1986).*Leadership in Urban Government in India* .Allahabad: Kitab Mahal.
Maheshwari, S.L.(2003).*Local Government in India* .Agra: Lakshmi Narain Aggarwal.
Singh, Charanjeev & Kaushik, Meenu.(2005).*Urban Poverty and Its Alleviation Programmes* . Chandigarh: APH.

Sivaramakrishanan, K.C. (1993). Ed. al. *Urbanisation in India: Basic Services and People's Participation* .New Delhi: ISS.

Semester IV (Group A)

Paper IV: Police Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: The students will understand the complex role of police in contemporary society. Pedagogical tools to be used by teachers include: short films, role plays, field visits, case studies, visits to police stations. The students will develop analytical and critical skills and develop an understanding of working of police administration.

Unit-I

Police Administration: Evolution; Concept and Significance; Police: Powers and Functions
Reforms in Police Administration after Independence
Crime: Types, Causes and Remedies

Unit-II

Police set up at National Level: Organisation, Functions and Role
Police set up at State Level: Organisation, Functions and Role
Police set up at District Level: Organisation, Functions and Role
Police set up at Local Level: Organisation, Functions and Role

Unit-III

Police Personnel IPS and State Police Service
Recruitment, Promotion, Training, Conduct and Discipline

Unit-IV

Community Policing: Concept, Role and Significance
Police and Human Rights: Emerging Issues and Challenges
Police and Women

List of Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books

Ghosh, G.(2010).*Re-legitimizing Indian Police* .New Delhi: Radha Publication.

Ghosh,S.(1973). *Police Administration: Organisation and Procedure* .Eastern Law House.

Ghosh, S.K. and Hummer, Don .(2008). *Encyclopaedia of Police in India.* Volume I. New York: Taylor & Francis Group.

Hunter ,R. D. Barker,T & Mayhall,P.D.(2010*). Police Community Relations and the Administration of Justice.*Prentice Hall.

Jim,R & Rustamji, K.F.(1993).*Handbook of Police Administration*, CRC Press. New Delhi : Ashish Publishing House.

Rohtagi,M.(2007). *Spy System in Ancient India* .New Delhi: Gyan Books Pvt. Ltd.

Rohit ,C.(2009). *Policing Reinvention Strategies in a Marketing Framework*. New Delhi:Sage Publication.

Subramaniam, K.S.(2009). *Political Violence and the Police in India*.SAGE Publications, India.

Srivastava, A.(1999).*Role of Police in a Changing Society*. New Delhi: A.P.H. Publishing .

Swanson,C.R. , Territo,L. & Taylor,R.W.(2011). *Police Administration:Structures ,processes ,and behavior* .Prentice Hall.

Semester-IV (Group A)
Paper-V: International Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: The paper is designed to acquaint the students both with the theoretical and practical aspects including the origin, objectives, historical legacy and the role of International Administration in the global framework. A focused study of various institutions and agencies related to international administration includes functions and role of WTO, IMF, SAARC, ASEAN, UNESCAO, UNICEF, ILO, WHO, UNDP besides covering the United Nations, its Secretariat and main aspects of Globalization and Global Governance.

Unit-I

International Administration: Origin, Objectives and Role of United Nations: Historical Legacy and Evaluation
United Nation: Organisation, Functions and Role

Unit-II

International Institutions: Functions, Role and Problems of WTO (World Trade Organisation)
World Bank (WB) and International Monetary Fund (IMF)
Regional Institutions: Functions, Role and Problems of SAARC and ASEAN

Unit-III

UN Secretariat: Organisation, Functions and Working
Future of the United Nations
Globalization and Global Governance

Unit-IV

Machinery to Settle International Disputes
Organs and Specialized Agencies of the United Nations: Function, Programmes and Role with special reference to UNESCO, UNICEF, ILO, WHO, UNDP

List of Readings

Cable, V.(1999).*Globalization and global governance* .London: Royal Institute of International Affairs.
Goel, S.L. (1976).*International Administration* .New Delhi: Sterling Publishers.
Narsimhan, C.V.(1988).*The United Nations: an inside view* .New Delhi: United Nations Publications.www.un.org/ www.saarc-sec.org/ www.ilo.org/ www.aseansec.org/
Saksena, K.P.(1993*).Reforming the United Nation: the challenge of relevance* .New Delhi: Sage Publications.

Semester IV – Group A
Paper VI: Information Technology and Computer Applications in Public Administration
(Common in Groups A, B, C & D; compulsory for Group D))

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: This paper is designed to introduce the student to the basic aspects of information technology and develop an understanding of the ways in which this technology can be adopted and adapted in public administration. The student will ultimately be in a position to understand and integrate the technology and the human resource input requirements for designing effective management information systems, e-governance applications and structural arrangements mindful of the issues of security and ethics.

UNIT-I

Meaning, Role, Evolution of Management Information Systems
Components and activities of an Information System
Operations and Management Classification of Information Systems; MIS and Decision Making
Building and Maintaining Information Systems; The Information Systems Department

UNIT-II

General Model of a Computer System; Understanding Input devices; Output Devices; Primary and Secondary Storage Devices and Media; CPUs
Operating System Basics; PC Operating Systems; OS and User Interface (Windows XP)
Hardware; Software; Types of Software
Networking; Local and Wide Area Networks

UNIT-III

Word Processing Software: Uses, Interface and Special Features. (Using MS Word)
Spread Sheet Software: Uses, Interface and Special Features. (Using MS Excel)
Data Base Management Software: Uses, Interface and Special Features. (Using MS Access)
Introduction to the Internet; Internet basics (Using Internet Explorer)

UNIT-IV

E - Governance: Concept, Significance and Scope
Computer Applications in Public Administration
Computer Security, Crime and Ethics

List of Readings

Basandra, S.K.,(1999).Computers Today .New Delhi: Galgotia Publishers Pvt. Ltd.

Bedi, K., Singh, P. & Srivastava, S.(2001).*Government@net* .New Delhi: Sage Publications.

Bhatnagar, S.(2004).*E Government: From Vision to Implementation (A Practical Guide with Case Studies.* New Delhi: Sage Publications.

Brien, J & Marakas, G. M.(2011).Management Information Systems . India: Tata McGraw Hill Publishing Company Limited .

Davis, G. B., Olson &Margrethe, A.(1985). *Management Information Systems: Conceptual Foundations, Structure and Development* .New York: Tata McGraw Hill.

Hodson, P.(1998).*Local Area Networks.* New Delhi: BPB Retreived from http://www.msoffice-tutorial-training.com/

Laudon, K. C. & Laudon, J. P.(2011,12th ed). *Management Information Systems: Managing the Digital Firm* .New Delhi: Pearson Education .

Leon, A & Leon, M.(1999).*Introduction to Computers* .New Delhi: Vikas Publishing House Pvt. Ltd.

Lucas, H. C. Jr.(2000).*Information Technology for Management* .New Delhi: Tata McGraw-Hill.

Murdick,R., Ross,C., Joel E. & Claggett, J. R.(1984). *Information Systems for Modern and Management* .New Delhi: Prentice Hall.

Norton, P.(2006).*Introduction to Computers* New Delhi: Tata Publications.

Saxena, S.(2009).*A First Course in Computers: Based on Windows XP and Office XP .New Delhi:* Vikas Publishing Pvt. Ltd.

Semester IV – Group A
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The aim of the paper is to acquaint the students with the concept and philosophy of ethics with special reference to ethics in public life and accountability of public services in India. The paper through teaching in case studies will enhance the problem solving skills on situations relating to integrity, probity in public life and problem solving approach to various issues and conflicts face by him in dealing with society. The students will learn to effectively communicate ethics and governance concepts and arguments in a logical manner.

Unit I

Ethics: Concept and Significance; Importance of Ethical Values in Public Life
Contribution of Kautilya, Vivekananda and Mahatma Gandhi to Ethics in Administration
Contribution of Western Administrative Thinkers to Ethics with special reference to Plato and Immanuel Kant

Unit II

Ethics and Human Interface: Essence, Determinants and Consequences of Ethics in Human Actions
Significance of human values and Attitudes in Ethical Development
Morality: Concept and Issues in Public service

Unit III

Ethics in Public Life: Civil Service Neutrality and Anonymity
Significance of Ethical and Moral Values in Governance
Code of Ethics and Code of Conduct for Civil Services in India

Unit IV

Probity in Governance- Corruption: Concept and Causes; Mechanism for Fighting Corruption
Work Culture- Concept, Significance and Characteristics of a good work culture;
Case Studies relating to Ethics in Public Administration

List of Readings

Arora, R. K.(2008).*Ethics in governance: innovations issues and instrumentalities.* Jaipur :Rawat.

Bhargava,R. (2006).*Politics and ethics of the Indian Constitution*. New Delhi: OUP.

Chaturvedi, T. N. (Ed.)(1996). *Ethics in public life*. New Delhi: IIPA.

Fox,W.(2009).*A theory of general ethics – human relationships, nature, and the built environment*.New Delhi: PHI Learning.

Ghere,R.K. and Frederickson,H.G. (Eds.) . (2007). *Ethics in Public Management*. New Delhi: PHI Learning.

Godbole,M.(2003).*Public accountability and transparency: the imperatives of good governance.* New Delhi: Orient Longman.

Hooja,R.(2008).*Corruption, ethics and accountability essays by an administrator*. New Delhi: IIPA

Huberts, L. W.J.C.et.al. (2008). *Ethics and integrity of governance: Perspectives across frontiers* (New horizons in public policy series). California :Edward Elgar Publishers.

Martinez,J.M.*Public administration ethics for the 21st century* .Santa Barbara:ABC-CLIO.

Mathur, B.P.(2014).*Ethics for governance: Reinventing public services*.New Delhi: Routledge Taylor and Francis Group.

Menzel,D.C.(2010).*Ethics moments in government* (American Society of Public Administration)Boca Raton:CRC.

Sawshilya,A.(2012).*Ethics and governance*.New Delhi: Pearson Education.

Second Administrative Reforms Commission (2007). *Ethics in Governance*. New Delhi: GOI.

Sheeran,P.J.(2006).*Ethics in public administration – a philosophical approach*. Jaipur: Rawat. .

Semester IV (Group B)
Paper II: Public Enterprise Management (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: This paper covers various aspects of Public Sector and Public Sector Undertakings in India. In particular, the paper covers various forms of organization, governing boards, privatization and performance of central public sector enterprises in India. Course material will be supplemented by activities like case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

Unit-I

Public Enterprise: Concept, Rationale and Objectives
Role of Public Sector in the Indian Economy
Organisational Forms: Departmental Undertaking; Public Corporation; and Government Company

Unit-II

Governing Boards: Types, Functions, Size and Composition
Legislative Control over Public Enterprises
Ministrial Control over Public Enterprises

Unit-III

Pricing and Public Enterprises
Public Sector Reforms: Rationale; Performance Contract System/Memorandum of Understanding (MOU)
Professionalisation of Boards of Governance in India

Unit-IV

Disinvestment: Objectives, Methods, Machinery and Assessment
Privatisation: Theory, Objectives, Methods, Procedure, and Assessment; Lessons from the U.K. Experience
Contracting Out: Concept & Rationale; Contracting Out Local Services

List of Readings

Bailey,S.J.(2001).Public sector economics: theory, policy and practice . ***2nd*** ed.London: Palgrave.

Bos,D. (1991) Privatization: a theoretical treatment .Oxford: Oxford University Press.

Dubhashi, P.R.(1976). Economics, planning and public administration.Bombay: Somaiya Publications, Pvt. Ltd.

Administrative Reforms Commission.(1967).Report on Public Undertof study team on public sector undertakings .New Delhi: Gocernment of India.

Gupta, K.R.(1975).Issues in public enterprises. ***2nd*** ed.New Delhi: S.Chand.

Hanson , A.H. (1972) .Public enterprises and economic development .London: Routledge and Kegan.

Jha,L.K.(1986). Economic administration in India – retrospects and prospect .New Delhi: IIPA.

Khera, S.S(1977).Government in business .New Delhi: National Publishing House

Kuchhal ,S.C. (1976). Industrial Economy of India .Allahabad: Chaitanya Publishing House

Marathe, S.S.(2008).Regulation and development .New Delhi: Sage Publishers.

Narain,L.(1980).Principles and practices of public enterprises management .New Delhi: S. Chand.

Planning Commission .Five year plan documents.GOI.

Ramanadham, V.V.(1988).The working of public sector .Bombay: Allied Publishers.

United Nations Organisation.(1974). Management and supervision of public enterprises in developing countries .New York: V.N.

United Nations (1970). Measures for improving the performances of public enterprises in developing countries .New York: V.N.

Vickers, J. and Yarrow, G.(1988).Privatization: an economic analysis .Cambridge: **MIT Press.**

World Bank.(1995).Bureaucrats in business – the economics and politics of government ownership.New York: World Bank.

Semester IV (Group B)
Paper III: Marketing Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: The objective of the paper is to make learners understand the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm in VUCA (Volatile, Uncertain, Complex and Ambiguous) business environment. The students will acquire critical thinking, advertising and product pricing skills at the end of this course.

Unit-I

Introduction to Marketing Management: Meaning, Nature and Scope of Marketing
Marketing Philosophies
Marketing Management Process
Concept of marketing mix-4P and 7P

Unit-II

Consumer and Organisation Buyer Behaviour
Market Segmentation, Targeting and Positioning
Product Planning: Product concept, types of products, Major Product Decision and Product Life Cycle
Brand Management

Unit-III

Product Pricing Decision: Pricing Process, Policies and Strategies
Distribution Channel Decision: Types and function of intermediaries, selection and management of intermediaries
Promotion: Communication Process
Promotion Tools: Advertising, Personal Selling, Publicity and Sales Promotion

Unit-IV

Marketing Organisation and Control: Organising for marketing, Marketing Implementation & Control
Ethics in Marketing
Emerging Trends and Issues in Marketing: Consumerism, Rural Marketing, Societal Marketing, Online Marketing, Green Marketing, Retail Marketing, Customer Relation Marketing

List of Readings

Bhasin, M.L.(1991).*Indian marketing: the case studies* .New Delhi: Anmol Publishers.
Bose, B. S.(1998).*Handbook of marketing management* .Mumbai: Himalaya Publishing House.
Chowdhary, N. & Chowdhary, M.(2005).*Textbook of Marketing Services: The Indian Experience* .New Delhi: Macmillan.
Giles, G.B.(1982).*Marketing* .London: The English Language Book Society.
Gopalaswamy, T.P.(1997).*Rural marketing: environment, problems and strategies* .Delhi: Vikas Publishing House Ltd.
Hanson, W. A. & Kalyanam K.(2007).*Internet marketing and e-commerce* .Singapore: South Western College Pub.
Kotler, P.Marketing Management: *Analysis,Planning,Implementation & Control* .New Delhi: Prentice Hall of India.
Kotler, P.(2001).*Kotler on marketing: how to create, win and dominate markets* .Great Britain: Simon & Schuster .
Kotler, P.*Marketing management: a South Asian perspective* .New Delhi: Pearson Education.
Kumar, S. R.(2001).*Marketing Nugggets: Conceptual Dimensions in Marketing* .New Delhi: Vikas Publishing House Ltd.
Kurian V.(1997).*Unfinished Dream .New Delhi*: Tata McGraw Hill.
Molenaar, C.N.A.(2002).*Future of marketing: practical strategies for marketers in the post-internet age* .Great Britain: Pearson Education Ltd.
Michael, J.E.,Bruce,J.W. & William ,J.S.(2001) *Marketing Marketing*, New Delhi: Tata McGraw Hill .
Perreault W.D.& Jerome,E.M.(2013).*Basic Marketing*, New Delhi: Tata McGraw Hill .

Pride, W.M. and Ferrell,O.C.(2016).*Marketing:Concept and Strategies*,Delhi: Biztantra Press.
Ramaswamy,V.S. & Namakumari, S.(2002).*Marketing Management:Planning, Control*.New Delhi: Macmillan Press.
William,J.S.,Etzel ,M.J.& Walker, B.(2004).*Marketing*.Japan:McGraw Hill Kogakusha Ltd.
Zikmund,A.()Marketing,Mumbai:Thomson Learning.

Semester IV (Group B)
Paper IV – Industrial Relations
(Common in Groups B, C & D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper covers a very important area of governance of industrial undertakings in India i.e. concept and approaches of Industrial Relations. The course will also make the students familiar with industrial conflicts and their settlement; various aspects of trade unions; participative management; structure and functioning of International Labour Organisation (I.L.O.), etc.

UNIT-I

Industrial Relations: Concept and Significance
Complaints and Grievance: Concept; machinery for grievance handling
Approaches to Industrial Relations

UNIT-II

Industrial Conflicts: Concepts, Causes and Remedies
Machinery for the Settlement of Industrial Disputes:
Conciliation
Arbitration
Adjudication
Collective Bargaining

UNIT-III

Trade Unions: Concept, Origin, Types and Functions
Theories of Trade Unions
Registration and Recognition of Trade Unions

UNIT-IV

Participative Management: Concept, Objectives and Types
Schemes of Employee Participation in India
International Labour Organisation (I.L.O.) – Structure; Objectives

List of Readings

Aggarwal, R.D.(1973).*Dynamics of Personnel Management in India* .New Delhi: Tata McGraw Hill.

Aswathappa, K.(2007).*Human Resources and Personnel Management* .New Delhi: Tata McGraw Hill.

Davar, Rustam S..(1997).Personnel Management and Industrial Relations in India .New Delhi:Vikas Publishing House.

Ghosh, P.(1969),*Personnel Administration in India* .Bengaluru:Sudha Publications.

Mamoria, C.B. and Gankar, S.V.(2003).*Personnel Management*.New Delhi: Himalaya Publishing House.

Mamoria, C.B. Mamoria, S. and Gankar, S.V.(1997).*Dynamics of Industrial Relations in India* .New Delhi: Himalaya Publishing House.

).

Sen ,Ratna(2003). *Industrial Relations in India: Shifting Paradigms* .New Delhi: Macmillan.

Semester IV – Groups B
Paper V: Project Management (Compulsory)
(Common in Groups B &D; compulsory in Group B)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: Project Management continues to grow as a profession. Project management techniques are now used outside the traditional project industries and a management-by-project approach has increasingly been adopted in development projects funded by the UN, World Bank and other international agencies; it is also sought to be adopted in government funded welfare and development projects. The relevance of the course is derived from this context and the objectives are to impart a deep understanding of all the stages of project management and the techniques supporting project management.

UNIT-I

Project Management: Organisation, Planning including Prerequisites for Successful Project Implementation and Control
Project Planning: Resource Allocation Framework; Generation and Screening of Project Ideas

UNIT-II

Project Analysis: Market and Demand Analysis; Technical Analysis; Financial Analysis
Project Selection I: Project Appraisal Criteria – Project Cash Flow; Time Value of Money; Cost of Capital

UNIT-III

Project Selection II
Project Risk Analysis;
Social cost benefit analysis: Rationale and approaches;
Shadow Pricing applications in India

UNIT-IV

Project Implementation
Project Management Techniques: Network Analysis (PERT/CPM),
Project Monitoring and Review: Integrated Cost Planning and Budgeting; Monitoring Information; Reporting System and Evaluation

List of Readings

Burke, Rory(2004).*Project Management: Planning and Control Techniques* .Singapore: John Wiley & Sons Asia (Pvt. Ltd.).
Choudhry, Sadan(1988).*Project Scheduling and Monitoring in Practice*. Delhi: South Asian Publishers.
Clifton, David S. and Fyefe, David E.(1977).*Project Feasibility Analysis*.New York: John Wiley.
Harrison, F.L.(1992)*Advance Project Management* .London: Gower, 2nd ed.
Little, I.M.D. and Mirlees, J.A.(1976).*Project Appraisal and Planning for Development Countries* London : Heinemann Educational Books.
Lock, Dennis(2007).*Project Management*.England: Gower.
Planning Commission(1975).*Guidelines for Preparation of Feasibility Reports of Industrial Projects* .Delhi: Government of India.
Prasanna, Chandra(1995).*Projects: Preparation; Appraisal, Implementation* .Tata McGraw Hill.
Srinath, L.S.(1996).*PERT and CPM-Principles and Applications* .New Delhi: Affiliated East-West Press.
UNIDO(1978).*Guide to Practical Project Appraisal: Social Benefits Cost Analysis, Project Formulation and Evaluation* .Delhi: Oxford and IBH.

Semester IV (Group B)

Paper VI: Information Technology and Computer Applications in Public Administration (Common in Groups A, B, C & D; compulsory in Group D)

Semester IV – Group B
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)
Semester IV (Group C)
Paper-II: Labour Laws (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper covers five major labour legislations in India which are crucial for harmonious employer-employee relations. The detailed provisions of these legislations with reference to the cases would be taught to the students.

UNIT-I

Industrial Disputes Act, 1947

(a) Introduction and Definitions
(b) Authorities under the Act
(c) Notice of Change
(d) Reference of Disputes to Boards, Courts of Tribunals
(e) Procedure, powers and duties of authorities
(f) Strikes and Lock-outs
(g) Lay-off and Retrenchment
(h) Penalties
(i) Miscellaneous Provisions

UNIT-II

Factories Act, 1948

a) Introduction and definitions
b) Inspecting Staff
c) Health
d) Safety
e) Welfare
f) Working Hours of Adults
g) Employment of young persons
h) Annual Leave with wages
i) Penalties and Procedures

UNIT-III

The Workmen's Compensation Act, 1923

a. Introduction and definitions
b. Employer's Liability and amount of compensation
c. Commissioner's Powers and functions

UNIT-IV

The Minimum Wages Act, 1948

a. Introduction and Definitions
b. Fixation of minimum rates of wages
c. Miscellaneous provisions

List of Readings

Kumar, Anil.(2003).*Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*.New Delhi: Deep and Deep.

Malhotra, O.P.(1985).*The Law of Industrial Disputes (Vol. I and II)*, Mumbai: N.M.Tripathi Private Limited.

Mishra, S.N.(2010).*An Introduction to Labour and Industrial Laws* .Delhi: Pioneer Books.

Rao, E.M.(2004).*Industrial Jurisprudence* .New Delhi: Lexis Nexis.

Reddy, R. Jayaprakash.(2004).*Labour Legislation*.New Delhi: APH.

Sharma, A.M.(2004).*Industrial Jurisprudence and Legislation*.Mumbai: Himalaya Publishing House.

Srivastava, K.D.(1948).*Commentaries on the Factories Act, 1948*(3rd ed.)Chandigarh : Eastern Book.

Srivastava, K.D.(1976).*The Industrial Employment Standing Orders Act, 1946 together with rules* . Chandigarh : Eastern Book.

Semester IV (Group C)
Paper III– Organizational Psychology
(Common to Group C & D; compulsory in Group C)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The paper will make the students familiar with the basic concepts of Organisational Psychology. Functional aspects of Organizational Psychology like human relations, employment, attitudes, groups, personality and work stress would be taught to the students. Course material will be supplemented by activities like role play, case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

UNIT-I

Organisational and Industrial Psychology: Concept, Nature and Scope
Human Relations: Concept, Features and Hawthorne Experiments
Employee Needs: Concept, Hierarchy of Needs and Need Satisfaction

UNIT-II

Attitude: Concept, Nature and Significance
Industrial Morale: Concept, Nature and Determinants
Motivation of Industrial Employees: Concept and Determinants

UNIT-III

Personality: Concept, Significance and Types
Job Satisfaction: Concept, Significance and Determinants
Groups: Concept, Types and Inter-Group Relations

UNIT-IV

Fatigue: Concept, Causes and Remedies
Monotony and Boredom: Concept, Causes and Effects
Work Stress and its Management

List of Readings

Brown, J.A.C.(1954).*The Social Psychology of Industry* .Penguin.
Ganguli, H.C.(1983).*Structure and Process of Organization* .Asia Publishing House.
Katz and Kahn.(1979).*Social Psychology of Organizations* .Wiley Easter.
Norman R.F.Maier.(1970).*Psychology in Industry* .Oxford and IBH.
Schein, Edgar.(1988).Organizational Psychology .Prentice Hall.
Stephan P. Robbins, Seema Sanghi, Timothy Judge .(2009). *Organizational Behaviour: Concepts, Controversies and Applications* .New Delhi: Pearson 13th Edition.

Semester IV (Group C)
Paper IV- Industrial Relations
(Common in Group B, C & D)

Semester IV (Group C)
Paper V - Labour Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: By the end of the semester the student will be able to comprehend various concepts and dimensions related to labour policy and administration,, employee welfare and will become fully acquainted with the institutional structure dealing with labour administration at both union and state levels in India. Tools to be employed for the effective teaching of the subject include case study method, audio visuals techniques, brainstorming on various issues, power point presentation, study visits to the industries etc. Use of these tools will develop the analytical skills and enhance the knowledge quotient of the students. This will lead to the overall personality and skill development of the students.

UNIT-I

State and Labour: Theoretical Aspects
Indian Labour: Characteristics
Industrialisation and Growth of Indian Labour

UNIT-II

Evolution of Labour Policy in India
Labour Policy and Five Year Plans
Labour Policy with special reference to Terms and Conditions of Employment; Industrial Relations and Wages

UNIT-III

Organisation, Functions and Role of Union Ministry of Labour and Employment; Labour Bureau and Directorate General of Labour Welfare of Government of India
Labour Department at the State Level

UNIT-IV

Labour Policy and Legislation in India
Employee Welfare: Concepts; Significance; Approaches
2nd National Commission on Labour

List of Readings

Bhagoliwal T.N.(1982).*Economics of Labour and Industrial Relations* .Agra: Sahitya Bhawan.
Government of India.(1969).*Report of the National Commission on Labour*.
Jagdish (ed.)(2004).*Labour Welfare Administration: Theories and Legal Provisions* .New Delhi:Akansha.
Kumar Anil.(2003).*Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*.New Delhi: Deep and Deep Publication.

Mamkoottam, Kuriakose. (2003).*Labour and Change: Essays on Globalisation, Technological Change in Labour in India .New* Delhi: Response Book.
Mamoria, C.B.(1991).*Dynamics of Industrial Relations* .Bombay: Himalaya.
Misra, S.N.(2002).*An Introduction to Labour and Industrial Laws* .Allahabad: Allahabad Law Agency, 2nd edition .

Semester IV (Group C)
Paper VI – Information Technology and Computer Applications in Public Administration
(Common in Group A, B, C & D; compulsory in Group D)

Semester IV – Group C
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

Semester IV – Group D
Paper II: Techniques of Administrative Improvement (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: Administrative improvement is an important aspect of administrative management. The objectives of this course are to comprehensively deal with the varied reference points leading to promoting administrative efficiency. The students will therefore gain an understanding of the ways in which change can be managed in an organization at the operations and policy planning levels. A thorough study of the reports of the Government of India Commissions on Administrative Improvement and Reforms and the working of the O&M Division of the Government of India will link the theoretical and operational aspects of administrative improvement in public administration.

UNIT-I

Work Study in Administration: Paper work simplification; Method study
Work Measurement; Standardization and Work Norms

UNIT-II

Organisation Analysis and Development of Organisational Structure
Techniques of Materials Management: ABC, VED, SDE and FSN Analysis

UNIT-III

Management of Change; Innovations in Management
Quality Circles; Total Quality Management
Management by Objectives

UNIT-IV

Working of O and M Division in the Government of India
The Sixth Pay Commission's recommendations on Administrative Improvement
The ARCs' and Administrative Improvement in Indian Administration

List of Readings

Armstrong, Michael.(1995).*Handbook of Management Techniques* .New Delhi: Excel Books.
Currie, R. and Faraday.(1972).*Work Study* .London: Pitman.
Gopalkrishan, P.(1999).*Handbook of Materials Management* .New Delhi: Prentice Hall of India.
Government of India. *Management in Government*. Quarterly Journal published by the Department of Personnel and Administrative Reform :Administrative Reforms Wing.
Government of India.(2008).*Second Administrative Reforms Commission Reports*.
Government of India.(2008). *Ministry of Personnel, Public Grievances and Pension*. Department of Personnel and Training: Report of Sixth Pay Commission.
I.L.O.(2008).Introduction to Work Study .Oxford & IBN Publishing Co. Pvt. Ltd.
Maheshwari, S. R.(2002).*Administrative Reforms in India* .New Delhi: Macmillan India Ltd.
Maheshwari, S. R.(2006).Indian Administration .New Delhi: Orient Longman Private Limited.
Reddin, W.J.(1971).*Effective Management by Objectives* .New York : McGraw Hill.
Srinath, L.S.(1996).*PERT and CPM-Principles and Applications* .New Delhi: Affiliated East-West Press.
United Nations.(1972).*Use of Modern Management Techniques in the Public Administration of Developing Countries* .New York.

Semester IV (Group D)
Paper III – Organisational Psychology
(Common in Groups C & D; compulsory in Group C)

Semester IV (Group D)
Paper IV– Industrial Relations
(Common in Groups B, C & D)

Semester IV (Group D)
Paper V– Project Management
(Common in Groups B &D; compulsory in Group B)

Semester IV (Group D)
Paper VI: Information Technology and Computer Applications in Public Administration (Compulsory)
(Common in Group A, B, C &D; compulsory in Group D)

Semester IV – Group D
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. SOCIOLOGY (SEMESTER SYSTEM)

EXAMINATIONS, 2018-19

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Note :

A candidate for M. A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he / she has completed the prescribed courses in an affiliated college or the Department concerned of this University.

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES of Sociology (Semester System)
(*Effective from the First Year Admissions for the Academic Session 2010-11)*

1. The Syndicate has approved the following Guidelines, Mode of Testing and Evaluation including Continuous Internal Assessment of students:

(i)	Terminal Evaluation	80%
(ii)	Continuous Assessment	20%

(iii) Continuous Assessment may include Written Test, Snap Test, Participation in Discussions in the class, Term Paper, Attendance etc.

(iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:

(a)	Written Test (one per semester)	:	25	(reduced to 5)
(b)	Snap Test	:	25	(reduced to 5)
(c)	Term Paper/s	:	25	(reduced to 5)
(d)	Participation in Class Discussions	:	15	(reduced to 3)
(e)	Attendance	:	10	(reduced to 2)*

Total: 100 reduced to 20

*Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

Attendance Component			Mark/s for Theory Papers
(a)	75% and above up to 85%	:	1
(b)	Above 85%	:	2

2. **In the case of Paper SOC R 439: Methods & Techniques in Social Research:**

The system of evaluation for Internal Assessment shall be based on field work–data collection, report writing and presentation of report. The break-up of the marks shall be as under:

Data Collection	:	25	(reduced to 5)
Report Writing	:	50	(reduced to 10)
Presentation of Report	:	25	(reduced to 5)
Total		**100 reduced to 20**	

<u>Note:</u> " In view of the peculiarity of distance education courses, students admitted to USOL in M.A. Sociology (Semesters I to IV) shall be given Internal Assessment for all the courses, including SOC-R-439 (3rd Semester), on the basis of Assignments as in the previous system."

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the particular subject and, thus he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the Proforma obtainable from the Examination Branch.

5. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2006 will be shown separately in the Detailed-Marks-Card (D.M.C.)

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READINGS IN THE SUBJECT OF SOCIOLOGY, SESSION 2018-19

SCHEME FOR OPTING COURSES

SEMESTER-I		
Course no.	**Title**	
SOC R 411	History of Social Thought	
SOC R 412	Sociology of Family and Gender	
SOC R 413	Sociology of Development	
SOC R 414	Social Stratification: Concepts & Theories	
SEMESTER-II		
SOC R 425	Positivistic Sociological Theories	
SOC R 426	Methodology of Social Research	
SOC O 521	Population and Society	
SOC O 621	Social Dimensions of Development	
SOC O 721	Sociology of Urban Settlements	
SOC O 821	Structural Moorings of Gender Oppression	
SOC O 921	Peasants and Rural Society In India	
SOC O 922	Organizational Theory and Behaviour	
SOC O 923	Basic Social Statistics	
SEMESTER-III		
SOC R 438	Interpretive Sociological Theories	
SOC R 439	Methods & Techniques in Social Research	
SOC O 532	Basic Methods in Population Studies	
SOC O 632	Social Development in India	
SOC O 633	Rural Development in India	
SOC O 732	Problems of Urban India	
SOC O 832	Family in Cross Cultural Perspective	
SOC O 931	Sociology of Aging	
SOC O 932	Organizational Structure and Development	
SOC O 933	Sociology of Deviance: Concepts and Theories	

SOC O 934 Sociology of Crime
SOC O 935/945 Dissertation (III and IV Semesters)*
SOC O 936 Advanced Social Statistics
SOC O 937 Sociology of Education

SEMESTER-IV

SOC R 440 Perspectives on Indian Society
SOC O 543 Determinants and Consequences of Population Growth
SOC O 544/744 Sociology of Human Migration
SOC O 644 Environmental Crisis and Sustainable Development
SOC O 645 Entrepreneurship and Development
SOC O 743 Cities, Urban Planning and Development
SOC O 843 Family Dynamics in Contemporary India
SOC O 844 Gender and Development
SOC O 941 Fundamentals of Industrial Sociology
SOC O 942 Social Problems
SOC O 943 Political Sociology
SOC O 944 Sociology of Marginalized Communities
SOC O 945/935 Dissertation (IIIrd and IVth semesters)*
SOC O 946 Media and Culture

There will be **two** categories of courses and each course will be of 4 credits.

(1) SOC R level are Required or Compulsory Courses.
(2) SOC O level are Open Courses (including Dissertation).

The students will be required to complete 64 credit hour courses successfully in the total duration of four semesters. The break up of the credit hours is as follows:

Course Category		**No. of Courses to be completed**	**Credits**
1.	Required or Compulsory Courses (SOC R level)	9	9x4= 36
2.	Open Courses (SOC O level)	7	7x4= 28
		Total credits	**64**

Each student shall take up all four Required Courses in the First Semester. In the Second Semester, in addition to two Required Courses, each student shall opt for two Open Courses out of those offered in that particular Semester. In the Third Semester again, in addition to two Required Courses, each student shall opt for two Open Courses, out of those offered during that Semester, including Field Dissertation, depending upon his/her eligibility for the same. In the Fourth Semester, apart from one Required Course,

each student shall opt for three Open Courses (two in case he/she already has dissertation)*.

*Note: **Since the Semester system in M.A. Sociology is just being introduced in colleges from the session 2011-12, SOC O 935/945 Dissertation shall continue to be offered only in the Department and USOL. Its introduction in the colleges shall be subject to approval by the concerned university authorities as per university norms.**

Further, offering of Optional Courses by the Department/College will depend upon the availability of faculty for teaching the course(s). In this way, the candidates will exercise their choice in the following manner:

Semester	Required Course	Open Course
I	4	-
II	2	2
III	2	2
IV	1	3
	9	**7**

***Note**: The Dissertation (SOC O 935/945) will carry 8 credits (200 marks) and will spread over two Semesters, i.e. Semesters III and IV. Only those students who have scored 480 marks during the 1st year (1st and 2nd semesters), taking not more than a total of 32 credits, will be allowed to take up dissertation.

In Colleges affiliated to Panjab University offering M.A. (Semester System) in Sociology,

" There will be six contact hours per week (4 lectures and 2 tutorials)."

Areas of Specialization

There are four Areas of Specialization within the Open Courses. These are:

1. Development Studies
2. Population Studies
3. Family & Gender Studies
4. Urban Studies

A candidate who successfully completes at least 3 Open Courses during M.A. programme in one of these four areas of specialization, will be issued a Certificate of Specialization in that area.

For the purpose of providing specialization, various courses have been grouped under the areas as follows:

1. **Development Studies**
   i) SOC O 621: Social Dimensions of Development (Sem. II)
   ii) SOC O 632: Social Development in India (Sem. III)
   iii) SOC O 633: Rural Development in India (Sem. III)
   iv) SOC O 644: Environmental Crisis and Sustainable Development (Sem. IV)
   v) SOC O 645: Entrepreneurship and Development (Sem. IV)
   vi) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   vii) SOC O 844: Gender and Development (Sem. IV)
2. **Population Studies**
   i) SOC O 521: Population and Society (Sem. II)
   ii) SOC O 532: Basic Methods in Population Studies (Sem. III)
   iii) SOC O 543: Determinants and Consequences of Population Growth (Sem. IV)
   iv) SOC O 544/744: Sociology of Human Migration (Sem. IV)

3. **Family and Gender Studies**
   i) SOC O 821: Structural Moorings of Gender Oppression . (Sem. II)
   ii) SOC O 832: Family in Cross-Cultural Perspective (Sem. III)
   iii) SOC O 843: Family Dynamics in Contemporary India (Sem. IV)
   iv) SOC O 844: Gender and Development (Sem. IV)

4. **Urban Studies**
   i) SOC O 721: Sociology of Urban Settlements (Sem. II)
   ii) SOC O 732: Problems of Urban India (Sem. III)
   iii) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   iv) SOC O 744/544: Sociology of Human Migration (Sem. IV)

Thrust Areas

- **Sustainable Development** (in the context of Globalization, Information, Communication and Technology)

- **Family and Gender Studies**

- **Population, Health and Aging**

- **Social Control and Deviance** (with special reference to Activism, Terrorism and Cyber Crime)

Additional Areas of Interest

Social Development, Deviance & Social Problems, Development and Social Change, Urban Studies, Peasant and Rural Studies, State and Society

M.A. (SOCIOLOGY) SYLLABI AND COURSES OF READING

SEMESTER-I

SOC R 411: HISTORY OF SOCIAL THOUGHT

Objective:

1. To introduce students to historical evolution of sociological thought.
2. To sensitize students to a detailed study of Classical Sociologists, i.e. Karl Marx, Max Weber and Emile Durkheim.
3. To apply the formulation of these thinkers to contemporary issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to the maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline:

Unit-I

A brief review of Enlightenment Thought with special reference to Rousseau; and of the Conservative Reaction to it, with special reference to St. Simon and Auguste Comte.

Unit-II

Karl Marx: Methodology - the concepts of Totality: Historical Materialism, Human Praxis.

Basic Concepts: Means, Relations and Modes of Production: Base and Super-structure; Contradiction; Exploitation; Alienation.

Epochs of social development with special reference to Capitalism; Classes and Class Conflict.

Unit-III

Max Weber: Methodology-Verstehen, Value-Neutrality and Objectivity, Generality and the Ideal Type;

Basic concepts: Social action and its Types, social relationships; Power, Domination and Legitimate Order.

Protestant Ethic and the Spirit of Capitalism; the Rationalization process, Bureaucracy, distribution of Power and Social Stratification.

Unit-IV

Emile Durkheim: Methodology-the nature of Social Facts and their Causation.

Basic concepts: Individual and Collective Conscience, Social Solidarity and Anomie; the Sacred and Profane, the nature of Religion, Suicide as social fact.

Mechanical to Organic Solidarity, Differentiation and Social Division of Labour.

Suggested Readings

1. Aron, Raymond, (Reprint 1990), *Main Currents in Sociological Thought* (Vols. I & II), London, Pelican.
2. Avineri S. (1970) *The Social and Political Thought of Karl Marx*, London, Cambridge University Press.
3. Bendix R. (1960) Max Weber: *An Intellectual Portrait*, New York, Doubleday.
4. Durkheim E. (1960) *The Division of Labour in Society*, Illinois, Free Press of Gilencoe.
5. Giddens, Anthony (1971) *Capitalism and Modern Social Theory*, London, Cambridge, U. Press.
6. Irving M. Zeitlin (1969) *Ideology and the Development of Sociological Theory*, New Delhi, Prentice Hall.
7. Marx, K. and Engels F. (1971), *The Manifesto of the Communist Party*, Moscow, Progress Publishers.
8. Max Weber (1965), *Protestant Ethic and the Spirit of Capitalism*, London, Allen & Unwin.

Additional Readings

1. Ritzer, George, (1996) *Sociological Theory*, London, Sage Publications.
2. Hughes, John A. et. al., (1995), *Understanding Classical Sociology* - Marx, Weber and Durkheim, London, Sage Publications.
3. Pampel Fred C., (2000) *Sociological Lives and Ideas*: *An Introduction to the Classical Theorists*, N.Y., Worth Publishers.

SOC R 412: SOCIOLOGY OF FAMILY AND GENDER

Objective

This course is aimed at sensitizing the students regarding the basic concepts and approaches used for explaining and understanding family and gender. It also aims at sensitizing students about the process of gender socialization within the framework of family. Finally, it exposes the student to specific problems and legal provisions made available to counter these problems relating to gender inequality in the Indian context.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Approaches to Family

Concepts-Family, Household and Domestic function;

Approaches- Structural Functional, Conflict, Symbolic-Interactionist,

Unit-II

Concept and Construction of Gender

i) Concepts- Sex, Gender, Gender-Identity and Gender-roles

ii) Basic understanding of Patriarchy, Masculinity and Femininity, Gender Socialization and Gender Stereotyping through the institutions of family, education, work, media and religion.

Unit-III

Approaches to Gender

Feminism: Meaning; Liberal, Radical, Socialist-Marxist and Post Modernist Feminism

Unit-IV

Gender Equality through Legislation (in Indian Context)

i) Dimensions of Gender Inequality: Female Foeticide, Neglect of Girl Child , Bride Burning and Status of Elderly Women.

ii) Brief introduction to PNDT Act, Dowry Prohibition Act and Domestic Violence Act, Sexual Harrassment of Women at Workplace, Prevention, Prohibition and Redressal Act.

Suggested Readings

1. Bender, Donald R. (1970) 'A Refinement of the Concept of Household: Families, Co-residence and Domestic Functions', *American Anthropologist*, Vol.32,No.1, PP 1-15.
2. Chanana, Karuna (1988) *Socialization, Education and Women: Explorations in Gender-Identity*, New Delhi: Orient Longman.
3. Lipman, Jean Blumen (1984), *Gender-Roles and Power*, New Jersey, Prentice Hall Inc.
4. Oakely, Ann (1972 *Sex, Gender and Society*, London : Harper & Row Pub.
5. Patel, Tulsi (2005), *The Family in India: Structure And Practice,* New Delhi: Sage Publications.
6. Saradamoni K.(ed) (1992), *Finding the Household: Conceptual and Methodological Issues*, New Delhi: Sage Publication.
7. Shah. A.M. (1973), *The Household Dimension of Family*, New Delhi: Orient Longman.
8. White James M. & David M. Klein (2002), *Family Theories*. Thousand Oaks: Sage Publications (Second Edition).
9. Wood, Julia T (1999*), Gendered Lives.* London: Wadsworth Pub. Company (Third Edition).
10. Wykes, Maggie and Barrie, Gunter (2005) *The Media and Body Image*, New Delhi: Sage Publications.
11. Padia, Chandrakala (2011). Theorizing Femisnism: A Cross-Cultural Exploration, Jaipur, Rawat Publications.
12. Bhagwat, Vidut (2004), Feminist Social Thought: An introduction to Six Key Thinkers, Jaipur, rawat Publications
13. Bhasin, Kamla(1993) What is Patriarchy, Kali for Women, Delhi
14. Bhasin ,Kamla (2000) Understanding Gender . Kali for Women, Delhi
15. Bhasin Kamla (2004) Exploring Masulinity, Women Unlimited . Delhi
16. Handbook on Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act, 2013, Government of India, Ministry of Women and Child Development , November 2015

Additional Readings

1. Bare Acts: PNDT Act, Dowry Prohibition Act, Protection of Women Against Domestic Violence Act, Hindu Succession Act.
2. Burr, Wersley R. et.al (1997), *Contemporary Theories about Family*, New York: Free Press.
3. Das, Man Singh & Gupta, Vijay Kumar (eds.) (1995), *Gender Roles and Family Analysis*, New Delhi: M.D. Pub.
4. Dube, Leela (1997), *Women and Kinship: Contemporary Perspectives on Gender in South and South-East Asia*, Tokyo: United Nations Univ. Press.
5. Hofstede, Geert and Associates (1998*), Masculinity and Femininity*, Thousand Oaks: Sage Publication.
6. Lancy, Lobo (1992), 'Household and Family among Thakurs in a North Village', *Sociological Bulletin*, Vol. 41, No. 1&2, pp 46-66.
7. Lengermann, Patrician M. & Jill Niebrugge-Brantley (1996) 'Contemporary Feminist Theory', in George Ritzer, *Sociological Theory,* (Fourth Edition), pp. 436-486, New York : McGraw-Hill.
8. Thorne, Barrie & Marilyn Yalom (eds.) (1982), *Rethinking the Family: Some Feminist Questions,* New York: Longman.
9. Weitz, Shirley (1977), *Sex-Roles*, London: George Allen & Unwin.

SOC R 413: SOCIOLOGY OF DEVELOPMENT

Objective

Keeping in view the relevance of the theme of development, especially in the less developed societies, this course aims (a) to familiarize the students with the various ways that development has been conceptualized; (b) to critically evaluate the modernization theory in its economic, sociological, social-psychological and political forms; (c) to provide a review of the underdevelopment theory given by the Latin American political economists; and (d) to re-assess the various paths to development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development: The concept and its changing connotations (liberal and socialist);
Operational Indicators.

Unit-II

Modernization Theories:

Economic (Gunnar Myrdal, W. W. Rostow);
Sociological (Neil J. Smelser, Daniel Lerner,
Social-Psychological (David C. McClelland, Everett E. Hagen);
Political (Gabriel A. Almond & James S. Coleman);
Their Critical Assessment

Unit-III

Theories of Underdevelopment: Centre-
Periphery (A. G. Frank, Samir Amin);

Unequal exchange (Paul Baran); World system (Immanuel Wallerstein);
Their Critical Assessment

Unit-IV

Paths of Development:

Capitalist, Socialist, Mixed;
Globalization as a Strategy of Development.

Suggested Readings

1. Coleman, J. (1968), "Modernization: Political Aspect", in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences* Vols. 9 & 10 (L-M), London: MacMillan.
2. Desai, Vandana and Robert B Potter, (2008), *The Companion to Development Studies*, London: Hodder Arnold Publication.
3. Gray, J. (1969), "The Economics of Maoism" in H. Bernstein (ed.) *Underdevelopment and Development-The Third World Today*, N.Y.: Penguin Pub. (pp. 254-273).
4. Harrison D. (1988), *The Sociology of Modernization and Development*, New Delhi: Routledge.
5. Horowitz, I. L. (1966), *Three Worlds of Development*, N.Y.: Oxford University Press (Selected chapters).
6. Lerner, D. (1968), "Modernization: Social Aspects" in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences*, Vols. 9 & 10 (L-M) (pp. 387-394), London: MacMillan.
7. McMichael, Philip (2008), *Development and Social Change: A Global Perspective*, Newbury Park, CA: Pine Forge Press.

8. Mehta, S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
9. Myrdal, Gunnar (1968), *An Approach to Asian Drama*, Harmondsworth: Penguin.
10. Ness, G. D. (1970), *Sociology of Economics Development: A Reader*, N.Y.: Harper and Row (Selected Chapters).
11. Pandey, R. (1985), *Sociology of Development*, New Delhi: Mittal Pub.
12. Pandey, R. (1986), *Sociology of Underdevelopment*, New Delhi: Mittal Pub.
13. Parsons, Talcott (1966), *Societies: Evolutionary and Comparative Perspectives*, Englewood Cliffs, N. J.: Prentice-Hall, (pp. 20-29).
14. Sabbarwal, Sherry (2010), "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
15. Sharma, S. L. (1980), Criteria of Social Development, *Journal of Social Action*, Jan.-March.
16. Sharma, S. L. (1986), *Development: Socio-Cultural Dimensions*, Jaipur: Rawat (Chapter I).
17. Smelser, N. J. (1968), *Essays in Sociological Explanation*, Englewood Cliffs, N. J.: Prentice-Hall, (Chapter 6).
18. Walby, Sylvia (2009), *Globalization and Inequalities: Complexity and Contested Modernities*, Newbury Park, CA: Pine Forge Press.
19. Went, Robert (2000), *Globalization: Neo-Liberal Challenge, Radical Responses*. London: Pluto Press.

Additional Readings

1. Abraham, M. F. (1990), *Modern Sociological Theory: An Introduction*. New Delhi: OUP.
2. Apter, D. (1987), *Rethinking Development*, London: Sage.
3. Blomstrom, M. and B. Hettne (1984), *Development Theory in Transition*, London: Zed Books.
4. Desai, A. R. (1983), *India's Path of Development: A Marxist Approach*. New Delhi, OUP.
5. iddens, A. (1990), *The Consequences of Modernity*, Cambridge: Polity Press.
6. Haq, Mahbub Ul (1995), *Reflections on Human Development*, New Delhi: OUP.
7. Larrain, J. (1991), *Theories of Development: Capitalism, Colonialism and Dependency*, Cambridge, Polity Press.
8. Leeson, P. F. and Minogue, M. (eds.) (1988), *Perspectives on Development: Cross-Disciplinary Themes in Development*, Manchester: Manchester University Press.
9. Mehta, S.R. (2010), New Understanding of Indian Society: Incounters with Sociology, Shimla, Indian Institute of Advanced Study.
10. Mehta, Rani and Mehta, S.R. (2010), Social Transformation of an Island Nation: Development Wonder in Mauritius, New Delhi, Kalpaz Publications.
11. Schuurman, F. J. (1993), *Beyond the Impasse: New Directions in Development Theory*, London: Zed Books.

SOC R 414: SOCIAL STRATIFICATION: CONCEPTS & THEORIES

Objective

1. To sensitize students about elements of discrimination, exploitation, inequality and prevalence of hierarchies in everyday life.

2. To give a background of important sociological concepts.
3. To give theoretical formulations of important thinkers like Max Weber, Karl Marx, Talcott Parsons, Davis and Moore and Ralph Dahrendorf.
4. To sensitize students in terms of understanding contemporary formulations like the emerging of middle class and changing dimensions of caste and class.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts

Inequality, Differentiation; Ranking, Hierarchy and Social Stratification

Dimensions of Social Stratification

Caste, Class, Race, Ethnicity and Gender

Unit-II

Theoretical Formulations:

i) Functional Theory: Par sona,Davis and Moore;
ii) Conflict Theory: Karl Marx, R. Dahrendorf
iii) Multidimensional Theory: Max Weber

Unit-III

Emerging Class System

Class, Middle Class, New Middle Class

Correlates of Social Class: Occupation, Education and Income

Unit-IV

Changing Caste System
Change and Continuity in Caste in India
Resurgence of Caste (with special reference to Politics and Khap Panchayats)
Affirmative Action with regard to Scheduled Castes.

Suggested Readings

1. Beteille, Andre (1977) *Inequality Among Men*, Delhi, Oxford University Press.
2. Bendix, R & S. M. Lipset (eds.) (1970) *Class, Status and Power*, London, Routledge & Kegan Paul.
3. Beteille, Andre (ed.) (1969) *Social Inequality*, Penguin Books.
4. Cottrell, Allin (1984) *Social Classes in Marxist Theory*, London, Routledge & Kegan Paul.
5. Culvert, P (1982) *The Concept of Class*, London, Hutchison.
6. D'Souza V. S. (1981) *Inequality and its Perpetuation*, Delhi, Manohar Publication.
7. Eisenstadt, S. N. (1971) *Social Differentiation and Stratification*, London, Scott, Foresman & Co.
8. Giddens A. (1980*) The Class Structure of the Advanced Societies*, London, Unwin Hyman.
9. Gupta, Dipankar (ed) (1991) *Social Stratification*, Delhi, OUP.
10. Johnson, D. L. (1982*) Class and Social Development: A New Theory of the Middle Class,* Baverly Hills, Sage Pub.
11. Malik, S. C. (1986) *Determinants of Social Status in India*, Delhi, Motilal Banarsidas.
12. Sharma, K. L. (1986) *Social Stratification in India*, New Delhi, Manohar.
13. Srinivas, M. N., ed. (1996) *Caste: Its Twentieth Century Avatar*, New Delhi, Viking.
14. Singh G. (1985) *The New Middle Class in India: A Sociological Analysis*, Jaipur, Rawat Publication.
15. Singh, Yogendra (1977) *Social Stratification & Social Change*, Delhi. Manohar Publication.
16. Tumin, M. M. (1978) *Social Stratification*, Prentice Hall.

Additional Readings

1. Beteille, Andre (2002) *Equality and Universality: Essays in Political Theory*, Delhi, OUP.

2. Beteille, Andre (2002) *The Antinomies of Society*, Delhi, OUP.

3. Johnson, D. L. (ed.) (1985) *Middle Classes in Dependent Countries*, Beverly Hills, Sage Publication.

4. Lane, David (1982) *The End of Social Inequality*, New York, George Allen & Unwin.

5. Lloyd, Peter (1983) *The Third World Proletariat*, Boston, George Allen & Unwin.

6. Meale, R. S. (1984) *History and Class*, Oxford, Basic Blackwell.

7. Stinchcombe, A. L. (1986) *Stratification and Organization,* Cambridge, Cambridge University Press.

SEMESTER-II

SOC R 425: POSITIVISTIC SOCIOLOGICAL THEORIES

Objectives

This course exposes the students to the writings of sociologists constituting the School of Positivistic Theories who actually treat Sociology as a natural science. It also includes the more recent theories such as Structuration, Post-structuralism, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Positivism: Definition; Contribution of Auguste Comte, Emile Durkheim
Functionalism: Definition; Anthropological functionalism–Radcliffe-Brown, Malinowski

Unit-II

Structural-Functionalism: Talcott Parsons
Functional analysis of Robert K.Merton
Neo-Functionalism: Jeffrey Alexander, Paul Colomy

Unit-III

Structuralism: Levi-Strauss
Structural Marxism: Louis Althusser
Structuration: Anthony Giddens

Unit-IV

Conflict Theories: Karl Marx, Ralf Dahrendorf, Randall Collins

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2002) *Contemporary Sociological Theory,* California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory,* California, Pine Forge Press.
3. Alexander, J. (1985) *Neofunctionalism*, Beverley Hills, California, Sage.
4. Alexander, J. (1982) *Theoretical Logic in Sociology*, Berkeley, California, University of California Press.
5. Bauman, Z. (1976) *Towards a Critical Sociology: An Essay on Commonsense and Emancipation*, London, Routledge and Kegan Paul.
6. Clarke, S. (1981) *The Foundation of Structuralism*, Brighton, Harvest Press.
7. Colomy, P. (ed.) (1990*) Functionalist Sociology*, London, Edward Elgar.
8. Colomy, P. (ed.) (1990*) Neofunctionalist Sociology*, London, Edward Elgar.
9. Craib, Ian (1984) *Modern Social Theory*, Brighton, Harvester Press.
10. Derek, Layder (2006) *Understanding Social Theory*, New Delhi: Sage Publications.
11. Giddens, A. (1987) *Social Theory and Modern Sociology,* Cambridge, Polity Press.
12. Giddens, A. and J.H. Turner (1987) *Social Theory Today*, Cambridge, Polity Press.
13. Helle, H.J. and S.N. Eisenstadt (eds.) (1985*) Macro-Sociological Theory,* London, Sage.
14. Lane, M. (ed.) (1970) *Structuralism: A Reader*, London, Jonathan Cape.
15. Ritzer, G. (1988*) Sociological Theory*, N.Y., McGraw-Hill.
16. Turner, J.H. (1978) *The Structure of Sociological Theory,* Homewood, Dorsey Press.

Additional Readings

1. Craib, Ian (1992) *Modern Social Theory: From Parsons to Habermas*, London, Harvester Press.
2. Collins, Randall (1997) *Sociological Theory*, Jaipur, Rawat.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat.
4. Westby, David L. (1991) *The Growth of Sociological Theory*, New Jersey: Prentice Hall.
5. Zeitlin, I.M. (1998) *Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat.

SOC R 426: METHODOLOGY OF SOCIAL RESEARCH

Objective

This course familiarizes the students with the major Epistemological Schools in methodology of social sciences. It will also acquaint the students with the basic elements of social research and the major problems confronted by social scientists in arriving at objectivity and value neutrality.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Major Epistemological Schools in Methodology in Social Research

Positivistic and Interpretive; Rationalism and Empiricism; Objectivism and Constructivism

Unit-II

Major Methodological Dilemmas in Social Research

Subjectivity and Objectivity
Value neutrality
Methodological Individualism versus Methodological Collectivism
Limits of Quantification in Social Research
Logic of Triangulation

Unit-III

Sampling

Meaning and Importance
Universe, Population, Sampling Frame, Sampling Error
Types of Sampling:
- Probability Sampling- Meaning, Types, Advantages and Disadvantages
- Non- Probability Sampling- Meaning, Types, Advantages and Disadvantages
- Theoretical Sampling

Unit-IV

Qualitative Research

Ethnography, Participatory Research, Action Research, Interviewing as Conversation, Narratives, Grounded theory, Naturalistic Inquiry, Strengths and Weaknesses of Qualitative Research.

Suggested Readings

1. Bernard, H. Russell (2000) *Social Research Method — Qualitative and Quantitative Approaches,* New Delhi, Sage Publication India Pvt. Ltd.
2. Bryman, Alan (2001) *Social Research Methods,* New York, Oxford University Press.
3. Cicourel, A.V. (1964), *Method and Measurement in Sociology,* Glencoe, Free Press.
4. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
5. Mukherjee, Partha N. (2000), *Methodology in Social Research*, New Delhi: Sage Publication.
6. Strauss, Anselm (1990) *Basics of Qualitative Research Grounded Theory Procedures and Techniques*, New Delhi: Sage Publication. —

Additional Readings

1. Bose, P. K. (1997) "Problems and Paradoxes of Inductive Social Science: A Critique of Ramkrishna Mukherjee", *Sociological Bulletin*, 46 (2), Sept.
2. Bryant, G.A., (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Hanmond, Michael, Howarth, Jane and Keat, Russel (1991) *Understanding Phenomenology,* Basil Blackwell.
4. Himmelstrand, Ulf (1986) *The Sociology of Structure and Action*, New Delhi, Sage Publication.
5. Hindess, Barry (1977*) Philosophy and Methodology in Social Sciences*. The Harvester Press.
6. Jenks, Chris (ed.) (1998) *Core Sociological Dichotomies*, New Delhi, Sage Publication.

SOC O 521: POPULATION AND SOCIETY

Objective

The course intends to discuss the inter-linkages between size, growth, composition and quality of population with societal components. It introduces the students to the importance of population issues in ancient thought to modern times. The course would include theoretical contributions from Malthusian-Neo-Malthusian, Marxian-Neo-Marxian and Developmentalist perspectives. Discussion will focus mainly on issues in India but of course in comparative context at the global and regional levels.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Population and Society:

Development of Early Thought- A Brief view from Roman, Greek, Chinese, Arabian and Indian writings.

Emergence of ideas from these thoughts on Population Equilibrium, Optimum Population, Population Control, Regulating Population through the institution of Marriage, Family and the State

Unit-II

Theoretical Contribution:

Malthus and Neo-Malthusian
Marxian and Neo-Marxian
Demographic Transition
Family Planning and Developmentalist Perspectives
Middle Path Approach

Unit-III

Trends of Population Growth at Global and Regional level and Future Growth.
Trends of Population Growth in India:

Pre and Post Independence Period, Future Growth by mid of 21st century.
Distribution of Population by Regional Balances.

Compositions of Population by Age, Gender, Rural-Urban, Education, and Broad Industrial Classification Categories.

Unit-IV

Towards Population Stabilization in India: Population Policy 2000 –Goals and Strategies Continuity and Change from earlier Population Policy in the Post Independent India. Reproductive & Child Health Approach.

Suggested Readings

1. Bhende, Asha & Tara Kanitkar (1999) *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, Donald J. (1969) *The Principles of Demography*, N.,Y. John Wiley.
3. Bose, Ashish (1991) *Demographic Diversity in India*, Delhi, B.R. Publishing.
4. Census of India (2001), Paper 2 (Rural-Urban Totals).
5. Chambliss, R. (1954), *Social Thought: From Hammurabi to Comte,* New York, Dryden Press.
6. Haberland, Nicole and Diana Measham (eds.) (2002) *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning,* New York, Population Council.
7. *International Encyclopaedia of Population*, 2 Vols.
8. Kleinmann, Davis S. (1980) *Human Adaptation and Population Growth: A Non-Malthusian Perspective*, New York, Monclairef.
9. Nam, Charles (1968) *Population and Society*, Boston, Houghton, Miffin Co.
10. *National Population Policy (2000),* Government of India.
11. Pachauri, S. (ed.) (1999), *Implementing Reproductive Health Agenda in India: the Beginning*, New Delhi, Population Council.
12. Petersen, William (ed.) (1972*), Readings in Population*. N.Y., Macmillan.
13. Population Studies, (1996) *Golden Jubilee Special Issue*, Great Britain (select papers).
14. Premi, M.K. (1991), *India's Population: Heading Towards a Billion*, Delhi, B.R. Publishing.
15. Sen, Amartya and Jean Dreze (1996), *Indian Development*, Oxford University Press.
16. Simon, Julian L. (1981), *The Ultimate Resource,* Princeton, Princeton University Press.
17. U.N., (1973) *Determinants and Consequences of Population Growth*, (Chapter-Introduction), NY.
18. U.N. (2002) *World Population Reports*, N.Y.

Additional Readings

1. Agarwala, S.N. (1984), *Population,* New Delhi: National Book Trust, India.
2. Agarwala, S.N. (1977), *India's Population Problems*, New Delhi: Tata McGraw Hill.
3. Hans,Raj (2001)*, Fundamentals of Demography*, New Delhi: Surjeet Publications.
4. Kulkarni, P.M. (2000), "Prospective Changes in the size and structure of India's Population – Implications of PFI Projections up to 2051" *in Millennium Conference on Population, Development and Environment Nexus*, New Delhi: PHD Chamber of Commerce and Industry.

5. Panandikar, V.A Pai (2000), "India's Demography and Democracy", in *Millennium Conference on Population, Development and Environment Nexus,*
New Delhi: PHD Chamber of Commerce and Industry.
6. Thompson, Warren, S. (1953), *Population Problems*, New York: McGraw-Hill.

SOC O 621: SOCIAL DIMENSIONS OF DEVELOPMENT

Objective

Economic development in society cannot remain unaffected by social-structural factors. Similarly, the social structure, too, is influenced by economic growth and modernization. With this in view, the present paper (a) provides the Gandhian, Marxist, Ecological, Post-modernist, Feminist and Sociological critiques of the economic growth and modernization models of development; (b) discusses how structural factors like caste, tradition, religion and population can impede or facilitate development; (c) examines how economic development and modernization can, in turn, lead to problems related to ethnicity, disparity, displacement and (d) discuss some of the new trends in development studies.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Critiques of Economic Paradigm of Development:

Gandhian, Marxist, Post-Modernist, Ecological, Feminist, and Sociological

Unit-II

Social-Structural and Cultural Factors in Economic Development:

Caste, Religion, Population, Traditions and Values

Unit-III

Socio-Cultural Consequences of Economic Development: Disparity, Displacement and Resettlement, Ethnic Resurgence, Erosion of Traditions and Values.

Unit-IV

New Directions in the Understanding of Development:
Ethical Development, Capability Approach (Amartya Sen)
New Modernity and Risk Society (Ulrich Beck)
Human Rights and Development (Peter Uvin)
Inclusive Development
Millennium Development Goals (UNDP)

Suggested Readings

1. Biswas, S. C. (ed.) (1969) *Gandhi, Theory and Practice: Social Impact and Contemporary Relevance*, Shimla, IIAS. (Articles by V. Palshikar & Raj Krishna).
2. Boyne, Roy (2003) *Risk (Concepts in the Social Sciences)*, Berkshire: Open University Press.
3. Cernea, M. M. (1988) "Involuntary Resettlement and Development" *Finance and Development*, Sept. (pp.) 44-46.
4. Desai, Vandana and Robert B Potter, (2008) *The Companion to Development Studies*, London: A Hodder Arnold Publication.
5. Development and Populations, Special Issue (1990) *Yojana*, Vol. 34, Nos. 1 & 2, Jan. 26.
6. Dube, S. C. (1958) *India's Changing Villages: Human Factors in Community Development*, London: Routledge & Kegan Paul (Chapter 6).
7. Ferreira, Francisco H. G. and Michael Walton (2006) *World Development Report: Equity and Development*, Washington DC: World Bank & N.Y.: Oxford University Press.
8. Mehta, Rani (2014) Sociology and Environmental Sustainability, Jaipur, Rawat Publications.
9. Mishra, G. P., D. M. Diwakar and Ashok Mathur (2006) *Deprivation and Inclusive Development,* Lucknow: New Royal Book Co.
10. Pieterse, Jan Nederveen (2010) *Development Theory*, Newbury Park, CA: Pine Forge Press.
11. Quinlivan, Gary and Antony Davies (2003) "Ethical Development and the Social Impact of Globalization", *International Journal on World Peace*, Vol. 20.
12. Rao, M. S. A. (1969) "Religion and Economic Development" *Sociological Bulletin*, Vol. XVIII, No. 1, March (pp.1-15).
13. Sabbarwal, Sherry (2010) "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
14. Sardar Sarovar Project: Review of Resettlement and Rehabilitation in Maharashtra (1993) report by the Tata Institute of Social Sciences, in *Economic and Political Weekly*, Aug. 21, (pp. 1705-1714).
15. Sen, Amartya (2000) *Development as Freedom*. Oxford: Oxford University Press.
16. Sharma, S. L. (1994) "Salience of Ethnicity in Modernization: Evidence from India", *Sociological Bulletin*, Vol. 39, Nos. 1 & 2 (pp. 33-51).

17. Sharma, S.L. (1988) "Modernization of Indian Society: A Symbolic Intreractionist Perspective", *The Journal of Sociological Studies*, Vol.7, Jan. (pp.10-33).
18. Sinha, D. and S. R. Kao (eds.) (1988) *Social Values and Development*, New Delhi: Sage (Introduction and Chapter I).
19. "Sustainable Development" Special Issue (1991) *The European Journal of Development Research*, Vol. 3, No. I June.
20. UN, (2007) *Globalization and Inclusive Development (Note by the UNCTAD Secretariat)*, Geneva: United Nations Pub.
21. UN, (2009) *Millennium Development Goals Report 2009*, N.Y.: United Nations Publication.
22. Uvin, Peter (2004) *Human Rights and Development*, West Hartford, Connecticut: Kumarian Press.

Additional Readings

1. Apthorpe, Raymond, J. and A. Krahl (1986) *Development Studies: Critique and Renewal*, Leiden, the Netherlands: Brill.
2. Chakraborty, M. (1987) "Resettlement of Large Dams Oustees in India" in *People and Dams, Published by the Society for Participatory Research in Asia*, New Delhi.
3. Foster, G. M. (1973) *Traditional Societies and Technological Change*, New Delhi: Allied Pub. (Chapter 5).
4. Giddens, A. (1996) "Global Problems and Ecological Crisis" in *Introduction to Sociology*, IInd edition, New York: W.W. Norton & Co.
5. Momsen, J. (1991) *Women and Development in the Third World*, N.Y.: Routledge.
6. Nusebaum, Martha (1993) *The Quality of Life*, Oxford: Oxford University Press.
7. Pieterse, J. N. (ed.) (1992) *Emancipations, Modern and Postmodern*, London: Sage.
8. Pimpley, P. N., "Development and Downward Social Mobility in Independent India", Unpublished Monograph.
9. Sabbarwal, Sherry (1992-93) "Ethnicity: A Critical Review of the Conceptions and Perspectives", *Social Science Research Journal*, Vol. 1, Nos. 1 & 2, March-Sept., 1992-93.
10. Sharma S. L. (1986) *Development: Socio-cultural Dimensions*; Jaipur: Rawat Publications (Chapters 1, 7, 8, 9).
11. Sharma, S. L. (1989), "Social Development: Reflection on the Concept and the Indian Experience", *Guru Nanak Journal of Sociology*, Vol.10, Nos. 1 & 2 (pp. 37-55).

SOC O 721: SOCIOLOGY OF URBAN SETTLEMENTS

Objective

This course has been devised to introduce the students to the history of urban settlements and emergence of Urban Sociology as a discipline. The course would acquaint the students with the basic concepts, approaches and theoretical formulations relating to urban typology, urban ecology, urbanism etc., with a special focus on the diverse experiences of western and non-western, particularly Indian, regions. This course will provide the basic understanding to the students who wish to specialize in urban sociology.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Urbanization in Historical Perspective

Emergence of Urban Settlements
Urbanization in Developed and Developing Countries
Suburbanization
Pre-industrial, Industrial and Post-industrial and Colonial city
Metropolitan and Mega city

Unit-II

Approaches to Urban Society

Ecological-Classical Neo-Classical and Socio-Cultural
Technological and Demographic
Urbanism as a Way of Life
Rural-Urban Continuum
Marxist Approach to City

Unit-III

Internal Structure of Cities
Concentric-Zone Theory, Star theory, Sector theory, Multiple-Nuclei theory

Location of Cities

Central Place theory, Break-in-transportation, Specialized
Functions Urban Primacy and Rank-Size Rule.

Unit-IV

Urban Functions

Basic and Non-basic Functions
Generative and Parasitic Cities.
Functional Classification of Cities
Cultural Role of Cities

Suggested Readings

1. Castells, Manuel, (1997), *The Urban Question*, London, Edward Arnold.
2. Gill, Rajesh, (2009) *The Contemporary Indian Urban Society — Gender, Ethnicity and Governance*, Jaipur, Rawat Publication.
3. Gill, Rajesh (1989), "Some Issues in the Conceptualization of Urbanism", *Journal of Sociological Studies,* Vol. 8, Jan., 75-85.
4. Gill, Rajesh, (2000), 'Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization', *Sociological Bulletin*, Vol. 49, No. 2, September, pp. 211-228.
5. Guglar, Joseph (ed.), (1988), *Urbanization of the Third World*, Oxford, Oxford University Press.
6. Hatt, P.K. and Reiss, A.J. (eds.) (1951), *Cities and Society,* Illinois, The Free Press.
7. Lewis, Oscar, (1970), *"Further Observations on the Folk-Urban Continuum and Urbanization with special reference to Mexico City",* in Hauser and Schnore (eds.), *The Study of Urbanization,* New York, John Wiley and Sons.
8. Redfield, Robert and Milton B. Singer, (1954), "Cultural Role of Cities", in *Economic Development and Cultural Change,* Vol. 3, 53-73.
9. Sjoberg, Gideon, (1960), *The Pre-Industrial City,* Illinois, The Free Press.
10. Theodorson, G.A. (ed), (1982), Urban Patterns, Studies in Human Ecology, University Press.
11. Theodorson, George, (1961), *Studies in Human Ecology, Evanstow,* Harper and Row.
12. Weber, Max, (1960), *The City,* Translated by Martindale, London, Heinemann.
13. Wirth, Louis, (1938), "Urbanism as a Way of Life", *American Journal of Sociology,* Vol. 44, 1-24.

Additional Readings

1. Ficker, V.B. & H.S. Graves, (1971), *Social Science and Urban Crisis*, New York, The Macmillan Company.
2. Flanagan, William G., (1990), *Urban Sociology, Images and Structure*. Boston, Allyn and Bacon.
3. Gans, Herbert J., (1968), "*Urbanism and Sub-Urbanism as ways of Life: A Re-evaluation of Definitions*" in Sylvia F. Fava (ed.), *Urbanism in World Perspective*, New York, Thomas Y. Crowell Co.
4. Hoselitz, Bert F., (1960), *Sociological Aspects of Economic Growth,* Illinois, Free Press.
5. Spates, James, (1982), *The Sociology of Cities,* New York, St. Martin Press.

SOC O 821: STRUCTURAL MOORINGS OF GENDER OPPRESSION

Objective

The course aims at understanding the social-structural underpinnings of gender oppression persisting in India and worldwide. The agenda of gender empowerment fails to yield the desired outcomes because of structural impediments which are, nevertheless, difficult to overcome. On the one hand, there is the socially given identity of 'otherness' of the woman and on the other, there are contested spaces and processes of self-identity formation. Various contemporary issues, perspectives and challenges in feminist scholarship, movements, agency and empowerment will be explored in a holistic framework through the course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Unit-I

Social construction of gender: Structural myths of femininity and masculinity. Patriarchy and gendered division of labour.

Reflections on structural gender inequity in nature-culture debates.

Unit-II

Approaches to gender:
Black Feminism
Dalit Feminism

Unit-III

International Conventions with special reference to CEDAW Reports: Govt. of India, 2000 & 2007 (Articles 2 & 3)

Gendering the Human Development Indices: Recasting the Gender Development Index and the Gender Empowerment Measure for India: Govt. of India, 2009.

Changing Status of Women in India: Historical and Contemporary Perspective

Unit-IV

Women's movement in India: National Commission of Women

Gender Narratives in Indian Epics: Sita and Draupadi

Suggested Readings

1. Agarwal, Bina (ed.), 1994, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge, Cambridge University Press.
2. Agarwal, Bina (ed.), 1998, *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi, Kali for Women.
3. Beauvoir, Simone de, 1989, *The Second Sex*, New York, Vintage Books.
4. Blumberg, Rae Lesser (ed.), 1991, *Gender, Family and Economy: The Triple Overlap*, California, Sage.
5. Bose, Mandakranta, 2000, *Faces of the Feminine in Ancient, Medieval and Modern India*, New Delhi, OUP.
6. Butler, Judith, 1999, *Gender Trouble: Feminism and the Subversion of Identity*, New York, Routledge.
7. Cohen, Beth (ed.), 1995, *The Distaff Side: Representing the Female in Homer's 'Odyssey'*, New York, OUP.
8. Collins, Patricia Hill, 2000, *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*, New York, Routledge.
9. Friedan, Betty, 1984*, The Feminine Mystique*, New York, Dell Publications.
10. Grogan, Sarah, 1999, *Body Image: Understanding Body Dissatisfaction in Men, Women and Children*, New York, Routledge.
11. Hooks, Bell, 2000, *Feminist Theory: From Margin To Center*, London, Pluto Press.
12. Jackson, Stevi & Jackie Jones, 1998, *Contemporary Feminist Theories*, Edinburgh, Edinburgh University Press.

13. Kalleberg, Arne L. & Rachael A. Rosenfield, 1990, *"Work in the Family and the Labour Market: Cross-national Reciprocal Analysis."* In *Journal of Marriage and Family*, Vol. 52, No. 2 (May), pp. 331-346.
14. Kimmel, Michael S., 2000, *The Gendered Society*, New York, OUP.
15. Lerner, Gerda, 1986, *The Creation of Patriarchy*, Oxford, OUP.
16. Leslie, Julia, 1991, *Roles and Rituals for Hindu Women*, Madison, Fairleigh University Press.
17. Lorber, Judith & Susan A. Farrell (eds.), 1991, *The Social Construction of Gender*, California, Sage.
18. Mandelker, Amy, 1993, *Framing Anna Karenina: Tolstoy, the Woman Question and the Victorian Novel*, Columbus, Ohio State University Press.
19. Mazumdar, Vina, 1979, *Symbols of Power: Studies on the Political Status of Women in India*, Mumbai, Allied Publishers.
20. Mies, Maria, 1980, *Indian Women and Patriarchy*, New Delhi, Concept.
21. Oakley, Ann, 1985, *Sex, Gender and Society*, London, Gower.
22. Omvedt, Gail, 1990, *Violence Against Women: New Movements and New Theories in India*, New Delhi, Kali for Women.
23. Ray, Raka, 2002, *Fields of Protest: Women's Movements in India*, New Delhi, Kali for Women.
24. Rege, Sharmila, 2006,*Writing Caste/ Writing Gender: Narrating Dalit Women's Testimonies*, New Delhi, Zubaan.
25. Roman, Leslie G. & Linda Eyre (eds.), 1997, *Dangerous Territories: Struggles for Difference and Equality in Education*, New York, Routledge.
26. Weitz, Rose (ed.), 1998, *The Politics of Women's Bodies: Sexuality, Appearance and Behaviour*, New York, OUP.

Additional Readings

1. Agnes, Flavia, Sudhir Chandra & Monmayee Basu (eds.), 2004, *Women and Law in India*, New Delhi, OUP.
2. Desai, Neera & Maitreyi Krishnaraj (eds.), 1987, *Women and Society in India*, New Delhi, Ajanta.
3. Desai, Neera (ed.), 1988, *A Decade of the Women's Movement in India*, New Delhi, Himalaya.
4. Leslie, Julia (ed.), 2000, *Invented Identities: The Interplay of Gender, Religion and Politics in India*, New Delhi, OUP.
5. Shulamith, Firestone, 2003, *The Dialectic of Sex : The Case For Feminist Revolution*, New York, Farrar, Straus and Giroux.

SOC O 921: PEASANTS AND RURAL SOCIETY IN INDIA

Objective

The basic purpose of the course is to apprise the students about the basic differences of rural sociology *vis-a-vis* the urban sociology, and the crucial role played by the peasantry therein. Also how the traditional social institutions, agricultural economy and the caste system together build up social structure which is entirely different from the ideal market-oriented capitalist institutions. The course would also throw light on the nature of changes taking place in the rural social structure after the presentation of money and market economy linked to the global capital.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Significance of the study of Rural Society as a separate subject
Basic concepts/definition: Peasant, Rural Society, Village and Indian Village.
Rural Social Institutions: Family, Kinship, Class, Tribe, Caste System, Jajmani System, Religion, Political Institutions and Factions.

Unit-II

Rural India under the British rule:
Introduction of limited Land Reforms

Introduction of Commercial Crops and their Social and Political Repercussion
Introduction of Modern Industry and New Rural-Urban Linkages

Social Transformation in Independent India:
Shift from Feudal to Capitalist form of Agriculture and Change in Social Structure.
Role of Land Reforms
Role of Peasant Movement

Unit-III

Globalization and Crises of Rural Society
Impact on Economy
Impact on Social Institutions

Unit-IV

Emerging Social Ecology
Democratic Process and Caste-Ethnic Relations
Panchayati Raj Institutions and Neo-Village Republics

Suggested Readings

1. Desai, A.R. (1977) *Rural Sociology in India,* Bombay: Popular Prakashan.
2. Frankel, F.R. and Rao, M.S.A. (1989) *Dominance and State Power in Modern India*, Bombay: OUP.
3. Mencher, J.P, (1983) *Social Anthropology of Peasantry*, Part-III, OUP.
4. Mishra, Rajeeb (2006) *Voluntary Sector and Rural Development: Concepts, Practice and New Approach to Remove Rural Poverty,* New Delhi, Rawat Publications.
5. Omvedt, Gail (ed.) (1982) *Land, Caste and Politics in India*, Delhi: OUP.
6. Reddy, A.Vinayak and Charyulu, M.Yadagira. (Eds.). (2008). *Rural Development in India: Politics and Initiatives,* New Delhi, New Century.
7. Shanin, Theodor (ed.), (1987) *Peasants and Peasant Society*, New Delhi: Penguin.

Additional Readings

1. Appadurai, Arjun, (1996) *Modernity at Large: Cultural Dimensions of Globalization*; New Delhi, OUP
2. Beck, Ulrich (2000) *What is Globalization?* London: Polity.
3. Berch, Berberogue, ed. (1992) *Class, State and Development in India,* New Delhi: Sage Publications.
4. Thorner, D and Thorner, E. (1962) *Land and Labour in India,* Bombay: Asia Publications.
5. Walter, C. Neala, (1990) *Developing Rural India: Policies, Politics and Progress*, New Delhi, Allied Publishers.

SOC O 922: ORGANIZATIONAL THEORY AND BEHAVIOUR

Objective

The course provides (a) an introduction to the concept of organization; (b) discusses the various theoretical approaches to organizations; (c) familiarizes the student with the concepts of organizational ideologies and culture; and (d) focuses on the behavioral dimensions in organizations.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Organization:

Definition, Features and Typologies based on Function, Regulation, Technology and Structure and Environment

Unit-II

Theoretical Perspectives:

Classical – Marx, Weber, Taylor (Scientific Management);

Neo-Classical – Human Relations approach with special reference to the Hawthorne studies;

Modern – Systemic (closed, open and socio-technical systems approach by the Tavistock School) and Interactional (Goffman and the total institution)

Unit-III

Organizational Ideologies and Culture:

Ideologies – Structuralism, Psychologism, Consensualism, Welfarism and Legalism; Culture- sub-cultures and socialization

Unit-IV

Behaviour in Organizations:

Job satisfaction, Job Commitment, Decision making and Stress Management

Suggested Readings

1. Baron, Robert A. (1976) *Behavior in Organizations*, N.Y.: John Wiley.
2. Beach, L. R. (1997) *Psychology of Decision Making: People in Organizations*, Thousand Oaks: Sage.
3. Biddle, D. and R. Evenden (2000) *Human Aspects of Management*, New Delhi: JAICO Publishing House.
4. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: OUP
5. Eldridge, J. E. T. & A. D. Crombie (1974) *A Sociology of Organization*, London: Nelson.
6. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London: Sage Publications.
7. Pestonjee, D. M. (1999) *Stress and Coping: The Indian Experience*, New Delhi: Sage.
8. Robbins, S. P. (1999) *Organization Theory: Structure, Designs and Applications*, New Delhi: Prentice-Hall.
9. Wieland, George F. & R. A. Ullrich (1976) *Organizations: Behavior, Design and Change*, Homewood, Illinois: Richard D. Irwin Inc.

Additional Readings

1. Blau, P. M. & W. R. Scott (1963) *Formal Organizations: A Comparative Approach*, London: Routledge and Kegan-Paul.
2. Blumberg R. L. (1987) *Organizations in Contemporary Society*, Englewood Cliffs: N. J. Prentice Hall Inc.
3. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.
4. Etzioni, A. (eds.) (1969) *A Sociological Reader on Complex Organizations*, 2nd ed., N.Y.: Hold & Reinhard & Winston.
5. Etzioni, A. (1972) *Modern Organizations*, N. Delhi: E.E.E. Prentice-Hall of India.
6. Hall, Richard H. (1972) *Organizations: Structure and Process*, 2nd ed., Englewood Cliffs: N.J. Prentice Hall Inc.
7. Litterer, J. A. (ed.) (1969) *Organizations: Structure and Behavior*, N.Y.: Wiley & Sons.
8. Porter, L. W. *et al.* (1975) *Behavior in Organizations*, N.Y.: McGraw Hill.

9. Reitz, H. J. (1977) *Behavior in Organizations*, Homewood Illinois: Richard D. Irwin.
10. Sharma, K. L. (1981) *Voluntary Business Associations in Organizational Frame*, Department of Sociology: Panjab University, Chandigarh.
11. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 923: BASIC SOCIAL STATISTICS

Objective

This paper is designed to familiarize the students about basic statistical concepts, quantitative techniques for description and induction of sociological data. In the first and second units, students are introduced to measures of central tendency and measures of dispersion, bivariate distribution, etc. The third unit includes measures of association, probability, standard scores, etc. In the last unit, students are exposed to various inferential methods.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** (Theory portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable Electronic Calculators and Statistical Tables is permitted for the examination.

Course Outline

Unit-I

Statistics in Social Analysis - Functions of Statistics in social analysis, Limitations of Statistics

Variables-discrete and continuous, quantitative and qualitative; independent and dependent

Levels of measurement-Nominal, ordinal and interval

Frequency distribution, grouping error, cumulative frequency distribution, Arithmetic mean, median and mode

Unit-II

Range, semi-interquartile range, average absolute deviation, variance, standard deviation, coefficient of variation, Symmetry and Kurtosis

Bivariate distributions-Bivariate contingency tables, rules for percentaging bivariate frequency tables

Unit-III

Measures of Association-Lambda, Cramer's V, Spearman's rank correlation, Gamma and Pearson's product moment correlation coefficient

Elements of probability- 'a priori' & empirical probability, properties of probability Normal probability distribution, area under the normal curve, standard scores, use of standard scores

Unit-IV

Statistical Inference-Simple random sampling, sample and universe, statistic and parameter, sampling distribution, standard error of statistic, level of significance, critical region

Tests of significance-Z and `t' tests for significance of mean (2 independent samples); Chi-square test for AXB contingency table.

Suggested Readings

1. Blalock, H.M. (1979*) Social Statistics*, New York, McGraw Hill Book Company.

2. Loether, H.J. and Tavish, Mac D.G. (1974) *Descriptive Statistics for Sociologists: An Introduction,* Boston, Allyn and Bacon, Inc.

3. Mark Sirkin R. (1995) *Statistics for the Social Sciences*, London, Sage Publications.

4. Muller John and Kar. F. Schusseller and Herbert, L. Costner, *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.

5. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

6. Weiss, Roberts (1968) *Statistics in Social Research*, New York John Wiley & Sons, Inc.

Additional Readings

1. Jane, L. Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*; Sage Publications: London.

2. Deshpande, J.V., Gore, A.P., Shanubhogve (1995), *Statistical Analysis of Nominal Data*: New Age International Publishers: New Delhi.

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SEMESTER-III

SOC R 438: INTERPRETIVE SOCIOLOGICAL THEORIES

Objective

This course sensitizes the students to the works and ideas of sociologists who have contributed to the perspective of Interpretive Sociology, as against the Positivistic sociology. It focuses on the work of Action theorists, Interactionist theorists and the scholars belonging to the Frankfurt School of Critical Theory.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Action Theories : Max Weber, Talcott Parsons

Unit-II

Symbolic Interactionism : G.H. Mead, H. Blumer

Phenomenology : E. Husserl, A. Schutz

Unit-III

Dramaturgy : E. Goffman

Ethnomethodology : H. Garfinkel

Unit-IV

Critical Theory : J. Habermas

H. Marcuse

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory*, California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A., (2002) *Contemporary Sociological Theory*, California, Pine Forge Press.
3. Alexander, J. (1982) *Positivism: Presuppositions and Current Controversies*, Vol. I of Theoretical Logic in Sociology, Barkeley and Los Angeles, University of California Press.
4. Bernstein, R.J. (ed.) (1985) *Habermas and Modernity,* Cambridge Polity Press.
5. Blumer, H. (1969) *Symbolic Interactionism*, Englewood Cliffs, Prentice Hall.
6. Craib, Ian (1984) *Modern Social Theory,* Brigton, Harvestor Press.
7. Douglas, J. (ed.) (1971) *Understanding Everyday Life*, London, Routeledge & Kegan Paul.
8. Garfinkel, H. (1984*), Studies in Ethnomethodology*, Cambridge, Polity Press.
9. Giddens. A. (1987*) Social Theory and Modern Sociology*, Cambridge, Polity Press.
10. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
11. Goffman, E. (1959) *The Presentation of Self in Everyday Life*, New York, Doubleday.
12. Gurwitsch, A. (1962) "The Commonsense World as Social Reality", *Social Research*, 28-1, 71-93.
13. Habermas, J. (1984) *Theory of Communicative Action*, Cambridge, Polity Press.
14. Heritage, John C. (1987) "Ëthnomethodology" in A. Giddens and Turner (eds.), *Social Theory Today*, Cambridge Policy Press, 347-382.
15. Heritage, J. (1989) *Garfinkel and Ethnomethodology*, Cambridge, Polity Press.
16. Joas, H. (1987) "Symbolic Interactionism" in A. Giddens and J. H. Turner (eds.) *Social Theory Today*, Cambridge, Polity Press, 82-115.
17. Natanson, M. (1970) "Phenomenology and Typification: A Study in the Philosophy of A. Schutz", *Social Research* 37 (1), 1-22.
18. Parsons, Talcott, (1951) *The Social System*, Glencoe, III, The Free Press.
19. Weber, Max (1947) *The Theory of Social and Economic Organization*, Glencoe, III, The Free Press.
20. Zaner, R. M. (1961) "Theory of Intersubjectivity: Alfred Schutz", *Social Research*, 28-1, 1-17.

Additional Readings

1. Collins, Randall (1997*) Sociological Theory*, Jaipur, Rawat Publications.
2. Elliott, Anthony and Bryan S. Turner (eds.) (2001) *Profiles in Contemporary Social Theory*, London, Sage Publications.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat Publications.
4. Zeitlin, I.M. (1998*) Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat Publications.

SOC R 439: METHODS AND TECHNIQUES IN SOCIAL RESEARCH

Objective

Students in this Semester are supposed to do field work as a part of this Course. Hence, the Course familiarizes the students with basic elements of scientific method, apart from the process of field work, data collection and finally report writing. This course trains the students as to how to draw influences and conclusions out of empirical research.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Scientific Method:

i) Definition and Aims: Explanation; Generalization; Prediction; Control
ii) Basic Elements: Concepts, Constructs, Hypotheses, Fact, Theory
iii) Induction and Deduction

Unit-II

Research Design:

Exploratory, Descriptive, Experimental, Quasi-experimental, Comparative, Longitudinal and Panel studies
Problems of Experimental Studies in Social Research.

Unit-III

Measurement and Scaling:

Measurement: Meaning, Levels, Indices, Operationalization, Problems
Scaling Techniques - Thurstone, Likert, Guttman and Bogardus Scales Reliability and Validity of Scales.

Unit-IV

Field Work:
Meaning and Uses
Techniques of Data Collection:

Observation: Structured and Unstructured; Participant and Non-Participant;
Interview Schedule: Structured and Unstructured
Interview: Types; Advantages and Disadvantages
Questionnaire: Types, Advantages and Disadvantages
Case Study; Content Analysis;
Data Analysis: Coding, Tabulation and Report Writing

Suggested Readings

1. Bailey, K. D., (1997) *Methods of Social Research*, New York, The Free Press.
2. Bernard, H. Russell (2000) *Social Research Methods – Qualitative and Quantitative Approaches*, New Delhi, Sage Publications India Pvt. Ltd.
3. Colin, R. (2000) *Real World Research* Oxford, Blackwell,
4. Goode, W.J. and Hatt P.K. (1952), *Methods in Social Research*, New York: McGraw Hill, International Students Edition.
5. Kerlinger, Fred N. (1973), *Foundations of Behavioural Research*, New York, Holt, Rinehart & Winston, INC.
6. Moser and Kalton (1980) Survey *Methods in Social Investigation.* Heinemann Educational Books.
7. Punch, K. F, (1998) *Introduction of Social Research, Quantitative & Qualitative Approach*, New Delhi, Sage Robson,
8. Seltiz, Claire, et.al. (1959) *Research Methods in Social Relations,* New York, Henry Holt & Co.
9. Tashakkori, A. and Charles Teddlie, (2003) *Handbook of Mixed Methods,* New Delhi, Sage.
10. Tim, May, (2001) *Social Research: Issues, Methods and Process*. Buckingham, Open University Press.

Additional Readings

1. *Barly, Kenneth, D. (1978) Methods of Social Research,* New York. The Free Press.
2. Bryant, G.A. (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Giddens, Anthony, (1974), *Positivism and Sociology*, London: Hienmann.
4. Hindess, Barry (1977) *Philosophy and Methodology in Social Sciences*,
5. The Harvester Press.
6. Madge, John, (1976) *The Tools of Social Science*, London, Longman.

SOC O 532: BASIC METHODS IN POPULATION STUDIES

Objective

To understand the basic dynamics of population, it is important to have basic knowledge of demographic methods. This course prepares the students to explore the sources of demographic data, learn basic techniques to handle these data and develop measures to understand changes in population size, fertility, mortality and marriage.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Sources of Demographic Data: Census, Civil Registration, Population Surveys, and UN Sources of Demographic Data. Nature and Quality of these Data Sources.

Changes in Population Size: Intercensal Change, Average Annual Growth Rate, Linear Growth Rate, Geometric Growth Rate, Exponential Growth Rate; Interpolation and Extrapolation.

Unit-II

Population Composition and Distribution: Literacy Rate, Rural-Urban, Labour Force Participation Rate.

Age and Sex Composition: Problems related to Age Data, Age Distribution, Age Heaping Effects, and Adjustment of Age Data. Dependency Ratios. Construction of Age-sex pyramids, Sex Ratio.

Unit-III

Measures of Mortality: Computation of Crude Death Rate, Age-Specific Death Rates; Infant Mortality Rate, Perinatal, Neonatal, Post-Neonatal Mortality Rate.

Life-Table Method: Types of Life Tables, Basic Columns of Life Tables. Relationship between various life-table columns, Life Table Stationary Population. Application of Life Table approach.

Unit-IV

Measures of Fertility: Computation of Crude Birth Rate and its uses, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate, Child Woman Ratio

Contraceptive Prevalence Rate, Abortion Rate & Foetal Wastage

Measure of Marriage & Divorce: Crude Marriage Rate, Divorce Rate. Mean Age at Marriage from Census and Survey Data.

Suggested Readings

1. Census of India*, Age and Life Tables*, Series of India, Paper 2 , GOI, 1974.
2. Hanp, Arthur and Thomas, T. (2001*) Population Reference Bureaus,* Population Handbook, 4th ed., Washington, PR3.
3. Mishra, Bhaskar D. (1993) *Introduction to the Study of Population.* New Delhi, National Book Population Reference Bureau, Trust (Latest Edition)
4. Shryock, Henry S. Jacob S. Siegel and Others (1976) *Methods and Materials of Demography.* (Condensed Edition) Harcourt Brace, Academic Press.
5. Spiegelman, Mortimer, (1968) *Introduction to Demography*, Cambridge, Harvard University Press.
6. *UN Manuals* Nos. 1, 2 & 3, United Nations.

Additional Readings

1. Cox, Peter (1959), *Demography,* London: Cambridge University.
2. Haupt, A. and Kane, T. (1998), *Population Handbook*, Washington DC, Population Reference Bureau.
3. Newell, Colin (1988), *Methods and Models in Demography*, London, Belhaven Press.

SOC O 632: SOCIAL DEVELOPMENT IN INDIA

Objective

This paper examines the development process in India focusing mainly on the issues of

(a) the India State and planned development; (b) the role of voluntary sector in India's development; (c) the assessment of the problems of, and measures taken to improve the conditions of the underprivileged groups such as the SCs, STs and BCs; and (d) to consider the phenomenon of globalization and its consequences for the Indian society.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Social Development: Concept, Meaning and Indicators
Development Planning in India Historical Overview and present status Planning Commission-Niti Aayog)

Unit-II

Voluntary Sector and Development: Voluntary sector organizations, their Potential and Limitations as Agencies of Social Transformation; Case Studies of Voluntary organisations.

Unit-III

Development of Disadvantaged Groups: Problems of Scheduled Castes (SCs), Scheduled Tribes (STs) and Backward Classes (BCs); Compensatory Discrimination through Constitutional and Legal measures; Development Schemes for SCs, STs and BCs; Commissions and their Recommendations: Mandal Commission and the Reservation Debate; Sociological Appraisal of the Development Policies for STs, SCs and BCs

Unit-IV

Globalization and its Social Implications in India: Impact on Agriculture and Labour; Women and Youth.

Suggested Readings

1. Basu, A. R. (1985) *Tribal Development Programmes and Administration in India*, New Delhi: National Book Organization. (Chapters 2 & 15)
2. Basu, D. K. and R. Sisson (eds.) (1986) *Social and Economic Development in India: A Re-assessment*, New Delhi: Sage, (Chapters by Ser & Galanter).
3. Chitnis, Suma (1981) *A Long Way to Go: Report of a Survey of Scheduled Caste High School and College Students*, New Delhi: Allied Pub. (pp. 107-143).
4. Choudhary, K. (1990) "Reservations: A Systematic Compulsion", *Mainstream*, March 3. (pp. 23-26)
5. Conference Number on "Economic Restructuring in India and Labor" (1992) *The Indian Journal of Labor Economics*, Vol. 35, No. 4. Oct-Dec.
6. Desai A. R. (1985) *India's Path of Development: A Marxist Approach*, Bombay: Popular Prakashan (Chapter 2).
7. GO, (1993) "Farmers Movement: Fighting for Liberalization", *Economic and Political Weekly*, December 11 (pp. 2708-2710)
8. Jain, Devaki, (1980) *Quest for Power: Five Indian Case Studies*, Ghaziabad, Vikas
9. Jena, N. A. (1994) "An Inquiry into Popular Participation", *Participation and Governance*, Vol. I, No. I, July (pp.8-17)
10. Khan, Murtaz Ali (1980) *Scheduled Castes and Their Status*, New Delhi: ICSSR, (Introduction)
11. McPhail, T. L. (1992) "Electronic Colonialism and the World Information Order" in A. Giddens (ed.) *Human Societies: A Reader, Cambridge*, Polity Press (pp.289-291)
12. Mehta , S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
13. Misra, S. K. and V. K. Puri (1994) *Indian Economy: Its Development Experience*, Bombay: Himalaya Pub.
14. Mowli, V. C. (ed.) (1990) *Role of Voluntary Organizations in Social Development*, New Delhi: Sterling Pub. (Preface & Conclusion)
15. Petras, James (1994) "Cultural Imperialism in Late 20th Century", *Economic and Political Weekly*, Aug. 6 (pp. 2070-2073)
16. Pimpley, P. N. (1988) *Voluntaristic Approach to Development*, Unpublished Monograph.
17. Rajput, Pam and H. L. Swarup (eds.) (1994) *Women and Globalization: Reflections, Options and Strategies*, New Delhi: Ashish Pub. House.
18. Rao, V. M. (1994) "Agriculture and Liberalization: Some Implications for Development Policies", *Economic and Political Weekly*, April 16-23 (pp.999-1003)
19. Redelift, Michael (1984) *Development and the Environmental Crisis: Red or Green Alternatives?* London: Methuen Inc.
20. Sabbarwal, S. (1997) "Ecological and Socio-Economic Consequences of International Tourism for the Less Developed Countries" in S. R. Mehta (ed.)
21. *Poverty, Population and Sustainable Development: Essays in Honour of Professor V. S. D'Souza*, Jaipur: Rawat.
22. Schchiananda (1977) *Harijan Elite: A Study of their Status, Network, Mobility and Role in Social Transformation*, New Delhi: Thomson Press (Chapter 6).
23. Shankar, K. (1989) "Planning Ethos in India", *Mainstream*, Sept. 23 (pp.7-8)

24. Sharma, S. L. (1992) "Social Action Groups as harbingers of Silent Revolution", *Economic and Political Weekly*, Vol. 27, No. 47
25. Singh, A. K. (1984) *Tribal Development in India*, New Delhi: Amar Prakashan, Chapters 2, 7 & 8
26. Singh, S. N. (1994) *Reservations: Problems and Prospects*, New Delhi: Uppal Pub. House, (Introduction & Chapter 3)
27. "Sustainable Development", Special Issue (1991), *The European Journal of Development Research*, Vol. 3, No. 1, June
28. "Symposium on Implications of Globalization" (1995) *Sociological Bulletin*, Vol. 44, (Articles by Mathew, Panini & Pathy)
29. Yadav, K. C. (1994) *India's Unequal Citizens: A Study of OBCs*, New Delhi: Manohar Pub. (Introduction & Chapters 3 & 5).

Additional Readings

1. Appadurai, A. (1997) *Modernity at Large: the Cultural Dimensions of Globalization*, New Delhi: OUP
2. Dereze, J. and Amartya Sen (1996) *India: Economic Development and Social Opportunity*, New Delhi: OUP
3. Keily, R. and P. Marflet (eds.) (1998) *Globalization and the Third World*, London: Routledge.
4. Peet, R. (1991) *Global Capitalism: Theories of Societal Development*, Routledge
5. Waters, M., (1995) *Globalization*, New York: Routledge & Kegan Paul.

SOC O 633: RURAL DEVELOPMENT IN INDIA

Objective

The objective of the course is to familiarize the students with the history of rural development in India, role of the state and farmers in it, and the impact of Market forces on agriculture.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Perspectives on Rural Development:
Liberal, Marxist, Gandhian

Unit-II

State and Rural Development: Land Reforms
Community Development Programs
State and Alleviation of Rural Poverty through Various Programs: SGSY, IAY, EAS, JRY. etc.
State and Education of Rural Masses
Role of Panchayati Raj Institutions

Unit-III

Rural Development and the Role of Peasant Movements:
Pre-Independence Period: Tribal Revolts, Kisan Sabha, Gandhi and Peasants and Telangana Uprising
Post-Independence Period: Tenant Movement, Naxalite Movement and Fresh move for Land Reforms, Farmers Movement.

Unit-IV

Rural Development and the Market Forces:
Green Revolution and its Impact on Rural Society
Globalization, Commercialization of Agriculture,
Impact on Non-Farm Employment and Distributive Justice
W.T.O. and the Process of Marginalization
Challenges of Sustainable Rural Development

Suggested Readings

1. Berch, Berberogue, (ed.) (1992) *Class, State and Development in India*, New Delhi, Sage Publications.
2. Desai, A.R. (ed.) (1979) *Peasant Struggles in India*, Bombay: Oxford University Press.
3. Desai, A.R (ed.) (1986) *Agrarian Struggles in India after Independence*, Oxford University Press.
4. Desai, A.R. (1977) *Rural Sociology in India,* Bombay, Popular.
5. Dhanagre, D.N. (1983) *Peasant Movements in India,* Delhi: Oxford Univ. Press.
6. Nadkarni, M.V. (1987) *Farmers' Movement in India*, Delhi, Allied Publishers.

7. Radhakrishana, P. (1989) *Peasant Struggles: Land Reforms and Social Change in Malabar 1836-1982,* New Delhi: Sage.
8. Shah, Ghanshyam (1990) *Social Movements in India: A Review of Literature*, New Delhi: Sage.
9. Singh, K.S. (1982) *Tribal Movements in India*, New Delhi: Mandra.

Additional Readings

1. Franda Marcus (1979), *India's Rural Development: An Assessment of Alternatives*, London: Indian Univ. Press.
2. Hoogvelt, Ankie (1998) *The Sociology of Development*, London: Macmillan.
3. Jain, L.C. (1979) *Grass Without Roots- Rural Development Under Government*, New Delhi: Sage.
4. Mehta, S.R. (1984) *Rural Development: Policies and Programmes*, New Delhi: Sage Publications.
5. Rao, S.K. (ed.) (1981) *Rural Development in India: Some Facets*, Hyderabad: NIRD.
6. Rao, S.V. (1985) *Education and Rural Development*, New Delhi: Sage Publications.
7. Rao, V.M. and Aziz, Abdul (1989) *Poverty Alleviation in India-Programme and Action,* New Delhi: Ashish.

SOC O 732: PROBLEMS OF URBAN INDIA

Objective

This course familiarizes the students with the contemporary urban situation in India, apart from the historical trends and patterns of urbanization in India. Focus shall be on the recently emerging urban problems and the approaches which have been used to tackle them. The students will be exposed to the most pertinent issues and controversies relating to urban population of India, so as to enable them to develop research problems for further specialization in the given area.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

India's Urbanization

Historical account of Urbanization in India:
Trends and Pattern, Features
Urbanism and Urbanization, Over-urbanization
Rural-Urban Migration. Urban Informal Sector, Tertiarization
Mega Cities of India

Unit-II

Urban Basic Services

Definition, Intra and Inter-City variations:
Water Supply, Power, Sanitation and Sewerage, Solid Waste Management, Education, Health, etc.

Environmental Pollution

Cities and Pollution, Causes, Types and Remedies.
Urban Transport and Traffic Management.

Unit-III

Approaches to Urban Management

Approaches:
Public Provision, Privatization and People's Participation,
Community Participation- Strengths and Weaknesses.
Lessons from Empirical Cases

Unit-IV

Urban Poverty in India

Concept of Urban Poverty; Theoretical Explanations- Structural and Cultural,
Economic and non economic indicators.

Culture of Poverty, Critique.

Empirical situation of Urban poverty in India, Housing, Slums, Features of Indian slums and Causes, Women and Child Poverty.

Suggested Readings

1. Bose, Ashish, (1994). *India's Urban Population- 1991 Census Data.* New Delhi, Wheeler Publishing Co. Ltd.

2. Bose, Ashish (1970). *Urbanization in India: An Inventory of Source Materials,* Bombay, Academic Books Ltd.

3. Census of India, every successive Report.

4. Dentler, Robert A., (1977). *Urban Problems, Perspectives and Solutions*. Chicago, Rand, McNally College Publishing Co.

5. D'Souza, Victor S., (1979). "Socio-Cultural Marginality: A Theory of Urban Slums and Poverty in Cities", in *Sociological Bulletin,* Vol. 28, Nos. 1-2.

6. Flanagan, William G. (1990). *Urban Sociology, Images and Structure.* Boston, Allyn and Bacon.

7. Gill, Rajesh (2009). *The Contemporary Indian Urban Society: Ethnicity, Gender and Governance*. New Delhi, Bookwell.

8. Gill, Rajesh 1993. "Urban Poverty in India: Theoretical Understanding and Policy Implications", in *Urban India.* Vol. XIII, July-Dec., No. 2.

9. Gill, Rajesh 1997. "Issues and Perspectives on Urban Poverty: The Indian Experience" in *Urban India,* Vol. XVII, Jan.-June/July-Dec. Nos. 1&2.

10. Misra, R.P. and K. Misra.1998. Million Cities of India. New Delhi, Sustainable Development Foundation.

11. Sovani, N.V. 1966. *Urbanization and Urban India.* Bombay, Asia Publishing House.

12. Tiwari, Vinod K. and Rao, W.P. (eds.) 1986. Indian Cities-Ecological Perspectives. New Delhi, Concept Publishing House.

13. Wratten, Ellen 1995. "What is Urban Poverty? Definitions and Characteristics". In *Environment and Urbanization*. Vol. 7 No.1.

Additional Readings

1. Garber, Judity A. & Turner, R.S. (eds.) 1995. *Gender in Urban Research*. Urban Annual Review, Sage Publications.

2. Gill, Rajesh 2000. "Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization?", in *Sociological Bulletin.* Vol. 49, No. 2, Sept.

3. Gill, Rajesh 1999. "Seventy-Fourth Constitution Amendment and Political Empowerment of Women in Punjab: A Study in Urban Governance", in *Urban India,* XIX(1).

4. Misra, R.P. and Misra, Kamlesh, 1998. *Million Cities of India.* New Delhi, Sustainable Development Foundation.

5. Mohanty, Bidyut (ed.) 1993. *Urbanization in Developing Countries, Basic Services and Community Participation.* New Delhi, Concept Publishing Company.
6. National Institute of Urban Affairs, 1988. *State of India's Urbanization.* New Delhi, NIUA.

7. National Commission on Urbanization 1988, *Report,* Vols. 1&2.

8. Pactone, Michael 1990. *Urban Problems-An Applied Urban Analysis.* London, Routledge.

9. Press, Irwin and Smith, M.F. *Urban Place and Process-Readings in The Anthropology of Cities.*

10. Ramachandran, R. 1989. *Urbanization and Urban Systems in India.* New Delhi, Oxford University Press.

11. Rao, M.S.A. 1974. *Urban Sociology in India, Reader and Source Book.* New Delhi, Orient Longmans Ltd.

12. Spates, James. 1982. *The Sociology of Cities*. New York, St. Martin Press.

13. Wit, J.W. 1996. *Poverty, Policy and Politics in Madras Slums-Dynamics of Survival, Gender and Leadership.* The Hague, Institute of Social Sciences, Development Studies, Sage.

SOC O 832: FAMILY IN CROSS-CULTURAL PERSPECTIVE

Objective

Students' exposure to this course intends to facilitate their comparative understanding of family and gender relations in different societies. Another aim is to make the students aware whether the family is the basic institution in all societies and whether family as an institution is near the point of extinction or restructuring itself and as a consequence many alternative lifestyles to traditional marriage and family living are emerging.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Family and Gender-Relations

In Highly-Developed, Developing and Under-Developed Countries

- Japan, Belgium
- India, Iran, Brazil
- Afghanistan and Ethiopia

Unit-II

Universality of Family

- Family As a Universal Social Institution- Views of Bronislaw Malinowski, George Murdock, Talcott Parsons, Norman W. Bell and Ezra F. Vogel

- Fate of Family among the Blacks in The Islands of West Indies, Parts of Central America and the U.S.A.; The Nayars of Central Kerala in India.

Unit-III

Emerging Alternative Lifestyles

- Singlehood – Never Married
- Cohabitation – Living Together Without Marriage

- Single parent – Male/Female Headed Households
- Group Living – Communes (The Kibbutz of Israel)

Unit-IV

Future of Family in the light of

- Gender Equity
- Ageing
- Migration

Suggested Readings

1. Allen, Katherine (1990) *Single Women/Family Ties*, New Delhi: Sage Publications.
2. Bell Norman W. and Eza F. Vogel (1986) *A Modern Introduction to the Family* (Revised edition), New York: The Free Press.
3. Bender, David L. and Gray E. McCuen (eds.) (1972) *Is Family Obsolete*? Minnesota: Green Heaven Press.
4. Boh Katja and et. al (1990) *Changing Patterns of European Family Life*, New York: Routledge.
5. Chakraborty, Krishna (2002) *Family in India*, New Delhi: Rawat Publications.
6. Das Man Singh & Clinton K. Jesser (eds) (1980) *The Family in Latin America,* New Delhi: Vikas Publishing House Pvt. Ltd.
7. Das Man Singh (ed.) (1990) *Family in the Muslim World*, Delhi: M.D. Publications.
8. Hereda, Rudolf C. and Mathas, Edward (1995) *Family in Changing World: Women, Children and Strategies of Intervention*, New Delhi: Indian Social Institute.
9. Leeder, Alaine, (2004) *The Family in Global Perspective*. New Delhi: Sage Publications.
10. Macklin, Eleanord D and Roger H. Rubin (1983) *Contemporary Families and Alternative Life Styles*, New Delhi. Sage Publications.
11. Vardhan Ranjay (1999) Female Headed Households in Patriarchal Society: A Sociological Study, Delhi, Indian Publishers Distributors

Additional Readings

1. Aidala, Angela A. (1989) 'Communes and Changing Family Norms', *Journal of Family Issues,* Vol. 10, No. 3, (Sept), PP 311-338.
2. Allan, Graham (1984) *Family Life: Domestic Roles and Social Organization*, New York: Basil Blackwell.
3. Bharat, Shalini (1984) 'Single-Parent Families- Consequences for Single Parents', *Indian Journal of Social Work*, Vol XLIX, No. 3, PP 227-238.
4. Bumpass, Larry L. James. A. Sweet and Andrew Cherlin (1991) 'The Role of Cohabitation in Declining Rates of Marriage'*, Journal of Marriage and Family*, Vol. 53. No. 4, (Nov.), PP 913-927.
5. Uberoi, Patricia (ed.) (1993) *Family, Kinship and Marriage in India*, Delhi: Oxford University Press.
6. Vardhan Ranjay (2008) Single Women: A Study of Spinsters, Delhi, Indian Publishers Distributors

SOC O 931: SOCIOLOGY OF AGING

Objective

Owing to breakdown of traditional values and institutional framework in societies such as India, the aged are facing a number of socio-economic and psycho-medical problems. The worldwide trends indicate that the proportion of aged people in the populations of different societies is ever increasing. This has far reaching implications for the societies across the world. Social scientists are looking at this issue as a matter of serious concern. So, there is an urgent need to study the aged to understand their plight and problems, to study the problems created by increasing aging population as well as to formulate possible interventions for their welfare. This course is an attempt in this direction.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Aging:

- Biological & Physiological, Social and Psychological Aging
- Myths and Facts about Old Age
- Demographic Dimensions of the Elderly

Unit-II

Sociological Perspectives of Aging

Micro-Perspectives:

- Role Theory (Aging and the Individual),
- Activity Theory,
- Disengagement Theory,

Macro Perspectives:

- Modernization Theory,
- Age Stratification Theory,
- Political Economy Theory

Unit-III

Society, Family and Aging:

- Status of the Aged in the Family-Urban and Rural Settings.
- Neglect and Abuse of Elderly in Family.
- Aged in Different Societies- Tribal, Traditional, and Modern.
- Status and Treatment which they get in Traditional Hindu Society.

Unit-IV

Problems of aged and Rehabilitation:

- Economic, Social, Physical and Psychological Problems.
- Emerging Factors Responsible for Aggravating Problems of the Aged.
- Strategies for Coping with the Problems of the Aged, Social Security Schemes and other Developmental Programmes.

Suggested Readings

1. Bose, A. & Gangrade, K.D. eds. (1988) *Aging in India*, New Delhi: O.U.P.
2. Bhatia, H.S. (1983) *Aging and Society*, Udaipur: Aryan Publishers.
3. Dandekar, Kumudini (1996)*The Elderly in India*, New Delhi: Sage Pub. Pvt. Ltd.
4. Desai, Murli & Siva Raju (2000) *Gerontological Social Work in India: Some issues & Perspectives*, New Delhi: B.R. Pub Corp.
5. Donald , Cowgill (1972) *Aging & Modernization*, New York: Meredith Corp.
6. Sharma, M.L.; and Dak, M.K. (1987) *Aging in India*, Delhi: Ajanta Pub.
7. Wilson, Gail (2000) *Understanding Old Age: Critical and Global Perspectives*, New Delhi, Sage Publications.

Additional Readings

1. Cohen, Lawrence (1999) *No Aging in India: Modernity, Senility and the Family,* New Delhi: O.U.P.
2. Dandekar, Kumudini (1993), 'The Aged, their Problems and Social Interventions in Maharashtra', *Economic and Political Weekly*, Vol. XXVII, No. 23, June 5, pp. 1189-94.
3. Rajan, S. Irudaya, Mishra, V.S. and Sarma, P. Sankara, (1999), *India's Elderly: Burden or Challenge?*, New Delhi, Sage Publications.
4. Sati, P.N. (1988*) Retired and Aged People*, Delhi, Mittal Publications.

SOC O 932: ORGANIZATIONAL STRUCTURE AND DEVELOPMENT

Objective

This course focuses on a) the structural dimensions of organization; b) the phenomena of organizational power and environment; c) the emerging salience of information technology in organizational communication; and d) the processes of organizational change and development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Organizational Structure and Goals:

Structural Dimensions – Complexity, Centralization, Bureaucratization, Professionalization; Goals – Types, Goal Multiplicity and Goal Conflict, Goal Succession and Displacement

Unit-II

Organizational Regime and Environment:

Leadership – Definition, Theories and Styles

Power in Organizations – Authority (Weber)

Power and Compliance (Etzioni)

Environment – Definition and Types

Unit-III

Communication and Information Technology in Organizations:

Communication – Formal and Informal networks

Role of Information Technology (IT) in Modern Organizations

Unit-IV

Planned Change and Organizational Development (OD):

Definition, Nature and Approaches

The Process and Techniques of OD – Systemic and Interpersonal

Suggested Readings

1. Bhatnagar, Subhash (2000) *Information and Communication: Technology in Development*, New Delhi: Sage Publications.

2. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: Oxford University Press.

3. Fiedler, F. E. (1967) *A Theory of Leadership Effectiveness*. N.Y.: McGraw-Hill.

4. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London, Sage.

5. Kaur, K. P. (1993) *The Professional Management in Industrial Organizations*. New Delhi: Deep and Deep.

6. Luthans, F. (2000) *Organizational Behavior*, Boston, Irwin McGraw-Hill.

7. Manuel, C. (1996) *The Rise of Network Society*. London: Blackwell.

8. Marguilies, N. and A. Raja (eds.) (1978) *Conceptual Foundations of Organizational Development*. N.Y.: McGraw-Hill.

9. Melkote, S. (2001) *Communication for Development in the Third World*. New Delhi: Sage.

10. Sabbarwal, S. (1990) *Organizational Approach to Environmental Control*. New Delhi: Ashish Pub.

11. Sharma, R. A. (2000) *Organizational Theory and Behavior* (2nd edition), New Delhi: Tata McGraw-Hill.

12. Singh, N. (2000) *Human Relations and Organizational Behavior*, New Delhi, Deep and Deep.

13. Zrkocrzy, P. and N. Heap (1995) *Information Technology*. N.Y.: Pitman.

Additional Readings

1. Blumberg, R. L. (1987) *Organizations in Contemporary Society*, Englewood: Cliffs, N. J.: Prentice-Hall.

2. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.

3. Gross, E. (1969) "The Definition of Organizational Goals" *British Journal of Sociology*, Vol. 20, (pp 277-294).

4. Harlow, D. N. & J. J. Hall, Richard H. (1972) *Organizations: Structures and Process*, N. Y.: Wiley.

5. Haralambos, M. (1980) *Sociology: Themes and Perspectives*, New Delhi: Oxford University Press.

6. Litterer J. A. (1969) *Organizational Structure and Behavior*, N.Y.: Wiley.

7. Perrow, C. (1961) "The Analysis of Goals in Complex Organizations", *American Journal of Sociology*, Vol. 66, pp 335-341.

8. Sabbarwal, S. (1988) "Approaches to Organizational Structure and Effectiveness", *Sociological Bulletin*, 37 (1 & 2) March-September.

9. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 933: SOCIOLOGY OF DEVIANCE: CONCEPTS AND THEORIES

Objective

This paper aims at sensitizing the students regarding the concept of deviance and its related terms. Students will also be made aware of different explanations of deviance ranging from pathological to interactionist perspectives.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Deviant Behaviour:

Definition, Concept – Relative/Absolute.

Distinction between Deviant Behaviour and Deviant-Role

Pathological Perspective of Deviance – Biological and Psychological theories.

Unit-II

Social Disorganization and Value-Conflict Perspective:

Causes of Social Disorganization
Theories of Social Disorganization:

C.H. Cooley, W.I. Thomas and Florian Znaniechi, W.F. Ogburn. Theory of Conflict of Values: Richard C. Fuller & Richard R. Myers.

Unit-III

Structural-Functional Perspective:

Theory of Anomie: Emile Durkheim and Robert K. Merton

Theory of Differential Association: Edwin Sutherland and Donald R. Cressey.

Unit-IV

Inter-actionist Perspective:

Theory of Labelling: Edwin M. Lemert and Howard S. Becker Social and Psychological Effects of Labelling for Primary and Secondary Deviance, Social Consequences of Stigma

Social Consequences of Stigma and Labelling.

Suggested Readings

1. Aggleton, Peter (1987) *Deviance,* New York: Tavistock Publication.
2. Becker, H. and Aluin Boskoff (eds.) (1989) *Modern Sociological Theory: In Continuity and Change*, New York: Dryden.
3. Downes, David and Rock Paul (1982*) Understanding Deviance: A Guide to the Sociology of Crime and Rule-Breaking,* Oxford Clarendon Press.
4. Edwin H (1980) *The Deviance Process*, New York: D. Van Vost & Co.
5. Kelly Delos H (1979) *Deviant-Behaviour: Readings in the Sociology of Deviance.* New York: Martin's Press
6. Schur, Edwin M (1971) *Labelling Deviant Behaviour: Its Sociological Implications,* New York : Harper & Row Pub.
7. Singh R.G. (1985*) Sociology of Deviance*, New Delhi: Jain Sons Publications.
8. Thio, Alex (1978) *Deviant Behaviour.* London: Houghton Mifflin Co.

Additional Readings

1. Becker, Howard S. (1963) *Outsiders: Studies in the Sociology of Deviance*, Glenco: Free Press.
2. Gibbons, Don C. (1978) *Society, Crime and Criminal Careers* (3rd ed.) New Delhi: Prentice-Hall of India Pvt. Ltd.
3. Gove, Wolter R (ed) (1980) *The Labelling of Deviance* (2nd ed.) London : Sage Publications.
4. Reid Sue Titus (1976) *Crime and Criminology* Illionois: The Dryden Press.
5. Wolfgand, Marvin and E. Franco Ferrachtti (1982) *The Sub-Culture of Violence.* Beverly Hills: Sage Publications.

SOC O 934: SOCIOLOGY OF CRIME

Objective

This course is designed to acquaint the students with concepts and perspectives used to explain the criminal behaviour. Students will be introduced to the eruption of different forms of crime and the significant advances made towards its control and prevention and correctional measures.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Perspectives:

Deviance, Juvenile delinquency and Crime

Legal, Behavioral and Sociological Definitions of Crime
Classical and Positive Schools of Criminology

Biological, Psychological and Sociological Approaches (Conflict, Structural-Functional and Symbolic-Interactionist)

Unit-II

Major Forms of Crime:

Violent Crime: Homicide and Aggravated Assault

Property Offences: Economic and Property Crimes

Public Order Offenses: Crime against Moral and Political Order Crimes
involving Abuse of Power: White Collar and Corporate Crime

Unit-III

Punishment in Relation to Crime:

Theories of Punishment: Retributive, Deterrent and Reformative
Penology in India and Indian Penal Code

Types of Punishment: Capital punishment, transportation, imprisonment, forfeiture of property, fine, whipping

Unit-IV

Correctional Programmes:

Significance and Forms of Correctional Programmes: Prison based, Community based.
Prison based Correction: New Delhi Model of Correction.

Community based Correction: Probation, Parole, After-care and Rehabilitation.

Suggested Readings

1. Agarwal, Rajendra Saran & Sarvesh Kumar (eds.) (1986) *Crimes & Punishment in New Perspective*, Delhi: Mittal Publication.
2. Ahuja, Ram (2000) *Criminology*, Jaipur: Rawat Publications.
3. Bhatnagar, R.R. (1990) *Crimes in India: Problems and Policy*, New Delhi: Ashish Publications.
4. Crow, Iain (2001) *Treatment and Rehabilitation of Offenders,* London: Sage Publications.
5. Lilly, J.Robert., Cullen, Francis .T and Ball, Richard A. (2007). *Criminological Theory: Context and Consequences*, Sage Publications, Thousand Oaks.
6. Prasad, R.S.(2004). Cyber Crime and Introduction, ICFAI Univ, Hederabad.
7. Sharma, Ram Nath (1993) *Crime and Penology: Social Disorganization and Social Problems*, Delhi, Surjeet Publications.
8. Singha, Radhika (1999) *Despotism in Law: Crime and Justice in Early Colonial India*, New Delhi, O.U.P.
9. Sutherland, Edwin H & Donald R. Cressey (1968) *Principles of Criminology,* Bombay, The Times of India Press.
10. Weisburd, Dand & Kip Schlegal (1990) *White-Collar Crime Reconsidered*, Boston: Northeastern University Press.

Additional Readings

1. Devasia, V.V. (1993) *Criminology, Victimology and Corrections*, Delhi: Ashish Publications.
2. Doongaji, Damayanti (1986) *Crime and Punishment in Ancient Hindu Society*, Delhi, Ajanta Publications.
   Dutta, N.K.(1989) *Origin and Development of Criminal Justice in India*, New Delhi: Deep and Deep Publications.
3. Gill, S.S. (1998*) The Pathology of Corruption*, New Delhi: Harper Collins Publishers.
4. Gilsinan, James F. (1989) *Criminology and Public Policy: An Introduction*, Englewood Cliffs, Prentice Hall.
5. Mathur, Krishan Mohan (1996) *Crime, Human Rights and National Security*, New Delhi: Gyan Publication House.
6. Meier, Robert F. (1988) *Crime and Society*, Boston, Allyn & Bacon.
7. Ministry of Home Affairs (1998) *Crime in India*, New Delhi, Government of India.

SOC O 935/945: DISSERTATION (3rd and 4th Semesters)

SOC O 936: ADVANCED SOCIAL STATISTICS

Objective

The course is aimed at introducing the students with advanced statistical techniques for multivariate analysis of sociological data. In the first two units the students are familiarized with various aspects of simple and multiple regression analysis including coefficient of determination, correction-ratio, point-biserial correction, partial correlation etc. The last two units include discussion on Path analysis and various parametric and non- parametric tests of significance.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** (Theory Portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable electronic calculators and Statistical Tables is permitted for the examination.

Course outline

Unit-I

Linear Regression, Least Squares Method, Estimating the Intercept and Slope of the Linear Regression Model

Standard Error of the Estimate and its Uses, Zero-Order Correlation by Least Squares Method

Coefficient of Determination, Correlation and Causation, Ecological Fallacy of Correlation, Correlation-Ratio, Point Biserial Correlation.

Unit-II

Multiple Regression, Multiple Regression Equations, Multiple Collinearity, Interpretation of Regression Coefficient, Confidence Interval for the Estimate of Multiple Regression, Multiple Correlation, Properties of Multiple Correlation Coefficient, Coefficient of Multiple Determination, First order Partial Correlation.

Unit-III

Path Analysis, Formulation of Recursive, Fully Recursive Path Models, Estimation of Path Coefficients (No numerical questions to be set in the question paper on path analysis)

Parametric tests-One way analysis of variance for means, t-test for means (related samples), z-test for proportions (One Sample and Two Independent Samples)

Unit-IV

Non-Parametric Tests of Significance

Distinction between Parametric and Non-Parametric Tests, Kruskal Wallis One Way Analysis of Variance, Friedman Two–Way Analysis of Variance, Kolmogorov Smirnov Test (Two Independent Samples), Mann-Whitney-U Test, Wilcoxon Matched-Pairs-signed-Ranks Test.

Suggested Readings

1. Alexander Von Eye, Chrisof Schustee (1998) *Regression Analysis for Social Sciences,*USA, Academic Press.
2. Blalock, H.M. (1979) *Social Statistics,*New York, McGraw Hill Book Company.
3. Joseph F. Hair, Rolph E. Anderson Ronald L. Tatham (1987), *Multivariate Data Analysis with Readings*, New York, Macmillan Publishing Company.
4. Kothari C.R. (1984) *Quantitative Techniques*, New Delhi, Vikas Publishing House, Pvt. Ltd.
5. Morris Hamburg (1983) *Statistical Analysis for Decision Making*. San Diego, Harcourt Brace Jovanovich Pubs.
6. Muller John and Karl, F. Schuseller and Herbert, L. Costner (1977), *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.
7. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

Additional Readings

1. Marl Sirkin, R. (1995), *Statistics for the Social Science;* London, Sage Publications.
2. Jane, J., Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*, London, Sage Publications.

SOC O 937: Sociology of Education

Objective

The course provides (a) an introduction to an important branch of Sociology that deals with education and Society. (b) Students will get acquainted with the approaches and contributions in the sociology of education (c) familiarizes the student with the Growth and Expansion of Education in India; and (d) Role of Education in the Development Process and (e) Emerging educational scenario under the process of Globalisation

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.
The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit - I
The Concept of Education; Education and Society; Socialization and Education; Cultural and Social Reproduction

Theoretical Approaches: **Gandhian, Functional**, **Conflict and** Post **Modern**

Unit - II

1.Role of Education in Social and Human Development -- Emerging Perspectives

2.Role of Education for Empowerment of the Marginalized- SCs, S.Ts, (and Women)

3.Education and the Policy of Positive Discrimination and Affirmative Action

Unit - III.

Education: Expansion and Growth

Constitutional Provisions and Educational Policies in India

Universalization of Elementarv Education, Crises in lndian Higher Education, Expansion of Professional Education and Private Sector

Unit - IV

Education and Social Stratification:

Caste and Education

Gender and Education

Class and Education

Education and Social Mobility **/** (Mobility and Equality of Educational opportunities.)

Suggested Readings:

1. A.H. Halseye et. al. (eds.). 2002. Education. Culture, Economy, Society. Oxford: Oxford University Press (Selected chapters).
2. Apple, M. W. 1982. Cultural and Economic Reproduction in Education: Essays on class. ideology and the state. London: RKP. (Chapters 1, 9).
3. Benei, Veronique. 2009. Schooling India. Hindus, Muslims and the Forging of Citizens. New Delhi, Orient Blackswan.
4. Beteille, A. 1985. Equality of Opportunity and the Equal Distribution of Benefits. Pune: Orient Longman (Gokhale Institute of Politics and Economics).
5. Beteille, A. 2009. Institutions and Networks. Current Science. 97, 2:148-156.
6. Boren. M.E. 2001. Student Resistance. A History of the Unruly Subject. New York. London: Routledge.
7. Coleman. J. S. 1968. "The Concept of Equality of Educational Opportunity". Harvard Educational Review, 38(1): 7-22.
8. Dewey, J. (1916). Democracy and Education. An Introduction to the Philosophy of Education. New York: Free Press.
9. Froerer, Peggy. 2007. Disciplining the Saffron Way: Moral Education and the Hindu Rashtra, Modern Asian Studies. 41,5: 1033-1071.
10. Gandhi, M.K. 1977. Basic Education, in The Collected Works. Ahmadabad: Navajivan.
11. Giddens, Anthony. 2002. Sociology. Cambridge: Polity press.
12. Haralambos and Holborn 2008. Sociology: Themes and Perspectives. London: Collins
13. Jeffrey, Craig, Roger Jeffery and Patricia Jeffrey. 2008. School and madrasah education: gender and the strategies of Muslim young men in rural north India. Compare. A Journal of Comparative and International Education. 38, 5: 581-593.
14. Kumar. K. 2002. Prejudice and Pride. New Delhi: Viking. 23
15. McLaren, P. 1986. Schooling as a Ritual Performance: Towards a Political Economy of Educational Symbols and Gestures. New York: Routledge.
16. Saigol, R. 2000. Symbolic Violence, Curriculum, Pedagogy and Society. Lahore: Sahe. (Chapters 5, 6, and 7).
17. Thapan, M. 2006 (1991). Life at School. An Ethnographic Study. New Delhi: Oxford University Press. 13. Willis, P. E. 1977. Learning to Labour: How Working Class Kids Gets Working Class Jobs. Surrey, England: Saxon House.
18. Wazir, Rekha (ed.) 2000. The Gender Gap in Basic Education. New Delhi, Sage Publications (selected chapters).
19. Mehta, Rani (2004), Crisis in Higher Education. Role Analysis of Teachers in a University System, New Delhi, Kalpaz Publications.

SEMESTER –IV

SOC R 440: PERSPECTIVES ON INDIAN SOCIETY

Objective

This paper aims to acquaint the students with some of the sociological perspectives which have been developed to study the Indian Society. The course aims at giving a chronological view on studies of Indian society. Introducing the students to important Indian Sociologists and their monographs; It further hopes to help the students formulate a link between their theoretical background and examples from the field and to sensitize students about important Indian Social Institutions: Family, Village and Caste, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Indological: G.S. Ghurye, P.N. Prabhu.

Structuralist: Dumont, Louis & Pocock, David, Mckim Marriot.

Unit-II

Structural Functionalist: M.N. Srinivas, S.C. Dube, Yogendra Singh.

Unit-III

Conflict and Subaltern: B.R. Ambedkar, D.P. Mukherji, A.R. Desai.

Unit-IV

Current Issues in Indian Sociology: Indianization/Indegenization, Contextualization

Suggested Readings

1. Ahmad, Imtiaz (1972) 'For a Sociology of India', *Contributions to Indian Sociology*, 6:172-8.
2. Ambedkar, B.R. (1948) *The Untouchables: Who Were They and Why They Became Untouchable*s, Delhi, Amrit Book Company.
3. Atal, Yogesh (2003). *Indian Sociology from Where to Where: Footnotes to the History of the Discipline.* Jaipur, Rawat Publications.
4. Atal, Yogesh (1993). *Understanding Indian Society: Festschrift in Honour of Professor S.C.Dube.* New Delhi, Har-Anand Publications.
5. Bailey, F.G. (1959) 'For a Sociology of India', *Contributions to Indian Sociology,* 3, 88-101.
6. Beteille, Andre (1974) 'Sociology and Ethnosociology', *International Social Science Journal,* 24(4) 703-4.
7. Burghart, R (1983) 'For a Sociology of India: An Intracultural Approach to the Study of Hindu Society', Contributions to Indian Sociology, 17 (2): 275-93.
8. Das, Veena (ed.) (2004). *Handbook of Indian Sociology.* New Delhi, Oxford University Press.
9. Desai, A.R. (1976*) Social Background of Indian Nationalism*, Bombay, Popular Prakashan.
10. Dhanagare, D.N. (1993) *Themes and Perspectives in Indian Sociology.* Jaipur, Rawat Publications.
11. Dube, S.C. (1959) *Indian Villages,* London, Routledge & Kegan Paul Ltd.
12. Dumont, Louis and Pocock, D. (eds.) (1960). *Contibutions to Indian Sociology.* Paris, Monton.
13. Dumont, L. & Pocock (1960) 'For a Sociology of India: A Rejoinder To Dr. Bailey', Contributions to Indian Sociology, 4:82-9.
14. Dumont, Louis (1970) *Home-Hierarchicus: Caste System and its Implications,* Delhi: Vikas Publications.
15. Ghurye, G.S. (1957*) Caste and Class in India*, Bombay, Popular Book Depot.
16. Gill, Rajesh.(2007). Let Sociology be Sociology**,** in *Sociological Bulletin*, Vol. 56, No. 3, Sept.-Dec. 2007, pp. 430-34.
17. Jodhka S.S. (1998) 'From Book View' to 'Field View': Social Anthropological Constructions of the Indian Village', *Oxford Development Studies*, Vol.26 No.3, 1998.
18. Marriot, Mackim (1994) *India Through Hindu Categories*, Delhi: Sage Publication.
19. Mukerjee, Ramakrishna (1979) *Sociology of Indian Sociology,* Bombay, Allied.
20. Mukherji, D.P. (1958) *Diversities*, Delhi Peoples Publishing House.
21. Mukherji, D.P. (1979). *Sociology of Indian Culture.* Jaipur, Rawat Publications.
22. Omvedt, Gail (1994) *Dalits and the Democratic Revolution*. New Delhi, Sage Publications.
23. Oommen, T.K. (1986) *Indian Sociology: Reflections and Interpretations.* Bombay, Popular Prakashan.
24. Patel Sujata (1998), 'The Nostalgia for the Village: M.N. Srinivas and the Making of Indian Social Anthropology', *South Asia,* Vol.XXI, No.1, pp-49-61.
25. Prabhu, P.N. (1954) *Hindu Social Organization*, Bombay, Popular Book Depot.
26. Pramanick, S.N. (1994) *Sociology of G.S. Ghurye: Concerns*, New Delhi, Vistaar Publication.
27. Ram, Nandu (1999), *Beyond Ambedkar*, New Delhi, Har Anand Publishers.

28. Singh, Yogendra (1973) *Modernization of Indian Tradition*, Jaipur, Rawat Publications.
29. Singh, Yogendra (1986) *Indian Sociology: Social Conditioning and Emerging Concerns*, New Delhi, Vistaar Publications.
30. Singh, Yogendra (1984). *Image of Man: Ideology and Theory in Indian Sociology.* Delhi, Chanakya.
31. Srinivas, M.N. (1952*) Religion and Society Among the Coorgs of South India*, London, Asia.
32. Srinivas, M.N. (1970) 'Sociology and Sociologists in India Today', *Sociological Bulletin* 19(1): 1-10.
33. Unnithan, T.K.N., Deva, Indra and Singh, Yogendra (eds.) (1965). *Towards a Sociology of Culture in India: Essays in Honour of Professor D.P.Mukherji.* New Delhi, Prentice Hall.

Additional Readings

1. Madan, T.N. (1977) 'The Dialectic of Tradition and Modernity in the Sociology of D.P. Mukerji', *Sociological Bulletin*, Vol.26 (2) 155-76.
2. Marriot, Mckim (1955) *Village India: Studies in the Little Community*, Chicago, The University of Chicago Press.
3. Oommen, T.K. (2007) *Knowledge and Society: Situating Sociology and Social Anthropology.* New Delhi, Oxford University Press.
4. Srinivas, M.N. (1970) *Social Change in Modern India*, Barkeley, California University Press.
5. Unnithan, T.K. N., Singh, Y. Singhi Narendra and Indra Deva (eds.) (1967) *Sociology for India,* New Delhi, Prentice Hall
6. Srinivas, M.N. (1976) *The Remembered Village*, Delhi, Oxford University Press.
7. Srinivas, M.N. (1980) *Social Structure*, Delhi, Hindustan Publishing Corporation.

SOC O 543: DETERMINANTS AND CONSEQUENCES OF POPULATION GROWTH

Objective

The course mainly focuses to sensitize students about a) the effect of population growth on development processes; b) Differential mortality and fertility patterns in the developed and the developing countries; c) Population distribution patterns in India; and d) the various programmes implemented for regulating population in India.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Relationship between Population, Development, Environment and Society in the context of Population Size, Composition and Distribution of Population

Factors affecting Age, Structure and Sex Compositions; Demographic, Social and Economic implications

Unit-II

Mortality Patterns in Developed and Developing Countries:

General Mortality, Infant and Child Mortality, Morality Differentials, Determinants of Mortality and Cause of deaths. Consequences of Declining Mortality for demographic and social structures

Unit-III

Fertility Patterns and Trends in Developed and Developing Countries, Crude Birth Rates and Total Fertility Rates, Net Reproduction Rate, Theoretical Understanding of the Biosocial, Socio-cultural, Social-psychological and Socio-demographic factors affecting Fertility. Fertility Differentials, Consequences of Fertility Decline for Demographic and Social Structures

Unit-IV

Population Distribution Patterns in India- Regional Level, Rural-Urban, Socio-economic and demographic factors associated with population distribution.

Consequences of Population Redistribution on Demographic and Social Structures.

Regulating Population in India: National Family Welfare Programme
Reproductive and Child Health Programme

Strategies for Implementation and Overall Impact MTP
and PNDT Act- Correcting the Gender Bias.

Suggested Readings

1. Bhende, Asha and Tara Kanitkar (1999), *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, D.J. (1969) *Principles of Demography*, N.Y,John Wiley.
3. Bose, A. (1991) *Demographic Diversity in India*. Delhi, B.R. Publications.
4. Cassen, D. (1978), *India, Population Economy and Society*, London, MacMillan.

5. Ersheng GAO (2003), *Reproductive Health , Gender and Development*, Delhi, B.R.Publishing Corporation.
6. Jain, A.K. and Visaria (eds.) (1988), *Infant Mortality in India. Differentials and Determinants,* Sage Publications.
7. Kaistha, K.C. and Satish Sharma (1998), *Population, Environment and Spatial Mobility,* New Delhi, Gyan Publications.
8. Mahadevan, K. (1989*) Fertility Policies from Asian Countries*, Delhi, Sage.
9. Matras, Juda (1977) *Introduction to Population*, New Jersey, Prentice Hall, Inc.
10. Mitra, Ashok (1978) *India's Population, Aspects of Quality Control*, 2 Vols.
11. MOHFW, GOI, *Cause of Death Statistics* (Annual Issues).
12. *National Family Health Survey, India* (1994) (2000) Bombay, IIPS.
13. *PNDT Act* (1996) GOI.
14. Prasad, Narendra (2001), *Population Growth and Child Labour*, New Delhi, Kanishka Publishers.
15. Premi, M.K. (1991), *India's Population: Heading towards a Billion,* Delhi, B.R. Publications.
16. Retherford, Robert D. & T.K. Roy (2003) *Factors Affecting Sex Selective Abortions in India and 17 Major States*, NFHS Report No.21, Mumbai, IIPS.
17. Sen, Amartya (1982) *Choice, Welfare and Measurement*, Oxford Univ.Press.
18. Sen, Amartya & Jean Dreze (1996) *Indian Development*, Oxford Univ.Press.
19. Srinivas, M.N. (1977) *Culture and Human Fertility in India,* Delhi, Oxford Univ. Press.
20. Singh, K.P. (1986) *Correlates of Fertility Behaviour: A Study of Rural Communities in Punjab and Haryana*, New Delhi, Concept Publishing House, 205p.
21. Sinha, P. N (2001), *Population Growth and Global Stability*, New Delhi, Author's Press.
22. Tandon, Usha (2003). *Population Law: An Instrument for Population Stabilization*, New Delhi, Deep and Deep Publications Pvt. Ltd.
23. U.N. (1987) *Fertility Behaviour in the Context of Development* (P.S. No. 100).
24. United Nations (1987) *World Population Policies*, Monitoring Report Vol. II

Additional Readings

1. Dyson, T. and Crook, N. (eds.) (1984), *India's Demography: Essays on the Contemporary Population*, New Delhi, South Asian Publishers Pvt. Ltd.
2. D'Souza, V.S. (1984), *Economic Development, Social Structure and Population Growth,* New Delhi, Sage Publications.
3. Finkle, L. Jason and C. Anson McIntesh, (1994), (eds.), *The New Politics of Population: Conflict and Consequences in Family Planning*, New York, The Population Council.
4. Mc Nicoll, Geoffrey and Mead Cain, (1990), *Rural Development and Population: Institutions and Policy*, New York, Oxford University Press (The Population Council, New York).
5. Mehta, S.R. (1997), (ed.), *Poverty, Population and Sustainable Development*, Jaipur, Rawat Publications.
6. Mehta, Rani (2014) Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications, pp 29-168.

SOC O 544/744: SOCIOLOGY OF HUMAN MIGRATION

Objective

The aim of this course is to explore how migration as a social demographic process has a bearing on the processes of urbanization and social integration. It attempts to discuss the need to address the problems associated with large influx of immigrants into cities, within the country and trans-nationally, leading to crises of physical infrastructure and conflict situations. Also, it aims to appreciate the positive consequences of migration in terms of its capacity to enrich various cultures.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Migration	:	Conventional View and Changing Conception
Migration Data	:	Sources and Problems relating to Measurement.

Unit-II

Major Typologies	:	Spatial, Temporal, Purposive and Stream Criteria.
Broad Trends and Patterns	:	At Global Level with special reference to India.

Unit-III

Theoretical Formulations:	Classical, Socio-economic & Developmental (Contributions of Revenstein, Stouffer, Everett Lee, Lewis, Harris and Todaro, Zelinski, Davis and Push-Pull Factor theory).
Determinants of Migration:	Ecological, Demographic, Social, Economic and Political

Unit-IV

Consequences of Migration: International context – Brain-Drain and Critique: Internal context- Social, Economic and Political

Migration Policy: Need and Challenges

Suggested Readings

1. Balan, Jorge (ed.), 1981), *Why People Move*, Paris, Unesco Press.
2. Chaudhuri, I.R., (1993), *Migration and Remittances: Inter-Urban and Rural-Urban Linkages*, New Delhi, Sage Publications.
3. Connel, John & Others, (1970), *Migration from Rural Areas: Evidence from Village Studies,* Oxford University Press, Delhi.
4. Dutoit, B.M. and H.I. Safa, (1975), *Migration and Urbanization Models and Adaptive Strategies*, The Hague, Mouton.
5. Findley, Sally, (1982), *Migration Surveys, Methodologies*, A Review of Designs, IUSSP, No.2
6. Hugo, H., (1982), 'Circular Migration in Indonesia', *Population and Development Review*, Vol 8, No. 1, March, pp-59-83.
7. Kaistha, K.C., (1987), 'Migration Patterns in Development Transition of Rural Areas', *Population Geography* (1 & 2), June-December.
8. Kosinski, L.A. & K.K. Mandood Elahi, (1985), *Population Redistribution and Development in South Asia,* Boston, D. Reidel Pub. Co.
9. Kosinski L. and Prothero R. (1974) *People on the Move: Studies on Internal Migration,* London, Methuen.
10. Oberoi, A. S. & H. K.M. Singh, (1982), *Causes and Consequences of Internal Migration: Studies from Indian Punjab*, Delhi, OUP.
11. Oberoi, A.S. & Others, (1989), *Determinants and Consequences of Internal Migration in India: Studies in Bihar, Kerala and Uttar Pradesh*, Delhi, OUP.
12. Bogue, D.J., (1969), Principles of Demography, New York, John Wiley & Sons.
13. Prother, R.M. & Chapman Murray (eds.), 1985, *Circulation in Third World Countries,* London, Routledge & Kegan Paul.
14. Rao, M.S.A., (1986), *Studies in Migration*, Delhi, Manohar.
15. UN (1984) *Population Distribution, Migration and Development. Proceedings of* the Expert Group on Population Distribution Migration and Development, Hammamat (Tunisia) March 21-25, 1983.
16. U.N. (1994) *Population Distribution and Migration* (Particularly Papers by Castals, S. 'Process of Integration of Migrant Communities' and Rogge, I.R. 'Changing Solutions to Refugee Movement'.
17. Weiner, Myron, (1978), *Sons of Soil: Migration and Ethnic Conflict in India*, New Jersey, Princeton University Press.

Additional Readings

1. Brettel, Caroline & James Hollifield, (2000), *Migration Theory: Talking Across Disciplines,*New York, Routledge.
2. Hazari, Bharat R. & Pasquale M., (2001*), Migration, Unemployment and Trade*, Boston, Kluwer Academic Publishers.
3. Indra, Doreen (ed.), (1998*), Engendering Forced Migration: Theory and Practice,* New York, Berghahn Books.

4. Lucassen, Jan & Lucassen, Leo, (1997), *Migration, Migration History, History: Old Paradigms and New Perspectives,* University of Bern Publications, Bern.
5. Manning, Patrick, (2005), *Migration in World History*, London, Cambridge University Press.
6. Sharpe, Pamela, (2001), *Women, Gender and Labour Migration: Historical and Global Perspectives,* New York, Routledge.

SOC O 644: ENVIRONMENTAL CRISIS AND SUSTAINABLE DEVELOPMENT

Objective

The course focuses on the discussion of the environment–society interface keeping the following objectives in view (a) to familiarize the student with the crisis of environmental degradation both at the global and national levels; (b) to focus on the environmental problems in India; (c) to highlight the role of environmental movements in ecological protection; and (d) to discuss some of the measures necessary for environmental preservation.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development and Environmental Degradation:
Meaning of Environment; Environment and Society;
Problems and Environmental Consequences

Unit-II

Environment Situation in India:
Environmental Problems in India – Extent, Causes and Solutions; Environmental Policy in India.

Unit-III

Environmental Movements:
Role of voluntary organizations and popular participation in environmental protection and preservation; The Chipko Movement, Movements against Narmada Valley and Tehri

Dam projects, Sukhomajri Experiment, Protest against Mining in Doon Valley; Eco-feminism; Public Interest Litigation (PIL) and Judicial Activism.

Unit-IV

Sustainable Development: Towards a Sound Environmental Policy;

Environmental Education; Social Forestry and Afforestation Program; Biogas and Renewable Energy Program; Efficient Water Management Programs; Use of Appropriate Technology.

Suggested Readings

1. Deoria, R.S. et al. (1990) *Man, Development and Environment*. N. Delhi: Ashish Publications.
2. Katyal, J and M. Satake (1989) *Environmental Pollution*. New Delhi: Anmol Pub.
3. Khoshoo, T.N. (1986) *Environmental Priorities in India and Sustainable Development*. New Delhi: Indian Science Congress Association.
4. Mahesh, K and B. Bhattacharya (eds.), (1999) *Judging the Judges*. N. Delhi: Gyan Publications.
5. Mehta, Rani (2014), Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications.
6. Raza, Mehdi (ed.), (1992) *Development and Ecology*. Jaipur: Rawat.
7. Rasure, K.A. (2007) , *Environment and Sustainable Developmen*t , New Delhi, Serial Publications, VOL. I,II,III.
8. Spaargaren G. et al (2000) (ed.), *Environment and Global Modernity*, New Delhi, Sage Publications India Pvt. Ltd.
9. Singh,R.B. (2002) (ed.) *Human Dimensions of Sustainable Development*, New Delhi, Rawat Publications.
10. Sharma, S.L. (1993) "Managing Environmental Crisis – Regulatory vis-à-vis Participatory Approach" in J.L. Rastogi and Bidhi Chand (eds.) *Management and Business Education*. Jaipur: Rawat Publications.
11. Shiva, Vandana, (1988) *Staying Alive – Women, Ecology and Survival in India*. New Delhi: Kali for Women.
12. Singh, Gian (1991) Environmental Deterioration in India – Causes and Control. New Delhi: Agricole.
13. Tewari, K.M. (1989) *Social Forestry in India*. Dehradun: Natraj Publishers.
14. Wilson, D. (ed.) (1984) *The Environmental Crisis*, London: Hinemann.

Additional Readings

1. Bandhu, Desh (ed.), (1981) *Environmental Management*, Dehradun, Natraj Publishers.
2. Bandhu, Desh and N.L. Ramanathan (eds.) (1982) *Education For Environmental Planning and Conservation*, Dehradun, Natraj Publishers.
3. Bharadwaj, H.R. (1997) *Lawyers and Judges*, New Delhi, Konark Pub.
4. Chaudhary, Jayasri R.(2001). *An Introduction to Development and Regional Planning,* New Delhi, Orient Longman.
5. Ehrlich, P. R. et al., (1973) *Human Ecology- Problems and Solutions*, San Francisco, W.H. Freeman and Co.

6. Kothari, Ashish et al. (eds.), (1998) *Communities and Conservation*, New Delhi, Sage Publications.
7. Mehta, Rani (2011) "Sustainable Development in Mauritius: Issues and Implications," New Delhi, Contributions to Indian Social Science, IASSI, Vol. 30, No. 2, April-June.
8. Pawar, S.N. and R.B. Patil (eds.) (1998) *Sociology of Environment*, Jaipur, Rawat
9. Sheth, Pravin (1997) *Environmentalism – Politics, Ecology and Development*, Jaipur, Rawat Publications.

SOC O 645: ENTREPRENEURSHIP AND DEVELOPMENT

Objective

This course is acquainting the students with various theoretical developments in the area of entrepreneurship and their implication for action programs. Accordingly, first two units deal with various theories and development of entrepreneurship in different communities and groups. The other two units deal with the implication of theories for action programs and development of Entrepreneurship Development Program (EDPs) and interaction of entrepreneurs with business environment.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Entrepreneur and Entrepreneurship:
Concept, Functions: Growth of Entrepreneurship with special reference to India
Theories of Entrepreneurship: Max Weber, David McClelland, E. E. Hagen, B. E. Hoselitz and Schumpeter

Unit-II

Entrepreneurship among Social Groups
Business Communities: Samurai Community in Japan, Filipino and Chinese in Philippines; Parsees, Marwaris, Ramgarhias, Ravidasias and Business Communities in South India; Social Groups: Women, Tribals, Scheduled Castes

Unit-III

Development of an Entrepreneur
Implication of Theories for Action Program and Development of Entrepreneurs through Training and Entrepreneurship Development Program (EDPs).

Unit-IV

Entrepreneurship and Environment:
General Environment, Typology of Environment, Role of Business Associations in Controlling the Environment.

Suggested Readings

1. Akhouri, M. M. P. *et al.* (1987) *Trainers' Manual on Developing Entrepreneurial Motivation*, New Delhi: National Institute for Entrepreneurship and Small Business Development.
2. Bansal, C. L. (1993) *Entrepreneurship and Small Business Management*, Delhi, Har Anand Publications.
3. Bhatia, B. S. and Batra, G. S. (2001) *Entrepreneurship and Small Business Management*, New Delhi: Deep and Deep Publications, Pvt. Ltd.
4. Bisht, N. S. *et al.* (1989) *Entrepreneurship: Reflections and Investigations*, Allahabad: Chugh Pub.
5. Guha, A. (1984) "More about Parsi-Seths, their roots, Entrepreneurship and Compradoe Role", *Economic and Political Weekly*, Vol. IX, No.3, June, pp 1660-18.
6. Hagen, E. E. (1962) *On the Theory of Social Change*, Bombay: Vakils, Feff and Simpson.
7. Hoselitz, B. F. (1952) "Entrepreneurship and Economic Growth" *American Journal of Economics and Sociology*, Vol.12 (1).
8. Hoselitz, B. F. (1960) *Sociological Aspects of Economic Growth*, London: Collier-McMillan.
9. Kaur, K. P. (1992) *Professional Management in Industrial Organizations*, New Delhi: Deep & Deep Publications.
10. Kaur, K. P. (1995) "Role of Trade Associations in Entrepreneurial Development", *SEDME*, Vol. XXII, No.3.
11. Kelbagh, Chetana (ed.), (1991) *Women and Development, Women in Enterprise and Profession*, Vol. III, New Delhi: Discovery Publishing House.
12. Kilby, P. (1971) *Entrepreneurship and Economic Development*, N.Y.: Free, Free Press.
13. Kirchhoff B. A. *et al.* (eds.) (1988) *Frontiers of Entrepreneurship Research*, Wellesley: Babson College.
14. Leibenstein, H. (1968) "Entrepreneurship and Development", *American Economic Review*, LVIII (2), May.
15. McClelland, D. C. (1961) *The Achieving Society*, N.Y.: Van Nostrand Co.

16. Pruthi, S. P. S. (1972) *Economic and Managerial Environment in India*, Bombay: Progressive Corp.
17. Sabbarwal, S. (1990) *Organizational Approach to Environment Control*, N. Delhi: Ashish Publications.
18. Sabherwal, Satish (1976) *Mobile Man*, New Delhi: Vikas Publishing House. Pvt. Ltd.
19. Schumpeter, J. A. (1959) *The Theory of Economic Development*, Cambridge: Harvard Univ. Press.
20. Sharma, K. L. & H. Singh (1980) *Entrepreneurial Growth and Development: Programmes in Northern India*, New Delhi: Abhinay Publications.
21. Sharma, K. L. (1981) *Voluntary Business Associations*, Chandigarh: Panjab University.
22. Sharma, K. L. (1988) "Community and Entrepreneurship", *Eastern Anthropologist*, 42 (3).
23. Tandon, B. C. (1975) *Environment and Entrepreneurs*, Allahabad: Chugh Pub.
24. Weber, Max (1947) *Theory of Social and Economic Organization*: tr. by A. R. Henderson and Talcott Parsons (ed.), Oxford: Oxford University Press.

Additional Readings

1. Rathore, B. S. and J. S. Saini (eds.) (2007) *A Handbook of Entrepreneurship*, Panchkula: Aapaga.
2. Hagen, E. E. (1980) *The Economics of Development*, Illinois: Irwin, Inc., Homewood.
3. Schumpeter, J. A. (1939) *Business Cycles: A Theoretical, Historical and Statistical Analysis of Capitalist Process*, London: McGraw Hill.
4. Weber, Max (1965) *The Protest and Ethic and the Spirit of Capitalism*, Tr. by Talcott Parsons, London: Union.
5. Weber, Max (1968) *Economy and Society*, New York: Bedminster Press.

SOC O 743: CITIES, URBAN PLANNING AND DEVELOPMENT

Objective

This is the third course in the specialization of Urban Sociology offered to MA students from second through fourth semesters. It is presumed that by now the students has the basic understanding of the conceptual and theoretical formulations in urban sociology, with specific relation to India's experience as compared to the Western. In this course the student shall be apprised with the contemporary and emerging conceptual and empirical developments in the area of urban planning and development, especially with an emphasis upon the shift from mere town and physical planning to social planning, decentralization etc. manifested both at global and national agenda.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Urban Planning

Physical and Town Planning, Zoning, Master Plan;
Critique of Conventional Urban Planning;
Concept of Social Planning and its Implications on Urban Planning;
People's Participation in Urban Planning and Development; Decentralization and Democratization in Urban Planning.

Unit-II

Cities and Urban Development

U.N. Conventions on Human Settlements and Global Agenda;
Urban Renewal and Urban Redevelopment;
Sustainable, Humane, Child-Friendly, Eco-Friendly Cities;
From Urban Development to Sustainable Urban Development and its Features;

Unit-III

Urban Planning in India

Critical Appraisal of Slum Rehabilitation Schemes

Critical Appraisal of Urban Poverty Alleviation Programs.
Critical Appraisal of 74th Constitutional Amendment Act and its Salient Features

Unit-IV

Cities and Culture

Cities and Cultural Change (with reference to Georg Simmel, Louis Wirth and C. Fischer)

Cities and Consumerism

Cities and Ethnicity

Suggested Readings

1. Ali, Sabir, (1990), *Slums Within Slums- A Study of Resettlement Colonies in Delhi*, New Delhi, HarAnand and Vikas.
2. Breese, Gerald and Whiteman, Dorothy E, (eds.), (1953)*, An Approach to Urban Planning*, Princeton, Princeton University Press.
3. Castells, Manuel, (1977). *The Urban Question*, London, Edward Arnold Publishers Ltd.
4. Castells, Manuel, (1975), 1968, Is there an Urban Sociology? Reprinted in Urban *Sociology: Critical Essays* (ed.) by C. Pickvance, New York, St. Martin's Press. Pp. 33-59.
5. Flanagan, William, (1993), Contemporary Urban Sociology, Cambridge, Cambridge University Press.
6. Gill, Rajesh, (2009). *The Contemporary Indian Urban Society -Ethnicity, Gender and Governance.* New Delhi, Bookwell Publishers.
7. Gill, Rajesh, (2003)'. Planning Urban Settlements for People: A Social Agenda', in *Urban India,* Vol. XXIII, No. I, Jan.-June 2003.
8. Harvey, D. (1999), "The City in a Globalizing World" (ed.) by Charles Lemerit (2004), *Social Theory: Multicultural and Classical Readings*, U.S.A., Westview Press.
9. Jo Beall (ed.), (1997), *A City for All- Valuing Difference and Working with Diversity*, London, Zed Books Ltd.
10. Lo, Fu Chen and Yeung, Yue-man (eds.),(1998), *Globalization and the World of Large Cities,* Tokyo, United Nations University Press.
11. Miles, S. and Miles, M., (2004). *Consuming Cities.* New York, MacMillan.
12. Report of National Commission on Urbanization, (1988), Vols. 1&2.
13. Sassen, S. (1991). *The Global City*, Princeton, Princeton University Press.
14. Satterthwaite, D. (2007), "When People Live Mostly in the Cities" *The Hindu*, January 18.
15. Simmel, Georg, (1990). 2nd Edition. *The Philosophy of Money,* trans. by T. Bottomore and D. Frisby (ed.) D. Frisby. London, Routledge.
16. Simmel, Georg, (1964). "The Metropolis and Mental Life" in K. Wolff (ed.), *The Sociology of Georg Simmel,* New York, Free Press. (Org. 1905).
17. Uner, Kirdar (ed.), (1997), *Cities Fit For People*, New York, United Nations.
18. Weber, Max, (1958), *The City*, Chicago, Free Press.

Additional Readings

1. Chandoke, Neera, (1991). "The Post Colonial City", *Economic and Political Weekly,* Mumbai, December 14, pp. 2868-2873.
2. Fagence, Michael, (1977), *Citizen Participation in Planning,* Oxford, Pergamon Press.
3. Gill, Rajesh, (1991), *Slums as Urban Villages- A Comparative Study in Two Cities*, Jaipur, Rawat Publications.
4. Mumford, Lewis, (1961). *The City in History.* New York, Harcourt, Brace and World.
5. Sarin, Madhu, 1975*, Planning and the Urban Poor: The Chandigarh Experience*, London, School of Environmental Studies.
6. Saunders, P. 1981*, Social Theory and the Urban Question*, London, Hutchison & Co. Ltd.
7. Short, J.R., 1996, *The Urban Order- An Introduction to Cities, Culture and Power*, Blackwell Publishers.
8. Southall, Adian, 1998, *The City in Time and Space,* Cambridge, Cambridge University Press.

SOC O 843: FAMILY DYNAMICS IN CONTEMPORARY INDIA

Objective

In this course students will be enabled to have a grasp of the changing marriage and family patterns in India. The course will be addressing to the impact of technological and economic factors on family and how family has responded to these by undergoingchanges in its Form, Structure and Functions, which in turn influence the values and role-relations within the family. Students will be further acquainted with the family's failure in coping with the pressures of modern life.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marriage Patterns

Traditional and Contemporary Patterns from Vedic times to Modern times

- Changing Patterns of Marriage Alliances
- Child Marriage; Increasing Age at Marriage, its Socio-economic and Cultural Determinants, Regional Variations and Demographic Consequences.

Unit-II

Trends in Family Type

- Regional Variation in Family Type and its Socio-cultural Correlates.
- Joint Family: Its Structural & Functional Aspects, Changing forms of Joint family – Nuclearization.
- Changing Status and Role of the Women and the Aged.

Unit-III

Family Values and Role-Relations

- Familial Values : Familism vs. Individualism.
- Dyadic Relations : Changing Filial (Parent and Child), Fraternal (Siblings-Brother and Sister, Brother and Brother, Sister and Sister),

Unit-IV

Family Disintegration

Marital Maladjustment.

- Factors Responsible for Disintegration of Joint and Nuclear family.
- Desertion and Divorce: their Extent, Causes and Consequences.

Suggested Readings

1. Apte, Usha M. (1978) *The Sacrament of Marriage in Hindu Society*, Delhi : Ajanta Publications.
2. Chakrabortty, Krishna (2002) *Family in India,* New Delhi : Rawat Publications.
3. Kolenda, Pauline (1987*) Regional Differences in Family Structure in India*, Jaipur Rawat Publications.
4. Lal, A.K. (1990*) The Urban Family, A Study of Hindu Social System*, New Delhi: Concept Publishing Company.
5. Madan, T.N. (1989) *Family and Kinship* (2nd Edition), Delhi: Oxford University Press.
6. Mandelbaum, David G. (1970) *Society in India: Continuity and Change* (Vol.1), Bombay: Popular Parkashan.
7. Pandey, Rajendra (1994) *Social Problems of Contemporary India*, (Chapter-12), New Delhi: Ashish Publishing House.
8. Pernau,Maragrit, Ahmed, Imtiaz and Helmut, Redfield (2003) *Family and Gender:Changing Values in Germany and India*, New Delhi: Sage Publications.
9. Pothen S. (1980) *Divorce: Its Causes and Consequences in Hindu Society,* Delhi: Shakti Books.
10. Reddy, M.M. Krishna (1998) *Marriage, Population and Society*, New Delhi: Kanishka Publishers.
11. Shah, A.M. (1998) *The Family in India: Critical Essays*, New Delhi: Orient Longman.
12. Singh, J.P. (2003) 'Nuclearisation of Household and Family in Urban India', *Sociological Bulletin*, Vol.52, No.1, PP: 53-70.
13. Sinha, Raghvir (1993) *Dynamics of Change in the Modern Family*, New Delhi: Concept Publishing Company.

Additional Readings

1. Audinarayana N. & R. Rajasree (1995) 'Cultural Determinants of Age at Marriage', *The Journal of Family Welfare*, Vol. 4, No.1, pp.8-14.
2. Augustin, John S. (1982) *The Indian Family in Transition*, New Delhi: Vikas Publishing House.
3. Basu, Monmayee (2003) *Hindu Women and Marriage Law from Sacrament to Contract,* New Delhi: O.U.P.
4. Chauhan, Abha (2003) 'Kinship Principles and the Patterns of Marriage Alliance: The Meos of Mewat', *Sociological Bulletin*, Vol.52, No.1, pp: 71-90.

5. Goode, William J.(1970) *World Revolution & Family Patterns*, New York: Free Press.
6. Kapoor, Promila (1974) *The Changing Status of Working Women in India*, New Delhi: Vikas Publishing House.
7. Madan, T.N. (1993) 'The Hindu Family and Development', in P. Uberoi (ed.), *Family, Kinship and Marriage*, Delhi: Oxford University Press.
8. Sharma, Bela Rani (1997) *Women: Marriage, Family and Divorce*, Jaipur: Mangal Deep Publication.
9. Sinha, Durganand, Henry and S.R. Rao (1988) *Social Values & Development: Asian Perspective*, New Delhi: Sage Publications.
10. Vatuk, Sylvia (1972) *Kinship and Urbanization: White Collar Migration in North India,* London: University of California Press.

SOC O 844: GENDER AND DEVELOPMENT

Objective

This paper largely focuses on India attempts to establish a link between Development and Gender. It will particularly focus on different perspectives and schemes adopted for promoting Gender and Development. Secondly, it will highlight the biases inherent in most developmental policies which have been detrimental to women. Thirdly, it will look at changes taking place in gender relations particularly in the area of work. The focus will be on women and work; differentials and role conflict in family due to changing equations. Lastly, it will take an overview of indicators of issues related to Discrimination, Exploitation and Oppression.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit I

Women in Development , Women and Development, Gender and Development (WID , WAD, GAD)
Gender Equality and Inequality in Productivity and work

Family compulsions and other factors affecting gender related choices or priorities of work, Role conflict among Women
Indicators of Low status of Women

Unit-II

Perspectives on Gender and Development

- Welfarist, Developmentalist and Empowerment.
- Empowerment: Paradigms and Paradoxes.
- Changing status of Women in India, Precolonial, Colonial and Post-Colonial.
- Measures to uplift women's status.

Unit III

Measures to Improve Gender Relations

- Special Schemes and Strategies for Women's Development in India
- Voluntary sector and Women's Development.
- Women in Sectoral Development: Education, Health, Agriculture and Industry.

Unit-IV

- Globalisation and Women's Development
- Development Policies- Liberalization and Globalization: their Impact on Women.
- Environment, Development and Gender: Deforestation, Environmental Degradation and Feminization of Poverty.
- Women in Panchayati Raj Institutions and Urban Local Bodies: 73rd and 74th Constitutional Amendments.

Suggested Readings

1. Arya, Sadhna (2000) *Women, Gender Equality and the State*, Delhi: New Deep and Deep Publication.
2. Forbes, Geraldine (1998) *Women in Modern India*, Cambridge University Press.
3. Ghadially, Rehana (1988) *Women in Indian Society*, New Delhi; Sage.
4. Laxmi Devi (1998*) Women and Development*, New Delhi. Anmol Publications.
5. Manchanda, Rita (2001) *Women, War and Peace in South Asia: From Victimhood to Agency,* New Delhi: Sage Publication.
6. Seth, Mira (2001) *Women and Development*, New Delhi: Sage Publications.
7. Suchitra, Anant, Ramani Rao and Kabita Kappor, *Women at Work in India*, Ministry of Labour, GOI.

Additional Readings

1. Aggarwal, Bina (1988) *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi: Kali for Women.
2. Ahooja, Patel, Krishna (1995) *Women and Development*, New Delhi: Ashish Publishing House.

3. Chafeltz, Saltrman, Janet (1999) *Gender Equity–An Integrated Theory of Stability and Change,* New Delhi: Sage Publications.
4. Gulati, Leela (1982) *Profiles in Poverty*. New Delhi, Hindustan Publishing Corporation.
5. Heyser, Noeleen and Sen, Gita (1994) *Gender, Economic Growth and Poverty*, New Delhi: Kali for Women.
6. Krishnaraj Maitraeyi (1988) *Women and Development: The Indian Experience,* New Delhi: Subheda Publications.
7. Kumari, Abhilesha and Sabina Kidwai (1997) *Crossing the Sacred Line, Womens' Search for Political Power,* New Delhi: Orient Longman.
8. Maheshwari, S.R. (2002) *Local Government in India*, (New Delhi: Uppal Book Store).
9. Mazumdar, Vina (1979) *Symbols of Power: Studies on the Political Status of Women in India*, New Delhi: Allied.
10. Myers, Kristen Anderson (1998) *Feminist Foundations–Towards Transforming Sociology*, New Delhi: Sage.
11. Powell, Gang N. (1995) *Handbook of Gender and Work*, New Delhi: Sage Publications.
12. Rajput, Pam and Swarup, Hemlata (1994) *Women and Globalization*, New Delhi: Ashish Publishers.
13. Sangari Kumkum and Uma, Chakravarty (ed.) (1998), *From Myths to Markets,* Shimla, IIAS.
14. Shiva,Vandana (1988) *Staying Alive*, New Delhi: Kali for Women.
15. Staggenborg, Suzanne (1998) *Gender, Family and Social Movements,* New Delhi: Forge Press.
16. Vaid S,K Sangpari (1989) *Recasting Women: Essays in Colonial History*, New Delhi: Kali for Women.
17. Venkatashwara, Sandhya, (1995) *Environment, Development and the Gender Gap*, New Delhi: Sage Publications.

SOC O 941: FUNDAMENTALS OF INDUSTRIAL SOCIOLOGY

Objective

This paper aims to familiarize the students to the nature of industrial sociology highlighting (a) the theories relating to industry, organization and trade unionism; (b) industrialization and its impact on social institutions; (c) the issues related to industrial conflict with special emphasis on the role of trade unions; and (d) to assess the impact of globalization on industry.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit- I

Industrial Sociology: Nature and scope
Theories– Marx (Alienation), Taylor (Scientific Management), Mayo (Human Relations), Marcuse (One Dimensional Man)
Types of Productive Systems– Cottage, Guild, Domestic, Factory
Industrial Roles – Worker, Foreman, Line and Staff, Specialist.

Unit- II

Industrialization and Social Institutions:
Impact on Family, Education and Stratification; Work and Leisure

Unit- III

Industrial Conflict and Employee Participation:
Trade Unions: Managerial and Conflict Theories; Strike as a Bargaining Tool

Unit- IV

Globalization and Industry:
Fordism vs. Flexible Specialization
Globalization and Industrial Relations
Emergence of Multi National Companies (MNCs)
Technological Revolution and Impact on Industry and Society

Suggested Readings

1. Bain, G. S. (ed.) (1984) *Industrial Relations in Britain*. London: Basil Blackwell.
2. Dosi, G. (1984) *Technological Change and Industrial Transformation*. N.Y.: St. Martins Press.
3. Eldridge, John *et al.* (1991) *Industrial Sociology and Economic Crisis*. N.Y.: Harvester Wheatsheaf.
4. Jorgenson, D. W. and K. J. Stroh (1999) "Information Technology and Growth", American Economic Review, 89 (109-115).
5. Kalleberg, A. L. and I. Berg (1987) *Work and Industry,* N.Y. Plennum.
6. Moses, J. A. (1990) *Trade Union Theory from Marx to Walesa*, N.Y.: Berg.
7. Parker, Stanley (1976) *The Sociology of Leisure*. London: George Affer & Union Ud.
8. Pojek, Chris (1985) *Capitalism and Leisure Theory*, London: Tavistock.

9. Schnieder, E. V. (1972) *Industrial Sociology*, London: Harper and Row.
10. Southall R. (ed.) (1988) *Trade Unions and the New Industrialization of the Third World*, London: Zed Books.
11. Watson, K. T. (1995) *Sociology, Work and Industry*. London: Routledge and Kegan Paul.

Additional Readings

1. Burns, Tom (Ed) (1969) *Industrial Man*, Harmondsworth: Penguin Books.
2. Caplow, Theodore (1965) *The Sociology of Work*, N. Y.: McGraw Hill Book Co., Chapter 6.
3. Faunce, William, A. (ed) (1967) *Readings in Industrial Sociology*, Appleton: Century, Crof & Gisbel.
4. Miller, D. and W. H. Form (1964) *Industrial Sociology*, Second Ed. London: Harper and Row.
5. Parker, S. R. *et al.* (1977) *The Sociology of Industry*, London: George Allen and Unwin.
6. Pascual, Gisbert (1972) *Fundamentals of Industrial Sociology*, New Delhi: Tata McGraw Hill.
7. Ramaswamy E. A. & Uma Ramaswamy (1981) *Industry and Labour: An Introduction*, Delhi: Oxford University Press .

SOC O 942: SOCIAL PROBLEMS

Objective

Over the years, India's social problems have become difficult, intricate and hydra-headed, pervading the entire social, economic, cultural and demographic structure. Keeping this in view, this paper aims at introducing the students to the concept and various perspectives on social problems. It also aims at providing detailed knowledge about specific social problems ranging from socio-cultural problems to socio-demographic problems.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept and Sociological Perspectives:

- Definition
- How and When an Issue becomes a Social Problem
- Subjective Definition and Objective Condition
- Stages in its Development
- Assumptions of Social Problems.

Perspectives on Social Problems**:**
Functional Perspective
Conflict Perspective
Symbolic Interactionist Perspective

Unit-II

Socio-Cultural Problems:
- Corruption
- Sex-Deviation
- Dowry

Unit-III

Socio-Economic and Structural Problems
- Poverty
- Unemployment
- Drug-addiction

Unit-IV

Socio-Demographic Problems:
- Child Labour and Child Abuse
- Problems of the Elderly
- Differently abled

Suggested Readings

1. Aziz, Abdul (1994) Poverty, *Alleviation in India: Policies and Programes,* New Delhi: Ashish Publication.
2. Bajpai, P.K. (1992) *Youth, Education and Unemployment*, New Delhi: Ashish Pub.House.
3. Ghosh S.K. (1996) *The World of Prostitutes*, A.P.H. Publication Corporation.
4. Julian Joseph (1989) *Social Problems (6th edition)* New Jersey: Prentice Hall.
5. Kapoor.T. (1985) *Drug Epidemic among Indian Youth*, New Delhi: Mittal Pub.
6. Mani, D. Ram, (1988) *The Physically-Handicapped in India,* New Delhi: Shilpa Publications.
7. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.

8. Murickan J. (ed.) (1989) *Poverty in India: Challenges & Responses*, Bangalore: Xavier Board Publication.
9. *Sharma, Vijay (1994) Protection* to Women in Matrimonial Home, New Delhi: Deep and Deep Publication.
10. Singh, Amarnath (1990) *Child Labour in India*, New Delhi: Shipra Publication.
11. Singhvi L.M (1977) *Unemployment Problems in India*, New Delhi: National Publishing House.
12. Srivastava C.P. (2001) *Corruption: India's Enemy within*, Delhi: MacMillan.
13. Teja M. K. (1993) Dowry: *A Study in Attitudes and Practices,* New Delhi: Inter India Publication.

Additional Readings

1. Sharma, R.K. (1998), *Social Problems and Welfare*, Atlantic Publishers: New Delhi.
2. Ahuja, Ram (2003), *Social Problems in India,* Rawat Publications: Jaipur.
3. Wilson, Gial (2000), Understanding Old Age: Critical and Global Perspective: New Delhi: Sage Publications.

SOC O 943: POLITICAL SOCIOLOGY

Objective

The course expects to familiarize the students with the relationship between the state and social structure. How power is central to any social institution is another important focus of the course. After the theoretical introduction, the course would finally focus on the Indian state and civil society including the various institutions. What role did the social movements play in the democratization of the Indian society would also be the part of the discussion.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Meaning and Scope of Political Sociology;
Concepts of State, Civil Society, Power, Social Caste, Varna, Structure and Nation.

Unit-II

Socio-economic Conditions and the Nature of Political Institutions:
Authoritarian State, Theocratic State, Military State, Democratic State

Unit-III

Sociology of Power, Nature and Form of Power; Power and Authority
Theories of Political Power; Elite, Structural-Functional and Marxist

Unit-IV

Thematic Concerns in Indian Political Sociology:
Varna, Caste and Kinship
State and Civil Society, State and Social Structure, State and Nation-building
Movements of Resistance.

Suggested Readings

1. Barrington Moore, Jr. (1966) *Social Bases of Dictatorship and Democracy,* Boston: Beacon Press.
2. Bottomore, T. (1979) *Political Sociology*, Ambika, Bombay: B.I.
3. Chakraborty, Salyabrata (Eds.). (2005*). Political Sociology*, Macmillan, New Delhi.
4. Kothari, R. (1970*) Caste in Indian Politics*, New Delhi: Orient Longman.
5. Lukes, Steven (1974*) Power: A Radical View*, Hong Kong, Macmillan.
6. Motwani, K., Saksena, RD. (Eds.) (2009). Sociology of Politics: Theoretical Perspectives, New Delhi, Cosmo.
7. Phadnis, U. and Ganguly, R. (2001) *Ethnicity and Nation Building in South Asia*, New Delhi: Sage.
8. Pizzorni, A. (ed) (1971) *Political Sociology*: Penguin
9. Rathod, P.B., (2005). *Fundamentals of Political Sociology,* Jaipur, ABD Publication.
10. Verma, R.P., (2001). *Dynamics of Political Sociology*, New Delhi, Rajat.

Additional Readings

1. Quigley, D. (1999) *Interpretation of Caste*, Delhi: Oxford.
2. Martin, Roderick (1977*) The Sociology of Power*, New Delhi, London, Routledge and Kegan Paul.
3. Munek, R. (2002) *Globalization and Labour*, Delhi: Madhyam Brs.

SOC O 944: SOCIOLOGY OF MARGINALIZED COMMUNITIES

Objective

The course aims at sensitizing the students to the significance of the sociological study of Dalits, tribals and other sub-alteran groups. The focus would be on communities/groups suffering poverty, deprivation and discrimination.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marginalization and its Socio-economic Indices:
Poverty, Relative Isolation, Deprivation, Exploitation, Discrimination, Educational Backwardness; Inequality
A Critical View of the Caste System
Untouchability: Historical and Social Roots.

Unit-II

The Social Structure and Culture of marginalized communities:
The Status of SCs, STs, Nomadic Castes and Tribes and De-Notified Tribes; Problems; Social Mobility; Development; Identity Formation.

Unit-III

Perspectives on Marginalization:
Role of Ideology in Marginalization
The views of Jotirao Phule, Periyar, Babasaheb Ambedkar, Ram Manohar Lohiya.

Unit-IV

(a) Social Movements among Marginalized Communities: Nature and Dynamics; Perspectives on Social Movements: Protest, Reform: Role of Christian Missionaries in Social Reform Movements; Role of NGOs.
(b) Marginalization and Affirmative Action: Constitutional Provisions; Implementation; Impact on Marginalized Communities; Limitations; Critical Review.

Suggested Readings

1. Beteille, Andre (1981) *Backward Classes and the New Social Order*, Delhi: Oxford University Press.
2. Beteille, Andre (1992) *The Backward Classes in Contemporary India,* Delhi: Oxford University Press.
3. Charsley, S.R. and G.K. Karanth (1998) (eds.) *Challenging Untouchability*, Delhi: Sage Publications.
4. Chako, M. Priyaram. (2005). *Tribal Communities and Social Change*, New Delhi: Sage Publications.
5. Chaudhuri, S.N. (1988) *Changing Status of Depressed Castes in Contemporary India*, Delhi: Daya Publishing House.
6. Gupta, Dipankar (1991) *Social Stratification,* New Delhi: Oxford University Press.
7. Jogdand, P.G. (2000) *New Economic Policy and Dalits*, Jaipur: Rawat Publications.
8. Narayan, Badri. (2006). *Women Heroes and Dalit Asssertion In North India: Cultural Identity and Politics,* New Delhi: Sage Publications.
9. Singha, Roy (2004), (ed.), *Social Development and the Empowerment of Marginalized Groups. Perspectives and Strategies* New Delhi: Sage Publications.
10. Srikrishna, S., Samudrala and Anil Kumar. (Eds.). (2007). *Dalits and Human Rights*, New Delhi: Serial Publication.

Additional Readings

1. Gore, M.S. (1993) *The Social Context of an Ideology: The Social and Political Thoughts of Babasaheb Ambedkar*, New Delhi : Sage.
2. Jogdand P.C. (1991) *Dalit Movement in Maharastra*, New Delhi: Kanak Publications, 1991.
3. Mahajan, Gurpreet (1998) *Democracy, Difference and Social Justice*, New Delhi: Oxford University Press.
4. Mehta, Rani (2011), "Globalization and Human Rights of the Marginalised Groups: A Sociological Perspective," Amritsar, Guru Nanak Journal of Sociology, GNDU, Vol. 32, Nos. 1&2.
5. Omvedt, Gail (1995): *Dalit Visions: The Anti-Caste Movement and the Construction of an Indian Identity,* New Delhi: Orient Longman.
6. Omvedt, Gail (1999) *Dalits and the Democratic Revolution*, New Delhi: Sage.
7. Oommen, T.K. (1990*) Protest and Change: Studies in Social Movements*, Delhi: Sage Publications.
8. Robb, Peter (1993) (eds*.) Dalit Movements and the Meeting of labour in India*, Delhi: Sage Publications.
9. Shah, Ghansham (1990) *Social Movements in India: a Review of Literature*, Delhi: Sage Publications.
10. Shah, Ghansham (2002*), Dalit Identity and Politics*, New Delhi: Sage.

11. Singh, K.S. (1988) *The Scheduled Castes,* Delhi: Anthropological Survey of India.
12. Singh K.S. (1995) *The Scheduled Tribes*, Delhi: Oxford University Press.
13. Zelliot, Eleanor (1995) *From Untouchable to Dalit: Essays on the Ambedkar Movement,* New Delhi: Manohar

SOC O 945/935: DISSERTATION (IIIrd and IVth Semesters)

SOC O 946: MEDIA AND CULTURE

Objective

This course has been designed to provide a sociological perspective on the role of popular culture and mass media in modern society. It focuses on the phenomena of communication, mass media, popular culture, especially in the Indian context, and their relationship with the globalization process since all these together play a major role in shaping the society.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks

Course Outline

Unit-I

Communication: Definition, Process, Functions and Types

Approaches to Communication

Factors influencing Communication

Mass Media – Print and Electronic

Unit-II

Culture: Popular Culture, Mass Culture, Folk Culture, Elite Culture; Mass Media and Culture; Theoretical Perspectives on Popular Culture and the Media.

Unit-III

Globalization, Mass Media and Culture – Diffusion of global culture through the mass media and its impact on society – social values, youth, family, consumerism, food, clothes, entertainment; Dissemination of awareness by media on social issues – violence, stereotypes, gender issues.

Unit-IV

Media and the Indian society – Satellite television and its impact; Impact of Social Media

Suggested Readings

1. Axford, B. and R. Huggins (2001) *New Media and Politics*, London, Sage Publications.
2. Curren, J. and M. Gurevitch (1991) (eds.), *Mass Media and Society*, London, Edward Arnold.
3. Dwyer, R. and C. Pinney (2001) (eds*.), Pleasure and the Nation: The History, Politics and Consumption of Public Culture in India,* New Delhi, Oxford University Press.
4. French, D. and Michael Richard (2000) (eds.), *Television in Contemporary Asia*, London, Sage.
5. Garnham, Nicholas, (2000*) Emancipation: the Media and Modernity,* New Delhi, Oxford University Press.
6. Gunaratne, S. (2000) (ed.), *Handbook of the Media in Asia*, London, Sage.
7. Mitra, A. (1993) *Television and Popular Culture in India,* New Delhi, Sage Publications.
8. Page, D and W. Crawley (2001) *Satellites over South Asia*, London, Sage Publications.
9. Preston, P. (2001) *Reshaping Communications,* Cambridge, Cambridge University Press.
10. Real, M.R. (1996) Exploring Media Culture: A Guide, New Delhi, Sage.
11. Singhal, A. and E.M. Rogers (2000) *India's Communication Revolution*, New Delhi, Sage Publications.

Additional Readings

1. Chakravarty, Sunita S. (2000) *National Identity in Indian Popular Cinema 1947-87*, New Delhi, Oxford University Press.
2. Croteau, David and W. Hoynes (1997) *Media/Society: Industries, Images and Audiences*, London, Pine Forge Press.
3. Johnson, K. (2000) *Television and Social Change in Rural India*, London, Sage.
4. Mankekar, P. (2000) *Screening Culture, Viewing Politics: Television, Womanhood and Nation in Modern India*, New Delhi, Oxford University Press.
5. Gupta, Nilanjana (1998) *Switching Channels: Ideologies of Television in India,* New Delhi, Oxford University Press.
6. Melkote, S.R. and H.L. Steeves (2001) *Communication for Development in the Third World: Theory and Practice for Empowerment*, London, Sage Publications.

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE SYLLABI FOR

M. Sc. INFORMATION TECHNOLOGY

(SEMESTER SYSTEM)

EXAMINATIONS 2018 - 2019

--:O:--

PANJAB UNIVERSITY, CHANDIGARH Outlines of Tests, Syllabi and Courses of Reading for M. Sc. Information Technology (Two Year Degree Programme) for Session 2018 - 2019.

FIRST YEAR					
		FIRST SEMESTER			
Paper Code	**Paper Name**	**Theory & Practical Lectures**	**Univ. Exam. Marks**	**Int. Exam. Marks**	**Exam. Hours**
MS-66	Linux Administration and Programming	6	80	20	3
MS-61	Software Engineering	6	80	20	3
MS-62	Computer Algorithms	6	80	20	3
MS-42	Operating System Concepts	6	80	20	3
MS-63	Minor Project Based on 66	6	80	20	3
MS-64	Minor Project Based on 62	6	80	20	3
		SECOND SEMESTER			
MS-45	Advance Java and Network Programming	6	80	20	3
MS-65	E- Commerce and Emerging Trends	6	80	20	3
MS-60	Advanced Database System and MySQL	6	80	20	3
MS-67	Artificial Intelligence	6	80	20	3
MS-27	SEMINAR	2	-	50	
MS-56	Minor Project Based on MS-45& MS-60	6	80	20	3
MS-68	Minor Project Based on MS-67	6	80	20	3
SECOND YEAR					
		THIRD SEMESTER			
MS-32	.NET Framework and C#	6	80	20	3
MS-69	Theory of Computation	6	80	50	3
MS-39	Computer Graphics	6	80	20	3
MS-14	Systems Approach to Management and Optimization Techniques	6	80	20	3
MS-18	SEMINAR	2	-	50	
MS-33	Minor Project Based on MS-32	6	80	20	3
MS-59	Minor Project Based on MS- 39	6	80	20	3
		FOURTH SEMESTER			
MS-21	**Major Project**		**320**	**80**	

The project period will be of 6 months duration.

The project will involve development of application/system software in industrial/ commercial/ scientific environment

The report should consist of the following :

- Cover page including Project title, Name of the student, Name of the Department and Names of the Project Guides (both External and Internal).
- Acknowledgements.
- Certificates from company and department duly signed by external guide, Principal and internal guide.
- Contents with page numbers.
- Introduction (includes background and application or importance of the project)
- Objectives
- **System Analysis** System Feasibility study
- Software requirement specifications
- Design with system flowcharts and input/output design.
- Implementation and Testing

- Hardware and software used
- Listing of well commented programs with result/output or detailed algorithms with input and output.

Further scope of the project

- Bibliography
- Appendices (any other information related to project)

Each student should observe the following norms while submitting the synopsis/thesis for the Project :

(a) Use both sides of the paper instead of only single side.
(b) Use one and half interline spacing in the text (instead of double space)
(c) Stop using a blank sheet before the page, carrying figure or table.
(d) Try to insert figure/table in the text page itself (instead of using a fresh page for it, each time.)

Students must consult/inform the internal guides regarding the progress of their work at least once in 20 days. It is the duty of the student to be in touch with his internal guide. The student must prepare 5 copies of the report including one copy for self. The remaining four are to be submitted before 31st May every year as per the following :

1. Main Library
2. Department Library
3. Internal Guide
4. Company

One softcopy of the work is to be submitted to the concerned head of the department/institution along with the report. The student must present his/ her work in 15 minutes mainly focusing on his/her contribution with the help of slides followed by demonstration of the practical work done. The project Viva will be completed before 15th June every year exact dates will be informed before 31st May every year.

An external examiner, internal examiner and the internal guide will conduct project viva.

SEMESTER I

Paper Code: MS - 66
Paper Title: Linux System Administration and Programming
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	**P**
6	**8**

Objective: This course enables students to get familiar with Linux system, its commands, files & directories, system, shell programming, PERL programming and system administration. After the completion of this course, student will be able to:

- Work in the Linux environment for Linux server administration
- Write the shell programs, PERL programs and C-program with system calls

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT –I

1. **Introduction to Linux:** Functions of an **o**perating system, Linux's History, different flavors of Linux, Minimum System Requirements for installing Linux: Using LILO; Linux's fdisk.

2. **Using Linux:** Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords; Linux Error Messages, Search Paths, Input and Output Redirection, Man pages, Wildcards: * and ?, Environment Variables, process Commands: ps, kill, su command; GREP pattern searching command, vi text-editor.

UNIT-II

3. **Using the File System** : Files Overview, Common types of files, file and directory management commands, Absolute and relative filenames; pwd, cd, rm, cat, mkdir, mv, cp;, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc.

4. **File and Directory Permissions**: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; Bourne Again Shell (BASH): Command-line Completion, Wildcards, Command History, Aliases, Pipelines, setting shell prompts, Job control, Customizing bash,bash variables.

UNIT-III

5. **Shell Programming:** Creating and Running Shell Programs, Using variables, Positional Parameters and other built-in Shell Variables; importance of quotation marks, test Command, Conditional Statements: if Statement, case Statement; Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions.

6. **Linux for System Administrators:** System Administration Basics, The root Account, Starting and Stopping the System; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, Checking file Systems, Compressing files with gzip and compress: Using tar, Backups, Setting the Login Message,Setting of DNS, Ping, WWW, and e-mail.

UNIT-IV

7. **PERL:** Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless Statements, for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators.

8. **System Calls:** C as System Programming Language, I/O system calls – umask(); create(); open(); read(); write(); lseek(); dup(); link(); access(); chmod(); chown(); Process management system calls; fork(); getpid(); getppid(); exit(); wait(); sleep() ; Signal system calls – kill(); signal().

REFERENCES:

1. Tim Parker: Linux Unleashed, Techmedia Publishing House.
2. Norton, P.: Complete guide to LINUX, Techmedia.
3. Komarinski, M.: LINUX System Administration Handbook, AW.
4. John Goerzen: Linux Programming Bible, IDG Books, New Delhi.
5. Venkateshmurthy, M.G.: Introduction to Unix& Shell Programming, Pearson Education.
6. Linux Network Administration Guide by Tery Dawson, Gregor N. Purdy, Tony Bautts – Oreilly.
7. Stones, Richard and Mathew Neil: Beginning Linux Programming, 3rd Edition, Wrox.
8. Jones, Tim: GNU/Linux Application Programming, Wiley India Pvt. Ltd.

Paper Code: MS - 61
PaperTitle: Software Engineering
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand Software Configuration Managements Tools and Techniques. After the completion of this paper, student will be able to

- Use principles, concepts, methods, and techniques of the software engineering approach to produce quality software.
- Apply software engineering principles and practices in the planning and development of an actual software product.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Software Engineering:** Definition, Software Engineering goals, Characteristics of well-engineered software, Software Process Models: Waterfall Model, Prototyping Model, Spiral Model, RAD, AgileModelling.
2. **Software Requirement Specification (SRS):** Software Requirements, Definition of SRS, Characteristics of SRS, Components of SRS, Designing of SRS.
3. **System Analysis:** Principles of Structures Analysis, DFDs, E-R Diagrams, Data Dictionary.

UNIT - II

4. **Software Design:** Design Objectives, Design Principles, Concepts, Design Process, Design Methodologies: Structured Design, Modular Design, Object Oriented Design, User Interface Design and its elements and its Characteristics.

5. **Software Project Planning & Scheduling:** Objectives, Decomposition techniques, Planning and Scheduling Tools: GANTT Chart, PERT Chart, Critical Path Method and Work Breakdown Structure; Cost estimation, Cost estimation Models: Single Variable Model, COCOMO Model; Software Risks, Risk Assessment.

UNIT – III

6. Software Metrics**:** Role of Metrics and Measurement, Types of Software Metrics: Product Metrics, Software Size Metrics: LOC and Function Points, Process Metrics, People Metrics**.**
7. System Maintenance and Reliability**:** Maintenance and its types; Factors Affecting Software Reliability, Software Reliability vs Hardware Reliability, Software Reliability Metrics.

UNIT-IV

8. **Software Testing Techniques:** Introduction to Software Testing Process, Objectives of Software Testing. BBT & its Techniques: Boundary Value Analysis, Equivalence Class Testing, and Cause- Effect Graph, White-Box Testing and its Techniques: Domain and Boundary Testing, Logic Based Testing, Data Flow Testing and Basic Path Testing.
9. **Software Testing Strategies:** Characteristics, Integration Testing, Functional Testing, Object Oriented Testing, Alpha and Beta Testing.

REFERENCES:

1. Pressman : Software Engineering, Tata-McGraw Hill Publishing House.
2. Sommerville, I: Software Engineering, Pearson Education.
3. Rajib Mall: Fundamentals of Software Engineering, PHI Learning Pvt. Limited
4. Jalota, Pankaj: An integrated approach to Software Engineering, Narosa Publishing Company.
5. Ali Behforooz : Software Engineering Fundamentals, Oxford University Press. Frederick J.H
6. William E. Perry, WILEY: Effective methods for Software Testing
7. Gill, Nasib Singh: Software Engineering: Software reliability, Testing and Quality Assurance. Khanna Book Publishing

Paper Code: MS - 62
Paper Title: Computer Algorithm
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	8

Objective:
The objective of the module is to create skills in students to design and analyze algorithms. After studying this subject students will be able to

- Understand algorithms and give theoretical estimates for the resources needed by any algorithm.
- Analyze Algorithms.
- Have an empirical approach to gauge the comparative performance of a given set of algorithms.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Data Structures**: Definition, Types of Data Structures, Stacks and its operations(Push, Pop), Queue and its operations (Insert, Delete), Tree (Binary Tree, General Tree and its Traversal), Graph(Types and its Traversal).
2. **Algorithms and Analysis:**Definition; Analysing algorithms; space and time complexity, Asymptotic Notation (O, Ω, θ) practical complexities, Best, average and worst case performance of algorithms, examples, Recursive algorithms, Introduction to recurrence relations.

UNIT – II

3. **Divide and Conquer:** General method, Binary search, Merge sort, Quick sort, Selection problem, Strassen's matrix multiplication and analysis of these problems.

4. **Greedy Method:** General Method, Knapsack problem, Job sequencing with deadlines, Minimum spanning Trees (Prim's Algorithm, Kruskal's Algorithm), Single source shortest paths and analysis of these problems.

UNIT - III

5. **Dynamic Programming:** General method, Optimal binary search trees, 0/1 Knapsack, the traveling salesperson problem, Single Source Shortest Path Problem (Bellman Ford Algorithm), All pair shortest path problem (Floyd's Algorithm).

6. **Back Tracking:** General method, N queen's problem, Graph coloring, Hamiltonian cycles, Analysis of these problems.

UNIT - IV

7. **Branch-And-Bound:** General Method, 0/1 Knapsack, Traveling Salesperson problems.

8. **NP-hard and NP-complete problems:** Basic concepts, Statement of Cook's Theorem, Satisfiability SAT, Examples of NP-hard graph [Clique Decision Problem, Chromatic Number

Decision Problem] and NP-scheduling problems [Scheduling Identical Processors, Job Shop Scheduling].

REFERENCES:

1. Lipschutz, Seymour, 1986: Theory & Problems of Data Structures, Schaum Series.
2. Horowitz, Ellis and Sahni, Sartaj: Fundamentals of Computer Algorithms, Galgotia Publications.
3. Aho, A.V., Hopcroft, J.E., Ullman, J.D.: The Design and Analysis of Computer Algorithms, Addison-Wesley.
4. Goodman, S.E. &Hedetniemi: Introduction to the Design and Analysis of Algorithms, McGraw-Hill Book Comp.
5. Knuth, D. E.: Fundamental of Algorithms: The Art of Computer Programming, Vol.-1, NareshPubl.House.
6. Brassad, Gilles and Bartley, Paul: Fundamentals of Algorithms, Prentice Hall of India.

Paper Code: MS - 42
Paper Title: Operating System Concepts
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand **the concepts of Operating System.** After the completion of this paper, student will be able to

- Manage various processes and use the scheduling algorithms.
- Handle the deadlock conditions.
- Manage the files on the disk with effective outcome.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Operating System:** History, Structure of OS, Functions/ Operations of OS, Types: Single User, Multi-user, Simple Batch Processing, Multiprogramming, Multitasking, Parallel systems, Distributed system, Real time system.
2. **Process Management:** Process, Process state, Process Control Block; Process scheduling: Scheduling queues, Schedulers, Context switch; Operation on process: Process creation and termination; interrupt mechanism, threads, Scheduling Algorithms: Pre-emptive and non pre-emptive scheduling, FCFS, SJFS, RRS, priority scheduling, Multilevel queue scheduling, Multilevel feedback queue scheduling, Inter process communication: Shared memory systems, Message passing systems.

UNIT - II

3. **Process Synchronization:** Concurrent Processes, Race condition, Shared data; Critical section problem: Mutual exclusion, Progress, Bounded waiting; Software solution: Busy form of waiting, lock and unlock primitives, Dekker's algorithm, Peterson's solution, Baker's Algorithm; Synchronization: Semaphores, Monitors, Reader Writer Problem, Producer Consumer Problem, Dinning Philosopher Problem.
4. **System Deadlock:** System Model; Deadlock Characterization: Necessary conditions, Resource Allocation graph; Deadlock prevention: Mutual Exclusion, Hold and Wait, No Preemption, Circular wait; Deadlock Avoidance: Safe state, unsafe state, Resource Allocation graph Algorithm, Banker's Algorithm; Deadlock Detection & Recovery from deadlock: Wait-for-graph

UNIT - III

5. **Memory Management:** Hierarchy of memory types, Cache memory: Types: Associative memory, direct mapped, set associative.
6. **Memory Allocation:** Address binding, Address Space, Memory Protection, Contiguous and Non- Contiguous allocation, Swapping, Fragmentation; Paging: Protection, Shared pages, Techniques for structuring of page table; Segmentation: Segmentation with paging; Virtual

Memory: Demand paging; Page replacement Algorithms: FIFO, Optimal, LRU, LFU, MFU, Working set, Thrashing;

UNIT - IV

7. **Storage Management:** File(s): Attributes, Operations, Types, Structure; Access Methods: Sequential, Direct access, Index; Directory Structure: Single level, Two level, Tree Structured, Acyclic Graph; File System mounting; File sharing; Protection: Types of access, access control.
8. **File system** structure, File system implementation, Directory implementation, Allocation methods: Contiguous Allocation, Linked Allocation, Indexed Allocation; Disk scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Disk management; Swap space management; RAID.

REFERENCES:

1. Galvin P.B., Silberschatz A., Gagne G.: Operating System Concepts, Wiley Publications.
2. Deitel, H.M.: An Introduction to Operating System, Addision-Wesley Publishing Company.
3. Milenkovic, M.: Operating System - Concepts and Design, McGraw-Hill International Editions.
4. Madnick and Donovan: Operating System, McGraw-Hill Publishing Company.
5. Hansen P. Brineh: Operating System Principles, Prentice-Hall India.

SEMESTER II

Paper Code: MS - 45
Paper Title: Advance Java and Network Programming.
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L	P
6	4

Objectives: This paper enables student to enhance the programming skills using object oriented programming approaches. After the completion of this paper, student will be able to

- To create enterprise and standard applications Java.
- To develop web applications with database support.
- To develop client server based applications.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Review of Java Basics:** Applets, Multithreading, AWT Controls, Event Handling.
2. **Swing:** Features, components, Swing vs AWT, swing containers, controls, using Dialogs, sliders, progress bars, tables, creating user interface using swing.

UNIT-II

3. **Java Database Connectivity:** Connectivity model, Java. SQL package, JDBC Exception classes, Database connectivity, Data manipulation and navigation, Using PreparedStatement, creating database applications
4. **Java RMI:** Distributed object technologies, RMI architecture, creating RMI applications.

UNIT-III

5. **Java Servlets:** Servlets vs CGI, Servlet Lifecycle, creating and running servlets.
6. **Networking:** Networking basics, Client / server model, Java and the Net, TCP/IP client sockets, TCP/IP server sockets, Inet Address, URL, Data grams, creating networking applications.

UNIT-IV

7. **Java Beans :** Component architecture, Components, Advantages of Beans, Bean Developer kit (BDK), JAR files, introspection, developing Beans, Using Bound properties, The Java Beans API, Introduction to EJB (Enterprise Java Beans),Types of EJB, Uses of EJB.
8. **Java Server Pages:** Introduction, JSP Architecture, JSP Elements: Implicit Objects, Comments, Directives, Action Elements, Scripting Elements., developing simple Web Applications.

REFERENCES:

1. Schildt, Herbert: The Complete Reference Java 2, TMH.
2. Ivan Bayross: Web Enabled Commercial Application Development using Java 2.0, BPB.
3. Cornell, Gary and Horstmann Cay S.: Core Java, Vol I and Vol II, Sun Microsystems Press.
4. Keogh, James: J2EE: The Complete Reference.
5. Martin Bond, Debbie Law, Andy Longshaw, Dan Haywood, PeterRoxburgh: SAMS: Teach Yourself J2EE in 21 days, Pearson.
6. Java 6 Programming Black Book, Kogent Solution Inc., Dream Tech Press.

Paper Code: MS – 65
Paper Title: E-Commerce and Emerging Trends
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	0

Objectives: This course enables students to be familiar with Fundamentals of Electronic Commerce and Emerging Technologies such as Parallel Computing, Cloud Computing, Grid Computing, Mobile Computing, and Concept of Big Data.
Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Electronic Commerce:** Traditional Commerce vs Electronic Commerce, Types of E-Commerce, E-Commerce infrastructure: Hardware and Software requirements, **Electronic Data Interchange (EDI):** EDI enabled procurement process and its benefits; Components of EDI system: EDI standards, EDI software, communication networks;**Electronic Payment Methods:** Types of Electronic Payment Systems, Digital Token Based Electronic Payment Systems, Smart cards and Electronic payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic payment Systems.

2. **Issues in E-commerce:** The legal and policy environment of E-Commerce; Intellectual Property, advertising and consumer protection; Copyright Law; Patent Law; Network Security and Firewalls; Client-Server Network Security Threats; Data and Message Security; Encrypted Documents and E-mail; Digital Signatures.

UNIT-II

4. **Business Intelligence:** Introduction to Business Intelligence, Digital data and its types – structured, semi-structured and unstructured, Introduction to Online Transaction Processing (OLTP), Online Analytical Processing (OLAP), Different OLAP architectures: MOLAP, ROLAP, HOLAP, Comparison of OLTP and OLAP. BI Definitions and need, BI Component Framework, Business Applications of BI.

5. **Case Studies:** Supply Chain management, Banking, Online Reservation Systems, Online Publishing

UNIT-III

6. Parallel Computing: Introduction and use, Flynn's Classical Taxonomy: SISD, SIMD, MISD, MIMD; Parallel Computer Memory Architectures: Shared Memory, Distributed Memory, Hybrid Distributed-Shared Memory; Parallel Programming Models: Shared Memory Model, Threads Model, Distributed Memory/Message Passing Model, Data Parallel Model, Hybrid Model, SPMD and MPMP, Introduction to Parallel Virtual Machine and Message Passing Interface, Supercomputers.
7. Cloud Computing: Introduction and use, Architecture, Service Models: infrastructure as a service, platform as a service, and software as a service;

UNIT-IV

8. Grid computing: Introduction and benefits, virtual organisations, grid Architecture and its relationship to other distributed technologies, grid application areas.

9. Mobile Computing : Definition, Guided Transmission, Unguided Transmission; Mobile computing architecture, Mobile Devices, Mobile System Networks: Cellular, WLAN, Ad hoc networks; Introduction to : GSM,CDMA,GPRS,EDGE; Introduction to Mobile Databases; Mobile Applications; Mobile Application Languages; features of Mobile Operating system: Palm OS , Symbian, Android.

REFERENCES :

1. Ravi KalaKota and Andrew B. Whinston: Frontiers of Electronic Commerce, Addison Wesley 1996
2. Kamlesh K. Bajaj and Debjani Nag: E-Commerce The Cutting Edge of Business, McGraw Hill Education.
3. R. N. Prasad and Seema Acharya , Fundamentals of Business Analytics , Wiley 2011
4. M. Sasikumar, Dinesh Shikhare, P. Ravi Prakash: Introduction to Parallel Processing, PHI.
5. Barry Wilkinson, Michael Allen, Parallel Programming: Techniques and Applications Using Networked Workstations and Parallel Computers, Pearson Education.
6. Joshy Joseph, Craig Fellenstein : Grid Computing, Pearson Education.
7. ZarekNabrzyski, Jennifer M. Schopf, Jan Weglarz: Grid Resource Management - State of the Art and Future Trends, Kluwer Academic Publishers.
8. Kamal, Raj, Mobile Computing, Oxford Higher Education.
9. Perkins, Mobile Computing, Pearson Education.
10. Jochen Schiller: "Mobile Communications", PHI/Pearson Education.

Paper Title : Advanced Database Programming & MySQL
Paper Code: MS-60
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes dduration)

Objectives:
The course aims at providing the students through insight on few DBMS principles and practices. Students will learn and implement the operations for making and using databases with help of SQL and PL/SQL.
Note :

i) The Question Paper will consist of Four Units.
ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii) The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv) All questions carry equal marks unless specified.

UNIT - I

1. **Database Management Systems**: Definition, Characteristics, Advantages of Using DBMS Approach, Classification of DBMSs, Data Models, Database Schema and Instance, Three Schema Architecture, Data Independence – Physical and Logical data Independence.
2. **Entity- relationship model**: Entities, Relationships, Representation of entities, attributes, Representation of relationship set, Generalization, aggregation.
3. **Normalization**: Functional Dependency, Full Functional Dependency, Partial Dependency, Transitive Dependency, Normal Forms– 1NF, 2NF, 3NF, BCNF, Multi-valued Dependency.

UNIT - II

4**. Relational Algebra and Relational Calculus**: Relational Algebra: Operations- Union, Intersection, Difference, Cartesian product, Projection, Selection, Division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

5. **Transaction and Concurrency control**: Concept of transaction, ACID properties, Serializibility, States of transaction, Concurrency control: Locking techniques, Time stamp based protocols, Granularity of data items, Deadlock.

UNIT - III

6. **MySQL**: Introduction; Why MySql; Tools provided with MySQL; MySQL Architectural Terminology;Databases:Creating, Selecting, Dropping and Altering Databases; Tables: Creating, dropping, Altering, Indexing Tables; Adding new rows, Retrieving Information, Deleting or Updating Existing rows; Obtaining MySQL Metadata; Joins; Subqueries; Views; Multiple Tables Deletion and Updation; Foriegn Keys and Referential Integrity; MySQL Data Types; Sequences.

UNIT - IV

10.**Data Warehousing**: Introduction; Features; Data modeling for Data Warehousing; Building Data warehouse; Comparison between Data Warehouse and DBMS Metadata; Problems and issues in Data Warehouse.

11. **Data Mining**: Overview; Goals of Data Mining; Techniques: Association rules(Market Basket Algorithm, Apriori Algorithm); Classification: Decision Tree, Induction Algorithm; Applications of Data Mining.

References:

1. Elmarsi&Navathe, “Fundamentals of Database Systems” 4th Edition, 2004.
2. Jiawei Han and MichelineKamber,"Data Mining: Concepts and Techniques", Elsvier.
3. William H. Inmon, "Building the Data Warehouse",Fourth Edition, Willey.
4. C.J.Date “Introduction to database system”, 8th Edition, Galgotia Publications, 2004.
5. Paul DuBois, "MySQL Developer's Library", Fourth Edition, Addison Wesley.
6. Bipin C. Desai, An Introduction to Database System
7. Silberschatz, Korth, Sudershan “Database System Concepts” 4th Edition, McGraw Hill Education, 2002.
8. Ivan Bayross, “SQL/PLSQL: The Programming Language of Oracle, 3rd Revised Edition, 2006

Paper Code: MS - 67
Paper Title: Artificial Intelligence
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives: The paper enables students to understand Artificial Intelligence techniques and the language LISP. After the completion of this paper, student will be able to

- Apply standard AI techniques to solve problems.
- Characterize the Knowledge Acquisition
- Differentiate various expert systems
- Write programs of AI using LISP

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Artificial Intelligence (AI)** : Introduction and Applications, History of AI from Alan Turing and developments in AI, application areas; Criteria for success; Problem Characteristics; Problem representation-State space representation, problem reduction representation, production system; Introduction to agents, intelligent software systems, Applications, Intelligent architectures, components of intelligent agent based distributed systems.
2. **Search and Control Strategies:** Data driven and goal driven search; Uninformed search-Breadth -first Search and Depth-First Search methods; Heuristic Search Techniques - Hill Climbing, Best first Search, A*, AO*, Constraint satisfaction and means-ends analysis techniques.

UNIT - II

3. **Knowledge Representation** : Information and Knowledge, Knowledge Acquisition and Manipulation, Issues in Knowledge Representation, Knowledge Representation Methods, Propositional Logic and First Order Predicate Logic, Resolution: Definition, Conversion to ClauseForm, Resolution in Propositional and Predicate Logic, Unification and Resolution Principle; Horn's Clauses, Semantic Networks, Partitioned Semantic Nets, Frames, Scripts and Conceptual Dependencies.
4. **Game Playing:**Minimax Search Procedure, Adding Alpha-Beta Cutoffs.

UNIT - III

5. **Expert Systems** : Definition and Applications, Characteristics of Expert systems, Architecture of a typical Expert System, Expert System Shells, Building an Expert System, Case studies of Expert Systems like MYCIN, Specific Application of AI.
6. **Natural Language understandingand Processing**: Complexity of the problem, Syntactic processing: Grammars and Parsers, Augmented Transition Networks; Semantic Analysis:

Semantic Grammars, Case Grammars; Discourse and Pragmatic processing:Using Focus in Understanding, Modeling Beliefs; Introduction to Perception :Vision using Low-Level and High-Level Image Features and Action: Navigation and Manipulation.

UNIT - IV

7. AI Language PROLOG: Features of Prolog, Elementary Data Types, Compound objects in Prolog, Writing simple program in Prolog, Understanding Default flow control of the Prolog Program, Controlling Program Flow with cut and fail, List Manipulation, String manipulation, Arithmetic Operators and evaluation of Arithmetic expressions, Input /Output statement. Some simple example problems: Tower of Hanoi, Sorted Tree Dictionary, Sorting, Searching Graphs, Searching aMaze.

REFERENCES:

1. Rich Elaine and Knight Kevin: Artificial Intelligence; Tata-McGraw Hill Company, New Delhi.
2. George F Luger; William A. Stubblefield: Artificial Intelligence; Structures and Strategies for Complex problem solving, Pearson Education.
3. Patterson, Dan W.: Introduction to Artificial Intelligence and Expert Systems, Prentice-Hall of India Pvt. Ltd., New Delhi.
4. W.F. Clofisin and C.S. Mellish, "Programming in PROLOG", Narosa Publishing Co.
5. SanjivaNath, "Turbo PROLOG", Galgotia Publications Pvt. Ltd.
6. Bharti&Chaitany: Natural Language Processing, PHI.
7. Russel, Sturat&Norviig, Peter: Artificial Intelligence; A modern Approach; Person Education Pvt. Ltd.

SEMESTER – III

Paper Code: MS - 32
Paper Title: .NET FRAMEWORK AND C#
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L	P
6	8

Objectives: This course aims at making a student capable of developing console, windows and web applications using C# on .NET platform.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Introduction to .NET environment:** The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach.
2. **Introduction to C#** :Introducing C#, Overview of C#, Literals, Variables, Data Types, Operators, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, Enumerations, difference between C++ and C#, difference between Java and C#.

UNIT-II

3. **Object Oriented Aspects of C#** : Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Errors and Exceptions.
4. **I/O and Object Serialization:** I/O: System. I/O, Streams, TextWriter, TextReader, BinaryWriter, Binary Reader, File Stream, File; Serialisation: Binary, SOAP, XML and Custom Serialisation.

UNIT-III

5. **Writing Windows Forms Applications and Deploying Windows Forms Applications**: Writing Windows Forms Applications: Understanding Windows Forms, Window form controls, Menus, MDI Forms, Using Inheritance in Windows Forms, Using Common Dialog Controls, Deploying Windows Forms Applications: Introduction to deployment, Click Once deployment, Creating an Installation Package for project.
6. **Writing ASP .NET applications and Deploying ASP .NET Applications:** Introduction to ASP.NET, Using Validation Controls, Managing State in ASP.NET Web Applications, Deploying ASP.NET Applications with Windows Installer.

UNIT-IV

7. **Accessing Data with ADO .NET:** ADO .NET Architecture, Components, Database, DataReader, DataAdapter, DataSet, Viewing data using Data Grid View Control, Creating Applications.

REFERENCES:

1. Jones, Bradley L.: Sams Teach Yourself C# in 21 Days.
2. Balagurusamy, E.: Programming in C#, Tata McGraw-Hill.
3. Liberty, J.: Programming C#, O'Reilly.
4. Schildt, Herbert: The Complete Reference: C#, Tata McGraw-Hill.
5. Robinson: Professional C#, Wrox Press.
6. Jason Beres: SAMS Teach Yourself Visual Studio.Net in 21 days.
7. Watsel, Nagel, Pedersen, Reid, Skinne, White: Beginning Microsoft Visual C#, Wrox Publications.

Paper Title: THEORY OF COMPUTATION
Paper Code: MS - 69
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs**.
Number of Lectures: 90 (45 minutes duration)

Objectives:
The goal of this course is to provide students with an understanding of basic concepts of Theory of Computation.

Note :
(i) The Question paper will consist of Four Units.
(ii) Examiner will set total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii) The students are required to attempt one question from each unit and the compulsory question.
(iv) All questions carry equal marks.

UNIT I

1. **Theory of Automata**: Definition, Description of Automata, Transition Systems, Language, Grammar, Deterministic & Non-Deterministic Finite State Machines, Equivalence of DFA and NDFA, Finite State Machine with output (Moore Machine and Meally Machine), Conversion of Moore Machine to Meally Machine & vice-versa, Minimization of Finite Automata.
2. **Formal Languages**: Chomsky Classification of Languages, Languages and their Relations, Languages and Automata.

UNIT II

3. **Regular Sets and Regular Grammars**: Regular Expressions, Finite Automata and Regular Expressions, Conversion of NDFA to DFA, Arden's Theorem, Construction of FA equivalent to Regular Expression, Equivalence of two Finite Automata, Equivalence of two Regular Expressions, Pumping lemma for Regular Sets and applications, Closure Properties of Regular Sets, Construction of Regular Grammar generating Transition System for a DFA, Construction of Transition System accepting Language for a Regular Grammar , limitations of finite state machine.

UNIT III

4. **Context Free Languages**: Context free grammar, Simplification of Context Free Grammars, Normal Forms for Context Free Grammers: Chomsky Normal Form, Greibach Normal Form, Pumping Lemma, CYK algorithm.
5. **PDA**: Push down stack machine, Design of deterministic and non-deterministic push-down stack, Parser design.

UNIT IV

6. **LR(K) Grammars**: Properties of LR(K) Grammar, Closure properties of Languages.
7. **Turing Machine**: Turing machine definition and design of Turing Machine, Church-Turing Thesis, Variations of Turing Machines, combining Turing machine, Universal Turing Machine, Post Machine, Chomsky Hierarchy, Halting problem, Post Correspondence problem.

References:

1. Mishra, K.L.P and Chandrasekaran, N.: Theory of Computer Science, Automata, Languages and Computation.
2. Lewis, Harry R. and Papadimitriou, Christos H.: Theory of Computation, Prentice Hall of India, 1996.
3. Hopcroft, John E. and Ullman, Jefrey D.: Introduction to Automata Theory, Languages and Computation, Addison-Wesley Publishing Company Inc.
4. Brady, J.M.: Theory of Computer Science, Wiley.
5. A.V. Aho, J.E. Hopcroft and J.D. Ullman, 'Introduction to Automata, Languages and Computations, Addison Wesley, 1980.
6. M.Davis and E.J. Weyuker 'Computability, Complexity and Languages' Academic Press, 1982.

Paper Code: MS – 39
Paper Title: Computer Graphics
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives:
This paper enables students to understand graphics hardware and various 2D and 3D algorithms. After the completion of this paper, student will be able to:
- Implement the principles and commonly used paradigms and techniques of computer graphics.
- Use OpenGL proficiently using C / C++.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer Graphics**: Overview of Graphics Systems, Display Devices, Display Processors, Character Generation; Interactive graphical techniques; Positioning, (Elastic or Rubber Band lines, Inking, zooming, panning)
2. **Raster Scan Graphics**: Line Drawing algorithms-Direct method, DDA and Bresenham's; Circle drawing algorithm- 2-point, 4-point, trigonometric method, 8-point, Bresenham method, Bresenham Midpoint method.

UNIT - II

3. **Two Dimensional Geometric Transformation & Viewing**: homogeneous coordinate system; Basic Transformations- Translation, Rotation, Scaling, Reflection, Shear, composite transformation like- Rotation about an Arbitrary Point, Reflection through an Arbitrary Line; transformation of points and unit square.
4. **Clipping: Point clipping Line clipping algorithms**: Cohen-Sutherland and Liang-Barsky, Polygon Clipping; Window to viewport coordinate transformation.

UNIT - III

5. **Graphics Programming using C/C++**: Basic Graphical functions; Mouse Programming, Graphic Languages: Primitives (Constants, actions, operators, variables), display subroutines, plotting and geometric transformations, Concept of Animation, Saving, Loading and Printing graphics images from/to disk. Animated algorithms for sorting, Towers of Hanoi.
6. **Open GL using C/C++**: Geometric Primitives and Attributes; Viewing; Color; Lighting, Animation**.**

UNIT - IV

2. **Three Dimensional Concepts & Object Representations**: Three Dimensional Display Methods, Parallel Projection, Perspective Projection; Translation, Rotation, Scaling, Composite Transformation; Hidden line and surface elimination-Z-buffer, back face, scan line, depth sorting.
3. **Shading-**Modelling light intensities- flat shading, gouraud shading, phong shading. Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces.

REFERENCES:

1. Giloi, W.K.:Interactive Computer Graphics; Prentice-Hall India Ltd.
2. Newman, W., Sproul, R.F.: Principles of Interactive Computer Graphics, McGraw- Hill.
3. Rogers, D.F.: Procedural Elements for Computer Graphics, McGraw-Hill.
4. Foley, J.D., Van Dam A.: Fundamentals of Interactive Computer Graphics, Addison-Wesley.
5. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
6. Roy, Plastock, Theory & Problems of Computer Graphics, Schaum Series
7. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
8. Dave Shreiner, Mason W., Jackie N., Tom Davis; The OpenGL Programming Guide – The Red Book, Addision-Wesley.

Paper Code: MS – 14
Paper Title: Systems Approach to Management and Optimization Techniques
Maximum Marks: 100 (Ext ernal : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	0

Objective: This course enables students to be familiar with different types of Info systems, basics of DR and its practical problems.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Concepts of Computer Based Systems**: Data, Information, Information Systems, Model ofcomputer based information system; Introduction to Management Information System,Decision Support System and Knowledge Based Systems.
2. **Accounting Information System**: Characteristics, sample system, subsystems for fillingcustomer order, order replenishment stock, performing general ledger processes; features anduse of Accounting Information System Package-Tally.
3. **Marketing Information System**: Basic concepts, model, subsystems including MarketingResearch, Marketing Intelligence, Product, Place, Promotion and Pricing subsystems.

UNIT-II

4. **Manufacturing Information System**: Model and subsystems including Accounting information, Industrial Engineering, Inventory, Quality and Cost Subsystems.
5. **Financial Information System**: Model and Subsystems including Forecasting, FundsManagement and Control Subsystems.
6. **Human Resources Information Systems**: Model and Subsystems including humanresources research, human resources intelligence, HRIS Database, HRIS output.

UNIT-III

7. **Basics of Operations Research (OR)**: Origin and Development of OR, Characteristics ofOR, Models in OR, OR and Decision Making, Role of Computers in OR, Limitations of OR.
8. **Linear Programming**: Mathematical Formulation, Graphical and Simplex method, Dualityin Linear programming, Dual Simplex Method, The Revised Simplex Method, SensitivityAnalysis.

UNIT-IV

9. **Special types of Linear Programming problems**: Transportation and Assignmentproblems.
10. **Integer Programming**: Introduction, Branch and Bound Techniques, Binary LinearProgramming, Assignment & Traveling salesman problems.
11. **Dynamic Programming**: Deterministic & Probabilistic Dynamic Programming.

REFERENCES

1. Basandra, Suresh K. : Computer Systems Today, Wheeler Publishing
2. Murdick, R.G. & Ross J.E. &Claggtt J.R.: Information Systems for Modern Management, Prentice Hall
3. Swarup, Kanti, Gupta, P.K. &Manmohan: Operations Research, Sultan Chand & Sons.
4. Gupta, Prem Kumar &Hira, D.S.: Operations Research.
5. Rao, S. S.: Introduction to Optimization: Theory & Applications, Wiley Eastern.
6. Taha, H.A.: Operations Research – An Introduction, McMillan Publishing Company
7. S.D. Sharma: Operation Research, Sultan Chand & Sons.

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PANJAB UNIVERSITY CHANDIGARH-160 014 (INDIA)

(Estted. Under the Panjab University Act VII of 1947 enacted by the Govt. Of India)

FACULTY OF SCIENCE

SYLLABI

FOR

PG Diploma in Chemical Analysis of Food

(Semester System)

EXAMINATIONS 2018-2019

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR POSTGRADUATE DIPLOMA IN CHEMICAL ANALYSIS OF FOOD FOR THE EXMINATIONS OF 2018-2019

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Outline of Tests

There will be two semesters in a year. Examination will be held at the end of each semester.

Total Marks: 300

There will be two theory papers and one practical paper in each semester.

1st Semester

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Semester I

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Foods: As source of Energy, energy value of foods, uses of foods in the body, digestion, absorption and transport. [10]

Unit-II

Chemistry of Fats and Oils: Composition-saturated and unsaturated fatty acids. Functions and storage in the body and Physio-chemical properties. An idea about soaps, detergents, emulsions and emulsifiers. [10]

Unit-III

Carbohydrates I: Composition and classification, storage in the body, biological functions of some monosaccharides and disaccharides (glucose, fructose, Sucrose, Maltose and lactose). [10]

Unit-IV

Carbohydrates II: Biological functions of some polysaccharides (starch and cellulose). Important chemical and biological reactions, Other sweetening agents: Saccharin, Aspartame. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. *Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.*

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Adulterants I: Food Colours

-Food colors and Additives.
- Kinds of colors used.
-Water soluble food colors. **[10]**

Unit-II

Food Adulterants II: Dyes and preservatives

-Dyes: Permitted and non-permitted dyes.
-Identification of Dyes by Spot Test.
-Preservatives, Organic preservatives-Dyes-Percentage-Definition and classification. **[10]**

Unit-III

Milk and Milk Products:
Composition, Classification, Processing, Natural Aspects of mild, curd, paneer, khoa, cheese, ice-cream and various kinds of processed milk. **[10]**

Unit-IV

Beverages:
Tea, coffee, chocolate, cocoa powder, processing (in brief), chemical constituents, Good and Bad effects of alcoholic and non-alcoholic beverages. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearson *Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. *Handbook of Analysis and Quality Control for fruit and vegetable products*
6. *The Preservation of Food Adulteration Act, 1954*, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Simple physical and chemical tests to determine quality and detect adulterants in the following:

(i) Milk and Milk products
(ii) Oils and fats
(iii) Spices and condiments
(iv) Food grains
(v) Flours
(vi) Canned Foods
(vii) Cane Sugar, Saccharin and Vegetable
(viii) Beverages Alcoholic, Non-Alcoholic

(40)

II. Principles and Techniques of separation methods, chromatography (TLC)

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

Semester II

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Amino Acids and Proteins: Composition, sources, functions and deficiency symptoms, Physio-Chemical properties. Denaturation of proteins during processing, Chemical Analysis of proteins. **[10]**

Unit-II

Cereals and Pulses: Brief introduction to cereals and pulses, composition and nutritional aspects. **[10]**

Unit-III

Some Important Vitamins I: Fat soluble-Vitamins (A, D, E and K). Sources, structures and biological importance. **[10]**

Unit-IV

Some Important Vitamins II: Water soluble vitamin (Ascorbic Acid, thiamin, Riboflavin, B-Complex as B_6, Folic Acid). Sources, structures and biological importance. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the

academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Analysis I: Sampling Technique**,** Preparation of Sample**,** General Physical methods of analysis of Foods (i) Bactometaric (ii) Refractometry (iii) Polarimetery and Polarography (iv) Chromatography (v) UV-Visible. [10]

Unit-II

Food Analysis II: General chemical Methods:

-Proximate Principle
-Specific Gravity method
-Ash and Types
-Total protein and Non-Protein N
-Total Fat and different kinds of Lipids
-Total carbohydrate, starch, mono/disaccharides. [10]

Unit-III

Canned Foods: Chemical composition and quality criterian of canned foods.

Spices and Condiments: Composition and Nature **[10]**

Unit-IV

Legal Aspects of food Adulteration and Prevention

- Standards of food quality.
- Permissible limits of food preservatives in, milk, spices, beverages and canned foods.
- Procuring and analysis of food items for confirming adulteration.
- Power and duties of Public Analyst and food Inspectors.
- Prevention of food adulteration. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*

4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearso*n Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. Handbook of Analysis and Quality Control for fruit and vegetable products
6. The Preservation of Food Adulteration Act, 1954, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Determination of Acid value, iodine Value and Saponification Value.

(20)

II. (a) Visit to chemical/Food laboratories of Industry related to get students acquainted with various aspects of Chemical analysis of Foods.

(b) To prepare and submit a report on the said visit (200-300 words).

(c) Periodical Examination of students by asking viva-voce.

(20)

III. Continuous assessment based on Regularity, House Tests and Attendance.

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

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PANJABUNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI FOR

POSTGRADUATE DIPLOMA

IN

COMPUTER APPLICATIONS

FOR

EXAMINATIONS 2018 – 2019
(SEMESTER SYSTEM)

--:O:-

Outline of the Syllabi and Courses for Post Graduate Diploma in Computer Applications for Examination – 2018 - 2019 (Semester System).

FIRST YEAR (SEMESTER –I)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/Weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-1101	Computer Fundamentals	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1102	Computer Programming using C	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1103	DataBase Management System	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1104	Data Communications and Networks	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-1105	Lab1 (Based on PGD-1101 & PGD-1102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-1106	Lab2 (Based on PGD-1103)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
TOTAL PERIODS =42						**TOTAL MARKS = 450**		

FIRST YEAR (SEMESTER –II)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-2101	Object Oriented Concepts Using JAVA	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2102	Web Technologies	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2103	Software Engineering	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2104	Computer Based Accounting	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-2105	Lab3 (Practical based on PGD-2101)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-2106	Lab4 (Practical based on PGD-2102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-2107	**Project Work :** Project will involve Development of Business Application / Web Site	**0**	**0**	**6**	**0**	**--**	**100**	**--**
TOTAL PERIODS =48						**TOTAL MARKS = 550**		

Note: Pass Marks 40% marks in Theory, Internal Assessment, and Practical separately.
50% marks for Project Work.
50% marks in Aggregate to qualify the examinations.

SEMESTER –I

Paper Title : Computer Fundamentals
Paper Code : PGD - 1101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to familiarize students with basic concepts related to Computers, DOS, Windows, Linux and application software's like Word-processing, Spreadsheet Software and Presentation Software.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation
Input/Output devices.

UNIT - II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT - III

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.

   Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
   Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
   Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
   Clipart: Using clip art, Creating Word Art
   Mail merge: Creating merged envelops, creating merged mailing labels

UNIT - IV

7. **Spreadsheet Software:**
   Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

   Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

   Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

   Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. **Presentation Software**:
   Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References :

1.	Basandra, S.K	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K,	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M,	Computers Today by McGraw Hill, New York
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron,	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper Title : Computer Programming Using C
Paper Code : PGD - 1102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with programming concepts of 'C' including functions, Arrays, strings etc.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes**: automatic, external, static, register
5. **Preprocessor**: #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT - II

6. **Functions**: library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions
8. **Pointer**s: Definition, Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers, array of pointers

UNIT - III

9. **Strings:** Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
10. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures
11. **Unions**: Declaring a Union, Accessing elements of a type union.

UNIT - IV

12. **Console Input/Output:** Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
13. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File.

References:		
1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series.N.D. TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications,
4.	Salaria, R. S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper Title : Data Base Management System
Paper Code : PGD - 1103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Database concepts and SQL.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Data Base Concept:** Data Base Vs File Oriented Approach, Basic DBMS terminology, Data Independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantages and Disadvantages of DBMS. Distributed Databases, Structure and Design of Distributed Databases.

2. **Data Base Design:** Introduction to Data Models, Entity Relationship Model, Entities, Attributes, E-R Diagrams, Conceptual Design of a relational data base model.

UNIT - II

3. **Relational Model:** Storage organization for Relations, Relational Algebra, Relational Calculus, Functional dependencies, multivalued dependencies, Candidate Key and Primary Key in a Relation, Foreign Keys, Normalization - Introduction, 1NF, Partial Dependencies, 2N, data Anomalies in 2NF Relations, Transitive Dependencies 3NF

3. **Database Security:** Database Security and Integrity: Data security risks, Password-related threats, Protecting the data within the database- database privileges, system privileges and object privileges, granting and revoking privileges and Roles. Concurrency: locking techniques for concurrency control.
Recovery: Causes of failures, recovery from failures, Log based recovery, checkpoints

UNIT - III

4. **Understanding SQL-1:** Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Functions: Character Functions, Date Functions, Group Functions, Ordering the result of a Query Aggregate Functions, Grouping the Result of a Query.

UNIT - IV

5. **Understanding SQL-II:** Definition and Advantages of Views, Creating and Altering Views, Using Views, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries, Define Transaction, COMMIT and ROLLBACK,

References:		
1.	Desai, B.C.	An Introduction to Database Systems, Galgotia Pub. New Delhi
2.	Date, C. J.	Database Systems Vol. I & II, Narosa Publ., New Delhi (Indian student ed.)
3.	Henry F. Korth, Abraham,	Database System Concepts, McGraw Hill Inc., New York International ed
4.	Mukhi, Vijay	Mastering Oracle, BPB Publication, NewDelhi
5.	James T. Perry	Understanding ORACLE, BPB Publications
6.	O'Reilly	Oracle PL/SQL Programming, Shroff Publications Mumbai
7.	Rowski, Bob	Oracle Client server Computing, BPB publications

Paper Title : Data Communications and Networks
Paper Code : PGD - 1104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Layered structure of Networks and working of different Layered.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer networks and applications:** Network Structure and Architecture, Network Hardware and Software (protocol hierarchies, design issues for layers, interfaces and services: connection oriented and connection less), Network structure and architecture-point to point, multicast, broadcast, Classification of networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) , LAN topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). Network Connecting Devices: Repeaters, Hubs, Bridges, Routers, Gateways and Switches, Network Reference models: OSI model, TCP / IP model. Comparison between OSI and TCP/IP.

UNIT - II

2. **Introduction to Data Communication**: Analog Signal, Digital Signal, Analog vs Digital Communication; Band Width Limitation, Data rate of a channel; Physical Layer: Transmission media: Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, Telephone system, modems. Modulation techniques: AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM

UNIT - III

3. **The Data Link Layer:** Design Issues, Error Detection and Correction: Nature of errors, Parity Check, CRC, Hamming Code, Elementary Data Link Protocols: Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sliding windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.

UNIT - IV

4. **The Network Layer:** Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast, Hierarchical Routing), Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket); Internetworking: tunneling, Internet Routing, fragmentation.

References :		
1.	Tanenbaum, Andrew S.	Computer Networks, PHI.
2.	Behrouz A. Forouzan	Data Communication & Networking, TMH
3.	Stalling William Maxwell	Data and Computer Communication, Macmillan International edition.
4.	McGoven, Tom	Data Communication Concepts& Applications", (Prentice Hall)

Title : Lab1(Based on PGD - 1101 and PGD - 1102)

Paper Code : PGD-PR-1105 \

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1101 and PGD- 1102

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title : Lab2(Based on PGD -1103)

Paper Code : PGD-PR-1106

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1103.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

SEMESTER -II

Paper Title : Object Oriented Concepts Using JAVA
Paper Code : PGD - 2101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with Object Oriented concepts including inheritance, visibility control etc. using JAVA programming language.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **OOPs concepts**: Basic Concepts of Object-Oriented Programming (Objects and Classes, Data abstraction and encapsulation, Inheritance, Polymorphism, Dynamic binding, Message communication), difference between procedure oriented and object oriented approach, Benefits of OOP's; Applications of OOP's, Object-Oriented languages.

2. **Object oriented programming with JAVA**: Byte code, Java virtual machine, Java Development Kit, java tokens, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, method overloading, static members

UNIT - II

3. **Inheritance:** Defining a subclass, subclass constructor, multilevel inheritance, Hirerchical inheritance.Overriding methods, Final variables, methods, and classes, Abstract Methods and Classes.
4. **Visibility Control**: Public access, friendly access, protected access, private access, private protected access.
5. **Arrays:** One dimensional array, declaration, creation and initialization of arrays, Array length, Two dimensional array

UNIT - III

6. **Strings**: String arrays, String methods, StringBuffer class
7. **Interfaces:** Defining interfaces, Extending Interfaces, Implementing Interfaces.Accessing Interface variables
8. **Packages:** Java API packages, Defining a package, Creating and Accessing packages, Adding class to a package, Hiding Classes.

9. **Multithreaded Programming**: Creating Thread, Extending the Thread class, Stopping and Blocking a Thread, Life cycle of a Thread.

UNIT - IV

10. **Errors and Exception Handling**: Fundamentals, error types, exception types, using Try and catch, finally statement, Built–in exceptions.
11. **Applet Programming**: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets

References:		
1.	Balaguruswamy, E.	Fundamentals of Java
2.	Daniel Dang	An Introduction to Java Programming, PHI, New Delhi
3.	Deitel & Dietel	JAVA, How to Program, Pearson Education Asia
4.	Liang	An Introduction to Java Programming PHI

Paper Title : Web Technologies
Paper Code : PGD - 2102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : This course familiarizes students with concepts of HTML, CSS, JAVA Scripts and PHP.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to HTML/DHTML:** Brief history of HTML, Building blocks of HTML, lists, links, images, image map, tables, frames, forms
2. **Introduction to cascading style sheets (CSS):** Introduction to Style Sheets, Types of style Sheets-Inline, embedded and external style sheets.

UNIT - II

3. **Fundamentals of Javascript:** Features, tokens, data types, variables, operations, control constructs, strings, arrays, functions, Document Object Model, event handling. Applications related to client side form validation.
4. **Javascript Objects**: Core language objects, The String Object, The Math Object, and The Date Object; User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects

UNIT - III

5. **Introduction to PHP:** Embedding PHP code in a Web Page, Basic Syntax, Defining variable and constant, PHP Data types, Operators and Expressions
6. **Control Structures:** Making Decisions, Doing Repetitive task with looping, File inclusion statements.
7. **Functions**: Defining a function, Call by value and Call by reference, recursive function, Library functions
8. **String**s: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function.

UNIT - IV

9. **Arrays:** Anatomy of an Array, Creating index based and Associative array, Accessing array Element, Looping with associative array using each() and foreach(), Some useful Library function: current(), next(), prev(), reset(), end(). **Working with Forms:** Super global variables, super global array, Importing and accessing user input, Combine HTML and PHP code.

10. Working with files and Directories: Opening, closing, Coping, renaming and deleting a file, working with directories, File Uploading & Downloading

References:		
1.	Phillips	Using HTML, PHI
2.	Bayross, Ivan	HTMLl,DHTML, Javascript by BPB
3.	Wanger & Wyke	Java Script Unleased, Techmedia, New Delhi.
4.	Steve Suehring	PHP6 and MYSQL Bible, Wiley India edition
5.	Steven Holzner	PHP:The complete Reference, Tata McGraw Hill
6	Kelvin Tetroi	Programming PHP

Paper Title : Software Engineering
Paper Code : PGD -2103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : This course make students understand concepts related to Software Engineering including process model, project management, design and testing.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Software Engineering Fundamentals**: Characteristics, Components, Applications, principles of software engineering, skills of software engineer.
2. **Software Process Models**: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, win Win Spiral Model

UNIT - II

3. **Software Project Management**: Software Project management Plan(SPMP), Project scheduling Techniques- Work Breakdown Structure(WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM)
4. **Software Project Estimation and risk Management**: Problem-based estimation, Process based estimation, Cost Estimation Model- COCOMO Model, Software Risks, software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS

UNIT - III

5. **Software Design**: Software Design Process, Design Failures and Remedies
6. **Structured Analysis and Design tools:** Structured Analysis and Structured Design (SASD)-Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary(DD), Entity-Relationship diagram(ERD)

UNIT - IV

7. **Software Testing**: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing
8. **Software Quality and Maintenance**: Software quality attributes, Factors affecting Software Quality, Aims of Software Maintenance, Types of Software Maintenance, Software Maintenance Costs.

References:		
1.	Fairley	Software Engineering Concepts, McGraw Hill
2.	Lewis, T.G.	Software Engineering, McGraw Hill.
3.	Meyers, G.	The Art of Software Testing, Wiley-Inter-Science
4.	Hibbard, P.G	Constructing Quality Software, North Holland Publication
5.	Shere, Kenneth	Software Engineering & Management, Prentice Hall
6	Deutsch, Willis	Software Quality Engineering : A Total Technical and Management Approach, Prentice Hall.
7.	Doug Bell, Ian Murrey and John Pugh	Software Engineering: A Programming Approach, Prentice Hall
8.	Pressman:	Software Engineering, Tata McGraw Hill
9.	Ghazzi, Carlo	Fundamentals of Software Engineering, PHI

Paper Title : Computer Based Accounting
Paper Code : PGD - 2104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration : 60 Lectures of one hour each.

Objective : This course make students understand accounting principle and computerized accounting.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Accounting: Principles, concepts and conventions, double entry system of accounting, introduction of basic books of accounts of sole proprietary concern, control accounts for debtors and creditors, closing of books of accounts and preparation of trial balance.

Final Accounts: Trading, profit and loss accounts and balance sheet of sole proprietary concern with normal closing entries.

UNIT - II

Introduction to Manufacturing Account, final accounts of partnership firms, limited company.

Introduction to Computerized Financial Accounting, coding logic and codes rquired,master files, Transaction files, Introduction to documents used data collection, processing of different files, outputs obtained

UNIT - III

Introduction to Computerized Inventory Control, types of inventory and associated documents, Inventory reports-nature and types, Inventory Control : ABC and Ageing analysis, Methods of Stock validation : LIFO, FIFO, actual bases, Interfacing Inventory with Financial Accounting, Purchasing Sub-Systems, Sales Order processing.

UNIT - IV

Introduction to Computerized Payroll & Invoicing Applications, Exposure to Structure, Processing and Reports, Interfacing these applications to financial Accounting.

Use of Accounting package Tally: Introduction to Tally, Groups, Ledgers, Vouchers, Orders, Cost Centers and Categories, Stock, Reports in Tally

References:	
Kellock, J., 1972	Elements of Accounting, Heinemann 1st ed., London
Rockley, L.E., 1970	Finance for the Non-Accountant 2nd. Edition, London : Business Book.
Levy and Sarnat, 1991	Principle of Financial Management, Prentice-Hall, International, PHI.
Arnold, 1984	Financial Accounting, Prentice-Hall, International (Paperback Edition).
Horngren and Sundem, 2010	Introduction to FinancialAccounting, Prentice-Hall International (Paperback Ediion) N.D: PHI
Murthy, U.S.	Management Finance, 2nd. Edition, Vakils Fefers & Simons Ltd
Van Home, James, C., 2004	Financial Management & Policy, Prentice Inc
Pandey, I.M., 1979	Financial Management, Vikas Publication, 6th Rev. ed., N. Delhi

Paper Title: Lab3 (Based on PGD- 2101)

Paper Code: PGD-PR-2105

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD -2101.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Lab4 (Based on PGD- 2102)

Paper Code: PGD-PR-2106

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on **PGD- 2102**

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Project Work.

Paper Code: PGD-2107 **Max. Marks: 100**

Major Project on any database application using any database development tool is to be developed/ Development of a Web Site using Database connectivity

SYLLABUS
PG DIPLOMA IN CYBER CRIME
(Semester System)

Detail Marks

i) 1st Semester = 400
ii) 2nd Semester = 400
Grand Total = 800

SCHEME OF THE COURSE

1st Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–101	General Forensic Science-I	80	20	100
PGDCR–102	Computer Basics	80	20	100
PGDCR–103	Intellectual Property Rights & International Treaties	80	20	100
PGDCR–104 (Practical)	Basic Computer Skills	80	20	100

Total = 400

2nd Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–201	Computer Forensics	80	20	100
PGDCR–202	Cyber Crime and Information Technology Act	80	20	100
PGDCR–203	Computer Forensics Analysis	80	20	100
PGDCR–204	Project/Dissertation	Project : 80	Viva: 20	100

Total = 400

FIRST SEMESTER

PGDCR-101: GENERAL FORENSIC SCINECE-I

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Nature, Need (social changes, anonymity, technical knowledge, wide field, better evidence, Alternatives), Functions & Development of Forensic Science, Laws and Principles governing Forensic Science, Forensic Science set-up in India, Forensic Science Institutions.
Problem of Proofs (General, Scientific Evidence & Proof, Investigative Problems, Scientific Aspects, Legal Problems)

Unit-II

Expert testimony (The expert, Report, Illustrations, language, The Prosecution counsel, Defence Counsel, The court (Fallacies about expert evidence), Time element

Unit-III

Indian legal systems: The Indian Evidence Act, Indian Constitution, **Cr PC and their relevant sections pertaining to admissibility of Evidence**, Expert evidence, Examination of expert etc., Reports admissible, The evidence, Insufficient evidence, **Case Law pertaining to digital Evidence in various courts of Law.**

Unit-IV

Scene of occurrence, Importance, The problems, Location, Evaluation (Protection, Photography, Sketching, Search), Scene management, Documentation. **Systematic examination of scene of occurrence and recovery of hardware (special mention of digital crime form remote where law of the land may not be applicable).**

Text/ References:

1. Sharma, B.R 1990, Forensic Science in Criminal Investigation and Trial. Central Law Agency, Allahabad.
2. Saferstein, R., 1976, Criminalistics : An Introduction to Forensic Science
3. Saferstein, R., 1982, Forensic Science Hand Book I & II, Printice Hall : N. Jersey
4. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
5. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London
6. Kirk, P.I, 1953, Crime in Investigation. Interscience Publishers : New York

PGDCR–102: COMPUTER BASICS

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Computers and Law, Principles of Computer: Memory and processor address and data buses, stored program concept, Motherboards, Word processing and graphic file formats. Boot sequence, Operating system, **Windows, Linux, internet, working and issues related to security of network, layers of network, firewalls, antivirus and other malwares.**
Input/Output (I/O): Standard (I/O) devices, unformatted (character and string) and formatted (scan and print) (I/O) functions, **Memory hierarchy and cache memory.**

Unit-II

Computer Languages: Brief history and general structure, stages of development of a program, Basic building blocks of computer language. Overview of C language
Data types: Constant and variable, declaring variables, storage classes, different types of expressions and their evaluation, **Database management system (DBMS).**

Unit-III

Data files: Introduction to data files, different ways of file processing (standard I/O and system I/O), Description of various library function for file handling, updating files, programming examples to illustrate the processing of files
Methods of storing data: number systems, character codes, record structures, file formats and file signatures.

Unit-IV

Biometrics: Fingerprint and Hand Geometry, Facial and Voice Recognition, Eye Biometrics: Iris and Retina Scanning, Biometric crimes**, Concept and working of Aadhaar.**

Text/ References:

1. Rajaraman V., Fundamentals of computers, 4th edition, Prentice hall of India Pvt. Ltd, 2007
2. Kanetker Y., Let us C, BPB Publishers 8th edition 2007
3. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
4. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London

PGDCR–103: INTELLECTUAL PROPERTY RIGHTS & INTERNATIONAL TREATIES

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Introduction to Intellectual Property Rights, WIPO, WTO, GATT, TRIPS, Berne convention, Universal Copyright Convention, Copyright Treaty (WCT), Copyright Act 1957, Trades Marks Act, Plagiarism

Unit-II

Principles of Data Security/Protection, Jurisdictional issues, Retention of electronic-data, Transactional Data Flow

Unit-III

International Treaties: PCT, PLT, SPLT, Washington Treaty

Unit-IV

Indian Patent Act, Definition, violation and antidote, Application of Patents to IT e.g. Patents for computer softwares, Patents for electronic trade, Patent Search on internet Patent websites of US and other countries, Distinctions in claims, Vetting of patents, IT related patents in India

Text/ References:

1. Handbook of Cyber and E–Commerce Laws – Bakshi P.M. & Suri R.K.
2. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a
3. Networked World, Wiley Publishing, 2002.
4. Textbook of Intellectual Property Rights, Prixit Bansal

PGDCR–104: PRACTICALS

Lectures: 4 Hrs. / Week **Practical: 80 Marks**

1. **Working of Widows environment and Linux,**
2. **Internal and external Commands of DOS.**
3. **Network commands like ping**
4. **Tracing of an email.**
5. **Reading of source code.**
6. **Trial versions of various tools**
7. **Photoshop image processing**
8. **Retrieval of deleted data.**
9. Working with internet like browsing, chatting, and social networking sites etc.

SECOND SEMESTER

PGDCR-201: COMPUTER FORENSICS

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit-I

Computer Crimes (Nature, Motives, Characteristics, Investigative Impediments), Traditional computer crime, recognizing and defining computer crime, Phreakers, Evolution in hacking community, Theft of Intellectual Property

Unit-II

Classification (Information Piracy and vandalism, Theft of information services, organised crime, Infringement of copy right, Theft, wire tapping, data destruction, virus, spy software, money laundering, electronic fund transfer, electronic personation, hackers, software piracy

Unit-III

Contemporary computer crime, Neo-Traditional crime, Web based criminal activity, Terrorism & organised crime: Introduction, Terror online, Terrorism & crime, organised crime, **image processing, morphing**.

Unit-IV

Computer Criminals (Employees, Computer Experts, other computer criminals, handling, Laws, legislation), **preventative measure**.

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
3. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
4. Hand book of computer crime investigation, Eoghan Casey, Elsevier.
5. Digital evidence and computer crime-Forensic science, computers and the internet, Casey, Academic press.
6. Ashbourn, J.: Practical Biometrics – From Aspiration to Implementation, Springer Verlag, 2004.
7. Bolle, R.M., Connell, J.H., Pankanti, S., Ratha, N.K., Senior, AW.: Guide to Biometrics, Springer Verlag, 2004.
8. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a Networked World, Wiley Publishing, 2002.
9. M. Erbschloe, J. R. Vacca: Information Warfare: How to Survive Cyber Attacks (McGraw-Hili Prof. 2001.)

PGDCR-202: CYBER CRIME AND INFORMATION TECHNOLOGY ACT

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit I

Internet: Evolution, Advantages and Disadvantages of Internet Technology, Netizens and Cyber Space, Cyber Law and its components, Cyber crimes and classification

Unit II

Information Technology Act 2000 Amended by the Information Technology (Amendment) Act, 2008

Need, Aims, Objectives and Applications (Section 1)

Definitions

- Computer [Section 2(i)]
- Computer Network [Section 2(j)]
- Computer Resource [Section 2(k)]
- Computer System [Section 2(i)]
- E-record [Section 2(t)]
- Information [Section 2(v)]
- Asymmetric crypto system [Section 2(f)]

Digital Signature, Electronic Signature [Section 3 & 3A]

Attribution, Acknowledgement and Dispatch of e-record [Sections 11 – 13]

The controller of Certifying Authorities (CCA) [Sections 17 – 29]

Unit III

Certifying Authority [Sections 30 – 34]

Cyber Crime: (i) Cyber contraventions and penalty [Sections 43 – 45]
(ii) Offences [Sections 65 – 77]
Extra-territorial jurisdiction, Cognizable and Bailable offences [Sections 75, 77 – 77B]

Unit IV

Investigation and procedure of search and seizure [Sections 78 & 80], Intermediary and its liability [Section 2(1)(w) and 279), Examiner of Evidence [Section 79A], Grey areas of IT Act 2000, Jurisdiction: National and International Cases

Text/References:

1. Cyber laws- Singh Y., 5th edition (2012) Universal Law Publishing Company
2. Cyber Crime- Bansal S.K., (2011) APH Publishing Corporation
3. Forensic Science in Criminal Investigation and Trial- Sharma B.R., 4th edition (2009)
4. Cyber Laws, E-commerce & M-Commerce- Ahmed T., (2012) APH Publishing Corporation
5. Handbook of Cyber and E-Commerce Laws- Bakshi P.M., Suri R.K., (2002) Bharat's Publishing House
6. Taxman's Law of Information Technology (Cyber Law)- Mittal D.P., (2000) New Taxman Allied Services Pvt. Ltd., New Delhi

PGDCR–203: **COMPUTER FORENSICS TOOLS**

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Electronic evidence, Discovery of electronic evidence, documentation, chain of custody, authorization, evidence collection, packaging and transportation, storage of evidence

Unit-II

Cyber forensic tools & utility: Coroner's Toolkit, EnCase Forensic, Forensic toolkit, i2 Analyst's Notebook, LogLogic LX2000, ProDiscover Incident Response.

Unit-III

Internet investigations (e-mail, IRC, chatting sites, social networking sites etc.); IP addresses and domain names; Investigative methods, Digital Evidence

Unit-IV

Prevention: The basics, access (password cards, biometrics), Secrecy, Integrity, computer data backups, Risk Management, **cryptography, stegnography.**

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer evidence-Collection and preservation, Christopher L.T. Brown, FireWall Media, New Delhi.
3. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
4. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
5. Cyber crime, Doughless Thomas and Brian D.Loader.
6. A practical guide to LINUX, Sober.
7. Computer forensics-Incident response essentials, Warren G.Kruse IIand Jay G.Heiser., Addison Wesley.
8. Cyber crime investigation field guide, Bruce Middleton, Auerbach publications.
9. A. Blyth and G. L. Kovacich, "Information Assurance", Springer, 2005.

PGDCR–204: PROJECT/DISSERTATION
Lectures: 4 Hrs/ Week **Marks: 100 Marks**

Project Based on Computer forensic, Network Security, information Security, cyber crime etc., Case Studies related to IPR Cyber world and Electronic Commerce.

Instruction for Examiners

1. **For the theory examination a total of 9 questions will be set, two from each unit I, II, III, IV. There will be one compulsory question of eight to ten short answer type questions covering the whole syllabus. There will be no choice in compulsory question.**
2. **Students will be required to attempt five questions choosing one question from each of the unit I, II, III, IV and the compulsory question.**
3. **All question will carry equal marks**

PANJAB UNIVERSITY, CHANDIGARH

SYLLABI

FOR

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING

Examination

2013-14

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING, SESSION 2013-2014

I. The duration of the course leading to the Post Graduate Diploma in Guidance & Counseling shall be one year. The 1examation shall be divided into **two semesters**. The examinations in first semester and second semester shall ordinarily be in the months of December and May/June respectively or on such other dates as may be fixed by the Syndicate.

II. Every candidate shall pay his examination fee for each Semester at the time of admission to the course, along with other charges, i.e., tuition fee etc.

2. The minimum qualification for admission to first semester of the course shall be

(a) A Bachelor's/Postgraduate degree in any discipline of the University or a degree of any other University which has been recognized by the Syndicate as equivalent thereto with not less than **45%** marks in the aggregate.

3. Provided that in case of candidates having Bachelors degree of the university through modern India languages [Hindi/Urdu/Punjabi (gurmukhi Script)] and /or in a classical language (Sanskrit/ Persian/Arabic) or degree of any other university obtained in the same manner recognized by the syndicate, **45%** marks in the aggregate shall be calculated by

taking into account full percentage of marks in all the papers in language excluding the additional optional paper, English and the elective subject taken together.

(b) Preference will be given to the candidates possessing Bachelor of Education (B.Ed), Nursery Teacher Training (NTT) or ETT (with a B.A, Degree).or Fee structure as approved by Syndicate

4. The first semester examination shall be open to a regular student who
(i) has been on the rolls of the University Department/Principal of the College during one semester preceding the first semester examination; and

(ii) has attended not less than 75 percent of the lectures, seminars, case discussions, case conferences, internship sessions, practicum's etc

5. The second semester examination shall be open to a regular student who:

a) Has been on the rolls of the university department of education/principal of the college of education during one semester preceding the second semester examination

b) Has attended not less than 75% of lectures, seminars, case discussion. Syndicate sessions, field trips, project work etc for each papers and

c) Has passed the first semester examination or is covered under 'Reappear' Regulations 10.

6. The minimum number of marks to pass the examination in each semester shall be-(i) 35% in each paper in the University examination separately as well as jointly with internal assessment;
(i) 35% in the seminar, project and viva-voce;
(ii) 50% in the aggregate of(i) and (ii) above.

6.1 Grace marks shall be given @ one percent of the aggregate marks of the University examination for each semester. A candidate may avail of the grace marks either in the aggregate or in one or more papers as may be to his advantage. Grace marks shall, however, be given only for passing the examination or for earning the higher division and not for passing the examination with distinction.

7. A candidate who fails in the First semester but has secured at least 35% marks separately as well as Jointly with internal assessment in not less than 50% of the papers prescribed for that semester shall be permitted to continue his studies in the second semester but he will be required to reappear in the next May/June examination in such papers in which he had failed in the December examination, simultaneously with the second semester examination. If he fails to pass the first semester examination even in the second attempt his result for the second semester examination snail be cancelled and he will be required to leave the course.

(b) A candidate who fails in second semester examination but had secured at least 35% marks separately as well as jointly with internal assessment In not less than 50% papers prescribed for that semester shall be allowed to reappear in such papers in which he had failed in April examination in special examination to be held in August but not before the expiry of six weeks from the date of declaration of the result.

(c) A candidate who fails to clear the second semester examination even in the special examination held in August shall be given one more chance. He may appear either in December of the same year or in May/June examination next year in such papers in which he had failed in the special examination held in August.

A candidate who is unable to clear the second semester examination even after availing of the second chance as specified above shall be required to leave the course.

8. If a candidate is required to reappear in a paper, which has 75% internal assessment, he will be given one more opportunity to qualify in that paper without attending a fresh course. This work assignment may be determined by the Head of the University Department/Principal of the College.

9. A candidate who failed in the Ist or 2nd semester examination and is not covered under the ' Reappear' regulations may be given one more chance and allowed to appear In the next regular examination without attending a fresh course of lectures but he will have to repeat the entire examination. If a candidate fails to pass in a semester examination even after the second

attempt he will be required to leave the course.

10. Successful candidates shall be classified as under;

(i) Those who obtain 75% or more of the total First Division with aggregate marks in al! the semester examination taken together Distinction

(ii) Those who obtain 60% or more of the aggregate marks but less than 75% marks in all the semester examinations taken together. First Division.

(iii) Those who obtain below 60% of the aggregate marks in all the Second Division semester examinations taken together.

Rules

I. Proposed number of seats are 40.

I. I The head of the University Department/Principal of the College shall forward to the Controller of Examinations at least five weeks before the commencement of the examination for each semester a list of the students along with their admission forms and fees who have satisfied the requirements of regulations and are qualified to appear in the examination.

1.2 Whenever the application or fee of the candidate is received more than three days after the last date prescribed by the University. She/he shall pay an additional fee as fixed by the Syndicate, provided that such application shall be entertained only up to three weeks before the commencement of the examination.

2. Every candidate shall be examined in the subjects as laid down in the syllabus prescribed from time to time. Seminar, Project and Workshop will be assessed internally on 100% basis. Viva-Voce shall be conducted jointly by the internal and external examiners.

The Head of the University Department/Principal of the College shall forward these marks on the basis of periodical tests, written assignment, case discussion, Syndicate sessions, field trips etc., to the Controller of Examinations at least one week before the commencement of the examination.

3. The Head of the University Department/Principal of the College will preserve the records on the basis of which the internal assessment awards have been prepared for inspection, if needed by the University, up to six months from the date of declaration of the results.

Project reports shall be submitted to the Head of the University department/Principal of the College at least)0 days before the commencement of the examination. Reports received after the prescribed date shall not be accepted.

4. A deficiency up to 10 per cent lectures may be condoned by the Head of the University Department/Principal of the College.

4.1 The second semester examination shall be open to a regular student who-

(a) has been on the rolls of the University Department/Principal of the College during one semester

preceding the second semester examination;

(b) has attended not less than 75% of lectures, seminars, case studies, case conferences, internship sessions, practicum's etc., for each paper; (a deficiency up to 10% may be condoned by the Head of the University Department/Principal of the College); &

(c) has passed the First Semester examination or is covered under ' Reappear' Regulation 10.

5. The medium of instruction and examination shall be English, Hindi & Punjabi

6. The internal assessment awards of a candidate who fails in the examination shall be carried forward.

7. As soon as possible after the termination of the examination, the Controller of Examinations shall publish a list of the candidates who has passed.

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING Session-2013-2014

The Post Graduate diploma aims to create a supportive and collaborative learning environment for students from diverse backgrounds and cultures to acquire knowledge, attitudes, and skills essential in the practice of guidance and counseling- The course will also help the students to become exemplary in applying essential guidance and counseling knowledge and skills in a variety of settings with individuals from diverse backgrounds.

Goals and Objectives

Post graduate diploma in guidance and counseling will enable the students to:

1. Have the knowledge, personal attitudes and skills to provide effective guidance counseling and developmental services to clients diverse In age, gender and socioeconomic status

2. Have a strong Identity as professional counselors with a commitment to future development and possession of effective networking skills.

3. Have research and program evaluation skills that include development of research and program evaluation questions, selection of appropriate methodologies for collecting and analyzing data.

4 Have the skills to primarily deliver developmental and preventative services using individual as well as small and large group interventions to children with different abilities.

5. Have the ability to go beyond providing individual services and have skills to lead teams of teaching professionals developing and providing a comprehensive set of services as needed by the client population.

6. Have skills to advocate For student client issues and to foster productive organizational change.

7. Have a vision of career planning as a developmental process and to provide individual guidance and counseling and skills training to facilitate decision-making and to work with developmental life transitions.

8. Have the knowledge and skills to use, technology resources in professional practice and in research and to understand the application of ethical practice to use of assessment and information management tools.

Course Details

Duration of the Course

The duration of the course will be in one year in two semesters.

Theory

The course consists of core components in theory of guidance and counseling processes and procedures and psychological assessments.

Practical work

The course includes intensive training in practical / field work integrated with theory components

Internship

The course has an input of two weeks' internship programme.

Details

Total no of papers is	6(100 marks each)
Total Marks	600 (100 X 6)
Internal assessment	25 percent in each paper
External evaluation	75 percent in each paper

Note: For Evaluation

1. A total of 5 questions are to be attempted in each paper. There will be 4 questions (One from each unit) and one question of short notes.
2. Each question will carry 15 marks
3. There will be internal choice in first 4 questions
4. Questions of Short notes will be spread over 4 Units. There will be no choice in fifth question related to short notes
5. There will be house test in each of the first five papers carrying 25 marks each by way of internal assessment
6. There will be Viva voce (external) test in Paper VI carrying 25 marks. The internal assessment of Paper VI will be based on supervised practical work carrying 75 marks in which case study and internship will carry 30 marks each. Career conference and career exhibition will be of 15 marks

Paper I INTRODUCTION TO GUIDANCE

(Semester-I)

OBJECTIVES:

The course contents In this paper will enable the students:

1. To understand the meaning, principles, needs and types of guidance
2. To have a detailed knowledge about various guidance services
3. To organize guidance programme in elementary and secondary schools
4. To develop skills in using technology for guidance purpose

COURSE CONTENTS

Unit I MEANING, TYPES & EMERGING TRENDS OF GUIDANCE

1. Meaning, aims, principles, and needs of Guidance
2. Types of guidance: Personal, Social, Educational, Career, Leisure time, Health and guidance for children with different abilities.
3. Emerging trends of Guidance

Unit II COMPONENTS AND ORGANISATION OF GUIDANCE SERVICES

1. Individual Inventory service
2. Information service
3. Counseling service
4. Placement & Follow-up service

Unit III ORGANIZATION OF GUIDANCE PROGRAM

1. Essential requisites of Guidance Programme
2. Organization of guidance programme for elementary schools
3. Organization of guidance programme for secondary schools
4. Role of teachers, guidance personnel in organizing of the guidance programs.
5. Management of resources in guidance programme.

Unit IV INFORMATION TECHNOLOGY AND GUIDANCE

(THEORY AND PRACTICAL)

I. Skill of using Information Technology and Internet
II. Use online testing services, guidance services for education and career information
III. Resource sharing.

PRACT1CUM/ WORK BASED LEARNING

I. Plan, organize and disseminate any one service using different mediums and methods e.g. Posters, pamphlets, multimedia presentation, interactive sessions, talks, workshops etc.

Paper II INTRODUCTION TO COUNSELLING

OBJECTIVES:

The contents in this paper will help the students:

I. To understand the meaning, types and techniques of counseling

2. To learn about theories of counseling

3. To develop counseling skills in conducting counseling sessions

4. To learn about new emerging areas of counselling

COURSE CONTENTS

Unit I THEORETICAL FOUNDATION OF COUNSELLING

1. Meaning, historical development and Importance of counselling
2. Types: Individual and Group counseling.
3. Approaches of counselling: Directive, Non directive. Eclectic counseling.
4. Techniques in counseling: Testing and Non Testing techniques
5. The counselor-Qualities of effective counselor, self renewal: preventive burnout, ethical standards and legal considerations in counselling

Unit II THEORIES OF COUNSELLING

The theoretical beginnings, goals and therapeutic process of following theories of counselling:

1. Psychoanalytical theory (Freud, Jung)

2. Self concept/actualization theory (Rogers, Maslow)

3. Trait theory (Cattell)

4. Rational emotive theory (Albert Ellis)

5. Indian therapeutic approach (Patanjali's Yoga therapy)

6. Behavioristic (Skinners. Pavlov)

Unit III ADJUSTMENT AND MENTAL HEALTH

1. Meaning and process of adjustment, adjustment mechanisms, adjustment problems of children and adolescents.
2. Causes of maladjustment, physical, emotional, mental and social.
3. Differences between adjusted and maladjusted adolescents, criteria of good mental health, role of counselor in developing good mental health
4. Echniques of stress management, conflict resolution and mediation and violence prevention programs and models

Unit IV COUNSELLING SKILLS

I. Building Trust: Listening, attending, building rapport, demonstrating empathy, observing
II. Interview: types of Interview, procedure of conducting interview: preparation, process, interpretation, recording, termination
III. Speciation concerns in counseling Substance abuse. Drug addition. HIV AIDS; Child abuse (trauma), internet and technological abuse. Gerontology. Counseling for aging population); Life long learning; Preparation for family life (parenting and child rearing)
IV. Professional interest and trends.

'PRACTICUM/ WORK BASED LEARNING

Conduct individual and group counseling sessions using non-testing techniques & counseling Skills in the classroom/groups & prepare a report.

PAPER III EDUCATIONAL AND PSYCHOLOGICAL APPRAISAL

OBJECTIVES:

After going through the contents in this paper the students will be able:

I. To understand the concept of educational and psychological appraisal

II. To know the criteria of selection of a test and characteristics of a good test

III. To learn to administer and interpret psychological tests to know the Individual abilities and personality aspects

IV. To make appropriate use of achievement and diagnostic test in locating learning difficulties

V. To master elementary statistics and apply it in student's appraisal

COURSE CONTENTS

Unit I PSYCHOLOGICAL TESTING

1. History of Psychological Testing
2. The nature and uses of psychological tests
3. Test standardization: procedure, reliability and validity
4. Interpretation test scores: Qualitative and Quantitative
5. Ethical and social issues in testing

Unit II ADMINISTRATION AND INTERPRETATION OF STANDARDIZED PSYCHOLOGICAL TEST

1 Intelligence. Verbal, Non-Verbal & Performance tests

2. Personality: Self report inventories, projective tests, scales, 'situational test.

3. Aptitudes: Differential & Specific abilities (DAT, Music, Art, Science. Maths, Teaching).

4. Interests: Educational and Vocational

5. Attitudes: Diversities (Religion, Culture, and language)

Unit III ACHIEVEMENT AND DIAGNOSTIC TESTS

1. Achievement test: Use of teacher made and standardized subject specific tests
2. Diagnostic test: Learning difficulties; Behaviour problems
3. Administration and interpretation of achievement and diagnostic tests.

Unit IV ELEMENTARY STATISTICS

1. Descriptive statistics: measurers of central tendency, percentiles, measures of variability
2. Pearson's Product Moment & Spearman's Rank order correlation
3. Normal probability curve and its applications
4. Inferential statistics: parametric techniques (z test, t test and ANOVA (one way) and non parametric techniques (chi-square test and median test)

PRACTICUM/ WORK BASED LEARNING

- Preparation of a profile of one subject client using the above tests
- Preparation of one achievement test

PAPER IV- COUNSELING CHILDREN AND ADOLESCENTS WITH DIFFERENT ABILITIES

(Semester-II)

OBJECTIVES:

The contents of this course will enable the students to master the techniques of:

1. Understanding the needs and problems of children and adolescents with exceptional abilities
2. Identification of academic, social, emotional and vocational problems of students
3. Conducting individual and group counselling
4. Preparing case history, doing case analysis and preparing profile of the case.

COURSE CONTENTS

Unit- I

TYPES, NEEDS AND PROBLEMS OF SPECIAL CHILDREN

1. Concept of different abilities & their types
2. Needs & Problems of children with different abilities
3. Needs and problems of adolescents with deferent abilities
4. Importance of counseling; of students with different abilities and counseling of parents, family and peers

Unit II IDENTIFICATION AND DIAGNOSIS OF PROBLEM AREAS

1. Identification of personal, social & academic problems of children (5-12 years) at elementary level
2. Identification of academic, social & vocational needs & problems of adolescents (13 to 18 yrs) at secondary level
3. Diagnosis of Problem areas
4. Meaning and types Stress and its causes

Unit III INTERVENTION PROGRAMMES

1. Individual and group counseling for children for emotional, social, behavioural and academic problems
2. Individual & group counseling the adolescents for emotional, social, academic & vocational problems
3. Relaxation strategies, yoga & meditation therapies for children and adolescents for reducing stress and problems
4. Personal management skills (eg. Time, self management etc)

Unit IV- CASE STUDY

I. Concept, importance and types of case studies.

2 Components and step followed in case study

3. Group discussions initiated by the teacher with regard to I of minimum) case studies of the following areas problems:

- Academic Problems (Learning difficulties, choice of subjects
- Class room problems (Discipline/ behaviour)
- Giftedness (Gifted underachiever, academically gifted at least in one subject)
- Slow learner/educationally backward child
- Emotional/social problem (Adjustment)
- Attention deficit hyperactive (ADH) Children
- Problem of Decision making (Choice of career)
- Visual/ auditory/ Speech challenged

- Orthopedically challenged,
- Mentally challenged
- Learning Disabled

PRACTICUM/ WORK BASED LEARNING

Preparation of a case profile of a student with different abilities • Case conference.

Paper V CAREER EDUCATION

OBJECTIVES:

The contents of this course will enable the students:

- To get a comprehensive introduction to career education through historical background
- To develop an understanding of the current trends and issues in career education
- To study decision-making and how the process applies to career planning.
- "To study the relationships among work, family, and leisure.
- To identify career issues related to special students.
- To be able to use the Internet and online guidance services
- To overview methods of disseminating and using career information, including computer-based delivery systems (Internet).

COURSE CONTENTS

Unit-I

-CAREER DEVELOPMENT

- Meaning and historical development of career counseling
- Stages of career development
- Career development and human conditions
- Identifying and analyzing life career themes and career talents ."
- Emerging world of work careers and need for career education

Unit II THEORIES OF CAREER DEVELOPMENT

1. Super's theory of vocational development
2. Tiedman and O'hara's theory of career development
3. Williamson's Trait theory
4. Ginzberg and Associates theory of occupational development
5. Roe's theory of career choice
6. Relationship of career theories to career planning

Unit-III CONDITIONS GIVING RISE TO CAREER GUIDANCE & CAREER EDUCATION

1. Changing economic conditions of society & the impact of labour market
2. Psycho-social conditions of the individuals
3. Advancement of technology and survival skills
4. Problems pertaining to work, family, education, and leisure

Unit IV- CAREER CHOICE AND DECISION MAKING

1. Career maturity: concept: and factors
2. Empowering students in career decision making (strategies)
3. Matching career talents with career decision making
4. Guidance for developing life goals & choices

PRACTICUM/ WORK BASED LEARNING

1. A visit to a educational/vocational career center
2. Preparation of a research based project report of an emerging career. The project may include the following information along with any other: • The Profession • Work Environment'• Main Areas • Training Required Skills and attitude • Entry • Education Required • Eligibility • Institutes • Job Prospects • Remuneration • Pressures • Future Prospects "Related Careers" Any Other

Paper VI SUPERVISED PRACTICUM / 1NTERNSHIP/ WORK BASED LEARNING

OBJECTIVES:

The supervised practical work will train and enhance the student's skills:

1. In identifying the problems of an individual with the help of selecting, administering appropriate test, interpreting the data, preparing the complete history and profile of the case
2. To interpret/ diagnose the case problem and select an appropriate intervention for helping the case in adjustment/

development of relevant life goals and making appropriate choices

3. To be attached to a school /an institution or an agency with an onsite counselor

COURSE CONTENTS

Case Study

- Field work: Identification of 4 cases out of the following areas through testing and referrals: (collection of data)
- Academic Problems (Learning difficulties, choice of subjects)
- Class room problems (Discipline/ behaviour)
- Giftedness (Gifted underachiever, academically gifted at least in one subject)
- Slow learner/ educationally backward child
- ''Emotional/social problem (Adjustment)
- Attention deficit hyperactive (ADH) problems
- Problem of Decision making (Choice of a career)
- Visual/auditory/Speech challenged
- Orthopedically challenged
- Mentally challenged
- Learning disabled

2 Case preparation and case analysis of the four selected cases

3. Case conference with fellow students
4. Intervention (use of appropriate guidance/ counseling strategies)
5. Written report of the cases

Career Conference

The students will plan and organize career talks and career exhibitions

Internship

The course has an input of two weeks' internship programme. Trainees are required to have an attachment with a school or an jnstitution or an agency under an experienced onsite counsellor for the stipulated period. During the period of internship, the trainees would plan and undertake work related to planning and execution of guidance and counselling activities including counselling casework. They will prepare a project report of the apprenticeship work done by them and with the reviewed learning outcomes by the onsite counselor and the supervisor and submit the same for evaluation.

SUGGESTED READINGS

Paper-II

Arbuckale, D.S. (1965) Counseling: Philosophy, theory and practice. Boston Ailyn and Bacon

Paper-II

Carroll, Michael & Walton Michael, Ed- (1997). Handbook of counseling in organizations. New Delhi: SAGE Publications India Pvt Ltd.

Paper-I, II & IV

Chandra Ramesh, (2002). Guidance and counselling. Delhi:

Paper-IV

Kalpaz Publications S/Cruickshank, W.M. (1963). Psychology of

Exceptional Children and Youth. N.Y. Prentice Hal!

Paper-I

Dash, Nibedita (2004). Secondary School organization, Guidance and Educational Technology. New Delhi; Dominant Publishers and Distributors-Dressel, RL (1976). A Handbook of Academic Evaluation. London. Jossey-/Bass Publishers

Paper-III

Garret.H.E. (1981) Statistics in education and Psychology. Bombay. Vakils Feffer and Simons LTD

Paper-II, IV

Geldard, Kathryn & Geldard, David (1997). Counselling children- A practical Introduction. New Delhi: Sega publications

Paper-II, IV & V

Gladdinos, S.T. (2009). Counseling- A Comprehensive Profession. Pearson Publications libson R.L. & Mitchell M.H (2008) Introduction to Counseling and guidance. Pearson Publication.

Paper-III

Gregory, R.J. (2004). Psychological Testing: History Principles and Application. N.Y Pearson Education Group

Paper-I

Jones, Arthur J, (1970). Principles of Guidance Sixth Edition. New Delhi: Tata McGraw Publishing Company Ltd.

Paper-I &II

Knapp, Robert H, (I953). Practical Guidance Methods for Counselors, Teachers and Administrators. New York: McGraw Hill Book Company, Inc

Paper-I &II

Kochhar, S.K. (I996). Guidance and counselling in colleges ad universities. New Delhi: Sterling Publishers Pvt Ltd.

Paper-II

Lapworth, Phil, Sills Charlotte & Fish Sue, (2001). Integration in counselling & Psychotherapy- Developing a personal approach. London: SAGE publications

Paper-II
Lazarus, R. (1969) Patterns of Adjustment and human Effectiveness. N.Y, McGraw hill

Paper-I
Lytton, Hugh & Craft Maurice, Ed. (1974). Guidance and counselling in British schools- A discussion of current issues. London: Edward Arnold (Publishers) Ltd

Paper-III

Noll et al (1979). Introduction to Education and Measurement. Boston Houghton Mifflin Co.

Paper-IV

Panda ,K.C.(2004) Education of the Exceptional Children) New Delhi, Vikas Publishing House Pvt. LTD

Paper-V

Paper- Pandit, J.L. (1970) The World of Work. (INDIA) Orient Longman

Paper-II

Palmer, Stephen, dainow Sheila and Milner Pat, (1996). Counselling- The BAC counselling reader. New Delhi: Sega Publications

Paper-II

Patterson, C.H. (1973) Theories of Counseling and Psychotherapy. N.Y. Harper and Raw

Paper-I

Qureshi. Hasnain (2004). Educational Counselling. New Delhi: Anmol Publications Pvt Ltd.

Paper-I &II

Safaya, B,N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications

Scott, M.J. & Stradling, S.G, (2001) Counseling for

Posttraumatice Stress Disorder. London; Sage Publication

Paper-II

Shatter. L.F&Shoben, E.J. (1970) The Psychology of Adjustment, Boston, Houghton Mifflin

Paper-III

Shah. R.K. (2002). Educational Testing and Measurement. Jaipur- INDIA, Pointer Publishers

Paper-I

Sharma, Ram Nath & Sharma Rachana, (2004). Guidance and counseling in India. New Del hi Atlantic Publishers and Distributors

Paper-V

Sharma, Shashi Prabha (2004).Career Guidane and counseling. New Delhi: Kanishka Publishers, Distributors

Paper-I

Sharma, Tara Chand (2002). Modern methods of guidance and counselling. New Delhi: sarup & Sons

Paper-I & V

Sharma, Yogendra K. (2004). Principles of educational and vocational guidance. New Delhi: Kanishka Publishers. Distributors

Paper-I & V

Sharma. Yogendra K- (2004). Text book of Educational Psycghology. New Delhi: Kanishka Publishers. Distributors

Paper-II

Sharma, A.S. (2000). Counseling Psychology. New Delhi: Commonwealth Publisher

Paper-II &V

Sherrzer. Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston

Paper-I

Shenzer, Bruce & Stone Shelly C (1996). Fundamentals of guidance. Third Ed. London: Houghton Mifflin Company Boston

Paper-V

Sinha. Neelam (I996). Strategies, Issues and Concepts in Vocational Education. New Delhi: Common Wealth Publishers Yadav, M.S. & Govinda, R. (1977). Educational Evaluation-A package of Auto-instructions Material. Ahmedabad: Sahitya Mudranalaya

SUGGESTED READINGS

PAPER-I

Chadra Ramesh, (2002). Guidance and counseling. Delhi: Kalpaz Publications.

Dash, Nibedita (2004). Secondary School organization, Guidace and Educational Technology,New Delhi: Dominat Publishers and Distributors.

Dressel, P.L. (1976). A Handbook of Academic Evaluation. London. Jossey-/ Bass Publishers

Jones, Arthur j, (1970). Principles of Guidance Sixth Edition. New Delhi: Tata McGraw Publishing Company Ltd.

Knapp, Robert H. (1953). Practical Guidance Methods for Counselors, Teahers and Administrators. New York: McGraw-Hill Book Company, Inc

Kochhar, S.K. (1996). Guidance and counselling in colleges and universities. New Delhi: Sterling Publishers Pvt. Ltd.

Lytton, Hugh & Craft Maurice, Ed. (1974). Guidance and counselling in British schools- A discussion of current issues. London: Edward Arnold, Publishers Ltd.

Qureshi, Hasnain (2004) Educational Counselling. New Dehli: Anmol Publications Pvt. Ltd.

Safaya, B.N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications.

Sharma, Ram Nath & Sharma Rachana, (2004). Guidance and Counselling in India. New Delhi: Atlantic Publishers and Distributors.

Sharma, Tara Chand (2002) Modern Methods of Guidance and Counselling New Delhi: Sarup & Sons

Sharam, Yogendra k (2004). Principles of educational and vocational guidance. New Delhi: Kanishka Publishers, Distributors.

Sertzer, Bruce & Stone Shelly C (1996). Fundamentals of guidance, Third Ed. London: Houghton Mifflin Company Boston.

PAPER-II

Arbuckale, D.S. (1965) Counseling: Philosophy, theory and practice. Boston Allyn and Bacon

Carroll, Michael & Walton Michael, Ed.(1997). Handbook of counseling in organizations. New Delhi: SAGE Publications. India Pvt. Ltd.

Chandra Ramesh, (2002). Guidance and counselling. Delhi: Kalpaz Publications.

Geldard, Kathryn & Geldard, David (1997). Counselling children- A practical Introduction. New Delhi: Sega Publications.

Gibson, R.L. & Mitchell M.H.(2008). Introduction to Counselling and Guidance. New Delhi: Pearson Publications.

Gladding, S.T. (2004) Counselling- A Comprehensive Profession. New Delhi: Pearson Publications.

Gregory, R.J. (2004). Psychological Testing: History Principles and Application. N.Y. Pearson Education Group.

Knapp, Robert H. (1953). Practical Guidance Methods for Counselors, Teahers and Administrators. New York: McGraw- Hill Book Company, Inc

Kochhar, S.K. (1996). Guidance and cunselling in colleges ad universities. New Delhi: Sterling Publishers Pvt. Ltd.

Lapworth, Phil, Sills Charlotte & Fish Sue, (2001). Integration in counselling & Psychotherapy- Developing a Personal approach. London: SAGE Publications.

Lazarus, R. (1969) Patterns of Adjustment and human Effectiveness. N.Y., McGraw hill.

Palmer, Stephen, dainow Sheila and Milner Pat, (1996). Counselling- The BAC counselling reader. New Delhi: Sega Publications.

Patterson, C.H. (1973) Theories of Counseling and Psychotherapy. N.Y. Harper and Raw

Safaya, B.N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications.

Shaffer, L.F. & Shoben, E.J. (1970) The Psychology of Adjustment, Boston, Houghton Mifflin

Sharma, A.S. (2000). Counseling Psychology. New Delhi: Commonwealth Publisher.

Shertzer, Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston.

Paper- III

Garret, H.E. (1981) Statistics in education and Psychology. Bombay. Vakils Feffer and Simons LTD

Noll et al (1979). Introduction to Education and Measurement. Boston Houghton Mifflin Co.

Shah. R.K. (2002). Educational Testing and Measurement . Jaipur. INDIA, Pointer Publishers.

Paper-IV

Chandra Ramesh, (2002). Guidance and counselling. Delhi: Kalpaz Publications.

Cruickshank, W.M. (1963). Psychology of Exceptional Children and Youth. N.Y. Prentice Hall.

Geldard, Kathryn & Geldard, David (1997). Counselling Children-A practical Introduction. New Delhi: Sega publications.

Gladding, S.T. (2004) Counselling- A Comprehensive Profession. New Delhi: Pearson Publications.

Panda, K.C. (2004) Education of the Exceptional Children, New Delhi, Vikas Publishing House Pvt. Ltd.

Paper-V

Gladding S.T. (2004). Counselling- A Comprehensive Profession: New Delhi: Pearson Publications.

Pandit, J.L. (1970) The World of Work. (INDIA) Orient Longman

Sharma, Shashi Prabha (2004) . Career Guidance and Counseling. New Delhi : Kanishks Publishes, Distributors.

Sharma, Yogendra K. (2004).Principles of educational and vocational guidance.

Sharma, Yogendra K. (2004). Text book of Educational Psychology. New Delhi: Kanishka Publishers, Distributors.

Shertzer, Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston.

Sinha, Neelam (1996). Strategies, Issues and Concepts in Vocational Education. New Delhi: Common Wealth Publishers.

PANJAB UNIVERSITY, CHANDIGARH

(Estted. under the Panjab University Act VII of 1947- enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

POSTGRADUATE DIPLOMA

IN

MASS COMMUNICATION

(SEMESTER SYSTEM)

EXAMINATIONS, 2017-18

PANJAB UNIVERSITY, CHANDIGARH

Outlines of tests, syllabi and courses of reading for Post-Graduate Diploma in Mass Communication (Semester System) for the examination 2017-18.

SEMESTER I

NOTE: **There will be four theory papers each carrying 100 marks in each semester. One practical assignment of 50 marks is compulsory in each semester.**

PGDMC	101	Introduction to Mass Communication
PGDMC	102	Print Media
PGDMC	103	Electronic Media
PGDMC	104	Advertising and Public Relations
PGDMC	105	Practical Assignments

SEMESTER II

PGDMC	106	Introduction to Mass Communication
PGDMC	107	Print Media
PGDMC	108	Electronic Media
PGDMC	109	Advertising and Public Relations
PGDMC	110	Practical Assignments

NOTE: The assignments are required to be submitted in the portfolio 20 days before the commencement of the theory exams as mentioned in the Academic Calendar. No assignment will be accepted thereafter and the candidates' defaulter in this regard will not be issue the roll numbers for the theory papers.

Post-Graduate Diploma in Mass Communication

FIRST SEMESTER

PGDMC 101: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Communication: Meaning & Definition of communication; Functions of communication; Modern & Classical.

Unit -II

- Process & elements of communication; Forms of communication – Intrapersonal, Interpersonal, Group (public, crowd, small & large group); mass communications importance & characteristics.

Unit – III

- Theories & Models of Mass Communication: Meaning & Definition; Models: S-R,
- Shannon & Weaver, Laswell formula, Osgood & Schramm.

Unit - IV

- Two – step flow; Diffusion of Innovations; four rings of defences

ESSENTIAL READINGS:

1. Everett M. Rogers, (1976), *Communication and Development*. Beverly Hills, Sage Publications.
2. E.S. Herman & Noam Chomsky, (1994), *Manufacturing Consent*, Vintage.
3. Berelson, Bernard & Janowitz, Morris (ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York.
4. Carwright, Dorwin & Zander, Alvin (ed.), (1968), *Group Dynamics Tavistock*, London.
5. McQuail, Denis, (1994), *Mass Communication Theory,* SAGE, London.
6. McQuail, Denis (ed.), (1976), *Sociology of Mass Communication*. Penguin, London.

7. Rogers, Evertt M. (ed), (1982), Communication & Development. SAGE, Beverly Hills.
8. Sage, (1981 onwards), *Mass Communication Year Books*. SAGE, Beverly Hills.
9. Schramm, Wilbur, (1975), *Men, Messages & Media*. Harper & Row, New York.
10. Schramm, Wilbur (ed.), (1963), *Mass Communication*. University of Illinois Press, Illinois.
11. Schramm, Wilbur (ed.), (1955), The Process and Effects of Mass Communication, University of Illinois Press, Urban.
12. Schramm, Wilbur, (1957), *Responsibility in Mass Communication*. Harper & Row, New York.
13. Wood, Ronald N., (1983), *Mass Media & the Individual,* West Publishing Co., Minnesota.

ADDITIONAL READINGS:

1. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
2. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.,
3. Keval J. Kumar, Jaico, (1995), Mass Communications in India, Publishing House.
4. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
5. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
6. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
7. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

PGDMC 102: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing and editing. To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. To help the students to understand the finer aspects of reporting for print media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

News	:	Definition, Concept, Elements, Values, Sources, Making and Maintaining sources, Structure – 5 Ws and IH, Inverted Pyramid Pattern, Different Types and styles of lead writing.

Unit –II

Principles of Reporting	:	Role and Responsibilities of Reporting staff, Concept of Beats.

Unit – III

Interviews	:	Types, purposes, techniques, preparation, skills.
Writing	:	News analysis, Features, Articles, Editorials.

Unit- IV

Subbing & Editing	:	Significance and Principles; Subbing Symbols; Brief introduction to DTP.

ESSENTIAL READINGS:

1. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
2. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D.
3. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D.
4. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey.
5. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D.
6. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D.
7. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
8. Barns, Margarita, (1940), Indian Press, George Allen & Unwin, London.
9. Basu, Durgada, (1982), The Law of the Press in India, Prentice-Hall, New Delhi.
10. Cheney, William, (1955), Freedom of the Press, Harcourt-Brace, New York.
11. Eliott, Deni (ed.), (1986), Responsible Journalism, Sage Beverly Hills.
12. Herd, Harold, (1976), The March of Journalism, Greenwood Press, Connecticut.
13. Karkhanis, Sharad, (1981), Indian Politics & Role of the Press, Vikas Publishers, New Delhi.

ADDITIONAL READINGS:

1. Wray, Cheryl Sloan, (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group.
2. Hay and Vicky, (1991), *The Essential Feature: Writing for Newspapers and Magazines*, Columbia University Press.
3. Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books.
4. Harrington, Walt. Ed, (1997), *Intimate Journalism: The Art and Craft of Reporting Everyday Life*, Sage Publications, Sage Publications, N.Y.
5. Metzler, Ken, (1996), *Creative Interviewing: The Writer's Guide to Gathering Information by Asking Questions*, Allyn and Bacon Inc.

PGDMC 103: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes;

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

RADIO

Brief History of Radio in India

Characteristics of Radio

Radio as Mass Medium : Role, reach and future.

All India Radio : Organizational structure.

Unit – II

Different types of Radio Programmes : Interviews, talks, discussion, radio-features.

Unit-III

TELEVISION

Brief History of Television in India

Characteristics of Television

Television as a Mass Medium : Role, reach and future.

Doordarshan : Organizational Structure.

Unit -IV

Different types of TV programmes : Interviews, discussions, TV documentary.

ESSENTIAL READINGS:

1. Govt. of India, (1966), *Radio and Television: Report of the Committee of Broadcasting and Information.*

2. Govt. of India, (1978), *Akash Bharti (Report of The Working Group of Autonomy for Akashvani & Doordarshan)* 2 Volumes. Publications Division, Min. of 1 & B.

3. Govt. of India, (1985), *An Indian Personality for Television: (Report of The Working Group On Software for Doordarshan)* Min I & B.

4. Govt. of India, (1968), *Radio and Television (Report of The Committee on Broadcasting and Information),* Publications Division, Min. of I & B.

5. Barnouw, Erik, (1978), *The Sponsor*, Oxford University Press, New York.

6. Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice*, Routledge, New York.

7. Shrivastava, K.M., (1989), *Radio and TV Journalism*, Sterling Publishers, New Delhi.

8. Cohler, David Keith, (1985), *Broadcast Journalism*, Prentice-Hall, New Jersey.

9. Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*, Rajat Publications, New Delhi.

10. Fedler, Fred, bender, John R., Davenport, Huanda, Drager, Michael W., (2005), *Reporting for the Media*, Oxford University Press, New York.

11. Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi.

ADDITIONAL READINGS:

1. Cohen, Akilia A, (1987), *The Television News Interview*, SAGE, New Delhi.

2. Caywood, Clark L., (2004), *The Handbook of Strategic Public Relations and Integrated Communications*, Tata McGraw Hill, New York.

3. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications, Tata McGraw Hill, New York.

4. Shrivastava, K.M, (2005), *Broadcast Journalism in the 21st century New Dawn Press Group*, New Delhi.

PGDMC 104: ADVERTISING AND PUBLIC RELATIONS Marks = 100

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Definition, scope and concept of Advertising
- Advertising in marketing – mix; concept of IMC
- Major types of Advertising : Classified; classified display; display
- Carrier and Non – carrier media of advertising

Unit -II

- Advertising Media: Newspaper, Magazines, Radio, TV, Internet, Outdoor, Transit, Direct Mail, P-O-P; characteristics of individual media and their advertising features.

Unit – III

- PR: Definition and Role.
- PR vis-à-vis Publicity, propaganda, advertising, PR in Marketing Mix, Brief introduction to Integrated Marketing Communication.
- Organisation; different types of organisation; Importance of Communication within organisation, different types of channels of communications.

Unit - IV

- Publics in PR: Internal & External & their importance
- Code of Ethics in PR

ESSENTIAL READINGS:

1. David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson.
2. David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman.
3. Subroto Sengupta, (1990), *Positioning,* New Delhi, Tata-Mcgraw Hill.
4. Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.
5. J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books.
6. Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School.
7. Dorothy Cohen, (1972), *Advertising.* NY, Wiley.
8. Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956.
9. Fraser P. Seital, (1984), The Practice of Public Relations. 2nd ed., Columbus Bell & Howell Co.

ADDITIONAL READINGS:

1. John Lee, (1968), Diplomatic. Persuaders, N.Y. Wiley.
2. Black, Marwin & Harlow, Rex, (1985), Practical Public Relations. Harper & Bros.; New York.
3. Black, Sam, (1978), Practical Public Relations Pitman, London.
4. Black, Sam, (1972), Role of Public Relations in Management. Pitman, London.
5. Bowman, Pat & Ellis, Nigel (ed.), (1985), Handbook of Public Relations. George Harrap & Co., Ltd., London.

PGDMC-105 Practical Assignments Marks : 50

S. NO.	ASSIGNMENTS	NOS.	MARKS
1	News Stories – Covering major events in your areas	4	8
2	Interviews of prominent persons	2	8
3	Translation of News Story: English to Hindi/Punjabi	1	4
4	Translation of News Story: Hindi/Punjabi to English	1	4
5	Identify Classified & Classified Display ads, Display ads; Product ad; Institutional ad; Transit ad, Outdoor ad, Direct Mail ad, POP ad	1	8
6	Review of any radio programme (current affairs/news bulletin/ interview based programme/feature/talk shows/ song-based programme etc.)	1	4
7	Feature Writing	1	6
8	Dummy of two pages of a Newspaper	1	8
	TOTAL		**50**

Post-Graduate Diploma in Mass Communication

SECOND SEMESTER

PGDMC 106: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Theories of Mass Communication

Unit-I

- Agenda –setting; Uses & gratification.

Unit-II

- Characteristics of various media of mass communication: Print, Electronic, Traditional.

Unit-III

- Media Systems: Authoritarian theory; Libertarian theory; Social – Responsibility Theory

Unit -IV

- Totalitarian theory; Development Media Hypothesis, Democratic – Participant Media Hypothesis.

Course of reading is as same as in the paper in Semester -I

PGDMC 107: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing, editing and design; To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. The paper is also design to familiarize students with various laws pertaining to the media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

Editorial department set - up	:	Criteria for judging news copy. Organizational structure of the editorial department of a newspaper.
News room organization	:	Functions of News Editor, Chief Sub – Editor and Sub – Editor

Unit – II

Headline	:	Mechanics of headline writing; typographical patterns; purposes; kinds of headlines; Dummy; page – make – up.
Photo – editing	:	Selection; editing and cropping of pictures; placement of photographs. Writing captions.

Unit - III

Role & Responsibilities of Journalists	:	Code of ethics for journalists (Press Council of India).

Unit – IV

Press Laws	:	Copyright Act, Law of Defamation, Contempt of Court, Official Secrets Act, Right to Information Act. Contempt of Legislature, Law of Obscenity.

Course of reading is as same as in the paper in Semester -I

PGDMC 108: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes; To equip the students with the skill to camera shot composition, camera movements and basic steps of program production.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Organisational structure of NSD in Dordarshan & AIR.
- Characteristics of Radio & TV.
- Structure and preparation of a Television Bulletin (gathering, condensing, compiling and presenting TV news).
- Basics principles of writing news for Radio & TV
- News packages.

Unit – II

- Basics of TV script, Writing, Different types of scripts (Narrative Style, split page, camera script)
- Above & below the line function in TV production.

Unit – III

- Basic camera shots, camera movements, competition & transitions.

Unit – IV

- Basics of Programmes Editing: Linear and Non-Linear Editing.
- Basic process of programme production: Pre-production, production, post-production.

Course of reading is as same as in the paper in Semester -I

PGDMC 109: ADVERTISING AND PUBLIC RELATIONS **Marks = 100**

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Advertising Copy Writing: Definition; principles; do's & don'ts; U.S.P.; AIDA formula.
- Advertising layout and Design: Design vocabulary & Design principles; and stages of layout.

Unit-II

- Advertising Agency: Structure and Functions
- Advertising Campaign: Brief Introduction.
- Code of Ethics of Advertising in India.

Unit – III

- PR tools: House Journals; pamphlets; brochures; Newsletter; bill boards; press conferences, Cable TV, Exhibitions; internet, mobile.

Unit - IV

- Brief introduction to PR process; Fact Finding & Feedback, Planning & programming, communication & action, evaluation.

Course of reading is as same as in the paper in Semester -I

PGMC- 110: PRACTICAL ASSIGNMENTS **Marks: 50**

S. NO.	ASSIGNMENTS	NOS.	MARKS
1.	Photo caption Writing	1	4
2.	Press Release	2	6
3.	Script writing for radio news of five minutes	1	8
4.	Script writing for TV news of five minutes	1	8
5.	Write a story board of a half minute TV commercial	1	4
6.	Print Advertisements Analysis		
	a) Classified	2	4
	b) Display Classified	2	4
	c) Display	2	4
7.	Brochure	2	8
	TOTAL		**50**

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
THIRD YEAR
(SEMESTER : FIFTH AND SIXTH)
Examination, 2019-2020

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE HONOURS SUBJECTS OF THE B.A./B.Sc. THIRD YEAR FOR THE EXAMINATION, 2019-2020

ENGLISH

SEMESTER V

PAPER : 20th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	G.B. Shaw	:	*Arms and the Man.*
2.	George Orwell	:	*Nineteen Eighty Four.*
3.	D. H. Lawrence	:	*The Rainbow.*
4.	W.B. Yeats	:	(i) *Among school Children* (ii) *The Second coming* (iii) *Lake of Isle Innisfree*

Testing :

There will be **Two Units.**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three

Unit I
There will be one question on the literary movement of 20th Century with internal choice

(15 marks)

There will be one question with reference to the context from writers at Serial No. 1 and 4. Two passages will be set from each writer with internal choice. Students will attempt one passage from each writer.

(15 Marks)

Unit II
There will be two essay type questions with internal choice on each of the four writers' texts. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

SEMESTER VI

PAPER : INDIAN WRITING IN ENGLISH

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1.	Tagore	:	(i) *The Joureny* (ii) *Sea Shore.* (iii) *Maya*	}	*Selection from Geetanjali*
2.	Mulk Raj Anand	:	*Coolie.*		
3.	R.K. Narayan	:	*The Vender of Sweets*		
4.	Kamla Dass	:	(i) *An Introduction* (ii) *Forest Fire* (iii) *The Freaks* (iv) *My Grandmother's House*		

Testing :

1. There will be one question with reference to context. Two stanzas with internal choice will be set from Tagore and Kamla Dass. Students will attempt one stanza from each Poet.. (10 marks)

2. Four questions (one on each author) of 20 marks each will internal choice. ($20 \times 4 = 80$ marks)

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B.A./B.Sc. (Sanskrit Honours) Third Year Syllabus
बी.ए. (संस्कृत आनर्स) तृतीय वर्ष परीक्षा 2019-20
SEMESTER-V

तृतीय पत्र : पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः–

विद्यार्थियों को काव्य के स्वरूप, प्रयोजन इत्यादि से अवगत करना । इसी के साथ ही पाणिनीय सूत्रों के माध्यम से कारक तथा स्त्री प्रत्ययों के अध्ययनोपरान्त संस्कृत लेखन के प्रति उत्साहित करना ।

UNIT-I

(क) साहित्यदर्पण–प्रथम परिच्छेद 40 अंक

UNIT-II

(ख) लघुसिद्धान्तकौमुदी– 30 अंक

(i) विभक्त्यर्थ (कारक–प्रकरण) 15 अंक

(ii) स्त्री–प्रत्यय 15 अंक

UNIT-III

(ग) संस्कृत में निबन्ध (इन विषयों पर– संस्कृतभाषा, परोपकारः, गीता, वेदानां महत्त्वम्, आदर्श–छात्रः)। 20 अंक

नोट – पत्र का अध्यापन समय–नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

B.A./B.Sc. (Sanskrit Honours) Third Year Syllabus
बी.ए. (संस्कृत आनर्स) तृतीय वर्ष परीक्षा 2019-20
SEMESTER-VI

चतुर्थ प्रश्न –पत्रः पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः–

उपनिषद् प्रतिपादित नचिकेता एवं यम के संवाद द्वारा विद्यार्थियों को रहस्यमय परमतत्त्व से परिचित कराना, इसके अतिरिक्त चतुर्वेद, ब्राह्मण तथा उपनिषद् ग्रन्थों के विषय–वस्तु का अध्ययन करवाना।

UNIT-I

(क) उपनिषद्–साहित्य 60 अंक

(i) कठोपनिषद्–(प्रथम अध्याय) अनुवाद एवं व्याख्या (6 में से 4 सन्दर्भ) 4×10 = 40 अंक

(ii) कठोपनिषद् से सम्बद्ध प्रश्न (2 में से 1 का उत्तर) 1×20 = 20 अंक

UNIT-II

(ख) वैदिक साहित्य का इतिहास 30 अंक

1. सहिंताएँ 2. ब्राह्मणग्रन्थ 3. उपनिषद 2×15 = 30 अंक

(विषय वस्तु से सम्बन्धित चार में से दो के उत्तर पूछे जायेगें) ।

नोट – पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

Books Recommended :

1. Sanskrit Drama : A.B. Keith.
2. Classical Sanskrit literature : A.B. Keith.
3. A History of Sanskrit Literature : A.A. Macdone.
4. A History of Indian Literature, Vol. I : M. Vintenitz
5. History of Sanskrit Literature by V. Varadachari.
6. संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय
7. वैदिक साहित्य और संस्कृति : बलदेव उपाध्याय
8. संस्कृत वाड्मय का इतिहास : वाचस्पति गैरोला
9. संस्कृत साहित्य की रूपरेखा : चन्द्रशेखर पाण्डेय

Note : All books are available at the Chaukhamba Sanskrit Series, Chaukhamba, Varanasi and Motilal Banarasidas, Jawahar Nagar, Bunglow Road, Delhi.

PERSIAN

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER V

PAPER-III : HISTORY OF PERSIAN LITERATURE

SAFIVID PERIOD

100 Marks

Time : 3 Hrs.

Books Recommended:

1. History of Persian Literature by Dr. Razazadeh Shafaq.
2. History of Persian Literature by Dr. Brown Vol. III.

PERSIAN

B.A.(HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER-VI

Paper-IV MODERN PERSIAN

100 Marks
Time : 3 Hrs

1. PROSE:
   (i) The following three short stories of Saeed-Nafisi
   (a) Azan-E-Maghrib
   (b) Khana-Ye-Pidari.
   (c) Janayat-E-Man

   (ii) The following three short stories of Mohammed Heijazi:
   (a) Khud Khusi.
   (b) Eedi.
   (c) Mah-e-man

Book Prescribed:

Nasib-Jadid-e-farsi, jayyed Press, Ballimaran, Delhi-6

2. POETRY:
   Quasidan
   1. Namund Namah by Bahar.
      "Dar Sher Band Mehro-Wafa Dilbari Namund."
   2. Ghazalliyat-E-Parveen Etisami by Mehdi Hameedi.
   3. Qataat by Mehdi Hameedi.

Books Recommended:

1. Barguzida-Ye-She'r-e-Farsi-Ye-Mu' aasir Part-I by Dr. Muneeb-al-Rehaman.
2. Edara-ye-Ulam-e-Islami, Danish gah-e-Islami,Aligarh.

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ARABIC

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

(Kept in Abeyance)

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FRENCH

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER V

5th Semester: FRENCH LITERATURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

INTRODUCTION TO HISTORY OF FRENCH LITERATURE FROM 17th– 18th CENTURY

Questions should be asked strictly from the prescribed text book.

1. Five questions of 8 marks each based on History of French Literature — 40 Marks
2. Fill in the blanks or multiple choice questions on History of literature with maximum of 2 marks each. — 20 Marks

Poetry: Explanation, central idea, critical appreciation of poems — 30 Marks

1. L'amour et la folie (La Fontaine)
2. Le laboureur et ses enfants (La Fontaine)
3. Le lion et le rat (La Fontaine)
4. Le chêne et le Roseau (La Fontaine)
5. La Jeune veuve (La Fontaine)

Courses of Reading :

Memento de Littérature française, by Hélène, Publication Hatier, Profil Littèrature. Only from 17-18 centuries to be studied.

Note : 1. The latest syllabus should be followed.
2. Choice should be given in questions.

Reference Books :

1. Collection littéraire—Moyen age – 20eme siècle -Lagarde et Michard, Bordas.
2. Recueil de Textes littéraires français. Moyen Age -20eme siècle-Chassang et Senninger.
3. Moyen age -20eme siècle – Castex et. P. Surer, Hachette.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH

SEMESTER VI

6th SEMSETER-: HISTORY OF LITERATURE, POETRY &VIVA-VOCE

Max. Marks	: 100
Theory	: 70 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours
Viva-Voce	: 20 Marks

History of literature 19th-20thCentury:

Introduction to the History of French Literature 19th – 20th century.
Five questions of 8 marks each based on History of French Literature 40 Marks

Poetry: 30 Marks

Explanation, resume, central idea, critical appreciation of the poems

1. Les feuilles mortes (Jacques Prévert)
2. Chant d'automne (Baudelaire)
3. L'homme et la mer (Baudelaire)
4. Paysage(Baudelaire)
5. L'albatros (Baudelaire)

Viva-Voce 20 Marks

1. Dictation of an unseen passage of about 200 words. 10 Marks
2. Oral questions based on the dictation passage and also general questions 10 Marks

Note: Questions in all the papers shall be asked and answered in French only.

For the information of private candidates:

1 Viva is compulsory

2.The theory paper would be proportionately marked out of 80 as there is no internal assessment.

HINDI
(B.A. HONS. 3rd YEAR 5th SEMESTER 2019)

PAPER-III (A)

तृतीय पाठ्यचर्या **पूर्णांक – 90 + 10 = 100**

समय – तीन घंटे

1. **कहानियाँ : आधार चयन–भीष्म साहनी, आधार पब्लिकेशन, पंचकूला ।**
2. **संस्मरण : अतीत के चलचित्र – महादेवी वर्मा, राधकृष्ण प्रकाशन, नई दिल्ली ।**

(क) प्रस्तुत दोनों कृतियों में से 10/10 अंकों के 4 व्याख्यांश पूछे जाएंगे । छात्रों को केवल दो की संदर्भ एवं काव्य–सौन्दय सहित व्याख्या करनी होगी । 10+10=20

(ख) दोनों कृतियों में से 4 समीक्षात्मक प्रश्न पूछे जाएंगे । जिनमें से छात्रों को 15–15 अंको के दो प्रश्नों के उत्तर देने होंगे । 15+15=30

(प्रत्येक कृति में से एक प्रश्न अवश्य करना होगा)

(चरित्र, मूल संवेदना, तात्त्विक समीक्षा, उद्देश्य, भाषा–शैली)

3. **काव्यशास्त्र** **अंक–30**

(क) शब्द शक्तियाँ – परिभाषा और उदाहरण

(ख) बिम्ब – परिभाषा एवं स्वरुप

(ग) रस – परिचय, प्रकार, लक्षण और उदाहरण

(घ) प्रतीक – परिभाषा एवं स्वरुप

खंड तीन से संबंध्ति चारों उपखंडों (क ख ग घ) में से कुल मिलाकर 20–20 अंकों के चार प्रश्न पूछे जाएंगे जिनमें से छात्रों को किन्हीं दो के उत्तर देने होंगे ।

4. **दो–दो अंकों के 5 वस्तुनिष्ठ प्रश्न करने होंगे ।**
8 प्रश्न पूछे जाएंगे । 5x2=10

5. **आंतरिक मूल्यांकन –** **अंक–10**

सहायक पुस्तकें :

1 **अन्धा युग : एक विवेचन, डॉ0 हरीश्चन्द्र वर्मा. नव भारती शंकर प्रतिष्ठान, नई दिल्ली**
2 **हिन्दी कहानी अन्तरंग परिचय : रामदरश मिश्र, नेशनल पब्लिकेषन, नई दिल्ली ।**
3 **हिन्दी कहानी अपनी जुबानी : डॉ0 इन्द्रनाथ मदान, संभावना पब्लिकेशन, हापुड ।**

HINDI
(B.A. HONS. 3rd YEAR 6th SEMESTER 2020)

PAPER-IV (B)

चतुर्थ पाठ्यचर्या

पूर्णांक–90+10=100

समय – तीन घंटे

1. **काव्य–नाटक : एक कण्ठ विषयायी–दुष्यंत कुमार, लोकभारती**

   (क) इस कृति में से 10–10 अंकों के दो व्याख्यांश पूछे जाएंगे,

   इनमें से एक करना होगा ।

   (ख) इस कृति में से 16–16 अंकों के दो समीक्षात्मक प्रश्न पूछे जाएंगे,

   इनमें से एक करना होगा । **अंक–26**

2. **छंद : भुजंगप्रयात, मालिनी, मंदाक्रान्ता, शिखरिणी, अहीर**

   मनव, बरवै । **अंक–20**

3. **अंलकार : अन्योक्ति, तुल्योगिता, उल्लेख, व्याजस्तुति,**
   अनन्वय, विभावना **अंक–20**

(छात्रों को पाँच–पाँच अंकों के 4 छंदो और पाँच–पाँच अंकों के चार अलंकारों के लक्षण तथा उदाहरण लिखने होंगे । प्राश्निक को दुगना विकल्प देना होगा)

4. **भाषा :** **अंक–24**

   (i) हिन्दी की प्रमुख बोलियां–क्षेत्र और विशेषताएं
   विशेषतः ब्रज, अवधी का परिचय

(ii) **मानक हिन्दी की संरचना–शब्द संरचना, रूप–सरंचना**
वाक्य संरचना

(iii) **क. राजभाषा हिन्दी का परिचय तथा वर्तमानस्थिति ।**
ख. देवनागरी लिपि का अनुमोदित मानक रूप ।

विशेष : खंड 4 में से 15–15 अंकों के कुल चार प्रश्न पूछे जाएंगे । जिनमें से छात्रों को दो के उत्तर देने होंगे ।

5. आंतरिक मूल्यांकन : अंक–10

सहायक पुस्तकें :–

1. **अन्धा युग : पथ और प्रदर्शन, जयदेव तनेजा, वाणी प्रकाशन, नई दिल्ली ।**
2. **अन्धा युग और भारती के अन्य नाट्य प्रयोग : जयदेव तनेजा, नचिकेता प्रकाशन, नई दिल्ली ।**
3. **काव्य के तत्त्व : आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद ।**

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019–20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ

ਪੇਪਰ ਪੰਜਵਾਂ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਕਾਵਿ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪ੍ਰਯੋਜਨ
2. ਕਾਵਿ ਦੀ ਆਤਮਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਨਿਰਧਾਰਨ
3. ਕਾਵਿ ਦੇ ਤੱਤ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

1. ਧੁਨੀ ਸੰਪ੍ਰਦਾਇ
2. ਰਸ ਸੰਪ੍ਰਦਾਇ
3. ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਚੋਣਵੇ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਮਾਲੋਚਨਾ ਦਾ ਆਰੰਭ
2. ਨਾਮਕਰਣ
3. ਕਾਵਿ ਦਾ ਲੱਛਣ ਤੇ ਸਰੂਪ
4. ਕਾਵਿ ਤੇ ਸਾਹਿਤ
5. ਕਾਵਿ ਦੇ ਪ੍ਰਯੋਜਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019–20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਛੇਵਾਂ

ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਉਦੇਸ਼ ਅਤੇ ਖੇਤਰ
2. ਪੰਜਾਬੀ ਆਲੋਚਨਾ – ਆਰੰਭ ਤੇ ਵਿਕਾਸ
3. ਕਾਵਿ ਟਿੱਪਣੀਆਂ ਤੇ ਟੀਕਾਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਬਾਵਾ ਬੁੱਧ ਸਿੰਘ, ਕਿਸ਼ਨ ਸਿੰਘ, ਅਤਰ ਸਿੰਘ, ਹਰਿਭਜਨ ਸਿੰਘ।

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸਾਹਿਤਿਆਰਥ – ਸੰਤ ਸਿੰਘ ਸੇਖੋ (ਪੰਜ ਚੋਣਵੇ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਪੁਰਾਤਨ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
2. ਆਧੁਨਿਕ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
3. ਅਧਿਆਤਮਿਕ ਕਵਿਤਾ
4. ਕਵਿਤਾ ਤੇ ਸਮਾਜਕ ਆਲੋਚਨਾ
5. ਕਵਿਤਾ ਤੇ ਵਿਗਿਆਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019–20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ – ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਸੱਤਵਾਂ

ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਪ੍ਰਯੋਜਨ
2. ਅਨੁਕਰਨ, ਵਿਰੇਚਨ ਅਤੇ ਉੱਦਾਤ
3. ਤ੍ਰਾਸਦੀ/ਦੁਖਾਂਤ : ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪਲੈਟੋ, ਅਰਸਤੂ, ਲੌਂਜਾਈਨਸ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ

(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਸ਼ਾਸਤ੍ਰ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ ਤੇ ਜੀਵਨ
2. ਸਾਹਿਤ ਤੇ ਸਮਾਜ
3. ਸਾਹਿਤ ਤੇ ਵਿਅਕਤੀ
4. ਵਾਰਤਕ ਕਲਾ
5. ਨਿਬੰਧ ਤੇ ਸ਼ੈਲੀ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019–20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ–ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਅੱਠਵਾਂ

ਪੱਛਮੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ : ਉਦੇਸ਼ ਤੇ ਖੇਤਰ
2. ਪੱਛਮੀ ਆਲੋਚਨਾ : ਪ੍ਰਮੁੱਖ ਸਥਾਪਨਾਵਾਂ
3. ਵਿਚਾਰਧਾਰਾ ਤੇ ਸਾਹਿਤ, ਅਜਨਬੀਕਰਨ ਤੇ ਸਾਹਿਤਕ ਪਾਠ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮਾਰਕਸਵਾਦ, ਰੂਪਵਾਦ, ਮਨੋਵਿਸ਼ਲੇਸ਼ਣ, ਸੰਰਚਨਾਵਾਦ : ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਟ੍ਰੀ ਆਰ਼ ਵਿਨੋਦ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਆਲੋਚਨਾ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ (ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਾਰਜ ਤੇ ਕਰਤੱਵ)
2. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਚਾਰ
3. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਤਿਬੱਧਤਾ
4. ਸਾਹਿਤ ਅਤੇ ਸੁਤੰਤਰਤਾ
5. ਸਾਹਿਤ ਅਤੇ ਚਿਤੰਨ

(ਅੰਕ : 15)

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URDU

SEMESTER V

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- I Novelette

Unit-I

Novelette-‘ Dilruba’ Ka tanqidi Jayeza 25 marks

Unit-II

Plot aur Character 20 marks

Unit-III

‘Agle Janam Mohe Bitiya na Kijo’ ka tanqidi jayeza 25 marks

Unit –IV

Plot aur character 20 marks

Books Prescribed:-

1. ‘ Char Novelette’by Qurrat-ul-ain Hyder,Educational Book House,Aligarh.
2. ‘Beesveen Sadi mein Urdu Novel’ by Dr. Usuf Sarmast, Education Book House, Aligarh.

URDU

SEMESTER VI

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- II Novelette

Unit-I

Ismat Chughtai Ka Novelette 'Ziddi' Ka Plot 25 marks

Unit-II

Character 20 marks

Unit-III

Critical notes on Ismat Chughtai ki novel nigari ki khususiaat 25 marks

Unit –IV

Ismat Chughtai ki life history 20 marks

Books Prescribed:-

1. Novelette'Ziddi' by Ismat Chughtai,Education Book House, Aligarh
2. 'Beesveen Sadi mein Urdu Novel'by Dr. Usuf Sarmast, Education Book House, Aligarh.

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GERMAN

SEMESTER V

Summary

Max. Marks: 100 marks (Total)
Paper-1 (Theory): 90 marks
Internal Assessment: 10 marks

Paper – 1 (Theory): 90 marks (Total)
Time: 3 hours
Note: Use of dictionary is allowed

i. Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:

i. Aufklärung

ii. Sturm und Drang.

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Geschichte der deutschen Dichtung, Fricke/Klotz.

ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

GERMAN

Summary

Max. Marks: 100 marks (Total)
Paper-2 (Theory): 90 marks
Internal Assessment: 10 marks

Paper - 2 Essay and Translation (Theory): 90 marks

Time: 3 hours
Note: Use of dictionary is allowed

i. Translation of an unseen text/s from German into English : 50 marks

ii. Translation of an unseen text/s from English into German : 20 marks

iii. Essay writing in German (about 250 words) : 20 marks

i. Länder und Leute

ii. Ausbildung und Berufswege (Indien / Deutschland)

iii. Politik (Indien / Deutschland / Europa / Welt)

iv. Umzug und Einrichtung

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:
1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch by Hartmut Aufderstraße a.o.

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GERMAN

SEMESTER VI

Summary

Max. Marks: 100 marks (Total)
Written Paper (Theory): 90 marks
Internal Assessment: 10 marks

Written Paper (Theory): 90 marks (Total)

Time: 3 hours
Note: Use of dictionary is allowed

Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:
i. Klassik
ii. Romantik

Internal Assessment : 10 marks (Total)
- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:
i. Geschichte der deutschen Dichtung, Fricke/Klotz.
ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:
i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

Viva-voce (Oral exam)

Max. Marks : 100 marks (Total)

i. Reading, comprehension (question/answers) of an unseen text : 40 marks
ii. To speak on one of the given topics : 30 marks
iii. General conversation in German : 30 marks

Suggestions for preparation:
i. Magazine (Der Spiegel), Internet websites, Information on German-speaking countries etc.

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DEFENCE & STRATEGIC STUDIES
SEMESTER - V
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Paper : Area Studies China-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hrs.

Total Teaching Periods: 75

SECTION-I

1. Military Geography of China : Location, size and strategic importance.
2. Economic and Industrial resources (in brief).
3. Population, composition and characteristics of major ethnic groups.

SECTION-II

1. History of China in brief from the CH'IN to Manchus Dynasty.
2. Nationalist Revolution in China under Dr. Sun Yet Sen : Events and effects.

SECTION-III

1. Rise of Chiang Kai Shek.
2. The Nanking Government of China, long march in China.
3. The Civil War in brief.

SECTION-IV

1. Party-Army Relationship.
2. Communist party and its relationship with the Armed Forces.
3. Higher Defence Organisation.
4. Cultural Revolution.

BOOKS RECOMMENDED :

1.	Balance, Edger O.	:	The Red Army of China, Russell Square, London.
2.	Chatterji, B.R.	:	Modern China –A Short History, Meenakshi Printing, Meerut.
3.	Encyclopaedia of Britannica.		
4.	Gupta, R.S.	:	History of Modern China, Sterling Pub.
5.	Kapur, Harish	:	China in World Politics, Div. Pub., N.D.
6.	Liu, F.F.	:	A Military History of Modern China, Princeton Uni. Press.
7.	Mao Tse Tung	:	Communist Rule in China.
8.	Mc. Aleavy, Henry	:	The Modern History of China.
9.	Mitchison	:	Chinese Revolution.
10.	Nung Chen Li	:	The Political History of China, Princeton Uni. Press.
11.	Pelissier Roger	:	The Awakening of China, Secker and Warturg, London.
12.	Tregear, T.R.	:	A Geography of China, University of London.
13.	Wilson Dick	:	A Quarter of Mankind, Weidenfeld and Micholson Olson, London.

DEFENCE & STRATEGIC STUDIES
SEMESTER - VI
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Max. Marks : 100
Theory : 90 Marks
Int. Ass. : 10 Marks
Time : 3hrs

Total Teaching Periods: 75

Paper : Area Studies China-II

SECTION- I

SINO-INDIAN WAR (1962)

1. Events Leading to the war.
2. Operation in brief.
3. Lessions learnt

SECTION- II

1. Determinants of Chinese Foreign Policy.
2. China's Relations with India.
3. China's Relations with Pakistan and its impact on India.

SECTION–III

1. China's Relations with other neighbouring countries.
2. China's Relations with the U.S.A.
3. China's Relations with Russia.

SECTION-IV

1. Defence Potential of China.
2. China's Modernization Program.
3. China's Nuclear Weapon Development.

Books Recommended:

1. Dalvi, J.P. : Himalyan Blunder, Thackei' and Co., Bombay.
2. Griffith Samoul, B. : The Chinese People's Liberation Anny, Army Pub., N.D.
3. Kapur, Harish : China in World Politics, Div. Pub., N.D.
4. Mao TsiTung : CoIn;m~ist Rule ~Chin~. .
5. Sharma, B.L. : The Paklstan-'-Chma AXIS, Asia Pub., B~mbay.
6. Sinh~; K.K. : Problems of Defence of South and East Asia, Rawat Pub., Jaipur.
7. Tr~er N. Frank and : Twentieth Appraisal Year, Weidenfeld and Nicolson, London, William Genderson
8. Cassell & Company : Guerilla Warfare-Mac Tse- Tung & Guevera, Red Lion Sq.,London.

Journals: -

1. RAUSEN DATA : Problem of Communism.
2. Institute of Defence Studies & Analysis (India)
   i. Strategic Analysis.
   ii. Strategic Digest.
3. The China Quarterly.
4. The Institute of Strategic Studies, London. : Military Balance, IISS London.

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HISTORY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

SEMESTER V

Any one paper from the following:

(i) History of China

OR

(ii) History of Russia

(i) HISTORY OF CHINA:

Max. Marks:	**100**
Theory:	**90 Marks**
Internal Assessment:	**10 Marks**
Time	**3 hours**

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

CHINA IN THE 18TH CENTURY

1. Political and Economic Institutions
2. Social and Intellectual Conditions
3. Foreign Relations

UNIT-II

'OPENING' OF CHINA AND REBELLIONS

4. Canton Trade System, Opium Wars, Treaty Settlements
5. Taiping Revolution
6. Reform Movement of 1898

UNIT-III

REVOLUTION AND REFORM

7. Boxer Rebellion 1900
8. Intellectual, Social and Economic Change
9. Rise of Sun Yat Sen and Revolution

UNIT-IV

RISE OF THE REPUBLIC

10. Intellectual Revolution and National Unification
11. National Government 1928-37
12. Chinese People's Republic 1945-49

Recommended Readings:

1. Chesneaux, Jean Francoise Le : *China : From the Opium Wars to 1911 Revolution Vol.I.* Delhi : Khosla, 1978.
2. Hsu Immanuel : C.Y., *The Rise of Modern China*, New York : Oxford University Press, 1970.
3. Vinacke, Harold M. : *A History of the Far East in Modern Times*, New York : Appleton Century Crafts, 1961 (6th edn.).
4. Clyde, Paul Hibbert, : *The Far East : A History of the Impact of the West on Eastern Asia*, Englewood Cliffs, N.J. Prentice Hall : 1958 (3rd edn.).

(ii) HISTORY OF RUSSIA:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

1. *Liberalism and Reaction :* Alexander I; Nicholas I.
2. *Modernisation of Russia :* Alexander II; Alexander III & Nicholas II.

UNIT-II

3. *Russia and the Far East :* Interventions in China, Mongolia and Manchuria.

4. *Background of Russian Revolution 1905-1917 :* Revolution of 1905; Russia on the eve of the Revolution of 1917 – Polity, Society, Economy; Lenin's Contribution to the Revolution.

UNIT-III

5. *Causes of the Russian Revolution and its Aftermath :* The February Revolution and the Provisional Government, the Bolshevik (October Revolution), its impact on Russia and the World.

6. *Civil War :* Russian withdrawal from First World War; Peace of Brest Litovisk; Allied Intervention.

UNIT-IV

7. *The Soviet Economy :* War Communism; New Economic Policy and its impact.

8. *Planned Economy :* Weaning from the New Economic Policy and the First Five Year Plan.

Recommended Readings :

1. Barrington Moore (Jr.) : *The Social Origins of Dictatorship and Democracy.*
2. Paul Kennedy : *The Rise & Fall of Great Powers,* Fontana Press London, 1988.
3. Lionel Kochan : *The Making of Modern Russia,* Penguin Books, 1962.
4. Basil, Dymtrystyn : *History of Russia,* Prentice Hall, New Delhi, 1977.
5. E.H. Carr : *The Bolshevik Revolution,* Penguin Books Ltd., Victoria, 1971 (Reprint).
6. M.T. Florinsky : *Russia : A Short History,* Macmillan, London, 1971 (2nd ed.)

HISTORY

SEMESTER VI

Any one paper from the following :

(iii) Social Origins of Right And Left Wing Dictatorship Of Modern Times

OR

(iv) USA and the World c.1800-1960's

(iii) SOCIAL ORIGINS OF RIGHT AND LEFT WING DICTATORSHIP IN MODERN TIMES:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I: China

1. The Collapse of Imperial System, the emergence of War lords; the Kuomintang interlude; efforts at democracy and Capitalism.
2. The Peasant rebellions; Communist Revolutions; success against the Kuomintang

UNIT II: Russia

3. The Internal Collapse of the Tsarist Regime; Revolution of 1917- Feb/ March and October
4. The Establishment of a Communist Government; Forced industrialization and Collective Agriculture; Stalinist Totalitarianism.

UNIT III: Italy

5. Italy's problems with the Capitalist powers; Failure of Italian Democracy in Economic, Social and Foreign policy
6. The Fascist alternative: Ideology and the corporative state

UNIT IV: Germany

7. Germany's rise as a capitalist powers; Weimar republic and its failure.
8. The fascist stresses with western Europe; Nazi totalitarian programme.

Essential readings:

Barrington Moore : *Social Origins of Dictatorship and Democracy*, Penguin/Peregrine 1977. (reprint)

Reference Reading

Hannah Arendt : *The Origin of Totalitarianism*, Harcourt Brace, New York. 1951

F. Chabad : *A History of Italian Fascism* (Tr. Muricl Grindard) Weidenfeld and Nicolson, London 1961.

(iv) USA AND THE WORLD c.1800-1960's:

Max. Marks:	**100**
Theory:	**90 Marks**
Internal Assessment:	**10 Marks**
Time	**3 hours**

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I

1. US Foreign Policy 1789-97-Response to French; issues with Britain; Jay's Treaty 1799; Pinckney's Treaty 1797; Peace with France
2. Diplomatic Achievements 1800-1820's-Louisiana Purchase; Settlement with Britain; Acquisition of Florida; non colonization of Alaska; liberation of Latin America; Monroe Doctrine
3. Industrial Revolution in America-expansion of transportation; manufacturing; foreign trade and shipping

UNIT II

4. Expansion to the West in the 1830's –Early settlement in the West; Texas question; migration to Oregon
5. Manifest Destiny –Annexation of Texas; Oregon Treaty; Relations with Mexico; conquest of California
6. USA as a World Power-Expansion in Pacific region; Dispute with Venezuela; Results of War with Spain 1898; Policy in Caribbean and Mexico; Open Door Policy in South East Asia

UNIT III

7. USA and World War I-US attitude to war, entry into the war; 14 point programme, role in Paris peace conference 1919
8. Foreign Policy 1920,s-30's- Washington Treaties, Locarno Treaty, Relations with Mexico, Change in 'Big Stick' Policy, Good Neighbour policy, reaction to Chinese situation
9. USA and World War II- US attitude, US aid to War and War Production, Pearl Harbour

UNIT IV

10. New World Order-US Peace Programme and United Nations, Relations with Soviet Union and Containment, Pan, American Conference 1945, post War Europe
11. US in East Asia-American response to China, Japan, Korea, Vietnam
12. US in Europe and West Asia-US and NATO, issues with Egypt, support to Israelis, Eisenhower Doctrine

Recommended readings:

1. Henry Bamford Parkes : *The United States of America: A History*, 1964 (Reprint), Scientific Book Agency, Calcutta, 1976.
2. Richard Current & Others : *History of United States: A Survey,* Alfred A. Knopf, New York,1965.
3. Julius W. Pratt : *A History of United States Foreign Policy,* Prentice Hall (Second Edition), New Jersey, 1965.
4. Allen, G.C., : *Japan's Economic Recovery*, London Oxford University Press, 1958 (Reprint 1960).
5. Beckman, George H : *The Modernization of China and Japan*, New York : Harper and Row, 1962.

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POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

Outlines of Tests, Syllabi and Courses of Reading

V SEMESTER : Option (i) International Relations since 1945.
OR
Option (ii) Modern Indian Political Thought.
OR
Option (iii) Women and Political Process.

VI SEMESTER : Option (i) Research Methods in (Political Science) Social Sciences.
OR
Option (ii) Modern Political Ideologies
OR
Option (iii) Western Political Thought.

V SEMESTER : Option (i) — INTERNATIONAL RELATIONS SINCE 1945

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims at mapping out some of the major transformations that have occurred in the realm of International Relations since 1945.

UNIT-I Post World War-II International Relations :

(a) Post War World Order.
(b) Emergence of Super Powers.

UNIT-II Democracy and Rise of IIIrd World :

(a) Non-Alignment: Meaning and Relevance.
(b) SAARC, European Union.

UNIT-III **Transformation in Post World War II International Relations :**

(a) Decline of Bipolarity.
(b) Nature of Emerging World Order.

UNIT-IV **New Global Scenario and International Relations:**

(a) Demand for New International Economic Order (NIEO)
(b) Issue of Global Terrorism.

Suggested Readings :

1. Peter Calvocoressi : *World Politics Since 1945*, London : Longman, 1945.
2. Budhraj, V.S. : *International Relations After Second World War* (in Hindi), Chandigarh, Haryana Sahitya Academy, 2000.
3. Keswani, K. B. : *International Relations in Modern World* (1900-1988), Bombay, Himalaya Publishing House, 1994.
4. Baylis and Steve Smith : *The Globalization of World Politics – An Introduction to International Relations*, Oxford, Oxford University Press, 2001.
5. Alan C. Lamborn and Joseph Lepgold : *World Politics into the Twenty First Century : Unique Context, Enduring Patterns*, New Jersey, Prentice Hall, 2003.

References :

1. Paul Kennedy : *The Rise and Fall of Great Power*, Fontana Press.
2. Henry Kissinger : *Diplomacy*, London, Simon & Soluster, 1994.
3. Paul R. Viotti & Mark V. Kauppi : *International Relations and World Politics : Security, Economy*, Identity Third Edition Pearson Education, 2007.
4. John Baylis and Steve Smith : *The Globalisation of World Politics* : An Introduction to International Relations, Second Edition, OUP, 2001.

OR

V SEMESTER : Option (ii) — MODERN INDIAN POLITICAL THOUGHT

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory

question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims at creating understanding about the evolution of political thought in modern India with special reference to the stated philosophers.

UNIT-I **Sir Syed Ahmed Khan :**

(a) As a Nationalist.
(b) Education.
(c) Muslim Nationalism-As a Communalist.

UNIT-II **M.K. Gandhi :**

(a) Satyagraha.
(b) Swaraj.
(c) Non-Violence.

UNIT-III **M.N. Roy :**

(a) Radical Humanism - critique of Marxism
(b) New Humanism

UNIT-IV **B.R. Ambedkar** :

(a) Annihilation of Caste
(b) Social Justice
(c) Democracy : Political and Social

Recommended Readings:-

1. Thomas Pantham & Deutsch (ed.) : *Political Thought in Modern India*, New Delhi, Sage, 1986.
2. Majumdar, B.B. : *History of Indian Social and Political Ideas,* Calcutta: Bookland, 1967.

References :

1. Parekh, Bhikhu : *Colonialism, Tradition, Reform : Analysis of Gandhi's Political Discourse*, New Delhi, Sage, 1989.
2. Iyer, Raghvan (ed.) : *Moral and Political Thought of Mahatma Gandhi*, New York, Oxford, 1973.
3. Appadorai, A : *Indian Political Thinkers in the Twentieth Century*, Delhi, Oxford, 1972.
4. Jatava, D.R. : *The Political Philosophy of B.R. Ambedkar*, Delhi; Arya Phoenix, 1965.
5. Hussain, M. Hadi, Syed Ahmed Khan : *Pioneer of Indian Resurgence Lahore*, Institute of Islamic Culture, 1970.
6. Imam, Zafar, : *Muslims in India*, New Delhi : Orient Longman, 1975.

7.	Chattarjee, Partha	:	*Nationalist Thought and the Colonial World, Delhi* : OUP, 1986.
8.	Lyer, Raghavan	:	*The Moral and Political Thought of Mahatma Gandhi*, Delhi : OUP, 1973.
9.	Pantham, Thomas, Parekh,	:	*Gandhi's Political Philosophy*, London, Macmillan, 1989, Bhikhu.
10.	Ghatak, B.K. (ed.)	:	*Dr. Ambedkar's Thought*, New Delhi : APH, 1997.
11.	Keer, Dhanajayay, Dr. Ambedkar	:	*Life and Mission, Bombay* : Popular Parkashan, 1964.
12.	Zelliot, Eleanor	:	*The Social and Political Thought of B.R. Ambedkar in Pantham and Deutsch*, 1986.
13.	Roy, M.N.	:	*New Humanism,* Calcutta : Renaissance, 1953.
14.	Roy, M.N.	:	*The Philosophy and Practice of Radical Humanism*, New Delhi : Radical Humanist Association, 1970.
15.	Roy, Samaren, M.N. Roy	:	*A Political Biography*, Hyderabad : Orient Longman, 1997.
16.	Ray, Sibnarayan (ed.), M.N. Roy	:	*Philosopher Revolutionary*, Delhi, Ajanta, 1995.
17.	Seth, Sanjay	:	*Marxist Theory and Nationalist Politics, The Case of Colonical India*, New Delhi : Sage, 1995.
18.	B.R. Ambedkar (Author) and Arundhati Roy (Introduction)	:	*Annihilation of Caste: The Annoted Critcial Edition,* Navayana, Delhi, 2014.
19.	Chitkara, MG	:	*Dr. Ambedkar and Social Justice,* APH Publishing Corporation, 2002.
20.	Christophe Jaffrelot	:	*Dr. Ambedkar and Untouchability: Analysing and Fighting Caste,* Columbia University Press, 2015.
21.	Gail Omvedt	:	Ambedkar: Towards An Enlightened India, Penguin India, 2008.

OR

V SEMESTER : Option (iii) — WOMEN AND POLITICAL PROCESS

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims to introduce students to the key approaches of Feminist thought contemporary debates concerning women and politics in India. It will include an analysis of the Indian State, the role of women's movement and the major feminist issues in contemporary Indian politics.

UNIT-I **Theoretical Approaches to Women Studies :**

(a) Liberal Feminism.
(b) Marxist / Socialist Feminism .

UNIT-II **Rise of Women's Movement, its role in Contemporary Societies :**

Historical Legacy :

(a) French Revolution, Civil Rights and Suffrage Movements in the West.
(b) Role and Contribution of Women in Indian National Movement.

UNIT-III **Women and Society in India :**

(a) Evolution of Women's position in India – an historical overview-
  (i) Vedic period
  (ii) Medieval Period (Post Vedic Period)
  (iii) Modern Period
(b) Social Position:
  (i) Demographic pattern- Sex Ratio.
  (ii) Legal, Political and Property Rights.
  (iii) Access to Education.

UNIT-IV **Women's Movement in Contemporary India:**

(a) Women Movement in India- Women Movements against Dowry & Rape
(b) Women and Political Participation in India-Status & Barriers, 73rd & 74th Amendment.

Recommended Readings :

1. Millet, Kate, *Sexual Politics*, New York, Doubleday, 1970.
2. Michele Barrett, *Women's Oppression Today*, London, Verso, 1980.
3. Lenin, V.I., *On the Emancipation of Women*, Moscow, Progress, 1981.
4. Eisenstein, Zillah, *Capitalist Patriarchy and the Case for Socialist Feminism*, New York, Longman, 1981 (also New York, Monthly Review Press, 1979).
5. Boserup, Easter, *Women's Role in Economic Development*, London, George Allen & Unwin, 1975.
6. Altback, E.M. (Ed.), *From Feminism to Liberation*, Cambridge, Massachusetts, Schenkman Hare Revised Ed., 1980.
7. Jayawardhane, Kumari (Ed.), *Feminism and Nationalism in the Third World*, New Delhi, 1987.

8. Phadnis, Urmilla and Malani Indira eds., *Women of the World : Illusion and Reality*, New Delhi, Vikas, 1978.

9. Desai, N., *Women in Modern India*, Bombay, Vora & Co., 1977.

10. Nanda, B.R. ed., *Indian Women from Purdah to Modernity*, New Delhi, Vikas, 1976.

11. *I.C.S.S.R., Status of Women's Committee Report*, New Delhi, ICSSR, 1975.

12. Mazumdar, Vina, *Towards Equality*, ICSSR, Delhi.

13. Desai, Neera and Krishanaraj, M., *Women and Society in India*, Delhi, Ajanta, 1987.

14. Chakaravarty, Shanti, *Rural Women's Claim to Priority*, New Delhi, C.W.D.S., 1986.

15. "Women's Struggles and Movement", Paper of Third National Conference, Chandigarh, IAWS.

16. Kaushik, S. (ed.), *Women's Oppression, Patterns and Perspective*, Vikas, New Delhi, 1984.

17. Kumar, Radha, *A History of Doing*, Kali Publications, New Delhi, 2006.

18. Gandhi, Nandita & Shah, Nandita, *The Issues at State*, New Delhi, Kali Publication, 1992.

19. Menon, Nivedita (ed.), *Gender & Politics in India*, New Delhi, Oxford University Press, 1999.

20. Rao, Anupama (ed.), *Gender & Caste*, Delhi, Sage Publications, 2005.

POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

SEMESTER- VI

VI SEMESTER : Option (i) — RESEARCH METHODS IN (POLITICAL SCIENCE) SOCIAL SCIENCES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper endeavors to introduce the students about the tools of research methodology into social sciences. The paper would enable the students to take up research after Master's degree.

UNIT-I Research in Social Science with reference to Political Science—Definition, Nature and Limitations.

UNIT-II Methods – Traditional and Scientific, Survey Research Methods : Observation, Interviews, Questionnaire, Content–Analysis.

UNIT-III
(a) Sample and Sampling Techniques.
(b) Measures of Central Tendency—Mean, Mode and Median.
(c) Data Processing—Coding Tabulation and Analysis.

UNIT-IV Research Design : Formulation of Research problem, Hypotheses, Objective, relevance of study, Literature Review, Methodology Report Writing.

Suggested Readings :

1. Goode and Hatt, *Methods in Social Research*, Auddond (McGraw - Hill), New York, 1952.
2. Pauline Yong, *Scientific Survey and Research*, New Delhi, 1968.
3. Arnold Brecht, *Political Theory*, Times of India Press, 1970.
4. Michael S. Lewis-Beck, ed., *The Encyclopedia of Social Science Research Methods*, New Delhi, Sage, 2004.
5. Keith F. Punch, *Introduction to Social Research*, London, Sage, 2005.

6. Shapiro, Ian, Rogers M. Smith and Tarek E. Masoud, *Problems and Methods in the Study of Politics, Cambridge* : Cambridge University Press, 2004.

7. Van Evera, Stephen, *Guide to Methods for Students of Political Science*, Ithaca : Cornell University Press, 1997.

8. Goertz, Gary, *Social Science Concepts : A User's Guide*, Princeton : Princeton University Press, 2006.

9. Creswell, John W., *Research Design : Qualitative, Quantitative, and Mixed Method Approaches :* Thousand Oaks, Calif : Sage Publications, 2003.

OR

VI SEMESTER : Option (ii) : MODERN POLITICAL IDEOLOGIES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper refers to the basic tenets of modern political ideologies.

UNIT-I **Liberalism :**
a) Classical and Modern Liberalism.
b) Neo Liberalism.

UNIT-II **Socialism :**
a) Marxian Socialism.
b) Democratic Socialism

UNIT-III
a) Anarchism.
b) Fascism

UNIT-IV **Gandhism**
a) Gandhi's Idea of State:
b) Social and Political Ideas of Gandhi.

Suggested Readings :

1. Bandhyopadhya, J., *Political and Social Thought of Gandhi*, Bombay, 1969.
2. George Lichtheim, Marxism : An Historical and Critical Study, Routledge and Kegan Paul, London, 1962.
3. Noel O' Sullivan, Conservation, St. Martin's Press, New York, 1976.
4. Manning, D.J., Liberalism, St. Martin's Press, New York, 1976.

OR

VI SEMESTER : Option (iii) — WESTERN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims to introduce to the students the major themes of Western Political Thought. This will be done by taking an in-depth study of the key thinkers of this tradition.

UNIT-I Hobbes.
- a) Nature of Man, State of Nature, Natural Laws.
- b) Social Contract.
- c) Individualism Vs. Absolutism.

UNIT-II Locke.
- a) Nature of Man, State of Nature, Natural Rights.
- b) Social Contract.
- c) Contribution of Locke to Liberalism.

UNIT-III Rousseau.
- a) State of Nature, Natural Man.
- b) Social Contract.
- c) Theory of General Will.

UNIT-IV Karl Marx.
- a) Historical Materialism, Economic Determinism.
- b) Theory of Surplus Value.
- c) Class Struggle.

Recommended Readings :

1. Sabine, G.H., *A History of Political Theory*, Bombay : Oxford & IBH, 1973.

2. Dunning, W.A., *A History of Political Theories*, 3 Vols., Allahabad : Central, 1973.

3. Sait, E.M. (ed.), *Masters of Political Thought*, 3 Vols., London : George and Harap, 1947.

4. William Ebenstien, *Great Political Thinkers—Plato to the Present*, OUP : New Delhi, 1966.

5. Jen Pike, Nigel Waaburton & Derek Matravers, *Reading Political Philosophy, Machiavelli to Mill*, London, Routledge, Open University, 2000.

6. Andrew Hacker, *Political Theory*, London, OUP, 1961.

7. David Boucher & Paul Kelly, *Political Thinkers, From Socrates to the Present*, Paperback U.K., 2003.

8. David Boucher & Paul Kelly, *The Social Contract*—from Hobbes to Rawls, Paperback, U.K., 1994.

References :

1. Rapheal, D.D., Hobbes, *Morals and Politics*, London, George Allen, 1978.

2. David Macdellan, *Marx*, London, Fontana Modern Masters Series, 1983.

3. Plamenatz, J., *Man and Society*, 2 Vols., New York, Longman, 1984.

4. Hall, J.C., Rousseau : *An Introduction to His Political Philosophy*, London, MacMillan, 1973.

5. John, Dunn, *The Political Thought of John Locke*, Cambridge, Cambridge University Press, 1969.

6. Roger, D. Masters, *The Political Philosophy of Rousseau*, Princeton, Princeton University Press, 1968.

7. Shlomo, Avineri, *The Social and Political Thought of Karl Marx*, New Delhi, S. Chand, 1968.

8. Jon Elster, *Making Sense of Marx*, Cambridge, Cambridge University Press, 1985.

9. Ernest Cassirer, *The Question of Jean Jacques Rousseau*, New Haven and London, Yale University Press, 1989.

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ECONOMICS

SEMESTER V

The candidates are required to study **one of the** following papers:

I Money and Banking.

II International Economics.

III Introduction to Econometrics.

Paper-I : MONEY AND BANKING

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective: Money and Banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude channels- market, non market, institutes and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutes in the process of growth and development. Accordingly, the paper on 'Economics of Money and banking' is an optimal interaction of monetary theory, banking and non- banking financial institutes, which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

(i) *The syllabus has been divided into four units.*

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions.It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two**questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

UNIT-I

Definition of Money, Money and Near Money Assets.
Supply of Money:Components, Determinants- High Powered Money and Money Multiplier, Measures of Supply of Money in India.

UNIT-II

Demand for Money: Classical Theory, Keynes Liquidity Preference Theory, Friedman's Restatement of Quantity Theory of Money.
Central Banking: Main Functions, Techniques of Monetary Management, Monetary Policy of Reserve Bank of India.

UNIT-III

Commercial Banking: Main Functions, Major Developments and Reforms in Indian Banking System since 1991.
Non-Banking Financial Institutions (NBFIs) – Role and Structure NBFIs in India.

UNIT-IV

International Monetary Fund- Features and Role.
World Bank: Features and Role.
Asian Development Bank: Features and Role.

Recommended Readings:

1. Diulio A. Eugene (latest Edition) : Theory and Problems of Money and Banking, International Edition (Schaum's Outline Series)
2. Gupta, S. B (2004) : Monetary Planning in India, S. Chand, New Delhi.
3. Khanna, Perminder (2005) : Advanced Study in Money and Policy : Relevance in the Indian Economy, Atlantic Publishers, New Delhi
4. Kulkarni, G (1999) : Modern Monetary Theory, McMillan, New Delhi
5. Laidler, D. E. W (1977) : The Demand for Money : Theories and Evidence, Allied Publishers, New Delhi.
6. Bofinger Peter (2001) : Monetary Policy: Goals, Institutions, Strategy and Instrument, Oxford University Press.

Supplementary Readings:

1. Reserve Bank of India Publications- (Latest).
2. Government of India: Economic Survey (latest)

Paper-II: INTERNATIONAL ECONOMICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital- both short-term and long-term- at the global level. The contents of the paper spread over the different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both as the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought the students writing assignments, tutorials and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to beof answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Pure Theory of International Trade:Theories of Absolute Advantage, Comparative Advantage andOpportunity Costs. Heckscher-Ohlin Theory. Factor Price Equalisation. Gains from Trade, their Measurement and Distribution. Terms of Trade, Secular Deterioration Hypothesis.

UNIT-II

Commercial Policy:The Theory of Tariffs, Optimum and Effective Rate of Tariff, Inter-relationship betweenTrade, Aid and Economic Development. The Theory of Economic Integration among Nations; Forms of Economic Integration. The Theory of Customs Union.

UNIT-III

Balance of Payments, Exchange Rate and Trade Structures:The Process of Adjustment in the Balance ofPayments. The Concept of Foreign Trade Multiplier. Fixed Vs. Flexible Exchange Rates and their Relative Merits and Demerits. Structure of Trade, Trade between Developing and Developed Countries. Unequal Exchange and its Impact on Balance of Payments. Current Problems of Trade and Finance of Developing Countries. Role of Multinational Corporations in the Developing Countries.

UNIT-IV

International Monetary System:IMF and International Monetary System, Present International Monetary System, problems of International Liquidity. Proposals for International Monetary Reforms. New International Economic Order.

Recommended Readings :

1. Soderston , B. O. (1994) : International Economics, 2nd Edition, Macmillan Press, London,
2. Salvatore, Dominick (latest edition) : International Economics, John Wiley & Sons.
3. Krugman P R &ObstifeldMaurice(latest edition) : International Economics – Theory and Policy, Addison- wesley.
4. Ghuman , Ranjit Singh (latest edition) : Antar-RashtriyaArthVigiyan, (Punjabi Medium) Punjabi University, Patiala.

Supplementary Readings :

1. Kindleberger, C. P. (1987) : International Economics, Richard Irwin, Homes wood, Illinois, Indian Edition.
2. Sir RaiHarrod (Trans. Pritam Singh Gill) : Antar-RashtriyaArthShastar, Punjabi University, Patiala.

Paper-III: - INTRODUCTION TO ECONOMETRICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: Application of economic theory need a reasonable understanding of economic relationship andstatistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant application of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous models.

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, is so far as possible, would be selected from everyday life/experience. The feedback would be sough through the students writing assignments and written examinations.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition and Scope of Econometrics. The Methodology of Economic Research. Specification and Estimation of an Econometric Model.
Single Equation Models*:*Ordinary Least Squares: Estimation and Properties of the Estimators

UNIT-II

Testing of Hypothesis*:*Basic Concepts; Type I and Type II errors. Simple and Composite Hypothesis.t and F tests. Maximum Likelihood Estimation.

UNIT-III

The General Linear Regression Model in Matrix Form: Estimation and Properties of the Estimators.
Tests of Significance of Coefficients. Partial Correlation Coefficients.
Multicollinearity:Its Detection and Solution.
Heteroscedasticity: Its Detection and Solution.

UNIT-IV

Dummy Variables*:*The dummy Variable Trap. Interpretation of Slope and Intercept.
Lagged Variables*:*Uses in Economics. Estimation Problems, Koyck Transformation, Partial and Stock Adjustment Models.

Recommended Readings :

1. Gujarati, Damodar (2007) : Basic Econometrics, McGraw Hill, New Delhi.
2. Ohnson, J. (1977) : Econometrics Methods, 2nd Edition, McGraw Hill, New

Supplementary Readings :

1. Intrilligator, M. D. (1978) : Econometric Models and Applications, Prentice Hall
2. Kendall, M. G. & A. Sturat (eds.) : Advanced Theory of Statistics, Vols. I & II, Griffin and Co., London.
3. Maddala, G. S. (1977) : Econometrics, New Delhi, McGraw Hill.
4. Wallis, K. F. (1973) : Topics in Applied Econometrics, London, Bray Hills

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ECONOMICS
SEMESTER VI

The candidates are required to study **one of the** following papers:

IV Environmental Economics
V Economics of Labour
VI Public Finance

Paper-IV : Environmental Economics

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our resources by optimally allocating them for future use.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Introduction to Environmental Economics: Introduction; the Economy and the Environment: Inter-Linkages; First Two Laws of Thermodynamics.
Economic Efficiency and Market Failures: Market Solution and Efficiency; Market Failures; Problem of Externalities; Public goods and Public bads; Common Property Recourse; Non-convexities; Asymmetric Information.

UNIT-II

Economic of Pollution*:* Damage Functions and Abatement Cost Functions; Marginal Decision; Optimal Level of Pollution; Market Solutions and Government Actions; Economic Incentives and least-Cost Solution; Command and Control Policies.

UNIT-III

Valuing the Environment: Economic valuation of Environment Goods: Types of Environmental Values; Monetary Valuation Techniques; Non-Monetary Valuation Techniques; Comparing Methodologies. The Environmental Kuznets Curve

UNIT-IV

Cost-Benefit Analysis and the Environment: The Theory of Cost Benefit Analysis; Idea of Discounting and Choice of Discount Rate; Framework for Cost – Benefit Analysis; Discounting and Future Generation.
International Environmental Issue: Economics of Climate Change: Trade & Environment.

Economic Growth and Sustainable Development: Economic Growth and Development; the Environmental Kuznets Curve; Economics of Sustainable Development.

International Environmental Issues: Economics of Climate Change; Trade and the Environment.

Recommended Readings :

1. Goodstein, E.S. (2002) : Economics and the Environment (3rd ed.) Prentice Hall.
2. Hanley, N., Shogern, J.F and White, B (1977) : Environmental Economics in Theory and Practice, Macmillan
3. Sankar, U. (ed) James, A.J., M.N. : Environmental Economics, Oxford University Press, New Delhi.
4. Murty and Smita Mishra (2006) : Murty and Smita Mishra (1999), Economics of Water Pollution- The Indian Experience, Oxford University Press, New Delhi
5. Varian. Hal R., (2006) : Intermedate Micro-Economics- A Modern Approach, 7th ed., East-West Press.
6. Cherry, S.N. and Vyasual, Vinod (2000) : Environmental Management- an Indian Perspectives, Macmillan, New Delhi.

PAPER- V: ECONOMICS OF LABOUR

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

COURSE OBJECTIVE: Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing "joblessness", the importance of issues such as employment and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India. The time–tested method of imparting verbal instructions through lectures would be used

The objective of the course is to provide students with the basic economic tools needed to understand and analyze how earnings are determined, how labour markets work and how various government policies may affect labour market.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit I

Nature and Scope of Labour Economics, Nature and Characteristics of Labour Markets in Developing Countries like India.
Theories of Wages, Concept of Minimum Wage, Living Wage and Fair Wage in Theories and Practice.

Unit II

Wage Determination in various Sectors- Rural, Urban, Organized, Unorganized and Informal Sectors.

Poverty and Unemployment in Developing Countries, Unemployment: Concept, Types and Employment Policy particularly in India.

Unit III

Impact of Rationalization, Technological Change and Modernization on Employment in Organized Private Industry and Public Sector; Employment in Agriculture Sector; Women and Child labour.

Unit IV

Role and Functions of Trade Unions, Growth, Pattern and Structure of Trade Unions in India, Achievements of Labour Unions, Collective Bargaining.
Industrial Disputes: Causes of Industrial Disputes, Their Settlement and Prevention Mechanism.

BOOKS RECOMMENDED:

1.	Binswanger, H. P. & M. R. Rosenzweig (eds.) (1984)	:	Contractual Arrangements, Employment, and Wages in Rural Labour Markets in Asia, Yale University Press, New Haven.
2.	Datt, G. (1996)	:	Bargaining Power, Wages and Employment; An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3.	Deshpande, L. K., P. R. Brahmananda and EAG Robinson (eds.) (1983)	:	Employment Policy in a Developing Economy, Vols. I & II, Macmillan, London.
4.	Deshpande, L. K. and J. C. Sandesara (eds.) (1970)	:	Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
5.	Deshpande, S. G. Standing and L. K. Deshpande (1998)	:	Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
6.	Foster, A. D. & M. R. Rosenberg (1993)	:	Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank, Washington D C.
7.	Campbell, R. McConnell and Stanley, L. A. Brue and D. A. Macpherson (2010)	:	Contemporary Labour Economics, 8th Ed. McGraw Hill Book

SUPPLEMENTARY READINGS:

1.	Hauseman, S. (1991)	:	Industrial Restructuring with Job Security: The Case of European Steel Harvard University Press, Cambridge, Mass.
2.	Hicks, J. R. (1932)	:	The Theory of Wages, Clarendon Press, Oxford.
3.	Lester, R. A. (1964)	:	Economics of Labour (2nd edition), Macmillan, New York
4.	McConnell, C. R. & S. L. Brue (1986)	:	Contemporary Labour Economics, McGraw- Hill, New York.
5.	McCormick, B. & Smith (eds.) (1968)	:	The Labour Market, Penguin, Harmondsworth
6.	Tyagi, B.P	:	Labour Economics and Social Welfare, Jai Parkash Nath and Co. (Latest edition)
7.	Pant, S C(1965)	:	Indian Labour Problems,Chaitanya Publishing House, Allahabad

Paper-VI: PUBLIC FINANCE

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives: Role and function of the Government in an economy have been changing with the passage of time. The term' Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income etc. there are vast array of fiscal institutions- tax system, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existing of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

The student would be evaluated at the end of each semester through subjective type questions/answer (both short and essay type). The scripts would be evaluated by the examiners having adequate graduate teaching experience in the paper/option concern.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Principle of Public Finance – Subjective and Objective Criteria.
Theory of Public Expenditure*:*Maximum Social Advantage, Theory of Social Goods: Distinction between
Public, Private and Merit Goods. Public Expenditure and Economic Growth. Effects of Public Expenditure on Production, Distribution, Social Over-head Capital, Stability and Innovation. Criteria of Public Expenditure.

UNIT-II

Public Revenue*:*Approaches of Equity in Taxation:Benefits principle Cost of Service Principle, Ability toPay Theory. Effects of Taxation. Analysis of Major Taxes – Income Tax, Expenditure Tax, Corporation Tax, Wealth Tax, Excise Duties, Sales Tax, and Custom Duties. The concept of Taxable Capacity. Taxation in a Developing Economy. Fiscal Incidence: Theories of Tax Shifting, Concepts of Incidence, Measurement of Incidence.

UNIT-III

Public Debt:Role of Public Debt. Different Forms of Public Debt. Burden of Public Debt, Redemption of Public Debt. Debt Management.
Budgetary Policy*:*Functional and Economic Classification of budgets and their Uses. PerformanceBudgets. Budget as an Instrument of Mobilization and Chanalization of Resources and Redistribution of Income and Wealth.

UNIT-IV

Balance and Unbalanced Budgets.
Fiscal Federalism*:*Principles of Federal Finance.
Development Finance*:*Functional Finance vs. Development Finance.
Mobilisation of Financial Resources for Planned Developments.

Suggested Readings:

1. Buchanan J.M. : Public Finance in the Demostic Process (Collected works of James M Buchanan), Library Fund, USA.
2. Musgrave, R. A. (1959) : Theory of Public Finance, McGraw- Hill Publishers.
3. Musgrave R A. & Musgrave P B (5th edition) : Public Finance in Theory and Practice, Mc Hill Publishers
4. Taylor P.E (1949) : The Economics of Public Finance, Macmillan Publishers, New York.

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SOCIOLOGY

SEMESTER V

Methods and Techniques of Social Research

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 =18 marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

The students will be introduced with basic methods and techniques in social research. The objective of this course is to familiarize the students with the basic elements of scientific method, various methods of data collection and social measurement.

Course Content :

UNIT-I

Scientific Method : Features; Concepts; Stages of social research; Hypothesis.

UNIT-II

*Sampling Technique: Meaning P*opulation and Census, Sampling frame
Types of Sampling: Probability: Simple random/stratified random/cluster/multi-stage. Non–Probability: Accidental/Quota/Purposive; Sampling Error.

UNIT-III

Techniques of Data Collection : Observation, Participant and Non-Participant Observation, Interview Schedule and Questionnaire (Structured/Unstructured); Case study method.

UNIT-IV

Measurement : Levels and Problems, Measures of Central Tendency: Mean, Mode, Median.

Essential Readings :

1. *Sellltiz, Claire et.al* : *Research Methods in Social Relations (Revised ed.), New York: Henry Hold & Co. (latest edition).*
2. *Goode, W.J. & Hatt, P.K. (2006)* : *Methods in Social Research, Delhi, Surjeet Publications*
3. *Young, P.V.* : *Scientific Social Surveys and Research, New Delhi: Prentice Hall of India Private Ltd., (1988)*
4. *Mukerjee, P.N.* : *Methodology on Social Research: Dilemmas and Perspectives, New Delhi: Sage, 2000.*

Further Readings :

1. *Festinger, L. & Katz, D.* : *Research Methods in Behavioural Science, New York: Dryden Press, (1953)*
2. *Lindzey, Gardner & Aronson* : *The Handbook of Social Psychology (2nd ed.), Addison: Wesley Pub. Comp.,(1968)*
3. *Robson, Colin* : *Real World Research, Oxford: Blackwell, (2000)*
4. *Bryman Alman, (2014)* : *Social Research Methods, New Delhi, Oxford University Press*
5. *Neuman, W.L.,(2007)* : *Social Research Methods : Qualitative and Quantitative Approaches, Delhi, Pearson Education*

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SOCIOLOGY
SEMESTER VI

Option (i) Social Demography

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Option (i) Social Demography

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The course exposes students to various components of population growth, data sources and basic theoretical problems of population. Concepts of mortality and fertility are discussed in general and with reference to India in particular. Students are apprised of the latest Population Policy in India.

Course Content :

UNIT-I

Population : Definition, Scope, Nature, Sources of Population Data-Census and Vital Registration.

UNIT-II

Population Theories : Malthusian theory of Population; Biological: Theory of Density Principle and Diet Theory; Social Theories: Social Capillarity and Theory of Diffusion: Theory of Demographic Transition.

UNIT-III

Concepts of Mortality : Causes of Mortality, Infant Mortality, Mortality Rate in India.

Fertility : Concept of Fertility, Factors affecting Fertility–Biological, Socio-Cultural and Psychological Fertility in India.

UNIT-IV

Population Policy in India, Female Foeticide (reference to PNDT Act).

Essential Readings :

1.	*Bhende, Asha & Kanitkar, Tara,(2014)*	*:*	*Principles of Population (revised ed.), Mumbai Himalaya Publishing House.*
2.	*Bogue, Donald, J.*	*:*	*Principles of Demography, New York: John Willey,(1969)*
3.	*Nam, Charles, P.*	*:*	*Population and Society,(1968)*
4.	*Premi, M.K.*	*:*	*An Introduction to Social Demography, Delhi: Vikas Publishing House, (1983)*
5.	*Weeks, J.R.*	*:*	*Population: An Introduction to Concepts & Issues, London: Wardworth Publishing Co., (1988)*
6.	*Raj Hans(2010)*	*:*	*Fundamentals of Demography, Delhi, Surjeet Publications*

Further Readings :

1.	*Bose, Ashish*	*:*	*India & The Asian Perspective, New Delhi: B.R. Publishing Corporation, (1993)*
2.	*Matras, Juda*	*:*	*A Sociological Approach, New Jersey: Prentice Hall, (1977)*
3.	*Government of India*	*:*	*National Population Policy (2000), Ministry of Health & Family Welfare, GOI.*
			(Latest Census Reports and Sample Registration Bulletins of the Government of India.)
4.	*Premi, M.K.*	*:*	*India's Population: Heading towards a Billion, Delhi: B.R. Publications, (1991)*
5.	*Dyson Tim,(2011)*	*:*	*Population and Development, The Demographic Transition,Jaipur, Rawat Publications*

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

To understand the contemporary social problems in society, the students are exposed to the basic concept of deviance, its theoretical perspectives and control mechanisms.

Course Content:

UNIT-I

Deviance : Definition, Concept (Relative and Absolute) Distinction between deviant behaviour and deviant role. Pathological theories (Biological and Psychological).

UNIT-II

Sociological Theories : Theories of social disorganization (C.H. Cooley, W.I. Thomas and Florian Znaniecki, W.F. Ogburn).

Structural-Functional Theories : Theory of Anomie (Emile Durkheim, Robert K. Merton), Differential Association (E. Sutherland and D.R. Cressey).

Interactionist Theories : Theory of Labelling (Edwin M. Lemert and Howard S. Becker).

UNIT-III

Controlling Deviance : Socialization - means and agencies, Social Control: means and agencies, Social codes and customs; Sympathy: passive and active.

UNIT-IV

Selected Problems of Deviance: Sex Deviance, Delinquency, White Collar Crimes, Cyber Crime.

Essential Readings :

1.	*Becker, Howard S.*	*:*	*Outsiders: Studies in the Sociology of Deviance, Glenco, Free Press, (1987)*
2.	*Ferrell, R. & V.L. Swigert [ed.]*	*:*	*Social Deviance, New York: J.B. Lippincott Co. (1975).*
3.	*Haralambos, M.*	*:*	*Sociology – Themes & Perspectives, Delhi, Oxford University Press,(1984)*
4.	*Kelly, Delos H.*	*:*	*Deviant Behaviour: Readings in Sociology of Deviance, New York: Martin's Press, (1979)*
5.	*Lawson, T & T. Heaton*	*:*	*Crime & Deviance, New Delhi : Macmillan, (1999)*
6.	*Metta, Spencer*	*:*	*Foundations of Modern Sociology, New Jersey: Prentice Hall Inc., Englewood Cliff, (1979)*
7.	*Michael Mc Kee and Ian Robertson*	*:*	*Social Problems, Toronto: Random House Inc., (1976)*
8.	*Thio, Alex*	*:*	*Deviant Behaviour, London : Houghton Mifflin, (1978)*
9.	*Ahuja, Ram,(2012)*	*:*	*Criminology, Jaipur Rawat Publications*
10.	*Ahuja, Ram,(2015)*	*:*	*Social Problems in India, Jaipur, Rawat Publications*

Further Readings :

1.	Erdwin. H. Pfuhl	:	*The Deviance Process,* New York: D.Van Nostrand Co., (1980)
2.	Ian Robertson	:	*Sociology,* New York: Publisher Inc. (1977)
3.	John, J. Grant	:	*Social Problems as Human Concern,* San Francisco: Body & Fraser Publishing Company, (1976)
4.	Rubington, Weinberg	:	*Studies of Social Problems,* New York: Oxford University Press, (1977)
5.	Rushing, William A. [ed.]	:	*Deviant Behavior & Social Process:* Rand McNally College Pub. Co., (1985)
6.	Bansal,S.K.(2013)	:	*Cyber Crime, New Delhi, APH Publications*
7.	Sharma,Rajendra K,(1988)	:	*Social Disorganization, New Delhi :Attantic Publications*
8.	Byrne, David,(2009)	:	*Social Exclusion, Jaipur, Rawat Publications*

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20
SEMESTER – V

Paper-A, Option (i) : PHILOSOPHY OF SCIENCE
OR
Paper-A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Paper-A Option (i) : PHILOSOPHY OF SCIENCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The aim of this paper is to analyse the concepts of philosophy and science, Einstein's Theory of Relativity i.e. space, time and relativity; Nature of observational language and theoretical language; causality, prediction and probability; Principle of Complimentarity.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

- The Nature and Scope of Philosophy of Science. Relation between Philosophy and Science.
- Einstein's Theory of Relativity : Space, time, reality.
- Methodological character of theoretical concepts. Observational language, theoretical language, a criterion of significance of theoretical terms. Dispositional concepts, Difference between theoretical terms and pure dispositional terms.

UNIT-II

- Causality, Prediction and Probability.
- Principle of Causality.
- Causality as the existence of Laws.

UNIT-III

- Causal Law and Statistical Laws.
- Induction and Probability.
- Theories of Probability.

UNIT-IV

- Rationality Debate & Theory Choice.
- Popper & Kuhn

Essential Readings :

Bridgman, P.W.(1958), The Logic of Modern Physics, Macmillan : New York
Earnest Nagel (1979), Structure of Science : Hackett Pub. Co.
Hans Reichenbac (1994), Rise of Scientific Philosophy :California University Press

Suggested Readings :

Minnesota Studies in the Philosophy of Science, Minnesota Centre for Philosophy of Science, 1958.
Phillip Frank (1957), *Philosophy of Science: The Link between Science and Philosophy* (Englewood Cliff : Prentice Hall)

OR

Paper – A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at understanding the nature of social and political philosophy and some of its fundamental concepts; its major social and political theories and Indian political thought.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

- Nature and Scope of Social and Political Philosophy :

- Relation between Social and Political Philosophy and Social Sciences such as Sociology and Political Science with special emphasis on the distinction between Philosophy and Science.
- Empirical and Scientific study of society and politics as distinct from philosophical study of society and politics.

UNIT-II

- Some Fundamental Concepts of Social and Political Philosophy :

- Distinction between Natural Facts and Social Facts.
- Normative Aspects of Socio-Political Reality.
- State and Civil Society.
- Liberty, Equality and Fraternity.
- Social Change and Social Progress.
- Tradition and Modernisation.
- Power and Authority.
- Reform and Revolution.
- Justice.

UNIT-III

- Major Social and Political Theories
- Liberalism.
- Egalitarianism.
- Anarchism.

UNIT-IV

- Indian Political Thought : Chanakya, Vivekananda, Gandhi, Ambedkar.

Essential Readings :

Ambedkar, B.R. (2003), *Writings and Speeches,* Government of Maharastra, Bombay., Vol. 18, 19 & 20

Bhattacharyya, K.C. (1983), Studies in Philosophy, Motilala (U.K.) Books of India, New Delhi

Gautam, S.P. (1991), *Samaj Darshan,* Haryana Sahitya Akademy, Chandigarh

Tagore (2002), *Religion of Man,* Rupa Publications, Paperback, New Delhi

Will Kymlica Kamal Nayan Chaubey (2010), Samkalin Rajniti – Darshan Ek Parichay, 2nd Ed. Pearson Delhi

Complete Works of Swami Vivekananda (relevant portions) Advaita Ashram, Calcutta, 1957.

Suggested Readings :

Menon, Nivedita (2013), Seeing like a Feminist, Zubaan: New Delhi

Miller, David (2003), Political Philosophy, A very short introduction, Oxford University Press, New York

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20
SEMESTER – VI

Paper -B, Option (i) : LOGIC

OR

Paper-B Option (ii) : PHILOSOPHY OF CULTURE

OR

Paper -B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at training the students in skills of critical reasoning by introducing laws of thought, criteria for validity of arguments, deductive and inductive reasoning.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

- Nature and Scope of Logic.
- Deductive Inference.
- Laws of Thought.

UNIT-II

- Aristotelian Classification of Propositions.
- Immediate and Mediate Inference.
- Syllogism.

UNIT-III

- Truth Tables.
- Propositional Calculus.
- Quantifiers and Propositional Functions.
- Predicate Calculus.

UNIT-IV

- Inductive Logic.
- Probability.
- Scientific Method.
- Law and Explanation

Essential Readings :

Irving Copi (2004), I*ntroduction to Logic,* Prentice Hall

Irving Copi (1979), Nagel and *Symbolic Logic,* Prentice Hall

Cohen (2002), *Introduction to Logic and Scientific Method,* Simon Publications

Suggested Readings :

Russell (1970), Principles of Mathematics (Allen & Unwin London)

Jean Necod (1970), Foundations of Geometry and Induction (kegan Paul)

OR

Paper- B Option (ii) : PHILOSOPHY OF CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims to introduce the problems like origin and meaning of culture, civilization, tradition, the role of ideology and Utopia, Indian cultural tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT – I

- Origin and meaning of Culture.
- Culture, Civilization and the Individual.

UNIT – II

- Religion as an Apex of Culture.
- Culture and Language.

UNIT – III

- Culture, Tradition and Modernity. The metaphysical loss of Human.
- Sources of Indian Culture Tradition.

UNIT – IV

- Role of Science and Technology in Cultural Evolution.
- Inter – Cultural understanding and Hermeneutic Tradition.

Essential Readings:

Eliot (1962), Notes towards definition of Culture, Faber & Faber, London

Gadamer (2005), Truth and method. Continum International

G.C. Pandey (1972), Meaning and Process of Culture. Shivlal Aggarwal & Co. Agra

Sneh Pandit Ed. (1980), Perspectives on Philosophy of Culture, Delhi, S. Chand

Vellassery Sebastian & Geeta Manaktala (2008), Foundations of Indian Social Life: Cultural, Religious and Aesthetics. Booksurge Publishing U.S.

Wittgenstein (1980), Culture and Value. translated by Peter Winch, Oxford Blackwell

Suggested Readings :

A.J. Toynbee (1948), Civilization on Trial, Oxford University Press

Paul Ricouer (1984), Time and Narrative published by University of Chicago Press, London

OR

Paper – B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims at familiarizing the students with the meaning and scope of Aesthetics, art and society, aesthetic experience according to the Western and Indian tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

- Aesthetics, its meaning and scope.
- Nature and function of art.

UNIT-II

- The relation of art to society.

UNIT-III

- Meaning and purpose of art in the Indian Tradition.

UNIT-IV

- Nature of Aesthetic experience according to the Western and Indian traditions.

Essential Readings :

Hiriyanna (1954), Art Experience, Karyalaya Publications: Mysore

Susan, L. Feagin and Patrick Maynard (ed.) (1997), *Aesthetics,* Oxford University Press

Suggested Readings :

Meredith (220 &) The Critique of Judgement by Immanuel Kant Tr., J.C., Oxford University, Press

Morris Weitz (ed.) (1970), Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York

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PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER V

PAPER: PSYCHOLOGICAL TESTING

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : *Introduction to Psychological Tests :*History of Psychological Testing; Nature of Psychological Tests. Classification of Tests; Use of Tests.

UNIT-II : *Item Writing and Item Analysis :*Characteristics of a Good Item; Various types of Items; Item Difficulty; Item Discrimination.

UNIT-III : *Reliability and Validity :Reliability :* Concept, Types, Factors Affecting Reliability. *Validity :* Concept, Types, Factors Affecting Validity; Relation between Reliability and Validity.

UNIT-IV : *Interpretation of Test Scores :Criterion Referenced Scores :* Content Referenced and Outcome Referenced Scores; Norms Referenced Scores; Concept of Norms, Types of Norms (Percentile Scale and T. Scale).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

Books Recommended

Suggested Readings :

1. Anastasi, A. (1998) : *Psychological Testing,* New York : Macmillan.

2. Gregory, R.J. (1996) : *Psychological Testing,* Singapore : Allyn and Bacon.

3. Guilford, J.P. and Fruchter, B. (1981):*Fundamental Statistics in Psychology and Education,* Singapore: McGraw Hill.

4. Guilford, J.P. (1954) : *Psychometric Methods,* New Delhi : Tata McGraw Hill.

Reference Books :

1. Freeman, F.S. (1962) : *Theory and Practice of Psychological Testing,* New Delhi : Oxford and IBH.

2. Cronbach, L.J. (1990) : *Essentials of Psychological Testing,* New York : Harper and Row.

3. Brown, F.G. (1976) : *Principles of Educational and Psychological Testing,* New York : Holt, Rinehart and Winston.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER VI

PAPER: Counselling and Organizational Psychology

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : Concept of Counselling; Approaches to Counselling; Freudian, Experiential Client Centered, Gestalt, Existential, Cognitive Behaviour Therapy.

UNIT-II : Work Motivation: Early and Contemporary Theories.Strategies of Organizational Development.

UNIT-III : Concept and Nature of Health Protective Behaviour.Concept and types of Health Coronary Behaviour (Special reference to nicotine addiction and alcoholism).

UNIT-IV : Psychology of Exceptional Children with special reference to learning disabled and Gifted Children.

Books Recommended :

Suggested Readings :

1. Luthans, F. (1998) : *Organizational Behaviour,* New York : Irwin McGraw Hill.
2. Moorhead, G. and Griffin, R.W. (1999) : *Organizational Behaviour,* Delhi : AITBS.
1 . Parikh, M.R. & Gupta, R. (2010) : *Organizational Behaviour, Tata McGraw Hill Education* Private *Limited,* New Delhi : West Patel Nagar.
4. Robbins, S.P. (2000) : *Organizational Behaviour,* New York : Prentice Hall of India.
5. Rao, S.N. (1992) : *Counselling and Guidance,* New Delhi : Tata McGraw Hill.
6. Nystul, M.S. (1999) : *Introduction to Counselling – An Art and Science Perspective,* Boston : Allyn and Bacon.
7. Brannon, L. and Feist, J. (2007): *Introduction to Health Psychology*. New Delhi: Thomson – Wadsworth.
8. Mohan, J. and Sehgal, M. (2006): *Health Psychology*. New Delhi: Abhijeet Publications.
9. Narayan, J.(2003) : *Educating Children with Learning Problems in Regular Schools*, Secunderabad : NIMH.
10. Raj, F. (2010) : Breaking Through: A Hand book for parents and teachers of children with Specific Learning Disabilities, Secunderabad: Vifa Publishers.

Reference Books :

1. Newstrom, J.W. and Davis K. (1998) : *Organizational Behaviour,* New Delhi : Tata McGraw Hill .
2. Woolfe, R., and Dryden, W. (Eds.) (1996) : *Handbook of Counselling Psychology,* New Delhi : Sage Publications.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2019

SEMESTER V

Paper III: APPLIED GEOGRAPHY

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:
To understand the prevalent issues in environment, society and economy and to provide a geographical interpretation with special reference to India

Course Content:

Unit- I

Applied Geography: Meaning and concepts:

Meaning, nature and scope and significance of Applied Geography. Concept of planning region.

Regionalisation scheme with reference to economic regionalization. (25 lectures)

Unit- II

Applied Geography: Methods and technieques:

Cartographic techniqeues using point, line and area symbols. (10 lectures)

Unit- III

Applied Geography: Contributions:

Industrial location theory of Weber and its application in industrial planning.
Christaller's Central Place Theory and its application in location of central places.
Von Thunen's Agricultural Location Theory and its application in agricultural location.
Perroux's Growth Pole Theory and its application in regional development planning.

UNIT- IV

Land use studies: Rural and Urban.

Rural Land Use: Survey and Classification.

Urban Land Use : Survey and Classification.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

Books Recommended

Essential Readings:

1.	Carter, H.	:	The Study of Urban Geography, Arnold-Heinemann, New Delhi, 1979.
2.	Chorley, R.J. & P. Haggett (Ed.)	:	Models in Geography, Methuen & Co., London, 1967.
3.	Jones, Alun	:	Fieldwork in Geography, Longman, Green Co., London, 1968.
4.	Stamp, L.D.	:	Applied Geography, Penguin Books, England, 1960.
5.	Singh, R.L. (Ed.)	:	Applied Geography, National Geographical Society of India, Department of Geography, B.H.U., Varanasi, India.

Further Readings:

1.	Dawson, J.A.	:	Geography, Teach Yourself Books, Hodder and Stoughton, UK 1983.
2.	Misra, R.P. and others	:	Regional Development Planning in India, Vikas, New Delhi.1974
3.	Misra, V.C. & others	:	Essays in Applied Geography, University of Sagar, India.1976

4. Sen Gupta, P. &Sadasyuk Galina : Economic Regionalization of India, Problems and Approaches, Registrar General Census of India.
5. Singh, Jasbir & Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill, New Delhi, 1994.
6. World Report, World Bank & OUP (Annual Report)

Pedagogy:

- Exposure to media.
- National Five Year Plan documents and publications related to planning.
- Field work related to land –use and other socio-economic issues.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2020
Semester VI

Any one of the following options:

Option (i)	**:**	**AGRICULTURAL GEOGRAPHY (An Elementary Course)**
Option (ii)	**:**	**POLITICAL GEOGRAPHY (An Elementary Course)**
Option (iii)	**:**	**ENVIRONMENTAL GEOGRAPHY (An Elementary Course)**

Option (i) AGRICULTURAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the concepts and development of agriculture;
- To examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialisation. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objective is also to discuss environmental, technological and social issues in agricultural sector with special reference to India.

Course Content:

Unit- I

Nature, scope and significance of agricultural geography.

General landuse classification.

Physical determinants of agricultural landuse: Relief, climate, soils.

Unit- II

Social and cultural determinants of agricultural landuse, land tenure, size and fragmentation of holdings and labour.

Economic determinants of agricultural landuse: Marketing facilities, transport facilities, tariff and import restrictions, price incentives, credit.

Unit-III

A critical review of Whittlesey's agricultural classification.

Characteristics and world patterns of the following:

Subsistence types of agriculture: Nomadic herding, shifting cultivation, rudimentary sedentary tillage, intensive subsistence tillage, subsistence crop and livestock farming.

Unit- IV

Commercial types of agriculture: livestock ranching, commercial plantation farming, commercial grain farming, mixed farming, commercial dairy farming.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each UNIT. The students will be required to attempt one question from each UNIT. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Alexander, J.W.: *Economic Geography*, Prentice Hall, Englewood Cliffs, latest Edition.
2. Husain, M. : *Systematic Agricultural Geography*, Inter-India Publications, New Delhi, 2000.
3. Singh, J. & Dhillon, S.S. : *Agricultural Geography*, Tata McGraw Hill Publishing New Delhi, 1994.

Further Readings:

1. Morgan, W.B. & Munton, R.J.C. : *Agricultural Geography*, Methuen, London, 1971.
2. Symons, L. : *Agricultural Geography*, G. Bell & Sons, London, 1964.

Pedagogy:

The teacher should impress the students the overall importance of agriculture in the global perspective. The world is fast changing and its impact is felt on agriculture. Population is increasing and demand of agricultural products is also on the increase. Contrary to it, the farm lands are decreasing, that necessitates infusion of technology in agricultural sector. It is causing environmental pollution. The teacher should interact with students on said issues. Examples from neighbouring areas may be given to the students for better perceptions.

Option (ii): POLITICAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the geographical factors which have a bearing on the political/ administrative organisation of space.
- To enhance awareness among the students of multi-dimensional nature of geo-political space.

Course Content:

Unit- I

Nature and scope of political geography, phases in the development of political geography. Physical elements of political geography: Location, size and shape, relief, climate, and seas and oceans.

Unit- II

Economic elements of political geography: Basic natural resources; food and power, minerals, industry, trade and transportation.

Human-cultural elements of political geography: Ethnographic structure of nations, language, religion, population, quantity and quality.

Unit- III

Concepts of frontiers and boundaries: Classification of boundaries.

Global distribution of political power: Views of Mackinder, Mahan and Spykman and their contemporary relevance.

Unit- IV

International tension: Identification of tension areas and factors contributing to tensions in different areas with special examples from Middle East and Indian Ocean.

Political Geography of the Indian Ocean.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. De Blij, H.J. Glassner, M. : *Systematic Political Geography*, John Wiley, New York, 1968.
2. Dikshit, R.D. : *Political Geography*: A Contemporary Perspective, Tata McGraw Hill, New Delhi, 1996.

Further Readings:

1. Adhikari, Sudeepta : *Political Geography*, Rawat, Jaipur, 1997
2. Muir, R. : *Modern Political Geography*, Macmillan, London,1981.
3. Prescott, J.R.V. : *Political Geography*, Methuen, London, 1992.
4. Prescott, J.R.V. : *The Geography of Frontiers & Boundaries*, Aldine Pvt. Ltd., Chicago, 1965.
5. Valkenberg, S.V. New& Stotz, Carl, L. : *Elements of Political Geography*, Prentice Hall of India, Delhi, 1963.

Pedagogy:

- Fieldwork to understand the political/administrative boundary configuration and people's problems and their perceptions.
- Consult political maps (large scale, small scale).
- Atlases and archival records.
- Collect relevant newspaper items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Option (iii): ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To understand the significance of environment and its interrelationship with man.
- To understand the importance of soil and factors responsible for erosion.
- The importance of energy sources, forest and wildlife and their preservation to be studied.

Course Content:

Unit-I

Environment and Geography: Relationship between geography and environment; definition and scope of environmental geography; significance of environmental studies.

The Environment: Characteristics, components and functioning; concept of healthy environment.
(6 + 6 = 12 lectures)

Unit- II

The Soil System: Origin and composition; horizons, texture, chemistry, factors influencing soil types; soil erosion, soil conservation; and soil pollution.
Energy: Energy flow in the ecosystem; environmental impact of both conventional and non-conventional energy sources. (6 + 4 = 10 lectures)

Unit- III

Forests: Significance; world reserves; deforestation; and conservation strategies.

Wildlife: Wildlife and environment relationship, regional distribution; conservation of wildlife; and wildlife in India. (5 + 5 = 10 lectures)

Unit- IV

Population and Environment: Basic issues, environmental impact of population growth and agenda for action.

Global Environmental Issues: Water contamination; atmospheric pollution; acid rain; noise pollution; and control strategies.

Legislative strategies, environmental issues and the international community; Rio-de-Janeiro Earth Summit of 1992; selected environmental protection laws in India; Environmental Protection Act, National Environmental Tribunal Act, Wildlife Protection Act, Forest Conservation Act, Air Act, Water Act. (6 + 6 + 6 = 18 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Adam, W.M. : *Green Development: Environment & Sustainability in the Third World*, Routledge, London, 1990.
2. Chandna, R.C. : *Environment Awareness*, Kalyani Publishers, New Delhi. Clarendon Press, Oxford, 1998. Also available in Hindi & Punjabi.
3. Chandna, R.C. : *Environmental Geography*, Kalyani Publishers, New Delhi, 2001.
4. Goudie, A.S. : *The Human Impact on Environment*, Blackwell, Oxford, 1993.

Further Readings:

1.	Ehrlich, Paul, R. et. al	:	*Ecoscience – Population, Resources and Environment*, Freeman and Co., San Francisco, 1977.
2.	Goudie, A.S.	:	*Environmental Change, Contemporary Problems in Geography*, Clarendon Press, Oxford, 1992.
3.	Pickering, K.T.	:	*An Introduction to Global Environmental Issues*, Routledge, London, 1994.
4.	Singh, Savinder Allahabad,	:	*Environmental Geography*, Paryag Pustak Bhawan, 1991.
5.	Strahler, A.N. & Strahler, L.A.	:	*Geography and Man's Environment*, John Wiley & Sons, New York.

Pedagogy:

- The interaction of teacher and students is must on issues related to environment, energy resources, forest and soil preservation.
- A field visit to those areas where soil erosion is a serious problem be arranged and methods of conservation be taught.

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PUBLIC ADMINISTRATION
SEMESTER -V

Paper- III : RESEARCH METHODS AND STATISTICS

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time : 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding about the nature and scope of Social Research, Methods of Social Research, data collection and data processing. It would also acquaint the students with basics of sampling and statistical methods including measures of central tendency, dispersion, correlation and Chi-Squares Test.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Meaning, Nature and Scope of Social Research.
Concepts; Hypotheses : Meaning, Types and Significance.
Research Design - Meaning, Types and Components.
Methods of Social Research - Experimental–Survey and Case Study.

UNIT-II

Methods of Data Collection—Documents, Observation, Interview and Questionnaire.
Data Processing-Editing, Coding and Tabulation, The Use of Computer.
Report Writing.

UNIT-III

Sampling-Meaning, Types, Merits and Demerits.
Frequency Distribution – Meaning and Steps.
Measures of Central Tendency – Mean, Median and Mode.

UNIT-IV

Measures of Dispersion –Standard Deviation.
Correlation – Karl Pearson.
Chi-Square

Essential Readings :

Goode, W.J., & Hatt, P.K. (1990). *Methods in Social Research.* U.S.A. : McGraw Hill.
Gupta ,S.P. (1987) . *Statistical Methods.* New Delhi : Sultan Chand .
Moser, C.A. & Kalton. G. (1979).*Survey Methods in Social Investigations.* London : ELBS
Seltiz,C.et al. (1964) . *Research Methods in Social Relations* . New York : Rinehart & Winston.

Further Readings :

Bowley, A. (1947). *Elements of Statistics* (6th ed.) . New York : Staples.
Cohen, L. (1968) . *Statistical Method for Social Scientists* .New Delhi : Prentice Hall of India Private Ltd.
Ghosh., and Chowdhry. (2004). S*tatistics* (Rev. Enlarg. Ed.) Allahabad : Indian Press.

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PUBLIC ADMINISTRATION
SEMESTER-VI

PAPER IV : The candidates have to select one out of the following four options :

Option (i) : Organisation Behaviour
Option (ii) : Cooperative Administration in India
Option (iii) : Public Enterprise Management (with special reference to India)
Option (iv) : Environment Administration in India
Option (v) : Emerging Issues in Public Administration

Paper- IV : OPTION (i) : ORGANISATION BEHAVIOUR

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :
The objective of the paper is to give the student an in-depth insight into the various aspects and factors affecting individual, interpersonal and group behaviors in organisations. The key areas include study of human behavior and concepts like Attitudes, Morale, Leadership, Motivation and Organizational Change.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Organisation Behaviour : Concept and significance
Individual Behaviour : Concept; Nature; Individual Factors
Interpersonal Relations : Meaning; Dimensions; Factors

UNIT-II

Team Development : Importance; Types of Teams
Attitudes : Concept, Types
Morale : Concept; Significance; Building up High Morale

UNIT-III

Groups : Concept; Types
Leadership : Styles of Leadership
Motivation : Concept; Determinants

UNIT-IV

Organisational Change : Concept; Resistance to change
Organisational Development : Concept; Need; Techniques
Organisational Effectiveness : Concept; Approaches

Essential Readings :

Davis, K. (2001).*Organizational Behaviour* . NewYork: McGraw Hill.
Dubin, R. (1968). *Human Relations in Administration(*3rd ed.)*,* New Delhi: Prentice Hall.
Gupta, S. & Joshi, R. (2007).*Organizational Behaviour* . New Delhi: Kalyani Publishers.
Kolasa, B.J. (1969). *Introduction to Behavioural Sciences for Business.* New York: Wiley.
Prasad , L.M.(2000). *Organisational Behaviour*(3rd ed.).New Delhi: Sultan Chand
Sharma, K.K. & Sahni, P. (1988).*Organisational Behaviour* . New Delhi: Deep & Deep.

Paper- IV: OPTION (ii) : CO-OPERATIVE ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to acquaint the students with the evolution of cooperatives in India and its Principles. It will also deal with Legislation on Cooperatives, Registration, structure and Administration at the Union and State level. Further the students will gain an understanding of the forms and Role of Cooperatives, their managerial & personnel aspects.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Co-operation : Meaning, Significance and Evolution
Co-operative Principles
Co-operative Legislation : Government of India Act, 1912 and Punjab Co-operative Societies Act, 1961(as amended from time to time)

UNIT-II

Registration of a Co-operative Society
General Body, Board of Directors and Committees
Chief-Executive : Appointment, Functions and Role
Co-operative Administration at Union Level – Organisation and Functions

UNIT-III

Co-operative Department at State Level – Organisation and Functions
Registrar Co-operative Societies : Appointment and Role
Forms of Co-operatives : Role of Apex Federations and Primary Co-operatives
Co-operative Education

UNIT-IV

Human Resource Management : Recruitment and Training
Financial Management

Essential Readings :

Dubhashi, P.R. (1970) . *Principles and Philosophy of Cooperation* . Pune: VMNICM.
Goel, B.B. (1988). *Dynamics of Cooperative Administration* . Delhi: Deep and Deep.
Goel , S.L., & Goel, B.B. (1979). *Principles, Problems and Prospects of Co-operative Administration* .Delhi: Sterling.
Kamra, P.K. (1986) .*Cooperative Management* . Delhi: Deep and Deep.
Krishnaswami, O.R. (1978) . *Fundamentals of Cooperatives* .Delhi: S.Chand and Co.
Mathur, B.S.(1971). *Cooperation in India.* Agra: Sahitya Bhawan.

Further Readings :

Bhatia, B.S. (ed.). (1994). *Encyclopaedia of Cooperative Management.* New Delhi: Deep & Deep Publications Pvt. Ltd.
Dwivedi, R.C. (1982).*Democracy in Cooperative Movement.*New Delhi. National Cooperative Union of India.
Gill , M.S. (1983).*Agricultural Cooperatives* .Delhi: Vilas.
I.C.A. (1977).*Readings in Cooperative Management.*Delhi: ICA.
I.C.A. (1980).*Experts Consultation on Cooperative Member Education* . Delhi: ICA.
I.L.O.(n.d.).*Cooperative Management and Administration* .Geneva: I.L.O.
Puri, S.S.(1979). *Ends and Means of Cooperative Development* . Delhi: NCUI

Paper-IV: OPTION (iii): PUBLIC ENTERPRISE MANAGEMENT (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time :		3Hours

Objective of the Paper :

The objective of the paper is to give the student a detailed understanding of the concept, evolution, types, role and problems of public enterprises in India. It would also give an insight into legislative and government control over public enterprises, performance and reforms of the public enterprises and the concept of privatization.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Public Enterprise : Meaning and Evolution
Public Enterprises in India : Rationale and Role
Administrative and Managerial Problems of Public Enterprises

UNIT-II

Organisational Patterns: Departmental Undertakings, Public Corporation and Government Company
Board of Directors: Rationale, Constitution, Types and Functions

UNIT-III

Legislative Control over Public Enterprises
Government Control over Public Enterprises
Performance of Public Enterprises

UNIT-IV

Public Enterprise Reforms since 1991
Memorandum of Understanding
Privatization : Meaning, Rationale, Achievements and Failures

Essential Readings :

Dutt, Ruddra and Sundaram, K.P.M. (2009) .*Indian Economy* . New Delhi: S. Chand.
Khera, S.S. (1977) . *Government in Business* . Delhi : National.
Mathur, B.P. (1999) .*Public Enterprise Management* . New Delhi :Macmillan
Narain, Laxmi . (2005). *Public Enterprise Management and Privatisation* . New Delhi :S. Chand.
Parkash, Jagdish . (2002). *Administration of Public Enterprises in India* . Mumbai :Himalaya Publishing House.
Sengupta , N.K. (2007) . *Government and Business* . New Delhi :Vikas.

Further Readings:

Gedam, Ratnakar. (1995) . *Public Sector Management.*
Government of India. *Public Enterprises Survey, India, Ministry of Heavy Industry & Public Enterprises, Vol. 1, 2, 3* .DPE. New Delhi.
Gupta, K.R. (1975) . *Issues in Public Enterprises* . New Delhi: S.Chand.
Hanson , A.H. (1972).*Public Enterprises and Economic Development* . London : Routledge and Kegan.
Ramanadham, V.V.(1988). *The Working of Public Sector* . Bombay : Allied Publishers.
Ramanadham , V.V. *The Structure of Public Enterprises and Economics in India* . Bombay: Asia Publishing House.
United Nations. (1974). *Countries* . New York : V. N.

Paper-IV: OPTION (iv): ENVIRONMENT ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding of the concept and components of environment, environment administration and sustainable development. In addition, the students would be made aware of environment problems, threats and impact of development on environment. The student will also gain knowledge regarding the machinery for environment protection at the Union and State levels, Environmental Policy, priorities, global issues and role of NGOs in environment conservation would be dealt with.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Environment – Concept and Components
Environment Administration – Meaning, Nature and Scope
Sustainable Development – Concept, Issues and Strategy

UNIT-II

Environment Problems and Threats–Air, Water, Land, Human Settlements and Forests
Impact of Development, Urbanization and Industry on Environment
Organisation and Machinery of the Government at the Union Level for Environment Protection
Organisation and Machinery of the Government at the State Level for Environment Protection

UNIT-III

Pollution Control Boards–Organisation, Functions and Role

Environmental Policy with special reference to Water, Air and Forest; Constitutional Provisions; Legislative Measures

Environmental Priorities in India—Population Stabilisation; Forest Cover; Deforestation; Wildlife Protection; Recycling of Wastes

UNIT-IV

Environment and Global Issues— Conventions; Depletion of Ozone Layer; Global Warming

Environment Education, Awareness and Ethics; Role of NGOs in Environment Protection and Conservation

Essential Readings :

Chandana, R.C. (1998) .Environment Awareness . New Delhi : Kalyani.

Edmunds, S. and Latey, J. (1973). Environmental administration . New York : McGraw-Hill.
Nanda, V.K. (1997). Environmental Education .New Delhi : Anmol.
Sapru, R.K. (2002) . Development administration . New Delhi : Sterling.
Sapru ,R.K. (2004). Public Policy . New Delhi : Sterling.

Further Readings :

Agnihotri , Sheo Parkash. (1992). *Environment Conservation Management and Planning.* Allahabad : Chugh.

India, Centre for Science and Environment. (1982). *The state of India's Environment : A Citizen's Report* . New Delhi:Vishal Bhawan.

Kumar, Naresh.(1999) . *Air Pollution and Environment Protection : Legislative Policies, Judicial Trends and Social Perceptions* . New Delhi : Mittal.

Kumar, Naresh.(1999). *Air Pollution and Environment Protection:Legislative Policies,Judicial Trends and Social Perceptions* . New Delhi:Mittal

Monga, G.S. (2004).*Environment and D evelopment* . New Delhi : Deep and Deep.

Radha, S. and Sankhyan, A.S.(2004). *Environmental Challenges of the 21st Century . New Delhi:* Deep.

PAPER- IV: OPTION (V): Emerging Issues in Public Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to familiarize the students with the emerging issues in Indian Administration. At the end of the course the students will have an understanding of the concepts of disaster management, human rights, regulatory administration in India, consumer protection, right to information, new areas of governance in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Good governance – Concept and significance
E- governance – Concept and significance
Regulatory Administration - Concept and significance

Unit II

Transparency and Accountability in Administration – Significance
Mechanism – Social Audit, Results Framework Document (RFD)
Ethics and Integrity in Administration

Unit III

Human Rights - Concept and significance
Women Empowerment with special reference to National Mission for Empowerment of Women (NMEW)
Youth Empowerment with special reference to Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Unit IV

Sustainable Development - Concept and significance
Environment Administration - Concept and significance
Disaster Management - Concept and significance

Suggested Readings :

Arora , Ramesh K. (2013). *Ethical Governance in Business and government*. Jaipur : Aalekh Publishers.

Bhandari, Sunanda (2015).*MahilaSashaktikaranEvamRajkiyaYojanaye.* Jaipur: Ritu Publications.

Bystydzienski, Jill M. (2008).*Democratization & Women's Grassroot Movements.* JotiSekhon. Zubaan.

Centre for Good Governance.Social Audit Tool Kit,"n.d" from www.cgg.gov.in

Food & Agricultural Organization (F.A.O.*).A handbook for trainers on participatory local development: The Panchayat & Training Module on social Audit*

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006) .*Environmental Issues of Development.*AmbalaCantt, India: The Associated Publishers.

Goel, S.L. (2006).*Encyclopedia of Disaster Management*, Deep and Deep Publication Pvt. Ltd.

Government of India. *Guidelines for Results Framework Document(RFD).* "n.d" retrieved from www.performance.gov.in

Government of India. (2006,September). *Second ARC – Third Report (Crises Management: From Despair to Hope).*

Government of India.(2006,june) . *Second ARC – First Report (Right to Information- Master Key to Good Governance).*

Government of India. (2008,December). *Second ARC – Eleventh Report (Promoting e-governance: The Smart Way Forward).*

Government of India.Ministry *of Skill Development and Entrepreneurship-*" *n.d'' retrived from* www.skilldevelopment.gov.in/pmkvy.html

Government of India*. Ministry of Women & Child Development,* "n.d'' retreived from www.nmew.gov.in.

Government of India. *E-governance for Citizen Empowerment National Information Centre*. ''n.d''retreived from www.nic.in

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Verma, J.S. (2006). *The Universe of Human Rights.* Delhi: Universal Law Publishing Company.

Kumar, Abhishekand Tripathy, Pramod Kumar.*Skill Development in India – An Overview of Initiatives& Schemes.* New Delhi: Kanishka Publishers.

Mathur, B.P. (2014). *Ethics for Governance: Reinventing Public Services.* India: Routledge.

Jaswal, P.S.and Jaswal, Nishtha. (2000). *Environmental Law* . Pioneer Publications.

Palekar, S.A. (2012). *Development Administration*. New Delhi: PHI Learning Private Limited.

Manisha Priyam; Menon Krishna and Banerjee, Madhulika. (2009). *Human Rights, Gender and the Environment.* Pearson.

Trivedi, Priya Ranjan. (1999). *Encyclopedia of Ecology and Environment Volume 3 Environmental Education*. New Delhi :Indian Institute of Ecology and Environment.

Vayunandan, E. and Mathew, Dolly. (2003). *Good Governance Initiatives in India*. New Delhi : Prentice Hall of India.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – V

Note : The students shall have to opt for one paper for Semester - V examination out of the following two papers :

Outlines of Test :

Paper V : Archaeology

Paper VI : Spread of Indian Culture In Central Asia, China And Tibet

Paper-V: ARCHAEOLOGY

Total Marks	**: 100**
Theory	**: 90**
Internal assessment	**: 10**
Time	**: 3 Hours**

Objectives :

This course is a survey of the pre and pro to historic background to Indian history from the earliest times to the early historical period. Excavated sites are studied for an insight into the growth and development of early Indian culture.

Pedagogy of the CourseWork:

The students are made familiar with prehistoric, proto historic and historical sites. Slides, photographs of relevant sites, their significance in establishing chronologies is discussed in the class. Visits to museums is an important aspect through which students are made familiar with the material evidence.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

The Palaeolithic, Mesolithic and Neolithic cultural sequences in various parts of the Indian subcontinent.

UNIT-II:

(a) The background and the phenomenon of the Harappan civilization.
(b) The Chalcolithic cultures of western and southern India

UNIT-III:
The beginning of iron technology and the Painted Grey Ware Culture.

UNIT-IV :
Excavations of early historic cities of :
(a) Northern India and Gangetic doab : Taxila and Hastinapura.
(b) Eastern India : Sisupalgarh and Chandraketugarh.
(c) Southern India : Arikamedu and Brahmagiri.

Essential Readings :

1. Agrawal, D.P. : The Archaeology of India, Select Book Service Syndicate, New Delhi, 1984.
2. Allchin, B. and F.R. : The Rise of Civilization in India and Pakistan, Cambridge University Press, New Delhi, 1989.
3. Fagan, Brian M. : People of the Earth : An Introduction to Longman, Singapore, 2004.
4. Possehl, G. : Ancient Cities of the Indus, Vikas Publishers, New Delhi, 1979.
5. Ratnagar, S. : Understanding Harappa, Tulika, New Delhi, 2001.

Suggested Readings :

1. Roy, T.N. : The Ganges Civilization a critical archaeological study of the painted grey ware and northern black polished ware periods of the ganga plains of India, Ramanand Vidya Bhawan, New Delhi, 1983.
2. Tripathi, V. : The Painted Grey Ware An Iron Age Culture of Northern India Concept, Publisher Corporation, Delhi, 1976.

Paper VI: SPREAD OF INDIAN CULTURE IN CENTRAL ASIA, CHINA AND TIBET

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary aim of this paper is to make the students study the spread of Indian culture and ideas in Central Asia, China and Tibet, generally termed in history as 'Greater India'. This forms an important phase of India's contribution to the world culture.

2. **Pedagogy of the Course Work :**
It is expected to acquaint the students with the background of Indian culture's spread and the factors responsible for it. While outlining the spread of Indian culture and religion, the spread of art, architecture and literature should also be taken care of. Visual aids wherever required should be used to familiarize students with Indian art and its influence in these countries.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

Spread of Indian Culture in the Central Asian States.

UNIT-II:

Introduction of Buddhism in China and the early contacts.

UNIT-III:

Chinese pilgrims in India – Fahien, Hiuen Tsang and I-Tsing.

UNIT-IV:

(a) Spread of Buddhism in Tibet up to 12th century A.D. with special reference to the missions of Padma Sambhava.
(b) Lamaism.

Essential Readings :

1. Bagchi, P.C. : *India and Central Asia,* National Council of Education Bengal, Calcutta, 1984.
2. Bapat, P.V. : *2500 Years of Buddhism,* South Asian Books, New Delhi, 1977.
3. Dougles, R : *China (The Story of the Nation),* Hesperidis, London, 1900, 2006.
4. Elliot, C. : *Hinduism and Buddhism,* Vols. II and III, Routledge, London, 1962.
5. Puri, B.N. : *Buddhism in Central Asia,* Motilal Banarsidass, Delhi, 1987.

Suggested Readings :

1. Upasak, C.S. : *History of Buddhism in Afghanistan,* Central Institute of Higher Tibetan Studies, Varanasi, 1990.
2. Waddell, A.L. : *Buddhism and Lamaism of Tibet* rpt., Vimar Publishing House, London, 1979.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – VI

Note : The students shall have to opt for one paper for Semester - VI examination out of the following two papers :

Outlines of Test :

Paper VII : Epigraphy and Numismatics

Paper VIII : Spread of Indian Culture in South-East Asia upto 12th Century A.D.

Paper-VII : EPIGRAPHY AND NUMISMATICS

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives :

The paper is aimed to prepare students to handle the original source material – inscriptions and coins, which make the backbone of Ancient Indian History, as without the knowledge of epigraphy and numismatics, the subject cannot be mastered.

Pedagogy of the CourseWork:

Students should be familiarized with the each topic in detail.Visual aids like the photographs/slides of the coins and inscriptions shall be used regularly. The decipherment of Asokan inscriptions shall be taught with the help of plates and paleographic charts to the students.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

(a) Origin and antiquity of writing in India with special reference to the origin of Brahmi script.

(b) Origin and antiquity of coinage in India.

UNIT-I

(a) Ashokan inscriptions – Pillar Edicts I to IV; Girnar Rock Edicts I, II and XIII. (Both for study and decipherment).

(b) Besnagar Pillar inscription of Heliodorus; Nasik Cave Inscription of Queen Balasri; Sarnath Buddha Image inscription of Kanishka's year 3; Junagarh Rock inscription of Rudradaman I, Saka year 72. (Study only). Gupta inscriptions—Allahabad Pillar inscription of Samudragupta, Mehrauli Iron Pillar inscription of Chandra, Bhitari Stone Pillar inscription of Skandagupta (Study only).

(c) Post-Gupta inscriptions : Mandasor Stone inscription of Malava Samvat 589, Banskhera Copper-plate of Harshavardhana, Pehowa inscription of Bhojadeva (Study only).

UNIT-III:

(a) Coins as source of ancient Indian history.

(b) Study of Punch marked coins.

UNIT-IV:

(a) Coins of the Kushanas.

(b) Coins of the Guptas.

Essential Readings :

1. Allan, John : *Catalogue of the Coins of Ancient India,* Trustees of the British Museum, London, 1967
2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, Varanasi, 1957.
3. Buhler, G., : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 2004
4. Dani, A.H., : *Indian Paleography*, Munshiram Manoharlal, New Delhi, 1997

Suggested Readings :

1. Gupta, P.L. : *Coins,* rpt. National Book Trust India, .New Delhi, 2006.
2. Hultzsh, E. : *Corpus Inscriptionum Indicarum,* Vol. I, rpt., Archaeological Survey of India, Delhi, 1991.

Paper-VIII : SPREAD OF INDIAN CULTURE IN SOUTH-EAST ASIA UPTO 12TH CENTURY A.D.

Total Marks :	100
Theory :	90
Internal Assessment:	10
Time :	3 Hours

Objectives:

This course enlightens the students about the spread of Indian culture in Burma, Indonesia, Combodia and Champa. In order to teach the students about the elements of Indian Culture, which made its impact felt in those countries, it is, therefore, necessary to discuss the political history, art, architecture and religion of those regions.

Pedagogy of the CourseWork:

The students are taught with the help of slides, photographs and maps. In addition to it, lectures, workshops, seminars, written assignments, class discussions and term papers are essential component of this course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

(a) Beginning of Indianisation in Burma.

(b) Art and Religion of Burma.

UNIT-II:

(a) Beginning of Indianisation in Indonesia.

(b) Study of Indo-Javanese Art.

UNIT-III:

(a) Beginning of Indianisation in Cambodia.

(b) Art of Cambodia.

UNIT-IV:

(a) Beginning of Indianisation in Champa.

(b) Study of Art and Archaeological remains of Champa.

Essential Readings :

1. Chatterji, B.R. : *Indian Cultural Influence in Cambodia,* University of Calcutta, Calcutta, 1933.
2. Coedes, C. : *The Making of South East Asia,* University of California Press, London, 1966
3. Coomaraswamy, A.K. : *History of Indian and Indonesian Art,* Kessinger Publishing, New Delhi, 1972.
4. Harrison, Brian, : *South East Asia, A Short History,* Macmillan Press, New York, 1966 .
5. Majumdar, R.C. : *Hindu Colonies in the Far East,* K.L. Mukhopadhaya, Calcutta, 1944.

Suggested Readings :

1. Majumdar, R.C. : *Suvarnadvipa, Ancient Indian Colonies in the Far East,* Modern Publication Syndicate, 1937.
2. Majumdar, R.C. : *Kambuja-Desa, or An Ancient Hindu Colony in Cambodia,* Lighting Source Incorporated, Madras, 1944.
3. Singhal, D.P. : *India and World Civilization,* Vols. I & II, Michigan State University Press, Calcutta, 1972.

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POLICE ADMINISTRATION

SEMESTER V

Semester V: Police Procedures and Investigation-I

(A) Course Objectives:

The course has been designed to impart students knowledge about the procedures followed and investigation done by the police after the incidence of crime. The students will be taught about the crime scene, its importance, inspection of crime scene and its preservation along with the investigation officer and his/ her role. Further the students would be made aware about investigation, interrogation and interview techniques with a focus on witnesses, women and juvenile offenders.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks)

(D) Course Content:

Unit-I

Investigating Officer: Power of observation and its importance in Investigation; and Qualities of investigating officer.

Unit-II

Crime Scene: importance of crime scene; inspection of crime scene; and preservation of crime scene.

Unit-III

Investigation; interrogation; and interviews.

Unit-IV

Examination of witnesses; interrogation of women accused; and interrogation of juvenile offenders.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 978.
5. International Association: Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, A.P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi,1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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POLICE ADMINISTRATION

SEMESTER VI

Semester VI: Police Procedures and Investigation-II

(A) Course Objectives:

The objective of this course is to introduce to the students about the use of scientific techniques in the field of investigation. After providing knowledge in death, types of death and bodily changes after death, the students would be imparted information on how to preserve finger prints, footprints, knowledge about handling of physical evidences, along with their packing and forwarding. In addition knowledge about the modern tools of investigation would also be provided.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Death; Types of death- death due to suffocation hanging, drowning, accident, suicide and murder. Bodily changes after death.

Unit-II

Preservation of finger prints, footprints, and blood at the scene of crime.

Unit-III

Physical evidence, handling packing and forwarding of physical evidence, and types of opinion to be obtained from physical evidence.

Unit-IV

Photography and its importance in police work; Polygraph; Brain mapping; and Narco Analysis.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 1978.
5. International Association : Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA, 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, P.H. Publishing Corporation, New Delhi,1999.

Further Readings

1.	Singh, S.P.	:	Combating Bio- terrorism with SpeciaL Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2.	Dutta, K.K.	:	Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3.	Ghosh, S.K. and Rustamji, K.F.	:	Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4.	Vadackumchery, James	:	Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5.	Vadackumchery, James	:	Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6.	Sharma, R	:	Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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MUSIC (VOCAL AND INSTRUMENTAL)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper:-(Theory)

Total Marks	: 50
Theory	: 45 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Note: There will be 10 questions in all and a student will attempt five questions choosing at least one from each unit.

UNIT-I

1. Definition with full explanation of the following :-
   Sthai, Antra, Krintan, Badhat, Jod-Alap, Lag Daat, Jugalbandi, Layakaries (Adi, Kaudi, Biadi)
2. Establishment of Swaras on strings of Veena.

UNIT–II

1. Definition of Aesthetics in context of Indian Music
2. Rasa Sidhanta of Bharat

UNIT–III

1. Topics of Essay: - (i) Sangeet Sammelan
2. Knowledge of good qualities of a music performer (Vocalist or an Instrumentalist)
3. Elementary Knowledge of Harmonium, Tabla,Veena

UNIT-IV

1. Description of Detailed & Non-detailed Ragas:-
   1. Detailed Raga :-
      i) Marwa (ii) Madhmad Sarang
   2. Non-detailed Raga: -
      (i) Sohni (ii) Megh
   3. Talas:- Tivra, Sultal

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Paper B: Practical (Choice & Viva) **:** 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) One Dhamar in Gayaki Anga and /one drut gat in ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Marwa
(ii) M adhang Sarang

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Sohni
(ii) Megh

(c) Talas : Tivara, Sultal on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas.

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single .

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1. Sangeetanjali : Pt. Onkar Nath Thakur
2. Abhinav Geetanjali : Pt. Ramashray Jha
3. Saras Sangeet : Pradeep Kumar Dixit
4. Aakashvani Evam Hindustani Shastriya Sangeet : Dr. Suchismita
5. Sangeet Visharad : Basant
6. Raag Parichay : Harish Chandra Srivastav
7. Sangeet swarit : Dr. Ramanand Dwivedi
8. Sangeet Prabodhika : Dr. Parmanand Bansal
   Dr. Gyan Chand

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper-:-Theory

Total Marks	: 50
Theory	: 45 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

UNIT – I

1. Definition with full explanation of the following :-
   Kalavant,Vaggeykar, Swarsthan Niyam

UNIT-II

1. Essays:- i Role of Music in National Integration
   ii Lok Sangeet
   iii Music Appreciation

UNIT-III

1. Impact of Western Music on Indian Music
2. Study of Western Instruments:- Guitar, Keyboard, Octopad

1. Detailed study of Dakshini Music System of the following:-

i Swara
ii Raga
iii Tala

UNIT-IV

1. Description of Detailed & Non-detailed Ragas: -

1. Detailed Raga: - (i) Patdeep
(ii) Megh Malhar
2. Non-detailed Ragas: - (i) Bhimpalasi
(ii) Bahar
3.Talas:- Tilwada, Adachautal

Unit -V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Paper B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(b) Tarana or one Fast Gat in Ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

(a) Ability to write notation of the Vilambit and Drut Gat of Ragas prescribed in the course:-
Patdeep, Megh Malhar

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Patdeep
(ii) Megh Malhar

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Bhimpalasi
(ii) Bahar

(c) Talas : Tilwada, Adachartala on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(d) Geet Ghazal

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1. Bhatkhande Sangeet Shastra	:	Pt. Bhatkhande
2. Abhinav Geetanjali	:	Pt. Ramashray Jth
3. Sangeetanjali	:	Pt. Onkar Nath Thakur
4. Raag Parichay	:	Harishchandra Srivastav
5. Sangeet Visharad	:	Basant
6. Sawars Sangeet	:	Pradeep Kumar Dixit
7. Sangeet Swarit	:	Dr. Ramanand Dwivedi
8. Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand
9. Art Education	:	Janardan Prasad

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HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Third year (SEMESTER SYSTEM) has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2019-2020

SEMESTER-V

Paper V: Physics of Semiconductors

Unit I

Crystal Properties and Growth of Semiconductors: Semiconductor materials, Crystal lattices, Ge and Si crystal structure, production of electronic grade Si, Bulk crystal growth, Epitaxial growth.

Bonding forces and energy bands in solids, Metals, semiconductors and insulators, Direct and Indirect semiconductors, intrinsic and extrinsic semiconductors, compensation, Electrons and holes, effective mass, Fermi level, Conductivity and mobility, temperature dependence of Carrier concentration, effect of temperature, doping and field on mobility, Hall effect, Invariance of Fermi level at equilibrium.

Excess carriers in semiconductors: Optical absorption, Photoluminescence, Electroluminescence, Carrier lifetime and photoconductivity, photoconductive devices.

Unit II

Diffusion and drift of carriers: Einstein relation, built-in fields in semiconductors with different doping profiles, energy band diagrams. Steady state carrier injection, diffusion length, Haynes-Shockley experiment (qualitative discussion).

pn junction energy band diagrams, forward and reverse-biased junction, calculation of contact potential and depletion width in abrupt junction, diffusion and drift currents, Reverse-bias breakdown, Zener and Avalanche diode. Diffusion and depletion capacitance of pn junction, varactors.

Metal-semiconductor contacts, energy band diagrams of ohmic and rectifying contacts, Schottky diodes.

Recommended Books:

1. Solid State Electronic Devices: Ben Streetman, Sanjay Banerjee (Prentice Hall India, 2005).

Paper VI: Computational Physics

Note : The Computational Physics paper will consist of two parts (a) written examination of one hour duration and (b) Practical examination of two hours duration. Both the parts carry equal marks.

Unit I

C Programming Language

Types of Computer Systems and Operating Systems.
Introduction to Programming : Algorithms, Structured Programming. Basic idea of Compilers.
Data and Statements : Data Types. Constants and Variables. Mathematical, Relational, Logical and Bitwise Operators. Expressions and Statements. Block, Local and Global variables. Auto, Static and External Variables.
I/O Statements : printf, scanf, getc, getch, getchar, getche, etc.
Manipulators for Data Formatting: setw, width, endl and setprecision etc. ASCII Files I/O.
Preprocessor : #include and #define directives.
Control Statements :- If-statement. If-else Statement. Nested if Structure. Else-if Statement.
Ternary Operator. Goto Statement. Switch Statement. Unconditional and Conditional
Looping. While Loop. Do-while Loop. For Loop. Break and Continue Statements. Nested
Loops.
Arrays and Structures :- One and Two Dimensional Arrays. Idea of Structures, Strings and Pointers
Functions : Standard Library Functions and User-defined Functions.
Functions returning Values. Function Prototypes. Function Call by Value and by Reference.
Recursion.

Unit II

Design of algorithm and computer programs based on the numerical techniques read in Paper III "Statistics and Numerical Techniques".
Programs : (a) Data handling: find standard deviation, mean, variance, moments etc., (b) the least squared fitted curve for a data set, (c) roots of quadratic equations, (d) first order derivative at given x for a data set using Lagrange interpolation, (e) numerical integration on 1-D function using Simpson methods, (f) solving a differential equation using Euler/Runge-Kutta method, (g) Sum, Difference and Product of Matrices, (h) determinant of a matrix - its eigenvalues and eigenvectors.(h)Plotting and evaluation of mathematical functions.

Recommended Books:

1. Schaum's Outline of Programming with C, Byron Gottfried, McGraw-Hill.
2. Computer Programming in C, V. Rajaraman (Prentice Hall of India Pvt. Ltd.) (2006)
3. Computer Applications in Physics: S. Chandra (Narosa) (2008).
4. Computational Physics: R.C.Verma, P.K. Ahluwalia and K.C. Sharma (New Age) (2005).

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PHYSICS
SEMESTER-VI

Paper VII: Nuclear Radiations and Detection

Unit I

Radiation Sources:

Radioactive decays: Alpha decay, β^-, $\beta+$ and EC decays, Radioactivity units, gamma rays, Internal conversion, X-rays, Auger electron, Bremesstrahlung, Annhilation radiation.
Neutron sources- fission, radioisotope based sources and photoneutron sources, Accelerator based sources.
Radiation Interactions : Interaction of light and heavy Charged Particles, Stopping power, energy and range straggling.
Interaction of Fast Electrons - ionsation and radiative loss, backscattering.
Interaction of Gamma rays, photoelectric absorption, Compton scattering and pair production. Attenuation coefficient.
Interaction of Neutrons, Slowing down power, thermal neutrons.
Sources of Background: Natural radioactivity, Air borne radioactivity, Primary and secondary Cosmic rays.

Unit II

General Properties of Radiation Detectors: Modes of detector operation, Current mode, pulse mode, Pulse Height Spectra, Energy Resolution, Detection Efficiency, Dead Time-paralyzable and non-paralyzable models.
Radiation Detectors:
Ionization process in gases, Ion pair formation, fano factor, diffusion, charge transfer and recombination, Charge Migration and Collection.
Gas-filled detectors: Gas Multiplication, avalanche formation, Regions of detector operation.
Proportional Counters, fill gases and choice of geometry.
Geiger-Mueller counter, Fill Gases and Quenching mechanism, Recovery time and dead time, detection of charged particles, gamma and neutrons rays with G.M. counter.
Scintillation Detectors : Organic and Inorganic Scintillators; Characteristics and parameters associated with Gamma ray spectrum
Semiconductor detectors.
Detection of slow and fast neutrons by neutron-induced reactions.

Recommended Books:

1. Radiation detection and measurement: G.F. Knoll (Wiley, New York) (2000).

Paper VIII: Physics Practical

Note : The students are expected to perform any 6 experiments taking at least 3 from each section.

Unit I

1. Measurement of vacuum using the pirani/thermocouple gauge made using electric bulb filament.
2. To study Poisson and Gaussian distributions using a GM Counter.
3. To study absorption of gamma rays in Pb and Fe absorbers.
4. Strength of Alpha source using Solid state nuclear track detector.
5. To study regulated power supply and voltage multiplier circuits (using breadboard).

Unit II

6. To design an Astable multivibrator of given specifications using 555 Timer IC.
7. To design a monostable multivibrator of given specifications using 555 Timer IC and to measure the pulse-width of its output.
8. To study logic gates and clocked JK Master-Slave flip flops using IC's.
9. Study of photon intensity variation through crossed polariods and diffraction spectrum from diffraction grating using LDR/Photodiode.
10. To measure resistivity of semiconductor at different temperatures using four probe method and the deduce band gap of the semiconductor.

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CHEMISTRY

B.Sc. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019

SEMESTER- V

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper V	:	Inorganic Chemistry-A	20	45	05
Paper VI	:	Physical Chemistry-A	20	45	05

Paper V: INORGANIC CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Inorganic Chains: (5 lectures)

(a) Chains : Catenation including heterocatenation, silicate minerals, intercalation, One dimensional sulphur-nitrogen conductor.

Unit II

Inorganic Rings and Cages : (5 lectures)

(a) Rings : Borazines, phosphazenes and phosphazene polymers.

(b) Cages : Simple cage molecules; Phosphorus–oxygen and phosphorus-sulphur cages; introduction to carboranes and metallocarboranes

Unit III

Organometallics-I : (5 lectures)

Formation and reactions (i) carbonylate ions (ii) metal-carbonyl hydrides & (iii) metal carbonyl halides.

Unit IV

Organometallics-II : (5 lectures)

Transition metal-carbon multiple bonds : Chemistry of :

Alkylidene Complexes.

Alkylidyne complexes including bridged molecules.

Metallocumulenes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
2. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
3. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
4. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VI: PHYSICAL CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Transport Properties-I *:* (5 Lectures)

Recapitulation of Collision Properties of gases such as collision cross section, collision diameter, collision number, collision frequency and mean free path.

Meaning of transport, Properties of gases, Flux, General equation of transport. Thermal conductivity, kinetic theory of thermal conductivity (derivation of the expression).

Unit-II

Transport Properties-II *:* (5 Lectures)

Viscosity of gases, kinetic theory of gas viscosity, (derivation of the expression). Measurement of gas viscosity, Diffusion Coefficient. Kinetic theory of diffusion in gases. (derivation of the expression).

Diffusion in liquids, theory of diffusion in liquids, diffusion in solutions, laws of diffusion.

Unit-III

Dynamic Electro-Chemistry : (5 Lectures)

Processes at electrodes. The electric double layer (Gouy-Chapman, Helmholtz and Stern models-qualitative ideas. The potential difference, Rate of charge transfer, Bulter Volmer equation, Tafel plot, Overpotential Polarisation, Polarography, Fuel cells, Corrosion, Inhibition of Corrosion.

Unit-IV

Surface Chemistry : (5 Lectures)

Interfacial region, types of interfaces, surface tension, thermodynamics of surfaces, plane interface, curved surfaces, Laplace and Kelvin equations including their derivation.
Gibbs Adsorption Equation and its Thermodynamic derivation, Wetting and adhesion in solid-liquid systems, contact angle, Capillary rise and surface tension. Surface Films on liquids.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
3. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
4. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
5. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
6. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

CHEMISTRY

SEMESTER VI

Outlines of Tests

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
PaperVII	:	Inorganic Chemistry -B	20	45	05
PaperVIII	:	Physical Chemistry -B	20	45	05

Paper VII: INORGANIC CHEMISTRY-B

Total Marks : 50

Theory : 45

Internal Assessment : 5

Total Lectures : 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

(5lectures)

Complexes of aromatic systems with transition metals. M.O. description of bonding in Ferrocene.

Study of coordinative unsaturation, oxidative addition,

Unit-II (5 Lectures)

Insertion reactions in Organometallics.

Phenomenon of Fluxionality in Organometallics and its characterization.

Unit-III

Reaction Mechanism : (5 lectures)

Nature and classification of lignad substitution reactions, application of V.B. & C.F. theories to predict the substitution reactions. Mechanism of ligand replacement reactions, substitution in octahedral complexes acid hydrolysis, base hydrolysis, acid-catalysed, acid hydrolysis and acid hydrolysis for chelates.

Unit-IV (5 lectures)

Substitution in square planar complexes. The trans-effect & its Synthetic applications, M.O. theories and trans-effects. Electron transfer reactions & their mechanism. Molecular rearrangements, mechanistic pathways of substitution.

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

5. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
6. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
7. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
8. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VIII: PHYSICAL CHEMISTRY-B

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Colloids-I : (5 Lectures)

The colloidal state; preparation of colloidal solutions, Methods of purification of colloidal systems, dialysis, electro-dialysis, filtration, Ultra-filtration. Classification of colloidal systems, their typical properties with special reference to optical properties (Tyndall effect).

Unit-II

Colloids-II : (5 Lectures)

The Brownian movement. Electrokinetic phenomena, Stabilization of colloidal systems and theories of stability; zeta potential, Coagulation, Flocculation of colloids by electrolytes and its mechanism. Association Colloids, Micellar system, Emulsions and their types, HLB value of emulsifiers, Introduction to microemulsions.

Unit-III

Quantum Chemistry-I : (5 Lectures)

ATOMS : Schrodinger equation for multi-electron atoms, Need for approximate Solutions. Basic ideas of the Variation theorem and the Perturbation methods. Self-Consistent Field methods (Hertree and Hertree-Fock)- Elementary treatment only. Indistinguishability of Electrons. Pauli exclusion principle, two electron spin functions; Slater determinants and Pauli principle. New Atomic term symbols. Spin-orbit coupling (Total orbital momentum, multiplicity, total angular momentum) vector model of atom, Hund's rules, atomic spectra and Selection rules.

Unit-IV

Quantum Chemistry-II : (5 Lectures)

Molecules :

Schrodinger equation for molecules, Born-Oppenheimer approximation.Valence bond theory and Molecular Orbital theory as two approaches for approximate solution of Schrodinger equation LCAO-MO treatments of H_2 and Valence bond treatment of H_2 (complete solutions not required. Only wave functions to be discussed) Comparison of MO and VB treatments. Brief Introduction to the electronic structure for polyatomic molecules. Metals, Insulators and Semiconductors. Band Theory of Solids (elementary discussion).

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

7. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
8. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
9. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
10. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
11. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
12. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

BOTANY

B.Sc. (Honours) Botany Fifth and Sixth Semester Syllabus

(Examination 2019-2020)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A:	Biology of Cryptogams and Seed Plants	3 hrs.	36	4	40
Theory Paper-B:	Genetics, Plant Breeding, Biochemistry, Molecular Biology and Biotechnology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs	18	2	20
Sixth Semester					
Theory Paper- A:	Microbiology and Plant Pathology	3 hrs.	36	4	40
Theory Paper-B:	Systematics of Angiosperms and Environmental Biology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	2	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY

B.Sc. (Honours) Fifth Semester (Examination December, 2019)

PAPER-A: BIOLOGY OF CRYPTOGAMS AND SEED PLANTS

Max. Marks : 40
Theory : 36
Internal Assessment : 04

Objective : The basic objective of this paper is to make the students understand the diversity in various life forms of plant kingdom. It provides knowledge about evolution of simpler forms to complex ones along with their morphology, anatomy and reproduction.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
BIOLOGY OF CRYPTOGAMS

Algae: Occurrence and distribution; thallus organization and evolutionary tendencies; ultrastructure of algal cell; criteria for classification, structure and life history of *Oedogonium* (Chlorophyceae), *Vaucheria* (Xanthophyceae), *Ectocarpus* (phaeophyceae), *Batrachospermum* (Rhodophyceae) and economic importance of algae.

Fungi: Occurrence and distribution; ultrastructure of fungal cell, cell wall composition, modern concepts in the classification of fungi; nutrition, reproduction, structure and life history of *Rhizopus* (Zygomycetes), *Peziza*, *Saccharomyces* (Ascomycetes), *Alternaria* (Deuteromycetes), *Agaricus* (Basidiomycetes); types of fungal spores and mode of their liberation and economic importance of fungi.

UNIT-II

Bryophytes: Comparative account of morphology, anatomy and reproduction in *Riccia, Marchantia, Anthoceros, Funaria*; evolution of sporophyte and gametophyte; classification, ecological aspects and economic importance.

Pteridophytes: The primary vascular plants; classification, comparative account of morphology, anatomy and reproduction in *Rhynia, Lycopodium, Selaginella, Equisetum, Marsilea, Pteris*; Telome theory; stelar evolution; heterospory and seed habit.

UNIT-III
SEED PLANTS

Phanerogams, the seed bearing plants: General characteristics and types.

The Living Cycads: Distribution; vegetative organography and anatomy; reproductive cycle –sporophytes and sporangia, gametophytes, fertilization, embryogeny and seed development of *Cycas*.

The Coniferales: General organography and anatomy; foliage leaves; storbilli and sporangia; reproductive cycle– sporogenesis, gametophytes, fertilization, embryogeny and seed development of *Pinus*.

The Gnetales: Habit and distribution; vegetative organography and anatomy; reproductive cycle – the storbilli, sporogenesis, male and female gametophytes, pollination, fertilization and embryogeny of *Ephedra*.

UNIT-IV

Alternatives for Reproduction: Vegetative and sexual reproduction.

Flower: Evolution, concept of flower as a modified determinate shoot and functions of flower.

Structure of Anther : Microsporogenesis: formation of pollen grains (male gametophyte); pollen germination; pollen tube growth.

Structure of Pistil**:** Ovules; megasporogenesis; development of embryo sac (female gametophyte).

Mechanisms and Agencies of Pollination: Pollen-stigma interaction; self-incompatibility; double fertilization, apomixis.

Seed and Fruit: Development of endosperm and embryo in monocotyledons and dicotyledons; storage of reserve materials and desiccation in seeds; dormancy and seed germination; fruit maturation; ripening and dispersal.

Suggested Readings

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 4th revised and enlarged edition. Vikas Publishing House, Delhi, India, 2000.
2. Bold, H.C., Alexopoulos, C.J. and Delevoryas, T. Morphology of Plant and Fungi (4th Edition), Harper and Foul Co., New York, 1980.
3. Cronquist, A. The evolution and classification of flowering plants, Thomas Nelson (Printers) Ltd., London and Edinburgh, 1968.
4. Delevoryas, Th. Plant Diversification, Modern Biology Series. Halt, Rinehart and Winston, New York, 1965.
5. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
6. Dube, H.C. An Introduction to Fungi, Vikas Publishing House Pvt. Ltd., Delhi, India, 1990.
7. Foster, A.S. and Gifford, A.E.M., Jr. The Comparative Morphology of Vascular Plants, Vakils, Peffer and Simons Pvt. Ltd, 1967.
8. Gifford, E.M. and Foster, A.S. Morphology and Evolution of Vascular Plants, W.H. Freeman & Co., New York, 1989.

9. Gilbert, M.S. Cryptogamic Botany, Vol. I & II (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1985.
10. Johri, B.M. Embryology of Angiosperms, Springer-Verlag, Berlin, 1984.
11. Kumar, H.D. Introductory Phycology, Affiliated East-West Press Ltd., New York, 1988.
12. Puri, P. Brophytes, Atmaram & Sons, Delhi, India, 1985.
13. Raghvan, V. Molecular Embryology of Flowering Plants, Cambridge University Press, New York, 1997.
14. Rangaswamy, G. and Mahadevan, A. Diseases of Crop Plants in India, Prentice Hall India Pvt. Ltd. New Delhi, India, 1999.
15. Singh, V, Pande, P.C. and Jain, D.K. Diversity of Microbes and Cryptogams, Rastogi Publications, Meerut, India, 2008.
16. Sporne, K.R. The Morphology of Angiosperms. B.I. Publication, Bombay, India, 1977.
17. Srivastava, H.N. Diversity of Microbes & Cryptogams, Vol. I, Pradeep Publications, Jalandhar, India, 2014.
18. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol.III, Pradeep Publications, Jalandhar, India, 2014.
19. Wilson, N.S. and Rothwell, G.W. Palaeobotany and the Evolution of Plants (2nd Edition), Cambridge University Press, UK, 1993.

Suggested Laboratory Exercises (Biology of Cryptogams)

1. Comparative study of algal genera with reference to the classes mentioned in theory.
2. Comparative study of fungal genera with reference to the classes mentioned in theory.
3. Comparative study of morphology, anatomy and reproductive structures in *Riccia, Marchantia, Anthoceros* and *Funaria.*
4. Comparative study of different members of Pteridophytes mentioned in the theory syllabus.
5. Comparative anatomical structure of stem/wood of Cycadales, Coniferales, Ephedrales, Gnetales and angiosperms, from sections and macerations.
6. Comparative structure of the male and female cones of Cycads (*Cycas*), Conifers (*Pinus*) and Ephedrales (*Ephedra*).
7. Comparative structure of leaf, leaf appendages, venation and stomata of gymnosperms and angiosperms.
8. Diversity in pollen grain structure among Cycads, Conifers, Ephedrales and angiosperms with respect to size, exine sculpturing, germ spore number, number of constituent cells and any other features.
9. Microsporogenesis and male gametophyte development in angiosperms through microtome sectioning and acetocarmine squash technique.
10. Pollen grain germination by hanging-drop and sitting-drop techniques in *Impatiens*, *Catharanthus roseus* (= *Vinca rosea*) or any other suitable material.
11. Diversity in the structure of stigma, style, stigmatic papillae and transmitting tissue of style.

BOTANY

SEMESTER – V

PAPER-B: GENETICS AND PLANT BREEDING, BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Objective: The course work of this paper deals with basic concepts of genetics, plant breeding, molecular biology and biotechnology. It deals with various types of plant reproduction and methods of plant improvement. It provides knowledge of molecular and cellular basis that would enable the students to understand the hereditary and evolutionary trends in plants kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
GENETICS

Cell division - Mitosis and Meiosis.

Mendel's Experiments and Principles of Inheritance: Backcross and test cross; gene interactions and modified dihybrid ratios – complementary, supplementary, duplicate and epistatic factors.

Quantitative Genetics: Quantitative traits and quantitative genetics; the multiple factor hypothesis; descriptive statistics.

Linkage and Recombination: Coupling and repulsion phases; two and three point testcrosses with their significance in chromosome mapping; interference and co-efficient of coincidence.

Maternal Influence on Inheritance: Shell coiling in snails and Kappa particles in Paramecium; cytoplasmic inheritance in yeast (mitochondria) and Mirabilis jalapa (plastids).

Changes in Chromosome Structure: Origin, types and effects of duplications, deletions, inversions and translocations; meiosis in structural heterozygotes.

UNIT –II

PLANT BREEDING

Methods of Plant Improvement: Pure line and mass selection; hybridization in self and cross pollinated crops; introduction and acclimatization; hybrid vigour.

Alterations in the Genetic makeup – changes at Genetic Level: Spontaneous and induced mutations; mutagens – types and mode of action; transitions, Transversions and frame-shift mutations; detection of mutations.

Alterations in Genetic makeup – changes in Chromosome Number : Origin, types and effects of auto and allopolyploidy; origin and meiosis in nullisomics, monosomics and trisomics.

Mutations and polyploidy as methods of plant improvement.

UNIT-III

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Nucleic Acids: Composition of nucleic acids and synthesis of nucleotides; DNA structure; A,B and Z forms of DNA; denaturation and renaturation of DNA; chromatin structure; DNA replication and recombination; DNA polymerases; different forms of RNA and their role.

Amino Acid and Protein Metabolism: Structure, characteristics and classification of amino acids; protein and non-protein amino acids; amino acid biosynthesis; GS/GOGAT cycle; transamination; peptide bond and polypeptide chain; primary, secondary, tertiary and quaternary structure of proteins; protein biosynthesis and its regulation; post-translational modification of proteins; protein targeting; protein degradation.

Carbohydrate Metabolism: Classification; structure of some representatives examples of monosaccharides, disaccharides, polysaccharides; stereoisomers, enantiomers and epimers; biosynthesis and degradation of sucrose and starch.

Lipid Metabolism: Saturated and unsaturated fatty acids; fatty acid biosynthesis; oxidation of fatty acids; storage and mobilization of fatty acids and lipids.

UNIT-IV

BIOTECHNOLOGY

Gene Structure, Expression and Regulation: Gene organization in prokaryotes and eukaryotes; operon concept; gene regulation in prokaryotes and eukaryotes; inducible, repressible, positive and negative gene regulation; interrupted genes in eukaryotes; RNA splicing; mRNA stability.

Recombinant DNA Technology: Restriction endonucleases: prokaryotic and eukaryotic cloning vectors; genomic and cDNA libraries; southern and northern analysis; various techniques of gene mapping and DNA fingerprinting (RFLP, RAPD, AFLP); chromosome walking; polymerase chain reaction; DNA sequencing.

Plant Biotechnology: Cellular differentiation and totipotency; organogenesis and embryogenesis; protoplast isolation and culture; somatic hybridization; clonal propagation; genetic engineering of plants; vectors for gene delivery; selectable markers and reporter genes; methods of gene delivery; Agrobacterium – the natural genetic engineer; salient achievements in crop biotechnology (with suitable examples) and prospects.

Suggested Readings:

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. Molecular Biology of Cell, Garland Publishing Co., Inc., New York, USA, 1999.
2. Atherly, A.G., Girton, J.R. and McDonald. The Science of Genetics, Saunders College Publishing Co., Fort Worth, USA, 1999.
3. Bhatia, K.N. and Dhand, Neelam. Cell Biology and Genetics, Trueman Book Company, Jalandhar, India, 2013
4. Buchanan, B.B., Gruissem, W. and Jones, R.L. Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists, Maryland, USA, 2000.
5. Dennis, D.T., Turpin, D.H., Lefebvre, D.D. and Layzell, D.B. (eds). Plant Metabolism (2nd Edition), Longman, Essex, England, 1997.
6. Gardener, J., Simmons, H.J. and Snustad, D.P. Principles of Genetics (8th Edition), John Wiley & Sons, New York, 1991.
7. Gupta, P.K. Cytogenetics, Rastogi Publications. Shivaji Road, Meerut, India, 1995.
8. Gupta, P.K. Cytology, Genetics and Molecular Biology, Rastogi Publications. Shivaji Road, Meerut, India, 2009.
9. Gupta, P.K. Genetics, Rastogi Publications. Shivaji Road, Meerut, India, 1994.
10. Hartl, D.L. and Jones, E.W. Genetics: Principles and Analysis (4th Edition), Jones & Bartlett Publishers. Massachusetts, USA, 1998.
11. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology (2nd Edition), John Wiley and Sons, Chichester, England, 1999.
12. Lodish, H., Berk, A., Zipursky, S.L., Matsudaira, P., Baltimore, D. and Darnell, J. Molecular Cell Biology (4th Edition), W.H. Freeman and Co., New York, U.S.A, 2000.
13. Old, R.W. and Primrose, S.B. Principles of Gene Manipulation, Blackwell Scientific Publications, Oxford, UK, 1989.
14. Poehlmann, J.M. and Sleeper, D.R. Breeding Field Crops, Panima Publishing House, New Delhi, India, 1995.
15. Russel, P.J. Genetics (5th Edition), The Benjamin/Cummings Publishing Co., Inc., USA, 1998.
16. Sharma, J.R. Principles and Practice of Plant Breeding, Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1994.
17. Simmonds, N.W. Principles of Crop Improvement, Longman, London and New York, 1979.
18. Snustad, D.P. and Simmons, M.J. Principles of Genetics (2nd Edition), John Wiley & Sons, Inc., USA, 2000.
19. Srivastava, H.N. Cell Biology and Genetics, Vol.II, Pradeep Publications, Jalandhar, India, 2006.
20. Srivastava, H.N. Plant Physiology, Biochemistry and Biotechnology, Vol.V, Pradeep Publications, Jalandhar, India, 2013.
21. Verma, P.S. and Agarwal, V.K. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company (Reprint, 2010).

Suggested Laboratory Exercises:

1. Determination of chromosome count from dividing pollen mother cells and root tips.
2. Preparation of karyotypes from dividing root tip cells and pollen grains.
3. Determination of intraspecific variation in chromosome number from locally available taxa.
4. Correlation of floral structure with pollination system (e.g. *Salvia*, *Sesamum*, pea, *Lathyrus*, wheat, rice, maize).
5. Field exploration for detection of male sterile plants and estimation of their pollen fertility in locally grown crop plants e.g. *Sorghum*, tomato and *Linum*.
6. Estimation of pollen ovule ratio and its bearing on pollination system.
7. Emasculation and bagging of flowers of Brassicaceae, Poaceae, Papilionaceae, Malvaceae and Linaceae, pollinating them manually and estimating fruit and seed set.
8. Chemical tests to demonstrate the presence of starch, sugar, fat and protein in plant material.
9. To identify the amino acids in a mixture by resolving through paper chromatography or TLC.
10. To prepare the standard curve for protein and determine the protein content in unknown samples by Biuret method.
11. Colorimetric estimation of RNA using orcinol.
12. Colorimetric estimation of DNA using diphenyl amine.
13. Isolation of plant genomic DNA and its spooling.
14. Isolation of total RNA from plant tissue and its colorimetric estimation.
15. Preparation of tissue culture media, sterilization and inoculation of plant material.
16. Demonstration of techniques of in vitro culture of various explants.
17. Isolation of plant protoplasts (e.g. Tobacco, *Petunia*) using enzymes available commercially and estimation of their yield.

Note: In the practical classes, emphasis should be given on basic principles of spectro-photometry, chromatography, electrophoresis and rDNA technology and related fundamentals.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1 Identify classify & write illustrated morphological note on specimens A & B (unit I – III of paper A) 4

Q.2 Demonstrate and perform the experiment C (Biochemistry/Biotechnology) and show it to the examiner. 5

Q.3. Identify slides D & E giving at least two reasons for each. 4

Q.4 Practical note book 2

Q.5 Viva-Voce 3

BOTANY

B.Sc. (Honours) Sixth Semester (Examination May, 2020)

PAPER-A: MICROBIOLOGY AND PLANT PATHOLOGY

Objectives: The basic objective of this paper is to make students familiar with the systematic position of microorganisms, their ultrastructure, classification and industrial application. It also deals with the important aspects of plant diseases, their pathogens and disease management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
(MICROBIOLOGY)

General account of Microorganisms and their characteristics features.

Ultrastructure of Microorganisms: Prokaryotic microorganisms; fine structure of prokaryotic cell; eukaryotic microorganisms; viruses – properties and classification; characteristic features of host-virus interaction; bacteriophage T4; tobacco mosaic virus; general account of mycoplasma and actinomycetes.

Industrial Application of Microorganisms: Organic acids, alcohol, food processing, milk products, antibiotics and biopesticides.

UNIT-II

Genetic Recombination in Prokaryotes: Conjugation, transformation and transduction.

Role of Microorganisms in biogeochemical cycling of nitrogen and carbon; Biological N_2 fixation.

UNIT-III

(PLANT PATHOLOGY)

Major Diseases of Plants, their symptoms and Control : Blast and brown spot of rice, rust and smuts of wheat, downy mildew and green ear disease of bajra, white rust of crucifers, late blight of potato, wilt of pigeon pea, damping off seedlings of tomato/mustard/chillies, Tikka or leaf spot of groundnut, citrus die back, powdery mildews of cucurbits and grapes, red rot of sugarcane.

Plant Disease Management: Chemical, biological; IPM systems; development of transgenics; biopesticides; plant disease clinics.

UNIT-IV

Pathogen Attack and Defense Mechanisms: Physical, physiological, biochemical and molecular aspects.

Plant Disease Epidemiology: Transmission and spread of plant pathogens; disease cycles, epidemics; modeling and disease forecasting.

Suggested Readings:

1. Agrios, G.N. Plant Pathology, Academic Press, London, 1997.
2. Albajes, R. Gullino, M.L., Van Lenteren, J.C. and Elad, Y. Integrated Pest and Disease Management in Green house crops, Kluwer Academic Publishers, 2000.
3. Bridge, P. et al. Molecular Variability of Fungal Pathogens, CAB International, UK, 1998.
4. Bridge, P. et al. Application of PCR in Mycology, CAB International, UK, 1999.
5. Bridge, P., Moore, D.R. and Scott, P.R. Informational Technology, Plant Pathology and Biodiversity, CAB International, UK, 1998.
6. Clifton, A. Introduction to the Bacteria, McGraw Hill Co., New York, 1958.
7. Mandahar, C.L. Introduction to Plant Viruses, Chand & Co. Ltd., Delhi, India,1998.
8. Persley, G.J. Biotechnologies and Integrated Pest Management, CAB International, UK, 1996.
9. Skerritt, J.H. and Apples, R. New Diagnostics in Crop Sciences, CAB International, UK, 1995.

Suggested Laboratory Exercises

1. Calibration of microscope: determination of dimensions of microorganisms (suggested model organisms: yeast, lactobacilli, cyanobacteria).
2. Cultivation media for autotrophic and heterotrophic microorganisms (cleaning of glasswares, mineral media, complex media, solid media, sterilization).
3. Isolation of microorganisms: streaking on agar plates/pour plate method, isolation of clones, preservation.
4. Preparation of Winogradsky column using pond bottom mud, observations on temporal sequence of appearance of microbes. (visual appearance, microscopic observations)
5. Observation on virus infected plants (symptoms).
6. Fermentation by yeast (inverted tube method, use of different substrates, e.g. glucose, fructose, cane sugar, starch)
7. Study of histopathology of various plant diseases included in theory.
8. Isolation and culture of plant pathogens (e.g. *Colletotrichum, Fusarium, Alternaria*) and establishment of Koch's postulates and their pathogenicity.
9. Study on antagonism between isolated antagonists and plant pathogens and test of biological control.
10. Demonstration of the assay of prohibitins (phytoalexins).
11. Demonstration of biopesticides (essential oils, neem, turmeric and garlic) against some pathogens.

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BOTANY

SEMESTER – VI

PAPER-B: SYSTEMATICS OF ANGIOSPERMS AND ENVIRONMENTAL BIOLOGY

Objective: This paper deals with taxonomy and species concept of plants. It provides a knowledge about identification, nomenclature and classification which forms the basis of future research work. It also deals with inter-relations of plants and environment as well as various environmental problems, role of national and international organization in environmental management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

ANGIOSPERM SYSTEMATICS

Introduction : Aims and components of systematics, introduction to identification, nomenclature, phylogeny and classification.

Systematics in Practice: Importance of herbarium specimens and their preparation; role of herbaria and botanical gardens; documentation (floras, monographs, manuals, journals, abstracts, indices and dictionaries); keys for identification of plants.

Taxonomic Hierarchy: Taxonomic category, taxonomic groups; concepts of species, genus and family.

Botanical Nomenclature: Principles and rules; ranks and names; type method; principle of priority and its limitations; names of hybrids and cultivars; concept of biocode.

UNIT-II

General characters of Angiosperms.

Systems of Classification: Bentham and Hooker's system. Engler and Prantl's system and Takhtajan's system.

Modern Taxonomy: Supporting evidences/inputs for taxonomy; taxonomy in relation to anatomy, embryology, palynology, ecology, cytology (cytotaxonomy), secondary metabolites in plants (chemotaxonomy).

A brief account of following families: Ranunculaceae, Brassicaceae, Rutaceae, Fabaceae, Cucurbitaceae, Apiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

UNIT-III

ENVIRONMENTAL BIOLOGY

Introduction: Inter-relationship between the living world and the environment; the components and dynamism; homeostasis; relevance to man.

Earth as a System: The biosphere, the hydrosphere, the atmosphere and the lithosphere; components within biosphere (Biomes); parameters delimiting individual biomes.

The Environment: Soil, water and atmosphere – general account and adaptations.

Organismal Ecology/Biotic components: Individuals, species, population communities and their characteristics.

Ecosystems: Concepts of ecosystem; homeostasis; structure of ecosystem; functions of ecosystem; transfer of energy and minerals via grazing and detritus chains and role of micro-organisms; cycles (hydrologic, gaseous); role of humans in maintaining biogeochemical cycles.
Diversity of Ecosystem: Aquatic (fresh water); terrestrial (forest/grassland); man-made ecosystems.

UNIT-IV

Human Ecology and Ecological Management: The human population; renewable and non-renewable natural resources and their management; conservation of biodiversity; endangered species; conventional and non-conventional energy sources.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Suggested Readings

1. Barbour, M.G., Burk, J.H. and Pitts, W.D. Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.
2. Bhojwani, S.S. Plant Tissue Culture: Applications and Limitations, Elsevier Science Publishers, New York, USA, 1990.
3. Collins, H.A., and Edwards, S. Plant Cell Culture, Bios Scientific Publishers, Oxford, UK, 1998.
4. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
5. Hill, M.K. Understanding Environmental Pollution, Cambridge University Press, 1997.
6. Kormondy, E.J. Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, India, 1996.
7. Mackenzie, A. et al. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, India, 1999.
8. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.
9. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.
10. Odum, E.P. Basic Ecology. Saunders, Philadelphia, 1983.
11. Raghavan, V. Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, New York, USA, 1986.
12. Smith R.K. Ecology and Field Biology. Harper Collins, New York, 1996.

13. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol. III, Pradeep Publications, Jalandhar, India, 2014.
14. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture, Kluwer Academic Publishers, The Netherlands, 1994.

Suggested laboratory Exercises

Description of the following flowers belonging to the various families included in theory syllabus:

1. Ranunculaceae : *Ranunculus, Delphinium*
2. Brassicaceae : *Brassica, Iberis*
3. Rutaceae: *Citrus, Murraya*
4. Fabaceae: *Lathyrus, Cassia, Mimosa* and *Acacia*
5. Cucurbitaceae: *Luffa*
6. Apiaceae; *Coriandrum*
7. Asteraceae: *Helianthus, Ageratum, Sonchus.*
8. Asclepiadaceae: *Calotropis.*
9. Solanaceae: *Solanum, Petunia*
10. Lamiaceae: *Ocimum, Salvia*
11. Chenopodiaceae: *Chenopodium*
12. Euphorbiaceae: *Euphorbia, Phyllanthus*
13. Liliaceae: *Asphodelus, Asparagus*
14. Poaceae: *Avena, Triticum.*

Suggested laboratory Exercises (Environmental Biology)

1. Mechanical analysis of soils by sieve method
2. Determination of water holding capacity and field capacity of soil.
3. Determination of permeability (capillarity and percolation) of different types of soils.
4. Determination of species area curve by minimal quadrat size.
5. Analysis of the herbaceous vegetation for frequency, density and abundance.
6. Effect of tree canopy on the distribution of herbaceous vegetation.
7. Field visit: students should be taken for field visits to places of ecological/environmental interest. They should submit detailed report of the visit in the form of project report in the final practical examination for evaluation. The report shall carry marks.

Note to teachers:

The students are to be familiarized with the families listed above in the practical classes with representative's species or any other that may be available locally. However, questions pertaining to these may be asked in the theory examinations.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1	Describe specimen A in technical terms & proper sequence. Draw F.D and V.S of the flower. Cut T.S of ovary and V.S of the flower and show it to the examiner. Write its F.F. as well.	6
Q.2	Identify specimen B and write Histopathological note on it.	3
Q.3.	Identify slides C by giving at least two reasons.	2
Q.4	Field Diary	2
Q.5	Practical note book	2
Q.6	Viva-Voce	3

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ZOOLOGY

SEMESTER – V

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

PAPER II: AQUATIC BIOLOGY-I

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Structure and functions of testis, epididymis, vas deferens.

UNIT –II

Seminal vesicle and prostate gland.
Semen composition, sperm maturation and capacatation.

UNIT -III

Structure and functions of ovary, oviduct, uterus and vagina.

UNIT -IV

Oestrous and menstural cycles.
Fertilization, implantation, gestation, parturition and lactation.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Greep, R.O. & Astwood, E.B.,(Eds), Handbook of Physiology, Kluwer Academic/ Plenum Publishers, New York, 2002.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Physico-chemical characteristics of marine environment

UNIT -II

Zonation in marine habitat : Pelagic and benthic zone and their flora and fauna.

UNIT -III

Freshwater zonation in a lake and stream : Supralittoral, littoral, sublittoral, profundal & limnetic zones of a lake. Pool zone and rapid zone of a stream.

UNIT -IV

Classification of freshwater habitats : Streams ponds, lakes, marshes and swamps.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Jhingran, V.G., Fish & Fisheries of India, Hindustan Publications Corporation, Delhi, 1991.

PRACTICALS

Practical based on both theory papers I & II :

I. Demonstration of male and female reproductive systems and their associated glands in rat/rabbit through charts.
II. Histology of testis, epididymis, vas deferens, prostate, seminal vesicle, ovary, uterus and vagina through permanent slides..
III. Study of permanent slides of the vaginal smear of human menstrual cycle and rat/mice oestrous cycle.
IV. Determination of the different phases of the oestrous cycle in living rat through permanent slides.
V. Study of mammalian sperm through slides/charts.
VI. Histological examination of placenta through slides/charts.
VII. Freshwater zonation in lake/stream and study of different communities (plankton, nekton, neuston, benthos and lotic communities).

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of given system and show to examiner/Spot parts of system on the charts/models. (3)

II Identification of phases of oestrous cycle. (1)

III Record biota in a given sample from a lake. Make labeled sketches and demonstrate them to the examiner. (2)

IV Examine the water sample for various communities from different zones of a lake and draw labelled sketches. (2)

V Identify the specimens/slides/charts A-D. Give reasons of the identification. (4)

VI. Note book and charts. (3)

VII. Viva-Voce. (3)

****

ZOOLOGY

SEMESTER – VI

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

PAPER II: AQUATIC BIOLOGY-II

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT –I

Neuro-Hormonal Regulation of production of Gonadal and Gonadotropic hormones.

UNIT –II

Neuro-Hormonal Regulation of production of Hypothalamic factors and Structural behaviour.

UNIT –III

Fertility Regulation

Contraception and modern contraceptive technology-natural, mechanical, chemical immunological and surgical methods and Fertilization *in vitro* (Test tube baby).

UNIT -IV

Application of fertility regulation in live stock:

i. Artificial insemination in farm animals.
ii. Milk yield.
iii. Egg production in poultry.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Turner, C.P. & Bagnara, J.T., General Endocronology, Saunders Intern. Publications, 1984.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-II

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Ecosystem : Study of ecosystem with particular reference to the components of aquatic ecosystem. Food chains and food webs. Flow of energy in a food chain.

UNIT -II

Physico-chemical characteristics of freshwater environment : Temperature, light, current of water, density, pH, dissolved oxygen, carbon dioxide and nutrients.

UNIT -III

Productivity : Concepts of productivity, primary, secondary and tertiary productivity, yield and carrying capacity.

UNIT -IV

Ecological sucession : Succession, kinds of succession, changes in animal life during hydrarch concept of climax.
Adaptations of aquatic organisms.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Odum, E.P., Fundamentals of Ecology, Saunders Co., Philadelphia, 2004.

PRACTICALS

Practical based on both theory papers I & II:

I. Study of permanent slides of mammalian ovary and testis.
II. Study of different techniques of contraception through charts/models/video clippings.
III. Study of artificial insemination, egg production through charts/models/video clippings.
IV. Study of components of lake ecosystem and grazing type of food chain.
V. Physico-chemical characteristics of freshwater environment. Temperature, Light. turbidity, current of water, density, pH, dissolved O_2, CO_2 and nutrients.
VI. Ecological succession in an aquatic habitat in the laboratory.

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of techniques of contraception/artificial insemination. (3)

II Determine the physico-chemical factors in a given sample of fresh water. Write the procedure followed. (4)

III Draw labeled diagram of food chain (in aquatic/terrestrial environment) (2)

IV Identify the cells/part in slides A & B. Give reasons for identification and name the hormone secreted by it. (3)

V. Note book and charts (3)

VI. Viva-Voce. (3)

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B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE)

SEMESTER-V

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2) There would not be more than eight students in one section in practical examination.

3) There would be upto eight students in one section in practical class.

4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.

5) No electronic Instruments will be allowed for lehra in practical examination.

6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 practical periods per week) : 45 Marks

Paper-A Theory

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 3 Hours

Unit-I

1. Definitions:- Pharmaishi Chakardar paran, Chakardar paran, Hela, Kataksh, Anghar
2. Eyebrow movements
3. Comparison of Gat Nikas and Gat Bhav

Unit-II

1. Knowledge of dance forms:- Kuchipudi, Kathak
2. Costumes used is kathak in the period of mughal and present
3. Dance and festivals

Unit-III

1. Knowledge of modern dance
2. Contribution of Pt. Birju Maharaj in the field of kathak dance
3. Description of tribal dance i.e. sammi, santhal

Unit-IV

1. Notation of that, Amad, Tora, Chakardar, Paran, Chatusjati Paran, Kavit in Teentaal
2. Notation of Thaat, Amad, Utham, Tora, Ganesh Paran in swari Taal (15 Matra)
3. Notation of Tora, Tukra, Paran in sultaal (10 Matra)
4. Nagma of above mentioned Taals
5. Ekgun, Dugun, Tigun, Chaugun Layakries of above Taals

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper- B Practical

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 20 minutes

1. Teentaal (16 Matra)
   Thaat-1
   Amad-1
   Tora-2
   Chakardar Paran-1
   Chatusjati Paran-1
   Kavit-1
2. Swari Taal (15 Mara)
   Thaat-1
   Amad-1
   Utham-1
   Tora-2
   Ganesh Paran-1
3. Sool Taal (10 Matra)
   Tora-2
   Tukra-1
   Paran-1
4. Gat Nikas :- Thaat and Murli
5. Palttas in Teentaal
6. Practical demonstration of Sammi and Naatti
7. Play Nagma in Teentaal and Swari Taal

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE)

SEMESTER-VI

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2) There would not be more than eight students in one section in practical examination.

3) There would be upto eight students in one section in practical class.

4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.

5) No electronic Instruments will be allowed for lehra in practical examination.

6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 practical periods per week) : 45 Marks

Paper-A Theory

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 3 Hours

Unit-I

1. Definitions: - Chaturang, Trivat, Tarana, Sargam, Palta.
2. Neck Movements
3. Choreography

Unit-II

1. Knowledge of Dance forms:- Sattriya and Kathak
2. Contribution of leading Institutions of Kathak Dance
3. Importance of Thumri and Hori in Kathak Dance

Unit-III

1. Contribution of Guru Rajinder Gangani in the field of Dance
2. Dance and Society
3. Detailed knowledge of dance

Unit-IV

1. Notation of Thaat, Amad, Uthan, Tora, Mishrgati Paran, Kavit, Premlu
2. Notation of Thaat, Amad, Tora, Kavit in Basant Taal
3. Nation of Thaat, Tora, Premlu, Shiv Paran in Dhamar Taal.
4. Nagma of above mentioned Taals
5. Ekgum,Dugun, Tigun, Chaugun, Layakaries of above mentioned Taals

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 20 minutes

1. Teentaal (16 Matra)
   Thaat-1
   Amad-1
   Tora-2
   Mishrjati Paran-1
   Kavit-1
   Paremelu-1
2. Basant (9 Mara)
   Thaat-1
   Amad-1
   Tora-2
   Kavit-1
3. Dhamar (14 Matra)
   Thaat-1
   Tora-2
   Premelu-1
   Shiv Paran-1
4. Gat Nikas – Ghungat, Gagri
5. Palttas in Teentaal
6. Practical demonstration in Luddi and Haryanvi
7. Play Nagma in Teentaal and Dhamar

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 – enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT AND COMMERCE

SYLLABI

FOR

B.Com. (General & Hons.)
(Semester System)
For the Examinations 2019-2020

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SCHEME OF B.Com COURSE (General and Hons.)

Semester – I

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 101 A **BCM 101 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 102	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 103	**INTERDISCIPLINARY** PSYCHOLOGY FOR MANAGERS	100	5	1
BCM 104	BUSINESS ECONOMICS-I	100	5	1
BCM 105	PRINCIPLES OF FINANCIAL ACOUNTING**	100	5	1
BCM 106	COMMERCIAL LAWS	100	5	1
BCM 107	PRINCIPLES AND PRACTICES OF MANAGEMENT	100	5	1

Semester – II

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 201 A **BCM 201 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 202	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 203	**INTERDISCIPLINARY** E-COMMERCE	100	5	1
BCM 204	BUSINESS ECONOMICS-II	100	5	1
BCM 205	CORPORATE ACOUNTING**	100	5	1
BCM 206	BUSINESS LAWS	100	5	1
BCM 207	HUMAN RESOURCE MANAGEMENT	100	5	1
	ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE*	100+50		

Semester – III

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 301	**INTERDISCIPLINARY** ISSUES IN INDIAN COMMERCE	100	5	1
BCM 302	COST ACCOUNTING**	100	5	1
BCM 303	COMPANY LAW	100	5	
BCM 304	BUSINESS MATHEMATICS AND STATISTICS **	100	5	1
BCM 305	BANKING AND INSURANCE	100	5	1
BCM 306	GOODS AND SERVICES TAX (GST)**	100	5	1

Semester-IV

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 401	**INTERDISCIPLINARY** SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	100	5	1
BCM 402	ADVANCED ACCOUNTING**	100	5	1
BCM 403	AUDITING AND SECRETARIAL PRACTICE	100	5	1
BCM 404	COST MANAGEMENT**	100	5	1
BCM 405	MARKETING MANAGEMENT	100	5	1
BCM 406	QUANTITATIVE TECHNIQUES AND METHODS**	100	5	1

Semester-V

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T)Per Week***
BCM 501	INCOME TAX LAW**	100	5	1
BCM 502	MANAGEMENT ACCOUNTING**	100	5	1
BCM 503	INDIAN ECONOMY	100	5	1
BCM 504	PRODUCTION AND OPERATION MANAGEMENT	100	5	1
BCM 505	ENTREPRENEURSHIP AND SMALL BUSINESS	100	5	1
BCM 506	FINANCIAL MARKETS AND SERVICES	100	5	1

Semester-VI

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 601	DIRECT TAX LAWS**	100	5	1
BCM 602	FINANCIAL MANAGEMENT	100	5	1
BCM 603	ISSUES IN FINANCIAL REPORTING	100	5	1
BCM 604	SOCIAL AND BUSINESS ETHICS	100	5	1
BCM 605	OPERATIONAL RESEARCH**	100	5	1
BCM 606	SECTORAL ASPECTS OF INDIAN ECONOMY	100	5	1

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./BBA 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/ they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

** the strength of B.Com. unit shall be 70. There will be tutorials only in the papers which have been highlighted with asterisk**.

***Each unit of B.com. will be divided into 3-groups for the purpose of Tutorials.

Scheme of Examination

B.Com. Honours

A student can pursue Honours course in B.Com. by taking up one paper each in four semesters beginning with 3rd semester in any one of the following four streams. Option of any stream once exercised cannot be changed subsequently.

1. Accounting & Finance

1. **BCH 307:** Accounting Theory and Reporting Practices	3rd Semester
2. **BCH 407:** Contemporary Issues in Accounting	4th Semester
3. **BCH 507:**Strategic Financial Management	5th Semester
4. **BCH607:**Investment Management	6th Semester

2. Economics

1. **BCH 308:** Development Economics	3rd Semester
2. **BCH 408:** Industrial Economics	4th Semester
3. **BCH 508:** Money and Banking	5th Semester
4. **BCH 608:** International Economics	6th Semester

3. Management Studies

1. **BCH 309:** Advertising & Brand Management	3rd Semester
2. **BCH 409:** Consumer Behaviour	4th Semester
3. **BCH 509:** Compensation Management	5th Semester
4. **BCH 609:** Training & Development	6th Semester

4. Banking

1. **BCH 310:** Bank Management	3rd Semester
2. **BCH 410:** Bank Legislation	4th Semester
3. **BCH 510:** Electronic Banking and Risk Management	5th Semester
4. **BCH 610:** Bank Marketing	6th Semester

SYLLABI FOR B.COM FOR THE EXAMINATION OF 2019-20 ONWARDS

Note :

1. Examination in each subject for B.Com will be of 3 hours duration.
2. There will be no objective type questions.
3. Students are required to have the knowledge of the developments in the subject up to 6 months before the examination.
4. Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University/College to the examinees.
5. Tutorials classes will be held as notified in the Scheme of Examination for the session 2014-15 and 2015 onwards.
6. The following categories of the students shall be entitled to take the option of History and Culture of Punjab in lieu of Punjabi as compulsory subject:
   (a) Students who have not studied Punjabi up to Class 10^{th}.
   (b) Wards of defence personnel and Central government employee/employees, who are transferable on all India basis.
   (c) Foreigners.
7. 20% marks in each paper will be internal assessment based on the following parameters:

a.	Mid-Semester Test	:	50%
b.	Academic Activity (Seminar, Project &Assignments)	:	30%
c.	Attendance	:	20%

INSTRUCTIONS FOR THE PAPER SETTERS

Note : The question paper of each subject covering the entire course shall be divided into three sections :

Section A (20 marks)
This section will have 6 short answer questions from the entire syllabus. Students are required to attempt 4 questions from this section. Each question will carry 5 marks; the total weightage being 20 marks.

Section B (30 marks)
This section will consist of essay type/numerical questions from Unit I of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Section C (30 marks)
This section will consist of essay type/numerical questions from Unit II of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Important Note : In all numerical papers the paper setter is required to set numerical questions as follows:

Section A :	Four numerical questions out of six questions.
Section B and C:	At least two numerical questions out of four questions.

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

SEMESTER-I

BCM101 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Essay Writing on National and International Problems.	10 marks
3.	Translation of Business Advertisement from English to Punjabi	05 marks
4.	Correct-Incorrect words	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi,
   Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 1 to 6
2. List of words of Business Vocabulary attached (A to H)

Themes and Units:

1.	Two questions from the book **Galiey Chikkarh Door Ghar** (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2×4=08 marks
3.	Essay (1 out of 4) (National and International Problems)	10 marks
4.	Translation of Business Advertisement from English to Punjabi	05 marks
5.	Correct-Incorrect words (5 words out of 8)	05 marks
6.	Business Vocabulary (5 words out of 8)	05 marks

ਬੀ.ਕਾਮ. ਭਾਗ ਪਹਿਲਾ
ਸਮੈਸਟਰ ਪਹਿਲਾ

Business Vocabulary

1.	Acceptance	ਪ੍ਰਵਾਨਗੀ, ਸਵੀਕ੍ਰਿਤੀ
2.	Access	ਪਹੁੰਚ
3.	Account	ਲੇਖਾ
4.	Accountant	ਲੇਖਾਕਾਰ
5.	Account Book	ਵਹੀ ਖਾਤਾ
6.	Acknowledgement	ਪਹੁੰਚ ਰਸੀਦ
7.	Advance	ਪੇ□ਗੀ
8.	Alternative Cost	ਵਿਕਲਪੀ ਲਾਗਤ
9.	Amalgamation	ਸੰਮਿ□ਰਣ
10.	Amortization of Debts	ਕਰ□ਆਂ ਦਾ ਕਿ□ਤਵਾਰ ਭੁਗਤਾਨ
11.	Amortization of fixed Assets	ਅਚਲ ਸੰਪਤੀ ਦੀ ਕਿ□ਤਵਾਰ ਪੂਰਤੀ
12.	Annuity	ਵਾਰ□ਕੀ
13.	Anticipated Prices	ਅਨੁਮਾਨਿਤ ਕੀਮਤਾਂ
14.	Arbitration	ਸਾਲਸੀ, ਵਿਚੋਲਗੀ
15.	Assessed Tax	ਨਿਰਧਾਰਤ ਕਰ
16.	Assets	ਸੰਪਤੀ
17.	Assets and Liabilities	ਲੈਣਦਾਰੀਆਂ ਅਤੇ ਦੇਣਦਾਰੀਆਂ
18.	Authorized Capital	ਅਧਿਕਾਰਿਤ ਪੂੰਜੀ
19.	Audit	ਲੇਖਾ ਪੜਤਾਲ
20.	Audit Staff	ਲੇਖਾ ਪੜਤਾਲ ਅਮਲਾ
21.	Average	ਔਸਤ
22.	Average Productivity	ਔਸਤ ਉਤਪਾਦਕਤਾ
23.	Average Income	ਔਸਤ ਆਮਦਨ
24.	Back Log	ਪਿਛਲਾ ਬਕਾਇਆ
25.	Balance Sheet	□□ ਸਾਰਣੀ
26.	Bankrupt	ਦਿਵਾਲੀਆ
27.	Barter	ਵਸਤ ਵਟਾਂਦਰਾ
28.	Beneficial	ਲਾਭਦਾਇਕ
29.	Bilateral Agreement	ਦੋ ਧਿਰੀ ਸਮਝੌਤਾ
30.	Bill of Exchange	ਹੁੰਡੀ
31.	Bond	ਰਿਣ-ਪੱਤਰ
32.	Book Value	ਕਿਤਾਬੀ ਮੁੱਲ
33.	Book Keeping	ਵਹੀ ਖਾਤਾ
34.	Break-Even Point	ਸਮਾਨ ਬਿੰਦੂ
35.	Breach of Trust	ਅਮਾਨਤ ਵਿਚ ਿ□ਆਨਤ
36.	Broker	ਦਲਾਲ

37.	Capital Account	ਪੂੰਜੀਗਤ ਖਾਤਾ
38.	Capital Expenditure	ਪੂੰਜੀ ਰੂਪ ਖਰਚ
39.	Capital Formation	ਪੂੰਜੀ ਨਿਰਮਾਣ
40.	Capital Investment	ਪੂੰਜੀ ਨਿਵੇ□
41.	Capital Gains	ਪੂੰਜੀ ਰੂਪ ਲਾਭ
42.	Capital Goods	ਪੂੰਜੀ ਰੂਪ ਵਸਤਾਂ
43.	Cash Account	ਰੋਕੜ ਖਾਤਾ
44.	Cash Balance	ਨਕਦ ਬਕਾਇਆ
45.	Cash Book	ਰੋਕੜ ਵਹੀ
46.	Census	ਜਨਗਣਨਾ
47.	Circulating Capital	ਮਾਰਕੀਟ ਵਿਚ ਲੱਗੀ ਪੂੰਜੀ
48.	Commerce	ਕਾਮਰਸ, ਵਣਜ, ਵਪਾਰ
49.	Commercial Capital	ਵਣਜੀ ਪੂੰਜੀ
50.	Commodity	ਉਪਭੋਗਤਾ ਵਸਤ
51.	Company	ਕੰਪਨੀ
52.	Competition	ਪ੍ਰਤੀਯੋਗਤਾ
53.	Corporation	ਨਿਗਮ
54.	Cost Account	ਲਾਗਤ ਲੇਖਾ
55.	Cost of Production	ਉਤਪਾਦਨ ਦੀ ਲਾਗਤ
56.	Current Account	ਚਾਲੂ ਖਾਤਾ
57.	Current Liabilities	ਚਲੰਤ ਦੇਣਦਾਰੀਆਂ
58.	Debenture	ਰਿਣ ਪੱਤਰ
59.	Debt Management	ਰਿਣ-ਪ੍ਰਬੰਧ
60.	deduct	ਕਟੌਤੀ
61.	Deferred Payment	ਸਥਗਿਤ ਭੁਗਤਾਨ
62.	Deflation	ਮੁੱਦਰਾ ਵਿਸਫੀਤੀ
63.	Demand for payment	ਅਦਾਇਗੀ ਲਈ ਮੰਗ
64.	Demonstration Effect	ਪ੍ਰਦਰ□ਨੀ ਪ੍ਰਭਾਵ
65.	Depreciation	ਮੁੱਲ ਘਟਾਈ
66.	Depression	ਆਰਥਿਕ ਮੰਦਾ
67.	Devaluation	ਕਰੰਸੀ ਦਾ ਅਵਮੂਲਣ
68.	Discount Rate	ਕਟੌਤੀ ਦਰ
69.	Disinvestment	ਵਿਨਿਵੇ□
70.	Dividend	ਲਾਭ-ਅੰ□
71.	Distribution	ਵਿਤਰਣ
72.	Documentary proof	ਦਸਤਾਵੇ□ੀ ਸਬੂਤ
73.	Double Entry	ਦੂਹਰਾ ਇੰਦਰਾਜ
74.	Draftsman	ਨਕ□ਾ ਨਵੀਸ
75.	Economic Indicator	ਆਰਥਿਕ ਸੂਚਕ

76.	Entrepreneur	ਉੱਦਮੀ
77.	Excise Duty	ਉਤਪਾਦਨ ਕਰ
78.	Export Tax	ਨਿਰਯਾਤ ਕਰ
79.	Expenditure	ਖਰਚ
80.	Fair Trade	ਉਚਿਤ ਵਪਾਰ
81.	Finance	ਵਿੱਤ
82.	Finance affairs	ਵਿੱਤੀ ਮਾਮਲੇ
83.	Financial Penalty	ਵਿੱਤੀ ਦੰਡ
84.	Fine Paper	ਉੱਤਮ ਹੁੰਡੀ
85.	Firm	ਫਰਮ
86.	Firm Offer	ਪੱਕੀ ਪੇ□ਕ□
87.	Fiscal Policy	ਵਿੱਤੀ ਨੀਤੀ
88.	Fiscal Year	ਵਿੱਤੀ ਸਾਲ
89.	Fixed Capital	ਸਥਾਈ ਪੂੰਜੀ
90.	Fixed Costs	ਸਥਾਈ ਖਰਚੇ
91.	Floatation	ਕਰ□ਾ ਚਾਲੂ ਕਰਨਾ
92.	Foreign Exchange	ਵਿਦੇ□ੀ ਮੁੱਦਰਾ
93.	Fringe Benefits	ਉਪਰਲੇ ਲਾਭ
94.	Glut	ਭਰਮਾਰ
95.	Goods Account	ਮਾਲ ਲੇਖਾ
96.	Gross Profit	ਕੁੱਲ ਲਾਭ
97.	Hidden Tax	ਲੁਪਤ ਕਰ
98.	Hoarding	□ਖੀਰਾਬਾ□ੀ
99.	Holding Company	ਨਿਯੰਤਰਕ ਕੰਪਨੀ
100.	Human Capital	ਮਨੁੱਖੀ ਪੂੰਜੀ

BCM101 B HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur and its impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. and Das, :A Social, Cultural and Economic History of India, Vol. II, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

BCM 102: ENGLISH AND BUSINESS COMMUNICATION SKILLS

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens,** ed., K.A. Kalia (Oxford University Press), The relevant sections, however, are as follows:

I.	The Model Millionaire	: *Oscar Wilde*
II.	The Gift of the Magi	: *O. Henry*
III.	The Judgement-seat of Vikramaditya	: *Sister Nivedita*
IV.	Fur	: *Saki*
V.	A. Marriage Proposal	: *Anton Chekhov*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end. Unit II shall consist of the following sub-units:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: Letters of all kinds, tender notices, auction notices, public notices; memos and advertisements relating to sales/marketing.

Practical Work: To impart the skills of Personal Interview and public speaking like Declamation and Debate.

Practical Work:

There will be viva-voce examination of 10 marks which will include Debate, Declamation and Personal Interview.

Note : *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 Marks
Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, be based upon the prescribed text **Ten Mighty Pens.**	10 Marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q. 3.	It shall consist of an Unseen Passage for Comprehension (not more than 300 words), with minimum five questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 Marks
Q. 4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 Marks
Section II *(Based upon Unit II)*		
Q. 5.	This question shall test a students' ability to write business letter of various kinds (in not more than 250 words). There will be Internal Choice in the question.	10 Marks
Q. 6.	This question shall be on Memos, Tender Notices/Auction Notices/Public Notices/ Advertisements.(have to attempt four of 5 marks each)	20 Marks 5x4=20
Q.7.	Two short questions to test the students' understanding of various aspects of business communication.	10 Marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *Textbook of Business Communication,* Anjali Kalkar, R.B. Suryawanshi, Amlanjyoti Sengupta,, Hyderbad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM103: PSYCHOLOGY FOR MANAGERS

Objective: The objective of the paper is to provide broad understanding about basic concepts and techniques of human behaviour to the students.

UNIT- I

Introduction: Concepts, Definitions; Need and Importance of Organisational Behaviour for Managers, Contributing Disciplines of OB. Nature and Scope, Organisational Behaviour Models.

Individual Behaviour: Introduction and Meaning, Factors Affecting Individual Behaviour, Models of Individual Behaviour

Personality: Meaning, Characteristics, Determinants and Theories of Personality

Perception: Nature & Importance, Perception Process, Perceptual Selectivity, Perceptual Organization, Perpetual Errors and Distortions.

Attitudes and Values: Components, Sources and Measurement of Attitudes. Concept, Sources and Types of Values.

UNIT II:

Motivation: Meaning and Importance of Motivation, Theories of Motivation, Morale.

Inter Personal Behaviour and Transactional Analysis (TA).

Leadership: Definition, Importance, Leadership Styles, Models and Theories of Leadership .

Stress Management: Concept, Sources of Stress, Work Stressors, Consequences, Prevention and Management of Stress.

Conflict Management: Traditional vis-a-vis Modern View of Conflict, Types and Causes of Conflict, Conflict Resolution.

Reference books:

1. Robbins, Stephens P., Organisational Behaviour
2. French, W and C. Bell, Organisational Development
3. Davis, Keith, Human Behaviour at Work: Organisational Behaviour
4. Luthans, Fred, Organisational Behaviour
5. Harold Weihrich, Koontz, Essentials of Management
6. Robbins, Stephens P., Organisational Behaviour Concepts, controversies and Applications.

BCM 104: BUSINESS ECONOMICS-I

Objective: To study the basic concepts of microeconomics relevant for Business decision making and helping the students to understand the application of economic principles in business management

UNIT – I

Consumer Behaviour

Utility Approach: Meaning, Types, Relationship between Marginal Utility and Total Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium, Derivation of Demand Curve.

Indifference Curve Approach: Properties, Consumer Equilibrium, Price Effect, Income Effect, Substitution Effect, Price Effect a combination of Income Effect and Substitution Effect.

Law of Demand

Elasticity of Demand: Definitions, Types, Measurement, Factors and Importance.

Demand Forecasting

UNIT-II

Production and Revenue

Production Function : Laws of Returns, Law of Variable Proportion and Returns to Scale.

Cost and Cost Curves : Concept of Nominal Real Economic Implicit, Explicit and Opportunity Cost, Cost Curve under Short-run and Long-run, Relationship between Average Cost and Marginal Cost.

Revenue Curves : Concept of Total Average and Marginal Revenue under different Market Conditions, Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Perfect Competition: Features, Equilibrium of Firm, Equilibrium of Industry, Role of Time element in Price Determination.

Monopoly: Feature, Equilibrium of Firm/Industry, Price Discrimination and Its Types.

Monopolistic Combination: Features, Price-Output Policy of the Firm. Selling Cost, Meaning, Effects, Equilibrium of Firm with respect to Selling Cost.

Oligopoly: Features, Price Leadership, Collusive Oligopoly, Kinky Demand Curve Analysis

Reference books:

1. Dwivedi, D.N. Managerial Economics, 7th Edition, Vikas Publishing House.
2. Salvatore, D. Managerial Economics in a Global Economy, 6th Edition, Oxford University Press.
3. Peterson, L. and Jain Managerial Eco., 4th Edition, Pearson Education.
4. A. Kontsoyianis; Modern Micro-Economics.
5. M. Adhikary ; Business Economics.

BCM 105: PRINCIPLES OF FINANCIAL ACOUNTING

Objective: The objective of this paper is to help students to acquire conceptual knowledge of financial accounting and to impart skills for recording various kinds of business transactions.

UNIT – I

Generally Accepted Accounting Principles (GAAP): Accounting Concepts and Conventions: their Nature, Purposes and Limitations. Financial Accounting Standards: Transition from IAS to IFRS.

Financial Statements of Sole Proprietor and Partnership Firm (with adjustments): Income Statement, Balance Sheet

Branch Accounting: Dependent and Independent Branches (Excluding Foreign Branches).

Departmental Accounting: Meaning, Needs, Advantages, Apportionment of Expenses, Inter Departmental Transfers and Provision for Unrealised Profit.

UNIT – II

Accounting for Consignment.

Accounting for Joint Venture.

Accounting for Dissolution of Partnership Firm; Insolvency of Partners(excluding Sale to a Company) and Piecemeal Distribution.

Royalty Accounts

Practical work:

1 . Preparation of List of Accounting Standards and IFRS.

2. Comparison of US GAPP with Indian Accounting Standards.

Reference books:

1. Shukla and Grewal – Advanced Accounting, S. Chand Publication, New Delhi.
2. R.L. Gupta and V.K. Gupta - Advanced Accounting, Sultan Chand Publication, New Delhi.
3. T.S. Reddy & A. Murthy – Financial Accounting, Margham Publications, Chennai.
4. P.C. Tulsian – Financial Accounting, S.Chand and Sons.

BCM 106: COMMERCIAL LAW

Objective: The main objective of the paper is to acquaint the students with general Commercial Laws.

UNIT I

Indian Contract Act, 1872: Definition & Nature of Contract, Classification; Offer & Acceptance; Consideration; Capacity of Parties; Free Consent; Legality of Objectives; Void Agreements; Performance of Contracts; Discharge of Contract; Contingent Contracts; Quasi Contracts; Remedies for Breach of Contract.

UNIT II

Special Contracts: Indemnity & Guarantee; Bailment & Pledge; Contract of Agency.

Right to Information Act, 2005: Definitions, Right to Information & Obligations of Public Authorities, The Central & State Information Commission, Power & Functions of the Information Commissions, Appeal & Penalties.

The Consumer Protection Act, 1986: Introduction, Objectives Commencement & Application, Definitions, Salient Features, Grievance Redressal Machinery.

Reference books:

1. Avtar Singh : The Principles of Mercantile Law
2. M.C. Kuchhal : Business Law
3. N.D. Kapoor : Business Law
4. P.R. Chandra : Business Law, Galgotia, New Delhi
5. Gogna : Mercantile Law, S. Chand
6. M.S. Shukla : Business Law, Sultan Chand.

BCM 107: PRINCIPLES AND PRACTICES OF MANAGEMENT

Objective: The objective of the paper is to help the students in understanding the process of business management and its functions.

UNIT I

Management: Nature, Definitions, Scope, Levels, Process and Significance of Management. Development of Management Thoughts: Classical, Neo-Classical Systems, Contingency and Contemporary Approaches to Management (Drucker, Porter, Prahalad, Senge and Tom Peters)

Planning: Concept, Process, Nature, Steps in Planning, Significance and Types. Decision Making: Concept and Process, Types of Decisions, Management By Objectives (MBO).

Organization: Concept, Nature, Process, Significance, Types, Organisational Structure, Committees, Span of Control. Authority and Responsibility. Delegation, Decentralization and Departmentation.

UNIT II

Direction: Concept, Features, Importance and Limitations of Direction. Elements of Direction- Supervision, Motivation, Leadership and Communication

Coordination: Concept, Features, Importance and Limitations of Coordination. Internal and External Coordination

Control: Concept, Features, Importance and Limitations of Control. Control Process. Essentials of a Good Control System. Techniques of Control. Relationship between Planning and Control

Reference books:

1. Peter F. Drucker, 'The Practice of Management'
2. Weihrich and Koontz, 'Essentials of Management'
3. Stoner and Freeman, 'Management'
4. David R Hampton, 'Modern Management'
5. Stephen P Robbins, David A DeCenzo, 'Fundamentals of Management, Essential Concepts and Applications'

SEMESTER-II

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

BCM201 A: PUNJABI

Max. Marks : 50 marks.
Written : 45 marks.
Internal Assessment : 05 marks.
Time : 3 hrs.

1.	A Book of Punjabi.	20 marks
2.	Business Correspondence : Letters	10 marks
3.	Punctuation	05 marks
4.	Business Advertisement	05 marks
5.	Business Vocabulary	05 marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi, Publishers: Kasturi Lal & Sons, Amritsar-Jalandhar.
   Chapters 7 to 12.
2. List of words of Business Vocabulary attached (I to Z)

Themes and Units:

1.	Two questions from the book Galiey Chikkarh Door Ghar. (With internal choice)	6+6=12 marks
2.	Short answer question (4 out of 6)	2 x 4=08 marks
3.	Business Correspondence : Letters	10 marks
4.	Punctuation	05 marks
5.	Business Advertisement (Punjabi)	05 marks
6.	Business Vocabulary	05 marks

Suggested Readings
Punjabi Viyakaran by Dr. Harkirat Singh, Punjab State University Text-book Board, Chandigarh.

ਬੀ.ਕਾਮ. ਭਾਗ ਪਹਿਲਾ
ਸਮੈਸਟਰ ਦੂਜਾ

Business Vocabulary

1.	Imperfect Market	ਅਪੂਰਣ ਮੰਡੀ
2.	Imports	ਆਯਾਤ
3.	Import Duty	ਆਯਾਤ ਕਰ
4.	Imputed Income	ਆਰੋਪਿਤ ਆਮਦਨ
5.	Imprest Account	ਸਰਕਾਰੀ ਪੇ□ਗੀ ਲੇਖਾ
6.	Income Statement	ਆਮਦਨ ਚਿੱਠਾ
7.	Index of Profit	ਲਾਭ ਸੂਚਕ
8.	Income Tax	ਆਮਦਨ ਕਰ
9.	Inflation	ਮੁਦਰਾ ਸਫੀਤੀ
10.	Intangible Assets	ਅਸਥੂਲ ਲੈਣਦਾਰੀਆਂ
11.	Investment	ਨਿਵੇ□
12.	Invoice	ਬੀਚਕ
13.	Jobber	ਸਟਾਕ ਆੜ੍ਹਤੀ
14.	Job Casting	ਲਾਗਤ ਨਿਰਧਾਰਣ
15.	Joint Venture	ਸਾਂਝਾ ਉੱਦਮ
16.	Labour	ਕਿਰਤ
17.	Laissez Fair	ਖੁੱਲ੍ਹੀ ਵਿਵਸਥਾ
18.	Lease Holding Building and Property	ਪੱਟੇ]ਤੇ ਇਮਾਰਤ ਅਤੇ ਜਾਇਦਾਦ
19.	Ledger	□ਾਤਾ
20.	Ledger Folio	ਖਾਤਾ ਪੰਨਾ
21.	Liabilities	ਦੇਣਦਾਰੀਆਂ
22.	Liquidator	ਨਿਰਧਾਰਕ
23.	Market	ਮੰਡੀ
24.	Marketable Goods	ਵਿਕਣਯੋਗ ਵਸਤਾਂ
25.	Mechanization	ਮ□ੀਨੀਕਰਨ
26.	Mercantilism	ਵਪਾਰਵਾਦ
27.	Monetary System	ਮੁੱਦਰਾ ਪ੍ਰਬੰਧ
28.	Money of Account	ਲੇਖੇ ਦੀ ਮੁੱਦਰਾ
29.	Monopoly	ਏਕਾਧਿਕਾਰ
30.	Mortgage	ਰਹਿਣ, ਗਿਰਵੀ
31.	Net Investment	ਨਿਰੋਲ ਨਿਵੇ□
32.	Net Profit	ਨਿਰੋਲ ਲਾਭ
33.	Notice of Stoppage	ਰੋਕ ਸੂਚਨਾ
34.	Office Expenses Account	ਦ□ਤਰੀ □ਰਚ ਲੇਖਾ
35.	Open Market Operations	ਖੁੱਲ੍ਹਾ ਮੰਡੀ ਵਿਹਾਰ

36.	Over Due	ਮਿਆਦ ਪੁੱਗੀ
37.	Over Head Cost	ਬੱਝੀ ਲਾਗਤ
38.	Partnership	ਹਿੱਸੇਦਾਰੀ, ਸਾਂਝੀਦਾਰੀ
39.	Payable Accounts	ਦੇਣਯੋਗ ਲੇਖੇ
40.	Preference Shares	ਤਰਜੀਹੀ ਹਿੱਸੇ
41.	Premium	ਪ੍ਰੀਮੀਅਮ
42.	Price Control	ਕੀਮਤ ਨਿਯੰਤਰਣ
43.	Production	ਉਤਪਾਦਨ
44.	Profit Margin	ਲਾਭ ਅੰ□
45.	Proprietor	ਸੰਪਤੀ ਮਾਲਕ
46.	Quasi Negotiable Instrument	ਅਰਧ ਵਿੱਕਰੀਯੋਗ ਹੁੰਡੀ
47.	Quotation	ਮੁੱਲ ਸੂਚੀ
48.	Rate of Exchange	ਵਟਾਂਦਰਾ ਦਰ
49.	Ready Delivery	ਤਿਆਰ ਮਾਲ
50.	Real Wages	ਵਾਸਤਵਿਕ ਮਜਦੂਰੀ
51.	Rebate	ਛੋਟ, ਕਟੌਤੀ
52.	Recession	ਆਰਥਿਕ ਮੰਦੀ ਦਾ ਦੌਰ
53.	Receivable Accounts	ਲੈਣਯੋਗ ਲੇਖੇ
54.	Redemption of Mortgage	ਰਹਿਣ ਛੁਡਾਉਣਾ
55.	Receipts and Payment Account	ਪ੍ਰਾਪਤੀ ਅਤੇ ਅਦਾਇਗੀ ਲੇਖਾ
56.	Rent	ਕਿਰਾਇਆ
57.	Rent Account	ਲਗਾਨ ਲੇਖਾ, ਕਿਰਾਇਆ ਲੇਖਾ
58.	Reserve Price	ਰਾਖਵੀਂ ਕੀਮਤ
59.	Revenue	ਆਮਦਨ
60.	Sales Tax	ਵਿੱਕਰੀ ਕਰ
61.	Sales Transfer Order	ਵਿੱਕਰੀ ਇੰਤਕਾਲ ਹੁਕਮ
62.	Security Bond	ਜਮਾਨਤਨਾਮਾ
63.	Service Goods	ਸੇਵਾ ਵਸਤਾਂ
64.	Shares	□ਅਰ, ਹਿੱਸੇ
65.	Share Capital	□ਅਰ ਪੂੰਜੀ
66.	Share Holder	ਹਿੱਸੇਦਾਰ
67.	Share Market	□ਅਰ ਬਾਜਾਰ
68.	Short Bills	ਅਲਪਕਾਲੀ ਹੁੰਡੀਆਂ
69.	Slump	ਮੰਦਾ
70.	Sole Proprietorship	ਏਕਲ ਮਾਲਕੀ
71.	Speculation	ਸੱਟਾ ਅਨੁਮਾਨ
72.	Statutory Company	ਕਾਨੂੰਨ ਅਧੀਨ ਸਥਾਪਿਤ ਕੰਪਨੀ
73.	Stipulated	ਨਿ□ਚਿਤ ਕੀਤਾ
74.	Stock	ਭੰਡਾਰ, ਸਟਾਕ

75.	Stock Exchange	□ਅਰ ਬਾਜਾਰ
76.	Subsidiary Company	ਸਹਾਇਕ ਕੰਪਨੀ
77.	Surety	□ਾਮਨ
78.	Tariff	ਦਰ ਸੂਚੀ
79.	Tax Exemption	ਕਰ ਛੋਟ
80.	Tax Base	ਕਰ ਆਧਾਰ
81.	Tax Evasion	ਕਰ ਚੋਰੀ
82.	Tax Equity	ਕਰ ਸਮਨੀਤੀ
83.	Tender	ਟੈਂਡਰ
84.	Tender money	ਟੈਂਡਰ ਦੀ ਰਕਮ
85.	Terms of Payment	ਭੁਗਤਾਨ ਦੀਆਂ □ਰਤਾਂ
86.	Terms of Trade	ਵਪਾਰ ਦੀਆਂ □ਰਤਾਂ
87.	Trademark	ਮਾਰਕਾ
88.	Transactions	ਸੌਦੇ, ਲੈਣ ਦੇਣ
89.	Transfer Book	ਇੰਤਕਾਲ ਖਾਤਾ
90.	Under Value	ਘੱਟ ਮੁੱਲਅੰਕਣ
91.	Unproductive Expenditure	ਅਣ-ਉਪਜਾਊ ਖਰਚ
92.	Unproductive Labour	ਅਣ-ਉਪਜਾਊ ਕਿਰਤ
93.	Validity Period	ਪ੍ਰਮਾਣਿਤ ਮਿਆਦ
94.	Vertical Integration	ਸਮਰੂਪ ਸੰਘਟਨ
95.	Wages	ਮਜਦੂਰੀ
96.	Wages Account	ਉਜਰਤ ਲੇਖਾ
97.	Wage Goods	ਮਜਦੂਰੀ ਵਸਤਾਂ
98.	Wage Book	ਉਜਰਤ ਵਹੀ
99.	Wharf age	ਉਤਰਾਈ
100.	Write Off	ਵੱਟੇ ਖਾਤੇ ਪਾਉਣਾ
101.	Working Capital	ਚਲੰਤ ਪੂੰਜੀ
102.	Yield	ਉਪਜ
103.	Zero Rate of Interest	ਵਿਆਜ ਦੀ □ਰੋ ਦਰ

Semester II

BCM201 B HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab; Board of Administration
2. Western Education: Growth of Education and rise of middle classes
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of print Technology; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising of 1907; Ghadar Movement .
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas. Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries -Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP (Physical geographical map of undivided punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cultural and Economic History of India, Vol.II, And Das, M.N. Macmillan, delhi, 1974.

BCM 202 : ENGLISH AND BUSINESS COMUNICATION

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is 100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens** Issues ed. K.A. Kalia (Oxford University Press).

The relevant sections, however, are as follows:

I. Chandalika: *Rabindranath Tagore*
II. A Bachelor's Complaint of the Behaviour of Married People: *Charles Lamb*
III. El Dorado: *R.L. Stevenson*
IV. Bores : *E.V. Lucas*
V. The Art of the Essayist : *A.C. Benson*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end, Unit II shall consist of the following sub-units:

Writing Skills: This section shall focus on business précis-writing, curriculum vitae; short formal reports (not exceeding 200 words).

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of e-mails, Fax Messages, Teleconferencing, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for Group Discussion etc.

Practical Work: To impart skills of Group Discussion.

Practical Work: There will be viva-voce examination of 10 marks which will include Group Discussion. The students will appear in the group of 10 students for viva-voce.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 80 will be proportionately increased out of 100.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Section I *(It is text-based and corresponds to Unit I in the syllabus)*

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 marks

Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, and be based upon the prescribed text **Ten Mighty Pens.**	10 marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q.3.	It shall consist of **an Unseen Passage for Comprehension** (not more than 300 words), with minimum six questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 marks
Q.4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 marks
Section II *(Based upon Unit II)*		
Q.5.	The students shall be asked to write a short survey report on a situation, incident, business problem, or the possibility of starting a new commercial venture (in about 150-200 words). The students shall be given an internal choice in this question.	10 marks
Q.6.	This will test the students' ability to write a Précis. A passage of about 200 words shall be given and the students shall have to write a précis of about 70 words (including the title).	10 marks
Q.7.	Definition/format of Modern forms of communication to be tested- Listening - Non verbal communication, e-mail, fax, teleconferencing etc.	10 marks
Q.8.	Curriculum Vitae	10 marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM 203: E- COMMERCE

Objective: The objective of this paper is to provide fundamental knowledge to the students about E-Commerce so that they can better perform in any area of operation and can excel in the field of commerce with IT specialization.

UNIT I

Electronic Commerce Framework, History, Basics and Tools of E-Commerce, Comparison of Web-based with Traditional Business; Growth of E-Commerce – Present and potential.

E-Business : Meaning, Importance, Models Based on the Relationships of Transacting Parties (B2B, B2C, C2C and C2B), Present Status of E-Commerce in India, Regulatory Aspects of E-Commerce.

UNIT II

Changing Structure of Organisation – The Impact of E-Commerce on Various Business Sectors such as Entertainment, Education, Health Services, Publishing and Financial Services. Socio-Economic Impacts of E-Commerce.

Electronic Payment System: Types of Payment System — E-Cash and Currency Servers, E-Cheques, Credit Cards, Smart Cards, Electronic Purses and Debit Cards. Electronic Data Interchange, Digital Signatures, Cryptography, Interoperatibility and Intercompatibility.

Reference books:

1. Diwan, Prag and Sushil Sharma: Electronic Commerce, A Manager's Guide to E,Business Vanity Books International, Delhi.
2. Kalakota, Ravi and Shinston Andrew B: Frontiers of Eletronic Commerce, Addision Wesley.
3. Minoli and Minoli: Web Commerce Technology Handbook, Tata McGraw Hill, New Delhi.
4. Schneider, Gray P.: Electronic Commerce, Course Technology, Delhi.

BCM 204: BUSINESS ECONOMICS-II

Objective: The paper aims at providing the knowledge of basic concepts of the distribution and modern tools of macro-economic analysis.

UNIT-I

Distribution

Wages : Meaning, Types, Marginal Productivity Theory of Wages, Modern Theory of Wages.
Rent: Meaning ,Types, Ricardian Theory of Rent, Modern Theory of Rent, Quasi- Rent.
Interest: Meaning, Types, Classical Theory of Interest, Neo-Classical Theory of Interest, Liquidity Preference Theory of Interest.
Profits: Nature, Types, Dynamic Theory of Profits, Innovation Theory of Profits, Risks Bearing Theory of Profit, Uncertainty Bearing Theory of Profits.
National Income: Meaning, Concepts of National Income, Measurement of National Income, Difficulties in Its Measurements, Its Significance.

UNIT- II

Say's Law of Market: Meaning, Implications,
Classical Theory of Income Output and Employment:
Keynesian Theory of Employment.
Effective Demand: Determination, Importance
Consumption Function: Meaning, Factors Influencing Consumption Function, Average and Marginal Propensities to Consume, Propensity to Save, Psychological Law of Consumption and its Importance.
Marginal Efficiency of Capital: Meaning, Determinants, Theory of Secular Stagnation.
Investment: Meaning, Types, Factors Affecting Investment, Importance of Investment, Measures to Raise Private Investment.
Multiplier: Meaning, Keynesian Income or Investment Multiplier, Leakages, Uses, Limitations of Multiplier, Multiplier and Under-Developed Countries.

Reference books:

1.Shapiro. E	Macroeconomic analysis Galotia publications, New Delhi.
2.Eugene Diulio	Macro economics, 4th Edition, Tata McGraw Hills, Publishing Col. Ltd, New Delhi.
3.Dornbusch R, Fisher, S and Startz, R	Macro Economics, 8th Edition, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
4.Ackley,G.	Macroeconomics: Theory and Policy, Macmillan, New York

BCM 205: CORPORATE ACCOUNTING

Objective: To provide knowledge about basic corporate accounting with the relevant accounting standards.

UNIT 1

Issue, Forfeiture, Reissue and Buy-Back of Shares,

Redemption of Preference Shares.

Right Issue and Bonus Shares.

Final Accounts of Companies (including Managerial Remuneration & Profit Prior to Incorporation),

UNIT II

Underwriting of Shares and Debentures.

Issue and Redemption of Debentures.

Accounts of Banking Companies

Accounts of Insurance Companies.

Note : Accounting Standards are to be covered along with topics.

Practical Work:

1. Preparation of Final Accounts of Companies and critical evaluation.
2. Comparison of annual reports of companies and disclosures norms.

Reference books:

1. R.L. Gupta and M. Radhaswamy – Advanced accounts – Sultan Chand.
2. Shukla Garewal and Gupta – Advanced accounts – S.Chand, New Delhi.
3. D. Chanderbose – Advanced Accounting, Vol. I, PHI Learning Pvt. Ltd.
4. T.S. Reddy and A. Murthy – Corporate Accounting, Margham Publications, Chennai.

BCM 206: BUSINESS LAWS

Objective: The main objective of the paper is to acquaint the students about Business Laws.

UNIT– I

Sale of Goods Act, 1930: Contract of Sale of Goods, Conditions & Warranties; Transfer of Ownership; Performance of the Contract: Remedial Measures; Auctionable Claims.

Negotiable Instruments Act, 1881: Definition, Acceptance and Negotiation, Rights and Liabilities of Parties, Dishonor of Negotiable Instrument, Hundis, Bankers and Customers.

UNIT- II

Factories Act, 1948: Objectives; Definitions; Approval; Licensing & Registration of Factories; The Inspecting Staff Health; Safety Welfare; Working Hours of Adults; Employment of Women; Child Labour – Issues and Challenges; Leave with Wages; Penalties & Procedure Supplemental.

The Industrial Disputes Act, 1947: Scope & Object; Definitions; Authorities; Notice of Change; Reference of Disputes; Procedure; Powers & Duties of Authorities; Award & Settlement; Strikes & Lockouts; Lay-off & Retrenchment etc.

Reference books:

1. Malik, K.L., Industrial Laws and Labour Laws, Eastern Book Company, Lucknow.
2. Kumar, H.L., Digest of Labour Cases, Universal Law Publishing Co P Ltd, New Delhi
3. Srivastava, S.C., Industrial Relations &Labour Laws, Vikas Publishing House (P) Ltd.
4. Sharma, J.P., Simplified Approach to Labour Laws, Bharat Law House (P) Ltd., New Delhi.
5. Sharma, J.P., Industrial Laws, Taxmann, New Delhi.

BCM 207: HUMAN RESOURCE MANAGEMENT

Objective: The objective of the paper is to familiarize the students with the different aspects of managing human resource in the organization.

UNIT – I

Human Resource Management: Introduction, Meaning and Definitions, Brief History, Nature, Functions, Importance and Limitations of HRM. Contemporary Challenges in HRM.

Human Resource Planning; Introduction, Definitions, Features, Need for HR Planning, Objectives, Process, Factors affecting HR Planning, Types, Benefits, Problems in HR Planning and Way for Effective HR Planning.

Job Analysis and Job Design: Introduction, Objectives, Benefits, Process, Techniques and Problems in Job Analysis. Job Design- Meaning, Objectives and Techniques of Job Design.

Recruitment and Selection: Meaning and Definitions, Importance and Purpose, Process, Factors Affecting Recruitment, Sources of Recruitment, Methods, Constraints and Challenges of Recruitment. Recent Trends in Recruitment. Selection: Meaning and Definition, Selection Process and Methods.

Placement and Induction: Meaning and Problems in Placement. Induction: Meaning, Objectives, Contents, Elements, Procedure and Problems in Induction.

UNIT – II

Training and Development: Concepts, Importance, Identification of Training Needs. Types of Training: On the Job and Off the Job Methods of Training. Designing and Evaluation of Training Programmes. Meaning of Development, Difference between Training and Development.

Performance Appraisal: Concept, Objectives, Methods of Performance Appraisal; How to Make it Effective.

Internal Mobility and Transfers: Promotions, Demotions and Other Forms of Separations, Definitions, Purpose, and Basis of Promotions. Transfer: Definitions, Purpose, Types and Transfer Policy.

Compensation Management: Concept, Methods of Wage payments and Incentive Plans, Fringe Benefits.

Reference books:

1. Dessler, Personnel Human Resource Management, Prentice Hall of India.
2. D A DeCenzo and S P Robbins, Personnel/ Human Resource Management, Prentice Hall of India.
3. Ian Beardwell and Len Holden, Human Resource Management, Macmillan.
4. Wendell French, The Personnel Management Process, Houghton Mifflin Co., Boston...
5. M S Saiyadain, Human Resource Management, Tata McGraw

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE

UNIT I (Environment)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food;

uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India**.**

Websites:

(a) **www.chandigarhpolice.nic.in**
(b) **www.punjabpolice.gov.in**
(c) **www.haryanapolice.gov.in**
(d) **www.hppolice.nic.in**

SYLLABUS ON "VIOLENCE AGAINST WOMEN/CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II
Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361

(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/**HRLN**India/a-life-free-from-**violence**
http://hrln.org/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

Unit IV (Drug Abuse)

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.

    - A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) **Concept and overview :** what are drugs? Meaning of use, misuse and abuse of drugs. Misuse of prescription drugs with special emphasis on antibiotics and steroids. Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3, 4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Causes and consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, Public Policies and Programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.
10. NCERT(2010). Training Resource Materials (Adolescence Education Programme)

SEMESTER-III

BCM 301: ISSUES IN INDIAN COMMERCE

Objective: To enable the students to acquire basic knowledge of different issues faced in progress and prospects of commerce in India.

UNIT-I

Foreign Direct Investment: Concept, Historical Perspective, Incentives for Attracting Foreign Capital, Implication for Indian industry, Role of Foreign Investment Promotion Board (FIPB) – Automatic Route and Sectoral Limits, Difference between FDI and Foreign Portfolio Investment (FPI).

"Make in India" An Initiative of Government of India, Objectives, Sectors in Focus and Issues & Challenges ahead.

Technology in Commerce: Features, Impact, Management and Status of Technology and Impact of Technology on Commerce in India.

International Finance: Introduction, Need, Importance, Sources-External Commercial (FCCBs) Borrowings (ECB), American Depository Receipt (ADR), Global Depository Receipt (GDR).

UNIT-II

Infrastructure: Growth of Infrastructure- Energy, Transport and Communication. Public-Private Partnership (PPP) in Infrastructure Development in India, Bottlenecks, Models - Built Operate and Transfer (BOT), Built Operate Levy and Transfer (BOLT), Special Economic Zones (SEZs).

Stock Exchanges in India: Organisation, Nature, Functions, Benefits, Growth, Trading in Stock Markets- Electronic Trading, Listing and Role of SEBI, Commodity Exchanges in India.

Corporate Debt Restructuring: Concept, Importance, Methods, Corporate Scams and Regulatory Authorities-Serious Fraud Investigation Office (SFIO), Investors; Protection in India-Importance, Need, and Initiatives by the Central Government.

Recent Trends in Credit Rating Services in India- Role of ICRA and CRISIL.

Reference books:

1. Indian Economy - Datt and Sundharam, S Chand and Co. New Delhi
2. Indian Economy - M.B. Shukla, Taxman Publication, New Delhi
3. India Transport Report, National Transport Development Committee Report, Routledge, Tolstoy Marg, New Delhi
4. Financial Markets Institutions and Financial Services, C Gomez –Prentice-Hall.
5. Principles of Business Organisation, by Y.K. Bhushan, Sultan Chand & Co, New Delhi
6. Guruswamy. S – Global Financial Institutions, Tata Mcgraw Hills India.
8. Khan – my Indian Financial Systems - Tata Mcgraw Hills India.
9. Website of Make in India

BCM 302: COST ACCOUNTING

Objective: The objective of this paper is to help the students to acquire conceptual knowledge of cost accounting and elements of cost.

UNIT – I

Introduction: Nature, Scope and Advantages of Cost Accounting, Installation of Costing System, Difference between Cost and Financial Accounting, Classification of Costs.

Material: Purchase, Storage and Control of Material, Stock Levels, Inventory, Control Techniques. Methods of Pricing Material Issues.

Labour: Meaning and Components of Labour Cost. Concept, Accounting and Control of Idle time and Overtime. Methods of Wage Payment and Incentive Plans, Labour Turnover .

UNIT – II

Overheads: Collection, Classification, Allocation, Apportionment and Absorption of Overheads (Primary and Secondary Distribution), Machine Hour Rate.

Preparation of Cost Sheet, Operation Costing, Service Costing.

Cost Ledger Accounting, Integral Accounting, Reconciliation of Cost and Financial Accounts.

Practical Work:
Use of software package to obtain cost accounting output like: Analysis of Cost- Centre wise and Element wise, Allocation and Apportionment of Overheads, Preparation of Cost Sheet.

Reference books:

1. Banerjee Bhabatosh: Cost Accounting, Phi Learning
2. Saxena and Vashist: Cost Accounting, Sultan Chand and Sons.
3. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
4. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 303: COMPANY LAW

Objective: The objective of this paper is to help the students understand various provisions of Companies Act 2013.

UNIT - I

Introduction: Characteristics of a Company, Concept of Lifting of Corporate Veil, Emerging Types of Companies.

Formation of Company –Promotion & Registration, Pre-incorporation Contract and Provisional Contracts.

Memorandum of Association, Articles of Association, Doctrine of Constructive Notice, Doctrine of Ultra-Vires, Doctrine of Indoor Management,

Prospectus and Statement in Lieu of Prospectus, Red-Herring Prospectus.

Share Capital – Kinds of Shares, Book Building Process, Information Memorandum, Dematerlisation of Shares, ASBA System, Transfer & Transmission of Shares, Buyback of Shares.

UNIT- II

Members and Shareholders – Their Rights and Duties.

Management – Directors, Classification of Directors, Disqualification, Appointment, Legal Position, Powers and Duties, Disclosures of Interest, Removal of Directors, Board Meetings, Other Managerial Personnel and Remuneration, Digital Signatures of Directors.

Winding Up-Concept and Modes.

Practical Work: Teacher should use Internet and Communication Technology to give students demo regarding procedure of Online Filing of Documents for Registration of Company, obtaining Director Identity Number (DIN), Corporate Identity Number (CIN), etc. Students should be apprised of National Company Law Tribunal (NCLT), Insider Trading, Rating Agencies, etc. Practical Training about Notice of Meeting, Agenda, Quorum, Proxy, Reports, Minutes of Meeting, Resolutions, etc. The teacher should use simulation method and will hold at least One Statutory Meeting, One Annual General Meeting, One Extra-ordinary Meeting and One Board Meeting.

Reference books:

1. Kannal, S., & V.S. Sowrirajan, "*Company Law Procedure*", Taxman's Allied Services (P)Ltd., New Delhi (Latest Edn).
2. Ramaiya, A., "*A Ramaiya's Guide to Companies Act*", Lexis Nexis ButterworthsWadhwa, Nagpur.
3. Singh, Harpal, "*Indian Company Law*", Galgotia Publishing, Delhi.
4. Singh, Avtar, "Company Law", Eastern Book Company, Lucknow

BCM 304: BUSINESS MATHEMATICS AND STATISTICS

Objective: The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions.

UNIT I

Matrices and Determinants: Definition of a Matrix. Types of Matrices; Algebra of Matrices; Properties of Determinants; Calculation of Values of Determinants upto Third Order, Ad-Joint of a Matrix, Elementary Row or Column Operations; Inverse of a Matrix. Solution of a System of Linear Equations having Unique Solution and Involving not More Than Three Variables.

Differentiation –Idea of Simple Derivative of different Functions (excluding trigonometric function).
Maxima and Minima of Functions of One Variable only

UNIT II

Introduction: Statistics as a Subject; Statistical Data: Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data.

Analysis of Univariate Data: Construction of a Frequency Distribution; Concept of Central Tendency and Dispersion-and Their Measures; Measures of Skewness; Concept of Kurtosis.
Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend
Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate); Tests of Adequacy; Chain-Base Index Numbers; Base Shifting, Splicing, and Deflecting; Problems in Constructing Index Numbers; Consumer Price Index.

Practical work: Collection, Classification and Presentation of data using Microsoft Excel

Reference books:

1. Dowling E.T.: Mathematics for Economics; Shaum Series, McGraw Hill, London.
2. Holden: Mathematics for Business and Economics; Macmillan India, New Delhi.
3. Kapoor, V.K.: Business Mathematics; Sultan Chand & Sons, Delhi.
4. Vohra, N.D.: Quantitative Techniques in Management; Tata McGraw Hill, New Delhi.
5. Aczel, Amir D.: Complete Business Statistics, Irwin.
6. Chou-Ya-Lun: Statistical Analysis, Holt, Rinchart and Winslon.
7. Heinz, Kohler: Statistics for Business & Economics, Harper Collins.
8. Levin, Richard I.& David S Rubin: Statistics for Management, Prentice Hall of India, Delhi.

BCM 305: BANKING AND INSURANCE

Objective: To acquaint the students with Indian Banking and Insurance industry.

UNIT – I

Indian Banking System: Introduction, Concept, Types of Banks and Structure of Banking System, Functions of Commercial Banks, The Reserve Bank of India: Management and Structure, Functions of RBI, Monetary Policies and Techniques of Credit Control.

Reforms in Indian Banking: Overview, Recommendations of Narasimham Committee, Verma Panel Report, Basel II Norms, Capital Adequacy Ratio (CAR), Revised NPA Norms- Grievance Mechanism and Banking Ombudsman, Impact of Reforms.

Emerging Trends in Banking: Concept of E-Banking, Mobile Banking, Electronic Fund Transfer- (RTGS & NEFT) and Core Banking. RBI Guidelines on Internet Banking, Challenges faced by Indian Banking, Cheque Truncation System.

UNIT – II

Insurance: Concept, Nature of Insurance, Functions of Insurance, Types of Insurance (Life and Non-Life), Importance of Insurance, Principles of Insurance Contract-Features of Life and Non-life Insurance.

Insurance and IRDA: IRDA Act 1999, Provisions, Duties, Powers and Functions of IRDA, Composition and Grievance Mechanism and Insurance Ombudsman.

Reference books:

1. M N Mishra, S B Mishra: Insurance Principles & Practice, Sultan Chand and Sons.
2. James L Athearn: Risk and Insurance, West Publication Co.
3. NaliniPravaTripathy and Prabir Pal: Insurance Theory and Practice, Prentice Hall India.
4. PAS Mani: Life Insurance in India, Western Printers and Publication. Insurance & Risk Management – Dr. P.K.Gupta,Himalaya Publishing House, Delhi.
5. Banking Law and Practice Maheshwari, S.N. and Maheshwari, S.K.,Kalyani Publishers, New Delhi.
6. Emerging Trends in the Banking Sector, Mittal R.K., Saini A.K. &Dhingra Sanjay, Macmillan, New Delhi.
7. MadhuVij: Management of Financial Institutions in India, Anmol Publications.
8. U.C. Patnaik: Rural Banking in India, Anmol Publications.
9. Vasanth Desai: Nature and Problems of Commercial Banking in India, Himalaya Publishing House.
10. V.K. Gupta: Management of Financial Institutions in India, Radha Publications
11. G. Ramesh Babu: Management of Financial Institutions in India, Craft Publishing Company.
12. Vasanth Desai: Indian Banking, Nature and Problems, Himalaya Publications House.

BCM-306: GOODS AND SERVICE TAX

Objective: Understanding of Basics of GST

Unit I

Tax Structure in India, Direct and Indirect Taxes, Overview of Goods and Services Tax, Implementation of GST, Reasons for GST introduction, Pros and cons of GST,Registration procedure under GST, CGST/ SGST Act, 2017,Classes of officers under GST, their appointment and powers; Levy and collection of CGST/ SGST; Composition Levy scheme;Timeand Value of supply, valuation in GST (basics),Tax invoice, credit and debit notes.

Unit II

IGST Act, 2017: Definitions, Supplies in the course of inter-State trade or commerce, Supplies in the course of intra-State trade or commerce, Levy and collection of IGST, power to grant exemption from tax, place of supply under IGST; Input tax credit;Returns under GST;Refund of tax; offences and penalties, Prosecution and Appeals under GST, GST Portal: GST Eco system,GST suvidha provider.

References

1. The Central Goods and Services Tax Act, 2017 of Ministry of Law and Justice (Legislative Department) 12th April, 2017) published in The Gazette of India dated 12th April, 2017.
2. Taxmann's GST Ready Reckoner Updated till 18th June, 2017.
3. Taxmann's GST Manual-Enforced w.e.f. 1.7.2017.
4. GST Ready Reckoner by CA Kesha R Garg, Bharat Law House, Delhi.
5. Goods and Services Tax in India -----Notifications by Government of India
6. GST Bill 2012
7. Integrated Goods and Services Tax Act 2017

SEMESTER-IV

BCM 401: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: The paper aims at providing the students a comprehensive knowledge about security analysis and portfolio management and equipping for taking profitable investment decisions.

UNIT – I

Investment – Meaning, Nature, Objectives and Process. Investment Avenues/ Alternatives. Investment Philosophy, Value Investing and Growth Investing, Investment Strategy, Individual and Institutional Investors.

Security Analysis – Meaning, Risk and Return, Types and Measurement of Risk, Risk and Return Trade Off.

Investment Analysis : Fundamental Analysis – Economic, Industry and Company Analysis.

Technical Analysis. Fundamental v/s Technical Analysis.

UNIT – II

Portfolio Management – Concept, Portfolio Management Schemes, Portfolio Theories, Capital Market Line, Marvkowitz Model, Sharpe Model, Jensen and Treynor Model, Capital Asset Pricing Model, Arbitrage Pricing Theory, Efficient Market Theory, Security Market Line.

Portfolio Performance Evaluation and Revision.
Global Investing – Benefits and Options for Global Investment.

Reference books:

1. Fischer & Jordan, Security Analysis and Portfolio Management, Prentice Hall India.
2. Punithavathy Pandian, Security Analysis and Portfolio Management, Vikas Publishing House Pvt. Ltd.
3. Martin Pring, Technical Analysis Explained, McGraw Hill.
4. V. A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House.
5. French, Don, Security and Portfolio Analysis, Merril Publishing Co.
6. Preeti Singh, Investment Management, Himalaya Publishing.
7. Devin S., Portfolio Management, Prentice Hall.
8. Cheney, Muses, Fundamentals of Investments
9. V. K. Bhalla, Portfolio Analysis and Management, Sultan Chand & Sons

BCM 402: ADVANCED ACCOUNTING

Objective: To provide knowledge to students about advanced accounting problems with the relevant Indian Accounting Standards.

UNIT-I

Valuation of Shares and Goodwill.

Insurance Claims.

Accounting for Hire- Purchase and Instalment System

Investment Accounts.

UNIT-II

Accounting for Amalgamation, Absorption(Excluding Inter-Holding) & External and Internal Reconstructions.

Accounts of Holding Companies-Preparation of CBS, Mutual Owings- Revaluation of Assests - Bonus Issue (Excluding Cross Holdings).

Liquidation of Companies.

Practical work:

1. Designing Scheme of Internal Reconstruction.

2. Case Studies on Mergers and Acquisitions.

Reference books:

1. Sehgal A. and Sehgal D., "Advanced Accounting", Taxman Publications Pvt Ltd., New Delhi.
2. Shukla, M.C., Grewal T.S. and Gupta S.C: "Corporate Accounting", S. Chand and Co., New Delhi.
3. Gupta R.L, and Radhaswamy M, "Corporate Accounting", Sultan Chand and Sons, New Delhi.
4. Goyal V.K., "Corporate Accounting", Excel Books, New Delhi.
5. Maheshwari S.N., and Maheshwari S.K., "Corporate Accounting", Vikas Publication,New Delhi.
6. Gupta N.and Sharma C., "Corporate Accounting", Ane Books Pvt Ltd,New Delhi

BCM403: AUDITING AND SECRETARIAL PRACTICE

Objective: The objective of the paper is to help the students in understanding concepts and issues in Auditing and Secretarial Practice.

UNIT-I

Auditing: Introduction, Meaning, Objectives, Basic Principles, Classifications, Advantages and Limitations of Audit. Investigation, Difference between Audit and Investigation: Audit Program, Audit Evidence, Internal Control, Internal Check and Internal Audit.

Vouching – Definition – Features – Examining Vouchers - Vouching of Cash book – Vouching of Trading Transactions.

Verification and Valuation of Assets & Liabilities
Company Auditor - Qualifications and Disqualifications –Appointment - Removal, Remuneration, Rights, Duties and Liabilities, Auditor's Report - Contents and Types Company Auditor Report Order (CARO).

UNIT – II

Secretarial Practice: Definition of Company Secretary, Qualification of Company Secretary, Appointment, Dismissal, Duties & Liability for Offences of Company Secretaries. Position and Role of Company Secretaries, Company Secretary in Practice.

Procedure for Statutory Meeting and its fate under New Companies Act 2013, Annual General Meeting, Extra Ordinary General Meeting, Director, Board and Committee Meetings, Meaning and Types of Motions and Resolution, Minutes, Role of Company Secretary before, during and after Meetings.

Practical Work :

a) Practical Work on Vouching and Audit Report Preparation.
b) Preparing of Minutes, Motions and Resolutions, Holding of Meetings.

Reference books:

1. Dinkar, P., "*Principles and Practice of Auditing",* Sultan Chand and Sons, New Delhi.
2. Institute of Chartered Accountants of India: ''*Auditing and Assurance Standards*'', ICAI,
3. Gupta, K., and Arora, A., "*Fundamentals of Auditing,*", Tata Mc-Graw Hill, Publishing Co. Ltd., New Delhi.
4. Ghatalia, S.V.: "*Practical Auditing,*", Allied Publishers Private Ltd., New Delhi.
5. Kapoor, N.D., "Secretarial Practice" Sultan Chand and sons.
6. Kuchal,M.C., "Secretarial Practice", Vikas Publishing.

BCM 404: COST MANAGEMENT

Objective: The objective of the paper is to acquaint the students with the various methods of cost determination and tools and techniques of cost control.

UNIT – I

Cost Management: Need Significance and Different Areas of Cost Management and Application.

Methods of Cost Determination: Job Costing, Batch Costing, Contract Costing, Uniform Costing and Inter Firm Costing, Process Costing (including joint and by- products).

Contemporary Concepts: Activity Based Costing, Target Costing, Life Cycle Costing, Value Chain Analysis.

UNIT – II

Techniques for Cost Control:

Marginal Costing, Cost, Volume; Profit Analysis and Decision Making; Differential Costing and Absorption Costing.

Budgeting and Budgetary Control: Concepts, Objectives, Limitations, Types of Budgets, Zero Base Budgeting.

Standard Costing, Analysis of Variance.

Practical Work:

Use of software package to obtain cost accounting output like: Fixed and Variable Cost, Break Even Point, P/V Analysis, Preparation of budgets.

Reference books:

1. Edward Blocher, David Stoul-GaryCokins: Cost Management,McGraw Hill
2. Jawahar Lal: Advance Management Accounting, S.Chand and Company Ltd.
3. M. Ravi Kishore: Cost Management, Taxman Publications.
4. N.K.Agarwal: Cost Accounting, Suchita Prakashan Pvt.Ltd.
5. Horngren, Srikant M.Datar, George foster: Cost Accounting, Prentice Hall.

BCM 405: MARKETING MANAGEMENT

Objective: The paper aims at making students to understand the basic concepts, philosophies, process and techniques of marketing.

UNIT – I

Introduction to Marketing: Meaning, Nature and Scope of Marketing, Marketing Concepts and Philosophies, Marketing Process, Marketing Mix.
Marketing Information System: Meaning and Components, Marketing Research Process.
Consumer Buying Behaviour: Factors Influencing Buying Behaviour, Buying Decision Process.
Market Segmentation: Levels and Patterns of Market Segmentation, Basis, Major Segmentation Variables for Consumer Markets, Concepts of Market Targeting and Positioning.
Product Planning and Market Strategies: Product Life Cycle, New Product Development, Product Concepts and Classification, Branding, Packaging and Labeling.

UNIT – II

Pricing Decision: Pricing Policies and Strategies.
Distribution Decisions: Channel Design Decisions, Major Channel Alternatives, Channels Management Decision, Causes and Managing Channel Conflict, Physical Distribution.
Promotion Decisions: Communication Process.

Promotion Tools: Advertising (Steps Involved in Designing and Advertising Programme), Sales Promotions, Public Relations, Personal Selling.
Issues in Marketing in a Developing Economy, Rural Marketing.

Reference books:

1. Czinkota, M.R. and Kotabe.M., *Marketing Management,* Vikas Publishing, New Delhi.
2. Kotler, P., *Marketing Management: Analysis, Planning, Implementation & Control*, Prentice Hall of India, New Delhi.
3. Perreault, W.D. and Jerome, E.M.., *Basic Marketing*, Tata McGraw Hill, New Delh.
4. Ramaswamy, V.S. and Namakumari, S., *Marketing Management: Planning, Control*, MacMillan Press, New Delhi.
5. Zikmund, A., *Marketing,* Thomson Learning, Mumbai.

BCM 406: QUANTITATIVE TECHNIQUES AND METHODS

Objective: The objective of the paper is to acquaint the student with the various quantitative techniques and methods used in managerial decisions.

UNIT I

Quantitative Techniques: Introduction and Use in Business

Theory of Probability: Introduction, Definitions and Use of Addition and Multiplicative Theorem, Conditional Probability. Probability-Distribution: Binomial-Distribution, Poisson-Distribution, Normal-Distribution

Linear Programming: Meaning, Advantages, Limitations, Basic Terminology, Formulation of Linear Programming Problem, Graphic Solution of Linear Programming Problem; Business Application of Linear Programming.

UNIT II

Interpolation and Extrapolation

Correlation: Meaning, Types, Methods-Scattered Diagram, Karl Pearson's Coefficient of Correlation, Rank Correlation and Concurrent Deviation Method.

Regression: Meaning and Significance, Difference Between Correlation and Regression, Simple Linear Regression and Estimation of Parameters (Slope and Intercept).

Practical Work: Use of Microsoft Excel in Solving Simple Data Analysis.

Reference books:

1. Dowling E. Mathematical Methods for Business and Economics, McGraw Hill
2. K. Sydsaeter, P. Hammond Essential Mathematics for Economic Analysis, Pearson
3. Chiang Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill
4. Renshaw, G. Maths for Economics. Oxford: Oxford University Press.
5. Spiegel M. and Stephens L. Schaum's Outline of Statistics, McGraw Hill
6. Lind D. Basic Statistics for Business and Economics, McGraw Hill
7. Dougherty, C. Introduction to Econometrics. Oxford: Oxford University Press.
8. Vogelvang, B. Econometrics: Theory and Applications with E-Views. London Pearson.

SEMESTER-V

BCM 501: INCOME TAX LAW

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Introduction, Important Definitions: Assessee, Person, Income, Total Income, Assessment Year & Previous Year. Agricultural Income & its assessment. Residence & Tax Liability (Basis of Charge). Capital & Revenue. Exempted Incomes.

Income from Salaries, Income from House Property.

UNIT – II

Profits and Gains of Business and Profession including Depreciation, Capital gains, Income from Other Sources.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Preparation of Form 16 and 16A
2. Preparation and Filling of ITR Forms
3. Preparation of PAN Form

Suggested Readings:

1. Students' Guide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts – Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax – Dr. Garish Ahuja & Dr. Ravi Gupta

   (Bharat Publications, New Delhi)

BCM 502: MANAGEMENT ACCOUNTING

Objective: To study the basic concepts of Management Accounting relevant in Business and helping the students to understand the usage of Accounting in Financial Management.

Unit-I

Origin Concept, Nature and Scope of Management Accounting, Distinction between Management Accounting and Financial Accounting. Nature, Importance and Limitations of Financial Statements, Tools of Financial Analysis-Trend Analysis, Common Size Financial Statements and Comparative Financial Statements, Ratio Analysis.

Unit-II

Fund Flow Statement, Cash Flow Statement (AS-3). Price Level Accounting, Social Accounting, Human Resource Accounting (Concept only), Responsibility Accounting: Concepts, Steps in Responsibility Accounting and Advantages of Responsibility Accounting.

***Practical*:** Use of various software packages to obtain different Management Accounting outputs like : (i) Fund Flow Statement, (ii) Ratio Analysis, (iii) Cash Forecasting.

Reference books:

1. Anthony Robert, Reece, Principles of Management Accounting; Richard D. Irwin Inc. Illinois.
2. Khan M.Y. and Jain P.K., Management Accounting; Tata McGraw Hill, New Delhi.
3. Kaplan R.S. and Atkinson A.A., Advanced Management Accounting, Prentice India International, New Delhi.
4. Dr. S.N. Maheshwari : Principles of Management Accounting, Sultan Chand & Sons, New Delhi
5. I.M. Pandey : Management Accounting, Vikas Publication
6. Debarshi Bhattachharya : Management Accounting, Pearson Publication

BCM 503: INDIAN ECONOMY

Unit – I

i) State of Indian Economy at the time of Independence.

ii) Nature of Indian Economy.

iii) Features and Appraisal of Economic Reforms Programme.

iv) Comparing Development Experience of Economies of India and China.

v) National Income of India – Estimates, Inter-regional Variations in National Income.

vi) Demographic Features of Indian Population, Demographic Dividend.

Unit – II

i) Indian Public Finance: The Indian Tax Structure, Public Expenditure, Public Debt.

ii) Capital Market: Growth, Problems and Reforms since 1991.

iii) External Sector: Contemporary Problems of India's International trade. Balance of Payments Position, Foreign Trade Policy.

iv) Economic Planning in India – Objectives, Achievements and Failures, Latest Five Year Plan in India, NITI Aayog.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 – Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy – Problems and Prospects, Viking, New Delhi.
3. Ahluwalia, I.J. and Little, IMD(eds.) 1998: India's Economic Reforms and Development. (Essays in Honour of Manmohan Singh), OUP, New Delhi
4. Nagraj, R.2006: Aspects of India's Economic Growth and Reforms, academic Foundations, New Delhi.
5. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
6. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
7. Dhar, P.K.: Indian Economy – Its Growing Dimensions (Latest Edition), Kalyani Publishers
8. Economic Survey: Government of India, Latest Issue
9. Economic and Political Weekly: Various Issues

BCM 504: PRODUCTION AND OPERATION MANAGEMENT

Objectives: The objective of this course is to enable the students to understand the concepts of production and operations management of an industrial undertaking.

Unit-I

Introduction of Production and Operational Management: Meaning, Objectives and Scope. Strategic Planning and Demand Forecasting. Production Process and Analysis. Capacity Planning and Management. New Product/ Service Design and Development. Facility Location. Facility Layout. Production Planning and Control Techniques- Sequencing (Processing in Job through Two Machines) and Network Analysis - PERT/CPM (including Crashing).

Unit-II

Work Measurement and Work Study: Methods, Analysis and various Charts, Time Study and Principles of Motion Economy. Purchase Management. Inventory Management Fundamentals : Economic Order Quantity, Quantity Discount, Reorder Level, Lead Time, Safety Stock, JIT. Supply Chain Management: Concept & Components of Supply Chain, Activities in Supply Chain Management, Logistics Management.

Suggested Readings:

1. B. Mahadevan "Operations Management Theory & Practice", Pearson Education.

2. Kanishka Bedi , "Production & Operations Management", Oxford Higher Education.

3. L.J. Krajewski & L.P. Ritzman "Operations Management Processes & Value Chains", Pearson Education.

4. B.S. Goel "Production Operation Management".

5. Richard B Chase, F Robert Jacobs, Nicholas J Aquilano and Nitin K Agarwal , "Operations Management – For Competitive Advantage", The McGraw Hill Companies.

BCM 505: ENTREPRENEURSHIP AND SMALL BUSINESS

Objectives:- The basic objective of this course is to help the learners understand various issues involved in setting up a private enterprise and develop required entrepreneurial skills in economic development. It also aims to motivate students to opt for entrepreneurship and self-employment as alternate career options.

UNIT- I

Entrepreneurship- Concept and Theories; Entrepreneur- Meaning and Characteristics: Leadership, Risk taking, Decision making, Motivation, Innovation.

Women Entrepreneurship- Problems Faced, Suggestions, Role of Government to promote Women Entrepreneurship; Socio- economic Environment.

Business Planning; Entrepreneurial Development Programmes- their Relevance and Achievement, Role of Government in Organizing EDPs.

UNIT- II

Small Scale Business-Seed Bed of Entrepreneurship; Business Venture- Its Concept; Setting up a Small Scale Enterprise.

Product Planning and Management; Marketing Management; Growth and Diversification Strategies.

Role of Small Business in the National Economy; Small Business and Modern Technology.

Tax Considerations/ Benefits to Small Scale Units; SSI Exemptions.

Suggested readings

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House, Delhi.
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd., Singapore.
4. Chandra, Ravi (2003). Entrepreneurial Success: A Psychological Study. Sterling Publication Pvt. Ltd., New Delhi.
5. . Balaraju, Theduri (2004). Entrepreneurship Development: An Analytical Study. Akansha Publishing House, Uttam Nagar, New Delhi.
6. David, Otes (2004). A Guide to Entrepreneurship. Jaico Books Publishing House, Delhi.
7. Taneja (2004). Entrepreneurship. Galgotia Publishers

BCM 506: FINANCIAL MARKETS AND SERVICES

Objective: To familiarize the students with the traditional and modern financial and services.

UNIT I

Financial Markets: Meaning, Functions and Types.

Money Market: Meaning, Characteristics, Structure, Participants, Growth of Indian Money Market, Components of Money Market, Call Money Market, Acceptance Market, Bills Market, Commercial Paper Market. Certificates of Deposits Market in India.

Capital Market: Nature and Role, Functions, Distinction between Money market and Capital Market, Primary Market, Secondary market, Operational Mechanism of Capital Market.

UNIT II

Financial Services: Meaning, Characteristics, Importance and Kinds of Financial services, Financial Services and Economic Environment, Players in Financial services. Merchant Banking: Concept, Evolution and Functions of Merchant banks.

Mutual Funds: Concept, Types, Advantages, Problems of Mutual Funds in India, Constitution and Management of Mutual Funds.

Exchange Traded Funds, Factoring.

Suggested readings

1.Financial Markets: A Beginners' Module, Workbook from NSE
2. Mutual Fund: A Beginners' Module, Workbook from NSE
3. Gurusamy, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
4.. Saunders, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
5. Thummuluri, Siddaiah, Financial Services, 1st edition, Pearson Education.
6. Khan, Indian Financial Systems, 6th edition, Tata McGraw Hill

BCM 601: DIRECT TAX LAWS

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Deemed Incomes and Clubbing of Incomes (Aggregation of Incomes), Set-off and Carry Forward of Losses, Deductions to be made in Computing the Total Income, Rebate & Relief.

Assessment of Individual.

UNIT – II

Assessments of HUF, Association of Persons & Firm.

Income Tax Authorities, Procedure of Assessment (Practical aspects of Filing of Return to be stressed), Penalties, Deduction & Collection of Tax at Source, Advance Payment of Tax, Appeals & Revision.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Filing of return by an Individual, HUF & Firm.

2. Filling and Submission of TDS Form.

Suggested Readings:

1. Students' Guide to Income Tax - Dr. Vinod K. Singhania & Dr. Monica Singhania. (Taxmann Publications, New Delhi)

2. Income Tax Law and Accounts – Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax – Dr. Garish Ahuja & Dr. Ravi Gupta (Bharat Publications, New Delhi)

BCM 602: FINANCIAL MANAGEMENT

Objective: The objective of the paper is to familiarize the students with Principles and Practices of Financial Management.

UNIT- I

Financial Management: Meaning, Scope and Objectives of Financial Management, Time Value of Money- Compounding Techniques and Discounting Techniques. Capital Budgeting, Evaluation of Projects (excluding Risk and Uncertainty, Implications of Normal, Initial and Terminal Depreciation and Balancing Charge). Cost of Capital: Determination of Cost of Capital, Components of Cost of Capital.

UNIT- II

Sources of Corporate Finance, SEBI Guidelines for Raising Corporate Finance. Capital Structure, Meaning, Types of Leverage, Determinants of Capital Structure. Theories of Capital Structure. Working Capital Management and Its Estimation (Excluding Cash, Receivable and Inventory Management). Dividend Policy- Relevance and Irrelevance Theories.

Reference books:

1. J C Van Horne, "Financial Management and Policy", 12th Edition, New Delhi, Prentice Hall of India
2. J C Van Horne, J W Wachowicz, Jr. "Fundamentals of Financial Management" 13th Edition, Prentice Hall of India
3. Prasanna Chandra, "Financial Management' Tata McGraw Hill.
4. Khan and Jain, "Financial Management- Text and Problems" 2nd Edition, Tata McGraw Hill'
5. R A Brealey and S C Myers, "Principles of Corporate Finance", Tata McGraw Hill, 7th Edition
6. I M Pandey, "Financial Management", Vikas Publishing House, 9th Edition

BCM 603: ISSUES IN FINANCIAL REPORTING

Objectives: The main objective of this subject is to provide knowledge to the students about developments in financial reporting, and understanding of reporting issues at the national and international level.

Unit I

Financial reporting: Nature and Objectives, Benefits, Users of Financial Reports. General Purpose and Specific Purpose Report. Qualitative Characteristics of Accounting Information.

Conceptual Framework of Financial Reporting: FASB and IASB

International Financial Reporting Standards (IFRS): Role of IASB, Arguments for Global Conversion. Achievements of IASB and Obstacles in Conversion. Required Disclosures as per IFRS.

Unit II

Issues in Corporate Financial Reporting **-** Accounting for Changing Price Level, Social Reporting, Human Resource Accounting.

Indian Accounting Standard with reference to Segment Reporting, Interim Reporting, Leases and Intangible Assets.

Difference between IFRS and Indian Accounting Standards. US GAAP.

Recent Trends in Financial Reporting in the Indian context

Suggested Readings:

1. E.S. Hendriksen, Accounting Theory, Richard D. Irwin.

2. M.W.E. Glautier and B. Underdown, Accounting Theory and Practice.

3. Ahmed Riahi Belkaoui, Accounting Theory, Thomson Learning.

4. Henry I- Wolk, Jere R. Francis and Michael G- Tearney, Accounting Theory: A Conceptual and Institutional Approach, South Western Publishing Co.

5. Robert Bloom and Pieter T. Elagers, Accounting Theory and Policy, Harcourt Brace Joranovich.

6. L.S. Porwal, Accounting Theory, McGraw Hill Education (India) Ltd.

7. Jawahar Lal, Accounting Theory and Practice, Himalaya Publishing House, New Delhi.

BCM604: SOCIAL AND BUSINESS ETHICS

Objectives: The course aims to educate that how the adoption of Business Ethics by organizations not only discourages corporate wrong-doing, but also contributes substantially in the achievement of corporate excellence.

Unit-I

Business Ethics, Definition, Nature, Purpose, Ethical Issues in Management, Causes of Unethical Behaviour, Ethical Abuse-Values, Morals and Business Ethics-Levels of Business Ethics, Myths of Business Ethics, Relationship between Value, Morals and Ethics., Conflict of Interest.
Ethics at Workplace: Individual in Organisation, Gender Issues, Harassment, Discrimination.
Ethics in Accounting &Finance, Marketing and Consumer Protection- Importance, Problems and Issues.

Unit –II

Whistle Blower Policies-Meaning, Importance and Issues.
Corporate Social Responsibility under Company Act 2013.
Ethical Issues in Corporate Governance.
Environmental Issues-Protection of Natural Environment, Prevention of Pollution, Depletion and Conservation of Natural resources.

Suggested Readings:

1. Chakraborty , S.K. : ,Foundations of management Work - Contributions from Indian Thought: Himalaya Publishing House Delhi
2. Griffiths , B. : Themarriage of East and West , colling London
3. Gandhi , M.K. : The Study of My Experience with Truth, Navjivan Publishing House , Ahmedabad
4. Velasquez , M.G. : Business Ethics 5. Sekhar , R.C. : Ethical Choices in Business .

BCM 605: OPERATIONAL RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operational Research—Meaning, Significance and Scope. Introduction to Linear Programming, Formulation of Linear Programming—Problem, Graphical Method, Simplex Method. Duality in Linear Programming, Definition of Dual Problem, General Rules in Converting any Primal into its Dual, Transportation Problem, Assignment Problem.

UNIT-II

Decision Theory: Decision Making under Uncertainty and Risk, Decision Trees. Replacement Problem (Individual and Group replacement Problems both). Games Theory : Two Persons Zero Sum Games, Pure Strategies, Mixed Strategies. Simulation; Meaning, Process, Advantages, Limitations and Applications.

Practical Work :

Use of Linear Programming in Industry.

Suggested Readings:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

BCM 606: SECTORAL ASPECTS OF INDIAN ECONOMY

Objectives: This course will provide insight into the various sectoral aspects of indian economy

Unit – I

i) Agriculture: Features, Agricultural Productivity and Income, Rural Indebtedness, Agricultural Marketing, Agricultural Finance and Agricultural Policy, New Development in Agriculture – Contract Farming, Organic Farming and Corporate Farming.

ii) Industrial Development during the Planning Period, Industrial Policy of Govt. of India, National manufacturing policy, Small Scale and Cottage industries in India: Importance, problems and Govt. Policy, Large Scale Industries – Iron & Steel, Cement and Petrochemicals.

Unit – II

i) Services Sector in India: Growth and Contribution of Services in India in Pre and Post Reform Period, Role and Problems of Public and Private Sector in India

ii) Problems of Indian Economy: Poverty, Unemployment, Inflation, Unequal distribution of Income and Wealth, Inter-State disparities in the Pattern of Development.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 – Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy – Problems and Prospects, Viking, New Delhi.
3. Nagraj, R.2006: Aspects of India's Economic Growth and Reforms, academic Foundations, New Delhi.
4. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
5. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
6. Dhar, P.K.: Indian Economy – Its Growing Dimensions (Latest Edition), Kalyani Publishers
7. Economic Survey: Government of India, Latest Issue
8. Economic and Political Weekly: Various Issues

B.COM. (HONS.) 3rd SEMESTER

BCH 307: ACCOUNTING THEORY AND REPORTING PRACTICES

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding accounting theory.

UNIT-I

The History and Development of Accounting, Nature and Uses of Accounting, Traditional Approaches to the Formulation of An Accounting Theory, Regulatory Approach to the Formulation of An Accounting Theory; The Events, Behavioural and Human Information Processing Approach.

Unit –II

The Predictive and Positive Approaches to the Formulation of Accounting Theory, A Conceptual Framework for Financial Accounting and Reporting. The Structure of Accounting Theory, Alternatives Asset-Valuation and Income Determination Models.

Reference Books:

1. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
2. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
3. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting.
4. Elliott, B. & Elliott, J., Financial Accounting and Reporting. Harlow
5. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. S. Agarwal, Manual of Accounting Standards, Snow White.
8. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.

BCH 308: DEVELOPMENT ECONOMICS

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding economic development and growth.

UNIT-1

Concept of Economic Development, Distinction between Growth and Development, Various Traditional and Modern Criteria to Measure Development, Determinants of Development, Balanced vs. Unbalanced Growth,

Concept of Sustainable Development, Importance, Indices of Development,

Classical Theories of Development-Adam Smith, Karl Marks and Schumpeter, Rostow's Stages of Growth, Kaldor Model of Growth.

UNIT-II

Economic Development Since Independence, India's Five Years Plans- Objectives, Strategies, Achievements and Constraints,
Models in Economic Planning- Harrod-Domar Model, Mahalanobis Model,
Role of State and Capital Formation in Economic Development, Growth and Distribution Trends and Policies regarding Poverty; Inequality and Unemployment in India,

Reference Books:

1. Agarwala, A.N. and S.P. Singh, Economics of Underdevelopment, Oxford University Press, London.
2. Misra, S. K. and Puri, Economics of Development and Planning, Mumbai: Himalaya Publishers.
3. Meier, Gerald M. and James E. Rauch, Leading Issues in Economic Development, Oxford University Press, New Delhi.
4. Todaro, M.P., Economic Development in the Third World, Longman, New York.
5. Salvatore, D. and E. Dowling: Development Economics, Schaum's, Outline Series in Economics, McGraw Hill, New York.

BCH 309: ADVERTISING AND BRAND MANAGEMENT

Objective: The objective of the paper is to provide an understanding of the principles of advertising and brand management.

UNIT - I

Advertising: Introduction, Scope, Importance in Business : Role of Advertising in Social and Economic Development of India: Ethics in Indian Advertising. Advertising and Consumer Behaviour; Setting Advertising Objectives, DAGMAR; Determining Advertising Budgets; Advertising Planning and Strategy, Creative Strategy Development and Implementation. Role of Integrated Marketing Communication in the Marketing Programme; Process of Marketing Communication; Definition and Scope of Advertising Management; Determination of Target Audience. Media Planning: Setting Media Objectives; Developing Media Strategies, Evaluation of Different Media and Media Selection; Media Buying; Measuring Advertising Effectiveness.

UNIT – II

Brand-Concept: Nature and Importance of Brand; Brand vs. Generics, Brand Life Cycle, Brand Name and Brand Management; Brand Identity: Conceiving, Planning and Executing (Aaker Model), Brand Loyalty, Measures of Loyalty; Brand Equity: Concepts and Measures of Brand Equity-Cost, Price and Consumer Based Methods; Sustaining Brand Equity; Brand Personality: Definition of Brand Personality, Measures of Personality, Formulation of Brand Personality; Brand Image Vs Brand Personality. Brand Positioning: Concepts and Definitions, Repositioning, Celebrity Endorsement, Brand Extension; Differential Advantage: Strategies for Competitive Advantage, Brand Pyramid; Branding in different sectors; Role of Information in Brand Management; Role of e-Communities in Brand Management.

Reference Books:

1. Arens W.A. Contemporary Advertising, Tata Mc Graw Hill, New Delhi

2. Batra. R. Myers, J.G. and Aaker D.A., Advertising management, prentice hall of India, New Delhi

BCH 310: BANK MANAGEMENT

Objectives: The paper aims at acquainting the students, the concepts of Bank Management and relevant aspects.

UNIT – I

Banking Structure in India – Banks and Regulatory Environment – Analysis of Balance Sheet and Profit and Loss Account – Financial Performance Analysis with Ratios – RBI and its role on Bank Performance – Banks and Risk Management, Types of Risks in Banking Industries – Risk and Return – Profitability – Liquidity – Solvency Trace off – Project Appraisal – Capital Adequacy Norms – MIM – Interest and Non – Interest Income – Lending Principles.

UNIT – II

NPA – Provisions, Types, Impact on Profitability. Warning Signals – NPA Management – How to Overcome NPA – Recent Measures by Regulatory Authority – Debt Recovery Tribunal – Provisions of Revenue Recovery Act – Portfolio Management in Banks – Allocation of Bank Funds – Investment Avenues for Banks – Asset Liability Management – Models – Importance – SARFESI Act – Information and Communication Technology and Bank Management.

Reference Books:

1. Donald,F., R. Gup Benten E., Kolari, J.W., *Commercial Banking The Management of Risk*, South Western Thomson Learning
2. Justin,P. and Padmalatha, S.,*Management of Banking and Financial Service*s, Pearson Education
3. Timothy,K.W. and MacDonald, *Bank Management*, The Dryden Press, Hascourt College Publisher

B.COM. (HONOURS) 4th SEMESTER

BCH407: CONTEMPORARY ISSUES IN ACCOUNTING

Objective: The paper aims at acquainting students with the contemporary issues in accounting.

UNIT – I

Role of International Accounting Standard Committee in Harmonisation of Divergent Accounting Practices.

Accounting for Human Resources.

Accounting for Price-Level Changes.

Accounting for Financial Instruments.

UNIT – II

Segment Reporting, Interim Reporting.

Forensic Accounting – Introduction – Historical Background, Essentials – Role of Forensic Accountant – Forensic Accounting in India.

Corporate Accountability Reporting- Basics of Sustainability Reporting- Social Reporting and Performance Reporting.

Accounting for Brand Equity – Introduction, Types of Brands, Objectives – Models, Environment Accounting.

Reference Books: -

1. L S Porwal. Tata McGraw-Hill Education, .
2. Hendriksen, Irwin Professional Publishing; 5 Sub edition, .
3. Accounting theory and practice / M.W.E. Glautier, B. Underdown Glautier, M. W.(Michel William Edgard).

BCH 408: INDUSTRIAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about concepts, theories and policies regarding industrial structure and growth.

Unit - I

Industrial Economics - Meaning, Scope, Need and Significance,

Pattern and Phases of Industrial Growth and Changes in Industrial Structure, Role of Industry in Economic Development,

Theories of Industrial Location- Weber, Sargent Florence, Factors Influencing Location of Industries, Localization and Decentralization on Industriesm, Industrial Productivity and Efficiency, Measures Required for Improving Productivity and Efficiency

Unit - II

Role of Industrialization in Economic Development, Factors for and Against Industrial Development, Problems of Industrialization in Developing Countries,

Industrial Finance in India- Scope, Importance and Sources, Industrial Growth in India during Plans, Impact of Economic Reforms on India's Industrial Growth,

India's Industrial Policies, Role and Performance of Public Sector Enterprises, Privatization of Public Sector Undertakings in India,

Performance and Problems of Micro, Small, Medium Enterprises in India

Reference Books:

1. Ahluwalia I.J., 'Industrial Growth in India,' Oxford University Press, New Delhi Barthwal R.R., 'Industrial Economics,' Wiley Eastern Ltd., New Delh
2. Cherunilam, F. ,'Industrial Economics: Indian Perspective', Himalaya Publishing House, Mumbai.
3. Desai, B. , 'Industrial Economics in India,' Himalaya Publishing House, Mumbai
4. Hay, D. and D.J. Morries , Industrial Economy; Theory and Evidence, Oxford University Press, New Delhi
5. Kuchhal, S.C.,'Industrial Economy of India,' Chaitanya Publishing House, Allahabad
6. Thakur, Srinivas V. , 'Industrialization and Economic Development' Popular Parkashan, Mumbai

BCH 409 : CONSUMER BEHAVIOUR

Objective: The paper aims at enabling students to understand the process of consumer behaviour, the various external and internal factors that influence consumer behaviour and to apply the concept to the development of marketing strategy.

UNIT- I

Introduction to Consumer Behavior: Scope and Relevance of Consumer Behavior Studies; Buying Decision Process; Basic Model of Consumer Behavior; Problem Recognition – Methods of Problem Solving; Information Search, Alternative Evaluation and Selection, Outlet Selection and Purchase, Post Purchase Behavior and Customer Satisfaction, Role of Involvement. Individual Determinants of Consumer Behaviour: Role of Motivation; Personality and Self Concept; Attention and Perception; Consumer Learning; Consumer Attitudes – Formation and Change; Consumer Values and Lifestyles. External Determinants of Consumer Behavior: Influence of Culture and Subculture; Social Class; Reference Groups and Family Influences; Diffusion of Innovations.

UNIT- II

Consumer Decision Process: Problem Recognition; Search and Evaluation of Alternatives; Purchase Process; Post Purchase Behaviour and Cognitive Dissonance. Models of Consumer Behaviour; Researching Consumer Behaviour; Online Customer Behaviour. Diversity of Consumer Behaviour; Role of Consumer Behaviour in Marketing Strategy.

Reference Books:

1. Schiffman L.G. and Kanuk L.L., Consumer Behaviour, 9th Edition, Prentice Hall of India, New Delhi
2. Assel Henry, Consumer Behaviour, Biztantra, New Delhi.
3. Hawkins, D. I. & Roger, J. B. and Kenneth, A.C. . Consumer Behaviour-Building
4. Satish Batra & S. H. H. Kazmi: Consumer Behavior Text & Cases (Excel)

BCH 410: BANK LEGISLATION

Objective: The paper aims to acquire knowledge about the legal & regulatory framework of the banking system and the various laws and enactments.

UNIT –I

Evolution of Banking Laws in India- Provisions of Banking Regulation Act, 1949 – Its Amendments. Reserve Bank of India Act, 1934 – Role and Functions of RBI-Credit Control Techniques- Indian Evidence Act- Negotiable Instruments Act 1881. Payments and Settlements Systems Act 2007 and Amendments.

UNIT-II

Special Features of Recovery of Debts due to Banks and Financial Institutions Act, 1993, The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002, Grievance Mechanism and Banking Ombudsman- Lok-Adalats- Banking Codes and Standard Boards Board- Debts Recovery Tribunals.

Reference Books:

1. Banking Regulation Act, 1949.
2. RBI, Act, 1934.
3. J.N. Jain and R.K. Jain: Modern Banking and Insurance, Deep and Deep Publications.
4. R.K. Mittal, A.K. Sahni and Sanjay Dhingra: Emerging Trends in the Banking Sector, Macmillan.
5. Arundeep Singh and N.S. Toor: Legal and Regulatory Aspects of Banking, Skylark Publications.
6. John C. Hull: Risk Management and Financial Institutions, Pearson Education.

B.COM. HONOURS
5th Semester

BCH 507: STRATEGIC FINANCIAL MANAGEMENT

OBJECTIVE: This Course aims at enabling the students to understand various financial management concepts and to apply financial management theories and techniques for strategic decision making and informed analysis. It aims at enabling students to manage basic corporate finance transactions besides investing more profitably and operate more efficiently.

.UNIT-I

Introduction to Strategic Financial Management. Interface of Financial Policy and Strategic Management. Significant references for Strategic Financial Management. Strategic Business Unit. Financing Choices and Decisions: Differences in Financing of Venture Firm, Mature Companies and Firms in High Growth Stage, Deal Structuring and Pricing, IPOs and their Under-pricing. Asset -stripping. Investment Appraisal Techniques, Capital Rationing, Impact of Inflation on Capital Budgeting Decisions.

UNIT-II

Financial aspects of Corporate Restructuring. Monitoring the Restructuring Process. Leveraged Buyouts (LBOs), Management Buyouts (MBOs), Spin Offs and Asset Divestitures Financial Engineering. Financial Innovation: Relevance, Drivers and Implications. Ethical Aspects of Strategic Financial Management. Financial Aspects of Supply Chain Management and Distribution Chain Management. Innovative Approach to Internal Cost-Profit Analysis. Valuation of a Business Enterprise.

Suggested Readings:

1. Allen, D: An Introduction to Strategic Financial Management, CIMA/Kogan Page, London.
2. Brealey, Richard A. and Myers, Stewart C, Principles of Corporate Finance, Tata McGraw Hill.
3. Chandra, Prasanna: Financial Management, Tata McGraw Hill, Delhi.
4. Damodaran, Aswath, Valuation, John Wiley & Sons.
5. Foster, George, Financial Statement Analysis, Pearson Education Hampton, Jone, Financial Decision Making, PHI, New Delhi.
6. Grinblatt, Mark and Titman, Sheridan, Financial Markets and Corporate Strategy, Tata McGraw Hill.
7. Jakhotiya,Dr.Girish: Strategic Financial Management, Vikas Publishing House Limited.
8. Kaplan, Robert S., and Cooper, Robin: Cost & effect: Using integrated cost systems to drive profitability and performance, Harvard Business Press.

BCH 508: Money and Banking

Objectives: This course exposes students to the theory and functioning of the monetary and banking sectors of the economy.

Unit –I

Money- Concept, Functions, Measures;
Fisher's Transactions Approach to the Quantity Theory of Money; Cambridge Cash- Balances Approach;
Keynes Demand Theory of Money; Friedman's Theory of Demand for Money;
Theory of Money Supply- H- Theory of Money;
Inflation- Concept, Types, Demand-Pull inflation, Cost-Push Inflation, Philips Curve, Structural Inflation in the Less Developed Countries;

Unit-II

Bank- Meaning, Functions, Liabilities and Assets;
Commercial banks; Co-operative banks; Development banks; Non-Bank Financial Intermediaries (NBFIs); Unregulated Credit Markets;
Reserve Bank of India- Goals, Current Monetary Policy;
Banking Sector Reforms in India

Suggested Readings:

1. Suraj B. Gupta, Monetary Economics: Institutions, Theory and Policy, S. Chand & Company Ltd.
2. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
3. Michael R. Baye and Dennis W. Jansen, Money, Banking, and Financial Markets: An Economics Approach, Houghton Mifflin Company, U.S.A.
4. F.S. Mishkin, The Economics of Money Banking and Financial Markets Business School Edition, Pearson India.
5. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill,
6. L. M. Bhole, Collected Papers on Money, Interest and Monetary Policy, Amani International Publishers.
7. Economic Survey, Ministry of Finance, Government of India, Latest edition
8. www.rbi.org.in

BCH 509: COMPENSATION MANAGEMENT

Objective: To enable the students to design and administer a compensation system that rewards employees fairly while satisfying customer demands and permitting the organization to operate profitably.

Unit I

Compensation Management - Concept, Principles and Practices; Theories of Compensation; Compensation in a Knowledge Based World. Foundations of Compensation - Performance Evaluation, Job Evaluation - Job Grading and Job Design; Executive Compensation. Compensation and Organizational Strategy- Monetary and Non-Monetary Rewards; Fringe Benefits, Developing Strategic Compensation Alternatives; Challenges of Compensation Design and Compensation Policies in India.

Unit II

Components of Compensation -Basic Pay, D.A., Incentives Plans, Profit Sharing Schemes, Provident fund, Gratuity and Pension. Payroll Accounting -Tax planning, Tax Efficient Compensation Package. International Compensation Management - Components and Approaches .Compensation Laws- Payment of Wages Act, Payment of Gratuity Act, Employees State Insurance Act, and Workmen's Compensation Act.

Suggested Readings:

1. Venkataratnam, C.S., and B. K. Srivastava,'Personnel Management and Human Resources', Tata McGraw Hill.
2. Thomas, J. Bergman, V.G. Scarpllo and F.S. Hills.'Compensation Decision Making', Dryden Press.
3. Dunn, J.D. and F. M. Rachal, 'Wage and Salary Administration: Total Compensation System', McGraw Hill, New York.
4. Armstrong, M. and HellenMurlis,'Reward Management-A handbook of Remuneration Strategy'.
5. Henderson, Richard I., 'Compensation Management in a Knowledge Based world', Pearson Education.
6. Bhattacharya, Mousumi S. and Sengupta, Nilanjai, 'Compensation Management', Excel Books.

BCH 510: Electronic Banking and Risk Management

Objective: To provide an understanding and an appreciation of Electronic Banking and of Risk Management in order to enable the optimum strategy for the handling of risk in banks.

Unit-I

Electronic Banking– Core Banking –Electronic Products, On line Banking – Facilities provided and Security Issues, Cheque Truncation, Microfiche, Phone and Mobile Banking Electronic Funds Transfer Systems – Plain Messages (Telex or Data Communication) – Structured Messages (SWIFT, etc...) – RTGS, NEFT, Information Technology – Current Trends – Bank Net, RBI Net, Data Net, Nicnet, I–net, E– mail, etc.–Role and Uses of Technology Up-gradation – Global Developments in Banking Technology Impact of Technology on Banks – Effect on Customers and Service Quality – Computer Audit – Information System Audit.

Unit-II

Risk Management: Types of Risks in BANKS, Risk Management Framework in Banks: Enterprise –wide Risk Management in Banks; Elements of Risk Management Framework; Systematic Risk Management in Banks; Different Measures of Measuring Risks; Risk Management – Process and Techniques for Assessment and Management. Asset– liability Management in Banks, Role of RBI. Information System Security and Disaster Management.

Suggested Readings:

1. Marrison, Christopher Ian, "The fundamentals of risk measurement", New York: McGrw Hill.

2. Marshall, Christopher Lee, "Measuring and Managing Operational Risks in Financial Institutions: Tools, Techniques, and Other Resources", Singapore, New York: John Wiley.

3. MacDonald and Koch, "Management of Banking", Thomson, London.

4. Bidani, S.N., "Banking Risks", Vision Books. 5. Joshi, V.C. and Joshi, V.V., "Managing Indian Banks", Sage Publications.88

B.COM. (HONOURS)

6th Semester

BCH607: INVESTMENT MANAGEMENT

Objective and expected outcome of the course: This course provides a broad overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general. It aims at enabling the students to get theoretical and practical background in the field of investments, financial markets, valuation of investment and different investment strategies. Students will know the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.

Unit - I

Introduction to Investment Management

Financial System in India – Money Market, Capital Market, Debt Market, Need for correlating these – Bullion Market and Foreign Exchange Market.

Organization and Functioning of Securities Markets in India – Nature and Function, Organizational Structure, Role and Function of Primary Market and Secondary Markets, Type of Market Transactions based upon – Long and Short Orders, Size of Order, Price Limit of Orders, Time limit of orders, Special type of orders and order execution. Margin Trading.

Valuation of Securities – Valuation of Bonds, Valuation of Debentures, Valuation of Preference Shares, Valuation of Equity Shares and Share Valuation: CAPM Model.

UNIT - II

Market Indices – Concept, Method of Computing India's Leading Stock Indices, Overview of various Benchmark Indices, Market capitalization Indices, Sectoral Indices and Broad market Indices.

Security Credit Rating – Introduction, Factors Affecting Assigned Ratings, Credit Rating Agencies in India, Functions, Approaches and Framework Used and Business Models, Benefits of Credit Rating, Regulatory Concerns.

Risk Management Through Derivatives – Introduction to Derivatives Market and Securities, Forward and Future Contracts – Overview, Hedging, Optimal Hedge Ratio, Valuation, Application and Strategies. Options – Overview, Valuation Models and Strategies. Swaps.

Investing in Alternative Asset Classes - Hedge Funds, Characteristics of a Hedge Fund, Hedge Fund Strategies, Risk Arbitrage Investing, Hedge Fund Performance, Private Equity and Venture Capital.

Suggested Readings:

1. Babu.Dr.G.Ramesh, Portfolio Management including Security Analysis,Concept Publishing Company.

2. Dr.Raganatham M&Madhumathi R. Investment analysis Portfolio management. Person Education, New Delhi.

3. Dr.BhallaV.K.Investment Management, S.Chand and Company, New Delhi.

4. Fisher & Jordan, Security analysis and portfolio management, Prentice Hall of India, New Delhi.

5. Rustagi R.P, Investments Analysis and Portfolio management, Sultan Chand & Sons, New Delhi.

6. Sharpe, William and Gordon, Investments – Prentice hall of India, New Delhi.

BCH 608: INTERNATIONAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about International Economics.

Unit-I

Adam Smith's Absolute Advantage Theory; Ricardo's Comparative Advantage Theory; Heckscher-Ohlin Theory of Trade; Terms of Trade

Free Trade vs Protection, Rationale of Protection Policy in Developing Countries, Barrier Tarriffs, Quotas to Trade.

Unit-II

Balance of Payments: Definitions and Concepts- Balance of Trade, Balance of Payments on Current Account, Balance of Payments on Capital Account, Autonomous and Accommodating Capital Flows; Causes and Measures to Correct the Disequilibrium

Exchange Rate: Meaning and Its determination; Fixed vs Flexible Exchange Rate, Theories of Exchange Rate: BoPs Theory, PPP Theory.

Suggested Readings:

1. H.G. Mannur, International Economics, Vikas Publishing House Pvt Ltd.
2. Bo Sodersten, International Economics, Macmillan Publishers Ltd.
3. Bo Sodersten and Geoffrey Reed, International Economics, St. Martin's Press.
4. R.R. Paul, Money Banking and International Trade, Kalyani Publishers.
5. Dominic Salvatore, International Economics, John Wiley and Sons Inc.
6. Economic Survey, Ministry of Finance, Government of India, Latest edition.

BCH 609: TRAINING & DEVELOPMENT

Objectives: This Course aims at educating students regarding the concept of training and development in an organization.

UNIT – I

Introduction to Training Concept: Definition, Meaning, Need For Training, Importance Of Training, Objectives Of Training, Process Of Training: Steps In Training

Concept of Training Need; Identification of Training Need, Methods of Training and Techniques of Training, On the Job, Off the Job, Lecture, Role Play , Case Study, Vestibule Training, Simulation Techniques, in Basket Exercise, Syndicate Method, T- Group Training, Psychological Lab, Business Game, Activity Based Training, Programme Instruction Training, Choosing the Right Training Techniques.

UNIT – II

Designing Training and Development Programs: Organisation of Training and Development Programs, Training Design, Kinds of Training and Development Programs- Competence Based and Role Based Training; Orientation and Socialization

Evaluation of Training and Development Effectiveness: Reasons for Evaluating Training and Development Programs, Problems in Evaluation; Methods of Evaluating Effectiveness of Training Efforts.

Suggested Readings:

1. Prior, John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Noe, Raymond A., and Amitabh Deo Kodwani, Employee Training and Development, Tata McGraw Hill.
3. Blanchard, P. N. & Thacker, W. J. (1998). Effective Training: Systems, Strategies and Practices. Prentice Hall, New Jersey.
4. Raymond Noe, A. (2005). Employees Training and Development", McGraw Hill Publication.
5. Bhatia, S.K "Training And Development".

BCH 610: BANK MARKETING

Objective: The paper aims at acquainting the students application of marketing functions in banks, being directed at providing services to satisfy customers financial (and other related) needs and wants, more effectively and efficiently.

UNIT–I

Introduction of Marketing and Key Concepts–Definition Marketing and Market, Four Elements in Marketing Mix and Their inter-relationship. Marketing Planning–Micro and Macro Factors influencing the Market for an Organisation, Bank Marketing and Marketing Mix, Bank Distribution. The art of Customer Service as Applied to Banking. Customer Behaviour in Banking, Banking Consumer and Market Segmentation–Mass Marketing, Multiple Marketing, Steps in Strategy Formulation, Marketing Research in Banking– Types of Data–Primary and Secondary, Uses of Marketing Research. Relationship Marketing in Banking, Competitive Analysis in Banking.

UNIT–II

Bank's Product Strategy–Core, Value Added, Fundamental and Augmented Products, Product Item and Product Line , Difference between Product and Service , The Concept of Product/Service Delivery in Banking, Pricing Strategies and Its Applications in Banking—Elasticity of Demand , Break Even Analysis, Different Types of Products and Key Variables Banking Promotion Strategy– The Communication Process, Goals of Communication, Steps in Developing Effective Communication, Selling and Organising for Sales and Selling to Corporate Clients–Meaning of Corporate Clients, Relationship and Transaction Banking, Bank Organisation for large Corporate Clients, International Bank Marketing.

Suggested Readings:

1. Chacko, Oommen and Grewal, Rajendra, "Marketing of Banking Services".
MacMillan India Ltd
2. Bank Marketing Association, "Bank Marketing", The Association
3. Reidenbach, R. Eric and Pitts, Robert E, "Effective bank marketing: issues, Techniques and Applications",1987, Bank Administration Institute.

DEPARTMENT OF PHYSICAL EDUCATION

FACULTY OF EDUCATION
(PANJAB UNIVERSITY CHANDIGARH)

SYLLABUS FOR
BACHELOR OF PHYSICAL EDUCATION (B.P.Ed)
(SEMESTER SYSTEM)

SESSION: 2018-2019

PREAMBLE:

The Bachelor of Physical Education (B.P.Ed) – Two Years (Four Semesters) Programme is meant for preparing quality teacher in Physical Education for Secondary Schools.

VISION

In line with the University mission, the Department has the aim of educating the "whole-person" and to produce quality teachers to serve as administrators in the profession of physical education and sports. Through improving our academic programme and services to the University and local community, we pledge to continually strive for academic excellence and to maintain our leadership role in our profession.

MISSION

1. To produce quality physical education teachers for imparting instructions in the subject of physical education.
2. To make people aware about the benefits of physical activity through extension lectures and demonstrations.
3. To provide excellent research and teaching in Physical Education in order to promote and develop the health and well being of people.
4. To promote health through specific physical activities, prescribed by a specialized physical educationalist.
5. To collaborate with the different organizations which are involved in promoting the quality life of the human beings i.e., educational institutions and NGOs.
6. To provide harmonious and stimulated academic environment for the promotion of quality teaching and research in the department.
7. To provide opportunity to faculty and students of the department for their self evaluations, accountability, autonomy and innovations in the area of physical education and sports.
8. To concentrate on quality research in the area of health, physical education and sports.
9. To introduce consultancy and training programmes for different educational institutions and other organizations for the conduct of sports and fitness events.
10. To update the curriculum and syllabi as per global needs and challenges.

OBJECTIVES:

This programme shall strive to achieve the following objectives:

General Objectives:

1. To enable teacher to understand the nature, purpose and philosophy of physical education at secondary stage.
2. To prepare teachers of physical education with broader educational perspective.
3. To develop for potentialities and organizing physical education programmes and activities.
4. To develop capacity to organized leisure and recreational activities.
5. To empower them to inspire their students to actively participate in physical and yogic exercises.
6. To enable teachers to develop personality, character, willpower, democratic values and positive games and sports.
7. To make teachers capable of imparting basic knowledge about health, hygiene and nutrition
8. To develop skills and competencies to organized school and community games and sports.
9. To cultivate the spirit of sportsmanship, mental and physical alertness, scientific temper and optimism.
10. To promote mental health, power of self- decision and self control, correct judgment and action emotional stability and equanimity, respect for others and acceptance of authority and rules
11. To promote appreciation and interest for indigenous games , sports and yogic exercises
12. To create awareness about health and hygiene in the community.

Specific Objectives

1. To lay down a sound foundation for higher and advance studies in Physical Education in India.
2. To produce quality teachers in physical education.
3. To prepare students for advance coaching Diplomas in disciplines – Athletics, Gymnastics, Hockey, Swimming, Basketball, Football etc.
4. To fulfill the eligibility criteria of Foreign Universities to get admission in post graduate courses abroad since it is a basic and global programme.
5. To generate employment in the fields of Health Fitness and Gym- Management, Physiotherapy, Journalism, Aquatics and Yoga.
6. To provide opportunity to talented students to excel in sports and become outstanding sports persons.
7. To promote mass participation in Physical Education activities (Games, Sports Displays etc) through intra – mural and Extra- mural programmes.

OUTLINES OF TESTS, SYLLABI AND COURSES FOR THE BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.) EXAMINATION (SEMESTER SYSTEM) FOR THE SESSION: 2018-2019

The course of instruction for the B.P.Ed Examination consists of three parts as under:

PART – I	Theory Papers	1600 Marks
PART – II	Practical Course (Skill and Prowess)	800 Marks
PART – III	Practice of Teaching	800 Marks
		Total: 3200

Marks

Note I:

- *Part-I will be evaluated externally.*
- *Part-II will be evaluated by a panel of three internal examiners appointed by the Chairman/Principal of the Department/Institution.*
- *Part-III will be evaluated with one external and one internal examiner.*

Successful candidate shall be classified as follows:

	Pass	Third Division	Second Division	First Division	Distinction
Part-I: Theory	35%	Less than 50% marks in Aggregate	50%	60%	75%
Part-II: Practical Course (Skill and Prowess)	40%	Less than 50% marks in Aggregate	50%	60%	75%
Part-III: Practice of Teaching	40%	Less than 50% marks in Aggregate	50%	60%	75%

Note: Since this is a professional course aimed at improving the standard of games and sports, it is essential that special attention be given to the practical aspect of Track and Field, Games and Sports. Therefore, specified 20 hours per week must be devoted to the practical teaching.

SEMESTER-I
PART–I: THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
I.	CC-101	History, Principles and Foundation of Physical Education	68	4	20	80	100
II.	CC-102	Anatomy and Physiology	68	4	20	80	100
III.	CC-103	Educational Technology and Methods of Teaching in Physical Education	68	4	20	80	100
Elective Course (Any One)							
IV.	EC-101	Olympic Movement	68	4	20	80	100
	EC-102	Officiating and Coaching					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-101	Track and Field (Sprints, Shot-Put, Long Jump, Relays)	68	4	40	-	40
	PC-102	Swimming, Gymnastics	68	4	20+20	-	40
	PC-103	Calisthenics, Dumb-bells, Opening and Closing Ceremonies of Sports Events	68	4	40	-	40
	PC-104	Basketball, Football, Kabaddi, Kho-Kho	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
.	PT-101	Movement Lesson (A) Action Song (B) Motion Story	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons in the movement lesson and 05 officiating lessons in schools. The candidate shall prepare a note book covering action song and motion story lessons which shall carry (20+20) 40 marks.

Paper –I (CC-101)
HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT 1: INTRODUCTION
- Meaning, Definition and Scope of Physical Education
- Aims and Objective of Physical Education
- Importance of Physical Education in present era.
- Misconceptions about Physical Education.
- Relationship of Physical Education with General Education.
- Physical Education as an Art and Science.

UNIT- 2 HISTORICAL DEVELOPMENT OF PHYSICAL EDUCATION IN INDIA
- Indus Valley Civilization Period. (3250 BC 2500 BC)
- Vedic Period (2500 BC 600 BC)
- Early Hindu Period (600 BC 320 AD) and Later Hindu Period (320 AD 1000 AD)
- British Period (Before 1947)
- Physical Education in India (After 1947)
- Y.M.C.A. and its contributions.

UNIT- 3 FOUNDATION OF PHYSICAL EDUCATION
- Philosophical foundation:
  - Idealism
  - Pragmatism
  - Naturalism
  - Realism
  - Humanism and Existentialism
- Fitness and wellness movement in the contemporary perspectives
- Sports for all and its role in the maintenance and promotion of fitness.

UNIT-4 PRINCIPLES OF PHYSICAL EDUCATION
- Biological
  - Growth and development
  - Age and gender characteristics
  - Body Types
  - Anthropometric differences
- Psychological
  - Learning types, learning curve
  - Laws and principles of learning
  - Attitude, interest, emotions and sentiments
- Sociological
  - Society and culture
  - Leadership
  - Social integration and cohesiveness

REFERENCES:

1. Barow, H.M. (1971). *Man and His Movement*-Principles of Physical Education, Philadelphia, Lea and Febiger.
2. Bucher, C.A. (1972). *Foundations of Physical Education*, St. Louis; C.V. Mosby Co.
3. Kamlesh, M.L. (2004). *Principles and History of Physical Education and Sports,* Friends Publications (India), New Delhi.
4. Mohan, V. M. (1969). Principles of physical education. Delhi: Metropolitan Book Depot
5. Khan, E.A. (1964). *History of Physical Education,* Scientific Book Company. Patna.
6. Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
7. Obertuffer (1970). Delbert physical education. New York: Harper & Brothers Publisher.
8. Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
9. William, J. F. (1964). The principles of physical education. Philadelphia: W.B. Saunders Co.

Paper –II (CC-102)
ANATOMY AND PHYSIOLOGY

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: ANATOMY AND PHYSIOLOGY

- Introduction of Anatomy and physiology and its importance in the field of physical education and sports.
- Introduction of Cell and Tissue.
- The arrangement of the skeleton Function - of the skeleton Ribs and Vertebral column and the extremities.
- Joints of the body and their types
- Gender differences in the skeleton.

UNIT-II: SYSTEMS OF HUMAN BODY

- **Blood and circulatory system:** Constituents of blood and their function Blood groups and blood transfusion, clotting of blood, the structure of the heart-properties of the heart muscle, circulation of blood, cardiac cycle, blood pressure, Cardiac output.
- **The Respiratory system:** The Respiratory passage the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.
- **The Digestive system:** structure and functions of the digestive system, Digestive organs, Metabolism,
- **Excretory system:** Structure and functions of the kidneys and the skin.
- **The Endocrine glands:** Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.
- **Nervous systems:** Function of the Autonomic nervous system and Central nervous system. Reflex Action,

UNIT-III: NEUROMUSCULAR JUNCTIONS

- Muscles: Types of muscles, Properties and functions.
- Neuromuscular junction
- Fuel for muscular activity
- Role of oxygen- oxygen debt, second wind, vital capacity.
- Fatigue: Meaning and sites of fatigue.

UNIT-IV: EFFECTS OF EXERCISE ON VARIOUS SYSTEMS

- Effect of exercise and training on cardiovascular system.
- Effect of exercise and training on respiratory system.
- Effect of exercise and training on muscular system
- Physiological concept of physical fitness, warming up, conditioning.

REFERENCES:

1. Gupta, A. P. (2010). Anatomy *and physiology.* Agra: SumitPrakashan.
2. Hoeger, Werner W.K, Hoegen,Sharon A. (2004). Principles and Labs for fitness and wellness.
3. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication,1982.
4. Moorthy, A. M. (2014). *Anatomy physiology and health education.*Karaikudi: Madalayam Publications.
5. Pearce. E. (1989). Anatomy and Physiology for Nurses, Delhi, Oxford University Press.
6. Richardson, Seano, Anderson, Mark B. (2008). Overtraining Athletes: Personal Journey in Sports.
7. Wilmore, Jack H and Costill, David L. (1994).Physiology of Sports and Exercise. Human Kinetics.

Paper –III (CC-103)
EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION
- Education and Education Technology: Meaning and Definitions.
- Types of Education: Formal, Informal and Non- Formal education.
- Teaching: Meaning and Principles of teaching.
- Importance of technological devices used for imparting knowledge.

UNIT II TEACHING METHODS AND PRESENTATION TECHNIQUES
- Teaching Methods: Lecture method, Command method, Demonstration method, Imitation method, project method, Whole method, Whole- part- whole method, Part method, , At will method etc.
- Factors affecting teaching methods.
- Presentation Techniques: Personal and technical preparation, Steps of presentation.
- Types of class formations and Methods of classification of students.

UNIT III TEACHING AIDS
- Teaching Aids: Meaning, Importance, types of teaching aids.
- Criteria for selecting teaching aids.
- Team Teaching: Meaning, Principles and advantage of team teaching.
- Difference between Teaching Methods and Teaching Aid.

UNIT IV LESSON PLANNING AND TEACHING INNOVATIONS
- Lesson Planning: Meaning, Importance and Types
- Principles of lesson plans.
- Micro Teaching: Meaning, steps of micro teaching, advantages and principles
- Simulation Teaching: Meaning, Types and steps of simulation teaching.

REFERENCES:
1. Bhardwaj (2003).A *New media of educational planning*.New Delhi:Sarup of Sons.
2. Brar, R.S & Kanwar,S., (2008). Teaching Methodology and Education Technology in Physical Education, Kalyani Publisher, New Delhi.
3. Kochar, S.K. (2014). *Methods and techniques of teaching.* New Delhi: Sterling Publishers.
4. M.L. Kamlesh & Sangral, M..S., (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
5. Walia, J.S. (1999). *Principles and methods of education.*Jullandhar:Paul Publishers.

Paper –IV (EC-101)
OLYMPIC MOVEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I ORIGIN OF OLYMPIC MOVEMENT
- Philosophy of Olympic movement
- The early history of the Olympic movement
- The significant stages in the development of the modern Olympic movement
- Educational and cultural values of Olympic movement

UNIT IIMODERN OLYMPIC GAMES
- Significance of Olympic Ideals, Olympic Rings, Olympic Flag
- Olympic Protocol for member countries
- Olympic Code of Ethics
- Olympism in action
- Sports for All

UNIT III DIFFERENT OLYMPIC GAMES
- Para Olympic Games
- Summer Olympics
- Winter Olympics
- Youth Olympic Games

UNIT IV COMMITTEES OF OLYMPIC GAMES
- International Olympic Committee - Structure and Functions
- National Olympic committees and their role in Olympic movement
- Olympic commission and their functions
- Olympic medal winners of India

REFERENCES:
1. Osborne, M. P. (2004). *Magictree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York:* Random House Books for Young Readers.
2. Burbank, J. M., Andranovich, G. D. &Heying Boulder, C. H. (2001).Olympic dreams: the impact of mega-events on local politics: Lynne Rienner.

Paper –IV (EC-102)
OFFICIATING AND COACHING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION OF OFFICIATING AND COACHING
- Concept of officiating and coaching
- Importance and principles of officiating
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

UNIT- II: COACH AS A MENTOR
- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching

UNIT- III: DUTIES OF OFFICIAL
- Duties of official in general, pre, during and post game.
- Philosophy of officiating
- Mechanics of officiating position, singles and movement etc.
- Ethics of officiating

UNIT- IV: QUALITIES AND QUALIFICATIONS OF COACH AND OFFICIAL
- Qualities and qualification of coach and official
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments, preparation of TA, DA bills
- Integrity and values of sports

REFERENCES:
1. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
2. Dyson, G. H. (1963).*The mechanics of athletics*. London: University of London Press Ltd.
3. Singer, R. N. (1972).*Coaching, athletic & psychology*. New York: M.C. Graw Hill.
4. Brar. T. S. (2002). Officiating techniques in Track and Field, Gwalior. Bhargava Press.
5. De Souza A. J. (1999).Track Geography and Field Sites. Chennai. DBAC Sports Envisions.
6. Mortensen, J. and Cooper J. M. (1963). Track & Field for coach & athlete,. Prentice Hall Inc., Englewood Cliffs.

SEMESTER-II
PART – I THEORY PAPERS

Paper	Course Code	Subject	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
V.	CC-201	Yoga Education	68	4	20	80	100
VI.	CC-202	Health Education and Environmental Studies	68	4	20	80	100
VII.	CC-203	Organization and Administration	68	4	20	80	100
Elective Course (Any One)							
VIII.	EC-201	Contemporary issues in Physical Education, Fitness and Wellness	68	4	20	80	100
	EC-202	Sports Nutrition and Weight Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-201	Track and Field (Middle Distance Races, Hurdles, Discus Throw, High Jump)	68	4	40	-	40
	PC-202	Swimming, Gymnastics	68	4	20+20	-	40
	PC-203	Aerobics, Lezium, Indian Clubs,	68	4	40	-	40
	PC-204	Hockey, Volleyball, Handball, Softball,	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-201	(A) General Lesson (B) Theory Lesson	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (General and Theory Lessons) and 05 officiating lessons in schools. The candidate shall prepare a note book covering General and Theory Lessons which shall carry (20+20) 40 marks.

Paper –V (CC-201)
YOGA EDUCATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION
- Meaning and Definition of Yoga
- Aims and Objectives of Yoga
- Yoga in Early Upanisads
- The Yoga Sutra: General Consideration
- Need and Importance of Yoga in Physical Education and Sports

UNIT II: FOUNDATION OF YOGA
- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga

UNIT - III ASANAS
- Effect of Asanas and Pranayama on various system of the body
- Classification of asanas with special reference to physical education and sports
- Influences of relaxtive, meditative posture on various system of the body
- Types of Bandhas and mudras
- Type of kriyas

UNIT IV YOGA EDUCATION
- Basic, applied and action research in Yoga
- Difference between yogic practices and physical exercises
- Yoga education centers in India and abroad
- Competitions in Yogasanas

REFERENCES:
1. Brown, F. Y.,(2000). *How to use yoga*. Delhi:Sports Publication.
2. Gharote, M. L. & Ganguly, H.(1988). *Teaching methods for yogic practices*. Lonawala: Kaixydahmoe.
3. Rajjan, S. M. (1985). *Yoga strengthening of relaxation for sports man.* New Delhi: Allied Publishers.
4. Shankar,G. (1998) *Holistic approach of yoga.* New Delhi:Aditya Publishers.
5. Shekar,K. C., (2003).*Yoga for health*. Delhi: Khel Sahitya Kendra.

Paper –VI (CC-202)
HEALTH EDUCATION AND ENVIRONMENT STUDIES

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

Unit I Health Education

- Concept, Dimensions, Spectrum and Determinants of Health
- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene

Unit II Health Problems in India

- Communicable and Non Communicable Diseases
- Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive Population,
- Personal and Environmental Hygiene for schools
- Objective of school health service, Role of health education in schools
- Health Services Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

Unit III Environmental Science

- Definition, Scope, Need and Importance of environmental studies.
- Concept of environmental education, Historical background of environmental education,
- Celebration of various days in relation with environment.
- Plastic recycling & probation of plastic bag / cover.
- Role of school in environmental conservation and sustainable development.

Unit IV Natural Resources and related environmental issues:

- Water resources, food resources and Land resources
- Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- Management of environment and Govt. policies , Role of pollution control board.

REFERENCES:

1. Agrawal, K.C. (2001). *Environmental biology*. Bikaner: Nidhi publishers Ltd.
2. Beotra, Alka (2001). Drug Education Handbook on Drug Abuse in Sports. Mumbai: Applied Nutrition Sciences.
3. Frank, H. &Walter, H. (1976). *Turners school health education*. Saint Louis: The C.V. Mosby Company.
4. Odum, E.P. (1971). *Fundamental of ecology*. U.S.A.: W.B. Saunders Co.
5. Pande, P. K. (1987). Outline of Sports Medicine, New Delhi : Jaypee Brothers.
6. Roy, Steven and Richard, Irvin (1983). Sports Medicine ,N.J. : Englewood Cliff.
7. Sharma, N.P.(2005). Sharir Rachna Tatha Sharir Kriya Vigyan . New Delhi : Khel Sahitya Kendra.

Paper –VII (CC-203)
ORGANIZATION AND ADMINISTRATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: ORGANIZATION AND ADMINISTRATION

- Meaning and importance of Organization and Administration in physical education.
- Qualification and Responsibilities of Physical Education teacher and pupil leader.
- Planning and their basic principles,
- Program planning: Meaning, Importance, Principles of program planning in physical education.
- Functions of Management: Planning, organizing, staffing, directing, communicating, co-ordination, controlling, evaluating and innovating.

UNIT II: OFFICE MANAGEMENT, RECORD, REGISTER & BUDGET

- Office Management: Meaning, definition, functions and kinds of office management
- Records and Registers: Maintenance of attendance Register, stock register, cash register, physical efficiency record, Medical examination Record.
- Budget: Meaning, Importance of Budget making,
- Criteria of a good Budget, Sources of Income, Expenditure, Preparation of Budget.

UNITIII: FACILITIES, & TIME-TABLE MANAGEMENT

- Facilities and equipment management: Types of facilities; Infrastructure-indoor, out door.
- Playfields: Area, Location, layout and care
- Equipment: Need, importance, purchase, care and maintenance.
- Time Table Management: Meaning, Need, Importance and Factor affecting time table.

UNITIV: COMPETITION ORGANIZATION

- Tournament and its importance.
- Types of Tournament and its organization structure - Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament, consolation tournaments and challenge Tournament.
- Organization structure of Athletic Meet.
- Sports Event Intramurals & Extramural Tournament planning.

REFERENCES:

1. Bucher, C. A. (1985). *Administration of Physical Education and Athletic programme.*St. Lolis: The C.V. Hosby Co.
2. M.L. Kamlesh and M.S. Sangral (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
3. Sharma, V.M. & Tiwari, R.H. (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
4. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press.
5. Tirunarayan and Hariharan (1985). Methods in Physical education M.S C.T. & S. H. Allagappa College of Physical Education, Karaikuddi U.

Paper –VIII (EC-201)
CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I CONCEPT OF PHYSICAL EDUCATION AND FITNESS
- Definition, Aims and Objectives of Physical Education, fitness and Wellness
- Importance and Scope of fitness and wellness
- Modern concept of Physical fitness and Wellness
- Physical Education and its Relevance in Inter Disciplinary Context.

UNIT II FITNESS, WELLNESS AND LIFESTYLE
- Fitness Types of Fitness and Components of Fitness
- Understanding of Wellness
- Modern Lifestyle and Hypo kinetic Diseases Prevention and Management
- Physical Activity and Health Benefits

UNIT III PRINCIPLES OF EXERCISE PROGRAM
- Means of Fitness development aerobic and anaerobic exercises
- Exercises and Heart rate Zones for various aerobic exercise intensities
- Concept of free weight Vs Machine, Sets and Repetition etc
- Concept of designing different fitness training program for different age group.

UNIT IV SAFETY EDUCATION AND FITNESS PROMOTION
- Health and Safety in Daily Life
- First Aid and Emergency Care
- Common Injuries and their Management

REFERENCES:
1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). Sport *medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G. (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

Paper –VIII (EC-202)
SPORTS NUTRITION AND WEIGHT MANAGEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS NUTRITION

- Meaning and Definition of Sports Nutrition
- Basic Nutrition guidelines
- Role of nutrition in sports
- Factor to consider for developing nutrition plan

UNIT II NUTRIENTS: INGESTION TO ENERGY METABOLISM

- Carbohydrates, Protein, Fat Meaning, classification and its function
- Role of carbohydrates, Fat and protein during exercise
- Vitamins, Minerals, Water Meaning, classification and its function
- Role of hydration during exercise, water balance, Nutrition daily caloric requirement and expenditure.

UNIT III NUTRITION AND WEIGHT MANAGEMENT

- Meaning of weight management Concept of weight management in modern era Factor affecting weight management and values of weight management
- Concept of BMI (Body mass index), Obesity and its hazard, Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss
- Obesity Definition, meaning and types of obesity,
- Health Risks Associated with Obesity, Obesity - Causes and Solutions for Overcoming Obesity.

UNIT IV STEPS OF PLANNING OF WEIGHT MANAGEMENT

- Nutrition Daily calorie intake and expenditure, Determination of desirable body weight
- Balanced diet for Indian School Children, Maintaining a Healthy Lifestyle
- Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss

REFERENCES:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6).
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a keycomponent of successful weight loss maintenance.*Obesity(Silver Spring). 15*(12).
3. Chu, S.Y. & Kim, L. J.(2007). Maternal obesity and risk of stillbirth: a metaanalysis. Am J ObstetGynecol, 197(3).
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. N Engl J Med,356(21).
5. Dixon, J.B., & O'Brien, P.E., Playfair, J. (2006). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized.

SEMESTER-III
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
IX.	CC-301	Computer Application in Physical Education	68	4	20	80	100
X	CC-302	Sports Psychology and Sociology	68	4	20	80	100
XI	CC-303	Sports Training	68	4	20	80	100
Elective Course (Any One)							
XII.	EC-301	Sports Medicine, Physiotherapy, and rehabilitation	68	4	20	80	100
	EC-302	Curriculum Design					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-301	Track and Field (Long Distance Races, Javelin Throw, Triple Jump, Steeple Chase)	68	4	40	-	40
	PC-302	Swimming, Gymnastics	68	4	20+20	-	40
	PC-303	Folk Dances	68	4	40	-	40
	PC-304	Cricket, Badminton, Table-Tennis, Lawn-Tennis	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-301	Teaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (Games, Track & Field) and 05 officiating lessons in schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –IX (CC-301)
COMPUTER APPLICATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I: INTRODUCTION TO COMPUTER
- Meaning, need and importance of information and communication technology (ICT). Application of Computers in Physical Education
- Components of computer, input and output device
- Application software used in Physical Education and sports

UNIT II: MS WORD
- Introduction to MS Word
- Creating, saving and opening a document
- Formatting Editing features Drawing table
- Page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes

UNIT III: MS EXCEL
- Introduction to MS Excel
- Creating, saving and opening spreadsheet
- Creating formulas
- Format and editing features adjusting columns width and row height understanding charts.

UNIT IV: MS POWER POINT
- Introduction to MS Power Point
- Creating, saving and opening a ppt. file
- Format and editing features slide show, design, inserting slide number
- Picture, graph, table
- Preparation of Power point presentations

REFERANCES:
1. Irtegov, D.(2004). *Operating system fundamentals*. Firewall Media.
2. Milke, M. (2007). *Absolute beginners guide to computer basics*. Pearson Education Asia.
3. Barrett, R. (2007). Administrator's Guide to Microsoft Office 2007 servers.
4. Eric, L. Einspruch (2005). AN Introductory Guide to SPSS for Windows, Sage.
5. Kilman, Shin (1995). *SPSS GUIDE* Mc Graw – Hill Higher Education.
6. Murray, K. (2007). Faster smarter Microsoft office XP: Take charge of your Microsoft office programme.

Paper –X (CC-302)
SPORTS PSYCHOLOGY AND SOCIOLOGY

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT -I: INTRODUCTION

- Meaning, Importance and scope of Educational and Sports Psychology
- General characteristics of Various Stages of growth and development
- Types and nature of individual differences; Factors responsible -Heredity And environment
- Psycho-sociological aspects of Human behavior in relation to physical education and sports

UNIT-II: SPORTS PSYCHOLOGY

- Nature of learning, theories of learning, Laws of learning,
- Plateau in Learning; & transfer of training
- Meaning and definition of personality, characteristics of personality,
- Dimension of personality, Personality and Sports performance
- Nature of motivation: Factors influencing motivation; Motivation and techniques and its impact on sports performance.
- Mental Preparation Strategies: Attention focus, Self- talk, Relaxation, Imaginary.
- Aggression and Sports, Meaning and nature of anxiety, Kinds of anxiety
- Meaning and nature of stress; Types of stress, Anxiety, Stress, Arousal and their effects on sports performance

UNIT-III: RELATION BETWEEN SOCIAL SCIENCE AND PHYSICAL EDUCATION.

- Orthodoxy, customs, Tradition and Physical Education.
- Festivals and Physical Education.
- Socialization through Physical Education.
- Social Group life, Social conglomeration and Social group, Primary group and Remote group.

UNIT-4 CULTURE: MEANING AND IMPORTANCE.

- Features of culture,
- Importance of culture.
- Effects of culture on people life style.
- Different methods of studying Observation/ Inspection method, Questionnaire method, Interview method

REFERENCES:

1. Ball, D. W. & Loy, J. W. (1975). Sport *and social order; Contribution to the sociology of sport.* London: Addison Wesley Publishing Co., Inc.
2. Kamlesh, M.L. (1998). Psychology in physical education and sport. New Delhi: Metropolitan Book Co.
3. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1981). Sports culture and society. Philadelphia: Lea &Febiger.
4. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sport and social system. London: Addison Wesley Publishing Company Inc.
5. Skinnner, C. E.(1984). Education psychology. New Delhi: Prentice Hall of India.
6. William, F. O.& Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt Ltd.

Paper –XI (CC-303)
SPORTS TRAINING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO SPORTS TRAINING

- Meaning and Definition of Sports Training ○ Aim and Objective of Sports Training
- Principles of Sports Training
- System of Sports Training Basic Performance, Good Performance and High Performance Training

UNIT II TRAINING COMPONENTS

- Strength Mean and Methods of Strength Development
- Speed Mean and Methods of Speed Development
- Endurance - Mean and Methods of Endurance Development
- Coordination Mean and Methods of coordination Development
- Flexibility Mean and Methods of Flexibility Development

UNIT III TRAINING PROCESS

- Training Load- Definition and Types of Training Load
- Principles of Intensity and Volume of stimulus
- Technical Training Meaning and Methods of Technique Training
- Tactical Training Meaning and Methods of Tactical Training

UNIT IV TRAINING PROGRAMMING AND PLANNING

- Periodization Meaning and types of Periodization
- Aim and Content of Periods Preparatory, Competition, Transitional etc.
- Planning Training session
- Talent Identification and Development

REFERENCES:

1. Bompa, Tudor, O. (1999). Periodisations Training for sports: Human Kinetic (U.S.A).
2. Dick, W. F. (1980). *Sports training principles.*London: Lepus Books.
3. Dick. W. Frank. (1980). *Sports Training Principles*, London: Lepus Birks.
4. Harre . Dictrich. (1982). *Principles of Sports Training*. Beslin : Sportulag.
5. Harre, D. (1982). *Principles of sports training.*Berlin: Sporulated.
6. Singh, Hardyal (1991). *Science of Sports Training*. D, V, S Publications. New Delhi.
7. Uppal, A.K. (1999). S*ports Training.*New Delhi: Friends Publication.

Paper –XII (EC-301)
SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: - SPORTS MEDICINE:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education
- Prevention of injuries in sports Common sports injuries Diagnosis
- First Aid - Treatment - Laceration Blisters Contusion - Strain Sprain Fracture Dislocation and Cramps Bandages Types of Bandages trapping and supports.

UNIT-II: PHYSIOTHERAPY

- Definition Guiding principles of physiotherapy, Importance of physiotherapy, Introduction and demonstration of treatments - Electrotherapy infrared rays Ultraviolet rays short wave diathermy ultrasonic rays.

UNIT-III: HYDROTHERAPY:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast Bath, Whirlpool Bath Steam Bath Sauna Bath Hot Water Fomentation Massage: History of Massage Classification of Manipulation (Swedish System) physiological Effect of Massage.

UNIT-IV: THERAPEUTIC EXERCISE:

- Definition and Scope Principles of Therapeutic Exercise Classification, Effects and uses of Therapeutic exercise passive Movements (Relaxed, Forced and passive - stretching) active movements (concentric, Eccentric and static) application of the therapeutic exercise: Free Mobility Exercise Shoulder, Elbow Wrist and Finger Joints Hips, Knee, ankle and Foot joints Trunk. Head and Neck exercises.

REFERENCES:

1. Christine, M. D. (1999). *Physiology of sports and exercise*.USA: Human Kinetics.
2. Conley, M.(2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005). *Drugs in sports,* (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D.(1979). A *dictionary for physical educators.* In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.
5. Jeyaprakash, C. S. (2003). Sports Medicine, J.P. Brothers Pub., New Delhi.
6. Khanna, G.L. (1990). *Exercise physiology & sports medicine*. Delhi:Lucky Enterprises.
7. Pandey, P.K. (1987). Outline *of sports medicine*, New Delhi: J.P. Brothers Pub.,1987.

Paper –XII (EC-302)
CURRICULUM DISIGN

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I MODERN CONCEPT OF THE CURRICULUM

- Need and importance of curriculum, Need and importance of curriculum development, the role of the teacher in curriculum development.
- Factors affecting curriculum - Social factors - Personnel qualifications - Climatic consideration - Equipment and facilities -Time suitability of hours.
- National and Professional policies, Research finding

UNIT II BASIC GUIDE LINE FOR CURRICULUM CONSTRUCTION; CONTEST (SELECTION AND EXPANSION).

- Focalization
- Socialization
- Individualization
- Sequence and operation
- Steps in curriculum construction.

UNIT III CURRICULUM-OLD AND NEW CONCEPTS, MECHANICS OF CURRICULUM PLANNING.

- Basic principles of curriculum construction.
- Curriculum Design, Meaning, Importance and factors affecting curriculum design.
- Principles of Curriculum design according to the needs of the students and state and national level policies.
- Role of Teachers

UNIT IV Under-graduate preparation of professional preparation.

- Areas of Health education, Physical education and Recreation.
- Curriculum design-Experience of Education, Field and Laboratory.
- Teaching practice.
- Professional Competencies to be developed-Facilities and special resources for library, laboratory and other facilities.

REFERENCES:

1. Barrow, H. M. (1983). *Man and movement: principles of physical education*. Philadelphia: Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby & Company.
3. Cassidy, R. (1986). *Curriculum development in physical education*. New York: Harper & Company.

SEMESTER-IV
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
XIII.	CC-401	Measurement and Evaluation in Physical Education	68	4	20	80	100
XIV.	CC-402	Kinesiology and Biomechanics	68	4	20	80	100
XV.	CC-403	Research and Statistics in Physical Education	68	4	20	80	100
Elective Course (Any One)							
XVI.	EC-401	Theory of Sports and Games	68	4	20	80	100
	EC-402	Sports Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-401	Track and Field (Race Walk, Road Race, Hammer throw, Pole Vault)	68	4	40	-	40
	PC-402	Swimming, Gymnastics	68	4	20+20	-	40
	PC-403	Mass Demonstrations	68	4	40	-	40
	PC-404	Wrestling, Judo, Boxing, Kabaddi (circle Style)	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-401	Coaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each trainee will be required to take a minimum of 10 supervised lessons (Games, Track & Field) and 05 officiating lessons in schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –XIII (CC-401)
MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I INTRODUCTION TO TEST & MEASUREMENT & EVALUATION
- Meaning of Test & Measurement & Evaluation in Physical Education
- Need & Importance of Test & Measurement & Evaluation in Physical Education
- Principles of Evaluation

UNIT-II CRITERIA, CLASSIFICATION AND ADMINISTRATION OF TEST
- Criteria of good Test
- Criteria of tests, scientific authenticity (reliability, objectivity, validity and availability of norms)
- Type and classification of Test
- Administration of test

UNIT- III PHYSICAL FITNESS TESTS
- AAHPER youth fitness test
- National physical Fitness Test
- Indiana Motor Fitness Test
- JCR test

UNIT- IV SPORTS SKILL TESTS
- Lockhart and McPherson badminton test
- Johnson basketball test
- McDonald soccer test
- S.A.I volleyball test

REFERENCES:
1. Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark.
2. Barron, H. M., & Mchee, R. (1997). *A practical approach to measurement in physical education*. Philadelphia: Lea and Febiger.
3. Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi: D.V.S. Publications.
4. Mathews, D.K. (1973). Measurement in physical education, Philadelphia: W.B.Sounders Compnay.

5. Pheasant, S.(1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
6. Phillips, D. A., &Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Willey and Sons.
7. Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

Paper –XIV (CC-402)
KINESIOLOGY AND BIOMECHANICS

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO KINESIOLOGY AND SPORTS BIOMECHANICS

- Meaning and Definition of Kinesiology and Sports Biomechanics
- Importance of Kinesiology and Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- Terminology of Fundamental Movements
- Fundamental concepts of following terms Axes and Planes, Centre of Gravity, Equilibrium, Line of Gravity

UNIT II FUNDAMENTAL CONCEPT OF ANATOMY AND PHYSIOLOGY

- Classification of Joints and Muscles
- Types of Muscle Contractions
- Posture Meaning, Types and Importance of good posture.
- Fundamental concepts of following terms- Angle of Pull, All or None Law, Reciprocal Innovation

UNIT III MECHANICAL CONCEPTS

- Force - Meaning, definition, types and its application to sports activities
- Lever - Meaning, definition, types and its application to human body.
- Newtons Laws of Motion Meaning, definition and its application to sports activities.
- Projectile Factors influencing projectile trajectory.

UNIT IV KINEMATICS AND KINETICS OF HUMAN MOVEMENT

- Linear Kinematics Distance and Displacement, speed and velocity, Acceleration
- Angular kinematics Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.
- Linear Kinetics Inertia, Mass, Momentum, Friction.
- Angular Kinetics Moment of inertia ,Couple, Stability.

REFERENCES:

1. Bunn, J. W. (1972).*Scientific principles of coaching.* Englewood Cliffs, N.J.: Prentice Hall Inc.
2. Hay, J. G. & Reid, J. G.(1982).*The anatomical and mechanical basis of human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
3. Hay, J. G. & Reid, J. G.(1988).*Anatomy, mechanics and human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
4. Hay, J. G. (1970).*The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc. Simonian, C. (1911).*Fundamentalsof sport biomechanics.* Englewood Cliffs, N.J.: Prentice Hall Inc.

Paper –XV (CC-403)
RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT I INTRODUCTION TO RESEARCH

- Definition of Research
- Need and importance of Research in Physical Education and Sports.
- Scope of Research in Physical Education & Sports.
- Classification of Research
- Research Problem, Meaning of the term, Location and criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations.

UNIT II SURVEY OF RELATED LITERATURE

- Need for surveying related literature.
- Literature Sources, Library Reading
- Research Proposal, Meaning and Significance of Research Proposal.
- Preparation of Research proposal / project.
- Research Report: A group project is to be undertaken by a small batch of students under the supervision of a teacher, wherein it is expected to survey school facilities of physical education, health assessment programme evaluation, fitness status of the students, staff and other stakeholders etc. and submit the report to the institution.

UNIT-III BASICS OF STATISTICAL ANALYSIS

- Statistics: Meaning, Definition, Nature and Importance
- Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables
- Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram

UNIT- IVSTATISTICAL MODELS IN PHYSICAL EDUCATION AND SPORTS

- Measures of Central Tendency: Mean, Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data
- Measures of Variability: Meaning, importance, computing from group and ungroup data
- Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data

REFERENCES:

1. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc. +
2. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
3. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
4. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
5. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
6. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

Paper –XVI (EC-401)
THEORY OF SPORTS AND GAMES

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: GENERAL INTRODUCTION OF SPECIALIZED GAMES AND SPORTS

Athletics, Badminton, Basketball, Cricket, Football, Gymnastic, Hockey, Handball, Kabaddi, Kho-Kho, Tennis, Volleyball and Yoga.

Each game or sports to be dealt under the following heads

○ History and development of the Game and Sports ○ Ground preparation, dimensions and marking ○ Standard equipment and their specifications ○ Ethics of sports and sportsmanship

UNIT-II: SCIENTIFIC PRINCIPLES OF COACHING: (Particular Sports And Game Specific)

○ Motion Types of motion and Displacement, Speed, Velocity, Acceleration, Distance and Newtons Law of motions.
○ Force Friction, Centripetal and Centrifugal force, Principles of force.
○ Equilibrium and its types ○ Lever and its types
○ Sports Training Aims, Principles and characteristics.
○ Training load Components, Principles of load, Over Load (causes and symptoms).

UNIT-III: PHYSICAL FITNESS COMPONENTS: (Particular Sports and Game Specific)

○ Speed and its types
o Strength and its types ○ Endurance and its types
○ Flexibility and its types
○ Coordinative ability and its types
○ Training methods: Development of components of physical fitness and motor fitness through following training methods (continuous method, interval method, circuit method, fartlek /speed play and weight training)

UNIT-IV: CONDITIONING EXERCISES AND WARMING UP

○ Concept of Conditioning and warming up.
○ Role of weight training in games and sports.
○ Teaching of fundamental skill & their mastery (technique, tactic and different phases of skill acquisition).
○ Recreational and Lead up games
○ Strategy Offence and defense, Principles of offence and defense.

REFERENCES:

1. Bunn, J. W. (1968). *The art of officiating sports*. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). *Scientific principles of coaching.* Englewood cliffs N. J. Prentice Hall.
3. Dyson, G. H. (1963). *The mechanics of athletics*. London: University of London Press Ltd.
4. Lawther, J.D. (1965). *Psychology of coaching.* New York: Pre. Hall.
5. Singer, R. N. (1972). *Coaching, athletic & psychology*. New York: M.C. Graw Hill.

Paper –XVI (EC-402)
SPORTS MANAGEMENT

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I

- Nature and Concept of Sports Management.
- Progressive concept of Sports management.
- The purpose and scope of Sports Management.
- Essential skills of Sports Management.
- Qualities and competencies required for the Sports Manager.
- Event Management in physical education and sports.

UNIT-II

- Meaning and Definition of leadership
- Leadership style and method.
- Elements of leadership.
- Forms of Leadership.
    - Autocratic
    - Laissez-faire
    - Democratic
    - Benevolent Dictator
- Qualities of administrative leader.
- Preparation of administrative leader.
- Leadership and Organizational performance.

UNIT-III

- Sports Management in Schools, colleges and Universities.
- Factors affecting planning ○ Planning a school or college sports programme.
- Directing of school or college sports programme.
- Controlling a school, college and university sports programme.
    - Developing performance standard
    - Establishing a reporting system
    - Evaluation
    - The reward/punishment system

UNIT-IV

- Financial management in Physical Education & sports in schools, Colleges and Universities.
- Budget Importance, Criteria of good budget,
- Steps of Budget making
- Principles of budgeting

REFERENCES:

1. Ashton, D. (1968).Administration of physical education for women.New York: The Ronal Press
2. Bucher, C.A. (1978). Administration of physical education and athletic programme. 7th Edition, St. Louis: The C.V. Mosby Co.
3. Daughtrey, G. & Woods, J.B. (1976). Physical education and intramural programmes, organisation and administration. Philadelphia U.S.A. : W.B. Sounders Cp.
4. Earl, F. Z,& Gary, W. B. (1963).Management competency development in sports and physical education. Philadelphia: W. Lea and Febiger.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) FIRST YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2019-2020

(SEMESTER : FIRST AND SECOND)

i.e

First Semester : November/December, 2019
Second Semester : April/May, 2020

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Sr. No.	*Particulars*		*Page No.*
	Structural Outline		**(i)-(iv)**
1.	**English (Compulsory) (for B.A. candidates)**		**1**
2.	**Panjabi (Compulsory) (for B.A. and B.Sc. candidates)**		**3**
3.	**History and Culture of Punjab (for B.A. Candidates Only)**		**5**
4.	**History and Culture of Punjab (for B.Sc. Candidates Only)**		**9**
5.	**Electronics**	**Kept in Abeyance**	**14**
6.	**Agriculture**		**15**
7.	**English (Elective)**		**20**
8.	**Hindi (Elective)**		**22**
9.	**Panjabi (Elective)**		**30**
10.	**Sanskrit (Elective)**		**32**
11.	**Urdu (Elective)**		**36**
12.	**Persian (Elective)**		**38**
13.	**French (Elective)**		**40**
14.	**German (Elective)**		**42**
15.	**Russian (Elective)**		**44**
16.	**Arabic (Elective)**	**Kept in Abeyance**	**46**
17.	**Bengali (Elective)**	**Kept in Abeyance**	**46**
18.	**Tamil (Elective)**	**Kept in Abeyance**	**46**
19.	**Telugu (Elective)**	**Kept in Abeyance**	**46**
20.	**Kannada (Elective)**	**Kept in Abeyance**	**46**
21.	**Malayalam (Elective)**	**Kept in Abeyance**	**46**
22.	**Physical Education**		**47**
23.	**Education**		**55**
24.	**Adult Education**		**59**
25.	**Music (Vocal)**		**63**
26.	**Music (Instrumental)**		**69**
27.	**Music (Tabla)**		**75**
28.	**Music (Indian Classical Dance)**		**79**
29.	**Fine Arts**		**84**
30.	**History of Art**		**90**
31.	**Ancient Indian History, Culture & Archaeology**		**94**
32.	**Defence and Strategic Studies**		**98**
33.	**History**		**104**
34.	**Political Science**		**108**
35.	**Economics**		**112**
36.	**Sociology**		**116**
37.	**Public Administration**		**120**
38.	**Philosophy**		**124**
39.	**Psychology**		**128**
40.	**Geography**		**132**
41.	**Gandhian Studies**		**142**
42.	**Journalism & Mass Communication.**		**146**
43.	**Police Administration**		**150**
44.	**Women's Studies**		**154**
45.	**Human Rights and Duties**		**159**
46.	**Religious & Sikh Studies**		**163**
47.	**Home Science**		**167**
48.	**Environment Conservation**		**173**
49.	**Mathematics**		**177**
50.	**Computer Science**		**183**
51.	**Statistics**		**189**
52.	**Applied Statistics**		**194**
53.	**Physics**		**197**
54.	**Chemistry**		**209**
55.	**Botany**		**224**
56.	**Zoology**		**232**
57.	**Bio-Chemistry**		**243**
58.	**Introduction to Computer Science**		**249**
59.	**Microbiology**		**254**
60.	**(i)Environment (ii) Road Safety Education (iii) Violence against Women/ Children.**		**261**

SCHEME FOR OPTING SUBJECTS
B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM)
EXAMINATION, 2019-2020

B.A. (General) 1st Year (Semester System) study programme consists of three compulsory subjects and three elective subjects :

Compulsory subjects :

(a) Punjabi
OR
History & Culture of Punjab

(b) English

(c) Environment, Road Safety Education, Violence against Women/Children and Drug Abuse ***

Elective Subjects : A student is required to take up 3 elective subjects in all, selecting *not more than one subject* from any of the following sets of combinations. :

1. English, Hindi, Punjabi, ** Bengali, Urdu, Persian, ** Tamil, French,** Arabic, Russian, German, ** Kannada, ** Malayalam, ** Telugu.
2. Economics, Defence & Strategic Studies, Fine Arts, Education, Adult Education, History of Art.
3. History, Mathematics.
4. Public Administration, Home Science, Gandhian Studies, Philosophy.
5. Political Science, * Statistics, Applied Statistics; Indian Classical Dance, Human Rights and Duties.
6. Sanskrit, Physical Education, Ancient Indian History, Culture & Archaeology, Psychology, Geography.
7. Computer Science, Agriculture, Sociology.
8. Music (Instrumental), Women's Studies, Music (Tabla), Environment Conservation, Religious and Sikh Studies
9. Music (Vocal), Police Administration, Journalism & Mass Communication.

Note: *The students can opt. only two elective subjects from the following :*
Music (Instrumental), Music (Vocal), Music (Tabla) and Indian Classical Dance.

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* Statistics can be opted only with Mathematics

** The Syllabus of Tamil, Telugu, Kannada, Malayalam, Arabic & Bengali Languages are **kept in abeyance**

*** This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

10. ** *Elective Vocational Subject (one of the following) :* *Pre-requisite subject at +2 level*

1.	Mass Communication –Video Production	Any
2.	Functional English	English
3.	Advertising, Sales Promotion & Sales Management	Any
4.	Foreign Trade, Practices and Procedures	Preferably with Economics or Commerce
5.	Office Management & Secretarial Practice	Any
6.	Computer Applications	Preferably Computer
7.	Functional Hindi	Hindi
8.	Tax Procedures & Practices	Accountancy/Business Studies
9.	Principles and Practice of Insurance	Any
10.	Information Technology	Any
11.	Fashion Designing	Any
12.	Early Childhood Care & Education	Any

**A student who opts for Computer Science as an Elective subject shall not take up Computer Applications/Information Technology as Elective Vocational subject and vice-versa.

Note :- Syllabus for the Subject at Sr. No. 1 is not framed.

FOR B.SC. (GENERAL) CANDIDATES :

(Besides the compulsory subject, a student shall offer any three elective subjects)

A	*Elective Vocational Subject*	*Other Two Elective Subjects*	*Pre-requisite subjects at +2 level*
1.	Clinical Nutrition Dietetics	Chemistry, Physics & Botany	PCB*
2.	Bio-Technology	Chemistry, Botany or Zoology	PCB
3.	Seed Technology	Botany, Chemistry	PCB
4.	Industrial Fish & Fishery	Zoology, Chemistry	PCB
5.	Instrumentation	Physics, Mathematics	PCM
6.	Mass Communication Video Production	Any two Science Subjects	Any
7.	Electronic Equipment Maintenance **(Kept In Abeyance)**	Physics, Chemistry/Maths.	PCM
8.	Computer Applications	Any two Science Subjects	Preferably Computer
9.	Industrial Chemistry	Chem., Maths./Botany/Zoology	PCM/B
10.	Industrial Microbiology	Chemistry and Botany or Zoology	PCB
11.	Food Science & Quality Control **(Kept In Abeyance)**	Chemistry and Botany/Zoology	PCB
12.	Information Technology	Any	Any

B			
13.	Bioinformatics, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
14.	Biotechnology, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
15.	Electronics : Physics + Electronics +Mathematics	:	PCM
	OR		
	Chemistry + Electronics + Computer Science		
16.	1. Agriculture, Botany & Zoology	:	PCB
	2. Agriculture, Biotechnology, Botany/Zoology	:	PCB
	3. Agriculture, Microbiology, Chemistry/Botany/Zoology	:	PCB
	4. Agriculture, Chemistry, Physics/Botany/Zoology	:	PCB

* P stands for Physics, C stands for Chemistry, B for Biology and M for Mathematics.
** B for Botany.
*** Z for Zoology

Note :- Syllabus for the Subject at Sr. No. 1, 3, 4, 5 and 6 are not framed.

Guidelines for continuous internal assessment (10%) for regular students of Under-Graduate courses (semester system):

Criteria for Internal Assessment:

(i)	Class test	=	5%
(ii)	Academic Activities (Seminar, Project, Assignment)	=	3%
(iii)	Attendance	=	2%

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be proportionately be increased to maximum marks of the paper in lieu of internal assessment.

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) i.e. FIRST SEMESTER NOVEMBER/DECEMBER 2019 AND SECOND SEMESTER APRIL/MAY 2020, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – I

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Text Prescribed :

English at Work, (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 1-4
Prose Chapters = 1-4

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type questions from Prose in not more than 100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Paragraph Writing (Descriptive and Narrative) ***One*** out of ***three*** to be attempted **05 marks**

Q.5. Comprehension of passage from Prose text **05 marks**

Q.6 Grammar - Voice, Determiners, Modals, Antonyms **10 marks**

Q.7. Translation from Vernacular to English. ***Four*** out of ***Six*** sentences (only tense based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ENGLISH (Compulsory)

SEMESTER – II

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Text Prescribed :

English at Work (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 5-8
Prose Chapters = 5-8

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type question from Prose in not more than100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Letter Writing (Personal only) **05 marks**

Q.5. Grammar : Narration, Preposition, Conjunctions, Synonyms **10 marks**

Q.6 Comprehension of Unseen Passage **05 marks**

Q.7. Translation from Hindi to English. ***Four*** out of ***six*** sentences (only idiom based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ਪੰਜਾਬੀ (ਲਾਜਮੀ)

ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਲੇਖ ਰਚਨਾ 10 ਅੰਕ
3. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਾਵਿ-ਸੁਮੇਲ**, (ਸੰਪਾਦਕ) ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ ।
(ਹਰਭਜਨ ਸਿੰਘ ਹੁੰਦਲ ਅਤੇ ਹਰਭਜਨ ਸਿੰਘ ਰੈਨੂ ਸਿਲੇਬਸ ਵਿਚ ਨਹੀਂ ਹਨ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਕਾਵਿ-ਸੁਮੇਲ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 5 ਅੰਕ

(ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਂਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋਂ ਇਕ) 5+5= 10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਪ੍ਰਸ਼ਨਾ ਵਿਚੋਂ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1= 5 ਅੰਕ

3. ਲੇਖ ਰਚਨਾ (500 ਸ਼ਬਦਾਂ ਵਿਚ) ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ 10 ਅੰਕ
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ

5. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 6 ਅੰਕ

(i) ਵਿਆਕਰਨ : ਵਿਆਕਰਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹਤੱਵ ਤੇ ਤੱਤ (ਵਾਕ ਪ੍ਰਬੰਧ, ਰੂਪ ਪ੍ਰਬੰਧ, ਧੁਨੀ ਪ੍ਰਬੰਧ ਤੇ ਲਿਖਤ ਪ੍ਰਬੰਧ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ) (ਦੋ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨਾ ਹੈ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ) 2+2= 4 ਅੰਕ

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਭਾਗ ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁਲ ਅੰਕ: 50
ਲਿਖਤੀ ਅੰਕ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ — 10 ਅੰਕ
3. ਮੁਹਾਵਰੇ — 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਥਾ ਕਹਾਣੀ**, (ਸੰਪਾਦਕ) ਡਾ ਧਨਵੰਤ ਕੌਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਕਥਾ ਕਹਾਣੀ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 4+6= 10 ਅੰਕ

   (ਅ) ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚ ਸੰਮਲਿਤ ਕਹਾਣੀਆਂ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਣ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ

2. ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ।) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 5×1= 5 ਅੰਕ

3 ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ ਲਿਖਣਾ (ਸਾਹਿਤਕ, ਸੱਭਿਆਚਾਰਕ ਤੇ ਖੇਡ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ) — 10 ਅੰਕ

4 ਮੁਹਾਵਰੇ : ਅਰਥ ਦਸ ਕੇ ਵਾਕ ਬਣਾਉਣੇ (ਸੱਤ ਵਿਚੋਂ ਕੋਈ ਪੰਜ ਕਰਨੇ) (ਮੁਹਾਵਰੇ ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ਵਿਚੋਂ ਹੀ ਪੁੱਛੇ ਜਾਣ) — 5 ਅੰਕ

5 ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ

(i) ਧੁਨੀ ਤੇ ਧੁਨੀ ਗ੍ਰਾਮ : ਧੁਨੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੰਡੀ ਤੇ ਅਖੰਡੀ ਧੁਨੀਆਂ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ)
ਪੰਜਾਬੀ ਸਵਰ ਧੁਨੀਆਂ ਤੇ ਵਿਅੰਜਨ ਧੁਨੀਆਂ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ । (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ , 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ' , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ' , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ' , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3= 9 ਪੀਰੀਅਡ ।

HISTORY AND CULTURE OF PUNJAB

(For B.A. Only)

B.A. (General) SEMESTER –I EXAMINATION, 2019-20

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO PRE- MAURYAN PERIOD

Objectives: To introduce the students to the history of the Early History of the region.
Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (FOR PAPER in Semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit -IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 6 marks

   Explanatory Note : 4 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Unit-I

Ancient Punjab : Physical features; impact on history

Historical Sources : Literary; archaeological

Harappan Culture : Extent and town planning

Unit-II

Harappan Culture : Social, Economic and Religious life; causes of disappearance.

Rig Vedic Age : The rise of Indo Aryans; main features of life in the early Vedic Age.

Later Vedic Age : Political, Social, Economic and Religious life of later Vedic Aryans.

Unit-III

Caste System : Origin and evolution.

The Epics : Historical importance of Ramayan and Mahabharat.

Political Condition on eve of Alexander's invasion.

Unit-IV

Impact of Alexander's invasion on social and cultural life.

Position of women : Harappan, early Vedic and later Vedic Age.

Map:

Important Historical places of Punjab : Mohenjodaro, Harappa, Kotla Nihang Khan, Sanghol, Banawali, Taxila, Indraprastha, Hastinapur, Kurukshetra, Srinagar, Purusapura, Sakala.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966.

Note : The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.

(b) Ward of/and Defence Personnel and Central Government Employee/Employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(For B.A. Only)

B.A. (General) SEMESTER-II EXAMINATION, 2019-20

Paper : HISTORY AND CULTURE OF PUNJAB FROM MAURYAN TIMES TO 1200 A.D.

Objectives: To introduce the students to the history of the early history of the region.

Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES: (FOR PAPER in Semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit–IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. One question from Unit -IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

Map	:	6 marks
Explanatory Note	:	4 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Unit-I

The Mauryan Empire : Social, economic and religious life
Buddhism and Jainism : Impact on Punjab with special reference to 4th Buddhist Council.
The Kushanas : Impact of Kanishka's rule on Punjab.

Unit-II

Gandhara School of Art : Salient features.
The Guptas : Cultural and scientific developments.
Position of Women : Under the Mauryas, the Guptas and the Vardhanas.

Unit-III

Depiction of Punjab in the accounts of Chinese travelers. Fahien and Hwen Tsang.
Main developments in literature.
Education : Significant developments; Taxila.

Unit-IV

Society and Culture on the eve of the Turkish invasion of Punjab.
Punjab in the Kitab-ul-Hind of Alberuni.

Map:

Important Historical places : Lahore, Multan Bathinda, Uchh, Jalandhar, Thanesar, Kangra, Taxila, Kundalvana, Pehowa, Thatta.

Suggested Readings :

1. Joshi, L.M. (ed.) : History and Culture of the Punjab, Part I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M. and Fauja Singh, (eds.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977.
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983.
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966.
5. Basham, A.L. : The Wonder That was India, Rupa Books, Calcutta (18th rep.), 1992.
6. Sharma, B.N. : Life in Northern India, Munshiram Manohar Lal, Delhi, 1966.

Note : The following categories of the students shall be entitled to take the option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.
(b) Ward of/and Defence Personnel and Central Government employee/employees who are transferable on all India basis.
(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(All Candidates other than B.A.)

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious;
3. Growth and impact of Jainism and Buddhism in Panjab.

UNIT II

4. Society and Culture under Maurayas and Guptas.
5. Bhakti movement: Main features; prominent saints and their contribution.
6. Origin and development of Sufism.

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development- Manji, Masand, Sangat and Pangat
8. Transformation of Sikhism: Martyrdom of Guru Arjan; New policy of Guru Hargobind, martyrdom of Guru Tegh Bahadur.
9. Institution of Khalsa: New baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and other institutions - rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh.
12. MAP (of undivided physical geographical map of Punjab):
    Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.

11. Chopra, P.N.,Puri, B.N. And Das,M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, Delhi 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10^{th}.
B. Ward of/and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

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HISTORY AND CULTURE OF PUNJAB
(All Candidates other than B.A.)
SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab; Board of Administration.
2. Western Education: Growth of Education and rise of middle classes.
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas; Ad Dharam Movement
6. Development of Press & literature: growth of print technology; development in literature

UNIT III

7. Emergence Of Political Consciousness: Ghadar Movement; Jallianwala Bagh Massacre
8. Gurudwara Reform Movement; major Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: Non Cooperation Movement; HSRA and Bhagat Singh; Civil Disobedience Movement; Quit India Movement.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Post-Independence Punjab: Linguistic Reorganization; Green Revolution.
12. MAP (physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuswant : A History of the Sikhs, vol I: 1469-1839, oxford University Press, Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das, M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

ELECTRONICS

(KEPT IN ABEYANCE FOR THE EXAMINATION, 2019-2020)

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AGRICULTURE

SEMESTER-I

Paper-I : Basics of Agricultural Botany & Forestry (THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week : 1. Theory - Six of 45 minutes duration each.
2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Plant Morphology - Root, Stem, Leaf - Their types and modifications.

Inflorescence - Types and classification.

Flower - Parts and their functions.

Fruit - Types and classification.

Unit-II

Pollination - Types, Significance, Emasculation, Techniques, mode of Reproduction and their significance

Life cycle of a typical angiosperm. Objectives of Plant Breeding, introduction to self – Incompatibility.

Unit-III

Cultivation practices including soil requirements, Water requirements, Improved varieties of the region for:

Cereals - Wheat, Rice, Maize.

Fibres – Cotton, Jute.

Oil Crops - Sarson, Soyabean.

Fruits - Mango, Grapes, Citrus, Sapota.

Unit-IV

Importance of forests, Important forest trees of India and status of forestry in Punjab, its significance.

Raising of Nurseries for forestry.

Social forestry: Definition, concept & its significance.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Study of root, stem, leaf modifications.

Raising of crops/visit to farms/fields to have knowledge of various agricultural tools, implements, and methods of crop production of related area.

Visit to Fruit and Forest nurseries.

Performance of emasculation techniques.

Books Recommended:

1. ICAR : *Hand Book of Agriculture,* New Delhi (2008).
2. S.S. Sinha, P. Gupta and A.K. Gupta : *Hand Book of Agricultural Science,* Kalyani Publishers, Ludhiana (2009).
3. P.A.U., Ludhiana (2010). : Rabi Crops *Package of Practices,*
4. P.A.U., Ludhiana (2010). : Kharif Crops *Package of Practices,*
5. Bhatia : *Elementary Biology,* Trumen Publishers, Jalandhar (2010).
6. Alan Stephens : *Dictionary of Agriculture,* Universal Book Stall, New Delhi (1998).
7. Chidda Singh, Prem Singh and Rajbir Singh : *Modern Techniques of Raising Field Crops,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2009).
8. B.S. Chundawat and S.K. Gautam : *Text Book of Agroforestry,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2006).

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AGRICULTURE

SEMESTER-II

Paper-II: Agricultural Economics and Agronomy (THEORY)

Max. Marks : 75
Theory : 70 marks Internal Assessment : 5 marks Time : 3 Hours

Period per week: 1. Theory - Six of 45 minutes duration each.
2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural Banking, Agricultural Loans – Its various types, repayment mode, form filling for agricultural loans.

National policy for agricultural loans.

Agriculture credit cards.

Fundamentals of land measurements and land revenue

Unit-II

Various legal aspects of import and export of raw crop and crop products.

Quarantine laws.

Fundamentals of agricultural economics.

Psychological pressure on farmer and villagers of different classes.

Unit-III

Storage of vegetables, Fruits, Grains at local and large level.

Vegetable and fruit preservation.

Unit-IV

Soil types, Management, Improvement and Amendments. Soil

Testing.

Fundamental of fertilizers and manures.

Important fertilizers and their uses.

Nitrogen fixation.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Visit to Agricultural, Rural Banks to have basic knowledge of loan processing and recovery.

Identification of financial problems of a village.

Identification and collection of fertilizers.

Preservation of fruits and vegetables in Pickle, Jam, Jellies, Squash and Sauce forms.

Books Recommended:

1. K.T. Acharya : *Every Day Indian Processed Foods,* National Book Trust, New Delhi (2008).
2. Malkit Nagi and Satinder Bajaj : *Home Preservation of Fruit and Vegetables,* P.A.U., Ludhiana (2008).
3. ICAR : *Hand Book of Agriculture,* New Delhi.
4. T.D. Biswas and S.K. Mukherjee : *Text Book of Soil Sciences,* Kalyani Publishers, Ludhiana (2008).
5. Girdhari Lal, G.S. Siddappa and G.L. Tandon : *Preservation of Fruit and Vegetables,* ICAR Publication, New Delhi (2008)
6. Das and Gupta : *Manures and Fertilizers,* Kalyani Publishers, Ludhiana (1999).

ENGLISH (Elective)
SEMESTER –I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Units from **Fluency in English** Ed., Promodini Verma**,** Mukti Sanyal, Tulika Prasad, New Delhi: Macmillan India, 2009 (**the prescribed text)** are recommended for **First Semester:**

Units: 1, 3, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17

Literary Terms: Ballad, Sonnet, Ode, Lyric, Elegy, Dramatic Monologue, Interior Monologue, Blank Verse, Free Verse, Mock-Epic, Metaphysical Conceit, Negative Capability, Egotistical Sublime, Fancy, Imagination, Irony, Paradox, Ambiguity, Alliteration, Assonance, Imagery.

Testing Pattern:

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do five in not more than 50-60 words. (15 marks)

Q.2. The examiner will set twelve short questions (to be answered in not more than 30-40 words) from **Fluency in English (the prescribed text),** out of which a student shall be expected to attempt any *ten.* (15 marks)

Q.3. The examiner shall give two passages from the anthology **Fluency in English** along with five questions. The students shall be expected to attempt only one passage of the two. In other words, this question shall have internal choice. This question shall test the comprehension, critical acumen and the presentation skills of a student. (15 marks)

Section -B

Q.4. Letter Writing (Official) (10marks)

Q.5. Applied Grammar:

(a) Voice, Direct/Indirect, Transformation of Sentences (simple, complex, compound) (15 marks)

(b) Articles, Preposition, Conjunctions (10 marks)

Q.6. Vocabulary:

Antonyms/Synonyms, Use of words/phrases in sentences (10 marks)

ENGLISH (Elective)

SEMESTER –II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Essays, Stories and Plays from the prescribed book **'A Collection of Essays, Short Stories & One Act Plays,** Ed., R.K Kaushik & S.C. Bhatia, New Delhi, OUP, 2006. (**Included in Section -A**) are recommended for **Second Semester:**

Essays 1-6
Stories 1-6
Plays 1-4

Literary terms/concepts*: Prose, Essay, Expository Essay, Analytical /Argumentative Essay, Lyrical Essay, Descriptive Essay, Imaginative Essay, Philosophical Essay, Short Story, Long Story, Drama, Dramatic Plot, Character, Incident, Setting, Structure, Tragedy, Comedy, Tragi-comedy*

Testing Pattern:

Q. 1. Literary terms/concepts (Five out of Eight) (15 marks)

Q. 2. Ten short questions to be attempted out of fourteen, based on **A Collection of Essays, Short Stories and One Act Plays'** (each to be answered in not more than 30-40 words.) (15 marks)

Q. 3. Long questions *five out of seven*, again based on **A Collection of Essays, Short Stories and One Act Plays' (**each to be answered in not more than 100-120 words) . (15 marks)

Section -B

Q. 4. Paragraph Writing (based on outline, a situation, a string of questions etc.) (15 marks)

Q. 5. Applied Grammar-

(a) Corrections (10 marks)
(b) Use of the same words as different parts of speech (10 marks)

Q. 6. Translation from Vernacular into English (10 sentences only) (10 marks)

OR

(For foreign students, a paragraph on any one of the two given topics, preferably, proverbs or idioms**)**

हिन्दी (ऐच्छिक)
सेमेस्टर-1

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1 कवितालोक :

सं. डॉ. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित।

इन चार कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई है-

कबीर, रैदास, गुरुनानक देव, सूरदास।

(क) 5-5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होंगी। कुल 4 संदर्भ पूछे जाएँगे। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल 2 प्रश्न पूछे जाएँगे। अंक : 06

इस खंड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछे जायेंगे। उत्तरों की शब्द-सीमा 200 होगी।

2 सजीव कहानियाँ :

सं. डॉ. लक्ष्मीचन्द्र खुराना, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित। निम्नलिखित सात कहानियाँ पाठ्यक्रम में हैं :-
शतरंज के खिलाड़ी, ममता, अशिक्षित का हृदय, मौत के मुँह में, व्याय मंत्री, गुलाब, सभ्य-असभ्य।

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी। कुल 4 व्याख्याएँ पूछी जाएँगी। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। इस खंड में कथावस्तु, चरित्र-चित्रण एवं उद्देश्य से संबंधित कुल दो प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की शब्द-सीमा 200 तक होगी। अंक : 06

3 तीन-तीन अंकों के तीन लघु-उत्तरापेक्षी प्रश्न करने होंगे। अंक : 09

कुल 6 प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की सीमा 50 शब्दों तक होगी। ये प्रश्न इस पत्र के पूर्वोक्त दो खंडों (कवितालोक एवं सजीव कहानियाँ) पर आधारित होंगे।

4 हिन्दी-साहित्य का इतिहास : अंक : 07

आदिकाल (अपभ्रंश साहित्य को छोड़कर) से निम्नलिखित शीर्षकों पर आधारित प्रश्न पूछे जाएँगे।

आदिकाल का नामकरण, काल-सीमा, परिस्थितियाँ, प्रवृतियाँ और पृथ्वीराज रासो तथा बीसलदेव रासो का परिचय।

7 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगे। (शब्द-सीमा 200)

5 वस्तुनिष्ठ प्रश्न अंक : 10

इस पत्र के पूर्वोक्त तीनों खंडों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगे।

6 समीक्षा सिद्धान्त : अंक : 07

कहानी :- परिभाषा, तत्त्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगे। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200)

7 व्यावहारिक व्याकरण : अंक : 20

(क) विपरीतार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ख) समानार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ग) शब्द-शोधन और वाक्य-शोधन (सात में से पाँच करने होगे।) 5 अंक

(घ) वाक्यांश के लिए एक शब्द (सात में से पाँच करने होगे।) 5 अंक

8 परिभाषिक शब्दावली (सलग्न शब्दावली) अंक : 5

कुल आठ में से पाँच के उतर देने होगे।

9 आंतरिक मूल्यांकन : अंक : 10

सहायक पुस्तकें :

हिन्दी साहित्य का इतिहास : कुसुम वर्मा

निर्देश : छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होगे।

पारिभाषिक शब्दावली

	A	
1.	Abbreviation	संक्षिप्ति
2.	Absence	अनुपस्थिति, गैरहाजिरी
3.	Accommodation	आवास
4.	Advice	परामर्श, सलाह, सूचना, संज्ञापन
5.	Allegiance	निष्ठा
6.	Alteration	परिवर्तन, हेर-फेर
7.	Amendation	संशोधन
8.	Appendix	परिशिष्ट
9.	Assistant	सहायक
10.	Attendance	उपस्थिति, हाजिरी
	B	
11.	Basic pay	मूल वेतन
12.	Birth Date	जन्म तिथि, जन्म की तारीख़
13.	Block	खंड, ब्लाक
14.	Board	बोर्ड, मंडल
15.	Break in Service	सेवा में व्यवधान
16.	By Hand	दस्ती
	C	
17.	Cancel	रद्द करना
18.	Clarification	स्पष्टीकरण
19	Closing Balance	अंत-शेष, रोकड़ बाकी
20.	Committee	समिति
21.	Competence	सक्षमता
22	Conference	सम्मेलन
23.	Confirmation	पुष्टि
24.	Consolidated fund	समेकित निधि
25.	Conveyance allowance	वाहन भत्ता
26.	Corruption	भ्रष्टाचार
27.	Covering letter	सहपत्र

	D	
28.	Dealing Assistant	संबंधित सहायक
29.	Dearness Allowance	मंहगाई भत्ता
30.	Department	विभाग
31.	Deputy Secretary	उपसचिव
32.	Dissent	विसम्मति, विमति, (विधि), अहसमति
33.	Duplicate	अनुलिपि, दूसरी प्रति
34.	Duration	अवधि
35.	Duty	ड्यूटी, काम, कार्य, कर्त्तव्य, भार, शुल्क
	E	
36.	Encashment	भुनाना, तुड़ाना
37.	Entry	प्रविष्टि, इंदराज, प्रवेश
38.	Evidence	साक्ष्य, गवाही, प्रमाण
39.	Expert	विशेषज्ञ
40.	Export	निर्यात
41.	Extract	उद्धरण
	F	
42.	Fitness Certificate	स्वस्थता प्रमाणपत्र, योग्यता प्रमाणपत्र
43.	Fresh Receipt (F.R.)	नई आवती
44.	Further Action	आगे की कार्रवाई, अगली कार्यवाही
	G	
45.	General Manager	प्रधान प्रबंधक, महाप्रबंधक
46.	General Meeting	साधारण सभा, साधारण बैठक
47.	Grant-in-aid	सहायता-अनुदान
48.	Guidance	मार्गदर्शन, निर्देशन
	H	
49	Head Clerk	प्रधान लिपिक, हैड कलर्क
50.	Head of Account	लेखा-शीर्ष
51.	Head office	प्रधान कार्यालय
52.	Head Quarter	मुख्यालय
53.	Holiday	अवकाश

I

54.	Immediate officer	आसन्न अधिकारी
55.	Import	आयात
56.	Increment	वेतन-वृद्धि
57.	Inquiry	पूछताछ, जाँच
58.	Inspector	निरीक्षक
59.	Instruction	अनुदेश, हिदायत
60.	Instructor	अनुदेशक
61.	Interpretation	निर्वचन, व्याख्या
62.	Intimation	प्रज्ञापन, सूचना, इत्तिला
63.	Investigation	अन्वेषण, तफतीश, जाँच-पड़ताल
64.	Irrelevant	असंबद्ध, विसंगत
65.	Issue	(संज्ञा) निर्गम, प्रश्न, मसला, (क्रिया) जारी करना, भेजना, देना

J

66.	Job	नौकरी, जाँच, कार्य
67.	Joining Date	कार्यग्रहण-तारीख, कार्यारम्भ-तारीख
68.	Joint Secretary	संयुक्त सचिव

L

69.	Labour Welfare	श्रम-कल्याण
70.	Leave Salary	छुट्टी का वेतन
71.	Leave Vacancy	अवकाश-रिक्ति
72.	Length of Service	सेवाकाल

हिन्दी (ऐच्छिक)
सेमेस्टर-2

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1. कवितालोक :

सं. डा. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित ।
इन तीन कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई हैं
मीरांबाई, तुलसीदास, गिरिध्र कविराय

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी । कुल 4 व्याख्याएँ पूछी जाएँगी। अंक-10
(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल 2 प्रश्न पूछे जाएँगे। अंक-06

इस खण्ड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछें जायेंगे। उतर की शब्द सीमा 200 होगी।

2. झांसी की रानी- वृंदावनलाल वर्मा, मयूर प्रकाशन, झांसी । अंक-16

नामकरण, कथावस्तु, चरित्र-चित्रण, उद्देश्य के आधर पर चार समीक्षात्मक प्रश्न पूछे जाएँगे, जिनमें से 8 अंको के कोई दो प्रश्न करने होंगे। (शब्द- सीमा 200-250)

3. हिन्दी साहित्य का इतिहास :
भक्तिकाल :- निम्न शीर्षकों पर आधारित 2 प्रश्न पूछें जाएँगें। एक का उतर देना होगा। (शब्द-सीमा 200) अंक-08
भक्तिकाल की परिस्थितियाँ, सन्तकाव्य, प्रेमाख्यानकाव्य, रामकाव्य और कृष्ण काव्य की विशेषताएँ, कबीर, जायसी, तुलसी और सूरदास

4. वस्तुनिष्ठ प्रश्न अंक-10
इस पत्र के पूर्वोक्त तीनों खण्डों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उतर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5. समीक्षा सिद्धान्त
उपन्यास:-परिभाषा, तत्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगें। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200) अंक-07

6. मुहावरे और लोकोक्तियाँ (सात में से पाँच के उतर देने होंगे।) अंक-10

7. निर्धारित विषय पर अनुच्छेद-लेखन (तीन में से एक प्रश्न करना होगा।) अंक-10

8. निजी पत्र-लेखन (दो में से एक प्रश्न करना होगा) अंक-08

9. पारिभाषिक शब्दावली-(संलग्न शब्दावली) अंक-05

आंतरिक मूल्यांकन अंक-10

निर्देश :-छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।

	M	
1..	Management	प्रबंध
2.	Medical	चिकित्सा
3.	Medical Leave	चिकित्सा-छुट्टी
4.	Medical Officer	चिकित्सा-अधिकारी
5.	Messenger	संदेशवाहक
6.	Ministry	मंत्रालय, मंत्रिमंडल
7.	Modification	संशोधन, रूपांतर
8.	Most Immediate	अति-तात्कालिक
	N	
9.	Nationality	राष्ट्रीयता
10.	Necessary Action	आवश्यक कार्रवाई
11.	Negligence	उपेक्षा, प्रमाद, गफलत
12.	No-Objection	अनापत्ति
13.	Non-Official	गैर-सरकारी, अशासकीय
	O	
14.	Obedience	आज्ञापालन, आज्ञानुवर्तन
15.	Objection	आपत्ति
16.	Offence	अपराध
17.	Offer	प्रस्ताव
18.	Office	कार्यालय, दफतर, पद
19.	Office Copy	कार्यालय-प्रति, दफतर की प्रति
20.	Office Hours	कार्यालय-समय
21.	Office Order	कार्यालय-आदेश
22.	Officer	अधिकारी, अफसर
23.	Officer-in-charge	प्रभारी अधिकारी
24.	Officiating	स्थानापन्न
25.	Option	विकल्प
26.	Original Copy	मूल प्रति
27.	Outstanding	बकाया
28.	Overtime	समयोपरि, अतिरिक्त समय
	P	
29.	Part Time	अंशकालिक
30.	Pay	वेतन

31.	Payment	अदायगी
32.	Penalty	दंड, अर्थ-दंड, जुर्माना
33.	Pending	अनिर्णीत पड़ा हुआ, रूका हुआ, लंबित
34.	Pension	पेंशन
35.	Planning	योजना, योजना बनाना
36.	Proceedings	कार्यवाही
37.	Proposal	प्रस्ताव
38.	Publicity	प्रचार
39.	Postpone	स्थगित करना, मुल्तवी करना
	Q	
40.	Qualification	अर्हता, योग्यता
41.	Quarterly	त्रैमासिक
	R	
42.	Rectification	परिशोधन
43.	Reference	संदर्भ, निर्देश, हवाला
44.	Remark	विचार, अभ्युक्ति
45.	Remuneration	पारिश्रमिक, मेहनताना
46.	Renewal	नवीनीकरण
47.	Revenue	राजस्व
	S	
48.	Satisfactory	संतोषजनक
49.	Scrutiny	संवीक्षा
50.	Seal	मुद्रा, मोहर
51.	Secret	गुप्त, गुप्त बात
52.	Security	प्रतिभूति, सुरक्षा
53.	Seniority	वरिष्ठता
54.	State Government	राज्य सरकार
55.	Stores	सामान, सामग्री, भंडार
56.	Summary	सारांश, संक्षेप
57.	Superintendent	अधीक्षक
58.	Supervisor	पर्यवेक्षक
	T	
59.	Target	लक्ष्य
60.	Technical	तकनीकी
61.	Testimonial	शंसापत्र
62.	Tour	दौरा
63.	Training	प्रशिक्षण
64.	Translation	अनुवाद

65.	Travelling Allowance	यात्रा-भत्ता
	U	
66.	Under Secretary	अवर-सचिव
67.	Unemployment	बेकारी, बेरोजगारी
68.	Unofficial Letter	अशासकीय पत्र
69.	Up-to-date	अद्यतन
	V	
70.	Verification	सत्यापन
71.	Violation	अतिक्रमण
	W	
72.	Waiting list	प्रतीक्षा-सूची
73.	Warning	चेतावनी
74.	Working days	कार्य-दिवस, काम के दिन
75.	Working Hours	कार्य-समय, काम के घंटे
76.	Working Knowledge	कार्य-साधक-ज्ञान
77.	Write off	बट्टे-खाते डालना
	Z	
78.	Zone	जोन, अंचल

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਜਨਰਲ ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ : 100
ਲਿਖਤੀ : 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 10
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ	25 ਅੰਕ
2.	ਪੰਜਾਬੀ ਇਕਾਂਗੀ	25 ਅੰਕ
3.	ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ)	20 ਅੰਕ
4.	ਭਾਸ਼ਾ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	10 ਅੰਕ
5.	ਸਾਹਿਤ ਦੇ ਰੂਪ	10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਬਾਵਾ ਬਲਵੰਤ, ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ, ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ, ਡਾ. ਜਗਤਾਰ)

2. **ਛੇ ਦਰਸ਼ਨ**, ਸੰਤ ਸਿੰਘ ਸੇਖੋ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ। ('ਨਿਸ਼ਾਂਤ ਬਾਗ ਵਿੱਚ' ਇਕਾਂਗੀ ਨੂੰ ਛੱਡ ਕੇ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	**(ੳ)**	'**ਨਕਸ਼ ਨੁਹਾਰ**' ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	**10 ਅੰਕ**
	(ਅ)	'ਛੇ ਦਰਸ਼ਨ' ਇਕਾਂਗੀ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
2.	(ੳ)	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
	(ਅ)	ਇਕਾਂਗੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ)	10 ਅੰਕ
3.	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		2 x 5=10 ਅੰਕ
4.	**ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਕਵਿਤਾ, ਨਾਟਕ ਤੇ ਇਕਾਂਗੀ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		5 x 4=20 ਅੰਕ
5.	ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਮਹਤੱਵ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ
6.	ਸਾਹਿਤ ਦੇ ਰੂਪ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਤੱਤ ਕਵਿਤਾ, ਗੀਤ, ਗ਼ਜ਼ਲ, ਇਕਾਂਗੀ, ਨਾਵਲ, ਕਹਾਣੀ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ

ਵਿਸ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਵਲ 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ) 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ 10 ਅੰਕ
5. ਸਾਹਿਤ ਆਲੋਚਨਾ 10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਪਾਸ਼, ਸੰਤ ਰਾਮ ਉਦਾਸੀ, ਸੁਰਜੀਤ ਪਾਤਰ, ਜਸਵੰਤ ਦੀਦ, ਨਵਤੇਜ ਭਾਰਤੀ, ਸੁਖਵਿੰਦਰ ਅੰਮ੍ਰਿਤ, ਦਰਸ਼ਨ ਬੁਲੰਦਵੀ, ਜਸਵਿੰਦਰ, ਸੁਖਪਾਲ)
2. **ਬਲਦੇ ਦੀਵੇ,** ਰਜ਼ੀਆ ਨੂਰ ਮੁਹੰਮਦ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) **ਨਕਸ਼ ਨੁਹਾਰ** ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
   (ਅ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
2. (ੳ) **ਬਲਦੇ ਦੀਵੇ** ਨਾਵਲ ਵਿਚੋਂ ਪ੍ਰਮੁੱਖ ਘਟਨਾਵਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
   (ਅ) ਨਾਵਲ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
   (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ)
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਵਲ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰ ਤੋਂ ਵੱਧ ਨਾ ਹਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤਕ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ. ਤੱਕ) : ਨਾਵਲ, ਕਹਾਣੀ ਤੇ ਸਫ਼ਰਨਾਮਾ 5 x4=20 ਅੰਕ
   ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ ਸੰਖੇਪ ਉੱਤਰ ਵਾਲੇ ਪ੍ਰਸ਼ਨ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ - ਉੱਤਰ 50 ਸ਼ਬਦ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : **10 ਅੰਕ**
   (ੳ) ਧੁਨੀ ਸੰਪਰਦਾਇ (ਅ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ)
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)
6. ਸਾਹਿਤ ਆਲੋਚਨਾ : ਸਾਹਿਤ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਤੱਤ **10 ਅੰਕ**
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪੱਤੀ ਤੇ ਵਿਕਾਸ, ਡਾ. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕ੍ਰਿਪਾਲ ਸਿੰਘ ਕਸੇਲ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
5. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.) 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
6. ਜੱਗੀ, ਰਤਨ ਸਿੰਘ (ਡਾ.). ਸਾਹਿਤ ਦੇ ਰੂਪ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
8. ਸ਼ੈਰੀ ਸਿੰਘ ਤੇ ਬ੍ਰਹਮ ਜਗਦੀਸ਼ (ਪ੍ਰੋ.), ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
9. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

संस्कृत (इलैक्टिव)
सेमेस्टर–1

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT - I

(क) **अपरीक्षितकारकम्** (1-4 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) **नीतिशतकम्** (1-25 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

UNIT – II

(ग) **व्यावहारिक संस्कृत शब्दावलीः** शरीरांग, फल एवं सब्जियाँ सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. अगूंठा-अङ्गुष्ठः	2. आँख-चक्षुः, लोचनम्, नेत्रम्, नयनम्	3. अंगुली-अङ्गुलिः
4. ओठ-ओष्ठः	5. कमर-श्रोणिः, कटिः	6. कलाई-मणिबन्ध:
7. कान-कर्णः, श्रोत्रम्	8. गर्दन-ग्रीवा	9. घुटना-जानुः
10. जीभ-जिह्वा, रसना	11. दाँत-दन्तः, दशनः	12. नाक-घ्राणम्, नासिका
13. पेट-कुक्षिः, उदरम्	14. बांह-बाहुः, भुजः	15. भौं-भ्रूः

16. माथा-ललाटम्
17. शरीर-गात्रम्, शरीरम्
18. अंगूर-द्राक्षा
19. अमरूद-आम्रलम्
20. आम-आम्रम्
21. काजू-काजवम्
22. किशमिश-शुष्कद्राक्षा
23. खजूर-खर्जूरम्
24. जामुन-जम्बूफलम्
25. तरबूज-तारबूजम्
26. खरबूजा-खर्बुजम्
27. नारियल-नारिकेलम्
28. लीची-लीचिका
29. सेव-सेवम्
30. अंजीर-अंजीरम्
31. नारंगी-नारंगम्
32. बेल-बिल्वम्, श्रीफलम्
33. बेर-बदरीफलम्
34. मेवा-शुष्कफलम्
35. आलू-आलुः
36. ककडी-कर्कटी
37. करेला-कारवेल्लम्
38. गोभी-गोजिह्वा
39. टमाटर-रक्ताङ्गम्
40. टिंडा-टिंडिशः
41. धनिया-धान्यकम्
42. पालक-पालकीर्ः
43. प्याज-पलाण्डुः
44. वैंगन-वंगनः
45. भिंडी-भिंडकः
46. मिर्च-मरीचम्
47. मूली-मूलकम्
48. लहसून-लशुनम्
49. शलगम-श्वेतकन्दः
50. साग-शाकः

UNIT-III

(घ) वर्णों के उच्चारण स्थान **4x1=4अंक**

(ङ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

अत्र, तत्र, कुत्र, यत्र, अन्यत्र, सर्वत्र एकत्र, इतः, ततः, कुतः, कदा, तदा, यदा, सदा, तथा, यथा

(च) संख्या (गणना) वाची शब्द (1 से 50 तक (पाँच शब्द) **5x1=5अंक**

(छ) सामान्य- ज्ञान - तिथि, नक्षत्र, योग, करण, वार **5अंक**

(ज) स्वर सन्धि (पाँच सन्धियाँ प्रष्टव्य) **5x1=5अंक**

UNIT-IV

(झ) शब्दरूप : राम, लता, फल, मुनि, मति, नदी (दो शब्दरूप प्रष्टव्य) **2x4=8अंक**

(ञ) धातुरूप : पत, गम, पठ्, क्रीड, वद्, पा (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में, दो धातुरूप प्रष्टव्य) **2x4=8अंक**

UNIT-V

(ट) हिन्दी से संस्कृत में अनुवाद (5 वाक्य) **5x1=5अंक**

सहायक पुस्तकें – 1. अपरीक्षितकारकम्(विष्णुशर्मा)। 2. नीतिशतकम् (भर्तृहरि)। 3. शीघ्रबोध, चौखम्बा, वाराणसी।

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संस्कृत (इलैक्टिव)
सेमेस्टर–2

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) अपरीक्षितकारकम् (5-8 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) नीतिशतकम् (26-50 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

(ग) व्यावहारिक संस्कृत शब्दावली : पशु, पक्षी एवं वनस्पति सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. ऊँट-उष्ट्रः	2. खरगोश-शशकः	3. गधा-गर्दभः, खरः
4. गाय-गौः	5. गीदड़-श्रृगालः	6. गैंडा-गण्डकः
7. घोड़ा-अश्वः, घोटकः	8. चूहा - मूषकः	9. छिपकली-ललन्तिका
10. नेवला-नकुलः	11. बन्दर-वानरः, कपिः	12. बकरा-अजः
13. बिल्ली-मार्जारी	14. बैल-बलदः, बलीवर्दः, वृषभः	15. भैंस-महिषी
16. शेर-सिंहः	17. हाथी-गजः, दन्ती, करी	18. हिरन-मृगः, हरिणः, कुरंगः
19. उल्लू-उलुकः, कौशिकः	20. कबूतर-कपोतः, पारावतः	21. कोयल-कोकिलः

22. कौवा-काकः	23. गीध-गृधः	24. चकवा-चक्रवाकः
25. चिड़िया-चटका	26. तोता - शुकः	27. पपीहा-चातकः
28. बगला-बकः	29. बतख-वर्तकः, वर्तिका	30. बाज-श्येनः
31. मोर-मयूरः	32. मुर्गा-कुक्कुटः	33. हंस-हंसः
34. सारस-सारसः	35. आंवला-आमलकी	36. आम(वृक्ष)-आम्रः
37. जामुन (वृक्ष)-जम्बूः	38. नारियल (वृक्ष)-नारिकेलः	39. नीम-निम्बः
40. पीपल-अश्वत्थः	41. बेल (वृक्ष)-बिल्वः	42. गुलाब-स्थलपद्मम्
43. कमल-कुवलयम्, पुण्डरीकम्, पद्मम्	44. गेंदा-गन्धपुष्पम्	45. चमेली-मालती
46. चम्पा-चम्पकः	47. पराग-मकरन्दः	48. रात की रानी-रजनीगन्धा
49. पत्ता-पत्रम्, पर्णम्	50. लता-व्रततिः, वीरुत्	

(घ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

कथम्, अद्यः, श्वः, ह्यः, परश्वः, सद्यः, पुरतः, पृष्ठतः, वामतः, दक्षिणतः, नीचै, उच्चैः, बहिः, अन्तः

(ङ) संख्या (गणना) वाची शब्द (51 से 100 तक) पाँच शब्द **5x1=5अंक**

(च) सामान्य- ज्ञान (राशि, मास, ग्रह एवं दश दिशाओं के नाम) **5अंक**

(छ) शब्दरूप : गुरु, पितृ, मातृ, भवत्, अस्मद्, युष्मद् (दो शब्दरूप प्रष्टव्य) **2x5=10अंक**

(ज) धातुरूप : लिख्, नी, दृश्, भू, त्यज्, स्मृ धातु (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में दो धातुरूप प्रष्टव्य) **10अंक**

(झ) हिन्दी से संस्कृत में अनुवाद (10 वाक्य) **5x2=10अंक**

सहायक पुस्तकें – अपरीक्षितकारकम् (विष्णुशर्मा)। नीतिशतकम् (भर्तृहरि)। शीघ्रबोध, चौखम्बा वाराणसी।

URDU (Elective)

SEMESTER - I

Essay and Composition:

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Essay 30 marks

Unit-II

Letter/ Application 20 marks

Unit-III

Mutazad Alfaz, Mutaradif Alfaz, Wahid aur Jama, Tazkeer-o-Taanees 20 marks

Unit-IV

Muhaware, Correction of words/ sentences 20 marks

Books Recommended:

1. Guldasta-e- mazameen -Insha pardazi Part II by Dr. Arif Mohd. Khan, published by Educational Book House, AMU Market, Aligarh.
2. Urdu Qaedah-mae- Intekhaab Nasar-o-nazm by Dr. Haroon Ayub.

URDU (Elective)

SEMESTER - II

Prose and Poetry

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Explanation of Prose Passages from : 30 marks
Urdu Zuban Hamari, Mirza Ghalib ki Seerat, Darogha ki Panchon Ghee mein, Nasooh ki Bimari.

Unit-II

Explanation of Ghazal verses from : 20 marks
Muhammed Valiullah Vali, Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Faiz Ahmed Faiz, Raghupati Sahay Firaq Gorakhpuri, Jigar Moradabadi.

Unit-III

Explanation of Nazm verses from : 20 marks
Ajanta, Taj Mahal, Kashmir, Shikast-e-zindan ka khwab, Dastan Shahzade ke ghayab hone ki, Farzi latifa, Ek chehlum par, Clerk.

Unit-IV

Summary of poem or a lesson from prose and poetry (given in Unit I & III) 20 marks

Books Prescribed

Urdu Nisab Part II, published by Educational Book House, A.M.U. Market, Aligarh.

PERSIAN (Elective)

Note : There will be one paper in each Semester i.e. 1st and 2nd Semester of 90 marks each and Internal Assessment 10 marks each Semester for the session of 2019-2020.

SEMESTER-I

Paper-A – Prose:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Translation of two passages into English, Urdu, Punjabi, Hindi or Persian. (Out of three question 2 have to be attempted)	Marks: 30
2.	Explanation of Hikayat or Intekhab into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the Hikayat from Gulistan-e-Saadi into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the authors.	Marks: 20

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. Complete Prose section.
   Hafiz Maulavi Mohd. Ayyub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Ilahabad.

PERSIAN (Elective)

SEMESTER-II

Paper-B – Poetry:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Explanation of poems into English, Urdu, Punjabi, Hindi or Persian (Out of three poems comprising five Ashaar two have to be attempted)	Marks: 30
2.	Explanation of the theme of the poem into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the poem into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the poets.	Marks: 20

Only the following poems from the book Guldasta-ye-Farsi:

(1) **انتخاب از سعدی**

شنیدم که در وقت نزع روان
شنیدم که دا رای فرخ تبار
مشتاقی وصبوری از حد گزشت یارا

(2) **غزلیات حافظ**

دوش وقت سحرا از غصه نجاتم دادند
دل می رود زدستم صاحب دلان خدار

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. From Hissa-ye-Nazm.
   Hafiz Maulavi Mohd. Ayub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Allahabad.

FRENCH (Elective)

SEMESTER - I

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. — 20 marks

2. Comprehension of an unseen text (easier than the prescribed textbook). Ten questions to be put and answered in French. — 10 marks

3. Translation from English into French and from French into English of a passage or short sentences based on the vocabulary of the prescribed textbook. — 10+10 marks

4. Questions on applied grammar, including conjugation of verbs in applied form, pertaining to the text book. — 30 marks

5. Write a dialogue of 150 words on the topics covered in the syllabus. — 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 1-6) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Semester.

2. All questions are to be asked and answered in French (except questions on translation).

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (Elective)

SEMESTER – II

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 70 marks
Internal Assessment : 10 marks
Viva : 20 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. 20 marks

2. Comprehension of an unseen text. Ten questions to be put and answered in French. 10 marks

3. Questions on applied grammar, including conjugation of verbs in applied form pertaining to the text book. 30 marks

4. Write an essay/composition of 150 words on any topic covered in the syllabus 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 7-8) Version Originale-2 (Units 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie, Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Year.

2. All questions are to be asked and answered in French

Viva:	**20 marks**
Reading	10 marks
Seen	05 marks
Unseen	05 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory**.**
2. The theory paper would be proportionately marked out of 80 as there is no internal assessment.

GERMAN (Elective)

SEMESTER – I

Summary

Max. Marks	:	100 marks(Total)
Paper-A (Theory)	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 1-15 upto page 78 (5 questions) : 50 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1": Chapters 1-15 upto page 78 (3 out of 4 questions to be attempted) : 20 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 20 marks

i. Gefunden (Goethe)
ii. Da ich ein Knabe war (Hölderlin)
iii. Sehnsucht (Eichendorff)

Internal Assessment : 1**0 marks (Total)**

- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 1-15 upto page 78.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary Book:

"Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 1-15.

GERMAN (Elective)

SEMESTER –II

Summary

Max. Marks	:	100 marks(Total)
End-Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) Examination	:	30 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 16-30 (5 questions) : 30 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1" : Chapters 16-30 (3 out of 4 questions to be attempted) : 15 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 15 marks

i. Die Lorelei (Heine)
ii. Sommerbild (Hebbel)
iii. Abendlied (Keller)

Oral (viva-voce) Examination : 30 marks (Total)

i. Easy conversation in German
ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : 10 marks (Total)

i. Continuous Evaluation
ii. Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 16-30.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary book:

i. "Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 16-30.

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RUSSIAN (Elective)

SEMESTER - I

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks	**:**	**100**
Theory	**:**	**90 marks**
Internal Assessment (For regular students)	**:**	**10 marks**
Maximum Time	**:**	**3 hrs.**

1. Translation from simple Russian into English/Hindi/Punjabi (about 120 words) **15 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 100 words). **15 Marks**

3. Simple applied grammar: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

4. Questions on prescribed texts in Russian: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

5. Composition (One out of three) on the following topics: **15 Marks**
   1. My family. 2. My day. 3. Our class. 4. Working day.

6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper: **15 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi.(Lessons 1-15)

Books recommended for additional reading

1. A. K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.

2. S. Khavronina: Russian in Exercise,1978.

3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.

4. Dictionaries : English -Russian dictionary.
   Russian -English dictionary.

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RUSSIAN (Elective)
SEMESTER - II

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks : 70
Theory : 60 marks
Internal Assessment : 10 marks
(For regular students)
Maximum Time : 3 hrs.

1. Translation from simple Russian into English/Hindi/Punjabi (about 80 words) **10 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 75 words). **10 Marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) (Covered in Lessons 16-31, Wagner) **12 Marks**

4. Questions on prescribed texts in Russian: 4 questions out of 6 (2 marks each) (Covered in Lessons 16-31, Wagner) **08 Marks**

5. Composition (One out of three) on the following topics: **10 Marks**
   1. Our city. 2. Our flat. 3. An evening party. 4. Birthday.

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper: **10 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 16-31)

Books recommended for additional reading

1. A.K.Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S. Khavronina: Russian in Exercise,1978.
3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.
4. Dictionaries: English -Russian dictionary.
   Russian -English dictionary.

Oral/ Practical **Maximum Marks: 30**

Reading of text(s) and conversation in simple Russian.

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 6-31)

SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabus for B.A.(GENERAL)
FIRST YEAR (SEMESTER SYSTEM) SYLLABUS has been
KEPT IN ABEYANCE

PHYSICAL EDUCATION

SEMESTER-I

THEORY :

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks, i.e two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Education :

- Meaning and concept of Education

Physical Education :

- Meaning and definition of Physical Education, its aim and objectives.
- Need and importance of Physical Education in the Modern Society and its relationship with other subjects.

History of Physical Education :

- Pre and Post Independence Development of Physical Education in India.

UNIT-III 12 Marks

Olympic Games, Asian Games & Common Wealth Games :

- Ancient Olympic Games.
- Modern Olympic Games.
- Asian Games; and
- Common Wealth Games.

UNIT-IV 12 Marks

Sports Schemes, National Institutions of Sports and National and International Governing Bodies of Olympic Games :

- Raj Kumari Amrit Kaur Coaching Scheme.
- Netaji Subash National Institute of Sports, Patiala (NSNIS, Patiala).
- Sports Authority of India (SAI).
- Indian Olympic Association (IOA).
- International Olympic Committee (IOC).

UNIT-V 12 Marks

Basics of Handball :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna Awardees of the game.

References :

1. Barrow, H. M. (1983) : *"Man and Movements : Principles of Physical Education",* Philadelphia, Lea and Febiger.
2. Brar, R.S. Walia, R., Gill, M., Kanwar, S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of physical education"* Kalyani Publisher, Ludhiana, Punjab.
3. Bucher, C. A. (1979) : *"Foundations of Physical Education,"* St. Louis C.V. Mosby Company.
4. Chauhan, S.S. (1985) : *"Advanced Educational Psychology",* New Print-India Pvt. Ltd., Sahibabad, U.P.
5. Khan, E. A. (1964) : *"History of Physical Education,"* Scientific Book Company.

6. Murti K. & Ram, P. N. (1990) : *"Educational Dimensions of Physical Education",* 2nd Revised Edition, Print India, New Delhi.

7. Moslon (1976) : *"The Olympian",* Olympic House, Canada.

8. Puni, A.T. (1980) : *"Sports Psychology",* An abridged Translated by G.S.Sandhu, NIS, Patiala.

9. Sharma, P.D. (1996) : *"Olympics : Athens to Atlanta, 1896-1996",* Friends Publications (India) Delhi.

10. Sheldon, W.H. (1940) : *"The Varieties of Human Physique",* New York, Harper and Row Publishers.

11. Singh, Ajmer et al (2000) : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana.

12. Skinner, C. E. (1964) : *"Educational Psychology",* 4th edition, Prentice Hall of India Pvt. Ltd.

13. Narayanan T. C. and Hariharan S. (1975) : *"An Analytical History of Physical Education",* South India Press, Karaikudi.

PRACTICAL

Max. Marks : 35
Practical : 30
Internal Assessment : 05

ATHLETICS

Sprints (Types of Start and Finish) :

(a) Crouch start-fixing of starting blocks, getting in and off the block, emphasizing on body position, need of starting blocks in a sprint race.

(b) Practice of starts with starting blocks using proper commands.

(c) Training the students for correct running style.

(d) Practice of Finishing the sprint with different techniques.

(e) Rules and Regulations of Sprint races.

Middle Distance, Long Distance and Walking Events :

(a) Marking of standard tracks, width of lanes and starting points for various races.
(b) Practical of Standing Start.
(c) Correct running and walking style, emphasis on proper body position and foot placement.
(d) Running tactics.
(e) Rules of competition.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under :

Athletics 15 marks, participation and achievement in Athletics 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover, in the absence of proper facilities required for the events mentioned above may prove to be injurious/ fatal to the students.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher /class for each semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

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PHYSICAL EDUCATION

SEMESTER-II

THEORY

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is **compulsory.** It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks i.e., two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Cell:

- Meaning and definition of Anatomy & Physiology, Structure and Functions of a cell.

Skeletal System :

- Meaning and functions of skeletal system.
- Types of Bones and names of various bones of the body.

Muscular System :

- Introduction of Muscular system, structure and function of muscular system.
- Effect of short and long duration physical Exercise on the muscular system.

UNIT-III 12 Marks

Warming up, Cooling down and Physical Fitness :

- Warming up and cooling down in sports and its singnificance
- Meaning, definition and components of Physical Fitness.
- Influence of age, sex, body composition, diet, climate, exercise and training on Physical Fitness.

Kho-kho:

- History of the game
- Basic fundamentals
- Equipment and specifications
- Marking/layout of court
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play); and
- Major tournaments and Arjuna Awardees of the game

UNIT-IV 12 Marks

Health & Health Education :

- Meaning and definition of health.
- Meaning, definition, objectives, scope, principles and importance of Health Education.
- Personal hygiene, its meaning and importance.

First Aid :

- Meaning and importance of First Aid in Physical Education and Sports with special reference to Drowning, Dislocation of a joint, Fracture of bone, Sprain and Strain.

UNIT-V 12 Marks

Biological Basis of Physical Education :

- Growth and Development, Differences between growth and development.
- Factors affecting growth and development.
- Heredity and Environment and its effects on Growth and Development.
- Various stages of growth and development.

References :

1. Brar, R.S. Walia, R., Gill, M., Kanwar,S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of Physical Education"* Kalyani Publisher, Ludhiana Punjab.
2. Chaurasia, B.D. (1981) : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition.
3. Dandiya, P.C., Jafer, Z., Y.K. & Afifa J. (1996) : *"Health Education and Community Pharmacy",* Vallabh Prakashan, Pitampura, New Delhi.
4. Marley, W.P. (1982) : *"Health and Physical Fitness",* CBS College Publishing.
5. Mathews, D.K. and Fox, E.L. (1976) : *"The Physiological Basis of Physical Education & Athletics*", Second Edition, W.B. Saunders Co., Philadelphia.
6. Park, J.E. & Park, K. (1985) : *"Text Book of Preventive and Social Medicine",* 10th Edition, Banarasi Dass Bhanot, Jabalpur, India.
7. Rose & Wilson (1981) : *"Foundations of Anatomy and Physiology",* 5th Edition.
8. Sampath, K. & Maheshwar B.U. (1999) : *"Human Anatomy & Physiology",* First Edition, Birla Publications, Delhi.
9. Dinshaw, S.F. (1997) : *Fighting fit for ever.* The Marine Sports Publishing Division, Bombay.
10. Shaphard, R.J. (1978) : *"The Fit Athlete",* Oxford University Press.
11. Larry, S.G. (1982) : *Essential of exercise physiology.* Surjeet Publications, Delhi, First Indian Print.
12. Singh, Ajmer et. al. (2000) : *Modern text book of physical education, health and sports,* Kalyani Publishers, Ludhiana.
13. Wilmore, J. H. (1997) : *"Athletic Training and Physical Fitness",* Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Messachusetts.

PRACTICAL

Max. Marks : 35
Practical : 30 marks
Internal Assessment : 05 marks

Games :

Note : Volleyball or Kabaddi (NS) and any one game of the choice of the student (other than the two) which should be confined to the list of games approved by the Association of Indian Universities.

Volleyball

(a) Measurements (volleyball court, net, poles, antenna and ball).
(b) Number and position of players and officials.
(c) Types of service (under arm service, side arm service and tennis service).
(d) Types of passes (under hand and over head pass).
(e) Rules of the game.

OR

Kabaddi (NS)

(a) Measurements (Kabaddi court for men and women).
(b) Number of players and officials.
(c) Fundamental offensive skills, touching with hand, leg thrust, front kick, side kick, Mule kick, jump and dive counter.
(d) Defensive Skill (wrist catch, normal grip, ankle catch, knee catch and chain formation).
(e) Tactics : (a) getting bonus point (b) counter to bonus line crossing (c) Delaying tactics for getting lona.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under : Games 15 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. The choice of games by the students shall be confined to the list of games approved by the Association of Indian Universities.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher/class semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

EDUCATION
SEMESTER – I

PAPER : EDUCATION AND SOCIETY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV and; 75 words for each short answer type question in Unit V) for answer.

Objectives :

To enable the students to understand :

1. The Meaning, Nature and Scope of Education along with its types.
2. Functions of Education in light of its aims.
3. Role of Education viz-a-viz present day needs.

Course Contents :

UNIT-I : (a) Meaning and Nature of Education : Education as a Socio-Political Process and Developmental Process.
(b) Informal, Formal and Non-Formal Education.

UNIT-II : (a) Aims of Education – Individual, Social, Vocational and Democratic.
(b) Functions of Education – Individual Development, Transmission of Cultural Heritage and Education for Social Change.

UNIT-III : (a) Education for Democratic Citizenship.
(b) National Integration and International Understanding.

UNIT-IV : (a) Value Education –Meaning of Values, their Development
(b) Transactional Strategies.

Books Recommended :

1. Bhatia, K.K. and Narang, C.L. : *Teacher and Education in Emerging Indian Society,* Tandon Publishers, Ludhiana, 2002.
2. Bhatia, K.K. and Sharma, S. : *Bhartiya Shiksha Ki Adhunik Samasyaein,* Parkash *et al* Bros., Ludhiana, 1986.
3. Bhatnagar, Suresh : *Kothari Commission Recommendations and Evaluation with a Text on National Policy on Education,* Loyal Book Depot, Meerut, 1982.
4. Govt. of India : *National Policy on Education,* Ministry of Human Resource Development, New Delhi, 1986.
5. Govt. of India, Ministry of Education : *Report of Education Commission (1964-66)—Education and National Development.*
6. Govt. of India, Ministry of Education : *Report of Secondary Education Commission* (1952-53), New Delhi.
7. Gupta, S.P. : *Sikhya de Sidhant ate Takneekan,* Hans Book Depot, Faridkot, 1989.
8. Kansal, M.R. : *Sikhya de Sidhant,* Punjab State University Text Book Board, Chandigarh.
9. Mathur, S. S. : *Shiksha Sidhant,* Vinod Pustak Mandir, Agra, 1981.
10. Sharma, T.R. : *Sikhya de Sidhant,* Punjabi University, Patiala.
11. Safaya, R.N. : *Principles and Techniques of Education,* Dhanpat Rai & Sons, Jallandhar.
12. Yadav, H. S. et al : *Adhunik Bhartiya Smaj Mein Shiksha,* Tandon Publishers, Ludhiana, 1995.
13. Yadav & Yadav : *Education in the Emerging Indian Society,* Tandon Publications, Ludhiana.

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EDUCATION
SEMESTER – II

PAPER : EDUCATION AND HUMAN DEVELOPMENT

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV; and 75 words for each short answer type question in Unit V) for answer.

Objectives :

To make the students understand :

1. The meaning, scope and uses of psychology in education.
2. Human growth and development upto the stage of childhood.
3. Meaning, purpose of learning and factors influencing learning.
4. The concept of intelligence - its meaning and measurements.
5. Causes and significance of individual differences.

Course Contents :

UNIT-I : (a) *Educational Psychology :* Meaning, Nature and Scope.
(b) Individual Differences – Causes, Significance and Educational Implications.

UNIT-II : (a) Nature of Human Growth and Development – Physical, Mental, Emotional and Social.
(b) *Stages of Human Development :* Infancy and Childhood, their Needs, Significance and Problems.

UNIT-III : (a) *Learning :* Meaning and Definition.
(b) Theories of Learning - Trial and Error by Thorndike and Classical Conditioning by Pavlov.

UNIT-IV : (a) *Intelligence :* Meaning, Types
(b) Measurement of Intelligence.

Books Recommended :

1. Aggarwal, J.C. : *Essentials of Educational Psychology,* Vikas Publishing House, Private Ltd., New Delhi, 1995.
2. Bhatia, H.R. : *A Textbook of Educational Psychology,* Asia Publishing House, New Delhi, 1977.
3. Bhatnagar, S. : *Shiksha Manovigyan,* International Publishing House, Meerut, 1977.
4. Dhingra, R. : *Educational Psychology and Guidance,* Punjab Katab Ghar, Jallandhar.
5. Kagan, J. and Lang, C. : *Psychology and Education,* Harcourt Brace Jovanovich, Inc., New York, 1978.
6. Kundu, D. : *Modern Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1974.
7. Kuppuswamy, B. : *Advanced Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1994.
8. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
9. Mathur, S.S. : *Educational Psychology,* Vinod Pustak Mandir, Agra, 1998.
10. Sandhu, I.K. and Kaur, A. : *Shikhya Manovigyan,* Punjabi University, Patiala, 1976.
11. Walia, J. S. : *Foundations of Educational Psychology,* Paul Publishers, Jallandhar, 2001.

ADULT EDUCATION

SEMESTER-I

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	03Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 9 marks each. Unit V will consist of **6** short answer type questions which will cover the entire syllabus uniformly and will carry 9 marks in all. Each short question will carry 1½ marks comprising 6 question.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of 8 in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question.

OBJECTIVES OF THE COURSE :

The main objectives of the paper are :

1. To introduce students with meaning, scope and components of adult education.
2. To provide an overview of history of adult education.
3. To equip students with objectives, strategies and implementation of National Literacy Mission's Programs.
4. To acquaint students with structuring of teaching – learning environment for an adult learner.
5. To explain to students the various forms of Adult Education.

THEORY :-

UNIT-I : *Adult Education :* Concept, Meaning, Brief History during Post-Independence Period.

UNIT-II : Scope and Components of Adult Education i.e. Literacy, Numeracy, Awareness and Functionality.

UNIT-III : *National Literacy Mission :* Objectives, Strategies and Implementation.

UNIT-IV : Sakshar Bhart Mission- Objectives Strategies and Implementation.

PRACTICAL/ FIELD WORK:

Participation of the students in the following and preparation of Project Report :

Survey of the Village/Area : General information regarding the village; its Economic, Social and Cultural Activities : Needs and Problems.

The break up of 50 marks allotted to practical is as under :	*External*	*Internal*
(i) Viva-Voce	15 marks	
(ii) Written questions based on the Project	10 marks	5
(iii) Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended:

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*
5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*
6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.
7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.
9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.
10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.
11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.
12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.
13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

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ADULT EDUCATION

SEMESTER-II

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	3 Hours

UNIT-I : *Structuring Teaching Learning Environment for Adult Learners :* Identification of Areas. Survey of the Community, Identification of Learners.

UNIT-II : Campaign for enrolment of Adult Learning, enrolment of the learners and day-to-day functioning of Adult Education Centre, Involvement of Community & Developmental Agencies.

UNIT-III : Various forms of Adult Education i.e. Social Education, Community Education.

UNIT-IV : Basic Education and Life Long Education.

PRACTICAL/FIELD WORK :

Participation of the students in the following and preparation of Project Report :

1. Preparation of profile of the area.
2. Organization of Adult Education Centres for Basic Literacy Development.

The break up of 50 marks allotted to practical is as under :

		External	*Internal*
(i)	Viva-Voce	15 marks	
(ii)	Written questions based on the Project	10 marks	5
(iii)	Project Report	20 marks	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended :

1. Datta, S.C. : *Adult Education in India,* Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : *The National Adult Education Programme, 1978.*
3. Directorate of Adult Education, Ministry of Education, Govt. of India : *Training of Adult Education Functionaries 1-4,* D.A.E., 1980
4. Directorate of Adult Education : *Fifty Years of Adult Education in India.*

5. Dept. of Education, Ministry of Human Resource Development, Govt. of India : *National Literacy Mission, 1988.*

6. Kundu, C.L : *Adult Education : Principles, Practices and Prospectus,* Sterling Publishers, Delhi, 1984.

7. Mali, M.G. : *Adult Education in India,* Deep and Deep Publication, New Delhi, 1984.

8. Mathur, B.M. : *Adult Education & Social Change,* The Associated Publishers, Ambala Cantt., 1989.

9. Pangotra, N.N. : *Adult Education, Project through Universities and Colleges,* CACEE, Panjab University, 1987.

10. Sharma, I.P. : *Adult Education in India,* National Book Organization, 1985.

11. Singh, Sohan : *History of Adult Education,* The Indian Adult Education Association, New Delhi, 1957.

12. Styler, W.E. : *Adult Education in India,* Oxford University Press, 1986.

13. Yadav, R.S. : *Adult Education Training & Productivity*, The Indian Publications, Ambala Cantt., 1991.

MUSIC (Vocal)

SEMESTER – I

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section of Practical Class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**

6. The candidate can take vocal music along with Instrumental Music/Tabla.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)				45 Marks
PRACTICAL (20 minute's duration)				45 Marks
(i)	Choice & Viva	:	35 Marks	
(ii)	Harmonium	:	05 Marks	
(iii)	Tabla	:	05 Marks	
Internal Assessment (Theory + Practical) (05+05)				10 Marks
			Total :	**100 Marks**

THEORY

Unit-I

1. Bhatkhande Notation System in Modern Period.
2. Elementary knowledge of Raga
3. Different Jaties of Ragas of ***the Present Raga System*** of North Indian Music

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words): Shruti, Swara (Shudh & Vikrit), Saptak, Alankar
2. Life sketch and contribution of Pandit V.N. Bhatkhande.
3. Sangeet: (Definition and Importance)

Unit-III

1. Brief description of Tanpura.
2. Definitions and types of Khayal.

Unit-IV

1. Notation & b r i e f d escription of Ragas prescribed in the course with Alap and Taans:- Alhaiya Bilawal, Bhopali
2. Notation & Description of Talas prescribed in the course:- Teentala, Dadra (Single & Double)

NOTE :- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: - Alhaiya Bilawal, Bhopali
2. One Sargamgeet in any of the prescribed ragas
3. Ability to play Dadra Tala on Tabla
4. Ability to recite bols of the tala prescribed in the course in Thah and Dugun by hand:-Teen tala, Dadra
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swaras and sing alongwith it.
6. Ability to sing national Anthem

Books Recommended:

1.	Sangeet Bodh	:	Paranjpe, Shartchandra Shridhar.
2.	Sangeet Shastra Vigyan	:	Panna Lal Madan.
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	Sangeet Sar Part (I)	:	Mrs. Veena Mankaran
5.	Raga Vigyan, Part I to IV	:	Pt. V.N. Patwardhan.
6.	Hamare Sangeet Ratan	:	Sangeet Karayalaya, Hathras.
7.	Sangeetanjali Part I to IV	:	Pt. Onkar Nath Thakur.
8.	Kramik Pustak Mallika Part I to III	:	Pt. V.N. Bhatkhande.
9.	Raag Parichay Part I,II,III	:	Sh. H.C. Srivastav.
10.	Sangeet Kaumudi Part II	:	V.S. Nigam.
11.	Sangeet Shastra Darpan Part II	:	Shanti Goverdhan.

MUSIC (Vocal)

SEMESTER-II

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto10 students in one section of Practical Class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**
6. The candidate can take vocal music along with Instrumental Music/Tabla.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
(i) Choice & Viva :	35 Marks
(ii) Harmonium :	05 Marks
(iii) Tabla :	05 Marks
Internal Assessment (Theory + Practical) (05 + 05) :	10 Marks

THEORY

Unit-I

1. Knowledge of Bhatkhande Thaat Paddhati
2. Study of Naad
3. Various developments (in brief) in the History of North Indian Music of Modern Period.

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words):

   Matra, Avartan, Sam, Tali, Khali, Vibhag, Aroh, Avaroh

2. Elementary knowledge of the Gun Dosh of Gayak

Unit-III

1. Elementary knowledge of the Laya & Taal in Music
2. Brief life sketch and contributions of : Pt. Vishnu Digambar Paluskar.

Unit-IV

Notation and Description of the prescribed Ragas and Talas :-

1. To write one drut khyal in each of the following ragas:- Yaman, Kafi with Alap and Taans
2. To write one bada khyal in any raga of the syllabus with Alap and Taans
3. To write the notation of Talas:- Ektal, Kehrwa.
4. To write the description of ragas of the syllabus

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Tala.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas : -Yaman, Kafi
2. One Vilambit Khayal in any of the prescribed Ragas.
3. Ability to play Teen Tala on Tabla
4. Ability to recite bols of the talas prescribed in the course in Thah and Dugun by hand:- Ek tal, Kehrwa
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swars and sing along with it.

Books Recommended:

1.	*Sangeet Bodh*	:	Paranjpe, Shartchandra Shridhar.
2.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	*Sangeet Sar Part (I)*	:	Mrs. Veena Mankaran.
5.	*Raga Vigyan, Part I to IV*	:	Pt. V.N. Patwardhan.
6.	*Hamare Sangeet Ratan*	:	Sangeet Karayalaya, Hathras.
7.	*Sangeetanjali Part I to IV*	:	Pt. Onkar Nath Thakur.
8.	*Kramik Pustak Mallika Part I to III*	:	Pt. V.N. Bhatkhande.
9.	*Raag Parichay Part I,II,III*	:	Sh. H.C. Srivastav.
10.	*Sangeet Kaumudi Part II*	:	V.S. Nigam.
11.	*Sangeet Shastra Darpan Part II*	:	Shanti Goverdhan.

MUSIC (Instrumental)

SEMESTER-I

GENERAL INSTRUCTIONS :-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i)	Viva	:	35 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla	:	05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit – I

1. Elementary knowledge of Raga
2. Sangeet (Definition & importance)
3. Different Jaties of Ragas of the Present Raga System of North Indian Music.

Unit – II

1. Elementary knowledge of the following terms: (not more than 100 words) :
   Swara, Saptak, Alankar. Aron, Avroh, Pakad, Thaat
2. Elementary knowledge of Bhatkhande Notation System.

Unit – III

1. Brief description of your own instrument.
2. Definition and types of Gat (Razakhani and Maseetkhani).

Unit – IV

Notation and Description of the prescribed Ragas and Talas :

1. Rag Bhopali (one Razakhani gat)
2. To write Alankars.
3. To write the notation of Tala (Dadra & Teental) with dugun layakaries

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. Demonstration of different Alankars of Shudh & Vikrit Swaras on your instrument.
2. One Razakhani gat of raga Bhopali
3. Knowledge of the non-detailed raga : Deshkar (only Aroh-Avroh and Pakad).
4. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries: Dadra, Teental .
5. Ability to play Shudh-Swaras on Harmonium.
6. Ability to play Dadra tala on tabla.

Books Recommended

1.	*Rag Parichaya Part II and III*	:	H.C. Srivastava.
2.	*Sangeet Kaumudi Part-II (Punjabi)*	:	V.S. Nigam
3.	*Sitar Marg, Part-II*	:	S. Bandopadhya.
4.	*Sangeet Sar, Part-I*	:	Mrs. Veena Mankaran.
5.	*Sangeetanjali, Part I & IV*	:	Pt. Onkar Nath Thakur.
6.	*Sangeet Manjusha*	:	Dr. Indrani Chakravarti.
7.	Sangeet Shastra Vigyan	:	Sh. Panna Lal Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna Lal Madan

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MUSIC (Instrumental)

SEMESTER-II

GENERAL INSTRUCTIONS

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i) Viva : 35 Marks

(ii) Harmonium : 05 Marks

(iii) Tabla : 05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit-I

1. Various developments (in brief) in the History of Indian Music of Modern Period.
2. Knowledge of Bhatkhande That Paddhati.
3. Study of Nada

Unit-II

1. Elementary knowledge of the following terms (not more than 100 words) :
   Matra, Avartan, Sam, Tali, Khali and Vibhag
2. Study of various bols of Mizrab,Tora , Jhala

Unit-III

1. Elementary knowledge of Laya and Taal in Music
2. Brief life sketches and their contributions to Indian Music of the following great masters :-
   (i) Pt. Ravi Shanker
   (ii) Pt. V.N. Bhatkhande

Unit-IV

Definition and description of the prescribed Ragas and Tala :- Yaman , Kafi

1. One Maseetkhani Gat in any prescribed raga and talas :-Yaman , Kafi
2. To write the notation of Razakhani Gat of rag Kafi and Yaman with atleast four todas
3. Write in notation Jhaptala, Keharva Tala with dugan layakaries.

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. One Maseetkhani Gat in any raga of your syllabus.
2. Razakhani gats with toras & Jhala in the following ragas :-Kafi, Yaman
3. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries :Talas : Jhaptal & Keharva
4. Ability to play Teen tala on Tabla
5. Ability to play Aroh, Avron of Raag Yaman & Kafi on Harmonium.
6. Ability to play National Anthem on your own instrument.

Books Recommended:

1.	Rag Parichaya Part II and III	:	H.C. Srivastava
2.	Sangeet Kaumudi Part-II (Punjabi)	:	V.S. Nigam
3.	Sitar Marg Part-II	:	S. Bandopadhya
4.	Sangeet Sar, Part-I	:	Mrs. Veena Mankaran
5.	Sangeetanjali, Part I & IV	:	Pt. Onkar Nath Thakur
6.	Sangeet Manjusha	:	Dr. Indrani Chakravarti
7.	Sangeet Shastra Vigyan	:	Sh. Panna La Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna La Madan

MUSIC (Tabla)

SEMESTER – I

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-I. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

Paper-B: **PRACTICAL** (20 minute's duration). : 45 Marks

(i)	Viva	30 Marks
(ii)	Harmonium	05 Marks
(iii)	Tabla (Tuning)	05 Marks
(iv)	Padhant on Hand	05 Marks

Internal Assessment (Theory+Practical) (5+5) 10 Marks

Total: 100 Marks

Paper-A THEORY

UNIT-I

1. Brief history of Tabla
2. Elementry knowledge of Taal
3. Sangeet (definition & Importance).

UNIT-II

1. Definitions : Sam, Tali, Khali, Vibhag, Bol, Theka, Avartan, Thah, Dugun
2. Brief description of Tabla.
3. Description of playing techniques of ten vernas.

UNIT-III

1. Life sketches and contributions of the following:-
    a. Ustad Siddhar Khan
    b. Miyan Kadar Baksh
    c. Pt. Chatur Lal

UNIT-IV

1. Ability to write in notation the composition prescribed Taal: (Teentaal, Chautal, Kehrva) Quaida, Simple Tukra, Tihai
2. To write description of Taal of the syllabus.
3. To write the notation of Taal in Single and Double.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B PRACTICAL

1. Taals Prescribed Teen Taal, Chautaal, Kehrwa
2. Laggi in Kehrwa Taal and its variety.
3. Teen Taal (Peshkara, Two Paltas, Two Kaydas, Two Mukhra)
4. Chautaal (Theka in Thah and Dugun)
5. Practice of playing the above Taals with Vocal and Instrumental performances.
6. Ability to play Nagma/Lehra on Harmonium in Teen Taal.

Books Recommended:

1. Taal Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadhya : M.P. Sharma
5. Hamare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

MUSIC (Tabla)

SEMESTER-II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A:	**THEORY** (3 Hours duration)	:	45 Marks
Paper-B:	**PRACTICAL** (20 minutes duration).	:	45 Marks
(i)	Viva	:	30 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla (Tuning)	:	05 Marks
(iv)	Padhant on Hand	:	05 Marks
Internal Assessment (Theory & Practical) (5+5)		:	10 Marks
	Total	:	**100 Marks**

Paper-A Theory

UNIT- I

1. Origin and development of Tabla
2. Definition of Baaj and Chhand.
3. Brief description of Bhatkhande Taal notation system.

UNIT- II

1. Importance of Taal in music.
2. Elementary knowledge of the following musical terms (not more than 100 words)
   Matra, Laya (Vilambit, Madya, Drut) Tukra, Ateet, Anagat
3. Gharana:- Definition and importance in the context of Tabla.

UNIT- III

1. Life sketches and contributions of the following:-
   a. Ustad Allah Rakha Khan.
   b. Ustad Ahmad Jaan Thirkava.
   c. Pt. Samta Parshad (Gudai Maharaj)

UNIT- IV

1. Teental, Ektaal, Dadra.
2. To write description of Taals of your syllabus.
3. To write the notation of Taal in Single Double and Chaugun

UNIT- V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Taals prescribed Dadra, Ektaal, Teen Taal
2. Laggi in Dadra and Kehrwa Taal.
3. Ektaal (One Qaida, Two Tukra, Two Tihai, One Paran)
4. Teentaal (One Rela, One Chakradar Paran, One Tukra, One Mohra)
5. Practice of Dholak playing in Kehrwa Taal.
6. Ability to play Nagma/Lehra on Harmonium in Ektaal.
7. Tuning of Tabla.

Books Recommended:

1. Tala Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadya : M.P. Sharma
5. Harmare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

MUSIC (Indian Classical Dance)

SEMESTER-I

GENERAL INSTRUCTIONS:

1 In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2 There would be upto ten students in one section in practical class.
3 There would not be more than eight students in a batch for practical examination.
4 No electronic Instruments will be allowed for lehra in practical examination
5 The candidate can take Dance along with Vocal music.
6 The candidate can also take instrumental music with Dance.
7 While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8 In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

Internal assessment (Theory and Practical) (5 + 5) 10 Marks

Paper-A : Theory

Unit –I

1. Origin of Tandava
2. Four Neck movements
3. Eight eye glances

Unit-II

1. Defination of Mudra. Explain Asamyukta Mudras based on Abhinaya Darpan.
2. Definition of the following terms:
   Tora, Salami, Theka, Tehai, Amad.
3. Brief study of Kathak Dance in Ancient period .

Unit-III

1. Definition of folk Dance.
2. A study of folk dances of Punjab, their costumes and background music.
3. A study of folk dance of Haryana, their costumes and background music.

Unit-IV

1. Notation of Tatkar and Theka in Ekgun, Dugun and Chaugun laykaries.
2. Notation of Amad, Tukra, Salami, Tora and Tihai in Teentaal.
3. Notation of Nagma in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Practical: Paper-B

(A) Teen Taal:

i)Tatkar in Ekgun, Dugun and Chaugun laykaries. Theka and Tatkar with Ekgun. Dugun and Chaugun Layakaries

ii) Salami - 1
iii) Amad - 1
iv) Tora - 4
v) Tihai - 1
vi) Tukra - 1

B) Practical of all the technical part in Teentaal on hand
C) Theka of Teentaal on hand in Ekgun and Dugun laykaries
D) Theka of Teentaal on table.

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MUSIC (Indian Classical Dance)

SEMESTER –II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
Internal assessment (Theory and Practical) (5 + 5)	10 Marks

Paper-A: THEORY

Unit –I

1. Study of Lasya Dance.
2. Six Eyebrow movements.
3. Nine Head movements.

Unit-II

1. Detail knowledge of Samyukta Mudras based on Abhinaya Darpan.
2. Essential characteristics of Bharatnatyam.
3. Detailed study of Kathak in mughal period.

Unit-III

1. Brief study of Abhinaya and its various parts.
2. Life sketch of Pt. Narayan Prasad.
3. Definition of Nritta, Nritya and Natya.

Unit IV

1. Notation of Theka of Jhaptaal in Ekgun, Dugun and Chougun layakaries.
2. Notation of Tatkar, Tora, Amad and Paran and Chakardar Paran in Jhaptaal.
3. Notation of Tatkar, Thaat, Tora, Tehai and Kavit in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

(A) Teen Taal:

i)	Tatkar in teentaal in Ekgun, Dugun and Chougun layakaries.		
ii)	Thaat	-	1
iii)	Tora	-	2
iv)	Kavit	-	1
v)	Tihai	-	1

(B) Jhaptaal:-

i)	Tatkar in Ekgun, Dugun and Chaugun layakaries.		
ii)	Tora	-	2
iii)	Amad	-	1
iv)	Paran	-	1
v)	Chakardar paran	-	1

(C) Practice of prescribed material in both the taals on hand.

(D) Practical knowledge of Samyukta Mudras.

(E) Ability to play nagma in teentaal on Harmonium.

(F) Ability to play theka of Jhaptaal on Tabla.

FINE ARTS

SEMESTER – I

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

Instruction to paper-setters

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Pre-historic paintings from Bhim–Betka .
- Ajanta Cave Painting: Shaddanta Jataka, Padmapani, Avalokitesvara, Dying Princess, Mahajanaka Jataka, Decorative ceiling panels from Cave No. 2.

Unit-II : History of Indian Sculpture

- Indus Valley Civilization - Seals, Metal Dancing Girl, Red Sandstone Torso, Bust of Priest from Mohenjodaro.
- Mauryan Art: Rampurva Bull Capital, Lion Capital from Sarnath, Didarganj Yakshi.

Unit-III : History of Western Art

- Pre-historic Art - Wounded Bison (Altamira), Venus of Willendorf.
- Egyptian Art - Palette of King Narmer, Seated Scribe.
- Greek Art - Standing Youth, Discobolus, Laocoon Group.

Unit-IV : Definition of Key Terms and General Concepts

- Colour: Colour Theory, Colour wheel, Colour terminology and meaning of colour, Line - different types of lines and its meaning, Perspective: Linear and Aerial, Foreshortening.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks: 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects and to study the proportion, volume and rhythmic relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Pencil, charcoal or Pastel colours.
4. Size : ½ Imperial sheet

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Pencil Shading, charcoal
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

1. Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
2. Medium : Pencil Sketching or Pastel, Pencil colours.
3. Size : ½ Imperial sheet

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).

Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

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FINE ARTS

SEMESTER – II

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

INSTRUCTIONS TO PAPER-SETTERS

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Sittanavasal - Lotus Pond.
- Eastern Indian Miniature Painting with special reference to Ashtasahasrika Prajnaparamita.
- Western Indian Miniature Painting with special reference to Nativity of Mahavira from Palm-leaf manuscripts.

Unit-II : History of Indian Sculpture

- Bharhut - Dream of Queen Maya, Yakshas and Yakshini figures.
- Amravati - The Great Departure, Subjugation of Nalagiri.

Unit-III : History of Western Art

- Roman Art - Augustus of Primaporta, Arch of Titus.
- Byzantine Art – Mosaic: Emperor Justinian and his Attendants in S. Vitale.
- Gothic Art - Madonna Enthroned by Duccio, The Lamentation by Giotto.

Unit-IV : Definition of Key Terms and General Concepts

Mural - Fresco and Tempera techniques, Miniature, Chiaroscuro (light-shade), Sculpture in round and in relief.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitons and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks : 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects to study proportion, volume and rhythmic : relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Oil, acrylic or water colours.
4. Size : ½ Imperial sheet or Canvas Pad

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Charcoal or Pastels (Monochrome)
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.

1. Medium : Oil, acrylic or water colours.
2. Size : ½ Imperial sheet or Canvas pad

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).
Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.

2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

HISTORY OF ART

SEMESTER – I

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

HISTORY OF INDIAN PAINTING AND SCULPTURE Max. Marks : 100
Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Study of Indian Painting :

Unit-I

(a) Pre-historic Painting.

(b) *Ajanta :* Early Period, Classical Period and Post-Classical Period.

Unit-II

(a) Bagh

(b) Badami.

(c) Sittanavasal.

(d) Ellora.

Study of Indian Sculpture :

Unit-III

(a) Indus Valley Civilization.

(b) Mauryan Period.

(c) Bharhut.

(d) Sanchi.

Unit-IV

(a) Amaravati.

(b) Nagarjunikonda.

(c) Mathura under the Kushanas.

(d) Gandharan Art.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Reprint Corporation, New Delhi, 1983.

2. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

3. Gupte and Mahajan : *Ajanta, Ellora and Aurangabad Caves,* D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.

4. Rowland, Benjamin : *The Art and Architecture of India,* Penguin Books, Great Britain, 1959.

5. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.

6. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.

7. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.

8. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART

SEMESTER – II

Max. Marks : 100
Time : 3 Hours

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

STUDY OF WESTERN PAINTING AND SCULPTURE (from the earliest times to ca. 1400 A.D.) and Theory and Principles of Art Appreciation

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Western Art :

Unit-I

(a) Pre-historic Painting.

(b) Egyptian Art.

Unit-II

(a) Greek Art.

(b) Roman Art.

Unit-III

(a) Art of Early Christian Period.

(b) Byzantine Period.

(c) Gothic Period.

Unit-IV

Explanation through illustrations of the concept of :

(a) Space, Line, Colour, Form, Texture, Light and Shade, Design, Balance, Harmony, Composition, Perspective, Foreshortening.

(b) Mural, Fresco and Tempera techniques.

Pedagogy :

The students are expected to familiarize themselves with the art form as seen from the books, slides and related films.

Suggested Readings :

1. Read, Herbert : *Meaning of Art,* Faber & Faber, London, 1972.
2. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
3. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
4. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – I

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-I : HISTORY AND CULTURE OF INDIA FROM THE INDUS VALLEY CIVILIZATION TO 321 B.C.

Objectives :

The paper is a survey of the proto-historic and historic background to Indian history from the Harappan Civilization to 321 BC.

Pedagogy of the Course Work :

Students are familiarized with sources and with methods of reconstructing ancient history. An attempt is made to view the events in their situational context, locating the interconnection of social, economic and political developments, as far as their sources permit.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hours duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of the Harappan Civilization.

   (b) Location of the 16 Mahajanapadas.

   (c) Alexander's Indian campaign.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I

Sources of Ancient Indian history: Harappan Civilization: origin; extent; urban features and decline.

UNIT-II

Vedic Civilization (Rig Vedic and Later Vedic Period): society; polity; economy; culture and religion.

UNIT-III

The Sixteen Mahajanapadas with special reference to the rise of Magadha (from Bimbisara to the fall of the Nandas); The rise of Buddhism and Jainism.

UNIT-IV

The Iranian and Macedonian invasions: political and cultural impact on the Indian subcontinent.

Essential Readings :

1. Basham, A.L. : *The Wonder that was India,* Rupa, Mumbai, 1971.
2. Chakravarti, Ranabir *Exploring Early India: Upto C.AD 1300* Ratna Sagar, New Delhi 2016.
3. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
4. Majumdar, R.C. et al : *The Vedic Age,Vol.I, Bombay;* Bhartiya Vidya Bhavan, Mumbai, 1971.
5. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
6. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed. Oxford, New Delhi, 2011.
7. Sharma, R.S. *Material Culture and Social Formation in Ancient India*, Machmillan, Delhi, 1983
8. Singh, Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century),* Pearson Education, Delhi, 2009
9. Thapar, R. : *A History of India,* Vol. I: *From Origins to 1300*, Penguin, 1990.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER – II

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-II : HISTORY AND CULTURE OF INDIA FROM THE MAURYAS TO 319 A.D.

Objectives :

This course deals with the political and cultural history of India from Mauryas to the Post Kushana period.

Pedagogy of the Course Work :

The students are taught with the help of slides, photographs, topographical maps and political maps. In addition to it, lectures, workshops and seminars are arranged to facilitate the students to understand the subject in a better way.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.
4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
5. The map question shall have the following topics :
   (a) Extent of the Mauryan empire.
   (b) Location of Ashokan inscriptions.
   (c) Extent of Kanishka's empire.
6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I :

The Mauryan empire: sources; political and cultural relations; administrative organization; society and economy; Ashoka's dhamma; downfall of the Mauryan empire.

UNIT-II:

Sungas, Kanvas and Satvahanas: survey of the sources; political overview; society and economy; culture and religion.

UNIT-III:

The Indo Greeks, Shakas and Parthians: survey of the sources; polity; society and economy.

UNIT-IV:

Kushana and Post-Kushana Period: survey of the sources; social; political; economic; cultural and religious conditions.

Essential Readings :

1. Bongard Levin, G. : *Mauryan India,* Sterling, Delhi, 1985.
2. Chakravarti, Ranabir *Exploring Early India: Upto C.AD 1300* Ratna Sagar, New Delhi 2016.
3. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
4. Majumdar, R.C. et al, eds. : *The History and Culture of the Indian People,* Bhartiya Vidya Bhawan, Mumbai, 1951.
5. Mukherjee, B.N. : *The Rise and Fall of the Kushana Empire,* Firma KLM, Calcutta, 1988.
6. Narain, A.K. : *The Indo–Greeks,* Claerendon Press, Oxford, 1957.
7. Nilakantha Sastri, K.A. (ed.) : *The Age of the Nandas and Mauryas,* Motilal Banarsidass, New Delhi, 1988.
8. Raychaudhuri, H.C. : *The Political History of Ancient India,* Oxford, New Delhi, 2011
9. Shastri, A.M. : *Early History of the Deccan, Sandeep Prakashan,* New Delhi, 1987.
10. Shrimali, K.N. : *Prachin Bharat Ka Itihas,* Karyanvaya Nideshalay, Delhi University , Delhi 2009.
11. Singh Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century*), Pearson Education, Delhi, 2009.
12. Thapar, R. : *Ashoka and the Decline of the Mauryas,* Oxford, New Delhi, 2012.
13. Thapar Romila : *The Penguin History of Early India from the origin to AD 1300,* Penguin Books, New Delhi, 2002.

DEFENCE & STRATEGIC STUDIES

SEMESTER – I

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

PAPER : CONCEPT OF WARFARE

M. Marks : 70
Time : 3 Hrs.

Objective : This paper deals with the conceptual aspects of warfare focuses on the various aspects of warfare from conventional to Nuclear age.

SECTION-I

1. War : Its definition concept and evolution.
2. Principles of War, Historical Development, Meaning & Importance.

SECTION-II

3. Modern War : Meaning, Historical Development, Features and Humanization of War.
4. Non-Conventional Warfare with reference to Guerrilla War : Its Origin, Principles and Techniques.
5. Asymmetric Warfare

SECTION-III

6. Nuclear War, Beginning of Nuclear Era, Effects of Nuclear explosions, Nuclear strategy, Deterrence, Missiles and their classification.

SECTION-IV

7. Psychological aspects of war, Leadership, Motivation, Morale, Discipline, Panic and Fear.
8. Information Warfare.

Books Recommended :

1. Bernard, Brodie, Strategy in the Missile Age Rand Corp., Santa Monica, 2007.
2. Boring, E., Psychology in the Armed Services, National Academics, Washington 1945.
3. Clausewitz Von Carl, On War, Wilder Publications, United States, 2008.
4. Fuller, J.F.C, Armament and History, Da Press, New York,1998 .
5. Fuller, J.F.C., The Conduct of War, N.J. Rutgers University Press, New Brunswick, 1961.
6. Gerald, J., Defence Psychology, Pergamon Press, Michigan, 2008.
7. Harkabi Y., Nuclear War and Nuclear Peace, Transaction Publishers,Piscataway, New Jersey, 2008.
8. Hart, Liddle, Strategy of Indirect Approach, BiblioBazaar, 2011 Washington, 1945.
9. JFR Jacob, Surrender at Dacca, Birth of a Nation, Manohar Publishers & Distributors, New Delhi, 1997.
10. Malkasian Carter, A History of Modern Wars of Attrition, Greenwood Publishing Group, 2002.
11. May Larry, Emily Crookston, War: Eassy in Political Philosophy, Cambridge University Press, 2008.
12. Montgomery, A History of Warfare, Cleveland world Publishers,1968.
13. Palit, D.K., War in the Deterrent Age, Gardners Books, Delhi 2006.
14. Tripathi, K.S., Evolution of Nuclear Strategy, Vikas Publication, Delhi,1970.
15. Waelder Robert, Psychological aspects of war and peace, Geneva research Centre, Geneva, 1939.

Paper : <u>PRACTICAL</u> Total Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on Computer.

SECTION-A, Practical Test

Marks: 10

Note :

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Conventional Signs*:* Military and Geographical.
2. Introduction to Topographical Maps*:* Definition, features, classification, enlargement and reduction of maps.
3. Grid System*:* Four figure, six figure and eight figure map, references.

SECTION-B

Marks: 10

1. Practical Record	5 marks
2. Viva-Voce	5 marks

(Students be asked to prepare on current topics of general interest)

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DEFENCE & STRATEGIC STUDIES

SEMESTER – II

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : INTERNATIONAL RELATIONS, STRATEGIC ASPECTS

M. Marks : 70
Time : 3 Hrs.

Objective : This paper focuses on the various attributes of international relations and its role in maintaining peace & security.

SECTION-I

1. International Relations: Meaning, concept and its relationship with strategic aspects.
2. National interest and war: Definition of national interest & its relationship with security; War as an instrument of National Policy.

SECTION-II

3. Balance of Power: Meaning, Historical Development, Evaluation and its functioning.
4. Cold War: Definition, Cause and Means, Diplomatic, Psychological, Economic effects and Perspective.

SECTION-III

5. Collective Security: Meaning and Concept, Role of United Nations Organization in maintaining Collective Security.

SECTION-IV

6. Disarmament and Arms Control, Meaning and Concept, Efforts by UNO towards its achievement.

Books Recommended:

1. Flemming, D.F., *The Cold War and its Origin,* Doubleday, University of Michigan, United States, 1961.
2. Gaddis Lewis John, *The Cold War,* Penguin, UK, 2011.
3. Goldblat Jozef, *Arms Control: The New Guide to Negotiations and Agreements with New CD-ROM Supplement,* SAGE, London, 2002.
4. Griffiths Martin, *International Relations: The Key Concepts,* Psychology Press, 2002.
5. Joseph , Frankel , *The Making of Foreign Policy,* Oxford University Press, Oxford, 1963.
6. Knapp, W., *A History of War and Peace,* Oxford University Press, Oxford, 1967.
7. Kumar, Mahendra, *Theoretical Aspects of International Politics,* University of Notre Dame Press, Notre Dame, Ind., 1959
8. Lawrence Robert M., *Arms Control and Disarmament,* Burgers, 1973.
9. Lucas, *A History of Cold War,* Bloomsbury Publishing London, 2008.
10. Morgenthau, H., *Politics Among Nations,* McGraw-Hill New York, 1993.
11. Morton, Halperin , *Limited War in the Nuclear Age,* Greenwood Press, Michigan, 1978.
12. Orakhelashvili Alexander, *Collective Security,* Oxford University Press, UK, 2011.
13. Sarooshi Dan, *The United Nations and the Development of Collective Security: The Delegation by the UN Security Council of Its Chapter VII Powers,* Oxford University Press, UK, 1999.
14. Sheehan Michael J., *The Balance of Power: History and Theory,* Taylor & Francis, 1996.
15. Qamar, Hasanan, *Psychology for the Fighting Man,* Penguin Books, U.K, 1943.

Paper-B: PRACTICAL Total Marks : 20
Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A, Practical Test

Marks: 10

Note:

1. There will be three questions in all and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Distance and Scale*:* Definition, types, methods of representing scale, inters conversion of statement, into representative fraction, construction of simple scale line and comparative scale lines.

2. Directions*:* Types of North, finding out True North, direction by equal altitude method, Watch method, Map method and Compass method.

3. Service Protector: Its type and uses.

SECTION-B

Marks: 10

1. Practical Record 5 marks
2. Viva-Voce 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER – I

PAPER : HISTORY OF INDIA UPTO 1200 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (FOR PAPER in Semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper:

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of the aAncient period in Indian History.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Major Sources of History : Literary and travel accounts; Archaeological findings; inscriptions; coins.
II. Harappan Civilization : Extent, town planning; social economic and religious life.
III. Life in Vedic Age: Political and Economic; social and religious.

UNIT II

IV. Republics and Kingdom 600-321 B.C.: Mahajanpadas; the rise of Magadha.
V. Jainism and Buddhism : Life and teachings of Vardhman Mahavir; Life and teachings of Gautam Buddha.
VI The Mauryan Empire : Central and Provincial Administration; revenue, judicial and local administration; Ashoka's Dhamma.

UNIT III

VII Post Mauryan Period : Decline of Mauryas and Kanishka and his achievements.
VIII. The Gupta Empire : The rise of Guptas and social, economic, cultural and scientific Developments under Guptas.
IX. The Rise of Southern Kingdoms: Administration Under Pallavas; Rashtrakutas and Chalukyas.

UNIT IV

X. Regional Kingdoms in the North : Administration under Harsh Vardhana; origin of Rajputs.
XI South Indian States: Administration under Cholas; Taxation and trade under Pandayas

XII Map :

(i) Map on important Historical places: Ajanta, Bodhgaya, Ellora, Harrappa, Indraprastha, Kalibangan, Kalinga , Kannauj, Lothal, Nalanda, Patliputra, Sanchi , Sopara, Taxila, Ujjain, Varanasi
(ii) Extent of Harappan Civilization.
(iii) Mauryan Kingdom under Ashoka.

Reading List :

1. Basham, A.L. : *The Wonder That Was India,* Calcutta : Rupa & Co., 1992.
2. Jha, D.N. : *Ancient India : An Historical Outline,* Delhi : Manohar, 2nd Rev. Ed., 2005.
3. Sharma, R.S. : *India's Ancient Past,* Delhi : OUP, 2005.
4. Sharma, R.S. : Parambhik Bharat Ka Parichay, Delhi : Orient Black Swan, 2007 (Hindi Medium).
5. Thapar, Romila : *Early India from the Origin to A.D. 1300,* U.K.: Penguin, 2015.
6. Noboru, Karashima : *Concise History of South India, OUP, Delhi, 2014.*
7. Chakravarty Ranbir : *Exploring Early India,* New Delhi: Ratna Sagar Pvt. Ltd., 2016

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HISTORY

SEMESTER – II

PAPER : HISTORY OF INDIA 1200-1750 A.D.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES : (FOR PAPER in Semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. One question from Unit IV shall be set on the map.

Explanation :

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

   Map : 10 marks

   Explanatory Note : 08 marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of Medieval India.

Pedagogy : Lectures, library work and discussions.

UNIT I

I. Establishment of Turkish rule under Muizuddin of Ghor; Consolidation under Iltutmish and Balban.

II. The Khaljis : Administration; agrarian and market reforms of Alauddin Khailji.

III. The Tughlaqs : Muhammad Bin Tughlaq's administrative experiments and its impact, Feroz Shah Tughluq's administrative and economic reforms.

UNIT II

IV. Vijaynagar Kingdom : Establishment; Administration and Economy.

V. Formation of the Mughal Empire : Political condition of India on the eve of Babur's invasions; conquests and causes of his success.

VI. The Afghans : Establishment of Afghan power under Sher Shah Suri; administrative reforms.

UNIT III

VII. The Mughal Empire : Central and Provincial administration; land revenue system.

VIII. The Mughal Empire : Mansabdari system; Jagirdari System.

IX. Debates on the Decline of the Mughal Empire.

UNIT IV

X. The Rise of the Marathas : Conquests of Shivaji; administration.

XI. Evolution and main features : Bhakti movement; Sufism.

XII. MAP :

(i) Important Historical places : Lahore, Delhi, Agra, Mathura, Fatehpur Sikri, Chittor, Jaipur, Udaipur, Panipat, Lucknow, Ahmednagar, Poona, Surat, Golkonda, Bijapur, Daulatabad,

(ii) Extent of Empire under Allauddin Khalji.

(iii) Mughal Empire in 1707.

Reading List :

1. Alam, Muzaffar and Sanjay Subrahmanyam : *The Mughal State 1526-1750,* New Delhi : Oxford University Press, 1998.

2. Chandra, Satish : *Medieval India from Sultanate to the Mughals (1206-1526),* New Delhi : Har-Anand Publications Pvt. Ltd., 1997.

3. Chandra, Satish : *Medieval India from Sultanate to the Mughals, Part -II* Mughal Empire (1526-1748). New Delhi: Har-Anand Publications Pvt. Ltd., 2007

4. Chandra, Satish : *Essays on Medieval Indian History,* New Delhi : Oxford University Press, 1987.

5. Chandra, Satish : *History of Medieval India,* Delhi : Orient Black Swan, 2007 (Hindi Medium).

6. Habib, Irfan : *Medieval India : The Study of Civilization*, New Delhi : National Book Trust, India, 2008.

7. Ray Chaudhri Tapan and Irfan Habib : *The Cambridge Economic History of India*, Vol. I., c. 1200-c.1750, New Delhi : Orient Longman, 2007.

8. Rizvi, S.A.A. : *The Wonder That Was India,* Vol. II, 1200-1700, New Delhi : Rupa & Co., 1996.

9. Singh Navtej : *Madhkalin Bharat,* National Book Trust (Punjabi).

POLITICAL SCIENCE

SEMESTER – I

POLITICAL THEORY-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The objective of this paper is to introduce first year undergraduate students to some of the basic aspects, concepts and themes in the discipline of Political Science.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Political Sciene :* Meaning, Definition and Scope.

2. Relationship of Political Science with Economics, History and Sociology.

Unit-II

1. *The State :* Definition, Elements and its Distinction from Government and Society.

2. *Theories of the Origin of State :* Social Contract, Historical/Evolutionary.

Unit-III

1. *State :* Liberal, Marxian and Gandhian View.
2. *Welfare State :* Liberal and Socialist Perspective.

Unit-IV

1. *Sovereignty :* Definition, Attributes/ Characteristics and Types.
2. *Theories of Sovereignty :* Monistic and Pluralistic.
3. *Political System : a)* Meaning & Characteristics.
   Political System : b) Functions according to David Easton & Almond & Powell.

Books Recommended :

1. J.C. Johri : *Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2. A.C. Kapoor : *Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3. O.P. Gauba : *An Introduction to Political Theory,* Macmillan India Ltd., New Delhi, 2009.
4. Andrew Heywood : *Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5. Robert A. Dahl & Bruce S. Finebric Kner : *Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6. Frank Bealey, Richard Chapman and Michael Sheehan : *Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7. Andrew Heywood : *Political Theory : An Introduction,* MacMillan Press, London, 1999.
8. Aron I. Skoble & Fiber R. Maclian (eds.) : *Political Philosophy : Essential Selections,* Pearson Education, 1999.
9. Andrew Heywood : *Politics,* Macmillan, London, 1997.
10. M.P. Jain : *Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11. S.P. Verma : Modern *Political Theory,* General Publishing House, New Delhi. 1983.

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POLITICAL SCIENCE

SEMESTER – II

POLITICAL THEORY-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The aim of this paper is to deepen and expand the knowledge of the student in Political Science. It introduces higher level concepts and themes in political theory. It will provide students with the tools to engage with some key political issues of our times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Power, Authority, Legitimacy :* Meaning and Characteristics.
2. *Political Culture :* Meaning, Characteristics and Types.
3. *Political Socialisation :* Meaning, Characteristics and Agencies.

Unit-II

1. *Rights & Duties :* Meaning, Types and Co-relation between the two.
2. *Universal Declaration of Human Rights:* Meaning of Human Rights, Nature and Characteristics.

Unit-III

1. *Liberty :* Meaning, Types & its Safeguards.
2. *Equality :* Meaning, Types and Relationship between Liberty and Equality.
3. *Justice :* Meaning and its various Dimensions.

Unit-IV

1. *Social Change :* Meaning, Characteristics and Factors.
2. *Democracy :* Meaning, types, necessary conditions for the success of Democracy.
3. *Theories of Democracy:* Elite and Marxian.

Books Recommended :

1.	J.C. Johri	:	*Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2.	A.C. Kapoor	:	*Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3.	O.P. Gauba	:	*An Introduction to Political Theory,* MacMillan India Ltd., New Delhi, 2009.
4.	Andrew Heywood	:	*Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5.	Robert A. Dahl & Bruce S. Finebric Kner	:	*Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6.	Frank Bealey, Richard Chapman and Michael Sheehan	:	*Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7.	Andrew Heywood	:	*Political Theory : An Introduction,* MacMillan Press, London, 1999.
8.	Aron I. Skoble & Fiber R. Maclian (eds.)	:	*Political Philosophy, Essential Selections,* Pearson Education, 1999.
9.	Andrew Heywood	:	*Politics,* Macmillan, London, 1997.
10.	M.P. Jain	:	*Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11.	S.P. Verma	:	*Modern Political Theory,* General Publishing House, New Delhi, 1983.

ECONOMICS

SEMESTER – I

Paper : MICRO ECONOMICS

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objective :

Microeconomics is concerned with the analysis of economic phenomena from the perspective of the individual. The course covers the basic concepts and tools needed to undertake the analysis of such problems that arise due to the law of scarcity. The course also aims at introduction of the functioning of competitive and noncompetitive product markets and performance of the markets for resources. The students are expected to develop rudimentary understanding of how and why consumers, firms, and markets in the economy function the way they do.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction : Definition, Meaning, Nature and Scope of Economics.

Theory of Demand and consumer Behaviuor : Utility Analysis and Indifference Curve Analysis. Law of Demand and its Exceptions, Elasticity of Demand and its measurement, Consumer Surplus and its measurement.

Unit-II

Theory of Production and Costs: Concept, Law of Variable Proportions and Laws of Returns to Scale, Cost Concepts and Cost Curves in Short and Long periods (Traditional Theory of Costs).
Market Forms and Revenue: Behaviour of Average Revenue and Marginal Revenue under Perfect Competition and Imperfect Competition. Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Unit-III

Price and Output Determination: Price and Output Determination of the Firm and Industry under Perfect Competition, Monopoly and Monopolistic Competition in Short and Long run, Concept of Discriminating Monopoly.

Unit-IV

Distribution: Marginal Productivity and Modern Theories of Wage Determination, Ricardian and Modern Theories of Rent. Classical and Loanable Funds Theory of Interest, Risk and Uncertainty theories of Profit.

Recommended Readings:

1. Chaudhary, Kalyanjit Roy(2012) : Modern Micro Economics, Vol. I & II Bookland Publishers, New Delhi.
2. Chopra, P.N., Singh, Joginder & Grewal, P.S. (Punjabi Medium) (Latest Edition) : Price Theory and Distrubution, Kalyani Publishers, Ludhiana.
3. Lipsey, R.G. & Crystal, K.A.(2011) : Principles of Economics, Oxford University Press, New Delhi.
4. Samuelson, P.A. (trans. Piar Singh) (1972) : Arth-Shastar Ek Prarmbhik Vishleshan, Punjabi University, Patiala
5. Stonier, A.W.. & Hague, D.C. (2005) : A Text Book of Economic Theory.

Supplementary Readings:

1. Ahuja, H.. (2012) : Advanced Economic Theory, S.Chand & Co., New Delhi.
2. Chopra, P.N.(2012) : Micro Economics Theory and Welfare Economics, Kalyani Publishers, New Delhi.
3. Dwivedi, D.N. (2012) : Microeconomics-Theory and Applications, Pearson Education Delhi.
4. Pindyck, Robert, S., Rubinfeld Dainel, L. and Mehta, P.L. (2013) : Microeconomics, Prentice Hall of India, New Delhi.
5. Ray, N.C. (1980) : An Introduction to Microeconomics, The Macmillan, New Delhi.
6. Robinson, John (Trans.) (Latest Edition) : Apuran Prityogita Di Arhiki, Punjabi University, Patiala.
7. Salvatore, D (2009) : Micro Economics: Theory & Applications, Oxford University Press, New York.
8. Singh, H.K. Manmohan (Trans Vashisht, Om Parkash) (1971) : Mang Sidhant Ate Mishrat Arth-Vivstha Vich Arthik Ganana, Punjabi University, Patiala.

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ECONOMICS

SEMESTER – II

Paper : MACRO ECONOMICS

Max. Marks	: 100
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 hours

Course Objective:

This paper aims to familiarize the student with the generally accepted principles of macroeconomics. It deals with aggregates i.e. consumers as a whole, producers as a whole, exporters and importers as a whole, the effects of government spending and taxation, and the monetary policy of the central bank. The course includes the basic theories of determination of income, consumption, investment, employment, money and interest, inflation, Monetary and Fiscal policies, and business cycles.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type question i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidate shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction: Nature, Meaning and Scope of Macro-Economics.

Consumption Function:
Average and Marginal Propensity to Consume, Keynes' Psychological Law of Consumption.
Investment Function:
Types of Investment, Investment Demand Schedule and Factors Affecting Investment Decisions, Marginal Efficiency of Capital, Static and Dynamic Multiplier.

Unit-II

Determination of Income and Employment:
Classical and Keynesian Theories of Income, Output and Employment, Say's Law of Markets. Principle of Effective Demand.

Unit-III

Money and Banking:
Money : Definition, Functions and Role
Quantity Theory of Money: Fisher's Equation and Cambridge Equation, Keynesian Liquidity Preference Theory.
Banking: Major Functions of Commercial Banks and Process of Credit Creation.

Unit-IV

Inflation and Macro-Economic Policies:
Cost-push and Demand-pull Theories of Inflation, Measures to Control Inflation. Monetary and Fiscal Policies for Stabilization.

Trade Cycle: Meaning and Phases.

Recommended Readings:

1. Dernburg, T.F. & McDougal, D.M.(1983) : Macro Economics, McGraw Hill, New York.
2. Ghuman, Ranjit Singh (latest edition) : Antar-Rashtriya Arth Vigyan, Punjabi University, Patiala.
3. Shapiro, E. (1996) : Macroeconomic Analysis, Galgotia Pub.(P) Ltd., New Delhi.
4. Sharma, O.P. (Punjabi Medium) (latest edition) : Macro Economics, Punjabi University, Patiala.
5. Vaish, M.C. (2010) : Macro Economic Theory, Oxford Unversity, Press, New Delhi.

Supplementary Readings:

1. Ackley, Gardner (1985) : Macro Economic Theory, McMillan, New York.
2. Ahuja, H.L. (2004) : Macroeconomics Theory and Policy, S.Chand Pub. New Delhi.
3. Baird, C.W. (1982) : Elements of Modern Economics, West Publishing Company.
4. Dwivedi, D.N. (2012) : Macroeconomics-Theory and Policy, Tata McGraw Hill Publication House, New Delhi.

SOCIOLOGY

SEMESTER - I

FUNDAMENTALS OF SOCIOLOGY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper aims at introducing Fundamentals of Sociology to the beginners of the subjec, the basic understanding about Sociology as a discipline. Study of various terms, concepts and processes will help students in formulating a Sociological Viewpoint and an easy comprehension of the discipline at later stages.

Course Content :

Unit-I

Introduction to Sociology: Origin and Development; Nature and Significance.

Relationship of Sociology with other Social Sciences –Anthropology, History and Psychology.

Unit-II

Understanding Society: Meaning, Characteristics, Theories of Origin of Society – Organic and Social-Contract. Relationship between Individual and Society.

Social Groups - Meaning, Characteristics and Classification Primary and Secondary Groups Ingroups & Outgroups, Reference Group.

Unit-III

Culture: Meaning and Features, Culture and Civilization, Cultural Lag, Acculturation, Assimilation, Cultural Pluralism.

Dimensions of Culture: Cultural Trait, Cultural Patterns, Cultural Complexes, Cultural Relativism.

Unit-IV

Socialization: Meaning, Stages, Agencies and Theories of Mead and Cooley.
Social Control: Meaning, Types and Agencies – Formal and Informal

Essential Readings:

1. *Bhushan Vidya & Sachdeva D.D. (2014)* : *An Introduction of Sociology Kitab Maaal, Allahabad*
2. *Bottomore, T.B. (1975)* : *Introduction to Sociology, Bombay : Blackie and Sons.*
3. *Bottomore, T.B. (1975)* : *Sociology : A Guide to Problems and Literature (Hindi and English), Bombay : Blackie and Sons.*
4. *Davis, Kingsley (1978)* : *Human Society, London : MacMillan Company.*
5. *Dube, S.C. (1990)* : *Understanding Society - A Text Book, NCERT.*
6. *Maciver, R.M. and C.H. Page* : *Society, London : MacMillan Company.*
7. *Macionis, John, J. (2005)* : *Society: The Basics, New York : Prentice Hall.*
8. *Madhurima (2015)* : *Readings in Sociology – Semester-1, Jalandhar : New Academic Publishing House (All Mediums).*
9. *Rao, Shankar, C.N. (2013)* : *Sociology—Primary Principles of Sociology. S.S. Chand and Company Ltd.*
10. *Sharma, R.N. (2001)* : *Samajshastra Ke Sidhant, New Delhi: Atlantic Publishers.*

Further Readings :

1. *Broom, L. and P. Selznick (1968)* : *Sociology, New York : Harper and Row.*
2. *Berger, Peter L. (1998)* : *Invitation to Sociology : A Humanistic Perspective, U.S.A. : Pelican Books.*
3. *Giddens, Anthony Sutton Philip M (2013)* : *Sociology : Seventh Edition, Polity press*
4. *Haralambos, M. (2010) Heald R.M.* : *Sociology : Themes & Perspectives, New Delhi : Oxford University Press.*
5. *Harlombos & Holborn (2014)* : *Sociology : Themes & Perspectives Collins Education E Editing Work*
6. *Schaefer, Richard, T. and Robert P. Lamm (1999)* : *Sociology, New Delhi : Tata-McGraw Hill.*

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SOCIOLOGY

SEMESTER - II

SOCIOLOGY STRATIFICATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

All over the world, social groups are differentiated from one another and often ranked in terms of certain criteria. In this paper, students are exposed to the theoretical understanding of social stratification. In the Indian context, it is pertinent to apprise the students of the concept of social mobility and various factors that contribute to it. The major purpose of this course is to prepare the students to understand the hierarchical structure of groups in various societies and help them understand the social mobility.

Course Content

Unit-I

Social Stratification – Meaning, feature and functions; Inequalities – Social and Natural.
Elements : Differentiation, Hierarchy, Ranking, Reward, Evaluation.

Unit-II

Theories of Social Stratification :
Functionalist – Davis and Moore.

Conflict – Marx.
Class, Status, Party – Weber.

Unit-III

Forms of Social stratification: Caste, Class, Race and Gender. Interface between caste and class.

Unit-IV

Social Mobility – Meaning, types, factors.
Indicators – Education, Occupation, Income.

Essential Readings :

1. Bendix, R. & Lipset, S.M. (1974) : *Class, Status & Power : Social Stratification in Comparative Perspective,* London : Routledge & Kegan Paul.
2. Ghurye, G.S. (1983) : *Caste, Class and Occupation,* Bombay : Popular Prakashan.
3. Giddens, Anthony (2001) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
6. Sharma, K.L. (1980) : *Essays in Social Stratification*, Jaipur : Rawat.
7. Tumin, M. (1987) : *Social Stratification,* New Delhi : Prentice Hall.
8. Sharma K.L. (2009) : *Social Inequality in India, Jaipur Rawat Publication*

Further Readings :

1. Beteille, Andre (ed.) (1978) : *Social Inequality,* Auckland : Penguin Books.
2. Beteille, Andre (1996) : "Varna & Jati", *Sociological Bulletin,* Vol. 45, No. 1 (March) Pages 15-27.
3. Culvert (1982) : *The Concept of Class*, London : Hutchinson.
4. Gupta, Dipankar (2008) : *Social Stratification*, New Delhi : Oxford University Press.
5. Hughes, John *et al* (1995) : *Understanding Classical Sociology,* Marx, Weber & Durkheim, London : Sage.
6. Richardson, C.J. (1977) : *Contemporary Social Mobility*, L and Francies Printer.
7. Inglis David & John Bone (ed) (2006) : Social Stratification Dimensions of Social Stratification Caste ethnicity & Gender Taylor & Francis
8. Levine, Rhona (ed) (2006) : Social class & Stratification Rowman & Littlefield Publishers.
9. Singh, Yogendra, (2006) : Social Stratification and Change in India, New Delhi
10. Ritzer, George (2012) : Sociological Theory, Manohar Publication Tata McGrew Hill Education Private Limited, New Delhi
11. Mac Ion's John J, Plummmer Ken, (2014) : Sociology: A Global Introduction, New Delhi, Pearson
12. Samdna Peter (1990) : Social class & Stratification Routledge, N.Y.
13. Giddens, Anthony & Sutton W.Philip (2007) : Sociology: Introductory Readings Polity Press, Malden: M.A.
14. Schaefer, Richard, T. (2010) : Sociology: A brief Introductions Tata Mcgraw Hill., N.Y.

PUBLIC ADMINISTRATION

SEMESTER - I

PAPER : ADMINISTRATIVE THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	03 Hours

Objective of the Paper :

The objective of this paper is to acquaint the student with the basic concepts and principles of public administration. In addition, the paper would trace the evolution of public administration and its relationship with other social sciences.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning, Nature, Scope and Significance of Public Administration; Public and Private Administration; Public Administration as a Science or an Art; Relationship of Public Administration with other Social Sciences; Evolution of Public Administration since 1887.

Unit-II

Organization: Meaning, Types: Formal and Informal Organization
Forms of Organization: Department, Public Corporation, Government Company.
Principles of Organization: Hierarchy, Span of Control, Unity of Command, Authority and Responsibility.

Unit-III

Chief Executive- Types, functions and Role
Line, Staff and Auxiliary Agencies
Centralisation and Decentralisation
Decision Making: Meaning, types and process

Unit-IV

Coordination: Concept, Methods and Hindrances
Communication: Concept, Process and Barriers
Supervison: Concept and Methods
Leadership: Concept, Styles, Qualities of a Good Administrator

Essential Readings

Awasthi, A. and Maheshwari, S.R. (2011). *Public Administration*. Agra: Laxmi Narain Aggarwal Publication.

Basu, Rumki (1990). *Introduction to Public Administration*. New Delhi: Sterling Publishers.

Basu, Rumki (2008). *Public Administration: Theory and Concept*. New Delhi: Sterling Publishers.

Bhattacharya, Mohit (2002). *Public Administration: Structure, Process and Behaviour*. Calcutta: World Press.

Bhattacharya, Mohit (2012). *New Horizons of Public Administration*. New Delhi: Jawahar Publishers & Distributers.

Fadia, B.L. and Fadia, Kuldeep (2011). *Public Administration: Administrative Theories and Concepts*. Agra: Sahitya Bhawan Publication

Goel, S.L. (2003). *Public Administration: Theory and Practice*. New Delhi: Deep &Deep Publishers.

Mahajan, Chander Mohan. *Elements of Public Administration*, Patiala: Publication Bureau (Panjabi) Punjabi University.

Nigro, Felix A. and Nigro, Llyod G. (1970). *Modern Public Administration*. New York: Harper and Row.

Ojha, Pundrik and Sharma, Kiran (2009). *Public Administration: Theory and Practice* Jalandhar: Raj Publishers.

Puri,K.K .(2004). *Elements of Public Administration*. Jalandhar: Bharat Prakash

Sapru, R.K. (2008). *Administrative Theories and Management Thought*. New Delhi: Prentice-Hall of India.

Sharma, M.P. and Sadana, B.L. (2009). *Public Administration in Theory and Practice*. Allahabad: Kitab Mahal.

Singh, Sahib and Singh, Swinder (2015). *Public Administration: Theory and* Practice. Jalandhar: New Academic Publishing Co.

Further Readings

Gladden, E.N. (1964). *An Introduction to Public* Administration. London: Staples Press.

Golembiewski, Robert T. (1977). *Public Administration as a Developing Discipline*. New York: Marcel Dekker.

Henry, Nicholas (2012). *Public Administration and Public Affairs (12th ed.)*. New Delhi: Prentice Hall of India Pvt. Ltd.

Koontz, H. and O' Donnel, Cyril (1972).*Principles of Management: An Analysis of Managerial Functions*. New York: McGraw Hill

Naidu, S.P. (2005). *Public Administration concept and Theories*. New Delhi, New Age International Publication.

Ojha, Pundrik and Sharma, Kiran (2012). *Public Administration: Theory and Practice.* Jalandhar: Raj Publishers.

Pfiffner John, M. and Presthus, R.Vance (1953). *Public Administration*. New York: Ronald Press.

Pfiffner, John M. and Sherwood, Frank P. (1960). *Administrative Organization*. New Delhi: Prentice Hall.

Phillip, A.T. and Rao. K.H. Sivaji (1989). *Indian Government and Politics.* New Delhi: Sterling Publishers.

Self, Peter. (1972). *Administrative Theories and Politics.* London: George Allen and Unwin.

PUBLIC ADMINISTRATION

SEMESTER - II

PAPER : : INDIAN ADMINISTRATION

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of Indian administration particularly the functioning of executive, legislature and judiciary at the union and state levels. It would also make them aware of the bureaucratic set up at these levels.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Features of Indian Administration
Union Executive: President; Prime Minister, and Council of Ministers
Union Legislature: Lok Sabha – Composition, Functions and Role: Rajya Sabha – Composition, Functions and Role

Unit-II

State Executive: Governor, Chief Minister and State Council of Ministers
State-Legislature: Legislative Assembly and Legislative Council – Composition, Functions and Role
Centre-State Relations: Administrative and Legislative

Unit-III

Union and State Judiciary: Supreme Court – Composition, Functions and Role
High Court – Composition, Functions and Role
Control over Administration: Legislative and Judicial
Delegated Legislation: Meaning, Reasons and Safeguards

Unit-IV

Cabinet Secretariat– Composition, Functions and Role
State Secretariat– Composition, Functions and Role
District Administration: Structure and Functions

Essential Readings

Arora, Ramesh. K and Chaturvedi, Geeta (2000). *Indian Public Administration: Institution and Issues.* New Delhi: WishwasPrakashan.

Awasthi, A. (1980). *Central Administration*. New Delhi: Tata McGraw Hill.

Fadia, B.L. and Fadia, Kuldeep (2011). *Indian Administration.* Agra: SahityaBhawan Publication.

Maheshwari, S.R. (1979). *State Government in India*. New Delhi: Mac. Millan.

Maheshwari, S.R. (2001). *Indian Administration*. New Delhi: Orient Longman.

Puri, K.K. (2006). *Indian Administration*. Jalandhar: Bharat Prakashan

Sapru, R.K. (2001). *Indian Administration*. Ludhiana: Kalyani Publishers.

Sharma, P.D. and Sharma, B.M. (2009).*Indian Administration Retrospect and Prospect*. Jaipur: Rawat Publication.

Singh, Sahib and Singh, Swinder (2007). *Public Administration: Theory and Practice*. Jalandhar: New Academic Publishing Co.

Further Readings

Government of India (2009). *Organisational Structure of Government of India - Fifteenth Report*. New Delhi: Second Administrative Reforms Commission.

Government of India (2009). *State and District Administration - Thirteenth Report*. New Delhi: Second Administrative Reforms Commission.

Pylee, M.V. (1965). *Constitutional Government in India*. Bombay: Asia Publishing House

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PHILOSOPHY

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

Paper : ELEMENTS OF PHILOSOPHY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS & OBJECTIVES :

The aim of this paper is to familiarize the students with the subject, its branches, problems and methods. The contents of this paper provide the students with a wider canvas about tackling day-to-day problems from a larger perspective.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be 9 questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidates shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature of Philosophy (Introduction).
2. Problems of Philosophy with special focus on social equality, self knowledge and rationality.
3. Methods of Philosophy : Critical and Reflective approach.

Unit-II

4. Introduction to main branches of Philosophy : Metaphysics, Epistemology, Ethics, Social Philosophy and Aesthetics (The interrelation between the branches will be focused).
5. Relation of Philosophy with Science and Religion.
6. Nature of Art and Aesthetic Experience

Unit-III

7. Ethics and Social Philosophy : Good life and Good Society.
8. Morality in Public and Private life.
9. Individual and Society.

Unit-IV

11. Justice : Virtue, Fairness, Equality.
12. Tolerance : Respect for Cultural Pluralism and Social diversities.
13. Caste System in India : Jyoti Ba Phule, Gandhi, Ambedkar.

Essential Readings :

1. G.L. Chandramani : Hitopadesa, Jaico Publishing House, 1995.
2. Mandukya Upanisad, Yamuna Prasad Tripathi : Varanasi Bhartiya Vidya Prakashan, 1966.
3. Narvane, V.S. : Modern Indian Thought, Orient Longman Publishers, 1978.
4. Titus, H.H. : Living Issues in Philosophy, Oxford University, 1993.
5. Amartya Sen : The Idea of Justice, The Belknap Press of Harvard University Press Cambridge, Massachusetts, 2009.
6. Calvin Lewis Pinchin : Issues in Philosophy, Palgrave Macmillan, London, 2nd Ed. December, 2004.
7. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

Suggested Readings :

1. Aesop's Fables : Penguin Books, Harmondsworth, 1998.
2. Dr. B.R. Ambedkar : Annihilation of Caste, Navayana Publishers, New Delhi, 1936.
3. Jyotiba Phule : Gulamgiri (The Slavery), Hindi Translator S. Murti, Cultural Publishers, Lucknow, 3rd Ed. 1994.
4. Narayana Hitopadesa : Translated from Sanskrit by A.B.D. Haksar, Penguin Books, 1998.

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PHILOSOPHY

SEMESTER-II

Paper : LOGIC

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS AND OBJECTIVES :

This paper aims at a systematic study of the Science of Logic which is the most effective means of developing logical abstract thinking in us. It tries to provide students with a mastery of Logic so that they can think in clearer terms and be less prone to error.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be **9** questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidate shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature, Scope and Utility of Logic.
2. Terms and Propositions : Kinds of Terms, Connotation and Denotation of Terms. Aristotle's classification of proposition (Square of Opposition—Contradictories), Contraries, Sub-Contraries and Sub-Alterns.

Unit-II

3. Laws of Thought : Identity, Contradiction, Excluded Middle and Sufficient Reason.
4. Argument : Immediate Inference and Mediate Inference. Some kinds of immediate inference : Conversion, Obversion, Contraposition, Inversion.

Unit-III

5. Categorical Syllogism : The Structure and Rules of validity of Pure Categorical Syllogism, Figures and moods, Fallacies of Syllogism.
6. Introduction to Truth-Tables, Negation, Conjunction, Disjunction, Implications and Equivalences.

Unit-IV

7. Nature of Induction : Distinction between Deduction and Induction.
8. Kinds of Induction.
9. Causation : Nature of Cause, Plurality of Causes.

Essential Readings :

1.	Copi, I. M.	:	Introduction to Logic (N.Y., Macmillan, 1972, Hindi Translation available); London : Routledge and Kegan Paul.
2.	Copi, Irvin M.	:	Introduction to Symbolic Logic (Prentice Hall of India), New Delhi, 1998.
3.	Cohen and Nagel	:	Introduction to Logic and Scientific Method (Allied Publishers), New Delhi, 2000.

Suggested Readings :

1.	Alice Ambrose, Morris Lazerowitz	:	Fundamentals of Symbolic Logic, revised ed., Holt, Rinehart and Winston, New York, 1962.
2.	F.H. Bradley	:	The Principles of Logic, Oxford University Press, London, 1950.
3.	John Dewey	:	Logic, Henry Holt and Company, New York, 1938.

PSYCHOLOGY

SEMESTER –I

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-I

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Nature of Psychology, Goals and Branches of Psychology, Historical Evolution of Psychology, Development of Psychology in India.

Unit II

Emotions : Definition and Concept of Emotions, Types of Emotions, Theories of Emotions (James–Lange, Cannon Bard, Schacter-Singer Theory.), Introduction to Emotion Intelligence.

Unit III

Method of Psychology: Experimental Method, Observation Method.
Sampling Techniques, Survey Method.

Unit IV

Motivation: Definition, Nature, Concept. Types of Motives (Physiological, Psychological, Social): Theories of Motivation: Humanistic (Maslow), Need Theories (McClelland and Murray).

Note: The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Level of Aspiration.
2. Facial Expressions in Emotions
3. Public Opinion Survey.
4. Measurement of Motivation
5. Zeigarnik Effect
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2003). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (2014). Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966). Statistics in Psychology and Education, New Delhi : Vakils, Feffer and Simons.
6. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Rinehart and Winston.
7. Morgan, C.T., King, R.A., J.R. Weisz and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
8. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

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PSYCHOLOGY

SEMESTER –II

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-II

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Personality – Concept, Trait Theories (Eysenck, Costa and MCrae), Psychoanalytic Theory (Freud).

Humanistic Theory (Rogers). Measurement of Personality, (Self Report Measures, Projective Techniques and Behavioural Assessment)

Unit II

Statistics: Graphical Representation of Data: Measures of Central Tendency and Variability.

Correlation - Meaning of Correlation, Rank Order and Product Moment-Correlation and Interpretation.

Unit III

Development: Concept, Heredity and Environmental Influences. Theories of Development : Erickson, Psychosocial Theory, Piaget's theory of Cognitive Development.

Unit IV

Intelligence : Concept, Theories of Intelligence: Spearman, Thurstone, Cattell, Guilford. Measurement of Intelligence (Verbal and Non Verbal Test and Individual and Group Tests).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Verbal Test of Intelligence
2. Non Verbal Test of Intelligence
3. Performance Test of Intelligence.
4. McCosta & Crae NEO Big Five Personality Inventory.
5. Interest Inventory.
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2002). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1996). Understanding Psychology, New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer and Simons.
6. Guilford, J.P., and Fruchter, B. (1981). Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000). Introduction to Psychology. New Delhi: Kalyani.
8. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Holy, Tinvsty snf Eindyon.
9. Morgan, C.T., King, R.A., Weisz ,J.R. and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
10. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

GEOGRAPHY

SEMESTER - I

Paper-I : PHYSICAL GEOGRAPHY-I : Geomorphology

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

The course aims to familiarize the students with the fundamental concepts in physical geography, essentially geomorphology.

Course Content:

UNIT-I

Nature & Scope of Geography: Place of Physical Geography within the discipline of Geography, Divisions of Physical Geography (Geomorphology, Climatology Oceanography and Biogeography). (8 lectures)

Interior of the Earth: Constitution, Isostasy, Continental Drift (with special reference to Wegener's Theory and Plate Tectonics). (12 lectures)

UNIT-II

Movements of the Earth : Orogenic and Epeirogenic (with special reference to Geosyncline theory); landforms resulting from forces of Compression and Tension; Earthquakes and Volcanoes (causes, types and distribution) (20 lectures)

UNIT-III

Rocks: Origin, classification and characteristics. (8 lectures)

Major Land Forms: Mountains, plateaus and plains in the world. (10 lectures)

UNIT-IV

Geomorphic Agents and Landscapes: Fluvial, Glacial, Aeolian, Coastal and Karst. (22 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.
   The paper-setter must put note (5) in the question paper

List of Readings :

Essential Readings:

1. Blij, H.J. De & Petor O. Muller : *Physical Geography of the Global Environment,* John Wiley & Sons, Inc., New York, 1996.
2. Bryant, R.H. : *Physical Geography*, Rupa Publications India Pvt. Ltd., New Delhi, 2011.
3. Hussain, Majid : *Fundamentals of Physical Geography (3rd Edition),* Rawat Publication, Jaipur, 2011.
4. Hyndman, D. and D. Hyndman : *Natural Hazards and Disasters (2nd Edition),* Brooks/Cole Cengage Learning, Belmont, USA, 2009.
5. Khan, Nizamuddin : *An Introduction to Physical Geography*, Concept Publishing Company, New Delhi, 2001.
6. Lal, D.S. : *Physical Geography,* Sharda Pustak Bhawan, Allahabad, 2012.
7. Monkhouse, F.J. : *Principles of Physical Geography (8th Edition),* Hodder & Stoughton, London, UK, 1975
8. Pal, Saroj K. : *Physical Geography of India : A Study in Regional Earth Sciences,* Orient Longman, Calcutta, 1998.
9. Petersen, J.F., D. Sack and R.E. Gabler : *Physical Geography (10th Edition)*, Brooks/Cole Cengage Learning, Belmont, USA, 2011
10. Singh, Savindra : *Physical Geography,* Gyanodya Prakashan, Gorakhpur, 2012.
11. Strahler, Alan H. and Arthur N. Strahler : *Modern Physical Geography,* John Wiley, New York, 2003.

Further Readings:

1. Bunnett, R.B. : *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
2. Dayal, P. : *A Text Book of Geomorphology*, Shukla Book Depot, Patna, 1995.
3. Dury, G.H. : *The Face of the Earth,* Penguin, England, 1973.
4. Gass, I.G. : *Understanding the Earth,* The Artemis Press, Sussex, 1973.
5. Gautam, Alka *Geomorphology,* Sharda Pustak Bhawan, Allahabad, 2012.
6. Kaur, Dhian : *The Earth,* Kalyani Publishers, Ludhiana, 2000.
7. Kale, V. and Gupta, A. : *Elements of Geomorphology,* Oxford University Press, Calcutta, 2001.
8. Mamoria, C.P. and Niati, J.L. : *Bhautic Bhoogol Ke Tatwa* (in Hindi), Agra, 1976.
9. Singh, Savindra : *Geomorphology,* Prayag Pustak Bhawan, Allahabad, 2004.
10. Sparks, B.W. : *Geomorphology,* Longman, London, 1986.
11. Thornbury, W.D. : *Principles of Geomorphology,* Second Edition, Wiley Eastern Ltd., New Delhi, 1993.

Pedagogy:

- Use of Audio-visual aids, maps, diagrams and other forms of illustrations especially in the Indian context are recommended.
- Relevant educational field trips must be arranged to illustrate the theory being taught.

Paper-II: CARTOGRAPHY-I Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (5+5)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography.
- To explain the elements of Map (Scale and Orientation) and steps in Map making.
- To introduce relief representation.

Course Content:

UNIT-I

Maps: Brief history of map making and types of maps.

Geometry of the Earth: Latitude, Longitude (Time Zones and International Date Line), Size and Shape of the Earth. (3 lectures, 6 lab sessions)

UNIT-II

Scales: Methods of representing scale;
Methods of construction of Graphic scales: Plain, Comparative, Time and Diagonal.
(6 lectures, 12 Lab. sessions)

UNIT-III

Directions and Bearings: Plotting of a course, True North, Magnetic North, finding True North with the Pole star, a watch and a rod; Bearing and its conversion. (6 lectures, 12 Lab. sessions)

UNIT-IV

Representation of Relief: Hill-shading, Hachures, and Layer Tints, Spot heights, Benchmarks, Contours.
(6 lectures, 12 Lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be in about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL.They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper.

List of Readings

Essential Readings:

1. Dink, Phyllis: *Map Work*, Atma Ram & Sons, 1962.
2. Khullar, D.R.: *Essentials of Practical Geography*, New Academic Publishing Company, Jalandhar, 2003.
3. Mishra, R.P. & Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
4. Sarkar, Asish: Practical Geography: A Systematic Approach (2nd Edition), Orient BlackSwan, Hyderabad, 2011.
5. Singh, Gopal: *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
6. Singh, R.L. & P.B. Singh: *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Bagulia, A.M.: *Practical Geography*, Anmol Publications Pvt. Limited, New Delhi, 2006.
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
3. Rather, G.M.: *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011.
4. Robinson et al.: *Elements of Cartography (6th Edition)*, Wiley India Pvt. Ltd., New Delhi, 2009.

Pedagogy:

- The use of topographical sheets of Survey of India
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

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GEOGRAPHY

SEMESTER - II

Paper-III: PHYSICAL GEOGRAPHY-II: Climatology & Oceanography

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To acquaint the students with the elements and attributes of climatology and oceanography
- To underscore the role of climate in human life
- To emphasize the significance of oceans within the global environmental system

Course Content:

UNIT-I

Definition of Climatology: Concepts of Climate and Weather, Nature and Scope of Climatology. (2 Lectures)
Climate: Elements and Controls. (4 Lectures)
Physical Structure of the Atmosphere: Troposphere, Tropopause, Stratosphere, Ozonosphere, Mesosphere, Thermosphere and Exosphere (attributes of these layers). (6 Lectures)
Physical and Chemical Composition of the Atmosphere: Dust particles, Vapour Particles, Active gases, Inert gases. (2 Lectures)
Insolation and Temperature: Distribution of Insolation (horizontal); Distribution of Temperature (vertical, horizontal, annual, seasonal and diurnal) (6 Lectures)

UNIT-II

Atmospheric Pressure and Wind Distribution: Atmospheric disturbances: Tropical Cyclones, Temperate Cyclones and Anticyclones. (8 Lectures)
Atmospheric Moisture: Condensation forms: cloud, dew, fog, frost and snow. (8 Lectures)
Precipitation: forms and types, world patterns (spatial and seasonal).
Introduction to Koppen's classification of world climate (4 lectures)
Role of Climate in Human Life : Atmospheric pollution and global warming: causes, consequences and measures of control (4 lectures)

UNIT-III

Oceanography : Definition, Nature and Scope (5 lectures)
Topography of the Ocean Basins; Continental Shelf, Continental Slope, Abyssal Plain, Ridges, Deeps and Trenches (5 lectures)
Temperature and Salinity of ocean waters: World patterns and controlling factors (6 lectures)

UNIT-IV

Movements of Oceanic Waters: Waves, Tides and Currents; Surface currents of the oceans;
Role of Ocean Currents in heat distribution over the globe. (10 lectures)
Marine Deposits and Corals: Origin and types. (10 lectures)

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be about 25 words. Each part will carry 2 marks (Total 20 marks).

2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks. These will be in addition to the compulsory question I.

3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.

4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (5) in the question paper.

Essential Readings :

1. Critchfield, H.J. : *General Climatology,* Prentice Hall of India Private Ltd., New Delhi, 1975
2. Frederick K. and Edward J. Tarbuck : The Atmosphere: An Introduction to Meteorology, Prentice Hall of India Pvt. Ltd., New Delhi, 1995.
3. Hess Darrel, Dennis G Tasa : Mcknight's Physical Geography: A Landscape Appreciation (2011).
4. Khan, N. : *An Introduction to Physical Geography,* Concept, New Delhi, 2001.
5. Lal, D.S. : *Climatology,* Chaitanya Publishing House, Allahabad, 2009.
6. Sharma, R.C and Vatal, M : *Oceanography for Geographers*, Chetnya, Allahabad, 2005.
7. Singh, Malkit : Dimensions in Physical Geography, Rasmeet Parkashan, Jalandhar 2012.
8. Singh, Savindra : *Climatology,* Prayag Pustak Bhavan, Allahabad, 2004.
9. Trewartha, G.T. Delhi, : *An Introduction to Climate,* McGraw Hill Book Co., New International Student Edition, 1980.

Further Readings :

1. Bhutani, Smita : *Our Atmosphere,* Edited by R.C. Chandna, Kalyani Publishers, Ludhiana, Delhi, 2000.
2. Bunnett, R.B. *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
3. Gross, Grant M. : *Oceanography : A View of the Earth*, Prentice Hall, New Jersey, 1975.
4. Monkhouse, F.J. : *The Principles of Physical Geography*, University of London Press, London, 1959.
5. Pattersen, S. : *Introduction to Meteorology,* McGraw Hill Book Co., London, 2011
6. Stringer, E.T. : *Foundations of Climatology*, Surjeet Publications, Delhi, 1982.

Pedagogy:

- Conscious effort be made to make the students aware of the significance of climate and oceans to human life.
- Use of Slides, photographs and documentaries on climates and oceans strongly recommended.

Paper-IV: CARTOGRAPHY-II Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (10+10)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography
- To explain the elements of Map (Scale and Orientation) and steps in Map making
- To introduce relief representation and weather symbolization on maps

COURSE CONTENT

UNIT-I

Brief History of Cartography
Elements of Map Design (6 lectures, 12lab sessions)

UNIT-II

Enlargement and Reduction of Maps: Graphic methods – Square and Similar Triangles.
Introduction to concept of Global Positioning System (GPS).

(6 lectures, 12 Lab. sessions)

UNIT-III

Interpretation of Indian Weather Maps: General introduction to the study of weather maps, the scheme of weather symbols including Beaufort's scale employed in Indian Daily Weather Maps.

(6 lectures, 12 lab. sessions)

UNIT-IV

Weather in India: Summer season (period of summer monsoon), winter season, Weather Forecasting through the study of weather maps and recent advances in weather forecasting.

(6 lectures, 12 lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question I.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper

Essential Readings :

1. Mishra, R.P. & Ramesh, A. : *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
2. Singh, Gopal : *Mapwork and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 1995.
3. Singh, R.L. & Singh : *Mapwork and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.
4. Dink, Phyllis : *Mapwork*, Atma Ram & Sons, Latest Edition, 1962.
5. Anderle, R : *The Global Positioning System, Royal* Society of London, 1998.
6. Kulkarni, M.N : *The GPS and Its Applications, Training,* Volume GPS Training Course, Civil Engg. Dept., I.I.T. Bombay, 9-19 May, 2000.
7. Hoffman-Wellenhof, B. et. al.: *GPS Theory and Practice,* $4^{th\ Rev}$. Edition, Springer Wien, New York.

Further Readings:

1. Monkhouse, F.J. & Wilkinson, H.R. : *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
2. Robinson, A.H. & Randall, D. Sale: *Elements of Cartography*, John Wiley & Sons, New York (Sixth Edition), 1995.
3. Colombo, O.L. & Watkins, M.M.: *Satellite Positioning in US National Report to IUGG,* on Geodesy, 1991.
4. King, R.W. & Others: *Surveying with GPS,* University of New South Wales, Australia,1985.
5. Kulkarni, M.N.: *GPS from an Indian Perspective,* GIM International Journal, GITC Publication, The Netherlands, Vol. 14, Oct., pp. 43-45. (2000a).
6. Mueller, I.I.: *Global and Regional Geodynamics,* IAG Symposia 101, Springer Verlag, 1989.
7. Wells, D.E.: *Guideto GPS Positioning, Canadian* GPS Association, New Brunswick, Canada, 1988.

Pedagogy :

- The use of topographical sheets of Survey of India and weather maps.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

GANDHIAN STUDIES
SEMESTER –I

MAHATMA GANDHI: FAMILY AND EARLY LIFE (INDIA, ENGLAND AND SOUTH AFRICA)

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives :

The paper is designed to acquaint the students with the early life of Mahatma Gandhi in India and in London.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Family and Schooling

a) Family Background – Parents, Rambha & others
b) Neighbourhood and Early Impact
c) Schooling
d) Influence of Indian Scriptures

UNIT-II

As a Law Student in London

a) Dilemma Before Going to London
b) As a Law Student
c) Vegetarianism
d) Self-transformation and Home Coming

UNIT-III

Gandhi in South Africa

a) Journey to South Africa
b) Encounter with Racial Discrimination/Apartheid
c) Conditions of Indians in South Africa
d) Birth of Satyagraha

UNIT-IV

Satyagraha in Practice

a) Disfranchisement of Indians
b) Establishment of Natal Indian Congress
c) Asiatic Law Amendment Ordinance
d) Home Coming

ESSENTIAL READINGS:

1 Bhattacharyya, Buddhadeva : *Evolution of the Political Philosophy of Gandhi* (Calcutta: Calcutta Book House), 1969.

2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.

3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 1986, 1995, 2004 editions.

4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1987.

5. Gandhi, M.K. : *Hind Swaraj (*Ahmedabad: Navajivan Publishing House), 1992.

6. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi : Deep & Deep Publication), 2001.

7. Mishra, Anil Dutta : *Reading Gandhi* (New Delhi: Dorling Kindersley Pearson), 2012.

8. Nanda, B.R. : *Mahatma Gandhi - A Biography* (London: George Allen and Unwin), 1976.

FURTHER READINGS:

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.

2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.

3. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.

4. Nanda, B.R. : *Making of a Nation: India's Road to Independence* (New Delhi: Harper Collins), 1998.

5. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997 edition.

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GANDHIAN STUDIES

SEMESTER –II

GANDHI IN FREEDOM STRUGGLE - SOUTH AFRICA AND INDIA

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives:

The paper is designed to acquaint the students with life in South Africa and struggle against racial discrimination.

Pedagogy of the Course Work :

90% Lectures (including expert lectures).
10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Struggle for Human Rights in South Africa

a) Green Pamphlet
b) Indian Opinion
c) Visit to London
d) Interaction and Confrontation : Race & Caste

UNIT-II

Establishing Ashrams

a) Experience of Community Life in South Africa
b) Phoenix Settlement
c) Tolstoy Farm
d) Return to India

UNIT-III

Western Influences-I

a) Influence of John Ruskin
b) Influence of Henry David Thoreau
c) Influence of Leo Tolstoy
d) Influence of Emerson

UNIT-IV

Gandhi's entry into Indian Politics

a) Early Political Activities
b) Champaran Satyagrah
c) Kheda Satyagrah
d) Ahmadabad Mill Strike

Essential Readings:

1. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
3. Fischer, Louis : *Life of Mahatma Gandhi* (New York: Harper and Row), 1983.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001.
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992.
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999.
7. Kripalani, J.B. : *Mahatma Gandhi, His Life and Thought* (New Delhi: Publications Division, Ministry of Information and Broadcasting), 1971.
8. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi: Deep & Deep Publication), 2001.
9. Nanda, B.R. : *Making of a Nation : India's Road to Independence(New Delhi: Harper Collins), 1998.*
10. Parekh, Bhikhu : *Gandhi's Political Philosophy: A Critical Examination* (Delhi: Ajanta), 1989.

Further Readings :

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.
2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.
3. Bondurant, John V. : *Conquest of Violence: The Gandhian Philosophy of Conflict* (Bombay : Oxford University Press), 1959.
4. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
5. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.
6. Ganguly, Debjani & Docker, John (eds.). : *Rethinking Gandhi and Non-violence Relationlity Global Perspective* (New Delhi: Orient Blackswan Pvt.,), 2009.
7. Nanda, B.R. : *Mahatma Gandhi- A Biography (London :George Allen and Unwin), 1976.*
8. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997, edition.

JOURNALISM & MASS COMMUNICATION

SEMESTER –I

INTRODUCTION TO MASS COMMUNICATION - I

Max. Marks	:	100
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will introduce to the students the general concepts and historical viewpoints in communication and media. The students would also get an understanding of the basic models communication and gain an understanding of the current scenario of media industry in India.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Definition, nature and concept of communication; types of communication: intra; inter; group and mass.

Unit-II : Basic models of mass communication : S-R model; Schramm's Model; Model based on Lasswell formula; Mathematical Model.

Unit-III : Early Press History in India (1782-1947); Role of nationalist newspapers in freedom struggle; Laws to curb press freedom before Indian independence; Role of press in Post Independence era (1947-1975); Role of Press during Emergency (1975-1977); Press in modern India (1978-present)

Unit-IV : Brief overview of media industry in India with emphasis on growth of

- Press
- Radio
- TV
- New Media

PRACTICALS

Max. Marks : 20 Marks

1. Project on any one aspect of communication : 1 0 Marks
2. Case study of any one early newspaper : 1 0 Marks

Books Recommended:

Essential Reading :

1. Wilbur Schramm, (1960), *Mass Communication*, 2nd ed. Urbana, University of Illinois Pr.
2. Wilbur Schramm, (1953), *Process & Effects of Mass Communication*, Urbana, University of Illinois Press.
3. Lee Richardson, (1969), *Dimensions of Communication*, N.Y. Appleton- Century-Croft.
4. Kenneth K. Anderson, 1972, *Introduction of Communication: Theory and Practice*. Menlo Park, Cummings Pub. Co.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd..
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading:

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, NY
3. Blumler, Jay G & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- II

PAPER : INTRODUCTION TO MASS COMMUNICATION-II

Max. Marks	**:**	**100**
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives:

This course will introduce students to the basic terminology of various forms of mass media as well as folk and new media. They will also be apprised with application areas such as Advertising & Public Relations.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Basic terms, concepts, definitions and nature of Print, TV and Radio Journalism.

Unit-II : Folk Media: Types, reach and relevance.

Unit-III : New Media: Cyberspace as a source of information, communication and entertainment.

Unit-IV : Definition, role of Advertising and Public Relations.

PRACTICALS

Max. Marks : 20 Marks

1.	Case study of any one newspaper, radio station or TV channel	:	10 Marks
2.	Project on either folk or new media	:	10 Marks

Books Recommended:

Essential Reading :

1. Luthra, H.P., 1984, *Indian Broadcasting*. Publications Division, Min. of I & B.
2. Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi.
3. Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd., New Delhi.
4. Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth Publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading :

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, N.Y.
3. Blumler, Jay G. & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.
5. Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London.
6. Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher.
7. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York.
8. Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

POLICE ADMINISTRATION

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

PAPER : POLICE ADMINISTRATION IN INDIA

(A) Course Objectives :

The principal objective of this paper is to acquaint the students with the features of Indian Police Administration along with its history and growth. Considerable attention has been paid to the concept and significance of reforms in Police Administration with special reference to reform initiatives after independence. The endeavor of the course would be to familiarize the students with the Police Administration at the Union Level with special focus on the Union Ministry of Home Affairs and Central Armed Police Forces .The powers functions and role of Police at Union, State, District and Police Station level will also be discussed.

(B) Pedagogy of the Course Work :

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words . The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 =18 marks).
- Rest of the paper shall contain 4 Units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit-I

Concept, Role and Significance of Police; Origin and development of Police in Ancient, Medieval and British Period. Police Reforms in India after Independence.

Unit-II

Organization and Working of Union Ministry of Home Affairs; Organization and Working of Central Police Organizations with special reference to Central Bureau of Investigation (CBI); Intelligence Bureau (IB); Bureau of Police Research and Development (BPR & D); and National Crime Records Bureau (NCRB).

Unit-III

Origin, Structure and Working of Central Armed Police Forces (CAPFs) with Special Reference to BSF, CRPF, ITBP , CISF and SSB.

Unit-IV

Organization and Working of Police Administration at the State Level, District Level and Police Station Level. Commissionerate System of Policing.

Essential Readings:

1. Gupta, Anandswarup : The Police in British India: 1861-1947, Bureau of Police Research & Development, New Delhi, 2007.
2. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
3. Sharma, P. D. : Indian Police – A Developmental Approach, Research Publications, New Delhi, 1977.
4. Sen, Shankar : Indian Police Today, Ashish Publishing House, New Delhi, 1994.
5. K.P Singh : Police Gyan Vigyan, Bright Law House, New Delhi, 2004.

Further Readings:

1. Vadackumchery, James : National Police Commission: Issues for Rethinking, APH Publishing Corporation, New Delhi, 1998.
2. Saxena, Anil K. : Professionalism in Indian Police, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Chaturvedi, J.C. : Police Administration and Investigation of Crime, Isha Books, Delhi, 2006.
4. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.

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POLICE ADMINISTRATION

SEMESTER – II

Paper : CONSTITUTION OF INDIA

(A) Course Objectives:

The objective of this course is to give an overview to the students the basic information about the Constitution of India. The students would be taught concepts such as Preamble, Citizenship, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties. They are made to understand the political executive at the union and state level; the union and state legislature and judiciary at the Union and in the state. In addition, efforts would be made to discuss the mechanism available for ensuring police accountability.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :
(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit – I

Preamble, Citizenship, Fundamental Rights, Restrictions of Police Rights, Directive Principles of State Policy & Fundamental Duties.

Unit – II

Executive at the Union Level; President, Prime Minister and Council of Ministers; Union Legislature: Lok Sabha and Rajya Sabha; Judiciary at the Union Level: Supreme Court.

Unit-III

Executive at the State Level; Governor, Chief Minister and Council of Ministers. State Legislature: Vidhan Sabha and Vidhan Parishad. Judiciary in the State : High Court and Subordinate Courts.

Unit – IV

Public Accountability of Police through Constitutional and statutory bodies: National Commission for Schedule Caste, National Commission for Schedule Tribes, National Commission for Women, National Human Rights Commission. National Commission on Protection of Child Rights.

Essential Readings:

1.	Ramesh K. Arora and Rajni Goyal	:	Indian Public Administration: Institutions and Issues, Wishwa Prakashan, New Delhi, 1997.
2.	Avasthi and Avasthi	:	Indian Administration, Lakshmi Narain Agarwal, Agra, 1995.
3.	Norman D. Palmer	:	The Indian Political System, Houghton Hiffin, New York, 1975.
4.	Iqbal Narain (Ed.)	:	State Politics in India, Meenakshi Publications, Meerut, 1976.
5.	Granville Austin	:	The Indian Constitution : Cornerstone of a Nation, Oxford University Press, London, 1966.
6.	Sriram Maheshwari	:	State Government in India, Macmillan, New Delhi, 2000.

Further Readings :

1.	Bambri, C. P.	:	The Indian State – 50 Years, Shipra Publications, Delhi, 1977.
2.	Singh, Hoshiar (Ed.)	:	Indian Administration, Aalekh Publishers, Jaipur, 1990.
3.	Pye, Lucian W. and Sidney Verba (Eds.)	:	Political Culture and Political Development, Princeton University Press, New Jersey, USA, 1965.

WOMEN'S STUDIES

SEMESTER–I

Paper- : FOUNDATIONAL CONCEPTS IN WOMEN'S STUDIES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : The objective of this course is to conscientise the students about some of the key concepts in women's studies, their meaning from a feminist and gender perspective with special reference to India.

Course Contents :

Unit I: Gender

- Sex and Gender : Definition and Difference
- Gender Stereotypes: Genesis and Persistence through Family, School and Peer Group
- Social Construction of Gender: From infancy to Adulthood to Old age

Unit II: Patriarchy

- Definition and Origin of Patriarchy
- Manifestations of Patriarchy:
  - (a) Preference for Male Child
  - (b) Discrimination against girl-child and women in the family
  - (c) Violence against Women
  - (d) Discrimination against Women at the Workplace

Unit III: Empowerment

- Definition
- Types of Empowerment:
  - (a) Social – with reference to women's role in marriage and family
  - (b) Political – 73rd and 74th Constitutional Amendment Acts
  - (c) Economic – Employment and Property Rights

Unit IV: Women's Studies

- (a) Definition,
- (b) Rationale for Women's Studies,
- (c) Evolution of Women's Studies,
- (d) Women's Studies as a discipline.

NOTE:

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

1. Anderson, Margaret : *Thinking About Women,* Macmillan, New York, 1993.
2. Bhasin, Kamla : *What is Patriarchy?,* Kali for Women, New Delhi, 1994.
3. Bhasin, Kamla : *Understanding Gender,* Kali for Women, New Delhi, 2000.
4. Connel, R.W. : *Gender,* Polity, Cambridge, 2002.
5. Jain, Devaki and Rajput, Pam (eds.) : *Narratives from the Women's Studies Family,* Sage, New Delhi, 2003.
6. Poonacha, Veena : *Understanding Women's Studies*, RCWS, SNDT University, Mumbai, 1999.
7. Singh, Umesh Pratap, Garg, Rajesh Kumar and Nigam, Vivek Kumar : *Women Empowerment : Dimension and Direction,* Adhyayan Publishers and Distributors, New Delhi, 2012.
8. Woodward, Kath : *The Short Guide of Gender,* Rawat Publications, Jaipur, 2012.
9. Viz. M., Bhatia, M. and S.(eds) : *Women Studies in India: A Journey of 25 Years*, Rawat Publications, Jaipur, 2014

Further Readings :

1. Aravamudan, Gita : *Disappearing Daughters : The Tragedy of Female Foeticide,* Penguin, New Delhi, 2007.
2. Lerner, Gerda : *The Creation of Patriarchy,* Oxford University Press, New Delhi, 1986.
3. Lorber, Judith and Farell, Susan A. (ed.) : *The Social Construction of Gender,* Sage, New Delhi, 1991.
4. Makwana Ramesh H. : *Women Empowerment through Panchayati Raj,* ABD Publishers, Jaipur, New Delhi, 2012
5. Mies, Maria : *Indian Women and Patriarchy,* Concept Publishing Company, New Delhi, 1980.
6. Rajput, Pam & Kaur, Manvinder : "Women's Studies in Higher Education in India: Some Reflections", *Samyukta,* Vol. III, No.1, January, 2003.

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WOMEN'S STUDIES

SEMESTER -II

Paper : STATUS OF WOMEN IN INDIA-I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: The status of women in India has changed over time in relation to historical and cultural realities, levels of consciousness, perceptions and actions of individual women, women's groups and finally State initiatives. This course first aims to acquaint the student with women in the Indian tradition from ancient times to the present, a tradition which has arisen out of the heterogeneity of experience. Further it aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Course Contents

Unit I : Status of women in India in a historical perspective:

(a) Ancient India
(b) Medieval India
(c) Modern India

Unit II: Women and Family

(a) Origin of the family
(b) Types of family
(c) Gender Division of labour in family
(d) Female headed households

Unit III: Women, Religion and Caste

(a) Religion: Women's Status in major Indian religions - Hinduism, Islam, Sikhism, Christianity
(b) Caste: Introduction to caste system in India; Caste and Gender

Unit IV: Violence against Women

(a) Violence against Women: Definition as given by the United Nations
(b) Prevalent forms of violence against Women :

- Domestic violence
- Rape and Molestation
- Sexual Harassment
- Dowry Related Violence

NOTE:

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal, Banarsidass, Delhi, 1959.
2. Bader, Clarisse : *Women in Ancient India: Moral and Literary Studies,* Anmol Pub., Delhi, 1987.
3. Chatterjee, Meera : *A Report on Indian Women from Birth to Twenty*, NIPCCD, New Delhi, 1999.
4. Gopalan, Sarala and Shiva, Mira : *National Profile on Women, Health and Development,* VHAI, & WHO, 2000.
5. Gopalan, Sarala : *Towards Equality – The Unfinished Agenda : Status of Women in India-2001,* National Commission for Women, New Delhi, 2002.
6. Menon-Sen, Kalayani and Shiva Kumar, A.K. : *Women in India! How Free? How Equal?,* Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.
7. *National Human Development Report, 2001,* Planning Commission, Govt. of India, March, 2002.
8. Pruthi, Raj Kumar, Devi, Rameshwari and Pruthi, Romila, (eds.) : *Status and Position of Women: In Ancient, Medieval and Modern India,* Mangal Deep, Jaipur, 2001.
9. Sagade, J. : *Child marriage in India: Socio-Legal and Human Rights Dimensions,* Oxford University Press, New Delhi, 2012.

Further Readings :

1. Ali, Azra Asghar : *The Emergence of Feminism Among Indian Muslim Women,* 1920-1947, Oxford, Karachi, 2000.
2. Anand, Meena : *Dalit Women : Fear and Discrimination,* Isha Books, Delhi, 2005.
3. Bhattacharya, Rinki (eds.) : *Behind Closed Doors: Domestic Violence in India,* Sage, New Delhi 2004.
4. Choudhary, Prem : *Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India,* OUP, New Delhi, 2007.
5. Desai, Neera and Krishnaraj, Maithreyi (eds.) : *Women and Society in India,* Ajanta Publication, New Delhi, 1987.
6. Goodman, Jacqueline : *Global Perspectives on Gender and Work : Readings and Interpretations Reprint,* Rowman and Little Field Publishers, New York, Toronto Plymouth, UK, 2012.
7. Jacobson, Doranne and Wadley, Susan S. : *Women in India: Two Perspectives,* Manohar, New Delhi, 1986.
8. Kumar, Hajira (ed.) : *Status of Muslim Women in India,* Aakar Books, Delhi, 2002.
9. Mohanti, Bedabati : *Violence Against Women : An Analysis of Contemporary Realities,* Kanishka Publications, New Delhi, 2005.
10. Mohini Giri, V. : *Deprived Devis : Women's Unequal Status in Society,* Gyan, New Delhi, 2006.
11. Nagar, N.S. : *Changing Status of Indian Women,* Vista International Pub., Delhi, 2008.
12. Rajawat, Mamta : *Dalit Women: Issues and Perspectives,* Anmol Pub., New Delhi, 2005.
13. Thomas, P. : *Indian Women Through the Ages,* Asia Publishing House, Bombay, 1964.
14. Yadav, Ravi Prakash and Barsa Kumar Chandradeep : *Women Workers in India,* New Century Publications, New Delhi, India, 2012.

HUMAN RIGHTS AND DUTIES

SEMESTER-I

Paper : HUMAN RIGHTS AND DUTIES : CONCEPTUAL UNDERSTANDING

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objective :

The course is designed to provide adequate theoretical understanding about humans rights and duties. It purports to develop a broad understanding of human rights and duties, awareness about the theoretical origins of human rights and their correlation with governance issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72

UNIT-I

THE CONCEPT OF HUMAN RIGHTS:

- Meaning and nature of Human Rights
- Classification of Rights
- The Concept of Human Rights

UNIT-II

CONCEPT OF HUMAN DUTIES:

- Meaning and nature of Human Duties; Moral, ethical, social, economic, political and cultural universal
- Classification of Human Duties: Individual, family, Community, Nation-State, Human kind and Mother Earth.
- Relationship between Rights and Duties.

UNIT-III

INTRODUCTION TO THEORIES OF HUMAN RIGHTS:

- Natural Rights Theory
- Liberal Theory of Rights,
- Legal/ positivist Theory of Rights
- Marxist Theory of Rights.
- Feminist Theory of Rights

UNIT-IV

DEMOCRATIC GOVERNANCE:

- Democracy and People's participation.
- Rule of Law: Non-arbitraries.
- Role of Civil Society

Essential Readings:

1. Brundlad Report : *Our Common future,* (1986) Oxford.
2. David Robert son : *A Dictionary of Human Rights,* (2004) Europa Publications, London.
3. Darren, J.O. Byrne : *Human Rights: An Introduction*, Pearson, (2005) Education Pvt. Ltd., Singapore.
4. Ian Brownlie, et al. (eds.): *Basic Documents on Human Rights,* (2006) Oxford
5. Jayapalan, N. : *Human Rights,* Atlantic Publishers, (2000) New Delhi.
6. Kalpana Kammabiran : C*rafting Human Rights Cultures* (2006), NALSAR University of Law, Hyderabad.
7. Gandhi, P.R. (ed.) : *Blackstone's International Human Rights Documents,* (2001) University, Delhi.

Further Readings

1. Baxi Upendra (ed.) : *The Right to be Human ,* (1987) *Lancer International,* New Delhi.
2. Sanajaoba, N. : *Human Rights in the New Millennium,* (2000) Manas Publications, New Delhi
3. Tripathi, Mani B.N. : *Jurisprudence,* (2008) *Faridabad*: Allahbad Law Agency
4. Lakhani, M.V. : *Studies in Juris Prudence*, (2013), Tech Publications New Delhi: Cyber

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HUMAN RIGHTS AND DUTIES

SEMESTER-II

Paper : HUMAN RIGHTS : INTERNATIONAL DIMENSIONS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

This paper purports to deal with promotion and protection of human rights in the international context, particularly in the UN bodies. It aims to create awareness regarding the Universal Declaration of Human Rights, 1948, significant Covenants along with the Optional Protocols.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e. 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72 marks

UNIT-I

INTERNATIONAL NORMS AND MECHANISMS:

- League of Nations
- The United Nations Charter and the development of Human Rights.

UNIT-II

INTERNATIONAL BILL OF RIGHTS:

- Universal Declaration of Human Rights (UDHR), 1948
- International Covenant on Civil and Political Rights (ICCPR), 1966; Optional Protocol
- International Covenant on Economic Social and Cultural Rights (ICESCR), 1966; Optional Protocol

UNIT-III

HUMAN RIGHTS AND UNITED NATIONS BODIES (I):

- UN General Assembly
- Economic and Social Council (ECOSOC)
- UN Human Rights Council

UNIT-IV

HUMAN RIGHTS AND UNITED NATIONS BODIES (II):

- International Labour Organization (ILO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Health Organization (WHO)

Essential Readings:

1. Philip (ed.) : *United Nations and Human Rights* (1966), Clearndon Press, Oxford.
2. Henry Steiner J. et al (eds.) : *International Human Rights in Context* (1966), Chapter 10, Clarendon Press, Oxford.
3. Saxena, J.N. et al (ed.) : *United Nations for Better World* (1986), Lancers Books, New Delhi.
4. Henkin Louis : *International Bill of Rights: The Covenant on Civil and Political Rights* (1981), Columbia University Press, New York.
5. Krasno Jean A. : *The United Nations* (2005), Viva books, New Delhi.
6. Lauterpacht, Hersch : *An International Bill of the Right of Man* (1945), Columbia University Press, New York.
7. Morsink, Johannes : *The Universal Declaration of Human Rights : Origins, Drafting and Intent* (1999), University of Pennsylania Press, Philadelphia

Further Readings

8. UN Centre for Human Rights : *International Human Rights Standards for Law Enforcement*(1966), World Campaign for Human Rights, Geneva.
9 Kapoor, S.K. : *Human Rights,* (2005) Allahabad Central Law Agency:
10 Aggarwal, H.O : *International Law and Human Rights*, (2008) Central Allahabad Law Agency:

RELIGIOUS AND SIKH STUDIES

SEMESTER- I

PAPER-I, HINDUISM

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious and Sikh Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course as one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness regarding the origin, features and teachings of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9x2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4x18).

Course Contents

Unit. I. Vaishnavism : origin, development; features and institutions

Unit. II. Shaivism: origin, development; features and institutions

Unit. III. Shaktism: origin, development; features and institutions

Unit. IV. Bhakti Movement in India: growth and development; with special reference to Ramanuj and Chaitanya

Essential Readings:

1. Bhandarkar, R.G., *Vaishnavism, Shaivism and Minor Religious Systems*, Varanasi 1965.
2. Jayaswal, Suvira, *the Origin and Development of Vaishnavism*, New Delhi, 1981.
3. Majumdar, A.K., Chaitanya, *His Life and Doctrine: A Study in Vaishnaism,* Bombay: Bhartiya Vidya Bhavan, 1969.
4. Sharma, Krishna, *Bhakti and the Bhakti Movement: A New Perspective*, New Delhi: Munshiram Manoharlal, 1987.
5. ਉਪਾਧਿਆਇ **ਬਲਦੇਵ, *ਭਾਰਤੀ ਦਰਸ਼ਨ ਕੀ ਰੂਪਰੇਖਾ*** (ਹਿੰਦੀ), ਪ੍ਰਕਾਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ,2016 ਪੇਪਰ ਬੈਕ.
6. **ਸਿੰਘ ਸਰਬਜਿੰਦਰ, ਡਾ.**(ਸੰਪਾ.) **'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪਤ੍ਰਿਕਾ**
7. ਸਿਨਹਾ, ਹਰੇਂਦ੍ਰ ਪ੍ਰਸਾਦ (ਡਾ.), *ਧਰਮ ਦਰਸ਼ਨ ਕੀ ਰੂਪ ਰੇਖਾ,* ਮੋਤੀਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ, 1985.
8. **ਦੱਤਾ ਅਤੇ ਚੈਟਰਜੀ, *ਭਾਰਤੀ ਦਰਸ਼ਨ*** (ਹਿੰਦੀ), ਪਬਲੀਕੇਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ, 1973
9. **ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: 'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●5**
11 ਨਿਰਾਕਾਰੀ, ਆਰ. ਡੀ. *ਭਾਰਤੀ ਦਰਸ਼ਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1994.
12 ਪੰਨੂੰ, ਹਰਪਾਲ ਸਿੰਘ (ਡਾ.), *ਭਾਰਤ ਦੇ ਪੁਰਾਤਨ ਧਰਮ*, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2000.
13 ਮਿਸ਼ਰ, ਉਮੇਸ਼ (ਡਾ.), *ਭਾਰਤੀ ਦਰਸ਼ਨ, ਉਤਰ ਪ੍ਰਦੇਸ਼,* ਹਿੰਦੀ ਸੰਸਥਾਨ, ਲਖਨਊ, 2003.

Further readings:

- Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

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RELIGIOUS AND SIKH STUDIES

SEMESTER- II

PAPER-II NEW FAITHS AND SAINTS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit I. Jainism: Life and Teachings of Mahavira ; origin and development of Jainism

Unit. II. Buddhism: Life and Teachings of Lord Buddha; origin and development of Buddhism

Unit. III. Sant Kabir: Life, Teachings and Contribution

Unit. IV. Sant Ravidas: Life, Teachings and Contribution

Essential Readings:

1. Chatterjee, Asim Kumar, *A Comprehensive History of Jainism,* Delhi: Munshilal Manoharlal Publishers, 2000.
2. Dutt R.C., *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983.
3. Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.
4 Vandeville, Charlotte, *A Weaver Named Kabir*, Oxford: India Paperbacks, 1997.
5 ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ' ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●9
6 ਸਿੰਗਲ, ਧਰਮ ਪਾਲ ਡਾ., *ਗੁਰੂ ਰਵਿਦਾਸ, ਜੀਵਨ ਤੇ ਵਿਚਾਰ,* ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ, 2●●1
7 ਸਰਾਓ, ਕਰਮਤੇਜ ਸਿੰਘ, *ਪ੍ਰਾਚੀਨ ਭਾਰਤੀ ਬੁੱਧ ਧਰਮ: ਉਦਭਵ, ਵਿਕਾਸ ਤੇ ਪਤਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2007.
8 ਕੁਮਾਰ ਲਾਲ ਬਸੰਤ, *'ਸਮਕਾਲੀ ਭਾਰਤੀ ਦਰਸ਼ਨ*, ਮੋਤੀ ਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ 2●●6 (ਹਿੰਦੀ)
9 ਜੋਸ਼ੀ, ਐਲ. ਐਮ., (ਸੰਪਾ.), *ਧੱਮਪੱਦ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1990.
10 ਬ੍ਰਹਮਜਗਦੀਸ਼ ਸਿੰਘ, *ਸੰਤ ਕਬੀਰ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਬਾਣੀ,* ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●2
11 ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: *'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ* ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●1

Further readings:

1. Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.
2. Lopez, Jr., Donald S. (Ed.) *Buddhism in Practice,* New Delhi, 1998.
3. Vandeville, Charlotte, *Myths, Saints and Legends in Medieval India*, Delhi: Oxford University Press, 1999.

HOME SCIENCE

SEMESTER- I

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	45	05	1	3	45	05	100
									Total :	**100**

Note : 1. Each Practical group will have 12-15 students.

PAPER : FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : **50**
Theory : **45**
Int. Ass. : **05**
Periods : **6 Hours per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I (a) Meaning & Importance of Home Science.
(b) Functions of Home.

II (a) Home Scientist as an Entrepreneur.
(b) Agencies promoting Entrepreneurship- Commercial Banks, District Industries, Co-operative Societes.

Section B

III Interior Decoration

(a) Elements of Art - Line, Form, Pattern, Texture, Colour, Light and Space.
(b) Principles of Art in relation to interior decoration - Harmony, Balance, Rhythm, Proportion & Emphasis.

IV Colour

(a) Characteristics of colour
(b) Colour wheel
(c) Colour schemes

Section C

V Hygiene & Health

(a) Definition of Hygiene, Health
(b) Definition of infection, sources, carrier and control
(c) Definition and types of immunity.
(d) Immunization schedule

VI Causes & Spread of following diseases.

(a) Caused by insects – Malaria & Dengue
(b) Conveyed by ingestion – Enteric Fever, Cholera, Dysentery & Diarrhea
(c) Spread by droplet infection- chickenpox, measles, mumps & TB.
(d) Sexually transmitted diseases -AIDS.

Section D

VII Food Hygiene

(a) Definition
(b) Hygiene during preparation, service and storage of food.
(c) Domestic purification of water-
- Aquaguard
- Reverse Osmosis

VIII Food Adulteration

(a) Definition
(b) Common food adulterants and their effects on health.
(c) Household Methods of testing food adulteration.

PRACTICAL

Max. Marks : 50 Marks
Practical Theory : 45 Marks
Inter. Asses. : 05 Marks
Time : 3 hours per week.

1. Floor Decoration - Making of Alpana and Rangoli for different occasions.
2. Methods of detecting adulteration in any five foods such as ghee, castor sugar, milk, honey, red chili powder, tea leaves, turmeric powder etc.
3. Table setting, Table manners and Napkin foldings.
4. Making of a Chart/Model/Poster of Colour Wheel or Colour Schemes.
5. Survey of 5 households to study Immunisation schedule.

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HOME SCIENCE
SEMESTER- II

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	45	05	1	3	45	05	100
									Total :	**100**

Note: 1. Each Practical group will have 12-15 students.

PAPER: FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Periods : 6 Hours per Week

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I. Resources

(a) Introduction
(b) Classification

II. Time Management

(a) Steps in making time plans.
(b) Tools in time management- peak loads, work curves and rest periods.

III. Money Management
(a) Types of Income
(b) Budget- Types, Advantages and limitations of budgeting, factors affecting budget, basic steps in planning of budget.
(c) Means of supplementing family income.

IV. Energy Management

(a) Fatigue – Types, Symptoms & Effects.
(b) Work Simplification (Mundel)

Section B

V. Furniture

(a) Factors affecting selection of furniture.
(b) Furniture requirement and arrangement for different rooms.
(1) Master Bedroom
(2) Drawing Room
(3) Dining Room
(4) Children's Room

VI. Flower Arrangement
(a) Definition and Types
(b) Principles of art in flower arrangement
(c) Material and Essential equipment used in Flower Arrangement.

Section C

VII. The Home maker as a Consumer
(a) Concept and objectives of Consumer Education.
(b) Rights and responsibilities of a Consumer.
(c) Malpractices in the production of consumer goods.
(d) Consumer guides- Standardized marks, labels, packaging, media and consumer redressal forum.

VII. Health Education
(a) Aims and Objectives
(b) Scope
(c) Importance

Section D

IX. Digestive System
(a) Diagram of Alimentary Canal
(b) Functions of mouth, stomach, intestines (Small and Large)
(c) Digestion of Carbohydrates, proteins and fats.

X. Simple first aid for burns, poisoning, electric shock, bleeding, drowning, fainting, fractures, insect bite, snake bite, nose bleeding, sunstroke, sprain, heart attack.

PRACTICAL

Max. Marks : 50 Marks
Practical : 45 Marks
Inter. Asses. : 05 Marks
Time : 3 hours per week.

1. Making of fresh flower arrangement for a corner and centre table.
2. Introduction to basic first aid techniques.
3. Cleaning & Polishing of household metals: brass, copper, silver, iron, aluminium, plastic and nonstick ware.
4. Cleaning and polishing of Wooden Furniture.
5. Cleaning of Glass windowpanes.

References

1. Anna Hong Rutt : *Home Furnishing,* Wiley Eastern Ltd., New Delhi, 1973.
2. Hazel Thompson, Criag old Day Rush : *Home with character,* Univesal Book Stall, Delhi, Kanpur 1969.
3. Betty Pepis : *Interior Decoration A to Z,* Doubleday & Co., Inc. New York, 1965.
4. Ray Faulkiner, Sarah Faulkner : *Inside Today's Home,* Holt, Rinehart & Winston, 1973.
5. R.S. Deshpandae : *Modern Ideal Home for India,* United Book Corporation, Poona, 1983.
6. R.S. Deshpandae : *Build your own Home,* United Book Corporation, Poon, 1983.
7. M.A. Varghese, N.M. Ogale, K. Srinivisan : *Home Management,* Wiley Eastern Ltd., 1985.
8. The Educational Planning Group, Delhi : *Home Management,* Arya Publishing House, New Delhi, 1986.
9. Stella Sournderaj : *A text book of Household Arts,* Orient Longman Ltd., 1974.
10. A Margaret Kaye : *A Student Hand Book of Housewifery,* J.M. Dent and Sons Ltd., London, 1958.
11. Ball, Vetrio Kloss : *Art of Interior Design,* The Macmillan Co., New York, 1962.
12. Goldstein H.I. and Goldstein V. : *Art in Everyday Life,* Macmillan, New York, 1964.
13. Swanson, Betty : *Introduction to Home Management,* Macmillan Co., New York, 1981.
14. Julia Elements : *101 ideas for flower arrangement,* C. Arthur Persons Ltd., London, 1963.
15. Halse A.O. : *The Use of Colour in Interior,* Mcgraw Hill Book Co., New York, 1961.
16. Walter Ian Fischman, Richerd Demsbe, William Bernard: *Basic Home Repairs,* A Grosset Super Good Life Book Publishers, New York, 1975.
17. Saxena, R. R. (1990) *Social and Preventive Medicine,* CBS Publishers and Distributors, Delhi.
18. Selman, A. C. (1992) *Health & Longevity,* Oriental watchman Publishing house, Park, Poona, India.
19. Bedi, Y. P. : *Hygiene and Public Health.*
20. Pearce Evelyn. C., Anatomy and Physiology for Nurses, Oxford University.
21. Best, Charles, H.and Taylor, N.B., The Living Body – A Text in Human Physiology, Asia Publishing House.
22. Phadke : Aids to Hygiene
23. Bhatia, B.C. and Sri P.N. (1968), Elementary Hygiene, Oriental Longman.
24. Seetharam, (2005) *An Introduction to Family Resource Management*, CBS Publishers and Distributors, Delhi.
25. Kaur and Macneil, (1994), *Theory and Practice of Home Science*, Subject Publication, New Delhi.

Journals

1. Indian Journal of Home Science, Home Science Association of India, Sri Avinashilingam Home Science College for Women, Coimbatore.
2. Inside Outside, Edited and Published by Malika Sarabhai, Wadia Building, 19/21 Dalal Street, Bombay.
3. Journal of Home Economics, American Home, A Venue, NW Wahington.

ENVIRONMENT CONSERVATION

SEMESTER – I

Paper : ENVIRONMENT AND FORESTRY

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	65	10	25	-	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:
There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : ENVIRONMENT AND FORESTRY

UNIT-I

Environment: **Definition, Scope & importance** of Environment. A brief introduction of Physical & biological environment.

Ecosystem: Concept of Ecosystem, Biotic & abiotic components, food chain, food web trophic levels, types of ecosystems, terrestrial and aquatic. Biogeochemical cycles - nitrogen, carbon, phosphorous and sulphur cycle.

UNIT-II

Natural Resources: Definition, type of natural resources (Renewable and nonrenewable natural resources) and the policies of their conservation. Energy resources; Fossil fuel, Alternative source of energy (Solar energy, wind power, geothermal energy, dung energy and wood energy.

UNIT-III

Forestry: Forestry, Concept, types of forests in India & the world. Deforestation, reforestation and afforestation. Major and minor forest products. Reasons of forest destruction and its impact on Environment. Community forestry, Farm forestry, Social forestry and Agroforestry.

UNIT-IV

Indoor Environment: Pollution of the in house environment pollutants in the offices, workplaces (School, Bus stand, College and Kitchens). Environmental problems linked to urban and rural lifestyle, Adulterants; Food adulterants (Wheat flour, milk, red chili powder, mustard oil, desi ghee, sweets, artificial sweetness, dyes, food allergens).

PRACTICAL

(*Based on theory paper*)

Laboratory work: Tests of food adulterants.

Study the forest products with help of charts and specimens.

Survey reports of indoor environmental pollutants and local forests.

A visit to forest to study different components of these ecosystems.

Books Recommended :

1. Purochit, S.S., Shammi, Q.J. & Agarwal, A.K. : Text Book of Environment Sciences, Saraswati Pub., Jodhpur, 2007.
2. Dhaliwal, G.S & Kukul, S.S. : Essentials of Environmental Sciences, Kalyani Pub., Ludhiana, 2008.
3. Chundawat, B.S. & Gautam, S.K : Text Book of Agroforestry, Raju Primalai, New Delhi. 2006.
4. Chandna, R.C. : Environmental Geography, Kalyani Pub., Ludhiana, 2006.
5. Sagreiya, K.P. : Forests and Forestry, National Book Trust, New Delhi, 2007.
6. Ralhon, P.K., Dhaliwal, G.S. & Avtar Singh : The Forests-Production and Management, Kalyani Pub., Ludhiana.
7. Arora, S. : Fundamentals of Environmental Biology, Kalyani Pub., Ludhiana, 2008.
8. Dwivedi, A.P. : Forestry in India, Surya Publications, Dehradun, 1993.

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ENVIRONMENT CONSERVATION

SEMESTER – II

PAPER : SOIL AND WATER POLLUTION

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	68	7	22	3	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:

There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : SOIL AND WATER POLLUTION

UNIT-I

Lithosphere: Meaning of Soil profile, its components, types of soil, physical-chemical properties of soil.

Soil Fertility: Micro-and macro-nutrients, technique of testing soil sample. Methods of increasing soil fertility, merits and demerits of fertilizers, role of soil microorganisms.

UNIT-II

Degradation of soil: Soil erosion (Water and Wind erosion) causes of effect of erosion. Soil pollution: Different types of soil pollutants (Chemicals, Pesticides, Fertilizers & manure, discarded material. Pollution and control measures.

UNIT-III

Hydrosphere: Major sources and uses of water. Overutilization of surface & ground water, floods, drought. Conflicts over water. Potable water, its characteristics. Water cycle (Global and Biological)

UNIT-IV

Water pollution: Definition, Types & Sources of water pollution, its consequences and control measures. Different types of diseases due to water pollution. Treatment of wastewater by green method (Root-zone technology), Marine pollution - a brief account.

PRACTICAL

Determination of soil pH

Use of Portable Kit

Determination of organic matter in soil

Determination of $CaCO_3$ in soil.

Determination of available Nitrogen in soil.

Identification of different fertilizers.

Determination of pH of water.

Determination of organic carbon.

Determination of microbial carbon.

Determination of available Nitrogen.

Determination of dissolved Oxygen, BOD.

Determination of hardness and alkalinity of water.

Survey reports of different water samples in local and adjoining areas and interpretation of water test report.

Books Recommended

1. Singh, R.A. : Soil Physical Analysis, Kalyani Publishers, Delhi, India, 1989.
2. Rao, Sitaram : Introduction to Soil Forestry, Oxford and IBH, New Delhi, 1979.
3. Gupta, P.K. : A Handbook of Soil Fertilizer and Manure, Agrobios, Jodhpur, India, 2003.
4. Miller, R.W. and Donahue, R.L. : Soils in our Environment , Prentice Hall, USA, 1995.
5. Mahajan, S.P. : Air Pollution, Control, TERI Press, Delhi, India, 2009
6. Kudeshia, V.P. : Water Pollution, Prgati Parkashan, New Delhi, India, 2009
7. Hooja, R. : Management of water for Agriculture: Irrigation, Watersheds, and Drainage, Rawat Publications, India, 2009.
8. Goel, P.K. : Water Pollution: Causes, Effects and Control, New Age International Publishers, New Delhi, 2006
9. Ramachandra, T.V. : Soil and Groundwater Production from Agricultural Activities, TERI Press, New Delhi, India, 2006

MATHEMATICS

SEMESTER – I

Paper-I : PLANE GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes in two dimensions: Shifting of origin, rotation of axes, invariants.

Pair of Straight Lines :
Joint equation of pair of straight lines and angle between them, Condition of parallelism and perpendicularity, Joint equation of the angle bisectors, Joint equation of lines joining origin to the intersection of a line and a curve.

Circle :
General equation of circle, Circle through intersection of two lines, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, angle of intersection and orthogonality, power of a point w.r.t. circle, radical axis, co-axial family of circles, limiting points.

Unit-II

Conic :
General equation of a conic, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, diameter. Conjugate diameters of ellipse and hyperbola, special properties of parabola, ellipse and hyperbola, conjugate hyperbola, asymptotes of hyperbola, rectangular hyperbola. Indentification of conic in general second degree equations.

References :

1. S. L. Loney : *The Elements of Coordinate Geometry,* Macmillan and Company, London, 2nd Edition 2007.
2. P.K. Jain and Khalil Ahmad : *A Text Book of Analytical Geometry of Two Dimensions, Wiley Eastern Ltd., 1999.*
3. Erwin Kreyszig : *Advanced Engineering Mathematics, John Wiley & Sons,1999.*
4. Gorakh Prasad and H.C. Gupta : *Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahabad, 1955.*

Paper-II : CALCULUS - I

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Properties of real numbers :
Order property of real numbers, bounds, l.u.b. and g.l.b. order completeness property of real numbers, archimedian property of real numbers.

Limits:
ε-δ definition of the limit of a function, basic properties of limits, infinite limits, indeterminate forms.

Continuity:
Continuous functions, types of discontinuities, continuity of composite functions, continuity of $|f(x)|$, sign of a function in a neighborhood of a point of continuity, intermediate value theorem, maximum and minimum value theorem.

Unit-II

Mean value theorems:
Rolle's Theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, their geometric interpretation and applications, Taylor's theorem, Maclaurin's theorem with various form of remainders and their applications.

Hyperbolic, inverse hyperbolic functions of a real variable and their derivatives, successive differentiations, Leibnitz's theorem.

References :

1. J. D. Murray & M . R. Spiegel : *Theory and Problems of Advanced Calculus,* Schaum's Outline Series, Schaum Publishing Co., New York.
2. P.K. Jain and S. K. Kaushik : *An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.*
3. Gorakh Prasad : *Differential Calculus, Pothishala Private Ltd., Allahabad.*
4. G.B. Thomas & R.L. Finney : *Calculus and Analytic Geometry (Ninth Edition), Pearson Publication.*
5. Shanti Narayan and P.K. Mittal : *Differential Calculus, Edition 2006, S. Chand & Co., New Delhi.*

Paper III: TRIGONOMETRY AND MATRICES

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

D'Moivre's theorem, application of D'Moivre's theorem including primitive n^{th} root of unity. Expansions of $\sin n\theta$, $\cos n\theta$, $\sin^n \theta$, $\cos^n \theta$ ($n \in N$). The exponential, logarithmic, direct and inverse circular and hyperbolic functions of a complex variable. Summation of series including Gregory Series.

Unit-II

Hermitian and skew-hermitian matrices, linear dependence of row and column vectors, row rank, column rank and rank of a matrix and their equivalence. Theorems on consistency of a system of linear equations (both homogeneous and non-homogeneous). Eigen-values, eigen-vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix. Diagonalization.

References:

1. K.B. Datta : *Matrix and Linear Algebra*, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.

2. S. R. Knight and H.S. Hall : *Higher Algebra, H.M. Publications, 1994.*

3. R.S. Verma and K.S. Shukla : *Text Book on Trigonometry, Pothishala Pvt. Ltd., Allahabad.*

4. Shanti Narayan and P.K. Mittal : *A Text Book of Matrices, S. Chand & Co., New Delhi, Revised Edition, 2007.*

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MATHEMATICS

SEMESTER – II

Paper-I : SOLID GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes:
Shifting of origin and rotation of axes.

Sphere:
Section of a sphere and a plane, spheres through a given circle, intersection of a line and a sphere, tangent line, tangent plane, angle of intersection of two spheres and condition of orthogonality, power of a point w.r.t. a sphere, radical axis, radical center, co-axial family of spheres, limiting points.

Cylinder:
Cylinder as a surface generated by a line moving parallel to a fixed line and through a fixed curve, different kinds of cylinders such as right circular, elliptic, parabolic and hyperbolic cylinders in standard forms, enveloping cylinders.

Unit-II

Cone:
Cone with a vertex at the origin as the graph of a homogeneous equation of second degree in x,y,z, cone as a surface generated by a line passing through a fixed curve and a fixed point outside the plane of the curve, reciprocal cones, right circular and elliptic cones, right circular cone as a surface of revolution obtained by rotating the curve in a plane about an axis, enveloping cones.

Conicoid:
Equations of ellipsoid, hyperboloid and paraboloid in standard form. Reduction of second degree equation in three variables in standard form.

References:

1. P.K.Jain and Khalil Ahmad : A Text Book of Analytical Geometry of Three Dimensions, Wiley Eastern Ltd., 1999.
2. Shanti Narayan and P. K. Mittal : Analytical Solid Geometry, Seventeenth Revised Edition, S. Chand & Co., New Delhi, 2006.
3. R.J.T. Bill : Elementary Treatise on Coordinate Geometry of Three Dimensions, Macmillan India Ltd., 1994.

Paper-II : CALCULUS - II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Concavity, convexity and points of inflexion, Multiple points, Asymptotes, Tracing of curves (Cartesian and parametric co-ordinates only).

Curvature:
Curvature of a curve at a point, radius of curvature of cartesian, parametric, polar curves and for implicit functions , evolute and involute, chord of curvature.

Unit-II

Integral calculus:
Integration of hyperbolic and inverse hyperbolic functions. Reduction Formulae.

Numerical Integration: Trapezoidal, Prismoidal and Simpson Rules.

Application of definite integral: Summation of Series, Quadrature, rectification, volumes and surfaces of solids of revolution (Cartesian co-ordinates only)

References:

1. G. B. Thomas & R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
2. Gabriel Klambauer : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
3. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.
4. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co. New Delhi, 2000.

Paper III: THEORY OF EQUATIONS

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Euclid's algorithm, synthetic division, roots and their multiplicity. Complex roots of real polynomials occur in conjugate pairs with same multiplicity. Relation between roots and co-efficients. Transformation of equations. Descartes' Rule of Signs.

Unit-II

Newton's method of divisors, Solution of cubic and bi-quadratic equations, Cardan's method of solving a cubic, discriminant and nature of roots of real cubic, trigonometric solutions of a real cubic with real roots. Descarte's and Ferrari's method for a bi-quadratic.

References:

1. S.R. Knight and H.S. Hall : Higher Algebra, H. M. Publications, 1994.

2. Chandrika Prasad : Text Book on Algebra and Theory of Equations, Pothishala Private Ltd., Allahabad.

COMPUTER SCIENCE

SEMESTER-I

SCHEME OF EXAMINATION

FIRST SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS01	**Theory-A**	**Computer Fundamentals**	**3**	**30**	**5**	**35**
Paper –CS02	**Theory-B**	**PC Software**	**3**	**30**	**5**	**35**
Paper – PCS01	**Practical-C**	**Practical Based on Paper – CS01**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS01 : Computer Fundamentals

Objective : To teach the students the fundamentals of computer related to its hardware & software.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

UNIT –II

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

UNIT – III

Types of software: System and Application software; **Programming Languages**: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison. **Range of Applications**: Scientific, Word Processing, Spread Sheets, E-commerce, Business, Educational, Industrial, National level weather forecasting, Remote Sensing, Planning Multilingual Applications.

UNIT – IV

Operating Systems : Components of Operating System; Functions of Operating System; Types of Operating System; Linux/Dos/Windows. **Computers and Communication**: Single user, multi-user, workstation, and client server systems. Computer networks, Network protocols. LAN, WAN, Services offered by Internet.

Suggested Readings :

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications

Paper-CS02: PC Software

Objective : To teach the basic functionality of Disk Operating System & Windows. To impart detailed knowledge for creating word processing, spreadsheet & presentation documents.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Concept of files and directories; Disk Operating System: DOS, System Files, types of DOS commands: Internal and External commands: Introduction to AUTOEXEC.BAT, Directory commands: XCOPY, DEL, RENAME, ATTRIB, BACKUP, RESTORE, FIND, SYS; General commands: TYPE, DATE, TIME, PROMPT; Batch Files, Wild Cards, Line Editor.

UNIT – II

Introduction to graphical user interface, window operating system, Anatomy of windows, organizing folders and files, recycle bin, my computer, windows explorer, control panel.

UNIT – III

Word Processing : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement; Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Sorting blocks, Adjusting Margins and Hyphenating Documents, Creating Master Documents, Creating Data Source, Merging Documents, Using Mail merge feature for labels and envelops; Inserting Pictures, Tables, Working with equations.

UNIT – IV

Spread Sheet : Worksheet overview, Row, Column, Cells, Menus, Creating Worksheet, Opening, Saving, Printing Worksheets; Calculations, Auto fill, Working with Formulae, Data Formatting (number formatting, date formatting), Working with Ranges, Establishing Worksheet links; Creating, Sorting and Filtering Data Base; Creating chart, Adding Titles, Legends etc. to charts, Printing Charts, Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons, Functions (Statistical, Financial, Mathematical, String, Date and Time).

MS-Power Point: Creating, Saving, Printing Presentation; Selecting Design Templates, Animations and Transitions, Auto Content Wizard.

Suggested Readings :

1. Ludd Robbins : *Mastering DOS.*
2. Alan R. Miller : *The ABC's of DOS-6.2.*
3. Richard Allen King : *MS-DOS H. B.*
4. Gilbert Held : *IBM PC and PCXT User's Reference Manual.*
5. Cowart, Robert : *Using Microsoft Windows 2000 Professional,* Que Publishing, 2000.
6. Taxali, Ravikant : *PC Software Made Simple,* New Delhi.
7. Mansfield, Ron : *Compact Guide to Windows, Word & Excel.*

Paper – PCS01 : Practical : Practicals Based on Paper CS02

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COMPUTER SCIENCE
SEMESTER-II

SCHEME OF EXAMINATION

SECOND SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS03	**Theory-A**	**Operating System Concepts**	**3**	**30**	**5**	**35**
Paper –CS04	**Theory-B**	**C Programming**	**3**	**30**	**5**	**35**
Paper – PCS02	**Practical-C**	**Practical Based on Paper – CS04**	**3**	**30**	**--**	**30**

Paper-CS03: Operating System Concepts

Objective : To teach the students various operating system concepts relating to managing processes, memory and deadlocks.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, need of operating system and functions of operating system, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems; Structure of Operating System;

UNIT - II

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling.

UNIT - III

Deadlocks: Introduction, Necessary and sufficient conditions for Deadlocks, Resource allocation graph, Introduction to methods for handling deadlocks, deadlock prevention, deadlock avoidance: Banker Algorithm, deadlock detection and recovery.

UNIT - IV

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

Suggested Readings :

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.

Further Reading :

2. Brinch, Hansen, Operating System Principles, Prentice Hall of India
3. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delhi

Paper-CS04 : C Programming

Objective : To teach the student basic constructs of 'C' programming language and enable them to create 'C' based applications.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.

Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.

UNIT – II

Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.

Loop Control Structure: While and do-while, for loop and Nested for loop,

Case Control Structure: Decision using switch, The goto statement.

UNIT – III

Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function.

UNIT – IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).

Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Union, Difference between Structure and Union .

Suggested Readings :

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading :

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

Paper – PCS02 : Practical : Practical Based on Paper CS04.

STATISTICS

SEMESTER - I

Note :
1. A candidate shall offer this subject in B.A./B .Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. There are two papers code named papers 101 and 102 in the subject of Statistics in B.A./B.Sc. 1st Semester. These are to be taught simultaneously throughout the Semester.
3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 101: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-I

Max. Marks	:	75
Theory	:	65
Internal Assessment	:	10
Time	:	3 Hours

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach. This course will lay the foundation to probability theory of outcomes of real life random experiments. The focus will be on theoretical as well as practical approach.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical tables and log tables will be provided on request.

Unit-I

Important Concepts in Probability: Random experiment, trial, sample point and sample space, definition of an event, mutually exclusive, exhaustive, independent and equally likely events. Definition of probability – classical and relative frequency approach to probability, their demerits and axiomatic approach to probability. Properties of probability based on axiomatic approach, conditional probability, Bayes' theorem and its applications (concepts and simple applications).

Random Variables: Definition of discrete random variables, probability mass function, continuous random variable, probability density function, illustrations of random variables and their properties, distribution function and its properties, expectation of a random variable and its properties – moments, (only definition), moment generating function. Two dimensional random variables- joint, marginal and conditional distributions . Distribution of random variables.

Unit-II

Collection of Data: Primary data – designing a questionnaire and a schedule. Secondary data- its major sources including some government publications. Concept of a Statistical Population and samples from a population; qualitative and quantitative data; discrete and continuous data.

Presentation of Data: Diagrammatic representations of data, frequency distribution, graphical representation, histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display, Box and whisker plot.

Analysis of Quantitative Data: univariate data concepts of central tendency, dispersion and relative dispersion, skewness and kurtosis and their measures including those based on quartiles and moments. Sheppard's correction for moments (without derivation).

Suggested Readings

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications*. Addison Wesley.

2. Goon A.M., Gupta M.K., Dasgupta.B. (2005) :*Fundamentals of Statistics*, Vol. I, World Press, Calcutta.

3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics* (7th edition) Wiley.

Additional Readings

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.

2. Miller, I. and Miller, M. (2002) : John E. Freunds's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.

3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.

4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.

5. Lipshut Z, S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.

6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper-102 : PRACTICAL (SEMESTER-I)

Maximum Marks : 25
Time Allowed : 3 Hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Presentation of data by Frequency tables
2. Diagrams: Bar, Multiple Bar, Stacked Bar, Line and Pie
3. Graphs: histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display
4. Measures of central tendency
5. Measures of dispersion
6. Measures of Skewness
7. Box and Whisker Plot
8. Measures of Kurtosis.

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STATISTICS

SEMESTER-II

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. There are two papers code named papers 103 and 104 in the subject of Statistics in B.A./B.Sc. 2nd semester. These are to be taught simultaneously throughout the semester.

3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 103: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-II

Maximum Marks : 75
Theory : 65
Internal Assessment : 10
Time allowed : 3 hours

Objective: This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.
The objective of the course is to make the students conversant with various techniques used in analysis of data.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical **tables** and log tables will be provided on request.

Unit-I

Standard Univariate Distributions and their Properties: Discrete uniform, Binominal, Poisson, Hyper geometric, Geometric and negative binomial distributions, uniform, normal , exponential, gamma, beta distributions.

Bivariate normal distribution and associated marginal and conditional probability distributions (without derivation).

Chebyshev's inequality and its applications, statements and applications of weak law of large numbers, and Central Limit Theorems (De-moivre's – Laplace and Lindeberg -Levy).

Unit-II

Bivariate Data: scatter diagram, product moment correlation coefficient, properties and coefficient of determination. Spearman's rank correlation coefficient. Simple linear regression and its properties, principle of least square, fitting of linear regression and related results

Multivariate Data: multiple and partial correlation in three variables. (only results no derivations).

Analysis of Categorical Data (using 2x2 contingency table): consistency of categorical data independence and association of attributes. Various measures of association:-Yule coefficient, coefficient of colligation & coefficient V_{AB}.

References:

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications.* Addison Wesley.
2. Goon A.M., Gupta M.K., Das Gupta.B. (2005) : *Fundamentals of Statistics*, Vol. I, World Press, Calcutta.
3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics*: A Foundation for analysis in the Health Sciences, Tenth Edition, Wiley

Additional References:

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.
2. Miller, I. and Miller, M. (2002) : John E. Frends's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.
3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.
4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.
5. Lipshut Z,S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.
6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper - 104: PRACTICAL (Semester-II)

Maximum Marks: 25
Time allowed : 3 hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Product Moment Correlation.
2. Spearman's rank correlation
3. Linear Regression of two variables.
4. Fitting of Curves (reducible to linear form) by the least square method.
5. Multiple and Partial correlations
6. Fitting of Binomial, Poisson and Normal distributions

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APPLIED STATISTICS

SEMESTER - I

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 101AS in B.A. /B.Sc. Semester-I having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 101AS: MATHEMATICAL METHODS – I

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective: The objective of the course is to provide knowledge of the basic concepts in Calculus, Trigonometry, Algebra and Geometry.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I (CALCULUS AND TRIGONOMETRY)

Limits and continuity of functions, derivatives and their geometrical interpretations. Applications of derivatives to maxima and minima, exponential and logarithmic functions, integrals of functions of one variable, geometrical interpretation of integral as area, integration of standard functions, integration by substitution and parts.

Trigonometry: Definition of an angle, its various measures and relations between them, graphs circular functions.

UNIT-II (ALGEBRA AND GEOMETRY)

The solution of linear and quadratic equations in one variable, arithmetic, geometric and harmonic progressions, permutations and combinations, principle of induction, Binomial theorem for positive integral index.

Elementary Analytical Geometry: Equations of straight line, parabola, and hyperbola.

Books Recommended

1. Allen, R.G.D (2006) : Mathematical Analysis for Economists, Chapter-II (Units 2.1, 2.2, 2.8), Chapter-III (Units 3.1, 3.6), Chapter – IV (Units 4.1, 4.7), Chapter VI (Units 6.1 – 6.8), Chapter VII, Chapter VIII (Unit 8.2), Chapter IX (Units 9.1 – 9.4), Macmillan Delhi.

2. Gurhard Tintner (1970) : Mathematics and Statistics for Economists Chapter – VI., Rinehart : New York

3. Loney, S.L. (2010) : Plane Trigonometry, Part – I, Chapter – I (Units I to 22), Part – II, Chapter V (Units 61, 65),Aitbs Publishers, India.

Additional references:

1. Arye, F. Jr. (1999) : First Year College Mathematics (Schaum's Series).Mc Graw Hill, New York.

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APPLIED STATISTICS

SEMESTER – II

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2 The candidate opted for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 102AS in B.A./B.Sc. Semester-II having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 102AS: PROBABILITY

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective:. This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculators are allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I

Random experiments, sample space, events probability, Finite sample spaces, equally likely outcomes, conditional probability, Bayes theorem, independent events, random variables, discrete and continuous probability density functions.

UNIT –II

Expectation and variance of random variable.
Binomial, Poisson, geometric, hypergeometric, uniform, exponential and normal distribution

Books Prescribed

1. P.L.Meyer , (1971) : Introductory Probability and Statistical Applications, Addison Wesley, chapters 1, 2, 3, 4, 5, 8 and 9.

2. Goon, A.M., Gupta, M.K. & Dasgupta,B (2005). : Fundamentals of Statistics, Vol. I. The world press private Ltd.

3. Murray Spiegel, John Schiller & A. Srinivasan (2002) : Schaum's Easy outline of Probability and Statistics, Mc Graw Hill, New York.

Additional References:

1. Sheldon M. Ross (2009) : Introduction to Probability Models, Academic Press: San Diego.

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PHYSICS

B.Sc. (GENERAL) FIRST YEAR (1st and 2nd Semester) EXAMINATION, 2019-20

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3 (three) marks for the Internal assessment. **The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the second semester examination.**
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper as well as practical paper will be three hours.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems/exercises in the question paper should be 25-30%.
6. Student will attempt two questions from each Unit (I-II) and any six parts of question seven.
7. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

Papers, marks and teaching hours allocation :

Paper A :	Mechanics	Total Teaching hrs. 30
Paper B :	Vibrations, Waves and EM Theory	Total Teaching hrs. 30
Paper C :	Electricity and Magnetism	Total Teaching hrs. 30
	Physics Practicals	Total Teaching hrs. 45

* marks allotted for internal assessment.

PHYSICS

SEMESTER – I

Paper A: MECHANICS-I (30 Hrs.)

UNIT-I

Cartesian and spherical polar co-ordinate systems, Two- and three-dimensional coordinate systems, area, volume, displacement, velocity, and acceleration in these systems, solid angle.
Centre of mass, linear momentum, angular momentum, torque, potential energy and kinetic energy of a system of particles.
Relationship of conservation laws of linear momentum, angular momentum and energy, and symmetries of space and time.

UNIT-II

Various forces in nature, relative strengths and spatial dependence,
Motion under force obeying inverse square law, equivalent one body problem.
Motion under central forces, equation of motion under central force, equation of orbit and turning points, Kepler's Laws.
Elastic collision in Lab. and C.M. systems, relationships of velocities, angles, and kinetic energies in these two systems, cross section of elastic scattering, Rutherford scattering.

Books Suggested :

Essential Readings :

1. Mechanics, H.S. Hans & S.P. Puri.
2. Mechanics, Berkeley, Vol. I, C. Kittle.

Further Readings :

1. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
2. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-I (30 Hrs.)

UNIT-I

Simple harmonic motion, energy of a SHM, Compound Pendulum, Torsional Pendulum, Electrical Oscillations, Transverse Vibrations of a mass on a string, composition of two perpendicular SHM of same period and of period in ratio 1: 2. Decay of free vibrations due to damping, differential equation of motion, types of damping, determination of damping co-efficient; Logarithmic decrement, relaxation time and Q- Factor. Electromagnetic damping (Electrical oscillator).

UNIT-II

Differential equation for forced mechanical and electrical oscillators, Transient and steady state behaviour. Displacement and velocity variation with driving force frequency, variation of phase with frequency, resonance. Power supplied to an oscillator and its variation with frequency. Q-value and band width. Q-value as an amplification factor. Stiffness, coupled oscillators, Normal co-ordinates and normal modes of vibration, Inductance coupling of electrical oscillators.

Books Suggested :

Essential Readings :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper–C : ELECTRICITY AND MAGNETISM-I (30 Hrs.)

UNIT-I

Basic ideas of Vector Calculus, Gradient, Divergence, curl in Cartesian coordinates and their useful relations, physical significance and applications, Conservative field, Greens's theorem in a plane, Laplacian in Rectangular coordinates. Stoke's theorem, Gauss's divergence theorem, Coulomb's Law for point charges and continuous distribution of charges, electric field due to dipole, line charge, charged ring, circular disc and sheet of charge, Gauss's Law and its differential form.

UNIT-II

Work and potential difference, Potential difference as line integral of field, Electric potential due to dipole and quadrupole and its applications in Electrostatic field, Electric field as gradient of scalar potential, curl $\mathbf{E} = 0$. Calculation of $\mathbf{E}$ due to a point charge and dipole from potential. Poisson and Laplace's equation, Concept of electrical images. Calculation of electric potential and field due to a point charge placed near an infinitely conducting sheet.

Polarisation of matter, atomic and molecular dipoles, induced dipole moment and atomic polarizability. Electric susceptibility and polarization vector. Relation $K= 1 + \chi$, Gauss's law for dielectrics. Displacement vector, Div. $\mathbf{D} = 0$, Energy stored in dielectric medium.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism* by A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The activities given in the section "Analysis of Experimental Data" are compulsory for all the students in the First semester.

The students are required to perform all the Nine experiments from each of the Units I and Unit II. The Practical examination will be held along with the second semester examinations.

The aim of project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepara a project report of about 10 pages. Assessment of the project work will be done on the basis of effort put in the execution of the project, report prepared, and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section-A will consist of 4 experiments from each of Unit I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section–A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **12**.
7. In a single group, no experiment to be allotted to more than three examinees in the group.

Analysis of Experimental Data (Compulsory for all students in first semester):

Objectives :

(i) Knowledge of propagation of errors.
(ii) Knowledge of significant figures, Determination of standard deviation and probable error and their use in interpretation of the experimental result.
(iii) Familiarity with the method of least square fitting of experimental data to a curve.

LIST OF EXPERIMENTS :

UNIT-I

MECHANICS

I. Measurements :

Objectives :

(i) Measurements of time, length, thickness and curvature, pressure, humidity
(ii) Concepts of least count, horizontal, vertical and angular alignments

Activities :

(i) To measure internal/external diameter of a hollow cylinder using Vernier calipers
(ii) To measure thickness of wire
(iii) To measure curvature of a lens
(iv) To measure pressure using Barometer
(v) To measure humidity using dry and wet thermometer

II. Rotation :

Objectives :

(i) Study of rotational motion.
(ii) Establishing relationship between different quantities.

Activities :

(i) To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).

(ii) To establish relationship between torque and angular acceleration using fly wheel.

III. One-Dimensional Collisions :

Objectives :

(i) Conservation of linear momentum and kinetic energy in elastic collisions.
(ii) Dependence of fraction of kinetic energy transferred on the masses of colliding bodies.
(iii) Idea of coefficient of restitution.

Activities :

To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.

IV. Compound Pendulum :

Objectives :

(i) Idea of equivalent simple pendulum.
(ii) Concepts of centre of suspension and oscillation.
(iii) Dependence of time period on moment of Inertia .
(iv) Radius of gyration.
(v) Determination of g.

Activities :

(i) Measure time period as a function of distance of centre of suspension (oscillation) from centre of mass, plot relevant graphs, determine radius of gyration and acceleration due to gravity.
(ii) Find the value of g by Katers' or Bar pendulum.

V. Torsion Pendulum :

Objectives :

(i) Idea of torsional vibration, dependence of time period on M.O.I. and restoring torque.
(ii) Modulus of rigidity.

Activity :

Measure time period of oscillation of a Maxwell needle and determine modulus of rigidity of the material of a given wire.

VI. Damped Oscillator :

Objectives :

(i) Study damped oscillations.
(ii) Coefficient of damping, quality factor etc.

Activities :

To measure/obtain logarithmic decrement, coefficient of damping, relaxation time, and quality factor of a damped simple pendulum.

VII. Elasticity :

Objective :

Knowledge of elastic constants and related quantities.

Activities :

(i) Study of bending of beams and determination of Young's Modulus.
(ii) Determination of Poisson's ratio for rubber/plastic.

VIII. Standing waves :

Objective :

Standing waves on a string and in air.

Activities :

(i) Melde's experiment.
(ii) Kundt's tube.

IX. Viscosity :

Objective :

Knowledge of viscosity of liquids.

Activity :

Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.

Computer based activities : Elementary C language programs, flowcharts and their interpretation.

1. To print out all natural even/odd numbers from a given series of natural numbers.
2. Numerical solution of equations of motion.
3. To calculate first ten prime numbers.

UNIT-II

ELECTRICITY AND MAGNETISM

I. Objective :

Measurement of resistance, voltage, current and electric energy.

Activities :

(i) To use a multimeter for measuring AC and DC voltage and resistance.
(ii) Measurement of resistance of LDR - To study inverse-square law (concept of solid angle and inverse square law) using linear LDR and light source.
(iii) Observations and measurements using an Electric energy meter. To find wattage of given bulb or heater.
(iv) To study the efficiency of an electric kettle or heater element with varying input voltage.

II. Low Resistance Measurements :

Objectives :

(i) Inadequacy of Wheatstone bridge to measure low resistances.
(ii) Acquaintance with a method of measuring low resistances.

Activity :

To determine low resistance with Carey Fosters Bridge.

III. Magnetic Field :

Objectives :

(i) Familiarity with the magnetic field produced by a solenoid.
(ii) Dependence of solenoidal field on number of turns and current.
(iii) Permeability of air.

Activities :

To study the magnetic field produced by a current carrying solenoid using a search coil and calculate permeability of air.

IV. Electromagnetic Induction :

Objective :

Verification of laws of electromagnetic induction.

Activity :

To study the induced e.m.f. as function of the velocity of the magnet.

V. Magnetism and current :
Objectives and Activities :

Force on a conductor carrying current in a magnetic field.

VI. LCR Circuits :

Objective :

Study of phase relationship between currents and voltages in ac circuits.

Activity :

Study of phase relationships using impedance triangle for LCR circuit and calculate impedance.

VII. Resonant Circuits :

Objective :

Concepts of resonance and Q-value.

Activities :

(i) Resonance in a series LCR circuits for different R-value and calculate Q-value.
(ii) Resonance in a parallel LCR circuits for different R-value and calculate Q-value.
(iii) To determine the dielectric constant of a solid by resonance method.

VIII. Capacitance :

Objectives :

(i) Measurement of capacitance, dielectric constant.
(ii) Concept of time constant and time base circuit.
(iii) Knowledge of a-c Bridges.

Activities :

(i) Capacitance by flashing and quenching of a neon lamp.
(ii) Measurement of capacitance, determination of permittivity of a medium, air and relative permittivity by De-Sauty's bridge.

IX. Self Inductance :

Objectives :

(i) Knowledge of a-c bridges.
(ii) Concept of self-inductance.

Activities :

(i) To determine L using Anderson Bridge.

Computer based activities: Elementary C language programs, flowchart and their interpretation.

1. To rearrange a list of numbers in ascending and descending orders.
2. To compile a frequency distribution and evaluate moments such as mean; standard deviation etc.
3. To evaluate sum of finite series and the area under a curve.

Texts and Reference Books :

1. *"B.Sc. Practical Physics by C.L. Arora, S.Chand & Co. (2014).*
2. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
3. *"Programming with C, Schaum series"* by Byron Gottfried & Jitender Chhabra

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PHYSICS

SEMESTER–II

Paper A : MECHANICS – II

UNIT-I

Rigid Body motion; Rotational motion, principal moments and Axes, Euler's equations, precession and elementary gyroscope.
Galilean transformations and Invariance, Transformation equations for inertial frames inclined to each other, Non-Inertial frames. Fictitious forces in a rotating frames of reference, Centrifugal and Coriolis forces due to rotation of earth, Foucault's pendulum.
Concept of stationery universal frame of reference and ether, Michelson-Morley experiment and its results.

UNIT-II

Postulates of special theory of relativity, Lorentz transformations, Kinematical consequences of Lorentz transformations – length contraction and time dilation, Twin paradox, Transformation of velocities, Simultaneity of relativity, Velocity of light in moving fluid, Relativistic Doppler effect.
Variation of mass with velocity, mass-energy equivalence, rest mass in an inelastic collision, relativistic momentum & energy, their transformation, concepts of Minkowski space, four vector formulation.

Books Suggested :

Essential Readings :

1. Mechanics, Berkeley, Vol. I, C. Kittle.
2. Mechanics, H.S. Hans & S.P. Puri.

Further Readings :

1. *Mechanics & Relativity (3rd Edition)*, Vidwan Singh Soni (PHI Learning, New Delhi, 2013)
2. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
3. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).
4. *Basic Concepts of Relativity,* R.H. Good (East-West Press, New Delhi, 1974).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-II (30 Hrs.)

UNIT-I

Waves in physical media, Wave equation and its solution, Types of waves, particle velocity, acceleration and energy in progressive waves. Longitudinal waves on a rod.
Transverse waves on a string, characteristic impedance of a string, Waves in absorbing media.
Reflection and Transmission of transverse waves on a string at discontinuity, Reflection and transmission of energy.
Reflection and transmission of longitudinal waves at a boundary.
Standing wave ratio, Impedance matching, Energy of vibrating string. Wave and group velocity.

UNIT-II

Physical interpretation of Maxwell's equations, E.M. waves and wave equation in a medium having finite permeability, permittivity and conductivity. Energy flow due to EM wave - Poynting vector, Impedance of a dielectric to EM waves. EM waves in a conducting medium and skin depth. Impedance and Refractive index of a dielectric and a conductor.
Reflection and transmission of EM waves at a boundary of two dielectric media for normal and oblique incidence.
Reflection of EM waves from the surface of a conductor at normal incidence.

Essential Readings :

Books Suggested :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.
3. *EM Waves and Radiating Systems* by Edward C. Jordan and K.G. Balmain, Prentice Hall.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper-C: ELECTRICITY AND MAGNETISM-II (30 Hrs.)

UNIT-I

Current and current density, equation of continuity. Microscopic form of Ohm's Law ($\mathbf{J} = \sigma\mathbf{E}$) and conductivity. Failure of Ohm's Law. Invariance of charge. **E** in different frames of reference. Field of a point charge moving with constant velocity. Force between parallel currents.
Behaviour of various substances in magnetic field. Definition of M and H and their relation to free and bound currents. Permeability and susceptibility and their interrelationship. B-H curve and energy loss in hysteresis, Langevin theory of diamagnetism.

UNIT-II

Lorentz's force. Definition of **B**. Biot Savart's Law and its application to long straight wire, circular current loop and solenoid. Ampere's Circuital law and its application. Divergence and curl of **B**. Hall effect, expression and co-efficient. Vector potential, Definition and derivation, current density— definition, its use in calculation of change in magnetic field at a current sheet. Energy stored in magnetic field, Faraday's Law of EM induction, Displacement current, Mutual inductance and reciprocity theorem. Self inductance for solenoid.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism,* A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The Practical examination will be held along with the second semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester I.

CHEMISTRY
SEMESTER – I

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
I	Inorganic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
II	Organic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
III	Physical Chemistry-A	30	3 periods per week	22 + 3 internal assessment
IV	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper 1 – INORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Atomic Structure

Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, Schrodinger wave equation, significance of Ψ and Ψ^2, quantum numbers, radial and angular wave functions and probability distribution curves, shapes of *s*, *p*, *d* orbitals. Aufbau and Pauli exclusion principles, Hund's multiplicity rule. Electronic configurations of the elements and ions.

UNIT-II (7 Hrs.)

Periodic Properties

Position of elements in the periodic table; effective nuclear charge and its Calculations Atomic and ionic radii, ionization energy, electron affinity and electronegativity – definition, methods of determination or evaluation, trends in periodic table and applications in predicting and explaining the chemical behaviour.

UNIT-III (7 Hrs.)

Chemistry of Noble Gases and *s*-Block Elements

Chemical properties of the noble gases, chemistry of xenon, structure and bonding in xenon compounds. Comparative study, diagonal relationships, salient features of hydrides, solvation and complexation tendencies including their function in biosystems, an introduction to alkyls and aryls.

UNIT-IV (8 Hrs.)

Chemical Bonding-I

Covalent Bond – Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions. BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, $SnCl_2$, XeF_4, BF_4^-, PF_6^-, $SnCl_6^{2-}$. Valence shell electron pair repulsion (VSEPR) theory to NH_3, H_3O^+, SF_4, ClF_3, ICl_2^- and H_2O. MO theory, homonuclear (elements and ions of 1st and 2nd row), and heteronuclear (BO, CN, CO^+, NO^+, CO, CN^-), diatomic molecules. Percentage ionic character from dipole moment and electronegativity difference.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-II: ORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Structure and Bonding:
Hybridization, bond lengths and bond angles, bond energy, localized and delocalized chemical bond, Van der Waals interactions, resonance, hyperconjugation, aromaticity, inductive and field effects, hydrogen bonding.

Mechanism of Organic Reactions:
Curved arrow notation, drawing electron movements with arrows, half-headed and double-headed arrows, homolytic and heterolytic bond breaking. Types of reagents-electrophiles and nucleophiles. Types of organic reactions. Energy considerations.

Reactive intermediates-Carbocations, carbanions, free radicals, carbenes, arynes and nitrenes (with examples). Assigning formal charges on intermediates and other ionic species.

Methods of determination of reaction mechanism (product analysis, intermediates, isotope effects, kinetic and stereochemical studies).

UNIT –II (7 Hrs.)

Alkanes and Cycloalkanes:
Isomerism in alkanes, sources, methods of formation (with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acids), physical properties and chemical reactions of alkanes
Mechanism of free radical halogenation of alkanes: Orientation, reactivity and selectivity. Cycloalkanes – nomenclature, methods of formation, chemical reactions, Baeyer's strain theory and its limitation. Ring strain in small rings (cyclopropane and cyclobutane), theory of strainless rings. The case of cyclopropane ring: banana bonds

UNIT-III (8 Hrs.)

Stereochemistry of Organic Compounds I:
Concept of isomerism, Types of isomerism.
Optical isomerism – Elements of symmetry, molecular chirality, enantiomers, stereogenic center, optical activity, properties of enantiomers, chiral and achiral molecules with two stereogenic centers, diastereomers, threo and erythro diastereomers, meso compounds, resolution of enantiomers, inversion, retention and racemization.

Relative and absolute configuration, sequence rules, D & L and R & S systems of nomenclature.

UNIT-IV **(7 Hrs.)**

Stereochemistry of Organic Compounds II:

Geometric isomerism: Determination of configuration of geometric isomers. E & Z system of nomenclature, geometric isomerism in oximes and alicyclic compounds.

Conformational isomerism – Conformational analysis of ethane and n-butane; conformations of cyclohexane, axial and equatorial bonds, conformation of mono and disubstituted cyclohexane derivatives. Newman projection and Sawhorse formulae, Fischer and flying wedge formulae.

Difference between configuration and conformation.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-III: PHYSICAL CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills**.**

UNIT-I (8 Hrs.)

Mathematical Concepts and Evaluation of Analytical Data:

Logarithmic relations, curve sketching, linear graphs and calculation of slopes, differentiation and integration of functions like e^x, x^n, sin x, log x; maxima and minima, partial differentiation and reciprocity relations.

Terms of mean and median, precision and accuracy in chemical analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, linear least squares curve fitting, types of errors, standard deviation.

UNIT-II (7 Hrs.)

Gaseous States:

Postulates of kinetic theory of gases, deviation from ideal behavior, Van der Waal's equation of state.

Critical Phenomena: PV isotherms of real gases, continuity of states, the isotherms of Van der Waal's equation, relationship between critical constants and Van der Waal's constants, the law of corresponding states, reduced equation of state.

Molecular Velocities*:* Root mean square, average and most probable velocities. Qualitative discussion of the Maxwell's distribution of molecular velocities, collision number, mean free path and collision diameter. Liquification of gases (based on Joule-Thomson effect).

UNIT-III (8 Hrs.)

Chemical Kinetics-I

Chemical kinetics and its scope, rate of a reaction, factors influencing the rate of a reaction- concentration, temperature, pressure, solvent, light, catalyst. Concentration dependence of rates, mathematical characteristics of simple chemical reactions – zero order, first order, second order, pseudo order, half life and mean life. Determination of the order of reaction – differential method, method of integration, method of half life period and isolation method.

Radioactive decay as a first order phenomenon.

UNIT-IV (7 Hrs.)

Chemical Kinetics-II

Theories of Chemical Kinetics: Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

Simple collision theory based on hard sphere model, transition state theory (equilibrium hypothesis). Expression for the rate constant based on equilibrium constant and thermodynamic aspects.

Catalysis and general characteristics of catalytic reactions, Homogeneous catalysis, acid-base catalysis and enzyme catalysis including their mechanisms, Michaelis Menten equation for enzyme catalysis and its mechanism.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-IV: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

INORGANIC CHEMISTRY

(a) QUALITATIVE ANALYSIS:

Semimicro Analysis, cation analysis, separation and identification of ions from groups I, II, III, IV, V and VI. Anion analysis (4 ions).

Instruction to Examiners: Four ions with no interference (anions such as PO_4^{3-}, BO^{3-}_3 and similar anions like Cl^-, Br^-, I^- etc. and cattons from the same group) may not be given.

(b) QUANTITATIVE ANALYSIS:

Volumetric titrations involving acid-base, $KMnO_4$ and $K_2Cr_2O_7$.

There are three experiments - one involving acid-base titrations, one involving $KMnO_4$ and one involving $K_2Cr_2O_7$.

1. Determination of strength of Na_2Co_3 solution by titrating it against a standard solution of HCl.
2. Determination of molarity of $KMnO_4$ solution by titrating it against a standard solution of Oxalic acid.
3. Standarise the given $K_2Cr_2O_7$ solution by titrating it against a standard solution of Mohr's Salt.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Qualitative Analysis : 10 marks

Q.No. II. Quantitative Analysis : 06 marks

Q.No. III. Viva-Voce :03 marks

Ask three questions (1 marks each) related to chemistry practicals. :03 marks

Q.No. IV. Note Book

Books Suggested (Laboratory Courses)

1. Svehla, Vogel's Qualitative Inorganic Analysis (revised); 7th edition Pubs: Orient Longman, 1996.
2. Bassett, J., Denney, R.C., Jeffery, G.H., Mendham, J., Vogel's Textbook of Quantitative Inorganic Analysis (revised); 4th edition, 1978.
3. Palmer, W.G., Experimental Inorganic Chemistry; 1st edition, Pubs: Cambridge, 1954.
4. Brauer, Handbook of Preparative Inorganic Chemistry; 2nd edition, Pubs: Academic Press, 1963, Vol. I, & 1965, Vol. II.
5. Audrieth, L.F., Inorganic Synthesis; Pubs: McGraw Hill, 1950, Vol. 3rd; E.G. Rochow, 1960 Vol. VI; J. Kleinberg, 1963, Vol. 7; S.Y. Tyree, 1967 ,Vol.9; E.L. Muetterties, 1967, Vol.10; W.L. Jolly 1986, Vol 11; R.W. Parry 1970, Vol. 12; F.A. Cotton 1972, Vol. 13; A.G. Mac Diarmid, 1977, Vol. 17.
6. Bansal, R.K., Laboratory Manual of Organic chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

CHEMISTRY
SEMESTER –II

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
V	Inorganic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VI	Organic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VII	Physical Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VIII	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper V – INORGANIC CHEMISTRY –B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Chemical Bonding-II

Ionic Solids – Concept of close packing., Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF_2 and antifluorite), radius ratio rule and coordination number, limitation of radius ratio rule, lattice defects, semiconductors.

UNIT-II (8 Hrs.)

Chemical Bonding-III

Lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids, polarizing power and polarisability of ions, Fajan's rule. Metallic bond-free electron, valence bond and band theories. Weak Interactions – Hydrogen bonding, Van der Waals forces.

UNIT-III (7 Hrs.)

***p*-Block Elements-I**

Comparative study (including diagonal relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane and higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.

UNIT-IV (8 Hrs.)

***p*-Block Elements-II**

Comparative study of groups 15-17 elements, compounds like hydrides, oxides, oxyacids and halides of groups 15-17, silicates (structural principle), tetrasulphur tetranitride, basic properties of halogens, interhalogens and polyhalides.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-VI: ORGANIC CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Alkenes, Cycloalkenes

Nomenclature of alkenes, methods of formation, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides, regioselectivity in alcohol dehydration. The Saytzeff's Rule, Hofmann elimination, physical properties and relative stabilities of alkenes.

Chemical reactions of alkenes – mechanisms involved in hydrogenation, electrophilic and free radical additions, Markownikoff's rule, hydroboration – oxidation, oxymercuration-reduction. Epoxidation, ozonolysis, hydration, hydroxylation and oxidation with $KMnO_4$. Polymerization of alkenes. Substitution at the allylic and vinylic positions of alkenes. Industrial applications of ethylene and propene.

UNIT-II (7 Hrs.)

Dienes and Alkynes

Methods of formation, conformation and chemical reactions of cycloalkenes.

Nomenclature and classification of dienes : Isolated, conjugated and cumulated dienes. Structure of allenes and butadiene, methods of formation, polymerization. Chemical reactions – 1,2 and 1,4 additions, Diels-Alder reaction.

Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation, metal-ammonia reductions, oxidation and polymerization.

UNIT-III (8 Hrs.)

Arenes and Aromaticity:

Nomenclature of benzene derivatives. The aryl group, Aromatic nucleus and side chain, Structure of benzene : Molecular formula and Kekule structure. Stability and carbon-carbon bond lengths of benzene, resonance structure, MO picture.

Aromaticity: The Huckel rule, aromatic ions.

Aromatic electrophilic substitution – General pattern of the mechanism, role of σ and π – complexes. Mechanism of nitration, halogenation, sulphonation, mercuration and Friedel-Crafts reaction. Energy profile diagrams. Activating and deactivating substituents, orientation and ortho/para ratio. Side chain reactions of benzene derivatives. Methods of formation and chemical reactions of alkylbenzenes, alkynyl benzenes and biphenyl.

UNIT-IV **(7 Hrs.)**

Alkyl and Aryl Halides

Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms of nucleophilic substitution reactions of alkyl halides, S_N2 and S_N1 reactions with energy profile diagrams.
Polyhalogen compounds : chloroform, carbon tetrachloride.
Methods of formation of aryl halides, nuclear and side chain reactions. The addition-elimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions.
Relative relativities of alkyl halides vs. allyl, vinyl and aryl halides.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-VII: PHYSICAL CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30Hrs.
(2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Thermodynamics-I:

Definition of Thermodynamic Terms: System, surroundings etc. Types of systems, intensive and extensive properties. State and path functions and their differentials. Thermodynamic process. Concept of heat and work.

First Law of Thermodynamics: Statement, definition of internal energy and enthalpy, Heat capacity, heat capacities at constant volume and pressure and their relationship. Joule's Law-Joule-Thomson coefficient and inversion temperature. Calculations of w, q, dU & dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process.

UNIT-II (7 Hrs.)

Thermochemistry:

Standard state, standard enthalpy of formation-Hess's Law of constant Heat Summation and its applications. Heat of reaction at constant pressure and at constant volume. Enthalpy of neutralization. Bond dissociation energy and its calculation from thermo-chemical data, temperature dependence of enthalpy. Kirchoff's equation.

UNIT- III (7 Hrs.)

Colloidal State:

Definition of colloids, classification of colloids.

Solids in liquids (sols): Properties –kinetic, optical and electrical; stability of colloids, protective action, Hardy-Schulze rules, gold number.

Liquids in liquids (emulsions) : Types of emulsions, preparation. Emulsifier.

Liquids in solids (gels): Classification, preparation and properties, inhibition, general applications of colloids.

UNIT-IV (8 Hrs.)

Solutions, Dilute Solutions and Colligative Properties:

Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

Dilute solution, colligative properties, Raoult's law, relative lowering of vapour pressure, molecular weight determination. Osmosis, law of osmotic pressure and its measurement, determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point, Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression of freezing point. Experimental methods for determining various colligative properties.

Abnormal molar mass, degree of dissociation and association of solutes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-VIII: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

ORGANIC CHEMISTRY AND GREEN CHEMISTRY PRACTICALS
Crystallization and determination of melting points

Concept of induction of crystallization
1. Phthalic acid from hot water (using fluted filter paper and stemless funnel).
2. Acetanilide from boiling water.
3. Benzoic acid from water

PHYSICAL CHEMISTRY

1. Refractive indices
   Determine the Refractive indices of given liquids (water, acetone, methanol, ethylacetate, cyclohexane) by Abbe's refractometer & calculate their specific refractions.
2. Viscosity
   To determine the viscosity of Brine Solution (20%), n-Butyl alcohol, cyclohexane
3. Surface Tension
   To determine the surface tension of Brine Solution (20%), n-Butyl alcohol, cyclohexane

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:
Q.No. I. Physical Chemistry : 10 marks
Q.No. II. Organic Chemistry : 06 marks
Q.No. III. Viva-Voce : 03 marks
Ask three questions (1 marks each) related to chemistry practicals.

Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition Pubs: R. Chand & Co., New Delhi, 2002.
2. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1998.
3. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

SEMESTER-I

First Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A	Plant Diversity-I	3 hrs.	36	04	40
Theory Paper-B	Cell Biology	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Second Semester					
Theory Paper –A	Plant Diversity-II	3hrs	36	04	40
Theory Paper-B	Genetics	3hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3hrs.	18	02	20
		Total			**200**

Note: 1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

Paper-A: PLANT DIVERSITY-I

Objective: The basic objective of this paper is to make students aware about the diversity in various life forms of plant kingdom. It gives an idea about the most simple group of plants. A systematic study of algae and fungi included in this group would familiarize students not only with structural differentiation but also provide an insight about the heterotrophic and autotrophic modes of nutrition in the plant kingdom. This paper in fact forms the basis of any advance study in Botany.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bacteria: Salient features, types and cell structure.

Algae: General Characters; systematic position, structure and life history of *Oscillatoria* (Cyanophyceae) *Volvox*, *Cladophora* (Chlorophyceae); *Vaucheria* (Xanthophyceae).

UNIT-II

Systematic position, structure and life history of *Dictyota* (Phaeophyceae); *Batrachospermum* (Rhodophyceae) and economic importance of algae.

UNIT-III

Fungi: General characters; systematic position, structure and life history of *Albugo* (White rust of crucifers: *Albugo candida*), *Rhizopus* and *Saccharomyces*.

UNIT-IV

Systematic position, structure and life history of *Agaricus*, *Ustilago* (Loose smut of wheat: *Ustilago tritici*), *Puccinia* (Black rust of wheat: *Puccinia graminis tritici*), *Colletotrichum* (Red rot of sugarcane: *Colletotrichum falcatum*); general account of Lichens and their economic importance.

Suggested Readings :

1. Alexopoulos, C. J. Mims, C. W`. and Blackwell, M. 1996. Introductory Mycology. John Wiley and Sons, Inc. USA.
2. Dube, H.C. 1990. An Introduction to Fungi. Vikas Publishing House Pvt. Ltd., Delhi.
3. Goyal, J. P. Dhand, Neelam and Saini, Aruna. 2011. Foundations of Botany. Trueman Book Company Jalandhar.
4. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi.
5. Sharma, O.P. 1992. Text Book of Thallophytes, McMillan India Ltd., New Delhi.
6. Sharma, P.D. 1991. The Fungi. Rastogi & Co., Meerut.
7. Smith, G.M. 1971. Cryptogamic Botany. Vol. 1, Algae & Fungi, Tata McGraw Hill Publishing Co. New Delhi.
8. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
9. Srivastava, H.N. 2013. Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
10. Vishishta, B. R. 1999. Botany for Degree Students. Algae. S. Chand and Company Ltd., New Delhi.
11. Vishishta, B. R. 1999. Botany for Degree Students. Fungi. S. Chand and Company Ltd., New Delhi.

Paper-B: Cell Biology

Objective: This paper deals with the basic structural unit of life i.e. Cell & its organelles. It provides an insight into structural and cytological basis of functional differentiation in plants. Coupled with the study of prokaryotic and eukaryotic diversity of life forms included in Paper-A, the course material of this paper gives an idea about cellular, molecular and biochemical basis of such differentiation.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Ultrastructure and functions of a typical plant cell and its organelles: Nucleus, Mitochondrion, Plastids, Ribosome, Endoplasmic reticulum, Golgi apparatus, Lysosomes; Structure and functions of cell wall and plasma membrane: fluid mosaic model only.

UNIT-II

Physical structure of chromosome; Giant chromosomes: Polytene and Lampbrush chromosomes; Chromosomal alterations (deletion, duplication, inversion, translocation) and their importance; Variations in chromosome number, (aneuploidy and polyploidy) introduction and their importance.

UNIT-III

Cell divisions: Mitosis and Meiosis in plants and their significance, Synaptonemal complex, DNA: Structure (Watson and Crick model), Nucleosome, types of DNA and role of DNA, Replication of DNA.

UNIT-IV

Structure and concept of gene: One gene-one enzyme hypothesis; Genetic Code: Characteristics, exceptions, Wobble hypothesis; RNA: Structure and types; Transcription and translation; Regulation of gene expression in prokaryotes (Lac operon and Tryptophan operon) and in eukaryotes (a brief account).

Suggested Readings :

1. Alberts, B., Gray, D. Lewis, J. Raff, M., Roberts, K. and Watson, I.D. 1999. Molecular Biology of Cell. Garland Publishing Co., Inc., New York, USA.
2. Bhatia, K.N. and Dhand Neelam. 2013. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. A Text-book of Cell and Molecular Biology. Rastogi Publications, Meerut, India.
4. Kleinsmith, L.J. and Kish, V.M. 1995. Principles of Cell and Molecular Biology (2nd edition). Harper Collins College Publishers, New York, USA.
5. Lodish, H., Berk, A., Zipursky, S.L. Matsudaira, P., Baltimor, D. and Darnell, J. 2000. Molecular Cell Biology. W.H. Freeman & Co., New York, USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Wolfe, S.L. 1993. Molecular and Cell Biology. Wadsworth Publishing Co., California, USA.

Suggested laboratory exercises for First Semester :

1. Study of morphology of various genera included in algae and fungi.
2. Study of Crustose, Foliose and Fructicose types of Lichen thalli.
3. Histopathological study of White rust of crucifers, Loose smut of wheat, Black rust of wheat and Red rot of sugarcane.
4. To study cell structure from onion leaf peels; demonostration of staining and mounting method.
5. Preparation of temporary slides to show different stages of mitosis from root tips of *Allium cepa* and *A. sativum*.
6. Preparation of temporary slides to show different stages of meiosis from floral buds of *Allium/Brassica*.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1.	Identify and write illustrated morphological note on specimens A and B.	05
2.	Prepare a squash mount of specimen C to show the stage of cell division visible in the slide and show it to the examiner. Identify it giving at least one reason. Draw the stage of cell division and show it to the examiner.	05
3.	Identify and the slides D and E giving at least two reasons for each.	04
1.	Practical Note-book	02
2.	Viva-voce	02

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BOTANY

SEMESTER – II

Paper-A: Plant Diversity-II

Objective: The basic objective of this paper is to make the students aware about the diversity in various life forms of plant kingdom. It gives an idea about how different life forms have evolved from simpler to complex ones. A sequential study ranging from Bryophytes (the amphibians of plant kingdom) and then to Pteridophytes -the first vascular land plants, would enable students to have a broad prospective of evolutionary trends in plant kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bryophyta: General characters; systematic position, structure, reproduction and life cycle of *Marchantia* and *Riccia* (Hepaticopsida) excluding developmental stages.

UNIT-II

Systematic position, structure, reproduction and life cycle of *Anthoceros* (Anthocerotopsida) and *Funaria* (Bryopsida) excluding developmental stages.

UNIT–III

Pteridophyta: General characters; systematic position, structure, reproduction and life cycle of *Rhynia* (Psilophytopsida) and *Selaginella* (Lycopsida) excluding developmental stages.

UNIT-IV

Systematic position, structure, reproduction and life cycle of *Equisetum* (Sphenopsida) and *Pteris* (Pteropsida) excluding developmental stages.

Suggested Readings

1. Goyal, J. P. Dhand, Neelam and Saini, Aruna 2011. Foundations of Botany. Trueman Book Company Jalandhar.
2. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi
3. Puri, P. 1980. Bryophyta. Atma Ram & Sons, Delhi.
4. Sharma, O.P. 1990. Text Book of Pteridophyta, McGraw Hill Publishing Co., New Delhi.
5. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
6. Smith, G.M. 1971. Cryptogamic Botany. Vol. II, Bryophytes and Pteridophytes, Tata McGraw Hill Publishing Co., New Delhi.
7. Srivastava, H.N. 2013.Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
8. Vishishta, B. R. 1999. Botany for Degree Students. Bryophyta. S. Chand and Company Ltd., New Delhi.

Paper-B : Genetics

Objective: This paper deals with various aspects of hereditary trends observed in successive generations. It provides an insight into genetic basis of such evolutionary trends in plants. Coupled with the study of variations in life forms included in Paper A, the course material of Paper B provides an idea about the important role that genetics plays in structural and functional differentiation of plants.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Mendelism : Mendel's experiments and results, Mendel's Laws of Dominance, Segregation and Independent assortment; Linkage: complete and incomplete linkage, linkage groups, linkage maps, importance of linkage, cytological interpretation of Mendelism.

UNIT-II

Non-allelic Gene Interactions: Dominant and recessive epistasis, supplementary genes, complementary genes, quantitative or polygenic inheritance, duplicate genes. Allelic gene interactions: Incomplete dominance, codominance, multiple alleles, pleiotropic genes.

UNIT-III

Chromosome theory of heredity, parallelism between chromosome and Mendelian factors, Sex linked inheritance; Characteristics and examples (Haemophilia, colour-blindness); Cytoplasmic or extranuclear inheritance: mitochondrial and plastid DNA; plastid inheritance in *Mirabilis*, mitochondrial inheritance in Yeast.

UNIT–IV

Genetic variations: Continuous and Discontinuous; Mutations: characteristics, types, importance, factors affecting mutations; Mutagens: Physical and chemical, mechanism of gene mutations; DNA damage and repair: Types of damage (Single base change and structural distortion), types of repair system in prokaryotes and eukaryotes.

Suggested Readings :

1. Atherly, A.G., Girton, J.R. and McDonald, J.F. 1999. The Science of Genetics. Saunders College Publishing, Fort Worth, USA.
2. Bhatia, K. N. and Dhand Neelam 2013.. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. Genetics. Rastogi Publications, Meerut, India.
4. Russel, P.J. 1998. Genetics. The Benjamin/Cummings. Publishing Co. Inc., USA.
5. Snustad, D.P. and Simmons, M.J. 2000. Principles of Genetics, John Wiley & Sons, Inc., USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Stent, G.S. 1986. Molecular Genetics. CBS Publications.

Suggested laboratory exercises for Second Semester:

1. Study of morphology of various genera mentioned in Bryophyta and Pteridophyta.
2. I. Preparation of permanent stained slides of :

Marchantia	(V.S. Thallus)	*Selaginella*	(T.S. Stem)
Riccia	(V.S. Thallus)		
Anthoceros	(V.S. Thallus)	*Equisetum*	(T.S. Aerial stem passing through internode)
Funaria	(T.S. Stem)	*Pteris*	(T.S. Petiole and leaflet)

II. Study through permanent slides:

Marchantia

i) L.S. Antheridiophore
ii) L.S. Archegoniophore
iii) L.S. Mature sporogonium

Riccia

L.S. Mature sporogonium

Anthoceros

i) T.S. Thallus passing through antheridia
ii) T.S. Thallus passing through archegonia
iii) L.S. Mature sporogonium.

Funaria

i) L.S. Male receptacle
ii) L.S. Female receptacle
iii) L.S. Capsule
iv) Primary protonema

Selaginella

L.S. Sporangiferous spike

Equisetum

i) L.S. Strobilus
ii) T.S. Strobilus

Pteris

Mature prothallus

3. Problems related to Mendalism and gene interactions.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1. Cut T.S., stain and make a permanent mount of specimen A. Identify, draw its labelled diagram and show the slide to the examiner. 06

2. Problem related to Mendalism or gene interaction (to be announced by the examiner). 04

3. Identify the slides B and C giving at least two reasons for each. 04

4. *Viva-voce* & Practical Note-book. 2+2= 04

ZOOLOGY

FIRST SEMESTER

		Time	Theory	Internal Assessment	Marks
Paper-I :	Biodiversity & Cell Biology – I	3 hrs.	36	4	40
Paper-II:	Biodiversity & Cell Biology – II	3 hrs.	36	4	40
Practical:	One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
				Total marks :	100

SECOND SEMESTER

		Time	Theory	Internal Assessment	Marks
Paper-I :	Biodiversity & Ecology - I	3 hrs.	36	4	40
Paper-II:	Biodiversity & Ecology - II	3 hrs.	36	4	40
Practical:	One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
				Total marks :	100

Note : The number of hours for Theory and Practical per week shall be 6 and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Semester-I and Semester-II in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

ZOOLOGY

FIRST SEMESTER

PAPER–I : BIODIVERSITY & CELL BIOLOGY-I (ZOO. 01)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following protozoan types :
Amoeba, Paramecium and Plasmodium.

Classification up to orders with ecological notes and economic importance (if any) of the following :
Entamoeba, Trypanosoma, Giardia, Noctiluca, Eimeria, Opalina,Vorticella, Balantidium and Nyctotherus.

UNIT – II

Detailed study of the following animal types :

Parazoa (Porifera)	:	Sycon (*Scypha*)
Cnidaria (Coelenterata)	:	*Obelia*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Parazoa (Porifera)	:	*Grantia, Euplectella, Hyalonema and Spongilla*
Cnidaria (Coelenterata)	:	*Hydra, Sertularia, Plumularia, Obelia, Tubularia, Bougainvillea, Porpita, Velella, Physalia, Rhizostoma Millipora, Aurelia, Alcyonium, Tubipora, Zoanthus, Metridium, Madrepora, Favia, Fungia and Astrangia.*

UNIT – III

Methods in Cell Biology	:	Principles and applications of light (simple, compound & phase contrast) and electron (SEM & TEM) microscopes Fixation & fixatives, staining techniques. (simple and double staining)
Organisation of Cell	:	Concept of Prokaryotic and Eukaryotic cell, extra nuclear and nuclear organization of cell.
Plasma membrane	:	Structure with particular references to Fluid Mosaic Model, Osmosis, active and passive transport, endocytosis and exocytosis.

UNIT – IV

Endoplasmic reticulum	:	Structure, types, associated enzymes and functions.
Mitochondria	:	Structure, mitochondrial enzymes and the role of mitochondria in respiration. Mitochondrial DNA.
Golgi complex	:	Structure, associated enzymes and functions.

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A molecular approach – G. M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PAPER–II : BIODIVERSITY & CELL BIOLOGY - II (ZOO. 102)

Max. Marks	:	40 marks
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 Hrs.

UNIT – I

Detailed study of the following animal types :

Platyhelminthes	:	*Fasciola,Taenia*
Aschelminthes	:	*Ascaris*
		Parasitic adaptations in Helminths

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Platyhelminthes	:	*Dugesia, Schistosoma and Echinococcus.*
Aschelminthes	:	*Ascaris, Oxyuris, Wuchereria.*

UNIT – II

Detailed study of the following animal type :

Annelida	:	*Pheretima*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Annelida	:	*Nereis, Polynoe, Eunice, Arenicola, Aphrodite, Amphitrite, Chaetopterus, Tubifex and Pontobdella.*

UNIT – III

Lysosomes	:	Lysosomal enzymes, Polymorphism and functions.
Ribosomes	:	Types of ribosomes, their structure and functions.
Centrosome	:	Structure and functions.

UNIT-IV

Nucleus	:	Structure and functions of nuclear membrane, nucleolus and chromosomes. Euchromatin & Heterochromatin
An elementary idea of cell transformation in Cancer	:	Introduction, difference between normal and Cancer cells, types of cancer, basic idea of transformation.
An elementary idea of cellular basis of immunity	:	Cellular & Humoral immunity. Elementary idea of cells & organs of immune system .

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A Molecular approach – G.M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PRACTICALS : Practical based on Theory Papers ZOO-101 & ZOO-102 (ZOO-151)

1. Examination of cultures of *Euglena* and *Paramecium.*
2. Classification upto orders with ecological notes and economic importance, if any, of the following animals :
   Slides : *Amoeba, Euglena, Trypanosoma, Noctiluca, Eimeria, Monocystis, Paramoecium* (Binary fission and conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus & Polystomella.*

Parazoa (Porifera) :	Specimens: *Sycon, Grantia, Euplectella, Hyalonema, Spongilla, Euspongia.*	
Cnidaria (Coelenterata)	(a)	Specimens : *Porpita, Velella, Physalia, Aurelia, Rhizostoma Metridium, Millipora, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia and Astrangia.*
	(b)	Slides : *Hydra* (W.M.) *Hydra* with buds. *Obelia* (colony and medusa). *Sertularia, Plumularia, Tubularia, Bougainvillea* and *Aurelia larva.*
Aschelminthes	:	*Ascaris* (male and female), *Trichinella, Ancylostoma.*
Platyhelminthes	(a)	Specimens : *Dugesia, Fasciola, Taenia, Echinococcus.*
	(b)	Slides : Miracidium, Sporocyst, Redia, Cercaria of *Fasciola*, Scolex and Proglottids of *Taenia* (mature and gravid).
Annelida	:	*Pheretima, Nereis, Heteronereis, Polynoe, Eunice, Aphrodite, Chaetopterus, Arenicola, Tubifex* and *Pontobdella.*

3. Study of the following permanent stained preparations :
   - L.S. and T.S. *Sycon,* gemmules, spicules and spongin fibres of a sponge.
   - T.S. *Hydra* (Testis and ovary region).
   - T.S. *Pheretima* (Pharyngeal and typhlosolar regions); setae, septal nephridia, spermathecae and ovary of *Pheretima*
   - T.S. *Fasciola* (Different regions).
   - T.S. *Ascaris* (Male & female).

4. Preparation of the following slides :
   Temporary preparation of *Paramecium*, Euglena and vorticella.

5. Demonstration of dissection of earthworm through video clipping/models/charts ets.

6. Make a preparation of sex-chromatin from buccal smear.

7 . Introduction to the following through photographs/lab. visits :
   - Gel electrophoresis, TEM & SEM, ultrastructure of cell organelles.

8. Study of slide of striated muscle fibre and Animal cell.

Note : . Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labelled sketch of the any given system and show to examiner/Spot any four parts of anatomy in given models/charts. 2 marks

2. Make a temporary mount of the material "A". Identify and draw its labelled sketch and show it to the examiner. 1 marks

3.Identify the slides (B-C) and give two important reasons for each identification. 3 marks

4.Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks

5. Identify the cell organelle through photograph and give two important reasons for Identification/Buccal smear/striated muscle fibre/paper chromatography. 2 marks

6.Viva voce 2 marks

7.Practical records and chart 2 marks

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ZOOLOGY

SECOND SEMESTER

Paper- I : BIODIVERSITY & ECOLOGY - I (ZOO-201)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type Questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Detailed study of the following animal types :

Arthropoda : *Periplaneata*
Social organizations in insects (honey bee and termite).

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Arthropoda : *Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper) *Gryllus* (Cricket), *Mantis* (Preying Mantis), *Cicada, Forficula* (Earwig), *Cimex*, *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth).

UNIT –II

Detailed study of the following animal types :

Arthropoda : Prawn (*Palaemon*)
Life cycle of *Anopheles* and *Culex*.

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Peripatus, Prawn, Lobster, *Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

UNIT – III

Ecology	:	Subdivisions and Scope of ecology.
Ecosystem	:	Components, ecological energetics, food web, introduction to major ecosystems of the world.
Ecological factors	:	Temperature, light and soil as ecological factors.

UNIT – IV

Nutrients	:	Biogeochemical cycles & concept of limiting factors.
Ecological Adaptations	:	Morphological, physiological and behavioural adaptations in animals in different habitats.
Population	:	Characteristics and regulation of population.

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

Paper-II BIODIVERSITY & ECOLOGY - II (ZOO-202)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following animal type :

Mollusca : *Pila*

Classification up to orders with ecological notes and economic importance (if any)

Mollusca : *Chiton, Anodonta, Mytilus, Ostrea, Cardium, Pholas, Solen* (Razor Fish), *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus and Dentalium*

UNIT – II

Detailed study of the following animal types :

Echinodermata : *Asterias*, Echinoderm Larvae.
Hemichordata : *Balanoglossus*, External characters and affinities.

Classification up to orders with ecological notes and economic importance (if any)

Echinodermata : *Echinus, Cucumaria, Ophiothrix, Antedon and Asterias.*
Hemichordata : *Balanoglossus.*

UNIT – III

Inter and intra ecological relationships : Competition, predation, parasitism, commensalism, ammensalism & mutualism

Biotic community : Characteristics, ecological succession, ecological niche.

UNIT – IV

Natural resources : Renewable and nonrenewable natural resources and their conservations.

Environmental Degradation : Causes, impact and control of environmental pollution. (Air, Water, Land, Noise)

Wildlife conservation : Basic concepts

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

PRACTICALS : Practical based on Theory Papers ZOO-201 & ZOO-202 (ZOO 152)

1. Classification upto orders with ecological notes and economic importance, if any, of the following animals :

   Arthropoda : *Peripatus, Palaemon, Lobster, Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper), *Gryllus* (Cricket), *Mantis* (Praying Mantis) *Cicada, Forficula* (Earwig), *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth), *Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

   Mollusca : *Anodonta, Mytilus, Ostrea, Cardium,Pholas, Solen* (Razorfish) *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus shell* (Complete and T.S.), *Chiton and Dentalium.*

   Echinodermata : *Asterias, Echinus, Ophiothrix* and *Antedon Cucumaria*

   Hemichordata : *Balanoglossus*.

2. Study of the following permanent stained preparations :
   Trachea, mouth parts of *Periplaneta*
   Radula and osphradium of *Pila*.
   T.S. Star fish (Arm).

3. Demonstration of dissection of the following animals through video clippings/charts/models:
   Periplaneta : Digestive and nervous systems; mouth parts and trachea.
   Pila : Pallial complex, digestive and nervous systems, Radula.
4. Study of animal adaptations with the help of specimens, charts and models.
5. Study of Zoogeographical regions and their fauna.
6. Study of biotic components of an ecosystem.
7. Study of different types of nests in birds.
8. Study & preparation of zoogeographical charts/maps.

Note: Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled diagram of any given system of an animal and explain it to the examiner Sketch and demonstrate it to the examiner. 2 marks
2. Identify the slides (A-C) and give two important reasons for each identification. 3 marks
3. Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks
4. Identify the type of adaptation/type of nest/biotic components with a short note. 1 marks
5. Mark Zoogeographical region on the given physical map along with endemic fauna and climate. 2 marks
6. Viva voce 2 marks
7. Practical record, charts/maps and project report of excursion to a place of zoological interest 2 marks

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BIOCHEMISTRY
Semester I

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper-A: Carbohydrates and Lipids **Marks: 45+5**

(*Three periods per week)*

Objective: To learn about biomolecules, their structure and functional significance.

SECTION-I

(Lectures: 6)

Introduction to biochemistry and its scope. Water: physical properties, as a biological solvent and structure of water,dissociation of water. pH and pOH, buffer solution. Henderson Hasselbalch equation, acid-base indicators, buffers and physiologically important buffers, dialysis and osmosis.

SECTION-II

(Lectures: 8)

Definition and classification of carbohydrates. Fischer and Haworth structures of carbohydrates. Stereoisomerism, and mutarotation. Anomeric forms of monosaccharides. Derivatives of monosaccharides (glycosides, deoxysugars,amino sugars and other derivatives of biological importance). Oligosaccharides of biological importance (structure of maltose, lactose, sucrose, cellobiose, trehalose, raffinose). Characteristic reactions of monosaccharides: reactions with hydrazine, hydrogen cyanide, hydroxylamine; reduction and oxidation of sugars; periodic acid oxidation; action of alkali upon sugars; acylation and methylation of sugars. Homo-and hetero-polysaccharides (structures of amylose, amylopectin, starch, inulin, pectins, dextrins, glycogen, cellulose, chitin). GAGs as components of connective tissue.Polysaccharides of bacterial cell wall, glycoproteins

SECTION-III

(Lectures: 8)

Definition and classification of fatty acids (saturated and unsaturated). Essential fatty acids. Important reactions of functional groups present in fatty acids. Characteristics of fatty acids and fats (saponification, iodine, acid, acetyl and peroxide values). Refractive index, m. p., b.p. and their relation to molecular size. Properties of glycerol. Fats as source of energy. Waxes.Structures, characteristics and functions of lipids: triacylglycerols, phospholipids: lecithins (Phosphotidylcholines), lysolecithins, cephalins (phosphotidylethanolamines), phosphatidylserines, Phosphatidyl inositol, sphingomyelins, plasmalogens), cerebrosides, gangliosides, sulfatides.

SECTION-IV

(Lectures: 6)

Lipoproteins– composition, classification and biological functions. Liposomes.
Terpenes and steroids – Terpenes of biological significance e.g. carotenes, phytol. Cholesterol and other animal sterols. Colour reactions of sterols. Sterols of yeast and fungi (mycosterols). Phytosterols. Steroidal hormones. Bile acids.
Structure and properties of eicosanoids-prostaglandins, leukotrienes, thromboxanes, prostacyclins

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay Edition,	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

1. Qualitative tests for carbohydrates.
2. Estimation of carbohydrate by anthrone method.
3. Estimation of ascorbic acid by dye method.
4. Verification of Beer-Lambert law for nitrophenol or cobalt chloride.
5. Qualitative tests for cholesterol and lipids
6. Determination of saponification value of fats
7. Determination of iodine value of fats.
8. Estimation of phospholipids by vanillin method.

Paper-B: Nitrogen containing Biomolecules Marks: 45+5

SECTION–I

(Lectures: 7)

Amino acids: common structural features. Stereoisomerism and RS system of designating optical isomers. Classification based on the nature of "R" groups. Amino acids present in proteins and non-protein amino acids. Specialized role of amino acids. Physical and chemical properties of amino acids. Titration of amino acids. Rigid and planar nature of a peptide bond. Folding of peptide chains into regular repeating structures (α helix, β pleated sheets). β -turn in polypeptides. Chemical synthesis of polypeptides. Biologically active peptides.

SECTION–II

(Lectures: 8)

Proteins: levels of protein structure. Determination of primary structure of proteins. Forces stabilizing structure and shape of proteins. Native proteins and their conformations. Behaviour of proteins in solutions. Salting in & salting out of proteins. Denaturation of proteins. Structural and functional diversity of proteins, fibrous proteins (keratins, collagen & elastin), globular proteins (hemoglobin, myoglobin) and conjugated proteins.

SECTION-III

(Lectures: 8)

Nucleic Acids: structure and properties of purine and pyrimidine bases. Nucleosides and nucleotides. Biologically important nucleotides. Double helical model of DNA and forces responsible for it. Different forms of DNA (A,B and Z type), denaturation of DNA. Physical and chemical properties of nucleic acids. Chemical and enzymatic hydrolysis of nucleic acids. Sequencing of polynucleotides. Types of RNA and ribozyme.

SECTION-IV

(Lectures: 6)

Porphyrins: porphyrin nucleus and classification of porphyrins. Heme and other metalloporphyrins occurring in nature. Detection of porphyrins spectrophotometrically and by fluorescence. Chemical nature and physiological significance of bile pigments.

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay Edition,	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

1. Qualitative tests for Amino acids and proteins
2.Titration curve for amino acids and determination of pKa value.
3. Estimation of:
   (a) Amino acids by ninhydrin method.
   (b) Protein by biuret and Lowery method
   (c) DNA by diphenylamine method
   (d) RNA by orcinol method
4. Spectrophotometic measurements of DNA and RNA solutions

BIOCHEMISTRY
Semester II

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper- A: Biochemical Techniques **Marks: 45+5**

Credit: 3+0+0
Objective: To learn various biochemical techniques

Section-I

(Lectures: 7)

Beer-Lambert's law. Light absorption and its transmittance. Determination and application of extinction coefficient. Applications of following spectroscopic techniques in elucidating structure of Biomolecules:- visible, U.V., Infra-red and fluorescence spectroscopy

Section-II

(Lectures: 8)

Chromatography: general principles, distribution coefficient, partition chromatography-normal phase and reverse phase liquid chromatography. Modes of chromatography-column, thin layer and paper chromatography. Principles, matrices and applications of gel permeation, adsorption, ion exchange and affinity chromatography.Gas chromatography (GC) and High Performance Liquid Chromatography (HPLC).

Section-III

(Lectures: 7)

Various centrifugation techniques and their applications in Biochemistry.Preparative and analytical ultracentrifugation procedures.Application of partial specific volume, diffusion coefficient and viscosity measurements in the study of macromolecules of biochemical importance.

Section-IV

(Lectures: 8)

Electrophoresis: General principle, support media, types of electrophoresis.
Electrophoresis of proteins: native and SDS-PAGE. Isoelectric focusing, 2D-PAGE, detection and recovery of proteins.Molecular weight determination.Immuno electrophoresis. Electrophoresis of nucleic acid: agarose-gel electrophoresis of DNA and RNA, pulsed-field gel electrophoresis, Northern and Southern transfer procedure.

SUGGESTED BOOKS

1. Biochemical Techniques: Theory and practice by Robyt, J.F. and White, B.J, 1987, Brooke/Cole Publishing Company, California.
2. Principles and techniques of Biochemistry & Molecular biology by K Wilson & J Walker 6th Ed.Cambridge University press
3. Fundamentals of analytical chemistry by Skoog /West/Holter/Crouch Thompson/Brooks/Cole

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

I. Estimation of proteins using UV absorbance and biuret method.
II. Estimation of proteins using Lowry/Bradford method.
III. Isoelectric pH of casein.
IV. Ammonium sulphate fractionation of serum proteins.
V. Separation of albumin from serum using anion-exchange chromatography.
VI. SDS-PAGE analysis of proteins.

Paper-B: Enzymes and Bioenergetics **Marks: 45+5**

Objective: To learn principles of thermodynamics, nature of enzymes, their mode of action and enzyme kinetics

SECTION-I

(Lecture: 7)

Introduction to enzymes.General characteristics of enzymes.IUB system of nomenclature and classification of enzymes.Prosthetic group.Holoenzyme, apoenzyme, cofactors, isoenzymes and their clinical significance and zymogens, coenzymes (NAD/NADP,FMN/FAD, coenzyme A,TPP, pyridoxal phosphate, tetrahydrofolate) and their biochemical functions, assay of enzyme activity, units of enzyme activity. Active site of enzymes

SECTION-II

(Lectures: 8)

Enzymes as catalysts. Theories of enzymes catalysis: proximity and orientation effects, acid base catalysis, covalent catalysis. Role of metals in enzyme catalysis
Monomeric enzymes, oligomeric enzymes & multienzyme complexes.Mechanism of action of chymotrypsin and pyruvate dehydrogenase.

SECTION-III

(Lectures: 8)

Factors affecting velocity of enzyme catalysed reactions: enzyme concentration, pH and temperature. Michaelis-Menten equation.Determination of Km and its significance.
Enzyme inhibition: Various types of enzyme inhibitions. Determination of Ki value.Enzyme inhibitors and their importance.Introduction to multisubstrate enzymes. Allosteric enzymes and enzyme regulation.

SECTION-IV

(Lectures: 8)

Concepts of bioenergetics, principles of thermodynamics & their application in Biochemistry, concept of free energy.Biological oxidations.Redox potential. ATP and High energy phosphate compounds: introduction, phosphate group transfer potential, enzymes and co-enzymes involved in oxidations and reductions. Mitochondrial electron transport chain and oxidative phosphorylation.Substrate level phosphorylation, mechanism of oxidative phosphorylation.

Books Recommended:

1. J.R. Whitaker : Principles of Enzymology for the Food Sciences, 2nd Ed., Marcel Dekker, Inc., New York.
2. J.E. Bell and E.T. Bell : Protein and Enzymes, Prentice Hall Inc, New Jersey.
3. Berg J. M, LubertStryer : Bio-chemistry, W.F. Freeman and Co., New York, Edition 7th, 2002.
4. Nelson D.L & Cox M. M. : Principles of Bio-chemistry, Worth Publishers, Inc., New York, edition 4th 2005.
5. Conn E.E &Stumpf P.K. : Outlines of Bio-chemistry, Bruening & Doi John Wiley & Sons.
6. T. Palmer : Enzymes: Biochemistry, Biotechnology and Clinical chemistry, 2nd Ed. (2008) Affiliated East-West press Pvt. Ltd. New Delhi.

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

I. Preparation of casein from milk
II. Determination of achromatic point of saliva
III. (a) Assay of serum alkaline phosphatase activity.
(b) Effect of pH on enzyme activity.
(c) Effect of temperature on enzyme activity and determination of energy of activation.
(d) Effect of substrate concentration on enzyme activity and determination of Km.
IV. Inhibition of alkaline phosphatase by EDTA.
V. Demonstration of potato polyphenoloxidase activity.

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INTRODUCTION TO COMPUTER SCIENCE
(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module I while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III.

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lecturers per week	Max. Marks			Exam Hours
	First Semester			Ext.	Int.		
1	A	Fundamentals of Information Technology	6	25	5	30	3
2	C	Practical on Paper – A	6	-	-	20	3
	Second Semester			Ext.	Int.		
3	B	Computer Programming Using C	6	25	5	30	3
4	D	Practical on Paper – B	6	-	-	20	3

SEMESTER I

Paper A
Paper Title: Fundamentals Of Information Technology
Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

Objective : To familiarize students with basic concepts of Computer and Information Technology, Students will get understanding of concepts related to operating systems and application softwares.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.
2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
   ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation. Input/Output devices.

UNIT-II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.
4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin
5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
   Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT-III

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.
   Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
   Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
   Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
   Clipart: Using clip art, Creating Word Art
   Mail merge: Creating merged envelops, creating merged mailing labels

UNIT-IV

7. **Spreadsheet Software:**
   Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

   Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

   Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

   Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts
8. **Presentation Software**:
   Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References:

1.	Basandra, S.K.	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K.	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K.	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M.	Computers Todays by McGraw Hill, New York, 3rd ed., N.Y. Int. ed.
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron.	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper – C : Practical on Paper - A

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

INTRODUCTION TO COMPUTER SCIENCE

SEMESTER II

Paper B
Paper Title: Computer Programming Using C

Max. Marks : 25 **Time : 3 Hrs**
Theory: Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60
Objective : To make student understand programming concepts of 'C' language including functions, arrays, input/output etc.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Input/Output, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes:** automatic, external, static, register
5. **Preprocessor:** #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT-II

6. **Functions:** library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions

UNIT-III

8. **Strings**: Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
9. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures

UNIT-IV

10. **Console Input/Output**: Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
11. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File, Text Files and Binary Files.

References:

1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi, 8th Edition.
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series, N.D., TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications.
4.	Salaria, R.S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper – D : Practical on Paper - B

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

MICROBIOLOGY

B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) EXAMINATION (2019-20)

Note : 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

Scheme of Examination		*Duration*	*Marks*
	FIRST YEAR		
	Semester I		
THEORY		6 hrs	75 (66+9*)
MIC 101:	**Fundamentals of Microbiology -I**	3 hrs.	37.5 (33 + 4.5*)
MIC 102 :	**Microbial Physiology—Metabolism – I**	3 hrs.	37.5 (33 + 4.5*)
PRACTICAL			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 101 and MIC 102		6 hrs	25 (22+3*)
	Semester II		
THEORY		6 hrs	75 (66+9*)
MIC 201:	**Fundamentals of Microbiology -II**	3 hrs.	37.5 (33 + 4.5*)
MIC 202 :	**Microbial Physiology—Metabolism –II**	3 hrs.	37.5 (33 + 4.5*)
Practical			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 201 and MIC 202		6 hrs	25 (22+3*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

OUTLINES OF TESTS AND SYLLABI
MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 101 : FUNDAMENTALS OF MICROBIOLOGY (I)

Semester-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. History, development, scope and applications of Microbiology.
2. Methods of Microbiology, isolation of pure cultures, theory and practice of sterilization.
3. Nature of Microbial World : Prokaryotes and eukaryotes, growth pattern in microbes.

SECTION-B

1. Morphology and fine structure of bacteria, fungi, actinomycetes and algae.
2. Organization of cell wall, cell membrane, flagella and capsules in bacteria.
3. Morphogenesis in bacteria, formation of spores and cysts.

SECTION-C

1. Recombinant DNA technology: genetic engineering and gene cloning in microorganisms.
2. Strategies of genetic engineering: Restriction enzymes, vectors and plasmids.

SECTION-D

1. Microorganism Association with Vascular Plants: Rhizosphere and Rhizoplane microorganisms and Mycorrhizae.
2. Nitrogen fixation: Symbiotic and nonsymbiotic and biofertilizers.
3. Biopesticides.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M.Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008)

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 102 : MICROBIAL PHYSIOLOGY—METABOLISM (I)

Semester-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth, and enzymes.

SECTION-A

1. Microbial Nutrition : Requirements for Growth. Physical requirement (temperature, pH, osmotic pressure), chemical requirements (C, N, S, P, O).
2. Culture Media : Chemically defined media, complex media, anaerobic growth media, selective & differential media, and enrichment culture. Cultivation of Aerobes and Anaerobes.

SECTION-B

1. Enzymes : Chemical and physical properties of enzymes.
2. Classification and nomenclature of Enzymes.
3. Factors affecting enzyme activity.

SECTION-C

Microbial Metabolism :

1. Respiration and fermentation.
2. Glycolysis.
3. Pentose Phosphate pathway,
4. The Entner Doudoroff pathway.
5. Tricarboxylic acid cycle.
6. Glyoxylate cycle.

SECTION-D

Bacterial Genetics :

1. Conjugation.
2. Transformation.
3. Transduction (generalized transduction, specialized transduction).
4. The Regulation of Gene Expression : Lac operon, tryptophan operon. Recommended

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Textbook of Microbiology, S. Chand and Company.

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
Semester I

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

PRACTICALS

1. Preparation of culture media, spread plates, pour plates, selective media, differential media.
2. Separation of pure cultures and study the effect of selective nutrients on prokaryotes.
3. Isolation of Soil Bacteria, Soil Fungi, Soil Actinomycetes.
4. Selective media for Soil microflora and use of growth factors, Study of Rhizosphere interactions, Quantitative measurements of Soil nutrients and Rhizosphere microflora and preparation of starter cultures of Rhizobium, Azotobacter.
5. Measurement of Soil Enzymes.
6. Use of ultraviolet light for its germicidal effect.
7. The replica plating technique.
8. Effect of temperature, Osmotic pressure, energy source etc. on growth of prokaryotes.

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 201 : FUNDAMENTALS OF MICROBIOLOGY (II)

Semester-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. Microscopic examination of micro-organism, bright field microscopy, dark field microscopy, phase contrast microscopy and electron microscopy.
2. Staining of microbes, theory of Gram staining.

SECTION-B

1. Animal Viruses : Morphology, cultivation and viral disease cycle.
2. Bacteriophages : Morphology, multiplication, detection and enumeration.
3. Biotransformation of
   (a) D-Sorbitol to L-Sorbose.
   (b) Antibiotics.
   (c) Steroids.

SECTION-C

Genetic engineering for human welfare:

1. Production of pharmaceuticals.
2. Insect pest control.
3. Use of Genetically Engineered Microorganisms (GEMs) for control of pollution.

SECTION-D

1. Biogeochemical Cycling—Carbon cycle, Nitrogen cycle, Phosphorus and Sulphur cycle with role of microorganisms.
2. Sewage (waste-water) treatment, chemical characteristics, microbiological characteristics, waste water treatment processes.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M.Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008)

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 202 : MICROBIAL PHYSIOLOGY—METABOLISM (II)
Semester – II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth, and enzymes.

SECTION-A

1. Microbial Growth : Growth in population, bacterial growth curve, mathematical nature and expression.
2. Factors affecting growth in microorganisms.
3. Methods for measurement of growth in microorganisms. .

SECTION-B

1. Mechanisms of enzymes action.
2. Inhibition, control and regulation of enzyme activity .
3. Enzyme kinetics: Michaelis-Menten equation.

SECTION-C

Microbial Metabolism :
1. Catabolism of lipids and proteins.
2. Beta oxidation
3. Electron transport chain.
4. Biochemical mechanisms of generation of ATP.

SECTION-D

Microbial Utilization of Energy & Biosynthesis :
1. Transport of nutrient by bacteria.
2. Synthesis of Amino Acids : Glutamate, lysine, glutamine, serine, arginine family.
3. Structures and biosynthesis of cell wall peptidoglycan.
4. Biosynthesis of Carbohydrates (gluconeogenesis) & Phospholipids.
   Replication of DNA molecules, Transcription & Translation (process of protein synthesis).

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Text Book of Microbiology, S. Chand and Company.

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
Semester -II

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

PRACTICALS

1. Use of microscope in examination of unstained bacteria, fungi, algae, parasites and stained cell preparations including simple staining, Gram's staining, acid fast staining, capsule staining, spore staining using prokaryotic and eukaryotic cells, hanging drop preparation.
2. Presumptive, confirmed and completed tests for safety of water supplies.
3. Relation of free oxygen to microbial growth, monitoring of dissolved oxygen in various effluents.
4. Determination of COD in Industrial effluents.
5. Effects of antimetabolites on Microbial culture (Inhibition by Sulfanilamide).
6. Determination of Water Activity of various substrates and assay of surface active agents.
7. Turbidimetric/spectrophotometric monitoring of growth using liquid cultures.
8. Efficiency of photosynthesis in photoautotrophs.

Environment, Road Safety Education, Violence against Women/Children

SEMESTER II

Part - I (Environment)

Note: *The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.*

1. **Environment Concept :**
Introduction, concept of biosphere—lithosphere, hydrosphere, atmosphere; Natural resources—their need and types; principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. **Atmosphere :**
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. **Hydrosphere :**
Types of aquatic systems. Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. **Lithosphere :**
Earth crust, Soil—a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. **Forests :**
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. **Conservation of Environment :**
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems—soil, water, air, wildlife, forests.

7. **Management of Solid Waste :**
Merits and demerits of different ways of solid waste management—open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. **Indoor Environment :**
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. **Global Environmental Issues :**
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. **Indian Laws on Environment :**
Indian laws pertaining to Environmental protection : Environment (Protection) Act, 1986; General information about Laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. **Biodiversity :**
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. **Noise and Microbial Pollution :**
Pollution due to noise and microbes and their effects.

13. **Human Population and Environment :**
Population growth and family welfare programme, Human Health, HIV/AIDS, Human rights.

14. **Social Issues :**
Environmental Ethics : Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. **Local Environmental Issues :**
Environmental problems in rural and urban areas, Problem of Congress grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practicals:

Depending on the available facility in the college, a visit to Vermicomposting units or any other such non-poluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern :

A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deducation for wrong answer or unattempted question), and of 1 hour duration.

The students have to obtain 33% marks to quality the paper. The marks are not added/included in the final mark sheet.

Part - II (Road Safety Education)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination : 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

Part - III (Violence against Women / Children)

1. **Concept and Types of Violence:** Meaning and Definiton of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. **Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:**

Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376(A), 376B, 376C, 376D and 376E;
Cruelty - Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve- teasing. These are Sections 294, 354 and 509 of Indian Penal Code. Section 509 of the Indian Penal Code defines (Word, gesture or act intended to insult the modesty of a women), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty).
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. **Protective Laws for Women:**

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. **Protective Provisions of IPC regarding Sexual Violence against Children:**

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305(abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 **The Protection of Children from Sexual Offences Act, 2012:** An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women*, New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/HRLNIndia/a-life-free-from-violence
http://hrln.rg/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) SECOND YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2019-2020

(SEMESTER : THIRD AND FOURTH)

i.e

Third Semester : November/December, 2019
Fourth Semester : April/May, 2020

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2019 AND FOURTH SEMESTER APRIL/MAY 2020, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – III

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Objective:

- To teach finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G Damodar, D Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Ode to Autumn

ii. The Road Not Taken

iii. Money Madness

iv. I, Too

Prose Section:

i. Mr. Know All

ii. Film Making

iii. Not Just Oranges

iv. A Tale on Advertising

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section-B

Q.4. Note making (**one** out of **two** is to be attempted) 4 marks
(The examiner will set **two** paragraphs based on the prescribed text for note making. The students be asked to attempt any **one** of the **two**).

Q.5. Grammer:

i. Non finite verbs 5 marks
ii. Punctuation (A short paragraph) 5 marks
iii. Do as directed (based on transformation of sentences) 10 marks

(The examiner will set **three** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities, students have done in the class are adequately covered.)

ENGLISH (Compulsory)

SEMESTER – IV

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Objective:

- To Teach Finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill.
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G. Damodar, D. Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Goodbye Party for Miss Pushpa T.S.

ii. I Will Embrace Only the Sun

iii. Refugee Mother and Child

iv. This is a Photograph of Me

Prose Section:

i. On Shaking Hands

ii. No Man is an Island

iii. Freedom of the Press

iv. An Except From Decolonizing the Mind

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section – B

Q.4. Paragraph writing (based on post-reading activities suggested in the prescribed texts)
One out of **three** is to attempted. 5 marks
(The examiner will set **three** topics for paragraphs writing from the post reading activities suggested in the prescribed texts. While selecting this question, special care must be taken to borrow ideas from the text or suitably modify them so as to identify viable topics that the students of B.A.(compulsory)can easily handle.)

Q.5. Report writing (with internal choice) 4 marks
(The examiner will give information about some social issue, an event/incident, some topic of current affairs etc. and will ask the students to write a report in about 100 words on the given topic. The information can also be given in form of a dialogue on some issue of general interest. The examiner will set this question with an internal choice).

Q.6. Grammer:
i. Using nouns as verbs or vice-versa 5 marks
ii. Combining pairs of sentences using words given in the brackets 5 marks
iii. Text-based Idioms and Phrases 5 marks
(The examiner will set **four** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities students have done in the class are adequately covered.)

****

ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-III

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 1-4
Drama : Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical work:-

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and one from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5. Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6. One short question to test the students' understanding of various aspects of Business Communication.

5 marks

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ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-IV

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 5-8
Drama : Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae, short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations.Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication. How to Prepare for an Interview & Group Discussion etc.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any four, **Two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and **one** from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. Short Survey Report (150-200 words) with internal choice. **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6. Definition/Format of modern forms of communication to be tested.
(e-mail, fax, videoconferencing) **5 marks**

****

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਬਾਰੇ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਚਿੱਠੀ ਪੱਤਰ — 8 ਅੰਕ
3. ਪੰਜਾਬੀ ਭਾਸ਼ਾ — 7 ਅੰਕ
4. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. ਪੰਜ-ਆਬ, (ਸੰਪਾ.) ਪ੍ਰੋ. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਪੰਜ -ਆਬ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ) — 4+6=10 ਅੰਕ
   (ਅ) ਨਿਬੰਧਾਂ ਦੀ ਪੁਸਤਕ ਵਿਚ ਆਏ ਸਭਿਆਚਾਰਕ ਸੰਕਲਪਾਂ (ਇਸ਼ਟ, ਅਖਾਣ, ਲੋਕਗੀਤ, ਵਿਰਾਸਤੀ ਖੇਡਾਂ, ਲੋਕ ਵਿਸ਼ਵਾਸ, ਮੇਲੇ, ਤਿਉਹਾਰ, ਗਿੱਧਾ, ਲੋਕ ਚਿਕਿਤਸਾ ਤੇ ਲੋਕਧਾਰਾ) ਬਾਰੇ ਪ੍ਰਸ਼ਨ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 5 ਅੰਕ
2. 'ਪੰਜ-ਆਬ' ਪੁਸਤਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 1 x 5= 5 ਅੰਕ
3. ਚਿੱਠੀ ਪੱਤਰ (ਦਫ਼ਤਰੀ, ਵਪਾਰਕ, ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਮਸਲਿਆਂ ਬਾਰੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ) (ਦੋ ਵਿਚੋਂ ਇਕ) — 8 ਅੰਕ
4. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਜਨਮ , ਵਿਕਾਸ ਤੇ ਵਰਤਮਾਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 7 ਅੰਕ
5. ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ
   (i) ਸ਼ਬਦ ਤੇ ਸ਼ਬਦ ਰਚਨਾ:ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ, ਭਾਵੰਸ਼: ਬੰਦ ਤੇ ਖੁੱਲ੍ਹੇ ਭਾਵੰਸ਼, ਧਾਤੂ ਤੇ ਵਧੇਤਰ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)
   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
   ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਇਕਾਂਗੀ ਤੇ ਨਾਟਕ	20 ਅੰਕ
2.	ਪੈਰ੍ਹੇ ਦਾ ਅਨੁਵਾਦ (ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ)	8 ਅੰਕ
3.	ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਛੇ ਛੱਲਾਂ (ਸੰਪਾ.) ਡਾ.ਆਤਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਕੱਲਰ, ਸਵਰਾਜਬੀਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ)	‘ਛੇ ਛੱਲਾਂ’ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	4+6 =10 ਅੰਕ
	(ਅ)	‘ਛੇ ਛੱਲਾਂ’ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਨ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	5 ਅੰਕ
2.		ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ ਕਰਨੇ)	1 x 5=5 ਅੰਕ
3.		ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ (ਲਗਭਗ 100 ਸ਼ਬਦਾਂ ਵਿਚ)	8 ਅੰਕ
4.		ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
		ਨੋਟ: ਉਪਭਾਸ਼ਾਵਾਂ ਉਪਰ ਸਵਾਲ ਸਿਰਫ ਪੂਰਬੀ ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ (ਮਾਝੀ, ਮਲਵਈ, ਦੁਆਬੀ ਤੇ ਪੁਆਧੀ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਪੁੱਛਿਆ ਜਾਵੇ। (ਦੋ ਵਿਚੋਂ ਇਕ)	
5.		ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	6 ਅੰਕ
		(i) ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਕੋਸ਼ਗਤ ਤੇ ਵਿਆਕਰਨਕ ਸ਼ਬਦ, ਵਿਕਾਰੀ ਤੇ ਅਵਿਕਾਰੀ ਸ਼ਬਦ, ਸਧਾਰਨ,ਸਮਾਸੀ ਤੇ ਮਿਸ਼ਰਤ, ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨੇਮ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	
		(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ	2+2= 4 ਅੰਕ
		ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ।(ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋਂ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ:
1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

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HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-III

Objectives: To introduce the students to the history of the region during medieval times.
Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER–SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER III AND IV)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 mark each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **HISTORY AND CULTURE OF PUNJAB 1200-C- 1700 A.D**

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Unit-I

Society and Culture in Punjab during the Turko-Afghan rule
The Punjab under the Great Mughals
Guru Nanak : His teachings, concept of Langar and Sangat

Unit-II

Salient features of the Bhakti movement
Main Features of Sufism in Punjab
Development of Sikhism (1539-1581): Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das for the development of Sikhism

Unit III

Transformation of Sikhism : Compilation of Adi-Granth; Martyrdom of Guru Arjan Dev
Guru Hargobind's New policy
Martyrdom of Guru Tegh Bahadur

Unit IV

Foundation of the Khalsa
Post Khalsa activities of Guru Gobind Singh
MAP: Important Historical Places Delhi; Lahore; Sarhind; Multan; Kartarpur; Amritsar; Kiratpur; Tarn Taran; Anandpur Sahib; Fatehgarh Sahib; Paonta Sahib; Machhiwara; Muktsar.

Suggested Readings:

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-IV

Objectives: To introduce the students to the history of the region in the later medieval period.
Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER III AND IV)

The syllabus has been divided into four Units.
There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (2) in the question paper.

One question from Unit-IV shall be set on the map.

Explanation:

Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.

The paper-setter would avoid repetition between different types of question within one question paper.

Paper: HISTORY AND CULTURE OF PUNJAB 18TH AND EARLY 19TH CENTURIES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Unit I

Banda Bahadur and his achievements
Sikh Struggle for Sovereignty from 1716-1765
Role of Dal Khalsa, Rakhi, Gurmata and Misls

Unit II

Ranjit Singh's rise to Power
Civil and Military administration
Relations with the British

Unit-III

Political Developments 1839-1845
Anglo-Sikh Wars
Annexation of the Punjab

Unit-IV

New Developments in literature, art and architecture in the Punjab region.
Social life with special reference to the position of women, fairs, festivals, folk music, dance and games in the Punjab.
MAP Important Historical Places Lohgarh; Sarhind; Gujranwala; Lahore; Amritsar; Multan; Peshawar; Sialkot; Ferozepore; Ambala; Gujrat; Mudki; Ludhiana.

Suggested Readings :

Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.

Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.

Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.

Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.

Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

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ENGLISH (Elective)

SEMESTER-III

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

William Shakespeare: *The Merchant of Venice*

LITERARY TERMS:

Drama, Myth of Dionysus, Liturgical Drama, Miracle Plays, Mystery Plays, Interlude, Mimesis, Catharsis, Tragic Hero, Organic Unity, Revenge Tragedy, Poetic Drama, Verse Drama, Myth & Drama, Ritual & Drama, Yaksgana, Theory, Indian Theory of Drama, Puppetry, Ardhnarishwra.

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks
2. Reference to the Context from the prescribed play. 15 marks
   (*The examiner will set three passages/stanzas from the prescribed play. The students will attempt any two out of these three.*)
3. Long answer type question in about 300-350 words form the prescribed text. One out of two is to be attempted. 15 marks

Section - B

4. Dialogue writing
   (*The examiner will set one descriptive passage of about 300-400 words and ask the students to re-write the same in dialogue form. The examiner, however, must ensure that the passage can easily be converted into dialogue form.*) 10 marks

5. Identifying figures of speech in sentences (unseen):
   Simile, Metaphor, Alliteration, Assonance. 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Idioms and Phrases 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

ENGLISH (Elective)

SEMESTER IV

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

An Anthology of English Verse
Ed. Department of English, Deen Dayal Upadhayaya, Gorakhpur University. New Delhi: OUP, 2004

Prescribed poems:

i. John Donne: *The Sun Rising*
ii. Alexander Pope: *From Essay on Man*
iii. Thomas Gray: *Elegy Written in the Country Churchyard*
iv. William Blake: *The Tiger*
v. William Wordsworth: *Tintern Abbey*
vi. John Keats: *Ode to a Nightingale*
vii. Tennyson: *Ulysses*
viii. Browning: *My Last Duchess*
ix. Matthew Arnold: *To Marguerite*
x. Hopkins: *Pied Beauty*
xi. A. K. Ramanujan: *History*
xii. W.B. Yeats: *A Prayer for my Daughter*
xiii. T.S. Eliot: *Journey of the Magi*
xiv. Thomas Hardy: *The Darkling Thrush*
xv. Philip Larkin: *The Trees*

LITERARY TERMS:

Allegory, Allusion, Antithesis, Epic, Epithet, Hyperbole, Internal Rhyme, Rhyme Royal, Terza Rima Metaphor, Metonymy, Medias Res, Oxymoron, Mood, Tone, Personification, Stanza, Spenserian Stanza, Satire, Free paragraph

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks

2. Short answer type question in about 50-60 words from the prescribed text. Five out of seven are to be attempted. 15 marks

3. Long answer type of questions in about 100-120 words from the prescribed text. Three out of five are to be attempted. 15 marks

Section – B

4. Precis Writing 10 marks

5. Identifying figures of speech in sentences (unseen)
   Metonymy, Epithet, Oxymoron, Epigram, Metonymy 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Choose the correct meaning of the word 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

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हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–3

पूर्णांक : 90+10=100

समय : 3 घण्टे

1. **तरंगिणी– मनोहर लाल आनन्द, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो, चण्डीगढ़।**
निम्नलिखित कवि पाठ्यक्रम में निध रित है:–
मैथिलीशरण गुप्त, जयशंकर प्रसाद, सूर्यकान्त त्रिपाठी निराला, सुमित्रानन्दन पन्त

   क) 5–5 अंकों की दो सन्दर्भ–सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाऐंगी। अंक–10

   ख) कवि–परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जायेंगे। 8 अंकों का एक ही प्रश्न करना होगा। प्रत्येक उत्तर की शब्द सीमा 200 होगी। अंक–08

2. **एक सत्य हरिश्चन्द्र– डॉ0 लक्ष्मीनारायण लाल, राजपाल एण्ड सन्ज, नई दिल्ली।**

   क) संदर्भ सहित व्याख्या के लिए दो प्रश्न पूछे जाएँगे; उत्तर एक का ही देना होगा। अंक–05

   ख) पात्रों के चरित्र–चित्रण, तत्वों के आधार पर नाटक की समीक्षा तथा समस्या संबंधी दो प्रश्न पूछे जायेंगें। 8 अंकों का एक ही प्रश्न करना होगा। (शब्द–सीमा 200) अंक–08

3. **इस खण्ड में 3–3 अंकों के तीन लघुत्तरी प्रश्नों के उत्तर देने होंगे। कुल 6 प्रश्न पूछे जायेंगे। ये प्रश्न इस पत्र के पूर्वोक्त दो खण्डों (तरंगिणी व एक सत्य हरिश्चन्द्र) पर आधारित होंगे। (शब्द–सीमा 50) अंक–09**

4. **हिन्दी साहित्य का इतिहास– रीतिकाल : (केवल काव्य–खंड) अंक–08**
रीतिकाल की परिस्थितियाँ, नामकरण, सीमा–निर्धारण, प्रवृतियाँ रीतिबद्ध और रीतिमुक्त काव्य की प्रमुख विशेषताएँ, प्रमुख कवि– केशव, बिहारी, घनानंद, के संबंध में 8 अंकों का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगें। (शब्द–सीमा 200–250)

5. **वस्तुनिष्ठ प्रश्न** **अंक–10**

इस पत्र के पूर्वोक्त तीनों खण्डों के आधर पर 1–1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

6. **समीक्षा सिद्धान्त– केवल 'नाटक'** **अंक–07**

परिभाषा, तत्व और वर्गीकरण पर आधरित नाटक से संबंध्ति दो प्रश्न पूछे जायेंगे। जिनमें से 7 अंकों का एक प्रश्न करना होगा। (शब्द सीमा 200)

7. **व्यावहारिक व्याकरण–** **अंक–15**

क)	**समाकृति, भिन्नार्थक शब्द–युग्म**	**3)**	**(चार में से तीन)**
ख)	**स्वर–सन्धि एवं व्यंजन–संधि**	**3)**	
ग)	**सन्धि–विच्छेद(केवल व्यावहारिक)**	**3)**	**(चार में से तीन)**
घ)	**वाक्य–शोध्न**	**3)**	**(चार में से तीन)**
ड.)	**विराम–चिह्न**	**3)**	

8. **तकनीकी शब्दावली (केवल प्रशासकीय शब्दावली)** **अंक–10**

(सलंग्न शब्दावली)

15 में से 10 का उत्तर देना होगा।

आंतरिक मूल्यांकन– **अंक–10**

निर्देश :–छह लेक्चर Text **के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।**

प्रशासनिक शब्दावली

1.	Acceptance	**स्वीकृति**
2.	Account	**लेखा, खाता, हिसाब**
3.	Accuse	**अभियोग लगाना**
4.	Acknowledge (fact etc.)	**अभिस्वीकार करना, मानना कबूल करना**
5.	Acknowledgement due	**रसीद, पावती सहित**
6.	Addressee	**पाने वाला**
7.	Adjournment	**स्थगन**
8.	Administration	**प्रशासन**
9.	Admissible	**ग्राह्य, स्वीकार्य**

10.	Affidavit	शपथ लेना, हलफनामा
11.	Agent	अभिकर्ता, एजेन्ट
12.	Agitation	आन्दोलन
13.	Agreement	करार, अनुबंध,सहमति
14.	Allowance	भत्ता
15.	Amenity	सुख–सुविधा
16.	Anti-Corruption Officer	भ्रष्टाचार निरोध अध्किारी
17.	Appeal	अपील, अपील करना
18.	Appointment	नियुक्ति
19.	Appoint	नियुक्ति करना
20.	Approval	अनुमोदन
21.	Article	अनुच्छेद, नियम,वस्तु
22.	Association	संघ, समाज, संगम
23.	At Par	सममूल्य पर
24.	Attendant	परिचर
25.	Attestation	साक्ष्यांकन, अनुप्रमाणन
26.	Audit	लेखा परीक्षा
27.	Ballot Paper	मतपत्र, मतपर्ची
28.	Ban	प्रतिबंध, रोक, पाबंदी
29.	Bonafide	सद्भावी, वास्तविक, असली
30.	Book –Fair	पुस्तक मेला
31.	Bureau	कार्यालय, ब्यूरो
32.	Cabinet	मंत्री मंडल
33.	Candidate	अभ्य ार्थी, प्रार्थी, उम्मीदवार
34.	Care-taker	रखवाला, अवधायक
35.	Cashier	रोकड़िया
36.	Censure	निंदा प्रस्ताव, परिनिंदा
37.	Certificate of Medical Fitness	आरोग्य प्रमाण–पत्र
38.	Character Certificate	चरित्र प्रमाण–पत्र
39.	Charge Sheet	आरोप पत्र, फर्द, जुर्म
40.	Circular	परिपत्र, गशती–चिट्ठी
41.	Circulation of Traffic	यातायात परिचालन
42.	Circus	क्रीड़ा रंग, रंगमंडप
43.	Citation	प्रशास्ति, उद्धरण, अनुलेखन
44.	City Booking Office	नगर टिकट घर, नगर बुकिंग–कार्यालय

45.	City Compensatory Allowance	नगर भत्ता
46.	Civil	नागरिक
47.	Civil Pole	नगर निर्वाचन
48.	Civil Sense	नागरिक भावना
49.	Civil-air-craft	असैनिक वायुयान
50.	Claimant	दावेदार, दावी
51.	Collector	समाहर्ता, संग्रहक, संकलनकर्ता,कलेक्टर
52.	Colony	बस्ती, उपनिवेश
53.	Colosal	विशाल, वृहत्काय
54.	Colour Blindness	वर्णान्धता
55.	Communique	विज्ञप्ति
56.	Complaint	शिकायत
57.	Complementary	पूरक
58.	Completion Report	समापन रिपोर्ट
59.	Certified Copy	प्रमाणित प्रतिलिपि
60.	Complementary Copy	उपहार प्रति,मानार्थ प्रति
61.	Composite	मिला जुला, सम्मिश्रण संशिष्ट
62.	Comprehension	व्यापक कार्य बोध
63.	Contingencies	आकस्मिक व्यय
64.	Contractor	ठेकदार, संविदाकार
65.	Confiscate	जब्त करना, अधिहरण करना
66.	Corporation	निगम
67.	Custody	अभिरक्षा
68.	Decorum	शिष्टता, शालीनता
69.	Defacto	वस्तुतः
70.	Defaulter	त्रुटिकारी, चूक करने वाला,बाकीदार
71.	Defendant	प्रतिवादी
72.	Depreciation Charge	मूल्यह्रास प्रभार,अवक्षय प्रभार
73.	Design	अभिकल्प, अभिकल्पना,रूपांकन, डिज़ाइन
74.	Dispatch	प्रेषण,रवानगी, प्रेषित करना, रवाना करना
75.	Dignitary	उच्च पदधरी, महिमान्वित
76.	Director	निदेशक
77.	Disbursement	संवितरण
78.	Discipline	अनुशासन
79.	Discrepancy	विसंगति, गलती
80.	Discretion	विवेक, विवेकाधिकार

81.	Dissent	विसम्मति, असहमति
82.	Disqualified	अयोग्य
83.	Division	विभाजन, मंडल, श्रेणी, प्रभाग, डिवीजन
84.	Eligible	पात्रता, प्राप्त,पात्र
85.	Emergency	आपात, आपात्–स्थिति, आपतिक
86.	Emigrant	उत्प्रवासी
87.	Employment	रोजगार, नौकरी, नियोजन
88.	Employment Exchange	रोजगार कार्यालय, रोजगार दफतर
89.	Employment Officer	रोजगार अधि कारी
90.	Enquiry	पूछताछ,जाँच
91.	Enrolment Number	नामांकन संख्या
92.	Enrolled	नामांकित
93.	Evacuee	निष्क्रान्त
94.	Executive Engineer	कार्यपालक अभियन्ता, कार्यपाल इंजीनियर
95.	Faculty	संकाय
96.	Finance	वित्त, रूपया लगाना
97.	Gazetted Officer	राजपत्रित अधिकारी
98.	Gazetteer	राजविवरणिका
99.	Gazetted post	राजपत्रित पद
100.	Grant	अनुदान, स्वीकार करना
101.	Incentive	प्रोत्साहन
102.	Index	सूचक, अनुक्रमणी
103.	Initials	आद्यक्षर
104.	Insured Letter	बीमा किया हुआ पत्रा
105.	Interim	अन्तरिम
106.	Intelligence	गुप्तवार्ता, आसूचना
107.	Intelligentia	प्रबुद्ध वर्ग, बुद्धिजीवी वर्ग
108.	Intensive reading	गहन पठन
109.	Intention	अभिप्राय, आशय
110.	Judgment	निर्णय
111.	Jurisdiction	अधिकार– क्षेत्र
112.	Ledger	खाता
113.	Lessee	पट्टेदार
114.	Liaision Officer	संपर्क अधिकारी
115.	Maintenance	अनुरक्षण, भरण–पोषण, रख–रखाव
116.	Major	व्यस्क, बालिग, मेजर,प्राप्तत्य

117.	Manager	प्रबंधक, व्यवस्थापक, मैनेजर
118.	Minor	अवस्यक, नाबालिग, अप्राप्तव्य
119.	Monopoly	एकाधिकारी, एकाधिपत्य
120.	Motion	प्रस्ताव
121.	Nationalization	राष्ट्रीयकरण
122.	Negotiation	संधिवार्ता, समझौते की बातचीत
123.	Note of Dissent	विसन्मति लेख, असहमति लेख
124.	Notification	अधिसूचना
125.	Oath Commissioner	शपथ आयुक्त
126.	Offender	अपराधी
127.	Permissible	अनुभेय, अनुज्ञेय,क्षम्य
128.	Planning Commission	योजना आयोग
129.	Precedence	पूर्वता, अग्रता
130.	Procedure	कार्यविधि
131.	Public	सार्वजनिक,आम,सरकारी,लोक
132.	Quorum	गणपूर्ति, कोरम
133.	Receipt	पावती, प्राप्ति रसीद
134.	Recruitment	भर्ती
135.	Receiver	पानेवाला
136.	Reminder	स्मरण–पत्र
137.	Representative	प्रतिनिधि
138.	Senior	वरिष्ठ, ज्येष्ठ
139.	Sine die	अनिश्चित काल के लिए
140.	Statutory	कानुनी, विधिक,संविधिक
141.	Stenographer	आशुलिपिक
142.	Subordinate	अधीन, अधीनस्थ
143.	Tender	निविदा,टेंडर
144.	Transfer	बदली, स्थानांतरण, अंतरण
145.	Treasurer	कोषपाल
146.	Unofficial	अशासकीय
147.	Vacancy	रिक्ति
148.	Vigilance Officer	सतर्कता अधिकारी, निगरानी अधिकारी
149.	Warrant	अधिपत्र, वारंट

हिन्दी (ऐच्छिक द्वितीय वर्ष)

सेमेस्टर–4

पूर्णांक : 90+10=100

समय : 3 घण्टे

1. तरंगिणी–मनोहर लाल आनन्द, पंजाब विश्व विद्यालय, पब्लिकेशन ब्यूरो, चण्डीगढ़ से प्रकाशित निम्न कवि पाठ्यक्रम में निधरित हैः–
महादेवी वर्मा, अज्ञेय, धर्मवीर भारती।

   क) 5–5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाएंगी। **अंक–10**

   ख) कवि परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जाएंगे। 8 अंको का एक प्रश्न करना होगा। उत्तर सीमा 200 शब्दों की होगी। **अंक–08**

2. आदर्श एकांकी संग्रह – सं. डॉ0 संसार चन्द्र, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो चण्डीगढ़ द्वारा प्रकाशित

   क) एकांकी के तत्वों के आधार पर समीक्षात्मक प्रश्न (सार–लेखन, चरित्र–चित्रण, उद्देश्य संबंधी) दो प्रश्न पूछे जायेंगे। 8 अंकों का एक प्रश्न करना होगा। **अंक–08**

   ख) संदर्भ सहित व्याख्या नहीं पूछी जाएगी।

3. हिन्दी साहित्य का इतिहास : आधुनिक काल (केवल काव्य–खण्ड)
आधुनिक काल के भारतेन्दु–युग, द्विवेदी युग,छायावाद, प्रगतिवाद, प्रयोगवाद और नई कविता की केवल प्रमुख प्रवृतियों से संबंधित 10 अंको का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगें। (शब्द सीमा–सीमा 250) **अंक–10**

4. वस्तुनिष्ठ प्रश्न **अंक–10**
इस पत्रा के पूर्वोक्त तीन खण्डों के आधार पर एक–एक अंक के दस वस्तुनिष्ठ प्रश्न करने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5.	**संलग्न 50 टिप्पणियों का अभ्यास :** **पूछी गई दस टिप्पणियों में से पाँच का उत्तर देना होगा।**	**अंक–10**
6.	**समीक्षा सिद्धान्त : केवल 'एंकाकी'** **एकांकी के तत्व, परिभाषा और वर्गीकरण से संबंधित दो प्रश्न पूछे जाएँगें। 10 अंको का केवल एक प्रश्न करना होगा। शब्द–सीमा 250)**	**अंक–10**
7.	**सार लेखन**	**अंक–8**
8.	**शासकीय पत्र लेखन (दो में से एक)**	**अंक–8**
9.	**विस्तारण**	**अंक–8**
	आंतरिक मूल्यांकन	**अंक–10**

निर्देश : 6 लेक्चर Text **के और 3 लेक्चर व्याकरण के अनिवार्य होंगे।**

50 टिप्पणियाँ

1.	A brief note is placed below	**संक्षिप्त टिप्पणी नीचे प्रस्तुत है ।**
2.	Acknowledge receipt of this	**इसकी पावती भेजिए ।**
3.	Action as proposed may be taken	**यथा प्रस्तावित कार्यवाही की जाए।**
4.	Agenda of the meeting is put up	**बैठक की कार्यसूची प्रस्तुत है ।**
5.	Application may be rejected	**आवेदन अस्वीकार कर दिया जाए ।**
6.	Approved as proposed	**प्रस्ताव के अनुसार अनुमोदित**
7.	Administrative approval may be obtained	**प्रशासनिक अनुमोदन प्राप्त किया जाए ।**
8.	Await reply	**उत्तर की प्रतीक्षा करें ।**
9.	Await further report	**और विवरण की प्रतीक्षा करें ।**
10.	Ascertain this position please	**कृपया स्थिति का पता लगायें ।**
11.	Amended draft is submitted for approval	**संशोध्ति प्रारूप अवलोकनार्थ प्रस्तुत हैं ।**
12.	Brief resume of the case is given below	**मामले का संक्षिप्त सार नीचे दिया गया है।**
13.	Call for explanation	**स्पष्टीकरण माँगे**
14.	Call for report	**रिपोर्ट मँगवाए ।**
15.	Comply with the orders	**आदेशों का पालन करें ।**
16.	Clarify the position please	**कृपया स्थिति का स्पष्ट करें ।**
17-	Copy enclosed for ready reference	**सुलभ संदर्भ के लिए प्रतिलिपि संलग्न है ।**
18.	Copy is enclosed	**प्रतिलिपि संलग्न है ।**

19.	Copy forwarded for information and Necessary action	प्रतिलिपि सूचनार्थ एवं आवश्यक कार्यवाही के लिए प्रषित है ।
20.	Case may be kept pending	मामले को अभी अनिर्णीत रखा जाए ।
21.	Delay should be avoided	विलम्ब न किया जाए।
22.	Disciplinary proceedings may be initiated	आनुशासनिक कार्यवाही शुरू की जाए ।
23.	Draft reply is put up	उत्तर का मसौदा प्रस्तुत है
24.	Enquiry may be conducted	जाँच की जाएं
25.	Expedite action	शीघ्र कार्यवाही करें ।
26.	Explanation may be called for	स्पष्टीकरण माँगा जाए ।
27.	Facts for the case may be put up	मामलों के तथ्य प्रस्तुत करें ।
28.	For perusal and return	देखकर लौटाने के लिए
29.	For comments please	कृपया टिप्पणी दें ।
30.	For sympathetic consideration	सहानुभुतिपूर्ण विचार के लिए।
31.	Forwarded and recommended	प्रेषित और संस्तुत।
32.	I concur with the proposal	मैं इस प्रस्ताव से अपनी सहमति प्रकट करता हूँ।
33.	I have no remarks to offer	मुझे कोई टिप्पणी नहीं करनी हैं ।
34.	Inform all concerned	सभी संबंध्ति व्यक्तियों को सूचित करें ।
35.	Issue a circular	परिपत्र जारी करें ।
36.	Keep pending	निर्णय के लिए रोक रखें ।
37.	Kindly accord sanction	कृपया स्वीकृति दीजिए ।
38.	Kindly confirm	कृपया पुष्टि करें।
39.	Matter is under consideration	मामला विचाराधीन है ।
40.	No action is necessary	कोई कार्यवाही अपेक्षित नहीं है
41.	Needful has been done	आवश्यक कार्यवाही की गई है ।
42.	Order may be issued	आदेश जारी किया जाए ।
43.	Please see the proceeding notes	कृपया पिछली टिप्पणियाँ देख लें ।
44.	Put up the relevant papers	संबध्ति कागज प्रस्तुत करें ।
45.	Reminder may be sent	अनुस्मारक भेजा जाए ।
46.	Report compliance immediately	अनुपालन करके तुरन्त सूचित करें ।
47.	Specific reason may be given	विशिष्ट कारण दिया जाए ।
48.	Submitted for information	सूचना के लिए प्रस्तुत है ।
49.	This may be treated as confident	इसे गोपनीय समझा जाए ।
50.	Verified and found correct	जाँचा और सही पाया ।

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ) ਭਾਗ ਦੂਜਾ, ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ — 25 ਅੰਕ
2. ਸਫ਼ਰਨਾਮੇ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਬਾਬਾ ਵਜੀਦ, ਅਲੀ ਹੈਦਰ, ਸੱਯਦ ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਸੱਯਦ ਵਾਰਿਸ ਸ਼ਾਹ, ਨਜਾਬਤ ਅਤੇ ਪੀਰ ਮੁਹੰਮਦ)
2. **ਦੁਨੀਆ ਇਕ ਮਹਿਲ ਹੈ,** ਗੁਰਬਖ਼ਸ਼ ਸਿੰਘ ਕਪੂਰ, ਕਸਤੂਰੀ ਲਾਲ ਐਂਡ ਸੰਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) "ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ" ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ –ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) "**ਦੁਨੀਆ ਇਕ ਮਹਿਲ ਹੈ**" ਸਫ਼ਰਨਾਮਾ ਪੁਸਤਕ ਦੇ ਆਧਾਰ ਉੱਤੇ ਪ੍ਰਮੁੱਖ ਥਾਵਾਂ ਤੇ ਘਟਨਾਵਾਂ ਦੇ ਵੇਰਵੇ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਸਫ਼ਰਨਾਮੇ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਸਫ਼ਰਨਾਮੇ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
(ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ: ਤੱਕ ਸੂਫ਼ੀ ਕਾਵਿ-ਧਾਰਾ ਤੇ ਕਿੱਸਾ – ਕਾਵਿ ਧਾਰਾ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਚਾਰ – ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ), ਰਸ ਸੰਪ੍ਰਦਾਇ, ਵਕ੍ਰੋਕਤੀ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ: ਟਕਸਾਲੀ ਭਾਸ਼ਾ, ਵਿਅਕਤੀ ਭਾਸ਼ਾ, ਅਪਭਾਸ਼ਾ, ਗੁਪਤ ਭਾਸ਼ਾ, ਰਜਿਸਟਰ, ਪਿਜ਼ਨ ਤੇ ਕ੍ਰਿਓਲ (ਚਾਰ ਵਿਚੋਂ ਦੋ) — 10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ) ਭਾਗ ਦੂਜਾ, ਅਪ੍ਰੈਲ/ ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ 25 ਅੰਕ
2. ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) 20 ਅੰਕ
4. ਸਾਹਿਤ ਆਲੋਚਨਾ 10 ਅੰਕ
5. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਹਾਸ਼ਮ ਸ਼ਾਹ, ਕਵੀ ਸੌਂਧਾ, ਕਾਦਰਯਾਰ, ਸ਼ਾਹ ਮੁਹੰਮਦ ਅਤੇ ਭਗਵਾਨ ਸਿੰਘ)
2. ਕਥਾ -ਪ੍ਰਵਾਹ (ਸੰਪਾ.) ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਨਿਰਧਾਰਤ ਕਾਵਿ-ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ- ਬੰਦ ਦੀ ਵਿਹਾਰਕ ਸਮੀਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
2. (ੳ) ਕਥਾ-ਪ੍ਰਵਾਹ ਪੁਸਤਕ ਵਿਚੋਂ ਘਟਨਾਵਾਂ , ਥੀਮ, ਪਾਤਰ ਚਿਤਰਨ ਤੇ ਕਥਾ ਜੁਗਤਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) 10 ਅੰਕ
   (ਅ) ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ:) ਵਾਰ ਕਾਵਿ, ਜੰਗਨਾਮਾ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) 5 x 4=20 ਅੰਕ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਤੇ ਸਮਾਜ, ਸਾਹਿਤ ਤੇ ਸਖ਼ਸ਼ੀਅਤ, ਸਾਹਿਤ ਤੇ ਸ਼ੈਲੀ, ਸਾਹਿਤ ਤੇ ਮਨੋਵਿਗਿਆਨ, ਸਾਹਿਤ ਤੇ ਵਿਗਿਆਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) 10 ਅੰਕ
6. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਉਪਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਭਾਸ਼ਾ ਤੇ ਉਪਭਾਸ਼ਾ, ਉਪਭਾਸ਼ਾ ਦੀਆਂ ਪਛਾਣ ਵਿਧੀਆਂ। 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
5. ਸੰਘਾ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿੱਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਉਹੀ, 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
10. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

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संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष

SEMESTER-III

Paper - Sanskrit : **श्रीमद्भगवद्गीता एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को भारतीय दर्शन के अद्वितीय ग्रन्थ रत्न श्रीमद्भगवद्गीता (चतुर्थ अध्याय) में प्रतिपादित निष्काम कर्मयोग, समत्व योग में स्थित योगी पुरुषों का आचरण एवं उनकी महिमा, विभिन्न प्रकार के ज्ञानयज्ञ तथा ज्ञान का महत्त्व इत्यादि विषयों का अध्ययन करवाना ।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) गीता (चतुर्थ - अध्याय) (दो सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **2X10= 20 अंक**

(ख) गीता (चतुर्थ अध्याय) पर आधारित समीक्षात्मक लघुप्रश्न **05 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : वस्त्र, आभूषण एवं श्रृंगारपरक (15 में से 10 शब्दों की संस्कृत) **10X 1 = 10 अंक**

1. कंबल-कम्बलः	2. कुरता-कञ्चुकः	3. कोट-प्रावारः
4. चादर-प्रच्छदः, शय्याच्छादनम्	5. जूता-उपानत्	6. तकिया-उपधानम्
7. दरी-आस्तरणम्	8. दुपट्टा-उत्तरीयम्	9. धोती-अधोवस्त्रम्,
10. पगड़ी-शिरस्त्रम् उष्णीकम्	11. परदा-यवनिका	12. पायजामा-पादयामः
13. पैंट-आप्रपदीनम्	14. रुमाल-करवस्त्रम्	15. शेरवानी-प्रावारकम्
16. साड़ी-साटिका	17. स्वेटर-उर्णावरकम्	18. कपड़ा-वस्त्रम्, वसनम्, चीरम्
19. अंगूठी-अङ्गुलीयकम्, मुद्रिका	20. कंगना-कंकणः	21. कान की बाली-कुण्डलम्
22. गहना-अलङ्कारः, आभरणम्	23. घुंघरू -किंकिणी	24. चूड़ी-काचवलयः, काचवलयम्
25. नथ-छोलिका	26. पाजेब-नूपुरः, नूपुरम्	27. बाजूबंद (ब्रेस लेट)-केयूरम्
28. हार-हारः	29. सोने का कड़ा-कटकः	30. आयना (शीशा)-दर्पणः, आदर्शः

31. इत्र (सैंट)-गन्धतैलम्	32. उबटन - उद्वर्तनम्	33. कंघी-प्रसाधनी
34. काजल-अञ्जनम्, कज्जलम्	35. क्रीम-शरः	36. ड्रेसिंग टेबल-शृंगारफलकम्
37. तिलक-तिलकम्	38. दाँत का ब्रुश-दन्तधावनम्,दन्तकूर्चः	39. नेल पोलिश-नखरंजनम्
40. बिन्दी-बिन्दुकः	41. पाउडर-चूर्णकम्	42. मंजन-दन्तचूर्णम्
43. मेहदी-मञ्जिष्ठा	44. लिपस्टिक-ओष्ठरंजनम्	45. साबुन-फेनिलम्, फेनकम्
46.. सिंदूर-सिन्दूरम्	47. दांत कूरेदने की सूई-दन्तशोधनी	48. महावर-अलक्तका
49. रूज-कपोलरंजनम्	50. सिंगारदान-शृंगारधानम् , शृंगारपिटकम्	

UNIT-III

(घ) व्यञ्जन सन्धि **5x1=05अंक**

(ङ) द्वन्द्व- समास **5x1=05अंक**

(च) तद्धित प्रत्यय : अण् , मतुप् , तरप् , तमप् - केवल उदाहरण ही प्रष्टव्य हैं) **5x1=05अंक**

UNIT-IV

(छ) शब्दरूप : तत् , एतत् , यत्(तीनों लिंगों में) राजन् तथा चन्द्रमस् **2x5=10अंक**

(ज) धातुरूप : अस् , दा, कुप् , शक् , प्रच्छ्, मिल् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(झ) छन्द : अनुष्टुप् , वंशस्थ, इन्द्रवज्रा, उपेन्द्रवज्रा, उपजाति (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **2x5=10अंक**

UNIT-V

(ञ) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष

SEMESTER-IV

Paper - Sanskrit : **नाटक एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- संस्कृत नाट्यविद्या के स्वरूप और प्रवृत्तियों से परिचित कराना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) दूतवाक्यम् - भास (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **3x10=30 अंक**

(ख) समीक्षात्मक लघु प्रश्न, पात्र चरित्र चित्रण, लेखक परिचय, रचनाएँ व दूतवाक्यम् की विषयवस्तु **5 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : अन्न, भोजन एवं तत्सम्बद्ध पात्र (15 में से 10 शब्दों की संस्कृत) **10x1=10 अंक**

1. अरहर-आढकी
2. उड़द-माषः
3. गेहूँ-गोधूम:
4. गेहूँ का आटा - गोधूमचूर्णः
5. चना-चणकः
6. जौ-यवः
7. चावल-तण्डुलः, व्रीहिः
8. ज्वार-यवनालः
9. तिल-तिलः
10. दाल-द्विदलम्
11. धान-धान्यम्, शालिः
12. बाजरा-प्रियङ्गुः
13. बेसन-चणकचूर्णम्
14. मसूर-मसूरः
15. मूंग-मुद्गः
16. सत्तु-सक्तुः
17. सरसों-सर्षपः
18. हल्दी-हरिद्रा
19. अचार-सन्धितम्
20. गरम भोजन-उष्णभोजनम्
21. खिचड़ी-कृशरः
22. चटनी-अवलेहः
23. चिकना-चिक्कणम्
24. ठंडाभोजन-शीतभोजनम्
25. भरता-भर्ता
26. भात-ओदनः, ओदनम्
27. मट्ठा-तक्रम्
28. रसोई-रसवती, पाकशाला, महानस
29. रायता-राज्यक्तम्
30. रोटी-रोटिका
31. शक्कर-शर्करा
32. समोसा-समोषः
33. सौंफ-मधुरः
34. हींग-हिंगुः
35. अंगीठी-हसन्ती
36. कटोरा-कटोरम्
37. कड़ाही-कटाहः, स्वेदनी
38. कांच का गिलास - काचकंसम्, काचचषकः

39. गिलास-कंसम् , चषकः	40. घड़ा-घटः, कुम्भः	41. चम्मच-चमसः
42. चीमठा-सन्दंशः	43. टव-द्रोणी	44. थाली-स्थालिका, थालिका
45. प्लेट - शरावः	46. बाल्टी-उदञ्चनम्	47. लोटा-करकः
48. स्टोव-उद्ध्मानम्	49. बेलन-वेलनम्	50. चाकू-छुरिका

UNIT-III

(घ) तत्पुरुष - समास **5x1=05अंक**

(ङ) कृदन्त प्रत्यय : क्त, क्तवतु , क्त्वा तथा तुमुन् प्रत्यय **5x1=05अंक**

(गम् , पठ् , पत् , क्रीड् , वद् , पा, लिख् , नी, दृश् , भू , त्यज् , स्मृ , अस् , दा, कुप् , शक् , प्रच्छ् , मिल् , कृ , क्री , ग्रह , ज्ञा , श्रु , कथ् - इन धातुओं के योग में)

(च) शब्दरूप : किम् व सर्व (तीनों लिंगों में), महत् व बलवत् (पुलिङ्ग में) एवं कति **2x5=10अंक**

UNIT-IV

(छ) धातुरूप : कृ, क्रीञ् , ग्रह् , ज्ञा, श्रु तथा कथ् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(ज) कारक (केवल सामान्य नियम-अशुद्ध वाक्यों को शुद्ध करना) **5x1=05अंक**

UNIT-V

(छ) छन्द : शिखरिणी, मन्दाक्रान्ता, मालिनी, वसन्ततिलका तथा भुजंगप्रयात (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **10अंक**

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

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URDU (Elective)

SEMESTER-III

Prose and Poetry

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

i. Explanation of Verses(Ghazaliat) :
Mir Taqi Mir, Khwaja Mir Dard, Ibrahim Zauq, Mirza Asadullah Khan Ghalib, Momin Khan Momin, Hasrat Mohani, Raghupati Sahay Firaq Gorakhpuri.

20 marks

ii. Explanation of Nazms:

Search Results		
Allama Iqbal	-	Chand aur Tare, Mulla aur Bahisht
Nazir Akbrabadi	-	Mele ki Sair
Brij Narayan Chakbast	-	Ramayan ka ek Scene

10 marks

Unit-II

Explanation of prose:			
Mir Amman	-	Sair Pehle Darvesh Ki	
Sir Syed Ahmed Khan	-	Sarab-e-hayat	
Farahatullah Baig	-	Murda Badast Zinda Ast	
Munshi Prem Chand	-	Roshni	
Rashid-ul-Kheri	-	Toonfan-e-Hayat Ka Ek warq	30 marks

Unit-III

Central idea of a lesson or nazm (from Unit I & II above) 15 marks

Unit-IV

Introduction and literary contribution of the poets & prose writers
Poets: Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Nazir Akbarabadi
Prose writers : Sir Syed Ahmed Khan, Altaf Hussain Hali, Munshi Prem Chand 15 marks

Books Prescribed:

1. Khyaban-e-Adab by, Azimul Haq Junedi, Educational BookHouse, AMU Market, Aligarh.

URDU (Elective)

SEMESTER-IV

Novel: Ek Chadar Maili Si

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

Novel - One question each on its Plot and Characters 30 marks

Unit-II

Explanation of Paragraph from Novel 30 marks

Unit-III

Rajinder Singh Bedi Ki Novel Nigari Ki Khususiyat

Or

Novel Ke Ajza-e-Tarkibi 15 marks

Unit-IV

Unseen paragraph (candidate will be asked three questions from it) 15 marks

Books Prescribed :

1. Ek Chadar Maili Si, by Rajinder Singh Bedi.

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PERSIAN (Elective)
SEMESTER-III

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2019-2020.

Paper-A : Prose

Marks : 90
Internal Assessment : 10
Time : 3 hours

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye-Kutah.	20 marks
4.	Simple direct questions on the life and works of the authors.	30 marks

Books prescribed

Nisabe Jadide Farsi
(Published By Jayyad Press Ballimaran Delhi)
Only following portions from Prose Section.

i. Intekhab-e-Sarzamin-e-Hind-Ali Asghar Hikmat.

ii. Dastan-e-Kutah by Mohammad Hejazi.

PERSIAN (Elective)

SEMESTER-IV

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2019-2020.

Paper-B : Poetry

Marks : 90
Internal Assessment : 10
Time : 3 hours

Distribution of marks :

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Central idea of the poem.	20 marks
4.	Simple direct questions on the life and works of the poets as prescribed in the text.	30 marks

Books prescribed

Nisab-e-Jadeed-e-Farsi(Published by Jayyad Press Ballimaran, Delhi). Only following portions from Prose Section.

Az Gzalliyat-e-Hafiz

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.

Saaqi Benur Badah Bar Afrooz Jam-e- Maa.

Doosh deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:

Jan Ze Tan Burdi-o- Dar Jaani Hunooz.

Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

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FRENCH (ELECTIVE)

SEMESTER-III

WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 Marks

II (a) Questions (including General and based on Civilization) from the prescribed Text book (of 3 marks each). 15 Marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 20 Marks

(c) Composition based on the subject or theme from the text. 10 Marks

(d) Comprehension of an unseen text .
Ten questions to be put in French and to be answered in French. 10 Marks

III Prose:
Direct simple questions based on the prescribed text (Saison-2, Dossier 0-4) to be asked and answered in French, Questions should be of 5 marks each. 20 Marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Saison-2 (Dossier 0-4) Méthode de Français par Marie-Noëlle Cocton, Anneline Dintilhac, Dorothée Dupleix, Delphine de Ripaux, Anouchka Oliveira, Les Editions Didier, 2014

- Livre de I' élève
- Cahier d' exercices

Poetry:

Comprehension, explanation, literary, appreciation and criticism of the poems.

The following 5 poems to be studied:

1. PIERRE DE RONSARD
   Recueil : *Odes*
   Mignonne, allons voir si la rose

http://poesie.webnet.fr/lesgrandsclassiques/poemes

2. Victor HUGO
   Recueil **:** *Les contemplations*
   Demain, dès l'aube

http://poesie.webnet.fr/lesgrandsclassiques/poemes

3. Jacques PREVERT
   Recueil : *Paroles*
   Le cancre

http://www.unjourunpoeme.fr/poeme/le-cancre

4. Jacques PREVERT
   Recueil : *Paroles*
   Déjeuner du Matin

https://vivelapoesie.wordpress.com/

5. Paul VERLAINE
   Il pleure dans mon cœur

http://poesie.webnet.fr/lesgrandsclassiques/poemes/paul verlaine

Prose:- Tintin Au Tibet, Casterman

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. 3rd Semester.

2. All questions are to be asked and answered in French.

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (ELECTIVE) 4TH SEMESTER:

CREATIVE WRITING AND EXPRESSION, GRAMMAR IN CONTEXT

Max. Marks : 100
Theory : 60 Marks
Internal Assessment: 10 Marks
Viva : 30 Marks
Time : 3 hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 15 Marks

II Prose:
Direct simple questions based on the prescribed text to be asked and answered in French, Questions should be of 5 marks each. 15 Marks

III (a) Questions (including General and based on Civilisation) from the prescribed Text book (of 3 marks each). 15 Marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the text book. 15 Marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book : Saison (Units 5-9) Méthode de Français par Marie-NoëlleCocton, Anneline Dintilhac, Dorothée Dupleix, Delphine de Ripaux, Anouchka Oliveira, Les Editions Didier, 2014.

(a) Livre de l'éléve
Cahier d'exercices

Poetry :

To be studied: Comprehension, explanation, literary appreciation of the poems.

The following 5 poems to be studied:

1. Charles BAUDELAIRE
   Recueil : *Fleurs du mal*
   L'Albatros
   http://fleursdumal.org/poem/200

2. Charles BAUDELAIRE
   Recueil : *Fleurs du mal*
   L'Homme et la mer
   http://www.eternels-eclairs.fr/poemes-baudelaire

3. Alphonse de LAMARTINE
   Recueil *: Nouvelles méditations poétiques*
   Le papillon
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Gérard de NERVAL
   Recueil : Odelettes
   Le point noir
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

5. *Jean-Pierre Claris de FLORIAN*
   Recueil : Chanson
   Plaisir d'amour
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

Prose :- Raymond Queneau 'Exercice de style'…Only the following topics/papges are to be studied.

Sr. No.	Title	Page No.
1.	Surprises	13
2.	Rêve	14
3.	L'arc-en-ciel	17
4.	Hésitations	20
5.	Précisions	22
6.	Récit	27
7.	Négativité	29
8.	Lettreofficielle	36
9.	Analyselogique	40
10.	Insistence	42
11.	Ignorance	45
12.	Présent	48
13.	Imparfait	50
14.	Moi je	57
15.	Exclamations	59
16.	Alors	61
17.	Interrogatoire	65
18.	Comédie	67
19.	Philosophique	75
20.	Impuissant	138

All questions are to be asked and answered in French.

Viva:	30 Marks
Reading:	
Seen	10 Marks
Unseen	10 Marks
Conversation	10 Marks

For the information of private candidates:
1 Viva is compulsory
2. The theory paper would be proportionately marked out of 70 as there is no internal assessment.

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GERMAN (Elective)

SEMESTER-III

Summary

Max. Marks	:	100 marks (Total)
Paper-A(Theory)	:	90 marks
Internal Assessment	:	10 marks

Paper A-Theory: 90 marks
Time: 3 hours
Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks) conforming to prescribed text-book "Lagune-2": Chapters1-17 upto page 87 50 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-2": Chapters 1-17 upto page 87 20 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book "Texte zum Lesen und Nacherzählen", from pages 1-12 20 marks

Internal Assessment **10 marks(Total)**

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 1-17 upto page 87.
ii. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, upto page 12.

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters1-17

GERMAN (Elective)

SEMESTER-IV

Summary

Max. Marks	:	100marks(Total)
End Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) examination	:	30 marks
Internal Assessment	:	10 marks

Paper B-Theory : 60 marks(Total)

Time : 3 hours

Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks)confirming to prescribed text-book "Lagune-2": Chapters 18-34 30 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed text-book "Lagune-2": Chapters 18-34 15 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book " Texte zum Lesen und Nacherzählen", from pages 12-21 15 marks

Oral (viva-voce) Examination : 30 marks(Total)

i. Conversation in German
ii. Reading of a simple unseen text and answering questions there-on

Internal Assessment : 10 marks(Total)

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

iii. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 18-34.
iv. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, page 12-21.

Supplementary book:

ii. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 18-34

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RUSSIAN (Elective)

SEMESTER-III

Paper-A (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 100**
			Theory	**: 90 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) **15 marks**
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) **15 marks**
3. Simple applied grammar: 3 question out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
4. Question on prescribed texts in Russian : 3 questions out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
5. Composition (One out of three) on the following topics: **15 marks**
   1. My friend 2. My Country 3. My favorite writer 4. Our Library
6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper **15 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 31-37)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary
   Russian-English dictionary

RUSSIAN (Elective)
SEMESTER-IV

Paper-B (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 70**
			Theory	**: 60 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 80 words) **10 marks**

2. Translation from simple English/Hindi/Punjabi into Russian (about 75 words) **10 marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) **12 marks**
(Covered in Lessons 38-45, Wagner)

4. Questions on prescribed texts in Russian : 4 questions out of 6 **08 marks**
(2 marks each)
(Covered in Lessons 38-45, Wagner)

5. Composition (One out of three) on the following topics: **10 marks**
1. Our City 2. Our University 3. A Cultural evening 4. Journey/Excursion

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper **10 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 38-45)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary.
Russian-English dictionary.

(iii) **Oral/Practical** **Maximum Marks:30**

Reading of text(s) and conversation in simple Russian

1. V. N. Wagner: Russian, PPH, New Delhi.(Lessons 31-45)

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SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabi for B.A.(GENERAL)
SECOND YEAR (SEMESTER SYSTEM) has been
KEPT IN ABEYANCE

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PHYSICAL EDUCATION

B.A. (GENERAL) THIRD SEMESTER EXAMINATION, 2019-2020

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Psychological Basis of Physical Education :

- Meaning of Psychology and Sports Psychology.
- Psychological factors effecting physical performance.
- Meaning of Learning.
- Laws of Learning.
- Learning curve, its types, characteristics and implications in Physical Education and Sports.
- Psychological characteristics and problems of an adolescent.
- The role of Physical Education and Sports in solving the problems of an adolescent.

UNIT-III 12 Marks

Motivation:

- Meaning, definitions, types and methods of motivation.
- Importance of motivation in Physical Education and Sports.

Transfer of Training:

- Meaning, definitions, types and factors affecting transfer of training.

UNIT-IV 12 Marks

Personality:

- Meaning, definitions, characteristics, dimensions and traits of personality.
- Factors affecting development of personality (Heredity and Environment).
- Role of physical activities in Personality Development.

Sports and Socialization:

- Meaning and definitions of socialization, socialization through sports.

UNIT-V 12 Marks

Politics, Economy, Media and Sports Performance :

- Role of politics and economy in the promotion of games and sports.
- Role of media in promotion of sports.
- Causes of deterioration and suggestions for the improvement of Sports Performance.

Softball:

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of field.
- Rules and regulations (number of players, number of officials required and general rules of play).
- Major tournaments of the game.

References :

1. Blair Jones & Simpson :*"Educational Psychology ",* The MacMillan Co., New York, 1962.
2. Brown, R. : *"Social Psychology",* Free Press, New York, 1965.
3. Bucher, Charles A. : *"Foundations of Physical Education",* St. Louis, 1979, The C.V. Mosby Company.
4. Conger, J.J.: "*Adolescence and Youth : Psychological Development in a Changing World,"* 22nd Edition, 1977, Harper and Row, New York.

5. Cratty, B.J.: *" Psychology and Physical Activity"*, Englewood Cliffs, N.J., Prentice Hall, 1968

6. Hollander, E.P.: *" Principles and Methods of Social Psychology"*, New York, 1971, Oxford University Press.
7. Linsa, M.I., *"Child-Adults, Peers : Patterns Communication",* Progress Publishers, Moscow, 1985.
8. Linggren, H.E.: *" Educational Psychology in the Class Room"*, John Wiley & Sons, New York, 1962.

9. Loy, John W. and Kenyon Gerald, S. *: "Sport, Cultural and Society : A Reader on the Sociology of Sport",* London, 1969, The MacMillan Co.
10. Hurlock, E.B. : *"Adolescent Development",* Appleton Century Crofts, New York,1956.

11. Rushall, Brent S. and Siedentop : *"The Development and Control of Behaviour in Sport and Physical Daryl Education"*, Philadelphia, 1972, Lea and Febiger.
12. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

13. Singh, Ajmer et. al. : *Modern Text Books of Physical Education, Health and Sports,* Kalyani Publishers, Ludhiana, 2000.
14. Talamini, John T. and Page & Charles, H. : *"Sport & Society – An Anthology",* Boston, 1973, Little Brown Co.
15. Walia, J.S. : *"Foundations of Educational Psychology",* Paul Publishers, Jalandhar City, 1992.

16. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Massachusetts.

PRACTICAL

Max.Marks : 35
Practical : 30
Internal assessment: 5

ATHLETICS

a) History of athletics
b) List of track and field events
c) Marking of standard track, width of lanes and starting points for various races.

LONG JUMP:

(a) Approach run (b) Take off (c) Flight (d) Landing (e) Brief information of various styles and practice of any one style depending upon the facilities available (f) Rules and regulations of the long jump.

PHYSICAL FITNESS TESTS:

More emphasis shall be given on physical fitness with regard to specific physical fitness components (Endurance and Strength).

Test 1 : ENDURANCE : 9/12 min. run and walk test.
Test 2 : STRENGTH : Standing broad jump test.

Division of Practical Marks*:* Marks for each activity shall be divided as under:

Athletics 10 Marks, Participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory and practical papers shall consist of 65 and 35 marks each.
5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students :***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods :***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. ***Teaching Work Load :***

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. ***Division of Marks (Theory and Practical) :***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

PHYSICAL EDUCATION
B.A. (GENERAL) FOURTH SEMESTER EXAMINATION, 2019-2020

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Respiratory System :

- Meaning of Respiration, types of Respiration, Organs of the Respiratory System.
- Functions of the Respiratory System. Vital capacity and its measurement.
- Mechanism and Neural Control of Respiration.

Digestive System :

- Meaning, Importance and Organs of Digestive System.
- Functions, processes, mechanism and nerve regulators of Digestive System.

UNIT-III 12 Marks

Circulatory System :

- Meaning of the circulatory system.
- Heart, its structure, functions and control of the heart rate.
- Various types of blood vessels and their functions.
- Cardiac Cycle.

Blood :

- Meaning, functions and composition of blood.
- Maintenance of blood supply.
- Blood groups and their importance.
- Blood Clotting.

UNIT-IV 12 Marks

Communicable Diseases :

Meaning of a communicable disease. Communicable diseases such as HIV/AIDS, Viral Hepatitis—A, B & C and Tetanus, their modes of transmission and methods of prevention.

Yoga:

- Meaning and aim of Yoga.
- Meaning, Principles and Importance of Asanas.
- Meditative poses (Padamasna, Vajrasana, and Sukhasana), their technique, precautions and effects/advantages.
- Cultural poses (Savasna, Halasana, Bhujangasana Sarvangasana, and Dhanurasana), their technique, precautions and effects/advantages.

Basics of Tennis :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking / layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna awardees of the game.

UNIT-V 12 Marks

Sports Injuries :

- Basis of Sports Injuries.
- Common Sports Injuries, such as sprains, strains, fracture, dislocation, abrasions, contusion, bruise, tennis elbow. Their causes, preventive and remedial measures.
- Treatment and care (RICE) of sports injuries.

Disability and Rehabilitation :

- Meaning, types, causes and preventive measures of disability.
- Problems of the disabled. Physical Activity and health for disabled.
- Meaning and scope of Rehabilitation.

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.
2. Dandiya, P.C., Jafer, Z.Y. K. and Jafer Afifa: *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.
3. Govt. of India : *"Occupational Diseases : A Guide to Recognition and Notification",* Chief Adviser Factories, Ministry of Labour and Employment, New Delhi, 1955.
4. Park, J.E. & Park, K. : *"Text Book of Preventive and Social Medicine",* 10th Edition, 1985, Banarsi Dass Bhanot, Jabalpur, India.
5. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Assistant Professors",* Lend : Edward Arnold Ltd., 1983.
6. Rao, M.N. and Lundgren, N.P.V. : *"A Review of Occupational Health Research in India",* ICMR, New Delhi, 1955.
7. Rose & Wilson : *"Foundations of Anatomy and Physiology",* 5th Edition, 1981, Reprinted in 1985.
8. Winter Griffith, H. : *"Complete Guide to Sports Injuries",* First Indian Edition, 1989, Metropolitan Book Co. Pvt. Ltd., New Delhi.
9. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999- 2000, Birla Publications, Delhi.
10. Singh, Ajmer et. al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.
11. Smith, Olive and F. Guthrie : *"Rehabilitation and Remedial Exercise",* Bailliere, Tindall and Cox Limited, London, 1949.
12. Sri Anand : *"The Complete Book of Yoga : Harmony of Body and Minds",* Orient Paper Back, New Delhi, 1980.
13. Staford, T. & Ellen Davis Kelly : *"Preventive and Corrective Physical Education",* Third Edition, 1958, Ronald Press Co., New York.
14. Swami Kuvalyananda : *"Kaivalyadhama",* Lonavala, Bombay, 1933.
15. Vijayendra Pratap : *"A Teacher's Guide for Beginning Yoga",* First Edition, 1987, Sky Foundations, Philadelphia, Pennsylavania, U.S.A.
16. World Health Organisation : *"Health Hazards of the Human Environment",* Geneva,1962.

PRACTICAL

Max. Marks	:	35
Practical	:	30
Internal Assessment	:	05

GAMES

Basketball or Ball badminton and any other one game of the choice of the student.

Basketball

(a) Measurements (Basket ball ground).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental and basic skills.

Football

(a) Measurements (Field & ball).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental Skills.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.
(ii) This subject should be offered to the normal students (not to disabled one).
(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.
(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students:***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. ***Infrastructure/facilities and Supporting personnel:***

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods:***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6.Teaching Work Load:

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. ***Division of Marks (Theory and Practical):***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper-III : FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer type question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from Units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV; and 75 words for each short answer type in Unit V.

Objectives :

1. To acquaint the students with major foundations underlying Education.
2. To enable the students to understand the concept of Philosophy of Education.
3. To enable the students to understand the concept of Educational Sociology and Educational Technology.
4. To enable the students to understand major Philosophies and their Educational implications.

COURSE CONTENTS :

UNIT-I

Philosophical, Sociological, and Technological Foundations of Education—Concept and their Role in Education.

UNIT-II

Philosophy of Education – Definition, Nature and Scope.

Difference between Educational Philosophy and Philosophy of Education.

UNIT-III

Educational Sociology – Definition, Nature and Scope.

Information and Communication Technology—Role in Education.

UNIT-IV

Major Philosophies of the World—Idealism, Naturalism and Pragmatism—Main Features and their Contribution to Education.

Books Recommended :

1. Aggarwal, J.C. : *Theory and Principles of Education,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

2. Bhatia, K.K. and Narang, C.L. : *Philosophical and Sociological Bases of Education,* Tondon Publications, Ludhiana, 2002.

3. Sataya, R.N. and Shaida, B.D. : *Development of Educational Thought and Practice,* Dhanpat Rai Publishing Company (P.), New Delhi, 1996.

4. Taneja, V.R. : *Foundations of Education,* Mohindra Capital Publishers, Panchkula, 1998

5. Singh, K. : *Vidiyak Manovigian,* Gujral Book Depot, Patiala, 1999.

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-IV

Paper-IV : PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in Unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for Units I, II, III, IV and 75 words for each short answer question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV and 75 words for short answer type question in Unit V.

Objectives :

1. To enable the students to understand the perspective roles of heredity and environment in educational development of a child.

2. To enable the students to understand the concept of personality and its place in Education.

3. To make the students familiar with the concept of Special Education; the special needs of the Gifted, Backward and Delinquent Children and their Educational implications.

4. To make the students familiar with the concepts of Emotions, Stress and Stress management among adolescents.

COURSE CONTENTS :

UNIT-I

Difference between Psychology and Educational Psychology, Significance of Educational Psychology.

Heredity and Environment – Concepts and their role in Educational development.

UNIT-II

Personality : Concept, Assessment and its Educational Implications.

UNIT-III

Special Education : Meaning and Concept.

Types of Exceptional Children with special reference to the Gifted, Backward and Delinquents (Their Characteristics and Educational Implications).

UNIT-IV

Emotions and Stress – Concept, Types of Stress (Physical, Psychological and Social), Stress Management with Special Reference to Adolescents.

Books Recommended :

1. Batra, Promod : *Simple Ways to Manage Stress,* Think Inc., Delhi, 1997.
2. Carewell, M., Clark, L. & Meldrum, C. : *Psychology,* Harper Collins Publishers Ltd., London, 2000.
3. Clare, Sylvia : *Emotions –Releasing Your Child's Potential,* UBS Publishers and Distributors, New Delhi, 2003.
4. Chauhan, S.S. : *Advanced Educational Psychology,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.
5. Dhaliwal, A.S. : *Vidyak Mnovigian,* Punjabi University, Patiala, 2001.
6. Dutt, Sunil & Sodhi, G.S. : *Teaching Learning – A Process Approach,* Samir Publications, Chandigarh, 1995.
7. Goleman Daniel : *Emotional Intelligence,* Baanam Books, New York, 1995.
8. Kirk, Semual : *Educating the Exceptional Child,* I.B.H. Publishing Co., Calcutta, 1992.
9. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
10. Panda, K.C. : *Education of Exceptional Children,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

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ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

Semester –III

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To acquaint students with the psychology of adult learner and the strategies employed to motivate them.

2. To impart knowledge to students on adult characteristics and their psychology.

3. To impart knowledge on suitability of teaching – learning material and audio visual material used by new – literates, preraks and Nodal Prerakes.

4. To acquaint students with various agencies involved in adult education program.

5. To provide knowledge to students regarding concept, need, methods and procedures involved in monitoring process.

6. To impart knowledge to students on the concept, meaning, scope and significance of Adult Education.

7. To acquaint students with the knowledge, how adult education play an important role in social and economic development.

THEORY

UNIT I

(i) Characteristics of Adult and Psychology of Adult Learners involved in Adult Literacy Program.

(ii) Roll of Motivational Strategies in Adult Educational Program.

UNIT II

(i) Suitability of Teaching – Learning and Audio – Visual Material used for Neo-Literates.

(ii) Suitability of Training Material for Preraks and Nodal Preraks.

UNIT III

(i) Agencies of Adult Education: Government, Private.

(ii) Monitoring of Adult Education Program: The Paradigm Content, General Consideration, Need for Monitoring.

UNIT IV

(i) Meaning of Adult Education, its Scope, Aims and Significance.

(ii) Role of Adult Education in Social and Economic Development.

Practical/Field Work:

Max Marks : 50 Marks
External : 45 Marks
Internal : 5 Marks

Participation of the Students in the following:

1. Survey of the Area - A brief report.
2. Planning and Organization of Awareness Generating Activities for Adults.

ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
Semester –IV

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III & IV) are of 9 marks (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE :

The main objective of the paper are :

1. To provide an overview on History of Adult Education in India.
2. To impart knowledge to students on various Target Groups involved Under Adult Literacy Programs.
3. To expose students with the Teaching Learning Methodologies for teaching Adults.
4. To acquaint students with the Role and Responsibilities assumed by Preraks and Nodal Preraks.
5. To expose students with Concepts and Strategies involved under Total Literacy Campaign.
6. To acquaint students with the knowledge of various agencies involved in Adult Education Programs.
7. To expose students with the Preparation and Planning of Continuing Education and Awareness Generating Programs.
8. To impart knowledge to students on Linkage of Adult Education with Development.

THEORY

UNIT-I

(i) History of Adult Education in India.

(ii) Target Groups involved under Adult Education Programs.

UNIT-II

(i) Methodology of Teaching Adults in Adult Literacy Programs

(ii) Role of Preraks and Nodal Preraks in Adult Education.

UNIT-III

(i) Total Literacy Campaign : Its Concept and Strategies.

(ii) Agencies Involved under Adult Education : Government and Non-Government.

UNIT-IV

(i) Preparation and Planning of Adult Education Programs : Continuing Education and Awareness Generating Programs.

(ii) Adult Education and its Linkage with Development.

Practical/Field Work:

Max Marks	:	50 Marks
External	:	45 Marks
Internal	:	5 Marks

Participation of the Students in the following:

1. Visits to the 5 Government and Non-Government Agencies – A brief Report in the form of file to be submitted in the practical exam.

2. Preparation of Teaching – Learning Aids used for Teaching Adults.

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MUSIC (Vocal)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto ten students in one section in practical class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. The candidate can take vocal music along with instrumental music.

6. The candidate can also take instrumental music with tabla.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit**. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

Paper-A: THEORY (3 Hours duration) : 45 marks
(Duration 45 minutes 06 practical+ 02 Theory periods per week)

Paper-B: Practical (20 minutes duration) : 45 marks

(i) Viva : 35 marks
(ii) Harmonium : 05 marks
(iii) Tabla : 05 marks

Internal Assessment (Theory + Practical) (05 +05) : 10 marks

Total : 100 marks

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Brief knowledge of Gram.
2. Kanth Sadhana.
3. Gharana: definition and importance

Unit–II

1 Knowledge of Alap, and its various forms.
2 Explain the following: - Upaj, Mukhda, Bol-Baant, Khatka, Murki, Kan.
3 Knowledge of Lakshans of Ragas in Modern Period.

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.

(i) Ustad Alladiya Khan
(ii) Pt. Bhimsen Joshi
(iii) Sh. Krishan Rao Shankar Pandit.

Unit–IV

1 Description and Notations of the prescribed Ragas and Talas : -

(i) To write drut khyal in any one of the prescribed ragas :-Malkauns, Bhairav with Alap and Taans
(ii) To write prescribed ragas of the syllabus with Alap and Taans
(iii) To write the notation of Tala :- Jhaptala, Chartala (single & double)
(iv) To write the description of detailed and non detailed Ragas: Chandrakauns, Kalingda.

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas:Malkauns, Bhairav.
2. One lakshana geet/ Sargam geet in any prescribed ragas
3. Ability to play Kehrva on Tabla
4. Ability to recite following talas by hand: Tilwada, Chartala
5. Ability to play on Harmonium at least three alankaras based on Shudh swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Chandrakauns, Kalingda.
8. Ability to sing one Drut khayal of your course with harmonium.

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	Sangeet Kala ka Itihas	:	Panna Lal Madan

MUSIC (Vocal)

SEMESTER-IV

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There should not be more than eight students in a batch for practical examination.

3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

4. The candidate can take vocal music along with instrumental music.

5. The candidate can also take instrumental music with Tabla.

6. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**

8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	:	45 marks
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
	(i) Viva	:	35 marks
	(ii) Harmonium	:	05 marks
	(iii) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical development (in brief) of North Indian Music during the Medieval Period.
2. Brief knowledge of Murchhana.
3. Importance of Notation system.

Unit-II

1. Importance of Tanpura and Sahayak Nada
2. Varieties of Gamak
3. Explain the following :- Meend, Bol-Alap, andolan, boltana, Badat.

Unit-III

1. Brief life sketches of great masters of music and their contributions:
   i) Ustad Amir Khan Sahib
   ii) Ustad Faiyaz Khan Sahib
   iii) Pt. Onkar Nath Thakur

Unit-IV

1. Description and Notations of the prescribed Ragas and Talas :-
   i) To write in notation a drut khyal in any one of the prescribed Raga of the syllabus:- Bihag, Bhimplasi
   ii) To write in notation a vilambit khyal in any prescribed raga of the syllabus.
   iii) To write the notations of Talas: Roopak, Tilwada (Single & Double)
   iv) To write the description of Ragas :- Non detailed: Maru Bihag, Dhani

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: Bihag, Bhimplasi.
2. One vilambit Khayal in any of the detailed ragas prescribed in the course with extempore alaps and tanas.
3. Ability to play Ek taal on Tabla
4. Ability to recite following talas by hand: Tilwada, Roopak
5. Ability to play on Harmonium at least three Alankaras based on komal and Teevra Swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Maru Bihag, Dhani
8. Ability to sing one Drut khayal of your course with harmonium

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper A : THEORY (3 Hours duration) **(Duration 45 minutes 06 practical + 02 Theory periods per week)**		:	45 marks
Paper-B: PRACTICAL (20 minutes duration)		:	45 marks
(i) Viva	: 35 marks		
(ii) Harmonium	: 05 marks		
(iii) Tabla	: 05 marks		
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1 Ghamak and its varieties.
2 Brief knowledge of Gram.
3 Gun and Dosh of Vadak.

Unit–II

1. Gharana (definition and importance)
2 Knowledge of Alap, and its various forms.
3. Knowledge of Avirbhav and Tirobhav, Alaptav- Bahutav

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.
(i) Ustad Inayat Khan
(ii) Ustad Allaudin Khan
(iii) Pt. Vishnu Digambar Pluskar

Unit–IV

Description and Notation of the prescribed Ragas of Syllabus: -
1. To write one Drut Gat (in any prescribed raga of your course with Toras)
2. Description and notation of Raga:- Bihag, Bhimplasi with todas
3. Notation of Ektal and Rupak tala with dugun layakaries

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas :
Bihag, Bhimplasi
2. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad : Maru Bihag, Patdeep
3. Use of one swara meend and kan.
4. Ability to play teen tala on Tabla
5. Ability to sing three alankras of Shudh swaras with the help of harmonium.
6. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Ektala, Rupak

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: PRACTICAL (20 minutes duration)			: 45 marks
(i) Viva		: 35 marks	
(ii) Harmonium		: 05 marks	
(iii) Tabla		: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical developments in North Indian Music during Medieval period.
2. Brief knowledge of Murchhana system
3. Classification of Indian Musical Instruments

Unit-II

1. A Study of Shuddh, Chhaya Lag and Sankiran Ragas
2. Time theory of Indian Ragas
3. Definitions and explanations of the musical terms (not more than 100 words):-
   Kampan, Meend, Ghaseet, Zamzama, Krintan

Unit–III

1. Brief life sketches of great masters of music and their contributions:
   - i) Ustad Vilayat Khan
   - ii) Ustad Abdul Halim Zafar Khan
   - iii) Smt. Annapurna Devi Ji

Unit–IV

Description and Notation of the prescribed Raga of syllabus :-

- i) To write one Maseetkhani Gat (in any prescribed raga of your course.
- ii) To write the notation of Razakhani Gat of with Toras: Raga Madhuwanti, Hamir
- iii) To write the notation of Tivra and Dhamar with dugun

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carrying 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Maseetkhani Gat in any raga from your course
2. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas:- Hamir, Madhuwanti.
3. One Madhya laya gat with alap and todas in any prescribed raga other than teentala.
4. Knowledge of the following Non-detailed Raga: Aroh, Avroh and Pakad : Multani, Kedar
5. Use of two swara meend and kan.
6. Ability to play Jhaptala on Tabla
7. Ability to sing three alankars of komal and teevra swaras with the help of harmonium.
8. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Tivra, Dhamar

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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Music (Tabla)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-III. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	:	30	marks
(ii)	Harmonium	:	05	marks
(iii)	Tabla (Tuning)		05	marks
(iv)	Padhant on Hand	:	05	marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

1. Origin of Tala
2. Classification of musical instruments.
3. Study of Delhi Gharana

UNIT-II

1. Elementary knowledge of the following musical terms (not more than 100 words)

   Mukhda, Tihai, Muhra, Uthan
2. Study of dus Pranas of Taal
3. Classification of Taal (Margi & Deshi)

UNIT-III

1. Life sketches and contributions of the following:-
   a. Ustad Amir Hussain Khan
   b. Ustad Bahadur Singh
   c. Abdul Latif Ahmad Khan

UNIT-IV

1. Jhaptaal, Rupak, Sultaal
2. To write the description of Taals of your course
3. To write the notation of Taal in Single, Double, Tigun & Chougun

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Proper Badhat of following Talas on Tabla Jhaptal, Sultal, Rupak
2. Improvisation of laggi in Kehrva
3. Jhaptal- Peshkar, Two Palatas, Two quaida and Two Palatas, One simple Tukra
4. Sultal – Thah, Dugun & Chaugun
5. Practical Knowledge of Khemta Taal
6. Ability to play Nagma on Harmonium in Jhaptal
7. Tuning of Tabla

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras.
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla.
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-I	:	G.C. Srivastava

Ten Books recommended other than already recommended
Aakrosh By : G.C. Srivastava

Music (Tabla)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-IV. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A : THEORY (3 Hours duration) : 45 marks

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	: 30	marks
(ii)	Harmonium	: 05	marks
(iii)	Tabla (Tuning)	05	marks
(iv)	Padhant on Hand	: 05	marks

Internal Assessment (Theory & Practical) (5 + 5) : 10 marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

1. Laya and Layakaries
2. Folk Taal instruments of Punjab.
3. Brief description of Pt. V.D. Pulaskar Taal notation system.

UNIT-II

1. Elementary knowledge of the following (not more than 100 words)

   Rela, Paran, Gat, Kayda, Chakrdar Paran
2. Elementary knowledge of karnatka Taal system
3. Study of Ajarada Gharana

UNIT-III

1. Life sketches and contributions of the following:-
   a. Ustad Habibuddin Khan
   b. Ustad Natthu Khan
   c. Pt. Kanthe Maharaj

UNIT-IV

1. Tivra, Rupak, Aada-Chartaal
2. To write descriptions of Taals of your syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chougun and aad

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Proper Badhat of following Talas on Tabla :Rupak, Tivra, Ada-chartaal.
2. Improvisation of laggi in Dadra
3. Rupak- Peshkar, Two Palatas, One quaida and two Paltas, One Mohra
4. Teental – Two Rela with Two Paltas, Two Charkraddar Paran, One Charkrdaar Tukra
5. Practical Knowledge of Playing above taalas with vocal & instrumental music performance
6. Ability to play Nagma on Harmonium in Rupak
7. Tuning of Tabla

Note:- It is understood that candidate must have knowledge of tala of Semester 3rd also.

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras.
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla.
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-I	:	G.C. Srivastava

Ten Books recommended other than already recommended
Aakrosh By : G.C. Srivastava

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Music (Indian Classical Dance)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Kasak-Masak, Bharramri, Chari, Astooti
2. Present status of Kathak Dance.
3. Survey of essential characteristics of Manipuri Dance.

Unit-II

1 . Life Sketch of Pt. Shambhu Maharaj
2. Importance of Gayan and Vadan in Kathak Dance
3. Guru Shishya Prampra

Unit-III

1. Comparision of Classical and Folk Dance.
2. Folk Dance of Himachal.
3. Brief. Study of Rasa.

Unit-IV

1. Theka and Bol Tatkar in Ekgun,Dugun and Chaugun layakaries of Ada Chautal, Ektaal and Teental
2. Notation of Salami, Amad,Tora and Tihai in Ada Chautaal.
3. Notation of Thaat, Amad, Tora and Paran in Teentaal.
4. Write Nagma in Teental and Adachautaal.
5. Theka and Tatkar of Ektaal in Ekgun, Dugun and Chougun layakaries.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

I. Ada Chautal:

1.	Theka and Tatkar with Ekgun, Dugun and Chaugun Layakaries.		
2.	Salami	:	1
3.	Tora	:	2
4.	Amad	:	1
5.	Nagma	:	1
6.	Tihai	:	1

II. Teentaal

1.	Tatkar with Ekgun, Dugun and Chaugun Layakaries		
2.	Thaat	:	1
3.	Amad	:	1
4.	Tora	:	2
5.	Paran	:	2
6.	Nagma	:	1
7.	Ektaal:		
8.	Theka		
9.	Tatkar		

III. One Gat of Ghunghat

IV. Padhant of above mentioned material on hand in teen taal and Ada chautaal

V. Ability of play Nagma in teentaal

VI. Theka of Ektaal in Ekgun Layakari on hand

VII. Practical Demonstration of Gidha.

Music (Indian Classical Dance)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

General Instructions:

1. In case of private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Gati, Paran, Tisrajali Paran, Chatusrajati Paran, Premlu.
2. Brief knowledge of Kathakali.
3. Importance of Ghungroo in Kathak Dance

Unit-II

1. Gharanas of Kathak Dance and their comparison
2. Merits and demerits of Kathak Dance
3. Contribution of Pt. Rajender Gangani ji in the field of Kathak Dance

Unit-III

1. Knowledge of thumri
2. Knowledge of Chhau Nritya.
3. Knowledge of different Instruments used in Kathak Dance.

Unit-IV

1. Notation of Theka and Bol-Tatkar in Ekgun, Dugun and chaugun layakaries in Ada chautaal, Teentaal and Ektaal.
2. Notation of Chakardar Tora Chakardar paran, Kavit, Tihai and Nagma in Teentaal.
3. Write Tihai, Thaat, Paran, Chakardar Paran, Kavit and Nagma.
4. Theka of Ektaal in Ekgun, Dugun and Chaugun layakaries with Tihai, Tora and Amad.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

I. Adachautal

1.	Tatkar with Ekgun, Dwigun and Chaugun Layakari		
2.	Paran	:	1
3.	Chakardary Paran	:	1
4.	Thaat	:	1
5.	Tihai	:	1
6.	Kavit	:	1

II. Teentaal

1.	Tatkar with Ekgun, Dugun, Chaugun and Athgun layakaries.		
2.	Kavit	:	1
3.	Chakardar Tora	:	1
4.	Chakardar Paran	:	1
5.	Tihai	:	1
6.	Nagma	:	1
7.	Ektaal		
8.	Amad	:	1
9.	Tora	:	1
10.	Tihai	:	1

III. One Gat Nikas of Mataki
IV. Padhant of above mentioned material in teen taal and Ada Chautaal on hand
V. Ability to play Nagma in Ada Chautaal
VI. Theka of Ekgun and Dwigun Layakaries of above mentioned taals.
VII. Practical Demonstration of a Bhangra steps.

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FINE ARTS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper A : Theory (History of Art) **Max. Marks : 54**

Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions. Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Western Indian Minitaure Painting -- Decorative Designs and Paintings of the 1439 Kalpasutra Manuscript.
- Pre Mughal Paingting -- Chaurapanchashika and Nimat Nama Manuscript Paintings

Unit-II : History of Indian Sculpture

- Gandhara –Fasting Buddha and Mahaparinirvana of Buddha
- Mathura –Portraits of the Kushana Kings.
- Sarnath –Seated Buddha.
- Sultanganj –Bronze Buddha.

Unit-III : History of Western Art

- Early Renaissance : Masaccio-Expulsion; Holy Trinity.
- High Renaissance: Leonardo Da Vinci – Last Supper; Michelangelo—Creation of Adam from the Sistine ceiling; Pieta.
- Northern Renaissance : Durer – Knight, Death and the Devil.

Unit-IV : Definition of Key Terms and General Concepts

- Composition – Volume, Texture, Space, Unity, Harmony, Rhythm, Proportion.
- Six Limbs of Indian Painting.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

	Max. Marks	*Max. Time*
1. Landscape Painting (on the spot)	30	5 hours
2. Life Sketching	30	5 hours
3. Poster & Book Cover Design or Clay Modelling	30	5 hours
	Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

FINE ARTS

SEMESTER-IV

Paper A : Theory (History of Art) **Max. Marks : 54**
Time : 3 Hours

Objectives :
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus. Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions.
   Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Mughal Paintings of Hamza-Nama ; South Kensington Akbar Nama ; Jahangiri Portraits and illustrations of birds and animals.
- Deccani Paintings –Tarif-i-Hussain-Shahi from Ahmednagar ; Najam-ul-Ulum from Bijapur.

Unit-II : History of Indian Sculpture

- Deogarh –Vishnu Anantashayana.
- Ellora—Ravana Shaking Mount Kailasha.
- Mahabalipuram –Descent of Ganges (Kiratarjuniyam panel).

Unit-III : History of Western Art

- Baroque : Rubens –Garden of Love.
- Neo-Classicism and Romanticism : David –The Death of Socrates; Constable-The Haywain.
- Realism : Courbet –Artist's Studio.

Unit-IV : Definition of Key Terms and General Concepts

- Art and Craft ; Design ; Mosaic ; Tribal Art ; Folk Art ; Piece-mould ; Waste-mould.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

	Max. Marks	*Max. Time*
1. Landscape Painting (on the spot)	30	5 hours
2. Life Sketching	30	5 hours
3. Poster & Book Cover Design or Clay Modelling	30	5 hours
	Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

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HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF INDIAN PAINTING (from ca. 9th century to ca. 1800 A.D.) AND SCULPTURE (from ca. 4th century A.D. to ca. 6th century A.D.)

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I

Development of Miniature Painting :

(a) Eastern Indian.

(b) Western Indian.

Unit-II

Painting under the Mughals :

(a) Akbar.

(b) Jahangir.

(c) Shahjahan.

Unit-III

Indian Miniature Painting :

(a) Rajasthani Schools—Mewar, Bundi, Kishangarh.

(b) Pahari Schools—Basohli, Guler, Kangra.

Unit-IV

Indian Sculpture in the Classical Phase :

Sculpture under the Guptas – Mathura, Sarnath, Deogarh, Ajanta.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : *The History and Culture of Indian People, Vols. I, II and III* (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Goswamy, B.N. & E. Fischer : *Pahari Masters : Court Painters of Northern India,* Museum Reitberg, Zurich Switzerland, 1992.
4. Khandalvala, Karl : *Pahari Miniature Painting,* The New Book Co. Pvt. Ltd., Bombay, 1958.
5. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
6. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
7. Barrett, D. and Gray, B. : *Painting of India,* The World Publishing Co., Ohio, 1963.
8. Brown, Percy : *Indian Painting under the Mughals,* Cosmo Publications, New Delhi, 1981.
9. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-IV

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF EUROPEAN PAINTING AND SCULPTURE (from 1300 A.D. to ca. 1850 A.D.) and THEORY AND PRINCIPLES OF ART APPRECIATION

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of European Painting and Sculpture

(a) Early Renaissance–Masaccio, Donatello.

(b) High Renaissance–Lenoardo Da Vinci, Michelangelo, Raphael, Titian.

Unit-II: Baroque Period

Caravaggio, Rubens, Rembrandt, Bernini, Claude Lorrain.

Unit-III:

(a) Neo-Classicism and Romanticism–David, Ingres, John Constable, W. Turner.

(b) Realism–Courbet.

Unit-IV : Theory and Principles of Art Appreciation

(a) Definition of the term Miniature Painting

(b) Six limbs of Indian Painting (Shadanga) and their manifestations in actual works.

(c) Indian concept of primary colours and their symbolic meaning.

(d) Indian theory of Rasa, Bhava and Beauty.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
2. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
3. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.
4. Turner, Jane (ed.) : *The Dictionary of Art,* Macmillan Publishers Limited, New York, 1996.
5. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
6. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
7. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
8. Murray, Peter and Linda Murray : *A Dictionary of Art & Artists,* Penguin Reference Book, Great Britain, 1959.
9. Rowland Benjamin (Jr.) : *Art in East and West,* Beacon Press, Toronto, 1964.
10. Ray, Niharanjan : *An Approach to Indian Art,* Publication Bureau, P.U., Chandigarh, 1974.
11. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper-III : HISTORY AND CULTURE OF INDIA FROM 320 A.D. TO 650 A.D.

Max.Marks : 100
Theory : 90 Marks
InternalAssessment : 10 Marks
Time : 3Hour

Objectives :

The main objective of this paper is to make students study the political history and cultural development starting from the Gupta period till the death of Harsha.

Pedagogy of the Course Work :

The students are expected to have an idea of the original sources for the reconstruction of the history of the period. Maps and transparencies should be put to use in class for better understanding by the students.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks.

2. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

3. The map question shall have the following topics :
   (a) Extent of Chandragupta II's empire.
   (b) Extent of Harsha's empire.
   (c) Distribution of monuments of the Gupta-Vakataka period.

4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper-setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

5. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (5) in the question paper.

UNIT-I

1. (a) Political condition of Northern India on the eve of the rise of the Guptas.
   (b) Foundation of the Gupta Empire.

2. The Imperial Gupta rulers : Samudragupta: Chandergupta II and Kumargupta

UNIT-II

1. Decline of the Gupta Empire.
2. The Gupta Administration.
3. Cultural and Economic Achievements during the Gupta period.

UNIT-III

1. The Vakatakas of the Deccan.
2. The Huna Invasions and their impact.

UNIT-IV

1. The Aulikaras of Daspura, the Maukharis and the Later Guptas.
2. The Pushyabhutis of Thanesar : Political and Cultural survey.

Essential Readings :

1. Agrawal, Ashvini : *Rise & Fall of the Imperial Guptas,* Motilal Banarsidass, Delhi, 1989.
2. Altekar, A.S. & Majumdar, R.C. : *The Vakataka-Gupta Age,* rpt., Motilal Banarsidass, Delhi, 2006.
3. Goyal, S.R., : *The Imperial Guptas: A Multidisciplinary Political Study,* Kusum-anjali Book World, Jodhpur, 2005
4. Majumdar, R.C. & Dasgupta, K.K. (Eds.) : *The Comprehensive History of India, Vol. III,* Pt. 1, People Publishing House, Delhi 1981, (Chapters Dealing with the Gupta and the Post Gupta History).

Suggested Readings:

1. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
2. Mookerji, R.K. : *The Gupta Empire,* Motilal Banarsidass, Delhi, 1989.
3. Thaplyal, K.K. : *The Imperial* Guptas: *A political History*, Aryan Books *International*, New Delhi, 2012
4. Tripathi, R.S. : *History of Ancient India,* rpt., Delhi, 1977.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

Paper-IV : HISTORY AND CULTURE OF INDIA FROM 650 A.D. TO 1200 A.D.

Max.Marks	: 100
Theory	: 90 Marks
InternalAssessment	: 10 Marks
Time	: 3Hours

Objectives :

The primary objective of this paper is to acquaint the students with the historical development in India after the death of Harsha. A detailed study of the various dynasties ruling in the different parts of our country will be taken up.

Pedagogy of the Course Work :

The students should be given an outline of the original sources which help to reconstruct the history of the period. Slides and transparencies should be used in the class room lectures to help the students to comprehend the developments in different fields.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The paper-setter is required to **9** questions in all. All questions shall carry equal marks.

2. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

3. The map question shall have the following topics :
   (a) Extent of Pratihara Empire.
   (b) Distribution of Temples—Lingaraja, Konark, Jagannath, Kandariya Mahadev, Parsvanath, Lakshman, Osian and Mahabalipuram.
   (c) Important Centres of Education—Nalanda, Ujjain, Pushpagiri and Nagarjunakonda.

4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper- setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

5. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (5) in the question paper.

UNIT-I :

1. Pratiharas
2. Palas

UNIT-II :

1. Paramaras
2. Chahamanas

UNIT-III :

1. Gahadavalas
2. Chandellas

UNIT-IV :

1. Rashtrakutas
2. Cholas.

Essential Readings :

1. Altekar, A.S. : *Rastrakutas and Their Times,* 2nd ed. Oriental Book Agency, Poona, 1967.
2. Bhatia, Pratipal : *The Paramaras,* Munshiram Manoharlal, New Delhi, 1970.
3. Chakravarti, Ranbir : *Exploring Early India upto C. AD 1300,* Machmillan, 2010
4. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003
5. Majumdar, R.C. : *History & Culture of Indian People,* Vol. IV, *The Age of Imperial Kanauj,* Bhartiya Vidya Bhawan, Bombay, 1955 (Relevant Chapters) Vol. V, *The Struggle for Empire,* Bombay 1957 (Relevant Chapters).

Suggested Readings :

1. Puri, B.N. : *The History of the Gurjara-Pratiharas, Manohar,* Delhi, 1986.
2. Ray, H.C. : *Dynastic History of India,* 2 Vols, Calcutta 1931,1936.
3. Sastri, K.A.N. : *A History of South India, 4th ed.* Oxford University Press, Madras, 1976.
4. Tripathi, R.S. : *History of Kanauj to the Muslim Conquest, 4th ed.,* Motilal Banarsidass, Delhi, 1989.

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DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE IN INDIA

M. Marks : 70
Time : 3 Hrs.

Objective :

This paper deals with the salient features of Indian warfare with emphasis on Military Organization, Battle techniques and Leadership.

SECTION-I

1. Battle of Hydaspes and Alexander's Art of War.
2. Kautilya's Philosophy of War.

SECTION-II

3. Military Organizations and Battle Techniques of Rajputs and Turks with particular reference to Battle of Tarrain, 1192 A.D.
4. Military Organizations and Battle Techniques of Mughals and Afghans with particular reference to First Battle of Panipat, 1526 A.D.

SECTION-III

5. Battle techniques of Southern Muslim Sultans with particular reference to Battle of Talikota, 1565 A.D.
6. Military Organization and Battle Techniques of Marathas under Shivaji.

SECTION-IV

1. Military organization and Battle Techniques of Sikh Army under Maharaja Ranjit Singh.
2. Warfare under East India Company with particular reference to Battle of Assaye 1803 A.D. and Chilianwala 1849 A.D.
3. Indian Armed Forces 1858 to 1947: General Evolution and Development (A Broad Perspective).

Books Recommended :

1. Bajwa, F.S., The Military Systems of Sikhs, Motilal Banarsidas Delhi, 1964.
2. Dass, S.T., An Introduction to the Art of War, Sagar Publications, Delhi, 1970.
3. Erskin, Memories of Babur, Biblio Bazaar, 2012.
4. JFC, Fuller, Generalship of Alexander, The Great, Eyre and Spottiswoode, 1958.
5. Kangle, K.P., Kautilya's Arthshastra, Motilal Banarsidas Publishers Pvt. Ltd., Delhi, 1986.
6. Majumdar, B.K., Military Systems in Ancient India, Firma K.L. Mukopadhayay Publishers, Delhi, 1960.
7. Mallesan, Decisive Battle of India, Read Books Design, 2010.
8. Nath, Rajendra, Military Leadership in India, Vedic Period to Indo-Pak Wars, Lancers Books, California, 1990.
9. Sarkar, J.N., Military History of India, Orient Longmans, Virginia, 1960.
10. Sen., S.N., Military System of the Marathas, Orient Longmans, Michigan, 1958.
11. Sharma, Gautam, Indian Army through the Ages, Allied Publishers, University of Michigan, 1966.
12. Singh, Gurcharan, Battles of Panipat, Army Educational Stores, 1966.
13. William, Irvin, Army of the Indian Mughals, Low Price Publishers, 1994.

Paper: **PRACTICAL**

Max. Marks : 20
Time: 1 hrs

Note:

1. There will be of 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A Practical Test

Marks : 10

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Bearing: Definition, Types and Inter conversion of Bearing in detail.
2. Liquid Prismatic Compass: Features and Funcitons of its various parts.
3. Determination of Individual Compass Error

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva Voce Marks : 5

DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question form each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students.. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE

M. Marks : 70
Time : 3 Hours

SECTION-I

1. Military Organizations and Battle techniques of Macedonians and Persians with particular reference to Battles of Arbella, 331 B.C.
2. Military Organization and Battle Technique of Romans and Carthagenians with particular reference to the Battles of Cannae, 216 B.C.
3. Military Organizations and Battle Techniques of Barbarians with particular reference to Battle of Adrianople, 378 A.D.

SECTION-II

4. Military Organizations and Battle Techniques of the English and French with reference to the Battle of Hastings, 1066 A.D.
5. The Mongol Art of War under Changez Khan and his successors.

SECTION-III

6. Industrial revolution and its Impact on Weapons, Communications and Tactics.
7. Elements and Principles of Napoleonic Warfare.

SECTION-IV

8. Naval Warfare with particular reference to the Battle of Trafalgar, 1805.
9. American Civil War (1861-65) : Causes and Events.

Books Recommended :

1. Barrie and Rackett, The Ancient Art of War Vols. I & II., Barrie and Rockliff, 1957.
2. Bullock, H., Military History of the Western World,Vol. 1, Da Capo Press, 1978.
3. Fuller, JFC, Armament and History, Da Capo Press, New York, 1998.
4. Fuller, JFC, Conduct of War, Eyre & Spottiswoode (Publisher) Ltd., Great Britain, 1962.
5. Fuller, JFC, Machine Warfare, the Infantry Journal, University of Michigan, 1943.
6. Fuller, JFC, Military History of the Western World, Da Capo Press, New York, 1987.
7. Montgomery, F.M., A History of Warfare, World Publication Co. The University of Michigan, 1968.
8. Montress, L., War through the Ages, Harper & Brothers, Indiana University, New York, 1987.

Paper : PRACTICAL

Max. Marks : 20

Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical.For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A : Practical Test

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Setting of Map: With Compass and without Compass.
2. Marching by Compass: To set the Compas in a particular direction for Night March.
3. Finding position on the Maps: Determine One's and Enemy's position on the Map by Resection and Intersection method.

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva-Voce Marks : 5

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HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. *The syllabus has been divided into four units.*
   There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit IV shall be set on the map.

   The paper-setter must put note (iii) in the question paper.

Explanation :

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :

Map	:	10 marks
Explanatory Note	:	08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper-setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF INDIA, 1750-1964 A.D.

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : To introduce the students to the broad developments in the history of India in Modern times.

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Foundation of British Rule : Circumstances leading to the battles of Plassey and Buxar and their significance; Reforms of Warren Hastings.
2. Administrative Reforms : Reforms of Cornwallis, William Bentinck and Dalhousie.
3. The Uprising of 1857 : Political, socio-religious, economic and immediate causes; failure; results.

Unit-II

4. Economic Changes : British Agrarian policies and commercialization of agriculture; rural indebtedness; Growth of modern industry; theory of economic drain.
5. Socio-Religious Reform Movements : Brahmo Samaj; Aligarh Movement; Arya Samaj; Ramakrishna Mission.
6. Depressed Classes Movement : Contribution of Jyotiba Phule, Dr.B.R. Ambedkar and Mahatma Gandhi.

Unit-III

7. Growth of Political Consciousness : Foundation and growth of the Indian National Congress from 1885-1905; Growth of Nationalism 1905-1919.
8. Indian National Movement : Circumstances leading to the non-cooperation movement 1920-1922; the Civil Disobedience Movement.
9. Rise of Communal Politics : Factors responsible for the growth of communal politics; Separate electorate; Muslim League and Pakistan Resolution.

Unit-IV

10. Towards Partition and Independence : Quit India Movement; British proposals for independence; Indian Independence Act of 1947.
11. Significant Developments after Independence,1947- 64 : Making of the constitution; integration of princely states; the reorganisation of states.
12. Map:
    (a) Important Historical Places – Delhi, Calcutta, Madras, Bombay, Goa, Surat, Plassey, Buxar, Gwalior, Jhansi, Hyderabad, Sabarmati, Amritsar, Lucknow, Lahore and Aligarh.
    (b) Extent of the British Empire in 1856.
    (c) Republic of India in 1950.

Books Recommended :

1. Abdul Kalam Azad, *Azadi Ki Kahani* (Hindi Medium), Delhi : Orient Black Swan, 2007.
2. Bandyopadhyay, Sekhar, *From Plassey to Partition : A History of Modern India,* Delhi : Orient Black Swan, 2007 (Also available in Hindi Medium).
3. Chandra, Bipan, *Communalism in Modern India,* Delhi : Vikas Publishers, 1987.
4. Chandra, Bipan *et al., India's Struggle for Independence, 1875-1947,* Delhi : Viking/Penguin Books,1989.
5. Chandra, Bipan, *Aitihasik Sangharsh – EPIC Struggle* (Hindi Medium), Delhi : Orient Black Swan, 2007.
6. Nanda, B.R., *Making of a Nation : India's Road to Independence,* New Delhi : Harper-Collins, 1998.
7. Gopal, S, (Pbi)

HISTORY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) *The syllabus has been divided into four units.*
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (2) in the question paper.

(iii) One question from Unit IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under :
Map : 10 marks
Explanatory Note : 08 marks

Note : In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF THE PUNJAB, 1469-1849 A.D.

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

Objectives : To introduce the students to the broad developments in the history of the Punjab from the mid 15^{th} to the mid 19^{th} century i.e. the medieval period

Pedagogy : Lectures, library work and discussions.

Unit-I

1. Teachings of Guru Nanak, Development of Sikh Institutions : langar, manji, masand, gurdwara
2. Compilation of the Adi Granth; causes and significance of the martyrdom of Guru Arjan Dev.
3. Guru Hargobind's new policy and its justification; martyrdom of Guru Tegh Bahadur and its significance.

Unit-II

4. Circumstances leading to the creation of Khalsa and its significance; the new injunctions and symbols of the Khalsa.
5. Establishment of independent rule under Banda Bahadur; socio-economic transformation.
6. Role of Rakhi, Gurmata and Dal Khalsa in 18th century polity; emergence of autonomous chiefs.

Unit-III

7. Unification under Ranjit Singh; expansion of the Kingdom of Lahore
8. Civil & Provincial administration;Land Revenue system under Maharaja Ranjit Singh
9. Social Structure in the early 19th century Punjab

Unit-IV

10. Anglo-Sikh relations upto 1839; political developments 1839-1849.
11. First Anglo-Sikh war; second Anglo-Sikh war and the annexation of the Punjab.
12. Map :
    (a) Important Historical Places – Amritsar, Goindwal, Anandpur Sahib, Chamkaur Sahib, Kiratpur, Kartarpur, Paonta Sahib, Sirhind, Muktsar, Tarn Taran, Lahore, Machhiwara, Ropar, Multan and Peshawar.
    (b) Battles of Banda Bahadur. (location)
    (c) Kingdom of Lahore(Boundaries)

Note : In case, a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 10 places on map of 1 mark each and write explanatory note on any four of 2 marks each.

Books Recommended :

1. Banerjee, I.B., *Evolution of the Khalsa,* 2 Vols., Calcutta : A Mukherjee & Co., 1979 (2nd edn.).
2. Banga, Indu (ed.), *Five Punjabi Centuries : Polity, Economy, Society and Culture c. 1500-1900,* New Delhi : Manohar, 1997.
3. Fauja Singh, *State and Society under Maharaja Ranjit Singh,*Master Publishers, Delhi.
4. Grewal, J.S., *The Sikhs of the Punjab : The New Cambridge History of India,* New Delhi : Cambridge University Press, 1999 (2nd edn.).
5. Khushwant singh*, A History of the Sikhs* Volume I and II
6. McLeod, W.H., *Sikhs and Sikhism,* New Delhi : Oxford University Press, 2000.
7. Sinha, N.K., *Rise of the Sikh Power,* Calcutta : A Mukherjee & Co., 1973
8. Teja Singh and Ganda Singh, *A Short History of the Sikhs,1469-1765* ,Vol.I, Patiala : Punjabi University, 1983.

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POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

INDIAN GOVERNMENT AND POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives: This paper provides students with a basic knowledge of the fundamental elements and institutions of government, politics and processes in India at both the centre and state levels.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Basic Features of Indian Constitution.
2. Preamble and its perceptions.
3. Indian Federalism- Meaning & its features.
4. Centre State Relations (Legislative, Administrative & Financial)

Unit-II

1. Fundamental Rights (Art14-Art 32)- Meaning, Explanation, Criticism & Importance.
2. Fundamental Duties- Meaning, Explanation, Evaluation (Criticism & Importance).
3. Directive Principals of State Policy (Art 36- Art 51)- Liberal, Socialist, International, Gandhian- Meaning, Explanation, Sanctions, Criticism & Importance

Unit-III

1. President : Election, powers, position and changing role.
2. Parliament : Composition, powers and role.
3. Cabinet –
   a) Parliamentary features
   b) Prime Minister : Election, powers, position and changing role.
4. Supreme Court : Composition, powers & Judicial Review.

Unit-IV

1. Governor : Appointment, powers and role.
2. State Legislature : Composition, powers and role of Legislative Assembly/Vidhan Sabha.
3. Council of Ministers and Chief Minister : Election, powers, position and role.
4. High Court : Composition, powers and its role.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.
20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.
21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.
22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.
23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.
24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.
25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.
26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

INDIAN POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours.

Objectives :

The aim of this paper is to enrich the student's understanding of the working of the Indian political system with reference to political parties, the party system, elections and voting behaviour. Units III and IV of the paper examine in detail certain key issues and debates in contemporary India.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Nature of party system in India : A critical evaluation.
2. National Political Parties [Indian National Congress, BJP, CPI, CPI(M), BSP] : Ideology, Policy and Programmes
3. Regional Political Parties (SAD, DMK, AIDMK) : Ideology, Policy and Programmes.

Unit-II

1. The Election Commission : A critical evaluation and electoral reforms in India.
2. Pressure Groups in Indian Politics- Types & Role
3. Voting Behaviour in India – its Determinants.

Unit-III

1. Emerging Trends in Indian Politics.
2. Role of Caste, Religion in Indian Politics.
3. Regionalism in Indian Politics-its causes & impact.

Unit-IV

1. Basic principles and determinants of Indian Foreign Policy.
2. Non-alignment : Meaning and Nature.
3. Non-alignment Movement- its Relevance.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.

20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.

21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.

22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.

23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.

24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.

25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.

26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

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ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper : PUBLIC FINANCE AND INTERNATIONAL ECONOMICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective : The primary course objective is to introduce the students to the basics of public finance and international trade. The first two units aim to introduce students to the primary functions of government to generate resources from the people and to spend money improving their lives. The last two units are concerned with basic theories of international trade and commercial policies, balance of payments, determination of exchange rates and role of international financial institutions.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Introduction to Public Finance : Nature, Scope and its Importance.

Public Expenditure: Canons, Principle of Maximum Social Advantage, Wagner's Law, Wiseman Peacock Hypothesis. Causes for the Recent Growth of Public Expenditure in India.

Taxation : Classification and Canons, Characteristics of a Good Tax System.

Unit-II

Incidence and Impact of Taxation : Demand and Supply Theory.

Taxable Capacity : Absolute and Relative Capacity, Determinants of Taxable Capacity.

Public Debt : Its types and Role, Burden of debt and Methods of its Redemption.

Deficit Financing : Objectives and Limitations.

Unit-III

Pure Theory of International Trade : Classical and Heckscher - Ohlin Theories, The Theory of Reciprocal Demand.

Terms of Trade : Concept and Types

Commercial Policy : Free Trade Vs. Protection, Regional Blocks: ASEAN, SAFTA Problems and prospects. Impact of W.T.O. on Less Developed Countries.

Unit-IV

Balance of Payments: Meaning, Concept and Components of Balance of Payments. Disequilibrium in the Balance of Payments : Causes and Measures to corret the disequilibrium

Exchange Rate : Meaning and its Determination, Fixed Vs. Flexible Rate of Exchange and Purchasing Power Parity Theory.

IMF and IBRD : Objectives, Working and Achievements.

Recommended Readings :

1. Musgrave, A.R. & Musgrave, P.B. (2011) : *Public Finance in Theory and Practice,* McGraw Hills, International Students' Edition.
2. Kindleberger, C.P. (1987) : *International Economics,* Richard Irwin Homewood, Illiois, Indian Edition
3. Sharma, O.P. (latest edition) : *Sarvjnik Vit,* Punjabi University, Patiala.
4. Ghuman, Ranjit Singh (latest edition) : *Antar-Rashtriya Arth Vigyan,* Punjabi University, Patiala.
5. Soderston B.O. (1994) : *International Economics,* McMillan Press Ltd.

Supplementary Reading :

1. Bhatia, H.L. (2008) : *Public Finance*, Vikas Publishing House Pvt. Ltd.
2. Dalton, H. (1978) : *Principles of Public Finance,* Routledge and Kegan Paul, London.
3. Tyagi, B.P. (1994) : *Public Finance,* Jai Prakash Math & Co, Meerut.

ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

Semester-IV

Paper : QUANTITATIVE METHODS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective :

The objective of the course is to train the students in the use of basic mathematical and statistical tools in analyzing various economic phenomenons. It deals with the design of how data is presented, the analysis of the data, and the drawing of conclusions from the data. The course aims to improve decision-making accuracy of the students and enabling them to test new ideas.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

1. There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 09 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.
2. Use of simple calculator is allowed.
3. The paper setter may in general stick to the distribution of marks of 1/3 to theory and 2/3 to numericals.

Unit-I

Elementary Idea of Sets and Functions : Simple and Partial Derivatives, Differentiation of Simple functions – Polynomial (x) and Exponential functions. Maxima and Minima of functions of one variable only. Their Applications of Micro and Macro Economics.

Unit-II

Matrices : Definition and Types, Operations (Sum, Difference, Product and Transpose), Adjoint and Inverse of a matrix (upto 3 · 3), Solution of Equations (upto 3) by Matrix Methods and Crammer's rule.
Measures of Central Tendency : Mean, Median, Partition Values, Mode, Measures of Dispersion, Skewness.

Unit-III

Correlation Analysis—Karl Pearson's (except grouped data) and Spearman's formula, Simple Regression Analysis.
Interpolation – Binomial, Expansion, Newton's (Advancing Difference Method) and Lagrange's Method.

Unit-IV

Index Numbers : Concepts, Problems and Importance, Simple Index Number, Lespeyre's and Fisher's Index Numbers only (among weighted index numbers), Reversibility Tests.
Time Series Analysis : Components of Time Series, Determination of Trend, Least Square and Moving Average Method.

Books Recommended

1. Archibald, G. C. and Lipsey, R. G. (1977) : *An Introduction to a Mathematical Treatment of Economics,* English Language Book Society, Weidenfeld and Nicolson.

2. Gupta, S.C. (1992) : Fundamentals of Statics, Mumbai, Himalaya Publishing House.

3. Kandoi, Balwant (2011) : Mathematics for Business and Economics with Applications, in 2 Vol., Himalaya, Mumbai.

4. Sanchati, D. C. & Kapoor, V. K. (1987) : *Business Mathematics,* Sultan Chand & Sons, New Delhi.

5. Yamane, Taro (1972) : Economists, Prentice Hall, New Delhi.

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

SOCIAL STRUCTURE AND SOCIAL CHANGE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper basically introduces students both to conceptual and some theoretical understanding of social structure and social change. Students are introduced to characteristics and elements of social structure and to understand the meaning, process and factors of social change.

Course Content

Unit-I

Social Structure : Meaning, Characteristics, Elements – Status, Role, Power and Prestige. Norms and Values.

Unit-II

Social Change : Meaning and Features.
Types of Social Change : Evolution (Comte), Revolution (Marx), Development – Changing Connotations.

Unit-III

Factors of Social Change: Economic, Demographic, Education, Legislative, Scientific and Technological

Unit-IV

Processes of Social Change : Sanskritization, Westernization, Modernization and Secularization, Globalization and its impact on Society.

Essential Readings :

1. Bierstedt, Robert (1970) : *Social Order,* New York : McGraw Hill.
2. Haferkand, H. and Smelser, N.J. (1992) : *Social Change and Modernity,* Berkeley : University of California Press.
3. Macionis, John, J. (2005) : *Society : The Basics,* New York : Prentice Hall.
4. Madhurima (2016) : *Readings in Sociology – Semester-II,* Jalandhar : New Academic Publishing House (All Mediums).
5. Moore, Wilbert (2004) : *Social Change*, New Delhi, Prentice Hall.
6. Singh, Yogendra (1993) : *Social Change in India,* New Delhi : Haranand Publications.
7. Srinivas, M.N. (1963) : *Social Change in Modern India,* Berkeley : University of California Press.

Further Readings :

1. Radcliffe-Brown, A.R. (1979) : *Structure and Function in Primitive Society*, London : Routledge and Kegan paul.
2. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
3. Talcott, Parsons (1959) : *Social System*, London : Tavistock Publications.
4. Singh, Yogendra (1996) : "Sociology and the Emerging Challenge of Change", *Sociological Bulletin,* Volume 45, No. 1, March, Page 1-14.
5. Singer, M. (1972) : *When a Great Tradition Modernizes : An Anthropological Approach to Indian Civilization,* New York : Praeger Publishers.
6. Yogendra Singh, (2008) : Social Change in India, New Delhi, Har Anand Publications
7. Srinivas, M.N., (2011) : Social Change in Modern India, Hyderabad, Orient Black Swan
8. Kuppu (Swamy, B, 2001) : Social Change in India, Delhi, Konark

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER IV

SOCIAL INSTITUTIONS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective:

In this paper, social institution as a concept is introduced to the students. Study of various institutions which are foundations of human society, will help students to look at society in an objective and analytical way.

Course Work

Unit-I

Institutions – Meaning, Features; Normative and Relational aspects of Institutions.
Types – Social, Political, Economic and Cultural.
Difference of Institutions with Society Community and Association

Unit-II

Social Institutions :
Marriage –Types : Monogamy and Polygamy; Rules of Mate Selection, Contemporary Trends.
Family – Meaning, Types, Structure, Function; Development Cycle and Changing Trends.
Kinship – Meaning, Significance and a Brief Understanding of Incest, Consanguinity, Affinity, Clan, Lineage, Contemporary Trends.

Unit-III

Political Institutions – State, Government and Political Parties – Features and Functions.
Economic Institutions – Features and Functions, Property, Division of Labour (Emile Durkheim).

Unit-IV

Cultural Institutions – Religion : Meaning elements, Types, Functions (Emile Durkheim & Max Weber),Dysfunctions

Essential Readings :

1. Christensen, H.(ed.) (1964) : *Handbook of Marriage & Family,* New Delhi: Allyn and Bacon.
2. Fox, Robin (1967) : *Kinship and Marriage : An Anthropological Perspective; Baltimore : Penguin Books.*
3. Giddens, Anthony (2013) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Johnson, Harry, M. (1998) : *Sociology : A Systematic Introduction*, Delhi : Allied Publishers.
6. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
7. Giddens, Anthony & Sutton W. Philip (2010) : *Sociology : Introductory Readings,* U.K.: Polity Press.
8. Schacfer, Richard, T.(2010) : *Sociology : A Brief Introductions,* N.Y.: Tata McGraw Hill.

Further Readings :

1. K.M. Kapadia (1996) : *Marriage & Family in India, Delhi, Oxford University Press*
2. Bronislaw Malinowski (1944) : *A Scientific Theory of Culture & other Essay (ed.) Huntington Cairns, C Hapel Hall,* The University of North Caroliva Press.
3. Particia Uberoi (1997) : *Family, Kinship & Marriage in India, New Delhi, Oxford University Press*
4. Max Weber (1968) : *The Protestant Ethic and the Spirit of Capitalism-R.H. Tawney (ed.) Unvwin University, Book London.*
5. Radcliff Brown, A.R. (1979) : *Structure and Functions in Primitive Society, London: Routledge and Kegan Paul.*
6. Madan, T.N.(2002) : *Religion in India, Delhi-Oxfored UniversityPress,Atal,yogesh,2012,Sociology,Delhi ;Pearson*
7. Marlom bos & Holborn,(2016) : *Cociology Themes and perspectives,London, Collins*
8. Madan, T.N.,(2001) : *Family and Kinship,New Delhi, Oxford University Press*
9. Froer, Peggy,(2010) : *Religious Divisions and Social Conflict,New Delhi, Esha Beteille*

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PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER – III

PAPER : PERSONNEL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of public personnel administration particularly recruitment, training and promotion. Contemporary issues like grievance redressal machinery, corruption, morale etc. concerning administration of human resources in government will also be examined.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

For Private/University School of Open Learning (USOL) students who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.
The Paper-Setter must put note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Personnel Administration – Meaning and Significance.
Bureaucracy: Meaning, Characteristics, Demerits and Remedies.
Civil Service: Meaning, Features and Role.
Position and Rank Classification Systems: Significance and Features

Unit-II

Recruitment: Meaning, Methods and Problems.
Recruitment System of Higher Civil Services in India.
UPSC: Composition, Functions and Role.
SPSC: Composition, Functions and Role.

Unit-III

Training – Meaning, Types, Methods, Training of Higher Civil Services in India.
Conduct, Discipline and Ethics in Public Services.
Promotion: Meaning, Significance and Principles.

Unit-IV

Morale, Causes of Low Morale and Measures for Improvement.
Corruption in Administration - Causes and Remedies.
Administrative Tribunals: Meaning, Types, Advantages and Disadvantages.

Essential Readings :

Davar , R.S.(1976). *Personnel Management and Industrial Relations* . NewDelhi : Vikas Publishers.

Goel, S.L.(2008).*Public Personnel Administration* . New Delhi : Sterling Publishers.

Stahl,O.G.(1975).*Public Personnel Administration.* New Delhi : Oxford and IBH Publications.

Tyagi, A.R.(2001).*Public Administration: Principles and Practice* .Delhi: Atma Ram and Sons Publishers.

Further Readings :

Government of India, Administrative Reforms Commission(1967). *Report on Personnel Administration.* New Delhi : Manager of Publications.

Government of India, 2nd Administrative Reforms Commission.(2010) *10th Report :Refurbishing of Personal Administration – Scaling New Heights.* New Delhi : Manager of Publications.

Indian Institute of Public Administration(1970). *Personnel Adminstration*.New Delhi : IIPA.

Paul Pigors and C.A. Myers(1973). *Personnel Administration : A Point of View and Method.*

New York:McGraw Hill.

Sinha , V.M. (1986).*Personnel Administration.* Jaipur : RBSA.

PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

PAPER : FINANCIAL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of financial administration like budgeting, auditing, centre-state financial relations etc. It would also make them aware of: institutions like ministry of finance, union finance commission, parliamentary committees; and concepts like direct taxes, indirect taxes, deficit financing, public debt.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Financial Administration: Meaning and Significance .
Aspects of Public Finance.
Budget: Meaning, Types and Principles.
Budget: Preparation and Enactment.

Unit-II

Union Ministry of Finance: Organisation, Functions and Role.
Centre-State Financial Relations.
Union Finance Commission: Composition and Functions.

Unit-III

Audit: Concept, Objectives and Types.
Comptroller and Auditor General of India(CAGI) : Appointment, Functions and Role.
Concepts: Deficit Financing, Fiscal Deficit, Public Debt and Public Expenditure.

Unit-IV

Legislative Control over Finance.
Public Accounts Committee:Composition, Functions and Role.
Estimates Committee:Composition, Functions and Role.

Essential Readings

Goel,S.L.,(1993).*Financial Management and Administration.* New Delhi: Sterling Publication.

Lall,G.S..*Financial Administration in India* .Delhi: H.P.J.Kapoor, 4th ed.

Mookerjee ,S.S. *Indian Public Finance and Financial Administration* . New Delhi.

S.Sahib and S.Swinder.(2016)*Public Personnel and Financial Administration* Jalandhar: New Academic Publishers Co.

Thavaraj,M.J.K.(1978).*Financial Administration of India* . New Delhi: Sultan Chand Publications.

Further Readings

Government of India, 2nd ARC .14th Report-*Strengthening Financial Management System.*

Government of India,Administrative Reforms Commission.(1967). *Report on Financial Administration*. New Delhi : Manager of Publications.

Government of India,Administrative Reforms Commission. *Report on Financial Accounts and Audit* (1967). New Delhi.

Government of India,Administrative Reforms Commission(1967).*Report on Centre-State Relations*. New Delhi : Manager of Publications.

Mahajan S. and Mahajan,A.(2014). *Financial Administration in India*. Delhi : PHI Learning Private Limited.
Sinha, R.K.(1986). *Centre-State Financial Relations in India: Various Aspects, Irritants, Framework for Action* .New Delhi: Deep & Deep Publications.

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

Outlines of tests, syllabi and courses of reading

SEMESTER-III

Paper : INDIAN ETHICS (Theory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper highlights the ethical philosophies propounded in the different Indian Philosophical Systems. It exposes the students to the main tenets of Buddhism, Sikhism, Gandhism, Gita and Vedic Culture.

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical Philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

- Salient Features of Indian Ethics with reference to Purusartha : Yuga Dharma and Sanatan Dharma.
- Varna Vyastha and Ashrama Dharma : A Contemporary Analysis.
- Concept of Sreyas and Preyas.

Unit-II

- Buddhist Ethics : Four Noble Truths, Eight Noble Paths, Ahimsa and Karma Bhava Chakra, Sila.
- Jaina Ethics : Triratnas.
- Sikh Ethics : Hukum, Nirbhau, Nirvair, Parupkar, Sewa and Sahaj.

Unit-III

- Gita : Anasakta Karma, Lok Samgraha, Sva-Dharma
- Gandhi : Ahimsa, Satyagraha and Antyodaya.

Unit-IV

- Yoga and Stress Management .
- Yoga : Yama, Niyama, Asana, Pranayama, Pratyahara, Dharna, Dhyan, Samadhi.

Essential Readings :

Maitra S. K. (1956) The Ethics of the Hindus, New Delhi: Asian Publication Services

Singh Avtar (1970) Ethics of the Sikhs, Patiala: Punjabi University.

Sharma I.C. (1965) Ethical Philosophies of India London: George Allen and Unwin

Vivekananda (1992) Raja Yoga, Calcutta: Advaita Ashram

Suggested Readings :

Dasgupta Surama (1994) Development of Moral Philosophy in India, New Delhi : Munshi Ram Manoharlal Pub.,

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER – IV

Paper: WESTERN ETHICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*
There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (ii) in the question paper.

Unit-I

- The Nature of Ethics : Virtues and Goodness, its concerns, Relation of Ethics with Aesthetics, Psychology and Religion.
- The notion of Truth, Beauty & Goodness, Reflective Customary Morality.
- Object of Moral Judgement : Actions, Intentions, Situations and Character.

Unit-II

- Virtue Ethics : Aristotle.
- De-Ontological Ethics: Kant's Categorical Imperativeion.

Unit-III

- Teleological Ethics :
  (i) Hedonism
  (ii) Utilitarianism :
  (a) Mill
  (b) Bentham

Unit-IV

- Moral Rights of Foetus and Female Foeticide.
- Sexual harassment and Gender Justice.
- Environmental Ethics : Pollution, Land Degradation and Organic Farming and Global Warming.

Essential Readings :

1. Aristotle (2001) Nicomachean Ethics, Dordrecht : D. Reidel, Penguin Harmondsworth
2. Lillie William (1957) An Introduction to Ethics : London, Matheun
3. Singer Peter (1995) Practical Ethics (Second Edition), Cambridge University Press
4. Verma Ved Parkash (1987), Neeti Shastra (in Hindi), New Delhi : Allied Publishers

Suggested Readings :

1. Hospers John, Human Conduct: An introduction to the Problems of Ethics
2. Hursthome Rosaline (1061), Virtue Ethics, Harcourt: New York.
3. Frankena W., (1994) Ethics, New Delhi: Englewood Cliffs, Prentice Hall, India
4. Macbott J.D. (1966) An Introduction to Ethics Hutchinson: London

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PSYCHOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in experimental psychology. The students would also get an understanding of the Nervous System, Psychophysics, Learning. This course will also give an insight into psychophysics, statistics and cognitive aspects of Psychology.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper: EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

The Nervous System: Structure and functioning of the neuron; division of nervous system – Central Nervous System and Peripheral Nervous System; Structure and functioning of the brain.

Unit II

Sensation

Concept and types; Vision-The Visual Stimulus, Structure and Functioning of the Eye , Theories of Colour Vision; Audition: The Auditory Stimulus,Structure and Functioning of the Ear, Theories of Hearing.

Unit III

Psychophysics

Thresholds; Psychophysical Methods of Limits, Constant stimuli and Average Error.

Unit IV

Learning

Concept, Classical Conditioning, Operant Conditioning, Observational Learning.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Two Point Threshold
2. Muller Lyer Illusion
3. Differential Threshold
4. Method of Paired Comparison
5. Maze Learning
6. Bilateral Transfer of Training

Suggested Readings :

1. Baron, R.A. (2003): Psychology. New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology. Delhi: Pearson.
3. Das, J.P. (1998): The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1998) : Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
6. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
7. Guilford, J.P. and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education. Singapore: McGraw Hill.
8. Kerlinger, F. N. (1964) : Foundations of Behavioural Research. New York: Rinehart and Winston.
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology. Singapore: McGraw Hill.

PSYCHOLOGY

SEMESTER-IV

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in General Psychology. The students would also get an understanding of the principles and theories in different areas like Sensation, Perception and Thinking. The course also introduces the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Memory
Sensory Register; Short-Term and Long -Term Memory; Levels of Processing; Measurement of Memory; Forgetting with special reference to retro-active and pro-active inhibition

Unit II

Perception:Concepts , Types of Perception of Form,Space and Movement
Attention: Nature, Types anf Factors.

Unit III

Thinking :Nature, Tool & Types and Factors
Problem Solving: Nature ,Stages and Factors.
Creativity: Concept; Torrance's Theory of Creativity.

Unit IV

Statistics
Normal Probability Distribution: Properties and Applications: Hypothesis Testing – Type I and Type II Errors; Chi-square Test Application to one – way and Two-way classifications.

Note : The use of non-programmable calculators and statistical tables are allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Division of Attention
2. Span of Attention
3. Comparing Recall and Recognition as Measures of Memory
4. Retroactive Interference
5. Concept Formation.

Suggested Readings:

1. Baron, R.A. (2003): *Psychology,* New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology, Delhi: Pearson.
3. Das , J.P. (1998):The Working Mind: An Introduction to Psychology, New Delhi: Sage.
4. Feldman, R.S. (1998) :Understanding Psychology, New Delhi: Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer And Simons.
6. Guilford, J.P., and Fruchter, B. (1981):Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000) : Introduction to Psychology, New Delhi: Kalyani
8. Kerlinger, F.N. (1964): Foundations of Behavioural Research, New York Holy, Rinehart and Wintson
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987): Introduction to Psychology, Singapore: McGraw Hill

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GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-III

Paper –V: GEOGRAPHY OF INDIA

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

To foster an understanding of the physical and cultural landscape of India and its spatial diversity

Course Content

Unit-I

Introduction: India in the context of South Asia, Asia and the World. (05 lectures)
Physiography: Relief, drainage, climate, vegetation, soils. (15 lectures)

Unit-II

Agriculture: Characteristics and problems of Indian agriculture; irrigation, major crops (rice, wheat, maize, sugarcane, cotton, jute and tea), Food security with special reference to India. (15 lectures)
Natural hazards in India: Flood, Drought and Earthquake. (05 lectures)

Unit III

Population: Distribution and density, Growth, Migration, Urbanization (05 lectures)
Mineral and Power Resources: Iron ore, manganese, mica, copper and gold; Coal, Petroleum, Hydroelectricity and Non- conventional Power resources. (15 lectures)

Unit IV

Industries: Distribution and localization factors of major industries (Iron and Steel, Cotton Textiles, Sugar, Fertilizers, Automobile). (15 lectures)
Trade &Transport: Rail, Road, Airways and Waterways; International Trade (05 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests,(5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance(2%).
6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings:

Essential Reading:

1. Deshpande, C.D. : *India: A Regional Interpretation,* Indian Council of Social Science Research, New Delhi, 1992.
2. Johnson, B.L.C. : *India: Resources and Development,* Arnold Heinemann, London, 1980.
3. Johnson, B.L.C. : *South Asia,* Heinemann, London, 1981.
4. Khullar, D.R. : *India: A Comprehensive Geography,* Kalyani Publishers, New Delhi, 2011.
5. Majid Hussain : *Geography of India*, Tata McGraw-Hill, Delhi, 2013.
6. Spate, O.H.K. and ATA : *India & Pakistan*: *Land, People and Economy,* Methuen, London, Learmonth, 1967.
7. Tiwari, R.C : *Geography of India,* Pravalika Publications, Allahabad, 2013.

Further Readings :

1. Singh, Gopal : *A Geography of India,* Atma Ram & Sons, New Delhi, 1995
2. Singh, Jagdish : *India: A Comprehensive Systematic Geography,* Gyanodaya Prakashan, Gorakhpur, 2nd Edition, 2003.
3. Singh, R.L. : *India: A Regional Geography (Ed.),* National Geographical Society of India, Varanasi, 1971.
4. Singh, Savindra : *Environmental Geography,* Pravalika Publications, Allahabad, 2014
5. Sharma, T.C. and O. : *Economic and Commercial Geography of India,* Vikas Publishing, House, New Delhi, 2005.
6. Tirtha, Ranjit & Gopal Krishan : *Emerging India,* Conpub Ann Arbour Publishers, Michigan, 1992.

Pedagogy:

- Use of visual aids especially maps.
- Students should be encouraged to use an atlas in the classrooms.
- Audio-video shows on different parts of India.

Paper-VI: CARTOGRAPHY-III

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives:

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Nature of Geographic Data: Spatial and Attribute (Climatic, Population, Agriculture and Industrial)
Symbolization & Scaling of Geographical Data: Point, Line and Area

(4 lectures, 4 lab sessions)

UNIT-II

Choice, Use and Representation of Data using Point Symbols: Columnar Diagrams (Simple, Multiple, Compound, Percentage); Dot, Circle and Sphere

(6 lectures, 12 lab sessions)

UNIT-III

Choice, Use and Representation of the following Point Symbols: Graphs (Line Graph, Climograph, Hythergraph, Ergograph, Wind Rose, Combined and Bar Graph)

(8 lectures, 20 lab sessions)

UNIT-IV

Choice, Use and Representation of Data using: Line Symbols (Isopleth and Flow Lines); and Area Symbols (Choropleth)

(6 lectures, 12 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.

2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.

3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.

6. Three hours Practical Classes in a week are compulsory.

7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.

10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.

11. For practical classes, the number of students in one group shall not exceed fifteen.

12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Khullar, D.R. : *Essentials of Practical Geography, New Academic Publishig Co.*, Jalandhar, 2009.
2. Robinson, A.H. : *Elements of Cartography, 6th Edition*, John Wiley, New York, 2009.
3. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
4. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
5. Singh, R.L. & P.B. Singh : *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
4. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- The students need to be trained in the use of symbols to depict various geographic data.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

Paper-VII: GEOGRAPHY OF PUNJAB

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To understand the regional setting of Punjab state in detail through physical and political maps.
- To examine the cultural patterns of the regions.
- To study the distribution of major crops, industries and transport links in the state.
- To understand the intra regional variations in select aspects.

Course Content:

Unit –I

Introduction: Location, Evolution, Cultural Regions (Majha, Doaba & Malwa) and Administrative Divisions of the State. (15 lectures)

Unit –II

Physical Base: Relief, Drainage, Climate, Soils and Vegetation (12 lectures)
Resources: Mineral and Power; Water with special reference to river water sharing. (8 lectures)

Unit-III

Agriculture: Main Characteristics and Problems; Agro-climatic Regions; Green Revolution & its Ecological Implications; Irrigation; Main crops (wheat, rice, cotton, sugarcane) and their distribution, Livestock and dairying. (20 lectures)

Unit –IV

Population: Distribution, Density, Growth, Migration, Sex Ratio, Urbanization. (7 lectures)
Industries: Main characteristics, Distribution Patterns of Major Industries (Cotton Textile, Sugar, Hosiery Engineering) Industrial Concentration, Problems of Industrialization. (15 lectures)
Trade &Transport: Road, Rail and Air Transport; Inter-State Trade. (3 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests, (5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance (2%).

6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings

Essential Readings:

1. Mankoo, Darshan Singh : *Geography of Punjab, 4th Edition,* Kalyani Publishers, Ludhaina 2009.
2. Mavi, H.S. & Tiwana, D.S. : *Geography of Punjab*, National Book Trust, Delhi, 1993.
3. Singh, Jaspal : *Geography of Punjab,* Twenty First Century Publications, Patiala, 2014
4. Singh, Malkit : *Geography of Punjab*, Rashmeet Parkashan, Jalandhar, 2004

Further Readings:

1. Deshpande ,C.D. : *India: A Regional Interpretation* , Indian Council of Social Science Research, New Delhi, 1992.
2. Economic and Statistical Organization of Punjab : *Statistical Abstract of Punjab*, Economic and Statistical Organization of Punjab, Chandigarh, 2014
3. Gosal, G.S. & Gopal Krishan : *Regional Disparities in Level of Socio-Economic Development in Punjab*, Vishal Publications, Kurukshetra , 1984.
4. Gupta S.P. : *The Punjab: An Overview*, ESS PEE Publications, Chandigarh, 2004.
5. Kahlon, Simrit : *Punjab: regional reflections,* Man and Development, 29 (2), 2007.
6. Singh Pritam : *Punjab Economy: The Emerging Patterns*, Enkay Publishers, New Delhi, 1995.
7. Singh, R.L. : *India: A Regional Geography (Ed)*, National Geographical Society of India, 1990, Reprint.
8. Spate, O.H.K. & Learmonth A.T.A. : *India and Pakistan: A General and Regional Geography*, Methuen, London, 1967

Pedagogy

- Extensive and intensive use of maps to understand the regional setting.
- A component of field visit to some areas of each region may be planned for effective understanding of the region.

Paper-VIII: CARTOGRAPHY-IV

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives :

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Topographical Maps: Nomenclature (Classification), Study and Interpretation; Significance and Application in Geographical Studies

(4 lectures, 4 lab sessions)

UNIT-II

Profiles: Serial, Composite, Superimposed and Projected
Longitudinal and Transverse; Profiles of rivers

(8 lectures, 16 lab sessions)

UNIT-III

Elementary Remote Sensing : Definition, Concept, History, Application Areas and Types of platforms

(10 lectures, 8 lab sessions)

UNIT-IV

Introduction to Concept of GIS and Computer Cartography.
Definition, Development, Database (Spatial and Non Spatial) GIS Components (Hardware & Software) and Application.
Preparation of Line Graphs, Bars and Pie Charts using Computers.

(10 lectures, 10 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. For college students, a separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.
3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared by the University for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Three hours Practical Classes in a week are compulsory.
7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.
11. For practical classes, the number of students in one group shall not exceed fifteen.
12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Bhatta, Basudeb : *Remote Sensing and GIS,* Oxford, 2nd Edition, New Delhi, 2011
2. Guha, P.K. : *Remote Sensing For The Beginner,* East-West Press, 3rd Edition, New Delhi, 2013..
3. Khullar, D.R. : Essentials of Practical Geography, New Academic Publishing Co., Jalandhar, 2009.
4. Robinson, A.H. : *Elements of Cartography, 6th Edition,* John Wiley, New York, 2009.
5. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
6. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
7. Singh, R.L. & Singh, P.B. : *Map Work and Practical Geography, Central Book Depot, Raghunandan Allahabad, 2007.*

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Joseph, George : *Fundamentals of Remote Sensing,* Universities Press (India) Private Limited, 2nd Edition, Hyderabad, 2005
4. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
5. Panda, B.C. : *Remote Sensing: Principles and Applications,* Viva Books, New Delhi, 2008
6. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- They should learn to comprehend the topographical maps by deriving slopes and drawing profiles.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

SOCIAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Social Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Social Thought

1. Truth
2. Non-violence
1. Sarvodaya

UNIT-II

Man and State

4. Human Rights
5. Ideal Society, State and Rama Rajya

UNIT-III

Gandhi and Ethics

6. Education
7. Theory of Civilization
8. Morality and Religion

UNIT-IV

Gandhi and Social Justice

9. Drive against Untouchability :
   (a) Caste System
   (b) Communal Award
   (c) Poona Pact

10. Women Empowerment

Essential Readings :

1. Bandyopadhyaya, J. : *Social and Political Thought of Mahatma Gandhi,* (Bombay : Allied Publisher) 1969.
2. Bharathi, K.S. : *Social and Political Thought of Mahatma Gandhi* (New Delhi : Concept) 1995.
3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navjivan Publishing House), 2001
4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
5. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
6. Mishra, Anil Dutta : *Reading Gandhi,* (New Delhi : Pearson), 2012
7. Varma, V.P. : *Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1998.

Further Readings :

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.
3.	Suda, J.P.	:	*Main Currents of Social and Political Thought of Modern India,* Vol. II, Meerut (K. Nath & Co.) 1973.
4.	Unnithan, T.K.N.	:	*Gandhi and Social Change,* New Delhi (Arnold Heinemann India), 1973.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

POLITICAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Political Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Political Thought

1. Truth & Non-violence
2. Theory of Ends & Means
3. State : Ideal Society and State

UNIT-II

Democracy & Decentralization

4. Panchayat Raj/Gram Swaraj
5. Freedom & Equality
6. Rights and Duties

UNIT-III

Religion and Politics

7. Satyagraha : Meaning, Essentials, Forms & Significance
8. Satyagraha & Passive Resistance
9. Spiritualization of Politics

UNIT-IV

Contemporary Relevance

10. Communal Harmony
11. Assessment and Contemporary Relevance

Essential Readings

1. Bhattacharyya, Buddhadeva : *Evolution of Political Thought of Gandhi,* Calcutta: Calcutta Book House, 1969.
2. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
3. Dhawan, G.N. : *Political Philosophy of Mahatma Gandhi,* Ahmedabad (Navajivan Publishing House) 1990, 4th Edition.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
7. Mishra, Anil Dutta : *Reading Gandhi,* New Delhi (Dorling Kindersley, Pearson), 2012
8. Varma, V.P. : *The Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1981.

Further Readings:

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Iyer, Raghaavan N.	:	*The Moral & Political Thought of Mahatma Gandhi, London,* Oxford University Press, 1973.
3.	Mishra, Anil Dutta (ed.)	:	Perspectives on Human Rights (New Delhi, Radha Publications)2002.
4.	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

PRINT JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives:

This course will introduce students to the basic techniques of sourcing news stairs and features. They will also be trained in the art and science of writing and presenting print media content.

B. Pedagogy of the Course Work:

80 % Lectures (including expert lectures).

20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Definition, nature and types of news and features; sourcing news and features.

Unit-II: Writing techniques and styles of news reports and features.

Unit-III: Role and responsibility of a sub-editor; basic editing techniques for copy and pictures; importance and writing of headlines.

Unit-IV: Introduction to typography and design principles; page make up using publishing software

PRACTICALS

Max. Marks : 20

1. Prepare a Current Affairs file of news & features . : 20 Marks

Books Recommended :

ESSENTIAL READING

1 Mencher, Melvin, , (1989), *Basic News Writing: W.M.C.* Brown Publishers, New York

2 Metz, William, (1990), *News Writing: From Lead to 30*. 3rd Edition, Prentice-Hall Inc., New Jersey

3 Rivers, William. L , (1991), *Freelancer and Staff Writer: Newspaper Features and Magazine Articles*, Wadsworth Publishing Co.

4 Alexander Louis , (1987), *Beyond the Facts: A Guide to the Art of Feature Writing*. Gulf Publishing Co.

5 Garrison, B, (1999), *Profession of Feature Writing.* New Jersey: Lawrence Erlbaum Assoc

6 Aamidor, A., (1999), *Real Feature Writing*. New Jersey: Lawrence Erlbaum Assoc

7 Blundell, William. E , (1998), *The Art and Craft of Feature Writing*, Plume Inc.

8 Garrison, Bruce , (1998), *Professional Feature Writing*, Laurence Eribaum Assoc

9 Bean, Erik , (1999) , *Writing for Publication*, Deadline Communications

10 Krantz, Marshall , (1996), *Ideas and Research*, Writers' Digest Books

11 Bruce D. Itule, Dougles A Anderson, (2006), *News Writing and Reporting for Today's Media*,
McGraw Hill

12 Melvin Mencher, (2007), *News Reporting & Writing*, McGraw Hill

13 Tim Harrower, (2006), *Inside Reporting, A Practical guide to the Craft of Journalism*, McGraw Hill.

14 Stephen G. Bloom, (2002), *Writing Narrative Journalism : Inside the Writers mind*, Iowa Sate University Press.

ADDITIONAL READING

1 Kennedy, A , (1992), *Beyond the Inverted Pyramid*, Bradford Books

2 Bowles, D., & Borden, (2000), *Creative Editing*, (3rd ed.) Belmont, CA: Wadsworth

3 Elbow Peter, (1998), Writing *with Power*. Oxford University Press. N.Y

4 Johnson, C., (2005), *21st Century: Feature Writing*. New York: Allyn and Bacon

5 Wray, Cheryl Sloan , (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group

6 Wilbur, R., (1995), *Magazine feature writing*. New York: St. Martin's Press

7 Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books

8 Greene, B., (1988), *Handbook of Magazine Article Writing*. Cincinnati, OH: Writer's Digest

9 Wray, C., (2005), *Writing for Magazines*, (2nd ed.). Boston: McGraw Hill.

10 Ward, H., (1993), *Magazine and Feature Writing*. Mountain View, CA: Mayfield Publishing.

11 Wells, Gordon , (1997), *The Craft of Writing Articles*, Allison and Burby Inc.

12 Hennessey, Brendan, (1997), *Writing Feature Articles: A Practical Guide to Methods and Markets*, Focal Press.

13 Friedlander, Edward. J , (1999), *Feature Writing for Newspapers and Magazines: The Pursuit of Excellence*, Addison-Wesley Publishing Co.

14 Bell, James Scott,(2008), *Revision and Self Editing (Write great Fiction),* Writers Digest Books, New York,

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER- IV

RADIO & TV JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives :

The course will introduce students to the basic techniques of writing & presenting for the radio and TV medium.

B. Pedagogy of the Course Work :

80 % lectures (including expert lectures).

20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Basic principles of gathering, treatment and presentation of news for Radio; Basic principles of gathering, treatment and presentation of news for Television

Unit-II: Reporting and writing for Radio and TV; Pronunciation and modulation in Radio/TV reporting: Pitch, volume, tempo, vitality.

Unit-III: Basic introduction to audio/video production & its stages (pre-production, production, post production).

Unit-IV: Basic camera shots and language of camera movements.

PRACTICALS

Max. Marks : 20

1. Compilation of 5-minute weekly TV news bulletins 10 Marks
2. Compilation of 10-minute weekly radio bulletins. 10 Marks

ESSENTIAL READING

1 Chatterji,P.C. , (1991), *Broadcasting in India*. SAGE, New Delhi

2 Luthra, H.P., 1984, *Indian Broadcasting.* Publications Division, Min. of I & B.

3 Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi,

4 Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd.., New Delhi,

5 Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey

6 Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice,* Routledge, New York

7 Shrivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publishers, New Delhi.

8 Cohler, David Keith, (1985), *Broadcast Journalism*. Prentice-Hall, New Jersey.

9 Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*. Rajat Publications, New Delhi.

10 Fedler, Fred, bender, John R., Davenport, huanda, Drager, Michael W., (2005), *Reporting for the media.* Oxford University Press, New York.

11 Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi,

12 Cohen, Akilia A, (1987), *The Television News Interview.* SAGE, New Delhi,

13 Shrivastava, K.M., (2005), *Broadcast Journalism in the 21st century* new Dawn Press Group, New Delhi,

14 Fulding, Ken, (1990), Introduction *to Television Production*, Longman, New York,

ADDITIONAL READING

1 Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London

2 Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher

3 Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York,

4 Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

5 Fulding, Ken, (1990), Introduction to Television Production, Longman, New York.

6 Cohen,Akiba N., (1987), The Television News Interview, SAGE, Beverly Hills.

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POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Police Personnel Administration

(A) Course Objectives:

The objective of this course is to give inputs to the students on the various aspects of personnel relevant to police administration. Effort is made to impart knowledge to the candidates about the meaning, nature, scope and significance of Police Personnel Administration in India. In addition, job analysis, job description, pay policy, compensation and fringe benefits have been discussed. Further, the recruitment, training and promotion system in Police Service in India has been included in the syllabus. The students are also taught about the performance appraisal, police ethics, corruption in police, code of conduct and discipline along with doctrine of pleasure.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Police Personnel Administration; Significance of Police Personnel Administration in India; Career System in Police Administration.

Unit-II

Job Analysis and Job Description of Police Personnel – Concept and Significance; Pay Policy, Compensation and Fringe Benefits.

Unit-III

Recruitment: Meaning and Methods; Recruitment of Police Personnel in India; Training: Meaning and Types; Training of IPS Officers and State Police Services in India; Promotion: Meaning and Principles; Promotion of Police Personnel in India.

Unit-IV

Performance Appraisal; Police Ethics and Code of Conduct; Corruption – Meaning and Causes; Corruption in Police Force; Disciplinary Actions; Doctrine of Pleasure – Safeguards against Arbitrary Punishment.

Essential Readings:

1.	Administrative Reforms Commission	:	Report on Personnel Administration, 11th Report, Government of India, New Delhi.
2.	Goel, S.L.	:	Public Personnel Administration, Deep & Deep Publication Pvt. Ltd., New Delhi, 2006.
3.	Mamoria, C.B.	:	Personnel Management, Himalaya Publishing House, Mumbai, 2007.
4.	Zehra, Kaneez	:	Training of I.P.S., Ashish Publishing House, New Delhi, 1993.
5.	Muthuswamy, P.	:	Swamy's Manual on Disciplinary Proceedings, Swamy Publishers (p) Ltd., Madras, 1986.

Further Readings

1.	Saxena, A.P.	:	Training and Development in Government, The Indian Institute of Public Administration, New Delhi, 1974.
2.	Singh, Sahib Bhayana, Singh, Swinder and Dogra, R.K.	:	Public Personnel and Financial Administration, New Academics, Jalandhar, 1990.
3.	Ghosh, P.	:	Personnel Administration in India, Sudha Publications Private Limited, New Delhi, 1973.

POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

Law and Order Administration

(A) Course Objectives:

The principal objective of the syllabi is to acquaint the students with the basics of Law and Order Administration in India. Specifically, the students will be imparted the knowledge about the meaning, nature, scope and significance of Law and Order Administration in India along with some basic issues and emerging patterns. The endeavour is to discuss in detail the role and significance of Primary and Auxiliary Agencies of Law and Order Administration. Further, the role of Law and Order Administration in crowd management, communal riots, agrarian and industrial conflicts has also been discussed. The students are also taught about the challenges before Law and Order Administration. In addition, the concept of National Security along with challenges to it, in contemporary terms have been included in the syllabus.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Law and Order Administration; Significance of Law and Order Administration in India; Law and Order Administration – Some Basic Issues and Emerging Patterns.

Unit-II

Role, Significance and interrelationships of Law and Order Administration Agencies at the District level : The Police; Civil Administration; Court of Law; Prisons; and Health.

Unit-III

Role of Law and Order Administration in Crowd Management, Communal Riots and Industrial & Agrarian Conflicts. Challenges before Law and Order Administration.

Unit-IV

National Security: Concept and Significance. Challenges to National Security in India – Contemporary Issues.

Essential Readings:

1. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.
2. Sharma, K.K. : Law and Order Administration, National Book Organization, New Delhi, 1985.
3. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
4. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume - I, Ashish Publishing House, New Delhi, 1993.
5. Bharti, Dalbir : *Police Evam Log: Donon ke Adhikar Va Zimmedarian,* A.P.H. Publishing Corporation, New Delhi, 2007.
6. Singh, Yogendra : Social Change in India: Crisis and Resilience, Har-Anand Publications Pvt. Ltd., New Delhi, 2007.

Further Readings

1. Mayhall, Pamela D.et.al. : Police-Community Relations and the Administration of Justice, Prentice-Hall Inc., New Jersey, 1995.
2. Ghosh, S.K. : Keeping the Peace: For Whom the Bell Tolls (Police Then and Now), Ashish Publishing House, New Delhi, 1989.
3. Vadackumchery, James & Kattakayam, John : Human Behaviour and Law Enforcement, Ashish Publishing House, New Delhi, 1995.
4. Owens, R.Glynn and Ashcraft, J. Barrie : Violence: A Guide for the Caring Professions, Croom Helm, New Hampshire, USA, 1985.
5. Singh, K.P. ` : Police Gyan Vigyan, The Bright Law House Delhi, 2003.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper : FEMINIST THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :
This course offers the prominent theories that feminists have formulated to explain the matrix of gender inequality from the nineteenth century to the present. It further seeks to introduce the student to the key debates within feminist theories as well as the shifts in feminism.

Note : The students are expected to have a general understanding of the various strands of feminism and not of any specific feminist thinker in this course.

Course Contents :

Unit-I : Feminism

(a) Definition,

(b) Emergence of Feminism with special focus on

- Women in French Revolution,
- Suffrage Movement in the U.S.A. (with reference to Seneca Falls Convention and Declaration of Sentiments),
- Suffrage Movement in the U.K.

(c) Three waves of Feminism.

Unit-II : Strands of Feminism-I

(a) Liberal Feminism,

(b) Socialist Feminism,

(c) Marxist Feminism.

Unit-III : Strands of Feminism-II

(a) Radical Feminism

(b) Post modern Feminism

(c) Psycho-analytic Feminism (Freudian).

Unit-IV : Strands of Feminism-III

(a) Black Feminism

(b) Cultural Feminism

(c) Eco-Feminism.

NOTE :

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

Agarwal, Bina, **The Gender and Environment Debate: Lessons from India, Feminist Studies,** Vol. 18, No.1, Spring 1992, pp 119-158.

Anderson, Margaret, **Thinking About Women,** Macmillan, New York, 1993.

Beasley, Chris, **What is Feminism?,** Sage, London, 1999.

Bell Hooks, **Ain't I a Woman: Black Women and Feminism,** Pluto Press, London, 1982.

Chatterjee, Mohini, **Feminism and Gender Equality,** Aavishkar, Jaipur, 2005.

Collins, Patricia Hill, **Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment,** Routledge, New York, 1999.

Desai, Leela, **Issues in Feminism,** Pointer Pub., Jaipur, 2004.

Molyneux, Maxinne and Steiberg, Deborah Lynn, ***Mies and Shiva's Ecofeminism: A New Testament,*** **Feminist Review,** No. 49, Spring 1995, pp 86-10.

Further Readings :

Banks, Olive, **Faces of Feminism: A Study of Feminism as a Social Movement,** St. Martin's Press, New York, 1981.

Freeman, Jo (ed.), **Women: A Feminist Perspective,** Palo Alto, California : Mayfield, 1975.

Kosambi, Meera, **Crossing Thresholds: Feminist Essays in Social History**, Permanent Black, New Delhi, 2007.

Mishra, Binod (ed.), **Critical Responses to Feminism,** Sapru & Sons, New Delhi, 2006.

Shukla, Bhaskar A., **Feminism : From Mary Wollstonecraft to Betty Friedan,** Sapru & Sons, New Delhi, 2007.

Spender, Dale, **Feminist Theorists: Three Centuries of Women's Intellectual Traditions,** The Women's Press, London, 1982.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

Paper : Status of Women in India – II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective : This course aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Unit-I : Demographic Trends

(a) Sex Ratio, Age Specific Sex Ratio : Trends

(b) Change in Sex Ratio : Causes and Consequences

(c) Fertility Rates

(d) Definitions: Infant Mortality Rate, Child Mortality Rate, Total Mortality Rate, Maternal Mortality Rate;

Causes of Gender Differentials in Mortality Rates

Unit-II : Women and Education

(a) Gender Gaps in Literacy Rates, School Enrolment and Dropout Rates and Right to Education

(b) Women in Higher Education : Gender Gaps

(c) Obstacles to Women's Education : Socio Cultural, Economic and Infrastructural

Unit-III : Women and Health

(a) Why Health is a Gender Issue?

(b) Definition : Health & Reproductive Health

(c) Factors affecting Women's Health Status

(d) Issues relating to women's health status : Nutritional health status of women and girl child in India.

Unit-IV : Women and Work :

(a) Changing definition of Household work.

(b) Gender differential in Work Participation Rates

(c) Sexual Division of Labour

(d) Sexual Harassment at the Workplace

(e) Obstacles to Women's Workforce Participation : Cultural, Skill development etc.

NOTE :

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

1. Chatterjee, Meera , **A Report on Indian Women from Birth to Twenty,** NIPCCD, New Delhi, 1999.

2. Gopalan, Sarala and Shiva, Mira, **National Profile on Women, Health and Development,** VHAI & WHO, 2000.

3. Gopalan, Sarala, **Towards Equality - The Unfinished Agenda : Status of Women in India -2001,** National Commission for Women, New Delhi, 2002.

4. Menon-Sen, Kalayani and Shiva Kumar, A.K., **Women in India ! How Free?, How Equal?** Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.

5. **National Human Development Report, 2001**, Planning Commission, Govt. of India, March, 2002.

Further Readings :

1. Ali, Aruna Asaf, **Resurgence of Indian Women,** Nehru Memorial Museum and Library, New Delhi, Radiant ,1991.

2. Ali, Azra Asghar, **The Emergence of Feminism Among Indian Muslim Women,** 1920-1947, Oxford, Karachi, 2000.

3. Anand, Meena **Dalit Women : Fear and Discrimination,** Isha Books, Delhi, 2005.

4. Bhattacharya, Rinki (ed.), **Behind Closed Doors : Domestic Violence in India,** Sage, New Delhi, 2004.

5. Choudhary, Prem, **Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India**, OUP, New Delhi, 2007.

6. Desai, Neera and Krishnaraj, Maithreyi (ed.), **Women and Society in India**, Ajanta Publication, New Delhi, 1987.

7. Kumar, Hajira (ed.), **Status of Muslim Women in India**, Aakar Books, Delhi, 2002.

8. Mohanti, Bedabati, **Violence Against Women: An Analysis of Contemporary Realities**, Kanishka Publication, New Delhi, 2005.

9. Mohini, Giri, V., **Deprived Devis : Women's Unequal Status in Society Gyan**, New Delhi, 2006.

10. Rajawat, Mamta, **Dalit Women : Issues and Perspectives**, Anmol Pub, New Delhi, 2006.

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HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

PAPER : HUMAN RIGHTS & DUTIES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:
The course is designed to make students aware about the human rights and duties framework in India. An attempt has been made to deal the issue within the ambit of evolution of the concepts of human rights and duties; Constitutional structure and Implementation mechanisms.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: EVOLUTIONARY PHASE

(i) Evolution of the concept of Human Rights in India
(ii) The notion and significance of Duties in India
(iii) Values and relevance of composite culture of India: non-violence; secularism and fraternity

UNIT II: CONSTITUTIONAL FRAMEWORK

(i) The Preamble
(ii) Fundamental Rights
(iii) Directive Principles of State Policy
(iv) Fundamental Duties

UNIT III: KEY AREAS IN THE CONTEMPORARY PHASE

(i) Right to food security
(ii) Right to Education
(iii) Right to Information
(iv) Right to clear environment

UNIT IV: IMPLEMENTATION OF HUMAN RIGHTS

(i) Constitutional Machinery: Role of Judiciary
(ii) Statuary Machinery: National Human Rights Commission and State Human Rights Commissions

Essential Readings:

1. Aarti Singh Introduction to Human Rights and Duties: An Introuction to Human Rights: Concepts in Human Rights and the United Nations (2016), Lambert Acdemic Publishing (LAP).
2. Kaur, Amrit Pal, Promotion of Human Rights Law & Implementation,(2014) New Era Law Publications, New Delhi.
3. Lexis Manp/Kumar Sinha, Implementation of Basic Human Rights (2013), Nexis, New Delhi.
4. Brownlie Ian, et al.(eds), *Basic Documents on Human Rights*, (2006) Oxford.
5. David Robertson, *A Dictionary of Human Rights*, Europa Publications, (2004), London.
6. Ray, Arun National Human Rights Commission of India: Formation Functioning and Future Prospects (Vol.# 2), (2004), Atlantic Publication, New Delhi.
7. Nirmal, C.J., Human Rights in India: Historical, Solcial and Political Perspectives (2002) Oxford New Delhi.
8. Gandhi, P.R. (ed), *Blackstone's International Human Rights Documents* (2001),Universal, Delhi.
9. Basu, D.D., *Introduction to the Constitution of India,* (1997), New Delhi: Prentice Hall of India.
10. Henry J. Steiner, et al., (eds.), *International Human Rights in Context*, Chapter 10, (1996) Clarendon Press, Oxford.
11. Brundland Report, *Our Common Future,* (1986), Oxford.

Further Readings:

1. Kapoor, S.K:, *Human Rights under International Law and Indian Law*, (2014) Central Law Publications, Allahabad.
2. Kapoor, S.K:, *Human Rights under International Law*, (2009) Central Law Publications, Allahabad.
3. Paul, R.C., *Situation of Human Rights in India,* (2000) Commonwealth New Delhi: Publishers.
4. Rao, Ashiwini, *Status of Human Rights in India*, (2010) New Delhi, Pacific.
5. South Asian Human Rights Documentation Centre : *Human Rights and Humanitarian Law,* (2008) South Asian Human Rights Documentation Centre, New Delhi.
6. South Asian Human Rights Documentation Centre: *Introducing Human Rights,* New Delhi, (2006) South Asian Human Rights Documentation Centre, New Delhi.

HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

PAPER : HUMAN RIGHTS ISSUES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:

The Paper deals with a few specific issues in India along with some key responses emerging from the Indian society for the protection and Promotion of human rights.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: HUMAN RIGHTS & LABOUR

(i) Bonded Labour
(ii) Unorganized labour
(iii) Child Labour

UNIT II: STRUCTURAL PROBLEMS AND IMPACT ON HUMAN RIGHTS

(i) Poverty
(ii) Illiteracy
(iii) Unemployment

UNIT III: HUMAN RIGHTS & CRIMINAL JUSTICE

(i) Concept of Criminal Justice System in India
(ii) Rights of the accused
(iii) Rights of the victim

UNIT IV: SOCIAL AUDITING FOR HUMAN RIGHTS

(i) Definition, significance of social auditing
(ii) Agent of Social Auditing including Human Rights Defenders
(iii) Role of Media in social auditing
(iv) Role of Civil Society in social auditing

Essential Readings:

1. Pavithran, K.S., Human Rights in India: Discourses and Contestations (2018) Gyan Publishing, Mumbai.
2. Singh Karamjeet and Kaur Navleen, Gender Mainstreaming in Higher Education: An Inclusive Approach (2018), Bharti, Publications, New Delhi.
3. Gupta Namita, Human Rights in India: Contemporary Issues and Challenges (2017) Regal Publication, New Delhi.
4. Aggarwal, H.O., Human Rights, (2014), Central Law Publications, New Delhi
5. Anuradha, K.P., Human Rights Issues in India (2010), Adhyayan Publishers & Distributors, New Delhi.
6. Satish C. Shastri(ed), *Human Rights, Development and Environmental Law: An Anthology,* (2007), Jain Book Agency, Delhi.
7. Amrita Aggarwal, Human Rights for Survival of Civilization, (2004) Kalinga Publications.
8. V.R.Krishna lyer, *Human rights – A judge's Miscellany,* (1995) B. R. Publishing Corporation, Delhi.
9. Kalpana Kannabiran, *Crafting Human Rights Cultures*, (2006), NALSAR University of Law.
10. Upendra Baxi (ed.), *The Right to be Human*, (1987), Lancer International, New Delhi.
11. R.C.Mishra, *Human Rights and Policing*, Authors Press, (2005), New Delhi.

Further Readings:

1. K.I. Vibhute, *Criminal Justice A Human Rights Perspective of the Criminal Justice Process in India*, (2004), Eastern Book Company, Lucknow.
2. Khanna, S.K., *Children and the Human Rights,* (1998), Commonwealth, New Delhi.
3. Pandit Kamalkar, Human Rights and Criminal Justice, (2010), Asia Law House, Hyderbad.
4. Pachauri, S.K., *Children and Human Rights,* (1999), APH Publications, Delhi.
5. Pachauri, S.K. *Women and Human Rights,* (1999), APH Publications, New Delhi.

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RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

PAPER- III, SIKH RELIGION AND HISTORY

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs.

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Life, Teachings and Contribution: Guru Nanak Dev, Guru Angad Dev, Guru Amar Das, Guru Ram Das and Guru Arjun Dev; Martyrdom of Guru Arjan Dev.

Unit - II

Life, Teachings and Contribution: Guru Hargobind, Guru Har Rai, Guru Harkrishan,Guru Teg Bahadur and Guru Gobind Singh; Martyrdom of Guru Tegh Bahadur.

Unit - III

Life, Teachings and Contribution:Bhagats and Bhatts

Unit - IV

Compilation of the *Adi Granth*; Foundation of the Khalsa

Essential Readings

- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ, ਡਾ. (ਮੁਖ ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀਕਾਰ ਵਿਸ਼ੇਸ਼ ਅੰਕ-57 ਮਾਰਚ 2●●3, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅਜਮੇਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਪ੍ਰਗਟਯੋ ਖਾਲਸਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਰਾਜਿੰਦਰ ਸਿੰਘ ਜਾਲੀ, ਸਿਖ ਇਤਿਹਾਸ ਦੀਆਂ ਝਲਕੀਆਂ, ਜਾਲੀ ਲਿਟਰੇਟਚਰ ਹਾਊਸ ਦਿੱਲੀ-ਅਮਰੀਕਾ
- ਹਰਚਰਨ ਸਿੰਘ, ਡਾ., ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਨਾਨਕ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ , ਡਾ. , ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀ ਸੰਪਾਦਨਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਡਾ. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿਲੋ, ਗੁਰੂ ਰਾਮਦਾਸ, ਰੂਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਅੰਮ੍ਰਿਤ ਲਾਲ ਪਾਲ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ- ਜੀਵਨ ਤੇ ਬਾਣੀ, ਸੰਗਮ ਪਬਲੀਕੇਸ਼ਨ
- ਗੁਰਮੁਖ ਸਿੰਘ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ: ਜੀਵਨ ਦਰਸ਼ਨ ਤੇ ਬਾਣੀ, ਰੂਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਸਤਿਬੀਰ ਸਿੰਘ, 'ਗੁਰ ਭਾਰੀ' ਜੀਵਨੀ ਗੁਰੂ ਹਰਿਗੋਬਿੰਦ ਜੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਅਮਰਦਾਸ- ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).
- Grewal, J.S., *Guru Nanak in History*, Chandigarh: Panjab University, 1979.
- Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: Oxford University Press, 1968.
- G.S. Talib: *Guru Nanak; His personality & Vision*

Further Reading

- ਇੰਦੂਭੂਸ਼ਨ ਬੈਨਰਜੀ, ਖਾਲਸੇ ਦੀ ਉਤਪਤੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਿਆਰ ਸਿੰਘ, (ਸੰਪਾ.) ਸ੍ਰੀ ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ (ਫਾਰਸੀ ਸਰੋਤ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਡਾ. ਗੁਰਸ਼ਰਨ ਜੱਗੀ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਬਾਣੀ, ਗੁਰਮਤ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ
- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).
- Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

PAPER- IV SIKH LITERATURE AND INSTITUTIONS

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Unity of Guruship; Institution of Gurdwara

Unit -II

Different sects within the Sikh Movement (Udasis, Minas, Dhirmalya , Ram Raiyas) origin and development

Unit - III

Study of *Japji* and *Chandi Di Var* (Message and Formation)

Unit - IV

Study of Janam Sakhis; Tika; Parmarath; Gost. (Definition and Features) (Two out of three)

Essential Readings

- ਨਰਿੰਦਰ ਕੌਰ ਭਾਟੀਆ ਅਤੇ ਜਸਵਿੰਦਰ ਕੌਰ ਢਿਲੋਂ, ਡਾ. (ਸੰਪਾ.) ਪ੍ਰਮੁੱਖ ਸਿੱਖ ਸੰਸਥਾਵਾਂ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਤਾਰਨ ਸਿੰਘ, ਗੁਰਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਦਰਸ਼ਨ ਸਿੰਘ, ਡਾ., ਧਰਮ ਅਧਿਐਨ ਅਤੇ ਸਿੱਖ ਅਧਿਐਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਜਪੁਜੀ, ਵਿਚਾਰਧਾਰਾ, ਪ੍ਰਬੰਧ ਤੇ ਪਾਠ, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਰਾਮ ਸਿੰਘ, ਡਾ. ਜਪੁਜੀ ਦੇ ਪੰਜ ਖੰਡ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ, ਚੰਡੀ ਦੀ ਵਾਰ, ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
- ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਚੰਡੀ ਦੀ ਵਾਰ, ਗੁਰਮਤਿ ਪ੍ਰਕਾਸ਼ਨ ਪਟਿਆਲਾ
- ਹਰਬੰਸ ਸਿੰਘ ਗਿਆਨੀ, ਚੰਡੀ ਦੀ ਵਾਰ ਸਟੀਕ, ਸਹਿਗਲ ਪ੍ਰਿੰਟਿਰਜ਼ ਜਲੰਧਰ

Further Reading

- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Grewal, J.S., *Sikh Ideology, Polity and Social Order*, New Delhi: Manohar, 1996.
- Mcleod, W.H., *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999.
- Jagraj Singh: A complete guide to Sikhism, Unistar Chandigarh, 2011

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ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper : Air Pollution and Climate Change

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Paper : AIR POLLUTION AND CLIMATE CHANGE

Unit-I

Atmosphere: Composition of atmosphere, Air Pollution: Sources, Classification (Natural and anthropogenic sources; primary and secondary pollutants), Smoke, Smog, Particulate Matter and Acid rain. Effects of air pollution on human health, plants, animals and material. Air (Prevention and Control of Pollution) Act, 1981.

Unit-II

Green House Effect: Definition, Green house gases, Sources of green house effect, Global Warming.

Stratospheric ozone layer depletion. Role of agriculture to green house effect (paddy and livestock, biomass burning) in GHE.

Unit-III

Noise pollution: Definition, Sources, Noise standards, Silence Zones, Consequences of noise pollution.

Radioactive Pollution: Definition**,** Sources, effect on human health.

Mineral Resources: Types and Importance of minerals; Mineral extraction and environmental problems (limestone mining in Moussourie hills, coal mining in Jharkhand).

Unit-IV

Control: Measures and techniques to control air pollution in vehicles and industries, Green building concept, CDM (Clean Development Mechanism), Carbon sequestration. Control of noise pollution.

PRACTICAL

To monitor the level of Dust fall, SPM in surrounding atmosphere.

To monitor the level of NOx and SO_2 in surrounding atmosphere.

To prepare a survey report on different sources causing air pollution in local area.

To prepare a survey report on noise pollution in your locality.

To visit, collect data and prepare report regarding air and water pollution from sugar mill, thermal plant, cement factory in the adjoining area like Nawanshahr, Ropar, and Hoshiarpur.

ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

Paper : SOLID WASTE AND DISASTER MANAGEMENT

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Unit-I

Solid waste: Sources, nature and characteristics; categories of solid waste, Biodegradable and non-biodegradable waste; Plastic nuisance. Solid waste disposal: Sanitary landfills, Composting, optimum conditions for composting, Pyrolysis, Incineration and Refuse Derived Fuels. Fly Ash utilization, MSW Handling Rules, 2000.

Unit-II

Natural disasters: Floods, earthquakes, Tsunami, land slides, drought, forest fire and Tropical cyclones.

Disaster management: pre-disaster phase, actual disaster phase, post- disaster phase.

Unit-III

Bioenergy and waste water treatment: Biogas plant: Construction and working of biogas plants, its advantages and disadvantages. Vermi-culture and Vermi-composting, Biofertilisers, Biofuels.

Waste water treatment (STP and ETP), A brief account of primary, secondary and tertiary treatment.

Unit-IV

Organic farming: Definition, Need of Organic Farming, Methods: Soil management, weed management, control of pests. Its advantages. Organic Food, its benefits.

Waste lands: Definition, Categories of waste lands, Desertification, ways of reclamation.

PRACTICAL

A visit to Composting/Vermicomposting Unit.

To prepare a survey report of municipal waste of your city (Generation to disposal).

Classify the waste of your municipality waste (Source based and Waste based)

To visit any landfill site and prepare a tour report.

To prepare a list of herbicides / pesticides / insecticides commonly used in this area

To make a list of various botanical pesticides available in the market

Assignments/project as assigned by the teacher

Books Recommended

1. Critchfield, Howard J., General Climatology, Second Edition, Prentice-Hall, Inc., 1982.
2. Houghton, J., Global Warming, The Complete Briefing, 3rd Edition, Cambridge Univ. Press, 2006.
3. Hill, M. K., Understanding Environmental Pollution, Cambridge Univ. Press, 2008.
4. Malsin, M., Global Warming, A Very Short Introduction, Oxford Univ. Press, 2009
5. Tchobanogloas, G., Integrated Solid Waste Management: Engineering, Principle and Management. McGraw Hill, USA. 1993.
6. Singh, H.M., Solid Waste Management. Alfa Publications, Delhi. 2010.
7. Bhatnagar R.K. & Palta R.K., Earthworm Vermin Culture & Vermi Composting, Kalyani, Pub. 2007.
8. Ranganathan L.S, Vermi biotechnology: From Soil Health to Human Health, Updesh Purodit Pub. Jodhpur, 2006.
9. Aggarwal, A. K., Water Pollution, APH Publications, New Delhi, 2008.
10. American Public Health Association, Standard Methods for Examination of Water and Wastewater, APHA, New York, 2003.
11. Sengupta, B., John, S. & Abraham, T. Forth Estate, A Handbook on Air, Water and Land Pollution. IDMA Foundation for Sustainable Development and BR Publications Corporation, Delhi. 2006.
12. Aggarwal, A. K., Noise Pollution. APH Publications, New Delhi, 2008.
13. Veeresh, G. K., Organic Farming. Foundation Books, Delhi, 2006.
14. Gehlot, D., Organic Farming: Components and Management, Agrobios, Jodhpur, 2010.
15. Singh, K. K. & Aleyer, L., Disaster Management: Manmade Disasters. APH Publications. 2010.
16. Dhunna, M., Disaster Management, Vayu Education of India, Delhi, 2009.
16. Sharma & Sharma, Natural Disasters, APH Publications, 2009.
17. Dara, S.S., A Textbook of Environmental Chemistry. 2nd Edition. S. Chand & Company Ltd., Ram Nagar, New Delhi, 2010.

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MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-III

Paper-I : ADVANCED CALCULUS-I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note :

1. The syllabus has been split into two Units : Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions in all selecting at least two questions from each unit. Each question will be of 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorials.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Limit and continuity of functions of two and three variables. Partial differentiation. Change of variables. Partial derivation and differentiability of real-valued functions of two and three variables. Schwarz and Young's theorem. Statements of Inverse and implicit function theorems and applications.

Vector differentiation, Gradient, Divergence and Curl with their properties and applications.

Unit-II

Euler's theorem on homogeneous functions. Taylor's theorem for functions of two and three variables. Jacobians. Envelopes. Evolutes. Maxima, minima and saddle points of functions of two and three variables. Lagrange's multiplier method.

References

1. Gabriel Klaumber : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
2. T.M. Apostol : Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
3. R.R.Goldberg : Real Analysis, Oxford & I.B.H. Publishing Co., New Delhi, 1970.
4. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.
5. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6. Gorakh Prasad : Differential Calculus, Pothishala Pvt.Ltd., Allahabad.

7.	J. D. Murray & M. R. Spiegel	:	Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
8.	S.C.Malik	:	Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
9.	Shanti Narayan	:	A Course of Mathematical Analysis, S. Chand and Company, New Delhi
10.	J. D. Murray & M.R. Spiegel	:	Vector Analysis, Schaum Publishing Company, New York.
11.	N.Saram and S.N. Nigam	:	Introduction to Vector Analysis, Pothishala Pvt. Ltd., Allahabad.
12.	Shanti Narayan	:	A Text Book of Vector Calculus, S. Chand & Co., New Delhi.

Paper II : DIFFERENTIAL EQUATIONS- I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Exact differential equations. First order and higher degree equations solvable for x, y, p. Clairaut's form. Singular solution as an envelope of general solutions. Geometrical meaning of a differential equation. Orthogonal trajectories. Linear differential equations with constant coefficients.

Unit-II

Linear differential equations with variable coefficients- Cauchy and Legendre Equations. Linear differential equations of second order- transformation of the equation by changing the dependent variable/the independent variable, methods of variation of parameters and reduction of order. Simultaneous Differential Equations

References

1.	Erwin Kreyszig	:	Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2.	D.A. Murray	:	Introductory Course on Differential Equations, Orient Longmen, (India), 1967.
3.	A.R. Forsyth	:	A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4.	Ross, S.L.	:	Differential Equations, John Willey & Sons, 2004.

Paper III : STATICS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination per paper in a Semester

Unit-I

Basic notions. Composition and resolution of concurrent forces – Parallelogram law of forces, Components of a force in given directions, Resolved parts of a force, Resultant of any number of coplanar concurrent forces, Equilibrium conditions for coplanar concurrent forces, equilbrium of a body resting on a smooth inclined plane. Equilibrium of three forces acting at a point – Triangle law of forces, $\lambda - \mu$ theorem, Lami's theorem. Parallel Forces.

Unit-II

Moments and Couples – Moment of a force about a point and a line, Centre of Parallel forces, theorems on moment of a couple, Equivalent couples, Varignon's theorem, generalized theorem of moments, resultant of a force and a couple, resolution of a force into a force and a couple, reduction of a system of coplanar forces to a force and a couple. Equilibrium conditions for any number of coplanar non-concurrent forces.

Friction: definition and nature of friction, laws of friction, equilibrium of a particle on a rough plane, Problems on ladders, rods, spheres and circles.

References

1. S.L. Loney : Statics, Macmillan and Company, London.
2. R.S. Verma : A Text Book on Statics, Pothishala Pvt. Ltd., Allahabad.
3. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics. S Chand and Company
4. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.

MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

Paper I: ADVANCED CALCULUS II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination per paper in a Semester

Unit-I

Definition of a sequence, Bounds of a sequence, Convergent, divergent and oscillatory sequences, Algebra of limits, Monotonic Sequences, Cauchy's theorems on limits, Subsequences, Bolzano-Weirstrass Theorem, Cauchy's convergence criterion.

Sequential continuity and Uniform continuity of functions of single variable.

Unit-II

Series of non-negative terms. P-Test. Comparison tests. Cauchy's integral test. Cauchy's Root test. Ratio tests : Kummer's Test, D'Alembert's test, Raabe's test, De Morgan and Bertrand's test, Gauss Test, Logarithmic test. Alternating series. Leibnitz's theorem. Absolute and conditional convergence, Rearrangement of absolutely convergent series, Riemann's rearrangement theorem

References:

1. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi 1997.
2. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi 2000.
3. Murray R. Spiegel : Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
4. S.C.Malik : Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
5. O.E.Stanaitis : An Introduction to Sequences, Series and Improper Integrals, Holden – Dey, Inc., San Francisco, California.
6. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.
7. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper II : DIFFERENTIAL EQUATIONS- II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Series solution of differential equations-Power Series method, Bessel and Legendre equations.

Bessel functions of First and Second kind. Legendre function. Generating function. Recurrence relation and orthogonality of Bessel and Legendre function.

Partial Differential Equations: Origin of first order Partial Differential Equations, Linear Equation of first order, Integral surfaces passing through a given curve, surfaces orthogonal to a given system of surfaces.

Unit-II

Inverse Laplace transforms- Linearity property, Shifting properties, Change of Scale Property. Inverse Laplace transforms of derivatives and integrals, Convolution theorem.

Applications of Laplace Transforms - Solution of differential equations with constant coefficients, Solution of differential equations with variable coefficients, Solution of simultaneous differential equations.

Laplace Transformation-Linearity of the Laplace transformation. Existence theorem for Laplace transformations, Shifting Theorems, Laplace transforms of derivatives and integrals, Multiplication of t^n, Division by t.

References:

1. Erwin Kreyszig : Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2. D.A. Murray : Introductory Course on Differential Equations, Orient Longmen, (India) 1967.
3. A.R. Forsyth : A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4. Sneddon, I.N. : Elements of Partial Differential Equations, McGraw Hill, 1957.
5. J. D. Murray & M. R. Spiegel : Schaum Series, Laplace Transforms.

6. Ross, S.L. : Differential Equations, John Willey & Sons, 2004.

7. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.

8. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper III : DYNAMICS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination per paper in a Semester

Unit-I

Motion of a particle with constant acceleration, acceleration of falling bodies, motion under gravity, motion of a body projected vertically upwards: Newton's Laws of Motion, Motion of two particles connected by a string, motion along a smooth inclined plane, constrained motion along a smooth inclined plane. Variable acceleration: Simple harmonic motion, elastic string.

Unit-II

Curvilinear motion of a particle in a plane: Definition of velocity and acceleration, projectiles, motion in a circle.

Work, power, conservative fields and the potential energy, work done against gravity, potential energy of a gravitational field.

Relative motion, relative displacement, velocity and acceleration, motion relative to a rotating frame of reference.

Linear momentum, angular momentum, conservation of angular momentum, impulsive forces, principle of impulse and momentum, motion with respect to centre of mass of a system of particles, collisions of elastic bodies, loss of energy during impact.

References:

1. S.L. Loney : An Elementary Treatise on the Dynamics of a Particle and of Rigid bodies, Cambridge University Press, 1956.
2. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics. S Chand and Company
3. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.
4. Donald T. GreenWood : Principles of Dynamics, Second Edition, Prentice Hall of India.
5. M . Ray : A Text Book on Dynamics , S. Chand and Company- 1989

COMPUTER SCIENCE
SEMESTER-III

SCHEME OF EXAMINATION

THIRD SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS05	**Theory-A**	**Computer Organization**	**3**	**30**	**5**	**35**
Paper –CS06	**Theory-B**	**Object Oriented Programming using (C++)**	**3**	**30**	**5**	**35**
Paper – PCS03	**Practical-C**	**Practical Based on Paper – CS06**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS05 : Computer Organization

Objective : To teach the students the basics of computer organization, Microprocessor & basic know how about system maintenance.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Representation of Information : Number system: Binary, Decimal, Hexadecimal, Octal; Conversions; integer and floating point representation, character codes (ASCII, EBCDIC), error detection and correction codes: Parity bit method, Hamming code; Boolean algebra.

UNIT – II

*Basic Building Blocks :*Combinatorial logic design : Gates, Half Adder, Full Adder, Encoder, Decoder, Multiplexer : Sequential Building Block : Flip-Flops, Registers, Counters: Synchronous and Asynchronous Counters, Bus.

Microinstructions : Register Transfer, Arithmetic, Logical and Shift Operations; Instruction : Instruction Format, Instruction Cycle; Interrrupt: Interrupt types, Interrupt Cycle.

UNIT – III

Micrprocessor : Architecture of 8086/8088 Processor Model; Instruction Set; Addressing Modes: Registgers used in Mircoprocessor.

Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/Output.

UNIT – IV

System Maintenance : Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, types of displays and other peripheral devices, installing software; Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection of Viruses, Protection from Viruses.

Suggested Readings :

Essential :

1. Mano, M.M. : *Computer System Architecture,* 3rd Ed., Dec., 1998, PHI.

Further Reading :

2. Tannenbaum, A.S. : *Structured Computer Organization,* 3rd Ed., Oct., 1993, PHI.

3. Gear, C.W. : *Computer Organisation and Programming,* McGraw Hill, 1975.

4. Langholz, G., Grancioni, J. & Kandel, A. : *Elements of Computer Organization,* Prentice Hall International, 1988.

5. Hayes : *Computer Architecture and Organization,* McGraw Hill, International Edition.

6. Sloan, M.E. : *Computer Hardware and Organization,* 2nd Edition, Galgotia Pvt. Ltd.

Paper-CS06 : Object Oriented Programming (using C++)

Objective : To teach the students the implementation of various object oriented programming concepts through C++ programming

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts of Object Oriented Programming(OOP) : Object, Class, Encapsulation, Data Hiding, Inheritance, Polymorphism. Analysis and design of system using Object Oriented Approach, Benefit of OOPs.

Structure of a C++ Program : Include files, Declaration of class, Main function, I/O streams.

Classes : Class Declaration : Data Members, Member Functions, Private and Public members, data hiding and encapsulation, arrays within a class.

Objects : Creating Objects, Accessing class data members, Accessing member functions, Methods of passing arguments to functions.

UNIT – II

Object Concepts: Arrays of Objects, Objects as function arguments: Pass by value, Pass by Reference, Pointers to Objects.

Functions in C++ : Member function definition inside the class declaration and outside the class declaration, scope resolution operator, Private and Public member function, Nesting of member functions, Static and Friend functions.

UNIT – III

Constructors and Destructors: Constructors: Declaration and Definition, Default Constructors, Parameterized Constructors, Copy Constructors. *Destructors*: Definition and use.

Inheritance – Extending Classes : Concept of inheritance, base class, derived class, defining derived classes, visibility modes, private, public, protected; single inheritance : privately derived, publicly derived; making a protected member inheritable, access control to private and protected members by member functions of a derived class, multilevel inheritance, nesting of classes.

UNIT – IV

Polymorphism : Definition, types, Function overloading, Operator Overloading, Virtual functions and pure virtual functions.

Suggested Readings :

Essential :

1. Stroustrup : ***The C ++ Programming Language,*** **Addison Wesley.**
2. E. Balaguruswamy : ***Object Oriented Programming with C++,*** **TMH.**

Further Reading :

3. Robert Lafore : ***OOP in Turbo C++,*** **Galgotia.**
4. Herbert Schildt : ***Schildt's Advanced Win 95 Prog. in C & C++,*** **TMH.**
5. Herbert Schildt : ***C++ The Complete Reference,*** **TMH.**

Paper – PCS03 : Practical Based on Paper CS06

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COMPUTER SCIENCE
SEMESTER-IV

SCHEME OF EXAMINATION

FOURTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS07	**Theory-A**	**Database Concepts**	**3**	**30**	**5**	**35**
Paper –CS08	**Theory-B**	**Data Structures**	**3**	**30**	**5**	**35**
Paper – PCS04	**Practical-C**	**Practical Based on Paper – CS08**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS07: Database Concepts

Objective : To teach the underlying concepts of database system in depth to students.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach; Data Independence.

UNIT – II

Relational Data Model: Relational model concepts, Integrity constraints over Relations, Conventional Data Models : An overview of Network and Hierarchical Data Models. The 12 Rules (Codd's Rule) for an RDBMS; Entity Relationship model.

UNIT – III

Relational Algebra and Calculus: Storage Organization for Relations, Relational Algebra: Operations - union, intersection, difference, Cartesian product, projection, selection, division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

UNIT – IV

Advance concepts: Client-Server Architecture, 3-tier Architecture of database, Distributed databases, Normalization: First, second and third Normal Form, Boyce Codd Normal Form; Database Integrity: entity and referential; Security: , Concurrency, Recovery

Suggested Reading

Essential :

1. Date, C.J., 1981 : *An Introduction to Data Base Systems,* Vols. I and II, Addison-Wesley.

Further Readings

2. Ullman, Jeffrey D., : *Principles of Data Base Systems,* 2nd Edition, Galgotia Publ. Pvt. Ltd. 1982.
3. Whittington, R.P. : *Data Base System Engineering,* Clavendon Press.
4. Pratt, P., 1987 : *Data Base Systems Management and Design,* Boyd and Fraser Publ. Comp.

Paper-CS08 : Data Structures

Objective : To teach the students various data structures and operations performed on them using algorithms. The students will be capable to implement these operations using any programming language.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures; **Arrays**: Introduction, Types of Array, Memory representation, Applications and operations. **Stacks**: Introduction, memory representation, Applications and operations

UNIT – II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation; **Queue**: Introduction, Types, Memory Representation and Applications.

UNIT – III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Binary Search tree; **Graphs**: Introduction, Memory Representation, Graph Traversal (DFS and BFS).

UNIT – IV

Searching: Binary and Linear Search; **Sorting**: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Readings :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.

Paper – PCS04 : Practical Based on Paper CS08 – Implement Data Structures Operations using C / C++.

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STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Note :

1. A candidate shall offer these subjects in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers with codes 201 and 202 in the subject of Statistics in B.A./B.Sc. 3rd semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (of 45 minutes each) for theory per week and 4 lectures (of 45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 201 : STATISTICAL INFERENCE

Maximum Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to provide a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Concept of a statistic and its sampling distribution. Point estimate of a parameter, concept of unbiasedness, consistency, efficiency and sufficiency (only the definitions and examples). Maximum likelihood estimation (standard distributions) Standard errors of sample mean and sample proportion. Sampling distribution of sum of independent binomial and Poisson random variables. Independence of sample mean and variance in random sampling from a normal distribution (without derivation).

Statements and sampling distributions of chi-square, t & F distributions and their relationships.

UNIT-II

Statistical Tests and Interval Estimation : Null and alternative hypothesis, two types of errors, level of significance and p-value. Testing for the mean and variance of a normal distribution, testing of equality of means and variances of two univariate normal distributions, and their related confidence intervals. Testing the significance of sample correlation coefficient.

Large Sample Tests : Use of central limit theorem for testing and interval estimation of a single mean and a single proportion, difference of two means and two proportions. Fisher's Z-transformation and its uses. Chi-square test for goodness of fit and testing of independence of attributes, Yale's correction.

References :

1. Goon A.M., Gupta M.K., Dasgupta. B. (2005) : Fundamentals of Statistics, Vol. I, World Press, Calcutta.
2. Miller, I. and Miller, M. (2002) : John E. Freund's Mathematical Statistics (6^{th} addition, low price edition), Prentice Hall of India.

Additional References :

1. Mood A.M., Graybill F.A. and Boes D.C. (1974) : Introduction to the Theory of Statistics, McGraw Hill.
2. Bhat B.R., Srivenkatramana T and Rao Madhava K.S. (1997) : Statistics : A Beginner's Text, Vol. I, New Age International (P) Ltd.
3. Snedecor G.W and Cochran W.G. (1967) : Statistical Methods. lowa State University Press.
4. Spiegel, M.R , Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4^{th} edition) Tata McGraw Hill Education Private Limited

Paper- 202: PRACTICAL (SEMESTER-III)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce : 5 marks; record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Drawing random samples from standard distributions : Uniform, Exponential and Normal.
2. Tests of significance based on t, chi-square and F for one sample, two samples and paired sample problems; significance of correlation coefficient. Use of Z-Transformation for testing $\rho = \rho_0$.
3. Large sample tests for means and proportions, tests of goodness of fit and independence of attributes in contingency tables.
4. Confidence intervals for one and two sample problems (mean, variance and proportion).

STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-IV

Note : 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. A candidate shall offer this subject in B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.

3. There are two papers code named papers 203 and 204 in the subject of Statistics in B.A./B.Sc. 4th semester. These are to be taught simultaneously throughout the semester.

4. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 203 : SAMPLE SURVEYS, DESIGN AND ANALYSIS OF EXPERIMENTS

Maximum Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of this course is to acquaint the students about the need & merits of sampling over census and the implementation of various sampling schemes along with their merits, demerits and comparisons in appropriate practical situations. The students will get exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I

Concepts of population and sample, need for sampling, census and sample surveys, basic concepts in sampling. Sample selection and sample size. Sampling and non-sampling errors.

Some basic sampling methods for estimation of population mean, variance and standard error of estimates : simple random sampling (SRS) with and without replacement, stratified random sampling under various allocations and systematic sampling.

UNIT-II

Linear Models : concepts of fixed effect, random effect and mixed effect models. Analysis of variance for one way, two-way (with one observation per cell and with multiple but equal observations per cell) classifications under the fixed effect models.

Need for design of experiment, three fundamental principles of design, basic designs-CRD, RBD, LSD and their analysis.

References:

1. Goon A.M., Gupta M.K., Das Gupta. B. (2005) : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Singh, D. and Chaudhary, F.S (1986). : Theory and Analysis of Sample Survey Designs, John Wiley and sons.

Additional References:

1. Sukhatme, B.V (1984) : Sample Survey Methods and Its Applications, Indian Society of Agricultural Statistics.
2. Murthy M.N (1967) : Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
3. Sampath S. (2000) : Sampling Theory and Methods, Narosa Publishing House.
4. Dass M.N. and Giri (1986) : Design and Analysis of Experiments, Springer Verlag.
5. Cochran W.G. and Cox G.M (1992) : Experimental Designs, John Wiley and Sons.
6. Montgomery, D. C. (2000) : Design and Analysis of Experiment, John Wiley, New York.

Paper - 204: PRACTICAL (SEMESTER-IV)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce : 5 marks; record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Selection of sample and determination of sample size : Simple random sampling (SRS), stratified SRS, allocation problems in stratified SRS and systematic sampling.
2. Analysis of variance for one-way and two-way classifications. Analysis of CRD, RBD and LSD.

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APPLIED STATISTICS

SEMESTER-III

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 201AS in B.A./B.Sc. Semester-III having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

PAPER - 201AS: MATHEMATICAL METHODS - II

Maximum Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to provide an exposure to the Coordinate Geometry of three dimensions, Calculus of several variables and theory of Matrices.

Note : There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.

UNIT-I

Coordinate Geometry of 3 Dimensions : Cartesian, spherical coordinates, equations of line, plane, sphere and ellipsoid.

Matrices and Linear Algebra : Determinants, algebra of matrices, rank of a matrix, inverse of a matrix, symmetric matrices (upto 4×4 matrices only).

UNIT-II

Matrices and Linear Algebra : Systems of Linear equations and their solutions.

Calculus of Several Variables : Functions of two variables, Partial derivatives and double integrals. Applications to evaluation of area.

Books Prescribed

1. Ayres F. (1999) : First Year College Mathematics, Schaum Series, Mc Graw Hill, New York.

2. Ayres F. (1980) : Matrices, Schaum Series, Mc Graw Hill, New York.

Books suggested for supplementary Reading

1. Kindle J.H. (1990) : Analytical Geometry, Schaum Series, Mc Graw Hill, New York.

2. Ayres F. (1999) : Calculus, Schaum Series, Mc Graw Hill, New York.

3. Spiegel M.R. (2002) : Advanced Calculus, Schaum Series, Mc Graw Hill, New York.

APPLIED STATISTICS

SEMESTER-IV

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 202AS in the subject of Applied Statistics in B.A./B.Sc. Semester IV, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

PAPER- 202 AS: STATISTICAL METHODS

Maximum Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach.

Note :
1. There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Compilation, classification, tabulation and diagrammatic representation of statistical data. Concepts of Statistical population, random sample and frequency curve, measures of location, dispersion, skewness and kurtosis.

Two dimensional random variable, joint probability distributions, marginal and conditional probability distributions, conditional expectation, covariance and correlation coefficient.

UNIT-II

Measures of association and contingency, correlation and linear-regression involving two variables. Bivariate normal distributions.

Statement of weak law of large numbers and central limit theorem for independent and identical random variables. Sampling distributions of means, chi-square, t and F in sampling from normal populations (without proof).

Books recommended

1. Goon, A.M., Gupta, M.K. and Dasgupta, B (2005). : Fundamentals of Statistics, Vol.1 Chapter 1 to 6, 9, 10, 13 (only the relevant portion from these chapters as suggested by the body of the syllabus).

2. P.L.Meyer, (1971) : Introductory Probability and Statistical Applications, Addison Wesley. American Pub. Co.

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PHYSICS

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2019-2020

General Instructions for teachers, students and paper setters:

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The Practical examination is of 25 marks including 3 (three) marks for the Internal assessment. The exams will be conducted every semester.

2. The number of lectures per week will be three for each theory paper and six for practicals.

3. The examination time for each theory paper as well as practical paper will be three hours.

4. Each theory paper will consist of seven questions comprising of three sections. First two sections will comprise of three questions from each of Units I and II of syllabus, and the third section will comprise of one compulsory question of ten short answer type parts covering whole syllabus. The question paper will be set for 44 marks - All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory questions. After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

7. External examiners will be sent for Practical examinations.

PHYSICS

SEMESTER-III

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – I	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –I	Total Teaching hrs. 30
Paper C	:	Quantum Physics-I	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-I (30 Hrs.)

UNIT-I

Basic ideas of Statistical Physics, Scope of Statistical Physics, basic ideas about probability, distribution of four distinguishable particles in two compartments of equal size. Concept of macrostates, microstates, thermodynamic probability, effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability, equilibrium state of dynamic system, distribution of distinguishable n particles in k compartments of unequal sizes.

UNIT-II

Phase space and its division into elementary cells, three kinds of statistics. The basic approach in the three statistics. Maxwell-Boltzman statistics applied to an ideal gas in equilibrium, experimental verification of Maxwell-Boltzman's law of distribution of molecular speeds.
Need of quantum statistics--B.E. statistics, derivation of Planck's law of radiation, deduction of Wien's displacement law and Stefan's law from Planck's law, F.D. statistics, Comparison of M.B., B.E. and F.D. statistics.

Books Suggested :

Essential Readings :

1. "*Statistical Physics and Thermodynamics*", V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar).
2. "*A Treatise on Heat*" Saha and Srivastava (Indian Press, Ahmedabad, 1972).

Further Readings:

1. *Thermal Physics* by C. Kittel & H. Kroemer, CBS Pub., 1987.
2. *Thermal Physics*, S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-I **(30 Hrs.)**

UNIT-I

Interference : Concept of coherence, spatial and temporal coherence, coherence time, coherence length, area of coherence. Conditions for observing interference fringes. Interference by wavefront division and amplitude division. Young's double slit experiment. Lloyd's mirror and Fresnel's biprism, phase change on reflection. Newton's rings,Michelson interferometer—working, principle and nature of fringes. Interference in thin films, Role of interference in anti-reflection. Multiple beam interference, Fabry-Perot interferometer, nature of fringes, finesse.

UNIT-II

Diffraction : Huygen-Fresnal theory half period zones, zone plates. Distinction between Fresnel and Fraunhofer diffraction. Fraunhofer diffraction due to single slit and intensity distribution,double slits & multiple slits(qualitative). Fraunhofer diffraction at rectangular (qualitative discussion)and circular apertures. Effects of diffraction in optical imaging, resolving power of microscope and telescope, diffraction grating, its use as a spectroscopic element, resolving power, Moire's fringes.

Polarization : Concept and analytical treatment of unpolarised, plane polarized and elliptically polarized light. Double refraction, Nicol prism, sheet polarisers, retardation plates. Production and analysis of polarized light (quarter and half wave plates).

Books Suggested :

Essential Readings:

1. *Optics*, Jenkins and White, McGraw Hill.
2. *Optics*, Ajoy Ghatak, McMillan India.
3. *Physics for Degree Students,* C. L. Arora and P .S. Hemne, S. Chand & Co., 2014.

Further Readings:

1. *Optics*, Born and Wolf, Pergamon.

Paper-C : QUANTUM PHYSICS-I (30 Hrs.)

UNIT-I

Formalism of Wave Mechanics :

(i) Plancks's formula of Black body radiation and energy quantization,
Wave-particle duality – Photoelectric effect, X-ray diffraction, Compton effect, Pair production, Photon and gravity.
De Brogile waves, wave packet, Phase velocity and Group velocity, Electron microscope, Particle in a box, Particle diffraction, Davisson-Germer experiment, Interferferometry with particles.
Uncertainty principle with illustrations, Principle of complementarity. (Chapters 2 and 3 of book 1 or Chapters 1-3 of book 2)

(ii) Quantum mechanics, Wave equation, Plausible arguments leading to time-dependent Schrodinger equations, Born's interpretation of Wave function, complex character, continuity and boundary conditions, probability interpretation, normalization, Probabilty current, Probability conservation equation, Principle of superposition.

(iii) Fundamental postulates of quantum mechanics. Eigenvalues and eigenfunctions. Operator formalism, Position, momentum and energy operators, expectation values, Ehrenfest theorem, Hermitian operators.

(Chapter 5 of book 1 and book 2)

UNIT-II

Problems in One and Three Dimensions :

(a) Steady-state Schrodinger equation, Appliction to stationary states for one dimension, Potential step. potential barrier, Tunnel effect examples, Scanning Tunneling microscope, rectangular potential well, Linear harmonic oscillator.

(Chapter 5 of book 1 and book 2)

(ii) Schrödinger equation for spherically symmetric potential, spherical harmonics, hydrogen atom energy levels and eigenfunctions, Principal, Orbital and Magnetic quantum numbers, Electron probability density.

(Chapter 6 of book 1 and book 2)

Books Suggested :

Essential Readings :

1. *Concept of Modern Physics, A. Beiser, S. Mahajan and S. R. Choudhury, Tata McGraw Hill, 6th Edition.*
2. *Quantum Physics of Atoms, Molecular, R. Eisberg & R.Resnick, Second Edition, John Wiley, 2002.*
3. *Physics for Degree Students, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014*

Further Readings :

1. *Modern Physics,* J. Bernstein, P.M. Fishbane, S.G. Gasiorowicz, Pearson, 2000.
2. *Elements of Modern Physics*, S.H. Patil, McGraw Hill, 1998.
3. *Quantum Mechanics*, E. Merzbacaher, II Ed., John Wiley.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II .The Practical examination will be held along with the fourth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment,fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i) One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii) One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii) Viva-Voce and Record (Practical file)	10
(iv) Project	8
(v) Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

UNIT-I

A. Statistical Physics and Thermodynamics :

I. To study adiabatic expansion of a gas.

II. To measure thermal expansion of crystal using interference fringes.

III. To measure thermal conductivity in poor conductor by Lee's method.

IV. Thermo emf calibration, comparison.

V. Total radiation law, temperature dependence of radiation.

VI. To study Probability distribution using coloured dice, coins.

B. Optics and Lasers :

VII. To determine the refractive index of a liquid using spectrometer.

VIII. To determine the Cauchy's constants.

IX. To study the refractive index of a doubly refracting prism.

X. Study of rotation of plane of polarization with a polarimeter.

XI. To determine the wave length of a given light using biprism.

Exercises :

1. To measure the thermo e.m.f.
2. To determine the heating efficiency of an electric kettle with varying voltages.
3. To measure the angle of rotation of plane of polarization for the given liquid.
4. To determine the least count and setup the spectrometer for minimum deviation position of the prism.

Computer Based Activities : Elementary C language programs.

1. Motion of particle in a central force field.
2. Calculation of days between two dates of a year.
3. To check if triangle exists and the type of the triangle.

UNIT-II

C. Optics and Lasers :

I. To determine the wave length and dispersive power using plane diffraction grating (use Hg source).

II. To determine the resolving power of a telescope.

III. To determine the resolving power of a grating.

IV. Set up Newton's rings to determine wave length of sodium light.

V. To measure an inaccessible height using sextant.

VI. To determine the principal points of a lens system.

VII. To determine the divergence and wave length of a given laser source.

D. Quantum Physics:

VIII. To study the Photoelectric effect and determine the value of Planck's constant.

IX. To study the gas discharge spectrum of hydrogen.

X. To study the absorption spectra of iodine vapours.

XI. To determine the ionization potential of mercury.

Exercises :

1. To measure the diameter of Newton's rings.
2. Study of variation of light intensity using photovoltaic cell/inverse square law.
3. To determine the angle of wedge using interference method.
4. To measure the angle of elevation of a tall building.

Computer Based Activities : Elementary C language programs.

1. To find the sum of the sine and cosine series and print out the curve.
2. To find Sum and Product of Matrices
3. Motion of a projectile using computer simulation.

Text and Reference Books :

1. *A Laboratory Manual of Physics for Undergraduate Classes,* D.P. Khandelwal.
2. *B.Sc. Practical Physics, C.L.* Arora (S. Chand) & Co. (2014)
3. *Numerical Analysis* by C. Dixon.
4. *Programming with C, Schaum series* by Byron Gottfried & Jitender Chhabra.

PHYSICS

SEMESTER – IV

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – II	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –II	Total Teaching hrs. 30
Paper C	:	Quantum Physics-II	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-II (30 Hrs.)

UNIT-I

Statistical definition of entropy, change of entropy of a system, additive nature of entropy, law of increase of entropy, reversible and irreversible processes with examples. Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder.
Brief review of the terms and Laws of Thermodynamics, Carnot's Cycle. Entropy changes in Carnot's Cycle. Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path in a P.V. diagram, entropy of a perfect gas. Equation of state of ideal gas from simple statistical consideration. Heat death of the universe.

UNIT-II

Derivation of Maxwell's thermodynamical relations and applications, cooling produced by adiabatic stretching, adiabatic compression, change of internal energy with volume. Expression for (C_p-C_v), change of state and Clayperon Equation. Thermodynamical treatment of Joule-Thomson effect. Use of Joule-Thomson effect for liquification of helium. Production of very low temperature by adiabatic demagnetisation.

Books Suggested :

Essential Readings:

1. *"Statistical Physics and Thermodynamics",* V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar)
2. *"A Treatise on Heat"* Saha and Srivastava (Indian Press, Ahmedabad, 1972.)

Further Readings :

1. *Thermal Physics by C.* Kittel & H. Kroemer, CBS Pub., 1987
2. *Thermal Physics,* S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-II **(30 Hrs.)**

UNIT-I

Laser Fundamentals :
Interacation of light with matter : Absorption, spontaneous emission, stimulated emission, Wave mechanical explanation, Properties of Spectral Lines, Temporal and spatial coherence, Charatertistics of stimulated emission, Einstein coefficients and their relations, Light amplification and threshold condition ,Population inversion, Kinetics of optical absorption (qualitative account only), Qualitative account of Collisional broadening, Doppler broadening & Natural broadening, Mechanism of Luminescence.
Lasing action, Components of Laser, Elementary theory of optical cavity, longitudinal and transverse modes, Principal pumping schemes, Three level and four level laser schemes.

UNIT-II

Laser Systems : Types of lasers, Ruby and Nd : YAG lasers. He–Ne, Dye and CO_2 lasers – construction, mode of creating population inversion and output characteristics.
Applications of lasers—a general outline, Holography. Principle, recording of hologram and reconstruction of image.
Fiber Optics : Photonics, Optical fibre, Construction, Numerical aperture, acceptance angle, skip distance, Step index fibre – single mode and multimode, Graded index fibre, Losses in optical fibre, Material losses and Rayleigh scattering, bending losses, Intermodal and intramodal dispersion.
Splicing techniques, Optical fibre based communication system, Medical applications.

Books Suggested :

Essential Readings :

1. *Laser Fundamentals,* W.T. Silfvast, Foundation Books.
2. *Lasers and Non-linear Optics,* B.B. Laud, Wiley Eastern Limited.
3. *A text book of Optics,* Subtahmanyam N., Lal B. and Avadhanulu, M. N., S. Chand & Co., 2012.
4. *Optical Fiber Communication,* Keiser, MH.

Further Readings :

1. *Lasers,* Svelto Pergmon.

Paper-C : QUANTUM PHYSICS-II (30 Hrs.)

UNIT-I

Radiative transitions, selection rules and life times,
Spectrum of hydrogen atom.
Normal Neeman effect and experiment, Degeneracy of H-atom energy levels, fine structure, Electron angular momentum, Larmor's frequency, electron spin angular momentum, Exclusive principle, Stern-Gerlach experiment, spin-orbit coupling, electron magnetic moment, total angular momentum, Hyperfine structure, examples of one electron systems, Anomalous Zeeman effect, Lande-g factor (sodium D-lines). Paschen-Back Effect, Stark Effect.

(Chapters 6 & 7 of Book 1, Chapters 8-10 of Book 2)

UNIT-II

Symmetric and Antisymmetric wave functions, exclusion principle, Many electron atoms, Slater determinant, Electronic configurations, Hund's rule, Spin-Orbit coupling, L-S coupling, J-J couplings, term symbols. Atomic spectra of H, Na, He and Hg, selection rules.

X-ray spectra, nomenclature, Selection rules, Mosley law, Auger effect.

Molecular bonding, H_2^+ ion and H_2 molecules, Complex molecules, molecular spectra, selection rules, symmetric structures, rotational vibrational levels and spectra of diatomic molecules,vibration-rotation spectra, electronic spectra of molecules, Franck Condon principle, fluorescence and phosphorescence, Raman Effect, Magnetic resonance experiments.

(Chapters 7 & 8 of Book 1, Chapter 12 of Book 2)

Books Suggested :

Essential Readings :

1. *Concepts of Modern Physics,* A. Beiser, S. Mahajan and S. R. Choudhary, Tata McGraw Hill, 6th Edition.
2. *Quantum Physics of Atoms, Molecular,* R. Eisberg & R. Resnick, Second Edition, John Wiley, 2002.
3. *Physics for Degree Students,* C.L. Arora and P.S. Hemne, S.Chand & Co., 2014.
4. *Elements of Modern Physics,* S.H. Patil, McGraw Hill, 1998.

Further Readings :

1. *Fundamentals of Molecular Spectroscopy,* C.N . Banwell, T.M.H., 1972
2. *Atomic and Molecular Spectra*, Rajkumar (Kedarnath Ramnath Prakashan, Meerut).
3. *Atomic Spectra,* H.G. Kuhn, Academic Press, N.Y.

PHYSICS PRACTICALS

The Practical examination will be held along with the fourth semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester III.

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CHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

Scheme of Teaching and Examination

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Total Marks

SEMESTER-III- 100

SEMESTER-IV- 100

200

CHEMISTRY

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
	Total	**15 periods/week**		**100**

Paper-IX: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Chemistry of Elements of First Transition Series:
Characteristic properties of *d*-block elements.

Properties of the elements of the first transition series, their simple compounds and complexes, illustrating relative stability of their oxidation states, coordination number and geometry.

UNIT-II **(7 Hrs.)**

Chemistry of Elements of Second and Third Transition Series:
General characteristics, comparative treatment with their 3*d*-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and stereochemistry.

UNIT-III **(8 Hrs.)**

Chemistry of Coordination Compounds-I
Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds

UNIT-IV **(7 Hrs.)**

Chemistry of Coordination Compounds-II
Valence bond theory of transition metal complexes. Properties of Coordination compounds i.e. magenetic properties, colours (Qualitative approach only), use of coordination compounds.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-X: ORGANIC CHEMISTRY-A **Time : 3 Hrs**
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Alcohols and Phenols:

Classification and nomenclature

Monohydric alcohols-Nomenclature, methods of formation by reduction of aldehydes, ketones, carboxylic acids and esters. Hydrogen bonding. Acidic nature. Reactions of alcohols. Dihydric and Trihydric alcohols-Nomenclature, methods of formation, chemical reactions of vicinal glycols and glycerol.

Preparation of phenols, physical properties and acidic character. Comparative acidic strengths of alcohols and phenols, resonance stabilization of phenoxide ion. Reactions of phenols-electrophilic aromatic substitution, acylation and carboxylation. Mechanisms of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, and Reimer-Tiemann reaction.

UNIT-II **(8 Hrs.)**

Aldehydes and Ketones I

Nomenclature and structure of the carbonyl group. Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids. Physical properties.

UNIT-III **(7 Hrs.)**

Aldehydes and Ketones-II

Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol, Perkin and Knoevenagel condensations. Condensation with ammonia and its derivatives. Wittig reaction, Mannich reaction.

Use of acetals as protecting group. Oxidation of aldehydes, Baeyer-Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen, Wolff-Kishner, $LiAlH_4$ and $NaBH_4$ reductions.

UNIT-IV

Carboxylic Acids: **(7 Hrs.)**

Nomenclature, structure and bonding, physical properties, acidity of carboxylic acids, effects of substitutions on acid strength. Preparations of carboxylic acids. Reactions of carboxylic acids. Hell-Volhard-Zelinsky reaction. Synthesis of acid chlorides, esters and amides, Reduction of carboxylic acids. Mechanism of decarboxylation. Methods of formation and chemical reactions of halo acids. Hydroxyl acids: Malic, tartaric and citric acids(structural features only).

Methods of formation and chemical reactions of unsaturated monocarboxylic acids.

Dicarboxylic acids: Methods of formation and effects of heat and hydrating agents.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.

4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.

5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XI: PHYSICAL CHEMISTRY-A

Time : 3 Hrs.
Max. Marks:22+3
60 Hrs. (2 Hrs./Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Liquid State:
Intermolecular forces, structure of liquids (a qualitative description).
Structural differences between solids, liquids and gases.
Liquid Crystals : Difference between liquid crystal, solid and liquid. Classification, structure of nematic and cholestric phases. Thermography and seven segment cell.

UNIT-II **(7 Hrs.)**

Chemical Equilibrium:
Equilibrium constant and free energy. Thermodynamic derivation of law of mass of mass action. Le - Chatelier's principle.
Reaction isotherm and Reaction isochore-Clapeyron equation and Clausius –Clapeyron equation, applications.

UNIT-III **(8 Hrs.)**

Thermodynamics-II:
Second Law of Thermodynamics: Need for the law, different statements of the law, Carnot cycle and its efficiency, Carnot theorem. Thermodynamic scale of temperature.

Concept of Entropy: Entropy as a state function, entropy as a function of V & T, entropy as a function of P & T, entropy change in physical change, Clausius inequality, entropy as a criteria of spontaneity and equilibrium. Entropy change in ideal gases and mixing of gases.

UNIT-IV **(7 Hrs.)**

Thermodynamics-III:
Third Law of Thermodynamics: Nernst heat theorem, statement and concept of residual entropy, evaluation of absolute entropy from heat capacity data. Gibbs and Helmholtz functions; Gibbs function (G) and Helmholtz functions (A) as thermodynamic quantities, A & G as criteria for thermodynamic equilibrium and spontaneity, their advantage over entropy change. Variation of G and A with P, V and T.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XII: LABORATORY PRACTICALS

Max. Marks:22+3

Inorganic Chemistry **6 Periods/week**

Quantitative Analysis

Volumetric Analysis:

a) Estimation of calcium content in chalk as calcium oxalate by permanganometry.
b) Estimation of hardness of water by EDTA.
c) Estimation of ferrous and ferric by dichromate method.
d) Estimation of copper using sodium thiosulphate

Gravimetric Analysis

Analysis of Cu as CuSCN and Ni as Ni (dimethylgyoxime)$_2$.

Physical Chemistry

Thermochemistry:

a) To determine the solubility of benzoic acid at different temperatures and to determine ΔH of the dissolution process.
b) To determine the enthalpy of neutralization of a weak acid/weak base versus strong base/strong acid and determine the enthalpy of ionization of the weak acid/weak base. pH of a Buffer solution, Determination of ionization constant of a weak acid.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Inorganic Chemistry	: 09 marks
Q.No. II. Physical Chemistry	: 06 marks
Q.No. III. Viva-Voce	: 04 marks
Ask four questions (2 marks each) related to chemistry practicals.	
Q.No. IV. Note Book	: 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs:Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R. Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

CHEMISTRY

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-XIII: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Chemistry of Lanthanide Elements:
Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

Chemistry of Actinides:
General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from U, similarities between the later actinides and the later lanthanides.

UNIT-II **(7 Hrs.)**

Acids and Bases:
Arrhenius, Bronsted-Lowry, the Lux-Flood, solvent system and Lewis concepts of acids and bases.

UNIT-III **(8 Hrs.)**

Oxidation and Reduction:
Use of redox potential data – analysis of redox cycle, redox stability in water – Frost, Latimer and Pourbaix diagrams. Principles involved in the extraction of the elements.

UNIT-IV **(7 Hrs.)**

Non-aqueous Solvents:
Physical properties of a solvent, types of solvents and their general characteristics, reactions in non-aqueous solvents with reference to liquid NH_3 and liquid SO_2.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-XIV: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Carboxylic Acid Derivatives:
Structure and nomenclature of acid chlorides, esters, amides and acid anhydrides. Relative stability & reactivity of acyl derivatives. Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution.

Preparation of carboxylic acid derivatives, chemical reactions. Mechanisms of esterification and hydrolysis (acidic and basic).

UNIT-II (8 Hrs.)

Ethers , Epoxides Fats, Oils and Detergents:
Nomenclature of ether and methods of their formation, physical properties. Chemical reaction-cleavage and autoxidation, Ziesel's method.

Synthesis of epoxides. Acid and base-catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides.

Natural fats, edible and industrial oils of vegetable origin, common fatty acids, glycerides, hydrogenation of unsaturated oils. Saponification value, iodine value, acid value. Soaps, synthetic detergents; alkyl and aryl sulphonates.

UNIT-III (7 Hrs.)

Organic Compounds of Nitrogen:
Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanisms of nucleophilic substitution in nitroarenes and their reductions in acidic, neutral and alkaline media. Picric acid.

Structure and nomenclature of amines, physical properties. Stereochemistry of amines, Separation of a mixture of primary, secondary and tertiary amines. Structural features effecting basicity of amines. Amine salts as phase-transfer catalysis. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel-phthalimide reaction, Hofmann bromamide reaction.

UNIT-IV

Heterocyclic Compounds: **(7 Hrs.)**

Introduction: Moleculer Orbital picture and aromatic character of pyrrole, furan, thiophene, pyridine. Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution. Mechanism of nucleophilic substitution reactions in pyridine derivatives.Comparision of basicity of pyridine, piperidine and pyrrole.

Introduction to condensed-five and six-membered heterocycles. Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis. Skraup synthesis and Bischler-Napieralski synthesis. Mechanism of electrophilic substitution reactions of indole, quinoline and isoquinoline.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.

4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.

5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XV: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Phase equilibrium:

Statement and meaning of the terms – phase, component and degree of freedom, derivation of Gibbs phase rule, phase equilibria of one component system—water, CO_2 and S systems.

Phase equilibria of two component system –solid –liquid equilibria, simple eutectic – Bi-Cd system, desiliverisation of lead.

Solid solutions—compound formation with congruent melting point (Mg-Zn) and incongruent melting point, (NaCl-H_2O) system. Freezing mixtures, acetone-dry ice.

Partially Miscible Liquids –Phenol-water, trimethylamine – water, nicotine –water systems.

Nernst distribution law-thermodynamic derivation, applications.

UNIT-II (7 Hrs.)

Electrochemistry –I:

Electrical transport –Conduction in metals and in electrolyte solutions, specific conductance and equivalent conductance, measurement of equivalent conductance, variation of equivalent and specific conductance with dilution.

Migration of ions and Kohlrausch Law, Arrhennius theory of electrolyte dissociation and its limitations, weak and strong electrolytes, Ostwald's dilution law, its uses and limitations. Debye-Huckel-Onsager's equation for strong electrolytes (elementary treatment only). Transport number, definition and determination by Hittorf method and moving boundary method.

UNIT-III (8 Hrs.)

Electrochemistry-II:

Types of reversible electrodes – gas metal – ion, metal –insoluble salt – anion and redox electrodes. Electrode reactions, Nernst equation, derivation of cell E.M.F. and single electrode potential, standard hydrogen electrode – reference electrodes – standard electrode potential, sign conventions, electrochemical series and its significance.

UNIT-IV **(7 Hrs.)**

Electrolytic and Galvanic cells – reversible and irreversible cells, conventional representation of electrochemical cells.

E.M.F. of a cell and its measurements. Computation of cell E.M.F. Calculation of thermodynamic quantities of cell reactions (ΔG, ΔH and K), Polarization, over potential and hydrogen overvoltage.
Concentration cell with and without transport, liquid junction potential, application of concentration cells, valency of ions, solubility product and activity coefficient, potentiometric titrations.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each..

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XVI LABORATORY PRACTICALS

Max. Marks: 22+3
6 Periods/week

Organic Chemistry

Laboratory Techniques:

a) Determination of R_f values and identification of organic compounds. Separation of isometric mixture of Ortho and paranitroaniline using hexane and ethyl acetate (8.5 : 1.5) by thin layer chromatography.

b) Extraction of caffeine from tea leaves.

Qualitative Analysis:

Detection of elements (N, S and halogens) and functional groups (phenolic, carboxylic, carbonyl, esters, carbohydrates, amines, amides, nitro and anilide), in simple organic compounds.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Organic Chemistry: (analysis of organic compound) : 09 marks
Q.No II. TLC experiment, Extraction of caffeine) : 06 marks
Q.No. III. Viva-Voce : 04 marks
Ask four questions (2 marks each) related to chemistry practicals.
Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs : Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2019-2020

Third Semester		**Time**	**Theory**	**Int Assess.**	**Max Marks**
Theory Paper-A:	Diversity of Seed Plants and their Systematics-I	**3 hrs.**	**36**	**04**	**40**
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-I	**3 hrs**	**36**	**04**	**40**
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Fourth Semester					
Theory Paper-A:	Diversity of Seed Plants and their Systematics-II	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-II	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY

B.Sc.(General) Third Semester (Examination December, 2019)

THEORY PAPER- A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS- I

Objective: This paper deals with highly advance and evolved group of plants with naked seeds i.e. Gymnosperms. The course work of this paper gives a fair idea about the general features, economic importance and study of fossil as well as living gymnosperms.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various plant forms.

UNIT-I

General characteristics and economic importance of gymnosperms; differences between gymnosperms and angiosperms; differences between manoxylic and pycnoxylic wood.

UNIT-II

Fossil gymnosperms : Geological time Scale, Brief account of fossils, their formation and types (excluding details).

Lyginopteris: Introduction, external structure of stem; internal structure of primary stem, root and leaf; reproduction.

Williamsonia: Introduction, external morphology; internal structure; reproductive organs, male and female flowers.

UNIT-III

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of Cycas.

UNIT-IV

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of:

a) Pinus
b) Ephedra

Suggested Reading:

1. Bhatnagar, S.P. and Moitra, A. Gymnosperms, New Age International Limited, New Delhi, 1996.
2. Chopra, G.L. Text book of Gymnosperms, S. Nagin, Delhi, 1976.
3. Dhand, N. Systematics of Spermatophyta. Trueman Publications, Jalandhar, 2012
4. Pandey, B.P. College Botany, Vol. II. S. Chand & Company Ltd., New Delhi, 1994.
5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
6. Sporne, K.R. The Morphology of Gymnosperms, Hutchinson & Co (Publishers) Ltd., London, 1965.
7. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III. Pradeep Publications, Jalandhar, 2014.

PAPER –B: STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-I

Objective: This paper deals with the basic body plan and diversity in flowering plant forms. The course work of this paper covers vegetative and reproductive morphology of these plants and will familiarize the students with plants bearing the enclosed seeds.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

The basic body plan of a flowering plant.
Diversity in plant form in annuals, biennials and perennials.
Root system: Tap root and adventitious root system and their various types; structural and anatomical modifications for storage, respiration and reproduction.

UNIT-II

Stem : Modifications of aerial and underground stem.
Leaf: Venation, phyllotaxy, simple and compound leaves, functions and modifications; internal structure (dicot and monocot leaves).

UNIT-III

Flower : As a modified shoot, functions; structure of anther and pistil; structure and development of male and female gametophytes.

UNIT-IV

Double fertilization and its significance; different types of ovules and embryo-sacs.

Suggested Readings :

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 5th edition. Vikas Publishing House Pvt. Ltd., Delhi, 2009.

2. Goyal J.P. and Saini, A. Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

3. Pandey, S.N., Chadha, A. Plant Anatomy and Embryology, Vikas Publishing House Pvt. Ltd., Delhi, 1996.

4. Singh, V. Plant Anatomy and Embryology of Angiosperms, Global Media Publications, Delhi 2010.

5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

6. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.

Suggested laboratory exercises:

1. *Cycas*:
   - i) Habit, armour of leaf bases on the stem, young and old foliage leaves, scale leaves, male cone, megasporophyll, seed.
   - ii) Preparation of permanent stained slides of *Cycas* (T.S. leaflet, rachis and coralloid root).

2. *Pinus*:
   - i) Dwarf shoot; Male cone; Female cones (first year, second year and third year); Seed.
   - ii) Preparation of permanent slide of T.S. needle and pollen grains.
   - iii) Study through permanent slides :
     - a) L.S. male cone
     - b) L.S. female cone
     - c) L.S. ovule

3. *Ephedra*:
   - i) Habit and structure of male and female cones
   - ii) Preparation of permanent slide of T.S. stem (young).
   - iii) Study through permanent slides:
     - a) L.S. female cone
     - b) L.S. male cone

4. Modifications of **root, stem and leaf**.

5. Study through preparation of permanent slides :
   i) V.S. dicot leaf
   ii) V.S. monocot leaf

Guidelines for Botany Practical Examination:

Max. Marks:	**20**
Practical:	**18**
Int. Assessment:	**2**
Time:	**3 hours**

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify, draw its well labeled diagram and show it to the examiner. 6
2. Identify, write illustrated morphological note on specimen B (from gymnosperms) and C from root/stem/leaf modifications. 4
3. Identify slides D and E giving at least two reasons. 4
4. Practical note book and Viva-voce 2+2=4

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BOTANY

B.Sc. (GENERAL) Fourth Semester (Examination May, 2020)

PAPER-A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS-II

Objectives: This paper deals with highly advance and evolved group of plants i.e. Angiosperms. The study of gradual transition from seedless plants to seed plants would make students familiar with origin of structural and functional complexity in plant kingdom. The systematics part of this paper is in fact backbone of the study of Botany. Without having knowledge of taxonomy and species concept, no further research work can be pursued. The identification, nomenclature and classification of the concerned plants make the first step of any research work in Botany.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various families of flowering plants.

UNIT-I

General characters of Angiosperms. Plant nomenclature and International Code of Botanical Nomenclature : Common names and scientific names, principles and rules; taxonomic ranks; type concept (Holotype, Isotype, Syntype, Paratype, Lectotype, Neotype and Topotype); principle of priority, aims and objectives of plant taxonomy.

A brief account of Bentham and Hooker's System of classification, its merits and demerits.

UNIT-II

Terminology pertaining to floral description.

General account and diagnostic features of the following families (excluding economic importance) :

Liliaceae	:	*Asphodelus/Asparagus*
Gramineae (Poaceae)	:	*Triticum*
Ranunculaceae	:	*Ranunculus* and *Delphinium*
Brassicaceae	:	*Brassica*

UNIT-III

General account and diagnostic features of the following families (excluding economic importance):

Rutaceae	:	*Citrus* and *Murraya*
Malvaceae	:	*Hibiscus*
Fabaceae	:	*Lathyrus, Cassia* and *Acacia*
Umbelliferae (Apiaceae)	:	*Coriandrum*

UNIT-IV

General account and diagnostic features of the following families (excluding economic importance) :

Compositae (Asteraceae)	:	*Helianthus/Ageratum*
Asclepiadaceae	:	*Calotropis*
Solanaceae	:	*Solanum* and *Petunia*
Labiatae (Lamiaceae)	:	*Ocimum*
Chenopodiaceae	:	*Chenopodium*

Suggested Readings:

1. Chopra, G.L. Angiosperms: Systematic and Life Cycle, Pradeep Publications, Jalandhar, 1987.
2. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012.
3. Maheshwari, J.K. Flora of Delhi, CSIR, New Delhi, 1963.
4. Singh, G. Plant Systematics: Theory and Practice, Oxford and IBH Pvt. Ltd., New Delhi, 1999.
5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
6. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III, Pradeep Publications, Jalandhar, 2006.
7. Vasishta, P.C. Taxonomy of Angiosperms. R. Chand & Co., New Delhi, 1997.

PAPER-B: **STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-II**

Objectives: This paper deals with structure development and reproduction in flowering plants – the most fascinating group of plants on earth. The course material of this paper deals with internal structure of various plant parts, their growth patterns and abnormalities in structural development. The vast range of variation found in this group of plants provides a platform to students for acquiring basic knowledge of flowering plants which makes a foundation of applied branches like horticulture, floriculture, olericulture and arboriculture.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Tissue systems: Meristematic, shoot apex, root apex; simple and complex permanent tissues, special tissues; internal structure of primary dicot stem & root (*Helianthus*); secondary growth in dicot stem & root (*Helianthus*); internal structure of monocot stem & root (*Zea mays*); differences between dicot stem and monocot stem; differences between dicot root and monocot root.

UNIT-II

Anomalous stem structure in *Boerhaavia*, *Nyctanthes*, *Mirabilis* and *Dracaena*.
Various methods of vegetative propagation; micropropagation, basic technique and its importance.

UNIT-III

Types of pollination, advantages and disadvantages of self and cross-pollination; contrivances for self and cross-pollination, various agencies to bring about cross-pollination, characters of flowers pollinated by different agencies.

UNIT-IV

Seed formation: Development of endosperm and embryo. Fruit development, maturation and parthenocarpy. Significance of seed: Suspended animation; ecological adaptation and dispersal strategies.

Suggested Readings:

1. Esau, K. Anatomy of Seed Plants, 2nd edition, John Wiley & Sons, New York, 1977.
2. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.
3. Goyal J.P. and Saini, A. Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.
4. Singh, V. Pande, P.C. and Jain, D.K. A Text book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.
5. Srivastava, H.N.. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.
6. Vasishta, P.C. A Text book of Plant Anatomy, S. Nagin & Co., Delhi, 1979.

Suggested Laboratory Exercises:

1. Preparation of permanent stained slides to show:

    a. Anomalous internal structure of stem in *Boerhaavia, Nyctanthes, Mirabilis* and *Dracaena*.
    b. T.S. dicot stem & root (*Helianthus*)
    c. T.S. monocot stem & root (*Zea mays*)
    d. Types of Placentation

2. Description of flowers in technical terms, drawing F.D., V.S., T.S. ovary, writing F.F. and reference to their respective families of the genera mentioned in different families in theory syllabus.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify and draw its well labeled diagram and show it to the examiner. 5

2. Describe specimen B or C in technical terms and proper sequence. Draw F.D. and V.S. of flower B or C. Cut T.S. of ovary and V.S. of flower and show them to the examiner. Write F.F. also. Refer specimen B or C to its respective family. 5

3. Identify slides D and E giving at least one reason. 2

4. Practical note book 2

5. Plant Album 2

6. *Viva-voce* 2

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ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Paper I	:	Biodiversity (Chordates) & Evolution-I	40	(36+ 4) marks
Paper II	:	Biochemistry & Physiology-I	40	(36 + 4) marks
Practical		(Covering the entire syllabus) of 4 hours duration	20	(18+ 2) marks
		Total :	**100 marks**	

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER–I : BIODIVERSITY (CHORDATES) & EVOLUTION-I (ZOO 301)

Max. Marks	:	40
Theory Exam.	:	36 Marks
Internal Assessment	:	4 Marks
Time	:	3 Hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Chordates – Origin, Parental care and migration.
Protochordates –Urochordata-Type Study – *Herdmania* except development,
Cephalochordata- Type Study – *Amphioxus* (except development)

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Protochordates	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa, Oikopleura & Branchiostoma (*excluding development*).*

UNIT-II

Cyclostomata – External Characters of *Petromyzon* & affinities of Cyclostomata
Pisces- Scales & fins, Type study-*Labeo*.

Cyclostomata	:	*Myxine, Petromyzon* & *Ammocoetes* larva.
Chondrichthyes	:	*Zygaena*(Hammer headed shark), *Pristis* (saw fish), *Narcine* (electric ray), *Trygon*, *Rhinobatus* and *Chimaera*(rabbit fish).
Actinopterygii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus* (lung fish)

UNIT-III

Amphibia – Type study-Hoplobatrachus Tigerinus.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Amblystoma* and its Axolotl Larva, *Triton, Salamandra, Hyla, Rhacophorus.*

UNIT-IV

Concept and evidences of organic evolution.
Theories of organic evolution.
Origin of life.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.

4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.

5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt. Ltd., 1993.

PAPER II : BIOCHEMISTRY AND PHYSIOLOGY-I (ZOO 302)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Biochemistry and its scope;
Carbohydrates, proteins, lipids and nucleic acids: their classifications and functions.

UNIT-II

Enzymes : Nature, nomenclature, mode of action, their classification, coenzymes and cofactors.

Carbohydrate metabolism : The Embden Meyerhoff, Parnas pathway (glycolysis), the tricarboxylic acid cycle, the hexose monophosphate shunt**,** glycogenesis and glycogenolysis.

UNIT-III

Digestion : Digestion of dietary constituents, regulation of digestive processes and absorption. extra and intra cellular digestion, enzymatic digestion and symbiotic digestion.

Respiration : Exchange and transport of respiratory gases, Oxygen dissociation curve of haemoglobin, Bohr effect, chloride shift, Haldane effect and control of breathing.

UNIT-IV

Blood : Composition and functions of blood and lymph. Function of hemoglobin, blood clotting. Blood groups including Rh. Factor.

Heart : Origin and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, blood pressure and micro-circulation.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.
2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.
3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990
4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 301 & 302 (ZOO 251)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Urochordata	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa & Oikopleura.*
Cephalochordata	:	*Amphioxus.*
Cyclostomata	:	*Myxine, Petromyzon & Ammocoetes* Larva.
Chondrinchthyes	:	*Zygaena* (Hammer headed shark), *Pristis* (Saw fish), *Narcine* (Electric ray), *Trygon*, *Rhinobatus* and *Chimaera* (Rabbit fish).
Actinoptergii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, cheneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus*
Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva, *Triton, Salamandra, Hyla, Rhacophorus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Herdmania	:	General anatomy
Labeo	:	Digestive**,** reproductive systems, heart, afferent and efferent branchial arteries and cranial nerves.

3. Study of the skeleton of *Labeo, Hoplobatrachus Tigerinus*(frog)
4. Study of the following prepared slides :
   T.S. *Amphioxus* through various regions.
   Spicules & pharynx of *Herdmania* & pharynx of *Amphioxus.*
5. Study of the following prepared slides :
   Histology of frog (compound tissues).
6. Recording of blood pressure of man
7. Demonstration of equipment used for estimating haemoglobin content.
8. Demonstrate the presence of amylase in saliva, denaturation by pH and temperature.
9. Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides F-H giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-IV

Paper I: Biodiversity (Chordates) & Evolution – II	40 (36 + 4) marks
Paper II : Biochemistry & Animal Physiology-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER – I : BIODIVERSITY (CHORDATES) & EVOLUTION- II (ZOO 401)

UNIT-I

Reptilia- Type study-*Uromastix*, Poisonous and non-poisonous snakes, Poison apparatus in snakes.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Reptilia : *Chelone*(turtle) and *Testudo*(Tortoise), *Hemidactylus* (wall lizard), *Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis* and Alligator.

UNIT-II

Aves-Type study-Pigeon, Flight adaptations in birds.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Aves : *Ardea, Milvus, Pavo, Tyto, Alcedo, Eudynamis* and *Casuarius*.

UNIT- III

Mammals-Type study-Rat, Dentition in mammals.

Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus* (Kangaroo), *Loris, Macaca, Manis* (Scaly ant eater), *Hystrix* (porcupine), *Funambulus* (Squirrel) *Panthera, Canis,Herpestes* (Mongoose), *Capra, Pteropus*.

UNIT-IV

Concept of micro, macro and mega-evolution.
Biological concept of species.
Fossils and dating of fossils.
Evolution of man.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.
4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.
5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt.Ltd., 1993.

PAPER II : BIOCHEMISTRY AND PHYSIOLOGY-II (ZOO 402)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Lipid metabolism : B-oxidation of fatty acids, fate of glycerol and gluconeogenesis, interaction of carbohydrates and lipids, lipogenesis in tissues, ketosis.

UNIT-II

Protein metabolism : Metabolism of amino acids (Oxidative deamination, transamination and decarboxylation), hydrolysis of proteins and Ornithine cycle).

UNIT-III

Excretion : Structure and types of nephron, urine formation, osmoregulation and counter current mechanism, composition of urine.

Muscles : Ultrastructure, chemical and physiological basis of skeletal muscle contraction.

UNIT-IV

Neural Integration : Structure of neuron, resting membrane potential, origin and propagation of impulse along the axon, synapse and myoneural junction.

Endocrine System : Structure, hormones and functions of thyroid, parathyroid, adrenal, pineal, hypothalamus, pituitary, pancreas, gonads, thymus, hormones of alimentary canal and kidney.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.

2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.

3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990

4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 401 & 402 (ZOO 252)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Reptilia	:	*Chelone*(Turtle) and *Testudo* (Tortoise), *Hemidactylus, Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera,Crocodilus, Gavialis.*
Aves	:	*Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
Mammalia	:	*Ornithorhynchus, Echidna, Didelphis, Macropus,Loris, Macaca, Manis, Hystrix, Funambulus,Panthera, Canis, Herpestes,Capra,Pteropus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Chick	:	Digestive, arterial, venous and urinogenital systems.
White Rat	:	Digestive, arterial, venous and urinogenital systems.

3. Study of the skeleton of *Varanus, Gallus* and Rat/ *Oryctolagus* (Rabbit).
4. Study of the following prepared slides :
   Histology of rat/rabbit (compound tissues)
5. Study of blood smear of a mammal.
6. Identification of food stuffs:starch, glucose, proteins and fats in solution.
7. Demonstration of osmosis and diffusion.
8. Analysis of urine for urea, chloride, glucose and uric acid.
9. An idea of location of endocrine glands in mammals through charts / models/ video clippings
10. Tracing of human evolution through models.

Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides D & E giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

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BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Carbohydrate & Lipid metabolism **Marks: 45+5**

Objective: To learn about digestion and absorption of carbohydrates and lipids and major metabolic pathways pertaining to them.

SECTION-I

(Lectures 8)

Metabolic pathways of carbohydrates, glycolysis and alcoholic fermentation, the pentose phosphate pathway, metabolism of fructose, galactose, TCA cycle and pyruvate dehydrogenase complex.

SECTION-II

(Lectures 8)

Glucuronate and glyoxylate pathway, gluconeogenesis,cori cycle, glycogenolysis & glycogenesis, biosynthesis of starch and ascorbic acid.

SECTION-III

(Lectures 7)

beta-Oxidation of fatty acids including odd chain fatty acids. Alpha and omega oxidation of fatty acids. Formation and utilization of ketone bodies. Biosynthesis of saturated and unsaturated fatty acids.

SECTION-IV

(Lectures 7)

Biosynthesis and degradation of phospholipids and triglycerides.Cholesterol biosynthetic pathway. Biosynthesis of cerebrosides; sulfatides and gangliosides. Biosynthesis of prostaglandins, thromboxanes, leukotrienes, lipooxins and prostacyclins.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey& D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Grannerand V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

Paper B: Protein & Nucleic acid metabolism **Marks: 45+5**

Objective: To learn major metabolic pathways pertaining to nitrogenous compounds proteins & nucleic acids.

SECTION-I

(Lectures 6)

Digestion & absorption of proteins, nitrogen balance, general reactions of amino acids: deamination, transamination and decarboxylation. Urea cycle.

SECTION-II

(Lectures 8)

Catabolism of carbon skeletons of amino acids: glycine, alanine, serine and threonine, phenylalanine and tyrosine, tryptophan, histidine, leucine, valine and isoleucine, cysteine and methionine, lysine, glutamic acid and glutamine, aspartic acid and asparagine.

SECTION-III

(Lectures7)

Biosynthesis of nutritionally non-essential amino acids : glutamate and glutamine, aspartate and asparagine, proline, alanine, cysteine & selenocysteine, tyrosine, serine, glycine. conversion of amino acids to specialized products : polyamines, catecholamines, glutathione, creatinine, melanin, serotonin.

SECTION-IV

(Lectures 9)

Nucleic Acids

Degradation and biosynthesis of purines and pyrimidines nucleotides, salvage pathway, formation of deoxyribonucleotides, biosynthesis and degradation of heme. Disorders of purine & pyrimidine metabolism, anticancer drugs.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey & D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Separation of serum and plasma.

2. Estimation of blood glucose by the methods of (i) Folin Wu (ii) Nelson Somogyi.

3. Separation and identification of amino acids by Paper chromatography

4. Seperation of lipids by Thin layer chromatography.

5. Estimation of Ca2+ in serum.

6. Estimation of total cholesterol in serum.

7. Estimation of total lipids in serum by Vanillin method.

8. Estimation of pyruvic acid.

9. Estimation of creatinine

10.Colorimetric estimation of inorganic phosphate

BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-2020
SEMESTER-IV

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Advanced Biochemical Techniques **Marks: 45+5**

Objective: To understand the principles and applications of cell biology techniques, spectroscopic, radioisotopic & spectrometry techniques.

SECTION-I

(Lectures: 8)

General Laboratory Techniques:

Membrane/ultra filtration, dialysis, diffusion, surface tension, viscosity and their applications to biological systems. Cell biology techniques: microbial, animal and plant cell/tissue culture, cell disruption/homogenization/sonication, cell sorting, cell counting, cryopreservation.

SECTION-II

(Lectures: 6)

Fluorescence spectroscopy: principle, applications of fluorescence activated cell sorting (FACS), different fluorescence in situ hybridization (FISH), fluorescence immunoassay.

SECTION-III

Radio isotopic techniques: **(Lectures: 10)**

Nature of isotopes and radioisotopes. Radioactive decay. Properties of radioactive emissions. Units of radioactivity. Techniques used to measure radioactivity; GM counter and liquid scintillation counting and gamma counter. Labelling of biochemical compounds and autoradiography. Use of radioactive tracers in the study of enzyme reaction mechanisms and metabolic pathways. Radioimmuno assay. Biological hazards of radiation and safety measures in handling radioisotopes.

SECTION-IV

(Lectures: 6)

Nuclear magnetic resonance (NMR) and Electron spin resonance (ESR) : theory, applications. atomic spectrometry; mass spectrometry: matrix assisted desorption ionization (MALDI)

Books Suggested:

1. Biochemical Techniques – Theory and Practice by John. F. Robyt and Bernard J. White Cole Publishing Co. (U.S.A.).
2. Physical Biochemistry: Application to Biochemistry and Molecular Biology by David Freifelder W.H. Freeman and Company (U.S.A.).
3. A Biologist's Guide to Principles and Techniques of Practical Biochemistry by K.H. Goulding and Keith Wilson, Edward Arnold (U.K.), Ltd.

Paper B: Membrane Biochemistry **Marks: 50**

Objective: to make students aware of structural and functional aspects of membranes. Highlighting the significance of their compositional heterogeneity and to various cell functions.

SECTION-I

(Lectures 7)

Introduction: membrane structure and organization: physical and biological models of membranes structure. Protein- lipid interactions in membranes, fluid mosaic model of membrane structure, its merits and demerits. Constituents of biological membranes in prokaryotes and eukaryotes. Asymmetry of biomembranes. Structure of RBC membrane.

SECTION –II

(Lectures 7)

Membrane dynamics: Physical properties of membrane lipids, membrane fluidity, Phase transitions, cytological biochemical probes and methods to study membrane fluids. Membrane transport: Typical properties of membrane transport, passive diffusion, facilitative diffusion, Carrier mediated active transport. Role of Na, K- ATPase.Ca-ATPase & H^+-ATPase. Ionophores and siderophores, structure and functions.

SECTION –III

(Lectures 8)

Membrane analysis: isolation and characterization of cell membrane, criteria of membrane purity. Solubilization of membranes and their reconstitution. Labeling of membrane probes and determination of transbilayer distribution of membrane components. Liposomes: unilamelar and multilamelar vesicles. Methods of their preparation, characterization and their applications in targeting drugs and gene therapy.

SECTION –IV

(Lectures 8)

Biogenesis and turnover of membranes: Synthesis of membrane components and their trafficking, signal hypothesis, coated vesicles. Regulation and coordination of membrane component synthesis. Membrane disorders: erythrocyte deformities, transport disorders. Disorders of membrane lipids

Books Suggested

1. Jain, MK. Introduction to Biological membranes, John Wiley and sons New York, 1988
2. Vance, DE & Vance JE, Biochemistry of lipids and Biomembranes, Benzamin Cummings, 1985
3. Jones MN & Chapman D. Micelles monolayers and biomembranes, Wiley-Lis New York, 1995
4. Lodish H. Molecular Cell biology, WH Freeman and Company, 2013
5. Various review articles.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Electrophoresis of nucleic acids.
2. Gram staining of cells.
3. Cell fractionation and cell isolation estimation of marker enzyme
4. Paper chromatography of carbohydrates.
5. Cell counting/counting viability.
6. Demonstration of hypotonic ,hypertonic and osmotic media.
7. Preparation of starch from potato and its hydrolysis by salivary amylase.
8. Haemocytometer

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MICROBIOLOGY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2019-2020

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

SEMESTER-III

Scheme of Examination		Duration	Marks
THEORY		**6** hrs	75 (33+33+9*)
MIC 301:	**Introduction to Medical Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 302 :	**Introductory Immunology – I**	3 hrs.	37.5 (33+4.5*)
PRACTICAL			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 301 and MIC 302		3 hrs	25 (22+3*)

Semester IV

THEORY		6 hrs	75 (33+33+9*)
MIC 401:	**Introduction to Medical Microbiology-II**	3 hrs.	37.5 (33+4.5*)
MIC 402 :	**Introductory Immunology –II**	3 hrs.	37.5 (33+4.5*)
PRACTICAL			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 401 and MIC 402		3 hrs	25 (22+3*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY
SEMESTER-III

MIC 301 : INTRODUCTION TO MEDICAL MICROBIOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Brief introduction to terminology of infectious diseases, Frequency of disease, Recognition of infectious disease, Infectious disease cycle.

Section B

Nomenclature and classification of microbes of medical importance, criteria of classification

Section C

Microbial adherence, Active penetration into body, Passive penetration into body, Microbial production of enzymes in the body

Section D

Development of chemotherapy, General characteristics of antimicrobial drugs, Determining level of antimicrobial activity, Mechanism of action of antimicrobial drugs, Factors influencing the effectiveness of antimicrobial drugs.

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 302 : INTRODUCTORY IMMUNOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction and history of immunology, Non-specific defence; Physical barriers, Chemical barriers, Cellular, Phagocytosis, Inflammatory barriers, Inflammation, Fever, Types of Immunity, Active and Passive Immunity, Immunological memory

Section B

Humoral Immune Response, Antibodies/ Immunoglobulins, Structure, function and type of antibodies

Section C

Cell Mediated Immune System (CMI), Mechanism of CMI, Types of effector T cells, Helper T cells, Suppressor T cells, Cytotoxic T cells, Killer T cells, Interactions between T and B lymphocytes

Section D

Antigen-antibody interactions,: Precipitation reaction, Immunodiffusion test, Counter current Immuno electrophoresis, Complement fixation tests

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

MICROBIOLOGY
PRACTICAL
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
Semester-III

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1 Staining- Gram staining, Albert and ZNCF staining
2 Isolation and maintenance of pure cultures
3 Physiological characteristics of bacteria and its use for their identification
4 Assay of antimicrobials
5 Preparation of serum/plasma

MICROBIOLOGY
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
MIC 401 : INTRODUCTION TO MEDICAL MICROBIOLOGY-II

Semester IV

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Virulence and mode of transmission, Emerging and reemerging infectious diseases, Global travel and health considerations, Nosocomial infections

Section B

Origin of normal flora, Germ free and gnotobiotic life, Distribution and occurrence of Normal flora of skin, eye, respiratory tract, mouth, intestinal tract and genitourinary tract

Section C

Events in infection following penetration, Microbial virulence factors

Section D

Antibacterial drugs viz. sulphonamides, Quinolones, Penicillins, Cephalosporins, Tetracyclines, Erythromycin, and Chloramphenicol, Drug resistance, Antifungal and antiviral drugs

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MICROBIOLOGY
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
MIC 402 : INTRODUCTORY IMMUNOLOGY-II

Semester IV

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Primary and secondary lymphoid organs, Mucosa associated lymphoid tissues (MALT), Cutaneous associated lymphoid tissues (CALT), Lymphocyte traffic, Cells of Immune system, Antigens; Factors affecting Immunogenicity, Epitopes, Haptens

Section B

Antigenic combining regions of antibodies, Factors influencing antibody production, Genetic model, Multigene organisation, Generation of antibody diversity

Section C

Cytokines, Lymphokines, Colony stimulating factors, Tumour necrosis factors, Interferons, Accessory cells (Macrophages), the complement system, Classical and alternate pathway, HLA, Monoclonal antibody technology and its applications

Section D

Antigen-antibody Interactions: Widal test, Wasserman's test, Weil-Felix reaction, Western blotting, Types of Vaccines

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

MICROBIOLOGY
PRACTICAL
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
Semester - IV

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1. Sterilization- Introduction to autoclave, hot air oven, filter sterilization

2. Demonstration of Immune organs in dissected animals

3. Demonstration of Immune cells in smears prepared from Immune organs

4. Complement fixation

5. Antigen-antibody interactions:

-Agglutination

-Precipitation

-Blood grouping

-Immunodiffusion

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ELECTRONICS

(KEPT IN ABEYANCE)

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AGRICULTURE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2019-2020

SEMESTER-III

Paper – III : Agricultural Diversification and Machinery

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration each.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1. The syllabus of this paper has been diveided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural aid on works :
Dairy
Poultry
Fishery
Mushroom Cultivation
Animal Husbandry
Bee Keeping

Unit-II

Maintenance of grassy lawns and flower beds.
Raising of winter and summer ornamental flowers (rose, gladioli, dahlias, dianthus, foliage plants).
Fundamentals of landscape of an educational institute, factory, panchayat lands and office buildings.

Unit-III

Introduction to medicinal, aromatic and spice plants.
Growing of non-conventional plants.
Basic idea of Gentically Modified crops.
Fundamentals of land measurements and land revenue.

Unit-IV

Important parts of the tractor, combine, thresher and their maintenance.
Study of various agricultural tools and implements.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Poultry Farms, Fish Ponds, Apiary, Dairy Farms
Raising various ornamental flowers of different seasons
Maintenance of grassy lawns
Study the parts of engines, tractor and combine

Books :

1. Agriculture Engineering Vol.I and Vol. II, A. M. Michae, T.P. Ojha, 2006, Jain Brothers, New Delhi.
2. Mushroom Growing, 1997, H. S. Garcha, P. A. U., Ludhiana.
3. Hand Book of Agriculture, 2008, ICAR, New Delhi.
4. Farm Machinery, An Approach, S.C. Jain and Grace Philips, 2006, Standard Publishers, Distributors, New Delhi.
5. Fundamentals of Dairy Chemistry, Wong, Jenness, Keeney and Marth, 1998, CBS Publishers and Distributors, New Delhi.
6. Milk and Milk Products, Clarence Henry Eckles, Willes Barnes Combs and Harold Macy, Delhi, 2006, Tata McGraw Hill Publishing Company Limited, New Delhi.
7. Introduction to Plant Biotechnology, H. S. Chawla, 2008, Oxford and IBH Publishing Company Pvt. Ltd., New Delhi 2.
8. Plant Biotechnology, B. D. Singh, 2009, Kalyani Publishers, Ludhiana.
9. Aquarium and Fish Keeping, C. B. L. Srivastava, 2006, Kitab Mahal Allahabad.
10. Medicinal Plants of India, R. Zafar, 2006, CBS Publishers and Distributors, New Delhi.
11. Spices and Condiments, J. S. Pruthi, 2008, National Book Trust, New Delhi.

AGRICULTURE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2019-2020
SEMESTER-IV

Paper – IV : Cultivation Practices of Vegetables, Timber and basic statistical methods

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1 The syllabus of this paper has been divided into four units.

2 Question paper shall comprise of 9 question in all.

3 Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.

4 Units I, II, III and IV shall have two questions each from respective Units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.

5 Total five questions are to be attempted.

Unit – I

Tillage, Fundamentals and Principles of Tillage, Zero Tillage, Tillage Implements.

Unit – II

Cultivation Practices of Potato, Tomato; Bhindi, Cabbage; Onion and Asparagus

Unit – III

What are Timbers and Lumbers ?
Raising of Dalbergia; Tectona; Poplar; and Eucalyptus

Unit- IV

Statistical Methods for Agricultural workers including Mean, Mode, Median, Chi-Square, Standard Deviation.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Agricultural Farms for Fundamental Aspects of Tillage
Raising Forest Nursery
Cultivation of Seasonal Vegetables
Numerical Problems of Statistics

Books :

1. Principles of Agronomy**,** T. Yellamanda Reddy and G. H. Sankara Reddy, 2008, Kalyani Publishers, Ludhiana.

2. Statistical Methods for Agricultural Workers, V.G. Panse and P.V. Sukhatme, 1997, ICAR, New Delhi.

3. Modern Techniques for Raising Field Crops, Chidda Singh, Prem Singh and Rajbir Singh, 2009, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

4. Vegetable Crops of India, P.C. Das, 1998, Kalyani Publishers, Ludhiana.

5. Potato Cultivation, 1998, Nandpuri and Kumar, P.A.U., Ludhiana.

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HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2019-20
SEMESTER- III

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textiles	1	3	45	05	1	3	45	05	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-III

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 6 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

Note: 1. Internal assessment should be based on: Assignment/test/Seminars & Attendance for Theory & Practical.

2. Practical examination will be held before the final Theory Exams.

3. Practical group should have 12-15 students.

SECTION-A

1. Equipment & supplies used for Clothing construction - their use & care
2. Sewing Machine :
   (a) Parts of Sewing Machine and its accessories.
   (b) Common defects in sewing machine & their remedies.
   (c) Care of Sewing Machine.

SECTION-B

1. Recording of body measurements & care to be taken while taking body measurements.
2. Preparation of fabric for construction- shrinking and straightening.
3. Tools of Drafting, Steps involved in drafting from measurement to garment construction, points to be kept in mind while making a draft.
4. Terms used in construction i.e. Seam Allowance, Ease, Selvedge, Dart, Grain line, Stay stitching.

SECTION-C

1. Classification of textile fibres
2. Manufacture and Properties of fibres:
   Cotton, Silk, Wool, Nylon.

SECTION-D

1. Different types of yarns:

   Simple, Novelty and Textured Yarns.

2. Fabric Construction –

   (A) Weaving - Parts of a loom, Process of weaving & Types
   a. Simple weaves – Plain, Rib, Basket
   b. Twill weaves
   c. Satin weave & Sateen weave

   (B) Knitting, Felting and Bonding.

(SEMESTER-III)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 45
Internal Assessment: 05
Time : 6 Hours per week

1. Make samples of the following :
   (a) Tacking, running stitch, hemming, Back Stitch, Fasteners using buttonhole stitch
   (b) Seams—Flat seam, Counter hem, Mantua maker, French Seam & Run & Fell seam.
   (c) Processes—Continuous wrap, two piece placket opening, pleats, gathers into a band, tucks.
   (d) Joining- shaped facing on V neck line & piping on round neck.

2. Embroidery—any "10" fancy stitches.

3. Drafting of the following:
   (a) Jangia
   (b) Bloomer
   (c) Child's bodice block
   (d) Sleeve- Plain sleeve, Puff sleeve
   (e) Collars- Baby, Cape & Peter Pan

4. Construction of following :
   (a) Jangia
   (b) Bloomer
   (c) Gathered frock with any sleeve and collar.

HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION,2019-20
SEMESTER- IV

SEMESTER-IV

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	3	45	05	1	3	45	05	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-IV

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 6 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of 8 objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Elements of art such as colour, form, texture, shape and line
2. Principles of design such as Harmony, Balance, Rhythm, Emphasis, Proportion in relation to clothing

SECTION-B

1. Introduction to Fashion, Fad and Style.
2. Selection of suitable clothes for following age groups :

   Infants, Toddlers, School going children, Adolescents, Adults, Elderly.
3. Care & Storage of garments of cotton, wool, silk.

SECTION-C

1. Bleaches- Oxidising, reducing bleaches & their suitability to different fabrics.
2. Finishing- types & importance. Different Finishes- Sizing, Desizing, Calendering, Sanforising, Mercerization, Crease resistant, Water proof & Water repellent, Flame resistant & Flame proof.

SECTION-D

1. Application of colour on fabrics
   (a) Dyeing-Simple dyeing of cotton
   (b) Resist-Tie, Dye and Batik
2. Printing-Block printing, screen printing, roller printing
3. Methods of Laundry/Washing.

(SEMESTER-IV)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 45
Internal Assessment: 05
Time : 6 Hours per week

1. Laundry :
   a) Testing of cotton, wool silk and nylon by burning test.
   b) Stain Removal : Rust, Coffee, Tea, Paint, Nail Polish, Lipstick, Perfume, Blood, Boot Polish, Ink (Ball Pen), Curry and Juice.
2. Laundry & finishing of following garments :
   * Cotton : Salwar, Kameez.
   * Synthetic : Gathered Frock/Pleated Skirt.
   * Woollen : Cardigan/Pullovers.
   * Spot cleaning of a Shawl.

3. Preparation of samples of Tie and Dye & Block Printing.
4. Drafting and construction of the following garments:
   a. Petticoat
   b. Lady's kameez and salwar
5. Project on Care Labels of Garments or Market survey of Laundry Products.

Reference Books :

1. Singer Sewing Book, Mary Brocks Bichen, McGraw Hill Book Company, Inc., New York, Toronto, London, 1953.
2. Basic Processes & Clothing Construction, Sherie Doongaji & Raushni Deshpande, Raaj Prakashan, New Delhi (Fourth Revised edition).
3. Pattern Drafting Vol. III, Dress Making, Kamakura—Shobo Publishing Co. Ltd., Tokyo, Japan, 1972 (Fifth Edition).
4. A Manual of Children Clothing, Savitri Pandit, Orient Longmans Ltd., Bombay, 1967.
5. Practical Dress Design, Principles of Fitting and Pattern Making, Mabel D. Erwin, The Macmillan Company, New York, Ninth Printing, 1966.
6. Indian Embroidery, Its Variegated Charms, Savitri Pandit, Faculty of Home Sciences, Baroda, 1976, First Edition.
7. The Basic Book of Sewing, Eve Harlow Pub. Octopids Books Ltd., London.
8. Simple Dress Making 2, Maureen Guddsworthy Pub. Mills & Boon Ltd., London.
9. Encyclopaedia of Dress Making, Pub. Marshall Caven Dish Books Ltd., London.
10. Textile Fabrics and their Selection, Isable B. Wingate Prentice Hall, Inc., Englewood Cliffs, N.J., 1970.
11. Fundamentals of Textiles and their Care, Susheela Dantyagi, Orient Longmans, Bombay, Calcutta, Madras, New Delhi, Reprinted, 1968.
12. Household Textiles and Laundry Work, Durga Deulkar, Atma Ram & Sons, New Delhi, 1973.
13. Ideas for Fabric Printing and Dyeing Gooch, Peter H. Charles Cribner's, New York, 1974.
14. Encyclopaedia of Textiles, Fabrics, Grayson Martin, John Wiley, New York, 1984.
15. Tie-Dyed Textiles of India—Veronica Murphy & Rosemary Crill, Pub. Mapiu Publishing Pvt. Ltd., Ahmedabad.
16. Fashion and Textile Design, Neelima.
17. Printing and Washing of Textile, Neelima
18. Handbook of Fashion and Textile Designing, R. K. Sahu.
19. Traditional Embroidery of India, Shailajan D. Naik.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATIONS, 2019-2020

(SEMESTER : FIFTH AND SIXTH)

i.e

Fifth Semester : November/December, 2019
Sixth Semester : April/May, 2020

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PANJAB UNIVERSITY, CHANDIGARH
OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) i.e. FIFTH SEMESTER NOVEMBER/DECEMBER 2019 AND SIXTH SEMESTER APRIL/MAY 2020, EXAMINATIONS.

ENGLISH (Compulsory)
(For B.A. Candidates Only)
SEMESTER V

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

Note:

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.

(ii) Section A shall deal with the text and Section B with composition and grammar.

(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan), **Panjab University Edition.**

Unit I to III (Unit II- Chapter 'Emotional Intelligence' deleted)

Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five** selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting, at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4. Write an essay (in not more than 500 words), choosing one topic out of the given **four**. A wide range of topics should be given and in this respect ideas may be drawn from the prescribed text. **10Marks**

Q.5. (a) Antonyms –***ten*** out of ***fifteen*** **. 5 Marks**

(b) Correct the sentences- ***ten*** out of ***fifteen.*** **5 Marks**

……..

ENGLISH (Compulsory)
(For B.A. Candidates Only)
SEMESTER VI

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.
(ii) Section A shall deal with the text and Section B with composition and grammar.
(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan) , **Panjab University Edition.**

Unit IV-VI
Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas. **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five**, selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4.A question on Précis writing shall be set, without any internal choice. For this purpose, the passage chosen should be simple, lucid and coherent and must not exceed 240-250 words. **10 Marks**

Q.5 (a) Idioms and Phrases to be used in sentences. ***ten*** out of ***fifteen*** **5 marks**

(b) One word substitution – ***ten*** out of ***fifteen*** **5 Marks**

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
(ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ)
(ਬੀਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਪੈਰ੍ਹਾ ਰਚਨਾ 8 ਅੰਕ
3. ਲਿਪੀ 7 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ (ਸੰਪਾ) ਅਤਰ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

   (ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋ ਇਕ) 5+5=10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5+1 = 5 ਅੰਕ

3. ਪੈਰ੍ਹਾ ਰਚਨਾ (ਲਗਪਗ 250 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
(ਮਨੁੱਖੀ ਸੁਭਾਅ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਜੀਵਨ ਦੇ ਹਲਕੇ ਫ਼ੁਲਕੇ ਵਿਸ਼ਿਆ ਨਾਲ ਸੰਬੰਧਤ)
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7ਅੰਕ
ਲਿਪੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਜਨਮ ਤੇ ਵਿਕਾਸ,

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ

   (i) ਵਾਕੰਸ਼, ਨਾਂਵ ਵਾਕੰਸ਼ ਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪਛਾਣ 6 ਅੰਕ

   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

   (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

.....

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ ਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਨਾਵਲ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਅਖ਼ਬਾਰ ਲਈ ਪ੍ਰੈਸ ਨੋਟ	10 ਅੰਕ
3.	ਗੁਰਮੁਖੀ ਲਿਪੀ	5 ਅੰਕ
4.	ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. **ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ**, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਅੰਨ੍ਹੇ ਘੋੜੇ ਦਾ ਦਾਨ ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋ ਇਕ) 5 ਅੰਕ

(ਅ) ਨਾਵਲ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ ਤੇ ਪਾਤਰ ਚਿਤਰਨ (ਦੋ ਵਿਚੋ ਇਕ) 10 ਅੰਕ

2 ਨਾਵਲ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
(ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1 = 5 ਅੰਕ

3. ਅਖ਼ਬਾਰਾਂ ਲਈ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨੇ : ਕਾਲਜ ਦੀਆਂ ਸਾਹਿਤਕ, ਸਭਿਆਚਾਰਕ, ਖੇਡਾਂ ਅਤੇ ਅਕਾਦਮਿਕ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ ਸਰਗਰਮੀਆਂ ਬਾਰੇ। (ਲਗਪਗ 200 ਸ਼ਬਦਾਂ ਵਿਚ) 8 ਅੰਕ
ਨੋਟ : ਸਿਰਫ਼ ਇਕ ਪ੍ਰੈਸ ਨੋਟ ਤਿਆਰ ਕਰਨ ਲਈ ਹੀ ਕਿਹਾ ਜਾਵੇ

4. ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: 7 ਅੰਕ

ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਨਾਮਕਰਣ, ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਲਈ ਅਨੁਕੂਲਤਾ, ਪ੍ਰਮੁੱਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਲਿਖਣ ਵਿਧੀ (ਆਰਥੋਗ੍ਰਾਫ਼ੀ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਸਵਾਲ)

5. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ
(i) ਵਾਕ ਤੇ ਉਪਵਾਕ ਦੀ ਪਰਿਭਾਸ਼ਾ: ਵਾਕ ਬਣਤਰ ਤੇ ਕਾਰਜ
ਬਣਤਰ: ਸਧਾਰਨ, ਸੰਯੁਕਤ ਤੇ ਮਿਸ਼ਰਤ ਵਾਕ
ਕਾਰਜ: ਪ੍ਰਸ਼ਨਵਾਚੀ, ਆਗਿਆਵਾਚੀ ਤੇ ਬਿਆਨੀਆ ਵਾਕ 6 ਅੰਕ

(ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 2+2=4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), 'ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ', ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜ੍ਹ ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ , 1999.
2. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ(ਡਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997
3. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ', ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ,ਅੰਮ੍ਰਿਤਸਰ,2012.
4. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. ਬਰਾੜ ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ', ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ,2008.
6. ਧਾਲੀਵਾਲ ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
7. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER V

PAPER: HISTORY AND CULTURE OF PUNJAB: COLONIAL PERIOD

Objectives: To introduce the students to the history of the history of the region and the impact of colonial rule.

Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

UNIT 1

Early British Administration: Board of Administration 1849-1853; Reforms under John Lawrence
Colonial Policies: Agriculture; Trade & Industry
Spread of Modern Education

UNIT II

Impact of Socio-Religious Reform Movements: Namdharis; Singh Sabha
Impact of Socio-Religious Reform Movements: Arya Samaj; Ahmediyas
Uprising of 1907: Causes and Consequences

UNIT III

Ghadar Movement: Origin and Activities
Jallianwala Bagh: Circumstances and Consequences
Gurudwara Reform Movement: Causes and Consequences

UNIT IV

Response to Non Co-operation ; Civil Disobedience
Partition : Circumstances; Impact
Map:, Delhi, Amritsar, Lahore, Lyallpur, Montgomery, Jaito, Nankana Sahib, Khemkaran, Tarn Taran, Jalandhar, Sargodha, Sialkot, Ambala,

Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	Khushwant Singh	*A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi,1991.
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991.

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER VI

PAPER: HISTORY AND CULTURE OF PUNJAB: POST INDEPENDENCE PERIOD

Objectives: To introduce the students to the history of the history of the region in the post 1947 period.
Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:			
	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

UNIT 1

Migration and its Socio-Economic impact
Rehabilitation and Resettlement
Demand for Punjabi Suba; Reorganization Act 1966

UNIT II

Green Revolution and its impact
Development of Education
Political and Economic Development post 1966

UNIT III

Issues of Boundary; water; Chandigarh
Socio-Economic Development in the 1980's
Operation Bluestar and its impact

UNIT IV

New Social issues-gender discrimination, drug menace, farmer suicide
Development of Punjabi literature : Bhai Vir Singh, Shiv Kumar Batalvi;Amrita Pritam
Map: Delhi, Amritsar, Khemkaran,TarnTaran, Jalandhar, Ambala, Ludhiana, Panipat, Karnal,Qadian, Gurdaspur, Hissar, Chandigarh.

Suggested Readings:

1. Fauja Singh (ed.) — *History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2. Fauja Singh — *Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3. J.S. Grewal — *The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4. R.S. Johar, and J.S. Khanna — *Studies in Punjab Economy,* GNDU, Amritsar, 1983
5. Satya, M. Rai — *Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6. P.N. Chopra, B.N. Puri and M.N. Das — *A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7. K.C. Yadav and S.M. Fogat — *Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy,Chandigarh, 1991.

ENGLISH (ELECTIVE)

SEMESTER V

Max.Marks 100
Written 90
Int. Assessment 10

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding.The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II .**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

1. Modern Indian Literature: Poems and Short Stories, Edited by the Dept. of , University of Delhi, OUP, 2007 New Delhi.

Section I

(Literary terms/Concepts: *Literatures Indian Languages, Colonialism, Post-colonial, Multicultural Society: Orientalism, Hybridity, Ideology, Gender, Race, Class, Caste, Nation, Importance of Translation in India, Methods of Translation)*

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do *five.* 15 marks

Q.2 The examiner will set seven short questions (each to be answered in 60-80 words) based on Modern Indian Literature: Poems and Short stories out of which the students shall be required to attempt only *five.* 15 marks

Q.3. There will be three long questions, out of which two long questions are to be answered each in about 180-200 words. These questions shall be based on *Modern Indian Literature: Poems and Short Stories.* 15 marks

Section II

Q.4 Note-making (A passage of about 1000 words is to be given for this Purpose) 15 marks

Q.5. An unseen passage for Comprehension (about 1000 words again) With ten multiple choice questions is to be given. 15 marks

Q.6 Applied Grammar:

(a) 5 Pairs of words to be used in sentences. (altar/alter/compliment/complement etc.) (1x5=5 marks)

(b) First find one word for many and then use it in a sentence. 5 marks

(c) First change the form of nouns/verbs/adjectives and then make sentences. (1x5=5 marks)

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ENGLISH (ELECTIVE)

SEMESTER VI

Max.Marks	**100**
Written	**90**
Int. Assessment	**10**

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding. The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II.**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

R.K.Narayan's Novel: The Guide

SECTION I

(Literary Concepts/Terms: *Fiction, Non-fiction, Narrative, Bildungsroman, Picaresque Novel, Novel of Sensibility, Historical Romance, Gothic Novel, Realistic Novel, Psychological Novel, Political Novel, Regional Novel, Point of View, Omniscient Author, First Person Narrator, Stream of Consciousness, Protagonist/ antagonist, Plot/Story, Character, Structure)*

Q.1	Literary terms/concepts (*five out of eight*)	15 marks
Q.2.	Short question based on the prescribed novel, *Five out of Seven* (each in 60-80 words).	15 marks
Q.3	Long questions based on the novel *three out of five* dealing with the incidents, theme(s) Character(s), symbols etc.(each in 180-200 words)	15 marks

SECTION II

Q.4	Essay on any one (out of the given four) topic of international importance (in about 700 words)	20 marks
Q.5.	Report-writing (in about 300 words) on an incident/situation , conference/seminar, problem/state of education/poverty /unemployment or similar issues.	10 marks
Q.6.	Translation from Hindi/Punjabi into English (Passage of about 400 words)	
	OR	
	Paragraph on any *one* out of the *two* given topics (for foreign students only)	15 marks

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हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य तृतीय वर्ष) सेमेस्टर-5

पूर्णांक **90+10=100**
समय- 3 घंटे

1. **कुरुक्षेत्र**

रामधारी सिंह 'दिनकर' प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।

(क) 6-6 अंकों की दो संदर्भ सहित व्याख्याएं करनी होगी। कुल चार काव्यांश दिए जायेंगे।

(ख) 15 अंकों का एक आलोचनात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगे। अंक-27

2. **समीक्षा सिद्धांत :**

क. काव्य की परिभाषा तथा भेद, महाकाव्य, खंडकाव्य, गीतिकाव्य की परिभाषा तथा विशेषताएँ

ख. गद्य विधाएं-निबंध, संस्मरण, जीवनी तथा आत्मकथा के स्वरूप और तत्वों का सामान्य परिचय। अंक-30

उपर्युक्त खंडों क ख में से संबंधित 15-15 अंकों के चार प्रश्न पूछे जाएंगे इनमें से केवल दो के उत्तर देने होंगे ।

3 **अलंकार :**

केवल निम्नलिखित अलंकार निर्धारित हैं।
अनुप्रास, यमक, श्लेष, वकोक्ति, उपमा, रूपक, अतिशयोक्ति, विरोधभास, उत्प्रेक्षा, प्रतीप । 6 X 3=18

4 **लघूत्तरापेक्षी :**

प्रथम दो खंडों (कुरुक्षेत्र एवं समीक्षा सिद्धांत) में से पांच-पांच अंक के तीन प्रश्न करने होंगे, 6 प्रश्न पूछे जाएंगे । (शब्द सीमा - 50 शब्द) अंक-15

5. **आंतरिक मूल्यांकन** अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य) (तृतीय वर्ष) सेमेस्टर-6

पूर्णांक **90**+10=100
समय- 3 घंटे

1. निबंध लेखन (केवल साहित्यिक और सामाजिक विषयों पर) अंक-20
कुल आठ निबंधों में से किसी एक विषय पर लिखने के लिए कहा जाएगा।

2. गद्य फुलवारी, सम्पादक डॉ0 शहाबुद्दीन शेख, प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।
केवल निम्नलिखित पाठ निर्धारित है । अंक-16

'आसुओं की होली' (प्रेमचंद), 'अकेली' (मन्नु भंडारी), 'चीफ की दावत' (भीष्म साहनी)
'सुभान खाँ' (रामवृक्ष बेनीपुरी) 'भाभी' (महादेवी वर्मा), 'सदाचार का ताबीज (हरिशंकर परसाई), महात्मा गांधी' (रामकुमार वर्मा), 'मैं घैाबी हू¡' शिवपूजन सहाय), 'गप-शप' (नामवर सिंह), 'जमनोत्री की यात्रा' (विष्णु प्रभाकर)

(क) 6 अंकों की एक सन्दर्भ सहित व्याख्या करनी होगी । कुल दो व्याख्याँए पूछी जाएंगी ।

(ख) 10 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल दो प्रश्न पूछे जाएंगे ।

3. हिन्दी साहित्य का इतिहास अंक-24
केवल निम्नलिखित गद्य-विधाओं का उद्भव और विकास : उपन्यास, कहानी,
नाटक, निबंध, आत्मकथा, जीवनी, संस्मरण, रेखाचित्र ।
इन गद्य- विधाओं में से 12-12 अंकों के कम से कम चार प्रश्न पूछे जाएंगे,
छात्रों को केवल दो प्रश्नों के उत्तर लिखने होंगे ।

4. छन्द-परिचय- निम्नलिखित छन्द निर्धारित हैं । अंक-15
दोहा, सोरठा, चौपाई, रोला, कुण्डलियां, सवैया, द्रुतविलम्बित, हरिगीतिका, उपेन्द्रवज्रा, इन्द्रवज्रा ।
पाँच छन्दों के लक्षण और उदाहरण पूछे जाएंगे, जिनमें से तीन का उत्तर देना होगा ।

5. हिन्दी भाषा और उसकी लिपि अंक-10
देवनागरी लिपि : विकास, गुण दोष, सुधार के उपाय 10 अंकों के कुल दो प्रश्न पूछे जाएंगे, जिनमें से केवल एक प्रश्न का उत्तर देना होगा ।

6. निमन्त्रण पत्र, प्रेस, विज्ञप्ति, विज्ञापन का प्रारूप तैयार करना । अंक-5
दो प्रश्न पूछे जाएंगे, छात्राों को एक प्रश्न का उत्तर देना होगा।

आंतरिक मूल्याकंन अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

संस्कृत (इलैक्टिव)
5th Semester

Paper - Sanskrit : **उपनिषद्, रामायण, शब्दावली व व्याकरण** पूर्णांकः 90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा। उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।-
- ईश्वर, त्याग, कर्म, विद्या, अविद्या, सम्भूति, असम्भूति आदि औपनिषदिक विषयों का अध्ययन कराना।
- आदि काव्य वाल्मीकि रामायण तथा लौकिक काव्य के सौन्दर्य का दिग्दर्शन कराना।
- संस्कृत के समृद्ध शब्दभण्डार द्वारा छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT - I

(क) ईशोपनिषद्

(1) मन्त्र/मन्त्रांश का अनुवाद एवं व्याख्या 1x10=10अंक

(2) समीक्षात्मक प्रश्न / सूक्ति व्याख्या 1x10=10अंक

(ख) वाल्मीकिरामायण (सुन्दरकाण्ड, सर्ग-15, गीता प्रैस गोरखपुर) श्लोक व्याख्या 2x7½=15अंक

UNIT - II

(ग) व्यावहारिक संस्कृत शब्दावली : वाद्य, खेल एवं युद्ध सम्बन्धी (15 में से 10 शब्दों की संस्कृत) 1x10=10अंक

1. उतार – अवरोहः	2. चढ़ाव-आरोह	3. जलतरंग-जलतरङ्गः
4. ढिंढोरा - डिण्डिमः	5. ढोल - पटहः	6. ढोलकः - ढोलक
7. तवला - मुरजः	8. तानपुरा - तानपुराः	9. तुरही (शहनाई) - तूर्यम्
10. नगाड़ा - दुन्दुभिः	11. पियानो - तन्त्रीवाद्यम्	12. बांसुरी - मुरली
13. मंजीरा-मञ्जीरम्	14. सारंगी (वायलिन)-सारंगी	15. सितार-वीणा
16. हारमोनियम-मनोहारिवाद्यम्	17. गेंद-कन्दुकः	18. टेनिस का खेल-टेनिस-क्रीडा
19. नेट-जालम्	20. फुटबाल-पादकन्दुकः	21. बैड मिंटन-पत्रिक्रीडा
22. मैच-क्रीडाप्रतियोगिता	23. रेफरी-निर्णायकः	24. रैकेट-काष्ठपरिष्करः
25. बालीबालक्षेपकन्दुकः	26. हाकी का खेल-यष्टिक्रीडा	27. बिगुल-संज्ञाशंखः
28. कोमलस्वर-मन्द्रः स्वरः	29. तीव्रस्वर-तारःस्वरः	30. मध्यमस्वर- मध्यः, मध्यस्वरः

31.एटमबम-परमाणु अस्त्रम्	32. क्वच-वर्मन्	33.कृपाण-असिः
34. गण्डासा-तोमरः	35. गदा- गदा	36. गोली-गुलिका
37. छावनी-शिविरम्	38. टीयर गैस-धूम्रास्त्रम्	39. तेप-शतघ्नी
40. जल सेनापति-भूसेनाध्यक्षः	41. थल सेनापति- भूसेनाध्यक्षः	42. वायुसेनापति-वायुसेनाध्यक्षः
43. धनुष- धनुः, कोदण्डः, चापम्, कार्मुकम्	44. पिस्तौल-लघुभुशुण्डिः	45. बन्दूक-भूशुण्डिः
46. बम-आग्नेयास्त्रम्	47. हाइड्रोजन बम-जलपरमाण्वस्त्रम्	48. बारूद-अग्निचूर्णम्
49. लड़ाई का जहाज-युद्धपोतः	50.लड़ाई का विमान-युद्धविमानम्	

UNIT - III

(घ) विसर्ग सन्धि 5x1=5अंक

(ङ) अव्ययीभाव समास 5x1=5अंक

(च) अलंकार : उपमा, उ॰ प्रेक्षा, रूपक, विभावना, विशेषोक्ति तथा विरोधाभास 2x7½=15अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT - IV

(छ) वैदिक इतिहास (लघु प्रश्न/टिप्पणी) 2x5=10अंक

(i) वेदों का सामान्य परचिय

(ii) वेदांग साहित्य का सामान्य परिचय

UNIT - V

(ज) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य)

5x2=10अंक

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संस्कृत (इलैक्टिव)

6th Semester

Paper - Sanskrit : **लौकिक काव्य, इतिहास, निबन्ध व व्याकरण** पूर्णांकः90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा। उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- लौकिक काव्य के रचनासौष्ठव से परिचय कराना।
- संस्कृत के समृद्ध शब्दभण्डार से छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT-I

(क) रघुवंश (प्रथम सर्ग) - कालिदास

i) श्लोकों का सप्रसंग अनुवाद व व्याख्या 2x10=20अंक

ii) सूक्ति-सप्रंसग व्याख्या (तीन में से एक) 1x10=10अंक

UNIT-II

(ख) संस्कृत शब्दावली : सम्बन्धसूचक एवं प्रशासनिक शब्द 10x1=10अंक

1.पिता/माता - जनकः, /जननी

2. चाचा, चाची-पितृव्यः, पितृव्या

3. पति, पत्नी-पतिः, पत्नी (भार्या, जाया)

4. नाना, नानी-मातामहः, मातामही

5. छोटा भाई, बड़ा भाई-अनुजः, अग्रजः

6. दादा, दादी-पितामहः, पितामही

7. पुत्र, पुत्री-पुत्रः/आत्मजः, पुत्री/आत्मजा

8. जीजा-भगिनीपतिः

9. जंवाई (दामाद)-जामाता

10. देवर, देवरानी-देवरः, याता

11. मामा, मामी-मातुलः, मातुली

12. साला, साली-श्यालः (स्यालः), श्याली (स्याली)

13. सास, ससुर-श्वश्रूः, श्वशुरः

14. समधी (कुडम), समधिन (कुडमनी) -सम्बन्धी, सम्बन्धिनी

15. पोता, पोती-पौत्रः, पौत्री

16. भतीजा, भतीजी-भ्रातृपुत्रः /भ्रातृव्यः, भ्रातृपुत्री /भ्रातृव्या

17. भानजा, भानजी-भागिनेयः, भागिनेयी

18. चचेरा भाई, चचेरी बहिन-पितृव्यपुत्रः, पितृव्यपुत्री

19. भाभी-भ्रातृजाया

20. Administration-प्रशासनम्

21.Appeal-निवेदनम्

22. Approval-अनुमोदनम्

23. Ban-प्रतिबन्धः
24. Cabinet-मन्त्रिमण्डलम्
25. Corporation-निगमः
26. Director-निदेशकः
27. Employment-आजीविका, वृत्तिः
28. Initials-आद्यक्षरम्
29. Judgement-निर्णयः
30. Gazetted Officer-राजपत्रिताधिकारी
31. Notification-अधिसूचना
32. Procedure-कार्यविधिः
33. Receipt-प्राप्तिः
34. Senior-वरिष्ठः
35. Subordinate-अधीनस्थः
36. Transfer-स्थानान्तरणम्
37. Vacancy-रिक्तिः
38. Character Certificate-चरित्रप्रमाणपत्रम्
39. Civic-नागरिकः

(ii) पंजाबी में प्रयुक्त संस्कृत के तत्सम तथा तद्भव शब्दों की सूची 10x1=10अंक

संस्कृत शब्द	पंजाबी शब्द	संस्कृत शब्द	पंजाबी शब्द
1. चिरम्-(विलम्ब, देरी, दीर्घकाल)	चिर	21. रटितम् (रटा हुआ)	रटंत
2. वेला (समय, अवसर)	बेला	22. लोहितम् (खून)	लहूं
3. शाकः (हरि सब्जी)	साग	23. वसितम्, वसितिः (वस्ती)	वसूं, वसों
4. कर्करम् (ढेला, कंकर)	कंकर	24. हृदयम् (हृदय, दिल)	हिउं, हियां
5. चतुष्कम् (चौंक)	चौंक, चौंका	25. श्वश्रूः (सास)	सस्सू
6. द्वयम् (दो, जोड़ा)	दोह	26. वधूः (वहू)	वहू
7. धावनम् (धोना)	धावण	27. अद्य (आज)	अज्ज
8. नखम् (नाखून)	नउंह, नहुं, नौंह	28. अर्ध (आधा)	अद्धा
9. निषिद्धम् (बुरा, अपवित्र)	नखिंध	29. उच्चैः (ऊँचा)	उच्चा
10. नीलम् (एक रत्न)	नीलम, लीलम	30. कदा (कब)	कद
11. पदम् (पैर)	पउं	31. तदा (तब)	तद
12. नयनम् (नेत्र)	नैणूं	32. यदा (जब)	जद
13. पुच्छम् (पूंछ)	पूंछ	33. कृतः (किया)	कीत्ता
14. बाल्यम् (बचपन)	बालम	34. चन्द्रः (चांद)	चन्द
15. बीजम् (बीज)	बीं, बीउं	35. त्वम् (तुम)	तूं
16. भयम् (डर)	भैं, भउं, भंऊ	36. निम्बः (नीम)	निम्म
17. माषम् (उड़द)	मांह, महां	37. पिप्पलः (पीप	पिप्पल

18. मनःघटितम् (स्वकल्पित)	मनघडंत	38. बलदः (बैल)	बलद, बौलद
19. मुखम् (मुंह)	मूंह, मूं	39. हस्तः (हाथ)	हत्थ
20. युगलम् (जोड़ा)	जुगलां	40. सर्वः (सब)	सब्भ

UNIT-III

(ग)णिजन्त व सन्नन्त प्रयोग (प्रथम पुरुष का एकवचन ही प्रष्टव्य है।) 5x1= 5 अंक

(i) णिच् प्रत्यय केवल भू, पठ्, हस्, गम्, कृ, अधिइङ्, खाद्, चल्, नश्, व नम् धातु से ही प्रष्टव्य हैं।

(ii) सन् प्रत्यय केवल स्वप्, घ्रा, पठ्, कृ, गम्, मृ, मुच्, दा, तृ तथा भू धातु से ही प्रष्टव्य हैं।

(घ)बहुव्रीहि समास 5x1= 5 अंक

(ङ)अंलकार : अनुप्रास, यमक, अर्थान्तरन्यास, श्लेष, अतिशयोक्ति व दृष्टान्त 2x5=10 अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT-IV

(च)लौकिक संस्कृत साहित्य के निम्नलिखित लेखकों की कृतियों का परिचय 2x5= 10 अंक

(भास, कालिदास, भवभूति, बाणभट्ट, माघ, भर्तृहरि व दण्डी)

UNIT-V

(छ)संस्कृत निबन्ध (तीन में से एक विषय पर दस पंक्तयों में) 1x10=10अंक

विषय – संस्कृतभाषाया महत्त्वम्, मम प्रियः कविः, मम प्रियं पुस्तकम्, दीपावली, सत्संगतिः तथा पर्यावरणसुरक्षा)

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਥੀਏ ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਦੇ ਰੂਪ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

(ਨਿਰਧਾਰਤ ਕਵੀ : ਸ਼ੇਖ ਫਰੀਦ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ, ਗਰੂ ਅਰਜਨ ਦੇਵ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ, ਭਾਈ ਗੁਰਦਾਸ)

2. ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ, ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) 'ਮੁਇਆ ਸਾਰ ਨ ਕਾਈ' ਨਾਟਕ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਟਕ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) (ਦੋ ਵਿਚੋ ਇੱਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 2x5 = 10 ਅੰਕ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ: ਤੱਕ)** : ਗੁਰਮਤਿ, ਵਾਰ ਕਾਵਿ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4 =20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: ਰੀਤੀ ਸੰਪ੍ਰਦਾਇ, ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਸਾਹਿਤ ਦੇ ਰੂਪ : ਜਨਮਸਾਖੀ, ਸ਼ਲੋਕ, ਕਾਫ਼ੀ, ਕਿੱਸਾ, ਵਾਰ, ਸੀਹਰਫ਼ੀ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ) — 20 ਅੰਕ
4. ਪੱਛਮੀਂ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
(ਨਿਰਧਾਰਤ ਕਵੀ: ਸ਼ਾਹ ਹੁਸੈਨ, ਦਮੋਦਰ, ਹਾਫਿਜ਼ ਬਰਖੁਰਦਾਰ, ਮਿਰਜ਼ਾ ਸਾਹਿਬਾ
2. ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼, (;ਜ਼ਗਕਓ) ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
(ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਤੇ ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼ ਪਾਠ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ-ਬੰਦ / ਵਾਰਤਕ ਅੰਸ਼ਾਂ ਦੀ ਵਿਹਾਰਕ ਆਲੋਚਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
(ਅ) ਨਿਬੰਧ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਿਬੰਧ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 2x5 = 10 ਅੰਕ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ)** : ਸੂਫੀ, ਕਿੱਸਾ ਤੇ ਜੰਗਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5x4 = 20 ਅੰਕ
5. ਪੱਛਮੀਂ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ੳ) ਅਰਸਤੂ ਦਕ ਅਨੁਕਰਣ ਸਿਧਾਂਤ (ਅ) ਮਨੋਵਿਸ਼ਲੇਸ਼ਣੀ ਵਿਧੀ (ਏ) ਮਾਰਕਸਵਾਦ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੇਤਰ ਤੇ ਹੋਰ ਵਿਗਿਆਨਾਂ ਨਾਲ ਸੰਬੰਧ (ਮਨੋਵਿਗਿਆਨ, ਸਮਾਜ ਵਿਗਿਆਨ ਤੇ ਮਾਨਵ ਵਿਗਿਆਨ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਈਸ਼ਰ ਸਿੰਘ ਤਾਂਘ, ਪੱਛਮੀਂ ਸਮੀਖਿਆ ਦੇ ਸਿਧਾਂਤ, ਦੀਪ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਸ਼ਹਿਰ।
5. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), 'ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
6. ਹਰਿਭਜਨ ਸਿੰਘ, ਅਧਿਅਨ ਤੇ ਅਧਿਆਪਨ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਧਾਲੀਵਾਲ,ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ' ,ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

URDU (ELECTIVE)
SEMESTER-V

Theory **90 Marks**
Internal Assessment **10 Marks**
Time: 3 Hours

Paper-A

Unit-I

Explanation of prose passage from following lessons: 30 Marks

1.
- Ek khuda parast shahzadi (Meer Amman)
- Shahzade ke pahle safar ka aaghaz (Rajab Ali Baig Suroor)
- Guzra hua zamana (Sir Syed Ahmed Khan)
- Qatil ki maa (Prem Chand)

Unit-II

2. (i) Explanation of Verses from following ghazals 30 Marks
- Jo is shor se Meer rota rahega (Meer Taqi Meer)
- Maqdur nahin uski tajalli ke bayan ka (Sauda)
- Tohmaten chand apne zimme dhar chale (Khawaja Mir Dard)
- Dil-e-nadan tujhe hua kya hai (Mirza Asdullah Khan Ghalib)
- Tamannaon mein uljhaya gaya hun (Shad Azimabadi)
- Duniya meri bala jane, mahngi ya sasti hai (Fani Badayuni)
- Na jane ashk se aankhon mein kyon hain aaye hue (Firaq Gorakhpuri)
- Mauje gul, mauje saba, mauje sehar lagti hai (Jam Nisar Akhtar)

(ii) Explanation of verses from following nazams
- Daastan shehzade ke ghayab hone ki (Meer Hassan)
- Aadmi Nama (Nazeer Akbar Abadi)
- Badli Ka Chand (Josh Malihabadi)
- Raat aur rail (Asrar-ul Haq Majaz)
- Kutte (Faiz Ahmed Faiz)

Unit-III

3. Summary of a lesson or a poem from Unit I and II 15 Marks

Unit-IV

4. Question on the basis of the following forms of prose and poetry 15 Marks

1. Ghazal 2. Nazam 3.Qasida 4.Novel 5.Afsana

Books Prescribed:
Shaoore Adab: Intikhab Nasar-o-nazam,Maktaba Jamia,New Delhi

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URDU (ELECTIVE)
SEMESTER-VI

Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Paper-B

Short story and literary history of Urdu literature

Unit-I

1. Urdu adab ki ibtida aur irtiqa 30 Marks
2. Fort William College Ki adabi khidmaat

Unit-II

Contribution of Urdu Poetry with special reference to: 30 Marks

- Asadullah Khan Ghalib
- Brij Narayan Chakbast
- Allama Iqbal
- Faiz Ahmad Faiz

Unit-III

Contribution of Urdu prose with special reference to: 15 Marks

- Sir Syed Ahmed Khan
- Altaf Husain Hali
- Quratulain Haider
- Ismat Chughtai

Unit-IV

Urdu Afsane Inshaiye 15 Marks

- Bhola
- Hajj e Akbar
- Manzoor
- Election

Book Prescribed:
Tarikh-e-Adab Urdu by, Dr.Ram Babu Saxena
Afsane Inshaiye aur drame, compiled by Mohammad Qasim Siddiqui,
Education Book House Aligarh

Books Recommended:
Tarikh-e-Adab Urdu, by Dr. Aijaz Hussain

PERSIAN (ELECTIVE)
SEMESTER-V

There will be two Paper Setters/Examiner.

PAPER-A : PROSE

Marks: 90
Time : 3 Hrs
Internal Assessment : 10

1.	Translation of text pieces into English,Hindi,Urdu, Panjabi or Persian.	20 Marks
2.	Explanation of text pieces into English,Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye- Kuath	20 Marks
4.	Simple direct questions on the life works of the authors	20 Marks
5.	Short notes.	10 Marks
	Total:-	90 marks

Books prescribed:

Nisabe Jadide Farsi (Published By Jayyad Ballimaran, Delhi) Only following portion from Prose Section.

(i) Intekhab Sarzamin-e-Hindi-Ali Asghar Hikmat,P.33-60
(ii) Dastanha-ye-Kutah:-
  (a) Azzan-e- Maghrib by Saeed Nafisi.
  (b) Khukushi By Mohd. Hijazi.

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PERSIAN (ELECTIVE)
SEMESTER-VI

Paper-B POETRY

Marks 90
Time 3 Hours
Internal Assessment 10

1.	Translation of text pieces into English, Hindi,Urdu, Panjabi Or Persian.	20 Marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Central idea of the poem	20 Marks
4.	Simple direct questions on the life works of the Poets	20 Marks
5.	Short notes.	10 Marks
	Total:	90 Marks

Books Prescribed:

Nisabe Jadide Farsi(Published by Jayyad Ballimaran, Delhi). Only following portions form poetry section:-

Az Gzalliyat-e-Hafiz:

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.
Saaqi Benur Badah Bar Afrooz Jam-e-Maa.
Doosh Deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:
Jan Ze Tan Burdi-o-Dar Jaani Hunooz.
Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

Masanaviy-e-Maulana Rum:
Deed Musa Yek Shabani Rah Be Rah.
Wahi Aamad Suy-e-Musa Az Khusa

Wassayad-e-Urfi
Dar Wasf-e-Kashmir

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FRENCH (ELECTIVE)

B.A. /B.SC.(GENERAL) THIRD YEAR (SEMESTER SYSTEM) SYLLABUS, 2019-2020

SEMESTER-5TH

INTRODUCTION TO FRENCH DRAMA, POETRY AND PROSE

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

I Literary Master Pieces, Drama, *Ma Vie n'est plus un roman*, Michel Déon 25 Marks

Questions on character sketches and Critical appreciation of the drama to be asked and answered in French.

II Selected Reading-Poetry 25 Marks

Questions, explanations of stanzas of poems and central ideas, critical appreciation and summaries of the poems to be asked and answered in French.

III Text Book : Version Originale-3 (Units 8-9) Version Originale-4 (Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

(a) General questions to be based on the prescribed text.(4 questions of 5 marks each) 20 Marks

(b) Questions on French civilization in the form of fill in the blanks, multiple choice and short answers of 1-2 sentences. 20 Marks

I Courses of Reading :

Drama : *Ma Vie n'est plus un roman*, Michel Déon de L'Académie française, Editions Gallimard, 1987

II Poetry :

1. Pierre de Ronsard
   Quand vous serez bien vieille

https://www.poetica.fr/poeme-90/pierre-ronsard

2. Jean de la Fontaine
   Recueil : Livre I, Fable n° 1
   La Cigale et la Fourmi

www.lesfables.fr

3. Arthur RIMBAUD
   Recueil : Poésies
   Le dormeur du val
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Raymond RADIGUET
   Recueil : *Poèmes divers*
   Sur la mort d' une rose
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

5. Guillaume APOLLINAIRE
   Recueil : *Alcools*
   La blanche neige
   https://www.poetica.fr/poeme-782/guillaume-apollinaire

Text Books for Reference :

1. French Poetry for students by A.W. Bains.
2. Le Français et la Vie-Tome III G. Mauger/M.Bruezier .
4. Collection Littéraire XIX & XX Siècle-Nouveaux classiques Larousse.
5. Les Textes français -XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

CHOICE TO BE GIVEN IN ALL QUESTIONS

Note for Private Candidates: -The theory paper would be marked proportionately out of 100 as there is no internal assessment.

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FRENCH (ELECTIVE)

SEMESTER-6th

FRENCH POETRY, APPLIED GRAMMAR, CREATIVE WRITING AND VIVA-VOCE

Max. Marks	: 100
Theory	: 60 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

1.	Summary, explanation and analysis of prescribed poems	20 Marks
2.	A composition on a topic within the textbook of about 200-300 words	15 Marks
3.	Questions on applied grammar [Questions to be based on grammar section of Prose - Version Originale-3 (Units 8-9) Version Originale-4(Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil Pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.	25 Marks
4.	**Viva-Voce:**	
1.	Dictation of an unseen passage of about 100 words.	10 Marks
2.	Conversation (general)	10 Marks
3.	Reading (Unseen passage)	10 Marks

Courses of Reading:

Poetry: The following five poems are to be studied:

1. Alfred De MUSSET
   Recueil : *Premières poésies*
   Sonnet : Que j'aime le premier frisson d'hiver

http://poesie.webnet.fr/lesgrandsclassiques/poemes

2. Victor HUGO
   Recueil : Les quatre vents de l'esprit
   Cent mille hommes, criblés d'obus et de mitraille

http://poesie.webnet.fr/lesgrandsclassiques/poemes

3. Alphonse de LAMARTINE
   Recueil : M*éditations poétiques*
   L'Automne

http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Théophile GAUTIER
   Premier sourire du printemps

http://poesie.webnet.fr/lesgrandsclassiques/poemes/theophile_gautier

5. Jean –Baptiste CLEMENT
Le temps des cerises

http://poesie.webnet.fr/lesgrandsclassiques/poemes

Comprehension, explanation, literary appreciation and criticism of the poems to be studied.

Note : 1. The latest syllabus should be strictly followed.
2. Choice should be given in questions.

Text Books for Reference:

1. French Poetry for students by - A.W. Bains.
2. Le francais et la Vie-Tome III G. Mauger/M.Bruezier.
3. Collection Litteraire XIX & XX Siecle-Nouveaux classique Larousse.
4. Poèmes choisis-A de. Musset, Edition-Nouveaux classiques Larousse.
5. Les Textes français- XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

Courses of Reading :

Version Originale-3 (Units 8-9) Version Originale-4 (Unit 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil Pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris.

N.B. : (1) The latest syllabus to be followed strictly and the question paper should be of B.A.III level.
(2) Choice in questions must be given.
(3) Eight periods of one hour weekly – Six hours for text and two hours for composition.
(4) The composition and the unseen passages should be based on the vocabulary and grammar covered till B.A. III.
(5) The paper will be set and answered in French (except Translation).

Note for Private Candidates: - The theory paper would be marked proportionately out of 70 as there is no internal assessment.

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GERMAN (Elective)
Semester - V

Summary

Max. Marks :100 marks(Total)
Paper – A (Theory) : 90 marks
Internal Assessment: 10 marks

Paper A - Theory : **90 marks**

Time: 3 hours

Note: Use of dictionary is allowed

i. Explanation and interpretation of any **two** poems or **three** stanzas from the prescribed book "German Verse" (Kulkarni & Chapekar) : 30 marks

- i. Hyperions Schicksalslied (Hölderlin)
- ii. Der Karussel (Rilke)
- iii. Des Schiffers Traum (Arndt)
- iv. Der Zauberlehrling (Goethe)
- v. Ganymed (Goethe)
- vi. Einkehr (Uhland)

ii. Characterization / Literary questions (2) on the prescribed drama "Andorra" (Max Frisch) : 30 marks

iii. Translation of unseen text/s from German into English : 30 marks

5.2 **Internal Assessment** : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "German Verse" (Kulkarni & Chapekar)
ii. "Andorra" (Max Frisch)

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GERMAN (Elective)

Semester - VI

Summary

Max. Marks: 100 marks (Total)
End-semester Exam Paper-B (Theory) : 60 marks
Oral (viva-voce) examination : 30 marks
Internal Assessment : 10 marks

Paper B - Theory		:	**60 marks (Total)**
	Time Note: Use of dictionary is allowed	:	3 hours
i.	Translation of unseen text/s from German into English	:	20 marks
ii.	Translation of unseen text/s from English into German	:	10 marks
iii.	Characterization / Literary questions (2 out of 3) on the prescribed novel "Der Verdacht" (Dürrenmatt)	:	30 marks
Oral (viva-voce) Examination		**:**	**30 marks (Total)**
i.	Conversation in German		
ii.	Reading of a simple unseen text and answering questions there-on.		
Internal Assessment		:	**10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbooks:

i. "Deutsche Texte zum Übersetzen", Max Hueber Verlag.
ii. "Der Verdacht" (Dürrenmatt)

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Russian (Elective)
SEMESTER -V

Paper –Option (i) (General Translation & Grammar): Written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) Cases(Nouns, Pronouns, Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes). 20 Marks

Note: Use of dictionaries is allowed.

OR

Paper: Option(ii) (Scientific & technical Translation & Grammar): written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian (Scientific & technical material) into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) 20 Marks

   Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes).

Note: Use of dictionaries is allowed.

Extra material to be provided by the department.

RUSSIAN (ELECTIVE)
SEMESTER -VI

Paper : Written (Literature)
Maximum Time : 3 hrs.

Maximum Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Biographies of Russian writers from prescribed text books **20 marks**
Biographies 2 out of 4 (10 marks each)

A.S.Pushkin
N.V.Gogol
A.P.Chekhov
M.Gorky
Leo Tolstoy
Chigiz Aitmatov
Konstantin Paustovsky

2. Literary works
(2 Question out of 4(10 marks each) on the following works: **20 marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

3.
a/ Reference to the context (Poetry): **10 marks**

a) Nyane	A.S.Pushkin
b) V Sibri	A.S.Pushkin
c) Parus	M.V.Lermontov

Poetry paragraph from the text studied (1 out of 2)

b/ Reference to the context (Prose): **10 Marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

Prose paragraph from the text studied (1 out of 2)

iii) Oral/Practical **30 marks**

Practical (Dissertation: Independent translation of about 2500 words from Russian literary, socio-political, popular science texts into English/Hindi/Punjabi) **15 marks**

OR

Verbal Narration in Russian on any two of the following topics:

1.Biography of any Indian/Russian personality 2. Native state 3. My favorite Russian Literary work.
4. Russia 5. India 6. Sport, 7. India-Russia commercial/Trade Relation.

General Conversation **15 marks**

Books Recommended for additional reading

N.S.Burlakov & C.N. Chakravarti : A Cherstomathy of Russian Literature. 1970
Nikolai Bannikov; Three centuries of Russian Literature. Progress Publishers, Moscow,1980.
A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
T.E. Pecherista : DOROGI – Stories by Soviet writers Russian language,Moscow,1979.
S Khavronnia: Russian in Exercise, 1978.
I Pulkina: RUSSIAN A Practical Grammar with Exercise. Russky Yazik. Pub. H.Moscow.
Dictionaries: English-Russian dictionary.
Russian-English dictionary
B.I.Balin and R.M.Bakaya: An Introductory Russian course for students of Science and technology, Asia publishing house, Delhi (For Scientific & technical Translation group)

Note: Extra materials to be provided by the department.

FOLLOWING SUBJECTS ARE KEPT IN ABEYANCE FOR THE SESSION 2019-20:-

1. **ARABIC (ELECTIVE)**
2. **BENGALI (ELECTIVE)**
3. **TAMIL (ELECTIVE)**
4. **KANNADA (ELECTIVE)**
5. **MALAYALAM (ELECTIVE)**
6. **TELUGU (ELECTIVE)**

PHYSICAL EDUCATION

B.A. /B.Sc. (GENERAL) FIFTH SEMESTER EXAMINATION (2019-20)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Play:

– Meaning and Definition of Play.
– Various theories of play and their significance in Physical Education and Sports.

Recreation:

– Meaning, definition, characteristics, aim, objectives and types of recreation and recreational activities.
– Significance of recreation in the modern society.
– Recreation providing agencies.

UNIT-III **12** Marks

Competitions:

– Meaning, importance and conduct of intramural and extramural competitions.
– Meaning and types of tournament and their merits and demerits.
– Draw of fixtures of various tournaments.

Camps:

– Meaning, aim and objectives of the camp.
– Advantages of camping/outdoor education.
– Types and agencies promoting camping.
– Organization of camps and factors affecting its organization.
– Educative values of a camp.

Athletic Meet:

– Organization of an athletic meet.
– Importance/significance of an athletic meet.

UNIT-IV **12** Marks

Posture:

– Meaning, types and importance of a good posture.
– Causes, preventive and remedial measures of a poor posture.

Postural Deformities:

– Postural deformities (Kyphosis, lordosis, scoliosis and flat foot), their causes, preventive and remedial measures.

Physical Activities and their effects on various physical parameters and vice versa:

– Physical activities/training and their effects on aging, body composition, and obesity.
– General problems of obesity.
– Health related risk factors of obesity.
– Obesity and physical activity.
– Causes, preventive and remedial measures of obesity.

UNIT-V **12** Marks

Massage:

– Brief history of massage.
– Meaning and definition of massage.
– Principles/guidelines for massage.
– Types of massage and their benefits.
– Effects of massage on skin, blood circulation, nervous system and muscles.

Basics of Cricket:

History of the game
Basic fundamentals
Equipment and specifications
Marking / layout of field
Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
Major tournaments and Arjuna awardees of the game.

References :

1. Bell, A.J. : *"Massage and the Physiotherapist : Physiotherapy",* 1964.

2. Butler, G.D. : *"Introduction to Community Recreation",* McGraw Hill Book Company, Inc. New York, 1959.

3. Garinder, M. Dena : *"The Principles of Exercise Therapy",* Fourth Edition, 1985, CBS Publishers and Distributors, Delhi.

4. Gladys Scott, M. : *"Analysis of Human Motion",* 2nd Edition, 1970, Eurasia Publishing House Pvt. Ltd., New Delhi.

5. Lee Joseph : *"Play in Education, National Recreation Association",* New York, 1942.

6. Meyer, Herold D., and Charles K. Brightbill : *"Recreation Administration : A Guide to its Practices",* Prentice Hall Inc., Englewood Cliffs, N.J., 1956.

7. Mitchell, Elmer D., and Bernard S. Mason : *"Theory of Play",* The Ronald Press Co., New York, 1948.

8. Nash, Jay B. : *"Philosophy of Recreation and Leisure",* The C.V. Mosby Co., St. Louis, 1953.

9. Parameswara Ram, N. : *"Kinesiology – Physical Education and Sports",* Parkash Brothers – Educational Publishers, 1988.

10. Piscopo, John and Baley, James A. : *"Kinesiology : The Science of Movement",* John Wiley & Sons, Inc., 1981.

11. Singh, Ajmer *et.al.* : *Modern Text Book of Physical Education, Health and Sports* Kalyani Publishers, Ludhiana, 2000.

12. Struna, Monika and Church, Connie : *"Self Massage : Touch Techniques of Relax, Soothe and Stimulate your Body",* Hutchinson & Co. Ltd., London, 1983.

13. Tirunarayanan, C. Hariharasarma, S. : *"Methods in Physical Education",* The South India Press, Karaikudi.

14. Wilmore, Jack H. : *"Atheltic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc. 470, Atlantic Avenue, Boston Massachusetts.

15. Wood, Elizabeth C. and Becker, Paul D. : *"Beard's Massage",* Third Edition, 1981, W.B. Saunders Company, Philadelphia, P.A.

PRACTICAL

Max. Marks : 35 Marks
Practical : 30 Marks
Internal assessment : 5 Marks

ATHLETICS

(a) History of athletics

(b) List of track and field events

(c) Marking of standard track, width of lanes and starting points for various races.

6. THROWS:

Throws (Shot-put or Discuss Throw or Javelin Throw) and one event of the choice of the student.

(a) **Shot-put** (The holding the stance, the glide, the delivery and the reverse or the recovery).

OR

Discuss Throw (The handhold, the initial stance, the preliminary swings, turn the delivery and the reverse or the recovery).

OR

Javelin Throw (The grip, the carry, the run way approach, the last five strides, the delivery, the reverse or the recovery).

(b) Measurements of equipment and the throwing circles or the approach run, the arc and the throwing area/the sectors.

2. PHYSICAL FITNESS TESTS: More emphasis shall be given on variety of physical exercises for the development of Flexibility and strength components of physical fitness.

Test 1- Flexibility: Sit and reach test

Test 2- Strength: Medicine Ball Throw.

Division of Practical Marks: Marks for each activity shall be divided as under:

Athletics and Physical fitness 15 marks, Participation and achievement in sports/games 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.

3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.

4. The theory and practical papers shall consist of 65 and 35 marks each.

5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.

6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.

7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections:*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students :*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods :*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load :*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. *Division of Marks (Theory and Practical) :*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

PHYSICAL EDUCATION

B.A. / B.Sc. (GENERAL) SIXTH SEMESTER EXAMINATION (2019-20)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(a) There shall be nine questions in all, spread over Five Units.
(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.
(c) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.
(d) All questions/units will carry equal marks.
(e) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Nervous System:

– Meaning of Nervous System.
– Main organs of Nervous System and their functions.
– Reflex action and Reciprocal Innervations.
– Functional classification of Nervous System.

Excretory System:

– Meaning of Excretory System.
– Main organs of Excretory System and their structure and functions.

Endocrine System:

– Meaning of **Endocrine System**.
– Meaning of Glands, their location and functions/Harmones produced by them.

UNIT-III **12** Marks

Sports Training,

– Meaning, definition, aim, objective, characteristics and principles of sports training.

General Physiological concept:

– Physiological concepts such as vital capacity, second wind, stitch in the side and its causes.
– Definition of oxygen debt/excess post exercise oxygen consumption (EPOC) and its implication.
– Meaning definition and types of fatigue.
– Muscular contractions such as isotonic, isometric, eccentric and isokinetic.
– Meaning of Blood pressure, Hypertension: Its causes, effects and treatment, exercise and Hypertension.

Effects of Physical Exercise / Training on body systems:

– Effects of Physical exercise/Training on muscular, respiratory and circulatory systems of the body.

UNIT-IV **12** Marks

Carrier aspects in Physical Education:

– Carrier options in Physical Education.
– Different avenues in Physical Education.
– Self assessment for carrier choices.
– Courses and institutions available for Physical Education profession.

UNIT-V **12** Marks

Coach:

– Coaching, coaching philosophy, definition of a coach.
– Qualification and characteristics of a coach.
– Responsibilities of a coach.

Basics of Table Tennis:

– History of the game
– Basic fundamentals
– Equipment and specifications
– Marking / layout of T.T Table
– Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
– Major tournaments and Arjuna awardees of the game

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.

2. Dandiya, P.C., Jafer, Z.Y.K. and Jafer Afifa : *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.

3. Dick, Frank, W. : *"Sports Training Principles",* Lepus Books, London, 1980.

4. Jensen, C.R. and Fisher, A.G. : *"Scientific Basis of Athletic Conditioning",* Lea and Febiger, Philadelphia, 1979.

5. Matveyer, L. : *"Fundamentals of Sports Training",* Mir Publication, Moscow, 1981.

6. Mathews, D.K. and Fox, E.L. : *"The Physiological Basis of Physical Education & Athletics",* Second Edition, W.B. Saunders Co., Philadelphia, 1976.

7. McArdle, William D., Katch Frank I., and Katch, Victor, L.

: *"Exercise Physiology : Energy, Nutrition and Human Performance",* Lea and Febiger, Philadelphia, 1981.

8. Morgan, R.E. and Adamson, G.T. : *"Circuit Training",* Bell and Sons, London, 1958.

9. Morehouse, L.E. and Miller, A.T. : *"Physiology of Exercise",* The C.V. Mosby Co., St. Louis, 1965.

10. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Teachers",* Lend Edward Arnolod Ltd., 1983.

11. Rose & Wilson : *"Foundations of Anatomy and Physiology*, 5th Edition,1981, Reprinted in 1985.

12. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999-2000, Birla Publications, Delhi.

13. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

14. Shaver, Larry G. : *"Essential of Exercise Physiology",* Surjeet Publications, Delhi First Indian Print, 1982.

15. Singh, Ajmer, Et.al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.

16. Singh, Hardyal : *"Sports Training-General Theory and Methods",* Netaji Subhash National Institute of Sports, Patiala, 1984.

17. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",*1977, Allyn and Bacon, Incl., 470, Atlantic Avenue Boston, Massachusetts.

PRACTICAL

Max Marks : 35
Practical : 30
Internal assessment : 5

GAMES

(Badminton or Hockey and any other one game of the choice of the student).

Badminton:

(a) Measurement (Badminton Court, Net, Racket and Shuttle cock) for singles and doubles.
(b) Number of players and officials.
(c) Holding the racket and shuttle cock.
(d) Types of Service: High and Low.
(e) Types of Strokes: fore hand, back hand, over head.
(f) Shots: Smash, Lob shot, net shot, dive shot.
(g) Rules and regulations of the game.

Hockey :

(a) Measurements (Hockey ground, goalpost, hockey stick, ball and flags) for men and women.
(b) Number and position of players and officials.
(c) Fundamental skills (grip, hitting, stopping dribbling, push, scoop and flick).
(d) Rules and regulations of the game.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections :*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students:*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

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The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

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(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. *Division of Marks (Theory and Practical):*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2019-20

SEMESTER –V

Paper- : INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

GENERAL INSTRUCTIONS FOR THE CANDIDATE:

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. The students are required to attempt **6** short answer type questions out of **8** in Unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives:

1. To enable the students to know about History of Indian Education.
2. To enable the students to understand the problems of pre-primary Education.
3. To make the students familiar with the concept of Universalization of Elementary Education and its problems.
4. To make the students familiar with the constitutional provisions of Education and role of different agencies in Education.

Course Contents :

UNIT-I : Education in the ancient and medieval period of Indian History.

UNIT-II : Current status and problems of pre-primary education. Public schools and their future.

UNIT-III : Importance of Elementary Education.
Universalization of Elementary Education. Problems of Elementary Education and Role of the State in Elementary Education.
Sarav Sikhiya Abhiyan – Concept, Objectives & Implementation.

UNIT-IV : Constitutional Provisions of Education.
Provisions for Education of Weaker Sections of Society.

Books Recommended :

1. Kaur, Kuldip : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh Centre for Research in Rural and Industrial Development, 1985.
2. Narula and Naik, J.I. : *Bharat Wich Vidyak Sikhya Da Itihas,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi 1953.
4. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-65), New Delhi, 1966.
5. Kochhar, S.K. : *Pivotal Issue of Education,* New Delhi, Sterling Publisher, 1984.
6. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* New Delhi, 1986.
7. Govt. of India : *Seventh Five Year Plan,* New Delhi.
8. Govt. of India : *Challenges of Education, A Policy Perspective,* New Delhi, 1986.
9. Sodhi, T.S. : *Bharti Sikhya Ate Us Diyan Samasiyavan,* Bawa Publications, Patiala.
10. Govt. of India, Ministry of Human Resource Development : *National Policy on Education, Programme of Action*, New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2019-20

SEMESTER –VI

PAPER : MODERN INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To make the students familiar with the structure of Secondary Education in India.
2. To enable the students to know about different policies of education.
3. To make the students familiar with the problems of education for 21st century.
4. To enable the students to know about the need and importance of vocationalisation of education.
5. To enable the students to know about Adult, Continuing and Environmental Education.

Course Contents :

UNIT-I : Secondary Education – Structure, Recommendations of Kothari Education Commission and National Policy of Education.

RMSA(Rashtriya Madhmik Shiksha Abhiyan) – Concept Objectives and Implementation.

UNIT-II: Implementation of National Policy of Education of 1986 and 1992.

Education in the Twelveth Five Year Plan.

Problems and Prospects of Education for the 21st century.

UNIT-III : Vocationalisation of Education – Meaning, Need and Importance.

Aims, Objectives and Problems of Secondary Education.

Role of different Agencies – NCERT, NCTE AND DIET.

UNIT-IV : Adult, Continuing and Distance Education.

Environmental Education, ICT in Education.

Books Recommended :

1. Narula & Naik, J.P. : *Bharat Wich Vidyak Sikhya Da Ithas,* Patiala, Punjabi University.
2. Sharma, T.R. : *Bharti Sikhya Dian Samasiyan,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.
4. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi, 1953.
5. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-66), New Delhi, 1966.
6. Kochhar, S.K. : *Pivotal Issues in Education,* New Delhi, Sterling Publishers, 1984.
7. Kaur, K. : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh : Centre for Research in Rural and Industrial Development, 1985.
8. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* New Delhi, 1986.
9. Govt. of India : *Seventh Five Year Plan,* New Delhi.
10. Govt. of India : *Challenge of Education : A Policy Perspective,* New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992

ADULT EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

Max. Marks	:	100
Theory	:	40 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND FOR THE CANDIDATE:

The question paper will consist of five Units: I, II, III, IV and V. Units II, III, IV and V will have two questions from the respective units of the syllabus and will carry 8 marks each. The students are requested to attempt **one** question from each Unit i.e. (II, III, IV and V). Unit I will consist of **eight** short answer type questions which will cover the entire syllabus and is compulsory and carrying one mark for each question.

OBJECTIVES OF THE COURSE :

The objectives of the paper are :

1. To expose students to the concept, importance and scope of continuing education.
2. To acquaint students with the basis of life skills education, its concept, meaning and its various forms.
3. To expose students with life long learning and its future perspectives.
4. To equip students with role of universities in adult and continuing education programs.
5. To explain students extension as third dimension.

ADULT EDUCATION
SEMESTER-V

THEORY :

UNIT-I

Adult and Continuing E ducation:

(a) Adult Literacy in reference to National Literacy Mission 1985, its objectives.
(b) Continuing Education : Concept, Importance, Scope and Objectives

UNIT-II

Saakhshar Bharat Mission 2009.

(a) Saakhshar Bharat Mission 2009, its targets and specific objectives.

(b) Flexi Approach to Saakhshar Bharat Mission 2009 and Continuing Education.

UNIT-III

Life Long Learning

(a) Life Long Learning - Concept, Needs, Scope, Strategies.

(b) Its Implications and Future Perspectives.

UNIT-IV

Extension Education

(a) Extension Education – The Third Dimension.

(b) Its Major Thrust Areas, Programs and Activities.

PRACTICAL/FIELD WORK **50 marks**

1. Organisation of T wo Awareness Generating Programs and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

ADULT EDUCATION
SEMESTER-VI

UNIT-I

Adult and Continuing Education:

(a) Different types of Programes in Continuing Education

(b) Role of Universities in Adult & Continuing Education.

UNIT-II

Life Skills

(a) Life skill Education – its meaning and Concept.

(b) NCERT CORE LIFE SKILLS
Problem-Solving, Decision-Making, Empathy, Creative-Thinking, Critical-Thinking, Stress Management, Time Management, Emotional Security, Communication Skills, Recreation Skills

UNIT-III

National Policy on Skill Development 2015.

(a) National Policy on Skill and Entrepreneurial Development 2015, its objectives and targets.

(b) Its Policy Frame Work, Governance and Financing.

UNIT-IV

Extension Education

(a) Swachh Bharat Mission-Objectives, Targets.

(b) Women Empowerment Challenges and Issues, Its Need and Importance.

PRACTICAL/FIELD WORK **50 marks**

1. Organization of Two Extension Lectures in Slum/Village and Report Writing.

The break up of 50 marks allotted to practical is as under:

	External	Internal
i) Viva- Voice	10 marks	3
ii) Written Questions Based on the Project	20 marks	2
iii) Project Report	10 marks	5

Books Recommended

1. Singh, Madan: Companion to Adult Educators
National Literacy Mission
Director of Adult Education
Ministry of Human Resource
Development,
Dept. of Adult Education, New
Delhi, 1999
2. Suriakanthi, A. : Perspectives of Continuing
Education, Dept. of Adult,
Continuing Education &
Extension,
Gandhi Gram Rural University,
Gandhi Gram, 2007
3. Parthasarathy, K. : Facets of Adult and Continuing
Education, School of Education,
Centre for Adult, Continuing
Education & Extension,
Bharathidasan University
Trichirappatti, 2006
4. Parthasarathy, K. : Population Education and Youth
Development, School of Education,
Centre for Adult, Continuing
Education and Extionsion,
Barathidasan University,
Trichirappatti, 2007
5. Alan Rogers : Teaching Adults, Sterling Publishers
Pvt. Ltd., New Delhi, 1989
6. Mohanty J. : Adult & Non formal Education,
Deep Publications, New Delhi, 1993
7.U.G.C. Guidelines. (X and XI Plan) : University Grants Commission,
for Adult, Continuing Education and Extension New Delhi

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MUSIC (Vocal)

SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent**.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	: 45 marks
Paper-B:	**Practical** (20 minutes duration)	: 45 marks
	(i) Viva	: 35 marks
	(ii) Harmonium	: 05 marks
	(iii) Tabla	: 05 marks
Internal Assessment (Theory + Practical)	(05 +05)	: 10 marks
	Total :	**100 marks**

Paper-A : THEORY (Duration 45 minutes 02 Theory per week)

UNIT-I

1. Explain the following Gayan Shaillies:-Tappa, Dharupad, Tarana.
2. Special features of time Theory of Indian Ragas
3. Raganga Paddhti

UNIT-II

Detailed study of the following:-

1. Manch- Pradarshan
2. Professions in Music
3. Lok Sangeet of Punjab

UNIT-III

Contribution in detail and life sketches in brief of the following: -

1. Pt. Kumar Gandharv
2. Smt. Gangu Bai Hangal
3. Ustad Bade Gulam Ali Khan Sahib

UNIT-IV

Description and Notation of the prescribed Ragas:-

1. To write notation of Vilambit / Drut khyal in the prescribed Ragas with Alaps and Taans : -Vrindavani Sarang, Asavari
2. To write notations of Talas in Ekgun & Dugun of :- Jhumra, Sultala
3. To write the description of Ragas:- Non-detailed Ragas:Des, Jaunpuri

NOTE: Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: -Vrindavani Sarang & Asavari
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dharupad in proper style.
4. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
5. Ability to play Jhaptal on Tabla.
6. Ability to recite the following Talas in Thah, Dugun by hand:-Jhumra, Sultala
7. Ability to sing any two Drut Khayals of your course on Harmonium.
8. Knowledge of non-detailed Ragas:
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Des, Jaunpuri.
9. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*	:	Panna Lal Madan

MUSIC (Vocal)
SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than eight students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music.
5. The candidate can also take instrumental music with tabla.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	: 45 marks
Paper-B:	**Practical** (20 minutes duration)	: 45 marks
(iv)	Viva	: 35 marks
(v)	Harmonium	: 05 marks
(vi)	Tabla	: 05 marks
Internal Assessment (Theory + Practical)	(05 +05)	: 10 marks
	Total	**: 100 marks**

Paper-A: THEORY (Duration 45 minutes 02 Theory per week)

UNIT –I

1. General History of Indian Music i.e. from Bharat to Sharangdev
2. Explain the following Gayan Shaillies: - Dhamar, Bhajan , Shabad, Thumri
3. Varieties of Tana

UNIT –II

Contribution in detail and life sketches in brief of the following great masters:-

1. Ustad Vilayat Hussain Khan
2. Pt. Dalip Chandra Bedi
3. Pt. V. N. Patvardhan

UNIT-III

Detailed study of the following:-

1. Role of Akashwani and Doordarshan towards the popularisation of Indian Classical Music
2. Role of Electronic mediums (Basic Instruments) i.e Electronic, Tabla, Tanpura
3. Sansthagat Sangeet Shikshan Pranali

UNIT-IV

Description and Notations of the prescribed Ragas and Talas :-

1. To write in notation of Vilambit gat / drut khyal in the prescribed Ragas with Alap & Taans:-- Madhuwanti & Darbari- kanada.
2. To write in notations of talas:-Deepchandi, Dhamar (Single + Double)
3. To write the description of Ragas:- Non detailed Ragas: Multani, Adana

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

Paper-B : PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: Madhuwanti & Darbari Kanhada
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dhamar in proper style.
4. One Tarana in any of the detailed Ragas prescribed in the course.
5. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
6. Ability to play Chartala on Tabla.
7. Ability to recite the following Talas in Thah, Dugun by hand: Deepchandi & Dhamar
8. Ability to sing any two Drut Khayals of your course on Harmonium.
9. Knowledge of non-detailed Ragas :
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Multani & Adana
10. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*		Panna Lal Madan

MUSIC (Instrumental)

SEMESTER-V

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. **There should not be more than eight students in a batch for practical examination.**
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i) Viva : 35 marks

(ii) Gayan : 05 marks

(iii) Tabla : 05 marks

Internal Assessment (Theory + Practical) : 05+05 = 10 marks

Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. Explain & define the different Vadan Shaillies (Styles) of your own instrument.
2. Historical development of Indian Musical Scale.
3. Varieties of Tana / Tora

UNIT-II

1. Importance of Laya and Tala in Music
2. Folk Instruments of Punjab.
3. Future of Instrumental Music.

UNIT-III

Brief life sketches and their contributions:-

1. Ustad Bismillah Khan
2. Ustad Hafiz Ali Khan
3. Pt. Nikhil Banerji

UNIT-IV

Notations and Description of ragas and Talas:- Multani, Jai Jaiwanti

1. To write one Maseetkhani Gat with Todas
2. To write Razakhani Gat with Todas of ragas Multani, Jaijaiwanti
3. To write single and double of Tala :- Deepchandi, Tilwada
4. Non- detailed raga:- Madhuwanti, Chhayanat

NOTE: -Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ Description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas : Multani, Jaijaiwanti
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:-Madhuwanti, Chhayanat
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Deepchandi, Tilwada.
5. Ability to play Dhamar on Tabla.
6. One Dhun.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan,Ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1. Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2. Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3. Rag Parichaya Part III & IV	:	H.C. Shrivastava.
4 *Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5. *Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6. *Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7. Sangeet Granth atey Bharti Sangeet Da Itihas	:	Chander Kanta, Khosla

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MUSIC (Instrumental)
SEMESTER-VI

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45marks

(i)	Viva	:	35 marks
(ii)	Gayan	:	05 marks
(iii)	Tabla	:	05 marks
Internal Assessment (Theory + Practical)		:	05+05 = 10 marks
			Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. General History of Indian Music i.e. from Bharata to Sharangdeva
2. Notational System, origin and development
3. Knowledge of Uttari and Dakshani Sangeet Paddhati

UNIT-II

1. The life Sketches and contributions of the following great musicians :-
   (i) Dr. Lal Mani Mishra
   (ii) Dr. Panna Lal Ghosh
   (iii) Smt. Sharan Rani

UNIT-III

Essays:-

(i) Chitrpat Sangeet Mein Vadyon Ki Bhoomika.
(ii) Role of the Akashvani and Doordarshan in popularizing Instrumental Music.
(iii) Manch Pradarshan

UNIT-IV

Notation and Description of the prescribed Ragas and Talas:-

1. Ragas:- Mian-Ki-Todi, Mian Malhar.
2. Talas :- Sultal, Adachartal
3. Non detail Raga :- Gujri -Todi, Bahar

- To write one maseetkhnai Gat with todas in any prescribed rag
- To write a Razakhani Gat with Todas
- To write single and double of prescribed Talas
- To write the description of detailed and non detailed raga

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas: Mian-Ki-Todi, Mian- Malhar
2. One Maseet Khani (Vilambit) Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:Gujri-Todi, Bahar
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Adachautal, Sultal.
5. Ability to play Tilwada on Tabla.
6. One Sitarkhani gat with toras in any prescribed ragas.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan, ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
4	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla

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MUSIC (TABLA)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-V. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: THEORY (3 Hours duration) : 45 marks

Paper-B: PRACTICAL (20 minute's duration) : 45 marks

(i)	Viva	: 30 marks
(ii)	Harmonium	: 05 marks
(iii)	Tabla (Tuning)	: 05 marks
(iv)	Padhant on Hand	: 05 marks

Internal Assessment (Theory & Practical) (5+5) : 10 marks

Total **: 100 marks**

Paper-A Theory

UNIT-I

1. Gun- Dosh of Tabla Vadak.
2. Various development of Tabla in 19th and 20th Century.
3. Comparative study of Pt. V.N. Bhatkhande and Pt. V.D. Pulaskar Taal notation system

UNIT-II

1. Elementary knowledge of the following (not more than 100 words)
   Kriya, Kaal Palta, Laggi, Baant, Peshkaar
2. Use of Taals in accompaniment with Gayan and Vadan shailies
3. Study of Farrukhabad and Punjab Gharana

UNIT-III

1. Life sketches and contribution of the following:-
   a. Pt. Ram Sahai
   b. Pt. Anokhe Lal Mishra
   c. Pt. Bhairav Sahai

UNIT-IV

1. Teentaal, Jhaptaal, Rupak, Aada-Chartaal, Tilvara, Punjabi taal
2. To write description of Taal of your syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chaugun, Aad and Kuaad

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL

1. Playing of Talas prescribed in the course:- Ada Chautal, Tilwara and Punjabi Tala
2. Playing proper Badhat of Ada-Chautal, Teentala
3. Playing all the prescribed Talas with Vocal and Instrumental performances as well as solo items.
4. Tuning of Tabla/Pakhawaj
5. Practical knowledge of the following in the prescribed Talas:
   (i) Ada chartala:- simple Paran, Mukhra, Mohra, Uthan
   (ii) Rupak /Teevra:- Peshkar, Quaida, Palta, Rela, Paran.

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

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MUSIC (TABLA)
SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-VI. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: THEORY (3 Hours duration) : 45 marks

Paper-B: PRACTICAL (20 minute's duration) : 45 marks

i)	Viva	:	30 marks
ii)	Harmonium	:	05 marks
iii)	Tabla (Tuning)	:	05 marks
iv)	Padhant on Hand	:	05 marks

Internal Assessment (Theory & Practical) (5+5) : 10 marks

Total **: 100 marks**

Paper-A Theory

UNIT-I

1. Detailed study of the following:-
   a. Manch Pardarshan
   b. Profession in music (Tabla)
   c. Comparative study of North Indian and Karnatka Taal system

UNIT-II

1. Elementary knowledge of the following (not more than 100 words)
   Gat, Quida, Laggi, Baaj, Ladi, Farmaishi, Chhakardar, Paran
2. Role of electronic instrument in the context of rhythm.
3. Study of Lucknow and Banaras Gharana.

UNIT-III

1. Life sketches and contributions of the following:-
   a. Pt. Viroo Mishra
   b. Pt. Kishan Maharaj
   c. Ustad Zakir Hussan

UNIT-IV

1. Dhamar, Aada-chautaal, Jhaptaal
2. To write description of Taal of the syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chaugun, Aad, Kuaad, Biaad Layakaris

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL

1. Playing of Talas prescribed in the course:- Dhamar, Ada Chartala and Jhaptala
2. Playing proper Badhat of Dhamar:- Ada Chartala and Jhaptala
3. Playing all the prescribed Talas with Vocal and Instrumental performance as well as solo item.
4. Tuning of Tabla/Pakhawaj
5. Practical knowledge of the following in the prescribed Talas:
   (i) Dhamar:-Chakardar Paran, Farmaishi Paran, Tukra
   (ii) Tilwara:-Vilambit, Theka with accompaniment in Vocal

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe
7.	Taal Prasson	:	Chhote Lal Mishra
8.	Avanaddha Vadhya	:	M.P. Sharma

INDIAN CLASSICAL DANCE
SEMESTER –V

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

PAPER-A THEORY

Unit –I

1. Defination the following terms:
   Kataksh, Ang, Upang, Pratyanga, Hela.
2. Origin of Taal and its ten pranas.
3. Technique of Indian Ballet.

Unit-II

1. Dance and Nature
2. Brief study of Natya Shastra
3. Brief study of Natak Bheda

Unit-III

1. Essential characteristics of Mohini Attam.
2. Brief note on Bhave.
3. Brief note on Folk Dances of Rajasthan.

Unit-IV

1. Description of Teen Tala anad Sawari and Dhamar
2. Notation of Theka, Bol Tatkar, thaat, Amad, Chakardar, Tora, Tihai and Premelu and Nagma in Teen Taal.
3. Notation of Theka, Bol, Tatkar, Tihai, Amad, Paran, Chakardar, Paran, Tukra, Kavit and Nagma in Sawari Tala.
4. Notation of Theka, Bol -Tatkar and Tihai in Dhamar.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 minutes 06 periods per week)

Unit - I

1. Swari Tala
   b) Theka
   c) Bol Tatkar
   d) Tukra - 2
   e) Amad - 1
   f) Chakardar Paran - 1
   g) Tihai - 1
   h) Paran - 1
   i) Nagma - 1
   j) Kavit - 1

   Teen Taal:

2. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Thaat - 1
   d) Amad - 1
   e) Chakardar Tora - 1
   f) Tihai - 1
   g) Premula - 1
   h) Nagma - 1

3. Dhamar Taal:

   I Tatkar
   II Tihai

4. a) Knowledge of Folk Dance of Rajasthani practically
   b) Play Theka of Sawari on Tabla
   c) Gat Nikas of Ghungat and Matki
   d) All the practical work on Hand

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INDIAN CLASSICAL DANCE

SEMESTER –VI

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

Paper-A Theory

Unit- I

1. History of Kathak Dance.
2. Brief study of Nayika Bheda.
3. Knowledge of Dakshini Taal System.

Unit-II

1. Essential characteristics of Odissi.
2. Loka Dharmi and Natya Dharmi.
3. Life sketch of Achhan Maharaj Ji.

Unit III

1. Brief study of Abhinaya Darpan.
2. Dance and Fine Arts.
3. History of Stage.

Unit IV

1. Description of Dhamar with Theka, Two Toras, Tihai, Amad and Pakshiparan.
2. Notation of Theka, Amad, Tihai, Tora, Kavit and Chatusjati paran in Teen Taal.
3. Notation of Theka, Paran, Chakardar Paran, Tisarjati Paran, Kavit in Sawari Taal.
4. Nagma, Bol Tatkar in Dhamar, Teen Taal and Sawari.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical (Duration 45 minutes, 06 periods per week)

1. Dhamar (Matra 14)
   a) Bol Tatkar
   b) Theka
   c) Toras-
   d) Tihai-1
   e) Pakshiparan
   f) Amad

2. Swari Tala (Matra 15)
   a) Theka
   b) Bol Tatkar
   c) Paran-1
   d) Chakardar Paran-1
   e) Tisarjati Paran-1
   f) Kavit-1

3. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Amad -1
   d) Tihai -1
   e) Tora - 2
   f) Kavit -1
   g) Chatusjati paran

4. a) Knowledge of Sammi Dance practically
   b) Play Theka of Dhamar on Tabla
   c) Gat Nikas of Murli and Ghungat
   d) All the practical work on Hand
   e) Gat Bhava (Panghat ki Chhed Chhaad).

BOOKS RECOMMENDED:

1.	Kathak	:	Sunil Kothari
2.	Bhartiya Sanskriti mein Kathak Parampara	:	Mandavi Singh
3.	Bharatiya Nritya Kala	:	Keshav Chander Verma
4.	Dance in Thumri	:	Projesh Banerji
5.	Dances of Asia	:	Kiets Sakakibera
6.	Kathak Darpan	:	T. R. Azad
7.	Kathak Nritya Shiksha Part - I & Part - II	:	Puru Dadhich
8.	Natya Shashstra of Bharatmuni	:	
9.	Abhinaya Darpan aur Geet – Gobind	:	Dr. Laxmi Narayan Garg
10.	Abhinaya Darpan	:	Dr. Aarohi Walia
11.	Nritya Abhigyan	:	Shobha Koser
12.	Kathak Gyaneshwari	:	T. R. Azad
13.	Bhartiya Lok Nritye Mein Haryana aur Rajasthan	:	Neera Sharma
14.	Etihasik Paripeksh Mein Kathak Nritya	:	Maya Tak
15.	Kathak	:	Shikha Khare
16.	Bhartiye Sangeet Vadya	:	Lal Mani Mishra
17.	Kathak Kalpdrum	:	Dr. Chetna Jyotshi
18.	Indian Art	:	K. Bharatha Iyer
19.	Indian Sculpture and Painting	:	E.B. Havell
20.	Fine Art	:	Kulwant Singh
21.	Indian Sculpture	:	Stella Kramrish
22.	Sculpture in India	:	Dr. N. L. Mathur
23.	Kala Wahegure di	:	Shobha Singh

FINE ARTS

B.A./ B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

SEMESTER V

THEORY

Paper A : History of Art **Max. Marks : 54**
Max. Time : 3 hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Rajasthani Painting – Chavand Raagmala from Mewar, Raag-Raagini from Bundi and Nayika from Kishangarh
- Pahari Painting – Ramayana from Basohli, Gita-Govinda from Kangra

Unit II : History of Indian Sculpture

- Mahabalipuram – Maheshasuramardini
- Elephanta – Ardhanarishwara
- Chola Bronzes – Nataraja and Parvati Images

Unit III : History of Western Art

- Beginning of Modern Painting – Manet
- Impressionism – Monet
- Neo Impressionism-Seurat
- Post Impressionism-Van Gogh

Unit IV : Definition of Key terms, General Concepts and Techniques

- Form and Content, Art and Religion, Art and Society, Tradition, Modernity

Pedagogy:

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

FINE ARTS
SEMESTER VI

THEORY

Paper A : History of Art **Max. Marks : 54**
Max.Time : 3hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Company Painting
- Folk Style – Kalighat and Maithili

Unit II : History of Indian Sculpture

- Khajuraho – Mother and Child
- Konark – Musician Figures
- Sravanbelgola – Bahubali

Unit III : History of Western Art

- Expressionism – Edvard Munch
- Fauvism-Matisse
- Cubism-Picasso

Unit IV : Definition of Key terms, General Concepts and Techniques

- Beauty, Rasa and Bhava, Gestures, Postures and Movements, Stained Glass, Cire-perdue (lost-wax casting)

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

HISTORY OF ART

B.A. / B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

SEMESTER - V

History of Indian Painting (from ca. 1800 to the present times) and Sculpture (from ca. 600 to 1300 A.D.)

Max.Marks: 100
Time: 3 Hr

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Indian Painting

Unit-I

- Company painting.
- Early oil painters - Raja Ravi Verma.
- Bengal School with special reference to Abanindranath Tagore

Unit-II

- New Trends: Nandlal Bose, Rabindranath Tagore, Gaganendranath Tagore, Jamini Roy, Amrita Shergil, D.P. Roy Chowdhury, Sobha Singh, M.F.Hussain, Satish Gujral.

History of Indian Sculpture

Unit-III

- Sculptures of Pala and Sena Period - Bengal, Bihar, Orissa

Unit-IV

- Pratihara Sculpture of Central and Western India.
- Chola Sculpture in Stone & Bronze

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Archer, W.G : India and Modern Art, George Allen & Unwin Limited, London, 1959.
- Archer, M. & Archer W.G. : Indian Painting for the British, 1770-1880, Oxford University Press, London, 1955.
- Chaitanya, Krishna : A History of Indian Painting, The Modern Period, Abhinav Publications, New Delhi, 1994.
- Appasamy, Jaya : Abanindranath Tagore and the Art of his Times, Lalit Kala Akademi, New Delhi, 1968.
- Mago, P.N. : Contemporary Art in India, A Perspective, National Book Trust of India, New Delhi, 2000.
- …… : Lalit Kala Monographs, Lalit Kala **Akademi, Delhi.**
- Journals and Periodicals : Lalit Kala Contemporary, Roopa-lekha, Marg.
- Parimoo, Ratan : The Paintings of the Three Tagores, Maharaja Sayajirao University, Baroda, 1973.
- Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
- Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
- Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART
SEMESTER-VI

History of European Painting and Sculpture (from ca. 1850 A.D. onwards), and Theory and Principles of Art Appreciation.

Max.Marks: 100
Time: 3 Hrs

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set 9 **questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of European Painting and Sculpture

Unit-I

- Impressionism - Monet, Degas, Renoir.
- Post-impressionism - Van Gogh, Cezanne, Gauguin.

Unit-II

- Cubism - Picasso, Braque
- Expressionism - Munch, Nolde.
- Abstract Art - Kandinsky
- Abstract Expressionism - Jackson Pollock.

Theory and Principles of Art Appreciation

Unit-III

- Function of Art.
- A brief study of Indian and Western approaches to Art.

Unit-IV
Explanation of the term

- Form, Content, Abstraction, Modernity, Contemporaneity, Pointillism, Collage, Lithograph, Etching and Ready-made with the help of relevant examples.

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
- Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
- Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
- Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.
- Ray, Niharanjan : An Approach to Indian Art, Publication Bureau, P.U., Chandigarh, 1974.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
- Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.

ANCIENT INDIAN HISTORY, CULTURE AND ARCHAEOLOGY
SEMESTER V

Paper-V (VOCATIONAL) : EXCAVATIONS, MONUMENTS AND SCULPTURES IN STONE AND BRONZE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives :

The primary objective of this paper is to prepare the students to become professional archaeologists through the study of various excavated and explored archaeological sites, monuments and antiquities such as stone and bronze sculptures. The study of this paper is designed for preparing students to persue advanced study in the subject.

Pedagogy of the Course Work :

It is expected to familiarize students with brief outline of the topics with the help of visual aids like slides and transparencies. Field work trips to museums and sites may be undertaken.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
3. The map question shall have the following topics :
   (a) Location of important archaeological sites mentioned in Unit I.
   (b) Location of important monuments mentioned in Unit II.
   (c) Location/Provenance of important sculptures mentioned in Units III and IV.
4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice, i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.
5. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I:

Excavations : (Note: Instructions will be confined only to the location of the site and important results obtained). Kalibangan, Lothal Mitathal, Sugh, Sanghol, Inamgaon.

UNIT-II:

Monuments : Asokan Pillars, Stupa of Sanchi, Rock-cut-architecture of Ajanta and Ellora, Temples: Kandariya, Mahadev, Lingaraja and Konark..

UNIT-III:

Sculptures : Stone-Harappan, Sculpture of Rampurva Ashokan Bull, Didarganj Yakshi, Katra Buddha, Sarnath Seated Buddha, Gomatesvara at Sravanavelagola, Maheshamurti, (Elephanta), Krishna holding Govardhana (Halebid), Sun Image of Konark, Kasia reclining Buddha (Mahaparinirvana).

UNIT-IV:

Bronze : Sultanganj Buddha, Nalanda Image of Balarama and Buddha, Kurkihar Avalokitesvara, Indra and Padmapani from Nepal, Tanjore (Chola), Nataraja, Balakrishna Kaliyadamana and Somaskanda Murti.

Essential Readings :

1. Agrawala, V.S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
2. Allchin, B. and Allchin, F.R. : *The Rise of Civilization in India and Pakistan,* Cambridge University, Cambridge, 1982.
3. Bajpai, K.D. : *Five Phases of Indian Art,* Vidya Prakashan Jodhpur, 1991.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* Vol-1, rpt. D.B. Tara Gorevala sons, Bombay, 1971

Suggested Readings

1. Lal, B.B. : *The Early Civilization of South Asia,* Aryan Books, *New* Delhi, 1997.
2. Saraswati, S.K. : *A Survey of Indian Sculpture,* 2nd ed. Munshiram Manoharlal, New Delhi 1975.
3. Upinder Singh : *A History of Ancienty and Early Medieval India,* Pearson, New Delhi, 2009.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER VI

Paper-VI: EPIGRAPHY AND NUMISMATICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

This course makes the students aware of major scripts of Ancient India, their origin and development upto 6th century A.D. It also provides knowledge about the origin, antiquity and main features of ancient Indian coins.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs and maps. In addition to it, special lectures, workshops, seminars, written assignments, class discussions, and term papers, should be included while teaching this course.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.

2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The question on map shall consist of the location of the sites of important inscriptions of Asoka.

3. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate will attempt one question from each unit. Each question shall carry 18 marks.

4. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (4) in the question paper.

UNIT-I:

(a) Epigraphy : Major scripts of Ancient India.

(b) Their origin and development up to 6th century A.D.

UNIT-II:

Rock and pillar edicts of Asoka.

UNIT-III:

(a) Origin and Antiquity of Punchmarked coins.

(b) Origin and date of Tribal coins : Yaudheyas, Kunindas, Audumbaras and Malavas.

UNIT-IV:

(a) Kushana Coins.
(b) Gupta Coins.

Essential Readings :

1 Allan, John : *Catalogue of Coins of Ancient India,* Vol.I, rpt., Delhi, 1974.

2. Altekar, A.S. : *Coinage of the Gupta Empire and its imitations,* Numismatic Society of India, BHU, Varanasi, 1957.
Varanasi, 1957.

3. Chattopadhya, B. : *The Age of Kushanas,* A Numismatic Study, Calcutta, 1970.

4. Gupta, P.L. : *Coins,* rpt., National Book Trust, New Delhi, 2006.

Suggested Readings :

1 Hultzsch, E. : *Corpus Inscriptionum Indicarum,* Vol.I, rpt. Archaeological Survey of India, Delhi, 1991.

2. Pandey, R.B. : *Indian Palaeography,* Munshiram Manoharlal, Banaras, 1952.

3. Dani A.H. : *Indian Palaeography,* Munshiram Manoharlal, New Delhi, 1997.

DEFENCE & STRATEGIC STUDIES

SEMESTER –V

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper - NATIONAL SECURITY: CONCEPTIONAL ASPECTS

M. Marks: 70
Time: 3 hours

Objective :

This paper deals with the conceptual aspects of national security and the role of economy & military organizations in furthering national pursuits.

SECTION -I

1. National Security: Definition and Concept.
2. Elements of National Security: Geography, Mineral Resources, Economic Stability, Military preparedness, Socio-Political Factors, Science and Technology.

SECTION -II

3. Collective Security Arrangements: Security Relevance of UN in the modern context, Role of NATO in the Post Cold War era.

SECTION -III

4. Regional groupings: SAARC, ASEAN and BIMSTEC (Aims and Objectives of the three Alliances to be discussed).

SECTION -IV

5. Non-Aligned Movement and National Security: History, Features, Problems and Achievements.

Books Recommended

1. Abhyankar, M.G., Defence Principles and Organisation, Usha Publications, Longmans, Michigan, 1966.
2. Aditya, Chibber , National Security Doctrine, Lancers International, New Delhi, 1990.
3. Alva, Myrdal , The Game of Disarmament, Pantheon Books, New York ,1982.
4. Bandhyopadhyay, J., India's Foreign Policy Making, Allied Publishers Private Ltd., Mumbai, 1970.
5. Choudhary, Subrata Roy, Military Alliances and Neutrality in War and Peace, Orient Longmans, Bombay, 1966.
6. Hadley Arthur T., The Nation's Safety and Arms Control, Viking Press, University of Michigan, 1961.
7. Hans, J. Margenthau , Politics Among Nations, McGraw-Hill, New York, 1993.
8. Misra, K.P., Studies in Indian Foreign Policy, Vikas Publications, Delhi, 1969.
9. Rana, A.P., The Imperative of Non-Alignment, McMillan Cop. of India, 1976.
10. Shah, A.B., India's Defence and Foreign Policies, Manaktalas , 1966.
11. Singh, Jasbir, Indian Defence Year Book 2012-13, Natraj Publishers, Dehradun, 2001.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Relief features and their representation on Map.
2. Degree of Slopes, Gradients and Inter-visibility of Points.
3. Study of Field Craft with reference to the following:

   (a) Ground
   (b) Cover
   (c) Camouflage
   (d) Observation

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

DEFENCE & STRATEGIC STUDIES

SEMESTER –VI

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper: NATIONAL SECURITY OF INDIA

M. Marks: 70
Time : 3 hours

Objective - This paper covers the various factors related to National Security in India.

SECTION -I

1. India's Security Problems since 1947:
   (a) Geo-political effects of Partition: Boundaries and Frontiers.
   (b) Integration of States: J & K, Junagarh, Hyderabad and Goa.
   (c) An overview of India's Security problems related to Pakistan and China.

SECTION -II

2. Indian Ocean and India's Maritime Security.
3. Nuclear Policy of India: History, Evolution and Policy options.

SECTION -III

4. Internal Dimensions of India's National Security with particular reference to Insurgency, Terrorism and Low Intensity Conflict.
5. Disaster Management in India and the role of Civil Defence.

SECTION -IV

6. Economic Mobilization for National Defence.
7. Planning and Production for National Defence with particular reference to India's Defence Production and DRDO.
8. Higher Defence Organization in India

Books Recommended

1. Barnawal, S.P., Military Year Book, A Guide Publication, New Delhi, 2012.
2. Chopra, Maharaj, K., India the Search for Power: India and the Indian Ocean, Lalwani Publication House, Delhi, 1969.
3. Cohen Stephen, P. , The Indian Army, Oxford University Press, New Delhi,1990.
4. Kaul, Ravi, India's Strategic Spectrum, Chanakya Publishing House, Delhi, 1969.
5. Kavic, L.J., India's Quest for Security, Cambridge University Press, London,1967.
6. Klaus, Knorr, War Potential of the Nation, Greenwood Press, Northwestern University, 1979.
7. Khera, S.S. , India's Defence Problem, Orient Longmans, University of California,1968.
8. Kohli, S.N., Sea Power in the Indian Ocean, Tata McGraw Hill, Delhi, 1978.
9. Misra, R.N., Indian Ocean and India's Security, Mittal Publications, Delhi, 1986.
10. Pathak, K.K., Nuclear Policy of India, Gitanjali Prakashan, Delhi, 1980.
11. Panikkar, K.M.
    (i) Defence Problems of India.
    (ii) India and the Indian Ocean, G.Allen & Unwin, Ltd., 1945.
12. Rao, PVR, Defence Without Drift, Popular Prakashan, Delhi, 1970.
13. Rao, Rama, (i) Self Reliance and Security, Radiant , University of Michigan,1984.
    (ii) Role of Defence Production, Radiant, University of Michigan, 1984.
14. Singh, Bhupinder, Textbook of Defence Studies (Part III Punjabi), B.C. Publishers, Patiala,1983.
15. Singh, Jasbir, Defence Year Book, 2012-13, Natraj Publication, Dehradun, 2001.
16. Singh, Jasjit , Nuclear India, Knowledge World, Delhi, 1998.
17. Singh, Jaswant , Defending Indian Hemisphere , McMillan, Basingstoke, 1998.
18. Thomas, Raju G.C., The Defence of India (A Budgetary Perspectives), McMillan, Delhi, 1970.
19. Subrahmanyam, K.
    (i) Indian Security Perspectives, ABC Publishing House, New Delhi,1982
    (ii) Planning for Defence.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Tactical Formations: Section and Platoon.
2. Application of Fire: Fire Control, Fire Control Orders and Sequence of Fire Control Orders.
3. Military Messages: Verbal and Written.

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER- V

PAPER: HISTORY OF PUNJAB 1849-1966

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	10 Marks
Explanatory Note	:	08 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the impact of the colonial period on the region

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. British Administration: new structure; formation and achievements of Board of Administration
2. British Agrarian Policy; commercialisation of agriculture
3. Developments in Irrigation; transport and communication

UNIT-II:

4. Growth of Modern Education
5. Socio-Religious Reform- main ideas of Namdharis; Singh Sabha; Arya Samaj;Ad Dharam Movement.
6. Political awakening: agitation of 1907; Ghadar Movement

UNIT-III:

7. Growth of Political consciousness: Jallian wala bagh; Gurudwara Reform Movement
8. Circumstance leading to partition.
9. Rehabilitation and resettlement

UNIT –IV:

10. Punjabi Suba Movement and Reorganisation Act 1966
11. Agricultural development: Green Revolution; Land reforms
12. Map : Lahore, Amritsar, Jalandhar, Ludhiana, Lyallpur, Ambala, Kurukshetra, Hissar, Delhi, Jaito, Nankana Sahib, Sargodha, Tarn Taran, Khem Karan,

Reading List:

1. Fauja Singh (ed.) : *History and Culture of the Punjab, Part II*, Publication Bureau, Punjabi University, Patiala, 1987.

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. It would also form the basis for one to two sentence answer questions.

2. Fauja Singh : *Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3. J.S. Grewal : *The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4. Khushwant Singh : *A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi, 1991.
5. Satya, M. Rai : *Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6. P.N. Chopra, B.N. Puri and M.N. Das : *A Social,Cultural & Economic History of India,* Vol. III, Macmillan, Delhi, 1974.
7. K.C. Yadav and S.M. Fogat : *Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991
8. R.S. Johar, and J.S Khanna : *Studies in Punjab Economy,* GNDU, Amritsar, 1983.
9. Monica Das Gupta, T.N. Krishna & Lincon C. Chen : *Women's Health in India, Risk and Vulnerability*, Oxford, OUP, 1998.

HISTORY

SEMESTER-VI

PAPER: WORLD HISTORY 18TH - 20TH CENTURY

INSTRUCTIONS FOR THE PAPER – SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
2. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 5 places on map of 2 marks each and write explanatory note on any four of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: **World History 1761 - 1956**

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the modern period in World history.

Pedagogy: Lectures, library work and discussions.

UNIT-I:

1. The American Revolution; causes and consequences
2. The French Revolution-causes and impact; Continental System of Napoleon
3. Congress of Vienna 1815-motives, provisions, significance

UNIT-II:

4. The Industrial Era-causes of origin, new inventions, impact on society
5. Unification of Italy and Germany
6. New Imperialism 1871-1914

UNIT-III:

7. World War I: Division of Europe into two blocks, causes, Paris Peace Conference
8. Russian Revolution 1917- causes and impact
9. Nationalism and Communism in China- causes of revolution of 1911 and its impact; causes and consequences of revolution of 1949

UNIT–IV:

10. Mejie restoration and modernization in Japan
11. World War II; causes and consequences
12. World Map: Beijing, Berlin, Boston, Cairo, Constantinople, Frankfurt, Geneva, London, Moscow, Nagasaki, Nanking, Paris, Rome, Tokyo, Trafalgar, Vienna, Waterloo.

Suggested Readings

1. Davis, H.A. : *An Outline History of The World,* OUP, 1964, 4th Edition.
2. Garraty John A. & Peter Gay (ed.) : *The University History of the World,* United Kingdom : New Orchard Edition, 1985.
3. Gupta, P.S. : *Europe Ka Itihas,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1996 (Hindi Medium).
4. Hinsley, F.H. (ed.) : *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.
5. Stavrianos, L.S. : *The World Since 1500,* Delhi : Prentice Hall of India, 1965.
6. Ashworth, W. : *A Short History of the International Economy, 1850-1950,* London : Longmans, 1954.
7. Brecher, Michael : *The Foreign Policy System of Israel, Toronto* : Oxford University Press, 1972.
8. Chabod, Fredrico : *History of Italian Fascism,* London : Weidenfeld, 1961.
9. Gupta, P.S. : *Adhunik Paschim Ka Uday,* Hindi Madhyam Karanvaya Nideshalaya, Dilli : Dilli Vishavidhalaya, 1997 (Hindi Medium).
10. Garraty John A. & Peter Gay (ed.) : *The Columbia History of the World,* United Kingdom : New Orchard Edition, 1985.

POLITICAL SCIENCE
SEMESTER - V

COMPARATIVE POLITICAL SYSTEMS (UK AND USA)

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The purpose of this paper is to serve as an introduction to the field of comparative politics. It provides a broad overview of the field of comparative politics and examines some key approaches. The major part of the paper is devoted to understanding and analyzing the origins and working of two political systems, the UK and the USA. The student will not only become familiar with the working of these two political systems but also understand how the concepts of comparative politics can be used to understand real world politics.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit–4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I: Theoretical Framework

(i) Meaning, Nature and Scope of Comparative Government and Politics
(ii) Comparative Method.

Unit-II: U.K.

(i) The British Political System - Salient Features and Conventions.

(ii) Executive
   (a) Monarchy:- Difference b/w King and Crown, Powers of Crown, Nominal and Real position Justification of Monarchy
   (b) Features of Parliamentary/ Cabinet Government
   (c) Prime Minster:- Composition, Powers, Position and Role

   Legislature
   (a) House of Lords:- Composition, Powers, Criticism & Utility
   (b) House of Commons:- Composition, Powers, Mutual relations between House of Lords and House of Commons

(iii) Judiciary
   (a) Organisation of Courts in U.K.
   (b) Rule of Law.

Unit-III : U.S.A.

(i) The Constitutional framework of U.S.

(i) Salient features
(ii) Separation of Powers & Checks & Balances
(iii) Federal System- Meaning, Features, Tendency towards Centralisation and its future.

(ii) Executive

(i) Elections of U.S. President

(ii) Composition, Powers & Position of U.S. President.

Legislature/Congress

(i) House of Representative- Composition, Power, House of Representative is the weakest chamber
(ii) Senate – Composition, Powers, Most Powerful Second Chamber, Mutual relations b/w House of Representative & Senate

Judiciary

(i) Supreme Court - Organisation, Composition, Powers & its Role.

(ii) Power of Judicial review

Unit-IV

(i) Political Parties and Interest/Pressure Groups of U.K- Nature & Role.
(ii) Political Parties and Interest/ Pressure Groups of U.S.A. - Nature & Role.

Books Recommended :

1. Hague and Harrop : *Comparative Government and Politics*, Palgrave, New York, 2001.
2. V.N. Khanna Comp., : *Comparative Study of Government and Politics*, S. Chand and New Delhi 1999.
3. Andrew Heywood : *Politics*, Macmillan Palgrave, New York, 1997.
4. A.C. Kapoor : *Select Constitutions*, S. Chand and Company, New Delhi 1995.
5. Vishnu Bhagwan and Vidya Bhushan : World Constitutions, Sterling Publisher, New Delhi 1993.
6. J.C. Johari : *Major Modern Political Systems*, Vishal Publication, Delhi 1986.
7. J.C. Johari : *Comparative Politics*, Sterling Publishers, New Delhi 1982.
8. K.R. Bombwall Ambala : *Major Contemporary Constitutional Systems*, Modern Publication, Cantt 1978.
9. Mackintosh London, : *The Government and Politics of Britain*, Hutchinson and Comp., 1977.
10. Herman Finer London, : *Theory and Practice of Modern Government*, Theuen and Comp., 1963.

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POLITICAL SCIENCE

SEMESTER-VI

INTERNATIONAL POLITICS : THEORY AND PRACTICE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : This paper provides students with an overview of the broad theories and concepts used to understand international politics. It also examines key issues in contemporary global history from an international politics perspective.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (2) in the question paper.

Unit-I

1. Meaning, Nature and Scope of International Politics.
2. Realist and Idealist approaches to International Politics.

Unit-II

1. National Power : Its Elements and Limitations.
2. Balance of Power - Its critical evaluation.
3. Collective Security –Meaning & Feature, Difference between Balance of Power & Collective Security

Unit-III

1. Bipolar, Unipolar and Multi-Polar World.
2. Nature of Emerging World Order.

Unit-IV

1. Regional Organisations : SAARC and EU.
2. New International Economic Order (NIEO).

Books Recommended :

1. H. Bull, *The Anarchical Society : A Study of Order in World Politics,* London, Macmillan 2002.
2. John Baylis and Steve Smith, *The Globalisation of World Politics,* OUP, Oxford, 2001.
3. A. Roberts, "The UN and International Security"*, Survival*, Vol. 35, No. 1, Spring 1993.
4. A. Hurell, "Collective Security and International Order Revision", *International Relations*, Vol. II, No. 1, April 1992.
5. S.P. Verma, *International System and the Third World,* New Delhi, Vikas, 1988.
6. H.J. Morgenthau, *Politics Among Nations : The Struggle for Power and Peace*, 6th Edn., revised by K.W. Thompson, New York, Alfred Knopf, 1985.
6. S.H. Hoffman (ed.), *Contemporary Theory in International Relations,* Massachusetts, Addison-Wesley, 1979.
8. N.D. Palmer and H. Perkins, *International Relations,* Calcutta Scientific Book Company, 1971.
9. J. Frankel, *The Making of Foreign Policy,* London, Oxford University Press, 1963.
10. E.H. Carr, *Conditions of Peace,* New York, The Macmillan Company, 1944.
11. E.H. Carr, *The Twenty Year Crisis,* London, Macmillan, 1939.

ECONOMICS
SEMESTER - V

ECONOMICS OF DEVELOPMENT

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The primary course objective is to introduce the students to the basic features, determinants, and theories and strategies of development of underdeveloped economies. It also introduces students to the theory of how control and direction of economic activity by a central public authority can be used as an alternative to market by the underdeveloped economies.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Economic Growth and Development- Concept and Measurement. Main Features of an Underdeveloped Economy.
Determinants of Economic Development. Capital Formation:It's Source, Nurkse's Thesis of Disguised Unemployment. Lewis Theory of Unlimited Supply of Labour.

Unit-II

Classical Model of Growth; HarrodDomar Model of EconomicGrowth; One Sector Neo-classical Model of Growth. Solow Model of Growth. *Dualism :* Social and Technological.

Unit-III

Theory of Big Push. Leibenstein's Critical MinimumEffect Thesis. Strategies of Economic Development:Balanced Vs. Unbalanced Growth. Rostow's Theory of Stages of Growth.

Unit-IV

Theory of Planning in Developing Countries:Need, Objectives, Strategies and Problems of Planning. Price Mechanism and Planning. Investment Criteria. Choice of Technique. Emerging Strategies: Export Promotion and Import Substitution Strategy.

Books Recommended :

1 Higgins, Benjamin (1994) : Economic Development : Principles, Problems and Policies, Norton Publisher, New York.

2 Meier, G.M. (1995) : Leading Issues in Economic Development, Oxford University Press, New York.

3 Meier, G. M. and Rauch, James E. (2006) : Leading Issues in Economic Development, Eighth Edition, Oxford University Press

4 Nurkse, R. (1992) : Problems of Capital Formation in Underdeveloped Countries, Oxford University, Press

5 Rostow, W. W. (1960) : Stages of Economic Growth, Cambridge University Press.

6 Thirlwal, A P (2011) : Economics of Development, Palgrave Macmillan Publishers, UK.

Supplementary Readings:

Todaro, Michael. P (1989) : Economic Development in the Third World, Orient Longman, London.PalgraveMacMillan,UK

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yECONOMICS
SEMESTER- VI

INDIAN ECONOMY

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The objective of the paper is to familiarize the students with the features and characteristics of the Indian Economy. It also includes performance and problems of Industrial development, Indian tax structure, external trade and balance of payments, and objectives, strategy and performance of Indian planning. The course aims to develop analytical understanding of the students by exposing them to the basic issues of the Indian economy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Indian Economy on the Eve of Independence. Features and Characteristics of Indian Economy since Independence: Agriculture: Importance of Agriculture; Causes of Backwardness and Low productivity; New Agricultural Strategy, Green Revolution and Critical Evaluation with Special Reference to Environmental Degradation; Land Reforms: Need, Implementation and Evaluation.

Unit-II

Industry: Problems of Industrial Development; Public and Private Sector; Industrial Policy since 1956 with Special Emphasis on Recent Trends of Liberalization; Role and Problems of Small and Large Scale Industries in the era of Globlisation. Major Large Scale Industries: Iron& Steel, Cotton Textile, Petroleum & I.T.

Unit-III

Principal Features of Indian Tax Structure. Division of Financial Recourses between Centre and the States. Direction and Composition of Exports and Imports and Changes there in since Economic Reforms; Balance of Payment problems; Critical Evaluation of the Role of MNCs in India.

Unit-IV

Planning: Importance, Objectives, Strategy and Achievements of Indian Planning; Critical Evaluation of the Latest Five Year Plan (Plan wise details to be excluded); Major Indian Economic Problems: Inflation, Unemployment and Poverty; Introduction to Consumer Education and Consumer Protection (elementary ideas).

Books Recommended :

1 Dhar, P.K (Latest Edition) : Indian Economy, Kalyani Publishers, Ludhiana.

2 Gill, K : Evolution of Indian Economy, NCERT, New Delhi.

3 Aggarwal, A N (Latest Edition). Indian Economy, Wiley Eastern Ltd.

4 Datt, Rudder & Sundram, KPM : Indian Economy, S. Chand & Co. (Latest Edition)

5 Soni .R. N. : Leading Issues in Agriculture Economics , Sohan Lal Nagin Chand & Sons.

6 Ghosh. A (Trans. Avtar Narinder Singh) : Bhartiy Arth Vivshta (Punjabi University, Patiala).

7 Singh, Chander Gupt : Bharti Arth Shastar (PunjabiUniversity, Patiala).

8 Mishra, S.K. & Puri, V.K. (English & Hindi Medium) : Indian Economy, Himalaya Publishing House, Mumbai (Latest Edition).

9 Tondon, B.B. & Tondon, K.K : Indian Economy, Tata McGraw Hills Pub. Co., New Delhi(1998).

Supplementary Readings:

1. Government of India: Five Year Plan (latest).
2. Government of India: Economic Survey (latest).

SOCIOLOGY
SEMESTER - V

SOCIETY IN INDIA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper–setter must put note (iii) in the question paper.

Objective

The objective of this paper is to present a comprehensive view of Indian Society. The students are exposed to the tribal, rural and urban societies and are presented with the social structure and social institutions to understand these segments of Indian Society. Through this paper, the students are also introduced to the problems of the underprivileged in Indian Society.

Course Content

Unit-I

Tribal Society: Meaning, Characteristics; Classification of tribes.

Institutional Features: Family, Marriage, Economy and Changing trends.

Unit-II

Rural Society: Meaning; Characteristics.

Institutional Features : Family, Marriage; Economy and Polity (Village Panchayat); Changing Trends.

Unit-III

Urban Society : Meaning and characteristics, Concepts of urbanization and urbanism;

Institutional features; Urban family - features and changes; Economy; Voluntary associations; Slums.

Unit-IV

Under-privileged Sections—Women, Physically Disabled, Scheduled Castes and Scheduled Tribes: Measures to improve their status.

Essential Readings:

1. Bose, N.K. (1980) : *Tribal Life in India,* National Book Trust.
2. Desai, A.R. (1969) : *Rural Sociology in India,* Bombay: Popular Prakashan.
3. Desai, A.R. (2006) : *Social Background of Indian Nationalism, Mumbai Popular Prakashan*
4. Lal, S.N. & Nahar, U.R. (1992) : *Rural Social Transformations,* Jaipur : Rawat.
5. Madan & Majumdar (1989) : *An Introduction to Social Anthropology,* New Delhi: National Publications (Hindi & English).
6. Madhurima (2009) : *Readings in Sociology-Part-3*, Jalandhar: New Academic Publishing House [All Mediums].
7. Mandelbaum, G. (1970) : *Society in India,* Bombay: Popular Prakashan (Hindi & English).
8. Sen, Pujan Kumar,(2012) : *Indian Society:Continuity and Change Pearson, New Delhi*
7. Shah, Ghanshyam (ed.) (2002) : *Caste & Democratic Politics in India,* New Delhi: Permanent Black.
8. Sharma, R.K. (2004) : *Indian Society: Institutions & Change,* New Delhi: Atlantic Publications.
9. Singh, K.S. (2002) : *The Scheduled Castes*, New Delhi: Oxford University Press.

Further Readings:

1. Ahuja, Ram (2015) : *Social Problems in India,* Jaipur, Rawat Publications.
2. Mahajan, Sanjeev (2004) : *Gramin Samajshastra,* New Delhi: Arjun Publishing House.
3. Punit, A.E. (1978) : *Social Systems in Rural India,* New Delhi: Sterling Publications.
4 Rao, M.S., Chandrashekar Bhatt, L.N. Kelkar (eds.) (1991) : *A Reader in Urban Sociology,* New Delhi: Orient Longman.
5. Shah, D.S. & Sisodia, Y.S. (ed.) (2004) : *Tribal Issues in India,* Jaipur: Rawat Publications.
6. Singh, K. Suresh (2001) : *The Scheduled Tribes,* New Delhi: Oxford University Press.
7. Vardhan,Ranjay, (2008) : Single Women, A Study of Spinsters, Delhi, Indian Publishers Distributors

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SOCIOLOGY
SEMESTER -VI

DISORGANISATION AND EMERGING PROBLEMS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective

This paper exposes the students to social disorganization, its levels and current problems. It helps students to understand social realities and also equips them to utilize their knowledge in various theoretical and practical exercises.

Course Content

Unit-I

Social Disorganization : Concepts and Levels –Personal, Familial and Societal.

Unit-II

Personal Problems: Problems of Adolescence; Alcoholism; Drug Addiction, Suicide.

Unit-III

Familial Problems: Domestic Violence, Violence against Children; Female Headed Households; Problems of Working Women.

Unit-IV

Societal Problems : Poverty; Corruption; Problems of the Aged, Cyber Crime

Essential Readings:

1. *Ahuja, Ram (2015)* : *Social Problems in India, Jaipur: Rawat Publications.*
2. *Elliot, H.V. & Merill, F. (1950)* : *Social Disorganization, New York: Harper Brothers.*
3. *Gill, S.S. (1998)* : *Pathology of Corruption, New Delhi: Harper Collins.*
4. *Macionis, John J. (2005)* : *Social Problems, New York: Prentice Hall.*
5. *Madan, G.R. (1978)* : *Indian Social Problems, New Delhi: Allied Publishers.*
6. *Mitra, S.M. (2005)* : *Indian Problems, New Delhi: Eastern Book Corporation.*
7. *Mohan, J. & Sehgal, M. (2004)* : *Youth & Drugs, New Delhi: Abhijit Publications.*
8. *Narasaiah, M.L. (2005)* : *Poverty & Environment, New Delhi: Discovery Publishing House.*
9. *Rai, Bhartiya (2004)* : *Samajik Samasyaein, New Delhi: Arjun Publishing House.*
10. *Shankar Rao,(2015)* : *Indian Social Problems: A Sociological Perspective,S. Chand & Company, New Delhi*
11. *Vardhan, Ranjay (1999)* : *Female Headed Households in Patriarchal Society: A Sociological Study, Delhi: Indian Publishers Distributors.*

Further Readings:

1. *Chakraborty, Rajgopal Dhar (2004)* : *The Greying of India : Population, Ageing in the Context of Asia, New Delhi : Sage.*
2. *Mahajan, Amarjit & Madhurima (1994)* : *Family Violence and Abuse in India, New Delhi : Deep and Deep Publications.*
3. *Natrajan, P.S. (2003)* : *"A Theory of Indian Communalism" in Think India Quarterly, Vol. 6, No. 3, July-Sept.*
4. *Pavrala, Vinod (1996)* : *Interpreting Corruption, New Delhi : Sage.*
5. *Phandaris, Urmila (1989)* : *Ethnicity and Nation Building in South Asia, New Delhi: Sage.*
6. *Shankar Rao, C.N. (2007)* : *Indian Society, Delhi: S. Chand and Company.*
7. *Bansal,S.K.(2013)* : *Cyber Crime, New Delhi,APJ Publications*
8. *Pendse Neelkanth Ganjan, Sarkar Sukanta,(2015)* : *Social Problems in India, Delhi,Kalpur Publications*

PUBLIC ADMINISTRATION
SEMESTER -V

PAPER: LOCAL GOVERNMENT (WITH SPECIAL REFERENCE TO PUNJAB

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of the concept, significance and evolution of local government in India. It would also acquaint them with the pattern and working of divisional and district administration. The key areas covered are the types, structure, functions, finances and personnel of rural and urban local governments. It would also include the concept of state control over local bodies, provincialisation and rural-urban relationship with reference to Punjab.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and Significance of Local Government
Evolution of Local Government since 1882
Role of Deputy Commissioner; Divisional Commissioner
Rural and Urban Development: Dimensions and Issues

Unit-II

The 73rd Constitutional Amendment – Provisions and its Impact
Gram Sabha – Composition Functions and Powers
Panchayati Raj Institutions in Punjab – Structure, Functions, Sources of Finances and Personnel

Unit-III

The 74th Constitutional Amendment – Provisions and its Impact
Urban Local Bodies – Structure, Functions and Sources of Finance
Mayor – Position, Functions and Powers
Municipal Commissioner – Position, Functions and Powers

Unit-IV

State Control over Local Bodies
State Finance Commission: Composition, Functions and Role
Provincialisation of Municipal Services
Rural- Urban Relationship – Challenges and Remedies

Essential Readings:

Goel, S.L. & Ramesh, S. (2003). *Panchayati Raj in India* .New Delhi: Deep & Deep Publishers.
Hochgesang, T.W. (1994). Rural Local Self -Government in India.Hyderabad: NIRD.
Maheshwari, S.R. (2002). *Local Government in India*. Agra : L.N. Aggawal.
Puri, K.K. and.Barara, G.S.(2008) *Local Government in India*. Jalandhar: Bharat Prakashan.
Sahib, S & Singh, S. (2000). *Local Government in India*. Jalandhar: New Academic Publishers.

Further Readings

Government of India, Second Administrative Reforms Commission, 6th Report – Local Governance

Khanna, B.S. (1991). *Rural Developments in South Asia.*New Delhi: Deep & Deep Publications.

Singh, H.B. (2003). *Revitalised Urban Administration in India*. Delhi: Kalpaz Publishers.

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PUBLIC ADMINISTRATION

SEMESTER - VI

PAPER: DEVELOPMENT ADMINISTRATION (WITH SPECIAL REFERENCE TO PUNJAB)

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the concept & significance of development administration, features of developed & developing countries, planning machinery at Centre & State level and the emergence of India as a welfare state. The paper would also give an understanding about the concept, forms, role and problems of public enterprises as well as the working of select Union Ministries and agencies in Welfare and Development Administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Development: Meaning, Features and Aspects
Development Administration: Meaning, Nature, Scope and Significance
Features of Developed and Developing Countries

Unit-II

India as a Welfare State.
Planning: Meaning, Objectives and Significance
Planning Machinery in India at National, State and Local

Unit-III

Public Enterprises: Concept and Forms
Role of Public Enterprises in Economic Development
Managerial Problems of Public Enterprises
Public Enterprise Reforms since 1991; Concept of Privatisation

Unit-IV

Administration of Rural Development at the local level
Education and Development; Role of State Administration in Primary and Secondary Education
Health and Development; Role of the Ministry of Health and Family Welfare
Role of Voluntary Sector in Development

Essential Readings

Bava, N.J. (1997). *Non-Governmental Organisations in Development: Theory and Practice*.Ed. New Delhi: Kanishka

Dhar, P.K. (2007). *Indian Economy-Its Growing Dimensions*.New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). Development Administration: From Underdevelopment to Sustainable Development. London: Macmillan.

Mathur, B.P. (1999). *Public Enterprise Management* .Macmillan India: New Delhi.

Sapru, R.K. (2003). 2nd Ed. *Development Administration.* New Delhi: Sterling Publishers.

Singh, S. & Singh S. (2010). *Public Administration: Development and Local Administration*. Jalandhar: New Academic Publishers.

Website of Ministry of Health and Family Welfare: mohfw.gov.in/

Website of Planning Commission: planningcommission.nic.in/data/ngo/npvol07.pdf

Further Readings

Goel, S.L. (2003). *Advanced Public Administration*. New Delhi: Deep & Deep Publications.

Jain, R.B. (2002). *Public Administration in India – 21st Century Challenges for Good Governance.* Delhi: Deep & Deep Publications Pvt. Ltd.

Parikh, S. & Radhakrishna, R. (2002). *Indian Development Report* .Indira Gandhi Institute of Development. New Delhi: Oxford University Press.

Rao, Vasudeva. B.S. (2007). *Rural Development Strategies & Role of Institutions*; *Issue Innovations and Initiatives.* Ambala: The Associated Publishers.

Rattan,V.(1997). *Women and Child Development Programme Administration.* New Delhi: S. Chand.

Srivastava, S.P. (1998). *The Development Debate: Critical Perspectives.* Jaipur & New Delhi: Rawat Publications.

PHILOSOPHY

SEMESTER – V

PAPER : INDIAN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :
This paper discusses the main epistemological and metaphysical issues as discussed in the various Indian Philosophical Systems.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

- There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.

- For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit–I

- Salient features of Indian Epistemology and Metaphysics.
- Concept of Prama and Pramana according to Nyaya
  - i) Pratyaksa
  - ii) Anumana
  - iii) Sabda
  - iv) Upamana
  - v) Arthapatti
  - vi) Anuplabdhi

Unit–II

- Materialism (Swabhava vada) of Charvakas.
- Anekantavada of Jainism.
- Aryasatyas, Pratityasamutpada of Buddhism.

Unit–III

- Concept of Self and Consciousness with special reference to Mandukya Upanishads.
- Advaita Vedanta : Sankara on Brahman and Maya.

Unit - IV

- Samkhya. : Theory of Causation. (Satkaryavada)
- Vaisesika : Nature and kinds of Padartha (Categories)
- Sikhism : Nature of Ultimate Reality, Mand and the World.

Essential Readings:

Chatterjee, S.C. & Datta, D.M. (1993), An Introduction to Indian Philosophy, Calcutta University, Calcutta University

Hiriyanna, M. (1999), Outlines of Indian Philosophy, London (Allen and Unwin, London, 1999) (Hindi Translation Available)

Tarka (1992) Samgraha of Annambhatta (Poona:Bhandarkar Oriental Research Institute).

Suggested Readings:

Ananikana (1991), A Nyaya Manual, Ed. Sri. Krishna Sarma, Chennai : Adyar Library and Research

Chatterjee, S.C. (1995), The Nyaya Theory of Knowledge , Calcutta :University of Calcutta

Panchapagesha Sastri (1999), The Philosophy of Aesthetic Pleasure (Annamalai University)

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PHILOSOPHY

SEMESTER – VI

PAPER : WESTERN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives:

This paper aims at exposing the students to main epistemological and metaphysical theories and problems of western philosophy. It also deals with basic themes of existentialism, logical positivism and analytical philosophy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I

- Nature of Philosophy with special reference to Metaphysics and Epistemology (introductory).
- Materialism : Mechanical and Dialectical.
- Idealism : Objective (Plato), Subjective (Berkeley).

Unit-II

- Nature of Knowledge : Knowing subject, Act of knowing and object of Knowledge.
- Theories of Truth : Coherence, Correspondence and Pragmatic

Unit-III

- Theories of Knowledge :

  Rationalism.

  Empiricism.

  Transcendentalism of Kant.

Unit-IV

- Universal and Particulars : Concept of Being (Parmenides) and Becoming (Heraclites).
- Substance (Spinoza) Causality (Hume).
- Existentialism : Being in itself; Being for itself; Choice and Freedom.

Essential Readings :

Ewing, A.C., (1999), Fundamental Questions of Philosophy ,London : Routledge & Kegan Paul

Titus, H.H. (1999) Living Issues in Philosophy, New Delhi : Eurasia Pub. House, 4th ed., Prentice Hall Pub.

Macquire, John (1972), Existentialism, , New York : Philosophical Library

Suggested Readings :

Ayer, A.J.(2002), Twentieth Century Philosophy, Harmondsworth, Penguin Books

Ayer, A.J.(1969) Language, Truth and Logic, Dover Publications, Soft Cover ISBN 0486200108

Korner, Stephen (2002) Fundamental Questions of Philosophy (Penguin), Harmondsworth

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PSYCHOLOGY
SEMESTER - V

Objectives :

(I) The course will enable the students to get an introductory knowledge about Clinical Psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: CLINICAL PSYCHOLOGY

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be Compulsory question. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Nature and Criteria of abnormality, *Viewpoints Regarding Abnormality:* Historical, Psychodynamic, Behavioural, Cognitive, Humanistic and Interpersonal;

UNIT-II : *Causes of Abnormal Behaviour:* Biological, Psychological and Sociocultural Causes.

UNIT-III : *Stress:* Concept of Stress; Types of Stressors; Etiology of Stress; Coping Strategies: Problem Focussed and Emotion Focussed, Effects of Stress.

UNIT-IV : *Significance of Statistics :* Mean, Standard Deviation, Correlation. Significance of Difference Between Means (Correlated and Uncorrelated).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. The use of Biofeedback.
2. Presumptive Stressful Life Event Scale.
3. Adjustment Inventory.
4. Mental Health Inventory.
5. Sentence Completion Test.
6. Word Association Test.

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003).*Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) . *Abnormal Psychology,* New York : John Wiley and Sons.

3. Feldman, R.S. (2014).*Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

4. Garrett, H. E. (1966) . *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons.

5. Guilford, J.P., and Fruchter, B. (1981) . *Fundamental Statistics in Psychology and Education.* Singapore: McGraw Hill.

6. Sarason, B.R. & Sarason, I.G. *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_Prentice Hall of India.

7. Singh, A.K.(1986).*Tests, measurements and research methods in behavioural sciences.*Tata McGraw Hill.

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PSYCHOLOGY
SEMESTER - VI

Objectives :

(I) This course will enable the students to get an introductory knowledge about Clinical psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: BEHAVIOURAL DISORDERS

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :
The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry14 marks and shall be Compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Anxiety Based Disorders viz. Phobia; OCD; Panic; Generalized Anxiety Disorder. Conversion Disorders, Dissociative Disorders : Types, Symptoms and Etiology.

UNIT-II : *Mood Disorders :* Types, Symptoms and Etiology.

UNIT-III : *Schizophrenia Types :* Symptoms and Etiology.

UNIT-IV : *Psychotherapies :* Psychodynamic Therapy, Behaviour Therapy, Cognitive- Behaviour Therapy, Humanistic Therapy.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. Clinical Interview.
2. TAT.
3. Depression Inventory (Beck).
4. State Trait Anxiety Inventory
5. Self Efficacy
6. Aggression Scale

Books Recommended:

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003) : *Abnormal Psychology and Modern Life,* New York : Pearson Education.
2. Davison, G.C. and Neale, J.M. (1998) : *Abnormal Psychology,* New York : John Wiley and Sons.
3. Garrett, H. E. (1966) : *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons

Reference Books

1. Feldman, R.S. (2014) : *Understanding Psychology,* New Delhi : Tata McGraw Hill.2.
2. Guilford, J.P. and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education* Singapore: McGraw Hill.
3. Sarason, B.R. & Sarason, I.G. : *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_ Prentice Hall of India.

GEOGRAPHY
SEMESTER-V

Paper-IX: WORLD REGIONAL GEOGRAPHY- I

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:

To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:

Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to Regional Groupings (European Union, North Atlantic Treaty Organization, North American Free Trade Agreement and Commonwealth of Independent States).

UNIT-I

(i) Anglo America (20 lectures)

UNIT-II

(ii) Latin America (20 lectures)

UNIT-III

(iii) Europe (20 lectures)

UNIT-IV

(iv) Russia & Commonwealth of Independent States (30 lectures)

(v) Oceania

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words each. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 Marks) and (iii) attendance (2marks).

7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 7 in the question paper.

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective*. Prentis Hall, New Jersy, 1995.
2. Blij, Harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cairns, G. O. et. al. : *Australia. Macmillan Co.* New York, 1962.
4. Coysh, A. W. and M. E. Tomlinson : *The Southern Continents.* University Tutorial Press, London, 1980.
5. English, Paul Ward & James, A.Miller : *World Regional Geography: A Question of Place, John Wiley*, New York, 1989.
6. Gilbert, Alan : *Latin American Development: A Geographical Perspective.* Hanswoodsworth Penguin, Middlesex, London, 1974.
7. Gottmann, Jean : *A Geography of Europe. Harrape & Co*. London, 1969.
8. Gregory, J. S. ed. : *The Geography of USSR*. Novosti Press Agency, Moscow, 1985.
9. Hudson, F. S. : *North America. Mc. Donald & Evans*, Fly Mouth, 1975.
10. Jackson, Richard H. & Lloyd E.Hudman : *World Regional Geography: Issues for Today, John Wiley*, New York, 1991.
11. Kromm, D. E. : *World Regional Geography, Saunders Publishing*, New York, 1980.
12. Malmstorm, V. H. Englewood Cliffs : *Geography of Europe: A Regional Analysis*. Prentice Hall, New York, 1991.
13. Patterson, J. H. : *North America. Oxford University Press,* New York, 1995.
14. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando, 1998.

Further Readings:

1. Don R. Hoy (Ed.) 1980. : *Essentials of Geography and Development,* Macmillan, New York,
2. Hussain, Majid : *World Regional Geography, Rawat Publications*, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the Wold, Kalyani Publishers,* Ludhiana, 2009.
4. Tikkha, R. N., Bali, P.K. and Sekhon, M. S. : *World Regional Geography,* New Academic Publishers, 2007.
5. Singh, Malkit : *World Regional Geography,* Rasmeet Prakashan, Jalandhar, 2009.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents.Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - X: MAP PROJECTIONS

Max. Marks: 30
Time: 3 hours

Distribution of Marks:

(i) Written paper of three hours covering entire syllabus shall be held for students of USOL. For others it shall be at respective colleges. 20 marks

(ii) Practical Record relating to Map Projections and Viva voce on Practical Record relating to Map Projections. 10 marks

Objective:

- To provide an analytical understanding of use of common map projections.

Course Content:

Unit- I

Map Projections:
General introduction , classification of projections, general principles of identification and choice of projections.
(6 lectures)

Unit- II

Construction, properties and limitations of following projections

Cylindrical : Simple, Equal area, Mercator's (4 lectures, 6 lab. sessions)

Unit- III

Construction, properties and limitations of following projections

Conical : One Standard Parallel, Two Standard Parallel , Bonne's, Polyconic and International
(4 lectures, 6 lab. sessions)

Unit- IV

Construction, properties and limitations of following projections

Zenithals : Gnomonic, Stereographic, Orthographic, Equidistant and Equal Area (Polar cases only)
Conventional : Sinusoidal and Molleweide's (normal cases only) (7 lectures, 7 lab. sessions)

Note:

1. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of geography in the college.

3. Evaluation of Practical Record and Field Report will be done at the time of viva-voce examination.A minimum of 20 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in practical record and field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Practical Record.

6. A fresh practical note book shall be prepared by failed /improvement candidates.

7 For Practical classes, the number of students in one group shall not exceed fifteen.

8. There will be 3 hours of teaching per week for this paper.

9. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 9 in the question paper.

Books Recommended

Essential Readings

1. Kellaway, George P. : *Map Projections*, Methuen and Co., London. Year 1956
2. Steers, J.A. : *Map Projections*, University of London Press, London,1957 Year .
3. Garnett, William : *Map Projections,* George Phillip and Sons, London.

Essential Readings

3. Singh, R.L & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

Basic fundamentals of map projections are introduced by demonstration of construction exercises in class.

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GEOGRAPHY
SEMESTER-VI

Paper-XI: WORLD REGIONAL GEOGRAPHY- II

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:
To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:
Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to regional groupings (South Asian Association of Regional Cooperation, Association of South East Asian Nations, Organization of Petroleum Exporting Countries and Organization of African Unity).

UNIT-I

(i) East Asia (20 lectures)

UNIT-II

(ii) South East Asia (iii) South Asia. (30 lectures)

UNIT-III

(iv) Middle East and North Africa (20 lectures)

UNIT-IV

(v) Africa South of Sahara (20 lectures)

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 marks) and (iii) attendance (2 marks).
7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. (**The paper setter must put note 7 in the question paper.)**

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective.* Prentis Hall,New Jersy, 1995.
2. Blij, harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cressy, G. B. : *Asia's Land and People*. McGraw Hill, London, 1963.
4. Dobby, E. H. G. : *South East Asia*. University of London Press, London, 1980.
5. English, Paul Ward & James, A. : *World Regional Geography: A Question of Place*,John Miller Wiley, New York, 1989.
6. Fisher, W. B. : *The Middle East.* Methuen, London, 1978.
7. Ginsburg, Norton. Ed. : *The Pattern of Asia*. Englewood Cliffs, New Jersey, 1958.
8. Hance, William, A. : *The Geography of Modern Africa*. Columbia University Press, London, 1965.
9. Jackson, Richard H. & Lloyd E. Hudman : *World Regional Geography: Issues for Today*, John Wiley, New York, 1991.
10. Kromm, D. E. : *World Regional Geography,* Saunders Publishing, New York, 1980.
11. Prichard, J.M. : *Africa,* Longman, London, 1981.
12. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando,1998.
13. Spencer, J. E. and L. T. William : *Asia, East by South: A Cultural Geography.* John Willey & Sons, New York, 1971.
14. Spate, O. H. K. and A. T. A. Learmonth : *India and Pakistan: A General and Regional Geography*,Methuen, London, 1967.

Further Readings:

1. Don R. Hoy (Ed.) : *Essentials of Geography and Development*, Macmillan, New York, 1980.
2. Hussain, Majid : *World Regional Geography*, Rawat Publications, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the World*, Kalyani Publishers, Ludhiana, 2009.
4. Singh, Malkit : *World Regional Geography*, Rasmeet Prakashan, Jalandhar, 2009.
5. Tikkha, R. N., Bali, P.K. and Sekhon, M. S : *World Regional Geography*, New Academic Publishers, 2007.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents. Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - XII: FIELD SURVEY BASED REPORT

Max. Marks: 30
Time : 3 hours

- To acquaint the students with the importance of field work as one of the methodologies in geography.
- To familiarise the students about pre-field work and post-field work i.e. data processing and analysis and writing of field work report.

Distribution of Marks

i) Viva-Voce : 10 Marks ii) Field Report: 20 Marks

Fieldwork (Theory):

(i) Role of fieldwork in Geography.

(ii) Scale of study and fieldwork methodology.

(iii) Methods of collecting primary data : Observation, Interview and Questionnaire and Measurement.

(iv) Methods of field study of: a farm, a village, and a town. (20 lectures)

Note: The teachers should familiarize the students in the class before collection of primary data for preparation of field work.

Fieldwork (Practical): A field report of minimum 20 pages will be prepared based on primary data on problems such as (a) local market survey, (b) service area of school/ or hospital; (c) traffic flow, and (d) socio-economic characteristics of student's village/ mohalla/ sector.

(25 lab. Sessions)

Note:

1. There will be no written paper for USOL and college students.
2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher the Geography in the college.
3. Evaluation of Field Report will be done at the time of viva-voce examination. There will be no laboratory exercise at that time.
4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Field Report with the University School of Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Field Report will be evaluated by two examiners (including at least one from the USOL).
5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Field Report. .
6. All students are required to submit a practical record based on theoretical component listed as fieldwork (theory)
7. A fresh field report shall be prepared by failed /improvement candidates.
8. For Practical classes, the number of students in one group shall not exceed fifteen.
9. There will be 3 hours of teaching per week for this paper.
10. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 10 in the question paper.

Books Recommended

Essential Readings

1. Jones, P.A. : *Fieldwork in Geography*, Longman, London, 1968.
2. Archer, J.E. & Dalton, T.H. : *Fieldwork in Geography,* E.T. Bastford Ltd., London, 1968.
3. Singh, Gopal : *Mapwork and Practical Geography*, Surjeet Book Depot, Delhi,1993.

Further Readings

1. Hudson, F.S. : *A Geography of Settlements*, MacDonald, London, 1970.
2. Singh, L.R. & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

The students need to be trained to collect primary data, its processing and cartographic representation through taking up field exercises.

GANDHIAN STUDIES
SEMESTER-V
ECONOMIC THOUGHT OF MAHATMA GANDHI

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the Economic Thought of Mahatma Gandhi.

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:
1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Bases of Gandhian Economic Thought

1. Indian Influences on Gandhi's Economic Thought
2. Western Influences on Gandhi's Economic Thought
3. Fundamental Principles of Gandhi's Economic Thought

UNIT-II- Critique of Mechanization

4. Gandhi's Views on Machinery
5. Labour-Capital Relations
6. Theory of Trusteeship
7. Gandhi & Role of Corporate Social Resposibility

UNIT-III-Essence of Gandhian Economy

8. Doctrine of Swadeshi
9. Bread Labour
10. Concept of Wantlessness
11. Concept of Sarvodaya

UNIT-IV-Gandhi and Contemporary Idealogies

12. Gandhi's Views on Communism
13. Gandhi on Capitalism
14. Gandhian Socialism
15. Relevance of Gandhi's views in Globalized World

ESSENTIAL READINGS:

1. Biswas, S.C.(ed.) : *Gandhi: Theory and Practice, Social Impact and Contemporary Relevance* (Shimla: Indian Institute of Advanced Studies), 1960, pp.183-247.

2. Dasgupta, Ajit, K. : *Gandhi's Economic Thought* (London: Routledge), 1996.

3. Diwan, Romesh & Lutz : *Essays in Gandhian Economics* (Delhi: Gandhi Peace Foundation),1985.

4. Kumarappa, J.C. : *Gandhian Economic Thought* (Varanasi: Sarva Seva Sangh), 1962.

5. Mehta, Usha : *The Multi-Dimensional Thought of Mahatma Gandhi* (Mumbai : Mani Bhavan Gandhi Sangrahalaya), 2008.

6. Sethi, J.D. : *International Economic Disorder, A Theory of Economic Darwinism & A Gandhian Solution*, (Shimla: Indian Institute of Advanced Studies), 1996.

FURTHER READINGS

1. Dantwala,M.L. : *Gandhism Reconsidered* (Bombay: Padma Publications Publications), 1945.

2. Gandhi, M.K. : *Hind Swaraj or Indian Home Rule* (Ahmedabad: Navajivan Publishing House), 1982 edition.

3. Mehta, J. K. : *A Philosophical Interpretation of Economics* (London: Oxford University Press), 1956.

4. Schumacher, E.F. : *Small is Beautiful* (London: Abacus), 1989.

5. Sethi, J.D. : *Gandhi Today* (New Delhi: Vikas Publishing House), 1976.

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GANDHIAN STUDIES

SEMESTER-VI

Peace and Conflict Resolution

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the understanding of the concept of Peace and different methods of Conflict Resolution

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:

1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Understanding Peace

1. Meaning & basic components of Peace
2. Approaches to Peace
3. Obstacles to Peace
4. Gandhi's approach to Peace

UNIT-II- Peace Movements

1. Social Movements-Environment, Women, Dalit
2. NGOs
3. Civil Right movements in United States

UNIT-III-Understanding Conflict

1. Concept of Conflict
2. Causes of Conflicts
3. Types of Conflicts

UNIT-IV- Methods and Agencies of Conflict Resolution

1. Pacific methods of Conflict Resolution
2. Peace making
3. U.N. Peace Keeping & Peace Building

ESSENTIAL READINGS:

1. Barash, David, P. : *Approaches to Peace: A Reader in Peace Studies* (New York: Oxford University Press), 2000.
2. Brock, Peter : *Mahatma Gandhi & Mother India, Essay on Gandhi's Non-Violence & Nationalism* (Ahmedabad: Navajivan Publishing House), 1983.
3. Brock, Peter : *Twentieth Century Pacifism* (New York: Van-Nostrand Reinhold Company), 1970.
4. Galtung, Johan : *Peace by Peaceful Means* (New Delhi: Sage Publications), 1996.
5. Gultung, Johan : *The Struggle for Peace* (Ahmedabad: Peace Research Centre, Gujarat Vidyapeeth), 1984.
6. Melasuo, Tuomo (ed.) : *National Movements and World Peace* (U.S.A.: Avebury-Aldershot Brook),
7. Misra, R.P. : *Gandhian Model of Development and World Peace* (New Delhi: Concept Publishers), 1988.
8. Murty, K. S : *Quest for Peace* (Delhi: Ajanta), 1986.
9.. Murty, K. S. and Boughet, A.C. : *Studies in the Problems of Peace* (Bombay: Asia Publishers), 1960.
10. Peter, Wallen Steen (ed.) : *Peace Research: Achievements and Challenges* (London: West View), 1988.
11. Rennie, Linda and Preagar, Forcey (eds.) : *Peace: Meanings, Politics and Strategies* (London: West View),1986.
12. Sethi, J. D. : *Gandhian Critique of Western Peace Movement* (Delhi: Chanakya), 1989.
13. Sharp, Gene : *Politics of Non-Violent Action* (Boston: Sergent Publications), 1973.
14. Bondurant, J.V. : *Conquest of Violence* (Bombay: *O.U.P*), 1959.
15. Burton, J.W. : *Global Conflict* (London: Wheatsheef),1984.
16. Burton, John (ed.) : *Conflict Resolution and Preventive Human Needs Theory* (New York: St. Martin Press), 1990.
17. Chernyak, Yefim : *Ambient Conflicts* (Delhi: Progress Press), 1987.
18. Conlon, D.E. : "The Mediation-Intervention, Discussion-Towards an Integrated Perspective". *Negotiation Journal*, Vol. 4, No.2 of 1988, pp. 143-148.
19. Galtung, Johan : "Institutionalized Conflict Resolution-A Theoretical Paradigm*" Journal of Peace Research*, 1965, pp 348-395
20. Khanna, D.D. & Kueck Gert W. (eds.) : *Conflict Resolution, Human Rights and Democracy* (New Delhi: Shipra Publications), 2003
21. Kriesberg, Louis : *Social Conflicts* (Englewood Cliffs: Prentice Hall), 1982.
22. Kulkarni, V.B. : *Conflict in Indian Society* (Bombay: Bhartiya Vidya Bhavan), 1987
23. Shridharani, K.L. : *War Without Violence* (Bombay: Bhartiya Vidya Bhavan),1962.
24. Thakur, Ramesh : *International Conflict Resolution* (Bombay: West View),1998.
25. Weber, Thomas : *Conflict Resolution & Gandhian Ethics* (New Delhi: Gandhi Peace Foundation), 1991.

FURTHER READINGS:

1.	Danesh, H.B.	:	"Towards on Integrative Theory of Peace Education", *Journal of Peace Education*, Vol. 3, No.1, 2006.
2.	Elsie Boulding	:	"Peace Culture" in *Encyclopedia of Violence, Peace and Conflict* (San Diego: Academic Press), 1999.
3.	Kant , Immaunel	:	*Perpetual Peace: A Philosophical Essay* (London: Swan Sunne), 1902.
4.	UNESCO	:	*From a Culture of Violence to a Culture of Peace* (Paris: UNESCO), 1996.
5.	Azar, E.E. & Buitor J.W. (ed.)	:	*International Conflict Resolution: Theory & Practice (Brighton: Wheatsheef), 1986.*
6.	Burton, J.W.	:	*Conflict Resolution & Prevention (Basingstoke: Macmillan),1990.*
7.	Darby J. & Mac. Ginty R.	:	*Contemporary Peace Making (Palgrave: Macmillan), 2002.*
8.	Juergensmeyer, Mart	:	*Gandhi Way: A Handbook of Conflict Resolution (Berkeley: University of California Press), 2002.*
9.	Kriesbery, Lawis	:	*International Conflict Resolution (New Heven: Yale University Press), 1992.*
10.	Mitchell, C.R.	:	*Handbook of Conflict Resolution: An Problem Solving Approach (London), 1996.*
11.	Ramsbothan D. & Miall, H.	:	*Contemporary Conflict Management (New York : Blackwell), 2005.*
12.	Sustac, Zeno & Claudin Ignet	:	*Alternative Ways of Solving Conflicts (ADR) (New Delhi: Promila and Co. Publishers), 2001.*

JOURNALISM & MASS COMMUNICATION

SEMESTER V

MEDIA MANAGEMENT, ETHICS AND LAWS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :
The course will introduce the students to the basic structure of media organizations and the regulatory framework and laws of the journalistic profession.

B. Pedagogy of the Course Work:
80% Lectures (including expert lectures)
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be 9 questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I
Types of ownership patterns: Sole Proprietorship, Partnership, Joint Stock Company, Conglomerate, Chain, Trust/Societies/Associations, Cross Media Ownership

Unit II
Basic principles of Management given by Henry Fayoland their applications in media organistions,Organistional structure of Large Daily Newspaper,Radio Station and TV Station.

Unit III
Freedom of speech and expression [Article 19(1)(a) and 19(2)] Press Council of India guidelines for Ethical conduct.

Unit IV
Brief overview of: Right to Information Act, Copyright Act, Law of Defamation, Law of Obscenity, Contempt of Court, Contempt of Legislature

PRACTICALS **Max. Marks : 20**

1	Case study of any one type of ownership pattern of Indian media organizations.	20 Marks

Books Recommended

ESSENTIAL READING

1. Kohli Vanita ,(2003), *The Indian Media Business*, Sage.
2. Ganaratne Shelton ,(2000) *Handbook of the media*, Sage
3. Kothari Gulab (1995) *Newspaper Management in India*, DK Publishers, New Delhi
4. Frank Thayer(1954) *Newspaper Business management*, Prentice hall Inc, New York
5. Trilok N Sindhwani (1975), *Newspaper Economics and management*, Ankur publishing House, New Delhi.
6. John Mcmanus (1994), *Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
7. Edward S. Herman and Robert W. McChesney(1997), *The Global media: New missionaries of corporate capitalism* , Madhyam Books, New Delhi
8. Edward S. Herman and Robert W. McChesney(2002) *Manufacturing Consent: The political economy of mass media*, Random House,
9. Bagdikian Ben H,(2004), *The New Media Monopoly*,.Beacon Press
10. Redmond James and Trager Robert, (2004),*Balancing on the Wire: The Art of Managing Media Organizations*, 2nd ed., Atomic Dog
11. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
12. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D
13. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D
14. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey
15. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D
16. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D
17. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
18. Christians, Clifford and Traber, Michael, (1997), Communication Ethics and Universal Values, Sage Publications, N.D
19. Sharma, S.R , (1996), *Democracy and the Press*, Radha Publications, N.D.
20. Padhy, K.S., (1991), *Battle for Freedom of Press in India*, Academic Foundation, N.D

ADDITIONAL READING

1. McManus John (1994),*Market-Driven Journalism: Let the Citizen Beware*, Iowa State Press
2. Underwood Doug(1993),*When MBA's Rule the Newsroom: How the Marketers and Managers are Reshaping Today's Media*, Columbia University Press
3. Neuharth Al(1989),*Confessions of an S.O.B.,* Doubleday
4. Mackay Harvey(1988),*Swim With the Sharks without Being Eaten Alive*, Wm. Morrow & Co
5. Adarsh Kumar Varma (2003), *12 ½, Management Mantras of Journalism*, Kanishka Publishers, New Delhi
6. Mehta, Vinod, (1999), *Mr. Editor, How Close are you to the PM*, Konark Publishers, N.D.Shamsi N Afeque, (2006*), Media Organisation And Management*, Anmol Publications Pvt Ltd, New Delhi
7. Aggarwal, S.K., (1993), *Media and Ethics*, Sipra Publications, N.D.Stephen Lacy, George Sylvie, Robert H. Wicks, Jan LeBlanc Wicks, Ardyth Broadrick Sohn, (2003), *Media management: A Casebook Approach, Lea's Communication Series* , Lawrence Erlbaum Associates
8. Chauhan, Swati and Chandra, Navin, (1997), *Journalism Today: Principles, Practices and Challenges,* Kanishka Publishers, N.D.
9. Tharyam, P., (1999), *Good News, Bad News*, Punnoose Tharyam, N.D.
10. Fineman, Martha.A ed, (1997), *Feminism, Media and the Law,* Oxford University Press. N.Y.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- VI

ADVERTISING & PUBLIC RELATIONS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will make students conversant with strategic communication by imparting training in writing advertising copy and press releases amongst other tools.

B. Pedagogy of the Course Work :

80 % lectures (including expert lectures).

20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I

Definition & types of advertising; Place of Advertising in marketing mix; Advertising agency - structure and functions

Unit-II

Concept & definition of advertising copy; Elements of a typical advertisement; Basic principles of writing advertising copy;

Unit –III

Concepts & types of Public in PR; Brief introduction to Public Relations in Public & Private Sector; PR Agency: Structure & Functions

Unit – IV

Brief introduction to PR tools & Media Relations

PRACTICALS

Max. Marks : 20

1	Portfolio of five self-designed advertisements	10 marks
2	Prepare a file of PR tools used by anyone organization	10 marks

Books Recommended

ESSENTIAL READING

1 David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson

2 David Ogilvy, *The Unpublished David Ogilvy*

3 David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman

4 Subroto Sengupta, *Cases in Advertising and Communication Marketing*

5 Subroto Sengupta, (1990), *Positioning* (New Delhi, Tata-Mcgraw Hill

6 Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.

7 J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books

8 Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School

9 Dorothy Cohen, (1972), *Advertising.* NY, Wiley

10 Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956

11 Scott M. Cutlip & A.H. Genter, (1964), *Effective Public Relations*. 3rd ed. ,Englishwood Cliffs, Prentice-hall

12 Fraser P. Seital, (1984), *The Practice of Public Relations*. 2nd ed., Columbus Bell & Howell Co.

13 S.K. Roy, (1974), *Corporate Image of India*. New Delhi, Sh. Ram Center

14 Krishnachander Lehiri, *Publicity: Art and Literature with special reference to India*.

15 John Lee, (1968), *Diplomatic.* Persuaders, N.Y. Wiley.

16 Rajendra, *Lok Sampark* (Haryana Hindi Granth Academy, Chandigarh)

17 Dilgir, H.S., *Lok Sampark-Sanchar Atay Sandhan* (Kala Darpan Prakashan Chandigarh)

18 Mehta, D.S., *Handbook of Public Relations in India*, (Allied Publishers, New Delhi.)

19 Black, Marwin & Harlow, Rex, (1985), *Practical Public Relations*. Harper & Bros.; New York

20 Black, Sam, (1978), *Practical Public Relations Pitman*, London.

ADDITIONAL READING

1 Bajpai, Shailaja & Unikrishnan, Namita, (1996), *The Impact of Television Advertising on children*. SAGE, ND

2 Berelson, Bernard & Janowitz, Morris (Ed.), (1996), *Reader in Public Opinion & Communication*. The Free Press, New York

3 Berman, Ronald, (1981), *Advertising & Social Change*. SAGE, Newbury Park

4 Burke, Kenneth, (1946), *A grammar of motives*. Prentice-hall Englewood Cliffs

5 Burke, Kenneth, (1950), *A Rhetoric of motive*. Prentice-hall Englewood Cliffs

6 Cannon, Tom, (1973), *Advertising Research: Intertext-Books*, London

7 Agarwala-Rogers, Rekha & Rogers, Everett M., (1976), *Communication in Organisations*. The Free Press, Toronto

8 Berelson, Bernard & Janowitz, Morris (Ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York

9 Brembeck Winston & Howell, William, (1976), *Persuasion,* Prentice Hall, New Jersey

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POLICE ADMINISTRATION
SEMESTER - V

Organisational Behaviour With Special Reference to Police Administration

(A) Course Objectives:

The objective of this course is to familiarize the students with the concept, nature and significance of organizational behavior with special reference to police administration. The course also aims to discuss the foundations and models of organisational behavior. In particular, the students would be taught the concepts such as motivation, morale, leadership, communication, decision-making, and transactional analysis. Further, the inputs regarding the concept and rationale of organizational change and organizational development would be imparted to the students.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of:

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Organisational Behaviour: Concept, Nature and Significance. Foundations of Organisational Behaviour – Scientific Management, Human Relations, Systems and Contingency. Models of Organisational Behaviour.

Unit-II

Motivation: Concept; and Theories – Maslow's Need Hierarchy and McGregor's Theory X & Y. Morale: Concept; and Factors to Build-up Morale in India Police. Leadership: Concept, Theories – Trait and Situational; and Qualities.

Unit-III

Communication: Concept, Process, Types and Barriers. Communication Modes in Indian Police. Decision-Making: Concept; Types; and Simon's Rational Comprehensive Theory. Transactional Analysis: Meaning; and Types of Transactions.

Unit-IV

Organizational Change: Concept; Rationale; and Resistance to Change. Organisational Development: Concept and Rationale.

Essential Readings:

1. Prasad, L.M. : Organisation Behaviour, Sultan Chand & Sons, New Delhi, 2008.
2. Aswathappa, K. : Organisational Behaviour, 7th Edition, Himalaya Publishing House, New Delhi, 2007.
3. Moorhead, Gregory & Ricky W. Griffin : Organizational Behaviour: Managing People & Organizations, Biztantra, New Delhi, 2005.
4. Robbins, Stephen P. : Organizational Behaviour, Prentice-Hall of India Private Limited, New Delhi, 2001.
5. Sharma, K.K. & : Organisation Behaviour, Deep & Deep Sahni, Pradeep Publishers, New Delhi,1988.
6. Dubin, Robert : Human Relations in Administration, Prentice-Hall of India Private Limited, New Delhi, 1968.
7. George, C. S. : History of Management Thought, Prentice-Hall of India Private Limited, New Delhi.
8. Simon, Herbert A. : Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation, Macmillan, New York, 1976.
9. Sapru, R. K. : Theories of Administration, S. Chand, New Delhi, 1996.
10. Maheshwari, S. R. : Administrative Thinkers, MacMillan, New Delhi, Latest Edition.
11. Saiyadain, Mirza S. : Organisational Behaviour, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2006.
12. McShane, Steven L.; Glinow, Mary Ann Von; & Sharma, Radha R. : Organisational Behaviour, Tata McGraw-Hill, Publishing Company Ltd., New Delhi, 2006.

Further Readings

1. Argyris, Chris : Personality and Organisation: The Conflict Between System and the Individual, Harper and Row, New York, 1957.
2. Argyris, Chris : Integrating Individual and Organisation, Wiley, New York, 1964.
3. Mayo, Elton : The Social Problems of an Industrial Civilisation, Routledge and Kegan Paul Limited, London, 1957.
4. Hicks, Herbert G. : The Management of Organisation: a system and human resource approach, McGraw Hill, New York,1972.
5. Vadackumchery, James : Police Leadership: The Inside Story, APH Publishing Corporation, New Delhi, 1999.
6. Pugh, D. S. (ed.) : Organisation Theory, Penguin Books, Harmondsworth, 2nd Edition, 1984.

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POLICE ADMINISTRATION
SEMESTER- VI

Law and Police Administration

(A) Course Objectives:

The police system in India has to work within the ambit of legal framework laid down by the Constitution and by the enacted laws. The major responsibility of the police is to ensure the implementation of such laws. The course has been designed to impart knowledge to the students on the laws governing the 'prevention and detection of crime' which is laid down as the primary duty in the Indian Police Act 1861. The endeavour of the course is to familiarize the students with the main provisions of the Indian Penal Code 1860, the offences under it and the offences affecting the human body. In addition, meaning and definition of terms covered under Section 2 relevant to the police administration along with the powers of the police officer have been discussed.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

THE INDIAN PENAL CODE 1860: MAIN PROVISIONS

(i) Jurisdiction (Sections 1-5)
(ii) General Explanations (Sections 6-52-A)
(iii) Punishments (Sections 53, 53A, 54, 55, 60, 63, 73)
(iv) Joint & Constructive Liability Section 34 & Section149

Unit-II

Offences under the Indian Penal Code 1860

(i) Abetment (Section 107 & 108)
(ii) Criminal Conspiracy (Sections 120-A, 120-B)
(iii) Offences against the State (Sections 121, 121-A, 124-A)
(iv) Offences Against Public Tranquility (Sections 141-147)

Unit-III

Offences Affecting Human Body

-Culpable Homicide (Section 299) & Murder (Section 300)
-Causing death by rash and negligent act (Section 304A)
-Dowry Death (Section 304B)
-Hurt (Section 319), Grievous Hurt (Section 320)
-Wrongful Restraint and Wrongful Confinement (Sections 339, 340)
-Assault (Section 351)
-Sexual Harassment (Sections 354 A, 354 B, 354 C & 354 D)
-Kidnapping and Abduction (Sections 359-362)
-Rape (Sections 375, 376 A to D)

Unit-IV

Classification of offences in CRPC:

-Bailable and non-bailable offence;
-Cognizable and non-cognizable offence;
-Compoundable offences;
-Summons Case;
-Warrant Case;

Role of Police Officer:

-Lodging of First Information Report (Section 154) & Effects of Refusal to lodge FIR
-Police investigation
-Arrest (Section 41) & Rights of Arrested Persons
-Search (Section 165)

Essential Readings:

1. Tandon, Mahesh : The Indian Penal Code, Allahabad Law Agency, Prasad & Tandon, Rajesh Latest Edition.
2. Gandhi, B. M. : Indian Penal Code, Eastern Book Company, 2nd Edition.
3. Bhattacharya, T. : Indian Penal Code, Central Law Agency, Allahabad, 2007.
4. Mishra, S.N. : Indian Penal Code, Central Law Publications, Allahabad, 2007.
5. The Indian Penal Code : Bare Act with Short Notes, Universal Law Publishing Co. Pvt. Ltd., Delhi, 2008.

Further Readings

1. Lal, Rattan and Dhiraj Lal : Indian Penal Code
2. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.

WOMEN'S STUDIES

SEMESTER - V

PAPER: NATIONAL AND INTERNATIONAL INITIATIVES FOR WOMEN

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objective: This course aims to conscientise the students about the efforts made by national and international organizations, both governmental and non-governmental, towards women's empowerment and increased participation in social, economic and political life. The course exposes the student particularly to the U.N. initiatives in empowering women, putting an end to age old discrimination against them.

Course Contents

Unit I – Constitution of India and Women's Rights:

a) Fundamental rights and women's rights: de jure and de facto position
b) Directive Principles of State Policy and women's rights with special reference to Articles 39, 42, 43 and 44
c) Factors inhibiting effective implementation of Constitutional provisions

Unit II – Women and Law in India:

a) Dowry Prohibition Act, 1961 (as amended in 1984 & 1986);
b) Protection of Women from Domestic Violence Act, 2005,
c) Women's Rights in Property as Coparcener (as per 2005 Amendment of Hindu Succession Act, 1956)

Unit III – UN Conferences on Women:

a) Mexico (1975)
b) Copenhagen (1980)
c) Nairobi (1985)
d) Beijing (1995)
e) Beijing +5 (2000)
f) Beijing + 10 (2005)

Unit IV – UN Conventions for Women and Children:

a) Convention on the Political Rights of Women 1952
b) Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) 1979
c) Convention on the Rights of the Child (CRC), 1990, Optional Protocol

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

Aggarwal, Nomita : **Women and Law in India**, New Century Publication, Delhi, 2002.

Basu,D.D. : **Introduction to The Constitution of India**, Wadhwa & Co. Agra, 2001.

Jain, Devaki : **Women Development and the UN: A Sixty Year Quest for Equality and Justice**, Orient Longman, Delhi, 2006.

Shukla, Surinder : **United Nations and Empowerment of Women**, Arun Pub. House, Chandigarh, 2009.

United Nations and The Advancement of Women *(*1945-1996), United Nations Publication, 1996.

Further Readings:

Diwan, Paras : **Dowry and Protection to Married Women**, Deep and Deep Publication, New Delhi, 1987.

Ghosh, S. K. : **Women in Changing Society**, Ashish Publishing House, New Delhi, 1984.

Ratra, Amiteshwar; Parveen Kaur & Chhikara,Sudha : **Marriage and Family: In Diverse and Changing Scenario,** Deep & Deep, New Delhi, 2006.

Singh, Indu Prakash : **Women, law and Social Change in India**, Radiant, New Delhi, 1989.

Readings in Hindi:

Anthony,M.J. : **Kanooni Salha**, Hind Pocket Books, New Delhi, 2006.

Bansal, Bandna **Panchayati Raj Mein Mahila Bhagyadari**, Kalpaz Pub., New Delhi, 2004.

Gupta, Kamlesh Kumar : **Bharatiya Mahilayen Shoshan**, Utpidan avam Adhikar, Book Enclave, Jaipur, 2005.

Natani, Prakash : **Mahila Jagriti aur Kanoon**, Aavishkar Pub., Jaipur, Narayan 2005.

Natani, Prakash Narayan : **Manavadhikar avam Mahilayen**, sublime Pub., Delhi, 2005.

Sanyukt Rashtr, Karavahi Hatu Ghushana-Patra Tatha Beijing Ghushana, Campewell Publication, New Delhi, 1995.

Mathew, D.P. : **Hindu Vivaha Aur Talaq**, Indian Social Institute, New Delhi, 1986.

Mathew, D.P. : **Atam Raksha**, New Delhi, 1984.

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WOMEN'S STUDIES

SEMESTER-VI

PAPER : WOMEN'S DEVELOPMENT AND EMPOWERMENT IN INDIA

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objectives: This paper focuses on the issues related to the process of development and its impact on women, particularly in the context of a developing nation like India. The attempt is to equip the student to understand the major aspects of critique of development through a gender lens in its global and local contexts.

Course Contents

Unit I – Concept of Development

- Changing concept from Growth to Development;
- Human Centric Development;
- Why is gender a development issue?
- Indices of development: Human Development Index (HDI), Gender Development Index (GDI), Gender Empowerment Measure (GEM)

Unit II – Strategies for Women's Development

- Women in Development (WID), Women and Development (WAD) and Gender and Development (GAD),
- Empowerment and Sustainable Development;
- Microcredit

Unit III - Policy Initiatives

- Changing approaches from welfare to development to empowerment with special reference to Five Year Plans (First to Twelth Plan)
- National Policy for Empowerment of Women

Unit IV – Implementation Machinery

- Social Welfare Boards,
- National Commission for Women (NCW),
- Ministry of Women and Child Development (MOWCD),
- National Institute of Public Cooperation and Child Development (NIPCCD)

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

ESSENTIAL READINGS

Ahooja-Patel, Krishna : **Women and Development**, Ashish Publishing House New Delhi, 1995.

Govt. of India, Five Year Plans (1st to 11th), Planning Commission, New Delhi.

Gupte, Shakuntla : **Women Development in India**, Anmol Pub, New Delhi, 2005.

Mathu, Anuradha (ed) : **Facets of Women's Development**, Kalpaz Pub, Delhi, 2006.

South Asia Human Development Reports 2000 and 2004, Mahbub ul Haq Human Development Centre.

UNDP Human Development Reports, 1995-2007.

Further Readings

Heyzer, Noeleen and Gita,(ed.), : **Gender, Economic Growth and Poverty**, Kali for Sen, Women, New Delhi, 1994.

Jain, Devaki : **Development as if Women Mattered**, Monograph, ISS, New Delhi,1983.

Krishanaraj, Maitreyi, : **Women and Development: The Indian Experience**, Subhada Publishers.

Rajput, Pam & Swarup Hemlata (ed.), : **Women and Globalization**, Ashish Pub. House, New Delhi, 1994

Reddy, V Narayana et al (eds), : **Women in Development: Challenges and Achievements,** Serials Pub, Delhi, 2005.

Singh, Gopal : **Economic Empowerment of Rural Women in India,** et al (eds) RBSA Pub, Jaipur, 2003

Verma, S.B, Jiloka, S.K. Kushwah, K.J, (eds), : **Rural Women Empowerment,** Cambridge Univ Press, & U.K.,2005.

Readings in Hindi:

Kumar, Raj (ed.) : **Bhartiya Mahila**, Arjun Publishing, New Delhi, 2003.

Sarawat, Sawapnal : **Mahila Vikas AK Paridrashay**, Nayanprakashan, New Delhi,

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HUMAN RIGHTS & DUTIES
SEMESTER-V

PAPER: HUMAN RIGHTS RESPONSES TO SELECT PROBLEMS INTERNATIONAL AND NATIONAL PERSPECTIVE

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with a few select problems that have been addressed internationally through the UN Conventions to ensure protection of human rights. The objective is to regard to problems such as racial discrimination; custodial violence; and socially vulnerable groups including women, children, Specially-Abled and Internally Displaced Persons.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: (i) for written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9 x 2 = 18 marks. (ii) In addition to it, Question Nos. II to IX will consist of long answer of long answer (easy) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4 x 18 = 72 marks.

UNIT-I

Racial Discrimination: International Convention and Related Mechanism

(a) Convention on the prevention and punishment of the Crime of Genocide, 1948.
(b) International Convention on Elimination of All Forms of Racial Discrimination 1965.
(c) Refugees and the Refugee Convention, 1951

UNIT –II

Custodial Violence and Safeguards:

(a) Custodial Violence a
  (i) Torture and Death in Police Custody
  (ii) Fake Encounters and Enforced Disappearances
  (iii) Human Indignity against Women and Children
(b) Convention against Torture and Other Cruel and Human of Degrading Treatment or Punishment, 1984.

UNIT-III

Social Vulnerability and Protection –I: Women and Children

(a) Understanding Discrimination and Violence against Women and Children
(b) Convention on the Elimination of All Forms of Discrimination against Women, 1979.
(c) Convention on the Rights of the Child, 1989.
(d) Human Trafficking and United Nations Convention against Transnational Organized Crime, 2000

UNIT- IV

Social Vulnerability and Protection- II: Aged, Specially-Abled and Internally Displaced Persons.

(a) Problems of Aged and specially – Abled Persons.
(b) Convention of the Rights of Persons with Disabilities, 2006.
(c) International Mechanism for the Rights of the Aged.
(d) Internally Displaced Persons and Related Mechanism.

Essential Readings:

1. Ayabn, L, Tesch-Romer,C.,Contemporary Perspective on Ageism, (2018), United Sttes: Springer International Publishing.
2. Gullete-Morganroth,M., Ending Ageism or How Not to Shoot Old People, (2017) London, Rutgers University Press.
3. Dovey, Ceridwen, What Old Age is Really Like? (2015), New York, Grand Central Publishing.
4. Ghai Anita, Rethinking Disability in India, (2015) New Delhi, Routledge.
5. Burch, Susan and Rembis, Michael, Disability, (2014) Histories, Chacago, University of Illinois Press.
6. Kuppers, Petra, Studying Disability Arts and Culture: An Introduction, (2014), Palgrave Macmillan Press, New York.
7. Addlakha, Renu, Disability Studies in India: Global Discourse, Local Realities, (2013) London, Rontledge Taylor and Francis.
8. Addlakha, Renu and Blume, Stuart et. Al: Disability and Society: A Reader, (2009), Orient Black Swan, Hyderabad.
9. Aggarwal, H.O: *Human Rights*, (2010), Central Law Publications, Allahbad.
10. Aggarwal, H.O: *International Law and Human Rights, (2010,)* Central Law Publications, New Delhi.
11. Ahuja, Ram: *Social Problems in India*, (2009), Rawat jaipur.
12. Biswal, Tapan: *Human Rights*, *Gender and Environment,* (2006), New Delhi.
13. Kapoor, SK.: *Human Rights under International Law*,(2009), Central Law Publications, Allahabad.
14. Karna, G.N.:Disability Studies in India: Retrospect and Prospect, (2001), New Delhi:Gyan Publishing House.
15. Lauterpacht, Hersch: *An International Bill of the Rights of the Man*,(1945), New York: Columbia University Press
16. South Asian Human Rights Documentation Centre: *Human Rights and Humanitarian Law,(2008),* South Asian Human Rights Documentation Centre, New Delhi, 2008.
17. Wolf, Sherry: Sexuality and Socialism: History, Politics, Theory of LGBT Liberalization, (2009), Chicago: Haymarket Books

Further Reading:

1. Rao, Mamta: Law Relating to Women and Children, (2008), Eastern Book Company, Luck.
2. Verma, R.S.: Human Rights: Burning Issues of the World, Volumes I, II and III (2000), Delhi: Radiant Publishers.
3. Langley, Winstore E.: Encyclopedia of Human Rights Issues Since 1945,(1999), London: Fitzroy Dearborn Publishers.
4. Pachauri, S.K. : Children and Human Rigths , (1999), New Delhi: APH Publications.
5. Pacuhauri, S.K: Women and Human Rights, (1999), New Delhi: APH Publications.
6. Karna, G.N: United Nations and the Rights of Disabled Persons: A Study in Indian Perspective, (1999), New Delhi: APH Publishing Co.

HUMAN RIGHTS & DUTIES
SEMESTER-VI

PAPER: REGIONAL HUMAN RIGHTS INSTRUMENTS, STANDARDS AND MECHANISM

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with key features of regional human rights standards and mechanisms. The objectives of the paper are twofold. Firstly, it is familiarize the students that regional initiatives complement the international initiatives in promoting and protecting human rights. Secondly, it is to train students to locate countries of the specific region on an outline map of the world.

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES: Note: (i) for the written appear, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answers type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9x2 =18 marks. (ii) In addition to it. Questions Nos. II to IX will consist of long answer (essay) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4x18=72 marks per Unit where students will be asked to located countries that are party to the Regional Conventions or have either ratified specific Conventions or have not ratified the given Conventions on the attached world outline map.

UNIT-I

Europe:

a. European Convention on the Protection of Human Rights (ECHR), 1950.
b. European Social Charter (ESC), 1961 (Revised 1996)
c. Charter of Fundamental Rights of the European Union, 2000.

UNIT-II

America:

a. American Convention on Human Rights (ACHR), 1969
b. Inter- American Convention to Prevent and Punish Torture, 1985
c. Inter- American Convention on Forced Disappearance of Persons, 1994

UNIT-III

Africa and Arab:

a. African Charter on Human and Peoples' Rights (Banjul Charter), 1981.
b. Convention Regarding the Specific aspects of Refugee Problems in Africa
c. Arab Charter on Human Rights, 2004

UNIT-IV

South and South-East Asia

a. SAARC Conventions: (i) Conventions on Regional Arrangements for the Promotion of Child Welfare in South Asia; (ii) Convention on Preventing and Combating the Trafficking in Women and Children for Prostitution
b. ASEAN Charter on Rights, 2007.

REFERENCES:

Essential Readings:

1. Aggarwal, H.O.: *Human Rights, Central Law Publications,* Allahabad. 2010.

2. Aggarwal, H.O.: *International Law and Human Rights*, Central Law Publications, New Delhi, 2010

3. Chodhury, A.R. and Bhuiyan, J.H.: *An introduction to international Human Rights Law*, Brill, 2010

4. Kappor, S.K: *Human Rights Under International Law,* Central Law Publications Allahbad. 2009.

5. Jacobs, Francis G and R.C.A White: *The European Convention on Human Rights,* Oxford: Clarendon University Press. 1996

Further Readings:

1. Arora, Lalit Kumar: *Major Human Rights Instruments,* Isha Book, New Delhi, 2006.

2. Vincent O. Orlu Nmehielle: *The African Human Rights System: it's Law Practice and Institutions*, Kluwer Law International, The Netherlands, 2001.

3. South Asia Human Rights Documentation Centre: *Human Rights and Humanitarian Law*, South Asian Human Rights Documentation Centre, New Delhi, 2008

4. Sarkar, Sukanta: *Human Rights Violations of Minorities*, Anmol Publications, New Delhi, 2015.

RELIGIOUS & SIKH STUDIES

SEMESTER- V

Max. Marks: 100
Written : 90 marks
Internal : 10 marks

PAPER- V, RELIGIOUS REFORM MOVEMENTS IN MODERN INDIA

Objectives:

The course is designed for the students who want to pursue semester bases graduate degree programme with religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. 1 would carry 18 marks (9X2). In addition to it, Question No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4 X 18).

Course Contents:

Unit I. Brahmo Samaj and Arya Samaj: Leaders, Principles and Contribution

Unit II. Namdharis and Singh Sabha Movement: Leaders, Principles and Contribution

Unit III. Anjumans and Ahmadiyahs: Leaders, Principles and Contribution

Unit IV Swami Vivekanand; Sir Syed Ahmad Khan and Bhai Kahn Singh Nabha

Essential Readings

- ਤਾਰਨ ਸਿੰਘ, ਗੁਰ*ਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ ,* ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ ਪਟਿਆਲਾ
- ਡਾ. ਸਰਬਜਿੰਦਰ ਸਿੰਘ, (ਸੰਪਾ.) ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Farquhar, J.N., *Modern Religious Movements in India*

- Jones, K.W., *Arya Dharm,* Delhi: Manohar, 1989.
- Lavan, Spencer, *The Ahmadiyah Movement: A History and Prespactive,* Delhi: Manohar, 1974.
- Radice, William (ed.), *Swami Vivekananda and the Modernisation of Hinduism,* Delhi : OUP, 1998.
- Jones, K.W., *Socio Religious Reform Movements in British India,* New Cambridge History, Delhi: Foundation Books, Delhi, 1994.

Further Reading

- Sen, S.P., *Social and Religious Reform Movement in the 19th & 20th Century,* Calcutta: 1999.
- Banga, Indu, ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1900,* New Delhi: Manohar, 1997.
- Shan Muhammad, *Sir Syed Ahmad Khan: A Political Biography,* Meenakshi Prakshan.

RELIGIOUS & SIKH STUDIES

SEMESTER- VI

Max. Marks: 100
Written : 90 marks
Internal : 10 marks

PAPER-VI SEMITIC RELIGIONS

Objectives:

The course is designed for the students who want to pursue semester bases graduate degree programme with religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. 1 would carry 18 marks (9X2). In addition to it, Question No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4 X 18).

Course Contents:

Unit I Islam: origin and development in India

Unit II Sufi Tradition: origin and development in India

Unit III Christianity: origin and development in India

Unit IV Sects within Christianity: Catholics and Protestants

Essential Readings

- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ, 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ 'ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Mishra, Neeru, *Sufis and Sufism: Some Reflectons,* New Delhi: Manohar, 2004.
- Rizvi, S.A.A., A *History of Sufism in India,* Vol.1, New Delhi: Munshiram Manoharlal, 1997.

Further Readings

- Grewal, J.S., *Religious Movements and Institutions in Medival India,* PHISPC*, New Delhi:* Oxford University Press, 2006.
- Webster, John C.B. *The Christian Community and Change in 19th Century North India,* Delhi: Manohar, 1976.
- Frykenberg, Robert Eric, Christianity in India: From Beginnings to the Present, New York: OUP, 2010.

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COMPUTER SCIENCE
SEMESTER-V

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS09	**Theory-A**	**Project Management**	**3**	**30**	**5**	**35**
Paper –CS10	**Theory-B**	**Relational Database Management System**	**3**	**30**	**5**	**35**
Paper – PCS05	**Practical-C**	**Practical Based on Paper – CS10**	**3**	**30**	**--**	**30**

Paper Code: CS09

Paper Title: Project Management

Objective: The student will come to know how a project needs to established, organized , coordinated ,controlled and evaluated.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii) The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. Concepts of Project Management :
Concept of a project, Characteristic features of a project, Categories of project, Project life cycle phases, Project Management Concepts, Tools and Techniques for Project Management, Introduction of Computerised project management systems, Roles and Responsibilities of a Project Manager.

2. Establishing the Project :
Feasibility Report : Raw material survey, Demand study, Technical study, Location study; Financing Arrangements, Preparation of Cost Estimates, Finalisation of Project Implementation Schedule, Evaluation of the Project Profitability, Fixing the zero date.

UNIT II

3. Organizing human resource:
Delegation, Project organization: Matrix, Tax force and Totally projectized organization;

4. Organizing the Project:
Working of Systems, Design of Systems, Project Work System Design, Work Breakdown Structure, Project Execution Plan, Project Procedure Manual, Project Control System, Planning, Scheduling and Monitoring.

UNIT III

5. Project Directions, Coordination and Control:
Project Direction, Communications in a Project, Project Coordination, Project Control, Scope/Progress Control, Performance Control, Schedule Control, and Cost Control.

6. Project Management Performance:
Performance Indicators, Performance Improvement, Project Management Environment.

UNIT IV

7. Report Writing - I:
Characteristics of Reports, Importance of Reports, Types of Reports, Structure and layout of Reports: front matter, main body, back matter;Preparatory Steps to Writing Reports: Evaluation of material, Note making, Organising material, Principle of organisation, Making outline

8. Report Writing- II:
Elements of Style; Use of Illustrations: types; Writing the Report: Rough draft, Process of writing, Order of writing, Final draft, Check list for reports;SpecimenReports: technical report;

REFERENCES

1. Choudhary, S., 1988 : Project Management, Tata McGraw-Hill Publishing CompanyLimited, 1988 (Recommended as a text-book for the syllabus contents upto Unit III).
2. Sharma, R.C., and Krishna Mohan, 1996 : Business Correspondence and Report Writing, Second Edition, Tata McGraw-Hill Publishing Company Ltd., 1978 (Recommended as a text-book for the syllabus contents for Unit IV).
3. Gopalakrishnan, P. & Rama Moorthy, V.E., 1993. : Text Book of Project Management, Mac Million India Ltd.
4. Harrison, F.L., 1992. : Advanced Project Management, A Structured Approach (Third Edition), Metropolitan.
5. Srinath, I. S., 1989. : PERT & CPM, Principles and Applications, Third Edition, Affiliated East-West Press Pvt. Ltd.
6. Rodrigues, M.V., 1992 : Effective Business Communication, Concept Publishing Company, 1992.

Paper Code: CS10

Paper Title: Relational Database Management System

Objectives: This course will enable the student to get well versed with the SQL and PL/SQL concepts.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. Interactive SQL : SQL commands; Data Definition Language Commands; Data Manipulation Language Commands; Data types, Insertion of data into the tables; Viewing of data from the tables; Conditional viewing of data; Deletion operations; Updating the contents of the table; Modifying the structure of the table; Renaming table; Destroying tables.

2. Data Constraints: Types of Data Constraints; Column Level Constraints; Table Level Constraints; Null value concepts; The UNIQUE Constraint; The PRIMARY Constraint; The FOREIGN key Constraint; The CHECK Constraint; Viewing the User Constraint.

UNIT – II

3. SQL Operators and Functions: Arithmetic operators, Logical operators, Range searching, Pattern matching; Using DUAL, SYSDATE;SQL Functions: Group, Scalar, Aggregate, Numeric, String and Date Functions.

4. Grouping data from tables in SQL : GroupBy , Having clause, Subqueries, Collating Information: Equi Joins, Cartesian Joins, Outer Joins, Self Joins; SET Operators: Union, Intersect, Minus; Nested Queries.

UNIT III

5. Indexes: Creation, Types, Dropping an index; Introduction to Views, Manipulating the Base table(s) through views, Rules of DML Statements on Join Views, Dropping a View, Inline Views, Materialized Views.

6. Sequences: Creation, Reference and Alteration; Database Security and Privileges: Grant Command, Revoke Command, Application Privileges Management, COMMIT and ROLLBACK.

UNIT IV

7. PL/SQL-I: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL block structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data types, Variables and constants, Scope and visibility of a variable, Assignments and expressions, Operator precedence, Conditional and iterative control, SQL within PL/SQL, writing PL/SQL code.

8. PL/SQL-II: Cursor management in PL/SQL, Cursor manipulation, Implicit and Explicit cursor attributes, Exceptional Handling, Subprograms in PL/SQL, Procedure, Functions, and Triggers.

References:

1. Ivan Bayross: SQL, PL/SQL the programming language of oracle, BPB publications.
2. Kevin Loney :Oracle Complete Reference, McGraw-Hill
3. James T. Perry &Josesph G. Lateer: Understanding Oracle, BPB
4. Mukhi, Vijay 1992: Mastering Oracle 6.0, BPB Publications.

Paper – PCS05 : Practical Based on Paper CS10 – Relational Database Management System.

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COMPUTER SCIENCE
SEMESTER-VI

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS11	**Theory-A**	**E-Commerce**	**3**	**30**	**5**	**35**
Paper –CS12	**Theory-B**	**Web Programming**	**3**	**30**	**5**	**35**
Paper – PCS06	**Practical-C**	**Practical Based on Paper – CS12**	**3**	**30**	**--**	**30**

Paper Code: CS11

Paper Title: E-Commerce

Objective: To develop an understanding of concepts of E-Commerce

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. E-Commerce: Introduction, History, Motivation for E-Commerce, Types of Ecommerce, Advantages, Limitations, E-Commerce applications : Business-to-consumer, Business-to-Business, Consumer-to-Business, Consumer-to-Consumer, Business-within-Business.

2. Internet and www: Introduction, History, Benefits of www, Internet Service Providers, Web and Electronic commerce,Web architecture and its components, Interactive web applications, Web and database integration, Web software development tools, Search engines.

UNIT II

3. Website designing and hosting: Life cycle of website building, Website content andtraffic management, Working of ISPs, Choosing an ISP, Choosing and registering a domain name.

4. Implementation and Maintenance of E-Commerce: Implementation strategies, Maintenance strategies, Legal and Ethical issues in E-commerce.

UNIT III

5. Payment Systems : From Barter to money, Requirements of Internet-based payments,Electronic payment media : Credit cards, Debit cards, Smart cards, e-wallets, Issues and implications of payment systems, Latest trends in payment systems.

6. Marketing on the Internet: Internet marketing techniques and cycles, Attracting and Tracking customers, Pros and cons of online marketing.

UNIT IV

7. Firewalls and Network Security: Types of firewall, Gateways, Proxy Servers and its advantages and disadvantages; Transaction Security: Types of transaction, Requirements for transaction, Encryption: asymmetric and symmetric encryption; Digital signatures, Digital certificates, Implementation and management issues.

REFERENCES :

1. Kalakota Ravi & Andrew B. Whinston, 1997 : Electronic Commerce, A manager's Guide, Person Education.
2. Elias M. Awad, 2006 : Electronic Commerce from vision to fulfillment, PHI.
3. P.T. JOSEPH, S.J., 2015 : E-COMMERCE, Fifth Edition: AN INDIAN PERSPECTIVE, PHI.
4. PKenneth C, Landon, Carol Guercio Traver, 2010 : E-Commerce – Business Technology society, Pearson Education.

Paper Code: CS12

Paper Title: Web Programming

Objectives: This course will enable the student to build and publish web sites using HTML, CSS, JavaScript and PHP.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT - I

1. Basic Terminology : Web Server; Web Browser, Understanding Communication between a Browser and Web Server, Webpage, Website, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL.

2. HTML : HTML Program Structure, Paragraph Breaks, Line Breaks; Emphasizing Text: Heading Styles, Drawing Lines; Text Styles :Bold, Italics, Underline; Other Text Effects: Centering of text and images etc; Lists: Unordered List, Ordered Lists, Definition lists; Adding Graphics to HTML Documents using the Border, Width, Height and Align; Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

3. Linking Documents : Anchor tag, External Document References, Internal Document References and Image Maps; Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

4. DHTML: Introduction to Cascading Style Sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External; Forms: Attributes of Form element: Input element, Text Element, Password, Button, Submit Button, Reset Button, Checkbox, Radio, TextArea, Select and Option.

UNIT - III

5. JavaScript: Introduction and Features of JavaScript, Writing JavaScript into HTML,Tokens, Data Types, Variables, Operators, Control Constructs, Strings Arrays, Functions, Document Object Model, CoreLanguage Objects, Client Side Objects, Event Handling, Applications related to client side formvalidation, Built-In Objects in JavaScript: String Object, Math Object, Date Object;

UNIT - IV

6. Introduction to PHP : PHP Installation and Configuration; Naming files, Comments,Variables, Operators, Arrays, Flow Control Structures, More language basics; User-defined functions; Input validation, Working with Mathematical, String, Date and Time functions

REFERENCES

1. Bayross, Ivan : Wen enabled commercial applications development using HTML, Javascript , DHTML and PHP by BPB, Latest reprint
2. Wanger&Wyke : Java Script Unleased, Pearson Education, New Delhi.2
3. Thomas Powell : HTML & CSS: The Complete Reference
4. John Pollock : JavaScript, A Beginner's Guide
5. Steven Holzner PHP: The Complete Reference, Tata McGraw Hill
6 Kelvin Tetroi: Programming PHP , O'Reilly Media

Paper – PCS06 : Practical Based on Paper CS12 – Web Programming.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER-V

Paper: Biodiversity and Conservation

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question NO. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Biodiversity and Conservation

Section-I

Biodiversity: Definition, levels, importance, threats to biodiversity, hot spots of biodiversity in India. Environment Protection Act, 1986, Water (Prevention and Control of Pollution Act) 1974, Forest (Conservation) Act, 1980.

Section-II

Conservation: Causes of extinction of biodiversity**,** Strategies of conservation (in-situ and ex-situ). Protected Areas (National Parks, Sanctuaries and Biosphere reserves). Wild Life Protection Act, 1972.
Joint Forest Managemnt (JFM)

Section-III

Environmental Ethics: Role of religion in Environment Protection. Role of Indian tradition in environment conservation, Sustainable agriculture.
Different possible measures to make aware localties about environmental hazards and its remedies. Public Interest Litigation(PIL).

Section-IV

Cultivation Practices: Role of tree & plants in conservation; use of medicinal plants; cultivation methods *(Aloe vera, Calotropis (AK), Mentha, Ocimum*, Neem, *Ricinus, Jatropa, Accacia, Khair* (Katha).

Practical

Collection of local flora and fauna.
Study of vegetation of local area/college campus.
Collection of ten pests.
Identification of weeds.
Study of vegetation density by quadrat method
Plantation of medicinal plants**.**
Adaptation features of plants and animals.
Assignments/project as assigned by the teacher.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER -VI

Paper: Public Awareness and Environment Issues

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	05	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Public Awareness and Environment Issues

Section-I

Current Environmnet Issues: Climate Change, Global Warming, Population Explosion, Rain water harvesting, relamation of mining areas, impact of green revolution on environment with special referencve to Punab, Tehri Dam, Narmada Project, Bhopa Gas Tragedy, River Cleaning Project of Sant B.S. Seechewal (Punjab).

Section-II

Environmental Protection: Role of Non - Governmental Organizations (NGOs) in environmental protection (Chipko movement, For a Living Ganga by WWF, Transformation DTC fleet to CNG driven transport, Earth Hour, Green Peace (Nitrate Pollution in Punjab), KVM, Jaito). Role of individual in environment protection. Role of environmental education.

Section-III

Environmental Agencies: Role of International & National Agencies: UNEP, UNDP, WWF, MOEF, CPCB, in environment conservation and management.
A brief account on Ramsar convention, CITES (Convention on International Trade in Endangered Species), UNFCC, Montreal Protocol, Kyoto Protocol, Copenhagen Summit.

Section-IV

RS and GIS: Definition, Application in Environment**.**
Biostat: Mean mode, median, standard deviation, co-relation, Regression.

Practical

Public/Mass awareness programmes in different villages and their reports.
Survey report on different diseases based theory.
Visit to a dam to study its construction and working.
To visit any NGO working for environment.
To study various indoor pollutants in houses like LPG, AC, Paints, Polish, Cosmetics, Detergents, Shampoo, Hair dyes.
To study the different tools of stat in data interpretation.
Assignments/project as assigned by the teacher.

Books Recommended:

Jaswal & Jaswal	:	Environmental Law, APH Publications, New Delhi, 2006.
Khitoliya, R. K.	:	Environment Protection and Law, APH Publications, 2009.
Trivedi, R.K.	:	Handbook of Environmental Laws, Acts, Guidelines, Compliance and Standards, Vol. I & II, B.S. Publications, Hyderabad. 2004.
Srivastava, A.K.	:	Environmental Ethics, APH Publications, 2004.
Lillesand, T.M. and Kiefer, R.W.	:	Remote Sensing and Image Interpretation, John Wiley, Cambridge, 1987.
Fazal, S.	:	Remote Sensing Basics, Kalyani Pub. 2008.
Patel, A.N. & Singh, S.	:	Remote Sensing: Principles and Applications, Scientific Books, Jodhpur, 2009.
Jensen, J.	:	Remote Sensing of the Environment, Pearson Education, Prentice Hall, 2007.
CSE, Delhi	:	A Water Harvesting Manual, 2010.
Arora, P.N.	:	Biostatistics, Himalayan Pub. House, 2008.
Spencere, J.	:	Biodiversity: Beginners Guide, One World Publication, Oxford, 2009.
Chaudhari, A. B.	:	Biodiversity Endangered, Scientific Books, 2009.
Singh, Oraon & Prasad.	:	Medicinal Plants, APH Publications, 2009

MICROBIOLOGY

SEMESTER -V

THEORY		6 hrs	75(33+33+9*)
MIC 501:	**Pathogenic Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 502:	**Food and Industrial Microbiology-I**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical examination pertaining to the entire syllabus 3 hrs 25 (22+3*)
included in Theory Papers MIC 501 and MIC 502

Semester VI

THEORY		6 hrs	75(33+33+9*)
MIC 601:	**Pathogenic Microbiology-II**	3 hrs.	37.5 (33+4.5*)
MIC 602:	**Food and Industrial Microbiology-II**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical examination pertaining to the entire syllabus 3 hrs 25 (22+3*)
included in Theory Papers MIC 601 and MIC 602

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

MIC 501-PATHOGENIC MICROBIOLOGY-I

SEMESTER- V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Streptococcus, Pneumococcus, Neisseria, Corynebacterium, Bacillus, Clostridium, Proteus*. The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Rabies, Polio, Small pox and Measles.

Section C

Introduction to Human mycotic infections viz Superficial, Cryptococcosis and Dermatophytosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz. amoebiasis, Kala-azar and Toxoplasmosis.

MICROBIOLOGY

MIC502-FOOD AND INDUSTRIAL MICROBIOLOGY-I

SEMESTER -V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Food as substrate for microorganisms, Nutritive value of food stuffs, Effect of Hydrogen ion concentration (pH), moisture requirement on food, Important food borne diseases viz. Staphylococcal intoxication, Botulism, Salmonellosis and Shigillosis.

Section B

Contamination, preservation and spoilage in various foods viz. cereal and cereal products (cereal grains, flour, bread, pasta, macroni), Sugar and sugar products (Maple, Syrup, Honey, Candy).

Section C

Production strains, Isolation and screening techniques, preservation and genetic modification of Industrial microorganisms.

Section D

Yeast (Baker's) and its uses, Fermentation of Beer, Wine and Alcohol.

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.

5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.
6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY

PRACTICAL

SEMESTER- V

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1. Identification of both Gram positive and Gram negative bacteria on the basis of:
   i) Morphology
   ii) Biochemical characteristics
   iii) Serological reactions
2. Demonstration of pathogens (Viruses, fungi, parasites) in permanent mounted slides
3. Demonstation of cysts/ ovas of Protozoa/ Helminths.
4. Demonstration of Laboratory grown fungi on Sabauraud's agar
5. Germ tube test for *Candida albicans*

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MICROBIOLOGY

MIC601-PATHOGENIC MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Shigella, Salmonella, Vibrio, Yersinia, Hemophilus*and *Mycobacterium.* The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Herpes, Influenza and AIDS

Section C

Introduction to Human mycotic infections viz Blastomycosis, Opportunistic mycosis; Candidiasis and Aspergillosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz.Ascariasis, Filariasis and Hook worm infections

MICROBIOLOGY
MIC602-FOOD AND INDUSTRIAL MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS:37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Qualitative and Quantitative analysis of food components (proteins, lipids, carbohydrates), Microbiological examination of food products including dairy products, food poisoning caused by bacteria and fungi.

Section B

Contamination, preservation and spoilage in various foods viz. Vegetables and fruits, Meat (Fresh meat, fresh beef, hamburger, fish), Milk and milk products (Cheese, butter)

Section C

Fermentation media, Characteristics of Ideal production media, Common substrates used in Ideal fermentations, Batch and continuous fermentations

Section D

Production of organic acids viz. acetic acid, lactic acid, propionic acid, butyric acid and mixed acids. Mass transfer in aerobic fermentations

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.
5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.

6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY
PRACTICAL
B.Sc. (GENERAL) THIRD YEAR EXAMINATION
Semester- VI

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1. Demonstration of Fungi through normal saline/KOH preparation
2. Quantitative examination of microbial types in raw processed preserved food stuffs
3. Direct microscopic examination of bacteria in raw, pasteurised milk
4. Methylene reductase test for milk
5. Various biochemical tests and their importance in Food Microbiology

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MATHEMATICS

SEMESTER V

Paper I : ANALYSIS - I

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Countable and uncountable sets.
Riemann integral, Integrability of continuous and monotonic functions, Properties of integrable functions, The fundamental theorem of integral calculus, Mean value theorems of integral calculus.
Beta and Gamma functions.

Unit-II

Improper integrals and their convergence, Comparison tests, Absolute and conditional convergence, Abel's and Dirichlet's tests, Frullani's integral.
Integral as a function of a parameter. Continuity, derivability and integrability of an integral of a function of a parameter.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa New Delhi, 1997.
5. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.
6. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
7. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
8. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.

Paper II: MODERN ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Groups, Subgroups, Lagrange's Theorem, Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems, Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of A_n, $n \geq 5$ (without proof).

Unit-II

Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings, Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings.

References :

1. S. Singh and Q. Zameerudin : *Modern Algebra*, 8th Edition, Vikas Publication, New Delhi.
2. I.N. Herstein : *Topics in Algebra*, Wiley Eastern Ltd., New Delhi.
3. J.A. Gallian : *Contemporary Abstract Algebra*, Narosa Publication House, New Delhi.
4. M. Artin : *Algebra*, Prentice Hall of India, New Delhi, 1994.

Paper III : PROBABILITY THEORY

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Review of notion of Probability, conditional Probability and independence, Bayes' Theorem.

Random Variables : Concept, probability density function, cumulative distribution function, discrete and continuous random variables, expectations, mean, variance, moment generating function, skewness and kurtosis.

Discrete Random Variables : Bernoulli random variable, binomial random variable, negative binomial random variable, geometric random variable, Poisson random variable.

SECTION B

Continuous Random Variables : Uniform random variable, exponential random variable, Beta random variable, Gamma random variable, Chi-square random variable, normal random variable.

Bivariate Random Variables : Joint distribution, joint and conditional distributions, Conditional Expectations, Independent random variables, the correlation coefficient, Bivariate normal distribution.

References

Ross, S.M. : Introduction to Probability Models (Sixth edition) Academic Press, 1997.

Hogg., R.V and Craig, A.T : Introduction to Mathematical Statistics, MacMillan, 2002.

I. Blake : An Introduction to Applied Probability, John Wiley & Sons,1979.

J. Pitman : Probability, Narosa,1993.

P. L. Meyer : Introductory Probability and Statistical Applications, 2nd Edition, Oxford and IBH Publishing Co

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MATHEMATICS
SEMESTER VI

Paper I : ANALYSIS - II

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Double and triple integrals : Double Integral over A Rectangle, Repeated Integrals in $\mathbf{R}^2$, Double Integrals over Bounded Non-rectangular Regions, Area of Bounded Regions in Plane, Double Integrals as Volumes, Change of Variables in Double Integrals, Change to Polar Coordinates, Area in Polar Coordinates, Triple Integral in Rectangular Coordinates, Triple Integrals over General Regions in $\mathbf{R}^3$, Repeated Integrals in $\mathbf{R}^3$, Volume of a Region in $\mathbf{R}^3$, Change of Variables in a Triple Integral to Cylindrical and Spherical Coordinates

Vector Integration : Line, Surface and Volume integration. Gauss divergence theorem, Stokes' theorem, Green's theorem.

Unit-II

Sequences and series of functions : Pointwise and uniform convergence, Cauchy criterion for uniform convergence, Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence, uniform convergence and continuity, uniform convergence and Riemann integration, uniform convergence and differentiation, Weierstrass approximation theorem(Statement only), Abel's and Taylor's theorems for power series.

Fourier series : Fourier expansion of piecewise monotonic functions, Fourier Series for Odd and Even Function, Half Range Series, Fourier Series in the Intervals $[0, 2\pi]$, $[-1, 1]$ and $[a, b]$.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.

5. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
7. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
8. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.

Paper II : LINEAR ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Vectror Space : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors, Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements

Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations

Unit-II

Linear transformations and matrices, Change of basis.

Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value, Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix).

References :

1. K. Hoffman and R. Kunze : *Linear Algebra*, 2nd Edition, Prentice Hall, New Jersy, 1971.
2. P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, First Course in Linear Algebra (Wiley Eastern Delhi).
3. J. Gilbert and L. Gilbert: Linear Algebra and Matrix Theory (Academic Press).
4. I.N. Herstein, Topics in Algebra (Delhi Vikas).
5. V.Bist and V. Sahai, Linear Algebra (Narosa, Delhi).

Paper III : NUMERICAL ANALYSIS

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials.
Interpolation: Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation

Formulas using Difference.

Numerical Differentiation.
Numerical Quadrature: Newton-Cote's Formulas, Gauss Quadrature Formulas, Chebychev's Formulas.

SECTION B

Linear Equations: Direct Methods for Solving Systems of Linear Equations (Gauss Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, Gauss-Seidel, Relaxation Methods).
The Algebraic Eigenvalue problem: Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.
Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods.

References

1. C.E. Froberg : *Introduction to Numerical Analysis* (Second Edition),Addison-Wesley, 1979.
2. Melvin J. Maron : *Numerical Analysis : A Practical Approach,* Macmillan Publishing Co., New York, 1982.
3. M.K. Jain, S.R.K. Iyengar and R.K. Jain : *Numerical Methods for Scientific and Engineering Computation,* New Age International (P.) Ltd., 1999.
4. R.Y. Rubistein : *Simulation and the Monte Carlo Methods,* John Wiley, 1981.
5. D. J. Yakowitz : *Computational Probability and Simulation,* Addison-Wesley, 1977.
6. S.S. Sastry : *Introductory Methods of Numerical Analysis,* 3rd Edition (2000), Prentice Hall of India Pvt. Ltd., New Delhi.

STATISTICS

SEMESTER-V

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2 A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A. /B.Sc First and Second years.

3 There are two papers with codes 301 and 302 in the subject of Statistics in B.A./B.Sc., Semester-V. These are to be taught simultaneously throughout the Semester.

4 For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lectures per week for theory and practical, shall be allotted for the teaching.

Paper 301: DEMOGRAPHY AND ECO NOMIC STATISTICS

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of this course is to acquaint students with the basic concepts of Microeconomictheory and the analysis of Statistical concepts used in the context of economic set up. They will also be exposed to the basic concepts in Demography.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT –I

Sources of demographic data-census, vital statistical registers, adhoc surveys and hospital records. Measurement of mortality - crude death rate, specific death rates, standardized death rate, infant mortality rate and cause of death rate, complete life Table and its description. Measurement of fertility - crude birth rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate.

Economic time series, its different components, illustrations, additive and multiplicative models, determination of trend, growth curves (exponential and modified exponential), analysis of seasonal fluctuations, construction of seasonal indices.

UNIT –II

Index numbers**,** definition, Methods to construct price, quantity and value index numbers. Problems involved in the construction of index numbers, use of averages, simple aggregative and weighted average methods. Laspeyre's, Paasche's, Edgeworth - Marshall and Fisher's index numbers. Time and factor reversal tests of index numbers. Chain Base index numbers, Cost of living index number, interpretation and applications of index numbers.

Static laws of demand and supply, price elasticity of demand, Pareto distribution, log normal distribution and their properties.

References:

1. Goon A.M., Gupta M.K. Gupta. B.(2005) : Fundamentals of Statistics, Vol. II, World Press, Das Calcutta.
2. Srivastava O.S (1983) : A Textbook of Demography, Vikas Publishing.

Additional References:

1. Croxton F.E and Cowden D.J. (1969) : Applied General Statistics, Prentice Hall of India.
2. Gupta and Mukhopadhyay P.P (1999) : Applied Statistics, Central Book Agency.
3. Gupta, S. C. & . Kapoor, V. K (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

PAPER 302 : PRACTICAL (SEMESTER-V)

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Computing measures of mortality & fertility, construction of complete life table and examples involving users of life tables.
2. Construction of Index Numbers by Laspeyre's, Paasche's, Edgeworth-Marshall's and Fisher's methods.
3. Determination of trend, construction of seasonal indices in a time series.

STATISTICS
B.A. /B.Sc. (GENERAL) THIRD YEAR EXAMINATION
SEMESTER-VI

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2 A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc. First and Second years.

3 There are two papers with codes 303 and 304 in the subject of Statistics in B.A./B.Sc., Semester-VI. These are to be taught simultaneously throughout the Semester.

4 For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lectures per week for theory and practical, shall be allotted for the teaching.

Paper 303: STATISTICAL QUALITY CONTROL AND COMPUTATIONAL TECHNIQUES

Maximum Marks : 75
Theory : 65
Internal Assessment : 10
Time allowed : 3 hours

Objective: This course teaches the application of Statistics to maintain quality in Enginnering or industrial set up. Linear programming with applications in the management and Administration of military, government, commercial, and industrial systems, is used to maximize the utility of limited resources. The objective is to acquaint the students ith different techniques for optimization.

Notes:

1 There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2 Simple non-programmable calculator is allowed.

3 Statistical tables and log tables will be provided on request.

UNIT –I

Importance of Statistical methods in industrial research and practice, meaning of quality, quality assurance and process control. General theory of control charts, causes of variations in quality, control limits, sub-grouping summery of out of control criteria. Charts for variables - $\overline{X}$ and R charts. Charts for attributes - np, p, c and u - charts.

Principle of acceptance sampling- problem of lot acceptance, stipulation of good and bad lots, concepts of producer's and consumer's risks, AQL, LTPD, AOQL, ATI, ASN and OC functions. Single and double sampling plans and their ATI, ASN and OC functions.

UNIT –II

Difference tables and methods of interpolation, Newton's and Lagrange's methods of interpolation, divided differences, numerical differentiation and integration. Trapezoidal rule, Simpson's one third formula, iterative solution of linear equations by Gauss – Seidel Method.

Linear Programming: elementary theory of convex sets, definition of general linear programming problems (LPP), formulation of LPP, examples of LPP. Graphical and simplex methods of solving an LPP, artificial variables, duality of LPP ,Transportation problem (non-degenerate and balanced cases), initial basic feasible solution through North-West Corner Rule, Matrix Minima & VAN method.

References:

1. Goon, A.M, Gupta, M.K. and Dasgupta, B. (2005) : Fundamental of Statistics Vol. I. World Press, Calcutta.
2. Goon, A.M, Gupta, M.K. and Dasgupta, B. (2005) : Fundamental of Statistics Vol. II. World Press, Calcutta.
3. Jain M.K., Iyengar S.R.K. & Jain R.K. (2010) : Numerical Methods, 5th edition.
4. Montgomery, D.C (2001) : Introduction to Statistical Quality Control; Wiley
5. Swarup, K, Gupta, P.K. and Manmohan, M. (2008) : Operation research, Sultan Chand & Sons Educational Publishers New Delhi.

Additional References:

1. Grant E.L (1964) : Statistical Quality Control, McGraw Hill.
2. Duncan A.J (1974) : Quality Control and Industrial Statistics, Taraporewala and Sons.
3. Gass S.I (1975) : Linear Programming Methods and Applications, McGraw Hill.
4. Rajaraman, V (1981) : Computer Oriented Numerical Methods, Prentice Hall.

PAPER 304 : PRACTICAL (SEMESTER-V)

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1 Drawing of $\overline{X}$, R, np, p,c and u – charts, Drawing of OC, AOQ and ATI curves for single and double sampling plans for attributes.

2 Construction of difference tables, use of Newton, Lagrange and divided difference interpolation formulae, numerical evaluation of integrals using Trapezoidal and Simpson one-third formulae, solution of system of linear equations by Gauss – Seidel iterative method.

3 Formulation of LPP's and their duals. Solving LPP's by graphical and Simplex methods, solution of transportation problem.

APPLIED STATISTICS

SEMESTER-V

Note:
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./ B.Sc. Statistics.
2 The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.
3. There is one paper with code 301AS in the subject of Applied Statistics in B.A./B.Sc. Semester-V, having a total of 100 marks.
4 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 301 AS: ESTIMATION AND TESTING OF HYPOTHESIS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide

(i) a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.
(ii) exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.
(iii) an insight into Multivariate Techniques.

Notes:

1 There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.

2 Simple non-programmable calculator is allowed.
3 Statistical tables and log tables will be provided on request.

UNIT –I

Estimators and estimates, unbiased, consistent, efficient estimators. Methods of moments, maximum likelihood estimators for the parameters of Binomial, Poisson and normal distributions, confidence intervals.

Tests of a statistical hypothesis, two types of errors, power of a test, Tests for the parameters of Binomial, Poisson and normal distributions, Chi-squared tests of goodness of fit. Wilcoxon and sign test.

UNIT –II

Analysis of variance, one and two way classifications. Estimates of main effects, tests of significance for equality of effects.

Principles of design of experiments- Randomization, replication and local control. Completely randomized and randomized block designs.

Multivariate Techniques (upto 4 variables only). Estimators of mean vector and variance-covariance matrix of multivariate (upto 4) normal distribution, multiple regression, multiple correlation and partial correlation.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B (2005) : Fundamentals of Statistics, Vol. I Chapters: 14 to18 (only the relevant portion from these chapters as suggested in the syllabus)

2. Goon, A.M., Gupta, M.K. and Das Gupta, B (2005) : Fundamentals of Statistics, Vol. II, Chapters: 1, 2 (only the relevant portion from these chapters as suggested in the syllabus)

Additional references:

1. Daniel, W.W. and Cross C.L. (2013) : Biostatistics. A foundation for analysis in the health Sciences, (10^{th} edition) Wiley India: New Delhi.
2. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

APPLIED STATISTICS

SIXTH SEMESTER

Note: 1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/ or B.A./ B.Sc. Statistics.

2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.

3. There is one paper with code 302AS in the subject of Applied Statistics in B.A./B.Sc. Semester VI, having a total of 100 marks.

4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 302AS: ECONOMICS AND INDUSTRIAL STATISTICS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide an idea about different sampling methods, use of index numbers and time series. It also provides exposure to the knowledge about controlling quality in industry. Different measures used in demography are described.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

UNIT-I

Sampling: Simple random and stratified sampling, optimum allocation in stratified sampling. Ratio and regression estimates.

Index Numbers: Index Numbers-as weighted averages, Price Index numbers, Quantity index numbers, Fisher's tests for index numbers.

Time Series: The four components of a time series, moving average, the Slutsky Yule effect, determination of trend by curve fitting and moving average methods.

UNIT –II

Quality Control: Construction, use and interpretation of control charts for mean, range, fraction defective and number of defects. Single sampling inspection plans. Concepts of producer's and consumer's risks, O.C. and A.O.Q. Curves.

Vital Statistics: Rates and ratios, crude death rate, age specific death rate, infant mortality rates, standardized death rates, direct and indirect methods. Measurement of fertility, crude birth rate, general, specific and total fertility rates. Standardized birth rates. Calendar Year rates.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B. (2005) : Fundamentals of Statistics, Vol. II, Ch. 3, 4, 6, 7, 9. (only the relevant portion from these chapters as suggested in the syllabus)

2. Daniel, W.W. and Cross C.L. (2013) : Biostatistics, A foundation for analysis in the health Sciences, Tenth edition Wiley India: New Delhi.

Additional References:

1. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

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PHYSICS

B.Sc. (GENERAL) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2019-20

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal assessment.
   The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the sixth semester examination.
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper will be three hours and it will be four hours for practicals.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems /exercises in the question paper should be 25-30%.
6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

PHYSICS

SEMESTER – V

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - I	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - I	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - I	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - I (30 Hrs.)

UNIT-I

Crystal structure: Symmetry operations for a two dimensional crystal. Two dimensional Bravais lattices, Three dimensional Bravais lattices, Basic primitive cells, Crystal planes and Miller indices, Diamond and NaCl structure. Crystal diffraction : Bragg's Law, Determination of crystal structure, Laue equations, Reciprocal lattices of SC, BCC and FCC, Bragg's law in reciprocal lattice, Brillouin zones and its derivation in two dimensions, structure factor and atomic form factor.

UNIT-II

Band Theory of solids, periodic potential and Bloch theorem, Kronig-Penney model, band gaps, band structures in conductors, direct and indirect semiconductors and insulators.
Free electron theory of metals, effective mass, drift current, mobility and conductivity (carrier concentration and mobility of carriers) and their variation with temperature in semi-conductors, Fermi level positions in intrinsic and extrinsic semiconductors, Wiedemann-Franz law, Hall effect in metals and semiconductors.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition, S.O.* Pillai, *New Age International Publishers.*
4. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - I (30 Hrs.)

UNIT-I

Concepts of current and voltage sources, Thevenin's theorem, Norton's theorem, Source conversion.
CRO, Block diagram, construction and principle of working, Use of CRO for frequency, time period, special features of dual trace, phase measurements.

Energy band diagrams in semiconductors, Direct and indirect semiconductors, Formula to calculate Position of Fermi level in p and n semiconductors, Barrier formation, energy band diagram of p-n junction, Formula for Depletion width, Qualitative ides of current flow mechanism in forward and reverse biased diode, v-i characteristics, static and dynamic resistance, Depletion and diffusion capacitance, zener diode, LED, photodiode and solar cell.

(Book 1, Book 3)

UNIT-II

Diode circuits, Clipping circuits, Rectification: half wave, full wave and bridge rectifiers, filter circuits (C, LC and π filters), rectification efficiency and ripple factor in LC filter, voltage regulation circuit using zener diode, voltage multiplier circuits.
Bipolar Junction transistors : Structure and working, different currents in transistor, switching action. Characteristics of CB, CE and CC configurations, Active, cutoff and saturation regions.
Load line analysis of transistors, Q-point, Transistor biasing and stabilization of operating point, fixed bias, collector to base bias, bias circuit with emitter resistor, voltage divider biasing circuit.
Working ans analysis of CE amplifier using h-parameters, current, voltage and power gain, input and output impedance. Class A, B and C amplifiers.

(Book 1, Book 2)

Recommended Books :

Essential Readings :

1. Electronic Devices and Circuit Theory, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, *7th ed.* McGraw Hill
3. *Solid State Electronic Devices,* 6th Ed., Ben G. Streetman and S. Banerjee, Eastern Economy Edition.

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata Mc Graw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha, and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - I **(60 Hrs.)**

UNIT-I

General properties of Nuclei : Constituents of nucleus and their intrinsic properties, Quantitative facts about nuclear size, mass, density, binding energy and its variation with mass number, Wave mechanical properties of nucleus, angular momentum, parity; magnetic moment and electric moments of the nucleus. properties of nuclear forces and saturation, meson theory of nuclear forces
Nuclear Models : Liquid drop model, semi-empirical mass formula, most stable isobar.
Evidence for nuclear shell structure, Nuclear shell model, concept of mean field.

UNIT-II

Radioactive decay, Units of radioactivity (Ci and Bq), Successive disintegration, Natural radioactivity, Radioactive series, Carbon dating.
Alpha decay, energetic, alpha spectrum, Gamow's theory of alpha decay, Geiger-Nuttal rule.
Beta decay, Qualitative discussion of beta spectrum, Evidence of existence of Neutrino, Conservation of nuclear energy in Beta minus, Beta plus and Electron capture decays.
Gamma-ray emission, selection rules, Internal conversion.

Nuclear Reactions: Types, Concept of compound and direct (pickup and stripping) reactions, Reaction differential and integral cross section, units, conservation laws and kinematics, Q-value equation, Coulomb (Rutherford) scattering cross section and distance of nearest approach.
Energy classification of neutrons, Nuclear fission in reactors, Reactor facilities available in India, Nuclear fusion in stars.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.
2. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
3. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II . The Practical examination will be held along with the sixth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.

3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.

4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.

5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.

6. Number of candidates in a group for practical examination should not exceed 12.

7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

Note : Each student should perform ***at least Nine experiments*** in the laboratory.

UNIT-I

I CONDENSED MATTER PHYSICS:

(i) Measurement of reverse saturation current in p-n junction diode at various temperatures and to find the approximate value of energy gap.
(ii) To draw forward and reverse bias characteristics of a p-n junction diode and draw a load line.
(iii) Study of a diode as a clipping element.
(iv) To measure the magnetic susceptibility of $FeCl_2$ solution by Quincke's method.

II ELECTRONICS AND SOLID STATE DEVICES :

(v) To study the response of RC-circuit to various input voltages (square, sine and triangular).
(vi) To measure the efficiency and ripple factors for (a) Half-wave, (b) Full wave, and (c) Bridge rectifier circuits.
(vii) To study the reduction in the ripples in the rectified output with RC, LC and π-filters.
(viii) To draw the characteristics of a Zener diode and LED using constant current source.
(ix) To study the stabilization of output voltage of a power supply with Zener diode.
(x) To set up an oscillator and study its output on CRO for different V values.
(xi) To study the characteristics of a thermistor and find its parameters.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. Print a 2D array in spiral form.
2. To find determinant of a given matrix.
3. To find inverse of a given matrix.
4. To interpolate the data values from the given set.

UNIT-II

I CONDENSED MATTER PHYSICS:

(i) To trace the B-H curves for different materials using CRO and find the magnetic parameters from these.
(ii) To find the conductivity of a given semi-conductor crystal using four probe method.
(iii) To determine the Hall coefficient for a given semiconductor.

II ELECTRONICS AND SOLID STATE DEVICES :

(iv) To measure and plot Common Emitter Characteristics of a transistor (pnp or npn).
(v) To plot Common Base Characteristics and determine h-parameters of a given transistor.
(vi) To draw output and mutual characteristics of an FET and determine its parameters.
(vii) To study the gain of an amplifier at different frequencies and to find band-width and gain-band- width product.

III NUCLEAR PHYSICS :

(viii) To draw the Plateau of a GM counter and find its dead time.

(ix) To study the statistical fluctuations using GM counter.

(x) To study the absorption of beta-particles and determine the end point energy using GM counter. Also determine the absorption co-efficient (for aluminium) from it.

(xi) Verification of Rutherford Scattering experiment-mechanical analogue.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. To solve simultaneous equations by elimination method.
2. Fitting a straight line or a simple curve of a given data.
3. Convert a given integer into binary and octal/hexadecimal system and vice versa.

Text and Reference Books :

1. *"A Laboratory Manual of Physics for Undergraduate Classes" by D.P.* Khandelwal.
2. *"B.Sc. Practical Physics" by C.L. Arora, S. Chand & Co. (2014)*
3. *"Numerical Analysis" by C. Dixon*
4. *Programming with C,* Byron Gottfried & Jitender Chhabra, *Schaum series*

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PHYSICS

SEMESTER – VI

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - II	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - II	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - II	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - II (30 Hrs.)

UNIT-I

Lattice Dynamics : Lattice vibrations and phonons, Scattering of photons by phonons, Dynamics of a linear chain of similar atoms and chain of two types of atoms, optical and acoustic modes, Density of modes, Einstein and Debye theories of specific heats of solids.

Magnetic classification of materials (Dia, para, ferro, ferri, antiferro), Langevin theory of dia and paramagnetism, Quantum theory, Weiss's theory of Ferromagnetism, temperature dependence, hysteresis of ferromagnetic materials.

UNIT-II

Dielectric constant & polarizability, electric susceptibility, Clausius Mosotti equation, frequency dependence, ferroelectrics and Piezoelectrics.

Liquid crystals, various types and properties. Applications.

Superconductivity: Meisner effect, London's equation and penetration depth, critical magnetic field and temperature, DC and AC Josephson effect, BCS theory (formation of cooper pairs), ground state and energy gap.

Basic ideas of materials at nanoscale: Difference from bulk material properties, Nanoparticles, introduction to fabrication and characterization techniques, Carbon Nanostructures - nanotubes, grapheme. Applications of nanotechnology in various fields.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition,* S.O. Pillai, New Age International Publishers.
4. *Fundamental of Physics, Vol. II,* R.M.P. Jaiswal, S.K. Gupta and A. Rani, R. Chand and Co.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - II (30 Hrs.)

UNIT-I

Structure and working of JEFT, characteristics, drain and transconductance curve, FET amplifier and its voltage gain, Structure and working of MOSFET.

Feed back in amplifiers, voltage gain of negative feedback amplifier, advantages of negative voltage feedback, negative current feedback circuit, emitter follower.

Theory of sinusoidal oscillations, loop gain and phase, Lead-lag RC circuit, Wein bridge oscillator. Barkhausen criterion of sustained oscillations, positive feedback amplifier, LC oscillators, Colpitts and Hartley oscillators.

(Book1, Book2)

UNIT-II

Operational amplifier (black box approach) : Characteristics of ideal and practical opamp 741, open-loop and closed-loop gain, characteristics and applications - inverting and non-inverting amplifiers, adder, subtractor, differentiator and integrator, Comparator, Timer IC555, pin diagram and its applications as astable and monostable multivibrator.

(Book1, Book2)

Analog and digital circuits, binary numbers, decimal to binary conversions, AND, OR, NOT gates, NAND NOR gates as universal gates, XOR and XNOR gates.

De Morgan's theorem, Simplification of logic circuit using Boolean algebra, Minterms and Maxterms, Conversion of a truth table into an equivalent logic circuit by Sum of products method. (Book 3)

Analog and digital communication systems, Amplitude and Frequency modulation, Power in AM wave, generation and detection, Brief account of Satellite communication, Sky-wave communication, and mobile communication.

Recommended Books :

Essential Readings :

1. *Electronic Devices and Circuit Theory*, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, 7th *ed.* McGraw Hill
3. Digital Principles and Applications, 7th Ed., A.P. Malvino, D.P. Leach and Saha, 2011, Tata McGraw Hill

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata McGraw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - II (30 Hrs.)

UNIT-I

Interaction of nuclear radiation with matter: Energy loss due to ionization (Bethe Bloch formula), Range and energy straggling, Energy loss of electrons and positrons, radiation loss by fast electrons, Bremsstrahlung, electron-positron annihilation, production of Cerenkov radiation,
Gamma-ray interaction with matter, photoelectric effect, Compton scattering, pair production (qualitative description).
Detectors for nuclear radiation: Gas-filled detectors, Ionization chamber, proportional counter, G.M. counter, Scintillation detector and Photomultiplier tube, Brief account of Semiconductor detectors.

UNIT-II

Particle Physics : Particle interactions : basic features and their exchange particles, Classification of elementary particles, properties, decay modes of leptons and mesons, Antiparticles, charge conjugation
Symmetries and Conservation principles, Lepton number, baryon number, Isospin, Hypercharge, Strangeness and charm, Gell-mann Nishijima formula
Concept of the quark model, color quantum number and gluons.
Origin and composition of Cosmic rays, Secondary cosmic rays, Effect of magnetic field of earth, Van Allen belts.
Particle accelerators: Cockcroft-Walton accelerator, Van-de Graaff generator, Tandem accelerator Linear accelerator, Cyclotron. Brief account of Syncrhrotron, Accelerator facilities available in India.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.
4. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.

Further Readings :

1. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
2. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The Practical examination will be held along with the sixth semester examinations.General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester V.

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

SEMESTER-6th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Total Marks

SEMESTER-5-100

SEMESTER-6-100

200

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*		*Teaching Hrs.*	*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XVII: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Metal – Ligand Bonding in Transition Metal Complexes:

Limitations of valence bond theory, an elementary idea of crystal – field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal – field parameters, Spectro chemical Series.

UNIT-II **(7 Hrs.)**

Thermodynamic and Kinetic Aspects of Metal Complexes :

A brief outline of thermodynamic and Kinetic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes.

UNIT-III **(8 Hrs.)**

Organometallic Chemistry:

Definition, nomenclature and classification of organometallic compounds. Preparation, properties, bonding and applications of alkyls and aryls of Li, Al , Hg, Sn and Ti, a brief account of metal – ethylenic complexes and homogeneous hydrogenation, mononuclear carbonyls and the nature of bonding in metal carbonyls

UNIT-IV **(7 Hrs.)**

Bioinorganic Chemistry:
Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin. Biological role of alkali and alkaline earth metal ions. Nitrogen fixation.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5. Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6. Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9. Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XVIII: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I

Electromagnetic Spectrum: Absorption Spectra –I: **(7 Hrs.)**
Ultraviolet (UV) absorption spectroscopy – Absorption laws (Beer – Lambert Law), molar absorptivity, presentation and analysis of UV spectra, types of electronic transitions, effect of conjugation. Concept of chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. UV spectra of conjugated enes and enones.

Woodward Fieser Rules and their applications in calculating maximum values of conjugated alkenes (cyclic as well as acyclic) and conjugated carbonyl compounds.

UNIT-II **(7 Hrs.)**

Electromagnetic Spectrum: Absorption Spectra-II:

Infrared (IR) absorption spectroscopy – Molecular vibrations, Hooke's law, selection rules, intensity and position of IR bands, measurement of IR spectrum, fingerprint region, characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds.

Problems pertaining to the structure elucidation of simple organic compounds using UV, IR and PMR spectroscopic techniques.

UNIT-III **(8 Hrs.)**

Spectroscopy:

Nuclear magnetic resonance (NMR) spectroscopy.
Proton magnetic resonance (^{1}H NMR) spectroscopy, nuclear shielding and deshielding, chemical shift and molecular structure, spin-spin splitting and coupling constants, area of signals, interpretation of PMR spectra of simple organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromoethane, ethyl acetate, toluene and acetophenone.

UNIT-IV **(8 Hrs.)**

Carbohydrates:

Classification and nomenclature. Monosaccharides, mechanism of osazone formation, interconversion of glucose and fructose, chain lengthening and chain shortening of aldoses. Configuration of monosaccharides. Erythro and threo diastereomers. Conversion of glucose into mannose. Formation of glycosides, ethers and esters. Determination of ring size of monosaccharides. Cyclic structure of D (+) – glucose. Mechanism of mutarotation.

Structure of ribose and deoxyribose.

An introduction to disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose) without involving structure determination.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5. Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XIX: PHYSICAL CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Elementary Quantum Mechanics-I:

Black-body radiation, Planck's radiation law, photoelectric effect, heat capacity of solids, Bohr's model of hydrogen atom (no derivation) and its defects, Compton effect.

De Broglie hypothesis, the Heisenberg's uncertainty principle, Sinusoidal wave equation, Hamiltonian operator, Schrodinger wave equation and its importance, physical interpretation of the wave function, postulates of quantum mechanics, particle in a one dimensional box.

Schrodinger wave equation for H-atom, separation into three equations (without derivation), quantum numbers and their importance, hydrogen like wave functions, radial wave functions, angular wave functions.

UNIT-II (7 Hrs.)

Elementary Quantum Mechanics-II:

Molecular orbital theory, basic ideas – criteria for forming M.O. from A.O., construction of M.O.'s by LCAO – H_2^+ ion. Calculation of energy levels from wave functions, physical picture of bonding and antibonding wave functions, concept of σ, $\sigma*$, π, π^* orbitals and their characteristics. Hybrid orbitals – sp, sp^2, sp^3; calculation of coefficients of A.O.'s used in these hybrid orbitals.

Introduction to valence bond model of H_2, comparison of M.O. and V.B. models.

UNIT-III (8 Hrs.)

Photochemistry-I:

Interaction of radiation with matter, difference between thermal and photochemical processes. Laws of Photochemistry: Grothus – Drapper law, Stark – Einstein law, Jablonski diagram depicting various processes occurring in the excited state.

UNIT-IV (7 Hrs.)

Photochemistry-II:

Qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions – energy transfer processes (simple examples).Photochemistry of carbonyl compounds and alkenes.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11. Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12. Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13. Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XX: LABORATORY PRACTICALS **Max. Marks: 22+3**

INORGANIC CHEMISTRY

Synthesis and Analysis: **6 Periods/ week**

(a) Preparation of sodium trioxalatoferrate (III), $Na_3[Fe(C_2O_4)_3]$ and determination of its composition by permaganometry.
(b) Preparation of copper tetraammine complex $[Cu(NH_3)_4]SO_4$.
(c) Preparation of cis-and trans-bisoxalatodiaqua chromate (III) ion.

Instrumentation
Solvent Extraction
Separation and estimation of Mg(II) and Fe(II).

PHYSICAL CHEMISTRY

Electrochemistry

(a) To determine the strength of the given acid conductometrically using standard alkali solution.
(b) To determine the solubility and solubility product of a sparingly soluble electrolyte conductomertircally.
(c) To study the saponification of ethyl acetate conductometrically.
(d) To determine the ionization constant of a weak acid conductometrically.
(e) To study the distribution of iodine between water and CCl_4.
(f) To study the distribution of benzoic acid between benzene and water.

Molecular Weight Determination

(a) Determination of molecular weight of a non – volatile solute by Rast method.
(b) Determination of the apparent degree of dissociation of an electrolyte (e.g. NaCl) in aqueous solution of the substance.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an inorganic complex : 7 marks

Q.No. 2. Physical Chemistry : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1. Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.
2. Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.
3. Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.
4. Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.
5. Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.
6. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.
7. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.
8. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.
9. Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.
10. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

CHEMISTRY
SEMESTER-6th
Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XXI: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course
To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Silicones and Phosphazenes:

Silicones and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.

UNIT-II **(8 Hrs.)**

Hard and Soft Acids and Bases (HSAB):

Classification of acids and bases as hard and soft Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, theoretical basis of hardness and softness, electronegativity and hardness and softness.

UNIT-III **(8 Hrs.)**

Electronic Spectra of Transition Metal Complexes:
Types of electronic transitions, L – S coupling, selection rules for *d-d* transitions, spectroscopic ground states, Orgel – energy level diagram for d^1 and d^9states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-IV **(7 Hrs.)**

Magnetic Properties of Transition Metal Complexes:

Types of magnetic behaviour, methods of determining magnetic susceptibility, spin-only formula. Correlation of μ_s and μ_{eff} values, orbital contribution to magnetic moments, application of magnetic moment data for 3*d*-metal complexes.

Instructions for paper setters and candidates:

i ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2 Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3 Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4 Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5 Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6 Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7 Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8 Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9 Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XXII: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Amino Acids, Peptides, Proteins and Nucleic Acids:

Classification, structure and stereochemistry of amino acids. Acid- base behavior, isoelectric point and electrophoresis. Preparation and reactions of α - amino acids.

Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid – phase peptide synthesis. Structures of peptides and proteins. Levels of protein structure. Protein denaturation/renaturation.

Nucleic Acids : Introduction. Constituents of nucleic acids. Ribonucleosides and ribonucleotides. The double helical Structure of DNA.

UNIT-II **(7 Hrs.)**

Synthetic Polymers:

Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler – Natta polymerization and vinyl polymers.

Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy resins and polyurethanes.

Natural and synthetic rubbers.

UNIT-III **(7 Hrs.)**

Organic Synthesis via Enolates:

Acidity of ά-hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.

UNIT-IV **(8 Hrs.)**

Organometallic Compounds:

Organomagnesium Compounds: The Grignard reagents – Formation, structure and chemical reactions.

Organozinc Compounds: Formation and Chemical reactions.

Organolithium Compounds: Formation and Chemical reactions.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2 Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3 Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.

4 Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

5 Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.

6 Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XXIII: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Solid State-I:

Definition of space lattice, unit cell and Miller Indices

Laws of Crystallography – (i) Law of Constancy of Interfacial Angles, (ii) Law of Rationality of Indices, (iii) Law of Symmetry. Symmetry elements in crystals.

UNIT-II **(8 Hrs.)**

Solid State-II:

X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure of NaCl, KCl and CsCl (Laue's method and powder method). Applications of Powder diffraction for structure determination, Thermal and photochemical reaction in solid state

UNIT-III **(8 Hrs.)**

Spectroscopy :
Introduction : Electromagnetic radiation, regions of the spectrum, basic features of different spectrometers, statement of the Born-Oppenheimer approximation, degrees of freedom.

Rotational Spectrum:
Diatomic molecules. Energy levels of a rigid rotor (semi – classical principles), selection rules, spectral intensity, determination of bond length, qualitative description of non-rigid rotor, isotope effect.

UNIT-IV **(7 Hrs.)**

Vibrational Spectrum:
Infrared Spectrum : Energy levels of simple harmonic oscillator, selection rules, pure vibrational spectrum intensity, determination of force constant and qualitative relation of force constant and bond energies, effect of anharmonic motion and isotope on the spectrum, idea of vibrational frequencies of different functional groups. Raman Spectrum : Concept of polarizability, pure rotational and pure vibrational, Raman spectra of diatomic molecules, selection rules.

Electronic Spectrum:
Concept of potential energy curves for bonding and antibonding molecular orbitals, qualitative description of selection rules and Franck- Condon principle.

Qualitative description of σ, π – and n M.O., their energy levels and the respective transitions.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2 Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3 Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4 Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5 Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6 Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7 Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8 Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9 Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10 Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11 Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12 Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13 Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XXIV: LABORATORY PRACTICALS **Max. Marks: 22+3**

ORGANIC CHEMISTRY
Laboratory Techniques
Column Chromatography
Separation of fluorescein and methylene blue.
Separation of leaf pigments from spinach leaves.

Synthesis of Organic Compounds

(a) Aliphatic electrophilic substitution.
Preparation of iodoform from ethanol and acetone.
(b) Aromatic electrophilic substitution.
Nitration

Preparation of m-dinitrobenzene
Preparation of p-nitroacetanilide
Preparation of p-iodoaniline from aniline.
Preparation of methyl orange from N,N-dimethyl aniline and sulphanilic acid.

Halogenation

Preparation of p-bromoacetanilide

Preparation of 2,4,6 – tribromophenol

(c) Oxidation

Preparation of benzoic acid from toluene.

(d) Reduction

Preparation of aniline from nitrobenzene

Preparation of m-nitroaniline from m - dinitrobenzene

Stereochemical study of Organic Compounds via Models

R and S configuration of optical isomers.

E, Z configuration of geometrical isomers

Conformational analysis of cyclohexanes and substituted cyclohexanes.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an organic compound : 7 marks

Q.No. 2. Experiment based onLaboratory Technique : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1 Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.

2 Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.

3 Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.

4 Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.

5 Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.

6 Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

7 Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

8 Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

9 Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

10 Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

BOTANY

B.Sc. (General) Botany Fifth and Sixth Semester Syllabus (Examinations, 2019-2020)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper-A:	Plant Physiology-I	3 hrs.	36	04	40
Theory Paper-B:	Plant Ecology	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Sixth Semester					
Theory Paper-A:	Plant Physiology-II	3 hrs.	36	04	40
Theory Paper-B:	Economic Botany	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of **9** questions. Question No.1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY

SEMESTER -V

THEORY PAPER- A: PLANT PHYSIOLOGY-I

Objectives: The basic aim of this paper is to familiarize the students with various concepts of functions and metabolism of plants. The course material of this paper would enable the students to correlate structural diversity of various plant forms with functional differentiation and its biological aspects including biological nitrogen fixation and mineral nutrition. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

UNIT-I

Plant Water Relations: Importance of water to plant life; physical properties of water; imbibition, diffusion, osmosis, plasmolysis and deplasmolysis, concept of osmotic potential, water potential and pressure potential; absorption of water, active and passive mechanism of water absorption; transport of water, mechanism and theories to explain ascent of sap; transpiration types, mechanism of opening and closing of stomata, mechanism of transpiration, factors affecting transpiration, antitranspirants.

UNIT-II

Mineral nutrition: Hydroponics and its importance; essential macro-and micro elements, essentiality criteria, deficiency symptoms and their role; mineral uptake; mechanism of mineral uptake (active, passive absorption and modern concepts).

UNIT-III

Nitrogen Metabolism: Biological nitrogen fixation; importance of nitrate reductase and its regulation; ammonia assimilation.

Lipid Metabolism: Structure and function of lipids; β – oxidation; saturated and unsaturated fatty acids.

UNIT-IV

Proteins: Classification, role and structure (primary, secondary and tertiary) of proteins.

Basics of enzymology: Discovery and nomenclature; classification, structure, properties, factors affecting enzyme activity, mechanism of enzyme action.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
3. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
4. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
5. Taiz, L. and Zeiger, E. Plant Physiology (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010
6. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: PLANT ECOLOGY

Objective: The basic objective of this paper is to make students aware about the role of environment in causing structural and functional variation in plants. Since the present day problems of varied nature like pollution, Global Warming etc. are directly or indirectly related to ecology, it is more than desired to provide the students with knowledge of basic concepts of ecology.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Definition, scope, relationship with other sciences.

Plant Environment: Climatic, edaphic, topographic and biotic factors affecting growth and distribution of plants.

UNIT-II

Ecosystem : Concept, structure; abiotic and biotic components; trophic levels, food chain, food web, ecological pyramids, energy flow, biogeochemical cycles of carbon, nitrogen and water.

UNIT-III

Community Ecology: Community characteristics, frequency, density cover, life forms, biological spectrum; ecological succession – Hydrosere and Xerosere.

UNIT-IV

Applied Ecology :

a) Air, water and soil pollution and their control.

b) Conservation and management of natural resources. (renewable and non-renewable)

Suggested Readings

1. Kormondy, E.J. Concepts of Ecology. Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.
2. Odum, E. and Barrett, G.W. Fundamentals of Ecology, Cengage Learning Publisher, 2004.
3. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.
4. Saini A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
5. Sharma, P.D. Ecology and Environment, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To determine osmotic pressure of cell sap by plasmolytic method.

2. To demonstrate imbibition pressure using:

   i) Imbibition pressure apparatus.
   ii) Plaster of Paris cone.

3. To demonstrate osmosis through animal membrane/potato osmoscope.

4. To demonstrate plasmolysis and deplasmolysis.

5. To demonstrate mechanical and electrical adsorption.

6. To demonstrate the measurement of transpiration using simple potometer.

7. To demonstrate transpiration pull.

8. To study the effect of light intensity, and wind velocity on the rate of transpiration using Ganong's potometer.

9. To compare the rate of transpiration from the two sides of a leaf using :

   i) Vaseline method
   ii) Cobalt chloride method

10. To demonstrate the mechanism of opening and closing of stomata.

11. To demonstrate the path of ascent of sap.

Plant Ecology:

1. Study of ecological adaptations in external characters of :

   Hydrilla, Potamogeton, Ceratophyllum, Vallisneria, Lemna, Eichhornia Nelumbium, Calotropis, Nerium, Acacia, Zizyphus, Casuarina, Capparis, Asparagus, Ruscus, Opuntia, Euphorbia royleana.

2. To prepare permanent stained slide to show ecological adaptations in the internal structure of the following:

   a) T.S. stem of *Hydrilla*

   b) T.S. leaf and petiole of *Eichhornia*

   c) T.S. leaf and petiole of *Nelumbium*

   d) T.S. leaf of *Nerium*

   e) T.S. stem of *Casuarina* and *Capparis*

3. To determine soil pH using pH paper/solution/pH meter.

4. To determine water holding capacity of soil.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and cut T.S. of stem, leaf or petiole (to be announced by the examiner) of specimen B. Make its permanent stained slide and show it to the examiner. Draw its labelled diagram and write its morphological and anatomical characters of ecological importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

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BOTANY

SEMESTER -VI

PAPER-A: PLANT PHYSIOLOGY-II

Objectives: The main objective of this paper is to familiarize the students with growth and metabolic processes of the plants. It also deals with the plant development, differentiation and their regulatory mechanism along with basic concepts in tissue culture.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

UNIT-I

Photosynthesis: Significance, historical aspect; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems, cyclic and non- cyclic photophosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration; factors affecting photosynthesis; transport of organic substances: Mechanism of phloem transport, source-sink relationship, factors affecting translocation.

UNIT-II

Respiration: ATP – The biological energy currency; aerobic and anaerobic respiration; Krebs cycle; electron transport mechanism (Chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway; respiratory quotient.

UNIT-III

Growth and development: Definitions; phases of growth and development; kinetics of growth, factors affecting growth; plant movements; the concept of photoperiodism, physiology of flowering; florigen concept; roles of plant hormones– auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery.

UNIT-IV

Biotechnology: Functional definition; basic aspects of plant tissue culture, its applications and somatic hybridization.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Bhojwani, S.S. Plant Tissue Culture: applications and Limitations. Elsevier Science Publishers, New York, USA, 1990.
3. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
4. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
5. Srivastava, H.N. Plant Physiology, Biochemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
6. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
7. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
8. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.
9. Taiz, L. and Zeiger, E. Plant Physiology (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010

PAPER-B: ECONOMIC BOTANY

Objective: The basic objective of this paper is aimed to give an insight into plant wealth such as medicinal plants; crop plants; beverages; spices; condiments; sugar; fiber; pulp & oil yielding plants of commercial & economic importance. Both the aspects of this paper give a sound basis of ecology and economic botany so that students can venture into fields like Environmental Biology, Conservation Biology, Forestry, Agriculture, Horticulture and Crop production etc.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Cereals (Wheat, Rice and Maize)
ii) Fibres (Cotton)
iii) Vegetables (Potato)

UNIT-II

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Fruits (Mango, Grapes, Lemon)
ii) Sugar-yielding plants (Sugarcane)
iii) Oil-yielding plants (Groundnut, Mustard)

UNIT-III

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Wheat, Maize, Rice, Moong, Gram (Food).
ii) Teak, Shisham, Deodar, Sal (Timbers).
iii) Cotton, Jute, Coir, Flax (Fibres).
iv) Fennel, Coriander, Turmeric, Ginger, Mint, Clove (Spices and Condiments).

UNIT-IV

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Bamboo, Eucalyptus (Pulp plants).
ii) Liquorice, Belladona, Aconite, Ashwagandha, Arjun, Poppy, Amla (Medicinal plants).
iii) Tea and Coffee (Beverages).

Forestry: Forest conservation, wood seasoning and its preservation.

Suggested Readings

1. Kochhar, S.L. Economic Botany in Tropics, (4th edition). Macmillan India Ltd., New Delhi, 2012.
2. Saini, A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
3. Sharma, O.P. Hill's Economic Botany (Late Dr. A.F. Hill, Adapted by O.P. Sharma). Tata McGraw Hill Co. Ltd., New Delhi, 1996.
4. Simpson B. and Ogorzaly, M. Economic Botany: Plants in our World (3rd edition). McGraw Hill Publisher, 2000.
5. Taiz, L. and Zeiger, E. Plant Physiology (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010
6. Singh, V., Pande, P.C. and Jain, D.K. Economic Botany, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To demonstrate that chlorophyll is necessary for photosynthesis.
2. To demonstrate that light is necessary for photosynthesis.
3. To demonstrate that CO_2 is essential for photosynthesis.
4. To demonstrate evolution of oxygen during photosynthesis in an aquatic plant.
5. To study the effect of light intensity and CO_2 concentration on the rate of photosynthesis using an aquatic plant.
6. To demonstrate aerobic respiration using flask method.
7. To demonstrate anaerobic respiration in germinating seeds or yeast.
8. To demonstrate the activity of amylase.
9. To demonstrate the activity of catalase in plant tissue (germinating seeds).
10. To demonstrate phototropism.
11. To demonstrate geotropism using clinostat.
12. To test for the presence of starch, proteins, amino acids, and reducing sugars in plant material.

Economic Botany:

Identification and morphology of economically important part/s of crop plants mentioned below:
Cereals (wheat, rice); Fibres (cotton); Vegetables (potato); Fruits (mango, grapes, lemon); sugar-yielding plants (sugarcane) and oil-yielding plants (groundnut, mustard).

Guidelines for Botany Practical Examination

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner.
2. Identify and write illustrated morphological notes on specimens B & C giving their economic importance.
3. Practical note-book
4. *Viva-voce*

ZOOLOGY
SEMESTER -V

Paper I: Developmental Biology	40 (36 +4) marks
Paper II: Applied Zoology-I	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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Total :	100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester V,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: DEVELOPMENTAL BIOLOGY (ZOO-501)

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

UNIT-I

Gametogenesis with particular reference to differentiation of spermatozoa. Vitellogenesis, role of follicle/subtesticular cells in gametogenesis.
Egg maturation : egg membranes : polarity of egg.

UNIT-II

Fertilization, parthenogenesis.

Cleavage : Types of cleavage patterns depending upon amount and distribution of yolk and position of spindle. Blastula and types of blastula.

Fate maps of chick and frog embryos.

UNIT-III

Induction: cell to cell interactions: juxtacrine, paracrine, gap junctions; basic concepts of organizers and inducers and their role. Determination and differentiation.

Development up to three germ layers in *Herdmania, Amphioxus*, frog, chick and rabbit.

UNIT-IV

Foetal membranes, their formation and role.

Mammalian placenta – its formation, types and functions.

Metamorphosis in *Herdmania* and *Rana* (frog)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Ballinsky, B.I. — An Introduction to Embryology, 5th edition, Saunders Co., 1981.
2. Gilbert, S.F. — Developmental Biology, 10th ed.,Sinauer Ass., Inc. Publ., 2014.
3. Urspaung, H. — Major Problems in Developmental Biology, Academic Press, New York, 1966.
4. Gardner, E.J., Simmons, M.J. and Snustad, — Principles of Genetics, 8thed., John Wiley and Sons, Inc. New York, 2004.
5. Wolport, Lewis — Principles of development, Oxford University press, Oxford, 2007

Practical based on Theory Paper

1. Study of the development of frog from permanent slides.
2. Window preparation and identification of stages of development in chick egg.
3. Study of the development of chick embryo from permanent slides up to 96 hours.
4. Study of the following permanent slides:
    a. Stages of gametogenesis, structure of egg and sperm of a mammal.
    b. Larva of *Herdmania*.
5. Study of metamorphosis of *Herdmania* and Frog through charts/video.

Paper II: APPLIED ZOOLOGY-I

Max. Marks	: 40
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-I
2. Economic Entomology and Pest Management-I
3. Inland Fisheries & Aquaculture-I

OPTION I: MEDICAL ZOOLOGY & MEDICAL LABORATORY TECHNOLOGY-I
(ZOO-502A)

UNIT-I

Introduction to parasitology (pertaining to various terminologies in use).
Brief introduction to pathogenic microbes. (Dengue, Chikangunya, Japanese encephalitis, tuberculosis).
Epidemic diseases, such as typhoid, cholera, small pox; their occurrence and eradication programmes.

UNIT-II

Brief accounts of life history, mode of infection and pathogenicity of the following pathogens with reference to man; prophylaxis and treatment:

Pathogenic protozoans : *Entamoeba, Trypanosoma, Leishmania, Giardia, Trichomonas* and *Plasmodium.*

UNIT-III

Pathogenic helminthes: *Fasciolopsis, Schistosoma, Echinococcus, Ancylostoma, Trichinella, Wuchereria, Dracunculus* and *Oxyuris*.

UNIT-IV

Life cycle, disease caused and control measures of arthropod vectors : *Anopheles stephensi, A culicifaces,Aedes aegypti, A. albopictus*, *Culex fatigans, C.tritaeniorhynchus*, *Mansonia* sp., *Xenopsylla cheopis,Pediculus*.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Chatterjee, K.D. : Parasitology, Protozoology and Helminthology, 13th ed., CSB Publishers and Distributors Pvt. Ltd., 2009.
2. Garcia, L.S. Diagnostic Medical Parasitology, 4th ed., ASM Press Washington, 2001.
3. Parija, S.C. Text book of Medical Parasitology, Protozoology and Helminthology, 1st edition, 2001.

Practicals based on Theory Paper ZOO-502A (ZOO-352A)

1. Introduction to Medical Entomology to various orders.
2. Study of permanent slides and specimens of parasitic protozoans, helminthes and arthropods mentioned in theory syllabus.

OPTION-II:ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-I (ZOO-502B)

UNIT-I

Introduction to Entomology with various orders.
Comparative studies of mouth parts in Grasshopper, Honeybee, Butterfly, Red-Cotton bug, House fly and Mosquito.
Major modifications in the antennae and legs of insects.
Development of Insects: Different type of metamorphosis along with a study of different kinds of larvae and pupae.
Systematic position, habits and nature of damage of the following pests of crops and vegetables :

I. Sugarcane :

1. Sugarcane leaf hopper (*Pyriliaperpusila*) alongwith life cycle and control measures.
2. Sugarcane top borer (*Scirpophaganivella*)
3. Sugarcane stem borer (*Chilotreainfuscatellus*)

II. Cotton :

1. Pink bollworm (*Pectinophoragossypiella*) alongwith life cycle and control measures.
2. Red cotton bug (*Dysdercuscinglulatus*)
3. Cotton grey weevil (*Myllocerusmaculosus*)
4. Surface grasshopper (*Chrotogonustrachypterus*)
5. Cotton jassid (*Empoascadevastans*)

UNIT-II

III. Paddy :

1. Rice Gundhy Bug (*Leptocorisavaricornis*) alongwith life cycle and control measures.
2. Rice grasshopper (*Hieroglyphyusbanian*)
3. Rice Hispa (*Dicladispaarmigera*)

IV. Wheat :

1. Wheat stem borer (*Sesamiainferens*) alongwith life cycle and control measures.
2. Termites (*Microtermesobesi*)
3. Aphids (*Macrosiphummiscanthi*) Jassids (*Amrasca sp.*)

V. Vegetables :

1. Red pumpkin beetle (*Aulacophorafoveicollis*)
2. Pumpkin fruit fly (*Dacuscucurbitae*) alongwith life cycle and control measures.
3. Hadda beetle (*Epilachnavigintioctopunctata*)

UNIT-III

VI. Pests of Stored Grains : Systematic position, habits and nature of damage of the following pests of stored grains :

1. Pulse Beetle (*Callosobruchus maculates*) alongwith life cycle and control.
2. Rice weevil (*Sitophilus oryzae*)
3. Khapra beetle (*Trogodermagranarium*)
4. Rust red flour beetle (*Tribolumcastaneum*)
5. Lesser grain borer (*Rhizoperthadominica*)
6. Rice moth (*Corcyra cephalonica*)

UNIT-IV

Systematic position, disease caused and control of the following insects of Medical and Veterinary importance :

1. Mosquitoes (Aedes,Anopheles, Culex)
2. Sand fly (*Phlebotomus minutus*)
3. House fly (*Musca domestica*) along with life cycle of house fly.
4. Horse fly (*Tabanus striatus*)
5. Blow fly (*Calliphora erythrocephala*)
6. Warble fly (*Hypoderma lineatum*)
7. Poultry louse(*Menopon gallinae*)
8. Sucking louse/(*Haematopinus surysternus*)
9. Fleas (*Xenopsylla cheopis*)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Attwal, A.S., : Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991.
2. Nair, M.R.G.K. : Insects and Mites of Crops in India, ICAR, New Delhi, 1975.
3. Kumar, A. and Nigam, P.M. : Economic and Applied Entomology, Emkay Publications, 1991.
4. Matheson, R. : Medical Entomology, Comstock Publishing Company, Inc., 1950.
5. Metcalf, R.L. & Metcalf, R.A. : Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-502B (ZOO-352B)

1. External morphology and identification marks of the crops and vegetables pests : P*yrillaperpusilla* (Sugarcane leaf hopper), *Pectinophora gossypiella* (Pink bollworm), *Leptocorisa varicornis* (Gunbdhy bug) *Hieroglyphus banian* (Paddy grass hopper), *Dacus cucurbitae* (Pumpkin fruit fly).
2. External morphology and identification marks of the following stored grain pests : *Sitophilus oryzae* (Rice weevil), *Tribolium castaneum* (Rustred flour beetle), *Rhizopertha dominica* (Lesser grain borer/susri),*Trogoderma granarium* (Khapra beetle), *Callosobruchu smaculatus* (Pulse beetle/Dhora).
3. External morphology and identification marks of the following insects of Medical/Veterinary importance-Mosquitoes (*Culex, Anopheles and Aedes*), house fly (*Musca domestica*), blow fly (*Calliphora erythrocephala*), warble fly (*Hypoderma lineatum*) and horse fly (*Tabanus striatus*).
4. A study of different types of larvae and pupae of insects through slides, charts etc.
5. Project- Study of life cycle of any insect.

OPTION III: INLAND FISHERIES & AQUACULTURE-I (ZOO-502C)

UNIT-I

- Components of Aquaculture: Capture, Culture, Intensive, Extensive, Semi-Intensive, Pen Culture, Cage Culture.
- Morphology of a typical fish (Carp, Catfish, Eel, Perch)
- Culturable fishes: Characters of culturable fishes, Indian major carps, saltwater fishes, exotic species and air breathing fishes.

UNIT-II

- Structure of mouth of different fishes in relation to feeding habits
- Bionomics of *Labeorohita, CatlaCatla, Cirrhinusmrigala, Wallago attu.*
- Food value of Fish (Vitamins, Amino acids, Minerals etc.)

UNIT-III

- Exotic fishes: History, their introduction, morphology, their role in fish culture and impact on native fish fauna.
- Induced Breeding: History, technique, chemicals involved in induced breeding and impact on fish culture.

UNIT-IV

- Pond culture: Construction of pond, types of pond, hydrobiological factors of water and soil of a fish pond, fertilization of pond, maintenance of pond.
- Aquatic weeds and their control both biological and chemical.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1.	Jhingran, V.G. ,	:	Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2.	Day, F.	:	Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3.	Johal, M.S. &Tandon,	:	Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4.	Agarwal, S.C. &Johal M.S.	:	Fishery Development, Narendra Publishing House, Delhi, 1997.
5.	Johal, M.S. &Tandon K.K.	:	Fishes of Punjab, Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6.	Karl, F.L.	:	Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7.	Brian, R.M. &David W.W.(ed.).,	:	Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO-502C (ZOO-352C)

1. Morphology of a Carp, Cat fish and Perch.
2. Morphometric and meristic characters of a typical fish.
3. Identification of the following fishes using keys to the species :
   Notopterus n*otopterus*. ; *Labeo rohita, L. colbasu, L. bata, Cirrhinus mrigala, Catla catla, Puntius sarana, Tor putitora, Schizothorax richardsonii, Aorichthys seenghala, Wallago attu, Bagarius bagarius, Heterpneustus fossilis, Channamaruluis, C. striatus, Xenentondon cancila, Cyprinus carpio, Hypophthalmichthys molitrix,Ctenopharyngodon idellaus, Colisa fasciatus, Mastacembelus armatus.*

   For the identification of the fishes, the students can use already prepared keys or can prepare their own keys.

4. Determination of maturity stages (both male and female) of any commercial fish (preserved specimens) through slides/charts etc.
5. Preparation of permanant slides of phytoplanktons and zooplanktons which constitute the food of commercial fishes. Their identification and study of important characters.
6. Identification of common aquatic weeds of a fish pond.
7. Study of various exotic fishes (*Hypophthalmichthys molitrix, Ctenopharyngodon idellaus, Cyprinus carpio, Gambusia affinis, Salmo trutta fario, salmo gairdneri, gairdneri*) with respect to the purpose with which they were introduced.
8. Study of endemic culturable fish species *(Catla catla, Labeo rohita, Cirrhinus mrigala)*
9. Study of types of fins and scales.

Guidelines for the conduct of Practical Examinations:

Max. Marks : 20 marks
Practical Exam : 18 marks
Internal Assessment : 2 marks
Time : 4 hours

1. Identify the developmental stage of chick embryo by window preparation. 2.5
2. Identify the slides A , B& C. Give two reasons for each identification 4.5
3. Viva-Voce 2
4. Practical Note Book and Project Report 2

Option-I

5. To identify the specimens D, E&F. Write the disease caused by each and two reasons for their identification. 4.5
6. Identify the given instrument. Write about its uses and functions. 2.5

Option- II

5 To identify the specimens D, E & F belonging to crop and stored grain pests. Give one outstanding character of each. 4.5

6 Identify specimen/ slide G. Give its one outstanding morphological character and medical/ veterinary importance. 2.5

Option- III

5. Giving two identification features identify specimen D&E. 2

6. Identify specimen 'F'. Give the purpose for which this fish has been introduced. 1

7. Identify the slides G & H. Give one identification features of each. 2

8. Identify the weed 'I' and write its common identification features. 2

ZOOLOGY

SEMESTER -VI

Paper I: GENETICS	40 (36 +4) marks
Paper II: APPLIED ZOOLOGY-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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Total :	100 marks

Note: The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester VI,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: GENETICS (ZOO-601)

UNIT-I

Mendelism and Mendeliar Ratios.
Modification of Mendelian ratios .
Non-allelic gene interaction, Modified F_2 ratios.

(9:7, 9:3:4, 9:3:3:1, 12:3:1, 13:3,15:1,9:6:1)

Gene modifications due to incomplete dominance, lethal factors (2:1), Pleiotropic genes.

Multiple Alleles : Blood group inheritance,eye colour in *Drosophila*, pseudo-allelism.

Multiple factors : Qualitative and quantitative characters, inheritance of quantitative traits (skin colour in man).

UNIT-II

Linkage, crossing over and recombination : Linkage, sex-linked characters, crossing over, frequency of crossing over, cytological basis of crossing over, synaptonemal complex. Recombination in Fungi, (tetrad analysis).
Gene and Genetic Code : Structure of nucleic acids (DNA & RNA). Replication of DNA and transcription.Expression of gene (protein synthesis in Prokaryotes and Eukaryotes). Properties of genetic code, codon assignment, wobble hypothesis.
Extranuclear inheritance : Kappa particles in *Paramecium*.

UNIT-III

Mutations : Spontaneous and induced mutations, physical and chemical mutagens.
Detection of mutations in *Drosophila*. Inborn errors of metabolism in man (Phenylketonuria, Alcaptonuria, Albinism).Somatic mutations and carcinogenesis.
Regulation of gene expression in prokaryotes (Operon model) and in eukaryotes.

UNIT-IV

Population genetics : Equilibrium of gene frequencies and Hardy Weinberg Law.
Genetic recombination in bacteria (conjugation, transduction and transformation) plasmids.
Applied Genetics : Recombinant DNA,genetic cloning and its applications in medicine and agriculture, DNA finger printing.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. De Robertis, E.D.P. and De Robertis, E.M.F : Cell and Molecular Biology, W.B. Saunders Co., Philadelphia, 1995.
2. Powar, C.B. : Cell Biology, Himalaya Publishing House, Bombay, 1999.
3. Swanson, C.P., Merz, T. and Young, W.J Division, : Cytogenetics – The Chromosome in Inheritance and Evolution, Prentice Hall, 1981.
4. Gupta, P.K. : Cytology, Genetics and Molecular Biology, Rastogi Publishers, Meerut, 1993.
5. Chaudhry, S. and Sharma, A. : PV's Cytology& Ecology, S. Vikas& Co., Jallandhar, 2003.
6. Gardner, E. J., Simmons, M.J. and Snustad, D.P. : Priciples of Genetics, 8th ed., John Wiley and Sons, Inc., New York, 2004.

Practicals based on Theory Paper ZOO-601(ZOO-353)

1. Demonstration of Law of segregation, Independent assortment and epistasis (use of coloured beads or capsules etc.). Numericals for segregation and Independent assortment.
2. Segregation demonstration in preserved material (Maize).
3. Cytoplasmic inheritance in *Mirabilis jalapa*.
4. Inheritance of other human characteristics, ability to taste, PTC, thiourea.
5. Comparison of variance in respect of pod length and number of seeds/pods.
6. Calculation of gene frequencies and random mating (coloured beads or capsules).
7. Study of polytene chromosomes of *Chironomus*/*Drosophila* through photographs.
8. Dermatographics: Palm print taking and finger tip patterns.

Paper II: APPLIED ZOOLOGY-II

Max. Marks	:	40
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-II
2. Economic Entomology and Pest Management-II
3. Inland Fisheries & Aquaculture-II

OPTION I: MEDICAL ZOOLOGY AND MEDICAL LABORATORY TECHNOLOGY-II (ZOO-602A)

UNIT-I

Brief introduction to Cells, organs, specific and non specific defence mechanisms.
Humoral and cell mediated immune-response, Antigens-physical & chemical properties.

UNIT-II

Antibodies - structure and function of immunoglobulin M, G, A, E and D.
Antigen and antibody interactions :Serodiagnostic assays.
Vaccines and their types.

UNIT- III

Laboratory safety rules, hazards and precautions during sample collection and laboratory investigations.

Laboratory techniques: Colorimetry, Microscopy (student's and electron microscope), Autoclaving., Centrifugation, Spectrophotometry.

Haematology : Collection of blood (Venous and Capillary), Anticoagulants (merits and demerits), Romanowsky's stains,

UNIT- IV

Bacteriology : Sterilisation, (dry heat, moist heat, autoclave, filtration), Disinfection, Staining techniques (gram's stain, AFB stain, etc), Culture media (Defined & Synthetic media & routine laboratory media), Bacterial culture (aerobic and anaerobic), Antibiotic sensitivity.

Biochemistry : Protein estimation, Estimation of blood urea, blood sugar and urine analysis.

Histopathology : Common fixatives and staining techniques, Histochemistry : Principle and method : Staining of carbohydrates, proteins and fats with bromo phenol blue, Periodic acid Schiff, Sudan Black blue and Feulgen reaction.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Baker, F.J. and Silverton, R.E.	:	Introduction to Medical Laboratory Technology, 6th edition, Butterworth and Co. Ltd., 1985.
2.	Cheesborough, M.	:	Medical Laboratory Technology for Tropical countries, 2nd edition, Butterworth and Co. Ltd., 1987.
3.	Talib, V.H.	:	Essential Laboratory Manual, Mehta Publishers, New Delhi, 1999.
4.	Goldsby, R.A., Kindt, T.J. Osborne, B.A. and Kuby, J	:	Immunology, 6th edition, Freeman, W.H. & Co., New York, U.S.A., 2007.
5.	Kuby	:	6th Edition

Practicals based on Theory Paper ZOO-602A (ZOO-354A)

1. Demonstration of safety rules in laboratory like proper handling of patients specimens and disposal of syringes, needles etc.
2. Demonstration of the use of autoclave, centrifuge and spectrophotometer.
3. Cleaning and sterilization of glassware using hot air oven, autoclave etc.
4. Demonstration of various equipments for the estimation of hemoglobin, WBC, RBC, ESR.
5. Estimation of sugar and protein in a sample.
6. Procedure of Fixation, embedding, cutting of tissue sections and their staining (Routine Haematoxylin and Eosin and special staining with BPB,PAS, SBB and Feulgen reaction) (Theory only).
7. Study of permanent slides-Thymus, spleen & lymph mode.
8. Demonstration of parts of microscope, its functioning and care.

OPTION-II: ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-II (ZOO-602B)

UNIT-I

1. Sericulture

(i) Species of silkworm
(ii) Requirements of Sericulture Industry
(iii) Grainage Management
(iv) Pre and Post-cocoon processing (Stifling & Reeling)
(v) Diseases of silkworm.

UNIT-II

2. Apiculture

(i) Species of Honeybees
(ii) Flora for Apiculture
(iii) Methods & Appliances of Bee Keeping
(iv) Products - (a) Honey (b) Bee wax (c) Propolis (d) Pollen (e) Royal Jelly (f) Bee Venom
(v) Diseases of Honey bee

3. Lac Culture

(i) Species and varities of Lac insect
(ii) Host Plants
(iii) Cultivation of Lac
(iv) Processing of Lac
(v) Lac Industry
(vi) Enemies of Lac insect.

UNIT-III

I. **Chemical Control** : Types and Classification of Insecticides (a) Insecticides of plant origin with special reference to vicotine; Pyrethrum; Rotenone and Azadirachtin (b) Chlorinated Hydrocarbons insecticides with special reference to DDT; Toxaphene; BNC; Chlordane; Aldrin; Endrin and Endosulfan (c) Organophosphorus Insecticides with special reference toMalathion;TEPP; Parathion and DDVP (d) Carbamate Insecticides with reference to Carbaryl and Carbofuran (e) Fumigants with reference to Hydrogen cyanide; Methyl bromide; Ethylene dichloride; Carbon tetrachloride and Aluminium phosphide. Hazards of chemical control. List of banned pesticides.

UNIT-IV

II. **Recent methods of Pest Control**:

- **Biological Control** : History; Techniques in biological control, Agents of biological Control (a) Vertebrates (b) Nemathelminthes (c) Arthropods (d) Protozoan; Microbial control with the help of Bacteria, Virus and Fungi.
- **Integrated Pest Control**: Introduction of IPM: Pre-requisites; Implementation Strategy; Framework of IPM programme and perspectives in IPM.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Attwal, A.S.,	:	Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991
2.	Dent, D.	:	Integrated Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1995.
3.	Howse, P., Stevens, I. & Jones, O	:	Insect Pheromones and their use in Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1998.
4.	Mishra, R.C.	:	Honey Bees and their Management in India, ICAR Publication, New Delhi, 1995.
5.	Kumar, A. and Nigam, P.M.,	:	Economic and Applied Entomology, Emkay Publications, 1991.
6.	Metcalf, R.L. & Metcalf, R.A.	:	Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-602B (ZOO-354B)

1. Study of Mouth parts of honey bee, butterfly and red cotton bug from permanent mounts.
2. Study of different types of antennae, legs and wings through preserved specimens and permanent slides.
3. A study of life stages of silk worm, honey bees and lac insect.
4. Structure and working of common sprayers: Hand Compression sprayer, Knap sack sprayer.
5. Visit to apiary and godowns for study of infestation and project report.

OPTION III - INLAND FISHERIES & AQUACULTURE-II (ZOO-602C)

UNIT-I

- Fishing gears: Classification of the fishing gears according to the habitats in which they are being used, Electrical fishing.
- Culture systems: Monoculture and polyculture

UNIT-II

- Integrated fish farming: Duck-cum-fish farming, Dairy-cum-fish farming and Poultry-cum-fish farming.
- Pearl culture in India: Species used, implantation procedures, water quality requirements and economics
- Fish seed resources and their transport

UNIT-III

- Prawn culture: Culture of fresh water prawn, culture technology
- Cold water fisheries: Mahseer fisheries and trout fisheries
- Fish Diseases and their control: Viral, bacterial, fungal, protozoan, helminth, crustacean, diseases due to nhygienic conditions, diseases during transportation.

UNIT-IV

- Fish by-products
- Fish marketing
- Fish preservation: Principles of fish preservation, preservation by curing (Drying, Salting and Smoking), Chilling and freezing of fish, Canning of fish and fish products, Spoilage of fish, Rigor mortis

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1. Jhingran, V.G., : Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2. Day, F. : Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3. Johal, M.S. &Tandon, : Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4. Agarwal, S.C. &Johal M.S. : Fishery Development, Narendra Publishing House, Delhi, 1997.
5. Johal, M.S. &Tandon K.K. : Fishes of Punjab,Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6. Karl, F.L. : Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7. Brian, R.M. &David W.W.(ed.)., : Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

<u>Practicals based on Theory Paper</u> ZOO 602C (ZOO-354C)

1. Determination of food and feeding habits of locally available fishes on the basis of stomach analysis adopting the following methods :
   a. Frequency occurrence method
   b. Feeding intensity
   c. Point method.
2. Estimation of following chemical parameters of the water of a fish pond:
   a. Temperature
   b. pH
   c. Dissolved oxygen
   d. Phosphates
   e. Total dissolved solids
   f. Nitrates
   g. Hardness
   h. Chlorides
3. Visits to various fish ponds and fish market.
4. Study of various fresh water prawn species cultured in India.

Guidelines for the conduct of Practical Examinations

Max. Marks	: 20
Practical Exam	: 18 marks
Internal Assessment	: 2 marks
Time	: 4 hours

1. Demonstrate the law of independent assortment/segregation/epistasis from the material provided. Identify the characters involved showing the dominance/recessiveness of characters.

   OR

   Calculate the gene frequency from a known sample of characteristics using Hardy-Weinberg Law. 3
2. Make a dermatographic print of your finger tips or palm pattern and classify the various visible patterns with the help of diagrams and demonstrate it to the examiner. 3
3. Identification of polytene chromosomes from the photograph provided. 1
4. Viva-Voce 2
5. Practical Note Book and Project Report 2

Option-I

6. Identify the slide and give two reasons for identification. 2
7. Identify the instrument/apparatus (Autoclave/centrifuge/spectrophotometer/microtome etc.). Write about its uses and working. 2
8. Quantitative estimation of sugar/protein in the given sample 3

Option- II

9. Identification of mouth parts/antennae/legs/wings from charts/slides/specimens 2
10. Mention the type of larva/pupa/stages of life history of silkworm, honeybees, lac insect. Write a note on its external morphology. 2
11. Name the apparatus provided. Draw its well labeled diagram and explain its structure and working. 3

Option- III

12. Identify the gear 'A' and draw its well labeled diagram. 2
13. Identify specimens B & C giving one identification feature of each. 2
14. Determine the Temperature/pH/Dissolved oxygen/Phosphates/Total dissolved Solids/Nitrates/Hardness/Chlorides in given water sample. 1
15. Write the habit and habitat of given specimen (Cold water fish)'D'. 2

BIO-CHEMISTRY
SEMESTER V

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total no. of questions will be nine. All questions carry equal marks.
2. Q. no. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – I **Marks: 45+5**

Objective: To understand aspects of storage and expression of genetic information. Membrane structure and function.

SECTION-I

(Lectures: 10)

Experimental proof for DNA as genetic material. Watson-Crick model of DNA. A&Z-DNA, structure of chromatin topology of DNA & topoisomerases. Organization of genes in different genomes. Extra nuclear genomes.

SECTION-II

(Lectures: 10)

Types & biochemical basis of mutations, DNA replication: semiconservative, semicontinuous, bidirectional & from a unique origin. Enzymes & proteins of DNA replication. Mechanism of DNA repair, DNA recombination.

SECTION-III

(Lectures: 10)

Transcription in prokaryotes and eukaryotes: promoter sequences, initiation, elongation, Rho dependent and rho independent termination, regulation, processing, alternative splicing, mRNA editing & Inhibitors of transcription.

SECTION-IV

(Lectures: 10)

Translation in prokaryoties and eukaryoties: Genetic code, Wobble hypothesis, structure of tRNA, amino acid activation, initiation, elongation, termination and inhibitors of translation, post translational modification of proteins.

Books Suggested :

1. Biochemistry, 5th Ed., 2002., Berg, J. M. & L. Stryer, W.H. Freeman, San Francisco.
2. Molecular Biology by David Freifelder, 1987.
3. Genes XI, by Benjamin Lewin, 2014.
4. Molecular Cell Biology by James Darnell, Harvey Lodish and Davit Baltimore, 7th Edition, 2014.

Paper B: Applied Biochemistry – I **Marks: 45+5**

Objective: To understand general aspects of vitamins, hormones, nutrition, immunology, blood coagulation, muscle contraction and nerve impulse transmission.

SECTION-I

(Lectures: 10)

Vitamins: water soluble & fat soluble, their sources, structure & biochemical function. Role of Thiamine, Riboflavin, Niacin, Pyridoxine, Pantothenic Acid, biotin, folic acid and Ascorbic acid. Role of Vitamin A in the visual cycle, Role of Vitamin D, Vitamin E and Antioxidant theory, role of Vitamin K in Coagulation.

SECTION-II

(Lectures: 10)

Essential nutrients. Protein energy malnutrition, starvation and obesity. Respiratory quotient (R.Q.) of carbohydrates, proteins and lipids. Basic metabolic rate and factors influencing it. Specific dynamic action of foods.

SECTION-III

(Lectures: 10)

Biochemical principles of toxicology. Phase I reactions and cytochrome P 450 enzyme systems. Phase II reactions and various conjugation systems. Effects of nutritional status and metabolic induction on xenobiotic toxicity; importance of physico–chemical properties of toxic chemicals. Biochemical basis of organophosphate and carbamate pesticides toxicity.

SECTION-IV

(Lectures: 10)

Hormones: classes, modes of action, endocrine glands & their hormones. Hypothalmic and posterior pituitary hormones, Anterior pituitary hormones, PTH, Calcitonin, insulin, glucagon, steroid hormones, thyroid hormones.

Books Suggested :

1. Berg, J. M., Lubert Stryer *:* Bio-chemistry*,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. Biochemical Toxicology of Environmental Agents by A. De Bruin, Elsevier Pub.
4. Human Nutrition & Dietetics by R. Passmore & M.A. Eastwood.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Extraction of DNA
2. Estimation of DNA by diphenylamine method.
3. Effect of temperature on the Viscosity of DNA using Oswald's viscometer.
4. Assays of SGPT and SGOT in serum.
5. Extraction of RNA from yeast .
6. Estimation of RNA by Orcinol method.
7. Determination of total protein and A/G ratio in serum.
8. Separation of serum proteins using paper electrophoresis.
9. Demonstration of Western Blotting technique.

BIO-CHEMISTRY

SEMESTER -VI

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – II **Marks: 45+5**

Objective: To understand aspects of storage, expression and regulation of genetic information.

SECTION-I

(Lectures: 10)

Targetting of proteins to different cell organelles. Post & co-translational modification of proteins. DNA binding domains of protein. Regulation of prokaryotes gene expression. Concept of operon, regulation of lac operon, trp-operon, phage infection (lysogenic & lytic mode)

SECTION-II

(Lectures: 10)

Regulation of enkaryotic gene expression. transcription factors: Zn fingers and leucine zipper. Roles of RNA regulators. hormonal control of transcription.

SECTION-III

(Lectures: 10)

Gene cloning: different types of vectors, libraries & isolation of gene. Yeast gal gene and mat locus. Mechanism of development in Drosophila.

SECTION-IV

(Lectures: 10)

Analysing genome, genome size, genome sequencing, microarrays, DNA finger printing, SNPs and applications in diseases and forensic.

Books Suggested :

1. Freifelder's Essentilas of Molecular Biology Malacinski GM 4th edition Narosa New Delhi 2005
2. Molecular Biology of Gene Watson JD 7th edition 2007 CSH New York 2013.
3. Genes XI, Benzamin Lewin, 2014 Oxford press Oxford.
4. Molecular cell biology Lodish H et al 8th edition 2016 McMilian Publishers, London.
5. Genomes 3 Brown TA. Garland Science New York 2007.

Paper B: Applied Biochemistry – II **Marks: 45+5**

Objective: Providing the student a comprehensive knowledge of physiology with emphasis on immune system and techniques in use; blood, muscle and nerve. This course will explain and demonstrate important techniques being used for analysis of blood. It will also enable the students to understand how the fundamental systems work in tandem for keeping the body fit.

SECTION-I

(Lectures: 10)

Basics of immune system. Cells & organs involved in immune response. Molecules associated: antigen, hapten & immunoglobulins- their structure, properties & functions. Innate & adaptive responses. Complement system- types, mechanism & functions. Humoral & cell mediated immune responses.

Immunological techniques-their principle, method & applications: precipitation, agglutination, Immunofluorescence, radio-immunoassay (RIA), enzyme liked immunosorbent assay (ELISA) and immunoblotting.

SECTION-II

(Lectures: 10)

Blood: composition, groups, functions; coagulation. Anticoagulants. Hemoglobin- forms, roles and disorders: hemoglobinopathies, anaemia.Buffers in the body: acid base equilibrium. Systems responsible for maintenance of acid-base balance- erythrocytes, respiration, liver, kidneys. Disturbances in acid base balance and compensation.

SECTION-III

(Lectures: 10)

Muscle: basic components of muscle cell, arichitecture of muscular organization, types. Microscopic & electron microscopic structure-skeletal, smooth & cardiac. Role of muscle proteins & calcium.

Mechanism of skeletal and smooth muscle contraction and relaxation. Sliding filament theory. Excitation-contraction coupling.

SECTION-IV

(Lectures: 10)

Central nervous system, peripheral nervous system, action potential, neurotransmitters, synapses & nerve gases. Mechanism of nerve impulse transmission: structure, classification and functions of neurons and neuroglias. The resting membrane potential & action potential.

Properties of nerve fibers : excitability, conductivity, all or none law, accommodation, adaptation, summation, refractory period, indefatigability.

Synapses : types, structure, synaptic transmission of the impulse, synaptic potentials, neurotransmitters, cotransmitters, neuromodulators. The neuromuscular junction : structure, transmission, end-plate potential.

Books Suggested :

1. Berg, J. M., Lubert Stryer *:* Bio-chemistry*,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. Essential Immunology by Ivan M. Roitt, English Language Book Society (ELBS) 8th Ed.,1994.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1.Demonstration of western blotting

2. Use of different anticoagulants.

3. Estimation of haemoglobin in blood.

4.Demonstration of ELISA.

5. Determination of clotting time of blood.

6. Determination of proteins by dye binding assay.

7. Visualizing antigen-abtibody precipitation in gel.

8. Agglutination assay.

9. Separation of proteins by SDS-Polyacrylamine Gel Electrophoresis

10. Liver function tests.

11. Estimation of urea and creatinine.

ELECTRONICS

(Kept in Abeyance)

AGRICULTURE
B.A/B.Sc. 5th and 6th Semester System

SEMESTER-V

Paper-V: Agrodiversity and Physiology

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Unit I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

History of Agroforestry
Agroecological Zonification
Socioeconomic Aspects of Agroforestry
Agroforestry System for Small Holdings
Arid Land Agroforestry

Unit – II

Establishment of Orchard
Basic Cultural Practices
Elemental Role and Needs of Nutrients
Propagation – Principles and Techniques
Stock –Scion relationship and their incompatibility
Fruit Physiology

Unit – III

Respiration- Glycolysis, Citric Acid Cycle, Photorespiration
Photosynthesis – Light Reaction, Dark Reaction, C_4 – Cycle, CAM Plants
Growth Hormones and their role in Agriculture
Enzymes and Vitamins
Vernalization
Photoperiodism

Unit – IV

Intellectual Property Right
Informatics in Agriculture
Seed Production and Technology
Indigenous Technical Knowledge in Agriculture
Introduction to Crop Biotechnology
Agrobiodiversity

PRACTICAL

Max. Marks	: 25 Marks
Practical	: 20 Marks
Internal Assessment	: 05 Marks

Planning an Orchard
Study of Agroforestry of Local Area
Scion- Stock relationship study
Study the effect of temperature and light duration on various crop plants of an area
Role of computer in Agriculture
GM crops and techniques
Study of Agrobiodiversity of Punjab

BOOKS

Plant Physiology, 2010 – K.N. Bhatia – Trumen Publishers, Jalandhar
Plant Physiology, 2010 – H.N. Srivasava – Pardeep Publishers, Jalandhar
Fruits – Ranjit Singh and S.K. Sexena - National Book Trust, New Delhi, 2008
Fruit Physiology – Amar Singh – Kalyani Publishers, Ludhiana, 1997

AGRICULTURE

SEMESTER-VI

Paper-VI: Insect Pests and Diseases of Crop

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 5 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

Plant Protection
Crop diseases ? How to control them?
Biological control, chemical control
Systemic fungicides
Weedicides
Compatibility of various fungicides and weedicides
Rodenticides

Unit – II

Diseases of Crop Plants

1. Crop-Wheat

Type of Disease	Name of Disease	Causal Organism
Fungal	Loose smut of Wheat	*Ustilago tritici*
Bacterial	Tundu disease of Wheat	*Corynebacterium tritici*
Viral	Chloris striate mosaic	Chloris striate mosaic virus (CSMV)

2. Crop- Rice

Type of Disease	Name of Disease	Causal Organism
Fungal	Blast of Rice	*Piricularia oryzae*
Bacterial	Bacterial Blight of Rice	*Xanthomonas oryzae*
Viral	Rice Tungro disease	Rice tungro Bacilliform virus (RTBV)

3. Crop- Maize

Type of Disease	Name of Disease	Causal Organism
Fungal	Black kernal rot	*Lasiodiplodia theorbrome*
Bacterial	Stalk rot of Maize	*Erwinia cartovora*
Viral	Maize chlorotic dwarf	Maize chlorotic dwarf virus (MCDV)

4. Crop-Citrus

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Citrus black spot	*Guignardia citricarpa*
Bacterial	Citrus canker	*Xanthomonas citri*
Viral	Citrus Yellow Mosaic	Badnavirus

5. Crop-Grapes

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Powdery Mildew of grapevine	*Unicinula nectator*
Bacterial	Crown gall	*Agrobacterium tumifaciens*
Viral	Cork bark	Grapevine virus B

6. Crop-Cotton

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Cotton Rust	*Puccinia schedonnardii*
Bacterial	Bacterial Blight of Cotton	*Xanthomonas citri*
Viral	Leaf curl	Bigeminivirus or Cotton Leaf curl virus (CLCuV)

7. Vegetables

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Late Blight of Potato	*Phytopthora infestans*
Bacterial	Bacterial canker of Tomato	*Clavibacter michiganensis*
Viral	Yellow vein mosaic of Bhindi	Yellow vein mosaic virus

8. Oil Crops: Mustard

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	White rust of crucifers	*Albugo candida*
Bacterial	Black rot of crucifers	*Xanthomonas campestris*
Viral	Rai Mosaic virus	Yellow Mosaic Virus

9. Oil Crops: Groundnut

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Tikka Disease of groundnut	*Cercospora s*p.
Bacterial	Bacterial wilt	*Pseudomonas solanacearum*
Viral	Groundnut crinkle	Groundnut crinkle virus

Unit – III

General account of Insects and pests
Classification of Insects
Parts of Insect body
Control measures of Insect pests and diseases of crop

Unit – IV

Insect and nematode diseases of Cereal (Wheat, Maize, Rice) crops; Oil (Sunflower, Groundnut, Mustard) crops; Fruit (Mango, Guava, Citrus) crops

Vegetable crops

Rabi Crops	**Kharif Crops**
Green Peas	Chilli
Chick Peas (Cicer arientinum)	Okra
Onion (Allium cepa)	Bitter Gourd
Tomato (Solanum lycopersicum)	Bottle Gourd
Potato (Solanum tuberosum)	Brinjal

PRACTICAL

Max. Marks : 25 Marks
Practical : 20 Marks
Internal Assessment : 05 Marks

Study of all the diseases mentioned in theory
Symptoms and their control measures

Books

Plant Pathology – R.S. Singh, 2007 – Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi

Plant Pathology – R.S. Malhotra and Aggarwal, 2009 – Tata MacGraw Hill Publishing, New Delhi

Economic and Applied Entomolgy – Kumar and Nigam, 2008 - Emkay Publishing, New Delhi

Fungicides– Y.L. Naine and Thaplial, 2008 – Oxford and IBH Publishing Co. Pvt. Ltd., Calcutta, Bombay

Elements of Entomology – Rajendra Singh, 2007 – Rastogi Publications, Meerut

A Text book of Applied Entomology – Vol I and Vol II – Srivastva, 2007- Kalyani Publishers, Ludhiana

Indian Crop Pests - Kumar and Nigam, 2007 – Emkay Publishers, Allahabad

Integrated Pest Management – G.s. Dhaliwal and R. Arora, 2006 – Kalyani Publishers, Ludhiana

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HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2019-20
SEMESTER- V

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	45	05	1	3	45	05	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 06 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I. Importance and Functions of Food :

(a)Physiological; (b) Psychological; (c) Social

II. Food Constituents : Carbohydrates, Proteins and Fats—Functions, sources, requirements and deficiency.

III. Methods of Cooking : Boiling, Steaming, Frying, Baking, Roasting and Microwave cooking.

SECTION B

IV. Functions, recommended allowances, deficiency, excess and food sources of the following nutrients:

(a) Vitamins–A, B_1, B_2, B_3 , Vit. C, Vit. D.
(b) Minerals– Calcium, Phosphorous, Iron, Sodium, Iodine.

V. Balanced Diet

(a) Concept
(b) Classification of food based on the five/seven food groups.

SECTION-C

VI. Pregnancy

1. Signs and symptoms of pregnancy.
2. Discomforts and Complications.
3. Care during pregnancy
4. Preparation for delivery
5. Post natal care- Importance of breast feeding, bottle feeding, weaning and different types of weaning foods

VII. Methods of family planning

SECTION D

VIII Definition and importance of Child Development.

(a) Differences between growth and development; (b) Principles of development.

IX Developmental tasks at various stages of development

PRACTICAL

Max. Marks	**:**	**50**
Practical	**:**	**45**
Int. Ass.	**:**	**05**
Hours	**:**	**03 Hours per week**

I. Preparation of following dishes using various methods of cooking
   a. Soups- stimulating and nourishing (any two)
   b. Snacks- savory and sweet (two each)
   c. Salads- decorative and nutritious (two each)
   d. Bakery items (any two)
   e. Preparation with cereal pulse combination (any two)
   f. Desserts (any two)

II. Hot and cold beverages (at least two each).

III. Preparation of low cost nutritious recipes (at least two)

IV. Recipes- enhancing nutritive value (at least two)

V. Project

- Survey of Food Labels in order to study their nutritional facts

OR

- Survey of eating habits of five students

Reports to be submitted

List of Equipments for a practical group of 12-15 students :

1.	Gas Burners	15
2.	Cooking Range	01
3.	Ovens	05
4.	Mixers and Grinders	05
5.	Weighing Scales (for food)	05
6.	Gas Lighters	15
7.	Dustbin-Small	15-Big-1
8.	Vegetable Racks	02
9.	Plate Racks	15
10.	Storage Jars and Containers	25
11.	Refrigerator	01
12.	Icing Sets	05

Cooking Utensils

1.	Pressure Cooker	15
2.	Patila with Lid	30
3.	Kadahai	15
4.	Parat	15
5.	Tawa	15
6.	Chakla-Belna	15
7.	Grinding Stone	15
8.	Saucepans	15
9.	Karchhi	15
10.	Palta	15

11.	Poni	15
12.	Soup Strainers	15
13.	Sieves	15
14.	Enamel Bowls	15
15.	Baking Trays and Tins	15
16.	Cookie Trays	15
17.	Serving Trays	15
18.	Cutting Knives	15
19.	Peelers	15
20.	Jelly Moulds	15

Crockery and Cutlery

1.	Full Plates	30
2.	Half Plates	30
3.	Quarter Plates	30
4.	Cups & Saucers	30
5.	Soup Bowls	30
6.	Glasses	36
7.	Katoris (Vegetables Bowls)	30
8.	Dongas	30
9.	Forks	30
10.	Table Knives	30
11.	Table Spoons	48
12.	Tea Spoons	48
13.	Serving Spoons	24
14.	Tea Sets	05
15.	Dinner Sets	05
16.	Borosil Bowls	15
17.	Casseroles	15

HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2019-20
SEMESTER- VI

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time In hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	45	05	1	3	45	05	100
									Total:	**100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 06 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 8 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 8 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I Food Preservation :
- (a) Definition, Importance & Principles.
- (b) Causes of food spoilage.
- (c) Household methods of food preservation—sun drying, use of salt, oil, spices, sugar & chemical preservatives.

II Meal Planning:
- (a) Definition
- (b) Importance
- (c) Principles of meal planning (physiological, psychological and economical)

SECTION-B

III. Therapeutic Diets & Modification of Normal Diet:
- (a) Principles of therapeutic diets.
- (b) Concept of soft, bland, liquid diets with examples.

IV. Therapeutic diets in the following conditions with principles involved :
- (a) Fever
- (b) Diarrhoea
- (c) High blood pressure/ Hypertension
- (d) Diabetes Mellitus.

SECTION-C

VI. Emotional Development of the child from infancy up to 6 years
- (a) Characteristics of children's emotions.
- (b) Common childhood emotions—Fear, angers, jealousy, curiosity love and affection.

VII. Language Development.
- (a) Stages of language development.
- (b) Factors affecting language development

SECTION-D

VIII. Play
- (a) Significance of play.
- (b) Types of play.
- (c) Play materials/equipment required for various age groups.

IX. Common behavioural problems and their remedies—Bed wetting, thumb sucking, nail biting, temper tantrums.

PRACTICAL

Max. Marks	**:50**
Practical	**:45**
Int. Ass.	**:05**
Hours	**:03 Hours per week**

I Planning & Preparation of diets for the following:
- (a) Pre-Schooler;
- (b) School going/packed lunch;
- (c) Adolescent;
- (d) Pregnant and lactating woman.

II Cooking and serving of the following : Soft, liquid, fluid diets (two each)

III Preservation- preparation of pickle, jam, chutney and squash (one each)

IV Project

- Safety measures of play equipment
  OR
- Visit to a nursery school
  OR
- Preparation of any one play item

Reports to be submitted

- **List of Equipments for a practical group of 15 students : SAME AS OF SEMESTER V**

Reference Books :

1. *Applied Nutrition,* R. Rajalakshmi, Oxford & IBH Publishing Co. Pvt. Ltd., N. Delhi.
2. *Principles of Nutrition-Dietetics,* Dr. M. Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 88, Mysore Road, Bangalore.
3. *Food & Nutrition, Educational Planning Group,* Arya Publishing House, Karol Bagh, New Delhi-5.
4. *Normal and Therapeutic Nutrition,* Br Corinne, H. Robinson, Marlya R. Lowler, Macmillan Publishing Co., New York, Collier Macmillan Publishers, London.
5. *Textbook of Nutrition and Dietetics*. Kumud Khanna, Sharda Gupta, Santosh Jain Passi, Rama Seth, Ranjana Mahna, Seema Puri. 2nd Edition. Elite Publishing House Pvt Ltd 2013
6. *Diet Nutrition and Health*. Rakesh Mittal
7. *Diet and Nutrition*. Huma Zaidi
8. *Nutritive Value of Indian Foods,* G. Copalen, B.V. Rama Sastri, and S.C. Balasubramaniam, National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, India.
9. *Human Development,* Graing J. Graig, 5th Edition, 1989/Prentice Hall, Englewood Cliffs, New Jersey, 07632.
10. *The Modern Parents Guide to Baby & Child Care-Violet,* Broadribb, R. N.H.S. & Henry F. Loc. M.E., 1973 Macdonald's and Jane's London.
11. *Good House Keeping's Baby Book V—The Good Housekeeping,* 12th ed., 1959.
12. *Child Psychology.* Dr. Nisha Sharma
13. *These are your children—Dadys,* Gardner Jenkins and Helen Shacter, 4th ed., Scott, Foresman and Co., Glenview Illinios.
14. Hurlock, E.B., *Child Development,* 6th ed., McGraw Hill International Book Company, 1978.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
SECOND YEAR
(SEMESTER : THIRD AND FOURTH)
Examination, 2019-2020

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2019 AND FOURTH SEMESTER APRIL/MAY 2020, EXAMINATIONS.

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER -III

16th and 17th Century Literature

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1.	William Shakespeare	*Othello*	
2.	Francis Bacon	(i)	*Of Friendship.*
		(ii)	*Of Studies.*
3.	John Donne	(i)	*The Sun Rising.*
		(ii)	*The Canonization.*
		(iii)	*The Relique.*
		(iv)	*Hymn to God, The Father.*
4.	John Milton	The following poems :	
		(i)	*Of Man's First Disobedience.*
		(ii)	*On the Morning of Christ's Nativity.*
		(iii)	*On his blindness.*

Testing :
There will be **two Units-**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I
There will be one question on the literary movement of 16th & 17th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer with internal choice at Serial No. 1, 3 and 4. Students will attempt one passage from each writer.

(15 Marks)

Unit II
Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER – IV

18th and 19th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	Emily Bronte	Wuthering Heights.
2.	S. T. Coleridge	The following poems : (a) *Kubla Khan.* (b) *The Rime of the Ancient Mariner.*
3.	P.B. Shelley	The following poems : (a) *Ozymandias.* (b) *Ode to the West Wind.* (c) *To A Skylark.*
4.	Thomas Hardy	*Tess of the D'Urbenvilles.*

Testing :
There will be **two Units-**
Unit I will consist of compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I

There will be one question on the literary movement of 18th & 19th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer at serial No. 2 and 3 with internal choice. Students will attempt one passage from each author.

(15 Marks)

Unit II

Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2019-20

SEMESTER-III

प्रथम पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- उपनिषद् तथा नीति साहित्य द्वारा प्रतिपादित शाश्वत जीवन मूल्यों से छात्र को अवगत कराना तथा व्याकरण की संज्ञाओं का बोध कराना।

UNIT-I

(क) केनोपनिषद् (मन्त्र व्याख्या पाँच में से तीन - 3x10=30अंक व समीक्षातमक प्रश्न दो में से एक प्रश्न - 1x9=9अंक) **39**अंक

UNIT-II

(ख) नीतिशतकम्

(श्लोक 51 से अन्त तक) (श्लोक व्याख्या पाँच में से तीन - 3x10=30अंक व सूक्ति व्याख्या तीन में से एक - 1x9=9अंक) **39**अंक

UNIT-III

(ग) संज्ञा प्रकरण (लघुसिद्धान्तकौमुदी) (6 में से 3 सूत्रार्थ) 3x4=12अंक 12अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2019-20

SEMESTER-IV

द्वितीय पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- विद्यार्थियों को संस्कृत नाट्य साहित्य के प्रमुख नाटककार भास अथवा कालिदास के समय, जीवनचक्र, काव्यसौन्दर्य, प्रकृतिचित्रण, प्रेम एवं सौन्दर्य-बोध, नाट्य-कला, पात्र-चरित्रचित्रण इत्यादि विषयों के विस्तृत अध्ययन के लिए प्रेरित करना।

(इस पत्र में छात्र **विकल्प - I** या **विकल्प - II** ग्रहण करेगा)।

विकल्प - I : भास पूर्णांक **-** 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) भास 2x15= 30 अंक

भास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख) स्वप्नवासवदत्तम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

अथवा

विकल्प - II : कालिदास पूर्णांक - 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) कालिदास 2x15=30 अंक

कालिदास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'अभिज्ञानशाकुन्तलम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख)अभिज्ञान- शाकुन्तलम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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URDU

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER -III

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER I : Poetry and Prose

Unit – I

Diwan-e-Ghalib Radif Alif : 30 Marks

Explanation (Tashrih of first 30 Ghazaliyat)

Unit – II

Critical notes on Ghalib ki Qasida Nigari 15 Marks

Unit – III

Mirza Ghalib ki Khutut Nigari ki Khususiyat 30 Marks

Unit -IV

Mirza Ghalib ki Hayat aur Karname 15 Marks

Books Recommended:

1. Zikr-e-Ghalib, by Malik Ram, Tamal Printing Press, 1976.
2. Afkar-e-Ghalib, by Dr. Khalifa Abdur Rehman, 1973.
3. Ghalib Ki Maktoob Nigari, by Prof. Nazir Ahmad

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URDU

SEMESTER -IV

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER II : Essay (Literary)

Unit – I

Fort William College Ki Adabi Khidmat 25 Marks

Unit – II

Urdu Zaban ki Ibtida aur Irtiqa 20 Marks

Unit – III

Dabistan Luckhnow ki Khusiyat 20 Marks

Unit -IV

Dabistan Delhi ki Khusiyat 25 Marks

Books Recommended:

1. Urdu Adab Ki Tarikh, by Azeem-ul-Haq Junedi.
2. Tareekh-e-Adab-e-Urdu, by Prof. Noor-ul-Hasan Naqvi.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER -III

Paper : I **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

i) Ghaznzvid Period

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER -IV

Paper : II **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

1. Ereteqaye Zaban-o-Adabiyat-e-Farsi be Ahde Moghal dar Hind.

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

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ARABIC

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-2020

(KEPT IN ABEYANCE)

FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

3rd Semester : APPLIED GRAMMAR AND DRAMA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

a)Drama

Comprehension, explanation and literary appreciation of the prescribed textbook. 50 Marks

Courses of Reading :

Molière , Le Bourgeois Gentilhomme—(Edition Bordas).

Grammar : 40 Marks

1. Applied Grammer . 15 Marks
2. Essay in French, subject or theme to be taken from the given text. 10 Marks
3. Precis or analysis of a given text. 15 Marks

N.B. 1. The latest syllabus will be followed and question paper should be of B.A.II (Hons.) level.

2. Choice in questions should be given.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

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FRENCH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-IV

4th Semester : PROSE, APPLIED GRAMMAR & VIVA-VOCE

Max. Marks	:	100
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Applied Grammar: 25 Marks

Prose : 35 Marks

La Symphonie Pastorale, André Gide,
Comprehension, explanation and literary appreciation of the prescribed text.

Courses of Reading :
La Symphonie Pastorale, André Gide, (Edition Bordas) ou Nouveaux Classiques Larousse.

La Grammaire pour bien écrire, Bescherelle, Hatier, 1987.

Viva-Voce : **30 Marks**

(a) Dictation of an unseen passage of about 200 words based on the Vocabulary and grammar covered upto B.A.II. 10 Marks

(b) Oral questions and answers on a given text (unseen). 10 Marks

(c) General questions and reading. 10 Marks

N.B. : 1. All unseen passages shall be based on the vocabulary and grammar covered till the end of 3rd and 4th Semester courses.
2. All questions are to be asked and answered in French.
3. The latest syllabus must be followed.
4. Choice in questions must be given.
5. Question paper will be set according to B.A.II (Hons.) level.

For the information of private candidate :

1.Viva is compulsory.

2.The theory paper would be marked proportionately out of 70 as there is no internal assessment.

HINDI

बी.ए. (आनर्स) 2019–20 (द्वितीय वर्ष)

सेमेस्टर–तीन **पूर्णांक : 90+10=100**

समय : 3 घण्टे

1. **कवितावली : तुलसीदास (केवल सुन्दरकाण्ड)**

2. **भारत–भारती : मैथिलीशरण गुप्त**

   (क) दोनों काव्यकृतियों में से 12–12 अंकों की 4 व्याख्याएँ पूछी जाएँगी जिनमें से 2 व्याख्याएँ करनी होंगी। सन्दर्भ सहित व्याख्या के साथ–साथ काव्य–सौन्दर्य भी स्पष्ट करना होगा। अंक–24

   (ख) दोनों काव्य कृतियों में से 6 समीक्षात्मक प्रश्न पूछे जाएँगें जिनमें से 18–18 अंकों के तीन प्रश्न करने होंगे। अंक–54

   विशेष : प्रत्येक काव्य कृति में से एक प्रश्न करना अनिवार्य होगा।

3. **राष्ट्रीय भाषा हिन्दी : स्वरूप एवं महत्व अंक–12**

4. **आंतरिक मूल्यांकन अंक : 10**

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HINDI

बी.ए. (आनर्स) 2019–20

सेमेस्टर–चार **पूर्णांक : 90+10= 100**

समय : 3 घण्टे

1. **लहर : जयशंकर प्रसाद**

   क) **लहर में से 12–12 अंकों की 2 व्याख्याएँ पूछी जाएँगी जिनमें से एक पद्यांश की सप्रसंग व्याख्या करनी होगी। अंक–12**

   काव्य–सौन्दर्य भी स्पष्ट करना होगा।

   ख) **लहर काव्य कृति में से दो समीक्षात्मक प्रश्न पूछे जाएँगें। जिनमें से 16 अंक का एक प्रश्न करना होगा। अंक–16**

2. **अंग्रेजी से हिन्दी अनुवाद अंक–20**
3. **निबन्ध लेखन अंक–10**
4. **टिप्पण तथा प्रारूपण सम्बन्धी नियमों का सामान्य ज्ञान अंक–10**
5. **जन संचार–रेडियो, दूरदर्शन एवं समाचार पत्रों के लिए लेखन की विशिष्ट विधि अंक–10**
6. **हिन्दी के उपसर्ग–प्रत्यय अर्थ व प्रयोग तथा शब्द शोध अंक–12**

आन्तरिक मूल्यांकन अंक–10

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ਪੰਜਾਬੀ
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਦੂਜਾ (2019–20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – I

ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

ਆਧੁਨਿਕਤਾ, ਆਧੁਨਿਕ ਸੰਵੇਦਨਾ, ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

1. ਆਧੁਨਿਕਤਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਲੱਛਣ
3. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ : ਪ੍ਰਗਤੀਵਾਦੀ, ਪ੍ਰਯੋਗਸ਼ੀਲ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ
ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ

ਪੰਜਾਬੀ ਨਾਵਲ, ਕਵਿਤਾ, ਕਹਾਣੀ, ਸਵੈ-ਜੀਵਨੀ, ਨਾਟਕ
(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ
ਮੇਰੀ ਚੋਣਵੀਂ ਕਵਿਤਾ : ਪ੍ਰੋ ਮੋਹਨ ਸਿੰਘ
ਆਰਸੀ ਪਬਲੀਕੇਸ਼ਨ, ਦਿੱਲੀ

(ਵਿਸ਼ਾ– ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿ–ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

ਪੰਜਾਬੀ
B.A. II (SEMESTER III) ਆਨਰਜ਼
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ – ।।
ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਮੱਧਕਾਲ – ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਮੱਧਕਾਲੀ ਸੰਵੇਦਨਾ ਤੇ ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ
3. ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ :ਗੁਰਮਤਿ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਵਾਰ ਤੇ ਜੰਗਨਾਮਾ, ਜਨਮਸਾਖੀ, ਕਾਫ਼ੀ, ਬਾਰ੍ਹਮਾਂਹ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਪੂਰਨ ਭਗਤ : ਕਾਦਰਯਾਰ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਕਾਵਿ–ਜੁਗਤਾਂ, ਕਾਵਿਸ਼ਭਾਸ਼ਾ, ਕਾਵਿ–ਕਲਾ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼
ਅਪ੍ਰੈਲ / ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ –।।।
ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਪੰਜਾਬ ਦਾ ਬਟਵਾਰਾ : ਕਹਾਣੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਸੰਗ ਵਿੱਚ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪੰਜਾਬੀ ਸੰਵੇਦਨਾ ਦੇ ਪ੍ਰਮੁੱਖ ਸਾਹਿਤਕਾਰ : ਰਜਿੰਦਰ ਸਿੰਘ ਬੇਦੀ, ਭੀਸ਼ਮ ਸਾਹਨੀ, ਖੁਸ਼ਵੰਤ ਸਿੰਘ, ਅਫ਼ਜ਼ਲ ਅਹਿਸਨ ਰੰਧਾਵਾ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਮੰਟੋ ਦੀਆਂ ਕਹਾਣੀਆਂ : ਸੰਪਾਦਕ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼
ਪ੍ਰਮੁੱਖ ਪੰਜ ਕਹਾਣੀਆਂ : ਟੋਭਾ ਟੇਕ ਸਿੰਘ
ਬੋਅ
ਬਾਪੂ ਗੋਪੀ ਨਾਥ
ਟੇਟਵਾਲ ਦਾ ਕੁੱਤਾ
ਧੂੰਆਂ
(ਵਿਸ਼ ਯਥਾਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਕਹਾਣੀ-ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

B.A. II (SEMESTER IV) ਆਨਰਜ਼

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ–IV
ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਅਤੇ ਸਾਹਿਤ

ਕੁੱਲ ਅੰਕ : 50 — 05 Internal Assessment
ਪ੍ਰਾਪਤ ਅੰਕ : 45 — Time : 3 Hours

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਸੰਵੇਦਨਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਸਰੂਪ
2. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦਾ ਸਾਹਿਤ
3. ਭਾਰਤੀ ਸੰਵੇਦਨਾ ਦੀ ਸਾਹਿਤਕ ਸਿਰਜਣਕਾਰੀ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮੁਨਸ਼ੀ ਪ੍ਰੇਮ ਚੰਦ, ਰਬਿੰਦਰ ਨਾਥ ਟੈਗੋਰ
ਮੁਲਕ ਰਾਜ ਅਨੰਦ, ਗਿਰੀਸ਼ ਕਰਨਾਰਡ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸੰਸਕਾਰ (ਨਾਵਲ) : ਯੂ ਆਰ ਅਨੰਤਮੂਰਤੀ (ਅਨੁਵਾਦਕ)
ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
(ਵਿਸ਼ਾ–ਵਸਤੂ, ਬਿਰਤਾਂਤਕਾਰੀ ਤੇ ਨਾਵਲ–ਕਲਾ ਸੰਬੰਧੀ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ)
(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 15)

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GERMAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER –III

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed novel "Der Richter und sein Henker" (Dürrenmatt) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 1-17 upto page 87 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstarße a.o. Chapters 1-17 upto page 87.

ii. "Der Richter und sein Henker" (Dürrenmatt)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 1-17

Summary

Max. Marks : 100 marks(Total)
Paper-2 (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory): 90 marks

Note : Use of dictionary is allowed

i.	Translation of an unseen text/s from German into English.	:	50 marks
ii.	Translation of an unseen text/s from English into German	:	20 Marks
iii.	Essay writing in German (about 250 words)	:	20 Marks

i. Ein Traum
ii. Eine Ferienreise
iii. Essen und Trinken
iv. Heutige Mode und Kleidung
v. Ein Fest (indisch/deutsch)

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessmet will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbook:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

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GERMAN

SEMESTER –IV

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed drama "Biedermann und die Brandstifter" (Max Frisch) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 18-34 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstraße a.o. Chapters 18-34.

ii. "Biedermann und die Brandstifter" (Max Frisch)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 18-34.

Max. Marks :100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory) : 90 marks

Note : Use of dictionary is allowed

i. Translation of an unseen text/s from German into English. : 50 marks

ii. Translation of an unseen text/s from English into German : 20 Marks

iii. Essay writing in German (about 250 words) : 20 Marks

i. Der Klimawandel
ii. Auf dem Markt
iii. Medien und Netzwerk
iv. Heutige Frau
v. Jugend und Gesellschaft

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. “Lagune-2” Kursbuch & Arbeitsbuch by Hartmut Aufderstraße a.o.

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DEFENCE & STRATEGIC STUDIES

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-2020

SEMESTER-III

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN -I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Military Geography of Pakistan : Its strategic importance, economic and industrial resources.
2. People and their characteristics.

SECTION-II

3. Outlines of history leading to the Birth of Pakistan.
4. Political Developments in Pakistan since 1947.
5. Role of Military in Pakistan's Politics.

SECTION-III

6. Foreign Policy of Pakistan (Basic Determinants).
7. Foreign Policy of Pakistan with regard to U.S.A. & Russia.

SECTION-IV

8. Pakistan's Foreign relations with its neighbours with particular reference to Afghanistan, India and Iran.

Books Recommended :

1. Akhtar, Jamna Das, *Political Conspiracies in Pakistan*, Delhi : Punjabi Pustak Bhandar, 1969
2. Britanninca., *The New Encyclopedia Britannica*, Chicago, II : Encyclopedia Britannica, Inc, 2005.
3. Burke, S.M., *Pakistan's Foreign Policy* : An Historical Analysis. [S.I.: s.n. Print]
4. Callerd, Keith B., Pakistan – A Political Study, London : Allen & Unwin, 1957.
5. Chopra, Surendra, *Perspectives on Pakistan's Foreign Policy*, Amritsar: Guru Nanak Dev University Press, 1983.
6. Cohen, Stephen P., *The Pakistan Army*, Berkeley: University of California Press, 1984.
7. Johnson, Allan G., *Privilege, Power, and Difference*, Boston, Mass: McGraw- Hill, 2006.
8. Khaliq, Sheikh Abdul, *Pakistan—Peace and War*, London : Regency Press, 1973.
9. Moon, Penderel, *Divide and Quit*, Delhi: Oxford University Press, 1998.
10. Sahni, Naresh Chander, *Political Struggle In Pakistan*, Jullundur City: New Academic Pub. Co., 1969, Print.
11. Sayeed, Khalid B., *Pakistan, The Formative Phase, 1857-1948*, London: Oxford University Press, 1968.
12. Sidhu, K.S., *Pakistan: Khetri Adhyayan*; Publication Bureau, Punjabi University Patiala, 1987.
13. Stephens, Ian. *Pakistan: New York* : Praeger, 1963.
14. Tayyeb Ali, and A Tayyeb. *Pakistan.* London [etc.] Oxford University Press, 1966.
15. Tinker, Hugh. *India and Pakistan*. New York: Frederick. A. Praeger, 1968.
16. Williams, L.F. Rushbrook. *The State of Pakistan*. London: Faber, 1966.
17. Ziring, Lawrence. *Pakistan In The Twentieth Century*, Karachi [u.a.]: Oxford University Press, 1998.
18. Ziring Lawrence, *The Ayub Khan Era,* Karachi: Paramount Publishing, 2009.

DEFENCE & STRATEGIC STUDIES

SEMESTER-IV

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Jammu and Kashmir Campaign 1947-48 : Causes, operations in brief and effects.
2. Indo-Pak War 1965 : Causes, operations in brief and effects.

SECTION-II

3. Indo-Pak War 1971 : Causes, operations in brief and effects.
4. 1999-Kargil War .

SECTION-III

5. Defence Potential of Pakistan.
6. Armed Forces of Pakistan.

SECTION-IV

7. Nuclear Policy of Pakistan.
8. Terrorism in Pakistan

Books Recommended :

1. Ayoob, Mohammed, and K. Subrahmanyam. *The Liberation War*, The University of Michigan: S.Chand, 1972.

2. Brines, Russell. The Indo-Pakistani Conflict, London: Pall Mall P., 1968.

3. Costa, Benedict. *Dismemberment of Pakistan*, Ludhiana: Kalyani Publisher,: 1972.

4. Dasgupta, C. *War and Diplomacy In Kashmir*, 1947-48. New Delhi: Sage, 2002.

5. Feldman, Herbert. *Revolution In Pakistan*. London: Oxford U.P., 1967, Print.

6. Feldman, Herbert. *The End and The Beginning*. London: Oxford University Press, 1975.

7. Gupta, K.R., *India-Pakistan Relations with Special Refernce to Kashmir*, New Delhi: Atlantic Publishers & Distributors, 2003.

8. Hackett, James T., *The Military Balance 2011*. Oxfordshire: Routledge, 2011.

9. Johri, Sita Ram. The Indo-Pak Conflict of 1965. Luckhnow: Himalaya Publications, 1967.

10. Kaul, Brij Mohan. Confrontation With Pakistan, Delhi: Vikas Publicaitons, 1971.

11. Khaliq, Sheikh Abdul, Pakistan, Peace and War, London: Regency Press, 1973.

12. Lachhman Singh., Indian Sword Strikes In East Pakistan. New Delhi: Vikas, 1979.

13. Mankekar, D. R. Pakistan Cut To Size, New Delhi: Indian Book Co, 1972. Print.

14. Mankekar, D.R. Twenty two Fateful Days. Bombay: Manaktalas, 1967. Print.

15. Nath, Rajendra. Military Leadership In India. New Delhi, India: Lancers Books, 1990.

16. Palit, D.K. The Lightning Campaign. New Delhi: Thomson Press (India), 1972.

17. Sahni, Naresh Chander, *Political Struggle in Pakistan*, Jullundur City: New Academic Pub. Co, 1969.

18. Sen. Lionel Protip. *Slender Was The Thread: Kashmir Confrontations, 1947-48*, Bombay: Orient Longmans, 1969.

19. Sethi, Surinder Singh. *The Decisive War: Emergence of a New Nation*. New Delhi: Sagar Publications, 1972.

20. Sidhu, K.S. *Pakistan: Khetri Adhyayan*: Publication Bureau, Punjabi University Patiala, 1987.

21. Sinha, S.K. *Operations Rescue*, New Delhi: Vision Books, 1977.

22. Ziring, Lawerence. *The Ayub Khan Era*. Karachi: Paramount Publishing, 2009.

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HISTORY

SYLLABUS OF B.A. (HONOURS) SEMESTER III/IV, 2019-20

Note : The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any two papers, one in Semester III and one in Semester IV according to the following :

Semester III

(i) Social and Cultural Trends in Ancient India.

OR

(ii) Social and Cultural Trends in Medieval India.

Semester IV

(ii) Social and Cultural Trends in Medieval India.

OR

(iii) Social and Cultural Trends in Modern India.

Note: Candidates CANNOT OPT FOR PAPER (ii) in BOTH Semesters.

(i) SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The paper-setter would avoid repetition between different types of question within one question paper.

Paper- SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Institutions: Varna, Jati, Ashrama and Samskara
2. Marginalized Sections of the Society: Shudras and slaves.

UNIT II

3. Women: Status and rights
4. Education: system of learning, Principal centres,

UNIT III

3. Early Religions : Harappan and Vedic
4. Protest Movements: Jainism and Buddhism

UNIT IV

5. Puranic Religions: Vaishnavism, Shaivism and Shaktism
6. Significant developments in art and architecture.

   (a) Styles of Temple Architecture: Nagara, Dravida and Vesara
   (b) Sculpture: Mauryan, Mathura, Gandhara and Gupta
   (c) Painting: Ajanta caves.

Recommended readings:

1. P.N.Prabhu, *Hindu Social Organisation*, Popular Prakashan, Bombay, 1979.

2. R.S.Sharma, *Surdas in Ancient India*, Motilal Banarasidas, Delhi, 1980.

3. K.Roy, Ed. *Women in Early Indian Societies*, Manohar, New Delhi,1999.

4. A.S. Altekar, *Education in Ancient India*, The Indian Book shop, Benaras, 1937.

5. S. Ratnagar, *Understanding Haraappa*, Tulika, New Delhi, 2001.

6. A.L. Basham, *The Wonder That Was India*, Rupa, Calcutta, 1992.

7. R.G. Bhandarkar, *Vaishnavism, Shaivism and Minor Religious Systems*, Indological Book House, Varanasi, 1965.

8. P.Brown, *History of Indian Architecture*, Vol. I Taraporevavala, Bombay 1965.

9. S.K. Saraswati, *Survey of Indian Sculpture*, Munshiram Manoharlal, New Delhi, 1975.

10. D.Barrett & B Grey, *Indian Painting* Skira, Lausanne, 1963.

(ii) SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper II: SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Conditions in the Delhi Sultanate: Nobles, theologians, slaves and other social groups; position of women; social customs and manners.
2. Devotional Movement: Vaishnavism in Bengal, the Gangetic Plain and Rajputana; the teachings and impact of Kabir and Guru Nanak

UNIT II

3. Mystical Dimensions of Islam: Organisation of the Chishti and Suhrawardi orders, with reference to their beliefs and practices.
4. Landmarks in Persian Historiography: The historical works of Ziauddin Barani and Abul Fazl.

UNIT III

5. State Intervention in the Socio-Religious Sphere: Akbar's liberal policy; his *Ibadat Khana* debates, the *mahzar* and breach with orthodox ulama; introduction of *Tauhid-i-Ilahi* and social reforms
6. Muslim Revivalist Movements: Salient features of the Mahdawi movement; socio-religious ideas of Sheikh Ahmad Sirhindi and their impact.

UNIT IV

7. Development of Literature: the devotional writings of Tulsidas, Ravidas and Namdev; the contribution of Malik Muhammad Jaisi; Abdur Rahim Khan-i-Khanan and Ras Khan.
8. Fine Arts in Mughal India: the development of architecture, painting and music during the sixteenth and seventeenth centuries.

Recommended Readings:

1. *K.M. Ashraf: Life and Conditions of the People of Hindustan,* Second Edition, Munshiram Manoharlal, New Delhi, 1970.
2. Satish Chandra*: Medieval India: From Sultanate to the Mughals*, Parts I & II, Haranand Publications (Rep.), New Delhi, 2003.
3. Peter Hardy*: Historians of Medieval India: Studies in Indo-Muslim Historical Writing*, First Indian Edition, Munshiram Manoharlal, New Delhi 1997.
4. Harbans Mukhia *: Historians and Historiography During the Reign of Akbar*, Vikas Publishing House, New Delhi 1976.
5. Khaliq Ahmad Nizami: *Religion and Politics in India During the Thirteenth Century*, New Edition, Oxford University Press, Delhi, 2001.
6. S.A.A. Razvi: *The Wonder That was India*, Part II, Twelfth Impression, Rupa and Company, New Delhi, 2002.
7. Mohammad Yasin: *A Social History of Islamic India*, Second Revised Edition, Munshiram Manoharlal, New Delhi, 1974

III. SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Socio-Cultural Trends in Early 19th Century: Religion, education and literature
2. Women Education: Aligarh Girls School; Kanya Maha Vidyalya.

UNIT II

3. Socio-Religious Reform Movements in Punjab and North- West: The Arya Samaj; Singh Sabhas and the Ahmadiyas
4. Socio-Religious Awakening in the Central Belt and Maharashtra: The Manav Dharma Sabha; the Prathana Samaj: the Rahnumai Mazdayesan Sabha (among Parsis)

UNIT III

5. Cultural Reorientation in the South: Annie Besant and the Theosophical Movement
6. The Marriage Reform Efforts: Legislative measures for the abolition of Sati and Female infanticide; contribution of reformers towards the promotion of widow-remarriage

UNIT IV

7. The Social Protest Movements: Role of Jyotiba Phule in Maharashtra; Swami Narayana Guru in Kerala; Mangoo Ram and the Ad Dharm Movement in Punjab.
8. The Literary Trends: Development of literature in Hindi; Bengali and Marathi languages.

Recommended Readings:

1. Kenneth W., Jones: *The New Cambridge History of India: Socio Religious Reform Movements in British India* (Cambridge, 1989).

2. R.C.Majumdar and Others (ed.): *British Paramountcy and Indian Renaissance*, Part II, Bhartiya Vidya Bhavan Series, Vol. X.

3. Robert D, Baird (ed.*): Religion in Modern India*, Manohar, New Delhi, 1981.

4. Gail Minault*: Secluded Scholars: Women's Education and Muslim Social Reform in Colonial India* New Delhi, O.U.P.1998.

5. Geraldine Forbes: *Women in Modern India* , Foundation Books, New Delhi, 1996.

6. Tara Chand *: History of the Freedom Movement in India*, Vol.II, New Delhi, 1967, Publication Division, G.O.I.

7. Mark Jurgensmeyer: *Religious Rebels in the Punjab*, Delhi, Ajanta, 1988.

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POLITICAL SCIENCE

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

Outlines of Test

Semester-III Option (i) : International Relations 1917-1945

OR

Option (ii) : Colonialism and Nationalism in Modern India

Semester-IV Option (i) : Western Political Thought

OR

Option (ii) : Comparative Politics

Syllabus and Courses of Reading :

Semester-III

OPTION (I) : INTERNATIONAL RELATIONS 1917-1945

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The essential concern of the course is with the period between the Bolshevik Revolution and the end of the Second World War. However, to facilitate better understanding of the developments during this period, it is very essential that the teacher familiarizes the students with the major currents of international politics immediately preceding the First World War as well as during the course of that war. Needless to say, no question will be asked on the period up to the Bolshevik Revolution.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Course Content :

Unit-I : *Nature of International Relations before and after World War-I :*

(a) Imperial confrontation & Concern for peace.
(b) Peace treaties & rise of International Organisation-League of Nation.

Unit-II : *Rise of Nationalism :*

(a) National Upsurge

(b) Search for colonies

Unit-III : *European Politics and the Post-War Settlement :*

(a) French quest for security and the German urge for equality.

(b) Britain and the European power system.

Unit-IV: *Origins of the Second World War, & International Organisation (United Nations) :*

(a) Alliances and counter-alliances.

(b) Failure of the League of Nations & Emergence of U.N.

(d) American Ambivalence.

Note : Questions to be asked on the Genesis itself and not on post-1945 developments related to the United Nations.

Suggested Readings :

1. Carr, E.H. : International Relations Between the Two World Wars (1919-1939), (London : Macmillan Press, 1973).
2. Northedge, F.S. : A Hundred Years of International Relations (London : Duchworth, 1971).
3. William Shirer : The Rise and Fall of the Third Reich, A History of Nazi Germany (London : Secker and Warburg, 1960).
4. Keswani, K.B. : International Relations : 1900 to Present Day (Bombay : Himalaya Publishing House, 2004).
5. Quicky Wright : A Study of War (Chicago : University of Chicago Press, 1942).
6. Goodrich, L.M., and Edward Hambro : Charter of the United Nations-Commentary and Documents (London: London Institute fo World Affairs, 1949).
7. Richard Little and Michael Smith (eds.) : *Perspective in World Politics (London: Routledge, 2006).*
8. Chris Brown : *Understanding International Relations (London, Palgrave, 2001).*

OR

OPTION (ii) COLONIALISM AND NATIONALISM IN MODERN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The paper aims at enabling the students about the nature and evolution of the Indian National Movement and constitutional development in colonial India.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Historical Foundations of National Movement :*

(a) Socio-Religious reform movements.

(i) Arya Samaj
(ii) Brahmo Samaj
(iii) Singh Sabha Movement
(iv) Tama Krishan Mission

Unit-II : (a) Origin and growth of Indian National Congress.

(b) Moderates and Extremists—Debates over objectives, ideology, strategy, social basis.

(c) Revolutionary Terrorism.

Unit-III : *Gandhi and Nationalist Movement in India :*

(a) Gandhi : Political strategy and new techniques of struggle.

(b) Non-Cooperation, Civil Disobedience and Quit India Movements.

Unit-IV : Landmarks in the devolution of power with special reference to Government of India Acts of

(i) 1909
(ii) 1919
(iii) 1935
(iv) Indian Independence Act 1947.

Suggested Readings :

1.	Sumit Sarkar	:	Modern India (Madras : Macmillan, 1995).
2.	Bipan Chandra	:	Essays on Colonialism (Delhi : Orient Longman, 2000).
3.	Thomas Pantham et al (ed.)	:	Modern Indian Political Thought (Delhi : Sage, 1986).
4.	Gail Omvedt	:	Dalit Visions –The Tract of the Times (Delhi : Orient Longman, 2002).
5.	Radha Kumar	:	History of Doing (Delhi : Kali for Women, 1995).
6.	Paul Brass	:	The Politics of India Since Independence (Delhi : Foundation Books, 1992).
7.	V.R. Mehta and Thomas Pantham, ed.	:	Political Ideas in Modern India, Thematic Exploration (Delhi : Sage, 2006).

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POLITICAL SCIENCE
Semester-IV

OPTION (i) WESTERN POLITICAL THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

This paper aims to introduce to the students the major themes of western political thought. This will be done by undertaking an indepth study of the key thinkers of this tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I	**:**	*Plato* : The Republic	-	Justice
			-	Philosopher-King
			-	Educations
			-	Communism of wives & property
Unit-II	**:**	*Plato* : The Statesman and the Laws	-	Ideal State
			-	Second Best State
Unit-III	**:**	*Aristotle* : The Politics	-	Inequality-Slavery, Women
			-	Nature of the State
			-	Classification of Constitutions
			-	Revolution
Unit-IV	**:**	*Machiavelli* : The Prince	-	Machiavelli as a Modern Political Thinker.
			-	Morality and Politics.
			-	Power and Statecraft.

Suggested Readings :

1. Sabine, G.H. : *A History of Political Theory* (Bombay : Oxford & IBH, 1973).
2. Dunning, W.A. : *A History of Political Theories,* 3 Vols. (Allahabad : Central, 1973).
3. Sait, E.M. (ed.) : *Masters of Political Thought*, 3 Vols. (London : George and Harap, 1947).
4. William Ebenstein : *Great Political Thinkers : Plato to Present*, 1966 (New Delhi : OUP, 2000).

Reference Books :

1. Ernest Barker : *Greek Political Theory : Plato and His Predecessors* (London : Methuen, 1978).
2. Mulgan, R. : *Aristotle's Political Theory* (Oxford : Clarendon, 1977).
3. Plamenatz, John *Man and Society,* 2 Vols. (New York : Longman, Latest Edition).
4. Quentin Skinner : *Machiavelli* (Oxford : OUP, 1981).
5. Raphael, D.D. : *Hobbes : Morals and Politics* (London : George Allen, 1978).
6. Hall, J.C. : *Rousseau : Introduction to His Political Philosophy* (London : Macmillan, 1971).
7. David Maclellan : *Marx : Fontana Modern Masters Series* (London : Fontana, 1986).

OR

OPTION (ii) C O M P A R A T I V E POLITICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :
The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial as well as developing societies and this will be undertaken in a comparative framework.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 **units**. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Approaches to Comparative Politics :*

(a) Political Sociology.

(b) Political Economy.

Unit-II : *Theories of Development :*

(a) Modernisation and Development Theories.

(b) Alternative Third World perspective on development.

Unit-III : *Political Participation and Representation :*

(a) Political Parties.

(b) Interest Groups and Pressure Groups.

(c) Political Elite.

Unit-IV : (a) Theories of State : Liberal, Marxist.

(b) Civil Society and New Social Movements.

Suggested Readings :

1. Andrew Heywood : *Politics* (London : Macmillan, 1997).

2. Mary Mank Sworth and Mourice Kogan (ed.) : *The Encyclopaedia of Government and Politics* (London : Routledge, 1992).

3. Rod Hague, Martin Harrop and Shaun Breslin : *Comparative Government and Politics : An Introduction* (London : Macmillan, 1998).

4. Gabriel Almond, G. Bingham Powell, Kaare Strom and Russel J. Dalton : *Comparative Politics Today* (Delhi : Pearson Education, 2005).

5. Ronald H. Chilcote : *Theories of Comparative Politics : The Search for a Paradigm Reconsidered* (Boulder : Westview Press, 1994).

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ECONOMICS

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER-III

The candidates are required to study one paper out of the following three papers :

I Economics of Agriculture.

II History of Economic Thought.

III Economics of Population.

Paper–I : ECONOMICS OF AGRICULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Economics of Agriculture : Its nature and scope, Interdependence between agriculture and industry. Nature and problems of agricultural development in developing countries.

Unit-II

Transforming Traditional Agriculture : Ranis & Fei, Schultz and Meller's Models, Lewis model of unlimited supplies of labour.

Unit-III

Land reforms and system of farming. Farm size and productivity relationship. Agricultural price policy, Agricultural taxation (All these topics should deal with special reference to India).

Unit-IV

New agricultural strategy and Green Revolution. Problems of small farmers and agricultural labourers. Agricultural credit, marketable and marketed surplus. Surplus and its utilization. (All these topics would deal with special reference to India).

Recommended Readings:

1. Eicher, C. & Witt, L. (1970) : Agriculture in Economic Development, Vera & Co., Bombay
2. Frankel, Francis R. (1971) : India's Green Revolution-Economic Gains and Political Costs, Oxford University Press, Bombay
3. Joshi, P.C. (1975) : :Land Reforms in India, Allied, Bombay, Part II, Sections I & II
4. Khusro, A.M. (1968) : Readings in Agricultural Development, Allied, Bombay, Articles by : B.S. Minhas & T.N. Srinivasan, V.M. Dandekar, M.L. Dantwala, A.N. Khusro, T. Bergman, V.K.R.V. Rao.
5. Meller, J.W. (1966) : The Economics of Agricultural Development, Vera & Co., Bombay
6. Misra, S.K. & Puri, V.K. (2014) : Indian Economy, Himalaya Publishing House, Bombay
7. Schultz, T.W. (1970) : Transforming Traditional Agriculture, Lyall Book Depot, Ludhiana
8. Singh, Amarjit & Sadhu, A.N. (1986) : Agricultural Problems in India, Himalaya Publishing House, Bombay
9. Soni,R.N. (1992) : Leading Issues in Agricultural Economics, Vishal Publisher, Jalandhar.
10. Todaro, Michael P. (1987) : Economic Development in the Third World, Orient Longman, New Delhi
11. Wadhva, Charan D. (1973) : Some Problems of India's Economic Policy, Tata McGraw Hills, Bombay, Part II: Articles-B,C,D, F and G

Supplementary Readings:

1. Sameeksha Trust, Bombay : Various Issues : Economic and Political Weekly.
2. Indian Society of Agricultural Economics, Bombay : Various Issues : Indian Journal of Agricultural Economics.

Paper -II : HISTORY OF ECONOMIC THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Pre-Classical Economic Thought : Mercantilism : Mercantilist ideas, regulations of economic life, leading theory of Mercantilist school, Physiocracy : ideas with special reference to Quesnay and Turgot.

Unit-II

Classical and Marxian Political Economy : The classical tradition : Adam Smith, Ricardo, J. S. Mill and Karl Marx on value, distribution and development.

Unit-III

Reaction Against Classicism : Socialist and Nationalist thinkers, Sismondi, Saint-Simon, Robert Brown and Fourier, Subjective School : Menger, Weiser and Bohm Bewark.

Unit-IV

Neo-Classical Economics : Main features.
Marshall : Scope of Economics, theory of firm, time-element, partial equilibrium analysis.
Keynes: Concept of effective demand, consumption, investment, inflationary gap.

Recommned Readings:

1. Blaug , M. (1968) : Economic Theory in Retrospect, Richard D. Irwin Inc. Illinois.
2. Gide & Rist (1964) : A History of Economic Doctrine, George G. Harper & Co. Ltd., London
3. Sweezy , P. M. (1991) : The Theory of Capitalist Development, K. P. Bagchi & Co., Calcutta,
4. Roll, Eric (1993) : History of Economic Thought, Oxford University Press, Calcutta..

Supplementary Readings :

1. Ghosh , B. N. & Ghosh, Rama (1988) : Concise History of Economic Thought, Himalaya Publishing House, Delhi .
2. Paul , R.R. (1979) : Classical Political Economy, Kalyani Publishers, Delhi..
3. Schumpeter , J.A. (1961) : History of Economic Analysis (Selected Portions), George Allen & Unwin, London,

Paper-III: Economics of Population

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT – I

Theories of Population: Malthus, optimum.
Demographic transition theory .
Population and Economic Development.

UNIT – II

Population Structure and Characteristics: Impact of Population growth on the age and gender structure
Fertility: Concepts of fertility transition. Measurement of fertility .
Mortality: Components and Measurement, Infant Mortality in India.

UNIT – III

Migration: Concepts, causes and consequences (economic and demographic) of migration.
Migration in India: Causes and Trends, Rural-Urban, Male-Female.
Urbanization: Concepts, Trends of Urbanization in India.

UNIT – IV

Growth and Structure of Indian Population.
Literacy: Literacy transition in India, pattern of literacy and literacy differentials in India.
Estimation of Population in India: Census, sampling and vital registration methods.
Population Policy in India since Independence.

Essential Readings:

Aggarwal, A. S. N. (1972)	:	India's Population Problem Tata McGraw Hills Co., Bombay.
Becker, G. (1960)	:	An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
Boserup, E. (1981)	:	Population and Technological Change University of Chicago Press, Chicago.
Bouge, D. J. (1971)	:	Principles of Demography, John Wiley, New York.
Bose, Ashish (1978)	:	India's Urbanization, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
Coale, A. and E. Hoover (1958)	:	Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects. Princeton University, Press, Princeton.
Chenery, H. and T.N. Srinivasan (eds.) (1989)	:	Handbook of Development Economics, Vol. 1 & 2, Elsevier, Amsterdam.
Chandna, R. C. (2000)	:	A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
Cox, Peter R. (1979)	:	Demography, Vikas Publishing House, New Delhi
Easterlin, R. A. (1968)	:	Population, Labour Force and Long Swings in Economic Growth: National Bureau of Economic Research, New York.
Ghosh, B. N. (ed.) (1987)	:	Studies in Population and Economic Development, Deep and Deep Publications, New Delhi
John R. Weeks (2002)	:	Population : An Introduction to Concepts and Issues (7^{th} edition), Wadsworth Publishing Company, New York.
Leibenstein, H. (1957)	:	Economic Backwardness and Economic Growth, New York, John Wiley and Sons
Govt. of India	:	Census Report, 2001.

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ECONOMICS

Semester-IV

The candidates are required to study one paper out of the following three papers :

I Industrial Economics.
II Economics of Public Enterprises.
III Theory of Statistics.

Paper-I : INDUSTRIAL ECONOMICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Scope and methods of Industrial Economics; Basic concepts of firm, industry and market; Organisational forms and alternative motives of the firms; Industrial structure and economic development.

Unit-II

Market Structure : Sellers concentration, product differentiation, conditions of entry and economies of scale, market structure and profitability.
Growth of Firms : Vertical integration, diversification, mergers and innovation; constraints on growth-demand, financial and managerial.

Unit-III

Theory of industrial location, contribution of Weber and Sergent Florence, centralized vs. balanced regional development, industrial concentration and dispersal in India.

Unit-IV

Industrial policy since independence, Industrial development under plans and reasons for deceleration of industrial growth, Growth of State industrialization in India.

Recommended Readings :

1. Barthwal, R. R. (2010) : Industrial Economics : An Introductory Text Book, New Age International Publisher (P.) Ltd., New Delhi.
2. Datt , Rudar & Sundharam K. P. M. (2012) : Indian Economy , S. Chand & Company.
3. Devine , P. J. et al. (1974) : An Introduction of Industrial Economics, George Allen & Unwin Ltd.,London.
4. Howe , W. Steward (1978) : Industrial Economics : An Applied Approach, The Macmillan Press Ltd.
5. Kuchhal, S. C. (1989) : Industrial Economy of India , Allahabad, Chaitanya Publishing House.

Supplementary Readings :

1. Ahluwalia , Ishar Judge (1985) : Industrial Growth in India : Stagnation Since Mid Sixties, Oxford University Press, Delhi.
2. Penrose, E. T. (1995) : The Theory of Growth of Firm, Oxford, Basil Blackwell.
3. Richardson, Harry W. (1969) : Elements of Regional Economics, Penguin Education.
4. Sivayya & Das (1978) : Indian Industrial Economy, S. Chand & Co., New Delhi
5. Smith, David M. (1971) : Industrial Location : An Economic Geographical Analysis, John Wiley & Sons Inc.

Paper II : ECONOMICS OF PUBLIC ENTERPRISES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Concepts : Role of public sector in socio-economic development, Rationale of public sector—multiple objectives of public enterprises and clash and complementarity in objectives. Historical perspective of public sector in India. Organisation of public enterprises – various forms and role.

Unit-II

Role of public sector financial institutions in the financing of public enterprises. Problems of management of working capital – Management of inventory, credit and cash financing of working capital.

Unit-III

Pricing in Public Sector : Basis and types of pricing policies, pricing practices, machinery of price fixation. Accountability and profitability of public sector – Causes of poor financial performance of public sector in India.

Unit-IV

Sources of funds of public enterprises – Debt and equity, Industrial relations and its importance, Industrial disputes : causes, effects and their settlements.

Recommended Readings :

1. Narain , Laxmi (1980) : Principles and Practices of Public Enterprises Management, S. Chand & Co.,New Delhi.
2. Narain , Laxmi (1982) : Public Enterprises in India, S. Chand & Co., New Delhi.
3. Institute of Public Enterprises (1967) : Organisation in Public Enterprises, Tripathi, Bombay.
4. Institute of Public Enterprises (latest edition) : Pricing and Investment in Public Enterprises, Oxford and IBH Publishing Co., New Delhi.

Supplementary Readings :

1. Bhalla , G. S. (1968) : Financial Administration of Nationalised Industry in U.K. and India, Meenakshi, Meerut.

2. Gupta, K. R. (1978) : Issues in Public Enterprises, S. Chand & Co., New Delhi.

Paper- III : THEORY OF STATISTICS

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT - I

*Moments & Expectation***:** Concept of random variables, Moments, Mathematical expectation, Moment Generating Function, Characteristic Function.
*Regression and Correlation***:** Multiple, Partial Regression and Correlation, Fitting of multiple regression by least squares technique
*Growth Curves***:** Properties, methods of estimation and applications of parabolic, geometric, exponential, modified exponential, Gompertz and logistic growth curves.

UNIT - II

Probability: Addition and Multiplication Theorems, Conditional Probability, Bays Theorem, Chebychev's Inequality, Central limit theorem
*Probability Distribution***:** General Characteristics and Applications of Binomial, Poisson and Normal Distribution.

UNIT - III

*Sampling & Sampling Distribution***:** Concept of sampling distribution, Types & Techniques of Sampling, Statistic vs Parameter.
Estimation: Point Estimation and Interval Estimation, Properties of Point Estimates, Maximum Likelihood Estimates.
Statistical Hypothesis: Two -tailed and one-tailed tests, Types I and II Errors, Level of significance, Critical Region.

UNIT - IV

*Large and small samples***:** Tests of significance based on Normal, 't' 'F' and 'Z' distributions. Testing the significance of means, proportions, correlation and regression coefficients and their interpretation. Elementary Knowledge of Analysis of Variance (one-way and two -way classification) and Analysis of Covariance.
*Non-Parametric Tests***:** Chi-square test and sign test.
Quality Control: Elementary Knowledge of quality Control and its simple application.

RECOMMENDED READINGS

1.	Croxton, F.E. & Cowden, D.J. (latest edition)	:	Applied General Statistics, Prentice Hall London and Prentice Hall of India.
2.	Gupta , S.C. &Kapoor, V.K. (1996)	:	Fundamentals of Applied Statistics, Sultan Chand & Sons, New Delhi
3.	Gupta, S.P. (1980)	:	Statistical Methods, Sultan Chand & Sons, New Delhi
4.	Kapoor, J.N. & H.C.Saxena (1976)	:	Mathematical Statistics, S. Chand & Co .Pvt. Ltd., New Delhi
5.	Mills, F.C. (1955)	:	Statistical Methods, Henry Hold & Co, New York
6.	Speigal, M.R. (1961)	:	Theory and Problems of Statistics
7.	Wonnacott , T. & Wonnacott, R. (1977)	:	Introductory Statistics for Business and Economics, John Willey & Sons.
8.	Yule, G.U. & Kendall, M.G. (1950)	:	An Introduction to Theory of Statistics (for theory of attributes)

SUPPLEMENTARY READINGS

1.	Carmal, P.H. (latest edition)	:	Applied Statistics for Economics, Sir Issac Pitman and Sons Ltd., London
2.	Chou, Ya-Lun (1975)	:	Statistical Analysis, Hold, Rinehart and Winston, New York.
3.	Freund, J.E. (1964)	:	Mathematical Statistics, Prentice Hall
4.	Freund,J.E. & William, F.J. (1979)	:	Modern Business Statistics, Prentice Hall, Englewood
5.	Grant, R.L. (1996)	:	Statistical Quality Control, McGraw Hill Book
6.	Hoel, P.G. (2007)	:	Elementary Statistics, John Wiley & Sons.
7.	Mood, A.M. & Graybill, F.A.(1963)	:	Introduction to the Theory of Statistics McGraw Hill.
8.	Yamane, Taro (1970)	:	Statistics: An Introductory Analysis, Harper and Rew, New York.

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SOCIOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER –III

SOCIAL THOUGHT (Compulsory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

Note

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper intends to familiarize the students with the contributions of major thinkers in classical Sociology and their continuing relevance to its contemporary concerns. This paper offers the Honours students with an understanding of the development of Sociology as a discipline, with a focus upon classical thinkers.

Course Content :

UNIT-I

Auguste Comte : Laws of Three Stages, Hierarchy of Sciences, Positivism.

UNIT-II

Emile Durkheim : Social facts and division of labour, social solidarity; suicide and religion.

UNIT-III

Max Weber : Social action, class, status and power, types of authority; Protestant ethic and the spirit of capitalism.

UNIT-IV

Karl Marx : Historical materialism; dialectical materialism; class conflict, capitalism and theory of social change.

Essential Readings:

1. *Coser, L.A. (1997) : Masters of Sociological Thought, New York : Harcourt Brace Jovonovich*
2. *Collins, Randall (1977) : Theoretical Sociology, Jaipur : Rawat Publications.*
3. *Raymond, Aron (1982) : Main Currents in Sociological Thought, Vols. I & II, Harmondsworth: Penguin Books.*
4. *Timasheff, N.S.(1967) : Sociological Theory : Its Nature and Growth, New York : Random House.*
5. *Zeitlin, I.M.(1987) : Ideology and the Development of Sociological Theory, New Jersey : Prentice Hall.*
6. *Stones Reb (ed) (2007) : Key Sociological Thinkers Palgrove, NY.: Macmillon*
7. *John A Hughes, W Sharrock Peter T. Martin(2004) : Understanding Classical Sociology Sage, Thousand Oak*
8. *Bert N Adams & R.A. Sydie (2002) : Classical Sociological Theory, Sage, New Delhi*
9. *Anthony Giddens & Philip W Sutton (2007) : Sociology: Introductory Readings Maldon: Polity Press*

Further Readings :

1. *Harlambos, M. (1984) : Sociology, Themes and Perspectives, Delhi : Oxford University Press.*
2. *Lemert, C. (ed.) (2004) : Social Theory – The Multicultural & Classical Readings, Jaipur : Rawat Publications.*
3. *Marx & Engles(1967) : The Communist Manifesto, Harmondsworth : Penguin Books.*
4. *Morrison, Ken, Marx, Durkheim, Weber (1995) : Formation of Modern Social Thought, London : Sage,*
5. *Sorokin, P. (1978) : Contemporary Sociological Theories, Ludhiana : Kalyani Publishers.*
6. *Judge, paramjit S, (2012) : Foundations of Classical Theory, New Delhi, Pearson*
7. *Kundu, Abhijit, (2012) : Sociological Theory, New Delhi, Pearson*

SOCIOLOGY

SEMESTER-IV

SOCIAL PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper exposes the honours students in Sociology to the related field - Social Psychology. The purpose of this paper is to introduce the basic concepts in Social Psychology, which have a bearing on the Social-Psychological understanding of social interaction, social groups, public opinion and leadership qualities. This course prepares the students to study social phenomena from social-psychological perspectives.

Course Content :

UNIT-I

Introduction – Nature, Scope, Application and Relationship of Social Psychology with Sociology.

UNIT-II

Perception, Motivation, Learning, Attitudes and their Measurement.

UNIT-III

Social Groups – Groups and Classification. Collective Behaviour : Crowd, Audience, Mob and their differences.

UNIT-IV

Propaganda and Public Opinion.
Leadership – Emergence, type and functions of leaders, leadership qualities.

Essential Readings:

1. *Curtis, Jack H. (1960)* : *Social Psychology, New York : McGraw Hill.*
2. *Fraser, C. & Burchell, B. (2001)* : *Introducing Social Psychology, Cambridge : Polity Press.*
3. *Kuppuswamy, B. (1980)* : *Social Psychology, Bombay, Asia Pub. House.*
4. *Krech, D. & Cretchfield, Richards (1948)* : *Theory & Problems of Social Psychology, New York : McGraw Hill, 1948.*
5. *Lindgren, H. Clay (1974)* : *An Introduction to Social Psychology, 2nd ed., New Delhi : Wiley Eastern.*
6. *Linde Smith, Strauss, A.R., Denzin, A.L. & Norman, D.(1988)* : *Social Psychology, New Jersey : Prentice Hall.*
7. *Perry, J.B. & Pugh, M.D.(1978)* : *Collective Behaviour : Response to Social Stress, Minnisotta : West Publishing Co.*

Further Readings

1. *Baron, Robert A, Branscombe Nyla R., Byrne Donn, Bhardwaj Gopa (2012)* : *Social Psychology, New Delhi, Pearson*
2. *Taylor, Shelley E., Pepla, Letitia Anne, Sears David O, (2006)* : *Social Psychology, New Delhi, Pearson*
3. *Patiwal, Suprithy, (2002)* : *Jaipur, RBSA Publication*

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PHILOSOPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER – III

Paper : CONTEMPORARY WESTERN PHILOSOPHY & CONTEMPORARY INDIAN THOUGHT AND CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives :

The aim of this paper is to acquaint students with the theories of different western contemporary philosophers and the problems of language, perception, meaning and truth, science and God; and to familiarize the students with Indian thought and culture according to Contemporary Indian thinkers.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

- Idealism (Bradley).
- Realism – Common Sense & Critical Realism (Moore, Russell & Putnam)

Unit-II

- Language, Meaning & Truth.
- Philosophy, Science & Religion.
- Existentialism : Theistic and Atheistic Approaches.

Unit-III

- Mahatma Gandhi & Tilak.
- Ambedkar & M.N. Roy

Unit-IV

- Sri Aurobindo
- Swami Dayanand Saraswati
- Swami Vivekananda.
- Tagore

Essential Readings :

1. Ayer A.J.,(1982) Philosophy in the 20th : Unwin.

2. Narvane V.S., (1967), Modern Indian Thought: Asia

3. Russell (1980), Inquiry into Meaning & Truth: Harper Collins.

Suggested Readings :

1. Copleston F.C. (2003), Contemporary Philosophy: Studies of Logical Positivism and Existentialism: Continuum Intl. Pub. Group.

2. Tagore Rabindranath (1931), Religion of Man, New York: Macmillian Publishers.

3. Tilak B.G. (2002), Srimad Bhagwad Gita Rahasya or Karma Yoga Delhi: Manohar Book Pub.

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PHILOSOPHY

SEMESTER – IV

Paper: STUDY OF A SPECIAL PHILOSOPHER

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives:

The aim of this paper is to make students study a philosopher indepth amongst the options offered.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain **4** units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

One out of the following Philosophers :

Option (i) : PLATO

Unit-I : Virtues : Wisdom, Courage, Temperance and Justice, Justice and Happiness : Is the just life happier than the unjust one

Unit-II : The meaning and purpose of education.

Unit-III : Nature of knowledge and its relation to sensation.

Unit-IV : Language and its relation to the world : Do names picture the objects named ?

OR

Option (ii) : ARISTOTLE

Unit-I : Form and Matter.

Unit-II : Aristotle's Ten Categories.

Unit-III : Four Causes and Change.

Unit-IV : Identity of Thought and Truth in the Active Reason.

OR

Option (iii) : IMMANUEL KANT

Unit-I : A –priori and A –posteriori judgements.

Unit-II : Nature of Space and Time.

Unit-III : Function of Categories and Significance of Antinomies.

Unit-IV : Refutation on the various proofs for the existence of God.

OR

Option (iv) : UPANISHADS

(Chandogya, Mandukya and Isa)

Unit-I : Mandukya's Treatment of 'Aum'. Symbol of Immanent and Transcendent aspects of Atman.

Unit-II : Philosophy of Being as instructed by Uddalaka Aruni in Chandogya Upanishad.

Unit-III : Nature of Atman in Isa Upanishad.

Unit-IV : Views of Upanishads on Brahman, Soul and World.

OR

Option (v) : SARTRE : Being and Nothingness

Unit-I : Being-in-itself and Being-for-itself.

Unit-II : Facticity.

Unit-III : Freedom, responsibility and badfaith.

Unit-IV : Being for Others, Existence of Others, the problem of embodiment.

OR

Option (vi) : NAGARJUNA

Unit-I : Concept of Sunya.

Unit-II : Sunyata and Pratiyasamutpada.

Unit-III : Logic and Reality.

Unit-IV : Dialectical System.

OR

Option (vii) : SAMKARA

Unit-I : Theory of Causation.

Unit-II : Prakriti as a Ultimate Cause.

Unit-III : Parinamavada Vs. Vivartavada.

Unit-IV : Refutation of Prakritikaranavada.

OR

Option (viii) : PATANJALI

Unit-I : Language and meaning.

Unit-II : Word-meaning relationship.

Unit-III : Purpose of grammar.

Unit-IV : Sabda as a Pramana.

Essential Readings :

1. B.Jowetth(Tr. Ploto's Dialogues(1937), Plato-Republic, Theatetus, Cratylus In : New York : Random
2. Banarasi Dass(1956), Samkara, Brahmasutrabhasya : Tarka Pada (First four Sutras, Thibaut, Sacred Books of the East, Delhi : Motilal Banarasi Dass.
3. Howells Christina(1992), Cambridge Companion to Sartre e:, Cambridge University Press, 1992.
4. Kemp Smith (Tr.) Norman (1952), Kant-Critique of Pure Reason : London, Macmillan.
5. Patanjali : Mahabhasya, Chaps. I & II Gita Press, Gorakhpur, 1927
6. Republic, Hackett Publishing Company, Indian Polish, 1992, U.S.A.
7. Sartre J.P.(1993), Being & Nothingness: Washington Square Press, 1993.
8. Sedley D.N.(2003), Cratylus in Plato's Dialogues, Plato, Cambridge University Press:, Cambridge, U.K..
9. Stcherbatsky Theo (2003), Nagarjuna-Madhyamika Karika, Stcherbatsky Theo : Conception of Buddhist Nirvana Delhi : Bharatiya Vidya Prakashan
10. Waterfield Penguine Robin H. (2004) Theatetus, Plato, Robin H. Waterfield, Penguine Books, London
11. Washington John(1956), Aristotle-Metaphysics Ed. & Tr. By John Washington and with an introduction by Sir David Ross : London : Dentsons).

Suggested Readings :

1. C.Lodge Rupert (1956), The Philosophy of Plato: London.
2. Chattopadhyaya (2000), The Philosophy of Sankara's Advaita Vedanta: Sarop of Sons.
3. Gosling J.C. B(1973) Plato, Routledge & Kegan Paul: London
4. Mathews (2005), Sartre, Jean Paul, Between Existentialism and Marxism, New York
5. Stace W.T., 1982, A Critical History of Greek Philosophy: Macmilan India Ltd.
6. Sartre Paul Jean (2007), Stephen Priest (Ed.), Basic Writings, Routledge: London

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PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER-III

PAPER : SOCIAL PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) Social Psychology course emphasizes the relationship between society and individuals. It also enables the students in understanding group dynamics, role of attitudes and leadership behaviour in the society.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit I : *Introduction :* Nature of Social Psychology, Methods of Research in Social Psychology.

Unit II : *Attitudes :* Concepts, Formation of Attitudes, Theories of Attitude Change; Measurement of Attitudes.

Unit III : *Leadership :* Functions of Leaders, Theories of Leadership (Trait Theories, Behavioural Theories, Fiedler's Contingency Model).

Unit IV : Applications of Social Psychology: Pro Social behavior, Bullying, Ragging.

Books Recommended :

Suggested Readings :

1. Baron, R.A. and Byrne, D. (2003) : Social Psychology : Understanding Human Interaction, New Delhi: Prentice Hall of India.

2. Robbins, S.P. (1998) zzzzzzzzzzz : Organizational Behaviour, New York : Prentice Hall of India.

3. Luthans, F. (1998) : Organizational Behaviour.New York : McGraw Hill.

4. Taylor, G.E. Peplau, L.A. and Sears, D.O. (2006) . : Social Psychology, Delhi:Pearson

Reference Books :

1. Lindgren, H.C. (1973) : Introduction of Social Psychology. New York : Wiley.

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PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER IV

Paper : RECENT PERSPECTIVES OF PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) This course aims at helping the students to appreciate the basic assumptions, principles and historical roots of modern scientific psychology. It will also help them to understand main theoretical perspective in psychology.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totaling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit- I : *Emotional Intelligence* : Concept and Theories (Goleman, Salovey and Meyer).

Unit-II: *Spirituality and Well Being* : Concept, Measurement and Relationship with Well Being.

Unit-III: *Stress and Coronary Heart Disease;* Concept, Symptoms, Role of Stress in Coronary Heart Disease.

Unit-IV: *Positive Emotions and Mental Health:* Forgiveness, Gratitude and Mental Health.

Books Recommended :

Suggested Readings

1. Crompton, W.C. (2005): An Introduction to Positive Psychology. Singapore: Thomson.

2. Snyder, C.R. and Lopez, S.J. (2005): Handbook of Positive Psychology. New York: Oxford University Press.

3. Brannon, L. and Feist, J. (2007): Introduction to Health Psychology. New Delhi. Thomson – Wadsworth.

4. Cohen, L.M., M.C. Chargue, D.E. and Colins, F.J.: The Health Psychology Handbook. New Delhi: Sage Publications.

5. Mohan, J. (2003) : Psychosocial Correlates of Coronary Artery Disease: A Monograph. New Delhi: Friends Publishers.

5. Mohan, J. and Sehgal , M. (2006) : Health Psychology. New Delhi: Abhijeet Publications.

7. Pestonjee, D.M. (2006): Stress and Coping: The Indian Experience. New Delhi: Sage Publications.

Reference Books:

1. Carr, A.(2004): Positive Psychology; The Science of Happiness and Human Strengths. New York: Brunner –Routledge.

2. Linley, P.A. and Joseph, S. (2004) : Positive Psychology in Practice. New York John Wiley and Sons.

3. Peterson, C. (2006): Positive Psychology. New York: Oxford University Press.

4. Friedman –Di, Mateo (1989): Health Psychology. New York: Prentice Hall.

5. Kaplan, R.M., Sallis, J.E. and Patterson, T.L. (1993): Health and Human Behaviour. New York: McGraw Hill.

6. Sarafino, P.E. (1998): Health Psychology: Biopsychosocial Interactions. New Delhi: John Wiley and Sons..

7. Taylor, S.E. (2006) : Health Psychology. New Delhi: John Wiley and Sons.

8. White, P. (2005): Biopsychosocial Medicine: An Integrated Appraoch to Understanding Illness, New Delhi: Oxford University Press.

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GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER-III

Paper-I : THE NATURE OF GEOGRAPHY

Max. Marks	:	100
(Terminal Exam	:	90 Marks)
Internal Assessment	:	10Marks
Time	:	3 Hours

Objectives :

1. To introduce the students to the philosophical and methodological foundations of the subject and its place in the world of knowledge.
2. To familiarise them with the major landmarks in development of geographic thought at different periods of time.

Course Content :

UNIT-I

Nature and Development of Geography as a Discipline.

Contribution of Eratosthenes, Ptolemy, Humboldt, Ritter and Darwin.

UNIT-II

Concepts in Geography:

Spatial Distribution, Man-Environment Relationship, Areal Differentiation, Spatial Organisation.

UNIT-III

Approaches:
Empirical/Theoretical, Systematic / Regional, Behavioural.

UNIT-IV

Schools of Thought:

Determinism, Possibilism, Neo Determinism, Positivism, Humanism

Notes :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.
3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings :

1. Gosal G.S. : *History of Geograpic Thought*, Panjab University, Chandigarh, 2015.
2. Husain, Majid. : *Evolution of Geographical Thought,* Rawat, Jaipur, 2001.
3. Martin, G.J. : *All Possible Worlds – A History of Geographical Ideas*, Oxford University Press, U.K., 2005.

Further Readings :

1. Adhikari, Sudeepta : *Fundamentals of Geographic Thought,* Chaitanya, Allahabad, 2004.
2. Dikshit, R.D. : *Geographical Thought : A Contextual History of Ideas*, Prentice Hall, New Delhi, 2000.
3. Hartshorne, Richard : *Perspectives on the Nature of Geography,* Rand, McNally and Co., Chicago, 1959.
4. Minshull, R. : *The Changing Nature of Geography,* Hutchinson University Library, London, 1970.
5. Nayak, A & Jeffrey,A : *Geographical Thought An Introduction to Ideas in Human Geography,* Routledge, Taylor and Francis, London,2016.

Pedagogy :

- Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of the subject.
- The students may be encouraged to collect information on any theme amenable to geographical interpretation.

GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER IV

Any one of the following optional courses :

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

OR

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The course is meant to provide an understanding of spatial and structural dimensions of population and the emerging issues. The course is further aimed at familiarising the students with global and regional level problems and also equip them for comprehending the Indian situation.

Course Content :

UNIT-I

Nature and scope of population geography, factors affecting distribution of population; present world pattern of population distribution. Density of population – various types of densities and their significance; broad spatial patterns of density of population in the world.

UNIT-II

Growth of population – Determinants of population growth; trends of population growth in developed and developing countries of the world.

Migration – Types, causes and consequences.

UNIT-III

Sex composition – Its determinants and world patterns.

Occupational structure – A comparative study of developed and developing countries.
Literacy–its determinants and world patterns.

UNIT-IV

Urbanization – Definition, process of urbanization; comparative study of urbanization in developed and developing countries.

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Special credit will be given to suitable use of maps.

4. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings:

Essential Readings :

1. Chandna, R.C. : *A Geography of Population*, Kalyani Publishers, Delhi, 1996.
2. Clarke, J.I. : *Population Geography,* Pergamon Press, Oxford, Latest Edition.

Further Readings :

1. Chandna, R.C. : *Jansankhya Bhoogol*, Kalyani Publishers, New Delhi, 1996.
2. Crook, N. : *Principles of Population and Development*, Pergamon, New York, 1997.
3. Jones, H.R. : *Population Geography*, Harper and Row, London, 1981.
4. Sundaram, K.V. & Nangia, S. (Eds.) : *Population Geography*, Heritage, New Delhi, 1986.
5. Trewartha, G.T. : *The Less Developed Realm – A Population Geography*, McGraw-Hill, New York, 1972.
6. Trewartha, G.T. : *The More Developed Realm : A Geography of its Population,* Pergamon Press, Oxford, 1979.

Pedagogy :

1. Use maps and atlases.
2. Students should be encouraged to read Population Clock.
3. Consult census publications.
4. Organised field work.
5. Organise discussions on population issues.

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

1. To understand the process of urbanization and origin, growth and classification of urban settlements with relevant theories and models.
2. To examine the changing economic base and structure of the contemporary cities.
3. To relate urbanisation process and the evolution of the urban system.
4. To examine the contemporary urban issues and suggest new urban planning and urban policy

Course Content :

UNIT-I

Definition, nature and scope of urban geography.

Definition of urban places.

Evolution of City through Historical Times : Ancient, medieval, modern.

UNIT-II

Site and situation of cities : Definition, importance, types.

Size and spacing of cities.

Ecological Processes : Centripetal and centrifugal forces, types of ecological processes.

UNIT-III

Internal structure of cities : Theories of internal structure and their evaluation, concentric zone theory, sector theory, multiple nuclei theory.

UNIT-IV

City – Region relations.

Umland of Cities : Definition, bases of demarcation, attributes.

Rural –Urban Fringe : Attributes and demarcation.

Note :

1. The compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each Unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings:

1. Carter, Harold : *The Study of Urban Geography*, Edward Arnold, London, Latest Edition.
2. Krishan, Gopal : *Nagar Bhugol,* Punjab State University Text Book Board, Chandigarh, 1974.
3. Mayer, H.M. and Kohn, L.F. (Eds.) : *Readings in Urban Geography*, University of Chicago Press, Chicago, 1964.

Further Readings :

1. Johnson, H.J. : *Urban Geography : An Introductory Analysis,* Pergamon Press, London, 1972.
2. Knox, Paul : *Urban Social Geography : An Introduction,* Longman, London, 1982.
3. Verma, LN : *Urban Geography :* Rawat Publications
4. Sidhartha K & Mukherjee S : *Cities Urbanization and Urban systems* Kisalaya Publications Pvt. Ltd., 2013.
5. Ramachandran, K : *Urbanisation and Urban Systems in India* Oxford University, Press, 1992.

Pedagogy :

- Awareness of data sources such as from Census of India, Town Planning organizations, and their applications to understand and evaluate the spatial patterns and the processes of urbanization should be highlighted in the class. This needs to be in form of selected case studies.
- Study of urban morphology and urban functions with special reference to selected towns need to be encouraged.
- Atlases and maps of NATMO and Census should be consulted and students should be given opportunity to participate in group discussions.

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PUBLIC ADMINISTRATION

SEMESTER -III

PAPER- I: ADMINISTRATIVE THOUGHT

Max. Marks: 100
Theory: 90 Marks
Internal assessment: 10 Marks
Time: 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of select ancient, classical, neo-classical and modern administrative thinkers and their contribution to administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Kautilya, M.K.Gandhi and Woodrow Wilson

Unit-II

Frederick W. Taylor, Henri Fayol, Luther Gulick and L.B.Urwick

Unit-III

Max Weber, Elton Mayo and M.P.Follet

Unit-IV

Herbert A. Simon, Abraham Maslow and Fred W. Riggs

Essential Readings

Bertram, M. Gross.(1964).*The Managing of Organisations: The Administrative Struggle* .London: Mac Millan Publishers.

Fred W, Rigg.(1964)..*Administration in Developing Countries* .Boston Houghton.

George, C.S.(1974).*History of Management Thought.*New Delhi: Prentice Hall.

Hooja, R & Arora, R. K. (2007).*Administrative Theories* .Jaipur: Rawat Publicaion.

Katariya,S.(2011). *Administrative Thinkers* .New Delhi: National Publishing House Jaipur.

Maheshwari ,S.R.(2003) . *Administrative Thinkers* .New Delhi: MacMillan.

Prasad & Prasad.(2007). *Administrative Thinkers* .New Delhi: Sterling Publishers,Reprint.

Sapru, R.K.(1996).*Theories of administration* .New Delhi: S. Chand.

Simon, A. Herbert.(1976). 3rd Ed. *Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation* . New York: Macmillan.

Sudha , G.S.(2004). *Management of History Thinkers*.Jaipur : R.B.S.A. Publishers .

Further Reading

Barnard, C. (1974).*The Functions of the Executive* . London: Oxford University Press.

Pugh, D. S. (1984). 2nd Ed. *Organisation Theory* .Harmondsworth :Penguin Books.

Rabin, J. & Others.(2007). 3rd Ed.*Handbook of Public Administration.* New York: Marcel Dekker.

Silverman, D.(1970).*The Theory of Organisation* . London: Heinemann.

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PUBLIC ADMINISTRATION

SEMESTER-IV

PAPER- II: The candidates have to select one out of the following three options:

Option (i) : Agricultural Administration in India
Option (ii) : Industrial Administration in India
Option (iii) : Police Administration
Option (iv) : Public Policy and Analysis

PAPER-II – Option (i): AGRICULTURAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth knowledge about the role of agriculture in the economic development of the country, role of technology in agricultural development, marketing of agricultural produce. It would also give understanding about the agricultural policies of the government and introduce the student to certain related issues like agricultural finance, agricultural education, research, and extension.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Role of Agriculture in Economic Development
Problems of Agricultural Development
Agriculture Policy

Unit-II

Agriculture Development under Five-Year Plans
Centre-State Relations in Agriculture
Agriculture Administration at the Central and State Levels

Unit-III

New Technology for the Development of Agriculture
Marketing of Agriculture Produce
Agriculture Finance and Rural Indebtedness

Unit-IV

Role of NABARD in Agricultural Development
Agricultural Education and Research
World Trade Organisation and Agriculture

Essential Readings

Chaudhary, P. (1972). *Readings in Indian Agricultural Development*. London: George Allen & Unwin.
Ghosh , R.N.(1977). *Agriculture in Economic Development with Special Reference to Punjab* . New Delhi: Vikas.
Mahajan , V.S. (1990). *Agriculture and Rural Economy in India.* New Delhi: Deep & Deep Publications.
Rao , C.H. Hanumantha.(1975). *Technological Change and Distribution of Gains in Indian Agriculture* . Delhi: Macmillan.

Further Readings

Government of India. (2007-2012). 11th Five Year Plan.
Government of India.(1976) . *National Commission on Agriculture* (*Reports)* .New Delhi: Manager of Publications.
Government of India.(Recent Year). Economy Survey. Ministry of Finance, Economic Division.
N.C.A.E.R. (1974). *Credit Recruitment for Agriculture.* New Delhi.
Planning Commission. 12th Plan Approach Paper

PAPER-II – Option (ii): INDUSTRIAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper: The objective of the paper is to give the student an insight and rationale into the concept of Industrialization, role of Public Enterprises in industrial development and the concepts of privatization and disinvestment. It would also give an understanding about the industrial policies of the government and introduce the student to certain related issues like industrial pollution, industrial sickness, and industrial dispersal.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Industrialization – Meaning, Objectives and Rationale
Role of Industry in Economic Development
Problems of Industrialization in India

UNIT-II

Industrial Policy Resolution of 1948 and 1956
New Industrial Policy of 1991
Industrial Finance – Sources, Problems and Remedies

UNIT-III

Role of Public Enterprises in Industrial Development of India
Privatization – Meaning, Methods, Merits and Demerits
Disinvestment – Meaning, Methods, Merits and Demerits

UNIT-IV

Industrial Pollution – Meaning, Types and its Impact on Environment
Industrial Sickness – Meaning, Extent and Magnitude, Causes and Remedies
Industrial Dispersal – Meaning and Policy Measures

Essential Readings

Aggarwal, A.N. (2001). *Indian Economy* .New Delhi : Vikas Publishing House.
Dutt,R. (2009).*Indian Economy* .New Delhi: S.Chand&Company Private Limited.
Kuchhal,S.C.(1983).*Industrial Economy of India.*Allahabad : Chaitnaya Publishing House.
Marathe,S.S.(1986).*Regulation and Development: The Indian Policy Experience of Controls over Industry* .New Delhi: Sage Publications.

Further Readings

Dhar,P.K.(2007).*Indian Economy : Its Growing Dimensions.*New Delhi: Kalyani Publishers.

Govt. of India.(2002). *Planning Commission*:*10th Five Year Plan 2002-2007* .New Delhi: Planning Commission.

Government of India.*Economic Survey* (Recent Years) Ministry of Finance, Economic Division.

Sivayya, K.V., & Dass, V.B.M. (2004).*Indian Industrial Economy* . New Delhi: S.Chand & Company Private Limited.

PAPER-II – Option (iii): Police Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the evolution of police system in India, need and importance of police in society, personnel aspects of police administration like recruitment, training, promotion, service conditions etc. It would also give an understanding about the expectations of the public from police and introduce the student to certain related issues like community policing, e-governance in police, attitudinal change in police services etc.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and significance of Police Administration
Evolution of Police Administration in India
Police Reforms in India

Unit-II

Organization and functions of Union Ministry of Home Affairs
Police Administration at State level
Police Administration at District level

Unit-III

Police Personnel Administration in India: Recruitment and Training of Police Personnel at Centre (IPS) and State level (SPS)
Service conditions and Discipline in Police Services

Unit-IV

The Concept and Need of Community Policing.
Concept & Importance of E-Governance in Police.
Attitudinal Change in Police: Concept, Significance and Methods.

Essential Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books.
Ghosh, S.K. & Rustamji, K.F.M. (1993,1994,1995).*Encyclopaedia of Police in India*, Vol. I-III. New Delhi:Light and Life Publishers.
Gupta,A. (2007).*The Police in British India 1861-1947.* New Delhi:Bureau of Police Research and Development.
James, V.D. (1998). *National Police Commission: Issues ForRethinking*. New Delhi: APH Publishing Corporation.
Muthuswamy, P. (1989). *Swamy's Manual on Disciplinary Proceedings. Chennai*: Swamy Publishers Ltd.
Stahl, O. G. (1975). *Public Personnel Administration.* New Delhi*:* Oxford & IBH Publishing Co.

PAPER-II-Option (iv) : Public Policy and Analysis

Max. Marks:	**100**
Theory:	**90 Marks**
Internal assessment:	**10 Marks**
Time:	**3 Hours**

Objective of the Paper:

The purpose of this course is to provide students an understanding of the basic concepts of public policy and the environment in which it operates .It attempts to help students understand and gain insights into the various stages in policy process with special reference to the social, political and administrative environment prevailing in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Public Policy - Meaning, Significance and Types
Distinction between Policy, Planning , Decision making and Goals; Policy Cycle
Policy Analysis- Meaning, Significance; Approaches to Policy Analysis

Unit-II

Public Policy Formulation:Models of Policy-Making:Incremental, Rational, Institutional
Role of Legislature, Executive, Judiciary, Political Parties in policy formulation

Unit-III

Public Policy Implementation :
Role of Executive, Legislature, Bureaucracy and Judiciary in Policy Implementation
Major problems in policy implementation

Unit IV

Policy Monitoring and Evaluation ; Criteria for Evaluation;
Problems in Policy Evaluation

Essential Readings

Birkland, Thomas A. (2005) .An introduction to the Policy Process: Theories , Concepts and Models of Public Policy Making M.E.Sharpe

Dye , Thomas (2002) Understanding Public Policy (New Delhi:Pearson Education Singapore (P) Ltd.,

Henry, Nicholas (2015) Public Administration and Public Affairs,(New Jersey:Prentice Hall,Twelfth Edition,

Mathur , Kuldeep (2013) .Public Policy and Politics in India:How Institutions Matter? (Oxford,

Manon, Vineetha (2014) Public Policy and Administration,Wisdom Press , New Delhi,

Sapru, R.K. Public Policy: Art and Craft of Policy Analysis (New Delhi: Prentice Hall of India, learning 2nd Edition.)

Furthur Readings

Anderson, J. E. (2005). *Public Policy Making (6th ed.)*. New York:Houghton Mifflin Co.

Ayyar, V. R.V. (2009). *Public Policy Making in India*.New Delhi:Pearson.

Frank. F, Miller, G. J., & Sidney, M.S. (2007).*Handbook of Public Policy Analysis Theory, Politics and Methods*, Boca Raton, Florida: CRC Press.

Nagel . S.S. (1991*)* . *Public Policy:Goals, Means and Methods*. New York: St. Martin Press.

Rabin J., Hildreth, W., & Miller, G. (2007).*Handbook of Public Administration (3rd ed.).*Florida: Taylor & Francis Group.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-20

SEMESTER-III

Note: **The students shall have to opt for one paper for Semester III examination out of the following two papers:**

OUTLINESOFTEST

Paper-I : Social ideas and social life from the earliest times to 1000A.D.

Paper-II : Economic ideas & economic life from the earliest times to 1000 A.D.

Paper-I: SOCIAL IDEAS AND SOCIAL LIFE FROM THE EARLIEST TIMES TO 1000A.D.

Max.Marks : 100
Theory : 90 Marks
InternalAssessment : 10 Marks
Time : 3Hours

Objective:

1. The primary objective of this paper is to acquaint the students with the origin and development of social institutions and ideas peculiar to the Indian society. The survey of the social life of the people in ancient India will also be discussed in detail.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology and contents of the sources mentioned in the syllabus.The changing pattern in social life should be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing15 short questions spread over the who syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry18 marks i.e.2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit–4 in all.

UNIT-I

1. Sources: Vedic literature, Epics, *Manu Smriti* and *Kamsutra* of Vatsayayana.
2. Four Purusharthas; Sixteen Samsakaras.

UNIT-II

3. Origin and development of caste system.
4. Slavery in ancient India.
5. Stages of life — four asramas.

UNIT-III

6. Family life and law of inheritance.
7. Development of education in ancient India.
8. Dress, ornaments, foods and drinks.

UNIT-IV

9. Position of women in ancient India.
10. Institution of marriage.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal Banarsidass, Delhi, 1991.
2. Altekar, A.S. : *Education in Ancient India,* rpt. Gyan Publishing House, New Delhi 2009.
3. Banerji, S.C. : *Society in Ancient India,* D.K. Print World, NewDelhi,1997.
4. Basham, A.L. ed. : *Cultural History of India,* Oxford University Press, NewDelhi, 1975.
5. Chanana, D.R. : *Slavery in Ancient India,as depicted in Pali and Sanskrit Texts,* New Age Printing Press, Delhi, 1960.

Suggeted Readings:

1. Ghurye, G.S. : *Caste and Class in India,* Popular Prakashan, Bombay, 1969.
2. Majumdar, B.P. : *Social and Economic History of North India* ,Budh Prakashan, Calcutta, 1960.
3. Mookerjee, R.K. : *Ancient Indian Education,* 3rd ed. Cosmo Publications, London, 1960.
4. Sharma, B.N. : *Social Life in Northern India,* Munshiram Manoharlal, Delhi,1966.

Paper-II: ECONOMIC IDEAS AND ECONOMIC LIFE FROM THE EARLIEST TIMES TO 1000 A.D.

Max.Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

Objective:

1. The main objective of this paper is to familiarize the students with economic ideas as contained in the secular and non-secular literature of our country. It will also make a survey of the economic life in ancient India to help the students to underst and economic institutions of those times.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology, authorship and contents of the sources mentioned in the syllabus. The changing pattern of agriculture, industries, trade and commerce should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit–4 in all.

UNIT-I:

1. Sources : Vedic literature, Epics, *Arthasastra* of Kautilya and *Nitisara* of Kamandaka.

2. Agriculture in ancient India, ownership of land.

UNIT-II:

3. Taxation.
4. Industries and industrial products in ancient India.

UNIT-III:

5. Types of labour and wages.
6. Introduction and development of coinage.

UNIT-IV:

7. Trade and Commerce in ancient India.
8. Guild System.
9. Trade routes and transport.

Essential Readings:

1.	Gopal, Lallanji:		*Economic Life in Northern India* (700to1200 A.D.) Motilal Banarsidass, Delhi,1965.
2.	Maity, S.K.	:	*Economic Life in North India in the Gupta Period,* Motilal Banarsidass, Calcutta,1970.
3.	Majumdar, B.P.	:	*Social and Economic History of North India,* Firma KLM, Calcutta, 1960.
4.	Majumdar, R.C.	:	*Corporate Life in Ancient India,* Firma KLM,Calcutta,1922.
Suggested Readings:			
1.	Moti Chandra	:	*Sarthavaha,* Shakti Malik Abhinav Publishers, Patna, 1953.
2.	Moti Chandra	:	*Trade and Trade Routes in Ancient India,* Shakti Malik Abhinav Publishers, Delhi, 1977.
3.	Saletore, R.N.	:	*Early Indian Economic History,* N.M. Tripathi Publishers, Bombay, 1973.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-20

SEMESTER-IV

Note: **The students shall have to opt for one paper for Semester – IV examination out of the following two papers:**

OUTLINES OF TEST

Paper-III: Political ideas and institutions from the earliest times to 1000 A.D.

Paper-IV: History of Art and Architecture (Earliest times to C.1000 A.D.)

Paper-III: POLITICAL IDEAS AND INSTITUTIONS FROM THE EARLIEST TIMES TO 1000 A.D.

Max.Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

Objective:

1. The emphasis of this paper will be on the development of political ideas as enshrined in our secular and non-secular literature. It will also focus on the administrative institutions existing from the earliest times to 1000 AD.

2. **Pedagogy of the Course Work :**
   The students are expected to know the broad rules and political ideas laid down in the Law books during the period of study. They should be familiarized with the changing patterns of administrative set up at different times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all.All questions carry equal marks.The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shallc arry18marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit–4 in all.

UNIT-I:

1. Sources*:* Vedic literature, Epics, the *Arthasastra* of Kautilya, *Smritis* of Manu and Yajnavalkya.
2. Political Institutions*:*State, King, Council of Ministers and Foreign Relations.

UNIT-II:

3. Administrative organization during the Vedic period.
4. Administrative Organisation under the Mauryas.

UNIT-III:

5. Administrative Organisation under the Kushanas.
6. Administrative Organisation under the Guptas.

UNIT-IV:

7. Administrative Organisation under the Pushyabhutis.
8. Administrative Organisation under the Cholas.

Essential Readings:

1. Altekar, A.S. : *State and Government in Ancient India,* Motilal Banarsidass,Delhi,2002 .
2. Devhuti, D. : *Harsha, A Political Study,* Oxford University Press,New Delhi,2001.
3. Ghoshal, U.N. : *A History of Indian Political Ideas: The Ancient period and the period of transition to the Middle Ages,* Oxford University Press, London,1966.
4. Goyal, S.R. : *History of Imperial Guptas:* Central Book Depot, Allahabad,1968.
5. Jayaswal, K.P. : *Hindu Polity,* Chowkhamba Sanskrit Pratisthan,Banglore,2005.
6. Mukherjee, B.N. : *Rise and Fall of the Kushanas,* Firma KLM, Calcutta, 1988.
7. Prasad, Beni: *State in Ancient India* ,Central Book Depot, Allahabad,1974.
8. Satya Shrava: *The Sakas in India,* Motilal Banarsidass, NewDelhi,1981.
9. Sharma, R.S. : *Some Aspects of Political Ideas and Institutionsin Ancient India,* Motilal Banarsidass, Delhi,2001.

Suggested Readings:

1. Shastri K.A.N. : *The Cholas, Madras, 1975; Chola Vansha,* New Delhi, 1979 (In Hindi).
2. Thapar, Romila : *The Mauryas Revisited,* K.P. Bagchi and Company, Calcutta,1988.
3. Thapar, Romila : *Ashoka and the Decline of the Mauryas,* 2nd ed. Oxford University Press, New Delhi,1977.

Paper IV: HISTORY OF ART AND ARCHITECTURE (EARLIEST TIMES TO C. 1000 A.D.)

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Total	:	3 Hours

Objectives :

The main objective of the paper is to acquaint the students with the development in field of art and architecture of ancient India. The couse shall help students to learn about our heritage.

Pedagogy of the Course Work:

Besides giving an outline of the history and salient features of the topics enumerated in the syllabus, students should be thoroughly acquainted with important monuments and images in stone and bronze of each period. Important schools of art existing during the period should also be introduced. Constant use of visual aids like slides and transparencies should for mintegral part of teaching. Field worktrips to museums and monuments should be undertaken during the course work.

INSTRUCTIONS FOR THE PAPER-SETTER AND THECANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all.All questions carry equal marks.The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words.The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e.the candidates shall attempt one question from each Unit–4 in all.

UNIT-I:

(a) Harappan architecture

(b) Harappan sculptures.

UNIT-II:

(a) Stupa Architecture – Sanchi and Amaravati Stupas
(b) Rock-cut Architecture– Lomas Rishi, Ajanta and Ellora Caves

UNIT-III:

Temple Architecture :

(a) Gupta temples.

(b) *Nagara* – Chandella.

(c) *Dravida* – Chola.

(d) *Vesara* – Chalukya.

UNIT-IV:

Sculpture

(a) Early Period – Mauryan, Sunga and Kushanas.

(b) Gupta and Early Medieval – Gupta, Pala and Chola.

Essential Readings:

1. Agrawala, P.K. : *Gupta Temple Architecture,* Prithvi Prakashan, Varanasi, 1968.
2. Agrawala, V.S. : *Gupta Art,* U.P Historical Society, Lucknow, 1948.
3. Agrawala, V. S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* D.B. Taraporevala Sons, Bombay, 1971.
5. Dehejia, Vidya : *Early Buddhist Rock Temples : A Chronological Study,*Thomson and Hudson Ltd., London, 1972.
6. Gangoly, O.C. : *South Indian Bronzes,* Nababharat Publishers, Calcutta, 1978.
7. Harle, J.C. : *Gupta Sculpture,* Munshiram Manoharlal, New Delhi, 1996.
8. Huntington, S. : *The Art of Ancient India (Buddhist, Hindu, Jain),* Weather Hill, Tokyo, 1985.
9. Kramrisch, Stella : *Indian Scuplture, 2 Vols.,* Motilal Banarasidas, Delhi, 1981.
10. Krishna Deva : *Temples of North India,* National Book Trust India, New Delhi, 2000

Essential Readings:

1. Ray, Niharranjan : *Maurya and Sunga Art,* Indian Studies,Calcutta, 1965.
2. Rowland, R. : *The Art and Architecture of India,* Penguin Books, London, 1953.
3. Saraswati, S.K. : *Survey of Indian Sculpture, 2nd ed.,* Munshiram Manoharlal, New Delhi, 1975.
4. Srinivasan, K.R. : *Temples of South India,* National Book Trust, India, New Delhi, 1998.

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POLICE ADMINISTRATION

B.A. (HONOURS) 3rd Semester EXAMINATION, 2019-20

SEMESTER-III

Semester III : Police Administration and Crime

(A) Course Objectives:

The objective of this course is to introduce to the students, the Concept, Characteristics, and Causes of Crime. The endeavour also is to discuss the special forms of crime. Towards the end the students will be imparted knowledge relating to the role of Police in controlling crime.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit – I

Crime: Concept, Characteristics and Classification.
Causative factors of Crime.
Crime Statistics in India: Sources and Problems.

Unit- II

Organized Crime: Meaning, Characteristics and Types.
White Collar Crime: Meaning, Elements and Types.
Cyber Crime: Meaning, Causes and Types.

Unit- III

Crime Against Women: Concept, Incidence and Remedies.
Juvenile Delinquency: Meaning, Causes and Treatment.
Youth and Crime: Meaning, Characteristics and Trends.

Unit- IV

Drug related Crimes: Concept, Extent and Remedial Measures.
Custodial Crime: Concept, Extent and Remedial Measures.
Role of Police in Crime Control.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central law Publication, Allahabad, 2008.
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Siddique, Ahmad : Criminology- Problems and Perspectives, Eastern Books Co., Lucknow, 1993
4. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Gandhirajan, C. K : Organized Crime, A.P.H. Publishing Corp., New Delhi, 2004
2. Venugopal, Rao : Facets of Crime in India, Allied Publishers Private Limited, Bombay, 1967
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003

POLICE ADMINISTRATION

B.A. (HONOURS) 4th Semester EXAMINATION, 2019-20

SEMESTER-IV

Paper : Correctional Administration

(A) Course Objectives:

The Prime objective of this course is to familiarize the students with the meaning, nature , scope and principle of correctional administration. In addition the efforts are made to discuss with the students, Prison administration along with the alternative non-institutional methods of Probation and Parole elaborately.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72marks)

Unit- I

Meaning, Nature and Scope of Correctional Administration.
Punishment: Concept and Theories.
Forms of Punishment.

Unit- II

Probation: Concept and Development.
Parole: Concept and Development.
Prison: Concept and Origin.

Unit- III

Statutory Prisons in India.
Classification of Prisons in India.
Problems of Prisons in India.

Unit-IV

Prison Reforms in India.
Open Prisons: Concept, Origin and Advantages.
Prisons and Human Rights.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central Law Publication, Allahabad, 2008
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003
4. Davies, Martin : Prisoners of Society: Attitudes and After-Care.
5. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A. 2003
2. Hassine, Victor : Life without Parole: Living in Prison Today, Roxbury Publishing Company, California, 2004.
3. Carrbine, Eamonn. et.al. : Criminology: A Sociological Introduction, Routledge, London, 2005.
4. Pollock, Joyceiyn M. : Prisons and Prison Life : Costs and Consequences, Roxbury Publishing Company, California,2004.
5. Pachauri, S.K : Prisoners and Human Rights, A.P.H. Publishing Corporation, New Delhi, 1999.
6. Paluch (Jr.), James A. : A Life for a Life-Life Imprisonment: America's Other Death Penalty, Edited by Bernard, Thomas J. & Johnson, Robert, Roxbury Publishing Company, California, 2004.
7. Sharma, S.D. : Creative Activities and the Law: Human Rights Approach, Deep & Deep Publications, 2007.

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MUSIC (VOCAL AND INSTRUMENTAL)

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER-III

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY

UNIT-I

1. Concept and characteristics of Raga Dhyan.
2. Role of computer to promote Indian Classical Music
3. A study of Jati Lakshan

UNIT-II

1. Detailed Study of Ghranas of the following:
   (a) Khayal Gayan
   (b) Sitar Vadan.
2. A study of the following:-
   Thumri, Maseetkhani, Razakhani Gat, Trivat
3. Brief Knowledge of the following:-
   Nada, Swara, Shruti, Nyas, Vadi, Laya & Tala.

UNIT-III

1. Shudha Vikrat Swaas of Bharat and Sharangdev
2. Study of Shruti, Chaturarna or Bharat and Sharngdev
3. Importance of Laya and Tala

UNIT-IV

1. Description and Comparative study of Detailed and Non-detailed Ragas :-
   (a) Detailed Ragas :-Hamir, Darbari
   (b) Non-detailed Ragas :-Adana, Kamod
2. Notation of Detailed Ragas and Talas
   i) Notation of Khayal/Gat
   ii) Notation of Tala prescribed in the syllabus
   Dhmar, Adachantal, Deepchandi

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper–II: Practical (Choice & Viva) **45 Marks**

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(b) One Dhrupad with different Layakaries in any detailed ragas 5 marks

OR

One Vilambit Gat in *Chautala* with different layakaries 5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Darbari.
(ii) Hamir.

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Adana.
(ii) Kamod.

(c) Talas : Jhaptal, Ektal and Teental on Tabla.

(i) One slow Khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 5 marks

(iii) Ability to recite Dhamar, Adachautal and Deepchandi talas in single. 2.5 marks.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1. Pranav Bharti : Pt. Onkar Nath Thakur
2. Abhinav Geetanjali : Pt. Ramashray Jha
3. Gharanedaar Gayaki : Varman Rao H. Deshpanday
4. Sangeetanjali : Pt. Onkar Nath Thakur
5. Pillars of Hindustani Music : B.R. Deodhar
6. Sangeet swarit : Dr. Ramakant Dwivedi
7. Sangeet Chintan : Dr. Soubhagya Vardhan Brihaspati
8. Bhartiya Sangeet Mein Vaigyanik Upakarano ka Prayog : Aneeta Gautam
9. Saat Sur aur Sattairs Dayare : Shambu Nath Mishra
10. Raag Parichay : Harish Chandra Srivastav
11. Sangeet Prabodhika : Dr. Gyan Chand
12. Sangeet Shastra Vigyan : Dr. Panna Lal Madan
13. Sangeet Kala Ka Itihas : Dr. Panna Lal Madan

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-IV

General Instructions

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY

UNIT-I

1. Detailed study of Gram
2. Detailed study of Murchhna

UNIT-II

3. Role of Electronic Media in Indian Classical Music
4. Music and Fine Arts

UNIT-III

1. A study of the following :-

   Sitarkhani Gat, Dhun, Chaturang, Dadra

2. Brief knowledge of the following with illustrations:-

   Vadi, Samvadi, Zamzama, Jod Alap, Gat, Avirbhav & Tirobhav

3. A Study of present raga Lakshan

UNIT-IV

1. Notation of Detailed Ragas and Talas
   A) i) Notation of Khayal/Gat
      ii) Notation of Tala prescribed in the syllabus: Tivra, Jhumra, Punjabi Theka

2. Non detailed Ragas
   B) i) Hamir
      ii) Vrindavani Sarang

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e., theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper–B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Any one of the following : 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Kedar
(ii) Des

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Hamir
(ii) Vrindavani Sarang

(c) Talas : Chartal, Sultal and Tilwada on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeet swarit	:	Dr. Ramakant Dwivedi
2.	Sangeetanjali	:	Pt. Onkar Nath Thakur
3.	Abhinav Geetanjali	:	Pt. Ramashray Jha
4.	Sanchar Aur Sanchar Madhyam	:	Dr. Chandra Prakash Mishra
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet Visharad	:	Basant
7.	Raag Parichay	:	Harish Chandra Srivastav
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal
9.	Raag ka Udbhav Evam Vikas	:	

HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Second year has been **KEPT IN ABEYANCE for the session 2019-20**

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PHYSICS

B.Sc. (HONOURS) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2019-20

General Instructions for teachers, students and paper setters:

1. There will be two papers in each of the Semesters III-IV. Each of the papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The teaching hours for each theory paper are prescribed to be 30 hours and Physics Practical and Computational Physics are prescribed to be 60 hours.

2. The number of lectures per week will be three for each theory paper and six for practicals .

3. The examination time for each theory paper as well as Physics practical paper will be three hours.The Computational Physics paper will consist of two parts(a)written examination of one hour duration,and (b)Practical examination of two hours duration . Both the parts carry equal marks.

4. Each theory paper will consist of **seven** questions comprising of three sections .First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus.The question paper will be set for 44 marks-**All the questions in first and second sections will carry 9(nine) marks each and the compulsory question will carry 8 marks**. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question.**After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
   Computational Physics paper in Semester V will consist of two papers carrying equal marks:
   (a)Written examination of one and half hour duration common for all the students appearing in examination.
   (b)Practical examination of one and half hours duration Both the parts carry equal marks.

3. The numerical problems/exercises in the question paper should be 25-30%.

4. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Paper I : Physics of Vacuum and Low Temperature

Unit I

Basics of Vacuum Techniques: Introduction, classification of vacuum ranges, throughput, Pump speed, speed of exhaust, conductance, ultimate pressure, viscous flow, molecular flow.

Production of Low Pressures: Pump types, Gaede oil-sealed rotating vane pump, Diffusion pump, sputter ion pumps, Gettering, types of getters, Cryogenic pumps.

Measurement of Low Pressures: Types of gauges, Mcleod gauge, Pirani gauge, Measurement of ultrahigh vacuum, penning gauge.

Methodology of Vacuum systems: Vacuum system, Materials for vacuum system, cleaning and sealing of vacuum system, Leak detection and its location.

(Book 1 and Book 2)

Unit II

Production and Measurement of Low Temperatures: Various methods for refrigeration, Coefficient of performance, Liquefaction of gases, Joule-Thomson effect, Principle of regenerative cooling, liquefaction of H_2 and He, Liquefaction of nitrogen, Solidification of He. Liquid He II, Thermodynamics of λ-transition, Adiabatic demagnetization, Linde's method, Temperatures below 0.01K, Low temperature thermometry and techniques, Use of liquid air and other liquefied gases.

(Book 3 and Book 4)

Recommended Books:

1. Vacuum Technology: A. Roth (North Holland, 1990).
2. Vacuum Technology: A. Guthrie (John Wiley, 1963).
3. A Treatise on Heat: M.N. Saha and B.N. Srivastava (Indian Press, 1965).
4. Low Temperature Physics: C. Dewitt, B. Dreyfus and P.G. de Gennes (Gordon & Breach, 1962).

Paper II : Electronics

Unit I

Analog Electronics

Circuit Theory: Voltage sources, Current sources, Capacitors, Inductors, Linear circuits, KCL, KVL, Mesh and Node analysis, Level shifting, Thevenin and Norton equivalent circuits, Power and energy relationships in case of R, L and C, Maximum Power Transfer Theorem, Series and parallel connection of mutually coupled coil, Equivalent circuit of transformer. (Book 1)

Transducers : Electrical transducers, Resistive transducers – Resistive position transducer, Strain gauge, Resistance thermometer, Platinum thermometer, Thermistor. Inductive transducers – Differential output transducers, LVDT, Pressure inductive transducer. Capacitive transducers, Piezo electric load cell, Thermocouple transducers.

(Book 2)

Unit II

Digital Electronics

Number systems: Binary, Hexadecimal and octal number systems, Interconversions and Binary arithmetic, 2's complement arithmetic, Binary fractions and negative binary numbers, floating point representations, Codes, Error detecting and correcting codes.

Digital Principles and Logic: Digital signals, Positive and Negative Logic, Basic digital circuits, Basic Gates – NOT, OR, AND; Universal Logic gates: NOR, NAND; Exclusive-OR gate.

Combinational Logic Circuits – Boolean Laws and De Morgan's theorems, Sum of Product method, Product of sums method, Karnaugh map (up to 4 variables).

Sequential circuits: Flip-flops – RS, JK, D, clocked, race-around conditions in JK flip-flop, master slave JK, Shift registers: serial in serial out, serial in parallel out, parallel in parallel out (only up to 4 bits)

(Book 3 and Book 4)

Recommended Books:

1. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).
2. Electronic Instrumentation, H.S. Kalsi (Tata McGraw-Hill, 2004).
3. Modern Digital Electronics: R.P. Jain (Tata McGraw Hill, 2010).
4. Digital Principles and Applications : Malvino and Leach (Tata McGraw Hill, 2010).

PHYSICS

SEMESTER-IV

Paper III: Statistics and Numerical Techniques

Unit I

Statistics and Probability: Measures of central tendency, Arithmetic mean, median, mode, Geometric mean, Harmonic mean, Quartiles, deciles and percentiles.
Measures of dispersion : Standard deviation, mean deviation, semi-interquartile range, coefficient of variation, Moments, Skewness and Kurtosis.
Linear Correlation and Regression for Two Variables only.
Conditional probability, probability distributions, Mathematical expectation, Probability and Combinatorial analysis

(Book 1)

Counting Statistics and Error Prediction: Characterization of Data, Binomial, Normal and Poisson distributions and their applications, Estimation of the Precision of a Single Measurement, Measure of consistency of observed fluctuations with expected Statistical fluctuation, chi square, Error Propagation, Distribution of time intervals between successive random events.

(Book 2)

Unit II

Numerical Techniques:
Solution of Algebraic and Transcendental Equations: Bisection Method, Secant Method, Newton-Raphson Method.
Interpolation : Finite difference interpolation with equal intervals, Newton' Forward and Backward Interpolation Formulae, Interpolation with unequally spaced points, Lagrange's interpolation formula, Extrapolation.
Numerical integration by Trapezoidal, Weddle's and Simpson's rules, Romberg integration.
Numerical differentiation by Newtons's forward and backward difference formulae, divided difference formula.
Numerical solution of differential equations, Euler's and Runge-Kutta Method.
Method of least-squares fitting of straight line, parabola and exponential curves, least squares fitting for any non-linear function by iterative method.

(Book 3 and Book 4)

Recommended Books:

1. Schaum's Outlines Statistics: Murry R Spiegel and Larry J Stephens (Tata McGraw Hill Education Pvt. Ltd., 2011)
2. Radiation Detection and Measurement: G.F. Knoll (Wiley, New York) (2000).
3. Numerical Mathematical Analysis, J.B. Scarborough (Oxford Book Co. Kolkata) (1961).
4. Introductory *Methods* of *Numerical Analysis,* S.S. *Sastry*. PHI Learning Pvt. Ltd. (2005).
5. A First Course in Computational Physics: P.L. Devries (Wiley, New York) (1994).

Paper IV : Mathematical Physics

Unit I

Differential Equations : Methods of separation of variables; separation of Helmholtz equation in Cartesian, spherical and cylindrical coordinates. Laplace equation in various coordinate systems, Ordinary and singular points; Examples of partial differential equations in physics, Heat Flow in one and two Dimensions.

Series solution of differential equations - Power series solution about ordinary point and regular singular point.

Special Functions in Physics : Dirac delta function, properties of delta function. Gamma function, factorial notation and applications. Beta function.

(Book 1 and Book 2)

Unit II

Special polynomials in Physics :

Bessel's differential equation, Bessel functions of first kind, generating function, recurrence formulae, plots, zeros of Bessel functions and orthogonality.

Legendre's equation, Legendre's polynomials, plots, generating functions, recurrence relations, orthogonality, Series expansion of a function in terms of a complete set of Legendre functions, Rodrigues formula.

(Book 1 and Book 2)

Laplace transforms, Applications of Laplace transforms to derivatives and integrals, s-domain interpretation of passive circuit elements R, L and C; Analysis of simple circuits in s-domain, Transfer function, poles and zeros, Stability of circuit.

Recommended Books:

1. Mathematical Physics: P.K. Chatopadhyay (Wiley Eastern, New Delhi, 2005)
2. Mathematical methods for Physicists : G. Arfken and H.J. Weber (Academic Press, SanDiego, sixth edition, 2005)
3. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).

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CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2019-20
Outlines of Tests

SEMESTER - III

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
Paper I	:	Organic Chemistry-A	20	22	03
Paper II	:	Analytical Chemistry-A	20	22	03

Paper I : ORGANIC CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hoffmann, Curtius, Lossen-similarities, advantages and stereochemistry at the migrating group, effect of migrating group on rate of reaction. Baeyer Villiger Rearrangement.

Unit-II

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hydroperoxide rearrangement–migratory aptitude, Brown, Pinacol, Wolff, Stevens, Wittig and Favorskii rearrangements-participation of groups such as –O–C–R, halogens, Aryl, and sigma bond, nonclassical carbocation.

Unit-III

Stereochemistry I: (05 Lectures)
Enantiomeric relationship, Diastereomeric relationship, Prochiral relationship. Conformational relationship in carbocyclic rings other than 5-membered, conformational effects on reactivity. Relationships between ring size and facility of ring closure.

Unit-IV

Stereochemistry II: (05 Lectures)

Hard Soft Acid Base principles: pka Values. Generation of Carbon Nucleophiles by Deprotonation, Regio selectivity and stereo selectivity in enolate formation, Medium effects, O versus C as site of alkylation, examples of Stork enamine reactions.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper II : ANALYTICAL CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Elementary Concepts I: (05 Lectures)

Qualitative and quantitative analysis, concepts and importance of quantitative analysis, choice of methods for analysis, sampling and theories of sampling, preparation of samples for analysis, calibration standards, solution concentrations in terms of various conventions, simple equilibrium calculations, calibration of analytical weights and glass wares, significance of calibration, role of instrumental methods of analysis in analytical chemistry.

Unit-II

Elementary Concepts II: (05 Lectures)

Terms of mean, medium, precision and accuracy in chemical analysis, types of errors in analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, least square curve fitting, propagation of errors, significant figure convention, standard deviations, confidence limits.

Theory of volumetric and gravimetric methods of analysis, primary and secondary standards, theory of indicators and their selection for titrations, precipitation methods, optimum conditions for precipitation, steps involved in gravimetric analysis, important organic precipitants.

Unit-III

Acid-Base Equilibria : (05 Lectures)

Acids and bases, ionization equilibria for weak monobasic acids, bases and related salts, acid base titration reagents and indicators for neutralization titrations, neutralization titrations for a strong acid with a strong base, polybasic acid with a strong base.

Unit-IV

Oxidation-Reduction Equilibria : (05 Lectures)

Oxidation-reduction reactions, reduction potentials, Nernst equation, oxidation-reduction titrations and curves, oxidation-reduction indicators, applications of oxidation-reduction techniques, determination of water by the Karl Fischer titration method.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) ***Examiner will set total of <u>NINE</u> questions comprising <u>TWO</u> questions from each unit and <u>ONE</u> compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt <u>FIVE</u> questions in all, <u>ONE</u> question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2019-20
Outlines of Tests

SEMESTER - IV

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
Paper III	:	Organic Chemistry-B	20	22	03
Paper IV	:	Analytical Chemistry-B	20	22	03

Paper III : Organic Chemistry-B

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Organic Chemistry of Life I: (05 Lectures)

Nucleic Acids : Nucleosides; Pentoses, heterocyclic bases, nucleotide; Purines and phosphate, DNA and RNA Hydrogen bonding and DNA replication (heredity).

Unit-II

Organic Chemistry of Life I: (05 Lectures)

Enzymes, nomenclature of enzymes, characteristics of enzymes, coenzyme A and prosthetic group. Coenzyme derived from niacin and examples of redox reaction with it.

Unit-III

Pericyclic Reactions I : (05 Lectures)

Electrocyclic Reactions: Woodward and Hoffmann rules, correlation diagram for cyclobutene = butadiene interconversion, Frontier orbital theory. Examples of 4, 6 and 8 electron systems, stereochemical modes.

Cycloaddition Reactions : Woodward and Hoffmann rules, Frontier Molecular orbital theory for Dieis-Alder reaction.

Unit-IV

Pericyclic Reactions II: (05 Lectures)

(4+2) and (2+2) cycloadditions, exo and endo isomers, Examples Bicyclo (2, 2, 1) heptane and Bicyclo (2, 2, 2,) octane systems. Intramolecular Diels Alder reaction.

Sigmatropic Rearrangements: Woodward and Hoffmann rules, Frontier Molecular orbital for 1, 3; 1, 5 and 1, 7 shifts. Examples including vitamin D_2 formation from 7-dehydro cholesterol (Provitamin D_3).

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory questions carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper IV : ANALYTICAL CHEMISTRY-B:

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE:

To teach the fundamental concept of Chemistry and their applications, The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit- I

Precipitation Equilibria : (05 Lectures)

Solubility of precipitates, effect of competing equilibria on solubility of precipitates, separation of ions by control of concentration of precipitating reagents, effect of electrolyte concentration on solubility product, theory of precipitation titrations. The Vohlard and the Mohr's methods of analysis, adsorption indicators.

Unit-II

Complexation Equilibria : (05 Lectures)

Complexation, formation constants, EDTA equilibria, effect of pH on EDTA equilibria, complexometric titration curves, selection of indicators for complexometric titrations, applications of complexometric equilibria.

Unit-III

Solvent Extraction and Ion-Exchange Separation : (06 Lectures)

Basic concepts of solvent extraction, relationship between distribution coefficient, distribution ratio and per cent extraction, applications of extraction methods in analytical chemistry, ion-exchange processes, ion-exchange-resins, techniques and applications of ion-exchange separation, basic concepts of column and gas chromatography.

Unit-IV

Radioisotope Methodology and its Applications : (04 Lectures)

Radioactive isotopes, radioactive decay rates and half-life periods of radioactive isotopes, sample preparation in radiochemical measurements, background, dead-time and inefficiency corrections in radioactive measurements, isotope dilution method and its applications, radiometric-titrations, neutron activation analysis.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

BOTANY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

Third Semester

		Time	Theory	Int Assess.	Max Marks
Theory Paper-A :	Plant Physiology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – I	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20

Fourth Semester

Theory Paper-A :	Plant Ecology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – II	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			200

Note : 1. The number of teaching hours for theory and practical per session shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

SEMESTER –III

Paper -A : PLANT PHYSIOLOGY

Objective : The main objective of this paper is to make the students aware about various functions and metabolisms of plants. The course material of this paper would enable the students to understand gradual aspects of growth and development in plants along with concept of photoperiodism, role of hormones and photomorphogenesis.

Teaching Methodology : Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

Unit-I

Plant-Water Relations : Water transport processes; diffusion and osmosis; water potential and chemical potential; absorption of water, water transport through xylem; transpiration and its significance; factors affecting transpiration; mechanism of stomatal movement.

Mineral Nutrition : Criteria of essentiality of elements; macro-and micronutrients; role of essential elements; mineral deficiency symptoms and plant disorders; nutrient uptake and transport mechanisms; role of cell membrane, ion pumps and carriers.

Unit-II

Photosynthesis : Historical background and significance; structure of photosynthetic apparatus; photosynthetic pigments; accessory pigments and the photoprotective carotenoids; reaction center complexes; photochemical reactions; electron transport pathways in chloroplast membranes; photophosphorylation; the Calvin cycle; the C_4 carbon cycle; crassulacean acid metabolism; synthesis of starch and sucrose; photorespiration.

Transport of Organic Substances: Transport of photosynthates; source-sink relationships; the mechanism of translocation in the phloem; assimilate partitioning.

UNIT-III

Respiration : Glycolysis; the TCA cycle and its regulation; electron transport in mitochondria; oxidative phosphorylation; pentose phosphate pathway; cyanide-resistant respiration.

Nitrogen Metabolism : Biological nitrogen fixation; reduction of N_2 into ammonia; *nif* genes; regulation of nitrate reductase and nitrogenase; nitrate and ammonium assimilation.

Unit-IV

Growth and Development : General aspects – definitions, phases of growth; kinetics of growth; physiology of seed dormancy and seed germination; concept of photoperiodism; Physiology of flowering; the florigen concept and role of hormones; vernalization; senescence and fruit ripening; importance of respiratory climacteric; discovery, physiological role and mechanism of action of the phytohormones – auxins, cytokinins, gibberellins, abscisic acid and ethylene; photomorphogenesis; discovery of phytochromes and cryptochromes, their role and mechanism of actions; signal transduction – basic concept; plant movements – tropic and nastic; biological clocks.

Suggested Readings :

1. Copleand, R. A. Enzymes: A Practical Introduction to Structure, Mechanism and Data Analysis, VCH Publishers, New York, 1996.
2. Dryer, R.L. and Lata, G.F. Experimental Biochemistry, Oxford University Press, New York, 1989.
3. Galston, A.W. Life Processess In Plants, Scientific American Library, Springer-Verlag, New York USA, 1989.
4. Hooykaas, P.J.J., Hall M.A. and Libbenga, K.R. (eds.) Biochemistry and Molecular Biology of Plant Hormones, Elsevier, Amsterdam, The Netherlands, 1999.
5. Hopkins W.G. Introduction to Plant Physiology : John Wiley and Sons. Inc., New York, USA, 1995.
6. Moore, T.C. Research Experiences in Plant Physiology: A Laboratory Manual, Springer-Verlag, Berlin, 1974.
7. Moore, T.C. Biochemistry and Physiology of Plant Hormones (2nd edition), Springer-Verlag, New York, USA, 1989.
8. Salisbury. F.B. and Ross, C.W. Plant Physiology (4th edition), Wadsworth Pulishing Co., California, USA, 1992.
9. Srivastava, H.N. Plant Physiology, Biochemistry & Biotechnology, Vol. V, Pradeep Publications, Jalandhar, India, 2013.
10. Taiz, L. and Zeiger, E. Plant Physiologyy (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010.
11. Wilson, K. and Goulding, K.H. (eds.). A Biologist's Guide to Principles and Techniques of Practical Biochemistry, Edward Arnold, London, U.K., 1986.

Suggested Labortary exercises for Third Semester

1. To study the permeability of plasma membrane using different concentrations of organic solvents.
2. To study the effect of temperature on permeability of plasma membrane.
3. To extract enzymes and study their activity, e.g. amylase, lipase, acid phosphatase, catalase, peroxidase.
4. Effect of the following factors on enzyme activity :

   pH, temperature, enzyme and substrate concentration, heavy metals.
5. To extract and separate chloroplast pigments by solvent method and demonstrate fluorescence in chloroplast extracts.
6. To determine the osmotic potential of vascular sap by plasmolytic method.

7. To determine the water potential of given tissue (any tuber).
8. To determine stomatal Index, stomatal frequency and percentage of leaf area open through stomata. Also study the effect of ABA on stomatal closure.
9. Effect of carbon dioxide concentration on the rate of photosynthesis.
10. To demonstrate that oxygen is evolved during photosynthesis.

Paper -B: DEVELOPMENT OF PLANTS AND THEIR UTILIZATION-I

Objective: This paper deals with internal structure of various plant parts, their growth and development patterns. It gives an insight into plant domestication and role of wild plants in ecosystem functioning.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Organization of the Higher Plant Body : The shoot and root systems; variation in habit and longevity; environmental influences.

UNIT-II

Meristems and Development : Shoot apical meristem, root apical meristem, lateral meristems and their functions. Range of form and structure of stem, leaf and root; their tissues and functions.

UNIT-III

Secondary Body of the Plant : Vascular cambium; secondary xylem (basic structure of wood); secondary phloem and periderm.

Unit-IV

Role of Wild Plants in Ecosystem Functioning : A general account.
Domestication of Plants : Primary and secondary centres of diversity; plant introduction.

Suggested Readings :

1. Carlquist, S. Comparative Wood Anatomy : Systematic, Ecological and Evolutionary Aspects of Dicotyledonous Wood, Springer-Verlag, Berlin, 1988.
2. Cutter, E.G. Cell and Tissues, Part I, Edward Arnold, London, 1969.

3. Cutter, E.G. Plant Anatomy: Experiment and Interpretation, Part II, Organs, Edward Arnold, London, 1971.

4. Esau, K. Anatomy of Seed Plants, 2nd Edition, John Wiley and Sons, New York, 1977.

5. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.

6. Fuller, K.W. and Gallon, J.R. Plant Products and New Technology, Clarendon Press, Oxford, New York, 1985.

7. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California, USA, 1998.

8. Nair, M.N.B. Wood Anatomy and Major Uses of Wood, Faculty of Forestry, University Putra Malaysia, 43400 Serdang, Selangor D.E. Malaysia, 1988.

9. Raghvan, V. Development Biology of Flowering Plants, Springer-Verlag, New York, 2000.

10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants,5th Edition, W. H. Freeman and Co., Worth Publishers, New York, 1999.

11. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV, Pradeep Publications, Jalandhar, India, 2007.

12. Goyal, J.P., Saini, Aruna. Angiosperms, Structure, Development and Reproduction, Trueman Company, Jalandhar, India, 2006.

13. Singh, V., Pande, P.C and Jain, D.K. Structure, Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, India, 2012.

Suggested Laboratory Exercises :

1. Study in the field of a large variety of herbaceous and perennials, both monocotyledonous and dicotyledonous, aquatic, mesophytic, xeromorphic plants, succulents, climbers, twiners, parasites, and trees with varied canopy architecture. Field diary to be prepared.

2. Morphology and anatomy of stems, roots and leaves using stained hand sections of permanent slides (tapioca, carrot, radish, onion, garlic, turnip, potato, etc.)

3. Study of vascular cambium in stem and root. Secondary growth. Examples of cambial variants and resultant secondary structures.

4. Preparation of world maps to show Vavilov's centres of origin of cultivated plants and Zhukovsky's concept of mega centres.

5. Preparation of maps showing the centres of primary diversity of important economic plants that originated in India and region of cultivation of plants introduced from the New World, Europe, Central Asia, Australia, Malaysia, China.

Guidelines for Botany Practical Examination:

Max. Marks: 20
Practical: 18
Int. Assessment: 2
Time: 3 hrs.

Q.1. Write procedure and precautions for Physiology experiment A. Perform the experiment, record observations calculation if any and results. Show the experiment to the examiner. 5

Q.2. Write illustrated morphological note on specimens B & C. 4

Q.3. Idenitfy slides D & E giving at least two identifying features for each. 4

Q.4. Practical Note book. 2

Q.5. Viva-Voce 3

BOTANY
SEMESTER-IV

PAPER-A: PLANT ECOLOGY

Objective: This paper deals with the role of environment in causing structural and functional variations in plants. It provides a broad idea about concept of population, community, ecosystem, ecological succession and role of plant indicators in environment monitoring.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT- I

Introduction : Holocoenotic nature of environment; limiting factors; ecological amplitude triggering factors (soil, water, atmosphere).

Ecological Adaptations: Concept, ecads, ecotypes and ecoclines; adaptations in relation to soil oligotrophy; adaptive significance of photosynthetic pathways.

Population : Concepts; density and pattern; idealized plant life history; population growth; carrying capacity; population regulation; r and k selection; population interactions.

UNIT- II

Community: Community characteristics and their measurement, species diversity (alpha, beta and gamma), niche.

Ecosystem : Concept, components and organisation, energy flow; ecological efficiencies; cycling of C, N and P; characterization and structure of ecosystem; the biotic and abiotic components, their inter-relationship; the processes within ecosystem, the trophic organisation; autotrophy, heterotrophy, parasitism, detritus, decomposition.

Ecological Succession : Mechanism and types; nature of climax; food chains and food webs; ecological pyramids.

UNIT- III

Flow of Energy and Materials : Flow of energy and materials within ecosystem; models of energy flow; ecosystem productivity; biogeochemical cycles; major types of ecosystems.

UNIT- IV

Plant Indicators and their role in Environmental Monitoring.

Phytogeography : General principles, vegetation of India.

Suggested Readings :

1. Barbour, M.G., Burk, J.H. and Pitts, W.D., Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.

2. Hill, M.K., Understanding Environmental Pollution, Cambridge University Press, 1997.

3. Kormondy, E.J., Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.

4. Mackenzie, A. et al., Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.

5. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.

6. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.

7. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.

8. Smith, R.K. Ecology and Field Biology, Harper Collins, New York, 1996.

9. Srivastava, H.N. Ecology and Utilization of Plants, Vol.VI Pradeep Publications, Jalandhar, India, 2012.

Suggested Labortary exercises:

1. To study ecological adaptations (morphological and anatomical) in plants (hydrophytes, xerophytes, epiphytes).

2. To determine minimum area of sampling unit (quadrat) for the study of grassland community.

3. To estimate Importance Value Index for grassland species.

4. To prepare maps of India with respect to (i) Major climate zones, (ii) Forest types, and (iii) Bio-geographical regions and to comment on these.

Paper -B : DEVELOPMENT OF PLANTS AND THEIR UTILIZATION – II

Objective : The course work of this paper deals with utilization of plants. It would provide the students an idea about importance of various plant parts as well as plant wealth such as medicinal, crops and food plants, fibre and oil yielding plants, timber yielding and firewood species.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT-I

A General account of wheat, rice, maize, sorghum, bajra, potato and sugarcane.
Legumes : Chickpea (Bengal gram), red gram (arhar) – a general account.

UNIT-II

Vegetable Oil Sources : Mustard, groundnut, soyabean and coconut –a brief account.
Plant Fibres : Cotton, jute and coir.
Timber and Firewood Species : A general account of use of following trees:
Tectona, Dalbergia, Albizzia, Eucalyptus, Cedrus, Acacia, Shorea, Terminalia, Mangifera and Azadirachta.

UNIT -III

Medicinal Plants : A brief account of plant drugs and their chief constituents used in indigenous and allopathic systems of medicines viz. *Opium, Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrhiza, Phyllanthus amarus (P. fraternus), Allium sativum, Atropa belladonna and Aloe barbadense.*

Unit-IV

A brief account of the following:
Natural Rubber : *Hevea brasiliensis*
Essential Oils: *Cymbopogon sp., Eucalyptus, Jasminum, Geramium and Vetiveria.*
Insecticides : *Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum).*
Dyes : *Curcuma longa(turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigofera (Indigo) and Lawsonia inermis (mehndi).* Extraction of pigments.
Ornamental Plans : Familarity with seasonal and perennials grown in your locality.

Suggested Reading :

1. Kocchar, S.L., Economic Botany in Tropics, 2nd edition, Macmillan India Ltd., New Delhi, 1988.
2. Lyndon, R.F., Plant Development : The Cellular Basis, Unwin Hyman, London, 1990.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S., A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma O.P. Hill's Economic Botany, Tata McGraw Hill Publishing Company Ltd., New Delhi, India, 1996.
5. Simpson, B.B. and Conner-Ogorzaly, M., Economic Botany –Plants in Our World, McGraw Hill, New York, 1986.
6. Srivastava, H.N. Eology and Utilization of Plants, Vol. VI, Pradeep Publications, Jalandhar, India, 2012.
7. Steevas, T.A. and Sussex, I.M. Patterns in Plant Development, 2nd Edition, Cambridge University Press, Cambridge, 1989.
8. Thoms, P.Trees: Their Natural History Cambridge University Press, Cambridge, 2000.
9. Tippo, O. and Stern, W.L. Humanistic Botany, W.W. Norton, New York, 1977.
10. Vishnu Swarup, Ornatmental Horticulture, Macmillan India, Ltd., Neew Delhi India, 1997.

Suggested Laboratory Exercises

1. Study of vegetative and reproductive morphology and anatomy of wheat, rice, maize, sorghum, bajra, potato and sugarcane. Study of starch grains in these plants (except in sugarcane). Epidermal structure of sugarcane stem and leaves. Tests for sucrose.
2. Study of vegetative and floral morphology, and pod development in chickpea and red gram.
3. Study of structure of oil storing tissues in sectioned seeds of mustard, groundnut and soyabean, and coconut endosperm, using micro-chemical tests.
4. Study of wood anatomy of ring-porous, diffuse porous woods using hand sections or prepared slides. Understanding of wood anatomy using T.S., T.L.S. and R.L.S. in five timber yielding species (*Tectona, Dalbergia, Albizzia, Eucalyptus Cedrus, Acacia, Shorea, Terminalia, Mangifera, Azadirachta,* or any other depending on the location of the institution). Preparation of a list of 10 fire wood species in your region and their properties.
5. Study of 10 whole plants (live or from herbarium specimens) used as resources of drugs : (*Opium*, *Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrrhiza, Phyllanthus amarus (P. fraternus*), *Allium sativum, Atropa belladonna, , Aloe barbadense,* or any other important plants of your area.
6. Study of laticiferous system in the stem of *Hevea brasiliensis,* familiarization with whole plants (fresh or herbarium specimens of *Cymbopogon* sp., *Eucalyptus, Jasminum, Geranium and Vetiveria* (or any other local sources of essential oils).
7. Study of Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum) from live specimens. Sources of dyes : Curcuma longa (turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigo fera (indigo) and Lawsonia inermis (mehndi). Extraction of pigments.
8. Preparation of a list of trees and shrubs used as ornamentals alongwith their popular and scientific names. Seasons of flowering and brief description. Calendar of seasonals grown as bed plants, potted plants, house plants, flowers used for worship or ornamentation. This may be illustrated and presented as a term paper at the time of examination.

Guidelines for Botany Practical Examination

Max. Marks : 20
Practical : 18
Int. Assessment : 2
Time : 3 hrs.

1. Identify specimen A and write note on its ecological adaptations. 3
2. Identify and write illustrated morphological note on specimens B,C & D giving their economic importance. 6
3. Identify & write botanical name and family of specimens E & F. 4
4. Practical note book. 2
5. Vice-Voce . 3

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ZOOLOGY

B. Sc. (HONOURS) SEMESTER - III

PAPER I: ENVIRONMENTAL BIOLOGY-I

Max. Marks	: 40
Theory Exam	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Environment :** Introduction and components.
2. **Ecological Concepts :** Ecosystem: Types food chains, food web, energy flow.

UNIT-II

3. **Biogeochemical cycles**
4. **Ecological succession**

UNIT-III

5. **Pollution: Types** - Air, water, land, thermal and noise pollution.

   (a) *Sources of Pollution :* Sewage, industrial wastes, silt, fertilizers, detergents, oils, pesticides, smoke, exhaust gases from automobiles, smog, acid rains, radioactive elements etc.

   (b) *Pollution in India:* Major polluted rivers and their sources of pollution, air pollution in major cities.

   (c) *Hazards of Pollution :* Effects of pollution on plants and animals.

UNIT-IV

6. (a) *Control of Pollution:* Primary, secondary and tertiary treatment, standards for the quality of drinking water.

   (b) Bioremediation

Suggested Readings :

1.	Odum, E.P.	:	Fundamentals of Ecology, W.B. Saunders Co., Philadelphia, 1971.
2.	Melanby, K.	:	The Biology of Pollution : Studies in Biology, No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3.	Louis, K.	:	River Pollution, Butterworths, 1969.
4.	Dix, H.M.	:	Environmental Pollution, Atmosphere, Land, Water and Noise, (Institution of Environmental Science) Wiley, 1981.
5.	Mani, M.S.	:	Ecology and Biogeography of India, Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6.	Kendeigh, S.C.	:	Ecology with Special Reference to Animals and Man, New Jersey, Prentice Hall Inc., 1974.

Paper II: MOLECULAR BIOLOGY-I

Max. Marks	: 40
Theory Exam	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Introduction** : Scope and historical account from molecules to cells, prokaryotes to eukaryotes, unicellular to multicellular.
2. **Biomolecules** : Micro and Macro molecules Structure and function of carbohydrates, lipids, proteins and nucleic acids.

UNIT-II

3. **Carbohydrates** : Classification, structure of cellulose and glycogen.
4. **Lipids** : Classification, structure of ganglioside and steroids.

UNIT-III

5. **Proteins**: Classification, structure of amino acids, primary, secondary and tertiary structure of proteins, structure of hemoglobin and lysozyme.

UNIT-IV

6. **Nucleic Acids** : DNA. What genes are made of? Detailed structure of DNA Molecule, replication, RNA - various types, transcription, translation and involvement of RNAs in protein synthesis.

Books Recommended :

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Watson, J.D. : Molecular Biology of the Cell, Robert, K. & Garland Publications, New York, 1983
2. DeRobertis, E.M.F. Jr. : Essentials of Cell and Molecular Biology, Halt Saunders, Japan, 1981
3. DeRobertis, E.D.P. & DeRobertis, E.M.F. : Cell and Molecular Biology, 8th edition, Halt Saunders, Tokyo, 1987.
4. Gardner, E.J., Simmons, M.J. & Snustad, D.P : Principles of Genetics, John Wiley & Sons, New York, 2004.
5. Power, C.B. : Cell Biology, Himalayan, Publishing House, Bombay, 1981
6. Schleif, R. : Genetics and Molecular Biology, Addison-Wesley, Reading U.K, 1986
7. Villee, C.A., Selomon, E.P. & Davis, P.W, : Biology, Saunders College Publishing, New York, 1985
8. Watson, J.D. : Molecular Biology of the Gene, 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9. Barry, J.M. : Molecular Biology, Genes and Chemical Control of Living Cells, Prentice Hall, Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-III

Practical's based on both theory papers.

1. Estimation of D.O. of the given water sample (normal and polluted).
2. Estimation of total alkalinity of water sample (normal and polluted).
3. Estimation of chlorine of water sample (normal and polluted).
4. Estimation of Hardness of water sample (normal and polluted).
5. Estimation of NO3 of water sample (normal and polluted).
6. Estimation of PO4 of water sample (normal and polluted).
7. Analysis of the variations in protein contents in different organs of an animal procured from slaughter house.
8. Analysis of the species variations in amino acids requirements.
9. Demonstration of carbohydrate and proteins in a cell (Cytochemically).
10. Prepare a Project on national parks/sanctuaries/biosphere reserves.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) III Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks

I. Analyze the variations in protein contents in the organs of a given specimen. Write the procedure and show the reading to the examiner. (3)

II. Determine the physico-chemical factors (A) in given water sample from a lake. Write the procedures followed. (3)

III. Demonstrate cytochemically carbohydrates/protein in an eukaryotic cell. Write the procedure and show the preparation to the examiner. (3)

IV. Write a note on the project…… (2)

V. Viva-Voce. (3)

VI. Note Book and Charts. (4)

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2019-20

SEMESTER-IV

PAPER I : ENVIRONMENTAL BIOLOGY-II
PAPER II: MOLECULER BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

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PAPER I: ENVIRONMENTAL BIOLOGY-II

UNIT-I

1. **Biodiversity Conservation** (In-situ, Ex-situ)
2. **IUCN Red List Categories:** Critically Endangered, Endangered, Vulnerable, Rare, Least Concern

UNIT-II

3. **National Conservation Projects**
4. **National Biodiversity Act and Wild life Act**

UNIT-III

5. Ecology of Conservation:

(a) Conservation of Natural Resources: Water, land and minerals.

(b) *Aquaculture:* Pisciculture and management of ponds, extensive & intensive and integrated fish culture.

UNIT-IV

6. (a) Forest Ecology: Forest statistics of India, conservation of forests, management of forests for timber productions.
   (b) Agriculture :Weed control, crop rotation, green revolution, checking of soil erosion.
   (c) *Dedesertification:* Measures to control the advance of desert.

Suggested Readings :

1.	Odum, E.P.	:	Fundamentals of Ecology, W.B. Saunders Co., Philadelphia, 1971.
2.	Melanby, K.	:	The Biology of Pollution : Studies in Biology, No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3.	Louis, K.	:	River Pollution, Butterworths, 1969.
4.	Dix, H.M.	:	Environmental Pollution, Atmosphere, Land, Water and Noise, (Institution of Environmental Science) Wiley, 1981.
5.	Mani, M.S.	:	Ecology and Biogeography of India, Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6.	Kendeigh, S.C.	:	Ecology with Special Reference to Animals and Man, New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-II

UNIT-I

1. **Mutations :** Types of mutations, physical and chemical mutagens and their mode of action on DNA.

2. **Bioenergetics :** Types of energy and their transformation, first and second law of thermodynamics.

UNIT-II

3. Factors governing chemical reactions, generation and function of ATP, biocatalysts; role of enzymes in cellular reactions. Types of major enzymes, Apoptosis.

4. **Regulation of Gene Expression :** Concept of operon, induction and repression in Prokaryotes, gene regulation in eukaryotes.

UNIT-III

5. **Molecules of Cellular Defence :** Structure and function of antibody, major histocompatibility antigens, HLA system. Genetic basis of antibody diversity.

UNIT-IV

6. **Molecular Basis of Inborn Errors of Metabolism :** Genetic basis of carbohydrates and amino acid metabolism, galactosemia and Phenylketonuria.

7. **Recombinant DNA :** Restriction endonucleases, Plasmids, cloning of DNA, use of recombinant DNA technology.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	Molecular Biology of the Cell, Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	Essentials of Cell and Molecular Biology, Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	Cell and Molecular Biology, 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	Principles of Genetics, John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	Cell Biology, Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	Genetics and Molecular Biology, Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	Biology, Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	Molecular Biology of the Gene, 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	Molecular Biology, Genes and Chemical Control of Living Cells, Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-IV

Practical's based on both theory papers.

1. Biota of pond water and sewage/industrial effluent.
2. Effect of light and gravity on organism.
3. Study of littoral, limnetic, profundal communities.
4. Study of nucleic acids in tissues (Cytochemically).
5. Idea about viruses and bacteria through charts etc.
6. Preparation and study of onion root tip chromosomes.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) IV Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2marks

I. Record biota in the given sewage samples. Draw labeled sketches & demonstrare these to the examiner. (3)

II. Examine water sample for biotic communities from particular zone of lake, sketch and demonstrate. (3)

III. Identify the given chart/diagram. Write a brief note on it. (2)

IV. Study the effect of …… on the given animal. Write the procedure followed. (2)

V. Male a chromosomes preparations of the onion root tip. Draw a label diagram of any stage of mitosis and show it to the Examiner. (3)

VI. Viva-Voce. (2)

VII. Note Book and Charts. (3)

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B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE), 2019-20

SEMESTER-III

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There would not be more than eight students in one section in practical examination.
3) There would be upto eight students in one section in practical class.
4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5) No electronic Instruments will be allowed for lehra in practical examination.
6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 theory periods per week) : 45 Marks

Paper-A Theory

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 3 Hours

Unit-I

1. Define the following terms : Stuti, Thaat, Tehai, Gat, Bharamri
2. Nritta, Natya, Nritya
3. Head Movements

Unit-II

1. Contributions Acchan Maharaj in the field of dance
2. Life sketch of Guru Pt. Narayan Prasad.
3. Knowledge of Gharanas of Kathak Dance

Unit-III

1. Detailed knowledge of Folk dance of west Bengal.
2. Study of Abhinaya
3. Brief note on Kathak and Odissi.

Unit-IV

1. Description of Jhaptaal, Ektaal and Adachautaal
2. Writing of Ekgun, Dugun and Chogun of following talas: Teentala, Ektala, Jhaptala
3. Writing of notation: Thaat, Amad, Tihai, Tukra, Tisarjati paran, Palta, Kavit in : Teentala, Jhaptala, Ektala

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B Practical

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 20 minutes

1. Teentala: Tatkar in Ekgun, Dugun, Chaugun layakaries with two tihaies.
2. Ektala & Jhaptala: Thaat-2, Amad-2, Tihai-2, Tukras-2, Tisarjati paran-1, palta-1, kavit-1
3. Gat Nikas: Thaat and Mataki
4. Practical demonstration of Rajasthani dance
5. Practical knowledge of Asamyukta Mudras.
6. Ability to play Nagma in teentala
7. Recitation of all toras & tukras etc. on hand.

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE), 2019-20

SEMESTER-IV

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) There would not be more than eight students in one section in practical examination.
3) There would be upto eight students in one section in practical class.
4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5) No electronic Instruments will be allowed for lehra in practical examination.
6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 theory periods per week) : 45 Marks

Paper-A Theory

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 3 Hours

Unit-I

1. Define the following terms: Uthaan, Chakardar Paran, Palta, Jati, Pakshi Paran
2. Ang, Upang, Pratyang
3. Eye Movements

Unit-II

1. Origin and development of Kathak Dance
2. Detailed study of Kathakali Dance
3. Prastutikran of Kathak

Unit-III

1. Detailed study of Chari
2. Study of Abhinaya Darpan
3. Dance and Literature

Unit-IV

1. Description of Dadra (6), Kehrva (8), Dhamar (14), Teentala (16)
2. Writing of Ekgun, Dugun, Chaugun of above mentioned talas with tehai
3. Writing in notation : Thaat, Amad, Tehai, Tora, Chakardar paran, Kavit and Premlu in Dhamar & teentala

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 20 minutes

1. Adachautala : Tatkar in Ekgun, Dugun, Chaugun layakaries with two tihaies.
2. Dhamar & Teentala: Thaat-2, Amad-2, Tihai-2, Toras-2, Paran-1, Kavit-1, Pramelu-1
3. Gat Nikas: Ghungat, Bansuri
4. Practical demonstration of Giddha
5. Practical knowledge of Sanyukta Mudras.
6. Ability to play Nagma on harmonium in teentala & dhamar
7. Recitation of all toras & tukras etc. on hand.

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 — enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

BACHELOR OF COMPUTER APPLICATIONS (B.C.A)

(SEMESTER SYSTEM)
PART-I, II, III
(First to Sixth Semester)
FOR
2019 - 2020 SESSION

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Panjab University, Chandigarh

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Scheme of Examination and Syllabus of BCA w.e.f. 2019 -20

Bachelor of Computer Applications Semester – I

Paper Code	Title	L	T		Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-101	English(Compulsory)-A	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-102	Fundamentals of Mathematical Statistics	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-103	Computer Fundamentals and Computing Software	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-104	Problem Solving Through C	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-105	Lab based on BCA-16-103	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-106	Lab based on BCA-16-104	-	-	6	6	-	50	50	4 Hrs	2
	Environment & Road Safety Education									
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – II

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-201	English (Compulsory)-B	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-202	Computer Organization	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-203	Fundamentals of Web Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-204	Object Oriented Programming using C++	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-205	Lab based on BCA-16-203	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-206	Lab based on BCA-16-204	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

***The Environment, Road Safety Education & Violence Against Women/Children is a compulsory qualifying paper which the students have to study in the B.C.A. 1st year (2nd Semester). If the students failed in qualify the paper during 2nd Semester, he / she / they be allowed to appear / qualify the same in the 4th or 6th semester/s.**

Bachelor of Computer Applications Semester – III

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Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-301/ BCA-16-302	Punjabi-A/ History & Culture of Punjab – A	6	-	-	6	05	45	50	3 Hrs	2
BCA-16-303	Information System Design and Implementation	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-304	Computer Oriented Numerical Methods	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-305	Data Structures	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-306	Lab based on BCA-16-304	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-307	Lab based on BCA-16-305	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**35**	**340**	**375**		**15**

Bachelor of Computer Applications Semester – IV

Paper Code	Title	L	T	P	Total	Int	Ext	Total		Credits
BCA-16-401/ BCA-16-402	Punjabi-B/History & Culture of Punjab – B	6	-	-	6	05	45	50	3 Hrs	2
BCA-16-403	Software Project Management	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-404	Operating System Concepts and Linux	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-405	Database Management System	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-406	Lab based on BCA-16-404	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-407	Lab based on BCA-16-405	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**-**	**12**	**36**	**40**	**340**	**375**		**15**

Bachelor of Computer Applications Semester – V

Paper Code	Title :	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-501	Computer Networks	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-502	Discrete Mathematical Structure	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-503	Java Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-504	Web Application Development using PHP	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-505	Lab based on BCA-16-503	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-506	Lab based on BCA-16-504	-	-	6	6	-	50	50	4 Hrs	2
		24	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – VI

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-601	E-Commerce	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-602	Application Development using VB.Net	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-603	Computer Graphics and Multimedia Applications	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-604	Lab based on BCA-16-603	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-605	Major Project and Seminar	-	-	12	12	10	115	125		5
	Total	**18**	**-**	**18**	**36**	**40**	**360**	**400**		**16**

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./B.C.A.1st year. The students are required to qualify this paper either in the first year, second year and third year of the course. The examination will be conducted by the University.

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FIRST SEMESTER

English (Compulsory) – A
: **BCA-16-101**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Semester I

Book Prescribed: **Colours of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (1& 2)
One essay type question on summary/Character/Incident (one out of two with internal choice)
10 marks

II) **Prose (1 to 3)**
Long essay type question on Summary/Theme(one out of two with internal choice)
10 marks

III) **Poetry** (1 to 6) **15 marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context (one out of two with internal choice) **5 marks**

Section B

1) Word formation from Prose and Stories and their use in sentences (5 out of 8)
10 marks

2) Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3) Translation from Hindi/Punjabi to English **5 marks**
(a small Paragraph)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Official, Business and Letters to the Editors **5 marks**

Fundamentals of Mathematical Statistics
: **BCA-16-102**

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the basic techniques of Statistical Methods. After completing this course students will be able to solve various Financial, Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Basic (Non-programmable) type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Basic Statistics: Types of Statistics, Different Statistical Techniques, Steps in Statistical Investigation, Uses and Limitations of statistics, Collection of Data: Sources of collecting primary and Secondary Data, Limitations of Secondary Data, Criteria of evaluating secondary data, Organization of data, Graphs of Grouped Frequency Distribution, Tabulation of Data, Parts of Table

Measures of Central Tendency: Kinds of measures of central tendency (statistical averages or averages):

Arithmetic Mean: Simple Arithmetic Mean, Methods of calculating Simple Arithmetic Mean, Arithmetic Mean in case of Individual Series, Discrete series and continuous series, Weighted Arithmetic Mean, Combined Arithmetic Mean.

Geometric Mean: Simple Geometric Mean, Methods of calculating Simple Geometric Mean, Geometric Mean in case of Individual Series, Discrete series and continuous series, Weighted Geometric Mean, Combined Geometric Mean.

Harmonic Mean: Simple Harmonic Mean, Methods of calculating Simple Harmonic Mean, Harmonic Mean in case of Individual, Discrete series and continuous series, Weighted Harmonic Mean, Combined Harmonic Mean.

UNIT - II

Median: Methods of Calculating Median in case of Individual, Discrete series and continuous series

Partition Value: Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles

Mode: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series

Range: Computation of Range, Inter Quartile Range, Computation of Inter Quartile Range, Percentile Range and Computation of Percentile Range.

Mean Deviation, Computation of Mean Deviation, Standard Deviation, Calculation of Standard Deviation, Variance, Calculation of Standard Deviation for individual Series, Discrete Series and Continuous Series, Coefficient of Standard Deviation and coefficient of variation, Combined Standard Deviation, Correcting incorrect Standard Deviation

UNIT - III

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Correlation Analysis : Correlation Analysis: Definition, Types of Correlation: Positive, Negative, Simple, Multiple, Partial, Total, Linear and Non-Linear. Need of Correlation Analysis, Correlation and Causation, Techniques for Measuring Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation: Correcting incorrect coefficient of correlation, calculating Karl Pearson's coefficient of correlation in case of grouped series, Probable Error, Coefficient of Determination, Spearman's coefficient of Correlation (Rank correlation): Calculation of Correct Coefficient of rank correlation, Difference between Rank Coefficient and Karl Pearson's coefficient of coefficient, Coefficient of concurrent deviation.

UNIT - IV

Regression Analysis (Linear Regression): Definition, Difference between Correlation and Regression, Types of Regression Analysis: Simple, Multiple, Partial, Total, Linear and Non-Linear, Objectives of Regression Analysis, Methods of obtaining regression analysis: Regression Lines, Regression Equations. Methods of obtaining regression equations: Normal Equations and Regression Coefficient, Properties of Regression Coefficient, Standard Error of Estimate, Regression Coefficient in case of Grouped Data, Uses of Regression Analysis and Limitations of Regression Analysis.

Suggested Readings:

1. Gupta S.C, Kapoor V.K. : Fundamentals of mathematical Statistics, Sultan Chand & Sons.
2. Gupta, S.P., 2003 : Statistical Methods, S. Chand.
3. Affi, A.A, 1979 : Statistical Analysis: A Computer Oriented Approach, Academic Press, Inc.

Computer Fundamentals and Computing Software
: **BCA-16-103**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: The objective of this course is to familiarize students with complete Fundamentals and the packages commonly used in computing software.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

Types of software: System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.

UNIT - II

Understanding Operating System using DOS : Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. Batch Files: Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

Understanding Graphical User Interface using Windows: Fundamentals of Windows, Types of Windows, Anatomy of windows, Icons, Recycle bin, Operations on Folders, Registry of Windows: Basics, Editing; Control panel.

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UNIT - III

Word Processing Package: Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools, word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, auto-formatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge, Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms.

UNIT - IV

Spreadsheet Package: Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes, Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, Printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros.

Presentation Packages: Basics of creating a presentation, Parts of main window, workspace views, creating a presentation, Incorporation of Animation.

Note: Any word processing, spreadsheet and presentation package may be used. Focus should be on open source software's.

Suggested Readings:

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications
3. Mathur Rajiv, 1995: DOS 6.2 Quick Reference, Galgotia.
4. OOoAuthors Team : Getting Started with OpenOffice.org 3.3, Friends of OpenDocument
5. Singleton, Roderick G.: OpenOffice.org User Guide.

Problem Solving Through C
: **BCA-16-104**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to make the student understand programming language concepts, mainly control structures, reading a set of data, stepwise refinement, function and arrays. After completion of this course, the student is expected to analyze the real life problem and write programs in 'C' language to solve problems. The main emphasis of the course is on problem solving aspect.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.
Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.
Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

UNIT - II

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.
Loop Control Structure: While and do-while, for loop and Nested for loop,
Case Control Structure: Decision using switch, Thegoto statement.
Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

UNIT - III

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function: Call by value and call by reference, Arrays of characters, Insertion and deletion operations, Searching the elements in an array, Using matrices in arrays, Passing an Entire Array to a Function.

Pointers: Pointer declaration, Address operator "&", Indirection operator "*", Pointer and arrays, Pointers and 2-Dimensional Arrays, Pointer to an Array, Passing 2-D array to a Function, Array of Pointers.
Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions.

UNIT - IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).
Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers, Union.
Files in C: Introduction, Opening and Closing files, Basic I/O operation on files.

Suggested Readings:

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading:

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

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SECOND SEMESTER

English (Compulsory) – B
BCA-16-201

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L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Semester II

Book Prescribed: **Colour of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (3-5)
One essay type question on summary/Character/Incident (one out of two with internal choice) **10 marks**

2) **Prose (4-5)**
Long essay type question on Summary/Theme (one out of two with internal choice) **10 marks**

3) Poetry (7-11) **15marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context(one out of two with internal choice) **5 marks**

Section B

1) Paragraph Writing(Descriptive and Narrative) **10 marks**

2). Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3). Translation from Hindi/Punjabi to English **5 marks**
(isolated sentences)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Transformation of all types (5 out of 5) **5 marks**

Computer Organization
BCA-16-202

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L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to understand the basic organization of computer system and system maintenance.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Organisation: Evolution of Computers, Von Neumann Architecture, Combinatorial Blocks : Gates, Half Adder, Full Adder, Multiplexers, Decoders, Encoders; Sequential Building blocks : Flip Flops, Registers, Counters,
Information representation: codes, fixed and floating point representation
Arithmetic: Addition and subtraction for sign magnitude and 2's complement numbers, integer multiplication using Booth's algorithms

UNIT - II

Architecture of a Simple Processor: Architecture of 8086/8088 microprocessor, instruction set, Addressing Modes.
Instruction: Microinstructions: Register Transfer, Arithmetic, Logical and Shift, Types of Instructions, Instruction Cycle.
Interrupt: Types, Interrupt Cycle
I/O organization: Strobe based and Handshake based communication, DMA based data transfer

UNIT - III

Memory Organisation: Memory Hierarchy, RAM (Static and Dynamic), ROM Associative memory, Cache memory organisation, Virtual memory organisation.
Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/ Output.

UNIT - IV

System Maintenance: Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection, prevention and protection from Viruses.

Suggested Readings:

Essential :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,

Further Reading :

2. P. Pal Choudhri, 1994. : Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 : Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.

Fundamentals of Web Programming

: **BCA-16-203**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to build and publish web sites using HTML, DHTML, CSS, JavaScript and Dreamweaver.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Terminology: Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL

HTML: Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.)

Lists: Unordered List, Ordered Lists, Definition lists

Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes

Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

Linking Documents: Anchor tag, External Document References, Internal Document References and Image Maps

Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

DHTML: Introduction to cascading style sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External

Forms: Attributes of Form element, Input element, The Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option

UNIT - III

Java Script: Introduction and Features of JavaScript, Writing JavaScript into HTML, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.

Other Built-In Objects in JavaScript: The String Object, The Math Object, The Date Object;

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UNIT - IV

Introduction to Dreamweaver: Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.
Web Hosting: Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools

Suggested Readings:

Essential :

1	Wanger & Wyke	:	Java Script Unleased, Pearson Education, New Delhi.
2	Bayross, Ivan :	:	HTML, DHTML, Java Script by BPB, Latest reprint
3	Schildt , Herbert	:	The Complete Reference Java 2, TMH, Latest reprint
4	Joseph Lowery	:	Adobe Dreamweaver CS5 Bible Paperback Edition

Further Reading :

5	Thomas Powell	:	HTML & CSS: The Complete Reference
6	John Pollock	:	JavaScript, A Beginner's Guide
7	Janine C. Warner	:	Dreamweaver CS5 For Dummies Paperback Edition
8	David Powers	:	The Essential Guide to Dreamweaver CS4

Object Oriented Programming using C++
: BCA-16-204

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: By the end of the course, students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, and explore advanced C++ techniques.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Principles of Object Oriented Programming (OOP): Introduction to OOP, Difference between OOP and Procedure Oriented Programming; Concepts: Object, Class, Encapsulation, Abstraction, Polymorphism and
Inheritance, Applications of OOP. Special operators: scope resolution operator, Member Dereferencing operators, Memory management operators, Manipulators and Type cast operator
Structure of a C++ Program and Classes and Objects : Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions; Class Function Definition: Member Function definition inside the class declaration and outside the class declaration.

UNIT - II

Friend function, inline function, Static members, Function Overloading, Arrays within a class. Arrays of Objects; Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects.
Constructors: Declaration and Definition, Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use.
Operator Overloading & Type Conversion: Conversion from basic type to user defined type, User defined to basic type and one user defined conversion to another user defined type.

UNIT - III

Inheritance: Extending Classes Concept of inheritance, Base class, Defining derived classes, Visibility modes : Public, Private, Protected ;Types of Inheritance: Single inheritance : Privately derived, Publicly derived; Making a protected member inheritable, multilevel

inheritance, multiple Inheritance and ambiguity of multiple inheritance, Hierarchal Inheritance, Hybrid, Nesting of classes.

Polymorphism: Definition, Application and demonstration of Data Abstraction, Encapsulation and Polymorphism. Early Binding, Polymorphism with pointers, Virtual Functions, Late binding, pure virtual functions.

UNIT - IV

Exception Handling: Definition, Exception Handling Mechanism : Throwing mechanism and Catching Mechanism, Rethrowing an Exception

File Processing : Opening and closing of file, Binary file operations, structures and file operations, classes and file operations, Random file processing.

Suggested Readings :

Essential :

1. E. Balaguruswamy, 2008 : Object Oriented Programming with C++, TMH.

Further Reading :

2. Bjarne Stroustrup, 2009 : The C++ Programming Language, Addison-Wesley Publishing Company.
3. Robert Lafore, 2003 : Object Oriented Programming in Turbo C++, Galgotia Pub.
4. Salaria, R. S. : Object Oriented Programming Using C++, Khanna Book Publishing Co. (P.) Ltd., New Delhi.

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THIRD SEMESTER

Punjabi – A
BCA-16-301

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ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ,
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
   (ਭਾਈ ਵੀਰ ਸਿੰਘ- ਗੁਲਾਬ ਦਾ ਫੁੱਲ ਤੋੜਨ ਵਾਲੇ ਨੂੰ, ਵਿਛੋੜਾ-ਵਸਲ, ਖੇੜਾ, ਪੂਰਨ ਸਿੰਘ- ਜਵਾਨ ਪੰਜਾਬ, ਸਮੁੰਦਰ ਕਿਨਾਰੇ ਮੈਂ ਉਡੀਕਾਂ, ਗਰਾਂ ਦਾ ਮਿਹਨਤੀ ਬਲਦ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ- ਰਾਧਾ ਸੰਦੇਸ਼, ਏਕੇ ਦੀ ਬਰਕਤ, ਪੰਜਾਬੀ ਦਾ ਸੁਪਨਾ, ਮੋਹਨ ਸਿੰਘ- ਮਾਂ, ਦੇਸ਼ ਪਿਆਰ, ਹਵਾ ਦਾ ਜੀਵਨ ਅਤੇ ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ- ਆਖਾਂ ਵਾਰਸ ਸ਼ਾਹ ਨੂੰ, ਸੱਤ ਵਰ੍ਹੇ ਅਤੇ ਅਸ਼ੋਕਾ ਚੇਤੀ ਕਵਿਤਾਵਾਂ)
2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
   (ਏਹੁ ਨਿਦੋਸਾ ਮਾਰੀਐ, ਸਵਰਗ ਦੀ ਝਲਕ, ਮਾਮਲਾ, ਉਜਾੜ, ਬਸ਼ੀਰਾ ਅਤੇ ਰੱਬ ਤੇ ਰੁੱਤਾਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (3 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ.ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਸੁਜਾਨ ਸਿੰਘ, ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ ਅਤੇ ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਲੇਖ : ਸਮਾਜਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਆਮ ਵਾਕਫ਼ੀ ਨਾਲ ਸੰਬੰਧਤ (500 ਸ਼ਬਦਾਂ ਤੱਕ)	7 ਅੰਕ
6.	ਸ਼ਬਦ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜਾਂ ਵਿੱਚੋਂ 7)	7 ਅੰਕ
7.	ਵਾਕ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਵਾਕਾਂ ਵਿੱਚੋਂ 8)	8 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

HISTORY AND CULTURE OF PUNJAB – A
BCA-16-302

HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi,1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala, 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.and Das, M.N. :A Social, Cultural and Economic History of India, Vol. II, Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Information System Design and Implementation

:

BCA-16-303

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students about the various aspects of Information Systems to be developed their analysis and design. The motive is to aware the learners about pre requisite of software development and associated paradigms. After completing this course students will be able to be analyse and design information systems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Systems Concepts and Information Systems Environment: Definition and characteristics of a system. Elements of a system Environment: Boundaries and interface. Types of systems: Physical or Abstract Systems, Open and Closed System, Man - made information systems.
The System Development Life Cycle: Introduction to various phases-Recognition of Need, Feasibility Study, Analysis, Design, Implementation, Post– Implementation and Maintenance.
The Role of System Analyst: Skills of a System Analyst, various roles of the Analyst.

UNIT - II

System Planning and the Initial Investigation: Bases for planning in system analysis, Initial investigation, determining the users information requirements, Problem definition and Project Initiation, Background Analysis, Fact Finding, Fact Analysis, Determination of Feasibility.
Information Gathering: Introduction, Information Gathering tools: Review of Literature, Procedures and forms. On -site observation. Interviews and questionnaires.
Tools of Structured Analysis: Various tools of structured analysis: Data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table, Pros and cons of each tools.

UNIT - III

Feasibility Study: System Performance-statement of Constraints, Identification of Specific System Objectives, description of Outputs. Feasibility Study – Feasibility considerations, Steps in feasibility analysis. Feasibility Report.
System Design: The Process of Design-Logical and Physical Design, Design methodologies: Structured design, Functional Decomposition

System Testing and Quality Assurance: Testing, System testing, Quality assurance and its goals in its system life cycle, Levels of quality assurance, Trends in testing.

UNIT – IV

Implementation and Software Maintenance: Introduction, Conversion- Activity network for Conversion, File Conversion, User Training: Elements of user Training Post implementation review. Software Maintenance - Primary activities of a Maintenance Procedure, Reducing Maintenance Costs.

Hardware and Software Selection: Types of Software, Procedure for Hardware/Software selection: Major phases in selection, Evaluation and Validation, Vendor Selection, Post – Installation Review. Software selection- Criteria for Software Selection, the evaluation process.

Suggested Readings:

1. E.M. Awad: Systems Analysis and Design, Galgotia Publications(P)Ltd.

Further Reading :

2. Hardgrave Bill C., Siau Keng, Chiang Roger H.L., Systems Analysis and Design: Techniques, Methodologies, Approaches and Architectures 1st Edition, M.E. Sharpe Publications.

Computer Oriented Numerical Methods
: **BCA-16-304**

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the essential techniques of Numerical Methods. After completing this course students will be able to solve various Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Basic (Non-programmable) type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Introduction to differentiation, integration and matrix algebra.

(No. of Lectures – 05)

Data Representation and Computer Arithmetic: Introduction, Concept of Exact and Approximate Numbers, Concept of Significant digits, Representation of Numbers in Memory, Storage of Integer Numbers: Signed Representation, 1's Complement Representation, 2's Complement Representation, Floating Point Numbers and their storage, Floating Point Arithmetic, Normalization and their consequences, Errors, Measures of Accuracy: Absolute Error, Relative Error and Percentage Error, Error types: Data Errors, Truncation Errors, Round-Off Errors, Computational Errors, Rules, Relationship between Relative Error and Significant digits and Error Propagation: Error Propagation in Addition Operation, Subtraction Operation, Multiplication Operation and Division Operation.

(No. of Lectures – 10)

UNIT - II

Solution of Non-Linear Equations: Introduction, Types of Non-Linear Equations: Polynomial Equations, Transcendental Equations, Methods of Finding Solutions of Non-Linear equations: Direct Method, Iterative Method.

Iterative Methods: Bisection Method, False-Position Method, Secant Method, Newton - Raphson Methods, Zeros of a polynomial using Birge – Vieta Method. Convergence of Iterative Methods, Comparison between Iterative Methods.

(No. of Lectures – 08)

Simultaneous Linear Equations: Solution of Simultaneous Linear Equations using Direct and Iterative Methods: Direct Methods: Gauss – Elimination Method, Gauss-Jordan Method, Concept of Pivoting, Iterative Method: Gauss-Seidal Method.

(No. of Lectures – 07)

UNIT - III

Interpolation: Introduction, Lagrange Interpolation, Inverse Interpolation, Finite Differences: Forward Differences, Backward Differences, Divided Differences, Difference Tables: Forward Difference Table, Backward Difference Table, Divided Difference Table, Observations regarding Difference Tables, Newton's Method of Interpolation: Newton' s Forward Difference Interpolation Formula, Newton' s Backward Difference Interpolation Formula, Newton' s Divided Difference Interpolation Formula.

(No. of Lectures – 10)

Numerical Integration: Introduction, Newton-Cotes Integration Formulae: Trapezoidal Rule, Simpson's 1/3rd Rule, Simpson's 3/8th Rule.

(No. of Lectures – 05)

UNIT - IV

Approximation: Approximation of functions: Taylor Series Representation, Chebyshev Polynomials.

(No. of Lectures – 07)

Solution of Ordinary Differential Equations: Introduction**,** Euler's Method, Runga–Kutta Methods: 2nd order & 4th order, Predictor Corrector Methods: Modified Euler's Method.

(No. of Lectures – 08)

Suggested Readings:

Essential :

1. Salaria,R.S. : Computer Oriented Numerical Methods,5th Edition, Khanna Book Publishing Co. (P.) Ltd., New Delhi

Further Reading :

2. Rajaraman,V.,2004 : Computer Programming in C, Prentice Hall of India.
3. S.S. Shastry : Introductory Methods of Numerical Analysis
4. H.C. Saxena : Finite differences and Numerical Analysis

Data Structures
: **BCA-16-305**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students various data structures and the basic operations performed using them. At the end of course the student will have complete knowledge of data structures, thus will be able to use them for solving real world problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures.
Arrays: Introduction, Types of Array, Memory representation, Applications and operations.
Stacks: Introduction, memory representation, Applications and operations

UNIT - II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation.
Queue: Introduction, Types, Memory Representation and Applications.

UNIT - III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree.
Graphs: Introduction, Memory Representation, Graph Traversal (DFS and BFS)

UNIT - IV

Searching: Binary and Linear Search;
Sorting: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.
Comparison of various Searching and Sorting algorithms.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Reading :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.
3. Salaria, R. S. : Data Structures & Algorithm Using C, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
4. Salaria, R. S., Test Your Skills in Data Structures, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
5. Sofat Sanjeev, Data Structure with C and C++, Khanna Book Publishing Co.
6. Patel, R.B., Expert Data Structure in C, Khanna Book Publishing Co.

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FOURTH SEMESTER

Punjabi (Compulsory) – B
BCA-16-401

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ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਅਪ੍ਰੈਲ /ਮਈ 2●2● ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
(ਫ਼ੀਰੋਜ਼ਦੀਨ ਸ਼ਰਫ਼- ਪੰਜਾਬ, ਭਾਰਤ, ਮਾਂ ਦਾ ਦਿਲ, ਨੰਦ ਲਾਲ ਨੂਰਪੁਰੀ- ਭੋਲਾ ਪੰਛੀ, ਚੁੰਮ ਚੁੰਮ ਰਖੋ, ਸ਼ੌਕਣ ਮੇਲੇ ਦੀ, ਸ਼ਿਵ ਕੁਮਾਰ- ਲੱਛੀ ਕੁੜੀ, ਕੀ ਪੁੱਛਦਿਉ ਹਾਲ ਫ਼ਕੀਰਾਂ ਦਾ, ਬਿਰਹੜਾ, ਪਾਸ਼- ਇਨਕਾਰ, ਅਸੀਂ ਲੜਾਂਗੇ ਸਾਥੀ, ਗੀਤ, ਸੁਰਜੀਤ ਪਾਤਰ- ਖ਼ਤਾਂ ਦੀ ਉਡੀਕ, ਗ਼ਜ਼ਲ (ਕੋਈ ਡਾਲੀਆਂ 'ਚੋਂ) ਅਤੇ ਗ਼ਜ਼ਲ (ਮੇਰਾ ਸੂਰਜ ਡੁਬਿਆ ਹੈ) ਕਵਿਤਾਵਾਂ)

2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
(ਗਧੀ ਵਾਲਾ, ਕੁਰਸੀ, ਬਾਕੀ ਸਭ ਸੁੱਖ-ਸਾਂਦ ਹੈ, ਰੋਹੀ ਬੀਆਬਾਨ, ਜਿੱਥੋਂ ਸੂਰਜ ਉੱਗਦਾ ਹੈ ਅਤੇ ਪਰਛਾਵੇਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (4 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਸ਼ਿਵ ਕੁਮਾਰ, ਪਾਸ਼, ਸੁਰਜੀਤ ਪਾਤਰ, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਰਘੁਬੀਰ ਢੰਡ ਅਤੇ ਵਰਿਆਮ ਸੰਧੂ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਕਾਲਜ ਨਾਲ ਸਬੰਧਤ ਪ੍ਰੈਸ-ਨੋਟ (2 ਵਿਚੋਂ 1)	8 ਅੰਕ
6.	ਕਾਰੋਬਾਰੀ ਇਸ਼ਤਿਹਾਰ (2 ਵਿਚੋਂ 1)	7 ਅੰਕ
7.	ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	7 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

: **History and Culture of Punjab – B**
BCA-16-402

HISTORY AND CULTURE OF PUNJAB-II

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in the Modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab, Board of Administration
2. Western Education: Growth of Education and rise of middle classes

3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP(Physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal :History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.

Software Project Management
: **BCA-16-403**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students important concepts, terms related to various phases during the development of a software project. At the end of the course the student will be able to apply software project management techniques to manage a software project.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Software Project Management and Process Groups: Introduction to project and project management, role of a project manager in project management, a system view of project management, Stakeholders of Project, Project phases and product life cycles, Evolution of software economics, Improving software economics: reducing product size, software processes, team effectiveness, automation through software environments, Principles of modern software management.

UNIT - II

Project Management Framework: Project Management Framework, Software Tools for Project Management, Issues in Project Staff Acquisition and Team formation and Development, Model based software architectures, Workflows of the process, Checkpoints of the process.

Project Integration: Integration Management: Project selection, project management plans, project execution, project monitoring and controlling, integrated change control;

UNIT - III

Scope Management: Scope Management: project scope statement, Work breakdown structures, Scope verification and scope control, Process instrumentation and seven core metrics.

Software management disciplines: Iterative process planning, Project organizations and responsibilities, Process automation.

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UNIT - IV

Project Scheduling: Time Management; Importance of Project Schedules, Sequencing and Scheduling Activity, Project Network Diagrams, PERT/CPM, Gantt charts, Critical chain scheduling.

Cost Management: Project Cost Management - Importance and Principles of Project Cost Management, Resource Planning, Cost Estimating Techniques and. Expert Judgment, Estimating by Analogy, COCOMO Model, Cost Budgeting and Control

Suggested Readings :

Essential :

1. Kathy Schwalbe, Information Technology Project management, Thomson Publication.
2. Bob Hughes and Mike Cotterell, Software Project Management, Tata McGraw-Hill.

Further Reading :

3. Walker Royce, Software Project Management - A Unified, Addison-Wesley.
4. Pankaj Jalote, Software Project Management in Practice, Pearson Education.
5. S.A. Kelkar, Software Project Management, A Concise Study, Prentice-Hall India.

: Operating System Concepts and Linux

BCA-16-404

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the module is to create skills of students in operating systems concepts and Linux commands.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, its needs and services, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling

UNIT - II

Deadlocks: Necessary and sufficient conditions for Deadlocks, Introduction to methods for handling deadlocks, deadlock detection and recovery

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

UNIT - III

Introduction to Linux: Linux's shell, Kernel, Features of Linux, History, Minimum system requirements, Boot and Root disks , Starting and stopping Linux system, passwords, logging in and out, terminal Handling commands: who, Understanding wildcards, Environment variables.

Understanding I/O Redirection and Piping: Introduction, cut, paste, sort, tee; Introduction to Regular Expressions and grep .

Using file system: Introduction to common types of files, Filenames, Introduction to different types of directories; Parent, Subdirectory, Home directory; rules to name a directory, Important directories in Linux File System, Absolute and relative filenames, creating files and directories, listing files (ls), pwd, moving and copying files (mv, cp), moving directories, Removing files and directories, using wildcards with files and directories, File and directory permissions using relative and absolute methods, Changing group ownership, umask settings

UNIT - IV

Process Management: Types of processes, ps, bg, fg, nice, kill.
Understanding System Administration activities: Superuser (su) command, Taking backups using tar, Managing disk space, Mounting and Un-mounting file system, Managing users, Managing printers with lpd, mknod, lpc, lpq, lprm.
Vi editor: starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text.

Suggested Readings:

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.
2. John Goerzen: Linux Programming Bible, IDG Books, New Delhi, 2000.

Further Reading :

3. Brinch, Hansen, Operating System Principles, Prentice Hall of India
4. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delh.
5. Sumitabha Das: Your Unix - The Ultimate Guide, TMH, 2000.

Database Management System
: **BCA-16-405**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving the students the insight of the underlying concepts of database management system and **implement them using Database software.**

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach.
Data Base Systems Concepts and Architecture: Schemas and Instances, DBMS architecture and Data Independence, Data base languages & Interfaces, DBMS functions and component modules.
Entity Relationship Model: Entity Types, Entity Sets, Attributes & Keys, Relationships, Relationship Types, Roles and Structural Constraints, Design issues, weak entity types, E-R Diagrams. Design of an E-R Database Schema, Reduction of an E-R Schema to Tables.

UNIT - II

Relational Data Model : Relational model concepts, Integrity constraints over Relations, Relational Algebra - Basic Operations.
Conventional Data Models : An overview of Network and Hierarchical Data Models.
Relational Data Base Design : Functional Dependencies, Decomposition, Desirable properties of decomposition, Normal forms based on primary keys (1 NF, 2 NF, 3 NF and BC NF).
RDBMS: Terminology, The 12 Rules (Codd's Rule) for an RDBMS.

UNIT - III

Understanding SQL-1: Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, ordering the result of a

Query Aggregate Functions, Grouping the Result of a Query, creation and deletion of Views, Managing privileges with Grant and Revoke Command, COMMIT and ROLLBACK, Functions: Character Functions, Date Functions, Group Functions

UNIT - IV

Understanding SQL-II: Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries
PL/SQL: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Conditional and Iterative Control, Cursor Management in PL/SQL, Implicit/explicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions, Database Trigger, types of triggers, dropping triggers, storage for triggers.

Suggested Readings:
Essential

1. Elmasri & Navathe: Fundamentals of Database systems, 3rd Edition, Addison Wesley, New Delhi.
2. Ivan Bayross : SQL, PL/SQL-The Program Language of ORACLE, BPB Publication, New Delhi.

Further Reading :

3. Korth & Silberschatz : Database System Concept, 4th Edition, McGraw Hill International Edition.
4. Raghu Ramakrishnan & Johannes Gehrke: Database Management Systems, 2nd edition, Mcgraw Hill International Edition.
5. C.J.Date : An Introduction to Data bases Systems 7th Edition, Addison Wesley, New Delhi.
6. Bipin C.Desai : An Introduction to Database System, Galgotia Publication, New Delhi
7. Abbey, Abramson & Corey : Oracle 8i-A Beginner's Guide Tata McGraw Hill Publishing Company Ltd.

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FIFTH SEMESTER

Computer Networks
BCA-16-501

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the course is to:

- Offer knowledge about computer network related hardware and software using a layered architecture.
- Provide good understanding of the concepts of network security, wireless and various emerging network technologies.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Network: Network Hardware and Software, Network Topologies, Uses of Computer Networks, OSI Reference Model, TCP/IP reference model, Comparison of OSI with TCP/IP model.

Physical Layer: Transmission media: Twisted pair, Coaxial cable, Fiber optics, Wireless Transmission (Radio, Microwave, and Infrared), Switching: Circuit Switching, Message Switching, Packet Switching & their comparisons. ISDN and its services, Multiplexing: Frequency Division, Time Division, Wave Length Division, MODEMS.

UNIT - II

Data Link Layer: Design Issue, Framing, Errors Detection and Correction Code: Check sum, CRC, Hamming code, Data Link Protocols for noisy and noiseless channels, Sliding Window Protocol: Stop and Wait ARQ, Go-back-N ARQ, Selective Repeat ARQ.

Medium Access Sub-Layer: Introduction to Static and Dynamic channel allocation, IEEE standards 802.3.

UNIT - III

Network Layer: Design Issues, network layer addressing, network layer datagram, IP addressed Classes. Sub netting-Sub network, Subnet mask, Routing Algorithm: Shortest Path Routing, Flooding, Broadcast and Multicast routing, Congestion control: Principles of Congestion Control, Congestion prevention policies, Leaky bucket and token bucket algorithms.

UNIT - IV

Application Layer: Domain Name system (DNS), DNS name space, DNS Servers, World Wide Web, HTTP, e-mail: Architecture and Services, Message Component, Multipurpose Internet Mail Extensions (MIME), Simple Mail Transfer Protocol (SMTP), Post Office Protocol (POP), Remote Login and File transfer protocol, Introduction to Network Security.

REFERENCES:

1. Andrew S. Tanenbaum, "Computer Networks", Pearson Publication.
2. Behrouz A. Forouzan, "Data Communication and Networking", Tata McGraw Hill.
3. Theodore S. Rappaport, "Wireless Communication: Principle and Practices", Pearson Publication.
4. Charlie Kaufman, Radio Perlman, Mike Speciner, "Network Security", PHI.
5. Mayank Dave," Computer Networks", Cengage Learning.

Discrete Mathematical Structure
BCA-16-502

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives : In this paper, Students will learn and be able to acquire the knowledge of Logic, Relations and Functions. Algebric Functions and Graph Theory will also be discussed in this paper.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT – I

Set Theory : Relations and Functions : Set Notation and Description, subset, basic set operations, Venn Diagrams, laws of set theory, partitions of sets, min sets, duality principle, basic definitions of relations and functions, graphics of relations, properties of relations: injective, surjective and bijective functions, compositions.

UNIT - II

Recurrence : Recurrence Relations and Recursive Algorithms – Linear-Recurrence Relations with Constant Coefficients; Homogeneous Solutions : Particular Solution, Total Solution, Solution by the Method of Generating functions.

UNIT – III

Graph Theory : Graph and planar graphs – Basic Terminology, Multi-graphs, Weighted Graphs, Paths and Circuits, Shortest Paths, Eulerian Paths and Circuits. Travelling Salesman Problem, Planar Graphs.

UNIT – IV

Automata Theory : Finite State Machines–Equivalent Machines, Finite State Machines as language Recognizers; Analysis of Algorithms - Time Complexity, Complexity of Problems.

References :

1. Doerr,A.and Kenneth, L.,Applied Discrete Structures for Computer Science, 1989 Galgotia Publications Pvt. Ltd.
2. Liu, C. L., 1985, Elements of Discrete Mathematics, McGraw Hill.
3. Seymour Lipschutz and Lipson, :2000 Solved Problems in Discrete Mathematics, McGraw- Hill., 1992

Java Programming
BCA-16-503

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving student knowledge about all the programming concepts of JAVA programming language.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT I

Java and the Internet: The Java programming language and its characteristics; Java development kit, Java run- time environment; Java compiler

Fundamentals of Java: Java Vs. C++, Byte Code, Java Virtual Machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructors, Garbage Collection, method overloading,

Inheritance: Different types of Inheritance, member access, using super keyword to call super class constructors, creating a multilevel hierarchy, method overriding, dynamic method dispatch, using abstract classes, using Final keyword.

UNIT II

I/O Basics: streams, the predefined streams; Reading console Input, Writing console Output.

Arrays and Strings: One-dimensional and two-dimensional Arrays, String Handling using String and StringBuffer class, String Functions.

Packages: Types of packages, defining a package, Importing packages, Access protection

Interfaces: Defining an Interface, Implementing Interfaces, Variables in Interfaces, Achieving multiple inheritance using interfaces, Interface and Abstract classes.

UNIT III

Exception Handling: Java Exception handling model, Types of exception, using Try and catch, Multiple Try and Catch clauses, Nested Try statements, finally block, user defined exceptions.

Multi-threaded Programming: The Java Thread model, the Thread class and Runnable interface, Creating a Thread using Runnable Interface and extending Thread, Creating Multiple Threads, Thread Priorities, Synchronizations: Methods, Statements, Inter Thread Communication, Deadlock, Suspending, Resuming and Stopping Threads.

Applet Programming: Introduction, Types of applet, Life Cycle, Incorporating an applet into web page using Applet Tag, running applets, using Graphics class and its methods to draw lines, rectangles, circles, ellipses, arcs and polygons.

UNIT IV

Using AWT controls: Introduction to AWT, Creating GUI Applications using AWT, AWT controls: Label, TextBox, TextArea, Check Boxes, Radio Buttons, Choice lists, Understanding Layout Managers: FlowLayout, BorderLayout, GridLayout; Introduction to Event handling using Delegation Event Model.

Introduction to Java Database Connectivity (JDBC): JDBC Architecture, JDBC Drivers, Java.SQL package, Connecting to the Database and performing basic database operation like Insert, Delete, Update and Select.

References:

1. Balaguruswamy, E. : Programming with Java, A Primer, TMH, New Delhi, Latest reprint.
2. Bayross, Ivan : Java 2 by BPB publication
3. Schildt , Herbert : The Complete Reference Java 2, TMH.
4. Arora, Indu : JAVA Programming

Web Application Development using PHP
BCA-16-504

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course enables students to do web programming using PHP and MySQL. It would enable them to develop websites and other web based applications.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Introduction to web applications: Client Side Scripting Vs Server Side Scripting, Understanding Web Servers: Local Servers and Remote Servers, Installing WAMP and configuring PHP environment, Static website Vs Dynamic website development, Embedding PHP code in Web Pages

PHP Basics: Tokens, Variables, Variable Scope, Constants, Data Types, number handling in PHP, operands, operators, expressions, operator precedence, comments, echo and Print statement

Control structures: Branching statements: if-else, ternary operator, switch; looping statements: while, do-while, for; file inclusion Statements

UNIT - II

Functions: Function definition, Creating and invoking user-defined functions, Formal parameters versus actual parameters, Function and variable scope, Recursion, Library functions

String Handling: interpolation with curly braces, characters and string indexes, string operators, heredoc, string functions, Formatting Strings, Comparing and searching Strings and substrings

Arrays: PHP Arrays, Creating Arrays, Accessing Array elements, Multidimensional Arrays, Inspecting Arrays, Deleting from Arrays, Iterating with each() and foreach(), Iterative functions: current(), next(), prev(), reset(), end()

UNIT - III

Forms: Working with HTML Form controls and PHP, Super global variables, super global array, importing user input, Accessing user input

Integrating PHP and Database: Connecting to database, Making SQL queries, Executing queries, Fetching data sets, Integrating Forms and Databases**:** Basic form submission to a database, editing data with an HTML form

UNIT - IV

Maintaining User State: Introduction to Cookies, Setting time in a cookie with PHP, Deleting a cookie, creating session cookie, Introduction to sessions, Starting a session, Registering Session variables, working with session variables, Destroying session, passing session Ids , encoding and decoding session variables, increase session expire time, working of session without cookie.

Working with File System: Understanding PHP file permissions, Opening and closing a file, File reading and writing functions, File system and directory functions

References:

1. PHP6 and MySQL Bible, Steve Suehring, Wiley India edition, 2015 reprint
2. PHP: The Complete Reference, "Steven Holzner", Tata McGraw Hill
3. PHP6, Apache, MySQL Web development, Timothy Boronczyk, Wiley India edition
4. Programming PHP, Rasmus Lerdorf, Kevin Tetroi (O'Reilly, ISBN 1565926102).
5. PHP, MySQL, and JavaScript: A Step-By-Step Guide to Creating Dynamic Websites by Robin Nixon O'Reilly Media
6. Core PHP Programming. Leon Atkinson (Prentice Hall, ISBN 0130463469).

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SIXTH SEMESTER

E-Commerce
BCA-16-601

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to understand the process of electronic commerce and familiarizes students with the technology involved in it.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

An Overview of E-Commerce:
Definitions: E-commerce, E-business, difference between E-commerce and E-business, Problems with Traditional business systems, Aims of E-commerce, Types of E-commerce: B2B, B2C, C2C, B2G, G2H, G2C, Operational & Strategic benefits of E-commerce, Issues & Challenges in E-commerce.
Electronic Data Interchange (EDI): Definition; Traditional versus EDI enabled system for document exchange; Components of EDI: EDI Standards, EDI Software, Communication Networks; EDI Message Structure; EDI Notification Structure; EDI in India; EDI enabled procurement process; Benefits of EDI: Direct Benefits, Strategic Benefits; EDI Implementation issues; Legal Aspects

UNIT - II

Web based E-Commerce: Definition; Need for web based business, Steps in setting up business on Internet: Selection & registration of domain name, Website development : Planning a website, Steps for creating a website, Elements of a webpage, web authoring tools, Hosting a website: Website hosting considerations.
Online Promotion tools & techniques: Getting links to your site, banner advertisements & measuring advertisement effectiveness; Web Traffic Analysis: Hits, View pages, Visits and Other web-reporting tools, various measures, What is Search Engine optimization

UNIT - III

Electronic Payment Systems: E-cash: Purchasing & using of e-cash; Electronic Purses their loading with cash and use; E-cheque payment system; Online Third Party Verified Payment System through Credit & Debit Cards; ATM based cash disbursement system; Electronic Bill Payment System; Inter bank clearing system.

UNIT - IV

Mobile Commerce: Definition, Benefits of Mobile Commerce, Issues in Mobile Commerce, Mobile Commerce Framework
Applications of E-Commerce & Case Studies: Applications of e-commerce, Case studies in Retailing, Banking and e-governance; Cyber Crimes: Types, Cyber Forensics, Cyber crimes and IT Act - 2000.

References:

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1. Bhasker, Bharat: Electronic Commerce: Framework, Technologies and Applications; Tata McGraw- Hill.
2. Bajaj, Kamlesh & Nag, Debjani: E-Commerce-The Cutting Edge of Business; Tata McGraw- Hill.
3. Young, Margaret Levine : The Complete Reference: Internet; Tata McGraw Hill.
4. KalaKota, Ravi & Whinston, Andrew B.: Frontiers of Electronic Commerce; Addison Wesley.
5. Stallings, William: Network Security Essentials: Applications & Standards; Pearson Education.
6. Minoli, Daniel & Minoli, Emma: Web Commerce Technology Handbook; Tata McGraw
   Hill.
7. Murthy CSV: e-Commerce: Concepts, Models, Strategies; Himalayas Publishing House.
8. Kosiur, David: Understanding E-Commerce; Microsoft Press.

Application Development using VB.Net
BCA-16-602

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The course is designed to enable the students to develop applications using event driven programming with VB.net (as front end) and accessing database at back end.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Overview of the Visual Studio .NET IDE: Introduction to .NET Framework and the Common Language Runtime, Introduction to Visual tudio.NET IDE: Menu Bar and Tool Bar, Solution Explorer, Toolbox, Using different controls of Toolbox and their commonly used properties and methods: TextBox, Label, Check Box, Radio Button, Button, Frame, List Box, Combo Box, Picture, Image, Shape, Drive, File, directory related controls, Introduction to Menus

UNIT - II

Basics of VB.Net: Constants, Variables, data types, assignment operator, Operators: Arithmetic, Relational and logical operators, Assignment operators, Control structures: If, if/then/else selection structures, Select case Multiple-selection structure, While, do while, do until, For/Next repetition structure

Procedures: Introduction, sub Procedures, function procedures, event procedures, commonly used Form events, msgBox function, InputBox function.

Arrays and Strings: declaring and allocating Arrays, Using Strings and String functions: len, right, left, ucase, lcase, ltrim, trim;

Control Arrays: Introduction, creating and using Control Arrays

UNIT - III

Writing ASP .NET applications and Deploying ASP .NET Applications: Introduction to ASP.NET, Difference between ASP and ASP.NET, Understanding Web Forms, Using Validation Controls :
RequiredFieldValidator,RangeValidator,CompareValidator,RegularExpressionValidator,CustomValidator,ValidationSummary; , Managing State in ASP.NET Web Applications using Session object, Cookie and Query String ,Creating ASP.NET application, Deploying ASP.NET Applications with Windows Installer, Introduction to Web Services.

UNIT - IV

Accessing Data with ADO.NET: Understanding ADO.net, ADO.NET Object model: Connected model and Disconnected model, architecture, components, Understanding Provider classes, using Data Reader to read data from database, Data Adapter and Data sets, Using DataAdapter for Data Navigation and Data Manipulation, connecting to and querying a data source, using Data Grid view control with ADO.NET data sources.

Reference Books:

1. Dave Grundgeiger, Programming Visual Basic .NET, O'Reilly Publisher.
2. Michael McMillan, Object Oriented programming usning Visual Basic.Net, Cambridge University Press.
3. Cameron Wakefield Henk-Evert Sonder Wei Meng Lee, VB.NET Developer's Guide, Global Knowledge, Syngress Publishing.
4. Evangelos Petroutsos, Mastering Visual Basic .NET, SYBEX Publishing
5. Deitel, Visual Basic.NET How to Program, Pearson Education
6. Lowell Mauer, Teach Yourself more Visual Basic.net in 21 days, SAMS

Computer Graphics and Multimedia Applications
BCA-16-603

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this paper is to introduced basic computer graphic concepts and algorithms. The student will also learn about essential concepts used in developing multimedia applications.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Graphics: A Survey of Computer Graphics : Computer Aided Design, Presentation Graphics, Computer art, Entertainment, Education and Training, Visualization, Image Pressing, Graphical User Interfaces.
Overview of Graphics Systems: Video Display Devices, Cathode Ray Tube, CRT monitors, Flat panel displays: Plasma Panel display, Thin-film electroluminescent displays, LED, Liquid Crystal Displays (LCD), Raster Scan Systems, Random Scan Systems. Graphics Monitors and Workstations, Input Devices, Hard-copy devices, Graphics Software.

UNIT - II

Studying the Features and Developing Computer Graphics Using Standard Graphics package Auto CAD: Features and applications of AutoCAD, Interface, System Requirements, The X, Y coordinate system, Dimensioning, Drawing commands, Cleaning Up the drawing, Positioning Commands, Editing Commands, Construction Commands, Display Commands.
Developing Computer Graphics Using 'C': Input-output primitives, setting character and text attributes, changing line styles, Using fill styles to fill images. Use these primitives to develop programs like drawing concentric circles, Ellipses, Sine curves, Histograms, Pie charts and human face.

UNIT - III

Multimedia Applications: What is multimedia, Components of Multimedia, Need of Multimedia, Features of a Multimedia System, Benefits and problems of using Multimedia?
System Components: Multimedia system and a conventional system, Basic System components, Subsystems and functions of a Multimedia computer, Multimedia Add-on Cards. Applications: Multimedia in the Real World, Training and Education, Image Processing, Multimedia in home and office

Multimedia Platforms: Personal computer as a Multimedia System, Limitations of the early Personal Computer as a Multimedia System, The evolution of MPC, Hardware Platforms, Software Platforms.
Development Tools: Types of development tools, Commercial tools, Stages of Multimedia Application Development.

UNIT - IV

Image: Sources of image, Types of images, Basic editing operations, Introduction to Image Compression: Lossy and Lossless compression, Image file formats.
Audio: Hardware for Audio, Digital Audio, Audio editing operations, MIDI, Audio file formats
Video: Hardware Components of a Video System, introduction to Video compression, MPEG, Video file formats.
Storage for multimedia: magnetic media, Optical media, Compact disk specifications.
Studying features and use of Multimedia authoring tools like Photoshop and Macromedia Director.
Photoshop- Features, Interface, Toolbox, Color models, Layers, Filters
Macromedia Director- Features, Stage, Cast, Score, Control Panel, Sprite, Channels, Text Inspector, Tools for creating cast members

References

1. Hearn and Backer, Computer Graphics, Second Edition, PHI, New Delhi
2. Kanetkar Yashwant, Graphics Under 'C', BPB Publications
3. Judith Jeffcoate, Multimedia in Practice, Technology and Applications, PHI
4. Foley, Vandom, Fenier, Hughes, 'C'; Addison Wesley Publishers
5. Ian R. Sinclair, Multimedia on the PC (with CDROM), BPB Publications
6. Hillman, David, Multimedia Technology and Applications, ITP
7. Vaughan, Tay, Multimedia Making it Work, Osborne Publishers.
8. Ze-Nian, Li.Mark, S. Drew, Fundamentals of Multimedia, Pearson Education

PANJAB UNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. (Honors) in Biotechnology (Semester System)

1st to 6th Semester

EXAMINATIONS 2019-20

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B.Sc. (Hons.) Biotechnology (Semester System) Examinations 2019-20

B.Sc. (Hons.) 1st year (1st Semester) (July, 2019)

Sr. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-I-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-I--II-T	50	-	-
3.	Mathematics / A Life Sciences -B	BIOT-Sem-I-III-TA/TB	75	BIOT-Sem-I-III-PA/PB	25
4.	Chemistry	BIOT-Sem-I-IV-T	75	BIOT- Sem -I-IV-P	25
5	Physics	BIOT-Sem-I-V-T	75	BIOT-Sem-I-V-P	25
6	Introduction to Biotechnology	BIOT-Sem-I-VI-T	75	BIOT-Sem-I-VI- P	25

Total Marks = 500

B.Sc. (Hons.) 1st year (2nd Semester) (January, 2020)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

Environment, Road Safety Education, Violence Against Women/Children & Drug Abuse is a compulsory qualifying paper, which the students have to study in the B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he /she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

B.Sc. (Hons.) 2nd year (3rd Semester) (July, 2019)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Biochemistry	BIOT-Sem-III-I-T	75	BIOT-Sem-III-I-P	25
2.	Genetics	BIOT-Sem-III-II-T	75	BIOT-Sem-III-II-P	25
3.	Immunology-I	BIOT-Sem-III-III-T	75	BIOT-Sem-III-III-P	25
4.	Plant Tissue Culture	BIOT-Sem-III-IV-T	75	BIOT-Sem-III-IV-P	25
5.	Animal Cell Culture	BIOT-Sem-III-V-T	75	BIOT-Sem-III-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester) (January, 2020)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) Biotechnology (Semester System) Examinations (Session 2019-20)

B.Sc. (Hons.) 3rd year (5th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Environmental Biotechnology	BIOT-Sem-V-II-T	75	BIOT-Sem-V-II-P	25
3.	Bioinformatics	BIOT-Sem-V-III-T	75	BIOT-Sem-V-III-P	25
4.	Enzymology	BIOT-Sem-V-IV-T	75	BIOT-Sem-V-IV-P	25
5.	Summer Training	---	--	BIOT-Sem-V-V-P	100

Total Marks = 500

B.Sc. (Hons.) 3rd year (6th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-VI-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-VI-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-VI-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-VI-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreneurship	BIOT-Sem-VI-V-T	100		

Total Marks = 500

Paper: English
Code No: BIOT-Sem-I-I-T

Semester I
Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 1-4
Drama: Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:
Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which, a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**.

This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama.
5 marks

Note; The question 1 &2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here.
5 marks

Q.5.Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6 One short question to test the students' understanding of various aspects of Business Communication.
5 Marks

BIOT - Sem-I--II-T

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: 50

ਲਿਖਤੀ: 45

ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5

ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ

ਪੱਤਰ-ਵਿਹਾਰ

ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ),

ਸੰਪਾਦਕ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਵਿਤਾ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਚੋਂ ਇੱਕ)	5 ਅੰਕ
ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇੱਕ)	$3 + 5 = 8$ਅੰਕ
ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਵਿਤਾਵਾਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	7 ਅੰਕ
ਵਿਆਕਰਣ:	(3+3+4=10ਅੰਕ)

ਓ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ

ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ

ਏ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ

ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	10ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ :ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

BIOT - Sem-I--II-T

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Vedic Age: socio-economic life; development of caste; position of women.
3. Religion: vedic religion; impact of Buddhism and Jainism on the region.

UNIT II

4. Society and Culture c. 1000 A.D.: Socio-economic life; religious life; education
5. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

6. Society and Culture c. 1500A.D: socio-economic life under the Lodhis; religious beliefs and practices- Vainavism, Shaivism, Shaktism, Islam.

UNIT III

7. Sikhism: new ideology of Guru Nanak; evolution of Sikh community-guruship,manji,masand; new institutions-gurdwara, sangat-pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society: social unrest; emergence of new rulers-rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh: social mobility; painting and architecture; literature.
12. MAP: Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRam Manohar Lal, Delhi, 1966
7. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N. And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.
12. Hussain ,Yusuf 1973(rep.). : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay,

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Paper: Mathematics **Theory: 67 Marks**
Code No: BIOT-Sem-I-III-TA **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Mathematics

- To study the different concepts of limits, differentiation, integration and calculus so as to apply these concepts in biotechnology.
- To learn solutions to quadratic, cubic equations, differential equation, linear equation and thus study the applications in biotechnology.

Paper: Mathematics

UNIT – I

Numbers

Different kinds of numbers, integer, rational and irrational, surds and their properties, Fractional indices.

Complex numbers, conjugate, modulus and argument of a complex number.

UNIT – II

Set, relation and function

Set, product sets, relations, functions (polynomials, trignometric, exponential), graphical representation of functions

Limit

Sequences, limits of sequences, series, limits of functions

Unit III

Calculus

Differentiation: Calculating gradients of chords first and higher order derivatives. Applications increasing and decreasing functions, maximum and minimum points, Derivatives as rates of change.

Integration

Finding a function from its derivative, definite integral, indefinite integral, calculating areas for bounded regions.

Differential Equations

Forming differential equations solving first order differential equation and second order differential equation with constant co-efficients, growth equation, applications.

UNIT – IV

Linear Programming
Elementary statistics
Representation of Data: Discrete data, continuous data, histogram, polygons, frequency curves, The Mean, variability of data-The standard deviation, Median, quintiles, percentile
Skewness

Reference Books:
1. Arya J.C, Lardner R.W (1990). Mathematics for the biological sciences(Prentice Hall. International, New Delhi).
2. Mathematics: Text book for class XI & XII (2006) (National Council ofEducation Research and Training, New Delhi).

Mathematics (Practicals)

Practical : 22 Marks
Internal Ass.: 3 Marks

1. Computation of mean, variance and standard deviation using given (preferably biological) data (2 to 3 practicals).
2. Sets (Venn-Diagram, Union, Intersection, Difference of sets, Symmetric Difference of sets, Complement of sets) (2 practicals).
3. Relations (graphical representation of relation from set A to set B or set A to set A) (1 practical).
4. Histogram, frequency polygon, ogives, pie chart, bar diagrams (2 to 3 practical).
5. Solving linear programming problem using graphical methods (2 practical).

Paper: Life Sciences **BIOT-Sem-I-III-TB**
Theory: 67 Marks
Internal Ass.: 8 Marks

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Life Sciences

- To increase scientific vocabulary and understanding of a variety of life science concepts.
- To learn about the anatomy and physiology of animals and animal systems.
- To study ecology and ecosystems.

Unit-I

An introduction to life on earth.
Plant Anatomy and Physiology:-
Structure of land plants.
Nutrition and Transport phenomena in plants.

Plant reproduction and development.
Plant responses to the environment.

Unit-II

Ecology:- Community interactions.
Ecosystems:- Definition and components.
Food chain and food web.
Habitat.
Ecological succession.
Types of succession.
Animal behaviour:-Definition and learning.

Unit-III

Animal Anatomy and Physiology:-
Homeostasis and organization of animal body.
Circulation.
Respiration.
Nutrition and digestion.
Urinary system and homeostasis.
The immune response.

Unit-IV

Animal Anatomy and Physiology:-
The endocrine system.
Nervous system.
The senses.
Action and support by the muscles and skeleton system.
Reproduction.

Reference Books:

1. Life Sciences (2001) by Rastogi and Dubey, S. Chand & Co., New Delhi.
2. Basics of Biotechnology–I: Introduction to Life Sciences (2005) by Sobti& Sharma, Vishal Publishing Co. Jalandhar.
3. Ecology- Principles and applications (2004) by Chapman and Reiss, Cambridge University Press, Cambridge, U.K.
4. Microbial Ecology- fundamentals and applications, (2000) by R. Atlas and R. Bartha, Benjamin / Cummings Science Publishing, California.
5. Animal Physiology (2008) by R. C. Sobti, Narosa publishing house Pvt. ltd, New Delhi.

BIOT-Sem-I-III-PB **Life Sciences (Practical)**

Practical : 22 Marks
Internal Ass.: 3 Marks

1. To study cell structure from onion leaf peels.
2. To study ultra structure of cell organelles through photographs.
3. To study digestive, Respiratory, Circulatory, Endocrine and Reproductive system of Human body through charts/ model.

4. Study of the slides/specimens and identification with reasons – Bacteria, oscillatoria, Spirogyra, Rhizopus, Mushroom, yeast, liverwort, moss, fern, lichen, one monocotyledon and dicotyledon.
5. Study of the slides/specimens and identification with reasons –Amoeba, Hydra, Tapeworm, Roundworm, Earthworm, Cockroach, Pila, Starfish, Shark Labeo, Frog, Lizard, Pigeon and Rabbit.

Paper: Chemistry **Theory: 67 marks**
Code No: BIOT-Sem-I-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn the concepts of chemical thermodynamics, chemical equilibrium and their applications.
- To learn about compounds of carbon , their sources, mechanism of reactions and utility in daily life
- To study concepts of stereochemistry and spectra of organic molecules.

UNIT – I

a) **Chemical bonding:** Elementary treatment of valence bond theory and molecular orbital theory. Ionic bonding, multiple bonds, multi-center bonds, metallic bonding.hydrogen bonding and its significance.

b) **Periodic properties:** Position of elements in the periodic table,effective nuclear charge and its calculation, atomic and ionic radii, ionization energy, electron affinity, electronegativity. Trends in periodic table and application in predicting and explaining the chemical behavior.

c) **Molecular Spectroscopy:** Difference between atomic and molecular spectroscopy, absorption and emission spectroscopy, regions of electromagnetic spectrum. Infrared and Raman spectra, basic principle and information from Infrared and Raman spectra.Principle of NMR, chemical shift values and its applications. Importance of mass spectroscopy in chemistry and biology

UNIT – II

a) **Solutions:** Ideal and non- ideal solutions, method of expression concentrations of solution, activity and activity coefficients, dilute solution, Osmotic pressure, its law and measurements, Elevation of boiling point and depression of freezing points.

b) **Chemical kinetics:** Scope, rate of reaction, influencing factors such as concentration, temperature, pressure, solvent *etc*. theories of chemical kinetics. Arrhenius equation, concept of activation energy.

UNIT – III

a) **Photochemistry:**
Absorption of light, Lambert-Beer Law, Photochemical principles: Stark-Einstein Law of Photochemical equivalence, Quantum yield of photochemical reaction (with example). Fluorescence and Phosphorescence.

b) **Coordination compounds:** Introduction, Wener's coordination theory, naming of coordination compounds, isomerism and stereochemistry in coordination compounds

UNIT – IV

a) **Fundamentals:** inductive effect electromeric effect, resonance, hyperconjugation, types of reagents, electrophiles and nucleophiles, types of organic reaction intermediates, carbocations, free radicals, carbenes (with example). Nomenclature and classification of Alkyl halide, method of formation, chemical reaction, mechanisms and stereochemistry of nucleophillic substitution reaction of Alkyl halides,SN_2, and SN_1 reaction with energy diagram.

b) **Carboxylic Acids and derivatives:** Structure of carboxylic acids and derivatives. Acidity of carboxylic acids, effects of substitution on acidic strengths, chemical properties of carboxylic acids. HVZ reaction with mechanism. Relative stability and reactivity and reactivity of acid chloride, esters, anhydrides, amides, mechanism of esterification.

Reference Books:

1. Bruce H Mahan (1987). University Chemistry Edition 3rd (Narosa Publishers).
2. R. T. Morrison, R. N. Boyd (2001). Organic Chemistry (Prentice-Hall of India Pvt. Ltd).
3. J.D Lee. (2008). Concise Inorganic Chemistry, (Wiley-India).
4. B. R. Puri, L. R. Sharma. (1989). Principles of inorganic chemistry (Shoban Lal Nagin Chand and Co).
5. Walter J Moore (1986). Basic physical chemistry (Prentice Hall of India).

BIOT-Sem-I-IV-P **Chemistry (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Inorganic qualitative analysis
2. Four ions including interfering ions.
3. Iodimetry and Iodometry
4. Redox titrations using ceric sulphate, potassium dichromate and potassium permanganate
5. Complexometric titration using EDTA of Ca^{++}, Mg^{++} and Zn^{++}
6 Analysis of a given organic compound (solid): Elemental Analysis,

Reference Books:

1. L. Saland (1989). Practical chemistry labs: A resource manual (Walch Education).
2. J. Leonard, B. Lygo, G. Procter (1998). Advanced practical organicchemistry. (CRC publications).
3. P. Kelter, M. Mosher, A. Scott (2008). Chemistry: The practical science(Publisher Houghton Mifflin).
4. G. Svehla (1996). Vogel's quantitative inorganic analysis (Prentice Hall)

Paper: Physics **Theory: 67 Marks**
Code No: BIOT-Sem-I-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

Physics is one of the important basic sciences and Biotechnology is based upon these. Introduction to basic course of Physics will enhance the grasping of subject.

UNIT – I

Science, Physics and Life Sciences- An introduction to apparent differences and the underlying overlap (atomic nature of matter). Units of measurement and ranges (from the smallest to the largest known) for different physical quantities viz. mass, length, time, current, temperature, luminosity, etc. with suitable examples from bio/physical sciences.

UNIT – II

Coulomb's law for point charges; electric field due to point charge and electric dipole (on axial line and equator line), electric flux; Gauss's theorem and its applications (line of charge and sheet of charge).

Electric potential due to point charge, group of charges and dipole (on axial line and equatorial line), potential difference as line integral of electric field, capacitance; series and parallel arrangements, energy stored in the electric field of capacitor, current, current density, equation of continuity, Ohm's law in vector form.

UNIT - III

Interference of waves, phase and path differences, theory of interference fringes, Young's experiment, coherent sources, Llyod's mirror, Fresnel Biprism, intensities of maxima and minima.

Diffraction of light, rectilinear propagation, Fresnel and Fraunhofer diffraction, Fraunhofer diffraction at single slit, Rayleigh criterion for resolving power, Resolving power of telescope and microscope, Compound Microscope (Principle, construction, ray diagram, formula for magnifying power), fluorescent microscope(concept only), Polarization, introduction.

UNIT – IV

Quantum theory of light, X-rays diffraction, Compton effect, Bragg's law, de Broglie wave equation, phase velocity and group velocity, electron microscope, Uncertainty Principle (statement only), applications of Uncertainty Principle (particle in a box, existence of electron in Nucleus and atom).

Radioactivity and its laws ; half-life and mean life, uses of radioactivity.

Reference Books:
1. H.S. Hans & S.P. Puri : Mechanics (Tata Mcgraw Hill 1984)
2. Electricity and Magnetism : Berkeley physics course vol. II.
3. AjoyGhatak : Optics (Tata Mcgraw Hill 2004)
4. Jenkins &White : Fundamental of optics (Tata Mcgraw Hill 1991)
5. D.P. Khandelwal : Text book of optics and atomic physics (Himalaya Pub. 2005)
6. Arthur Beiser : Modern Physics (Tata Mcgraw Hill 1981)

BIOT-Sem-I-V-P **Physics (Practical)** **Practical : 22 Marks**
Internal Ass.: 3 Marks

Introduction and practice the concepts of proper measurement, data recording, and data presentation; stress to be laid on use of proper units, least count, error & its propagation, graph plotting & least square fitting. (Simple measuring devices available in the lab may be used to create basic data).

1. Resolving power of Telescope/Microscope.
2. Rotation of the plane of polarization of a solution using a Polarimeter.
3. Use of C.R.O. as a display & measuring device.
4. Capacitance by flashing and quenching of a neon lamp.

Reference Books:
1. Laboratory Manual of Physics for Undergraduate classes by D. P. Khandelwal
2. B.Sc. Physics Practicals by C. L. Arora.

Paper: Introduction to Biotechnology **Theory: 67 Marks**
Code No: BIOT-Sem-I-VI-T **Internal Ass.: 8 Marks**
Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -
This course will introduce the basic concepts of biotechnology to the students. They will learn about the history of biotechnology; the foundations of modern biotechnology; the role of biotechnology in fermentation industry, environment and modern medicine and the ethical implications of biotechnology.

Unit-I

Advent, scope and basics of biotechnology
Bacteria as workhorses of biotechnology; *E. coli* as the model bacterium

Yeast and fungi in Biotechnology
Introduction to multicellular organisms as research models: *Drosophila melanogaster*, *Caenorhabditis elegans*, *Daniorerio*, *Musmusculus*
Arabidopsis thaliana as model for plant genetics,
Role of viruses and bacteriophages in biotechnology

Unit-II

Structure and function of the cell: the basic unit of life
Prokaryotic and Eukaryotic cells
Biomolecules in a cell (DNA, RNA and proteins)
Introduction to genomics, transcriptomics, proteomics and metabolomics; bioinformatics and its role in biotechnology.
Introduction to basic techniques like sterilization, centrifugation, electrophoresis, chromatography, sonication.
Fundamentals of recombinant DNA technology: Restriction Enzymes, Vectors and their properties.

Unit-III

Applications of biotechnology: today and tomorrow
Basics of Biotechnology in fermentation and pharmaceutical processes.
Green technology to control pollution.
Role of biotechnology in diagnostics, introduction to gene therapy.

Unit-IV

Biotechnology and society: genetically modified organisms (GMOs) - transgenic plants and animals and their applications in biotechnology.
Public concerns and risks associated with genetic engineering: Bioterrorism and biowarfare.
Ethical, social and legal implications of biotechnology.

Reference Books:

1. Comprehensive Biotechnology, Murray Moo-Young, 2nd edition (2011), Pergamon Press.
2. Introduction to Biotechnology, William J. Thieman& Michael A. Palladino, 3rd edition (2012), Benjamin Cummings.
3. Biotechnology Expanding Horizons, BD Singh, 4th edition (2012), Kalyani Publishers.
4. The Ethics of Biotechnology (Biotechnology in the 21st Century), Jonathan Morris, Chelsea House Pub (L), 1st edition (2005).
5. Biotechnology, Applying the Genetic Revolution, David P. Clark & Nanette J. Pazdernik, 1st edition (2008), Academic Cell.
6. Molecular Biotechnology, Sandy B. Primrose, 2nd edition (1991), Blackwell Scientific Publications, ISBN.
7. Biotechnology: Demystifying the concepts, David Bourgaize, Thomas R. Jewell & Rodolfo G. Buiser, 1stedition(1999), Benjamin Cummings.
8. Ethical Issues in Biotechnology, Richard Sherlock & John D. Morrey, 1st edition (2002), Rowman & Littlefield Publishers.

BIOT-Sem-I-VI-P

Introduction to Biotechnology (Practical) **Practical : 22 Marks**
Internal Ass.: 3 Marks

1. Introduction and use of basic equipments in a biotechnology laboratory (Auto-pipettes, pH meter, centrifuges, light microscope, electrophoretic apparatus, vortex mixer, magnetic stirrer, rocker, laminar hoods, autoclave, sonicator)
2. Handling and disposal of hazardous reagents (acids, carcinogenic chemicals like acrylamide, ethidium bromide) and concept of chemical hoods
3. Good laboratory practices followed in biotechnology laboratory (sterility, DNAse/ RNAse free space, separate area for protein work, possible means of contamination and its control etc)
4. Cell disruption and cell lysis of animal/plant/bacterial cell
5. Separation and estimation of extracellular and intracellular proteins
6. Quantification of nucleic acids by colorimetry (orcinol)
7. Introduction to bioinformatic tools used in biotechnology

Semester – II

B.Sc. (Hons.) 1st year (2nd Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-Sem-II-I-T	50	-	-
2.	Punjabi/HCP	BIOT - Sem-II--II-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-Sem-II-III-T	75	BIOT-Sem-II-III-P	25
4.	Basic Biochemistry	BIOT-Sem-II-IV-T	75	BIOT-Sem-II-IV-P	25
5.	Cell Biology	BIOT-Sem-II-V-T	75	BIOT-Sem-II-V-P	25
6.	General Microbiology	BIOT-Sem-II-VI-T	75	BIOT-Sem-II-VI-P	25

Total Marks = 500

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/CHILDREN AND DRUG ABUSE (SEMESTER – II)

Note: The syllabus has 15 topics to be covered in 25 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermi composting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:
A qualifying paper of 50 marks comprising of fifty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 70 marks.
- Seventy multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent i.e. 23 marks out of 70.
- Duration of examination: 90 minutes.
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN/CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:
Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E;
Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.
4. Protective Provisions of IPC regarding Sexual Violence against Children:
Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A

(kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 30 Marks.
- It shall have 30 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women,* New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People

Unit IV (Drug Abuse)

Drug Abuse: Problem, Prevention and Management

Note : This is a compulsory qualifying paper, which the students have to study and qualify during three year of degree course.

Main Objective

This module introduces to the students the problem of drug abuse and its adverse consequences for the society. The students would get an understanding of why drug abuse is such a serious problem to our society. The course also apprises them of how to prevent and manage this menace.

Learning objectives of the course

1. Understand the meaning of the term drug.
2. Understand the difference between use, misuse and abuse of drugs.
3. Differentiate between commonly abused legal and illegal drugs.
4. Become aware of common signs and symptoms of drug abuse.
5. Understand the causes and consequences of drug abuse
6. Identify and access safety measures for support to stay away/give up drug abuse
7. Become aware of the interventions for the prevention and management of drug abuse.

Pedagogy of the course work

1. 70 % Lectures (Including expert lectures)
2. 30% assignments, discussion, seminars and class tests.
   - A visit to drug de-addiction centre could also be undertaken

Course content

UNIT I: Problem of Drug Abuse

a) Concept and overview : what are drugs? Meaning of use, misuse and abuse of drugs. Misuse of prescription drugs with special emphasis on antibiotics and steroids. Historical perspective of drug abuse. How drug abuse is different from drug dependence and drug addiction? Physical and psychological dependence: concepts of drug tolerance and withdrawal symptoms.

b) Types of drugs often abused and their effects

Stimulants: tobacco Amphetamines: dl-amphetamine (Benzedrine ®), dextroamphetamine (Dexedrine®). Cocaine.

Depressants : Alcohol. Barbiturates: phenobarbitone (Nembutal®), secobarbital (Seconal®), Benzodiazepenes: diazepam (valium ®), alprazolam (Xanax®), flunitrazepam (Rohypnol®)

Narcotics: Morphine, heroin ('Chitta'/ 'Brown Sugar'), pethidine, oxycodone.

Hallucinogens: cannabis ['Bhang', marijuana ('Ganja'), hashish ('Charas'), hash oil]. MDMA (3, 4- methylenedioxy methamphetamine) /'Ecstasy'/ 'Molly'. LSD (lysergic acid diethylamide).

Miscellaneous: cough/cold medicines: diphendydramine (Benadryl®), chlorpheneramine maleate+ codeine+alcohol (Corex®). Iodex®, Vicks®, Amrutanjan® and correction fluid (Whitener).

UNIT II: Theories of consequences of drug abuse

a) **Theories of drug abuse:** Physiological theory. Psychological theory. Sociological theory.

b) **Consequences of drug abuse:** For individuals, families, society and economy.

Unit III: Extent and nature of the problem

Magnitude of the menace of drug abuse. Vulnerable age groups. Characteristic and features of proneness. Signs and symptoms of drug abuse.
Physical indicators. Academic indicators. Behavioural and psychological indicators.

UNIT IV: Prevention and management of drug abuse

Legislations, public policies and programs for the prevention and cure of drug abuse. Prevention of drug abuse. Management of drug abuse. Medical management. Working of drug De-addiction Centres. Role of Family, School and media.

Suggested readings:

1. Clayton, J.M and Scott, M.A (2014). Drugs and Drugs Policy: the control of consciousness alterartion. New Delhi: Sage Publications India Pvt. Ltd.
2. Kapoor, T. (1985). Drug epidemic among Indian Youth, New Delhi: Mittal Pub
3. Modi, I and Modi S.(1997). Drugs: Addiction and prevention, Jaipur: Rawat Publication.
4. Ahuja, R (2003). Social problems in India, Rawat Publication, Jaipur
5. 2003 National Household survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AIIMS, 2004
6. World Drug Report, (updated every year), United Nations office of Drug and Crime.
7. Extent, pattern and Trend of Drug use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic substances Act, 1985. (New Delhi: Universal, 2012).
9. Government of India (2015).Scheme of assistance for prevention and alcoholism and substance (Drugs) abuse and for social defence services-Guidelines. Ministry of social Justice and Empowerment. New Delhi.
10. NCERT(2010). Training Resource Materials (Adolescence Education Programme)

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Paper: English
Code No: BIOT-Sem-II-I-T

Semester II

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the Internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 5-8
Drama: Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:
Writing Skills: This section shall focus on précis-writing, curriculum vitae; short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.,

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for an Interview & Group Discussion etc

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Leaning, the marks obtained by them out of 40 will be proportionately increased out of 50.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which , a student will be expected to attempt any four. **Two** from **Prose** and **two** from

Drama. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama. 5 **marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribe (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 Short Survey Report (150-200 words) with internal choice**.** **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6 Definition/Format of modern forms of communication to be tested.

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 50

ਲਿਖਤੀ: 45

ਇੰਟਰਨਲ ਅਸੈਸਮੈੱਟ: 5

ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ
2. ਪੱਤਰ-ਵਿਹਾਰ
3. ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ)

ਸੰਪਾਦਕ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

1.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਚੋਂ ਇੱਕ)	5 ਅੰਕ
2.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇੱਕ)	8ਅੰਕ
3.	ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਹਾਣੀਆਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿਚ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
4.	ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	7 ਅੰਕ
5.	ਵਿਆਕਰਣ:	5 ਅੰਕ
	ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
	ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
	ੲ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
6.	ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	5 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ :ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
   3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.
3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Paper: Statistics & Computer Fundamentals **Theory: 67 Marks**
Code No: BIOT-Sem-II-III-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Objectives: -

- To learn applications of statistics in the field of biology.
- To study concepts of probability, averages, distributions, tests of deviations, correlation and linear regression.
- To learn to design experiments and analysis of results by tests of significance or analysis of variance.

UNIT – I

An introduction, types of data, collection, classification and tabulation of the primary data, secondary data, discrete data and continuous data, diagramatic and graphical representation of grouped data, frequency distribution {univariate and bivariate},cumulative frequency distribution and their graphical representation, histogram frequency polygon.

Concept of central tendency or location and their measures, partition values: quantiles, deciles and percentiles, dispersion and their measures, relative dispersion.

UNIT – II

Binomial distribution, Poisson distribution as a limiting form of binomial distribution and properties of these distributions, moments, moment generation function, cumulate generating function, geometric distribution and exponential distribution and properties ofthese distributions.
Normal distribution
Correlation and regression analysis
Hypothesis testing
Markov models
Cluster analysis

- Nearest neighbor search
- Search using stem numbers
- Search using text signature

Concepts of Probability.

UNIT – III

Computers: General introduction to computers, organization of computers, digital and analogue computers, computers algorithms.

Introduction to computers and its uses: Milestones in hardware andsoftware-batch oriented/online/real time applications.
Compute as systems: Basic concepts, stored programs, functional units andtheir interrelation-communication with computer.

UNIT – IV

Data storage devices:
Primary storage: Storage address and capacity, type of memory.
Secondary storage devices: Magnetic tape-data representation and R/W; Magnetic disks, fixed and removable, data representation and R/W; Floppy and hard disks, optical disks CD-Rom, mass storage devices.
Input/output devices: Key-tape/diskette devices, light pin Mouse, joystick, source data automation.
Printed outputs: Serial, line, page, printers, plotters, voice response units.

Reference Books:

1. P.N. Arora & P.K. Malhotra (1996).Biostatistics (Himalaya PublishingHouse, Mumbai).
2. Sokal&Rohlf(1973). Introduction to biostatistics (Toppan Co. Japan).
3. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics: Anintroduction (Springer).
4. P.K. Sinha (2004). Computer fundamentals (BPB).
5. Suresh K. Basandra (2008). Computers today (Galgotia Publications Pvt.Ltd., New Delhi).

BIOT-Sem-II-III-T

Statistics and Computer Fundamentals (Practical) **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. Presentation of data by frequency tables, diagrams and graphs.
2. Calculation of measures of central tendencies, skewness and Kurtosis.
3. Calculation of dispersion.
4. Fitting of binomial distribution and Poisson distribution.
5. Probability
6. Basics of computer: Basic commands-File creation, copying, moving and deleting in DOS & windows, Using e-mail, browsers, search engines.

Reference Books:

1. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics:An introduction (Springer).
2. P.K. Sinha (2004). Computer fundamentals (BPB).
3. Suresh K. Basandra (2008). Computers today (Galgotia PublicationsPvt. Ltd., New Delhi).

Paper: Basic Biochemistry **Theory: 67 Marks**
Code No: BIOT-Sem-II-IV-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

To make student conversant with the biochemical aspect of cell, chemical structure & function of various biomolecules.

UNIT – I

Water: Physico chemical properties of water, dissociation and association constants. pH and buffers, pI, pka, Henderson Hasselbatch equation and its implications.

Carbohydrates: Structure of important mono, di-, oligo- and polysaccharides, glycoproteins, peptidoglycan, glycolipids and lipopolysaccharides. Reaction of monosaccharides.

UNIT II

Lipids: Classification of lipids and fatty acids, general functions of major lipid subclasses, acylglycerols, phosphoglycerols, phosphoglycerides, sphingolipids, glycosphingolipids and terpenes, sterols, steroids: Prostaglandins.

UNIT – III

Vitamins and hormones: Types of vitamins and their chemistry, vitamins as cofactors, steroids and peptide hormones.

UNIT IV

Proteins: Structure of amino acids, nonprotein and rare amino acids and their chemical reactions. Structural organization of proteins (primary, secondary, tertiary and quaternary domain structure), protein classification and function. Forces stabilizing primary, secondary and tertiary structure.

Reference Books:

1. Lehninger A.L., Nelson D.L. and Cox M.M. (2005).Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson Publishers).
4. G.L. Zubay, W.W. Parson, D.E. Vance. (1995). Principles of biochemistry:Student study art notebook (Wm.C. Brown).
5. Bucke C. (1999). Carbohydrate biotechnology protocols (Humana Press).
6. H.R. Horton, A.J. Scism, L.A. Moran, R.S. Ochs, J.D Rawn, K.G. Scrimgeour. (2006). Principles of biochemistry (Prentice Hall).

BIOT-Sem-II-IV-P Basic Biochemistry (Practical) Practical: 25 Marks
Internal Ass.: 3 Marks

1. Preparation of physiological buffers.
2. Verification of Beer-Lamberts law for p-nitrophenol.
3. Determination of pKa value of p-nitrophenol.
4. Estimation of carbohydrates in given solution by Anthrone method.
5. The determination of acid value and saponifaction value of a fat.
6. Methods of protein estimation.

Paper: Cell Biology **Theory: 67 Marks**
Code No: BIOT-Sem-II-V-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

- To understand the detailed overview of eukaryotic cell and its inner components
- To understand the processes of cell transport and cell locomotion
- Introduction to stem cells and their applications

Practical skills will be imparted to the students through critically designed practical related to the subjects.

Unit I

Cell as a basic unit of living systems: the cell theory, pre-cellular evolution, artificial creation of "cells", broad classification and ultrastructure of cell types (PPLOs, Bacteria, eukaryotic microbes, plant and animal cells), tissue, organ and organism at different level of organization of other genetically similar cells; biochemical composition of cells (proteins, lipids, carbohydrates, nucleic acids and metabolic pool).

Ultrastructure of cell membrane and cell organelle: structure and function of cell organelles, ultrastrucure of cell membrane, cytosol, golgi bodies, vacuoles, endoplasmic reticulum (rough and smooth), ribosomes, cytoskeletal structures (actin microtubules etc), mitochondria, chloroplast, lysosomes, peroxisomes, nucleus (nuclear membrane, nucleoplasm, nucleolus)

Unit II

Cellular transport: Passive & active transport, permeases, sodium, potassium, Calcium, ATPase pumps, lysosomal and vacuolar membrane, ATP dependent proton pumps, co-transport, symport,

antiport, transport into prokaryotic cells, endocytosis and exocytosis, entry of viruses and toxins into cells.

Unit III

Cell locomotion: Amoeboid, Flagellar and Ciliar.

Chromosomes: discovery, morphology, chemical composition, structural organization of chromatids, centromere, telomere, chromatin, nucleosome organization, euchromatin and heterochromatin, special chromosomes (polytene, lampbrush chromosomes), banding patterns in human chromosomes.

Unit IV

Basics of stem cells: Introduction to concepts in stem cell biology, Cell differentiation in multicellular organisms: (renewal, potency: Totipotent, pleuripotent, multipotent); types of stem cells: early embryonic stem cells, blastocyst embryonic stem cells, fetal stem cells, umbilical cord stem cells, adult stem cells; applications; ethical issues related to stem cells.

Reference Books:

1. The World of the Cell (2008) Becker, Klein Smith & Hardin Pearson education Inc
2. Cell and Molecular Biology (2010) E.D.P De Robertis and E.M.F. De Robertis, Jr.
3. Molecular Cell Biology (2007) Lodish et al. Freeman & Co
4. Molecular Biology of the Cell (2007) Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter.
5. The Cell: A Molecular Approach (2013) Geoffrey M. Cooper and Robert E. Hausman
6. Cells and Cell Function: Advanced Level (2007) Sally Morgan
7. Stem Cells: An Insider's Guide (2013) Paul Knoepfler

BIOT-Sem-II-V-P **Paper: Cell Biology (Practical)** **Practical: 22 Marks**
Internal Ass.: 3 Marks

1. To study the parts and function of a light microscope
2. To prepare a wet mount of onion peel for microscopy
3. Counting of cells using haemocytometer
4. Subcellular fractionation of spinach cells
5. To study cell locomotion of amoeba
6. To study flagellar motility in bacteria by hanging drop technique
7. To study cell transport in cell membrane by following experiments
    1) Diffusion through artificial membrane: transport of albumin and glucose solution through dialysis bag.
    2) To study the effect of membrane disrupting agents in beet root
8. Quantitative analysis of cell membrane lipids by TLC

Paper: General Microbiology **Theory: 67 Marks**
Code No: BIOT-Sem-II-VI-T **Internal Ass.: 8 Marks**

Instructions for paper setters and candidates

- Set nine questions in all from three sections. All questions carry equal marks.
  - Section A will cover Unit I & II
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – B will cover Unit – III & IV
- Set 2 questions from each unit out of which any 2 are to be attempted
  - Section – C will be compulsory and will have 7 – 10 short answer type (not objective type) questions covering the whole syllabus.

Course Objectives

Microbes play significant role in understanding medical science and industries so study of microbes from basic to advance level, with understanding of biochemistry, cell structure and application makes this paper significant.

UNIT – I

History of Microbiology: A. Leewenhook, L. Pasteur, R. Koch, J. Lister, J.Tyndall, Koch postulates, discovery of antibiotics.
Principle of microscopy: Bright field, dark field, phase contrast, fluorescent, electron microscopy.

UNIT – II

Microbial classification: Bacteria, fungi
Morphology of bacteria, viruses and fungi with major emphasis on bacterial structure specially cell wall. Gram positive and Gram negative bacteria. Microbial spores, sporulation/ germination process.

UNIT – III

Microbial growth, nutritional biodiversity, phases of growth, generation time, growth rate, monoauxic, diauxic and synchronous growth. Chemostat
Physical and chemical agents to kill microbes, sterilization and pasteurization processes.

UNIT –IV

Normal micro flora in human/ animals. Types of microbial pathogens and diseases caused by them. Microbial interactions like symbiosis and antibiosis. Host defense mechanism against pathogens.

Reference Books:

1. Tortora, G.J., Funke, B.R. and Case, C.L. (2009) Microbiology: An introduction (Benjamin/ Cummings publishing company, Inc).
2. R. Y. Stanier, M. Doudoroff, E. A. Adelberg (1999). General microbiology (MacMillian Press London).
3. M.J. Pelczar, E.C. Sun Chan, N.R. Krieg (2007). Microbiology (Tata McGraw Hill Publication, New Delhi). 5th edition.
4. H.G. Schlegel, C.Zaborosch, M. Kogut (1993).General microbiology (Cambridge University Press).
5. S.C. Prescott, C.G. Dunn (1959). Industrial microbiology (McGraw- Hill).
6. Purohit, S.S. (2003). Microbiology: Fundamentals and applications (Agrobios, India)
7. Postgate, J.R. (2000). Microbes and man (Cambridge University Press).

BIOT-Sem-II-VI-P General Microbiology (Practicals) Practical: 22 Marks
Internal Ass.: 3 Marks

1. Cleaning of glass wares, preparation of media, cotton plugging and sterilization.
2. Isolation of microorganisms from air, water and soil samples.
3. Dilution and pour plating techniques.
4. Gram staining, spore staining, motility
5. Growth curve of microorganisms.
6. Antibiotics sensitivity of microbes using antibiotic discs.
7. Testing of water quality.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual, (Pearson Benjamin Cummings).

B.Sc. (Hons.) 2nd year (3rd Semester)

Paper: Biochemistry
Course No.: BIOT-Sem-III-I-T

Theory : 67 marks
Internal assest : 08 marks
Total : 75 marks

Instructions for paper setters and candidates:-:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To familiarize the students with the biochemical activities taking place at cellular level, highlighting the enzymatic reactions, metabolic pathways and biochemical aspect.*

Unit- I

Metabolism: Metabolic pathways, biochemical reaction mechanism, energy rich metabolites. Coupled reactions, substrate level phosphorylation. Importance of ATP: Structural basis of high phosphoryl transfer potential of ATP. Sources of cellular energy, activated carriers. Regulation and evolution of metabolic pathways.

Unit- II

Carbohydrate metabolism: Biosynthesis and degradation of glucose; feeder pathways of glycolysis; Kreb cycle, amphibolic nature of the Kreb cycle; regulation of Kreb cycle, regulation of gluconegenesis. Glycogen metabolism.
Mitochondrial electron transport chain, oxidative phosphorylation; regulation of ATP synthesis.

Unit- III

Lipid Metabolism: Biosynthesis and degradation of fatty acids; β-oxidation of saturated, unsaturated and polyunsaturated fatty acids. Formation of ketone bodies, their function and physiological significance. Fatty acid synthesis: multifunctional enzyme complex in eukaryotes, function of citrate. Regulation of fatty acid metabolism.
Cholesterol metabolism: Biosynthesis of cholesterol and its regulation.

Unit- IV

Amino acid metabolism: Biosynthesis of nutritionally non-essential amino acids; catabolism of carbon skeleton of amino acids. Conversion of amino acids to specialized products; amino acids as precursors of porphyrins, bile pigments and biogenic amines.
Nucleic acid metabolism: Biosynthesis of purine and pyrimidine nucleotides; salvage reactions. Catabolism of purines and pyrimidines, urea cycle.

Reference Books:

1. Lehninger A.L., Nelson D.L., Cox M.M. (2005). Principles of biochemistry (W. H. Freeman, USA).
2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson).

4. Voet D., Voet, J.G. (2004).Biochemistry (John Wiley & Sons).
5. Voet, D., Voet, J.G. and Pratt, C.W. (2008). Fundamentals of biochemistry: Life at the molecular level (John Wiley & Sons).

Biochemistry (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Estimation of DNA by the diphenylamine reaction.
2. Determination of reducing sugars using 3, 5-dinitrosalicylic acid and Benedict's test.
3. Determination of iodine number of fat.
4. Determination of extinction coefficient of nucleic acids.
5. Biuret assay for protein estimation..
6. Quantitative estimation of amino acids using ninhydrin reaction.
7. Estimation of RNA by means of orcinol reaction.

Paper: Genetics
Course No.: BIOT-Sem-III-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The focus of this course is on the science of heredity with emphasis on the basics of Mendelian and molecular genetics. It will familiarize students with chromosome organization, linkage, chromosome mapping, chromosome aberrations, mutations and microbial genetics.*

Unit – I

Mendelian laws of inheritance, Sex determination in drosophila, plants and animals, sex linkage, Non-disjunction as a proof of chromosomal theory of inheritance. Numerical chromosome aberrations: polyploidy, aneuploidy, Chromosomal aberrations: Delition, duplications, inversions, translocations, position effects.

Unit – II

Gene interactions, sex linked inheritance. Crossing over: molecular mechanism and cytological proof, Recombination, linkage, gene mapping, Three point testcross, interference, coincidence, recombination frequencies, Tetrad analysis, somatic cell hybridization for gene linkage studies, Hereditary defects.

Unit – III

Population genetics: Hardy-Weinberg equilibrium, gene and genotypic frequencies, Chi- square test, probability, pedigree analysis.

Mutation: Spontaneous versus induced mutations, types of mutations, mutagenic agents: Physical, chemical and radiation, molecular basis of mutations, mechanisms of DNA repair, mutations frequency, correlation between mutagenicity and carcinogenicity,

Unit – IV

Basic microbial genetics: Conjugation, transduction, transformation, isolation of auxotrophs, replica plating techniques, analysis of mutations in biochemical pathway, one gene – one enzyme hypothesis. Extra chromosomal inheritance: mitochondrial and chloroplast genetic systems.

Reference Books:

1. Birge, E.A. (2006). Bacterial and bacteriophage genetics (Springer).
2. Dale J., Park S. (2005) Molecular genetics of bacteria (John Wiley and SonsInc).
3. Freifelder, D. (2005). Molecular biology (Jones and Bartlett).
4. Synder, L., Champness W. (2007). Molecular genetics of bacteria (ASM Press).
5. Turn N.J, Trempy J.E. (2006). Fundamental bacterial genetics (Wiley Blackwell).
6. T.A. Baker, J.D. Watson, S. Bell. (2004). Molecular biology of the gene (Benjamin B. Cummings).
7. A.J.F. Griffiths, S.R. Wessler, R.C. Lewontin, S.B. Carroll (2007). Introduction to genetic analysis (W.H.Freeman & Co Ltd).
8. Strickberger M.W. (2006) 3rd edition. Genetics (Macmillan).
9. Verma P.S (2012)Genetics (S.Chand & Company Ltd.)
10. Sanders M.F. and Bowman J.L.(2012) Genetic Analysis (Pearsons)

Genetics (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Examination of permanent slides of various stages of mitosis and meiosis and different types of chromosomes.
2. Demonstration of law of segregation and independent assortment (use of dried peas, colored peas, capsules *etc*.).
3. Numerical for segregation and independent assortment.
4. Use of Chi-square for prediction of phenotype/genotype frequencies of parents from progeny and vice-versa, epistasis.
5. Detection of blood groups (ABO & Rh factors).
6. Calculation of variance in respect of pod length and number of seeds/pod.
7. Calculation of gene frequencies and random mating (colored beads, capsules).
8. Dermatographics: Palm print taking and finger tip patterns.

Paper: Immunology-I
Course No.: BIOT-Sem-III-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: *To understand general aspects of immune system like different components of the immune system, Generation and functions of these components, Knowledge of basic immunological techniques*.

Unit-I

1. Introduction
i) Overviews of immune system – Historical perspectives
ii) Innate and acquired immunity
iii) Clonal nature of immune response.

2. Cells of the immune system : Hematopoiesis and differentiation, lymphocyte trafficking, B-lymphocytes, T-lymphocytes, macrophages, dendritic cells, Natural killer cells and lymphocyte activated killer cells, eosinophils, neutrophils & mast cells.

Unit-II

3. **Organs of the immune system :** Primary and secondary lymphoid organs, systemic function of immune system.
4. **Lymphocyte Trafficking**: Cell surface proteins, Cell Adhesion molecules (Integrin, Selectin, Cadherin family and Ig Superfamily).
5. **Antigen** – Immunogenicity Vs. antigenicity, factors effecting immunogeniticity, nature of immunogen, epitopes, heptans and antigenicity, pattern recognition receptors.

Unit-III

6. **Immunoglobulins:** Structure of antibody, antibody effector function, antibody classes and biological activities, antigenic determinants on Immunoglobulins, Immunoglobulins superfamilies.
7. **Major histocompatibility complex:** General organization and inheritance, MHC molecules and genes, genetic map, cellular distribution, regulation of MHC expression and disease susceptibility, antigen presentation.

Unit-IV

8. **Hybridoma Technology:** Production of Monoclonal Antibodies, applications of polyclonal and monoclonal antibodies.
9. **Antigen–Antibody interactions** : Strength of interaction, cross reactivity, antibody affinity, avidity. Antigen-antibody interactions as tools for research and diagnosis: precipitation and agglutination reactions, immunodiffusion, immunoelectrophoresis, immunoassays, Enzyme linked immunosorbent assay (ELISA), Radioimmunoassay (RIA), western blot, Immunofluorescence.

Reference Books:

1. Kuby Immunology (2006) by Thomas J. Kindt, Richard A. Goldsby, Barbara A. Osborne, Janis Kuby (W.H. Freeman).
2. Immunology- A short course (2009) by Richard Coico, Geoffrey Sunshine (Wiley Blackwell).
3. Fundamentals of immunology (1999) by William Paul (Lippincott Williams & Wilkins).
4. Immunology (2001) by Ivan Maurice Roitt, Jonathan Brostoff, David K. Male (Mosby).
5. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) WH Freeman & Co. New York; 2006.
6. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley Blackwell; 2011.

Paper: Immunology-I (Practicals)
Course No.: BIOT-Sem-III-III-P

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Lymphoid organs and their microscopic organization.
2. Differential leucocytes count.
3. Separation of serum from blood.
4. Separation of plasma from blood.
5. Ouchterlony Double Diffusion
6. Radial immuno diffusion test using specific antibody and antigen.
7. Agglutination (Blood group testing).

Paper: Plant Tissue Culture
Course No.: BIOT-Sem-III-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To introduce the students with fundamentals and applications of plant tissue culture. This course will expose students to the methods of culturing, maintaining and regenerating plants species.*

Unit – I

Cellular totipotency and differentiation in plants.
Plant Culture Media and their composition.
Sterilization techniques for glassware and tissue culture media.
Micropropagation: Establishment of aseptic culture, various stages, advantages and disadvantages.

Unit –II

Organogenesis; somatic embryogenesis; somaclonal variation, its genetic basis and application in crop improvement. Cell/callus line selection for resistance to herbicide, stress and diseases. Role of tissue culture in rapid clonal propagation, production of pathogen - free plants and "synthetic seeds" haploid and Triploid plant production & their application.

Unit – III

Protoplast and somatic hybridization: Isolation, culture and plant regeneration, protoplast fusion, identification and characterization of somatic hybrids, applications of protoplast hybridization technology.

Unit – IV

Secondary metabolites: Secondary Plant products from cultured cells and their industrial applications.
Cryopreservation of germplasm: Short term and long term conservation of plant genetic resources, *In situ* and *Ex situ* conservation of plants

Reference Books:

1. Razdan, M.K. (2007). Introduction to plant tissue culture (India Book House Pvt. Ltd).

2. Narayanaswamy, S (1994). Plant cell and tissue culture (Tata Mc-Graw Hill Publishing Co.Ltd, New Delhi).
3. Rudolf, E. (1994). Plant cell biotechnology (Spinger Verlag).
4. Bhojwani, S.S., Razdan, M.K. (1996), Plant tissue culture: Theory and practice (Elsevier Science, Netherlands).
5. Gamborg, O.L., Phillips, G.C. (1995). Plant cell, tissue and organ culture: Fundamental methods (Illustrated, Publisher Springer).
6. HS Chawla (2003). Plant biotechnology: A practical approach (Science Publishers, USA). Plant Tissue Culture and Biotechnology

Plant Tissue Culture (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Laboratory design set up for a plant tissue culture laboratory.
2. How to clean glass/plastic ware.
3. Preparation of complex nutrient medium (Murashige and Skoog's medium).
4. To select, prune, sterilize and prepare an explant for culture.
5. To culture different explants for raising callus cultures.
6. Significance of growth hormones in culture medium.
7. To demonstrate various steps of micropropagation.

Paper: Animal Cell Culture
Course No.: BIOT-Sem-III-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the field of Animal cell-culturing and its importance to mankind. The students will also learn the techniques involved in animal cell culture.*

Unit – I

History of development of cell cultures, natural surroundings for animal cells, simulating natural conditions for animal cells, metabolic capabilities of animal cells.

Biology of cultured cells : The culture environment, cell adhesion, proliferation, differentiation, signaling, evolution of cell lines. Equipments and materials for animal cell culture technology.

Unit II

Introduction to the balanced salt solutions and simple growth medium. Brief discussion on the chemical, physical and metabolic functions of different constituents of culture medium. Role of carbon dioxide. Role of serum and supplements.

Serum & protein free defined media and their application.

Animal cell culture Techniques: Dispersion and disruption of tissues; primary cultures, anchorage and non-anchorage dependent cells; secondary culture, transformed animal cells.

Unit – III

Established/continuous cell lines, commonly used animal cell lines, their origin and characteristic. Maintenance and growth kinetics of cells in culture, differentiation of cells,
Measurement of growth and viability of cells in culture. Cytotoxicity assays & their applications,

Unit – IV

Characterization of Cell lines and their authentication, Cell fusion and production of monoclonal antibodies.
Transformation and immortalization, cryopreservation.
Bio-Safety & Bioethics.

Reference Books:

1. R. Ian Freshney, (2010) 6th Edition, Wiley-Blackwell. Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications
2. P.R. Yadav and Rajeev Tyagi, Discovery Publishing House, (2006) Biotechnology of Animal Tissues
3. Julio, E., Celis. (2006) Cell Biology. A laboratory handbook, Vol. I-IV (Elsevier Academic)
4. Butler, M (1996) Mammalian cell biotechnology. A practical approach (IRL, Oxford University Press)
5. Gareth, E.J. (Edition Illustrated, Humana Press) (1996) Human cell culture protocols.

Animal Cell Culture (Practical)

Practical : 22 marks
Int. assessment : 03marks
Total : 25 marks
Time : 3 hours

1. Fumigation of animal cell culture laboratories.
2. Maintenance of aseptic conditions and sterilization method.
3. Preparation of Minimal Essential Growth medium for cell culture.
4. Isolation of lymphocytes for culturing.

B.Sc. (Hons.) 2nd year (4th Semester) (January, 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester)

Paper: Immunology-II
Course No.: BIOT-Sem-IV-I-T

Theory : 65 marks
Int. assessment : 10 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the principles of advanced Immunology, both at the molecular and cellular levels.*

Unit-I

1. **B Cell Activation, Differentiation:** B-Cell Activation and Proliferation, In Vivo Sites for Induction of Humoral Responses, T-dependent and T-independent antigens.
2. **Organization and expression of Immunoglobulins gene:** Genetic model, multigene organization, generation of antibody diversity.

Unit-II

3. **Receptors and Signaling:** T-Cell Receptors: Structure and Roles, T-Cell Receptor Complex.
4. **T-Cell Maturation, Activation, and Differentiation**: Thymic Selection of the T-Cell Repertoire, T_H-Cell Activation, T-Cell Differentiation, Cell Death and T-Cell populations, Peripheral-T-Cells.
5. **Complement system:** Function, Components- Classic, Alternative, Mannose binding proteins, activation, Regulation of the Complement System, Biological Consequences of Complement Activation.

Unit-III

6. **Hypersensitivity:** Type I, Type II, Type III and Type IV Hypersensitivity reactions and their implications.
7. **Autoimmunity:** Organ specific autoimmune diseases : Hashimoto's Thyroditis, Insulin-dependent Diabetes Mellitus, Grave's disease, Mysthenia Gravis.
   Systemic Autoimmune Disease: Systemic lupus Erythmatosus (SLE).

Unit-IV

8. **Transplantation immunology-** Immunologic Basis of Graft Rejection, Clinical Manifestations of Graft Rejection, General Immunosuppressive Therapy, Specific Immunosuppressive Therapy, Immune Tolerance to Allografts, Clinical Transplantation
9. **Vaccines and Vaccination** – principles of vaccination, passive & active immunization, immunization programs, adjuvants, bacterial vaccines, viral vaccines, polysaccharide vaccines, DNA vaccines, recombinant vaccines, vaccines to other infectious agents, tumor vaccines.

Reference Books:

1. Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) W.H. Freeman & Co. New York; 2006.
2. Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley- Blackwell; 2011
3. Peakman M, Vergani D, Pyne DJ, Woodward M. Basic and clinical immunology. (1st Ed.) Churchill Livingstone; 1997.
4. Roitt I, Brostoff J, Male D. Immunology. (6th Ed.) Harcourt Health Sciences, 2001.

5. Clinical Immunology and serology: A laboratory perspective (1997) by Stevens C.D (F A Dacis Company, Phialadelphia).

Immunology-II (Practical)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Performing enzyme linked immunosorbent assay (ELISA).
2. Rocket immuno-electrophoresis for antigen antibody interaction.
3. Isolation of mononuclear cells from peripheral blood and viability test by dye exclusion methods.
4. Total leucocyte count (TLC).
5. Isolation of IgG from serum.

Paper: Biophysical and Biochemical Techniques
Course No.: BIOT-Sem-IV-II-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *To enable the students learn important tools and techniques based on biophysical and biochemical principles so that they can understand application of these techniques in biotechnology*

Unit – I

Principle, working and applications of Spectrophotometry (UV& visible) and spectroflourimetry,
Atomic absorption spectrophotometry: Equipment used and applications
Infrared and Raman spectroscopy. ORD and circular dichroism, Nuclear Magnetic Resonance and Electron Spin Resonance spectroscopy, Magnetic Resonance Imaging.
Electrophoresis: Principle, types & applications.

Unit – II

Microscopy: Properties; Light and Bright field Microscopy, Dark field Microscopy; Phase contrast, Fluorescent and Confocal microscopy,
Electron microscopy: Scanning and Transmission Electron Microscopy.
Centrifugation: Principle, types & applications.

Unit – III

Crystallography: Physical basis of crystallization; formation of crystals; Mounting of crystals
X-ray diffraction: Braggs law; Diffraction of x-rays by crystals
Overview of chromatography; Gas chromatography and HPLC

Unit – IV

Radioisotope techniques: Radiotracers; GM counter, proportional and scintillation counters, autoradiography.
Mass spectrometry: Physical basis; Instrument used; ionization modes; Applications
Collaboration of MS with other techniques: GCMS and LCMS.

Reference Books:

1. K Wilson, J Walker (2000) Principles and techniques of biochemistry and Molecular Biology Seventh Edition, (Cambridge University Press).
2. SR Mikkelsen, E Cortin (2004). Bioanalytical Chemistry (2004) (John Wiley & Sons)
3. David Sheehan (2009). Physical Biochemistry: Principles and Applications, Second Edition. (John Wiley & Sons)
4. P. Carmona, R. Navarro, A, Hernanz (1997) Spectroscopy of biological molecules: Modern trends (Illustrated, Publisher Springer)
5. Bernard Valeur (2001). Molecular fluorescence: Principles and application (Wiley-VCH).Plenum USA].
6. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).
7. Bansal, D.D., K Hardori, R & Gupta, M.M. (1985). Practical biochemistry (Standard Publication, Chandigarh).

Biophysical And Biochemical Techniques (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25marks
Time : 3 hours

1. Identification of the provided sample using some of the spectroscopic techniques.
2. Quantitative analysis by UV/Visible spectrophotometry.
3. Use and care of light microscope.
4. Demonstration of radioisotopic techniques
5. Gel filtration chromatography

Paper: Plant Biotechnology
Course No.: BIOT-Sem-IV-III-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: The objective of this course is to familiarize the students with different aspects of plant molecular biotechnology and techniques for plant genetic manipulations.

Unit – I

Genetic material of plant cells with an introduction to chloroplast and mitochondrial DNA.
Plant Promoter, Plant Selection markers and reporter genes.
Transformation of plant cells; different type of vectors including viral vectors and their benefits.

Unit –II

Modes of gene delivery in plants: Particle bombardment, electroporation, microinjection; Advantages and disadvantages

Agrobacterium mediated gene transfer, natural pathogen mode of infection,

vir gene functions, Ti / Ri plasmids, Screening and selection of transformants, PCR and hybridization methods; Transgene selection and silencing; Generation and maintenance of transgenic plants.

Unit – III

Transgenic plants: Genetic modification of plants for herbicide resistance, Pest resistance, virus resistance Bacterial and fungal resistance. : Delayed fruit ripening, improved protein composition.

Bt cotton, golden rice and some others as examples.

Unit – IV

Plant cell as factories for production of industrial enzymes, biodegradable plastics, antibodies, edible vaccines; manipulation of metabolic pathways for production of fatty acids, industrial oils, terpenoids, flavanoids.

Reference Books:

1. Draper, J.R., Scott. P., Armitage, R. Walden (1988). Plant Genetic Transformation and Gene Expression – A Laboratory Manual. Blackwell Scientific Publications, Oxford.
2. Ashihara et al. (2011) Plant Metabolism and Biotechnology, John Wiley & Sons, Ltd. ISBN: 978-0-470-74703-2
3. Old, R.W., and Primrose, S.B. (2004). Principles of Gene Manipulation : An Introduction to Genetic Engineering. Blackwell Scientific Publications, Oxford.
4. Peter J. Lea and Richard C. Leegood, Plant Biochemistry and Molecular Biology, Wiley Publishing.
5. Singh R.P. & Jaiwal P.K. (2003) Plant Genetic Engineering Vol. 1 – 4. SCI Tech Publishing LLC, U.S.A.
6. Gupta, P.K. (1990). An Introduction to Biotechnology, Rastogi Publications, Meerut.

Plant Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Aseptic culture techniques for establishment and maintenance of cultures
2. Preparation of stock solutions of MS basal medium and plant growth regulator stocks.
3. Micropropagation of Tobacco plant by leaf disc culture.
4. Isolation of plant genomic DNA by modified CTAB method.
5. DNA check run by Agarose Electrophoresis.
6. Agrobacterium tumefaciens-mediated plant transformation.

Paper: Animal Biotechnology
Course No.: BIOT-Sem-IV-IV-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *The major emphasis of this course is to introduce the students to the advances in the field of Animal and their importance to mankind.*

Unit-I

Organotypic and histotypic cultures: *Organotypic culture:* Gas and nutrient exchange, structure integrity, growth, differentiation, advantages and applications. Methods, advantages and applications of histotypic culture.

Three dimensional culture and tissue engineering: Concept of tissue engineering, components of tissue engineering, cells imaging in 3D construct.

Unit-II

In vitro **fertilization (IVF)** in Humans and Embryo Transfer in Livestock.

Cell culture based vaccines: Cells as virus host/cell culture based vaccines, cells as protein factory/cell expression system and cells as antigen presenter/personalized vaccine.

Scaling up of the animal cell culture: different methods of scale up at laboratory and industrial level.

Unit-III

Transgenic animals and their applications: Concept of transgenics, Methods of gene transfer, selection of clone containing DNA insert and application of transgenic animals (Food, environment, recombinant proteins, drugs *etc.*). Safety and ethical issues of transgenic animals.

Unit-IV

Production of various products of human use using animal cell culture:

Antibiotics production

Human Growth factors

Insulin and other Hormones

Essential Readings:

1. Culture of animal cells (2009). RI Freshney, Sixth ed. John Willey & Sons.
2. Culture of animal cells: A manual of basic technique and specialized applications. John Wiley & Sons, (2011).
3. Animal cell culture and technology by Michaelis Butler. BIOS Scientific Publisher (2003).
4. Animal cell biotechnology XVI 2nd Edition (2007) by Ralf Partner Humana Press.
5. Textbook of animal biotechnology (2012) by B Singh**,** S K Gautam**,** and M S Chauhan..
7. Principles of tissue engineering by Robert Lanza, Robert Langer, Joseph P. Vacanti. Academic Press, (2011) - Science - 1344 pages.
8. Transgenic animal technology, 2ndEdition: A Laboratory Handbook by Carl A. Pinkert. Academic Press; 2nd edition (2002).

Animal Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Growing the cell monolayers, *in vitro*.
2. Trypsinization of the monolayers and cell counting using hemocytometer.
3. To check the viability of the cells using Trypan Blue dye exclusion assay.
4. Checking the cytotoxicity of the compounds using MTT Assay.

Paper: Agro & Industrial Biotechnology
Course No.: BIOT-Sem-IV-V-T

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates:-
•Set nine questions in all. All questions carry equal marks.
•Five questions to be attempted.
•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
•Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective: *This course will introduce students to the concepts of agriculture as industry. This course will help students to understand the application of fundamental concepts like transgenic approaches to improve crop plants, microbial culture maintenance, and metabolite purification at industrial level.*

Unit I

Basic concept of agriculture as industry: Industrially important microbes, its screening, selection and identification.

Maintenance and preservation of industrially important microbial cultures.

Differences between microbial industrial process and chemical industrial process.

Unit II

Improvement programme of industrial microbes, mutational programme of penicillin producing microorganisms, selection pressure in maintaining the hyper producer, lowering of production due to reversal of mutations, media formulation and process optimization of industrial and agro industrial microbes.

Unit III

Microbes in agro industries and industrial biotechnology: Introduction of primary and secondary metabolites, production of vitamin B12, alcohol, wine, beer, cheese, bread, citric acid, gluconic acid, antibiotics (penicillin), enzymes (amylases, cellulases, lipases and proteases) and their industrial applications.

Unit IV

Emerging energy technologies in agro industries: production of vermiculture, composting, herbicides and biopesticides, production of biofertilizers: Blue green algae, azolla, fungi, mycorrhiza (VAM), bacteria – *Azospirrilum*, microbial biotransformations, single cell proteins (bacterial, fungal and algal).

Reference Books:

1. Marwaha, S.S., Arora, J.K. (2003). Biotechnological strategies in agro-Processing (Asiatech publishers Inc. New Delhi, India).
2. Stanbury, P.F., Whitaker A. (2011) 2nd edition. Principles of fermentation technology.
3. Singh, BD. (2008). Biotechnology: Expanding horizons (Kalyani Publishers, India).
4. Patel A.H. (2007). Industrial microbiology (New Age International Publishers).
5. Loessner, J. M, Jay J.M, D.A. Golden (2005). Modern food microbiology (Golden Springer).
6. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

Agro & Industrial Biotechnology (Practicals)

Practical : 22 marks
Int. assessment : 03 marks
Total : 25 marks
Time : 3 hours

1. Counting of Microbial cells by serial dilution techniques (Spread plate and pour plate).
2. Measurement of bacterial size.
3. Screening of industrial enzymes (cellulase, protease, amylase *etc.*) from different soil samples.
4. Production of enzymes by submerged and solid state fermentation.

B.Sc. (Hons.) 3rd year (5th Semester) (July, 2018)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioanalytical tools	BIOT-Sem-V-II-T	75	BIOT-Sem-IV-II-P	25
3.	Environmental Biotechnology	BIOT-Sem-V-III-T	75	BIOT-Sem-IV-III-P	25
4.	Bioinformatics	BIOT-Sem-V-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Enzymology	BIOT-Sem-V-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. Hons Biotechnology 3rd year (5th Semester)

BIOT-Sem-V-I-T MOLECULAR BIOLOGY

Theory : 67 marks
Int. asset : 08 marks
Total : 75 marks
Time : 3 hours

Objectives: To make the students understand the fundamental concepts which includes DNA structure, replication, transcription, translation, mutation, gene regulation.

UNIT-I

1. DNA: Chemical composition of DNA DNA structure-single stranded DNA, detailed account of double stranded DNA, BDNA, Z.DNA and other structural forms and their importance.
2. Genome organization in prokaryotes**:** Molecular nature of the genetic material, Composition and structure of prokaryotic DNA and RNA.
3. Genome organization in eukaryotes: Composition and structure of eukaryotic DNA and RNA. Characteristic features of highly repetitive DNA, Tandemly repetitive DNA and Mini and microsatellite DNA and Insertional elements and their role and importance

UNIT-II

4. DNA replication: Prokaryotic DNA replication; replication origin and site and structure and DNA Ter regions and structure. DNA polymerases, composition and features, replication factors and the mechanism of replication, leading strand and lagging strand synthesis, procesessivity and fidelity. Replication of single stranded DNA, M13 viral DNA.
5. Eukaryotic DNA replication; origins, replication initiation complexes and their assembly, licensing factors, DNA polymerases and their composition, telomerase and mode of action, replication factors, disassembly of chromatin components and reassembly during replication.

UNIT-III

6. Gene Expression: Overview of central dogma
7. RNAs: types, rRNAs; Structural features of rRNAs- prokaryotic and eukaryotic. tRNAs: structural features, their anticodon feature. mRNAs- prokaryotic and eukaryotic mRNAs, structural features,
8. Transcription: regulatory elements and mechanism of transcription regulation in prokaryotes and eukaryotes

UNIT IV

9. Translation: Overview and mechanism of translation process in prokaryotes, characteristics of the genetic code, structure and charging of tRNA,
10. Gene Regulation: Regulation of gene expression in response to environmental conditions. Operon concept- the Lactose and the Tryptophan operon.

REFERENCE BOOKS:

Lewin, B., 2004, Genes VIII, Oxford Univ. Press, Noida, India.
Ingraham, John.L.2004, Introduction to Microbiology, 3 Ed., Thomson brocks/Cole Inc.

Malacinski, George M., 2005, Freifelder's. Essentials of Molecular Biology, Narosa Publishing House, ND.
Karp, Gerald, 2005, Cell and Molecular Biology, Wiley International, USA.
Snusted and Simmons, 2006, Principles of genetics, John Wiley and Sons, Inc
Brown, T.A, 2007, Genomes 3, Garland Science.
Weaver R.F., Molecular biology (2005), McGraw

BIOT-Sem-V-I-T: Molecular Biology (Practical)

Practical : 20 marks
Int. assessment : 05marks
Total : 25 marks
Time : 3 hours

1. Preparation of Reagents for DNA isolation.
2. DNA isolation from plants.
3. Agarose gel electrophoresis of DNA.
4. Plasmid DNA isolation.
5. Isolation of genomic DNA from Bacteria.
6. Restriction digestion of DNA.

Reference Books:

Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar.

BIOT-Sem-V-II-T : ENVIRONMENTAL BIOTECHNOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective:

The course focuses on an introduction to environment, major threats to environment by various polluting agents and the remedies for the same, incorporating design and monitoring of waste treatment processes. As well as learning environmental technology fundamentals, with special focus on biological treatment processes, environmental management. The course is use of biotechnology to design cleaner manufacturing processes and to solve pollution problems. It is ideal for under graduates just embarking on their career, or scientists and engineers who have been working for a few years and wish to develop their career in this direction.

UNIT-I

Basics of Environment and Environmental pollution, air, water, soil and noise.
Air – Types, Sources & Effects,
Soil - Physicochemical and bacteriological analysis of soil, soil pollutants (fertilizers, insecticides fungicides, pesticides).
Noise pollution, its control and impact on human health.
Renewable and Non Renewable resources. and their Environmental Impacts.
Modern Fuels (gasohol, hydrogen and solar energy) and their Environmental Impacts.

UNIT-II

Water pollution and its management: Measurement of water, pollution, sources of water pollution.
Microbiology of waste water treatment, aerobic processes, activated sludge, oxidation ponds, trickling filters, and rotating biological contactors.
Anaerobic processes: Anaerobic digesters, upward flow anaerobic sludge blanket reactors.
General strategies for wastewaters treatment.

UNIT-III

Bioremediation of contaminated soil and its applications
Degradation of pesticides and other toxic chemicals by microorganism. Integrated Pest management
Biodegradation of environmental pollutants: pesticides, hydrocarbons, dye, etc.
Biofertilizers for clean environment– Nitrogen fixing microorganism, enrichment of the soil with assimilable nitrogen

UNIT IV

Introduction to solid waste and municipal solid waste management: Sources, types, composition.
Bioabsorption of metals:- Role of Microorganisms in biosorption and bioleaching. ,
Enrichment of ores by microorganisms
Bioindicators for detection of pollution

References Books:

1. Environmental Biotechnology: Principles and applications Bruce, E. Rittmann and Perry L.Mc. Corty, Mc. Graw Hill Publications, New York, 2000.
2. Environmental Biotechnology 2nd Edition, Alan Scragg, 2005, Oxford University Press.
3.Environmental Biotechnology (2007) S.K. Agarwal APH Publishing Corporation.
4. Wastewater engineering–Treatment, disposal and reuse (2009) by Metcalf and Eddy, Inc. (Tata Mc Graw Hill, New Delhi).
5. Comprehensive biotechnology (2004) by Murray Moo Young, Alan T Bull, Howard Dalton, Set 4 Vol (Elsevier India P Ltd).
6. Comprehensive biotechnology: The principles and regulation of biotechnology in industry, agriculture and medicine (1985) by Charles L Cooney, Arthur E Humphrey, Vol.2 (Pergamon Press).
7. Environmental chemistry (2006) by Aniol Kumar De (New Age International (P) Ltd).
8. Introduction to biodeterioration (2004) by D. Allsopp, Kenneth J. Seal, Christine C. Gaylarde (Cambridge University Press).

Practical:- ENVIRONMENTAL BIOTECHNOLOGY
BIOT-Sem-V-II-T

Practical : 20 marks
Int. assessment : 05 marks

Total : 25 marks
Time : 3 hours

1. Detection of coli forms for determination of the purity of potable water.
2. Determination of chlorine in water
3. Determination of total alkalinity of water
4. Determination of dissolved oxygen concentration of water sample.
5. Determination of biological oxygen demand (BOD) of a sewage sample.
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Isolation of phosphate solubilizing microorganisms from soil.

Reference Books:

1. Microbiology: A laboratory manual (2007) by Cappuccino J.G and Sherman N. (Publisher Pearson Benjamin Cummings).
2. Biotechnology Laboratory Manual by Swamy, P.M. Rastogi Publications (2008).
3. Practical Microbiology by Dr R.C. Dubey and D.K. Maheshwari, S.Chand Publications.

BIOINFORMATICS

Theory : 67 marks
Int. assessment : 08 marks
BIOT-Sem-V-III-T **Total : 75 marks**
Time : 3 hours

UNIT – I

Introduction to Bioinformatics, Biological Databases and Sequence analysis

Introduction, overview and needs of bioinformatics technology.

Primary Databases: Primary Sequence database i.e. GenBank & EMBL.

Secondary Databases: SwissProt/TrEMBL, Pfam.

Molecular Structure Databases: Protein Data Bank (PDB), SCOP, CATH. Understanding the structure of each database and using it on the web.

UNIT – II

Sequence Alignment

Introduction to sequence alignment and its applications.

Pair wise sequence alignment: Concept of global and local alignment, Dot Plot, algorithm for pair wise sequence alignment (Needleman Wunsch, Smith-watterman methods), Introduction to BLAST, types of BLAST, algorithm of BLAST and interpretation of its result.

Substitution matrices: Introduction to substitution matrices: PAM and BLOSUM matrices, concept of log odd ratio.

Multiple sequence alignment: Methods of multiple sequence alignment. Introduction to consensus sequences, motifs and profiles.

UNIT – III

Phylogenetic Analysis: Introduction to phylogenetic analysis and its application, phylogenetic tree topologies, methods of phylogenetic tree construction and tools.

Genome Annotation: Concept of genome annotation, methods of gene identification. Tools of gene identification: GenScan and Glimmer.

UNIT IV

Protein Structure Prediction: Concepts and strategies of protein structure prediction, methods of secondary structure prediction, and methods of protein tertiary structure prediction. Structure visualization tool – RasMol.

BIOT-Sem-V-IV-P: BIOINFORMATICS (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Searching literatures over PubMed.
2. Performing DOTPLOT on web.
3. Retrieving amino acid and nucleotide sequence from sequence databases using Entrez.
4. Performing BLASTp/n and interpreting its results.
5. Performing PSI-BLAST.
6. Performing multiple sequence alignment using Clustalw.
7. Finding ORF in nucleotide sequence using NCBI ORF FINDER
8. Using GenScan to identify exons in nucleotide sequence.
9. Download protein structure form PDB and visualize it using RasMol.

BIOT-Sem-V-IV-T Paper: ENZYMOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

UNIT – I

Structure and functions of enzymes: Historical background and general properties of enzymes, concept of active centre, binding sites, stereo specificity and ES complex formation, activation energy, Evidences for enzyme-substrate complex; Lock and key, Induced fit and Transition state hypotheses, Coenzymes and Cofactors- Prosthetic group, coenzymes involved in different metabolic pathways.

UNIT – II

Factors Affecting the Enzyme Activity: Concentration, pH and temperature. Kinetics of a single substrate enzyme catalysed reaction, derivation of Michealis-Menten Equation, significance of Km value, Vmax, Turnover number, Kcat. Enzyme activity, international units, specific activity,

Enzymes as thrombolytic agents, Anti-inflammatory agents, streptokinase, Isoenzymes

UNIT-III

Enzyme Regulation: Feedback inhibition, Allosteric Regulation, Covalent Modification and Proteolytic Activation. Organization of enzymes in the cell, localization, enzymes in membranes. Acid-base catalysis, covalent catalysis, Metal ion catalysis, multienzyme complexes and ribozymes, catalytic antibodies, Allosteric enzymes.

UNIT – IV

Applications of Enzymes: Immobilized enzymes, industrial applications of immobilized enzymes, Thermophilic enzymes, amylases, lipases, Proteolytic enzymes in meat and leather industry, enzymes used in fermentation processes, cellulose degrading enzymes, Metal degrading enzymes.

Reference Books:

1. Fundamentals of Enzymology : Nicholas Price & Lewis Stevens
2. Biochemistry text books by Stryer, Voet and Lehninger
3. Methods in enzymology Vol.185 (1990) Gene Expression technology edited by D.V. Goeddel (Academic Press Inc. San Diego).
4. Enzymes: biochemistry, biotechnology and clinical chemistry (2001) by Trevor Palmer (Horwood).
5. Fundamentals of enzymology: The cell and molecular biology of catalytic proteins (2003) by Nicholas C. Price, Lewis Stevens, Lewis Stevens published (Oxford University Press, USA).
6. Principles and reactions of protein extraction, purification, and characterization (2004) edited by Hafiz Ahmed PhD (CRC, Taylor Francis Group).

BIOT-Sem-V-IV-P: Enzymology (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Estimation of enzyme activity.
2. To study the Effect of pH on activity of enzyme.
3. To study the Effect of temperature on activity of enzyme.
4. To study the effect of substrate concentration on enzyme activity.
5. To estimate Km and Vmax of an enzyme and plot Line-Weaver Burk plot.

Reference Books:

1. An introduction to practical biochemistry (2004) by Plummer D.T. (Tata McGraw Hill Publishers Co. Ltd., New Delhi).
2. Practical Enzymology (2004) By Hans Bisswanger (Wiley- VCH, Weinheim)
3. Introductory practical biochemistry (2005) by S.K. Sawhney, Randhir Singh (Alpha Science International).

BIOT-Sem-V-IV-P **Paper: SummerTraining**

Training : 80 marks
Int. assessment : 20 marks
Total : 100 marks

The students will undergo summer training after completion of 4th Semester and will be assessed in the 5th semester. The duration of training will be 4 to 6 weeks.

B.Sc. (Hons.) 3rd year (6th Semester) (Jan 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-V-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-IV-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreneurship	BIOT-Sem-VI-V-T	100		

Total Marks = 500

B.Sc. (Hons.)3rd year (6th Semester)

BIOT-Sem-VI-I-T Paper: GENETIC ENGINEERING

: 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours

Objectives:
Genetic engineering refers to the process of manipulating the characteristics and functions of the original genes of an organism. The objective of this process is to introduce new physiological and physical features or characteristics. The students will learn how the genes can be cut and paste from one organism to another and what are its implications.

UNIT-I

1. Introduction to genetic engineering. Why gene cloning and DNA analysis is important. . How to clone a gene - What is clone, Overview of the procedure

2. Tools in Recombinant DNA Technology:

Restriction and modifying enzymes, Type I , Type II and Type III enzymes and their characteristic features; restriction sequences, isoschizomers, rare cutting enzymes, enzyme cutting similar sequence in different manner.

DNA Modifying enzymes: Characteristics and applications of Nucleases – DNase and RNase, DNA-Pol I, Klenow fragment, T4DNA polymerase, T7 DNA polymerase, T4 Polynucleotide kinase, Phosphatase, Reverse transcriptase, Taq polymerase and Ligase. Terminal deoxy ribonucleotidyl transferase.

3. **Polymerase Chain Reaction**: Types and applications

UNIT II

Basic biology of plasmids and Phage vectors Basic features of plasmids, plasmid classification, Bacteriophage λ, lytic & lysogeny, Promoter control circuits. linear and circular forms of lambda vector, DNA cloning with single stranded DNA vectors.

DNA cloning vectors Cloning vectors for E. coli- Nomenclature, pBR 322, pBR 327, pUC 8, pGEM3Z. insertion and replacement vectors; Vectors based on M13. Methods of identification of recombinants: Insertional inactivation, blue/white selection. Cloning vectors for yeast- YEp, YIp, YRp.

Advanced Vectors: cosmid, phagemid, Bacterial Artificial Chromosomes (BACs), shuttle vectors, yeast artificial chromosomes.

UNIT-III

Preparation of genomic and cDNA library: Partial digests, Choice of vectors, Construction and Evaluation of a genomic library. cDNA library: mRNA enrichment, cDNA synthesis, Random, arrayed and Ordered library.

Finding The Right Clone: Gene identification, Nucleic acid hybridization, screening Procedure, Probe selection, immuno screening, functional complementation. Southern blotting, northern blotting.

Preparation of nucleic acid probes: DNA and RNA labeling techniques, nick translation , random priming, end labelling, radioactive and non- radioactive labels.

UNIT-IV

Site directed mutagenesis (cassette , primer extension, RT, real time, multiplex, inverse),
DNA sequencing (Maxam-Gilbert, Sanger, pyro).
Production of Protein from Cloned Genes: Special vectors for expression of foreign genes in *E. coli,* General problems with the production of recombinant protein in *E. coli.* Production of recombinant protein by eukaryotic cells.

Suggested readings:

1. Recombinant DNA by Watson, J.D. et.al., 1993, Scientific American Books, New York.
2. Principles of Gene Manipulation by Old., R.W. and Primrose, S.B., 2004, Blackwell Publishing, UK.
3. Methods in Gene Technology by Dale, J.N., 1994, JAI Press Ltd. London, England.
4. Recombinant Principles of gene manipulation and genomics, primrose & Twyman 2006, Blackwell, U.K.
5. Gene cloning and DNA analysis: An introduction by T.A. Brown (5th Ed.) 2006, Blackwell Science Ltd.
6. Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar,

BIOT-Sem-VI-I-P : GENETIC ENGINEERING (PRACTICAL)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Demonstration of PCR.
2. Demonstration of Southern blotting.
3. Preparation of competent cells.
4. Transformation of competent cells and blue/white selection.
5. Spectrophotometer analysis of DNA.

BIOT-Sem-VI-II-T: BIOPROCESS ENGINEERING AND TECHNOLOGY

Theory : 67 marks
Int. assessment: 08 marks
Total : 75marks
Time : 3 hours

Instructions for paper setters and candidates
• Set nine questions in all. Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Unit – I
Fundamental principles of biochemical engineering.
Sterilization of air and media sterilization, design of batch sterilization process.
Del factor, sterilization cycle, continuous sterilization process
Unit – II

Microbial growth kinetics Simple kinetics of microbial growth (Batch and Continuous, Feed Back System), yield coefficient, doubling time, specific growth rate, internal and external feedback systems, metabolic and Biomass productivities, effect of temperature and pH on the product formation

Unit – III

Design of fermenter:

Components of Fermenter, Aseptic operation of the fermenters, control and measurement equipment of fermenters, pH and DO probes, impeller and spargers,

Unit – IV

Downstream processing

Removal of microbial cells and other solid materials, foam separations, filtration, industrial filters, centrifugations and industrial centrifuges, cell Disruption, aqueous two phase extraction system, super critical extraction, whole broth process.

Waste water treatment for fermentation process

Reference Books:

1. Madigan, M.T., Martinko, J.M, P.V. Dunlap, T.D. Brock, D.P. Clark (2008). Brock biology of mMicroorganisms (Pearson Benjamin Cummings).
2. Prescott, L.M. Harley, J.P., Klein, D.A. (2001). Microbiology (McGraw-Hill, Boston).
3. Schaechter, M., Ingraham, J.L., Neidhardt, F.C., (2006). Microbe (ASM Press, Washington, DC).
4. Prescott, L.M. (1999). Microbiology with microbes in motion (McGraw-Hill).
5. Bailey J.E., Ollis, D.F. (1986). Biochemical engineering fundamentals (McGraw-Hill).
6. Schuler, M.L., Kargi F. (2002). Bioprocess engineering: Basic concepts (Prentice hall PTR, Upper Saddle River NY).

BIOT-Sem-VI-II-P: Bioprocess Engineering and Technology (Practicals)

Practical: 20 marks
Int. assessment: 05 marks
Total: 25 marks
Time: 3 hours

1. Demonstration of components and sterilization of fermenters and other accessories.
2. Determination of doubling time, yield coefficient for growth of microorganism.
3. Effect of temperature and pH and growth and product formation.
4. Determination of Specific growth rate and maximum specific growth rate
5. Cell disruption by Sonicator
6. Demonstration of normal flow and cross flow filtration process.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory (Pearson Benjamin Cummings).
2. Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).

BIOT-Sem-VI-III-T : FOOD BIOTECHNOLOGY

Theory: 67 marks
Int. assessment: 08 marks
Total: 75 marks
Time: 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks.

• Five questions to be attempted.

• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT – I

Food and Microorganisms: History and scope of Food biotechnology, food as substrates for microbes, factors affecting growth of microorganisms, Detection of microorganisms in food: Sampling plan & procedure for microbial analysis; Qualitative methods to isolate pathogenic microorganisms, test for bacterial toxins in foods; Quantitative methods for microbial enumeration: Direct enumeration, indirect estimations and standard and recommended methods; Applications of enzymes in food technology.

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UNIT – II

Principles of food preservation: Physical, chemical, and biological methods of preservations.

Contamination, preservation and spoilage of different kind of foods: Milk and milk products (milk, butter, yoghurt and cheese), beverages (beer, wine, tea and coffee), meat and fish products (sausages, vegetables and fruits.

UNIT – III

Food adulterants and food additives: Major food adulterants, types and their methods of assay, food additives their function and uses, flavoring agents, coloring agents and vitamins as food additives.

Fermented foods and their production: Bakers yeast, Bread, cheese, yoghurt, tofu, miso, tempeh, sauerkraut,meat and alcoholic beverages (beer and wine)

Production of algal, fungal and other microbial proteins(SCP and mushroom etc)

Probiotics, prebiotics,fortified and biofortified foods, functional foods, nutraceuticals, organic foods.

Genetically modified food (Golden rice, Favr savr tomato, protato, pomato etc)

UNIT –IV

Food and water borne diseases: Shigellosis, Salmonellosis, Cholera.

Food borne intoxications: *Staphylococcal, Bacillus and Clostridium botulinum*

Exotoxins and Endotoxins, their mechanism of action

Rapid and advanced estimation methods (Immunoassays, nucleic acid probe)for detection of pathogens.

Reference Books:

1. Frazier W.C., Westhoff, D.C. (Ed). (1988). Food microbiology (McGraw-Hill).

2. Admas, M.R., Moss, M.O (2005). Food microbiology (Edition 3, Illustrated Publisher Royal Society of Chemistry).

3. SriLakshmi B. (2003) Food science (New Age International Publishers, India).

4. Jay J.M., M.J. Loessner, D.A. Golden. (2005). Modern food microbiology (Edition 7,

Illustrated Publisher Springer).
5. B. Sivasankar (2004). Food processing and preservation (PHI Private Ltd, New Delhi).
6. Michael P. Doyle (1989). Food borne bacterial pathogens (Edition illustrated, Publisher Marcel Dekker).

BIOT-Sem-VI-III-P: FOOD BIOTECHNOLOGY (Practicals)

Practical : 20 marks
Int. assessment : 05 marks
Total : 25 marks
Time : 3 hours

1. Isolation and identification of microorganisms in spoiled food (fungi and bacteria).
2. Inhibitory effect of low temperature on microbial growth.
3. Production and estimation of ethanol.
4. Estimation of lactose in milk.
5. Methylene blue reductase test (MBRT) for determination of quality of milk.
6. Plating the milk samples for microbial contamination.
7. Demonstration for the identification of mushrooms by spore prints.
8. Checking the effect of pasteurization of milk by alkaline phosphatase.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-VI-IV-T: GENOMICS AND PROTEOMICS

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

- ***Set nine questions in all. All questions carry equal marks.***
- ***Five questions to be attempted.***
- ***Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).***
- ***Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.***

UNIT I

Introduction to Genomics, DNA sequencing methods – manual & automated: Maxam & Gilbert and Sangers method. Pyrosequencing, Genome Sequencing: Shotgun & Hierarchical (clone contig) methods, Computer tools for sequencing projects: Genome sequence assembly software.

UNIT II

Managing and Distributing Genome Data: Web based servers and softwares for genome analysis: ENSEMBL, VISTA, UCSC Genome Browser, NCBI genome. Selected Model Organisms' Genomes and Databases.

UNIT III

Introduction to protein structure, Chemical properties of proteins. Physical interactions that determine the property of proteins. Short-range interactions, electrostatic forces, van der waal interactions, hydrogen bonds, Hydrophobic interactions. Determination of sizes (Sedimentation analysis, gel filteration, SDS-PAGE); Native PAGE, Determination of covalent structures – Edman degradation.

UNIT IV

Introduction to Proteomics, Analysis of proteomes. 2D-PAGE. Sample preparation, solubilization, reduction, resolution. Reproducibility of 2D-PAGE. Mass spectrometry based methods for protein identification. De novo sequencing using mass spectrometric data.

PRACTICALS

1. Use of SNP databases at NCBI and other sites
2. Use of OMIM database
3. Detection of Open Reading Frames using ORF Finder
4. Proteomics 2D PAGE database
5. Softwares for Protein localization.
6. Hydropathy plots
7. Native PAGE
8. SDS-PAGE

SUGGESTED READING

1. Genes IX by Benjamin Lewin, Johns and Bartlett Publisher, 2006.
2. Modern Biotechnology, 2nd Edition, S.B. Primrose, Blackwell Publishing, 1987.
3. Molecular Biotechnology: Principles and Applications of Recombinant DNA, 4th Edition, B.R. Glick, J.J. Pasternak and C.L. Patten, 2010.
4. Russell, P. J. (2009). iGenetics- A Molecular Approach. III Edition. Benjamin Cummings.
5. Molecular Cloning: A Laboratory Manual (3rd Edition) Sambrook and Russell Vol. I to III, 1989.
6. Principles of Gene Manipulation 6th Edition, S.B.Primrose, R.M.Twyman and R.W. Old. Blackwell Science, 2001.
7. Snustad, D.P., Simmons, M.J. (2009). Principles of Genetics. V Edition. John Wiley and Sons Inc. 3. Klug, W.S., Cummings, M.R., Spencer, C.A. (2009). Concepts of Genetics. IX Edition. Benjamin Cummings.

BIOT-Sem-VI-V-T

INTELLECTUAL PROPERTY RIGHTS AND ETHICAL ISSUES IN BIOTECHNOLOGY AND ENTREPRENEURSHIP

Theory : 90 marks
Int. assessment : 10 marks
Total : 100marks
Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks.**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**
- **Five questions to be attempted.**

- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**

Objective: To introduce the students to intellectual rights and how to use the current intellectual property system to protect and commercialize their biotechnological invention. This course also covers the ethical issues, controversies and social-ethical impact of biotechnology on society.

UNIT – I

IPR: Introduction to Intellectual Property Rights. Tangible and intangible property. Patents: Introduction to patent law and brief history (early GATT and TRIPS), conditions for patentability; procedure for obtaining patents, patent filing through PCT, rights of a patentee; patent infringements and litigation.
Indian patent laws and amendments. Patents from an international perspective.

UNIT- II

Design, copyright and Trademark:
Copyright: Registration procedure and copyright authorities; assignment and transfer of copyright, copyright infringement and exceptions to infringement; software copyright.
Designs: Introduction to the law on industrial designs; registration and piracy; international perspective; commercial exploitation and infringement.
Trademark: Importance, Registration, Trademark infringement and piracy.

UNIT – III

Patenting in biotechnology: Biotechnology patents and its economic, ethical and depository considerations.
Patentable subject matter and legal aspects of transfer of biotechnology in India. Other multilateral treaties & International conventions – Paris convention, CBD, UPOV, PGRFA.
Writing a patent specification.
Information sources in patent literature search.

UNIT – IV

Entrepreneurship:
Entrepreneur and its types, Women Entrepreneurship. Selection of a product, Product line design and development processes, economics on material and energy requirement, stock the product and release the same for making
The basic regulations of excise: Demand for a given product, feasibility of its production under given constraints of raw material, energy input, financial situations export potential.

Reference Books:

1. J.E. Smith (2004). Biotechnology (Cambridge Univ. Press).
2. V. Santaniello (2000). Agriculture and intellectual property rights:
economic institutional, and implementation issues in biotechnology (Edition illustrated Publisher CABI).
3. Thackerey, A (ed) (1998). Private science: Biotechnology and the rise of the molecular sciences (Univ. of Pennsylvania Press, Phil).
4. Inderpal Singh and Baljinder Kaur (2006) Patent law and Entrepreneurship. Kalyani Publishers, India.

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI

AND

COURSES OF READING FOR

M. Sc. BOTANY

(TWO YEARS' COURSE)

SEMESTER SYSTEM,

1ST TO 4TH SEMESTERS

EXAMINATIONS of 2019-2020

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M. Sc. BOTANY (TWO- YEAR COURSE) SEMESTER SYSTEM EXAMINATIONS of 2019–20, 2020-21 & 2021-22

FIRST SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
I	- Phycology	75 (60A+ 15 HT*)	25 (20+5HT*)
II	- Bryology	75 (60A+ 15 HT *)	25 (20+5HT*)
III	- Mycology and Microbiology	75 (60A+ 15 HT*)	25 (20+5HT*)
IV	- A) Computer Applications & Biostatistics B) Lab. Techniques	75 (60A+ 15 HT*)	25 (20+5HT*)
V-	Anatomy of Angiosperms	75 (60A+ 15 HT *)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 = 500		

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT* : House Test

SECOND SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
VI	- Pteridophytes	75 (60A+ 15 HT)	25 (20+5HT*)
VII	- Gymnosperms	75 (60A+ 15 HT)	25 (20+5HT*)
VIII	- Angiosperm Morphology, Taxonomy and Phylogeny	75 (60A+ 15 HT)	25 (20+5HT*)
IX	- Reproductive Biology of Angiosperms	75 (60A+ 15 HT)	25 (20+5HT*)
X	- Plant Pathology	75 (60A+ 15 HT)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 =		**500**

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT * : House Test.

SECOND YEAR

3rd and 4th SEMESTERS

THIRD SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XI	- Molecular Biology	75 (60A+ 15 HT*)	25 (20+5HT*)
XII	- Plant Physiology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIII	- Biotechnology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIV	- Cytogenetics	75 (60A+ 15 HT*)	25 (20+5HT*)
XV	- Ecology and Environment	75 (60A + 15 HT*)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS: 375 + 125 =		**500**

TEACHING HOURS: THEORY: 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

FOURTH SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XVI	- Plant Biochemistry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVII	- Forestry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVIII	- Genetics and Plant Breeding	75 (60A+ 15 HT*)	25 (20+5HT*)
XIX	- Plant Resource, Utilization and Conservation	75 (60A+ 15 HT*)	25 (20+5HT*)
XX -	A) Research Project/Field Study Report	---	60
	B) Seminar	---	40
	Total Marks	**300**	**200**
	GRAND TOTAL OF MARKS: 300 + 200 =		**500**

TEACHING HOURS : THEORY : 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

*** The duration of each paper for the examination is 3 hours**

FIRST YEAR
1st and 2nd SEMESTERS
EXAMINATIONS 2018–19, 2019-20 & 2020-21
(ADMISSION of 2018, 2019, 2020)

FIRST SEMESTER

PAPER I: PHYCOLOGY

Objective of the paper is to impart knowledge about Algae on various aspects like Classification, Life cycles, Thallus organization and Reproduction in various groups; Evolution, Habitats and Economic importance of algae.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical, the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Criteria for algal classification (pigments, reserve food, flagella, chloroplasts, pyrenoids, eye spots, endoplasmic reticular membrane etc.); Comparative account of important systems of classification (Fritsch, Round, Chapman and Lee).
2. Salient features: Cell structure, thallus organization, reproduction and broad classification of i) Cyanophyta ii) Xanthophyta iii) Bacillariophyta iv) Dinophyta.

UNIT-II

3. Salient features : Cell structure, thallus organization, reproduction and broad classification of v) Chlorophyta vi) Phaeophyta vii) Cryptophyta and viii) Rhodophyta.

UNIT-III

4. Diversity in algal habitats (terrestrial, freshwater and marine).
5. Thallus organization in algae including evolutionary trends.
6. Reproduction (vegetative, asexual and sexual), origin and evolution of sex, life cycles.
7. Current concepts and relationships of protochlorophycean algae.

UNIT-IV

8. Rhythms and bioluminescence in dinoflagellates.
9. Economic importance of algae (algal biofertilizers, algal blooms, algae as food and feed, uses in industries etc.)
10. Algae in Biotechnology.

PRACTICALS

Max. Marks :20

1. Algal collections from different habitats and their identification.
2. Morphology and reproductive stages of following genera:

Cyanophyta *: Chroococcus, Microcystis, Oscillatoria, Lyngbya, Nostoc, Anabaena, Gloetrichia, Cylindrospermum, Scytonema*.

Chlorophyta: *Volvox, Hydrodictyon, Chlorella, Pediastrum, Scenedesmus*, *Oedogonium, Bulbochaete, Cosmarium, Closterium, Zygnema, Sphaeroplea, Cladophora, Pithophora, Spirogyra, Caulerpa, Codium, Valonia, Halimeda, Acetabularia, Chara, Nitella, Coleochaete, Dreparnaldia.*

Xanthophyta *: Vaucheria, Botrydium.*

Bacillariophyta *: Pinnularia, Synedra, Navicula, Cyclotella.*

Phaeophyta : *Ectocarpus, Fucus, Laminaria, Dictyota, Desmortestia, Sporochnus, Sargassum.*

Rhodophyta : *Erythrotrichia, Porphyra, Nemalion, Batrachospermum, Corallina, Gelidium, Polysiphonia*

ESSENTIAL READINGS

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1. Chapman, V.J. and D.J. Chapman. *The Algae.* ELBS and Macmillan , NY. 1977.
2. Lee, R. E., *Phycology,* Cambridge University Press, Cambridge, 2008
3. VanDen Hock, C., Mann, D.G. and Jahns, H. M. *Algae : An Introduction to Phycology,* Cambridge University Press, Cambridge, 1995.

SUGGESTED READINGS

1. Ahluwalia, A.S., (Ed.) *Phycology: Principles, Processes and Applications*, Daya Publishing House, New Delhi, 2003
2. Kumar, H.D., *Introductory Phycology,* East West Press, New Delhi, 1999
3. Lee, R.E. *Phycology*. 4th Ed. Cambridge University Press, London. 2008.

PAPER II : BRYOLOGY

Objective of the paper is to impart knowledge about Bryophytes on various aspects like Classification, structural organization and developmental studies of gametophyte and sporophyte in various groups; Ecology, Water relations, Chemistry, Cytology, Fossil bryophytes, Origin and evolution, Experimental studies and Economic Importance.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class room. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25 (20A+5HT)

THEORY

Max. Marks: 60

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics of Bryophytes: systems of classification with salient features of Anthcerotophyta, Marchantiophyta and Bryophyta.
2. Structure and development of sex organs in Bryophytes.
3. Economic Importance of Bryophytes.
4. Ecology of Bryophytes: Habitats, Growth forms, Bryophytes as Pollution Indicators.
5. Water Relations: Drought Tolerance ; Dessication and Rehydration ; Ectohydric ,Endohydric and Mixohydric mosses.

UNIT-II

6. Comparative structural organization of gametophyte and sporophyte; Asexual reproductive structures; distribution of sex organs; protective structures associated with archegonia and developing sporogonia; spore and elaters / peristome teeth ; spore dispersal mechanisms and spore germination in
    a) **Hornworts** (Anthocerotales)
    b) **Liverworts** (Calobryales, Jungermanniales, Metzgeriales, Marchantiales, Monocleales and Sphaerocarpales)

UNIT-III

    c) **Mosses** (Sphagnopsida, Andreaeopsida – *Andreaea* and *Takakia*, Archidiopsida, and Peristomiopsida -- Tetraphidae, Buxbaumidae, Polytrichidae and Bryidae).

7. Experimental studies: Effect of various factors on protonemal differentiation and bud formation; Apogamy and Apospory.

UNIT-IV

8. Chemistry of Bryophytes: A brief account of distribution of various organic compounds in different groups of Bryophytes ; Chemistry in relation to taxonomy.
9. Cytological studies in Bryophytes: Chromosome numbers in major groups of Bryophytes, Polyploidy in brief, m-chromosomes and sex-chromosomes, Cytology in relation to taxonomy.
10. Fossil Bryophytes (A brief account).
11. Origin of Bryophytes.

PRACTICALS **Max. Marks : 20**

1. Structural details of *Marchantia, Asterella, Plagiochasma, Targionia, Pellia, Frullania, Porella, Notothylas, Anthoceros, Sphagnum, Pogonatum, Barbula, Bryum and Entodon* and *Thuidium.*
2. Study of diagnostic features of following genera: *Dumortiera, Athalamia, Conocephalum, Cryptomitrium, Reboulia, Riccia, Riccardia, Metzgeria, Blasia, Sewardiella, Plagiochila, Fissidens , Atrichum* , *Mnium* and *Thuidium.*
3. Field trips to familiarize with natural habitats, growth forms and diversity of bryophytes.
4. To study permanent slides / photographs of m-Chromosomes and Sex- chromosomes.

ESSENTIAL READINGS

1. Goffinet, B. and Shaw, A.J. *Bryophyte Biology*. Cambridge University Press, Cambridge, pp. 476, 2000.
2. Richardson, D. H. S. *Biology of Mosses*, Blackwell Scientific Publications, Oxford, pp. 220, 1981.
3. Schofield, W.B. *Introduction to Bryology*, Macmillan Publishing Company, New York, pp. 431, 1985.

SUGGESTED READINGS

1. Kashyap, S.R. *Liverworts of Western Himalayas and the Punjab plains. Vols I II.* Researchco Publications, New Delhi. 1932
2. Kumar, S.S. *An approach towards Phylogenetic Classification of Mosses*. Jour. Hattori Bot. Lab. Nichinan , Japan. 1984.
3. Rashid, A. *An Introduction to Bryophyta*. Ist Ed. Vikas Publishing House Pvt. Ltd., New Delhi. 298 pp. 1998.

PAPER III : MYCOLOGY AND MICROBIOLOGY

Objective of the paper is to impart knowledge about Classification, Mycelium, Reproduction in various groups of Fungi; Nomenclature, Classification, Structure, reproduction, importance of Bacteria, Viruses, MLOs, Spiroplasmas, Viroids, Mycoviruses; Translocation and distribution in host plants, infection, replication and transmission of plant viruses.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Recent trends in the classification of Fungi.
2. General account of Myxomycota, Oomycota and Chytidriomycota

UNIT-II

3. General account of Zygomycota, Ascomycota , Basidiomycota and anamorphic fungi.

UNIT-III

4. Tissue systems in Fungi.
5. Types of Centrum development in Ascomycota.
6. Heterokaryosis and Parasexuality.
7. Mycorrhizal application in agriculture and plant growth.

UNIT-IV

8. Nomenclature, classification, morphology, translocation and distribution in host plants, infection, replication and transmission of plant viruses.
9. Nomenclature, classification, structure, reproduction, nutrition and economic importance of Eubacteria ; General account of Archaebacteria.
10. Brief account of MLOs, Spiroplasma, Viroids and Mycoviruses.

PRACTICALS

Max. Marks: 20

1. Study of morphological and reproductive structures of following genera :
   MYXOMYCOTA: *Stemonitis, Physarum.*
   OOMYCOTA: *Saprolegnia, Albugo, Peronospora, Phytophthora***,** *Bremia.*
   CHYTIDRIOMYCOTA: *Synchitrium, Allomyces, Blastocladia.*
   ZYGOMYCOTA: *Mucor, Rhizopus, Pilobolus.*
   ASCOMYCOTA: *Protomyces, Aspergillus, Penicillium, Claviceps, Phyllactinia, Xylaria, Morchella, Peziza*
   BASIDIOMYCOTA: *Puccinia, Melampsora, Agaricus, Ustilago, Polyporus, Ganoderma, Cyathus, Hydnum , Geasterum.*
   ANAMORPHIC FUNGI: *Fusarium, Cercospora, Colletotrichum, Alternaria, Helminthosporium.*
2. Preparation of media to isolate fungi, bacteria and other microbes.
3. Isolation of *Rhizobium* from legume root nodules.
4. Sensitivity tests of bacteria using different antibiotics.

SUGGESTED READINGS

1. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
2. Webster, J. and Webes R. *Introduction to Fungi*. Cambridge University Press, Cambridge 3rd Edition, 2007.
3. Bos, L. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1992

SUGGESTED READINGS

1. Bilgrami,K.S. and R.N.Verma. *Physiology of Fungi.*2nd Ed. Vikas Publication House, New Delhi
2. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. *Microbiology.* 5th Ed. Tata McGraw Hill, New Delhi. 2007.
3. Kendrick, B. *The Fifth Kingdom*. Focus Publishing, Newburyport, M.A. U.S.A, 2000

PAPER IV : A) COMPUTER APPLICATIONS AND BIOSTATISTICS

B) LABORATORY TECHNIQUES

Objective: Now-a-days life sciences have become interdisciplinary. The aim of this paper is to converse and train the students with different modern biological and physico-chemical techniques employed in the study of biological materials.

This paper also aims to impart basic knowledge of Computer (Computer Hardware, software and programming languages etc.) and Biostatistics and use the information in analyzing the biological data.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector, LCD projector etc. The students also make group discussions in the class rooms. In practical the students learn the working of different instruments and computer.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

SECTION A : COMPUTER APPLICATIONS AND BIOSTATISTICS

UNIT-I

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

UNIT-II

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chi square – test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation; Simple & multiple regression.

ESSENTIAL READINGS

1. Daniel, W.W. *Biostatistics: A foundation for Analysis in the Health Sciences*. Wiley and Sons, Singapore, 2006, pp. 755.
2. Kothari, C.R. *Research Methodology – Methods and Techniques*. 2nd revised ed. New Age International Publishers, India, 2009, pp.401.
3. Sinha, P.K. *Computer Fundamentals.* 4th Ed. B.P.B. Publication. 404 pp. 2003.

SUGGESTED READINGS

1. Hunt, R. and J. Shelly. *Computer and Common Sense.* 4th Ed. Prentice Hall, India. 224 pp. 2002
2. Dobbs, S. and Miller, J. *Statistics 1*. Cambridge University Press, UK, 2006, pp. 184
3 Dobbs, S. and Miller, J. *Statistics 2*. Cambridge University Press, UK, 2006, pp. 178.

SECTION B : LABORATORY TECHNIQUES

UNIT-III

1. Principles and applications of Light, Phase Contrast, Fluorescence, Scanning and Transmission Electron Microscopy.
2. Principles and applications of Tracer Techniques in Biology: Radioactive Isotopes and Half Life of isotopes; Autoradiography.
3. pH metery – Principles and applications.
4. Principles, procedure and application of Paper Chromatography, Thin Layer Chromatography, Gel filtration, Ion Exchange and Affinity Chromatography, High Pressure Liquid Chromatography.

UNIT-IV

5. Electrophoresis and Isoelectric focusing: Principle, working and applications of Electrophoresis.
6. Colorimetery and Spectrophotometery: Lambert Beer Law, Basic components, applications.
7. Centrifugation: Technique and principles; Preparative and Analytical Centrifugation.

PRACTICALS Max. Marks :20

1. Data collection, presentation, plots, Chi-square test, Goodness of fit, determination of correlation coefficient.
2. Genomic DNA isolation.
3. DNA and Protein analysis by Gel electrophoresis.
4. To demonstrate Beer's law using different dyes.
5. Preparation of Phosphate Buffers of different pH values.
6. Practicals pertaining to Chromatographic techniques: Column Chromatography (Exclusion and Affinity Chromatography), Paper Chromatography and Thin Layer Chromatography.
7. Practicals pertaining to centrifugation.

ESSENTIAL READINGS

1. Mahajan, B.K. *Methods in Biostatistics for Medical Students and Research Workers*. Jaypee Brothers Medical Publishers, India, 2006, pp. 341
2. Potter, G.W.H. *Analysis of Biomolecules : An introduction to Principles, Instrumentation and Techniques*. Chapman and Hall, London.252pp. 1995
3. Wilson, K. and J. Walker. *Principles and Techniques of Practical Biochemistry.* Cambridge University Press, Cambridge.784pp. 2000.

SUGGESTED READINGS

1. Plummer, D.T. *An Introduction to Practical Biochemistry*. Tata McGraw Hill Publishing Ltd., New Delhi.352pp. 1994.
2. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K.390pp. 2001.
3. Sawhney, S.K. and R. Singh. *Introductory Practical Biochemistry.* Narosa Publishing House, New Delhi.470pp. 2002.

PAPER V : ANATOMY OF ANGIOSPERMS

Objective: This paper deals with the structure, origin, differentiation and phylogeny of meristems cell, tissues and organs of the plant body.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Camera Lucida, Computer and Image Projecting system and permanent glass slides of plant materials

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Shoot Development :**Various theories regarding the organization and activity of shoot apical meristem (SAM) ; Transition to flowering, Floral meristem and Floral development in *Arabidopsis* and *Antirrhinum* .
2. **Root development:** Organization of Root Apical Meristem (RAM); Vascular tissue differentiation; lateral roots .

UNIT-II

3. **Leaf growth and differentiation**: Phyllotaxy, Leaf development, differentiation of epidermis (with special reference to stomata and trichomes) and mesophyll, Kranz Anatomy and Leaf abscission.

UNIT-III

4. Structure, differentiation and phylogeny of Xylem; Reaction wood.
5. Structure, differentiation and phylogeny of Phloem

UNIT-IV

6. Transfer Cells.
7. Structure and activity of vascular and cork cambium.
8. Seed coat anatomy with reference to legumes and cereals.

PRACTICALS

Max. Marks : 20

1. Study of anomalous type of secondary growth through transverse sections.
2. Maceration of wood.
3. Study of living shoot apices .
4. Study of cyto-histological zonation in the shoot apical meristem and. examination of shoot apices in both T.S. and L.S. to show the origin and arrangement of leaf primordia.
5. Study of V.S. of various types of leaves.
6. Study of leaf epidermis.
7. Study of T.S. of Seed Coat.

ESSENTIAL READINGS

1. Beck, C.D. *An Introduction to Plant Structure and Development: Plant Anatomy for the 21st Century.* Cambridge Univ. Press,. 452 pp. 2009.
2. Burgess, J. *An Introduction to Plant Cell Development.* Cambridge Univ. Press, Cambridge. 266 pp. 1985.
3. Fahn, A. *Plant Anatomy*. 3rd Ed. Pergamon Press, Oxford. 544 pp. 1989.

SUGGESTED READINGS

1. Esau, K. *Anatomy of Seed Plants*. John Wiley, New York. 550 pp. 1977.
2. Ray, F.E. and S.E.Eichhorn. *Esau's Plant Anatomy : Meristems, Cells and Tissues of the Plant Body: their Structure, Function and Development.* 3rd Ed. Wiley-Lis . 624 pp. 2006.
3. Steeves, T.A. and I. M. Sussex. *Patterns in Plant Development.* 2nd Ed. Cambridge Univ. Press, Cambridge. 408 pp. 1989.

SECOND SEMESTER

PAPER VI : PTERIDOPHYTES

Objective of the paper is to impart knowledge about Pteridophytes on various aspects like Classification, Structural organization and Developmental studies of sporophyte and gametophyte of extant and extinct Pteridophytes, Economic importance , Cytological and Experimental studies.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In the practical the students make observations and work on the plant materials (including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics, The emerging concepts and Classification of pteridophytes.
2. Geological Time Table ; Fossils- their types , formation and methods of study ;Calculation of age of rocks / fossils.
3. Distribution, habitat, range, organography, external and internal morphology of sporophyte, spores and their mechanism of dispersal, gametophytic generation and sexuality and embryogeny of following classes of Pteridophytes with reference to the genera mentioned :

A: PSILOPSIDA

i) Rhyniales : *Rhynia, Horneophyton, Yarravia, Cooksonia*

ii) Trimerophytales : *Trimerophyton, Psilophyton*

iii) Zosterophyllales : Zosterophyllum , *Kaulangiophyton, Crenaticaulis, Sawdonia*

B: PSILOTOPSIDA

Psilotales : *Psilotum* and *Tmesipteris* ; A discussion on the systematic position of this group in pteridophytes.

UNIT-II

C: LYCOPSIDA

i) Protolepidodendrales : *Drepanophycus, Asteroxylon, Protolepidodendron,*
ii) Lycopodiales : A brief account of *Lycopodium* and *Phylloglossum*
iii) Lepidodendrales : *Stigmaria*
Family Lepidodendraceae , Family Bothrodendraceae,
Family Sigillariaceae, Family Pleuromeiaceae
iv) Isoetales : *Isoetes, Nathorstiana* , Brief account of *Stylites*
v) Selaginellales : *Selaginella* (A brief account)

D: SPHENOPSIDA

i) Hyeniales : *Hyenia*
ii) Sphenophyllales : *Sphenophyllum, Shenophyllostachys, Eviostachya, Cheirostrobus*
iii) Calamitales : *Asterocalamites, Protocalamites, Calamites, Calamostachys,Paleostachys*
iv) Equisetales : *Equisetum* (A brief account)

UNIT-III

E: PTEROPSIDA

a) Primofilices
i) Cladoxylales : *Cladoxylon, Pseudosporochnus*
ii) Coenopteridales : *Stauropteris, Botryopteris, Rhacophyton*

b) Eusporangiatae
i) Marattiales: *Psaronius, Angiopteris, Marattia*
ii) Ophioglossales : *Ophioglossum, Botrychium , Helminthostachys*

c) Osmundidae : Osmundales – *Osmunda*

d) Leptospangiatae
i) Marsileales : A brief account
ii) Salviniales : *Salvinia, Azolla*
iii) Filicales: General account of sporophyte morphology, stellar organization, soral and sporangial characters, gametophytes and embryogeny.

UNIT-IV

4. Apogamy and Apospory
5. Reproductive Biology of ferns.
6. Heterospory and its significance.
7. Cytological evolution and Species Concepts – Cytological evolutionary role of polyploidy in the evolution of pteridophytes.
8. Economic importance of Pteridophytes

PRACTICALS **Max. Marks :20**

1. Study of morphology and anatomy of vegetative and reproductive organs using cleared whole mounts, sections , macerations and permanent preparations of following living genera :
Psilotum, Lycopodium, Isoetes, Selaginella, Equisetum, Angiopteris, Ophioglossum, Botrychium, Osmunda, Marsilea, Salvinia, Azolla, Lygodium, Hymenophyllum,

Cyathea, Pteris, Asplenium, Dryopteris, Polystichum, Adiantum, Polypodium, and *Lepisorus.*

2. Study of some fossil pteridophytes through specimens and permanent slides .
3. Preparation of permanent slides / charts.
4. Field trips to familiarize with the diversity of pteridophytes in their natural habitats.

ESSENTIAL READINGS

1. Khullar, S.P. *An Illustrated Fern Flora of West Himalayas* (Vols. I and 2). International Book Distributors, Dehradun, 2000.
2. Rashid, A. A*n Introduction to Pteridophyta*. Vikas Publishers, New Delhi, 1999.
3. Sporne, K.R. *The Morphology of Pteridophytes*. B.I., Publications, Bombay, Delhi, Madras, 1982.

SUGGESTED READINGS

1. Parihar, N.S. *An Introduction to Embryophyta Vol. II, Pteridophytes*. Central Book Depot, Allahbad. 1965.
2. Pryer, K.M., H.Schneider, A.R.Smith, R.Cranfill, P.G.Wolf, J.S.Hunt and S.D.Sipes. *Horsetails and Ferns are a monophyletic group and the closest living relatives to seed plants*. Nature 409: 618-622, 2001.
3. Raghavan, V. *Developmental Biology of Fern Gametophytes (Developmental and Cell Biology Series).* Cambridge Univ. Press, Cambridge. 384 pp. 1989.

PAPER VII : GYMNOSPERMS

Objective of the paper is to impart knowledge about Gymnosperms on various aspects like classification, structural organization and developmental studies of sporophyte and gametophyte of extant and extinct Gymnosperms, Economic importance , Cytological studies and Phytogeography.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials(including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics and Classification of Gymnosperms (Broad outlines).
2. Detailed study of the vegetative morphology, reproductive organs, structure and evolution of the following orders and families (with reference to the genera mentioned)

I . CLASS : PROGYMNOSPERMOPSIDA

i) ORDER : ANEUROPHYTALES
Family: Aneurophytaceae : *Aneurophyton, Tetraxylopteris, Triloboxylon, Proteokalon*

ii) ORDER : PROTOPITYALES
Family : Protopityaceae : *Protopitys*

iii) ORDER : ARCHAEOPTERIDALES
Family : Archaeopteridaceae : *Archaeopteris*

UNIT-II

II. CLASS : CYCADOPSIDA

i) ORDER : PTERIDOSPERMALES
a) Family Lyginopteridaceae : *Lyginopteris, Lagenostoma, Telangium, Crossotheca*
b) Family Glossopteridaceae : *Vertebraria, Glossopteris,*
c) Family Medullosaceae : *Medullosa, Codonotheca Pachytesta,Whittleseya, Goldenbergia*
d) Family Caytoniaceae : *Sagenopteris, Caytonia*

ii) ORDER : BENNETTITALES (CYCADEOIDEALES)
a) Family Bennettitaceae (= Cycadeoideaceae) : *Bennettites* (= *Cycadeoidea*)
b) Family Williamsoniaceae : *Williamsonia*
c) Family Wiellandiellaceae : *Wielandiella, Williamsoniella*

iii) ORDER : CYCADALES
a) Family Cycadaceae : *Macrozamia, Zamia*

iv) ORDER : PENTOXYLALES
a) Family Pentoxylaceae : *Pentoxylon, Nepanioxylon, Carnoconites, Sahnia*

UNIT-III

III CLASS : CONIFEROPSIDA

i) ORDER : CORDAITALES
Family Cordaitaceae : *Cordaites, Cordianthus, Mitrospermum*

ii) ORDER : CONIFERALES
a) General account with reference to the families : Pinaceae, Taxodiaceae, Podocarpaceae, Cephalotaxaceae, Araucariaceae, Sciadopityaceae
b) Range of form, structure and evolution of Female Cones in Coniferales

iii) ORDER : GINKGOALES
Family Ginkgoaceae : *Ginkgo*

iv) ORDER : TAXALES
Family Taxaceae : *Taxus*

IV CLASS : GNETOPSIDA

i) ORDER : GNETALES
a) Family Gnetaceae : *Gnetum*
b) Family Welwitschiaceae : *Welwitschia*

UNIT-IV

3. Male gametophytes in Gymnosperms.
4. Distribution of Living Gymnosperms in India.
5. Structure and Evolution of Archegonium in Gymnosperms.
6. General survey of cytology of Gymnosperms .
7. Economic importance of gymnosperms.

PRACTICALS Max. Marks : 20

1. Study of morphology and anatomy of vegetative and reproductive parts of *Cycas, Zamia, Cedrus, Abies, Pinus, Picea, Cupressus, Cryptomeria, Agathis, Araucaria, Taxodium Taxus, Cephalotaxus , Ginkgo, Ephedra* and *Gnetum.*
2. Study of some Fossil Gymnosperms through specimens and permanent slides.
3. Field trips to familiarize various gymnosperms in nature and field identification of Indian Gymnosperms.
4. Preparation of permanent slides / charts.

ESSENTIAL READINGS

1 Beck, C. E. *Gymnosperm Phylogeny,* Bot. Rev., 51: 176-294, 1985.
2. Bhatnagar, S.P. and Moitra, A. *Gymnosperms*. New Age International Limited, New Delhi, 1996.
3. Sharma, O.P. ad Dixit, S. *Gymnosperms*. Pragati Prakashan, Meerut, 2001.

SUGGESTED READINGS

1. Meyen, S.V. *Basic Features of Gymnosperms, Systematics and Phylogeny as Evidenced by the Fossil Record,* Bot. Rev., 50 : 1-112, 1984.
2. Rothwell, G.W. *The Role of Comparative Morphology and Anatomy in Interpreting the Systematics of Fossil Gymnosperms*, Bot. Rev., 51: 318-327, 1985.
3. Sporne, K.R. *The Morphology of Gymnosperms,* B. I. Publications, Delhi, 1974

PAPER VIII : ANGIOSPERM MORPHOLOGY, TAXONOMY AND PHYLOGENY

Objective of the paper is to impart knowledge about Angiosperms on various aspects like Taxonomy, Phylogeny, Classification, Botanical gardens, Herbaria, Floras, Manuals, Periodicals and Botanical Survey of India and Biodiversity and structural organization of vegetative and reproductive organs of various groups.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students study flowers of different families.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the

whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Principles of Plant Classification with emphasis on modern tools of taxonomy ; Taxonomy as a SYNTHETIC DISCIPLINE, Numerical Taxonomy, Chemotaxonomy, Serology and Taxonomy, Biosystematics.
2. Taxonomic literature, General Indexes, Floras, Manuals, Important periodicals with emphasis on Indian floristics.
3. Important Botanical Gardens and Herbaria.
4. Botanical Survey of India – its organization and role.
5. Botanical Nomenclature and International Code of Botanical Nomenclature.

UNIT-II

6. Phylogenetic systems of classification - Hutchinson, Cronquist , Takhtajan , Dahlgren and Thorne.
7. Phylogeny of Angiosperms: Origin, Evolution and inter-relationship of dicots and monocots.

UNIT-III

8. Salient features of following families:

(a) DICOTYLEDONS

Ranunculaceae, Magnoliaceae , Fumariaceae, Cruciferae, Papaveraceae, Capparidaceae, Caryophyllaceae, Malvaceae, Sterculiaceae, Rutaceae, Meliaceae, Rhamnaceae, Anacardiaceae, Leguminosae, Rosaceae, Combretaceae, Myrtaceae, Solanaceae , Lythraceae, Cucurbitaceae, Cactaceae, Umbelliferae, Compositae, Primulaceae, Oleaceae, Asclepediaceae, Apocynaceae, Boraginaceae, Scrophulariaceae, Bignoniaceae, Acanthaceae, Labiatae Verbenaceae, Amaranthaceae, Polygoniaceae, Nyctaginaceae, Euphorbiaceae, and Cannabinaceae.

UNIT-IV

(b) MONOCOTYLEDONS:

Orchidaceae, Cannaceae, Amaryllidaceae, Liliaceae, Palmae, Araceae, Cyperaceae and Graminae.

9. The Species Concept, Taxonomic hierarchies : Species, Genus, Family and other Categories.
10. Evolution of Stamen and Carpel.

PRACTICALS **Max. Marks : 20**

1. Study of morphology, primitive and advanced characters of cultivated and wild representatives of various families. Study of basic structure of flower, variations, floral parts in detail, floral symmetry, insertion of floral parts etc.
2. Location of key characters and use of keys to derive families.
3. Field study of angiosperms in different types of habitats and preparation of Plant album.
4. Training in using floras for identification of specimens described in field or class.

ESSENTIAL READINGS

1. Cronquist, A. *An Integrated System of Classification of Flowering Plants.* Columbia University Press, Columbia. 1262 pp. 1981.
2. Eames, A.J. *Morphology of Angiosperms*. McGraw – Hill Inc., New York. 518 pp. 1961
3. Sporne, K.R. *The Morphology of Angiosperms*. B.I. Publication, Bombay, Calcutta, Delhi. 207 pp. 1986.

SUGGESTED READINGS

1. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology : A Laboratory Manual*. Springer-Verlag, Berlin. 1992.
2. Sharma, O.P. *Plant Taxonomy*. Tata McGraw Hill Publishing Co. Pvt. Ltd., New Delhi.482 pp. 2002.
3. Subramaniam, N.S. *Modern Plant Taxonomy*. Vikas Publishing House Pvt. Ltd., Delhi.494 pp. 2007.

PAPER IX: REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

Objective of the paper is to impart knowledge about various biological aspects of reproduction in Angiosperms like structure of male and female Gametophyte, Palynology, Pollination, Pollen-pistil interaction, Self incompatibility, Apomixis, Fertilization, Endosperm, Embryo and Seed formation.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the reproductive parts of the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Apomixis**: Types and evolutionary significance.
2. **Male Gametophyte:** Structure of anthers; Microsporogenesis; Role of tapetum; Pollen development; Sperm dimorphism.
3. **Palynology:** Pollen wall structure; Male sterility; Hybrid seed production; Pollen viability and storage.

UNIT-II

4. **Female Gametophye** : Ovule development ; Megasporogenesis; organization of Embryo sac, structure of embryo sac cells.
5. **Pollination, Pollen-pistil interaction and fertilization:** Floral characteristics; Pollination mechanisms and vectors ; breeding systems; structure of the pistil ; Pollen-stigma interactions and pollen tube growth and guidance.

UNIT-III

6. Sporophytic and gametophytic self – incompatibility (cytological , biochemical and molecular aspects).
7. Double fertilization, *in vitro* fertilization.

UNIT-IV

8. **Endosperm**: Development and types.
9. **Embryo**: Development of embryo in Monocots and Dicots.
10. **Seed**: Structure and formation.

PRACTICALS

Max. Marks: 20

1. Study of microsporogenesis and gametogenesis in sections of anthers.
2. Examination of modes of anther dehiscence and collection of pollen grains for microscopic examination (maize , grasses, *Cannabis sativa, Crotolaria, Tradescantia, Brassica, Petunia, Solanum melongena* etc.
3. Tests for pollen viability using stains and *in vitro* germination . Pollen germination using hanging drop and sitting drop cultures, suspension culture and surface culture.
4. Study of ovules in cleared preparations ; study of monosporic , bisporic and tetrasporic types of embryo sac development and embryos through examination of permanent stained serial sections
5. Field study of several types of flowers with different pollination mechanisms (Wind pollination, Bee / butterfly pollination, Bird pollination).

ESSENTIAL READINGS

1. Johri, B.M. (Ed.) . *Embryology of Angiosperms.* Springer-Verlag, Berlin. 830 pp. 1985.
2. Maheshwari, P. *Recent advances in Embryology of Angiosperms.* Int. Soc. Pl. Morphologists, Delhi. 463 pp. 1963.
3. Raghavan, V. *Embryogenesis in Angiosperms – A Developmental and Experimental Study*. Cambridge University, Cambridge. 303 pp. 1986.

SUGGESTED READINGS

1. Bhojwani, S.S. and S.P. Bhatnagar. *The Embryology of Angiosperms. 4th ed.* Vikas Publishing House , New Delhi.357 pp. 2000
2. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen: Structure and* Function. Wiley Eastern Ltd. New Delhi. 337 pp. 1985.
3. Swamy, B.G.L. and K.Y. Krishnamurthy. *From flower to fruit: Embryology of Flowering plants.* Tata McGraw-Hill, New Delhi. 1980.

PAPER X : PLANT PATHOLOGY

Objective of the paper is to impart knowledge on various aspects of Plant Pathology like Symptomatology, Defence mechanisms, Host Parasite interactions, Role of enzymes and toxins in pathogenesis, Nutrition of fungi and Disease forecasting . It also aims to study the Etiology, Epidemiology and Control of different plant diseases caused by Fungi and other micro-organisms.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and study the diseased specimens using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks: 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. History, concept of plant diseases.
2. Role of enzymes and toxins in pathogenesis.
3. Defense mechanism.
4. Host-parasite interactions.

UNIT-II

5. Disease forecasting and assessment.
6. Principles of Plant Disease control; Biocontrol
7. Nutrition in Fungi.

UNIT-III

8. Etiology , epidemiology and control of following diseases:

    i) Paddy: Paddy Blast, Brown Leaf Spot, Bacterial Blight
    ii) Wheat: Rusts, Bunt and Smuts, Tundu Disease
    iii) Maize: Smut leaf blight, powdery mildew
    iv) Sugarcane: Red Rot, Smut
    v) Grapes: Downy and Powdry Mildews
    vi) Peach: Leaf Curl
    vii) Groundnut: Tikka disease
    viii) Apple: Apple Scab
    ix) Mustard: White Rust, Downy Mildew
    x) Potato: Early and Late Blight, Wart Disease
    xi) Linseed: Rust
    xii) Damping off of the seedlings
    xiii) Ergot of Rye

UNIT-IV

9. Diseases caused by plant viruses, MLOs, Spiroplasma, Viroids and Mycoviruses: General symptoms and Principles of Control.

PRACTICALS

Max. Marks: 20

1. Study and diagnosis of plant diseases mentioned in Theory syllabus.
2. Isolation, purification and single spore culture of pathogens.

ESSENTIAL READINGS

1. Agrios, G.N. *Plant Pathology*. Elsevier Academic Press, 2005, pp.922
2. Mehrotra, R.S. and Aggarwal, A. *Plant Pathology*, Publ., Tata McGraw Hill, 2003, pp. 846.
3. Sharma, P. D. *Plant Pathology*, Rastogi Publ., Meerut, 1998.
4.

SUGGESTED READINGS

1. Bilgrami, K.S. and Dube, H.C. *A Text Book of Modern Plant Pathology,* Vikas Publishing House, New Delhi, 1990, pp. 344
2. Sharma, P.D. *The Fungi and Allied Organisms* . Ist Ed. Alpha Science International Ltd., 300 2005.
3. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.

SECOND YEAR
THIRD SEMESTER

PAPER XI : MOLECULAR BIOLOGY

Objective of the paper is to impart knowledge about various aspects of Molecular Biology like Chemical nature and Biosynthesis of Genetic material, Mechanism of Translation, Control function of genes, Cancer, Antigens, Cell cycle and Apoptosis.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students learn techniques of histochemical localization, extraction and estimation of DNA, RNA and Protein and Antigen- antibody reaction.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Cell cycle and Apoptosis & control mechanisms**: Role of cyclins and cyclin dependent kinases, mechanism of programmed cell death.
2. **Chemical Nature of Genetic Material** : Nomenclature, composition and structure of nucleic acids; three dimensional structure of DNA (Prokaryotes, eukaryotes and viral); shape of DNA studied from various physico-chemical properties *(A-, B- , Z-DNA)* ; Structure and functions of different types of RNA ; Biosynthesis of Nucleotides and Biological importance of the nucleotides.

UNIT-II

3. Mechanism of Nucleic Acid Biosynthesis :

a) Replication of DNA (Double-stranded and single stranded); rolling circle model of replication; types of DNA polymerase, DNA topoisomerase, DNA ligase, DNAase, Reverse transcriptase.

b) Biosynthesis of different types of RNA: Transcription factors and machinery, Formation of Initiation complex, Transcription activators and repressors, RNA polymerases, elongation and termination, RNA Processing: RNA editing, Splicing, Polyadenylation, Capping ; RNA transport.

UNIT-III

4. **Mechanism of Translation:** Structure of ribosomes; initiation, elongation and termination of polypeptide chain; Translational proof reading; post-translational processing of polypeptide chain; Inhibitor of protein synthesis .
5. **Control Functions of the Gene :** Constitutive and induced genes; Regulatory genes, structural genes and repressors; Regulation of gene expression in phages; Regulation of gene expression in Prokaryotes; operon model, Role of cAMP in the transcription of operon, lactose and arabinose operons; Regulation of gene expression in eukaryotes, histone, non-histone proteins; different models of control, translation enzymatic and hormonal control.

UNIT-IV

6. **Cancer :** Biochemistry and molecular biology of cancer, Genetic rearrangements in progenitor cells, Oncogenes and Tumour suppressing genes, Cancer and Cell cycle , Virus induced cancer , Metastasis, Interaction of cancer cells with normal cells, Apoptosis, Therapeutic interventions of uncontrolled cell growth, Chemical carcinogenesis.
7. **Antigen :** Structure and functions of different clauses of immunoglobulins; Primary and Secondary immune response; lymphocytes and accessory cells; Humoral and Cell Mediated Immunity ; MHC; Mechanism of Immune response and generation of immunological diversity; Genetic control of immune response, Effector mechanisms; Application of Immunological principles (Vaccines and Diagnostics).

PRACTICALS Max. Marks: 20

1. Histochemical localization of DNA, RNA and Proteins.
2. To draw a standard curve of proteins
3. Estimation of protein content of plant tissues by Lowry's method.
4. Extraction and estimation of DNA contents of plant material.
5. Extraction and estimation of RNA contents of plant material.
6. Demonstration of Antigen – Antibody reactions.

ESSENTIAL READINGS

1. Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P. *Molecular Biology of the Cell* (5TH Edition) Macmillan Publishers Ltd, New York, USA, 2005.
2. Cooper GM and Hausman RE. *The Cell: A Molecular Approach* **(6th Edition)** ASM Press and Sinauer Associates, 2014.
3. Cox, M.M., Doudna J.A., O. Donnell M. *Molecular Biology: Principles and Practices* (1st Edition). W.H. Freeman and Company, 2012.

SUGGESTED READINGS

1, Karp G. *Cell and Molecular Biology* (7th Edition), J. Wiley & Sons, USA, 2013.
2. Nelson, D.L. & M.M. Cox. *Lehninger Principles of Biochemistry*. 5th Ed. W.H. Freeman Publishers. 1100 pp. 2008.
3. Robertis de, C.D.P. and E.M.S. de Robertis. *Cell and Molecular Biology.* Lea and Febiger**,** Philadelphia. 733pp.

PAPER XII : PLANT PHYSIOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Physiology like Cellular organelles, Membranes, Water relations of plants, Inorganic nutrition , Photosynthesis, Respiration, Nitrogen metabolism, Phytohormones, Growth, Stress physiology and Role of plant physiology in agriculture.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Structural organization and function of intracellular organelles** : Cell wall, Nucleus, mitochondria, Endoplasmic Reticulum, Golgi bodies, Peroxisomes, Lysosomes, Vacuoles, Plastids, Structure and function of cytoskeleton and its role in motility.
2. **Membrane structure and function** : Structure of model membrane, Lipid bilayer and membrane protein, diffusion, osmosis, ion channels, active transport, ion pumps, mechanism of sorting and regulation of intracellular transport, electrical properties of membranes.
3. **Water Relations of Plants:** Modern thermodynamic concepts of physical state of water in plant cells and tissues, movement of water in the Soil – Plant – Atmosphere Continuum. Transpiration, stomatal control and mechanism of guard cell movement.

UNIT-II

4. **Inorganic Nutrition:** Occurrence, availability and physiological roles of *various* elements, ion uptake and active and passive transport, Role of calmodulin, phloem transport.
5. **Photosynthesis :** Energy pathways in photosynthesis, Chloroplast as an energy transducing organelle, composition and characterization of photosystems I and II, electron flow through cyclic and non-cyclic photophosphorylation, pathway of CO_2 Fixation, differences between C_3 and C_4 photosynthesis, different kinds of C_4 pathways, CAM pathway – occurrence, biochemical events, and adaptive advantage. Regulation of photorespiration, Factors affecting photosynthesis, photorespiration and photophosphorylation.
6. **Respiration***:* Glycolysis, Krebs cycle and Electron Transport Chain (Cytochrome System), Gluconeogenesis, Factors affecting respiration.

UNIT-III

7. **Nitrogen Metabolism :** Nitrogen fixation of free living and symbiotic organisms, mechanism of Nitrogen fixation, Soil nitrogen sources, nitrogen uptake and assimilation, nitrate reductase system and induction, Light substrate-controlled induction, interrelationship between photosynthesis and nitrogen metabolism, transport of nitrogen in plants.
8. **Phytohormones :** Auxins, gibberellins, cytokinins, abscissins and ethylene : their transport, biosynthesis, physiological roles and mechanism of action; phenols, synthetic regulators, retardants and inhibitors.

UNIT-IV

9. **Growth :** Process, phases and dynamics of growth. External and internal factors affecting growth, growth and yield analysis, Source – Sink relationship, photoperiodism, phytochrome, endogenous rhythms, tropisms. Seed and bud dormancy and germination.
10. **Stress Physiology:** Mechanism of plant response to water (low and high), temperature (low and high), Salt (Salinity and Alkalinity) and biotic stresses (Pathogens and insects).
11. Applications of Plant Physiology in Agriculture.

PRACTICALS

Max. Marks : 20

1. Experiments pertaining to photosynthesis, respiration and water relations.
2. Determination of water potential by various methods.
3. Determination of Chlorophyll a and Chlrophyll b ratio in C3 and C4 plants.
4. Spectroscopic determination of Chrophyll a , Chlorophyll b , Carotenoids and Anthocyanin under varied environmental conditions.
5. Experimental study of hormonal effects in plant material.
6. Bioassays of hormones.
7. Study of seed germination as effected by different factors.
8. Experimental study of stress physiology.

ESSENTIAL READINGS

1. Wilkins, M.B., *Advanced Plant Physiology,* Pitman, New York, 1984.
2. Taiz, L. and Zeiger, E. *Plant Physiology,* (5th Edition), Sinauer Associates, Inc., Massachusetts, USA, 2010.
3. Hopkins, W.G. *Introduction to Plant Physiology*, John Wiley & Sons, Inc., N.Y., USA, 1999.

SUGGESTED READINGS

1. Malik, C.P. *Plant Physiology*. 3rd Ed. Kalyani Publishers India. 2002.
2.. Noggle, G.R. and G.J. Fritz. *Introductory Plant Physiology*. 2nd Ed. Prentice Hall of India Pvt. Ltd., New Delhi. 1991.
3. Salisbury, F.B. and C.Ross. *Plant Physiology.*4th Ed. CBS Publisher and Distributors.682 pp. 1992

PAPER XIII: BIOTECHNOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Biotechnology like Concept, Scope, Tools, Tissue Culture Techniques, Protoplast Culture and Somatic Hybridization, Anther and Pollen Culture, Recombinant DNA Technology, Biosensors and Application of Biotechnology in Medicines , Agriculture, Transgenic plants , Industry and Pollution control etc.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **History and Scope of Biotechnology and tools.**
2. **Tissue Culture Techniques**: Introduction to the techniques of plant tissue culture, concept of cellular totipotency, Nutritional requirements, cell and organ differentiation, Somaclonal variation, Somatic embryogenesis, Mentor pollen technology, Embryo culture, Embyro rescue, Germplasm storage including Cryopreservation.

UNIT-II

3. **Protoplast Culture and Somatic Hybridization:** Isolation of protoplasts, culture and fusion methods, selection of fusion products, production of hybrids and cybrids.
4. **Anther and Pollen Culture***:* Culture procedures for the induction of haploids, media and nutritional requirements, significance of haploids.

UNIT-III

5. **Recombinant DNA Technology:** Isolation and purification of DNA from plant cells, DNA sequencing, DNA engineering through cutting and joining DNA molecules, Restriction Endonucleases, Ligases.
6. **Application of Biotechnology** in Medicines, Agriculture, Transgenic production and role in Human Welfare.

UNIT-IV

7. **Scope and applications of Microbes** *in* (a) Agriculture with special reference to Biological N_2 fixation, (b) Industry Fermentation (Ethanol, Cheese, Curd) (c) Food (Single Cell Protein), (d) Pollution (degradation of pesticides and Hydrocarbons) and (e) Biogas Production.
8. **Biosensors:** Principles of detection and Applications.
9. **Biosafety and IPR** (a) Objectives of biosafety, guidelines, risk assessment, containment and planned introduction of GMOs and GEMs (b) Intellectual property and protection of IPR, protection of Biotechnological inventions, PBR and management of IPR.

PRACTICALS **Max. Marks :20**

1. Composition and preparation of various culture media :

(a) Knop's medium, (b) Knudson's medium, (c) Moore's medium

2. (d) Murashige & Skoog's medium.
3. Inoculation of Plant Materials, , leaf, root, stem.
4. Demonstration and or experimentation to study callus induction, organogenesis, plant regeneration, anther culture, embryo culture, protoplast isolation and fusion *in vitro*.
5. Visit to university/regional laboratories for demonstration of modern instruments employed in recent biotechnological techniques.

ESSENTIAL READINGS

1. Bhojwani, S. S. and Razdan, M. K. *Plant Tissue Culture - Theory and Practice.* Elsevier Science Pub. Co. Inc., New York, pp. 471, 1983.
2. Old, R.W. and Primrose, S.B. *Principles of Gene Manipulation : An Introduction to Genetic Engineering.* Blackwell Scientific Publications, Oxford, pp. 403, 1985.
3. Street, H. E. *Plant Tissue and Cell Culture.* Blackwell Scientific Publications, London, pp. 614, 1973.

SUGGESTED READINGS

1. Bajaj, Y.P.S. *Biotechnology in Agriculture and Forestry Plant Protoplasts and Genetic Engineering I.,* Springer Verlag, Berlin. 1989.
2. Singh, B.D. *Biotechnology: Expanding Horizon.* Kalyani Publishers, New Delhi.860 pp. 2007.
3. Smith, R.H. *Plant Tissue Culture, Technique and Experiments.*2nd Ed. Academic Press, New York.231pp. 2000.

PAPER XIV : CYTOGENETICS

Objective of the paper is to impart knowledge about various aspects of Cytogenetics like Chromatin organization, types of chromosomes and karyotype, Structural and numerical changes in chromosomes, Molecular cytogenetics, Restriction mapping, Alien gene transfer, Transposons, Mutations , DNA Damage and DNA Repair mechanisms.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study different types of chromosomes, mitosis and meiosis of diploids. They also study the meiosis of polyploids and translocation heterozygotes.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Chromatin Organization:** Chromosome structure and packaging of **DNA**; Molecular organization of centromere and telomere; nucleolus and ribosomal RNA genes; Unique and Repetitive DNA ; Euchromatin and heterochromatin.
2. **Karyotype** : Karyotype analysis ; Karyotype evolution; Various banding techniques and their uses.
3. **Specialized types of chromosomes**: polytene, lampbrush, B- chromosomes and sex chromosomes.

UNIT-II

4. **Structural changes in Chromosomes:** Origin, meiosis, breeding behaviour and evolutionary significance of Duplication, Deficiency, Inversion and Translocation heterozygotes ; Translocation tester sets; Robertsonian translocations ; B-A translocations.
5. **Numerical Changes in Chromosomes:** Origin, occurrence, production and meiosis of Haploids, Aneuploids and Euploids; origins and production of Autopolyploids; chromosome

and chromatid segregation; Allopolyploids; types, genome constitution and analysis; induction and characterization of Trisomics and Monosomics; Use of monosomics and trisomics in chromosome mapping.

UNIT-III

6. **Restriction Maps and Molecular Genetic Maps:** Restriction mapping RFLP as marker for mapping; chromosome walking; *in situ* hybridization as an aid in physical mapping of chromosome, FISH, GISH; chromosome jumping; Random amplified polymorphic DNA and AFLP techniques.
7. **Molecular Cytogenetics :** Nuclear DNA contents; C-value paradox, cot curve and its significance; Southern Northern and Western Blotting Techniques, Polymerase Chain Reaction.
8. **Alien Gene Transfer through Chromosome Manipulations:** Transfer of whole genome, transfer of individual chromosomes and chromosome segments; methods for detecting alien chromatin, production, characterization and utility of alien addition and substitution lines.

UNIT-IV

9. **Transposable Elements in prokaryotes and eukaryotes**: Cut and Paste transposons, Replicative transposons and Retrotransposons; Mutations induced by transposons.
10. **Mutations:** Spontaneous and induced mutations; physical and chemical mutagens; molecular Basis of gene mutations, site-directed mutagenesis applications of mutations.
11. **DNA damage and repair mechanisms**: Sources and types of DNA damage. Light dependent repair, Base Excision repair, Nucleotide Excision repair, Mismatch repair, Double- strand breaks Repair and Error-prone repair; Prokaryotic SOS response and Eukaryotic transcriptional response to DNA damage.

PRACTICALS

Max. Marks : 20

1. Study of meiosis in materials *Allium, Phlox, Chrysanthemum, Delphinium, Papaper*, Pollen and seed fertility and fruit set.
2. Mitotic studies and Karyotype analysis.
3. Linear differentiation of chromosomes through banding techniques, such as G-banding, C-banding and Q-banding (Photographs/Slides).
4. Orcein and Feulgen staining of the salivary gland chromosomes of *Chironomas and Drosophila* (Photographs/Slides).
5. Study of B chromosomes using maize or any other appropriate material.
6. Induction of polyploidy using colchicines, different methods of the application of colchicines.
7. Meiosis of complex translocation heterozygotes.

ESSENTIAL READINGS

1. Griffiths, A.J.F., W.M. Gelbart and J.H. Lewontin. *Modern Genetic Analysis.* 2nd ed. W.H. Freeman & Company, U.S.A. 2002.
2. Swanson, C.P., W.J. Young & T. Merz. *Cytogenetics: The Chromosomes in Division, Inheritance and Evolution.* Prentice Hall, Englwood Cliffs, New Jersey.577 pp. 1981.
3. Schulz-Schaeffer, J. *Cytogenetics.*2nd Ed. Springer-Verlag, Berlin. 446 pp. 1980.

SUGGESTED READINGS

1. Gupta, P.K. *Cytogenetics*. Rastogi Publication, Meerut.418 pp. 2004
2. Khush, G.S. 1974. *Cytogenetics of Aneuploids.* Academic press, New York
3. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.* 5th Ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.

PAPER XV: ECOLOGY AND ENVIRONMENT

Objective of the paper is to impart knowledge about various aspects of Ecology and Environment like Plant Communities and Ecosystems, Population Ecology, Biosphere Reserves, Biogeochemical cycles, Biodiversity and its conservation strategies, Pollution, Natural Resources and Non-conventional sources of energy, Climate change, Global Warming, Ozone depletion, Alien plant's invasion and Weed management.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study the soil samples for pH, conductivity, water holding capacity etc. They also study the ecosystems using Quadrat methods.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Environment & Ecosystem:** Concept and Principles.
2. **Population Ecology:** Characteristics of a population, Population growth curve, Population regulation, Life history strategies, Concept of metapopulation – Demes and dispersal, Intrdemic extinctions, Age structured populations.
3. **Plant Communities:** Definition, quantitative characters of Plant Communities. Different sampling techniques to study quantitative characters of plant communities.

UNIT-II

4. **Biosphere Reserve :** The concept, Major functions, Nilgiri Biosphere Reserve (a brief account)
5. **Bio-Geochemical Cycles:** General account types, brief account of the following bio-geochemical cycles: Carbon cycle, Nitrogen cycle, Phosphorus cycle and Sulphur cycle. .
6. **Biodiversity:** Concept, level, measuring of biodiversity; significance in terms of economic, spiritual, scientific, educational, ecological and genetical values; reasons for depletion, magnitude, distribution and conservation strategies; diversity loss from monoculture plantations. Concepts of phytogeography: Endemism, Hotspots and hottest hotspots; Plant Explorations; Invasions and Introductions.

UNIT-III

7. **Pollution:** Definition, different types of pollutants. **Air pollution;** different pollutants of air, control of Air pollution; **Water pollution** : different sources of water pollution, control of water pollution; **Land pollution** : sources, control of land pollution ; Bioremediation and Phytoremediation.

8. **Management and Conservation of Natural Resources :** Aims and objectives of conservation; renewable and non-renewable resources; special interest and total ecosystem conservation policy; maintenance of ecological processes; management of agriculture, forest and soil; preservation of plant genetic diversity; conservation strategies required at national and international level, sustainable development.
9. **Non Conventional Sources of Energy:** Solar Energy, Hydro Power, Wind Power, Biogas, Geothermal Energy, Ocean Thermal Energy, Tidal Energy, Wind Energy.

UNIT-IV

10. **Ozone Depletion:** Reasons and its effects on plants, methods to check ozone depletion.
11. **Invasion of Alien Plants;** Concept, ecological impact and management
12. **Global Warming and Climate Change:** Reasons, effects and the techniques used to control global warming.
13. **Weed Management:** The impact, use and ecological role of weeds in agro-ecosystems, weed characteristics related to success; Major weeds of the world; Ecological approach to weed management, Problems of the weeds; Allelopathy, its mode and Exploitation in weed management.

PRACTICALS

Max. Marks: 20

1. Techniques for collection of soil samples. Chemical analysis of soil samples taken from different types of soils and to assess their suitability for healthy plant growth.
2. To determine soil pH, conductivity, soil texture and water holding capacity of soil.
3. Chemical analysis of underground water samples taken from different depths and to assess its suitability for healthy plant growth.
4. To work out the size of the quadrat and number of Quadrats required to study the ecosystem of a given locality.
5. To determine density, abundance and frequency of species by quadrat method.
6. To determine the Importance Value Index (IVI) and Species Diversity Index of grassland ecosystem.
7. To study the stomatal behaviour in response to herbicides and pesticides.

ESSENTIAL READINGS

1. Primack, R.B. *Essentials of Conservation Biology*. Sinauer Associates, USA, 2010, pp. 601.
2. Singh, J.S., Singh, S.P. and Gupta, S.R. *Ecology, Environmental Science and Conservation*. S. Chand Publishing, India. 2015, pp. 929.
3. Stiling, P. *Ecology: Theories and Applications*. Prentice Hall, India, 2002, pp. 403

SUGGESTED READINGS

1. Odum, F.P. *Fundamentals of Ecology.* 3rd Ed. W.B. Saunders & Co. Philadephia, U.S.A. 534 pp. 1971.
2 Shukla, R.S.&P.S. Chandel. *Plant Ecology and Soil Science.* S.Chand & Company Ltd., ND.552 pp. 1993.
3. Sharma, P.D. *Ecology and Environment.* Rastogi Publications, Shivaji Road, Meerut, 660 pp. 1996.

FOURTH SEMESTER

PAPER XVI : PLANT BIOCHEMISTRY

Objective of the paper is to impart knowledge about various aspects of Plant Biochemistry like Bioenergetics, Role of Water, Structure, types, properties and metabolism of Amino acids and Proteins, Enzymes, Carbohydrates and Lipids ; Compounds of energy transfer and Redox reactions, Catabolism and Generation of phosphate bond energy ; Vitamins and Secondary metabolites.
Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Bioenergetics:** Concept of free energy changes, Laws of Thermodynamics, Exergonic and Endergonic Reactions, Entropy and Energy, Free Energy and Equilibrium Constant, Redox potential.
2. **Water:** Structure and Properties ; Weak intereactions in aqueous systems, Ionization of water Weak acids and Weak bases; Buffering against pH changes in biological systems, Henderson-Hassalbach equation. The fitness of the aqueous environment for living organisms.

UNIT-II

3. **Amino acids and Proteins:** Structure types, properties and Metabolism of Amino acids; Primary, Secondary, Tertiary and Quatenary structure of proteins ; domains, motif and folds; stability of protein structure ; Classification of proteins based on composition, solubility function; Reverse turns and Ramachandran plot.

4. **Enzymes:** Nomenclature and Classification; Enzyme Kinetics; Mode and Mechanism of Enzyme Action ,Enzyme Regulation, Activators, Inhibitors and Isoenzymes : Allosteric enzymes.

UNIT-III

5. **Carbohydrates:** Classification, composition and structure of Carbohydrates (Polysaccharides, Glycoproteins and Peptidoglycan), Stereoisomerism, Transformation of Carbohydrates, Synthesis and degradation of Sucrose, Starch, Cellulose.

6. **Lipids:** Classification, Structure and functions; Biosynthesis of Fatty Acids.

7. **Compounds of Energy Transfer and Redox Reactions:**
   a. Compounds of Energy Transfer *:* Adenosine Triphosphate, Uridine Triphosphate. Cytidine Triphosphate, Guanosine Triphosphate. Biosynthesis of purines and pyrimidines.

b. Compounds of Redox Reactions *:* Nicotinamide Adenine Dinucleotide (NAD). Nicotinamide Adenine Dinucleotide Phosphate (NADP), flavin Mononucleotide (FMN), Flavin Adenine Dinucleotide (FAD), Ascorbic Acid, Coenzyme, Cytochromes.

UNIT-IV

8. **Catabolism and Generation of Phosphate Bond Energy:** Sites and mechanism of Oxidative phosphorylation; Coupled Reactions, Group Transfer, Biological energy Transducers ; Oxidation of Carbohydrates (Regulation and Mechanism of T.C.A. cycle) and Oxidation of fats.

9. **Vitamins:** Structure, and functions of Thiamine, Riboflavin, Nicotinic Acid, Pantothenic Acid, Pyridoxine, Biotin, Folic Acid, Vitamin B12 , Ascorbic Acid, Vitamin A , D , E and K.

10. **Secondary Metabolites:** Biosynthesis of terpenes and phenols and alkaloids and their role.

PRACTICALS **Max. Marks : 20**

1. Detection of reducing, non reducing and total sugars: Molisch test, Fehling's test, Benedict's test, Barafoed's test, Saliwnoffs test and Iodine test.
2. Quantitative estimation of total carbohydrates by anthrone reagent. Preparation of potato starch, its microscopic structure and solubility test. Histochemical localization of starch.
3. Qualitative tests of protein like Biuret test, Xanthoproteic test, Ninhydrin test.
4. Quantitative estimation of amino acid and phenols by using Spectrophotometer.

ESSENTIAL READINGS

1. Lehninger, A. *Principles of Biochemistry.* Worth Publishers, 1982.
2. Conn, E.E. and Stumpf, P.K *Outlines of Biochemistry.* 5th Ed. Academic Press, London, 1987.
3. Deb, A.C. *Fundamentals of Biochemistry*. 9th ed. New Central Book Agency Pvt. Ltd., Kolkata, 2008.
4. Jain and Jain. *Fundamentals of Biochemistry*. S. Chand Pvt. Ltd., 2005

SUGGESTED READINGS

1 Buchanan, Bob. B., Gruissem, W. and Russeel, L. Jones(eds.). *Biochemistry & Molecular Biology of Plants.* Wiley Publishers, USA. 1280pp. 2015.
2. Malik, C.P. and M.B. Singh. *Plant Enzymology and Histoenzymology.* Kalyani Publishers. 1980.
3. Nelson, D.L. & M.M. Cox. *Lehninger's Principles of Biochemistry*. 5th ed. W.H.Freeman & Co., USA. 1100 pp. 2008.

PAPER XVII: FORESTRY

Objective of the paper is to impart knowledge about various aspects of Forestry like Silviculture, Forest Protection, Social and Urban Forestry, Forest Laws, Conservation of Forests, Types of Forests and Effects of forests.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students measure the diameter and height of trees. They study anatomy, moisture contents and

specific gravity of common timber trees of Punjab. They also take an account of the nearest natural forest visited by them.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Silviculture:** Definition, Regeneration : Types, Natural regeneration from seeds (different factors on which regeneration depends, seedlings establishment period), Regeneration from vegetative parts (Coppice, Root suckers, Cuttings, Layering, Grafting, Budding, Pollarding, Lopping and Pruning); Nursery making.
2. **Forest Protection:** Protection, causes and control of forest fires; Major diseases of forest plants.

UNIT-II

3. **Social and Urban Forestry:** Social forestry - Non commercial farm forestry, scope and limitations of Non commercial forestry, community forestry, scope and limitations of community forestry, social land allocation programmes (Taungya system). Economic benefits of social forestry, Urban forestry.
4. **Forest Laws and Forest Conservation:** Salient features of the Indian Forest Act 1972 (preliminary, reserved forests, protected forests), different methods employed for conservation of forests.

UNIT-III

5. **Forests Types:** Climate of India, different climatic regions of India. Central characters and distribution of the different forest types of India, Mensuration.

UNIT-IV

6. **Forest Effects :** General effects of forests on climate, control of runoff, effects on snow, soil erosion, wild life, pollution control, nutrient cycling, social values and ecotourism, economic values, floods, green belts and control of temperature.

PRACTICALS

Max. Marks : 20

1. To measure diameter at breast height (dbh), diameter over bark (dob) and diameter under bark (dub) and girth of trees.
2. To measure height of standing trees by Abney's level. .
3. To determine the moisture content, specific gravity and weight density of common timber trees of Punjab.
4. To compare the anatomy of Hard wood and soft wood .
5. Students should be taken to nearest natural forests and they should prepare a field report regarding the following points :
   Height above Sea level, Mean annual rain fall and temperature, Soil texture, soil pH, Topography Dominant tree species and the general characters of the forest (Distribution of trees in different storeys, ground flora, nature of leaf fall, average height of dominant tree species etc.) The students will submit the field report.

6 Propagation studies on important common forest trees of Punjab regarding Height and diameter increments (under similar soil conditions) at two months intervals under natural conditions of day length and temperature for young tree saplings of known age and represent the results in a graphic form.
7 Visit to the nearby forest nursery.

ESSENTIAL READINGS

1. Chaturvedi, A.N. *Forest Mensuration.* International Book Distributors, Dehradun. 403 pp. 1982.
2. Dwivedi, A.P. *A Text Book of Silviculture.* International Book Distributors, Dehradun. 505 pp. 2006.
3. Gopikumar, K., S. Gopakumar and E.V.Anoop. *Forest Nursery and Tree Husbandry*. International Book Distributors, Dehradun, 169 pp. 2003.

SUGGESTED READINGS

1. Negi, S.S. *Elements of General Silviculture*. International Book Distributors, Dehradun. 316 pp. 2003.
2. Negi, S.S. *Hand Book of Forest Ecology and Biology*. Internat BookDistributors, Dehradun. 268 pp. 2004.
3. Puri, G.S., Gupta, R.K. Mehr-Homji, V.M. and Puri, S. *Forest Ecology.* Vol. 2, Oxford & IBH, New Delhi. 708 pp. 1989.

PAPER XVIII: GENETICS AND PLANT BREEDING

Objective of the paper is to impart knowledge about various aspects of Genetics like Linkage, Gene Mapping, Microbial Genetics, Quantitative Genetics, Population Genetics and Human Genetics. The paper also deals with various methods of breeding in plants reproducing sexually and asexually.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. The students make analysis of different problems relating to genetics.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Allelism and Linkage**: Multiple Alleles, Pseudo-alleles, Complementation tests, Pleiotropy, Genomic imprinting, Penetrance and Expressivity, Phenocopy, Linkage and Crossing over, Sex Linkage, Sex limited and Sex influenced characters.
2. **Genetic Recombination and Gene Mapping methods** : Recombination, Molecular Mechanism of Recombination, Role of RecA and RecBCD enzymes, Site-specific recombination, Linkage maps, Tetrad analysis - Centromere mapping in linear tetrads and Analysis of unordered tetrads.

UNIT-II

3. **Extrachromosomal Inheritance:** Introduction, mitochondrial DNA and chloroplast DNA.
4. **Microbial Genetics***:* Mapping the bacteriophage genome; phage phenotypes; genetic recombination in phage; genetic transformation, conjugation and transduction in bacteria
5. **Multigene families:** Multigene families and their evolution.

UNIT-III

6. **Quantitative Genetics:** Polygenic inheritance, Heritability and its measurements, QTL mapping.
7. **Human Genetics***:* Pedigree analysis, Lod score for linkage testing, Genetic disorders.
8. **Population Genetics :** Gene pool, Gene frequency, Hardy- Weinberg Law , Concepts and rate of change in gene frequency through mutation, natural selection and migration ; random genetic drift.

UNIT-IV

9. **Principles of Plant Breeding :** Principles and objectives; important conventional methods of breeding of self and cross pollinated crops, Heterosis and Hybrid vigour, Utility of hybrids in Genetics and Plant Breeding.
10. **Asexual Breeding Systems**: Methods of breeding of vegetatively propagated crops; Non-conventional methods; Applications of polyploidy in improvement of crop plants; gene variability.
11. **Male Sterility:** Concept, Genetic control and Breeding utility.

PRACTICALS

Max. Marks : 20

1. Study of problems on Mendelian Genetics , Gene Interactions, Multiple alleles and Multiple gene inheritance.
2. To test the Genetic Hypothesis by Chi- Square Test and study goodness of fit.
3. Preparation of Linkage Maps in Diploids using three point test cross method.
4. Tetrad analysis and Centromere mapping in ordered and unordered tetrads.
5. Pedigree analysis.
6. Problems relating to Population genetics.

ESSENTIAL READINGS

1. Singh, B.D. *Plant Breeding Principles and Methods*. Kalyani Publishers, Ludhiana. 2009.
2. Brooker, R.J. *Genetics.* Addison-Wesley. Longman Publication. U.S.A. 1999.
3. Poehlman, J.M., Sleper, D.A., *Breeding Field Crops,* AVI. Publ., U.S.A, 1995.
4. Snustad, D. P., Simmons, M.J., *Principles of Genetics,* J. Wiley and Sons, USA, 2003.

SUGGESTED READINGS

1. Hayward, M.D., Bosemark, M.O., Romagosa, I., *Plant Breeding: Principles and Prospects*, Chapman and Hall, U.K, 1993.
2. Stickberger, M.W. *Genetics*, 2nd ed., MacMillan, New York. 842 pp. 1977.
3. Weaver, R.F.& P.W. Hedrick. *Genetics.* 3rd Ed. William C. Brown Publishers, U.S.A. 656 pp. 1997.

PAPER XIX : PLANT RESOURCE, UTILIZATION AND CONSERVATION

Objective of the paper is to impart knowledge about various economic aspects of plants like Origin of Agriculture; Origin, Distribution, Types, Botany ,Cultivation, Harvesting and Uses of different Cereals, Fruits, Vegetables, Spices, Beverages and Legumes; Medicinal plants and Insecticides; Uses of important plant products like Gums , Tannins, Vegetable oils and fats, Fibres and Wood ; Unexploited plants of economic value and Genetic resources and their conservation.

Teaching methodology include delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical students study morphology, anatomy and histochemistry of cereals, vegetables, fruits , spices and oil yielding plants.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. History of Agriculture: Ancient and modern agriculture.
2. World Centres of Primary diversity of domesticated plants: The Indo-Burmese Centre, Plant Introductions and Secondary Centres.
3. Origin and Distribution, Wheat, Rice and agronomic practices. .
4. Cultivation and uses of following fruits and vegetables: Citrus, Mango, Apple, Banana, Potato, Allium, Cabbage, Spinach, Tomato, Brinjal and Sweet Potato.

UNIT-II

5. **General Account of the Spices:** Ginger, Turmeric, Cinnamon, Clove, Umbelliferous spices and Peppers.
6. **Beverage Plants:** Source and general account of Tea and Coffee.
7. **Legumes:** Origin, Botany, Cultivation and uses of Pigeon pea, Chick pea, Cluster bean, French bean etc.
8. **Medicinal Plants and Insecticides:** History and classification of drugs, antibiotics, plants as sources of drugs, parts used, composition and uses. Insecticides of plant origin, Pyrethrum and Rotenone.

UNIT-III

9. **Gums:** Important commercial gums and their uses.
10. **Tannins and Dyes:** Sources and their uses.
11. **Vegetable Oils and Fats:** Distinction between fatty and essential oils. Drying (Soyabean and linseed), nondrying (Groundnut and Mustard oil) and Semi drying (cottonseed and Sunflower oil) oils and their uses.
12. **Fibres:** Classification, uses, type of fibres - Soft fibres, Hard fibres, Surface fibres, Brush fibres and Braiding fibres.

UNIT-IV

13. **Wood and its Uses:** Soft woods and hard woods, wood as fuel, construction material (Pilings, Veneers, Plywood), wood containers (cooperage), chemically derived products and wood distillation.
14. Unexploited plants of potential economic value; plants as a source of renewable energy.
15. Genetic Resources and their conservation.

PRACTICALS

Max. Marks : 20

1. Morphology, Anatomy, Microchemical tests of stored food materials of Wheat, Rice, Chick Pea, Potato, Sweet Potato; Comparison of Starch grains of Wheat, Rice, Potato and Mung.
2. Morphology of fruits and vegetables pertaining to theory syllabus.
3. Histochemical tests for cellulose, cutin, suberin, hemicellulose, fat, oils, proteins and starch.
4. Morphology and microscopic structure of umbelliferous fruits, turmeric and clove.
5. Vegetable Oils: Mustard, groundnut, soya bean, coconut, sunflower, castor; Morphology, microscopic structure of the oil yielding tissues, tests for oil.
6. Prepare a list of 10 important sources of firewood and timber in your locality. Give their local names, scientific names and families to which they belong. Mention their properties.
7. The students should be taken to a recognized Botanical Garden or a Museum to show different plants of economic importance.

ESSENTIAL READINGS

1. Chrispeels, M.J. and Sadava, D. *Plants, Food and People*, W.H. Freeman and Co., San Francisco, 1977
2. Dastur, J.F. *Medicinal Plants of India and Pakistan.*3rd Ed. Meyerbooks, 1985
3. Simpson, B.B. and Conner-Ogorzaly. E.M. Economic Botany- Plants in Our World. McGraw-Hill Book Company, New York, 1986.
4. Randhawa, M.S. *History of Agriculture*.Vol. II, ICAR, New Delhi, 1982.

SUGGESTED READINGS

1. Kocchar, S.L. *Economic Botany of the Tropics*, 2nd edition, Macmillan India Ltd., Delhi, 1998.
2. Sharma, O.P., *Hill's Economic Botany* (Late Dr. A.F. Hill, adapted by O.P. Sharma), Tata McGraw Hill Co. Ltd., New Delhi, 1996.
3. Swaminathan, M.S. and Kocchar, S.L., (Eds.). *Plants and Society*, MacMillan Publications Ltd., London, 1989

PAPER-XX: RESEARCH PROJECT / FIELD STUDY REPORT AND SEMINAR

Max. Marks : 100

This paper aims at inculcating the aptitude for research in the students so that after completing their postgraduate course they can opt for M. Phil. and / or Ph.D. courses.

Field study provides the students an opportunity to study the plant diversity in their natural habitats.

The purpose of presenting seminar is to train the students to prepare the topic and to deliver it before the students and teachers using the recent tools like Computer, CDs, LCD projector etc. This would instill a sense of confidence in the students to deliver lectures in classrooms and to present any paper before the academicians and scientists.

A): RESEARCH PROJECT/FIELD STUDY REPORT

Max. Marks: 60

RESEARCH PROJECT

The students will be given a small research project under the guidance of a supervisor which will be evaluated by a panel of two examiners.

OR

FIELD STUDY REPORT

The students will visit the field for study of plants pertaining to Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms. The students will also submit a Field Study Report on the flora of the place visited by them.

A panel of 2-3 examiners will evaluate the field study report.

B): SEMINAR **Max. Marks: 40**

The Seminar will be presented by all the students and it will be compulsory for all the students to attend the seminars.

The break-up of 40 marks will be as under:-

1. Presentation 30
2. Contents 10

Every seminar will be evaluated by a team of two examiners individually and the average of marks awarded by these examiners will be considered as the "Marks obtained".

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Pan jab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

For

M.Sc. Two Year Course (Zoology)

EXAMINATION 2018-2019

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.Sc. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM) 2018-2019

FIRST SEMESTER

		Marks
Paper - I :	Structure and Functions of Invertebrates - I	80
	Practical based on Paper - I	20
Paper - II :	Lower Chordates. Comparative Anatomy of Vertebrates -I	80
	Practical based on Paper-II	20
Paper III :	Animal Physiology	80
	Practical based on Paper III	20
Paper IV :	Ecology and Animal Behaviour	80
	Practical based on Paper IV	20
Paper V :	Biostatistics and Computer Application	80
	Practical based on Paper V	20

SECOND SEMESTER

Paper VI :	Structure and Functions of Invertebrates - II	80
	Practical based on Paper - VI	20
Paper VII :	Comparative Anatomy of Vertebrates -II	80
	Practical based on Paper-VII	20
Paper VIII :	Biosystematics and Evolution	80
	Practical based on Paper-VIII	20
Paper IX :	Endocrinology and Neural Physiology	80
	Practical based on Paper IX	20
Paper X :	Immunology	80
	Practical based on Paper X	20

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM)

THIRD SEMESTER

Paper XI :	Developmental Biology -I	80
	Practical based on paper XI	20
Paper XII :	Biochemistry,	80
	Practical based on Paper XII	20
Paper XIII :	Cell and Molecular Biology	80
	Practical based on Paper-XIII	20
Paper XIV :	Instrumentation and Methodology	80
	Practical based on Paper XIV	20
Paper XV :	Advances in Entomology	80
	Practical based on Paper XV	20

FOUR SEMESTER

Paper XVI :	Developmental Biology -II	80
	Practical based on paper XVI	20
Paper XVII :	Advances in Parasitology	80
	Practical based on Paper XVII	20
Paper XVIII :	Advances in Fish and Fisheries	80
	Practical based on Paper XVIII	20
Paper XIX :	Environmental Biology & Wild life	80
	Practical based on Paper XIX	20
Paper XX :	Cytogenetics and Molecular Genetics	80
	Practical based on Paper-XX	20

PAPER-I : STRUCTURE AND FUNCTIONS OF INVERTEBRATES -I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment : 15
Annual Theory Exam. : 65
Practical : 20
Internal Assessment : 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates.

UNIT-I

1. Phylum Protozoa : General organisation of Protozoa with special reference to feeding, locomotory organelles and locomotion, reproduction, parasitism and pathogenic protozoans.

2. Phylum Porifera : General organisation of phylum Porifera with special reference to canal system, skeleton and development.

3. Phylum Coelenterata : General organisation of phylum Coelenterata with special reference to polymorphism, corals and coral reefs, development and alternation of generation.

UNIT-II

4. Phylum Platyhelminthes : General organisation of phylum Platyhelminthes with special reference to body wall, digestive system, excretory system and reproductive system. Development and life cycles of *Fasciola, Schistosoma, Taenia* and *Echinococcus*.

5. Phylum Aschelminthes : General organisation of phylum Aschelminthes. Life cycle of *Ascaris lumbricoides. Wuchereria bancrofti, Dracunculus medinensis.*

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - I

Classification upto orders and study of the specimens mentioned against each phylum with ecological note.

1. Protozoa.
   a. Permanent stained preparation from the culture of *Amoeba, Euglena Paramecium* and *Vorticella*.

   b. Prepared slides of *Amoeba, Trypanosoma, Euglena, Noctiluca, Eimeria, Monocystis, Paramecium* (binary fission), *Paramecium* (conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus,* Radiolarian oozes and Foraminiferan oozes.

2. Porifera
   a. Specimens : *Scypha, Grantia,Spongilla, Euplectella, Hyalonema, Euspongia.*
   b. Prepared slides : Spicules, gemmules, *Sycon* (T.S and L.S).
   c. Preparation of permanent slides : gemmules and spicules.

3. Coelenterata
   a. Specimens: *Porpita, Velella, Physalia, Aurelia, Metridium, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia, Gorgonia* and *Pennatula*.
   b. Prepared slides : *Hydra* (W.M.), T.S. through regions of testis and ovary, *Obelia* (colony, medusa and polyp), *Sertularia, Plumularia, Tubularia Bougainvillea, Aurelia, Pennaria*.
   c. Preparation of permanent slides : *Hydra, Obelia, Sertularia* and *Plumularia*.

4. Platyhelminthes
   a. Specimens : *Planaria, Dugesia, Fasciola, Taenia*, and *Echinococcus.*
   b. Slides : *Fasciola* (miracidium, sporocyst, redia and cercaria), scolex and proglottids of *Taenia* (Mature and gravid L.S. & T.S.).
   c. Stained preparation of : Amphistome, proglottid of a cestode.

5. Aschelminthes
   a. Specimens : *Ascaris* (Male and female)
   b. Slides : *Ascaris* (T.S. of male and female gravid).

6. Project based on general information on animals, selecting at least one representative from each phylum.

Books Recommended

1. *Invertebrates* Vols.I, II, III, IV & V by L.H. Hyman, Mcgraw Hill, New York (1940- 51)
2. *Text book of Zoology* by Marshall and Williams (1962).
3. *Invertebrates Structure and function* by E.J.W. Barrington. English Language Book Society & Nelson (1969).
4. *Protozoology* by Kudo, R.R., Books and Periodicals Corp.(India) New Delhi (1986).

5. *Introduction to Animal Parasitology* by J.D. Smyth. Hodder & Stoughton, London (1976).

PAPER - II : LOWER CHORDATES. COMPARATIVE ANATOMY OF VERTEBRATES - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of protochordates.
To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT - I

Introduction to chordates. *Organisation* and affinities of *Herdmania* and *Amphioxus*.

Comparative account of following systems of the vertebrates with evolutionary trends from Pisces to Mammals.

Integumentary system : Integument and its derivatives.
Skeletal system : Chondrocranium, Splanchnocranium, Dermatocranium, Jaw suspension.

UNIT-II

Digestive system : Alimentary canal and associated glands. (Types of teeth, dental formulae and functions, Types of stomach, small and large intestines, Glands : Salivary, gastric, Pancreas and liver).
Circulatory system : Evolution of heart & aortic arches in different classes of vertebrates.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper II (MZL 6052)

1. Classification upto orders, excepting pisces and Aves,where classification upto subclasses is required, Habits, Habitats, external characters and economic importance (if any) of the following animals:

Chondrichthyes : *Zygaena, Pristis, Narcine, Trygon, Rhinobatus, Chimaera.*
Actinopterygii : *Polypterus, Acipenser, Lepidosteus, Muraena, Mystus, Catla. Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea*.
Dipneusti (Dipnoi) : *Protopterus* (Lung fish)
Amphibia : *Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva. *Triton, Salamandra, Hyla, Rhacophorus*.

Reptilia : *Hemidactylus,,Calotes, Draco, Varanus, Phrynosoma, Chamaeleon.*
Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera, Crocodilus. Gavialis, Chelone and *Testudo*.

2. Demonstration of dissection of *Labeo* through video clipping/models/charts : Digestive and reproductive systems, Circulatory system : heart, afferent and efferent branchial arteries, Nervous system : cranial nerves and internal ear.

3. Study of the skeleton of *Labeo*, *Rana* and *Varanus.*
4. Study of histology of different organs of frog through permanent slides.
5. Study of poison apparatus in snakes through charts.
6. Project based on general information on animals selecting atleast one representative from each class/Parental care.

Books Recommended

1. *A Text Book of Zoology*, Vol.II Vertebrates by A.J. Marshall, MacMillan & Co. Ltd., New York (1972).
2. *Anatomy of Chordates* by C.K. Weichert, McGraw Hill Book Co. Inc. London (1958).
3. *Biology of Vertebrates* by H.E. Walter and L.P. Sayles, McMillan Co. New York (1949).
4. *Comparative Anatomy of Vertebrates* by G.C. Kent, Torpen Co.Ltd., Tokyo (1954).
5. Anatomy of Comparative Vertebrates. Hyman, Libbie Heneietta Satish secial pub. House 2004.

Paper III : Animal Physiology

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to know about all the physiological processes going on in animal/human body.
To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT – I

Nutrition : Chemistry, metabolic role and sources of vitamins & deficiency diseases due to them. Biological significance and regulation of minerals and deficiency diseases due to them. Physiology of digestion.

Circulation : Chemistry of blood components and their functional significance; origin, formation,molecular regulation and maturation of RBCs and WBCs; biochemistry of haemoglobin and myoglobin; biochemical interconversions during blood coagulation and homeostasis. Cardiac cycle and its regulatory mechanisms. Cardiac output and the factors that affect cardiac output, micro circulation, blood pressure, factors influencing blood pressure and its regulation.

Respiration : Concept of respiration, mechanism of breathing; biochemistry of respiratory exchange; Transport of respiratory gases; Regulatory mechanisms (humoral and neural) of respiration. Respiratory acidosis, alkalosis and regulation of pH.

UNIT – II

Excretion : Concept of excretion and nitrogenous wastes; functional anatomy of renal unit; biophysical and chemical mechanisms of ultrafiltration, reabsorption and secretion, transport mechanisms, urine formation & regulatory control of sugar, urea, Na^+ K^+, and H^+; Role of kidneys in regulation of acid-base balance and osmoregulation, counter current mechanism.

Physiology of Muscles : Types of muscles and their components; Molecular organization of myosin, role of heavy and light meromyosin, molecular organization of actin; interaction of actin and myosin, AT Pase activity of myosin, power-stroke, ATP binding and hydrolysis; Role of troponin and tropomyosin and Ca^{++} in regulation of muscle contraction. Contraction of smooth muscles, role of phosphorylation, Ca^{++} and kinases; Role of actin and myosin in eukaryotic cells (microtubles and microfilaments).

Stress Physiology Physiological adaptations in response to high, low ambient temperature, physiological adaptation at high altitude and in deep sea environment.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper III

1. To demonstrate that the optimum activity of salivary amylase is pH dependent.
2. Demonstration of estimation of Haemoglobin.
3. Demonstration of determination of TLC, DLC, RBC &Count.
4. Demonstration of determination of bleeding and clotting time.
5. Demonstration of determination of blood groups.
6. Demonstration of measurement of blood pressure.
7. Demonstration of estimation of ESR.
8. To study the effect of exercise on cardiovascular and respiratory systems.
9. Demonstration of estimation of the glucose level in blood of mammal, Haematocrit.

BOOKS RECOMMENDED

1. Guyton, A.X., Text Book of Medical Physiology, 7th edition, Saunders Company (1986).
2. Best, J.P., Best and Taylor's Physiological basis of medical practice, 11th ed. William and Wilkins (1985).
3. Hoar, W.S., General and Comparative Physiology, Adaptation and Environment, 3rd ed. Cambridge University, Press (1985).
4. Vander, A.J., Sherman, J.H. and Luciana, D.S., Human Physiology, McGraw Hill Publ. Co. (1990).
5. Gillian Pocock and Christopher D. Richards. Human Physiology. The Basis of Medicine Oxford University Press (2001).

PAPER IV : ECOLOGY AND ANIMAL BEHAVIOUR

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the habitat and interactions of diverse animal groups with their environement.
To acquaint the students with characteristic behavioural aspects of animal life.

UNIT – I : ECOLOGY

1. **Introduction** : Definition, subdivision & scope of ecology.
2. **Abiotic Factors** : Temperature, light and soil as ecological factors.
3. **Principles of limiting factors** : Liebig's law of minimum, Shelfords law of tolerance and the combined concept of limiting factors.
4. **Ecosystem** : Definition, components,food chain & food web, energy flow through ecosystem, ecological pyramids, Major ecosystems of the world.
5. **Biogeochemical Cycles** : Definition, different types of gaseous and sedimentary biogeochemical cycles.
6. **Population** : Characteristics, ecological niche
7. **Biotic community** : Characteristics of biotic community, ecological niche.
8. **Ecological succession** : Definition, types of succession, xerarch & Hydrarch concept of climax community, theories of succession.
9. **Ecological Adaptations** : Desert, aerial, fusorial and aquatic adaptations in animals.

UNIT – II : ANIMAL BEHAVIOUR

1. Feeding
2. Learning, reasoning, instinctive and motivative behaviour.
3. Social and sexual behavior of animals
4. Circadian rhythms
5. Mimicry and Protective colouration – Definition, types of mimicry with examples.
6. Migration of fishes and birds.
7. Parental care
8. Intra and interspecific relationships.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IV

1. To study the phototactic behaviour of an insect.
2. To study the geotactic behaviour of an insect.
3. To study nesting behaviour in birds.
4. To study the soil fauna.
5. To determine the pH of the soil.
6. To determine the moisture content of soil
7. To determine the salinity of the soil.
8. To study desert adaptations in animals.
9. To study aquatic adaptation in animals.
10. To study aereal adaptation in animals.
11. To study inter specific relationships.
12. To study the biotic components of an ecosystem.

Books recommended

1. Fundamentals of Ecology by E.P. Odum, Saunders College Publishing, Philadelphia, 1971.
2. Natural Resources Conservation : An Ecological Approach by O.S. Qwen, Mac Millan Publ. Co. N.T., 1994.
3. Ecology by Kreb J. Charles, Harper & Row Publ. New York, 1982.
4. *Principles of Animal Behaviour* by Dugatkin, Lee A, W.W. Norton, New York, 2004.
5. Animal Behaviour (Ethology) by V.K. Ahggarwal, 2010.
6. *Handbook of Ethological Methods* by Lehner, Phillip N, 2nd ed. Cambridge University Press, Cambridge, 1996.

Paper V : Biostatistics & Computer Applications

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course

To acquaint the students of basic statistics applicable in biological studies.

To make the students computer literate to be able to use the vast store of knowledge on the internet and to be able to use computers for studies.

UNIT-I (Biostatistics)

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of Central Tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence linuty.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chisquare - test, Z-test, F-test, Student t- Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation ; Simple & multiple regression.

UNIT-II (Computer Applications)

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practical based on theory paper V

1. Calculation of dispersion
2. Calculation of measure of central tendency
3. Fitting of Binomial distribution
4. Fitting of Poisson distribution
5. Tests of statistical significance
6. Write programme to demonstrate conditional statements using C language.
7. To perform mail merge.

8. Use of Excel and Power point.
9. Use of E-mail and internet.

Books Recommended

1. Daniel, W.W. 1983. Biostatistics : A Foundation for analysis in the Health Sciences. John Wiley and Sons, New York.
2. Dunn, O.J. and V.A. Clark. 2001. Basic Statistics : A primer for Biomedical Science. John Wilety and Sons, New York.
3. Goon, A.M., M.K. Gupta and B. Dasgupta. 1983. Fundamentals of Statistics. Vol.I.
4. Hunt, R. and J. Shelly. Computer and Common Sense. Prentice Hall.
5. Kanetker, Y. Let us 'C' B.P.B. Publication.
6. Rajaraman, V. Vomputer Programming in FORTRAN. IV. Prentice Hall.
7. Rajaraman, V. and T. Radhakrishanan. An Introduction to Digital Computers. Prentice Hall.
8. Sinha P.K. and Priti Sinha Computer Fundamentals. 3rd Ed. B.P.B. Publication.
9. Banerjee P.K. Introduction to Biostatistics (A Textbook of Biometry) S. Chand and company Ltd.

SECOND SEMESTER

PAPER-VI : STRUCTURE AND FUNCTIONS OF INVERTEBRATES –II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates including minor phyla.

UNIT-I

1. Phylum Annelida : General organisation of phylum Annelida with special reference to segmentation, digestive, excretory and reproductive systems.

2. Phylum Arthrpoda : General organisation of Arthrpoda. Larval forms of crustaceans. Modifications of mouth parts, wings and legs of insects. Social organisation of insects (Termites, honey bee and ants).

UNIT-II

3. Phylum Mollusca : General organisation of Mollusca with special reference to feeding, respiration and shell diversity, podium or foot in Mollusca, torsion and detorsion in Gastropoda.

4. Phylum Echinodermata : General organisation of Echinodermata, Comparative account of water vascular system, haemal and perihaemal systems, Larval forms in Echinodermata

5. Minor Phyla : Concept and significance. Organisation and general characters of different minor phyla. Rotifera, Gastrotricha, Kinorhyncha and Nematomorpha.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - VI

1. Annelida
   a. Demonstration of dissection of Earthworm (digestive, nervous and reproductive systems) through video clippings/models/charts.

b. Specimens : *Nereis,Heteronereis, Polynoe, Tubifex, Eunice, Aphrodite, Chaetopterus, Arenicola, Pontobdella, Amphitrite* and , *Hirudinaria.*

c. Prepared slides : Earthworm (T.S. typhlosolar region, setae, pharyngeal nephridium, septal nephridium, integumentary nephridium). *Nereis* (Parapodium),Leech (T.S.through different regions).

2. Arthropoda
   a. Demonstration of dissection of *Palaemon* (appendages,digestive, nervous and reproductive systems) through video clippings/models/charts..
   b. Specimens : *Peripatus, Lepisma*, Cockroach, Grasshopper, Praying mantis, Earwig, Dragonfly, Termite (queen and other castes), Ant, Butterfly, Moth, Beetles, Wasp, Honeybee,Crab, Prawn, *Lepas*, *Balanus, Apus, Limulus,* Scorpion, Spider, Millepede and Centipede.
   c. Prepared slides : Body louse, Bed-bug, Rat flea, *Cypris, Cyclops*, *Daphnia*, trachea of insects, gill and statocyst of Prawn. Trachea of insect, mouthparts of Cockroach, Mosquito, Honeybee, Housefly and butterfly,
3. Mollusca
   a. Demonstration of dissection of *Anodonta* (digestive and nervous systems) through video clippings/models/charts.
   b. Specimens :*Anodonta, Mytilus, Pholas, Pecten, Haliotis, Aplysia, Doris, Limax, Pila, Sepia,Octopus, Nautilus, Chiton* and *Dentalium*.
   c. Prepared Slides : Glochidium larva, radula *of Pila*, gill lamina of *Anodonta*.

4. Echinodermata
   a. Demonstration of anatomy of *Asterias* through charts/model/ video clipping.
   b. Specimens : *Asterias, Echinus, Cucumaria, Antedon, Ophiothrix.*
   c. Prepared slides : T.S. arm of Starfish, tube feet, larval forms of echinodermata

5. Project based on general information on animals selecting atleast one representative from each phylum.

Note : Candidates will be required to submit duly signed note books of practical record.

Books Recommended

1. *Invertebrates* Vols.I, II, III, IV & V by L.H. Hyman, Mcgraw Hill, New York (1940- 51)
2. *Text book of Zoology* by Marshall and Williams (1962).
3. *Invertebrates Structure and function* by E.J.W. Barrington. English Language Book Society & Nelson (1969).
4. *Imm's Text Book of Entomology* by Richards and Davies. Methuen & Co. Ltd. New York:EP Dutton & Co. Inc.(1983).
5. *Principles of Insect Morphology* by R.E. Snodgrass. Mcgraw Hill, New York (1935).
6. *The Insects : Structure and Function* by R.F. Chapman.English Language Book Soc. & Hodder and Sloughton, G. Britain (1978).

PAPER-VII : COMPARATIVE ANATOMY OF VERTEBRATES – II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT-I

Comparative account of the following systems of the vertebrates with evolutionary trends found pisces to mammals :

Respiratory system : Respiratory organs.
Types of respiratory mechanisms (gills, lungs, skin and accessory respiratory organs).

Urinogenital system : Succession of kidney (archinephros, pronephros, mesonephros, and metanephros), osmoregulation, evolution of gonads and urinogenital ducts.

UNIT-II

Nervous system : Comparative account and evolution of brain, spinal cord and cranial nerves.

Sense organs : Chemoreceptors, photoreceptors and mechanoreceptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VII

1. Aves : *Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
2. Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus, Loris, Macaca,Manis, Hystrix, Funambulus, Panthera, Canis, Herpestes, Capra,Pteropus*.
3. To study the skeleton of *Gallus, Oryctolagus*.
4. Demonstration of dissection of Chick and White Rat through video clipping/models/charts.
   Chick : Digestive, arterial, venous and urinogenital systems.
   White Rat : Digestive, arterial, venous and urinogenital systems.
5. Study of the histology of different organs of frog and rat/rabbit through permanent stained slides.
6. Project based on general information on animals selecting atleast one representative from each class/Bird migration.

Books Recommended

1. *A Text Book of Zoology*, Vol.II Vertebrates by A.J. Marshall, MacMillan & Co. Ltd., New York (1972).
2. *Anatomy of Chordates* by C.K. Weichert, McGraw Hill Book Co. Inc. London (1958).
3. *Biology of Vertebrates* by H.E. Walter and L.P. Sayles, McMillan Co. New York (1949).
4. *Comparative Anatomy of Vertebrates* by G.C. Kent, Torpen Co.Ltd., Tokyo (1954).
5. Anatomy of Comparative Vertebrates. Hyman, L. H. Satish Serial Pub. House 2004.

PAPER VIII : BIOSYSTEMATICS AND EVOLUTION

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to identify, classify and name the organisms according to international code of Zoological nomenclature.

To acquaint the students with different type of keys. To make the students understand the concept of speciation, origin of life and evolution.

UNIT-I

1. Definitions and perspectives of systematics, classification and taxonomy, goals and importance of taxonomy.
2. Procedures of taxonomy -identification, classification, nomenclature, phena, taxa, category.
3. Key and its significance.
4. Higher taxa and Linnean hierarchy
5. Qualitative and quantitative methods of analysis of variations
6. History and theories of classification
7. International code of Zoological nomenclature-principles, objectives and rules for nomenclature, type system and priority for different taxa.
8. Population structure of species
9. Polytypic species, race, variety, cline, subspecies, semispecies, super species.
10. Speciation.
11. Species concepts - Typological species concept, nominalistic species concept, biological species concept, evolutionary species concept.
12. Difficulties in applying biological species concept.

UNIT- II

1. Mutation theory of evolution : mutations, variations and natural selection; modern concept and interpretation of evolution and future of evolutionary process, sexual selection and co-evolution.
2. Interrelationship among different phyla of Invertebrates and their evolutionary significance.
3. Origin of vertebrates; Pisces, Amphibia, Reptilia, Aves and Mammalia.
4. Ancestry of man, horse, camel and elephant.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to

be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VIII

1. Use of key to identify the fishes of the region, representing different families.
2. Methods of describing common insects representing different orders, with particular reference to the recording of taxonomic characters.
3. Study of ancestory of man, horse, camel and elephant through charts/models.
4. Visit to a fossil park/Geology and Anthropology museums.
5. Study of origin of invertebrate and vertebrate groups through charts.

Books Recommended

1. Genetics and the origin of species by T. Dobzhansky, Columbia University Press (1951).
2. Principles of Systematic Zoology by E. Mayr, Tata McGraw Hill Publishing Co. Ltd., New Delhi (1976).
3. Taxonomy by R.E. Blackwelder, John Wiley & Sons, New York (1967).
4. Organic Evolution by Lull, MacMillan Co., New York (1947).
5. Time, life and man by R.A. Stirton, John Wiley and Sons, New York (1959).
6. Evolution of the Vertebrates by E.H. Colbert, Willy Eastern Ltd., New Delhi (1969).

Paper IX : Endocrinology and Neural Physiology (MZL 7001)

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT- I

Endocrinology : Chemical nature of hormones, steroid hormones, amino acid derived hormones, catecholamines and peptide hormones.

Mechanism of hormone action, steroid hormone-receptor interactions and signal transduction.

Autocrine, paracrine and telocrine regulation of hormones.

Pineal-hypothalmo-hypophyseal-gonadal axis.

Hormonal elaborations of Hypothalamus, pitutiary, pancreas, adrenals, thyroid, parathyroid and their role in regulation of carbohydrate, lipid, protein, calcium and phosphorus metabolism.

Hormones of gastro-intestinal tract.

Prostaglandins, their synthesis and biological functions.

Endocrine control of spermatogenesis, oogenesis and folliculogenesis in mammals.

UNIT-II

Nervous system and sense organs : Neuron as the basic unit of nerve physiology; Methyl-accepting chemotaxis proteins and chemotactic signals of the plasma membrane; Na^+ and K^+ permeability and action potentials, structure of Na^+ and K^+ channels.

Neurotransmitters : Molecular mechanism of acetylcholine, dopamine**,** serotonin γ-amino butyric and glycine neurotransmetters, acetylcholine receptor channels and their inhibitors; Retinal rod cell excitation and molecular biology of visual cycle, colour vision. Power of accommodation, myopia, hypermetropia, astigmatism, cataract, glaucoma. Mechanisms of auditory and olfactory responses. Gustatory receptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IX

1. To identify the stage of oestrous cycle through photographs and slides.
2. To show the endocrine glands in rat through charts/models/video clipping.
3. Preparation of permanent histology slides from testis, pancreas and adrenal of goat/sheep obtained from slaughter house.
4. To study the histology of endocrine glands.
5. To study the corrective measures for myopia, hypermetropia, astigmatism, cataract.
6. To study the structure of eye, ear and different types of neurons through charts/models.

BOOKS RECOMMENDED

1. Turner, C.D. and Bagnars, W.B., General Endocrinology, Saunders Company (1976).
2. Highnam, K.C. and Hill, L., Comparative Endocrinology of Invertebrates, Enwaral Arnold Ltd., London (1981).
3. Golds Worthy, G.J. Robinson, J. and Mordue, W., Endocrinology, John Wiley and Sons, New York (1981).
4. Tombes, A.S., An Introduction to Invertebrates Endocrinology, Academic Press, New York (1970).
5. Bentley, P.J., Comparative Vertebrate Endocrinology, Cambridge Univ. Press (1998).
6. Mac E. Hadley. Endocrinology. 4^{th} edition, Prentice Hall (1996).

PAPER X : IMMUNOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the defense mechanisms of animals/bodies.

UNIT-I

1. Organs and cells of the immune system and their functions : primary and secondary lymphoid organs, lymphocytes, mononuclear cells and granulocytic cells.
2. Antigens : Factors affecting immunogenicity, B and T cell epitopes, haptens and adjuvants.
3. Immunoglobulins :Basic and fine structure of Immunoglobulins, biological activities of different classes of Immunoglobulins.
4. Cellular and Humoral immune response -Role of T and B lymphocytes, Primary and secondary immune response.

UNIT-II

5. Major Histocompatibility Complex : MHC molecules and genes,regulation of MHC expression, its relation to immune responsiveness and disease susceptibility.
6. Complement System : Complement activation, regulation and biological effects mediated by complement components.
7. Antigen Antibody Interactions : Precipitation & agglutination reactions, radioimmunoassay, ELISA, Immuno fluorescence, Western blotting, Southern and Northern blotting. Immunoprecipitation and flow cytometry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper X

1. To demonstrate the agglutination reaction by typing of human blood into A,B, AB, O and Rh factor.
2. To demonstrate the different types of white cells in a stained blood film of a normal individual and compare with that of a diseased individual (allergy, parasitic infection etc.).
3. To study the sections of different lymphoid organs thymus, spleen, lymph node, intestine etc. from prepared slides.
4. To demonstrate Ouchterlony diffusion assay through Kit .
5. To demonstrate dot ELISA through kit.

Books recommended

1. Kuby Immunology (VI edition) by T.J. Kindt, R.A. Golds by and B.A. Osbome, W.H. Freeman Publishers (2007).
2. Essential Immunology by Roitt, I.M, Mosby, Harcourt Publishers (2001).
3. Immunology : A short course by E. Benjamini, R. Coico and G. Sunshine, Wiley Liss Publishers (2000).
5. Fundamental Immunology by W.E. Paul, Lippincott Raven Publishers (1998).
6. Immunology An Introduction by I.R.T. Zard, Thomson Publishers (1998).
7. Jameway, Charles. A – Immnunbiology – 6th ed. Luttmann, Werner & others – Immunology U.S.A., Academic Press.(2006).

THIRD SEMESTER

PAPER XI : DEVELOPMENTAL BIOLOGY - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the pattern of development at molecular level.
To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT - I

1. Basic concepts of Development : Potency, commitment, specificiation Induction, Instructive and permissive interactions, competence ,determination and differentiation.
2. Molecular basis of differentiation, transdifferentiation and dedifferentiation. Pattern formation in *Drosophila*, Amphibian, chick and *C. elegans*
3. Cleavage patterns and fate maps of Tunicate, *Drosophila*, Amphibia, chick and *C. elegans*.
4. Gene regulation in Development in *Drosophila*.

UNIT – II

1. Gametogenesis in animals.
2. Molecular events during fertilization.
3. Zygote formation, Blastula formation and embryonic fields. Gastrulation and formation of germ layers in animals.
4. Regeneration .

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XI

1. To study the different stages of development in frog and chick through permanent slides.
2. To study the spermatogenesis of rat and grasshopper through slides/charts./photographs.
3. Types of eggs in animals through charts/photographs/models.

Books recommended

1. An Introduction to Embryology by B.I. Balinsky, Saunders, Philadelphia (1981).
2. Major Problems in Developmental Biology by H. Urspaung, Academic Press, New York, (1972).
3. The Control of Gene Expression in Animal Development by J.B. Gurdon, Harvard University, Press, Oxford (1974)..
4. Gene activity in Early Development by Davdson, E.H. Academic Press, London (1977).
5. Development Biology by Scott .F. Gilbert, Sinauer Associators Inc. Publishers 8th edition (2006).
6. Development Biology (Vol.II) by Browder, L.W, Saunders (1984).

PAPER XII : BIOCHEMISTRY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of various metabolite in animal body. To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Carbohydrates : General structure, chemical properties & classification. Homo and heteropolysaccharides. Bacterial polysaccharides. Mucopolysaccharides. Biological functions of polysaccharides.

Glycolysis, TCA cycle, phosphogluconate pathway & glycogenolysis.

Bioenergetics of Carbohydrate matabolism.

Lipids : General structure and chemical properties of simple lipids. Structure and function of phospholipids. Biological functions & structure of cholesterol and steroid hormones.

Oxidation of fatty acids; biosynthesis of saturated and unsaturated fatty acids.

UNIT-II

Proteins : Amino acids and their properties, Protein structure and shape. Ramachandran Plot. Nucleic acids and protein interaction. Conjugated proteins : Lipoproteins, glycoproteins, nucleo proteins.

Biosynthesis of purines and pyrimidines. miRNA, Ramachandran plot.

Enzymes : Enzyme kinetics, mode of action of enzyme and biochemical role of coenzymes and isoenzymes, effect of enzyme concentration, effect of substrate concentration and pH on enzyme activity, allosteric enzymes, feed back inhibition, covalent modifications, irreversible and reversible. Ribozyme and Abzyme.

Electron transport chain : Mechanism of oxidative phosphorylation (Mitochondrial), inhibitors of electron transport chain Intibitors and uncouplers of mitochondrial oxidative phosphorylation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XII

1. Estimation of alkaline and acid phosphatases in the liver procured from local market.
2. Quantitative estimation of glycogen, cholesterol protein in tissue procured from local market.
3. Qualitative estimation of carbohydrates, lipids and protein in tissue procured from local market.

BOOKS RECOMMENDED:

1. Beckatt, A.H. and Stenlake, J.B., Practical Biochemistry, the Athlone Press, London (1988).
2. Freefelder, D, Practical Biochemistry : Application to Biochemistry and Molecular Biology, W.H.Freeman, (1982).
3. Wilson, Keith and Walker, John, Practical Biochemistry : Principles and techniques, 5th Edition Edited, Cambridge University Press (2000).
4. Kuby, Janis, Immunology, W.H. Freeman and Company (2000).
5. Alberts, Bruce and others Molecular Biology of the Cell. (2002)
6. Lewin, Benjamin and others Cells Canada Jonas and Bartle (2007).
7. Lehninger – Principles of Biochemistry & Bartle. Nelson & Cox. 4th edition. W H Freeman and Company, New York.
8. Eric E. Conn, Paul K. Stumf and others. Outlines of Biochemistry 5/E. John Wiley and Sons. (1995).
9. Jeremy M. Berg, John L. Tymoczko and lubert Stryer. Biochemistry. 5th edition W.H. Freeman and Company, New York (2006).
10. Donald Voet and J.G. Voet, Biochemistry, 3rd edition. John Wiley and Sons (2004).

Paper - XIII : CELL AND MOLECULAR BIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

To clarify the concept of population genetics to the students through Hardy-weinberg law.

UNIT- I

1. Fixation and staining techniques : Non -chemical and chemical fixatives, chemistry of staining of acidic and basic dyes.
2. Structure and functions of cell and its organelles (Nucleus, plasma membrane, mitochondria, Golgi bodies, endoplasmic reticulumn, ribosomes and lysosomes).
3. Plasma membrane : Structure and organisation of membranes, Glycoconjugates and proteins in membrane system,ion transport, Na+/K+ATPase, model membranes, liposomes.
4. Protein sorting in ER, Golgi and targeting of proteins to Mitochondria, secretory and endocytotic pathway.

UNIT- II

1. Cell-Cell signalling : Cell surface receptors, Second messenger system, MAP kinase pathways, Signalling from plasma membrane to nucleus.
2. Cytoskeletal elements : Microtubules and microfilaments.
3. Cell division : Cell Cycle, Molecular basis of cell division,mitotic apparatus, modification and abnormalities of cell division, chromosome movement (forces of cell division).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIII

1. Study of permanent histological slides of testis and ovaries of insects/ mice/rat.
2. Basis of reaction and demonstration of the sites of proteins, nucleic acids, lipids & carbohydrates in ovaries of insects/rat/mice through slides and photographs.
3. Study of stages of mitosis and meiosis from permanent slides from animal and plant materials through slides/charts/photographs.

Books recommended

1. Cell Biology and Molecular Biology by D.Robertis, EDP & DE Robertis E.M.F, 8th ed., Saunders & Co. Philadelphia (1995).
2. Cell Biology by C.B. Powar, 3rd ed., Himalaya Pub., Bombay (1984).
3. Advances in Cell and Molecular Biology by Dupraw, E.J., eds. Academic Press, New York & London (1971).
4. Cell Biology. Pollard, Thomas, D.S.Earnshan, William C. Saunders. USA. (2002).
5. The Cell : A Molecular Approach by Cooper GM & H 5th edition (2009).
6. Molecular Biology of the Cell, 5th edition by Alberts, John Raff. Roberts & Walter (2008).
7. Cell and Molecular Biology : Concepts and Experiments 5th edition by Gerald Karp. John Wiley and Saunders.
8. Molecular Cell Biology by Lodish *et. al*. W.H. Freeman Co. New York (2008).

Paper XIV : Instrumentation and Methodology

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Microscopy : Principle, structural parts and applications of compound microscope, phase – contrast microscope, fluorescence microscope, interference microscope, polarization microscope, dark field microscope, transmission electron microscope and scanning electron microscope.

Cell fractionation method : Principle of centrifugation and ultracentrifugation, different types of ultracentrifugations (in brief) and their applications, structural parts of an analytical ultracentrifuge, ultracentrifugation and buoyant density.

Spectrophotometry : Principle and structural parts of a colorimeter and a spectrophotometer and their applications.

Chromatography : Principles of chromatography, paper chromatography, thin layer chromatography, gas chromatography, gel permeation chromatography, ion exchange chromatography, high pressure liquid chromatography, affinity chromatography.

UNIT-II

Electrophoresis : Principles of electrophoresis, (Brief introduction to paper electrophoresis, polyacrylamide gel electrophoresis, disc gel electrophoresis,) SDS-PAGE, agarose gel electrophoresis, isoelectric focussing, applications of electrophoresis, Phage DNA, detection of plasmids, separation of DNA molecules.

Polymerase chain reaction (PCR) and its application.

Tissue culture techniques : Introduction to basic culture technique in Cell culture, organ culture, Aseptic techniques, sterilization technique, specialized culture technique, , Monolayer culture, suspension culture, leucocyte cultures. factors affecting cell growth *in vitro.*

Radioisotopes : Principles and applications of tracer techniques in biology, radiation dosimetry, radioactive isotopes and half life of isotopes, liquid scintillation counter, principles and applications of autoradiography and cerenekov radiation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIV

1. To study the parts of the compound microscope and phase-contrast microscope and their maintenance.
2. To study the living material under the phase contrast microscope.
3. Finding out the diameter, area and circumference with the help of stage micrometer and oculometer.
4. To sketch the diagram of any tissue with the help of camera lucida and to draw its magnification line.
5. Demonstration of section cutting and mounting of sections on the grid for SEM and TEM. Demonstration of SEM & TEM in the CIL lab., P.U., Chandigarh.
6. Demonstration of working of ultracentrifuge.
7. Demonstration of the working of PCR and Western blotting, Deptt. of Zoology, P.U., Chandigarh.
8. To separate a sample of amino acid with the help of paper chromatography.
9. Demonstration of SDS-PAGE, Agarose gel electrophoresis.

BOOKS RECOMMENDED:

1. Bacq, Z.M. and Alexender, P, Fundamentals of Radiography, Pergamon Press, London (1989).
2. Benett, A.H. and Usterbere, H, Phase Microscopy: Principle and applications, John Wiley and Sons, London (1951).
3. Dawes, C.J.,Techniques for Transmission and Scanning Electron Microscopy, Ladd Rew. Ind.,Inc.,Publishers (1981).
4. Freshrey, R.I. and Allen, R, Culture of Animal Cell : A manual of basic techniques, Lis Inc., New York. (1983).
5. Watt, J.M., The Principles and Practice of Electron Microscopy, Watt (1985).
6. Michael G, Flow Cytometry : A Practical Approach, 3rd Edition Edited Michael G. Ormerod Oxford University Press (2000).
7. In-vitro Cultivation of Animal Cells. BIOTOL, Elsevier (2004).

PAPER : XV ADVANCES IN ENTOMOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students aware of various pests of food crops and food products and various insect control methods.
To educate the students about economic importance and techniques of Apiculture and sericulture

UNIT-I

1. Salient features with suitable examples of the various insect orders : Thysanura, Odonata, Isoptera, Orthoptera, Hemiptera, Coleoptera, Lepidoptera, Hymenoptera and Diptera.
2. Strucure and function of the following systems in insects :
   a. Digestive System
   b. Respiratory System
   c. Nervous System
   d. Reproductive System
3. Post embryonic development and types of metamorphosis in insects. Structural modifications in the larvae & pupae.
4. Parthenogenesis in insects.
5. Effect of temperature and photopteriod on the lives of insects, details of onset, termination and significance of diapause.

UNIT-II

1. Plant host-insect interaction.
2. Practices of Sericulture, Apiculture & Lac culture
3. Systematic position, habits, nature of damage and outlines of the life cycles of following pests of crops, vegetables & fruits.

A. CROPS

Cotton :

(i) *Pectinophora gossypiella* (Pink boll worm)
(ii) *Bemisia tabaci* (Cotton white fly)
(iii *Dysdercus cingulatus* (Red cotton bug)

Sugarcane

(i) *Pyrilla perpusilla* (Sugarcane leaf hopper)
(ii) *Scirpophaga nivella* (Sugarcane top borer)

Paddy

(i) *Hieroglyphus banian* (Rice grass hopper)
(ii) *Leptocorisa varicornis* (Gundhi bug)

Wheat
(i) *Tanymecus indicus* (Ghujhia weevil)
(ii) *Sesamia inferens* (Wheat stem borer)

B. VEGETABLES
(i) *Dacus cucurbitae* (Pumpkin fruit fly)
(ii) *Raphidopalpa foveicollis* (Red pumkin beetle)

C. FRUITS
(i) *Drosicha mangifera* (Mango mealy bug)
(ii) *Diaphorina citri* (Citrus psylla)

3. Pests of stored food products with particular reference to their systematic position, habits, nature of damage caused by them along with the outlines of their life cycles :
(i) *Callosobruchus maculatus* (Pulse beetle)
(ii) *Sitophilus oryzae* (Rice weevil)
(iii) *Tribolium castaneum* (Rust red floor beetle)
(iv) *Sitotroga cerealella* (Angoumois grain moth).

4. Insect control :
(a) Chemical control : Categories of pesticides, important examples, their application and mode of action; Insect repellents and attractants.
(b) Biological Control : Principles, History, use of parasites, predators and pathogens.
(c) Integrated Pest Management (IPM).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XV

1. Study of insect biodiversity in natural environment and preparation of project based on the observation.
2. Identification marks and taxonomic status of insect pests of crops vegetables, fruits and stored products mentioned in theory syllabus.
3. Demonstration of dissection of insects for the study of following systems through charts/models/video clippings. :
   a. Digestive System
   b. Nervous System
   c. Reproductive System.
4. Systematic position upto family and ecology of the following medical and veterinary pests :
   a. *Anopheles* b. *Culex* c. *Aedes* D. Blow fly e. Bot fly f. Horse fly g. Flesh fly.
5. Introduction to apiculture practices and handling of Beehives in insects.
6. Study of male and female external genitalia of insects through permanent slides.

7. Study of different types of larvae and pupae with the help of charts/ photographs/ diagrams.

Books recommended

1. General Entomology, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, Calcutta, Bombay by M.S. Mani,1990.
2. The Insects, Structure & Function, English Language Book Society Hodder and Sloughton, G. Britain by R.F. Chapman,1978.
3. Imms Text Book of Entomology Methuen & Co. Ltd. New York: EP. Dutton & Co. INC. by Richards & Davies, 10th edition (1997).
4. Honey bees and their management in India, ICAR Publications by R.C. Mishra, 1995.
5. Agricultural Pests of India and South East Asia by A.S. Attwal, Kalyani Publishers, New Delhi, 1991.
6. Insects and Mites of Crops in India by MRGK. Nair, ICAR, N.Delhi, 1975.
7. Economic and Applied Entomology by Kumar and Nigam, Emkay Publications, Delhi, 2000.
8. Destructive and Useful Insects by Metcalf and Metcalf, McGraw Hill Publications, New York, 1951.
9. Integrated Pest Management by David Dent, Chapman & Hall, London, New York, Madras, 1995.
10. Insect Pheromones and their use in Pest Management by House Sevens and Jones, Chapman Hall,London, New York,Madras, 1998.
11. Beekeepy for Profile and Pleasure. Addison Webb. Agrobios, 2004.
12. Textbook of Applied Entomology. P. Srivastava. Vol.1. Kalyani Publishers, 2005.

FOURTH SEMESTER

PAPER XVI : DEVELOPMENTAL BIOLOGY - II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT – I

1. Organogenesis : Vulva formation in *C. elegans,* Eye lens induction. Epitheliomesenchymal interactions, Differentiation of neuron.
2. Primary and secondary embryonic induction, chemical nature of evocators.
3. Introduction to stem cells, stem cell related disorders, gene therapy.
4. Metamorphosis.

UNIT – II

I Teratogenesis : Critical period dose, classes of cytotoxic teratogens, human teratogenesis.
2. Totipotency & nuclear transfer experiment.
3. Cell surface adhesion, inter cellular adhesion, adhesive molecules - cadherins.
4. Environmental evolution and animal development: Environmental cues and effects, Malformations and disruptions, Changing evolution through development modularity, Developmental constraints.
5. Sex determination.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVI

1. To prepare the permanent stained slides of developing stages from fertilized egg of hen.
2. To study different larvae in invertebrates from permanent slides.
3. To study through PS of larvae of invertebrates (Redia, Cercaria, Arthropod larvae, Glochidium larva).

Books recommended

1. An Introduction to Embryology by B.I. Balinsky, Saunders, Philadelphia (1981).
2. Major Problems in Developmental Biology by H. Urspaung, Academic Press, New York, (1972).
3. The Control of Gene Expression in Animal Development by J.B. Gurdon, Harvard University, Press, Oxford (1974)..
4. Gene activity in Early Development by Davdson, E.H. Academic Press, London (1977).
5. Development Biology by Scott .F. Gilbert, Sinauer Associators Inc. Publishers 8th edition (2006).
6. Development Biology (Vol.II) by Browder, L.W, Saunders (1984).

PAPER XVII : ADVANCES IN PARASITOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To introduce the students to various pathogens causing diseases and the reactions of the body against them.

UNIT-I

1. Introduction to Parasitology, different types of animal associations : definitions; Parasitism, Mutualism, Hyperparasitism
2. Parasite Host Specificity : Kinds of parasite host specificity, specificity factors related to infection and growth.
3. Molecular, Celluclar and Physiological basis of Host Parasite Relationship : in Protozoans, trematode, cestode and nematode parasites.

UNIT-II

1. Immunity to Parasites : Brief account of immunity to malaria, leishmaniasis, trypanosomiasis, schistosomiasis and ascariasis.
2. Vectors - Brief account of various insect vectors of human parasitic infections.
3. Parasite Transmission : Introduction, mechanism, circardian rhythem.
4. Ecology of parasites : Ecological niche, host size, and parasite numbus, biological control, role of metazoan parasites in transmission of microbial infection.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVII

1. To study the protozoans and helminth parasites infecting frog, toad and common household insects through slides/charts.
2. To study the helminth parasites infecting gut of the sheep and goat obtained from slaughter house.
3. To study the parasites from stained blood smears - *Leishmania, Plasmodium* and *Trypanosoma*.
4. To study the vectors of different parasitic infections (Mosquito, ticks, sandfly etc.).

Books recommended

1. Parasitology : The Biology of Animal Parasites V edition by E.R. Noble and G.A. Noble, Lea & Febiger Philadelphia, 1982.
2. Physiology of Parasites by L.H. Chapell, Blackie, Glosgow, London, (1979).
3. Immunology of Infection by Kaufmann, Academic Press (1999).
4. An Introduction to Animal Parasitology by Smyth, J.D., Hodder & Stoughton, London (1976).

PAPER : XVIII : ADVANCES IN FISH AND FISHERIES

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with aquatic animal life and its economic importance.

UNIT-I

1. Introduction: History and scope of aquaculture, Different kinds of aquaculture-traditional, extensive, intensive, semi-intensive..
2. Criteria for candidate species selection and criteria for site selection for various culture practices, Farming methods: ponds, lens, cages, raceway, raft, rope, monoculture, polyculture, sewage fed culture and organic aquaculture.
3. Principle of composite fish culture, Composite fish culture of endemic and exotic fishes in India.
4. Limnological parameters: influence of the environmental parameters on fish abundance and distribution, aquaculture and other anthropogenic activities on fish populations.
5. Induced breeding: History, technique, different kinds of hatcheries and advantages of induced breeding in fishes. Use of synthetic chemicals for induced breeding.
6. Ecological classification of aquatic organisms other than fishes.
7. Characteristics of lotic environment (river/stream) as per zonation, major abiotic and biotic factors in a stream/river affecting the body form in hillstream fishes, Body form in hillstream fishes.
8. Productivity: Concept of productivity, estimation of primary productivity by different methods and classification of water bodies on the basis of productivity.

UNIT-II

1. Major and minor constituents of fish including minerals and trace elements in fish. Post mortem changes in fish- rigor mortis, autolysis, auto-oxidation and their significance, biochemical and microbial spoilage of fish.
2. Fish diseases: Fungal, bacterial, protozoan, worm and crustacean diseases of fishes.
3. Principles of fish preservation, Preservation of fish by curing (drying, salting and smoking), Chilling and freezing of fish, canning of fish and fish products. Fish transportation and marketing
4. Biological control of weeds/algal blooms using fishes.
5. Concept of Transgenic fish and bio-safety regulations.
6. Concept of molecular markers (mitochondrial//nuclear) with a brief description of different kinds of markers (RFLP, RAPD, AFLP, SSR or Microsatellite, SNP)
7. Hard parts used for age determination with advantages and disadvantages of each hard part.
8. Determination of growth of fish using length-weight equation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVIII

1. To estimate the dissolved oxygen in water.
2. To estimate the pH of water.
3. To estimate the phosphate of water.
4. To determine the BOD of water.
5. To study the benthic organisms.
6. To study the different types of fishing gears.
7. To study the Indian culturable fishes.
8. To study the Exotic culturable fishes.
9. Estimation of total alkalinity in a given water sample.
10. Estimation of total chlorides in a given water sample.
11. Estimation of total hardness in a given water sample.

Books recommended

1. Fish and Fisheries of India by V.G. Jhingran, Hindustan Publ. House, N. Delhi,1991.
2. Aquaculture Production FAO Fisheries Circular No.815 by FAO Rome,1991.
3. Aquaculture in Asia by M.M. Joseph, Asian Fisheries Soc., Mangalore, 1990.
4. Inland Fisheries of India Vol. I & II by P.K. Talwar and A.G. Jhingran, Oxford & IBH, New Delhi, 1991.
5. Freshwater Fishery Biology by K.F. Lagler, WmC. Brown Co. Publ. Dubuque, IOWA, 1969.
6. Methods for Assessment of Fish Production in Freshwaters, IBH Handbook No.3, Blackwell Scientific Publ., Oxford, 1970.
7. Fundamentals of Ecology by E.P. Odum, W.B. Saunders Co. Philadelphia, 1971.
8. Limnology by P.S. Welch McGraw Hill Book Co., New York, 1952.
9. Limnology by R.G. Watzel, R.G., W.B. Saunders Co Philadelphia, 1983.
10. The Biology of Polluted Waters by H.B.N. Hynes, Liverpool Univ. press, Liverpool, 1978.
11. Fundamentals of Limnology by F. Ruttner, Univ. Press Toronto, 1975.
12. Fishes : An Introduction to Ichthyology by P.B. Moyle and J.C. Cech. Prentice Hall Inc. Jersey USA, 1986.
13. Fishery Development by S.C. Agarwal and M.S. Johal. Narendra Publishing House, Delhi, 2004.
14. History of Fishes by J. Norman revised by P.H. Greenwood. Ernst Brown, London 1999.
15. Biology of Fishes by Kyle H.M. Biotech. Books, Delhi, 2007.
16. Freshwater Ecology : Concepts and environmental applications. Dodds, Walter K. Academic Press. USA., 2002.
17. The Biology of Fishes. New Introduction by Dr. Vijay Dev Singh. M. Hary. Kyle. Biotech. Books, 2007.
18. Fish Management and Aquatic Environment. Arvind Kumar and Pushplata Dukey. Daya Publishing House, 2006.

PAPER XIX : ENVIRONMENTAL BIOLOGY AND WILD LIFE

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To educate the students about the basic environmental phenomena like pollution, ecosystem, biogeochemical cycles, etc.
To educate the students about the importance of wild life conservation.

UNIT-I

1. **Environmental Pollution** : Causes impact and control measures of air, water and noise pollution, management of wastes, Environment Protection Act 1986.
2. **Natural resources** : Natural resources and their conservation.
3. **Energy resources** : Study of renewable and non-renewable energy resources. Non conventional energy resources.
4. **Environmental education** : Goals, objectives, and methods of teaching of environmental education.
5. **Ecosystem Dynamics and Management** :Stability and complexity of ecosystems. Speciation and extinctions, environmental impact assessment, sustainable development.

UNIT-II

1. **Zoogeography** : Zoogeographical regions and their fauna.
2. **Wildlife of India** : Different types with references to animals, causes of depletion, significance and conservation of wildlife.
3. **Sanctuaries and National Parks** : Location and Important fauna of the sanctuaries and national parks of India.
4. **Wildlife Projects** : Tiger Project, Crocodile Breeding Project, Hangul project, Gir lion Sanctuary project.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIX

1. To study the distribution of animals through zoogeographical maps.
2. A visit to a zoological park to study different wild animals and make a report.
3. To estimate the alkalinity of water.
4. To estimate the chlorides of water.
5. To estimate the nitrates of water.
6. To study the different types of phytoplankton.
7. To study the different types of zooplankton.

Books recommended

1. Environment Pollution by H.M. Dix, John Wiley Pub. N.Y.,1984.
2. Environmental Studies by D.B. Botkin and E.A. Keller, Merill Publ. Co.Toronto, London, 1987.
3. Wildlife in India by Saharia, V.B. Natraj Publ. Deharadun (U.P.).
4. Wildlife Biology by Raymond F Dasmann, Wiley Eastern Ltd.,New Delhi, 1982.

Paper XX : CYTOGENETICS AND MOLECULAR GENETICS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

To clarify the concept of population of genetics to the students through Hardy-weinberg law.

UNIT-I

1. Chromosome structure and function : Law of DNA constancy and C. value paradox. Specialized chromosomes (Salivary gland and Lampbrush chromosomes).
2. Molecular mutation : Molecular basis of mutation, physical and chemical mutagens, radiation mutagenesis, site directed mutagenesis, target theory.
3. Regulation of gene function : Operon hypothesis;Pro and eukaryotic operons;Induction and repression;Complex gene clusters.
4. Hardy Weinberg Law and Calculation of gene frequencies.

UNIT-II

1. Linkage and Genetic maps.
2. Dosage compensation.
3. Properties of Genetic code, mutations in genetic code, Wobble's hypothesis.
4. Fine structure of gene, Eukaryotic genome organization (structure of chromatin, coding and non-coding sequences, and satellite DNA); DNA damage and repair, DNA replication, amplification and rearrangements.
5. Organization of transcriptional units; Mechanism of transcription of prokaryotes and eukaryotes; RNA processing (capping, polyadenylation, splicing, introns and exons); Ribonucleoproteins, structure of mRNA.
6. Protein Synthesis.
7. Principles and methods of genetic engineering and Gene targeting; Applications in agriculture, health and industry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XX

1. Preparation of chromosomes from onion root tip for mitosis by squash method.
2. Study of salivary gland chromosomes of larvae of chironomus/Drosophila from permanent slides.
3. Study of metaphase karyotypes from photographs/permanent slides of Drosophila, grasshopper and man/rat.
3. Study of sex-chromatin Bars body from human buccal mucosa.
4. Demonstration of monohybrid and dihybrid cross, Co-dominance, Incomplete dominance and Epistasis with the help of beads and photographs.
5. Study of genetic disorders with the help of photographs.
6. Study of structural and numerical alteration of chromosomes : Deletion, duplication, inversion, translocation and ploidy with the help of photographs.

Books recommended

1. Genetics – U. Goodenough, IIIrd ed., Saunders College Pub., Philadelphia, (1984).
2. Cytogenetics - The Chromosome in Division, Inheritance and Evolution by C.P. Swanson, T. Merz and W.J. Young , IInd ed., Prentice Hall of India, New Delhi (1982).
3. Principles of Genetics by E.J. Gardner and D.P. Shustad, 7th ed., John Wiley, New York (1984).
4. Genetics - A survey of the Principles of Heredity by A.M. Winchestor, 3rd ed., Oxford and IBH Pub., Calcutta (1972).
5. Genetics: A text book for University students by P.K. Gupta, 3rd ed., Rastogi Pub., Meerut (1996).
6. Cytology, Genetics and Molecular Biology by P.K. Gupta, Rastogi Pub., Meerut (1991).
7. Genetics by Strickberger, Monroe W., 3rd ed., Macmillan Pub., New York, (1985).
8. Eukaryotic Chromosomes by Bostock, C.J. & Sumner, A.T., Amsterdam North Holland (1978).
9. Principles of Genetics by Sinnott, E.W. & Dunn, L.C., 3rd ed., McGraw-Hill, New York (1939).
10. Science of Genetics by Hexter, William and Yost, Henry T., Prentice Hall of India, New Delhi (1977).
11. Handbook of Molecular Cytology by Lima-De-Faria, A.ed. North Holland Publishing Company, Amsterdam, London(1969).
12. Principles of Genetics – 2nd edition. Snustad and Simmons. Joh Wiley & Sons.(2002)
13. Genetics. A Molecular Approach. T.A. Brown 3rd edition BIOS Scientific Publishers (2004).
14. Genetics. A Molecular Approach. Peter A. Russell. 2nd ed., Pearson. Benjamin Cummiy (2006).

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT & COMMERCE

SYLLABI

FOR

M.COM. [SEMESTER SYSTEM] EXAMINATIONS, 2017-18

(For Regular College/University/USOL Students)

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SCHEME, SYLLABI AND COURSES OF READING FOR M. COM. (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2017-2018

Note : 1. The duration of the examination in each subject will be 3 hours.

2. Maximum marks for external/written examination are 80 marks and Internal Assessment is 20 marks.

3. **The marks for Internal Assessment will be divided as Follows:**

For Regular Students

(a) Attendance : 20%

(b) Written Assignments : 30%

(c) Mid Semester Test : 50%

For University School of Open Learning (USOL) Students:

100% Internal Assessment will be based on Written Assignments

N. B.: Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University.

INSTRUCTIONS TO THE PAPER SETTERS :

IF THERE ARE TWO UNITS : Set 10 questions in all. Five questions from each unit. The students are required to answer five questions in all selecting at least 2 questions from each unit.

IF THERE ARE THREE UNITS : Set 10 questions in all. Three or four questions from each unit. The students are required to answer five questions in all selecting at least one question and not more than two from each unit.

IF THERE ARE FOUR UNITS : Set 10 questions in all. Two or three questions from each unit. The students are required to answer five questions in all selecting at least one question from each unit.

IF THERE ARE FIVE UNITS : Set 10 questions in all. Two questions from each unit. The students are required to attempt five questions in all selecting one question from each unit.

SCHEME OF EXAMINATION

SEMESTER-I

Paper 1	**M.C.101**	MANAGERIAL ECONOMICS	100 Marks
Paper 2	**M.C.102**	QUANTITATIVE METHODS FOR BUSINESS	100 Marks
Paper 3	**M.C.103**	MODERN ACCOUNTING THEORY & REPORTING PRACTICES	100 Marks
Paper 4	**M.C.104**	ORGANISATION THEORY AND BEHAVIOUR	100 Marks
Paper 5	**M.C.105**	MARKETING MANAGEMENT	100 Marks
Paper 6	**M.C.106**	MANAGEMENT INFORMATION SYSTEM	100 Marks
Paper 7	**M.C.107**	WORKSHOP ON IT APPLICATIONS IN COMMERCE (For Regular Students Only)	100 Marks
	M.C.107 A	IT APPLICATIONS IN COMMERCE (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-II

Paper 1	**M.C.201**	BUSINESS ENVIRONMENT	100 Marks
Paper 2	**M.C.202**	RESEARCH METHODOLOGY IN COMMERCE	100 Marks
Paper 3	**M.C.203**	FINANCIAL MANAGEMENT AND POLICY	100 Marks
Paper 4	**M.C.204**	PRODUCTION AND MATERIALS MANAGEMENT	100 Marks
Paper 5	**M.C.205**	OPERATIONS RESEARCH	100 Marks
Paper 6	**M.C.206**	BUSINESS POLICY & STRATEGIC MANAGEMENT	100 Marks
Paper 7	**M.C.207**	SUMMER TRAINING REPORT AND VIVA VOCE (For Regular College Students)	100 Marks
	M.C.207 A	ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (For USOL Students Only)	100 Marks
		OR	
	M.C.207 B	FINANCIAL SERVICES (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-III

Paper 1	**M.C.301**	BUSINESS PERFORMANCE MEASUREMENT	100 Marks
Paper 2	**M.C.302**	TAX PLANNING AND MANAGEMENT	100 Marks

For Paper 3, Paper 4, Paper 5, Paper 6 Students has to select two groups from the given groups A to F having two papers each. (MC. 303 to MC. 314)

Paper-3		Select Group from A-F	100 Marks
Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7			
	M.C.315	MC. 315-WORKSHOP ON FINANCIAL MARKETS AND INSTRUMENTS (For Regular Students Only)	100 Marks
	M.C.315 A	FINANCIAL MARKETS AND INSTRUMENTS (Theory paper For USOL Students Only)	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 303	Integrated Marketing Communication & Brand Equity	100 Marks
MC. 304	Marketing Research	100 Marks

Group B: Human Resource Management

MC. 305	Human Resource Development	100 Marks
MC. 306	Industrial Relations	100 Marks

Group C: International Business

MC. 307	Indiaôs Foreign Trade and Investment	100 Marks
MC. 308	Management of International Business Operations	100 Marks

Group D: Accounting & Finance

MC. 309	Strategic Cost Management	100 Marks
MC. 310	International Accounting	100 Marks

Group E: Applied Economics

MC. 311	Industrial Economics	100 Marks
MC. 312	Applied Econometrics	100 Marks

Group F: Banking and Insurance

MC. 313	Bank Management	100 Marks
MC. 314	Insurance Management	100 Marks

SEMESTER-IV

Paper 1	**M.C.401**	PROJECT PLANNING AND CONTROL	100 Marks
Paper 2	**M.C.402**	KNOWLEDGE MANAGEMENT	100 Marks
Paper 3	**M.C.403**	BUSINESS ETHICS AND CORPORATE GOVERNANCE	100 Marks

Every student has to select any one group from the two groups selected in the third semester (Selected group in the 4th semester will be having three papers) (MC. 404 to MC. 421)

Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7	**M.C.422**	COMPREHENSIVE VIVA-VOCE	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 404	Advertising and Sales Management	100 Marks
MC. 405	Services Marketing	100 Marks
MC. 406	Consumer Behavior	100 Marks

Group B: Human Resource Management

MC. 407	Organizational Change and Development	100 Marks
MC. 408	Training and Development	100 Marks
MC. 409	Compensation Management	100 Marks

Group C: International Business

MC. 410	International Business Environment	100 Marks
MC. 411	Global Financial Management	100 Marks
MC. 412	International Marketing Management	100 Marks

Group D: Accounting & Finance

MC. 413	Advanced Corporate Accounting	100 Marks
MC. 414	Security Analysis and Portfolio Management	100 Marks
MC. 415	Advanced Auditing	100 Marks

Group E: Applied Economics

MC. 416	Macro Economic Analysis and Policy	100 Marks
MC. 417	Economics of Services	100 Marks
MC. 418	World Trading System	100 Marks

Group F: Banking and Insurance

MC. 419	Bank Legislation	100 Marks
MC. 420	Risk Management	100 Marks
MC. 421	Actuarial Practice	100 Marks

SEMESTER-I

PAPER 1: MC. 101- MANAGERIAL ECONOMICS

Objective: The objective of the course is to acquaint students with the concepts of microï economic theory and their use in business decision making. The effort is to make them capable of using various concepts to deal with business problems in a global economic environment.

UNIT-I

Nature and scope of managerial economics, relationship with economic theory, decision sciences, and functional areas of business; Theory of the Firm: Reasons for existence of the firms & their functions, the objective and value of the firm, constraints on the operation of the firms, limitations of the theory of the firm; Nature & Functions of Profits: Business vs. Economic Profits, theories of profit, functions of profit; Tools of Analysis: Marginal Analysis, Optimization, Decision and Game Theory - Concepts; The International Framework of Managerial Economics.

UNIT-II

The demand for a commodity: Individualôs demand, Market demand, and the firm demand; Price, Income & Cross elasticity of demand; Using elasticityôs in managerial decisions; Theories of consumer behavior.

UNIT-III

Pricing Practices and Risk Analysis**:** Price and Output relationship under different market structures; Pricing Theories; Pricing of multiple products; Price discrimination - International price discrimination & Dumping, Transfer Pricing; Risk and Uncertainties in managerial decision making; Measuring risk with probability distribution; Utility Theory and risk aversion.

UNIT-IV

Technological change and the global market economy: Impact of technological change on productivity, labor and market structure; Industrial innovation and technology and technological environmental forecasting.

Reference Books:

1. Koutsyiannis, A., Modern Microeconomics, Macmillan Press Ltd.
2. Varian, Micro-Economic Analysis (ed. 3), Norton.
3. Pindyck Robert S. and Daniel L. Rubinfeld, Micro Economics, Third Edition, Prentice Hall of India, New Delhi.
4. Madala, G.S. and Ellen Miller, Micro Economics, Theory and Applications, McGraw Hill Book Company, New York.
5. Gould, John P., Edward P. Lazear, Micro-Economic Theory, Richard D. Irwin, Inc., Homewood Illinois.
6. Sen Anindya, Micro-Economics: Theory and Applications , Oxford University Press, New Delhi.
7. Tirole J., The Theory of Industrial Organization, Cambridge MIT Press.

PAPER 2: MC. 102 - QUANTITATIVE METHODS FOR BUSINESS

Objective: The objective of the course is to acquaint students with some of the important statistical techniques for managerial decision making. The emphasis will be on their applications to business and economic situations.

UNIT-I

Probability and Probability Distribution: Definitions - Probability Rules ï Application of Probability Rules- Conditional Probability- Bayes theorem- Random Variable and Probability Distributions; Binomial Distribution- Poisson Distribution and Normal Distribution.

UNIT-II

Statistical Estimation and hypothesis testing: Introduction to Hypothesis testing ï Meaning of Population, sample and sampling distribution - parameters and statistics - Central limit theorem - Concept of Standard Error - Confidential limits - Estimation of population parameters - properties of a good estimator - Point and interval estimation ï Hypothesis Formulation and testing procedure - Type I and Type II errors - one tail and two tail tests - Sampling of Attributes - Estimation and testing Number and Proportions of Successes, Difference between two proportions.

UNIT-III

Sampling Variables : Large Samples - Difference between large and small samples - Estimating population mean - testing the significance of Mean - Significance of the difference between means of two samples - Significance between the standard deviations of two samples - Small Samples -âô test - fixing fiducial limits to population mean ï testing the significance of the mean - testing the significance of the difference between two independent means - testing the significance of the difference between two dependent means- F test - meaning - Applications of F test - ANOVA - Assumptions - Procedure - one way and two-way analysis of variance.

UNIT-IV

Statistical Quality Control - Introduction - Chance and Assignable Causes of Variation Uses of SQC - Process Control and Product Control- Control Charts - Control Charts for Variables -X: Chart ï Range chart ï Standard deviation chart - Control charts for attributes - C chart -p chart - np chart. Decision Tree Analysis ï Decision Making under Uncertainties.

Reference Books:

1. Levin, R.I. and D.S. Rubin: Statistics for Management, Prentice-Hall of India.
2. S.C. Gupta : Fundamentals of Statistics, Himalaya Publishing House, New Delhi.
3. Anderson Quantitative Methods for Business Decision, Thomson.

4. Barry Render, Ralph M. Stair Jr., Michael E. Hanna: Quantitative Analysis for Management, Prentice Hall of India.
5. Anderson, Introduction to Management Science: Quantitative Techniques for Decision Making, Thomson.
6. D.C. Sancheti & V.K. Kapoor : Statistics, Sultan Chand & Sons, New Delhi.
7. Sharma, J.K.: Operations Research ï Theory & Applications, Macmillan India Ltd.
8. Gupta, S.P: Statistical Methods, S. Chand & Sons, New Delhi.

PAPER 3: MC. 103 - MODERN ACCOUNTING THEORY & REPORTING PRACTICES

Objective: In view of the convergence of the Indian Accounting Standards with the IFRS, it is desirable to equip the students with the required knowledge of International financial reporting standards and practices. The students are expected to achieve a clear conceptual understanding of the IFRS and possess sufficient knowledge expected out of an expert.

UNIT-I

The Regulatory and Financial Reporting Framework: The International Accounting Standards Board (IASB)-The role and the standard setting process. Progress towards international harmonization. The IASB-Framework for the Preparation and Presentation of Financial Statements; The first time adoption of international financial reporting standards : Objective of financial statements, Qualitative characteristics of financial statements, Elements of financial statements, Recognition and measurement of elements of financial statements, Fair value basis of measurement, Concepts of capital and capital maintenance.

UNIT-II

Elements of financial statements as per International Financial Reporting Standards: (a) Property, plant and equipment (b). Intangible assets inventories (c). Construction contracts (d). Liabilities (e). Financial instruments (f). Provisions and contingencies (g). Employment and post-employment benefits (h). Accounting for tax (i). Accounting for agriculture (j). Share based payment (k). IFRS- 6: Exploration for and evaluation of mineral resources.

UNIT-III

Presentation and additional disclosures as per International Financial Reporting Standards (a). Events after the balance sheet date (b). Earnings per share (c). Related party disclosures (d). Interim financial reporting (e). Effects of changes in foreign exchange rates (f.) Segment reporting.

UNIT-IV

Preparation of external financial reports for single entities as per International Standards (a) Income statements and discontinuing operations (b) Cash flow statements (c) Statement of changes in equity

(d) Preparation of external financial reports for combined entities and joint ventures (e) Definitions of subsidiaries, investments in associates and joint ventures (f) Exclusions from consolidations (g) Preparation of consolidated balance sheets and income statements (h) Equity accounting (i) Proportionate consolidation and joint ventures.

Reference Books:

1. Elliott, B. & Elliott, J. (2008), Financial Accounting and Reporting. 12th ed. Harlow: Pearson/Prentice Hall.
2. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting. London: Bloomsbury.
3. S. Agarwal, Manual of Accounting Standards, Snow White.
4. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.
5. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
8. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.

PAPER 4: MC. 104 - ORGANISATION THEORY AND BEHAVIOUR

Objective: The objective of the course is to develop a theoretical understanding among students about the structure and behavior of organization as it develops over time. The course will also make them capable of realizing the competitiveness for firms.

UNIT-I

Organizational Theories and Behaviour: Classical, Neo - classical and Contemporary. Authority, Power, status, formal and informal structure. Flat and Tall structures. Bureaucratization of organizations. Organizational Behaviour Concepts, determinants, models, challenges and opportunities of OB. Transaction cost and organizational behaviours. Contributing disciplines to the OB. Individual Behaviour: Foundations of individual behaviour, values, attitudes, personality and emotions. Theory X and Theory Y, Chris Argyris behaviour patterns, Perceptual process.

UNIT-II

Group Decision making and Communication: Concept and nature of decision making process, Individual versus group decision making, Nominal group technique and Delphi technique, models of communication, communication effectiveness in organizations. Feedback, TA, Johari Window. Motivation: Need hierarchy, Maslowôs Need Hierarchy, Two factor theory, Contemporary theories of motivation (ERG, Cognitive evaluation, goal setting, and equity) expectancy model. Behaviour modification, Motivation and organizational Effectiveness.

UNIT-III

Leadership, Power and Conflict: Concept and theories, Behavioral approach, Situational approach, Leadership effectiveness, Contemporary issues in leadership. Power and conflict. Bases of Power, power tactics, sources of conflict patterns, levels and conflict resolution strategies. Transactional Analysis (TA) - Work Stress.

UNIT- IV

Organizational Culture, Organizational Development and Stress Management: Concept and determinants of organizational culture, Organizational Development: Concept and intervention techniques. Individual and organizational factors to stress, Consequences of stress on individual and organization, management of stress. Case Studies: Some cases of real business world are required to be discussed.

Reference Books:

1. Stephen Robbins, Organisational Behaviour, Pearson Education.
2. Fred Luthans, Organizational Behavior, McGraw Hill.
3. Wagner, Organizational Behavour, Thomson Learning.
4. S.S. Khanka, Organisational Behaviour, S.Chand & Co., New Delhi .
5. Dr. S. Shajahan & Linu Shajahan, Organisational Behaviour, New Age International Publishers, New Delhi.
6. Hellriegel, D & J.W. Slocam, Organizational Behavior, Thomson Learning.
7. McSchane, Organization Behavior, TMH.
8. New Storm Davis Organisation Behavior, THM, New Delhi.
9. Slocum, Fundamentals of Organizational Behavior, Thompson Press (Indian Edition).

PAPER 5: MC. 105 - MARKETING MANAGEMENT

Objective: The objective of the course is to familiarize the students with the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm.

UNIT-I

Introduction to Marketing Management**;** Marketing - Meaning and approaches, Role of Marketing in Organizations, 4Ps & beyond, Marketing Challenges, Marketing Process and Marketing Planning, Marketing information system.

UNIT –II

Analyzing Market Opportunities ; Analyzing the Marketing Environment- Economic, Demographic, Social, Cultural, Technical, Political & Legal Buying Behaviour- Consumer, Business & Industrial Measuring and Forecasting Market Demand.

UNIT –III

Product management**:** Product - Meaning and Classifications, New Product Development. Managing Product Life Cycles, Brand Strategies and Management. Managing Service - Idea, Institution, Person, Place and Event.

UNIT–IV

Pricing, Distribution and Promotion Pricing- Influencing factors, Approaches, Strategies and Programmes. Channels of Distribution and Logistics. Promotion Strategies - Advertising, Sales Promotion & Public Relations.

Reference Books:

1. Kotler, Philip: Marketing Management Analysis, Planning Implementation and Control (Prentice Hall of India, N. Delhi, 2005).
2. Kotler, Keller, Koshy & Jha: Marketing Management, Pearson Education, N. Delhi.
3. Stone, Marilyn A. & John, Desmond: Fundamentals of Marketing, Routledge, UK.
4. Kumar and Minakshi, Marketing Management, Vikas Publ. House, New Delhi.
5. Kurtz : Principles of Marketing, Cengage Learning India Pvt. Ltd., New Delhi.
6. Stern, Luis W. & El-Ansary, Adel I: Marketing Channels, Prentice Hall of India, N. Delhi.
7. Markin, Ram: Marketing Strategy and Management, John Willey & Sons.
8. Kelly, E.J.& Lazer, William: Managerial Marketing ï Perspectives, Richard D. Irwin Inc, Illinois.

PAPER 6: MC. 106 - MANAGEMENT INFORMATION SYSTEM

Objective: The objective of the paper is to offer a comprehensive overview of Management information systems (MIS). It will explore technical, strategic and tactical issues related to MIS. Basic concepts in analyzing and designing information systems will be presented.

UNIT-I

MIS Definition - Characteristics - Evolution of MIS: Concepts; framework for understanding and designing MIS in an organization; MIS and other related disciplines: MIS and Management Accounting,

MIS and Computer Science, MIS and OR, MIS and Organizational Behavior, MIS and Management. Concept of information : definition, features, types, process of generation and communication; quality of information; information overload; techniques for managing overload; summarizing; filtering; inferences and message routing. System concepts : definition, types and characteristics of system-control in systems: feedback: positive and negative; negative feedback control system, input, process and output control; law of requisite variety.

UNIT-II

Structure of MIS: Basic structural concepts: formal and informal information systems; public and private information systems; multiple approaches to the structure of MIS: Operational elements (physical components, process, outputs for users), activity subsystems, functional subsystems and decision support ï synthesis of multiple approaches into a conceptual structure for MIS.

UNIT-III

Information systems: Transaction Processing Systems, Office Automation Systems, Information Reporting Systems, Decision Support Systems, Executive Support Systems, Expert systems.

UNIT-IV

Systems Development and Implementation: System development methodologies; SDLC approach; prototyping approach and user development approach - Systems Analysis; Systems Design; Concepts of database and database design; system implementation; management of information system projects; system documentation ï information system audit. Security of information resources; threats to information resources; security systems for risk management. Enterprise Resource Planning Systems ï Features-ERP Modules - implementation of ERP.

Reference Books:

1. OôBrien, James A: Management Information Systems, Tata McGraw Hill, New Delhi.
2. George M. Scott: Management Information Systems, McGraw Hill Book Company, New Delhi.
3. Schultheis, Robert and Summer, Mary: Management Information Systems, Tata McGraw Hill, New Delhi.
4. Gordon B Davis, et. El: Management Information Systems, Prentice Hall of India, New Delhi.
5. Kenneth C.Laudon and Jane P. Laudon: Management Information Systems ï Managing the Digital Firm, Pearson Education Asia, New Delhi.
6. Effy Oz, Management Information Systems, Vikas Publishing House, New Delhi.
7. Haag, Cummings and Mccubbrey: Management Information Systems for the Information Age, Tata McGraw Hill, New Delhi.
8. Post, Gerald V and Anderson, David L: Management Information Systems, Tata McGraw Hill, New Delhi.
9. Alex Leon: Enterprise Resource Planning ï Tata McGraw-Hill, New Delhi.

PAPER 7: MC. 107 - WORKSHOP ON IT APPLICATIONS IN COMMERCE

(For Regular Students studying in Colleges/University Department Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas - An Overview of Management Science and Quantitative Analysis: The Management Science Process - Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet- Understanding basic features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios - Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database-features- components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing- Data mining. Features of RDBMS -Database design and application development ï Tables- creation- relationships- Forms designing forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (e) Presentation session of the students on the assigned project.

Reference Books:

1. Hoffer, Jeffrey A, Marry B. Prescott, and Fred R. McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi.
3. Novathe and Elmasri: Fundamentals of Database Systems, Addison Wesley.

4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.

5. Ullmann, Jeffry D, Principles of Database Systems, Galgotia, New Delhi.

6. Post, Gerald V., Database Management Systems, Tata McGraw Hill.

7. Stephan G Powell and Kenneth R Baker Management Science, Art of Modeling with Spread Sheets, Wiley India(p) Ltd., New Delhi.

8. Elmasri and Nawathe- Fundamental of Database Systems, Pearson Education Asia, New Delhi.

PAPER 7: MC. - 107A - IT APPLICATIONS IN COMMERCE

(For USOL Students Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas- An Overview of Management Science and Quantitative Analysis: The Management Science Process-Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet - Understanding Basic Features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios- Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database ï features - components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing-Data mining. Features of RDBMS -Database design and application development ï Tables- creation-relationships- Forms designing, forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Reference Books:

1. Hoffer, Jeffrey A, Marry B.Prescott, and Fred R.McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi .
3. Novathe and Elmasri : Fundamentals of Database Systems, Addison Wesley.
4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.
5. Ullmann, Jeffry D. : Principles of Database Systems, Galgotia, New Delhi.
6. Post, Gerald V. : Database Management Systems, Tata McGraw Hill.
7. Stephan G Powell and Kenneth R Baker : Management Science ï Art of Modeling with Spread Sheets - -, Wiley India (P)Ltd., New Delhi.
8. Elmasri and Nawathe : Fundamental of Database Systems- Pearson Education Asia, New Delhi.

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SEMESTER-II

PAPER 1: MC. 201 - BUSINESS ENVIRONMENT

Objective: The objective of the course is to acquaint students with the concepts of macro ï economics and the macro environment in which a business organization operates. The course would also make the student capable of analyzing and understanding the macro economic policies of the government implemented from time to time and assess their impact on business.

UNIT-I

Business Environment: Cultural, social, political, technological, economic and legal environment - scanning - techniques of environmental forecasting - SWOT ï Internal environment - their impact on policy formulation.

UNIT-II

Economic reforms in India - Liberalization - privatization and globalization ï Competitive Strength of Indian industry - Impact of liberalization policy on different sectors ï Foreign Investments policy in India. Multi-national corporations - Their participation in India ï Their strategies, competitive strengths policies and performance.

UNIT-III

Industrial Policies: A brief review of industrial policies since independence, Industrial policy of 1991 and recent developments, Policy on foreign direct investment in Indian industry. Fiscal Policy: Public revenues, public expenditure, public debt, development activities financed by public expenditure, an evaluation of recent fiscal policy of Government of India ï Monetary Policy: Demand for and supply of money, Objectives of monetary and credit policy, recent trends - Role of Finance Commission. Integration of Worldôs economies and its impact on Indian Business.

UNIT-IV

Money and Capital market: Features and components of Indian Financial system, objectives, features and structure of Money market and capital market, recent developments - Stock Exchanges, Investor Protection and Role of SEBI. Legal Framework: Consumer Protection Act, 1986, Right to Information and Right to Service Acts and its implications for business.

Reference Books:

1. Wheelen, Concepts of Strategic Management and Business Policy, Pearson Education, New Delhi.
2. William Gluck & L R Jauch, Business Policy & Strategic Management, McGraw-Hill., New Delhi.
3. Kazhmi Azhar , Business Policy, TMH.

4. Gupta, Liberalisation - Its Impact on Indian Economy, Macmillan.
5. K.V.Sivayya and VBM Das: Indian Industrial Economy, Sultan Chand Publishers, Delhi.
6. Suresh Bedi: Business Environment, Excel, New Delhi.
7. Francis Cherunilam: Business Environment - Text & Cases, Himalayan Publishing House, Mumbai.
8. M. Adhikari: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
9. Prof. Laxmi Narain : Globalization , Liberalization and Privatization of Public Enterprises, Sultan Chand & Co., New Delhi.
10. Pandey, G.N., Environmental Management, Vikas Publishing House.

PAPER 2: MC. 202 - RESEARCH METHODOLOGY IN COMMERCE

Objective: The objective of this paper is to impart knowledge about various stages of the research processes and their application in Commerce and Management Education.

UNIT-I

Introduction: - Meaning of the Research ï Qualities of a research worker ï Scientific Method ï Definition ï stages of scientific study ï Different steps in scientific study ï Logical Methods ï Inductive & Deductive Methods ï Nature of the Phenomena & the use of the scientific methods. Approach to a Research Project **:-** Purpose of Research ï Functions in Research ï Research Programme ï Problem solving through research /financial aspects of research ï Research Design (Selective topic, Coverage, Hypothesis) ï Sources of Information ï Nature of study ï Definition of terms ï Techniques of study ï Collection, Analysis & presentation of the data ï Testing hypothesis ï Stating results.

UNIT-II

Use of the Library: - Finding the correct sources of information ï Uses of books, periodicals & encyclopedia ï Taking down notes ï Collection & organization of Material. Research Method :- Sampling Method ï Observation Method ï Case Study Method ï Interview Method ï Survey Method ï Experimental Method ï Questionnaire Method - Library Method ï Documentary Method ï Suitable Combination & Selection of Method ï advantages, disadvantages & limitations of methods.

UNIT-III

Presentation of Information:-Analysis of information ï Classification, tabulation & interpretation ï Presentation of data & its application ï Pictorial presentation ï Composition of information (quotation, footnotes, bibliography - tables, standards, abbreviations) - style of writing. Coordinating contents :- Front matter (blank sheet, title page, dedication, preface, table of contents, list of tables, list of figures, list of appendices etc.) ï Text proper (Chapter wise information) ï Back matter (appendices, glossary, bibliography, index, blank sheet).

UNIT-IV

Multivariate analysis ï an overview of dependence and interdependence methods (multiple regression, discriminate analysis, conjoint analysis, factor analysis, cluster analysis); research report; ingredients and constructions of research report ï procedure of preparation of reference and bibliography. Research Findings and Preparation and writing of a Research Report: - Benefits of implementation of actual research findings ï carrying forward the studies ï Management of research unit ï Preparation and writing of a ôResearch Reportô.

Reference Books:

1. Methods of Social Survey and Research, S. R. Bajpai, Kitab Ghar, Kanpur.
2. Zikmund, Millian G., Business Research Methods, Thomson Learning, Bombay.
3. Cooper, Donald R. and Pamels Schindler, Business Research Methods, Tata McGraw Hills, New Delhi.
4. Geode, Millian J. & Paul K. Hatl, Methods in Research Methods, Tata McGraw Hills, New Delhi.
5. Shekhran, Uma, Business Research Method, Miley Education, Singapore.
6. Kothari, C.R., Research Methodology- Methods and Techniques, New Age International Publishers.

PAPER 3: MC. 203 - FINANCIAL MANAGEMENT AND POLICY

Objective: The objective of the course is to acquaint the students with the basic analytical techniques and methods of financial management of business firms. The course also provides students the exposure to certain sophisticated and analytical techniques that are used for taking financial policy decisions.

UNIT-I

Financial management - Scope, finance functions and its organization, objectives of financial management; time value of money; sources of long term finance. Financial Forecasting: Sales Forecast Preparation of Performa Income Statement and Balance Sheet Growth and External Funds Requirement (EFR).

UNIT- II

Investment decisions; importance, difficulties, determining cash flows, methods of capital budgeting; risk analysis (risk adjusted discount rate methods and certainly equivalent methods) cost of different sources of raising capital; weighted average cost of capital.

UNIT- III

Capital Structure decisions - Leverage: Measuring and analyzing the implications of Leverage Operating Leverage, Financial Leverage and Total Leverage; capital structure theories - NI, NOI, traditional and M-M theories; Capital Structure Policy: Business & Financial Risk, A Total Risk Perspective Business & Financial Risk, A Market Risk Perspective Determinants of Capital Structure Decision Approach to Estimating the Target Capital Structure Variations in Capital Structures, EBIT / EPS Analysis and ROI/ROE Analysis.

UNIT- IV

Determinants of dividend models - Walter, Gordon & M.M. models. Working Capital ï Meaning, need, determinants; estimation of working capital need; management of cash; inventory & receivable.

Reference Books:

1. Pandey, I.M. Financial Management, Vikas Publishing House, New Delhi.
2. Khan M.Y. and Jain P.K. Financial Management, Tata McGraw Hill, New Delhi.
3. Keown, Arthu J., Martin, John D., Petty, J. William and Scott, David F., Financial Management, Pearson Education.
4. Chandra, Prasanna, Financial Management, TMH, New Delhi.
5. Van Horn, James C., Financial Management and Policy, Prentice Hall of India.
6. Brigaham & Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.
7. Kishore, R., Financial Management, Taxmans Publishing House, New Delhi.

PAPER 4: MC. 204 - PRODUCTION AND MATERIALS MANAGEMENT

Objective: To impart knowledge regarding production and management techniques, process, tools, and acquaint the students with the knowledge of marketing functions, techniques and strategies.

UNIT-I

Introduction to Production Management - Nature, Scope, Importance and Functions Materials Management - Evolution, Importance, Scope and Objectives - Interface with other functions. Introduction of Inventory Control, Static Inventory problem under risk. Dynamic Model under risk, policy coordinated, Replacement with discount. Introduction to purchasing, Functions of purchasing, procedure of purchasing, Selection Sources of Supply, Negotiation with Suppliers.

UNIT-II

Price determination; Price Cost Analysis, Quality determination and control value analysis. Scope & functions of operations management, Forecasting of demand. Delphi. Methods, Statistical Quality Control Technique.

UNIT-III

Facilities Location & Layout ï Strategic importance - Factors affecting location & layout - Installation of facilities ï Single location, multi-location decisions. Principles and Types of Facilities Layout. Importance and Functions of Production Planning & Control. Introduction to PERT / CPM - Network Crashing.

UNIT-IV

Productivity - Work Study - Objectives, Scope and Uses - Methods Study ï Flow process chart, Flow diagram & Process mapping - Work Measurement - Elements ï Performance Rating - Allowances - Standard Time - Synthetic Time Standards ï Work Sampling.

Reference Books:

1. Alan Mulemann, John Oakland, Keith Locker, ôProduction and Operations Managementô Macmillan India Ltd.
2. Datta, A.K., Materials Management : Procedures, Text and Cases, Prentice Hall of India.
3. Gaither, Operations Management , Thomas Learning.
4. S.A. ShunwalIa *&* Patel, Production and Operations Management, Himalaya Publishing.
5. R. Panneerselvan, Production and Operations Management, Prentice Hall of India.
6. P. Saravanavel, S. Sumathi, Production and Materials Management, Margham Publication.
7. Mukhoipadhyay, Production Planning and Control, TMH.

PAPER 5: MC. 205 - OPERATIONS RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operations Research: Evolution, methodology and role in decision making; Linear programming: Meaning, assumptions, advantages, scope and limitations: Formulation of Problem and its solution by graphical and simplex methods (Including Big M Method and Two Phase Simplex Method); special cases in simplex method; infeasibility, degeneracy, unboundedness and multiple optimal solutions; duality. Dual Simplex Method.

UNIT-II

Transportation problems including transshipment problems; Special cases in transportation problems; unbalanced problems, degeneracy; maximization objective and multiple optimal solutions; assignment problems including travelling salesmanôs problem. Special cases in assignment problems; unbalanced problems, maximization objective and multiple optimal solutions.

UNIT-III

PERT/CPM: Difference between PERT and CPM, network construction, calculating EST, EFT, LST, LFT and floats, probability considerations in PERT, time cost trade off. Decision theory: decision making under uncertainty and risk, Bayesian analysis, decision trees. Replacement problem (Individual and Group replacement problems both).

UNIT-IV

Game theory, pure and mixed strategy games; principle of dominance; two person zero sum game; Queuing theory: concept, assumptions and applications; analysis of queue system, Poisson distributed arrivals and exponentially distributed service time model (MMI and MMK); simulation; meaning, process, advantages, limitations and applications.

Reference Books:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
3. Vohra, N.D., Quantitative Techniques in Management, Tata McGraw Hills Publishing Company Ltd., New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

PAPER 6: MC. 206 - BUSINESS POLICY & STRATEGIC MANAGEMENT

Objective: The objective of the course is to help the students develop an understanding of the basic inputs in making and implementing corporate strategic decisions and also familiarize them with the issues and practices involved.

UNIT-I

Strategic Management - An Introduction - Evolution of business policy as a discipline - Strategy and the

Quest for Competitive Advantage: Military origins of strategy ï Evolution - Concept and Characteristics of strategic management ï Defining strategy ï Mintzerbgôs 5Ps of strategy ï Corporate, Business and Functional Levels of strategy - Strategic Management Process.

UNIT-II

Strategic Options Porterôs Generic Strategies Integration Strategies, Intensive Strategies. Diversification and Differentiation Strategies, Functional Strategy - Manufacturing, Financial, Marketing, Human Resource, Research & Development. Strategic Intent & Strategy Formulation: Vision, mission and purpose ï Business definition, objectives and goals ï Stakeholders in business and their roles in strategic management ï Corporate Social Responsibility, Ethical and Social Considerations in Strategy Development.

UNIT-III

Strategy implementation - Project implementation ï Procedural implementation ï Resource Allocation ï Organization Structure ï Matching structure and strategy. Behavioral issues in implementation ï Corporate culture ï Mc Kinseyôs 7s Framework - Concepts of Learning Organization. Strategy Evaluation - Importance - Symptoms of malfunctioning of strategy - Organization anarchies - Operations Control and Strategic Control - Measurement of performance - Analyzing variances - Role of organizational systems in evaluation.

UNIT-IV

New Business Models and strategies for Internet Economy: Shaping characteristics of E-Commerce environment ï E-Commerce Business Model and Strategies ï Internet Strategies for Traditional Business ï Key success factors in E-Commerce ï Virtual Value Chain. Cases in strategic management. A minimum of 10 cases encompassing the above topics to be analyzed and discussed in the class. Cases to be incorporated in the Question Paper.

Reference Books:

1. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting & Executing Strategy ï The Quest for Competitive Advantage, Tata McGraw Hill.
2. Ranjan Das, Crafting the Strategy: Concepts and Cases in Strategic Management, Tata McGraw Hill.
3. Henry, Mintzberg, Bruce, Ahlstrand and Joseph, Lampel, Strategy Safari, Free Press, New York.
4. Gary, Hamel and Prahalad, C. K.. Competing for the Future, HBS Press.
5. Ed. C.A. Montgomery, M.E. Porter, Strategy ï Seeking and Securing Competitive Advantage, Harvard Business Review Publications.
6. Peter F. Drucker, Managing in a Time of Great Change, Truman Talley Books/Plume Penguin Group.
7. Kazmi, A, Business Policy and Strategic Management, Tata Mcgraw Hill, New Delhi.
8. Wheelen, T.L. and Hunger, J.D, Strategic Management and Business Policy, Pearson Education, (LPE), New Delhi.

Paper 7: MC. 207- SUMMER TRAINING REPORT AND VIVA VOCE

(For Regular Students Only)

After the Completion of Second Semester Examination the students will go on 6-8 Weeks summer training in various Industrial undertakings, banking and financial services institutions, and Retail Sector organizations, undertake a project there to study a particular problem and file three copies of summer training report within 15 days completion of the training. The student has to file a certificate of completion of training issued by training organization. A VIVA-VOCE Examination will be conducted by the External examiner appointed by the University on the problems undertaken in the summer training report. Principal of the College/Chairperson of the Department must appoint one internal supervisor for the guidance of the student regarding the Summer Training Project. The List of the internal supervisors so appointed must be communicated to the Controller of examination within 10 days from the date of appointment. The Internal supervisor will also be acting as Internal Examiner at the time of Conduct of VIVA-VOCE and sit with External Examiner.

PAPER 7: MC. 207-A - ENTREPRENEURSHIP DEVELOPMENT & PROJECT MANAGEMENT

(For USOL Students Only)

Objective: The purpose of this paper is to prepare a ground where the students view Entrepreneurship as a desirable and feasible career option. In particular the paper seeks to build the necessary competencies and motivation for a career in Entrepreneurship.

UNIT-I

Foundations of Entrepreneurship Development: Concept and Need of Entrepreneurship Development, Definition of Entrepreneur, Entrepreneurship, Innovation, Invention, Creativity, Business Idea, Opportunities through change. Concepts of Entrepreneur, Manager, Intrapreneur / Corporate Entrepreneur ï comparative study - Roles, Responsibilities, Career opportunities. Entrepreneurship as a career, Entrepreneurship as a style of management, The changing role of the entrepreneur: mid career dilemmas ï Closing the window: Sustaining Competitiveness - Maintaining competitive advantage.

UNIT-II

Theories of Entrepreneurship: Innovation Theory by Schumpeter & Imitating Theory of High Achievement by McClelland ,X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen Influences on development.

UNIT-III

Project Management Technical, Financial, Marketing Personnel and Management feasibility Reports Financial schemes offered by various financial institutions like Commercial Banks, IDBI, ICICI, SIDBI, SFCs, Venture Capital Funding, Angle Capitalist.

UNIT-IV

Entrepreneurship Development and Government Role of Central Government and State Government in promoting Entrepreneurship with various incentives, subsidies, grants etc. ï with special reference to ôExport oriented unitesô Role of the following agencies in the Entrepreneurship Development DIC ï District Industrial Center, SISI ï Small Industries Services Institute, EDII ï Entrepreneurship Development Institute of India NIESBUD ï National Institute of Entrepreneurship and Small Business Development. NEDB ï National Entrepreneurship Development Board.

Recommended Books:-

1. Brandt, Steven C., The 10 Commandments for Building a Growth Company, Macmillan Business Books, Delhi.
2. Bhide, Amar V., The Origin and Evolution of New Business, Oxford University Press, New York.
3. Dollinger M.J., ôEntrepreneurship Strategies and Resourcesô, 3rd edition, Pearson Education, New Delhi.
4. Desai, Vasant Dr., Management of Small Scale Enterprises, Himalaya Publishing House, New Delhi.
5. Taneja, Gupta, Entrepreneur Development New Venture Creation, 2nd ed., Galgotia Publishing Company.
6. Holt, David H., Entrepreneurship: Strategies and Resources, Illinois, Irwin.
7. Panda, Shiba Charan, Entrepreneurship Development, New Delhi, Anmol Publications.
8. Patel, V.G., The Seven Business Crises and How to Beat Them, Tata-Mcgraw, New Delhi.

OR

PAPER 7: MC. 207-B - FINANCIAL SERVICES

(For USOL Students Only)

Objective: To provide insight to the structure, working and problems of financial, system in India as well as to enable students to appreciate and understand the concepts, mechanism and utility of different financial services.

UNIT – I

An overview of Indian financial system: Introduction, structure, components and mechanism of the financial system. Financial Services: An overview. Introduction to SEBI.

UNIT–II

Merchant Banking: Functions and SEBI regulations and Non Fund-based and Fund-based activities including role in mobilization of funds. Depository Services in India (including regulatory aspects).

UNIT–III

Leasing - Introduction, financial evaluation of lease from lessorôs and lesseeôs point of view, lease structuring, Tax, legal and accounting aspects especially in Indian context. Factoring: Features, process and agreement for factoring.

UNIT–IV

Mutual Fund: Introduction, management, regulations, working, and Indian experiences. Credit Rating: Concepts, functions and process of debt rating and SEBI regulations.

REFERENCES:

1.	L.M. Bhole	Financial Institutions and Markets
2.	J.C. Verna	Merchant Banking Organisation and Management
3.	Lalit K. Bansal	Merchant Banking and Financial Services
4.	M.Y.Khan	Financial Services
5.	V.A. Avadhani	Investment and Securities Markets in India.
6.	S. Ramesh & Arun Gupta	Venture Capital and Indian Financial Sector.

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SEMESTER-III

PAPER 1: MC. 301 - BUSINESS PERFORMANCE MEASUREMENT

Objective: The objective of this paper is to make the students familiar with the performance measurement techniques for business.

UNIT-I

Corporate Performance Measurement - Need and Importance; Historical Overview; Product Costing in price estimates and profit management; Techniques to measure and enhance profitability and quality of products and services; Activity Based Management, Target and Kaizen costing; benchmarking and environmental costing; Flexible Budgeting, and Activity Based Budgeting.

UNIT-II

Setting of performance goals and incentives, and the use of diagnostic tools and control; systems to achieve the goals; Strategic Profitability Analysis; Measuring performance using Economic Value Added (EVA) methodology; Comparison between Return on Investment (ROI) and EVA methodology of measuring performance.

UNIT-III

Measurement of Corporate Performance through Balanced Scorecard and its value creation potential;. Rationality behind balance score card; performance dimensions of the balance score card; Throughput Accounting; Comparison of Activity Based Costing.

UNIT-IV

Information Systems aspects of management control; Control-needs of Information flow, and its consolidation in multi-locational setting; Management Control System and its applications; Responsibility Accounting - Meaning and Methodology, types of responsibility centres, organizational structure of responsibility centres; objectives and methods of transfer pricing, pricing corporate services and administration of transfer pricing.

Reference Books:

1. Anthomu, R.N. and Govindrajan, V., Management Control System, Tata McGraw-Hill New Delhi.
2. Atkinson, A., R.S. Kaplan and S.M. Young, Management Accounting (4th ed). New Jersey: Prentice Hall
3. Friedlob, George T, Lydia, L.F., Essentials of Corporate Performance Measurement, John Wiley and Sons inc.
4. Manzoni, Alex, Islam Sardar, M.N, Performance Measurement in Corporate Governance, Springer
5. Simon, R., Performance Measurement and Control System for Implementing strategy-Text and Cases, Prentice Hall
6. Merchant, K and Van-der-stede, W.A., Management Control System: Performance Evaluation and Incentives, Prentice Hall.
7. Marvin T. Howell, Actionable Performance Measurement - A Key to Success, American Society for Quality, Quality Press, Milwaukee.
8. Merchant, K.A., Modern Management Control System: Text and Cases, Pearson Education Inc.

PAPER 2: MC. 302 - TAX PLANNING AND MANAGEMENT

Objective : The aim of this course is to familiarize the student with major latest provisions of the Indian tax laws and related judicial pronouncements pertaining to corporate enterprises having implications for various aspects of Corporate planning with a view to derive maximum possible tax benefits admissible under the law.

UNIT-I

Structure of Direct and Indirect Taxes in India. Concepts, Significance and Problems of Tax Planning, Tax Avoidance and Tax Evasion ï Recognized methods of Tax Planning : Ensuring maximum claims for deduction for companies with special emphasis on depreciation allowance, expenses of scientific research, amortization of preliminary expenses and amounts not claimed otherwise. Taking advantages of available reliefs, rebates and tax free sources of income.

UNIT-II

Definition of various kinds of companies - Meaning of company under IT Act. Residential status of companies and implications for Tax Planning. Assessment of companies including carry forward and set off of losses.

UNIT-III

Tax implications in planning of business unit as Proprietorship, Partnership, Pvt. Ltd. & Public Ltd. Tax planning in the context of exemptions, incentives, export promotions & various deductions under Chapterï VI of Income Tax Act. Setting up of a new Industrial Establishment: location aspects; nature of business; planning for tax holiday benefits. Specific management decisions such as (1) make or buy; (2) own or lease, (3) repair or replace; (4) export vs. local sale; (5) shut down or continue; (6) expand or contract.

UNIT-IV

An overview of goods and service tax: Introduction to GST, reasons for introducing GST, pros and cons of GST. Registration procedure of trader / service provider under GST. Levy and collection of CGST/SGST under GST. Composite levy scheme of GST. Levy and collection of IGST. Input tax credit and relief to consumers and traders under GST. Applicable rates of tax on various goods and services under GST.

Reference Books:

1. Singhania, V.K.: Direct Taxes: Laws and Practice , Taxman N. Delhi.
2. Singhania, V.K. : Direct Tax planning and Management Taxman N. Delhi.
3. Prasad, Bhagabati: Direct Tax Law & Practice, New Age Publ., N. Delhi.
4. Merhotra, H.C.: Direct Taxes Planning, Sahitya Bhavan, Agra.
5. Srinivas, E.A.: Corporate Tax Planning, TMG, New Delhi.
6. Lakhotia, R.N. Corporate Tax Planning, Vision Publications, N. Delhi
7. Ahuja, Girish & Gupta, Ravi: Systematic Approach to Income tax.
   Goods and Service Tax Act,2017

SEMESTER-III (ELECTIVES)
GROUP A: MARKETING

MC. 303 - INTEGRATED MARKETING COMMUNICATION & BRAND EQUITY

Objective: The objective is to introduce the students to the integrated role of promotion techniques with the special emphasis on advertising.

UNIT-I

Marketing communication; functional areas of marketing communication; integrated marketing communication; types of advertising agencies; media partners and their role; compensating the advertising agencies; agency evaluation; brands - its meaning; creating and maintaining the brand; selecting desired brand position; developing brand identification; creating a brand image; creating and maintaining brand relationship with customers; brand-customer touch points; prospects and customers; AIDA model; think/feer/do models; brand decision making process; attitude formation and attitude change; brand likeability.

UNIT-II

Branding concepts; branding challenges and opportunities; brand equity concept; strategic brand management process; customer based equity; building a strong brand and its implications; identifying and establishing brand positioning; defining and establishing brand values; internal branding.

UNIT-III

Campaign planning; IMC planning process; internal marketing; segmenting and targeting; types of segmentation; message and profitability targeting; digitization of brand information; customer database; building relationship through data management; developing creative message strategy; process of developing IMC message strategy; methods of getting creative ideas; brand-message execution; copywriting; writing for point and electronic media; print layout and design; executional and strategic consistency.

UNIT-IV

Media classification; media strength and weakness; wireless communication; e-mail marketing; website marketing; integrating online brand communication; media planning; consumer sales promotion; sales promotion tools; determining consumer sales promotion strength and limitations of sales promotion; trade promotion; trade promotion for new products and existing brands; trade promotion strategies; objectives of co-marketing communication.

Reference Books:

1. Duncan, Tom; Principles of Advertising and IMC; Tata McGraw Hill, New Delhi.
2. Clow, Kenneth & Baack, Donald; Integrated Advertising, Promotion and Marketing Communication; Pearson Education, New Delhi.
3. Belch, George and Belch, Michael; Advertising and Promotion; Tata McGraw Hill, New Delhi.
4. Wells, William, Burnett, John ad Moriarty, Sandra; Advertising Principles and Practice; Pearson Education; New Delhi.
5. Jethwaney, Jaishree and Jjain, Shruti; Advertising Management; Oxford University Press; New Delhi.

MC. 304 - MARKETING RESEARCH

Objective: The course aims at exposing the students to the concept, tools and techniques of marketing research and developing their skills to be able to apply research techniques to aid marketing decision making.

UNIT I

Introduction : Meaning, nature and importance of marketing research; Marketing research and scientific method; Research reliability and validity; Problems in conducting marketing research; Marketing Information System (MIS); Ways of conducting marketing research; Syndicated research. Marketing Research Process: Steps involved in conducting marketing research; Problem identification; Determining information needs; Developing marketing research proposal.

UNIT II

Research Design : Meaning and importance; Types of research designs ï explorative, descriptive and conclusive researches; Secondary data ï sources, uses and limitations; Primary data collection methods ï questioning techniques and observation methods; Online data sources and research; Questionnaire preparation. Sample Design and Field Work : Defining universe and sampling unit; Determining sampling frame; Probability and non - probability sampling methods; Sample size determination; Field work and data collection ï sampling and non-sampling errors.

UNIT III

Data Analysis and Report Preparation: Data editing, coding tabulation and graphical presentation; Univariate and multivariate data analyses techniques and their applications in marketing research; Report preparation, presentation and follow - up. Marketing Research Applications: Consumer research ï behaviour and motivation research, attitude measurement and scaling techniques.

UNIT IV

Product research; Advertising research; Marketing and sales forecasting; Sales analysis. Marketing Research in India: Status, organization and developments; Ethical issues in marketing research.

Suggested Readings:

1. Harper W. Boyd, Ralph Westfall and Stanley F. Stasch, Marketing Research: Text and Cases.
2. Malhotra, Naresh K., Marketing Research, 5th Ed., Prentice Hall of India.
3. Cooper, Donald R. and Pamela S. Schindler, Marketing Research, Tata McGraw Hill.
4. Paul E. Green, et.al., Research for Marketing Decisions, Prentice-Hall of India Pvt. Ltd, New Delhi.
5. Donald S. Tull and Del I. Hawkins, Marketing Research: Measurement and Methods, Prentice-Hall of India Pvt. Ltd., New Delhi.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 305 – HUMAN RESOURCE DEVELOPMENT

Objective: The objective of the course is to make student aware of the concepts, techniques and practices of human resource development. This course is intended to make students capable of applying the principles and techniques as professionals in organizations they work for.

UNIT I

Human resource development: Concept and evolution, human resource mobilizations, HRD Conceptual base, strategic interventions in HRD sector and target groups, HRD mechanisms, processes and outcomes, HRD instruments, HRD. HRD and Management: Attitude of top management towards HRD, Motivational aspects of HRD, Trends and Practices, Line manager and HRD.

UNIT II

HRD Activities: HRD culture and climate, Elements of HRD climate, measurement of HRD climate, factors to HRD climate, Determinant needs, developmental supervisor, HRD for Workers: HRD mechanisms for workers, Role of trade unions.

UNIT III

HRD in Organizations: Government organizations, educational institutions, armed forces, police and industry, private sectors and public sectors units.

UNIT IV

Emerging Issues in HRD: Creating awareness and commitment to HRD, Industrial relations and HRD, Utilization of HRD efforts, Future of HRD, International comparison of HRD (Commonalities and differences).

Reference Books:

1. Werner, Jon M. and Randy L. Desimone, Human Resource Development, South-Western Educational Publishing.
2. Nadler, L (ed), Corporate Human Resources Development, Van Nostrand Reinhold.
3. Parek V. and T.V. Rao, Designing and Planning Human Resource Systems, Oxford and IBH, New Delhi.
4. Strategic HRM ï Jeffery Mello, Thompson Publication, New Delhi.
5. Strategic HRM- Charles Greer, Pearson Education Asia , New Delhi.
6. Strategic HRM-Michael Armstrong, Kogan Page, London.
7. Strategic HRM- Agrwal, Oxford University Press , New Delhi.
8. Human Resource Management- Garry Dessler, PHI, New Delhi.

MC. 306 – INDUSTRIAL RELATIONS

Objective: The objective of the course is to make student aware of the concept of industrial relations. The course will make them understand the importance of industrial relations for an organization and how these relations provide dynamics to organizations.

UNIT I

Industrial Relations: Concepts and scope, Historical development, Unilatarist, Pluralist and Marxist perspective of IR. Trade Unionism: role of trade unions, trade union in India, national level federations, Goals and objectives of unions and union leadership, weaknesses in trade unions, trade unions, politics and government. Theories of trade unionism. Cross cultural aspects of union management relations.

UNIT II

Trade Union Act 1926: An overview. Union recognition; de-unionization strategies. Union Management Relations: conceptual framework, union management perspectives, organizational factors affecting union management relations. Public policies and union management relations, role of state, constitution and labour policies, ILO, Major events and international issues, changes affecting HR/IR perspectives, perspectives in India.

UNIT III

Industrial Democracy: Concepts and scopes of industrial democracy, Workerôs participation: Strategy, practices, behavioral science input/contribution and models. Rationale for participation, Issues in participation, strategies for making participation work and making participation more effective. Methods of industrial relation machinery in India; Statutory and non-statutory methods of industrial dispute resolution; Conciliation, mediation, arbitration and adjudication.

UNIT IV

Comparative Industrial Relations: Principles of comparative analysis, variables of comparative analysis (culture, values, ideologies, politico-economic structure). Experience of UK, Yugoslavia, West Germany, Scandinavian countries and Japan. Managing Industrial Relations: Regulatory mechanisms, employee discipline, suspension, dismissal and retrenchment, employee grievance handling, Collective bargaining, negotiation skills, industrial conflict resolution. Labour Welfare: Rationale need and requirements.

Reference Books:

1. Katz, Harry, Thomas A. Kochan, & A. J.S. Colvin, An Introduction to Collective Bargaining and Industrial Relations, The McGraw Hill Companies.
2. C.S. Venkat Ratnam, Industrial Relations: Text and Cases, Oxford University Press, Delhi.
3. Michael Salamon, Industrial Relations: Theory & Practice , Pearson Higher Education.
4. Farnham and Limlott, J., Understanding Industrial Relations Cassell.

GROUP C : INTERNATIONAL BUSINESS

MC. 307 - INDIA'S FOREIGN TRADE AND INVESTMENT

Objective: The objective of this course is to acquaint the students with structure and policy framework of Indiaôs foreign trade and investments.

UNIT I

Indiaôs Foreign Trade: Pattern and Structure of Indiaôs foreign trade; Indiaôs trade in service; Terms of trade; India on the world trading map; Analysis of thrust export products and markets. Foreign Trade Policy and Economic Relations: Policy making body and regulatory framework; Trends and developments in Indiaôs foreign trade policy; Bilateralism and multilateralism in Indiaôs trade relations; India and WTO, WTO and emerging trading environment, Indiaôs trade and economic relations with EU and other regional groupings; India and regional economic cooperation in South Asia.

UNIT II

Export Promotion Measures and Facilities: Export promotion measures and schemes; Export and trading houses, Import facilities for exports; Export processing/special economic zones (EPZs/SEZs) and 100% EOUs ï Policy framework and operational aspect. Institutional Arrangements and Infrastructure Support: Export promotion councils, Commodity boards/export development authorities; other service organizations; Infrastructure Support ï Transportation and warehousing infrastructure, Indian ports and shipping system.

UNIT III

Procedural and Documentary Framework ï An Overview: Trade operations and documentation; Procedure for getting started in export ï import business. Trade contract and INCO terms; Export payment terms and UCDPC; quality inspection; Excise and customs clearance. Foreign Trade Finance and Insurance: Pre - shipment and post-shipment finance; Sources and schemes of foreign trade finance; Exim Bank and foreign trade finance; Coverage of Credit, transit, commercial and political risks; ECGC and risk coverage.

UNIT IV

Foreign Exchange facilities and Regulations; Foreign exchange facilities and exchange rate mechanism; Regulatory framework ï FEMA and its objectives and provisions; Other acts and regulations. Foreign Investments: Indiaôs foreign investment policy and flows: Indiaôs investments abroad ï pattern and structure; Indian Joint ventures in foreign countries and their operations. Balance of Payment Account: Indiaôs Balance of Payment account and adjustment policies; foreign reserves and debt situation.

Reference Books:

1. Ministry of Commerce, Export Import Policy, Government of India, New Delhi.
2. Ministry of Commerce, Handbook of Procedures, Vols. I and II, Government of India, New Delhi.
3. Customs and Excise Laws, Various issues.
4. Nayyar Deepak, Foreign Trade Sector, Planning and Industrialisation in India, in Terance J. Byres (ed.), The State Development Planning and Liberalisation in India, Delhi.
5. Nayyar Deepak, Indiaôs Exports and Export Policies in 1960, Cambridge University Press. Meier G.M., Trade Policy and Development in Scott Maurice and Deepak Lal.
6. Public Policy and Economic Development ï Essays in Honour of lan Little, Oxford.
7. Nayyar Deepak, Indiaôs Export Performance 1970-85, Underlying Factors and Constraints, in Robert E.B. Lucas and Gustav F. Pipanek (ed.), Indian Economy Recent Development and Future Prospects, New Delhi.

MC. 308 - MANAGEMENT OF INTERNATIONAL BUSINESS OPERATIONS

Objective: The course intends to acquaint the students with the management of international business operations of a business firm.

UNIT I

International Business Management: Complexities and issues; Approaches to international management; Cross -cultural values and business management; Foreign market entry mode decisions and level of international involvement; International management orientation; International business management -A strategic perspective. International Planning: Environmental scanning and monito ring; Resource allocation and portfolio compositions of a global firm; Linkages and synergies among business units across borders; Locus of decision making; Headquarter ï subsidiary relationships in international business enterprises; International management information system.

UNIT II

Organizational and Control Aspects of International Operations: Organizational design and structure of international companies; Managing communication across cultures; Co-ordinating and controlling international business operations. International Production and Procurement: International production and location decisions; Procurement for international operations ï International sourcing World class manufacturing and international quality standards; Supply chain management and global business operations.

UNIT III

International Marketing Management: International Market segmentation, targeting and positioning; International marketing mix planning ï Product, price, promotion and distribution decisions. Management of International Financial Operations; International capital budgeting and portfolio investment decisions; International capital structure decision, International working capital management, International accounting and taxation issues.

UNIT IV

International Human Resource Management: Selection, training and development of people in international firms; Compensation and reward systems among international firms; Motivation and leadership in international firms. International Business Negotiations: Process and skills; Management of International Collaborative Arrangements.

Reference Books:

1. Danoes, John D. Radebaugh, Lee H., and Daniel P. Sullivan, International Business: Environment and Operations, Prentice Hall.
2. Griffin, Ricky W. and Pustay, Michael W., International Business: A Managerial Perspective, Prentice Hal.
3. Hill, Charles, W.L., International Business, McGraw Hill Company, New York.
4. Ball, Donald, Wendall H. McCulloch, Miachel Geringer, Michael S. Minor and Jeanne M. McNett, International Business: The Challenge of Global Competition, McGraw Hill Co.

GROUP D: ACCOUNTING AND FINANCE

MC. 309 - STRATEGIC COST MANAGEMENT

Objective: This course aims to acquaint the students with concepts and various aspects of cost management from strategic perspective.

UNIT-I

Conceptual framework of SCM, environmental influences in cost management practices, role of SCM in strategic positioning; cost management tools-life cycle costing, target costing, kaizen costing, JIT & theory of constraints, BPR and bench marking.

UNIT-II

Nature of activity-based costing (ABC); benefits and limitations of ABC; limitation of volume-based costing system, indicates of ABC; activity hierarchic; cost drivers; designing an ABC system, Activity-based management; operational and strategic application of ABC; customer profitability analysis, process value analysis, financial measures of activity efficiency; Nature of value-chain analysis; activity analysis an linkage analysis; application of linkage analysis in cost reduction and value addition.

UNIT-III

Functional-based planning and control; budgeting ï nature, administration and effectiveness; budgeting cycle; activity-based budgeting; kaizen approach; ZBB; performance budgeting; human aspects of budgeting; responsibility centers and financial control - nature and role of responsibility centers; accounting and evaluation of responsibility centers, measuring the performance of investment centre ï ROI, RI, EVA; transfer pricing and its applications.

UNIT-IV

Strategic-based performance measurement system: Balanced score card-prospective and limitations; establishing objectives and performance measures in different perspectives of balance score card; productivity measurement and control; productivity efficiency; partial and total productivity measurement; measuring changes in activity and process efficiency; quality cost management and reporting.

Reference Books:

1. Drury, Colin, Management Accounting and Control, Thomson Learning.
2. Horngren, Datar Foster, Cost Accounting, Pearson Education.
3. Hansen and Mowen, Cost Mangement, Thomson Learning.
4. Kaplan, Atkinson and Young, Management Accounting, Pearson Education.
5. Kaplan, Atkinson, Advanced Management Accounting, Pearson Education.
6. Anthony, Robert N., and Vijay, Management Control System, McGraw Hill.

MC. 310 - INTERNATIONAL ACCOUNTING

Objective: The objective of this course is to develop some conceptual knowledge and Understanding of international accounting issues among students. In addition, this course makes students capable of tackling issues in prevailing regulatory environments.

UNIT-I

International Dimensions of accounting and control: Multinational enterprise, Inter-nationalisation of capital markets, Internationalization of accounting profession. Operational and conceptual issue. Foreign currency translations, methods and practices.

UNIT-II

Specific Reporting Issues: Regulatory Disclosure Requirements; Foreign Operations Disclosure; Social Responsibility Disclosures. Managerial Accounting Issues: Strategic Planning; Management Control Systems; Performance Evaluation of foreign operations.

UNIT-III

International Accounting Standard Board and International Financial Reporting Standards (IFRS): Advantages, supporting and deterring forces; International and Regional Efforts in Standard Setting; International Standards setting process, Harmonization; Financial Statement Analysis of companies and countries differences in accounting principles, foreign currency statements and Ratio Analysis.

UNIT-IV

Transfer pricing, methods, objectives, strategies. Emerging issues in International Accounting.

Reference Books:

1. Radebaugh L. H. and S.J. Gray, International Accounting, and Multinational Enterprises, John Wiley & Sons.
2. Sandagaran S.M., International Accounting, South Western.
3. Gray, S.J., International Accounting and Transnational Decisions , Butterworth, London, U.K.
4. Holzer H. Peter, International Accounting, Horper and Row Publishers, New York.
5. Frederick D.S. Choi and Gary K. Meek, International Accounting, Pearson Education.
6. Shirin Rathore, International Accounting, Prentice Hall of India.

GROUP E: APPLIED ECONOMICS

MC. 311 - INDUSTRIAL ECONOMICS

Objective: The objective of the course is to acquaint students of economic concepts as applied to industrial behaviour. The course makes student capable to analyse and take decisions in respect of a firmôs or industryôs operations.

UNIT-I

Scope and Methods of Industrial Economics: Objectives of Industrial Economics, Firms, Industry and Markets. Industrial and Market Structure: Pattern of Industrial Structure, Industrial inter-dependence, Structure and performance, determinants of Market -Structure.

UNIT-II

Economies of size: Economies of size, vertical and horizontal integration, diversification, economies of scale and scope. Merger, acquisition and takeover, innovation, export led industrialization. Economies of location and spatial structure. Economics of ownership structure.

UNIT-III

Economics of Non-Price Decision of firm: Research and Development and Innovation: R & D expenditure decision, Financing R &D, Relationship between R & D and valuation, Economics of R & D, Structure of Market and R & D, Transfer of Technology.

UNIT-IV

Performance measurement: Profitability, Productivity and capacity utilization, Accounting measure and growth. Perfect and workable competition. State intervention in private sector, legal and institutional framework, competition policy, public policy and development of corporate sector.

Reference Books:

1. Divine P.J., N. Lee, R.M. Jones and W.J. Tyson, An Introduction to Industrial Economics, Anmol Publications.
2. Hay, A. Donald and Derek J. Morris, Industrial Economics: Theory and Evidence, Oxford University Press.
3. Scherer F.M. and David Ross, Industrial Market Structure and Economic Performance, Houghton Miffin Company, Boston.
4. Mukherjee, Dilip (Ed.), Indian Industry, Policies and Performance, Oxford University, Calcutta, India.
5. Seth, V.K. and A.K. Seth, Dynamics of Labour Absorption in Industry, Deep and Deep Publication, New Delhi.
6. Koutsoyiannis A., Economics of Non-Price Decision of Firms, Macmillan 1980, London.
7. Seth, V.K., Capacity Utilisation Industrial: Theory and Evidence, Deep and Deep Publisher, New Delhi.
8. Nayyar Deepak (ed.), Industrial Growth and Stagnation: The Debate in India , Sameeksha, Trust, Bombay.

MC. 312 - APPLIED ECONOMETRICS

Objective: The objective of the course is to acquaint students of the methodology of econometrics and make them capable of applying it to business problems. The emphasis will be on application aspects with theoretical understanding.

UNIT-I

Basic Concepts: Definition and scope of econometrics; model specification; desirable qualities of models; evaluating an econometric model; Random variables, stochastic variables and the stochastic error term; probability distributions (review); estimators, desirable qualities of a good estimator; maximum likelihood estimators (definition). The multiple regression model; The 3 variable model; partial regression and correlation coefficients; assumptions of the classical linear model; Derivation of Ordinary Least Squares Estimators; Properties of OLS estimators, OLS AS BLUE; Variances and Standard deviations; Goodness of fit: R -squared and adjusted R-squared; Tests of significance t and F tests; Hypothesis testing involving more than one parameter; Forecasting; Evaluation of Forecasts; Mean Squared error, RMS error.

UNIT-II

Extensions of the basic linear model: 1) Model transformable to linear form: Estimation of elasticity by log-linear models; Growth rates by semi -log models; linear -log models; polynomial regression models (espquadratic). 2) Qualitative variables: Qualitative independent variables and dependent variables (into only); applications of dummy variables; Time dummy, intercept dummy and structural change.

UNIT-III

Relaxing the assumptions of the basic linear model: 1) Multicollinearity: Perfect and imperfect multicollinearity; consequences of multicollinearity, detection and solution. 2) Heteroscedasticity: Nature and Causes; Consequences; Detection by graphical analysis of residuals and Parks test; Solution of Heteroscedasticity: Weighted Lease Squares. 3) Autocorrelation: nature and causes; Consequences; Detection by graphical analysis and D-W Test, Solution for AR. 4) Error in measurement. 5) Specification bias. 6) Simultaneous Equation Bias.

UNIT-IV

Estimation and specifications: Demand, Sales, Cost, Production and Consumption functions. Simultaneous equation system: Identification and Estimation of the model.

Reference Books:

1. Pindyck R.S. and D. Rubinfied, Econometric Theory and Models, McGraw Hill.
2. Gujarati, D.E., Essentials of Econometrics, McGraw Hill.
3. Koutsoyiannis, A., Theory of Econometrics, 3rd ed., Macmillan.
4. Julia Malden, Application of Econometrics, Hartiage Publishers.
5. Johnston, J., Econometric Methods, McGraw Hill Book Company, New Delhi.
6. Judge George G. et. al. Introduction to the Theory Practice of Econometric, John Wiley and Sons, New York.
7. Pesaran M. Hashem and Peter Schmiod (Ed.), Handbook of Applied Econometric, Vol. I & II Blackwell Publishers.
8. Intricigalor Michael D., Ronal G. Bodkin, Cheng Hsiao, Econometric Models, Techniques and Applications, Prentice Hall.

GROUP F: BANKING AND INSURANCE

MC. 313 - BANK MANAGEMENT

UNIT-I

Banking structure in India - banking functions and services - Foreign commercial banks - Private commercial banks - capital adequacy. Principles of lending - financial adequacy assessing the borrower - project appraisal - structural and Infrastructural analysis ï legal formalities - follow up loans, asset management companies.

UNIT-II

Non Performing Assets (NPAs) - Early Warning Signals - Management of NPAs - Remedies Available - Recent Measures - loan recovery tribunals - Provisions of Revenue Recovery Act.

UNIT-III

Investment management - priorities in allocation of bank funds - investment in governments securities - maturity and yield - quality and diversification, profitability management - profit planning.

UNIT-IV

Traditional Banking vs. E-Banking - facets of E-Banking - Internet Procurement - E - Banking Transaction - Electronic Delivery Channels - Truncated Cheque ï Complete Centralized Solution - Features of CCS - Advances of E-Banking - Constraints in E-Banking - Security Measures.

Reference Books :

1. Varshney, PN. Banking Law & Practice, Sultan Chand, New Delhi.
2. S.N.Maheswari, Banking Law & Practice, Ludhiana, Kalyani Publications.
3. Vasant Desai, Principles of Bank Management, Mumbai, Himalaya Publications.
4. K.Subramanian, Banking Reforms in India, TMH, New Delhi.
5. Joseph Sinkey, Commercial Bank Financial Bank Financial Management, Pearson Education (Prentice Hall)
6. E.Gordon and Dr. K. Natarajan, Banking Theory Law and Practice ï Himalaya Publishing House.

MC. 314 - INSURANCE MANAGEMENT

Objective: This course aims at a familiarizing the participants with the concept of insurance, the risk and its management, various insurance policies and their structure along with the legal dimensions involved. This course also aims at providing the knowledge of Insurance Companyôs Management.

UNIT-I

Conceptual Framework: Risk, Peril and hazard, classification and burden of risk. Insurance as a device to hedge risk. Elements of insurable risk. Development life. Functions of Insurer, Government as Insurer and a regular. Structure of Indian Insurance Industry. Principles and Practices of General Insurance: Meaning, Functions and Scope of Fire, Engineering, Accident, Marine and Aviation Insurance. Fire Insurance ï Types of Policies ï Floating Policies and Declaration Policies; Endorsements and Clauses ï Fire Protection System, Discounts ï Special Rating of Large Industrial Risks.

UNIT-II

Industrial Risk Insurance. Consequential Loss Insurance ï Standard Consequential Loss Policy Form ï Conditions. Engineering Insurance: Machinery Breakdown Insurance ï Contractors All risks Insurance and various other policies ï Miscellaneous Annual Policies ï Advance Loss of Profits Insurance. Motor Insurance ï type of: Vehicles and their Policies ï Rules & Regulations ï Policy Forms. Public Liability Policy: Professional Indemnities ï Employersô Liability Insurance. Personal Accident: Scope of Various covers. Miscellaneous (Accident) Insurance: Fidelity Guarantees and Bonds ï Burglary Insurance ï Money-in-transit Insurance, Bankerôs Indemnity Insurance and other important insurance covers.

UNIT-III

Aviation insurance: Special Features ï types of Cover, Marine Insurance including Inland Rail/Road transit insurance. Life and Health Insurance: Life Insurance and annuities broad classification of Life insurances, special purpose policies; Family income, Family maintenance, Family policy, Joint Life Policies, Classes of life insurance, Health Insurance: Medical Insurance Types of Health Insurance Coverages, types of losses covered. Health insurance contract. Buying a health insurance policy.

UNIT-IV

Legal frame work of Insurance: Insurance and Law of Contracts, characteristics of an Insurance Contract, Interpretation of the Contract, Doctrine of informal Warranties and beneficent interpretation, Exclusion of Coverageôs. Organization and Administration of Insurance: Management Organization: Departmentalisation, marketing, Claims, and loss control, underwriting and pricing of insurance, retention and re-insurance; Financial Structure, reserves of property and liabilities of insurer, earned surplus and profitability, Insurerôs Investments, Financial Reporting.

References Books:

1. W.A. Dinsdale, ñElements of Insuranceò, Pitaman, 1971.
2. Dorfman Marks S., ñIntroduction to Risk Management and Insuranceò, 5th Edition, Prentice Hall Inc., Englewood Cliffs N.J .
3. Nicholas Legh ï Jones, John Birds and David Owen, ñMacGillivray on Insurance Lawò, 11th Edition, Sweet & Maxwell, London, 2008.
4. Denis Riley, ñConsequential Loss Insurance and Claimsò, 4th edition, London: Sweet & Maxwell, 1977.

PAPER 7: MC. 315 - WORKSHOP ON FINANCIAL MARKETS & INSTRUMENTS
(For Regular Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT – I

Indian Financial System: Constituents, Functions of the Financial System Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System.

UNIT – II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits, Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT – III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT – IV

Innovative Financial Instruments and Financial Services: Bonds, features and innovations : Ex-interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System, Tata McGraw, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi
4. Desai, V: Indian Financial System and Development (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services, Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds, (Business Publications Inc.)
7. Dietrich, J.K: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K : Development of Indiaõs Financial System, Sarup & Sons.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (d) Presentation session of the students on the assigned project.

PAPER 7: MC. 315-A - FINANCIAL MARKETS & INSTRUMENTS
(For USOL Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT–I

Indian Financial System: Constituents, Functions of the Financial System, Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System

UNIT–II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange Market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT–III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE, Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT–IV

Innovative Financial Instruments and Financial Services: Bonds features and innovations: Ex- interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System , Tata McGraw Hill, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi.
4. Desai, V: Indian Financial System and Development. (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services , Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds (Business Publications Inc.
7. Dietrich, J.K.: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K: Development of Indiaôs Financial System, Sarup & Sons.

SEMESTER-IV

PAPER 1: MC. 401 – PROJECT PLANNING AND CONTROL

Objective: The objective of the course is to provide the student with skills necessary to create, plan and control a new Enterprise.

UNIT – I

Project Identification, Formulation and Planning : Understanding environment for business opportunities Idea generation, short listing and selection of product/service stages in Venture Appraisal- Technical, Financial, Economic and Social Appraisal Location, Factory Design and Layout. Commercial vs. National Profitability Social Cost - Benefit Analysis (broader concept only). Feasibility Report Preparation for new Enterprise - format and contents.

UNIT – II

Market and Financial Appraisal : Market Survey ï Design, Data Sources and Methodology, Market Segmentation and product differentiation, Forecasting Future demand and Distribution Analysis, Preparation of the Sales Plan and Report Estimation of Financial Requirement.

UNIT – III

Application of Capital Budgeting Techniques, Risk and Uncertainty Analysis for the new enterprise, Planning Capital Structure and Financing Project Financial viability Study.

UNIT – IV

Project Implementation and Management : Project Organisation and Control Network Analysis ï PERT & CPM Cost and Time Over-run Project Follow up and Monitoring.

Reference Books:

1. Chandra, Prasanna : Project Prepartation, Appraisal and Implementation, Tata Mc Graw Hill, N. Delhi.
2. Desai, Vasant : Entrepreneurial Development, Vol.II Project Formulation Appraisal and Financing for Small Industry, Himalaya Publ. N. Delhi.
3. Nicholas : Project Management for Business and Technology: Principles and Practice (Prentice Hall of India, N. Delhi.
4. Pitala : Project Appraisal Techniques, Oxford & IBH Publication.
5. Yound, Trevour L. : Planning and Implementing Project, Sterling Publishing Ltd.
6. Krishnan and Moorthy : Text Book of Project Management, Mac Millan India Ltd.
7. Singh, Narendra : Project Management & Control, Himalaya Publ., N. Delhi.

PAPER: 2 MC. 402 - KNOWLEDGE MANAGEMENT

Objective: The main aim of the course is to create awareness amongst the students to know the details of Knowledge Management in the changing scenario and its significance in framing the business strategy.

UNIT-I

Concept of knowledge, Major Philosophical Schools, Knowledge in economic and management theories, Knowledge as competitive resource, Knowledge intensive organization, Knowledge value chain.

UNIT-II

Knowledge management systems, Barriers to knowledge sharing, Expert systems.

UNIT-III

Knowledge creation as a tool of excellence, tacit and explicit knowledge, Models of knowledge creation process, Critical enabling conditions, Cross leveraging knowledge.

UNIT-IV

Knowledge management strategy and business strategy, Knowledge architecture, Organizational design for knowledge management, Role of Top and Middle management, Knowledge based reward systems.

Reference Books:

1. Devenport, T. H. and Prusak, L. : Working Knowledge; How Organizations Manage What They Know; Harvard Business School Process.
2. Dorothy Leonard Barton : Well Springs of Knowledge, Harvard Business Process.
3. John Sparrow : Knowledge in Organisations, Sage Publications..
4. J.W. Cortada, and J. A. Woods : Knowledge Management Year Book 1999-2000, Butterworth.
5. Richard Huseman and Jon Goodman : Leading with Knowledge, Sage.
6. Ikujiro Nonako and Hirotaka Tekeuchi : Knowledge Creating Company, OUP.
7. Madhukan Shukla : Competing Through Knowledge, Response Books.

PAPER 3: MC. 403 – BUSINESS ETHICS AND CORPORATE GOVERNANCE

UNIT-I

Business Ethics: Introduction to Business Ethics, Ethics, Morals & Values, Concepts of Utilitarianism and Universalism ï Theory of rights, theory of Justice ï Virtue ethics ï ethics of care ï Law and Ethics. The Nature of Ethics in Management Business Standards and Values, Value Orientation of the Firm. Typical Problems in Business Ethics: Environmental Pollution & Society, Marketing Ethics (in Products, Pricing, Promotion and Place) and Consumer protection ï Ethics in Human Resources management (Recruitment and promotion policies, Working Conditions,, Down Sizing Workforce), Ethical issues at the top management, Ethics in financial markets and investor protection ï Ethical responsibility towards competitors and business partners.

UNIT-II

Complexity of Ethical Issues: Conflicts in decision making from ethical and economic point of view, Ethical Dilemma, Solving ethical dilemma Managerial integrity and decision making. Ethical Leadership: Personal Integrity and self development ï wisdom based leadership. Corporate Governance: History of Corporate form and models, Corporate Objectives and goals, Ownership pattern ï Issues in managing public limited firms ï Agency problems. Nature & Evolution of Corporate Governance: Global and National Perspectives ï Global Corporate Governance models, Anglo American and Relationship model (Germany, Japan and France) Claims of Various Stakeholders, Why governance ï Changes in eighties Cadbury Report, Hampel Report and OECD Committee Recommendations ï SOX Act.

UNIT-III

Internal Corporate Governance Mechanism: Board of Directorsð Functional Committees of Board; Code of conduct, whistle blowers. External Corporate Governance Mechanism: Regulators, Gate keepers, Institutional Investors, Corporate raiders, Corporate Governance Ratings Corporate Governance in India: corporate form in India 50s to 90s ï developments in Corporate Governance in India in nineties and 2000s ï CII, Kumaramangalam, Narayanamoorthy, Naresh Chandra, JJ Irani Committee reports ï Legal and Regulatory Changes ï introduction and modification of Clause 49, Corporate governance in practice in India .

UNIT-IV

Cases:

1. A Dent in Wal Martôs Public Image - The PR Strategy.
2. China Aviation Oilôs Collapse: Singapore INCôs challenges.
3. Child labor in Coca Industry.
4. Obesity Concerns: Burger Kings Product Revenges.
5. Bhopal Gas Tragedy

Source

(a) Case Studies for Managers, Vol. II, IBSPCD
(b) BECG Main Reference Book

Reference Books:

1. Velasquez, M. G., Business Ethics: Concepts and Cases, Prentice Hall of India.
2. Monks, R. / Minow, N. Corporate Governance, Blackwell.
3. Banks, Eric., Corporate Governance, John Wiley.
4. Fernando, A C., Corporate Governance, Pearson Education.
5. N. Gopalsamy : Corporate Governance : The New Paradigm, Wheeler Pub., New Delhi.
6. Surendar Kumar : Corporate Governance : A Question of Ethics, Galgotia Pub., New Delhi.
7. N. Balasubramanian : Corporate Boards and Governance, Sterling Pub., New Delhi.
8. Harvard Business Review : Harvard Business Review on Corporate Governance, Boston Harvard Business School.

SEMESTER IV (ELECTIVES) GROUP A: MARKETING MANAGEMENT

MC. 404 - ADVERTISING AND SALES MANAGEMENT

Objective: The course aims at enabling the students to develop an in-depth understanding of the modern concepts and latest techniques of advertising and personal selling and sales force Management which constitute a fast -growing area of marketing.

UNIT-I

Advertising: Communication Basics: Role of communication; Communication process and flows; Planning the promotion mix; Advertising: Nature and importance; Advertising and the economy; Advertising and publicity; Advertising management process ï an overview; Determining target audience; Advertising objectives and positioning decisions; Advertising budget decisions. Message Decision: Determining advertising message; Developing advertising copy ï Headline main copy, logo, illustration, appeal, layout, creativity in advertising.

UNIT-II

Advertising through the internet; Media selection; Media scheduling. Organization of Advertising Operations: In -house vs. advertising agency arrangements; Managing advertising agency relations; valuation of advertisement and campaign effectiveness ï Before - and ï after advertising tests and techniques. Advertising in India; Social and regulatory aspects of advertising. Recent developments and issues in advertising.

UNIT-III

Sales Management: Fundamentals of Personal Selling: Nature and importance of Selling; Types of selling; Personal selling, salesmanship and sales management; Process of effective selling; Strategic Sales management. Sales Planning: Setting personal selling objective; Market analysis and sales forecasting; Sales budget; Sales territory; Sales quota.

UNIT-IV

Sales Organization: Organization structure; relationship of sales department with other departments; Distribution networks relationship. Sales Force Management: Recruitment and selection; training and development; motivating, supervising and compensating sales personnel; Controlling the sales effort; Evaluation of sales personnel; Sales and cost analysis. Ethical and legal aspects of selling.

Reference Books:

1. Aaker, David A., Rajeev Batra and John G. Mayers, Advertising Management, Prentice Hall of India, New Delhi.
2. Belch,. George and Michael Belch, Advertising and Promotion : An Integrated Marketing Communications Perspective , McGraw Hill.
3. Mandell, Maurice, Advertising , Prentice- Hall of India, New Delhi.
4. Still, Richard R. Edward W. Cundiff and Norman A.P.Govoni, Sales Management: Decisions, Strategies and Cases, Prentice Hall of India, New Delhi.
5. Anderson B. Robert, Professional Selling, Prentice-Hall Inc.
6. Spiro, Rosann, William J. Stanton and Greg Richo, Management of a Sales Force, McGraw Hill/Irwin.
7. Pederson Carlton A/, Miburn D. Wright, Barton A., Weitz, Selling Principles and Methods, Richard D. Irwin, Illinois.

MC. 405 - SERVICES MARKETING

Objective: To understand the service product and key elements of services marketing mix. Another objective deals with managing the service delivery process and the implementation of services marketing.

UNIT-I

Introduction to services marketing: role of services marketing; consumer behaviour in service encounters; customer interaction, purchase process, needs and expectations of customers; positioning services in competitive markets; search for competitive advantages; market segmentation, positioning vis-à-vis competitors.

UNIT-II

Creating the service product: Identifying and classifying supplementary services, planning and branding service-products, new service development; designing communication mix; branding and communication; effective pricing objectives and foundations for setting prices; distributing services; options for service delivery, place and time decisions, delivery in cyberspace, role of intermediaries.

UNIT-III

Designing and managing service processes; service process redesign, customer misbehavior; balancing demand and capacity: fluctuations in demand, capacity constrain, planning the service environment; consumer responses to and dimensions of service environment; managing people for service advantage: service leadership and culture.

UNIT-IV

Managing relationship and building loyalty; customer-firm relationship, analyzing and managing customer base; customer management relationship system in services marketing; customer feedback and service recovery; customer complaining behaviour, principles and responses to effective service recovery, service quality and the gap model, measuring and improving service quality, defining, measuring and improving service productivity; organizing for service leadership; search for synergy in service management, creating a leading service organization.

Reference Books:

1. Lovelock, Christopher, Wirtz, Jocken and Chatterjee, Jayanta; Services Marketing - People, Technology, Strategy; Pearson Education; New Delhi.
2. Zeithaml, Valarie A. & Bitner, Mary Jo, Services Marketing ï Integrating Customer Focus Across the Firm; Tata McGraw Hill, New Delhi.
3. Rao, K., Rama Mohana, Services Marketing, Pearson Education, New Delhi.
4. Hoffman & Bateson, Essentials of Service Marketing; Thomson Asia Ptc. Ltd., New Delhi.
5. Rampal, M.K. & Gupta, S.L., Services Marketing; Galgotia Publications; New Delhi.
6. Shanker Ravi, Services Marketing ï The Indian Perspective, Excel Books, New Delhi.

MC. 406 - CONSUMER BEHAVIOUR

Objective: Knowledge of consumer behaviour is a prerequisite for developing effective marketing strategy. The purpose of the course is to provide an in-depth understanding of the consumer and industrial buying processes and their determinants as relevant for marketing decision making.

UNIT-I

Consumer Behaviour: Importance and nature of consumer behaviour; Types of consumers and their role; Consumer buying process and determinants; Changing profile of Indian consumers.

UNIT-II

Individual Differences in Consumers: Needs and motivation; Perception; Attitude and attitude change; Learning and learning theories; Personality and life style analysis.

UNIT-III

External determinants of Consumer Behaviour: Family and its influence on consumer buying behaviour; Group and their influences; Social class; Culture and sub-culture.

UNIT-IV

Models of consumer behaviour; Business buying behaviour. Cross-cultural dimensions of consumer behaviour; Consumer research ï complexities and issues.

Reference Books:

1. Schiffman, L.G. and L.L. Kanuk, Consumer Behaviour, Pearson, Ltd., New Delhi.
2. Engel, J.F., Roser D. Blackwell and Paul W. Miniard, Consumer Behaviour, Cengage Learning.
3. Peter, J. Paul, and Jerry C. Olson, Consumer Behaviour and Marketing Strategy, McGraw Hill.
4. Assael, H., Consumer Behaviour and Marketing Action, Cengage Learning.
5. Hawkins Dell, Roger J. Best, Kenneth A. Conej, Consumer Behaviour, Building Marketing Strategy.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 407 - ORGANISATIONAL CHANGE AND DEVELOPMENT

Objective: This course is designed to provide I depth understanding of behavioural interventions and enable the students to apply these intervention for building individual, team, system, systems and process related competencies and helping organizational to achieve peak performance and become self sustaining.

UNIT-I

Organizational Change - Meaning, nature, types; theories of planned change; Organizational development ï nature and characteristics; process of organizational development.

UNIT-II

Human Process Interventions - T-group, process consultation, third party interventions, team building; organizational confrontation meeting, coaching and mentoring, role focused interventions.

UNIT-III

Techno structural Interventions - Restructuring organization, reengineering, employee involvement, work design; Strategic Interventions ï Organisation and environment relationships, organization transformation.

UNIT-IV

Contemporary issues and applications ï Organizational development in global context, organizational development in service sector, OD Practioners ï role, competencies requirement, professional ethics and value and experiences; future trends in OD.

Reference Books:

1. Cummings, Thomas G. and Christopher G. Worley, Organisation Development and Change, Thomson Learning.
2. Ramnarayan S., T.V. Rao and Kuldeep Singh, Organisation Development Interventions and Strategies, Response Books, New Delhi.
3. French, Wendell L. and Lecil H. Bell, Organisation Development, PHI, New Delhi.
4. Chowdhury, Subir, Organisation 21C, Pearson Education.

MC. 408 - TRAINING AND DEVELOPMENT

Objective: The objective of the course is to familiarize the students with basic concepts and principles of Training and Development of Human Resource and train them to understand the learning environment of a firm. The knowledge so obtained will make them capable of providing training to Human Resource of a business firm.

UNIT-I

Conceptual Framework: The functions of training, relationship of training to organizational and individual goals, Factors effecting successful training process, Skills of a successful trainer ï Internal and external trainer. Training and Learning: The learning process, learning curve, principles of learning, training guidelines, experience versus training, kinds of training, system approach to training, programmed instruction, transfer of training.

UNIT-II

Training Needs Assessment and Curriculum Development: Identification of Training and Development needs, training needs assessment - various approaches (the job and the Individual), Advantages and disadvantages of basic needs assessment techniques.

UNIT-III

Assessing curriculum needs, curriculum standards, matching organizational training needs, Developing training materials. Training Methods: Three Stages of training (Preparatory, implementation and follow - up stage), On the job and off -the job methods,, experiential versus non-experiential methods.

UNIT-IV

Evaluation of Training and Development, and Emerging Pattern: Reasons of evaluating training, Criteria for evaluation, problems of evaluation, steps involved in evaluation, methods for training evaluation, analysis and costing of training. Emerging Pattern of Training and development in India.

Reference Books:

1. Prior John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Donald F. Michalak and Edwin G. Yager, Making the Training Process Work, Harper and Row, New York.
3. Jack J. Phillips, Handbook of Training Evaluation and Measurement Methods , 3rd Edition,
   Houston, Gulf Publishing Co.
4. Lynton R., Pareek, U., Training for Development, 2nd Edition, New Delhi, Vistaar.

MC. 409 - COMPENSATION MANAGEMENT

Objective: This course is designed to promote understanding in issues related to compensation in corporate sector and impart skills in designing, analyzing and restructuring compensation management system, policies and strategies.

UNIT-I

Role of compensation in organization: Economic and behavioural theories related to compensation; strategic perspectives of compensation; compensation as motivational tool; compensation policy.

UNIT-II

Internal and external equities in compensation system; determining the worth of jobs; understanding inter and intra-industry compensation differentials, designing pay structure and administrating compensation package; understanding different components of compensation package like fringe benefits, incentives and retirement plans; pay for performance plans.

UNIT-III

Compensation of special group: Corporate Directors, Chief Executives, Senior Managers; components of executive compensation package; compensation of professionals and knowledge workers, R&D staff, sales compensation plan, international compensation.

UNIT-IV

Statutory provisions governing different components of reward system; working of different institutions related to reward system like wage boards, pay commissions, role of trade unions in compensation management; tax planning.

Reference Books:

1. Milkovich, George T. and Newman J.M., Compensation, Tata McGraw Hill.
2. Henderson, R.O., Compensation Management, Pearson Education.
3. Martocchio, J.J., Strategic Compensation, Pearson Education.
4. Armstong, M. and Murlis H., Reward Management, Kogan Page, UK.
5. Singh, B.D., Compensation Reward Management, Excel Books, New Delhi.

GROUP C: INTERNATIONAL BUSINESS

MC. 410 - INTERNATIONAL BUSINESS ENVIRONMENT

UNIT-I

An Overview of International Business Environment ï Economic environment ï political and regulatory environment ï demographic environment ï social, cultural and technological environment, International Economic Environment ï Regional integration and trade blocks ï Types of integration ï theory of customs union, European union ï regional groupings ï integration of developing countries ï SAARC, SAPTA, international commodity agreements ï quota agreements ï Cartels ï Bilateral & Multi lateral contracts ï Economic institutions ï International Monetary Funds (IMF) ï World Bank, Asian Development Bank, UNCTAD, UNIDO, International Trade Centre, WTO, GATT, GATS, TRIM, TRIPS.

UNIT-II

International Trade and Investment Theory - Historical developments of Modern Trade theory ï Investment theories ï Theory of capital movements ï Market imperfections ï Internationalisation ï Appropriability ï Location specific advantage ï eclectic. International Trade and Payments: Government Influence on Trade: Trade in merchandise ï Trade in services ï Global sourcing ï degree of dependence ï balance of payments ï trade and BOP of India. Cultural contacts of global management ï Understanding the role of culture ï communicating across cultures ï cross cultural negotiations and decision making.

UNIT-III

International Investment : Types and significance of foreign investments ï factors affecting international investment ï growth and dispersion of FDI ï cross border mergers and acquisitions ï foreign investment in India ï The New Policy ï EURO/ADR issuesï M&Aï Indian companies going global. Multi National Corporation : Definition and Meaning ï Importance and dominance of MNCs ï Code of conduct ï MNCs in India ï Transfer of Technology ï global competitiveness ï indicators of competitiveness - competitive advantage of nations ï Technology and Global competitiveness.

UNIT-IV

International Monetary System and Foreign Exchange Marketing: The Pre- Bretton Woodôs period, Break down of Bretton Wood system and emergence of EMS, EU and EURO. Social Responsibilities and Ethics, MNE Social Responsibilities, Efficiencies, Perspectives, Ethics, Technological Perspective, Foreign Corrupt Practices Act.

Reference Books:

1. The International Business Environment by Anant K. Sundaram / J. Stewart Black-Prentice Hall
2. International Business environments and Operations, John Daniel, Lee H Radebaugh, Daniel P Sulivan- Pearson Education.
3. International Management Managing Across Borders and Cultures, Fourth Edition by Helen Deresky ï PHI
4. Dynamics of Successful International Business Negotiations by Robert T. Moran, William G. Stripp ï JAICO
5. The International Environment of Business by Gerald M. Meierï Oxford Press.

MC. 411 - GLOBAL FINANCIAL MANAGEMENT

UNIT-I

Global Financial Environment : Financial Goal and Corporate Governance - Macro & Micro Intõl. Finance, - Intõl Monetary System & Crisis - Balance of Payment. Foreign Exchange Theory and Market: The Foreign Exchange Market and Problem, The Foregin Exchange Rate Determination.

UNIT-II

Foreign Currency Derivatives: Forward, Future and Option Market, PPP, IRP IFE, and International Parity Condition: International Triangula Arbitrage-Covered Interest Arbitrage.

UNIT-III

Forex Exposure & Risk Management - Transaction, Operating/Economy & Translation/Accounting Exposure - Currency Hedging Strategy. Transaction Exposure Management : - International Financial Engineering; Working Capital Management in Multinational Corporations.

UNIT-IV

Financing the Global Firm : - Global Cost of Capital & Available of Capital ï Sourcing Equity Globally - Financing Structure & International Debt - International Portfolio Theory - FDI Theory & Strategy.

Reference Books:

1. Madura J. : International Corporate Finance, 8th Edition, South Western Publishing Company.
2. Alan C. Shapiro, Multinational Financial Management, 6th Edition, Prentice-Hall International Inc.
3. Solnik, B. McLeavey, D. : Global Investment, 6th edition, Pearson Addison Wesley.
4. Richard M. Levich, International Financial Market, Prices and Polices , McGraw-Hill.
5. Hamdy Hady, Manajemen Keuangan Internasional edisi 3, YAI dan PT. Hecca Mitra Utama.

MC. 412 - INTERNATIONAL MARKETING MANAGEMENT

UNIT-I

Introduction: Basic Concepts of International Marketing, Definition and Dimensions of International Markets, Differences Between Domestic and International Marketing, Benefits of International Marketing, EPRG Framework in International Marketing, Changes of Development into Global Marketing.

UNIT-II

Environment of International Business: Introduction, Political and Legal Environment, Cultural Environment, Financial and Monetary Environment. Indian Foreign Trade: Indian Trade Policy, Recent Transit in Indiaגs Foreign Trade, Export Assistance, Institutional Infrastructure for Export Promotion in India, EXIM Policy of India.

UNIT-III

Identification of Foreign Markets: Product Planning for Exports, Export Pricing, Market Entry and Overseas Distribution System, Promoting Products, Internationally Role of WTO .

UNIT-IV

Overseas Market research, Marketing Plan for Exports, New Techniques in International Marketing, International Sub-Contracting, Joint Ventures, Multinationals Exports Finance, Risk Export Documents and Procedures.

Reference Books :

1. R. Srinivasan, International Marketing, Prentice Hall of India, New Delhi.
2. Onkvisit & Shaw ï International Marketing: Analysis and Strategy. (PHI)
3. Keegan, Global Marketing Management, PHI.
4. Rathore & Rathore, International Marketing, Himalaya Publishing , New Delhi.
5. Gitman, Global Marketing, Pearson.
6. Francis Chernnilam, International Marketing, Himalaya Publishing Home.

GROUP D: ACCOUNTING & FINANCE

MC.413: ADVANCED CORPORATE ACCOUNTING

Objectives: Corporation is the most important part of the economic development of a company. With pace of development of the emerging scenario, the corporate accounting is also becoming little bit tougher. This paper will enable the students to learn the advanced accounting in the field of corporate world.

UNIT-I

Business Acquisition and Conversion of partnership into limited company and Limited Liability Partnership (LLP): Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company ï with and without same set of books Amalgamation of firms, accounting in the books transferor and transferee firm.

Investment Accounts : Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.

UNIT-II

Company Merger and Reconstruction: Amalgamation, Absorption and Reconstructionï Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (both for amalgamation in the nature of Merger and of Purchase); inter-company transactions (including inter-company share holding). Internal reconstruction ï meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction.

UNIT-III

Valuation: Goodwill ï Valuation using different methods i.e., Average Profit, Super Profit, Capitalization and Annuity. Shares ï Valuation using different methods: Intrinsic, Earnings, Dividend Yield, Earnings-Price, Cum-div and Ex-div, Majority and Minority view and Fair Value.

UNIT-IV

Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest ï Basic principles and preparation of CBS; CBS with loss balance of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intergroup Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding).

Reference Books:

1. Sukla, Grewal, Gupta, Advanced Accountancy, Vol. II, S. Chand.
2. R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand.
3. Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing.
4. Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication.
5. Hanif & Mukherjee, Corporate Accounting, TMH.
6. L.S.Porwal, Accounting Theory, Tata Mcgraw Hill.
7. Gokul Sinha, Accounting Theory & Management Accounting.
8. B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
9. Frank Wood, Business Accounting Vol II, Pearson.
10. V.K.Goyal, Corporate Accounting, Excel Books.

MC. 414 - SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: To enable the students to understand various techniques of analysis used in investment decisions, portfolio analysis and efficient portfolio management.

UNIT-I

Security Market Analysis: Investment environment, Types of return and risk; Sources of risk Technical Analysis, Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis.

UNIT-II

Forms of Market Efficiency and Valuation of Securities : Random Walk Theory Form of Market efficiency Analysis of Bond/ Debentures: Valuation of bonds Analysis of risk in bonds-duration and convexity Valuation of Equity and Options.

UNIT-III

Portfolio Analysis : Portfolio Management ï Meaning, Evaluation & Role Risk & Return of a Portfolio, Risk Diversification Markowtiz Risk-Return Optimisation Single Index Model-Portfolio Tufel Risk. Portfolio Market Risk, Portfolio Unique Risk Sharpeôs Optimisation Solution.

UNIT-IV

Portfolio: Theory, Construction & Evaluation : Capital Market Theory - CAPM, Risk Free Lending Borrowing Arbitrage Pricing Theory Techniques of Portfolio Construction Active and Passive portfolio management, Bond portfolio management strategies - passive, semi-active and active along with immunization strategies Portfolio Performance Evaluation.

Reference Books:

1. Fuller & Farrel: Modern Investment & Security Analysis, McGraw Hill.
2. Strong, Robert. A: Portfolio Management Handbook, Jaico Publishing House, Delhi.
3. Singh, Preeti: Investment Analysis, Himalaya Publishing House.
4. Jordan & Fischer: Security Analysis & Portfolio Management, Prentice Hall India, N. Delhi.
5. Avadhani, V.A: Security Analysis & Portfolio Management.(Himalaya Publishing House).

MC. 415 - ADVANCED AUDITING

Objectives: The basic purpose of this paper is to provide in-depth knowledge of the auditing contemporary issues particularly related to the company audit.

UNIT-I

Company Audit: Qualification, Disqualification, Appointment, Removal, Remuneration of Auditors. Audit Ceiling-Status, Power, Duties and Liabilities of auditors. Branch Audit - Joint Audit - Special Audit. Maintenance of Books of Account ï Related Party Disclosures- Segment Reporting. Divisible Profit, Dividend and Depreciation (Companies Act, Standards on Accounting, Legal Decisions and Auditorôs Responsibility). Representations by Management - Contents of Annual Report (A Brief Idea).

UNIT-II

Audit Report and Certificate: Definition - Distinction between Report and Certificate - Types of Reports/Opinion 35 (Clean, Qualified, Disclaimer, Negative and Piecemeal) Contents of Audit Report (As per Companies Act and Standards on auditing). True and Fair View (Concept and Guiding Factors)- Materiality(Concepts and Relevance) - Limited Review- Disclosures. Certificate on Corporate Governance- Cash Flow Statement Reporting.

UNIT-III

Audit of Different Institutions: Banks - Legislation Relevant to Audit of Banks, Approach to Bank Audit, Internal Control Evaluation, Non-Performance Assets (Concept, Provisions), Long Form Audit Report. Insurance Companies - Legislation Relevant to Audit of Insurance Companies (Life and General Insurance), Review of Internal Control, Audit Report (Matters as per IRDA). Educational Institutions and Hospital Features and Basic Principles of Government Audit - Local Bodies and Non-Profit Seeking Organizations (including NGOs). Comptroller and Auditor General and its Constitutional Role. Investigation Meaning, Purpose - Distinction between Investigation and Auditing Approach to Investigation - Types of Investigations. Assessing a Business (Due Diligence Review, Valuation). Investigations to Detect Fraud, Misappropriations and Defalcations - Investigations with respect to Business Combinations.

UNIT-IV

Other Thrust Areas: Cost Audit - Concepts, Objectives, Advantages, Relevant Provisions of Comp. Act. Management Audit - Tax Audit - Systems Audit - Social Audit-Environment Audit Energy Audit - Forensic Audit-Peer review (Concepts, Objectives and Regulatory Requirements). Ethics in Auditing ï Auditorôs Independence. Auditing in CIS Environment. Standards on Auditing (Concepts, Purpose and Present Position as to Number and Title as issued by ICAI).

Note: Topics to be studied with reference to Standards on Auditing and Accounting including Applicable Indian Financial Reporting Standards.

Reference Books :

1. Gupta, Kamal, Contemporary Auditing, TMH.
2. Tandon, B.N., Principles of Auditing, S. Chand & Co.
3. Sharma, T.R., Auditing Principles & Problems, Sahitya Bhavan, Agra.
4. Spicer & Pegler, Practical Auditing.
5. Woolf, Emile, Auditing Today.
6. Basu, Sanjib Kumar, Fundamentals of Auditing, Pearson.
7. Auditing Assurance Standards and Guidelines issued by ICAI.

GROUP E: APPLIED ECONOMICS

MC. 416 - MACRO ECONOMIC ANALYSIS AND POLICY

Objectives: The Course seeks to provide grounding in basic macroeconomic theory and policy, with a focus on applications, especially in context of developing economies like India.

UNIT-I

Basic accounting concepts and tools in closed and open economies: National income accounting, nominal and real exchange rates and balance of payments, Keynesian theory of the short-run : Analysis of fiscal and monetary policies in the closed and open economy IS-LM models, including the Mundell-Fleming model, Interest rates in open and closed economies: Yield curve, covered and uncovered interest parity condition.

UNIT-II

The labour market and policy analysis in the medium and long run : AS-AD analysis, Analysis of inflation and unemployment : The Phillips curve; theories of unemployment conditional convergence.

UNIT-III

Theory of business cycles, Classical theories of economic growth : The Solow model; evidence on convergence and Theories of endogenous growth.

UNIT-IV

Open economy analysis : Models of currency crisis, exchange rate volatility. Expectations theory and financial markets, including rational expectations model.

Reference Books:

1. Blanchard, O. , Macroeconomics, Pearson Education, New Delhi .
2. Abel, A.S. and B.S. Bernanke, Macroeconomics, New Delhi Pearson Education.
3. Barro, R. and X. Sala-i-Martin , Economic Growth, India, Prentice Hall.
4. De Souza, E. , Macroeconomics, Pearson Education, New Delhi.
5. Dornbusch. R., S. Fischer and R. Start, Macroeconomics, Tata Mc Graw Hill, New Delhi .
6. Jones, C., Introduction to Economic Growth, W.W. Norton, New York.
7. Keynes, J., The General Theory of Employment, Interest and Money, New York Harcourt.
8. Krugman, P. and M. Obstfeld, International Economics, New Delhi, Addison Wesley .

MC. 417- ECONOMICS OF SERVICES

Objective: The objective of this paper is to acquint the students with the economics of various kinds of services and its related issues.

UNIT-I

Introduction: Basic concepts of services, trade in services, classification of services (CPC), economic growth and structural shifts in favour of services, cost disease hypothesis and its implications on growth, empirical evidence, service sector in India, causes of growth, implications of the service sector growth for long run growth.

UNIT-II

Economics of education: Micro theories of education, Beckerôs theory, Mincerian equation, over education, measuring micro effects of education, signaling theory of education, new growth theories and macro economic effects of education, human resources and human capital development empirical evidence government policies, government funding and issues, PPP in education, the case for universal, free, primary education, structure of higher education and problems of its financing in India, other issues in education policy; Health: Economic dimensions of health care - demand and supply of health care, Grossmanôs model of health care services, determinants of health - poverty, malnutrition, illiteracy and lack of information, Micro effects of health, health dimensions of macro economics development; health policy, financing of health care and resource constraints, inequalities in health - class and gender perspectives, institutional issues in health care delivery, economics of health insurance, community based health insurance.

UNIT-III

Economics of Infrastructure services : Role of infrastructure in economic development, natural monopoly and economics of infrastructure regulation, rate of return regulation, performance based regulation, pricing for infrastructure sector, role of subsidies, restructuring and privatisation of infrastructure sector with special reference to India, reform acts, competition in infrastructure sector, issues in infrastructure finance, modes of project financing, development of infrastructure projects - BOO, BOOT, BOLT etc.

UNIT-IV

Economics of ICT: ICT industry: An introduction, growth of the global ICT industry, measuring the impact of ICT, impact of IT on economic performance and trade, Impact of ICT on markets and society at large, direct and indirect macroeconomic impact on growth, theory and empirical evidence, specificities of information markets and network goods, need for specific sectoral regulation (discussions on case studies), familiarity with e-governance. The evolution of the sectoral regulation since the liberalisation of the Telecommunicat ions market in 1998 in India.

Reference Books/Journals:

1. Dasgupta S. and Singh A., Will services be the new engine of economic growth in India, working paper No. 310, Centre for business research, University of Cambridge, UK. Wolff A. (2005): The service economy in OECD countries, STI working paper 2005/3, statistical analysis of science, technology and industry.
2. Gordon J. and Gupta P., Understanding Indiaôs services revolution, working paper, IMF
3. Banga R. , Role of services in the growth Process, a survey, New Delhi, CRIER ÅGovernment of India (2005): Report on the CABE committee on autonomy of higher education institutions, ministry of human resource development
4. NCAER (2006):E readiness report , India

MC. 418 - WORLD TRADING SYSTEM

UNIT-I

Basic economic principles relating to international trade mercantilism, Comparative advantage and gains from trade, Factor endowments and trade patterns, Qualifications to the case for free trade, reciprocity, the optimal tariff, infant industries, strategic trade theory, revenue-raising considerations, and national security considerations.

UNIT-II

Evolution of the multilateral trading system under GATT : Emergence of discriminatory trade policies in the inter-war years leading up to the Bretton Woods Conference in 1944, The formation the GATT ï the Havana Charter and the failed attempt to establish the International Trade Organisation, Core principles of the GATT (MFN and national treatment), GATT and its changing character during the 1950s and 1960s, The emergence of the idea of special and differential treatment for developing countries and non-reciprocity, Exceptions to the GATT rules ï textiles and agriculture ï their implications, maturing of the GATT during the 1970s, GATT and the Uruguay Round.

UNIT-III

Analysis of the covered Agreements of the WTO: Agriculture, non-agricultural market access, rules, anti-dumping, subsidies, safeguards, trade facilitation, services, trips, environment, dispute settlement, attempts to expand the remit of the WTO, investment (MAI), labour standards.

UNIT-IV

Challenges to the Multilateral Trading System: The rise of regional trading agreements and free trade areas (FTAs), Relationship with the multilateral trading system, A ñspaghetti bowlò syndrome?, North-South FTAs and South-South FTAs, US unilateralism, Use of Section.

Reference Books:

1. Das B.L, The World Trade Organisation, A Guide to the Framework for International Trade, London and New York : Zed books and TWN.
2. Hoda A., Developing Countries in the International Trading System, New Delhi: Allied.
3. Aggarwal A., Anti-dumping and Developing Countries, An Introduction, New Delhi, Oxford University Press.
4. Kumar, S. : Trade in Services: Advantage, New Delhi , Bookwell Publications.
5. Marchetti J. and Roy M., Opening Markets for Trade in Services, London, Cambridge University Press.

GROUP F: BANKING AND INSURANCE

MC. 419-BANK LEGISLATION

Objective: The objective of this course is to apprise the students with the banking law and practice and develop an understanding of various laws affecting banks.

UNIT-I

Evolution of banking law : Banking Regulation Act, 1949; Reserve Bank of India Act, Bank Nationalization Act, 1969; A Study of Negotiable Instruments Act, 1881 based on case law.

UNIT-II

Banker and customer relations : Banks as borrowers; cheques - payment of customers cheques: collecting banker and customers accounts.

UNIT-III

Employment of funds; Guarantees; Advances secured by collateral securities; Advances against goods and documents of title to goods; Analysis of banks balance sheet, Electronic funds transfer and other electronic payments; Internet banking.

UNIT-IV

The Foreign exchange Management Act, 1999, Provisions relating to: Preliminary (Sec 1-2), Regulation and Management of Foreign Exchange (Sec 3 to 9). Authorized person (Section 10 to 12) Contravention and penalties (Section 13 to 15) Adjudication and Appeal (Sections 16 to 21 and sections 34-35) Directorate of enforcement (section 36 to 38).

Reference Books :

1. P.N. Varshney : Banking Law and Practice.
2. B.M. Lall Nigam : Banking Law and Practice.
3. Tannan : Banking Law and Practice in India.
4. Tax mann : Bankerôs Manual.
5. Diwan, Prag and Sunil Sharma : Electronic Commerceï A Managerôs Guide to E. Business, Varity Books International, Delhi.
6. V.K. Jain and Hemlata : Electronic and Mobile Commerce, Cyber-tech Pub. New Delhi. Uppal, K.K., Chawla, A.S. & Chawla & Malhotra Keshav : Banking Towards 21st Century, Published by Deep and Deep Publications, New Delhi.

MC.420-RISK MANAGEMENT

Objective: To provide an understanding and an appreciation of the principles and practices of risk management in order to enable production of the optimum strategy for the handling of risk in an organisation.

UNIT-I

Nature and Sources of Financial Risk: Introduction to Financial Risks, definition, including: Business Risk, Operational Risk, Financial Risk (market risk, credit risk, liquidity risk), Legal Risk; Introduction to risk management; Principles, essential features and objectives of risk management; Function and duties of a risk manager and the risk management department of a company; Content and purposes of a companyôs risk management philosophy, statement, manual and report; Location and structure risk management within the organizational structure; Risk and Return.

UNIT-II

Process of Risk Management; Techniques used in identifying sources of risk ; Quantitative and qualitative techniques used to identify and assess potential risks to an organization and the advantages and disadvantages of each technique. Techniques for gathering data. Methods of measuring, representing and comparing data for analysis and the relative advantages of each method. Probability theory, the ways in which probabilities are derived and their uses. Application of probability distribution.

UNIT-III

Risk Measurement and Control: The measurement of risk, Controlling risk: With insurance and without insurance. Objective and techniques of loss control management ï Property, Security, Employee and Liability risk control; Features of a contingency plan. Disaster Recovery, Crisis Management and Business Continuity.

UNIT-IV

Value at Risk (VaR): Meaning, Measuring Value at Risk Monte Carlo Simulatio-, application of VaR, Hedging- Concepts and Types; Hedging Process - Initiation, Monitoring, closing and roll over. Risk Management Information System (RMIS) - fundamental concepts, Evolution of RMIS, components, potential benefits and limitations of RMIS, Designing RMI, Implementing RMIS

Reference Books :

1. Redja, Principles of Risk Management and Insurance ,Pearson Education, N. Delhi.
2. Marrison The Fundamentals of Risk Mangement, Tata Mc Graw Hill, N. Delhi.
3. John C. Hull, Fundamentals of Futures & Options Markets (Prentice Hall.
4. Jorian, Phillippe Value at Risk: The New Benchmark for Managing Financial Risk McGraw-Hill.
5. Saunders, A. and M. Cornett., Financial Institutions Management: A Risk Management Approach, 6th ed. Boston: McGraw-Hill.
6. Harrington, S. and G. Niehaus. Risk Management and Insurance, McGraw-Hill.
7. Rivai, V., A. Veithzal, and F. Idroes. Bank and Financial Institutions Management: Conventional and Sharia System. Jakarta: Rajawali Pers.

MC. 421-ACTUARIAL SCIENCES

Objective: The purpose of this course is to equip the student with the principles and techniques of actuarial practice. The paper requires at least a prior general knowledge of mathematics and statistics.

UNIT-I

Basic Mathematics: Basic functions, Annuities - certain, Loans repayable by installments, Simple methods of determining the rate of interest in a transaction, Capital redemption assurance, Valuation of simple loans and debentures.

UNIT-II

Life Contingencies: Mortality tables, Elementary functions, the central death rate, Single life annuities and assurances, Commutation columns, Temporary and deferred annuities and assurances, Conversion tables.

UNIT-III

Special annuities and assurances, Periodical payments, Complete annuities, Policy value, Select and other tables.

UNIT-IV

Joint-life Annuities and Assurances: Value of and premiums for joint -life and contingent annuities and assurances.

Reference Books:

1. Donald D.W.A. ñCompound Interest and Annuities ï Certainò, 2nd Ed., Cambridge [Eng.] Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press.
2. R.E. Underwood, ñThe Elements of Actuarial Science ò, 4th Edition, Pitman.
3. Harry Freeman, ñMathematics for Actuarial Students ò, Cambridge at the University Press.

MC. 422- COMPREHENSIVE VIVA-VOCE

The Comprehensive VIVA-VOCE will be conducted at the end of the 4th Semester by the External Examiner appointed by the University. The VIVA-VOCE will be based on the content of the subjects studied by the student during the all four semesters.

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Published by **: Prof. A.K. Bhandari, Registrar, Panjab University, Chandigarh**

Department of Microbial Biotechnology (DMBT)

Panjab University

Chandigarh

Syllabus: 2019-2020, 2020-2021, 2021-2022 (M. Sc.)

SYLLABUS -2019-2020, 2020-2021, 2021-2022

M.Sc. Microbial Biotechnology

M.Sc. 1st year (1st Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Microbial Biodiversity and Physiology	MBT-101T	75	MBT-101 P	25	4
2.	Immunology and Immunotechnology	MBT-102T	75	MBT-102 P	25	4
3.	Genetics and Recombinant DNA Technology	MBT-103 T	75	MBT-103 P	25	4
4.	Microbial Biochemistry and Enzymology	MBT-104 T	75	MBT-104 P	25	4
5.	Bioprocess Engineering	MBT-105 T	75	MBT-105 P	25	4

Total Credits= 20
Total Marks = 500

M.Sc. 1st year (2nd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Medical Microbiology	MBT-201 T	75	MBT-201 P	25	4
2.	Molecular Biology	MBT-202 T	75	MBT-202 P	25	4
3.	Industrial Microbiology-1 (Health, Food, Enzymes)	MBT-203 T	75	MBT-203 P	25	4
4.	Bioinformatics & Biostatistics	MBT-204 T	75	MBT-204 P	25	4
5.	Intellectual Property Rights (IPR), Bioethics & Entrepreneurship	MBT-205 T	75	MBT-205 P	25	4

Total Credits= 20
Total Marks = 500

M.Sc. 2nd year (3rd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)	MBT-301 T	75	MBT-301 P	25	4
2.	Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)	MBT-302 T	75	MBT-302 P	25	4
3.	Bioinstruments and their Applications	MBT-303 T	75	MBT-303 P	25	4
4.	Microbial Identification, Diagnostics & Nanobiotechnology	MBT-304 T	75	MBT-304 P	25	4
5.	Tutorials	MBT-305 T	75	MBT-305 P	25	4

Total Credits= 20
Total Marks =500

M.Sc. 2nd year (4th Semester)

Sr. No.	*Course/Paper*	Code		Credits
		Theory		
		Course No.	**Marks**	
1.	Seminar &Journal Club	MBT-401 T	***100***	***4***
2.	Dissertation and Viva	MBT-402 T	***300+100***	***16***

Total Credits= 20
Total Marks = 500

Consolidation of Marks and Credits

Sr. No.	Class	Total Marks	Total No. of Credits
1.	M.Sc. 1st Yr	1000	40
2.	M.Sc. 2nd Yr	1000	40
Grand Total		**2000**	**80**

Department of Microbial Biotechnology (DMBT)

Syllabus
for
M.Sc. MICROBIAL BIOTECHNOLOGY
2019-2020, 2020-2021, 2021-2022

Semester I

1. MBT-101: Microbial Biodiversity and Physiology
2. MBT-102: Immunology and Immunotechnology
3. MBT-103: Genetics and Recombinant DNA Technology
4. MBT-104: Microbial Biochemistry and Enzymology
5. MBT-105: Bioprocess Engineering

Semester II

1. MBT-201: Medical Microbiology
2. MBT-202: Molecular Biology
3. MBT-203: Industrial Microbiology-1 (Health, Food, Enzymes)
4. MBT-204: Bioinformatics and Biostatistics
5. MBT-205: Intellectual Property Rights (IPR) Bioethics & Entrepreneurship

Semester III

1. MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)
2. MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)
3. MBT-303: Bioinstruments and their Applications
4. MBT- 304: Microbial Identification, Diagnostics & Nanobiotechnology
5. MBT-305: Tutorials

Semester IV

1. MBT-401: Seminar and Journal Club
2. MBT-402: Dissertation and Viva

MBT-101: Microbial Biodiversity and Physiology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) the diversity of microbes, (ii) growth & nutrientrequirements (iii) unique metabolic pathways.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit -I

1. Relevance of microbiology as a field of Biotechnology.
2. Historical milestones in Microbiology and Biotechnology
3. Structures and functions of bacteria, yeast and fungi.
4. Control of microbes by the use of physical and chemical agents.
5. Basic principles of evolution
6. Principles of protein stability

Unit – II

7. Biodiversity of

(a) Archaea
(b) Bacteria
(c) Fungi
(d) Algae
(e) Viruses
(f) Extremophiles

Unit – III

8. Nutritional requirements of microbes
9. Bacterial growth and its kinetics.
10. Chemostat, Turbidostat, Synchronous growth.
11. Mechanisms involved in transport of nutrients in microbes
12. Microbial interactions

Unit - IV

13. Brief introduction to common metabolic pathways.
14. Unique pathways of microbial metabolism: ED, PK pathways; Respiration; Fermentations; Amphibolic pathways; Anaplerotic reactions.
15. Bacterial cell wall biosynthesis
16. Integration of biochemical processes in the context of cells, tissues, and whole organisms

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical -20)*

1. Use of basic instruments in Microbiology (Light microscope, pH meter, Autoclave, Laminar flow chamber, Centrifuge, Spectrophotometer).
2. Staining of bacteria, yeast and fungi.
3. Purification of mixed cultures by streaking technique
4. Determination of viable count
5. Correlation of viable counting and optical density of cultures
6. Isolation of microbes from environment
7. Bacteriophage screening
8. Preparation of complex and synthetic medium.
9. Sterilization of liquid and solid items.
10. Storage of microbes

Suggested readings:

1. Microbial Biotechnology by A.R. Alagawadi, P.U. Krishnaraj, K.S. Jagadeesh, S. Kannaiyan. (2006) Publisher: Alpha Science Intl Ltd; First Edition (2006), ISBN-10: 8173197253 ISBN-13: 978-8173197253.

2. Prescott's Principles of Microbiology by Joanne Willey, Linda Sherwood, Chris Woolverton. (2017) Publisher: Mc Graw Hill Publisher. 10th Edition, 2017. ISBN10:1259670953 | ISBN13: 9781259670954

3. Fundamentals of Microbiology by Jeffrey C. Pommerville. (2017). Publisher: Jones and Bartlett Learning. ISBN: 978-1-284100952
4. Microbiology: An Application Based Approach by Michael J. Pelczar. (2009) Publisher:Tata McGraw Hill Education Private Limited. ISBN:1283187299, 9781283187299

5. Essential Microbiology by Staurt Hogg. (2013). Publisher: John Wiley & Sons, Publishing, Second edition. 2013. ISBN: 978-1-119-97891-6

6. Bacterial Physiology and Metabolism by Byung Hong Kim, Geoffrey Michael Gadd. (2008).Publisher: Cambridge University Press Publishing. ISBN: 978-0-521-84636-3

7. Microbes: Concepts and Applications by Prakash S. Bisen, Mousumi Debnath, G. B. Prasad. (2012). John Wiley & Sons, Publishing. ISBN: 978-0-470-90594-4

MBT-102: Immunology and Immunotechnology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To introduce the students to (i) the basics of immune system (ii) the response of humanstoforeign bodies (iii) the techniques involved in immunoassays (iv) vaccines*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided intofive units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Overview of the human immune response: adaptive and innate immunity; immune cells and immune organs
2. B cell biology: Development, selection, B cells as central players of humoral immunity
3. T cell biology: Development, thymic education, TCR rearrangement, basic functions of cells during immune response, T cells subsets
4. Immunoglobulins: Structure and functions of Immunoglobulins, Immunoglobulin rearrangement, molecular genetics of BCR generation
5. Antigens, haptens and adjuvants

Unit-II

6. Major Histocompatibility Complex (MHC): Structure, function and immunogenetics of MHC, MHC-TCR interactions, cell biology of antigen processing and presentation
7. Chemokine, cytokine and cell signaling: Their roles in activation and differentiation of cells of immune system, importance in response to pathogens
8. Immunological tolerance and autoimmunity
9. Hypersensitivity-mediated diseases

Unit-III

10. Antigen-antibody reactions, interaction, cross reactions, precipitation and agglutination
11. Radioimmunoassay, ELISA, Western blotting
12. Hybridomas and Monoclonal antibodies
13. Recent advances in immunological tools for diagnosis of diseases

Unit-IV

14. Immune response to infectious diseases: Responses to different classes of pathogens such as intracellular bacteria, viruses and extracellular and intracellular parasites
15. Vaccines and their types: killed and live, sub unit, recombinant, multivalent, DNA, edible vaccines
16. Cancer: immune-surveillance, tumorantigens, immunological intervention
17. Antibodies as immunotherapeutics
18. Cytokine therapy

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Total Leukocyte Count (TLC) and Differential Leukocyte count (DLC) of blood samples
2. Isolation of peripheral blood mononuclear cells from blood samples
3. Determination of cell viability
4. Immunoassays
5. Animal handling
6. Routes of immunization
7. Drawing blood from animals

Suggested readings:

1. Kuby Immunology by Judith A. Owen, Jenni Punt, Sharon A. Stranford and Patricia P. Jones. 2013; Publisher: Macmillan Higher Education; 7th edition. ISBN-13: 978-14641-3784-6, ISBN-10: 1-4641-3784-6
2. Roitt's Essential Immunology by Peter J. Delves, Seamus J. Martin, Dennis R. Burton and Ivan M. Roitt. 2016; Publisher: Wiley-Blackwell; 13th edition. ISBN: 978-1-118-41577-1
3. Basic Immunology byAbul Abbas Andrew H. Lichtman Shiv Pillai. 2015; Publisher: Elsevier Health; 5th edition. ISBN: 9780323390828
4. Janeway'sImmunobiology by Kenneth Murphy. 2011; Publisher: Garland Science; 8th edition. ISBN: 9780815342434

MBT-103: Genetics and Recombinant DNA Technology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) genetics of microbes (ii) permanent changes in thegenetic material (iii) techniques involved in the cloning of genetic elements*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Mendelian principles, concept of allele, multiple alleles, pseudoallele, co-dominance, incomplete dominance, gene interaction, pleiotropy, linkage, crossing over, sex-linked, sex-limited and sex-influenced characters.
2. Significance of genetic recombination
3. Homologous genetic recombination (Transformation, Transduction, Conjugation) and heterologous genetic recombination (IS, Tn, Mu phage)
4. Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers, mapping by using somatic cell hybrids

Unit - II

5. Mutations: Fluctuation test, Replica plating, Mutagenicity testing
6. Physical and chemical mutagens
7. Types of mutations
8. DNA Repair mechanisms

Unit – III

9. Host restriction/modification systems, Enzymes involved in gene cloning
10. Natural Plasmids and their types, Role of plasmids in transfer of genes
11. Plasmids as gene cloning vectors, Commercial vectors
12. Strategies involved in cloning of gene(s)
13. Construction of genomic, cDNA and meta-genomic libraries

Unit – IV

14. DNA sequencing
15. PCR and its applications and modifications
16. Phage display technology and its applications.
17. Yeast two-hybrid system and variants; Combinatorial library generation and use

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Isolation of chromosomal DNA
2. Isolation of plasmid
3. Preparation of competent cells
4. Transformation and Electroporation
5. Restriction digestion (complete and partial) of DNA
6. Cloning and expression of a gene in *E.coli*
7. Amplification of DNA by PCR

Suggested readings:

1. Principles of Genetics, by Eldon John Gardner, Michael J. Simmons, D. Peter Snustad. (Publisher: Wiley India; 8th Edition ISBN: 978-81-265-1043-6
2. Modern Microbial Genetics by Uldis N. Streips and Ronald E. Yasbin. (2002) Publisher: Wiley-Liss; 2nd edition, ISBN-10: 0471386650 ISBN-13: 978-0471386650
3. From Genes to Genomes: Concepts and Applications of DNA Technology by Jeremy W. Dale and Malcolm von Schantz. (2007), Publisher: Wiley-Interscience; 2nd edition ISBN-10: 0470017333, ISBN-13: 978-0470017333
4. Gene and Genome Technology: Principles and Applications of Recombinant DNA and Genomics by Sandy Primrose and Richard Twyman. (2007) Publisher: Blackwell Publishing Limited ISBN-10: 140515666X ISBN-13: 978-1405156660
5. Principles of Gene Manipulation and Genomics by Sandy Primrose, Richard Twyman, Bob Old, and Giuseppe Bertola. (2006) Publisher: Blackwell Publishing, Incorporated; 7th edition ISBN-10: 1405135441 ISBN-13: 978-1405135443
6. Manipulation and Expression of Recombinant DNA, by Sue Carson and Dominique Robertson. (2005) Publisher: Academic Press; 2nd edition, ISBN-10: 0120884186, ISBN-13: 978-0120884186
7. Gene Cloning and DNA Analysis: An Introduction by T. A. Brown. (2010) Publisher: Blackwell Publishing, Incorporated; 6th edition ISBN-9781405181730 (paperback) and 9781444334074 (hardback)
8. Recombinant DNA Technology by O.S. Reddi (2000), Publisher: Allied Publishers Pvt. Ltd. ISBN-10: 8170239958

MBT-104: Microbial Biochemistry and Enzymology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) macromolecular interactions (ii) structure and functions of biomolecules (iii) enzymes: their functions, regulation and industrial applications*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Buffers and physiological buffers.
2. Thermodynamics and Principles of thermodynamics, free energy, enthalpy and entropy.
3. Macromolecular interactions: van-der waal's, hydrogen bonding, ionic, hydrophobic, covalent etc.
4. Structure and functions of Carbohydrates, Proteins, Lipids, Nucleotides(DNA, RNA) and Vitamins.
5. Conformation of proteins (secondary, tertiary and quaternary structure; domains; motifs and folds; Ramachandran plot).

Unit – II

6. Metabolism of Carbohydrates (Glycolysis, TCA, HMP, Gluconeogenesis).
7. Metabolism of Lipids (Fatty acid metabolism, Phospholipid metabolism, Cholesterol biosynthesis).

Unit – III

8. Metabolism of protein (Digestion of proteins, General reactions of amino acids, Fate of carbon skeletons of amino acids, Regulation of amino acid biosynthesis).
9. Electron transport chain and Oxidative phosphorylation.

Unit – IV

10 Enzymes: General distinctive features, nomenclature and industrial applications.
11. Enzyme kinetics, Factors affecting enzymatic activity
12. Allosteric enzymes, Different types of inhibitors/ modulators
13. Feed back inhibition and Feedback repression mechanisms.
14. Multienzyme complexes: advantage and examples.
15. Biocatalysis: Definition, chirality, advantages/disadvantages of biocatalysis over chemical catalysis, different types of biocatalysis.

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Qualitative and quantitative assay of Sugars.
2. Qualitative and quantitative assay of Proteins.
3. Qualitative and quantitative assay of Lipids.
4. Qualitative and quantitative assay of Nucleic acids.
5. Assay of enzymes.
6. Substrate specificity and efficiency of enzymatic catalysis.
7. Kinetics of enzyme catalyzed reactions.
8. Effect of pH and temperature on enzyme activity.
9. Enzyme immobilization.

Suggested readings:

1. Enzyme Kinetics and Mechanism by P. Cook (2007), Publisher: Garland Science; 1st edition ISBN-10: 0815341407 ISBN-13: 978-0815341406.
2. Enzymatic Reaction Mechanisms by Perry A. Frey and Adrian D. Hegeman (2006), Publisher: Oxford University Press, USA; 1st edition ISBN-10: 0195122585 ISBN-13: 978-0195122589.
3. Enzyme Kinetics: A Modern Approach by Alejandro G. Marangoni (2002) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471159859 ISBN-13: 978-0471159858.
4. Introduction to Biocatalysis Using Enzymes and Microorganisms by S. M. Roberts, Nicholas J. Turner, Andrew J. Willetts, and M. K. Turner (1995) Publisher: Cambridge University Press ISBN-10: 0521430704 ISBN-13: 978-0521430708.
5. Principles of Biochemistry by David L. Nelson, Michael M. Cox. (2008, 5th edition), Publisher: W. H. Freeman, ISBN-13: 978-0716771081, ISBN-10: 071677108X.

MBT-105: Bioprocess Engineering

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to the (i) bioreactor and its types (ii) production of bioactivemolecules /cells in a bioreactor (iii) purification of bioactive molecules (iv) fermentation processes*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to a bioreactor design. Control panels of a bioreactor. Types of bioreactors. Kinetics of growth product formation and substrate utilization.
2. Operation of bio-reactors.

Unit – II

3. Mass and Heat Transfer in Bioreactors: Aeration and Agitation in Bioreactors, Concept of mass transfer correlation and scale up.

Unit – III

4. Up Stream Process (USP): Inoculum development, Media composition, Sterilization etc.
5. Down Stream Process (DSP): Cell disruptions, Flocculation, Filtration, Ultra filtration, Centrifugation, Ultracentrifugation, Chromatographic methods, two phase aqueous separations, solvent – solvent extraction, centrifugation, pre treatment, crystallization etc.
6. Characterization of protein structure and function

Unit – IV

7. Fermentations and Fermentative processes like Submerged, Solid state, Batch, Fed Batch, Continuous system etc.
8. Hygiene and safety in fermentation laboratory/processes.

Practicals

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Components and Operation of a Bioreactor
2. Batch fermentation in conical flask
3. Production of the enzyme/s in shake flask
4. Solid state fermentation
5. Fermentation strategies for proteins/polysaccharides
6. Purification strategies (simulation)

Suggested readings:

1. Biotransformations and Bioprocesses (Biotechnology and Bioprocessing Series). Mukesh Doble, Anil Kumar Kruthiventi and Vilas Ganjanan Gaikar (2004). Publisher: CRC; 1st edition, ISBN-10: 0824747755, ISBN-13: 978-0824747756.
2. Bioprocess Engineering Basic Concepts (2002).Publisher: Prentice Hall; 2nd ISBN-10: 8120321103 ISBN-13: 978-8120321106.
3. Principles of Fermentation Technology. P.F. Stanbury, A.Whitaker and S. Hall. (2001)
4. Bioprocess Engineering: Basic Concepts. Michael L, Shuler and Fikret Kargi (2001). Publisher: Prentice Hall PTR; 2nd edition ISBN-10: 0130819085, ISBN-13: 978-0130819086.
5. Solid-State Fermentation Bioreactors: Fundamentals of Design and Operation. David A. Mitchell, Nadia Krieger, and Marin Berovic (June 2006). Publisher: Springer; 1st edition ISBN-10: 3540312854, ISBN-13: 978-3540312857.
6. Bioreactors for Tissue Engineering: Principles, Design and Operation. Julian Chaudhuri and Mohamed Al-Rubeai (2005). Publisher: Springer; 1st edition.
7. Multiphase Bioreactor Design. Joaquim M.S. Cabral, Manuel Mota and Johannes (2001).Publisher: CRC ISBN-10: 0415272092, ISBN-13: 978-0415272094.

MBT-201: Medical Microbiology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To introduce the students to (i) Major infections in clinical settings (ii) Recent trends andtopics in microbial pathogenesis (iii) Antimicrobial chemotherapy (iv)Drug resistance*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided intofive units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Human microbiome in health and disease
2. Revisiting the basic concepts of infectious diseases: host parasite relationship; molecular Koch postulates; modes of transmission; virulence and pathogenicity; pathogenesis of infectious diseases; microbial mechanisms for escaping the host defenses; measures of disease occurrence and outcome
3. Microbial toxins (exotoxins and endotoxins) and their cellular targets
4. Quorum sensing and microbial pathogenicity

Unit – II

5. *Staphylococcus* species as a pathogenetic enigma
6. Molecular pathogenesis of infections caused by intracellular bacteria, with an emphasis of *Salmonella*, *Shigella*, *Listeria monocytogenes* and *Rickettsia*
7. Immunopathology, with an emphasis on *Mycobacterium tuberculosis*
8. Virulence mechanisms of other bacterial pathogens including streptococci, *Corynebacterium diphtheriae, Bordetella pertussis*, *Bacillus anthracis, Vibrio cholerae,* pathogenic *E. coli*, *Clostridium botulinum, Clostridium tetani, Clostridium perfringens,Helicobacter pylori, Yersinia pestis, Brucella abortus, Treponema pallidum, Borrelia burgdorferi*

Unit – III

9. Overview of viral pathogens, including Herpesviridae, Orthomyxoviridae, Paramyxoviridae, Flaviviridae, Hepatitis viruses, Rabies virus, Rhinovirus, Norwalk virus, Papilloma virus, Polio virus; Prion diseases
10. Viruses that changed the world: HIV and Ebola
11. Common fungal infections
12. Pathophysiology of malaria, amoebiasis and giardiasis

Unit – IV

13. Antimicrobial drugs and their cellular targets
14. Antimicrobial susceptibility testing in clinical laboratories
15. Mechanisms of drug resistance in microbes
16. Microbial biofilms and their clinical implications

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Culture identification of representative Gram-positive bacterial pathogens: *Staphylococcus,Streptococcus*
2. Culture identification of representative Gram-negative bacteria: *E. coli*, *Salmonella, Shigella,Proteus, Klebsiella, Pseudomonas*
3. Culture identification of fungal pathogens (*Candida, Aspergillus*)
4. Antimicrobial susceptibility testing of pathogenic bacteria
5. Collection, handling and storage of clinical samples

Suggested Readings:

1. Mims' Medical Microbiology by Richard Goering, Hazel Dockrell, Mark Zuckerman, Ivan Roitt and Peter L. Chiodini. 2012; Publisher: Elsevier; 5th edition. ISBN: 9780723436010
2. Mims' Pathogenesis of Infectious Disease by Anthony Nash, Robert Dalziel and J. Fitzgerald. 2015; Publisher: Elsevier; 6th edition. ISBN: 9780123971883.
3. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases by Gerald Mandell, John Bennett and Raphael Dolin. 2009; Publisher: Elsevier; 7th edition. ISBN: 9781437720600, 9781455708727
4. Manual of Clinical Microbiology. Editors: James H. Jorgensen, Michael A. Pfaller, Karen C. Carroll, Guido Funke, Marie Louise Landry, Sandra S. Richter and David W. Warnock. 2015; Publisher: American Society for Microbiology Press; 11thedition. ISBN: 9781555817374
5. Ananthanarayan and Paniker's Textbook of Microbiology by Reba Kanungo. 2017; Publisher: Universities Press; 10th edition. ISBN: 9789386235251
6. Bailey & Scott's Diagnostic Microbiology by Patricia Tille. 2016; Publisher: Elsevier; 14th edition. ISBN: 9780323354820

MBT-202: Molecular Biology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to the mechanism of (i) DNA replication (ii) DNAtranscription (iii) protein synthesis (iv) regulation of gene expression (v) signal transduction*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. DNA and its various forms, super coiling of DNA, DNA melting, repetitive sequences, $c_o t$ and $R_o t$ curves/analysis, C-value paradox, DNA protein interaction
2. Unit of DNA replication, enzymes involved in replication, origin and replication fork, fidelity of replication.
3. Replication of bacterial chromosome, chromosome structure and organization of genes on chromosome, operon context.
4. Replication of eukaryotic chromosomes, cell division and cell cycle

Unit-II

5. RNA synthesis and processing: transcription factors and machinery, formation of initiation complex, transcription activator and repressor, RNA polymerases, RNA capping, elongation, and termination, RNA processing, RNA editing, splicing, and polyadenylation, structure and function of different types of RNA, non coding RNA, RNA transport.

Unit – III

6. Protein synthesis and processing: Ribosome structure, genetic code, aminoacylation of tRNA, formation of initiation complex, initiation factors and their regulation, elongation and elongation factors, termination, translation proof-reading, translational inhibitors, Post-translational modification of proteins.
7. Control of gene expression at transcription and translation level

Unit – IV

8. Cell signaling: signal transduction pathways and their regulation, bacterial two-component systems, bacterial chemotaxis and quorum sensing.
9. Cancer Biology: Genetic rearrangements in progenitor cells, oncogenes, tumor suppressor genes, cancer and cell cycle, metastasis. Microbes in cancer: carcinogenesis and treatment
10. Gene silencing strategies and applications

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Spectrophotometric analysis of DNA
2. Isolation of RNA
3. Characterization of different types of RNA molecules
4. Construction of cDNA
5. Separation of *Escherichia coli* soluble proteins on non-denaturing gels.
6. Separation of *Escherichia coli* total proteins on denaturing gels.
7. Cell Proliferation/Cytotoxicity assays

Suggested readings:

1. Molecular Biology of the Gene, by James D. Watson, Tania A. Baker, Stephen P. Bell, and Alexander Gann (2007), Publisher: Benjamin Cummings; 6th edition ISBN-10: 080539592X ISBN-13: 978-0805395921
2. Fundamental Molecular Biology by Lizabeth A. Allison (2007), Publisher: Wiley-Blackwell; 1st edition ISBN-10: 1405103795 ISBN-13: 978-1405103794
3. Molecular Biology by Robert F. Weaver (2007) Publisher: Mcgraw-Hill College; 4th edition ISBN-10: 0072995246 ISBN-13: 978-0072995244
4. Cell and Molecular Biology: Concepts and Experiments by Gerald Karp (2013) Publisher: Wiley; 7th edition ISBN-10: 0470042176 ISBN-13: ISBN 13 978-1118-20673-7/978-1118-30179-1
5. Molecular Biology of the Cell by Bruce Alberts, Alexander Johnson, Julian Lewis, and Martin Raff Publisher: Garland Science; 5th edition, ISBN-10: 0815341059 ISBN-13: 978-081534105
6. Principles of Biochemistry by David L. Nelson, Michael M. Cox. (2008, 5th edition), Publisher: W. H. Freeman, ISBN-13: 978-0716771081, ISBN-10: 071677108X.

MBT-203: Industrial Microbiology- I (Health, Food, Enzymes)

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) Industrially important metabolites produced by microbes especially in the areas of health, food and enzymes (ii) immobilization of enzymes/cells*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Primary and Secondary metabolites of industrial importance.
2. Techniques involved in screening/detection of industrially important metabolites from microbes.
3. Pyruvate as the hub molecule
4. Microbial therapies and diagnostics

Unit - II

5. Biosynthesis and fermentation process involved in

(a) Health & Pharma- Antibiotics (Penicillin, Streptomycin,), Alkaloids (ergot, lysergic acid), Biotransformations (Steroids, chirals), Therapeutic proteins (Interferons, Insulin).

(b) Food and Beverages- Beer, Wine, Whisky, Vinegar

(c) Traditional fermented foods; Food additives: Vitamins, Bioflavors

Unit – III

6. Microbial Enzymes - Pharma related enzymes, Detergent enzymes, Processing of starch and related carbohydrates, Fruit juice production, Textile & leather manufacture, Treatment of wood pulp, Organic synthesis, Diagnostics

Unit – IV

7. Immobilization of enzymes and cells: Parameters for choosing a matrix for immobilization, types of methods for immobilizations. Applications of immobilization techniques.

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Screening of microbes for production of industrially important enzymes.
2. Optimization of conditions for optimal production of enzyme: - Media composition, Incubation temperature, Aeration, Incubation time.
3. Wine fermentation
4. Purification of antimicrobial metabolites from a microbe.
5. Enzyme immobilization
6. Design of fermentation processes for the production of fuels, chemicals and foodstuffs

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers. Doyle (2007). Publisher: American Society Microbiology; 3rd edition ISBN-10: 1555814077, ISBN-13: 978-1555814076.
2. Food Microbiology: An Introduction. Montville (2005). Publisher: American Society Microbiology; 1st edition ISBN-10: 1555813089, ISBN-13: 978-1555813086.
3. Environmental Microbiology: A Laboratory Manual. Ian L. Pepper and Charles P. Gerba(2004). Publisher: Academic Press; 2nd edition ISBN-10: 0125506562, ISBN-13: 978-0125506564.
4. Advances in Food & Nutrition Research. Steve Taylor (2003). Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479.
5. Environmental Microbiology. Raina M. Maier, Ian L. Pepper, and Charles P. Gerba(2000). Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705.
6. Applied Dairy Microbiology. Elmer H. Marth and James Steele (2001).Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367.
7. Peter F Drucker. Innovation and Entrepreneurship. Harper & Row, 1985
8. Prasanna Chandra- Projects: Preparation Appraisal and Super implementation. Tata Mc-Graw-Hill Co. Ltd
9. J.D. West & F.K. Levy. A management guide to PERT/CPM, Prentice Hall, India

MBT-204: Bioinformatics and Biostatistics

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) basic understanding of computers (ii) computationaltools developed for understanding of genetic material and proteins*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I (Biostatistics)

1. Basic definitions and applications. Data collection and representation. Measure of central tendencies (Mean, Median and Mode) and dispersal; measure of variability (standard deviation, standard error, range, mean deviation, coefficient of variation); probability distributions (Binomial, Poisson and Normal), sampling distribution
2. Difference between parametric and non-parametric statistics, confidence interval, errors, levels of significance
3. Regression and correlation, t-test, analysis of variance, chi-square test
4. Basic introduction to Multivariate statistics

Unit – II (Biological databases)

5. Brief on programming languages commonly used in Biological Sciences
6. Database- introduction, Primary, Secondary and Tertiary databases; Type and kind of databases; Literature search (PUBMED and MEDLINE).
7. Nucleic acid (GenBank, EMBL *etc.*); Structural databases- PDB, PDBsum, NDB, CATH, SCOP etc. Motifs and Pattern Databases- PROSITE, Pfam, iPfam *etc.*
8. Protein databases (SWISS PROT, UNIPROT *etc.*); Structural databases- PDB, PDBsum, NDB, CATH, SCOP *etc*; Motifs and Pattern Databases- PROSITE, Pfam, *etc*.
9. Sequence retrieval (SRS, Entrez) and Data submission.

Unit – III (Sequence analysis)

10. Sequence alignment- introduction and concepts, Local and Global alignment concepts.
11. Similarity and Percent identity score (open, extended gap penalty). Multiple sequence alignment (MSA) - introduction and concepts. Types of multiple sequence alignment techniques. Description of major softwares (MSA, CLUSTAL variants (X, W2, OMEGA), PILEUP, T-Coffee, PROS, CONS).
12. Database Scanning and Sequence similarity searches. Algorithm of FASTA. Description of BLAST algorithm. Various BLAST programs (BLASTP, BLASTN, BLASTX, PHI-BLAST, PSI-BLAST etc).
13. Protein Structure: Classification, Structure Analysis, Secondary structure predictions, Comparative/Homology modeling, Modeling using Swiss Model Server.

Unit – IV (Genome analysis)

14. Introduction to genomes. Sequencing techniques. Sequencing of whole genomes
15. NextGen Sequencing (NGS); Assembling of genomes from short reads
16. Concept of Metagenomics;Types of repeats and repeat finding techniques; Structure of genes; Prediction of gene in prokaryotic and eukaryotic genomes (GENESCAN, GeneMark, GeneSeqer *etc.*); Promoter prediction in *E. coli* and in eukaryotes
17. Description of major gene prediction methods

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Sequence (DNA & Protein) alignments
2. Genome sequence studies
3. Designing ideal primers for amplification of genetic material
4. Deciphering 3-D structure of proteins
5. Designing inhibitors of enzymes

Suggested readings:

1. Understanding Bioinformatics by Marketa Zvelebil and Jeremy Baum (2007) Publisher: Garland Science; 1st edition ISBN-10: 0815340249, ISBN-13: 978-0815340249
2. Essential Bioinformatics by Jin Xiong (2006) Publisher: Cambridge University Press; 1st edition ISBN-10: 0521600820, ISBN-13: 978-0521600828
3. Bioinformatics: Sequence and Genome Analysis by David W. Mount (2004). Publisher: Cold Spring Harbor Laboratory Press; 2nd edition ISBN-10: 0879697121 ISBN-13: 978-0879697129
4. An Introduction to Bioinformatics Algorithms (Computational Molecular Biology) by Neil C. Jones and Pavel A. Pevzner (2004) Publisher: The MIT Press; 1st edition ISBN-10: 0262101068, ISBN-13: 978-0262101066
5. Bioinformatics: A Biologist's Guide to Biocomputing and the Internet by Stuart M. Brown (2000). Publisher: Eaton Publishing Company/Biotechniques Books ISBN-10: 188129918X, ISBN-13: 978-1881299189

MBT-205: Intellectual Property Rights (IPR), Bioethics and Entrepreneurship

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) understanding of patents (ii) filing of patents (iii)ethical and social issues in biotechnology*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Introduction: General Introduction
2. Patent Claims, the legal decision-making process
3. Ownership of Tangible and Intellectual Property.
4. Basic requirements of patentability, patentable subject matter, novelty and the Public Domain; Non-obviousness, Foreign Patents
5. Special issues in Biotechnology Patents: Disclosure Requirements, Ethical issues, Plant Biotechnology- UPOV and plant breeder's rights, Case studies/ experiences from developing and developed countries, IPR issues in the Indian context.
6. Contract law, IP reform, Policy implications of IP

Unit - II

7. Copyright and Patents; International Treaties and Conventions; Business Software Patents
8. Patent Litigation: Substantive and Procedural Aspects
9. IT Act, 2000 : Aims and Objectives; Overview of the Act; Jurisdiction; Role of Certifying Authority; Regulators under IT Act; Cyber Crime-offences and Contraventions; Grey Areas on IT Act.

Unit - III

10. Biotechnology and hunger: Challenges for the Indian Biotechnological research and industries.
11. The Cartagena protocol on biosafety
12. Social and ethical implication of biological weapons
13. Intersection of Biotechnology with globalization, trade, poverty, food security, and environmental sustainability

Unit - IV

14. Entrepreneurship: Need, scope, philosophy and classification. Creativity and Entrepreneurship. Entrepreneurship competencies and traits, factors affecting Entrepreneurship development
15. Functions of entrepreneurship, Entrepreneurship with the motive of economic growth, theory of social change, family structure, migration and enterprise.

16. Barriers to entrepreneurship, community and entrepreneurship.
17. Funding challenges for an entrepreneur, Business planning and investment pitch, Identify and evaluate business opportunities, Risk assessment and management Opportunities for entrepreneurship in emerging markets

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Searching of Indian Patent databases
2. Drafting and filing of Indian Patent application.
3. Searching of International Patent databases
4. Drafting and filing of International Patent application.
5. How to formulate well-structured research questions, recognize appropriate research methods, and assess research reports

Suggested readings:

1. Intellectual Property Rights in the Global Economy. Maskus, K.E. (2000), Publisher: Peterson Institute, ISBN 0881322822, pp. 1-266.
2. Intellectual property: patents, copyright, trade marks and allied rights. Cornish, W.R. (2003). Universal Law Publishing, Delhi. ISBN-10: 0421781203, pp. 1-895.
3. Intellectual Property Rights: Infringement and Remedies. Padmanabhan A. (2012).Publisher: Lexis Butterworths Wadhwa Inc. ISBN: 9788180387937. pp.1-638.
4. Access to Knowledge in the Age of Intellectual Property. Krikorian G, Kapczynski A. (2010). Publisher: Zone Books Inc. ISBN/ASIN: 9781890951,pp.1-640
5. The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company. Blanck, S and Dorf, B. (2012). K&S Ranch Inc., California, USA ISBN-10: 0984999302 | ISBN-13: 978-0984999309, pp.1-557.
6. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses Ries, E. (2011). Crown Publishing Group, New York, USA, ISBN 978-0-307-88789-4, pp.1-309

MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics & Metabolomics)

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to recent trends in the field of Microbial Genomics,Proteomics & Metabolomics.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to Microbial genomes
2. Genome sequencing of different microbes and their importance
3. Techniques for genome research (chromosome walking, RFLP etc.)
4. Application of microbial genomic variability for utilizing in human welfare (applications)
5. Phylogenetic relationships between various genera of microbes

Unit – II

6. Sequences as Biological Information - Cells obey the Laws of Chemistry and Physics
7. Evolution by Genome Expansion and Reduction
8. Metagenomics
9. Methods to Compare Genomes
10. Archaeal Genomics
11. Microbial Genome Annotation
12. Genomics for pathogenic microbes – Search for better vaccines

Unit – III

13. Introduction to microbial proteomics
14. Techniques for Proteome research (2 – D gel electrophoresis, DIGE, PROTOMAP, COFRADIC, MALDI-ToF, Protein purification work station)
15. Gel free Mass Spectrometry based microbial proteomics - methodology and application
16. Microbial pathogenesis at the proteome level
17. Proteome research for novel drug targets
18. Structural proteomics and computational analysis
19. Proteomics of Archaea
20. High throughput proteomic screening for novel enzymes

Unit – IV

21. Techniques for metabolic engineering
22. Genetic and epigenetic manipulation of useful microbes
23. Strain improvement methods and strategies - Classical *vs* metabolic engineering, developing/ emerging/ novel

24. Production and yield enhancement of valuable products (fuels, amino acids, drugs *etc*) by metabolic engineering

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. RAPD/RFLP/16S rRNA-sequencing of bacterial isolates (e.g., *Escherichia coli* isolates) and phylogenetic tree construction
2. Isolation of metagenomic DNA from soil or water source
3. Demonstration of 2-D gel electrophoresis
4. Demonstration of MALDI – ToF
5. Demonstration of DNA/Protein Microarray system
6. Practicals on Microbial Genomics/Proteomics/Metabolomics using computational tools
7. Comparison of genomes. Genome projects and sequence archive databases.

Suggested readings:

1. Microbial Proteomics: Functional Biology of Whole Organisms by Ian Humphery-Smith and Michael Hecker (2006) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471699756, ISBN-13: 978-0471699750
2. Microbial Genomics and Drug Discovery by Thomas J. Dougherty and Steven J. Projan (2003) Publisher: CRC; 1st ed. ISBN-10: 0824740416, ISBN-13: 978-0824740412
3. Metabolic Engineering by Sang Yup Lee and E. Terry Papoutsakis (1999) Publisher: CRC; 1st edition ISBN-10: 082477390X, ISBN-13: 978-0824773908
4. Advances in Microbial Biotechnology by Rajhi Gupta, Jagjit Singh, T.N. Lakhanpal, and J.P. Jewari (1999) Publisher: A.P.H. Pub. Corp. ISBN-10: 8176480789, ISBN-13: 978-8176480789
5. Discovering Genomics, Proteomics and Bioinformatics by A. Malcolm Campbell, Laurie J. Heyer Publisher: Pearson Education India; 2nd edition (2007) ISBN-10: 8131715590, ISBN-13: 978-8131715598

MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) the benefits of microbes/their products in cleaning theenvironment (ii) large scale production of useful microbial biomass (iii) production of biofuels and chemicals (iv) useful protocols*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise of objective type/short notes covering the complete syllabus.*

Unit – I (Environment)

1. Waste water and effluent treatment,
2. Biodegradation of Xenobiotics, Bioremediation, Biomining
3. Biodegradable plastics
4. Bioinsecticides
5. Microbes as N and P Biofertilizers

Unit – II (Biomass)

6. Manufacture of Baker's yeast
7. Single cell protein production especially *Spirulina*
8. Mushroom cultivation especially *Agaricus bisporus*
9. Probiotics, Prebiotics, Synbiotics

Unit – III (Biofuels & Chemicals)

10. Biofuel production especially Ethanol, Butanol, Methane, Hydrogen, Electricity, Biodiesel
11. Organic acids especially Amino acids (glutamic acid, lysine), Citric acid, Acetic acid, Lactic acid
12. Microbial exopolysaccharides

Unit – IV (Protocols)

13. Good Lab Practices guidelines
14. Good Manufacturing Processes guidelines
15. Guidelines for use of recombinant microbes
16. Important Biotech companies of India and the World
17. Equipment validation, Analytical method validation, Process validation

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Estimation of BOD levels of a water sample
2. Isolation of P-solubilizers from the soil
3. Estimation of P-solubilizing activity of P-solubilizer
4. Isolation of *Lactobacilli* from milk/ curd
5. Production of bacteriocin by probiotics
6. Effect of temperature on the preparation of curd from milk
7. Effect of type of milk on the preparation of curd from milk

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers by Doyle (2007) Publisher: American Society Microbiolgy; 3rd edition ISBN-10: 1555814077 ISBN-13: 978-1555814076
2. Food Microbiology: An Introduction by Montville (2005) Publisher: American Society Microbiolgy; 1st edition. ISBN-10: 1555813089 ISBN-13:978-1555813086
3. Environmental Microbiology: A Laboratory Manual by Ian L. Pepper and Charles P. Gerba (2004) Publisher: Academic Press; 2nd edition ISBN-10: 0125506562 , ISBN-13: 978-0125506564
4. Advances in Food & Nutrition Research by Steve Taylor (2003) Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479
5. Environmental Microbiology by Raina M. Maier, Ian L. Pepper, and Charles P. Gerba (2000) Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705
6. Applied Dairy Microbiology, by Elmer H. Marth and James Steele (2001) Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367

MBT-303: Bioinstruments and their Applications

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to the variety of instruments used in the study ofMicrobial Biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Microscopy: Light microscope, Field Microscope, Fluorescent microscope, Phase contrast microscope, AFM, SCM, TEM, SEM, STM.
2. Spectrophotometer: UV and Visible
3. Mass spectroscopy, Infrared and Raman spectroscopy. CD spectroscopy, NMR, ESR.

Unit - II

4. Centrifugation: Theory and its applications to biological systems, centrifuges, rotors-fixed angle/swing out, concept of vertical, buoyant density centrifugation.
5. Electrophoresis: Theory, different methods of electrophoresis for proteins and nucleic acids.

Unit – III

6. Chromatography: GC, Paper Chromatography, TLC, HPLC, FPLC,
7. Crystallography and X-Ray diffraction, Electron diffraction, Neutron diffraction.
8. Radioisotope techniques: radiotracers GM Counter, Proportional and Scintillation counters, autoradiography

Unit – IV

9. Protein purification workstation
10. GCMS, LCMS
11. MALDI-ToF

Practicals:

Total Marks: 25 Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)

1. Operation of Microscopes: TEM, and SEM.
2. Running TLC; R_f value using TLC
3. Operation of Centrifuges (microfuge and high speed centrifuge and ultracentrifuge).
4. Operation of GC, HPLC
5. Operation of MS, LCMS, NMR.

Suggested Readings:

1. Advances in Chromatography. Eli Grushka and Nelu Grinberg (2007). Publisher: CRC: 1st edition. ISBN-10: 1420060252, ISBN-13: 978-1420060256, Volume 46.
2. Understanding NMR Spectroscopy. James Keeler (2005). Publisher: Wiley; 1st edition ISBN-10: 0470017872, ISBN-13: 978-0470017876.
3. Physical Principles of Electron Microscopy: An Introduction to TEM, SEM, and AEM. Ray F. Egerton (2005). Publisher: Springer; 1st ed.. ISBN-10: 0387258000, ISBN-13: 978-0387258003.
4. Fundamentals of Light Microscopy and Electronic Imaging. Douglas B. Murphy (2001). Publisher: Wiley-Liss; 1st edition ISBN-10: 047125391X, ISBN-13: 978-0471253914.
5. Principles and Techniques of Practical Biochemistry. Keith Wilson & John Walker(2000). Cambridge University Press.
6. Introduction to Spectroscopy. Donald L. Pavia, Gary M. Lampman, and George S. Kriz (2000). Publisher: Brooks Cole; 3rd edition. ISBN-10: 0030319617, ISBN-13: 978-0030319617.

MBT-304: Microbial Identification, Diagnostics and Nanobiotechnology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To introducethe students to (i) the various methods used in microbial identification & (ii)applications of nanotechnology in biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided intofive units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Principles of microbial diagnostics: conventional and molecular approaches
2. Microscopic examination: applications of light microscopy, fluorescent microscopy and electron microscopy in microbial identification
3. Serological diagnosis of infectious diseases
4. Automated detection systems: BACTEC, VITEK, FAME and Biolog

Unit - II

5. Nucleic-acid based detection: fluorescent in situ hybridization; line probe assay; PCR and its various types; transcription mediated amplification (TMA); nucleic acid sequence based amplification (NASBA); branched DNA (bDNA); Qβreplicase; hybrid capture
6. Epidemiological molecular typing: pulsed field gel electrophoresis, RFLP, RAPD and MLST
7. Flow cytometry and fluorescence-activated cell sorting
8. Microarray: types and applications

Unit – III

9. Basic components of a sensor
10. Types of biosensors and their applications
11. Biosensors in research and diagnostics
12. Lateral flow assays
13. Lab on a Chip technology

Unit – IV

14. Understanding Nanobiotechnology and its importance to society
15. Microbial nanoparticle production
16. Nanoparticles for biological applications
17. Luminiscent quantum dots for biological labeling

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Case studies in infectious disease diagnostics: clinical-case discussions and hands on
2. Chromogenic media for microbial identification
3. Microbial identification using VITEK, BACTEC, BIOLOGS and FAME (demonstration)
4. Microbial identification and typing by molecular methods
5. Practical on biosensors
6. Microbial synthesis of nanoparticles

Suggested readings:

1. Bailey & Scott's Diagnostic Microbiology by Patricia Tille. 2016; Publisher: Elsevier; 14th edition. ISBN: 9780323354820
2. Mackie &Mccartney Practical Medical Microbiology. Editors: J.G. Collee, A.G. Fraser, B.P. Marmion and A. Simmons. 1999; Publisher: Elsevier; 14th edition. ISBN: 9788131203934
3. Molecular Microbiology: Diagnostic Principles and Practice. Editors: David H. Persing, Fred C. Tenover, Randall T. Hayden, Margareta leven, Melissa B. Miller, Frederick S. Nolte, Yi-Wei Tang, Alex van Belkum. 2016; Publisher: American Society for Microbiology Press; 3rd edition. ISBN: 9781555819088
4. Nanotechnology in Diagnosis, Treatment and Prophylaxis of Infectious Diseases. Editors: MahendraRai and KaterynaKon. 2015; Publisher: Elsevier; 1st edition. ISBN: 9780128013175
5. Chemical Sensors and Biosensors by Brian R. Eggins. 2002. Publisher: Wiley; 1stedition. ISBN: 9780471899143
6. Nanobiotechnology: Concepts, Applications and Perspectives. Editors: C.M. Niemeyer, C.A. Mirkin. 2004. Publisher: Wiley; 1st edition. ISBN: 9783527306589
7. Nanobiotechnology II: More Concepts and Applications. Editors: C.A. Mirkin and C.M. Niemeyer. 2007. Publisher: Wiley; 1st edition. ISBN: 9783527316731
8. Handbook of Nanotechnology by Bharat Bhushan. 2010. Publisher: Springer; 3rd edition. ISBN:9783642025242

MBT-305: Tutorials

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *(i) To overcome the academic deficiencies of students and to expose the students tothose parts of Microbial Biotechnology which have not been covered in the syllabus (ii) Invited lectures from experts.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Quantitative PCR: Theory, Practice, Problems and Solutions.
2. Myths and misconception about diseases e.g., Tuberculosis, Leprosy, Rabies, Anthrax, Brucellosis.
3. Giant viruses and Virophages: Characteristics and evolutionary implications.

Unit - II

4. Biosafety, biosecurity and dual use research of concern.
5. Biomedical waste management.
6. Exceptions to the classical bacterial definition.

Unit - III

7. Diversity of antimicrobial peptides.
8. Role of integrons in microbial drug resistance.
9. Non-Rhizobium PGPRs and their role in crop productivity.

Unit - IV

10. Radiations in diagnostics.
11. Phosphorescence, Florescence and Luminescence
12. Applications of non-aqueous enzymology

Practicals:

Total Marks: 25 Int. Asses.-05. Project Report-20

The practical is intended to apprise the students of the research methodology including techniques and prepare for dissertation/research work. The overall assessment of the project report will be based on the quality of final project report (review/overview of literature and general methodology update of the assigned field) submitted.

Suggested Readings:

1. Real-time PCR, M. Tevfik Dorak (ed.) (2006). Publisher: Taylor & Francis Group. ISBN: 0–203–96731–3 (Master e-book)/ 0-4153-7734-X(Print Edition). For recent updates on detection, instrumentation and application of quantitative PCR, refer to the websites of the major QPCR reagent and instrument providers
2. Disease information and advisory websites http://www.who.int/en/; http://www.cdc.gov/; http://www.keelpno.gr/; http://www.ncdc.gov.in/
3. Vasquez M, Hallam SJ, Raoult D and Abrahão J (Eds). (2016). Megaviromes [Special Section]. Current Opinion in Microbiology, 31:1-234 (ISSN 1369-5274)

4. Bio-Medical Waste Management Rules, 2016. Ministry of Environment, Forest and Climate Change, Government of India. [Published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i)]
5. Laboratory Biosafety Manual. 3rd edition. (2004) Publisher: World Health Organization, Geneva. ISBN 92 4 154650
6. http://www.dbtindia.nic.in/ (Policies and Regulations regarding Bio-Medical Waste Management)
7. Antimicrobial databases: http://aps.unmc.edu/AP/main.php; http://www.camp.bicnirrh.res.in/
8. Journals: Biotechnology Advances; Current opinion in Microbiology; Nature Biotechnology; Analytical chemistry; Critical reviews in Biotechnology; Critical reviews in Microbiology

MBT-401: Seminar and Journal Club

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *This course will help the students to know the type of research going on in variouscountries. It will also help the students in preparing, delivering and defending a 'talk'.*

The Internal assessment will be made from the attendance and the interaction of the student during the seminars and tutorials.

Students will be asked to deliver a talk on current issues pertaining to Microbiology, Biotechnology and other important topics. Some guest lectures will be arranged.

MBT-402: Dissertation and Viva

Total Marks: 400 (Dissertation: 300 + Viva: 100)

Objective: *To prepare the students as how to carry out independent research work*

Each student will be given an independent research project. The evaluation will be based on the presentations, knowledge of the topic of research, quality of the compiled Dissertation.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF LANGUAGES

Syllabi
For
M.A. English
1st & 2nd Semester (New)
3rd and 4th Semester (Old)

FOR THE SESSION **2019-20**

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

Syllabus of Master of Arts (English)
General Directions for Semester I & II (only)

1. The entire course of MA (English) consists of **18 (eighteen) papers**. Semester I &II shall have four papers each (a total of 8 out of which four shall be compulsory and four optional)
2. At the beginning of every session, each department would announce the options it would offer to students on the basis of available resources.
3. There are two compulsory papers in Semester I, and correspondingly in Semester II.
4. For the optional papers, the students are advised to choose corresponding options across the semesters. For instance, anyone who opts 'Academic Writing –I' in Semester I, for sake of specialization, is advised to opt for 'Academic Writing –II'. Similarly anyone who opts 'Cultural Studies –I' in Semester I, for the sake of specialization, is advised to opt for 'Cultural Studies –II'.
5. All the books prescribed as well as suggested are available either online or in the printed form. The teachers are expected to teach only those parts or excerpts (of the texts) that have been prescribed in the course.
6. Each paper shall be evaluated both internally and externally. Out of a total of 100 marks per paper, each candidate shall be externally evaluated for 80 marks, and internally evaluated for 20. The internal assessment would be given on the basis of attendance (5 marks), class participation (5 marks) and mid-term examination (10 marks). The papers (except Paper XVII & Paper XVIII) across all the semesters have been divided into five units. In the final examination of each paper, five questions (one from each unit) would be asked with internal choice. Each question shall carry 16 marks with a word limit of about 500- 600 words.
7. Those appearing in the capacity of private candidates shall be evaluated externally only. For them each paper shall carry 100 marks (20X5= 100).

The paper-wise division of the syllabus is given below:

M.A I

Semester I

Twocompulsory papers

Paper I
Literary Movements–I

Paper II
Approaches to Literary Criticism – I

Twooptional papers

Paper III

1. Cultural Studies –I
2. Language and Linguistics –I
3. British Literature – I

Paper IV

1. Introduction to Literary Genres –I
2. British Literature -II
3. Academic Writing – I

Semester II

Two compulsory papers

Paper V
Literary Movements –II

Paper VI
Approaches to Literary Criticism –II

Two optional papers

Paper VII

1 Cultural Studies –II
2 Language and Linguistics –II
3 British Literature – III

Paper VIII

1. Introduction to Literary Genres –II
2. British Literature -IV
3. Academic Writing – II

Paper I

Literary Movements –I

Many distinct literary movements mark the journey of writing from ancient times to the very contemporary. The paper identifies some of the major literary movements that form the essential frame of reference for a critical engagement with the vast corpus of literature. Movements such as classicism, romanticism or realism constitute the primer of critical vocabulary and therefore a basic understanding of these movements is necessary for a nuanced understanding of varieties of literary articulation. Each movement has its own specific set of aesthetic, cultural and ethical values and preferences. The writers and writings that fall within a movement, despite their heterogeneity and particularities, do converge in terms of fostering an identifiable literary taste and trend. Though these movements do occur in literatures of the world, and across languages, yet the focus of this course is primarily on European literature, with special accent on the British. The emphasis of the paper is on the historical and conceptual understanding of various literary movements. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit I What is a literary movement?

1. François Jost, "The Challenge of Literary Movements", *Comparative Literature Studies*, Vol. 18, No. 3, Papers of the Seventh Triennial Meeting of the American Comparative Literature Association (Sep., 1981) 278-286.
2. Micah Mattix, "Periodization and Difference", *New Literary History*, Vol. 35, No. 4, Forms and/of Decadence (Autumn, 2004) 685-697.

Unit II Classicism

1. Jean Hytier and June Guicharnaud, "The Classicism of The Classics", *Yale French Studies*, No. 38, *The Classical Line: Essays in Honor of Henri Peyre* (1967) 5-17.
2. Horace, "Ars Poetica", *The Poetry of Criticism: Horace, Epistles II and Ars Poetics, Ross S. Kilpatrick* (Edmonton: The University of Alberta Press, 1990) 72-83
3. Longinus, *On the Sublime*. Chapters VIII-XXII. Trans H.L.Havell (London & New York, Macmillan & Co., 1890)14-48

Unit III Renaissance

1. George Parfitt, "Renaissance", *Encyclopedia of Literature and Criticism*. Eds. Martin Coyle, Peter Garside, Malcolm Kelsall and John Peck (London & New York: Routledge, 1990) 83-92.
2. Machiavelli: *Prince.* Oxford World Classics. Trans. & Edited by Peter Bondanella, (New York: OUP, 2005) 53-78.
3. Erasmus, *The Praise of Folly*, trans. & edited Hoyt Hopewell Hudson (Princeton: Princeton University Press, 2015) First Eight Sections, 1-20.

Unit IV Neo-Classicism

1. Thomas Kaminski, "Neoclassicism", from *A Companion to the Classical Tradition*, edited by Craig W. Kallendorf (Malden & Oxford: Blackwell, 2007) 57-71.
2. Samuel Johnson, "The Necessity of Good Humour", *The Rambler* 72, November 24, 1750 in *Samuel Johnson: Selected Writings*. Ed Peter Martin (Cambridge & Massachusetts: The Belknap Press of Harvard University Press, 2009) 97-100
3. Henry Fielding, "Author's Preface" to *Joseph Andrews* (Penguin, 1999) 25-31

Unit V Romanticism

1. Seamus Perry, "Romanticism: The Brief History of a Concept", *A Companion to Romanticism*, ed. Duncan Wu (Malden &Oxford: Blackwell, 1999) 3-12.
2. M. H. Abrams: "Romantic Analogues of Mind and Art", *The Mirror and the Lamp*: *Romantic Theory and the Critical Tradition* (OUP: Oxford, London & New York, 1953) 47- 56.
3. Coleridge, "Chapter XIII – On the Imagination or the Esemplastic Power", *Biographia Literaria*(Princeton UP, 1984) 116-128.

Secondary Readings

- Gerald Abraham, *Romanticism*: 1830-1890 (Oxford: Oxford University Press, 1990)
- David Galen, *Literary movements for students: presenting analysis, context, and criticism on literary movements*, Volume 1 (Pennsylvania State University, Gale Cengage, 2002)
- Anthony Grafton, Glenn W Most and Salvatore Settis, *The Classical Tradition* (Harvard: Harvard University Press, 2010)
- Christopher Gillie, *Movements in English Literature: 1900-1940* (Cambridge: Cambridge Univ. Press, 1978)
- Margaret Healy and Thomas Healy. *Renaissance Transformations: The Making of English Writing*, 1500-1650 (Edinburg: Edinburgh University Press, 2009)
- Richard Jenkyns,.*Classical Epic* (Bristol Classical Press, 1992)
- Hugh Honour,.*Neo-classicism* (Penguin, 1968)

- Richard Jenkyns, *Classical Literature: A Pelican Introduction* (Penguin Books UK, 2015)
- Siobhan Keenan. *Renaissance Literature* (Edinburg: Edinburgh University Press 2008)
- Dominique Secretan. *Classicism* (London & New York: Routledge 2017)

Model Test Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are the advantages of dividing the history of literature into precise periods or literary ages?

Or

Summarize the arguments posited in Micah Mattix's essay "Periodization and Difference".

Q.2 What is classicism? Give detailed answers through examples.

Or

How do Horace and Longinus theorize classical virtues of literature in their own respective ways?

Q.3 What are the new debates on 'Renaissance' as an age of discovery?

Or

Critically analyze Machiavelli and Erasmus as renaissance prose writers.

Q. 4. What are the salient features of Neo-classicism?

Or

Explain the features of neo-classical prose through your critical reading of the prescribed essay of Samuel Johnson and Henry Fielding's "Author's Preface" to *Joseph Andrews*.

Q. 5 What are the key characteristics of romanticism?

Or

Critically summarize the views of M.H. Abrams on romantic art.

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Paper II

Approaches to Literature – I

The objective of the course is to familiarize students with various approaches to literature, and the particular worldviews these are based on. The students should able to relate literary texts to their lives in terms of their own times and location. The number of approaches suggests that there is no one privileged way to understand a text, and that a text can yield multiple meanings if it is accessed through different worldviews. Each approach has a claim to total meaning till it is countered by another equally compelling approach. Each approach has its own well-argued theoretical base, a set of tested tools and a sustained methodology to help the student to navigate through the text with a degree of precision. These approaches put together give rise to what is often called as critical pluralism.

Testing: The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there should be questions of a practical nature in which the candidate has to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. M. H. Abrams, "Orientation of Critical Theories", *The Mirror and the Lamp: Romantic Theory and the Critical Tradition*, (Oxford UP, 1958), 3-29.

Unit II

1. Wilfred Guerin et al, eds., "Historical and Biographical Approaches (I, IIA, IIB); Moral and Philosophical Approaches (I, IIA, IIB)" ,A *Handbook of Critical Approaches to Literature* (Oxford: OUP, 2005) 5th Ed.
2. Hippolyte Taine, "Introduction" to *History of English Literature*, Vol. I, (New York: Holt & Williams:, 1871) 1-21.

Unit III

3. Chapter 5 of Wilfred Guerin's *Handbook*: The Formalist Approach (I, II, III, IV, VA, VD)
4. Cleanth Brooks, "The Heresy of Paraphrase", *The Well Wrought Urn* (London: Dobson Books1960 2nd Impression) 176-196.

Unit IV

1. Chapter 6 of Wilfred Guerin's *Handbook*: The Psychological Approach: Freud (I, IIA, IIG)
2. Lionel Trilling, "Freud and Literature", *The Liberal Imagination* (New York: Viking Press, 1950) 34-57.

Unit V

1. Chapter 7 of Wilfred Guerin's *Handbook*: Mythological and Archetypal Approaches (I, II, IIIA, IIIB)
2. Northrop Frye, " The Archetypes of Literature", *The Kenyon Review*,Vol. 13, No. 1 (Winter, 1951), 92-110.

Suggested Readings

- David Lodge, ed. *20th Century Literary Criticism: A Reader* (Longman, 1989)
- David Lodge, ed., *Criticism and Theory: A Reader* (Pearson Education, Ist Indian Rpt., 2003)
- David Daiches, *Critical Approaches to Literature*, 2nd ed. (Orient Longman, 1970)

- M.A.R. Habib. *A History of Literary Criticism: From Plato to the Present* (Blackwell, 2005)
- Patricia Waugh, *Literary Theory & Criticism: An Oxford Guide* (Oxford: OUP, 2006)
- M. S Nagarajan, *English Literary Criticism & Theory: An Introductory History.* (Orient Longman, 2006)
- David Robey and Ann Jefferson. *Modern Literary Theory* (Batsford, 1986)
- Frank Lentriccia. *After the New Criticism* (Chicago: Chicago UP, 1980)
- Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2003)
- Peter Barry, *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed. (Manchester: Manchester UP, 2004)
- Raman Selden, *A Reader's Guide to Contemporary Literary Theory (*Pearson, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How does M.H. Abrams categorize different approaches to literary criticism?

Or

What are the characteristics of the mimetic approach to literature?

Q. 2. What are the major concerns of historical approach to literary criticism?

Or

How do 'man, moment and milieu' influence literary work? Use Taine's view to answer your question.

Q. 3 What is the importance of close-reading of a text in the formalist analysis of a work?

Or

What are the pitfalls of paraphrasing poetry?

Q. 4. What are the major concepts of Freud that are used by literary critics to understand the psychological make-up of a literary work?

Or

Trilling observes that literature brings out "the night-side of life". Do you agree?

Q. 5 What are the assumptions of archetypal approach with respect to literary criticism?

Or

What is it that constitutes "the coordinating principle" of literary criticism, according to Frye?

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Paper III
(Choose any one option)
(1) Cultural Studies – I

Culture as a concept is often used synonymously with 'civilization', 'religion' or even 'ideology'. The objective of this foundational paper is to introduce to the students the concept of culture in terms of its relationship with the discourses of 'civilization', 'religion', 'everyday life', 'science' and 'ideology'. The distinctions are subtle, but not oppositional n fundamental ways. Culture, however, tends to subsume all other discourses of life, be it religious, ideological or civilizational. The paper through a reading of primary essays and secondary responses written over the last two centuries by eminent culture critics and theorists like Matthew Arnold, F.R. Leavis, T.S.Eliot and Raymond Williams tends to cover the evolutionary trajectory of debate. Before the discourse of culture opens up to accept the everyday aspects of life as its material praxis, it goes through a series of intellectual bouts with the votaries of religion, science and ideology. The paper consists of five units. The end-semester paper shall consist of five questions, one from each unit with internal choice. The paper carries a total of 80 marks.

Unit I Nature-Nurture Debate

1. John Locke, *An Essay Concerning Human Understanding*, Book I (T. Tegg and Son, 1836)1-48.
2. Leibniz, *New Essays on Human Understanding*, Book I (Cambridge UP, 1996) 69-108.

Unit II Culture and Civilization

1. John Storey, "The 'culture' and 'civilization' tradition", *Culture Theory and Popular Culture* 18-28.
2. Matthew Arnold, "Chapter 1", *Culture and Anarchy*, Jane Garnett (ed.), (Oxford University Press, 2006) 32-53.

Unit III Culture and Religion

1. T.S. Eliot, "Religion and Literature", *T.S. Eliot: Selected Essays* (Faber and Faber, 1932) rpt. 1972, 388-401.
2. T.S. Eliot, "The 'Three' Senses of Culture", *Notes Towards the Definition of Culture*, (HMH, 2014), 19-32.

Unit IV Culture and Science

1. C.P. Snow, *Two Cultures*, Stefan Collini (ed.), (Cambridge University Press, 2012).
2. F.R. Leavis, "Two Cultures? The Significance of C.P. Snow", *Two Cultures? The Significance of C.P. Snow*, (Cambridge University Press, 2013) 53-76.

Unit V Culture and Everyday Life

1. Raymond Williams, "Culture is Ordinary", *Resources of Hope: Culture, Democracy, Socialism*, (Verso, 1989), 3- 18.
2. John Storey, "Culturalism", *Culture Theory and Popular Culture*, (Wiley, 2003), 38-51.

Suggested Readings

- A.L.Kroeber & Clyde Klucichohn, *Culture: A Critical Review of Concepts and Definitions* (Cambridge & Massachusetts: The Museum, 1952).
- Andrew Milner, *Re-imagining Cultural Studies: The Promise of Cultural Materialism*, (London: Sage Publications, 2002).
- Andrew Singleton, *Religion, Culture and Society: A Global Approach*, (Sage, 2014).
- Andrew Tudor, *Decoding Culture: Theory and Method in Cultural Studies*, (1999).
- Anthony Easthope, *Literary into Cultural Studies*, (New York: Routledge, 1991).
- Ben Highmore, *Culture*, (New York: Routledge, 2016).
- Brian Longhurst, Greg Smith, et al. *Introducing Cultural Studies* (Pearson, 2008).
- Catherine Driscoll, *Modernist Cultural Studies*, (University Press of Florida, 2010).
- Chris Barker, *Cultural Studies: Theory and Practice*, (Sage Publications, 2011).
- Chris Barker, *Making Sense of Cultural Studies*, (Sage Publications, 2002).
- Helen Thomas, "Culture/ Nature", *Core Sociological Dichotomies*, ed., Chris Jenks (SAGE, 1998)110-122.
- Hermann von Helmholtz and David Cahan, *Science and Culture: Popular and Philosophical Essays* (University of Chicago Press, 1995).
- John Hartley, *A Short History of Cultural Studies*, (Sage Publications, 2003).
- John Storey *What is Cultural Studies?: A Reader* (Bloomsbury, 2009).
- Jolyon P. Mitchell and Sophia Marriage, *Mediating Religion: Studies in Media, Religion, and Culture*, (A&C Black, 2003).
- Michael Ryan, *Cultural Studies: A Practical Introduction*, (Wiley Blackwell, 2010).
- Richard Johnson, Deborah Chambers, et al, *The Practice of Cultural Studies*, (New Delhi: Sage Publications, 2004).
- Simon During, *The Cultural Studies Reader*, (Routledge, 1999).
- Simone During, *Cultural Studies: A Critical Introduction*, (New York: Routledge, 2005).
- Terry Eagleton, *The Idea of Culture* (Blackwell, 2008).
- Toby Miller, *A Companion to Cultural Studies*, (Wiley Blackwell, 2001).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q.1 Explain Locke's thesis of mind as *tabula rasa*.

Or

How does Leibnitz bring new perspectives to the understanding of human nature?

Q.2. How does John Storey relate 'culture' with 'civilization'? Explain.

Or

Arnold asserts that culture is "a study of perfection". What is critical response to Arnoldian idea of culture?

Q. 3 How does Eliot foreground the role of religion in the shaping of culture? Discuss critically.

Or

Eliot postulates "three senses of culture". Explain with the help of examples.

Q.4 C P Snow discovers two cultures in a framework of juxtaposition. Do you agree with his reductionist model?

Or

How does F R Leavis critique Snow's thesis of "two cultures"? Does Leavis not show his bias towards high classical values?

Q.5 What does John Storey mean by "culturalism". Explain with examples.

Or

Raymond Williams provides an anti-elitist notion of culture. Argue.

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(2) Language and Linguistics – I

The course aims to introduce study of language, its origin, nature, structure and function in human society. This involves the development of an awareness of philosophical, historical, comparative, structural, social and psychological perspectives on language as it evolves as a system related to the human need for communication as well as its cognitive aspects and its social functions. The course is aimed at tracing the main directions that the study of language has taken through the readings of thinkers in the field of linguistics.

Unit I Philosophy of Language

1. George Yule, "Animal and Human Languages", *The Study of Language* (CUP, 2010)10-20.
2. Saussure, "The Object of Linguistics" (7-17), "The Nature of Linguistic Sign" (65-78), "Synchronic Linguistics Part II Chapter I" (101 -102) & "Diachronic Linguistics Part III" (140-143), *Course in General Linguistics*,
3. F.H. Colson, "The Analogist and Anomalist Controversy",*The Classical Quarterly*, Vol. 13, Issue 1, January 1919, 24-36.

Unit II Language: Its Origin, Change and Universal Grammar

1. Fromkin, Rodman &Hyames, "Language Change" (Chapter 10),*An Introduction to Language* (Wadsworth 2010, 9th ed.) 488-530.
2. Noam Chomsky, "Knowledge of Language as A Focus of Inquiry", *Knowledge of Language* (Praeger, 1986) 1-14.

Unit III Language and Mind

1. Fromkin, Rodman &Hyams, "Language Processing and the Human Brain", *An Introduction to Language* (Wadsworth, 2014) Chapter 10, 444-494.
2. Steven Pinker, "How Language Works", *The Language Instinct* (Penguin Books) 77-119.
3. R. Jakobson, "Two Aspects of Language and Two Types of Aphasic Disturbances", *Roman Jakobson: Selected Writings* (Mouton, 1971) 239-259.

Unit IV Language, Society and Culture

1. Fromkin, Rodman &Hyams, "Language in Society", *An Introduction to Language* (Chapter 7, 229-336)
2. Dell Hymes, "On Communicative Competence", in Pride and Holmes ed. *Sociolinguistics: Selected readings*, (Penguin, 1972) 265-294.
3. Halliday, M., "Language as Social Semiotic" (Chapter II.6), *Language as Social Semiotic* (Edward Arnold, 1978) 108-127.
4. John Lyons "Sephir-Whorf hypothesis", *Language and Linguistics* (CUP, 1981) 2009 rpt. 303-311

Unit V Indian Linguistics: Theory of *Sphota*

1. Bimal Krishna Matilal,"*Sphota* Theory: Early History and Patanjali's Views", "Bhartrihari's View of *Sphota*" &"Critics of the Sphota Theory and Views of Later Grammarians", *The Word and the World* (OUP, 1992) 77-105..

Suggested Readings

- Michael Devitt, Richard Hanley, *The Blackwell Guide to the Philosophy of Language* (Wiley-Blackwell, 2006).
- Michael Morris, *An Introduction to the Philosophy of Language* (Cambridge University Press, 2007).
- Barry Lee (edt.), *Philosophy of Language: The Key Thinkers* (Continuum, 2011).
- John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970).
- M. A.K. Halliday, Jonathan J. Webster, *On Language and Linguistics* (Continuum, 2006).\
- Roman Jakobson, *Selected Writings: Word and Language* (de Gruyter Mouton, 1971).

- Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics* (Routledge, 1999).
- Leonard Bloomfield, *Language* (George Allen & Unwin Ltd., 1933).
- David Crystal, *How Language Works* (Avery Trade, 2007).
- Noam Chomsky, *Language and Thought* (Moyer Bell, 1993).
- Noam Chomsky, *Syntactic Structures,* 2nd Edition (Mouton de Gruyter, 2002).
- Steven Pinker, *The Stuff of Thought: Language As a Window into Human Nature* (Penguin, 2008).
- Steven Pinker, *How the Mind Works*, (W. W. Norton & Company, 2009).
- Jean Piaget, *The Child's Conception of the World* (Routledge & Kegan Paul Ltd.,1929).
- Roy Harris, *Language, Saussure and Wittgenstein: How to Play Games withWords* (Routledge, 1990).
- David Crystal, *The Cambridge Encyclopedia of Language* (Cambridge University Press, 1997).
- Fromkin, Rodman and Hyams, *An Introduction to Language* (Thomson Wadsworth, 2004) Indian Reprint.
- Janet Holmes, *An introduction to sociolinguistics* (Routledge, 2012).
- Martin Montgomery, *An Introduction to Language and Society* (Routledge, 1995).
- Board of Editors, *Linguistics: An Introduction* (Orient Black Swan. 2015)
- Syal and Jindal *An Introduction to Linguistics* (Prentice Hall of India, 2016)
- Bimal Krishna Matilal, *The Word and the World: India's Contribution to the Study of Language* (Oxford University Press, 1990).
- Narayan R Joshi, "Sphota Doctrine in Sanskrit Semantics Demystified", *Annals of Bhandarkar Oriental Research Institute*, ed. MG Deshpande& G U Thite, Vol. LXXXVII, 2007, 183-197.
- Harold G Coward, "Part Two: The *Sphota* Theory of Language as Revelation", *Sphota Theory of Language: A Philosophical Analysis* (MotilalBanarsidass, 1997) 69-137

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Language and Linguistics-I

Q.1 What is the Analogist and Anomalist controversy in Language?

Or

Discuss Saussure's dichotomy of Synchronic and Diachronic Linguistics.

Q.2 Discuss the diachronic changes in English with respect to sound and spelling.

Or

"TG Grammar is an improvement on the structuralists' view of Grammar". Discuss.

Q.3 How does Generative Grammar help to understand the language instinct?

Or

What is an aphasic disturbance? How does it affect language?

Q. 4 Write an essay on Hymes's concept of Communicative Competence.

Or

"We dissect nature according to the lines laid by our native languages". Elaborate.

Q. 5 Give a detailed historical account of *Sphota* Theory.

Or

Discuss Bharthari's view of *Sphota*. How do other Sanskrit grammarians respond to the theory of *sphota*?

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(3) British Literature – I

The objective of the paper is to provide an overview of the literature of the English Renaissance, Reformation and Restoration times. The Renaissance, fourteenth to sixteenth century, was a vibrant period of European history, which began in Italy and marked a revival of classical learning and was seen as a political, scientific, social, economic, philosophical, intellectual and cultural 'rebirth' after the Middle Ages. Humanism (*studia humanitatis*) shaped the sciences, literature, religion, art, politics and culture of the period. The course will concentrate on English Renaissance 1500-1660 during which the students will be introduced to the spirit of optimism, unlimited potential, stoic English character and underlying complexities of an age that produced some of the greatest works of literature the world has known. The goal will be to trace the key political, cultural and artistic transformations while paying close attention to continuities with medieval tradition. At the end of the course the students will not only be well versed with the iconic writers and representative texts of the time but will also be critically aware of the important intellectual shift that occurred in the human thought during the Renaissance. Renaissance overlaps with most of Reformation of the Western Church. Protestant Reformation was the foundation of Protestantism which contrary to the common practice of the time emphasized salvation through individual faith. The paper also focuses on the political, social and cultural impact of the Reformation in England and the literature of the time in addition to covering the English Restoration Period (1660-1700). The objective again is to familiarize the students with the major trends, ideas, genres, poetic forms and prose of these periods. The students at the end of the course would have explored a very turbulent chapter in English history.

Unit I

1. Martin Luther, "Freedom of a Christian", *Luther's Works: Career of a Reformer*, Vol. 31, Ed. Harold. J. Gimm, (Muhlenberg Press, 1957)327-377.
2. Francis Bacon, "Of Seditions and Troubles" & "Of Atheism", *Essays* (London: Penguin Books, 1985).(Courier Corporation, 2012) 42-51

Unit II

1. Christopher Marlowe, *Edward II* (London: Bloomsbury, 2014).

Unit III

1. Geoffrey Chaucer**,** "Wife of Bath's Prologue", *Canterbury Tales*. Ed. Jill Mann (Penguin Classics, 2003), 1-52.
2. John Milton, *Paradise Lost.* Book I (London: Penguin Classics, 2003), 1-26.

Unit IV

1. William Shakespeare, *Hamlet*. Ed. Ann Thompson and Neil Taylor (Bloomsbury, 2017).

Unit V

1. John Dryden, *Absalom and Achitophel,* 5th Edition. (Leopold Classic Library, 2017).

Suggested Readings

- Derek Traversi, *The Canterbury tales: A Reading* (Newark: University of Delaware Press, c1983).
- Piero Boitani and Jill Mann (eds.), *The Cambridge Companion to Chaucer* (Cambridge University Press, 2004).
- Andrew Hadfield (ed.), *The Cambridge Companion to Spenser* (Cambridge University Press, 2001).
- Frank Kermode, "Introduction", *Shakespeare, Spenser, Donne* (Routledge & Kegan Paul, 1971).
- Harold Bloom, ed. *Modern Critical Interpretations: William Shakespeare's As You Like It* (Chelsea House Publishers, 1988).
- Jay L. Halio, *Twentieth Century Interpretations of As You Like It: A Collection of Critical Essays* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968).
- William C Carroll, *The Metamorphoses of Shakespearean Comedy* (Princeton: Princeton University Press, 1985).
- Northrop Frye, *A Natural Perspective: The Development of Shakespearean Comedy and Romance* (New York: Columbia University Press, 1965).
- T.B. Tomlinson, *A Study of Elizabethan and Jacobean Tragedy* (Cambridge UP,1964).
- Bonamy Dobrée, *Restoration Comedy, 1660-1720* (OUP,1924).
- Deborah Payne Fisk (ed.), *The Cambridge Companion to English Restoration Theatre* (Cambridge University Press, 2000).
- John Milton, *The Major Works,* Stephen Orgel and Jonathan Goldberg, eds.(Oxford World's Classics, 2008).

- Dennis Richard Danielson, *The Cambridge companion to Milton*, (Cambridge, New York: Cambridge University Press, 1989).
- Noam Reisner, *John Milton's Paradise Lost: A Reading Guide* (Edinburgh: Edinburgh University Press, c2011).
- Boris Ford (ed.), *From Donne to Marvell*, (Penguin Books,1990).
- Derek Hirst and Steven N. Zwicker (eds.), *The Cambridge Companion to Andrew Marvell* (Cambridge University Press, 2010).
- Samuel I. Mintz, "Leviathan as Metaphor" (*Hobbes Studies* 2 (1989): 3-9).
- Shapin, Steven and Simon Shaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton University Press, 1985).
- Robert E Stillman, "Hobbes's *Leviathan*: Monsters, Metaphors, and Magic" (*ELH* 62.4 (1995): 791-819).
- Samuel Johnson,*Lives of the Poets* (Oxford World's Classics).
- James Engell, *The Creative imagination: Enlightenment to Romanticism* (Cambridge, Mass: Harvard University Press, 1981).
- Nigel Smith, *Literature and Revolution in England, 1640-1660* (Yale University Press, 1997).
- Michael Hattaway, ed. *A Companion to English Renaissance Literature and Culture* (Blackwell, 2003).
- D.H. Craig (ed.), *Ben Jonson: The Critical Heritage 1599-1798* (Routledge,1995).

Model Paper

Time: 3 hours
Total Marks 80
Note: Attempt all questions. Each question carries 16 marks

Q.1 "A Christian is perfectly free lord of all, subject to none. A Christian is a perfectly dutiful servant of all, subject to all." With reference to this paradoxical statement, explain Martin Luther's role in the formation of a new reformed church.

Or

Critically analyze Francis Bacon's position on atheism as summed up in his essay "Of Atheism". Discuss also his use of language in dealing with such a sensitive theme.

Q. 2 Critically comment on the politics of sexuality and power in Marlowe's *Edward II*.

Or

Analyze *Edward II* as a Renaissance play.

Q. 3 Based on your understanding of the portrayal of Wife of Bath in *Canterbury Tales*, do you consider Chaucer to be an early feminist? Give a detailed answer.

Or

Critically analyze the theme of darkness in *Paradise Lost* book 1 with reference to Milton's own blindness.

Q. 4 Attempt a psychoanalytic reading of Shakespeare's *Hamlet*.

Or

Discuss the theme of death in Shakespeare's *Hamlet*.

Q. 5 Discuss *Absalom and Achitophel* as a political satire.

Or

Critically comment on the use of biblical allegory in Dryden's *Absalom and Achitophel*.

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Paper IV

(Choose any one option)

(1) Introduction to Literary Genres –I

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the major genres that gained classical proportions mainly during the ancient period. Even as these genres acquired canonical value in the ancient times, their currency in subsequent history has not diminished. The effort is to provide a brief overview of each selected genre in terms of its historical evolution and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice.

Unit I What is a Genre?

1. Alastair Fowler, "Concepts of Genre", *Kinds of Literature: An Introduction to the Theory of Genres and Modes* (Oxford: Clarendon Press, 1982) 37-53.

Unit II Epic

1. Peter Toohey, "Epic: The Genre, Its Characteristics", *Reading Epic: An Introduction to Ancient Narratives* (London & New York: Routledge, 1992) 1-19.
2. John Milton, *Paradise Lost,* Book I (New Delhi: Oxford University Press, 2005).

Unit III Tragedy

1. Aristotle, Chapter VI-XVI, *Poetics*, trans. S. H. Butcher (London: Macmillan and Co.,1895).
2. Sophocles, "The Oedipus Rex", *The Three Theban Plays* (Penguin Classics, 1984).

Unit IV Comedy

1. Aristotle, "Tractatus Coislinianus", *An Aristotelian Theory of Comedy*, trans and ed. by Lane Cooper (New York: Harcourt, Brace and Company,1922) 224-226. [available online at https://ia802609.us.archive.org/27/items/aristoteliantheo030524mbp/aristoteliantheo030524mbp.pdf]
2. Aristophanes, "Frogs", *Frogs and Other Plays* (Penguin Classics, 2007).

Unit V Fable

1. M.O. Grenby, "Fables", *Children's Literature* (Edinburg: Edinburg University Press, 2008) 10-31.
2. Visnu Sharma, "Book IV: Loss of Gains", *The Panchatantra*, trans. Chandra Rajan (New Delhi: Penguin Books, 1993) 351-392.
3. Aesop, "The Good Things and the Bad Things", "The Man Selling a Holy Statue", "The Eagle and the Fox", "The Eagle and the Scarab Beetle", and "The Eagle, the Jackdaw and the Shepherd", *The Complete Fables* (Penguin Classics, 1998) 1-5.

Secondary Readings

- Katherine Callen King, *Ancient Epic* (Wiley Blackwell, 2009).
- Harold Bloom, *The Epic* (Philadelphia: Chelsea House Publishers, 2005).
- John Miles Foley, *A Companion to Ancient Epic* (Blackwell Publishing, 2006).
- Matthew Bevis, *Comedy: A Very Short Introduction* (Oxford: OUP,2013).
- Ritchie Robertson, *Mock-Heroic: From Pope to Heine* (Oxford & New York: OUP, 2009).
- Georg Lukacs, *The Theory of the Novel: A Historico-philosophical Essay on the Forms of Great Epic Literature*, trans. by Anna Bostock (London, The MIT Press, 1971).
- Raymond Williams, *Modern Tragedy*. Ed Pamela McCallum (Toronto: Broadview Encore Editions, 2006).
- Clifford Leech, *Tragedy* (London & New York: Routledge, 1969).
- Rebecca Bushnell, *Tragedy: A Short Introduction* (Blackwell Publishing, 2008).
- Holzberg, N. *The Ancient Fable: An Introduction*, translated by Christine Jackson Holzberg. (Bloomington & Indianapolis: Indiana University press, 2002).
- Marcel Cornis-Pope, ed., *New Literary Hybrids in the Age of Multi-Media Expression: Crossing Borders, Crossing Genres* (Amsterdam and Philadelphia: John Benjamin's Publishing Company, 2014).
- Peter Hunt, ed., *International Companion Encyclopedia of Children's Literature* (London & New York: Routledge, 2004).
- Matthew Kieran, "Tragedy versus Comedy: On Why Comedy is Equal of Tragedy", *Ethical Perspectives*, 20, no.3 (2013), 427-450.
- John Frow, *Genre: New Critical Idiom* (London & New York: Routledge).
- Andrew Stott, *Comedy* (London & New York: Routledge, 2014).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q,1. What do you mean by 'recategorization'? How did the Russian formalist exemplify the term?

Or

What is 'genre'? Is generic approach to literature a composite way of reading literature?

Q.2. What is Epic? Write about its origin.

Or

What is the difference between 'Mythological Epic' and 'Miniature Epic'?

Q.3. Aristotle gives preference to 'Tragedy' over 'Epic'. Explain critically.

Or

Aristotle suggests that the most powerful elements in a tragedy are *Peripetia* and *Anagnorisis.* Explain the two terms with reference to *Oedipus Rex.*

Q.4. Is there any kind of catharsis in comedy too, akin to what we have in tragedy? Explain.

Or

"Frogs" by Aristophanes is a classical comedy. On the basis of your reading of the play, identify the major elements of classical comedy.

Q.5. How do *Panchatantra* fables combine metaphysis with morality? Explain with examples.

Or

What are the general features of "fable"? Explain with examples from fables of Aesop.

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(2) British Literature – II

The end of the eighteenth century and early nineteenth century saw a momentous shift in philosophical, artistic and literary movement in Europe - Romanticism. It flourished until the mid-nineteenth century. Romanticism celebrated imagination and intuition in the enduring search for individual rights and liberty. It marks a shift from objectivism to subjectivism, from reason to power of imagination and emotive response. The objective of the paper is to introduce students to these tenets of Romanticism in general and to English Romanticism in particular. During the course they will be introduced to major English poets and prose writers of the period. Through the reading, the students will be familiarized with the English Romantic imagination, its stress on Nature, poetic inspiration, freedom, individualism and spontaneity; and the role language plays in it. Gothic fiction is also explored in the paper. At the end of the course the students will be familiar with major themes, ideas and concepts of Romanticism and English Literature. They will be cognizant of the historical, cultural, political and aesthetic milieu of the time. Students will study Romanticism as a reaction against the philosophical rationalism and neoclassicism of the Enlightenment. At the end of the course, they would have in-depth knowledge of a movement that not only captured the imagination of people with their ideas of liberty and freedom but also fuelled the avant-garde movements well into the twentieth century.

Unit I

1. Mary Shelley, *Frankenstein*. Foreword by Ruskin Bond (Collins Classics, 2018).

Unit II

1. William Wordsworth, *Preface to Lyrical Ballads* (Create Space Pub, 2016).

Unit III

1. William Blake, "The Chimney Sweeper" & "The Tyger", *Songs of Innocence and of Experience* (Oxford UP, 1967).
2. William Wordsworth, "Lines Written in Early Spring", "Ode: Intimations of Immortality" &"London 1802", *Selected Poems* (Penguin Classics, 2004).

Unit IV

1. John Keats, "Ode on Grecian Urn", "Ode to a Nightingale" & "Ode to Autumn", *Selected Poems* (Penguin Classics, 2007).
2. Samuel Taylor Coleridge, "Rime of the Ancient Mariner*",'Rime of the Ancient Mariner and the Other Poems* (Collin Classics, 2016).

Unit V

1. Charles Lamb, "Dream Children: A Reverie" & "The Praise of Chimney-Sweepers", *The Essays of Elia and Eliana* (G. Bell & Sons, Ltd).
2. William Hazlitt:

- 'On Reading Old Books', from *The Spirit of the Age* (Vintage, 2009).
- 'On Gusto', *The Fight and Other Writings* (Penguin Classics, 2000).

Suggested Readings

- Anita Brookner, *Romanticism and Its Discontents* (New York: Farrar, Straus & Giroux, 2000).
- Stuart Curran (ed), *The Cambridge Companion to British Romanticism* (Cambridge University Press, 1996).
- Giovanni Carsaniga, "The Age of Romanticism, 1800-1870", *The Cambridge History of Italian Literature,*eds. Peter Brand and Lino Pertile (CUP, 1999) 399-437.
- C.M. Bowra, *The Romantic Imagination* (OUP,1949).
- Walter Jackson Bate, *From Classic to Romantic: Premises of Taste in Eighteenth-century England* (Harvard Univ. Press,1946).
- M.H. Abrams (ed.), *English Romantic Poets: Modern Essays in Criticism* (OUP USA, 1975).
- Harold Bloom and Lionel Trilling, *The Oxford Anthology of English Literature,* Vol. II (New York: Oxford University Press, 1973) pp. 594–611,766–68, 777–8.

- Jean-Jacques Rousseau, 'Preface' to *Emile: or On Education*, trans. Allan Bloom (Penguin,1991).
- Jacob Bronowski, *William Blake, 1757-1827: A Man without a Mask* (Penguin Books,1954).
- D.W. Harding, "William Blake", *From Blake to Byron*: *The Pelican Guide to English Literature* ed. Boris Ford, Vol.5 (Penguin, 1957).
- Mark Schorer, *William Blake: The Politics of Vision* (H. Holt and Company, 1946).
- Morton D. Paley (ed.), *Twentieth Century Interpretations of Songs of Innocence and of Experience* (Prentice-Hall,1969).
- Northrop Frye, "Northrop Frye on Milton and Blake", *Collected Works of Northrop Frye* Vol.16, ed. by Angela Esterhammer (Uni. of Toronto Press, 2005).
- Northrop Frye, *Fearful Symmetry: A Study of William Blake*, ed. Nicholas Halmi(University of Toronto Press; 2nd Revised ed. edition, 2004).
- Morris Eaves (ed.), *The Cambridge Companion to William Blake* (CUP, 2003).
- Stephen Gill (ed.), *The Cambridge Companion to Wordsworth* (CUP, 2003).
- Lucy Newlyn (ed.), *The Cambridge Companion to Coleridge* (CUP, 2002).
- Angela Leighton, *Shelley and the Sublime. An Interpretation of the Major Poems* (Cambridge: CUP, 1984).
- Stuart Sperry, *Shelley's Major Verse: The Narrative and Dramatic Poetry* (Harvard Uni. Press, 1988).
- G.S. Fraser (ed.), *John Keats: Odes* (Macmillan,1971).
- Stuart Sperry, *Keats: The Poet* (Princeton Univ. Press, 1973).
- J. Cox (ed.), *Keats's Poetry and Prose* (Norton Critical Edition, 2008).
- Susan Wolfson (ed.), *The Cambridge Companion to Keats* (CUP, 2001).
- Drummond Bone (ed.), *The Cambridge Companion to Byron* (CUP, 2004).
- Bernard Blackstone, *Byron: A Survey* (Longman, 1975).
- Jerome McGann, *Byron and Romanticism* (Cambridge: CUP, 2002).
- William Hazlitt, *The Fight and Other Writings*, edsTom Paulin and David Chandler (Penguin Classics, 2000).
- John Kinnaird, *William Hazlitt: Critic of Power* (Columbia University Press, 1978).
- Tom Paulin, *The Day-Star of Liberty: William Hazlitt's Radical Style* (Faber & Faber, 1999).

Model Paper
British Literature – II

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1Discuss how romanticism informs Mary Shelley's *Frankenstein*.

Or

Mary Shelley's *Frankenstein* unfolds the irony of a victor becoming a victim of his own creation.

Q. 2 Discuss *Preface to Lyrical Ballads* as a manifesto of literary primitivism.

Or

How does William Wordsworth's *Preface to Lyrical Ballads* open the debate of poetic diction?

Q. 3 Discuss the theme of exploitation in "The Chimney Sweeper"?

Or

In the "Ode: Intimations of Immortality", Wordsworth attempts to reconcile the loss of the 'visionary gleam' of childhood with the growth of the 'philosophic mind' of adulthood. Discuss.

Q. 4 Explain the theme of 'permanence' versus 'mutability' in the poem "Ode to a Nightingale"?

Or

How does "Rime of the Ancient Mariner" explore penance and redemption?

Q.5 Comment on Lamb's prose style as seen in his essay "Dream Children: A Reverie".

Or

Critically analyze Hazlitt's concept of 'gusto'.

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(3) Academic Writing – I

The paper is designed to develop an awareness of the elements and conventions of academic writing. Students need to understand how academic writing is different from general writing; especially when they make the transition to higher education. The course will empower the students with the skills to convert a general text into an academic text and vice versa. It will equip them with summarizing skills so they can convert their articles into bulleted points for power point presentations. The paper will equip the students with paraphrasing skills so that they can build upon the bullet-points of power-points and convert them into academic journal articles. The course will focus more on the application of the learnt principles rather than the memorization of theoretical aspects.

The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the characteristics of academic writing and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the actual, hands on writing of academic documents. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I Academic Writing

1. Definition
2. Forms

Unit II Language and Style

1. Words and Phrases
2. Structures
3. Conventions of register specific academic writing
4. Ways of portraying Research Findings
5. Dealing with New Words (Academic Vocabulary Building)

Unit III Summarizing and Paraphrasing

1. Skimming a text
2. Scanning a book for specific details
3. How to paraphrase – changing word-order, changing word-class and vocabulary substitution
4. Paraphrasing and Quoting Sources
5. Using Direct Quotations
6. Referencing

Unit IV Discourse Level- Coherence and Cohesion

1. Introduction: Identifying effective and ineffective writing styles.
2. Macro features
3. Micro features
4. Exercises to test Structure, Flow, Sequencing etc.

Unit V Writing Field Reports and Term Papers

1. Function
2. Planning: making a Mind Map
3. Developing a theme
4. Integration: Structure and format
5. Synopsis writing as a mind map of the proposed research
6. Abstract writing

Suggested Readings:

Note: The books by Stella Cottrell and Renu Gupta can be used as textbooks in the classroom.

- Cottrell, Stella 2003. *The Study Skills Handbook.* China: Palgrave Macmillan
- Murphy, Raymond. 1992. *Elementary English Grammar (2nd edition).* Cambridge University Press.
- Murphy, Raymond. 1994. *Intermediate English Grammar (2nd edition).* Cambridge University Press.
- Hewings, Martin. 1999. *Advanced English Grammar*. Cambridge University Press.
- Gupta, Renu. 2010. *A Course in Academic Writing*. Orient Blackswan, New Delhi.

- McCarthy, Michael and Felicity O'Dell. 2009. *Academic Vocabulary in Use: 50 Units of Academic Vocabulary Reference and Practice; Self-study and Classroom Use.* Cambridge University Press.
- Hoshima, Alice and Hogue, Ann. 2007 3rd Ed. *Introduction to Academic Writing*. Pearson Longman: New York.
- Hayot, Eric. 2014. *The Elements of Academic Style: Writing for the Humanities*. Columbia Univ. Press: New York.
- Murray, Rowena & Moore, Sarah. 2006 .The Handbook of Academic Writing. Open University Press, McGraw Hill.
- Zemach, E Dorothy & Rumisek, Lisa A. 2006 Academic Writing: From Paragraph to Essay. Macmillan.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q 1. Explain the difference between academic writing and writing in our daily life. Give examples to illustrate.

Or

Describe the forms of academic writing.

Q.2 Given below are 20 incomplete sentences from an academic article. Select any 16 and complete them with the appropriate words/ phrases.

1. Karl Popper, an _____ 20th-century philosopher of science, thought that the fundamental feature of a scientific theory is that it should be falsifiable.

2. To call a theory falsifiable is _____ that it is false.

3. Rather, it means that the theory makes some _____ predictions that are capable of being tested against experience.

4. If these predictions turn out to be wrong, then the theory has been falsified, or _____

5. So a falsifiable theory is one that we _____ false - it is not compatible with every possible course of experience.

6. Popper thought that some _____ scientific theories did not satisfy this condition and thus did not deserve to be called science at all; rather they were merely pseudo-science.

7. Freud's psychoanalytic theory was one of Popper's _____ pseudo-science.

8. According to Popper, Freud's theory _____ any empirical findings whatsoever.

9. Whatever a patient's behavior, Freudians could find an _____ it in terms of their theory - they would never admit that their theory was wrong.

10. The same _____ Marx's theory of history, Popper maintained.

11. Marx claimed that in _____ societies around the world, capitalism would give way to socialism and ultimately to communism.

12. But when this didn't happen, instead of admitting that Marx's theory _____ ,Marxists would invent an ad hoc explanation for why what happened was actually perfectly consistent with their theory.

13. For example, they might say that the inevitable progress to communism had been temporarily slowed by the rise of the welfare state, which 'softened' the proletariat and weakened their _____ zeal.

14. Popper _____ Freud's and Marx's theories with Einstein's theory of gravitation, also known as general relativity.

15. Unlike Freud's and Marx's theories, Einstein's theory made a very definite prediction: that light rays from distant stars _____ by the gravitational field of the sun.

16. _____, this effect would be impossible to observe - except during a solar eclipse.

17. In 1919 the English _____ Sir Arthur Eddington organized two expeditions both of which found that starlight was indeed deflected by the sun, by almost exactly the amount Einstein had predicted.

18. Popper _____ by this.

19. Einstein's theory had made a definite, precise prediction, which _____ by observations.

20. Had it _____ that starlight was not deflected by the sun, this would have showed that Einstein was wrong.

Or

Write a brief essay on the conventions of register-specific academic writing, giving apt examples.

Q 3. Write a précis of the passage given below, reducing it to one-third of its length.

The human brain is said to be the most complex object in the known universe. Relative to body weight, human brains are larger than those of any other species, and by a long way. They are about three times larger than you would expect by comparing them with those of our closest relatives, the other great apes. A human brain weighs nearly one and a half kilograms and consists of over a billion neurons (nerve cells), with many billions of interconnections. Out of all these connections come our extraordinary abilities: perception, learning, memory, reasoning, language, and – somehow or another –consciousness. We know that the brain is intimately involved in consciousness because changes in the brain cause changes in consciousness. For example, drugs that affect brain function also affect subjective experiences; stimulation of small areas of the brain can induce specific experiences such as hallucinations, physical sensations, or emotional reactions; and damage to the brain can drastically affect a person's state of consciousness. This much we know for sure, but what remains a mystery is why we should be conscious at all.

Or

Write the paraphrase of the poem given below.

“The Road Not Taken” by Robert Frost (1874-1963)

Two roads diverged in a yellow wood,

And sorry I could not travel both

And be one traveler, long I stood

And looked down one as far as I could

To where it bent in the undergrowth;

Then took the other, as just as fair,

And having perhaps the better claim,

Because it was grassy and wanted wear;

Though as for that the passing there

Had worn them really about the same,

And both that morning equally lay

In leaves no step had trodden black.

Oh, I kept the first for another day!

Yet knowing how way leads on to way,

I doubted if I should ever come back.

I shall be telling this with a sigh

Somewhere ages and ages hence:

Two roads diverged in a wood, and I—

I took the one less traveled by,

And that has made all the difference.

Q.4 Analyze the passage given below for features of coherence and cohesion.

Why are people so happy? Is it simply that positive emotions are more frequent in life than negative ones, and so the balance is in the black? This may be true, but there are also other reasons people might report better-than-middling happiness when asked. Chronic unhappiness might indicate perceived failure to achieve life goals, or unfavorable comparisons with the achievement of others. As well as being things to avoid for their own sake, these are, to paraphrase evolutionary psychologist, Geoffrey Miller, things you might not want to admit to on a first date. That is, unhappiness is not just unfortunate; it is unattractive in a potential mate, friend, or colleague. This effect was pointed out by Adam Smith, father of free-market economics, who was an accomplished theoretician of emotions. Thus, one reason for such high self-reported happiness is that people are aware of the signals they are giving off and so they impression manage. Some indication that this effect is significant comes from the finding that people report higher levels of well-being in face-to- face interviews than in postal surveys. This effect is particularly pronounced when the interviewer is of the opposite sex. It is easy to understand the temptation to do this. (It is also worth

remembering when you feel down, that if everyone seems happier than you are, that may only mean that they are good at seeming happy.)

Or

The piece of writing given below has been rated as ineffective writing. Rewrite it, improving on it to make it more effective.

A community volunteer programme was initiated in rural Jamaica in May 1990. The main aim of the programme was to monitor the growth of children less than 36 months of age through community health volunteers (CHVs) and improve their nutritional status. At the end of the second year the programme was evaluated to determine its effectiveness. The results of the evaluation indicated that almost all (95.6%) of the children were covered by the CHVs. In addition the participation rate was high (78.5%). However, only 50% of the children were adequately covered. Nonetheless, 81% of them gained adequate weight. Indeed, malnutrition levels declined by 34.5%. The annual cost per child per year for the total programme was fairly moderate (US$14.5) with growth monitoring accounting for nearly half (42.7%). The results suggest that CHVs can play an important role in primary health care programmes in developing countries.

Q 5.. Create a Mind Map for a 2000 word article you will write on 'The Definition and Features of Effective Academic Writing'.

Or

Define and describe the parts of a Field Report.

Semester II

Compulsory Papers:

Paper V
Literary Movements –II

Many distinct literary movements mark the journey of writing from ancient times to the very contemporary. The paper identifies some of the major literary movements that form the essential frame of reference for a critical engagement with the vast corpus of literature. Movements such as classicism, romanticism or realism constitute the primer of critical vocabulary and therefore a basic understanding of these movements is necessary for a nuanced understanding of varieties of literary articulation. Each movement has its own specific set of aesthetic, cultural and ethical values and preferences. The writers and writings that fall within a movement, despite their heterogeneity and particularities, do converge in terms of fostering an identifiable literary taste and trend. Though these movements do occur in literatures of the world, and across languages, yet the focus of this course is primarily on European literature, with special accent on the British. The course is divided into five units. Each unit consists of general introductory essays on the specific movement and some primary texts that belong to the movement. The emphasis of the paper is on the

historical and conceptual understanding of various literary movements. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit I Realism

1. Ian Watt, "Realism and the Novel Form", *The Rise of the Novel*, (University of California Press, 2001) 11-36.
2. George Eliot, Chapter 17, *Adam Bede*, Volume 3,(William Blackwood and Sons, 1859) 223-244.

Unit II Modernism

1. Malcolm Bradbury and James McFarlane, "The Name and Nature of Modernism" from *Modernism: A Guide to European Literature 1890-1930*, ed. By Malcolm Bradbury and James McFarlane (Penguin, 1976), 19-35.
2. Ezra Pound, "A Few Don'ts by an Imagiste", https://www.poetryfoundation.org/poetrymagazine/articles/58900/a-few-donts-by-an-imagiste

Unit III Postmodernism

1. Linda Hutcheon, "Theorizing the Postmodern: Toward a Poetics", *A Poetics of Postmodernism: History, Theory, Fiction* (Routledge, London & New York, 1988) 3-21.
2. Ihab Hassan, "Toward a Concept of Postmodernism", *The Postmodern Turn* (Ohio: Ohio State University Press, 1987) 1-10.
3. Borges, Jorge Luis. "The Library of Babel", *Collected Fictions*. Trans. Andrew Hurley (New York: Penguin, 1998) 112-118.

Unit IV Postcolonialism

1. Bill Ashcroft, Gareth Griffiths, Helen Tiffin. Eds. "Introduction" to *The Empire Writes Back* (Routledge: London & New York, 1991) 2002, 2nd Ed. 1-13.
2. Ngugi wa Thiong'o ,"The Language of African Literature", *Decolonizing the Mind: The Politics of Language in African Literature* (Harare: Zimbabwe Publishing House, 1987) 1994 rpt. 3-33.

Unit V Debating 'Periodization' in History

1. Ted Underwood, "The Disciplinary Rationale for Periodization and a Forgotten Challenge to It (1886–1949)", *Why Literary Periods Mattered: Historical Contrast and the Prestige of English Studies* (Stanford & California: Stanford University Press, 2013) 114-135.
2. Eric Hayot, "Against Periodization; or, On Institutional Time", *New Literary History*, Vol. 42, No. 4, (Autumn 2011), 739-754.

Secondary Readings

- Ann L. Ardis, *Modernism and Cultural Conflict*, 1880-1922 (Cambridge: Cambridge University Press, 2002)
- Bill Ashcroft, *Key Concepts in Post-colonial Studies* (London & New York: Routledge, 1998)
- Chris Baldick, *The Modern Movement: 1910-1940* (Oxford: Oxford University Press, 2004)
- Norman F Cantor. *Twentieth-Century Culture: Modernism to Deconstruction* (Peter Lang, 1988)
- Peter Childs. *Modernism* (London & New York, Routledge, 2000)
- Leela Gandhi, *Postcolonial Theory* (Allen & Unwin, 1998)
- Ania Loomba, *Colonialism/Postcolonialism* (London & New York: Routledge 1998)
- Pam Morris, *Realism:* The New Critical Idiom (London & New York: Routledge, 2006)
- Dennis Walder, *The Realist Novel* (London & New York: Routledge, 1995)
- Ira Mark Milne, Project Editor, *Literary Movements for Students* (Gale Cengage Learning, 2009)
- John McLeod, *Beginning Postcolonialism* (Delhi: Viva Books, 2000)

Model Paper

Literary Movements II
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 What is realism? How does it lead to the rise of novel?
Or
How does George Eliot approach the need of realism in fiction? Answer your question in the light of arguments made in Chapter 17 of her novel *Adam Bede*.

Q. 2 What are the general features of 'modernism'? How does it shape literature in the first half of twentieth century?
Or
Discuss in detail the role of Ezra Pound's theory of imagism. How did it influence the aesthetics of modern poetry?

Q. 3 How does Linda Hutcheon sum up the poetics of postmodernism?
Or
How is postmodernism different from modernism? Discuss Ihab Hasan's formulations in this context.

Q.4 What do you mean by the expression "empire writes back"? Discuss the political implications of writing back.
Or
Does writing in a native tongue decolonize mind?

Q. 5 What are the limitations of writing literary history in terms of periods?
Or
Choose any one literary movement and map its scope and limitations.

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Paper VI
Approaches to Literature – II

The objective of the course is to familiarize students with various approaches to literature, and the particular worldviews these are based on. The students should able to relate literary texts to their lives in terms of their own times and location. The number of approaches suggest that there is no one privileged way to understand a text, and that a text can yield multiple meanings if it is accessed through different worldviews. Each approach has a claim to total meaning till it is countered by another equally compelling approach. Each approach has its own well-argued theoretical base, a set of tested tools and a sustained methodology to help the student to navigate through the text with a degree of precision. These approaches put together give rise to what is often called as critical pluralism. The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there should be questions of a practical nature in which the candidate has to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. Andrew Bennett and Nicholas Royle,"The beginning," "Readers and reading," "The author," and "The text and the world", *An Introduction to Literature, Criticism and Theory* (Pearson Longman, 2004, 3rd Edition) Chapters 1-4 (1-33).

Unit II

1. Terry Eagleton, "Literature and History", *Marxism and Literary Criticism* (London & New York: Routledge: 1976), 1-9.

Unit III

1. Wilfred L. Guerin et al, eds., "Feminism and Gender Studies (I, II, III, IVA, IVB, V)" A *Handbook of Critical Approaches to Literature* (Oxford: OUP, 2005) 5th Ed.
2. Charlotte *Krolokke* and Ann Scott Sorensen, "Three Waves of Feminism: From Suffragettes to Grrls", *Gender Communication Theory and Analyses: From Silence to Performance* (Thousand Oaks, London & New Delhi: SAGE, 2006) 1-24.

Unit IV

1. Chapter 9 of Wilfred Guerin's *Handbook*: Cultural Studies (I, II, IIIA, IIIB)
2. Stuart Hall, "The Formation of Cultural Studies", *Cultural Studies 1983: A Theoretical History* (Durham & London: Duke University Press, 2016) 5-24.

Unit V

1. Chapter 10 of Wilfred Guerin's *Handbook*: The Play of Meanings (I, II, III)
2. Umberto Eco, "The Open Work", *The Open Work*, trans. Anna Cancogni (Cambridge & Massachusetts: Harvard University Press, 1989) 1-23.

Suggested Readings

1. Andrew Bennett, and Nicholas Royle, *An Introduction to Literature, Criticism and Theory (*Pearson, 2004) (Third Edition is available online)
2. David Lodge, ed. *20th Century Literary Criticism: A Reader* (Longman, 1989)
3. David Daiches, *Critical Approaches to Literature*, 2nd ed. (Orient Longman, 1970)
4. M.A.R. Habib. *A History of Literary Criticism: From Plato to the Present* (Blackwell, 2005)
5. Patricia Waugh, *Literary Theory & Criticism: An Oxford Guide* (Oxford: OUP, 2006)
6. M. S Nagarajan, *English Literary Criticism & Theory: An Introductory History.* (Orient Longman, 2006)

7. David Robey and Ann Jefferson. *Modern Literary Theory* (Batsford, 1986)
8. Frank Lentriccia. *After the New Criticism* (Chicago: Chicago UP, 1980)
9. Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2003)
10. Peter Barry, *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed. (Manchester: Manchester UP, 2004)
11. Raman Selden, *A Reader's Guide to Contemporary Literary Theory (*Pearson, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1. How does a literary text multiply its beginning(s)?

Or

What is meant by "framed acts of reading"? Discuss the number of frames suggested by Andrew Bennet in this context.

Q.2 How important is the place of history in approaching a literary text?

Or

How does Terry Eagleton theorize the relationship of history with literature and vice versa?

Q.3. Feminism as a movement has undergone many phases. Delineate these phases with examples from literary texts.

Or

Literary texts are invariably gendered and therefore are always implicated in the politics of gender. Discuss feminist approach to literature in this regard.

Q.4 Discuss the methodological conundrums of the project of cultural studies.

Or

Explain critically the rise of cultural studies as a project in Britain and later on across the globe.

Q.5 Why does Umberto Eco describe text as "an open field"?

Or

Does a literary text yield any essential meaning or does it engender many possibilities of meaning. Argue.

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Paper VII
(Choose any one of the options)

(1) Cultural Studies – II

There are cultures within culture. The objective of the paper is to explore these various layers of cultures that begin to emerge due to intervention of new technologies in the lives of people. From a canonical understanding of culture, the paper moves on to unfold the arrival of popular culture, and within it various other subcultures that playfully subvert the dominance of the classical culture. The paper also provides a critical perspective on other shades of culture such as 'mass culture' or 'celebrity culture' that in the name of entertainment, pleasure or leisure often stupefy masses into a mode of uncritical consumerism. The paper introduces the students to some of the key theorists of the project of Cultural Studies such as Stuart Hall, John Fiske, Adorno and Habermas. The units contain essays both of theoretical and illustrative nature.

Unit I Popular Culture

1. Stuart Hall, "Notes on Deconstructing the Popular", *People's History and Socialist Theory*, ed. Raphael Samuel (Routledge Revival: 1981) 227-241.
2. John Fiske "Medonna", *Reading the Popular* (London & New York: Routledge, 1989) 95-114.

Unit II Subculture

- Dick Hebdige, "The Function of Subculture", *The Cultural Studies Reader*, ed. Simon During (London & New York: Routledge, 1993)2nd Edition 1999, 441-450.
- Paul Willis, "The Motor Bike and Motor Bike Culture", *Popular Culture: Past and Present, A Reader*, edited by Bernard Waites, Tony Bennett and Graham Martin (London & New York: Routledge, 1982) 284-293.

Unit III Public Sphere

1. Alan McKee, "Introduction" to *The Public Sphere: An Introduction* (Cambridge University Press, 2005) 4-14.
2. Jürgen Habermas, "From Culture Debating to Culture Consuming Society", *Towards Transformation of Public Sphere*, (John Wiley and Sons, 2015) 159-174.

Unit IV Mass Culture

1. Alan Swingewood, "The Theory of Mass Society", *The Myth of Mass Culture* (London: Macmillan, 1977) 1-23.

2. Theodor W Adorno, "Free Time", *The Culture Industry* (London & New York: Routledge, 1991 ed.) 187-197.

Unit V Celebrity Culture

1. Michael Ryan, "Audience, Performance and Celebrity", *Cultural Studies: A Practical Introduction* (Wiley Blackwell, 2010) 150-160.
2. Ellis Cashmore, "Cultivating/ Tastes: What parts did the media and consumer society play in turning us into celebrity-doters?" *Celebrity/ Culture* (Routledge, 2006), 1-16.

Suggested Readings

- Alexander Dhoest, Steven Malliet,et al., *The Borders of Subculture: Resistance and the Mainstream*, (Routledge, 2015)
- Andy Bennett and Keith Kahn-Harris, *After Subculture: Critical Studies in Contemporary Youth Culture*, (Palgrave Macmillan, 2004).
- Arthur Asa berger, *The Objects of Affection: Semiotics and Consumer Culture: Semiotics and Popular Culture* (Palgrave Macmillan, 2010).
- Chris Jenks, *Subculture: The Fragmentation of the Social*, (Sage, 2005).
- Craig J. Calhoun, *Habermas and the Public Sphere*, (MIT Press, 1992).
- Dick Hebdige, *Subculture: The Meaning of Style*, (Routledge, 1979).
- Dominic Strinati, *An Introduction to Theories of Popular Culture*, (Routledge, 2004).
- Ellis Cashmore, *Celebrity Culture: Key Ideas*, (Routledge, 2006).
- Gary Burns, *A Companion to Popular Culture*, (Wiley Blackwell, 2016).
- J.M. Adorno and Bernstein, *The Culture Industry: Selected essays on Mass Culture*, (Routledge, 2004).
- John A. Weaver, "From Culture and Images to Popular Culture Images", *Popular Culture: Primer*, (Peter Lang, 2005) 1-24.
- John Storey, *Cultural Theory and Popular Culture: An Introduction*, (Routledge, 2015).
- Jostein Gripsrud, Hallvard Moe, et al., *The Idea of the Public Sphere: A Reader* (Lexington Books, 2010).
- Jurgen Habermas and Thomas Berger, *The Structural Transformation of the Public Sphere*, (MIT Press, 1989).
- Peter Dahlgren, *Television and the Public Sphere: Citizenship, Democracy and the Media*, (Sage Publications, 1995).
- Robert W. Witkin, *Adorno on Popular Culture*, (Routledge, 2002).
- Ross Haenfler, *Subcultures: The Basics*, (Routledge, 2013).
- Rupa Haq, *Beyond Subculture: Pop, Youth and Identity in a Postcolonial World*, (Routledge, 2006).
- Su Holmes and Sean Redmond, *Framing Celebrity: New Directions in Celebrity Culture*, (Routledge, 2006).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q.1 Explain how Stuart Hall favors 'popular culture' as a site of social transformation.

Or

'Madonna's popularity is a complexity of power and resistances, of meanings and counter meanings, of pleasures and the struggle for control'. Explain the above statement with your understanding of popular culture.

Q. 2 Discuss Paul Willis' 'The Motor Bike and Motor Bike Culture' as an argument in favor of subculture.

Or

With your reading of Dick Hebdige's "Function of the Culture" discuss how subculture resists the hegemony of the dominant culture.

Q.3 What transformation does Habermas' notice in the making of public sphere?

Or

What do you mean by "public sphere", and how is it different from "civil society" and "mass culture"?

Q. 4 Explain Adorno's concept of "Free Time". Discuss the commodification of our hobbies in the age of consumerism.

Or

How does Allen Swingewood theorize "mass society"?

Q.5 "Celebrity culture is a phenomenon that is simultaneously well known and little known." Discuss the implications of the statement in light of Ellis Cashmore's prescribed essay.

Or

Discuss the role of media in fomenting 'Celebrity' Culture.

(2) Language and Linguistics – II

The aim of this paper is to develop an understanding of how language can be described at the levels of phonology, syntax, semantics and pragmatics. The English language is to be studied as a reference point, while comparison and consideration of structures in other languages will also be relevant. An important objective is the development of a practical and analytical approach to the study of languages, while extending the scope of linguistics to communication between languages, as in the activity of translation.

Unit I Phonetics and Phonology

- Fromkin, Rodman &Hyames, "Phonetics: The Sound of Language", *An Introduction to Language* (Wadsworth 2010, 9th ed.) 189-215.
- Fromkin, Rodman &Hyames, "Phonology: The Sound Patterns of Language", *An Introduction to Language* (Wadsworth 2010, 9th ed.) 224-263.

Unit II Morphology and Grammar

- Adrain Akmajian et al, "Morphology" (Chapter 2), *Linguistics – An Introduction to Language and Communication* (MIT, 2010) 6th Ed., 13-66.
- Frank Palmer, *Grammar*(Penguin, 1971) rpt.1996, 9-40 & 149-194.
- Noam Chomsky, "The Theory of Transformational Generative Grammar", *Topics in the Theory of Generative Grammar* (Moulton, 1978) 5th print, 51-75.

Unit III Semantics

- Adrain Akmaijian et al, "Semantics: The Study of Linguistic Meaning" (Chapter 6),*Linguistics –An Introduction to Language and Communication (*MIT, 2010) 6th Ed. 225-272.
- David Crystal, "Semantics" (Chapter 17) *The Cambridge Encyclopaedia of Language* (CUP, 1997) 42-49.
- John Lyons, "Part 2 Lexical Meaning", *Linguistic Semantics: An Introduction* (Cambridge University Press, 1995) 2005 rpt.,46-71.

Unit IV Pragmatics

- J. Habermas, "What is Universal Pragmatics?" *On the Pragmatics of Communication* (MIT, 1988) 21-104.
- Kent Back, "Speech Acts and Pragmatics", *The Blackwell Guide to the Philosophy of Language*, edited Michael Devitt and Richard Hanley (Blackwell, 2006) 147-167

Unit V Translation

- Peter Newmark, "Theory and Craft of Translation", Language Teaching / Volume 9 / Issue 01 / January 1976, 5 – 26.
- Peter Newmark, "Translating Methods" (45-53), "Literal Translation" (68-80), "The Other Translation Procedures" (81-93), *A Textbook of Translation* (Prentice Hall, 1988).
- J.C Catford, *A Linguistic Theory of Translation* (OUP, 1967) 20-72.

Suggested Readings

- John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970).
- M. A.K. Halliday, Jonathan J. Webster, *On Language and Linguistics* (Continuum, 2006).
- Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics* (Routledge, 1999).
- David Crystal,*The Cambridge Encyclopedia of Language* (Cambridge University Press, 1997).
- James S. Holmes (ed.), *The Nature of Translation: Essays on the Theory and Practice of Literary Translation* (Walter de Gruyter, 1970).
- Chris Fox, Shalom Lappin, *The Handbook of Contemporary Semantic Theory* (Wiley-Blackwell, 2015).
- John Lyons, *Linguistic Semantics: An Introduction* (Cambridge University Press, 1996).
- Yehuda N. Falk, *Subjects and Universal Grammar: An Explanatory Theory* (Cambridge University Press, 2006).
- Noam Chomsky, *Topics in the Theory of Generative Grammar* (De Gruyter Mouton, 1978).
- Thomas R. Hofmann, *Realms of Meaning: An Introduction to Semantics* (Routledge, 1993).
- Noam Chomsky, *Syntactic Structures,* 2nd Edition (Mouton de Gruyter, 2002).
- Bas Aarts, David Denison, Evelien Keizer, Gergana Popova-*Fuzzy Grammar: A Reader* (Oxford Univ Press, 2004).
- Geert Booij, *The Grammar of Words: An Introduction to Linguistic Morphology* (Oxford University Press, 2005).
- Richard J Bernstein, *The Pragmatic Turn* (Wiley_Polity, 2010).
- Paul Cobley (edt.), *The Routledge Companion to Semiotics and Linguistics,* (Routledge. 2005).
- Daniel Weissbort, Astradur Eysteinsson (edt.), *Translation-Theory and Practice: A Historical Reader* (OUP, 2006).
- David Crystal, *Making Sense: The Glamorous Story of English Grammar* (Oxford University Press, 2017).
- Gould Brown, *The Grammar of English Grammars* (Amazon Digital Services, 2004).
- M.A.K. Halliday: *Language as Social Semiotic: The Social Interpretation of Language and Meaning* (Edward Arnold, 1978).
- Steven Pinker, *How the Mind Works*, (W. W. Norton & Company, 2009).
- Jean Piaget, *The Child's Conception of the World* (Routledge & Kegan Paul Ltd.,1929).

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are speech sounds? How do we classify vowel and consonant sounds?
Or
Define phonology. Discuss phonemes as the phonological units of language.

Q. 2 How does Morphology help to understand the structure of complex words?
Or
Give a critical account of Transformational Generative Grammar.

Q. 3. What is meaning? What are the different approaches to the study of meaning in language.
Or
Define Semantics. Discuss the following semantic concepts with examples:
I) Synonymy and Antonymy
II) Homonymy and Polysemy

Q. 4 Discuss in detail Habermas's concept of Universal pragmatics.
Or
Explain critically Austin's idea of "doing things with words.

Q. 5 What are the different methods of translating a text? How do these methods correspond to different text types?
Or
Give a critical account of Newmark's theory of translation.

(3) British Literature – III

The Victorian Period (1832-1901) covers the long and successful reign of Queen Victoria. It was a period of colonial expansion, strengthening of the British Empire, industrial revolution, and scientific and technological progress. The objective of the paper is to explore the major writers and texts of the time and focus on the ideological, political, social and cultural impact on Victorian culture as a consequence of industrialization, urbanization, class conflict, Darwin and religious crisis, issue of gender, empire and imperial expansion and much more. The paper will also analyze the Victorian Gothic novel and its impact and continued popularity. Students will explore the creation of 'other' in Gothic writing and the monstrosity associated with it. The paper will furthermore familiarize the students with the genre of science fiction. At the end of the course the students will be conversant with the major writers, representative works and will be able to engage critically on the issues regarding empire, race, class, gender, impact of science, 'the woman question' and other significant events of the period.

Unit I

1. Robert Browning,"Grammarian's Funeral" & "The Last Ride Together", *The Poems of Robert Browning* (Wordsworth, 1994).
2. Alfred Lord Tennyson, "Defense of Lucknow", **"**The Higher Pantheism" [available online <www.bartleby.com/297/629.html> and <https://www.poetryfoundation.org/poems/45323/the-higher-pantheism>]
3. Christina Rossetti, "Better Resurrection" & "Amor Mundi", *Complete Poems* (Penguin, 2001).

Unit II

1. Charles Dickens, *Hard Times* (Penguin Classics, 2003).

Unit III

1. Mathew Arnold, 'Barbarians, Philistines and Populace' (Chapter 3), *Culture and Anarchy* (Oxford UP World's Classics, 2009).
2. John Ruskin, "Unto this Last", *Unto this Last and Other Writings of John Ruskin*, ed. Clive Wilmer (Penguin Books, 1985)155-228.

Unit IV

1. H G Wells,*The Time Machine* (New York: Signet Classics, 2007).

Unit V

1. Bram Stoker, *Dracula* (Wordsworth Classics, 2000).

Secondary Readings:

- Anthony Jenkins, The*Making of Victorian Drama* (Cambridge UP, 1991).
- Deirdre David (ed.), *The Cambridge Companion to the Victorian Novel* (Cambridge UP, 2012).
- Gregory Tate, *The Poet's Mind: The Psychology of Victorian Poetry 1830-1870* (Oxford UP, 2012).
- Isobel Armstrong, *Victorian Poetry: Poetry, Poetics and Politics* (Routledge, 2005).
- Joseph Bristow (ed.), *The Cambridge Companion to Victorian Poetry* (Cambridge UP, 2002).
- Josephine M. Guy, *The Victorian Social-Problem Novel: The Market, the Individual and Communal Life* (Macmillan 1996).
- Nicola Diane Thompson (ed.), *Victorian Women writers and the Woman Question* (Cambridge UP, 2000).

- Richard Cronin et al. (eds.), *A Companion to Victorian Poetry* (Blackwell, 2007).
- Paul Young, Globalization and the Great Exhibition: The Victorian New World Order (Palgrave Macmillan, 2009).
- Harold Bloom (ed.), The Victorian Novel (Chelsea House, 2004).
- Philip Davis, Why Victorian Literature Still Matters (Blackwell, 2008).
- Lauren M.E Goodlad, Victorian Literature and the Victorian State: Character and Governance in a Liberal Society (The John Hopkins UP, 2003).
- M.K.Gandhi, *Unto this Last: A Paraphrase* (Navjivan Publishing House, Ahmedabad)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Critically analyze Browning's dramatic monologues. How do they capture the doubts of Victorian England?

Or

Comment on the language of Tennyson's poems. How does it differ from the language of his contemporary poets?

Q. 2. "Now, what I want is Facts. Teach these boys and girls nothing but facts." What kind of education do children receive in Mr. Gradgrind's school? Critically explore the philosophical sub-text of *Hard Times*.

Or

Hard Times has many striking images. The use of agricultural images, in particular, lends thickness to the texture of the novel. Argue through citation of textual references.

Q. 3. Ruskin's *Unto this Last* combines ethics with economics. Argue.

Or

Critically analyze Matthew Arnold' s "Barbarians, Philistines and Populace". Bring out the elitist biases of Arnold.

Q. 4 *The Time Machine* is traditionally identified as science fiction. Is it possible to see it as a horror story?

Or

What are the qualities that make the Time Traveller a sympathetic, if flawed character in the story?

Q. 5 Critically analyze Dracula's lines, "Yes, I too can love; you yourselves can tell it from the past." Does he have a tragic love story in the past? At what points in the novel does Stoker seem to elicit the reader's sympathy for Dracula?

Or

Discuss the structure of the novel *Dracula*. Why do you think Stoker chose to construct it as a series of journal entries and letters from multiple points of view?

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Paper VIII

(1) Introduction to Literary Genres – II

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the major genres that emerged and ossified during and after 18th century in Europe and elsewhere. Even as these genres almost overwhelmed the literary space, posing a challenge to the entrenched classical modes, their presence in current literary history is no less important. The effort is to provide a brief overview of each selected genre in terms of its historical evolution and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice.

Unit I Mock Epic

1. Ritchie Robertson, "Elements of Mock-Epic", *Mock-Epic Poetry: From Pope to Heine* (Oxford: OUP, 2009) 35-70.
2. Alexander Pope, "The Rape of the Lock", *The Rape of the Lock and Other Major Writings* (Penguin Classics, 2011).

Unit II Novel

1. George Lukacs, *The Theory of Novel* (Cambridge and Massachusetts: MIT Press, 1971, 1st Edition) 56-84.
2. Daniel Defoe, *Robinson Crusoe* (Penguin Classics, 2003).

Unit III Essay

1. G Doughlas Atkins, "In-Betweeness: The Burden of Essay", *Tracing the Essay: From Experience to Truth* (Athens & London: The University of Georgia Press, 2005) 145-162.
2. Johnson, Samuel. "*The Rambler* No. 184." 1751. *Quotidiana.* Ed. Patrick Madden. 12 Mar 2007. 05 Jul 2018 <http://essays.quotidiana.org/johnson/rambler_no_184/>
3. Addison, Joseph. "On the essay form." 1711. *Quotidiana.* Ed. Patrick Madden. 18 Jan 2007. 05 Jul 2018 <http://essays.quotidiana.org/addison/essay_form/>

4. Lamb, Charles. “The genteel style in writing.” 1833. *Quotidiana.* Ed. Patrick Madden. 25 Feb 2007. 05 Jul 2018 <http://essays.quotidiana.org/lamb/genteel_style_in_writing/

Unit IV Gothic

1. David Punter and Glennis Byron, “Gothic in the Eighteenth Century”, *The Gothic* (Blackwell Publishing, 2004) 7-12.
2. Mary Wollstonecraft Shelley, *Frankenstein* (Penguin Classics, 1985).

Unit V Tragicomedy

- John Orr, “Modernism and Tragicomedy”, *Tragicomedy and Contemporary Culture* (London: Macmillan, 1991) 1-10.
- Samuel Beckett, *Waiting for Godot* (New York: Grove Press, 1954).

Suggested Readings:

- Verna A Foster, *The Name and Nature of Tragicomedy* (Routledge: London & New York, 2017).
- Karl Siegfried Guthke,*Modern Tragicomedy: An Investigation into the Nature of the Genre* (Random House, 1966).
- David L. Hirst,*Tragicomedy*(Methuen, 1984).
- Andrew Smith, *Gothic Literature* (Edinburgh: Edinburg University Press, 2007).
- Michael Edwards, “A Meaning for Mock-Heroic”, *Poetry and Possibility* (London: Macmillan, 1988) 32-51.
- T.W.Adorno, Bob Hullot-Kentor, Fredric Will, “The Essay as Form*”, New German Critique*, No. 32 (Spring-Summer, 1984) 151-171.
- Catherine Spooner and Emma McEvoy, eds.,*The Routledge Companion to Gothic* (London & New York: Routledge, 2007).
- Benedict Anderson, *Imagined Communities* (London & New York: Verso, 2nded 2006).
- Mikhail Bakhtin, *The Dialogic Imagination: Four Essays* (Texas: University of Texas Press, 2008 17th Ed.).
- Frank Humphrey Ristine, *English Tragicomedy: Its Origin and History* (The Columbia University Press, 1910) 1-25.

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1. What are the elements of mock-epic? Use Richie Robertson's prescribed essay to trace the rise of this genre.
Or
Discuss the nature of super-natural machinery in *The Rape of the Lock*.

Q.2. Why does Lucas term novel as a genre of exile from transcendence?
Or
Discuss Defoe's *Robinson Crusoe* as a new form of narrative that foregrounds this-worldliness of human experience.

Q. 3 Why does G Douglas Atkins attribute "In-Betweeness" to the genre of essay?
Or
Discuss the differences in style and content of essays of Addison and Charles Lamb.

Q. 4 What do you mean by gothic art? Differentiate gothic fiction from mainstream fiction.
Or
Critically discuss *Frankenstein* as a gothic novel.

Q. 5 Modern plays are neither tragic nor comic. Argue with the help of suitable examples.
Or
Discuss *Waiting for Godot* as a tragi-comedy.
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(2) British Literature – IV

An era of conflict and uncertainty, the twentieth century marked a break from the the preceding Victorian period. The old was rejected, 'Make itNew' announced Ezra Pound and 'new it indeed was'. It was an age of literary experimentation, which broke away from established rules, traditions and conventions. The focus was to search for new ways of looking at man, universe, and man's role in it. A period of shifting perspectives, class struggle, gender equality, devastating wars, and collapse of traditional notions of culture and aesthetics. Modernist avant-gardes challenged and often shocked the people with their ideas, styles and techniques. The objective of the paper is to study and understand the ways in which political, historical, economic, scientific, intellectual, environmental, social and cultural events have shaped the art and literature of the time. The students will be introduced to the innovative literary techniques, intellectual trends and change in themes of this turbulent period. At the end of the course they will be familiar with the representative texts, literary terminology, and the socio-political and cultural events that shaped twentieth century literature.

Unit I

1. T.S. Eliot, "The Burial of the Dead" Canto I, *The Waste Land;* "Love Song of Alfred J Prufrock", *The Complete Poems and Plays of T.S. Eliot* (Faber, Main Edition, 2004).
2. W.B. Yeats, "Easter 1916", "A Prayer for My Daughter" &"Sailing to Byzantium" *Yeats: Poetry and Prose* (Norton Critical Editions, 2001).
3. W.H. Auden, "The Shield of Achilles", "September 1, 1939" & "Musée des Beaux Arts", *W.H. Auden: Collected Poems*. Ed. Edward Mendelson (Vintage International, 1991).
4. D. H. Lawrence, "Mosquitoes" & "Snakes", *Complete Poems of D.H. Lawrence* (London: Wordsworth, 1994).

Unit II

1. Samuel Beckett, *Waiting for Godot* (Pearson, 2012).

Unit III

2. James Joyce, *Portrait of An Artist as a Young Man* (Vintage Classics, 2012).

Unit IV

- Aldous Huxley, *Brave New World* (Vintage Classics, 2004).

Unit V

1. George Orwell, "Notes on Nationalism", "The Prevention of Literature" & "Reflections on Gandhi", *George Orwell: Essays* (Penguin UK, 2000), also available at www.orwellfoundation.com
2. Virginia Woolf, *A Room of One's Own. London* (Penguin Modern Classics, 2002).

Secondary Readings

- Alex Davis and Lee M., The Cambridge Companion to Modernist Poetry (Cambridge UP, 2007).
- Jane Goldman, Modernism, 1910-1945: Image to Apocalypse (UK: Macmillan Education, 2003).
- Jessica Berman, Modernist Fiction, Cosmopolitanism and the Politics of Community (Baltimore: University of Maryland, August 2001).

- LAC Dobrez, The Existential and Its Exits: Literary and Philosophical Perspectives in the Works of Beckett, Ionesco Genet and Pinter (UK: Athlone Press, 1986).
- Malcolm Bradbury, The Modern British Novel (Penguin, 2001).
- Martin Puchner, Stage Fright: Modernism, Anti-Theatricality, and Drama (John Hopkins UP, 2002).
- Michael Levenson, Modernism and the Fate of Individuality (Cambridge UP, 1991).
- Michael North, Reading 1922: A Return to the Scene of the Modern (Oxford: Oxford UP, 1999).
- Rebecca Beasley, Theorists of Modernist Poetry: T.S. Eliot, T.E. Hulme, Ezra Pound. (Routledge, October 2007).
- R.P. Draper, An Introduction to Twentieth-Century Poetry in English (London: Macmillan, 1996).
- Susan C.W. Abbotson, Thematic Guide to Modern Drama (Greenwood Press, 2003).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Discuss Yeats as poet of Irish aristocratic values.

Or

What type of images does Eliot use in his poems to contrast mythical past with modern present?

Q. 2 Who could be Godot in "Waiting for Godot"?

Or

Critically analyze the use of language in "Waiting for Godot"?

Q. 3. Compare and contrast Stephen's perception of art with his perception of religion, family, school, or country in the novel *Portrait of an Artist as a Young Man*. What makes art such an appealing escape for Stephen?

Or

Describe how *Portrait of an Artist as a Young Man* is a study of the conditions of the development of an artist.

Q. 4 Discuss the relation between the sexes in the World State as depicted in *Brave New World*. Who holds the power in social situations, in the workplace, and in the government?

Or

Analyze how important elements of *Brave New World* are "distorted," and explain how these distortions contribute to the effectiveness of the work.

Q. 5 What predictions does Woolf make for women's writing in the future? How do they look from our current vantage point? (*A Room of One's Own*).
Or
George Orwell offers a critique of imperialism from the position of an insider. Argue.

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(3) Academic Writing -- II

The paper is designed to help students develop the use of effective learning strategies which will help in academic writing. The classes will expose the students to various forms of referencing and citation so that their work never comes under plagiarized texts. The classes will provide sufficient practice in order to empower the students to be able to write a coherent and cohesive text with a logical flow that demonstrates precision and clarity. The two papers on academic writing are designed to fulfill the requirements of higher education, so the focus in the classroom will be on consistent and regular writing practice. The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the characteristics of academic writing and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the actual, hands on writing of academic documents. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I Reading and Critical Thinking

1. Reading Broadly and Narrowly
2. Critical Reading towards Critical Writing
3. How to Get the Most out of Reading
4. Committing tentatively to a position
5. Taking a position on the Question

Unit II Note Taking and Note Making

1. Note taking techniques
2. Taking Notes from Research Reading (Recommended Strategies, Direct and Indirect Quotes)
3. Note making effectively

Unit III Presentations

1. Preparation and Planning
2. Creating Interest
3. Establishing a Relationship with the Audience

Unit IV Re-reading for Grammar, Punctuation and Style

1. Errors in Grammar
2. Errors in language use
3. Punctuation Errors
4. Referencing style and format

Unit V Plagiarism

1. Definition
2. Parameters
3. Strategies to avoid plagiarism
4. Spotting plagiarism

Suggested Readings

Note: The first two books can be used as textbooks in the classroom.

- Cottrell, Stella 2011. *Critical Thinking Skills.* China: Palgrave Macmillan
- Jordan, R. R. 1999. *Academic Writing Course.* Harlow: Longman.
- Leki, Ilona 1998. *Academic Writing.* India: Cambridge University Press.
- Morley, John et al. 2007. *University Writing Course.* Newbury, Berkshire: Express Publishing.
- Oshima, Alice and Ann Hogue. 2007. *Introduction to Academic Writing (The Longman Academic Writing Series).* Longman.
- Strunk, William Jr. 2000. *The Elements of Style.(4th edition).*Boston: Allyn &Bacon.
- Swales, John M. and Christine B. Feak. 2004. *Academic Writing for Graduate Students.* Ann Arbor: University of Michigan Press.

MODEL PAPER

Time: 3hrs. Maximum Marks: 80

Q. 1 Explain the difference between reading broadly and narrowly in our daily life, giving examples to illustrate.

Or

Give a critical reading to the passage given below, writing down your observations on the passage.

The Depiction of Women in Indian Cinema

Indian Women have excelled in every field and have engraved their names in many parts of the universe, but there still seems to be a long route ahead before she attains equal status in the minds of Indian men. 'Most agricultural civilizations downgraded

the status and potential of women, at least according to modern Western standards and to the implicit standards of hunting-and gatheringsocieties. Agricultural civilizations were characteristically patriarchal; that is,they were run by men and based on the assumption that men directed political,economic, and cultural life. Furthermore, as agricultural civilizations developed over time and became more prosperous and more elaborately organized, the status of women deteriorated from its initial level.'

In a well-defined patriarchal society like India, even the cinematic world deems to project women as in factual life. This is a good thing as films have mass appeal and at least some if not all carry out a message to the public and try to create awareness. There is a myth that women are characterized in films to prop up the male role rather than characterize them as the one who keeps the narrative structure sinuous. Women are insinuated in films as bearing the burden of sexual objectification that male roles cannot. Hence, they become the bearer, and not the maker of meaning says Laura Mulvey. Most Indian women live a silent life with enormous amount of sacrifices and retain their frustration within themselves for the sake of societal pressure.

Women in Indian cinema are born with certain assumptions ranging from cult movies to celluloid blockbusters like Sholay to more recent Fashion that employ themselves as in severe gender issues. They are portrayed either as damsels in distress or demented feminists or simple belly-shaking glam dolls whose sole ambition is to attract the attention of the male gender. In many Indian films it is a common trend to insert 'item numbers' which bear no rational connection to the film in anyways but with an assumption that the film is easily associated. As Bindu Nair says, 'Sometimes the one song ends up making the film a hit, such as 'Chamma Chamma' from the film China gate.'Occasionally, do we see a female being the protagonist of a film than merely being objects of sexual desire. In some cases there appears to be a clash between 'modern feminism' and 'traditional values'. Indian cinema often acts like an emotional register and is very resourceful while reading the characterization of 'Women'.

Q. 2 Write the notes you will make for the passage given below.

'Big' Data Science

If you could possibly take a trip back in time with a time machine and say to people that today a child can interact with one another from anywhere and query trillions of data all over the globe with a simple click on his/her computer they would have said that it is science fiction !

Today more than 2.9 million emails are sent across the internet every second. 375 megabytes of data is consumed by households each day. Google processes 24 petabyte of data per day. Now that's a lot of data!! With each click, like and share, the world's data pool is expanding faster than we comprehend. Data is being created every minute of every day without us even noticing it. Businesses today are paying attention to scores of data sources to make crucial decisions about the future. The rise

of digital and mobile communication has made the world become more connected, networked and traceable which has typically resulted in the availability of such large scale data sets.

So what is this buzz word "Big Data" all about? Big data may be defined as data sets whose size is beyond the ability of typical database software tools to capture, create, manage and process data. The definition can differ by sector, depending on what kinds of software tools are commonly available and what sizes of data sets are common in a particular industry. The explosion in digital data, bandwidth and processing power – combined with new tools for analyzing the data has sparked massive interest in the emerging field of data science. Big data has now reached every sector in the global economy. Big data has become an integral part of solving the world's problems. It allows companies to know more about their customers, products and on their own infrastructure. More recently, people have become extensively focused on the monetization of that data.

According to a McKinsey Global Institute Report[1] in 2011, simply making big data more easily accessible to relevant stakeholders in a timely manner can create enormous value. For example, in the public sector, making relevant data more easily accessible across otherwise separated departments can sharply cut search and processing time. Big data also allows organizations to create highly specific segmentations and to tailor products and services precisely to meet those needs. This approach is widely known in marketing and risk management but can be revolutionary elsewhere. Big Data is improving transportation and power consumption in cities, making our favorite websites & social networks more efficient, and even preventing suicides. Businesses are collecting more data than they know what to do with. Big data is everywhere; the volume of data produced, saved and mined is startling. Today, companies use data collection and analysis to formulate more cogent business strategies. Manufactures use data obtained from the use of real products to improve and develop new products and to create innovative after-sale service offerings. This will continue to be an emerging area for all industries. Data has become a competitive advantage and necessary part of product development.

Or

Describe the process of note-taking while listening to a lecture. What are the conventions that you shall use?

Q. 3 Rewrite the sentences given below, correcting the errors of grammar and punctuation.

a. They had been living in this house for 2007.
b. write in pencil
c. we had great time in paris
d. will you please borrow me a copy of our textbook
e. the money was equally divided among the two

f. why is you followed me asked the man
g. this is a amazed experience we never seeing something likes that said the girl
h. an booty was be sharing between a three thiefs

Or
Describe the various kinds of reference styles used, giving clear examples.

Q. 4 What is the importance of the audience during a presentation? How will you capture audience interest?
Or
Outline the steps in preparing for a presentation.

Q5. Create a set of strategies for avoiding plagiarism to be shared with young researchers.
Or
Define plagiarism and describe its parameters.

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M.A.II

Semester III

One compulsory paper:

Paper IX
Critical Theory – I

Three optional papers: Choose any three papers from the list of courses.

PaperX
Indian Writings (in English) – I
Cultural Studies -- III
Shakespeare –I
Stylistics

Paper XI
Postcolonial Literatures –I
New Media Writing – I
World Literature –I
Literature and Ecology –I

Paper XII

Indian Literary Criticism and Theory -I
Writings from Punjab – I
Introduction to Literary Genres –III
American Literature –I

Paper XIII

Dissertation-Work
Or
Research Methods
(for private students and those who do not want to undertake dissertation-work)

Semester IV

One compulsory paper

Paper XIV

Critical Theory – II

Four optional papers: Choose any three papers from the list given below.

Paper XV

Indian Writings (in Translation) – II
Cultural Studies -- IV
Shakespeare –II
English Language Teaching (ELT)

Paper XVI

Postcolonial Literatures –II
New Media Writing – II
World Literature –II
Literature and Ecology –II

Paper XVII

Indian Literary Criticism and Theory –II
Writings from Punjab – II
Introduction to Literary Genres –IV
American Literature –II

Paper XVIII

Skill Enhancement/ Social Outreach
Or
Creative Writing and Soft Skills
(for private students and those who do not want to undertake dissertation-work)

Instructions for private candidates and allthose regular candidates who do not want to opt for dissertation work in paper XIII & Skill Enhancement/Social Outreach paper XVIII:

1. Paper XIII offers an internal choice. Either In place of paper XVII, such candidates shall choose one more paper from the list of optional papers suggested in Sem. III. This would mean that the candidate in Sem. III shall have a total of five papers (one compulsory and four optionals)
2. Paper XVIII also offers an internal choice. Either the student opts for 'Skill Enhancement/Social Outreach' or he/she appears in a paper named 'Creative Writing and Soft Skills'. This would mean that the candidate in Sem IV shall have a total of five papers (one compulsory and four optional).
3. It is reiterated that in the interest of specialization, the students should prefer corresponding optional papers in Sem. III and Sem. IV.
4. The aggregate score of M.A. in case of private students and for those who do not want to undertake dissertation work and also do not want to opt for 'Skill Enhancement/Social Outreach' would amout to 1800. For those opting for dissertation work XIII & paper on Skill Enhancement/Social Outreach XVIII, the aggregate score would be 1600.
5. Those who opt for 'Dissertation-Work' in Paper XIII, shall have to opt for 'Skill Enhancement/Social Outreach' in Paper XVIII. Similarly those who opt for 'Research Methods' in paper XIII, shall have to opt for 'Creative Writing and Soft Skills' in Paper XVIII.

(Semester I)
Compulsory Papers

Paper I
Literary Movements –I

Many distinct literary movements mark the journey of writing from ancient times to the very contemporary. The paper identifies some of the major literary movements that form the essential frame of reference for a critical engagement with the vast corpus of literature. Movements such as classicism, romanticism or realism constitute the primer of critical vocabulary and therefore a basic understanding of these movements is necessary for a nuanced understanding of varieties of literary articulation. Each movement has its own specific set of aesthetic, cultural and ethical values and preferences. The writers and writings that fall within a movement, despite their heterogeneity and particularities, do converge in terms of fostering an

identifiable literary taste and trend. Though these movements do occur in literatures of the world, and across languages, yet the focus of this course is primarily on European literature, with special accent on the British. The emphasis of the paper is on the historical and conceptual understanding of various literary movements. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit I What is a literary movement?

3. François Jost, "The Challenge of Literary Movements", *Comparative Literature Studies*, Vol. 18, No. 3, Papers of the Seventh Triennial Meeting of the American Comparative Literature Association (Sep., 1981) 278-286.
4. Micah Mattix, "Periodization and Difference", *New Literary History*, Vol. 35, No. 4, Forms and/of Decadence (Autumn, 2004) 685-697.

Unit II Classicism

4. Jean Hytier and June Guicharnaud, "The Classicism of The Classics", *Yale French Studies*, No. 38, *The Classical Line: Essays in Honor of Henri Peyre* (1967) 5-17.
5. Horace, "Ars Poetica", *The Poetry of Criticism: Horace, Epistles II and Ars Poetics, Ross S. Kilpatrick* (Edmonton: The University of Alberta Press, 1990) 72-83
6. Longinus, *On the Sublime*. Chapters VIII-XXII. Trans H.L.Havell (London & New York, Macmillan & Co., 1890)14-48

Unit III Renaissance

4. George Parfitt, "Renaissance", *Encyclopedia of Literature and Criticism.* Eds. Martin Coyle, Peter Garside, Malcolm Kelsall and John Peck (London & New York: Routledge, 1990) 83-92.
5. Machiavelli: *Prince.* Oxford World Classics. Trans. & Edited by Peter Bondanella, (New York: OUP, 2005) 53-78.
6. Erasmus, *The Praise of Folly*, trans. & edited Hoyt Hopewell Hudson (Princeton: Princeton University Press, 2015) First Eight Sections, 1-20.

Unit IV Neo-Classicism

4. Thomas Kaminski, "Neoclassicism", from *A Companion to the Classical Tradition*, edited by Craig W. Kallendorf (Malden & Oxford: Blackwell,

2007) 57-71.

5. Samuel Johnson, "The Necessity of Good Humour", *The Rambler* 72, November 24, 1750 in *Samuel Johnson: Selected Writings*. Ed Peter Martin (Cambridge & Massachusetts: The Belknap Press of Harvard University Press, 2009) 97-100
6. Henry Fielding, "Author's Preface" to *Joseph Andrews* (Penguin, 1999) 25-31

Unit V Romanticism

4. Seamus Perry, "Romanticism: The Brief History of a Concept", *A Companion to Romanticism*, ed. Duncan Wu (Malden &Oxford: Blackwell, 1999) 3-12.
5. M. H. Abrams: "Romantic Analogues of Mind and Art", *The Mirror and the Lamp*: *Romantic Theory and the Critical Tradition* (OUP: Oxford, London & New York, 1953) 47- 56.
6. Coleridge, "Chapter XIII – On the Imagination or the Esemplastic Power", *Biographia Literaria*(Princeton UP, 1984) 116-128.

Secondary Readings

- Gerald Abraham, *Romanticism*: 1830-1890 (Oxford: Oxford University Press, 1990)
- David Galen, *Literary movements for students: presenting analysis, context, and criticism on literary movements*, Volume 1 (Pennsylvania State University, Gale Cengage, 2002)
- Anthony Grafton, Glenn W Most and Salvatore Settis, *The Classical Tradition* (Harvard: Harvard University Press, 2010)
- Christopher Gillie, *Movements in English Literature: 1900-1940* (Cambridge: Cambridge Univ. Press, 1978)
- Margaret Healy and Thomas Healy. *Renaissance Transformations: The Making of English Writing*, 1500-1650 (Edinburg: Edinburgh University Press, 2009)
- Richard Jenkyns,.*Classical Epic* (Bristol Classical Press, 1992)
- Hugh Honour,.*Neo-classicism* (Penguin, 1968)
- Richard Jenkyns*, Classical Literature: A Pelican Introduction* (Penguin Books UK, 2015)
- Siobhan Keenan. *Renaissance Literature* (Edinburg: Edinburgh University Press 2008)
- Dominique Secretan*. Classicism* (London & New York: Routledge 2017)

Model Test Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are the advantages of dividing the history of literature into precise periods or literary ages?

Or

Summarize the arguments posited in Micah Mattix's essay "Periodization and Difference".

Q.2 What is classicism? Give detailed answers through examples.

Or

How do Horace and Longinus theorize classical virtues of literature in their own respective ways?

Q.3 What are the new debates on 'Renaissance' as an age of discovery?

Or
Critically analyze Machiavelli and Erasmus as renaissance prose writers.

Q. 4. What are the salient features of Neo-classicism?
Or
Explain the features of neo-classical prose through your critical reading of the prescribed essay of Samuel Johnson and Henry Fielding's "Author's Preface" to *Joseph Andrews*.

Q. 5 What are the key characteristics of romanticism?
Or
Critically summarize the views of M.H. Abrams on romantic art.
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Paper II
Approaches to Literary Criticism – I

The objective of the course is to familiarize students with various approaches to literature, and the particular worldviews these are based on. The students should able to relate literary texts to their lives in terms of their own times and location. The number of approaches suggests that there is no one privileged way to understand a text, and that a text can yield multiple meanings if it is accessed through different worldviews. Each approach has a claim to total meaning till it is countered by another equally compelling approach. Each approach has its own well-argued theoretical base, a set of tested tools and a sustained methodology to help the student to navigate through the text with a degree of precision. These approaches put together give rise to what is often called as critical pluralism.
Testing: The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there should be questions of a practical nature in which the candidate has to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

5. M. H. Abrams, "Orientation of Critical Theories", *The Mirror and the Lamp: Romantic Theory and the Critical Tradition*, (Oxford UP, 1958), 3-29.

Unit II

3. Wilfred Guerin et al, eds., "Historical and Biographical Approaches (I, IIA, IIB); Moral and Philosophical Approaches (I, IIA, IIB)" ,A*Handbook of Critical Approaches to Literature* (Oxford: OUP, 2005) 5th Ed.
4. Hippolyte Taine, "Introduction" to *History of English Literature*, Vol. I, (New York: Holt & Williams:, 1871) 1-21.

Unit III

1. Chapter 5 of Wilfred Guerin's *Handbook*: The Formalist Approach (I, II, III, IV, VA, VD)
2. Cleanth Brooks, "The Heresy of Paraphrase", *The Well Wrought Urn* (London: Dobson Books1960 2nd Impression) 176-196.

Unit IV

3. Chapter 6 of Wilfred Guerin's *Handbook*: The Psychological Approach: Freud (I, IIA, IIG)
4. Lionel Trilling, "Freud and Literature", *The Liberal Imagination* (New York: Viking Press, 1950) 34-57.

Unit V

3. Chapter 7 of Wilfred Guerin's *Handbook*: Mythological and Archetypal Approaches (I, II, IIIA, IIIB)
4. Northrop Frye, " The Archetypes of Literature", *The Kenyon Review*,Vol. 13, No. 1 (Winter, 1951), 92-110.

Suggested Readings

- David Lodge, ed. *20th Century Literary Criticism: A Reader* (Longman, 1989)
- David Lodge, ed., *Criticism and Theory: A Reader* (Pearson Education, Ist Indian Rpt., 2003)
- David Daiches, *Critical Approaches to Literature*, 2nd ed. (Orient Longman, 1970)
- M.A.R. Habib. *A History of Literary Criticism: From Plato to the Present* (Blackwell, 2005)
- Patricia Waugh, *Literary Theory & Criticism: An Oxford Guide* (Oxford: OUP, 2006)

- M. S Nagarajan, *English Literary Criticism & Theory: An Introductory History.* (Orient Longman, 2006)
- David Robey and Ann Jefferson. *Modern Literary Theory* (Batsford, 1986)
- Frank Lentriccia. *After the New Criticism* (Chicago: Chicago UP, 1980)
- Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2003)
- Peter Barry, *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed. (Manchester: Manchester UP, 2004)
- Raman Selden, *A Reader's Guide to Contemporary Literary Theory (*Pearson, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How does M.H. Abrams categorize different approaches to literary criticism?
Or
What are the characteristics of the mimetic approach to literature?

Q. 2. What are the major concerns of historical approach to literary criticism?
Or
How do 'man, moment and milieu' influence literary work? Use Taine's view to answer your question.

Q. 3 What is the importance of close-reading of a text in the formalist analysis of a work?
Or
What are the pitfalls of paraphrasing poetry?

Q. 4. What are the major concepts of Freud that are used by literary critics to understand the psychological make-up of a literary work?
Or
Trilling observes that literature brings out "the night-side of life". Do you agree?

Q. 5 What are the assumptions of archetypal approach with respect to literary criticism?
Or
What is it that constitutes "the coordinating principle" of literary criticism, according to Frye?

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Paper III
(Choose any one option)

(3) Cultural Studies – I

Culture as a concept is often used synonymously with 'civilization', 'religion' or even 'ideology'. The objective of this foundational paper is to introduce to the students the concept of culture in terms of its relationship with the discourses of 'civilization', 'religion', 'everyday life', 'science' and 'ideology'. The distinctions are subtle, but not oppositional n fundamental ways. Culture, however, tends to subsume all other discourses of life, be it religious, ideological or civilizational. The paper through a reading of primary essays and secondary responses written over the last two centuries by eminent culture critics and theorists like Matthew Arnold, F.R. Leavis, T.S.Eliot and Raymond Williams tends to cover the evolutionary trajectory of debate. Before the discourse of culture opens up to accept the everyday aspects of life as its material praxis, it goes through a series of intellectual bouts with the votaries of religion, science and ideology. The paper consists of five units. The end-semester paper shall consist of five questions, one from each unit with internal choice. The paper carries a total of 80 marks.

Unit I Nature-Nurture Debate

3. John Locke, *An Essay Concerning Human Understanding*, Book I (T. Tegg and Son, 1836)1-48.
4. Leibniz, *New Essays on Human Understanding*, Book I (Cambridge UP, 1996) 69-108.

Unit II Culture and Civilization

3. John Storey, "The 'culture' and 'civilization' tradition", *Culture Theory and Popular Culture* 18-28.
4. Matthew Arnold, "Chapter 1", *Culture and Anarchy*, Jane Garnett (ed.), (Oxford University Press, 2006) 32-53.

Unit III Culture and Religion

3. T.S. Eliot, "Religion and Literature", *T.S. Eliot: Selected Essays* (Faber and Faber, 1932) rpt. 1972, 388-401.
4. T.S. Eliot, "The 'Three' Senses of Culture", *Notes Towards the Definition of Culture*, (HMH, 2014), 19-32.

Unit IV Culture and Science

3. C.P. Snow, *Two Cultures*, Stefan Collini (ed.), (Cambridge University Press, 2012).
4. F.R. Leavis, "Two Cultures? The Significance of C.P. Snow", *Two Cultures? The Significance of C.P. Snow*, (Cambridge University Press, 2013) 53-76.

Unit V Culture and Everyday Life

3. Raymond Williams, "Culture is Ordinary", *Resources of Hope: Culture, Democracy, Socialism*, (Verso, 1989), 3- 18.
4. John Storey, "Culturalism", *Culture Theory and Popular Culture*, (Wiley, 2003), 38-51.

Suggested Readings

- A.L.Kroeber & Clyde Klucichohn, *Culture: A Critical Review of Concepts and Definitions* (Cambridge & Massachusetts: The Museum, 1952).
- Andrew Milner, *Re-imagining Cultural Studies: The Promise of Cultural Materialism*, (London: Sage Publications, 2002).
- Andrew Singleton, *Religion, Culture and Society: A Global Approach*, (Sage, 2014).
- Andrew Tudor, *Decoding Culture: Theory and Method in Cultural Studies*, (1999).
- Anthony Easthope, *Literary into Cultural Studies*, (New York: Routledge, 1991).
- Ben Highmore, *Culture*, (New York: Routledge, 2016).
- Brian Longhurst, Greg Smith, et al. *Introducing Cultural Studies* (Pearson, 2008).
- Catherine Driscoll, *Modernist Cultural Studies*, (University Press of Florida, 2010).
- Chris Barker, *Cultural Studies: Theory and Practice*, (Sage Publications, 2011).
- Chris Barker, *Making Sense of Cultural Studies*, (Sage Publications, 2002).
- Helen Thomas, "Culture/ Nature", *Core Sociological Dichotomies*, ed., Chris Jenks (SAGE, 1998)110-122.
- Hermann von Helmholtz and David Cahan, *Science and Culture: Popular and Philosophical Essays* (University of Chicago Press, 1995).
- John Hartley, *A Short History of Cultural Studies*, (Sage Publications, 2003).
- John Storey *What is Cultural Studies?: A Reader* (Bloomsbury, 2009).
- Jolyon P. Mitchell and Sophia Marriage, *Mediating Religion: Studies in Media, Religion, and Culture*, (A&C Black, 2003).
- Michael Ryan, *Cultural Studies: A Practical Introduction*, (Wiley Blackwell, 2010).

- Richard Johnson, Deborah Chambers, et al, *The Practice of Cultural Studies*, (New Delhi: Sage Publications, 2004).
- Simon During, *The Cultural Studies Reader*, (Routledge, 1999).
- Simone During, *Cultural Studies: A Critical Introduction*, (New York: Routledge, 2005).
- Terry Eagleton, *The Idea of Culture* (Blackwell, 2008).
- Toby Miller, *A Companion to Cultural Studies*, (Wiley Blackwell, 2001).

Model Paper

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 Explain Locke's thesis of mind as *tabula rasa*.
Or
How does Leibnitz bring new perspectives to the understanding of human nature?

Q.2. How does John Storey relate 'culture' with 'civilization'? Explain.
Or
Arnold asserts that culture is "a study of perfection". What is critical response to Arnoldian idea of culture?

Q. 3 How does Eliot foreground the role of religion in the shaping of culture? Discuss critically.
Or
Eliot postulates "three senses of culture". Explain with the help of examples.

Q.4 C P Snow discovers two cultures in a framework of juxtaposition. Do you agree with his reductionist model?
Or
How does F R Leavis critique Snow's thesis of "two cultures"? Does Leavis not show his bias towards high classical values?

Q.5 What does John Storey mean by "culturalism". Explain with examples.
Or
Raymond Williams provides an anti-elitist notion of culture. Argue.
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(4) Language and Linguistics – I

The course aims to introduce study of language, its origin, nature, structure and function in human society. This involves the development of an awareness of philosophical, historical, comparative, structural, social and psychological perspectives on language as it evolves as a system related to the human need for

communication as well as its cognitive aspects and its social functions. The course is aimed at tracing the main directions that the study of language has taken through the readings of thinkers in the field of linguistics.

Unit I Philosophy of Language

4. George Yule, "Animal and Human Languages", *The Study of Language* (CUP, 2010)10-20.
5. Saussure, "The Object of Linguistics" (7-17), "The Nature of Linguistic Sign" (65-78), "Synchronic Linguistics Part II Chapter I" (101 -102) & "Diachronic Linguistics Part III" (140-143), *Course in General Linguistics*,
6. F.H. Colson, "The Analogist and Anomalist Controversy",*The Classical Quarterly*, Vol. 13, Issue 1, January 1919, 24-36.

Unit II Language: Its Origin, Change and Universal Grammar

3. Fromkin, Rodman &Hyames, "Language Change" (Chapter 10),*An Introduction to Language* (Wadsworth 2010, 9th ed.) 488-530.
4. Noam Chomsky, "Knowledge of Language as A Focus of Inquiry", *Knowledge of Language* (Praeger, 1986) 1-14.

Unit III Language and Mind

4. Fromkin, Rodman &Hyams, "Language Processing and the Human Brain", *An Introduction to Language* (Wadsworth, 2014) Chapter 10, 444-494.
5. Steven Pinker, "How Language Works", *The Language Instinct* (Penguin Books) 77-119.
6. R. Jakobson, "Two Aspects of Language and Two Types of Aphasic Disturbances", *Roman Jakobson: Selected Writings* (Mouton, 1971) 239-259.

Unit IV Language, Society and Culture

5. Fromkin, Rodman &Hyams, "Language in Society", *An Introduction to Language* (Chapter 7, 229-336)
6. Dell Hymes, "On Communicative Competence", in Pride and Holmes ed. *Sociolinguistics: Selected readings*, (Penguin, 1972) 265-294.
7. Halliday, M., "Language as Social Semiotic" (Chapter II.6), *Language as Social Semiotic* (Edward Arnold, 1978) 108-127.
8. John Lyons "Sephir-Whorf hypothesis", *Language and Linguistics* (CUP, 1981) 2009 rpt. 303-311

Unit V Indian Linguistics: Theory of *Sphota*

2. Bimal Krishna Matilal,"*Sphota* Theory: Early History and Patanjali's Views", "Bhartrihari's View of *Sphota*" &"Critics of the Sphota Theory and Views of Later Grammarians", *The Word and the World* (OUP, 1992) 77-105..

Suggested Readings

- Michael Devitt, Richard Hanley, *The Blackwell Guide to the Philosophy of Language* (Wiley-Blackwell, 2006).
- Michael Morris, *An Introduction to the Philosophy of Language* (Cambridge University Press, 2007).
- Barry Lee (edt.), *Philosophy of Language: The Key Thinkers* (Continuum, 2011).
- John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970).
- M. A.K. Halliday, Jonathan J. Webster, *On Language and Linguistics* (Continuum, 2006).\
- Roman Jakobson, *Selected Writings: Word and Language* (de Gruyter Mouton, 1971).
- Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics* (Routledge, 1999).
- Leonard Bloomfield, *Language* (George Allen & Unwin Ltd., 1933).
- David Crystal, *How Language Works* (Avery Trade, 2007).
- Noam Chomsky, *Language and Thought* (Moyer Bell, 1993).
- Noam Chomsky, *Syntactic Structures,* 2nd Edition (Mouton de Gruyter, 2002).
- Steven Pinker, *The Stuff of Thought: Language As a Window into Human Nature* (Penguin, 2008).
- Steven Pinker, *How the Mind Works*, (W. W. Norton & Company, 2009).
- Jean Piaget, *The Child's Conception of the World* (Routledge & Kegan Paul Ltd.,1929).
- Roy Harris, *Language, Saussure and Wittgenstein: How to Play Games withWords* (Routledge, 1990).
- David Crystal,*The Cambridge Encyclopedia of Language* (Cambridge University Press, 1997).
- Fromkin, Rodman and Hyams, *An Introduction to Language* (Thomson Wadsworth, 2004) Indian Reprint.
- Janet Holmes, *An introduction to sociolinguistics* (Routledge, 2012).
- Martin Montgomery, *An Introduction to Language and Society* (Routledge, 1995).
- Board of Editors, *Linguistics: An Introduction* (Orient Black Swan. 2015)

- Syal and Jindal *An Introduction to Linguistics* (Prentice Hall of India, 2016)
- Bimal Krishna Matilal,*The Word and the World: India's Contribution to the Study of Language* (Oxford University Press, 1990).
- Narayan R Joshi, "Sphota Doctrine in Sanskrit Semantics Demystified", *Annals of Bhandarkar Oriental Research Institute*, ed. MG Deshpande& G U Thite, Vol. LXXXVII, 2007, 183-197.
- Harold G Coward, "Part Two: The *Sphota* Theory of Language as Revelation", *Sphota Theory of Language: A Philosophical Analysis* (MotilalBanarsidass, 1997) 69-137

Model Paper

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Language and Linguistics-I

Q.1 What is the Analogist and Anomalist controversy in Language?
Or
Discuss Saussure's dichotomy of Synchronic and Diachronic Linguistics.

Q.2 Discuss the diachronic changes in English with respect to sound and spelling.
Or
"TG Grammar is an improvement on the structuralists' view of Grammar". Discuss.

Q.3 How does Generative Grammar help to understand the language instinct?
Or
What is an aphasic disturbance? How does it affect language?

Q. 4 Write an essay on Hymes's concept of Communicative Competence.
Or
"We dissect nature according to the lines laid by our native languages". Elaborate.

Q. 5 Give a detailed historical account of *Sphota* Theory.
Or
Discuss Bharthari's view of *Sphota*. How do other Sanskrit grammarians respond to the theory of *sphota*?

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(3) British Literature – I

The objective of the paper is to provide an overview of the literature of the English Renaissance, Reformation and Restoration times. The Renaissance, fourteenth to

sixteenth century, was a vibrant period of European history, which began in Italy and marked a revival of classical learning and was seen as a political, scientific, social, economic, philosophical, intellectual and cultural 'rebirth' after the Middle Ages. Humanism (*studia humanitatis*) shaped the sciences, literature, religion, art, politics and culture of the period. The course will concentrate on English Renaissance 1500-1660 during which the students will be introduced to the spirit of optimism, unlimited potential, stoic English character and underlying complexities of an age that produced some of the greatest works of literature the world has known. The goal will be to trace the key political, cultural and artistic transformations while paying close attention to continuities with medieval tradition. At the end of the course the students will not only be well versed with the iconic writers and representative texts of the time but will also be critically aware of the important intellectual shift that occurred in the human thought during the Renaissance. Renaissance overlaps with most of Reformation of the Western Church. Protestant Reformation was the foundation of Protestantism which contrary to the common practice of the time emphasized salvation through individual faith. The paper also focuses on the political, social and cultural impact of the Reformation in England and the literature of the time in addition to covering the English Restoration Period (1660-1700). The objective again is to familiarize the students with the major trends, ideas, genres, poetic forms and prose of these periods. The students at the end of the course would have explored a very turbulent chapter in English history.

Unit I

3. Martin Luther, "Freedom of a Christian", *Luther's Works: Career of a Reformer*, Vol. 31, Ed. Harold. J. Gimm, (Muhlenberg Press, 1957)327-377.
4. Francis Bacon, "Of Seditions and Troubles" & "Of Atheism", *Essays* (London: Penguin Books, 1985).(Courier Corporation, 2012) 42-51

Unit II

2. Christopher Marlowe, *Edward II* (London: Bloomsbury, 2014).

Unit III

3. Geoffrey Chaucer**,** "Wife of Bath's Prologue", *Canterbury Tales*. Ed. Jill Mann (Penguin Classics, 2003), 1-52.
4. John Milton, *Paradise Lost.* Book I (London: Penguin Classics, 2003), 1-26.

Unit IV

2. William Shakespeare, *Hamlet*. Ed. Ann Thompson and Neil Taylor (Bloomsbury, 2017).

Unit V

2. John Dryden, *Absalom and Achitophel,* 5th Edition. (Leopold Classic Library, 2017).

Suggested Readings

- Derek Traversi, *The Canterbury tales: A Reading* (Newark: University of Delaware Press, c1983).
- Piero Boitani and Jill Mann (eds.), *The Cambridge Companion to Chaucer* (Cambridge University Press, 2004).
- Andrew Hadfield (ed.), *The Cambridge Companion to Spenser* (Cambridge University Press, 2001).
- Frank Kermode, "Introduction", *Shakespeare, Spenser, Donne* (Routledge & Kegan Paul, 1971).
- Harold Bloom, ed. *Modern Critical Interpretations: William Shakespeare's As You Like It* (Chelsea House Publishers, 1988).
- Jay L. Halio, *Twentieth Century Interpretations of As You Like It: A Collection of Critical Essays* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968).
- William C Carroll, *The Metamorphoses of Shakespearean Comedy* (Princeton: Princeton University Press, 1985).
- Northrop Frye, *A Natural Perspective: The Development of Shakespearean Comedy and Romance* (New York: Columbia University Press, 1965).
- T.B. Tomlinson, *A Study of Elizabethan and Jacobean Tragedy* (Cambridge UP,1964).
- Bonamy Dobrée, *Restoration Comedy, 1660-1720* (OUP,1924).
- Deborah Payne Fisk (ed.), *The Cambridge Companion to English Restoration Theatre* (Cambridge University Press, 2000).
- John Milton, *The Major Works,* Stephen Orgel and Jonathan Goldberg, eds.(Oxford World's Classics, 2008).
- Dennis Richard Danielson, *The Cambridge companion to Milton*, (Cambridge, New York: Cambridge University Press, 1989).
- Noam Reisner, *John Milton's Paradise Lost: A Reading Guide* (Edinburgh: Edinburgh University Press, c2011).
- Boris Ford (ed.), *From Donne to Marvell*, (Penguin Books,1990).
- Derek Hirst and Steven N. Zwicker (eds.), *The Cambridge Companion to Andrew Marvell* (Cambridge University Press, 2010).
- Samuel I. Mintz, "Leviathan as Metaphor" (*Hobbes Studies* 2 (1989): 3-9).
- Shapin, Steven and Simon Shaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton University Press, 1985).
- Robert E Stillman, "Hobbes's *Leviathan*: Monsters, Metaphors, and Magic" (*ELH* 62.4 (1995): 791-819).

- Samuel Johnson,*Lives of the Poets* (Oxford World's Classics).
- James Engell, *The Creative imagination: Enlightenment to Romanticism* (Cambridge, Mass: Harvard University Press, 1981).
- Nigel Smith, *Literature and Revolution in England, 1640-1660* (Yale University Press, 1997).
- Michael Hattaway, ed. *A Companion to English Renaissance Literature and Culture* (Blackwell, 2003).
- D.H. Craig (ed.), *Ben Jonson: The Critical Heritage 1599-1798* (Routledge,1995).

Model Paper

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 "A Christian is perfectly free lord of all, subject to none. A Christian is a perfectly dutiful servant of all, subject to all." With reference to this paradoxical statement, explain Martin Luther's role in the formation of a new reformed church.
Or
Critically analyze Francis Bacon's position on atheism as summed up in his essay "Of Atheism". Discuss also his use of language in dealing with such a sensitive theme.

Q. 2 Critically comment on the politics of sexuality and power in Marlowe's *Edward II*.
Or
Analyze *Edward II* as a Renaissance play.

Q. 3 Based on your understanding of the portrayal of Wife of Bath in *Canterbury Tales*, do you consider Chaucer to be an early feminist? Give a detailed answer.
Or
Critically analyze the theme of darkness in *Paradise Lost* book 1 with reference to Milton's own blindness.

Q. 4 Attempt a psychoanalytic reading of Shakespeare's *Hamlet*.
Or
Discuss the theme of death in Shakespeare's *Hamlet*.

Q. 5 Discuss *Absalom and Achitophel* as a political satire.
Or
Critically comment on the use of biblical allegory in Dryden's *Absalom and Achitophel*.

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Paper IV
(Choose any one option)

(4) Introduction to Literary Genres –I

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the major genres that gained classical proportions mainly during the ancient period. Even as these genres acquired canonical value in the ancient times, their currency in subsequent history has not diminished. The effort is to provide a brief overview of each selected genre in terms of its historical evolution and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice.

Unit I What is a Genre?

2. Alastair Fowler, "Concepts of Genre", *Kinds of Literature: An Introduction to the Theory of Genres and Modes* (Oxford: Clarendon Press, 1982) 37-53.

Unit II Epic

3. Peter Toohey, "Epic: The Genre, Its Characteristics", *Reading Epic: An Introduction to Ancient Narratives* (London & New York: Routledge, 1992) 1-19.
4. John Milton, *Paradise Lost,* Book I (New Delhi: Oxford University Press, 2005).

Unit III Tragedy

3. Aristotle, Chapter VI-XVI, *Poetics*, trans. S. H. Butcher (London: Macmillan and Co.,1895).
4. Sophocles, "The Oedipus Rex", *The Three Theban Plays* (Penguin Classics, 1984).

Unit IV Comedy

3. Aristotle, "Tractatus Coislinianus", *An Aristotelian Theory of Comedy*, trans and ed. by Lane Cooper (New York: Harcourt, Brace and Company,1922) 224-226. [available online at https://ia802609.us.archive.org/27/items/aristoteliantheo030524mbp/aristoteliantheo030524mbp.pdf]
4. Aristophanes, "Frogs", *Frogs and Other Plays* (Penguin Classics, 2007).

Unit V Fable

4. M.O. Grenby, "Fables", *Children's Literature* (Edinburg: Edinburg University Press, 2008) 10-31.
5. Visnu Sharma, "Book IV: Loss of Gains", *The Panchatantra*, trans. Chandra Rajan (New Delhi: Penguin Books, 1993) 351-392.
6. Aesop, "The Good Things and the Bad Things", "The Man Selling a Holy Statue", "The Eagle and the Fox", "The Eagle and the Scarab Beetle", and "The Eagle, the Jackdaw and the Shepherd", *The Complete Fables* (Penguin Classics, 1998) 1-5.

Secondary Readings

- Katherine Callen King, *Ancient Epic* (Wiley Blackwell, 2009).
- Harold Bloom, *The Epic* (Philadelphia: Chelsea House Publishers, 2005).
- John Miles Foley, *A Companion to Ancient Epic* (Blackwell Publishing, 2006).
- Matthew Bevis, *Comedy: A Very Short Introduction* (Oxford: OUP,2013).
- Ritchie Robertson, *Mock-Heroic: From Pope to Heine* (Oxford & New York: OUP, 2009).
- Georg Lukacs, *The Theory of the Novel: A Historico-philosophical Essay on the Forms of Great Epic Literature*, trans. by Anna Bostock (London, The MIT Press, 1971).
- Raymond Williams, *Modern Tragedy*. Ed Pamela McCallum (Toronto: Broadview Encore Editions, 2006).
- Clifford Leech, *Tragedy* (London & New York: Routledge, 1969).
- Rebecca Bushnell, *Tragedy: A Short Introduction* (Blackwell Publishing, 2008).
- Holzberg, N. *The Ancient Fable: An Introduction*, translated by Christine Jackson Holzberg. (Bloomington & Indianapolis: Indiana University press, 2002).
- Marcel Cornis-Pope, ed., *New Literary Hybrids in the Age of Multi-Media Expression: Crossing Borders, Crossing Genres* (Amsterdam and Philadelphia: John Benjamin's Publishing Company, 2014).
- Peter Hunt, ed., *International Companion Encyclopedia of Children's Literature* (London & New York: Routledge, 2004).
- Matthew Kieran, "Tragedy versus Comedy: On Why Comedy is Equal of Tragedy", *Ethical Perspectives*, 20, no.3 (2013), 427-450.
- John Frow, *Genre: New Critical Idiom* (London & New York: Routledge).
- Andrew Stott, *Comedy* (London & New York: Routledge, 2014).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q,1. What do you mean by 'recategorization'? How did the Russian formalist exemplify the term?

Or

What is 'genre'? Is generic approach to literature a composite way of reading literature?

Q.2. What is Epic? Write about its origin.

Or

What is the difference between 'Mythological Epic' and 'Miniature Epic'?

Q.3. Aristotle gives preference to 'Tragedy' over 'Epic'. Explain critically.

Or

Aristotle suggests that the most powerful elements in a tragedy are *Peripetia* and *Anagnorisis.* Explain the two terms with reference to *Oedipus Rex.*

Q.4. Is there any kind of catharsis in comedy too, akin to what we have in tragedy? Explain.

Or

"Frogs" by Aristophanes is a classical comedy. On the basis of your reading of the play, identify the major elements of classical comedy.

Q.5. How do*Panchatantra* fables combine metaphysis with morality? Explain with examples.

Or

What are the general features of "fable"? Explain with examples from fables of Aesop.

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(5) British Literature – II

The end of the eighteenth century and early nineteenth century saw a momentous shift in philosophical, artistic and literary movement in Europe - Romanticism. It flourished until the mid-nineteenth century. Romanticism celebrated imagination and intuition in the enduring search for individual rights and liberty. It marks a shift from objectivism to subjectivism, from reason to power of imagination and emotive response. The objective of the paper is to introduce students to these tenets of

Romanticism in general and to English Romanticism in particular. During the course they will be introduced to major English poets and prose writers of the period. Through the reading, the students will be familiarized with the English Romantic imagination, its stress on Nature, poetic inspiration, freedom, individualism and spontaneity; and the role language plays in it. Gothic fiction is also explored in the paper. At the end of the course the students will be familiar with major themes, ideas and concepts of Romanticism and English Literature. They will be cognizant of the historical, cultural, political and aesthetic milieu of the time. Students will study Romanticism as a reaction against the philosophical rationalism and neoclassicism of the Enlightenment. At the end of the course, they would have in-depth knowledge of a movement that not only captured the imagination of people with their ideas of liberty and freedom but also fuelled the avant-garde movements well into the twentieth century.

Unit I

2. Mary Shelley, *Frankenstein*. Foreword by Ruskin Bond (Collins Classics, 2018).

Unit II

1. William Wordsworth, *Preface to Lyrical Ballads* (Create Space Pub, 2016).

Unit III

3. William Blake, "The Chimney Sweeper" & "The Tyger", *Songs of Innocence and of Experience* (Oxford UP, 1967).
4. William Wordsworth, "Lines Written in Early Spring", "Ode: Intimations of Immortality" &"London 1802", *Selected Poems* (Penguin Classics, 2004).

Unit IV

3. John Keats, "Ode on Grecian Urn", "Ode to a Nightingale" & "Ode to Autumn", *Selected Poems* (Penguin Classics, 2007).
4. Samuel Taylor Coleridge, "Rime of the Ancient Mariner*",'Rime of the Ancient Mariner and the Other Poems* (Collin Classics, 2016).

Unit V

3. Charles Lamb, "Dream Children: A Reverie" & "The Praise of Chimney-Sweepers", *The Essays of Elia and Eliana* (G. Bell & Sons, Ltd).

4. William Hazlitt:

- 'On Reading Old Books', from *The Spirit of the Age* (Vintage, 2009).
- 'On Gusto', *The Fight and Other Writings* (Penguin Classics, 2000).

Suggested Readings

- Anita Brookner, *Romanticism and Its Discontents* (New York: Farrar, Straus & Giroux, 2000).
- Stuart Curran (ed), *The Cambridge Companion to British Romanticism* (Cambridge University Press, 1996).
- Giovanni Carsaniga, "The Age of Romanticism, 1800-1870", *The Cambridge History of Italian Literature,*eds. Peter Brand and Lino Pertile (CUP, 1999) 399-437.
- C.M. Bowra, *The Romantic Imagination* (OUP,1949).
- Walter Jackson Bate, *From Classic to Romantic: Premises of Taste in Eighteenth-century England* (Harvard Univ. Press,1946).
- M.H. Abrams (ed.), *English Romantic Poets: Modern Essays in Criticism* (OUP USA, 1975).
- Harold Bloom and Lionel Trilling, *The Oxford Anthology of English Literature,* Vol. II (New York: Oxford University Press, 1973) pp. 594–611,766–68, 777–8.
- Jean-Jacques Rousseau, 'Preface' to *Emile: or On Education*, trans. Allan Bloom (Penguin,1991).
- Jacob Bronowski, *William Blake, 1757-1827: A Man without a Mask* (Penguin Books,1954).
- D.W. Harding, "William Blake", *From Blake to Byron*: *The Pelican Guide to English Literature* ed. Boris Ford, Vol.5 (Penguin, 1957).
- Mark Schorer, *William Blake: The Politics of Vision* (H. Holt and Company, 1946).
- Morton D. Paley (ed.), *Twentieth Century Interpretations of Songs of Innocence and of Experience* (Prentice-Hall,1969).
- Northrop Frye, "Northrop Frye on Milton and Blake", *Collected Works of Northrop Frye* Vol.16, ed. by Angela Esterhammer (Uni. of Toronto Press, 2005).
- Northrop Frye, *Fearful Symmetry: A Study of William Blake*, ed. Nicholas Halmi(University of Toronto Press; 2nd Revised ed. edition, 2004).
- Morris Eaves (ed.), *The Cambridge Companion to William Blake* (CUP, 2003).
- Stephen Gill (ed.), *The Cambridge Companion to Wordsworth* (CUP, 2003).
- Lucy Newlyn (ed.), *The Cambridge Companion to Coleridge* (CUP, 2002).
- Angela Leighton, *Shelley and the Sublime. An Interpretation of the Major Poems* (Cambridge: CUP, 1984).

- Stuart Sperry, *Shelley's Major Verse: The Narrative and Dramatic Poetry* (Harvard Uni. Press, 1988).
- G.S. Fraser (ed.), *John Keats: Odes* (Macmillan,1971).
- Stuart Sperry, *Keats: The Poet* (Princeton Univ. Press, 1973).
- J. Cox (ed.), *Keats's Poetry and Prose* (Norton Critical Edition, 2008).
- Susan Wolfson (ed.), *The Cambridge Companion to Keats* (CUP, 2001).
- Drummond Bone (ed.), *The Cambridge Companion to Byron* (CUP, 2004).
- Bernard Blackstone, *Byron: A Survey* (Longman, 1975).
- Jerome McGann, *Byron and Romanticism* (Cambridge: CUP, 2002).
- William Hazlitt, *The Fight and Other Writings*, edsTom Paulin and David Chandler (Penguin Classics, 2000).
- John Kinnaird, *William Hazlitt: Critic of Power* (Columbia University Press, 1978).
- Tom Paulin, *The Day-Star of Liberty: William Hazlitt's Radical Style* (Faber & Faber, 1999).

Model Paper

British Literature – II

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1Discuss how romanticism informs Mary Shelley's *Frankenstein*.

Or

Mary Shelley's *Frankenstein* unfolds the irony of a victor becoming a victim of his own creation.

Q. 2 Discuss *Preface to Lyrical Ballads* as a manifesto of literary primitivism.

Or

How does William Wordsworth's *Preface to Lyrical Ballads* open the debate of poetic diction?

Q. 3 Discuss the theme of exploitation in "The Chimney Sweeper"?

Or

In the "Ode: Intimations of Immortality", Wordsworth attempts to reconcile the loss of the 'visionary gleam' of childhood with the growth of the 'philosophic mind' of adulthood. Discuss.

Q. 4 Explain the theme of 'permanence' versus 'mutability' in the poem "Ode to a Nightingale"?

Or

How does "Rime of the Ancient Mariner" explore penance and redemption?

Q.5 Comment on Lamb's prose style as seen in his essay "Dream Children: A Reverie".
Or
Critically analyze Hazlitt's concept of 'gusto'.

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(6) Academic Writing – I

The paper is designed to develop an awareness of the elements and conventions of academic writing. Students need to understand how academic writing is different from general writing; especially when they make the transition to higher education. The course will empower the students with the skills to convert a general text into an academic text and vice versa. It will equip them with summarizing skills so they can convert their articles into bulleted points for power point presentations. The paper will equip the students with paraphrasing skills so that they can build upon the bullet-points of power-points and convert them into academic journal articles. The course will focus more on the application of the learnt principles rather than the memorization of theoretical aspects.
The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the characteristics of academic writing and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the actual, hands on writing of academic documents. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I Academic Writing

3. Definition
4. Forms

Unit II Language and Style

6. Words and Phrases
7. Structures
8. Conventions of register specific academic writing
9. Ways of portraying Research Findings
10. Dealing with New Words (Academic Vocabulary Building)

Unit III Summarizing and Paraphrasing

7. Skimming a text
8. Scanning a book for specific details
9. How to paraphrase – changing word-order, changing word-class and vocabulary substitution
10. Paraphrasing and Quoting Sources
11. Using Direct Quotations
12. Referencing

Unit IV Discourse Level- Coherence and Cohesion

5. Introduction: Identifying effective and ineffective writing styles.
6. Macro features
7. Micro features
8. Exercises to test Structure, Flow, Sequencing etc.

Unit V Writing Field Reports and Term Papers

7. Function
8. Planning: making a Mind Map
9. Developing a theme
10. Integration: Structure and format
11. Synopsis writing as a mind map of the proposed research
12. Abstract writing

Suggested Readings:

Note: The books by Stella Cottrell and Renu Gupta can be used as textbooks in the classroom.

- Cottrell, Stella 2003. *The Study Skills Handbook.* China: Palgrave Macmillan
- Murphy, Raymond. 1992. *Elementary English Grammar (2nd edition).* Cambridge University Press.
- Murphy, Raymond. 1994. *Intermediate English Grammar (2nd edition).* Cambridge University Press.
- Hewings, Martin. 1999. *Advanced English Grammar*. Cambridge University Press.
- Gupta, Renu. 2010. *A Course in Academic Writing*. Orient Blackswan, New Delhi.

- McCarthy, Michael and Felicity O'Dell. 2009. *Academic Vocabulary in Use: 50 Units of Academic Vocabulary Reference and Practice; Self-study and Classroom Use.* Cambridge University Press.
- Hoshima, Alice and Hogue, Ann. 2007 3rd Ed. *Introduction to Academic Writing*. Pearson Longman: New York.
- Hayot, Eric. 2014. *The Elements of Academic Style: Writing for the Humanities*. Columbia Univ. Press: New York.
- Murray, Rowena & Moore, Sarah. 2006 .The Handbook of Academic Writing. Open University Press, McGraw Hill.
- Zemach, E Dorothy & Rumisek, Lisa A. 2006 Academic Writing: From Paragraph to Essay. Macmillan.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q 1. Explain the difference between academic writing and writing in our daily life. Give examples to illustrate.

Or

Describe the forms of academic writing.

Q.2Given below are 20 incomplete sentences from an academic article. Select any 16 and complete them with the appropriate words/ phrases.

1. Karl Popper, an _____ 20th-century philosopher of science, thought that the fundamental feature of a scientific theory is that it should be falsifiable.
2. To call a theory falsifiable is _____ that it is false.
3. Rather, it means that the theory makes some _____ predictions that are capable of being tested against experience.
4. If these predictions turn out to be wrong, then the theory has been falsified, or _____
5. So a falsifiable theory is one that we _____ false - it is not compatible with every possible course of experience.
6. Popper thought that some _____ scientific theories did not satisfy this condition and thus did not deserve to be called science at all; rather they were merely pseudo-science.
7. Freud's psychoanalytic theory was one of Popper's _____ pseudo-science.
8. According to Popper, Freud's theory _____ any empirical findings whatsoever.
9. Whatever a patient's behavior, Freudians could find an _____ it in terms of their theory - they would never admit that their theory was wrong.
10. The same _____ Marx's theory of history, Popper maintained.
11. Marx claimed that in _____ societies around the world, capitalism would give way to socialism and ultimately to communism.

12. But when this didn't happen, instead of admitting that Marx's theory _____ ,Marxists would invent an ad hoc explanation for why what happened was actually perfectly consistent with their theory.
13. For example, they might say that the inevitable progress to communism had been temporarily slowed by the rise of the welfare state, which 'softened' the proletariat and weakened their _____ zeal.
14. Popper _____ Freud's and Marx's theories with Einstein's theory of gravitation, also known as general relativity.
15. Unlike Freud's and Marx's theories, Einstein's theory made a very definite prediction: that light rays from distant stars _____ by the gravitational field of the sun.
16. _____, this effect would be impossible to observe - except during a solar eclipse.
17. In 1919 the English _____ Sir Arthur Eddington organized two expeditions both of which found that starlight was indeed deflected by the sun, by almost exactly the amount Einstein had predicted.
18. Popper _____ by this.
19. Einstein's theory had made a definite, precise prediction, which _____ by observations.
20. Had it _____ that starlight was not deflected by the sun, this would have showed that Einstein was wrong.

Or

Write a brief essay on the conventions of register-specific academic writing, giving apt examples.

Q 3. Write a précis of the passage given below, reducing it to one-third of its length.

The human brain is said to be the most complex object in the known universe. Relative to body weight, human brains are larger than those of any other species, and by a long way. They are about three times larger than you would expect by comparing them with those of our closest relatives, the other great apes. A human brain weighs nearly one and a half kilograms and consists of over a billion neurons (nerve cells), with many billions of interconnections. Out of all these connections come our extraordinary abilities: perception, learning, memory, reasoning, language, and – somehow or another –consciousness. We know that the brain is intimately involved in consciousness because changes in the brain cause changes in consciousness. For example, drugs that affect brain function also affect subjective experiences; stimulation of small areas of the brain can induce specific experiences such as hallucinations, physical sensations, or emotional reactions; and damage to the brain can drastically affect a person’s state of consciousness. This much we know for sure, but what remains a mystery is why we should be conscious at all.

Or

Write the paraphrase of the poem given below.

“The Road Not Taken” by Robert Frost (1874-1963)

Two roads diverged in a yellow wood,
And sorry I could not travel both

And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;
Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,
And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.
I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

Q.4 Analyze the passage given below for features of coherence and cohesion.

Why are people so happy? Is it simply that positive emotions are more frequent in life than negative ones, and so the balance is in the black? This may be true, but there are also other reasons people might report better-than-middling happiness when asked. Chronic unhappiness might indicate perceived failure to achieve life goals, or unfavorable comparisons with the achievement of others. As well as being things to avoid for their own sake, these are, to paraphrase evolutionary psychologist, Geoffrey Miller, things you might not want to admit to on a first date. That is, unhappiness is not just unfortunate; it is unattractive in a potential mate, friend, or colleague. This effect was pointed out by Adam Smith, father of free-market economics, who was an accomplished theoretician of emotions. Thus, one reason for such high self-reported happiness is that people are aware of the signals they are giving off and so they impression manage. Some indication that this effect is significant comes from the finding that people report higher levels of well-being in face-to- face interviews than in postal surveys. This effect is particularly pronounced when the interviewer is of the opposite sex. It is easy to understand the temptation to do this. (It is also worth remembering when you feel down, that if everyone seems happier than you are, that may only mean that they are good at seeming happy.)

Or

The piece of writing given below has been rated as ineffective writing. Rewrite it, improving on it to make it more effective.

A community volunteer programme was initiated in rural Jamaica in May 1990. The main aim of the programme was to monitor the growth of children less than 36 months of age through community health volunteers (CHVs) and improve their nutritional status. At the end of the second year the programme was evaluated to

determine its effectiveness. The results of the evaluation indicated that almost all (95.6%) of the children were covered by the CHVs. In addition the participation rate was high (78.5%). However, only 50% of the children were adequately covered. Nonetheless, 81% of them gained adequate weight. Indeed, malnutrition levels declined by 34.5%. The annual cost per child per year for the total programme was fairly moderate (US$14.5) with growth monitoring accounting for nearly half (42.7%). The results suggest that CHVs can play an important role in primary health care programmes in developing countries.

Q 5.. Create a Mind Map for a 2000 word article you will write on 'The Definition and Features of Effective Academic Writing'.
Or
Define and describe the parts of a Field Report.

Semester II

Compulsory Papers:

Paper V
Literary Movements –II

Many distinct literary movements mark the journey of writing from ancient times to the very contemporary. The paper identifies some of the major literary movements that form the essential frame of reference for a critical engagement with the vast corpus of literature. Movements such as classicism, romanticism or realism constitute the primer of critical vocabulary and therefore a basic understanding of these movements is necessary for a nuanced understanding of varieties of literary articulation. Each movement has its own specific set of aesthetic, cultural and ethical values and preferences. The writers and writings that fall within a movement, despite their heterogeneity and particularities, do converge in terms of fostering an identifiable literary taste and trend. Though these movements do occur in literatures of the world, and across languages, yet the focus of this course is primarily on European literature, with special accent on the British. The course is divided into five units. Each unit consists of general introductory essays on the specific movement and some primary texts that belong to the movement. The emphasis of the paper is on the historical and conceptual understanding of various literary movements. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit I Realism

3. Ian Watt, "Realism and the Novel Form", *The Rise of the Novel*, (University of California Press, 2001) 11-36.
4. George Eliot, Chapter 17, *Adam Bede*, Volume 3,(William Blackwood and Sons, 1859) 223-244.

Unit II Modernism

3. Malcolm Bradbury and James McFarlane, "The Name and Nature of Modernism" from *Modernism: A Guide to European Literature 1890-1930*, ed. By Malcolm Bradbury and James McFarlane (Penguin, 1976), 19-35.
4. Ezra Pound, "A Few Don'ts by an Imagiste", https://www.poetryfoundation.org/poetrymagazine/articles/58900/a-few-donts-by-an-imagiste

Unit III Postmodernism

4. Linda Hutcheon, "Theorizing the Postmodern: Toward a Poetics", *A Poetics of Postmodernism: History, Theory, Fiction* (Routledge, London & New York, 1988) 3-21.
5. Ihab Hassan, "Toward a Concept of Postmodernism", *The Postmodern Turn* (Ohio: Ohio State University Press, 1987) 1-10.
6. Borges, Jorge Luis. "The Library of Babel", *Collected Fictions*. Trans. Andrew Hurley (New York: Penguin, 1998) 112-118.

Unit IV Postcolonialism

3. Bill Ashcroft, Gareth Griffiths, Helen Tiffin. Eds. "Introduction" to *The Empire Writes Back* (Routledge: London & New York, 1991) 2002, 2nd Ed. 1-13.
4. Ngugi wa Thiong'o ,"The Language of African Literature", *Decolonizing the Mind: The Politics of Language in African Literature* (Harare: Zimbabwe Publishing House, 1987) 1994 rpt. 3-33.

Unit V Debating 'Periodization' in History

3. Ted Underwood, "The Disciplinary Rationale for Periodization and a Forgotten Challenge to It (1886–1949)", *Why Literary Periods Mattered: Historical Contrast and the Prestige of English Studies* (Stanford & California: Stanford University Press, 2013) 114-135.

4. Eric Hayot, "Against Periodization; or, On Institutional Time", *New Literary History*, Vol. 42, No. 4, (Autumn 2011), 739-754.

Secondary Readings

- Ann L. Ardis, *Modernism and Cultural Conflict*, 1880-1922 (Cambridge: Cambridge University Press, 2002)
- Bill Ashcroft, *Key Concepts in Post-colonial Studies* (London & New York: Routledge, 1998)
- Chris Baldick, *The Modern Movement: 1910-1940* (Oxford: Oxford University Press, 2004)
- Norman F Cantor. *Twentieth-Century Culture: Modernism to Deconstruction* (Peter Lang, 1988)
- Peter Childs. *Modernism* (London & New York, Routledge, 2000)
- Leela Gandhi, *Postcolonial Theory* (Allen & Unwin, 1998)
- Ania Loomba, *Colonialism/Postcolonialism* (London & New York: Routledge 1998)
- Pam Morris, *Realism:* The New Critical Idiom (London & New York: Routledge, 2006)
- Dennis Walder, *The Realist Novel* (London & New York: Routledge, 1995)
- Ira Mark Milne, Project Editor, *Literary Movements for Students* (Gale Cengage Learning, 2009)
- John McLeod, *Beginning Postcolonialism* (Delhi: Viva Books, 2000)

Model Paper

Literary Movements II
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 What is realism? How does it lead to the rise of novel?
Or
How does George Eliot approach the need of realism in fiction? Answer your question in the light of arguments made in Chapter 17 of her novel *Adam Bede*.

Q. 2 What are the general features of 'modernism'? How does it shape literature in the first half of twentieth century?
Or

Discuss in detail the role of Ezra Pound's theory of imagism. How did it influence the aesthetics of modern poetry?

Q. 3 How does Linda Hutcheon sum up the poetics of postmodernism?
Or
How is postmodernism different from modernism? Discuss Ihab Hasan's formulations in this context.

Q.4 What do you mean by the expression "empire writes back"? Discuss the political implications of writing back.
Or
Does writing in a native tongue decolonize mind?

Q. 5 What are the limitations of writing literary history in terms of periods?
Or
Choose any one literary movement and map its scope and limitations.

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Paper VI
Approaches to Literature – II

The objective of the course is to familiarize students with various approaches to literature, and the particular worldviews these are based on. The students should able to relate literary texts to their lives in terms of their own times and location. The number of approaches suggest that there is no one privileged way to understand a text, and that a text can yield multiple meanings if it is accessed through different worldviews. Each approach has a claim to total meaning till it is countered by another equally compelling approach. Each approach has its own well-argued theoretical base, a set of tested tools and a sustained methodology to help the student to navigate through the text with a degree of precision. These approaches put together give rise to what is often called as critical pluralism. The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there should be questions of a practical nature in which the candidate has to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. Andrew Bennett and Nicholas Royle,"The beginning," "Readers and reading," "The author," and "The text and the world", *An Introduction to Literature,*

Criticism and Theory (Pearson Longman, 2004, 3rd Edition) Chapters 1-4 (1-33).

Unit II

1. Terry Eagleton, "Literature and History", *Marxism and Literary Criticism* (London & New York: Routledge: 1976), 1-9.

Unit III

1. Wilfred L. Guerin et al, eds., "Feminism and Gender Studies (I, II, III, IVA, IVB, V)" A *Handbook of Critical Approaches to Literature* (Oxford: OUP, 2005) 5th Ed.
2. Charlotte *Krolokke* and Ann Scott Sorensen, "Three Waves of Feminism: From Suffragettes to Grrls", *Gender Communication Theory and Analyses: From Silence to Performance* (Thousand Oaks, London & New Delhi: SAGE, 2006) 1-24.

Unit IV

1. Chapter 9 of Wilfred Guerin's *Handbook*: Cultural Studies (I, II, IIIA, IIIB)
2. Stuart Hall, "The Formation of Cultural Studies", *Cultural Studies 1983: A Theoretical History* (Durham & London: Duke University Press, 2016) 5-24.

Unit V

1. Chapter 10 of Wilfred Guerin's *Handbook*: The Play of Meanings (I, II, III)
2. Umberto Eco, "The Open Work", *The Open Work*, trans. Anna Cancogni (Cambridge & Massachusetts: Harvard University Press, 1989) 1-23.

Suggested Readings

12. Andrew Bennett, and Nicholas Royle, *An Introduction to Literature, Criticism and Theory (*Pearson, 2004) (Third Edition is available online)
13. David Lodge, ed. *20th Century Literary Criticism: A Reader* (Longman, 1989)
14. David Daiches, *Critical Approaches to Literature*, 2nd ed. (Orient Longman, 1970)
15. M.A.R. Habib. *A History of Literary Criticism: From Plato to the Present* (Blackwell, 2005)
16. Patricia Waugh, *Literary Theory & Criticism: An Oxford Guide* (Oxford: OUP, 2006)
17. M. S Nagarajan, *English Literary Criticism & Theory: An Introductory History.* (Orient Longman, 2006)
18. David Robey and Ann Jefferson. *Modern Literary Theory* (Batsford, 1986)

19. Frank Lentriccia. *After the New Criticism* (Chicago: Chicago UP, 1980)
20. Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2003)
21. Peter Barry, *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed. (Manchester: Manchester UP, 2004)
22. Raman Selden, *A Reader's Guide to Contemporary Literary Theory (*Pearson, 2006)

Model Paper

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1. How does a literary text multiply its beginning(s)?
Or
What is meant by "framed acts of reading"? Discuss the number of frames suggested by Andrew Bennet in this context.

Q.2 How important is the place of history in approaching a literary text?
Or
How does Terry Eagleton theorize the relationship of history with literature and vice versa?

Q.3. Feminism as a movement has undergone many phases. Delineate these phases with examples from literary texts.
Or
Literary texts are invariably gendered and therefore are always implicated in the politics of gender. Discuss feminist approach to literature in this regard.

Q.4 Discuss the methodological conundrums of the project of cultural studies.
Or
Explain critically the rise of cultural studies as a project in Britain and later on across the globe.

Q.5 Why does Umberto Eco describe text as "an open field"?
Or
Does a literary text yield any essential meaning or does it engender many possibilities of meaning. Argue.

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Paper VII
(Choose any one of the options)

(4) Cultural Studies – II

There are cultures within culture. The objective of the paper is to explore these various layers of cultures that begin to emerge due to intervention of new technologies in the lives of people. From a canonical understanding of culture, the paper moves on to unfold the arrival of popular culture, and within it various other subcultures that playfully subvert the dominance of the classical culture. The paper also provides a critical perspective on other shades of culture such as 'mass culture' or 'celebrity culture' that in the name of entertainment, pleasure or leisure often stupefy masses into a mode of uncritical consumerism. The paper introduces the students to some of the key theorists of the project of Cultural Studies such as Stuart Hall, John Fiske, Adorno and Habermas. The units contain essays both of theoretical and illustrative nature.

Unit I Popular Culture

3. Stuart Hall, "Notes on Deconstructing the Popular", *People's History and Socialist Theory*, ed. Raphael Samuel (Routledge Revival: 1981) 227-241.
4. John Fiske "Medonna", *Reading the Popular* (London & New York: Routledge, 1989) 95-114.

Unit II Subculture

- Dick Hebdige, "The Function of Subculture", *The Cultural Studies Reader*, ed. Simon During (London & New York: Routledge, 1993)2nd Edition 1999, 441-450.
- Paul Willis, "The Motor Bike and Motor Bike Culture", *Popular Culture: Past and Present, A Reader*, edited by Bernard Waites, Tony Bennett and Graham Martin (London & New York: Routledge, 1982) 284-293.

Unit III Public Sphere

3. Alan McKee, "Introduction" to *The Public Sphere: An Introduction* (Cambridge University Press, 2005) 4-14.
4. Jürgen Habermas, "From Culture Debating to Culture Consuming Society", *Towards Transformation of Public Sphere*, (John Wiley and Sons, 2015) 159-174.

Unit IV Mass Culture

3. Alan Swingewood, "The Theory of Mass Society", *The Myth of Mass Culture* (London: Macmillan, 1977) 1-23.
4. Theodor W Adorno, "Free Time", *The Culture Industry* (London & New York: Routledge, 1991 ed.) 187-197.

Unit V Celebrity Culture

3. Michael Ryan, "Audience, Performance and Celebrity", *Cultural Studies: A Practical Introduction* (Wiley Blackwell, 2010) 150-160.
4. Ellis Cashmore, "Cultivating/ Tastes: What parts did the media and consumer society play in turning us into celebrity-doters?" *Celebrity/ Culture* (Routledge, 2006), 1-16.

Suggested Readings

- Alexander Dhoest, Steven Malliet,et al., *The Borders of Subculture: Resistance and the Mainstream*, (Routledge, 2015)
- Andy Bennett and Keith Kahn-Harris, *After Subculture: Critical Studies in Contemporary Youth Culture*, (Palgrave Macmillan, 2004).
- Arthur Asa berger, *The Objects of Affection: Semiotics and Consumer Culture: Semiotics and Popular Culture* (Palgrave Macmillan, 2010).
- Chris Jenks, *Subculture: The Fragmentation of the Social*, (Sage, 2005).
- Craig J. Calhoun, *Habermas and the Public Sphere*, (MIT Press, 1992).
- Dick Hebdige, *Subculture: The Meaning of Style*, (Routledge, 1979).
- Dominic Strinati, *An Introduction to Theories of Popular Culture*, (Routledge, 2004).
- Ellis Cashmore, *Celebrity Culture: Key Ideas*, (Routledge, 2006).
- Gary Burns, *A Companion to Popular Culture*, (Wiley Blackwell, 2016).
- J.M. Adorno and Bernstein, *The Culture Industry: Selected essays on Mass Culture*, (Routledge, 2004).
- John A. Weaver, "From Culture and Images to Popular Culture Images", *Popular Culture: Primer*, (Peter Lang, 2005) 1-24.
- John Storey, *Cultural Theory and Popular Culture: An Introduction*, (Routledge, 2015).
- Jostein Gripsrud, Hallvard Moe, et al., *The Idea of the Public Sphere: A Reader* (Lexington Books, 2010).
- Jurgen Habermas and Thomas Berger, *The Structural Transformation of the Public Sphere*, (MIT Press, 1989).

- Peter Dahlgren, *Television and the Public Sphere: Citizenship, Democracy and the Media*, (Sage Publications, 1995).
- Robert W. Witkin, *Adorno on Popular Culture*, (Routledge, 2002).
- Ross Haenfler, *Subcultures: The Basics*, (Routledge, 2013).
- Rupa Haq, *Beyond Subculture: Pop, Youth and Identity in a Postcolonial World*, (Routledge, 2006).
- Su Holmes and Sean Redmond, *Framing Celebrity: New Directions in Celebrity Culture*, (Routledge, 2006).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q.1 Explain how Stuart Hall favors 'popular culture' as a site of social transformation.

Or

'Madonna's popularity is a complexity of power and resistances, of meanings and counter meanings, of pleasures and the struggle for control'. Explain the above statement with your understanding of popular culture.

Q. 2 Discuss Paul Willis' 'The Motor Bike and Motor Bike Culture' as an argument in favor of subculture.

Or

With your reading of Dick Hebdige's "Function of the Culture" discuss how subculture resists the hegemony of the dominant culture.

Q.3 What transformation does Habermas' notice in the making of public sphere?

Or

What do you mean by "public sphere", and how is it different from "civil society" and "mass culture"?

Q. 4 Explain Adorno's concept of "Free Time". Discuss the commodification of our hobbies in the age of consumerism.

Or

How does Allen Swingewood theorize "mass society"?

Q.5 "Celebrity culture is a phenomenon that is simultaneously well known and little known." Discuss the implications of the statement in light of Ellis Cashmore's prescribed essay.

Or

Discuss the role of media in fomenting 'Celebrity' Culture.

(5) Language and Linguistics – II

The aim of this paper is to develop an understanding of how language can be described at the levels of phonology, syntax, semantics and pragmatics. The English language is to be studied as a reference point, while comparison and consideration of structures in other languages will also be relevant. An important objective is the development of a practical and analytical approach to the study of languages, while extending the scope of linguistics to communication between languages, as in the activity of translation.

Unit I Phonetics and Phonology

- Fromkin, Rodman &Hyames, "Phonetics: The Sound of Language", *An Introduction to Language* (Wadsworth 2010, 9th ed.) 189-215.
- Fromkin, Rodman &Hyames, "Phonology: The Sound Patterns of Language", *An Introduction to Language* (Wadsworth 2010, 9th ed.) 224-263.

Unit II Morphology and Grammar

- Adrain Akmajian et al, "Morphology" (Chapter 2), *Linguistics – An Introduction to Language and Communication* (MIT, 2010) 6th Ed., 13-66.
- Frank Palmer, *Grammar*(Penguin, 1971) rpt.1996, 9-40 & 149-194.
- Noam Chomsky, "The Theory of Transformational Generative Grammar", *Topics in the Theory of Generative Grammar* (Moulton, 1978) 5th print, 51-75.

Unit III Semantics

- Adrain Akmaijian et al, "Semantics: The Study of Linguistic Meaning" (Chapter 6),*Linguistics –An Introduction to Language and Communication (*MIT, 2010) 6th Ed. 225-272.
- David Crystal, "Semantics" (Chapter 17) *The Cambridge Encyclopaedia of Language* (CUP, 1997) 42-49.
- John Lyons, "Part 2 Lexical Meaning", *Linguistic Semantics: An Introduction* (Cambridge University Press, 1995) 2005 rpt.,46-71.

Unit IV Pragmatics

- J. Habermas, "What is Universal Pragmatics?" *On the Pragmatics of Communication* (MIT, 1988) 21-104.

- Kent Back, "Speech Acts and Pragmatics", *The Blackwell Guide to the Philosophy of Language*, edited Michael Devitt and Richard Hanley (Blackwell, 2006) 147-167

Unit V Translation

- Peter Newmark, "Theory and Craft of Translation", Language Teaching / Volume 9 / Issue 01 / January 1976, 5 – 26.
- Peter Newmark, "Translating Methods" (45-53), "Literal Translation" (68-80), "The Other Translation Procedures" (81-93), *A Textbook of Translation* (Prentice Hall, 1988).
- J.C Catford, *A Linguistic Theory of Translation* (OUP, 1967) 20-72.

Suggested Readings

- John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970).
- M. A.K. Halliday, Jonathan J. Webster, *On Language and Linguistics* (Continuum, 2006).
- Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics* (Routledge, 1999).
- David Crystal,*The Cambridge Encyclopedia of Language* (Cambridge University Press, 1997).
- James S. Holmes (ed.), *The Nature of Translation: Essays on the Theory and Practice of Literary Translation* (Walter de Gruyter, 1970).
- Chris Fox, Shalom Lappin, *The Handbook of Contemporary Semantic Theory* (Wiley-Blackwell, 2015).
- John Lyons, *Linguistic Semantics: An Introduction* (Cambridge University Press, 1996).
- Yehuda N. Falk, *Subjects and Universal Grammar: An Explanatory Theory* (Cambridge University Press, 2006).
- Noam Chomsky, *Topics in the Theory of Generative Grammar* (De Gruyter Mouton, 1978).
- Thomas R. Hofmann, *Realms of Meaning: An Introduction to Semantics* (Routledge, 1993).
- Noam Chomsky, *Syntactic Structures,* 2nd Edition (Mouton de Gruyter, 2002).
- Bas Aarts, David Denison, Evelien Keizer, Gergana Popova-*Fuzzy Grammar: A Reader* (Oxford Univ Press, 2004).
- Geert Booij, *The Grammar of Words: An Introduction to Linguistic Morphology* (Oxford University Press, 2005).
- Richard J Bernstein, *The Pragmatic Turn* (Wiley_Polity, 2010).

- Paul Cobley (edt.), *The Routledge Companion to Semiotics and Linguistics,* (Routledge. 2005).
- Daniel Weissbort, Astradur Eysteinsson (edt.), *Translation-Theory and Practice: A Historical Reader* (OUP, 2006).
- David Crystal, *Making Sense: The Glamorous Story of English Grammar* (Oxford University Press, 2017).
- Gould Brown, *The Grammar of English Grammars* (Amazon Digital Services, 2004).
- M.A.K. Halliday: *Language as Social Semiotic: The Social Interpretation of Language and Meaning* (Edward Arnold, 1978).
- Steven Pinker, *How the Mind Works*, (W. W. Norton & Company, 2009).
- Jean Piaget, *The Child's Conception of the World* (Routledge & Kegan Paul Ltd.,1929).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are speech sounds? How do we classify vowel and consonant sounds?
Or
Define phonology. Discuss phonemes as the phonological units of language.

Q. 2 How does Morphology help to understand the structure of complex words?
Or
Give a critical account of Transformational Generative Grammar.

Q. 3. What is meaning? What are the different approaches to the study of meaning in language.
Or
Define Semantics. Discuss the following semantic concepts with examples:
III) Synonymy and Antonymy
IV) Homonymy and Polysemy

Q. 4 Discuss in detail Habermas's concept of Universal pragmatics.
Or
Explain critically Austin's idea of "doing things with words.

Q. 5 What are the different methods of translating a text? How do these methods correspond to different text types?
Or
Give a critical account of Newmark's theory of translation.

(6) British Literature – III

The Victorian Period (1832-1901) covers the long and successful reign of Queen Victoria. It was a period of colonial expansion, strengthening of the British Empire, industrial revolution, and scientific and technological progress. The objective of the paper is to explore the major writers and texts of the time and focus on the ideological, political, social and cultural impact on Victorian culture as a consequence of industrialization, urbanization, class conflict, Darwin and religious crisis, issue of gender, empire and imperial expansion and much more. The paper will also analyze the Victorian Gothic novel and its impact and continued popularity. Students will explore the creation of 'other' in Gothic writing and the monstrosity associated with it. The paper will furthermore familiarize the students with the genre of science fiction. At the end of the course the students will be conversant with the major writers, representative works and will be able to engage critically on the issues regarding empire, race, class, gender, impact of science, 'the woman question' and other significant events of the period.

Unit I

4. Robert Browning,"Grammarian's Funeral" & "The Last Ride Together", *The Poems of Robert Browning* (Wordsworth, 1994).
5. Alfred Lord Tennyson, "Defense of Lucknow", **"**The Higher Pantheism" [available online <www.bartleby.com/297/629.html> and <https://www.poetryfoundation.org/poems/45323/the-higher-pantheism>]
6. Christina Rossetti, "Better Resurrection" & "Amor Mundi", *Complete Poems* (Penguin, 2001).

Unit II

2. Charles Dickens, *Hard Times* (Penguin Classics, 2003).

Unit III

3. Mathew Arnold, 'Barbarians, Philistines and Populace' (Chapter 3), *Culture and Anarchy* (Oxford UP World's Classics, 2009).
4. John Ruskin, "Unto this Last", *Unto this Last and Other Writings of John Ruskin*, ed. Clive Wilmer (Penguin Books, 1985)155-228.

Unit IV

3. H G Wells,*The Time Machine* (New York: Signet Classics, 2007).

Unit V

2. Bram Stoker, *Dracula* (Wordsworth Classics, 2000).

Secondary Readings:

- Anthony Jenkins, The*Making of Victorian Drama* (Cambridge UP, 1991).
- Deirdre David (ed.), *The Cambridge Companion to the Victorian Novel* (Cambridge UP, 2012).
- Gregory Tate, *The Poet's Mind: The Psychology of Victorian Poetry 1830-1870* (Oxford UP, 2012).
- Isobel Armstrong, *Victorian Poetry: Poetry, Poetics and Politics* (Routledge, 2005).
- Joseph Bristow (ed.), *The Cambridge Companion to Victorian Poetry* (Cambridge UP, 2002).
- Josephine M. Guy, *The Victorian Social-Problem Novel: The Market, the Individual and Communal Life* (Macmillan 1996).
- Nicola Diane Thompson (ed.), *Victorian Women writers and the Woman Question* (Cambridge UP, 2000).
- Richard Cronin et al. (eds.), *A Companion to Victorian Poetry* (Blackwell, 2007).
- Paul Young, Globalization and the Great Exhibition: The Victorian New World Order (Palgrave Macmillan, 2009).
- Harold Bloom (ed.), The Victorian Novel (Chelsea House, 2004).
- Philip Davis, Why Victorian Literature Still Matters (Blackwell, 2008).
- Lauren M.E Goodlad, Victorian Literature and the Victorian State: Character and Governance in a Liberal Society (The John Hopkins UP, 2003).
- M.K.Gandhi, *Unto this Last: A Paraphrase* (Navjivan Publishing House, Ahmedabad)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Critically analyze Browning's dramatic monologues. How do they capture the doubts of Victorian England?

Or

Comment on the language of Tennyson's poems. How does it differ from the language of his contemporary poets?

Q. 2. "Now, what I want is Facts. Teach these boys and girls nothing but facts." What kind of education do children receive in Mr. Gradgrind's school? Critically explore the philosophical sub-text of *Hard Times*.

Or

Hard Times has many striking images. The use of agricultural images, in particular, lends thickness to the texture of the novel. Argue through citation of textual

references.

Q. 3. Ruskin's *Unto this Last* combines ethics with economics. Argue.
Or
Critically analyze Matthew Arnold' s "Barbarians, Philistines and Populace". Bring out the elitist biases of Arnold.

Q. 4 *The Time Machine* is traditionally identified as science fiction. Is it possible to see it as a horror story?
Or
What are the qualities that make the Time Traveller a sympathetic, if flawed character in the story?

Q. 5 Critically analyze Dracula's lines, "Yes, I too can love; you yourselves can tell it from the past." Does he have a tragic love story in the past? At what points in the novel does Stoker seem to elicit the reader's sympathy for Dracula?
Or
Discuss the structure of the novel *Dracula*. Why do you think Stoker chose to construct it as a series of journal entries and letters from multiple points of view?

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Paper VIII

(4) Introduction to Literary Genres – II

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the major genres that emerged and ossified during and after 18th century in Europe and elsewhere. Even as these genres almost overwhelmed the literary space, posing a challenge to the entrenched classical modes, their presence in current literary history is no less important. The effort is to provide a brief overview of each selected genre in terms of its historical evolution and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice.

Unit I Mock Epic

3. Ritchie Robertson, "Elements of Mock-Epic", *Mock-Epic Poetry: From Pope to Heine* (Oxford: OUP, 2009) 35-70.

4. Alexander Pope, "The Rape of the Lock", *The Rape of the Lock and Other Major Writings* (Penguin Classics, 2011).

Unit II Novel

3. George Lukacs, *The Theory of Novel* (Cambridge and Massachusetts: MIT Press, 1971, 1st Edition) 56-84.
4. Daniel Defoe, *Robinson Crusoe* (Penguin Classics, 2003).

Unit III Essay

5. G Doughlas Atkins, "In-Betweeness: The Burden of Essay", *Tracing the Essay: From Experience to Truth* (Athens & London: The University of Georgia Press, 2005) 145-162.
6. Johnson, Samuel. "*The Rambler* No. 184." 1751. *Quotidiana.* Ed. Patrick Madden. 12 Mar 2007. 05 Jul 2018 <http://essays.quotidiana.org/johnson/rambler_no_184/>
7. Addison, Joseph. "On the essay form." 1711. *Quotidiana.* Ed. Patrick Madden. 18 Jan 2007. 05 Jul 2018 <http://essays.quotidiana.org/addison/essay_form/>
8. Lamb, Charles. "The genteel style in writing." 1833. *Quotidiana.* Ed. Patrick Madden. 25 Feb 2007. 05 Jul 2018 <http://essays.quotidiana.org/lamb/genteel_style_in_writing/

Unit IV Gothic

3. David Punter and Glennis Byron, "Gothic in the Eighteenth Century", *The Gothic* (Blackwell Publishing, 2004) 7-12.
4. Mary Wollstonecraft Shelley, *Frankenstein* (Penguin Classics, 1985).

Unit V Tragicomedy

- John Orr, "Modernism and Tragicomedy", *Tragicomedy and Contemporary Culture* (London: Macmillan, 1991) 1-10.
- Samuel Beckett, *Waiting for Godot* (New York: Grove Press, 1954).

Suggested Readings:

- Verna A Foster, *The Name and Nature of Tragicomedy* (Routledge: London & New York, 2017).

- Karl Siegfried Guthke,*Modern Tragicomedy: An Investigation into the Nature of the Genre* (Random House, 1966).
- David L. Hirst,*Tragicomedy*(Methuen, 1984).
- Andrew Smith, *Gothic Literature* (Edinburgh: Edinburg University Press, 2007).
- Michael Edwards, "A Meaning for Mock-Heroic", *Poetry and Possibility* (London: Macmillan, 1988) 32-51.
- T.W.Adorno, Bob Hullot-Kentor, Fredric Will, "The Essay as Form*", New German Critique*, No. 32 (Spring-Summer, 1984) 151-171.
- Catherine Spooner and Emma McEvoy, eds.,*The Routledge Companion to Gothic* (London & New York: Routledge, 2007).
- Benedict Anderson, *Imagined Communities* (London & New York: Verso, 2nd ed 2006).
- Mikhail Bakhtin, *The Dialogic Imagination: Four Essays* (Texas: University of Texas Press, 2008 17th Ed.).
- Frank Humphrey Ristine, *English Tragicomedy: Its Origin and History* (The Columbia University Press, 1910) 1-25.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q.1. What are the elements of mock-epic? Use Richie Robertson's prescribed essay to trace the rise of this genre.

Or

Discuss the nature of super-natural machinery in *The Rape of the Lock*.

Q.2. Why does Lucas term novel as a genre of exile from transcendence?

Or

Discuss Defoe's *Robinson Crusoe* as a new form of narrative that foregrounds this-worldliness of human experience.

Q. 3 Why does G Douglas Atkins attribute "In-Betweeness" to the genre of essay?

Or

Discuss the differences in style and content of essays of Addison and Charles Lamb.

Q. 4 What do you mean by gothic art? Differentiate gothic fiction from mainstream fiction.

Or

Critically discuss *Frankenstein* as a gothic novel.

Q. 5 Modern plays are neither tragic nor comic. Argue with the help of suitable examples.
Or
Discuss *Waiting for Godot* as a tragi-comedy.

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(5) British Literature – IV

An era of conflict and uncertainty, the twentieth century marked a break from the the preceding Victorian period. The old was rejected, 'Make itNew' announced Ezra Pound and 'new it indeed was'. It was an age of literary experimentation, which broke away from established rules, traditions and conventions. The focus was to search for new ways of looking at man, universe, and man's role in it. A period of shifting perspectives, class struggle, gender equality, devastating wars, and collapse of traditional notions of culture and aesthetics. Modernist avant-gardes challenged and often shocked the people with their ideas, styles and techniques. The objective of the paper is to study and understand the ways in which political, historical, economic, scientific, intellectual, environmental, social and cultural events have shaped the art and literature of the time. The students will be introduced to the innovative literary techniques, intellectual trends and change in themes of this turbulent period. At the end of the course they will be familiar with the representative texts, literary terminology, and the socio-political and cultural events that shaped twentieth century literature.

Unit I

5. T.S. Eliot, "The Burial of the Dead" Canto I, *The Waste Land;* "Love Song of Alfred J Prufrock", *The Complete Poems and Plays of T.S. Eliot* (Faber, Main Edition, 2004).
6. W.B. Yeats, "Easter 1916", "A Prayer for My Daughter" &"Sailing to Byzantium" *Yeats: Poetry and Prose* (Norton Critical Editions, 2001).
7. W.H. Auden, "The Shield of Achilles", "September 1, 1939" & "Musée des Beaux Arts", *W.H. Auden: Collected Poems*. Ed. Edward Mendelson (Vintage International, 1991).
8. D. H. Lawrence, "Mosquitoes" & "Snakes", *Complete Poems of D.H. Lawrence* (London: Wordsworth, 1994).

Unit II

2. Samuel Beckett, *Waiting for Godot* (Pearson, 2012).

Unit III

4. James Joyce, *Portrait of An Artist as a Young Man* (Vintage Classics, 2012).

Unit IV

- Aldous Huxley, *Brave New World* (Vintage Classics, 2004).

Unit V

3. George Orwell, "Notes on Nationalism", "The Prevention of Literature" & "Reflections on Gandhi", *George Orwell: Essays* (Penguin UK, 2000), also available at www.orwellfoundation.com
4. Virginia Woolf, *A Room of One's Own. London* (Penguin Modern Classics, 2002).

Secondary Readings

- Alex Davis and Lee M., The Cambridge Companion to Modernist Poetry (Cambridge UP, 2007).
- Jane Goldman, Modernism, 1910-1945: Image to Apocalypse (UK: Macmillan Education, 2003).
- Jessica Berman, Modernist Fiction, Cosmopolitanism and the Politics of Community (Baltimore: University of Maryland, August 2001).
- LAC Dobrez, The Existential and Its Exits: Literary and Philosophical Perspectives in the Works of Beckett, Ionesco Genet and Pinter (UK: Athlone Press, 1986).
- Malcolm Bradbury, The Modern British Novel (Penguin, 2001).
- Martin Puchner, Stage Fright: Modernism, Anti-Theatricality, and Drama (John Hopkins UP, 2002).
- Michael Levenson, Modernism and the Fate of Individuality (Cambridge UP, 1991).
- Michael North, Reading 1922: A Return to the Scene of the Modern (Oxford: Oxford UP, 1999).
- Rebecca Beasley, Theorists of Modernist Poetry: T.S. Eliot, T.E. Hulme, Ezra Pound. (Routledge, October 2007).
- R.P. Draper, An Introduction to Twentieth-Century Poetry in English (London: Macmillan, 1996).
- Susan C.W. Abbotson, Thematic Guide to Modern Drama (Greenwood Press, 2003).

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1 Discuss Yeats as poet of Irish aristocratic values.

Or
What type of images does Eliot use in his poems to contrast mythical past with modern present?

Q. 2 Who could be Godot in "Waiting for Godot"?
Or
Critically analyze the use of language in "Waiting for Godot"?

Q. 3. Compare and contrast Stephen's perception of art with his perception of religion, family, school, or country in the novel *Portrait of an Artist as a Young Man*. What makes art such an appealing escape for Stephen?
Or
Describe how *Portrait of an Artist as a Young Man* is a study of the conditions of the development of an artist.

Q. 4 Discuss the relation between the sexes in the World State as depicted in *Brave New World*. Who holds the power in social situations, in the workplace, and in the government?
Or
Analyze how important elements of *Brave New World* are "distorted," and explain how these distortions contribute to the effectiveness of the work.

Q. 5 What predictions does Woolf make for women's writing in the future? How do they look from our current vantage point? (*A Room of One's Own*).
Or
George Orwell offers a critique of imperialism from the position of an insider. Argue.

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(6) Academic Writing -- II

The paper is designed to help students develop the use of effective learning strategies which will help in academic writing. The classes will expose the students to various forms of referencing and citation so that their work never comes under plagiarized texts. The classes will provide sufficient practice in order to empower the students to be able to write a coherent and cohesive text with a logical flow that demonstrates precision and clarity. The two papers on academic writing are designed to fulfill the requirements of higher education, so the focus in the classroom will be on consistent and regular writing practice. The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the characteristics of academic writing and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the actual, hands on writing of academic documents. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to

be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I Reading and Critical Thinking

1. Reading Broadly and Narrowly
2. Critical Reading towards Critical Writing
3. How to Get the Most out of Reading
4. Committing tentatively to a position
5. Taking a position on the Question

Unit II Note Taking and Note Making

4. Note taking techniques
5. Taking Notes from Research Reading (Recommended Strategies, Direct and Indirect Quotes)
6. Note making effectively

Unit III Presentations

4. Preparation and Planning
5. Creating Interest
6. Establishing a Relationship with the Audience

Unit IV Re-reading for Grammar, Punctuation and Style

5. Errors in Grammar
6. Errors in language use
7. Punctuation Errors
8. Referencing style and format

Unit V Plagiarism

5. Definition
6. Parameters
7. Strategies to avoid plagiarism
8. Spotting plagiarism

Suggested Readings

<u>Note: The first two books can be used as textbooks in the classroom.</u>

- Cottrell, Stella 2011. *Critical Thinking Skills.* China: Palgrave Macmillan
- Jordan, R. R. 1999. *Academic Writing Course.* Harlow: Longman.
- Leki, Ilona 1998. *Academic Writing.* India: Cambridge University Press.
- Morley, John et al. 2007. *University Writing Course.* Newbury, Berkshire: Express Publishing.
- Oshima, Alice and Ann Hogue. 2007. *Introduction to Academic Writing (The*

Longman Academic Writing Series). Longman.
- Strunk, William Jr. 2000. *The Elements of Style.(4th edition).*Boston: Allyn &Bacon.
- Swales, John M. and Christine B. Feak. 2004. *Academic Writing for Graduate Students.* Ann Arbor: University of Michigan Press.

MODEL PAPER

Time: 3hrs. **Maximum Marks: 80**

Q. 1 Explain the difference between reading broadly and narrowly in our daily life, giving examples to illustrate.
Or
Give a critical reading to the passage given below, writing down your observations on the passage.

The Depiction of Women in Indian Cinema
Indian Women have excelled in every field and have engraved their names in many parts of the universe, but there still seems to be a long route ahead before she attains equal status in the minds of Indian men. 'Most agricultural civilizations downgraded the status and potential of women, at least according to modern Western standards and to the implicit standards of hunting-and gatheringsocieties. Agricultural civilizations were characteristically patriarchal; that is,they were run by men and based on the assumption that men directed political,economic, and cultural life. Furthermore, as agricultural civilizations developed over time and became more prosperous and more elaborately organized, the status of women deteriorated from its initial level.'
In a well-defined patriarchal society like India, even the cinematic world deems to project women as in factual life. This is a good thing as films have mass appeal and at least some if not all carry out a message to the public and try to create awareness. There is a myth that women are characterized in films to prop up the male role rather than characterize them as the one who keeps the narrative structure sinuous. Women are insinuated in films as bearing the burden of sexual objectification that male roles cannot. Hence, they become the bearer, and not the maker of meaning says Laura Mulvey. Most Indian women live a silent life with enormous amount of sacrifices and retain their frustration within themselves for the sake of societal pressure.
Women in Indian cinema are born with certain assumptions ranging from cult movies to celluloid blockbusters like Sholay to more recent Fashion that employ themselves as in severe gender issues. They are portrayed either as damsels in distress or demented feminists or simple belly-shaking glam dolls whose sole ambition is to attract the attention of the male gender. In many Indian films it is a common trend to insert 'item numbers' which bear no rational connection to the film in anyways but with an assumption that the film is easily associated. As Bindu Nair says, 'Sometimes the one song ends up making the film a hit, such as 'Chamma Chamma' from the film

China gate.'Occasionally, do we see a female being the protagonist of a film than merely being objects of sexual desire. In some cases there appears to be a clash between 'modern feminism' and 'traditional values'. Indian cinema often acts like an emotional register and is very resourceful while reading the characterization of 'Women'.

Q. 2 Write the notes you will make for the passage given below.

'Big' Data Science

If you could possibly take a trip back in time with a time machine and say to people that today a child can interact with one another from anywhere and query trillions of data all over the globe with a simple click on his/her computer they would have said that it is science fiction !

Today more than 2.9 million emails are sent across the internet every second. 375 megabytes of data is consumed by households each day. Google processes 24 petabyte of data per day. Now that's a lot of data!! With each click, like and share, the world's data pool is expanding faster than we comprehend. Data is being created every minute of every day without us even noticing it. Businesses today are paying attention to scores of data sources to make crucial decisions about the future. The rise of digital and mobile communication has made the world become more connected, networked and traceable which has typically resulted in the availability of such large scale data sets.

So what is this buzz word "Big Data" all about? Big data may be defined as data sets whose size is beyond the ability of typical database software tools to capture, create, manage and process data. The definition can differ by sector, depending on what kinds of software tools are commonly available and what sizes of data sets are common in a particular industry. The explosion in digital data, bandwidth and processing power – combined with new tools for analyzing the data has sparked massive interest in the emerging field of data science. Big data has now reached every sector in the global economy. Big data has become an integral part of solving the world's problems. It allows companies to know more about their customers, products and on their own infrastructure. More recently, people have become extensively focused on the monetization of that data.

According to a McKinsey Global Institute Report[1] in 2011, simply making big data more easily accessible to relevant stakeholders in a timely manner can create enormous value. For example, in the public sector, making relevant data more easily accessible across otherwise separated departments can sharply cut search and processing time. Big data also allows organizations to create highly specific segmentations and to tailor products and services precisely to meet those needs. This approach is widely known in marketing and risk management but can be revolutionary elsewhere. Big Data is improving transportation and power

consumption in cities, making our favorite websites & social networks more efficient, and even preventing suicides. Businesses are collecting more data than they know what to do with. Big data is everywhere; the volume of data produced, saved and mined is startling. Today, companies use data collection and analysis to formulate more cogent business strategies. Manufactures use data obtained from the use of real products to improve and develop new products and to create innovative after-sale service offerings. This will continue to be an emerging area for all industries. Data has become a competitive advantage and necessary part of product development.

Or

Describe the process of note-taking while listening to a lecture. What are the conventions that you shall use?

Q. 3 Rewrite the sentences given below, correcting the errors of grammar and punctuation.

a. They had been living in this house for 2007.
b. write in pencil
c. we had great time in paris
d. will you please borrow me a copy of our textbook
e. the money was equally divided among the two
f. why is you followed me asked the man
g. this is a amazed experience we never seeing something likes that said the girl
h. an booty was be sharing between a three thiefs

Or
Describe the various kinds of reference styles used, giving clear examples.

Q. 4 What is the importance of the audience during a presentation? How will you capture audience interest?
Or
Outline the steps in preparing for a presentation.

Q5. Create a set of strategies for avoiding plagiarism to be shared with young researchers.
Or
Define plagiarism and describe its parameters.

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M.A. PART-II
SEMESTER-III

PAPER-I: LITERARY THEORY-I

Objectives:

The paper provides an important study of literary theory as an intellectual and critical activity 1960 onwards. Central to this course is the analysis of some of the major critical contributions to this area which form a benchmark in understanding the dynamics of literary/critical methods. The course takes up major strands of modern literary theory and provides a conceptual context for an understanding of the function and practice of modern literary and cultural criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of literary theory 1960 onwards, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Roland Barthes: "The Death of the Author" from Roland Barthes, *Image, Music, Text* (London: Flamingo, 1977): 142-48. Also in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 166-72.

Unit-2 Wolfgang Iser: "The Reading Process: a Phenomenological Approach" from David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988).

Unit-3 M. H. Abrams: "The Deconstructive Angel" (from David Lodge (ed.) *Modern Criticism and Theory: A Reader,* London and New York: Longman, 1988).

Unit-4 Raymond Williams: "Base and Superstructure"; and "Dominant, Residual andEmergent." From Raymond Williams, *Marxism & Literature* (Oxford: Oxford University Press, 1977): 75-82 and 121-27.

Suggested Reading:

1. Peter Barry: *Beginning Theory*, Manchester and New York: Manchester University Press, 1995.

2. Raman Selden:*A Reader's Guide to Contemporary Literary Theory*, New Jersey: Prentice-Hall, 1985.

3. Ann Jefferson & David Robey, eds., :*Modern Literary Theory,* New York: Barnes and Noble, 1982.

4. Terry Eagleton: *Literary Theory: An Introduction*, Minneapolis: University of Minnesota Press, 1983.

5. …. *Marxism and Literary Criticism*, Berkeley and Los Angeles: University of California Press, 1976.

6. Krishnaswamy et al.: *Contemporary Literary Theory: A Student's Companion*, New Delhi: Macmillan, 2000.

7. Jonathan Culler: *Barthes*, Great Britain: Fontana, 1983.

8. Jeremy Hawthorn, *A Concise Glossary of Contemporary Literary Theory*, London: Edward Arnold, 1992.

9. Stuart Sim, ed., *AZ: Guide to Modern Literary and Cultural Theorists*, London: Harvester Wheatsheaf, 1995.

10. John Sturrock: *The Word from Paris: Essays on Modern French Thinkers and Writers*, London: Verso, 1998.

PAPER-II: INDIAN WRITING IN ENGLISH

Objectives:

The focus of this paper is the study of Indian contribution to literature in English, from the early advent of English in India to contemporary writing in English. The history and development of Indian Writing in English is scrutinized with reference to the Indian Nationalist Movement, the philosophical thinking of political and social leaders/activists like Mahatma Gandhi, Pandit Jawahar Lal Nehru, Raja Rammohan Roy and others. The issues raised by diasporic movements across the globe, post coloniality and the emergence of modern India is also a part of the study of this paper.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of Indian writing in English, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Raja Rao **:** *Kanthapura*

Unit II: This unit will have three poets and there will be three poems by each :

(a) Agha Shahid Ali **:** "Farewell", "Ghazal", ("Where are you now ?") and "The Country without a Post Office". Available in *The Country without a Post Office,* Delhi. Ravi Dayal, 2000, Ist Indian

Edition.

(b)	A. K. Ramanujan	:	"Small-Scale Reflections on a Great House"; "Obituary", "Love Poem for Wife 1." Available in R. Parthasarathy ed., *Ten Twentieth Century Indian Poets* (Delhi: Oxford University Press, 1976).
(c)	ImtiazDharkar	:	"Purdah I", "Grace" and "Prayer", Available in ImtiazDharkar, *Purdah and Other Poems,* Delhi: Oxford University Press, 1989.
Unit III:	Amitav Ghosh	:	*The Shadow Lines* (Delhi: Ravi Dayal, 1988).
Unit IV:	Mahesh Dattani	:	*Final Solutions* (New Delhi: Penguin, 2005).

Suggested Reading:

1. K. R. S. Iyengar, *Indian Writing in English*, New Delhi: Sterling, 1985.

2. Bruce, King, *Modern Indian Poetry in English*, New Delhi: Oxford University Press, 1987.

3. A. K. Mehrotra ed., *An Illustrated History of Indian Literature in English*, New Delhi: Permanent Black, 2003.

4. TabishKhair, *Babu Fictions*, Delhi: Oxford University Press, 2006.

5. Meenakshi Mukherjee, *Twice Born Fiction*, New Delhi: Heinemann, 1971.

6 Meenakshi Mukherjee,*The Perishable Empire: Essays on Indian Writing in English*, New Delhi: Oxford University Press, 2000).

7. M. K. Naik ed., *Aspects of Indian Writing in English*, Delhi: Macmillan, 1979.

8. S. Tharu and K. Lalitha, *Women Writing in India: 600BC to the Present*, 2 Vols., New Delhi: Oxford University Press, 1995.

9. V. Raghavan and Nagendra, *An Introduction to Indian Poetics*, Bombay: Macmillan, 1970.

10. G. N. Devy, ed., *Indian Literary Criticism: Theory and Interpretation*, Hyderabad: Orient Longman, 2004.

PAPER- III (Opt. i): POST-COLONIAL STUDIES I (ECS II PCS I)

Objectives: To familiarize the students with theoretical concepts related to the literatures of the 'new' world - Asian, African, Australian, Caribbean, Latin American, Canadian - which have long remained ignored; to foreground issues such

as history, class, race, gender, nation, culture, marginality, diasporic consciousness, etc., emphasizing the emergent nature of literary productions from decolonized communities.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt four out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed units :

Prescribed Texts:

Unit-I. ENGLISH LITERARY STUDIES (with reference to English in India)

1. Thomas Babington Macaulay, 'Indian Education: Minute of the 2nd of February, 1835', in G. M. Young (ed.), *Macaulay: Prose and Poetry*, Cambridge, MA: Harvard University Press, 1967:719-30.

2. Gauri Viswanathan, Introduction to *Masks of Conquest*, New York: Columbia University Press, 1989: 1-22.

Unit-II. CULTURAL IDENTITY AND THE NATION

1. Ernest Renan, 'What is a Nation?' in Homi K. Bhabha, ed. *Nation and Narration*, London and New York: Routledge, 1990: 8-22.

2. Frantz Fanon, 'On National Culture' from *The Wretched of the Earth*, Harmondsworth: Penguin, 1967: 166-99.

Unit-III. DEFINING FORCES: GENDER AND RACE

1. Chandra Talpade Mohanty, 'Under Western Eyes', in Patrick Williams and Laura Chrisman, eds., *Colonial Discourse and Postcolonial Theory: A Reader*, New York: Harvester Wheatsheaf, 1993: 196-220.

2. Introducing Gayatri Spivak: Woman as subaltern, subject-positions, postcolonial feminism.

3. Race: Background, classification of races, Social Darwinism and imperial practice, social construction of race; race and ethnicity.

Unit IV. CULTURAL IDENTITY AND DIASPORA

1. Stuart Hall, 'Cultural Identity and Diaspora' in Jonathan Rutherford ed., *Identity: Community, Culture, Difference* (London: Lawrence and Wishart, 1990): 222-37.

Also in Padmini Mongia, *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996): 110-21.

2. Introducing HomiBhabha: Concepts of ambivalence and hybridity.

Suggested Reading:

1. John McLeod, *Beginning Postcolonialism*, Manchester and New York: Manchester University Press, 2000.
2. Ania Loomba, *Colonialism/Postcolonialism*, London and New York: Routledge, 1998.
3. Rumina Sethi, *The Politics of Postcolonialism: Empire, Nation and Resistance,* London: Pluto, 2011.
4. Robert J. C. Young, *Postcolonialism*: *A Very Short Introduction*, Oxford: Oxford University Press, 2003.
5. Leela Gandhi, *PostcolonialTheory*, Oxford: Oxford University Press, 1988.
6. Rajeswari Sunder Rajan (ed.), *The Lie of the Land: English Literary Studies in India*, Delhi: Oxford University Press, 1992.
7. Benedict Anderson,*Imagined Communities*, London: Verso, 1983.
8. Rumina Sethi, *Myths of the Nation: National Identity and Literary Representation*, Oxford: Clarendon, 1999.
9. Homi K. Bhabha, *The Location of Culture*, London and New York: Routledge, 1994.
10. Kumkum Sangari and Sudesh Vaid (eds.), *Recasting Women*, New Delhi: Kali, 1989.

PAPER-III (Opt. ii): LINGUISTICS-I (ECS II LIN I)

Objectives :

This paper is aimed to provide an introduction to the studies of language in modern times. Students are made to be aware of developments in the field of Linguistics in the 20th Century, and develop an understanding of the nature of language study through a scientific and analytical approach. An understanding of the concepts in modern Linguistics is an essential objective and the approach to be adopted is that of clear explication of linguistic thought and of the levels of linguistic analysis.

Pattern of examination

There shall be one compulsory question of 20 marks, comprising of short notes from all the units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question with internal choice will be set from each of the four units. The questions from Units 1 & 2 would be Essay Type. The questions from Units 3 & 4 would be exercises (Phonetic Transcription of words with primary stress, and morphological analysis) and short notes.

Content

Unit 1. Language - nature and functions (arbitrariness of sign, speech and writing, animal and human language, conventionality, system of systems). The earlier study of language – historical, comparative approaches, a brief history of linguistics.

Unit 2. The growth of Modern Linguistics:– The descriptive approach, Linguistics as a Science. The early structuralists, anthropologists - Boas, Sapir, Whorf' The contribution of Bloomfield. Ferdinand de Saussure and Dichotomies; Langue and Parole, Syntagmatic and Paradigmatic relationships, synchronic and diachronic approaches.Branches of Linguistics; Psycholinguistics and Neurolinguistics, Sociolinguistics and the study of the variation in language, particularly, dialect, accent and register.

Unit 3. Levels of linguistic analysis I - Phonetics (speech organs, description and classification of sounds, IPA system, phonemes, allophones, minimal pairs); Morphology (free and bound morphemes, allomorphs, zero morphemes, morphophonemics).

Unit 4. The Phonology of English - the description and classification of English Vowels and consonants, syllable structure, word stress. Transcription of English words, marking stress. Weak forms, assimilation and elision in connected speech, basic patterns of intonation.

Word formation in English; derivation, affixation , compounds.

Suggested Reading:

1. Yule, G., *The Study of Language*, Cambridge: Cambridge University Press, 2009.
2. Radford, A., *Linguistics: An Introduction,* Cambridge: Cambridge University Press, 1999.
3. Culler Jonathan, *Saussure*, London: Fontana Modern Classics, 1978.
4. Crystal, D., *Linguistics*, Harmondsworth: Penguin, 1980.
5. Sethi, J. and Dhamija, P.V, *Course in Phonetics and Spoken English*, New Delhi.
6. Syal and Jindal, *Introduction to Linguistics: Language, Grammar and Semantics,* revised Ed., New Delhi: Prentice Hall of India, 2007.
7. Lyons, J., *Language and Linguistics,* Cambridge: CUP, 1982.
8. Roach, P., *English Phonetics and Phonology: A Practical Course,* Prentice Hall of India, 1995.
9. Gimson, A.C., *Introduction to the Pronunciation of English,* London: Arnold, 1988.
10. Fromkin, Rodman and Hyams, *An Introduction to Language* 7th Ed., 11 Thomson Wadworth. Thomsan Asia, Singapore, reprinted in India 2004.
11. Conrad and Leech, *A Student Grammar of Spoken and Written English,* London: Longman.
12. Bauer, L., *Introducing Linguistic Morphology,* CUP, 2002.

PAPER-III (opt. iii) AMERICAN LITERATURE I
(AMERICAN FICTION FROM 1800 TO THE PRESENT)

Objective:

The course examines changes in the American narrative from 1800 to the present and considers what might be distinctly "American" about American literature. It focuses on the historical and cultural influences, literary movements, the short story and novel as distinct genres and on major literary figures. It explores literature that reveals and emerges from multiple perspectives such as those of race, gender, ethnicity, socio-economic class and historical period.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will test the candidate's awareness of the history of American fiction, and will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I : (19^{th} Century Short Fiction)
(a) Edgar Allan Poe, "The Fall of the House of Usher" (Norton)
(b) Nathaniel Hawthorne, "Rappaccini's Daughter" (Norton)
(c) Stephen Crane, "The Open Boat" (Doubleday Press)

Unit II : (Twentieth Century Short Fiction)
(a) Ernest Hemingway, "The Snows of Kilimanjaro" (Norton)
(b) William Faulkner, "A Rose for Emily" (Random House)
(c) Joyce Carol Oates, "Scenes of Passion and Despair" (Oxford)

Unit III : Toni Morrison, *The Bluest Eye* (Vintage)

Unit IV : Don DeLillo, *White Noise* (Penguin)

Suggested Reading:

1. Kenneth Silverman, ed., *New Essays on Poe's Major Tales* (Cambridge University Press, 1992).
2. Charles E. May, *Edgar Allan Poe: A Study of the Short Fiction (*Twayne Series,1991).
3. Albert V. Frank, ed., *Critical Essays on Hawthorne's Short Stories (*Twayne, 1993).

4. Chester L. Wolford, *Stephen Crane:A Study of the Short Fiction* (Twayne, 1989).
5. Paul Smith ed., *New Essays on Hemingway's Short Fiction (*Cambridge University Press, 1985).
6. Joseph M. Flora, *Ernest Hemingway: A Study of the Short Fiction (*Twayne, 1983).
7. Hans H. Skei, *The Art of Brevity: Excursions in Short Fiction Theory and Analysis (*South Carolina Press, 2004).
8. Linden Peach ed., *Toni Morrison: Contemporary Critical Essays* (Casebook Series, 1998).
9. Nancy Peterson, *Toni Morrison: Critical and Theoretical Approaches (*John Hopkins University Press, 1997).
10. Tim Engels & Hugh Ruppersburg eds., *Critical Essays on Don DeLillo,* GK Hall, 2000.

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY I

Objective:

This paper shall focus singularly on Indian Poetics - its various schools and theories so as to provide an alternative perspective of Literary Theory from an indigenous perch. The corpus of Indian Poetics is very rich and multivalent; the paper shall however deal with basic concepts and would therefore be introductory in nature and scope. The prescribed texts are available in English translation and there is no dearth of secondary material also. The students would be encouraged to take a critical view of our own 'poetics' and its relevance in the postcolonial contexts.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Text

Unit I

Rasa – Siddhanta with special reference to Bharatmuni, "On Natya and Rasa: Aesthetics of Dramatic experience" from the *Natyashastra,* anthologized inG.N.Devy's edited book *Indian Literary Criticism* (Hyderabad; Orient Longman, 2002).

Unit II

Dhvani –Siddhanta with special reference to Anandvardhana, "Dhvani: Structure of Meaning" from *Dhvanyaloka,* anthologized in G.N. Devy's edited book *Indian Literary Criticism*(Hyderabad, Orient Longman, 2002).

Unit III

Vakrokti-Siddhanta with special reference to Kuntaka, "Language of Poetry and Metaphor" from *Vakrokti-Jivita*, anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002).

Unit IV

A.K.Ramanujan, "*On Ancient Tamil Poetics*" anthologized in G.N. Devy's edited book *Indian Literary Criticism*(Hyderabad, Orient Longman, 2002).

Suggested Reading:

Rajan, P.K., *Indian Literary Criticism in English*: *Critics, Texts, Issues*, Delhi & Jaipur: Rawat, 2004.
Aijaz Ahmed, *In Theory; Classes, Nations, Literatures*, London: OUP, 1992.
Devi, G.N., *In Another Tongue: Essays on Indian English Literature*, Delhi: MacMillan, 1993.
_____ and Dallmayr Fred, *Between Traditions and Modernity: India's Search for Identity*, Delhi; Sage, 1998.
Chari, V.K., *Sanskrit Criticism*, Delhi: MotilalBanarsidas, 1993.
Sethuraman, V. Ed., *Indian Aesthetics: An Introduction*, Delhi: MacMillan 1992.
Rao, Raja, *The Meaning of India*, Delhi: Vision Books, 1996.
Mukherjee, Meenakshi, *The Perishable Empire: Essays on Indian Writing in English,* Delhi: OUP , 2000.
_____, *Reality and Realism*: *The Novel and Society in India*, Delhi: OUP, 1985.
Sunder Rajan, Rajeswari, Ed., *The Lie of the Land: English Literary Studies in India,* Delhi: OUP, 1991.
Gauri, Viswanathan, *Masks of Conquest: Literary Study and British Rule in India*, New York: Colombia University Press, 1989.
Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literatures* (Mysore, Dhvanyaloka, 1984.
Rayan, Krishna, *The Burning Bush: Suggestion in Indian Literature,* Delhi: B.R. Publishing, 1988.
_____, *Text and Sub-text* (Delhi, Arnold Heinemann, 1989).
_____, *Sahitya, A Theory for Indian Critical Practice,* Delhi: Arnold Heinemann, 1991.
Paranjape, Makarand Ed., *Nativism:Essays in Criticism*, Delhi: Sahitya Akademi, 1998.
Krishna, Daya, *Indian Philosophy: A Counter-Perspective*, Delhi: OUP 1991.
Krishnamoorthy, K., *Essays in Sanskrit Criticism*, Dharwar: Karnatak Univ., 1964.
Kane, P.B., *History of Sanskrit Poetics*, Delhi: Motilal Banarasidass, 1971, 4th ed.

PAPER IV (Opt.i): CULTURAL STUDIES-I

Objectives:
The course combines a thorough training in critical and cultural studies with a diverse range of advanced options offering you scope to configure and appropriate programme of study that meets your needs. At a historical juncture of incessant theoretical discourse when English Departments are being structurally reconstituted, cultural studies becomes significant as a course that focuses on criticism as a social and cultural practice in the 20th Century. An English education is now less a concern of familiar Western Course and more a confrontation with the diversity of transnational cultural schemes and texts. Such a task sets out to situate literature in relation to culture and within larger cultural formations. The main aim of this course is to examine literary studies as a self-conscious pursuit of a 'critical' definition of culture.

The programme is designed to provide grounding in the theoretical debates that inform contemporary investigations in a number of areas, such as society, subjectivity, ethnicity, aesthetics, postmodern experience and cultural history. The insights and analyses of late twentieth-century forms of critique – psychoanalysis, deconstruction, and ideological and political thought – are employed to assess some key concepts of interdisciplinary study. Working within multiple contextual formations in a globalized world, the course explains the need for ongoing contest and struggle to understand ideology of mass culture and hegemony with the necessity of achieving cultural knowledge of ordinary people vs. the elites, thus drawing the student closer to a bewildering variety of local and trans-cultural politics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words
each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: What is Culture?

1. T.S. Eliot, "The Three Senses of Culture", from *Notes Towards the Definition of Culture*, London: Faber and Faber, 1948. 21-34.

2. Raymond Williams, 'Culture is Ordinary', in *The Routledge Critical and Cultural Theory Reader.* Ed. Neil Badmington and Julia Thomas, London & New York, Routledge.

Unit II: Culture Studies

Richard Johnson, "What is Cultural Studies Anyway?", in *What is Cultural Studies?: A Reader*, Ed. John Storey, London & New York: Arnold, 1976. 75-114.

Unit III: Culture as Discourse

1. Eric Hobsbawm, "Introduction: Inventing Tradition", in *The Invention of Tradition*. Eds. Eric Hobsbawm and Terence Ranger, Cambridge: Cambridge University Press, 1997 rpt. 1-14.

2. Clifford Geertz, "Thick Description: Toward an Interpretive Theory of Culture" from *The Interpretation of Cultures: Selected Essays of Clifford Geertz*, Basic Books, 1973. 3-30.

Unit IV: Representation and Ideology

1. Stuart Hall, "The Work of Representation", in *Representation: Cultural Representations and Signifying Practices* Ed. Stuart Hall, London: Sage, 1997, 15-64.

2. Louis Althusser, "From 'Ideology and Ideological State Apparatuses'" in Anthony Easthope and Kate McGowan ed., *A Critical and Cultural Theory Reader* (Open University Press)

Suggested Reading:

Ali Rattansi and Sallie Westwood Eds., *Racism, Modernity and Identity: On the Western Front,* Oxford: Polity Press, 1994.
AshisNandy, *The Secret Politics of Our Desires: Innocence, Culpability, and Indian Popular Cinema, London:* Zed, 1999).
Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature,* London: Free Association Books, 1991.
Graeme Turner, *British Cultural Studies,* London: Routledge, London, 1990.
John Rajchman Ed., *The Identity in Question*, London: Routledge, 1995.
John Storey Ed., *What is Cultural Studies?: A Reader,* London: Edward Arnold,1996.
Malcolm Waters, *Globalization*, London: Routledge, 1995.
Stuart Hall, *Critical Dialogues in Cultural Studies*, London: Penguin, 1996.
Richard Hoggart, *The Uses of Literacy*, London: Penguin, 1958.
Ziauddin Sardar and Jerome Ravetz, *Cyberfutures*: *Culture and Politics on the Information Superhighway,* London: Pluto Press,1966.

PAPER IV (Opt. ii): APPLIED LINGUISTICS I

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Prescribed Content:

Unit 1: Linguistics and Language Teaching- Behaviourist, mentalist and cognitivist views of language learning. The difference between learning the first and the second language. Second language acquisition.The Monitor model.

Unit 2: The Language Learner: Interlanguage. Learners' errors as strategies of learning, Types of errors, The significance of error analysis. Universal grammar. Acculturation. Individual differences in learning-age, motivation, attitude and aptitude.

Unit 3: The notion of communicative competence. Varieties of language - social and regional dialects, pidgins and creoles, register. The significance of language variation in teaching and learning language.

Unit 4: Application of linguistics to the study of literary style: A few literary texts to be taken as examples to illustrate features of literary language-deviation, foregrounding, parallelism and poetic diction.

Suggested Reading:

1. Yule, George, *The Study of Language,* New Delhi: Cambridge University Press, 2006.

2. Kirkpatrick, Andy, *World Englishes: Implications for International Communication and English Language Teaching,* U.K.: Cambridge University Press, 2007.

3. Corder, S. Pit, *Introducing Applied Linguistics,* U.K.: Penguin, 1993.

4. Krishnaswamy and Sriraman, *Applied Linguistics*, Delhi: OUP, 1998.

5. Long, Michael H. and Doughty, Catherine J., *The Handbook of Second Language Acquisition*, U.K.: 2005.

6. Downes, William, *Language and Society,* U.K.: Cambridge University Press, 1998.

7. Ellis, Rod, *Understanding Second Language Acquisition,* U.K.: OUP, 1998.

8. Mc Laughlin, Barry, *Theories of Second Language Learning,* U.K.: Edward Arnold, 1988.

9. Skehan, Peter, *Individual Differences in Second Language Learning,* U.S.: Arnold, 1989.

10. Leech, G.N., *A Linguistic Guide to English Poetry*, London: Longman, 1967.

PAPER IV (Opt. iii): WORLD POETRY /NOVEL IN TRANSLATION

Objectives:

The paper provides an interesting study of world poetry and novel with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping students develop ways of approaching, understanding and interpreting classics.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1**.**Dante's *Inferno*(Penguin)
Unit-2. Cervantes' *Don Quixote* (Penguin)
Unit-3. Maxim Gorky's *Mother* (Moscow: Popular Publications)
Unit-4. (i) Pablo Neruda: 'A Song of Despair,' 'Enigmas' 'Brown & Agile Child' from *Collected Poems of Pablo Naruda.*
(ii) Octavio Paz: 'A Tree Within,' 'No More Cliches' 'Tomb of Amir Khusru' from *Collected Poems of Octavia Paz.*
(iii) Joseph Brodsky: 'Elegy,' Odysseus to Telemachus,' 'Folk Tune' from *Collected Poems of Joseph Brodsky.*

Suggested Reading:

1. Robert S. Haller, Trans. & Ed., *Literary Criticism of Dante Alighieri*, Lincoln: University of Nebraska Press, 1973).

2. Michael Caesar, *Dante: The Critical Heritage*, Routledge, 1995, pp 288, 383, 412, 631.

3. Peter S. Hawkins and Rachel Jacoff, ed., *The Poet's Dante: Twentieth-Century Responses,* New York: Farrar, 2001.

4. Brooks, Jeffrey, "Readers and Reading at the End of the Tsarist Era," from *Literature and Society in Imperial Russia, 1800-1914,* ed. William Mills Todd III, Stanford: Stanford University Press, 1978.

5. Brooks, Jeffrey, *When Russia Learned to Read: Literacy and Popular Literature, 1861-1917,*Princeton: Princeton University Press, 1985.

6. Bruckner, A., *A Literary History of Russia,* ed. Ellis H. Minns, trans. H. Havelock, London: T. Fisher Unwin, 1908.

7. Troyat, Henri, *Gorky*,trans. Lowell Blaw, New York: Crown Publishers, 1989.

8. Levin, Dan, *Stormy Petrel: The Life and Work of Maxim Gorky,* New York: Appleton-Century, 1965,ed.

PAPER-IV (Opt. iv) SHAKESPEARE-I

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to **Social and Literary aspects of the age of Shakespeare**: The English Renaissance. The Reformation, The Rise of Regular Comedy and Tragedy. Neo-classical Comedy, Shakespearean Comedy, Shakespearean Tragedy, the Sonnets, Globe Theatre, Shakespearean Stage, the Groundlings.

The following texts for detailed study:

1. Sonnet nos.: 12 – "When I do count the clock that tells the time"
   19 – "Devouring Time, blunt thou the lion's paws"
   29 – "When in Disgrace with Fortune and men's eyes"
   32 – "If thou survive my well-contented day"
   46 – "Mine eye and heart are at a mortal War"
   55 --"Not marble nor the gilded monuments"
   65 – "Since brass, nor stone, nor earth, nor boundless sea"
   71 – "No longer mourn for me when I am dead"
   147 – "My love is as a fever, longing still"
   152 – "In loving thee thou knowest I am forsworn"
2. *Henry IV- Part I*
3. *Twelfth Night*
4. *The Taming of The Shrew*

Suggested Reading:

1. B.Ford (Ed.) : *The Age of Shakespeare,* London: Penguin, 1982.
2. H.B.Charlton : *Shakespearean Comedy,* London: Methuen & Co. Ltd., 1959.
3. L.C. Knights : *An Approach to Hamlet,* London: Chatto and Windus, 1960.
4. G.W. Knights : *The Imperial Theme,* London: Methuen & Co. Ltd., 1951.

5. Alfred Harbage (ed.) : *20th Century Views on Shakespeare: The Tragedies,* Englewood Cliffs, Prentice Hall, 1964.
6. Robert Speaight : *Nature in Shakespearean Tragedies,* London : Hollis & Carter, 1955.
7. Sigurd Burckhardt : *Shakespearean Meanings,* New Jersey: Princeton Uni. Press, 1968.
8. S. Schoenbaum : *WilliamShakespeare: A Compact Documentary Life*.
9. AniaLoomba& Martin : *Post-colonial Shakespeare*- London and New York: Orkin Routledge, 1998.
10. Stanley Wells : *An Oxford Anthology of Shakespeare.* New York: Oxford University Press, 1989.
11. Gabriel Egan : *Shakespeare,* Edinburgh: Edinburgh University Press, 2007.
12. SukantaChaudhuri (ed.) : *Shakespeare without English,* Delhi: Pearson Education, 2006.
13. Thomas Cartelli and : *New Wave Shakespeare on Screen* (U.K.: Polity Press, Katherine Rowe 2007.
14.Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy in Renaissance England,* Berkeley: Univ. of California Press, 1988.
15. Cristina Malcolmson : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare,* Ithaca: Cornell University Press, 1991.
16. Alexander Legatt : *Shakespeare's Comedy of Love,* London: Methuen, 1974.
17. Jean, Howard and PhyllisRackin:*Engendering a Nation: A Feminist Account of Shakespeare's English Histories,* London, Routledge, 1997.
18. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two,* Buckingham: Open University Press, 1995.
19. Kenneth Mui : *Shakespeare's Sonnets*, U.K. George Allen &Unwin Ltd., 1982.
20. Richard B. Sewall : *The Vision of Tragedy*, New Haven : Yale University Press, 1959.

SEMESTER-IV

PAPER-I: LITERARY THEORY-II

Objectives:

The paper, which is a continuation of Paper I of semester III, introduces students to some more aspects of Literary Theory. In this semester, students will be introduced to new theorists in the field of New Historicism Postcolonial Theory and Feminist Criticism.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit 1. Stephen Greenblatt "Counterhistory and Anecdote" in Catherine Gallagher and Stephen Greenblatt *Practicing New Historicism* (London: University of Chicago Press, 2000): 49-74.

Unit 2. The following three excerpts from The Postcolonial Studies Reader edited by Ashcroft, Griffiths, and Tiffin (Routledge 1995)

i) Gayatri Spivak: "Can the Subaltern Speak", 24-28.
ii) Homi Bhabha: "Signs Taken for Wonders", 29-35.
iii) Edward Said: "Orientalism", 87-91.

Unit 3. Elaine Showalter: "Feminist Criticism in the Wilderness" in David Lodge (ed.) *Modern Criticism and Theory: A Reader* (London and New York: Longman, 1988): 331-53.

Unit 4. Aijaz Ahmed: "The Politics of Literary Postcoloniality" in Padmini Mongia ed. *Contemporary Postcolonial Theory: A Reader* (London: Arnold, 1996) 276-93. and New York: Longman, 1988), 399-410.

Suggested Reading:

1. Pam Morris, *Literature and Feminism*, Oxford: Blackwell, 1993.

2. Jorge Larrain: *Ideology and Cultural Identity*, Oxford: Polity, 1994.

3. Moyra Haslett: *Marxist Literary and Cultural Theories*, London: Macmillan, 2000.

4. Arthur Asa Berger: *Cultural Criticism: A Primer of Key Concepts*, California: Sage, 1995.

5. Stevi Jackson and Jackie Jones, *Contemporary Feminist Theories,* New York: New York UniversityPress, 1998.

6. Virginia Woolf, *A Room of One's Own*, London: Harcourt, 1929.

7. Roman De La Campa, E. Ann Kaplan and Michael Sprinker, eds., *Late Imperial Culture*, London andNew York: Verso.

8. Neil Lazarus, ed., *The Cambridge Companion to Postcolonial Literary Studies,* Cambridge:
Cambridge University Press, 2004.

9. Dirlik, Arif, 'The Postcolonial Aura: Third World Capitalism in the Age of Global Capitalism,' *Critical Inquiry*, Vol. 20 (1994): 328-56.

10. Bill Ashcroft and Pal Ahluwalia, *Edward Said: The Paradox of Identity*, London and New York: Routledge, 1999.

PAPER II: INDIAN WRITING IN TRANSLATION

Objectives:

There is a wealth of literature in various regional languages of India, which of late has been translated into English. The main purpose of the course would be to introduce students to the native varieties of literature. The range of texts, taken from different language-literatures, is enormous, foreclosing the possibilities of forging any essentialized idea of India. The Indianness of Indian writings, more often mapped through Indian English writings, stands questioned and challenged by the emerging corpus of the translated works. Each language-literature has its own specific forms, genres and literary stylesto which students would be exposed through a select list of texts/ books.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Novel

Fakir Mohan Senapati, *Six Acres and a Third*, Trans. Rabi Shankar Mishra, Satya P. Mohanty, Jatindra K. Nayak, et al., Delhi: Penguin, 2006.

Unit II: Short Stories

1. Prem Chand, "The Shroud," Available in *The World of Premchand: Selected Short Stories*, Trans. & Ed. by David Rubin, Delhi: Oxford University Press, 2001: 233-40.

2. Mahasweta Devi, "Draupadi," Available in *Breast Stories*. Trans. Gayatri Chakravorty Spivak, Calcutta: Seagull, 1997: 19-38.

3. UrmilPawar. "A Childhood Tale." Trans. Jahnavi Phalkey and Keerti Ramchandra, *Translating Caste,* Ed. Tapan Basu, Delhi: Katha, 2002: 43-55.

Unit III: Drama

Girish Karnad, *Tughlaq*, Delhi: Oxford University Press, 1975.

Unit IV:Poetry

1. Faiz Ahmad Faiz. "Don't Ask Me for that Love Again", "A Prison Evening", "We who were Executed" and "In Search of Vanished Blood." Available in *The Rebel's Silhouette*. 3rd Impression. Trans. Agha Shahid Ali, Delhi: Oxford University Press, 2005.

2. NamdeoDhasal. "Hunger", "I Slew the Seven Horses of the Chariot of the Sun" translated by DilipChitre, Delhi: Narayana, 2007, from the collection *Namdeo Dhasal: Poet of the Underworld.*

3. Suryakant Tripathi 'Nirala'. "Remembering Saroj." Available in *A Season on the Earth: Selected Poems of Nirala*. Trans. & Ed. David Rubin, Delhi: Oxford University Press, 2003.

Suggested Reading:

1. Meenakshi Mukherjee, *Realism and Reality: The Novel and Society in India*, Delhi: Oxford University Press, 1994 rpt.

2. Sheldon I. Pollock (ed.), *Literary Cultures in History: Reconstructions from South Asia*, California: Univ. of California Press, 2003.

3. K. Satchidanandan, *Indian Literature: Positions and Propositions*, Delhi: Pencraft, 1999.

4. Sisir Kumar Das (ed.), *History of Indian Literature*, Vol I-X, Delhi: Sahitya Akademi, 1995.

5. Priya Joshi, *In Another Country*, Delhi: Oxford University Press, 2002.

6. K.M. George, *Comparative Indian Literature*, Delhi: Macmillan, 1984.

7. Sujit Mukherjee, *A Dictionary of Indian Literature: Beginnings-1850*, Hyderabad: Orient Blackswan, 1999.
8. G.N.Devy, *After Amnesia*, Hyderabad: Orient Longman, 1992.
   -------, Of Many Heroes, Hyderabad: Orient Longman, 1998.
9. Tutun Mukherjee, ed., *Girish Karnad's Plays: Performance and Critical Perspectives*, Delhi: Pencraft, 2008.

10. Ananda Lal, ed., *Theaters of India: A Concise Companion*, Delhi: Oxford University Press, 2009.

PAPER-III (opt. i): POSTCOLONIAL STUDIES-II

Objectives: The course concerns New Literatures in English which will introduce students to some major issues and problems common to such literatures. After centuries of colonial rule and British Literature, we find that decolonization has shown that there are simply too many writers and writing, new nations and old hegemonies to be scrutinized. This course attempts to familiarize students to literatures of the 'new' world – African, Asian, Caribbean and Canadian – which have remained outside discourse making for a long time. The course is introduced as a revisionary discipline which primarily focuses on interrogating the Western canon.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 Chinua Achebe, *Things Fall Apart* (Oxford: Heinemann, 1958).

Unit-2 Salman Rushdie, *Midnight's Children* (New York: Avon, 1980).

Unit-3 Jean Rhys, *Wide Sargasso Sea* (London: Penguin, 1968).

Unit-4 Margaret Atwood, *Surfacing* (Canada: McClelland and Stewart, 1972).

Suggested Reading:

1. Margaret Atwood, *Survival:A Thematic Guide to Canadian Literature* (Southport: McClelland and Stewart, 1972).

2. Bill Ashcroft, et al, eds., *The Post-Colonial Studies Reader* (London and New York: Routledge, 2006).

3. Diana Brydon and Helen Tiffin, *Decolonising Fictions* (Sydney: Dangaroo, 1993).

4. Homi K. Bhabha, *Nation and Narration* (London and New York: Routledge, 1990).

5. Bill Ashcroft, Gareth Griffiths and Helen Tiffin, *Key Concepts in Post-Colonial Studies* (London and New York: Routledge, 1998).

6. Timothy Brennan, *Salman Rushdie and the Third World* (New York: St. Martin's Press, 1989).

7. Thomas F. Staley, *Jean Rhys: A Critical Study* (London: Palgrave Macmillan, 1979).

8. Pierrette Frickey, *Critical Perspectives on Jean Rhys* (Washington DC: Three Continents Press, 1990).

9. Bruce King, ed., *The New National and Postcolonial Literatures: An Introduction* (Oxford: Clarendon, 1996).

10. G. D. Killam, *The Novels of Chinua Achebe*. Studies in African LiteratureSeries.(London: Heinemann, 1978).

PAPER-III (opt. ii): LINGUISTICS-II

Objectives:

This course is aimed at an understanding of the development of the English language and structure of modern English. Many of the Latin-based rules and prescriptive approaches to English language have given way to a descriptive account of the language at all levels. The course is expected to familiarize students with the developments in the English language up to the present.

Pattern of examination

One compulsory question of 20 marks comprising of short notes from all units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four questions of 15 marks each i.e. one question each with internal choice will be set from each of the four units.

Content:

Unit 1. Levels of Linguistics Analysis II: The study of grammar-traditional (the latinate fallacy, the semantic fallacy) structural (IC analysis, NP and VP, phrase structure rules, practice of the diagram for analyzing sentence structure) transformational generative grammar with reference to Chomsky's distinction between deep and surface structures, kernel sentences and transformations and familiarity with some important transformational rules, lexical restrictions.

Unit 2. The Grammar of English – Basic sentence patterns in English, Description of the structure of Noun Phrase, Verb Phrase, Adjective and Adverbial Phrase in English (with practical exercises). Some types of complex sentences. Sentence connection and cohesion in English.

Unit 3. Levels of Linguistic Analysis III: Theories of semantics, Synonymy hyponymy, entailment, polysemy, ambiguity (with examples from the semantics of English).

Unit 4. Diachronic changes in English- sound and spelling change and the influence of other languages on English. The development of English grammars and dictionaries.English as global language- varieties of English in Britain and around the world with special reference to Indian English.

Suggested Reading:

1. Palmer, F., *Grammar* (Cambridge ,Cambridge Univ. Press, 1983).

2. Lyons, J., *Chomsky* (London, Fontana Modern Classics, 1983).

3. Krishnaswamy and Verma, *Modern Linguistics* (Delhi, OUP,1988).

4. Biber, Conrad and Leech, *A Student Grammar of Spoken and Written English*, London, Longman, 1999.

5. Leech, Svartvik, Quirk and Greenbaum, *A Comprehensive Grammar of the English Language* (London, Longman, 1988).

6. Knowles, G., *A Cultural History of the English Language (* London, Longman, 1998).

7. Bauer, Laurie, *Watching English Language* (London, Longman, 1994).

8. Crystal, D., *English as a Global Language (*Cambridge, CUP,1997)

9. Kachru, B., *TheIndianization of English* (New Delhi, OUP, 1988)

10. Wells, J., *Accents of English ,Vol.I The British Isles and Vol. II- Beyond the British Isles* (Cambridge, Cambridge Univ. Press, 1990)

PAPER III (opt. iii): AMERICAN LITERATURE-II

Objectives: The course explores the genres of poetry and drama focusing on major American texts that have left their mark on the culture. The works selected engage with class structures, racial, ethnic, sexual and gender relations as well as questions of national identity. They represent major developments in style, content, focus and language of American Poetry and Drama.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.
In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Texts for Study:

Unit I:	Walt Whitman	:	"Song of Myself" "Crossing Brooklyn Ferry" "Out of the Cradle Endlessly Rocking" "Song of the Open Road" (Norton)
Unit II:	Robert Frost	:	"Birches" "Mending Wall" "After Apple Picking" "Stopping by Woods on a Snowy Evening" "Design" "Directive" (Norton)
Unit III:	Eugene O'Neill	:	*The Hairy Ape* (East West Press)
Unit IV:	Arthur Miller	:	*The Crucible* (Allied Press)

Suggested Reading:

Jay Grossman, ed., *Breaking Bounds: Whitman and Cultural Studies (*Oxford University Press,1996).

Robert K. Martin, *The Continuing Presence of Walt Whitman: The Life after the Life* (Iowa Press, 1992).

Kenneth Price, ed., *Walt Whitman* (Cambridge University Press, 1996).

Philip L. Gerber, *Robert Frost* (Twayne,1982).

Jesse Zuba, *Robert Frost,* (Chelsea House, 2003).

Normand Berlin, *Eugene O'Neill* (Grove Press,1982).

James J. Martine, ed., *The Plays of O'Neill: A New Perspective* (GK Hall, 1985).

James J. Martine, *The Crucible: Politics, Property and Pretense (*Twayne, 1993).

John H. Ferres, ed., *Twentieth Century Interpretations of The Crucible,* 1972.

C.W.E. Bigsby, *A Critical Introduction to Twentieth Century Drama* (Cambridge University Press, 1982).

PAPER III (Opt. iv): INDIAN LITERARY CRITICISM AND THEORY II

Objective:

This paper is an extension of the paper on Indian Literary Criticism introduced in Semester III. Here the focus would be on Twentieth Century texts and Literary Interventions. Right from the days of the Freedom Movement, Indian Literary Criticism has increasingly taken political turns and twists. At one level attempts were

made to de-colonize literary theory by way of excavating schools and theories of the ancient past, at another level, the endeavour was to search for critical alternatives from within the historical past. While in the previous paper, the thrust is on well-evolved and taxonomically rich critical frames of *rasa, dhavni*and *vakrokti.* Here the emphasis is on theoretical debate about the possibilities of multiple critical authorizes that exist in Indian Culture.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

The paper consists of four Units:

Unit I:

1. Ananda Coomaraswamy, "*The Dance of Shiva"* (Delhi: Munshi Ram Manohar Lal Publishers,1999 ed).

2. Tagore, "*The True Nature of Literature",* Rabindranath Tagore: *Selected Writings on Literature and Language*, edited by Sisir Kumar Das and Sukanta Chaudhuri (Delhi: Oxford, 2001).

Unit II :

1. G.N.Devy, "After Amnesia", *After Amnesia:Tradition and Change in Indian Literary Criticism* (Hyderabad, Orient Longman,1992)

2. Bhalchandra Nemade, "*Nativism in Literature"*, Translated and Edited by Arvind Dixit and Makarand Paranjape, Nativism: Essays in Criticism *(*Delhi Sahitya Akademi).

Unit III :

a. Bhikhu Parekh, "Indianisation of Autobiography", *Colonialism, Tradition and Reform* (Delhi, Saga, 1989).

2. G.D. Devy, "Two Paradigms of History", *Of Many Heroes* (Hyderabad: Orient Longman, 1998).

Unit IV:

1. SharanKumar Limbale, "Dalit Literature and Aesthetics" in *Towards an Aesthetics of Dalit Literature* (Delhi: Orient Blackswan, 2004).

2. Kancha Ilaiah, "Towards the Dalitization of Nation" in Wages of Freedom: Fifty Years of Indian Nation- State, edited by Partha Chatterjee (Delhi: OUP, 1998).

Suggested Reading:

Rajan, P.K., *Indian Literary Criticism in English*; *Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).

Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London; OUP, 1992).

Devi, G.N., *In Another Tongue* (Delhi, MacMillan, 1993).

_____ and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).

Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banrasidas, 1993).

Sethuraman, V.Ed., *Indian Aesthetics: An Introduction* (Delhi, MacMillan, 1992).

Rao, Raja, *The Meaning of India* (Delhi: Vision Books, 1996).

Dangle Arjun Ed., *Poisoned Bread* (Hyderabad, Orient Longman, 1992).

Mukherjee, Meenakshi, *The Perishable Empire*(Delhi, OUP, 2000)

_____, Reality and Realism (Delhi, OUP, 1983)

Suder Rajan, Rajeswari, Ed., *The Lie of the Land* (Delhi, OUP, 1991).

Gauri, Viswanathan, *Masks of Conquest* (New York, Colombia University Press, 1989)

Narasimhaiah, C.D. and Srinath, C.N. Eds., *A Common Poetic for Indian Literature* (Mysore; Dhavanyaloka, 1984).

Rayan, Krishna, *The Burning Bush*(Delhi; B.R. Publishing, 1989).

_____.*Text and Sub-Text* (Delhi; Arnold Heinemann, 1989).

_____. *Sahitya; A Theory* (Delhi; Arnold Heinemann, 1991).

Paranjape, Makarand, Ed., *Nativism;Essays in Criticism* (Delhi; Sahitya Akademi, 1998).

Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi; OUP, 1991).

Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ. 1964).

Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasi Das, 1971, 4th ed.).

PAPER-IV (Opt. i) CULTURAL STUDIES-II

Objectives:

The multiple nuances of culture would be unfolded through a conceptual study of its emerging configurations. The paper enables us to appreciate the processes of culture as it enters new mediums of films, computer, internet and cybernetics. There would be a pedagogical shift as the students would be taught the prescribed essays through every-day examples. The pedagogic practice would nudge the students towards interdisciplinary studies viewing other subject areas in relation to literature, and for that matter, any text.

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit I: Mass Culture

Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction", from *Illuminations*, London: Fontana Press, 1992 ed. 211-244.

Unit II: Culture Industry

1. Adorno, "Free Time", from *The Culture Industry: Selected Essays on Mass Culture*, Ed. J.M.Bernstein, London and New York: Routledge, 1991, 187-197.

2. Habermas, "From a Culture-Debating to a Culture-Consuming Public", in *The Structural Transformation of the Public Sphere*, Polity Press, 1989, 159-175.

Unit III: Virtual Culture

1. Jean Baudrillard, "Simulacra and Simulations", in *Jean Baudrillard: Selected Writings*, Ed. Mark Poster, Polity, 2001, 169-187.

2. Paul Virilio, "Foreword" to *Desert Screen: War at the Speed of Light*, London: Continuum, 2005,
1-16.

Unit IV: Popular Culture/ Subculture

1. Stuart Hall, "Notes on Deconstructing 'the Popular'", from *Popular Culture: A Reader*, Eds. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 64-71.

2. Dick Hebdige, "Subculture", from *Popular Culture: A Reader*, Eds. Raiford Guins and Omayra Zaragoza Cruz, London: Sage, 2005, 355-371.

Suggested Reading:

1. Aijaz Ahmad, *In Theory*, London: Verso 1992.

2. Amartya Sen, *The Argumentative Indian: Writings on Indian History, Culture and Identity,* Great Britain:
Penguin, 2005.

3. Antonio Gramsci, *Selections from the Prison Notebooks,* London: Lawrence & Wishart,1971.

4. Cornel West, *Beyond Eurocentrism and Multiculturalism* , 2 Volumes, Monroe: Common Courage Press, Monroe,1993.

5. E.P. Thompson, *The Making of the English Working Class*, London: Penguin, 1978.

6. Glenn Jordan and Chris Weedon, *Cultural Politics,* Oxford: Blackwell, 1995.

7. Jill Forbes and Michael Kelly Eds., *French Cultural Studies*, Oxford, Oxford UP, 1995.

8. Lawrence Grossberg, Cary Nelson and Paula Treicher Eds., *Cultural Studies,* London: Routledge,1992.

9. Louis Althusser, *Reading Capital*, London: New Left Books, 1970.

10. Manuel Alvarado and John Thompson Eds.,*The Media Reader*, London: BFI, 1990.

11. Stanley Aronowitz, Barbara Matinson and Michael Menser Eds., *Techno-Science and Cyber-Culture,* London: Routledge, 1996.

PAPER-IV (Opt. ii): APPLIED LINGUISTICS-II

Note: There shall be one compulsory question of 20 marks comprising of short notes from all 4 Units, in which the candidate shall attempt four out of six short notes in 200 words each.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed units.

Contents:

Unit 1: Approaches and methods in language teaching – Direct, Grammar Translation, Audio-lingual, Structural-situational and Communicative Language Teaching, The Communicative Approach, Brief Historical overview of English Language Teaching with reference to the Problematic of

Teaching English in India (Pre and Post Independence Language Policies, Multilingualism, mother tongue influence, choice of a model for teaching).

Unit 2: Approaches to teaching Skills: LSR W, vocabulary and grammar at primary, secondary and tertiary/ advanced levels. Practical exercises in each of the skill areas. Making a language syllabus: needs analysis. Teaching of English for specific purposes.

Unit 3: Testing Language - Principles, relationship between teaching and testing, wash back effect, purposes and types of tests. Evaluation: Criteria, grading and determining levels of proficiency.

Unit 4: Materials for Teaching : Principles of selection, gradation and presentation; course books, work books, teachers' manuals, grammar, dictionaries. The use of a language corpus. The role of literature in language teaching.

Suggested Reading:

1. Tickoo, M.L., *Teaching and Learning English*, New Delhi: Orient Black Swan, 2003.

2. Howatt, A.P.R. and Widdowson, H.G., *A History of English Language Teaching,* China: Oxford University Press, 2004.

3. Larsen-Freeman, Diane*, Techniques and Principles in Language Teaching*, New Delhi: Oxford University Press, 2008.

4. Richards, Jack C. and Rodgers, Theodore S., *Approaches and Methods in Language Teaching*, U.K.: Cambridge University Press, 2005.

5. Krishnaswamy, N. and Krishnaswamy, L., *The Story of English in India,* New Delhi: Foundation Books, 2006.

6. Hughes, Arthur, *Testing for Language Teachers,* U.K.: Cambridge University Press, 2003.

7. Norrish, J**.,** *Language Learners and their Errors*, Hong Kong: MacMillan, 1983.

8. Agnihotri, R.K. and Khanna, A.L., *Problematising English in India,* New Delhi: Sage, 1995.

PAPER IV (Opt. iii): WORLD DRAMA IN TRANSLATION

Objectives:

The paper provides an interesting study of world drama with a view to help students develop perspective on world literature. This course is designed around canonical texts, and offers an opportunity to develop sense of what a 'classic' is, apart from helping them develop ways of approaching, understanding and interpreting classics. This paper complements the other paper on *World Poetry/Novel in Translation.*

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the following four prescribed texts/units:

Prescribed Texts:

Unit-1 : Sophocles: *King Oedipus* (Penguin)

Unit-2 : Henrik Ibsen: *Ghosts* (Pearson)

Unit-3 : Anton Chekhov: *The Cherry Orchard* (Penguin)

Unit-4 : Luigi Pirandello: *Six Characters in Search of an Author* (Collected Works of Pirandello)

Suggested Reading:

1. John Gassner : *Masters of the Drama,* U.S.A.: Dover Publications, 1954.

2. Barrett H. Clark and George Freedley :*A History of Modern Drama,* New York: Appleton Century - Crofts, Inc., 1947.

3. Travis Bogard and W.I. Oliver,eds. :*Modern Drama - Essays in Criticism,* London: OUP, 1965.

4. M.C. Bradbrook :*Ibsen: The Norwegian, a Revaluation,* London: Chatto and Windus, 1966

5. Rolf Fjelde, ed. : *Ibsen:A Collection of Critical Essays,* Englewood Cliffs:

Prentice Hall, 1965.

6. David Magarshack :*Chekhov : The Dramatist*, 1952.

7. Beverley Hahn : *Chekhov: A Study of the Major Stories & Plays,* London: Cambridge University Press, 1977.

8. Arnold P. Hinchliffe : *The Absurd,* London: Methuen, 1969.

9. James Vinson :*Contemporary Dramatists,* London: St. James Press, 1973.

PAPER-IV (Opt. iv) SHAKESPEARE-II

Note: There shall be one context-based question of 20 marks in which the candidate shall have to attempt three out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course. The question will be of general nature, not author or text-based.

In addition, there will be four essay-type questions of 15 marks each (to be answered in about 600 words each). One question with internal choice will be set from each of the four prescribed texts/units.

The following topics related to Social and Literary aspects of the Age of Shakespeare:

History Plays, the Sonnet, tragi-comedies, Shakespeare's longer poems, First Folio, Holinshed's Chronicles, the Fool in Shakespeare's plays, Shakespeare's contemporaries, the University Wits, Marlowe's Mighty Line.

Texts for detailed study:

1. *Hamlet*
2. *Antony and Cleopatra*
3. *Macbeth*
4. *The Winter's Tale*

Suggested Reading:

1. B.Ford (ed.) : *The Age of Shakespeare,* London: Penguin Books Ltd., 1982
2. A.C.Bradley : *Shakespearean Tragedy,* London*:* Macmillian and Co. Limited,1950.
3. G.W.Knights : *The Shakespearean Tempest,* London: Methuen & Co. Ltd. 1953.
4. Harry Levin : *The Question of Hamlet,* London: Oxford Uni. Press, 1978.
5. Alfred Harbage (ed.) : *Shakespeare, The Tragedies: A Collection of Critical Essays.20th Century Views on*

Shakespearean Tragedies, Englewood Cliffs: Prentice Hall, 1964.

6. Matthew N. Proser : *The Heroic Image in five Shakespearean Tragedies,* New Jersey: Princeton Univ. Press, 1965.

7. Arthur Sewell : *Character and Society in Shakespeare,* Oxford: Clarendon Press, 1951.

8. Robert Speaight : *Nature in Shakespearean Tragedy,* London: Hollis & Carter, 1955.

9. Sigurd Burckhardt : *Shakespearean Meanings*, New Jersey:Princeton Uni. Press, 1968.

10. AniaLoomba, : *Post-colonial Shakespeares,* London and New York: Martin Orkin (eds.) Routledge, 1998.

11. Stanley Wells and : *Shakespeare: An Oxford Guide,* Oxford: OUP, 2003.
Lena Cower Orlin

12. Stephen Greenblatt : *Shakespearean Negotiations: The Circulation of Social Energy inRenaissance England,* Berkeley: Univ. of California Press, 1988.

13. Valerie Wayne (ed.) : *The Matter of Difference: Materialist Feminist Criticism of Shakespeare,* Ithaca: Cornell University Press, 1991.

14. Alexander Leggatt : *Shakespeare's Comedy of Love,* London: Methuen, 1974.

15. Jean Howard and : *Engendering a Nation: A Feminist Account of* Phyllis Rackin (eds.) *Shakespeare'English Histories*, London: Routledge, 1997.

16. Nigel Wood (ed.) : *Theory in Practice: Henry IV, Parts One and Two,* Buckingham: Open University Press, 1995.

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PANJAB UNIVERSITY, CHANDIGARH

(Established under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M. A. HISTORY

(SEMESTER SYSTEM)

EXAMINATIONS, 2019-20.

- : o: -

DEPARTMENT OF HISTORY, PANJAB UNIVERSITY, CHANDIGARH

MA Programme at the Department of History2019-20

Courses and Syllabus (Semester System)

The MA programme at the Department of History is spread over two years divided into four semesters. This programme is governed by the Calendar of the Panjab University and various rules and regulations put in place by the university from time to time.

A candidate has to earn 64 credits in MA programme.

Note: The Syllabus for Semester I to IV below is applicable to candidates admitted in July 2019.
Some papers shall not be offered at present, in the Current Session, due to non availability of the faculty as indicated in the Course Outline below.

Course Outline

Semester I		**Code**	**Title of paper**	**Credits**
	Paper I:	HIS 111	The Punjab (mid-fifteenth to seventeenth centuries)	4 credits
	Paper II	HIS 231	Ancient India: An Overview	4 credits
	Paper III	HIS 221	Medieval India: Political Processes	4 credits
	Paper IV	HIS 211	Modern India: Political Processes	4 credits
Semester II		**Code**	**Title of paper**	**Credits**
	Group-IPaper I:	HIS 125	Punjab in the Eighteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 713	Opt. (i)Agrarian Economy of Ancient India	4 credits
		HIS 712	Opt. (ii)Agrarian Economy of Medieval India	4 credits
		HIS 711	Opt. (iii)Agrarian Economy of Modern India	4 credits
		HIS 721	Opt. (iv)Industry, Trade & Urbanization in Medieval India	4 credits
		HIS 730	Opt. (v)Industry and Trade in Modern India	4 credits
		HIS 733	Opt. (vi)Urbanization in Modern India(**Not offered to students in this Session)**	4 credits
	Group-III and IV Paper III and IV Any two of the following:	HIS 831	Opt. (i)Modern World (Mid 15th - 19th Century)	4 credits
		HIS 844	Opt. (ii)China & Japan (1840-1950)	4 credits
		HIS 821	Opt. (iii)History of Canada(**Not offered to students in this Session)**	4 credits
		HIS 811	Opt. (iv)American Imperialism in the Nineteenth and Twentieth Centuries(**Not offered to students in this Session)**	4 credits
		HIS 812	Opt. (i)USA (1820-1973)	4 credits
		HIS 832	Opt. (ii)World in the Twentieth Century	4 credits
Semester III	**Group-IPaper I:**	HIS 123	Punjab in the Nineteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 431	Opt. (i)Evolution of Ancient Societies	4 credits
		HIS 421	Opt. (ii)Feudal Society in Western Europe	4 credits
		HIS 411	Opt. (iii)History of Capitalism	4 credits

		HIS 412	Opt. (iv)Rise and Growth of Colonialism in India	4 credits
		HIS 602	Opt. (v)History of Secularism in Modern India(**Not offered to students in this Session)**	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 432	Opt. (i)Cultural History of Ancient India	4 credits
		HIS 604	Opt. (ii)Sacred Centres in Indian Civilization	4 credits
		HIS 424	Opt. (iii)Medieval Indian Art and Monuments.	4 credits
		HIS 601	Opt. (iv)Gender Relations in Modern India	4 credits
		HIS 455	Opt. (v)Diaspora in Colonial India **(Not offered to students in this Session)**	4 credits
		HIS 603	Opt. (vi)Science, Technology & Medicine in Colonial India	4 credits
		HIS 213	Opt. (vii)Constitutional Development in Modern India, 1773-1947	4 credits
		HIS 212	Opt. (viii)National Movement in India 1858-1947	4 credits
		HIS 214	Opt. (ix)British Policy and Princely States(**Not offered to students in this Session)**	4 credits
		HIS 263	Opt. (x)Contemporary India 1947-1992	4 credits
Semester IV	**Group-IPaper I:**	HIS 126	Punjab in the Twentieth Century (compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 911	Opt.(i) History and Historiography	4 credits
		HIS 912	Opt.(ii) History and Historical Method	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 720	Opt. (i) Religious and Social Processes in Ancient India	4 credits
		HIS 438	Opt. (ii) Buddhism in India	4 credits
		HIS 428	Opt. (iii) Religious Developments in Medieval India	4 credits
		HIS 426	Opt. (iv) Islamic Traditions of Medieval India	4 credits
		HIS 471	Opt. (v) Dalit Movements in Modern India	4 credits
		HIS 731	Opt. (vi) Working Class Movements in Modern India	4 credits
		HIS 467	Opt. (vii) Peasant Movements in Modern India	4 credits
		HIS 418	Opt. (viii) Socio-Religious Reform Movements in Modern India	4 credits
		HIS 462	Opt. (ix) History of Caste and Caste Politics in Modern India	4 credits

Semester I		Code	Title of paper	Credits
	Paper I:	HIS 111	The Punjab (mid-fifteenth to seventeenth centuries)	4 credits
	Paper II	HIS 231	Ancient India: An Overview	4 credits
	Paper III	HIS 221	Medieval India: Political Processes	4 credits
	Paper IV	HIS 211	Modern India: Political Processes	4 credits

PAPER I: THE PUNJAB (MID-FIFTEENTH TO SEVENTEENTH CENTURIES)

COURSE CODE: HIS 111

Objective: This paper aims to examine the politico-administrative, social and religious milieu of Guru Nanak in order to understand his response to the contemporary environment and the foundation of Sikh movement. It also deals with growth of Sikh movement under his first four successors, the phase of confrontation with Mughal state and its culmination under Guru Gobind Singh. It also attempts to discuss the administrative structure, agrarian and urban economy of the Punjab under the Mughals.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms

Sultan; Muqaddam; Baburvani; Hadith; Nirguna Bhakti; Hukum; Raza; Maya; Sachkhand; Jogi and Nathas; Udasi(travels)of Guru Nanak DevJi; Udasi Sect; Manji System; Masand System; Guru; Gurudwara; Guru Janamsakhi writings; Concept of Sahadat in Sikhism; Akal Takht; Miri and Piri; Khalsa Panth; Zafarnama; Suba; Pargana; Faujdar; Commercialisation of agriculture;Function of Urban Centres; Land Transport, River Transport

Unit I

Political developments and socio cultural milieu under the Afghans; response of Guru Nanak to contemporary religious systems ; response of Guru Nanak to contemporary social order; response of Guru Nanak to contemporary politics.

Unit II

New Institutions established by Guru Nanak; development of Sikh Panth with special reference to Guruship and Gurdwara;Janam Sakhis as sources of history; making of the Sikh scripture and its structure; emergence of different sects within the Sikh movement

Unit III

Martyrdoms of Sikh Gurus; politicization of the Sikh Community under Guru Hargobind;; the new baptism and its implications; historical significance of the Zafarnama.

Unit IV

Provincial administration under the Mughals; major crops and commercialization of agriculture; economic base of urban centres; means and routes of transport.

Essential Readings

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, New Delhi: Munshiram Manoharlal, 1979 (2nd ed.)

Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).

Fenech Louis E,*Martyrdom in the Sikh tradition*, : Oxford University Press, 2000.

Harbans Singh, *Guru Tegh Bahadur*, New Delhi: Manohar, 1994.

Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: CambridgeUniversity Press, 1999 (2nd ed.).

Grewal, J.S., *Guru Nanak in History*, Chandigarh: PanjabUniversity, 1979.

Mcleod, W.H., 'The Janam–Sakhis as Historical Sources', in *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999, pp.248-67.

Singh, Chetan, *Region and Empire: Punjab in the Seventeenth Century*, New Delhi: Manohar, 1991.

Singh Sulakhan, *Hetrodoxy in the Sikh Tradition*, Jalandhar:ABS Publication, 1999

Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).

Suggested Readings

Bhai Jodh Singh (tr.), *Varan Bhai Gurdas,* 3 vols., Patiala: Vision and Vantura, 1998.

Grewal, J.S., 'Cleavage in the Panth,' *Sikh Ideology, Polity and Social Order*, Manohar, 2007, pp: 78-85

Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: OxfordUniversity Press, 1968.

Talib, Gurbachan Singh (tr.), *Sri Guru Granth Sahib*, Patiala: Publication Bureau, PunjabiUniversity, IV Vols., 1999.

Paper II: Ancient India: An Overview

COURSE CODE: HIS 231

Objective: Building upon a prior basic knowledge of the history of ancient India, this course introduces the student to the major currents in the study of that history. It focusses on the the political processes that underlay the structures of the state and society but also takes the student into the details of social and cultural history.

Pedagogy: Lectures and tutorial discussions are the basic tools used in this course.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mehargarh; Gopati; Bhupati; Vidatha; Janapada; Mahajanapada; Gana-Sangha; Gahapati; Karshapana(Punch marked coins); Ashoka's Dhamma; Saptanga(seven limb's of the state /rajya); Stri-dhana; Silk-route; Sreni; Bali/Bhaga/ Shulka; Vishti; Prasasti; Mahayana; Hinayana; Puranic Hinduism; Agraharas; Devadana; Vanigramma; Samanta; Varnasamkara (Inter-mixing of Varnas); Tirthankara/Arhat; Uttarapatha; Dakshinapatha; Concept of urban decay; Kali Age Crisis; Mandapika; Nagaram.

Unit I: From Stone Age to Vedic Age: Palaeolithic and Neolithic Ages; The Indus Valley Civilization (Urban Centres, Economy and Decline- various Debates); Vedic Age (Aryan Homeland debate, Polity, Society and Economy).

Unit II: Age of Mahajanapadas: Emergence of the State Systems (Sixteen Mahajanapadas); Society (Buddhism and Jainism) and Economy (Urbanization, Trade, Crafts and Agriculture).

Unit III: The Maurya and Post Mauryan Period: The Mauryan Empire (Rulers, Administration and Ashoka's Dhamma); Post Mauryan Polities (Kushanas, Satavahanas and Sangam Chiefdoms); Economy (Indo-Roman Trade).

Unit IV: The Gupta and Post-Gupta Period: Political Developments (Guptas, Pushyabhutis and Pallavas); Social Developments (Caste Proliferation and Untouchability); Indian Feudalism Debate.

Essential Readings

Chakravarti, Ranabir, *Exploring Early India up to c. AD 1300*, New Delhli: Primus Books, 2016 third edition.

Habib, Irfan, *A People's History of India 6- Post Mauryan India, 200 BC- AD 300: A Political and Economic History*, New Delhi: Tulika Books, 2012.

Sharma, R. S., *Early Medieval Indian Society: A Study in Feudalization*, New Delhi: Orient Blackswan, 2014 reprint.

Sharma, Rimjhim and Kumar, Ashish, *Early India, up to c. 300 AD*, Delhi: Book Age Publications, 2019.

Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Delhi: Pearson Longman, 2009.

Suggested Readings

Chattopadhyaya, B. D., *Making of Early Medieval India*, New Delhi: Oxford University Press, 2012 second revised edition.

Chakrabarti, Kunal and Sinha, Kanad, *State, Power and Legitimacy: The Gupta Kingdom*, New Delhi: Primus Books, 2018.

Chauhan, G. C., *Early Indian Feudal Society and Its Culture*, Delhi: Munshiram Manoharlal, 2015.

Chakravarti,Ranabir, 'The Mauryas' and 'The Kushanas,' in *History of Ancient India, Vol. IV, Political History and Administration (c. 200 BC- 750 AD), (From the end of the Mauryan Rule to the Beginning of the Dominance of Regional Dynasties),* (ed.) Dilip K. Chakrabarti and M. Lal, New Delhi: Aryan Books International, pp. 35-68, 231-275, 2014.

Habib, Irfan and Jha, Vivekanand, *A People's History of India: 5- Mauryan India*. New Delhi: Tulika Books, 2011 reprint.

Kulke, Hermann, *History of Precolonial India: Issues and Debates* (English edition revised and edited by B. P. Sahu), New Delhi: Oxford University Press, 2018.

Sahu, B. P. and Kulke, Hermann, *Interrogating Political Systems: Integrative Processes and States in Pre-Modern India*, Delhi: Manohar, 2015.

Sharma, R.S., *Aspects of Political Ideas & Institutions in Ancient India*, New Delhi: Motilal Banarsidass, 2015 reprint.

Shrimali, K. M., *A People's History of India 4-The Age of Iron and the Religious Revolution, c.700-c.350 BC*, New Delhi: Tulika Books, 2011 reprint.

PAPER III: MEDIEVAL INDIA: POLITICAL PROCESSES

COURSE CODE: HIS 221

Objective: This paper seeks to examine the major political developments in the Indian subcontinent during a span of nearly five centuries i.e. from the thirteenth to the seventeenth century. It aims at an in-depth analysis of the processes of state formation in the Delhi Sultanate and Mughal Empire. It lays emphasis on (1) the long-term strategies that enabled these two states to establish political control and (2) to explore the functioning of political institutions and the articulation of political ideologies. It pays equal attention to the changing composition of the ruling class as well as the response of the powerful local elements.

Pedagogy: In the teaching of this paper, effort is made to gradually build on the foundation of knowledge laid at the undergraduate level. Discussions on various sub-themes need to be interspersed with critical references to the contemporary sources as well as divergent historiographical approaches.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Nasir Amir ul Mominin; Dar al-harb; Zimmi; *Shaik ul-Islam; wasaya; mawali ; bandagan i khass/ Amir-i-Chahalgani; Tazik;* Balban's Theory of Kingship;*akhlaq* and *adab* literature; *hukm i masahat bafa i biswa; Sera i Adl;Charai* and *Gharai* ; Amir i sada; *Taccavi (Taqavi);Diwan i khairat, Kharaj i Jizya; Patta* and *Qabuliyat; farr i izidi;* Mahzar; *Sulh i kul; Tauhid i- iIlahi;Ibadat Khana,*Mansab; Ain i-Dahsala; *watan jagir;* Satnamis; Jats' revolt in Doab; *chauth*; *sardeshmukhi,* Satnami Revolt

Unit I

Consequences of the Ghorian invasions; political consolidation under Iltutmish; problems and policies of Balban; nobility during the thirteenth century; agrarian reforms of Alauddin Khalji; mechanism of his market regulations and their impact.

Unit II

Political and religious orientation of Muhammad bin Tughluq; rationale, implementation and consequences of his projects; administrative reforms of Firuz Shah Tughluq; nobility under the Tughluqs; the Afghan concept of monarchy; the land revenue system of Sher Shah Sur.

Unit III

Abul Fazl's concept of monarchy; Akbar's relations with the Rajput chiefs; Experiment of Din-i- Ilahi and its critique; evolution of the mansab system; development of the land revenue system under Akbar

Unit IV

Mughal expansion in the Deccan during the first half of the seventeenth century; popular uprisings in northern India during the reign of Aurangzeb; his breach with Mewar and Marwar; his military conflict with the Marathas; his conquest of Bijapur and Golconda.

Essential Readings

Chandra, Satish, *Medieval India: From Sultanat to the Mughals,* 2 vols., New Delhi: Har-Anand Publications, (Reprint), 2003.

Habib, Mohammad & Khaliq Ahmad Nizami, (eds.), *A Comprehensive History of India, Vol.V: The Delhi Sultanate 1206-1526*, New Delhi: Peoples Publishing House, (Reprint), 1993.

Jackson, Peter, *The Delhi Sultanate: A Political and Military History*, Cambridge: Cambridge University Press, 1999.

Nigam, S.B.P., *Nobility under the Sultans of Delhi*, New Delhi: Munshiram Manoharlal, 1971.

Nizami, Khaliq Ahmad, *Religion and Politics in India during the Thirteenth Century,* New Delhi: Oxford University Press, New Edition, 2002.

Qureshi, Ishtiaq Husain, *The Administration of the Mughal Empire,* Patna: Janaki Prakashan, (reprint), 1979.

Richards, John F., *The Mughal Empire,* New Delhi: Foundation Books/ Cambridge University Press, 1993.

Singh, Surinder, *Madh Kalin Bharat Da Itihas,* Patiala: Punjabi University, 1997.

Tripathi, R.P., *Some Aspects of Muslim Administration*, Allahabad: Central Book Depot. (reprint), 1976.

Suggested Readings:

Alam, Muzaffar and Sanjay Subrahmanyam, (eds.), *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Ali, M. Athar, *Mughal India: Studies in Polity, Ideas, Society and Culture*, New Delhi: Oxford University Press, 2006.

Chandra, Satish, *Mughal Religious Policies, the Rajputs and the Deccan,* New Delhi: Vikas Publishing House, 1993.

Chandra, Satish, *Essays on Medieval Indian History,* New Delhi: Oxford University Press, 2003.

Hasan, S. Nurul, *Religion, State and Society in Medieval India*, Edited and Introduced by Satish Chandra, New Delhi: Oxford University Press, 2005.

Husain, Agha Mahdi, *The Rise and Fall of Muhammad bin Tughluq,* Delhi: Idarah-I-Adabiyat-I-Delli, (Reprint), 1972.

Jauhri, R.C., *Firoz Tughluq (1351-1388 AD)*, Jalandhar: ABS Publications, (Reprint), 1990.

Lal, Kishori Saran, *History of the Khaljis*, New Delhi: Munshiram Manoharlal, (Revised Edition), 1980.

Siddiqui, Iqtidar Husain, *Some Aspects of Afghan Despotism in India*, Aligarh: Three Men Publications, 1969.

Streusand, Douglas E., *The Formation of the Mughal Empire,* New Delhi: Oxford University Press, 1989.

PAPER IV: MODERN INDIA: POLITICAL PROCESSES

COURSE CODE: HIS 211

Objective: The paper is a study of British colonialism in which India can be studied as a classic case of British Imperialism. The historical context has been undertaken with a holistic interpretation of different approaches and interpretations such as Colonialist, Nationalist, Marxist, Subaltern, and Gandhian. The construction of the colonial state in north and south India followed constitutional changes which further enhanced to establish British control. Indian nationalism responded starting with peasant and tribal revolts, mutiny of 1857, emergence of Indian National Congress, militant movements, Subhas Bose, feminist movements.

Pedagogy: Methodology adopted would include lectures, discussions, review, seminars, and power point presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Colonialist historiography; Nationalist historiography; Marxist historiography; Subalterns; Gandhian historiography; Treaty of Salbai; Punjab Annexation-a breach of trust; Treaty of Seringapatam(1792); Mal-administration of Oudh; Treaty of Aix La- Chapelle(1748); Civilizing mission; Separate Electorates; Dyarchy; Provincial Autonomy; Board of Control;Montagu Declaration; Santhals; Mundas; Lathiyals; Revolt-First War of Indian Independence; Revolt-Military Uprising; Safety valve theory; Moderates; Revolutionaries; Indan National Army; Swaraj; Non-Cooperation; Civil Disobedience; Quit India.

Unit I

Historiography on the modern Indian state – approaches and interpretation: Colonialist, Nationalist, Marxist, Subaltern, Gandhian.

Unit II

Construction of colonial state policy and programme of expansion in north and south India: Bengal;Oudh; Deccan;Mysore; Marathas; Punjab.

Unit III

Constitutional developments: Regulating Act of 1773, Pitts India Act of 1784; The Indian Councils Act 1909; The Government of India Act 1919; The Government of India Act 1935.

Unit IV

Colonial state and Indian response; peasant and tribal movements, nature of the revolt of 1857; Emergence, programme and policies of Indian National Congress; militant movements; Subhas Chandra Bose and INA; Women participation in National Movement.

Essential Readings

Alavi, Seema (ed.), *The Eighteenth Century in India*, New Delhi: Oxford University Press, Reprint 2007.

Bayly, C.A., *Indian Society and the Making of the British Empire*, Cambridge, Cambridge University Press, Reprint, 2014.

Bipan, Chandra, *Communalism in Modern India*, Har Anand Publications, Delhi, 2016.

Brown, Judith, *Gandhi's Rise to Power: Indian politics 1915-1922*, Cambridge: Cambridge University, Press, 1972.

Chandra, Bipan *et al.*, *India's Struggle for Independence,1857-1947*, Delhi: Viking/Penguin Books, Reprint 2016.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India.* New Delhi: Har Anand Publications, 2016.

Ishita Banerjee Dube, *A History of Modern India,* Cambridge University Press, New Delhi, 2015.

Guha, Ranajit, 'On some aspects of Historiography of Colonial India', in Ranajit Guha ed. *Subaltern Studies I,* Delhi: Oxford University Press, 1986.

Mishra, B.B., *Administrative History of India*, Oxford University Press, Delhi, 1983.

Nanda, B.R., *Making of a nation: India's Road to Independence*, Delhi: Harper-Collins, 1998.

Sarkar, Sumit, *Modern India, 1885-1947*, Delhi: Pearson Education India, 2014.

Sen, S.P. ed., *Historians and Historiography in Modern India*, Institute of Historical Studies, Calcutta, 1973.

Sreedharan E: A Text Book of Historiography (500 B.C to A.D 2000, New Delhi: Orient Longmen, 2004

Suggested Readings:

Alam, Muzaffar, *Crisis of Empire in Mughal North India: Awadh and the Punjab, 1707-1748*, Delhi: Oxford University Press, Paperback, 2013.

Banerjee, A.C., *Constitutional History of India*, Vol. II & III.

Brown Judith, *Modern India, The Origins of an Asian Democracy* 2nd ed., Delhi: Oxford University Press, 1994.

Guha, Ranajit*, Elementary Aspects of Peasant Insurgency in Colonial India*, Delhi: Oxford University Press, 1983.

Hasan, Mushirul, *Nationalism and Communal Politics in India*, New Delhi: Manohar, Reprint 2000.

Josh, Bhagwan, *Struggle for Hegemony in India, 1920-47*, New Delhi: Sage, 1992.

Marshall, P.J., *The Eighteenth Century in Indian History*, New Delhi: Oxford University Press, 2003.

Partha, Chatterjee, *The Nation and its Fragments, Colonial and Post Colonial Histories*, New Delhi: Oxford University Press, reprint, 1994.

Sarkar, Sumit., *Swadeshi Movement in Bengal*, Delhi: Permanent Black, Second Edtion, 2011.

Talbot, Ian, *Punjab and the Raj, 1849-1947*, Delhi: Manohar, 1988.

Semester II		Code	Title of paper	Credits
	Group-IPaper I:	HIS 125	Punjab in the Eighteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 713	Opt. (i)Agrarian Economy of Ancient India	4 credits
		HIS 712	Opt. (ii)Agrarian Economy of Medieval India	4 credits
		HIS 711	Opt. (iii)Agrarian Economy of Modern India	4 credits
		HIS 721	Opt. (iv)Industry, Trade & Urbanization in Medieval India	4 credits
		HIS 730	Opt. (v)Industry and Trade in Modern India	4 credits
		HIS 733	Opt. (vi)Urbanization in Modern India(**Not offered to students in this Session)**	4 credits
	Group-III and IV Paper III and IV: Any two of the following	HIS 831	Opt. (i)Modern World (Mid 15th - 19th Century)	4 credits
		HIS 844	Opt. (ii)China & Japan (1840-1950)	4 credits
		HIS 821	Opt. (iii)History of Canada(**Not offered to students in this Session)**	4 credits
		HIS 811	Opt. (iv)American Imperialism in the Nineteenth and Twentieth Centuries(**Not offered to students in this Session)**	4 credits
		HIS 812	Opt. (i)USA (1820-1973)	4 credits
		HIS 832	Opt. (ii)World in the Twentieth Century	4 credits

PAPER I : PUNJAB IN THE EIGHTEENTH CENTURY (COMPULSORY)
COURSE CODE: HIS 125

Objective: This paper challenges the notion of the eighteenth century as a 'dark period' in the Indian history andbrings out the political process by which over a hundred new centres of power and not only the 'twelve misaldars' came up in the Punjab after the decline of the Mughal Empire. It deals with all the new rulers, Sikh as well as non-Sikh, in terms of their political organization, administrative arrangements, patterns of state patronage and the main features of urban as well as agrarian economy.

Pedagogy: The classroom teaching is supplemented by familiarizing the students with the maps of the area besidesdistribution of outlines for greater effectiveness. The evaluation is based on continuous internal assessment which comprises of unit tests, presentation of seminars, classroom participation and attendance.
Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks).The duration of written examination will be 3 hours. In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mukhlispur; Banjaras; Suzerainty;Vassal; Watan jagir; Intermediary zamindar; Paibaqi;Ijaradar; Absentee Jagirdar; Third Battle of Panipat; Khalisa Land;Kardar; Pargana;Dal Khalsa; Gurmatta; Rakhi; Misl; Batai;Kankut; Katra;Bunga; Trini;Haq- Buha; Ghiana; Inam jagir; Gobind Shahi coin; Nanak Shahi coin; Hundi;Madad-i-ma'ash.

Unit I

Establishment of independent rule under Banda Singh Bahadur and basis of his support; measures of the Mughal State; Impact of the decline of the Mughal Empire on administrative functioning and finances of the Punjab; struggle for power among the Mughals, the Afghans and the Marathas; Ahmad Shah Abdali and the Sikhs.

Unit II

Emergence of the new powers in the second half of the eighteenth century: the Rajput chieftains in the hills;the Muslim rulers in the plains; the Sikhs as rulers; role of Gurmatta, Dal Khalsa and Rakhi System in the political process; re-construction of 'eighteenth century as Misaldari period'.

Unit III

Civil and military administration under the new rulers; conception of suzerainty and coinage; Agrarian conditions and land revenue System.

Unit IV

Features of Jagirdari System; working and recepients of dharmarth grants; development of urban centres; trade and manufacture; eighteenth Century debate and the Punjab.

Essential Readings

Alam Muzaffar, *Crisis of Empire in Mughal North India*: *Awadh and the Punjab, 1707-48*, New Delhi: Oxford University Press, 2013 (2nd ed.).

Chetan Singh, *Region and Empire: Punjab in the Seventeenth Century*, Delhi: Oxford University Press, 1991.

Ganda Singh, Life of *Banda Singh Bahadur*, Publicaton Bureau, Punjabi University, Patiala, 2006.

Ganda Singh, *Ahmad Shah Durrani*, Bombay: Asia Publishing House, 1959.

Sachdeva, Veena, *Polity and Economy of the Punjab during the Late Eighteenth Century*, New Delhi: Manohar,1993.

Sachdeva, Veena, *Atharvi Shtabdi ke Antim Charan Mein Punjab Ki Rajnaitik Tatha Arth Vyavastha,* Chandigarh: Unistar, 2014 (Hindi Medium); *Mughal Raj de Patan Uprant da Punjab* (Atharvi Sadi), Chandigarh: Unistar, 2015 (Punjabi Medium)

Suggested Readings

Banga, Indu, ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1900*, New Delhi: Manohar, 1997.

Bhagat Singh, *Sikh Polity in the Eighteenth and Nineteenth Centuries*, New Delhi: Oriental Publishers & Distributors, 1978.

Grewal, J.S., *The Sikhs of the Punjab: The New Cambridge History of India*, New Delhi: Cambridge University Press, 2003.

Gupta, Hari Ram, *History of the Sikh Confederacies (1708-1769),* New Delhi: Munshiram Manoharlal, 1978 (3rd edn.).

Sachdeva Veena, 'Social Base of Sikh Movement under Banda Singh Bahadur', *Research Journal Social Sciences*, Vol.22, No.3, 2014, Panjab University, Chandigarh, pp.14-24.

Sharma, T.R., *Maharaja Ranjit Singh: Ruler and Warrior*, Chandigarh: Panjab University, 2005.

Sinha, N.K., *Rise of the Sikh Power*, Calcutta: A. Mukherjee & Co., 1973.

Surinder Singh, *Sikh Coinage – Symbol of Sikh Sovereignty,* New Delhi: Manohar, 2004.

PAPER II: OPT. (I) AGRARIAN ECONOMY OF ANCIENT INDIA

COURSE CODE: HIS 713

Objective: This course enlightens the students about the beginning of food production and agriculture system with special reference to bronze and iron ages. The role of agriculture and other allied trades to generate the state revenue. It also acquaints the students with the duties of the state administration to bestow all peasants and other vocational with various facilities and endowments to boost up the production and revenue of the state. It throws light on the origin and evolution of Levy system in ancient India, its determination and mode of collection.

Pedagogy: The students are taught with the help of slides, photographs, topographical maps, political maps etc. In addition to it lectures, workshops, seminars and field trips are arranged to enhance the articulating skill of the students and to understand the subject in a better way.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mehargarh; Gramani/gramika; kutumbika; gahapatis; Dasa-karmakars; Bali/Bhaga; Paranaya; Sali/Vrihi; Rajuka/Agronomoi; Sitadhyakasha; Sudarshana lake; Vishti; Agrahara; *Deva-agrahara/devagrahara*; *devadana;vaishyagrahara;Kara-shasana*; Samanta; *Bhumicchidra-nyaya*; urban decay; Kosambi's two stage theory of feudalism; Araghatta/ghatiyantra; Kupa/vapi; Damaras; Kali age crisis; tamra-patra/tamra-patta/tamra-sasana; hatta; mandapika; pentha; nagaram; Kaivartas; Kalabharas.

Unit I:
Evolution of Agriculture: Neolithic Age (Beginning of Agriculture and Domestication of Animals); Bronze Age (Agricultural Techniques, and Irrigation); Iron Age (Cultivation Techniques, Processes, Crop Patterns and Irrigation).

Unit II:
State and Land Systems: Land Rights (Communal Rights, Individual Rights, and Royal Rights); State and Private Property (Demarcation of Land, and Boundary Disputes); Land Revenue and Tax Relief Provisions.

Unit III:
Peasantry: Peasant hierarchy in Early India; Political and Social Relationships between Peasantry, Donors, and Donees; Peasant Unrests (Causes and Nature of Peasant Unrests; Kaivarta and Kalabhara Uprisings).

Unit IV:
Land Grants and Expansion of Agriculture: Land Grants (*agrahara*, *devadana*, *vaishyagrahara* and *kara-shasana*); Study of the *Krishiparasara* (Agricultural processes and Techniques); Early Medieval Agrarian Changes.

Essential Readings

Chattopadhyaya, B. D. (ed.), *Essays in Ancient Indian Economic History*, New Delhi: Primus Books, 2015 reprint.

Gopal, L., *Aspects of the History of Agriculture in Ancient India*, Allahabad: University of Allahabad, 1987.

Gopal, L., 'Agriculture', in *History of Technology in India- Vol. I: From Antiquity to c. 1200 AD*, ed. A. K. Bag, New Delhi: Indian National Science Academy, pp. 391-436, 1997.

Sahu, B. P., ed. *Land System and Rural Society in Early India*, New Delhi: Manohar, 2003 reprint.

Sharma, R. S., *Early Medieval Indian Society: A Study in Feudalization*, New Delhi: Orient Blackswan, 2014 reprint.

Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Pearson Longman: Delhi, 2009.

Suggested Readings

Chakravarti, Ranabir, 'Agricultural Technology in Early Medieval India (c. AD 500-1300)', in *The Medieval History Journal*, Vol. 11, No. 2, pp. 229-258, 2008.

Chakravarti, Ranabir, 'Interacting with Hydraulic Resources: Early Indian Experience', in *Science, Literature and Aesthetics- Vol. 15, Part-3*, ed. Amiya Dev, (HSPCIC) New Delhi: Munshiram Manoharlal, pp. 343-369, 2009.

Chattopadhyaya, B. D., *Aspects of Rural Settlements and Rural Society in Early Medieval India*, New Delhi: Primus Books, 2017.

Chauhan, G. C., *Economic History of Early Medieval Northern India*, Delhi: Atlantic Publishers, 2003.

Ghosh, Suchandra, 'Understanding Boundary Representations in the Copper-Plate Charters of Early Kamarupa', in *Indian Historical Review*, Vol. 41, No. 2, pp. 207-222, 2014.

Jha, D. N., *Revenue System in Post-Mauryan and Gupta Times*, Calcutta: Punthi Pustak, 1967.

Mandal, Krishna Kumar, 'Note: Forms of Peasant Protest in the "Jatakas",' in *Social Scientists*, Vol. 35, No. 5/6, pp. 39-46, 2007.

Mozumdar, G. P., and Banerji, S. C., ed. & tr., *Krisi-Parasara,* Kolkata: The Asiatic Society, reprint 2001 (or Any other suitable translation).

Thakur, V. K., and Aounshaman, Ashok, eds. *Peasant in Indian History- I*, Patna: Janaki Publishers, 1996.

PAPER II OPT. (II) AGRARIAN ECONOMY OF MEDIEVAL INDIA

COURSE CODE: HIS 712

Objective: This paper aims at a multi-dimensional picture of the historical changes that occurred in the agrarian economy during the medieval period. For the sake of clarity and convenience, it is divided into two chronological phases, the Delhi Sultanate and Mughal Empire. It seeks to make an in-depth analysis of the social structure, with particular reference to the various classes of peasantry as well as the intermediaries. It pays adequate attention to the technological aspects of agriculture and irrigation, besides the land rights and agrarian revolts. It also examines the mechanism evolved by the state to extract the social surplus.

Pedagogy: Since it is assumed that the student is quite familiar with the political history of medieval India, it is possible to delve into advanced writings of historians like Irfan Habib and Satish Chandra. Changes in the agrarian economy are studied in relation to the social structure and state formation, with stress on interpreting evidence from contemporary documentation.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Village Aristocracy;*Khuts;Chaudhuri;Zayad* crop; *rabi* and *kharif; noria* and *saqiya;* Persian wheel; Khwaja; Kharaj'; *hukm i masahat bafa i biswa;* Iqta; Madad-i-Ma'ash; *abwab;* Zamindar ; *Banth and Talpad*; *jins i- kamil; sair* land; *malikana; Deh kharj; panch mukadamman; khudh ka'sht;* Karori experiment (1574-75); Ain-i-Dahsala; *nasq; kankut;Zabti System; jama* and *hasil;Gaz-i-Ilahi;* Jagirdari crisis; *zamindar zortalab;*

Unit I

Structure of the rural society in the Delhi Sultanate; aristocracy, intermediaries and peasantry; methods of cultivation and types of crops; means of irrigation and water lifting devices; projects of agrarian expansion; prices of agricultural produce.

Unit II

Agrarian taxation in the Delhi sultanate; from tribute to a uniform land tax; magnitude of state share and methods of collection; salient features of the iqta system; stages in the evolution of the iqta system.

Unit III

Conditions of peasantry in Mughal India; stratification among the peasantry; the nature of agrarian property; structure of the village community; zamindars and nature of their income; genesis, composition and strength of the zamindars.

Unit IV

Assessment of land tax under the Mughals; magnitude of state share and mechanism of its collection; salient features of the jagirdari system; jagirdari system: fiscal rights and management; crisis in the jagirdari system; nature of the agrarian revolts.

Essential Readings

Farooqi, M.A., *The Economic Policy of the Sultans of Delhi*, New Delhi: Konark Publishers, 1991.

Habib, Irfan, *The Agrarian System of Mughal India*, New Delhi: Oxford University Press, 2nd Revised Edition, 1999.

Habib, Irfan, *Essays in Indian History: Towards A Marxist Perception*, New Delhi: Tulika, 1995.

Naqvi, H.K., *Agricultural, Industrial and Urban Dynamism under the Sultans of Delhi,* New Delhi: Munshiram Manoharlal, 1986.

Raychaudhuri, Tapan, & Irfan Habib, (Eds.), *The Cambridge Economic History of India, Vol.I*, Hyderabad: Orient Longman, (Reprint), 2004.

Suggested Readings

Alam, Muzaffar & Sanjay Subrahmanyam (eds.), *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Chandra, Satish (Ed.), *Essays on Medieval Indian Economic History,* New Delhi: Munshiram Manoharlal, 1987.

Grover, B.R., "Nature of Land Rights in Mughal India", in*The Indian Economic and Social History Review,* Vol.I, 1963.

Habib, Irfan, "Technological Changes and Society: 13th and 14th Centuries", in *Proceedings of the Indian History Congress*, Varanasi, 1969.

Habib, Irfan, "Economic History of the Delhi Sultanate: An Essay in Interpretation", in *The Indian Historical Review,* Vol. IV, No.2, 1978.

Hasan, S. Nurul, *Thoughts on Agrarian Relations in Mughal India*, New Delhi: Peoples Publishing House, 1973.

Moreland, W.H., *The Agrarian System of Moslem India: A Historical Essay with Appendices*, Cambridge Library Collection-South Asian History, Cambridge University Press (paperback), 2011.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595: A Statistical Study*, New Delhi: Oxford University Press (2nd ed.), 2015

Singh, Surinder, "Dynamics of Statecraft in the Delhi Sultanate: A Reconstruction from the Letters of Ainul Mulk Mahru", in *Proceedings of the Indian History Congress,* 61st Session, Calcutta, 2001.

PAPER II OPT. (III) AGRARIAN ECONOMY OF MODERN INDIA

COURSE CODE: HIS 711

Objective: This course examines the impact of colonialism on India's agrarian economy in the nineteenth and early twentieth centuries.

Pedagogy: Class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Agrarian society; Ryotwari; Mahalwari; Permanent settlement of Bengal; Classical Theory of Rent; Jajmani system; rural indebtedness; commercialization of agriculture; canalization; ICAR; Central Banking Enquiry Committee; Royal Commission of Agriculture; Cooperative Movement; self sufficient village economy; Agrarian relations; Famine Relief; Cash crops; Agricultural Labour; Taccavi Loan; Agricultural Technology;Punjab Land Alienation Act;Famine Relief Fund; Pattidar; Miras Land; Agricultural Trade; War Financing; Debt Relief.

Unit I

Agrarian Context: Mid 18th century background and British Agrarian Policy; Agrarian settlements: Permanent; Ryotwari; Mahalwari; consequences of periodic settlements.

Unit II

Agrarian Production and Technology;Commercialization of agriculture;Famine and the Peasantry; rural indebtedness

Unit III

Agrarian Relations: Northern and Central India; Eastern India; Western India; South India.

Unit IV

Development of irrigation in colonial times; Canalization and colonization of Punjab; Trade in Agricultural Produce; Agricultural Labour.

Essential Readings:

Ali, Imran, *The Punjab under Imperialism (1885-1947)*, OUP, New Delhi, 1989.

Bagchi, Amiya Kumar, *Colonialism and Indian Economy,* OUP, New Delhi, 2010.

Banerjee, Himadri, *Agrarian Society of the Punjab (1849-1901)*, Manohar, New Delhi, 1982.

Bhatia, B.M., *Famines in India: A Study in Some Aspects of the Economic History of India with Special Reference to Food Problems, 1860-1990,* Sangam Books, Delhi, 1991.

Bhattacharya, Dhires, *A Concise History of the Indian Economy (1750-1950),* Prentice Hall, New Delhi, 1979 (Second Edition).

Bhattacharya, Neeladri, *The Great Agrarian Conquest: The Colonial Reshaping of a Rural World,* Permanent Black, Ranikhet, 2018.

Kumar, Dharma(ed.), *The Cambridge Economic History of India, 1757-1970, Vol.II*, Orient Blackswan, Hyderabad, 2015(First Published 1984).

Dutt, R.C., *The Economic History of India in the Victorian Age,* Kegan Paul, London, 1903.

Dutt, R.P., *India Today,*Popular Parkashan, Bombay, 1949.

Gopal, S., *The Permanent Settlement in Bengal and its Result*, Allen and Unwin, London, 1949.

Roy, Tirthankar, *The Economic History of India(1858-1947),* OUP, New Delhi, 2006.

_____, *An Economic History of Early Modern India,* Routledge, London, 2017 (First Published 2013).

Singh, V.B. (ed.), *Economic History of India, 1857-1955,*Allied Publications, Bombay, 1965.

Suggested Readings:

Amin, Shahid, ' Agrarian Bases of Nationalist Agitations in India: An Historiographical Survey,' in D.A. Low, *The Indian National Congress*, Manohar, Delhi, 1988.

Bayly, C.A., *Rulers, Townsmen and Bazaars: North Indian Society in the Age of British Expansion(1770-1870),* OUP, New Delhi, 2012(First Published 1983).

Choudhuri, B.B.,'Trends in the Recent Studies in the Agrarian History of Colonial India' in T. Banerjee (ed.) *Indian Historical Research since Independence*, Calcutta, 1986.

Desai, A.R., *Social Background of Indian Nationalism*, Popular Prakashan, Bombay, 2004(First Published 1948).

Dhanagare, *Peasant Movements in India1920-1950*, OUP, New Delhi,. 1983.

Hardiman, David, *Peasant Resistance in India* 1858-1914, OUP, New Delhi 1992.

Kulke, Harman and Rothermund, Dietmar, *A History of India,* Routledge, London, 2010(First Published 1986).

Mukherjee, Mridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism*, Sage Publications, New Delhi, 2005.

Rothermund, D.,*Government Landlord and Peasant in India: Agrarian Relations under British Rule*, 1865-1935, Weisbaden, 1978.

Sen, Sunil, K., *Agrarian Relations in India, 1793-1947*, People's Publishing House, New Delhi, 1979.

Tomlinson, B.R., *The New Cambridge History of India: The Economy of Modern India (1860-1970),* Cambridge University Press, New Delhi, 2005(First Published 1998).

PAPER-II OPT. (IV) INDUSTRY, TRADE & URBANIZATION IN MEDIEVAL INDIA

COURSE CODE: HIS 721

Objective: This paper focuses on the Urban Economy of the Medieval period and looks with detail at the Urban pattern, Trade and Industry, Administration of towns and Social Classes in towns. It aims to introduce the urban dimension to students of Medieval India to add to their basic understanding of the period.

Pedagogy: Students will be introduced to new readings on the theme and a familiarization with debates on several issues.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each

unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Urban centre; qasbah;temple urbanism; urbanization; dynastic towns; mohalla; katra; tripolia; qahwakhana; kotwal; mir-i-mohalla; pol; rach bharmar; talimguru; chikandoz; naqqash; baradari; karkhana; jital; ganj; ahl-i-saif; ahl-i-qalam; hakeem; hunarmardan; balda; urban revolution 13th century; hundi; asharfi; qadam sharif; nakhas; manzil

Unit I

Urban pattern in the early medieval period; urban revolution in the 13th century; urban development upto mid 18th century; types of urban centres; morphology of towns; administration of towns.

Unit II

Major industries – textiles, metal work,; forms of organization; technology and labour; profile of medieval craftsmen; state policy; case studies – Shahjahanabad, Agra, Surat.

Unit III

Major trade routes; organization of trade; items, volume and trade pattern; currency, credit and monetary system; markets; state control; case studies—Chief Trading Centres.

Unit IV

Urban classes; nobility; commercial and trading classes; professional classes; artisans and craftsmen; labouring classes and slaves; courtly and popular culture.

Essential Readings

Abul Khan Muhammad Farooque, *Roads and Communications in Mughal India*, Adab-I-Adabiyat-i-Delhi, Delhi, 1977.

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, Delhi, 1978.

Blake, Stephen, *Shahjahanbad*, Cambridge University Press, 1993.

Chattopadhyaya, B.D., *The Making of Early Medieval India*, Delhi: Oxford University Press, 1994.

Grewal, Reeta, 'Urbanization in Medieval India' in *The State & Society in Medieval India* (ed, J.S. Grewal), Delhi: 2005, Oxford University Press, PHISPC, 396-429.

Gupta, I.P., *Urban glimpses of Mughal India: Agra the Imperial Capital,* Discovery, Delhi, 1986.

Habib, Irfan and Tapan Raychaudhari, eds., *The Cambridge Economic History of India*, Vol.I, Orient Longman, 1984.

Habib, Mohammad, 'Introduction' to *Elliot and Dawson's History of India*, Vol.II, Aligarh reprint, 1-102.

M.P. Singh, *Town, Market, Mint and Ports Towns in the Mughal Empire*, Delhi: Adam, 1985.

Naqvi, H.K., *Urban Centres & Industries in Upper India*, Bombay: Asia, 1968.

Naqvi, H.K., *Urbanization and Urban Centres under the Great Mughals*, Shimla: IIAS, 1971.

T.Chitchern, A.I., *India: Changing Economic Studies in 16th-18th Centuries*, Delhi: Manohar, 1998.

Vanina, Eugenia, *Urban Crafts and Craftsmen in Medieval India*, Delhi: Munshiram Manoharlal, 2004.

Suggested Readings

Bayly, C.A., *Rulers, Townsmen and Razaars: North India Society in the Age of British Expansion*, Oxford University Press.

Chenoy, Shama Mitra, *Shahjahanabad: City of Delhi 1638-1857*, Delhi: Munshiram Manoharlal, 1998.

Mallick, B.S., *Money Banking & Trade in Mughal India*, Jaipur: Rawat, 1991.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595*, Delhi: Oxford University Press, 1987.

Moreland, W.H., *India at the Death of Akbar: An Economic History*, Atma Ram & Sons, 1962.

Moreland, W.H., *From Akbar to Aurangzeb*, Delhi: Oriental Books, 1972 (reprint).

Naqvi, H.K., *Agriculture, Industry and Urban Dynamism under Sultans of Delhi*, Delhi: Munshiram Manoharlal, 1986.
Richards, J.F. ed., *The Imperial Monetary System of Mughal India*, Delhi: Oxford University Press, 1987.
Subramanyam S., ed., *Money and Markets in India*, Delhi: Oxford University Press, 1998.

PAPER-II OPT. (V) INDUSTRY AND TRADE IN MODERN INDIA

COURSE CODE: HIS 730

Objective: To examine the manner of early trade and industry in India and the evolution of private enterprise.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mercantilism; Imperialism; Nationalism; Balance of Trade;Exchange Banks;De-industrialization; East India Company; Subsidiary Alliance; Public Limited Company; Private Limited Company; Equality; Wootz; Free Trade; Chintz; Scientific temper; Swadeshi; Non –cooperation; Swarajya; Civil Disobedience; Dyarchy; Artisan; Trade Union; Factory Act; Labour Legislation; Industrial Enterpreneurship; Colonialism; Commercialization of Agriculture organized Sector

Unit I

Trade and East India Company: Growth; Composition; value of Trade; Balance of Trade; Impact of Presidency banks and Exchange banks on trade.

Unit II

Foreign Trade 1857-1947: Reasons of Trade expansion, Composition; Export and Import; Balance of Trade; Direction; Impact of two world wars on Indian foreign trade.

Unit III

The traditional artisanal industries: the de-industrialisation question; Nature of modern industry under the colonial rule- major industries- Cotton, textile, Jute, Iron and Steel; reasons of industrial expansion; Industrial entrepreneurship.

Unit IV

Industrial Labour under the Colonial rule: Wages and Standard of living; Trade union movement; Labour Disputes, Labour Legislation.

Essential Books

Asiya, Siddique, *Trade and Finance in Colonial India*, *1750-1860*, Oxford: Oxford University Press, 1995

Bagchi, A.K., *Private Investment in India, 1900-1939*, Cambridge: Cambridge University Press, 1972.

Buchanan, D.H., *The Development of Capitalistic Enterprise in India,* New York: Macmillan, 1939.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India*, New Delhi: PPH, 1982 (reprint).

Godgil, D.R., *The Industrial Evolution of India in Recent Times, 1860-1939*, Bombay: Oxford University Press, 1975 (reprint).

Mehta, S.D., *The Cotton Mills of India*, 1854-1954, Bombay: Textile Association, 1954.

Ray Chaudhary and Dharma Kumar (eds)., *The Cambridge Economic History of India, 1757-1970*, Vol.II, Hyderabad, 1984.

Suggested Readings

Morris, M.D.,*The Emergence of an Industrial Labour Force in India,* Berkeley: University Press, 1965.

Chaudhari, K.N., *The Economic Development of India under the East India Company, 1814-1858*, Cambridge: Cambridge University Press, 1971.

Sen, S.K., *Studies in Industrial Policy and Development of India, 1858-1914,* Calcutta: Progressive Publishers, 1964.

Singh, V.B.(ed.),*Economic History of India, 1857-1956*, Bombay: Asia, 1965

Thorner, D., 'De-industrialization in India' in his *Land and Labour in India*, Bombay: Asia, 1962.

Tirthankar, Roy, *Cloth and Commerce: textiles in colonial India*, New Delhi: Sage, 1996.

PAPER –II OPT. (VI) URBANIZATION IN MODERN INDIA(**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 733

Objective: The course introduces a new perspective and analyses the process of urbanization in India from the mid 18th to the 20th century. The changing patterns of urban development in the regional context; new urban forms, new social and economic institutions, urban administration and urban problems are examined. Case studies allow for an indepth analysis of the urban dimensions adding to our understanding of history and the impact of urbanization on society.

Pedagogy: The key concepts and context are taken up in class discussion which incorporates urban studies from allied disciplines as well. Maps and diagrams form an integral part of study.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Urban Centre; Urbanization; metropolis; megalopolis; Urban pattern; Mofussil town; qasbah; new urban forms; hill station; cantonement; colony town; civil lines; Brides of the Sea; Black town; municipal committee; octroi; municipal corporation; notified area; civic amenities; pseudo urbanization; over urbanization; ribbon development; economic institutions in towns; slums; circulation of traffic; Leaf plan of Chandigarh; superblock; garden city; million city; maximum city.

Unit I

Urban patterns in the mid 18th century; urban development in the colonial period; factors influencing urbanization; types of urban centers; case study of New Delhi- phases of growth, town planning and society.

Unit II

New Urban Forms: the hill station; cantonement; civil lines; colony town; the port cities; case study- Bombay- growth, morphology and social structure.

Unit III

Early administration in towns; introduction of municipal government; municipal functions and working; resources; nature of urban government in colonial times.

Unit IV

Urbanization in post-independence India; regional patterns; classification of urban places; urban problems- slums, lack of civic amenities, haphazard growth; urbanization policy; case study- Chandigarh- plan, growth and social dimensions.

Essential Readings

Avasthi, A. *Municipal Administration in India,* Agra: Lakshmi Narayan, 1972.

Banga, Indu (ed.), *The City in Indian History*, Delhi: Manohar, 1994.

Banga, Indu (ed.), *Ports and their Hinterlands in India 1700-1950*, Delhi: Manohar, 1991.

Banga, Indu and J.S. Grewal (eds), *Studies in Urban History*, Amritsar: GNDU, 1983.

Bayly, C.A., *Rulers Townsmen and Bazaars*, Delhi: Oxford University Press, 1992.

Frykenberg, R.E. (ed), *Delhi Through the Ages,* Delhi: Oxford University Press, 1993.

Gadgil, D.R., *The Industrial Evolution of India in Recent Times*, Delhi: Oxford University Press, 1994.

Gupta, Narayani, *Delhi Between Two Empires*, Delhi: Oxford University Press, 1981.

Kalia, Ravi; *Chandigarh: The Making of an Indian City*, Delhi: Oxford University Press, 1988.

King, Anthony; *Colonial Urban Development*, London: Routledge & Kegan Paul, 1976.

Ramachandran, R., *Urbanization and Urban Systems in India*, Delhi: Oxford University Press, 1999 (8th impression, 1st published 1989).

Sharma, Kavita et al., *Chandigarh Lifescape: brief social history of a planned city,* Chandigarh: Chandigarh Administration, 1999.

Suggested Readings:

Bose, Ashish, *India's Urbanization,* Delhi: Tata Mcgraw Hall, 1978.

Broeze, Frank (ed), *Brides of the Sea: Port Cities of Asia from the 16th to the 20th centuries*, New South Wales University Press, 1983.

D'Souza, Victor S., *Social Structure of a Planned City*: *Chandigarh*: Bombay: Orient Longman, 1968.

Didee, Jayamala and Rangaswamy (eds), *Urbanization Trends, Perspectives and Challenges*, Jaipur: Rawat Publications, 1993.

Heggade, Odeyar D., *Urban Development in India*, Delhi: Mohit, 1998

Prakasa Rao, V.L.S., *Urbanization in India: Spatial Dimensions,* Delhi: Concept, 1983.

Mitra, Asok, *Functional Classification of Indian Towns,* : Delhi: Institute of Economic Growth, 1973.

Sunderam, K.V., *Urban and Regional Planning in India*, Delhi: Vikas, 1977.

PAPERS III

PAPERS IV OPT. (I) MODERN WORLD (MID 15TH-19TH CENTURY)

COURSE CODE: HIS 831

Objectives: The paper focuses on the Modern phase of World history with particular reference to Modern ideas with emphasis on 'humanism', politics revolving around Europeon State System and colonial and economic developments are highlighted. The social and economic change which took place in Europe from 17th to 19th century effecting the transition from Feudalism to Capitalism and the rise of Nationalism in the 19th century are focused in the course.

Pedagogy: The Course is taught on the basis of lectures, seminars, discussions & tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Rennaisance; humanism; Reformation; Enlightenment;Socialism; utopian; soialists; commercial revolution; price revolution; Bloodless revolution; industrial revolution; scientific revolution; Liberty; Equality; constitutionalism;Nationalism; State building; feudalism; capitalism; parliamentary monarchy;liberalism; democracy;absolutism; Nation State; New World; Age of Exploaration; Free Trade; Continental System;

Unit I

Enlightenment and Modern Ideas: Renaissance, its social roots, humanism and its spread in Europe; Reformation, its origins, course and significance; Spread of Enlightenment, outside Europe; Rise of Socialist ideas (to Marx).

Unit II

Origins of Modern Politics: European States System- Spain, France and England; Colonial expansion and economic developments; early colonial empires of Portugals and Spain; shift of economic balance from Mediterranean to the Atlantic, commercial revolution and price revolution.

Unit III

Europe in the 17th and 18th Centuries: Economic, Social and Political dimensions-The English Revolution; Scientific Revolution; American Revolution and the constitution; French Revolution and its aftermath; European political patterns in the 18th century- parliamentary monarchy and patterns of Absolutism in Europe.

Unit IV

Modern Nation State System: English Industrial Revolution, transition from feudalism to capitalism; Rise of Nationalism in the 19th century; state building in Germany and Italy; liberalism and democracy in Britain; Disintegration of Empires through emergence of nationalities; 19th century European revolutions.

Essential Readings

Clark, G., *Early Modern Europe*, Oxford University Press, 1964.

Clough, Shepherd, *Economic Development of the Western World*, London: Macraw Hill Book Company.

Davis, H.A., *Outline History of the World. Ed.5* 1968.

Gay, P and J. Goratty(eds) *Columbia History of the World,* New York: Harper Row, 1972.

Hale, J.R., *Renaissance Europe*, London: Collins Sons & Co.Ltd., 1971.

Hinsley, F.H.(eds) *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.

Hobsbawm, Eric., *Age of Empire 1875-1914*, Delhi: Viking, 1975.

Hobsbawm, Eric., *Age of Revolution 1789-1848,* Delhi: Viking, 1975.

Palmer, R.A., *A History of Modern World,* Macgraw, 1982.

Stavrianos, L.S., *The World Since 1500*, Delhi: Prentice Hall of India, 1965.

Stavrianos., L.S., *Readings in World History*, USA: Allen & Bacon, Inc., 1962.

Suggested Readings

Lefebvre, G., *The French Revolution*
Rude, George, *Revolutionary Europe*, Collins, 1964.
Thompson, Davis, *Europe Since Napoleon,* Australia: Penguin, 1966.

PAPER III OPT. (II) CHINA AND JAPAN (1840-1950)

COURSE CODE: HIS 844

Objective: This courses aims to trace the various phases of history of China and Japan in modern times in context of their struggle against invasion of west. Also the present course seeks to evaluate the internal struggle as well as various efforts made within these nations which were directed towards the quest of their identities as important powers of the world.

Pedagogy: The said course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and term given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Opening of China; Cutting of the Chinese Melon; Open Door Policy; Co–hong; Taiping Rebellion; Battle of Concessions; Boxer Society; Li-Ito Convention; Campradores; Warlords; K.M.T.; League of Common Alliance; C.C.P.; Communism; Communes; Modernization of Japan; Meiji Restoration; Opening of Japan; Perry expedition; Tonghaks' rebellion; Most Favoured Nation Treatment; Right of Extra Territoriality; Treaty of Shimonoseki; Triple Intervention; Treaty of Portsmouth; 21 Demands; Aims of Washington Conference; Five Power Naval Treaty; Zaibatsu; Japanese militarism; Manchurian Crisis; Fall of Japan.

Unit I

Opening of China w.s.r.t. the First Opium War and the Second Opium War; Taiping rebellion; Battle of Concessions (1895-98); Boxer movement (1900); the Impact of foreigners in China – disintegration of family centered society and the rise of new classes.

Unit II

Sun Yat Sen and the revolution of 1911; Cultural awakening between 1917-1919; May 4th 1919 Movement; C.C.P.'s relations with K.M.T. till 1949 and triumph of communism; the inauguration of first Five Year Plan and land reforms; the role of communes.

Unit III

Opening of Japan w.s.r.t. Perry expedition and its significance; Meiji restoration and reforms for modernisation-end of feudalism, reorganization of central administration, reforms in education, industrial and agricultural reforms, the new Japanese Constitution of 1889; the first Sino-Japanese War (1894-95); Anglo- Japanese Alliance (1902); Russo-Japanese War (1905).

Unit IV

Japan's role in World War I and presentation of 21 demands; Washington Conference (1921); Causes and growth of Japanese militarism; Japan from Manchurian Crisis to the Second World War; monetary and banking systems in post-war Japan; the role of Zaibatsu in post-war economy.

Essential Readings

Allen, G.C., *Japan's Economic Recovery*, *Opium Wars to 1911 Revolution Vol.I,* Delhi: Routledge, 2000.

Donnithorne Audrey, *China's Economic Systems,*London: Routledge, 1st Edition 2016.

Flath David, *The Japanese Economy,* New York: Oxford University Press, Reprint 2014.

Hsu Immanuel, C.Y., *The Rise of Modern China,* New York: Oxford University Press, Reprint 2000.

Hughes, T.J. & Luard D.E.T., *The Economic Development of Communist China (1949-60),*Connecticut, US: Green Wood Press, 1975.

Vinacke, Harold M., *A History of the Far East in Modern Times*, New York: Appleton Century Crafts, 1961 (6th edn.)

Clyde, P. H. and Burton B.F., *The Far East: A History of the Impact of the West on Eastern Asia,* Englewood Cliffs, N.J. Prentice Hall, 1966.

Kennedy Paul, *The Rise and Fall of the Great Powers- Economic Change and Military Conflict from 1500 to 2000,* London: William Collins, Reprint 2017.

PAPERS III OPT. (III) HISTORY OF CANADA(**NOT OFFERED TO STUDENTS IN THIS SESSION)**

COURSE CODE: HIS 821

Objective: An introductory course focusing on the main developments in politics, economy and society of Canada from its inception to recent times. The major changes and its impact on the people is highlighted to understand the kind of transformation taking place in time and the making of a multi-cultural society.

Pedagogy: As the course is being introduced for the first time, basic standard reading would be utilized along with maps and perspectives to help study the country in some detail.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Inuit; First Nations; Runners of the woods;Skraelings; seigneurs; New France; Quebec Act 1774;Canada Bill 1791; Reciprocity Treaty 1854; Dominion Day; Halifax Award 1877; Alien Question;Gold Rush; NEP; Bits and Pieces Programme; conscription; "Rep by Pop"; Staples Theory; baby boom; Dirty Thirties; Parti Canadien; GATT; Parti Quebecois; Two Nationalisms; cultural genocide'; referendum; October Crisis; bilingualism;Hyde"Park Agreement;"ethnic ghetto"; Multiculturism;White Paper ; Meechlake Conference; Gang of Eight; Bill 22/101; CANDU model;

Unit I

First nations and their contact with early European settlers; French and English in Canada in 17th century; Anglo-French activity in 18th century; Canada c.1800.

Unit II

Transformation 1815-40; The Dominion of Canada 1867; Expansion 1867-96; Economic boom 1896-1914; Impact of World War I, Relations with Britain

Unit III

Politics and Economics of the 1920's; Developments in 1930's; Canada and World War II; Post War developments upto 1963, Relations with USA.

Unit IV

Economic Developments 1960-80; Changing Canada; Problems for Government. in 1970s-80s; Multi culturalism.

Essential Readings

Bothwell, Robert, *The Penguin History of Canada*, Penguin, Canada, 2006.

Morton, Desmond, *A Short History of Canada*, McChelland & Stewart, Toronto, 2006 (6th edn., 1st published 1987).

Bumstead, J.M., *A History of the Canadian Peoples*, Oxford University Press, Toronto, 2007 (3rd ed.)

Nelles, H.V., *A Little History of Canada*, Oxford University Press, Toronto, 2005.

Suggested Readings

Douglas R. Francis, Richard Jones and Donald B. Smith, *Origins: Canadian History to Confederation*, 6th ed., Nelson, Toronto, 2008.

Douglas R.Francis, Richard Jones and Donald B. Smith, *Destinies: Canadian History since Confederation*, Nelson, Toronto, 2006.

Dickason, Olive Patrica, *A Concise History of Canada's First Nations*, Oxford University Press, Toronto, 2006.

PAPER–II OPT. (IV) (A) AMERICAN IMPERIALISM IN THE NINETEENTH AND TWIENTIETH CENTURIES(**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 811

Objective: From an Indian perspective, this course examines the nature of American imperialism and its spread in the nineteenth and twentieth centuries. It presumes a prior knowledge of the broad trends in the history of America, India and the world.

Pedagogy: The course is based on class room discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Imperialism; Monroe Doctrine; industrialization; Mahan Doctrine;Americanization; Louisiana Purchase; great powers;League of Nations; 14 points; Cold War; NAM; McCarthy Era; Cultural imperialism;brain drain;American Independence; French and Indian War 1754-1763; Colonial Grieviences in America; Spanish Empire in the

America; Spanish American Wars; State Power and Industrilization; US expansion in 19th Century; American Intraventions outside the Western Sphere; US and Russia; US and Great Britain; First World War; Anticommunism in the US; US and the Muslim World;US and Israel; Indo-US relations before 1947

Unit I

Introduction to the Nature of Imperialism: The economic bases of imperialism; the strategic bases of imperialism; the altruistic-moral bases of imperialism; The empires of the eighteenth and nineteenth century: the British Empire in India; the Partition of Africa; the various European imperial interests in the Americas; American independence: the French and Indian War 1754-1763; The British empire in America and colonial grievances; the economic and moral bases for claiming independence for America as expressed in its culture, polity and society during the eighteenth and nineteenth centuries.

Unit II

The Monroe Doctrine: The United States replaces the Spanish Empire in the Americas and the Pacific; various Spanish American wars and their consequences; evolution of a moral basis for imperial expansion in the foreign policy; The American civil war**:** the link between state power and industrialisation; the use of moral positions for war like aggression. US expansion in the nineteenth and early twentieth century: Purchasing territories in America and the Pacific; the Mahan Doctrine and military strength; American interventions outside the western hemisphere in the nineteenth and early twentieth century.

Unit III

"Americanisation of the world" in the early twentieth century: The relative industrial and economic strength of the great powers; President Wilson's interventions before joining the First World War; American role in establishing peace after the First World War and the League of Nations. The growth of American power between the Two Wars: Economic interventions in Europe; the US and Russia; the US and Great Britain. The Cold War and American foreign policy: anti-communism in the US and the McCarthy Era; influence of internal concerns on US foreign policy; economic and human costs of American interventions within the US and outside.

Unit IV:

US and the third world: US hostility to NAM 1950s to 1990s; US and the Muslim World; US and Israel; US as a soft power: "Cultural imperialism"; the brain drain from across the world to the US; Indian opposition to US cultural imperialism, 1960s to 1990s; Impact of American imperialism on south Asia: Indo-US relations before independence; Indo-US relations from 1947 to 1971; Indo-US relations from 1971 to the 1990s.

Essential Readings

Ferguson, Nial, *Colossus: The Rise and Fall of the American Empire*, Penguin books, London, 2005, multiple reprints in Indian edition.

Gilbert, Martin, *A History of the Twentieth Century, 3 volumes*, Harper Collins, London, 2000, multiple reprints in Indian edition.

Handlin, Oscar, *The History of the United States,* Holt, Reinhart and Winston, New York, 1968, multiple reprints.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000,* Fontana Press, New York, 1988, multiple reprints in Indian edition.

Suggested Readings

Brecher, Michael,*The Foreign Policy System of Israel*, Oxford University Press, Toronto, 1972.

Chandra, Bipan, *Essays on Colonialism*, Orient Longman, New Delhi, 2000.

Desai, A.R, *The Social Background of Indian Nationalism*, Popular Prakashan, Bombay, 1954, multiple reprints.

Dutt, R.P., *India Today,* PPH, Bombay, 1949, multiple reprints.

Gilbert, Felix, *End of the European Era, 1890 to the Present* Norton, London, 1981.

Huntington, Samuel P., "The Clash of Civilizations?" in Foreign Affairs, 1993 Also, http://history.club.fatih.edu.tr/103%20Huntington%20Clash%20of%20Civilizations%20full%20text.htmLenin, V.I., *Imperialism, the Highest Stage of Capitalism: a popular outline***,** various editions, 1916.

Moore, Barrington Jr., *The Social Origins of Dictatorships and Democracies: Lord and Peasant in the Making of the Modern World*, Beacon Press, New York, 1966, also in Indian edition.

Owen, Roger and Bob Suttcliffe, (eds.), *Studies in the Theory of Imperialism*, Longman, London, 1972.

COURSE CODE: HIS 812

Objective: The emergence of America as a world leader was substantially based on the transformations taking place in that country as it tries to adjust itself to the post-Napoleonic world order of the nineteenth century. This course traces the main currents in American history to find an understanding of that transformation.

Pedagogy: Class room discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Nation state; freedom; big business; scientific temper; industrial revolution; imperialism; communism; foreign policy based on neutrality; carpet baggers; scallywags; populism; slavery; League of Nations; Free trade; Peace of Paris; progressive movement; Hooverville; New Deal; Economic depression; balance of trade; feminism; social justice; civil rights; foreign policy of appeasement.

Unit I

The new territories in the west: Expansion in Texas, the war with Mexico; Moral and ideological tensions: Growth of sectionalism, causes and consequences of the Civil War, Reconstruction of the South; The new economy: growth of industrialisation and new technologies, Big Business, 1875-1900; Growth of cities.

Unit II

Emergence as a World Power: War with Spain; causes and results; decision for economic imperialism; Overseas Expansion: The Carribean and the Pacific, 1896-1915; World Involvement: Unnatural neutrality; the U.S.A. at World War-I; The Treaty and the League.

Unit III

Populist and Progressive Movements: Leaders and achievements, 1890-1917; The onset of Great Depression: Causes and impact; the Hoover Program; The New Deal: New Deal Legislation; foreign policy during the New Deal period.

Unit IV

The Second World War: Issue of neutrality; the U.S.A. at war, planning a new World order; balance of terror: Colder war: Origins; diplomacy of Cold war; containment of communism; Détente; Social Movements: Movements for Social Justice: The Feminist Movement; Temperance; Suffrage; Civil Rights.

Essential Readings

Faragher, John Mack, Mari Jo Buhle, Daniel Czitrom, Susan H. Armitage,*Out of Many: A History of the American People*, Prentice Hall /Longman, New York, 2009.

Tindall, G B and D E Shi,*America: A narrative history*, WW Norton, New York 2009. Also available as ebook from [http://www.wwnorton.com/college/history/america7]

Zinn, Howard, *People's History of the United State, 1492-Present*. Revised edition 2005 (first published 1980).

Suggested Readings

Blum, John M., Bruce Cotton, *The National Experience: A History of the United States*, New York: 1970.

Current, Richard, N.T. Williams et al., *American History: A Survey*, Vol.II, Calcutta:Scientific Book Agency, 1975 (4th edition).

Faulkner, H.U., *American Economic History*, London: Harper and Row Publishers, 1954.

Morrison**,** S.E., H.S. Commager and W.E. Leuchtenburg, *The Growth of the American Republic,* New York: Oxford University Press, 1969.

Parkes, Henry Bamford, *The United States of America*, Calcutta: Scientific Book Agency, 1967 (reprint).
Pratt, Julius, W., *A History of United States Foreign Policy*, N.J.: Englewood Cliffs, 1957.
Wittner, Lawrence S., *Cold War America, From Hiroshima to Watergate*, New York: Praeger Publishers, 1974.

PAPER –IV OPT. (II) WORLD IN THE TWENTIETH CENTURY

COURSE CODE: HIS 832

Objectives: Structures of international systems in the early twentieth century were drawn on the plank of imperialism, colonialism, nationalism leading to emergence of a bipolar world, organised into military blocks with non military organisations such as United Nations acting as arbiters of international peace. The impact of a bipolar world and its political dynamics were visible, especially in the middle east. New trends in human and civil rights marked contemporary foreign policies while feminism, working class and students movements, gained momentum in the international landscape.

Pedagogy: The methodology will include lectures, discussions, review, seminars and power point presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Imperialism;Neo-imperialism; colonialism; Neo-colonialism; Socialism; Nationalism;Communism;Capitalism; revolution; human rights; feminism; working class; Commonwealth; NAM; United Nations; student movement; Middle East; Military Blocs; Civil rights;foreign policy; Third World; Non-alignment; NATO; Warsaw Pact;Glasnost; Perestroika;Menshevik; Bolshevik;Arab Politics.

Unit I

On the Eve and aftermath of the First World War: Imperialism and Colonialism with reference to the First World War; The Ideology of Nationalism with special reference to India and China; The Russian Revolution of 1905; Causes and impact of the Revolution of 1917, collapse of the Soviet Union.

Unit II

Human and Civil Rights and New Trends: The idea of Civil and Human rights in the Third World; Role of Civil and Human rights in contemporary foreign policy Strategies; Trends within the growth of feminism, working class, and students movement.

Unit III

Military Blocs and Non-Military Organizations: Non-military organizations; U.N. as an arbiter of international peace; Changing facets of Commonwealth and its irrelevance; growth of NAM as a critic of Imperialism and Neo-Colonialism.

Unit IV

Political Dynamics in the Middle East: Regional Arab politics and the conflict with Israel; U.S.S.R. and the Middle East; U.S.A.'s policy towards the Middle East with special reference to Iraq, Israel and Iran.

Essential Readings

Anderson, Eugene N., *Modern Europe in World Perspective*: *1914 to the Present*, Holt, New York: Rinehart and Winston, 1961.

Brar, B.S., *Explaining Communist Crises*, New Delhi: Ajanta, 1994.

Gilbert, Felix, *End of the European Era*, *1890 to the Present* London: Norton, 1981.

Hammond, Paul Y. (ed), *Political Dynamics in the Middle East*, New York: I.N.C., 1972.

Hobsbawn, E.J., *Age of Extremes*, Delhi: Viking, 1995.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*, London: Unwin and Hyman, 1988.

Spanier, John., *Games Nations Play*, Delhi: Macmillan India Ltd., 1990.

Suggested Readings

Ashworth, W., *A Short History of the International Economy*, *1850-1950*, London: Longmans, 1954.
Bergson, Abram & H.S., Levine, eds., *Soviet Economy Towards the Year 2000,* London: Unwin, 1983.
Brecher, Michael., *The Foreign Policy System of Israel*, Toronto: Oxford University Press, 1972.
Brezinski Zbignew., *The Soviet Bloc: Unity and Conflict,* Cambridge: The Harvard University Press, Mass, 1960.
Brezinski, Zbignew and S.P. Huntington., *Political Power: USA/USSR*, London: Chatto and Windus, 1964.
Chandra, Bipan, *Essays on Colonialism*, New Delhi: Orient Longman, 2000.
Chesneaux, Jean et. al. (eds.)., *China*, Vols. 1 and 2 Delhi: Khosla, 1978.
Clyde, Paul and Burton Beers., *The Far East: A History of Western Impacts and Eastern Responses, 1830-1975*, New Delhi: Prentice Hall, 1976.
Forsythe, David P., *Human Rights in International Relations*, Cambridge: Cambridge University Press, 2000.
Freeman, Michael., *Human Rights*, Black well Publishers Malden, 2003.
Holland, R.F., *European Decolonization, 1918-1981: An Introductory Survey,* London: Macmillan, 1985.
Horowitz, David., *Imperialism and Revolution,* London: Penguin Press, 1969.
Karsh, Efraim and Rautsi, Irari., *Saddam Hussein: a Political Biography*, Wheaton: B.P.C.C., 1991.
Kennan, George F., *Democracy and the Student Left*, London: Hutchison, 1968.
Kennan, George F., *The Fateful Alliance: France, Russia and the Coming of the First World War,* New York: Pantheon, 1984.
Kochan, Lionel & Richard Abraham., *The Making of Modern Russia*, London: St. Martin, 1984.

Lichteim, George., *Short History of Socialism,* London: Fontana, 1975.
Owen, Roger & Bob Suttchliffe, (eds.)., *Studies in the Theory of Imperialism,* London: Longmans, 1972.
Porter, Bernard., *The Lion's Share, A Short History of British Imperialism, 1850-1970*, London: Oxford University Press, 1976.
Porter, Brian, (ed.)., *International Politics, 1919-69*, London: Oxford University Press, 1972.
Samir, Amin., *Maldevelopment :anatomy of global failure,* London: Zed books, 1990
Singer, Hans W. and Javed Ansari., *Rich and Poor Countries*, London: Unwin, 1982.
Stevens, Georgiana G., *The United States and the Middle East*, Prentice – Hall Inc N.J., 1964.
The Cambridge Modern History, Vol. 12., *The Shifting Balance of Power,* Cambridge: Cambridge University Press, 1958.

Semester III	**Group-IPaper I:**	HIS 123	Punjab in the Nineteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 431	Opt. (i)Evolution of Ancient Societies	4 credits
		HIS 421	Opt. (ii)Feudal Society in Western Europe	4 credits
		HIS 411	Opt. (iii)History of Capitalism	4 credits
		HIS 412	Opt. (iv)Rise and Growth of Colonialism in India	4 credits
		HIS 602	Opt. (v)History of Secularism in Modern India **Not offered to students in this Session)**	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 432	Opt. (i)Cultural Histhisory of Ancient India	4 credits
		HIS 604	Opt. (ii)Sacred Centres in Indian Civilization	4 credits
		HIS 424	Opt. (iii)Medieval Indian Art and Monuments.	4 credits
		HIS 601	Opt. (iv)Gender Relations in Modern India	4 credits
		HIS 455	Opt. (v)Diaspora in Colonial India **(Not offered to students in this Session)**	4 credits
		HIS 603	Opt. (vi)Science, Technology & Medicine in Colonial India	4 credits
		HIS 213	Opt. (vi)Constitutional Development in Modern India, 1773-1947	4 credits
		HIS 212	Opt. (viii)National Movement in India 1858-1947	4 credits
		HIS 214	Opt. (ix)British Policy and Princely States(**Not offered to students in this Session)**	4 credits
		HIS 263	Opt. (x)Contemporary India 1947-1992	4 credits

PAPER I PUNJAB IN THE NINETEENTH CENTURY(COMPULSORY)

COURSE CODE: HIS 123

Objective: The aim of the present course is to make an assessment of British policy and programme in Punjab and study the construction of State. It critically examines and evaluates administrative, social, cultural, economic developments as well as socio-religious resurgence in the province between 1849-1901.

Pedagogy: The present course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Suba; Pargana; Kardar; Nazim; Batai; Kankut; Banwazaree; Suzerain; Vassalage; Dharmarth; Jagir; Ijara; Army panches;Treaty of Amritsar 1809; Treaty of Bhairowal 1846; Agricultural loans; Commercialization of agriculture; Canalization; Board of Administration; Punjab Frontier Force; Shuddhi; Nirankar; Kukas; Chief Khalsa Diwan; Mahdi; Socio-religious movement; Christian Missionaries; Aims of Anjumans; Agri-Horticultural Society; Modern technology in agriculture.

Unit I

Formation of the Kingdom of Lahore; land revenue system, agricultural production and development; trade, industry and urbanization.

Unit II

State and Polity: Nature of state, political developments 1839-1849; factors leading to the decline of the kingdom of Lahore; annexation of the Punjab.

Unit III

The early British administration 1849-59; British agrarian policies; application of modern science and technology in agriculture; canal colonies.

Unit IV

Socio Religious Reform Movements: Christian missionaries and their activities; Arya Samaj and Dev Samaj; Muslim Anjumans and Ahmediyas; Nirankaris, Namdharis and Singh Sabhas.

Essential Readings:

Ali, Imran: *The Punjab under Imperialism*, 1885-1947Princeton: Princeton University Press, 2016.

Bal, S.S., *British Policy towards the Punjab (1844-49)*, Calcutta, 1971.

Banerjee, Himadri: *Agrarian Society of the Punjab*1849-1901*,* Delhi: Manohar,2005.

Banga, Indu (ed.), *Five Punjabi Centuries*, Delhi: Manohar, 2000.

Banga, Indu and J.S. Grewal, eds., *Maharaja Ranjit Singh: Society and Economy*, Amritsar: GNDU, 2001.

Banga, Indu, *Agrarian System of the Sikhs,* Manohar, Delhi: 1978.

Fauja Singh, *Some Aspects of State and Society under Ranjit Singh*, New Delhi: Master Publishers, 1982.

Grewal, J.S. and Indu Banga, eds., *Maharaja Ranjit Singh and His Times*, Amritsar: GNDU, 1980.

Grewal, J.S., *The Reign of Maharaja Ranjit Singh: Structure of Power, Economy and Society*, Patiala: Sita Ram Kohli Memorial Lectures, 1981.

Grewal, J.S., *The Sikhs of the Punjab*, New Cambridge History of India, 1994.

Grewal Reeta and Sheena Pall, eds., *Pre-Colonial and Colonial Punjab*, Delhi: Manohar, 2005.

Grewal, Reeta, 'Polity, Economy and Urbanization: Early 19th Century Punjab' *Journal of Regional History*, Vol. IV, 56-72.

Jones, Kenneth W.: *Socio-Religious Reform Movements in British India*, Cambridge: Cambridghe University Press, 2006.

Khilnani, N.M: *British Power in the Punjab, 1839-1858,* Bombay: Asia Publishing House, 1972

Khushwant Singh, *History of the Sikhs*, Vol.II, Princeton: Princeton University Press, 2005.

Sukhwant, Singh: *Technological Breakthrough and Peasant Enteprise*, Delhi: Manpreet Prakashan, 2002.

Suggested Readings

Banga, Indu & J.S. Grewal, *Civil and Military Affairs of Ranjit Singh*, Amritsar: GNDU, 1987.

Farquhar, J.N: *Modern Religious Movements in India*, Delhi: Munshiram Manoharlal, 2010.

Goswamy, B.N., *Painters at the Sikh CourtI,* Delhi: Aryan Books, 1999.

Goswamy, B.N., *Piety and Splendour: Sikh Heritage in Art*, Delhi: National Museum, 2000.

Jones, Kenneth W.: *Arya Dharam: Hindu Concoiusness in the Nineteenth Century, Punjab*, Delhi: Manohar, 2006.

Lafont, S., *Maharaja Ranjit Singh: Land of Five Rivers*, Delhi: Oxford University Press, 2002.

Sharma, Radha, *Peasantry and the State Early 19th century Punjab*, Delhi: K.K. Publishers, 2000.

Sukhdev Singh Sohal: *The Making of Middle Classes in Punjab*, Jalandhar: ABS Publishers, 2008

Grewal J.S., *Early 19th Century Punjab*, Routledge, 2017.

PAPER –II OPT. (I) EVOLUTION OF ANCIENT SOCIETIES

COURSE CODE: HIS 431

Objective: This course provides an introduction to the form of existence of the earliest human societies and their relationship with the study of history.

Pedagogy: The course depends on class room discussions and visits to the various museums of history.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Hunters-gatherers; Neolithic; tribal society; chiefdom; shamanism; urban revolution; urbanization; Bronze age; Democracy; slavery; reciprocity; market exchange; gift giving; primitive valuables; domestic mode of production;State; Process of urbanization;

Unit –I

Hunting-gathering Societies in Asia;Characteristics of Neolithis societies in Western Asia; Stone culture of European societies wityh reference to Paleolithic and Mesolithic culture;shamanism in western Asia

Unit-II

The urban revolution and the processes of urbanization in Mesopotamia; features of Persian culture and the Zoroastrian religion; Religion and art in Egypt;Socio-economic life in Egypt.

Unit-III

The study of Shang period in Chinese civilization and its features; Neolilthic culture of China; Cultural and religious progress under the Chou; the political and ethical philosophy of Confucius;

Unit –IV

The evolution of the city state with reference to Greek idea of democracy;slavery and religion in Greek;Roman society and Economy;Decline of Roman Civilization

Essential Readings

Adams, R.M., 'Patterns of Urbanization in early Southern Mesopotamia' in P J Ucko et al, eds., *Man, Settlement and Urbanism*, London: Duckworth, 1972.
Adams, R.M., 'Water, Land and Life' in *Heartland of Cities*, Chicago: University of Chicago Press, 1981.
Alfody, G., *The Social History of Rome*, London: Routledge, 1988.
Andreev, Y.V., 'Urbanization as a Phenomenon of Social History', *Oxford Journal of Archaeology,* 8(2), 1989.
Andrewes, A., *The Greek Society,* London: Penguin, 1971.
Belshaw, C., *Traditional Exchange and Modern Markets,* Englewood Cliffs: Prentice-Hall, 1965.
Binford, L., ' Post-Pleistocene Adaptation', in S and L Binford, *New Perspectives in Archaeology,* Chicago: Aldine, 1968.
Bohannan, P. & G. Dalton(eds.), *Markets in Africa,* Evanston: Northwestern University Press, 1962.
Childe, V.G., , 'The Neolithic Revolution', in V.G. Childe, *Man Makes Himself,* London: Moonraker Press, 1956.

Suggested Readings

Adams, R.M., *The Evolution of Urban Society,* London: Weidenfeld & Nicolson, 1966.
Childe, V.G., 'The Urban Revolution in Mesopotamia' in *What Happened in History*, Harmondsworth: Penguin, 1954.
Clark, G and S Piggott, *Prehistoric Societies*, London, Hutchinson, 1965.
Earle, T. How., *Chiefs Come to Power*, Stanford: Stanford University Press, 1997.
Ehrenberg, V., *The Greek State*, Oxford: Basil Blackwell, 1960.
Ellen, R., 'Modes of Subsistence: Hunting and Gathering to Agriculture and Pastoralism', in T. Ingold ed., *Companion Encyclopedia of Anthropology*. London/New York: Routledge, 1994.
Finley, M.I., *Ancient Slavery and Modern Ideology*, London: Penguin, 1980.
Finley, M.I., *The Ancient Economy*, London: Chatto & Windus, 1973.
Harris, D.R. (ed)., , *The Origins and Spread of Agriculture in Eurasia,* Washington: Smithsonian Institution Press, 1996.
Ingold, T et al, *Hunter and Gatherers*, Volume One, New York/Oxford: Berg, 1988.
Jones, A.H.M., *The Roman Economy*, Oxford: Basil Blackwell, 1974.
Service, E.R., *The Hunters,* Englewood Cliffs: Prentice Hall, 1966.
Thomas, J., *Understanding the Neolithic*, London/New York: Routledge, 1999.
Wason, P.K., *The Archaeology of Rank,* Cambridge: Cambridge University Press, 1994.

PAPER –II OPT. (II) FEUDAL SOCIETY IN WESTERN EUROPE

COURSE CODE: HIS 421

Objectives: This paper is essentially devoted to the social history of medieval western Europe. It traces the transformation of the slave-owning society into the feudal society, besides exploring the institution of vassalage, with reference to the fief and manor. These structural changes are examined in the context of improvements in agricultural and industrial production, besides the expansion of trade and urbanization. This paper aims at understanding the methods of historical analysis that were developed by Marc Bloch, Henri Pirenne and Parry Anderson. It also enables us to sharpen our understanding of parallel developments in medieval India, as it opens the avenues of comparative analysis.

Pedagogy: The teacher is required to exercise considerable patience and diligence, so as to clarify key concepts like modes of production, kinship ties, vassalage, fief and manor. Equal attention is paid to material aspects of human life like agriculture, industry and trade. The study of historical maps, particularly relating to trade routes and urban centres, promises to benefit the young learners.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Latifundium; Roman Proletarii; Clan Optimates; Vendetta; Solidarity of kindred group; Vassal; Allod; Benificium; Precaria, fief de reprise, fiefs de dignité; Liege Homage; Ceremony of investiture; Demesne; Manor; banalities,Three field rotation in agriculture; Heavy Plough; weaving loom, Gothic architecture; Romanesque architecture; Catalan forge; Whipple tree; Trebuchet; Guilds; Urban Centres; Champagne fairs; Journeyman ; Hanse; corvée.

Unit I

Decline of Roman Empire with special reference to its political and social structure; the slave mode of production; consequences of the Germanic invasions; the role of kinship ties; practice of vendetta and ownership of property; structure of the family.

Unit II

Origin, development and symbolism of the feudal ties; mutual obligations of lords and vassals; plurality of homage; evolution and types of fiefs; inheritance and sale of fiefs; nature and working of the manorial system.

Unit III

Methods of agricultural production; changes in the agricultural technology and cropping pattern; salient features of textile production; contribution of building industry; development of mining industry.

Unit IV

Features of internal trade with special reference to champaigne fairs; international trade and the role of Hanse; emergence of urban centres; the organisation of guilds; the hierarchy of artisans; peasant and artisan revolts.

Essential Readings

Anderson, Perry, *Passages from Antiquity to Feudalism*, London: Verso (Rep.), 2013.

Bloch, Marc, *Feudal Society,* Vol.I, London: Routledge and Kegan Paul, (Rep.), 1975, New Delhi: Asha Jyoti Booksellers and Publishers (ndian ed.), 2006.

Bloch, Marc, *Samanti Samaj*, Vol.I, Hindi Translation, Krishnakant Sharma, New Delhi: Granth Shilpi, 2001.

Hodgett, Gerald A.J., *A Social and Economic History of Medieval Europe,* London*:* Routledge (Rep.), 2006.

Pirenne, Henri*, Economic and Social History of Medieval Europe*, Eastford (USA): Martino Fine Books (Rep.), 2014.

Suggested Readings

Cipolla, Carlo, (Ed.), *The Fontana Economic History of Europe: The Middle Ages,* London: Collins/Fontana Books, 1976.

Ganshoff, F.L., *Feudalism*, London: Longmans Green and Co. Ltd, 3rd Edition, 1963.

Pounds, N.J.G., *An Economic History of Medieval Europe*, London: Longman, 1974.

PAPER –II OPT. (III) HISTORY OF CAPITALISM

COURSE CODE: HIS 411

Objective: To trace the broad patterns in the history of capitalism since its rise in the sixteenth century through its emergence as the most powerful socio-economic system in the late nineteenth and early twentieth centuries.

Pedagogy: Class room lectures and discussions form the basis of instruction in this course.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Feudalism; Capitalism; Socialism; Marxism; Liberalism; Dialectical Materialism; Scientific Temper; Protestantism; Reformation; Banking system; Equality; Brotherhood; Liberty; Imperiakisms; Trade Unions;Spinning Jenny; Enclosures; agricultural revolution; industrial revolution; Feminism; Stalinism; Absolutist state; Totalitarianism; Welfare State.

Unit I

Transition from feudalism to capitalism: The role of colonial pillage in the emergence of capitalism 1500-1850; Mercantilism and its various forms, various chartered companies and their political and economic activities, the rise of the bourgeoisie, colonial expansion and critics of mercantilism; the emerging link between the generation of wealth and science; the scientific revolution and its relationship with war and the growth of trade in the 16th and 17th centuries.

Unit II

The rise of industrial capital, 1750-1914 with specific reference to Cotton Textile, Coal, Steam, Iron and Steel; the contribution of agriculture to capitalism: the various agricultural revolutions in the 17th, 18th and 19th centuries with special reference to enclosures, animal husbandry, food adequacy and population growth; creation of an infrastructure for economic growth; the factory system, the transport revolution, credit systems, banks, insurance, joint stock companies.

Unit III

Working Class: The Chartist Movement, trade unions, their role and growth, controversies over living conditions; social unrest and the revolutions of the 1840s in England, France, Germany and Italy; the middle classes: spread of education, growth of socialist and liberal ideas; women and public affairs, organization of local government.

Unit IV

Imperialism in the industrial era: great power rivalry in Europe, Asia and Africa; Debates on the nature and origins of 19th century imperialism; the various economic depresses of the 19th and early 20th centuries and their social and political impact; national responses to the crises: the growth of totalitarian and liberal politics in the form of Fascism, Nazism, Stalinism and the liberal welfare state.

Essential Readings

Beaud, Michel, *A History of Capitalism 1500-2000*, New Delhi: Akar, 2004.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic change and Military conflict from 1500 to 2000*, New York: Random House, 1988.

Landes, David S., *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*, Cambridge: Cambridge University Press, 1969.

Suggested Readings

Marx, Karl, *The Capital*, Vol. I, especially the following 6 chapters:

'Bloody Legislation against the Expropriated, from the end of the 15th Century.

'Forcing down of Wages by Act of Parliament'

'Genesis of the Capitalist Farmer'

'Reaction of the Agricultural Revolution on Industry. Creation of the Home-Market for Industrial Capital'

'Genesis of the Industrial Capitalist'

'Historical Tendency of Capitalist Accumulation'

'The Modern Theory of Colonisation'

Mendelsohn, K, *Science and Western domination*, London: Thames and Hudson, 1976.

Rostow, W.W., *The Stages of Economic Growth: A Non-Communist Manifesto*, Cambridge: Cambridge University Press, 1960.

PAPER –II OPT. (IV) RISE AND GROWTH OF COLONIALISM IN INDIA

COURSE CODE: HIS 412

Objective: This course aims to introduce the student to the broad trends in the rise and growth of colonialism and its specific form in India in modern times.

Pedagogy: The course is based on class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Colonialism; Colonial Structure; Imperialism; Colonial state; Imperial historiography; Nationalist historiography; subaltern historiography; economics of colonialism; mercantilist economy; commercialization of agriculture; de-industrialization; labour; Balance of trade; Charter Act of 1813; Finance imperialism; economic drain; old guarantee system; new guarantee system; rural indebtedness; ethnic identities; neo-colonialism; unequal development; capitalist class;National Planning Committee; political economy;

Unit I

Introduction to Colonialism: Colonial Structure & State; Stages of Colonialism; Economics of Colonialism; Historiography of Colonialism.

Unit II

Colonialism in India: East-India Company and Mercantilist Colonialism 1751-1813; 'Free Trade' 1813-1858, Impact on Agriculture; Trade and Industry; Labour Colonialism.

Unit III

Modern India and Imperialism: Theory of Imperialism; Finance Imperialism 1858-1947; The Indian Capitalist Class; The Nationalist Economic Agitation.

Unit IV

Colonialism and Modernization in India; Debates on impact of Colonialism on India; Colonialism and Ethnic Identities in India; British and Indian Ideas on Indian Economic development, 1858-1905; Danger of Neo-Colonialism after 1947.

Essential Readings

Bagchi, Amiya Kumar, *Colonialism and Indian Economy,* OUP, New Delhi, 2010.

Bhattacharya, Neeladri, *The Great Agrarian Conquest: The Colonial Reshaping of a Rural World,* Permanent Black, Ranikhet, 2018.

Chandra Bipin , *The Rise and Growth of Economic Nationalism in India,*Peoples Publishing House, New Delhi, 1978.

_____, *Essays on Colonialism*, Orient Longman, New Delhi, 2006(First Published 1999)..

_____, *Nationalism and Colonialism in Modern India*, Orient Longman, Delhi, 2006(First Published 1979).

Cohen, Benjamin J.,*The Question of Imperialism, The Political Economy of Dominance and Dependence*, Macmillan, 1973.

Cohn, Bernard S., *Colonialism and its Forms of Knowledge: The British in India,* Princeton University, Princeton, 1996.

Dutt, R.P., *India Today,*Popular Parkashan, Bombay, 1949.

Fieldhouse, D.K., *Colonialism: An Introduction*, Weidenfeld and Nicolson, London, 1981.

Habib, Irfan, *Essays in Indian History,* Tulika, New Delhi, 2007(First Published 1995).

Mohan, Kamlesh, "Colonialism & Ethnic Identities in India: 19th to Early 20th Century", in Kaisar, A.J. & Verma, S.P.(eds.), *Art and Culture: Endeavours in Interpretation,*New Delhi, 1996, pp.171-191.

Subramaniyam, Sanjay, *Europe's India: Words, People, Empires(1500-1800),* Harvard University Press, London, 2017.

Tharoor, Shashi, *An Era of Darkness: The British Empire in India,* Aleph, New Delhi, 2016.

Tomlinson, B.R., *The New Cambridge History of India: The Economy of Modern India 1860-1970,* Cambridge University Press, New Delhi, 1993.

Suggested Readings

Barrat, Brown, M., *The Economics of Imperialism*, London, 1974.

Bhattacharya, Dhires, *A Concise History of the Indian Economy (1750-1950),* Prentice Hall of India Pvt. Limited, New Delhi, 1979(Second Edition).

Chandra, Bipan, "Colonialism, Stages of Colonialism and the Colonial State",*Journal of Contemporary Asia*, Vol. 10, No. 3, 1980.

Fisher, Michael H., *Counterflows to Colonialism: Indian Travellers and Settlers in Britain(1600-1947),* Permanent Black, Delhi, 2004.

Habib, Irfan, *A People's History of India: Indian Economy(1858-1914),* Tulika Books, New Delhi, 2006.

_____,*A People's History of India: Indian Economy under Early British Rule(1757-1857),* Tulika Books, New Delhi, 2013.

Hobsbawm, Eric, *The Age of Revolution(1789-1848),* Weidenfeld and Nicolson, London, 1962.

_____, *The Age of Capital,* Weidenfeld and Nicolson, London, 1975.

Owen, Roger and Bob Suttcliffe (eds.), *Studies in the Theory of Imperialism*, Longman, London, 1972.

Roy, Tirthankar, *The Economic History of India(1858-1947),* OUP, New Delhi, 2006.

_____, *An Economic History of Early Modern India,* Routledge, Oxon, 2017 (First Published 2013).

Said, Edward, *Orientalism: Western Conception of the Orient,* Penguin, New Delhi, 2001(First Published 1978).

PAPER –IIOPT. (V):**HISTORY OF SECULARISM IN MODERN INDIA(NOT OFFERED TO STUDENTS IN THIS SESSION)**

COURSE CODE: HIS 602

Objective: Here we examine the idea of secularism, its origins in the west and the dilemmas in implementing this idea in India.

Pedagogy: Class room lectures and discussions form the bases of instruction.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Define Secularim, Fundamentalism, Pluralism, Social Science Perspective Of Secularism, Nation State, Western Secularism, Influence Of Enlightenment On Secularism, The Sikh Idea Of Secularism, Islamic Traditions And Secularism, Muslim Nationalists, Nationalist Muslims, Maulana Mohammad Ali, Maulana Abul Kalam Azad, Hindu Nationalism, Revivalism, Glorious Past, RSS, Gandhian Perspective Of Secularism, Nehru's Idea Of Secularism, Secularism According To Indian Constitution, Give Two Constitutional Provisions About Secularism, Communalism

Unit 1

Scope, concepts and method:

Secularisation and secularism: Social Science perspectives;

The emergence of the nation state and its relationship with secularism and religion.;

Secularism in the Enlightenment tradition and thereafter in Europe.

Unit II

Efforts to engage diverse traditions and interests:

The Sikh traditions and the idea of a secular state: Ranjit Singh;

Maulana Mohamed Ali, Maulana Abul Kalam Azad, the idea of a secular state and the conflict between pluralism and fundamentalism within the Islamic traditions;

Reform and revivalism in the nineteenth century Hindu tradition, Vivekananda, Arya Samaj and the RSS.

Unit III

Secularism in the formation of an Indian identity

The Gandhian perspective;

The Nehruvian perspective;

The Constitution of India and legislating for secularism;

Unit IV

The struggle for ideological space in recent times

The majority-minority conundrum.

Communalism and communal riots since independence.

The conflicting perspectives of Fundamentalism and Pluralism.

Essential Readings:

Madan, T N., *Modern myths, locked minds: secularism and fundamentalism in India,*Oxford University Press, New Delhi, 2003.

Chandra, Bipan, *Communalism in modern India*, Vikas, New Delhi, 1984.

Saberwal, Satish, *India: the crisis within*, Oxford University Press, 1996.

Smith, Donald Eugene, *India as a secular state*, Oxford University Press, Oxford, 1968.

Suggested Readings:

Ahmed, Akbar S., *Rediscovering Islam: making sense of Muslim history and society*, Routledge and Kegan Paul, London, 1988.

Azad, A. K., *India wins freedom,* Bombay, Orient Longman, 1959.

Babb, Lawrence A.,*Redemptive encounters: three modern styles in the Hindu tradition*, University of California Press, Berkeley, 1986.

Baxi, Upendra and Bhiku Parekh eds., *Crisis and change in contemporary India*, Sage, New Delhi, 1995.

Bayly, Chris A., *Indian society and the making of the British empire***,** Orient Longman, Hyderabad.

Berger, Peter L., *The social reality of religion*, Penguin, London, 1973.

Bhaduri, Amit *et. al.,* **"**A statement on scientific temper", *Mainstream,* 25 July 1981.

CAD., *Constitutent Assembly debates: 1948-49*, Loksabha Secretariat, New Delhi [also available for download on the website of the Parliament of India].

Chatterjee, Partha., **"**Secularism and toleration", *Economic and Political weekly,*1994 pp. 1768-77.

Datta, V. N., *Masulana Azad,*Manohar, New Delhi, 1990.

Dube, S. C. and Basilov V. N. eds., *Secularization in multi-religious societies*, Concept, New Delhi, 1988.

Gandhi, Rajmohan., *Understanding the Muslim mind*, Penguin, New Delhi, 1987.

Glasner, Peter., *The sociology of secularization*, Routledge and Kegan Paul, London, 1977.

Goyal, D. R., *Rashtriya Swayamsewak Sangha*, Radhakrishna Prakashan, New Delhi, 1979.

Haq Mushirul., *Islam in secular India*, Indian Institute of Advanced Studies, Simla, 1972.

Hardy, Peter., *The muslims of British India*, Cambridge University Press, Cambridge, 1971, reissued in 1996.

Hasan, Mushirul, *Mohamed Ali*, Manohar, New Delhi, 1981.

Nehru, Jawaharlal, *The discovery of India*, The Signet Press, Calcutta, 1946 [many later reprints also available].

O'Connell, Joseph T. *et al.* eds., *Sikh history and religion in the twentieth century,* University of Toronto, Toronto, 1988.

Singh, Mohinder, *The Akali movement*, Macmillan, New Delhi, 1978.

PAPERS –III & IV OPT. (I) CULTURAL HISTORY OF ANCIENT INDIA

COURSE CODE: HIS 432

Objective: To examine the cultural history of Ancient India

Pedagogy: Class room lectures, discussions, visits to museums and places of cultural importance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Vedas; *Aranyakas; Upanishads; Vedangas; Pitikas; Dharmasutras; Manusmriti; Arthashastra*;Nayanar Saints; Alavar Saints;*Puranas; Jatakas*; Sangam Literature; Stupa; Nataraja-Shiva; Chaitya; Vihara; Mathura Sculptural Art; Gandhara Sculptural Art; Sanchi; Nagara Style Temple Architecture; Dravida style Temple architecture; Chola Bronze; Buddhist cave paintings;Temple paintings;Ajanta; Ellora; *Natyashastra*; Raga; Rasa; Bhava;*Chitralakshana*; Types of Abhinaya; *Shakuntala.*

Unit I:
Sanskrit and Pali Literature: Vedic Corpus (*Vedas*, *Aranyakas*, *Brahmana*, *Upanishadas* and *Vedangas*), Shastras (*Manusmriti*, *Arthashastra* and *Kamasutra*), Puranas and Epic (*Mahabharata* and *Ramayana*); Pali Literature (*Vinayapitaka*, *Suttapitaka, Abhidhammapitaka,* and the *Jatakas*); Sangam Literature.

Unit II:
Art and Architecture: Mauryan Art; Buddhist Architecture (Stupa, Chaitya and Vihara); Temple Architecture (Nagara and Dravida Temples).

Unit III:
Sculpture and Paintings: Sculptural Art (Mathura, Gandhara and Amravati School), the Pallava Art and the Chola Bronze; Paintings (Ajanta and Ellora).

Unit IV:
Interpretations and Perspectives: Indian Art- Various Theories; Study of the *Vishnudharmottara Purana*-Chitralakshana; Study of the *Natyashastra* (Natya, Nritya, Rasa, Bhava, Types of Abhinaya, Regional Theatre).

Essential Readings

Basham, A. L., *The Wonder That Was India (A survey of the history and culture of the Indian sub-continent before the coming of the Muslims)*, London: Picador an imprint of Pan Macmillan Ltd, 2004 reprint.
Dhar, Parul Pandya, ed. *Indian Art History: Changing Perspectives*, New Delhi: DK Printworld and National Museum Institute, 2011.
Gupta, S. P. and Asthana, S. Prabha, *Elements of Indian Art (Including Temple Architecture, Iconography and Iconometry),* New Delhi: D. K. Printworld, 2007 reprint.
Rangacharya, Adya, *The Natyasastra,* (English translation with critical notes), New Delhi: Munshiram Manoharalal, 1999 (or Any other suitable translation).
Sahu, B. P., *A People's History of India 7- Society and Culture in Post-Mauryan India, c. 200 BC- AD 300*, (with a chapter on language and literature by Kesavan Veluthat), New Delhi: Tulika Books, 2015.
Shah, Priyabala, tr. *Vishnudharmottara Purana*, Delhi: Parimal Publications, 2002 (or Any other suitable translation).
Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Delhi: Pearson Longman, 2009.

Suggested Readings

Agrawala, V. S., *Indian Art [A History of Indian Art from the Earliest Times up to the Third Century AD]*, Varanasi: Prithivi Prakashan, 1965.
Dehejia, Vidya, ed. *Representing the Body: Gender Issues in Indian Art*, New Delhi: Kali for Women and The Book Review Literary Trust, 1997.
Deva, Krishna, *Temples of North India*, New Delhi: National Book Trust, 2010 reprint.
Kaul, Shonaleeka, ed. *Cultural History of Early South Asia,* New Delhi: Orient Blackswan, 2014.
Sivaramamurti, C., *Indian Painting*, New Delhi: National Book Trust, 2013 reprint.
Srinivasan, K. R., *Temples of South India*, New Delhi: National Book Trust, 2010 reprint.
Winternitz, M., *A History of Indian Literature- Vol. 1, 2, 7 3,* Delhi: Motilal Banarsidass, 1991 third edition.
Zvelebil, Kamil V., *A History of Indian Literature Vol. X: Tamil Literature*, Wiesbaden: Otto Harrassowitz, 1974.

PAPERS –III & IV **OPT. (II) SACRED CENTRES IN INDIAN CIVILIZATION**

COURSE CODE: HIS 604

Objective: The aim of this paper is to acquaint the students with the evolutionary, functional and financial aspectsof the sacred places of major systems of religious beliefs which served as important centres of pilgrimage. One national level centre of each major religious systems like Vaishnavism, Shaivism, Shaktism, Sufism and Sikhism has been taken as a case study to reflect the multi-cultural character of Indian subcontinent.

Pedagogy: The classroom teaching is supplemented by showing the slides of each sacred centre and power pointpresentation for greater effectiveness. The continuous evaluation is based on internal assessment which comprises of unit tests, presentation of seminar and classroom participation of the students.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Devadasi;Kannata Pandit; Trishuli;Arjitha Seva; Nabakalebra;Muktimandapa;Chhatis Nijoga; Pandas;Tilkayat;Birat System; Baris; Jajmani System; Panchkosi Parikarma; Nilkantha Syndrome; Kumbha Fair; Tabarruk; Degh; Chishti Silsila; Sama; Khuddam; Sajjada-i-Nashin; Mutwalli;Ghusal;Granthi; Dastur-ul-Amal.

Unit I

Notion of Sacred and spread of centres; social, cultural and economic functions; resources and patronage; temple functionaries: Priestly class, non-priestly and managerial class; Devadasis.

Unit II

The temple at Tirumala-Tirupati: its resources and patronage; the temple of Jagannath at Puri and its administration; emergence of temple towns in Gokul and Nathdwara; its mode of worship.

Unit III

Emergence of Varanasi as a Shaiva Centre: continuity of its traditions; Shakta centres in Himachal; rituals and practice of religious suicide in Prayag; the Kumbha fair at Prayag.

Unit IV

Emergence of Dargahs in India; Ajmer Sharif - the functionaries and the Urs festival; history and control of the Golden Temple; its mode of worship.

Essential Readings

Currie, P.M., *The Shrine and Cult of Mu 'in-al-Din Chishti of Ajmer,* Delhi: Oxford University Press, 2006 (reprint).

Dubey, D.P., *Prayaga- The Site of Kumbha Mela*. New Delhi: Aryan Books International, 2001.

Jindal, Rajendra, *Culture of a Sacred Town*, Bombay: Popular Prakashan, 1976.

Kaur, Madanjit, *The Golden Temple: Past and Present*, Amritsar: Guru Nanak Dev University, 1983.

Mishra, K.C., *The Cult of Jagannatha*, Calcutta: K.L. Mukhopadhyay, 1971.

Sachdeva, Veena, 'Emergence of Temple Towns in North India: Gokul and Nathdwara', *Research Journal SocialSciences*, Vol.13, Number 1, 2005, pp.121-31.

Saraswati, Baidyanath, *Kashi: Myth and Reality of a Classical Cultural Tradition,* Shimla: Indian Institute of Advanced Study, 1975.

Sitapati, P. Srivenkateswara, *The Lord of the Seven Hills*, Bombay: Tirupati, Bhartiya Vidya Bhavan, 2001.

Troll, Christian W., *Muslim Shrines in India: Their Character, History and Significance*, Delhi: Oxford University Press, 2003 (reprint).

Suggested Readings

E. Hein, "Temple Town & Hinterland: The Present Network of 'Religious Economy in Puri" in Eschmann, Annsharlot, Hermann Kulke and Gaya Charan Tripathi, *The Cult of Jagannath and the Regional Tradition ofOrissa*, Delhi: Manohar , 1978, pp. 439-448.

Jordan, Kay K., *From Sacred Servant to Profane Prostitute*: *A History of Changing Legal Status of theDevadasis in India,* 1857-1947, Delhi: Manohar, 2003, pp. 493-504.

Nandi, R.N., *Religious Institutions and Cults in the Deccan*, Delhi: Motilal Banarsidass, 2008 (reprint).

Pande, Rekha, "The Devadasis", in J.S. Grewal, *Religious Movements and Institutions in Medieval India,* Vol. VII, Part II, New Delhi: Oxford University Press, 2006,pp. 493-504.

Patnaik, N., *Cultural Tradition in Puri*, Shimla: Indian Institute of Advanced Study, 1977.

Reddy V. Narayana & A. Munirathnam Reddy, "History and Patronage of Tirumala- Tirupati Devasthanam," *Social Anthropology of Pilgrimage*, (ed Makhan Jha), Inter-India Publications, New Delhi, 2009, pp. 140-73.

Ramanaiah, J., *Temples of South India*, New Delhi: Concept Publishing Company, 1989.

Sachdeva, Veena, "Sikh Regurgance and Control: The Golden Temple, *Social Transformation in North-Western India during the 20th Century* (ed. Chetan Singh)", New Delhi: Manohar, 2010, pp 53-82.

Saraswati Baidyanath, *The Spectrum of the Sacred*, New Delhi: Concept Publishing Co., 1986.

Sharma, Mahesh, *The Realm of Faith, Subversion, Appropriation and Dominance in Western Himalaya*, Shimla, Indian Institute of Advanced Study, 2001.

PAPERS –III & IVOPT . (III) **MEDIEVAL INDIAN ART AND MONUMENTS**

COURSE CODE: HIS 424

Objective: The aim of this paper is to acquaint the students with architectural monuments constructed during themedieval period. In fact, each of the Muslim dynasties which established itself in the Indian subcontinent created its own architectural style and bequeathed a wealth of outstanding secular and religious buildings, this paper studies the main features of these buildings. It also discusses the developments in painting, dance & music.

Pedagogy: Lectures, visits to museums and monuments, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Quwat-ul-Islam; Mimber; Mehrab;Alai Minar; Iron Pillar in Qutb Complex;Sher Shah Suri's Tomb; Gagan Mahal; Char Minar; Mecca Masjid; Lotus Mahal; Elephants Stable;Gol Gumbad; Humayun's Tomb;Sher Mandal; Ibadat Khana;Buland Darwaza; Anoop Talab; Panch Mahal; Moti Masjid; Bibi ka Makbara; Pietra Dura; Hamza Namah; Kitab Khana;Shahi Qalam; Razmnamah

Unit I

Forms of Architecture of the Sultanate period; detailed study of Qutb Complex; the Tughlaq Monuments; Sayyid, Lodhi and Sur Architecture.

Unit II

Deccan Style of Architecture**:** Bidar; Golconda; Bijapur; Vijaynagar.

Unit III

Early phases of Mughal Architecture; Akbar's buildings at Fatehpur Sikri; elements of change under Jahangir; crystallisation of Mughal style under Shah Jahan; Islamization of architecture under Aurangzeb.

Unit IV

Establishment of Shahi Qalam; emergence of new traditions under Jahangir; response to European techniques and themes; paintings at the courts of Rajput rulers of the Punjab hills.

Essential Readings

Asher, Catherine B., *Architecture of Mughal India*, The Cambridge History of India, Part I, Vol. 4, New Delhi: Cambridge University Press, 1995.

Beach, Milo Cleveland, *Mughal and Rajput Painting*, Cambridge: The New Cambridge History of India, 2014 (reprint).

Brown, Percy, *History of Indian Architecture (Islamic Period), D.B. Taraporevala Sons & Co. Pvt. Ltd., Mumbai,2010.*

Juneja Monika (ed.), *Architecture in Medieval India*, Delhi: Permanent Black, 2001.

Koch, Ebba, *Mughal Architecture: An Outline of its History and Development (1526-1858),* New Delhi: Oxford University Press, 2002.

Merklinger, Elizabeth Schotten, *Sultanate Architecture of Pre-Mughal India*, New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd., 2005.

Suggested Readings

Ahmed, Aziz, *Studies in Islamic Culture in the Indian Environment*, New Delhi: Oxford University Press, 2000.

Chandra, Satish, *Medieval India From Sultanate to the Mughals*, *Delhi Sultanate (1206-1526), Part One*, New Delhi: Har Anand Publications Pvt. Ltd., 2010 (repirint).

Goswamy, B.N. & B. Fisher, *Wonders of a Golden Age,* Zurich, Museum Rietberg, 1987.

Hussain Yusuf, *Glimpses of Medieval Indian Culture,* Bombay: Asia Publishing House, 1973 (reprint).

Koch, Ebba, *Mughal Art and Imperial Ideology Collected Essays,* New Delhi: Oxford University Press, 2001.

Majumdar, R.C.(ed.), *The History and Culture of the Indian People, Vol.VII*, Bombay: Bhartiya Vidya Bhavan, 2015 (reprint).

Qaisar, Ahsan Jan and Verma, Som Parkash, (eds.), *Art and Culture: Endeavours in Interpretation*, New Delhi: Abinav Publications, 1996.

Sharma, Sunil, *Painting the Mughal Experience*, New Delhi: Oxford University Press, 2005.

Verma, Som Parkash, *Mughal Painters and Their Work: A Biographical Survey and Comprehensive Catalogue*, New Delhi: Oxford University Press/Centre of Advanced Study in History, Aligarh Muslim University, 1994.

Rizvi, S.A.A., *The Wonder That was India*, Vol.II, Picador India, 2005.

PAPERS –III & IVOPT(IV). GENDER RELATIONS IN MODERN INDIA

COURSE CODE: HIS 601

Objective: The subject of Gender in our era has become a focus of thought and study. There is concern for and discussion of women's roles, rights, economics and womens' studies.

Gender relations in Indian history is a critical understanding of Social reality from the Gender perspective. The crucial insight that while sex is biologically given, gender is socially constructed is the basic premise on which the paper is based. In virtually every area of social change, gender has become a category of analysis, which is to say that political, economic and development issues are thought of in terms of women's participation and their consequences for society.

The aim of the paper is to give an overview of Gender Relations in 19th& 20th Century India. To understand the subject and its structure, the first unit deal with the different perspectives on writings of the subject. A background is given of the position of women in ancient and Medieval India. A unit is devoted to the Colonial period. Two units demarcate the Initiatives and strategies employed post-independence to better the condition of women in every sphere.

Pedagogy: The course is based on class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Feminism; liberal feminism; radical feminism; socialist feminism; patriarchy; polygamy; stridhan; Wood's Despatch; Pratiloma/Anuloma; sati; jauhar; infanticide; concubinage; age of consent;re-socialization; patrilinear; matrilinear; joint family; nuclear family; infant mortality; sexual harassment; dowry death; devadasi; Naribahini; Zenana; Andarmahal; custodial rape; domestic violence; female foeticide; gender

Unit I

Historiography of Gender Relations, Different Perspective of women in Ancient India; Socio-cultural practices in Medieval India; Women in major religious traditions; structures of Patriarchy.

Unit II

Colonial Period: Impact of Social Reforms, personal and customary law; Impact of education on women; Formation of women's organisation; Women's struggle and participation in the national Movement.

Unit III

Post-Independence Initiative: Role of the state in Empowering Women; Political Participation; Legal Provisions; Development of Women's Movement; Women's struggle for rights; Peasant and Dalit Women's Movement.

Unit IV

Locating women in post independence India:Education and change; Role of women in economy; Social Position; Violence against Women; Images of Women in the Media; Continuity and Change.

Essential Readings

Agarwal, Bina, *Structures of Patriarchy: State Community and Household in Modernising Asia*, New Delhi: Kali for Women, 1988.

Altekar A.S., *The Position of Women in Hindu Civilization: Retrospect & Prospect, Delhi 1979*

Calman,Leslie J., *Towards Empowerment, Women and Movement Politics in India*, Oxford: Westview Press, 1992.

Desai, Neera & Maithreyi Krishnaraj, *Women and Society in India*, New Delhi: Ajanta Publications, 1987.

Gandhi, Nandita & Nandita Shah, *The Issues at Stake Theory and Practice in the Contemporary Womens Movement in India*, New Delhi: Kali for Women, 1992.

Kumar, Radha, *The History of Doing: An illustrated Account of Movements for Women's Rights and Feminism in India 1800-1990*, New Delhi: Kali for Women, Lied, 1997.

Leela Kasturi, G. & Vina Majumdar (ed)., *Women and Indian Nationalism*, New Delhi: Vikas, 1994

Nair, Janaki, *Women and Law in Colonial India: A Social History*, New Delhi: Kali for Women, 1996.

Nanda, B.R. (ed.), *Purdah to Modernity*, Delhi: Vikas Publishing, 1976.

Pawar, Kiran (ed.), *Women in Indian History*, Patiala: Vision and Venture, 1996.

Ray, Bharati & Aparna Basu (ed.), *From Independence Towards Freedom: Indian Women since 1947*, New Delhi: Oxford University Press, 2000.

Sangari, Kumkum and Sudesh Vaid (eds.), *Recasting Women*, New Delhi: Kali for Woman, Reprint, 1993.

Siddiqui, M. Mazheruddin, *Women in Islam*, Delhi: 1991.

Suggested Readings

Chanana, Karuna, *Socialisation, Education & Women, Exploration in Gender Identity,* Orient Longman, New Delhi, 1988.

Dietrich, Gabriel, *Women's Movement in India: Conceptual and Religious Reflections*, Bangalore, 1988.

Haksar, Nandita, *Demystification of Law for Women*, New Delhi, 1986.

Jacobson and Wadlkey S., *Women in India: Two Persepctives*, New Delhi, Manohar, 1986

Mathur, Kanchan, Countering Gender Violence, Sage, New Delhi, 2004.

Mazumdar, Vina (ed.), *Symbols of Power: Studies on the Political Status of Women in India*, Bombay: 1979.

PAPERS –III & IVOPT. (V) DIASPORA IN COLONIAL INDIA (**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 455

Objectives: The course aims to familiarize the students to the concept of 'Diaspora' and trace the different categories of Indian Diaspora. The different stages of colonial migrations to British plantation colonies are discussed with reference to the nineteenth and twentieth centuries. The course highlights the social and economic position vis-à-vis other ethnic communities and India's policy towards her diaspora.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Diaspora, Origin Of Indian Diaspora, NRI, People Of Indian Origin, Diasporic Identities, Caste Divisions Of Indian Diaspora, Reginal Divisions Of Diaspora, Linguistic Differences Of Indian Diaspora, Categories Of Indian Diaspora, Emigrations, British Plantation Colones, Migrations, Colonial Migrations, Social Status Of Migrants, Kangani System, Economic Conditions Of Migrants, Ethnic Communities, Cultural Activities, India's Policy Towards Its Diaspora, Race, Ethnicity, Migrations, Guef Countries, Professional Classes In USA And Canada, Migrations To United Kingdom, Migrations Towards Australia, Economic Positions Of Indian's In South Africa.

Unit I

Diaspora: the concept; origin; evolution and contemporary usage; Diasporic identities and their nature; categories of Indian Diaspora; People of Indian Origin and NRIs; Regional, linguistic, religious and caste divisions.

Unit II

Different Stages of Colonial Migrations: Emigration to British Plantation colonies Fiji; Surinam; Guyana; Mauritius; Malaysia; Trinidad & South Africa; their economic position and social status.

Unit III

Migrations in the 20th century: Indian Diaspora in Western Countries (USA, UK and Canada); Migration to Canada & the USA in late 19th and 20th centuries; Migration between 1920s to 1947; Migrations of professionals to USA, Canada, Australia and other developed nations; Migrations to Gulf Countries.

Unit IV

Indian Diaspora, Social and Economic Position: Indian Diaspora with reference to their social status (Race and Ethnicity); Economic position vis-à-vis other ethnic communities; participation and cultural activities; India's policy towards her Diaspora.

Essential Readings:

Arasaratnam, Sinnappah; *Indians in Malaysia and Singapore*, 1970, Reprint, Bombay: Oxford University Press, 1979.

Aurora, Gurdip Singh, *The New Frontiersmen: A Sociological Study of Indian Immigrants in the United Kingdom*, Bombay: Popular, 1967.

Barrier, N. Gerald, and Verne A. Dusenbery, ed; *The Sikh Diaspora: Migration and Experience Beyond Punjab*, Columbia: Modern South Asian Books, 1989.

Bachu, P.K., *Twice Emigrants: East African Sikh Settlers in Britain*, New York: Tavistock Publications, 1985.

Buchignani, Norman., *Immigration and Adaptation and the Management of Ethnic Identity: An Examination of Fijian East Indians in British Columbia*, Ph.D. thesis, Simon Fraser University, 1977.

Buchinani, Norman and Doreen M. Indra; *Continuous Journey: A Social History of South Asian in Canada:* Toronto, Mcclelland and Stewart, 1985.

Desai, Rashmi, *Indian Immigrants in Britain*, London: Oxford University Press, 1963.

Gillion, K.L., *Fiji Indian Migrants: A History of the End of Indentrial in 1920,* Melbourne: Oxford University Press, 1962.

Hardwick, Francis C; (ed), *From Beyond the Western Horizon: Canadians from the Sub-Continent of India*, Vancover: Tantalus Research, 1974.

Helweg, A.W, *The Sikhs in England: The Development of a Migrant Community, 1979* (ed), Delhi: Oxford University Press, 1986.

Hirabyashi, Gordon and K. Victor Ujimoto, *Visible Minorities and Multiculturalism: Asians in Canada,* Toronto: Bullerworth, 1980.

Jain, Sushil K, *East Indians in Canada*, Windsor Canadian Bibliographic Centre, 1970.

Jain, Sushil K,*Indian Diaspora In The Era of Globalisation*, Kalpaz Publications, 2012

Jane Singh, et al. eds., *South Asians in North America*, Berkeley: Centre for South and Southeast Asia Studies*,* University of California, 1988.

Jensen, Joan M, *Passage from India: Asian Indian Immigrants in North America*, Yale University Press, 1988.

Johnston, Hugh, *The Voyage of Kama Gata Maru: The Sikh Challenge to Canada's Colour Bar*, Delhi: Oxford University Press, 1979.

Lepervanche, Marie, M.De; *Indians in White Australia*, London: George Allen and Univin, 1984.

Mangat, J.S., *A History of the Asians in East Africa*, Oxford: Claredon Press, 1970.

Mcleod, W.H., *Punjabis in New Zealand*, Amritsar: GNDU Press, 1986.

Robinson, Vaughn, *Transients, Settlers and Refugees,* Oxford: Clarendon Press, 1986.

Sandhu, K.S., *Indians in Malaya,* Cambridge University Press, 1969.

Watson, J.L. ed., *Between Two Cultures*, Oxford: Basil Blackwell, 1977.

Suggested Readings

Agnihotri, *For Migratory Patterns with Punjab to Canal Colonies*, 1987.

Bains, Tara Singh and Hugh Johston,*The Four Quarters of the Night: The Life-Journey of an Emigrant Sikh,* Mc Gill-Queen's Studies in Ethnic History, 1995

Ballantyne, Tony, *B/W Colonialism and Diaspora Sikh Cultural Formation in an imperial world,* Duke University Press, USA, 2006.

Bali, Judith & Manohar S. Bal (ed), *Sikh in Ontario*, Toronto: Ontario Council of Sikhs, 1993.

Basran, Gurcharan S. and B. Singh Bolaria, *The Sikhs in Canada – Migration, race, class and gender*, New Delhi: Oxford University Press, 2003.

Basch, Glick Schiller & Szanton Blanc, *Nations Unbound: Transnational Projects Post-colonial predicaments & detenitoulization nations states*, Amsterdam: Gordon and Breech, 1993.
Dogra, Ravi, *Indo-Canadian*, Tantallon: N.S. Yeast Publications, 1987.

Ghosh, Ratna & Rabindra Kanungo, *South-Asian Canadians: Current issues in politics of culture*, Calgary: Shastri Indo-Canadian Institute, 1992.

Gundara, Jaswinder, *Splinkered Dreams: Sikhs in Southern Albata*, Calgary: Awsha International Development Resources Centre, 1985.

Hall, Patricia Wong & Victor M. Hwang (eds), *Anti Asian Violence in North America: Asian American & Asian Canadian rejection on Hate, Healing & Resistance*, Walnut Greek: Altanica Press, 2001.

Heather, C. Hudak, *Sikhs in Canada,* Weigh Educational Publishers (distributed by Saunders books, 2005).
Jagpal Sarjeet Singh, *Decomong Canadian: Pioneer Sikhs in their own words*, Columbia: Harbour Publishing Vancouver, 1994.

Mc Leod W.H., *Who is a Sikh? The Problem of Sikh Identity*, Oxford University Press, 1989.

Mukherjee, Miridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism,* SAGE Publication, New Delhi, 2005

Minhas, Manmohan Singh (Moni), *The Sikh Canadians* , Edmonton Alberta: Reidmore Books Inc., 1994.

Ralston, Helen, *The Lived Experiences of South Aian Immigrant Women on Atlantic Canada: The Interconnections of Race, Class and Gender*, Lewiston, N.Y.: Edwin Mellon Press, 1996.

Sandeep S. Brar, *Century of Struggle and Success: The Sikhs Canadians experience.*

Singh, Kesar, *Canadian Sikh (Part I) & Kamaghata Maru massacre*, British Columbia: Kesar Singh, Suney, 1989.

PAPERS –III & IVOPT. (VI): SCIENCE, TECHNOLOGY AND MEDICINE IN COLONIAL INDIA

COURSE CODE: HIS 603

Objective: The course examines a new theme in Indian history and looks at the introduction of science, technology and medicine by the colonial power. The objectives of colonial authorities, the organizational structure and the responses of the people are studied to understand the social impact of these new elements in Indian society.

Pedagogy: The course builds on the basic information of the colonial time and introduces the student to recent works on the theme to understand the larger context of colonial rule.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Science and Technology; Transfer of technology; colonial science;technical education; Diffusionist model of Basalla;wootz; arogyavihara; jurzail burdar; gate keepers; scientific soldiers; 'natinalist'scientists; pinjarapole; Persian wheel; Blue Terror; GTSI; Tata Scheme; BSA; variolation; cordone sanitaire; experimental farms; Unani system of medicine;Samrat Yantra; Colonizing the Body; Basant rog;Shitla mata; variolation;Ola Candi; Bombay Plan; Pilgrim Theory;apartheid in science.

Unit I

Science in pre-colonial times; development of colonial scientific policy; exploration and surveys- Rennel, Mackenzie, Lambton, Buchanan; administration of science; science in education and research.

Unit II

Technology and the Raj: Transfer of technology and British perspective; technology and agriculture; technology and railways; introduction of the telegraph; techology and shipping; technical education.

Unit III

Indigenous medicine and folk practices; early initiatives for health and medicine; colonial state and epidemics-smallpox, cholera, plague; nature of British medical policy; health and hegemony.

Unit IV

Response and Resistance to colonial science, technology and medicine; nationalist views; emergence of Indian scientific community; role of scientific leaders; science, state and nation.

Essential Readings

Arnold, David, *Colonizing the Body*, Delhi: Oxford University Press, 1993.

Arnold, David, *Science, Technology and Medicine in Colonial India*, Cambridge University Press, 2000.

Baber, Zaheer, *Science of Empire*, Delhi: Oxford University Press, 1998.

Deepak Kumar, *Science and the Raj*, Delhi: Oxford University Press, 1995.

Roy Macleod and Deepak Kumar, *Technology and the Raj*, Delhi, Sage.

Suggested Reading

Kerr, Ian J., *Building the Railways of the Raj 1850-1900*, Delhi: Oxford University Press, 1995.

Sangwan, S., *Science, Technology and Colonization*, Delhi: Anamika, 1990.

Sen, S.N., *Science and Technological Education in India*, Delhi: INSA, 1991.

Stone, Ian, *Canal Irrigation in British India*, Delhi: Oxford University Press, 1986.

PAPERS –III & IVOPT. (VII) CONSTITUTIONAL DEVELOPMENT IN MODERN INDIA, 1773-1947

COURSE CODE: HIS 213

Objective: To examine the various aspects of constitutional development in India.

Pedagogy: Lectures, tutorials and discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Charter Act; Queen's Declaration 1858; significance of Council's Act 1867; Dyarchy; Separate Electorate; Simon Commission; Nehru Committee; Provincial Autonomy; Cripps Proposals; Wavell Plan; Cabinet Mission; Mountbatten Plan; Nationalism; Constitutionalism; Constituent Assembly; Shimla Conference; Muddiman Committee; Swaraj; Poona Pact; Reserved Subjects; Transferred subjects; Emergency Powers; Communal Award; August Offer; Dominion Status; Commonwealth, Lucknow Pact; Constituent Assembly; Draft Committee.

Unit I

Constitutional Development during East India Company's rule; Government of India Act 1858, Significance of Queen Victoria's Declaration; Indian Councils Act.

Unit II

A new constitutional experiment: Act of 1909 (Morley–Minto Act); Significance of Montague- Chelmsford Report; The Act of 1919 and Dyarchy System in provinces.

Unit III

Nehru Committee Report; Simon Commission Proposals; the Act of 1935; Provincial Autonomy in operation.

Unit IV

Political Movements and Reform Proposals- Cripps Proposals and Indian reaction; the Wavell Plan; the Cabinet Mission; the Constituent Assembly; the Indian Independence Act; The Constitution of 1949.

Essential Readings:

Austin, Granville, *The Indian Constitution: Cornerstone of a Nation,* OUP, New Delhi, 1999.

Banerjee, A.C., *The Constitutional History of India*, Vol.II. 1858-1919, Macmillan, Delhi, 1978.

Chakrabarty, Bidyut, *Indian Constitution: Text, Context and Interpretation,* Sage, New Delhi, 2017.

Chaturvedi, Archna, *A Constitutional History of India,* Commonwealth Publishers, New Delhi, 2006.

Coupland, R. *The Constitutional Problem in India*, Part I, London, 1944.

Dube, Ishita Banerjee, *A History of Modern India,* Cambridge University Press, New Delhi, 2015.

Kashyap, Subhash G., *Constitutional History of India: Polity, Governance and the Constitution,* Centre for Studies in Civilizations, New Delhi, 2015.

Keith, A.B., *Constitutional History of India*, Central Book Depot, Allahabad, 1961(First Published 1936).

Khosla, Madhav, *The Indian Constitution,* OUP, New Delhi, 2012.

Mehrotra, S.R., *India and Commonwealth,* London, 1965.

Mukherjee, Mithi, *India in the Shadow of Empire: A Legal and Political History (1774-1950),* Oxford India Paperbacks, New Delhi, 2011.

Menon, V.P, *The Transfer of Power in India,* Orient Blackswan, New Delhi, 2017(First Published 1957).

Pylee, M.V., *Constitutional Government in India,* Asia Publishing House, Bombay, 1965(First Published 1960).

Sharma, Sri Ram, *A Constitutional History of India,* Macmillan, Bombay, 1955.

Suggested Readings

Bhatia, Udit, The *Indian Constituent Assembly,* Francis and Taylor, London, 2017.

Chakrabarty, Bidyut and Pandey, Rajendra Kumar, *Modern Indian Political Thought,* Sage, New Delhi, 2009.

Chand, Tara, *History of the Freedom Movement in India, 2 Vols.,* New Delhi, 1967.

Guha, Ramchandra, *Makers of Modern India,* Penguin, New Delhi, 2012.

_____, *Gandhi: The Years that Changed the World(1914-48),*Penguin Allen Lane, New Delhi, 2018.

Prasad, B. *The Origins of Provincial Autonomy*, Central Book Depot, Allahabad, 1941.

Roy, S.N., *Indian Politics and Constitutional Development*, New Delhi, 1976.

Seal, Anil*, The Emergence of Indian Nationalism*, Cambridge University Press, Cambridge, 1968.

PAPERS –III & IVOPT. (VIII) NATIONAL MOVEMENT IN INDIA 1858-1947

COURSE CODE: HIS 212

Objective: The course aims to trace the Indian National Movement from 1858 to 1947 focusing on how different historiographic schools view Indian Nationalism. Emphasis of the course is on the role played by INC from 1885 to 1947 and Gandhi in leading the country to freedom in 1947. The other strands of the National Movement particularly the Revolutionary and Left wing and youth organizations along with the communal strands are highlighted.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts andTerms:

Imperialism; Nationalism; Colonialism; Secularism; Nation in the making; militant nationalism; communalism; non –cooperation; civil disobedience; satyagraha; Home-Rule; Subaltern; Swadeshi; Praja Mandal; Gadhar; Khudai Khidmatgars; Trade Unionism; Indian National ARMY; Partition; Independence; Drain of Wealth; Swarajists; Moppila;Eka Movement; Khilafat Movement; Non-violence; Secretary of State;Minto Morley Reforms; Montague Chelmsford Reforms.

Unit I

Indian Nationalism 1859 – 1885: Different historiographic schools of Indian Nationalism: early associations and peasant uprisings 1859-1880s; theories of origin and foundation of the Indian National Congress; social basis of the Indian National Congress.

Unit II

National awakening in India in its early phase: National Awakening and Socio-Religious Social Reforms; the Moderate phase of the Indian National Congress; Partition of Bengal and Swadeshi; Growth of Extremism; Home-Rule Movement.

Unit III

Nationalism under Gandhi's leadership: emergence of Gandhi and his ideology of mass participation; critical assessment of Non-cooperation and Khilafat Movement, civil disobedience movement; 1940 Satyagraha and Quit India Movement; Freedom Struggle in the princely states.

Unit IV

Other strands of the National Movement: Revolutionary Movement since 1905; Left wing Politics and Youth Organizations; the Indian National Army; Communal strands; Muslim League and Hindu Mahasabha; last phase of the struggle; freedom and partition why Congress and Gandhi accept partition.

Essential Readings

Abel M, Glimpses of Indian National Movement, The ICFAI University Press, India, 2005

Bandyopadhyay Sekhar, *Nationialist Movement of India: A Reader,*Oxford University Press, 2009

Chandra, Bipan, Mridula Mukerjee, Aditya Mukerjee, K.N. Pannikar, Sucheta Mahajan, *India's Struggle for Independence 1857-1947*, New Delhi: Penguin Books, 1989.

Chandra Bipan, *Nationalism and Colonialism in Modern India*, Delhi: Orient Longman, 1979.

Chandra, Bipan, *Communalism in Modern India,* Vikas, New Delhi, 1984.

Chandra Bipan, *Indian National Movement: Long Term Dynamics*, Har Anand Publiction, New Delhi,2010.

D.N. Dhanagare, *Agrarian Movements and Gandhian Politics*, Oxford University Press, 1970.

Desai, A.R., *Social Background of Indian Nationalism*, Bombay: Popular Parkashan, 1966.

Guha, Ranjit, *Subaltern Studies, I – IX*, Delhi: Oxford University Press, 1982-86.

Jaffrelot Christophe, *Hindu Nationalist Movement and Indian Politics 1925 to the 1990s*, Penguin Books, India, 1999

Low, D.A. *Britain and Indian Nationalism*: *The imprint of Antiquity,* 1997

Mahajan, Sucheta, *Independence and Partition,* New Delhi: Sage, 2000.

Mehrotra, S.R., *Emergence of Indian National Congress*, Delhi: Manohar, 1971.

Mehrotra, S.R., *Towards India's Freedom and Partition,* New Delhi, 1979.

Nanda, B.R., *The Making of Indian Nation*, Collins: Harper, 1998.

Pathak, B.N. (ed.), *History of Indian National Congress*, 3 vols., New Delhi, 1985.

Singh, Anita Inder, *The Origins of Partition of India*, New Delhi: Oxford University Press, 1987.

Suggested Readings

AICC, *A Century History of the Indian National Congress*, Vols. II & III.

Aloysius, G., *Nationalism without a Nation in India*, Oxford University Press, 1998.

B.R. Nanda, Mahatma Gandhi: A Biography, Bombay: Allied Publishers, 1978.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India,* New Delhi: People's Publishing House, 1982 (reprint).

Farquhar, J.H., *Modern Religious Movements in India*, Delhi: Munshi Ram, Manohar Lal, 1976.

Gopal, S., *British Policy in India*, Cambridge: Cambridge University Press, 1965.

Joshi, Shashi, and Josh, B., *Struggle or Hegemony in India 1920-47,* Vol.I to III, New Delhi: Sage.

Low, D.A. (ed.), *Congress and the Raj,* New Delhi: Arnold Heinemann, 1977.

Massellos, Jim, *Nationalism on the Indian Subcontinent*, Melbourne: Thomas Nelson, 1972.

Rai Lala Lajpat, *Young India: An Interpretation and a History of Nationalist Movement,* Ocean Books Pvt Ltd., 2008

Salil Misra, *A Narrative of Communal Politics, UP 1937 -39.* New Delhi: Sage, 2001.

Sumit Sarkar , *The Swadeshi Movement in Bengal, 1903-1908*, New Delhi: Macmillan, 1977.

Tara Chand; *History of the Freedom Movement in India, 2 Vols.,* Delhi: Publication Division, 1963.

Vishalakshi Menon, *From Movement to Government,* Delhi: Sage India, 2005.

PAPERS –III & IVOPT. (IX) BRITISH POLICIES AND PRINCELY STATES **(NOT OFFERED TO STUDENTS IN THIS SESSION)**

COURSE CODE: HIS 214

Objective: This paper aims to understand and study the multiple patterns of British policy towards the Princely States of India. It seeks to examine the various facets of British paramountcy in different matters of the Native States and point out the variations and peculiarities thus found. Also the objective of the paper is to evaluate the Princely Chiefs' responses, their sensitiveness and changes in their attitude towards the British policy during the colonial period.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Ring Fence Policy; Policy of Subordinate Isolation; Policy of Subordinate Union; Subsidiary Alliance System; Doctrine of Lapse; Queen's Proclaimation; Adoption Sanads; Canning's Dispatch; Minority Administration; British Paramountcy; Theory of One Charge; Universal British Policy of Coinage; Native Coinage Act; Imperial Sevice Troops;British Policy towards Railways; New Salt Policy; New Opium Policy; International Postal Union; Aims of Chamber of Princes; Indian States Committee; Instrument of Accession; Integration of States; Change In British Policy in 1905; Annexation Of Oudh; Annexation Of Punjab; Reason for Rendition of Mysore; Justification of Deposition of Gaekwar (Baroda); Assertion of Paramountcy by Curzon; Dereliction of Duty of Native Chief; Constitution of Chamber of Princes.

Unit I

Policy of 'Ring Fence' under Clive, Warren Hastings and Cornwallis; Departure from the policy and Wellesley's Subsidiary Alliance System; Extension of Wellesley's policy under Marquis of Hastings; Dalhousie's policy of annexation of States by the application of 'doctrine of lapse' and other means.

Unit II

Adoption of new policy under the Crown after the revolt of 1857-58 – Queen's Proclamation, Canning's Despatch of April 1860 and Adoption Sanads; Succession matters w.s.r.t. minority administration; Deposition of Gaekwar of Baroda (1875), Rendition of Mysore (1881), the Manipur Case; Growth of Paramountcy under Curzon (1898-1905).

Unit III

The theory of 'one charge' – economic matters w.s.r.t. coinage and currency, salt and opium; means of communications- railways, post and telegraph; military establishment in the States and Organisation of Imperial Service Troops.

Unit IV

Change in the British policy after 1905 under Minto and Hardinge; Organisation of Chamber of Princes (1921) – its constitution and role; Indian States Committee (1927); Independence and integration of States.

Essential Readings

Arora, A.C., *British Policy towards the Punjab States 1858-1905,* Jalandhar: Export India Publications, 1982

Copland, Ian, *The Princes of India in the endgame of empire 1917-1947*, Cambridge: Cambridge University Press, revised edition 2010.

Fraser, Lovat, *India under Curzon and After,* Nabu Press, 2010.

Jeffrey, Robin (ed.), *People, Princes and Paramount Power: Society and Politics in the Indian Princely States*, New Delhi: Oxford University Press, 1978.

Lee-Warner, Sir William, *The Protected Princes of India*, Chizine Publications, Toronto, 2017.

Lee-Warner, Sir William, *The Native States of India*, London: Macmillan, 1910.

Majumdar, R.C. *et al*., *The History and Culture of the Indian People*, Vol.IX: *British Paramountcy and Indian Renaissance*, Part I, Bombay: Bhartiya Vidya Bhavan, 1963.

Menon, V.P., *The Story of the Integration of the Indian States*, New Delhi: Orient Blackswan, 2014.

Pannikar, K.M., *Indian States and the Government of India,* Delhi: Kaushal, 1985

Phadnis, Urmila, *Towards the Integration of Indian States 1919-1947,* Bombay: Asia, 1968

Ramasuck, Barbara N., *The Indian Princes and their States,* Cambridge: Cambridge University Press, revised edition 2008.

Verma, S.M., *Chamber of Princes,* New Delhi: National Book Organization, 1990.

PAPERS –III & IVOPT. (X) CONTEMPORARY INDIA 1947-1992

COURSE CODE: HIS 263

Objective: This course provides an introduction to the major strands in the history of contemporary India.

Pedagogy: The course involves the student in class lectures, discussions and term papers.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Contemporary History;Modern History;Nationlism;Freedom;Nation State;socialism;Spiritualism;Five Year Plans;Running Plan;Demographic Dvidend;Private Public Partnership;Public Sector;Green Revolution;Lnad Consodition;Equitable distribution of land;Khal;istan;Nagalim;Naxalism;Casteism;Civil Rights;Duties of Citizen; Secularism; Communalism; NAM; SAARC.

Unit I

Historiographic survey for Contemporary India including the emergence of the sub-discipline of Contemporary Indian History; Various ideological streams with special reference to Ambedkar, Gandhi, Nehru and Vivekananda.

Setting up an institutional structure for a new country: the making of the constitution, debates on its nature and changes made to it. The structure of the bureaucracy and the police and changes over time in their relationship with the legislative arm of the state and with civil society.

Rehabilitation after partition: settling the people, creating new towns and agricultural settlements, creating new opportunities for the displaced.

Unit II

Economic growth: Demographic trends;the Planning Process and Five Year Plans.

Industrial growth: Debates on the nature and value of the public and the private sector; Labour relations.

Land Reforms and agrarian changes: Green Revolution with special reference to the Punjab Peasant unrest and its changing forms, especially in Punjab, Bihar, Andhra Pradesh and Maharashtra.

Unit III

The States: The continuous reorganization of States since the 1950s. Changing nature of Centre-State relations.

The Emergency of 1975: its causes and consequences. Various political responses to the emergency. Emergence of a civil democratic rights movement and the varied responses of the state.

Political and economic relations with the World. Changing Patterns of friendship and enmity with neighbouring countries. Relations, political, social and economic with the so-called Great Powers.

Unit IV

Depressed classes, tribals, and women.

Political and social assertions by different regions: the Northeast, Tamilnadu and Punjab.

The emergence and articulation of an Indian identity: The problem of national integration versus adjusting conflicting claims in a democratic space.

Social change: changing patterns of assertion by marginalized groups:

Essential Readings

Consisting of books which give a broad, but essential, overview of various themes in the course and/or set the paradigm for understanding the history of Contemporary India. It is highly recommended that candidates browse through the collection of the AC Joshi Library, Panjab University for more detailed information about various topics.

Chandra Bipan, Mridula Mukherjee and Aditya Mukherjee, *India after independence, 1947-2000,* Delhi: Penguin, 2002.

Kohli, Atul, *The State and Poverty in India: The Politics of Reform*, Cambridge: Cambridge University Press, 1987

Kohli, Atul ed., *India's Democracy: An Analysis of Changing State Society Relations*, Princeton, Princeton University Press, 1988

Moore, Barrington M., James C. Scott, Edward Friedman, *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*, New York: Beacon Press, 1993.

North, Douglass C. et al. *Violence and Social Orders: A Conceptual Framework For Interpreting Recorded Human History*, Cambridge, Cambridge University Press, 2009.

Spear, Percival*, The Oxford History of Modern India 1740-1975*, New York: Oxford University Press, 1979.

Suggested Readings

Austin, Granville*, Working a Democratic Constitution: The Indian Experience*, New York and Delhi: Oxford University Press, 1999.

Bardhan, Pranab*, The Political Economy of Development in India,* Delhi: Oxford University Press, 1998.

Dreze, Jean and Amartya Sen, *India: Economic Development And Social Opportunity*, Delhi: Oxford University Press, 1996.

Karlekar, Hiranmay, ed., *Independent India: the first fifty years*, Delhi: ICCR and Oxford University Press, 1998.

Morris Jones, W.H., *The Government and Politics of India,* Delhi: Oxford University Press1987.

Omvedt, Gail, *Dalits and the democratic Revolution: Dr. Ambedkar and the Dalit Movement in Colonial India*, Thousand Oaks, CA: Sage, 1994.

Raghuramaraju, A., *Debates in Indian Philosophy Classical, Colonial, and Contemporary*, New Delhi: Oxford University Press, 2006.

SEMESTER IV

Semester IV	**Group-IPaper I:**	HIS 126	Punjab in the Twentieth Century (compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 911	Opt.(i) History and Historiography	4 credits
		HIS 912	Opt.(ii) History and Historical Method	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 720	Opt. (i) Religious And Social Processes In Ancient India	4 credits
		HIS 438	Opt. (ii) Buddhism in India	4 credits
		HIS 428	Opt. (iii) Religious Developments in Medieval India	4 credits
		HIS 426	Opt. (iv) Islamic Traditions of Medieval India	4 credits
		HIS 471	Opt. (v) Dalit Movements in Modern India	4 credits
		HIS 731	Opt. (vi) Working Class Movements in Modern India	4 credits
		HIS 467	Opt. (vii) Peasant Movements in Modern India	4 credits
		HIS 418	Opt. (viii) Socio-Religious Reform Movements in Modern India	4 credits
		HIS 462	Opt. (ix) History of Caste and Caste Politics in Modern India	4 credits

PAPER I, PUNJAB IN THE TWENTIETH CENTURY (COMPULSORY)

COURSE CODE: HIS 126

Objective: The course traces the history of Punjab from 1901 to 1966 focusing on how the agrarian policies and legislations passed by the British Raj in these years affected the Punjab Peasantry. How the discontentment led the Peasantry to join the National Movement which Gandhi spearheaded. Punjab's participation in the various phases is discussed particularly the phase of partition and how the province was further bifurcated in 1966.

Pedagogy: The course is to be taught through class room lectures and discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each

unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Jallianwala Bagh; Ghadar; Unionist Party; Rowlatt Satyagraha; Martial Law; Mahants; Babbar Akalis; Kirti Kisan Party; provincial autonomy; demand for Pakistan; Demand for Khalistan; Azad Punjab; Punjabi Suba; Shromani Prabandhak Committee; Akali Dal; Akali Party; Reorganization Act of 1966; Sarbarah; Muslim League; Central Sikh League; Keys Affair; Jaito ka morcha; Land Alienation Act; Colonization;

Unit I

Punjab from 1901 to 1920's: Land Alienation Act of 1901- The Agrarian Agitation of 1907, The Ghadar Movement; Rowlatt Satyagraha, Jallianwala Bagh and the marital law; formation of Punjab National Unionist Party, 1923.

Unit II

Punjab in 1920's: The Akali Agitation or Gurdwara Reform Movement; The Babbar Akalis 1921-22; The politics of Contestation in 1920: Congress and Arya Samj; Left wing groups of parties-1920's; Peasants Protests -1924-29.

Unit III

Punjab in 1930's-1940's The Civil Disobedience and Punjab; agitations around Land revenue; Unionists under Provincial Autonomy; responses to the demand of Pakistan; Congress and Sikh Politics 1940-1947, Communalism and partition of the Punjab.

Unit IV

Punjab after partition: Resettlement and Rehabilitation; Towards the Punjabi Province 1947-1966; Reorganization of Punjab 1966; Green Revolution

Essential Readings

Ali, Imran, *The Punjab under Imperialism 1890-1947*, Delhi: Oxford University Press, 1989.

Bal, S.S., *A Brief History of Modern Punjab,*Ludhiana: Lyall Book Depot, 1974

Bal, S.S. *British Administration in the Punjab and its Aftermath*; Amritsar, Guru Nanak Dev University, 1986.

Banerjee, Himadri, *Agrarian Society in the Punjab, 1849-1901,* New Delhi: Manohar, 1982.

Banga, Indu, (ed.), *Five Punjabi Centuries: Polity, Economy, Society and Culture c.1500,* Delhi: Manohar 1997.

Banga, Indu, *Agrarian System of the Sikhs*, New Delhi, Manohar, 1978.

Barrier, N.G., *The Sikhs and their Literature,* New Delhi: Manohar, 1970.

Dayal, Ravi (ed.) *We fought together for freedom*; Indian Council of Historical Research, Oxford University Press, Delhi, 1995

Mohan, Kamlesh, *Militant Nationalism in the Punjab*, New Delhi: Manohar, 1985.

Mukherjee, Mridula, *Colonializing Agriculture*, Modern Indian History Series, New Delhi: Sage India, 2005.

Mukherjee, Mridula, *Peasants in India's Non-violent Revolution,* Modern Indian History Series, New Delhi: Sage India, 2004.

Ram, Raja, *The Jallianwala Bagh Massacre*, Panjab University, Chandigarh,1978.

Riar, Sukhmani Bal, *The History and Politics of the Central Sikh League,* Chandigarh : Unistar, 2006.

Riar, Sukhmani Bal, *The Politics of the Sikhs 1940-1947*, Chandigarh: Unistar, 2006.

Singh, Mohinder, *The Akali Movement,* New Delhi: Macmillan, 1985.

Singh Parambakshish and Verma Devinder Kumar, *Punjab and the Freedom Struggle*, Patiala, Punjabi University, 1998.

Talbot, Ian, *Punjab and the Raj, 1849-1947*, Delhi: Manohar, 1988.

Tai Yong Tan and Gyanesh Kudaisya, *The Aftermath of Partition in South Asia,* Routledge Studies in the Modern History of Asia, London: 2000.

Tuteja, K.L., *Sikh Politics, 1920-1940,* Kurukshetra, 1984.

Van den Dungen, P.H.M., *The Punjab Tradition: Influence and Authority in the Nineteenth Century India*, London, 1972.

Suggested Readings

Grewal, J.S., *The Sikhs of the Punjab,New Cambridge History of India*, New Delhi: Orient Longman, 1990.

Grewal, J.S., *The Akalis: A Short History,* Chandigarh: Punjab Studies Publications, 1966.

Islam, M.M., *Irrigation, Agriculture and the Raj, Punjab 1887-1947*, New Delhi: Manohar, 1997.

Kirpal Singh, *The Partition of the Punjab,* Patiala: Punjabi University, 1972.

Mahajan Sucheta, *Anti British Agitation in 1907 Punjab*, Punjab History Conference Proceedings fifteenth session, 1981.

Pritam Singh and Shinder S.Thandi (eds.), *Punjabi Identity in a Global Content,* Delhi: Oxford, 1999.

Rai, Satya.M., *Legislative Politics and Freedom Struggle in Punjab 1897-1947,* New Delhi: Peoples Publishing House, 1984.

Singh, Parduman and Joginder Singh Dhanki, eds., *Buried Alive: Autobiography, Speeches and Writings of an Indian Revolutionary*, New Delhi: Sardar Ajit Singh, 1984.

Sukhwant Singh, *Agricultural Growth under Colonial Constraints in the Punjab: 1849-1947,* Delhi: Manmeet Prakashan, 2000.

Talbot Ian, *The Ggrowth of the Muslim League in the Punjab, Journal of Commonwealth and Comparative Politics,* 20, 1, 1982.

Tanwar, R, *Politics of Sharing Power: The Punjab Unionist Party 1923-1947*: New Delhi: Manohar, 1999.

Paper II: Any one from the following:

Opt. (i) History and Historiography

COURSE CODE: HIS 911

Objective: This paper provides an understanding of the meaning and nature of history and emphasizes on the value and interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Historical Fact; Reliability of Evidence; Genuineness of Evidence; PrimarySources; Secondary Sources; Accidental Causes; Rational Causes; Determinism in History; Chance in History; Objectivity in history; Group Bias;Aeriel Photography; Quantitative history; Psycho history; Role Theory; Cliometrics;Annales School; Concept of Total History; Orientalists; Administrator historians; Nationalist historians; Marxist historians; Subaltern history;Feminism; Post Modernism; Social Dynamics in History; Historical interpretation; Elitist Historiography; Non-elite historiography;Imaginative understanding;Cleopatra's nose; All History as Contemporary History; Colonialism and Indian Natinalism.

Unit I

Definition, historical facts; purpose and scope; value of studying history; categories of historical evidence; questions of genuineness and reliability of evidence; question of bias and objectivity; meaning of causation and handling of causes.

Unit II

History as Literature and as Science; History and Allied Disciplines of Archaeology, Geography; Sociology and Social Anthropology; Psychology and Economics; contribution of "The Annales School".

Unit III

Orientalists with special reference to William Jones; concerns of the Administrator-Historians; Nationalist historiography- its emergence, concerns, assumptions, strength and limitations.

Unit IV

Marxist historiography- its new perspectives and strength and limitations; treatment of Colonialism and Indian Nationalism; Subaltern historiography – their critique of existing historiography; themes, sources, techniques and strength and limitations; emerging new trends with special reference to feminist history and postmodernism.

Essential Readings

Aymard, Maurice and Harbans Mukhia eds., 'Introduction', *French Studies in History,* New Delhi: Orient Longman, 1989, 2 vols.

Carr, E.H., *What is History*, Melbourne:Penguin Books, 2018 (also available in Hindi and Punjabi translation).

Chandra, Bipan, 'Nationalist Historians' Interpretations of the Indian National Movement', *Situating Indian History for Sarvapalli Gopal*, eds. Sabyasachi Bhattacharya and Romila Thapar, Delhi: Oxford University Press, 1986.

Chandra, Bipan and others, 'Introduction', *India's Struggle for Independence, 1857-1947*, Delhi: Viking/Penguin Books.

Elton, G.R, *The Practice of History*, Oxford: Blackwell, 2002

Guha, Ranjit, 'On Some Aspects of Historiography of Colonial India', *Subaltern Studies I,* Delhi: Oxford University Press, 1986.

Jenkins, Keith, *On What is History*, London: Routledge, 2014.

Marwick, Arthur, *The New Nature of History*, Palgrave Macmillan, New York, 2001.

Mathur, L.P., *Historiography and Historians of Modern India*, New Delhi: Inter-India Publications, 1987.

Mukhopadhyay Subodh Kumar, *Evolution of Historiography in Modern India, 1900-1960,* Calcutta, K.P. Bagchi, 2002.

Sen, S.P. (ed)., *Historians and Historiography in Modern India,* Calcutta: Institute of Historical Studies, 2013.

Sheik Ali, B., *History: Its Theory and Method*, Chennai, Laxmi Pub., 2014.

Sreedharan, E., *A Textbook of Historiography: 500 B.C. to A.D. 2000,* New Delhi: Orient Longman, 2004.

Stone, Lawrence:, *History and Social Sciences in the Twentieth Century: The Future of History* ed. Charles F. Delzell, Nashville: Vanderbilt Univ. Press, 1997.

Webster, C.B. John:, *Studying History,* New Delhi, 2001.

Suggested Readings

Banga, Indu, *Causation in History*, Shimla: Indian Institute of Advanced Study, 1992.

Bhattacharya, Sabyasachi, 'Reflections on Concept of Regional History', *Perspectives on Indian Society and History*, ed. Hetukar Jha, New Delhi: Manohar, 2002, 81-90.

Bloch, Mark, *The Historian's Craft*, Manchester: Manchester University Press, 2004 (translated by Peter Putnam).

Chandra, Satish, "Decentring of History", *Essays on Medieval Indian History*, New Delhi: Oxford University Press, 2003.

Thapar, Romila, 'Ideology and Interpretation on Early Indian History', *Interpreting Early India*, Delhi: Abe Book Sellers, 2010.

OPT (II) HISTORY AND HISTORICAL METHOD

COURSE CODE: HIS 912

Objective: This paper provides an understanding of the meaning and nature of history and emphasizes on the value of interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Historical fact; social forces; scientific method; imaginative understanding; Cleopatra's nose; determinism; objectivity; bias in history; cyclic view of history; teleological view of history; value judgement;oral history; demography; archaeology; social anthropology; geography; economics; causation; rational causes; accidental causes; great man; rebel in history; primary/secondary sources.

Unit I

The historical fact; relationship between the historian and the facts; society and historian; importance of social forces; history as science; history as literature.

Unit II

History as a study of causes; problem of determinism; problem of chance; value judgments in history; objectivity in history.

Unit III

Categories of primary sources; problems of genuineness and reliability of literary sources; oral evidence; evaluation of secondary sources; questions historians ask.

Unit IV

Widening scope of history; history and archeology; history and geography, demography and economics; history and sociology and anthropology; history and literature; the value of history.

Essential Readings:

1. Carr, E.H., *What is History*, Melbourne: Penguin Books, 2018 (also available in Hindi and Punjabi translation).
2. Webster, John C.B., *Studying History*, Delhi: Macmillan, 2001.

Suggested Readings:

Appleby, Joyce, Lynn Hunt and Margaret Jacob, *Telling the Truth about History*, New York: W.W. Norton, 1995.

Banga, Indu, *Causation in History*, Shimla: Indian Institute of Advanced Study, 1992.

Barzun, Jaques and Henry F. Graff, *The Modern Researcher*, California: Wadsworth Publishing, 2003

Bloch, Mark, *The Historian's Craft*, Manchester: Manchester University Press, 2004 (translated by Peter Putnam).

Elton, G.R., *The Practice of History*, Oxford: Blackwell, 2002.

Gottschalk, Louis, *Understanding History, A Primer of Historical Method*, New Delhi: Alfred A. Knopf, 1968.

Hexter, J.H. *The History Primer*, New York: Basic Books, 1971.

Jenkins, Keith, *On What is History*, London: Routledge, 2014.

Landes, David S. and Charles Tilly (eds.), *History as Social Science*, Englewood Cliffs: Prentice-Hall, 1971.

Marwick, Arthur, *The New Nature of History*, New York: Palgrave Macmillan, 2001.

Rosenau, Pauline Marie, *Post-Modernism and the Social Science: Insights, Inroads and Intrusions*, Princeton: Princeton University Press,1992.

Singh, Surinder and Ishwar Dayal Gaur (eds.), *Popular Literature and Pre- Modern Society in South Asia*, New Delhi: Pearson-Longman, 2007.

Stone, Lawrence, 'History and Social Sciences in the Twentieth Century', *The Future of History,* ed. Charles F Delzell, Nasville: Vanderbilt University Press, 1997.

Vansina, Jan, *Oral Tradition: A Study in Historical Methodology*, London: Eurospan, 2006 (trs. H. M. Wright).

PAPERS III & IV OPT(I)RELIGIOUS AND SOCIAL PROCESSES IN ANCIENT INDIA

COURSE CODE: HIS 720

Objective: The aim of the paper is to highlight the role of social processes in the shaping of the religious discourse and philosophical speculations in relation to Brahmanism-Hinduism, Buddhism and Jainism.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:
Rigveda; Upanishadas; Aranyakas; Vedanga;Dana-Dakshina; Caturaryasatyas; Ashatangika-marga; Tirthankara; Lokayata; Ajivikas; Buddhist Triratnas; Jain Triratnas; Anekantavada; Mahayana; Hinayana; Vajrayana; Boddhisattva; Svetambara; Digambara; Shankhya; Yoga; Nyaya; Vaisheshika; Mimamsa; Vedanta; Nayanar Saints; Alavar Saints; Tantrism; Bhakti; Puranas; Gahapati; Setthi; Jaganatha Puri.
Unit I: Vedic Religion: Vedic Gods and Goddesses; Prayers, Sacrifices, and the Role of Brahmanas; Concept of Dana-Dakshina.

Unit II: Upanishads and Heterodox Sects: Philosophy of Upanishads, Buddhism, Jainism, Ajivaka and Lokayata; Material Background of Jainism and Buddhism; Women in Buddhism and Jainism.

Unit III: Schisms and Philosophical Differences: Buddhism (Hinayana and Mahayana) and Jainism (Svetambara and Digambara); Hindu Philosophical Schools (Shankhya, Yoga, Nyaya, Vaisheshika, Mimamsa and Vedanta).

Unit IV: Puranic Hinduism: Theistic Cults (Vishnavism, Shaivism) and Bhakti Movement (Nayanar-Alavar Saints); Tantrism and Its Impacts on Hinduism and Buddhism.

Essential Readings

Basham, A. L., *The Wonder That Was India (A survey of the history and culture of the Indian sub-continent before the coming of the Muslims),* London: Picador an imprint of Macmillan, 2004 reprint.

Jaini, S. Padmanabh, *Gender and Salvation: Jaina Debates on the Spiritual Liberation of Women*, (with a forward by Robert P. Goldman), New Delhi: Munshiram Manoharlal, 1992.

Radhakrishnan, S., *Indian Philosophy, Vol. 1 & 2*, (with an introduction by J. N. Mohanty), New Delhi: Oxford University Press, 2008.

Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Delhi: Pearson Longman, 2009.

Thapar, Romila, *Ancient Indian Social History: Some Interpretations* (particularly, 'Dana and Dakshina as Forms of Exchange', pp. 94-108), New Delhi: Orient Blackswan, 2016 reprint.

Suggested Readings

Chakrabarti, Kunal, *Religious Process: The Puranas and the Making of a Regional Tradition*, Delhi: Oxford University Press, 2018 second edition.
Chattopadhyaya, D. P., *Indian Philosophy: A Popular Introduction*, New Delhi: People's Publishing House, 2015 reprint.
Doniger, Wendy, *The Hindus: An Alternate History*, New Delhi: Speaking Tiger, 2015.
Dundas, Paul., *The Jains*, London: Routledge, 2002 reprint.

Habib, Irfan and Thakur, Vijay Kumar, *A People's History of India: 3- The Vedic Age.* New Delhi: Tulika Books, 2011 reprint.

Sahu, B. P., *A People's History of India 7- Society and Culture in Post-Mauryan India, c. 200 BC- AD 300*, (with a chapter on language and literature by Kesavan Veluthat), New Delhi: Tulika Books, 2015.

Shrimali, K. M., *A People's History of India 4-The Age of Iron and the Religious Revolution, c.700-c.350 BC*, New Delhi: Tulika Books, 2011 reprint.

Singh, Anand, ed. *Dana: Reciprocity and Patronage in Buddhism*, New Delhi: Primus Books, 2017.

COURSE CODE: HIS 438

Objective: To trace the origins of Buddhism in India since ancient times.

Pedagogy: Class room lectures, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Ajivikas; lokayatas;Gahapatis/ Setthis;Karshapana(puch marked coins); Pitakas/ pali canonical literature; Jatakas; Ajanta paintings; Stupa; Chaitya; Vihara; Mathura sculptural art; Gandhara sculptural art; Janapada/Mahajanapada; Gana-Sangha; Mahayana; Hinayana; Caturaryasatya; Ashtangikamarg; Vajrayana; Bodhisattva; Concept of Tara; Buddhist Tri-ratnas; Therigatha; Four Buddhist Councils; Chinese travelers(Fa Hsien and Xuan Zang).

Unit-I

Theravada its major schools; Origin and growth;organization and Doctrine;Buddhist notion of Ahimsa;the Agendas and significance of Byuddhist Councils

Unit-II

Hinayana and Mahayana their major school;growth and organization;Doctrines of Hinayana and Mahayana;Socio-economic foundations of early Buddhism;Women in early Buddhism

Unit-III

Emergence of Vajrayana and Tantrayana; Different aspects Tantrayana; Doctrines of Vajrayana;Prominent Siddhacarya such as Nagarjuna,Vajraghanta,Padamasambhave,Indrabhuti and Sarahapa;Socio role of Tantrayana

Unit IV

Origin and growth of Buddhist arts; architectural feathres of Stupas and the Chatayas;development of Sculpture arts of Gandhara. Ajanta Paintings its stylistic features; The Buddhist with reference to Dhayani Buddhas.

Essential Readings

Bapat, P.V. (ed.),*2500 years of Buddhism*, Mahabodhi Int. Meditation Centre, Leh-Ladakh, 1996.

Chakravarti, Uma, *The Social Dimensions of Early Buddhism,* Delhi, Oxford University Press, 1987.

Dutt, R.C, *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983

Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.

Horner, I.B., *Women under Primitive Buddhism*, Delhi: Motilal Banarsidas, 1995.

Joshi, L.M, *Studies in the Buddhist Culutre of India, Motilal Banarsidas*, Second Revised Edition, Delhi, 1977

Moharana, *S.K, Tantric Buddhism*, Aryan Book International , Delhi, 2001

Narain, A.K, *Studies in History of Buddhism*, B.R Publisher, Delhi, 1980

Sarao, K.T.S., *Origin and Nature of Ancient Indian Buddhism*, Taiwan, Buddha Educational Foundation (4th ed.), 2004.

Suzuki, B.L, *Mahayana Buddhism, George Allen & Unwin Ltd.*, London, 1967

Suggested Readings

Conze, E., *Buddhist Thought in India*, George Allen & Unwin Ltd., London, 1967

Dube, S.N., *Cross Current in Early Buddhism*, Manohar Pub., 1980.

Duerlinger, *Indian Buddhist Theories of Persons,* Routledge Curzon, London, 2005.

Dutt, N., *The Spread of Buddhism and Buddhist Schools*, Rajesh Publication, Delhi, 1980.

Lee-Kwangsu, *Buddhist Ideas and Rituals in Early India and Korea*, Manohar, Delhi, 1998.

Murti, T.R.V., *Buddhism*, Harper Coelins, Noida, 1998.

Nakamura, H., *Indian Buddhism: A Survey*, Motilal Banarsidas, Delhi, 1980.

Oldenberg, H., *Buddha: His Life and Doctrines*, Aravati Book, Delhi, 1997.

Pande, G.C., *Studies in the Origin of Buddhism*, Univ. of Allahabad, 1957.

Pande, G.C , *Buddhist Studies in India*, Motilal Banarsidas, Delhi, 1975.

Paul, Gronen, *A History of Indian Buddhism*, Motilal Banarsidas, Delhi, 1993.

Pathak, R.K., *Historical Survey of Indian Buddhism*, Ramanand Vidhya Bhawan, Delhi, 1989.

Sengupta, Sudha, *Buddhism in the Classical Age (400-750 AD)*, Sandeep Prakashan, Delhi, 1985.

PAPERS III & IV OPT. (III) RELIGIOUS DEVELOPMENTS IN MEDIEVAL INDIA

COURSE CODE: HIS 428

Objective: The aim opf this paper is to examine the developments in different religious systems during the medieval period of Indian history. It focuses on the continuity and change within Shaiva, Shakta and Vaishnava systems. It also deals with Krishna bhakti and its regional manifestations in Maharashtra, Bengla, Assam, Rajasthan and Gujarat. The objective of this paper is also to discuss Islam in its various forms and monotheistic movement started by kabir, Ravidas, Dadu and Guru Nanak.

Pedagogy: Class room teaching, evaluation based on continuous internal assessment comprising of unit tests, presentation of seminars, classroom participation and attendance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Alvars; Nayanars; Shaiv siddhanta;*kadambaguhadhivasi ;* Shakti *peeth; matrikas;* Panchratra agamas; Advaita ; Visishtadvaita of Ramanuj; Tirtavali; Varkari ; Gaudiyas; N*ama Parsanga ;* Pushtimarg; *silsila;* Shaikh; waliyat,Raushanayas,khanqah; sama; futuh; fiqh ; wahadat al wujud,wahadat al shuhud; Mahdi,Imam; Nirguna bhakti; Guru; Adi Granth; *khande ke pahul, Dasam Granth.*

Unit I

Early Movements: Shaivism and its features: Principles and Development ofShaiv Sidhanta; Origin and eveolutions of Shaktism; Main features of Sri Vaishnavism;Evolution **of**Rama Bhakti.

Unit II

The Cults of Krishna: The Varkaris in Maharashtra; Emergence of Gaudhiya Vaishnavism in Bengal; Vaishnavism in Assam; the Vallabhacharya in Rajasthan and Gujrat; Mirabai- A voice of female protest in bhakti tradition.

Unit III

Islam in Medieval India: the Sunnis; the Shias; the Ismailies, Sufis orders: Chishtis, Suhrawardis, Qadaris, Naqashbandis.

Unit IV

The Saints and the Sikhs: Kabir, his social outlook, formation and development of Kabir-Panth; Sant Ravidas; Dadu and Dadu-Panth; The Sikh Movement: Guru Nanak to Guru Gobind Singh.

Essential Readings

1. Bhandarkar, R.G., *Vaishnavism, Shaivism and minor Religious Systems*, New York; Routledge, 2016.
2. Burz Richard, *The Bhakti Sect of Vallabhacharya*, Faridabad: Thomson Press (India), 1976.
3. Deberry, William Theodore et.al. (ed), *Sources of Indian Tradition*, Delhi: Munshiram Manoharlal, 1963.
4. Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.
5. Mishra, Neeru, *Sufis and Sufism: Some Reflections*, New Delhi: Manohar, 2004.
6. Rizvi, S.A.A., *Muslim Revivalist Movements in Northern India in the Sixteenth and Seventeenth Centuries*, New Delhi: Munshiram Manoharlal, (rep.), 1993.
7. Vandenille Charlotte, *Myths, Saints legends in Medieval India*, Delhi: Oxford University Press, 1999.
8. Vandenille Charlotte, *A Weaver named Kabir*, Oxford: India Paperbacks, 1997.

Suggested Readings

1. Ahmad Tarique, *Religio-Political Forment in the North-West Frontier during the Mughal Period (The Raushanya Movement)*, Delhi: Idarah-I-Adabiyat-Dilli, 1982.
2. Grewal, J.S., *The Sikhs of the Punjab*, Cambridge: Cambridge University Press, 1993.
3. Nandi, R.N., *Religious Institutions and Cults in the Deccan,* Delhi: Motilal Banarsidas, 1973.
4. O'Cannel, Joseph T., *Organisational and Indian Aspects of Indian Religious Movements,* Shimla: Indian Institute of Advanced Study, 1999.
5. Schomer Karine and W.H. Mcleod, eds., *The Saints: Studies in a Devotional Tradition of India,* Delhi: Motilal Banarsidas, 1987.

PAPERS III & IV: OPT. (IV) ISLAMIC TRADITIONS OF MEDIEVAL INDIA

COURSE CODE: HIS 426

Objectives: This paper places the Islamic traditions of medieval India in the larger context of the rise of Islam inWest Asia. Apart from the theological and mystical dimensions of Islam in medieval India, it highlights the emergence of the popular syncretic culture that grew around the major sufi shrines. It also seeks to study the process of Islamization in two regions viz. Punjab and Bengal. This paper assumes significance in the light of the crisis that seems to afflict the Islamic societies in different parts of the world, besides serving as an intellectual response to the growing misunderstanding regarding Islam and its historical role.

Pedagogy: The teaching of this paper is based on the pioneer works of stalwarts like Khaliq Ahmad Nizami andSaiyid Athar Abbas Rizvi. In a large measure, it relies on the contributions of Richard M. Eaton that have fundamentally changed our understanding of the subject. While discarding monolithic explanations and unscientific stereotypes, this paper opens the mind to a complex and multi-layered past.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Isra; Rightly guided Caliphs; Hijri; Shariah; Zakat; Classical Schools of Fiqh; Hadis; Sheikh-al-Islam; Mufti; Battle of Karbala; Wilayat; Khilafat Namah;Deg;Sama; Urs; Roshni;Khanqah; Jama'at Khanah; Khuddam; Karka; Sajjada-Nishin; Ghusl; Barakat; Bihishati Darwaza; Imam; Tawiz; Ghazi Miyan; Dargah;Chakki Namah.

Unit I (Theology and Mysticism)

Rise and expansion of Islam in West Asia; political, legal and theological structure of Islam; Muslim religious life and Ulama in India during the thirteenth century; features of mystic ideology.

Unit II (Cult of Shrines)

The role of saints in Islam; rituals and management of the Ajmer shrine; the legend of Salar Masud Ghazi, structure, festivities and practices at the Bahraich shrine.

Unit III (Liberal and Revivalist Trends)

The socio-religious outlook of Abul Fazl; The mission of Shaikh Ahmad Sirhindi and its impact; the works of Dara Shukoh on mysticism, comparative religion and Hinduism.

Unit IV (Process of Islamization)

Conventional theories of religious conversion; rooting of Islam in Bengal; Islamization in south-west Punjab and the Pakpattan shrine; the role of sufi folk literature in the diffusion of Islam.

Essential Readings

Ahmad, Aziz, *Studies in Islamic Culture in the Indian Environment*, New Delhi: Oxford University Press (reprint), 2003.

Alavi, Azra, *Socio-Religious Outlook of Abul Fazl,* Delhi: Idarah-I-Adabiyat-I-Delli (reprint), 1983.

Currie, P.M., *The Shrine and Cult of Muinuddin Chishti of Ajmer*, New Delhi: Oxford University Press (reprint), 2006.

Eaton, Richard M., *The Rise of Islam and the Bengal Frontier 1204-1760*, New Delhi; Oxford University Press (reprint), 1997.

Eaton, Richard M., *Essays on Islam and Indian History*, New Delhi: Oxford University Press, 2000.

Friedmann, Yohanan., *Shaykh Ahmad Sirhindi: An Outline of His Thought and a Study of His Image in the Eyes ofPosterity,* New Delhi: Oxford University Press (reprint), 2000.

Nizami, Khaliq Ahmad, *Religion and Politics in India During the Thirteenth Century*, New Delhi: Oxford University Press (new edition), 2002.

Rizvi, Saiyid Athar Abbas*, Muslim Revivalist Movements in Northern India in the Sixteenth and SeventeenthCenturies,* New Delhi: Munshiram Manoharlal (reprint), 1990.

Singh, Surinder and Ishwar Dayal Gaur (ed.) *Sufism in Punjab: Mystic Literature and shrines,* Delhi: Akar, 2009.

Troll, Christian W., (ed.), *Muslim Shrines in India: Their Character, History and Significance,* New Delhi: Oxford University Press, 2003.

Vanina, Euginia*, Ideas and Society in India from 16th to 18th Century*, New Delhi: Oxford University Press, 1996.

Yasin, Mohammad, *A Social History of Islamic India*, New Delhi: Munshiram Manoharlal (reprint), 1974.

Suggested Readings

Amin, Shahid, "On Retelling the Muslim Conquest of North India", in *History and the Present*, Ed., Partha Chatterjee & Anjan Ghosh, New Delhi: Permanent Black, 2002.

Eaton, Richard M., (ed.), *India's Islamic Traditions 711-1750*, New Delhi: Oxford University Press, 2003.

Ernest, Carl W., *Eternal Garden: Mysticism, History and Politics at a South Asian Sufi Centre,* New Delhi: Oxford University Press (second edition), 2004.

Hasrat Bikramjit, *Dara Shukoh: Life and Works*, New Delhi: Munshiram Manoharlal (reprint), 1982.

Islam, Riazul*, Sufism in South Asia: Impact on Fourteenth Century Muslim Society,* Karachi: Oxford University Press, 2003.

Jafri, S.Z.H. & Helmut Reifeld (eds.), *The Islamic Path: Sufism, Society and Politics in India*, New Delhi: Conrad Adenauer Stiftung & Rainbow Publishers, 2006.

Nizami, Khaliq Ahmad*, The Life and Times of Shaikh Nizamuddin Auliya*, New Delhi: Idarah-i-Adabiyat-i-Delli, 1991.

Schimmel, Annemarie, *Islam in the Indian Subcontinent*, Leiden: E.J. Brill, 1980; Lahore: Sang-e-Meel Publications (reprint), 2003.

PAPERS III & IV OPT. (V) DALIT MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 471

Objective: The paper accounts for and interprets the phenomena of caste in India as a stratified social hierarchy prevalent from ancient times. Academic debates on the evolvement of caste, and the concept of jati and varna, reaction to Brahmanical strategies as arbiters of moral order and the rise of Bhakti saints , give an understanding on the emergence of the Dalit identity in the Indian context. The paper also discusses caste and gender and the movement for social justice, political participation and autonomy for dalits. Recent political parties have generated a new consciousness of equality in society among the dalits.

Pedagogy: Method would include lectures, discussions, review, seminars, powerpoint presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Caste, Varna System, Dalit, Untouchables, Dalit Revolt, Bhaktimodes of legitimacy, Chokhamela, Eknath, Ravidas, Mahar, Non- Brahman Movement, Orientalists, Dalit Movement, Ideology of Ambedkar, Ambedkarism, Conflict between Gandhi and Ambedkar, Gender, Scheduled Castes, Conversion Movement, Revival of Buddhism, Dalit Identity, Reservation, B.S.P, and S.P.

Unit I

Historical origins and Development of Caste; Bhakti modes of legitimacy for modern change; Chokhamela; Eknath; Ravidas; The context of Dalit revolt.

Unit II

Nineteenth Century back ground of Mahar and Non-Brahman movement in Maharashtra; Emergence of Dalit Movement 1900-1930, Nagpur; Hyderabad; Mysore and Punjab; Western 'Orientalists' and the colonial perception of caste; Caste and Gender.

Unit III

Ideology of Ambedkar; The American experience of Ambedkar; 'Ambedkarism' the Theory of Dalit Liberation; A Study in Leadership of Gandhi: Ambedkar; Revival of Buddhism.

Unit IV

Constitutional Safeguards; Caste based reservations; Non Political activism between 1970s-1990s; Political Parties- B.S.P., S.P.; Dalit Identity in Contemporary India.

Essential Readings

Ambedkar, B.R.,*The Untouchables,* Bombay: Thacker & Company, 1948.

Bayly, Susan, *Caste Society and Politics in India from the Eighteenth Century to the Modern Age*, Cambridge: Cambridge University Press, 1999.

Brass, Paul.R, *Caste, Faction and Party in Indian Politics* Vol.I, New Delhi: Chanakya Publications, 1983.

Chalam, K.S., *Caste Based Reservations and Human Development in India*, New Delhi: Sage, 2007.

Dhaka, S. & Dhaka, R., *Behind the Veil: Dalit Women in Panchayati Raj*, New Delhi: Abhijeet, 2005.

Kothari, Rajni ed., *Caste in Indian Politics*, New Delhi: 1970

Mohanty, Monoranjan*, Class Caste Gender*, New Delhi, Sage: 2007.

Omvedt, Gail, *Dalits and the Democratic Revolution*, New Delhi: Sage, 1992

Report of the Backward Class Commission, *Also known as the Mandal Commission Report,* available in soft format at http://www.socialjustice.in/documents/, 1980.

Shah, Ghanshyam (Ed). *Dalit Identity and Politics,* New Delhi: Saga Publications, 2001.

Zelliot, Eleanor*, From Untouchable to Dalit*, New Delhi: Manohar Publishers.

Suggested Readings

Ambedkar, B.R., *What Congress and Gandhi have done to the Untouchables*, Bombay: Thacker & Company, 1945.

Chandel, K. *Social and Cultural Development of Indian Dalits.,* New Delhi: A.B.P. Publishers, 2007.

Ghurye, G.S., *Indian Sadhus,* Bombay: Popular Parkashan, 1964

Gupta, Depankar, *Caste in Question Identity or Hierarchy*, New Delhi: Sage, 2007.

Gupta, S.K., *The Scheduled Castes in Modern Indian Politics; Their Emergence as a Political Power*, New Delhi, 1985.

Hutton, J.H. *Caste in India: its nature, function and origin*, London: Oxford University Press, 1963.

Kamble, N.D., *Atrocities on Scheduled Castes: In Post Independence India*, New Delhi: Ashish Publications House, 1981.

Khare R.S. *The Untouchables as himself: ideology, identity and pragmatism among the Lucknow Chamars*, Cambridge: Cambridge UniversityPress, 1984.

Michael, S.M. (Ed.).*Dalits in Modern India*, New Delhi: Vistar Publications, 1999.

Michael, S.M., *Dalit in Modern India*, New Delhi: Sage, 2007.

Omvedt, Gail, *The Anti Caste Movement and the Construction of an Indian Identity*, New Delhi: Orient Longman, 2006.

Rai, Sudha., *Dalit Assertion and the Unfinished Democratic Revolution: The Bahajuna Samaj Party in Uttar Pradesh Cultural Subordination and the Dalit Challenge.* New Delhi: Sage, 2002.

Rao, V., *Dr. B.R. Ambedkar: Champion of Human Rights in India*, Delhi: Manak, 2006.

Satyanaryana, A., *Dalits and Upper Caste: Essays in Social History*, New Delhi: Kanishka, 2005.

Shah, Ghanshyam, *Dalit Identity and Politics: Cultural Subordination and the Dalit Challenge*, New Delhi: Sage, 2001.

Singh, Rajendra, *The Depressed Classes of India*, New Delhi: B.R. Publishing House, 1986.

PAPERS III & IV OPT. (VI) WORKING CLASS MOVEMENT IN MODERN INDIA

COURSE CODE:

Objective: The present paper traces the history of working class movement and studies the formation and working of trade unions in India. It examines the factors facilitating or retarding the growth of the trade union movement. The constitution and functioning of the AITUC and other unions are also analysed.

Pedagogy: Lectures, discussions, tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concept and Terms:

Industrial labour, Plantation Industry, Modern Factory System, Marxian Socialism, Factory Legislation, Labour Union, Neel Darpan, Condition of Child Labour, Any two provisions of Indian Factory Act 1881, Indian Factory Act 1891, Indian Factory Act 1911, Factory Legislations, Unrest among labour, Effect of Russian Revolution on labour, ILO, AITUC, Role of CPI in labour movement, Split of AITUC 1929, Congress Socialist Party, Trade Union, Role of Working Class in National Movement, Government's attitude towards working class movement

Unit I

Rise and growth of plantation industries- indigo, coffee, tea and rubber, railway and coal mining; development of modern factory industries- cotton, jute, iron and steel industries and the rise of industrial labour force; impact of Marxian Socialism w.s.r.t. Karl Marx in India; repercussions of the factory legislations, emergence and working of labour unions of Europe in India.

Unit II

Condition of Indian workers including women and child labour; Factory Legislations - Indian Factory Act of 1881, 1891 and 1911; Outbreak of the First World War and large industrial unrest among workers - their strikes; Russian Revolution of 1917 and its impact.

Unit III

Formation of I.L.O. (1919) and the foundation of All India Trade Union Congress (AITUC, 1920); the constitution of AITUC; the functioning of AITUC; role of communist party of India between 1925-29, organization of Workers' and Peasants' Parties, Split in AITUC (1929).

Unit IV

Role of Left Wing - Congress Socialist Party and CPI; reunion of 1935 and spurt in the activities of Trade Unions (1936-1939); Indian Working Class and the National Movement; Government's attitude towards it; Second World War and its impact, resurgence in Working Class activities (1945-1947).

Essential Readings

Chandra Bipan, *Rise and Growth of Economic Nationalism in India*, New Delhi: People's Publishing House, 2016.

Dutt Palme, *India Today,* Bombay: People's Publishing House Ltd., revised Edition 2008.

Dutt Romesh, *The Economic History of India in the Early Age*, Delhi: Routledge, 2000

Gadgil D.R., *The Industrial Evolution of India in Recent Times,* 1860-1939, Bombay: Oxford University Press, 1971 (5th ed.)

Kumar Dharma and Raychaudhri Tapan (ed.), *The Cambridge Economic History of India*, Volume 2: c.1757-c.1970, New Delhi: Orient Longman and Cambridge University Press, 1991.

Mehta, B.L., *Trade Union Movement in India,* Delhi: Kanishka Publishing House, 1991.

Suggested Readings

Chandra, Bipan, Mukherjee Mridula and others, *India's Struggle for Independence 1857-1947,* Delhi: Penguin Books. 2016.

Desai A.R., *Social Background of Indian Nationalism*, Bombay: Popular Prakashan, (fifth ed. 1976) Bombay, revised edition 2011.

Giri V.V., *My Life and Times*, Volume I, Delhi: Macmillan, 1976.

Sarkar Sumit, *Modern India,* Delhi: Macmillan, 1983.

Forbes, Geraldine, *The New Cambridge History of India, IV.2 Women in Modern India*, Cambridge: Cambridge University Press, 2000 (2nd reprint).

PAPERS III & IV OPT. (VII) PEASANT MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 467

Objectives: This course introduces the student to the complex issue of peasant movements in India in the twentieth century.

Pedagogy: The course is based on lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each

unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Peasantry; tenants; landless labour; bonded labour; kinship group; landlordism; commercialization of agriculture;rent enhancement;peasant movement;satyagraha;Kisan Sabha; Telengana movement; Bardoli agitation; famine relief; drought; colonizing agriculture;peasant insurgency; Moplah rebellion; Agrarian society; Champaran;Kheda movement; agrarian relations; No Rent Movement; All India Kissan Sabha; Class Consciousness; Kinship ties; Land Relation; Surplus Production.

Unit I

Historiography of the Peasant Movements in India; Definition of Peasants; Class consciousness; Family and kinship ties, caste and peasantry in India

Unit II

Classification of peasants; Growth of modern landlordism; Commercialization of agriculture & its impact on land relations.

Unit III

Agrarian Conditions(1900-1947): Movements of prices, Impact of First World War on Peasantry, Great Depression & Peasantry, Peasant Movements: Champaran Satyagraha, Kheda Movement, Kisan Sabha , Moplah uprising.

Unit IV

Peasant Movements (1928-1947): Bardoli agitation (1928), Peasant movements during the Civil Disobedience Movement (1930-1934), Formation of the first All India Kisan Sabha (1938), Telangana Uprising, The National Movement and the Indian Peasantry.

Essential Readings:

Chandra, Bipan, *The Rise and Growth of Economic Nationalism*, Peoples Publishing House, New Delhi, 1966.

Chaudhury, B.B.,"History of Peasant Movements in British India: Some New Perspectives",*Indian Historical Review,* July 1983-84, New Delhi.

Desai, A.R., *Social Background of Indian Nationalism*, Popular Parkashan, Bombay, 2004(First Published 1948).

Desai, A.R.(ed.),*Peasant Struggles in India,* OUP, New Delhi, 1979.

Dhanagare, D.N., *Peasant Movements in India 1920-1950,*OUP, New Delhi, 1989.

Guha, Ranjit, *Elementary Aspects of Peasant Insurgency in Colonial India*, OUP, New Delhi, 1983.

Habib, Irfan, "Peasant in Indian History", *Social Scientist,* Vol. 11, No.3, March 1983, pp.21-64.

Hardiman, David, *Peasant Resistance in India, 1858-1914, OUP,* New Delhi, 1992.

Stokes, Eric, *The Peasant and the Raj: Studies in Agrarian Society and Peasant Rebellion in Colonial India*, Cambridge University Press, Cambridge, 1978.

Suggested Readings

Dhanagare, D.N., *Agrarian Conflict, Religion and Politics: The Moplah Rebellions in Malabar in the 19th and early 20th centuries, Past and Present*, No.74, February 1977, pp.112-41.

Dutt, R.C., *The Economic History of India*, Vol.II, New Delhi, 1972 (Reprint).

Dutt, R.P., *India Today,*Popular Parkashan, Bombay, 1949.

Ghosh, Arun, Agrarian Structure and Peasant Movements in Colonial and Post-Independence India: An Annotated Bibliography, K.P. Bagchi, Calcutta, 1990.

Henringham, Stephen, *Peasant Movements in Colonial India*: North Bihar 1917-1942, Canberra, 1982.

Hobsbawm, Eric, *Primitive Rebels: Studies in Archaic Forms of Social Movements in the Nineteenth and Twentieth Century,* Abacus, London, 2017(First Published in 1959).

Kumar, Dharma (ed.). *The Cambridge Economic History of India, 1757-1970*, Vol.II, Orient Longman, Hyderabad, 1984.

Mukherjee, Mridula, *Peasant in India's Non-Violent Revolution: Practice and Theory,* New Delhi, 2003.

Mukherjee, Mridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism*, Sage Publications, New Delhi, 2005.

Rothermund, D., *Government Landlord and Peasant in Indian Agrarian Relations under British Rule, 1865-1935,* Weisbaden, 1978.

Singh, V.B. (ed.), *Economic History of India*, 1857-1936,Bombay, 1965.

Sohal S.S, *Credit, Rural Debit and the Punjab Peasantry, 1849-1947,* Guru Nanak Dev University, Amritsar, 2012.

PAPERS III & IV OPT. (VIII) SOCIO-RELIGIOUS REFORM MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 418

Objective: The course seeks to examine the variety of socio-religious reform movements in response to colonial rule in the regional context. The common links between them and their contrasts, and our understanding of the changes in the colonial times. Specific themes related to education, depressed classes, gender and identity are highlighted to study the conflict and competition in the socio-religious reform movements.

Pedagogy: The course utilizes recent research on the subject and critically examines 'stereotypes' on reform and debates on different issues to understand the larger context.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Trasitional movements; acculturative movements; Faraiz; Dar-ul- Islam; nava samhita; Vedanta; bai'at; mujaddid; varnashramadharma; arsha-unarsha; shuddhi; niyoga; saranam/darshanan; Theosophists; anjuman; ijtihad; sehajdhari; keshdhari; sanatan dharm; paramhansa; tariqah; gurukul; madhi; hadith; fatwa; militant/moderate groups in Arya Samaj; identity; discrimination by caste; karewa; chadar dalna; sanatan dharma.

Unit I

Society in the 18th century- traditional groups; new social categories; colonial society; the historical origins of caste; western perceptions of caste; impact of western education; critique of Indian society..

Unit II

Ideologies and Impact of reform movements: Brahmo Smaj, Arya Smaj, Aligarh, Deoband, Singh Sabha, Ahmadiyas

Unit III

Agenda of social reformers: Attitudes towards the Depressed classes; debates on sati and widow remarriage; age of consent

Unit IV

Formation of socio-religious identities- Hindu consciousness; Muslim solidarity; Sikh identity; issues of conflict and competition; agents of social change.

Essential Readings

Bayly, Susan, *Caste, Society and Politics in India*, Cambridge University Press, 1999.

Desai, A.R., *Social Background of Indian Nationalism*, Delhi, 1962 (reprint).

Farquhar, J.N., *Modern Religious Movements in India*.

Grewal, J.S., *Perspectives of Sikh Identity*, Patiala, Punjabi University, 2001.

Jones, K.W., *Socio Religious Reform Movements in British India*, New Cambridge History, Delhi: Foundation Books, Delhi, 1994.

Lata Mani, *Contentious Traditions: Debate on Sati*, Delhi: Oxford University Press, 1998.

Nair, Janaki, *Women and Law in Colonial India*, Delhi: Kali for Women, 1996.

Rao, MSA, *Social Movements and Social Transformation,* Delhi, 1979.

Sen, S.P., *Social and Religious Reform Movement in the 19th & 20th Century*, Calcutta: 1999.

Suggested Readings

Ahmad, *The Wahabhi Movement in India*, Delhi: Manohar, 1994.

Balrd, Robert, ed., *Religion in India*, Delhi: Manohar, 1975.

Heimseth, Chailes, *Indian Nationalism and Hindu Social Reform.*

Jones, K.W., *Arya Dharm*, Delhi: Manohar, 1989.

Metcalfe, Barbara, D., *Islamic Revival in British India*, Princeton, 1982.

Sudhir Chandra, *Social Transformation and Creative Imagination*, Delhi: 1984.

Webster, John C.B., *The Christian Community and Change in 19th Century North India*, Delhi: Manohar, 1976.

PAPERS III & IV OPT. (IX) HISTORY OF CASTE AND CASTE POLITICS IN MODERN INDIA

COURSE CODE: HIS 462

Objective: To trace the evolution of caste and caste politics in modern India.

Pedagogy: Class lectures, tutorials, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Caste; varna system; Religious explanation of caste; occupational theory of caste; "Indian Rennaissance"; Forms of Social Discrimination ; Dalit; Depressed Clases; Scheduled Castes; Ambedkarism; Ideology of Gandhi; Non-Brahman Movement; Mahar; Reservation; Mandal Commission; Politicization of caste; Politics of inclusion; Affirmative Action; Constitutional provisions; Anti colonial movement; Upliftment.

Unit I

Scope, concepts and method

An introduction to the debates about caste; its historiography and the nature of power in society; The debate on the nature of hierarchies in society in India and the west; the caste-class conundrum; Presence of caste in the historiography of the national movement.

Unit II

The period of the anti-colonial movements

The "Indian renaissance" of the nineteenth century and the issue of caste; Manifestations of caste based exclusion; and protest against caste discrimination in the 19th and early 20th century; Efforts and inclusions based on caste during the national movement.

Unit III

Creation of a formal infrastructure for social inclusion and its working

Caste and the constitution of 1950; Antinomies in operationalising the constitutional provisions; and State sponsored social and economic welfare schemes for the upliftment of the people in a plural society; The Mandal Commission of 1979, an analysis of its recommendations; and the social and political impact on politics in modern India.

Unit IV

The democratisation of India's polity since the 1960s

Politicisation of caste in the electoral arena, 1950-1967; the rise to power of regional parties; and their caste based successes; The politics of inclusion and its impact on national integration.

Essential Readings

It is recommended that the extensive collection with the A C Joshi library at Panjab University, the British Council Library, Sector 9 Chandigarh and the Central State Library, Sector 34, Chandigarh be consulted for a more extended reading list

Bayly, Susan, *Caste, Society and Politics in India from the Eighteenth Century to the Modern Age*, Cambridge University Press, Cambridge, 1999.

Dirks, Nicholas, *Castes of Mind*, Princeton University Press, Princeton, 2001.

Guha, Ramchandra, *India after Gandhi: the History of the World's Largest Democracy***,** Picador,New Delhi, 2007.

Kothari, Rajni ed., *Caste in Indian politics*, New Delhi 1970.

Quigley, Declan, *The interpretation of caste*, Oxford University Press, Delhi, 1999.

Report of the Backward Classes Commission, *Also known as the Mandal Commission Report***,** available in soft format at http://www.socialjustice.in/documents/, 1980.

Suggested Readings

Jaffrelot , Christophe , *India's Silent Revolution*, Columbia University Press, New York, 2003.

Khilnani, Sunil, *The Idea of Indi*a**,** Farrar, Straus and Giroux**,** London 1999

*Report of the National Commission to Review the Working of the Constitutio***n** (Venkatachaliah report), "Pace of social change" available at http://lawmin.nic.in/ncrwc/finalreport/v1ch10.htm, 2002.

Satyanarayana, A, *Dalits and Upper Caste: Essays in Social History*, Kanishka, New Delhi, 2005.

Srinivas, M.N. , "The Social System of a Mysore Village", in McKim Marriot, ed, *Village India***,** Chicago University Press, Chicago, 1955, pp. 1-35.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) EXAMINATIONS, 2019-2020

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. Political Science (Semester System)
(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %
   (ii) Continuous Assessment : 20 %
   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
		Total :	**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES :

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.
(iii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.
(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card (D.M.C.).

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF POLITICAL SCIENCE FOR M.A. (Semester System) i.e. 1st and 3rd SEMESTERS NOVEMBER/DECEMBER, 2019 AND 2nd and 4th SEMESTERS APRIL/MAY, 2020 EXAMINATIONS

Outlines of Test

Note : Each paper/course shall carry 4 credits/100 marks.

A semester shall have at least 60 hours of lectures and 15 hours of seminars in the papers included in the syllabus.

FIRST SEMESTER

Course I : Western Political Thought-I

Course II : Key Concepts in Political Analysis

Course III : Indian Politics : Institutions at work (Compulsory)

Course IV : International Relations : An Historical Overview

SECOND SEMESTER

Course V : Western Political Thought (II)

Course VI : Comparative Politics : Understanding Advanced Industrial Societies

Course VII : Indian Politics : Political Processes (Compulsory)

Course VIII : Theories of International Relations

OR

Approaches to the Study of International Relations

THIRD SEMESTER

Course IX : Indian Political Thought-I (Compulsory)

Course X : Comparative Politics-II : Understanding Developing Societies (Compulsory)

OR

Comparative Political Systems with special reference to USA, UK, China, Japan & Switzerland (Compulsory)

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) International Organization

Option (b) Transnational Actors in International Politics

Option (c) Politics of Development in India

Option (d) Peace and Conflict Resolution

Option (e) Rethinking Geopolitics : Criactial Perspectives

Option (f) Theories of Development

Option (g) Public International Law-I

Course XII : ***The candidates are required to offer any one of the following courses :***

Option (a) Democracy in India

Option (b) Government & Politics of India's Neighbours (Pakistan, Bangladesh, Nepal and Sri Lanka).

Option (c) Women and Politics in India

Option (d) Rights : Ideas and Movements

Option (e) Nationalism : Theory and Context

Option (f) New Political Geography in Comparative Perspective

Option (g) Policies and Politics of Development in India

Option (h) Public Administration

FOURTH SEMESTER

Course XIII : Indian Political Thought-II (Compulsory)

Course XIV : Foreign Policy of India (Compulsory)

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) Parties and Electoral Politics in India

Option (b) State Politics in India

Option (c) Decentralized Governance and Local Level Institutions in India

Option (d) Political Sociology with special reference to India

Option (e) Representing "India" : Geopolitical Imaginations

Option (f) Dalit Movements and Issues in India

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) Feminist Political Theory

Option (b) Major themes in Recent Political Philosophy

Option (c) Readings in the Philosophy of Resistance and Liberation

Option (d) Contemporary Debates in 20th Century Marxism

Option (e) Introducing Federalism

Option (f) Public International Law-II

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) SYLLABUS

FIRST SEMESTER

Course I : WESTERN POLITICAL THOUGHT-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students to the major themes of western political thought. This will be done by undertaking an in-depth study of the key thinkers of this tradition.

Unit-I
1. Plato.
2. Aristotle.

Unit- II
1. St. Augustine.
2. St. Thomas Aquinas.

Unit-III

1. Machiavelli.
2. Hobbes.

Unit-IV
1. Locke.
2. Rousseau.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following secondary literature :

General Text Books :

1. Dunning, W.A., *A History of Political Theories,* Allahabad (any edition).
2. Ebenstein, William, *Great Political Thinkers,* IBH, Oxford (any edition).
3. Sabine, G.H., *A History of Political Theory,* Oxford and IBH, Bombay (any edition).
4. Russell, Bertand, *History of Western Philosophy,* Simon and Schuster, New York (any edition).
5. Strauss, Leo and Joseph Cropsey, *History of Political Philosophy,* Rand McNally, 1968.

Suggested Readings :

1. Allen, J.W., *A History of Political Thought in the Sixteenth Century,* Methuen, London, 1964 (Ch. II Machiavelli).
2. Bakshi, O.P., *Politics and Prejudice : Notes on Aristotle's Political Theory,* University of Delhi,1975.
3. Barker, E., "Introduction" in E. Barker (ed.), *The Politics of Aristotle,* OUP, Oxford.
4. Barker, E., *Greek Political Theory : Plato and His Predecessors,* Methuen, London, 1947.
5. Barnes, Jonathan, *Articles on Aristotle, Vol. 2, Ethics and Politics,* Duckworth, London, 1977.
6. Berlin, Isaiah, *The Originality of Machiavelli in I. Berlin, Against the Current,* OUP, Oxford, 1981.
7. Brian R. Nelson, *Western Political Thought,* Pearson, Delhi, 2004.
8. Brown, Keith C. (ed.), *Hobbes Studies,* Basil Blackwell, 1965.
9. Cole, G.D.H. (Translator), *The Social Contract and Discourses* by Jean Jacques Rousseau (Author) J.H. Brumfitt (Revised), London, Everyman's Library, 1993.
10. Colletti, Lucio, "Rousseau as Critic of Civil Society" in Lucio Colletti ed. From Rousseau to Lenin, OUP, Delhi, 1978.
11. Croix, GEM De Ste, *The Class Struggle in the Ancient Greek World,* Duckworth, London, 1981.
12. Crombie, I.M., *An Examination of Plato's Doctrines,* Vol. I R.K.P., London, 1962.
13. Cross, R.C. & A.B. Woozley, *Plato's Republic,* Macmillan, 1964.
14. Deane, Herbert, A., *The Politics and Social Ideas of St. Augustine,* Columbia University Press, New York, 1963.
15. Dunn, John, Locke, *Past Masters Series*, OUP, Oxford, 1984, Chs. 1 & 2.
16. Dunn, John, *The Political Thought of John Locke,* Cambridge University Press, Cambridge, 1969.
17. Filed, G.C., *The Philosophy of Plato,* London, 1969.
18. Gilby, Thomas, B., *The Political Thought of Thomas Aquinas,* University of Chicago Press, Chicago,1958.
19. Grimsley, Ronald, *The Philosophy of Rousseau,* OUP, London, 1973.
20. Hall, J.C., *Rousseau, Introduction to His Political Philosophy,* Macmillan, 1971.
21. Levinson, R.B., *In Defence of Plato,* Harvard University Press, Harvard, 1953.
22. Macpherson, C.B., "Introduction" in C.B. Macpherson (ed.), *Leviathan of Hobbes,* Penguin, Harmondsworth, 1968.
23. Macpherson, C.B., *Political Theory of Possessive Individualism, Hobbes to Locke,* OUP, London, 1962.
24. Masters, Roger D., *The Political Philosophy of Rousseau,* Princeton, 1968.
25. Muglan, R., *Aristotle's Political Theory,* Clarendon, Oxford, 1977.
26. Newman, N.L., *The Political Thought of Aristotle,* 4 Vols., Clarendon, Oxford, 1887-1902.
27. Pocock, J., *The Machiavellian Moment,* Princeton, 1975.
28. Popper, Karl, *The Open Society and Its Enemies,* Vol. I : The Spell of Plato, R.K.P., London, 1945.
29. Raphael, D.D., *Hobbes : Morals and Politics,* George Allen & Unwin, London, 1977.
30. Skinner, Q., *Machiavelli, Past Masters Series,* OUP, Oxford, 1981.
31. Skinners, Q., *Foundations of Modern Political Thought, Vol. 1 : The Rennaissance,* Cambridge University Press, Cambridge, 1978 (Chs. 4, 5, 6).

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Course II : KEY CONCEPTS IN POLITICAL ANALYSIS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course aims at introducing students to the key concepts which are the building blocks of political analysis. Each concept will be studied in terms of the main debates over its nature and scope in the discipline and its relationship with other concepts. After dong this course, the student will be able to discern the conceptural debates which underlie political phenomena.

Unit-I

What is Political? – Conflict, Class, Public and the Private
Power –Three Dimensional View of Power, Power as Influence, Exploitation, Hegemony, Power/Knowledge

Unit-II

State- Political Authority and Political Obligation, Modern State, State-Society relationship, Governmentality

Civil Society- Civil society and market, public sphere, civic virtue; community and civil society, State/civil society relationship

Unit III

Democracy- Who should rule and why? Protective, Pluralist and Radical democracy, Representation and Participation, Democracy and difference

Liberty – Negative and positive models, Civil and Political liberty, Freedom of expression, Alienation, Social conditioning and self realization

Unit-IV

Equality and Justice – Why equality; Equality of What; Universality and difference, Care
Rights- Natural, legal rights, human rights; Three generations of rights, Individual and group rights

Essential Readings:-

1. Andrew Heywood, *Political Theory*, Palgrave Macmillan, 2004 (Third Edition)
2. Andrew Heywood, *Politics*, Palgrave Macmillan, 2013 (Fourth Edition)
3. Rajeev Bhargava and Ashok Acharya (ed)*Political Theory: An Introduction* (Available in Hindi translation), Pearson Education, 2008
4. Andrew Vincent, *Modern Political Ideologies,* Wiley-Blackwell, 2010 (Third Edition)
5. Will Kymlicka, *Contemporary Political Philosophy* (Available in Hindi translation), OUP, 2002 (Second Edition)
6. Dudley Knowles, *Political Philosophy*, Routledge, 2001
7. Jonathan Wolff, *An Introduction to Political Philosophy,* OUP, 1996
8. John Dryzek, Bonnie Honig and Anne Phillips (eds), *The Oxford Handbook of Political Theory,* OUP, 2008
9. Jean Hampton, *Political Philosophy*, New Delhi, Oxford University Press, 1998

Suggested Readings:-

1. Adrian Leftwich: *What is Politics: The Activity and Its Study,* Polity Press, 2004
2. Amartya Sen, "Equality of What?" in S.M.McMurrin, ed., *The Tanner Lectures on Human Values*, Cambridge University Press, 1980, pp 195220.
3. Bhikhu Parekh, "Equality in a Multicultural Society", in *Rethinking Multiculturalism*, Palgrave, 2000
4. Colin Gordon et.al, eds., *The Foucault Effect: Studies in Governmentality*, University of Chicago Press, 1991
5. Craig Calhoun, "Civil Society and Public Sphere", in *Public Culture*, Vol 5, No2,1995.
6. David Held, *Models of Democracy*, Polity, 2006 (Third Edition)
7. David Held, *Political Theory and the Modern State*, Polity Press, 1989
8. David Miller: *The Liberty Reader*, Paradigm Publishers, 2006
9. John Rawls,' Justice as Fairness: Political not Metaphysical', *Philosophy and Public Affairs,* Vol 14 (3), 1985.
10. Michael Walzer, "Complex Equality", in *Spheres of Justice: A Defence of Pluralism and Equality*, Martin Robertson, 1983
11. Noberto Bobbio, 'Gramsci and the conception of civil society' in Chantal Mouffe (ed)*Gramsci and Marxist Theory*, Routledge,1979.
12. Robert Nozick, "Distributive Justice", in *Anarchy, State and Utopia*, Oxford, Blackwell, 1974
13. Ronald Dworkin, 'What is Equality? Part I: Equality of Welfare', *Philosophy and Public Affairs*, Vol 10/3, 1981
14. Ronald Dworkin, 'What is Equality? Part II: Equality of Resources', *Philosophy and Public Affairs*, Vol 10/4, 1981.
15. Selma Sevenhuijsen, 'The Place of Care: The Relevance of the Feminist Ethic of Care for Social Policy' in *Feminist Theory*, 4(2), 2003.
16. Simone Chambers and Will Kymlicka, eds., *Alternative Conceptions of Civil Society*, Princeton University Press, 2002.
17. Steven Lukes, *Power*: *A Radical Critique*, Palgrave Macmillan, 2005.

Semester-I

Course-III - Indian Politics: Institutions at Work (compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course*:*: Recent India has witnessed a major thrust in the study of India's political and economic processes. An important component of many such studies has been to refer to the relevant constitutional and institutional aspects. Such studies, sensitive to the constitutional experiences of a 'new democracy', have enriched themselves by undertaking an in-depth analysis of the way the constitutional provisions have been put into practice and also by making an attempt to explore the core ideas that guided the constitution-makers during the deliberations in the Constituent Assembly. The paper aims at making the students aware of the text of the Constitution of India, important debates and the way the institutions have worked over the last more than six and half decades.

1. Making of Political Institutions
a) Constituent Assembly Debates: Secularism, Rights
b) Preamble, Fundamental Rights and the Directive Principles of State Policy
c) Constitutional Amendments related to Right to Property: Nature, Problems and Politics

2. Federal Institutions
a) Strong Centre Framework: Reading Relevant Constitutional Text
b) Autonomy and Devolution: Sarkaria Commission Recommendations
c) Local Self Government: Politics of Decentralization

3. Executive and Legislature
a) President and Prime Minister: Modes of exercise of powers
b) Governors and Chief Ministers: Changing Role and Institutional Relationship
c) Union Parliament: Composition, Powers, Reservations and Parliamentary Committees

4. Judicial Power and Rule of Law
a) Supreme Court: Jurisdictions
b) Judicial Independence, Judicial Review
c) Judicial Activism, Public Interest Litigation
d) Election Commission of India and Electoral Reforms

Essential Readings

- Austin, Granville, *The Indian Constitution: Cornerstone of a Nation*, Oxford University Press, Delhi, 1966.
- Austin, Granville, *Working a Democratic Constitution: A History of the Indian Experience*, Oxford University Press, Delhi, 1999.
- Basu, D.D., *Introduction to the Constitution of India*, Lexis Nexis, Gurgaon, 2015.
- Bhargava, Rajeev, ed., *Politics and Ethics of the Indian Constitution*, Oxford University Press, New Delhi, 2008.
- Brass, Paul R., *The Politics of India since Independence*, Cambridge University Press, London, 1994.
- Chaube, S. K., *Constituent Assembly of India, Springboard of Revolution,* People's Publishing House, New Delhi, 1973.
- Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
- Hasan, Zoya et al., eds., *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, New Delhi, 2002.
- Kapur, Devesh and Pratap B Mehta (eds.) *Public Institutions in India: Performance and Design*, Oxford University Press, New Delhi, 2007.

Suggested Readings:-

Unit I

1. Arora, Balveer and Douglas Verney**,** eds., *Multiple Identities in a Single State*: *Indian*
2. Bandyopadhyay, Sekhar (ed.) *Nationalist Movement in India*, Oxford University Press, New Delhi, 2009.
3. Constituent Assembly Debates (Selections).
4. *Federalism in Comparative Perspective*, Konark Publishers, New Delhi, 1995.
5. Mehta, Pratap Bhanu, *The Burden of Democracy*, Penguin, New Delhi, 2003
6. Mehta, V. R. and Thomas Pantham (ed.), *Political Ideas in Modern India,* Delhi, Sage, 2006.
7. Mukherji, Nirmal and Balveer Arora, eds., *Federalism in India: Origins and Development*, Vikas Publishing House, New Delhi, 1992.
8. Rao Shiva B., *The Framing of India's Constitution, A Study and Select Documents*, Tripathi, Bombay, 1968.
9. Saez, Lawrence, *Federalism without a Centre*: *The Impact of Political and Economic Reforms on India's Federal System*, Sage, New Delhi, 2002.

Unit II

1. Baxi Upendra, *The Supreme Court in Indian Politics*, Eastern Book Company, New Delhi, 1980.
2. Baxi, Upendra, *Courage Craft and Contention: The Indian Supreme Court in the*
3. *Eighties,* N.M. Tripathi, Bombay, 1985.
4. Kashyap Subash, ed., *Constitutional Reforms*: *Problems, Prospects and Perspectives*, Radha Publications, New Delhi, 2004.
5. Kripal B.N. et al., eds., *Supreme but not Infallible*: *Essays in Honour of the Supreme Court of India*, Oxford University Press, New Delhi, 2000.
6. Sathe S.P., *Judicial Activism in India: Transgressing Borders and Enforcing Limits*, Oxford University Press, New Delhi, 2002.
7. Singh Ujjwal Kumar, *State, Democracy and AntiTerror Laws*, Sage Publications, New Delhi, 2007.

Unit III

1. *2002 Jammu and Kashmir Assembly*, Penguin, New Delhi, 2004.
2. Bhagat A.K., *Elections and Electoral Reforms*, Vikas Publications, New Delhi, 1996.
3. Bhambhri, C.P., *The Indian Prime Minister: A Framework for Political Analysis,* The Indian Law Institute, New Delhi.
4. *Change*, Vol II, Oxford University Press, New Delhi, 2008.
5. Konark Publishers, New Delhi, 1996.
6. Lyngdoh J. M., *Chronicle of an Impossible Election*: *The Election Commission and the*
7. Manor James, ed., *Nehru to the Nineties: The Changing Office of Prime Minister in India*, Viking Press, New Delhi, 1994.
8. Mehra Ajay K. and V. A. Pai Panandiker, *The Indian Cabinet: A Study in Governance***,**
9. Morris Jones W.H., *Parliament in India*, University of Pennsylvania Press, Philadelphia,
10. Noorani, A G, *Constitutional Questions in India: The President, Parliament and the States*, Oxford University press, New Delhi, 2002.

Unit IV

1. Baxi, Upendra and Bhikhu Parekh (ed.), *Crisis and Change in Contemporary India,* Sage, New Delhi, 1994.
2. Dhavan, Oxford University Press, Delhi, 1989.
3. Frankel Francine et al., eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
4. Galanter Marc, *Law and Society in Modern India*, edited with an introduction by Rajeev
5. Hardgrave Robert L., *India*: *Government and Politics in a Developing Nation*, Harcourt,
6. Jovanovich, New York, 1980.
7. Kaushik, Susheela (ed.), *Indian Government and Politics* (Hindi), Directorate of Hindi Implementation, Delhi University, 1990.
8. Keith A.B., *Constitutional History of India*, Methuen and Co, London, 1936.
9. Khan, Rasheeduddin (ed.), *Rethinking Indian Federalism, Indian Institute of Advanced Studies,* Shimla, 1997
10. Kohli Atul, ed., *The Success of India's Democracy*, Cambridge University Press, London,
11. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Cambridge University Press, Cambridge, 1991.
12. Noorani A.G., *Constitutional Questions in India***:** *The President, Parliament and the States***,** Oxford University Press**,** Delhi, 2000.
13. Palkivala, N.A., *Our Constitution Defaced and Defiled,* Macmillan, Delhi, 1974.
14. Pylee M.V., *India's Constitution*, Asia Publishing House, New Delhi, 1962.
15. Rao K.V. and K.M. Munshi, *Parliamentary Democracy of India*, The World Press Private Ltd, Calcutta, 1965.
16. Sudarshan, R., 'The Political Consequences of Constitutional Discourse' in T.V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Vol. I, OUP, Delhi, 1997.
17. Thakur, Ramesh, *The Government and Politics of India,* London, Macmillan Press, 1986
18. Vora, Rajendra and Suhas Palshikar (eds.), *Indian Democracy: Meanings and Practices,* Sage, New Delhi, 2003.
19. Weiner Myron, *The Indian Paradox*: *Essays in Indian Politics*, edited by Ashutosh Varshney, Sage Publications, New Delhi, 1989.

Journals to be Consulted

- ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues only on web)
- ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm

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Course IV : INTERNATIONAL RELATIONS : AN HISTORICAL OVERVIEW

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The purpose of this paper is to provide an historical overview of major developments in International Relations since the beginning of the twentieth century.

Unit-I

Crisis and Collapse of the 19th Century International System.
Two World Wars : Their causes and consequences.
Decolonization, rise and decline of third worldism.

Unit-II

Emerging of super powers, forms and phases of Bioplarity in the cold war.
Nuclear Politics : Issues of Proliferation, Discrimination and Hegemony.

Unit-III

Collapse of the Socialist Bloc : Alternative interpretation of its causes, consequences and future possibilities. End of cold war.
Emerging Issues in a Changing World : Ethnicity, environment, sustainable development, gender & peace.

Unit-IV

Emerging world order. Globalization, Regionalism and Trading,Trading blocks (NAFTA, APEC, EU & SAPTA) Changing role of IMF and The World Bank : Structural Adjustment Programmes. Transformation Facilities and Conditionalties, world trade organization.

Essential Reading

1. Rumki Basu, *International Politics: Concepts, Theories and Issues, SAGE,* 2012.
2. John Baylis, Steve Smith, Patricia Owens, *The Globalization of World Politics: An Introduction to International Relations,* Oxford University press, 2014.
3. Peter Calvocoressi, *World of Politics since 1945,* Longman, 1989 edn.

4. Christian Reus-Smit and Duncan Snidal, The Oxford Handbook of International Relations, OUP, 2010.
5. Mark V. Kaupp Paul R. Viotti, *International Relations And World Politics: Security, Economy, Identity* , Prentice Hall- Gale, 1996.
6. V. N. Khanna, *International Relations*, S.Chand (G/L) & Company Ltd; Fifth edition 2013

Suggested Readings :

1. Eric Hobsbawm, *Age of Extremes, The Short Twentieth Century,* 1914-91, Viking, 1995.
2. Paul Kennedy, *The Rise and Fall of Great Powers : Economic Change and Military Conflict from 1500 to 2000,* Fontana, 1988.
3. Paul Kennedy, *Preparing for the Twenty-First Century,* Indus, Harper Collins, 1993.
4. Kanta Ahuja *et al* (ed.), *Regime Transformations and Global Realignments* : Indo-European Dialogue *on Post-Cold War World,* Sage, 1993.
5. Peter Calvocoressi, *World of Politics Since 1945,* Longman, 1989 edn.
6. R. Giplin, *The Political Economy of International Relations,* Princeton, 1987.
7. Rama S. Melkote and A. Narasimha Rao, *International Relations,* Sterling, 1992.
8. R. Stubbs and G.R.D. Underhill, *Political Economy and the Changing Global Order,* Macmillan, 1994.
9. G. Hastedt (ed.), *One World, Many Voices : Global Perspectives on Political Issues,* Prentice Hall, 1995.
10. J.A. Camilleri and J. Falk, *The End of Sovereignty : The Politics of a Shrinking and Fragmenting World,* Edward Elgar, 1992.
11. Bhupinder Brar, *Explaining Communist Crises,* Ajanta, 1994.
12. Richard Little and Michael Smith (eds.), *Perspectives on World Politics,* Routledge, 2006.
13. Chris Brown, *Understanding International Relations,* Palgrave, 2001.
14. Peter Calvocoressi, *World Politics : 1945-2000,* Pearson Education, 2005.

SECOND SEMESTER

Course V : WESTERN POLITICAL THOUGHT (II)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students the major themes of western political thought. For this purpose, the paper undertakes a study of the key thinkers of this tradition.

Unit-I

1. Jeremy Bentham.
2. J.S. Mill.

Unit-II

1. Hegel.
2. Karl Marx.

Unit-III

1. Antonio Gramsci .
2. Herbert Marcuse.

Unit-IV

1. Hannah Arendt.
2. John Rawls.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following literature :

1. Plamenatz, John, *The English Utilitarians,* Basin Blackwell, Oxford, 1949.
2. Thakurdas, Frank, *The English Utilitarians and Idealists,* Vishal, Delhi, 1978.
3. Brinton, Crane, *English Political Thought in the 19th Century,* Havard University Press, 1954.

Suggested Readings :

1. Parekh, Bhikhu, *Bentham's Political Thought,* Barnes, and Noble, New York, 1973.
2. Marcuse, H., *Reason and Revolution : Hegel and the Rise of Social Theory,* RKP, London, 1955.
3. Evans, Michael, *Karl Marx*, George Allen & Unwin, 1975.
4. Kolakowski, Leszek, *Main Currents of Marxism, Vol. I,* The Founders, OUP, Oxford, 1978.
5. Cohen, G.A., *Karl Marx's Theory of History : A Defence,* Clarendon, Oxford, 1978.
6. Avineri, Shlomo, *The Social and Political Thought of Karl Marx,* S. Chand, New Delhi, 1968.
7. Ollman, Bertell, *Alienation : Marx's Concept of Man in Capitalist Society,* Cambridge University Press, Cambridge, 1977.
8. Althusser, Louis, *For Marx,* New Left Books, 1977.
9. Bottomore, T.B. (ed.), *A Dictionary of Marxist Thought,* Blackwell, Oxford, 1983.
10. Hoare, Q. and Smith, G.N. (ed.), *Selection from the Prison Notebooks of Antonio Gramsci,* International Publishers, New York, 1971.
11. Mouffe, C. (ed.), *Gramsci and Marxist Theory,* Routledge, 1979.
12. Sassoon, Anne, S., *Gramsci's Politics,* Croom Helm, London, 1980.
13. Arendt, Hannah, *The Origins of Totalitarianism,* Harcourt Brace, New York, 1951.
14. Arendt, Hannah, *The Human Conditions,* Chicago, University Press, Chicago, 1958.
15. Canovan, Margaret, *The Political Thought of Hannah Arendt,* Harcourt Brace, New York, 1974.
16. Parekh, Bhikhu C., *Hannah Arendt and the Search for A New Political Philosophy,* Humanities Press, Atlantic Highlands, 1991.
17. Rawls, John, *A Theory of Justice,* Oxford University Press, Oxford, 1971.
18. Rawls, John, *Political Liberalism,* Columbia University Press, New York, 1993.
19. Marcuse, Herbert, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society,* Beacon, Boston, 1964.
20. Anthony de Crespigny and Kenneth Minogue, *Contemporary Political Philosophers,* Dodd, Mead, and Company, New York, 1975.
21. Bhikhu, Parekh, *Contemporary Political Thinkers,* Martin Robbertson, Oxford, 1982.

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Course VI: COMPARATIVE POLITICS-I : UNDERSTANDING ADVANCED INDUSTRIAL SOCIETIES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial societies, and this will be undertaken in a comparative framework.

Unit-I

Comparative Politics: Meaning, Significance, Evolution, Nature and Content.
Comparative Method: Problems of comparative political analysis.

Unit-II

Modernity in Western Societies: meaning, evolution of modernity since the Christian era, nature and forms-political , social , economic and cultural.
Recent Debates: Modernity and class, Modernity and gender.

Unit-III

State and Civil Society: Theories and recent debates.
Constitutionalism: Theory and Practice in Contemporary States.

Unit-IV

Understanding Culture and Social change: Political Culture and Political Socialisation.
Political Participation and Representation: Political parties, Pressure groups and new social movements.

Readings:

Students are advised to see the relevant entries in the following reference books—

Seymour Martin Lipset (ed. in chief). The Encyclopedia of Democracy, Volumes I, II and III, Routledge, London, 1955; Vernon Bogdanor (ed.), The Blackwell Encyclopedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Essential Readings :

1. Almond, G., 'The Return to the State', *American Political Science Review,* 82, No. 3, September, 1998.
2. Caramani, Daniele, *Comparative Politics*, OUP, New Delhi.
3. Carnoy, Martin, *The State and Political Theory,* Princeton University Press, Princeton, 2016 (1984)
4. Chandhoke, Neera, "Limits of Comparative Political Analysis," *Economic and Political Weekly,* Vol. XXXI, No. 4, January 27, 1996.
5. Chilcote, Ronald, *Comparative Politics: The Search for a Paradigm Reconsidered,* Westview, Boulder (Second Edition), 1994.
6. Hague, Rod, Martin Harrop and Shaun Breslin, *Comparative Government and Politics: An Introduction,* Macmillan, London, 1993
7. Jessop, B., *State Theory : Putting Capitalist States in their Place,* Polity Press, Cambridge, 1990.
8. Johary, J.C. , *Comparative Politics*, Sterling Publisher, New Delhi, 2011.
9. Synder, R. (2001). 'Scaling Down: The Subnational Comparative Method'. *Studies in Comparative International Developmen*t. 36(1): 93-110
10. Tillin, Louis (2013). 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2): 235-240.

Suggested Readings

1. Almond, G.A., and S. Verba (eds.), *The Civic Culture Revisited,* Little Brown, Boston, 1980.
2. Almond, Gabriel G. Bingham Powell, Kaare Strom and Russel T. Dalton, *Comparative Politics Today,* Pearson Education, Delhi, 2005.
3. Anthias, Floyas and Nira Yuval-Davis, *Racialized Boundaries, Race, Nation, Gender, Colour and Class and the Anti-Racist Struggle,* Routledge, London, 1992.
4. Ball, A., and F. Millward, *Pressure Politics in Industrial Societies,* Macmillan, London, 1986.
5. Bellamy, Richard and Dario Castiglone (ed.), *Constitutionalism in Transformations : European and Theoretical Perspectives, Political Studies Vol. XLIV,* Special Issue, 1996.
6. Block, F., 'Beyond Relative Autonomy' in Ralph Miliband and John Saville (eds.), *The Socialist Register,* Merlin, London, 1980.
7. Blondel, J., *The Discipline of Politics,* Butterworth, London, 1981.
8. Bogdanor, V., (ed.), *Constitutions in Democratic Politics,* Gower, Aldershot, 1988.
9. Bombwall, K.R., *World Constitutions,* Modern Publishers, Ambala, 1980.
10. Calvert, Peter, *Revolution and Counter Revolution,* Open University Press, Milton Keynes, 1990.
11. Cammack, P., 'Statism, New Institutionalism and Marxism' in Ralph Miliband and Leo Panitch (eds.), *The Socialist Register,* Merlin, London, 1990.
12. Cantori, Louis J., and Andrew H. Ziegler (eds.), *Comparative Politics in the Post-Behavioural Era,* Lynne Rienner Publisher, Boulder, 1988.
13. Cigler, C., and B. Loomis (eds.), *Interest Group Politics, Congressional Quarterly* Press, Washington DC, 1985.
14. Dalton, Russel, J., "Comparative Politics of the Industrial Democracies : From the Golden Age to Island Hopping" in William Crotty (ed.), *Comparative Politics Policy and International Relations,* Northwestern University Press, Evanstone, 1991.

15. Dalton, Russell and Manfred Kurchler (eds.), *Challenging the Political Order,* New York, 1990.
16. Dogan, Mattei and Ali Kazancigilli (eds.), *Comparing Nations, Concepts, Strategies, Substance,* Blackwell, Oxford, 1994.
17. Dogan, Mattei and Dominique Pelassy, *How to Compare Nations, Strategies in Comparative Politics,* Chatham House, 1984 (Indian reprint) Vision Books, New Delhi, 1988.
18. Dunleavy, P., and B. O' Leary, *Theories of the State,* Macmillan, London, 1987.
19. Easton, David, 'The Political System Beyond the State', *Political Theory, No. 3,* 1981.
20. Eckstein, Harry and David E., Apter (ed.), *Comparative Politics, A Reader,* The Free Press of Glencoe, Collier-Macmillan, London, 1993.
21. Elster, Jon, 'Ways of Constitution-making' in Axel Hadenius (ed.), *Democracy's Victory and Crisis,* Cambridge University Press, Cambridge, 1997.
22. Evans Peter B., P.D. Rueschemeyer and T. Skocpol (ed.), *Bring the State Back in,* Cambridge University Press, Cambridge, 1985.
23. Gellner, E., 'Civil Society in Historical Context', *International Social Science Journal, No. 129,*1991.
24. Gellner, Ernest, *Nations and Nationalism,* Blackwell, Oxford, 1983.
25. Gibbins, J., (ed.), *Contemporary Political Culture : Politics in a Post-Modern Age,* Sage, London,1989.
26. Glazer, N., and D. Moynihan (eds.), *Ethnicity: Theory and Experience,* Harward University Press,Cambridge, 1975.
27. Graham, B.D., *Representation and Party Politics: A Comparative Perspective,* OUP, Oxford, 1990.
28. Hall, Stuart and Bram Gieben, *Formations of Modernity,* Polity, Cambridge, 1992.
29. Hawkesworth, Mary and Maurice, Kogan (ed.), *Encyclopedia of Government and Politics,* Routledge, London, 1992.
30. Held, D., *Political Theory and the Modern State,* Polity Press, Cambridge, 1989, 1990.
31. Hobsbawm, Eric, *Nations and Nationalism since 1780,* Cambridge, 1991.
32. Hoffman, J., *State Power and Democracy,* Wheatsheaf, Sussex, 1988.
33. Hutchinson, J., and A.D. Smith (eds.), *Nationalism,* OUP, Oxford, 1994.
34. Lane, J.E., *Constitutions in Political Theory,* Manchester University Press, Manchester, 1996.
35. Lane, Jan-Erik and Svante Ersson, *Comparative Politics : An Introduction and New Approach,* Polity, Cambridge, 1994, (Ch. 1, Comparative Approaches, Ch. 6, The Logic to Model Building in Comparative Government).
36. LaPalombara, Joseph and Myron Weiner (ed.), *Political Parties and Political Development,* Princeton University Press, Princeton, 1966.
37. Larrain, Jorge, *Theories of Development,* Polity, Cambridge, 1989. 1.12 Mohanty, Manoranjan, "Moving the Centre in the Comparative Study of Politics, An Approach to Creative Theory", Unpublished Paper (Photostat copy in Political Science Departmental Library, Panjab University).
38. Michael G. Ruskin, Robert L. Cord, James A. Medeiros and Walter S. Jones (eds.), *Political Science: An Introduction,* Prentice Hall, New Jersey, 2005.
39. Miliband, Ralph, *The State in Capitalist Societies,* Weidenfeld and Nicolson, London, 1968.
40. Moore Jr., Barrington, *Social Origins of Dictatorship and Democracy : Lord and Peasant in the Making of the Modern World,* Penguin, 1967.

41. Mueller-Rommel, F. (ed.), *New Politics in Western Europe,* Boulder, 1989.
42. Nordlinger, E., 'The Return to the State, Critique', *American Political Science Review,* Vol. 82, 3 September, 1988.
43. Preuss, Ulrich, K., 'Constitutionalism – Meaning, Endangerment, Sustainability' in Satish Saberwal and Heiko Sievers (ed.), *Rules, Laws, Constitutions,* Sage, New Delhi, 1998.
44. Sartori, G., *Parties and Party Systems: A Framework for Analysis,* Cambridge University Press, Cambridge, 1976.
45. Sartori, Giovanni, 'Compare Why and How, Comparing, Miscomparing and the Comparative Method' in Mattei Dogan and Ali Kazancigil (ed.) *Comparing Nations,* Blackwell, Oxford, 1994, Pp. 14-34.Wiarda, H. J., *New Directions in Comparative Politics,* Westview Press, Boulder, 1991.
46. Skocpol, Theda, *States and Social Revolutions: A Comparative Analysis of France, Russia nad China,* Cambridge University Press, Cambridge, 1979.
47. Smith, A.D., *The Ethnic Origins of Nation,* Basil Blackwell, Oxford, 1986.
48. Taylor, Charles, 'Modes of Civil Society', *Public Culture, Vol. 3,* No. 1, Fall 1990.
49. Wilson, G., *Interest Groups,* Blackwell, Oxford, 1990.

Course VII: INDIAN POLITICS: POLITICAL PROCESSES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course aims to introduce students to politics in India as it has evolved after decolonization. The themes discussed during the course will be those that are crucial to the understanding of the way political processes in the largest democracy of the world unfold in varying form. The paper takes up the issues for discussion related to the way democratic politics in India has evolved and been shaped in an underdeveloped, multi-ethnic setting along the lines of caste, class, and linguistic and religious identities. It also focuses on the way India's democratic state has fared in promoting economic development, both growth and equity.

1. ***Democratic Politics in Independent India***
a) Legacies of the Nationalist Movement.
b) Challenges of Democratic Transition and Consolidation
c) Nature of Indian State: Class, Gender

2. ***Political Parties and Electoral Politics***
a) Evolution and Shifts in Party System: Dominant Party System, Its Breakdown
b) Electoral Politics: Emerging Trends Since 1990's

3. ***Caste, Religion and Region***
a) Caste and Politics: Rise of Dalit and Backward Caste Politics
b) Religion and Politics: Secularism, Communalism and Rise of Hindutva
c) Region and Politics: Linguistic Identities and Reorganization of States; Politics of New States

4. ***State, Economy and Development***
a) Development Planning Model: Concept, Strategies, Policies, and Critique
b) Economic Transition: Causal Explanations
c) New Economic Policies: Social implications for the Weaker Sections in the Society

Essential Readings

1. Brass, Paul, *The Politics of India since Independence*, Cambridge University Press, Cambridge, 1994, Introduction.
2. Chandhoke, Neera and Praveen Priyadarshi, *Contemporary India: Economy, Society, Politics,* Pearson Education, New Delhi, 2009
3. Corbridge, Stuart and John Harriss, *Reinventing India*, Oxford University Press, Delhi, 2000.
4. deSouza, Peter and E Sridharan, *India's Political Parties*, New Delhi, Sage, 2007.
5. Francine, Frankel, et al, eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
6. Jayal, Niraja Gopal, ed., *Democracy in India,* Oxford University Press, New Delhi, 2001.
7. Kaviraj Sudipta, *The Trajectories of the Indian State*, Permanent Black, New Delhi, 2010.
8. Kohli, Atul, ed., *The Success of India's Democracy*, Cambridge University Press, Cambridge, 2001.
9. Mehta, Pratap Bhanu and Niraja Gopal Jayal, *The Oxford Companion to Politics of India*, New Delhi, Oxford University Press, 2010.
10. Menon, Nivedita, *Gender and Politics in India*, Delhi, Oxford University Press, 2001.
11. Morris-Jones W.H., *The Government and Politics in India*, B.I. Publications, New Delhi,
12. Mukherji, Rahul, *India's Economic Transition: The Politics of Reforms*, *Oxford* University *Press, New Delhi, 2014.*
13. Varshney, Ashutosh, *Battles Half Won: India's Improbable Democracy. Penguin, New Delhi, 2014.*

Suggested Readings

Unit I

1. Chhibber, Pradeep, *Democracy without Associations*, University of Michigan Press, Michigan, 1999.
2. Dubey, Abhay Kumar (ed.), *Loktantra Ke Saat Adhaya,* Vaani Prakashan, Delhi, 2002.
3. Hasan, Zoya, E. Sridharan and R. Sudarshan (eds.), *India's Living Constitution: Ideas, Practices, Controversies,* Permanent Black, Delhi, 2002.
4. Jenkins, Rob, *Democratic politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
5. Kaviraj, Sudipta, "A Critique of the Passive Revolution", *Economic and Political Weekly*, Vol. 23, No. 45/47, Special Number, Nov. 1988.
6. Kaviraj, Sudipta, "The Culture of Representative Democracy" in Partha Chatterjee (ed.), *Wages of freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1988.
7. Kohli, Atul, *India's democracy: An Analysis of Changing State-Society Relations*, Princeton University Press, Princeton, 1988.
8. Kothari, Rajni, "The Democratic Experiment" in Partha Chatterjee (ed.), *Wages of Freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1998.
9. Mehta, Pratap Bhanu, *Burden of Democracy,* Penguin, New Delhi, 2004.
10. Morris –Jones, W. H., *Politics Mainly Indian*, Orient Longman, New Delhi, 1978.
11. Nayyar, Deepak, 'Economic Development and Political Democracy-Interaction of Economics and Politics in Independent India', *Economic and Political Weekly, 33(49*), 5 December, 1998.
12. Nayyar, Deepak, 'Economic Growth in Independent India', *Economic and Political Weekly,* 41(15), 15 April, 2006.

13. Rudolph, Lloyd and Susanne, *In Pursuit of Lakshmi*: *Political Economy of the State in India*, University of Chicago Press, Chicago, 1987.
14. Satyamurthy, T.V., ed., *State and Nation in the Context of Social Change*, vol. l, Oxford University Press, Delhi, l994.
15. Vora, Rajendra and Suhas Palshikar, eds, *Indian Democracy: Meanings and Practices*, Sage, New Delhi, 2004.

Unit II

1. Adeney, Katherine and Saez Lawrence, eds., *Coalition Politics and Hindu Nationalism*, Routledge, London, 2005.
2. Brass, Paul R. and Marcus F. Franda, (eds), *Radical Politics in South Asia*, MIT Press, Cambridge, 1973.
3. Hansen, Thomas and Jaffrelot Christophe, eds., *The BJP and the Compulsions of Politics in India,* Oxford University Press, New Delhi, 1998.
4. Hasan, Zoya ed., *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
5. Kothari, Rajni, *State against Democracy: In Search of Humane Governance*, Ajanta, Delhi, 1988.
6. Mehra, Ajay K., Khanna, D.D., and Gert W. Kueck, eds., *Political Parties and Party Systems,* Sage, New Delhi, 2003.
7. Weiner, Myron, *Party Politics in India: The Development of a Multiparty System,* Princeton University Press, New Jersey, 1957.
8. Yadav, Yogendra and Suhas Palshikar (eds) Political Parties and Elections in Indian States :1990-2003, *Journal of Indian School of Political Economy,* 2003.

Unit III

1. Agarwal Bina, ed., *Structures of Patriarchy*: *State, Community and Household in Modernizing Asia*, Kali for Women, New Delhi, 1988.
2. Bardhan, Pranab*, The Political Economy of Development in India,* Oxford University Press, New Delhi, 1998.
3. Baruah, Sanjeeb (ed.) *Ethnonationalism in India: A Reader*, Oxford University Press, New Delhi, 2010.
4. Baruah, Sanjeeb, *India against Itself*: *Assam and the Politics of Nationality*, Oxford University Press, New Delhi, 2003.
5. Bhargava, Rajeev, ed., *Secularism and Its Critics*, Oxford University Press, New Delhi, 1998.
6. Brass, Paul, *Language, Religion and Politics in North India,* Cambridge University Press, London, 1974.
7. Fernandes, Leela, *India's New Middle Class*: *Democratic Politics in an Era of Economic Reform*, University of Minnesota Press, 2006.
8. Frankel, Francine and M.S.A. Rao, eds., *Dominance and State Power in India*: *Decline of a Social Order,* Oxford University Press, New Delhi, 1989.
9. Ganguly, Sumit (ed.) The State of India's Democracy, Oxford University Press, New Delhi, 2009.
10. Guru, Gopal (ed.), *Humiliation: Claims and Context*, Oxford University Press, New Delhi, 2009.
11. Jaffrelot, Christophe, *India's Silent Revolution: The Rise of the Low Castes in Northern Indian States,* Permanent Black, Delhi, 2003.
12. Jaffrelot, Christophe, *The Hindu Nationalist Movement and Indian Politics, 1925 to the 1990s,* Penguin Books, New Delhi, 1996.
13. Jenkins, Rob (ed.), *Regional Reflections: Company Politics across India's States,* Oxford University Press, New Delhi, 2004.
14. Kanungo, Pralay, *RSS's Tryst with Politics: from Hedgewar to Sudarshan,* Manohar, Delhi, 2002.
15. King, Robert D., *Nehru and Language Politics in India,* Oxford University Press, Delhi, 1995.

16. Kohli, Atul and Prerna Singh, edited, Handbook of Indian Politics, Routledge Press, 2013
17. Mcguire, John and Ian Copland (eds) *Hindu Nationalism and Governance*, Oxford University Press, Delhi, 2008.
18. Menon, Nivedita ed., *Gender and Politics in India*, Oxford University Press, New Delhi,
19. Misra B.B., *The Indian Middle Class- Their Growth in Modern Times*, Oxford University Press, Delhi, 1978.
20. Mohanty, Manoranjan ed., *Caste, Class and Gender*, Sage, Delhi, 2000.
21. Pai Sudha, *Dalit Assertion and the Unfinished Democratic Revolution*: *The Bahujan Samaj Party in Uttar Pradesh*, Sage, New Delhi, 2002.
22. Pai, Sudha , ed., *Handbook on Politics in the Indian States Regions*, *Political Parties and Economic Reforms,* Oxford University Press, New Delhi, 2013.
23. Prakash, Amit, *Jharkhand*: *Politics of Development and Identity*, Orient Longman, Hyderabad, 2001.
24. Samaddar, Ranabir, *The Politics of Autonomy: Indian Experience,* Sage, New Delhi, 2005.
25. Sarangi, Asha (ed.) *Language and Politics in India*, Oxford University Press, New Delhi, 2010.
26. Sathyamurthy T.V. ed., *Region, Religion, Caste, Gender and Culture in India*, Oxford University Press, Oxford, 1998.
27. Shah Ghanshyam ed., *Dalit Identity and Politics*, Sage, New Delhi, 2001.
28. Vanaik, Achin, *Communalism Contested: Religion, Modernity and Secularization,* Vistaar Publications, New Delhi, 1997.
29. Weiner Myron, *Sons of the Soil*: *Migration and Ethnic Conflict in India,* Oxford University Press, New Delhi, 1987.
30. Wilkinson, Steven I (ed.) *Religious Politics and Communal Violence*, Oxford University Press, New Delhi, 2007.

Unit IV

1. Bardhan, Pranab, *The Political Economy of Development in India,* Oxford University Press, Delhi, Revised Edition, 1997.
2. Brar, Bhupinder and Pampa Mukherjee, eds, *Facing Globality: Politics of resistance, Relocation and Reinvention in India,* New Delhi, Oxford University Press, 2012.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and the Politics of Identity in India* , Pearson-Longman, New Delhi , 2008.
4. Chatterjee Partha, ed., *Wages of Freedom*: *Fifty Years of the Indian Nation State*, Oxford University Press, New Delhi 1998.
5. Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
6. Frankel, Francine R., *India's Political Economy,* 1947-2004, 2nd edition, Oxford University Press, New Delhi, 2005.
7. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, OUP, Delhi, 1999
8. Kaviraj Sudipta, *The Enchantment of Democracy and India*, Permanent Black, New Delhi, 2010.
9. Kohli, Atul, *Democracy and Development in India: From Socialism to Pro-business,* Oxford University Press, New Delhi, 2010.
10. Kohli, Atul, *Poverty amid Plenty in the New India*, Oxford University Press, New Delhi, 2012.
11. Lakshman, Narayan, *Patrons of the Poor: Caste Politics and Policy Making in India,* Oxford University Press, New Delhi, 2011.
12. Mooji, Jos, *The Politics of Economic Reforms in India,* Sage, New Delhi, 2005.
13. Nayar, Baldev Raj (ed.) Globalization and Politics in India, Oxford University Press, New Delhi, 2010.

14. Patnaik, Prabhat, "Political Strategies of Economic Development," in Partha Chatterjee, ed., *Wages of Freedom, Fifty Years of the Indian Nation-State* Oxford University Press, New Delhi, 1998.
15. Rudolph, L. and Susanne Rudolph, *In Pursuit of Lakshmi: The Political Economy of Indian States,* Orient Longman, Delhi, 1988.
16. Shah, Ghanshyam, ed., *State and Social Movements,* Sage, Delhi, 1999.

Journals/Newspapers to be Consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web also check on JSTOR)
2. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
3. ***Studies In Indian Politics, Sage Journal***
4. ***The Hindu and Indian Express***

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Course-VIII: Theories of International Relations

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives of the Course: The key objective of this course is to provide a comprehensive overview of the major theories in IR, covering the entire disciplinary spectrum from mainstream approaches such as realism, liberalism and constructivism to critical approaches such as postcolonialism, postmodernism and feminism. Whereas the course content remains largely theoretical, both historical and contemporary practices are taken as illustrative examples, particularly illuminating non-Western perspectives. This course is expected to act as a catalyst for students to think creatively and critically in search of 'global' International Relations that is inclusive of non-Western perspectives and traditions.

The course has four units and each unit is presented with the help of key concepts. Each unit has essential readings that offer a basic introduction to the topic. Students are advised to familiarize themselves with the essential readings before the lecture and follow up with the specified recommended readings. During class discussion, they will be expected to critically evaluate the essential readings and attempt to uncover all possible nuances of an argument.

Unit-I

I. Introducing Practice-Theory Interface:
International practices, disciplinary lineage of IR, role and significance of theory, units and levels of analysis, practices of IR.

II: Mainstream IR Theories:
Realism (national interest, national power, national security, security dilemma, balance of power, structural realism, defensive/offensive realism)**;** *Liberalism* (interdependence**,** neoliberal institutionalism, commercial liberalism, democratic peace theory, international law, regimes, world public opinion).

III. Constructivism and the 'English School':
Identity, social construction of knowledge and the construction of social reality

IV: Critical IR theories and Non-Western Perspectives:
Marxism, post structuralism, postmodernism, post colonialism, feminism, ecological, 'global'IR

READINGS

Unit I
Essential Readings:

1. Adler, E. and Pouliot, V. (2011) 'International Practices', *International Theory*, 3(1): 1-36.
2. Brown, C. and Ainley, K. (2005) 3rd Edition, *Understanding International Relations Houndmills*: Palgrave Macmillan.
3. Snyder, J. (2004) 'One World, Rival Theories', *Foreign Policy,* 145: 52–62.
4. Walt, S. M. (1998) 'International Relations: One World, Many Theories,'*Foreign Policy* (Spring 1998): 29-46.

Suggested Readings:
1. Donnelly, J. (2015) 'The Discourse of Anarchy in IR', *International Theory: A Journal of International Politics, Law and Philosophy*, 7(3): 393-425.
2. Holsti, K.J. (1998) 'Scholarship in an Era of Anxiety: The Study of International Politics during the Cold War', *Review of International Studies* 24(5): 17-46.
3. Sørensen, G. S. (1998) 'IR Theory after the Cold War', *Review of International Studies*, 24(5): 83-100.

Unit II
Essential Readings

1. Doyle, M. (1997) *Ways of War and Peace: Realism, Liberalism, and Socialism*, New York: W.W. Norton & Company.
2. Jackson, R. and Sørensen, G. (2007) *Introduction to International Relations: Theories and Approaches*, Oxford: Oxford University Press.
3. Keohane, R. O. and Nye, J. S. (2001) *Power and Interdependence*, Pearson, 4th edition.
4. Dunne, T. and Schmidt, B. (2008), 'Realism', in John Baylis et al. (eds.), *The Globalization of World Politic, 3rd ed.,* Oxford: Oxford University Press.
5. Dunne, T. (2008), 'Liberalism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.
6. Morgenthau, H. J. (1948) *Politics among Nations: The Struggle for Power and Peace*, New York: Alfred Knopf
7. Vasquez, J.A. (1998) *The Power of Power Politics: From Classical Realism to Neotraditionalism*, Cambridge: Cambridge University Press.
8. Waltz, K. (2010) *Theory of International Politics*, Reading: MA: Addison-Wesley. *First Edition.*

Suggested Readings

1. Baldwin, D. ed. (1993) *Neorealism and Neoliberalism: The Contemporary Debate*, New York: Columbia University Press.
2. Burchill, S. (2005), 'Liberalism' in Burchill et al. *Theories of International Relations.*
3. Keohane, R. O. ed. (1986) *Neorealism and Its Critics*, New York: Columbia University Press.
4. Mearsheimer,J.(2001) *The Tragedy of Great Power Politics*, New York: Norton, pp.1-28.
5. Moravcsik, A. and Legro, J. (1999), 'Is Anybody Still a Realist?'*International Security*, 24 (2): 5-55.
6. Schroeder, P. (1994), 'Historical Reality vs. Neo-realist Theory', *International Security*, 19 (1): 108-148.
7. Schweller, R. (1992), 'Domestic Structure and Preventive War: Are Democracies More Pacific?'*World Politics*, 44 (2): 235-269

Unit III

Essential Readings:

1. Barnett, M. (2008), 'Constructivism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.
2. Buzan, B. (2001), 'The English School: An Underexploited Resource in IR', *Review of International Studies*, 27 (3): 471-488.
3. Dunne, T. (2008), 'The English School' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.
4. Hurd, I. (2008) 'Constructivism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of International Relations*, Oxford: Oxford University Press: 298–316.
5. Wendt, A. (1992) 'Anarchy Is What States Make of It: the Social Construction of Power Politics,' *International Organization*, 46: 391-425.

Suggested Readings:

1. Bull, H. and Watson, A. (eds.) (1985) *The Expansion of International Society*, Oxford: Clarendon Press.
2. Bull, H. (1977) *The Anarchical Society: A Study of Order in World Politics*, New York: Columbia University Press.
3. Buzan, B. and Little, R. (2000)*International Systems in World History: Remaking the Study of International Relations*, New York: Oxford University Press.
4. Emanuel, A. (2002) 'Constructivism and International Relations' in Walter Carlsnaes, Thomas Rise and Simmons (eds.) *Handbook of International Relations*, London: Sage.
5. Guzzini, S. (1993) 'Structural Power: the Limits of Neorealist Analysis,'*International Organization*, 43 (3): 443-478.

6. Little, R. (2003), 'The English School vs. American Realism: A Meeting of Minds or Divided by a Common Language?' *Review of International Studies*, 29: 443-460.

7. Linklater, A. (2005) 'The English School' in Scott Burchill et al. (eds.) *Theories of International Relations*, Hampshire: Palgrave Macmillan

8. Ted Hopf, T. (1998) 'The Promise of Constructivism in IR Theory,'*International Security*, Vol. 23, No. 1 (Summer 1998): 171-200.

Unit IV

Essential Readings:

1. Bajpai, K. and Mallavarapu, S. (2005) *International Relations in India: Bringing Theory Back Home*, New Delhi: Orient Blackswan.

2. Derian, J.D. (1995) *International Theory: Critical Investigations*, Houndmills: Macmillan.

3. Linklater, A. (1990) *Beyond Realism and Marxism: Critical Theory and International Relations*, Houndmills: Macmillan.

4. Neuman, S.G. (1998) *International Relations Theory and the Third World*, Houndmills: Macmillan.

5. Smith, S. and Owens, P. (2008), "Alternative Approaches to International Theory: Feminism", in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

6. Tickner, J. A. and Sjoberg, L. (eds.) (2011), *Twenty Years of Feminist International Relations: A Conversation about the Past, Present and Future*. London and New York: Routledge.

7. Burke, A. (2008), 'Postmodernism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.

8. Hobson, J. (2012) *The Eurocentric Conception of World: Western International Theory, 1760-2010*, Cambridge: Cambridge University Press.

9. Acharya, A. and Buzan, B. (2009) *Non-Western International Relations Theory: Perspectives On and Beyond Asia*, London: Routledge.

10. Neumann, Stephanie (ed.) (1998), International Relations and the Third World, New York: St. Martins Press.

11. Ling, L. H. M. (2002) *Post Colonial International Relations*: *Conquest and Desire between Asia and the West*, Palgrave Macmillan.

12. Tickner, A. B. and Wæver, O. (2009) *International Relations Scholarship Around the World*, London: Routledge.

Suggested Readings:

1. Devetak, R. (1996) 'Critical Theory', in Scott Burchill et al., *Theories of International Relations*, New York: St. Martinís: 145-178.
2. Mohammed, A. (2002) 'Inequality and Theorizing in International Relations: The Case for Subaltern Realism', *International Studies Review*, 4:2: 27-48.
3. Linklater, A. (1996) 'The Achievements of Critical Theory' in Steve Smith, Ken Booth and Marysia Zalewski (eds.) *International Theory: Positivism and Beyond*, Cambridge: Cambridge University Press.

OR

Course-VIII: APPROACHES TO THE STUDY OF INTERNATIONAL

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The purpose of this paper is to be familiarize students with alternative and diverse frameworks which seek to explain Internation Relations.

Unit-I

"Idealist"(Legal-Intitutional) Approach: Major Assumptions and Tenets; Roles assigned to International Law, Internatinal Organisations, World Public Opinon and International Morality. Proposals of World Government and Collective Security; World Order Models: Critical appraisal.

Unit-II

"Realist" (Power Politics) Approach: Major Assumptions and Tenets. Centrality of State, National Interest and National Power. Balance of Power and Deterrence. Neo-Realist Variants of Realism. Geopolitical Discourses. Critical Approaisals.

Unit-III

"Scientific" Approach: Therories of System, Decision-making, Bargaining and Communication. Critical appraisal.

Unit- IV

Radical Approaches: Marxism, Dependency Theory and World-System Analysis. Critical appraisal.

Essential Readings

1. Robert L. Pfaltzqraff and James Dougherty, Contending Therories of International Relations, Harper and Row, 1980.
2. Misra, K.P. and Richard Smirth Beal (eds), International Relations Theory: Western and Non-Western Perspectives, Vikas, 1980.
3. Taylor, Trevor (ed.), Approaches and Theories in International Relations, Longman, New York, 1978.
4. Ekkehart Krippendorff, International Relations as a Social Science, Radiant, New Delhi, 1982.
5. Kubalkiva, V., and Albert Cruickshank, Marxism and Inernational Relations, Clarendon, New York, 1958.
6. Keohane, R. (ed.) Neo-Realism and Its Critics, Columbia University,New York,m1986.
7. Parkinson, F., The Philosophy of International Relations: A Study in the History of Thought, Sage, California, 1977.
8. Immanuel Wallerstien, The ModernWorld Systems, 3 Vols., Academic Press, 1974, 80, 89.

Suggested Readings

1. Light, M. and A.J.R., Groom, International Relations: A Handbook of Current Therory, Frances Printer, 1995.
2. Brown, C, International Relations Theory: New Normtive Approaches, Hemel Henpstead, Harvester Wheatsheaf, 1992.
3. Bull, Hedley, The Anarchical Society: A study of Order in World Politics, Macmillan, 1977.
4. Cox, R., Producation, Power and Workd Order: Social Forces in the Making of History,Columbia University Press, 1987.
5. Frast. M., Towars a Naormative Theory of International Relations Relations, Combridge University Press, 1986.
6. Hollis, M. and Smith, S., Explaining and Understanding International Relations, Clarendon Press, 1990.
7. Keohane, R., After Hegemony: Cooperation and Discord in the World Political Economy, Princeton University Press, 1984.
8. Linklater, A. Beyond Realism and Marxism: Critical Theory and International Relations, Macmillan, 1990.
9. Little, R. and Smith, M. (ed.), Perspectives and International Politics, Second edn., Routledge, 1991.
10. Mamsbach, R. and Vasquez, J., In Search of Theory: A New Paradigm for Global Politics, Polity Press, 1992.
11. Olson, W. and Groom, A., International Relations Then and Now: Origins and Trends in Interpretation, Harper Collins, 1991.
12. Viotti, P. and M. Kauppi, International Relations Theory: Realism, Pluralism, Globaliosm, Second edn., Macmillan, 1993.
13. Derian, J.D., International Theory: Critical Investigations, Macmillan, 1995.
14. Charles W.Kegley, Jr. Controversies in International Relations Theory: Realism and Neoliveral.
15. Challenge, St. Martin Press, 1995.
16. Booth, Ken and Steve Smith (ed.), International Relations Theory Today, Polity Press, 1995.
17. Taylor, P.J., ed., Political Geography of Twentieth Century: A Global Analsis, Belhaven Press, 1983.
18. Brunn, S.D. and T.R. Leinbach (ed.) Collapsing Spac and Time: Geographic Aspects of Communication and Information, Harper Collins, 1991.
19. Glassner, M.I.,Political Geography, John Wiley and Sons, 1993.
20. J.O. Loughlin, (ed.),Dictionary of Geopolitics, Greenwood Press, 1993.
21. Calvocovessi, Peter, World Politics: 1945-2000, Pearson Education, Delhi, 2005.

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THIRD SEMESTER

Course IX: INDIAN POLITICAL THOUGHT-I (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The paper aims to introduce students to different discourses in the domain of Indian Political Thought. It includes historical roots, medieval socio-cultural traditions, renaissance and nationalist narratives.

Unit-I

Historical Roots and Medieval Socio-Cultural Traditions:

1. Dharmashastra and Arthashastra Traditions.
2. Bhakti and Sufi challenges to Hegemonic Religious Traditions.

Unit-II

Indian Renaissance and Social Reform Movements:

1. Meaning, Nature and Critical evaluation with Special reference to gender, caste and modernity.
2. Raja Rammohan Roy, Sir Syed Ahmed Khan, Pandita Ramabai, Jyotiba Phule.

Unit-III

Indian Liberalism and Nation-building:

Nehru, Tagore, Ranade, Gokhale

Unit-IV

Religious Nationalism:

1. Vivekananda, Tilak, Aurobindo and Savarkar.
2. Iqbal and Jinnah.

General Readings:

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century from Naroji to Nehru* (London : OUP, 1971).
2. Brown, D.M. (ed.), *The White Umbrella: Indian Political Thought from Manu to Gandhiji* (Bombay, Jaico, 1970).

3. Dallamayr, F.R. and Devy, G.N. (eds.), *Between Tradition and Modernity : India's Search for Identity* (London, Sage, 1998).

4. Dalton, D.G., *Indian Idea of Freedom* (Gurgaon, Academic Press, 1982).

5. Doctor, Adhi H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).

6. Karunakaran, K.P., *Religion and Political Awakening in India* (Meerut, Meenakshi, 1969), 2nd Edition.

7. Mahadevan, T.M.P. and G.V. Saroja, *Contemporary Indian Philosophy* (New Delhi, Sterling, 1981).

8. Mehta, V.R., *Foundations of Indian Political Thought* (New Delhi, Manohar, 1996).

9. Naravane, V.S., *Modern Indian Thought* (Bombay, Asia, 1964).

10. Pantham, Thomas and K.L., Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

11. Verma, V.P., *Modern Indian Political Thought* (Agra, Laxminarayan, 1996), Eleventh Revised Edition).

12. Verma, V.P., *Ancient and Medieval Indian Political Thought* (Agra, 1996).

13. Nandy, Ashis, *The Intimate Enemy : Loss and Recovery of Self under Colonialism*, Delhi, Oxford, 1983.

14. Guha, Ramachandra, 'The Absent Liberal', *Economic and Political Weekly,* December 15 2001.

15. Christopher Jaffrelot (edited), *Hindu Nationalism: A Reader,* Ranikhet, Permanent Black, 2007.

16. Quayum, Mohammad A, *'Imagining "One World": Rabindranath Tagore's Critique of Nationalism',* Interdisciplinary Literary Studies, Vol 7, No 2, Spring 2006.

17. Jahanbegloo, Ramin, 'Tagore and the Idea of Civilization', *India International Centre Quarterly,* Vol 34, No. 1, Summer, 2007.

18. Chakravarti, Uma, *Rewriting History: The Lives and the Times of Pandita Ramabai,* Delhi, Kali for Women, 1998.

19. Kosambi, Meera, 'Women, Emancipation and Equality: Pandita Ramabai's Contribution to Women's Cause', *Economic and Political Weekly,* October 29, 1988.

20. Lamba Rinku, 'Bringing the State Back in, Yet Again: The Debate on Socio-religious Reform in Late-Nineteenth-Century India', *Comparative Studies of South Asia, Africa and the Middle East,* Volume 29, Number 2, 2009.

21. Zachariah, Bhikhu, *'Nehru'* Routledge, 2004

22. Parekh, Bhikhu, 'Nehru and the National Philosophy of India', *Economic and Political Weekly*, Janurary 5 1991

23. Deshpande G. P. (ed.), *Selected Writings of Jotirao Phule, Delhi, Leftword Books,* 2002.

24. Omvedt, Gail, *Seeking Begumpura,* Delhi, Navayana, 2008.

25. Gopal, S, 'The Formative Ideology of Jawaharlal Nehru', *Economic and Political Weekly,* May 22 1976.

Suggested Readings:

1. Altekar, A.S., *State and Government in Ancient India* (Patna, Motilal Banarasi Dass, 1971), 3rd Edition.
2. Chausalkar, Ashok, 'Politics of Arthashastra Tradition', *Indian Journal of Political Science*, January-March, 1981.
3. Chaudhri, R.K., *Kautilya's Political Ideas and Institutions* (Varanasi, Chowkhamba Sanskrit Series, 1971).
4. Ghoshal, U.N., *A History of Indian Political Ideas* (London, OUP, 1959).
5. Jayaswal, K.P., *Hindu Polity* (Bangalore, 1978), 5th Edition.
6. Kangle, R.P., *The Kautilya Arthashastra Parts-I-III* (Delhi, Motilal Banarasidass, 1986).
7. Kohli, Ritu, *Kautilya's Political Theory* (New Delhi, Deep and Deep, 1995).
8. Parekh, Bhikhu, 'Some Reflections on Hindu Tradition of Political Thought' in Pantham and Deutsch (ed.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
9. Prasad, Beni, *Theory of Government in Ancient India* (Allahabad, Center Book, 1968), 2nd Revised Edition.
10. Ray, B.N., *Tradition and Innovation in Indian Political Thought* (Delhi, Ajanta, 1998).
11. Saletore, B.A., *Ancient Indian Political Thought and Institutions* (Bombay, Asia, 1963).
12. Singh, N.P., *Political Ideas and Ideals in the Mahabharata* (Bombay, Popular Prakashan, 1976).
13. Spellman, J., *The Political Theory of Ancient India* (Oxford, Clarendon Press, 1964).
14. Vanna, V.P., *Studies in Hindu Political Thought and Its Metaphysical Foundation* (Delhi : Motilal Banarasidass, 1954).
15. Anand, B.S., *Baba Farid* (New Delhi, Sahitya Akademy, 1975).
16. Bains, J.S., 'Political Ideas of Guru Nanak', *Indian Journal of Political Science,* 1962.
17. 'Political Ideas of Guru Gobind Singh', IIAS, *Sikhism and Indian Society*, Shimla, 1967.
18. Bihari, Bankey, *Sufism Mystics and Yogis of India* (Bombay, Bhartiya Vidya, Bhawan, 1962).
19. Kohli, S.S., *Bule Shah* (Sahitya Academy, 1987).
20. Majumdar, A.K., *Bhakti Renaissance* (Bombay, Bhartiya Vidya Bhawan, 1965).
21. Muller, Max, *Ram Mohan to Ramakrishna* (Calcutta, Susil, 1952).

22. Vaudeville, C., *A Weaver Named Kabir* (Delhi, OUP, 1997).

23. Westcott, G.H., *Kabir and the Kabir Panth* (Calcutta, Susil, 1953).

24. Aurobindo, Sri, *The Renaissance in India in Dallmayer,* Fred and G.N., Devy (ed.), 1998.

25. Bishop, Donald H. (ed.), *Thinkers of Indian Renaissance* (New Delhi, Wiley, 1982).

26. De, Barun, A Historical Critique of Renaissance Analogues for Nineteenth Century India, in Barun De (ed.), *Perspectives in Social Sciences I,* (Calcutta, 1977).

27. Majumdar, B.B., *History of Indian Social and Political Ideas* (Calcutta, Firma, KLM, 1996).

28. Mehta, V.R., 'Renaissance and the Beginning of Modern Thought', Ch. 8 in his *Foundations of Indian Political Thought* (New Delhi, Manohar, 1992).

29. Sarma, D.S., *The Renaissance of Hinduism in the Nineteenth and Twentieth Centuries* (Varanasi, Banaras Hindu University, 1944).

30. Vyas, K.C., *The Social Renaissance in India* (Bombay, Vohra and Company, 1957).

31. Zacharis, H.C.E., *Renascent India : From Rammohan Roy to Mohandas Gandhi* (London, George Allen and Unwin, 1933).

32. Buch, M.R., *Rise and Growth of Indian Liberalism* (Baroda, 1938).

33. Chakravarti, Uma, *Rewriting History : The Life and Times of Pandita Ramabai* (New Delhi, Kali for Women, 1998).

34. Chakravarti, Uma, *Gender, Class and Nation—Ramabai and the Critique of Brahmanical Patriarchy* (Delhi, OUP, 1998).

35. Joshi, V.C. (ed.), *Rammohan Roy and the Process of Modernisation in India* (Delhi, Vikas, 1975).

36. Kosambi, Meera, 'Indian Response to Christianity, Church and Colonialism : Case of Pandita Ramabai', *Economic and Political Weekly,* 24-31, October, 1992.

37. Mansani, R.P., *Dadabhai Naoroji : The Grand Old Man of India* (London, George Allen and Unwin, 1939).

38. Nanda, B.R., *Gokhale : The Indian Moderates and the British Raj* (Delhi, OUP, 1998).

39. Tucker, Richard P., *Ranade and the Roots of Indian Nationalism* (Bombay : Popular Prakashan, 1977).

40. Vora, Rajendra, 'Two Strands of Indian Liberalism : Ideas of Ranade and Phule' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

41. Aurobindo, Sri, *On Nationalism* (Pondicherry, Sri Aurobindo Ashram, 1965).

42. *Bankim–Tilak –Dayananda,* (Calcutta : Aryan, 1940).

43. Banerjee Sumanta, 'Hindutva – Ideology and Social Psychology', *Economic and Political Weekly,* 19 January, 1991).

44. Basu, Tapan, *et al* (eds.), *Khaki Shorts and Saffron Flags* (New Delhi, Oriented Longman, 1991).

45. Bose, N.S., *Swami Vivekananda* (New Delhi, Sahitya Akadami, 1994).
46. Dixit, Prabha, 'The Ideology of Hindu Nationalism' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
47. Embree, A.T., *Utopias in Conflict, Religion and Nationalism in Modern India* (Delhi, OUP, 1991).
48. Graham, B., *Hindu Nationalism and Indian Politics* (Cambridge, Cambridge University Press, 1990).
49. Heehs, Peter (ed.), *Essential Writings of Sri Aurobindo* (Delhi, OUP, 1998).
50. Joshi, V.C., *Aurobindo : An Interpretation* (Delhi, 1973).
51. Kaviraj, Sudipto, *The Unhappy Consciousness : Bankimchandra Chattopadhyaya and the Formation of Nationalist Discourse in India* (Delhi, OUP, 1995).
52. Savarkar, V.D., *"Hindutva Or Who is a Hindu"?* (Bombay, Veer Savarkar Prakashan, 1923).
53. Segupta, S.C., *Bankim Chandra Chatterjee* (New Delhi, Sahitya Akademi, 1982).
54. Shay, T.L., *Legacy of Lokmanya : Political Philosophy of Bal Gangadhar Tilak* (London, OUP, 1956).
55. Singh, Karan, *Prophet of Indian Nationalism* (Bombay, Bhartiya Vidya Bhawan, 1970).
56. Baljon, J.M.S., *The Reforms and Religious Ideas of Sir Sayyid Ahmad Khan* (Leiden : E.J. Bill, 1949).
57. Banerjee, A.C., *Two Nations: The Philosophy of Muslim Nationalism* (New Delhi, Concept, 1980).
58. Dar, B.A., *A Study of Iqbal's Philosophy* (Lahore, Md. Ashraf, 1933).
59. Hamid, Abdul, *Muslim Separatism in India* (London, OUP, 1967).
60. Hasan, Mushirul (ed.), *India's Partition : Process, Strategy and Mobilization* (Delhi, OUP, 1993).
61. Hussain, M. Hadi, *Syed Ahmed Khan: Pioneer of Indian Resurgence* (Lahore, Institute of Islamic Culture, 1970).
62. Imam, Zafar, *Muslims in India* (New Delhi: Orient Longman, 1975).
63. Mohammed, Shan, *Sir Syed Ahmad Khan: A Political Biography* (Meerut, Meenakshi Prakashan, 1969).
64. Mujahid, Sharif, *Quaid-i-Azam-Jinnah: Studies in Interpretation* (Delhi, B.R., 1985).
65. Naim, C.M. (ed.), *Iqbal, Jinnah and Pakistan* (Delhi, Jinnah Publi. House, 1982).
66. Shakir, Moin, 'Dynamic of Muslim Political Thought' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
67. Brohi, A.K., *Iqbal and The Concept of Islamic Socialism* (Karachi, Al-Karimi, 1967).
68. Hussain, Raiz, *Iqbal, Poet and His Politics* (New Delhi, Uppal Pub. House, 1987).
69. Burney, S.M., *Iqbal : Poet-Patriot of India* (New Delhi, Vikas, 1987).
70. Masud, Mohamad K. and Mumtaz Liaqat, *Iqbal Through Western Eyes (*Sterling, 1989).
71. Malik, Hafeez, *Iqbal : Poet-Philosopher of Pakistan* (New York : Columbia University Press, 1971).

Course X: COMPARATIVE POLITICS (II): UNDERSTANDING DEVELOPING SOCIETIES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debates in comparative politics with special reference to developing societies.

Unit-I

Approaches to the politics of developing countries :

- Political Sociology. –Systems theory, structural functionalism, political Culture, political development and institutionalism
- Political Economy. – Modernisation Theory, Dependency Theory and World System Analysis
- Alternative Approaches. New Institutional approach

Unit-II

- *Colonialism and Its Impact:* Politics, Economy and Culture.
- Nationalism and Anti-colonial Movement : Ideology, social base, strategies of mobilization and outcome with refrence to India, China and Latin America(creole nationalism)

Unit-III

- *Civil Society:* Ethnic, National and Regional identities.
- *Globalisation:* Definitin, difference between old and new, Its impact on the Developing World.

Unit-IV

- State- Nature of the state in Developing world with reference to Hamza Alavi, J.S. Saul and Colin Leys work, Political regimes- military, Islamic , etc ,
- Constitutionalism and Political parties.

Essential Readings

1. Alavi, H., *The State in Post-Colonial Societies: Pakistan and Bangladesh*, New Left Review, No. 74, 1972.
2. Allen, C. and G. Willams (eds.), *Sociology of* 'Developing Societies', Sub-Saharan Africa, Macmillan, London, 1982.
3. Cammack, Paul, David Pool and William Tordoff, *Third World Politics: A Comparative Introduction*, John Hopkins University Press, Baltimore, 1993.
4. Caramani, Daniele, *Comparative Politics*, Oxford University Press, Oxford, 2014.
5. Clapham,C., Third World Politics: An Introduction, Routledge, London 1985.
6. Dickovick, J. Tyler and Jonathan Eastwood, *Comparative Politics: Integrating Theories,* Methods, and Cases, Oxford University press, Oxford, 2014.
7. Eckstein, Harry and David, E. Apter, *Comparative Politics : A Reader,* The Free Press of Glencoe, London, 1994
8. Manor, James (ed.), *Third World Politics*, Longman, London, 1991.
9. Mohanty, Manorajan, P. Mukherji with O. Tornquist, *People's Rights, Social Movements and the State in the Third World*, Sage, New Delhi, 1998.
10. Randall, V., *Political Parties in the Third World*, Sage, London, 1988.
11. Smith, Anthony D., *State and Nation in the Third World: The Western State and African Nationalism*, Wheatsheaf, Sussex, 1983.

Students are advised to see the relevant entries in the following reference books Seymour Martin Lipset (ed. in chief). The Encylopaedia of Democracy, Volumes I, II and III, Routledge, London, 1995 : Vernon Bogdanor (ed.). The Blackwell Encyclopaedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to the Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Suggested Readings

1. . Alavi, Hamza and Teodor Shanin (eds.), *Introduction to the Sociology* of 'Developing Societies', Macmillan, London, 1982.
2. Amin, Samir, 'Social Movements at the Periphery' in P. Wignaraja (ed.), *New Social Movements in the South*, Zed, London, 1993.
3. Archetti, E. et al., *Latin America*, Macmillan, London, 1987.
4. Ayoade, J.A., 'States Without Citizens: An Emerging African Phenomenon' in D. Rothchild and N. Chazan (ed.), *The Precious Balance : State and Society in Africa*, Westview Press, Boulder, Colorado, 1988.
5. Bayart, J.F., 'Civil Society in Africa' in Chabal, P. (ed.), *Political Domination in Africa : Reflections on the Limits of Power*, Cambridge University Press, Cambridge, 1986.
6. Berger, M., 'The End of the Third World', *Third World Quarterly*, Vol. 15, No. 2, 1994.
7. Bratton, M., and Van der Walle, N., 'Towards Governance in Africa : Popular Demands and State Responses' in G. Hayden and M. Bratton (eds.), *Governance and Politics in Africa*, Boulder, Colorado, 1991.

8. Callaghy, T., 'Vision and Politics in the Transformation of the Global, Political Economy : Lessons from the Second and the Third World's in R. Slater, Schutz, B. and Dorr, S. (eds.), *Global Transformation and the Third World*, L. Rienner Pub., Boulder, Colorado, 1993.
9. Chabal, P., Introduction : 'Thinking About Politics in Africa', in Chabal, P. (eds.), *Political Domination in Africa : Reflections on the Limits of Power,* Cambridge University Press, Cambridge, 1986.
10. Chezan, N., 'Between Liberalism and Statism : African Political Cultures and Democracy' in Diamond, Larry (ed.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
11. Diamond, L., 'Introduction : Political Culture and Democracy', in L. Diamond (eds.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
12. Diamond, L., 'The Globalisation of Democracy' in Slater, R., Shutz, B., and Dorr, S. (ed.), *Global Transformation and the Third World*, L. Rienner, Boulder, Colorado, 1993.
13. Dixon, Chris and Michael J. Heffernan (eds.), *Colonialism and Development in the Contemporary World*, Mansell, New York, 1991.
14. Eliott, Carolyn, *Civil Society : A Reader*, Oxford University Press, New Delhi, 2003.
15. Engles, Dagmar, and Shula Marks (eds.), *Contesting Colonial Hegemony : State and Society in Africa and India*, British Academic Press, London (1994).
16. Fatton, R., *Predatory Rule, State and Civil Society in Africa*, L. Rienner, Boulder, Colorado, 1992.
17. Frank, A.G., *Capitalism and Underdevelopment in Latin America*, Penguin, Harmondsworth, 1971(Kumar, Ashutosh, 'Hamza Alavi and Post-Colonial State', *Economic and Political Weekly*, August 7, 2004).
18. Garreton, M.A., 'Political Democratisation in Latin America and the Crisis of Paradigms' in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
19. Geddes, Barbara 'Paradigms and Sand Castles in Comparative Politics of Developing Areas' in Crotty, William (ed.), *Comparative Politics, Policy and International Relations*, Northwestern University Press, Evanston, 1991.
20. Hawthorn, G., "Waiting for a Text?" Comparing 'Third World Politics in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
21. Haynes, Jeff, *Third World Politics, A Concise Introduction,* Blackwell, Oxford, 1996.
22. Huntington, S., *Political Order in Changing Societies*, Yale University Press, New Haven, 1968.
23. Huntington, S., The Third Wave, Democratisation in the Late Twentieth Century, University of Oklohoma Press, Norman, 1991.
24. Jayaram, N., On Civil Society : Issues and Perspective, Sage Publications, New Delhi, 2005.
25. Kamrava, M., Politics and Society in the Third World, Routledge, London, 1993.
26. Kaviraj, S., 'On State, Society and Discourse in India' in Manor, J. (ed.), Rethinking Third World Politics, Addison-Wesley Longman, London, 1993.
27. Luckham, R., 'Introduction : The Military, The Developmental State and Social Forces in Asia and the Pacific : Issues for Comparative Analysis' in Selochan, V. (ed.), The Military, The State, and Development in Asia and Pacific, Westview, Boulder, 1991.

28. Mamdani, M., T, Mkandawire, and E. Wamba-dia-Wamba, 'Social Movements and Democracy in Africa' in Wignaraja, P. (ed.), *New Social Movements in the South*, Zed Books, London, 1993.
29. Migdal, J., *Strong Societies and Weak States : State Society Relations and State Capabilities in the Third World*, Princeton University Press, Princeton, 1988.
30. Mitra, S. (ed.), *The Post-Colonial State in Asia*, Wheatsheaf, Hemel Hampstead, 1990.
31. Mouzelis, N., *Politics in the Semi-Periphery*, Macmillan, London, 1986.
32. Nkruman, K., *Neo-colonialism : The Last Stage of Capitalism*, Nelson, London, 1965.
33. O'Donnell, G., *Modernisation and Bureaucratic Authoritarianism, Institute of International Studies*, Berkeley, 1973. O' Donnell, G., Authoritarian Rule : Prospects for Democracy, John Hopkins University Press, Baltimore, 1973.
34. Parpart, J., 'Women and the State in Africa'; in D. Rothchild and N. Chazan (eds.), *The Precarious Balance : State and Society in Africa*, Westview, Boulder, 1988.
35. Potter, D., "Democratisation in Asia" in D. Held (ed.), *Prospects for Democracy : North, South, East, West,* Polity, Cambridge, 1985.
36. Pye, L., *Asian Power and Politics : The Culture Dimension of Authority*, Harvard University Press, Cambridge, 1985.
37. Randall, V., and Theobold, R., *Political Change and Underdevelopment : A Critical Introduction to Third World Politics,* Macmillan, London, 1985.
38. Rudolph, S., 'State Formation in Asia – Prolegemenon to a Comparative Study', *Journal of Asian Studies*, 46, 4, 1987.
39. Saul, John S., 'The State in Post-Colonial Societies : Tanzania' in Ralph Miliband and John Saville (ed.), *The Socialist Register*, Merlin, London, 1974.
40. Sisson, R., 'Culture and Democratisation in India' in Diamond, L. (ed.), *Political Culture and Democracy in Developing Countries*, Lynne Reiner, Boulder, 1993.
41. Smith, B.C., *Understanding Third World Politics, Theories of Political Change and Development,* Palgrave Macmillan, Basingstoke, 2003.
42. Taylor, Peter, J., 'The Legacy of Imperialism' in Dixon Chris and Michael, J Heffernan (eds.), *Colonialism and Development in the Contemporary World,* Mansell, New York, 1991.
43. Thomas, Clive, Y., *The Rise of the Authoritarian State in Peripheral Societies*, Monthly Review Press, New York, 1980.
44. West, David "New Social Movements" in Gerald F. Gaus and Chandran Kukathas, Handbook of Political Theory, Sage, London, 2004.

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OR

Course X : COMPARATIVE POLITICAL SYSTEMS WITH SPECIAL REFERENCE TO USA, UK, CHINA, JAPAN AND SWITZERLAND (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting **one question** from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debate in comparative politics with special reference to USA, UK, China, Japan and Switzerland.

UNIT-I

(i) Historical Antecedent of Contemporary Political Systems.
(ii) Evolution of the Constitution and Constitutional Systems.

UNIT-II

(i) Executive
(ii) Legislature

UNIT-III

(i) Political Parties
(ii) Pressure Groups

UNIT-IV

(i) Elections, Electoral Process
(ii) Political Participation, Voting Behavior

Readings:

1. Jean Blondel : *An Introduction to Comparative Government,* Praeger, 1969.
2. G. Almond and B. Powell : *Comparative Politics* : *A Development Approach*, Little Brown, 1966.
3. Robert Ward & Roy Macrides (Eds.) : *Modern Political Systems*, Prentice Hall, 1972.
4. M. Irish & J.W. Protho : *The Politics of American Democracy*, Prentice Hall, 1968.
5. D. J. Weller : *The Government of Politics of Communist China*, Hutchinson, 1970.

6. Peter Bormhead : *Britains Developing Constitution,* St. Martin's Press,1974.
7. John P. Mackintosh : *The Government and Politics of Britain,* Hutchinson, 1971.
8. P.J. Madgwick : *Introduction to British Politics*, Hutchinson, 1971.
9. A.H. Birch : *The British System of Government*, Allen & Unwin, 1980.
10. Lucian Pye : *The Spirit of Chinese Politics*, Cambridge, 1970.
11. Richard Rose : *Studies in British Politics*, Macmillan, 1966.
12. Shanti Swarup : *A Study of the Chinese Communist Movement (only Introduction)*, Clarendon, 1966.
13. Robert Wesson : *Communism and Communist Systems*, Prentice-Hall, 1978.
14. Richard H. Solomon : *Mao's Revolution and the Chinese Political Culture*, Oxford University, 1971.

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) : INTERNATIONAL ORGANISATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is designed to introduce the students to the relevance and functioning of international organizations in Contemporary World Politics. It takes up for the purpose a detailed study of some of the major specialized international agencies under the auspices of the United Nations.

UNIT-I

Evolution of International Organisation.

Theoretical approaches to the study of international organization : Classical, neo-realist, functionalist, conflict resolution, world society approach and the Marxist approach.

UNIT-II

Role and function of :

(i) International government organization.

(ii) International non-governmental organization.

Making of the United Nations : Its purpose, principles and structure.

United Nations and maintenance of international peace and security, collective security and its alternative.

UNIT-III

Major specialized agencies : ILO, UNESCO, WHO, FAO.
United Nations and Human Rights.

UNIT-IV

United Nations in the Post-Cold War Era :
UN and disarmament, revision of UN Charter, UN and emerging deterioration in international relations.
Limitations and constraints.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty First Century : Unique Contexts, Enduring Patterns* (New Jersey, Prentice Hall, 2003).
3. A. LeRoy Bennett, *International Organization : Principles and Issues* (New Jersey, Prentice Hall, 1991).
4. B.N. Mehrish, *International Organisations : Structures and Processes* (Jallandhar, Vishal Publications, 1996).
5. Shambhavi Vendantam, *United Nations : Putting Words to Work* (New Delhi, Vikash, 1996).
6. K. P. Saksena, *Reforming the United Nations : The Challenge of Relevance* (New Delhi, Sage, 1993).
7. C. Archer, *International Organisations* (London, Routledge, 1992).
8. P. R. Baehr and L. Gordenker, *The United Nations in 1990s* (Hamshire, Macmillan, 1994).
9. Boutros-Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
10. Abi-Saab Georgeas (ed.), *The Concept of International Organisation* (Paris, UNESCO, 1981).
11. Thomas G. Wein, David P. Forsyth, Roger A. Coate, *The United Nations and Changing World Politics* (Boulder, Westview Press, 1994).
12. William Burch, *The Evolution of the United Nations Peace Keeping : Case Studies and Comparative Analysis* (St. Martin Press, 1993).
13. Paul Taylor and A.R.J. Groom (eds.), *International Organisation : A Conceptual Approach* (London, Frances Printer, 1978).
14. J.W. Burton, *World Society* (London, Cambridge University Press, 1972).
15. Freidrich Kratochwil and Edward Mansfield (eds.), *International Organisation : A Reader* (New York, Harper Collins, 1994).

Option (b) : TRANSNATIONAL ACTORS IN INTERNATIONAL POLITICS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course is designed to introduce the students to the changing dynamics of the emerging world order in which various transnational actors have come to play an increasingly important role in shaping the responses of the state actors to some of the most crucial issues in contemporary history.

UNIT -I

The politics of terminology : From "Non-state actors" to "Transnational actors".
Limitations of state-centric framework and emergence of transnational actors.

UNIT -II

Theorizing different types of transnational actors in International Politics.
Transnational companies; Regional economic groupings; strategic and security actors; Non-legitimate groups and liberation movements; and Non-governmental organizations.

UNIT -III

Post-War Economy and the International Monetary System : International Monetary Fund and World Bank.
Dynamics of Regional Integration : European experience.
Beyond Europe: The global rise of regionalism (special reference to ASEAN and SAARC).

UNIT -IV

Cartelization of Natural Resources in the Age of Globalization : OPEC.
Issues and challenges in international environmental politics.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. R. O. Keohane and J. S. Nye (eds.), *Transnational Relations and World Politics* (Cambridge Mass: Harvard University Press, 1972).

3. T.G. Weiss and L. Gordenker (eds.), *NGOs, the UN and Global Governance* (Boulder, Colo. : Lynne Rienner, 1996).
4. P. Willets (ed.), *Pressure Groups in the Global System : The Transnational Relations of Issue-Oriented Non-Governmental Organizations* (London : Pinter, 1982).
5. P. Willets (ed.), *'The Conscience of the World' : The Influence of Non-Governmental Organizations in the UN System* (London: Hurst and Co., 1996).
6. T. Risse-Kappen (ed.), *Bringing Transnational Relations Back In* (Cambridge : Cambridge University Press, 1995).
7. J. N. Rosenau, *The Study of Global Interdependence : Essays on the Transnationalisation of the World Affairs* (London : Pinter, 1990).
8. A.J.R. Groom and P. Taylor, *Frameworks for International Co-operation* (London : Pinter, 1990).
9. Michael Nicholson, *International Relations : A Concise Introduction*, Second Edition (New York: Palgrave, Macmillan, 2002).
10. Robert Keohane, *International Institutions and State Power : Essays in International Relations Theory* (Boulder: Westview, 1989).
11. John Madeley, *Big Business, Poor Peoples: The Impact of Transnational Corporations in the World's Poor* (London: Zed Books, 1999).
12. Joel Krieger (ed.), *The Oxford Companion to the Politics of the World* (New York : Oxford University Press, 1993).
13. John E. Spero and Jeffery A. Hart, *The Politics of International Economic Relations,* 5th ed. (New York, St. Martin's Press, 1997).
14. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty-First Century : Unique Contexts, Enduring Patterns*, (New Jersey : Prentice Hall, 2003).

Option (c) : POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper attempts to understand development issues and problems in India with reference to theoretical advances in development studies.

UNIT -I

Development, meaning and changing conceptions.
Economic growth.
Human development.
Sustainable development.

UNIT -II

Theory of the Developmentalist State.
Impact of Development on the Political Process.
Development Strategies and State Policies in India – Priorities, Strategies, Target Groups.

UNIT -III

Socio-Economic Problems and Developmental Issues in India.
Poverty, Social Backwardness and Disparities.
Displacement, Resettlement and Environmental degradation.

UNIT -IV

Democratic decentralization and development in India.
Developmental Interventions, Non Governmental Initiatives and Empowerment.
Globalization, Changing Policies, Strategies and their implications in India.

Readings :

1. Bardhan, Pranab, 1984, *The Political Economy of Development in India*, New York, Blackwell.
2. Jalan, Bimal (ed.) 1992, *The Indian Economy : Problems and Prospects*, New Delhi, Viking.
3. Cassen, Robert and Vijay Joshi (eds.), 1992, *India : The Future of Economic Reform*, New Delhi, Oxford University Press.
4. Dreze, Jean & Amartya Sen, 1995, *India : Economic Development & Social Opportunity*, Delhi, Oxford University Press.
5. Frankel Francis et. al (eds.) 2000, *Transforming India : Social and Political Dynamics of Democracy*, Delhi, Oxford University Press.
6. Jayal, Niraja Gopal (ed.) 2001, *Democracy in India*, New Delhi, Oxford University Press.
7. Kaviraj Sudipta, 1987, "Dilemmas of Democratic Development in India" in Adrian Leftwich ed. *Democracy and Development Theory and Practice*, Cambridge, Polity Press.
8. Kohli Atul, 1987, *The State and Poverty in India : The Politics of Reform*, Cambridge, Cambridge University Press.
9. Lewis, John P., 1995, *Governance and Reform : Essays in Indian Political Economy*, Delhi, Oxford University Press.

10. Mathur Kuldeep (ed.) 1996, *Development Policy and Administration*, Delhi, Sage Publications.

11. Satyamurthy, T.V., 1999, *Social Change and Political Discourse in Indian Structures of Power, Movements of Resistance,* Delhi, Oxford University Press.

12. Sen Amartya, 2000, *Development as Freedom*, Delhi, Oxford University Press.

Option (d) : PEACE AND CONFLICT RESOLUTION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to introduce students to the meaning and contending approaches in the discipline of peace and conflict studies. It also brings into broader context the concept and theories of conflict and conflict resolution and the different strategies and tactics of non-violent resolutions.

UNIT-I

Peace Studies :

1. Meaning, scope and approaches.
2. Peace-keeping, Peace-making, Peace-building and post-peace confidence building measures.

UNIT-II

Peace Movements :

1. Civil Rights Movements.
2. Green Peace Movements.

UNIT-III

Conflict and Conflict Resolution : Conceptual and Epistemological dimensions:

1. Conflict: Typologies and Causes.
2. Conflict Resolution: Meaning and Scope.

UNIT-IV

Conflict Resolution and Transformation : General Strategies and Tactics :

1. Pacific Methods (Mediation, Arbitration and Adjudication), and Analytical problem solving approach (notably of John Burton).
2. Non-Violent techniques of conflict resolution (Gandhian).

Recommended Books :

1. Bondurant, J.V., *Conquest of Violence* (London, Princeton Uni. Press, 1958).
2. Coser, L., *The Function of Social Conflict* (N.Y., The Free Press, 1956).
3. Simmel, G., *Conflict and the Web of Group-Affiliation* (New York, 1955).
4. Weber, Thomas, *Conflict Resolution and Gandhian Ethics* (New Delhi, Gandhi Peace Foundation, 1991).
5. Wallensteen, Peter (ed.), *Peace Research : Achievements and Challenges* (Boulder & London, Westview Press, 1988).
6. Holsti, K.J., "Paths to Peace ? Theories of Conflict Resolution and Realities of International Politics," in Thakur, Ramesh (ed.), *International Conflict Resolution* (Boulder and London, Westview Press, 1988).
7. Galtung, J., *Peace by Peaceful Means* (London, Sage, 1996).
8. Galtung, J., *The Way is the Goal : Gandhi Today* (Ahmedabad, Gujarat, Vidyapeeth, 1992).
9. Boulding, Elise (ed.), *New Agenda for Peace Research* (Boulder and London, Lynee Reimer, 1992).
10. Boutras, Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
11. Burton, J. Dukes, Frank, *Conflict : Practices in Management, Settlement and Resolution* (London, Macmillan, 1990).
12. Sandole, Dennis, J.D. and Merwe, Hugo Van der (ed.), *Conflict Resolution Theory and Practice* (New York, Manchester University Press, 1993).

Option (e) : RETHINKING GEOPOLITICS : CRITICAL PERSPECTIVES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on the premise that geopolitics needs to be re-conceptualized as twenty-first century unfolds. The intention is to rethink and radicalize its components 'geo' and 'politics' so that the self-evident character and nuance of the sign 'geopolitics' can be conceptualized and pluralized. Once conceptualized in a critical way as a problematic of geopolitics or geographical politics, geopolitics becomes a much broader social and cultural phenomena that is normally described and understood by the geopolitical tradition of 'wise-men' statecraft.

UNIT-I

Modern Geopolitical Imagination and Visualizing Global Space : Blocks, Worlds and Zones of identity and difference.
Epochs of Geopolitics (Imperial Geopolitics, Cold War Geopolitics, and the Geopolitics of the 'New World Order'.

UNIT-II

Twenty-First Century Geopolitics (End of History? The Clash of Civilizations?).
National Identity and Geopolitical Visions (USA, Russia, India and Pakistan).

UNIT-III

The Geopolitics of Global Dangers ('rogue states', the 'coming anarchy', diseases and disasters).
The Geopolitics of Terror (with special reference to 11 September and its aftermath).

UNIT-IV

Critical Geopolitics (anti-geopolitics, social movements and alternative political geographies).
Gender and Geopolitics.

Suggested Readings :

1. Andrew Herod, Gearoid O Tuathail and Susan M. Roberts (eds.), An *Unruly World ? Globalisation, Governance and Geography*, London and New York : Routledge, 1998.
2. Ciro, E., Zoppe (ed.), *Charles Zorgbibe : On Geopolitics, Classical and Nuclear,* Boston, Nijhoff, 1985.
3. David, Hoosan (ed.), *Geography and National Identity*, Oxford, U.K. and Cambridge : USA : Blackwell, 1994.
4. Geoffrey, Parker, *Geopolitics : Past, Present and Future*, London and Washington : Pinter, 1998.
5. Gertjan, Dijkink, *National Identity and Geopolitical Visions*, London, New York : Routledge, 1996.
6. Gearoid, O. Tuathail, *Critical Geopolitics : The Politics of Writing Global Space*, London and New York : Routledge, 1996.
7. Gearoid, O. Tuathail, Simon Dalby and Paul Routledge (ed.), *The Geopolitics Reader*, London and New York, Routledge, 1998.
8. Gearoid, O. Tuathail, Simon Dalby (eds.), *Rethinking Geopolitics,* London and New York : Routledge, 1998.

9. Sloan, G.R., *Geopolitics in United States Strategic Policy, 1890-1987*, Brighton Wheatsheaf Books, 1988.
10. Jan Nederveen Pieterse, *World Orders in the Making : Humanitarian Intervention and Beyond*, Houndmills, Macmillan, 1998.
11. Jan Nijman, *The Geopolitics of Power and Conflict : Superpowers in the International Systems*, London and New York : Belhaven Press, 1993.
12. John, Agnew and Stuart Corbridge, *Mastering Space, Hegemony, Territory and Political Economy*, London, New York : Routledge, 1995.
13. John, Agnew, *Geopolitics : Revisioning World Politics*, London and New York : Routledge, 1998.
14. Klaus, John Dodds, "Geopolitics, Cartography and the State in South America," *Political Geography* 12 (4), July 1993 : 361-381.
15. Kurt Mills, *Human Rights in the Emerging Global Order, A New Sovereignty*, Houndmills : Macmillan Press Limited, 1998.
16. Mathew, B. Fielden, "The Geopolitics of Aid : The Provision and Termination of Aid to Afghan Refugees in North West Frontier Province, Pakistan," *Political Geography*, 1998, 17 (4) : 459-487.
17. Simon, Dalby, *Creating the Second Cold War*, London : Pinter, 1990.

Journals :

1. *Geopolitics* (see Special Issue on "11 September and its Aftermath : The Geopolitics of Terror", Volume 8, Number 3, September 1998.
2. Agnew, J., "American Hegemony into American Empire", *Antipode*, 35(5) : 871-885, 2003.
3. Gregory, D., *The Colonial Present*, Oxford: Blackwell, 2004.
4. Kelly, P., "A Critique of Critical Geopolitics", *Geopolitics*, 11 (1) : 24-53, 2006.

Option (f) : THEORIES OF DEVELOPMENT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This Course introduces students to the significant ways in which development has been conceptualised. It tracks the main grounds on which mainstream models of development have been critiqued and the key issues facing contemporary development theory.

UNIT-I

Development as economic growth–capitalist and socialist models.
Theories of modernisation.
Neo-liberalism and globalisation.
Role of the state, welfare and redistribution.

UNIT-II

Dependency, Underdevelopment and world system analysis.
Human development–Basic Needs, capability approach, rights based approaches.
Notion of social capital.

UNIT-III

Ecology and Nature, Sustainable Development.
Gender and Development.
Culture and Development.
Impact of Postmodernism on Development studies and the Post development rejection of Development.

UNIT-IV

Issues in Development studies today

1. Aid, Role of Non-government Organisations and International Agencies.
2. Democracy and Development.
3. Displacement.
4. Poverty.

Reading List :

1. G. Rist, *A History of Development*, London, Zed Books, 1997.
2. J. Crush, *Power of Development*, Routledge, 1995.
3. Ashis Nandy, *Bonfire of Creeds*, New Delhi, OUP, 2004.
4. Richard Peet and Elaine Hartwick, *Theories of Development*, New Delhi, Rawat, 2005.
5. Jan Nederveen Pieterse, *Development Theory, Constructions/Deconstructions*, New Delhi, Vistaar, 2001.
6. Naila Kabeer, *Reversed Realities, Gender Hierarchies in Development Thought*, W.W. Norton & Co., 1994.
7. R.W. Shenton and M.P. Cowan, *Doctrines of Development*, Routledge, 1996.
8. Nalini Visvanathan (Co-ordinator), Lynn Duggan, Laurie Nisonoff & Nan Wiegersma (Eds.), *The Women, Gender and Development Reader*, Zubaan Books.

9. Kriemild Saunders (Ed.), *Feminist Post-Development Thought : Rethinking Modernity, Post-colonialism and Representation*, Zubaan Books.

10. M. Rahnema & V. Bawtree (Eds.), *The Postdevelopment Reader*, New York, Zed Books, 1997.

11. Wolfgang Sachs, *The Development Dictionary,* Zed Books, London, 1992.

12. Amartya Sen*, Development as Freedom*, New Delhi, OUP, 2002.

13. John Hariss, *Depoliticising Development*, Leftword Books, New Delhi, 2001.

14. Susanne Schech, Jane Haggis, *Culture and Development : A Critical Reader*, Blackwell, 2000.

Option (g) : PUBLIC INTERNATIONAL LAW-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper introduces the students to the fundamentals and various other aspects of Public International Law.

Unit-I : Introducing International Law

Definition, basis and nature.
Distinction between Private International Law and Public International Law.

Sources.
Subjects of International Law – States, Individual and the International Institutions.
Relation of International Law to Municipal Law.

Unit-II : Law of Peace

Intervention.
Recognition – Theories, Modes and Consequences.
State Responsibility.
State Succession.

Unit-III : Force and International Law

Disputes :

Settlement by peaceful means.

Settlement through the agencies – U.N. and the International Court of Justice.

Settlement through means of short of war.

War :

General Laws of Warfare (Land, Maritime and Air)

Geneva Conventions.

War Crimes.

Neutrality

Blockade, Contraband and Prize Courts.

Unit-IV : International Transactions

Diplomatic Agents.

Consuls.

Treaties.

Books

1. Aggarwal, H.O. (2014), *International Law & Human Rights.* Jain Book Agency, New Delhi.
2. Cassese, Antonio (2005), *International Law.* Oxford University Press, USA.
3. Clapham, Andrew (2012), *Brierly's Law of Nations : An Introduction to the Role of International Law in International Relations.* Oxford University Press, USA.
4. Crawford, James (2013), *Brownlie's Principles of Public International Law.* Oxford University Press, USA.
5. Crawford, James and Koskenniemi, Martti (2012), *The Cambridge Companion to International Law (Cambridge Companions to Law).* Oxford University Press, USA.
6. Dixon, Martin (2013), *Textbook on International Law.* Oxford University Press, USA.
7. Evans, Malcolm (2010*), International Law.* Oxford University Press, USA.
8. Gray, Christine (2004), *International Law and the Use of Force.* Oxford University Press, USA.
9. Janis, Mark W. (2003), *An Introduction to International Law (Introduction to Law Series).* Oxford University Press, USA.
10. Lowe, Vaughan (2007), *International Law (Clarendon Law Series*). Oxford University Press, USA.
11. Malanczuk, Peter (1997), *Akehurst's Modern Introduction to International Law.* Routledge.
12. Shaw, Malcolm (2014), *International Law.* Cambridge University Press.
13. Tandon, M.P. and Anand, V.K. (2012), *International Law & Human Rights*. Jain Book Depot.

Journals

1. *American Journal of International Law* (AJIL), American Society of International Law, 1907.
2. Brooklyn Journal of International Law
3. *European Journal of International Law* (EJIL) : European University Institute, 1990.
4. *Indian Journal of International Law* : Indian Society of International Law, 1960.
5. *International and Comparative Law Quarterly* (ICLQ), British Institute of International and Comparative Law, 1952.
6. *Journal de droit international* (Clunet): founded by Edouard Clunet in 1874; now published by Lexis Nexis.
7. *Recueil des Cours / Collected Courses,* Hague Academy of International Law, 1923.
8. *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht, or Heidelberg Journal of International Law, (*ZaoRV / HJIL*):* Max Planck Inst. for Comparative Public Law and International Law, 1929.

Key websites

Listed below are a few key websites of the American Society of International Law:

1. Electronic Resource Guide (ERG): the American Society of International Law's guide to international law resources on the web, arranged in subject-based chapters.
2. Eagle-i : gateway to law websites, including international law sites, provided by IALS Library
3. Electronic Information System for International Law (EISIL) : gateway to international law websites, provided by the American Society of International Law.
4. International Law Commission (ILC): this UN body develops and codifies international law; its website provides ILC publications from 1949 onwards, and a research guide.
5. *Researching Public International Law:* substantial, detailed research guide by Kent McKeever, Director of the Arthur W. Diamond Law Library at Columbia University in the US (last updated 2006).
6. UN International Law page: information, resources and links relating to the UN's work in the field of international law
7. UN Treaty Collection: free access to the UN Treaty Series, League of Nations Treaty Series and related information.
8. United Nations Documents: gateway to the documentation of the UN General Assembly, Security Council, Secretariat and other UN bodies. (See also the IALS UN Research Guide.)
9. World LII Internaational Law Library: free collection of treaties, international court decisions, journals and other international law materials.

Oxford's unrivalled reference works available online

Oxford Scholarly Authorities on International Law

Online

Access the product: http://opil.ouplaw.com/home/OSAIL

Virginia Journal of International Law

Course XII : ***The candidates are required to offer any one of the following courses :***
Option (a) : DEMOCRACY IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : The paper aims at enabling the students to understand and reflect upon the theory and practice of democracy in India.

Unit-I

Prefiguring Indian Democracy.
Indian Democracy : Colonial Inheritance.
Idea of Democracy : Constituent Assembly Debates.
State of Democracy in Contemporary India.

Unit-II

Democracy and Development.
Development Planning.
Economic Reforms.

Unit-III

Identities and Rights : Mobilisation and Contestation.
Gender.
Minority Rights.
Dalits and Backward Classes.

Unit-IV

Political Institutions and Democratic Consolidation.
Indian Federalism in Transition.
Democracy and Decentralisation : Panchayati Raj.
Representation, Participation and Electoral Politics.

Selected Readings :

1. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India : Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).
2. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.), *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).
3. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).
4. Kuldeep Mathur (ed.), *Development Policy and Administration* (New Delhi : Sage, 1996).
5. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi: Sage, 2002).
6. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence*, (New Delhi : Oxford, 1998).
7. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 : 1251-68.
8. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II-The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 : 1361-70.
9. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India*, (New Delhi : Oxford, 2001).
10. Rajendra Vohra and Suhas Palishkar, *Indian Democracy : Meanings and Practices,* (New Delhi : Sage, 2004).
11. Peter Ronald deSouza (ed.), *Contemporary India : Transitions* (New Delhi : Sage, 2000).
12. Pratap Bhanu Mehta, *The Burden of Democracy* (New Delhi : Penguin, 2003).
13. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004* (New Delhi : Oxford, 2005), 2nd Edition.
14. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution : The Bahujan Samaj Party in Uttar Pradesh* (New Delhi : Sage, 2002).
15. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003), 2nd Edition.
16. Madhu Purinima Kishwar, *Deepening Democracy : Challenges of Governance and Globalisation in India* (New Delhi : Oxford, 2005).
17. Abhay Kumar Dubey, *Loktantra Ke Saat Adhyaya* (Delhi : Vani, 2002).
18. Abhay Kumar Dubey, *Bharat Ka Bhumandalikaran* (Delhi : Vani, 2003).

Option (b) : GOVERNMENT & POLITICS OF INDIA'S NEIGHBOURS (PAKISTAN, BANGLADESH, NEPAL AND SRI LANKA)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims at introducing the students to some of the dominant issues in South Asia and their long-term implications on bilateral relations among the states of the region. A critical assessment of India's role in the region is the special focus of this course.

UNIT–I

Impact of Geography, History and Lingo-cultural influences on the Government and Politics of India's neighbours.
Major political institutions and political parties in these countries.

UNIT–II

Social change, ethnicity and demography's impact on politics with special reference to forces of modernization and religious fundamentalism.
Political economy of the neighbouring states and its equation with globalization and liberalisation processes.

UNIT–III

Internal Conflict in South Asia : Causes and Dynamics.

UNIT–IV

India as a factor in the politics of these countries with emphasis on bilateral relations and multilateral SAARC.

Suggested Readings

1. Sugata Bose and Ayesha Jalal, *Modern South Asia : History, Culture, Political Economy* (New Delhi, Oxford University Press, 2004).
2. S. Mahmud Ali, *The Fearful State : Power, People and Internal War in South Asia* (London, Zed Books, 1993).
3. Paul R. Brass, *The Politics of South Asia since Independence* (Cambridge, Cambridge University Press, 1990).

4. Dipankar Gupta, *The Context of Ethnicity : Sikh Identity in a Comparative Perspective* (New Delhi, Oxford University Press, 1996).
5. Ashutosh Varshney, *Ethnic Conflict and Civic Life : Hindus and Muslims in India* (New Delhi, Oxford University Press, 2005).
6. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India* (New Delhi, Oxford University Press, 2001).
7. Tapan K. Bose and Rita Manchanda (eds.), *States, Citizens and Outsiders : The Uprooted Peoples of South Asia* (Kathmandu, South Asian Forum for Human Rights, 1997).
8. Ranabir Samaddar, *The Marginal Nation : Transborder Migration from Bangladesh to West Bengal* (New Delhi, Sage Publications, 1999).
9. Sanjeev Baruah, *Durable Disorder : Understanding the Politics of Northeast India* (New Delhi, Oxford University Press, 2005).
10. Urmila Phadnis, *Ethnicity in South Asia* (New Delhi, South Asian Publishers, 1986).
11. Urmila Phadnis, Kalim Bahadur, S.D. Muni (eds.), *Domestic Conflicts in South Asia : Political Dimensions,* Vol. I (New Delhi, South Asian Publishers, 1986).
12. Urmila Phadnis, S.D Muni, Kalim Bahadur, *Domestic Conflicts in South Asia : Economic and Ethnic Dimensions,* Vol. II (New Delhi, South Asian Publishers, 1986).
13. Veena Kukreja, *Civil-Military Relations in South Asia* (New Delhi, Sage Publications, 1991).
14. Ponna Wignaraja and Akmal Hussain, *The Challenge in South Asia : Development, Democracy and Regional Cooperation* (New Delhi, Sage Publications, 1989).
15. Paul R. Brass, *Ethnicity and Nationalism : Theory and Comparison* (New Delhi, Sage Publications, 1991).

16. Option (c) : WOMEN AND POLITICS IN INDIA

17. INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

18. The syllabus has been divided into four units.

19. There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

20.

21. **Objective of the Course:** This course looks at Indian politics through the lens of gender and draws attention to the main themes and debates regarding gender in modern India. It undertakes an analysis of the issues raised by the women's movement in India and the Indian state. In doing so, it will examine the debates on nationalism, social reform, law, citizenship, development, environment and explore inter-sectionality of identities and structures in India. It is an interdisciplinary course which draws on the academic domain of feminist studies.

Social reform and national movements- debate on the position of women; modernity, colonialism and patriarchy; Gandhi and women
Modern Indian State- Institutional and legal provisions, Equality provisions, Family and the state

Unit 2

Women's movement in Contemporary India – Phases, key campaigns,autonomy, relationship with political parties and critical assessment
Violence - Law, Sexualities, State; Public and private violence, Censorship

Unit 3

Community, Identity and Citizenship
Gender and Caste- Reservations for women, Ambedkar, Periyar, Dalit feminism
Gender and Religion- Personal Laws, UCC Debate, Partition, Communalism

Unit 4

Gender and Development: Impact of development policies, Employment and work, ecology and gender
Human development- Health, education

Essential Readings:

1. Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
2. Mary John (ed) *Women's Studies in India: A Reader,* Penguin, 2008
3. Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
4. Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
5. Radha Kumar, *A History of Doing*, Kali for Women, 1997

Suggested Readings

Unit 1

1. Anupama Roy, *Gendered Citizenship*,('The Womanly Vote'), Orient Blackswan, 2005
2. Bina Agarwal, 'The Family in Public Policy', in Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
3. Brinda Bose, *Gender and Censorship,* Women Unlimited, 2006
4. Geraldine Forbes, Women in Modern India, OUP, 2008
5. Janaki Nair, *Women and Law in Colonial India*, Kali for Women, 1996
6. Joanna Liddle and Rama Joshi, 'Gender and Imperialism in British India', *EPW*
7. Kameshwari Jandhyala, State Initiatives, *Seminar*, September 2001
8. Kumkum Sangari and Sudesh Vaid (ed) *Recasting Women* (Chapters by Uma Chakravarti – Whatever Happened to the Vedic Dasi, Partha Chatterjee- Nationalist Resolution of the Women's Question), kali for Women, 1990
9. Leela Kasturi and Vina Mazumdar (ed) *Women and Indian Nationalism*, (Introduction), Vikas Publishing House, 1994
10. Madhu Kishwar, Gandhi on Women, *EPW,* 5 October 1985
11. Rajeshwari Sunder Rajan, *The Scandal of the State*, (Introduction), Permanent Black, 2003
12. Ratna Kaur and Brenda Crossman, 'On Women, Equality and the Constitution' in Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999

13. Sadhna Arya, 'National Commission for Women, An Overview of its Performance', *EPW*, May 4 2013
14. Sujata Patel, 'Construction and Reconstruction of Woman in Gandhi', *EPW,* 20 February 1988
15. Sumit Sarkar and Tanika Sarkar (ed) *Women and Social Reform* (Introduction),

Unit 2

1. Arvind Narrain, ' The Verma Committee: Alchemizing anger to hope', Kafila.org
2. Gail Omvedt, 'Women's Movement: Some ideological Debates' in Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
3. Indira Jaising, 'Bringing Rights Home: Review of the Campaign for a Law on Domestic Violence', *EPW*, Oct 31 2009
4. Jayati Ghosh, 'Violence against Women: Economic Reforms and Increasing Insecurities', 29 January 2008 (http://www.macroscan.org/cur/jan08/cur290108Violence.htm)
5. Madhu Mehra, 'Taking Stock of the new Anti Rape Law', Kafila.org
6. Nivedita Menon, 'Conundrum of Agency in Sexual Violence' January 2014, Kafila.org
7. Nivedita Menon, 'Rights, Bodies and Law' in Nivedita Menon (ed) *Gender and Politics in India,* OUP, 1999
8. Radha Kumar, *A History of Doing* (Chapters 6-11), Kali for Women, 1997
9. Srimati Basu, 'The Politics of Giving: Dowry and Inheritance as Feminist Issues' in Basu (ed)*Dowry and Inheritance,* Women Unlimited, 2005
10. Susie Tharu and Tejaswini Niranjana, 'Problems for a Contemporary Theory of Gender' in Nivedita Menon, *Gender and Politics in India*, OUP, 1999
11. V Geetha, 'Periyar, Women and an Ethic of Citizenship' in Anupama Rao (ed) *Gender and Caste*, Women Unlimited, 2003
12. Veena Das, 'Sexual Violence, Discursive Formations and the State', *EPW,* Special Issue, Sepetember 1996

Unit 3

1. Bina Agarwal, 'A Field of One's Own' in Srimati Basu (ed) Dowry and Inheritance
2. Bina Agarwal, 'Landmark Step to Gender Equality', *The Hindu*,September 25 2005
3. Flavia Agnes, 'Economic Rights of Women in Muslim Law', *EPW*, Oct 12 1992
4. Gopal Guru, 'Dalit Women Talk Differently', *EPW*, Oct 14 1995
5. Janaki Abraham , 'Contingent Caste Endogamy and Patriarchy', *EPW*, Jan 11 2014
6. Meena Dhanda (ed) *Reservations for Women* (Introduction), Women Unlimited, 2008
7. Nida Kirmani, 'Claiming their Space: Muslim Women's Networks and Women's Movement in India', *Journal of International Women's Studies*, Nov 2009.
8. Nivedita Menon, 'Elusive Woman: Feminism and Women's Reservation Bill in Dhanda (ed)
9. Nivedita Menon, 'Uniform Civil Code: The Women's Movement Perspective', kafila.org
10. Pratima Pardeshi, 'Ambedkar and women's liberation', *the Dalit*, March-April 2002

Unit 1

11. R. Geetha, 'Panchayat Raj Institution and Women's Reservation' in Dhanda (ed)
12. Rajeshwari Sunder Rajan, 'Women between Community and State' in Rajan (ed) *The Scandal of the State*
13. Sharmila Rege, (ed) *Against the Madness of Manu*(Introduction), Navayana Books, 2013
14. Sharmila Rege, 'Dalit Women talk Differently: A Critique of 'Difference' and towards a Dalit Feminist Standpoint', *EPW*, Oct 31 1998
15. Tanika Sarkar, 'Women, Community and Nation' in Jaffrey and Basu (ed)
16. V. Geetha, 'Of Bodily Love and Hurt' in Mary E John and Janaki Nair (eds) *A Question of Silence: The Sexual Economies of Modern India,* Kali for Women, 1998
17. Zoya Hasan, 'Gender Politics, Legal Reform, and the Muslim Community in India' in Patricia Jaffrey and Amrita Basu (ed)*Appropriating Gender: Women's Activism and Politicized Religion in South Asia*, Routledge, 1998

Unit 4

1. Besty Hartmann and Mohan Rao, 'India's Population Programme', *EPW*, Oct 31 2015
2. Bina Agarwal, 'The Gender and Environment Debate' in N.Menon (ed) *Gender and Politics in India*, OUP, 1999
3. Dipta Bhog, 'Gender and Curriculum', *EPW*, April 27 2002
4. Executive Summary of the National Focus Group on Education, NCERT 2005
5. Geeta Nambissan, 'Integrating Gender Concerns', *Seminar*, April 2004
6. Harini Narayan, 'Women's Health, Population Control and Collective Action', *EPW*, Febuary 19, 2011
7. Indrani Mazumdar, Neetha N, 'Gender Dimensions: Employment Trends in India, 1993-94 to 2009-10, *EPW,* 22 October 2011
8. Kalpana Vishwanath, 'Whose Body, Whose Health' *Seminar*, Sept 2001
9. Kalyani Menon-Sen and Kalpana Kannabiran, "Microcredit: Magic Bullet or Poison Pill' in Michele Kelley and Deepika D'Souza (eds) *The World Bank in India,* Orient Blackswan, 2010
10. Leela Kasturi, 'Development, Patriarchy and Politics: Indian Women in the Political Process 1947-92', Occasional Paper, CWDS.
11. Maitrayee Chaudhuri, 'Citizens, Workers and emblems of Culture: An analysis of the First Plan Document on women', *Contributions to Indian Sociology,* 29 (no 1 and 2), 1995
12. Mary E John, 'Gender and Development in India, 1970s-1990s', *EPW*, Nov 23 1996
13. Mary E John, 'Reframing Globalisation: Perspectives from the Women's Movement' EPW, March 7 2009
14. Nirmala Banerjee, 'Whatever Happened to the Dreams of Modernity?' *EPW*, April 25, 1998.
15. NIrmala Buch, 'State Welfare Policy and Women, 1950-1975', *EPW*, 25 April 1998

16. Padmini Swaminathan (ed) Women and Work: Essays from EPW (Introduction), Orient Blackswan, 2012
17. Saheli Women's Resource Centre, 'Reproductive Rights in the Indian Context' (Also available in Hindi)
18. Sujatha Gothoskar, 'The Plight of Domestic Workers', *EPW*, June 1 2013.

Option (d) : RIGHTS : IDEAS AND MOVEMENTS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the various ways in which the notion of rights has been conceptualized in theory and the debates emerging from the rights-based movements.

Unit-I

Notions of Rights : Philosophical foundations, historical developments and normative framework (natural rights, civil rights, democratic rights and human rights).

Unit-II

Contextualizing Rights : Debate on universalism and cultural relativism of rights.
Development debates and human rights.

Unit-III

Human Rights Movements : Ideology and social basis of civil liberties and democratic rights movements in India : National Human Rights Commission; International Human Rights Movement – ideology and social basis.

Unit-IV

Current Challenges : State and rights of citizens (child, women, rights of victims of repression); community rights (minorities, ethnic groups), rights of migrants, displaced people and refugees.

Suggested Readings :

1. Arnold, Christopher, *Ideas and Ideology : Human Rights,* Edward Arnold, 1978.
2. Baviskar, Amita, *In the Belly of the River : Tribal Conflicts Over Development in the Valley,* OUP, Delhi, 1995.
3. Bose, Tapan K. and Rita Manchanda, States, Citizens and Outsiders : The Uprooted Peoples of South Asia, *South Asia Forum for Human Rights,* Kathmandu, 1998.
4. Butalia, Urvashi, *The Other Side of Silence : Voices from the Partition of India,* Viking, Delhi, 1998.
5. Claude, Richard Pieree and Burns H. Weston, *Human* Rights in the World Community : Issues and Actions, University of Pennsylvania Press, Philadelphia, 1989.
6. Dubois, M, "The Governance of the Third World : A Foucauldian Perspective on Power Relations in Development", *Alternatives, 16, 1, Winter,* 1991.
7. Freeden, Michael, *Rights, World View,* Delhi, 1998.
8. Gordenker, Leon, *Refugees in International Politics,* Columbia University Press, New York, 1987.
9. Gudwin-Gill, Guy S., *The Refugee in International Law,* Clarendon, Oxford, 1983.
10. Kochler, Hans, "The Concept of the Nation and the Question of Nationalism : The Traditional "Nation State" vs. a Multiculture 'Community State' in Michael Dunne and Tizianno Bonazzi (eds.) *Citizenship and Rights in Multicultural Societies,* Keele University Press, Keele, 1995.
11. Kothari, Smitu and Harsh Sethi (ed.), *Rethinking Human Rights, Challenges for Theory and Action,* Lokayan, 1989.
12. Kothari, Smitu, "The Human Rights Movement in India," *Social Action*, January-March, 1990, Pp. 1-15.
13. Kumar, Radha, *Divide and Fall? Bosnia in the Annals of Partition,* Verso, London, 1997.
14. Kymlicka, Will, *Multicultural Citizenship: A Liberal Theory of Minority Rights,* Clarendon, Oxford, 1996.
15. Donnelly, Jack, *The Concept of Human Rights,* Croom Helm, London, 1985.
16. Macfarlane, L. J., *The Theory and Practice of Human Rights,* Maurice Temple Smith, London, 1985.
17. Macpherson, C. B., "Problems of Human Rights in the Twentieth Century in C.B. Macpherson, *The Rise and Fall of Economic Justice,* OUP, Oxford, 1987.
18. Mills, Kurt, *Human Rights in the Emerging Global Order,* Palgrave Macmillan, 1998.
19. Mohanty, Manoranjan, Partha Nath Mukherji with Olle Tornquist (ed.), *People's Rights, Social Movements and the State in the Third World,* Sage, New Delhi, 1998.
20. Mani, S. D. and Lok Raj Baral (eds.), *Refugees and Regional Security in South Asia,* Konark, New Delhi, 1996.
21. Paraguli, P., "Power and Knowledge in Development Discourse : New Social Movements and State in India," *International Social Science Journal,* 127, February, 1991.
22. Ray, Ashwini, "Civil Rights Movement and Social Struggle in India", *Economic and Political Weekly,* Vol. XXI, No. 28, 12 July, 1986.
23. Rentein, Alison Dundes, *International Human Rights : Universalism vs Relativism,* Sage, 1990.
24. Rubin, B., "Civil Liberties Movements in India : New Approaches to the State", Asian Survey, Vol. 27, 1987, Pp. 371-92.
25. Singh, Pritam, "Sectarianism and Human Rights Discourse : The Politics of Human Rights in the Post-Colonial Punjab" in Michael R. Anderson and Sumit Guha (eds.), *Changing Concepts of Rights and Justice in South Asia,* OUP, Delhi, 1998.
26. Staunhagen, Rodalfo, *The Ethnic Question : Conflicts, Development and Human Rights,* United Nations University Press, Tokyo, 1990.

27. Steriner, Henry J. and Philip Alston, *International Human Rights in Context : Law, Politics and Morals,* Clarendon Press, Oxford, 1996.
28. Tambiah, Stanley, J., *Levelling Crowds : Ethnonationalist Conflicts and Collective Violence in South Asia,* Vistaar Publications, New Delhi, 1997.
29. UNESCO, *Violation of Human Rights : Possible Rights of Recourse and Forms of Resistance,* 1984.
30. UNHCR, *The State of the World's Refugees – A Humanitarian Agenda,* OUP, Oxford, (Latest edition).
31. Vincent, R. J., (ed.), *Foreign Policy and Human Rights,* Cambridge University Press, Cambridge, 1986.
32. Weiner, Myron, *The Global Migration Crisis : Challenge to States and to Human Rights,* Harper Collins, New York, 1995.
33. Wilmer, Frank, *The Indigenous Voice in World Politics : Since Time Immemorial,* Sage, Newbury Park, 1993.
34. Young, Iris, Marion, *Justice and the Politics of Difference,* Princeton University Press, Princeton, 1990.
35. Zolberg, Aristide R., Astri Suhyke and Sergio Aguayo, *Escape From Violence : Conflict and the Refugee Crisis in the Developing World,* OUP, New York, 1989.

Option (e) : NATIONALISM : THEORY AND CONTEXT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
(iii) The question paper will include the following instructions for the candidates:

(a) The first question is compulsory. It contains 15 questions covering the entire syllabus. The candidates are required to attempt any 10 of them, providing answers to each question in about 25 to 30 words. Each question carries 2 marks.

(b)The remaining question paper consists of 4 units. Each unit carries two questions. The candidates are required to answer one question from each Unit. Each question carries 15 marks.

OBJECTIVES:- This paper examines various theories of nationalism by placing them in the context of their origin. In the process, it examines the concept of nation, its relationshipwith other identities and new challenges it faces in the age of globalization.

UNIT-I

Nation, State and Nation-State: Conceptual Distinctions and Interrelationships.
Origins and Development of Nationalism: European and non-European contexts.
Various forms of nationalism.

UNIT-II

Primordialist theories of nationalism: socio-biological approach (Pierre van der Berghe); culturalist approach (Edward Shils and Clifford Geertz); perennialism (Adrian Hastings).Ethnosymbolist theories: (John Armstrong, Anthony D. Smith).

Modernist theories: nationalism as politics (JohnBreuilly, Paul R. Brass, Erich Hobsbawm); nationalism as social transformation (Ernest Gellner, Benedict Anderson).

UNIT-III

Marxist approach (Marx, Lenin, Rosa Luxemburg, Otto Bauer). Neo-Marxist approaches (tom Nairn, Michael Hector).
Feminstapproach (Nira Yuval-Davis).

UNIT-IV

Postcolonial theory (ParthaChatterjee).
Nationalism and Globalisation

ESSENTIAL READINGS

1. Hutchinson, J. and A.D. Smith (eds.), *Nationalism*,OUP, Oxford, 1994.
2. Ozkirimli, Umut, *Theories Of Nationalism: A Critical Introduction* (second edition), Palgrave Macmillan, New York,2010.

SUGGESTED READINGS

1. Alter, P., Nationalism, Edward Arnold, London, 1989.
2. Anderson, Benedict, *ImaginedCommunities: Reflection on the Origins and Spread of Nationalism*, Verso, London, 1991.
3. Anthiyas, Floya and Nira Yuval-Divas, *Women and the Nation-State*, Macmillan, London, 1989.
4. Balibar, Etienne and Immanuel Wallerstein, *Race, Nation, Class: Ambiguous Identities*, Verso, London, 1991.
5. Chatterjee, Partha, *The Nation and its Fragments*, Oxford University Press, 1994.
6. Connor, Walker, *The National Question in Marxist-Leninist Theory and Strategy*, Princeton University Press, Princeton, 1994.
7. Featherstone, Mike (ed.), *Global Culture: Nationalism, Globalization and Modernity,* Sage, London, 1990.
8. Gellner, Ernest, *Nations and Nationalism*, Blackwell, Oxford, 1983.
9. Hechter, Michael, *Internal Colonialism: The Celtic Fringe in British National Development, 1536-1966*, Routledge and Kegan Paul, London, 1975.
10. Hobsbawm, E.J., *Nations and Nationalism since 1780, Programme, Myth and Reality*, Cambridge University Press, Cambridge, 1990.
11. Ignatieff, Michael, *Blood and Belonging, Journeys into the Nationalism*, BBC Books and Chatto and Windus, London, 1993.
12. Jayawardena, K., *Feminism and Nationalism in the Third World*, New Delhi, 1986.
13. McGraw, A.G. et al (ed.), *Global Politics :Globalization and the Nation-State,* Polity, Oxford, 1992.
14. Nairn, Tom, *The Break-up of Britain: Crisis and Neo-Nationalism*, New Left Books, London, 1977.
15. Smith, Anthony, D., *The Ethnic Origins of Nations*, Blackwell, Oxford, 1986.
16. Smith, Anthony, D., *Theories of Nationalism*, Duckworth, London, 1971
17. Tiech, Mikulas and Roy Porter (eds.), *The National Question in Europe in Historical Context*, Cambridge University Press, Cambridge, 1993

Option (f) : NEW POLITICAL GEOGRAPHY IN COMPARATIVE PERSPECTIVE

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : Political Geography is concerned with the reciprocal impact of spatial patterns, features and structures, and political ideas, institutions. Above all, it focuses on the twin ideas of territory and territoriality. This course is based on the premise that with the Post-World War era coming to a decisive end, a new political geography –one offering fresh perspectives on the relationship between geography and politics—is in the making. Such a political geography recognizes that spatial patterns of political processes are not confined only to national boundaries. The nation-state is a part of a globalizing world, and the resultant geopolitical map contains nested regions with over-lapping boundaries. It is equally important to examine the geopolitical economy of so-called 'resource wars', that is armed conflicts revolving to a significant degree over the pursuit or possession of critical materials. The course will draw upon a number of case studies from different parts of the globe (especially Afro-Asia, Polar Regions and the Indian Ocean region) to enable students develop a better understanding of the politics of space and spaces of politics.

Unit-I

Understanding Key Concepts : Power, Territory/Territoriality, Space and Spatiality.
Globalization and the Regionalization : Integration and Fragmentation.

Unit-II

Territory and the Power of Ethnic Nationalism.
The Geopolitics of 'Resource Wars'.

Unit-III

Environmental Geopolitics and Sustainability (with special reference to the polar regions).
International Migration, Refugee Flows and Diasporas.

Unit-IV

New States and the Geopolitical Transition (with special reference to Central Asian Republics).
Changing nature and role of international boundaries and border regions.

Suggested Readings

1. David Slater, "Geopolitical Imaginations Across the North-South Divide : Issues of Difference, Development and Power," *Political Geography 16 (8)*, November 1997 : 631-654.
2. Ghazi Flah, "The Spatial Manifestation of Threat : Israelis and Palestinian Seek a 'Good' Border," *Political Geography,* 1995, 14 (8) : 689-706.
3. Ian Bremmer and Ray Taras (eds.), *New States, New Politics : Building the Post-Soviet Nations*, Cambridge : Cambridge University Press, 1997.
4. Leif Ohlsson (ed.), *Hydropolitics : Conflicts Over Water as a Development Constraint*, Dhaka University Press Limited, 1996.
5. Linda Weiss, *The Myth of the Powerless State : Governing the Economy in a Global Era,* Cambridge : Polity Press, 1998.
6. Malcolm Anderson*, Frontiers : Territory and State Formation in the Modern World,* Cambridge, Polity Press, 1996.
7. Mekonnen Tesfahuney, "Mobility, Racism and Geopolitics", *Political Geography*, 1998, 17 (5), 499-515.
8. Ramesh Dutta Dikshit, *Development in Political Geography : A Century of Progress*, New Delhi : Sage, 1997.
9. Robert Bennett and Robert Estall (eds.), *Global Change and Challenge : Geography for the 1990s*, London, New York : Routledge, 1991.
10. Sanjay Chaturvedi, *The Polar Regions : A Political Geography*, Chichester : John Wiley & Sons, 1996.
11. Sarah A. Radcliff, "Frontiers and Popular Nationhood : Geographies of Identity in the 1995 Ecuador-Peru-Border Dispute," *Political Geography*, 1998, 17 (3) : 273-293.
12. Stanley D. Brunn & Thomas R. Leinbach (eds.), *Collapsing Space & Time : Geographical Aspects of Communication & Information*, London : Harper Collins Academic, 1991.
13. Tapan K. Bose and Rita Manchanda, *State, Citizens and Outsiders : The Uprooted Peoples of South Asia*, Kathmandu : South Asia Forum for Human Rights, 1997.
14 Vladimir Kolossov and Andrei Treivish, "The Political Geography of European Minorities : Past and Future", *Political Geography*, 1998 : 17 (5) : 517-534.
15 Rajat Ganguli, *Kin State Intervention in Ethnic Conflicts : Lessons from South Asia*, New Delhi : Sage Publications, 1998.
16 Feroz Ahmed, *Ethnicity and Politics in Pakistan*, Karachi : Oxford University Press, 1998.
17 Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism : Essays North-South,* Delhi : Oxford University Press, 1997.
18 Stephen Castles & Mark J. Miller, *The Age of Migration : International Population Movements in the Modern World,* Houndmills, MacMillan, 1998 (Second Edition)
19 Agnew, J., *Making Political Geography*, London : Arnold, 2002.

20 Blackwell, M., *Political Geography*, London : Routledge, 2002.

21 Cox, K.R., *Political Geography: Territory, State and Society*, Oxford : Blackwell, 2002.

22 Dodds, K., *Geopolitics in a Changing World*, Harlow : Pearson Education, 2000.

23 Glassner, M. and Fahrer, C., *Political Geography*, Chichester : John Wiley & Sons, 2003.

24 Jones, M., *An Introduction to Political Geography*, London : Routledge, 2004.

25 Loughlin, John O. *Dictionary of Geopolitics*, Westport : Greenwood Press.

26 Painter, J., *Politics, Geography and 'Political Geography'*, London : Arnold, 1995.

27 Tuathail, G.O., Dalby, S. and Routledge, P., *The Geopolitics Reader*, London : Routledge, 2007.

28 Rumley, D. and Chaturvedi, S., *Energy Security and the Indian Ocean Region*, New Delhi : South Asian Publishers, 2005.

Journals

Political Geography.
Progress in Human Geography.

*Geopolitics** A Frank Cass Journal, (see in particular *Special Issue* on "The Geopolitics of Resource Wars", Volume 9, number 1, Spring 2004 : Special Issue on "Boundaries, Territory and Post-Modernity, Volume 3, Number 1, Summer 1998).

*Note : This journal is also available on line at Panjab University library website.

Option (g) : POLICIES AND POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper familiarises students with the various trajectories of the Indian development experience and their interaction with politics since independence.

Unit-I

The Colonial Experience.
National Movement : Debates on Development.
Planning and its precursors.

Unit-II

Agriculture and the Institutional Strategy.
Politics of land reforms.
New Agricultural Policy.
Green Revolution and the Rise of agrarian power/capitalism.

Unit-III

Politics of industrial Policy.
State and Business : Labour, Import Substitution and Nationalisation.
Politics of business groups.

Unit-IV

Economic Reforms : Background, Scope and Content.
Political Economy of Reforms.
Economic Reforms, Democracy and Electoral Politics.

Readings

1. Amit Bhaduri and Deepak Nayar, *The Intelligent Person's Guide to Liberalisation* (New Delhi : Penguin, 1996).

2. Ashutosh Varshney, *Democracy, Development and the Countryside : Urban-Rural Struggles in India*, (Cambridge : Cambridge University Press, 1995).

3. Atul Kohli, 'Politics of Economic Liberalisation in India', *World Development* 17(3), 1989 : 305-28.

4. Atul Kohli, The Politics of Economic Growth in India, 1980-2005: Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 :1251-68.

5. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II- The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 :1361-70.

6. Atul Kohli, *The State and Poverty in India : The Politics of Reform* (Cambridge : Cambridge University Press, 1987).

7. Baldev Raj Nayar, *Globalisation and Nationalism : The Changing Balance in India's Economic Policy*, 1950-2000 (New Delhi: Sage, 2001).

8. Baldev Raj Nayar, *India's Mixed Economy : The Role of Ideology and Interest in its Development* (Bombay : Popular Prakashan, 1989).

9. Baldev Raj Nayar, "Policy and Performance under Democratic Coalitions : India's United Front Government and Economic Reforms, 1996-98", *Journal of Commonwealth and Comparative Politics*, 37(2) July 1999 : 22-56.

10. Bimal Jalan (ed.), *Indian Economy : Problems and Prospects*, (New Delhi : Oxford, 1993).

11. Bipan Chandra, *The Rise and Growth of Economic Nationalism in India.*

12. Deepak Naayar, 'Economic Development and Political Democracy : Interaction of Economics and Politics in Independent India', *Economic and Political Weekly* 39(21) : 2079-31.

13. Dige Jorgen Pedersen, 'Explaining Economic Liberalisation in India : State and Society Perspectives', *World Development*, 28(2) 2000 : 265–82.

14. Donald Horowitz, 'Is there a third-world policy process', *Policy Sciences*, 22, 1989 : 197–212.

15. E. Sridharan, "Economic Liberalisation and India's Political Economy : Towards a Paradigm Synthesis", *Journal of Commonwealth and Comparative Politics*, 31(3), November, 1993.

16. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004*, (New Delhi : Oxford, 2005) 2nd Edition.

17. G. Thimmaiah, 'The Political Economy of Populist Programmes', *Journal of Indian School of Political Economy*, 8(1),1996 : 40–63.

18. Ian Little and Vijay Joshi (eds.), *India's Economic Reforms*, 1964-91, (Delhi : Oxford, 1998).

19. Isher Judge Ahluwalia, *Industrial Growth in India : Stagnation since the Mid-Sixties* (Delhi : Oxford, 1985).

20. Jagdish Bhagwati, *India in Transition : Freeing the Economy*, (New Delhi : Oxford, 1993).

21. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.) *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).

22. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).

23. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi : Sage, 2002).

24. Lloyd Rudolph and Susanne Rudolph, *In Pursuit of Lakshmi : The Political Economy of the Indian State* (Chicago : Chicago University Press, 1987).

25. Mark Robinson and Gordon White (ed.), *Democratic Developmental State* (Delhi, 1998).

26. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India: Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).

27. Pradeep Chhibber, 'Political Parties, Electoral Competition, Government Expenditures and Economic Reforms in India', *Journal of Development Studies*, 32(1), 1995 : 74–96.

28. Pranab, Bardhan, *The Political Economy of Development in India* (expanded edition with an epilogue on the Political Economy of Reform in India) (New Delhi, Oxford, 1998).

29. Rob Jenkins, *Democratic Politics and Economic Reform in India* (Cambridge University Press, New Delhi, 1999).

30. Robert Cassen and Vijay Joshi (eds.), *India : The Future of Economic Reforms* (New Delhi : Oxford, 1995).

31. Robert Wade, 'The Market for Public Office : Why the Indian State is not Better at Development', *World Development*, 13(4), 1985 : 467–97.

32. Sanjay Kumar, 'Impact of Economic Reforms on Indian Electorate', *Economic and Political Weekly* 39(16): 1621-30.

33. Stanley Kochanek, 'Liberalisation and Business Lobbying in India', *Journal of Commonwealth and Comparative Politics* 34(3), 1996: 155–73.

34. Stanley Kochanek, 'The Transformation of Interest Politics in India', *Pacific Affairs*, 68 (4), 1996 : 529–50.

35. Stanley Kochanek, *Business and Politics in India* (Berkeley : University of California Press, 1974).

36. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003) 2nd Edition.

37. Sukhamoy Chakravarthy, *Development Planning : The Indian Experience* (New Delhi : Oxford, 1987).

38. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence* (New Delhi: Oxford, 1998).

39. Terence J. Byres (ed.), *The State, Development Planning and Liberalisation in India* (New Delhi : Oxford, 1997).

40. Vanita Shastri, 'The Politics of Economic Liberalization in India', *Contemporary South Asia*, 6(1), 1997 : 27–56.

41. Vivek Chibber : *Locked in Place : State Building and Late Industrialisation in India,* (New Delhi : Tulika, 2004).

Course XII: Option (h) : PUBLIC ADMINISTRATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper will introduce students to different aspects of public administration with special reference to India.

UNIT-I

Development of Public Administration as a discipline – Basic concepts of administration – Nature and Scope – private and public administration – control over Administration, Executive, Legislative, Judiciary.

UNIT-II

Principles of Organization : Line & Staff Agencies
Type of Organization : Formal & Informal
Forms of Organization, Departmental, Public Corporation and Board.

UNIT-III

Personnel Administration, Bureaucracy and Civil Service, Recruitment, Promotion, Training and Civil Service Neutrality.

Financial Administration : Importance of Fiscal Management Budgetary Process in India. The Finance Ministry, Organization and Functions, Budgetary Control – Financial Committees of Parliament – Public Account Committee and Estimate Committee – Audit in India, Comptroller and Auditor General.

UNIT-IV

Administration Law, Delegated Legislation : Need for Delegation, Delegated Legislation in India; Parliamentary Control of Delegated Legislation.

Administration Tribunals : Emergence and significance of Administrative Tribunals, Judiciary and Administrative Tribunals.

Administrative Improvement and Reforms ; Lok Pal and Lok Ayukta.

Books Recommended :

1. M. P. Sharma & B.L. Sadana : *Public Administration in Theory and Practice*, Kitab Mahal, 2004.

2. C.P. Bhambari : *Administration in Changing Society,* National, 1978.

3. C.P. Bhambari : *Public Administration (Theory and Practice),* J.P.Nath & Co., 1972.

4. A. Avasthi and S. Maheshwari : *Public Administration,* Lakshmi Narain Agarwal, 1966.

5. Ramesh K. Arora : *Comparative Public Administration : An Ecological Perspective, Associate Publishing House, 1972.*

6. R.S. Milne : *Concepts and Models in Public Administration,* IIPA, 1966.

7. Chester Barnard : *The Functions of the Executive,* Cambridge, 1928.

8. J.S. Bhalla : *Public Enterprise in U.K., U.S.A., and India,* 1969.

9. Lee, Hahn Been and Samonte, Abelardo G. (eds) : *Administration Reforms in Asia, EROPA, 1970, See Particularly J.N. Khosla " Administration Reforms in Asia",* pp 270-286.

10. Pfiffner & Sherwood : *Administrative Organisation, Prentice-Hall, 1968.*

11. Amitai Etzioni : *Modern Organisation, Prentice Hall, 1972.*

12. Edwin B. Flippo : *Principles of Personnel Management (Fourth Edition), McGraw-Hill, Kogakusha Ltd., 1976.*

13. HPA : *Personnel Administration-Implementing the Reforms, IIPA, 1967.*

14. Administrative Reforms Commission Report on Personnel Administration (New Delhi : 2010)

15. C.P. Bhambri : *Public Administration (Theory and Practice (Meerut : Educational Published 21th edition 2010)*

16. Mohit Bhattacharya : *Public Administration (Calcutta : World Press, 2000)*

17. S. L. Kaushik and Pardeep Sahni (eds.) : *Public Administration in India : Emerging Trends (Allahabad : Kitab Mehal, 2007)*

18. William A. Niskanen : *Bureaucracy and Representative Government (Chicago: Atherton, 2007)*

FOURTH SEMESTER

Course XIII : INDIAN POLITICAL THOUGHT-II (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the major themes of Indian Political Thought particularly during the Indian National Movement through a study of the contribution of key thinkers during this period.

Unit-I

- M.K. Gandhi : Politics of Non-violence.
- Satyagraha and Swaraj.
- Sarvodaya.

Unit-II

- Challenging Brahminical Discourse : B.R. Ambedkar.
- Critique of Brahminical Hinduism.
- Class, Caste and Democracy.

Unit-III

- Politics and Philosophy of M. N. Roy : Theory of Radical Humanism, Roy-Lenin Controversy.
- The Ideology of Communist Movement in India.

Unit-IV

- Indian Socialist Tradition : Jawaharlal Nehru, R.M. Lohia and Jayprakash Narayan.

Essential Readings

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century : From Naoroji to Nehru* (London, OUP,1971).
2. Bali, D.R., *Modern Indian Thought* (New Delhi, Sterling, 1980).
3. Baxi Uppendra & Parekh, B. (eds.), *Crisis and Change in Contemporary India* (New Delhi, Sage, 1995). Doctor, A.H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).
4. Brown, D.M., *Nationalist Movement : Indian Political Thought from Ranade to Bhave* (Berkeley : University of California Press, 1965).
5. Pantham, Thomas and Deutsch, K.L. (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
6. Pantham, Thomas, *Political Theories and Social Reconstruction* (New Delhi, Sage, 1995).
7. Parekh, B. and Pantham, Thomas (eds.), *Political Discourse: Exploration in Indian and Western Political*
8. Parel, Anthony J. & Keith Ronald C. (eds.), *Contemporary Political Philosophy* (New Delhi, Sage, 1992). Vanna, V.P., *Modern Indian Political Thought* (Agra : Lakshami Narain, 1996), 11th Revised Edition. *Thought* (New Delhi, Sage, 1987).

Specific Readings

1. Arooran, A. N., *Tamil Renaissance and Dravdian Nationalism,* 1905-44 (Madurai : Koodal, 1980).
2. Chandra, Bipan (ed.), *The Indian Left : Critical Appraisal* (New Delhi, Vikas, 1983).
3. Chatterjee, Partha, *Nationalist Thought and The Colonial World* (Delhi : OUP, 1986).
4. Chatterji, Bhola, *Conflict in J. P.'s Politics* (New Delhi : Ankur, 1984).
5. Dalton, Dennis, "The Ideology of Sarvodaya" in *Pantham and Deutsch,* 1986.
6. Das, M. N., *Political Philosophy of Nehru* (London : George Allen and Unwin, 1961).
7. Dasgupta, Biplab, *The Naxalite Movement* (Bombay, Allied, 1974).
8. Doctor, Adi H., "Low Caste Protest Movements in 19th and 20th Century Maharashtra : A Study of Jyotirao Phule and B. R. Ambedkar," *Indian Journal of Social Science,* IV (2), April-June, 1991.
9. Gard, R.A., *Buddhist Political Thought : A Bibliography* (Washington : School of Advanced International Studies, 1952).
10. Ghatak, B.K. (ed.), *Dr. Ambedkar's Thought* (New Delhi : APH, 1997).
11. Ghose, Shankar, *Socialism and Communism in India* (Bombay, Allied, 1971).
12. Guha, Ranjit, "Dominance Without Hegemony and its Historiography" in Guha (ed.), *Subaltern Studies VI* (Delhi : OUP, 1989).
13. Gupta, S. D., *Comintern, India and the Colonial Question* (Calcutta : K. P. Bagichi, 1980).
14. Haiah, Kancha, "Towards the Dalitaization of the Nation in Partha Chatterjee" (ed.), *Wages of Freedom* (Delhi : OUP, 1988).
15. Irschik, F., *Politics and Social Conflict in South Asia : The Non-Brahmin Movement and Tamil Separatism,* 1916-29 (Berkeley : University of California Press, 1969).
16. Iyer, Raghavan, *The Moral and Political Thought of Mahatma Gandhi* (Delhi : OUP, 1973).
17. Jatava, D. R., *The Political Philosophy of B. R. Ambedkar* (Agra Phoenic, 1965).
18. Josh, Bhagwan, *Struggle for Hegemony in India, 1920-1947,* Vol., II : 1934-41 (New Delhi : Sage, 1992).

19. Juergensmeyer, Mark, "Shoring up the Saint : Some Suggestions for Improving Satyagraha" in John, Hick and Lamont, C. Hempel (eds.), *Gandhi's Significance for Today* (London : Macmillan, 1989).
20. Kantowsky, D., *Sarvodaya : The Other Development* (New Delhi : Vikas, 1980).
21. Kaviraj, Sudipta, "The Heteronomous Radicalism of M. N. Roy" in *Pantham and Deutsch,* 1986.
22. Keer, Dhanajayay, *Dr. Ambedkar : Life and Mission* (Bombay : Popular Parkashan, 1964).
23. Martyshin, Orest, *Jawaharlal Nehru and His Political Views* (Moscow : Progress, 1989).
24. Mehrotra, N. C., *Lohia : A Study (*Delhi *:* Atma Ram and Sons, 1978).
25. Mohanty, Manoranjan, "Ideology and Strategy of the Communist Movement in India" in *Pantham and Deutsch,* 1986.
26. Mukherjee, Partha N., "Sarvodaya After Gandhi" in Ramashray Roy (ed.), *Contemporary Crisis in Gandhi* (Delhi : Discovery, 1986).
27. Nagaraj, D. R., "A Tibetian Dog, The Silent Sadhus and Peasants of Champaran Notes on Violence, Non-Violence and Counter-Violence in Gandhi" in Ramashray Roy (ed.), *Gandhi and the Present Global Crisis* (Shimla : IIAS, 1996).
28. Nandy, Ashis, "From Outside the Imperium : Gandhi's Cultural Critique of the West" in *Roy,* 1986.
29. O'Hanlon, Rosalind, *Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in Nineteenth Century Western India* (London : Cambridge, University Press, 1985).
30. Omvedt Gail, *Dalits and the Democratic Revolution : Dr. Ambedkar and the Dalit Movement in Colonial India* (Delhi : Sage, 1994).
31. Omvedt, Gail, *Cultural Revolution in a Colonial Society : The Non-Brahman Movement in Western India 1873 to 1940* (Bombay : SSET, 1976).
32. Omvedt, Gail, *Dalit Visions* (New Delhi : Orient Longman, 1995).
33. Ostergaard, Geoffrey, "The Gandhian Movement in India since the Death of Gandhi" in *Hick and Hempel,* 1989.
34. Overstree, G. D. and Marshall Windmiller, *Communism in India* (Bombay, Perennial Press, 1969).
35. Pantham Thomas, "Understanding Nehru's Political Ideology" in Amal Ray (et. al.) (eds.), *The Nehru Legacy : An Appraiser* (Delhi : Oxford and IBH, 1991).
36. Pantham, Thomas, "Gandhi's Quest for Non-Violent Political Philosophy" in L. Rouner (ed.), *Celebrating Peace* (Notre Dame, University of Notre Dame Press, 1991).
37. Pantham, Thomas, "Gandhi's Theory of Non-Violence : His Reply to the Terrorist" in Neol O'Sullivan (ed.), *The Theory and Practice of Terrorism* (Sussex, 1986).
38. Pantham, Thomas, "Habermas's Practical Discourse and Gandhi's Satyagraha" in *Parekh and Pantham,* 1987.
39. Pantham, Thomas, "Postrelativism in Emancipatory Thought : The Significance of Gandhi's Swaraj and Satyagraha", in Sheth, D.L. and Nandy, Ashis (eds.), *The Multiverse of Democracy* (Delhi : OUP, 1997).
40. Pantham, Thomas, Parekh, Bhikhu, *Gandhi's Political Philosophy* (London, Macmillan, 1989).
41. Pillai, R. C., "The Political Thought of Jawaharlal Nehru" in *Pantham and Duetsch,* 1986.
42. Prasad, Bimal, *Jayprakash Narayan : Quest and Legacy* (New Delhi, Vikas, 1982).
43. Prasad, N. (ed.), *J. P. and Social Change* (Delhi, Radiant, 1982).
44. Prasad, R. A., *Socialist Thought in Modern India* (Delhi : Meenakshi, 1974).

45. Ram, Mohan, *Indian Communism : Split Within a Split,* (New Delhi : Vikas, 1969).
46. Rao, K. Raghavendra, "Communication Against Communication : The Gandhian Critique of Modern Civilization in Hind Swaraj" in *Parekh and Pantham, 1987.*
47. Ray, Sibnarayan (ed.), *M. N. Roy : Philosopher Revolutionary* (Delhi, Ajanta, 1995).
48. Roy, M. N., *New Humanism* (Calcutta : Renaissance, 1953).
49. Roy, Samaren, *M. N. Roy : A Political Biography* (Hyderabad : Orient Longman, 1997).
50. Seth, Sanjay, *Marxist Theory and Nationalist Politics : The Ease of Colonial India* (New Delhi : Sage, 1995).
51. Sinha, L. P., *The Left Wing in India* (Muzaffarpur, New Publishers, 1965).
52. Srinivasan, R., "The Ideological Genesis of the Dravidian Movement", *Indo-British Review,* January-June, 1987.
53. Srivastava, R.K., "Sarvodaya; Vision and Reality" in Roy, 1986.
54. *The Philosophy and Practice of Radical Humanism* (New Delhi : Radical Humanist Association, 1970).
55. Yopadgtata, P.C., "A Celebration of the Gandhian Alternative", *Economic and Political Weekly,* 2nd December, 1989.
56. Zelliot, Eleanor, "The Social and Political Thought of B. R. Ambedkar" in *Pantham and Deutsch,* 1986.

Course XIV : FOREIGN POLICY OF INDIA (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course tries to underline the changes, which the shifting nature of world order has induced into the more enduring elements and themes of Indian foreign policy. At the same time, India's growing assertion on the world stage as an important international actor is assessed in the light of its role in various global regimes.

Unit –I: Making of Indian Foreign Policy

1. Legacies and Actors
2. Principal Phases of Indian Foreign Policy
3. Transition from Nehruvianism to Neoliberalism

Unit-II: India's Economic Foreign Policy

4. Global Setting: IMF, WB, and WTO
5. Regional Setting: SAARC and Beyond

Unit–III: India's Strategic Foreign Poicy

6. India's Strategic concerns at global and regional level
7. India's Nuclear Policy

Unit-IV: India's Environmental Policy:

8. Climate Change
9. Energy Security

Essential Readings

1. C Raja Mohan , *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).
2. A. Appadorai and M. S. Rajan, *India's Foreign Policy and Relations* (South Asian Publishers, 1988).
3. Achin Vanaik, *India in a Changing World* (Orient Longman, 1995).
4. C. Raja Mohan, *Modi's World*: *Expanding India's Sphere of Influence* (Harper Collins, 2015).
5. David Malone, C. Rajamohan, Srinath Raghavan (Eds.), *The Oxford Handbook of Indian Foreign Policy* (Oxford Handbooks 2015).
6. Imtiaz Ahmed (ed.), *Indian Foreign Polic* (Delhi , Vikas Publishing House, 1993).
7. J. N. Dixit, *Makers of Indian Foreign Policy: From Raja Ram Mohan Roy to Yashwant Sinha*, 2003. (New Delhi: Harper Collins, 2003)
8. J.N. Dixit, *Indian Foreign Policy, 1947-2003* (New Delhi, D. K. Publications, 2003).
9. Kanti Bajpai and Harish V. Pant (eds.), *India's Foreign Policy*: *A Reader* (Oxford University Press, 2013)
10. Kanti Bajpai, *India and the world*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.
11. Kanti P. Bajpai and Amitabh Mattoo eds., *Securing India: Strategic Thought and Practice*, (New Delhi, Manohar Publishers, 1996).
12. Muchkund Dubey, *India's Foreign Policy: Coping with the Changing World* (Pearson, 2012)
13. R. S. Yadav, Bhartiya Videsh Niti (Hindi Edition).
14. Sumit Ganguly, *Indian Foreign Policy* (Oxford India Short Introductions Series, 2015).
15. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
16. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
17. V. P. Dutt, *India's Foreign Policy* (New Delhi, Vikas, 1984).

Suggested Readings

1. A. Kapur and A. J. Wilson, *The Foreign Policy of India and her Neighbours*, (Basingstroke: Macmillan, 1996).
2. A.P. Rana, *The Imperatives of Non-Alignment*: *A Conceptual Study of India's Foreign Policy Strategy in the Nehru Period*, (Macmillan, 1976).

3. Bimal Prasad (ed.), *Indian Foreign Policy* (New Delhi, Vikas).

4. C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).

5. Harish Kapur, *India's Foreign Policy, 1947-1992*: *Shadows and Substance* (New Delhi, Sage, 1994).

6. Iqbal Singh, *Between Two Fires: Towards an Understanding of Nehru's Foreign policy,* (Hyderabad: Orient Longman, 1998).

7. Itty Abraham, *The Making of the Indian Atomic Bomb, Science, Secrecy and the Postcolonial State*, (Zed Books, 1998).

8. J. N. Dixit, *Indian Foreign Policy and its Neighbours* (New Delhi, Gyan Books, 2001).

9. J.N. Dixit, *Across Borders: Fifty Years of India's Foreign Policy* (New Delhi, Picus Books, 1998).

10. J.N. Dixit, *My South Block Years: Memoirs of a Foreign Secretary*, (New Delhi, UBSPD), 1996.

11. K. Subrahmanyam, "Nehru and the India-China Conflict of 1962", in *Indian Foreign Policy: The Nehru Years*, ed. B.R. Nanda, (New Delhi, Vikas, 1976)`.

12. Lalit Mansingh et al. (eds), *Indian Foreign policy: Agenda for the 21st Century* (New Delhi: Konark Publishers, 1997).

13. M. S. Rajan, *India and International Affairs: A Collection of Essays* (New Delhi, Lancers Books, 1999).

14. M.J. Akbar, *Nehru: The Making of India*, (London, Penguin Books, 1988).

15. N. Jayapalan, *Foreign Policy of India* (Delhi, Atlantic, 2001).

16. Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

17. Robert W. Bradnock, *India's Foreign Policy Since 1971.* (London, Pinter Publishers, 1990.

18. Ronald, Inden, *Imaging India* (Cambridge, MA, Blackwell, 1992).

19. Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York, Simon and Schuster, 1996).

20. Stepehn D. Krasner, *Structural Conflicts: The Third World Against Global Liberation* (Berkeley, University of California Press, 1985).

21. Sumit Ganguly, *Indian Defence Policy*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.

22. Surjit Mansingh, *India's Search for Power, Indira Gandhi's Foreign Policy, 1966-1982* (Delhi, Sage, 1984.)

23. V. P. Dutt, *India's Foreign in a Changing World* (New Delhi, Vikas, 1999).

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) : PARTIES AND ELECTORAL POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : It helps the students to understand the evolution and transformation of political parties in India. It also analyses different issues that impinge on party politics and challenges posed by parties and party system to Indian democracy.

Unit-I

Political Parties and Party Politics in Contemporary India :

- A political, sociological and economic analysis.
- Federalism, regionalism and political parties.
- Party system in transition.

Unit-II

National Political Parties :

- Ideology and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-III

Regional and State Parties :

- Origin and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-IV

Electoral Politics in India :

- Role of Social cleavages and elections.
- Electoral reforms and the Electoral process.
- New Social Movements, NGOs and their impact on political parties.

Selected Readings

1. Chatterjee, Partha (Ed.), *State and Politics in India*, OUP, 1999.
2. Hasan, Zoya, (Ed.), *Parties and Party Politics in India*, New Delhi, Oxford, 2001.
3. Mehra, Ajay Kumar, D.D. Khanna and Gert W. Kueck (Ed.) , *Political Parties and Party Systems*, Sage Publications, New Delhi, 2003.
4. Mitra, Subrata K. and V.B. Singh, *Democracy and Social Change in India : A Cross Sectional Analysis of the National Electorate*, Sage, 1999.
5. Kohli, Atul, *Centralization and Powerlessness : India's Democracy in a Comprehensive Perspective* in Midgal, Joe, Atul Kohli and Vivenne Shue (Eds.) , *State Power and Social Forces*, Cambridge University Press, 1994.
6. Roy, Ramashray and Paul Wallace (Eds.), *India's 1999, Elections and 20th Century Politics*, Sage, New Delhi, 2003.
7. Vora, Rajendra and Suhas Palshikar (Eds.), *Indian Democracy*, Sage, New Delhi, 2003.

Option (b) : STATE POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: There is much recognition and appreciation of the regional states to be viewed as important political and economic units for developing a theoretical framework for analysing politics and economy undergoing a transition in recent India. The regional states are being considered as critical to the understanding of the issues pertaining to emergent national politics and economy. This course aims to explore the multiple dimensions of state as well as sub-state level politics in India in a comparative perspective.

Unit -I

A Theory of State Politics in India

a. Rise of State Politics as an Autonomous Discipline: Survey of Literature
b. Beyond Nation-State: Framing Regional Politics in India

Unit-II

Language, Region and Federal Polity

a. Reorganization of States in Independent India: 1953-1999
b. Recent Demands for New States: Shifting Bases
c. Politics of Autonomy/Self-determination: Punjab, Jammu and Kashmir
d. Regionalization of Politics: State Level Parties, Coalitional Politics at the State Level

Unit -III

Dalit and Backward Classes Movements

a. Tamil Nadu : Dravidian Movement and Lower Castes Assertion
b. Uttar Pradesh: Lower and Middle Castes Political Assertion
c. Punjab: Ad-Dharm Movement, Dalit Cultural Assertion

Unit-IV

Regional Roots of Development Politics in India: State Level Experiences

a. State, Political Regimes and Social Welfare Policy: Stark Variations across the States
b. Agrarian Politics in the States: Green Revolution, Farmers' Movements, Farmers' Suicides
c. Politics of Economic Reforms and Growing Spatial Disparity: Regional States and Sub-Regions

Essential Readings

1. Frankel, Francine and M.S.A. Rao, eds, *Dominance and State Power in Modern India,*
2. Jenkins, Rob, *Regional Reflections: Comparing Politics across India's States, Oxford* University Press, New Delhi, 2004.
3. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
4. Narain, Iqbal, ed., *State Politics in India*, Meenakshi Prakashan, Meerut, 1976.
5. Pai, Sudha , *Handbook on Politics in the Indian States Regions, Political Parties and Economic Reforms (*Ed.). Oxford University Press, New Delhi, 2013.
6. Weiner, Myron, ed., *State Politics in India*, Princeton University Press, New Jersey, 1968.
7. Wood John R, ed., *State Politics in Contemporary India: Crisis or Continuity*, Westview Press, Boulder, 1984.

Suggested Readings:

Unit I

1. Crane, Robert I. (ed.), *Regions and Regionalism in South Asian Studies: An Exploratory Study*, Duke University Monograph series, 1967.
2. Fadia, B., *State Politics in India*, Radiant Publishers, New Delhi, 1984.
3. Gould, W. *Hindu Nationalism and the Language of Politics in Late Colonial India*, Cambridge University Press, Cambridge, New York, 2004.
4. Heller, Patrick, 'Degrees of Democracy: Some Comparative Lessons from India', *World Politics*, 52, July, 2000. 484-519.
5. Iyer, L., 'Direct versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, 92(4), 2010, 693–713.
6. Jacob, Suraj, 'Towards a Comparative Sub-national Perspective on India', *Studies in Indian Politics*, December 2015 vol. 3 no. 2 229-246
7. Kailash, K. K., 'Varieties of Comparative State Politics Research in India', Seminar, 620, 2011, 66-71.
8. Kohli, Atul and Prerna Singh (eds.), *Handbook of Indian Politics*, Routledge, London, 2013.
9. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
10. Markovits, C., *A History of Modern India*, 1480–1950, Anthem, London, 2002.

11. Pai, Sudha, *State Politics New Dimensions: Party System, Liberalization and Politics of Identity.* Shipra Publications, New Delhi, 1999.
12. Palshikar, Suhas and Rajeswari Deshpande, 'Redefining State Politics in India', 2009, http://www.lokniti.org/newsletter/theme_note.pdf
13. Shastri, Sandeep and K. C. Suri and Yogendra Yadav, eds., *Electoral Politics in Indian States*, Oxford University Press, New Delhi, 2009.
14. Sinha, Aseema, 'Scaling Up: Beyond the Sub-national Comparative Method for India', *Studies in Indian Politics*, 3(1), June, 2015, 128-133.
15. Synder, Richard, 'Scaling Down: The Subnational Comparative Method', *Studies in Comparative International Development*, 36(1), March, 2001, 93-110
16. Tillin, Louise, 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2), December, 2013, 235-240.

Unit II

1. Ahmed, B., 'Elections and Party Politics in India: A Symposium'. *Asian Survey* 10(11), November, 979–92, 1970.
2. Bose, Sumantra, *States, Nations, Sovereignty: Sri Lanka, India and the Tamil Eelam Movement*, Sage, New Delhi, 1999.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and Politics of Identity in India*, Pearson-Longman, New Delhi, 2008.
4. Brass, Paul R, *Language Religion and Politics in North India,* Cambridge University Press, 1974.
5. Chadha Behera, Navneeta, *State, Identity and Violence; Jammu, Kashmir and Ladakh*, Manohar, New Delhi, 2000.
6. Chandra, K. and S. Wilkinson, 'Measuring the Effect of 'Ethnicity,' Comparative Political Studies 41(4–5), 2008, 515–63.
7. Chandra, K. *Why Ethnic Parties Succeed: A Comparative Study of the Bahujan Samaj Party Across Indian States*, Cambridge University Press, New York, 2000.
8. Chhibber, Pradeep K. and I. Nooruddin, 'Do Party Systems Count? The Number of Parties and Government Performance in the Indian States', *Comparative Political Studies,* 37(2), 2004, 152–87
9. Dasgupta, J., *Language Conflict and National Development: Group Politics and National Language Policy in India,* University of California Press, Berkeley, 1970.
10. Jaffrelot, Christophe and Sanjay Kumar, eds, *Rise of the Plebeians: The Changing Face of Indian Legislative Assemblies*, New Delhi, Routledge, 2009.
11. Kailash, K.K., 'Federal Calculations in State Level Coalition Governments', *India Review*, 10(3), July–September, 2011, 246–282.
12. Kudasia, Gyanesh, *Region, Nation, "Heartland": Uttar Pradesh in India's Body Politic*, New Delhi, Sage, 2006.
13. Mawdsley, Emma, 'Redrawing the Body Politic: Federalism, Regionalism and the Creation of New States in India', *Journal of Commonwealth and Comparative Politics*, 40(3): pp. 34-54.
14. Robinson, John, 'Regionalizing India: Uttarakhand and the Politics of Creating States', *South Asia: Journal of South Asian Studies*, 24(2):189-212, 2001.
15. Samaddar, Ranabir, ed., *The Politics of Autonomy: Indian Experiences*, Sage, New Delhi, 2005.
16. Sarangi, Asha, ed., *Language and Politics in India,* Oxford University Press, New Delhi, 2009.
17. Stepan, Alfred, J. Linz, and Yogendra Yadav, *Crafting State-Nations: India and Other Multinational Democracies,* Johns Hopkins University Press, Baltimore, 2011.
18. Wallace, Paul, ed., Region *and Nation in India,* Oxford University Press, Delhi, 1985.

19. Wilkinson, Steven, *Electoral Competition and Ethnic Violence in India.* Cambridge University Press, Cambridge and New York, 2004

Unit III

1. Deliege, R., *The World of the "Untouchables": Paraiyars of Tamil Nadu*, Oxford University Press, New Delhi, 1997.
2. Geeta, V., Rajdurai, 'Dalits and Non-Brahmin Consciousness in Colonial Tamil Nadu' *Economic and Political Weekly*, 28(39), September 25, 1993.
3. Hasan, Zoya, *Dominance and Mobilization: Rural Politics in Western Uttar Pradesh 1930-1980,* New Delhi, 1989.
4. Irschick, E. F., *Politics and Social Conflict in South India, the Non-Brahman Movement and Tamil Separatism*, 1916–1929. University of California Press, Berkeley and Los Angeles, 1969.
5. Jaffrelot, Christophe, *India's Silent Revolution the Rise of the Low Castes in North Indian Politics, Permanent* Black, New Delhi, 2003.
6. Jayal, Niraja Gopal, '*Federal Anxieties, Democratic Desires: The Politics of Governance Reform in Two Indian States'*, LSE, London, 2006. www.crisisstates.com.
7. Kumar, Ashutosh, 'Deras as Sites of Electoral Mobilization in Indian Punjab: Explaining Why Political Parties Do Flock to the Deras', *Asian Ethnicity*, Routledge, London, 17(3): 335-350, (June), 2014.
8. Pai, Sudha , *Dalit Assertion*, Short Introduction, Oxford University Press, 2013.
9. Pai, Sudha, *Dalit Assertion and the Unfinished Democratic Revolution: The BSP in Uttar Pradesh,* Sage Publications, New Delhi, 2002.
10. Pandey, Gyan, *The Construction of Communalism in Colonial North India*, Oxford University Press, Delhi, 1990.
11. Pandian, M. S. S., *Brahmin & Non-Brahmin: Genealogies of the Tamil Political Present,* New Delhi: Permanent Black, 2003.
12. Ram, Ronki (2016) 'Religion, identity and empowerment: the making of Ravidassia Dharm (Dalit Religion) in contemporary Punjab', in Knut A. Jacobsen (ed.) *Routledge Handbook of Contemporary India.* 371-83. London: Routledge.
13. Ram, Ronki, 'Social Exclusion, Resistance and Deras: Exploring the Myth of Casteless Sikh Society in Punjab', *Economic and Political Weekly*, 42(40), October 6-12, 2007, 4066-74.
14. Ram, Ronki, 'Untouchability in India with a Difference: Ad Dharm, Dalit Assertion and Caste Conflicts in Punjab', *Asian Survey*, XLIV (6), November-December 2004, 895-912
15. Shah, Ghanshyam, *Caste and Democratic Politics in India*, Anthem Press, London, 2004.
16. Subramanian, Narendra, *Ethnicity and Populist Mobilization: Political Parties, Citizens and Democracy in South India*, Oxford University Press, Delhi, 1999.
17. Varshney, Ashutosh, 'Is India Becoming More Democratic?' *The Journal of Asian Studies*, 59(1), 2000.
18. Yadav, Yogendra and Suhas Palshikar, 'From Hegemony to Convergence: Party System and Electoral Politics in the Indian States, 1952-2002', in Peter Ronald deSouza and E. Sridharan (eds) *India's Political Parties*, Sage, New Delhi, 2006.
19. Yadav, Yogendra and Suhas Palshikar, 'Ten Theses on State Politics in India', *Seminar*, 591, November, 2008

20. Yadav, Yogendra, 'India's Third Electoral System: 1989-1999', *Economic and Political Weekly*, 34(34-35), 1999, 2393-99
21. Yadav, Yogendra, 'Reconfiguration in Indian Politics: State Assembly Elections 1993-1995, *Economic and Political Weekly*, 31(2), January 13, 1996.

Unit IV

1. Ahluwalia, Montek Singh 'Economic Performance of States in Post-Reforms Period', *Economic and Political Weekly,* 6 May, 2000.
2. Bhalla, G.S. ed., *Economic Liberalization and Indian Agriculture,* Institute for Studies in Industrial Development, New Delhi, 1994.
3. Corbridge, Stuart, Glynn Williams, Rene Veron and Manoj Srivastava, *Seeing the State*, Cambridge University Press, New Delhi, 2008.
4. Dasgupta, Biplab, *The New Agrarian Technology and India,* Geneva UN, 1977.
5. Datt, G. and M. Ravallion, 'Is India's Economic Growth Leaving the Poor Behind?' *Journal of Economic Perspectives*, 16(3), 2002, 89–108.
6. Dreze, Jean & Amartya Sen, *India: Development and Participation*, Oxford University Press, Delhi, 2002.
7. Dreze, Jean & Amartya Sen, Indian *Development: Selected Regional Perspectives*, Oxford University Press, Delhi, 1998.
8. Frankel, Francine & M.S.A Rao (eds.) *Dominance and State Power in India,* Oxford University Press, New Delhi, 2 Vols. 1989, 1990.
9. Harriss, John, 'Comparing Political Regimes across Indian States: A Preliminary Essay, *Economic and Political Weekly*, November 27, 1999, 3367-3377.
10. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
11. Joshi, Vijay and I.E. Little, *India's Economic Reforms: 1991-2001*, Oxford University Press, New Delhi, 1996.
12. Kohli, Atul, 'Politics of Economic Growth in India, 1985-2005; Part 1: The 1980's and Part 11: The 1990's and Beyond', *Economic and Political Weekly*, April 1, 2007.
13. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Oxford University Press, Delhi, 1991.
14. Kohli, Atul, *The State and Poverty in India,* Cambridge University Press, Cambridge, 1987.
15. Kohli, Atul, *The Success of India's Democracy,* Cambridge; Cambridge University Press, New York, 2001.
16. Mitra, Subrata K., *The Puzzle of India's Governance: Culture, Context and Comparative Theory*, Routledge, London, 2006.
17. Mooij, Jos, ed., *The Politics of Economic Reforms in India*, Sage, New Delhi, 2005.
18. Paul, Samuel, and KS Sridhar, The Paradox of India's North–South Divide: **Lessons** from the States and Regions, New Delhi, Sage, 2016.
19. Prakash, Amit, *Jharkhand: Politics of Development and Identity*, Orient Longman, Hyderabad, 2002.
20. Rao, Govinda and Nirvikar Singh , *Political Economy of Federalism in India*, Oxford University Press, New Delhi, 2006.

21. Sachs, Jeffrey, Ashutosh Varshney, and Nirupam Bajpai, eds., *India in the Era of Economic Reforms***,** Oxford University Press, New Delhi, 1999.
22. Singh, Jagpal, *Capitalism and Dependence; Agrarian Politics in Western Uttar Pradesh, 1951-1991,* Manohar, New Delhi, 1992.
23. Singh, P. (2015). *How Solidarity Works for Welfare: Subnationalism and Social Development in India,* New York: Cambridge University Press
24. Sinha, Aseema, 'Ideas, Interests, and Institutions in Policy Change: A Comparison of West Bengal and Gujarat' in Jenkins, Rob , ed., *Regional Reflections: Comparing Politics across India's States*, New Delhi, Oxford University Press, Delhi, 2004.
25. Sinha, Aseema, *The Regional Roots of Developmental Politics in India: A Divided Leviathan*, Indiana University Press, Bloomington and Indianapolis, 2005.
26. Tillin L. & Deshpande, R. & Kailash, KK (Eds) (2016). *Politics of Welfare*: *Comparisons across Indian States*, Oxford, Oxford University Press.
27. Varshney, Ashutosh, Democracy, Development, and the Countryside: Urban-Rural Struggles in India. Cambridge University Press, Cambridge, 1998.

Journals/ Newsmagazine/Newspapers to be consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web. Also check on JSTOR)
2. ***Front Line***
3. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
4. ***Studies in Indian Politics***
5. ***The Hindu and Indian Express***

Option (c): DECENTRALIZED GOVERNANCE AND LOCAL LEVEL INSTITUTIONS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice i.e. attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with the concept of decentralized and democratic governance in India, both theoretically and at the level of institutional functioning at the local level. The emphasis of the course is on the process of democratic governance in both at the grassroots.

Unit-I

- Democratic Decentralization in India : Issues and Perspectives.
- Decentralization & Contemporary concerns—globalization and changing role of the state.

Unit-II

- Planning Urban Development – approaches, policies & programs.
- Urban local governance – Institutional aspects and functioning of urban local bodies with special reference to 74th Amendment.

Unit-III

- Planning Rural development—approaches, policies and programmes.
- Democracy at the grassroots—Growth, Development and functioning of PRI from 1952 to present.

Unit-IV

- Relationship between rural and urban local institutions.
- Role of NGOs in local governance & development.
- Challenges of Governance at the local level-autonomy, finance, personnel, participation.

Readings

1. Abdul, Aziz, *Decentralised Planning,* New Delhi, Sage, 1993.
2. Bose, Ashish, *National Commission on Urbanization,* Ministry of Urban Development, New Delhi, 1988.
3. Behra, M.C., *Globalising Rural Development*, Sage, Delhi, 2006.
4. Handy, Femida, Meenaz Kassuu, Suzanne Fervey (eds.), *Grass-Roots NGOs by Women for Women*, Sage, New Delhi, 2006.
5. Kumar, Girish, *Local Democracy in India*, Sage, Delhi, 2006.
6. Issaac Thomas & Richard W. Franke, *Local Government and Development : People's Campaign for Decentralized Planning in Kerala,* Delhi, Leftword, 2000.
7. Jain, L.C., Krishnamurthy, B.V. and Tripathi, P.M., *Grass without Roots : Rural Development Under Government Auspices,* New Delhi, Sage, 1987.
8. Maddick Henry, *Panchayati Raj : A Study of Rural Local Government in India,* London, Longman, 1970.
9. Mathur, O.M. (ed.), *India : The Challenge of Urban Governance,* New Delhi, National Institute of Public Finance & Policy, 1999.
10. Mishra, B.B., *District Administration and Rural Development in India,* Delhi, Oxford University Press, 1983.
11. Mukherjee Amitava, *Decentralization : Panchayats in the Nineties,* New Delhi, Vikas, 1994.

12. Prasad Kamta, *Planning and Poverty Alleviation,* New Delhi, Agricole, 1985.
13. Ravillion, M. and G. Datt, *Growth and Poverty in Rural India,* Washington D.C., World Bank, 1995.
14. Sen, Amartya, *Development as Freedom,* Delhi, Oxford University Press, 2000.
15. Chaturvedi, T.N. and Jain, R.B., *Panchayati Raj* (New Delhi, IIPA, 1981).
16. Bhattacharya, Mohit, *Municipal Government—Problems and Prospects* (Delhi Research Publications).
17. Jha, S.N. and Mathur, P.C., *Decentralization and Local Politics,* Sage, 1999.

Option (d) : POLITICAL SOCIOLOGY WITH SPECIAL REFERENCE TO INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: This paper aims at highlighting some of the major areas in the domain of political sociology with reference to India. The paper intends to familiarize the students with the social, cultural and economic structures of power in the Indian society and their mechanism of functioning in a critical perspective.

Unit I

Political Sociology : Thematic Concerns :

1. Nature, meaning and scope.
2. Historical Development.

Unit II

Social Stratification :

1. Concepts and Theoretical Contexts (Marx, Dahrendorf, Weber, and L. Dumont).
2. Caste, Class and Power.

Unit III

Conflict Formation :

1. Theoretical dimensions (Simmel, Coser, Marx and Dahrendorf).
2. Caste and Communal conflicts.

Unit IV

Political Sociology of Agrarian Relations :

1. Zamindari Abolition and Land Reforms.
2. Pressure Groups : Farmers and Labourers.

Books Recommended

1. Effrat, Andrew, *Perspective on Political Sociology*, New York, The Bobbs-Merrill, 1972.
2. Dowse, Robert E. & Hughes, John A., *Political Sociology*, London, John Wiley, 1975.
3. Horowitz, *Foundations of Political Sociology*, New York, Harper & Row, 1972.
4. Das, Hari Hara and Choudhary, B.C., *Introduction to Sociology*, New Delhi, Vikas, 1997.
5. Tumin, M.M., *Social Stratification*, New Jersey, Prentice Hall, 1978.
6. Gupta, Dipankar (ed.), *Social Stratification*, Delhi, OUP, 1991.
7. Scott, John, *Stratification and Power*, Cambridge, Polity, 1996.
8. Sharma, K.L., *Social Stratification in India*, New Delhi, Sage, 1997.
9. Singh, Yogendra, *Social Change in India*, New Delhi, Har Anand, 1993.
10. Layder, Derek, *Understanding Social Theory*, London, Sage, 1996.
11. Jaiswal, Suvira, *Caste : Origin, Function and Dimensions of Change*, Delhi, Manohar, 1998.
12. Srinivas, M.N., *Social Change in Modern India*, New Delhi, 1969.
13. Runciman, W.S., *Social Science and Political Theory*, Cambridge, 1971.
14. Lukes, *Steven, Power : A Radical View*, Hong Kong, Macmillan, 1974.
15. Barnes, Barry, *The Nature of Power*, Cambridge, Polity, 1988.

Option (e) : REPRESENTING 'INDIA' : GEOPOLITICAL IMAGINATIONS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course investigates how India has been represented by groups and individuals, political elites and the dominant institutions and intellectuals of statecraft. It intends to probe how a variety of geopolitical imaginations have come to compete with one another, as different actors seek to implant maps of meaning, relevance and order on to highly complex and dynamic political universe they inhabit, observe, try to understand and sometimes even desire to dominate. How various geopolitical idioms, myths and representational practices have been used to inscribe something called India and endow that entity with a content, history, meaning and trajectory. The intention of this course is exploratory and not normative.

Unit-I

1. Pre-colonial India : An Overview.
2. India in British Colonial Imagination.

Unit-II

3. Partition of British India and its Legacies.
4. Integration of Princely States.

Unit-III

5. The India Diaspora : Dynamics and Dilemmas of Migration.
6. Gender in Indian Geopolitics.

Unit-IV

7. Nationalist Constructions of India's Identity (with special reference to Nehru and Savarkar).
8. Rise of Hindutva and the Search for Alternative Geopolitical Imaginations.

Suggested Readings

1. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* I (4) : 53-71.
2. Bhargava, R. (ed.) (1998), *'Secularism and Its Critics' :* Delhi, Oxford University Press.
3. Bose, Sugata (1997), "Nation as Mother : Representations and Contestations of 'India' in Bengali Literature and Culture", in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press, 50-75.
4. Bose, Sumantra (1997), "Hindu Nationalism" and the Crisis of the Indian State : A Theoretical Perspective in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press.
5. Brecher, M. (1968), *India and World Politics : Krishna Menon's View of the World,* London : Oxford University Press.
6. Butalia, Urvashi (1998), *The Other Side of Silence,* New Delhi : Viking.
7. Cohn, B.S. (1997), *Colonialism and Its Forms of Knowledge : The British in India,* Delhi : Oxford University Press.
8. Dijkink, G. (1996), *National Identity and Geopolitical Visions : Maps of Pride and Pain,* London : Routledge.

9. Fisher, M. H. (1993), *The Politics of the British Annexation of India 1757-1857,* Delhi : Oxford University Press.
10. Graham, B. (1993), *Hindu Nationalism and Indian Politics : The Origins and Development of the Bharatiya Jana Sangh,* Cambridge, Cambridge University Press.
11. Hasan, M. (1996), "The Myth of Unity : Colonial and National Narratives" in D. Ludden (ed.) *Making India Hindu, Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
12. Jalal, A. (1997), "Exploding Communalism : The Politics of Muslim Identity in South Asia", in S. Bose and A. Jalal (eds.), Nationalism, Democracy and Development : State and Politics in India, Calcutta : Oxford University Press : 76-103.
13. Kakar, Sudhir (1995), *The Colours of Violence,* New Delhi : Penguin Books.
14. Kumar, R. (1997), "State Formation in India : Retrospect and Prospect", in M. Doornbos and S. Kaviraj (eds.), *Dynamics of State Formation : India and Europe Compared,* New Delhi : Sage : 359-409.
15. Katzenstein, M. F., Mehta, U. S. and Thakkar, U. (1998), "The Rebirth of Shiv Sena in Maharashtra : the Symbiosis of Discursive and Institutional Power" in A. Basu, and A. Kohli (eds.), *Community Conflicts and the State in India,* Delhi : Oxford University Press : 215-238.
16. Kaviraj, Sudhir (1993), "The Imaginary Institution of India," in P. Chatterjee and G. Pandey (eds.), *Subaltern Studies,* Delhi : OUP, Vol. VII : 1-39.
17. Kaviraj, S. (1994), "Crisis of the Nation-State in India," *Political Studies,* XLII : 115-129.
18. Kaviraj, S. (1997), "On The Structure of Nationalist Discourse", in T. V. Sathyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi : Oxford University Press.
19. Khilnani, S. (1998), *The Idea of India,* London : Penguin Books.
20. Kothari, R. (1997), "Fragments of a Discourse : Towards Conceptualization", in T.V. Sathyamurthi (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
21. Kothari, R. (1998), *Communalism in Indian Politics,* Ahmedabad, Rainbow Publishers Limited.
22. Krishna, B. (1995), *Sardar Vallabbhai Patel : India's Iron Man,* New Delhi : Indus.
23. Krishna, S. (1994), "Cartrographic Anxiety: Mapping the Body Politics in India," *Alternatives 19 : 507-521.*
24. Larson, G. J. (1997), *India's Agony Over Religion,* Delhi, Oxford University Press.
25. Ludden, D. (1996) (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
26. Mahanta, A. (1977), "The Indian State and Patriarchy" in T. V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
27. Malik, Y.K. and Singh, Y.B. (1994), *Hindu Nationalists in India : The Rise of the Bharatiya Janata Party,* New Delhi, Vistaar Publications.
28. Mayo, Katherine (1928), *Mother India,* New York : Harcourt Brace and Company.
29. Metcalf, T. R. (1995), *Ideologies of the Raj,* Cambridge : Cambridge University Press (The New Cambridge History of India).
30. Nandy, A. H., Trivedi, S. Mayaram and Yagnik, A. (eds.) (1995), *Creating a Nationality : The Ramjanambhumi Movement and the Fear of the Self,* Delhi : Oxford University Press.
31. Nehru, J. (1936), *An Autobiography,* London, John Lane.

32. Nehru, J. (1981), *The Discovery of India,* New Delhi : Jawaharlal Nehru Memorial Fund, Oxford University Press (First Published 1946 by the Signet Press, Calcutta).
33. Nehru, J. (1956), *Independence and After : A Collection of Speeches* 1946-1949, Delhi : Government of India.
34. Pandey, G. (1990), *The Construction of Communalism in Colonial North India,* Delhi, Oxford University Press.
35. Pandey, G. (1994) "The Prose of Otherness," *Subaltern Studies* (Delhi, OUP, Vol. VIII).
36. Parker, G. (1998), "Geopolitical Perspectives on India and Indian Foreign Policy" in The Ford Foundation Lectures in International Relations Studies, Departmental of Political Science, The Maharaja Sayajirao University of Baroda.
37. Pattanaik, D. D. (1998), *Hindu Nationalism in India : Conceptual Foundation,* New Delhi : Deep and Deep Publications.
38. Radhakrishnan, R. (1992), "Nationalism, Gender, and the Narrative of Identity" in Andrew Parker et al (eds.), *Nationalism and Sexuality,* New York, Sage.
39. Sarkar, T. (1996), "Imagining Hindurastra : the Hindu and the Muslim in Bankim Chandra's Writings" in D. Ludden (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
40. Sarkar, T. (1992), "The Hindu Wife and the Hindu Nation : Domesticity and Nationalism in Nineteenth Century Bengal," *Studies in History* (Sage, Delhi) 8 (2).
41. Savarkar, V. D. (1969), Hindutva, Bombay, Savarkar Prakashan 5th Edn.
42. Sen, A. (1998a), "On Interpreting India's Past" in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press (Oxford India Paperbacks).
43. Sen, A. (1998b), "Secularism and its Discontents" in Bhargava, R. (ed.), *Secularism and its Critics,* Delhi : Oxford University Press.
44. Varshney, A. (1993), "Contesting Meanings : India's National Identity, Hindu Nationalism, and the Politics of Anxiety", *Daedalus, 122, 3 : 227-261.*
45. Van Hear, N. (1998), *New Diasporas : The Mass Exodus, Dispersal and Regrouping of Migrant Communities,* London, UCL Press.
46. Weiner, M. (1997), "Minority Identity", in S. Kaviraj (ed.), *Politics in India,* Delhi, Oxford University Press : pp 241-254.
47. Ali, D., 1999, *Invoking the Past : The Uses of History in South Asia,* New Delhi : Oxford University Press.
48. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* 1(4) : 53-71.
49. Bianchini, B., Chaturvedi, S., Ivekovic, R. and Samaddar, R., 2005, *Partitions : Reshaping Minds and States,* London : Frank Cass.
50. Chaturvedi, S., 2000, "Representing Post-Colonial India: Inclusive/Exclusive Imaginations" in David Atkinson and Klaus Dodds (eds), *Geopolitical Traditions : Critical Histories of a Century of Geopolitical Thought,* London : Routledge.
51. Chaturvedi, S., 2005, "Diaspora in India's Geopolitical Visions : Linkages, Categories and Contestations", *Asian Affairs : An American Review,* 32(3).

52. Deshpande, S., 2003, *Contemporary India : A Sociological View,* New Delhi : Viking.
53. Jayaram, N., 2004 (ed.), *The Indian Diaspora : Dynamics of Migration,* Delhi : Sage.
54. Krishna, S., 1999, Post-*Colonial Anxieties : India, Sri Lanka and the Question of Nationhood,* Minneapolis : University of Minnesota Press.
55. Ludden, D., 2002, *India and South Asia : A Short History,* Oxford : One World.
56. Sen, A., 2006, *Identity and Violence : The Illusion of Destiny,* London : Allen Lane/Penguin.
57. Sen, A., 2005, *Argumentative Indian Writings on Indian History, Culture and Identity,* London : Allen Lane/Penguin.

Option (f): Dalit Movements and Issues in India

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: The purpose of this paper is to make students familiar with major Dalit Movements and issues in India.

UNIT-I

Anti-Caste and Adi Movements in the Colonial period-I
Jotiba Phuleand Satyashodhak Samaj,
Mangoo Ram andAd-Dharm Movement,
Periyar and Self-Respect Movement

UNIT-II

Anti-Caste Movements in the Colonial period-II
Dalit Movement and B.R.Ambedkar
Caste and Untouchability
Democracy and Repsentation of Minorities

UNIT-III

Politics of Assertion and Representationin Independent India

Republican Party of India
Dalit Panthers
Bahujan Samaj Party

UNIT-IV

Dalits and Contemporary Issues

Reservation and Politics of Inclusion
Dalits and Globalization
Dalit Women's Issues

Essentail Readings

1. *Aditya Nigam, "In search of a Bourgeoisie: Dalit politics enters a New Phase."* Economic and Political Weekly*, March 30, 2002, pp. 1190-1193.*
2. *Aditya Nigam, "Secularism, Modernity, National: Epistemology of the Dalit Critique."* Economic and Political Weekly*, November 25, 2000.*
3. Aryama and SukhadeoThorat (ed.), *Ambedkar in Retrospect: Essays in Economics, Politics & Society*, Rawat Publications, New Delhi, 2007.
4. *B.L.Mungekar, "Globalization and the Dalits."* Radical Humanist, *65(1): April 2001: 9-10.*
5. B.R.Ambedkar, *Dr. Babasaheb Ambedkar: Writings and Speeches*, Vol.1-17 (compiled by Vasant Moon), Education Department, Government of Maharashtra, Bombay.
6. Christophe Jaffrelot,*India's Silent Revolution the Rise of the Low Castes in North Indian Politics,* Permanent Black,New Delhi, 2003.
7. Dhananjay Keer, *Dr. Ambedkar Life and Mission*, Popular Prakashan, Bombay1991.
8. *Dipankar Gupta, "Positive Discrimination and the Question of Fraternity: Contrasting Ambedkar and Mandal on Reservation."* Economic and Political Weekly, *32(31): 2 August 1997.*
9. Eleanor Zelliot, Ambedkar *and Mahar Movement.* University of Pennsylvania, 1982.
10. Eleanor Zelliot, *From Untouchable to Dalit: Essay on Ambedkar Movement.* Manohar: New Delhi, 1992.
11. G.P. Deshpande, (ed) *Selected Writings of Jotirao Phule,* Left World: New Delhi, 2002.
12. Gail Omvedit, *Dalits and Democratic Revolution: Dr. Ambedkar and Dalit Movement in Colonial India.* Sage*:* New Delhi, 1994.
13. *Gail Omvedt, "Peasants, Dalits and Women: Democracy and India's New Social Movements."* Journal of Contemporary Asia: *24 (1): 1994.*
14. *Gail Omvedt*, Ambedkar Towards an Enlightened India. Penguin: New Delhi, 2004.
15. Gail Omvedt, *Cultural Revolt in a Colonial Society: The Non – Brahman Movement in Western India.* Scientific Socialist Education Trust: Bombay, 1976.
16. Gail Omvedt, *Dalit Vision.* Orient Longman: New Delhi, 1996 first Published 1995.

Suggested Readings

1. Geeta, V., Rajdurai 1993 "Dalits and Non-BrahminConsciousness in ColonialTamil Nadu" *Economic and Political Weekly*,28(39), September 25.
2. *George Mathew, "Will Reservation Ensure Participation."* Social Welfare: *42 (5-6): August-September, 1995.*
3. Harish K. Puri, (ed.) *Dalits in Regional Context. Rawat*: New Delhi, 2004.
4. *J. Mencher, "The Caste System Upside Down,"* Current Anthropology*: 15: 469-93: 1974.*
5. J.Massey, *Downtrodden: The Struggle of Indian Dalits for Identity, Solidarity and Liberation.* WCC Publications: Geneva, 1997.
6. Jaffrelot, Christophe, *Dr.Ambedkar and Untouchability*. Permanent black: New Delhi, 2004.
7. Mark Juergensmeyer, *Religious Rebels in Punjab: The Social Vision Of Untouchables*. Ajanta: Delhi, 1988.
8. Michael Mahar, (ed) *The Untouchables in Contemporary India.* University of Arizona press, 1972.
9. *N.S.Gehlot, "Dr. Ambedkar, Mahatma Gandhi and Dalit movement,"* Indian Journal of Political Science, *54(3-4): July-December 1993.*
10. *Pradeep Kumar, "Reservation within Reservations: Real Dalit Bahujans,"* Economic and Political Weekly*, 15 September 2001, 3305-3307.*
11. *Ramaswamy R. Iyer, "Towards Clarity on Reservation Question,"* Economic and Political Weekly*, 26(9) and 10: 2-9 March 1991.*
12. Ramnarayan Rawat, "Making Claims for Power: A New Agenda In Dalit Politics of Uttar Pradesh, 1946-48", Modern Asian Studies, Vol. 37, No. 3, 2003.
13. *Ronki Ram, "From servitude to assertion: Ambedkar's Subalterns Approach to Nationalism and Dalit liberation."* Social Sciences Research Journal, *Vol. 9, November 2, 2001, p.160.*
14. Rosalind O' Hanlon, *Caste, Conflict and Ideology: Mahatma Phule and Low Caste Protest in the 19th Centurary*, CUP, 1985.
15. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution.The Bahujan Samajwadi Party in Uttar Pradesh.*, Sage : New Delhi, 2002.
16. *V. Geetha, and S.V. Rajadurai. "Dalits and non-Brahmin Consciousness in Colonial Tamil Nadu*." Economic and Political Weekly*, 28(3): 25 September 1993.*
17. *V. Jha, "Stages in History of Untouchables,"* Indian Historical Review, *2: 1975: 14-31.*
18. Valrian Rodrigues, (ed) *The Essential Writings of B.R. Ambedkar*, Oxford: New York,2002.
19. *Webster, John C.B. "Understanding the Modern Dalit Movement."* Sociological Bulletin *45 (2): September 1996.*

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) : FEMINIST POLITICAL THEORY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course aims to introduce students to the major interventions of feminism in political theory. After introducing students to the feminist critique of mainstream political theory and the key conceptual categories in feminism, this course in the latter units examines 5 main issues to understand the major debates within various strands of feminism.

Unit-I

Feminism and the redefinition of the Political.
Feminist critiques of mainstream political theory.

Unit-II

Key Feminist concepts—Patriarchy, Sex-Gender distinction, Production and Reproduction.
Destabilizing the category of 'woman'.

Unit-III

Key Issues in Feminist theory 1.
Abortion.
Pornography.

Unit-IV

Key Issues in Feminist theory 2.
Race/Religion/Culture.
Anti-Militarism.

Reading List

1. Anne Philips, *Engendering Democracy,* Cambridge, Polity Press, 1991.
2. Allison Jagger, *Feminist Politics and Human Nature*, Rowman & Allanheld, 1983.
3. Judith Butler, *Gender Trouble : Feminism and the Subversion of Identity*, New York, Routledge, 1990.
4. Carole Pateman, *The Sexual Contract*, Stanford University Press, 1989.
5. Iris Marion Young, *Justice and the Politics of Difference*, Princeton University Press, 1990.
6. Kate Millet, *Sexual Politics*, Granada Publishing, 1969.
7. Simone de Beauvoir, *The Second Sex*, 1949 (translated by H.M. Parshley, Penguin 1972).
8. Germaine Greer, The Female Eunuch, 1970.
9. Nancy Fraser and Linda J. Nicholson, Social Criticism without Philosophy : An Encounter between Feminism and Postmodernism in *Theory Culture Society,* 1988; 5.
10. Susan Moller Okin : *Women in Western Political Thought*, Princeton, Princeton University Press, 1979.

Option (b) : MAJOR THEMES IN RECENT POLITICAL PHILOSOPHY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the questionpaper as follows:
The syllabus has been divided into four units.
There shall be 9 questions in all.

The first question is compulsory and shall be short answer type containing 15 short questions spread over the wholesyllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each.

Rest of the paper shall contain 4 units. Each unit shall have two questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course is intended to be a companion to the compulsory courses on Western Political Thought and Key Concepts in Political Theory. It carries forward the discussion by focusing on themes and concerns which have occupied debates particularly since the late twentieth century.

Unit-I

1. Environmentalism.
2. Pacifism.

Unit-II

3. Feminism.
4. Multiculturism.

Unit-III

5. Neo-liberalism.
6. Post Marxism.

Unit-IV

7. Postcolonialism.
8. Postmodernism.

ESSENTIAL READINGS:

Relevant portions from the following textbooks and histories:

1. Colin Farelly, Contemporary Political Theory, Sage, 2004.
2. Gerald F. Gaus and ChandranKukathas, Handbook of Political Theory, Sage, 2004.
3. R.E. Goodin and P. Petit, A Companion to Contemporary Political Philosophy, Blackwell, 1995.
4. Terence Ball and Richard Bellamy (ed.), The Cambridge History of Twentieth Century Political Thought, Cambridge University Press (CUP), 2003.
5. Will Kymlicka, Contemporary Political Theory : An Introduction, OUP, 2002

SUGGESTED READINGS

Environmentalism:

6. John Dryzek and Scholberg, Debating the Earth : The Environmental Politics Reader, OUP, 1998.
7. Lorraine Eliot, Global Politics of Environment, Macmillan, 1998.
8. Ramchandra Guha and Juan Martinez-Alier, Varieties of Environmentalism: Essays on North and South, OUP, 1998.

Pacifism:

9. Allen Eickelmann, Eric Nelson and Tom Lansford, Violence, Pacifism and Cultural Transformation, Ashgate, 2005.
10. Peter Brock and Nigel Young, Pacifism in the Twentieth Century, Syracuse Univ. Press, 1999.

Feminism:

11. Alison Jaggar and Iris Marion Oung (ed.), A Companion to Feminist Philosophy, Blackwell, 1998.
12. Anne Phillips (ed.), Feminism and Politics, OUP, 1998.
13. Judith Butler and J.W. Scott (ed.), Feminists Theories : The Political, Routledge, 1992.

Multiculturalism:

14. Bhikhu Parekh, Rethinking Multiculturalism, Palgrave, 2006.
15. GurpreetMahajan, The Multicultural Path, Sage, 2002.

Neoliberalism:

16. Alfredo Saad-Filho and Deborah Johnson (eds.), Neo-Liberalism: A Critical Reader, Pluto Press, 2005.
17. David Harvey, A Brief History of Neo-Liberalism, OUP, 2005.

Post- Marxism:

18. Stuart Sim, Post Marxism: An Intellectual History, Routledge, 2000.

Postmodernism:

19. David Harvey, TheCondition of Postmodernity, Basil, Blackwell, 1989.
20. David Lyon, Postmodernity, Viva Books, 2002.

Postcolonialism:

21. Bill Ashcroft, Gareth Griffins and Helen Zigfin (eds.), The Postcolonial Studies Reader,Routledge, 2006.
22. ZiauddinSardar, Orientalism, Viva Books, 2002

Option (c) : READINGS IN THE PHILOSOPHY OF RESISTANCE AND LIBERATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on original texts. It seeks to study the ideas of resistance through the writings of the following Political Philosophers :

Unit-I

Gandhi : *Hind Swaraj* (1909), (Ahmedabad, Navjivan Trust, 1938).

Unit-II

Frantz Fanon : *The Wretched of the Earth* (London, Pluto Press, 1986).

Unit-III

Ernesto Che Guevara : *The Guerrilla Warfare*, with an Introduction and Case Studies by Brian Loveman and Thomas M. Davies, JR. (Lanchester University Press, 1985).

Unit-IV

Stokely Carmichael : *Black Power: The Politics of Liberation in America*, 1967.

Suggested Readings

1. Horace B. Davis, "Social Classes and the Formation of Nations : Fanon, Cabral and the African National Struggle" in Horace B. Davis, *Toward A Marxist Theory of Nationalism* (New York, Monthly Review Press, 1978, pp. 202-239).
2. Homi Bhabha, "Remembering Fanon: Self, Psyche and the Colonial Condition", Foreword to Frantz Fanon, *Black Skin, White Masks* (London, Pluto Press, 1986).
3. Irene Gentizier, *Frantz Fanon – A Critical Study* (New York, Vintage, 1973).
4. Renate Zahar, *Frantz Fanon : Colonialism and Alienation* (New York, Monthly Review Press, 1975).
5. Aristide R. Zolberg, "Frantz Fanon" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).

6. Ashis Nandy, "Oppression and Human Liberation: Towards a Post-Gandhian Utopia", in Thomas Pantham and Karl Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage Publications, 1986).
7. Anthony J. Parel (ed.), *Hind Swaraj and Other Writings*, Cambridge University Press, New Delhi, Foundation Books, 1997).
8. Donald C. Hodges (ed.), *The Legacy of Che Guevara* (London, Thames and Hudson, 1977).
9. Michael Lowy, *The Marxism of Che Guevara : Philosophy, Economics and Revolutionary Warfare*, (New York, Monthly Review Press, 1973)
10. Renneth Minogue, "Che Guevara" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
11. George Feaver, "Black Power", in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
12. Stokely Carmichael, "Black Power", in David Cooper (ed.), *The Dialectics of Liberation*, Harmondsworth, Penguin, 1968.
13. Frantz Fanon, *The Wretched of the Earth* (Harmondsworth, Penguin, 1967).
14. Deborah Wyrick, *Fanon for Beginners* (Hyderabad, Orient Longman, 1998).
15. Sergio Sinay, *Che for Beginners* (Hyderabad, Orient Longman, 1997).

Option (d) : CONTEMPORARY DEBATES IN THE 20TH CENTURY MARXISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to familiarize students with the Marxist engagement with critical issues in the late twentieth century.

Unit-I

Structure and Agency : Marxian Debates.

Unit-II

Feminism and Marxism : Production, Reproduction and Power.

Unit-III

Environmentalism and Marxism, Capitalism, Colonialism, Socialism and Environmental Degradation.

Unit-IV

Nationalism, Internationalism and Marxism.
Globalization and Marxist Critique.

Readings :

(Students are expected to consult the journals *Monthly Review, New Left Review* and *Socialist Register* regularly).

1. Groz, A., *Farewell to the Working Class*, Pluto Press, London, 1982.
2. Barret, Michele, *Women's Oppression Today : Problems in Marxist Feminist Analysis*, Verso, London, 1980.
3. Landes, Joan, 'Marxism and the Women Question' in Sonia Kruks, Rayana Rapp and Marilyn B. Young (ed.), *Promissory Notes : Women in the Transition to Socialism,* Monthly Review Press, New York, 1989.
4. Mies, Maria, *Patriarchy and Accumulation on a World Scale*, Zed Books, London, 1986.
5. Mies, Maria, 'World Economy, Patriarchy and Accumulation' in Nelly Stromquist (ed.), *Women in the Third World*, Garland, New York, 1998.
6. Bahro, Rudolph, *From Red to Green*, 1984.
7. Foster, John Bellamy, *The Vulnerable Planet, A Short Economic History of the Environment,* Monthly Review Press, New York, 1994 (Indian Reprint) Cornerstone Publication, Kharagpur, 1999.
8. Foster, John Bellamy, *Marx's Ecology : Materialism and Nature,* Monthly Review Press, New York, 2000.
9. Harvey, David, 'The Nature of Environment : Dialectics of Social and Environmental Change' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register,* The Marlin Press, London, 1993.
10. Pratt, Larry and Wendy Montgomery, 'Green Imperialism, Pollution, Penitence, Profits in Leo Panitch (ed.), *Socialist Register*, Marlin Press, London and K.P. Bagchi & Compnay, Calcutta, 1997.
11. Davis, Horace B., *Toward a Marxist Theory of Nationalism,* Monthly Review Press, New York, 1978.
12. Lowy, Michael, 'Why Nationalism?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Marlin Press, London, 1993.
13. Munck, R., *The Difficult Dialogue, Marxism and Nationalism*, Zed, London, 1986.
14. Magdoff, Harry, 'Globalisation –To What End?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Merlin Press, London, 1992.

Option (e) : INTRODUCING FEDERALISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces certain key concepts and issues in federalism. The aim of the paper is to enable the student to obtain a broad perspective on federalism in a comparative perspective and to evaluate its utility as a tool for accommodating diversity.

Unit-I

The Essence of the Federal Idea.
Core features of Federations.
Models and variants of Federalism : Successive Waves.
Presidential and Parliamentary variant.

Unit-II

Approaches and Paths to Federalism.
Institutionalist Explanations of Origins.
Society-Centred Theories.
The William Riker- Alfred Stepan debate.

Unit-III

Federal Democracy and the Articulation of Diversity.
Federalism as a device for accommodating groups and interests.
Centralisation and Decentralisation in Federal Systems.
Asymmetric Federalism : India and Canada.

Unit-IV

The Making and Unmaking of Federal Systems.
Stress and Strains of Federalism : Failed Federations : USSR, Czechoslovakia, Yugoslavia.
New, Emerging, Incipient and Federal-type Solutions : South Africa, Belgium, Spain, Sri Lanka and the European Union.
Relevance of Federalism in a globalising world.

Readings

1. Alfred Stepan, "Federalism and Democracy : Beyond the US Model," *Journal of Democracy,* 1999, 10 : 4, 19-34.
2. Alfred Stepan, "Russian Federalism in Comparative Perspective," *Post-Soviet Affairs,* 2000b, 16 : 2, 133-176.
3. Alfred Stepan, *Arguing Comparative Politics* (Oxford : Oxford University Press, 2001).
4. Andrea Bosco (ed.), *The Federal Idea : The History of Federalism Since 1945* (London: Lothian Foundation Press, 1992).
5. Arendt Lijphart, 1977, *Democracy in Plural Societies: A Comparative Exploration,* New Haven, London, Yale University Press.
6. Arend Lijphart, Ronald Rogowski and R. Kent Weaver, "Separation of Powers and Cleavage Management," in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings, 1997), 302-344.
7. Balveer Arora, and Douglas V. Verney, 1995, *Multiple Identities in a Single State : Indian Federalism in Comparative Perspective,* New Delhi : Konark Publishers.
8. Bertus de Villiers (ed.), *Evaluating Federal Systems* (Cape Town : Jutta & Co., 1994).
9. Birch, A.H., 'Approaches to the Study of Federalism,' *Political Studies*, 1966, 14(1), 15-33.
10. C.D. Tarlton 1965, "Symmetry and Asymmetry as Elements of Federalism : A Theoretical Speculation," *The Journal of Politics*, 27.
11. Carol Skalnik Leff, "Democratization and Disintegration in Multinational States : The Break up of the Communist Federations," *World Politics*, 1999, 51, 205-35.
12. Daniel J. Elazar, "From Statism to Federalism - A Paradigm Shift," *International Political Science Review,* 1996 17(4), 417-429.
13. Daniel J. Elazar, "International and Comparative Federalism," *PS : Political Science and Politics*, 1993 (June).
14. Daniel J. Elazar, Federalism, in David Sills (ed.), *International Encyclopaedia of Social Sciences* (New York : Macmillan, 1968) 353-367.
15. Daniel J. Elazar, *Exploring Federalism* (Tuscaloosa : University of Alabama Press, 1987).
16. Graham Smith (ed.), *Federalism : The Multiethnic Challenge* (New York : Longman, 1995).
17. Graham Smith, "Russia Multiculturalism and Federal Justice," *Europe-Asia Studies*, 1998, 50(8), 1393-1411.
18. J. Coakley, 1994, "Approaches to the Resolution of Ethnic Conflict : The Strategy of Non-territorial Autonomy", *International Political Science Review*, Vol. 15, No. 3: 297-314.
19. Juan Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation : Southern Europe, South America and Post-Communist Europe*, (Baltimore, Johns Hopkins University Press, 1996).
20. Juan Linz and Alfred Stepan, "Political Identities and Electoral Consequences : Spain, the Soviet Union and Yugoslavia," *Daedalus*, 1992, 121.
21. Ivo Duchacek, *Comparative Federalism*, (Lanham Md : Reissued by University Press of America, 1987).
22. K.C. Wheare, *Federal Government*, Second Edition, London and New York : Oxford University Press, pp.1-34 (1951).

23. Michael Burgess and Alain-G. Gagnon (ed.), *Comparative Federalism and Federation* (Harvester: Wheatsheaf) (1993).

24. Michael Stein (1971), "Federal Political Systems and Federal Societies", in J. Peter Meekison (ed.), Canadian Federalism : Myth or Reality?, Second Edition, Toronto: Methuen, 37-48.

25. Peter C. Ordershook, "Russia's Party System : Is Russian Federalism Viable?" *Post-Soviet Affairs,*1996, 12(3), 195-217.

26. Richard Gunther and Anthony Mughan, "Political Institutions and Cleavage Management" in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings), 1997, 272-301.

27. Robert Agranoff (ed.) (1999), *Accommodating Diversity : Asymmetry in Federal States,* Baden-Baden: Nomos.

28. Robert Sharlet, "The Prospects for Federalism in Russian Constitutional Politics," *Publius* 1994, 24 (Spring), 115-127.

29. Ronald L. Watts, "Canada : Three Decades of Periodic Federal Crises," *International Political Science Review,* 1996 17(4), 353-371.

30. Ronald L. Watts, "Intergovernmental Relations : Conceptual Issues", in Norman Levy and Chris Tapscott (ed.), *Intergovernmental Relations in South Africa : The Challenges of Co-operative Government* (West Cape : IDASA, 2001) 22-42.

31. Ronald L. Watts, *Comparing Federal Systems in the 1990s* (Institute of Intergovernmental Relations, Queens University Ontario, 1999).

32. Ronald L. Watts, "Asymmetrical Decentralization : Functional or Dysfunctional", *Indian Journal of Federalism,* 2004, 1-42.

33. Steven Solnick, "Will Russia Survive? Centre and Periphery in the Russian Federation," in Barnett R. Rubin and Jack Snyder (ed.), *Post-Soviet Political Order : Conflict and State Building* (London: Routledge, 1998), 58-80.

34. William Riker, "Federalism", in Fred I. Greenstein and Nelson W. Polsby (eds.), *Handbook of Political Science : Governmental Institutions and Processes,* Vol. 5 : (Reading : Addison-Wesley, 1975), 93-172.

35. William S. Livingston (1952), "A Note on the Nature of Federalism", *Political Science Quarterly*, 67, 81-95.

36. Peter C. Ordeshook and Olga Shvetsova, "Federalism and Constitutional Design", *Journal of Democracy,* 8.1 (1997) 27-42.

Option (f) : PUBLIC INTERNATIONAL LAW-II

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This paper introduces the students to certain specific subjects and the recent trends of Public International Law.

Unit-I : States in general

State Territory :

Land Territory, National Waters, Territorial Sea, Air-Space and Subsoil under Earth, Modes of acquiring and losing State Territory.

State Jurisdiction :

Territorial Jurisdiction

Jurisdiction on High Seas

Jurisdiction on Aircraft

Jurisdiction on Antarctica and Outer-Space

Unit-II : Law of the Sea

The First and the Second United Nations Conference on the Law of the Sea

Third United Nations Conference on the Law of the Sea (UNCLOS III)

Convention on the Law of the Sea, 1982

Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (1994).

Unit-III : Individual in International Law

Nationality
Aliens
Extradition
Asylum
Human Rights

Unit-IV : Recent Trends

Recent Trends and the changing structure of International Law

Feminist Perspectives of International Law

Some new approaches to the study of International Law

The conflicts of Political Ideologies and the universality of International Law with particular reference to the Communist Approach to International Law, the Third and Fourth World Countries and International Law.

Books Recommended

1. Stark, J.G., *Introduction to International Law,* Butterworths, 1963.
2. Wolfgang Friedmann, *The Changing Structure of International Law,* Columbia University Press, 1964.
3. Gerhard Von Glahn, *Law Among Nations : An Introduction to Public International Law,* Longman, 1966.
4. D.P. O'Connell, *International Law,* Stevens and Sons, 1965, 2 Vols.
5. Richard A. Falk, *The Status of Law in International Society,* Princeton University Press, 1970, pp 447-539.
6. Anand, R.P., *Asian States and the Development of Universal International Law,* Vikas, 1972.
7. Anand, R.P., *New States and International Laws,* Vikas, 1972.
8. Ian Brownlie, *Principles of Public International Law,* Oxford University Press, 1973.
9. Grigory Tunkin, *Contemporary International Law,* Progress Publishers, 1969.
10. Corbett, P.E., *The Growth of World Law,* Princeton, 1971.
11. Quincy Wright, *Contemporary International Law : A Balance Sheet,* Random House, 1963.
12. *Journals :* (i) American Journal of International Law
    (ii) Indian Journal of International Law
13. Dallmeyer, G. Droninda (ed.), Reconceiving Reality : Women and International Law, American Society of International Law, 1999.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. PUBLIC ADMINISTRATION (Semester System)

EXAMINATIONS, 2017-2018

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APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

Note :

A candidate for M.A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he/she has completed the prescribed courses in an affiliated college or the department concerned of this University.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES OF Public Administration

(Semester System)

1. (i) Terminal Evaluation 80%
   (ii) Continuous Assessment 20%
   (iii) Continuous Assessment may include Written Assignment, Snap Test, Participation in class discussions , Term Paper, Attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:
      (a) Written Test (one per semester): 25 (reduced to 5)
      (b) Snap Test : 25 (reduced to 5)
      (c) Term Paper/s : 25 (reduced to 5)
      (d) Participation in Class Discussions: 15 (reduced to 3)
      (e) Attendance: 10 (reduced to 2)*

   Total: 100 reduced to 20 (50 will be reduced to 10 in case of papers with Max Marks 50)

   *Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

   Attendance Component Mark/s for Theory Papers
   (a) 75% and above up to 85%: 1
   (b) Above 85%: 2

2. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the subject and, thus he/she shall have to secure pass marks total of Internal Continuous Assessment and University examinations.

3. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the examination on the Performa obtainable from the Examination Branch.

4. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes will be shown separately in the Detailed-Marks-Card (D.M.C.)

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF PUBLIC ADMINISTRATION FOR M.A.(PBLIC ADMINISTRATION) SEMESTER SYSTEM (2017-18)

The M.A. Programme in Public Administration is job oriented, multi-disciplinary and the Curriculum integrates theoretical and practical perspectives in the field of Public Administration. The sequence of the courses has been scientifically planned in a manner that they constitute building-blocks for four groups of specialization.

The Programme is being run on Semester System. Each paper is of four (4) credits except for papers V and VI in Semester I and Semester II that are of two (2) credits each. A candidate must successfully complete 20 credits at the end of 2nd Semester to join the 3rd Semester and 28 credits at the end of the 3rd Semester to enable him to join the 4th Semester. There will be six contact hours per week (4 lectures and two tutorials per 4 credits).

The specialized groups are:

Group A: Applied Development Administration (with special reference to India)
Group B: Economic Administration (with special reference to India)
Group C: Human Resource Management (with special reference to India)
Group D: Administrative Management (with special reference to India)

Pedagogy: The pedagogy is designed to nurture the attributes of intellectual inquiry, scholarship, research and writing. This will include lectures, seminars, class discussion, term papers and other writing assignments, presentations,role play, case studies, field visits etc. and will be Information and Communication Technology supported.The use of this methods should equip the student with listening,writing and presentation skills along with the capacity for analysis and evaluation .Peer evaluation, people skills,navigating public spaces,leadership and team workwill be the skills expected to develop and to ready the student for the world of work.

Semester-I

Papers

I Administrative Theory
II Organisational Behaviour
III Public Financial Administration
IV Public Personnel Administration
V Indian Economic System
VI Indian Social System

Semester-II

Papers

I Administrative Thought
II Research Methods
III Public Policy and Administration
IV Administrative Law
V Indian Political System
VI Indian Administrative System

Semester-III

Note: Students of all the Groups have to take a total of 5 papers including the 3 compulsory papers.

Papers

I Development Administration **(Compulsory for all groups)**

Group A: Applied Development Administration (with special reference to India)

II Social Policy and Welfare Administration **(Compulsory)**
III People's Empowerment and Rural Governance **(Compulsory)**
IV Disaster Management
V Administration of Non-Government Organisations
VI Public Health Policy and Administration
VII Comparative Public Administration
VIII Dissertation

Group B: Economic Administration (with special reference to India)

II Economic Administration **(Compulsory)**
III Company and Cooperative Law **(Compulsory)**
IV Human Resource Management
V Financial Management
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Group C: Human Resource Management (with special reference to India)

II Social Policy and Welfare Administration
III Labour Economics **(Compulsory)**
IV Human Resource Management **(Compulsory)**
V Administration of Non-Government Organisations
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Group D: Administrative Management (with special reference to India)

II Administrative and Office Management **(Compulsory)**
III Management of Disciplinary Proceedings
IV Human Resource Management
V Administration of Non-Government Organisations **(Compulsory)**
VI Corporate Governance
VII Comparative Public Administration
VIII Dissertation

Semester –IV

Note: Students of all the Groups have to take a total of 5 papers including the 3 compulsory papers.

Papers

I Emerging Areas in Public Administration **(Compulsory for all groups)**

Group A: Applied Development Administration (with special reference to India)

II Education Policy and Administration **(Compulsory)**
III People's Empowerment and Urban Governance **(Compulsory)**
IV Police Administration
V International Administration
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group B: Economic Administration (with special reference to India)

II Public Enterprise Management **(Compulsory)**
III Marketing Management
IV Industrial Relations
V Project Management **(Compulsory)**
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group C: Human Resource Management (with special reference to India)

II Labour Laws **(Compulsory)**
III Organisational Psychology **(Compulsory)**
IV Industrial Relations
V Labour Policy and Administration
VI Information Technology and Computer Applications in Public Administration
VII Ethics in Public Administration

Group D: Administrative Management (with special reference to India)

II Techniques of Administrative Improvement **(Compulsory)**
III Organisational Psychology
IV Industrial Relations
V Project Management
VI Information Technology and Computer Applications in Public Administration **(Compulsory)**
VII Ethics in Public Administration

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-18)
Semester-I

Paper I – Administrative Theory

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper will familiarize the students with the basic concepts of Public Administration in developed and developing countries. In addition, the course will also cover new areas and developments in the field of Public Administration particularly E-Governance, Good Governance, New Public Administration. The paper will also cover various theories of organization.Apart from regular classroom teaching ,special talks/lecturesfrom experts as well as practitioners from the civil service will be organized to establish links between theory and practice and develop student's critical skills.

UNIT-I

Nature, Scope and Role of Public Administration in Developed and Developing Countries.
Evolution and Development of Public Administration: New Public Administration; New Public Management; Public Choice and Principle Agent Theories.

UNIT-II

Theories of Organisation: Classical, Bureaucratic, Human Relations, Behavioural and Systems.
Principles of Organisation: Hierarchy, Span of Control, Unity of Command, Communication, Centralisation and Decentralisation.

UNIT-III

The Chief Executive: Types, Functions and Role.
Line and Staff Agencies; Headquarter and Field relationships.
Accountability of Administration – Legislative, Executive and Judicial.

UNIT-IV

Citizen and Administration Interface: Concept and Philosophy; Citizen Charter
Administrative Reforms: Concept and Philosophy.
Good Governance – Concept and Rationale
E – Governance: Concept; Rationale; Significance.
Performance Measurement in Government

List of Readings

Arora,R.K. (Ed.).(1979*). Perspective in Administrative Theory*. New Delhi: Associated.

Bhambri, C.P.(2010).*Public Administration Theory and Practice (*21th ed.).Meerut: Educational Publishers.

Bhattacharya, M. (2000). *Public Administration*. Calcutta: World Press.

Blumenthal, S.C. (1960). *Management Information System*: *A Framework for Planning and Development*, (5th ed.). Englewood Cliffs NJ: Prentice Hall.

Drucker, P. F. (1999*). Management: Tasks, Responsibilities, Practices*. Bombay: Allied Publishers.

Etzioni, A. (1995). *Modern Organizations* New Delhi: Prentice Hall.

Golembiewsky, R.T. (1977). *Public Administration as a Developing Discipline* (2nd ed.). New York: Marcel, Publisher CRC Press.

Government of India, Cabinet Secretariat.*Performance Management*. Retrieved from http://performance.gov.in/RFD.html

Gross, B. (1964.). *The Managing of Organisations*. London: Free Press.

Henry, N. (2012). *Public Administration and Public Affairs* (12th ed.). New Jersey: Prentice Hall.

Herseay, P., & Blanchard, K.H. (2007). *Management of Organisational Behaviour*: (5th ed.)

New Delhi.

Hicks, H. G., & Gutlet, R. C. (2008). *Organisations : Theory and Behaviour* (2nd ed.) New York: McGraw Hill.

Kaushik, S.L.,& Sahni, P. (Eds.). (1983). *Public Administration in India: Emerging Trends*. Allahabad: Kitab Mahal.

Koontz, H. & O'Donnell, C. (1986). *Principles of Management*. 4th edition. Tokyo: McGraw Hill.

Krislov, S. (2010). *Representative Bureaucracy*.Englewood Cliffs, NJ: Prentice Hall.

Newman, W.M., Summer, C., & Warren, E. (1976*). Management: Concepts, Behaviour and Practice* New Delhi: Prentice Hall.

Nigro, F. A., & Nigro, C. (1989). Modern Public Administration (7th ed.). New York: Lloyd Harper and Row.

Niskanen, W. A. (2007). *Bureaucracy and Representative Government*. Chicago: Atherton.

Osborne, D., & Gaebler, T. (l993). *Re-inventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. New York: Addison Wesley.

Pfiffiner, J., & Sherwood, F. (1984). *Administrative Organization*. New Delhi: Prentice Hall.

Tullock, G. (1987). *The Politics of Bureaucracy*. Washington, DC: Public Affairs Press

Vickers, J.S., & Yarrow, G. K. (1997). *Privatization: An Economic Analysis* (7th ed.). Cambridge: MIT Press.

Paper II – Organisational Behaviour

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper:

The paper will help the student develop an understanding of human behavior in the workplace from an individual , group and organizational perspective .Course material will be supplemented by activities like role play, case study discussions and interaction with experts .Public speaking, critical thinking, group work, presentation skills will be developed during these activities**.**

UNIT-I

Organization Behaviour: Concept and Rationale.
Organisational Goals: Concept; Types.
Management by Objectives: Concept; Rationale; Steps.
Team building: Concept; Types of Teams.

UNIT-II

Decision Making: Concept; Types and Process.
Leadership: Concept; Theories – Trait; Situational; Behavioural.
Motivation: Concept; Theories – Needs Hierarchy; Motivation –Hygiene; Theory X-Theory Y.

UNIT-III

Group Dynamics: Concept, Types and Dynamics of Group Formation.
Conflict and Negotiations: Concept, Rationale and Strategies.
Organisational Change: Concept; Process; Resistance to change.

UNIT-IV

Foundations of Organizational Structure: Designing and contingent Factors.
Organisational Effectiveness: Concept and Approaches.
Organisational Development: Concept and Rationale.

List of Readings

Blanchard,K. and Blanchard,H.(2009). *Management of Organisational Behaviour*(9th ed.).Washington: Pearson Higher Education.

Cook,C., Hunsaker, P., & Coffey, R.(2001)., *Management and Organisational Behaviour* .New York: McGraw Hill.

Davis,K., Newstrom ,J.W.et al.(2010). *Organisation Behaviour: Human Behaviour at Work* (13th ed.). New York: McGraw Hill.

Hofstede,G., & Garratt,B.(2003).*Cultures and Organisations: Inter Cultural Cooperation and its Importance for Survival* .New York: Profile Books.

Judge,T.(2009) .*Concepts, Controversies and Applications*(13th ed.) .New Delhi: Pearson

Mcshane,S.,& Glinow,M.V.(2009). *Organisation Behaviour*(5th ed.). New York: McGraw Hill.

Nicholson,N.(1988).*Encyclopaedic Dictionary of OB.London*: Blackwell Publishers.

Saiyadain, M.S.(2006). *Organisational Behaviour*(2nd ed.). New Delhi: Tata McGraw Hill.

Paper III – Public Financial Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper seeks to familiarize the students of Public Administration regarding various aspects of financial administration, particularly Budgeting in India. In addition, the students would be made aware of the role of Comptroller and Auditor General, mobilisation of resources and fiscal federalism.Diverse teaching pedagogies like class room lectures,discussion,seminars, budgeting excercises etc. will be used to deliver course content.At the end of the course, the student will be able to present reports and develop analytical skill regarding the monetary and fiscal system in India.

UNIT-I

Meaning and Significance of Public Finance and Public Financial Administration.
Budget: Concept, Principles and Budget as an Instrument of Financial Administration, Public Policy and Management.

UNIT-II

Concept and Types of Budgets: Traditional Budgeting; Performance Budgeting, Zero-Base Budgeting.
Budget Preparation, Authorisation and Execution with special reference to India.

UNIT-III

Union Ministry of Finance : Organisation, Functions and Role
Significance of Monetary and Fiscal Policy
Union-State Financial Relations
Finance Commission; Composition, Role and functions.

UNIT-IV

Legislative Control over Finances with special reference to parliamentary committees.
Concept of Audit: Role of Comptroller and Auditor General.
Resource Mobilization: Tax and Non-Tax Sources, Public Borrowings and Deficit Financing

List of Readings

Burkhead. J. (1956). *Government Budgeting*. New York: Wiley Sons.

Chand, P. (2010). *Control of Public Expenditure in India* (2nd ed.).New Delhi: Allied Publishers.
Chand, P. (2010). *Performance Budgeting* (2nd ed.). New Delhi: Allied Publishers.
Gupta, B.N. (2006). *Indian Federal Finance and Budgetary Policy*. Allahabad: Chaitanya Publishing House.
Indian Administrative Reforms Commission. (1969).*Report on:* (i)*Financial Administration (ii)Finance, Accounts and Audit (iii)Centre-State Relations.* New Delhi: Manager of Publications, Government of India.
Indian Institute of Public Administration. (1983).Special Number on Administrative Accountability Vol.XXIX (3). New Delhi.
Lall, G.S. (1979). *Public Finance and Financial Administration in India*. New Delhi: Kapoor
Sury, M.M. (1990). *Government Budgeting in India.* New Delhi: Commonwealth Publishers
Thavaraj, M.J.K.. (2001). *Financial Administration in India* (6th ed.). (Delhi, Sultan Chand.

Paper IV – Public Personnel Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The syllabus of the paper attempts to familiarize the students with the concept of Public Personnel Administration, carrier systems and classification in India , various aspects of Human Resource Development ,civil services, rules of service,code of conduct and ethics,disciplinary action , negotiation machinery etc. Presentations, interactions with experts,case studies and discussions will be used for delivery of course content.The student will develop group work, leadership and analytical skills.

UNIT-I

Meaning and Significance of Public Personnel Administration
Role of Public Services
Career Systems – Concept and Types
Position Classification – Concept and Bases

UNIT-II

Concepts and Significance: Human Resource Development, Human Resource Planning, Recruitment, Training, Promotion and Performance Appraisal.

UNIT-III

Constitutional Provisions with regard to Civil Services in India
Pay Commissions in India
Union Public Service Commission (UPSC): Role and Functions

UNIT-IV

Administrative Ethics; Code of Conduct
Disciplinary Action
Employer-Employee Relations: Staff Associations and Union; Joint Consultative and Negotiation Machinery

List of Readings

Bhayana, S.S. and Singh S. (2016). *Public Personnel and Financial Administration* , 4th Ed. Jalandhar: New Academics.

Davar, Rustom S. (2008). *Personnel Management and Industrial Relations in India.* 2nd Edition. New Delhi: Vikas Publishing House.

Flippo, E. (2008). *Principles of Personnel Management.* 4th Edition. Kogakusha: McGraw Hill.

Goel, S.L. and Rajneesh, S. (2002). *Public Personnel Administration.* New Delhi: Sterling.

Government of India. (1988). *Report of the Commission on Centre-State Relations*. Nasik: General Manager.

Government of India, 2nd Administrative Reforms Commission . (2010). *10th Report: Refurbishing of Personnel Administration – Scaling New Heights.* New Delhi: Manager of Publications.

Koontz, H. and O'Donnell, Cyril.(2008). *Principles on Management*. , 5th Ed. Tokyo: McGraw Hill.

Pigors, P. and Myers, C.A. (1969). *Personnel Administration: A Point of View and a Method*. 6th Edition. Kogakusha: McGraw Hill.

Rouse, John E. (2008). *Public Administration in American Society*. Michigan: Gale Research.

Saxena, A.P. (2010). *Training and Development in Government*. New Delhi.

Stahl, O. Glenn. (1971). Public Personnel Administration. 6th Edition. New Delhi: Oxford and IBH Publishing.

United Nations. (2008). *New Approaches to Personnel Policy for Development*. New York.

Paper V – Indian Economic System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: Basic knowledge of Economics is pre-requisite for students to have better understanding of the subject of Public Administration .Thus the paper aims at making the students familiar with some of the core and relevant topics of Economic,especially their relevance for the student of administration.Learning outcomes also include some familiarity of the learners with select concepts of Economics and understanding of select field of Economics having bearing on Public Policy and Governance.Peadagogical tools will include lectures,Term Paper/Assignment, Presentations, Seminars and use of Information and Communication Technology.

UNIT-I

Relevance of Economics to Public Administration
Concepts: Market Mechanism, Perfect Competition, Monopoly, Monopolistic Competition, National Income
Concept and Features: Free Market Economy; Centrally Planned Economy; Mixed Economy

UNIT-II

Features of the Indian Economy
Growth and Structure of the Indian Economy
Indian Economic Reforms: Concept, Rationale and Evaluation

List of Readings

Ahuja, H. L.(2010).*Modern Economics* .New Delhi: S. Chand.

Dutt,R and Sundram, K.P.M.(2010).*Indian Economy* .New Delhi: S. Chand.

Halm, G.N.(1951).*Economic System-Comparative Analysis* .New York: Rinehart.

Koutsoyiannis, A.(1979).*Modern Micro-Economics*. Macmillan Press Ltd.

Lipsey, Richard G.(1971).*An Introduction to Positive Economics* .London: English Language Book Society.

Mote, V.L. and A,E.T.(1982).*Managerial Economics: Concepts and Cases* .New Delhi: Tata McGraw Hill.

Mukherji,S.(2003).*Modern Economic Theory* .New Delhi: Prentice Hall of India Pvt. Ltd.

Samuelson, Paul A.(2006).*Economics*. Tokyo: McGraw-Hill, New Delhi.

Shapiro, Edward.(2005).*Macro-Economics Analysis* .New Delhi: Galgotia Publications.

Stonier, Alfred W. & Hague, Douglas C.(2004).*A Text Book of Economic Theory* . Singapore: Pearson Education Pvt. Ltd. Indian Branch.

Paper VI – Indian Social System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper:

The endeavour is to make the student understand the multi-disciplinary nature of the subject of Public Administration and the relationship between Sociology and Public Administration.The students will be apprised about the basic concepts of social structure, social change in contemporary Indian Society and social tensions and their relevance in the field of Public Administration. Apart from the lecture methods, presentations and documentaries (audio-visual aids),case studies and special lectures by experts will be organized.The students will develop public speaking and analytical skills to understand Indian Society and link this with social policy and administration.

UNIT-I

Relevance of Sociology to Public Administration
Concept and Elements of Social Structure: Groups; Status and Role; Norms and Values.
Social Stratification: Caste, Class - Difference and Convergence.
Social Institutions: Marriage and Family.

UNIT-II

Social Change: Concept; Sources; Resistance
Social Change in Contemporary Indian Society
Social Tensions and Resolutions – Communalism, Regionalism and Violent Class Struggle

List of Readings

Dube, S.C.(2009).*Modernization and Development: The Search for Alternative Paradigms* . 2nd Ed.New Delhi: Sage Publishers,

Kuppuswamy, B.(2006).*Social Change in India.* Delhi:Konark Publisher Pvt. Ltd.

Mendelbaum ,David G.(1972).*Society in India* .Bombay: Popular Prakashan.

Moore, W.E.(1965).*Social Change* .New York: Prentice Hall.

Singh,Y.(1986).*Indian Sociology: Social Conditioning and Emerging Concerns* .New Delhi:Vistaar Publications.

Smelser, Neil J.(1970).*Introduction to Sociology.* New York: Willey.

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-2018)
Semester-II

Paper I – Administrative Thought

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper attempts to make the students of Public Administration aware of various theories and thoughts of various classical, neo-classical and modern thinkers in the area of administration and organization. The study of this paper will equip the students with the deep understanding of historical evolution of administrative thought, various conceptualizations and their application. Pedagogy will include lectures, assignment writing and presentations.

UNIT-I

Woodrow Wilson; F.W. Taylor;Henri Fayol; Luther Gulick and L. B. Urwick

UNIT-II

Max Weber; Elton Mayo; Mary Parker Follett; Chester I. Barnard

UNIT- III

Chris Argyris; Frederick Herzberg; Renesis Likert; Herbert A. Simon

UNIT-IV

Fred Riggs; Peter F. Drucker; Mahatma Gandhi; Kautilya

List of Readings

Allen, V.L. (1975). *Social Analysis.* London: Longman

Blau, P.M. (1987). Bureaucracy in Modern Society. New York: Random House.

Etzioni, A. (1964). *Modern Organisations*. New Delhi: Prentice Hall.

Foucault, M. (1975). *Discipline and Punishment*. Hammondsworth: Penguin.

George, C.S. (1974). *The History of Management Thought*. New Delhi: Prentice Hall.

Gross, B. (1968). Organisations and their Managing. New York: Free Press.

Hofstede, G. & Kassem, M.S. (1976). *European Contributions to Organisation Theory. Assen*:

Van Gorcum.

Jerzy, Z. (1922). *History of Social Thought*. West post: Greenwood.

Mouzelis, N.P. (2009). *Organization and Bureaucracy – An Analysis of Modern Theories*. London: Routledge.

Peters, T. (1994*). Liberation Management*.New York: Fawcett Columbine.

Pollard, H. R. (1978). *Further Development in Management Thought*. London Heinemann

Pollard, S. (1965). *The Genesis of Modern Management*. London: Arnold.
Prasad, D.R. & Prasad, V.S. (1989*). Administrative Thinkers*. New Delhi: Sterling.
Pugh D.S., Hickson D.J, & Hinings C.R.(2007). *Writers on Organisations* .Harmondsworth : Penguin.

Silverman, D. (2008). *The Theory of Organisations*. London: Heinemann.

Waldo D. (1948). *The Administrative State*. New York: Ronald.

Wren, D.A. (2009). *The Evolution of Management Thought*. New York: Ronald.

Paper II - Research Methods

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper aims to acquaint the student with the knowledge of philosophy, rationale and methodology of conducting good quality research in social sciences with special reference to Public Administration. The major objective of this paper is to prepare students for undertaking quality research at Masters' level in the form of Masters' Dissertation as well as subsequent research leading to the award of M.Phil/PhD Degree as well as pursuing research as a career. Enabling learners to look at contemporary relevant problems critically in the area of social science research, including Public Administration, and finding empirical solutions for the same. The course seeks to equip students in structuring research design, formulating research questions/hypotheses besides endowing them with the knowledge of how to collect data and analyze it with the help of suitable statistical techniques. The course also intends to train students in report writing. Pedagogy will include lectures, Term Paper/Assignment, Presentations, Seminars and Use of Information and Communication Technology. .

UNIT-I

Nature of Science and Scientific Method
Types of Research: Fundamental; Applied; Evaluative
Qualitative Research: Concepts and Significance
Basic Elements of Research - Research Problem: Selection and Formulation; Review of Literature;

UNIT-II

Concepts – Definition and Functions
Hypotheses: Definition; Features and Types and Testing Procedures
Research Design: Definition, Contents and Types
Survey Research and Case Study Method

UNIT-III

Sampling: Concept and Types
Methods of Data Collection: Documents, Observation, Interview and Questionnaire
Data Processing: Editing, Coding and Tabulation
Graphic Representation

UNIT-IV

Measures of Central Tendency: Mean, Median and Mode
Dispersion
Linear and Rank Correlation, Chi-Square ($\dot{x}^2$)
Report Writing

List of Readings

Bowley , A.L.(1937). *Elements of Statistics* .New York: Staples Press Inc.
Goode,W.J. and Hatt,P.K.(2006).*Methods in Social Research* .McGraw Hill Series.
Gupta, S.P.(2001).*Statistical Methods* .New Delhi: Sultan Chand and Sons.
Miller,D.C. and Salkind,N.J.(1981).*Handbook of Research Design and Social Measurement*. New Delhi: Sage .
Moser, C.A. and Kalton, G.(1993).Survey *Methods in Social Investigation*.London: The English Language Book Society and Heinemann .
Nachmias,D. & Nachmias,C.(1981).*Research Methods in the Social Sciences*. New York: St. Martin's Press.
Seltiz,C .& Cook,S.W.(1964). *Research Methods in Social Relations*. New York: Holt Rinehart and Winston.
Spiegal,M.R.(2008).*Theory and Problems of Statistics* .New York: Mc Graw-Hill .
Young,P.V.(2007).*Scientific Social Research and Surveys*.India: Asia Publishing House.

Paper III – Public Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Course: This core course on Public Policy comprehensively introduces the concept and significance of public policy, the history of policy sciences and the public policy process. At the end of the course the student will have an understanding of the growth of policy sciences, the significance and different stages of the public policy process in terms of the theoretical formulations as well as the working of this process with special reference to India.The pedagogical tools used will include lectures,case studies,policy analysis excercises,seminars and presentations.Thus, the student will develop critical understanding of the policy process as well as capacity to undertake policy analysis in substantive areas of public policy.

UNIT-I

Public Policy: Concept, Significance and Scope; Evolution of Policy Sciences
Policy Transfer: Concept, Rationale and Types: (Copying, Adaptation, Hybridization and Synthesis).
Policy Analysis: Concept and Significance; Approaches with special reference to the Incrementalist and Rationalist Paradigms

UNIT-II

Public Policy Making Process: Role of Legislature, Executive and Judiciary; Planning Machinery
Other Stakeholders in Policy-making: Political Parties, Interest Groups, Mass-media, Civil Society, and International Agencies.

UNIT-III

Public Policy Implementation, Monitoring and Control: Approaches to Policy Implementation; Role of Executive (with special reference to Bureaucracy), Legislature, Judiciary, Non-Governmental Organisations, Pressure Groups; Major Issues and Problems in Policy Implementation.

UNIT-IV

Policy Evaluation: Approaches to Policy Evaluation and Policy Impact; Criteria for Evaluation; Role of Staff, CAG, Parliamentary and Departmental Committees in Evaluation; Problems in policy evaluation.

List of Readings

Anderson, J E. (2005). *Public Policy Making*. Sixth ed. New York: Houghton Mifflin Co.

Ayyar, Vaidyanathan R V. (2009). *Public Policy Making in India*. N. Delhi: Pearson.
Basu, D.D. *Constitution of India*. 20th Edition. New Delhi: Prentice Hall of India.

Dolowitz, D.P. and Marsh, D. (January). Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance: An International Journal of Policy and Administration,* 13, No. 1, 5-24.

Dubhashi, P.R. (1986). Policy and Performance. New Delhi: Sage Publications.

Dye, T. (2002). *Understanding Public Policy*. New Delhi: Pearson Education Singapore (Pte) Ltd.

Henry, N. (2009). *Public Administration and Public Affairs*. Eleventh Edition. New Jersey: Prentice Hall.

Madan, K.D. et. al. (1982). *Policy Making in Government*. New Delhi: Publications Division, Government of India.

Mathur, K. (1996). *Development Policy and Administration*. New Delhi: Sage.

Munger, M.C. (2000). *Analysing Policy: Choices, Conflicts and Practices*. New York: W.W. Norton & Company.

Nagel, S.S.(1991). *Public Policy: Goals, Means and Methods*. NewYork: St. Martin Press.

Nedley, *A. Policy Transfer and the Developing-Country Experience Gap: Taking a Southern Perspective*. "n.d". http://www.york.ac.uk/ depts/poli/news/sem3esrc.htm.

Page, E.C. *Future Governance and the Literature on Policy Transfer Lesson Drawing*. "n.d". http://www.hull.ac.uk/futgov/Papers/EdPag Paper1.pdf)

Rabin J., Hidreth, W & Miller, G. (2007). Handbook of Public Administration . Third edition. Florida: Taylor & Francis Group.

Rose, R.(1993). *Lesson-Drawing in Public Policy: A Guide to Learning Across Time and Space*. New Jersey: Chatham House.

Sapru, R.K. *Public Policy: Art and Craft of Policy Analysis*. 2nd Edition. New Delhi: Prentice Hall of India learning.

Stone, D. *Learning Lessons, Policy Transfer and the International Diffusion of Policy Ideas*. "n.d" http:// poli.haifa.ac.il/~levi/res/stone-2000.pdf

Paper IV - Administrative Law

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Administrative Law is an integral part of Public Administration, a very significant ingredient to run the administration. The student is expected to develop an understanding of the various components of administrative law along with the principles of natural justice, Rule of Law, administrative legislation, adjudication and much more. In this paper the most important pedagogical toll is the study and analysis of case law. By the end of the course, a student should be able to specify the significance of administrative law, rule of law and the quasi-legislative, quasi-judicial procedures within administration.

UNIT-I

Meaning, Growth and Scope of Administrative Law
Distinction between Constitutional Law and Administrative Law
Droit Administratif
Concept of Rule of Law and Principles of Natural Justice

UNIT-II

Delegated Legislation: Need, Classification and Safeguards
Judicial Review of Administrative Action: Principles and Modes
Liability of the Administration; Contract and Tort

UNIT-III

Administrative Tribunals: Concept, Rationale and Types
Central Administrative Tribunal: Structure, Function and Role
Central Vigilance Commission: Structure, Functions, Role and Significance

UNIT-IV

Institution of Ombudsman: Concept and Genesis
Lok Pal and Lok Ayukta in India: Significance, Functions and Role
Fundamentals of Departmental Proceedings: Suspension, Charge sheet, Enquiry and Penalties.

List of Readings

Chhabra, S.(1990).*Administrative Tribunals* .New Delhi: Deep and Deep.
Diwan,P.(2007) .*Indian Constitution* . 2nd ed. Allahabad: Law Agency,.
Kagzi, M.C.J.(2008).*Indian Administrative law* . 2nd edition .Delhi: Metropolitan,.
Massey, I.P.(2008).*Administrative Law* .New Delhi: Eastern Book Company.
Mehta, S.M.(1990).*Indian Constitutional law* .New Delhi: Deep and Deep.
Sathe, S.P.(1998).*Administrative Law* . 6th Edition. Bombay: Tripathi,.
Sharma,S.K.(2007).*Directive Principles and Fundamental Rights* .New Delhi: Deep and Deep.
Swami,P.M.(1989).*Swami's Manual of Disciplinary Proceedings for Central Government Employees* .Madras:Swami Publishers.

Paper V – Indian Political System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50(out of which 10 marks are for internal assessment). Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.

- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper attempts to familiarize the students of Public Administration with the basic features of Indian Constitution, particularly those having relevance for the administrative set up in India. The students will also be familiarized with the institutions that make up the political system. Class room teaching, lectures by experts,seminars and field trips will form the pedagogical scheme of instruction.

UNIT-I

Unitary and Federal Features of the Indian Constitution
Political Executive at the Union Level: President, Prime Minister and Council of Ministers
Union Legislature - Lok Sabha and Rajya Sabha: Composition and Functions
Judiciary: Supreme Court; Judicial Review; Judicial Reforms.

UNIT-II

Stakeholders in the Political System: Political Parties; Pressure Groups; Interest Groups; Civil Society
Election Commission: Structure, Functions and Role
Electoral Reforms

List of Readings

Almond,G.A. and Coleman,J.S.(1966).*The Politics of Developing Area* .Princeton University Press.

Badyal, J.S.(1993).*Indian Political System* .Jalandhar: Sohal Lal Khanna, 5th ed.

Basu,D.D.(2008).*Introduction to the Constitution of India*.20th edition.New Delhi: Wadhwa and Company.

Hyman,H.H.(1972).*Political Socialization: A Study in the Psychology of Political Behavior* .New Delhi: American Publishing.

Narain,I (ed.)(1976).*State Politics in India* .Meerut, Meenakshi.

Palmer,N.D.(1961).*Indian Political System* .London: George Allen and Unwin Ltd.

Palmer,N.D.(1976).*Elections and Political Development: The South Asian Experience*.Vikas Publishing House.

Pye,Lucian.(1966).*Aspects of Political Developments*.Boston: Little Brown.

Paper VI – Indian Administrative System

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50(out of which 10 marks are for internal assessment). Time allowed will be 2 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 3 questions (one compulsory and one long question each from two units - Unit I & Unit II). The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.

- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The student will gain an understanding of the administrative set up and structure at the Centre level in addition to critical areas like headquarter field, centre –state relations and generalist/specialist relationship. The students will also be familiarized with the teaching, lectures by experts, seminars and field trips will form the pedagogical scheme of instruction.

UNIT-I

Central Secretariat: Structure, Functions and Role
Cabinet Secretariat: Significance, Functions and Role
Prime Minister Office: Significance, Functions and Role
Head Quarter- Field Relationships

UNIT-II

Centre-State Relations: Legislative and Administrative
Relationship between Political and Permanent Executive
Generalist and Specialist in Administration
Indian Administration: Problems and Challenges

List of Readings

Arora,R.K. and Goyal,R.(1997).*Indian Public Administration* .New Delhi: Vishwa Parkashan

Austin,G.(2009).*Indian Constitution* .Oxford: Claredon.

Avasthi and Avasthi.(2001).*Indian Administration* .Agra: Luxmi Narain Aggarwal.

Basu,D.D.(2008).*Introduction to the Constitution of India*.20th edition.New Delhi: Wadhwa and Company.

Maheshwari,S.(2001).*Indian Administration* . 6th edition .New Delhi: Macmillan.

Singh,H (ed.).(2008).*Indian Administration* .Jaipur: Aalekh Publishers.

Singh,M and Singh,H.(1989)*Public Administration in India* .New Delhi: Sterling Publishers.

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-18)

Semester III (Groups A, B, C and D)

Paper-I: Development Administration (Compulsory Paper for all Groups)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: In the third semester, the student will be exposed to the core area of Development Administration, besides being offered opportunities for pursuing individual applied areas of interest through elective courses. The aim of the paper is to provide introductory knowledge and skills needed to formulate, analyze and evaluate policy considerations, besides implementation, related to various dimensions of Development Administration. Through coverage of interdisciplinary topics students gain a holistic theoretical insight of the specialized areas of the course, namely, concept and significance of development, Sustainable Development and Development Administration, categorization of developing and developed worlds, planning, Public Enterprises, Population, United Nations, Role of Bureaucracy, Administrative Capability and People's Participation. Lectures, class room discussions, presentations and field trips will deepen the understanding and analytical and presentation skills of the student.

UNIT-I

Concept and Significance of Development
Sustainable Development: Concept and Significance
Development Administration: Concept and Significance
Main Characteristics of Developed and Developing Countries

UNIT-II

Administrative Capability and Development Administration
Organization for Development Planning a Centre, State and District Levels
Role of United Nations System in Development

UNIT-III

Public Enterprises: Concept and Rationale
Forms of Organisation: Departmental Undertakings, Statutory Corporations and Government Companies
Industrial Policies: 1956, 1991 and major subsequent developments

UNIT-IV

Population Policy and Development
Role of Bureaucracy in Development
People's Participation in Development
Women and Development

List of Readings

Basu, R. (1993).*The United Nations – Structure and Functions of an International Organisation*, New Delhi: Sterling.

Bava, N.J. (1997). *Non- Governmental Organisations in Development: Theory and Practice*. Ed. New Delhi: Kanishka.

Bhattacharya, M. (2001). *Development Administration*. New Delhi: Jawahar Publishers.

Dhar, P.K. (2007). *Indian Economy – Its Growing Dimensions*. New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). *Development Administration: From Underdevelopment to Sustainable Development*. London: Macmillan.

Mathur, H.M. (1986). *Administering Development in the Third World: Constraints and Choices*. New Delhi: Sage.

Mathur, K. (1996). *Development Policy and Administration*. Ed. New Delhi: Sage.

Parikh, K.S. (1999). *Indian Development Report*. Ed. Delhi: Oxford.

Patnaik, P. (January 2015). From the Planning Commission to the NITI Aayog. *Economic and Political* Weekly. L. (4).

Planning Commission. *Five Year Plan Documents*. New Delhi: Government of India.

Rao, M.G. (2015). Role and Functions of NITI Aayog. *Economic and Political Weekly*, L (4).

Rattan, V. (1997). *Women and Child Development Programme Administration*. Vol.1: Women and Child Development and Sustainable Human development. Vol.II: Integrated Child Development Services Programme Administration. New Delhi: S. Chand.

Riggs, F.W. (1970). *Frontiers of Development Administration*. Ed. Durham: Duke University Press.

Sapru, R.K. (2002). *Development Administration*. New Delhi: Sterling Publishers.

Singh, N. (February 2015). NITI Aayog and Indian Fiscal Federalism. *Yojana*.

Singh, A. (2000). *The Politics of Environment Administration.* New Delhi: Galgotia Publishing Company.

Subramaniam, V. (1990). *Public Administration in Third World*. London: Greenwood.

Sharma & Verma. (1985). *Comparative Public Administration*. New Delhi: IIPA.

Shah, R.R. (September 2014). Reorienting the Plan Process and Revitalising the Planning Commission. *Economic and Political Weekly*. XLIX (37).

United Nations (1975). *Development Administration, Current Approaches and Trends in Public Administration for National Development.* New York.

United Nations (1985). *Enhancing Capabilities for Administrative Reforms in Developing Countries.* New York.

United Nations (1971). *Administration of Development Programmes and Projects; Some Major Issues*. New York.

Verma, S.P. & Sharma, S.K. (1984). *Development Administration*. Ed. New Delhi: IIPA.

Weidner, E. (1970). *Development Administration in Asia*. Ed. Durham : Duke University Press.

Semester III (Group A)

Paper II: Social Policy and Welfare Administration
(Common in Groups A&C; compulsory for Group A)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The paper attempts to familiarize the students with various aspects of social welfare in India by emphasizing on policy, programmes and administration of the weaker sections, the administrative set up and the legislations in this area.The students will learn about various policies and programmes for welfare of women, children and other disadvantaged groups as well as the role of non-governmental organizations in social welfare and its administration. Class room teaching and field visits with written assignments and presentations will form the pedagogical scheme of instruction.

Unit-I

Social Welfare: Concept and Significance
Welfare State: Concept and Philosophy
Social Welfare Administration: Nature, Scope and Significance

Unit-II

Social Legislation in India: An Overview
Protection of Women from Domestic Violence Act, 2005
The Juvenile Justice (Care and Protection of Children) Act, 2013

Unit-III

Organisation and Functions of Union Ministry of Social Justice and Empowerment;
State Social Welfare Department; Central Social Welfare Board; State Social Welfare Board
Role of NGOs/Voluntary Organisations for Social Welfare

Unit-IV

Policy, Programmes and Administration for Welfare of SC/ST
Policy, Programmes and Administration for Welfare of Women and Children
Policy, Programmes and Administration for Welfare of Aged
Policy, Programmes and Administration for Welfare of Drug Addicts

List of Readings

Bulsara, J.F. & Verma (2006). *Perspective in Social Welfare in India*. New Delhi: S. Chand & Co.

Chowdhary, D.P. (1976). *Social Welfare Administration.* Delhi : Atma Ram and Sons.

Encyclopedia of Social Change. Vol. 5. New Delhi: Anmol Publishers.

Friedlander, W. & Apte, R. (2006). *Introduction to Social Welfare.* 5th Ed. New Delhi: Prentice Hall.

Gangrade, K.D. *Social Legislation in India*. Delhi: Concept Publishing House.

Madan, G.R. (2006). *Indian Social Problems*. Vol. II: Social Work. New Delhi: Allied Publishers Ltd.

Ministry of Information and Broadcasting (1987). *Encyclopedia of Social Welfare in India*. Vol. IV. New Delhi: GOI Publications Devision.

Ministry of Social Justice & Empowerment Govt. of India, Recent Annual Reports

Planning Commission (2007-12). Eleventh Five Year Plan. New Delhi: Government of India.

Relevant Acts of Parliament and Reports of Commission, Committees & Study Teams

Research, Reference and Training Division (2010). *A Reference Manual*. New Delhi: GOI Publications Division.

Robson, W. A. (1976). *Welfare State and Welfare Society*: Illusion and Reality. 2nd ed. London: Allen and Unwin,.

Roy, K. (2000). *Women and Child Development*. New Delhi: Commonwealth Publishers.

Sachdeva. D.R. (2009). *Social Welfare Administration*. Allahabad: Kitab Mahal.

Sankhdher, M.M. (1995). *Welfare State.* New Delhi: Deep & Deep.

Semester III (Group A)

Paper III: People's Empowerment and Rural Governance (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: India is predominantly a poor country.Empowering rural people and rural local bodies is quite significant to strengthen our base-social,economic and political.The student needs to be fully familiarized with the nature of rural local institutions and the steps towards rural upliftment. The important pedagogical tools in this paper include field visits to have a feel of the rural realities and working of the rural local.The students should be able to elaborate the structure and working of rural local bodies and the working of rural development programmes.Assignments and presentations will be used to review the understanding of the student.

UNIT-I

People's Empowerment: Concept; Rationale; Strategies
Evolution of Panchayati Raj in India with special focus on the 73rd Constitutional Amendment
Working on Panchayati Raj in India: Issues, Problems and Remedies

UNIT-II

Rural Government in India

(i)	Gram Sabha	:	Composition, Functions, Finances and Role
(ii)	Gram Panchayat	:	Composition, Finances, Functions and Role
(iii)	Panchayat Samiti	:	Composition, Finances, Functions and Role
iv)	Zila Parishad	:	Composition, Finances, Functions and Role

UNIT-III

State Election Commission: Composition, Functions and Role with special reference to Rural Local Bodies
Personnel Administration in Rural Governance: Role and Functions of Panchayat Secretary, Block Development and Panchayat Officer and District Development and Panchayat Officer
State Finance Commission: Composition, Functions and Role with special reference to Rural Local Bodies

UNIT-IV

Rural Development and Poverty Alleviation Schemes – National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGA)
Role of Cooperatives in Rural Development
Rural Problems and Challenges

List of Readings

Arora, R.K. & Goyal, R. (1996*). Indian Public Administration*. New Delhi:Vishwa Prakashan.
Aziz, A. (1996). *Decentralised Governance in Asian Countries*. Ed. New Delhi: Sage.
Bhadouria, B.D.S. & Dubey, V.P. (1989). *Panchayati Raj and Rural Development* New Delhi: Commonwealth Publishers.
Bhayana, S.S. & Singh, S. (1991).*Local Government in India*. Jalandhar: New Academic Publishing Company.
Burns, D. et. al. (1994). *The Politics of Decentralisation: Revitalising Local Democracy*. London: Macmillan.
Chaturvedi, T. N. & Datta, A. (1984). *Local Government.* New Delhi: IIPA.
Cheema, G.S. & Ponoinelli D. (1983). *Decentralisation and Development Policy Implementation in Developing Countries*. Ed. London: Sage.
Hochgesang, T.W. (1994). *Rural Local Self-Government in India*. Hyderabad: NIRD.
Khanna, B.S. (1992). Rural Development in South Asia. 4 Volumes. New Delhi: Deep and Deep.
Maheshwari, S.R.(2003). *Local Government in India*. Agra: Lakshmi Narain Aggarwal.
Mathew, G. (1994). *Panchayati Raj in India: From Legislation to Movement*. New Delhi:ISS.
Mathur, S.N.(1997). *Nyaya Panchayats as Instruments of Justice*. New Delhi: ISS.
Mishra, S.N.(1986). *Panchayati Raj Bureaucracy and Rural Development*. New Delhi: IIPA.
Mishra, S.N. (1996). *New Panchayati Raj in Action*. New Delhi: Mittal Publication.
Oakley, P et. al. (1984). *Approaches to Participation in Rural Development*. Geneva: I.C.O.
Oakley, P. *Projects with People: The Practice of Participation in Rural Development*. Geneva: I.L.O.
Oommen, M.A. & Datta, A. (1995*). Panchayats and their Finance*. New Delhi: ISS.
Oommen, M.A. (1995). *Devolution of Resources from the State to the Panchayati Institutions.* New Delhi: ISS.

Semester III (Group A)

Paper-IV: Disaster Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper has been introduced for the students of Public Administration to make them aware about different types of disasters and their management in India. Apart from developing and understanding of the strategy for disaster course will develop leadership and management skills of the disaster management .Case studies, role plays , mock drills, field visits, documentaries and interaction with experts in the field of disaster menegement will form the pedagogical scheme of instruction.

UNIT-I

Disaster: Concept & Dimensions
Natural Disasters: Earthquakes, Volcanic Eruptions, Floods, Cyclones, Climate Change
Man-made Disasters: Anthropogenic, Soil degradation, Desertification, Deforestation

UNIT-II

Disaster Management Act 2005
Organisational Framework for Disaster Administration in India at the Union, State and Local levels (including Nodal Agency, National Disaster Management, Authority, State Authority)

UNIT-III

Role of Information and Communication Technology Systems in Disaster Management
Interstate and International Cooperation for Disaster Management
Role of NGOs and Army in Disaster Management

UNIT-IV

Disaster Risk Reduction – Sustainable Development
Disaster Preparedness; Relief and Rehabilitation
Disaster Management Training

List of Readings

Anderson, J.(2008).*Public Policy Making: An Introduction*.5th ed.. Boston: Houghton-Mifflin.

Asian Development Bank.(1991). *Disaster Mitigation in Asia and the Pacific* .Manila: ADB.
Dynamics of the Emergency Management System.*Public Administration Review*.56(3)235-244.

Goel, S.L.(2006).*Encyclopedia of Disaster Management*.New Delhi: Deep and Deep.

Govt. of India/UNDP.(2002-07).*Disaster Risk Management Programme (2002-07): Community Based Disaster Preparedness and Risk Reduction through Participation of Committees and Local Self Governments* www.ndmindia.nic.in/EQProjects/goiundp2.0.pdf

Monappa,K.C.(2004).*Disaster Preparedness*. New Delhi .Akshay Public Agencies.

Narayan, B.(2009).*Disaster Management*. New Delhi .A.P.H. Publishing Corporation.

Princen T.Y.(1994).*Environmental NGO's in World Politics*.London: Routledge.
Sahni,P. Ariyabandu, M. Malagoda,M.(2003).*Disaster Risk Reduction in South Asia*.New Delhi: Prentice Hall.
Satendra and Sharma,V.K.(2004).*Sustainable Rural Development for Disaster Management*.New Delhi.

Schnneider, Saundra K.(2009).*Flirting With Disaster: Public Management in Crisis Situations* NY.

Wamsley, Gary L. and Aaron D. (May/June 1996).Escalating in a Quagmire: Changing.

Semester III (Group A)
Paper - V: Administration of Non-Government Organisations
(Common in Groups A, C & D; Compulsory for group D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objectives of the Course: This Paper is designed to prepare future NGO and Public Administrators to understand the theoretical conceptualization of the NGO and the NGO Sector in the framework of a developing economy and society.Lectures, case study analysis,presentations and field trips will be used to teach this course. At the end of the course the student will have an understanding of the commonly adopted organizational forms and governance structures pertaining to NGOs; issues of governance, capacity building and accountability; funding sources, making grant applications and project proposals; and also gain an understanding of the NGO-Government interface and its impact on the working of NGOs. Case studies of three international and domestic NGOs will further deepen the understanding and equip them to work as managers in the NGO Sector in combination with the other papers in this programme..

UNIT-I

Non Governmental Organisations (NGOs): Concept, Rationale and Scope
National Policy on the Voluntary Sector 2007
NGO-Government Interface in India with special reference to the Planning Commission, Ministries and Departments

UNIT-II

Organisational Forms and Governance Structures of NGOs: Trust; Society; Company
NGO-Government & NGO-Private sector partnerships: Rationale and practice
Sources of NGO Funding; Government and Foreign Grants: Eligibility, Requirements & Procedures with special reference to Foreign Contributions

UNIT-III

Issues of Governance; Capacity Building; Autonomy; Ethics
Accountability of NGOs: Rationale, Mechanisms and Problems
Formulation of a Welfare/Development Project Proposal including Monitoring and Evaluation arrangements

UNIT-IV

Case Studies:
Self Employed Women's Association (SEWA): Organisation, Functions and Working
Red Cross Society of India: Organisation, Functions and Working
Voluntary Action Network India (VANI)
OXFAM India

List of Readings

Bava N. (ed.) (1997). *Non-Government Organisations in Development: Theory and Practice*. New Delhi: Kanishka Publishers.

Chatterjee A. (1998). *NGOs: An Alternative Democracy in Hiranmay Karlekar Independent India: The First Fifty Years*. New Delhi: Indian Council for Cultural Relations and Oxford University Press.

Dantwala. M.L. Sethi Harsh and Pravin Visaria (eds.) (1998) *Social Change Through Voluntary Action.* New Delhi. Sage Publications.

Eleventh Five Year Plan (2007-12). Planning Commission, New Delhi.

Gangrade. K.D. and Jain S. (1995). NGOs: *Retrospect and Prospect*. New Delhi: Friedrich Ebert Stiftung.

Government of India (1994). An Action Plan to bring about Collaborative Relationship between Voluntary Organizations and Government. CAPART. New Delhi. Government of India. http:pcserver.nic.in/ngo/reports.aspx

Handy. C. (1990). *Understanding Voluntary Organizations – How to make them Function Effectively* London: Penguin Books.

Indian Red Cross http://www.indianredcross.org/

Jain R.B. (1995). *NGOs in Development Perspective*. New Delhi: Vivek Prakashan. Self Employed Women's Association http;//www.sewa.org/

Jain. N. (2009). *Handbook for NGOs: An Encyclopaedia for Non-Governmental Organisations and Voluntary Agencies*. (I & II). New Delhi. Nabhi Publications.

Kalima ,R.(1992).*Where Women Are Leaders: The Sewa Movement in India* .New Delhi:Vistaar Publications.

Mohanty, M. and Singh,A.Voluntarism and Government: Policy, Programme and Assistance, Voluntary Action Network India (VANI), http:pcserver.nic.in/ngo/reports.aspx

Nanavaty Meher and Kulkarni P.(1998). *NGOs in the Changing Scenario* .New Delhi. Uppal Publishing House.

OXFAM India .www.oxfamindia.org.

Planning Commission .(2002).*Proceedings of the All India Conference On The Role Of The Voluntary Sector In National Development*. http:pcserver.nic.in/ngo/reports.aspx

Prasad.K. (ed.).(2000).*NGOs and socio-Economic Development Opportunities* .New Delhi: Deep and Deep Publications Pvt. Ltd.

Report of the Steering Committee on Voluntary Sector for The Eleventh five-year Plan (Planning Commission (2007) .New Delhi,http://planningcommission.nic.in

Report of the Steering Committee on Voluntary Sector for The Tenth five-year Plan (Planning Commission(2002).New Delhi. http:pcserver.nic.in/ngo/reports.aspx

Smith-Sreen,P.(1995).Accountability in Development Organisations : Experiences of Women Organisations in India (New Delhi: Sage Publication,

Voluntary Action Network India .www. Vaniindia.org.(VANI)

Voluntary Organisations Database and Reports http:pcserver.nic.in/ngo/

Semester III (Group A)
Paper VI: Public Health Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Course: The paper prepares students in the area by exposing them to theoretical issues related to the challenges of Public Health Administration besides implementation. The students will understand healthcare policies and programmes including organizational set up at the union, state and local levels. Focussed study of some health care programmes is included besides the concept of hospital management.The study of structure and role of the National Institute of Health and Family Welfare and Medical Council of India and the World Health Organization (WHO) will inform the students of the national and international institutional structures of health administration.Special seminars and workshops will be organized to impart specialist knowledge to students.Field trips will also be organized to expose the student to health administration on the ground.

UNIT – I

Public Health Administration - Nature, Significance and Scope
Challenges of Public Health Administration
Implementation and Evaluation of Healthcare Policies and Programmes

UNIT – II

Union Ministry of Health and Family Welfare: Organization, Functions and Role
Health Administration at the State Level: Organization, Functions and Role of Department of Health
Administration of Primary Healthcare at the Local Level

UNIT – III

Healthcare Programmes in India - Family Welfare Programme; Reproductive Child Healthcare; Immunization Programme; National Rural Health Mission (NRHM)
Hospital Management: Organization, Function and Role

UNIT – IV

National Institute of Health and Family Welfare: Structure, Functions and Role
Medical Council of India: Structure, Functions and Role
WHO: Structure, Functions and Role in Asia

List of Readings

Ballabh.,C.(2007).*Health Care Services in Hospital*.New Delhi, Alfa Publication.
Ghosh.B.(1948).*A treatise on Hygiene and Public Health*.Calcutta: Scientific Publishing Company.
Goel. S.L.(1980).*Health Care Administration*.New Delhi: Sterling Publishers.
Goel.S.L.(2010).*Organisational Structure of Health Care System and Hospital Administration* .New Delhi, Deep & Deep Publishers Pvt. Ltd.
Hanlon John.H.(2008).*Principles of Public Health Administration*. St. Louis: C.V. Mosley Co.
Mahal.A. Debroy B. and Bhandari.L .(2010).India Health Report, 2010.New Delhi. BS Books.
Report of the Health Survey and Planning Committee(1959-61).
Sanjivi. K.S.(2007).*Planning India's Health* .Orient Longman.

Semester III – (Group A)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)
INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper provides an opportunity for students to acquire a deep knowledge and understanding of the concepts, approaches, indices and models used in the study of Comparative Public Administration. It will equip the student to apply the comparative approach through the theoretical formulations studied in Unit I to the economic, social, political and administrative systems and their working in the countries listed in the latter units. The universal configuration of groupings - G-20, SAARC, BRICS - has been adopted for a comprehensive case coverage to be studied in the current international scenario. The case study approach will be adopted for analysis. Teaching and learning will be through lectures, seminars, group work and presentations.

Unit I

Comparative Public Administration: Meaning, Significance, Scope, and Evolution
Approaches of Comparative Public Administration with special reference to the Bureaucratic Approach; the General Systems Approach; Structural-Functional and Ecological Approach.
Models of Comparative Public Administration with special reference to the Agraria - Industria Model; Prismatic Model.
Characteristics of Administrative systems in developed and developing countries.

Unit II

G-20 COUNTRIES
Political and Administrative Systems of U.S.A., U.K., France and Germany

Unit III

SAARC COUNTRIES
Political and Administrative Systems of India, Pakistan, Afghanistan and Bangladesh

Unit IV

BRICS COUNTRIES

Political and Administrative Systems of Brazil, Russia, South Africa, China

List of Readings

Almond, G., & Powell. G.B. (1972). *Comparative Politics: A Developmental Approach.* New Delhi: Amerind.

Arora, R.K. (1972). *Comparative Public Administration: An Ecological Perspective*. New Delhi: Associated Publishing House.

Arora, R.K., & Sharma, S. (Eds.). (1992). *Comparative and Development Administration; Ideas and Actions*. Jaipur: Arihand Centre for Administrative Change.

Bhatt, A., & Ranjan, R. (2010). *Comparative Government and Politics* (1st ed.). New Delhi: Anmol Publications Pvt. Ltd.

Chaturvedi, T.N. (1994). *Tulnatmak Lok Prashashan*. Jaipur: College Book Depot.
Farazmand, A. (Eds.). (2001). *Handbook of Comparative and Development Public Administration* (2nd ed.). New York: Marcell Dekker Inc.
Heady, F. (2001). *Public Administration: A Comparative Perspective* (6th ed.). New York: Marcel Dekker Inc.
Nadkarni, V. & Noonan, N. C. (Eds.). (2013). *Emerging Powers in a Comparative Perspective: The Political and Economic Rise of the BRIC Countries.* USA*:* Bloomsbury Academic.
Public Administration Review. (2007). *Special Issue on Comparative Public Administration*. New Delhi.
Ray, S.N. (2004). *Modern Comparative Politics: Approaches, Methods and Issues*. New Delhi: Prentice Hall of India.
Riggs, F.W. (1961). *The Ecology of Public Administration*. Bombay; Asia Publishing House.
Riggs, F.W. (1964). *Administration in Developing Countries: The Theory of Prismatic Society*. Boston: Houghton Mifflin Co.

Internet Sources

[Online] Available from http://news.bbc.co.uk/1/hi/country_profiles/default.stm
[Online] Available from https://www.cia.gov/library/publications/the-world-factbook/index.html
[Online] Available http://www.nationmaster.com/

Indicators/ Indices

- Democracy Audits: http://worldaudit.org/
- Economist Intelligence Unit Livability Index (Cities): www.eiu.com/
- Failed States Index: http://www.fundforpeace.org/global/?q=fsi
- Freedom Index: http://www.socialprogressimperative.org/
- Global Peace Index: http://www.visionofhumanity.org/
- Human Development Index: http://hdr.undp.org/en/statistics/
- Legatum Prosperity Index: http://www.prosperity.com/
- Transparency International Corruption Indexes: http://www.transparency.org/policy_research/surveys_indices
- World Bank Indicators Database (multiple economic and social indicators): http://data.worldbank.org/indicator
- Worldwide Governance Indicators (WGI): http://info.worldbank.org/governance/wgi/index.asp
- World values survey: http://www.worldvaluessurvey.org/index_organization

Semester III – (Group A)
Paper-VIII: Dissertation
(Common to Groups A, B, C & D)

(i) Dissertation option of only those students will be considered who apply for it within 15 days of normal admission to Semester III (i.e. without late fee) provided that such students have obtained at least 50% marks in the aggregate of Semester I and II.

(ii) Students for dissertation will be selected on the basis of merit in M.A. I. Selected students will be notified of the acceptance of dissertation as option within 20 days from the date of normal admissions.

(iii) Students opting for dissertation will submit the title and brief synopsis of their dissertation within four weeks from the date of notification to them, but not later than 15th November of the respective year, to be placed before the Postgraduate Board of Studies for approval.

(iv) Each student opting for dissertation from University School of Open Learning will have to be in contact with the supervisor for a minimum of eight weeks.

(v) All candidates opting for dissertation will submit the thesis one week prior to the commencement of final examination.

(vi) Panel of examiners for this course will be appointed by the PG Board of Studies.

(vii) The evaluation of the dissertation will be by an External Examiner and an Internal Examiner. The average of the marks awarded by these examiners will be sent confidentially to the Examination Branch through the Chairperson. If the difference between the two is more than 15 marks, a third examiner will be appointed. The marks awarded by the third examiner will be final.

Semester-III (Group B)
Paper-II: Economic Administration (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper would be compulsory for the students specializing in Economic Administration (with special reference to India) and during the course of study they will be familiarized with the economic models of the government, industrial policies and economic legislations. In addition, the students would be taught about the promotional role of state by referring to various promotional and infrastructural public sector undertakings. Apart from regular classroom teaching,special talks/lectures from experts as well practitioners from the civil service/industry will be organized to establish links between theory and practice and develop the student's critical skills.

Unit-I

Economic Administration: Nature and Scope
Market Failure: The Rationale for Government Intervention
Misuses of the Theory of Market Failure
State versus Market Debate

Unit-II

Economic Models of Government
Monetary Policy: Concept, Objectives, Instruments and Administration
Fiscal Policy: Concept, Objectives, Instruments and administration

Unit-III

Economic Legislation: Rationale, Philosophy and Overview
Industrial (Development and Regulation) Act, 1951
Foreign Exchange Management Act, 1999
Competition Act 2002

Unit-IV

Industrial Policy Resolutions, 1956 and New Industrial Policy, 1991
Promotional Role of State:

- Industrial Finance Corporation of India (IFCI): Organisational Structure, Objectives and Role;
- Industrial Development Bank of India (IDBI): Organisational Structure, Objectives and Role;
- Small Industries Development Bank of India (SIDBI): Organisational Structure, Objectives and Role

List of Readings

Bailey,S.J.(2001).Public Sector Economics: Theory, Policy and Practice(2nd ed.) .London: Palgrave.
Govt. of India .Five Year Plan Documents
Jha, L.K.(1986) .*Economic Administration in India – Retrospects and Prospect* .New Delhi: IIPA.
Kuchhal, S.C. (1989) .*Industrial Economy of India* .Allahabad:Chaitanya Publishing House.
Marathey, S.S. (1986).*Regulation and Development* .New Delhi: Sage Publications.
Mishra, S.K. and Puri, V.K.(2010).*Indian Economy : Its Development Experience* . New Delhi: Himalaya Publishing House.
Ramanadham, V.V.(1965).*The Working of Public Sector* .Bombay: Allied Publishers.
Taxmann's .(2009).*Economic Laws* .New Delhi: Taxmann Publications (P) Ltd.
United Nations .(1974).*Organisation, Management and Supervision of Public Enterprises in Developing Countries* .New York: U.N.
World Bank.(1995)*Bureaucrats in Business : The Economics and Politics of Government Ownership* .New York: World Bank.

Semester III (Group B)

Paper-III: Company and Cooperative Law (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The present paper is designed to educate the students about the structure, types and characteristics of a Company and a Co-operative. Besides making the students familiar with the capital structure, it would give them the insight of various sources of Finances. It would also give them insight about various aspects of cooperatives.Case study analysis will be anintegral part of class room pedagogy.

Unit-I

Company: Meaning, Nature and Characteristics; Types and Advantages
Incorporation: Meaning, Procedure
Memorandum of Association and Articles of Association

Unit-II

Prospectus: Meaning, contents, Statement in lieu of prospectus, Liabilities for Mis-statement
Share Capital: Meaning, Nature and Types, Allotment and Transfer of Shares
Debentures: Meaning, Types

Unit-III

Company Management - Appointment, Powers and Duties of the Board of Directors
Meetings: Kinds, Procedure
Winding up of Companies: Types, Procedure; Role of National Company Law Tribunal
Company Law in a Computerized Environment: E–filing

Unit-IV

Co-operatives: Concept, Significance and Types
Cooperative Legislation in India
Procedure for Registration of a Society
Registrar: Powers, Duties and Role

List of Readings

Bedi, R.D..(1981).*Theory, History and Practice of Cooperation*.Meerut : Loyal Book Depot.
Bhandari, M.C.(2015).*Guide to Company Law Procedures* (Vol.3) .Agra: Wadhwa and Company.
Goel, B.B.(1984).Cooperative Management and Administration.New Delhi : Deep and Deep Publications.
Govt. of India.Act and Statute (As Amended) The Companies Act, 2013.

Gower, L.C.B.(1954). *Principles of Modern Company Law*.London: Stevens and Sons Limited.
Kuchhal, M.C. and Kuchhal, V.(2013).*Modern Indian Company Law*(27th ed.). New Delhi:(Publishers)
Mamoria, C.B. and Saxena, R.D.(1973).*Cooperation in India* .Bombay: Kitab Mahal.
Nainta, R.P.(2004).*Laws Relating to Cooperative Societies : A Commentary*. Mayur Enterprise.
Shah, S.M.(1975).*Lectures on Company Law* .Bombay:Tripathi Pvt. Ltd.
Singh,A .*Company Law* . Lucknow: Eastern Book.
Taxmann's(2015). *Comparative Study of Companies Act 2013 and Companies Act 1956*. New Delhi: Taxmann Publications Private Limited.

Semester III (Groups B)
Paper IV – Human Resource Management
(Common in Groups B, C & D; compulsory for Group C)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The course on Human Resource Management (HRM) is designed to enhance the learning of student regarding the basic concepts and frameworks of HRM and understand the roles that HRM plays in the effective functioning of Public Enterprises. .The knowledge regarding these will be imparted through diverse teaching pedagogies like class room, lectures, case studies , discussions, presentations and assignments where students will examine and discuss about different companies and HRM practices adopted by them.At the end of this course the students will be able to discuss the relevance of HR policy, organizational structure, HR systems (manpower planning , recruitment, wage systems, fringe benefits etc.) and organizational culture.

UNIT-I

Human Resource Management: Concept and Significance
Manpower Planning: Concept, Significance and Steps
Job Analysis and Job Description: Concept and Significance

UNIT-II

Recruitment: Concept, Sources; Methods and Modes
Promotion: Concept, Types
Training – Concept, Types, Techniques
Employee Appraisal: Concept and Techniques

UNIT-III

Wages: Concept, Types and Determinants
Job Evaluation: Concept and Techniques
Fringe Benefits: Concepts and Types

UNIT-IV

Industrial Accidents: Concepts, Causes and Remedies
Employee Turnover: Concept, Causes and Remedies
Absenteeism: Concept, Causes and Prevention

List of Readings

Aggarwal, R.D.(1973).*Dynamics of Personnel Management in India* .New Delhi: Tata McGraw Hill.

Aswathappa, K.(2008).Human Resources and Personnel Management .New Delhi: Tata McGraw Hill.

Davar,R.S.(2008).*Personnel Management and Industrial Relations in India*(2nd ed.).Vikas Publishing House.

Flippo,E.(1976).*Principles of Personnel Management* (4th ed.).New York.McGraw Hill.

Ghosh, P.(2006).*Personnel Administration in India* .Sudha Publications.

Mamoria, C.B.(2008).*Personnel Management(*23rd ed.) New Delhi: Himalaya Publishing House,

Pigors,P & Myers,C(2008).*Personnel Administration: A Point and a Method* (6th ed.) .New York:McGraw Hill

Rao, V.S.P.(2008).*Human Resource Management* .New Delhi: Excel Books.

Yoder,D.(2008).*Personnel Management and Industrial Relations* (7th ed.). New Delhi: Prentice Hall of India.

Semester III (Group B)
Paper V – Financial Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective: To provide an understanding of the function, the roles, the goals and the processes financial management of public enterprises, covering the sourcing of finances and their issues in Investment and Operations. The students will acquire the skills for Financial Management analysis which are very essential for decision making. Case study, discussion method and exercises will be important pedagogical tools.

Unit-I

Nature and Problems of Financial Management in Public Enterprises and Non-Credit Cooperatives;
Government control over Finances
Appointment of financial advisors
Functions of Finance Manager in Modern Age.

Unit-II

Traditional and Modern Measures of Financial Performance: ROI, Earning Price Ratio, SVA, EVA and MVA
Concept and Approaches of Capital Structure Decision: NI, NOI, Traditional and Modigliani Miller Approach
Sources of Funds- Short Term and Long-Term

Unit-III

Cost of Capital-Equity, Preference Capital, Debt and Retained Earnings
Investment decision: appraisal of project; concept, process & techniques of capital budgeting and its applications
Risk and uncertainty in capital budgeting

Unit-IV

Overview of Working Capital Decision: Concept, Components, Factors Affecting Working Capital Requirement
Management of Cash, Inventory and Receivables
Cost-Volume-Profit Analysis for Management Decisions; Calculation of Breakeven Point, Contribution Margin Analysis, Margin of Safety, Profit Volume Ratios

List of Readings

Damodaran, A. (2001). *Corporate Finance: Theory & Practice*. John Wiley and Sons, Inc.
Gitman, L.J. (2007). *Principles of Managerial Finance*. Pearson Education.
Horne, V. (2002). *Financial Management and Policy.* Pearson Education.
James, C. V. (2002). *Financial Management and Policy*, Prentice Hall.
Khan, M.Y. & Jain, P.K. (1982). *Financial Management*. Tata McGraw Hill.
Knott, G. (2004). *Financial Management.* Palgrave Macmillan.
Pandey, I.M. (2015). *Financial Management*, Vikas Publications.
Prasanna, C. (2008). *Fundamentals of Financial Management*, Tata McGraw Hill.
Srivastava, R & Misra, A. (2008). *Financial Management*. Oxford Publishing.

Semester III (Group B)
Paper VI: Corporate Governance
(Common in Groups B, C &D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The objective of this paper is to acquaint the student with the concept of corporate governance and theories of corporate governance. The student will also be instructed about the various aspects of corporate governance with focus on ethics, corporate social responsibility and current issues and problems, primarily focusing on India.

Unit-I

Corporate Governance: Concept & Rationale
Theories of Corporate Governance: Stakeholders Theory: Agency Theory; Sociological Theory
Principles of Corporate Governance with special reference to Principles of Organisation for Economic Co-operation and Development (OECD)

Unit-II

Corporate Governance: Issues and Challenges
Corporate Governance and Ethics
Corporate Social Responsibility

Unit-III

Rights and Privileges of Share Holders and Investors
Board of Directors: Types; Composition & Functions
CEO: Appointment, Functions & Role

Unit-IV

Evolution of Corporate Governance in India
Corporate Governance in Public Enterprises
Corporate Governance in India and Future Trends

List of Readings

Bansal, C.L. (2005).*Corporate Governance – Law Practice &Procedures with Case Studies* .New Delhi: Taxmann Allied Services Pvt. Ltd.

Bhatia ,S.K.(2004).*Business Ethics and Corporate Governance* .New Delhi: Deep and Deep Publication Pvt. Ltd.

Dewan, S.M.(2006).*Corporate Governance in Public Sector Enterprises*.New Delhi: Doeling Kindersley India Pvt. Ltd.

Fernando ,A.C.(2009). *Corporate Governance – Principles, Policies & Practices* (3rd ed.).India:Dorling Kindersley Pvt. Ltd.

Gopalsamy, N.(1998). *Corporate Governance – The New Paradigm*.New Delhi: Wheeler Publishing.

Hazarika,A.(1999).Corporate Governance – Balancing Value Creation & Obligation in Oil industry .New Delhi: Tata McGraw Hill Publishing Company Ltd.

Kumar,S.(2002).*Corporate Governance – A Question of Ethics* .New Delhi:Galgotia Publishing Company.

Mathur ,U.C.(2005).*Corporate Governance and Business Ethics* .New Delhi: Macmillan India Ltd.

Millin,C.A.(2007).*Corporate Governance* .New Delhi: Oxford University Press.

Prasad,D.(2006).*Corporate Governance*.New Delhi: Prentice Hall of India Pvt. Ltd.

Reddy, Y.R.K.& Raju,E.(2000). *Corporate Governance in Banking & Finance* .New Delhi: Tata McGraw Hill Publishing Company Ltd..

Sehgal, M.K.(2004). *Corporate Governance & Restructuring of Industries* (Ambala: Wisdom Publications.

Singh, S.(2005).*Corporate Governance – Global Concepts &Practices* .New Delhi: Excel Books.

Vives,X.(2000).*Corporate Governance Theoretical & Empirical Perspectives* .USA.Cambridge University Press.

Williams,A.(2007)Corporate *Governance* .Mumbai : Jaico Publishing House.

Semester III – (Group B)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group B)
Paper-VIII: Dissertation
(Common in Groups A, B, C & D)

Semester III (Group C)
Paper –II: Social Policy and Welfare Administration
(Common in Groups A & C)

Semester III (Group C)
Paper III – Labour Economics (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: By the end of the course the student will be able to comprehend the various dimensions of labour in a complex labour economy like India. This includes problems of labour, wage fixation and conditions in the labour market. Tools to be employed for the effective teaching of the subject include case study method, audio visuals techniques, brainstorming on various issues, power point presentation, expert talks by professionals from industry etc. Use of these tools will develop the analytical and presentation skills and enhance the knowledge quotient of the students.

UNIT-I

Labour Economics: Nature and Scope
Concept of Labour as a factor of Production
General Features and Problems of Labour in Developing and Developed Countries
Unemployment: Meaning, Causes and Remedies

UNIT-II

Wage Differentials: Intra-Industry, Inter-Industry, Inter-Management and Occupational
Systems of Incentives: Monetary and Non-monetary
Problems of Rationalization and Automation
Factors Governing Slow Structural Changes in the Sectoral Composition of Labour Force in India

UNIT-III

Agricultural Labour: Problems and Issues
Industrial Labour: Problems and Issues
Labour in the Unorganised Sector: Problems and Issues
Issues pertaining to problems in service sector India

UNIT-IV

Wage-Policy and Regulation: Need for State Regulation of Wages, Methods of Wage Regulation Machinery for Wage Fixation
Overview of Economic Reforms and Labour in India with special reference to structural adjustment programme and privatization

List of Readings

Arya,P.P. & Tandon B.B.(2003).*Economics reforms in India*.New Delhi:Deep & Deep publications pvt. Ltd.
Banga,R.(2005).*Critical Issues in India's service-led growth*.Working paper no. 171. New Delhi:Indian council for research on international economic relations.
Bhagoliwal,N.T.(1982).*Economics of Labour and Industrial Relations* .Agra: Sahitya Bhawan.
Borjas, J Georg.(2012).*Labour Economics*.New Delhi, McGraw-Hill Higher Education.
Butler, Arthur D.(1961).*Labour Economics and Institutions* .New Delhi : Amerind Publishing Co.Pvt.Ltd.
Dutt,R & Sundaram, K.P.M.(2011).*Indian Economy* (62nd ed.).New Delhi: S. Chand& Co ltd.,
Elliot,F.R.(1990).*Labour Economics: A comparative Text .UK* :McGraw Hill.
Government of India.(1969).*Report of the National Commission on Labour.*
Joshi,V.M.(1919).*Labour Economics & Labour Problems*.New Delhi: Atlantic.
Mamoria,B.C.(1991).*Dynamics of Industrial Relations* .Bombay: Himalaya.
Misra,N.S.(1994).*An Introduction to Labour and Industrial Laws* .Agra:Sahitya Bhawan.
Mukherjee,A.(2013).The Service Sector in India.Working paper no. 352.Manila, Philippines:Asian Development Bank.
Reddy,.J.R.(2004).*Economics of Labour*.New Delhi: APH Publishing Corporation.
Sharma,K.A.(2006).*Labour Economics*.New Delhi:Anmol Publications.

Semester III – Group (C)
Paper IV: Human Resource Management (Compulsory)
(Common in Groups B, C & D, compulsory for Group C)

Semester III – (Group (C)
Paper V: Administration of Non-Government Organisations
(Common in Groups A, C &D; compulsory for Group D)

Semester III (Group C)
Paper VI: Corporate Governance
(Common in Groups B, C & D)

Semester III – (Group C)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group (C)
Paper-VIII: Dissertation
(Common in Groups A, B, C & D)

Semester III (Group D)
Paper II: Administrative and Office Management (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Administrative efficiency has, at its core, the systematization of organization and procedures thereby evolving work systems that are appropriate and procedures that eliminate unnecessary delays and allow the office work to be done effectively and at a reasonable cost. The objective of the course is to train the student to look at the setting up and working of an efficient and cost-effective office by familiarizing him with the core areas and issues of office administration.

UNIT-I

Administrative and Office Management: Nature and scope
Office organization: Role, functions and qualifications of office supervisor/office manager
Office layout and Space management

UNIT-II

Physical and Psychological factors in the office – colour, light, noise, air-conditioning, safety
Office Furniture, Machines and Equipment
Office Stationery and Supplies: standardization and codification; purchase, receipt, issue, disposal; store layout and store accounting

UNIT-III

Office communication: Role, Types & Means; handling incoming and outgoing mail
Records Management: Features of good records management; Filing, Classification and Indexing of records; Records Retention Schedules; Preservation of records and Disposal of unwanted records; Centralized and Decentralized record keeping systems

UNIT-IV

Office procedure and office manuals; forms designing and control
Quantitative and Qualitative office work control
Statutory and other Meetings: Drafting, Circulation, Preparation of agenda; Preparation and Confirmation of minutes and proceedings of meetings

List of Readings

Carl , Heyel.(1972).*Handbook of Office Management and Administrative Services*.New York: Mc Graw Hill.
Chopra, K. R.(2008).*Office Management* .Mumbai: Himalaya Books.
G,Whitehead,.(1982) .*Office Practice Made Simple*.London: The English Language Book Society.
Ghosh, Prasanta K.(2003).Office Management: Principles and Practice. (New Delhi: Sultan Chand & Sons .
Gopalkrishan, P.(1999). *Handbook of Materials Management* .New Delhi: Prentice Hall of India.
K,Zane and Qiible.(1977).*Introduction to Administrative Office Management* .Cambridge: Winthrop. Publishers.
K.R.Shrma, K. Shashi and Nayyar ,Sushil.(2002*).Office Management* .Ludhiana: Kalyani Publishers.
N.P, Reddy and R.H. Appannaiah.(1990).*Office Organisation and Management* .New Delhi: Himalaya Publishing House.
R.G.Terry.(1958).*Office Management and Control: The Administrative Managing of Information* .Irwin: Home Wood.
Rachel ,Littlefield.(1981).*Management of Office Operations* .New Delhi: Prentice Hall.

Robinson,M.E & I.H.W. Leffingwel .(1986).*Text Book of Office Management*.N.Delhi: McGraw Hill.
S.Gadkari.(1997).*Office Management for Public Administration-Principles and Techniques* .N. Delhi: Concept Publishing Company.

Semester III – Group (D)
Paper III: Management of Disciplinary Proceedings

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: This paper covers an important area of Public Administration relating to Disciplinary Proceedings and the remedies available to public servants in India. The students would be made familiar with the procedures of enquiries, punishments and application of other legal measures. Apart from lectures case study method will be used to explain different proceedings to the students.

UNIT-I

Disciplinary Proceedings: Concept and Significance
Position of Public Servants under the Constitution and Statutes
Meaning and Scope of Reasonable Opportunity
Conduct Rules

UNIT-II

Major Punishments: Suspension; Dismissal; and Termination
Minor Punishments: Censure; Withdrawal of Promotion and Incentives; Pay Recovery
Fundamentals of Departmental Enquiries

UNIT-III

Role and Scope of Rules of Natural Justice in Disciplinary Proceedings
Corruption/Embezzlement in Public Services
Application of Legal Measures

UNIT-IV

Remedies for Public Servants against Unconstitutional and Illegal Actions of the State

1) Departmental Remedies
2) Tribunal Remedies
3) Ombudsmanic Remedies
4) Court Remedies

List of Readings

Basu , D.D.(2008).Constitution of India .New Delhi: Wadhwa and Company Law Publishers.

Ghaiye,R.K. (1988).*Law and Procedure of Departmental Enquiries* .Lucknow: Eastern Book Company.

Government of India(1987).Administrative Tribunals Act, 1985 with Rules Central Administrative Tribunal (Procedure) Rules.

Jain,N.S and and Jain,P.M(1979).*Principles of Administrative Law* .Nagpur: Wadhwa and Company.

KrishnaN ,Rama V.P. (1974).*Guide to Departmental Enquiries against Government Servants*. Andhra Law Times.

Maheshwari,R.S.(2002).Administrative Reforms in India .New Delhi: Macmillan India Ltd.

Massey,P.I.(1985).*Administrative Law* .Lucknow: Eastern Book Co.

Muthuswamy,P. (1993).Swamy's manual on Disciplinary Proceedings .Madras: Swamy Publishers.

Saxena,R,D.(1987).*Ombudsman-Lokpal* .New Delhi: Deep and Deep Publication.

Sharma, B. Girhar.(1981). *Implementation of Ombudsman Plan in India* .New Delhi: Ashish Publishing House.
Singh, Balbir and Kagzi,J.C.M.(1979).*A Case book of Administrative Law* .New Delhi: Metropolitan Book Company Ltd.
Wade, R.W.R. (1994).*Administrative Law* .Oxford: Clarendon

Semester III – Group (D)
Paper IV: Human Resource Management
(Common in Groups B, C & D ; compulsory for Group C)

Semester III – Group (D)
Paper V: Administration of Non-Government Organisations (Compulsory)
(Common in Groups A, C &D; compulsory for Group D)

Semester III (Group D)
Paper VI: Corporate Governance
(Common in Groups B, C &D)

Semester III – (Group D)
Paper-VII: Comparative Public Administration
(Common in Groups A, B, C & D)

Semester III – (Group (D)
Paper-VIII: Dissertation
(Common in Groups A, B, C &D)

M.A. (PUBLIC ADMINISTRATION)
SEMESTER SYSTEM (2017-2018)
Semester IV (Groups A, B, C and D)

Paper I: Emerging Areas in Public Administration (Compulsory Paper for all Groups)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: An awareness of the concept, legislation and administrative setup of the key areas of environment, consumer protection, human rights and regulatory administration will help the students to solve problems to help public in their community. Apart from lectures, diverse teaching pedagogy like case study, video-screening, class room presentations be used to familiarize the students with new frontiers in Public Administration. The course will develop valuable sills of public speaking, critical thinking and leadership amongst students which are necessary in all areas of life.

Unit-I: Environmental Administration

Environmental Administration: Concept and Significance
The Environment (Protection) Act, 1986
Central Pollution Control Board: Organisation, Functions and Role.
Punjab Pollution Control Board: Organisation, Functions and Role

Unit-II: Consumer Protection and Administration

Consumer Protection: Concept and Significance
Consumer Protection Act, 1986 (with amendments)
Administrative Setup of the Consumer Disputes
Redressal Agencies: National, State and District Level

Unit-III: Human Rights and Administration

Human Rights: Concepts and Significance
Universal Declaration of Human Rights 1948
National Human Rights Commission: Organisation, Functions and Role
Punjab state Human Rights Commission: Organisation, Functions and Role

Unit-IV: Regulatory Administration

Regulatory Administration: Concept and Significance
Telecom Regulatory Authority of India: Structure, Functions and Role
Insurance Regulatory and Development Authority of India: Structure, Functions and Role
Central Electricity Regulation Commission: Structure, Functions and Role.

List of Readings
Semester IV (Groups A, B, C and D)

Paper I: Emerging Areas in Public Administration (Compulsory Paper for all Groups)

List of Readings

Subbian, Adaikkalam. (2006).*Human Rights: Philosophy, Promotion, Protection and Perspectives.* Ambala Cantt,India: The Associated Publishers.

Gambhir, Cheena. (2007). *Consumer Protection Administration*. New Delhi: Deep & Deep Publications.

Byrne, J. O' Darren. (2004).*Human Rights: An Introduction. Singapore*. Delhi: Pearson Education.

Rosenbloom, David. (1989). *Public Administration: Understanding Management Politics and Law in the Public Sect*or. New York: McGraw Hills Book Company.

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006). *Environmental Issues of Development*. Ambala Cantt, India: The Associated Publishers.

Singla, Gurnax. (1993). *Law of Consumer Protection*. Jaipur: Bharat Law Publications.

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Symonides, Janusz. (2002). *Human Rights: Concepts and Standards*. New Delhi: Rawat Publications.

Verma, J.S. (2006). *The Universe of Human Rights*. Delhi: Universal Law Publishing Company.

Narain, Laxmi. (2005). *Public Enterprise Management and Privatization*. New Delhi: S. Chand & Company Ltd.

Ansari, M.R. (2006). *Protecting Human Rights*. New Delhi: Maxford Books.

Jaswal, P.S. &Jaswal, Nishtha. (2000). *Environmental Law*. Pioneer Publications.

Mukund, RajanGobind. (1997). *Global Environmental Policies*. Oxford University Press.

Sarkar, S.K. (2002). Ed. Srivastava, Leena. *Reforms in the Infrastructure Sectors*:*Next Steps.* Tata Energy Research Institute.

Chary, S.N. &Vyasalu, Vinod. (2000). *Environment Management and Indian Perspectiv*e. Macmillan.

Sunder, S. & Sarkar,S.K.(2000). *Framework for Infrastructure Regulation*. Tata Energy Research Institute Press.

Aggarwal, V. K. (1993). *Consumer Protection Law &Practice*. New Delhi: BLH Publishers Ltd.

Ramanadham, V.V. (1989). *Privatization in Developing Countries*. London: Routledge.

Semester IV (Group A)
Paper II: Education Policy and Administration (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: The basic objective of this paper is to familiarize the students with the concepts of various systems of education and educational administration in India. In particular, the paper covers the provisions of the National Policy on Education, Five Year Plans and Sarv Shiksha Abhiyan. The organizational set up for administration of education and various agencies would also be taught.

UNIT – I

Educational Administration: Concept, Significance and Scope
Concepts: Universalization of Elementary Education, Non-Formal Education, Vocationalization of Secondary Education, Autonomous Colleges
Problems and Challenges of Educational Administration

UNIT – II

National Policy on Education, 1986 as modified in 1992 (Plan of Action, 1992)
Education and Five-Year Plans: Approaches, Priorities and Investments; RTE
Main Features, Organisation and administration of an Indian University

UNIT – III

Organization and Administration of Education at the Central Level with special reference to the Department of Education
University Grants Commission: Structure, Functions and Role
National Council of Educational Research and Training: Structure, Functions and Role

UNIT – IV

Socio-economic Problems of Educational Development – Equality of Opportunity Employment and Productivity, Nation Building and Citizenship; Globalization and Education
Implementation and Evaluation of Sarva Siksha Abhiyan

List of Readings

Goel, S.L.(1994).*Education Policy and Administration*.New Delhi: Deep and Deep Publication.
Government of India.(1966).*Report of the Education Commission*. Selected Chapters.
Lulla, B.P. and Murty, S.K.(1976*).Essentials of Educational Administration*.Mohindra Capital Publishers.
Mukerji, S.N.(1962).*Administration of Education, Planning and Finance* .Baroda: Acharya Book Depot.
Naik, J.P.(1975).*Policy and Performance in Indian Education* .New Delhi: Orient Longman.
Naik, J.P.(1975).*Quantity, Quality and Equality in Indian Education*.Bombay: Allied Publishers.

Semester IV (Group A)
Paper -III: People's Empowerment and Urban Governance (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objective of the Paper: Local Self-government is the government next door. Urban citizens are affected in various ways by the nature and working of their respective local government institutions. The students, after the course, should have a fairly good understanding of the urban affairs, problems and challenges, various urban development programmes and the setup of urban local bodies. The students should be able to critically evaluate the functioning of these institution and various programmes and should be able to make constructive suggestions. The essential pedagogical tool in this paper should be discussion, quiz, field studies and presentations.

UNIT-I

Urbanisation and Urban Challenges in India
Issues in Urban Development Policy including small cities
Problems of Development of Small and Medium Towns
Evolution of Urban Local Government in India with special focus on the 74th Constitutional Amendment Act.

UNIT-II

Urban Local Bodies in India:
Municipal Corporation: Structure, Composition, Functions and Role
Municipal Council and Nagar Panchayat: Structure, Composition, Functions and Role
Relationship between Deliberative and Executive wings
Role of other Urban Bodies: Cantonment Boards; Improvement Trusts; Development Authorities.

UNIT-III

Urban Finance: Sources and Problems
State Finance Commission: Composition, Functions and Role with special reference to Urban Local Bodies
Personnel Administration in Urban Governance: Role and Functions of Municipal Commissioner; Executive Officer
Provincialisation of Municipal Services

UNIT-IV

National Rural Livelihood Mission (NRLM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
Problems and Challenges of Rural–Urban Relationship
State Control over Local Government Institutions

List of Readings

Arora,K. Ramesh & Goyal,Rajni.(1996).*Indian public Administration* . Delhi: Vishwa Prakashan.
Aziz, Abdul.(1996).*Decentralised Governance in Asian Countries* .New Delhi: Sage.
Bhattacharya, Mohit.(1976).*Management of Urban Government in India* .New Delhi: Uppal.
Bhayana, Sahib Singh and Singh, Swinder(1991).*Local Government in India*.Jalandhar: New Academic Publishing Company.
Burns, Danny.(1994) Ed.. al.*The Politics of Decentralisation: Revitalising Local Democracy* London: Macmillan.
Chaturvedi, T.N. and Datta, Abhijit.(1984).*Local Government* .New Delhi: IIPA.
Cheema, G. & Ponoinelli D. (1983*).Decentralisation and Development Policy Implementation in Developing Countries* .London: Sage.
Kaushik,S. L.(1986).*Leadership in Urban Government in India* .Allahabad: Kitab Mahal.
Maheshwari, S.L.(2003).*Local Government in India* .Agra: Lakshmi Narain Aggarwal.
Singh, Charanjeev & Kaushik, Meenu.(2005).*Urban Poverty and Its Alleviation Programmes* . Chandigarh: APH.

Sivaramakrishanan, K.C. (1993). Ed. al. *Urbanisation in India: Basic Services and People's Participation* .New Delhi: ISS.

Semester IV (Group A)

Paper IV: Police Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: The students will understand the complex role of police in contemporary society. Pedagogical tools to be used by teachers include: short films, role plays, field visits, case studies, visits to police stations. The students will develop analytical and critical skills and develop an understanding of working of police administration.

Unit-I

Police Administration: Evolution; Concept and Significance; Police: Powers and Functions
Reforms in Police Administration after Independence
Crime: Types, Causes and Remedies

Unit-II

Police set up at National Level: Organisation, Functions and Role
Police set up at State Level: Organisation, Functions and Role
Police set up at District Level: Organisation, Functions and Role
Police set up at Local Level: Organisation, Functions and Role

Unit-III

Police Personnel IPS and State Police Service
Recruitment, Promotion, Training, Conduct and Discipline

Unit-IV

Community Policing: Concept, Role and Significance
Police and Human Rights: Emerging Issues and Challenges
Police and Women

List of Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books

Ghosh, G.(2010).*Re-legitimizing Indian Police* .New Delhi: Radha Publication.

Ghosh,S.(1973). *Police Administration: Organisation and Procedure* .Eastern Law House.

Ghosh, S.K. and Hummer, Don .(2008). *Encyclopaedia of Police in India.* Volume I. New York: Taylor & Francis Group.

Hunter ,R. D. Barker,T & Mayhall,P.D.(2010*). Police Community Relations and the Administration of Justice.*Prentice Hall.

Jim,R & Rustamji, K.F.(1993).*Handbook of Police Administration*, CRC Press. New Delhi : Ashish Publishing House.

Rohtagi,M.(2007). *Spy System in Ancient India* .New Delhi: Gyan Books Pvt. Ltd.

Rohit ,C.(2009). *Policing Reinvention Strategies in a Marketing Framework*. New Delhi:Sage Publication.

Subramaniam, K.S.(2009). *Political Violence and the Police in India*.SAGE Publications, India.

Srivastava, A.(1999).*Role of Police in a Changing Society*. New Delhi: A.P.H. Publishing .

Swanson,C.R. , Territo,L. & Taylor,R.W.(2011). *Police Administration:Structures ,processes ,and behavior* .Prentice Hall.

Semester-IV (Group A)
Paper-V: International Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: The paper is designed to acquaint the students both with the theoretical and practical aspects including the origin, objectives, historical legacy and the role of International Administration in the global framework. A focused study of various institutions and agencies related to international administration includes functions and role of WTO, IMF, SAARC, ASEAN, UNESCAO, UNICEF, ILO, WHO, UNDP besides covering the United Nations, its Secretariat and main aspects of Globalization and Global Governance.

Unit-I

International Administration: Origin, Objectives and Role of United Nations: Historical Legacy and Evaluation
United Nation: Organisation, Functions and Role

Unit-II

International Institutions: Functions, Role and Problems of WTO (World Trade Organisation)
World Bank (WB) and International Monetary Fund (IMF)
Regional Institutions: Functions, Role and Problems of SAARC and ASEAN

Unit-III

UN Secretariat: Organisation, Functions and Working
Future of the United Nations
Globalization and Global Governance

Unit-IV

Machinery to Settle International Disputes
Organs and Specialized Agencies of the United Nations: Function, Programmes and Role with special reference to UNESCO, UNICEF, ILO, WHO, UNDP

List of Readings

Cable, V.(1999).*Globalization and global governance* .London: Royal Institute of International Affairs.
Goel, S.L. (1976).*International Administration* .New Delhi: Sterling Publishers.
Narsimhan, C.V.(1988).*The United Nations: an inside view* .New Delhi: United Nations Publications.www.un.org/ www.saarc-sec.org/ www.ilo.org/ www.aseansec.org/
Saksena, K.P.(1993*).Reforming the United Nation: the challenge of relevance* .New Delhi: Sage Publications.

Semester IV – Group A
Paper VI: Information Technology and Computer Applications in Public Administration
(Common in Groups A, B, C & D; compulsory for Group D))

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: This paper is designed to introduce the student to the basic aspects of information technology and develop an understanding of the ways in which this technology can be adopted and adapted in public administration. The student will ultimately be in a position to understand and integrate the technology and the human resource input requirements for designing effective management information systems, e-governance applications and structural arrangements mindful of the issues of security and ethics.

UNIT-I

Meaning, Role, Evolution of Management Information Systems
Components and activities of an Information System
Operations and Management Classification of Information Systems; MIS and Decision Making
Building and Maintaining Information Systems; The Information Systems Department

UNIT-II

General Model of a Computer System; Understanding Input devices; Output Devices; Primary and Secondary Storage Devices and Media; CPUs
Operating System Basics; PC Operating Systems; OS and User Interface (Windows XP)
Hardware; Software; Types of Software
Networking; Local and Wide Area Networks

UNIT-III

Word Processing Software: Uses, Interface and Special Features. (Using MS Word)
Spread Sheet Software: Uses, Interface and Special Features. (Using MS Excel)
Data Base Management Software: Uses, Interface and Special Features. (Using MS Access)
Introduction to the Internet; Internet basics (Using Internet Explorer)

UNIT-IV

E - Governance: Concept, Significance and Scope
Computer Applications in Public Administration
Computer Security, Crime and Ethics

List of Readings

Basandra, S.K.,(1999).Computers Today .New Delhi: Galgotia Publishers Pvt. Ltd.

Bedi, K., Singh, P. & Srivastava, S.(2001).*Government@net* .New Delhi: Sage Publications.

Bhatnagar, S.(2004).*E Government: From Vision to Implementation (A Practical Guide with Case Studies.* New Delhi: Sage Publications.

Brien, J & Marakas, G. M.(2011).Management Information Systems . India: Tata McGraw Hill Publishing Company Limited .

Davis, G. B., Olson &Margrethe, A.(1985). *Management Information Systems: Conceptual Foundations, Structure and Development* .New York: Tata McGraw Hill.

Hodson, P.(1998).*Local Area Networks.* New Delhi: BPB Retreived from http://www.msoffice-tutorial-training.com/

Laudon, K. C. & Laudon, J. P.(2011,12th ed). *Management Information Systems: Managing the Digital Firm* .New Delhi: Pearson Education .

Leon, A & Leon, M.(1999).*Introduction to Computers* .New Delhi: Vikas Publishing House Pvt. Ltd.

Lucas, H. C. Jr.(2000).*Information Technology for Management* .New Delhi: Tata McGraw-Hill.

Murdick,R., Ross,C., Joel E. & Claggett, J. R.(1984). *Information Systems for Modern and Management* .New Delhi: Prentice Hall.

Norton, P.(2006).*Introduction to Computers* New Delhi: Tata Publications.

Saxena, S.(2009).*A First Course in Computers: Based on Windows XP and Office XP .New Delhi:* Vikas Publishing Pvt. Ltd.

Semester IV – Group A
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The aim of the paper is to acquaint the students with the concept and philosophy of ethics with special reference to ethics in public life and accountability of public services in India. The paper through teaching in case studies will enhance the problem solving skills on situations relating to integrity, probity in public life and problem solving approach to various issues and conflicts face by him in dealing with society. The students will learn to effectively communicate ethics and governance concepts and arguments in a logical manner.

Unit I

Ethics: Concept and Significance; Importance of Ethical Values in Public Life
Contribution of Kautilya, Vivekananda and Mahatma Gandhi to Ethics in Administration
Contribution of Western Administrative Thinkers to Ethics with special reference to Plato and Immanuel Kant

Unit II

Ethics and Human Interface: Essence, Determinants and Consequences of Ethics in Human Actions
Significance of human values and Attitudes in Ethical Development
Morality: Concept and Issues in Public service

Unit III

Ethics in Public Life: Civil Service Neutrality and Anonymity
Significance of Ethical and Moral Values in Governance
Code of Ethics and Code of Conduct for Civil Services in India

Unit IV

Probity in Governance- Corruption: Concept and Causes; Mechanism for Fighting Corruption
Work Culture- Concept, Significance and Characteristics of a good work culture;
Case Studies relating to Ethics in Public Administration

List of Readings

Arora, R. K.(2008).*Ethics in governance: innovations issues and instrumentalities.* Jaipur :Rawat.

Bhargava,R. (2006).*Politics and ethics of the Indian Constitution*. New Delhi: OUP.

Chaturvedi, T. N. (Ed.)(1996). *Ethics in public life*. New Delhi: IIPA.

Fox,W.(2009).*A theory of general ethics – human relationships, nature, and the built environment*.New Delhi: PHI Learning.

Ghere,R.K. and Frederickson,H.G. (Eds.) . (2007). *Ethics in Public Management*. New Delhi: PHI Learning.

Godbole,M.(2003).*Public accountability and transparency: the imperatives of good governance.* New Delhi: Orient Longman.

Hooja,R.(2008).*Corruption, ethics and accountability essays by an administrator*. New Delhi: IIPA

Huberts, L. W.J.C.et.al. (2008). *Ethics and integrity of governance: Perspectives across frontiers* (New horizons in public policy series). California :Edward Elgar Publishers.

Martinez,J.M.*Public administration ethics for the 21st century* .Santa Barbara:ABC-CLIO.

Mathur, B.P.(2014).*Ethics for governance: Reinventing public services*.New Delhi: Routledge Taylor and Francis Group.

Menzel,D.C.(2010).*Ethics moments in government* (American Society of Public Administration)Boca Raton:CRC.

Sawshilya,A.(2012).*Ethics and governance*.New Delhi: Pearson Education.

Second Administrative Reforms Commission (2007). *Ethics in Governance*. New Delhi: GOI.

Sheeran,P.J.(2006).*Ethics in public administration – a philosophical approach*. Jaipur: Rawat. .

Semester IV (Group B)
Paper II: Public Enterprise Management (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: This paper covers various aspects of Public Sector and Public Sector Undertakings in India. In particular, the paper covers various forms of organization, governing boards, privatization and performance of central public sector enterprises in India. Course material will be supplemented by activities like case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

Unit-I

Public Enterprise: Concept, Rationale and Objectives
Role of Public Sector in the Indian Economy
Organisational Forms: Departmental Undertaking; Public Corporation; and Government Company

Unit-II

Governing Boards: Types, Functions, Size and Composition
Legislative Control over Public Enterprises
Ministrial Control over Public Enterprises

Unit-III

Pricing and Public Enterprises
Public Sector Reforms: Rationale; Performance Contract System/Memorandum of Understanding (MOU)
Professionalisation of Boards of Governance in India

Unit-IV

Disinvestment: Objectives, Methods, Machinery and Assessment
Privatisation: Theory, Objectives, Methods, Procedure, and Assessment; Lessons from the U.K. Experience
Contracting Out: Concept & Rationale; Contracting Out Local Services

List of Readings

Bailey,S.J.(2001).Public sector economics: theory, policy and practice . ***2nd*** ed.London: Palgrave.

Bos,D. (1991) Privatization: a theoretical treatment .Oxford: Oxford University Press.

Dubhashi, P.R.(1976). Economics, planning and public administration.Bombay: Somaiya Publications, Pvt. Ltd.

Administrative Reforms Commission.(1967).Report on Public Undertof study team on public sector undertakings .New Delhi: Gocernment of India.

Gupta, K.R.(1975).Issues in public enterprises. ***2nd*** ed.New Delhi: S.Chand.

Hanson , A.H. (1972) .Public enterprises and economic development .London: Routledge and Kegan.

Jha,L.K.(1986). Economic administration in India – retrospects and prospect .New Delhi: IIPA.

Khera, S.S(1977).Government in business .New Delhi: National Publishing House

Kuchhal ,S.C. (1976). Industrial Economy of India .Allahabad: Chaitanya Publishing House

Marathe, S.S.(2008).Regulation and development .New Delhi: Sage Publishers.

Narain,L.(1980).Principles and practices of public enterprises management .New Delhi: S. Chand.

Planning Commission .Five year plan documents.GOI.

Ramanadham, V.V.(1988).The working of public sector .Bombay: Allied Publishers.

United Nations Organisation.(1974). Management and supervision of public enterprises in developing countries .New York: V.N.

United Nations (1970). Measures for improving the performances of public enterprises in developing countries .New York: V.N.

Vickers, J. and Yarrow, G.(1988).Privatization: an economic analysis .Cambridge: **MIT Press.**

World Bank.(1995).Bureaucrats in business – the economics and politics of government ownership.New York: World Bank.

Semester IV (Group B)
Paper III: Marketing Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: The objective of the paper is to make learners understand the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm in VUCA (Volatile, Uncertain, Complex and Ambiguous) business environment. The students will acquire critical thinking, advertising and product pricing skills at the end of this course.

Unit-I

Introduction to Marketing Management: Meaning, Nature and Scope of Marketing
Marketing Philosophies
Marketing Management Process
Concept of marketing mix-4P and 7P

Unit-II

Consumer and Organisation Buyer Behaviour
Market Segmentation, Targeting and Positioning
Product Planning: Product concept, types of products, Major Product Decision and Product Life Cycle
Brand Management

Unit-III

Product Pricing Decision: Pricing Process, Policies and Strategies
Distribution Channel Decision: Types and function of intermediaries, selection and management of intermediaries
Promotion: Communication Process
Promotion Tools: Advertising, Personal Selling, Publicity and Sales Promotion

Unit-IV

Marketing Organisation and Control: Organising for marketing, Marketing Implementation & Control
Ethics in Marketing
Emerging Trends and Issues in Marketing: Consumerism, Rural Marketing, Societal Marketing, Online Marketing, Green Marketing, Retail Marketing, Customer Relation Marketing

List of Readings

Bhasin, M.L.(1991).*Indian marketing: the case studies* .New Delhi: Anmol Publishers.
Bose, B. S.(1998).*Handbook of marketing management* .Mumbai: Himalaya Publishing House.
Chowdhary, N. & Chowdhary, M.(2005).*Textbook of Marketing Services: The Indian Experience* .New Delhi: Macmillan.
Giles, G.B.(1982).*Marketing* .London: The English Language Book Society.
Gopalaswamy, T.P.(1997).*Rural marketing: environment, problems and strategies* .Delhi: Vikas Publishing House Ltd.
Hanson, W. A. & Kalyanam K.(2007).*Internet marketing and e-commerce* .Singapore: South Western College Pub.
Kotler, P.Marketing Management: *Analysis,Planning,Implementation & Control* .New Delhi: Prentice Hall of India.
Kotler, P.(2001).*Kotler on marketing: how to create, win and dominate markets* .Great Britain: Simon & Schuster .
Kotler, P.*Marketing management: a South Asian perspective* .New Delhi: Pearson Education.
Kumar, S. R.(2001).*Marketing Nugggets: Conceptual Dimensions in Marketing* .New Delhi: Vikas Publishing House Ltd.
Kurian V.(1997).*Unfinished Dream .New Delhi*: Tata McGraw Hill.
Molenaar, C.N.A.(2002).*Future of marketing: practical strategies for marketers in the post-internet age* .Great Britain: Pearson Education Ltd.
Michael, J.E.,Bruce,J.W. & William ,J.S.(2001) *Marketing Marketing*, New Delhi: Tata McGraw Hill .
Perreault W.D.& Jerome,E.M.(2013).*Basic Marketing*, New Delhi: Tata McGraw Hill .

Pride, W.M. and Ferrell,O.C.(2016).*Marketing:Concept and Strategies*,Delhi: Biztantra Press.
Ramaswamy,V.S. & Namakumari, S.(2002).*Marketing Management:Planning, Control*.New Delhi: Macmillan Press.
William,J.S.,Etzel ,M.J.& Walker, B.(2004).*Marketing*.Japan:McGraw Hill Kogakusha Ltd.
Zikmund,A.()Marketing,Mumbai:Thomson Learning.

Semester IV (Group B)
Paper IV – Industrial Relations
(Common in Groups B, C & D)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper covers a very important area of governance of industrial undertakings in India i.e. concept and approaches of Industrial Relations. The course will also make the students familiar with industrial conflicts and their settlement; various aspects of trade unions; participative management; structure and functioning of International Labour Organisation (I.L.O.), etc.

UNIT-I

Industrial Relations: Concept and Significance
Complaints and Grievance: Concept; machinery for grievance handling
Approaches to Industrial Relations

UNIT-II

Industrial Conflicts: Concepts, Causes and Remedies
Machinery for the Settlement of Industrial Disputes:
Conciliation
Arbitration
Adjudication
Collective Bargaining

UNIT-III

Trade Unions: Concept, Origin, Types and Functions
Theories of Trade Unions
Registration and Recognition of Trade Unions

UNIT-IV

Participative Management: Concept, Objectives and Types
Schemes of Employee Participation in India
International Labour Organisation (I.L.O.) – Structure; Objectives

List of Readings

Aggarwal, R.D.(1973).*Dynamics of Personnel Management in India* .New Delhi: Tata McGraw Hill.

Aswathappa, K.(2007).*Human Resources and Personnel Management* .New Delhi: Tata McGraw Hill.

Davar, Rustam S..(1997).Personnel Management and Industrial Relations in India .New Delhi:Vikas Publishing House.

Ghosh, P.(1969),*Personnel Administration in India* .Bengaluru:Sudha Publications.

Mamoria, C.B. and Gankar, S.V.(2003).*Personnel Management*.New Delhi: Himalaya Publishing House.

Mamoria, C.B. Mamoria, S. and Gankar, S.V.(1997).*Dynamics of Industrial Relations in India* .New Delhi: Himalaya Publishing House.

).

Sen ,Ratna(2003). *Industrial Relations in India: Shifting Paradigms* .New Delhi: Macmillan.

Semester IV – Groups B
Paper V: Project Management (Compulsory)
(Common in Groups B &D; compulsory in Group B)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: Project Management continues to grow as a profession. Project management techniques are now used outside the traditional project industries and a management-by-project approach has increasingly been adopted in development projects funded by the UN, World Bank and other international agencies; it is also sought to be adopted in government funded welfare and development projects. The relevance of the course is derived from this context and the objectives are to impart a deep understanding of all the stages of project management and the techniques supporting project management.

UNIT-I

Project Management: Organisation, Planning including Prerequisites for Successful Project Implementation and Control
Project Planning: Resource Allocation Framework; Generation and Screening of Project Ideas

UNIT-II

Project Analysis: Market and Demand Analysis; Technical Analysis; Financial Analysis
Project Selection I: Project Appraisal Criteria – Project Cash Flow; Time Value of Money; Cost of Capital

UNIT-III

Project Selection II
Project Risk Analysis;
Social cost benefit analysis: Rationale and approaches;
Shadow Pricing applications in India

UNIT-IV

Project Implementation
Project Management Techniques: Network Analysis (PERT/CPM),
Project Monitoring and Review: Integrated Cost Planning and Budgeting; Monitoring Information; Reporting System and Evaluation

List of Readings

Burke, Rory(2004).*Project Management: Planning and Control Techniques* .Singapore: John Wiley & Sons Asia (Pvt. Ltd.).
Choudhry, Sadan(1988).*Project Scheduling and Monitoring in Practice*. Delhi: South Asian Publishers.
Clifton, David S. and Fyefe, David E.(1977).*Project Feasibility Analysis*.New York: John Wiley.
Harrison, F.L.(1992)*Advance Project Management* .London: Gower, 2nd ed.
Little, I.M.D. and Mirlees, J.A.(1976).*Project Appraisal and Planning for Development Countries* London : Heinemann Educational Books.
Lock, Dennis(2007).*Project Management*.England: Gower.
Planning Commission(1975).*Guidelines for Preparation of Feasibility Reports of Industrial Projects* .Delhi: Government of India.
Prasanna, Chandra(1995).*Projects: Preparation; Appraisal, Implementation* .Tata McGraw Hill.
Srinath, L.S.(1996).*PERT and CPM-Principles and Applications* .New Delhi: Affiliated East-West Press.
UNIDO(1978).*Guide to Practical Project Appraisal: Social Benefits Cost Analysis, Project Formulation and Evaluation* .Delhi: Oxford and IBH.

Semester IV (Group B)

Paper VI: Information Technology and Computer Applications in Public Administration (Common in Groups A, B, C & D; compulsory in Group D)

Semester IV – Group B
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)
Semester IV (Group C)
Paper-II: Labour Laws (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This paper covers five major labour legislations in India which are crucial for harmonious employer-employee relations. The detailed provisions of these legislations with reference to the cases would be taught to the students.

UNIT-I

Industrial Disputes Act, 1947

(a) Introduction and Definitions
(b) Authorities under the Act
(c) Notice of Change
(d) Reference of Disputes to Boards, Courts of Tribunals
(e) Procedure, powers and duties of authorities
(f) Strikes and Lock-outs
(g) Lay-off and Retrenchment
(h) Penalties
(i) Miscellaneous Provisions

UNIT-II

Factories Act, 1948

a) Introduction and definitions
b) Inspecting Staff
c) Health
d) Safety
e) Welfare
f) Working Hours of Adults
g) Employment of young persons
h) Annual Leave with wages
i) Penalties and Procedures

UNIT-III

The Workmen's Compensation Act, 1923

a. Introduction and definitions
b. Employer's Liability and amount of compensation
c. Commissioner's Powers and functions

UNIT-IV

The Minimum Wages Act, 1948

a. Introduction and Definitions
b. Fixation of minimum rates of wages
c. Miscellaneous provisions

List of Readings

Kumar, Anil.(2003).*Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*.New Delhi: Deep and Deep.

Malhotra, O.P.(1985).*The Law of Industrial Disputes (Vol. I and II)*, Mumbai: N.M.Tripathi Private Limited.

Mishra, S.N.(2010).*An Introduction to Labour and Industrial Laws* .Delhi: Pioneer Books.

Rao, E.M.(2004).*Industrial Jurisprudence* .New Delhi: Lexis Nexis.

Reddy, R. Jayaprakash.(2004).*Labour Legislation*.New Delhi: APH.

Sharma, A.M.(2004).*Industrial Jurisprudence and Legislation*.Mumbai: Himalaya Publishing House.

Srivastava, K.D.(1948).*Commentaries on the Factories Act, 1948*(3rd ed.)Chandigarh : Eastern Book.

Srivastava, K.D.(1976).*The Industrial Employment Standing Orders Act, 1946 together with rules* . Chandigarh : Eastern Book.

Semester IV (Group C)
Paper III– Organizational Psychology
(Common to Group C & D; compulsory in Group C)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The paper will make the students familiar with the basic concepts of Organisational Psychology. Functional aspects of Organizational Psychology like human relations, employment, attitudes, groups, personality and work stress would be taught to the students. Course material will be supplemented by activities like role play, case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

UNIT-I

Organisational and Industrial Psychology: Concept, Nature and Scope
Human Relations: Concept, Features and Hawthorne Experiments
Employee Needs: Concept, Hierarchy of Needs and Need Satisfaction

UNIT-II

Attitude: Concept, Nature and Significance
Industrial Morale: Concept, Nature and Determinants
Motivation of Industrial Employees: Concept and Determinants

UNIT-III

Personality: Concept, Significance and Types
Job Satisfaction: Concept, Significance and Determinants
Groups: Concept, Types and Inter-Group Relations

UNIT-IV

Fatigue: Concept, Causes and Remedies
Monotony and Boredom: Concept, Causes and Effects
Work Stress and its Management

List of Readings

Brown, J.A.C.(1954).*The Social Psychology of Industry* .Penguin.
Ganguli, H.C.(1983).*Structure and Process of Organization* .Asia Publishing House.
Katz and Kahn.(1979).*Social Psychology of Organizations* .Wiley Easter.
Norman R.F.Maier.(1970).*Psychology in Industry* .Oxford and IBH.
Schein, Edgar.(1988).Organizational Psychology .Prentice Hall.
Stephan P. Robbins, Seema Sanghi, Timothy Judge .(2009). *Organizational Behaviour: Concepts, Controversies and Applications* .New Delhi: Pearson 13th Edition.

Semester IV (Group C)
Paper IV- Industrial Relations
(Common in Group B, C & D)

Semester IV (Group C)
Paper V - Labour Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objective of the Paper: By the end of the semester the student will be able to comprehend various concepts and dimensions related to labour policy and administration,, employee welfare and will become fully acquainted with the institutional structure dealing with labour administration at both union and state levels in India. Tools to be employed for the effective teaching of the subject include case study method, audio visuals techniques, brainstorming on various issues, power point presentation, study visits to the industries etc. Use of these tools will develop the analytical skills and enhance the knowledge quotient of the students. This will lead to the overall personality and skill development of the students.

UNIT-I

State and Labour: Theoretical Aspects
Indian Labour: Characteristics
Industrialisation and Growth of Indian Labour

UNIT-II

Evolution of Labour Policy in India
Labour Policy and Five Year Plans
Labour Policy with special reference to Terms and Conditions of Employment; Industrial Relations and Wages

UNIT-III

Organisation, Functions and Role of Union Ministry of Labour and Employment; Labour Bureau and Directorate General of Labour Welfare of Government of India
Labour Department at the State Level

UNIT-IV

Labour Policy and Legislation in India
Employee Welfare: Concepts; Significance; Approaches
2nd National Commission on Labour

List of Readings

Bhagoliwal T.N.(1982).*Economics of Labour and Industrial Relations* .Agra: Sahitya Bhawan.
Government of India.(1969).*Report of the National Commission on Labour*.
Jagdish (ed.)(2004).*Labour Welfare Administration: Theories and Legal Provisions* .New Delhi:Akansha.
Kumar Anil.(2003).*Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*.New Delhi: Deep and Deep Publication.

Mamkoottam, Kuriakose. (2003).*Labour and Change: Essays on Globalisation, Technological Change in Labour in India .New* Delhi: Response Book.
Mamoria, C.B.(1991).*Dynamics of Industrial Relations* .Bombay: Himalaya.
Misra, S.N.(2002).*An Introduction to Labour and Industrial Laws* .Allahabad: Allahabad Law Agency, 2nd edition .

Semester IV (Group C)
Paper VI – Information Technology and Computer Applications in Public Administration
(Common in Group A, B, C & D; compulsory in Group D)

Semester IV – Group C
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

Semester IV – Group D
Paper II: Techniques of Administrative Improvement (Compulsory)

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment. **The Paper-Setter must put a note in question paper in this regard.**
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Course: Administrative improvement is an important aspect of administrative management. The objectives of this course are to comprehensively deal with the varied reference points leading to promoting administrative efficiency. The students will therefore gain an understanding of the ways in which change can be managed in an organization at the operations and policy planning levels. A thorough study of the reports of the Government of India Commissions on Administrative Improvement and Reforms and the working of the O&M Division of the Government of India will link the theoretical and operational aspects of administrative improvement in public administration.

UNIT-I

Work Study in Administration: Paper work simplification; Method study
Work Measurement; Standardization and Work Norms

UNIT-II

Organisation Analysis and Development of Organisational Structure
Techniques of Materials Management: ABC, VED, SDE and FSN Analysis

UNIT-III

Management of Change; Innovations in Management
Quality Circles; Total Quality Management
Management by Objectives

UNIT-IV

Working of O and M Division in the Government of India
The Sixth Pay Commission's recommendations on Administrative Improvement
The ARCs' and Administrative Improvement in Indian Administration

List of Readings

Armstrong, Michael.(1995).*Handbook of Management Techniques* .New Delhi: Excel Books.
Currie, R. and Faraday.(1972).*Work Study* .London: Pitman.
Gopalkrishan, P.(1999).*Handbook of Materials Management* .New Delhi: Prentice Hall of India.
Government of India. *Management in Government*. Quarterly Journal published by the Department of Personnel and Administrative Reform :Administrative Reforms Wing.
Government of India.(2008).*Second Administrative Reforms Commission Reports*.
Government of India.(2008). *Ministry of Personnel, Public Grievances and Pension*. Department of Personnel and Training: Report of Sixth Pay Commission.
I.L.O.(2008).Introduction to Work Study .Oxford & IBN Publishing Co. Pvt. Ltd.
Maheshwari, S. R.(2002).*Administrative Reforms in India* .New Delhi: Macmillan India Ltd.
Maheshwari, S. R.(2006).Indian Administration .New Delhi: Orient Longman Private Limited.
Reddin, W.J.(1971).*Effective Management by Objectives* .New York : McGraw Hill.
Srinath, L.S.(1996).*PERT and CPM-Principles and Applications* .New Delhi: Affiliated East-West Press.
United Nations.(1972).*Use of Modern Management Techniques in the Public Administration of Developing Countries* .New York.

Semester IV (Group D)
Paper III – Organisational Psychology
(Common in Groups C & D; compulsory in Group C)

Semester IV (Group D)
Paper IV– Industrial Relations
(Common in Groups B, C & D)

Semester IV (Group D)
Paper V– Project Management
(Common in Groups B &D; compulsory in Group B)

Semester IV (Group D)
Paper VI: Information Technology and Computer Applications in Public Administration (Compulsory)
(Common in Group A, B, C &D; compulsory in Group D)

Semester IV – Group D
Paper VII: Ethics in Public Administration
(Common in Groups A, B, C & D)

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SYLLABI AND COURSES OF READING OF M.A. PART I & II (SEMESTER SYSTEM) FOR THE EXAMINATION OF 2019-2020, 2020-2021 and 2021-2022

ਪੰਜਾਬੀ

ਐਮ. ਏ. ਭਾਗ ਪਹਿਲਾ

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਪਹਿਲਾ – <u>ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ –** ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ, ਮੱਧਕਾਲੀ ਸਾਹਿਤਕ ਸੰਦਰਭ ਅਤੇ ਪੂਰਵ ਨਾਨਕ ਕਾਲ (15●● ਈ. ਤਕ) ਦਾ ਸਾਹਿਤ: 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ –** ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ (15●1 ਈ. ਤੋਂ 185● ਈ. ਤਕ) 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ, ਮੱਧਕਾਲੀ ਸਾਹਿਤਕ ਸੰਦਰਭ ਅਤੇ ਪੂਰਵ ਨਾਨਕ ਕਾਲ (15●● ਈ. ਤਕ ਦਾ ਸਾਹਿਤ)** 3● ਅੰਕ
   (i) ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ; ਪੰਜਾਬੀ ਸਾਹਿਤ ਇਤਿਹਾਸਕਾਰੀ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਅਤੇ ਸੰਭਾਵਨਾਵਾਂ; ਕਾਲ ਵੰਡ ਦੇ ਮਸਲੇ
   (ii) ਸਮੁੱਚੇ ਮੱਧਕਾਲ ਦਾ ਇਤਿਹਾਸਕ ਅਤੇ ਸਭਿਆਚਾਰਕ ਸੰਦਰਭ; ਮੱਧਕਾਲੀ ਚੇਤਨਾ; ਮੱਧਕਾਲੀ ਸਾਹਿਤ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ
   (iii) ਪੂਰਵ ਨਾਨਕ ਕਾਲ (15●● ਈ. ਤੋਂ ਪਹਿਲਾਂ) ਦੀਆਂ ਸਾਹਿਤਕ ਧਾਰਾਵਾਂ : ਨਾਥ ਜੋਗੀ ਕਾਵਿ, ਸੂਫੀ ਕਾਵਿ, ਬੀਰ ਕਾਵਿ, ਲੋਕ ਕਾਵਿ
2. **ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ (15●1 ਤੋਂ 185● ਈ. ਤਕ)** 3● ਅੰਕ
   (i) ਸੂਫ਼ੀ ਕਾਵਿ; ਗੁਰਮਤਿ ਕਾਵਿ; ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ ਦੀ ਇਤਿਹਾਸਕ, ਦਾਰਸ਼ਨਿਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਸਾਹਿਤਕ ਵਿਸ਼ੇਸ਼ਤਾ
   (ii) ਕਿੱਸਾ ਕਾਵਿ ਅਤੇ ਬੀਰ ਕਾਵਿ ਦਾ ਇਤਿਹਾਸ ਮੂਲਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਸਾਹਿਤਕ ਅਧਿਐਨ
   (iii) ਇਸ ਕਾਲ (15●1–185●) ਦੇ ਸਾਹਿਤ ਦਾ ਸਦੀਵਾਰ ਅਧਿਐਨ; ਮੱਧਕਾਲੀ ਵਾਰਤਕ ਦਾ ਵਿਕਾਸ ਅਤੇ ਪ੍ਰਮੁਖ ਵੰਨਗੀਆਂ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਆਲੋਚਨਾਤਮਕ ਇਤਿਹਾਸ,** ਪੈਪਸੂ ਬੁੱਕ ਡੀਪੂ, ਪਟਿਆਲਾ
2. ਧਰਮਪਾਲ ਸਿੰਗਲ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
3. ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ ਅਤੇ ਗੋਬਿੰਦ ਸਿੰਘ ਲਾਂਬਾ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ,** ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ
5. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ) ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
6. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਜਿਲਦ ਦੂਜੀ ਤੋਂ ਚੌਦਵੀਂ ਤੱਕ) ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ
7. ਬਿਕਰਮ ਸਿੰਘ ਘੁੰਮਣ ਤੇ ਹਰਭਜਨ ਸਿੰਘ ਭਾਟੀਆ (ਸੰ.), **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ** (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
8. **ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਵਿਵੇਕ**, ਡਾ. ਅਮਰਜੀਤ ਸਿੰਘ ਕਾਂਗ, ਡਾ. ਜਸਪਾਲ ਕੌਰ ਕਾਂਗ, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
9. ਮੋਹਨ ਸਿੰਘ ਦੀਵਾਨਾ, **ਪੰਜਾਬੀ ਅਦਬ ਦੀ ਮੁਖ਼ਤਸਰ ਤਾਰੀਖ਼**, ਕਸਤੂਰੀ ਲਾਲ ਐਂਡ ਸਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ
10. **ਬਾਣੀ ਸੰਵੇਦਨਾ**, ਜਸਪਾਲ ਕੌਰ ਕਾਂਗ, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕ ਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
11. Mohan Singh Diwana, **A History of Panjabi Literature**, Kasturi Lal & Sons, Amritsar.
12. Mohan Singh Diwana, **Introduction to Panjabi Literature**, Nanak Singh Pustakmala, Amritsar.
13. Sant Singh Sekhon & Kartar Singh Duggal, **History of Punjabi Literature**, Sahitya Academy, New Delhi.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਦੂਜਾ – <u>ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਵਾਦ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਆਲੋਚਨਾ : ਵਿਕਾਸ ਪੜਾਅ ਅਤੇ ਮੂਲ ਸਥਾਪਨਾਵਾਂ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ ਅਤੇ ਵਾਦ** 3● ਅੰਕ
   (i) ਸਾਹਿਤ: ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਪ੍ਰਯੋਜਨ; ਰਹੱਸਵਾਦ, ਰੁਮਾਂਸਵਾਦ, ਯਥਾਰਥਵਾਦ, ਉੱਤਰ-ਆਧੁਨਿਕਤਾਵਾਦ : ਪਰਿਭਾਸ਼ਾ, ਸੰਕਲਪ ਅਤੇ ਮੂਲ ਲੱਛਣ
   (ii) ਗਰੀਕੋ-ਰੋਮਨ ਕਾਵਿ-ਸ਼ਾਸਤਰ:
      (ੳ) ਅਰਸਤੂ – ਅਨੁਕਰਨ, ਤ੍ਰਾਸਦੀ, ਵਿਰੇਚਨ;
      (ਅ) ਲੌਂਜਾਈਨਸ – ਉਦੱਾਤ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਸੋਮੇ;
   (iii) ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ:
      (ੳ) ਰਸ ਸੰਪਰਦਾਇ – ਰਸ ਨਿਸ਼ਪੱਤੀ ਅਤੇ ਸਾਧਾਰਨੀਕਰਨ
      (ਅ) ਧੁਨੀ ਸੰਪਰਦਾਇ – ਸ਼ਬਦ ਸ਼ਕਤੀਆਂ
      (ੲ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ : ਅਲੰਕਾਰ ਵਰਗੀਕਰਨ
2. **ਪੰਜਾਬੀ ਆਲੋਚਨਾ** 3● ਅੰਕ
   (i) ਮਾਰਕਸਵਾਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦੀਆਂ ਮੂਲ ਸਥਾਪਨਾਵਾਂ
   (ii) ਰੂਪਵਾਦੀ/ਸੰਰਚਨਾਵਾਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦੀਆਂ ਮੂਲ ਸਥਾਪਨਾਵਾਂ:
3. **ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਨਗੇਂਦਰ **ਅਰਸਤੂ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ,** (ਅਨੁ: ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ) ਐਸ. ਚਾਂਦ ਐਂਡ ਕੰਪਨੀ, ਦਿੱਲੀ।
2. ਅਚਾਰੀਆ ਵਿਸ਼ਵਨਾਥ, **ਸਾਹਿਤਯ ਦਰਪਣ**, (ਅਨੁ.: ਦੁਨੀ ਚੰਦਰ) ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
3. ਹਰਿਭਜਨ ਸਿੰਘ ਭਾਟੀਆ, **ਵੀਹਵੀਂ ਸਦੀ ਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦਾ ਸਰੂਪ**, ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
4. ਹਰਿਭਜਨ ਸਿੰਘ ਭਾਟੀਆ, **ਚਿੰਤਨ ਪੁਨਰ ਚਿੰਤਨ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●1●
5. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ., **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1997
6. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ), **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਚਿੰਤਨ: ਸਮਕਾਲੀ ਸਰੋਕਾਰ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ, 2●●3
7. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਸਾਹਿਤ ਅਧਿਐਨ ਪ੍ਰਣਾਲੀਆਂ,** ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
8. ਕੁਲਵੰਤ ਸਿੰਘ, **ਨਵ-ਆਲੋਚਨਾ: ਬਦਲਦੇ ਪਰਿਪੇਖ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●1●
9. **ਖੋਜ ਪਤ੍ਰਿਕਾ**, ਵਾਦ ਅੰਕ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
10. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ ਪਾਠ**, ਸ਼ਬਦ ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
11. ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ, **ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ,** ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
12. ਭਰਤਮੁਨੀ, **ਨਾਟਯ-ਸ਼ਾਸਤਰ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
13. ਲੌਂਜਾਈਨਸ, **ਉੱਦਾਤ ਬਾਰੇ** (ਪੰਜਾਬੀ ਅਨੁਵਾਦ: ਹਰਿਭਜਨ ਸਿੰਘ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
14. ਰਵਿੰਦਰ ਕੁਮਾਰ, **ਸਾਹਿਤ ਨਵ ਸਿਧਾਂਤ (ਪੂਰਬਵਾਦ ਤੋਂ ਕੌਮਵਾਦ ਤੱਕ)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
15. David Lodge, **Twentieth Century Criticism,** Orient Longman
16. David Lodge and Nigel Wood, **Modern Criticism and Theory,** Pearson

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਤੀਜਾ: **ਆਪਸ਼ਨ (i) – <u>ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ</u>**

ਕੁਲ ਅੰਕ : 1●●

ਲਿਖਤੀ : 8●

ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਦਾ ਇਤਿਹਾਸਕ ਸੰਦਰਭ ਅਤੇ ਸਿਧਾਂਤਕ ਪੱਖ (ਗੁਰਮਤ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ ਅਤੇ ਕਿੱਸਾ ਕਾਵਿ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ; ਦਾਰਸ਼ਨਿਕ ਪਿਛੋਕੜ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ) 15 ਅੰਕ
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਕਵੀ: ਗੁਰੂ ਨਾਨਕ, ਸ਼ਾਹ ਹੁਸੈਨ, ਹਾਸ਼ਮ 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰੂ ਨਾਨਕ ਦੇਵ : **ਜਪੁਜੀ**
2. ਸ਼ਾਹ ਹੁਸੈਨ: **ਕਾਫ਼ੀਆਂ**
3. ਹਾਸ਼ਮ: **ਸੱਸੀ ਪੁੰਨੂ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਅਤਰ ਸਿੰਘ**, ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਸੁਰਿੰਦਰ ਸਿੰਘ ਕੋਹਲੀ ਤੇ ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਗੁਰੂ ਨਾਨਕ, ਜੀਵਨ, ਸਮਾਂ ਤੇ ਰਚਨਾ,** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
4. ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਗੁਰੂ ਨਾਨਕ ਦਾ ਸ਼ਾਹਕਾਰ ਜਪੁਜੀ**, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
5. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਅਤੇ ਅਧਿਆਪਨ**, ਗੁਰੂ ਨਾਨਕ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ ।
6. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਕਾਵਿ ਸ਼ਿਮੋਣੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਬਾਣੀ ਦਾ ਸੱਚ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਰਾਮ ਸਿੰਘ, **ਜਪੁਜੀ ਦਾ ਵਿਸ਼ਾ ਤੇ ਰੂਪ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
9. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਸ਼ਾਹ ਹੁਸੈਨ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪਬਲੀਕੇਸ਼ਲ ਬਿਉਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
10. ਗੁਰਦਿਆਲ ਸਿੰਘ ਢਿੱਲੋਂ, **ਸ਼ਾਹ ਹੁਸੈਨ, ਦਰਸ਼ਨ ਸਾਧਨਾ ਤੇ ਕਲਾ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
11. ਗੁਰਦਿਆਲ ਸਿੰਘ ਢਿੱਲੋਂ, **ਸ਼ਾਹ ਹੁਸੈਨ, ਦਰਸ਼ਨ, ਸਾਧਨਾ ਤੇ ਕਲਾ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1996
12. ਡਾ. ਜਗਤਾਰ (ਸੰਪਾ.), **ਮਿੱਤਰਾਂ ਦੀ ਮਿਜਮਾਨੀ ਖਾਤਰ: ਸ਼ਾਹ ਹੁਸੈਨ ਜੀਵਨ ਤੇ ਰਚਨਾ,** ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
13. ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਸੱਸੀ ਹਾਸ਼ਮ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
14. ਲਾਜਵੰਤੀ ਰਾਮ ਕ੍ਰਿਸ਼ਨ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਵੀ**, (ਅਨੁਵਾਦ) ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
15. ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਹਾਸ਼ਮ ਸ਼ਾਹ: ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਸਾਹਿਤ ਅਕਾਡਮੀ, ਦਿੱਲੀ।
16. ਡਾ. ਜਗਜੀਤ ਸਿੰਘ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਾਵਿ ਪ੍ਰਵਚਨ**, ਬਲਵੰਤ ਪ੍ਰਕਾਸ਼ਨ, ਜਲੰਧਰ।
17. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੇਧਾਂ ਤੇ ਸਾਰਾਂ ਤੇ ਹੋਰ ਲੇਖ**, ਜਸਵੰਤ ਪ੍ਰਿੰਟਰਜ਼, ਲੁਧਿਆਣਾ।
18. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਭਾਰਤੀ ਸੂਫ਼ੀ ਪਰੰਪਰਾ ਤੇ ਸਾਹਿਤ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
19. ਡਾ. ਜਗਬੀਰ ਸਿੰਘ, **ਮੱਧਕਾਲੀ ਸ਼ਬਦ ਸਭਿਆਚਾਰ**, ਰਵਿੰਦਰ ਸਿੰਘ, WZ-13, ਮਨੋਹਰ ਪਾਰਕ, ਨਵੀਂ ਦਿੱਲੀ, 1989
20. ਡਾ. ਜਗਬੀਰ ਸਿੰਘ, **ਗੁਰਬਾਣੀ: ਵਿਸ਼ਵ ਦ੍ਰਿਸ਼ਟੀ ਤੇ ਵਿਚਾਰਧਾਰਾ**, ਵੈੱਲਵਿਸ਼ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1997
21. ਡਾ. ਹਰਚਰਨ ਕੌਰ (ਸੰਪਾ.), **ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਸਾਹਿਤ**, ਪੁਨਰ ਵਿਚਾਰ, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ, 1989
22. ਪ੍ਰੋ. ਪ੍ਰੀਤਮ ਸਿੰਘ (ਸੰਪਾ.), **ਸਿੱਖ ਫ਼ਲਸਫ਼ੇ ਦੀ ਰੂਪ ਰੇਖਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ,
23. ਡਾ. ਜਸਬੀਰ ਸਿੰਘ ਆਹਲੂਵਾਲੀਆ, **ਸਿੱਖ ਚਿੰਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
24. ਗੁਰਮੀਤ ਸਿੰਘ ਟਿਵਾਣਾ, **ਧਰਮ ਅਤੇ ਮਾਰਕਸਵਾਦ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
25. ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, **ਵਿਚਾਰਧਾਰਾ**, ਮਦਾਨ ਪਬਲਿਸ਼ਰਜ਼, ਪਟਿਆਲਾ।
26. ਡਾ. ਜਸਬੀਰ ਕੌਰ (ਸੰਪਾ.), **ਸ੍ਰੀ ਗੁਰੂ ਅਰਜਨ ਦੇਵ ਤੇ ਉਨ੍ਹਾਂ ਦਾ ਯੁੱਗ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
27. ਡਾ. ਜਸਵਿੰਦਰ ਕੌਰ ਢਿੱਲੋਂ, **ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਦੀਆਂ ਬਾਣੀਆਂ ਦਾ ਦਾਰਸ਼ਨਿਕ ਅਧਿਐਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
28. ਡਾ. ਮਹਿੰਦਰ ਕੌਰ ਗਿੱਲ, **ਗੁਰਬਾਣੀ ਸਮੀਖਿਆ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
29. ਡਾ. ਓਮ ਪ੍ਰਕਾਸ਼ ਵਸ਼ਿਸ਼ਟ, **ਚਿੰਨ੍ਹ ਵਿਗਿਆਨ ਅਤੇ ਗੁਰੂ ਨਾਨਕ ਬਾਣੀ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
30. ਡਾ. ਜਸਪਾਲ ਸਿੰਘ, (ਸੰਪਾ.) **ਸ਼੍ਰੀ ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਸਦੀਵੀ ਪ੍ਰੇਰਨਾ ਸਰੋਤ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਤੀਜਾ : ਆਪਸ਼ਨ (ii) – <u>ਗੁਰਮਤਿ ਅਤੇ ਸੂਫ਼ੀ ਕਾਵਿ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਦਾ ਇਤਿਹਾਸਕ ਸੰਦਰਭ ਅਤੇ ਸਿਧਾਂਤਕ ਪੱਖ 15 ਅੰਕ
(ਗੁਰਮਤਿ ਕਾਵਿ-ਧਾਰਾ, ਸੂਫ਼ੀ ਕਾਵਿ ਧਾਰਾ ਅਤੇ ਬੀਰ ਕਾਵਿ ਧਾਰਾ ਦਾ ਇਤਿਹਾਸ ਅਤੇ ਕਾਵਿ-ਸ਼ਾਸਤਰ; ਦਾਰਸ਼ਨਿਕ ਪਿਛੋਕੜ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ)
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਕਵੀ: ਗੁਰੂ ਨਾਨਕ, ਬਾਬਾ ਫ਼ਰੀਦ, ਭਾਈ ਗੁਰਦਾਸ 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰੂ ਨਾਨਕ ਦੇਵ : **ਆਸਾ ਦੀ ਵਾਰ**
2. ਬਾਬਾ ਫ਼ਰੀਦ: **ਸ਼ਲੋਕ ਅਤੇ ਸ਼ਬਦ**
3. ਭਾਈ ਗੁਰਦਾਸ: **ਪਹਿਲੀ ਵਾਰ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
3. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਕਾਵਿ ਸ਼ਿਰੋਮਣੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਭਾਈ ਗੁਰਦਾਸ ਇਕ ਅਧਿਐਨ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਸਾਹਿਬ ਸਿੰਘ, **ਆਸਾ ਦੀ ਵਾਰ ਸਟੀਕ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।
6. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਅਤੇ ਅਧਿਆਪਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
7. ਹਰਿਭਜਨ ਸਿੰਘ, **ਮੁੱਲ ਤੇ ਮੁੱਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
8. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਬਾਣੀ ਦਾ ਸੱਚ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
9. ਜਗਜੀਤ ਸਿੰਘ, **ਸ਼ੇਖ਼ ਫਰੀਦ ਦਾ ਕਾਵਿ ਪ੍ਰਵਚਨ**, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਜਗਜੀਤ ਸਿੰਘ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਾਵਿ ਪ੍ਰਵਚਨ**, ਬਲਵੰਤ ਪ੍ਰਕਾਸ਼ਨ, ਜਲੰਧਰ।
11. ਗੁਰਸ਼ਰਨ ਕੌਰ ਜੱਗੀ, **ਵਾਰਾਂ ਭਾਈ ਗੁਰਦਾਸ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
12. ਮੁਹੰਮਦ ਆਸਫ਼ ਖਾਨ, **ਆਖਿਆ ਫਰੀਦ ਨੇ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (i) – <u>ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਬਿਰਤਾਂਤ ਅਤੇ ਬਿਰਤਾਂਤਕਾਰੀ; ਪੰਜਾਬੀ ਨਾਵਲ : ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
2. ਪੰਜਾਬੀ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਨਾਵਲਕਾਰ (196● ਤੋਂ ਪਹਿਲਾਂ) 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਨਾਨਕ ਸਿੰਘ : **ਪਵਿੱਤਰ ਪਾਪੀ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।
2. ਸੋਹਣ ਸਿੰਘ ਸੀਤਲ, **ਜੁਗ ਬਦਲ ਗਿਆ**, ਸੀਤਲ ਪੁਸਤਕ ਭੰਡਾਰ, ਲੁਧਿਆਣਾ।
3. ਜਸਵੰਤ ਸਿੰਘ ਕੰਵਲ: **ਪੂਰਨਮਾਸ਼ੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

<u>ਸੁਝਾਈਆਂ ਪੁਸਤਕਾਂ</u>

1. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਨਾਵਲ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।

2. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਸਮਾਂ ਤੇ ਸੰਵਾਦ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਮਸਲੇ ਗਲਪ ਦੇ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
4. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜ ਪੰਜਾਬੀ ਨਾਵਲ : ਇਕ ਮੁਲਾਂਕਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
6. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਸਾਂਸਕ੍ਰਿਤਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
7. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਦਿਆਲ ਸਿੰਘ ਦੀ ਗਲਪ-ਚੇਤਨਾ**, ਲੋਕਾਇਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਨਰਿੰਜਨ ਤਸਨੀਮ (ਸੰਪਾ.), **ਆਧੁਨਿਕ ਪ੍ਰਵਿਰਤੀਆਂ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●5.
9. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਨਾਵਲ: ਸਰਵੇਖਣ ਤੇ ਮੁਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਕਰਮਜੀਤ ਸਿੰਘ ਤੇ ਟੀ. ਆਰ. ਵਿਨੋਦ (ਸੰਪਾ.), **ਗੁਰਦਿਆਲ ਸਿੰਘ ਅਭਿਨੰਦਨ ਗ੍ਰੰਥ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
11. ਜੁਰਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ (ਸੰਪਾ.), **ਨਾਵਲ ਦੀ ਵਿਧਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
12. ਜੁਰਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ, **ਪ੍ਰਗਤੀਵਾਦ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 1986
13. ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਿਵੇਸ਼ਵਰ (ਸੰਪਾ.) **ਨਾਵਲ ਸ਼ਾਸਤਰ ਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਯੂਨੀਸਟਾਰ ਬੁੱਕਸ, ਚੰਡੀਗੜ੍ਹ, 2●●2
14. ਗੁਰਪਾਲ ਸਿੰਘ ਸੰਧੂ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਚਿਹਨ-ਵਿਗਿਆਨਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
15. ਤ੍ਰਿਲੋਕ ਸਿੰਘ ਕੰਵਰ, (ਸੰਪਾ.) **ਸ਼ੋਧ-ਪ੍ਰਬੋਧ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
16. ਹਰਦਰਸ਼ਨ ਸਿੰਘ, **ਪੰਜਾਬੀ ਨਾਵਲ ਵਿਚ ਨਾਇਕ ਦਾ ਵਿਗਠਨ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੋਸਾਇਟੀ, ਲੁਧਿਆਣਾ, 1987.
17. ਕਰਮਜੀਤ ਸਿੰਘ (ਸੰਪਾ.), **ਨਾਵਲਕਾਰ ਸੋਹਨ ਸਿੰਘ ਸੀਤਲ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਜਜ਼, ਦਿੱਲੀ, 1973.
18. ਬਲਕਾਰ ਸਿੰਘ, **ਸੋਹਨ ਸਿੰਘ ਦੇ ਨਾਵਲਾਂ ਦਾ ਨਾਵਲੀ ਅਵਚੇਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਲ, ਚੰਡੀਗੜ੍ਹ, 2●●6
19. ਡਾ. ਨਰੇਂਦਰ ਮੋਹਨ (ਸੰਪਾ.), **ਆਧੁਨਿਕ ਹਿੰਦੀ ਉਪਨਿਆਸ**, ਮੈਕਮਿਲਨ ਕੰਪਨੀ, ਨਵੀਂ ਦਿੱਲੀ, 1975
20. ਡਾ. ਨਾਮਵਰ ਸਿੰਘ, **ਪ੍ਰੇਮਚੰਦ ਔਰ ਭਾਰਤੀ ਸਮਾਜ**, ਰਾਜਕਮਲ ਪ੍ਰਕਾਸ਼ਲ, ਨਵੀਂ ਦਿੱਲੀ, 2●●9

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (ii) – <u>ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਕਹਾਣੀ: ਬਿਰਤਾਂਤ ਤੇ ਬਿਰਤਾਂਤਕਾਰੀ, ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
2. ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਕਹਾਣੀਕਾਰਾਂ ਦਾ ਅਧਿਐਨ 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, '**ਸਮਾਚਾਰ**', ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲਧਿਆਣਾ।
2. ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ, '**ਦੁਆਦਸ਼ੀ**', ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1987
3. ਵਰਿਆਮ ਸੰਧੂ, '**ਚੌਥੀ ਕੂਟ**', ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ

ਸੁਝਾਈਆਂ ਪੁਸਤਕਾਂ

1. ਧਰਮਪਾਲ ਸਿੰਗਲ, ਗੁਰਲਾਲ ਸਿੰਘ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ: ਨਵੀਨ ਪ੍ਰਵਿਰਤੀਆਂ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਗੁਰਬਖਸ਼ ਸਿਘ ਫਰੈਂਕ, **ਨਿੱਕੀ ਕਹਾਣੀ ਅਤੇ ਪੰਜਾਬੀ ਨਿੱਕੀ ਕਹਾਣੀ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਅਧਿਐਨ**, ਲੋਕ ਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
4. ਜੋਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ, **ਕਹਾਣੀ ਦੀ ਵਿਧਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●6
5. ਧਨਵੰਤ ਕੌਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਬਿਰਤਾਂਤ-ਸ਼ਾਸਤਰੀ ਅਧਿਐਨ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਹਰਿਭਜਨ ਸਿੰਘ, **ਖਾਮੋਸ਼ੀ ਦਾ ਜਜ਼ੀਰਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਿਆਰ ਤੇ ਪਰਿਵਾਰ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
8. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
9. ਬਿਕਰਮ ਸਿੰਘ ਘੁੰਮਣ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ ਸਿਧਾਂਤ, ਸਰੂਪ ਤੇ ਵਿਕਾਸ**, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਸਵਿੰਦਰ ਸਿੰਘ ਉੱਪਲ, **ਪੰਜਾਬੀ ਕਹਾਣੀ : ਸਿਧਾਂਤ, ਸਰੂਪ ਤੇ ਵਿਕਾਸ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
11. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ: ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
12. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ, **'ਵਰਿਆਮ ਸੰਧੂ ਦੀ ਕਹਾਣੀ: ਸਰੂਪ ਤੇ ਵਿਵੇਕ'**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●7

13. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ, **ਵਿਸ਼ਵੀਕਰਨ ਅਤੇ ਪੰਜਾਬੀ ਕਹਾਣੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●7
14. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਸਫ਼ਰ ਤੇ ਸ਼ਾਸਤ੍ਰ,** ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।
15. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀਆਂ ਕਹਾਣੀਆਂ ਵਿਚ ਕਪਾਲ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਪੰਜਵਾਂ – <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਸੰਕ੍ਰਾਂਤੀ ਕਾਲ (185● ਈ. ਤੋਂ 19●● ਈ. ਤਕ) ਦਾ ਸਮੁੱਚਾ ਸਾਹਿਤ ਅਤੇ ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦਾ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ — 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦੇ ਪੰਜਾਬੀ ਗਲਪ, ਨਾਟਕ ਦਾ ਵਿਕਾਸ — 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਸੰਕ੍ਰਾਂਤੀ ਕਾਲ (185● ਈ. ਤੋਂ 19●● ਈ. ਤਕ) ਦਾ ਸਮੁੱਚਾ ਸਾਹਿਤ ਅਤੇ ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦਾ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ** — 3● ਅੰਕ
   (i) ਪੰਜਾਬੀ ਸਾਹਿਤ ਵਿਚ ਆਧੁਨਿਕਤਾ ਦਾ ਆਰੰਭ ਤੇ ਵਿਕਾਸ; ਮੱਧਕਾਲੀ ਤੇ ਆਧੁਨਿਕ ਬੋਧ ਵਿਚ ਅੰਤਰ; ਸੰਕ੍ਰਾਂਤੀ ਕਾਲ ਦੇ ਲੱਛਣ; ਧਾਰਮਕ ਪੁਨਰਜਾਗਰਤੀ ਦੀਆਂ ਲਹਿਰਾਂ ਦਾ ਸਾਹਿਤ; ਈਸਾਈ ਮਿਸ਼ਨਰੀਆਂ ਦੀ ਦੇਣ; ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਰੂਪਾਂ ਦਾ ਜਨਮ ਤੇ ਵਿਕਾਸ
   (ii) 185● ਈ. ਤੋਂ 19●● ਈ. ਤਕ ਰਚਿਆ ਗਿਆ ਸਾਹਿਤ (ਕਿੱਸਾ ਕਾਵਿ; ਸੂਫ਼ੀ ਕਾਵਿ; ਵਾਰਾਂ ਤੇ ਜੰਗਨਾਮੇ ਆਦਿ)
   (iii) ਵੀਹਵੀਂ ਸਦੀ ਦੀ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਇਤਿਹਾਸਮੂਲਕ ਅਤੇ ਪ੍ਰਵਿਰਤੀਮੂਲਕ ਅਧਿਐਨ (ਨਵ ਰਹੱਸਵਾਦੀ, ਰੁਮਾਂਟਿਕ, ਪ੍ਰਗਤੀਵਾਦੀ, ਪ੍ਰਯੋਗਵਾਦੀ, ਜੁਝਾਰਵਾਦੀ ਅਤੇ ਉੱਤਰ ਜੁਝਾਰਵਾਦੀ ਕਾਵਿ-ਧਾਰਾਵਾਂ ਦੇ ਹਵਾਲੇ ਨਾਲ)
2. **ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦੇ ਪੰਜਾਬੀ ਗਲਪ, ਨਾਟਕ ਅਤੇ ਵਾਰਤਕ ਰੂਪਾਂ ਦਾ ਵਿਕਾਸ** — 3● ਅੰਕ
   (i) ਪੰਜਾਬੀ ਗਲਪ (ਨਾਵਲ ਤੇ ਕਹਾਣੀ) ਦੀਆਂ ਪ੍ਰਮੁਖ ਪ੍ਰਵਿਰਤੀਆਂ ਅਤੇ ਵਿਕਾਸ ਪੜਾਅ
   (ii) ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦੀਆਂ ਪ੍ਰਮੁਖ ਪ੍ਰਵਿਰਤੀਆਂ
   (iii) ਪੰਜਾਬੀ ਵਾਰਤਕ ਰੂਪਾਂ (ਨਿਬੰਧ, ਜੀਵਨੀ, ਸਵੈ-ਜੀਵਨੀ, ਸਫਰਨਾਮਾ ਤੇ ਰੇਖਾ ਚਿੱਤਰ) ਦਾ ਇਤਿਹਾਸਮੂਲਕ ਅਧਿਐਨ
3. **ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** — 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ ਚਿੰਤਨ – (I ਅਤੇ II)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
2. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਨਾਟ ਚਿੰਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਆਲੋਚਨਾਤਮਕ ਇਤਿਹਾਸ,** ਪੈਪਸੂ ਬੁੱਕ ਡੀਪੂ, ਪਟਿਆਲਾ
4. ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ ਅਤੇ ਗੋਬਿੰਦ ਸਿੰਘ ਲਾਂਬਾ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ,** ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
5. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ
6. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਜਿਲਦ ਦੂਜੀ ਤੋਂ ਚੌਦਵੀਂ ਤੱਕ) ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ
7. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ) ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
8. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਜਿਲਦ 1, 3, 3),** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
9. ਪ੍ਰੀਤਮ ਸਿੰਘ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ**, ਕੇਂਦਰੀ ਪੰਜਾਬੀ ਲੇਖਕ ਸਭਾ, ਪੰਜਾਬ
10. ਯੋਗਰਾਜ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾਵਾਂ ਦਾ ਸੁਹਜ ਸ਼ਾਸਤਰ,** ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ
11. ਵਣਜਾਰਾ ਬੇਦੀ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਇਤਿਹਾਸ ਦੀਆਂ ਲੋਕ-ਰੂੜ੍ਹੀਆਂ**, ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਨਵੀਂ ਦਿੱਲੀ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜੇ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਛੇਵਾਂ – <u>ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਵਿਹਾਰਕ ਅਲੋਚਨਾ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ ਸ਼ਾਸਤਰ 15×3=45 ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਵਿਹਾਰਕ ਆਲੋਚਨਾ 15 ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ** 45 ਅੰਕ
   (i) ਰੂਪਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ
      (ੳ) ਰੂਸੀ ਰੂਪਵਾਦ : ਮੂਲ ਸੰਕਲਪ
      (ਅ) ਨਵ-ਅਮਰੀਕੀ ਸਕੂਲ: ਮੂਲ ਸੰਕਲਪ
   (ii) ਸੰਰਚਨਾਵਾਦ ਅਤੇ ਉੱਤਰ-ਸੰਰਚਨਾਵਾਦ
      (ੳ) ਸੰਰਚਨਾਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ: ਸੋਸਿਊਰ: ਭਾਸ਼ਕ ਮਾਡਲ; ਰੋਲਾਂ ਬਾਰਤ: ਬਿਰਤਾਂਤ ਸਿਧਾਂਤ
      (ਅ) ਉੱਤਰ-ਸੰਰਚਨਾਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ: ਮੂਲ ਸੰਕਲਪ
   (iii) **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ**
   ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ ਦੇ ਮੁੱਖ ਸੰਕਲਪ: ਵਿਚਾਰਧਾਰਾ, ਵਸਤੂ ਤੇ ਰੂਪ, ਪ੍ਰਤੀਬਧਤਾ,
2. **ਵਿਹਾਰਕ ਆਲੋਚਨਾ** 15 ਅੰਕ
   (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਵਿਚੋਂ ਇਕ ਕਵਿਤਾ
   (ਅ) ਆਧੁਨਿਕ ਕਾਵਿ ਵਿਚੋਂ ਇਕ ਕਵਿਤਾ
   (ੲ) ਵਾਰਤਕ ਦਾ ਇਕ ਪੈਰ੍ਹਾ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਅਤਰ ਸਿੰਘ, **ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
3. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਸਾਹਿਤਿਆਰਥ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਤਿੰਦਰ ਸਿੰਘ, **ਵਿਹਾਰਕ ਸਮੀਖਿਆ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
5. ਸੁਰਜੀਤ ਸਿੰਘ ਭੱਟੀ, **ਮਾਰਕਸਵਾਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
6. ਸੁਰਜੀਤ ਸਿੰਘ ਭੱਟੀ, **ਵਾਦ ਚਿੰਤਨ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
7. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ., **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1997
8. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ), **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਚਿੰਤਨ: ਸਮਕਾਲੀ ਸਰੋਕਾਰ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ, 2●●3
9. ਹਰਿਭਜਨ ਸਿੰਘ, **ਸਾਹਿਤ ਵਿਗਿਆਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਾਰਗਾਮੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
11. ਹਰਿਭਜਨ ਸਿੰਘ, **ਰੂਪਕੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
12. ਹਰਿਭਜਨ ਸਿੰਘ, **ਰਚਨਾ ਸੰਰਚਨਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
13. ਗੋਪੀ ਚੰਦ ਨਾਰੰਗ, **ਸੰਰਚਨਾਵਾਦ, ਉੱਤਰ-ਸੰਰਚਨਾਵਾਦ ਅਤੇ ਪੂਰਬੀ ਕਾਵਿ ਸ਼ਾਸਤਰ**, ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
14. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ-ਪਾਠ,** ਸ਼ਬਦ ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
15. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੱਚ ਸਦਾ ਅਬਾਦੀ ਕਰਨਾ**, ਸਾਹਿਤ ਕਲਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
16. ਨਾਹਰ ਸਿੰਘ, **ਮਾਰਕਸੀ ਰੂਪ ਚਿੰਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹੰਦ।
17. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਸਾਹਿਤ ਦੀ ਸਮਝ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
18. ਰਵਿੰਦਰ ਸਿੰਘ ਰਵੀ, **ਅਮਰੀਕਾ ਦੀ ਨਵੀਨ ਆਲੋਚਨਾ ਪ੍ਰਣਾਲੀ**, ਸੇਧ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ।
19. ਰਾਜਿੰਦਰਪਾਲ ਸਿੰਘ ਬਰਾੜ, **ਉੱਤਰ ਆਧੁਨਿਕਤਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
20. Jon Simons (ed.), **Contemporary Critical Theorists**, Edinburg University Press
21. David Lodge, **Twentieth Century Criticism,** Orient Longman
22. David Lodge and Nigel Wood, **Modern Criticism and Theory,** Pearson
23. ਮਨਮੋਹਨ, **ਮਿਸ਼ੈਲ ਫੂਕੋ ,** ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
24. ਗੁਰਭਗਤ ਸਿੰਘ, **ਦੈਰਿਦਾ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
25. ਤਸਕੀਨ, **ਰੋਲਾਂਬਾਰਥ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁੱਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਹੋਣਗੇ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਵਿਦਿਆਰਥੀ ਨੇ ਕੋਈ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਦੂਜੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਆਲੋਚਨਾ ਵਾਲੇ ਭਾਗ ਦੇ ਤਿੰਨਾਂ ਖੰਡਾਂ ਵਿਚੋਂ ਸਿਰਫ਼ ਦੋ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਵਿਦਿਅਰਥੀ ਨੇ ਕੋਈ ਇਕ ਸਵਾਲ ਕਰਨਾ ਹੋਵੇਗਾ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **10** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **50** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਸੱਤਵਾਂ: ਆਪਸ਼ਨ (i) – <u>ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ-II</u>

ਕੁਲ ਅੰਕ : 100
ਲਿਖਤੀ : 80
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 20

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
(ਮੱਧਕਾਲੀ ਕਾਵਿ-ਚੇਤਨਾ, ਮੱਧਕਾਲੀ ਪ੍ਰਗੀਤਕ ਅਤੇ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ ਦੇ ਪ੍ਰਮੁੱਖ ਲੱਛਣ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ)
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਕਵੀ: ਗੁਰੂ ਅਰਜਨ ਦੇਵ, ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 20 ਅੰਕ

ਕੋਰਸ

1. ਗੁਰੂ ਅਰਜਨ: **ਸੁਖਮਨੀ**
2. ਬੁੱਲੇ ਸ਼ਾਹ: **ਕਾਫੀਆਂ**
3. ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ: **ਚੰਡੀ ਦੀ ਵਾਰ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਅਤਰ ਸਿੰਘ, **ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਕਾਵਿ ਸ਼ਿਰੋਮਣੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਅਤੇ ਅਧਿਆਪਨ,** ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
5. ਕੁਲਜੀਤ ਸ਼ੈਲੀ, **ਸੂਫੀ ਕਾਵਿ ਦਾ ਬਿੰਬ ਵਿਵੇਕ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
6. ਜਗਜੀਤ ਸਿੰਘ (ਸੰਪਾ.) **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਾਵਿ ਪ੍ਰਵਚਨ**, ਬਲਵੰਤ ਪ੍ਰਕਾਸ਼ਨ, ਜਲੰਧਰ।
7. ਰਾਮ ਸਿੰਘ, **ਸੁਖਮਨੀ ਸਰਬਪੱਖੀ ਅਧਿਐਨ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
8. ਹਰਿਭਜਨ ਸਿੰਘ, **ਮੁੱਲ ਤੇ ਮੁੱਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
9. ਲਾਜਵੰਤੀ ਰਾਮ ਕ੍ਰਿਸ਼ਨ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਵੀ** (ਅਨੁਵਾਦ) ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
10. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੇਧਾਂ ਸਾਰਾਂ ਤੇ ਹੋਰ ਲੇਖ**, ਜਸਵੰਤ ਪ੍ਰਿੰਟਰਜ਼, ਲੁਧਿਆਣਾ।
11. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀ., ਪਟਿਆਲਾ।
12. ਡਾ. ਜਗਤਾਰ, **ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ: ਜੀਵਨ ਅਤੇ ਰਚਨਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
13. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿੱਲੋਂ, **ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਨੈਸ਼ਨਲ ਬੁੱਕ ਟਰਸਟ ਇੰਡੀਆ, ਦਿੱਲੀ।
14. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਭਾਰਤੀ ਸੂਫ਼ੀ ਪਰੰਪਰਾ ਤੇ ਸਾਹਿਤ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 20 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **50** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਸੱਤਵਾਂ : ਆਪਸ਼ਨ (ii) – <u>ਸੂਫ਼ੀ, ਕਿੱਸਾ ਅਤੇ ਬੀਰ ਕਾਵਿ</u>

ਕੁਲ ਅੰਕ : 100
ਲਿਖਤੀ : 80
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 20

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਾਪਤੀਆਂ 15 ਅੰਕ
(ਮੱਧਕਾਲੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ; ਮੱਧਕਾਲੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ ਦੇ ਲੱਛਣ; ਕਿੱਸਾ ਕਾਵਿ ਅਤੇ ਵਾਰ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ)

2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਕਵੀ 15×3=45 ਅੰਕ
(ਇਕ ਸੂਫ਼ੀ ਕਵੀ, ਇਕ ਕਿੱਸਾਕਾਰ ਅਤੇ ਇਕ ਜੰਗਨਾਮਾਕਾਰ)

3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਸੁਲਤਾਨ ਬਾਹੂ: **ਸੀ-ਹਰਫ਼ੀਆਂ**
2. ਵਾਰਿਸ ਸ਼ਾਹ : **ਕਿੱਸਾ ਹੀਰ-ਰਾਂਝਾ**
3. ਸ਼ਾਹ ਮੁਹੰਮਦ : **ਜੰਗ ਸਿੰਘਾਂ ਤੇ ਫਰੰਗੀਆਂ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਹਰਿਭਜਨ ਸਿੰਘ ਡਾ., **ਕਿੱਸਾ**, ਪੰਜਾਬ ਨੈਸ਼ਨਲ ਬੁੱਕ ਟ੍ਰਸਟ, ਦਿੱਲੀ।
2. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਹੀਰ ਵਾਰਿਸ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ
3. ਅਤਰ ਸਿੰਘ, **ਸਾਹਿਤ ਸੰਵੇਦਨਾ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
5. ਸੀਤਾ ਰਾਮ ਕੋਹਲੀ, **ਵਾਰ ਸ਼ਾਹ ਮੁਹੰਮਦ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਲੁਧਿਆਣਾ
6. **ਸ਼ਾਹ ਮੁਹੰਮਦ : ਇਕ ਸਰਵੇਖਣ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. **ਖੋਜ ਪਤ੍ਰਿਕਾ**, ਕਿੱਸਾ ਕਾਵਿ ਅੰਕ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ-ਪਾਠ**, ਸ਼ਬਦਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
9. **ਪੰਜਾਬੀ ਬੀਰ ਸਾਹਿਤ**, ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ।
10. **ਵਾਰਿਸ ਸ਼ਾਹ : ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ।
11. Robert Scholes, **The Naturte of Narrative,** Oxford University Press,
12. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੋਧਾਂ ਤੇ ਸਾਰਾਂ**, ਜਸਵੰਤ ਪ੍ਰਿੰਟਰਜ਼, ਲੁਧਿਆਣਾ.
13. ਦੇਵਿੰਦਰ (ਸੰਪਾ.), **ਚੰਬੇ ਦੀ ਬੂਟੀ**, ਸਾਹਿਤ ਅਕਾਦੇਮੀ, ਦਿੱਲੀ
14. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿੱਲੋਂ, **ਸੁਲਤਾਨ ਬਾਹੂ ਚਿੰਤਨ, ਕਲਾ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੁਸਾਇਟੀ, ਲੁਧਿਆਣਾ।
15. ਲਾਜਵੰਤੀ ਰਾਮ ਕ੍ਰਿਸ਼ਨ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਵੀ** (ਅਨੁਵਾਦ) ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
16. ਹਿਰਦੇਜੀਤ ਸਿੰਘ ਭੋਗਲ, **ਸੂਫ਼ੀ ਲੋਕ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
17. ਡਾ. ਦੀਵਾਨ ਸਿੰਘ, **ਸੂਫ਼ੀਵਾਦ ਤੇ ਹੋਰ ਲੇਖ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
18. ਅਜਮੇਰ ਕਵੈਂਟਰੀ, **ਕਿੱਸਾ ਹੀਰ ਵਾਰਸ ਸ਼ਾਹ**, (ਲਿੱਪੀ ਅੰਤਰ) ਪੰਜਾਬੀ ਸੱਥ, ਲਾਂਬੜਾਂ, ਜਲੰਧਰ।
19. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ (ਸੰਪਾ.) **ਹੀਰ ਵਾਰਿਸ: ਜਗਤ ਤੇ ਜੁਗਤ**, ਸਾਹਿਤ ਅਕਾਦੇਮੀ, ਦਿੱਲੀ।
20. ਗੁਰਦੇਵ ਸਿੰਘ, **ਜੰਗਨਾਮਾ: ਸਰੂਪ, ਸਿਧਾਂਤ ਤੇ ਵਿਕਾਸ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
21. ਗੁਰਤੇਜ ਸਿੰਘ, **ਸਾਂਝੇ ਪੰਜਾਬ ਦਾ ਦਰਦ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ
22. ਭੀਮ ਇੰਦਰ ਸਿੰਘ, **ਸ਼ਾਹ ਮੁਹੰਮਦ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
23. ਸੁਲੱਖਣ ਸਰਹੱਦੀ, **ਸੁਲਤਾਨ ਬਾਹੂ ਦਾ ਅਸਲ ਕਲਾਮ, ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
24. ਡਾ. ਜਸਪਾਲ ਕੌਰ ਕਾਂਗ, **ਕਿੱਸਾ ਸੰਵਾਦ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
25. ਡਾ. ਅਮਰਜੀਤ ਸਿੰਘ ਕਾਂਗ, **ਕਿੱਸਾ ਪਰਿਪੇਖ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ :

ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (i) – <u>ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਬਿਰਤਾਂਤ ਤੇ ਬਿਰਤਾਂਤਕਾਰੀ; ਪੰਜਾਬੀ ਨਾਵਲ: ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
2. ਪੰਜਾਬੀ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਨਾਵਲਕਾਰ (196● ਤੋਂ ਬਾਅਦ) 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰਦਿਆਲ ਸਿੰਘ, **ਅੱਧ ਚਾਨਣੀ ਰਾਤ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ
2. ਕਰਮਜੀਤ ਸਿੰਘ ਕੁੱਸਾ, **ਰਾਤ ਦੇ ਰਾਹੀ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1987
3. ਮਿੱਤਰਸੈਨ ਮੀਤ, **ਕੌਰਵ ਸਭਾ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●2

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਨਾਵਲ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਸਮਾਂ ਤੇ ਸੰਵਾਦ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।

3. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਮਸਲੇ ਗਲਪ ਦੇ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
4. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜ ਪੰਜਾਬੀ ਨਾਵਲ : ਇਕ ਮੁਲਾਂਕਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
6. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਸਾਂਸਕ੍ਰਿਤਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
7. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਦਿਆਲ ਸਿੰਘ ਦੇ ਨਾਵਲਾਂ ਦੀ ਗਲਪ-ਚੇਤਨਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਨਰਿੰਜਨ ਤਸਨੀਮ (ਸੰਪਾ.), **ਆਧੁਨਿਕ ਪ੍ਰਵਿਰਤੀਆਂ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●5.
9. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਨਾਵਲ: ਸਰਵੇਖਣ ਤੇ ਮੁਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਕਰਮਜੀਤ ਸਿੰਘ ਤੇ ਟੀ. ਆਰ. ਵਿਨੋਦ (ਸੰਪਾ.), **ਗੁਰਦਿਆਲ ਸਿੰਘ ਅਭਿਨੰਦਨ ਗ੍ਰੰਥ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
11. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ (ਸੰਪਾ.), **ਬਿਰਤਾਂਤਕ ਗਲਪ: ਆਧੁਨਿਕ ਦ੍ਰਿਸ਼ਟੀ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
12. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਰੂ, **ਪ੍ਰਗਤੀਵਾਦ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 1986
13. ਨਰਵਿੰਦਰ ਸਿੰਘ, **ਗੁਰਦਿਆਲ ਸਿੰਘ ਦਾ ਗਲਪ-ਪੈਰਾਡਾਈਮ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
14. ਗੁਰਪਾਲ ਸਿੰਘ ਸੰਧੂ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਚਿਹਨ-ਵਿਗਿਆਨਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
15. ਤ੍ਰਿਲੋਕ ਸਿੰਘ ਕੰਵਰ, (ਸੰਪਾ.) **ਸ਼ੋਧ-ਪ੍ਰਬੋਧ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
16. ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ (ਸੰਪਾ.), **ਸਮਾਜ, ਸੱਤਾ ਤੇ ਸਮਕਾਲੀ ਨਾਵਲ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●2
17. ਹਰਦਰਸ਼ਨ ਸਿੰਘ, **ਪੰਜਾਬੀ ਨਾਵਲ ਵਿਚ ਨਾਇਕ ਦਾ ਵਿਗਠਨ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੋਸਾਇਟੀ, ਲੁਧਿਆਣਾ, 1987.
18. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ (ਸੰਪਾ.), **ਕਰਮਜੀਤ ਸਿੰਘ ਕੁੱਸਾ ਦੇ ਨਾਵਲ: ਬਿਰਤਾਂਤ ਚੇਤਨਾ ਦੇ ਆਧਾਰ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ, 1999
19. ਐਸ. ਤਰਸੇਮ ਤੇ ਰਵੀ ਰਵਿੰਦਰ, **ਨਾਵਲਕਾਰ ਮਿੱਤਰਸੈਨ ਮੀਤ-ਸੰਵਾਦ ਦਰ ਸੰਵਾਦ**, ਮਾਤਾ ਭਾਗਵੰਤੀ ਸੇਵਾ ਟਰਸਟ, ਮਲੇਰਕੋਟਲਾ
20. ਅਮਰਜੀਤ ਸਿੰਘ ਗਰੇਵਾਲ, **ਪ੍ਰਸੰਗ ਕੌਰਵ ਸਭਾ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●6
21. ਪਰਮਜੀਤ ਸਿੰਘ ਢੀਂਗਰਾ, **ਨਾਵਲੀ ਭਾਸ਼ਾ: ਸੰਚਾਰ ਤੇ ਵਿਹਾਰ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।

ਲਾਜ਼ਮੀ ਪ੍ਰਸ਼ਨ ਲਈ ਮਾਡਲ ਪ੍ਰਸ਼ਨ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (ii) – <u>ਪੰਜਾਬੀ ਅਤੇ ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਕਹਾਣੀ: ਬਿਰਤਾਂਤ ਅਤੇ ਬਿਰਤਾਂਤਕਾਰੀ, ਕਹਾਣੀ: ਸਿਧਾਂਤ, ਪੰਜਾਬੀ ਅਤੇ ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਇਤਿਹਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ — 15 ਅੰਕ
2. ਦੋ ਪੰਜਾਬੀ ਅਤੇ ਇਕ ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀਕਾਰਾਂ ਦੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ, **ਮੇਰੀਆਂ ਸ਼੍ਰੇਸਟ ਕਹਾਣੀਆਂ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
2. ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼, **ਮੁਕਤੀ**, ਲੋਕਾਇਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
3. ਜਰਨੈਲ ਸਿੰਘ, **ਟਾਵਰਜ਼**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਧਰਮਪਾਲ ਸਿੰਗਲ, ਗੁਰਲਾਲ ਸਿੰਘ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ: ਨਵੀਨ ਪ੍ਰਵਿਰਤੀਆਂ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਗੁਰਬਖਸ਼ ਸਿਘ ਫਰੈਂਕ, **ਨਿੱਕੀ ਕਹਾਣੀ ਅਤੇ ਪੰਜਾਬੀ ਨਿੱਕੀ ਕਹਾਣੀ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਅਧਿਐਨ**, ਲੋਕ ਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
4. ਜੋਗਿੰਦਰ ਸਿੰਘ ਨਿਰਾਲਾ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਵਿਚ ਤਣਾਓ: ਸੀਮਾਂ ਤੇ ਸੰਭਾਵਨਾ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
5. ਧਨਵੰਤ ਕੌਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਬਿਰਤਾਂਤ-ਸ਼ਾਸਤਰੀ ਅਧਿਐਨ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਹਰਿਭਜਨ ਸਿੰਘ, **ਖਾਮੋਸ਼ੀ ਦਾ ਜਜ਼ੀਰਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਿਆਰ ਤੇ ਪਰਿਵਾਰ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
8. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

9. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀ ਕਥਾ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ
10. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਸਫ਼ਰ ਤੇ ਸ਼ਾਸਤਰ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ
11. ਅਮਰਜੀਤ ਕੌਰ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ ਸਿਧਾਂਤ, ਸਰੂਪ ਤੇ ਵਿਕਾਸ**, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
12. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ, **ਵਿਸ਼ਵਕਰਨ ਅਤੇ ਪੰਜਾਬੀ ਕਹਾਣੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●7
13. ਡਾ. ਤੇਜਵੰਤ ਗਿੱਲ (ਸੰਪਾ.), **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀ ਕਥਾ ਦਾ ਅੰਤਰਬੋਧ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●3
14. ਡਾ. ਰਜਨੀਸ਼ ਬਹਾਦਰ ਸਿੰਘ (ਸੰਪਾ.), **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਪਾਠਗਤ-ਵਿਸ਼ਲੇਸ਼ਣ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●4
15. ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਡਾ. ਹਰਸਿਮਰਨ ਸਿੰਘ ਰੰਧਾਵਾ (ਸੰਪਾ.), '**ਟਾਵਰਜ਼: ਵਸਤੂ, ਵਿਧੀ ਅਤੇ ਦ੍ਰਿਸ਼ਟੀ**', ਐਮ.ਪੀ. ਪ੍ਰਕਾਸ਼ਨ, ਦਿੱਲੀ, 2●●6
16. ਹਰਚੰਦ ਸਿੰਘ ਬੇਦੀ, **ਪਾਠ ਤੇ ਪ੍ਰਸੰਗ: ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 1998
17. ਹਰਚੰਦ ਸਿੰਘ ਬੇਦੀ, **ਪਰਵਾਸ ਤੇ ਪਰਵਾਸੀ ਸਾਹਿਤ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2●●5
18. ਹਰਚੰਦ ਸਿੰਘ ਬੇਦੀ, **ਪਰਵਾਸੀ ਸਾਹਿਤ ਦਾ ਸਭਿਆਚਾਰਕ ਪ੍ਰਸੰਗ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2●●7
19. ਡਾ. ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਬਿਰਤਾਂਤ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●12
20. ਡਾ. ਅਮਰਜੀਤ ਕੌਰ (ਸੰਪਾ.), **ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ ਸਿਮਰਤੀ ਗ੍ਰੰਥ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀ., ਪਟਿਆਲਾ।
21. ਡਾ. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਗਲਪ ਚਿੰਤਨ**, (ਸੰਪਾ.) ਡਾ. ਜਸਬੀਰ ਕੇਸਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
22. ਸਵਰਨ ਚੰਦਨ, **ਸੰਵੇਦਨਾ ਤੇ ਸਾਹਿਤ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1987
23. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ, **ਕਨੇਡੀਅਨ ਪੰਜਾਬੀ ਸਾਹਿਤ**, ਲੋਕਾਇਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 1998
24. ਅਕਾਲ ਅੰਮ੍ਰਿਤ ਕੌਰ, **ਪੰਜਾਬੀ ਗਲਪ, ਪਰਵਾਸੀ ਸਭਿਆਚਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

SYLLABI AND COURSES OF READING OF M.A. PART I & II (SEMESTER SYSTEM) FOR THE EXAMINATION OF 2019-2020, 2020-2021 and 2021-2022

ਪੰਜਾਬੀ

ਐਮ. ਏ. ਭਾਗ ਦੂਜਾ

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਨੌਵਾਂ – <u>ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ</u>

ਕੁਲ ਅੰਕ : 100
ਲਿਖਤੀ : 80
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 20

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਭਾਸ਼ਾ ਅਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ 30 ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਧੁਨੀ ਵਿਗਿਆਨ ਅਤੇ ਰੂਪ ਵਿਗਿਆਨ 30 ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 20 ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਸ਼ਾ ਅਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ** 30 ਅੰਕ
   (i) ਸੰਰਚਨਾਤਮਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਇਕ ਚਿਹਨ-ਪ੍ਰਣਾਲੀ ਦੇ ਰੂਪ ਵਿਚ; ਭਾਸ਼ਾ ਤੇ ਉਚਾਰ; ਚਿਹਨ, ਚਿਹਨਕ ਤੇ ਚਿਹਨਿਤ; ਵਿਨਿਆਸ ਮੂਲਕ ਅਤੇ ਸਹਿਚਾਰੀ ਸੰਬੰਧ; ਇਕਾਲਕਤਾ ਤੇ ਦੁਕਾਲਕਤਾ
   (ii) ਰੂਪਾਂਤਰੀ ਵਿਆਕਰਨ-ਭਾਸ਼ਾਈ ਸਮਰੱਥਾ ਅਤੇ ਨਿਭਾਉ, ਰੂਪਾਂਤਰਣ: ਗਹਿਨ ਸੰਰਚਨਾ ਅਤੇ ਸਤਹੀ ਸੰਰਚਨਾ
   (iii) ਪ੍ਰਕਾਰਜੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ – ਭਾਸ਼ਾ ਦਾ ਸੰਚਾਰ ਮਾਡਲ; ਭਾਸ਼ਾ, ਸਭਿਆਚਾਰ ਅਤੇ ਸਾਹਿਤ
2. **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਧੁਨੀ ਵਿਗਿਆਨ ਅਤੇ ਰੂਪ ਵਿਗਿਆਨ** 30 ਅੰਕ
   (i) ਧੁਨੀ-ਵਿਗਿਆਨ (phonetics) : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਅਧਿਐਨ ਸੱਤਰ; ਧੁਨੀ ਉਚਾਰਨ, ਵਾਰਵਾਰਤਾ ਅਤੇ ਤੀਬਰਤਾ, ਪਿੱਚ; ਪੰਜਾਬੀ ਦੀਆਂ ਸਵਰ ਅਤੇ ਵਿਅੰਜਨ-ਧੁਨੀਆਂ ਦੀ ਉਚਾਰਨੀ ਸੰਰਚਨਾ;
   (ii) ਪੰਜਾਬੀ ਧੁਨੀ-ਵਿਉਂਤ (phonology) : ਧੁਨੀਗ੍ਰਾਮ ਦਾ ਸੰਕਲਪ; ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਧੁਨੀ-ਵਿਉਂਤ: ਖੰਡੀ ਧੁਨੀ ਗ੍ਰਾਮ; ਅਖੰਡੀ ਧੁਨੀ ਗ੍ਰਾਮ: ਸੁਰ-ਪ੍ਰਣਾਲੀ (tonal system), ਵਾਕ-ਸੁਰ (intonation), ਅਨੁਨਾਸਿਕਤਾ ਅਤੇ ਸੰਗਮ; ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਉਚਾਰ-ਖੰਡੀ (syllabic) ਸੰਰਚਨਾ
   (iii) ਪੰਜਾਬੀ ਰੂਪ-ਵਿਗਿਆਨ (morphology) : ਰੂਪਗ੍ਰਾਮ ਦਾ ਸੰਕਲਪ ਅਤੇ ਪਛਾਣ; ਪੰਜਾਬੀ ਸ਼ਬਦ-ਸ਼੍ਰੇਣੀਆਂ; ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ ਅਤੇ ਰੂਪਾਂਤਰ: ਅਗੇਤਰ ਤੇ ਪਿਛੇਤਰ, ਵਿਉਤਪਤੀ ਤੇ ਵਿਕਾਰ (derivation and inflection)
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 20 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਹਰਕੀਰਤ ਸਿੰਘ, **ਰੂਪਾਂਤਰੀ ਵਿਆਕਰਨ**, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ, ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਹਰਕੀਰਤ ਸਿੰਘ ਅਤੇ ਬਾਹਰੀ, **ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ** ਭਾਸ਼ਾ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
3. ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ (ਸੰਪਾ.), **ਭਾਸ਼ਾ ਵਿਗਿਆਨ: ਸੰਕਲਪ ਤੇ ਦਿਸ਼ਾਵਾਂ**, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ।
4. ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ, **ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ,** ਮਦਾਨ ਪਬਲਿਸ਼ਰਜ਼, ਪਟਿਆਲਾ।
5. ਪਰਮਜੀਤ ਸਿੰਘ ਸਿੱਧੂ, **ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
6. ਪਰਮਜੀਤ ਸਿੰਘ ਢੀਂਗਰਾ, **ਭਾਸ਼ਾ: ਸਿਧਾਂਤ ਤੇ ਸਰੋਕਾਰ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
7. ਜਾਨ ਲਾਇਨਜ਼, **ਭਾਸ਼ਾ ਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਜੋਗਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ, ਗੁਰਮੁਖੀ ਲਿੱਪੀ: ਸੋਮੇ ਤੇ ਵਿਕਾਸ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
9. ਵੇਦ ਅਗਨੀਹੋਤਰੀ, **ਸ਼ਬਦ ਸਰੋਕਾਰ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।
10. Balbir Singh Sandhu, **A Descriptive Grammar of Puadhi**, **Parkh**, 1968, Vol. II, Panjab University, Chandigarh.
11. Balbir Singh Sandhu, **Articulatory and Acoustic Structure of Panjabi Consonants**, Punjabi University, Patiala.
12. Gill and Gleason, **A Refereence Grammar of Punjabi**, Punjabi University, Patiala
13. John Lyons, **Introduction to Theoretical Linguistics**, Cambridge University Press, Cambridge.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **10** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **50** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਦਸਵਾਂ : <u>ਸਭਿਆਚਾਰ, ਲੋਕਧਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ</u>

ਕੁਲ ਅੰਕ : **100**
ਲਿਖਤੀ : **80**
ਸਮਾਂ : 3 ਘੰਟੇ
ਇੰਟ. ਅਸੈਸਮੈਂਟ **20**

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਸਭਿਆਚਾਰ ਅਤੇ ਲੋਕਧਾਰਾ : ਸਿਧਾਂਤਕ ਪੱਖ **30** ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦਾ ਅਧਿਐਨ **30** ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ **20** ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਸਭਿਆਚਾਰ ਅਤੇ ਲੋਕਧਾਰਾ : ਸਿਧਾਂਤਕ ਪੱਖ** **30** ਅੰਕ
   (i) ਸਭਿਆਚਾਰ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ; ਸਭਿਆਚਾਰ ਦੇ ਪ੍ਰਮੁੱਖ ਅੰਗ ਅਤੇ ਪੱਖ; ਸਭਿਆਚਾਰ-ਵਿਗਿਆਨ; ਸਭਿਆਚਾਰ-ਵਿਗਿਆਨ ਦੇ ਮੂਲ ਸੰਕਲਪ; ਸਭਿਆਚਾਰਕ ਪਰਿਵਰਤਨ ਦੇ ਆਧਾਰ ਅਤੇ ਨੇਮ
   (ii) ਲੋਕਧਾਰਾ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ; ਲੋਕਧਾਰਾ ਦੇ ਅੰਗ ਅਤੇ ਪੱਖ; ਲੋਕਧਾਰਾ ਵਿਗਿਆਨ; ਲੋਕਧਾਰਾ ਦੇ ਮੂਲ ਸੰਕਲਪ (ਲੋਕ ਮਨ, ਲੋਕ ਰੂੜ੍ਹੀ, ਲੋਕ ਸੰਸਕ੍ਰਿਤੀ, ਲੋਕ ਵਿਸ਼ਵਾਸ)
   (iii) ਸਭਿਆਚਾਰ ਅਤੇ ਸਾਹਿਤ; ਲੋਕਧਾਰਾ ਅਤੇ ਸਾਹਿਤ: ਅੰਤਰ ਸੰਬੰਧ
2. **ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦਾ ਅਧਿਐਨ** **30** ਅੰਕ
   (i) ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦਾ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਪੜਾਅ; ਨਿੱਖੜਵੇਂ ਲੱਛਣ;
   (ii) ਵਿਸ਼ਵੀਕਰਣ ਦਾ ਵਰਤਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦੀ ਸਥਿਤੀ; ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਨਵੇਂ ਬਦਲਾਵ ਅਤੇ ਨਵੀਆਂ ਵੰਗਾਰਾਂ
   (iii) ਪੰਜਾਬੀ ਪਰਿਵਾਰ ਦੀ ਬਣਤਰ; ਪੰਜਾਬੀ ਦੇ ਸਾਕ ਸਕੀਰੀ ਸਬੰਧ; ਸਭਿਆਚਾਰਕ ਮੁੱਲ ਵਿਧਾਨ; ਪਰੰਪਰਕ ਪੰਜਾਬੀ ਪਿੰਡ ਦੀ ਭੂਗੋਲਕ ਬਣਤਰ; ਪਰੰਪਰਕ ਪੰਜਾਬੀ ਪਿੰਡ ਦੀ ਸਭਿਆਚਾਰਕ ਬਣਤਰ; ਪਰੰਪਰਕ ਪੰਜਾਬੀ ਪਿੰਡ ਦੀਆਂ ਮੁੱਖ ਸੰਸਥਾਵਾਂ
3. **ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** **20** ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਗੁਰਬਖਸ਼ ਸਿੰਘ ਫਰੈਂਕ, **ਸਭਿਆਚਾਰ ਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ – ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੁਸਾਇਟੀ ਲਿਮਟਿਡ, ਲੁਧਿਆਣਾ।
2. ਡਾ. ਨਾਹਰ ਸਿੰਘ, **ਲੋਕ ਕਾਵਿ ਦੀ ਸਿਰਜਣ ਪ੍ਰਕਿਰਿਆ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਸੰਸਕ੍ਰਿਤੀ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਨਾਹਰ ਸਿੰਘ, **ਮਾਂ ਸੁਹਾਗਣ ਸ਼ਗਨ ਕਰੇ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
5. ਨਾਹਰ ਸਿੰਘ, **ਬਾਗੀਂ ਚੰਬਾ ਖਿੜ ਰਿਹਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
6. ਵਣਜਾਰਾ ਬੇਦੀ, **ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਵਿਸ਼ਵ ਕੋਸ਼** (ਜਿਲਦ ਪਹਿਲੀ ਤੋਂ ਅੱਠਵੀਂ ਤੱਕ), ਨੈਸ਼ਨਲ ਬੁੱਕ ਸ਼ਾਪ, ਨਵੀਂ ਦਿੱਲੀ।
7. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, **ਪੰਜਾਬੀ ਮਿੱਥਕ ਕਥਾਵਾਂ ਦੀ ਚਿੰਨ੍ਹ ਜੁਗਤ**, ਪੈਪਸੂ ਬੁੱਕ ਡਿਪੂ, ਪਟਿਆਲਾ
8. ਮਨਜੀਤ ਸਿੰਘ, **ਪਿੰਡ ਵਿਉਂਤ ਤੇ ਸਭਿਆਚਾਰ,** ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
9. ਜਸਵਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਪਛਾਣ ਚਿੰਨ੍ਹ**, ਗਰੇਸ਼ੀਅਸ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ।
10. ਗਿਆਨੀ ਗੁਰਦਿਤ ਸਿੰਘ, **ਮੇਰਾ ਪਿੰਡ**, ਸਾਹਿਤ ਸਦਨ, ਚੰਡੀਗੜ੍ਹ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **10** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **50** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ : (i) : <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ – I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਭਾਗ ਪਹਿਲਾ: ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਪ੍ਰਵਿਰਤੀਆਂ/ਕਾਵਿ-ਧਾਰਾਵਾਂ ਤੇ ਪ੍ਰਾਪਤੀਆਂ 3● ਅੰਕ
(ਆਧੁਨਿਕਤਾ ਅਤੇ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ, ਪ੍ਰਮੁੱਖ ਕਾਵਿ-ਧਾਰਾਵਾਂ ਅਤੇ ਪ੍ਰਮੁੱਖ ਰੁਪਾਕਰ)
2. ਤਿੰਨ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀ 3● ਅੰਕ
(ਇਕ-ਇਕ ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਦੇ ਹਵਾਲੇ ਨਾਲ)
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ***<u>ਖੁੱਲ੍ਹੇ ਮੈਦਾਨ</u>***, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ। 3● ਅੰਕ
2. ***<u>ਮੇਰੀ ਚੌਣਵੀਂ ਕਵਿਤਾ</u>***, ਮੋਹਨ ਸਿੰਘ, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ। 3● ਅੰਕ
3. ***<u>ਸੁਗੰਧ ਸਮੀਰ</u>***, ਬਾਵਾ ਬਲਵੰਤ, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਕਰਮਜੀਤ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾਵਾਂ ਦੇ ਵਿਚਾਰਧਾਰਾਈ ਆਧਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਸਤਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਾਵਿ-ਰੂਪ ਅਧਿਐਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ I ਅਤੇ II, ਜਸਬੀਰ ਕੇਸਰ (ਸੰਪਾ.)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਅਤਰ ਸਿੰਘ, **ਸਾਹਿਤ ਸੰਵੇਦਨਾ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
5. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, **ਮੋਹਨ ਸਿੰਘ ਦਾ ਕਾਵਿ-ਜਗਤ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਸਿਧਾਂਤਕ ਪਰਿਪੇਖ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ, ਦਿੱਲੀ।
7. ਰਵਿੰਦਰ ਸਿੰਘ ਰਵੀ, **ਵਿਰਸਾ ਤੇ ਵਰਤਮਾਨ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਅਤਰ ਸਿੰਘ, **ਕਾਵਿ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹੰਦ।
9. ਸੁਖਦੇਵ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
10. ਯੋਗ ਰਾਜ, **ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਸੁਹਜ-ਸ਼ਾਸਤਰ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
11. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਸ਼ਾਇਰੀ ਸਮਕਾਲੀ ਸੰਦਰਭ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
12. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਕਵਿਤਾ : ਪ੍ਰਤੀਰੋਧ ਦੇ ਨਵ-ਸੰਦਰਭ**, ਸਪਤਰਿਸ਼ੀ ਪਬਲੀਕੇਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●18
13. ਐਸ. ਤਰਸੇਮ, **ਬਾਵਾ ਬਲਵੰਤ ਕਾਵਿ ਮੁਲਾਂਕਣ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
14. ਕੁਲਵੀਰ ਸਿੰਘ ਕਾਂਗ, **ਬਾਵਾ ਬਲਵੰਤ ਦਾ ਕਾਵਿ ਸੰਸਾਰ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ, ਦਿੱਲੀ।
15. ਤਰਲੋਕ ਸਿੰਘ ਕੰਵਰ, **ਪਾਠ ਤੇ ਪ੍ਰਸੰਗ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ, ਦਿੱਲੀ।
16. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਤੇ ਅਧਿਆਪਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
17. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪੂਰਨ ਸਿੰਘ ਰਚਨਾ-ਵਿਰਚਨਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
18. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਸਰੋਕਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
19. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
20. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
21. ਸ. ਤਰਸੇਮ, **ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ ਦੀ ਸਮੀਖਿਆ ਤੇ ਸੰਕਲਪ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
22. ਬਲਜੀਤ ਕੌਰ, **ਵੀਹਵੀਂ ਸਦੀ ਦੀ ਪੰਜਾਬੀ ਕਵਿਤਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ (ii) : <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ – I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਪ੍ਰਵਿਰਤੀਆਂ/ਕਾਵਿ-ਧਾਰਾਵਾਂ ਤੇ ਪ੍ਰਾਪਤੀਆਂ 15 ਅੰਕ
(ਆਧੁਨਿਕ ਕਾਵਿ-ਸੰਵੇਦਨਾ ਅਤੇ ਪ੍ਰਮੁੱਖ ਰੁਪਾਕਾਰ)

2. ਦੋ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀ ਇਕ-ਇਕ ਬਿਰਤਾਂਤਕ ਰਚਨਾ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਪ੍ਰੋਫੈਸਰ ਪੂਰਨ ਸਿੰਘ: **ਪੂਰਨ ਨਾਥ ਜੋਗੀ**
2. ਸ਼ਿਵ ਕੁਮਾਰ: **ਲੂਣਾ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਕਰਮਜੀਤ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾਵਾਂ ਦੇ ਵਿਚਾਰਧਾਰਾਈ ਆਧਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ I ਅਤੇ II, ਜਸਬੀਰ ਕੇਸਰ (ਸੰਪਾ.)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਅਤਰ ਸਿੰਘ, **ਸਾਹਿਤ ਸੰਵੇਦਨਾ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਤਰਾਂਜਲੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
5. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਸਿਧਾਂਤਕ ਪਰਿਪੇਖ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
7. ਗੁਰਚਰਨ ਸਿੰਘ ਅਰਸ਼ੀ (ਸੰਪਾ.), **ਲੂਣਾ: ਸਮੀਖਿਆ-ਵਿਧੀ ਮੂਲਕ ਦ੍ਰਿਸ਼ਟੀ-ਬਿੰਦੂ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ
8. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪੂਰਨ ਸਿੰਘ : ਰਚਨਾ ਵਿਰਚਨਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
9. ਅਤਰ ਸਿੰਘ, **ਕਾਵਿ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹੰਦ।
10. ਮਹਿੰਦਰ ਸਿੰਘ ਰੰਧਾਵਾ (ਸੰਪਾ.), **ਪੂਰਨ ਸਿੰਘ, ਜੀਵਨੀ ਤੇ ਕਵਿਤਾ**, ਸਾਹਿਤ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ।
11. **ਸਮਦਰਸ਼ੀ**, ਪੂਰਨ ਸਿੰਘ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ। (ਪੁਸਤਕ ਵੀ ਛਪ ਗਈ ਹੈ)

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (i) : <u>ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ-I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਨਾਟਕ ਤੇ ਰੰਗਮੰਚ ਦਾ ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
2. ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਨਾਟਕਕਾਰਾਂ ਦਾ ਇਕ, ਇਕ ਨਾਟਕ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਬਲਵੰਤ ਗਾਰਗੀ : ***ਲੋਹਾ ਕੁੱਟ***, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1976
2. ਕਪੂਰ ਸਿੰਘ ਘੁੰਮਣ, **ਰਾਣੀ ਕੋਕਿਲਾਂ**, ਨਿਊ ਬੁੱਕ ਕੰਪਨੀ, ਜਲੰਧਰ।
3. ਅਜਮੇਰ ਸਿੰਘ ਔਲਖ : **ਝਨਾ ਦੇ ਪਾਣੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਹਰਚਰਨ ਸਿੰਘ, **ਨਾਟਕ ਕਲਾ ਤੇ ਹੋਰ ਲੇਖ**, ਪੈਪਸੂ ਬੁੱਕ ਡਿਪੋ, ਪਟਿਆਲਾ।
2. ਸੁਰਜੀਤ ਸਿੰਘ ਸੇਠੀ, **ਨਾਟਕ ਕਲਾ**, ਪੰਜਾਬੀ ਨਾਟਕ ਅਕਾਦਮੀ, ਪਟਿਆਲਾ।
3. ਬਲਵੰਤ ਗਾਰਗੀ, **ਰੰਗਮੰਚ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
4. ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਤੇ ਗੁਰਦਿਆਲ ਸਿੰਘ ਫੁੱਲ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਨਾਟਕ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਸਬਿੰਦਰਜੀਤ ਸਿੰਘ ਸਾਗਰ, **ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਇਤਿਹਾਸ**', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1998
6. Peter Szondi, **Theory of Modern Drama**, Manchester University Press.
7. Eric Bentley, **Theory of Modern Stage**, Penguin Books.
8. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, ਰਵੇਲ ਸਿੰਘ (ਸੰਪਾ.), **ਬਲਵੰਤ ਗਾਰਗੀ: ਪੁਨਰ ਮੁੱਲਾਂਕਣ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ, 2●●5
9. ਗੁਰਦਿਆਲ ਸਿੰਘ ਫੁੱਲ, **ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਇਤਿਹਾਸ**, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1998
10. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਅਜਮੇਰ ਔਲਖ ਦੀ ਨਾਟ-ਭੂਮੀ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●2
11. ਬਲਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਰੰਗਮੰਚ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਤੇ ਇਤਿਹਾਸ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ

ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : <u>ਪੰਜਾਬੀ ਵਿਚ ਅਨੁਵਾਦਿਤ ਵਿਸ਼ਵ ਨਾਟਕ–I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਦੁਖਾਂਤ ਤੇ ਸੁਖਾਂਤ ਨਾਟਕਾਂ ਦੇ ਲੱਛਣ ਤੇ ਪਰੰਪਰਾ ਤੇ ਨਾਟ–ਸਿਧਾਂਤ 15 ਅੰਕ
2. ਯੂਨਾਨੀ, ਅੰਗਰੇਜੀ ਤੇ ਸੰਸਕ੍ਰਿਤ ਵਿਚੋਂ ਇਕ, ਇਕ ਅਨੁਵਾਦਤ ਨਾਟਕ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. *ਸੋਫੋਕਲੀਜ਼*, **ਰਾਜਾ ਈਡੀਪਸ**, ਅਨੁ. ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ, ਨਵੀ ਦਿੱਲੀ।
2. ਸ਼ੈਕਸਪੀਅਰ, **ਮੈਕਬਥ**, ਅਨੁ. ਡਾ. ਗੋਪਾਲ ਸਿੰਘ, ਵਰਡ ਬੁਕ ਸੈਂਟਰ, ਨਵੀਂ ਦਿੱਲੀ।
3. ਕਾਲੀਦਾਸ, **ਸ਼ਕੁੰਤਲਾ**, ਅਨੁ. ਨਿਹਾਲ ਸਿੰਘ ਰਸ, ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਨਰੇਂਦਰ, **ਅਰਸਤੂ ਦਾ ਕਾਵਿ ਸ਼ਾਸਤਰ** (ਪੰਜਾਬੀ ਅਨੁਵਾਦ: ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ), ਐਸ. ਚਾਂਦ ਐਂਡ ਕੰਪਨੀ, ਦਿੱਲੀ।
2. ਹਰਿਭਜਨ ਸਿੰਘ, **ਤ੍ਰਾਸਦੀ**, ਵਿਦਵਾਨ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਛਾਉਣੀ।
3. ਨਵਨਿੰਦਰਾ ਘੁੰਮਣ, **ਨਾਟਕੀ ਸਾਹਿਤ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1991
4. ਡਾ. ਕਮਲੇਸ਼ ਉੱਪਲ, **ਥੀਏਟਰ ਦੇ ਥੰਮ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●●
5. ਡਾ. ਕਮਲੇਸ਼ ਉੱਪਲ, **ਰੰਗਮੰਚ ਦੇ ਸ਼ਾਹਕਾਰ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●●
6. A.C. Bradley, **Shakespearian Tragedy**, Macmillan, London.
7. George Thomson, **Aeschylus and Athens**, Lawrence and Wishart, London.
8. Auerbach, **Mimesis**, Princeton University Press, N.J.
9. A.B. Keith, **The Sanskrit Drama**, Oxford University Press, 1966.
10. H.B.F. Kitto, **Greek Tragedy**, A Double Day Anchor Book, Garden City, New York.
11. Qrich Segal (ed.), **Greek Tregedy: Modern Essays in Criticism**, Harper & Row Publishers, New York.
12. Thomas Woodward (ed.), **Sophocles A Collection Critical Essays**, Prentice Hall Inc. Englewood Cliff.
13. Walten Ruben, **Kalidasa: The Human Meaning of His Work**, PPH 1984

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ–ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਤੇਰ੍ਹਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਵਾਕ ਵਿਗਿਆਨ ਤੇ ਅਰਥ ਵਿਗਿਆਨ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਇਤਿਹਾਸਕ ਵਿਕਾਸ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਵਾਕ ਵਿਗਿਆਨ ਤੇ ਅਰਥ ਵਿਗਿਆਨ** 3● ਅੰਕ
   (i) ਵਿਆਕਰਨਕ ਪ੍ਵਰਗ (Grammatical Categories) ਅਤੇ ਕਾਰਜ : ਲਿੰਗ, ਵਚਨ, ਕਾਰਕ, ਕਾਲ, ਬਿਰਤੀ, ਪੱਖ, ਪੁਰਖ, ਵਾਚ, ਸੰਕੇਤਵਾਚਕ ਪ੍ਵਰਗ, ਅਕਰਮਕਤਾ ਅਤੇ ਸਕਰਮਕਤਾ
   (ii) ਪੰਜਾਬੀ ਵਾਕ-ਵਿਗਿਆਨ : ਵਾਕ ਸੰਰਚਨਾ - ਵਾਕ, ਵਾਕੰਸ਼ ਅਤੇ ਉਪਵਾਕ; ਵਾਕਾਤਮਕ ਬਣਤਰਾਂ; ਮੇਲ ਤੇ ਅਧਿਕਾਰ; ਪੰਜਾਬੀ ਦੇ ਨਾਂਵ ਅਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ਾਂ ਦੀ ਬਣਤਰ; ਪੰਜਾਬੀ ਦੇ ਸਵਾਧੀਨ ਤੇ ਪਰਾਧੀਨ ਉਪਵਾਕਾਂ ਦੀ ਸੰਰਚਨਾ
   (iii) ਪੰਜਾਬੀ ਅਰਥ-ਵਿਗਿਆਨ : ਅਰਥ ਦਾ ਸੰਕਲਪ; ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ ਦੀ ਅਰਥਮੂਲਕ ਸੰਰਚਨਾ: ਸਮਾਨਾਰਥਕ, ਵਿਰੋਧਾਰਥਕ, ਬਹੁਅਰਥਕ, ਸਮੂਹ-ਅਰਥਕ (Hyponymy), ਪ੍ਤਿਕੂਲਤਾ (incompatibility), ਸਮਰੂਪਕ ਸ਼ਬਦ; ਅਰਥ-ਪਰਿਵਰਤਨ
2. **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਇਤਿਹਾਸਕ ਵਿਕਾਸ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ** 3● ਅੰਕ
   (i) ਭਾਰਤੀ ਆਰਿਆਈ ਭਾਸ਼ਾ ਪਰਿਵਾਰ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ; ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਨਿਕਾਸ ਅਤੇ ਇਤਿਹਾਸ: ਵਿਭਿੰਨ ਪੜਾਅ ਅਤੇ ਵਰਤਮਾਨ ਸਥਿਤੀ
   (ii) ਭਾਸ਼ਾ ਅਤੇ ਉਪਭਾਸ਼ਾ; ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ ਦਾ ਵਰਗੀਕਰਨ ਅਤੇ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ
   (iii) ਗੁਰਮੁਖੀ ਲਿਪੀ: ਗੁਰਮੁਖੀ ਆਰਥੋਗ੍ਾਫੀ; ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਸੰਰਚਨਾ; ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਪ੍ਾਚੀਨਤਾ; ਪੰਜਾਬੀ ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਪ੍ਮਾਣੀਕਰਨ ਦੇ ਮਸਲੇ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਸ਼ਨ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਆਤਮ ਸਿੰਘ, **ਸਮਾਜ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਇਤਿਹਾਸ,** ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਹਰਕੀਰਤ ਸਿੰਘ ਅਤੇ ਬਾਹਰੀ, **ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ** ਭਾਸ਼ਾ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਬਲਦੇਵ ਸਿੰਘ ਚੀਮਾ, **ਪੰਜਾਬੀ ਵਾਕ ਪ੍ਬੰਧ ਬਣਤਰ ਅਤੇ ਕਾਰਜ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
5. ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ (ਸੰਪਾ.), **ਭਾਸ਼ਾ ਵਿਗਿਆਨ: ਸੰਕਲਪ ਤੇ ਦਿਸ਼ਾਵਾਂ**, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਵਿਦਿਆ ਭਾਸ਼ਕਰ ਅਰੁਣ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਕਾਸ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਲੁਧਿਆਣਾ
7. ਜਗਜੀਤ ਸਿੰਘ, **ਪੰਜਾਬੀ ਵਿਆਕਰਨ : ਸ਼ੈ੍ਣੀਆਂ ਤੇ ਇਕਾਈਆਂ**, ਨਿਊ ਬੁੱਕ ਕੰਪਨੀ, ਜਲੰਧਰ
8. ਜੀ. ਬੀ. ਸਿੰਘ, **ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਜਨਮ ਤੇ ਵਿਕਾਸ,** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
9. ਦੁਨੀ ਚੰਦ੍, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਆਕਰਣ**, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
10. ਦੁਨੀ ਚੰਦ੍, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਕਾਸ,** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
11. ਪਰਮਜੀਤ ਸਿੰਘ ਸਿੱਧੂ, **ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
12. ਲਾਲ ਸਿੰਘ ਤੇ ਹਰਕੀਰਤ ਸਿੰਘ, **ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ,** ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀ. ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ
13. ਪਰਮਜੀਤ ਸਿੰਘ ਢੀਂਗਰਾ, **ਭਾਸ਼ਾ: ਪ੍ਬੰਧ ਤੇ ਵਿਹਾਰ**, ਦੀਪਕ ਪਬਲਿਸ ਰਜ਼, ਜਲੰਧਰ
14. ਬੂਟਾ ਸਿੰਘ ਬਰਾੜ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਸਰੋਤ ਤੇ ਸਰੂਪ**, ਵਾਰਿਸਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਤਸਰ
15. Balbir Singh Sandhu, **A Descriptive Grammar of Puadhi**, **Parkh**, 1968, Vol. II, Panjab University, Chandigarh
16. Gill and Gleason, **A Reference Grammar of Punjabi**, Punjabi University, Patiala.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਚੌਦਵਾਂ : <u>ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਅਤੇ ਲੋਕ ਸਾਹਿਤ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਮ

1. **ਭਾਗ ਪਹਿਲਾ** - ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਦਾ ਅਧਿਐਨ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** - ਪੰਜਾਬੀ ਲੋਕ ਸਾਹਿਤ ਦਾ ਅਧਿਐਨ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** -ਸਮੁੱਚੇ ਪਾਠਕ੍ਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਦਾ ਅਧਿਐਨ** 3● ਅੰਕ
   (i) ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਦੀਆਂ ਵਿਧਾਵਾਂ ਦੀ ਵਰਗਵੰਡ; ਪੰਜਾਬੀ ਲੋਕ ਵਿਸਵਾਸ਼ ਅਤੇ ਲੋਕ ਸਿਆਣਪਾਂ
   (ii) ਪੰਜਾਬੀ ਰੀਤਾਂ ਰਸਮਾਂ (ਜਨਮ, ਵਿਆਹ, ਮੌਤ)
   (iii) ਪੰਜਾਬ ਦੇ ਤਿਉਹਾਰ ਤੇ ਮੇਲੇ, ਲੋਕ ਨਾਚ ਅਤੇ ਲੋਕ ਨਾਟ,
2. **ਪੰਜਾਬੀ ਲੋਕ ਸਾਹਿਤ ਦਾ ਅਧਿਐਨ** 3● ਅੰਕ
   (i) ਲੋਕ ਸਾਹਿਤ ਦੀ ਪ੍ਰਕਿਰਤੀ, ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਅਤੇ ਸਭਿਆਚਾਰਕ ਮਹੱਤਵ; ਪੰਜਾਬੀ ਲੋਕ ਸਾਹਿਤ ਦੀਆਂ ਪ੍ਰਮੁਖ ਵਿਧਾਵਾਂ ਦੀ ਰੂਪ ਰਚਨਾ (ਸੁਹਾਗ, ਘੋੜੀ, ਸਿੱਠਣੀ, ਹੇਅਰਾ, ਟੱਪਾ, ਲੰਮੀ ਬੋਲੀ, ਕੀਰਨਾ, ਅਖਾਣ, ਮੁਹਾਵਰਾ, ਬੁਝਾਰਤ, ਮਿੱਥ ਕਥਾ, ਦੰਤ ਕਥਾ, ਲੋਕ ਕਹਾਣੀ, ਪਰੀ ਕਥਾ, ਨੀਤੀ ਕਥਾ);
   (ii) ਪੰਜਾਬੀ ਲੋਕ ਕਥਾ ਰੂਪਾਂ ਦੀ ਵਰਗਵੰਡ; ਪੰਜਾਬ ਵਿਚ ਲੋਕ ਬਿਰਤਾਂਤ ਦੀ ਪਰੰਪਰਾ; ਪੰਜਾਬੀ ਮਿੱਥ ਕਥਾਵਾਂ ਦੇ ਮੂਲ ਪੈਟਰਨ; ਪੰਜਾਬੀ ਲੋਕ ਬਿਰਤਾਂਤ ਦੀਆਂ ਲੋਕ ਰੁੜ੍ਹੀਆਂ; ਲੋਕ ਬਿਰਤਾਂਤ ਦੇ ਪਾਤਰ ਅਤੇ ਸਮੱਸਿਆਵਾਂ
   (iii) ਪੰਜਾਬੀ ਲੋਕ ਕਾਵਿ ਦੀ ਵਰਗ ਵੰਡ; ਪੰਜਾਬੀ ਲੋਕ ਕਾਵਿ ਵਿਚ ਔਰਤ ਦੀ ਸਥਿਤੀ ਅਤੇ ਸਿਰਜਣਕਾਰੀ; ਪੰਜਾਬੀ ਲੋਕ ਕਾਵਿ ਦੇ ਮੁੱਖ ਵਿਸ਼ੇ (ਰੱਬ; ਮੌਤ; ਇਸ਼ਕ; ਪੇਕਾ-ਸੌਹਰਾ ਤੇ ਪਰਿਵਾਰਕ ਰਿਸ਼ਤੇ);
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਦੇਵਿੰਦਰ ਸਤਿਆਰਥੀ, **ਗਿੱਧਾ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਨਵੀਂ ਦਿੱਲੀ।
2. ਮਹਿੰਦਰ ਸਿੰਘ ਰੰਧਾਵਾ ਤੇ ਦੇਵਿੰਦਰ ਸਤਿਆਰਥੀ, **ਪੰਜਾਬੀ ਲੋਕਗੀਤ**, ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ
3. ਵਣਜਾਰਾ ਬੇਦੀ, **ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਥਾ : ਰੂਪ ਤੇ ਪਰੰਪਰਾ**, ਪਰੰਪਰਾ ਪ੍ਰਕਾਸ਼ਨ, ਜੇ-11/8●, ਰਾਜੌਰੀ ਗਾਰਡਨ, ਨਵੀਂ ਦਿੱਲੀ
4. ਵਣਜਾਰਾ ਬੇਦੀ, **ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਵਿਸ਼ਵਕੋਸ਼** (ਜਿਲਦ 1 ਤੋਂ 8 ਤਕ), ਨੈਸ਼ਨਲ ਬੁੱਕ ਸ਼ਾਪ, ਨਵੀਂ ਦਿੱਲੀ
5. ਵਣਜਾਰਾ ਬੇਦੀ, **ਬਾਤਾਂ ਮੁੱਢ ਕਦੀਮ ਦੀਆਂ**, ਨਵਯੁਗ ਪਰੈਸ, ਨਵੀਂ ਦਿੱਲੀ
6. ਨਾਹਰ ਸਿੰਘ, **ਲੋਕ ਕਾਵਿ ਦੀ ਸਿਰਜਨ ਪ੍ਰਕਿਰਿਆ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
7. ਨਾਹਰ ਸਿੰਘ, **ਬਾਗੀਂ ਚੰਬਾ ਖਿੜ ਰਿਹਾ (ਜਿਲਦ ਪੰਜਵੀਂ)**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਨਾਹਰ ਸਿੰਘ, **ਮਾਂ ਸੁਹਾਗਣ ਸ਼ਗਨ ਕਰੇ (ਜਿਲਦ ਸੱਤਵੀਂ),** ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
9. ਨਾਹਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਲੋਕ ਨਾਚਾਂ ਦੀ ਸਭਿਆਚਾਰਕ ਭੂਮਿਕਾ ਅਤੇ ਸਾਰਥਕਤਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
10. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, **ਲੋਕਧਾਰਾ, ਭਾਸ਼ਾ ਤੇ ਸਭਿਆਚਾਰ**, ਪੈਪਸੂ ਬੁੱਕ ਸ਼ਾਪ, ਪਟਿਆਲਾ।
11. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਲੋਕਯਾਨ ਅਧਿਐਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
12. ਜਸਵਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਲੋਕ-ਸਾਹਿਤ ਸ਼ਾਸਤਰ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
13. ਜੋਗਿੰਦਰ ਸਿੰਘ ਕੈਰੋਂ, **ਪੰਜਾਬੀ ਲੋਕ ਕਹਾਣੀਆਂ ਦਾ ਸੰਰਚਨਾਤਮਕ ਅਧਿਐਨ ਅਤੇ ਵਰਗੀਕਰਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
14. Raymond Williams, **Culture**, Fontana Publication.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਪੰਦਰਵਾਂ : ਆਪਸ਼ਨ (i) : <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ -II</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਸਮਕਾਲੀ ਪੰਜਾਬੀ ਕਵਿਤਾ : ਕਾਵਿ-ਬੋਧ, ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ, ਆ ਰਹੇ ਬਦਲਾਅ ਅਤੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ) 15 ਅੰਕ
2. ਤਿੰਨ ਸਮਕਾਲੀ ਪੰਜਾਬੀ ਕਵੀ (ਇਕ-ਇਕ ਰਚਨਾ ਦੇ ਹਵਾਲੇ ਨਾਲ) 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ***ਪਰਵੇਸ਼ ਦੁਆਰ***, ਡਾ. ਜਗਤਾਰ
2. ***ਸਾਡੇ ਸਮਿਆਂ ਵਿਚ***, ਪਾਸ਼, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
3. ***ਹਨੇਰੇ ਵਿਚ ਸੁਲਗਦੀ ਵਰਣਮਾਲਾ***, ਸੁਰਜੀਤ ਪਾਤਰ, ਯੂਨੀਸਟਾਰ ਬੁੱਕਸ, ਚੰਡੀਗੜ੍ਹ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ-I, ਅਤੇ ਕਾਵਿ-ਚਿੰਤਨ II**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
2. ਕਰਮਜੀਤ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ-ਧਾਰਾਵਾਂ ਦੇ ਵਿਚਾਰਧਾਰਾਈ ਆਧਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀ., ਅੰਮ੍ਰਿਤਸਰ।
3. ਤੇਜਵੰਤ ਸਿੰਘ ਗਿੱਲ, **ਪਾਸ਼ : ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
4. ਤੇਜਵੰਤ ਸਿੰਘ ਗਿੱਲ, **ਸੁਰਜੀਤ ਪਾਤਰ**, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
5. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਸ਼ਾਇਰੀ: ਸਮਕਾਲੀ ਸੰਦਰਭ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
6. ਸੁਖਦੇਵ ਸਿੰਘ, ਪਾਲ ਕੌਰ (ਸੰਪਾ.), **ਪਾਸ਼: ਜਿਥੇ ਕਵਿਤਾ ਖਤਮ ਨਹੀਂ ਹੁੰਦੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
7. ਯੋਗ ਰਾਜ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਉਤਰ ਪੰਜਾਬ ਸੰਕਟ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
8. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਕਵਿਤਾ : ਪ੍ਰਤੀਰੋਧ ਦੇ ਨਵ-ਸੰਦਰਭ**, ਸਪਤਰਿਸ਼ੀ ਪਬਲੀਕੇਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2018
9. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
10. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਸਰੋਕਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
11. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
12. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ ਅਤੇ ਵਨੀਤਾ (ਸੰਪਾ.), **ਸੁਰਜੀਤ ਪਾਤਰ ਦੀ ਕਵਿਤਾ ਦਾ ਸੰਵਾਦ**, ਪੰਜਾਬੀ ਅਕਾਡਮੀ, ਦਿੱਲੀ।
13. ਸਰਬਜੀਤ ਸਿੰਘ (ਸੰਪਾ.), **ਡਾ. ਜਗਤਾਰ ਸ਼ਬਦ ਸੰਵਾਦ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 20 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **50** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਪੰਦਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : <u>ਆਧੁਨਿਕ ਬਿਰਤਾਂਤਕ ਪੰਜਾਬੀ ਕਵਿਤਾ -II</u>

ਕੁਲ ਅੰਕ : 100
ਲਿਖਤੀ : 80
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 20

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ: 1947 ਤੋਂ ਬਾਅਦ ਦੀ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦੇ ਮੁੱਖ ਝੁਕਾਅ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ, ਮਗਰਲੇ ਦੌਰ ਦੀ ਬਿਰਤਾਂਤਕ ਪੰਜਾਬੀ ਕਵਿਤਾ: ਸਿਧਾਂਤ ਅਤੇ ਇਤਿਹਾਸ — 15 ਅੰਕ
2. ਦੋ ਆਧੁਨਿਕ ਕਵੀਆਂ ਦੀ ਇਕ-ਇਕ ਬਿਰਤਾਂਤਕ ਕਾਵਿ ਰਚਨਾ — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ — 20 ਅੰਕ

ਕੋਰਸ

1. ***ਸਿਮ੍ਰਤੀ ਦੇ ਕਿਰਨ ਤੋਂ ਪਹਿਲਾਂ*** : ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ
2. ***ਰੁੱਖ ਤੇ ਰਿਸ਼ੀ***, ਹਰਿਭਜਨ ਸਿੰਘ, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ-I, ਅਤੇ ਕਾਵਿ-ਚਿੰਤਨ II**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
2. ਮਹਿੰਦਰ ਕੌਰ ਗਿੱਲ, **ਸੁਹਜ ਸਿਰਜੀ ਹਰਿਭਜਨ ਸਿੰਘ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
3. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ ਪਾਠ**, ਸ਼ਬਦ ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
4. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
5. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
6. ਮਹਿੰਦਰ ਕੌਰ ਗਿੱਲ, **ਕਲਾ ਕਰਮੀ ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
7. ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ, **ਮੇਰੀ ਸਾਹਿਤਕ ਸਵੈ ਜੀਵਨੀ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਗੁਲਜ਼ਾਰ ਸਿੰਘ ਸੰਧੂ (ਸੰਪਾ.), **ਹਰਿਭਜਨ ਸਿੰਘ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 20 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ

ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (i) : <u>ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ–II</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ — 15 ਅੰਕ
2. ਤਿੰਨ ਨਾਟਕਕਾਰ (ਇਕ ਇਕ ਨਾਟ–ਰਚਨਾ ਦੇ ਹਵਾਲੇ ਨਾਲ) — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ਚਰਨਦਾਸ ਸਿੱਧੂ, **ਬਾਬਾ ਬੰਤੂ**, ਨੈਸ਼ਨਲ ਬੁੱਕ ਸ਼ਾਪ, ਦਿੱਲੀ।
2. ਆਤਮਜੀਤ, **ਕੈਮਲੂਪਸ ਦੀਆਂ ਮੱਛੀਆਂ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. *ਸਵਰਾਜਬੀਰ, **ਸ਼ਾਇਰੀ***, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਰਵਿੰਦਰ ਸਿੰਘ, ਚਰਨਦਾ**ਸ ਸਿੱਧੂ ਦੇ ਨਾਟਕਾਂ ਦਾ ਆਲੋਚਨਾਤਮਕ ਅਧਿਐਨ**, ਮਨਪ੍ਰੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਦਿੱਲੀ, 2●●3
2. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਕੈਮਲੂਪਸ ਦੀਆਂ ਮੱਛੀਆਂ: ਸੰਵਾਦ ਤੇ ਸਮੀਖਿਆ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਡਾ. ਸਰਬਜੀਤ ਸਿੰਘ (ਸੰਪਾ.), **ਸਵਰਾਜਬੀਰ ਮਿੱਥ ਅਤੇ ਚਿੰਤਨ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ–ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (ii) : ਪੰਜਾਬੀ ਵਿਚ ਅਨੁਵਾਦਿਤ ਵਿਸ਼ਵ ਨਾਟਕ–II

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਨਾਟਕ ਦਾ ਸਿਧਾਂਤ ਅਤੇ ਵਿਭਿੰਨ ਨਾਟ ਜੁਗਤਾਂ — 15 ਅੰਕ
2. ਤਿੰਨ ਅਨੁਵਾਦਤ ਨਾਟਕਕਾਰ (ਇਕ ਨਾਟ–ਰਚਨਾ ਦੇ ਹਵਾਲੇ ਨਾਲ) — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ਬਰਤੈਲਤ ਬਰੈਖ਼ਤ, **ਇੰਜ ਹੋਇਆ ਇਨਸਾਫ**, ਅਨੁ. ਸਤੀਸ਼ ਕੁਮਾਰ ਵਰਮਾ, ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
2. ਲੋਰਕਾ, **ਅੱਗ ਦੇ ਕਲੀਰੇ**, (ਅਨੁ. ਸੁਰਜੀਤ ਪਾਤਰ), ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਯਾਂ ਜਿਰਾਦੂ, **ਸ਼ਹਿਰ ਮੇਰੇ ਦੀ ਪਾਗਲ ਔਰਤ**, (ਅਨੁ. ਸੁਰਜੀਤ ਪਾਤਰ), ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. William Raymond, **Modern Tragedy**, Verso Edition, 1979.
2. Eric Bentley (ed.), **The Theory of the Modern Stage:** (An Introduction to Modern Theatre and Drama), Penguin Books, 1972
3. Eric Bentley (ed.), **The Playright as Thinker**, Medidian Books, 1965
4. Marvin Carlson, **Theories of the Theatre: A Historicial and Critical Survey, From Greek to the Present**, Cornell University Press, Ithaca, 1984
5. Peter Demetz, **Brecht** (A Collection of Critical Essays), Prentice-Hall Inc. Englewood Cliffs, N.J.
6. Manuel Duran, **Lorca** (A Collection of Criticial Essays), Prentice-Hall Inc. Englewood Cliffs, N.J.

ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (iii) : <u>ਪੰਜਾਬੀ ਵਾਰਤਕ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਵਾਰਤਕ: ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ ਨਿਬੰਧਕਾਰੀ ਦੇ ਪ੍ਰਮੁੱਖ ਲੱਛਣ — 15 ਅੰਕ
2. ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਵਾਰਤਕ ਰਚਨਾਵਾਂ (ਇਕ, ਇਕ ਨਿਬੰਧ-ਸੰਗ੍ਰਹਿ ਜਾਂ ਸਾਖੀ ਦੇ ਹਵਾਲੇ ਨਾਲ — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. **ਪੁਰਾਤਨ ਜਨਮ ਸਾਖੀ**, ਸੰਪਾ. ਭਾਈ ਵੀਰ ਸਿੰਘ, ਖਾਲਸਾ ਸਮਾਚਾਰ ਪ੍ਰੈਸ, ਅੰਮ੍ਰਿਤਸਰ
2. ਤੇਜਾ ਸਿੰਘ, **ਨਵੀਆਂ ਸੋਚਾਂ**, ਕਸਤੂਰੀ ਲਾਲ ਐਂਡ ਸੰਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ
3. ਗੁਰਬਖ਼ਸ਼ ਸਿੰਘ, **ਸਾਵੀਂ ਪੱਧਰੀ ਜ਼ਿੰਦਗੀ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. **ਜਨਮ-ਸਾਖੀ ਪਰੰਪਰਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. **ਪੁਰਾਤਨ ਜਨਮ ਸਾਖੀ**, (ਸੰਪਾ.) ਭਾਈ ਵੀਰ ਸਿੰਘ, ਸਾਹਿਤ ਸਦਨ, ਨਵੀਂ ਦਿੱਲੀ
3. **ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਵਾਰਤਕ**, ਸੁਰਿੰਦਰ ਸਿੰਘ ਕੋਹਲੀ (ਸੰਪਾ.), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
4. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਵਾਰਤਕ ਤੇ ਵਾਰਤਕ ਸ਼ੈਲੀ**, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. **ਪੰਜਾਬੀ ਵਾਰਤਕ ਸੈਮੀਨਾਰ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ।
6. ਵਾਰਤਕ ਅੰਕ, **ਖੋਜ ਪੱਤ੍ਰਿਕਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

SYLLABI AND COURSES OF READING OF M.A. PART I & II (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2019-2020, 2020-2021 and 2021-2022

ਐਮ. ਏ. ਪੰਜਾਬੀ

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਪਹਿਲਾ – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ	(MPI)
ਪਰਚਾ ਦੂਜਾ – ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ	(SSP)
ਪਰਚਾ ਤੀਜਾ: ਆਪਸ਼ਨ (i) – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ	(MPK)
ਪਰਚਾ ਤੀਜਾ : ਆਪਸ਼ਨ (ii) – ਗੁਰਮਤਿ ਅਤੇ ਸੂਫ਼ੀ ਕਾਵਿ	(GSK)
ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (i) – ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ	(PNA)
ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (ii) – ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ	(PKA)

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਪੰਜਵਾਂ – ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ	(API)
ਪਰਚਾ ਛੇਵਾਂ – ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਵਿਹਾਰਕ ਅਲੋਚਨਾ	(PKS)
ਪਰਚਾ ਸੱਤਵਾਂ: ਆਪਸ਼ਨ (i) – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ–II	(MPK)
ਪਰਚਾ ਸੱਤਵਾਂ : ਆਪਸ਼ਨ (ii) – ਸੂਫ਼ੀ, ਕਿੱਸਾ ਅਤੇ ਬੀਰ ਕਾਵਿ	(SKB)
ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (i) – ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ	(PNA)
ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (ii) – ਪੰਜਾਬੀ ਅਤੇ ਪਰਵਾਸੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ	(PPK)

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਨੌਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	(BVP)
ਪਰਚਾ ਦਸਵਾਂ : ਸਭਿਆਚਾਰ, ਲੋਕਧਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ	(SLP)
ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ : (i) : ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ – I	(APK)
ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ (ii) : ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ – I	(ABK)
ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (i) : ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ–I	(PNR)
ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : ਵਿਸ਼ਵ ਦਾ ਅਨੁਵਾਦਤ ਨਾਟਕ	(PAV)

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਤੇਰ੍ਹਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ	(BPG)
ਪਰਚਾ ਚੌਦਵਾਂ : ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਅਤੇ ਲੋਕ ਸਾਹਿਤ	(PLS)
ਪਰਚਾ ਪੰਦਰਵਾਂ : ਆਪਸ਼ਨ (i) : ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ –II	(APK)
ਪਰਚਾ ਪੰਦਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : ਆਧੁਨਿਕ ਬਿਰਤਾਂਤਕ ਪੰਜਾਬੀ ਕਵਿਤਾ –II	(ABK)
ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (i) : ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ–II	(PNR)
ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (ii) : ਪੰਜਾਬੀ ਵਿਚ ਅਨੁਵਾਦਿਤ ਵਿਸ਼ਵ ਨਾਟਕ	(PAV)
ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (iii) : ਪੰਜਾਬੀ ਵਾਰਤਕ ਦਾ ਅਧਿਐਨ	(PVA)

ਸਮੈਸਟਰ ਪਹਿਲਾ (ਆਨਰਜ਼)

ਪਰਚਾ ਸਤਾਰ੍ਹਵਾਂ : ਗੁਰੂ ਨਾਨਕ ਬਾਣੀ – ਦੀਰਘ ਅਧਿਐਨ	(GBA)
ਪਰਚਾ ਅਠਾਰਵਾਂ : ਪਰਾਆਲੋਚਨਾ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦਾ ਅਧਿਐਨ	(PMA)

ਸਮੈਸਟਰ ਦੂਜਾ (ਆਨਰਜ਼)

ਪਰਚਾ ਉਨ੍ਹੀਵਾਂ : ਵਾਰਸ ਸ਼ਾਹ : ਦੀਰਘ ਅਧਿਐਨ	(WSA)
ਪਰਚਾ ਵੀਹਵਾਂ : ਪਰਾਆਲੋਚਨਾ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ – II	(PPA)

ਸਮੈਸਟਰ ਤੀਜਾ (ਆਨਰਜ਼)

ਪਰਚਾ ਇੱਕੀਵਾਂ : ਸ਼ਾਹ ਹੁਸੈਨ: ਦੀਰਘ ਅਧਿਐਨ	(SHA)
ਪਰਚਾ ਬਾਈਵਾਂ : ਪਾਕਿਸਤਾਨੀ ਪੰਜਾਬੀ ਸਾਹਿਤ	(PPS)

ਸਮੈਸਟਰ ਚੌਥਾ (ਆਨਰਜ਼)

ਪਰਚਾ ਤੇਈਵਾਂ : ਭਾਈ ਵੀਰ ਸਿੰਘ: ਦੀਰਘ ਅਧਿਐਨ	(BVA)
ਪਰਚਾ ਚੌਵੀਵਾਂ : ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਸਾਹਿਤ	(PPS)

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. SOCIOLOGY (SEMESTER SYSTEM)

EXAMINATIONS, 2018-19

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Note :

A candidate for M. A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he / she has completed the prescribed courses in an affiliated college or the Department concerned of this University.

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES of Sociology (Semester System)
(*Effective from the First Year Admissions for the Academic Session 2010-11)*

1. The Syndicate has approved the following Guidelines, Mode of Testing and Evaluation including Continuous Internal Assessment of students:

(i)	Terminal Evaluation	80%
(ii)	Continuous Assessment	20%

(iii) Continuous Assessment may include Written Test, Snap Test, Participation in Discussions in the class, Term Paper, Attendance etc.

(iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:

(a)	Written Test (one per semester)	:	25	(reduced to 5)
(b)	Snap Test	:	25	(reduced to 5)
(c)	Term Paper/s	:	25	(reduced to 5)
(d)	Participation in Class Discussions	:	15	(reduced to 3)
(e)	Attendance	:	10	(reduced to 2)*

Total: 100 reduced to 20

*Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

Attendance Component			Mark/s for Theory Papers
(a)	75% and above up to 85%	:	1
(b)	Above 85%	:	2

2. **In the case of Paper SOC R 439: Methods & Techniques in Social Research:**

The system of evaluation for Internal Assessment shall be based on field work–data collection, report writing and presentation of report. The break-up of the marks shall be as under:

Data Collection	:	25	(reduced to 5)
Report Writing	:	50	(reduced to 10)
Presentation of Report	:	25	(reduced to 5)
Total		**100 reduced to 20**	

<u>Note:</u> " In view of the peculiarity of distance education courses, students admitted to USOL in M.A. Sociology (Semesters I to IV) shall be given Internal Assessment for all the courses, including SOC-R-439 (3rd Semester), on the basis of Assignments as in the previous system."

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the particular subject and, thus he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the Proforma obtainable from the Examination Branch.

5. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2006 will be shown separately in the Detailed-Marks-Card (D.M.C.)

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READINGS IN THE SUBJECT OF SOCIOLOGY, SESSION 2018-19

SCHEME FOR OPTING COURSES

SEMESTER-I		
Course no.	**Title**	
SOC R 411	History of Social Thought	
SOC R 412	Sociology of Family and Gender	
SOC R 413	Sociology of Development	
SOC R 414	Social Stratification: Concepts & Theories	
SEMESTER-II		
SOC R 425	Positivistic Sociological Theories	
SOC R 426	Methodology of Social Research	
SOC O 521	Population and Society	
SOC O 621	Social Dimensions of Development	
SOC O 721	Sociology of Urban Settlements	
SOC O 821	Structural Moorings of Gender Oppression	
SOC O 921	Peasants and Rural Society In India	
SOC O 922	Organizational Theory and Behaviour	
SOC O 923	Basic Social Statistics	
SEMESTER-III		
SOC R 438	Interpretive Sociological Theories	
SOC R 439	Methods & Techniques in Social Research	
SOC O 532	Basic Methods in Population Studies	
SOC O 632	Social Development in India	
SOC O 633	Rural Development in India	
SOC O 732	Problems of Urban India	
SOC O 832	Family in Cross Cultural Perspective	
SOC O 931	Sociology of Aging	
SOC O 932	Organizational Structure and Development	
SOC O 933	Sociology of Deviance: Concepts and Theories	

SOC O 934 Sociology of Crime
SOC O 935/945 Dissertation (III and IV Semesters)*
SOC O 936 Advanced Social Statistics
SOC O 937 Sociology of Education

SEMESTER-IV

SOC R 440 Perspectives on Indian Society
SOC O 543 Determinants and Consequences of Population Growth
SOC O 544/744 Sociology of Human Migration
SOC O 644 Environmental Crisis and Sustainable Development
SOC O 645 Entrepreneurship and Development
SOC O 743 Cities, Urban Planning and Development
SOC O 843 Family Dynamics in Contemporary India
SOC O 844 Gender and Development
SOC O 941 Fundamentals of Industrial Sociology
SOC O 942 Social Problems
SOC O 943 Political Sociology
SOC O 944 Sociology of Marginalized Communities
SOC O 945/935 Dissertation (IIIrd and IVth semesters)*
SOC O 946 Media and Culture

There will be **two** categories of courses and each course will be of 4 credits.

(1) SOC R level are Required or Compulsory Courses.
(2) SOC O level are Open Courses (including Dissertation).

The students will be required to complete 64 credit hour courses successfully in the total duration of four semesters. The break up of the credit hours is as follows:

Course Category		**No. of Courses to be completed**	**Credits**
1.	Required or Compulsory Courses (SOC R level)	9	9x4= 36
2.	Open Courses (SOC O level)	7	7x4= 28
		Total credits	**64**

Each student shall take up all four Required Courses in the First Semester. In the Second Semester, in addition to two Required Courses, each student shall opt for two Open Courses out of those offered in that particular Semester. In the Third Semester again, in addition to two Required Courses, each student shall opt for two Open Courses, out of those offered during that Semester, including Field Dissertation, depending upon his/her eligibility for the same. In the Fourth Semester, apart from one Required Course,

each student shall opt for three Open Courses (two in case he/she already has dissertation)*.

*Note: **Since the Semester system in M.A. Sociology is just being introduced in colleges from the session 2011-12, SOC O 935/945 Dissertation shall continue to be offered only in the Department and USOL. Its introduction in the colleges shall be subject to approval by the concerned university authorities as per university norms.**

Further, offering of Optional Courses by the Department/College will depend upon the availability of faculty for teaching the course(s). In this way, the candidates will exercise their choice in the following manner:

Semester	Required Course	Open Course
I	4	-
II	2	2
III	2	2
IV	1	3
	9	**7**

***Note**: The Dissertation (SOC O 935/945) will carry 8 credits (200 marks) and will spread over two Semesters, i.e. Semesters III and IV. Only those students who have scored 480 marks during the 1st year (1st and 2nd semesters), taking not more than a total of 32 credits, will be allowed to take up dissertation.

In Colleges affiliated to Panjab University offering M.A. (Semester System) in Sociology,

" There will be six contact hours per week (4 lectures and 2 tutorials)."

Areas of Specialization

There are four Areas of Specialization within the Open Courses. These are:

1. Development Studies
2. Population Studies
3. Family & Gender Studies
4. Urban Studies

A candidate who successfully completes at least 3 Open Courses during M.A. programme in one of these four areas of specialization, will be issued a Certificate of Specialization in that area.

For the purpose of providing specialization, various courses have been grouped under the areas as follows:

1. **Development Studies**
   i) SOC O 621: Social Dimensions of Development (Sem. II)
   ii) SOC O 632: Social Development in India (Sem. III)
   iii) SOC O 633: Rural Development in India (Sem. III)
   iv) SOC O 644: Environmental Crisis and Sustainable Development (Sem. IV)
   v) SOC O 645: Entrepreneurship and Development (Sem. IV)
   vi) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   vii) SOC O 844: Gender and Development (Sem. IV)
2. **Population Studies**
   i) SOC O 521: Population and Society (Sem. II)
   ii) SOC O 532: Basic Methods in Population Studies (Sem. III)
   iii) SOC O 543: Determinants and Consequences of Population Growth (Sem. IV)
   iv) SOC O 544/744: Sociology of Human Migration (Sem. IV)

3. **Family and Gender Studies**
   i) SOC O 821: Structural Moorings of Gender Oppression . (Sem. II)
   ii) SOC O 832: Family in Cross-Cultural Perspective (Sem. III)
   iii) SOC O 843: Family Dynamics in Contemporary India (Sem. IV)
   iv) SOC O 844: Gender and Development (Sem. IV)

4. **Urban Studies**
   i) SOC O 721: Sociology of Urban Settlements (Sem. II)
   ii) SOC O 732: Problems of Urban India (Sem. III)
   iii) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   iv) SOC O 744/544: Sociology of Human Migration (Sem. IV)

Thrust Areas

- **Sustainable Development** (in the context of Globalization, Information, Communication and Technology)

- **Family and Gender Studies**

- **Population, Health and Aging**

- **Social Control and Deviance** (with special reference to Activism, Terrorism and Cyber Crime)

Additional Areas of Interest

Social Development, Deviance & Social Problems, Development and Social Change, Urban Studies, Peasant and Rural Studies, State and Society

M.A. (SOCIOLOGY) SYLLABI AND COURSES OF READING

SEMESTER-I

SOC R 411: HISTORY OF SOCIAL THOUGHT

Objective:

1. To introduce students to historical evolution of sociological thought.
2. To sensitize students to a detailed study of Classical Sociologists, i.e. Karl Marx, Max Weber and Emile Durkheim.
3. To apply the formulation of these thinkers to contemporary issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to the maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline:

Unit-I

A brief review of Enlightenment Thought with special reference to Rousseau; and of the Conservative Reaction to it, with special reference to St. Simon and Auguste Comte.

Unit-II

Karl Marx: Methodology - the concepts of Totality: Historical Materialism, Human Praxis.

Basic Concepts: Means, Relations and Modes of Production: Base and Super-structure; Contradiction; Exploitation; Alienation.

Epochs of social development with special reference to Capitalism; Classes and Class Conflict.

Unit-III

Max Weber: Methodology-Verstehen, Value-Neutrality and Objectivity, Generality and the Ideal Type;

Basic concepts: Social action and its Types, social relationships; Power, Domination and Legitimate Order.

Protestant Ethic and the Spirit of Capitalism; the Rationalization process, Bureaucracy, distribution of Power and Social Stratification.

Unit-IV

Emile Durkheim: Methodology-the nature of Social Facts and their Causation.

Basic concepts: Individual and Collective Conscience, Social Solidarity and Anomie; the Sacred and Profane, the nature of Religion, Suicide as social fact.

Mechanical to Organic Solidarity, Differentiation and Social Division of Labour.

Suggested Readings

1. Aron, Raymond, (Reprint 1990), *Main Currents in Sociological Thought* (Vols. I & II), London, Pelican.
2. Avineri S. (1970) *The Social and Political Thought of Karl Marx*, London, Cambridge University Press.
3. Bendix R. (1960) Max Weber: *An Intellectual Portrait*, New York, Doubleday.
4. Durkheim E. (1960) *The Division of Labour in Society*, Illinois, Free Press of Gilencoe.
5. Giddens, Anthony (1971) *Capitalism and Modern Social Theory*, London, Cambridge, U. Press.
6. Irving M. Zeitlin (1969) *Ideology and the Development of Sociological Theory*, New Delhi, Prentice Hall.
7. Marx, K. and Engels F. (1971), *The Manifesto of the Communist Party*, Moscow, Progress Publishers.
8. Max Weber (1965), *Protestant Ethic and the Spirit of Capitalism*, London, Allen & Unwin.

Additional Readings

1. Ritzer, George, (1996) *Sociological Theory*, London, Sage Publications.
2. Hughes, John A. et. al., (1995), *Understanding Classical Sociology* - Marx, Weber and Durkheim, London, Sage Publications.
3. Pampel Fred C., (2000) *Sociological Lives and Ideas*: *An Introduction to the Classical Theorists*, N.Y., Worth Publishers.

SOC R 412: SOCIOLOGY OF FAMILY AND GENDER

Objective

This course is aimed at sensitizing the students regarding the basic concepts and approaches used for explaining and understanding family and gender. It also aims at sensitizing students about the process of gender socialization within the framework of family. Finally, it exposes the student to specific problems and legal provisions made available to counter these problems relating to gender inequality in the Indian context.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Approaches to Family

Concepts-Family, Household and Domestic function;

Approaches- Structural Functional, Conflict, Symbolic-Interactionist,

Unit-II

Concept and Construction of Gender

i) Concepts- Sex, Gender, Gender-Identity and Gender-roles

ii) Basic understanding of Patriarchy, Masculinity and Femininity, Gender Socialization and Gender Stereotyping through the institutions of family, education, work, media and religion.

Unit-III

Approaches to Gender

Feminism: Meaning; Liberal, Radical, Socialist-Marxist and Post Modernist Feminism

Unit-IV

Gender Equality through Legislation (in Indian Context)

i) Dimensions of Gender Inequality: Female Foeticide, Neglect of Girl Child , Bride Burning and Status of Elderly Women.

ii) Brief introduction to PNDT Act, Dowry Prohibition Act and Domestic Violence Act, Sexual Harrassment of Women at Workplace, Prevention, Prohibition and Redressal Act.

Suggested Readings

1. Bender, Donald R. (1970) 'A Refinement of the Concept of Household: Families, Co-residence and Domestic Functions', *American Anthropologist*, Vol.32,No.1, PP 1-15.
2. Chanana, Karuna (1988) *Socialization, Education and Women: Explorations in Gender-Identity*, New Delhi: Orient Longman.
3. Lipman, Jean Blumen (1984), *Gender-Roles and Power*, New Jersey, Prentice Hall Inc.
4. Oakely, Ann (1972 *Sex, Gender and Society*, London : Harper & Row Pub.
5. Patel, Tulsi (2005), *The Family in India: Structure And Practice,* New Delhi: Sage Publications.
6. Saradamoni K.(ed) (1992), *Finding the Household: Conceptual and Methodological Issues*, New Delhi: Sage Publication.
7. Shah. A.M. (1973), *The Household Dimension of Family*, New Delhi: Orient Longman.
8. White James M. & David M. Klein (2002), *Family Theories*. Thousand Oaks: Sage Publications (Second Edition).
9. Wood, Julia T (1999*), Gendered Lives.* London: Wadsworth Pub. Company (Third Edition).
10. Wykes, Maggie and Barrie, Gunter (2005) *The Media and Body Image*, New Delhi: Sage Publications.
11. Padia, Chandrakala (2011). Theorizing Femisnism: A Cross-Cultural Exploration, Jaipur, Rawat Publications.
12. Bhagwat, Vidut (2004), Feminist Social Thought: An introduction to Six Key Thinkers, Jaipur, rawat Publications
13. Bhasin, Kamla(1993) What is Patriarchy, Kali for Women, Delhi
14. Bhasin ,Kamla (2000) Understanding Gender . Kali for Women, Delhi
15. Bhasin Kamla (2004) Exploring Masulinity, Women Unlimited . Delhi
16. Handbook on Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act, 2013, Government of India, Ministry of Women and Child Development , November 2015

Additional Readings

1. Bare Acts: PNDT Act, Dowry Prohibition Act, Protection of Women Against Domestic Violence Act, Hindu Succession Act.
2. Burr, Wersley R. et.al (1997), *Contemporary Theories about Family*, New York: Free Press.
3. Das, Man Singh & Gupta, Vijay Kumar (eds.) (1995), *Gender Roles and Family Analysis*, New Delhi: M.D. Pub.
4. Dube, Leela (1997), *Women and Kinship: Contemporary Perspectives on Gender in South and South-East Asia*, Tokyo: United Nations Univ. Press.
5. Hofstede, Geert and Associates (1998*), Masculinity and Femininity*, Thousand Oaks: Sage Publication.
6. Lancy, Lobo (1992), 'Household and Family among Thakurs in a North Village', *Sociological Bulletin*, Vol. 41, No. 1&2, pp 46-66.
7. Lengermann, Patrician M. & Jill Niebrugge-Brantley (1996) 'Contemporary Feminist Theory', in George Ritzer, *Sociological Theory,* (Fourth Edition), pp. 436-486, New York : McGraw-Hill.
8. Thorne, Barrie & Marilyn Yalom (eds.) (1982), *Rethinking the Family: Some Feminist Questions,* New York: Longman.
9. Weitz, Shirley (1977), *Sex-Roles*, London: George Allen & Unwin.

SOC R 413: SOCIOLOGY OF DEVELOPMENT

Objective

Keeping in view the relevance of the theme of development, especially in the less developed societies, this course aims (a) to familiarize the students with the various ways that development has been conceptualized; (b) to critically evaluate the modernization theory in its economic, sociological, social-psychological and political forms; (c) to provide a review of the underdevelopment theory given by the Latin American political economists; and (d) to re-assess the various paths to development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development: The concept and its changing connotations (liberal and socialist);
Operational Indicators.

Unit-II

Modernization Theories:

Economic (Gunnar Myrdal, W. W. Rostow);
Sociological (Neil J. Smelser, Daniel Lerner,
Social-Psychological (David C. McClelland, Everett E. Hagen);
Political (Gabriel A. Almond & James S. Coleman);
Their Critical Assessment

Unit-III

Theories of Underdevelopment: Centre-
Periphery (A. G. Frank, Samir Amin);

Unequal exchange (Paul Baran); World system (Immanuel Wallerstein);
Their Critical Assessment

Unit-IV

Paths of Development:

Capitalist, Socialist, Mixed;
Globalization as a Strategy of Development.

Suggested Readings

1. Coleman, J. (1968), "Modernization: Political Aspect", in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences* Vols. 9 & 10 (L-M), London: MacMillan.
2. Desai, Vandana and Robert B Potter, (2008), *The Companion to Development Studies*, London: Hodder Arnold Publication.
3. Gray, J. (1969), "The Economics of Maoism" in H. Bernstein (ed.) *Underdevelopment and Development-The Third World Today*, N.Y.: Penguin Pub. (pp. 254-273).
4. Harrison D. (1988), *The Sociology of Modernization and Development*, New Delhi: Routledge.
5. Horowitz, I. L. (1966), *Three Worlds of Development*, N.Y.: Oxford University Press (Selected chapters).
6. Lerner, D. (1968), "Modernization: Social Aspects" in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences*, Vols. 9 & 10 (L-M) (pp. 387-394), London: MacMillan.
7. McMichael, Philip (2008), *Development and Social Change: A Global Perspective*, Newbury Park, CA: Pine Forge Press.

8. Mehta, S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
9. Myrdal, Gunnar (1968), *An Approach to Asian Drama*, Harmondsworth: Penguin.
10. Ness, G. D. (1970), *Sociology of Economics Development: A Reader*, N.Y.: Harper and Row (Selected Chapters).
11. Pandey, R. (1985), *Sociology of Development*, New Delhi: Mittal Pub.
12. Pandey, R. (1986), *Sociology of Underdevelopment*, New Delhi: Mittal Pub.
13. Parsons, Talcott (1966), *Societies: Evolutionary and Comparative Perspectives*, Englewood Cliffs, N. J.: Prentice-Hall, (pp. 20-29).
14. Sabbarwal, Sherry (2010), "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
15. Sharma, S. L. (1980), Criteria of Social Development, *Journal of Social Action*, Jan.-March.
16. Sharma, S. L. (1986), *Development: Socio-Cultural Dimensions*, Jaipur: Rawat (Chapter I).
17. Smelser, N. J. (1968), *Essays in Sociological Explanation*, Englewood Cliffs, N. J.: Prentice-Hall, (Chapter 6).
18. Walby, Sylvia (2009), *Globalization and Inequalities: Complexity and Contested Modernities*, Newbury Park, CA: Pine Forge Press.
19. Went, Robert (2000), *Globalization: Neo-Liberal Challenge, Radical Responses*. London: Pluto Press.

Additional Readings

1. Abraham, M. F. (1990), *Modern Sociological Theory: An Introduction*. New Delhi: OUP.
2. Apter, D. (1987), *Rethinking Development*, London: Sage.
3. Blomstrom, M. and B. Hettne (1984), *Development Theory in Transition*, London: Zed Books.
4. Desai, A. R. (1983), *India's Path of Development: A Marxist Approach*. New Delhi, OUP.
5. iddens, A. (1990), *The Consequences of Modernity*, Cambridge: Polity Press.
6. Haq, Mahbub Ul (1995), *Reflections on Human Development*, New Delhi: OUP.
7. Larrain, J. (1991), *Theories of Development: Capitalism, Colonialism and Dependency*, Cambridge, Polity Press.
8. Leeson, P. F. and Minogue, M. (eds.) (1988), *Perspectives on Development: Cross-Disciplinary Themes in Development*, Manchester: Manchester University Press.
9. Mehta, S.R. (2010), New Understanding of Indian Society: Incounters with Sociology, Shimla, Indian Institute of Advanced Study.
10. Mehta, Rani and Mehta, S.R. (2010), Social Transformation of an Island Nation: Development Wonder in Mauritius, New Delhi, Kalpaz Publications.
11. Schuurman, F. J. (1993), *Beyond the Impasse: New Directions in Development Theory*, London: Zed Books.

SOC R 414: SOCIAL STRATIFICATION: CONCEPTS & THEORIES

Objective

1. To sensitize students about elements of discrimination, exploitation, inequality and prevalence of hierarchies in everyday life.

2. To give a background of important sociological concepts.
3. To give theoretical formulations of important thinkers like Max Weber, Karl Marx, Talcott Parsons, Davis and Moore and Ralph Dahrendorf.
4. To sensitize students in terms of understanding contemporary formulations like the emerging of middle class and changing dimensions of caste and class.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts

Inequality, Differentiation; Ranking, Hierarchy and Social Stratification

Dimensions of Social Stratification

Caste, Class, Race, Ethnicity and Gender

Unit-II

Theoretical Formulations:

i) Functional Theory: Par sona,Davis and Moore;
ii) Conflict Theory: Karl Marx, R. Dahrendorf
iii) Multidimensional Theory: Max Weber

Unit-III

Emerging Class System

Class, Middle Class, New Middle Class

Correlates of Social Class: Occupation, Education and Income

Unit-IV

Changing Caste System
Change and Continuity in Caste in India
Resurgence of Caste (with special reference to Politics and Khap Panchayats)
Affirmative Action with regard to Scheduled Castes.

Suggested Readings

1. Beteille, Andre (1977) *Inequality Among Men*, Delhi, Oxford University Press.
2. Bendix, R & S. M. Lipset (eds.) (1970) *Class, Status and Power*, London, Routledge & Kegan Paul.
3. Beteille, Andre (ed.) (1969) *Social Inequality*, Penguin Books.
4. Cottrell, Allin (1984) *Social Classes in Marxist Theory*, London, Routledge & Kegan Paul.
5. Culvert, P (1982) *The Concept of Class*, London, Hutchison.
6. D'Souza V. S. (1981) *Inequality and its Perpetuation*, Delhi, Manohar Publication.
7. Eisenstadt, S. N. (1971) *Social Differentiation and Stratification*, London, Scott, Foresman & Co.
8. Giddens A. (1980*) The Class Structure of the Advanced Societies*, London, Unwin Hyman.
9. Gupta, Dipankar (ed) (1991) *Social Stratification*, Delhi, OUP.
10. Johnson, D. L. (1982*) Class and Social Development: A New Theory of the Middle Class,* Baverly Hills, Sage Pub.
11. Malik, S. C. (1986) *Determinants of Social Status in India*, Delhi, Motilal Banarsidas.
12. Sharma, K. L. (1986) *Social Stratification in India*, New Delhi, Manohar.
13. Srinivas, M. N., ed. (1996) *Caste: Its Twentieth Century Avatar*, New Delhi, Viking.
14. Singh G. (1985) *The New Middle Class in India: A Sociological Analysis*, Jaipur, Rawat Publication.
15. Singh, Yogendra (1977) *Social Stratification & Social Change*, Delhi. Manohar Publication.
16. Tumin, M. M. (1978) *Social Stratification*, Prentice Hall.

Additional Readings

1. Beteille, Andre (2002) *Equality and Universality: Essays in Political Theory*, Delhi, OUP.

2. Beteille, Andre (2002) *The Antinomies of Society*, Delhi, OUP.

3. Johnson, D. L. (ed.) (1985) *Middle Classes in Dependent Countries*, Beverly Hills, Sage Publication.

4. Lane, David (1982) *The End of Social Inequality*, New York, George Allen & Unwin.

5. Lloyd, Peter (1983) *The Third World Proletariat*, Boston, George Allen & Unwin.

6. Meale, R. S. (1984) *History and Class*, Oxford, Basic Blackwell.

7. Stinchcombe, A. L. (1986) *Stratification and Organization,* Cambridge, Cambridge University Press.

SEMESTER-II

SOC R 425: POSITIVISTIC SOCIOLOGICAL THEORIES

Objectives

This course exposes the students to the writings of sociologists constituting the School of Positivistic Theories who actually treat Sociology as a natural science. It also includes the more recent theories such as Structuration, Post-structuralism, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Positivism: Definition; Contribution of Auguste Comte, Emile Durkheim
Functionalism: Definition; Anthropological functionalism–Radcliffe-Brown, Malinowski

Unit-II

Structural-Functionalism: Talcott Parsons
Functional analysis of Robert K.Merton
Neo-Functionalism: Jeffrey Alexander, Paul Colomy

Unit-III

Structuralism: Levi-Strauss
Structural Marxism: Louis Althusser
Structuration: Anthony Giddens

Unit-IV

Conflict Theories: Karl Marx, Ralf Dahrendorf, Randall Collins

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2002) *Contemporary Sociological Theory,* California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory,* California, Pine Forge Press.
3. Alexander, J. (1985) *Neofunctionalism*, Beverley Hills, California, Sage.
4. Alexander, J. (1982) *Theoretical Logic in Sociology*, Berkeley, California, University of California Press.
5. Bauman, Z. (1976) *Towards a Critical Sociology: An Essay on Commonsense and Emancipation*, London, Routledge and Kegan Paul.
6. Clarke, S. (1981) *The Foundation of Structuralism*, Brighton, Harvest Press.
7. Colomy, P. (ed.) (1990*) Functionalist Sociology*, London, Edward Elgar.
8. Colomy, P. (ed.) (1990*) Neofunctionalist Sociology*, London, Edward Elgar.
9. Craib, Ian (1984) *Modern Social Theory*, Brighton, Harvester Press.
10. Derek, Layder (2006) *Understanding Social Theory*, New Delhi: Sage Publications.
11. Giddens, A. (1987) *Social Theory and Modern Sociology,* Cambridge, Polity Press.
12. Giddens, A. and J.H. Turner (1987) *Social Theory Today*, Cambridge, Polity Press.
13. Helle, H.J. and S.N. Eisenstadt (eds.) (1985*) Macro-Sociological Theory,* London, Sage.
14. Lane, M. (ed.) (1970) *Structuralism: A Reader*, London, Jonathan Cape.
15. Ritzer, G. (1988*) Sociological Theory*, N.Y., McGraw-Hill.
16. Turner, J.H. (1978) *The Structure of Sociological Theory,* Homewood, Dorsey Press.

Additional Readings

1. Craib, Ian (1992) *Modern Social Theory: From Parsons to Habermas*, London, Harvester Press.
2. Collins, Randall (1997) *Sociological Theory*, Jaipur, Rawat.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat.
4. Westby, David L. (1991) *The Growth of Sociological Theory*, New Jersey: Prentice Hall.
5. Zeitlin, I.M. (1998) *Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat.

SOC R 426: METHODOLOGY OF SOCIAL RESEARCH

Objective

This course familiarizes the students with the major Epistemological Schools in methodology of social sciences. It will also acquaint the students with the basic elements of social research and the major problems confronted by social scientists in arriving at objectivity and value neutrality.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Major Epistemological Schools in Methodology in Social Research

Positivistic and Interpretive; Rationalism and Empiricism; Objectivism and Constructivism

Unit-II

Major Methodological Dilemmas in Social Research

Subjectivity and Objectivity
Value neutrality
Methodological Individualism versus Methodological Collectivism
Limits of Quantification in Social Research
Logic of Triangulation

Unit-III

Sampling

Meaning and Importance
Universe, Population, Sampling Frame, Sampling Error
Types of Sampling:
- Probability Sampling- Meaning, Types, Advantages and Disadvantages
- Non- Probability Sampling- Meaning, Types, Advantages and Disadvantages
- Theoretical Sampling

Unit-IV

Qualitative Research

Ethnography, Participatory Research, Action Research, Interviewing as Conversation, Narratives, Grounded theory, Naturalistic Inquiry, Strengths and Weaknesses of Qualitative Research.

Suggested Readings

1. Bernard, H. Russell (2000) *Social Research Method — Qualitative and Quantitative Approaches,* New Delhi, Sage Publication India Pvt. Ltd.
2. Bryman, Alan (2001) *Social Research Methods,* New York, Oxford University Press.
3. Cicourel, A.V. (1964), *Method and Measurement in Sociology,* Glencoe, Free Press.
4. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
5. Mukherjee, Partha N. (2000), *Methodology in Social Research*, New Delhi: Sage Publication.
6. Strauss, Anselm (1990) *Basics of Qualitative Research Grounded Theory Procedures and Techniques*, New Delhi: Sage Publication. —

Additional Readings

1. Bose, P. K. (1997) "Problems and Paradoxes of Inductive Social Science: A Critique of Ramkrishna Mukherjee", *Sociological Bulletin*, 46 (2), Sept.
2. Bryant, G.A., (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Hanmond, Michael, Howarth, Jane and Keat, Russel (1991) *Understanding Phenomenology,* Basil Blackwell.
4. Himmelstrand, Ulf (1986) *The Sociology of Structure and Action*, New Delhi, Sage Publication.
5. Hindess, Barry (1977*) Philosophy and Methodology in Social Sciences*. The Harvester Press.
6. Jenks, Chris (ed.) (1998) *Core Sociological Dichotomies*, New Delhi, Sage Publication.

SOC O 521: POPULATION AND SOCIETY

Objective

The course intends to discuss the inter-linkages between size, growth, composition and quality of population with societal components. It introduces the students to the importance of population issues in ancient thought to modern times. The course would include theoretical contributions from Malthusian-Neo-Malthusian, Marxian-Neo-Marxian and Developmentalist perspectives. Discussion will focus mainly on issues in India but of course in comparative context at the global and regional levels.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Population and Society:

Development of Early Thought- A Brief view from Roman, Greek, Chinese, Arabian and Indian writings.

Emergence of ideas from these thoughts on Population Equilibrium, Optimum Population, Population Control, Regulating Population through the institution of Marriage, Family and the State

Unit-II

Theoretical Contribution:

Malthus and Neo-Malthusian
Marxian and Neo-Marxian
Demographic Transition
Family Planning and Developmentalist Perspectives
Middle Path Approach

Unit-III

Trends of Population Growth at Global and Regional level and Future Growth.
Trends of Population Growth in India:

Pre and Post Independence Period, Future Growth by mid of 21st century.
Distribution of Population by Regional Balances.

Compositions of Population by Age, Gender, Rural-Urban, Education, and Broad Industrial Classification Categories.

Unit-IV

Towards Population Stabilization in India: Population Policy 2000 –Goals and Strategies Continuity and Change from earlier Population Policy in the Post Independent India. Reproductive & Child Health Approach.

Suggested Readings

1. Bhende, Asha & Tara Kanitkar (1999) *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, Donald J. (1969) *The Principles of Demography*, N.,Y. John Wiley.
3. Bose, Ashish (1991) *Demographic Diversity in India*, Delhi, B.R. Publishing.
4. Census of India (2001), Paper 2 (Rural-Urban Totals).
5. Chambliss, R. (1954), *Social Thought: From Hammurabi to Comte,* New York, Dryden Press.
6. Haberland, Nicole and Diana Measham (eds.) (2002) *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning,* New York, Population Council.
7. *International Encyclopaedia of Population*, 2 Vols.
8. Kleinmann, Davis S. (1980) *Human Adaptation and Population Growth: A Non-Malthusian Perspective*, New York, Monclairef.
9. Nam, Charles (1968) *Population and Society*, Boston, Houghton, Miffin Co.
10. *National Population Policy (2000),* Government of India.
11. Pachauri, S. (ed.) (1999), *Implementing Reproductive Health Agenda in India: the Beginning*, New Delhi, Population Council.
12. Petersen, William (ed.) (1972*), Readings in Population*. N.Y., Macmillan.
13. Population Studies, (1996) *Golden Jubilee Special Issue*, Great Britain (select papers).
14. Premi, M.K. (1991), *India's Population: Heading Towards a Billion*, Delhi, B.R. Publishing.
15. Sen, Amartya and Jean Dreze (1996), *Indian Development*, Oxford University Press.
16. Simon, Julian L. (1981), *The Ultimate Resource,* Princeton, Princeton University Press.
17. U.N., (1973) *Determinants and Consequences of Population Growth*, (Chapter-Introduction), NY.
18. U.N. (2002) *World Population Reports*, N.Y.

Additional Readings

1. Agarwala, S.N. (1984), *Population,* New Delhi: National Book Trust, India.
2. Agarwala, S.N. (1977), *India's Population Problems*, New Delhi: Tata McGraw Hill.
3. Hans,Raj (2001)*, Fundamentals of Demography*, New Delhi: Surjeet Publications.
4. Kulkarni, P.M. (2000), "Prospective Changes in the size and structure of India's Population – Implications of PFI Projections up to 2051" *in Millennium Conference on Population, Development and Environment Nexus*, New Delhi: PHD Chamber of Commerce and Industry.

5. Panandikar, V.A Pai (2000), "India's Demography and Democracy", in *Millennium Conference on Population, Development and Environment Nexus,*
New Delhi: PHD Chamber of Commerce and Industry.
6. Thompson, Warren, S. (1953), *Population Problems*, New York: McGraw-Hill.

SOC O 621: SOCIAL DIMENSIONS OF DEVELOPMENT

Objective

Economic development in society cannot remain unaffected by social-structural factors. Similarly, the social structure, too, is influenced by economic growth and modernization. With this in view, the present paper (a) provides the Gandhian, Marxist, Ecological, Post-modernist, Feminist and Sociological critiques of the economic growth and modernization models of development; (b) discusses how structural factors like caste, tradition, religion and population can impede or facilitate development; (c) examines how economic development and modernization can, in turn, lead to problems related to ethnicity, disparity, displacement and (d) discuss some of the new trends in development studies.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Critiques of Economic Paradigm of Development:

Gandhian, Marxist, Post-Modernist, Ecological, Feminist, and Sociological

Unit-II

Social-Structural and Cultural Factors in Economic Development:

Caste, Religion, Population, Traditions and Values

Unit-III

Socio-Cultural Consequences of Economic Development: Disparity, Displacement and Resettlement, Ethnic Resurgence, Erosion of Traditions and Values.

Unit-IV

New Directions in the Understanding of Development:
Ethical Development, Capability Approach (Amartya Sen)
New Modernity and Risk Society (Ulrich Beck)
Human Rights and Development (Peter Uvin)
Inclusive Development
Millennium Development Goals (UNDP)

Suggested Readings

1. Biswas, S. C. (ed.) (1969) *Gandhi, Theory and Practice: Social Impact and Contemporary Relevance*, Shimla, IIAS. (Articles by V. Palshikar & Raj Krishna).
2. Boyne, Roy (2003) *Risk (Concepts in the Social Sciences)*, Berkshire: Open University Press.
3. Cernea, M. M. (1988) "Involuntary Resettlement and Development" *Finance and Development*, Sept. (pp.) 44-46.
4. Desai, Vandana and Robert B Potter, (2008) *The Companion to Development Studies*, London: A Hodder Arnold Publication.
5. Development and Populations, Special Issue (1990) *Yojana*, Vol. 34, Nos. 1 & 2, Jan. 26.
6. Dube, S. C. (1958) *India's Changing Villages: Human Factors in Community Development*, London: Routledge & Kegan Paul (Chapter 6).
7. Ferreira, Francisco H. G. and Michael Walton (2006) *World Development Report: Equity and Development*, Washington DC: World Bank & N.Y.: Oxford University Press.
8. Mehta, Rani (2014) Sociology and Environmental Sustainability, Jaipur, Rawat Publications.
9. Mishra, G. P., D. M. Diwakar and Ashok Mathur (2006) *Deprivation and Inclusive Development,* Lucknow: New Royal Book Co.
10. Pieterse, Jan Nederveen (2010) *Development Theory*, Newbury Park, CA: Pine Forge Press.
11. Quinlivan, Gary and Antony Davies (2003) "Ethical Development and the Social Impact of Globalization", *International Journal on World Peace*, Vol. 20.
12. Rao, M. S. A. (1969) "Religion and Economic Development" *Sociological Bulletin*, Vol. XVIII, No. 1, March (pp.1-15).
13. Sabbarwal, Sherry (2010) "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
14. Sardar Sarovar Project: Review of Resettlement and Rehabilitation in Maharashtra (1993) report by the Tata Institute of Social Sciences, in *Economic and Political Weekly*, Aug. 21, (pp. 1705-1714).
15. Sen, Amartya (2000) *Development as Freedom*. Oxford: Oxford University Press.
16. Sharma, S. L. (1994) "Salience of Ethnicity in Modernization: Evidence from India", *Sociological Bulletin*, Vol. 39, Nos. 1 & 2 (pp. 33-51).

17. Sharma, S.L. (1988) "Modernization of Indian Society: A Symbolic Intreractionist Perspective", *The Journal of Sociological Studies*, Vol.7, Jan. (pp.10-33).
18. Sinha, D. and S. R. Kao (eds.) (1988) *Social Values and Development*, New Delhi: Sage (Introduction and Chapter I).
19. "Sustainable Development" Special Issue (1991) *The European Journal of Development Research*, Vol. 3, No. I June.
20. UN, (2007) *Globalization and Inclusive Development (Note by the UNCTAD Secretariat)*, Geneva: United Nations Pub.
21. UN, (2009) *Millennium Development Goals Report 2009*, N.Y.: United Nations Publication.
22. Uvin, Peter (2004) *Human Rights and Development*, West Hartford, Connecticut: Kumarian Press.

Additional Readings

1. Apthorpe, Raymond, J. and A. Krahl (1986) *Development Studies: Critique and Renewal*, Leiden, the Netherlands: Brill.
2. Chakraborty, M. (1987) "Resettlement of Large Dams Oustees in India" in *People and Dams, Published by the Society for Participatory Research in Asia*, New Delhi.
3. Foster, G. M. (1973) *Traditional Societies and Technological Change*, New Delhi: Allied Pub. (Chapter 5).
4. Giddens, A. (1996) "Global Problems and Ecological Crisis" in *Introduction to Sociology*, IInd edition, New York: W.W. Norton & Co.
5. Momsen, J. (1991) *Women and Development in the Third World*, N.Y.: Routledge.
6. Nusebaum, Martha (1993) *The Quality of Life*, Oxford: Oxford University Press.
7. Pieterse, J. N. (ed.) (1992) *Emancipations, Modern and Postmodern*, London: Sage.
8. Pimpley, P. N., "Development and Downward Social Mobility in Independent India", Unpublished Monograph.
9. Sabbarwal, Sherry (1992-93) "Ethnicity: A Critical Review of the Conceptions and Perspectives", *Social Science Research Journal*, Vol. 1, Nos. 1 & 2, March-Sept., 1992-93.
10. Sharma S. L. (1986) *Development: Socio-cultural Dimensions*; Jaipur: Rawat Publications (Chapters 1, 7, 8, 9).
11. Sharma, S. L. (1989), "Social Development: Reflection on the Concept and the Indian Experience", *Guru Nanak Journal of Sociology*, Vol.10, Nos. 1 & 2 (pp. 37-55).

SOC O 721: SOCIOLOGY OF URBAN SETTLEMENTS

Objective

This course has been devised to introduce the students to the history of urban settlements and emergence of Urban Sociology as a discipline. The course would acquaint the students with the basic concepts, approaches and theoretical formulations relating to urban typology, urban ecology, urbanism etc., with a special focus on the diverse experiences of western and non-western, particularly Indian, regions. This course will provide the basic understanding to the students who wish to specialize in urban sociology.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Urbanization in Historical Perspective

Emergence of Urban Settlements
Urbanization in Developed and Developing Countries
Suburbanization
Pre-industrial, Industrial and Post-industrial and Colonial city
Metropolitan and Mega city

Unit-II

Approaches to Urban Society

Ecological-Classical Neo-Classical and Socio-Cultural
Technological and Demographic
Urbanism as a Way of Life
Rural-Urban Continuum
Marxist Approach to City

Unit-III

Internal Structure of Cities
Concentric-Zone Theory, Star theory, Sector theory, Multiple-Nuclei theory

Location of Cities

Central Place theory, Break-in-transportation, Specialized
Functions Urban Primacy and Rank-Size Rule.

Unit-IV

Urban Functions

Basic and Non-basic Functions
Generative and Parasitic Cities.
Functional Classification of Cities
Cultural Role of Cities

Suggested Readings

1. Castells, Manuel, (1997), *The Urban Question*, London, Edward Arnold.
2. Gill, Rajesh, (2009) *The Contemporary Indian Urban Society — Gender, Ethnicity and Governance*, Jaipur, Rawat Publication.
3. Gill, Rajesh (1989), "Some Issues in the Conceptualization of Urbanism", *Journal of Sociological Studies,* Vol. 8, Jan., 75-85.
4. Gill, Rajesh, (2000), 'Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization', *Sociological Bulletin*, Vol. 49, No. 2, September, pp. 211-228.
5. Guglar, Joseph (ed.), (1988), *Urbanization of the Third World*, Oxford, Oxford University Press.
6. Hatt, P.K. and Reiss, A.J. (eds.) (1951), *Cities and Society,* Illinois, The Free Press.
7. Lewis, Oscar, (1970), *"Further Observations on the Folk-Urban Continuum and Urbanization with special reference to Mexico City",* in Hauser and Schnore (eds.), *The Study of Urbanization,* New York, John Wiley and Sons.
8. Redfield, Robert and Milton B. Singer, (1954), "Cultural Role of Cities", in *Economic Development and Cultural Change,* Vol. 3, 53-73.
9. Sjoberg, Gideon, (1960), *The Pre-Industrial City,* Illinois, The Free Press.
10. Theodorson, G.A. (ed), (1982), Urban Patterns, Studies in Human Ecology, University Press.
11. Theodorson, George, (1961), *Studies in Human Ecology, Evanstow,* Harper and Row.
12. Weber, Max, (1960), *The City,* Translated by Martindale, London, Heinemann.
13. Wirth, Louis, (1938), "Urbanism as a Way of Life", *American Journal of Sociology,* Vol. 44, 1-24.

Additional Readings

1. Ficker, V.B. & H.S. Graves, (1971), *Social Science and Urban Crisis*, New York, The Macmillan Company.
2. Flanagan, William G., (1990), *Urban Sociology, Images and Structure*. Boston, Allyn and Bacon.
3. Gans, Herbert J., (1968), "*Urbanism and Sub-Urbanism as ways of Life: A Re-evaluation of Definitions*" in Sylvia F. Fava (ed.), *Urbanism in World Perspective*, New York, Thomas Y. Crowell Co.
4. Hoselitz, Bert F., (1960), *Sociological Aspects of Economic Growth,* Illinois, Free Press.
5. Spates, James, (1982), *The Sociology of Cities,* New York, St. Martin Press.

SOC O 821: STRUCTURAL MOORINGS OF GENDER OPPRESSION

Objective

The course aims at understanding the social-structural underpinnings of gender oppression persisting in India and worldwide. The agenda of gender empowerment fails to yield the desired outcomes because of structural impediments which are, nevertheless, difficult to overcome. On the one hand, there is the socially given identity of 'otherness' of the woman and on the other, there are contested spaces and processes of self-identity formation. Various contemporary issues, perspectives and challenges in feminist scholarship, movements, agency and empowerment will be explored in a holistic framework through the course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Unit-I

Social construction of gender: Structural myths of femininity and masculinity. Patriarchy and gendered division of labour.

Reflections on structural gender inequity in nature-culture debates.

Unit-II

Approaches to gender:
Black Feminism
Dalit Feminism

Unit-III

International Conventions with special reference to CEDAW Reports: Govt. of India, 2000 & 2007 (Articles 2 & 3)

Gendering the Human Development Indices: Recasting the Gender Development Index and the Gender Empowerment Measure for India: Govt. of India, 2009.

Changing Status of Women in India: Historical and Contemporary Perspective

Unit-IV

Women's movement in India: National Commission of Women

Gender Narratives in Indian Epics: Sita and Draupadi

Suggested Readings

1. Agarwal, Bina (ed.), 1994, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge, Cambridge University Press.
2. Agarwal, Bina (ed.), 1998, *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi, Kali for Women.
3. Beauvoir, Simone de, 1989, *The Second Sex*, New York, Vintage Books.
4. Blumberg, Rae Lesser (ed.), 1991, *Gender, Family and Economy: The Triple Overlap*, California, Sage.
5. Bose, Mandakranta, 2000, *Faces of the Feminine in Ancient, Medieval and Modern India*, New Delhi, OUP.
6. Butler, Judith, 1999, *Gender Trouble: Feminism and the Subversion of Identity*, New York, Routledge.
7. Cohen, Beth (ed.), 1995, *The Distaff Side: Representing the Female in Homer's 'Odyssey'*, New York, OUP.
8. Collins, Patricia Hill, 2000, *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*, New York, Routledge.
9. Friedan, Betty, 1984*, The Feminine Mystique*, New York, Dell Publications.
10. Grogan, Sarah, 1999, *Body Image: Understanding Body Dissatisfaction in Men, Women and Children*, New York, Routledge.
11. Hooks, Bell, 2000, *Feminist Theory: From Margin To Center*, London, Pluto Press.
12. Jackson, Stevi & Jackie Jones, 1998, *Contemporary Feminist Theories*, Edinburgh, Edinburgh University Press.

13. Kalleberg, Arne L. & Rachael A. Rosenfield, 1990, *"Work in the Family and the Labour Market: Cross-national Reciprocal Analysis."* In *Journal of Marriage and Family*, Vol. 52, No. 2 (May), pp. 331-346.
14. Kimmel, Michael S., 2000, *The Gendered Society*, New York, OUP.
15. Lerner, Gerda, 1986, *The Creation of Patriarchy*, Oxford, OUP.
16. Leslie, Julia, 1991, *Roles and Rituals for Hindu Women*, Madison, Fairleigh University Press.
17. Lorber, Judith & Susan A. Farrell (eds.), 1991, *The Social Construction of Gender*, California, Sage.
18. Mandelker, Amy, 1993, *Framing Anna Karenina: Tolstoy, the Woman Question and the Victorian Novel*, Columbus, Ohio State University Press.
19. Mazumdar, Vina, 1979, *Symbols of Power: Studies on the Political Status of Women in India*, Mumbai, Allied Publishers.
20. Mies, Maria, 1980, *Indian Women and Patriarchy*, New Delhi, Concept.
21. Oakley, Ann, 1985, *Sex, Gender and Society*, London, Gower.
22. Omvedt, Gail, 1990, *Violence Against Women: New Movements and New Theories in India*, New Delhi, Kali for Women.
23. Ray, Raka, 2002, *Fields of Protest: Women's Movements in India*, New Delhi, Kali for Women.
24. Rege, Sharmila, 2006,*Writing Caste/ Writing Gender: Narrating Dalit Women's Testimonies*, New Delhi, Zubaan.
25. Roman, Leslie G. & Linda Eyre (eds.), 1997, *Dangerous Territories: Struggles for Difference and Equality in Education*, New York, Routledge.
26. Weitz, Rose (ed.), 1998, *The Politics of Women's Bodies: Sexuality, Appearance and Behaviour*, New York, OUP.

Additional Readings

1. Agnes, Flavia, Sudhir Chandra & Monmayee Basu (eds.), 2004, *Women and Law in India*, New Delhi, OUP.
2. Desai, Neera & Maitreyi Krishnaraj (eds.), 1987, *Women and Society in India*, New Delhi, Ajanta.
3. Desai, Neera (ed.), 1988, *A Decade of the Women's Movement in India*, New Delhi, Himalaya.
4. Leslie, Julia (ed.), 2000, *Invented Identities: The Interplay of Gender, Religion and Politics in India*, New Delhi, OUP.
5. Shulamith, Firestone, 2003, *The Dialectic of Sex : The Case For Feminist Revolution*, New York, Farrar, Straus and Giroux.

SOC O 921: PEASANTS AND RURAL SOCIETY IN INDIA

Objective

The basic purpose of the course is to apprise the students about the basic differences of rural sociology *vis-a-vis* the urban sociology, and the crucial role played by the peasantry therein. Also how the traditional social institutions, agricultural economy and the caste system together build up social structure which is entirely different from the ideal market-oriented capitalist institutions. The course would also throw light on the nature of changes taking place in the rural social structure after the presentation of money and market economy linked to the global capital.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Significance of the study of Rural Society as a separate subject
Basic concepts/definition: Peasant, Rural Society, Village and Indian Village.
Rural Social Institutions: Family, Kinship, Class, Tribe, Caste System, Jajmani System, Religion, Political Institutions and Factions.

Unit-II

Rural India under the British rule:
Introduction of limited Land Reforms

Introduction of Commercial Crops and their Social and Political Repercussion
Introduction of Modern Industry and New Rural-Urban Linkages

Social Transformation in Independent India:
Shift from Feudal to Capitalist form of Agriculture and Change in Social Structure.
Role of Land Reforms
Role of Peasant Movement

Unit-III

Globalization and Crises of Rural Society
Impact on Economy
Impact on Social Institutions

Unit-IV

Emerging Social Ecology
Democratic Process and Caste-Ethnic Relations
Panchayati Raj Institutions and Neo-Village Republics

Suggested Readings

1. Desai, A.R. (1977) *Rural Sociology in India,* Bombay: Popular Prakashan.
2. Frankel, F.R. and Rao, M.S.A. (1989) *Dominance and State Power in Modern India*, Bombay: OUP.
3. Mencher, J.P, (1983) *Social Anthropology of Peasantry*, Part-III, OUP.
4. Mishra, Rajeeb (2006) *Voluntary Sector and Rural Development: Concepts, Practice and New Approach to Remove Rural Poverty,* New Delhi, Rawat Publications.
5. Omvedt, Gail (ed.) (1982) *Land, Caste and Politics in India*, Delhi: OUP.
6. Reddy, A.Vinayak and Charyulu, M.Yadagira. (Eds.). (2008). *Rural Development in India: Politics and Initiatives,* New Delhi, New Century.
7. Shanin, Theodor (ed.), (1987) *Peasants and Peasant Society*, New Delhi: Penguin.

Additional Readings

1. Appadurai, Arjun, (1996) *Modernity at Large: Cultural Dimensions of Globalization*; New Delhi, OUP
2. Beck, Ulrich (2000) *What is Globalization?* London: Polity.
3. Berch, Berberogue, ed. (1992) *Class, State and Development in India,* New Delhi: Sage Publications.
4. Thorner, D and Thorner, E. (1962) *Land and Labour in India,* Bombay: Asia Publications.
5. Walter, C. Neala, (1990) *Developing Rural India: Policies, Politics and Progress*, New Delhi, Allied Publishers.

SOC O 922: ORGANIZATIONAL THEORY AND BEHAVIOUR

Objective

The course provides (a) an introduction to the concept of organization; (b) discusses the various theoretical approaches to organizations; (c) familiarizes the student with the concepts of organizational ideologies and culture; and (d) focuses on the behavioral dimensions in organizations.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Organization:

Definition, Features and Typologies based on Function, Regulation, Technology and Structure and Environment

Unit-II

Theoretical Perspectives:

Classical – Marx, Weber, Taylor (Scientific Management);

Neo-Classical – Human Relations approach with special reference to the Hawthorne studies;

Modern – Systemic (closed, open and socio-technical systems approach by the Tavistock School) and Interactional (Goffman and the total institution)

Unit-III

Organizational Ideologies and Culture:

Ideologies – Structuralism, Psychologism, Consensualism, Welfarism and Legalism; Culture- sub-cultures and socialization

Unit-IV

Behaviour in Organizations:

Job satisfaction, Job Commitment, Decision making and Stress Management

Suggested Readings

1. Baron, Robert A. (1976) *Behavior in Organizations*, N.Y.: John Wiley.
2. Beach, L. R. (1997) *Psychology of Decision Making: People in Organizations*, Thousand Oaks: Sage.
3. Biddle, D. and R. Evenden (2000) *Human Aspects of Management*, New Delhi: JAICO Publishing House.
4. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: OUP
5. Eldridge, J. E. T. & A. D. Crombie (1974) *A Sociology of Organization*, London: Nelson.
6. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London: Sage Publications.
7. Pestonjee, D. M. (1999) *Stress and Coping: The Indian Experience*, New Delhi: Sage.
8. Robbins, S. P. (1999) *Organization Theory: Structure, Designs and Applications*, New Delhi: Prentice-Hall.
9. Wieland, George F. & R. A. Ullrich (1976) *Organizations: Behavior, Design and Change*, Homewood, Illinois: Richard D. Irwin Inc.

Additional Readings

1. Blau, P. M. & W. R. Scott (1963) *Formal Organizations: A Comparative Approach*, London: Routledge and Kegan-Paul.
2. Blumberg R. L. (1987) *Organizations in Contemporary Society*, Englewood Cliffs: N. J. Prentice Hall Inc.
3. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.
4. Etzioni, A. (eds.) (1969) *A Sociological Reader on Complex Organizations*, 2nd ed., N.Y.: Hold & Reinhard & Winston.
5. Etzioni, A. (1972) *Modern Organizations*, N. Delhi: E.E.E. Prentice-Hall of India.
6. Hall, Richard H. (1972) *Organizations: Structure and Process*, 2nd ed., Englewood Cliffs: N.J. Prentice Hall Inc.
7. Litterer, J. A. (ed.) (1969) *Organizations: Structure and Behavior*, N.Y.: Wiley & Sons.
8. Porter, L. W. *et al.* (1975) *Behavior in Organizations*, N.Y.: McGraw Hill.

9. Reitz, H. J. (1977) *Behavior in Organizations*, Homewood Illinois: Richard D. Irwin.
10. Sharma, K. L. (1981) *Voluntary Business Associations in Organizational Frame*, Department of Sociology: Panjab University, Chandigarh.
11. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 923: BASIC SOCIAL STATISTICS

Objective

This paper is designed to familiarize the students about basic statistical concepts, quantitative techniques for description and induction of sociological data. In the first and second units, students are introduced to measures of central tendency and measures of dispersion, bivariate distribution, etc. The third unit includes measures of association, probability, standard scores, etc. In the last unit, students are exposed to various inferential methods.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** (Theory portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable Electronic Calculators and Statistical Tables is permitted for the examination.

Course Outline

Unit-I

Statistics in Social Analysis - Functions of Statistics in social analysis, Limitations of Statistics

Variables-discrete and continuous, quantitative and qualitative; independent and dependent

Levels of measurement-Nominal, ordinal and interval

Frequency distribution, grouping error, cumulative frequency distribution, Arithmetic mean, median and mode

Unit-II

Range, semi-interquartile range, average absolute deviation, variance, standard deviation, coefficient of variation, Symmetry and Kurtosis

Bivariate distributions-Bivariate contingency tables, rules for percentaging bivariate frequency tables

Unit-III

Measures of Association-Lambda, Cramer's V, Spearman's rank correlation, Gamma and Pearson's product moment correlation coefficient

Elements of probability- 'a priori' & empirical probability, properties of probability Normal probability distribution, area under the normal curve, standard scores, use of standard scores

Unit-IV

Statistical Inference-Simple random sampling, sample and universe, statistic and parameter, sampling distribution, standard error of statistic, level of significance, critical region

Tests of significance-Z and `t' tests for significance of mean (2 independent samples); Chi-square test for AXB contingency table.

Suggested Readings

1. Blalock, H.M. (1979*) Social Statistics*, New York, McGraw Hill Book Company.

2. Loether, H.J. and Tavish, Mac D.G. (1974) *Descriptive Statistics for Sociologists: An Introduction,* Boston, Allyn and Bacon, Inc.

3. Mark Sirkin R. (1995) *Statistics for the Social Sciences*, London, Sage Publications.

4. Muller John and Kar. F. Schusseller and Herbert, L. Costner, *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.

5. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

6. Weiss, Roberts (1968) *Statistics in Social Research*, New York John Wiley & Sons, Inc.

Additional Readings

1. Jane, L. Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*; Sage Publications: London.

2. Deshpande, J.V., Gore, A.P., Shanubhogve (1995), *Statistical Analysis of Nominal Data*: New Age International Publishers: New Delhi.

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SEMESTER-III

SOC R 438: INTERPRETIVE SOCIOLOGICAL THEORIES

Objective

This course sensitizes the students to the works and ideas of sociologists who have contributed to the perspective of Interpretive Sociology, as against the Positivistic sociology. It focuses on the work of Action theorists, Interactionist theorists and the scholars belonging to the Frankfurt School of Critical Theory.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Action Theories : Max Weber, Talcott Parsons

Unit-II

Symbolic Interactionism : G.H. Mead, H. Blumer

Phenomenology : E. Husserl, A. Schutz

Unit-III

Dramaturgy : E. Goffman

Ethnomethodology : H. Garfinkel

Unit-IV

Critical Theory : J. Habermas

H. Marcuse

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory*, California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A., (2002) *Contemporary Sociological Theory*, California, Pine Forge Press.
3. Alexander, J. (1982) *Positivism: Presuppositions and Current Controversies*, Vol. I of Theoretical Logic in Sociology, Barkeley and Los Angeles, University of California Press.
4. Bernstein, R.J. (ed.) (1985) *Habermas and Modernity,* Cambridge Polity Press.
5. Blumer, H. (1969) *Symbolic Interactionism*, Englewood Cliffs, Prentice Hall.
6. Craib, Ian (1984) *Modern Social Theory,* Brigton, Harvestor Press.
7. Douglas, J. (ed.) (1971) *Understanding Everyday Life*, London, Routeledge & Kegan Paul.
8. Garfinkel, H. (1984*), Studies in Ethnomethodology*, Cambridge, Polity Press.
9. Giddens. A. (1987*) Social Theory and Modern Sociology*, Cambridge, Polity Press.
10. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
11. Goffman, E. (1959) *The Presentation of Self in Everyday Life*, New York, Doubleday.
12. Gurwitsch, A. (1962) "The Commonsense World as Social Reality", *Social Research*, 28-1, 71-93.
13. Habermas, J. (1984) *Theory of Communicative Action*, Cambridge, Polity Press.
14. Heritage, John C. (1987) "Ëthnomethodology" in A. Giddens and Turner (eds.), *Social Theory Today*, Cambridge Policy Press, 347-382.
15. Heritage, J. (1989) *Garfinkel and Ethnomethodology*, Cambridge, Polity Press.
16. Joas, H. (1987) "Symbolic Interactionism" in A. Giddens and J. H. Turner (eds.) *Social Theory Today*, Cambridge, Polity Press, 82-115.
17. Natanson, M. (1970) "Phenomenology and Typification: A Study in the Philosophy of A. Schutz", *Social Research* 37 (1), 1-22.
18. Parsons, Talcott, (1951) *The Social System*, Glencoe, III, The Free Press.
19. Weber, Max (1947) *The Theory of Social and Economic Organization*, Glencoe, III, The Free Press.
20. Zaner, R. M. (1961) "Theory of Intersubjectivity: Alfred Schutz", *Social Research*, 28-1, 1-17.

Additional Readings

1. Collins, Randall (1997*) Sociological Theory*, Jaipur, Rawat Publications.
2. Elliott, Anthony and Bryan S. Turner (eds.) (2001) *Profiles in Contemporary Social Theory*, London, Sage Publications.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat Publications.
4. Zeitlin, I.M. (1998*) Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat Publications.

SOC R 439: METHODS AND TECHNIQUES IN SOCIAL RESEARCH

Objective

Students in this Semester are supposed to do field work as a part of this Course. Hence, the Course familiarizes the students with basic elements of scientific method, apart from the process of field work, data collection and finally report writing. This course trains the students as to how to draw influences and conclusions out of empirical research.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Scientific Method:

i) Definition and Aims: Explanation; Generalization; Prediction; Control
ii) Basic Elements: Concepts, Constructs, Hypotheses, Fact, Theory
iii) Induction and Deduction

Unit-II

Research Design:

Exploratory, Descriptive, Experimental, Quasi-experimental, Comparative, Longitudinal and Panel studies
Problems of Experimental Studies in Social Research.

Unit-III

Measurement and Scaling:

Measurement: Meaning, Levels, Indices, Operationalization, Problems
Scaling Techniques - Thurstone, Likert, Guttman and Bogardus Scales Reliability and Validity of Scales.

Unit-IV

Field Work:
Meaning and Uses
Techniques of Data Collection:

Observation: Structured and Unstructured; Participant and Non-Participant;
Interview Schedule: Structured and Unstructured
Interview: Types; Advantages and Disadvantages
Questionnaire: Types, Advantages and Disadvantages
Case Study; Content Analysis;
Data Analysis: Coding, Tabulation and Report Writing

Suggested Readings

1. Bailey, K. D., (1997) *Methods of Social Research*, New York, The Free Press.
2. Bernard, H. Russell (2000) *Social Research Methods – Qualitative and Quantitative Approaches*, New Delhi, Sage Publications India Pvt. Ltd.
3. Colin, R. (2000) *Real World Research* Oxford, Blackwell,
4. Goode, W.J. and Hatt P.K. (1952), *Methods in Social Research*, New York: McGraw Hill, International Students Edition.
5. Kerlinger, Fred N. (1973), *Foundations of Behavioural Research*, New York, Holt, Rinehart & Winston, INC.
6. Moser and Kalton (1980) Survey *Methods in Social Investigation.* Heinemann Educational Books.
7. Punch, K. F, (1998) *Introduction of Social Research, Quantitative & Qualitative Approach*, New Delhi, Sage Robson,
8. Seltiz, Claire, et.al. (1959) *Research Methods in Social Relations,* New York, Henry Holt & Co.
9. Tashakkori, A. and Charles Teddlie, (2003) *Handbook of Mixed Methods,* New Delhi, Sage.
10. Tim, May, (2001) *Social Research: Issues, Methods and Process*. Buckingham, Open University Press.

Additional Readings

1. *Barly, Kenneth, D. (1978) Methods of Social Research,* New York. The Free Press.
2. Bryant, G.A. (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Giddens, Anthony, (1974), *Positivism and Sociology*, London: Hienmann.
4. Hindess, Barry (1977) *Philosophy and Methodology in Social Sciences*,
5. The Harvester Press.
6. Madge, John, (1976) *The Tools of Social Science*, London, Longman.

SOC O 532: BASIC METHODS IN POPULATION STUDIES

Objective

To understand the basic dynamics of population, it is important to have basic knowledge of demographic methods. This course prepares the students to explore the sources of demographic data, learn basic techniques to handle these data and develop measures to understand changes in population size, fertility, mortality and marriage.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Sources of Demographic Data: Census, Civil Registration, Population Surveys, and UN Sources of Demographic Data. Nature and Quality of these Data Sources.

Changes in Population Size: Intercensal Change, Average Annual Growth Rate, Linear Growth Rate, Geometric Growth Rate, Exponential Growth Rate; Interpolation and Extrapolation.

Unit-II

Population Composition and Distribution: Literacy Rate, Rural-Urban, Labour Force Participation Rate.

Age and Sex Composition: Problems related to Age Data, Age Distribution, Age Heaping Effects, and Adjustment of Age Data. Dependency Ratios. Construction of Age-sex pyramids, Sex Ratio.

Unit-III

Measures of Mortality: Computation of Crude Death Rate, Age-Specific Death Rates; Infant Mortality Rate, Perinatal, Neonatal, Post-Neonatal Mortality Rate.

Life-Table Method: Types of Life Tables, Basic Columns of Life Tables. Relationship between various life-table columns, Life Table Stationary Population. Application of Life Table approach.

Unit-IV

Measures of Fertility: Computation of Crude Birth Rate and its uses, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate, Child Woman Ratio

Contraceptive Prevalence Rate, Abortion Rate & Foetal Wastage

Measure of Marriage & Divorce: Crude Marriage Rate, Divorce Rate. Mean Age at Marriage from Census and Survey Data.

Suggested Readings

1. Census of India*, Age and Life Tables*, Series of India, Paper 2 , GOI, 1974.
2. Hanp, Arthur and Thomas, T. (2001*) Population Reference Bureaus,* Population Handbook, 4th ed., Washington, PR3.
3. Mishra, Bhaskar D. (1993) *Introduction to the Study of Population.* New Delhi, National Book Population Reference Bureau, Trust (Latest Edition)
4. Shryock, Henry S. Jacob S. Siegel and Others (1976) *Methods and Materials of Demography.* (Condensed Edition) Harcourt Brace, Academic Press.
5. Spiegelman, Mortimer, (1968) *Introduction to Demography*, Cambridge, Harvard University Press.
6. *UN Manuals* Nos. 1, 2 & 3, United Nations.

Additional Readings

1. Cox, Peter (1959), *Demography,* London: Cambridge University.
2. Haupt, A. and Kane, T. (1998), *Population Handbook*, Washington DC, Population Reference Bureau.
3. Newell, Colin (1988), *Methods and Models in Demography*, London, Belhaven Press.

SOC O 632: SOCIAL DEVELOPMENT IN INDIA

Objective

This paper examines the development process in India focusing mainly on the issues of

(a) the India State and planned development; (b) the role of voluntary sector in India's development; (c) the assessment of the problems of, and measures taken to improve the conditions of the underprivileged groups such as the SCs, STs and BCs; and (d) to consider the phenomenon of globalization and its consequences for the Indian society.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Social Development: Concept, Meaning and Indicators
Development Planning in India Historical Overview and present status Planning Commission-Niti Aayog)

Unit-II

Voluntary Sector and Development: Voluntary sector organizations, their Potential and Limitations as Agencies of Social Transformation; Case Studies of Voluntary organisations.

Unit-III

Development of Disadvantaged Groups: Problems of Scheduled Castes (SCs), Scheduled Tribes (STs) and Backward Classes (BCs); Compensatory Discrimination through Constitutional and Legal measures; Development Schemes for SCs, STs and BCs; Commissions and their Recommendations: Mandal Commission and the Reservation Debate; Sociological Appraisal of the Development Policies for STs, SCs and BCs

Unit-IV

Globalization and its Social Implications in India: Impact on Agriculture and Labour; Women and Youth.

Suggested Readings

1. Basu, A. R. (1985) *Tribal Development Programmes and Administration in India*, New Delhi: National Book Organization. (Chapters 2 & 15)
2. Basu, D. K. and R. Sisson (eds.) (1986) *Social and Economic Development in India: A Re-assessment*, New Delhi: Sage, (Chapters by Ser & Galanter).
3. Chitnis, Suma (1981) *A Long Way to Go: Report of a Survey of Scheduled Caste High School and College Students*, New Delhi: Allied Pub. (pp. 107-143).
4. Choudhary, K. (1990) "Reservations: A Systematic Compulsion", *Mainstream*, March 3. (pp. 23-26)
5. Conference Number on "Economic Restructuring in India and Labor" (1992) *The Indian Journal of Labor Economics*, Vol. 35, No. 4. Oct-Dec.
6. Desai A. R. (1985) *India's Path of Development: A Marxist Approach*, Bombay: Popular Prakashan (Chapter 2).
7. GO, (1993) "Farmers Movement: Fighting for Liberalization", *Economic and Political Weekly*, December 11 (pp. 2708-2710)
8. Jain, Devaki, (1980) *Quest for Power: Five Indian Case Studies*, Ghaziabad, Vikas
9. Jena, N. A. (1994) "An Inquiry into Popular Participation", *Participation and Governance*, Vol. I, No. I, July (pp.8-17)
10. Khan, Murtaz Ali (1980) *Scheduled Castes and Their Status*, New Delhi: ICSSR, (Introduction)
11. McPhail, T. L. (1992) "Electronic Colonialism and the World Information Order" in A. Giddens (ed.) *Human Societies: A Reader, Cambridge*, Polity Press (pp.289-291)
12. Mehta , S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
13. Misra, S. K. and V. K. Puri (1994) *Indian Economy: Its Development Experience*, Bombay: Himalaya Pub.
14. Mowli, V. C. (ed.) (1990) *Role of Voluntary Organizations in Social Development*, New Delhi: Sterling Pub. (Preface & Conclusion)
15. Petras, James (1994) "Cultural Imperialism in Late 20th Century", *Economic and Political Weekly*, Aug. 6 (pp. 2070-2073)
16. Pimpley, P. N. (1988) *Voluntaristic Approach to Development*, Unpublished Monograph.
17. Rajput, Pam and H. L. Swarup (eds.) (1994) *Women and Globalization: Reflections, Options and Strategies*, New Delhi: Ashish Pub. House.
18. Rao, V. M. (1994) "Agriculture and Liberalization: Some Implications for Development Policies", *Economic and Political Weekly*, April 16-23 (pp.999-1003)
19. Redelift, Michael (1984) *Development and the Environmental Crisis: Red or Green Alternatives?* London: Methuen Inc.
20. Sabbarwal, S. (1997) "Ecological and Socio-Economic Consequences of International Tourism for the Less Developed Countries" in S. R. Mehta (ed.)
21. *Poverty, Population and Sustainable Development: Essays in Honour of Professor V. S. D'Souza*, Jaipur: Rawat.
22. Schchiananda (1977) *Harijan Elite: A Study of their Status, Network, Mobility and Role in Social Transformation*, New Delhi: Thomson Press (Chapter 6).
23. Shankar, K. (1989) "Planning Ethos in India", *Mainstream*, Sept. 23 (pp.7-8)

24. Sharma, S. L. (1992) "Social Action Groups as harbingers of Silent Revolution", *Economic and Political Weekly*, Vol. 27, No. 47
25. Singh, A. K. (1984) *Tribal Development in India*, New Delhi: Amar Prakashan, Chapters 2, 7 & 8
26. Singh, S. N. (1994) *Reservations: Problems and Prospects*, New Delhi: Uppal Pub. House, (Introduction & Chapter 3)
27. "Sustainable Development", Special Issue (1991), *The European Journal of Development Research*, Vol. 3, No. 1, June
28. "Symposium on Implications of Globalization" (1995) *Sociological Bulletin*, Vol. 44, (Articles by Mathew, Panini & Pathy)
29. Yadav, K. C. (1994) *India's Unequal Citizens: A Study of OBCs*, New Delhi: Manohar Pub. (Introduction & Chapters 3 & 5).

Additional Readings

1. Appadurai, A. (1997) *Modernity at Large: the Cultural Dimensions of Globalization*, New Delhi: OUP
2. Dereze, J. and Amartya Sen (1996) *India: Economic Development and Social Opportunity*, New Delhi: OUP
3. Keily, R. and P. Marflet (eds.) (1998) *Globalization and the Third World*, London: Routledge.
4. Peet, R. (1991) *Global Capitalism: Theories of Societal Development*, Routledge
5. Waters, M., (1995) *Globalization*, New York: Routledge & Kegan Paul.

SOC O 633: RURAL DEVELOPMENT IN INDIA

Objective

The objective of the course is to familiarize the students with the history of rural development in India, role of the state and farmers in it, and the impact of Market forces on agriculture.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Perspectives on Rural Development:
Liberal, Marxist, Gandhian

Unit-II

State and Rural Development: Land Reforms
Community Development Programs
State and Alleviation of Rural Poverty through Various Programs: SGSY, IAY, EAS, JRY. etc.
State and Education of Rural Masses
Role of Panchayati Raj Institutions

Unit-III

Rural Development and the Role of Peasant Movements:
Pre-Independence Period: Tribal Revolts, Kisan Sabha, Gandhi and Peasants and Telangana Uprising
Post-Independence Period: Tenant Movement, Naxalite Movement and Fresh move for Land Reforms, Farmers Movement.

Unit-IV

Rural Development and the Market Forces:
Green Revolution and its Impact on Rural Society
Globalization, Commercialization of Agriculture,
Impact on Non-Farm Employment and Distributive Justice
W.T.O. and the Process of Marginalization
Challenges of Sustainable Rural Development

Suggested Readings

1. Berch, Berberogue, (ed.) (1992) *Class, State and Development in India*, New Delhi, Sage Publications.
2. Desai, A.R. (ed.) (1979) *Peasant Struggles in India*, Bombay: Oxford University Press.
3. Desai, A.R (ed.) (1986) *Agrarian Struggles in India after Independence*, Oxford University Press.
4. Desai, A.R. (1977) *Rural Sociology in India,* Bombay, Popular.
5. Dhanagre, D.N. (1983) *Peasant Movements in India,* Delhi: Oxford Univ. Press.
6. Nadkarni, M.V. (1987) *Farmers' Movement in India*, Delhi, Allied Publishers.

7. Radhakrishana, P. (1989) *Peasant Struggles: Land Reforms and Social Change in Malabar 1836-1982,* New Delhi: Sage.
8. Shah, Ghanshyam (1990) *Social Movements in India: A Review of Literature*, New Delhi: Sage.
9. Singh, K.S. (1982) *Tribal Movements in India*, New Delhi: Mandra.

Additional Readings

1. Franda Marcus (1979), *India's Rural Development: An Assessment of Alternatives*, London: Indian Univ. Press.
2. Hoogvelt, Ankie (1998) *The Sociology of Development*, London: Macmillan.
3. Jain, L.C. (1979) *Grass Without Roots- Rural Development Under Government*, New Delhi: Sage.
4. Mehta, S.R. (1984) *Rural Development: Policies and Programmes*, New Delhi: Sage Publications.
5. Rao, S.K. (ed.) (1981) *Rural Development in India: Some Facets*, Hyderabad: NIRD.
6. Rao, S.V. (1985) *Education and Rural Development*, New Delhi: Sage Publications.
7. Rao, V.M. and Aziz, Abdul (1989) *Poverty Alleviation in India-Programme and Action,* New Delhi: Ashish.

SOC O 732: PROBLEMS OF URBAN INDIA

Objective

This course familiarizes the students with the contemporary urban situation in India, apart from the historical trends and patterns of urbanization in India. Focus shall be on the recently emerging urban problems and the approaches which have been used to tackle them. The students will be exposed to the most pertinent issues and controversies relating to urban population of India, so as to enable them to develop research problems for further specialization in the given area.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

India's Urbanization

Historical account of Urbanization in India:
Trends and Pattern, Features
Urbanism and Urbanization, Over-urbanization
Rural-Urban Migration. Urban Informal Sector, Tertiarization
Mega Cities of India

Unit-II

Urban Basic Services

Definition, Intra and Inter-City variations:
Water Supply, Power, Sanitation and Sewerage, Solid Waste Management, Education, Health, etc.

Environmental Pollution

Cities and Pollution, Causes, Types and Remedies.
Urban Transport and Traffic Management.

Unit-III

Approaches to Urban Management

Approaches:
Public Provision, Privatization and People's Participation,
Community Participation- Strengths and Weaknesses.
Lessons from Empirical Cases

Unit-IV

Urban Poverty in India

Concept of Urban Poverty; Theoretical Explanations- Structural and Cultural,
Economic and non economic indicators.

Culture of Poverty, Critique.

Empirical situation of Urban poverty in India, Housing, Slums, Features of Indian slums and Causes, Women and Child Poverty.

Suggested Readings

1. Bose, Ashish, (1994). *India's Urban Population- 1991 Census Data.* New Delhi, Wheeler Publishing Co. Ltd.

2. Bose, Ashish (1970). *Urbanization in India: An Inventory of Source Materials,* Bombay, Academic Books Ltd.

3. Census of India, every successive Report.

4. Dentler, Robert A., (1977). *Urban Problems, Perspectives and Solutions*. Chicago, Rand, McNally College Publishing Co.

5. D'Souza, Victor S., (1979). "Socio-Cultural Marginality: A Theory of Urban Slums and Poverty in Cities", in *Sociological Bulletin,* Vol. 28, Nos. 1-2.

6. Flanagan, William G. (1990). *Urban Sociology, Images and Structure.* Boston, Allyn and Bacon.

7. Gill, Rajesh (2009). *The Contemporary Indian Urban Society: Ethnicity, Gender and Governance*. New Delhi, Bookwell.

8. Gill, Rajesh 1993. "Urban Poverty in India: Theoretical Understanding and Policy Implications", in *Urban India.* Vol. XIII, July-Dec., No. 2.

9. Gill, Rajesh 1997. "Issues and Perspectives on Urban Poverty: The Indian Experience" in *Urban India,* Vol. XVII, Jan.-June/July-Dec. Nos. 1&2.

10. Misra, R.P. and K. Misra.1998. Million Cities of India. New Delhi, Sustainable Development Foundation.

11. Sovani, N.V. 1966. *Urbanization and Urban India.* Bombay, Asia Publishing House.

12. Tiwari, Vinod K. and Rao, W.P. (eds.) 1986. Indian Cities-Ecological Perspectives. New Delhi, Concept Publishing House.

13. Wratten, Ellen 1995. "What is Urban Poverty? Definitions and Characteristics". In *Environment and Urbanization*. Vol. 7 No.1.

Additional Readings

1. Garber, Judity A. & Turner, R.S. (eds.) 1995. *Gender in Urban Research*. Urban Annual Review, Sage Publications.

2. Gill, Rajesh 2000. "Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization?", in *Sociological Bulletin.* Vol. 49, No. 2, Sept.

3. Gill, Rajesh 1999. "Seventy-Fourth Constitution Amendment and Political Empowerment of Women in Punjab: A Study in Urban Governance", in *Urban India,* XIX(1).

4. Misra, R.P. and Misra, Kamlesh, 1998. *Million Cities of India.* New Delhi, Sustainable Development Foundation.

5. Mohanty, Bidyut (ed.) 1993. *Urbanization in Developing Countries, Basic Services and Community Participation.* New Delhi, Concept Publishing Company.
6. National Institute of Urban Affairs, 1988. *State of India's Urbanization.* New Delhi, NIUA.

7. National Commission on Urbanization 1988, *Report,* Vols. 1&2.

8. Pactone, Michael 1990. *Urban Problems-An Applied Urban Analysis.* London, Routledge.

9. Press, Irwin and Smith, M.F. *Urban Place and Process-Readings in The Anthropology of Cities.*

10. Ramachandran, R. 1989. *Urbanization and Urban Systems in India.* New Delhi, Oxford University Press.

11. Rao, M.S.A. 1974. *Urban Sociology in India, Reader and Source Book.* New Delhi, Orient Longmans Ltd.

12. Spates, James. 1982. *The Sociology of Cities*. New York, St. Martin Press.

13. Wit, J.W. 1996. *Poverty, Policy and Politics in Madras Slums-Dynamics of Survival, Gender and Leadership.* The Hague, Institute of Social Sciences, Development Studies, Sage.

SOC O 832: FAMILY IN CROSS-CULTURAL PERSPECTIVE

Objective

Students' exposure to this course intends to facilitate their comparative understanding of family and gender relations in different societies. Another aim is to make the students aware whether the family is the basic institution in all societies and whether family as an institution is near the point of extinction or restructuring itself and as a consequence many alternative lifestyles to traditional marriage and family living are emerging.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Family and Gender-Relations

In Highly-Developed, Developing and Under-Developed Countries

- Japan, Belgium
- India, Iran, Brazil
- Afghanistan and Ethiopia

Unit-II

Universality of Family

- Family As a Universal Social Institution- Views of Bronislaw Malinowski, George Murdock, Talcott Parsons, Norman W. Bell and Ezra F. Vogel

- Fate of Family among the Blacks in The Islands of West Indies, Parts of Central America and the U.S.A.; The Nayars of Central Kerala in India.

Unit-III

Emerging Alternative Lifestyles

- Singlehood – Never Married
- Cohabitation – Living Together Without Marriage

- Single parent – Male/Female Headed Households
- Group Living – Communes (The Kibbutz of Israel)

Unit-IV

Future of Family in the light of

- Gender Equity
- Ageing
- Migration

Suggested Readings

1. Allen, Katherine (1990) *Single Women/Family Ties*, New Delhi: Sage Publications.
2. Bell Norman W. and Eza F. Vogel (1986) *A Modern Introduction to the Family* (Revised edition), New York: The Free Press.
3. Bender, David L. and Gray E. McCuen (eds.) (1972) *Is Family Obsolete*? Minnesota: Green Heaven Press.
4. Boh Katja and et. al (1990) *Changing Patterns of European Family Life*, New York: Routledge.
5. Chakraborty, Krishna (2002) *Family in India*, New Delhi: Rawat Publications.
6. Das Man Singh & Clinton K. Jesser (eds) (1980) *The Family in Latin America,* New Delhi: Vikas Publishing House Pvt. Ltd.
7. Das Man Singh (ed.) (1990) *Family in the Muslim World*, Delhi: M.D. Publications.
8. Hereda, Rudolf C. and Mathas, Edward (1995) *Family in Changing World: Women, Children and Strategies of Intervention*, New Delhi: Indian Social Institute.
9. Leeder, Alaine, (2004) *The Family in Global Perspective*. New Delhi: Sage Publications.
10. Macklin, Eleanord D and Roger H. Rubin (1983) *Contemporary Families and Alternative Life Styles*, New Delhi. Sage Publications.
11. Vardhan Ranjay (1999) Female Headed Households in Patriarchal Society: A Sociological Study, Delhi, Indian Publishers Distributors

Additional Readings

1. Aidala, Angela A. (1989) 'Communes and Changing Family Norms', *Journal of Family Issues,* Vol. 10, No. 3, (Sept), PP 311-338.
2. Allan, Graham (1984) *Family Life: Domestic Roles and Social Organization*, New York: Basil Blackwell.
3. Bharat, Shalini (1984) 'Single-Parent Families- Consequences for Single Parents', *Indian Journal of Social Work*, Vol XLIX, No. 3, PP 227-238.
4. Bumpass, Larry L. James. A. Sweet and Andrew Cherlin (1991) 'The Role of Cohabitation in Declining Rates of Marriage'*, Journal of Marriage and Family*, Vol. 53. No. 4, (Nov.), PP 913-927.
5. Uberoi, Patricia (ed.) (1993) *Family, Kinship and Marriage in India*, Delhi: Oxford University Press.
6. Vardhan Ranjay (2008) Single Women: A Study of Spinsters, Delhi, Indian Publishers Distributors

SOC O 931: SOCIOLOGY OF AGING

Objective

Owing to breakdown of traditional values and institutional framework in societies such as India, the aged are facing a number of socio-economic and psycho-medical problems. The worldwide trends indicate that the proportion of aged people in the populations of different societies is ever increasing. This has far reaching implications for the societies across the world. Social scientists are looking at this issue as a matter of serious concern. So, there is an urgent need to study the aged to understand their plight and problems, to study the problems created by increasing aging population as well as to formulate possible interventions for their welfare. This course is an attempt in this direction.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Aging:

- Biological & Physiological, Social and Psychological Aging
- Myths and Facts about Old Age
- Demographic Dimensions of the Elderly

Unit-II

Sociological Perspectives of Aging

Micro-Perspectives:

- Role Theory (Aging and the Individual),
- Activity Theory,
- Disengagement Theory,

Macro Perspectives:

- Modernization Theory,
- Age Stratification Theory,
- Political Economy Theory

Unit-III

Society, Family and Aging:

- Status of the Aged in the Family-Urban and Rural Settings.
- Neglect and Abuse of Elderly in Family.
- Aged in Different Societies- Tribal, Traditional, and Modern.
- Status and Treatment which they get in Traditional Hindu Society.

Unit-IV

Problems of aged and Rehabilitation:

- Economic, Social, Physical and Psychological Problems.
- Emerging Factors Responsible for Aggravating Problems of the Aged.
- Strategies for Coping with the Problems of the Aged, Social Security Schemes and other Developmental Programmes.

Suggested Readings

1. Bose, A. & Gangrade, K.D. eds. (1988) *Aging in India*, New Delhi: O.U.P.
2. Bhatia, H.S. (1983) *Aging and Society*, Udaipur: Aryan Publishers.
3. Dandekar, Kumudini (1996)*The Elderly in India*, New Delhi: Sage Pub. Pvt. Ltd.
4. Desai, Murli & Siva Raju (2000) *Gerontological Social Work in India: Some issues & Perspectives*, New Delhi: B.R. Pub Corp.
5. Donald , Cowgill (1972) *Aging & Modernization*, New York: Meredith Corp.
6. Sharma, M.L.; and Dak, M.K. (1987) *Aging in India*, Delhi: Ajanta Pub.
7. Wilson, Gail (2000) *Understanding Old Age: Critical and Global Perspectives*, New Delhi, Sage Publications.

Additional Readings

1. Cohen, Lawrence (1999) *No Aging in India: Modernity, Senility and the Family,* New Delhi: O.U.P.
2. Dandekar, Kumudini (1993), 'The Aged, their Problems and Social Interventions in Maharashtra', *Economic and Political Weekly*, Vol. XXVII, No. 23, June 5, pp. 1189-94.
3. Rajan, S. Irudaya, Mishra, V.S. and Sarma, P. Sankara, (1999), *India's Elderly: Burden or Challenge?*, New Delhi, Sage Publications.
4. Sati, P.N. (1988*) Retired and Aged People*, Delhi, Mittal Publications.

SOC O 932: ORGANIZATIONAL STRUCTURE AND DEVELOPMENT

Objective

This course focuses on a) the structural dimensions of organization; b) the phenomena of organizational power and environment; c) the emerging salience of information technology in organizational communication; and d) the processes of organizational change and development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Organizational Structure and Goals:

Structural Dimensions – Complexity, Centralization, Bureaucratization, Professionalization; Goals – Types, Goal Multiplicity and Goal Conflict, Goal Succession and Displacement

Unit-II

Organizational Regime and Environment:

Leadership – Definition, Theories and Styles

Power in Organizations – Authority (Weber)

Power and Compliance (Etzioni)

Environment – Definition and Types

Unit-III

Communication and Information Technology in Organizations:

Communication – Formal and Informal networks

Role of Information Technology (IT) in Modern Organizations

Unit-IV

Planned Change and Organizational Development (OD):

Definition, Nature and Approaches

The Process and Techniques of OD – Systemic and Interpersonal

Suggested Readings

1. Bhatnagar, Subhash (2000) *Information and Communication: Technology in Development*, New Delhi: Sage Publications.

2. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: Oxford University Press.

3. Fiedler, F. E. (1967) *A Theory of Leadership Effectiveness*. N.Y.: McGraw-Hill.

4. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London, Sage.

5. Kaur, K. P. (1993) *The Professional Management in Industrial Organizations*. New Delhi: Deep and Deep.

6. Luthans, F. (2000) *Organizational Behavior*, Boston, Irwin McGraw-Hill.

7. Manuel, C. (1996) *The Rise of Network Society*. London: Blackwell.

8. Marguilies, N. and A. Raja (eds.) (1978) *Conceptual Foundations of Organizational Development*. N.Y.: McGraw-Hill.

9. Melkote, S. (2001) *Communication for Development in the Third World*. New Delhi: Sage.

10. Sabbarwal, S. (1990) *Organizational Approach to Environmental Control*. New Delhi: Ashish Pub.

11. Sharma, R. A. (2000) *Organizational Theory and Behavior* (2nd edition), New Delhi: Tata McGraw-Hill.

12. Singh, N. (2000) *Human Relations and Organizational Behavior*, New Delhi, Deep and Deep.

13. Zrkocrzy, P. and N. Heap (1995) *Information Technology*. N.Y.: Pitman.

Additional Readings

1. Blumberg, R. L. (1987) *Organizations in Contemporary Society*, Englewood: Cliffs, N. J.: Prentice-Hall.

2. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.

3. Gross, E. (1969) "The Definition of Organizational Goals" *British Journal of Sociology*, Vol. 20, (pp 277-294).

4. Harlow, D. N. & J. J. Hall, Richard H. (1972) *Organizations: Structures and Process*, N. Y.: Wiley.

5. Haralambos, M. (1980) *Sociology: Themes and Perspectives*, New Delhi: Oxford University Press.

6. Litterer J. A. (1969) *Organizational Structure and Behavior*, N.Y.: Wiley.

7. Perrow, C. (1961) "The Analysis of Goals in Complex Organizations", *American Journal of Sociology*, Vol. 66, pp 335-341.

8. Sabbarwal, S. (1988) "Approaches to Organizational Structure and Effectiveness", *Sociological Bulletin*, 37 (1 & 2) March-September.

9. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 933: SOCIOLOGY OF DEVIANCE: CONCEPTS AND THEORIES

Objective

This paper aims at sensitizing the students regarding the concept of deviance and its related terms. Students will also be made aware of different explanations of deviance ranging from pathological to interactionist perspectives.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Deviant Behaviour:

Definition, Concept – Relative/Absolute.

Distinction between Deviant Behaviour and Deviant-Role

Pathological Perspective of Deviance – Biological and Psychological theories.

Unit-II

Social Disorganization and Value-Conflict Perspective:

Causes of Social Disorganization
Theories of Social Disorganization:

C.H. Cooley, W.I. Thomas and Florian Znaniechi, W.F. Ogburn. Theory of Conflict of Values: Richard C. Fuller & Richard R. Myers.

Unit-III

Structural-Functional Perspective:

Theory of Anomie: Emile Durkheim and Robert K. Merton

Theory of Differential Association: Edwin Sutherland and Donald R. Cressey.

Unit-IV

Inter-actionist Perspective:

Theory of Labelling: Edwin M. Lemert and Howard S. Becker Social and Psychological Effects of Labelling for Primary and Secondary Deviance, Social Consequences of Stigma

Social Consequences of Stigma and Labelling.

Suggested Readings

1. Aggleton, Peter (1987) *Deviance,* New York: Tavistock Publication.
2. Becker, H. and Aluin Boskoff (eds.) (1989) *Modern Sociological Theory: In Continuity and Change*, New York: Dryden.
3. Downes, David and Rock Paul (1982*) Understanding Deviance: A Guide to the Sociology of Crime and Rule-Breaking,* Oxford Clarendon Press.
4. Edwin H (1980) *The Deviance Process*, New York: D. Van Vost & Co.
5. Kelly Delos H (1979) *Deviant-Behaviour: Readings in the Sociology of Deviance.* New York: Martin's Press
6. Schur, Edwin M (1971) *Labelling Deviant Behaviour: Its Sociological Implications,* New York : Harper & Row Pub.
7. Singh R.G. (1985*) Sociology of Deviance*, New Delhi: Jain Sons Publications.
8. Thio, Alex (1978) *Deviant Behaviour.* London: Houghton Mifflin Co.

Additional Readings

1. Becker, Howard S. (1963) *Outsiders: Studies in the Sociology of Deviance*, Glenco: Free Press.
2. Gibbons, Don C. (1978) *Society, Crime and Criminal Careers* (3rd ed.) New Delhi: Prentice-Hall of India Pvt. Ltd.
3. Gove, Wolter R (ed) (1980) *The Labelling of Deviance* (2nd ed.) London : Sage Publications.
4. Reid Sue Titus (1976) *Crime and Criminology* Illionois: The Dryden Press.
5. Wolfgand, Marvin and E. Franco Ferrachtti (1982) *The Sub-Culture of Violence.* Beverly Hills: Sage Publications.

SOC O 934: SOCIOLOGY OF CRIME

Objective

This course is designed to acquaint the students with concepts and perspectives used to explain the criminal behaviour. Students will be introduced to the eruption of different forms of crime and the significant advances made towards its control and prevention and correctional measures.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Perspectives:

Deviance, Juvenile delinquency and Crime

Legal, Behavioral and Sociological Definitions of Crime
Classical and Positive Schools of Criminology

Biological, Psychological and Sociological Approaches (Conflict, Structural-Functional and Symbolic-Interactionist)

Unit-II

Major Forms of Crime:

Violent Crime: Homicide and Aggravated Assault

Property Offences: Economic and Property Crimes

Public Order Offenses: Crime against Moral and Political Order Crimes
involving Abuse of Power: White Collar and Corporate Crime

Unit-III

Punishment in Relation to Crime:

Theories of Punishment: Retributive, Deterrent and Reformative
Penology in India and Indian Penal Code

Types of Punishment: Capital punishment, transportation, imprisonment, forfeiture of property, fine, whipping

Unit-IV

Correctional Programmes:

Significance and Forms of Correctional Programmes: Prison based, Community based.
Prison based Correction: New Delhi Model of Correction.

Community based Correction: Probation, Parole, After-care and Rehabilitation.

Suggested Readings

1. Agarwal, Rajendra Saran & Sarvesh Kumar (eds.) (1986) *Crimes & Punishment in New Perspective*, Delhi: Mittal Publication.
2. Ahuja, Ram (2000) *Criminology*, Jaipur: Rawat Publications.
3. Bhatnagar, R.R. (1990) *Crimes in India: Problems and Policy*, New Delhi: Ashish Publications.
4. Crow, Iain (2001) *Treatment and Rehabilitation of Offenders,* London: Sage Publications.
5. Lilly, J.Robert., Cullen, Francis .T and Ball, Richard A. (2007). *Criminological Theory: Context and Consequences*, Sage Publications, Thousand Oaks.
6. Prasad, R.S.(2004). Cyber Crime and Introduction, ICFAI Univ, Hederabad.
7. Sharma, Ram Nath (1993) *Crime and Penology: Social Disorganization and Social Problems*, Delhi, Surjeet Publications.
8. Singha, Radhika (1999) *Despotism in Law: Crime and Justice in Early Colonial India*, New Delhi, O.U.P.
9. Sutherland, Edwin H & Donald R. Cressey (1968) *Principles of Criminology,* Bombay, The Times of India Press.
10. Weisburd, Dand & Kip Schlegal (1990) *White-Collar Crime Reconsidered*, Boston: Northeastern University Press.

Additional Readings

1. Devasia, V.V. (1993) *Criminology, Victimology and Corrections*, Delhi: Ashish Publications.
2. Doongaji, Damayanti (1986) *Crime and Punishment in Ancient Hindu Society*, Delhi, Ajanta Publications.
   Dutta, N.K.(1989) *Origin and Development of Criminal Justice in India*, New Delhi: Deep and Deep Publications.
3. Gill, S.S. (1998*) The Pathology of Corruption*, New Delhi: Harper Collins Publishers.
4. Gilsinan, James F. (1989) *Criminology and Public Policy: An Introduction*, Englewood Cliffs, Prentice Hall.
5. Mathur, Krishan Mohan (1996) *Crime, Human Rights and National Security*, New Delhi: Gyan Publication House.
6. Meier, Robert F. (1988) *Crime and Society*, Boston, Allyn & Bacon.
7. Ministry of Home Affairs (1998) *Crime in India*, New Delhi, Government of India.

SOC O 935/945: DISSERTATION (3rd and 4th Semesters)

SOC O 936: ADVANCED SOCIAL STATISTICS

Objective

The course is aimed at introducing the students with advanced statistical techniques for multivariate analysis of sociological data. In the first two units the students are familiarized with various aspects of simple and multiple regression analysis including coefficient of determination, correction-ratio, point-biserial correction, partial correlation etc. The last two units include discussion on Path analysis and various parametric and non- parametric tests of significance.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** (Theory Portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable electronic calculators and Statistical Tables is permitted for the examination.

Course outline

Unit-I

Linear Regression, Least Squares Method, Estimating the Intercept and Slope of the Linear Regression Model

Standard Error of the Estimate and its Uses, Zero-Order Correlation by Least Squares Method

Coefficient of Determination, Correlation and Causation, Ecological Fallacy of Correlation, Correlation-Ratio, Point Biserial Correlation.

Unit-II

Multiple Regression, Multiple Regression Equations, Multiple Collinearity, Interpretation of Regression Coefficient, Confidence Interval for the Estimate of Multiple Regression, Multiple Correlation, Properties of Multiple Correlation Coefficient, Coefficient of Multiple Determination, First order Partial Correlation.

Unit-III

Path Analysis, Formulation of Recursive, Fully Recursive Path Models, Estimation of Path Coefficients (No numerical questions to be set in the question paper on path analysis)

Parametric tests-One way analysis of variance for means, t-test for means (related samples), z-test for proportions (One Sample and Two Independent Samples)

Unit-IV

Non-Parametric Tests of Significance

Distinction between Parametric and Non-Parametric Tests, Kruskal Wallis One Way Analysis of Variance, Friedman Two–Way Analysis of Variance, Kolmogorov Smirnov Test (Two Independent Samples), Mann-Whitney-U Test, Wilcoxon Matched-Pairs-signed-Ranks Test.

Suggested Readings

1. Alexander Von Eye, Chrisof Schustee (1998) *Regression Analysis for Social Sciences,*USA, Academic Press.
2. Blalock, H.M. (1979) *Social Statistics,*New York, McGraw Hill Book Company.
3. Joseph F. Hair, Rolph E. Anderson Ronald L. Tatham (1987), *Multivariate Data Analysis with Readings*, New York, Macmillan Publishing Company.
4. Kothari C.R. (1984) *Quantitative Techniques*, New Delhi, Vikas Publishing House, Pvt. Ltd.
5. Morris Hamburg (1983) *Statistical Analysis for Decision Making*. San Diego, Harcourt Brace Jovanovich Pubs.
6. Muller John and Karl, F. Schuseller and Herbert, L. Costner (1977), *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.
7. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

Additional Readings

1. Marl Sirkin, R. (1995), *Statistics for the Social Science;* London, Sage Publications.
2. Jane, J., Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*, London, Sage Publications.

SOC O 937: Sociology of Education

Objective

The course provides (a) an introduction to an important branch of Sociology that deals with education and Society. (b) Students will get acquainted with the approaches and contributions in the sociology of education (c) familiarizes the student with the Growth and Expansion of Education in India; and (d) Role of Education in the Development Process and (e) Emerging educational scenario under the process of Globalisation

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.
The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit - I
The Concept of Education; Education and Society; Socialization and Education; Cultural and Social Reproduction

Theoretical Approaches: **Gandhian, Functional**, **Conflict and** Post **Modern**

Unit - II

1.Role of Education in Social and Human Development -- Emerging Perspectives

2.Role of Education for Empowerment of the Marginalized- SCs, S.Ts, (and Women)

3.Education and the Policy of Positive Discrimination and Affirmative Action

Unit - III.

Education: Expansion and Growth

Constitutional Provisions and Educational Policies in India

Universalization of Elementarv Education, Crises in lndian Higher Education, Expansion of Professional Education and Private Sector

Unit - IV

Education and Social Stratification:

Caste and Education

Gender and Education

Class and Education

Education and Social Mobility **/** (Mobility and Equality of Educational opportunities.)

Suggested Readings:

1. A.H. Halseye et. al. (eds.). 2002. Education. Culture, Economy, Society. Oxford: Oxford University Press (Selected chapters).
2. Apple, M. W. 1982. Cultural and Economic Reproduction in Education: Essays on class. ideology and the state. London: RKP. (Chapters 1, 9).
3. Benei, Veronique. 2009. Schooling India. Hindus, Muslims and the Forging of Citizens. New Delhi, Orient Blackswan.
4. Beteille, A. 1985. Equality of Opportunity and the Equal Distribution of Benefits. Pune: Orient Longman (Gokhale Institute of Politics and Economics).
5. Beteille, A. 2009. Institutions and Networks. Current Science. 97, 2:148-156.
6. Boren. M.E. 2001. Student Resistance. A History of the Unruly Subject. New York. London: Routledge.
7. Coleman. J. S. 1968. "The Concept of Equality of Educational Opportunity". Harvard Educational Review, 38(1): 7-22.
8. Dewey, J. (1916). Democracy and Education. An Introduction to the Philosophy of Education. New York: Free Press.
9. Froerer, Peggy. 2007. Disciplining the Saffron Way: Moral Education and the Hindu Rashtra, Modern Asian Studies. 41,5: 1033-1071.
10. Gandhi, M.K. 1977. Basic Education, in The Collected Works. Ahmadabad: Navajivan.
11. Giddens, Anthony. 2002. Sociology. Cambridge: Polity press.
12. Haralambos and Holborn 2008. Sociology: Themes and Perspectives. London: Collins
13. Jeffrey, Craig, Roger Jeffery and Patricia Jeffrey. 2008. School and madrasah education: gender and the strategies of Muslim young men in rural north India. Compare. A Journal of Comparative and International Education. 38, 5: 581-593.
14. Kumar. K. 2002. Prejudice and Pride. New Delhi: Viking. 23
15. McLaren, P. 1986. Schooling as a Ritual Performance: Towards a Political Economy of Educational Symbols and Gestures. New York: Routledge.
16. Saigol, R. 2000. Symbolic Violence, Curriculum, Pedagogy and Society. Lahore: Sahe. (Chapters 5, 6, and 7).
17. Thapan, M. 2006 (1991). Life at School. An Ethnographic Study. New Delhi: Oxford University Press. 13. Willis, P. E. 1977. Learning to Labour: How Working Class Kids Gets Working Class Jobs. Surrey, England: Saxon House.
18. Wazir, Rekha (ed.) 2000. The Gender Gap in Basic Education. New Delhi, Sage Publications (selected chapters).
19. Mehta, Rani (2004), Crisis in Higher Education. Role Analysis of Teachers in a University System, New Delhi, Kalpaz Publications.

SEMESTER –IV

SOC R 440: PERSPECTIVES ON INDIAN SOCIETY

Objective

This paper aims to acquaint the students with some of the sociological perspectives which have been developed to study the Indian Society. The course aims at giving a chronological view on studies of Indian society. Introducing the students to important Indian Sociologists and their monographs; It further hopes to help the students formulate a link between their theoretical background and examples from the field and to sensitize students about important Indian Social Institutions: Family, Village and Caste, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Indological: G.S. Ghurye, P.N. Prabhu.

Structuralist: Dumont, Louis & Pocock, David, Mckim Marriot.

Unit-II

Structural Functionalist: M.N. Srinivas, S.C. Dube, Yogendra Singh.

Unit-III

Conflict and Subaltern: B.R. Ambedkar, D.P. Mukherji, A.R. Desai.

Unit-IV

Current Issues in Indian Sociology: Indianization/Indegenization, Contextualization

Suggested Readings

1. Ahmad, Imtiaz (1972) 'For a Sociology of India', *Contributions to Indian Sociology*, 6:172-8.
2. Ambedkar, B.R. (1948) *The Untouchables: Who Were They and Why They Became Untouchable*s, Delhi, Amrit Book Company.
3. Atal, Yogesh (2003). *Indian Sociology from Where to Where: Footnotes to the History of the Discipline.* Jaipur, Rawat Publications.
4. Atal, Yogesh (1993). *Understanding Indian Society: Festschrift in Honour of Professor S.C.Dube.* New Delhi, Har-Anand Publications.
5. Bailey, F.G. (1959) 'For a Sociology of India', *Contributions to Indian Sociology,* 3, 88-101.
6. Beteille, Andre (1974) 'Sociology and Ethnosociology', *International Social Science Journal,* 24(4) 703-4.
7. Burghart, R (1983) 'For a Sociology of India: An Intracultural Approach to the Study of Hindu Society', Contributions to Indian Sociology, 17 (2): 275-93.
8. Das, Veena (ed.) (2004). *Handbook of Indian Sociology.* New Delhi, Oxford University Press.
9. Desai, A.R. (1976*) Social Background of Indian Nationalism*, Bombay, Popular Prakashan.
10. Dhanagare, D.N. (1993) *Themes and Perspectives in Indian Sociology.* Jaipur, Rawat Publications.
11. Dube, S.C. (1959) *Indian Villages,* London, Routledge & Kegan Paul Ltd.
12. Dumont, Louis and Pocock, D. (eds.) (1960). *Contibutions to Indian Sociology.* Paris, Monton.
13. Dumont, L. & Pocock (1960) 'For a Sociology of India: A Rejoinder To Dr. Bailey', Contributions to Indian Sociology, 4:82-9.
14. Dumont, Louis (1970) *Home-Hierarchicus: Caste System and its Implications,* Delhi: Vikas Publications.
15. Ghurye, G.S. (1957*) Caste and Class in India*, Bombay, Popular Book Depot.
16. Gill, Rajesh.(2007). Let Sociology be Sociology**,** in *Sociological Bulletin*, Vol. 56, No. 3, Sept.-Dec. 2007, pp. 430-34.
17. Jodhka S.S. (1998) 'From Book View' to 'Field View': Social Anthropological Constructions of the Indian Village', *Oxford Development Studies*, Vol.26 No.3, 1998.
18. Marriot, Mackim (1994) *India Through Hindu Categories*, Delhi: Sage Publication.
19. Mukerjee, Ramakrishna (1979) *Sociology of Indian Sociology,* Bombay, Allied.
20. Mukherji, D.P. (1958) *Diversities*, Delhi Peoples Publishing House.
21. Mukherji, D.P. (1979). *Sociology of Indian Culture.* Jaipur, Rawat Publications.
22. Omvedt, Gail (1994) *Dalits and the Democratic Revolution*. New Delhi, Sage Publications.
23. Oommen, T.K. (1986) *Indian Sociology: Reflections and Interpretations.* Bombay, Popular Prakashan.
24. Patel Sujata (1998), 'The Nostalgia for the Village: M.N. Srinivas and the Making of Indian Social Anthropology', *South Asia,* Vol.XXI, No.1, pp-49-61.
25. Prabhu, P.N. (1954) *Hindu Social Organization*, Bombay, Popular Book Depot.
26. Pramanick, S.N. (1994) *Sociology of G.S. Ghurye: Concerns*, New Delhi, Vistaar Publication.
27. Ram, Nandu (1999), *Beyond Ambedkar*, New Delhi, Har Anand Publishers.

28. Singh, Yogendra (1973) *Modernization of Indian Tradition*, Jaipur, Rawat Publications.
29. Singh, Yogendra (1986) *Indian Sociology: Social Conditioning and Emerging Concerns*, New Delhi, Vistaar Publications.
30. Singh, Yogendra (1984). *Image of Man: Ideology and Theory in Indian Sociology.* Delhi, Chanakya.
31. Srinivas, M.N. (1952*) Religion and Society Among the Coorgs of South India*, London, Asia.
32. Srinivas, M.N. (1970) 'Sociology and Sociologists in India Today', *Sociological Bulletin* 19(1): 1-10.
33. Unnithan, T.K.N., Deva, Indra and Singh, Yogendra (eds.) (1965). *Towards a Sociology of Culture in India: Essays in Honour of Professor D.P.Mukherji.* New Delhi, Prentice Hall.

Additional Readings

1. Madan, T.N. (1977) 'The Dialectic of Tradition and Modernity in the Sociology of D.P. Mukerji', *Sociological Bulletin*, Vol.26 (2) 155-76.
2. Marriot, Mckim (1955) *Village India: Studies in the Little Community*, Chicago, The University of Chicago Press.
3. Oommen, T.K. (2007) *Knowledge and Society: Situating Sociology and Social Anthropology.* New Delhi, Oxford University Press.
4. Srinivas, M.N. (1970) *Social Change in Modern India*, Barkeley, California University Press.
5. Unnithan, T.K. N., Singh, Y. Singhi Narendra and Indra Deva (eds.) (1967) *Sociology for India,* New Delhi, Prentice Hall
6. Srinivas, M.N. (1976) *The Remembered Village*, Delhi, Oxford University Press.
7. Srinivas, M.N. (1980) *Social Structure*, Delhi, Hindustan Publishing Corporation.

SOC O 543: DETERMINANTS AND CONSEQUENCES OF POPULATION GROWTH

Objective

The course mainly focuses to sensitize students about a) the effect of population growth on development processes; b) Differential mortality and fertility patterns in the developed and the developing countries; c) Population distribution patterns in India; and d) the various programmes implemented for regulating population in India.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Relationship between Population, Development, Environment and Society in the context of Population Size, Composition and Distribution of Population

Factors affecting Age, Structure and Sex Compositions; Demographic, Social and Economic implications

Unit-II

Mortality Patterns in Developed and Developing Countries:

General Mortality, Infant and Child Mortality, Morality Differentials, Determinants of Mortality and Cause of deaths. Consequences of Declining Mortality for demographic and social structures

Unit-III

Fertility Patterns and Trends in Developed and Developing Countries, Crude Birth Rates and Total Fertility Rates, Net Reproduction Rate, Theoretical Understanding of the Biosocial, Socio-cultural, Social-psychological and Socio-demographic factors affecting Fertility. Fertility Differentials, Consequences of Fertility Decline for Demographic and Social Structures

Unit-IV

Population Distribution Patterns in India- Regional Level, Rural-Urban, Socio-economic and demographic factors associated with population distribution.

Consequences of Population Redistribution on Demographic and Social Structures.

Regulating Population in India: National Family Welfare Programme
Reproductive and Child Health Programme

Strategies for Implementation and Overall Impact MTP
and PNDT Act- Correcting the Gender Bias.

Suggested Readings

1. Bhende, Asha and Tara Kanitkar (1999), *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, D.J. (1969) *Principles of Demography*, N.Y,John Wiley.
3. Bose, A. (1991) *Demographic Diversity in India*. Delhi, B.R. Publications.
4. Cassen, D. (1978), *India, Population Economy and Society*, London, MacMillan.

5. Ersheng GAO (2003), *Reproductive Health , Gender and Development*, Delhi, B.R.Publishing Corporation.
6. Jain, A.K. and Visaria (eds.) (1988), *Infant Mortality in India. Differentials and Determinants,* Sage Publications.
7. Kaistha, K.C. and Satish Sharma (1998), *Population, Environment and Spatial Mobility,* New Delhi, Gyan Publications.
8. Mahadevan, K. (1989*) Fertility Policies from Asian Countries*, Delhi, Sage.
9. Matras, Juda (1977) *Introduction to Population*, New Jersey, Prentice Hall, Inc.
10. Mitra, Ashok (1978) *India's Population, Aspects of Quality Control*, 2 Vols.
11. MOHFW, GOI, *Cause of Death Statistics* (Annual Issues).
12. *National Family Health Survey, India* (1994) (2000) Bombay, IIPS.
13. *PNDT Act* (1996) GOI.
14. Prasad, Narendra (2001), *Population Growth and Child Labour*, New Delhi, Kanishka Publishers.
15. Premi, M.K. (1991), *India's Population: Heading towards a Billion,* Delhi, B.R. Publications.
16. Retherford, Robert D. & T.K. Roy (2003) *Factors Affecting Sex Selective Abortions in India and 17 Major States*, NFHS Report No.21, Mumbai, IIPS.
17. Sen, Amartya (1982) *Choice, Welfare and Measurement*, Oxford Univ.Press.
18. Sen, Amartya & Jean Dreze (1996) *Indian Development*, Oxford Univ.Press.
19. Srinivas, M.N. (1977) *Culture and Human Fertility in India,* Delhi, Oxford Univ. Press.
20. Singh, K.P. (1986) *Correlates of Fertility Behaviour: A Study of Rural Communities in Punjab and Haryana*, New Delhi, Concept Publishing House, 205p.
21. Sinha, P. N (2001), *Population Growth and Global Stability*, New Delhi, Author's Press.
22. Tandon, Usha (2003). *Population Law: An Instrument for Population Stabilization*, New Delhi, Deep and Deep Publications Pvt. Ltd.
23. U.N. (1987) *Fertility Behaviour in the Context of Development* (P.S. No. 100).
24. United Nations (1987) *World Population Policies*, Monitoring Report Vol. II

Additional Readings

1. Dyson, T. and Crook, N. (eds.) (1984), *India's Demography: Essays on the Contemporary Population*, New Delhi, South Asian Publishers Pvt. Ltd.
2. D'Souza, V.S. (1984), *Economic Development, Social Structure and Population Growth,* New Delhi, Sage Publications.
3. Finkle, L. Jason and C. Anson McIntesh, (1994), (eds.), *The New Politics of Population: Conflict and Consequences in Family Planning*, New York, The Population Council.
4. Mc Nicoll, Geoffrey and Mead Cain, (1990), *Rural Development and Population: Institutions and Policy*, New York, Oxford University Press (The Population Council, New York).
5. Mehta, S.R. (1997), (ed.), *Poverty, Population and Sustainable Development*, Jaipur, Rawat Publications.
6. Mehta, Rani (2014) Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications, pp 29-168.

SOC O 544/744: SOCIOLOGY OF HUMAN MIGRATION

Objective

The aim of this course is to explore how migration as a social demographic process has a bearing on the processes of urbanization and social integration. It attempts to discuss the need to address the problems associated with large influx of immigrants into cities, within the country and trans-nationally, leading to crises of physical infrastructure and conflict situations. Also, it aims to appreciate the positive consequences of migration in terms of its capacity to enrich various cultures.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Migration	:	Conventional View and Changing Conception
Migration Data	:	Sources and Problems relating to Measurement.

Unit-II

Major Typologies	:	Spatial, Temporal, Purposive and Stream Criteria.
Broad Trends and Patterns	:	At Global Level with special reference to India.

Unit-III

Theoretical Formulations:	Classical, Socio-economic & Developmental (Contributions of Revenstein, Stouffer, Everett Lee, Lewis, Harris and Todaro, Zelinski, Davis and Push-Pull Factor theory).
Determinants of Migration:	Ecological, Demographic, Social, Economic and Political

Unit-IV

Consequences of Migration: International context – Brain-Drain and Critique: Internal context- Social, Economic and Political

Migration Policy: Need and Challenges

Suggested Readings

1. Balan, Jorge (ed.), 1981), *Why People Move*, Paris, Unesco Press.
2. Chaudhuri, I.R., (1993), *Migration and Remittances: Inter-Urban and Rural-Urban Linkages*, New Delhi, Sage Publications.
3. Connel, John & Others, (1970), *Migration from Rural Areas: Evidence from Village Studies,* Oxford University Press, Delhi.
4. Dutoit, B.M. and H.I. Safa, (1975), *Migration and Urbanization Models and Adaptive Strategies*, The Hague, Mouton.
5. Findley, Sally, (1982), *Migration Surveys, Methodologies*, A Review of Designs, IUSSP, No.2
6. Hugo, H., (1982), 'Circular Migration in Indonesia', *Population and Development Review*, Vol 8, No. 1, March, pp-59-83.
7. Kaistha, K.C., (1987), 'Migration Patterns in Development Transition of Rural Areas', *Population Geography* (1 & 2), June-December.
8. Kosinski, L.A. & K.K. Mandood Elahi, (1985), *Population Redistribution and Development in South Asia,* Boston, D. Reidel Pub. Co.
9. Kosinski L. and Prothero R. (1974) *People on the Move: Studies on Internal Migration,* London, Methuen.
10. Oberoi, A. S. & H. K.M. Singh, (1982), *Causes and Consequences of Internal Migration: Studies from Indian Punjab*, Delhi, OUP.
11. Oberoi, A.S. & Others, (1989), *Determinants and Consequences of Internal Migration in India: Studies in Bihar, Kerala and Uttar Pradesh*, Delhi, OUP.
12. Bogue, D.J., (1969), Principles of Demography, New York, John Wiley & Sons.
13. Prother, R.M. & Chapman Murray (eds.), 1985, *Circulation in Third World Countries,* London, Routledge & Kegan Paul.
14. Rao, M.S.A., (1986), *Studies in Migration*, Delhi, Manohar.
15. UN (1984) *Population Distribution, Migration and Development. Proceedings of* the Expert Group on Population Distribution Migration and Development, Hammamat (Tunisia) March 21-25, 1983.
16. U.N. (1994) *Population Distribution and Migration* (Particularly Papers by Castals, S. 'Process of Integration of Migrant Communities' and Rogge, I.R. 'Changing Solutions to Refugee Movement'.
17. Weiner, Myron, (1978), *Sons of Soil: Migration and Ethnic Conflict in India*, New Jersey, Princeton University Press.

Additional Readings

1. Brettel, Caroline & James Hollifield, (2000), *Migration Theory: Talking Across Disciplines,*New York, Routledge.
2. Hazari, Bharat R. & Pasquale M., (2001*), Migration, Unemployment and Trade*, Boston, Kluwer Academic Publishers.
3. Indra, Doreen (ed.), (1998*), Engendering Forced Migration: Theory and Practice,* New York, Berghahn Books.

4. Lucassen, Jan & Lucassen, Leo, (1997), *Migration, Migration History, History: Old Paradigms and New Perspectives,* University of Bern Publications, Bern.
5. Manning, Patrick, (2005), *Migration in World History*, London, Cambridge University Press.
6. Sharpe, Pamela, (2001), *Women, Gender and Labour Migration: Historical and Global Perspectives,* New York, Routledge.

SOC O 644: ENVIRONMENTAL CRISIS AND SUSTAINABLE DEVELOPMENT

Objective

The course focuses on the discussion of the environment–society interface keeping the following objectives in view (a) to familiarize the student with the crisis of environmental degradation both at the global and national levels; (b) to focus on the environmental problems in India; (c) to highlight the role of environmental movements in ecological protection; and (d) to discuss some of the measures necessary for environmental preservation.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development and Environmental Degradation:
Meaning of Environment; Environment and Society;
Problems and Environmental Consequences

Unit-II

Environment Situation in India:
Environmental Problems in India – Extent, Causes and Solutions; Environmental Policy in India.

Unit-III

Environmental Movements:
Role of voluntary organizations and popular participation in environmental protection and preservation; The Chipko Movement, Movements against Narmada Valley and Tehri

Dam projects, Sukhomajri Experiment, Protest against Mining in Doon Valley; Eco-feminism; Public Interest Litigation (PIL) and Judicial Activism.

Unit-IV

Sustainable Development: Towards a Sound Environmental Policy;

Environmental Education; Social Forestry and Afforestation Program; Biogas and Renewable Energy Program; Efficient Water Management Programs; Use of Appropriate Technology.

Suggested Readings

1. Deoria, R.S. et al. (1990) *Man, Development and Environment*. N. Delhi: Ashish Publications.
2. Katyal, J and M. Satake (1989) *Environmental Pollution*. New Delhi: Anmol Pub.
3. Khoshoo, T.N. (1986) *Environmental Priorities in India and Sustainable Development*. New Delhi: Indian Science Congress Association.
4. Mahesh, K and B. Bhattacharya (eds.), (1999) *Judging the Judges*. N. Delhi: Gyan Publications.
5. Mehta, Rani (2014), Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications.
6. Raza, Mehdi (ed.), (1992) *Development and Ecology*. Jaipur: Rawat.
7. Rasure, K.A. (2007) , *Environment and Sustainable Developmen*t , New Delhi, Serial Publications, VOL. I,II,III.
8. Spaargaren G. et al (2000) (ed.), *Environment and Global Modernity*, New Delhi, Sage Publications India Pvt. Ltd.
9. Singh,R.B. (2002) (ed.) *Human Dimensions of Sustainable Development*, New Delhi, Rawat Publications.
10. Sharma, S.L. (1993) "Managing Environmental Crisis – Regulatory vis-à-vis Participatory Approach" in J.L. Rastogi and Bidhi Chand (eds.) *Management and Business Education*. Jaipur: Rawat Publications.
11. Shiva, Vandana, (1988) *Staying Alive – Women, Ecology and Survival in India*. New Delhi: Kali for Women.
12. Singh, Gian (1991) Environmental Deterioration in India – Causes and Control. New Delhi: Agricole.
13. Tewari, K.M. (1989) *Social Forestry in India*. Dehradun: Natraj Publishers.
14. Wilson, D. (ed.) (1984) *The Environmental Crisis*, London: Hinemann.

Additional Readings

1. Bandhu, Desh (ed.), (1981) *Environmental Management*, Dehradun, Natraj Publishers.
2. Bandhu, Desh and N.L. Ramanathan (eds.) (1982) *Education For Environmental Planning and Conservation*, Dehradun, Natraj Publishers.
3. Bharadwaj, H.R. (1997) *Lawyers and Judges*, New Delhi, Konark Pub.
4. Chaudhary, Jayasri R.(2001). *An Introduction to Development and Regional Planning,* New Delhi, Orient Longman.
5. Ehrlich, P. R. et al., (1973) *Human Ecology- Problems and Solutions*, San Francisco, W.H. Freeman and Co.

6. Kothari, Ashish et al. (eds.), (1998) *Communities and Conservation*, New Delhi, Sage Publications.
7. Mehta, Rani (2011) "Sustainable Development in Mauritius: Issues and Implications," New Delhi, Contributions to Indian Social Science, IASSI, Vol. 30, No. 2, April-June.
8. Pawar, S.N. and R.B. Patil (eds.) (1998) *Sociology of Environment*, Jaipur, Rawat
9. Sheth, Pravin (1997) *Environmentalism – Politics, Ecology and Development*, Jaipur, Rawat Publications.

SOC O 645: ENTREPRENEURSHIP AND DEVELOPMENT

Objective

This course is acquainting the students with various theoretical developments in the area of entrepreneurship and their implication for action programs. Accordingly, first two units deal with various theories and development of entrepreneurship in different communities and groups. The other two units deal with the implication of theories for action programs and development of Entrepreneurship Development Program (EDPs) and interaction of entrepreneurs with business environment.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Entrepreneur and Entrepreneurship:
Concept, Functions: Growth of Entrepreneurship with special reference to India
Theories of Entrepreneurship: Max Weber, David McClelland, E. E. Hagen, B. E. Hoselitz and Schumpeter

Unit-II

Entrepreneurship among Social Groups
Business Communities: Samurai Community in Japan, Filipino and Chinese in Philippines; Parsees, Marwaris, Ramgarhias, Ravidasias and Business Communities in South India; Social Groups: Women, Tribals, Scheduled Castes

Unit-III

Development of an Entrepreneur
Implication of Theories for Action Program and Development of Entrepreneurs through Training and Entrepreneurship Development Program (EDPs).

Unit-IV

Entrepreneurship and Environment:
General Environment, Typology of Environment, Role of Business Associations in Controlling the Environment.

Suggested Readings

1. Akhouri, M. M. P. *et al.* (1987) *Trainers' Manual on Developing Entrepreneurial Motivation*, New Delhi: National Institute for Entrepreneurship and Small Business Development.
2. Bansal, C. L. (1993) *Entrepreneurship and Small Business Management*, Delhi, Har Anand Publications.
3. Bhatia, B. S. and Batra, G. S. (2001) *Entrepreneurship and Small Business Management*, New Delhi: Deep and Deep Publications, Pvt. Ltd.
4. Bisht, N. S. *et al.* (1989) *Entrepreneurship: Reflections and Investigations*, Allahabad: Chugh Pub.
5. Guha, A. (1984) "More about Parsi-Seths, their roots, Entrepreneurship and Compradoe Role", *Economic and Political Weekly*, Vol. IX, No.3, June, pp 1660-18.
6. Hagen, E. E. (1962) *On the Theory of Social Change*, Bombay: Vakils, Feff and Simpson.
7. Hoselitz, B. F. (1952) "Entrepreneurship and Economic Growth" *American Journal of Economics and Sociology*, Vol.12 (1).
8. Hoselitz, B. F. (1960) *Sociological Aspects of Economic Growth*, London: Collier-McMillan.
9. Kaur, K. P. (1992) *Professional Management in Industrial Organizations*, New Delhi: Deep & Deep Publications.
10. Kaur, K. P. (1995) "Role of Trade Associations in Entrepreneurial Development", *SEDME*, Vol. XXII, No.3.
11. Kelbagh, Chetana (ed.), (1991) *Women and Development, Women in Enterprise and Profession*, Vol. III, New Delhi: Discovery Publishing House.
12. Kilby, P. (1971) *Entrepreneurship and Economic Development*, N.Y.: Free, Free Press.
13. Kirchhoff B. A. *et al.* (eds.) (1988) *Frontiers of Entrepreneurship Research*, Wellesley: Babson College.
14. Leibenstein, H. (1968) "Entrepreneurship and Development", *American Economic Review*, LVIII (2), May.
15. McClelland, D. C. (1961) *The Achieving Society*, N.Y.: Van Nostrand Co.

16. Pruthi, S. P. S. (1972) *Economic and Managerial Environment in India*, Bombay: Progressive Corp.
17. Sabbarwal, S. (1990) *Organizational Approach to Environment Control*, N. Delhi: Ashish Publications.
18. Sabherwal, Satish (1976) *Mobile Man*, New Delhi: Vikas Publishing House. Pvt. Ltd.
19. Schumpeter, J. A. (1959) *The Theory of Economic Development*, Cambridge: Harvard Univ. Press.
20. Sharma, K. L. & H. Singh (1980) *Entrepreneurial Growth and Development: Programmes in Northern India*, New Delhi: Abhinay Publications.
21. Sharma, K. L. (1981) *Voluntary Business Associations*, Chandigarh: Panjab University.
22. Sharma, K. L. (1988) "Community and Entrepreneurship", *Eastern Anthropologist*, 42 (3).
23. Tandon, B. C. (1975) *Environment and Entrepreneurs*, Allahabad: Chugh Pub.
24. Weber, Max (1947) *Theory of Social and Economic Organization*: tr. by A. R. Henderson and Talcott Parsons (ed.), Oxford: Oxford University Press.

Additional Readings

1. Rathore, B. S. and J. S. Saini (eds.) (2007) *A Handbook of Entrepreneurship*, Panchkula: Aapaga.
2. Hagen, E. E. (1980) *The Economics of Development*, Illinois: Irwin, Inc., Homewood.
3. Schumpeter, J. A. (1939) *Business Cycles: A Theoretical, Historical and Statistical Analysis of Capitalist Process*, London: McGraw Hill.
4. Weber, Max (1965) *The Protest and Ethic and the Spirit of Capitalism*, Tr. by Talcott Parsons, London: Union.
5. Weber, Max (1968) *Economy and Society*, New York: Bedminster Press.

SOC O 743: CITIES, URBAN PLANNING AND DEVELOPMENT

Objective

This is the third course in the specialization of Urban Sociology offered to MA students from second through fourth semesters. It is presumed that by now the students has the basic understanding of the conceptual and theoretical formulations in urban sociology, with specific relation to India's experience as compared to the Western. In this course the student shall be apprised with the contemporary and emerging conceptual and empirical developments in the area of urban planning and development, especially with an emphasis upon the shift from mere town and physical planning to social planning, decentralization etc. manifested both at global and national agenda.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Urban Planning

Physical and Town Planning, Zoning, Master Plan;
Critique of Conventional Urban Planning;
Concept of Social Planning and its Implications on Urban Planning;
People's Participation in Urban Planning and Development; Decentralization and Democratization in Urban Planning.

Unit-II

Cities and Urban Development

U.N. Conventions on Human Settlements and Global Agenda;
Urban Renewal and Urban Redevelopment;
Sustainable, Humane, Child-Friendly, Eco-Friendly Cities;
From Urban Development to Sustainable Urban Development and its Features;

Unit-III

Urban Planning in India

Critical Appraisal of Slum Rehabilitation Schemes

Critical Appraisal of Urban Poverty Alleviation Programs.
Critical Appraisal of 74th Constitutional Amendment Act and its Salient Features

Unit-IV

Cities and Culture

Cities and Cultural Change (with reference to Georg Simmel, Louis Wirth and C. Fischer)

Cities and Consumerism

Cities and Ethnicity

Suggested Readings

1. Ali, Sabir, (1990), *Slums Within Slums- A Study of Resettlement Colonies in Delhi*, New Delhi, HarAnand and Vikas.
2. Breese, Gerald and Whiteman, Dorothy E, (eds.), (1953)*, An Approach to Urban Planning*, Princeton, Princeton University Press.
3. Castells, Manuel, (1977). *The Urban Question*, London, Edward Arnold Publishers Ltd.
4. Castells, Manuel, (1975), 1968, Is there an Urban Sociology? Reprinted in Urban *Sociology: Critical Essays* (ed.) by C. Pickvance, New York, St. Martin's Press. Pp. 33-59.
5. Flanagan, William, (1993), Contemporary Urban Sociology, Cambridge, Cambridge University Press.
6. Gill, Rajesh, (2009). *The Contemporary Indian Urban Society -Ethnicity, Gender and Governance.* New Delhi, Bookwell Publishers.
7. Gill, Rajesh, (2003)'. Planning Urban Settlements for People: A Social Agenda', in *Urban India,* Vol. XXIII, No. I, Jan.-June 2003.
8. Harvey, D. (1999), "The City in a Globalizing World" (ed.) by Charles Lemerit (2004), *Social Theory: Multicultural and Classical Readings*, U.S.A., Westview Press.
9. Jo Beall (ed.), (1997), *A City for All- Valuing Difference and Working with Diversity*, London, Zed Books Ltd.
10. Lo, Fu Chen and Yeung, Yue-man (eds.),(1998), *Globalization and the World of Large Cities,* Tokyo, United Nations University Press.
11. Miles, S. and Miles, M., (2004). *Consuming Cities.* New York, MacMillan.
12. Report of National Commission on Urbanization, (1988), Vols. 1&2.
13. Sassen, S. (1991). *The Global City*, Princeton, Princeton University Press.
14. Satterthwaite, D. (2007), "When People Live Mostly in the Cities" *The Hindu*, January 18.
15. Simmel, Georg, (1990). 2nd Edition. *The Philosophy of Money,* trans. by T. Bottomore and D. Frisby (ed.) D. Frisby. London, Routledge.
16. Simmel, Georg, (1964). "The Metropolis and Mental Life" in K. Wolff (ed.), *The Sociology of Georg Simmel,* New York, Free Press. (Org. 1905).
17. Uner, Kirdar (ed.), (1997), *Cities Fit For People*, New York, United Nations.
18. Weber, Max, (1958), *The City*, Chicago, Free Press.

Additional Readings

1. Chandoke, Neera, (1991). "The Post Colonial City", *Economic and Political Weekly,* Mumbai, December 14, pp. 2868-2873.
2. Fagence, Michael, (1977), *Citizen Participation in Planning,* Oxford, Pergamon Press.
3. Gill, Rajesh, (1991), *Slums as Urban Villages- A Comparative Study in Two Cities*, Jaipur, Rawat Publications.
4. Mumford, Lewis, (1961). *The City in History.* New York, Harcourt, Brace and World.
5. Sarin, Madhu, 1975*, Planning and the Urban Poor: The Chandigarh Experience*, London, School of Environmental Studies.
6. Saunders, P. 1981*, Social Theory and the Urban Question*, London, Hutchison & Co. Ltd.
7. Short, J.R., 1996, *The Urban Order- An Introduction to Cities, Culture and Power*, Blackwell Publishers.
8. Southall, Adian, 1998, *The City in Time and Space,* Cambridge, Cambridge University Press.

SOC O 843: FAMILY DYNAMICS IN CONTEMPORARY INDIA

Objective

In this course students will be enabled to have a grasp of the changing marriage and family patterns in India. The course will be addressing to the impact of technological and economic factors on family and how family has responded to these by undergoingchanges in its Form, Structure and Functions, which in turn influence the values and role-relations within the family. Students will be further acquainted with the family's failure in coping with the pressures of modern life.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marriage Patterns

Traditional and Contemporary Patterns from Vedic times to Modern times

- Changing Patterns of Marriage Alliances
- Child Marriage; Increasing Age at Marriage, its Socio-economic and Cultural Determinants, Regional Variations and Demographic Consequences.

Unit-II

Trends in Family Type

- Regional Variation in Family Type and its Socio-cultural Correlates.
- Joint Family: Its Structural & Functional Aspects, Changing forms of Joint family – Nuclearization.
- Changing Status and Role of the Women and the Aged.

Unit-III

Family Values and Role-Relations

- Familial Values : Familism vs. Individualism.
- Dyadic Relations : Changing Filial (Parent and Child), Fraternal (Siblings-Brother and Sister, Brother and Brother, Sister and Sister),

Unit-IV

Family Disintegration

Marital Maladjustment.

- Factors Responsible for Disintegration of Joint and Nuclear family.
- Desertion and Divorce: their Extent, Causes and Consequences.

Suggested Readings

1. Apte, Usha M. (1978) *The Sacrament of Marriage in Hindu Society*, Delhi : Ajanta Publications.
2. Chakrabortty, Krishna (2002) *Family in India,* New Delhi : Rawat Publications.
3. Kolenda, Pauline (1987*) Regional Differences in Family Structure in India*, Jaipur Rawat Publications.
4. Lal, A.K. (1990*) The Urban Family, A Study of Hindu Social System*, New Delhi: Concept Publishing Company.
5. Madan, T.N. (1989) *Family and Kinship* (2nd Edition), Delhi: Oxford University Press.
6. Mandelbaum, David G. (1970) *Society in India: Continuity and Change* (Vol.1), Bombay: Popular Parkashan.
7. Pandey, Rajendra (1994) *Social Problems of Contemporary India*, (Chapter-12), New Delhi: Ashish Publishing House.
8. Pernau,Maragrit, Ahmed, Imtiaz and Helmut, Redfield (2003) *Family and Gender:Changing Values in Germany and India*, New Delhi: Sage Publications.
9. Pothen S. (1980) *Divorce: Its Causes and Consequences in Hindu Society,* Delhi: Shakti Books.
10. Reddy, M.M. Krishna (1998) *Marriage, Population and Society*, New Delhi: Kanishka Publishers.
11. Shah, A.M. (1998) *The Family in India: Critical Essays*, New Delhi: Orient Longman.
12. Singh, J.P. (2003) 'Nuclearisation of Household and Family in Urban India', *Sociological Bulletin*, Vol.52, No.1, PP: 53-70.
13. Sinha, Raghvir (1993) *Dynamics of Change in the Modern Family*, New Delhi: Concept Publishing Company.

Additional Readings

1. Audinarayana N. & R. Rajasree (1995) 'Cultural Determinants of Age at Marriage', *The Journal of Family Welfare*, Vol. 4, No.1, pp.8-14.
2. Augustin, John S. (1982) *The Indian Family in Transition*, New Delhi: Vikas Publishing House.
3. Basu, Monmayee (2003) *Hindu Women and Marriage Law from Sacrament to Contract,* New Delhi: O.U.P.
4. Chauhan, Abha (2003) 'Kinship Principles and the Patterns of Marriage Alliance: The Meos of Mewat', *Sociological Bulletin*, Vol.52, No.1, pp: 71-90.

5. Goode, William J.(1970) *World Revolution & Family Patterns*, New York: Free Press.
6. Kapoor, Promila (1974) *The Changing Status of Working Women in India*, New Delhi: Vikas Publishing House.
7. Madan, T.N. (1993) 'The Hindu Family and Development', in P. Uberoi (ed.), *Family, Kinship and Marriage*, Delhi: Oxford University Press.
8. Sharma, Bela Rani (1997) *Women: Marriage, Family and Divorce*, Jaipur: Mangal Deep Publication.
9. Sinha, Durganand, Henry and S.R. Rao (1988) *Social Values & Development: Asian Perspective*, New Delhi: Sage Publications.
10. Vatuk, Sylvia (1972) *Kinship and Urbanization: White Collar Migration in North India,* London: University of California Press.

SOC O 844: GENDER AND DEVELOPMENT

Objective

This paper largely focuses on India attempts to establish a link between Development and Gender. It will particularly focus on different perspectives and schemes adopted for promoting Gender and Development. Secondly, it will highlight the biases inherent in most developmental policies which have been detrimental to women. Thirdly, it will look at changes taking place in gender relations particularly in the area of work. The focus will be on women and work; differentials and role conflict in family due to changing equations. Lastly, it will take an overview of indicators of issues related to Discrimination, Exploitation and Oppression.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit I

Women in Development , Women and Development, Gender and Development (WID , WAD, GAD)
Gender Equality and Inequality in Productivity and work

Family compulsions and other factors affecting gender related choices or priorities of work, Role conflict among Women
Indicators of Low status of Women

Unit-II

Perspectives on Gender and Development

- Welfarist, Developmentalist and Empowerment.
- Empowerment: Paradigms and Paradoxes.
- Changing status of Women in India, Precolonial, Colonial and Post-Colonial.
- Measures to uplift women's status.

Unit III

Measures to Improve Gender Relations

- Special Schemes and Strategies for Women's Development in India
- Voluntary sector and Women's Development.
- Women in Sectoral Development: Education, Health, Agriculture and Industry.

Unit-IV

- Globalisation and Women's Development
- Development Policies- Liberalization and Globalization: their Impact on Women.
- Environment, Development and Gender: Deforestation, Environmental Degradation and Feminization of Poverty.
- Women in Panchayati Raj Institutions and Urban Local Bodies: 73rd and 74th Constitutional Amendments.

Suggested Readings

1. Arya, Sadhna (2000) *Women, Gender Equality and the State*, Delhi: New Deep and Deep Publication.
2. Forbes, Geraldine (1998) *Women in Modern India*, Cambridge University Press.
3. Ghadially, Rehana (1988) *Women in Indian Society*, New Delhi; Sage.
4. Laxmi Devi (1998*) Women and Development*, New Delhi. Anmol Publications.
5. Manchanda, Rita (2001) *Women, War and Peace in South Asia: From Victimhood to Agency,* New Delhi: Sage Publication.
6. Seth, Mira (2001) *Women and Development*, New Delhi: Sage Publications.
7. Suchitra, Anant, Ramani Rao and Kabita Kappor, *Women at Work in India*, Ministry of Labour, GOI.

Additional Readings

1. Aggarwal, Bina (1988) *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi: Kali for Women.
2. Ahooja, Patel, Krishna (1995) *Women and Development*, New Delhi: Ashish Publishing House.

3. Chafeltz, Saltrman, Janet (1999) *Gender Equity–An Integrated Theory of Stability and Change,* New Delhi: Sage Publications.
4. Gulati, Leela (1982) *Profiles in Poverty*. New Delhi, Hindustan Publishing Corporation.
5. Heyser, Noeleen and Sen, Gita (1994) *Gender, Economic Growth and Poverty*, New Delhi: Kali for Women.
6. Krishnaraj Maitraeyi (1988) *Women and Development: The Indian Experience,* New Delhi: Subheda Publications.
7. Kumari, Abhilesha and Sabina Kidwai (1997) *Crossing the Sacred Line, Womens' Search for Political Power,* New Delhi: Orient Longman.
8. Maheshwari, S.R. (2002) *Local Government in India*, (New Delhi: Uppal Book Store).
9. Mazumdar, Vina (1979) *Symbols of Power: Studies on the Political Status of Women in India*, New Delhi: Allied.
10. Myers, Kristen Anderson (1998) *Feminist Foundations–Towards Transforming Sociology*, New Delhi: Sage.
11. Powell, Gang N. (1995) *Handbook of Gender and Work*, New Delhi: Sage Publications.
12. Rajput, Pam and Swarup, Hemlata (1994) *Women and Globalization*, New Delhi: Ashish Publishers.
13. Sangari Kumkum and Uma, Chakravarty (ed.) (1998), *From Myths to Markets,* Shimla, IIAS.
14. Shiva,Vandana (1988) *Staying Alive*, New Delhi: Kali for Women.
15. Staggenborg, Suzanne (1998) *Gender, Family and Social Movements,* New Delhi: Forge Press.
16. Vaid S,K Sangpari (1989) *Recasting Women: Essays in Colonial History*, New Delhi: Kali for Women.
17. Venkatashwara, Sandhya, (1995) *Environment, Development and the Gender Gap*, New Delhi: Sage Publications.

SOC O 941: FUNDAMENTALS OF INDUSTRIAL SOCIOLOGY

Objective

This paper aims to familiarize the students to the nature of industrial sociology highlighting (a) the theories relating to industry, organization and trade unionism; (b) industrialization and its impact on social institutions; (c) the issues related to industrial conflict with special emphasis on the role of trade unions; and (d) to assess the impact of globalization on industry.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit- I

Industrial Sociology: Nature and scope
Theories– Marx (Alienation), Taylor (Scientific Management), Mayo (Human Relations), Marcuse (One Dimensional Man)
Types of Productive Systems– Cottage, Guild, Domestic, Factory
Industrial Roles – Worker, Foreman, Line and Staff, Specialist.

Unit- II

Industrialization and Social Institutions:
Impact on Family, Education and Stratification; Work and Leisure

Unit- III

Industrial Conflict and Employee Participation:
Trade Unions: Managerial and Conflict Theories; Strike as a Bargaining Tool

Unit- IV

Globalization and Industry:
Fordism vs. Flexible Specialization
Globalization and Industrial Relations
Emergence of Multi National Companies (MNCs)
Technological Revolution and Impact on Industry and Society

Suggested Readings

1. Bain, G. S. (ed.) (1984) *Industrial Relations in Britain*. London: Basil Blackwell.
2. Dosi, G. (1984) *Technological Change and Industrial Transformation*. N.Y.: St. Martins Press.
3. Eldridge, John *et al.* (1991) *Industrial Sociology and Economic Crisis*. N.Y.: Harvester Wheatsheaf.
4. Jorgenson, D. W. and K. J. Stroh (1999) "Information Technology and Growth", American Economic Review, 89 (109-115).
5. Kalleberg, A. L. and I. Berg (1987) *Work and Industry,* N.Y. Plennum.
6. Moses, J. A. (1990) *Trade Union Theory from Marx to Walesa*, N.Y.: Berg.
7. Parker, Stanley (1976) *The Sociology of Leisure*. London: George Affer & Union Ud.
8. Pojek, Chris (1985) *Capitalism and Leisure Theory*, London: Tavistock.

9. Schnieder, E. V. (1972) *Industrial Sociology*, London: Harper and Row.
10. Southall R. (ed.) (1988) *Trade Unions and the New Industrialization of the Third World*, London: Zed Books.
11. Watson, K. T. (1995) *Sociology, Work and Industry*. London: Routledge and Kegan Paul.

Additional Readings

1. Burns, Tom (Ed) (1969) *Industrial Man*, Harmondsworth: Penguin Books.
2. Caplow, Theodore (1965) *The Sociology of Work*, N. Y.: McGraw Hill Book Co., Chapter 6.
3. Faunce, William, A. (ed) (1967) *Readings in Industrial Sociology*, Appleton: Century, Crof & Gisbel.
4. Miller, D. and W. H. Form (1964) *Industrial Sociology*, Second Ed. London: Harper and Row.
5. Parker, S. R. *et al.* (1977) *The Sociology of Industry*, London: George Allen and Unwin.
6. Pascual, Gisbert (1972) *Fundamentals of Industrial Sociology*, New Delhi: Tata McGraw Hill.
7. Ramaswamy E. A. & Uma Ramaswamy (1981) *Industry and Labour: An Introduction*, Delhi: Oxford University Press .

SOC O 942: SOCIAL PROBLEMS

Objective

Over the years, India's social problems have become difficult, intricate and hydra-headed, pervading the entire social, economic, cultural and demographic structure. Keeping this in view, this paper aims at introducing the students to the concept and various perspectives on social problems. It also aims at providing detailed knowledge about specific social problems ranging from socio-cultural problems to socio-demographic problems.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept and Sociological Perspectives:

- Definition
- How and When an Issue becomes a Social Problem
- Subjective Definition and Objective Condition
- Stages in its Development
- Assumptions of Social Problems.

Perspectives on Social Problems**:**
Functional Perspective
Conflict Perspective
Symbolic Interactionist Perspective

Unit-II

Socio-Cultural Problems:
- Corruption
- Sex-Deviation
- Dowry

Unit-III

Socio-Economic and Structural Problems
- Poverty
- Unemployment
- Drug-addiction

Unit-IV

Socio-Demographic Problems:
- Child Labour and Child Abuse
- Problems of the Elderly
- Differently abled

Suggested Readings

1. Aziz, Abdul (1994) Poverty, *Alleviation in India: Policies and Programes,* New Delhi: Ashish Publication.
2. Bajpai, P.K. (1992) *Youth, Education and Unemployment*, New Delhi: Ashish Pub.House.
3. Ghosh S.K. (1996) *The World of Prostitutes*, A.P.H. Publication Corporation.
4. Julian Joseph (1989) *Social Problems (6th edition)* New Jersey: Prentice Hall.
5. Kapoor.T. (1985) *Drug Epidemic among Indian Youth*, New Delhi: Mittal Pub.
6. Mani, D. Ram, (1988) *The Physically-Handicapped in India,* New Delhi: Shilpa Publications.
7. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.

8. Murickan J. (ed.) (1989) *Poverty in India: Challenges & Responses*, Bangalore: Xavier Board Publication.
9. *Sharma, Vijay (1994) Protection* to Women in Matrimonial Home, New Delhi: Deep and Deep Publication.
10. Singh, Amarnath (1990) *Child Labour in India*, New Delhi: Shipra Publication.
11. Singhvi L.M (1977) *Unemployment Problems in India*, New Delhi: National Publishing House.
12. Srivastava C.P. (2001) *Corruption: India's Enemy within*, Delhi: MacMillan.
13. Teja M. K. (1993) Dowry: *A Study in Attitudes and Practices,* New Delhi: Inter India Publication.

Additional Readings

1. Sharma, R.K. (1998), *Social Problems and Welfare*, Atlantic Publishers: New Delhi.
2. Ahuja, Ram (2003), *Social Problems in India,* Rawat Publications: Jaipur.
3. Wilson, Gial (2000), Understanding Old Age: Critical and Global Perspective: New Delhi: Sage Publications.

SOC O 943: POLITICAL SOCIOLOGY

Objective

The course expects to familiarize the students with the relationship between the state and social structure. How power is central to any social institution is another important focus of the course. After the theoretical introduction, the course would finally focus on the Indian state and civil society including the various institutions. What role did the social movements play in the democratization of the Indian society would also be the part of the discussion.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Meaning and Scope of Political Sociology;
Concepts of State, Civil Society, Power, Social Caste, Varna, Structure and Nation.

Unit-II

Socio-economic Conditions and the Nature of Political Institutions:
Authoritarian State, Theocratic State, Military State, Democratic State

Unit-III

Sociology of Power, Nature and Form of Power; Power and Authority
Theories of Political Power; Elite, Structural-Functional and Marxist

Unit-IV

Thematic Concerns in Indian Political Sociology:
Varna, Caste and Kinship
State and Civil Society, State and Social Structure, State and Nation-building
Movements of Resistance.

Suggested Readings

1. Barrington Moore, Jr. (1966) *Social Bases of Dictatorship and Democracy,* Boston: Beacon Press.
2. Bottomore, T. (1979) *Political Sociology*, Ambika, Bombay: B.I.
3. Chakraborty, Salyabrata (Eds.). (2005*). Political Sociology*, Macmillan, New Delhi.
4. Kothari, R. (1970*) Caste in Indian Politics*, New Delhi: Orient Longman.
5. Lukes, Steven (1974*) Power: A Radical View*, Hong Kong, Macmillan.
6. Motwani, K., Saksena, RD. (Eds.) (2009). Sociology of Politics: Theoretical Perspectives, New Delhi, Cosmo.
7. Phadnis, U. and Ganguly, R. (2001) *Ethnicity and Nation Building in South Asia*, New Delhi: Sage.
8. Pizzorni, A. (ed) (1971) *Political Sociology*: Penguin
9. Rathod, P.B., (2005). *Fundamentals of Political Sociology,* Jaipur, ABD Publication.
10. Verma, R.P., (2001). *Dynamics of Political Sociology*, New Delhi, Rajat.

Additional Readings

1. Quigley, D. (1999) *Interpretation of Caste*, Delhi: Oxford.
2. Martin, Roderick (1977*) The Sociology of Power*, New Delhi, London, Routledge and Kegan Paul.
3. Munek, R. (2002) *Globalization and Labour*, Delhi: Madhyam Brs.

SOC O 944: SOCIOLOGY OF MARGINALIZED COMMUNITIES

Objective

The course aims at sensitizing the students to the significance of the sociological study of Dalits, tribals and other sub-alteran groups. The focus would be on communities/groups suffering poverty, deprivation and discrimination.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marginalization and its Socio-economic Indices:
Poverty, Relative Isolation, Deprivation, Exploitation, Discrimination, Educational Backwardness; Inequality
A Critical View of the Caste System
Untouchability: Historical and Social Roots.

Unit-II

The Social Structure and Culture of marginalized communities:
The Status of SCs, STs, Nomadic Castes and Tribes and De-Notified Tribes; Problems; Social Mobility; Development; Identity Formation.

Unit-III

Perspectives on Marginalization:
Role of Ideology in Marginalization
The views of Jotirao Phule, Periyar, Babasaheb Ambedkar, Ram Manohar Lohiya.

Unit-IV

(a) Social Movements among Marginalized Communities: Nature and Dynamics; Perspectives on Social Movements: Protest, Reform: Role of Christian Missionaries in Social Reform Movements; Role of NGOs.
(b) Marginalization and Affirmative Action: Constitutional Provisions; Implementation; Impact on Marginalized Communities; Limitations; Critical Review.

Suggested Readings

1. Beteille, Andre (1981) *Backward Classes and the New Social Order*, Delhi: Oxford University Press.
2. Beteille, Andre (1992) *The Backward Classes in Contemporary India,* Delhi: Oxford University Press.
3. Charsley, S.R. and G.K. Karanth (1998) (eds.) *Challenging Untouchability*, Delhi: Sage Publications.
4. Chako, M. Priyaram. (2005). *Tribal Communities and Social Change*, New Delhi: Sage Publications.
5. Chaudhuri, S.N. (1988) *Changing Status of Depressed Castes in Contemporary India*, Delhi: Daya Publishing House.
6. Gupta, Dipankar (1991) *Social Stratification,* New Delhi: Oxford University Press.
7. Jogdand, P.G. (2000) *New Economic Policy and Dalits*, Jaipur: Rawat Publications.
8. Narayan, Badri. (2006). *Women Heroes and Dalit Asssertion In North India: Cultural Identity and Politics,* New Delhi: Sage Publications.
9. Singha, Roy (2004), (ed.), *Social Development and the Empowerment of Marginalized Groups. Perspectives and Strategies* New Delhi: Sage Publications.
10. Srikrishna, S., Samudrala and Anil Kumar. (Eds.). (2007). *Dalits and Human Rights*, New Delhi: Serial Publication.

Additional Readings

1. Gore, M.S. (1993) *The Social Context of an Ideology: The Social and Political Thoughts of Babasaheb Ambedkar*, New Delhi : Sage.
2. Jogdand P.C. (1991) *Dalit Movement in Maharastra*, New Delhi: Kanak Publications, 1991.
3. Mahajan, Gurpreet (1998) *Democracy, Difference and Social Justice*, New Delhi: Oxford University Press.
4. Mehta, Rani (2011), "Globalization and Human Rights of the Marginalised Groups: A Sociological Perspective," Amritsar, Guru Nanak Journal of Sociology, GNDU, Vol. 32, Nos. 1&2.
5. Omvedt, Gail (1995): *Dalit Visions: The Anti-Caste Movement and the Construction of an Indian Identity,* New Delhi: Orient Longman.
6. Omvedt, Gail (1999) *Dalits and the Democratic Revolution*, New Delhi: Sage.
7. Oommen, T.K. (1990*) Protest and Change: Studies in Social Movements*, Delhi: Sage Publications.
8. Robb, Peter (1993) (eds*.) Dalit Movements and the Meeting of labour in India*, Delhi: Sage Publications.
9. Shah, Ghansham (1990) *Social Movements in India: a Review of Literature*, Delhi: Sage Publications.
10. Shah, Ghansham (2002*), Dalit Identity and Politics*, New Delhi: Sage.

11. Singh, K.S. (1988) *The Scheduled Castes,* Delhi: Anthropological Survey of India.
12. Singh K.S. (1995) *The Scheduled Tribes*, Delhi: Oxford University Press.
13. Zelliot, Eleanor (1995) *From Untouchable to Dalit: Essays on the Ambedkar Movement,* New Delhi: Manohar

SOC O 945/935: DISSERTATION (IIIrd and IVth Semesters)

SOC O 946: MEDIA AND CULTURE

Objective

This course has been designed to provide a sociological perspective on the role of popular culture and mass media in modern society. It focuses on the phenomena of communication, mass media, popular culture, especially in the Indian context, and their relationship with the globalization process since all these together play a major role in shaping the society.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks

Course Outline

Unit-I

Communication: Definition, Process, Functions and Types

Approaches to Communication

Factors influencing Communication

Mass Media – Print and Electronic

Unit-II

Culture: Popular Culture, Mass Culture, Folk Culture, Elite Culture; Mass Media and Culture; Theoretical Perspectives on Popular Culture and the Media.

Unit-III

Globalization, Mass Media and Culture – Diffusion of global culture through the mass media and its impact on society – social values, youth, family, consumerism, food, clothes, entertainment; Dissemination of awareness by media on social issues – violence, stereotypes, gender issues.

Unit-IV

Media and the Indian society – Satellite television and its impact; Impact of Social Media

Suggested Readings

1. Axford, B. and R. Huggins (2001) *New Media and Politics*, London, Sage Publications.
2. Curren, J. and M. Gurevitch (1991) (eds.), *Mass Media and Society*, London, Edward Arnold.
3. Dwyer, R. and C. Pinney (2001) (eds*.), Pleasure and the Nation: The History, Politics and Consumption of Public Culture in India,* New Delhi, Oxford University Press.
4. French, D. and Michael Richard (2000) (eds.), *Television in Contemporary Asia*, London, Sage.
5. Garnham, Nicholas, (2000*) Emancipation: the Media and Modernity,* New Delhi, Oxford University Press.
6. Gunaratne, S. (2000) (ed.), *Handbook of the Media in Asia*, London, Sage.
7. Mitra, A. (1993) *Television and Popular Culture in India,* New Delhi, Sage Publications.
8. Page, D and W. Crawley (2001) *Satellites over South Asia*, London, Sage Publications.
9. Preston, P. (2001) *Reshaping Communications,* Cambridge, Cambridge University Press.
10. Real, M.R. (1996) Exploring Media Culture: A Guide, New Delhi, Sage.
11. Singhal, A. and E.M. Rogers (2000) *India's Communication Revolution*, New Delhi, Sage Publications.

Additional Readings

1. Chakravarty, Sunita S. (2000) *National Identity in Indian Popular Cinema 1947-87*, New Delhi, Oxford University Press.
2. Croteau, David and W. Hoynes (1997) *Media/Society: Industries, Images and Audiences*, London, Pine Forge Press.
3. Johnson, K. (2000) *Television and Social Change in Rural India*, London, Sage.
4. Mankekar, P. (2000) *Screening Culture, Viewing Politics: Television, Womanhood and Nation in Modern India*, New Delhi, Oxford University Press.
5. Gupta, Nilanjana (1998) *Switching Channels: Ideologies of Television in India,* New Delhi, Oxford University Press.
6. Melkote, S.R. and H.L. Steeves (2001) *Communication for Development in the Third World: Theory and Practice for Empowerment*, London, Sage Publications.

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE SYLLABI FOR

M. Sc. INFORMATION TECHNOLOGY

(SEMESTER SYSTEM)

EXAMINATIONS 2018 - 2019

--:O:--

PANJAB UNIVERSITY, CHANDIGARH Outlines of Tests, Syllabi and Courses of Reading for M. Sc. Information Technology (Two Year Degree Programme) for Session 2018 - 2019.

FIRST YEAR					
		FIRST SEMESTER			
Paper Code	**Paper Name**	**Theory & Practical Lectures**	**Univ. Exam. Marks**	**Int. Exam. Marks**	**Exam. Hours**
MS-66	Linux Administration and Programming	6	80	20	3
MS-61	Software Engineering	6	80	20	3
MS-62	Computer Algorithms	6	80	20	3
MS-42	Operating System Concepts	6	80	20	3
MS-63	Minor Project Based on 66	6	80	20	3
MS-64	Minor Project Based on 62	6	80	20	3
		SECOND SEMESTER			
MS-45	Advance Java and Network Programming	6	80	20	3
MS-65	E- Commerce and Emerging Trends	6	80	20	3
MS-60	Advanced Database System and MySQL	6	80	20	3
MS-67	Artificial Intelligence	6	80	20	3
MS-27	SEMINAR	2	-	50	
MS-56	Minor Project Based on MS-45& MS-60	6	80	20	3
MS-68	Minor Project Based on MS-67	6	80	20	3
SECOND YEAR					
		THIRD SEMESTER			
MS-32	.NET Framework and C#	6	80	20	3
MS-69	Theory of Computation	6	80	50	3
MS-39	Computer Graphics	6	80	20	3
MS-14	Systems Approach to Management and Optimization Techniques	6	80	20	3
MS-18	SEMINAR	2	-	50	
MS-33	Minor Project Based on MS-32	6	80	20	3
MS-59	Minor Project Based on MS- 39	6	80	20	3
		FOURTH SEMESTER			
MS-21	**Major Project**		**320**	**80**	

The project period will be of 6 months duration.

The project will involve development of application/system software in industrial/ commercial/ scientific environment

The report should consist of the following :

- Cover page including Project title, Name of the student, Name of the Department and Names of the Project Guides (both External and Internal).
- Acknowledgements.
- Certificates from company and department duly signed by external guide, Principal and internal guide.
- Contents with page numbers.
- Introduction (includes background and application or importance of the project)
- Objectives
- **System Analysis** System Feasibility study
- Software requirement specifications
- Design with system flowcharts and input/output design.
- Implementation and Testing

- Hardware and software used
- Listing of well commented programs with result/output or detailed algorithms with input and output.

Further scope of the project

- Bibliography
- Appendices (any other information related to project)

Each student should observe the following norms while submitting the synopsis/thesis for the Project :

(a) Use both sides of the paper instead of only single side.
(b) Use one and half interline spacing in the text (instead of double space)
(c) Stop using a blank sheet before the page, carrying figure or table.
(d) Try to insert figure/table in the text page itself (instead of using a fresh page for it, each time.)

Students must consult/inform the internal guides regarding the progress of their work at least once in 20 days. It is the duty of the student to be in touch with his internal guide. The student must prepare 5 copies of the report including one copy for self. The remaining four are to be submitted before 31st May every year as per the following :

1. Main Library
2. Department Library
3. Internal Guide
4. Company

One softcopy of the work is to be submitted to the concerned head of the department/institution along with the report. The student must present his/ her work in 15 minutes mainly focusing on his/her contribution with the help of slides followed by demonstration of the practical work done. The project Viva will be completed before 15th June every year exact dates will be informed before 31st May every year.

An external examiner, internal examiner and the internal guide will conduct project viva.

SEMESTER I

Paper Code: MS - 66
Paper Title: Linux System Administration and Programming
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	**P**
6	**8**

Objective: This course enables students to get familiar with Linux system, its commands, files & directories, system, shell programming, PERL programming and system administration. After the completion of this course, student will be able to:

- Work in the Linux environment for Linux server administration
- Write the shell programs, PERL programs and C-program with system calls

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT –I

1. **Introduction to Linux:** Functions of an **o**perating system, Linux's History, different flavors of Linux, Minimum System Requirements for installing Linux: Using LILO; Linux's fdisk.

2. **Using Linux:** Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords; Linux Error Messages, Search Paths, Input and Output Redirection, Man pages, Wildcards: * and ?, Environment Variables, process Commands: ps, kill, su command; GREP pattern searching command, vi text-editor.

UNIT-II

3. **Using the File System** : Files Overview, Common types of files, file and directory management commands, Absolute and relative filenames; pwd, cd, rm, cat, mkdir, mv, cp;, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc.

4. **File and Directory Permissions**: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; Bourne Again Shell (BASH): Command-line Completion, Wildcards, Command History, Aliases, Pipelines, setting shell prompts, Job control, Customizing bash,bash variables.

UNIT-III

5. **Shell Programming:** Creating and Running Shell Programs, Using variables, Positional Parameters and other built-in Shell Variables; importance of quotation marks, test Command, Conditional Statements: if Statement, case Statement; Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions.

6. **Linux for System Administrators:** System Administration Basics, The root Account, Starting and Stopping the System; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, Checking file Systems, Compressing files with gzip and compress: Using tar, Backups, Setting the Login Message,Setting of DNS, Ping, WWW, and e-mail.

UNIT-IV

7. **PERL:** Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless Statements, for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators.

8. **System Calls:** C as System Programming Language, I/O system calls – umask(); create(); open(); read(); write(); lseek(); dup(); link(); access(); chmod(); chown(); Process management system calls; fork(); getpid(); getppid(); exit(); wait(); sleep() ; Signal system calls – kill(); signal().

REFERENCES:

1. Tim Parker: Linux Unleashed, Techmedia Publishing House.
2. Norton, P.: Complete guide to LINUX, Techmedia.
3. Komarinski, M.: LINUX System Administration Handbook, AW.
4. John Goerzen: Linux Programming Bible, IDG Books, New Delhi.
5. Venkateshmurthy, M.G.: Introduction to Unix& Shell Programming, Pearson Education.
6. Linux Network Administration Guide by Tery Dawson, Gregor N. Purdy, Tony Bautts – Oreilly.
7. Stones, Richard and Mathew Neil: Beginning Linux Programming, 3rd Edition, Wrox.
8. Jones, Tim: GNU/Linux Application Programming, Wiley India Pvt. Ltd.

Paper Code: MS - 61
PaperTitle: Software Engineering
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand Software Configuration Managements Tools and Techniques. After the completion of this paper, student will be able to

- Use principles, concepts, methods, and techniques of the software engineering approach to produce quality software.
- Apply software engineering principles and practices in the planning and development of an actual software product.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Software Engineering:** Definition, Software Engineering goals, Characteristics of well-engineered software, Software Process Models: Waterfall Model, Prototyping Model, Spiral Model, RAD, AgileModelling.
2. **Software Requirement Specification (SRS):** Software Requirements, Definition of SRS, Characteristics of SRS, Components of SRS, Designing of SRS.
3. **System Analysis:** Principles of Structures Analysis, DFDs, E-R Diagrams, Data Dictionary.

UNIT - II

4. **Software Design:** Design Objectives, Design Principles, Concepts, Design Process, Design Methodologies: Structured Design, Modular Design, Object Oriented Design, User Interface Design and its elements and its Characteristics.

5. **Software Project Planning & Scheduling:** Objectives, Decomposition techniques, Planning and Scheduling Tools: GANTT Chart, PERT Chart, Critical Path Method and Work Breakdown Structure; Cost estimation, Cost estimation Models: Single Variable Model, COCOMO Model; Software Risks, Risk Assessment.

UNIT – III

6. Software Metrics**:** Role of Metrics and Measurement, Types of Software Metrics: Product Metrics, Software Size Metrics: LOC and Function Points, Process Metrics, People Metrics**.**
7. System Maintenance and Reliability**:** Maintenance and its types; Factors Affecting Software Reliability, Software Reliability vs Hardware Reliability, Software Reliability Metrics.

UNIT-IV

8. **Software Testing Techniques:** Introduction to Software Testing Process, Objectives of Software Testing. BBT & its Techniques: Boundary Value Analysis, Equivalence Class Testing, and Cause- Effect Graph, White-Box Testing and its Techniques: Domain and Boundary Testing, Logic Based Testing, Data Flow Testing and Basic Path Testing.
9. **Software Testing Strategies:** Characteristics, Integration Testing, Functional Testing, Object Oriented Testing, Alpha and Beta Testing.

REFERENCES:

1. Pressman : Software Engineering, Tata-McGraw Hill Publishing House.
2. Sommerville, I: Software Engineering, Pearson Education.
3. Rajib Mall: Fundamentals of Software Engineering, PHI Learning Pvt. Limited
4. Jalota, Pankaj: An integrated approach to Software Engineering, Narosa Publishing Company.
5. Ali Behforooz : Software Engineering Fundamentals, Oxford University Press. Frederick J.H
6. William E. Perry, WILEY: Effective methods for Software Testing
7. Gill, Nasib Singh: Software Engineering: Software reliability, Testing and Quality Assurance. Khanna Book Publishing

Paper Code: MS - 62
Paper Title: Computer Algorithm
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	8

Objective:
The objective of the module is to create skills in students to design and analyze algorithms. After studying this subject students will be able to

- Understand algorithms and give theoretical estimates for the resources needed by any algorithm.
- Analyze Algorithms.
- Have an empirical approach to gauge the comparative performance of a given set of algorithms.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Data Structures**: Definition, Types of Data Structures, Stacks and its operations(Push, Pop), Queue and its operations (Insert, Delete), Tree (Binary Tree, General Tree and its Traversal), Graph(Types and its Traversal).
2. **Algorithms and Analysis:**Definition; Analysing algorithms; space and time complexity, Asymptotic Notation (O, Ω, θ) practical complexities, Best, average and worst case performance of algorithms, examples, Recursive algorithms, Introduction to recurrence relations.

UNIT – II

3. **Divide and Conquer:** General method, Binary search, Merge sort, Quick sort, Selection problem, Strassen's matrix multiplication and analysis of these problems.

4. **Greedy Method:** General Method, Knapsack problem, Job sequencing with deadlines, Minimum spanning Trees (Prim's Algorithm, Kruskal's Algorithm), Single source shortest paths and analysis of these problems.

UNIT - III

5. **Dynamic Programming:** General method, Optimal binary search trees, 0/1 Knapsack, the traveling salesperson problem, Single Source Shortest Path Problem (Bellman Ford Algorithm), All pair shortest path problem (Floyd's Algorithm).

6. **Back Tracking:** General method, N queen's problem, Graph coloring, Hamiltonian cycles, Analysis of these problems.

UNIT - IV

7. **Branch-And-Bound:** General Method, 0/1 Knapsack, Traveling Salesperson problems.

8. **NP-hard and NP-complete problems:** Basic concepts, Statement of Cook's Theorem, Satisfiability SAT, Examples of NP-hard graph [Clique Decision Problem, Chromatic Number

Decision Problem] and NP-scheduling problems [Scheduling Identical Processors, Job Shop Scheduling].

REFERENCES:

1. Lipschutz, Seymour, 1986: Theory & Problems of Data Structures, Schaum Series.
2. Horowitz, Ellis and Sahni, Sartaj: Fundamentals of Computer Algorithms, Galgotia Publications.
3. Aho, A.V., Hopcroft, J.E., Ullman, J.D.: The Design and Analysis of Computer Algorithms, Addison-Wesley.
4. Goodman, S.E. &Hedetniemi: Introduction to the Design and Analysis of Algorithms, McGraw-Hill Book Comp.
5. Knuth, D. E.: Fundamental of Algorithms: The Art of Computer Programming, Vol.-1, NareshPubl.House.
6. Brassad, Gilles and Bartley, Paul: Fundamentals of Algorithms, Prentice Hall of India.

Paper Code: MS - 42
Paper Title: Operating System Concepts
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand **the concepts of Operating System.** After the completion of this paper, student will be able to

- Manage various processes and use the scheduling algorithms.
- Handle the deadlock conditions.
- Manage the files on the disk with effective outcome.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Operating System:** History, Structure of OS, Functions/ Operations of OS, Types: Single User, Multi-user, Simple Batch Processing, Multiprogramming, Multitasking, Parallel systems, Distributed system, Real time system.
2. **Process Management:** Process, Process state, Process Control Block; Process scheduling: Scheduling queues, Schedulers, Context switch; Operation on process: Process creation and termination; interrupt mechanism, threads, Scheduling Algorithms: Pre-emptive and non pre-emptive scheduling, FCFS, SJFS, RRS, priority scheduling, Multilevel queue scheduling, Multilevel feedback queue scheduling, Inter process communication: Shared memory systems, Message passing systems.

UNIT - II

3. **Process Synchronization:** Concurrent Processes, Race condition, Shared data; Critical section problem: Mutual exclusion, Progress, Bounded waiting; Software solution: Busy form of waiting, lock and unlock primitives, Dekker's algorithm, Peterson's solution, Baker's Algorithm; Synchronization: Semaphores, Monitors, Reader Writer Problem, Producer Consumer Problem, Dinning Philosopher Problem.
4. **System Deadlock:** System Model; Deadlock Characterization: Necessary conditions, Resource Allocation graph; Deadlock prevention: Mutual Exclusion, Hold and Wait, No Preemption, Circular wait; Deadlock Avoidance: Safe state, unsafe state, Resource Allocation graph Algorithm, Banker's Algorithm; Deadlock Detection & Recovery from deadlock: Wait-for-graph

UNIT - III

5. **Memory Management:** Hierarchy of memory types, Cache memory: Types: Associative memory, direct mapped, set associative.
6. **Memory Allocation:** Address binding, Address Space, Memory Protection, Contiguous and Non- Contiguous allocation, Swapping, Fragmentation; Paging: Protection, Shared pages, Techniques for structuring of page table; Segmentation: Segmentation with paging; Virtual

Memory: Demand paging; Page replacement Algorithms: FIFO, Optimal, LRU, LFU, MFU, Working set, Thrashing;

UNIT - IV

7. **Storage Management:** File(s): Attributes, Operations, Types, Structure; Access Methods: Sequential, Direct access, Index; Directory Structure: Single level, Two level, Tree Structured, Acyclic Graph; File System mounting; File sharing; Protection: Types of access, access control.
8. **File system** structure, File system implementation, Directory implementation, Allocation methods: Contiguous Allocation, Linked Allocation, Indexed Allocation; Disk scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Disk management; Swap space management; RAID.

REFERENCES:

1. Galvin P.B., Silberschatz A., Gagne G.: Operating System Concepts, Wiley Publications.
2. Deitel, H.M.: An Introduction to Operating System, Addision-Wesley Publishing Company.
3. Milenkovic, M.: Operating System - Concepts and Design, McGraw-Hill International Editions.
4. Madnick and Donovan: Operating System, McGraw-Hill Publishing Company.
5. Hansen P. Brineh: Operating System Principles, Prentice-Hall India.

SEMESTER II

Paper Code: MS - 45
Paper Title: Advance Java and Network Programming.
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L	P
6	4

Objectives: This paper enables student to enhance the programming skills using object oriented programming approaches. After the completion of this paper, student will be able to

- To create enterprise and standard applications Java.
- To develop web applications with database support.
- To develop client server based applications.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Review of Java Basics:** Applets, Multithreading, AWT Controls, Event Handling.
2. **Swing:** Features, components, Swing vs AWT, swing containers, controls, using Dialogs, sliders, progress bars, tables, creating user interface using swing.

UNIT-II

3. **Java Database Connectivity:** Connectivity model, Java. SQL package, JDBC Exception classes, Database connectivity, Data manipulation and navigation, Using PreparedStatement, creating database applications
4. **Java RMI:** Distributed object technologies, RMI architecture, creating RMI applications.

UNIT-III

5. **Java Servlets:** Servlets vs CGI, Servlet Lifecycle, creating and running servlets.
6. **Networking:** Networking basics, Client / server model, Java and the Net, TCP/IP client sockets, TCP/IP server sockets, Inet Address, URL, Data grams, creating networking applications.

UNIT-IV

7. **Java Beans :** Component architecture, Components, Advantages of Beans, Bean Developer kit (BDK), JAR files, introspection, developing Beans, Using Bound properties, The Java Beans API, Introduction to EJB (Enterprise Java Beans),Types of EJB, Uses of EJB.
8. **Java Server Pages:** Introduction, JSP Architecture, JSP Elements: Implicit Objects, Comments, Directives, Action Elements, Scripting Elements., developing simple Web Applications.

REFERENCES:

1. Schildt, Herbert: The Complete Reference Java 2, TMH.
2. Ivan Bayross: Web Enabled Commercial Application Development using Java 2.0, BPB.
3. Cornell, Gary and Horstmann Cay S.: Core Java, Vol I and Vol II, Sun Microsystems Press.
4. Keogh, James: J2EE: The Complete Reference.
5. Martin Bond, Debbie Law, Andy Longshaw, Dan Haywood, PeterRoxburgh: SAMS: Teach Yourself J2EE in 21 days, Pearson.
6. Java 6 Programming Black Book, Kogent Solution Inc., Dream Tech Press.

Paper Code: MS – 65
Paper Title: E-Commerce and Emerging Trends
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	0

Objectives: This course enables students to be familiar with Fundamentals of Electronic Commerce and Emerging Technologies such as Parallel Computing, Cloud Computing, Grid Computing, Mobile Computing, and Concept of Big Data.
Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Electronic Commerce:** Traditional Commerce vs Electronic Commerce, Types of E-Commerce, E-Commerce infrastructure: Hardware and Software requirements, **Electronic Data Interchange (EDI):** EDI enabled procurement process and its benefits; Components of EDI system: EDI standards, EDI software, communication networks;**Electronic Payment Methods:** Types of Electronic Payment Systems, Digital Token Based Electronic Payment Systems, Smart cards and Electronic payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic payment Systems.

2. **Issues in E-commerce:** The legal and policy environment of E-Commerce; Intellectual Property, advertising and consumer protection; Copyright Law; Patent Law; Network Security and Firewalls; Client-Server Network Security Threats; Data and Message Security; Encrypted Documents and E-mail; Digital Signatures.

UNIT-II

4. **Business Intelligence:** Introduction to Business Intelligence, Digital data and its types – structured, semi-structured and unstructured, Introduction to Online Transaction Processing (OLTP), Online Analytical Processing (OLAP), Different OLAP architectures: MOLAP, ROLAP, HOLAP, Comparison of OLTP and OLAP. BI Definitions and need, BI Component Framework, Business Applications of BI.

5. **Case Studies:** Supply Chain management, Banking, Online Reservation Systems, Online Publishing

UNIT-III

6. Parallel Computing: Introduction and use, Flynn's Classical Taxonomy: SISD, SIMD, MISD, MIMD; Parallel Computer Memory Architectures: Shared Memory, Distributed Memory, Hybrid Distributed-Shared Memory; Parallel Programming Models: Shared Memory Model, Threads Model, Distributed Memory/Message Passing Model, Data Parallel Model, Hybrid Model, SPMD and MPMP, Introduction to Parallel Virtual Machine and Message Passing Interface, Supercomputers.
7. Cloud Computing: Introduction and use, Architecture, Service Models: infrastructure as a service, platform as a service, and software as a service;

UNIT-IV

8. Grid computing: Introduction and benefits, virtual organisations, grid Architecture and its relationship to other distributed technologies, grid application areas.

9. Mobile Computing : Definition, Guided Transmission, Unguided Transmission; Mobile computing architecture, Mobile Devices, Mobile System Networks: Cellular, WLAN, Ad hoc networks; Introduction to : GSM,CDMA,GPRS,EDGE; Introduction to Mobile Databases; Mobile Applications; Mobile Application Languages; features of Mobile Operating system: Palm OS , Symbian, Android.

REFERENCES :

1. Ravi KalaKota and Andrew B. Whinston: Frontiers of Electronic Commerce, Addison Wesley 1996
2. Kamlesh K. Bajaj and Debjani Nag: E-Commerce The Cutting Edge of Business, McGraw Hill Education.
3. R. N. Prasad and Seema Acharya , Fundamentals of Business Analytics , Wiley 2011
4. M. Sasikumar, Dinesh Shikhare, P. Ravi Prakash: Introduction to Parallel Processing, PHI.
5. Barry Wilkinson, Michael Allen, Parallel Programming: Techniques and Applications Using Networked Workstations and Parallel Computers, Pearson Education.
6. Joshy Joseph, Craig Fellenstein : Grid Computing, Pearson Education.
7. ZarekNabrzyski, Jennifer M. Schopf, Jan Weglarz: Grid Resource Management - State of the Art and Future Trends, Kluwer Academic Publishers.
8. Kamal, Raj, Mobile Computing, Oxford Higher Education.
9. Perkins, Mobile Computing, Pearson Education.
10. Jochen Schiller: "Mobile Communications", PHI/Pearson Education.

Paper Title : Advanced Database Programming & MySQL
Paper Code: MS-60
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes dduration)

Objectives:
The course aims at providing the students through insight on few DBMS principles and practices. Students will learn and implement the operations for making and using databases with help of SQL and PL/SQL.
Note :

i) The Question Paper will consist of Four Units.
ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii) The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv) All questions carry equal marks unless specified.

UNIT - I

1. **Database Management Systems**: Definition, Characteristics, Advantages of Using DBMS Approach, Classification of DBMSs, Data Models, Database Schema and Instance, Three Schema Architecture, Data Independence – Physical and Logical data Independence.
2. **Entity- relationship model**: Entities, Relationships, Representation of entities, attributes, Representation of relationship set, Generalization, aggregation.
3. **Normalization**: Functional Dependency, Full Functional Dependency, Partial Dependency, Transitive Dependency, Normal Forms– 1NF, 2NF, 3NF, BCNF, Multi-valued Dependency.

UNIT - II

4**. Relational Algebra and Relational Calculus**: Relational Algebra: Operations- Union, Intersection, Difference, Cartesian product, Projection, Selection, Division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

5. **Transaction and Concurrency control**: Concept of transaction, ACID properties, Serializibility, States of transaction, Concurrency control: Locking techniques, Time stamp based protocols, Granularity of data items, Deadlock.

UNIT - III

6. **MySQL**: Introduction; Why MySql; Tools provided with MySQL; MySQL Architectural Terminology;Databases:Creating, Selecting, Dropping and Altering Databases; Tables: Creating, dropping, Altering, Indexing Tables; Adding new rows, Retrieving Information, Deleting or Updating Existing rows; Obtaining MySQL Metadata; Joins; Subqueries; Views; Multiple Tables Deletion and Updation; Foriegn Keys and Referential Integrity; MySQL Data Types; Sequences.

UNIT - IV

10.**Data Warehousing**: Introduction; Features; Data modeling for Data Warehousing; Building Data warehouse; Comparison between Data Warehouse and DBMS Metadata; Problems and issues in Data Warehouse.

11. **Data Mining**: Overview; Goals of Data Mining; Techniques: Association rules(Market Basket Algorithm, Apriori Algorithm); Classification: Decision Tree, Induction Algorithm; Applications of Data Mining.

References:

1. Elmarsi&Navathe, “Fundamentals of Database Systems” 4th Edition, 2004.
2. Jiawei Han and MichelineKamber,"Data Mining: Concepts and Techniques", Elsvier.
3. William H. Inmon, "Building the Data Warehouse",Fourth Edition, Willey.
4. C.J.Date “Introduction to database system”, 8th Edition, Galgotia Publications, 2004.
5. Paul DuBois, "MySQL Developer's Library", Fourth Edition, Addison Wesley.
6. Bipin C. Desai, An Introduction to Database System
7. Silberschatz, Korth, Sudershan “Database System Concepts” 4th Edition, McGraw Hill Education, 2002.
8. Ivan Bayross, “SQL/PLSQL: The Programming Language of Oracle, 3rd Revised Edition, 2006

Paper Code: MS - 67
Paper Title: Artificial Intelligence
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives: The paper enables students to understand Artificial Intelligence techniques and the language LISP. After the completion of this paper, student will be able to

- Apply standard AI techniques to solve problems.
- Characterize the Knowledge Acquisition
- Differentiate various expert systems
- Write programs of AI using LISP

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Artificial Intelligence (AI)** : Introduction and Applications, History of AI from Alan Turing and developments in AI, application areas; Criteria for success; Problem Characteristics; Problem representation-State space representation, problem reduction representation, production system; Introduction to agents, intelligent software systems, Applications, Intelligent architectures, components of intelligent agent based distributed systems.
2. **Search and Control Strategies:** Data driven and goal driven search; Uninformed search-Breadth -first Search and Depth-First Search methods; Heuristic Search Techniques - Hill Climbing, Best first Search, A*, AO*, Constraint satisfaction and means-ends analysis techniques.

UNIT - II

3. **Knowledge Representation** : Information and Knowledge, Knowledge Acquisition and Manipulation, Issues in Knowledge Representation, Knowledge Representation Methods, Propositional Logic and First Order Predicate Logic, Resolution: Definition, Conversion to ClauseForm, Resolution in Propositional and Predicate Logic, Unification and Resolution Principle; Horn's Clauses, Semantic Networks, Partitioned Semantic Nets, Frames, Scripts and Conceptual Dependencies.
4. **Game Playing:**Minimax Search Procedure, Adding Alpha-Beta Cutoffs.

UNIT - III

5. **Expert Systems** : Definition and Applications, Characteristics of Expert systems, Architecture of a typical Expert System, Expert System Shells, Building an Expert System, Case studies of Expert Systems like MYCIN, Specific Application of AI.
6. **Natural Language understandingand Processing**: Complexity of the problem, Syntactic processing: Grammars and Parsers, Augmented Transition Networks; Semantic Analysis:

Semantic Grammars, Case Grammars; Discourse and Pragmatic processing:Using Focus in Understanding, Modeling Beliefs; Introduction to Perception :Vision using Low-Level and High-Level Image Features and Action: Navigation and Manipulation.

UNIT - IV

7. AI Language PROLOG: Features of Prolog, Elementary Data Types, Compound objects in Prolog, Writing simple program in Prolog, Understanding Default flow control of the Prolog Program, Controlling Program Flow with cut and fail, List Manipulation, String manipulation, Arithmetic Operators and evaluation of Arithmetic expressions, Input /Output statement. Some simple example problems: Tower of Hanoi, Sorted Tree Dictionary, Sorting, Searching Graphs, Searching aMaze.

REFERENCES:

1. Rich Elaine and Knight Kevin: Artificial Intelligence; Tata-McGraw Hill Company, New Delhi.
2. George F Luger; William A. Stubblefield: Artificial Intelligence; Structures and Strategies for Complex problem solving, Pearson Education.
3. Patterson, Dan W.: Introduction to Artificial Intelligence and Expert Systems, Prentice-Hall of India Pvt. Ltd., New Delhi.
4. W.F. Clofisin and C.S. Mellish, "Programming in PROLOG", Narosa Publishing Co.
5. SanjivaNath, "Turbo PROLOG", Galgotia Publications Pvt. Ltd.
6. Bharti&Chaitany: Natural Language Processing, PHI.
7. Russel, Sturat&Norviig, Peter: Artificial Intelligence; A modern Approach; Person Education Pvt. Ltd.

SEMESTER – III

Paper Code: MS - 32
Paper Title: .NET FRAMEWORK AND C#
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L	P
6	8

Objectives: This course aims at making a student capable of developing console, windows and web applications using C# on .NET platform.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Introduction to .NET environment:** The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach.
2. **Introduction to C#** :Introducing C#, Overview of C#, Literals, Variables, Data Types, Operators, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, Enumerations, difference between C++ and C#, difference between Java and C#.

UNIT-II

3. **Object Oriented Aspects of C#** : Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Errors and Exceptions.
4. **I/O and Object Serialization:** I/O: System. I/O, Streams, TextWriter, TextReader, BinaryWriter, Binary Reader, File Stream, File; Serialisation: Binary, SOAP, XML and Custom Serialisation.

UNIT-III

5. **Writing Windows Forms Applications and Deploying Windows Forms Applications**: Writing Windows Forms Applications: Understanding Windows Forms, Window form controls, Menus, MDI Forms, Using Inheritance in Windows Forms, Using Common Dialog Controls, Deploying Windows Forms Applications: Introduction to deployment, Click Once deployment, Creating an Installation Package for project.
6. **Writing ASP .NET applications and Deploying ASP .NET Applications:** Introduction to ASP.NET, Using Validation Controls, Managing State in ASP.NET Web Applications, Deploying ASP.NET Applications with Windows Installer.

UNIT-IV

7. **Accessing Data with ADO .NET:** ADO .NET Architecture, Components, Database, DataReader, DataAdapter, DataSet, Viewing data using Data Grid View Control, Creating Applications.

REFERENCES:

1. Jones, Bradley L.: Sams Teach Yourself C# in 21 Days.
2. Balagurusamy, E.: Programming in C#, Tata McGraw-Hill.
3. Liberty, J.: Programming C#, O'Reilly.
4. Schildt, Herbert: The Complete Reference: C#, Tata McGraw-Hill.
5. Robinson: Professional C#, Wrox Press.
6. Jason Beres: SAMS Teach Yourself Visual Studio.Net in 21 days.
7. Watsel, Nagel, Pedersen, Reid, Skinne, White: Beginning Microsoft Visual C#, Wrox Publications.

Paper Title: THEORY OF COMPUTATION
Paper Code: MS - 69
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs**.
Number of Lectures: 90 (45 minutes duration)

Objectives:
The goal of this course is to provide students with an understanding of basic concepts of Theory of Computation.

Note :
(i) The Question paper will consist of Four Units.
(ii) Examiner will set total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii) The students are required to attempt one question from each unit and the compulsory question.
(iv) All questions carry equal marks.

UNIT I

1. **Theory of Automata**: Definition, Description of Automata, Transition Systems, Language, Grammar, Deterministic & Non-Deterministic Finite State Machines, Equivalence of DFA and NDFA, Finite State Machine with output (Moore Machine and Meally Machine), Conversion of Moore Machine to Meally Machine & vice-versa, Minimization of Finite Automata.
2. **Formal Languages**: Chomsky Classification of Languages, Languages and their Relations, Languages and Automata.

UNIT II

3. **Regular Sets and Regular Grammars**: Regular Expressions, Finite Automata and Regular Expressions, Conversion of NDFA to DFA, Arden's Theorem, Construction of FA equivalent to Regular Expression, Equivalence of two Finite Automata, Equivalence of two Regular Expressions, Pumping lemma for Regular Sets and applications, Closure Properties of Regular Sets, Construction of Regular Grammar generating Transition System for a DFA, Construction of Transition System accepting Language for a Regular Grammar , limitations of finite state machine.

UNIT III

4. **Context Free Languages**: Context free grammar, Simplification of Context Free Grammars, Normal Forms for Context Free Grammers: Chomsky Normal Form, Greibach Normal Form, Pumping Lemma, CYK algorithm.
5. **PDA**: Push down stack machine, Design of deterministic and non-deterministic push-down stack, Parser design.

UNIT IV

6. **LR(K) Grammars**: Properties of LR(K) Grammar, Closure properties of Languages.
7. **Turing Machine**: Turing machine definition and design of Turing Machine, Church-Turing Thesis, Variations of Turing Machines, combining Turing machine, Universal Turing Machine, Post Machine, Chomsky Hierarchy, Halting problem, Post Correspondence problem.

References:

1. Mishra, K.L.P and Chandrasekaran, N.: Theory of Computer Science, Automata, Languages and Computation.
2. Lewis, Harry R. and Papadimitriou, Christos H.: Theory of Computation, Prentice Hall of India, 1996.
3. Hopcroft, John E. and Ullman, Jefrey D.: Introduction to Automata Theory, Languages and Computation, Addison-Wesley Publishing Company Inc.
4. Brady, J.M.: Theory of Computer Science, Wiley.
5. A.V. Aho, J.E. Hopcroft and J.D. Ullman, 'Introduction to Automata, Languages and Computations, Addison Wesley, 1980.
6. M.Davis and E.J. Weyuker 'Computability, Complexity and Languages' Academic Press, 1982.

Paper Code: MS – 39
Paper Title: Computer Graphics
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives:
This paper enables students to understand graphics hardware and various 2D and 3D algorithms. After the completion of this paper, student will be able to:
- Implement the principles and commonly used paradigms and techniques of computer graphics.
- Use OpenGL proficiently using C / C++.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer Graphics**: Overview of Graphics Systems, Display Devices, Display Processors, Character Generation; Interactive graphical techniques; Positioning, (Elastic or Rubber Band lines, Inking, zooming, panning)
2. **Raster Scan Graphics**: Line Drawing algorithms-Direct method, DDA and Bresenham's; Circle drawing algorithm- 2-point, 4-point, trigonometric method, 8-point, Bresenham method, Bresenham Midpoint method.

UNIT - II

3. **Two Dimensional Geometric Transformation & Viewing**: homogeneous coordinate system; Basic Transformations- Translation, Rotation, Scaling, Reflection, Shear, composite transformation like- Rotation about an Arbitrary Point, Reflection through an Arbitrary Line; transformation of points and unit square.
4. **Clipping: Point clipping Line clipping algorithms**: Cohen-Sutherland and Liang-Barsky, Polygon Clipping; Window to viewport coordinate transformation.

UNIT - III

5. **Graphics Programming using C/C++**: Basic Graphical functions; Mouse Programming, Graphic Languages: Primitives (Constants, actions, operators, variables), display subroutines, plotting and geometric transformations, Concept of Animation, Saving, Loading and Printing graphics images from/to disk. Animated algorithms for sorting, Towers of Hanoi.
6. **Open GL using C/C++**: Geometric Primitives and Attributes; Viewing; Color; Lighting, Animation**.**

UNIT - IV

2. **Three Dimensional Concepts & Object Representations**: Three Dimensional Display Methods, Parallel Projection, Perspective Projection; Translation, Rotation, Scaling, Composite Transformation; Hidden line and surface elimination-Z-buffer, back face, scan line, depth sorting.
3. **Shading-**Modelling light intensities- flat shading, gouraud shading, phong shading. Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces.

REFERENCES:

1. Giloi, W.K.:Interactive Computer Graphics; Prentice-Hall India Ltd.
2. Newman, W., Sproul, R.F.: Principles of Interactive Computer Graphics, McGraw- Hill.
3. Rogers, D.F.: Procedural Elements for Computer Graphics, McGraw-Hill.
4. Foley, J.D., Van Dam A.: Fundamentals of Interactive Computer Graphics, Addison-Wesley.
5. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
6. Roy, Plastock, Theory & Problems of Computer Graphics, Schaum Series
7. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
8. Dave Shreiner, Mason W., Jackie N., Tom Davis; The OpenGL Programming Guide – The Red Book, Addision-Wesley.

Paper Code: MS – 14
Paper Title: Systems Approach to Management and Optimization Techniques
Maximum Marks: 100 (Ext ernal : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	0

Objective: This course enables students to be familiar with different types of Info systems, basics of DR and its practical problems.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Concepts of Computer Based Systems**: Data, Information, Information Systems, Model ofcomputer based information system; Introduction to Management Information System,Decision Support System and Knowledge Based Systems.
2. **Accounting Information System**: Characteristics, sample system, subsystems for fillingcustomer order, order replenishment stock, performing general ledger processes; features anduse of Accounting Information System Package-Tally.
3. **Marketing Information System**: Basic concepts, model, subsystems including MarketingResearch, Marketing Intelligence, Product, Place, Promotion and Pricing subsystems.

UNIT-II

4. **Manufacturing Information System**: Model and subsystems including Accounting information, Industrial Engineering, Inventory, Quality and Cost Subsystems.
5. **Financial Information System**: Model and Subsystems including Forecasting, FundsManagement and Control Subsystems.
6. **Human Resources Information Systems**: Model and Subsystems including humanresources research, human resources intelligence, HRIS Database, HRIS output.

UNIT-III

7. **Basics of Operations Research (OR)**: Origin and Development of OR, Characteristics ofOR, Models in OR, OR and Decision Making, Role of Computers in OR, Limitations of OR.
8. **Linear Programming**: Mathematical Formulation, Graphical and Simplex method, Dualityin Linear programming, Dual Simplex Method, The Revised Simplex Method, SensitivityAnalysis.

UNIT-IV

9. **Special types of Linear Programming problems**: Transportation and Assignmentproblems.
10. **Integer Programming**: Introduction, Branch and Bound Techniques, Binary LinearProgramming, Assignment & Traveling salesman problems.
11. **Dynamic Programming**: Deterministic & Probabilistic Dynamic Programming.

REFERENCES

1. Basandra, Suresh K. : Computer Systems Today, Wheeler Publishing
2. Murdick, R.G. & Ross J.E. &Claggtt J.R.: Information Systems for Modern Management, Prentice Hall
3. Swarup, Kanti, Gupta, P.K. &Manmohan: Operations Research, Sultan Chand & Sons.
4. Gupta, Prem Kumar &Hira, D.S.: Operations Research.
5. Rao, S. S.: Introduction to Optimization: Theory & Applications, Wiley Eastern.
6. Taha, H.A.: Operations Research – An Introduction, McMillan Publishing Company
7. S.D. Sharma: Operation Research, Sultan Chand & Sons.

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PANJAB UNIVERSITY CHANDIGARH-160 014 (INDIA)

(Estted. Under the Panjab University Act VII of 1947 enacted by the Govt. Of India)

FACULTY OF SCIENCE

SYLLABI

FOR

PG Diploma in Chemical Analysis of Food

(Semester System)

EXAMINATIONS 2018-2019

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR POSTGRADUATE DIPLOMA IN CHEMICAL ANALYSIS OF FOOD FOR THE EXMINATIONS OF 2018-2019

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Outline of Tests

There will be two semesters in a year. Examination will be held at the end of each semester.

Total Marks: 300

There will be two theory papers and one practical paper in each semester.

1st Semester

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Semester I

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Foods: As source of Energy, energy value of foods, uses of foods in the body, digestion, absorption and transport. [10]

Unit-II

Chemistry of Fats and Oils: Composition-saturated and unsaturated fatty acids. Functions and storage in the body and Physio-chemical properties. An idea about soaps, detergents, emulsions and emulsifiers. [10]

Unit-III

Carbohydrates I: Composition and classification, storage in the body, biological functions of some monosaccharides and disaccharides (glucose, fructose, Sucrose, Maltose and lactose). [10]

Unit-IV

Carbohydrates II: Biological functions of some polysaccharides (starch and cellulose). Important chemical and biological reactions, Other sweetening agents: Saccharin, Aspartame. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. *Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.*

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Adulterants I: Food Colours

-Food colors and Additives.
- Kinds of colors used.
-Water soluble food colors. **[10]**

Unit-II

Food Adulterants II: Dyes and preservatives

-Dyes: Permitted and non-permitted dyes.
-Identification of Dyes by Spot Test.
-Preservatives, Organic preservatives-Dyes-Percentage-Definition and classification. **[10]**

Unit-III

Milk and Milk Products:
Composition, Classification, Processing, Natural Aspects of mild, curd, paneer, khoa, cheese, ice-cream and various kinds of processed milk. **[10]**

Unit-IV

Beverages:
Tea, coffee, chocolate, cocoa powder, processing (in brief), chemical constituents, Good and Bad effects of alcoholic and non-alcoholic beverages. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearson *Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. *Handbook of Analysis and Quality Control for fruit and vegetable products*
6. *The Preservation of Food Adulteration Act, 1954*, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Simple physical and chemical tests to determine quality and detect adulterants in the following:

(i) Milk and Milk products
(ii) Oils and fats
(iii) Spices and condiments
(iv) Food grains
(v) Flours
(vi) Canned Foods
(vii) Cane Sugar, Saccharin and Vegetable
(viii) Beverages Alcoholic, Non-Alcoholic

(40)

II. Principles and Techniques of separation methods, chromatography (TLC)

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

Semester II

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Amino Acids and Proteins: Composition, sources, functions and deficiency symptoms, Physio-Chemical properties. Denaturation of proteins during processing, Chemical Analysis of proteins. **[10]**

Unit-II

Cereals and Pulses: Brief introduction to cereals and pulses, composition and nutritional aspects. **[10]**

Unit-III

Some Important Vitamins I: Fat soluble-Vitamins (A, D, E and K). Sources, structures and biological importance. **[10]**

Unit-IV

Some Important Vitamins II: Water soluble vitamin (Ascorbic Acid, thiamin, Riboflavin, B-Complex as B_6, Folic Acid). Sources, structures and biological importance. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the

academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Analysis I: Sampling Technique**,** Preparation of Sample**,** General Physical methods of analysis of Foods (i) Bactometaric (ii) Refractometry (iii) Polarimetery and Polarography (iv) Chromatography (v) UV-Visible. [10]

Unit-II

Food Analysis II: General chemical Methods:

-Proximate Principle
-Specific Gravity method
-Ash and Types
-Total protein and Non-Protein N
-Total Fat and different kinds of Lipids
-Total carbohydrate, starch, mono/disaccharides. [10]

Unit-III

Canned Foods: Chemical composition and quality criterian of canned foods.

Spices and Condiments: Composition and Nature **[10]**

Unit-IV

Legal Aspects of food Adulteration and Prevention

- Standards of food quality.
- Permissible limits of food preservatives in, milk, spices, beverages and canned foods.
- Procuring and analysis of food items for confirming adulteration.
- Power and duties of Public Analyst and food Inspectors.
- Prevention of food adulteration. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*

4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearso*n Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. Handbook of Analysis and Quality Control for fruit and vegetable products
6. The Preservation of Food Adulteration Act, 1954, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Determination of Acid value, iodine Value and Saponification Value.

(20)

II. (a) Visit to chemical/Food laboratories of Industry related to get students acquainted with various aspects of Chemical analysis of Foods.

(b) To prepare and submit a report on the said visit (200-300 words).

(c) Periodical Examination of students by asking viva-voce.

(20)

III. Continuous assessment based on Regularity, House Tests and Attendance.

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

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PANJABUNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI FOR

POSTGRADUATE DIPLOMA

IN

COMPUTER APPLICATIONS

FOR

EXAMINATIONS 2018 – 2019
(SEMESTER SYSTEM)

--:O:-

Outline of the Syllabi and Courses for Post Graduate Diploma in Computer Applications for Examination – 2018 - 2019 (Semester System).

FIRST YEAR (SEMESTER –I)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/Weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-1101	Computer Fundamentals	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1102	Computer Programming using C	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1103	DataBase Management System	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1104	Data Communications and Networks	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-1105	Lab1 (Based on PGD-1101 & PGD-1102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-1106	Lab2 (Based on PGD-1103)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
TOTAL PERIODS =42						**TOTAL MARKS = 450**		

FIRST YEAR (SEMESTER –II)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-2101	Object Oriented Concepts Using JAVA	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2102	Web Technologies	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2103	Software Engineering	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2104	Computer Based Accounting	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-2105	Lab3 (Practical based on PGD-2101)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-2106	Lab4 (Practical based on PGD-2102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-2107	**Project Work :** Project will involve Development of Business Application / Web Site	**0**	**0**	**6**	**0**	**--**	**100**	**--**
TOTAL PERIODS =48						**TOTAL MARKS = 550**		

Note: Pass Marks 40% marks in Theory, Internal Assessment, and Practical separately.
50% marks for Project Work.
50% marks in Aggregate to qualify the examinations.

SEMESTER –I

Paper Title : Computer Fundamentals
Paper Code : PGD - 1101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to familiarize students with basic concepts related to Computers, DOS, Windows, Linux and application software's like Word-processing, Spreadsheet Software and Presentation Software.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation
Input/Output devices.

UNIT - II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT - III

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.

   Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
   Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
   Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
   Clipart: Using clip art, Creating Word Art
   Mail merge: Creating merged envelops, creating merged mailing labels

UNIT - IV

7. **Spreadsheet Software:**
   Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

   Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

   Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

   Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. **Presentation Software**:
   Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References :

1.	Basandra, S.K	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K,	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M,	Computers Today by McGraw Hill, New York
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron,	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper Title : Computer Programming Using C
Paper Code : PGD - 1102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with programming concepts of 'C' including functions, Arrays, strings etc.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes**: automatic, external, static, register
5. **Preprocessor**: #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT - II

6. **Functions**: library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions
8. **Pointer**s: Definition, Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers, array of pointers

UNIT - III

9. **Strings:** Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
10. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures
11. **Unions**: Declaring a Union, Accessing elements of a type union.

UNIT - IV

12. **Console Input/Output:** Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
13. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File.

References:		
1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series.N.D. TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications,
4.	Salaria, R. S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper Title : Data Base Management System
Paper Code : PGD - 1103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Database concepts and SQL.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Data Base Concept:** Data Base Vs File Oriented Approach, Basic DBMS terminology, Data Independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantages and Disadvantages of DBMS. Distributed Databases, Structure and Design of Distributed Databases.

2. **Data Base Design:** Introduction to Data Models, Entity Relationship Model, Entities, Attributes, E-R Diagrams, Conceptual Design of a relational data base model.

UNIT - II

3. **Relational Model:** Storage organization for Relations, Relational Algebra, Relational Calculus, Functional dependencies, multivalued dependencies, Candidate Key and Primary Key in a Relation, Foreign Keys, Normalization - Introduction, 1NF, Partial Dependencies, 2N, data Anomalies in 2NF Relations, Transitive Dependencies 3NF

3. **Database Security:** Database Security and Integrity: Data security risks, Password-related threats, Protecting the data within the database- database privileges, system privileges and object privileges, granting and revoking privileges and Roles. Concurrency: locking techniques for concurrency control.
Recovery: Causes of failures, recovery from failures, Log based recovery, checkpoints

UNIT - III

4. **Understanding SQL-1:** Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Functions: Character Functions, Date Functions, Group Functions, Ordering the result of a Query Aggregate Functions, Grouping the Result of a Query.

UNIT - IV

5. **Understanding SQL-II:** Definition and Advantages of Views, Creating and Altering Views, Using Views, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries, Define Transaction, COMMIT and ROLLBACK,

References:		
1.	Desai, B.C.	An Introduction to Database Systems, Galgotia Pub. New Delhi
2.	Date, C. J.	Database Systems Vol. I & II, Narosa Publ., New Delhi (Indian student ed.)
3.	Henry F. Korth, Abraham,	Database System Concepts, McGraw Hill Inc., New York International ed
4.	Mukhi, Vijay	Mastering Oracle, BPB Publication, NewDelhi
5.	James T. Perry	Understanding ORACLE, BPB Publications
6.	O'Reilly	Oracle PL/SQL Programming, Shroff Publications Mumbai
7.	Rowski, Bob	Oracle Client server Computing, BPB publications

Paper Title : Data Communications and Networks
Paper Code : PGD - 1104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Layered structure of Networks and working of different Layered.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer networks and applications:** Network Structure and Architecture, Network Hardware and Software (protocol hierarchies, design issues for layers, interfaces and services: connection oriented and connection less), Network structure and architecture-point to point, multicast, broadcast, Classification of networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) , LAN topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). Network Connecting Devices: Repeaters, Hubs, Bridges, Routers, Gateways and Switches, Network Reference models: OSI model, TCP / IP model. Comparison between OSI and TCP/IP.

UNIT - II

2. **Introduction to Data Communication**: Analog Signal, Digital Signal, Analog vs Digital Communication; Band Width Limitation, Data rate of a channel; Physical Layer: Transmission media: Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, Telephone system, modems. Modulation techniques: AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM

UNIT - III

3. **The Data Link Layer:** Design Issues, Error Detection and Correction: Nature of errors, Parity Check, CRC, Hamming Code, Elementary Data Link Protocols: Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sliding windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.

UNIT - IV

4. **The Network Layer:** Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast, Hierarchical Routing), Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket); Internetworking: tunneling, Internet Routing, fragmentation.

References :		
1.	Tanenbaum, Andrew S.	Computer Networks, PHI.
2.	Behrouz A. Forouzan	Data Communication & Networking, TMH
3.	Stalling William Maxwell	Data and Computer Communication, Macmillan International edition.
4.	McGoven, Tom	Data Communication Concepts& Applications", (Prentice Hall)

Title : Lab1(Based on PGD - 1101 and PGD - 1102)

Paper Code : PGD-PR-1105 \

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1101 and PGD- 1102

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title : Lab2(Based on PGD -1103)

Paper Code : PGD-PR-1106

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1103.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

SEMESTER -II

Paper Title : Object Oriented Concepts Using JAVA
Paper Code : PGD - 2101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with Object Oriented concepts including inheritance, visibility control etc. using JAVA programming language.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **OOPs concepts**: Basic Concepts of Object-Oriented Programming (Objects and Classes, Data abstraction and encapsulation, Inheritance, Polymorphism, Dynamic binding, Message communication), difference between procedure oriented and object oriented approach, Benefits of OOP's; Applications of OOP's, Object-Oriented languages.

2. **Object oriented programming with JAVA**: Byte code, Java virtual machine, Java Development Kit, java tokens, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, method overloading, static members

UNIT - II

3. **Inheritance:** Defining a subclass, subclass constructor, multilevel inheritance, Hirerchical inheritance.Overriding methods, Final variables, methods, and classes, Abstract Methods and Classes.
4. **Visibility Control**: Public access, friendly access, protected access, private access, private protected access.
5. **Arrays:** One dimensional array, declaration, creation and initialization of arrays, Array length, Two dimensional array

UNIT - III

6. **Strings**: String arrays, String methods, StringBuffer class
7. **Interfaces:** Defining interfaces, Extending Interfaces, Implementing Interfaces.Accessing Interface variables
8. **Packages:** Java API packages, Defining a package, Creating and Accessing packages, Adding class to a package, Hiding Classes.

9. **Multithreaded Programming**: Creating Thread, Extending the Thread class, Stopping and Blocking a Thread, Life cycle of a Thread.

UNIT - IV

10. **Errors and Exception Handling**: Fundamentals, error types, exception types, using Try and catch, finally statement, Built–in exceptions.
11. **Applet Programming**: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets

References:		
1.	Balaguruswamy, E.	Fundamentals of Java
2.	Daniel Dang	An Introduction to Java Programming, PHI, New Delhi
3.	Deitel & Dietel	JAVA, How to Program, Pearson Education Asia
4.	Liang	An Introduction to Java Programming PHI

Paper Title : Web Technologies
Paper Code : PGD - 2102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : This course familiarizes students with concepts of HTML, CSS, JAVA Scripts and PHP.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to HTML/DHTML:** Brief history of HTML, Building blocks of HTML, lists, links, images, image map, tables, frames, forms
2. **Introduction to cascading style sheets (CSS):** Introduction to Style Sheets, Types of style Sheets-Inline, embedded and external style sheets.

UNIT - II

3. **Fundamentals of Javascript:** Features, tokens, data types, variables, operations, control constructs, strings, arrays, functions, Document Object Model, event handling. Applications related to client side form validation.
4. **Javascript Objects**: Core language objects, The String Object, The Math Object, and The Date Object; User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects

UNIT - III

5. **Introduction to PHP:** Embedding PHP code in a Web Page, Basic Syntax, Defining variable and constant, PHP Data types, Operators and Expressions
6. **Control Structures:** Making Decisions, Doing Repetitive task with looping, File inclusion statements.
7. **Functions**: Defining a function, Call by value and Call by reference, recursive function, Library functions
8. **String**s: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function.

UNIT - IV

9. **Arrays:** Anatomy of an Array, Creating index based and Associative array, Accessing array Element, Looping with associative array using each() and foreach(), Some useful Library function: current(), next(), prev(), reset(), end(). **Working with Forms:** Super global variables, super global array, Importing and accessing user input, Combine HTML and PHP code.

10. Working with files and Directories: Opening, closing, Coping, renaming and deleting a file, working with directories, File Uploading & Downloading

References:		
1.	Phillips	Using HTML, PHI
2.	Bayross, Ivan	HTMLl,DHTML, Javascript by BPB
3.	Wanger & Wyke	Java Script Unleased, Techmedia, New Delhi.
4.	Steve Suehring	PHP6 and MYSQL Bible, Wiley India edition
5.	Steven Holzner	PHP:The complete Reference, Tata McGraw Hill
6	Kelvin Tetroi	Programming PHP

Paper Title : Software Engineering
Paper Code : PGD -2103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : This course make students understand concepts related to Software Engineering including process model, project management, design and testing.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Software Engineering Fundamentals**: Characteristics, Components, Applications, principles of software engineering, skills of software engineer.
2. **Software Process Models**: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, win Win Spiral Model

UNIT - II

3. **Software Project Management**: Software Project management Plan(SPMP), Project scheduling Techniques- Work Breakdown Structure(WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM)
4. **Software Project Estimation and risk Management**: Problem-based estimation, Process based estimation, Cost Estimation Model- COCOMO Model, Software Risks, software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS

UNIT - III

5. **Software Design**: Software Design Process, Design Failures and Remedies
6. **Structured Analysis and Design tools:** Structured Analysis and Structured Design (SASD)-Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary(DD), Entity-Relationship diagram(ERD)

UNIT - IV

7. **Software Testing**: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing
8. **Software Quality and Maintenance**: Software quality attributes, Factors affecting Software Quality, Aims of Software Maintenance, Types of Software Maintenance, Software Maintenance Costs.

References:		
1.	Fairley	Software Engineering Concepts, McGraw Hill
2.	Lewis, T.G.	Software Engineering, McGraw Hill.
3.	Meyers, G.	The Art of Software Testing, Wiley-Inter-Science
4.	Hibbard, P.G	Constructing Quality Software, North Holland Publication
5.	Shere, Kenneth	Software Engineering & Management, Prentice Hall
6	Deutsch, Willis	Software Quality Engineering : A Total Technical and Management Approach, Prentice Hall.
7.	Doug Bell, Ian Murrey and John Pugh	Software Engineering: A Programming Approach, Prentice Hall
8.	Pressman:	Software Engineering, Tata McGraw Hill
9.	Ghazzi, Carlo	Fundamentals of Software Engineering, PHI

Paper Title : Computer Based Accounting
Paper Code : PGD - 2104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration : 60 Lectures of one hour each.

Objective : This course make students understand accounting principle and computerized accounting.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Accounting: Principles, concepts and conventions, double entry system of accounting, introduction of basic books of accounts of sole proprietary concern, control accounts for debtors and creditors, closing of books of accounts and preparation of trial balance.

Final Accounts: Trading, profit and loss accounts and balance sheet of sole proprietary concern with normal closing entries.

UNIT - II

Introduction to Manufacturing Account, final accounts of partnership firms, limited company.

Introduction to Computerized Financial Accounting, coding logic and codes rquired,master files, Transaction files, Introduction to documents used data collection, processing of different files, outputs obtained

UNIT - III

Introduction to Computerized Inventory Control, types of inventory and associated documents, Inventory reports-nature and types, Inventory Control : ABC and Ageing analysis, Methods of Stock validation : LIFO, FIFO, actual bases, Interfacing Inventory with Financial Accounting, Purchasing Sub-Systems, Sales Order processing.

UNIT - IV

Introduction to Computerized Payroll & Invoicing Applications, Exposure to Structure, Processing and Reports, Interfacing these applications to financial Accounting.

Use of Accounting package Tally: Introduction to Tally, Groups, Ledgers, Vouchers, Orders, Cost Centers and Categories, Stock, Reports in Tally

References:	
Kellock, J., 1972	Elements of Accounting, Heinemann 1st ed., London
Rockley, L.E., 1970	Finance for the Non-Accountant 2nd. Edition, London : Business Book.
Levy and Sarnat, 1991	Principle of Financial Management, Prentice-Hall, International, PHI.
Arnold, 1984	Financial Accounting, Prentice-Hall, International (Paperback Edition).
Horngren and Sundem, 2010	Introduction to FinancialAccounting, Prentice-Hall International (Paperback Ediion) N.D: PHI
Murthy, U.S.	Management Finance, 2nd. Edition, Vakils Fefers & Simons Ltd
Van Home, James, C., 2004	Financial Management & Policy, Prentice Inc
Pandey, I.M., 1979	Financial Management, Vikas Publication, 6th Rev. ed., N. Delhi

Paper Title: Lab3 (Based on PGD- 2101)

Paper Code: PGD-PR-2105

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD -2101.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Lab4 (Based on PGD- 2102)

Paper Code: PGD-PR-2106

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on **PGD- 2102**

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Project Work.

Paper Code: PGD-2107 **Max. Marks: 100**

Major Project on any database application using any database development tool is to be developed/ Development of a Web Site using Database connectivity

SYLLABUS
PG DIPLOMA IN CYBER CRIME
(Semester System)

Detail Marks

i) 1st Semester = 400
ii) 2nd Semester = 400
Grand Total = 800

SCHEME OF THE COURSE

1st Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–101	General Forensic Science-I	80	20	100
PGDCR–102	Computer Basics	80	20	100
PGDCR–103	Intellectual Property Rights & International Treaties	80	20	100
PGDCR–104 (Practical)	Basic Computer Skills	80	20	100

Total = 400

2nd Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–201	Computer Forensics	80	20	100
PGDCR–202	Cyber Crime and Information Technology Act	80	20	100
PGDCR–203	Computer Forensics Analysis	80	20	100
PGDCR–204	Project/Dissertation	Project : 80	Viva: 20	100

Total = 400

FIRST SEMESTER

PGDCR-101: GENERAL FORENSIC SCINECE-I

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Nature, Need (social changes, anonymity, technical knowledge, wide field, better evidence, Alternatives), Functions & Development of Forensic Science, Laws and Principles governing Forensic Science, Forensic Science set-up in India, Forensic Science Institutions.
Problem of Proofs (General, Scientific Evidence & Proof, Investigative Problems, Scientific Aspects, Legal Problems)

Unit-II

Expert testimony (The expert, Report, Illustrations, language, The Prosecution counsel, Defence Counsel, The court (Fallacies about expert evidence), Time element

Unit-III

Indian legal systems: The Indian Evidence Act, Indian Constitution, **Cr PC and their relevant sections pertaining to admissibility of Evidence**, Expert evidence, Examination of expert etc., Reports admissible, The evidence, Insufficient evidence, **Case Law pertaining to digital Evidence in various courts of Law.**

Unit-IV

Scene of occurrence, Importance, The problems, Location, Evaluation (Protection, Photography, Sketching, Search), Scene management, Documentation. **Systematic examination of scene of occurrence and recovery of hardware (special mention of digital crime form remote where law of the land may not be applicable).**

Text/ References:

1. Sharma, B.R 1990, Forensic Science in Criminal Investigation and Trial. Central Law Agency, Allahabad.
2. Saferstein, R., 1976, Criminalistics : An Introduction to Forensic Science
3. Saferstein, R., 1982, Forensic Science Hand Book I & II, Printice Hall : N. Jersey
4. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
5. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London
6. Kirk, P.I, 1953, Crime in Investigation. Interscience Publishers : New York

PGDCR–102: COMPUTER BASICS

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Computers and Law, Principles of Computer: Memory and processor address and data buses, stored program concept, Motherboards, Word processing and graphic file formats. Boot sequence, Operating system, **Windows, Linux, internet, working and issues related to security of network, layers of network, firewalls, antivirus and other malwares.**
Input/Output (I/O): Standard (I/O) devices, unformatted (character and string) and formatted (scan and print) (I/O) functions, **Memory hierarchy and cache memory.**

Unit-II

Computer Languages: Brief history and general structure, stages of development of a program, Basic building blocks of computer language. Overview of C language
Data types: Constant and variable, declaring variables, storage classes, different types of expressions and their evaluation, **Database management system (DBMS).**

Unit-III

Data files: Introduction to data files, different ways of file processing (standard I/O and system I/O), Description of various library function for file handling, updating files, programming examples to illustrate the processing of files
Methods of storing data: number systems, character codes, record structures, file formats and file signatures.

Unit-IV

Biometrics: Fingerprint and Hand Geometry, Facial and Voice Recognition, Eye Biometrics: Iris and Retina Scanning, Biometric crimes**, Concept and working of Aadhaar.**

Text/ References:

1. Rajaraman V., Fundamentals of computers, 4th edition, Prentice hall of India Pvt. Ltd, 2007
2. Kanetker Y., Let us C, BPB Publishers 8th edition 2007
3. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
4. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London

PGDCR–103: INTELLECTUAL PROPERTY RIGHTS & INTERNATIONAL TREATIES

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Introduction to Intellectual Property Rights, WIPO, WTO, GATT, TRIPS, Berne convention, Universal Copyright Convention, Copyright Treaty (WCT), Copyright Act 1957, Trades Marks Act, Plagiarism

Unit-II

Principles of Data Security/Protection, Jurisdictional issues, Retention of electronic-data, Transactional Data Flow

Unit-III

International Treaties: PCT, PLT, SPLT, Washington Treaty

Unit-IV

Indian Patent Act, Definition, violation and antidote, Application of Patents to IT e.g. Patents for computer softwares, Patents for electronic trade, Patent Search on internet Patent websites of US and other countries, Distinctions in claims, Vetting of patents, IT related patents in India

Text/ References:

1. Handbook of Cyber and E–Commerce Laws – Bakshi P.M. & Suri R.K.
2. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a
3. Networked World, Wiley Publishing, 2002.
4. Textbook of Intellectual Property Rights, Prixit Bansal

PGDCR–104: PRACTICALS

Lectures: 4 Hrs. / Week **Practical: 80 Marks**

1. **Working of Widows environment and Linux,**
2. **Internal and external Commands of DOS.**
3. **Network commands like ping**
4. **Tracing of an email.**
5. **Reading of source code.**
6. **Trial versions of various tools**
7. **Photoshop image processing**
8. **Retrieval of deleted data.**
9. Working with internet like browsing, chatting, and social networking sites etc.

SECOND SEMESTER

PGDCR-201: COMPUTER FORENSICS

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit-I

Computer Crimes (Nature, Motives, Characteristics, Investigative Impediments), Traditional computer crime, recognizing and defining computer crime, Phreakers, Evolution in hacking community, Theft of Intellectual Property

Unit-II

Classification (Information Piracy and vandalism, Theft of information services, organised crime, Infringement of copy right, Theft, wire tapping, data destruction, virus, spy software, money laundering, electronic fund transfer, electronic personation, hackers, software piracy

Unit-III

Contemporary computer crime, Neo-Traditional crime, Web based criminal activity, Terrorism & organised crime: Introduction, Terror online, Terrorism & crime, organised crime, **image processing, morphing**.

Unit-IV

Computer Criminals (Employees, Computer Experts, other computer criminals, handling, Laws, legislation), **preventative measure**.

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
3. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
4. Hand book of computer crime investigation, Eoghan Casey, Elsevier.
5. Digital evidence and computer crime-Forensic science, computers and the internet, Casey, Academic press.
6. Ashbourn, J.: Practical Biometrics – From Aspiration to Implementation, Springer Verlag, 2004.
7. Bolle, R.M., Connell, J.H., Pankanti, S., Ratha, N.K., Senior, AW.: Guide to Biometrics, Springer Verlag, 2004.
8. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a Networked World, Wiley Publishing, 2002.
9. M. Erbschloe, J. R. Vacca: Information Warfare: How to Survive Cyber Attacks (McGraw-Hili Prof. 2001.)

PGDCR-202: CYBER CRIME AND INFORMATION TECHNOLOGY ACT

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit I

Internet: Evolution, Advantages and Disadvantages of Internet Technology, Netizens and Cyber Space, Cyber Law and its components, Cyber crimes and classification

Unit II

Information Technology Act 2000 Amended by the Information Technology (Amendment) Act, 2008

Need, Aims, Objectives and Applications (Section 1)

Definitions

- Computer [Section 2(i)]
- Computer Network [Section 2(j)]
- Computer Resource [Section 2(k)]
- Computer System [Section 2(i)]
- E-record [Section 2(t)]
- Information [Section 2(v)]
- Asymmetric crypto system [Section 2(f)]

Digital Signature, Electronic Signature [Section 3 & 3A]

Attribution, Acknowledgement and Dispatch of e-record [Sections 11 – 13]

The controller of Certifying Authorities (CCA) [Sections 17 – 29]

Unit III

Certifying Authority [Sections 30 – 34]

Cyber Crime: (i) Cyber contraventions and penalty [Sections 43 – 45]
(ii) Offences [Sections 65 – 77]
Extra-territorial jurisdiction, Cognizable and Bailable offences [Sections 75, 77 – 77B]

Unit IV

Investigation and procedure of search and seizure [Sections 78 & 80], Intermediary and its liability [Section 2(1)(w) and 279), Examiner of Evidence [Section 79A], Grey areas of IT Act 2000, Jurisdiction: National and International Cases

Text/References:

1. Cyber laws- Singh Y., 5th edition (2012) Universal Law Publishing Company
2. Cyber Crime- Bansal S.K., (2011) APH Publishing Corporation
3. Forensic Science in Criminal Investigation and Trial- Sharma B.R., 4th edition (2009)
4. Cyber Laws, E-commerce & M-Commerce- Ahmed T., (2012) APH Publishing Corporation
5. Handbook of Cyber and E-Commerce Laws- Bakshi P.M., Suri R.K., (2002) Bharat's Publishing House
6. Taxman's Law of Information Technology (Cyber Law)- Mittal D.P., (2000) New Taxman Allied Services Pvt. Ltd., New Delhi

PGDCR–203: **COMPUTER FORENSICS TOOLS**

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Electronic evidence, Discovery of electronic evidence, documentation, chain of custody, authorization, evidence collection, packaging and transportation, storage of evidence

Unit-II

Cyber forensic tools & utility: Coroner's Toolkit, EnCase Forensic, Forensic toolkit, i2 Analyst's Notebook, LogLogic LX2000, ProDiscover Incident Response.

Unit-III

Internet investigations (e-mail, IRC, chatting sites, social networking sites etc.); IP addresses and domain names; Investigative methods, Digital Evidence

Unit-IV

Prevention: The basics, access (password cards, biometrics), Secrecy, Integrity, computer data backups, Risk Management, **cryptography, stegnography.**

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer evidence-Collection and preservation, Christopher L.T. Brown, FireWall Media, New Delhi.
3. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
4. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
5. Cyber crime, Doughless Thomas and Brian D.Loader.
6. A practical guide to LINUX, Sober.
7. Computer forensics-Incident response essentials, Warren G.Kruse IIand Jay G.Heiser., Addison Wesley.
8. Cyber crime investigation field guide, Bruce Middleton, Auerbach publications.
9. A. Blyth and G. L. Kovacich, "Information Assurance", Springer, 2005.

PGDCR–204: PROJECT/DISSERTATION
Lectures: 4 Hrs/ Week **Marks: 100 Marks**

Project Based on Computer forensic, Network Security, information Security, cyber crime etc., Case Studies related to IPR Cyber world and Electronic Commerce.

Instruction for Examiners

1. **For the theory examination a total of 9 questions will be set, two from each unit I, II, III, IV. There will be one compulsory question of eight to ten short answer type questions covering the whole syllabus. There will be no choice in compulsory question.**
2. **Students will be required to attempt five questions choosing one question from each of the unit I, II, III, IV and the compulsory question.**
3. **All question will carry equal marks**

PANJAB UNIVERSITY, CHANDIGARH

SYLLABI

FOR

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING

Examination

2013-14

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING, SESSION 2013-2014

I. The duration of the course leading to the Post Graduate Diploma in Guidance & Counseling shall be one year. The 1examation shall be divided into **two semesters**. The examinations in first semester and second semester shall ordinarily be in the months of December and May/June respectively or on such other dates as may be fixed by the Syndicate.

II. Every candidate shall pay his examination fee for each Semester at the time of admission to the course, along with other charges, i.e., tuition fee etc.

2. The minimum qualification for admission to first semester of the course shall be

(a) A Bachelor's/Postgraduate degree in any discipline of the University or a degree of any other University which has been recognized by the Syndicate as equivalent thereto with not less than **45%** marks in the aggregate.

3. Provided that in case of candidates having Bachelors degree of the university through modern India languages [Hindi/Urdu/Punjabi (gurmukhi Script)] and /or in a classical language (Sanskrit/ Persian/Arabic) or degree of any other university obtained in the same manner recognized by the syndicate, **45%** marks in the aggregate shall be calculated by

taking into account full percentage of marks in all the papers in language excluding the additional optional paper, English and the elective subject taken together.

(b) Preference will be given to the candidates possessing Bachelor of Education (B.Ed), Nursery Teacher Training (NTT) or ETT (with a B.A, Degree).or Fee structure as approved by Syndicate

4. The first semester examination shall be open to a regular student who
(i) has been on the rolls of the University Department/Principal of the College during one semester preceding the first semester examination; and

(ii) has attended not less than 75 percent of the lectures, seminars, case discussions, case conferences, internship sessions, practicum's etc

5. The second semester examination shall be open to a regular student who:

a) Has been on the rolls of the university department of education/principal of the college of education during one semester preceding the second semester examination

b) Has attended not less than 75% of lectures, seminars, case discussion. Syndicate sessions, field trips, project work etc for each papers and

c) Has passed the first semester examination or is covered under 'Reappear' Regulations 10.

6. The minimum number of marks to pass the examination in each semester shall be-(i) 35% in each paper in the University examination separately as well as jointly with internal assessment;
(i) 35% in the seminar, project and viva-voce;
(ii) 50% in the aggregate of(i) and (ii) above.

6.1 Grace marks shall be given @ one percent of the aggregate marks of the University examination for each semester. A candidate may avail of the grace marks either in the aggregate or in one or more papers as may be to his advantage. Grace marks shall, however, be given only for passing the examination or for earning the higher division and not for passing the examination with distinction.

7. A candidate who fails in the First semester but has secured at least 35% marks separately as well as Jointly with internal assessment in not less than 50% of the papers prescribed for that semester shall be permitted to continue his studies in the second semester but he will be required to reappear in the next May/June examination in such papers in which he had failed in the December examination, simultaneously with the second semester examination. If he fails to pass the first semester examination even in the second attempt his result for the second semester examination snail be cancelled and he will be required to leave the course.

(b) A candidate who fails in second semester examination but had secured at least 35% marks separately as well as jointly with internal assessment In not less than 50% papers prescribed for that semester shall be allowed to reappear in such papers in which he had failed in April examination in special examination to be held in August but not before the expiry of six weeks from the date of declaration of the result.

(c) A candidate who fails to clear the second semester examination even in the special examination held in August shall be given one more chance. He may appear either in December of the same year or in May/June examination next year in such papers in which he had failed in the special examination held in August.

A candidate who is unable to clear the second semester examination even after availing of the second chance as specified above shall be required to leave the course.

8. If a candidate is required to reappear in a paper, which has 75% internal assessment, he will be given one more opportunity to qualify in that paper without attending a fresh course. This work assignment may be determined by the Head of the University Department/Principal of the College.

9. A candidate who failed in the Ist or 2nd semester examination and is not covered under the ' Reappear' regulations may be given one more chance and allowed to appear In the next regular examination without attending a fresh course of lectures but he will have to repeat the entire examination. If a candidate fails to pass in a semester examination even after the second

attempt he will be required to leave the course.

10. Successful candidates shall be classified as under;

(i) Those who obtain 75% or more of the total First Division with aggregate marks in al! the semester examination taken together Distinction

(ii) Those who obtain 60% or more of the aggregate marks but less than 75% marks in all the semester examinations taken together. First Division.

(iii) Those who obtain below 60% of the aggregate marks in all the Second Division semester examinations taken together.

Rules

I. Proposed number of seats are 40.

I. I The head of the University Department/Principal of the College shall forward to the Controller of Examinations at least five weeks before the commencement of the examination for each semester a list of the students along with their admission forms and fees who have satisfied the requirements of regulations and are qualified to appear in the examination.

1.2 Whenever the application or fee of the candidate is received more than three days after the last date prescribed by the University. She/he shall pay an additional fee as fixed by the Syndicate, provided that such application shall be entertained only up to three weeks before the commencement of the examination.

2. Every candidate shall be examined in the subjects as laid down in the syllabus prescribed from time to time. Seminar, Project and Workshop will be assessed internally on 100% basis. Viva-Voce shall be conducted jointly by the internal and external examiners.

The Head of the University Department/Principal of the College shall forward these marks on the basis of periodical tests, written assignment, case discussion, Syndicate sessions, field trips etc., to the Controller of Examinations at least one week before the commencement of the examination.

3. The Head of the University Department/Principal of the College will preserve the records on the basis of which the internal assessment awards have been prepared for inspection, if needed by the University, up to six months from the date of declaration of the results.

Project reports shall be submitted to the Head of the University department/Principal of the College at least)0 days before the commencement of the examination. Reports received after the prescribed date shall not be accepted.

4. A deficiency up to 10 per cent lectures may be condoned by the Head of the University Department/Principal of the College.

4.1 The second semester examination shall be open to a regular student who-

(a) has been on the rolls of the University Department/Principal of the College during one semester

preceding the second semester examination;

(b) has attended not less than 75% of lectures, seminars, case studies, case conferences, internship sessions, practicum's etc., for each paper; (a deficiency up to 10% may be condoned by the Head of the University Department/Principal of the College); &

(c) has passed the First Semester examination or is covered under ' Reappear' Regulation 10.

5. The medium of instruction and examination shall be English, Hindi & Punjabi

6. The internal assessment awards of a candidate who fails in the examination shall be carried forward.

7. As soon as possible after the termination of the examination, the Controller of Examinations shall publish a list of the candidates who has passed.

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING Session-2013-2014

The Post Graduate diploma aims to create a supportive and collaborative learning environment for students from diverse backgrounds and cultures to acquire knowledge, attitudes, and skills essential in the practice of guidance and counseling- The course will also help the students to become exemplary in applying essential guidance and counseling knowledge and skills in a variety of settings with individuals from diverse backgrounds.

Goals and Objectives

Post graduate diploma in guidance and counseling will enable the students to:

1. Have the knowledge, personal attitudes and skills to provide effective guidance counseling and developmental services to clients diverse In age, gender and socioeconomic status

2. Have a strong Identity as professional counselors with a commitment to future development and possession of effective networking skills.

3. Have research and program evaluation skills that include development of research and program evaluation questions, selection of appropriate methodologies for collecting and analyzing data.

4 Have the skills to primarily deliver developmental and preventative services using individual as well as small and large group interventions to children with different abilities.

5. Have the ability to go beyond providing individual services and have skills to lead teams of teaching professionals developing and providing a comprehensive set of services as needed by the client population.

6. Have skills to advocate For student client issues and to foster productive organizational change.

7. Have a vision of career planning as a developmental process and to provide individual guidance and counseling and skills training to facilitate decision-making and to work with developmental life transitions.

8. Have the knowledge and skills to use, technology resources in professional practice and in research and to understand the application of ethical practice to use of assessment and information management tools.

Course Details

Duration of the Course

The duration of the course will be in one year in two semesters.

Theory

The course consists of core components in theory of guidance and counseling processes and procedures and psychological assessments.

Practical work

The course includes intensive training in practical / field work integrated with theory components

Internship

The course has an input of two weeks' internship programme.

Details

Total no of papers is	6(100 marks each)
Total Marks	600 (100 X 6)
Internal assessment	25 percent in each paper
External evaluation	75 percent in each paper

Note: For Evaluation

1. A total of 5 questions are to be attempted in each paper. There will be 4 questions (One from each unit) and one question of short notes.
2. Each question will carry 15 marks
3. There will be internal choice in first 4 questions
4. Questions of Short notes will be spread over 4 Units. There will be no choice in fifth question related to short notes
5. There will be house test in each of the first five papers carrying 25 marks each by way of internal assessment
6. There will be Viva voce (external) test in Paper VI carrying 25 marks. The internal assessment of Paper VI will be based on supervised practical work carrying 75 marks in which case study and internship will carry 30 marks each. Career conference and career exhibition will be of 15 marks

Paper I INTRODUCTION TO GUIDANCE

(Semester-I)

OBJECTIVES:

The course contents In this paper will enable the students:

1. To understand the meaning, principles, needs and types of guidance
2. To have a detailed knowledge about various guidance services
3. To organize guidance programme in elementary and secondary schools
4. To develop skills in using technology for guidance purpose

COURSE CONTENTS

Unit I MEANING, TYPES & EMERGING TRENDS OF GUIDANCE

1. Meaning, aims, principles, and needs of Guidance
2. Types of guidance: Personal, Social, Educational, Career, Leisure time, Health and guidance for children with different abilities.
3. Emerging trends of Guidance

Unit II COMPONENTS AND ORGANISATION OF GUIDANCE SERVICES

1. Individual Inventory service
2. Information service
3. Counseling service
4. Placement & Follow-up service

Unit III ORGANIZATION OF GUIDANCE PROGRAM

1. Essential requisites of Guidance Programme
2. Organization of guidance programme for elementary schools
3. Organization of guidance programme for secondary schools
4. Role of teachers, guidance personnel in organizing of the guidance programs.
5. Management of resources in guidance programme.

Unit IV INFORMATION TECHNOLOGY AND GUIDANCE

(THEORY AND PRACTICAL)

I. Skill of using Information Technology and Internet
II. Use online testing services, guidance services for education and career information
III. Resource sharing.

PRACT1CUM/ WORK BASED LEARNING

I. Plan, organize and disseminate any one service using different mediums and methods e.g. Posters, pamphlets, multimedia presentation, interactive sessions, talks, workshops etc.

Paper II INTRODUCTION TO COUNSELLING

OBJECTIVES:

The contents in this paper will help the students:

I. To understand the meaning, types and techniques of counseling

2. To learn about theories of counseling

3. To develop counseling skills in conducting counseling sessions

4. To learn about new emerging areas of counselling

COURSE CONTENTS

Unit I THEORETICAL FOUNDATION OF COUNSELLING

1. Meaning, historical development and Importance of counselling
2. Types: Individual and Group counseling.
3. Approaches of counselling: Directive, Non directive. Eclectic counseling.
4. Techniques in counseling: Testing and Non Testing techniques
5. The counselor-Qualities of effective counselor, self renewal: preventive burnout, ethical standards and legal considerations in counselling

Unit II THEORIES OF COUNSELLING

The theoretical beginnings, goals and therapeutic process of following theories of counselling:

1. Psychoanalytical theory (Freud, Jung)

2. Self concept/actualization theory (Rogers, Maslow)

3. Trait theory (Cattell)

4. Rational emotive theory (Albert Ellis)

5. Indian therapeutic approach (Patanjali's Yoga therapy)

6. Behavioristic (Skinners. Pavlov)

Unit III ADJUSTMENT AND MENTAL HEALTH

1. Meaning and process of adjustment, adjustment mechanisms, adjustment problems of children and adolescents.
2. Causes of maladjustment, physical, emotional, mental and social.
3. Differences between adjusted and maladjusted adolescents, criteria of good mental health, role of counselor in developing good mental health
4. Echniques of stress management, conflict resolution and mediation and violence prevention programs and models

Unit IV COUNSELLING SKILLS

I. Building Trust: Listening, attending, building rapport, demonstrating empathy, observing
II. Interview: types of Interview, procedure of conducting interview: preparation, process, interpretation, recording, termination
III. Speciation concerns in counseling Substance abuse. Drug addition. HIV AIDS; Child abuse (trauma), internet and technological abuse. Gerontology. Counseling for aging population); Life long learning; Preparation for family life (parenting and child rearing)
IV. Professional interest and trends.

'PRACTICUM/ WORK BASED LEARNING

Conduct individual and group counseling sessions using non-testing techniques & counseling Skills in the classroom/groups & prepare a report.

PAPER III EDUCATIONAL AND PSYCHOLOGICAL APPRAISAL

OBJECTIVES:

After going through the contents in this paper the students will be able:

I. To understand the concept of educational and psychological appraisal

II. To know the criteria of selection of a test and characteristics of a good test

III. To learn to administer and interpret psychological tests to know the Individual abilities and personality aspects

IV. To make appropriate use of achievement and diagnostic test in locating learning difficulties

V. To master elementary statistics and apply it in student's appraisal

COURSE CONTENTS

Unit I PSYCHOLOGICAL TESTING

1. History of Psychological Testing
2. The nature and uses of psychological tests
3. Test standardization: procedure, reliability and validity
4. Interpretation test scores: Qualitative and Quantitative
5. Ethical and social issues in testing

Unit II ADMINISTRATION AND INTERPRETATION OF STANDARDIZED PSYCHOLOGICAL TEST

1 Intelligence. Verbal, Non-Verbal & Performance tests

2. Personality: Self report inventories, projective tests, scales, 'situational test.

3. Aptitudes: Differential & Specific abilities (DAT, Music, Art, Science. Maths, Teaching).

4. Interests: Educational and Vocational

5. Attitudes: Diversities (Religion, Culture, and language)

Unit III ACHIEVEMENT AND DIAGNOSTIC TESTS

1. Achievement test: Use of teacher made and standardized subject specific tests
2. Diagnostic test: Learning difficulties; Behaviour problems
3. Administration and interpretation of achievement and diagnostic tests.

Unit IV ELEMENTARY STATISTICS

1. Descriptive statistics: measurers of central tendency, percentiles, measures of variability
2. Pearson's Product Moment & Spearman's Rank order correlation
3. Normal probability curve and its applications
4. Inferential statistics: parametric techniques (z test, t test and ANOVA (one way) and non parametric techniques (chi-square test and median test)

PRACTICUM/ WORK BASED LEARNING

- Preparation of a profile of one subject client using the above tests
- Preparation of one achievement test

PAPER IV- COUNSELING CHILDREN AND ADOLESCENTS WITH DIFFERENT ABILITIES

(Semester-II)

OBJECTIVES:

The contents of this course will enable the students to master the techniques of:

1. Understanding the needs and problems of children and adolescents with exceptional abilities
2. Identification of academic, social, emotional and vocational problems of students
3. Conducting individual and group counselling
4. Preparing case history, doing case analysis and preparing profile of the case.

COURSE CONTENTS

Unit- I

TYPES, NEEDS AND PROBLEMS OF SPECIAL CHILDREN

1. Concept of different abilities & their types
2. Needs & Problems of children with different abilities
3. Needs and problems of adolescents with deferent abilities
4. Importance of counseling; of students with different abilities and counseling of parents, family and peers

Unit II IDENTIFICATION AND DIAGNOSIS OF PROBLEM AREAS

1. Identification of personal, social & academic problems of children (5-12 years) at elementary level
2. Identification of academic, social & vocational needs & problems of adolescents (13 to 18 yrs) at secondary level
3. Diagnosis of Problem areas
4. Meaning and types Stress and its causes

Unit III INTERVENTION PROGRAMMES

1. Individual and group counseling for children for emotional, social, behavioural and academic problems
2. Individual & group counseling the adolescents for emotional, social, academic & vocational problems
3. Relaxation strategies, yoga & meditation therapies for children and adolescents for reducing stress and problems
4. Personal management skills (eg. Time, self management etc)

Unit IV- CASE STUDY

I. Concept, importance and types of case studies.

2 Components and step followed in case study

3. Group discussions initiated by the teacher with regard to I of minimum) case studies of the following areas problems:

- Academic Problems (Learning difficulties, choice of subjects
- Class room problems (Discipline/ behaviour)
- Giftedness (Gifted underachiever, academically gifted at least in one subject)
- Slow learner/educationally backward child
- Emotional/social problem (Adjustment)
- Attention deficit hyperactive (ADH) Children
- Problem of Decision making (Choice of career)
- Visual/ auditory/ Speech challenged

- Orthopedically challenged,
- Mentally challenged
- Learning Disabled

PRACTICUM/ WORK BASED LEARNING

Preparation of a case profile of a student with different abilities • Case conference.

Paper V CAREER EDUCATION

OBJECTIVES:

The contents of this course will enable the students:

- To get a comprehensive introduction to career education through historical background
- To develop an understanding of the current trends and issues in career education
- To study decision-making and how the process applies to career planning.
- "To study the relationships among work, family, and leisure.
- To identify career issues related to special students.
- To be able to use the Internet and online guidance services
- To overview methods of disseminating and using career information, including computer-based delivery systems (Internet).

COURSE CONTENTS

Unit-I

-CAREER DEVELOPMENT

- Meaning and historical development of career counseling
- Stages of career development
- Career development and human conditions
- Identifying and analyzing life career themes and career talents ."
- Emerging world of work careers and need for career education

Unit II THEORIES OF CAREER DEVELOPMENT

1. Super's theory of vocational development
2. Tiedman and O'hara's theory of career development
3. Williamson's Trait theory
4. Ginzberg and Associates theory of occupational development
5. Roe's theory of career choice
6. Relationship of career theories to career planning

Unit-III CONDITIONS GIVING RISE TO CAREER GUIDANCE & CAREER EDUCATION

1. Changing economic conditions of society & the impact of labour market
2. Psycho-social conditions of the individuals
3. Advancement of technology and survival skills
4. Problems pertaining to work, family, education, and leisure

Unit IV- CAREER CHOICE AND DECISION MAKING

1. Career maturity: concept: and factors
2. Empowering students in career decision making (strategies)
3. Matching career talents with career decision making
4. Guidance for developing life goals & choices

PRACTICUM/ WORK BASED LEARNING

1. A visit to a educational/vocational career center
2. Preparation of a research based project report of an emerging career. The project may include the following information along with any other: • The Profession • Work Environment'• Main Areas • Training Required Skills and attitude • Entry • Education Required • Eligibility • Institutes • Job Prospects • Remuneration • Pressures • Future Prospects "Related Careers" Any Other

Paper VI SUPERVISED PRACTICUM / 1NTERNSHIP/ WORK BASED LEARNING

OBJECTIVES:

The supervised practical work will train and enhance the student's skills:

1. In identifying the problems of an individual with the help of selecting, administering appropriate test, interpreting the data, preparing the complete history and profile of the case
2. To interpret/ diagnose the case problem and select an appropriate intervention for helping the case in adjustment/

development of relevant life goals and making appropriate choices

3. To be attached to a school /an institution or an agency with an onsite counselor

COURSE CONTENTS

Case Study

- Field work: Identification of 4 cases out of the following areas through testing and referrals: (collection of data)
- Academic Problems (Learning difficulties, choice of subjects)
- Class room problems (Discipline/ behaviour)
- Giftedness (Gifted underachiever, academically gifted at least in one subject)
- Slow learner/ educationally backward child
- ''Emotional/social problem (Adjustment)
- Attention deficit hyperactive (ADH) problems
- Problem of Decision making (Choice of a career)
- Visual/auditory/Speech challenged
- Orthopedically challenged
- Mentally challenged
- Learning disabled

2 Case preparation and case analysis of the four selected cases

3. Case conference with fellow students
4. Intervention (use of appropriate guidance/ counseling strategies)
5. Written report of the cases

Career Conference

The students will plan and organize career talks and career exhibitions

Internship

The course has an input of two weeks' internship programme. Trainees are required to have an attachment with a school or an jnstitution or an agency under an experienced onsite counsellor for the stipulated period. During the period of internship, the trainees would plan and undertake work related to planning and execution of guidance and counselling activities including counselling casework. They will prepare a project report of the apprenticeship work done by them and with the reviewed learning outcomes by the onsite counselor and the supervisor and submit the same for evaluation.

SUGGESTED READINGS

Paper-II

Arbuckale, D.S. (1965) Counseling: Philosophy, theory and practice. Boston Ailyn and Bacon

Paper-II

Carroll, Michael & Walton Michael, Ed- (1997). Handbook of counseling in organizations. New Delhi: SAGE Publications India Pvt Ltd.

Paper-I, II & IV

Chandra Ramesh, (2002). Guidance and counselling. Delhi:

Paper-IV

Kalpaz Publications S/Cruickshank, W.M. (1963). Psychology of

Exceptional Children and Youth. N.Y. Prentice Hal!

Paper-I

Dash, Nibedita (2004). Secondary School organization, Guidance and Educational Technology. New Delhi; Dominant Publishers and Distributors-Dressel, RL (1976). A Handbook of Academic Evaluation. London. Jossey-/Bass Publishers

Paper-III

Garret.H.E. (1981) Statistics in education and Psychology. Bombay. Vakils Feffer and Simons LTD

Paper-II, IV

Geldard, Kathryn & Geldard, David (1997). Counselling children- A practical Introduction. New Delhi: Sega publications

Paper-II, IV & V

Gladdinos, S.T. (2009). Counseling- A Comprehensive Profession. Pearson Publications libson R.L. & Mitchell M.H (2008) Introduction to Counseling and guidance. Pearson Publication.

Paper-III

Gregory, R.J. (2004). Psychological Testing: History Principles and Application. N.Y Pearson Education Group

Paper-I

Jones, Arthur J, (1970). Principles of Guidance Sixth Edition. New Delhi: Tata McGraw Publishing Company Ltd.

Paper-I &II

Knapp, Robert H, (I953). Practical Guidance Methods for Counselors, Teachers and Administrators. New York: McGraw Hill Book Company, Inc

Paper-I &II

Kochhar, S.K. (I996). Guidance and counselling in colleges ad universities. New Delhi: Sterling Publishers Pvt Ltd.

Paper-II

Lapworth, Phil, Sills Charlotte & Fish Sue, (2001). Integration in counselling & Psychotherapy- Developing a personal approach. London: SAGE publications

Paper-II
Lazarus, R. (1969) Patterns of Adjustment and human Effectiveness. N.Y, McGraw hill

Paper-I
Lytton, Hugh & Craft Maurice, Ed. (1974). Guidance and counselling in British schools- A discussion of current issues. London: Edward Arnold (Publishers) Ltd

Paper-III

Noll et al (1979). Introduction to Education and Measurement. Boston Houghton Mifflin Co.

Paper-IV

Panda ,K.C.(2004) Education of the Exceptional Children) New Delhi, Vikas Publishing House Pvt. LTD

Paper-V

Paper- Pandit, J.L. (1970) The World of Work. (INDIA) Orient Longman

Paper-II

Palmer, Stephen, dainow Sheila and Milner Pat, (1996). Counselling- The BAC counselling reader. New Delhi: Sega Publications

Paper-II

Patterson, C.H. (1973) Theories of Counseling and Psychotherapy. N.Y. Harper and Raw

Paper-I

Qureshi. Hasnain (2004). Educational Counselling. New Delhi: Anmol Publications Pvt Ltd.

Paper-I &II

Safaya, B,N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications

Scott, M.J. & Stradling, S.G, (2001) Counseling for

Posttraumatice Stress Disorder. London; Sage Publication

Paper-II

Shatter. L.F&Shoben, E.J. (1970) The Psychology of Adjustment, Boston, Houghton Mifflin

Paper-III

Shah. R.K. (2002). Educational Testing and Measurement. Jaipur- INDIA, Pointer Publishers

Paper-I

Sharma, Ram Nath & Sharma Rachana, (2004). Guidance and counseling in India. New Del hi Atlantic Publishers and Distributors

Paper-V

Sharma, Shashi Prabha (2004).Career Guidane and counseling. New Delhi: Kanishka Publishers, Distributors

Paper-I

Sharma, Tara Chand (2002). Modern methods of guidance and counselling. New Delhi: sarup & Sons

Paper-I & V

Sharma, Yogendra K. (2004). Principles of educational and vocational guidance. New Delhi: Kanishka Publishers. Distributors

Paper-I & V

Sharma. Yogendra K- (2004). Text book of Educational Psycghology. New Delhi: Kanishka Publishers. Distributors

Paper-II

Sharma, A.S. (2000). Counseling Psychology. New Delhi: Commonwealth Publisher

Paper-II &V

Sherrzer. Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston

Paper-I

Shenzer, Bruce & Stone Shelly C (1996). Fundamentals of guidance. Third Ed. London: Houghton Mifflin Company Boston

Paper-V

Sinha. Neelam (I996). Strategies, Issues and Concepts in Vocational Education. New Delhi: Common Wealth Publishers Yadav, M.S. & Govinda, R. (1977). Educational Evaluation-A package of Auto-instructions Material. Ahmedabad: Sahitya Mudranalaya

SUGGESTED READINGS

PAPER-I

Chadra Ramesh, (2002). Guidance and counseling. Delhi: Kalpaz Publications.

Dash, Nibedita (2004). Secondary School organization, Guidace and Educational Technology,New Delhi: Dominat Publishers and Distributors.

Dressel, P.L. (1976). A Handbook of Academic Evaluation. London. Jossey-/ Bass Publishers

Jones, Arthur j, (1970). Principles of Guidance Sixth Edition. New Delhi: Tata McGraw Publishing Company Ltd.

Knapp, Robert H. (1953). Practical Guidance Methods for Counselors, Teahers and Administrators. New York: McGraw-Hill Book Company, Inc

Kochhar, S.K. (1996). Guidance and counselling in colleges and universities. New Delhi: Sterling Publishers Pvt. Ltd.

Lytton, Hugh & Craft Maurice, Ed. (1974). Guidance and counselling in British schools- A discussion of current issues. London: Edward Arnold, Publishers Ltd.

Qureshi, Hasnain (2004) Educational Counselling. New Dehli: Anmol Publications Pvt. Ltd.

Safaya, B.N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications.

Sharma, Ram Nath & Sharma Rachana, (2004). Guidance and Counselling in India. New Delhi: Atlantic Publishers and Distributors.

Sharma, Tara Chand (2002) Modern Methods of Guidance and Counselling New Delhi: Sarup & Sons

Sharam, Yogendra k (2004). Principles of educational and vocational guidance. New Delhi: Kanishka Publishers, Distributors.

Sertzer, Bruce & Stone Shelly C (1996). Fundamentals of guidance, Third Ed. London: Houghton Mifflin Company Boston.

PAPER-II

Arbuckale, D.S. (1965) Counseling: Philosophy, theory and practice. Boston Allyn and Bacon

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Gregory, R.J. (2004). Psychological Testing: History Principles and Application. N.Y. Pearson Education Group.

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Safaya, B.N. (2002). Guidance & Counselling. Chandigarh: Abhishek Publications.

Shaffer, L.F. & Shoben, E.J. (1970) The Psychology of Adjustment, Boston, Houghton Mifflin

Sharma, A.S. (2000). Counseling Psychology. New Delhi: Commonwealth Publisher.

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Garret, H.E. (1981) Statistics in education and Psychology. Bombay. Vakils Feffer and Simons LTD

Noll et al (1979). Introduction to Education and Measurement. Boston Houghton Mifflin Co.

Shah. R.K. (2002). Educational Testing and Measurement . Jaipur. INDIA, Pointer Publishers.

Paper-IV

Chandra Ramesh, (2002). Guidance and counselling. Delhi: Kalpaz Publications.

Cruickshank, W.M. (1963). Psychology of Exceptional Children and Youth. N.Y. Prentice Hall.

Geldard, Kathryn & Geldard, David (1997). Counselling Children-A practical Introduction. New Delhi: Sega publications.

Gladding, S.T. (2004) Counselling- A Comprehensive Profession. New Delhi: Pearson Publications.

Panda, K.C. (2004) Education of the Exceptional Children, New Delhi, Vikas Publishing House Pvt. Ltd.

Paper-V

Gladding S.T. (2004). Counselling- A Comprehensive Profession: New Delhi: Pearson Publications.

Pandit, J.L. (1970) The World of Work. (INDIA) Orient Longman

Sharma, Shashi Prabha (2004) . Career Guidance and Counseling. New Delhi : Kanishks Publishes, Distributors.

Sharma, Yogendra K. (2004).Principles of educational and vocational guidance.

Sharma, Yogendra K. (2004). Text book of Educational Psychology. New Delhi: Kanishka Publishers, Distributors.

Shertzer, Bruce & Stone Shelly C (1974). Fundamentals of Counselling, London: Houghton Mifflin Company Boston.

Sinha, Neelam (1996). Strategies, Issues and Concepts in Vocational Education. New Delhi: Common Wealth Publishers.

PANJAB UNIVERSITY, CHANDIGARH

(Estted. under the Panjab University Act VII of 1947- enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

POSTGRADUATE DIPLOMA

IN

MASS COMMUNICATION

(SEMESTER SYSTEM)

EXAMINATIONS, 2017-18

PANJAB UNIVERSITY, CHANDIGARH

Outlines of tests, syllabi and courses of reading for Post-Graduate Diploma in Mass Communication (Semester System) for the examination 2017-18.

SEMESTER I

NOTE: **There will be four theory papers each carrying 100 marks in each semester. One practical assignment of 50 marks is compulsory in each semester.**

PGDMC	101	Introduction to Mass Communication
PGDMC	102	Print Media
PGDMC	103	Electronic Media
PGDMC	104	Advertising and Public Relations
PGDMC	105	Practical Assignments

SEMESTER II

PGDMC	106	Introduction to Mass Communication
PGDMC	107	Print Media
PGDMC	108	Electronic Media
PGDMC	109	Advertising and Public Relations
PGDMC	110	Practical Assignments

NOTE: The assignments are required to be submitted in the portfolio 20 days before the commencement of the theory exams as mentioned in the Academic Calendar. No assignment will be accepted thereafter and the candidates' defaulter in this regard will not be issue the roll numbers for the theory papers.

Post-Graduate Diploma in Mass Communication

FIRST SEMESTER

PGDMC 101: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Communication: Meaning & Definition of communication; Functions of communication; Modern & Classical.

Unit -II

- Process & elements of communication; Forms of communication – Intrapersonal, Interpersonal, Group (public, crowd, small & large group); mass communications importance & characteristics.

Unit – III

- Theories & Models of Mass Communication: Meaning & Definition; Models: S-R,
- Shannon & Weaver, Laswell formula, Osgood & Schramm.

Unit - IV

- Two – step flow; Diffusion of Innovations; four rings of defences

ESSENTIAL READINGS:

1. Everett M. Rogers, (1976), *Communication and Development*. Beverly Hills, Sage Publications.
2. E.S. Herman & Noam Chomsky, (1994), *Manufacturing Consent*, Vintage.
3. Berelson, Bernard & Janowitz, Morris (ed.), (1966), *Reader in Public Opinion & Communication*. The Free Press, New York.
4. Carwright, Dorwin & Zander, Alvin (ed.), (1968), *Group Dynamics Tavistock*, London.
5. McQuail, Denis, (1994), *Mass Communication Theory,* SAGE, London.
6. McQuail, Denis (ed.), (1976), *Sociology of Mass Communication*. Penguin, London.

7. Rogers, Evertt M. (ed), (1982), Communication & Development. SAGE, Beverly Hills.
8. Sage, (1981 onwards), *Mass Communication Year Books*. SAGE, Beverly Hills.
9. Schramm, Wilbur, (1975), *Men, Messages & Media*. Harper & Row, New York.
10. Schramm, Wilbur (ed.), (1963), *Mass Communication*. University of Illinois Press, Illinois.
11. Schramm, Wilbur (ed.), (1955), The Process and Effects of Mass Communication, University of Illinois Press, Urban.
12. Schramm, Wilbur, (1957), *Responsibility in Mass Communication*. Harper & Row, New York.
13. Wood, Ronald N., (1983), *Mass Media & the Individual,* West Publishing Co., Minnesota.

ADDITIONAL READINGS:

1. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
2. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.,
3. Keval J. Kumar, Jaico, (1995), Mass Communications in India, Publishing House.
4. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
5. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
6. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
7. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

PGDMC 102: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing and editing. To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. To help the students to understand the finer aspects of reporting for print media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

News	:	Definition, Concept, Elements, Values, Sources, Making and Maintaining sources, Structure – 5 Ws and IH, Inverted Pyramid Pattern, Different Types and styles of lead writing.

Unit –II

Principles of Reporting	:	Role and Responsibilities of Reporting staff, Concept of Beats.

Unit – III

Interviews	:	Types, purposes, techniques, preparation, skills.
Writing	:	News analysis, Features, Articles, Editorials.

Unit- IV

Subbing & Editing	:	Significance and Principles; Subbing Symbols; Brief introduction to DTP.

ESSENTIAL READINGS:

1. Prabhakar, Manohar and Bhanawat, Sanjeev, (1999), *Compendium of Codes of Conduct for Media Professionals*, University Book House, Jaipur.
2. Trikha, N.K, (1986), *The Press Council – A Self Regulatory Mechanism for the Press*, Somaiya Publications, N.D.
3. Gupta, V.S. and Dayal, Rajeshwar (ed), (1998), *Media and Market Forces: Challenges and Opportunities,* Concept Publishing Co. N.D.
4. Olen, Jeffrey, (1988), *Ethics in Journalism,* Prentice Hall, New Jersey.
5. Padhy, K.S, (1984), *Indian Press: Role and Responsibility*, Ashish Publishing House, N.D.
6. Padhy, K.S., (1984), *The Muzzled Press*, Kanishka Publishers, N.D.
7. McManus, John. H, (1994), Market Driven Journalism, Sage Publications, N.D.
8. Barns, Margarita, (1940), Indian Press, George Allen & Unwin, London.
9. Basu, Durgada, (1982), The Law of the Press in India, Prentice-Hall, New Delhi.
10. Cheney, William, (1955), Freedom of the Press, Harcourt-Brace, New York.
11. Eliott, Deni (ed.), (1986), Responsible Journalism, Sage Beverly Hills.
12. Herd, Harold, (1976), The March of Journalism, Greenwood Press, Connecticut.
13. Karkhanis, Sharad, (1981), Indian Politics & Role of the Press, Vikas Publishers, New Delhi.

ADDITIONAL READINGS:

1. Wray, Cheryl Sloan, (1996), *Writing for Magazines: A Beginners Guide*, NTC Publishing Group.
2. Hay and Vicky, (1991), *The Essential Feature: Writing for Newspapers and Magazines*, Columbia University Press.
3. Wilber, Rick G, (1994), *Magazine Feature Writing*, Bedford Books.
4. Harrington, Walt. Ed, (1997), *Intimate Journalism: The Art and Craft of Reporting Everyday Life*, Sage Publications, Sage Publications, N.Y.
5. Metzler, Ken, (1996), *Creative Interviewing: The Writer's Guide to Gathering Information by Asking Questions*, Allyn and Bacon Inc.

PGDMC 103: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes;

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

RADIO

Brief History of Radio in India

Characteristics of Radio

Radio as Mass Medium : Role, reach and future.

All India Radio : Organizational structure.

Unit – II

Different types of Radio Programmes : Interviews, talks, discussion, radio-features.

Unit-III

TELEVISION

Brief History of Television in India

Characteristics of Television

Television as a Mass Medium : Role, reach and future.

Doordarshan : Organizational Structure.

Unit -IV

Different types of TV programmes : Interviews, discussions, TV documentary.

ESSENTIAL READINGS:

1. Govt. of India, (1966), *Radio and Television: Report of the Committee of Broadcasting and Information.*

2. Govt. of India, (1978), *Akash Bharti (Report of The Working Group of Autonomy for Akashvani & Doordarshan)* 2 Volumes. Publications Division, Min. of 1 & B.

3. Govt. of India, (1985), *An Indian Personality for Television: (Report of The Working Group On Software for Doordarshan)* Min I & B.

4. Govt. of India, (1968), *Radio and Television (Report of The Committee on Broadcasting and Information),* Publications Division, Min. of I & B.

5. Barnouw, Erik, (1978), *The Sponsor*, Oxford University Press, New York.

6. Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice*, Routledge, New York.

7. Shrivastava, K.M., (1989), *Radio and TV Journalism*, Sterling Publishers, New Delhi.

8. Cohler, David Keith, (1985), *Broadcast Journalism*, Prentice-Hall, New Jersey.

9. Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*, Rajat Publications, New Delhi.

10. Fedler, Fred, bender, John R., Davenport, Huanda, Drager, Michael W., (2005), *Reporting for the Media*, Oxford University Press, New York.

11. Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi.

ADDITIONAL READINGS:

1. Cohen, Akilia A, (1987), *The Television News Interview*, SAGE, New Delhi.

2. Caywood, Clark L., (2004), *The Handbook of Strategic Public Relations and Integrated Communications*, Tata McGraw Hill, New York.

3. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications, Tata McGraw Hill, New York.

4. Shrivastava, K.M, (2005), *Broadcast Journalism in the 21st century New Dawn Press Group*, New Delhi.

PGDMC 104: ADVERTISING AND PUBLIC RELATIONS Marks = 100

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.
2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)
3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Definition, scope and concept of Advertising
- Advertising in marketing – mix; concept of IMC
- Major types of Advertising : Classified; classified display; display
- Carrier and Non – carrier media of advertising

Unit -II

- Advertising Media: Newspaper, Magazines, Radio, TV, Internet, Outdoor, Transit, Direct Mail, P-O-P; characteristics of individual media and their advertising features.

Unit – III

- PR: Definition and Role.
- PR vis-à-vis Publicity, propaganda, advertising, PR in Marketing Mix, Brief introduction to Integrated Marketing Communication.
- Organisation; different types of organisation; Importance of Communication within organisation, different types of channels of communications.

Unit - IV

- Publics in PR: Internal & External & their importance
- Code of Ethics in PR

ESSENTIAL READINGS:

1. David Ogilvy, (1988), *Ogilvy of advertising*. London Pan Books, London, Sidgwick & Jackson.
2. David Ogilvy, (1969), *Confessions of an Advertising Man*. London, Longman.
3. Subroto Sengupta, (1990), *Positioning,* New Delhi, Tata-Mcgraw Hill.
4. Waston S. Dunn & Armold Darbe, (1982), *Advertising: Its Role in Modern Marketing*, Chicago, Dryden Pr. 5th ed.
5. J.N. Hobsen, (1968), *Select on Advertising Media*. 5th ed., London, Business Books.
6. Jack Haskins, (1963), *Advertising Research & Testing*, International Correspondence School.
7. Dorothy Cohen, (1972), *Advertising.* NY, Wiley.
8. Bailinger, Raymond, (1956), *Layout. Reinhold Publishing Corporation*, New York, 1956.
9. Fraser P. Seital, (1984), The Practice of Public Relations. 2nd ed., Columbus Bell & Howell Co.

ADDITIONAL READINGS:

1. John Lee, (1968), Diplomatic. Persuaders, N.Y. Wiley.
2. Black, Marwin & Harlow, Rex, (1985), Practical Public Relations. Harper & Bros.; New York.
3. Black, Sam, (1978), Practical Public Relations Pitman, London.
4. Black, Sam, (1972), Role of Public Relations in Management. Pitman, London.
5. Bowman, Pat & Ellis, Nigel (ed.), (1985), Handbook of Public Relations. George Harrap & Co., Ltd., London.

PGDMC-105 Practical Assignments Marks : 50

S. NO.	ASSIGNMENTS	NOS.	MARKS
1	News Stories – Covering major events in your areas	4	8
2	Interviews of prominent persons	2	8
3	Translation of News Story: English to Hindi/Punjabi	1	4
4	Translation of News Story: Hindi/Punjabi to English	1	4
5	Identify Classified & Classified Display ads, Display ads; Product ad; Institutional ad; Transit ad, Outdoor ad, Direct Mail ad, POP ad	1	8
6	Review of any radio programme (current affairs/news bulletin/ interview based programme/feature/talk shows/ song-based programme etc.)	1	4
7	Feature Writing	1	6
8	Dummy of two pages of a Newspaper	1	8
	TOTAL		**50**

Post-Graduate Diploma in Mass Communication

SECOND SEMESTER

PGDMC 106: INTRODUCTION TO MASS COMMUNICATION **Marks = 100**

OBJECTIVE: The course objective is to sensitize the students to the field of communication by exposing them to its different forms; to understand the basic concepts and terminology specific to communication and media; to sensitize them to the practical importance of Interpersonal, interpersonal, group and mass communication; to enable them to analyze and assess communication in the media and everyday life.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Theories of Mass Communication

Unit-I

- Agenda –setting; Uses & gratification.

Unit-II

- Characteristics of various media of mass communication: Print, Electronic, Traditional.

Unit-III

- Media Systems: Authoritarian theory; Libertarian theory; Social – Responsibility Theory

Unit -IV

- Totalitarian theory; Development Media Hypothesis, Democratic – Participant Media Hypothesis.

Course of reading is as same as in the paper in Semester -I

PGDMC 107: PRINT MEDIA **Marks = 100**

OBJECTIVE: The paper is designed to introduce students to both the field and the desk aspects of print journalism – reporting, writing, editing and design; To sensitize the students to the importance of press freedom and related issues of responsibility and accountability. The paper is also design to familiarize students with various laws pertaining to the media.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

Editorial department set - up	:	Criteria for judging news copy. Organizational structure of the editorial department of a newspaper.
News room organization	:	Functions of News Editor, Chief Sub – Editor and Sub – Editor

Unit – II

Headline	:	Mechanics of headline writing; typographical patterns; purposes; kinds of headlines; Dummy; page – make – up.
Photo – editing	:	Selection; editing and cropping of pictures; placement of photographs. Writing captions.

Unit - III

Role & Responsibilities of Journalists	:	Code of ethics for journalists (Press Council of India).

Unit – IV

Press Laws	:	Copyright Act, Law of Defamation, Contempt of Court, Official Secrets Act, Right to Information Act. Contempt of Legislature, Law of Obscenity.

Course of reading is as same as in the paper in Semester -I

PGDMC 108: ELECTRONIC MEDIA **Marks = 100**

OBJECTIVE: The course is designed to introduce the students the basic concepts and terminology specific to the media of radio and television; to understand the organizational structure of both AIR & DD; Sensitize students to the concepts of writing and scripting of Radio as well as TV programmes; To equip the students with the skill to camera shot composition, camera movements and basic steps of program production.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Organisational structure of NSD in Dordarshan & AIR.
- Characteristics of Radio & TV.
- Structure and preparation of a Television Bulletin (gathering, condensing, compiling and presenting TV news).
- Basics principles of writing news for Radio & TV
- News packages.

Unit – II

- Basics of TV script, Writing, Different types of scripts (Narrative Style, split page, camera script)
- Above & below the line function in TV production.

Unit – III

- Basic camera shots, camera movements, competition & transitions.

Unit – IV

- Basics of Programmes Editing: Linear and Non-Linear Editing.
- Basic process of programme production: Pre-production, production, post-production.

Course of reading is as same as in the paper in Semester -I

PGDMC 109: ADVERTISING AND PUBLIC RELATIONS **Marks = 100**

OBJECTIVE: The course will sensitize students to the basic concepts of advertising and public relations. The Paper will impart knowledge to help them analyze advertisements and advertising campaigns in various media; train the students to write advertising copy; introduce with ethics in advertising field. The 2nd part of the paper will impart skills for producing PR material, train the students to device PR campaign, to understand socially relevant and public service related institutional advertising.

Instructions for paper setters and candidates:

1. The maximum marks for the paper will be 100 and the time allowed will be 3 hours.

2. There shall be 9 questions in all and the candidates will be required to attempt 5 questions.

   The first question is compulsory comprising 10 short answer type questions spread over the whole syllabus to be answered in about 75-100 words each. The candidates are required to attempt 5 questions. Each question shall be of 4 marks. (5X4 = 20 marks)

3. Rest of the paper shall contain four units. Two questions shall be asked from each unit and the candidates shall be given internal choice. The candidates shall attempt one question from each unit. Each question will carry 20 marks. (4X20 = 80 marks)

Unit – I

- Advertising Copy Writing: Definition; principles; do's & don'ts; U.S.P.; AIDA formula.
- Advertising layout and Design: Design vocabulary & Design principles; and stages of layout.

Unit-II

- Advertising Agency: Structure and Functions
- Advertising Campaign: Brief Introduction.
- Code of Ethics of Advertising in India.

Unit – III

- PR tools: House Journals; pamphlets; brochures; Newsletter; bill boards; press conferences, Cable TV, Exhibitions; internet, mobile.

Unit - IV

- Brief introduction to PR process; Fact Finding & Feedback, Planning & programming, communication & action, evaluation.

Course of reading is as same as in the paper in Semester -I

PGMC- 110: PRACTICAL ASSIGNMENTS **Marks: 50**

S. NO.	ASSIGNMENTS	NOS.	MARKS
1.	Photo caption Writing	1	4
2.	Press Release	2	6
3.	Script writing for radio news of five minutes	1	8
4.	Script writing for TV news of five minutes	1	8
5.	Write a story board of a half minute TV commercial	1	4
6.	Print Advertisements Analysis		
	a) Classified	2	4
	b) Display Classified	2	4
	c) Display	2	4
7.	Brochure	2	8
	TOTAL		**50**

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
SECOND YEAR
(SEMESTER : THIRD AND FOURTH)
Examination, 2020-2021

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2020 AND FOURTH SEMESTER APRIL/MAY 2021, EXAMINATIONS.

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER -III

16th and 17th Century Literature

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1.	William Shakespeare	*Othello*	
2.	Francis Bacon	(i)	*Of Friendship.*
		(ii)	*Of Studies.*
3.	John Donne	(i)	*The Sun Rising.*
		(ii)	*The Canonization.*
		(iii)	*The Relique.*
		(iv)	*Hymn to God, The Father.*
4.	John Milton	The following poems :	
		(i)	*Of Man's First Disobedience.*
		(ii)	*On the Morning of Christ's Nativity.*
		(iii)	*On his blindness.*

Testing :
There will be **two Units-**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I
There will be one question on the literary movement of 16th & 17th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer with internal choice at Serial No. 1, 3 and 4. Students will attempt one passage from each writer.

(15 Marks)

Unit II
Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER – IV

18th and 19th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	Emily Bronte	Wuthering Heights.
2.	S. T. Coleridge	The following poems : (a) *Kubla Khan.* (b) *The Rime of the Ancient Mariner.*
3.	P.B. Shelley	The following poems : (a) *Ozymandias.* (b) *Ode to the West Wind.* (c) *To A Skylark.*
4.	Thomas Hardy	*Tess of the D'Urbenvilles.*

Testing :
There will be **two Units-**
Unit I will consist of compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three.

Unit I

There will be one question on the literary movement of 18th & 19th Century with internal choice.

(15 marks)

There will be one question with reference to the context. Two passages will be set from each writer at serial No. 2 and 3 with internal choice. Students will attempt one passage from each author.

(15 Marks)

Unit II

Two essay type questions with internal choice on each of the four writers' texts will be set. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2020-21

SEMESTER-III

प्रथम पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- उपनिषद् तथा नीति साहित्य द्वारा प्रतिपादित शाश्वत जीवन मूल्यों से छात्र को अवगत कराना तथा व्याकरण की संज्ञाओं का बोध कराना।

UNIT-I

(क) केनोपनिषद् (मन्त्र व्याख्या पाँच में से तीन - 3x10=30अंक व समीक्षातमक प्रश्न दो में से एक प्रश्न - 1x9=9अंक) **39**अंक

UNIT-II

(ख) नीतिशतकम्

(श्लोक 51 से अन्त तक) (श्लोक व्याख्या पाँच में से तीन - 3x10=30अंक व सूक्ति व्याख्या तीन में से एक - 1x9=9अंक) **39**अंक

UNIT-III

(ग) संज्ञा प्रकरण (लघुसिद्धान्तकौमुदी) (6 में से 3 सूत्रार्थ) 3x4=12अंक 12अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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बी .ए.(संस्कृत आनर्स) **द्वितीय वर्ष** परीक्षा 2020-21

SEMESTER-IV

द्वितीय पत्र : पूर्णांक : 90+10=100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

उद्देश्यः- विद्यार्थियों को संस्कृत नाट्य साहित्य के प्रमुख नाटककार भास अथवा कालिदास के समय, जीवनचक्र, काव्यसौन्दर्य, प्रकृतिचित्रण, प्रेम एवं सौन्दर्य-बोध, नाट्य-कला, पात्र-चरित्रचित्रण इत्यादि विषयों के विस्तृत अध्ययन के लिए प्रेरित करना।

(इस पत्र में छात्र **विकल्प - I** या **विकल्प - II** ग्रहण करेगा)।

विकल्प - I : भास पूर्णांक **-** 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) भास 2x15= 30 अंक

भास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'स्वप्नवासवदत्तम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख) स्वप्नवासवदत्तम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

अथवा

विकल्प - II : कालिदास पूर्णांक - 90+10=100अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय-3 घण्टे

UNIT-I

(क) कालिदास 2x15=30 अंक

कालिदास का काल, काव्य-सौन्दर्य, प्रकृति-चित्रण, प्रेम एवं सौन्दर्य, नाट्य-कला 'अभिज्ञानशाकुन्तलम्' के पात्रों का चरित्र चित्रण

UNIT-II

(ख)अभिज्ञान- शाकुन्तलम् 60 अंक

(i) सप्रसंङ्ग श्लोक अनुवाद (छह में से चार) 4x10=40 अंक

(ii) सूक्ति व्याख्या (तीन में से दो) 2x10-20 अंक

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा।

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URDU

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER -III

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER I : Poetry and Prose

Unit – I

Diwan-e-Ghalib Radif Alif : 30 Marks

Explanation (Tashrih of first 30 Ghazaliyat)

Unit – II

Critical notes on Ghalib ki Qasida Nigari 15 Marks

Unit – III

Mirza Ghalib ki Khutut Nigari ki Khususiyat 30 Marks

Unit -IV

Mirza Ghalib ki Hayat aur Karname 15 Marks

Books Recommended:

1. Zikr-e-Ghalib, by Malik Ram, Tamal Printing Press, 1976.
2. Afkar-e-Ghalib, by Dr. Khalifa Abdur Rehman, 1973.
3. Ghalib Ki Maktoob Nigari, by Prof. Nazir Ahmad

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URDU

SEMESTER -IV

Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hrs.

PAPER II : Essay (Literary)

Unit – I

Fort William College Ki Adabi Khidmat 25 Marks

Unit – II

Urdu Zaban ki Ibtida aur Irtiqa 20 Marks

Unit – III

Dabistan Luckhnow ki Khusiyat 20 Marks

Unit -IV

Dabistan Delhi ki Khusiyat 25 Marks

Books Recommended:

1. Urdu Adab Ki Tarikh, by Azeem-ul-Haq Junedi.
2. Tareekh-e-Adab-e-Urdu, by Prof. Noor-ul-Hasan Naqvi.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER -III

Paper : I **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

i) Ghaznzvid Period

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

PERSIAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER -IV

Paper : II **Marks : 100**
Time : 3 Hrs.

History of Persian Literature

1. Ereteqaye Zaban-o-Adabiyat-e-Farsi be Ahde Moghal dar Hind.

Books Recommended :

1. Literary History of Persia by Dr. E.G. Brown Part II.
2. She `ul` - Ajam by Shibli Part I, II & III.

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ARABIC

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-2021

(KEPT IN ABEYANCE)

FRENCH

SEMESTER-III

3rd Semester : APPLIED GRAMMAR AND DRAMA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

a) Drama

Comprehension, explanation and literary appreciation of the prescribed text. 50 Marks

Courses of Reading:

Molière, ***Le Bourgeois Gentilhomme-***(Edition Boards).

Grammar: **40 Marks**

1.	Applied Grammar .	15 Marks
2.	Essay in French: subject or theme to be taken from the given text.	10 Marks
3.	Precis or analysis of a given text	15 Marks

N.B. 1. The latest syllabus will be followed and question paper should be of B.A.II (Hons.) level.

2. Choice in questions should be given.

For the information of private candidate:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

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FRENCH

SEMESTER-IV

4th Semester : PROSE, APPLIED GRAMMAR & Viva-voce

Max. Marks	:	100
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Applied Grammar 25 Marks

Prose: 35 Marks

La Symphonie Pastorale, André Gide**,**
Comprehension, explanation and literary appreciation of the prescribed text.

Courses of Reading :

La Symphonie Pastorale,André Gide**,** (Edition Bordas) ou Nouveaux Classiques Larousse.

La Grammaire pour bien écrire, Bescherelle, Hatier, 1987.

Viva-Voce : **30 Marks**

(a) Dictation of an unseen passage of about 200 words based on the Vocabulary and grammar covered upto B.A.II. 10 Marks

(b) Oral questions and answers on a given text (unseen). 10 Marks

(c) General questions and reading 10 Marks

N.B:
1. All unseen passages shall be based on the vocabulary and grammar covered till the end of 3rd & 4th Semester courses.
2. All questions are to be asked and answered in French.
3. The latest syllabus must be followed.
4. Choice in questions must be given.
5. Question paper will be set according to B.A. II (Hons.) level.

For the information of private candidate:

1. Viva is compulsory.
2. The theory paper would be proportionately marked out of 70 as there is no internal assessment.

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HINDI

बी.ए. (आनर्स) 2020–21 (द्वितीय वर्ष)

सेमेस्टर–तीन **पूर्णांक : 90+10=100**

समय : 3 घण्टे

1. **कवितावली : तुलसीदास (केवल सुन्दरकाण्ड)**

2. **भारत–भारती : मैथिलीशरण गुप्त**

   (क) दोनों काव्यकृतियों में से 12–12 अंकों की 4 व्याख्याएँ पूछी जाएँगी जिनमें से 2 व्याख्याएँ करनी होंगी। सन्दर्भ सहित व्याख्या के साथ–साथ काव्य–सौन्दर्य भी स्पष्ट करना होगा। अंक–24

   (ख) दोनों काव्य कृतियों में से 6 समीक्षात्मक प्रश्न पूछे जाएँगें जिनमें से 18–18 अंकों के तीन प्रश्न करने होंगे। अंक–54

   विशेष : प्रत्येक काव्य कृति में से एक प्रश्न करना अनिवार्य होगा।

3. **राष्ट्रीय भाषा हिन्दी : स्वरूप एवं महत्व अंक–12**

4. **आंतरिक मूल्यांकन अंक : 10**

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HINDI

बी.ए. (आनर्स) 2020–21

सेमेस्टर–चार **पूर्णांक : 90+10= 100**

समय : 3 घण्टे

1. लहर : जयशंकर प्रसाद

क) लहर में से 12–12 अंकों की 2 व्याख्याएँ पूछी जाएँगी जिनमें से एक पद्यांश की सप्रसंग व्याख्या करनी होगी। अंक–12

काव्य–सौन्दर्य भी स्पष्ट करना होगा।

ख) लहर काव्य कृति में से दो समीक्षात्मक प्रश्न पूछे जाएँगें। जिनमें से 16 अंक का एक प्रश्न करना होगा। अंक–16

2. अंग्रेजी से हिन्दी अनुवाद अंक–20

3. निबन्ध लेखन अंक–10

4. टिप्पण तथा प्रारूपण सम्बन्धी नियमों का सामान्य ज्ञान अंक–10

5. जन संचार–रेडियो, दूरदर्शन एवं समाचार पत्रों के लिए लेखन की विशिष्ट विधि अंक–10

6. हिन्दी के उपसर्ग–प्रत्यय अर्थ व प्रयोग तथा शब्द शोध अंक–12

आन्तरिक मूल्यांकन अंक–10

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ.ਏ. ਭਾਗ ਦੂਜਾ (ਸਮੈਸਟਰ ਤੀਜਾ) ਕੁਲ ਅੰਕ :100

ਪੇਪਰ ਪਹਿਲਾ ਲਿਖਤੀ: 90

ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ:10

ਸਮਾਂ:3 ਘੰਟੇ

ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ

(ਭਾਗ ਪਹਿਲਾ)

1. ਮੱਧਕਾਲ: ਪਰਿਭਾਸ਼ਾ, ਸਰੂਪ, ਚੇਤਨਾ, ਦ੍ਰਿਸ਼ਟੀ ਤੇ ਨਿੱਖੜਵੇਂ ਲੱਛਣ
   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) 15 ਅੰਕ
2. ਸਾਹਿਤ ਦੇ ਰੂਪ:
   ਬਾਰਹਮਾਹ , ਜਨਮਸਾਖੀ, ਕਾਫ਼ੀ, ਕਿੱਸਾ , ਵਾਰ, ਜੰਗਨਾਮਾ ਤੇ ਗੋਸ਼ਟਿ
   (ਤਿੰਨ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 10+10= 20 ਅੰਕ

(ਭਾਗ ਦੂਜਾ)

3. ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ
   (ਗੁਰਮਤਿ-ਕਾਵਿ ਧਾਰਾ, ਸੂਫ਼ੀ-ਕਾਵਿ ਧਾਰਾ, ਕਿੱਸਾ-ਕਾਵਿ ਧਾਰਾ ਤੇ ਵੀਰ-ਕਾਵਿ ਧਾਰਾ)
   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) 20 ਅੰਕ

4. ਪੂਰਨ ਭਗਤ (ਕਾਦਰਯਾਰ)
   ਵਿਸ਼ਾ-ਵਸਤੂ, ਨਾਇਕ ਦਾ ਸੰਕਲਪ, ਕਾਵਿ-ਜੁਗਤਾਂ, ਕਾਵਿ-ਭਾਸ਼ਾ ਤੇ ਕਾਵਿ-ਕਲਾ
   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) 15 ਅੰਕ

(ਭਾਗ ਤੀਜਾ)

5. ਸਮੁੱਚੇ ਸਿਲੇਬਸ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
   (ਪੰਦਰਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦਸ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 10x2=20

ਨੋਟ: ਪੇਪਰ ਸੈੱਟਰ ਲਈ ਲਾਜ਼ਮੀ ਹਦਾਇਤਾਂ:

1. ਲਘੂ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਲਾਜ਼ਮੀ ਹੈ।
2. ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ ਸਮੁੱਚੇ ਸਿਲੇਬਸ ਦੇ ਆਧਾਰ 'ਤੇ ਹੀ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ(ਭਾਗ ਪਹਿਲਾ ਅਤੇ ਦੂਜਾ), ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ,ਪਟਿਆਲਾ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ(ਭਾਗ ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ, ਪਰਮਿੰਦਰ ਸਿੰਘ , ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ ਅਤੇ ਗੋਬਿੰਦ ਸਿੰਘ ਲਾਂਬਾ, ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਡਾ. ਰਾਜਿੰਦਰ ਸਿੰਘ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਨਵੀਨ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ ਸਮਕਾਲ ਤੱਕ), ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
6. ਡਾ. ਜੀਤ ਸਿੰਘ ਜੋਸ਼ੀ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ: ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, 42-ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਡਾਕਖਾਨਾ ਖਾਲਸਾ ਕਾਲਜ, ਅੰਮ੍ਰਿਤਸਰ
7. ਪ੍ਰੋ. ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਸਾਹਿਤ ਦੇ ਰੂਪ: ਸਾਹਿਤ ਅਤੇ ਵਿਕਾਸ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, 42-ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਡਾਕਖਾਨਾ ਖਾਲਸਾ ਕਾਲਜ, ਅੰਮ੍ਰਿਤਸਰ
8. ਪ੍ਰੋ. ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਪ੍ਰੋ. ਰਾਜਬੀਰ ਕੌਰ, ਮਧਕਾਲੀਨ ਸਾਹਿਤ ਧਾਰਾਵਾਂ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, 42-ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਡਾਕਖਾਨਾ ਖਾਲਸਾ ਕਾਲਜ, ਅੰਮ੍ਰਿਤਸਰ

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ.ਏ. ਭਾਗ ਦੂਜਾ (ਸਮੈਸਟਰ ਚੌਥਾ) ਕੁਲ ਅੰਕ:100

ਪੇਪਰ ਦੂਜਾ ਲਿਖਤੀ: 90

ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ:10

ਸਮਾਂ :3 ਘੰਟੇ

ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ

(ਭਾਗ ਪਹਿਲਾ)

1. ਆਧੁਨਿਕਤਾ: ਪਰਿਭਾਸ਼ਾ, ਸੰਕਲਪ, ਸਰੂਪ ਤੇ ਨਿੱਖੜਵੇਂ ਲੱਛਣ
   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) 15 ਅੰਕ
2. ਸਾਹਿਤ ਦੇ ਰੂਪ:
   ਕਵਿਤਾ, ਨਾਵਲ, ਨਾਟਕ, ਕਹਾਣੀ, ਜੀਵਨੀ, ਸਵੈ-ਜੀਵਨੀ ਤੇ ਸਫ਼ਰਨਾਮਾ
   (ਤਿੰਨ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 10+10= 20 ਅੰਕ

(ਭਾਗ ਦੂਜਾ)

3. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ
   (ਕਵਿਤਾ, ਨਾਵਲ, ਨਾਟਕ ਤੇ ਕਹਾਣੀ ਦੇ ਸੰਬੰਧ ਵਿਚ)
   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) 20 ਅੰਕ
4. ਮੇਰੀ ਚੋਣਵੀਂ ਕਵਿਤਾ: ਪ੍ਰੋ ਮੋਹਨ ਸਿੰਘ
   ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਾਵਿ-ਜੁਗਤਾਂ, ਕਾਵਿ-ਭਾਸ਼ਾ ਤੇ ਕਾਵਿ-ਕਲਾ
   (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) 15 ਅੰਕ

(ਭਾਗ ਤੀਜਾ)

5. ਸਮੁੱਚੇ ਸਿਲੇਬਸ ਵਿਚੋਂ ਲਘੂ ਪ੍ਰਸ਼ਨਾਂ ਵਾਲੇ ਉੱਤਰ (ਜਵਾਬ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)

   (ਪੰਦਰਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦਸ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) 10x2=20

ਨੋਟ: ਪੇਪਰ ਸੈੱਟਰ ਲਈ ਜ਼ਰੂਰੀ ਹਦਾਇਤਾਂ:

1. ਲਘੂ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਲਾਜ਼ਮੀ ਹੈ।
2. ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ ਸਮੁੱਚੇ ਸਿਲੇਬਸ ਦੇ ਆਧਾਰ 'ਤੇ ਹੀ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਡਾ. ਰਾਜਿੰਦਰ ਸਿੰਘ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਨਵੀਨ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ ਸਮਕਾਲ ਤੱਕ), ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਸਾਹਿਤ ਦੇ ਰੂਪ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਧਰਮਪਾਲ ਸਿੰਗਲ, ਗੁਰਲਾਲ ਸਿੰਘ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਕਹਾਣੀ: ਨਵੀਨ ਪ੍ਰਵਿਰਤੀਆਂ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
4. ਟੀ.ਆਰ.ਵਿਨੋਦ, ਪੰਜਾਬੀ ਕਹਾਣੀ ਅਧਿਐਨ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
5. ਧਨਵੰਤ ਕੌਰ, ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਬਿਰਤਾਂਤ -ਸ਼ਾਸਤਰੀ ਅਧਿਐਨ, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਡਾ. ਜੀਤ ਸਿੰਘ ਜੋਸ਼ੀ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ: ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, 42-ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਡਾਕਖਾਨਾ ਖਾਲਸਾ ਕਾਲਜ, ਅੰਮ੍ਰਿਤਸਰ।
7. ਪ੍ਰੋ. ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਸਾਹਿਤ ਦੇ ਰੂਪ: ਸਾਹਿਤ ਅਤੇ ਵਿਕਾਸ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, 42-ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਡਾਕਖਾਨਾ ਖਾਲਸਾ ਕਾਲਜ, ਅੰਮ੍ਰਿਤਸਰ।

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GERMAN

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER –III

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed novel "Der Richter und sein Henker" (Dürrenmatt) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 1-17 upto page 87 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstarße a.o. Chapters 1-17 upto page 87.

ii. "Der Richter und sein Henker" (Dürrenmatt)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 1-17

Summary

Max. Marks : 100 marks(Total)
Paper-2 (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory): 90 marks

Note : Use of dictionary is allowed

i.	Translation of an unseen text/s from German into English.	:	50 marks
ii.	Translation of an unseen text/s from English into German	:	20 Marks
iii.	Essay writing in German (about 250 words)	:	20 Marks

i. Ein Traum
ii. Eine Ferienreise
iii. Essen und Trinken
iv. Heutige Mode und Kleidung
v. Ein Fest (indisch/deutsch)

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessmet will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbook:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

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GERMAN

SEMESTER –IV

Summary

Max. Marks : 100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Paper-I (Theory) : 90 marks (Total)

Note : Use of dictionary is allowed.

i. Characterization /Literary questions (2 out of 3) on the prescribed drama "Biedermann und die Brandstifter" (Max Frisch) : 60 Marks

ii. Questions on text comprehension from the prescribed text-book "Lagune-2" Chapers 18-34 (5 out of 6 questions to be attempted) : 30 Marks

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. "Lagune-2" Kursbuch (2006 Edition) by Hartmut Aufderstraße a.o. Chapters 18-34.

ii. "Biedermann und die Brandstifter" (Max Frisch)

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o. Chapters 18-34.

Max. Marks :100 marks(Total)
Paper-I (Theory) : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

PAPER-II : ESSAY AND TRANSLATION(Theory) : 90 marks

Note : Use of dictionary is allowed

i. Translation of an unseen text/s from German into English. : 50 marks

ii. Translation of an unseen text/s from English into German : 20 Marks

iii. Essay writing in German (about 250 words) : 20 Marks

i. Der Klimawandel
ii. Auf dem Markt
iii. Medien und Netzwerk
iv. Heutige Frau
v. Jugend und Gesellschaft

Internal Assessment : 10 marks (Total)

- Continous Evaluation
- Attendance

Note :

1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calcultated proportionately to the marks obtained by the candidate in written examination.

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch & Arbeitsbuch by Hartmut Aufderstraße a.o.

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DEFENCE & STRATEGIC STUDIES

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN -I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Military Geography of Pakistan : Its strategic importance, economic and industrial resources.
2. People and their characteristics.

SECTION-II

3. Outlines of history leading to the Birth of Pakistan.
4. Political Developments in Pakistan since 1947.
5. Role of Military in Pakistan's Politics.

SECTION-III

6. Foreign Policy of Pakistan (Basic Determinants).
7. Foreign Policy of Pakistan with regard to U.S.A. & Russia.

SECTION-IV

8. Pakistan's Foreign relations with its neighbours with particular reference to Afghanistan, India and Iran.

Books Recommended :

1. Akhtar, Jamna Das, *Political Conspiracies in Pakistan*, Delhi : Punjabi Pustak Bhandar, 1969
2. Britanninca., *The New Encyclopedia Britannica*, Chicago, II : Encyclopedia Britannica, Inc, 2005.
3. Burke, S.M., *Pakistan's Foreign Policy* : An Historical Analysis. [S.I.: s.n. Print]
4. Callerd, Keith B., Pakistan – A Political Study, London : Allen & Unwin, 1957.
5. Chopra, Surendra, *Perspectives on Pakistan's Foreign Policy*, Amritsar: Guru Nanak Dev University Press, 1983.
6. Cohen, Stephen P., *The Pakistan Army*, Berkeley: University of California Press, 1984.
7. Johnson, Allan G., *Privilege, Power, and Difference*, Boston, Mass: McGraw- Hill, 2006.
8. Khaliq, Sheikh Abdul, *Pakistan—Peace and War*, London : Regency Press, 1973.
9. Moon, Penderel, *Divide and Quit*, Delhi: Oxford University Press, 1998.
10. Sahni, Naresh Chander, *Political Struggle In Pakistan*, Jullundur City: New Academic Pub. Co., 1969, Print.
11. Sayeed, Khalid B., *Pakistan, The Formative Phase, 1857-1948*, London: Oxford University Press, 1968.
12. Sidhu, K.S., *Pakistan: Khetri Adhyayan*; Publication Bureau, Punjabi University Patiala, 1987.
13. Stephens, Ian. *Pakistan: New York* : Praeger, 1963.
14. Tayyeb Ali, and A Tayyeb. *Pakistan.* London [etc.] Oxford University Press, 1966.
15. Tinker, Hugh. *India and Pakistan*. New York: Frederick. A. Praeger, 1968.
16. Williams, L.F. Rushbrook. *The State of Pakistan*. London: Faber, 1966.
17. Ziring, Lawrence. *Pakistan In The Twentieth Century*, Karachi [u.a.]: Oxford University Press, 1998.
18. Ziring Lawrence, *The Ayub Khan Era,* Karachi: Paramount Publishing, 2009.

DEFENCE & STRATEGIC STUDIES

SEMESTER-IV

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the question paper. The candidate will be required to attempt one question from each of these sections carrying 17½ marks each.

PAPER : AREA STUDIES–PAKISTAN-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Total Teaching Periods : 75

SECTION-I

1. Jammu and Kashmir Campaign 1947-48 : Causes, operations in brief and effects.
2. Indo-Pak War 1965 : Causes, operations in brief and effects.

SECTION-II

3. Indo-Pak War 1971 : Causes, operations in brief and effects.
4. 1999-Kargil War .

SECTION-III

5. Defence Potential of Pakistan.
6. Armed Forces of Pakistan.

SECTION-IV

7. Nuclear Policy of Pakistan.
8. Terrorism in Pakistan

Books Recommended :

1. Ayoob, Mohammed, and K. Subrahmanyam. *The Liberation War*, The University of Michigan: S.Chand, 1972.

2. Brines, Russell. The Indo-Pakistani Conflict, London: Pall Mall P., 1968.

3. Costa, Benedict. *Dismemberment of Pakistan*, Ludhiana: Kalyani Publisher,: 1972.

4. Dasgupta, C. *War and Diplomacy In Kashmir*, 1947-48. New Delhi: Sage, 2002.

5. Feldman, Herbert. *Revolution In Pakistan*. London: Oxford U.P., 1967, Print.

6. Feldman, Herbert. *The End and The Beginning*. London: Oxford University Press, 1975.

7. Gupta, K.R., *India-Pakistan Relations with Special Refernce to Kashmir*, New Delhi: Atlantic Publishers & Distributors, 2003.

8. Hackett, James T., *The Military Balance 2011*. Oxfordshire: Routledge, 2011.

9. Johri, Sita Ram. The Indo-Pak Conflict of 1965. Luckhnow: Himalaya Publications, 1967.

10. Kaul, Brij Mohan. Confrontation With Pakistan, Delhi: Vikas Publicaitons, 1971.

11. Khaliq, Sheikh Abdul, Pakistan, Peace and War, London: Regency Press, 1973.

12. Lachhman Singh., Indian Sword Strikes In East Pakistan. New Delhi: Vikas, 1979.

13. Mankekar, D. R. Pakistan Cut To Size, New Delhi: Indian Book Co, 1972. Print.

14. Mankekar, D.R. Twenty two Fateful Days. Bombay: Manaktalas, 1967. Print.

15. Nath, Rajendra. Military Leadership In India. New Delhi, India: Lancers Books, 1990.

16. Palit, D.K. The Lightning Campaign. New Delhi: Thomson Press (India), 1972.

17. Sahni, Naresh Chander, *Political Struggle in Pakistan*, Jullundur City: New Academic Pub. Co, 1969.

18. Sen. Lionel Protip. *Slender Was The Thread: Kashmir Confrontations, 1947-48*, Bombay: Orient Longmans, 1969.

19. Sethi, Surinder Singh. *The Decisive War: Emergence of a New Nation*. New Delhi: Sagar Publications, 1972.

20. Sidhu, K.S. *Pakistan: Khetri Adhyayan*: Publication Bureau, Punjabi University Patiala, 1987.

21. Sinha, S.K. *Operations Rescue*, New Delhi: Vision Books, 1977.

22. Ziring, Lawerence. *The Ayub Khan Era*. Karachi: Paramount Publishing, 2009.

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HISTORY

SYLLABUS OF B.A. (HONOURS) SEMESTER III/IV, 2020-21

Note : The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

Any two papers, one in Semester III and one in Semester IV according to the following :

Semester III

(i) Social and Cultural Trends in Ancient India.

OR

(ii) Social and Cultural Trends in Medieval India.

Semester IV

(ii) Social and Cultural Trends in Medieval India.

OR

(iii) Social and Cultural Trends in Modern India.

Note: Candidates CANNOT OPT FOR PAPER (ii) in BOTH Semesters.

(i) SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

2. The paper-setter would avoid repetition between different types of question within one question paper.

Paper- SOCIAL AND CULTURAL TRENDS IN ANCIENT INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Institutions: Varna, Jati, Ashrama and Samskara
2. Marginalized Sections of the Society: Shudras and slaves.

UNIT II

3. Women: Status and rights
4. Education: system of learning, Principal centres,

UNIT III

3. Early Religions : Harappan and Vedic
4. Protest Movements: Jainism and Buddhism

UNIT IV

5. Puranic Religions: Vaishnavism, Shaivism and Shaktism
6. Significant developments in art and architecture.

   (a) Styles of Temple Architecture: Nagara, Dravida and Vesara
   (b) Sculpture: Mauryan, Mathura, Gandhara and Gupta
   (c) Painting: Ajanta caves.

Recommended readings:

1. P.N.Prabhu, *Hindu Social Organisation*, Popular Prakashan, Bombay, 1979.

2. R.S.Sharma, *Surdas in Ancient India*, Motilal Banarasidas, Delhi, 1980.

3. K.Roy, Ed. *Women in Early Indian Societies*, Manohar, New Delhi,1999.

4. A.S. Altekar, *Education in Ancient India*, The Indian Book shop, Benaras, 1937.

5. S. Ratnagar, *Understanding Haraappa*, Tulika, New Delhi, 2001.

6. A.L. Basham, *The Wonder That Was India*, Rupa, Calcutta, 1992.

7. R.G. Bhandarkar, *Vaishnavism, Shaivism and Minor Religious Systems*, Indological Book House, Varanasi, 1965.

8. P.Brown, *History of Indian Architecture*, Vol. I Taraporevavala, Bombay 1965.

9. S.K. Saraswati, *Survey of Indian Sculpture*, Munshiram Manoharlal, New Delhi, 1975.

10. D.Barrett & B Grey, *Indian Painting* Skira, Lausanne, 1963.

(ii) SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA:

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper II: SOCIAL AND CULTURAL TRENDS IN MEDIEVAL INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Social Conditions in the Delhi Sultanate: Nobles, theologians, slaves and other social groups; position of women; social customs and manners.
2. Devotional Movement: Vaishnavism in Bengal, the Gangetic Plain and Rajputana; the teachings and impact of Kabir and Guru Nanak

UNIT II

3. Mystical Dimensions of Islam: Organisation of the Chishti and Suhrawardi orders, with reference to their beliefs and practices.
4. Landmarks in Persian Historiography: The historical works of Ziauddin Barani and Abul Fazl.

UNIT III

5. State Intervention in the Socio-Religious Sphere: Akbar's liberal policy; his *Ibadat Khana* debates, the *mahzar* and breach with orthodox ulama; introduction of *Tauhid-i-Ilahi* and social reforms
6. Muslim Revivalist Movements: Salient features of the Mahdawi movement; socio-religious ideas of Sheikh Ahmad Sirhindi and their impact.

UNIT IV

7. Development of Literature: the devotional writings of Tulsidas, Ravidas and Namdev; the contribution of Malik Muhammad Jaisi; Abdur Rahim Khan-i-Khanan and Ras Khan.
8. Fine Arts in Mughal India: the development of architecture, painting and music during the sixteenth and seventeenth centuries.

Recommended Readings:

1. *K.M. Ashraf: Life and Conditions of the People of Hindustan,* Second Edition, Munshiram Manoharlal, New Delhi, 1970.
2. Satish Chandra*: Medieval India: From Sultanate to the Mughals*, Parts I & II, Haranand Publications (Rep.), New Delhi, 2003.
3. Peter Hardy*: Historians of Medieval India: Studies in Indo-Muslim Historical Writing*, First Indian Edition, Munshiram Manoharlal, New Delhi 1997.
4. Harbans Mukhia *: Historians and Historiography During the Reign of Akbar*, Vikas Publishing House, New Delhi 1976.
5. Khaliq Ahmad Nizami: *Religion and Politics in India During the Thirteenth Century*, New Edition, Oxford University Press, Delhi, 2001.
6. S.A.A. Razvi: *The Wonder That was India*, Part II, Twelfth Impression, Rupa and Company, New Delhi, 2002.
7. Mohammad Yasin: *A Social History of Islamic India*, Second Revised Edition, Munshiram Manoharlal, New Delhi, 1974

III. SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

The syllabus has been divided into four Units.

There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 18 marks.

1. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

2. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: SOCIAL AND CULTURAL TRENDS IN MODERN INDIA

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Socio-Cultural Trends in Early 19th Century: Religion, education and literature
2. Women Education: Aligarh Girls School; Kanya Maha Vidyalya.

UNIT II

3. Socio-Religious Reform Movements in Punjab and North- West: The Arya Samaj; Singh Sabhas and the Ahmadiyas
4. Socio-Religious Awakening in the Central Belt and Maharashtra: The Manav Dharma Sabha; the Prathana Samaj: the Rahnumai Mazdayesan Sabha (among Parsis)

UNIT III

5. Cultural Reorientation in the South: Annie Besant and the Theosophical Movement
6. The Marriage Reform Efforts: Legislative measures for the abolition of Sati and Female infanticide; contribution of reformers towards the promotion of widow-remarriage

UNIT IV

7. The Social Protest Movements: Role of Jyotiba Phule in Maharashtra; Swami Narayana Guru in Kerala; Mangoo Ram and the Ad Dharm Movement in Punjab.
8. The Literary Trends: Development of literature in Hindi; Bengali and Marathi languages.

Recommended Readings:

1. Kenneth W., Jones: *The New Cambridge History of India: Socio Religious Reform Movements in British India* (Cambridge, 1989).

2. R.C.Majumdar and Others (ed.): *British Paramountcy and Indian Renaissance*, Part II, Bhartiya Vidya Bhavan Series, Vol. X.

3. Robert D, Baird (ed.*): Religion in Modern India*, Manohar, New Delhi, 1981.

4. Gail Minault*: Secluded Scholars: Women's Education and Muslim Social Reform in Colonial India* New Delhi, O.U.P.1998.

5. Geraldine Forbes: *Women in Modern India* , Foundation Books, New Delhi, 1996.

6. Tara Chand *: History of the Freedom Movement in India*, Vol.II, New Delhi, 1967, Publication Division, G.O.I.

7. Mark Jurgensmeyer: *Religious Rebels in the Punjab*, Delhi, Ajanta, 1988.

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POLITICAL SCIENCE

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

Outlines of Test

Semester-III Option (i) : International Relations 1917-1945

OR

Option (ii) : Colonialism and Nationalism in Modern India

Semester-IV Option (i) : Western Political Thought

OR

Option (ii) : Comparative Politics

Syllabus and Courses of Reading :

Semester-III

OPTION (I) : INTERNATIONAL RELATIONS 1917-1945

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The essential concern of the course is with the period between the Bolshevik Revolution and the end of the Second World War. However, to facilitate better understanding of the developments during this period, it is very essential that the teacher familiarizes the students with the major currents of international politics immediately preceding the First World War as well as during the course of that war. Needless to say, no question will be asked on the period up to the Bolshevik Revolution.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Course Content :

Unit-I : *Nature of International Relations before and after World War-I :*

(a) Imperial confrontation & Concern for peace.
(b) Peace treaties & rise of International Organisation-League of Nation.

Unit-II : *Rise of Nationalism :*

(a) National Upsurge

(b) Search for colonies

Unit-III : *European Politics and the Post-War Settlement :*

(a) French quest for security and the German urge for equality.

(b) Britain and the European power system.

Unit-IV: *Origins of the Second World War, & International Organisation (United Nations) :*

(a) Alliances and counter-alliances.

(b) Failure of the League of Nations & Emergence of U.N.

(d) American Ambivalence.

Note : Questions to be asked on the Genesis itself and not on post-1945 developments related to the United Nations.

Suggested Readings :

1. Carr, E.H. : International Relations Between the Two World Wars (1919-1939), (London : Macmillan Press, 1973).
2. Northedge, F.S. : A Hundred Years of International Relations (London : Duchworth, 1971).
3. William Shirer : The Rise and Fall of the Third Reich, A History of Nazi Germany (London : Secker and Warburg, 1960).
4. Keswani, K.B. : International Relations : 1900 to Present Day (Bombay : Himalaya Publishing House, 2004).
5. Quicky Wright : A Study of War (Chicago : University of Chicago Press, 1942).
6. Goodrich, L.M., and Edward Hambro : Charter of the United Nations-Commentary and Documents (London: London Institute fo World Affairs, 1949).
7. Richard Little and Michael Smith (eds.) : *Perspective in World Politics (London: Routledge, 2006).*
8. Chris Brown : *Understanding International Relations (London, Palgrave, 2001).*

OR

OPTION (ii) COLONIALISM AND NATIONALISM IN MODERN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

The paper aims at enabling the students about the nature and evolution of the Indian National Movement and constitutional development in colonial India.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Historical Foundations of National Movement :*

(a) Socio-Religious reform movements.

(i) Arya Samaj
(ii) Brahmo Samaj
(iii) Singh Sabha Movement
(iv) Tama Krishan Mission

Unit-II : (a) Origin and growth of Indian National Congress.

(b) Moderates and Extremists—Debates over objectives, ideology, strategy, social basis.

(c) Revolutionary Terrorism.

Unit-III : *Gandhi and Nationalist Movement in India :*

(a) Gandhi : Political strategy and new techniques of struggle.

(b) Non-Cooperation, Civil Disobedience and Quit India Movements.

Unit-IV : Landmarks in the devolution of power with special reference to Government of India Acts of

(i) 1909
(ii) 1919
(iii) 1935
(iv) Indian Independence Act 1947.

Suggested Readings :

1.	Sumit Sarkar	:	Modern India (Madras : Macmillan, 1995).
2.	Bipan Chandra	:	Essays on Colonialism (Delhi : Orient Longman, 2000).
3.	Thomas Pantham et al (ed.)	:	Modern Indian Political Thought (Delhi : Sage, 1986).
4.	Gail Omvedt	:	Dalit Visions –The Tract of the Times (Delhi : Orient Longman, 2002).
5.	Radha Kumar	:	History of Doing (Delhi : Kali for Women, 1995).
6.	Paul Brass	:	The Politics of India Since Independence (Delhi : Foundation Books, 1992).
7.	V.R. Mehta and Thomas Pantham, ed.	:	Political Ideas in Modern India, Thematic Exploration (Delhi : Sage, 2006).

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POLITICAL SCIENCE
Semester-IV

OPTION (i) WESTERN POLITICAL THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :

This paper aims to introduce to the students the major themes of western political thought. This will be done by undertaking an indepth study of the key thinkers of this tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I	**:**	*Plato* : The Republic	-	Justice
			-	Philosopher-King
			-	Educations
			-	Communism of wives & property
Unit-II	**:**	*Plato* : The Statesman and the Laws	-	Ideal State
			-	Second Best State
Unit-III	**:**	*Aristotle* : The Politics	-	Inequality-Slavery, Women
			-	Nature of the State
			-	Classification of Constitutions
			-	Revolution
Unit-IV	**:**	*Machiavelli* : The Prince	-	Machiavelli as a Modern Political Thinker.
			-	Morality and Politics.
			-	Power and Statecraft.

Suggested Readings :

1. Sabine, G.H. : *A History of Political Theory* (Bombay : Oxford & IBH, 1973).
2. Dunning, W.A. : *A History of Political Theories,* 3 Vols. (Allahabad : Central, 1973).
3. Sait, E.M. (ed.) : *Masters of Political Thought*, 3 Vols. (London : George and Harap, 1947).
4. William Ebenstein : *Great Political Thinkers : Plato to Present*, 1966 (New Delhi : OUP, 2000).

Reference Books :

1. Ernest Barker : *Greek Political Theory : Plato and His Predecessors* (London : Methuen, 1978).
2. Mulgan, R. : *Aristotle's Political Theory* (Oxford : Clarendon, 1977).
3. Plamenatz, John *Man and Society,* 2 Vols. (New York : Longman, Latest Edition).
4. Quentin Skinner : *Machiavelli* (Oxford : OUP, 1981).
5. Raphael, D.D. : *Hobbes : Morals and Politics* (London : George Allen, 1978).
6. Hall, J.C. : *Rousseau : Introduction to His Political Philosophy* (London : Macmillan, 1971).
7. David Maclellan : *Marx : Fontana Modern Masters Series* (London : Fontana, 1986).

OR

OPTION (ii) C O M P A R A T I V E POLITICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Objectives :
The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial as well as developing societies and this will be undertaken in a comparative framework.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 **units**. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

Unit-I : *Approaches to Comparative Politics :*

(a) Political Sociology.

(b) Political Economy.

Unit-II : *Theories of Development :*

(a) Modernisation and Development Theories.

(b) Alternative Third World perspective on development.

Unit-III : *Political Participation and Representation :*

(a) Political Parties.

(b) Interest Groups and Pressure Groups.

(c) Political Elite.

Unit-IV : (a) Theories of State : Liberal, Marxist.

(b) Civil Society and New Social Movements.

Suggested Readings :

1. Andrew Heywood : *Politics* (London : Macmillan, 1997).

2. Mary Mank Sworth and Mourice Kogan (ed.) : *The Encyclopaedia of Government and Politics* (London : Routledge, 1992).

3. Rod Hague, Martin Harrop and Shaun Breslin : *Comparative Government and Politics : An Introduction* (London : Macmillan, 1998).

4. Gabriel Almond, G. Bingham Powell, Kaare Strom and Russel J. Dalton : *Comparative Politics Today* (Delhi : Pearson Education, 2005).

5. Ronald H. Chilcote : *Theories of Comparative Politics : The Search for a Paradigm Reconsidered* (Boulder : Westview Press, 1994).

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ECONOMICS

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER-III

The candidates are required to study one paper out of the following three papers :

I Economics of Agriculture.

II History of Economic Thought.

III Economics of Population.

Paper–I : ECONOMICS OF AGRICULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Economics of Agriculture : Its nature and scope, Interdependence between agriculture and industry. Nature and problems of agricultural development in developing countries.

Unit-II

Transforming Traditional Agriculture : Ranis & Fei, Schultz and Meller's Models, Lewis model of unlimited supplies of labour.

Unit-III

Land reforms and system of farming. Farm size and productivity relationship. Agricultural price policy, Agricultural taxation (All these topics should deal with special reference to India).

Unit-IV

New agricultural strategy and Green Revolution. Problems of small farmers and agricultural labourers. Agricultural credit, marketable and marketed surplus. Surplus and its utilization. (All these topics would deal with special reference to India).

Recommended Readings:

1.	Eicher, C. & Witt, L. (1970)	:	Agriculture in Economic Development, Vera & Co., Bombay
2.	Frankel, Francis R. (1971)	:	India's Green Revolution-Economic Gains and Political Costs, Oxford University Press, Bombay
3.	Joshi, P.C. (1975)	:	:Land Reforms in India, Allied, Bombay, Part II, Sections I & II
4.	Khusro, A.M. (1968)	:	Readings in Agricultural Development, Allied, Bombay, Articles by : B.S. Minhas & T.N. Srinivasan, V.M. Dandekar, M.L. Dantwala, A.N. Khusro, T. Bergman, V.K.R.V. Rao.
5.	Meller, J.W. (1966)	:	The Economics of Agricultural Development, Vera & Co., Bombay
6.	Misra, S.K. & Puri, V.K. (2014)	:	Indian Economy, Himalaya Publishing House, Bombay
7.	Schultz, T.W. (1970)	:	Transforming Traditional Agriculture, Lyall Book Depot, Ludhiana
8.	Singh, Amarjit & Sadhu, A.N. (1986)	:	Agricultural Problems in India, Himalaya Publishing House, Bombay
9.	Soni,R.N. (1992)	:	Leading Issues in Agricultural Economics, Vishal Publisher, Jalandhar.
10.	Todaro, Michael P. (1987)	:	Economic Development in the Third World, Orient Longman, New Delhi
11.	Wadhva, Charan D. (1973)	:	Some Problems of India's Economic Policy, Tata McGraw Hills, Bombay, Part II: Articles-B,C,D, F and G

Supplementary Readings:

1.	Sameeksha Trust, Bombay	:	Various Issues : Economic and Political Weekly.
2.	Indian Society of Agricultural Economics, Bombay	:	Various Issues : Indian Journal of Agricultural Economics.

Paper -II : HISTORY OF ECONOMIC THOUGHT

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Pre-Classical Economic Thought : Mercantilism : Mercantilist ideas, regulations of economic life, leading theory of Mercantilist school, Physiocracy : ideas with special reference to Quesnay and Turgot.

Unit-II

Classical and Marxian Political Economy : The classical tradition : Adam Smith, Ricardo, J. S. Mill and Karl Marx on value, distribution and development.

Unit-III

Reaction Against Classicism : Socialist and Nationalist thinkers, Sismondi, Saint-Simon, Robert Brown and Fourier, Subjective School : Menger, Weiser and Bohm Bewark.

Unit-IV

Neo-Classical Economics : Main features.
Marshall : Scope of Economics, theory of firm, time-element, partial equilibrium analysis.
Keynes: Concept of effective demand, consumption, investment, inflationary gap.

Recommned Readings:

1. Blaug , M. (1968) : Economic Theory in Retrospect, Richard D. Irwin Inc. Illinois.
2. Gide & Rist (1964) : A History of Economic Doctrine, George G. Harper & Co. Ltd., London
3. Sweezy , P. M. (1991) : The Theory of Capitalist Development, K. P. Bagchi & Co., Calcutta,
4. Roll, Eric (1993) : History of Economic Thought, Oxford University Press, Calcutta..

Supplementary Readings :

1. Ghosh , B. N. & Ghosh, Rama (1988) : Concise History of Economic Thought, Himalaya Publishing House, Delhi .
2. Paul , R.R. (1979) : Classical Political Economy, Kalyani Publishers, Delhi..
3. Schumpeter , J.A. (1961) : History of Economic Analysis (Selected Portions), George Allen & Unwin, London,

Paper-III: Economics of Population

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT – I

Theories of Population: Malthus, optimum.
Demographic transition theory .
Population and Economic Development.

UNIT – II

Population Structure and Characteristics: Impact of Population growth on the age and gender structure
Fertility: Concepts of fertility transition. Measurement of fertility .
Mortality: Components and Measurement, Infant Mortality in India.

UNIT – III

Migration: Concepts, causes and consequences (economic and demographic) of migration.
Migration in India: Causes and Trends, Rural-Urban, Male-Female.
Urbanization: Concepts, Trends of Urbanization in India.

UNIT – IV

Growth and Structure of Indian Population.
Literacy: Literacy transition in India, pattern of literacy and literacy differentials in India.
Estimation of Population in India: Census, sampling and vital registration methods.
Population Policy in India since Independence.

Essential Readings:

Aggarwal, A. S. N. (1972)	:	India's Population Problem Tata McGraw Hills Co., Bombay.
Becker, G. (1960)	:	An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
Boserup, E. (1981)	:	Population and Technological Change University of Chicago Press, Chicago.
Bouge, D. J. (1971)	:	Principles of Demography, John Wiley, New York.
Bose, Ashish (1978)	:	India's Urbanization, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
Coale, A. and E. Hoover (1958)	:	Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects. Princeton University, Press, Princeton.
Chenery, H. and T.N. Srinivasan (eds.) (1989)	:	Handbook of Development Economics, Vol. 1 & 2, Elsevier, Amsterdam.
Chandna, R. C. (2000)	:	A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
Cox, Peter R. (1979)	:	Demography, Vikas Publishing House, New Delhi
Easterlin, R. A. (1968)	:	Population, Labour Force and Long Swings in Economic Growth: National Bureau of Economic Research, New York.
Ghosh, B. N. (ed.) (1987)	:	Studies in Population and Economic Development, Deep and Deep Publications, New Delhi
John R. Weeks (2002)	:	Population : An Introduction to Concepts and Issues (7^{th} edition), Wadsworth Publishing Company, New York.
Leibenstein, H. (1957)	:	Economic Backwardness and Economic Growth, New York, John Wiley and Sons
Govt. of India	:	Census Report, 2001.

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ECONOMICS

Semester-IV

The candidates are required to study one paper out of the following three papers :

I Industrial Economics.
II Economics of Public Enterprises.
III Theory of Statistics.

Paper-I : INDUSTRIAL ECONOMICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Scope and methods of Industrial Economics; Basic concepts of firm, industry and market; Organisational forms and alternative motives of the firms; Industrial structure and economic development.

Unit-II

Market Structure : Sellers concentration, product differentiation, conditions of entry and economies of scale, market structure and profitability.
Growth of Firms : Vertical integration, diversification, mergers and innovation; constraints on growth-demand, financial and managerial.

Unit-III

Theory of industrial location, contribution of Weber and Sergent Florence, centralized vs. balanced regional development, industrial concentration and dispersal in India.

Unit-IV

Industrial policy since independence, Industrial development under plans and reasons for deceleration of industrial growth, Growth of State industrialization in India.

Recommended Readings :

1. Barthwal, R. R. (2010) : Industrial Economics : An Introductory Text Book, New Age International Publisher (P.) Ltd., New Delhi.
2. Datt , Rudar & Sundharam K. P. M. (2012) : Indian Economy , S. Chand & Company.
3. Devine , P. J. et al. (1974) : An Introduction of Industrial Economics, George Allen & Unwin Ltd.,London.
4. Howe , W. Steward (1978) : Industrial Economics : An Applied Approach, The Macmillan Press Ltd.
5. Kuchhal, S. C. (1989) : Industrial Economy of India , Allahabad, Chaitanya Publishing House.

Supplementary Readings :

1. Ahluwalia , Ishar Judge (1985) : Industrial Growth in India : Stagnation Since Mid Sixties, Oxford University Press, Delhi.
2. Penrose, E. T. (1995) : The Theory of Growth of Firm, Oxford, Basil Blackwell.
3. Richardson, Harry W. (1969) : Elements of Regional Economics, Penguin Education.
4. Sivayya & Das (1978) : Indian Industrial Economy, S. Chand & Co., New Delhi
5. Smith, David M. (1971) : Industrial Location : An Economic Geographical Analysis, John Wiley & Sons Inc.

Paper II : ECONOMICS OF PUBLIC ENTERPRISES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

Concepts : Role of public sector in socio-economic development, Rationale of public sector—multiple objectives of public enterprises and clash and complementarity in objectives. Historical perspective of public sector in India. Organisation of public enterprises – various forms and role.

Unit-II

Role of public sector financial institutions in the financing of public enterprises. Problems of management of working capital – Management of inventory, credit and cash financing of working capital.

Unit-III

Pricing in Public Sector : Basis and types of pricing policies, pricing practices, machinery of price fixation. Accountability and profitability of public sector – Causes of poor financial performance of public sector in India.

Unit-IV

Sources of funds of public enterprises – Debt and equity, Industrial relations and its importance, Industrial disputes : causes, effects and their settlements.

Recommended Readings :

1. Narain , Laxmi (1980) : Principles and Practices of Public Enterprises Management, S. Chand & Co.,New Delhi.
2. Narain , Laxmi (1982) : Public Enterprises in India, S. Chand & Co., New Delhi.
3. Institute of Public Enterprises (1967) : Organisation in Public Enterprises, Tripathi, Bombay.
4. Institute of Public Enterprises (latest edition) : Pricing and Investment in Public Enterprises, Oxford and IBH Publishing Co., New Delhi.

Supplementary Readings :

1. Bhalla , G. S. (1968) : Financial Administration of Nationalised Industry in U.K. and India, Meenakshi, Meerut.

2. Gupta, K. R. (1978) : Issues in Public Enterprises, S. Chand & Co., New Delhi.

Paper- III : THEORY OF STATISTICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT - I

*Moments & Expectation***:** Concept of random variables, Moments, Mathematical expectation, Moment Generating Function, Characteristic Function.
*Regression and Correlation***:** Multiple, Partial Regression and Correlation, Fitting of multiple regression by least squares technique
*Growth Curves***:** Properties, methods of estimation and applications of parabolic, geometric, exponential, modified exponential, Gompertz and logistic growth curves.

UNIT - II

Probability: Addition and Multiplication Theorems, Conditional Probability, Bays Theorem, Chebychev's Inequality, Central limit theorem
*Probability Distribution***:** General Characteristics and Applications of Binomial, Poisson and Normal Distribution.

UNIT - III

*Sampling & Sampling Distribution***:** Concept of sampling distribution, Types & Techniques of Sampling, Statistic vs Parameter.
Estimation: Point Estimation and Interval Estimation, Properties of Point Estimates, Maximum Likelihood Estimates.
Statistical Hypothesis: Two -tailed and one-tailed tests, Types I and II Errors, Level of significance, Critical Region.

UNIT - IV

*Large and small samples***:** Tests of significance based on Normal, 't' 'F' and 'Z' distributions. Testing the significance of means, proportions, correlation and regression coefficients and their interpretation. Elementary Knowledge of Analysis of Variance (one-way and two -way classification) and Analysis of Covariance.
*Non-Parametric Tests***:** Chi-square test and sign test.
Quality Control: Elementary Knowledge of quality Control and its simple application.

RECOMMENDED READINGS

1.	Croxton, F.E. & Cowden, D.J. (latest edition)	:	Applied General Statistics, Prentice Hall London and Prentice Hall of India.
2.	Gupta , S.C. &Kapoor, V.K. (1996)	:	Fundamentals of Applied Statistics, Sultan Chand & Sons, New Delhi
3.	Gupta, S.P. (1980)	:	Statistical Methods, Sultan Chand & Sons, New Delhi
4.	Kapoor, J.N. & H.C.Saxena (1976)	:	Mathematical Statistics, S. Chand & Co .Pvt. Ltd., New Delhi
5.	Mills, F.C. (1955)	:	Statistical Methods, Henry Hold & Co, New York
6.	Speigal, M.R. (1961)	:	Theory and Problems of Statistics
7.	Wonnacott , T. & Wonnacott, R. (1977)	:	Introductory Statistics for Business and Economics, John Willey & Sons.
8.	Yule, G.U. & Kendall, M.G. (1950)	:	An Introduction to Theory of Statistics (for theory of attributes)

SUPPLEMENTARY READINGS

1.	Carmal, P.H. (latest edition)	:	Applied Statistics for Economics, Sir Issac Pitman and Sons Ltd., London
2.	Chou, Ya-Lun (1975)	:	Statistical Analysis, Hold, Rinehart and Winston, New York.
3.	Freund, J.E. (1964)	:	Mathematical Statistics, Prentice Hall
4.	Freund,J.E. & William, F.J. (1979)	:	Modern Business Statistics, Prentice Hall, Englewood
5.	Grant, R.L. (1996)	:	Statistical Quality Control, McGraw Hill Book
6.	Hoel, P.G. (2007)	:	Elementary Statistics, John Wiley & Sons.
7.	Mood, A.M. & Graybill, F.A.(1963)	:	Introduction to the Theory of Statistics McGraw Hill.
8.	Yamane, Taro (1970)	:	Statistics: An Introductory Analysis, Harper and Rew, New York.

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SOCIOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER –III

SOCIAL THOUGHT (Compulsory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

Note

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper intends to familiarize the students with the contributions of major thinkers in classical Sociology and their continuing relevance to its contemporary concerns. This paper offers the Honours students with an understanding of the development of Sociology as a discipline, with a focus upon classical thinkers.

Course Content :

UNIT-I

Auguste Comte : Laws of Three Stages, Hierarchy of Sciences, Positivism.

UNIT-II

Emile Durkheim : Social facts and division of labour, social solidarity; suicide and religion.

UNIT-III

Max Weber : Social action, class, status and power, types of authority; Protestant ethic and the spirit of capitalism.

UNIT-IV

Karl Marx : Historical materialism; dialectical materialism; class conflict, capitalism and theory of social change.

Essential Readings:

1. *Coser, L.A. (1997) : Masters of Sociological Thought, New York : Harcourt Brace Jovonovich*
2. *Collins, Randall (1977) : Theoretical Sociology, Jaipur : Rawat Publications.*
3. *Raymond, Aron (1982) : Main Currents in Sociological Thought, Vols. I & II, Harmondsworth: Penguin Books.*
4. *Timasheff, N.S.(1967) : Sociological Theory : Its Nature and Growth, New York : Random House.*
5. *Zeitlin, I.M.(1987) : Ideology and the Development of Sociological Theory, New Jersey : Prentice Hall.*
6. *Stones Reb (ed) (2007) : Key Sociological Thinkers Palgrove, NY.: Macmillon*
7. *John A Hughes, W Sharrock Peter T. Martin(2004) : Understanding Classical Sociology Sage, Thousand Oak*
8. *Bert N Adams & R.A. Sydie (2002) : Classical Sociological Theory, Sage, New Delhi*
9. *Anthony Giddens & Philip W Sutton (2007) : Sociology: Introductory Readings Maldon: Polity Press*

Further Readings :

1. *Harlambos, M. (1984) : Sociology, Themes and Perspectives, Delhi : Oxford University Press.*
2. *Lemert, C. (ed.) (2004) : Social Theory – The Multicultural & Classical Readings, Jaipur : Rawat Publications.*
3. *Marx & Engles(1967) : The Communist Manifesto, Harmondsworth : Penguin Books.*
4. *Morrison, Ken, Marx, Durkheim, Weber (1995) : Formation of Modern Social Thought, London : Sage,*
5. *Sorokin, P. (1978) : Contemporary Sociological Theories, Ludhiana : Kalyani Publishers.*
6. *Judge, paramjit S, (2012) : Foundations of Classical Theory, New Delhi, Pearson*
7. *Kundu, Abhijit, (2012) : Sociological Theory, New Delhi, Pearson*

SOCIOLOGY

SEMESTER-IV

SOCIAL PSYCHOLOGY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

1. For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** and cover the entire syllabus. In addition to it, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. 1 will be compulsory comprising of short answer type questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective:

This paper exposes the honours students in Sociology to the related field - Social Psychology. The purpose of this paper is to introduce the basic concepts in Social Psychology, which have a bearing on the Social-Psychological understanding of social interaction, social groups, public opinion and leadership qualities. This course prepares the students to study social phenomena from social-psychological perspectives.

Course Content :

UNIT-I

Introduction – Nature, Scope, Application and Relationship of Social Psychology with Sociology.

UNIT-II

Perception, Motivation, Learning, Attitudes and their Measurement.

UNIT-III

Social Groups – Groups and Classification. Collective Behaviour : Crowd, Audience, Mob and their differences.

UNIT-IV

Propaganda and Public Opinion.
Leadership – Emergence, type and functions of leaders, leadership qualities.

Essential Readings:

1. *Curtis, Jack H. (1960)* : *Social Psychology, New York : McGraw Hill.*
2. *Fraser, C. & Burchell, B. (2001)* : *Introducing Social Psychology, Cambridge : Polity Press.*
3. *Kuppuswamy, B. (1980)* : *Social Psychology, Bombay, Asia Pub. House.*
4. *Krech, D. & Cretchfield, Richards (1948)* : *Theory & Problems of Social Psychology, New York : McGraw Hill, 1948.*
5. *Lindgren, H. Clay (1974)* : *An Introduction to Social Psychology, 2nd ed., New Delhi : Wiley Eastern.*
6. *Linde Smith, Strauss, A.R., Denzin, A.L. & Norman, D.(1988)* : *Social Psychology, New Jersey : Prentice Hall.*
7. *Perry, J.B. & Pugh, M.D.(1978)* : *Collective Behaviour : Response to Social Stress, Minnisotta : West Publishing Co.*

Further Readings

1. *Baron, Robert A, Branscombe Nyla R., Byrne Donn, Bhardwaj Gopa (2012)* : *Social Psychology, New Delhi, Pearson*
2. *Taylor, Shelley E., Pepla, Letitia Anne, Sears David O, (2006)* : *Social Psychology, New Delhi, Pearson*
3. *Patiwal, Suprithy, (2002)* : *Jaipur, RBSA Publication*

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PHILOSOPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER – III

Paper : CONTEMPORARY WESTERN PHILOSOPHY & CONTEMPORARY INDIAN THOUGHT AND CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives :

The aim of this paper is to acquaint students with the theories of different western contemporary philosophers and the problems of language, perception, meaning and truth, science and God; and to familiarize the students with Indian thought and culture according to Contemporary Indian thinkers.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

Unit-I

- Idealism (Bradley).
- Realism – Common Sense & Critical Realism (Moore, Russell & Putnam)

Unit-II

- Language, Meaning & Truth.
- Philosophy, Science & Religion.
- Existentialism : Theistic and Atheistic Approaches.

Unit-III

- Mahatma Gandhi & Tilak.
- Ambedkar & M.N. Roy

Unit-IV

- Sri Aurobindo
- Swami Dayanand Saraswati
- Swami Vivekananda.
- Tagore

Essential Readings :

1. Ayer A.J.,(1982) Philosophy in the 20th : Unwin.

2. Narvane V.S., (1967), Modern Indian Thought: Asia

3. Russell (1980), Inquiry into Meaning & Truth: Harper Collins.

Suggested Readings :

1. Copleston F.C. (2003), Contemporary Philosophy: Studies of Logical Positivism and Existentialism: Continuum Intl. Pub. Group.

2. Tagore Rabindranath (1931), Religion of Man, New York: Macmillian Publishers.

3. Tilak B.G. (2002), Srimad Bhagwad Gita Rahasya or Karma Yoga Delhi: Manohar Book Pub.

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PHILOSOPHY

SEMESTER – IV

Paper: STUDY OF A SPECIAL PHILOSOPHER

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Aims and Objectives:

The aim of this paper is to make students study a philosopher indepth amongst the options offered.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain **4** units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

One out of the following Philosophers :

Option (i) : PLATO

Unit-I	:	Virtues : Wisdom, Courage, Temperance and Justice, Justice and Happiness : Is the just life happier than the unjust one
Unit-II	:	The meaning and purpose of education.
Unit-III	:	Nature of knowledge and its relation to sensation.
Unit-IV	:	Language and its relation to the world : Do names picture the objects named ?

OR

Option (ii) : ARISTOTLE

Unit-I	:	Form and Matter.
Unit-II	:	Aristotle's Ten Categories.
Unit-III	:	Four Causes and Change.
Unit-IV	:	Identity of Thought and Truth in the Active Reason.

OR

Option (iii) : IMMANUEL KANT

Unit-I : A –priori and A –posteriori judgements.

Unit-II : Nature of Space and Time.

Unit-III : Function of Categories and Significance of Antinomies.

Unit-IV : Refutation on the various proofs for the existence of God.

OR

Option (iv) : UPANISHADS

(Chandogya, Mandukya and Isa)

Unit-I : Mandukya's Treatment of 'Aum'. Symbol of Immanent and Transcendent aspects of Atman.

Unit-II : Philosophy of Being as instructed by Uddalaka Aruni in Chandogya Upanishad.

Unit-III : Nature of Atman in Isa Upanishad.

Unit-IV : Views of Upanishads on Brahman, Soul and World.

OR

Option (v) : SARTRE : Being and Nothingness

Unit-I : Being-in-itself and Being-for-itself.

Unit-II : Facticity.

Unit-III : Freedom, responsibility and badfaith.

Unit-IV : Being for Others, Existence of Others, the problem of embodiment.

OR

Option (vi) : NAGARJUNA

Unit-I : Concept of Sunya.

Unit-II : Sunyata and Pratiyasamutpada.

Unit-III : Logic and Reality.

Unit-IV : Dialectical System.

OR

Option (vii) : SAMKARA

Unit-I : Theory of Causation.

Unit-II : Prakriti as a Ultimate Cause.

Unit-III : Parinamavada Vs. Vivartavada.

Unit-IV : Refutation of Prakritikaranavada.

OR

Option (viii) : PATANJALI

Unit-I : Language and meaning.

Unit-II : Word-meaning relationship.

Unit-III : Purpose of grammar.

Unit-IV : Sabda as a Pramana.

Essential Readings :

1. B.Jowetth(Tr. Ploto's Dialogues(1937), Plato-Republic, Theatetus, Cratylus In : New York : Random
2. Banarasi Dass(1956), Samkara, Brahmasutrabhasya : Tarka Pada (First four Sutras, Thibaut, Sacred Books of the East, Delhi : Motilal Banarasi Dass.
3. Howells Christina(1992), Cambridge Companion to Sartre e:, Cambridge University Press, 1992.
4. Kemp Smith (Tr.) Norman (1952), Kant-Critique of Pure Reason : London, Macmillan.
5. Patanjali : Mahabhasya, Chaps. I & II Gita Press, Gorakhpur, 1927
6. Republic, Hackett Publishing Company, Indian Polish, 1992, U.S.A.
7. Sartre J.P.(1993), Being & Nothingness: Washington Square Press, 1993.
8. Sedley D.N.(2003), Cratylus in Plato's Dialogues, Plato, Cambridge University Press:, Cambridge, U.K..
9. Stcherbatsky Theo (2003), Nagarjuna-Madhyamika Karika, Stcherbatsky Theo : Conception of Buddhist Nirvana Delhi : Bharatiya Vidya Prakashan
10. Waterfield Penguine Robin H. (2004) Theatetus, Plato, Robin H. Waterfield, Penguine Books, London
11. Washington John(1956), Aristotle-Metaphysics Ed. & Tr. By John Washington and with an introduction by Sir David Ross : London : Dentsons).

Suggested Readings :

1. C.Lodge Rupert (1956), The Philosophy of Plato: London.
2. Chattopadhyaya (2000), The Philosophy of Sankara's Advaita Vedanta: Sarop of Sons.
3. Gosling J.C. B(1973) Plato, Routledge & Kegan Paul: London
4. Mathews (2005), Sartre, Jean Paul, Between Existentialism and Marxism, New York
5. Stace W.T., 1982, A Critical History of Greek Philosophy: Macmilan India Ltd.
6. Sartre Paul Jean (2007), Stephen Priest (Ed.), Basic Writings, Routledge: London

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PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER-III

PAPER : SOCIAL PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) Social Psychology course emphasizes the relationship between society and individuals. It also enables the students in understanding group dynamics, role of attitudes and leadership behaviour in the society.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totalling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit I : *Introduction :* Nature of Social Psychology, Methods of Research in Social Psychology.

Unit II : *Attitudes :* Concepts, Formation of Attitudes, Theories of Attitude Change; Measurement of Attitudes.

Unit III : *Leadership :* Functions of Leaders, Theories of Leadership (Trait Theories, Behavioural Theories, Fiedler's Contingency Model).

Unit IV : Applications of Social Psychology: Pro Social behavior, Bullying, Ragging.

Books Recommended :

Suggested Readings :

1. Baron, R.A. and Byrne, D. (2003) : Social Psychology : Understanding Human Interaction, New Delhi: Prentice Hall of India.
2. Robbins, S.P. (1998) zzzzzzzzzzz : Organizational Behaviour, New York : Prentice Hall of India.
3. Luthans, F. (1998) : Organizational Behaviour.New York : McGraw Hill.
4. Taylor, G.E. Peplau, L.A. and Sears, D.O. (2006) . : Social Psychology, Delhi:Pearson

Reference Books :

1. Lindgren, H.C. (1973) : Introduction of Social Psychology. New York : Wiley.

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PSYCHOLOGY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER IV

Paper : RECENT PERSPECTIVES OF PSYCHOLOGY

Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

(I) This course aims at helping the students to appreciate the basic assumptions, principles and historical roots of modern scientific psychology. It will also help them to understand main theoretical perspective in psychology.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars and tests.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25 - 30 words each. Each short question will carry 2 marks, totaling 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit –4 in all.

Unit- I : *Emotional Intelligence* : Concept and Theories (Goleman, Salovey and Meyer).

Unit-II: *Spirituality and Well Being* : Concept, Measurement and Relationship with Well Being.

Unit-III: *Stress and Coronary Heart Disease;* Concept, Symptoms, Role of Stress in Coronary Heart Disease.

Unit-IV: *Positive Emotions and Mental Health:* Forgiveness, Gratitude and Mental Health.

Books Recommended :

Suggested Readings

1. Crompton, W.C. (2005): An Introduction to Positive Psychology. Singapore: Thomson.

2. Snyder, C.R. and Lopez, S.J. (2005): Handbook of Positive Psychology. New York: Oxford University Press.

3. Brannon, L. and Feist, J. (2007): Introduction to Health Psychology. New Delhi. Thomson – Wadsworth.

4. Cohen, L.M., M.C. Chargue, D.E. and Colins, F.J.: The Health Psychology Handbook. New Delhi: Sage Publications.

5. Mohan, J. (2003) : Psychosocial Correlates of Coronary Artery Disease: A Monograph. New Delhi: Friends Publishers.

5. Mohan, J. and Sehgal , M. (2006) : Health Psychology. New Delhi: Abhijeet Publications.

7. Pestonjee, D.M. (2006): Stress and Coping: The Indian Experience. New Delhi: Sage Publications.

Reference Books:

1. Carr, A.(2004): Positive Psychology; The Science of Happiness and Human Strengths. New York: Brunner –Routledge.

2. Linley, P.A. and Joseph, S. (2004) : Positive Psychology in Practice. New York John Wiley and Sons.

3. Peterson, C. (2006): Positive Psychology. New York: Oxford University Press.

4. Friedman –Di, Mateo (1989): Health Psychology. New York: Prentice Hall.

5. Kaplan, R.M., Sallis, J.E. and Patterson, T.L. (1993): Health and Human Behaviour. New York: McGraw Hill.

6. Sarafino, P.E. (1998): Health Psychology: Biopsychosocial Interactions. New Delhi: John Wiley and Sons..

7. Taylor, S.E. (2006) : Health Psychology. New Delhi: John Wiley and Sons.

8. White, P. (2005): Biopsychosocial Medicine: An Integrated Appraoch to Understanding Illness, New Delhi: Oxford University Press.

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GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER-III

Paper-I : THE NATURE OF GEOGRAPHY

Max. Marks	:	100
(Terminal Exam	:	90 Marks)
Internal Assessment	:	10Marks
Time	:	3 Hours

Objectives :

1. To introduce the students to the philosophical and methodological foundations of the subject and its place in the world of knowledge.
2. To familiarise them with the major landmarks in development of geographic thought at different periods of time.

Course Content :

UNIT-I

Nature and Development of Geography as a Discipline.

Contribution of Eratosthenes, Ptolemy, Humboldt, Ritter and Darwin.

UNIT-II

Concepts in Geography:

Spatial Distribution, Man-Environment Relationship, Areal Differentiation, Spatial Organisation.

UNIT-III

Approaches:
Empirical/Theoretical, Systematic / Regional, Behavioural.

UNIT-IV

Schools of Thought:

Determinism, Possibilism, Neo Determinism, Positivism, Humanism

Notes :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.
3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings :

1. Gosal G.S. : *History of Geograpic Thought*, Panjab University, Chandigarh, 2015.
2. Husain, Majid. : *Evolution of Geographical Thought,* Rawat, Jaipur, 2001.
3. Martin, G.J. : *All Possible Worlds – A History of Geographical Ideas*, Oxford University Press, U.K., 2005.

Further Readings :

1. Adhikari, Sudeepta : *Fundamentals of Geographic Thought,* Chaitanya, Allahabad, 2004.
2. Dikshit, R.D. : *Geographical Thought : A Contextual History of Ideas*, Prentice Hall, New Delhi, 2000.
3. Hartshorne, Richard : *Perspectives on the Nature of Geography,* Rand, McNally and Co., Chicago, 1959.
4. Minshull, R. : *The Changing Nature of Geography,* Hutchinson University Library, London, 1970.
5. Nayak, A & Jeffrey,A : *Geographical Thought An Introduction to Ideas in Human Geography,* Routledge, Taylor and Francis, London,2016.

Pedagogy :

- Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of the subject.
- The students may be encouraged to collect information on any theme amenable to geographical interpretation.

GEOGRAPHY

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER IV

Any one of the following optional courses :

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

OR

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Option (i) : POPULATION GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives :

The course is meant to provide an understanding of spatial and structural dimensions of population and the emerging issues. The course is further aimed at familiarising the students with global and regional level problems and also equip them for comprehending the Indian situation.

Course Content :

UNIT-I

Nature and scope of population geography, factors affecting distribution of population; present world pattern of population distribution. Density of population – various types of densities and their significance; broad spatial patterns of density of population in the world.

UNIT-II

Growth of population – Determinants of population growth; trends of population growth in developed and developing countries of the world.

Migration – Types, causes and consequences.

UNIT-III

Sex composition – Its determinants and world patterns.

Occupational structure – A comparative study of developed and developing countries.
Literacy–its determinants and world patterns.

UNIT-IV

Urbanization – Definition, process of urbanization; comparative study of urbanization in developed and developing countries.

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Special credit will be given to suitable use of maps.

4. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings:

Essential Readings :

1. Chandna, R.C. : *A Geography of Population*, Kalyani Publishers, Delhi, 1996.
2. Clarke, J.I. : *Population Geography,* Pergamon Press, Oxford, Latest Edition.

Further Readings :

1. Chandna, R.C. : *Jansankhya Bhoogol*, Kalyani Publishers, New Delhi, 1996.
2. Crook, N. : *Principles of Population and Development*, Pergamon, New York, 1997.
3. Jones, H.R. : *Population Geography*, Harper and Row, London, 1981.
4. Sundaram, K.V. & Nangia, S. (Eds.) : *Population Geography*, Heritage, New Delhi, 1986.
5. Trewartha, G.T. : *The Less Developed Realm – A Population Geography*, McGraw-Hill, New York, 1972.
6. Trewartha, G.T. : *The More Developed Realm : A Geography of its Population,* Pergamon Press, Oxford, 1979.

Pedagogy :

1. Use maps and atlases.
2. Students should be encouraged to read Population Clock.
3. Consult census publications.
4. Organised field work.
5. Organise discussions on population issues.

Option (ii) : URBAN GEOGRAPHY (An Elementary Course)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

1. To understand the process of urbanization and origin, growth and classification of urban settlements with relevant theories and models.
2. To examine the changing economic base and structure of the contemporary cities.
3. To relate urbanisation process and the evolution of the urban system.
4. To examine the contemporary urban issues and suggest new urban planning and urban policy

Course Content :

UNIT-I

Definition, nature and scope of urban geography.

Definition of urban places.

Evolution of City through Historical Times : Ancient, medieval, modern.

UNIT-II

Site and situation of cities : Definition, importance, types.

Size and spacing of cities.

Ecological Processes : Centripetal and centrifugal forces, types of ecological processes.

UNIT-III

Internal structure of cities : Theories of internal structure and their evaluation, concentric zone theory, sector theory, multiple nuclei theory.

UNIT-IV

City – Region relations.

Umland of Cities : Definition, bases of demarcation, attributes.

Rural –Urban Fringe : Attributes and demarcation.

Note :

1. The compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).

2. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each Unit. The students will be required to attempt one question from each unit and each question will carry 17.5 marks. These will be in addition to the compulsory question at Serial Number 1.

3. Internal assessment will be based on (i) class tests, (5%), (ii) academic activities; Seminar, Project, Assignment (3%), and (iii) attendance (2%).

List of Readings

Essential Readings:

1. Carter, Harold : *The Study of Urban Geography*, Edward Arnold, London, Latest Edition.
2. Krishan, Gopal : *Nagar Bhugol,* Punjab State University Text Book Board, Chandigarh, 1974.
3. Mayer, H.M. and Kohn, L.F. (Eds.) : *Readings in Urban Geography*, University of Chicago Press, Chicago, 1964.

Further Readings :

1. Johnson, H.J. : *Urban Geography : An Introductory Analysis,* Pergamon Press, London, 1972.
2. Knox, Paul : *Urban Social Geography : An Introduction,* Longman, London, 1982.
3. Verma, LN : *Urban Geography :* Rawat Publications
4. Sidhartha K & Mukherjee S : *Cities Urbanization and Urban systems* Kisalaya Publications Pvt. Ltd., 2013.
5. Ramachandran, K : *Urbanisation and Urban Systems in India* Oxford University, Press, 1992.

Pedagogy :

- Awareness of data sources such as from Census of India, Town Planning organizations, and their applications to understand and evaluate the spatial patterns and the processes of urbanization should be highlighted in the class. This needs to be in form of selected case studies.
- Study of urban morphology and urban functions with special reference to selected towns need to be encouraged.
- Atlases and maps of NATMO and Census should be consulted and students should be given opportunity to participate in group discussions.

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PUBLIC ADMINISTRATION

SEMESTER -III

PAPER- I: ADMINISTRATIVE THOUGHT

Max. Marks: 100
Theory: 90 Marks
Internal assessment: 10 Marks
Time: 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of select ancient, classical, neo-classical and modern administrative thinkers and their contribution to administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Kautilya, M.K.Gandhi and Woodrow Wilson

Unit-II

Frederick W. Taylor, Henri Fayol, Luther Gulick and L.B.Urwick

Unit-III

Max Weber, Elton Mayo and M.P.Follet

Unit-IV

Herbert A. Simon, Abraham Maslow and Fred W. Riggs

Essential Readings

Bertram, M. Gross.(1964).*The Managing of Organisations: The Administrative Struggle* .London: Mac Millan Publishers.

Fred W, Rigg.(1964)..*Administration in Developing Countries* .Boston Houghton.

George, C.S.(1974).*History of Management Thought.*New Delhi: Prentice Hall.

Hooja, R & Arora, R. K. (2007).*Administrative Theories* .Jaipur: Rawat Publicaion.

Katariya,S.(2011). *Administrative Thinkers* .New Delhi: National Publishing House Jaipur.

Maheshwari ,S.R.(2003) . *Administrative Thinkers* .New Delhi: MacMillan.

Prasad & Prasad.(2007). *Administrative Thinkers* .New Delhi: Sterling Publishers,Reprint.

Sapru, R.K.(1996).*Theories of administration* .New Delhi: S. Chand.

Simon, A. Herbert.(1976). 3rd Ed. *Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation* . New York: Macmillan.

Sudha , G.S.(2004). *Management of History Thinkers*.Jaipur : R.B.S.A. Publishers .

Further Reading

Barnard, C. (1974).*The Functions of the Executive* . London: Oxford University Press.

Pugh, D. S. (1984). 2nd Ed. *Organisation Theory* .Harmondsworth :Penguin Books.

Rabin, J. & Others.(2007). 3rd Ed.*Handbook of Public Administration.* New York: Marcel Dekker.

Silverman, D.(1970).*The Theory of Organisation* . London: Heinemann.

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PUBLIC ADMINISTRATION

SEMESTER-IV

PAPER- II: The candidates have to select one out of the following three options:

Option (i) : Agricultural Administration in India
Option (ii) : Industrial Administration in India
Option (iii) : Police Administration
Option (iv) : Public Policy and Analysis

PAPER-II – Option (i): AGRICULTURAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth knowledge about the role of agriculture in the economic development of the country, role of technology in agricultural development, marketing of agricultural produce. It would also give understanding about the agricultural policies of the government and introduce the student to certain related issues like agricultural finance, agricultural education, research, and extension.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Role of Agriculture in Economic Development
Problems of Agricultural Development
Agriculture Policy

Unit-II

Agriculture Development under Five-Year Plans
Centre-State Relations in Agriculture
Agriculture Administration at the Central and State Levels

Unit-III

New Technology for the Development of Agriculture
Marketing of Agriculture Produce
Agriculture Finance and Rural Indebtedness

Unit-IV

Role of NABARD in Agricultural Development
Agricultural Education and Research
World Trade Organisation and Agriculture

Essential Readings

Chaudhary, P. (1972). *Readings in Indian Agricultural Development*. London: George Allen & Unwin.
Ghosh , R.N.(1977). *Agriculture in Economic Development with Special Reference to Punjab* . New Delhi: Vikas.
Mahajan , V.S. (1990). *Agriculture and Rural Economy in India.* New Delhi: Deep & Deep Publications.
Rao , C.H. Hanumantha.(1975). *Technological Change and Distribution of Gains in Indian Agriculture* . Delhi: Macmillan.

Further Readings

Government of India. (2007-2012). 11th Five Year Plan.
Government of India.(1976) . *National Commission on Agriculture* (*Reports)* .New Delhi: Manager of Publications.
Government of India.(Recent Year). Economy Survey. Ministry of Finance, Economic Division.
N.C.A.E.R. (1974). *Credit Recruitment for Agriculture.* New Delhi.
Planning Commission. 12th Plan Approach Paper

PAPER-II – Option (ii): INDUSTRIAL ADMINISTRATION IN INDIA

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper: The objective of the paper is to give the student an insight and rationale into the concept of Industrialization, role of Public Enterprises in industrial development and the concepts of privatization and disinvestment. It would also give an understanding about the industrial policies of the government and introduce the student to certain related issues like industrial pollution, industrial sickness, and industrial dispersal.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Industrialization – Meaning, Objectives and Rationale
Role of Industry in Economic Development
Problems of Industrialization in India

UNIT-II

Industrial Policy Resolution of 1948 and 1956
New Industrial Policy of 1991
Industrial Finance – Sources, Problems and Remedies

UNIT-III

Role of Public Enterprises in Industrial Development of India
Privatization – Meaning, Methods, Merits and Demerits
Disinvestment – Meaning, Methods, Merits and Demerits

UNIT-IV

Industrial Pollution – Meaning, Types and its Impact on Environment
Industrial Sickness – Meaning, Extent and Magnitude, Causes and Remedies
Industrial Dispersal – Meaning and Policy Measures

Essential Readings

Aggarwal, A.N. (2001). *Indian Economy* .New Delhi : Vikas Publishing House.
Dutt,R. (2009).*Indian Economy* .New Delhi: S.Chand&Company Private Limited.
Kuchhal,S.C.(1983).*Industrial Economy of India.*Allahabad : Chaitnaya Publishing House.
Marathe,S.S.(1986).*Regulation and Development: The Indian Policy Experience of Controls over Industry* .New Delhi: Sage Publications.

Further Readings

Dhar,P.K.(2007).*Indian Economy : Its Growing Dimensions.*New Delhi: Kalyani Publishers.

Govt. of India.(2002). *Planning Commission*:*10th Five Year Plan 2002-2007* .New Delhi: Planning Commission.

Government of India.*Economic Survey* (Recent Years) Ministry of Finance, Economic Division.

Sivayya, K.V., & Dass, V.B.M. (2004).*Indian Industrial Economy* . New Delhi: S.Chand & Company Private Limited.

PAPER-II – Option (iii): Police Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the evolution of police system in India, need and importance of police in society, personnel aspects of police administration like recruitment, training, promotion, service conditions etc. It would also give an understanding about the expectations of the public from police and introduce the student to certain related issues like community policing, e-governance in police, attitudinal change in police services etc.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and significance of Police Administration
Evolution of Police Administration in India
Police Reforms in India

Unit-II

Organization and functions of Union Ministry of Home Affairs
Police Administration at State level
Police Administration at District level

Unit-III

Police Personnel Administration in India: Recruitment and Training of Police Personnel at Centre (IPS) and State level (SPS)
Service conditions and Discipline in Police Services

Unit-IV

The Concept and Need of Community Policing.
Concept & Importance of E-Governance in Police.
Attitudinal Change in Police: Concept, Significance and Methods.

Essential Readings

Chaturvedi, J.C. (2006).*Police Administration and Investigation of Crime*.New Delhi: Isha Books.
Ghosh, S.K. & Rustamji, K.F.M. (1993,1994,1995).*Encyclopaedia of Police in India*, Vol. I-III. New Delhi:Light and Life Publishers.
Gupta,A. (2007).*The Police in British India 1861-1947.* New Delhi:Bureau of Police Research and Development.
James, V.D. (1998). *National Police Commission: Issues ForRethinking*. New Delhi: APH Publishing Corporation.
Muthuswamy, P. (1989). *Swamy's Manual on Disciplinary Proceedings. Chennai*: Swamy Publishers Ltd.
Stahl, O. G. (1975). *Public Personnel Administration.* New Delhi*:* Oxford & IBH Publishing Co.

PAPER-II-Option (iv) : Public Policy and Analysis

Max. Marks:	**100**
Theory:	**90 Marks**
Internal assessment:	**10 Marks**
Time:	**3 Hours**

Objective of the Paper:

The purpose of this course is to provide students an understanding of the basic concepts of public policy and the environment in which it operates .It attempts to help students understand and gain insights into the various stages in policy process with special reference to the social, political and administrative environment prevailing in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Public Policy - Meaning, Significance and Types
Distinction between Policy, Planning , Decision making and Goals; Policy Cycle
Policy Analysis- Meaning, Significance; Approaches to Policy Analysis

Unit-II

Public Policy Formulation:Models of Policy-Making:Incremental, Rational, Institutional
Role of Legislature, Executive, Judiciary, Political Parties in policy formulation

Unit-III

Public Policy Implementation :
Role of Executive, Legislature, Bureaucracy and Judiciary in Policy Implementation
Major problems in policy implementation

Unit IV

Policy Monitoring and Evaluation ; Criteria for Evaluation;
Problems in Policy Evaluation

Essential Readings

Birkland, Thomas A. (2005) .An introduction to the Policy Process: Theories , Concepts and Models of Public Policy Making M.E.Sharpe

Dye , Thomas (2002) Understanding Public Policy (New Delhi:Pearson Education Singapore (P) Ltd.,

Henry, Nicholas (2015) Public Administration and Public Affairs,(New Jersey:Prentice Hall,Twelfth Edition,

Mathur , Kuldeep (2013) .Public Policy and Politics in India:How Institutions Matter? (Oxford,

Manon, Vineetha (2014) Public Policy and Administration,Wisdom Press , New Delhi,

Sapru, R.K. Public Policy: Art and Craft of Policy Analysis (New Delhi: Prentice Hall of India, learning 2nd Edition.)

Furthur Readings

Anderson, J. E. (2005). *Public Policy Making (6th ed.)*. New York:Houghton Mifflin Co.

Ayyar, V. R.V. (2009). *Public Policy Making in India*.New Delhi:Pearson.

Frank. F, Miller, G. J., & Sidney, M.S. (2007).*Handbook of Public Policy Analysis Theory, Politics and Methods*, Boca Raton, Florida: CRC Press.

Nagel . S.S. (1991) . *Public Policy:Goals, Means and Methods*. New York: St. Martin Press.

Rabin J., Hildreth, W., & Miller, G. (2007).*Handbook of Public Administration (3rd ed.)*.Florida: Taylor & Francis Group.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2020-21

SEMESTER-III

Note: **The students shall have to opt for one paper for Semester III examination out of the following two papers:**

OUTLINESOFTEST

Paper-I : Social ideas and social life from the earliest times to 1000A.D.

Paper-II : Economic ideas & economic life from the earliest times to 1000 A.D.

Paper-I: SOCIAL IDEAS AND SOCIAL LIFE FROM THE EARLIEST TIMES TO 1000A.D.

Max.Marks : 100
Theory : 90 Marks
InternalAssessment : 10 Marks
Time : 3Hours

Objective:

1. The primary objective of this paper is to acquaint the students with the origin and development of social institutions and ideas peculiar to the Indian society. The survey of the social life of the people in ancient India will also be discussed in detail.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology and contents of the sources mentioned in the syllabus.The changing pattern in social life should be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing15 short questions spread over the who syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry18 marks i.e.2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit–4 in all.

UNIT-I

1. Sources: Vedic literature, Epics, *Manu Smriti* and *Kamsutra* of Vatsayayana.
2. Four Purusharthas; Sixteen Samsakaras.

UNIT-II

3. Origin and development of caste system.
4. Slavery in ancient India.
5. Stages of life — four asramas.

UNIT-III

6. Family life and law of inheritance.
7. Development of education in ancient India.
8. Dress, ornaments, foods and drinks.

UNIT-IV

9. Position of women in ancient India.
10. Institution of marriage.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal Banarsidass, Delhi, 1991.
2. Altekar, A.S. : *Education in Ancient India,* rpt. Gyan Publishing House, New Delhi 2009.
3. Banerji, S.C. : *Society in Ancient India,* D.K. Print World, NewDelhi,1997.
4. Basham, A.L. ed. : *Cultural History of India,* Oxford University Press, NewDelhi, 1975.
5. Chanana, D.R. : *Slavery in Ancient India,as depicted in Pali and Sanskrit Texts,* New Age Printing Press, Delhi, 1960.

Suggeted Readings:

1. Ghurye, G.S. : *Caste and Class in India,* Popular Prakashan, Bombay, 1969.
2. Majumdar, B.P. : *Social and Economic History of North India* ,Budh Prakashan, Calcutta, 1960.
3. Mookerjee, R.K. : *Ancient Indian Education,* 3rd ed. Cosmo Publications, London, 1960.
4. Sharma, B.N. : *Social Life in Northern India,* Munshiram Manoharlal, Delhi,1966.

Paper-II: ECONOMIC IDEAS AND ECONOMIC LIFE FROM THE EARLIEST TIMES TO 1000 A.D.

Max.Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

Objective:

1. The main objective of this paper is to familiarize the students with economic ideas as contained in the secular and non-secular literature of our country. It will also make a survey of the economic life in ancient India to help the students to underst and economic institutions of those times.

2. **Pedagogy of the Course Work :**
The students should be given an idea of the chronology, authorship and contents of the sources mentioned in the syllabus. The changing pattern of agriculture, industries, trade and commerce should also be highlighted.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit–4 in all.

UNIT-I:

1. Sources : Vedic literature, Epics, *Arthasastra* of Kautilya and *Nitisara* of Kamandaka.

2. Agriculture in ancient India, ownership of land.

UNIT-II:

3. Taxation.
4. Industries and industrial products in ancient India.

UNIT-III:

5. Types of labour and wages.
6. Introduction and development of coinage.

UNIT-IV:

7. Trade and Commerce in ancient India.
8. Guild System.
9. Trade routes and transport.

Essential Readings:

1.	Gopal, Lallanji:		*Economic Life in Northern India* (700to1200 A.D.) Motilal Banarsidass, Delhi,1965.
2.	Maity, S.K.	:	*Economic Life in North India in the Gupta Period,* Motilal Banarsidass, Calcutta,1970.
3.	Majumdar, B.P.	:	*Social and Economic History of North India,* Firma KLM, Calcutta, 1960.
4.	Majumdar, R.C.	:	*Corporate Life in Ancient India,* Firma KLM,Calcutta,1922.
Suggested Readings:			
1.	Moti Chandra	:	*Sarthavaha,* Shakti Malik Abhinav Publishers, Patna, 1953.
2.	Moti Chandra	:	*Trade and Trade Routes in Ancient India,* Shakti Malik Abhinav Publishers, Delhi, 1977.
3.	Saletore, R.N.	:	*Early Indian Economic History,* N.M. Tripathi Publishers, Bombay, 1973.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (HONOURS) SECOND YEAR (SEMESTER SYSTEM) EXAMINATION, 2020-21

SEMESTER-IV

Note: **The students shall have to opt for one paper for Semester – IV examination out of the following two papers:**

OUTLINES OF TEST

Paper-III: Political ideas and institutions from the earliest times to 1000 A.D.

Paper-IV: History of Art and Architecture (Earliest times to C.1000 A.D.)

Paper-III: POLITICAL IDEAS AND INSTITUTIONS FROM THE EARLIEST TIMES TO 1000 A.D.

Max.Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

Objective:

1. The emphasis of this paper will be on the development of political ideas as enshrined in our secular and non-secular literature. It will also focus on the administrative institutions existing from the earliest times to 1000 AD.

2. **Pedagogy of the Course Work :**
   The students are expected to know the broad rules and political ideas laid down in the Law books during the period of study. They should be familiarized with the changing patterns of administrative set up at different times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all.All questions carry equal marks.The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shallc arry18marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit–4 in all.

UNIT-I:

1. Sources*:* Vedic literature, Epics, the *Arthasastra* of Kautilya, *Smritis* of Manu and Yajnavalkya.
2. Political Institutions*:*State, King, Council of Ministers and Foreign Relations.

UNIT-II:

3. Administrative organization during the Vedic period.
4. Administrative Organisation under the Mauryas.

UNIT-III:

5. Administrative Organisation under the Kushanas.
6. Administrative Organisation under the Guptas.

UNIT-IV:

7. Administrative Organisation under the Pushyabhutis.
8. Administrative Organisation under the Cholas.

Essential Readings:

1. Altekar, A.S. : *State and Government in Ancient India,* Motilal Banarsidass,Delhi,2002 .
2. Devhuti, D. : *Harsha, A Political Study,* Oxford University Press,New Delhi,2001.
3. Ghoshal, U.N. : *A History of Indian Political Ideas: The Ancient period and the period of transition to the Middle Ages,* Oxford University Press, London,1966.
4. Goyal, S.R. : *History of Imperial Guptas:* Central Book Depot, Allahabad,1968.
5. Jayaswal, K.P. : *Hindu Polity,* Chowkhamba Sanskrit Pratisthan,Banglore,2005.
6. Mukherjee, B.N. : *Rise and Fall of the Kushanas,* Firma KLM, Calcutta, 1988.
7. Prasad, Beni: *State in Ancient India* ,Central Book Depot, Allahabad,1974.
8. Satya Shrava: *The Sakas in India,* Motilal Banarsidass, NewDelhi,1981.
9. Sharma, R.S. : *Some Aspects of Political Ideas and Institutionsin Ancient India,* Motilal Banarsidass, Delhi,2001.

Suggested Readings:

1. Shastri K.A.N. : *The Cholas, Madras, 1975; Chola Vansha,* New Delhi, 1979 (In Hindi).
2. Thapar, Romila : *The Mauryas Revisited,* K.P. Bagchi and Company, Calcutta,1988.
3. Thapar, Romila : *Ashoka and the Decline of the Mauryas,* 2nd ed. Oxford University Press, New Delhi,1977.

Paper IV: HISTORY OF ART AND ARCHITECTURE (EARLIEST TIMES TO C. 1000 A.D.)

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Total	:	3 Hours

Objectives :

The main objective of the paper is to acquaint the students with the development in field of art and architecture of ancient India. The couse shall help students to learn about our heritage.

Pedagogy of the Course Work:

Besides giving an outline of the history and salient features of the topics enumerated in the syllabus, students should be thoroughly acquainted with important monuments and images in stone and bronze of each period. Important schools of art existing during the period should also be introduced. Constant use of visual aids like slides and transparencies should for mintegral part of teaching. Field worktrips to museums and monuments should be undertaken during the course work.

INSTRUCTIONS FOR THE PAPER-SETTER AND THECANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all.All questions carry equal marks.The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words.The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e.the candidates shall attempt one question from each Unit–4 in all.

UNIT-I:

(a) Harappan architecture

(b) Harappan sculptures.

UNIT-II:

(a) Stupa Architecture – Sanchi and Amaravati Stupas
(b) Rock-cut Architecture– Lomas Rishi, Ajanta and Ellora Caves

UNIT-III:

Temple Architecture :

(a) Gupta temples.

(b) *Nagara* – Chandella.

(c) *Dravida* – Chola.

(d) *Vesara* – Chalukya.

UNIT-IV:

Sculpture

(a) Early Period – Mauryan, Sunga and Kushanas.

(b) Gupta and Early Medieval – Gupta, Pala and Chola.

Essential Readings:

1. Agrawala, P.K. : *Gupta Temple Architecture,* Prithvi Prakashan, Varanasi, 1968.
2. Agrawala, V.S. : *Gupta Art,* U.P Historical Society, Lucknow, 1948.
3. Agrawala, V. S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* D.B. Taraporevala Sons, Bombay, 1971.
5. Dehejia, Vidya : *Early Buddhist Rock Temples : A Chronological Study,*Thomson and Hudson Ltd., London, 1972.
6. Gangoly, O.C. : *South Indian Bronzes,* Nababharat Publishers, Calcutta, 1978.
7. Harle, J.C. : *Gupta Sculpture,* Munshiram Manoharlal, New Delhi, 1996.
8. Huntington, S. : *The Art of Ancient India (Buddhist, Hindu, Jain),* Weather Hill, Tokyo, 1985.
9. Kramrisch, Stella : *Indian Scuplture, 2 Vols.,* Motilal Banarasidas, Delhi, 1981.
10. Krishna Deva : *Temples of North India,* National Book Trust India, New Delhi, 2000

Essential Readings:

1. Ray, Niharranjan : *Maurya and Sunga Art,* Indian Studies,Calcutta, 1965.
2. Rowland, R. : *The Art and Architecture of India,* Penguin Books, London, 1953.
3. Saraswati, S.K. : *Survey of Indian Sculpture, 2nd ed.,* Munshiram Manoharlal, New Delhi, 1975.
4. Srinivasan, K.R. : *Temples of South India,* National Book Trust, India, New Delhi, 1998.

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POLICE ADMINISTRATION

B.A. (HONOURS) 3rd Semester EXAMINATION, 2020-21

SEMESTER-III

Semester III : Police Administration and Crime

(A) Course Objectives:

The objective of this course is to introduce to the students, the Concept, Characteristics, and Causes of Crime. The endeavour also is to discuss the special forms of crime. Towards the end the students will be imparted knowledge relating to the role of Police in controlling crime.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit – I

Crime: Concept, Characteristics and Classification.
Causative factors of Crime.
Crime Statistics in India: Sources and Problems.

Unit- II

Organized Crime: Meaning, Characteristics and Types.
White Collar Crime: Meaning, Elements and Types.
Cyber Crime: Meaning, Causes and Types.

Unit- III

Crime Against Women: Concept, Incidence and Remedies.
Juvenile Delinquency: Meaning, Causes and Treatment.
Youth and Crime: Meaning, Characteristics and Trends.

Unit- IV

Drug related Crimes: Concept, Extent and Remedial Measures.
Custodial Crime: Concept, Extent and Remedial Measures.
Role of Police in Crime Control.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central law Publication, Allahabad, 2008.
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Siddique, Ahmad : Criminology- Problems and Perspectives, Eastern Books Co., Lucknow, 1993
4. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Gandhirajan, C. K : Organized Crime, A.P.H. Publishing Corp., New Delhi, 2004
2. Venugopal, Rao : Facets of Crime in India, Allied Publishers Private Limited, Bombay, 1967
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003

POLICE ADMINISTRATION

B.A. (HONOURS) 4th Semester EXAMINATION, 2020-21

SEMESTER-IV

Paper : Correctional Administration

(A) Course Objectives:

The Prime objective of this course is to familiarize the students with the meaning, nature , scope and principle of correctional administration. In addition the efforts are made to discuss with the students, Prison administration along with the alternative non-institutional methods of Probation and Parole elaborately.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72marks)

Unit- I

Meaning, Nature and Scope of Correctional Administration.
Punishment: Concept and Theories.
Forms of Punishment.

Unit- II

Probation: Concept and Development.
Parole: Concept and Development.
Prison: Concept and Origin.

Unit- III

Statutory Prisons in India.
Classification of Prisons in India.
Problems of Prisons in India.

Unit-IV

Prison Reforms in India.
Open Prisons: Concept, Origin and Advantages.
Prisons and Human Rights.

Essential Readings

1. Paranjpe, N.V. : Criminology and Penology, Central Law Publication, Allahabad, 2008
2. Ahuja, R. : Criminology, Rawat Publication, Jaipur, 2008
3. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A., 2003
4. Davies, Martin : Prisoners of Society: Attitudes and After-Care.
5. Singh Deipa, Singh K P : Criminology,Penology and Victimology,The Bright Law House, New Delhi,2013

Further Readings

1. Abadinsky, Howard : Organized Crime, Wordsworth- Thomson Learning Academy Resources Centre, C.A. 2003
2. Hassine, Victor : Life without Parole: Living in Prison Today, Roxbury Publishing Company, California, 2004.
3. Carrbine, Eamonn. et.al. : Criminology: A Sociological Introduction, Routledge, London, 2005.
4. Pollock, Joyceiyn M. : Prisons and Prison Life : Costs and Consequences, Roxbury Publishing Company, California,2004.
5. Pachauri, S.K : Prisoners and Human Rights, A.P.H. Publishing Corporation, New Delhi, 1999.
6. Paluch (Jr.), James A. : A Life for a Life-Life Imprisonment: America's Other Death Penalty, Edited by Bernard, Thomas J. & Johnson, Robert, Roxbury Publishing Company, California, 2004.
7. Sharma, S.D. : Creative Activities and the Law: Human Rights Approach, Deep & Deep Publications, 2007.

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MUSIC (VOCAL AND INSTRUMENTAL)

B.A. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER-III

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			:	45 marks
Paper-B: PRACTICAL (20 minutes duration)			:	45 marks
(i)	Viva		:	35 marks
(ii)	Harmonium		:	05 marks
(iii)	Tabla		:	05 marks
Internal Assessment (Theory + Practical)		(05 +05) :		10 marks
		Total	**:**	**100 marks**

PAPER-A: THEORY

UNIT-I

1. Classification of Ragas from 8th Century.
2. Concept and characteristics of Raga Dhyan.
3. Role of computer to promote Indian Classical Music
4. A study of Jati Lakshan

UNIT-II

1. Detailed Study of Ghrana/Baaj of the following:
   (a) Khayal Gayan
   (b) Sitar Vadan.
2. A study of the following:-
   Thumri, Misarkhani, Zafarkhani Gat and Sadra
3. Brief Knowledge of the following:-
   Nada, Swara, Shruti, Nyas, Vadi, Sambadi and Vivadi Swar.

UNIT-III

1. Shudha Vikrat Swaas of Bharat and Pt.Srinivas
2. Study of Shruti, Chatur-Sarana or Bharat and Sharngdev
3. Importance of Laya and Tala

UNIT-IV

1. Description and Comparative study of Detailed and Non-detailed Ragas :-
   (a) Detailed Ragas :-Bhageshwari Darbari
   (b) Non-detailed Ragas :-Adana, Rageshwari
2. Notation of Detailed Ragas and Talas
   i) Notation of Khayal/Gat
   ii) Notation of Tala prescribed in the syllabus
   Dhamar, Adachantal, Deepchandi

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper–II: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i) A Vilambit Khayal : 7.5 marks

(ii) A Drut Khayal : 5 marks

OR

(i) A Vilambit Gat : 7.5 marks

(ii) A Drut Gat : 5 marks

(b) One Dhrupad with different Layakaries in any detailed ragas 5 marks

(c) Any one of the following : 05 marks
Bhajan, Shabad or Dhun

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Darbari.
(ii) Bhagewhsari

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Adana.
(ii) Rajeshwari.

(c) Talas : Jhaptal and Teental on Tabla. 7.5 marks

(i) One slow Khayal with extempore Alaps and Tanas in any of the detailed Ragas.

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 5 marks

(iii) Ability to recite Dhamar, Adachautal and Deepchandi talas in single. 2.5 marks.

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Pranav Bharti	:	Pt. Onkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Gharanedaar Gayaki	:	Varman Rao H. Deshpanday
4.	Sangeetanjali	:	Pt. Onkar Nath Thakur
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet swarit	:	Dr. Ramakant Dwivedi
7.	Sangeet Chintan	:	Dr. Soubhagya Vardhan Brihaspati
8.	Bhartiya Sangeet Mein Vaigyanik Upakarano ka Prayog	:	Aneeta Gautam
9.	Saat Sur aur Sattairs Dayare	:	Shambu Nath Mishra
10.	Raag Parichay	:	Harish Chandra Srivastav
11.	Sangeet Prabodhika	:	Dr. Gyan Chand
12.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
13.	Bhartiya Sangeet Ka Itihas	:	Dr. Panna Lal Madan

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-IV

General Instructions

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2) Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3) While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4) There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5) Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6) There should not be more than eight students in a batch for practical examination.
7) There would be upto ten students in one section in practical class

Paper-A: THEORY (3 Hours duration) : 45 marks
(Duration 45 minutes 06 practical+ 02 Theory periods per week)

Paper-B: PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	: 35 marks
(ii)	Harmonium	: 05 marks
(iii)	Tabla	: 05 marks

Internal Assessment (Theory + Practical) (05 +05) : 10 marks

Total : 100 marks

PAPER-A: THEORY

UNIT-I

1. Detailed study of Gram
2. Detailed study of Murchhna

UNIT-II

3. Role of Electronic Media in Indian Classical Music
4. Music and Fine Arts

UNIT-III

1. A study of the following:-
   Sitarkhani Gat , Dhun, Chaturang, Dadra

2. Brief knowledge of the following with illustrations :-
   Zamzama, Jod Alap, Mulki, Avirbhav & Tirobhav.

3. A study of present raga Lakshan

UNIT-IV

1. Notation of Detailed Ragas and Talaas
   A) i) Notation of Khayal /Gat
      ii) Notation of Tala prescribed in the syllabus:Tivra, Jhumra, Punjabi Theka

   Non detailed Ragas

   B) i) Kedar
      ii) Dash

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper–B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a) Choice (Solo performance) : 22.5 Marks

(b) Practical Test : 22.5 Marks

(i)	Tuning	:	5 Marks
(ii)	Capacity to play Talas on Tabla	:	2.5 Marks
(iii)	Capacity to play Harmonium	:	2.5 Marks
(iv)	Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(c) Tarana or one Fast Gat in Ektal 2.5 marks

(d) Bandematram 2.5 marks

Part-B: (VIVA)

(a) List of Detailed Ragas:
- (i) Hamir
- (ii) Vrindavani Sarang

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
- (i) Kedar
- (ii) Des

(c) Talas : Chartal, Sultal and Tilwada on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

(i) One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeet swarit	:	Dr. Ramakant Dwivedi
2.	Sangeetanjali	:	Pt. Onkar Nath Thakur
3.	Abhinav Geetanjali	:	Pt. Ramashray Jha
4.	Sanchar Aur Sanchar Madhyam	:	Dr. Chandra Prakash Mishra
5.	Pillars of Hindustani Music	:	B.R. Deodhar
6.	Sangeet Visharad	:	Basant
7.	Raag Parichay	:	Harish Chandra Srivastav
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal
9.	Raag ka Udbhav Evam Vikas	:	

HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Second year has been **KEPT IN ABEYANCE for the session 2020-21**

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PHYSICS

B.Sc. (HONOURS) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2020-21

General Instructions for teachers, students and paper setters:

1. There will be two papers in each of the Semesters III-IV. Each of the papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The teaching hours for each theory paper are prescribed to be 30 hours and Physics Practical and Computational Physics are prescribed to be 60 hours.

2. The number of lectures per week will be three for each theory paper and six for practicals .

3. The examination time for each theory paper as well as Physics practical paper will be three hours.The Computational Physics paper will consist of two parts(a)written examination of one hour duration,and (b)Practical examination of two hours duration . Both the parts carry equal marks.

4. Each theory paper will consist of **seven** questions comprising of three sections .First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus.The question paper will be set for 44 marks-**All the questions in first and second sections will carry 9(nine) marks each and the compulsory question will carry 8 marks**. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question.**After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
   Computational Physics paper in Semester V will consist of two papers carrying equal marks:
   (a)Written examination of one and half hour duration common for all the students appearing in examination.
   (b)Practical examination of one and half hours duration Both the parts carry equal marks.

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

PHYSICS

SEMESTER-III

Paper I : Physics of Vacuum and Low Temperature

Unit I

Basics of Vacuum Techniques: Introduction, classification of vacuum ranges, throughput, Pump speed, speed of exhaust, conductance, ultimate pressure, viscous flow, molecular flow.

Production of Low Pressures: Pump types, Gaede oil-sealed rotating vane pump, Diffusion pump, sputter ion pumps, Gettering, types of getters, Cryogenic pumps.

Measurement of Low Pressures: Types of gauges, Mcleod gauge, Pirani gauge, Measurement of ultrahigh vacuum, penning gauge.

Methodology of Vacuum systems: Vacuum system, Materials for vacuum system, cleaning and sealing of vacuum system, Leak detection and its location.

(Book 1 and Book 2)

Unit II

Production and Measurement of Low Temperatures: Various methods for refrigeration, Coefficient of performance, Liquefaction of gases, Joule-Thomson effect, Principle of regenerative cooling, liquefaction of H_2 and He, Liquefaction of nitrogen, Solidification of He. Liquid He II, Thermodynamics of λ-transition, Adiabatic demagnetization, Linde's method, Temperatures below 0.01K, Low temperature thermometry and techniques, Use of liquid air and other liquefied gases.

(Book 3 and Book 4)

Recommended Books:

1. Vacuum Technology: A. Roth (North Holland, 1990).
2. Vacuum Technology: A. Guthrie (John Wiley, 1963).
3. A Treatise on Heat: M.N. Saha and B.N. Srivastava (Indian Press, 1965).
4. Low Temperature Physics: C. Dewitt, B. Dreyfus and P.G. de Gennes (Gordon & Breach, 1962).

Paper II : Electronics

Unit I

Analog Electronics

Circuit Theory: Voltage sources, Current sources, Capacitors, Inductors, Linear circuits, KCL, KVL, Mesh and Node analysis, Level shifting, Thevenin and Norton equivalent circuits, Power and energy relationships in case of R, L and C, Maximum Power Transfer Theorem, Series and parallel connection of mutually coupled coil, Equivalent circuit of transformer. (Book 1)

Transducers : Electrical transducers, Resistive transducers – Resistive position transducer, Strain gauge, Resistance thermometer, Platinum thermometer, Thermistor. Inductive transducers – Differential output transducers, LVDT, Pressure inductive transducer. Capacitive transducers, Piezo electric load cell, Thermocouple transducers.

(Book 2)

Unit II

Digital Electronics

Number systems: Binary, Hexadecimal and octal number systems, Interconversions and Binary arithmetic, 2's complement arithmetic, Binary fractions and negative binary numbers, floating point representations, Codes, Error detecting and correcting codes.

Digital Principles and Logic: Digital signals, Positive and Negative Logic, Basic digital circuits, Basic Gates – NOT, OR, AND; Universal Logic gates: NOR, NAND; Exclusive-OR gate.

Combinational Logic Circuits – Boolean Laws and De Morgan's theorems, Sum of Product method, Product of sums method, Karnaugh map (up to 4 variables).

Sequential circuits: Flip-flops – RS, JK, D, clocked, race-around conditions in JK flip-flop, master slave JK, Shift registers: serial in serial out, serial in parallel out, parallel in parallel out (only up to 4 bits)

(Book 3 and Book 4)

Recommended Books:

1. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).
2. Electronic Instrumentation, H.S. Kalsi (Tata McGraw-Hill, 2004).
3. Modern Digital Electronics: R.P. Jain (Tata McGraw Hill, 2010).
4. Digital Principles and Applications : Malvino and Leach (Tata McGraw Hill, 2010).

PHYSICS

SEMESTER-IV

Paper III: Statistics and Numerical Techniques

Unit I

Statistics and Probability: Measures of central tendency, Arithmetic mean, median, mode, Geometric mean, Harmonic mean, Quartiles, deciles and percentiles.
Measures of dispersion : Standard deviation, mean deviation, semi-interquartile range, coefficient of variation, Moments, Skewness and Kurtosis.
Linear Correlation and Regression for Two Variables only.
Conditional probability, probability distributions, Mathematical expectation, Probability and Combinatorial analysis

(Book 1)

Counting Statistics and Error Prediction: Characterization of Data, Binomial, Normal and Poisson distributions and their applications, Estimation of the Precision of a Single Measurement, Measure of consistency of observed fluctuations with expected Statistical fluctuation, chi square, Error Propagation, Distribution of time intervals between successive random events.

(Book 2)

Unit II

Numerical Techniques:
Solution of Algebraic and Transcendental Equations: Bisection Method, Secant Method, Newton-Raphson Method.
Interpolation : Finite difference interpolation with equal intervals, Newton' Forward and Backward Interpolation Formulae, Interpolation with unequally spaced points, Lagrange's interpolation formula, Extrapolation.
Numerical integration by Trapezoidal, Weddle's and Simpson's rules, Romberg integration.
Numerical differentiation by Newtons's forward and backward difference formulae, divided difference formula.
Numerical solution of differential equations, Euler's and Runge-Kutta Method.
Method of least-squares fitting of straight line, parabola and exponential curves, least squares fitting for any non-linear function by iterative method.

(Book 3 and Book 4)

Recommended Books:

1. Schaum's Outlines Statistics: Murry R Spiegel and Larry J Stephens (Tata McGraw Hill Education Pvt. Ltd., 2011)
2. Radiation Detection and Measurement: G.F. Knoll (Wiley, New York) (2000).
3. Numerical Mathematical Analysis, J.B. Scarborough (Oxford Book Co. Kolkata) (1961).
4. Introductory *Methods* of *Numerical Analysis,* S.S. *Sastry*. PHI Learning Pvt. Ltd. (2005).
5. A First Course in Computational Physics: P.L. Devries (Wiley, New York) (1994).

Paper IV : Mathematical Physics

Unit I

Differential Equations : Methods of separation of variables; separation of Helmholtz equation in Cartesian, spherical and cylindrical coordinates. Laplace equation in various coordinate systems, Ordinary and singular points; Examples of partial differential equations in physics, Heat Flow in one and two Dimensions.

Series solution of differential equations - Power series solution about ordinary point and regular singular point.

Special Functions in Physics : Dirac delta function, properties of delta function. Gamma function, factorial notation and applications. Beta function.

(Book 1 and Book 2)

Unit II

Special polynomials in Physics :

Bessel's differential equation, Bessel functions of first kind, generating function, recurrence formulae, plots, zeros of Bessel functions and orthogonality.

Legendre's equation, Legendre's polynomials, plots, generating functions, recurrence relations, orthogonality, Series expansion of a function in terms of a complete set of Legendre functions, Rodrigues formula.

(Book 1 and Book 2)

Laplace transforms, Applications of Laplace transforms to derivatives and integrals, s-domain interpretation of passive circuit elements R, L and C; Analysis of simple circuits in s-domain, Transfer function, poles and zeros, Stability of circuit.

Recommended Books:

1. Mathematical Physics: P.K. Chatopadhyay (Wiley Eastern, New Delhi, 2005)
2. Mathematical methods for Physicists : G. Arfken and H.J. Weber (Academic Press, SanDiego, sixth edition, 2005)
3. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).

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CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2020-21
Outlines of Tests

SEMESTER - III

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper I	:	Organic Chemistry-A	20	22	03
Paper II	:	Analytical Chemistry-A	20	22	03

Paper I : ORGANIC CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hoffmann, Curtius, Lossen-similarities, advantages and stereochemistry at the migrating group, effect of migrating group on rate of reaction. Baeyer Villiger Rearrangement.

Unit-II

Rearrangements and Neighbouring Group Effects I: (05 Lectures)
Hydroperoxide rearrangement–migratory aptitude, Brown, Pinacol, Wolff, Stevens, Wittig and Favorskii rearrangements-participation of groups such as –O–C–R, halogens, Aryl, and sigma bond, nonclassical carbocation.

Unit-III

Stereochemistry I: (05 Lectures)
Enantiomeric relationship, Diastereomeric relationship, Prochiral relationship. Conformational relationship in carbocyclic rings other than 5-membered, conformational effects on reactivity. Relationships between ring size and facility of ring closure.

Unit-IV

Stereochemistry II: (05 Lectures)

Hard Soft Acid Base principles: pka Values. Generation of Carbon Nucleophiles by Deprotonation, Regio selectivity and stereo selectivity in enolate formation, Medium effects, O versus C as site of alkylation, examples of Stork enamine reactions.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper II : ANALYTICAL CHEMISTRY-A

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Elementary Concepts I: (05 Lectures)

Qualitative and quantitative analysis, concepts and importance of quantitative analysis, choice of methods for analysis, sampling and theories of sampling, preparation of samples for analysis, calibration standards, solution concentrations in terms of various conventions, simple equilibrium calculations, calibration of analytical weights and glass wares, significance of calibration, role of instrumental methods of analysis in analytical chemistry.

Unit-II

Elementary Concepts II: (05 Lectures)

Terms of mean, medium, precision and accuracy in chemical analysis, types of errors in analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, least square curve fitting, propagation of errors, significant figure convention, standard deviations, confidence limits.

Theory of volumetric and gravimetric methods of analysis, primary and secondary standards, theory of indicators and their selection for titrations, precipitation methods, optimum conditions for precipitation, steps involved in gravimetric analysis, important organic precipitants.

Unit-III

Acid-Base Equilibria : (05 Lectures)

Acids and bases, ionization equilibria for weak monobasic acids, bases and related salts, acid base titration reagents and indicators for neutralization titrations, neutralization titrations for a strong acid with a strong base, polybasic acid with a strong base.

Unit-IV

Oxidation-Reduction Equilibria : (05 Lectures)

Oxidation-reduction reactions, reduction potentials, Nernst equation, oxidation-reduction titrations and curves, oxidation-reduction indicators, applications of oxidation-reduction techniques, determination of water by the Karl Fischer titration method.

INSTRUCTIONS FOR PAPER SETTERS AND CANDIDATES :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

CHEMISTRY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2020-21
Outlines of Tests

SEMESTER - IV

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
Paper III	:	Organic Chemistry-B	20	22	03
Paper IV	:	Analytical Chemistry-B	20	22	03

Paper III : Organic Chemistry-B

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE :

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Organic Chemistry of Life I: (05 Lectures)

Nucleic Acids : Nucleosides; Pentoses, heterocyclic bases, nucleotide; Purines and phosphate, DNA and RNA Hydrogen bonding and DNA replication (heredity).

Unit-II

Organic Chemistry of Life I: (05 Lectures)

Enzymes, nomenclature of enzymes, characteristics of enzymes, coenzyme A and prosthetic group. Coenzyme derived from niacin and examples of redox reaction with it.

Unit-III

Pericyclic Reactions I : (05 Lectures)

Electrocyclic Reactions: Woodward and Hoffmann rules, correlation diagram for cyclobutene = butadiene interconversion, Frontier orbital theory. Examples of 4, 6 and 8 electron systems, stereochemical modes.

Cycloaddition Reactions : Woodward and Hoffmann rules, Frontier Molecular orbital theory for Dieis-Alder reaction.

Unit-IV

Pericyclic Reactions II: (05 Lectures)

(4+2) and (2+2) cycloadditions, exo and endo isomers, Examples Bicyclo (2, 2, 1) heptane and Bicyclo (2, 2, 2,) octane systems. Intramolecular Diels Alder reaction.

Sigmatropic Rearrangements: Woodward and Hoffmann rules, Frontier Molecular orbital for 1, 3; 1, 5 and 1, 7 shifts. Examples including vitamin D_2 formation from 7-dehydro cholesterol (Provitamin D_3).

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory questions carries six marks and remaining all questions carry four marks each.***

Suggested Books :

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice Hall India Pvt. Ltd., 1992.

2. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry : 4th edition, 2001.

3. Mukherji, S.M., Singh, S.P., Organic Chemistry; 1st edition, Pubs: New Age International, New Delhi, 1985, Vol. 2.

Paper IV : ANALYTICAL CHEMISTRY-B:

Max. Marks	:	25
Theory	:	22
Internal Assessment	:	03
Time	:	3 Hours
Lectures	:	20

OBJECTIVE OF THE COURSE:

To teach the fundamental concept of Chemistry and their applications, The syllabus pertaining to B.Sc. (HONOURS) Semester System in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit- I

Precipitation Equilibria : (05 Lectures)

Solubility of precipitates, effect of competing equilibria on solubility of precipitates, separation of ions by control of concentration of precipitating reagents, effect of electrolyte concentration on solubility product, theory of precipitation titrations. The Vohlard and the Mohr's methods of analysis, adsorption indicators.

Unit-II

Complexation Equilibria : (05 Lectures)

Complexation, formation constants, EDTA equilibria, effect of pH on EDTA equilibria, complexometric titration curves, selection of indicators for complexometric titrations, applications of complexometric equilibria.

Unit-III

Solvent Extraction and Ion-Exchange Separation : (06 Lectures)

Basic concepts of solvent extraction, relationship between distribution coefficient, distribution ratio and per cent extraction, applications of extraction methods in analytical chemistry, ion-exchange processes, ion-exchange-resins, techniques and applications of ion-exchange separation, basic concepts of column and gas chromatography.

Unit-IV

Radioisotope Methodology and its Applications : (04 Lectures)

Radioactive isotopes, radioactive decay rates and half-life periods of radioactive isotopes, sample preparation in radiochemical measurements, background, dead-time and inefficiency corrections in radioactive measurements, isotope dilution method and its applications, radiometric-titrations, neutron activation analysis.

Instructions for paper setters and candidates :

(i) ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

(ii) ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

(iii) ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Suggested Books:

1. Skoog, D.A., West, D.M., Saunders, H., Fundamentals of Analytical Chemistry, 8th edition, International, 2004.

2. Khopkar, S.M., Basic Concepts of Analytical Chemistry, 18th edition, Pubs, New Age International, 2002.

BOTANY

B.Sc. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

Third Semester

		Time	Theory	Int Assess.	Max Marks
Theory Paper-A :	Plant Physiology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – I	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Fourth Semester					
Theory Paper-A :	Plant Ecology	3 hrs.	36	04	40
Theory Paper-B :	Development of Plants and their Utilization – II	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			200

Note : 1. The number of teaching hours for theory and practical per session shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

SEMESTER –III

Paper -A : PLANT PHYSIOLOGY

Objective : The main objective of this paper is to make the students aware about various functions and metabolisms of plants. The course material of this paper would enable the students to understand gradual aspects of growth and development in plants along with concept of photoperiodism, role of hormones and photomorphogenesis.

Teaching Methodology : Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

Unit-I

Plant-Water Relations : Water transport processes; diffusion and osmosis; water potential and chemical potential; absorption of water, water transport through xylem; transpiration and its significance; factors affecting transpiration; mechanism of stomatal movement.

Mineral Nutrition : Criteria of essentiality of elements; macro-and micronutrients; role of essential elements; mineral deficiency symptoms and plant disorders; nutrient uptake and transport mechanisms; role of cell membrane, ion pumps and carriers.

Unit-II

Photosynthesis : Historical background and significance; structure of photosynthetic apparatus; photosynthetic pigments; accessory pigments and the photoprotective carotenoids; reaction center complexes; photochemical reactions; electron transport pathways in chloroplast membranes; photophosphorylation; the Calvin cycle; the C_4 carbon cycle; crassulacean acid metabolism; synthesis of starch and sucrose; photorespiration.

Transport of Organic Substances: Transport of photosynthates; source-sink relationships; the mechanism of translocation in the phloem; assimilate partitioning.

UNIT-III

Respiration : Glycolysis; the TCA cycle and its regulation; electron transport in mitochondria; oxidative phosphorylation; pentose phosphate pathway; cyanide-resistant respiration.

Nitrogen Metabolism : Biological nitrogen fixation; reduction of N_2 into ammonia; *nif* genes; regulation of nitrate reductase and nitrogenase; nitrate and ammonium assimilation.

Unit-IV

Growth and Development : General aspects – definitions, phases of growth; kinetics of growth; physiology of seed dormancy and seed germination; concept of photoperiodism; Physiology of flowering; the florigen concept and role of hormones; vernalization; senescence and fruit ripening; importance of respiratory climacteric; discovery, physiological role and mechanism of action of the phytohormones – auxins, cytokinins, gibberellins, abscisic acid and ethylene; photomorphogenesis; discovery of phytochromes and cryptochromes, their role and mechanism of actions; signal transduction – basic concept; plant movements – tropic and nastic; biological clocks.

Suggested Readings :

1. Copleand, R. A. Enzymes: A Practical Introduction to Structure, Mechanism and Data Analysis, VCH Publishers, New York, 1996.
2. Dryer, R.L. and Lata, G.F. Experimental Biochemistry, Oxford University Press, New York, 1989.
3. Galston, A.W. Life Processess In Plants, Scientific American Library, Springer-Verlag, New York USA, 1989.
4. Hooykaas, P.J.J., Hall M.A. and Libbenga, K.R. (eds.) Biochemistry and Molecular Biology of Plant Hormones, Elsevier, Amsterdam, The Netherlands, 1999.
5. Hopkins W.G. Introduction to Plant Physiology : John Wiley and Sons. Inc., New York, USA, 1995.
6. Moore, T.C. Research Experiences in Plant Physiology: A Laboratory Manual, Springer-Verlag, Berlin, 1974.
7. Moore, T.C. Biochemistry and Physiology of Plant Hormones (2nd edition), Springer-Verlag, New York, USA, 1989.
8. Salisbury. F.B. and Ross, C.W. Plant Physiology (4th edition), Wadsworth Pulishing Co., California, USA, 1992.
9. Srivastava, H.N. Plant Physiology, Biochemistry & Biotechnology, Vol. V, Pradeep Publications, Jalandhar, India, 2013.
10. Taiz, L. and Zeiger, E. Plant Physiologyy (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010.
11. Wilson, K. and Goulding, K.H. (eds.). A Biologist's Guide to Principles and Techniques of Practical Biochemistry, Edward Arnold, London, U.K., 1986.

Suggested Labortary exercises for Third Semester

1. To study the permeability of plasma membrane using different concentrations of organic solvents.
2. To study the effect of temperature on permeability of plasma membrane.
3. To extract enzymes and study their activity, e.g. amylase, lipase, acid phosphatase, catalase, peroxidase.
4. Effect of the following factors on enzyme activity :

   pH, temperature, enzyme and substrate concentration, heavy metals.
5. To extract and separate chloroplast pigments by solvent method and demonstrate fluorescence in chloroplast extracts.
6. To determine the osmotic potential of vascular sap by plasmolytic method.

7. To determine the water potential of given tissue (any tuber).
8. To determine stomatal Index, stomatal frequency and percentage of leaf area open through stomata. Also study the effect of ABA on stomatal closure.
9. Effect of carbon dioxide concentration on the rate of photosynthesis.
10. To demonstrate that oxygen is evolved during photosynthesis.

Paper -B: DEVELOPMENT OF PLANTS AND THEIR UTILIZATION-I

Objective: This paper deals with internal structure of various plant parts, their growth and development patterns. It gives an insight into plant domestication and role of wild plants in ecosystem functioning.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Organization of the Higher Plant Body : The shoot and root systems; variation in habit and longevity; environmental influences.

UNIT-II

Meristems and Development : Shoot apical meristem, root apical meristem, lateral meristems and their functions. Range of form and structure of stem, leaf and root; their tissues and functions.

UNIT-III

Secondary Body of the Plant : Vascular cambium; secondary xylem (basic structure of wood); secondary phloem and periderm.

Unit-IV

Role of Wild Plants in Ecosystem Functioning : A general account.
Domestication of Plants : Primary and secondary centres of diversity; plant introduction.

Suggested Readings :

1. Carlquist, S. Comparative Wood Anatomy : Systematic, Ecological and Evolutionary Aspects of Dicotyledonous Wood, Springer-Verlag, Berlin, 1988.
2. Cutter, E.G. Cell and Tissues, Part I, Edward Arnold, London, 1969.

3. Cutter, E.G. Plant Anatomy: Experiment and Interpretation, Part II, Organs, Edward Arnold, London, 1971.

4. Esau, K. Anatomy of Seed Plants, 2nd Edition, John Wiley and Sons, New York, 1977.

5. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.

6. Fuller, K.W. and Gallon, J.R. Plant Products and New Technology, Clarendon Press, Oxford, New York, 1985.

7. Mauseth, J.D. Plant Anatomy, The Benjamin/Cummings Publishing Company Inc., Menlo Park, California, USA, 1998.

8. Nair, M.N.B. Wood Anatomy and Major Uses of Wood, Faculty of Forestry, University Putra Malaysia, 43400 Serdang, Selangor D.E. Malaysia, 1988.

9. Raghvan, V. Development Biology of Flowering Plants, Springer-Verlag, New York, 2000.

10. Raven, P.H., Evert, R.F. and Eichhorn, S.E. Biology of Plants,5th Edition, W. H. Freeman and Co., Worth Publishers, New York, 1999.

11. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV, Pradeep Publications, Jalandhar, India, 2007.

12. Goyal, J.P., Saini, Aruna. Angiosperms, Structure, Development and Reproduction, Trueman Company, Jalandhar, India, 2006.

13. Singh, V., Pande, P.C and Jain, D.K. Structure, Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, India, 2012.

Suggested Laboratory Exercises :

1. Study in the field of a large variety of herbaceous and perennials, both monocotyledonous and dicotyledonous, aquatic, mesophytic, xeromorphic plants, succulents, climbers, twiners, parasites, and trees with varied canopy architecture. Field diary to be prepared.

2. Morphology and anatomy of stems, roots and leaves using stained hand sections of permanent slides (tapioca, carrot, radish, onion, garlic, turnip, potato, etc.)

3. Study of vascular cambium in stem and root. Secondary growth. Examples of cambial variants and resultant secondary structures.

4. Preparation of world maps to show Vavilov's centres of origin of cultivated plants and Zhukovsky's concept of mega centres.

5. Preparation of maps showing the centres of primary diversity of important economic plants that originated in India and region of cultivation of plants introduced from the New World, Europe, Central Asia, Australia, Malaysia, China.

Guidelines for Botany Practical Examination:

Max. Marks: 20
Practical: 18
Int. Assessment: 2
Time: 3 hrs.

Q.1. Write procedure and precautions for Physiology experiment A. Perform the experiment, record observations calculation if any and results. Show the experiment to the examiner. 5

Q.2. Write illustrated morphological note on specimens B & C. 4

Q.3. Idenitfy slides D & E giving at least two identifying features for each. 4

Q.4. Practical Note book. 2

Q.5. Viva-Voce 3

BOTANY
SEMESTER-IV

PAPER-A: PLANT ECOLOGY

Objective: This paper deals with the role of environment in causing structural and functional variations in plants. It provides a broad idea about concept of population, community, ecosystem, ecological succession and role of plant indicators in environment monitoring.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT- I

Introduction : Holocoenotic nature of environment; limiting factors; ecological amplitude triggering factors (soil, water, atmosphere).

Ecological Adaptations: Concept, ecads, ecotypes and ecoclines; adaptations in relation to soil oligotrophy; adaptive significance of photosynthetic pathways.

Population : Concepts; density and pattern; idealized plant life history; population growth; carrying capacity; population regulation; r and k selection; population interactions.

UNIT- II

Community: Community characteristics and their measurement, species diversity (alpha, beta and gamma), niche.

Ecosystem : Concept, components and organisation, energy flow; ecological efficiencies; cycling of C, N and P; characterization and structure of ecosystem; the biotic and abiotic components, their inter-relationship; the processes within ecosystem, the trophic organisation; autotrophy, heterotrophy, parasitism, detritus, decomposition.

Ecological Succession : Mechanism and types; nature of climax; food chains and food webs; ecological pyramids.

UNIT- III

Flow of Energy and Materials : Flow of energy and materials within ecosystem; models of energy flow; ecosystem productivity; biogeochemical cycles; major types of ecosystems.

UNIT- IV

Plant Indicators and their role in Environmental Monitoring.

Phytogeography : General principles, vegetation of India.

Suggested Readings :

1. Barbour, M.G., Burk, J.H. and Pitts, W.D., Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.

2. Hill, M.K., Understanding Environmental Pollution, Cambridge University Press, 1997.

3. Kormondy, E.J., Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.

4. Mackenzie, A. et al., Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, 1999.

5. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.

6. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.

7. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.

8. Smith, R.K. Ecology and Field Biology, Harper Collins, New York, 1996.

9. Srivastava, H.N. Ecology and Utilization of Plants, Vol.VI Pradeep Publications, Jalandhar, India, 2012.

Suggested Labortary exercises:

1. To study ecological adaptations (morphological and anatomical) in plants (hydrophytes, xerophytes, epiphytes).

2. To determine minimum area of sampling unit (quadrat) for the study of grassland community.

3. To estimate Importance Value Index for grassland species.

4. To prepare maps of India with respect to (i) Major climate zones, (ii) Forest types, and (iii) Bio-geographical regions and to comment on these.

Paper -B : DEVELOPMENT OF PLANTS AND THEIR UTILIZATION – II

Objective : The course work of this paper deals with utilization of plants. It would provide the students an idea about importance of various plant parts as well as plant wealth such as medicinal, crops and food plants, fibre and oil yielding plants, timber yielding and firewood species.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practical, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscope and binoculars and hands-on tools/equipment etc.

UNIT-I

A General account of wheat, rice, maize, sorghum, bajra, potato and sugarcane.
Legumes : Chickpea (Bengal gram), red gram (arhar) – a general account.

UNIT-II

Vegetable Oil Sources : Mustard, groundnut, soyabean and coconut –a brief account.
Plant Fibres : Cotton, jute and coir.
Timber and Firewood Species : A general account of use of following trees:
Tectona, Dalbergia, Albizzia, Eucalyptus, Cedrus, Acacia, Shorea, Terminalia, Mangifera and Azadirachta.

UNIT -III

Medicinal Plants : A brief account of plant drugs and their chief constituents used in indigenous and allopathic systems of medicines viz. *Opium, Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrhiza, Phyllanthus amarus (P. fraternus), Allium sativum, Atropa belladonna and Aloe barbadense.*

Unit-IV

A brief account of the following:
Natural Rubber : *Hevea brasiliensis*
Essential Oils: *Cymbopogon sp., Eucalyptus, Jasminum, Geramium and Vetiveria.*
Insecticides : *Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum).*
Dyes : *Curcuma longa(turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigofera (Indigo) and Lawsonia inermis (mehndi).* Extraction of pigments.
Ornamental Plans : Familarity with seasonal and perennials grown in your locality.

Suggested Reading :

1. Kocchar, S.L., Economic Botany in Tropics, 2nd edition, Macmillan India Ltd., New Delhi, 1988.
2. Lyndon, R.F., Plant Development : The Cellular Basis, Unwin Hyman, London, 1990.
3. Sambamurthy, A.V.S.S. and Subramanyam, N.S., A Textbook of Economic Botany, Wiley Eastern Ltd., New Delhi, 1989.
4. Sharma O.P. Hill's Economic Botany, Tata McGraw Hill Publishing Company Ltd., New Delhi, India, 1996.
5. Simpson, B.B. and Conner-Ogorzaly, M., Economic Botany –Plants in Our World, McGraw Hill, New York, 1986.
6. Srivastava, H.N. Eology and Utilization of Plants, Vol. VI, Pradeep Publications, Jalandhar, India, 2012.
7. Steevas, T.A. and Sussex, I.M. Patterns in Plant Development, 2nd Edition, Cambridge University Press, Cambridge, 1989.
8. Thoms, P.Trees: Their Natural History Cambridge University Press, Cambridge, 2000.
9. Tippo, O. and Stern, W.L. Humanistic Botany, W.W. Norton, New York, 1977.
10. Vishnu Swarup, Ornatmental Horticulture, Macmillan India, Ltd., Neew Delhi India, 1997.

Suggested Laboratory Exercises

1. Study of vegetative and reproductive morphology and anatomy of wheat, rice, maize, sorghum, bajra, potato and sugarcane. Study of starch grains in these plants (except in sugarcane). Epidermal structure of sugarcane stem and leaves. Tests for sucrose.
2. Study of vegetative and floral morphology, and pod development in chickpea and red gram.
3. Study of structure of oil storing tissues in sectioned seeds of mustard, groundnut and soyabean, and coconut endosperm, using micro-chemical tests.
4. Study of wood anatomy of ring-porous, diffuse porous woods using hand sections or prepared slides. Understanding of wood anatomy using T.S., T.L.S. and R.L.S. in five timber yielding species (*Tectona, Dalbergia, Albizzia, Eucalyptus Cedrus, Acacia, Shorea, Terminalia, Mangifera, Azadirachta,* or any other depending on the location of the institution). Preparation of a list of 10 fire wood species in your region and their properties.
5. Study of 10 whole plants (live or from herbarium specimens) used as resources of drugs : (*Opium*, *Rauvolfia, Adhatoda, Emblica officinalis, Terminalia bellirica, Glycyrrhiza, Phyllanthus amarus (P. fraternus*), *Allium sativum, Atropa belladonna, , Aloe barbadense,* or any other important plants of your area.
6. Study of laticiferous system in the stem of *Hevea brasiliensis,* familiarization with whole plants (fresh or herbarium specimens of *Cymbopogon* sp., *Eucalyptus, Jasminum, Geranium and Vetiveria* (or any other local sources of essential oils).
7. Study of Azadirachta, Artemisia annua, Chrysanthemum cinerarifolium (pyrethrum) from live specimens. Sources of dyes : Curcuma longa (turmeric), Bixa orellana (annatto), Crocus sativus, Butea monosperma (palash), Indigo fera (indigo) and Lawsonia inermis (mehndi). Extraction of pigments.
8. Preparation of a list of trees and shrubs used as ornamentals alongwith their popular and scientific names. Seasons of flowering and brief description. Calendar of seasonals grown as bed plants, potted plants, house plants, flowers used for worship or ornamentation. This may be illustrated and presented as a term paper at the time of examination.

Guidelines for Botany Practical Examination

Max. Marks : 20
Practical : 18
Int. Assessment : 2
Time : 3 hrs.

1. Identify specimen A and write note on its ecological adaptations. 3
2. Identify and write illustrated morphological note on specimens B,C & D giving their economic importance. 6
3. Identify & write botanical name and family of specimens E & F. 4
4. Practical note book. 2
5. Vice-Voce . 3

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ZOOLOGY

B. Sc. (HONOURS) SEMESTER - III

PAPER I: ENVIRONMENTAL BIOLOGY-I

Max. Marks	: 40
Theory Exam	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Environment :** Introduction and components.
2. **Ecological Concepts :** Ecosystem: Types food chains, food web, energy flow.

UNIT-II

3. **Biogeochemical cycles**
4. **Ecological succession**

UNIT-III

5. **Pollution: Types** - Air, water, land, thermal and noise pollution.

   (a) *Sources of Pollution :* Sewage, industrial wastes, silt, fertilizers, detergents, oils, pesticides, smoke, exhaust gases from automobiles, smog, acid rains, radioactive elements etc.

   (b) *Pollution in India:* Major polluted rivers and their sources of pollution, air pollution in major cities.

   (c) *Hazards of Pollution :* Effects of pollution on plants and animals.

UNIT-IV

6. (a) *Control of Pollution:* Primary, secondary and tertiary treatment, standards for the quality of drinking water.

   (b) Bioremediation

Suggested Readings :

1. Odum, E.P. : Fundamentals of Ecology, W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : The Biology of Pollution : Studies in Biology, No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3. Louis, K. : River Pollution, Butterworths, 1969.
4. Dix, H.M. : Environmental Pollution, Atmosphere, Land, Water and Noise, (Institution of Environmental Science) Wiley, 1981.
5. Mani, M.S. : Ecology and Biogeography of India, Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6. Kendeigh, S.C. : Ecology with Special Reference to Animals and Man, New Jersey, Prentice Hall Inc., 1974.

Paper II: MOLECULAR BIOLOGY-I

Max. Marks	: 40
Theory Exam	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

1. **Introduction** : Scope and historical account from molecules to cells, prokaryotes to eukaryotes, unicellular to multicellular.
2. **Biomolecules** : Micro and Macro molecules Structure and function of carbohydrates, lipids, proteins and nucleic acids.

UNIT-II

3. **Carbohydrates** : Classification, structure of cellulose and glycogen.
4. **Lipids** : Classification, structure of ganglioside and steroids.

UNIT-III

5. **Proteins**: Classification, structure of amino acids, primary, secondary and tertiary structure of proteins, structure of hemoglobin and lysozyme.

UNIT-IV

6. **Nucleic Acids** : DNA. What genes are made of? Detailed structure of DNA Molecule, replication, RNA - various types, transcription, translation and involvement of RNAs in protein synthesis.

Books Recommended :

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Watson, J.D. : Molecular Biology of the Cell, Robert, K. & Garland Publications, New York, 1983
2. DeRobertis, E.M.F. Jr. : Essentials of Cell and Molecular Biology, Halt Saunders, Japan, 1981
3. DeRobertis, E.D.P. & DeRobertis, E.M.F. : Cell and Molecular Biology, 8th edition, Halt Saunders, Tokyo, 1987.
4. Gardner, E.J., Simmons, M.J. & Snustad, D.P : Principles of Genetics, John Wiley & Sons, New York, 2004.
5. Power, C.B. : Cell Biology, Himalayan, Publishing House, Bombay, 1981
6. Schleif, R. : Genetics and Molecular Biology, Addison-Wesley, Reading U.K, 1986
7. Villee, C.A., Selomon, E.P. & Davis, P.W, : Biology, Saunders College Publishing, New York, 1985
8. Watson, J.D. : Molecular Biology of the Gene, 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9. Barry, J.M. : Molecular Biology, Genes and Chemical Control of Living Cells, Prentice Hall, Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-III

Practical's based on both theory papers.

1. Estimation of D.O. of the given water sample (normal and polluted).
2. Estimation of total alkalinity of water sample (normal and polluted).
3. Estimation of chlorine of water sample (normal and polluted).
4. Estimation of Hardness of water sample (normal and polluted).
5. Estimation of NO3 of water sample (normal and polluted).
6. Estimation of PO4 of water sample (normal and polluted).
7. Analysis of the variations in protein contents in different organs of an animal procured from slaughter house.
8. Analysis of the species variations in amino acids requirements.
9. Demonstration of carbohydrate and proteins in a cell (Cytochemically).
10. Prepare a Project on national parks/sanctuaries/biosphere reserves.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) III Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks

I. Analyze the variations in protein contents in the organs of a given specimen. Write the procedure and show the reading to the examiner. (3)

II. Determine the physico-chemical factors (A) in given water sample from a lake. Write the procedures followed. (3)

III. Demonstrate cytochemically carbohydrates/protein in an eukaryotic cell. Write the procedure and show the preparation to the examiner. (3)

IV. Write a note on the project…… (2)

V. Viva-Voce. (3)

VI. Note Book and Charts. (4)

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ZOOLOGY

B. Sc. (HONOURS) SECOND YEAR EXAMINATION, 2020-21

SEMESTER-IV

PAPER I : ENVIRONMENTAL BIOLOGY-II
PAPER II: MOLECULER BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

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PAPER I: ENVIRONMENTAL BIOLOGY-II

UNIT-I

1. **Biodiversity Conservation** (In-situ, Ex-situ)
2. **IUCN Red List Categories:** Critically Endangered, Endangered, Vulnerable, Rare, Least Concern

UNIT-II

3. **National Conservation Projects**
4. **National Biodiversity Act and Wild life Act**

UNIT-III

5. Ecology of Conservation:

(a) Conservation of Natural Resources: Water, land and minerals.

(b) *Aquaculture:* Pisciculture and management of ponds, extensive & intensive and integrated fish culture.

UNIT-IV

6. (a) Forest Ecology: Forest statistics of India, conservation of forests, management of forests for timber productions.
   (b) Agriculture :Weed control, crop rotation, green revolution, checking of soil erosion.
   (c) *Dedesertification:* Measures to control the advance of desert.

Suggested Readings :

1. Odum, E.P. : Fundamentals of Ecology, W.B. Saunders Co., Philadelphia, 1971.
2. Melanby, K. : The Biology of Pollution : Studies in Biology, No. 38, Edward Arnold (Publishers) Ltd., 41, Bedford Square, London,1980.
3. Louis, K. : River Pollution, Butterworths, 1969.
4. Dix, H.M. : Environmental Pollution, Atmosphere, Land, Water and Noise, (Institution of Environmental Science) Wiley, 1981.
5. Mani, M.S. : Ecology and Biogeography of India, Dr. W. Junk B.V. Publishers, The Hague, 1974 .
6. Kendeigh, S.C. : Ecology with Special Reference to Animals and Man, New Jersey, Prentice Hall Inc, 1974.

Paper II : MOLECULAR BIOLOGY-II

UNIT-I

1. **Mutations :** Types of mutations, physical and chemical mutagens and their mode of action on DNA.
2. **Bioenergetics :** Types of energy and their transformation, first and second law of thermodynamics.

UNIT-II

3. Factors governing chemical reactions, generation and function of ATP, biocatalysts; role of enzymes in cellular reactions. Types of major enzymes, Apoptosis.
4. **Regulation of Gene Expression :** Concept of operon, induction and repression in Prokaryotes, gene regulation in eukaryotes.

UNIT-III

5. **Molecules of Cellular Defence :** Structure and function of antibody, major histocompatibility antigens, HLA system. Genetic basis of antibody diversity.

UNIT-IV

6. **Molecular Basis of Inborn Errors of Metabolism :** Genetic basis of carbohydrates and amino acid metabolism, galactosemia and Phenylketonuria.
7. **Recombinant DNA :** Restriction endonucleases, Plasmids, cloning of DNA, use of recombinant DNA technology.

Books Recommended :

1	Alberts, B. Bray, D., Lewis, J., Raff, M., Robert, K. and Watson, J.D.	:	Molecular Biology of the Cell, Garland Publications, New York,1983.
2	DeRobertis, E.M.F. Jr.	:	Essentials of Cell and Molecular Biology, Halt-Saunders, Japan, 1981.
3	DeRobertis, E.D.P. and DeRobertis, E.M.F.	:	Cell and Molecular Biology, 8th Edition, Halt Saunders, Tokyo, 1987.
4	Gardner, E.J., Simmons, M.J. and Snustad, D.P.	:	Principles of Genetics, John Wiley and Sons, New York, 2004.
5	Power , C.B.	:	Cell Biology, Himalayan Publishing House, Bombay, 1981.
6	Schleif, R.	:	Genetics and Molecular Biology, Addison-Wesley, Reading U.K., 1986.
7	Villee, C.A., Selomon, E.P. and Davis, P.W.	:	Biology, Saunders College Publishing, New York, 1985.
8	Watson, J.D.	:	Molecular Biology of the Gene, 4th Edition, Vols. I & II, Narosa Book, New Delhi, 1987.
9	Barry, J.M.	:	Molecular Biology, Genes and Chemical Control of Living Cells, Prentice Hall Inc., New Jersey, 1964.

PRACTICALS

SEMESTER-IV

Practical's based on both theory papers.

1. Biota of pond water and sewage/industrial effluent.
2. Effect of light and gravity on organism.
3. Study of littoral, limnetic, profundal communities.
4. Study of nucleic acids in tissues (Cytochemically).
5. Idea about viruses and bacteria through charts etc.
6. Preparation and study of onion root tip chromosomes.

The scheme for the conduct of Practical Examination.

Based on Theory Papers I & II of B.Sc. (Honours) IV Semester

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2marks

I. Record biota in the given sewage samples. Draw labeled sketches & demonstrare these to the examiner. (3)

II. Examine water sample for biotic communities from particular zone of lake, sketch and demonstrate. (3)

III. Identify the given chart/diagram. Write a brief note on it. (2)

IV. Study the effect of …… on the given animal. Write the procedure followed. (2)

V. Male a chromosomes preparations of the onion root tip. Draw a label diagram of any stage of mitosis and show it to the Examiner. (3)

VI. Viva-Voce. (2)

VII. Note Book and Charts. (3)

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B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE), 2020-21

SEMESTER-III

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would not be more than eight students in one section in practical examination.
3. There would be upto eight students in one section in practical class.
4. In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5. No electronic Instruments will be allowed for lehra in practical examination.
6. While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 theory periods per week) : 45 Marks

Paper-A Theory

Maximum Marks: 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 3 Hours

Unit-I

1. Define the following terms : Stuti, Thaat, Tehai, Gat, Bhramari
2. Nritta, Natya, Nritya
3. Head Movements

Unit-II

1. Contribution of Acchan Maharaj in the field of dance
2. Life sketch of Guru Pt. Narayan Prasad.
3. Knowledge of Gharanas of Kathak Dance

Unit-III

1. Detailed knowledge of Folk dance of west Bengal.
2. Study of Abhinaya
3. Brief note on Kathak and Odissi.

Unit-IV

1. Description of Jhaptaal, Ektaal and Adachautaal
2. Writing of Ekgun, Dugun and Chogun of following talas: Teentala, Ektala, Jhaptala
3. Writing of notation: Thaat, Amad, Tihai, Tukra, Tisarjati paran, Kavit in : Teentala, Jhaptala, and Ektala

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks: 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 20 minutes

1. Teentala: Tatkar in Ekgun, Dugun, Chaugun layakaries with two tihaies.
2. Teentaal, Ektala & Jhaptala: Thaat-2, Amad-2, Tihai-2, Tukras-2, Tisarjati paran-1, , kavit-1
3. Gat Nikas: Thaat and Mataki
4. Practical demonstration of Rajasthani dance
5. Practical knowledge of Asamyukta Mudras.
6. Ability to play Nagma in teentala
7. Recitation of all toras & tukras etc. on hand.
8. Palta in Teental.

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE), 2020-21

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would not be more than eight students in one section in practical examination.
3. There would be upto eight students in one section in practical class.
4. In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5. No electronic Instruments will be allowed for lehra in practical examination.
6. While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 theory periods per week) : 45 Marks

Paper-A Theory

Maximum Marks: 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 3 Hours

Unit-I

1. Define the following terms: Uthaan, Chakardar Paran, Palta, Jati, Pakshi Paran
2. Ang, Upang, Pratyang
3. Eye Movements

Unit-II

1. Origin and development of Kathak Dance
2. Detailed study of Kathakali Dance
3. Prastutikaran of Kathak

Unit-III

1. Detailed study of Chari
2. Study of Abhinaya Darpan
3. Dance and Literature

Unit-IV

1. Description of Dadra (6), Keherva (8), Dhamar (14), Teentala (16)
2. Writing of Ekgun, Dugun, Chaugun of above mentioned talas with tehai
3. Writing in notation : Thaat, Amad, Tehai, Tora, Chakardar paran, Kavit and Premlu in Dhamar & teentala
4. Writing in Notation: Tatkar, Thaat, Toda, Tukda in Ada-chautaal.
5. Theka of Rupak in Ekgun, Dugun and Chuguan Layakari.

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks: 50 marks
Theory: 45 marks
Int. Assessment: 05marks
Time: 20 minutes

1. Adachautala::Tatkar in Ekgun, Dugun, Chaugun layakaries with two tihaies.
2. Dhamar & Teentala: Thaat-2, Amad-2, Tihai-2, Toras-2, Paran-1, Kavit-1, Pramelu-1
3. Adachautal: Tatkar, Thaat-1, Tora -2,Tukra -1
4. Gat Nikas: Ghungat, Bansuri
5. Practical demonstration of Giddha
6. Practical knowledge of Sanyukta Mudras.
7. Ability to play Nagma on harmonium in teentala & dhamar
8. Recitation of all toras & tukras etc. on hand.
9. Theka of Rupak in Ekgun, ?dugun and Chougun layakaris on hand.

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kathak: Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 – enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT AND COMMERCE

SYLLABI

FOR

B.Com. (General &Hons.)
(Semester System)
For the Examinations 2020-2021

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SCHEME OF B.Com COURSE (General and Hons.)

Semester – I

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 101 A **BCM 101 B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 102	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 103	**INTERDISCIPLINARY** PSYCHOLOGY FOR MANAGERS	100	5	1
BCM 104	BUSINESS ECONOMICS-I	100	5	1
BCM 105	PRINCIPLES OF FINANCIAL ACOUNTING**	100	5	1
BCM 106	COMMERCIAL LAWS	100	5	1
BCM 107	PRINCIPLES AND PRACTICES OF MANAGEMENT	100	5	1

Semester – II

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 201A **BCM 201B**	PUNJABI OR HISTORY AND CULTURE OF PUNJAB	50	3	
BCM 202	ENGLISH AND BUSINESS COMMUNICATION	100	5	1
BCM 203	**INTERDISCIPLINARY** E-COMMERCE	100	5	1
BCM 204	BUSINESS ECONOMICS-II	100	5	1
BCM 205	CORPORATE ACOUNTING**	100	5	1
BCM 206	BUSINESS LAWS	100	5	1
BCM 207	HUMAN RESOURCE MANAGEMENT	100	5	1
	ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/ CHILDREN AND DRUG ABUSE*	100		

Semester – III

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 301	**INTERDISCIPLINARY** ISSUES IN INDIAN COMMERCE	100	5	1
BCM 302	COST ACCOUNTING**	100	5	1
BCM 303	COMPANY LAW	100	5	
BCM 304	BUSINESS MATHEMATICS AND STATISTICS **	100	5	1
BCM 305	BANKING AND INSURANCE	100	5	1
BCM 306	GOODS AND SERVICES TAX (GST)**	100	5	1

Semester-IV

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 401	**INTERDISCIPLINARY** SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	100	5	1
BCM 402	ADVANCED ACCOUNTING**	100	5	1
BCM 403	AUDITING AND SECRETARIAL PRACTICE	100	5	1
BCM 404	COST MANAGEMENT**	100	5	1
BCM 405	MARKETING MANAGEMENT	100	5	1
BCM 406	QUANTITATIVE TECHNIQUES AND METHODS**	100	5	1

Semester-V

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T)Per Week***
BCM 501	INCOME TAX LAW**	100	5	1
BCM 502	MANAGEMENT ACCOUNTING**	100	5	1
BCM 503	INDIAN ECONOMY	100	5	1
BCM 504	PRODUCTION AND OPERATION MANAGEMENT	100	5	1
BCM 505	ENTREPRENEURSHIP AND SMALL BUSINESS	100	5	1
BCM 506	FINANCIAL MARKETS AND SERVICES	100	5	1

Semester-VI

Course Code	Course Title	Maximum Marks	Number of Lectures (L) Per Week	Tutorials (T) Per Week***
BCM 601	DIRECT TAX LAWS**	100	5	1
BCM 602	FINANCIAL MANAGEMENT	100	5	1
BCM 603	ISSUES IN FINANCIAL REPORTING	100	5	1
BCM 604	SOCIAL AND BUSINESS ETHICS	100	5	1
BCM 605	OPERATIONAL RESEARCH**	100	5	1
BCM 606	SECTORAL ASPECTS OF INDIAN ECONOMY	100	5	1

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./BBA 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/ they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

** the strength of B.Com. unit shall be 70. There will be tutorials only in the papers which have been highlighted with asterisk**.

***Each unit of B.com. will be divided into 3-groups for the purpose of Tutorials.

Scheme of Examination

B.Com. Honours

A student can pursue Honours course in B.Com. by taking up one paper each in four semesters beginning with 3rd semester in any one of the following four streams. Option of any stream once exercised cannot be changed subsequently.

1. Accounting &Finance

1. **BCH 307:** Accounting Theory and Reporting Practices	3rd Semester
2. **BCH 407:** Contemporary Issues in Accounting	4th Semester
3. **BCH 507:** Strategic Financial Management	5th Semester
4. **BCH607:** Investment Management	6th Semester

2. Economics

1. **BCH 308:** Development Economics	3rd Semester
2. **BCH 408:** Industrial Economics	4th Semester
3. **BCH 508:** Money and Banking	5th Semester
4. **BCH 608:** International Economics	6th Semester

3. Management Studies

1. **BCH 309:** Advertising &Brand Management	3rd Semester
2. **BCH 409:** Consumer Behaviour	4th Semester
3. **BCH 509:** Compensation Management	5th Semester
4. **BCH 609:** Training & Development	6th Semester

4. Banking

1. **BCH 310:** Bank Management	3rd Semester
2. **BCH 410:** Bank Legislation	4th Semester
3. **BCH 510:** Electronic Banking and Risk Management	5th Semester
4. **BCH 610:** Bank Marketing	6th Semester

SYLLABI FOR B.COM FOR THE EXAMINATION OF 2020-21 ONWARDS

Note :

1. Examination in each subject for B.Com will be of 3 hours duration.
2. There will be no objective type questions.
3. Students are required to have the knowledge of the developments in the subject up to 6 months before the examination.
4. Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University/College to the examinees.
5. Tutorials classes will be held as notified in the Scheme of Examination for the session 2014-15 and 2015onwards.
6. The following categories of the students shall be entitled to take the option of History and Culture of Punjab in lieu of Punjabi as compulsory subject:
   (a) Students who have not studied Punjabi up to Class10th.
   (b) Wards of defence personnel and Central government employee/employees, who are transferable on all India basis.
   (c) Foreigners.
7. 20% marks in each paper will be internal assessment based on the following parameters:

a.	Mid-Semester Test	:	50%
b.	Academic Activity (Seminar, Project & Assignments)	:	30%
c.	Attendance	:	20%

Note : *In case of private candidates the marks obtained by them out of 80 will be proportionately increased out of 100.*

In case of USOL Student (Internal Assessment), there will be 20 question in the form of MCQs in the Google form from the academic session 2021-22 onwards.

INSTRUCTIONS FOR THE PAPER SETTERS

Note : The question paper of each subject covering the entire course shall be divided into three sections :

Section A (20 marks)
This section will have 6 short answer questions from the entire syllabus. Students are required to attempt 4 questions from this section. Each question will carry 5 marks; the total weightage being 20marks.

Section B (30 marks)
This section will consist of essay type/numerical questions from Unit I of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks.

Section C (30 marks)
This section will consist of essay type/numerical questions from Unit II of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30marks.

Important Note : In all numerical papers the paper setter is required to set numerical questions as follows:

Section A:	Four numerical questions out of six questions.
Section BandC:	At least two numerical questions out of fourquestions.

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

SEMESTER-I

BCM101 A: PUNJABI

Max. Marks :50marks.Written : 45marks.
Internal Assessment : 05marks.
Time : 3hrs.

1.	A Book of Punjabi.	20marks
2.	Essay Writing on National and International Problems.	10marks
3.	Translation of Business Advertisement from English to Punjabi	05 marks
4.	Correct-Incorrect words	05marks
5.	Business Vocabulary	05marks

Courses:

1.	Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi, Publishers: Kasturi Lal& Sons, Amritsar-Jalandhar. Chapters 1 to 6	
2.	List of words of Business Vocabulary attached (A toH)	

Themes and Units:

1.	Two questions from the book **GalieyChikkarh DoorGhar** (With internal choice)	6+6=12 marks
2.	Short answer question (4 outof6)	2×4=08marks
3.	Essay (1 out of 4) (National and International Problems)	10marks
4.	Translation of Business Advertisement from English to Punjabi	05 marks
5.	Correct-Incorrect words (5 words outof8)	05marks
6.	Business Vocabulary (5 words outof8)	05marks

ਬੀ.ਕਾਮ. ਭਾਗ ਪਹਿਲਾ

ਸਮੈਸਟਰ ਪਹਿਲਾ

Business Vocabulary

1.	Acceptance	ਪ੍ਰਵਾਨਗੀ, ਸਵੀਕ੍ਰਿਤੀ
2.	Access	ਪਹੁੰਚ
3.	Account	ਲੇਖਾ
4.	Accountant	ਲੇਖਾਕਾਰ
5.	Account Book	ਵਹੀ ਖਾਤਾ
6.	Acknowledgement	ਪਹੁੰਚ ਰਸੀਦ
7.	Advance	ਪੇ□ਗੀ
8.	Alternative Cost	ਵਿਕਲਪੀ ਲਾਗਤ
9.	Amalgamation	ਸੰਮਿ□ਰਣ
10.	Amortization of Debts	ਕਰ□ਆਂ ਦਾ ਕਿ□ਤਵਾਰ ਭੁਗਤਾਨ
11.	Amortization of fixed Assets	ਅਚਲ ਸੰਪਤੀ ਦੀ ਕਿ□ਤਵਾਰ ਪੂਰਤੀ
12.	Annuity	ਵਾਰ□ਕੀ
13.	Anticipated Prices	ਅਨੁਮਾਨਿਤ ਕੀਮਤਾਂ
14.	Arbitration	ਸਾਲਸੀ, ਵਿਚੋਲਗੀ
15.	Assessed Tax	ਨਿਰਧਾਰਤ ਕਰ
16.	Assets	ਸੰਪਤੀ
17.	Assets and Liabilities	ਲੈਣਦਾਰੀਆਂ ਅਤੇ ਦੇਣਦਾਰੀਆਂ
18.	Authorized Capital	ਅਧਿਕਾਰਿਤ ਪੂੰਜੀ
19.	Audit	ਲੇਖਾ ਪੜਤਾਲ
20.	Audit Staff	ਲੇਖਾ ਪੜਤਾਲ ਅਮਲਾ
21.	Average	ਔਸਤ
22.	Average Productivity	ਔਸਤ ਉਤਪਾਦਕਤਾ
23.	Average Income	ਔਸਤ ਆਮਦਨ
24.	Back Log	ਪਿਛਲਾ ਬਕਾਇਆ
25.	Balance Sheet	□□ ਸਾਰਣੀ
26.	Bankrupt	ਦਿਵਾਲੀਆ
27.	Barter	ਵਸਤ ਵਟਾਂਦਰਾ
28.	Beneficial	ਲਾਭਦਾਇਕ
29.	Bilateral Agreement	ਦੋ ਧਿਰੀ ਸਮਝੌਤਾ
30.	Bill of Exchange	ਹੁੰਡੀ
31.	Bond	ਰਿਣ-ਪੱਤਰ
32.	Book Value	ਕਿਤਾਬੀ ਮੁੱਲ
33.	Book Keeping	ਵਹੀ ਖਾਤਾ
34.	Break-Even Point	ਸਮਾਨ ਬਿੰਦੂ
35.	Breach of Trust	ਅਮਾਨਤ ਵਿਚ □ਆਨਤ
36.	Broker	ਦਲਾਲ

37.	Capital Account	ਪੂੰਜੀਗਤ ਖਾਤਾ
38.	Capital Expenditure	ਪੂੰਜੀ ਰੂਪ ਖਰਚ
39.	Capital Formation	ਪੂੰਜੀ ਨਿਰਮਾਣ
40.	Capital Investment	ਪੂੰਜੀ ਨਿਵੇ□
41.	Capital Gains	ਪੂੰਜੀ ਰੂਪ ਲਾਭ
42.	Capital Goods	ਪੂੰਜੀ ਰੂਪ ਵਸਤਾਂ
43.	Cash Account	ਰੋਕੜ ਖਾਤਾ
44.	Cash Balance	ਨਕਦ ਬਕਾਇਆ
45.	Cash Book	ਰੋਕੜ ਵਹੀ
46.	Census	ਜਨਗਣਨਾ
47.	Circulating Capital	ਮਾਰਕੀਟ ਵਿਚ ਲੱਗੀ ਪੂੰਜੀ
48.	Commerce	ਕਾਮਰਸ, ਵਣਜ, ਵਪਾਰ
49.	Commercial Capital	ਵਣਜੀ ਪੂੰਜੀ
50.	Commodity	ਉਪਭੋਗਤਾ ਵਸਤ
51.	Company	ਕੰਪਨੀ
52.	Competition	ਪ੍ਰਤੀਯੋਗਤਾ
53.	Corporation	ਨਿਗਮ
54.	Cost Account	ਲਾਗਤ ਲੇਖਾ
55.	Cost of Production	ਉਤਪਾਦਨ ਦੀ ਲਾਗਤ
56.	Current Account	ਚਾਲੂ ਖਾਤਾ
57.	Current Liabilities	ਚਲੰਤ ਦੇਣਦਾਰੀਆਂ
58.	Debenture	ਰਿਣ ਪੱਤਰ
59.	Debt Management	ਰਿਣ-ਪ੍ਰਬੰਧ
60.	deduct	ਕਟੌਤੀ
61.	Deferred Payment	ਸਥਗਿਤ ਭੁਗਤਾਨ
62.	Deflation	ਮੁੱਦਰਾ ਵਿਸਫੀਤੀ
63.	Demand for payment	ਅਦਾਇਗੀ ਲਈ ਮੰਗ
64.	Demonstration Effect	ਪ੍ਰਦਰ□ਨੀ ਪ੍ਰਭਾਵ
65.	Depreciation	ਮੁੱਲ ਘਟਾਈ
66.	Depression	ਆਰਥਿਕ ਮੰਦਾ
67.	Devaluation	ਕਰੰਸੀ ਦਾ ਅਵਮੂਲਣ
68.	Discount Rate	ਕਟੌਤੀ ਦਰ
69.	Disinvestment	ਵਿਨਿਵੇ□
70.	Dividend	ਲਾਭ-ਅੰ□
71.	Distribution	ਵਿਤਰਣ
72.	Documentary proof	ਦਸਤਾਵੇ□ੀ ਸਬੂਤ
73.	Double Entry	ਦੂਹਰਾ ਇੰਦਰਾਜ
74.	Draftsman	ਨਕ□ਾ ਨਵੀਸ
75.	Economic Indicator	ਆਰਥਿਕ ਸੂਚਕ
76.	Entrepreneur	ਉੱਦਮੀ
77.	Excise Duty	ਉਤਪਾਦਨ ਕਰ
78.	Export Tax	ਨਿਰਯਾਤ ਕਰ
79.	Expenditure	ਖਰਚ

80.	Fair Trade	ਉਚਿਤ ਵਪਾਰ
81.	Finance	ਵਿੱਤ
82.	Finance affairs	ਵਿੱਤੀ ਮਾਮਲੇ
83.	Financial Penalty	ਵਿੱਤੀ ਦੰਡ
84.	Fine Paper	ਉੱਤਮ ਹੁੰਡੀ
85.	Firm	ਫਰਮ
86.	Firm Offer	ਪੱਕੀ ਪੇ□ਕ□
87.	Fiscal Policy	ਵਿੱਤੀ ਨੀਤੀ
88.	Fiscal Year	ਵਿੱਤੀ ਸਾਲ
89.	Fixed Capital	ਸਥਾਈ ਪੂੰਜੀ
90.	Fixed Costs	ਸਥਾਈ ਖਰਚੇ
91.	Floatation	ਕਰ□ਾ ਚਾਲੂ ਕਰਨਾ
92.	Foreign Exchange	ਵਿਦੇ□ੀ ਮੁੱਦਰਾ
93.	Fringe Benefits	ਉਪਰਲੇ ਲਾਭ
94.	Glut	ਭਰਮਾਰ
95.	Goods Account	ਮਾਲ ਲੇਖਾ
96.	Gross Profit	ਕੁੱਲ ਲਾਭ
97.	Hidden Tax	ਲੁਪਤ ਕਰ
98.	Hoarding	□ਖੀਰਾਬਾ□ੀ
99.	Holding Company	ਨਿਯੰਤਰਕ ਕੰਪਨੀ
100.	Human Capital	ਮਨੁੱਖੀ ਪੂੰਜੀ

BCM101B HISTORY AND CULTURE OF PUNJAB –I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be asunder:
   Map : 06Marks
   Explanatory Note : 04Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max.Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economiclife.
2. Life in Vedic Age: socio-economic andreligious.
3. Growth of Jainism and Buddhism in Punjab on theregion.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development ofSufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat andpangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru TeghBahadur and its impact.
9. Institution of Khalsa: new baptism;significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dalkhalsa.
11. Society and Culture of the people under Maharaja RanjitSingh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi,L.M(ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala,1989 (3rdedn.)
2. Joshi, L.M and Singh, Fauja(ed.) : History and Culture of the Punjab, Vol. I, PunjabiUniversity, Patiala, 1977
3. Prakash,Buddha : Glimpses of Ancient Punjab, P.U., Patiala,1983
4. Thapar,Romila : A History of India, Vol. I, Penguin Books,1966
5. Basham,A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma,B.N : Life in Northern India, Munshi Ram ManoharLal, Delhi,1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(MedievalPeriod), Publication Bureau, Punjabi University, Patiala 1990(3rdedn.).
8. Singh,Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala1972
9. Grewal,J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Orient Longman, Hyderabad,1990.
10. Singh,Khuwant : A History of the Sikhs, volI: 1469-1839, Oxford University Press Delhi,1991.
11. Chopra,P.N.,Puri,B.N. andDas, :A Social, Cultural and Economic History of India, Vol. II, M.N. Macmillan, Delhi, 1974.
12. Hussain,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay,1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all Indiabasis.
C. Foreigners

BCM 102: ENGLISH AND BUSINESS COMMUNICATION SKILLS

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens,** ed., K.A. Kalia (Oxford University Press), The relevant sections, however, are asfollows:

I.	TheModelMillionaire	: *OscarWilde*
II.	The Gift oftheMagi	: *O.Henry*
III.	The Judgement-seatofVikramaditya	: *Sister Nivedita*
IV.	Fur	:*Saki*
V.	A.MarriageProposal	: *Anton Chekhov*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end. Unit II shall consist of the following sub-units:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: Letters of all kinds, tender notices, auction notices, public notices; memos and advertisements relating to sales/marketing.

Practical Work: To impart the skills of Personal Interview and public speaking like Declamation and Debate.

Practical Work:

There will be viva-voce examination of 10 marks which will include Debate, Declamation and Personal Interview.

Note :*In case of private candidates the marks obtained by them out of 80 will be proportionately increased out of 100.*

In case of USOL Student (Internal Assessment), there will be 20 question in the form of MCQs in the Google form.

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 Marks
Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, be based upon the prescribed text **Ten Mighty Pens.**	10 Marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q. 3.	It shall consist of an Unseen Passage for Comprehension (not more than 300 words), with minimum five questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 Marks
Q. 4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 Marks
Section II *(Based upon Unit II)*		
Q. 5.	This question shall test a students' ability to write business letter of various kinds (in not more than 250 words). There will be Internal Choice in the question.	10 Marks
Q. 6.	This question shall be on Memos, Tender Notices/Auction Notices/Public Notices/ Advertisements.(have to attempt four of 5 marks each)	20 Marks 5x4=20
Q.7.	Two short questions to test the students' understanding of various aspects of business communication.	10 Marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja&AartiMujumdar, Hyderabad: Orient Blackswan.
2. *Textbook of Business Communication,* Anjali Kalkar, R.B. Suryawanshi, AmlanjyotiSengupta,,Hyderbad: OrientBlackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: OrientBlackswan.

BCM103: PSYCHOLOGY FOR MANAGERS

Objective: The objective of the paper is to provide broad understanding about basic concepts and techniques of human behaviour to the students.

UNIT- I

Introduction: Concepts, Definitions; Need and Importance of Organisational Behaviour for Managers, Contributing Disciplines of OB. Nature and Scope, Organisational Behaviour Models.

Individual Behaviour: Introduction and Meaning, Factors Affecting Individual Behaviour, Models of Individual Behaviour

Personality: Meaning, Characteristics, Determinants and Theories of Personality

Perception: Nature & Importance, Perception Process, Perpetual Errors and Distortions.

Attitudes and Values: Components, Sources and Measurement of Attitudes. Concept, Sources and Types of Values.

UNIT II:

Motivation: Meaning and Importance of Motivation, Theories of Motivation, Morale.

Inter Personal Behaviour and Transactional Analysis (TA).

Leadership: Definition, Importance, Leadership Styles, Models and Theories of Leadership .

Conflict Management: Traditional vis-a-vis Modern View of Conflict, Types and Causes of Conflict, Conflict Resolution.

Reference books:

1. Robbins, Stephens P., OrganisationalBehaviour
2. French, W and C. Bell, Organisational Development
3. Davis, Keith, Human Behaviour at Work: OrganisationalBehaviour
4. Luthans, Fred, OrganisationalBehaviour
5. Harold Weihrich, Koontz, Essentials ofManagement
6. Robbins, Stephens P., Organisational Behaviour Concepts, controversies andApplications.

BCM 104: BUSINESS ECONOMICS-I

Objective: To study the basic concepts of microeconomics relevant for Business decision making and helping the students to understand the application of economic principles in business management

UNIT – I

Consumer Behaviour

Utility Approach: Meaning, Types, Relationship between Marginal Utility and Total Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium, Derivation of Demand Curve.

Indifference Curve Approach: Properties, Consumer Equilibrium, Price Effect, Income Effect, Substitution Effect, Price Effect a combination of Income Effect and Substitution Effect.

Law of Demand

Elasticity of Demand: Definitions, Types, Measurement, Factors and Importance.

UNIT-II

Production and Revenue

Production Function : Laws of Returns, Law of Variable Proportion and Returns to Scale.

Cost and Cost Curves : Concept of Nominal Real Economic Implicit, Explicit and Opportunity Cost, Cost Curve under Short-run and Long-run, Relationship between Average Cost and Marginal Cost.

Revenue Curves : Concept of Total Average and Marginal Revenue under different Market Conditions, Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Perfect Competition: Features, Equilibrium of Firm, Equilibrium of Industry, Role of Time element in Price Determination.

Monopoly: Feature, Equilibrium of Firm/Industry, Price Discrimination and Its Types.

Monopolistic Combination: Features, Price-Output Policy of the Firm. Selling Cost, Meaning, Effects, Equilibrium of Firm with respect to Selling Cost.

Reference books:

1. Dwivedi, D.N. Managerial Economics, 7th Edition, Vikas Publishing House.
2. Salvatore, D. Managerial Economics in a Global Economy, 6th Edition, Oxford University Press.
3. Peterson, L. and Jain Managerial Eco., 4th Edition, Pearson Education.
4. A. Kontsoyianis; Modern Micro-Economics.
5. M. Adhikary ; Business Economics.

BCM 105: PRINCIPLES OF FINANCIAL ACOUNTING

Objective: The objective of this paper is to help students to acquire conceptual knowledge of financial accounting and to impart skills for recording various kinds of business transactions.

UNIT – I

Generally Accepted Accounting Principles (GAAP): Accounting Concepts and Conventions: their Nature, Purposes and Limitations. Introduction to Accounting Software and Tally.

Financial Statements of Sole Proprietor and Partnership Firm (with adjustments): Income Statement, Balance Sheet

Branch Accounting: Dependent and Independent Branches (Excluding Foreign Branches).

Departmental Accounting: Meaning, Needs, Advantages, Apportionment of Expenses, Inter Departmental Transfers and Provision for Unrealised Profit.

UNIT – II

Accounting for Consignment.

Accounting for Joint Venture.

Accounting for Dissolution of Partnership Firm; Insolvency of Partners(excluding Sale to a Company) and Piecemeal Distribution.

Royalty Accounts

Practical work:

1. Practical Accounting work using Tally Software

Reference books:

1. Shukla and Grewal – Advanced Accounting, S. Chand Publication, NewDelhi.
2. R.L. Gupta and V.K. Gupta - Advanced Accounting, Sultan Chand Publication, New Delhi.
3. T.S. Reddy & A. Murthy – Financial Accounting, Margham Publications,Chennai.
4. P.C. Tulsian – Financial Accounting, S.Chand andSons.

BCM 106: COMMERCIAL LAW

Objective: The main objective of the paper is to acquaint the students with general Commercial Laws.

UNIT I

Indian Contract Act, 1872: Definition & Nature of Contract, Classification; Offer & Acceptance; Consideration; Capacity of Parties; Free Consent; Legality of Objectives; Void Agreements; Performance of Contracts; Discharge of Contract; Contingent Contracts; Quasi Contracts; Remedies for Breach of Contract.

UNIT II

Special Contracts: Indemnity & Guarantee; Bailment & Pledge; Contract of Agency.

Introduction to Right to Information Act, 2005

The Consumer Protection Act, 2019: Introduction, Objectives Commencement & Application, Definitions, Salient Features, Grievance Redressal Machinery.

Reference books:

1. Avtar Singh : The Principles of MercantileLaw
2. M.C.Kuchhal : Business Law
3. N.D.Kapoor : Business Law
4. P.R.Chandra : Business Law, Galgotia, NewDelhi
5. Gogna : Mercantile Law, S.Chand
6. M.S.Shukla : Business Law, Sultan Chand.

Practical Work

1. How to file an application under Consumer Protection Act
2. Short case studies to be included in section A

BCM 107: PRINCIPLES AND PRACTICES OF MANAGEMENT

Objective: The objective of the paper is to help the students in understanding the process of business management and its functions.

UNIT I

Management: Nature, Definitions, Scope, Levels, Process and Significance of Management. Development of Management Thoughts: Classical, Neo-Classical Systems, Contingency and Contemporary Approaches to Management (Drucker, Porter, Prahalad, Senge and Tom Peters)

Planning: Concept, Process, Nature, Steps in Planning, Significance and Types. Decision Making: Concept and Process, Types of Decisions, Management By Objectives (MBO).

Organization: Concept, Nature, Process, Significance, Types, Organisational Structure, Committees, Span of Control. Authority and Responsibility. Delegation, Decentralization and Departmentation.

UNIT II

Direction: Concept, Features, Importance and Limitations of Direction. Elements of Direction- Supervision, Motivation, Leadership and Communication

Coordination: Concept, Features, Importance and Limitations of Coordination. Internal and External Coordination

Control: Concept, Features, Importance and Limitations of Control. Control Process. Essentials of a Good Control System. Techniques of Control. Relationship between Planning and Control

Reference books:

1. Peter F. Drucker, 'The Practice of Management'
2. Weihrich and Koontz, 'Essentials of Management'
3. Stoner and Freeman, 'Management'
4. David R Hampton, 'Modern Management'
5. Stephen P Robbins, David A DeCenzo, 'Fundamentals of Management, Essential Concepts and Applications'

SEMESTER-II

SCHEME OF B.COM. COURSE (GENERAL AND HONS.)

BCM201 A: PUNJABI

Max. Marks :50marks.Written : 45marks.
Internal Assessment : 05marks.
Time : 3hrs.

1.	A Book of Punjabi.	20marks
2.	Business Correspondence: Letters	10marks
3.	Punctuation	05marks
4.	Business Advertisement	05marks
5.	Business Vocabulary	05marks

Courses:

1. Galiey Chikkarh Door Ghar (Autobiography) by Dr. S.S. Wanjara Bedi, Publishers: Kasturi Lal& Sons, Amritsar-Jalandhar.
   Chapters 7 to 12.
2. List of words of Business Vocabulary attached (I toZ)

Themes and Units:

1.	Two questions from the book GalieyChikkarh DoorGhar. (With internal choice)	6+6=12 marks
2.	Short answer question (4 outof6)	2 x 4=08marks
3.	Business Correspondence: Letters	10marks
4.	Punctuation	05marks
5.	Business Advertisement(Punjabi)	05marks
6.	Business Vocabulary	05marks

Suggested Readings
Punjabi Viyakaran by Dr. Harkirat Singh, Punjab State University Text-book Board, Chandigarh.

ਬੀ.ਕਾਮ. ਭਾਗ ਪਹਿਲਾ
ਸਮੈਸਟਰ ਦੂਜਾ

Business Vocabulary

1.	Imperfect Market	ਅਪੂਰਣ ਮੰਡੀ
2.	Imports	ਆਯਾਤ
3.	Import Duty	ਆਯਾਤ ਕਰ
4.	Imputed Income	ਆਰੋਪਿਤ ਆਮਦਨ
5.	Imprest Account	ਸਰਕਾਰੀ ਪੇ□ਗੀ ਲੇਖਾ
6.	Income Statement	ਆਮਦਨ ਚਿੱਠਾ
7.	Index of Profit	ਲਾਭ ਸੂਚਕ
8.	Income Tax	ਆਮਦਨ ਕਰ
9.	Inflation	ਮੁਦਰਾ ਸਫੀਤੀ
10.	Intangible Assets	ਅਸਥੂਲ ਲੈਣਦਾਰੀਆਂ
11.	Investment	ਨਿਵੇ□
12.	Invoice	ਬੀਚਕ
13.	Jobber	ਸਟਾਕ ਆੜ੍ਹਤੀ
14.	Job Casting	ਲਾਗਤ ਨਿਰਧਾਰਣ
15.	Joint Venture	ਸਾਂਝਾ ਉੱਦਮ
16.	Labour	ਕਿਰਤ
17.	Laissez Fair	ਖੁੱਲ੍ਹੀ ਵਿਵਸਥਾ
18.	Lease Holding Building and Property	ਪੱਟੇ]ਤੇ ਇਮਾਰਤ ਅਤੇ ਜ਼ਾਇਦਾਦ
19.	Ledger	□ਾਤਾ
20.	Ledger Folio	ਖਾਤਾ ਪੰਨਾ
21.	Liabilities	ਦੇਣਦਾਰੀਆਂ
22.	Liquidator	ਨਿਰਧਾਰਕ
23.	Market	ਮੰਡੀ
24.	Marketable Goods	ਵਿਕਣਯੋਗ ਵਸਤਾਂ
25.	Mechanization	ਮ□ੀਨੀਕਰਨ
26.	Mercantilism	ਵਪਾਰਵਾਦ
27.	Monetary System	ਮੁੱਦਰਾ ਪ੍ਰਬੰਧ
28.	Money of Account	ਲੇਖੇ ਦੀ ਮੁੱਦਰਾ
29.	Monopoly	ਏਕਾਧਿਕਾਰ
30.	Mortgage	ਰਹਿਣ, ਗਿਰਵੀ
31.	Net Investment	ਨਿਰੋਲ ਨਿਵੇ□
32.	Net Profit	ਨਿਰੋਲ ਲਾਭ
33.	Notice of Stoppage	ਰੋਕ ਸੂਚਨਾ
34.	Office Expenses Account	ਦ□ਤਰੀ □ਰਚ ਲੇਖਾ
35.	Open Market Operations	ਖੁੱਲ੍ਹਾ ਮੰਡੀ ਵਿਹਾਰ
36.	Over Due	ਮਿਆਦ ਪੁੱਗੀ
37.	Over Head Cost	ਬੱਝੀ ਲਾਗਤ
38.	Partnership	ਹਿੱਸੇਦਾਰੀ, ਸਾਂਝੀਦਾਰੀ
39.	Payable Accounts	ਦੇਣਯੋਗ ਲੇਖੇ

40.	Preference Shares	ਤਰਜੀਹੀ ਹਿੱਸੇ
41.	Premium	ਪ੍ਰੀਮੀਅਮ
42.	Price Control	ਕੀਮਤ ਨਿਯੰਤਰਣ
43.	Production	ਉਤਪਾਦਨ
44.	Profit Margin	ਲਾਭ ਅੰ□
45.	Proprietor	ਸੰਪਤੀ ਮਾਲਕ
46.	Quasi Negotiable Instrument	ਅਰਧ ਵਿੱਕਰੀਯੋਗ ਹੁੰਡੀ
47.	Quotation	ਮੁੱਲ ਸੂਚੀ
48.	Rate of Exchange	ਵਟਾਂਦਰਾ ਦਰ
49.	Ready Delivery	ਤਿਆਰ ਮਾਲ
50.	Real Wages	ਵਾਸਤਵਿਕ ਮਜਦੂਰੀ
51.	Rebate	ਛੋਟ, ਕਟੌਤੀ
52.	Recession	ਆਰਥਿਕ ਮੰਦੀ ਦਾ ਦੌਰ
53.	Receivable Accounts	ਲੈਣਯੋਗ ਲੇਖੇ
54.	Redemption of Mortgage	ਰਹਿਣ ਛੁਡਾਉਣਾ
55.	Receipts and Payment Account	ਪ੍ਰਾਪਤੀ ਅਤੇ ਅਦਾਇਗੀ ਲੇਖਾ
56.	Rent	ਕਿਰਾਇਆ
57.	Rent Account	ਲਗਾਨ ਲੇਖਾ, ਕਿਰਾਇਆ ਲੇਖਾ
58.	Reserve Price	ਰਾਖਵੀਂ ਕੀਮਤ
59.	Revenue	ਆਮਦਨ
60.	Sales Tax	ਵਿੱਕਰੀ ਕਰ
61.	Sales Transfer Order	ਵਿੱਕਰੀ ਇੰਤਕਾਲ ਹੁਕਮ
62.	Security Bond	ਜਮਾਨਤਨਾਮਾ
63.	Service Goods	ਸੇਵਾ ਵਸਤਾਂ
64.	Shares	□ਅਰ, ਹਿੱਸੇ
65.	Share Capital	□ਅਰ ਪੂੰਜੀ
66.	Share Holder	ਹਿੱਸੇਦਾਰ
67.	Share Market	□ਅਰ ਬਾਜਾਰ
68.	Short Bills	ਅਲਪਕਾਲੀ ਹੁੰਡੀਆਂ
69.	Slump	ਮੰਦਾ
70.	Sole Proprietorship	ਏਕਲ ਮਾਲਕੀ
71.	Speculation	ਸੱਟਾ ਅਨੁਮਾਨ
72.	Statutory Company	ਕਾਨੂੰਨ ਅਧੀਨ ਸਥਾਪਿਤ ਕੰਪਨੀ
73.	Stipulated	ਨਿ□ਚਿਤ ਕੀਤਾ
74.	Stock	ਭੰਡਾਰ, ਸਟਾਕ
75.	Stock Exchange	□ਅਰ ਬਾਜਾਰ
76.	Subsidiary Company	ਸਹਾਇਕ ਕੰਪਨੀ
77.	Surety	□ਮਨ
78.	Tariff	ਦਰ ਸੂਚੀ
79.	Tax Exemption	ਕਰ ਛੋਟ
80.	Tax Base	ਕਰ ਆਧਾਰ
81.	Tax Evasion	ਕਰ ਚੋਰੀ
82.	Tax Equity	ਕਰ ਸਮਨੀਤੀ

83.	Tender	ਟੈਂਡਰ
84.	Tender money	ਟੈਂਡਰ ਦੀ ਰਕਮ
85.	Terms of Payment	ਭੁਗਤਾਨ ਦੀਆਂ □ਰਤਾਂ
86.	Terms of Trade	ਵਪਾਰ ਦੀਆਂ □ਰਤਾਂ
87.	Trademark	ਮਾਰਕਾ
88.	Transactions	ਸੌਦੇ, ਲੈਣ ਦੇਣ
89.	Transfer Book	ਇੰਤਕਾਲ ਖਾਤਾ
90.	Under Value	ਘੱਟ ਮੁੱਲਅੰਕਣ
91.	Unproductive Expenditure	ਅਣ-ਉਪਜਾਊ ਖਰਚ
92.	Unproductive Labour	ਅਣ-ਉਪਜਾਊ ਕਿਰਤ
93.	Validity Period	ਪ੍ਰਮਾਣਿਤ ਮਿਆਦ
94.	Vertical Integration	ਸਮਰੂਪ ਸੰਘਟਨ
95.	Wages	ਮਜਦੂਰੀ
96.	Wages Account	ਉਜਰਤ ਲੇਖਾ
97.	Wage Goods	ਮਜਦੂਰੀ ਵਸਤਾਂ
98.	Wage Book	ਉਜਰਤ ਵਹੀ
99.	Wharf age	ਉਤਰਾਈ
100.	Write Off	ਵੱਟੇ ਖਾਤੇ ਪਾਉਣਾ
101.	Working Capital	ਚਲੰਤ ਪੂੰਜੀ
102.	Yield	ਉਪਜ
103.	Zero Rate of Interest	ਵਿਆਜ ਦੀ □ਿਰੋ ਦਰ

Semester II

BCM201 B HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be asunder:
   Map : 6Marks
   Explanatory Note : 4Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCETIMES

Max. Marks : 50
Theory : 45
Internal Assessment : 05
Time : 3 Hours

Objectives: To introduce the students to the history of Punjab region in moderntimes.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab; Board of Administration
2. Western Education: Growth of Education and rise of middle classes
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of print Technology; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising of 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas. Activities of BabbarAkalis.
9. Struggle for Freedom: activities of revolutionaries -Naujawan Bharat Sabha; KirtiKissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP (Physical geographical map of undivided punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur,Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture of the Punjab, Part II(MedievalPeriod), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh,Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala1972.
3. Grewal,J.S. :The Sikhs of the Punjab, the New Cambridge History ofIndia, Orient Longman,Hyderabad,1990.
4. Singh,Khushwant :A History of the Sikhs, volI: 1469-1839, oxford University Press,. Delhi,1991.
5. Chopra, P.N.,Puri, B.N.:A Social, Cultural and Economic History of India,Vol.II, AndDas,M.N. Macmillan, delhi,1974.

BCM 202 : ENGLISH AND BUSINESS COMMUNICATION

Note:

(i) There will be one paper of 80 marks. 10 marks are reserved for the Internal Assessment and 10 for the Practical Work. Total is100.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of communication and language learning skills.

(iii) For Unit I, the prescribed text is **Ten Mighty Pens** Issues ed. K.A. Kalia (Oxford University Press).

The relevant sections, however, are as follows:

I. Chandalika: *RabindranathTagore*
II. A Bachelor's Complaint of the Behaviour of Married People: *CharlesLamb*
III. El Dorado: *R.L.Stevenson*
IV. Bores : *E.V.Lucas*
V. The Art of the Essayist : *A.C.Benson*

(iv) For Unit II, there is no prescribed text, only suggested reading, listed towards the end, Unit II shall consist of the following sub-units:

Writing Skills: This section shall focus on business précis-writing, curriculum vitae; short formal reports (not exceeding 200 words).

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of e-mails, Fax Messages, Teleconferencing, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for Group Discussion etc.

Practical Work: To impart skills of Group Discussion.

Practical Work: There will be viva-voce examination of 10 marks which will include Group Discussion. The students will appear in the group of 10 students for viva-voce.

Note: *In case of private candidates the marks obtained by them out of 80 will be proportionately increased out of 100.*

In case of USOL Student (Internal Assessment), there will be 20 question in the form of MCQs in the Google form.

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Section I *(It is text-based and corresponds to Unit I in the syllabus)*

Q. 1.	It shall consist of five short question/answers (not exceeding 100-120 words) out of which a student will be expected to attempt any three. This question shall be based upon the prescribed text **Ten Mighty Pens.**	12 marks

Q. 2.	It shall consist of two long question/answers (not exceeding 300-350 words) out of which a student will be expected to attempt only one. This question shall have internal choice, and be based upon the prescribed text **Ten Mighty Pens.**	10 marks
Note: The questions 1& 2 should be so designed as to cover all the chapters prescribed.		
Q.3.	It shall consist of **an Unseen Passage for Comprehension** (not more than 300 words), with minimum six questions at the end. These questions should be designed in such a way that we are able to test a student's comprehension ability, language/ presentation skills and vocabulary etc.	12 marks
Q.4.	It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given six words in one column and asked to match them with words/meanings in the next column.	6 marks
Section II *(Based upon Unit II)*		
Q.5.	The students shall be asked to write a short survey report on a situation, incident, business problem, or the possibility of starting a new commercial venture (in about 150-200 words). The students shall be given an internal choice in this question.	10 marks
Q.6.	This will test the students' ability to write a Précis. A passage of about 200 words shall be given and the students shall have to write a précis of about 70 words (including the title).	10 marks
Q.7.	Definition/format of Modern forms of communication to be tested- Listening - Non verbal communication, e-mail, fax, teleconferencing etc.	10 marks
Q.8.	Curriculum Vitae	10 marks

Suggested Reading:

1. *Business Communication,* Ed., Om P. Juneja & Aarti Mujumdar, Hyderabad: Orient Blackswan.
2. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.
3. *50 Ways to Improve Your Business English…without too much effort,* Ken Taylor, Hyderabad: Orient Blackswan.

BCM 203: E- COMMERCE

Objective: The objective of this paper is to provide fundamental knowledge to the students about E-Commerce so that they can better perform in any area of operation and can excel in the field of commerce with IT specialization.

UNIT I

Electronic Commerce Framework, History, Basics and Tools of E-Commerce, Comparison of Web-based with Traditional Business; Growth of E-Commerce – Present, Future and Potential.

E-Business: Meaning, Importance, Models Based on the Relationships of Transacting Parties (B2B, B2C, C2C and C2B), Present Status of E-Commerce in India, Regulatory Aspects of E-Commerce.

UNIT II

Changing Structure of Organisation – The Impact of E-Commerce on Various Business Sectors such as Entertainment, Education, Health Services, Publishing and Financial Services. Socio-Economic Impacts of E-Commerce.

Electronic Payment System: Types of Payment System — E-Cash and Currency Servers, E-Cheques, Credit Cards, Smart Cards, Electronic Wallets and Debit Cards. Electronic Data Interchange, Digital Signatures, Cryptography, Interoperatibility and Intercompatibility.

Reference books:

1. Diwan, Prag and Sushil Sharma: Electronic Commerce, A Manager's Guide to E,Business Vanity Books International,Delhi.
2. Kalakota, Ravi and Shinston Andrew B: Frontiers of Eletronic Commerce, AddisionWesley.
3. Minoli and Minoli: Web Commerce Technology Handbook, Tata McGraw Hill, NewDelhi.
4. Schneider, Gray P.: Electronic Commerce, Course Technology, Delhi.

BCM 204: BUSINESS ECONOMICS-II

Objective: The paper aims at providing the knowledge of basic concepts of the distribution and modern tools of macro-economic analysis.

UNIT-I

Distribution

Wages : Meaning, Types, Marginal Productivity Theory of Wages, Modern Theory of Wages.
Rent: Meaning ,Types, Ricardian Theory of Rent, Modern Theory of Rent, Quasi- Rent.
Interest: Meaning, Types, Classical Theory of Interest, Neo-Classical Theory of Interest, Liquidity Preference Theory of Interest.
Profits: Nature, Types, Dynamic Theory of Profits, Innovation Theory of Profits, Risks Bearing Theory of Profit, Uncertainty Bearing Theory of Profits.

UNIT-II

Say's Law of Market: Meaning, Implications,
Classical Theory of Income Output and Employment:
Keynesian Theory of Employment.
Effective Demand: Determination, Importance
Consumption Function: Meaning, Factors Influencing Consumption Function, Average and Marginal Propensities to Consume, Propensity to Save, Psychological Law of Consumption and its Importance.
Investment: Meaning, Types, Factors Affecting Investment, Importance of Investment, Measures to Raise Private Investment.
Multiplier: Meaning, Keynesian Income or Investment Multiplier, Leakages, Uses, Limitations of Multiplier, Multiplier and Under-Developed Countries.

Reference books:

1. Shapiro. E	Macroeconomic analysis Galotia publications, NewDelhi.
2. EugeneDiulio	Macro economics, 4th Edition, Tata McGraw Hills, Publishing Col. Ltd, NewDelhi.
3. Dornbusch R, Fisher, S andStartz,R	Macro Economics, 8th Edition, Tata McGraw Hills Publishing Co. Ltd., New Delhi.
4. Ackley,G.	Macroeconomics: Theory and Policy, Macmillan, NewYork

BCM 205: CORPORATE ACCOUNTING

Objective: To provide knowledge about basic corporate accounting with the relevant accountingstandards.

UNIT 1

Issue, Forfeiture, Reissue and Buy-Back of Shares,

Redemption of Preference Shares.

Right Issue and Bonus Shares.

Final Accounts of Companies (including Managerial Remuneration & Profit Prior to Incorporation),

UNIT II

Underwriting of Shares and Debentures.

Issue and Redemption of Debentures.

Accounts of Banking Companies

Accounts of Insurance Companies.

*Note :*Accounting Standards are to be covered along with topics.

Practical Work:

1. Preparation of Final Accounts of Companies and critical evaluation.
2. Comparison of annual reports of companies and disclosures norms.

Reference books:

1. R.L. Gupta and M. Radhaswamy – Advanced accounts – Sultan Chand.
2. Shukla Garewal and Gupta – Advanced accounts – S.Chand, NewDelhi.
3. D. Chanderbose – Advanced Accounting, Vol. I, PHI Learning Pvt.Ltd.
4. T.S. Reddy and A. Murthy – Corporate Accounting, Margham Publications,Chennai.

BCM 206: BUSINESS LAWS

Objective: The main objective of the paper is to acquaint the students about Business Laws.

UNIT– I

Sale of Goods Act, 1930: Contract of Sale of Goods, Conditions & Warranties; Transfer of Ownership; Performance of the Contract: Remedial Measures; Auctionable Claims.

Negotiable Instruments Act, 1881: Definition, Acceptance and Negotiation, Rights and Liabilities of Parties, Dishonor of Negotiable Instrument, Hundis, Bankers and Customers.

UNIT-II

Factories Act, 1948: Objectives; Definitions; Approval; Licensing & Registration of Factories; The Inspecting Staff Health; Safety Welfare; Working Hours of Adults; Employment of Women; Child Labour – Issues and Challenges; Leave with Wages.

The Industrial Disputes Act, 1947: Scope & Object; Definitions; Authorities; Reference of Disputes; Procedure; Powers & Duties of Authorities; Award & Settlement; Strikes & Lockouts; Lay-off & Retrenchment etc.

Note: short case studies to be included in Section A

Reference books:

1. Malik, K.L., Industrial Laws and Labour Laws, Eastern Book Company,Lucknow.
2. Kumar, H.L., Digest of Labour Cases, Universal Law Publishing Co P Ltd, NewDelhi
3. Srivastava, S.C., Industrial Relations &Labour Laws, Vikas Publishing House (P)Ltd.
4. Sharma, J.P., Simplified Approach to Labour Laws, Bharat Law House (P) Ltd., New Delhi.
5. Sharma, J.P., Industrial Laws, Taxmann, NewDelhi.

BCM 207: HUMAN RESOURCE MANAGEMENT

Objective: The objective of the paper is to familiarize the students with the different aspects of managing human resource in the organization.

UNIT – I

Human Resource Management: Introduction, Meaning and Definitions, Nature, Functions, Importance and Limitations of HRM. Contemporary Challenges in HRM.

Human Resource Planning; Introduction, Definitions, Features, Need for HR Planning, Objectives, Process, Factors affecting HR Planning, Types, Benefits.

Job Analysis and Job Design: Introduction, Objectives, Benefits, Process, Techniques and Problems in Job Analysis. Job Design- Meaning, Objectives and Techniques of Job Design.

Recruitment and Selection: Meaning and Definitions, Importance and Purpose, Process, Factors affecting Recruitment, Sources of Recruitment, Methods, Constraints and Challenges of Recruitment. Recent Trends in Recruitment. Selection: Meaning and Definition, Selection Process and Methods.

UNIT – II

Training and Development: Concepts, Importance, Identification of Training Needs. Types of Training: On the Job and Off the Job Methods of Training. Designing and Evaluation of Training Programmes. Meaning of Development, Difference between Training and Development.

Performance Appraisal: Concept, Objectives, Methods of Performance Appraisal; How to Make it Effective.

Internal Mobility and Transfers: Promotions, Demotions and Other Forms of Separations, Definitions, Purpose, and Basis of Promotions. Transfer: Definitions, Purpose, Types and Transfer Policy.

Reference books:

1. Dessler, Personnel Human Resource Management, Prentice Hall ofIndia.
2. D A DeCenzo and S P Robbins, Personnel/ Human Resource Management, PrenticeHall of India.
3. Ian Beardwell and Len Holden, Human Resource Management,Macmillan.
4. Wendell French, The Personnel Management Process, Houghton Mifflin Co.,Boston...
5. M S Saiyadain, Human Resource Management, TataMcGraw

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN/CHILDREN AND DRUG ABUSE (SEMESTER – II)

*** Total duration of the whole paper(Consisting of four parts) shall be of 2 hours, carrying 100 marks in whole, divided into the rations of 40:20:20:20**

Note: The syllabus has 15 topics to be covered in 20 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:
Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:
Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:
Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, ChipkoAndolan.

6. Conservation of Environment:
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:
Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:
Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:
Pollution due to noise and microbes and their effects.

13. Human Population and Environment:
Population growth and family welfare programme, Human Health. HIV-AIDS.Human Rights.

14. Social Issues:
Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:
Environmental problems in rural and urban areas.Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical
Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:

A qualifying paper of 40 marks comprising of forty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

Concept and Significance of Road Safety.

Role of Traffic Police in Road Safety.

Traffic Engineering – Concept & Significance.

Traffic Rules & Traffic Signs.

How to obtain Driving License.

Traffic Offences, Penalties and Procedures.

Common Driving mistakes.

Significance of First-aid in Road Safety.

Role of Civil Society in Road Safety.

Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 60 marks.
- Sixty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: Unit I (Environment) and Unit II (Road Safety).
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10. The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent
- The paper setter is requested to set the questions strictly according to the syllabus**.**

Suggested Readings

The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.

Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

www.chandigarhpolice.nic.in

www.punjabpolice.gov.in

www.haryanapolice.gov.in

www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL

UNIT III OF COMPULSORY PAPER ON ENVIRONMENT & ROAD SAFETY EDUCATION

AS PART OF SEMESTER - II

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women: Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E; Cruelty – Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections

which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);

Hurt & Grievous Hurt Provisions – Sections 319 to 326; Acid
Attacks – Sections 326A and 326B;

Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;

Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution-Sections 370 and 370A

3. Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. Protective Provisions of IPC regarding Sexual Violence against Children:

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO**.**

Note: Instructions for Examination:

Unit III of the paper dealing with Violence against Women and Children is of 20 Marks.
It shall have 20 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions). Minimum two questions from each topic must be covered.

All the questions are to be attempted Qualifying Marks 33 percent

Duration of Examination 30 Minutes

The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.

The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), Violence against Women, New Delhi: Rawat Publication
NRHM, Child Abuse, A Guidebook for the Media on Sexual Violence against Children The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).

The Protection of Children from Sexual Offences Act, 2012 The
Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

UNO, United Nations Secretary-General's Study on Violence against Children, adapted for Children and Young People

Unit –IV Drug Abuse

UNIT IV (Drug abuse: problem, prevention and management)

1. **Problem of drug abuse**
   Meaning and concept; types of drugs often misused;antibiotics, steroids and their misuse with suitable examples;habit forming drugs and their effects; drug addiction; drug tolerance and withdrawal symptoms;various signs and symptoms of drug abuse;vulnerable groups (age, gender and socio-economic status)
2. **Prevention and management of drug abuse**
   Medical treatment through deaddiction center, support of family, media and school education; Government policies, programs and laws to prevent drug abuse.

Instructions to the examiners

1. Unit IV of the paper dealing with Drug abuse would be of 20 marks comprising of twenty multiple choice questions carrying one mark each having four options a, b, c, d with one correct and three incorrect alternatives.
2. The question paper shall be set strictly according to the syllabus uniformly
3. All the questions are to be attempted

Note: The teaching hours for the Unit IV will be 10 hours

Suggested readings

1. Kapoor T (1985) Drug epidemic among Indian Youth. New Delhi: Mittal Pub
2. Modi, Ishwar and Modi, Shalini (1997) Drugs: addiction and prevention, Jaipur: Rawat publications
3. World drug Report 2019, Booklet 1, Executive summary, United Nations Office of drug and crime
4. Bansal R and Kumar A (2020) Drug abuse, addiction and recovery

SEMESTER-III

BCM 301: ISSUES IN INDIAN COMMERCE

Objective: To enable the students to acquire basic knowledge of different issues faced in progress and prospects of commerce in India.

UNIT-I

Foreign Direct Investment: Concept, Historical Perspective, Incentives for Attracting Foreign Capital, Implication for Indian industry, Role of Foreign Investment Promotion Board (FIPB) – Automatic Route and Sectoral Limits, Difference between FDI and Foreign Portfolio Investment (FPI).

"Make in India" An Initiative of Government of India, Objectives, Sectors in Focus and Issues & Challenges ahead.

International Finance: Introduction, Need, Importance, Sources-External Commercial (FCCBs) Borrowings (ECB), American Depository Receipt (ADR), Global Depository Receipt (GDR).

UNIT-II

Infrastructure: Growth of Infrastructure- Energy, Transport and Communication. Public-Private Partnership (PPP) in Infrastructure Development in India, Bottlenecks, Models - Built Operate and Transfer (BOT), Built Operate Levy and Transfer (BOLT).

Stock Exchanges in India: Organisation, Nature, Functions, Benefits, Growth, Trading in Stock Markets- Electronic Trading, Commodity Exchanges in India.

Corporate Debt Restructuring: Concept, Importance, Methods, Corporate Scams and Regulatory Authorities-Serious Fraud Investigation Office (SFIO), Investors Protection in India- Need, and Initiatives by the Central Government.

Recent Trends in Credit Rating Services in India- Role of ICRA and CRISIL.

Reference books:

1. Indian Economy - Datt and Sundharam, S Chand and Co. NewDelhi
2. Indian Economy - M.B. Shukla, Taxman Publication, NewDelhi
3. India Transport Report, National Transport Development Committee Report, Routledge, Tolstoy Marg, NewDelhi
4. Financial Markets Institutions and Financial Services, C Gomez–Prentice-Hall.
5. Principles of Business Organisation, by Y.K. Bhushan, Sultan Chand & Co, NewDelhi
6. Guruswamy. S – Global Financial Institutions, Tata Mcgraw HillsIndia.
8. Khan – my Indian Financial Systems - Tata Mcgraw HillsIndia.
9. Website of Make inIndia

BCM 302: COST ACCOUNTING

Objective: The objective of this paper is to help the students to acquire conceptual knowledge of cost accounting and elements of cost.

UNIT – I

Introduction: Nature, Scope and Advantages of Cost Accounting, Installation of Costing System, Difference between Cost and Financial Accounting, Classification of Costs.

Material: Purchase, Storage and Control of Material, Stock Levels, Inventory, Control Techniques. Methods of Pricing Material Issues.

Labour: Meaning and Components of Labour Cost. Concept, Accounting and Control of Idle time and Overtime. Methods of Wage Payment and Incentive Plans, Labour Turnover.

UNIT – II

Overheads: Collection, Classification, Allocation, Apportionment and Absorption of Overheads (Primary and Secondary Distribution), Machine Hour Rate.

Preparation of Cost Sheet, Operation Costing, Service Costing.

Cost Ledger Accounting, Reconciliation of Cost and Financial Accounts.

Practical Work:
Use of software package to obtain cost accounting output like: Analysis of Cost- Centre wise and Element wise, Allocation and Apportionment of Overheads, Preparation of Cost Sheet.

Reference books:

1. Banerjee Bhabatosh: Cost Accounting, PhiLearning
2. Saxena and Vashist: Cost Accounting, Sultan Chand andSons.
3. N.K.Agarwal: Cost Accounting, SuchitaPrakashanPvt.Ltd.
4. Horngren, SrikantM.Datar, George foster: Cost Accounting, PrenticeHall.

BCM 303: COMPANY LAW

Objective: The objective of this paper is to help the students understand various provisions of Companies Act 2013.

UNIT - I

Introduction: Characteristics of a Company, Concept of Lifting of Corporate Veil, Emerging Types of Companies.

Formation of Company –Promotion & Registration, Pre-incorporation Contract and Provisional Contracts.

Memorandum of Association, Articles of Association, Doctrine of Constructive Notice, Doctrine of Ultra-Vires, Doctrine of Indoor Management,

Prospectus and Statement in Lieu of Prospectus, Red-Herring Prospectus.

Share Capital – Kinds of Shares, Book Building Process, Information Memorandum, Dematerialization of Shares, ASBA System, Transfer & Transmission of Shares.

UNIT- II

Members and Shareholders – Their Rights and Duties.

Management – Directors, Classification of Directors, Disqualification, Appointment, Legal Position, Powers and Duties, Removal of Directors, Board Meetings, Other Managerial Personnel and Remuneration.

Winding Up-Concept and Modes.

Practical Work: Teacher should use Internet and Communication Technology to give students demo regarding procedure of Online Filing of Documents for Registration of Company, obtaining Director Identity Number (DIN), Corporate Identity Number (CIN), etc. Students should be apprised of National Company Law Tribunal (NCLT), Insider Trading, Rating Agencies, etc. Practical Training about Notice of Meeting, Agenda, Quorum, Proxy, Reports, Minutes of Meeting, Resolutions, etc. The teacher should use simulation method and will hold at least One Statutory Meeting, One Annual General Meeting, One Extra-ordinary Meeting and One Board Meeting.

Reference books:

1. Kannal, S., & V.S. Sowrirajan, "*Company Law Procedure*", Taxman's Allied Services (P)Ltd., New Delhi (LatestEdn).
2. Ramaiya, A., "*A Ramaiya's Guide to Companies Act*", Lexis Nexis Butterworths Wadhwa, Nagpur.
3. Singh, Harpal, "*Indian Company Law*", Galgotia Publishing, Delhi.
4. Singh, Avtar, "Company Law", Eastern Book Company, Lucknow

BCM 304: BUSINESS MATHEMATICS AND STATISTICS

Objective: The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions.

UNIT I

Matrices and Determinants: Definition of a Matrix. Types of Matrices; Algebra of Matrices; Properties of Determinants; Calculation of Values of Determinants upto Third Order, Ad-Joint of a Matrix, Elementary Row or Column Operations; Inverse of a Matrix. Solution of a System of Linear Equations having Unique Solution and Involving not More Than Three Variables.

Differentiation –Idea of Simple Derivative of different Functions (excluding trigonometric function).
Maxima and Minima of Functions of One Variable only

UNIT II

Introduction: Statistics as a Subject; Statistical Data: Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data.

Analysis of Univariate Data: Construction of a Frequency Distribution; Concept of Central Tendency and Dispersion-and Their Measures; Measures of Skewness; Concept of Kurtosis.
Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend
Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate); Tests of Adequacy; Chain-Base Index Numbers; Base Shifting, Splicing, and Deflecting; Problems in Constructing Index Numbers; Consumer Price Index.

Practical work: Collection, Classification and Presentation of data using Microsoft Excel

Reference books:

1. Dowling E.T.: Mathematics for Economics; Shaum Series, McGraw Hill,London.
2. Holden: Mathematics for Business and Economics; Macmillan India, NewDelhi.
3. Kapoor, V.K.: Business Mathematics; Sultan Chand & Sons,Delhi.
4. Vohra, N.D.: Quantitative Techniques in Management; Tata McGraw Hill, NewDelhi.
5. Aczel, Amir D.: Complete Business Statistics,Irwin.
6. Chou-Ya-Lun: Statistical Analysis, Holt, Rinchart and Winslon.
7. Heinz, Kohler: Statistics for Business & Economics, HarperCollins.
8. Levin, Richard I.& David S Rubin: Statistics for Management, Prentice Hall ofIndia, Delhi.

BCM 305: BANKING AND INSURANCE

Objective: To acquaint the students with Indian Banking and Insurance industry.

UNIT – I

Indian Banking System: Introduction, Concept, Types of Banks and Structure of Banking System, Functions of Commercial Banks, The Reserve Bank of India: Functions of RBI, Monetary Policies and Techniques of Credit Control.

Reforms in Indian Banking: Overview, Recommendations of Narasimham Committee, Verma Panel Report, Introduction to Basel Norms, Capital Adequacy Ratio (CAR), Revised NPA Norms- Grievance Mechanism and Banking Ombudsman, Impact of Reforms.

Emerging Trends in Banking: Concept of E-Banking, Mobile Banking, Electronic Fund Transfer- (RTGS& NEFT) and Core Banking. RBI Guidelines on Internet Banking, Challenges faced by Indian Banking, Cheque Truncation System.

UNIT – II

Insurance: Concept, Nature of Insurance, Functions of Insurance, Types of Insurance (Life and Non-Life), Importance of Insurance, Principles of Insurance Contract-Features of Life and Non-life Insurance.

Insurance and IRDA: IRDA Act 1999, Provisions, Duties, Powers and Functions of IRDA, Composition and Grievance Mechanism and Insurance Ombudsman.

Reference books:

1. M N Mishra, S B Mishra: Insurance Principles & Practice, Sultan Chand andSons.
2. James L Athearn: Risk and Insurance, West PublicationCo.
3. NaliniPravaTripathy and Prabir Pal: Insurance Theory and Practice, Prentice HallIndia.
4. PAS Mani: Life Insurance in India, Western Printers and Publication. Insurance & Risk Management – Dr. P.K.Gupta,Himalaya Publishing House,Delhi.
5. Banking Law and Practice Maheshwari, S.N. and Maheshwari, S.K.,Kalyani Publishers, New Delhi.
6. Emerging Trends in the Banking Sector, Mittal R.K., Saini A.K. &Dhingra Sanjay, Macmillan, NewDelhi.
7. MadhuVij: Management of Financial Institutions in India, AnmolPublications.
8. U.C. Patnaik: Rural Banking in India, Anmol Publications.
9. Vasanth Desai: Nature and Problems of Commercial Banking in India, Himalaya Publishing House.
10. V.K. Gupta: Management of Financial Institutions in India, RadhaPublications
11. G. Ramesh Babu: Management of Financial Institutions in India, Craft PublishingCompany.
12. Vasanth Desai: Indian Banking, Nature and Problems, Himalaya PublicationsHouse.

BCM-306: GOODS AND SERVICE TAX

Objective: Understanding of Basics of GST

Unit I

Tax structure in India: Direct and Indirect taxes, Overview of Goods and services tax, Implementation of GST: GST Council, Reasons for GST introduction: Pros & Cons, Registration: Persons liable for Registration- Procedure of registration- Exemption from Registration, Administration: Officers under GST- their appointment and powers, Levy and collection of CGST/ SGST, Composition levy scheme, Input tax credit(Simple problems) , Time of supply, Tax invoice, Credit and debit notes.

Unit II

IGST Act, 2017: Definitions- Supplies in the course of inter state trade or commerce- Supplies in the course of intra state trade or commerce- Levy and collection of IGST- Place of supply, Exemption from GST, Value of supply: Computation of taxable value & tax liability- Valuation rules, Returns and Payment under GST, Refund of taxes, Offences and penalties, GST portal: GSTN, GSP's and ASP's.

Reference books:

1. The Central Goods and Services Tax Act, 2017 of Ministry of Law and Justice (Legislative Department) 12th April, 2017) published in The Gazette of India dated 12th April,2017.
2. Taxmann's GST Ready Reckoner Updated till 18th June,2017.
3. Taxmann's GST Manual-Enforced w.e.f.1.7.2017.
4. GST Ready Reckoner by CA Kesha R Garg, Bharat Law House,Delhi.
5. Goods and Services Taxin India ----- Notifications by Government of India
6. GST Bill2012
7. Integrated Goods and Services Tax Act2017

SEMESTER-IV

BCM 401: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: The paper aims at providing the students a comprehensive knowledge about security analysis and portfolio management and equipping for taking profitable investment decisions.

UNIT – I

Investment – Meaning, Nature, Objectives and Process. Investment Avenues/ Alternatives. Investment Philosophy, Value Investing and Growth Investing, Investment Strategy, Individual and Institutional Investors.

Security Analysis – Meaning, Risk and Return, Types and Measurement of Risk, Risk and Return Trade Off.

Investment Analysis : Fundamental Analysis – Economic, Industry and Company Analysis.

Technical Analysis. Fundamental v/s Technical Analysis.

UNIT – II

Portfolio Management – Concept, Portfolio Management Schemes, Portfolio Theories, Capital Market Line, Marvkowitz Model, Sharpe Model, Jensen and Treynor Model, Capital Asset Pricing Model, Arbitrage Pricing Theory, Efficient Market Theory, Security Market Line.

Portfolio Performance Evaluation and Revision.
Global Investing – Benefits and Options for Global Investment.

Reference books:

1. Fischer & Jordan, Security Analysis and Portfolio Management, Prentice HallIndia.
2. Punithavathy Pandian, Security Analysis and Portfolio Management, VikasPublishing House Pvt.Ltd.
3. Martin Pring, Technical Analysis Explained, McGrawHill.
4. V. A. Avadhani, Investment and Securities Market in India, Himalaya Publishing House.
5. French, Don, Security and Portfolio Analysis, Merril PublishingCo.
6. Preeti Singh, Investment Management, HimalayaPublishing.
7. Devin S., Portfolio Management, PrenticeHall.
8. Cheney, Muses, Fundamentals of Investments
9. V. K. Bhalla, Portfolio Analysis and Management, Sultan Chand &Sons

BCM 402: ADVANCED ACCOUNTING

Objective: To provide knowledge to students about advanced accounting problems with the relevant Indian Accounting Standards.

UNIT-I

Valuation of Shares

Valuation of Goodwill

Insurance Claims.

Accounting for Hire-Purchase and Instalment system

Investment Accounts

UNIT-II

Accounting for Amalgamation, Absorption(Excluding Inter-Holding) & External and Internal Reconstructions.

Accounts of Holding Companies-Preparation of CBS, Mutual Owings- Revaluation of Assests - Bonus Issue (Excluding Cross Holdings).

Liquidation of Companies.

Practical work:

1. Designing Scheme of Internal Reconstruction.

2. Case Studies on Mergers and Acquisitions.

Reference books:

1. Sehgal A. and Sehgal D., "Advanced Accounting", Taxman Publications Pvt Ltd., NewDelhi.
2. Shukla, M.C., Grewal T.S. and Gupta S.C: "Corporate Accounting", S. Chand and Co., New Delhi.
3. Gupta R.L, and Radhaswamy M, "Corporate Accounting", Sultan Chand and Sons, NewDelhi.
4. Goyal V.K., "Corporate Accounting", Excel Books, NewDelhi.
5. Maheshwari S.N., and Maheshwari S.K., "Corporate Accounting", VikasPublication,NewDelhi.
6. Gupta N.and Sharma C., "Corporate Accounting", Ane Books PvtLtd,NewDelhi

BCM403: AUDITING AND SECRETARIAL PRACTICE

Objective: The objective of the paper is to help the students in understanding concepts and issues in Auditing and Secretarial Practice.

UNIT-I

Auditing: Introduction, Meaning, Objectives, Basic Principles, Classifications, Advantages and Limitations of Audit. Investigation, Difference between Audit and Investigation: Audit Program, Audit Evidence, Internal Control, Internal Check and Internal Audit.

Vouching – Definition – Features – Examining Vouchers - Vouching of Cash book – Vouching of Trading Transactions.

Verification and Valuation of Assets & Liabilities
Company Auditor - Qualifications and Disqualifications –Appointment - Removal, Remuneration, Rights, Duties and Liabilities, Auditor's Report - Contents and Types Company Auditor Report Order (CARO).

UNIT – II

Secretarial Practice: Definition of Company Secretary, Qualification of Company Secretary, Appointment, Dismissal, Duties & Liability for Offences of Company Secretaries. Position and Role of Company Secretaries, Company Secretary in Practice.

Annual General Meeting, Extra Ordinary General Meeting, Director, Board and Committee Meetings, Meaning and Types of Motions and Resolution, Minutes, Role of Company Secretary before, during and after Meetings.

Practical Work :

a) Practical Work on Vouching and Audit Report Preparation.
b) Preparing of Minutes, Motions and Resolutions, Holding of Meetings.

Reference books:

1. Dinkar, P., "*Principles and Practice of Auditing",* Sultan Chand and Sons, NewDelhi.
2. Institute of Chartered Accountants of India: ''*Auditing and Assurance Standards*'',ICAI,
3. Gupta, K., and Arora, A., "*Fundamentals of Auditing,*", Tata Mc-Graw Hill, Publishing Co. Ltd., NewDelhi.
4. Ghatalia, S.V.: "*Practical Auditing,*", Allied Publishers Private Ltd., NewDelhi.
5. Kapoor, N.D., "Secretarial Practice" Sultan Chand andsons.
6. Kuchal,M.C., "Secretarial Practice", VikasPublishing.

BCM 404: COST MANAGEMENT

Objective: The objective of the paper is to acquaint the students with the various methods of cost determination and tools and techniques of cost control.

UNIT – I

Cost Management: Need Significance and Different Areas of Cost Management and Application.
Methods of Cost Determination: Job Costing, Batch Costing, Contract Costing, Uniform Costing and Inter Firm Costing, Process Costing (including joint and by-products).
Contemporary Concepts: Activity Based Costing, Target Costing, Life Cycle Costing, Value Chain Analysis.

UNIT – II

Techniques for Cost Control:
Marginal Costing, Cost, Volume; Profit Analysis and Decision Making; Differential Costing and Absorption Costing.
Budgeting and Budgetary Control: Concepts, Objectives, Limitations, Types of Budgets, Zero Base Budgeting.
Standard Costing, Analysis of Variance.

Practical Work:

Use of software package to obtain cost accounting output like: Fixed and Variable Cost, Break Even Point, P/V Analysis, Preparation of budgets.

Reference books:

1. Edward Blocher, David Stoul-GaryCokins: Cost Management,McGrawHill
2. JawaharLal: Advance Management Accounting, S.Chand and CompanyLtd.
3. M. Ravi Kishore: Cost Management, TaxmanPublications.
4. N.K.Agarwal: Cost Accounting, SuchitaPrakashanPvt.Ltd.
5. Horngren, SrikantM.Datar, George foster: Cost Accounting, PrenticeHall.

BCM 405: MARKETING MANAGEMENT

Objective: The paper aims at making students to understand the basic concepts, philosophies, process and techniques of marketing.

UNIT – I

Introduction to Marketing: Meaning, Nature and Scope of Marketing, Marketing Concepts and Philosophies, Marketing Process, Marketing Mix.

Consumer Buying Behaviour: Factors Influencing Buying Behaviour, Buying Decision Process. Market Segmentation: Levels and Patterns of Market Segmentation, Basis, Major Segmentation Variables for Consumer Markets, Concepts of Market Targeting and Positioning.

Product Planning and Market Strategies: Product Life Cycle, New Product Development, Product Concepts and Classification, Branding, Packaging and Labeling.

UNIT – II

Pricing Decision: Pricing Policies and Strategies.

Distribution Decisions: Channel Design Decisions, Major Channel Alternatives, Channels Management Decision, Causes and Managing Channel Conflict, Physical Distribution.

Promotion Decisions: Communication Process.

Promotion Tools: Advertising (Steps Involved in Designing and Advertising Programme), Sales Promotions, Personal Selling.

Recent trends in online marketing; e- marketing, mobile marketing and social media marketing.

Reference books:

1. Czinkota, M.R. and Kotabe.M.,*Marketing Management,* Vikas Publishing, NewDelhi.
2. Kotler, P., *Marketing Management: Analysis, Planning, Implementation & Control*, Prentice Hall of India, NewDelhi.
3. Perreault, W.D. and Jerome, E.M.., *Basic Marketing*, Tata McGraw Hill, NewDelh.
4. Ramaswamy, V.S. and Namakumari, S., *Marketing Management: Planning, Control*, MacMillan Press, NewDelhi.
5. Zikmund, A., *Marketing,* Thomson Learning, Mumbai.

BCM 406: QUANTITATIVE TECHNIQUES AND METHODS

Objective: The objective of the paper is to acquaint the student with the various quantitative techniques and methods used in managerial decisions.

UNIT I

Quantitative Techniques: Introduction and Use in Business

Theory of Probability: Introduction, Definitions and Use of Addition and Multiplicative Theorem, Conditional Probability. Probability-Distribution: Binomial-Distribution, Poisson-Distribution, Normal-Distribution

Linear Programming: Meaning, Advantages, Limitations, Basic Terminology, Formulation of Linear Programming Problem, Graphic Solution of Linear Programming Problem; Business Application of Linear Programming.

UNIT II

Interpolation and Extrapolation

Correlation: Meaning, Types, Methods-Scattered Diagram, Karl Pearson's Coefficient of Correlation, Rank Correlation and Concurrent Deviation Method.

Regression: Meaning and Significance, Difference Between Correlation and Regression, Simple Linear Regression and Estimation of Parameters (Slope and Intercept).

Practical Work: Use of Microsoft Excel in Solving Simple Data Analysis.

Reference books:

1. Dowling E. Mathematical Methods for Business and Economics, McGrawHill
2. K. Sydsaeter, P. Hammond Essential Mathematics for Economic Analysis, Pearson
3. Chiang Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill
4. Renshaw, G. Maths for Economics. Oxford: Oxford UniversityPress.
5. Spiegel M. and Stephens L. Schaum's Outline of Statistics, McGrawHill
6. Lind D. Basic Statistics for Business and Economics, McGrawHill
7. Dougherty, C. Introduction to Econometrics. Oxford: Oxford University Press.
8. Vogelvang, B. Econometrics: Theory and Applications with E-Views. London Pearson.

SEMESTER-V

BCM 501: INCOME TAX LAW

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Introduction, Important Definitions: Assessee, Person, Income, Total Income, Assessment Year & Previous Year. Agricultural Income & its assessment. Residence & Tax Liability (Basis of Charge). Capital & Revenue. Exempted Incomes.

Income from Salaries, Income from House Property.

UNIT – II

Profits and Gains of Business and Profession including Depreciation, Capital gains, Income from Other Sources.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Preparation of Form 16 and16A
2. Preparation and Filling of ITR Forms
3. Preparation of PAN Form

Suggested Readings:

1. Students' Guide to Income Tax - Dr. Vinod K. Singhania& Dr. Monica Singhania. (Taxmann Publications, NewDelhi)

2. Income Tax Law and Accounts – Dr. H. C. Mehrotra & Dr. S.P. Goyal (Sahitya Bhawan Publications, Agra)

3. Income Tax – Dr. Garish Ahuja & Dr. Ravi Gupta

   (Bharat Publications, New Delhi)

BCM 502: MANAGEMENT ACCOUNTING

Objective: To study the basic concepts of Management Accounting relevant in Business and helping the students to understand the usage of Accounting in Financial Management.

Unit-I

Origin Concept, Nature and Scope of Management Accounting, Distinction between Management Accounting and Financial Accounting. Nature, Importance and Limitations of Financial Statements, Tools of Financial Analysis-Trend Analysis, Common Size Financial Statements and Comparative Financial Statements, Ratio Analysis.

Unit-II

Fund Flow Statement, Cash Flow Statement (AS-3). Price Level Accounting, Social Accounting, Human Resource Accounting (Concept only), Responsibility Accounting: Concepts, Steps in Responsibility Accounting and Advantages of Responsibility Accounting.

***Practical*:** Use of various software packages to obtain different Management Accounting outputs like : (i) Fund Flow Statement, (ii) Ratio Analysis, (iii) Cash Forecasting.

Reference books:

1. Anthony Robert, Reece, Principles of Management Accounting; Richard D. Irwin Inc.Illinois.
2. Khan M.Y. and Jain P.K., Management Accounting; Tata McGraw Hill, NewDelhi.
3. Kaplan R.S. and Atkinson A.A., Advanced Management Accounting, Prentice India International, NewDelhi.
4. Dr. S.N. Maheshwari : Principles of Management Accounting, Sultan Chand & Sons, NewDelhi
5. I.M. Pandey : Management Accounting, VikasPublication
6. DebarshiBhattachharya : Management Accounting, PearsonPublication

BCM 503: INDIAN ECONOMY

Unit – I

i) State of Indian Economy at the time of Independence.

ii) Nature of Indian Economy.

iii) Features and Appraisal of Economic Reforms Programme.

iv) Comparing Development Experience of Economies of India and China.

v) National Income of India – Estimates, Inter-regional Variations in National Income.

vi) Demographic Features of Indian Population, Demographic Dividend.

Unit – II

i) Indian Public Finance: The Indian Tax Structure, Public Expenditure, Public Debt.

ii) Capital Market: Growth, Problems and Reforms since1991.

iii) External Sector: Contemporary Problems of India's International trade. Balance of Payments Position, Foreign Trade Policy.

iv) Economic Planning in India – Objectives, Achievements and Failures, Latest Five Year Plan in India, NITI Aayog.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 – Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy – Problems and Prospects, Viking, NewDelhi.
3. Ahluwalia, I.J. and Little, IMD(eds.) 1998: India's Economic Reforms and Development. (Essays in Honour of Manmohan Singh), OUP, NewDelhi
4. Nagraj, R.2006: Aspects of India's Economic Growth and Reforms, academic Foundations, New Delhi.
5. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya PublishingHouse
6. Datt and Mahajan: Indian Economy, S. Chand and Company, LatestEdition
7. Dhar, P.K.: Indian Economy – Its Growing Dimensions (Latest Edition), Kalyani Publishers
8. Economic Survey: Government of India, Latest Issue
9. Economic and Political Weekly: Various Issues

BCM 504: PRODUCTION AND OPERATION MANAGEMENT

Objectives: The objective of this course is to enable the students to understand the concepts of production and operations management of an industrial undertaking.

Unit-I

Introduction of Production and Operational Management: Meaning, Objectives and Scope. Strategic Planning and Demand Forecasting. Production Process and Analysis. Capacity Planning and Management. New Product/ Service Design and Development. Facility Location. Facility Layout. Production Planning and Control Techniques- Sequencing (Processing in Job through Two Machines) and Network Analysis - PERT/CPM (including Crashing).

Unit-II

Work Measurement and Work Study: Methods, Analysis and various Charts, Time Study and Principles of Motion Economy. Purchase Management. Inventory Management Fundamentals : Economic Order Quantity, Quantity Discount, Reorder Level, Lead Time, Safety Stock, JIT. Supply Chain Management: Concept & Components of Supply Chain, Activities in Supply Chain Management, Logistics Management.

Suggested Readings:

1. B. Mahadevan “Operations Management Theory & Practice”, Pearson Education.

2. KanishkaBedi , “Production & Operations Management”, Oxford Higher Education.

3. L.J. Krajewski& L.P. Ritzman “Operations Management Processes &Value Chains”, Pearson Education.

4. B.S. Goel “Production Operation Management”.

5. Richard B Chase, F Robert Jacobs, Nicholas J Aquilano and Nitin K Agarwal, “Operations Management – For Competitive Advantage”, The McGraw Hill Companies.

BCM 505: ENTREPRENEURSHIP AND SMALL BUSINESS

Objectives:-The basic objective of this course is to help the learners understand various issues involved in setting up a private enterprise and develop required entrepreneurial skills in economic development. It also aims to motivate students to opt for entrepreneurship and self-employment as alternate career options.

UNIT- I

Entrepreneurship- Concept and Theories; Entrepreneur- Meaning and Characteristics, Entrepreneurial mindset.. Distinction between manager and entrepreneur. Distinction between entrepreneur and intrapreneur. Innovation- meaning , features, and need. Latest innovations in manufacturing and service sectors. Social and commercial entrepreneurship.

Women Entrepreneurship- Problems Faced, Suggestions, Role of Government to promote Women Entrepreneurship; Socio- economic Environment.

Business Planning. Entrepreneurial Development Programmes-- their Relevance and Achievement, Role of Government in Organizing EDPs.

UNIT- II

MSMEs –Definition, Registration process and its procedure, Benefits of registration. MSMEs---Seed Bed of Entrepreneurship; Start up- Its Concept, steps and need.

Product Planning and Management; Marketing Management; Growth and Diversification Strategies.

Logistics management—meaning, features, and its role in business enterprises

Role of MSMEs in the National Economy; Role of ecommerce and mcommerce in

promoting small business. Small Business and Modern Technology. Tax

Considerations/tax benefits to MSMEs; MSME'S Exemptions.

Project works

- Understanding the life of celebrated and unsung entrepreneurs
- Study the role of government, women, and dalits as entrepreneur
- Study the role of social marketing, social entrepreneurship, and social audit
- Study the role of different forms of business ownership
- Study the online business models and role of ecommerce and mcommerce
- Study of Indian model of businesses
- Study the shades of business in urban and rural areas
- Study various aspects of organizations like Tata, Reliance, Maruti, Hindustan Motors, Wipro, Haldiram, Flipkart, Amul, AmaravatiTalluka, Lizzatpapad, Google, Apple etc.
- Study Gandhi's Trusteeship model through Corporate Social Responsibility/Corporate

- Governance orientation of companies.
- Study the role of demographic, psychographic, political, competitive, and environmental factors in business
- Study the management of businesses like wellness, event management, radio taxies, etc.
- Study the role of business facilitators like banking, insurance, supply chain, and logistics, etc.
- Study of Dabbawals and mathematical reasoning
- Use and analysis of secondary data sources for business decision making
- Writing business plan

Suggested readings

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House,Delhi.
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd.,Singapore.
4. Chandra, Ravi (2003). Entrepreneurial Success: A Psychological Study. Sterling Publication Pvt. Ltd., NewDelhi.
5. . Balaraju, Theduri (2004). Entrepreneurship Development: An Analytical Study. Akansha Publishing House, Uttam Nagar, NewDelhi.
6. David, Otes (2004). A Guide to Entrepreneurship. Jaico Books Publishing House,Delhi.
7. Taneja (2004). Entrepreneurship. GalgotiaPublishers

BCM 506: FINANCIAL MARKETS AND SERVICES

Objective: To familiarize the students with the traditional and modern financial and services.

UNIT I

Financial Markets: Meaning, Functions and Types.

Money Market: Meaning, Characteristics, Structure, Participants, Growth of Indian Money Market, Components of Money Market, Call Money Market, Acceptance Market, Bills Market, Commercial Paper Market. Certificates of Deposits Market in India.

Capital Market: Nature and Role, Functions, Distinction between Money market and Capital Market, Primary Market, Secondary market, Operational Mechanism of Capital Market.

UNIT II

Financial Services: Meaning, Characteristics, Importance and Kinds of Financial services, Financial Services and Economic Environment, Players in Financial services. Merchant Banking: Concept, Evolution and Functions of Merchant banks.

Mutual Funds: Concept, Types, Advantages, Problems of Mutual Funds in India, Constitution and Management of Mutual Funds.

Exchange Traded Funds, Factoring.

Suggested readings

1. Financial Markets: A Beginners' Module, Workbook fromNSE
2. Mutual Fund: A Beginners' Module, Workbook fromNSE
3. Gurusamy, Financial Markets and Institutions, 3rd edition, Tata McGraw Hill.
4. Saunders, Financial Markets and Institutions, 3rd edition, Tata McGrawHill.
5. Thummuluri, Siddaiah, Financial Services, 1st edition, PearsonEducation.
6. Khan, Indian Financial Systems, 6th edition, Tata McGraw Hill

SEMESTER –VI

BCM 601: DIRECT TAX LAWS

Objective: The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India.

UNIT – I

Deemed Incomes and Clubbing of Incomes (Aggregation of Incomes), Set-off and Carry Forward of Losses, Deductions to be made in Computing the Total Income, Rebate &Relief.

Assessment of Individual.

UNIT –II

Assessments of HUF, Association of Persons &Firm.

Income Tax Authorities, Procedure of Assessment (Practical aspects of Filing of Return to be stressed), Penalties, Deduction & Collection of Tax at Source, Advance Payment of Tax, Appeals &Revision.

Note: The paper setter will consider the changes up to 30th September of relevant year.

Practical Work:

1. Filing of return by an Individual, HUF &Firm.
2. Filling and Submission of TDS Form.

Suggested Readings:

1. Students' Guide to Income Tax - Dr. Vinod K. Singhania& Dr. Monica Singhania. (Taxmann Publications, NewDelhi)
2. Income Tax Law and Accounts–Dr. H.C. Mehrotra & Dr.S.P .Goyal (Sahitya Bhawan Publications, Agra)
3. Income Tax – Dr. Garish Ahuja & Dr. Ravi Gupta (Bharat Publications, NewDelhi)

BCM 602: FINANCIAL MANAGEMENT

Objective: The objective of the paper is to familiarize the students with Principles and Practices of Financial Management.

UNIT- I

Financial Management: Meaning, Scope and Objectives of Financial Management, Time Value of Money- Compounding Techniques and Discounting Techniques. Capital Budgeting, Evaluation of Projects (excluding Risk and Uncertainty, Implications of Normal, Initial and Terminal Depreciation and Balancing Charge). Cost of Capital: Determination of Cost of Capital, Components of Cost of Capital.

UNIT- II

Sources of Corporate Finance, SEBI Guidelines for Raising Corporate Finance. Capital Structure, Meaning, Types of Leverage, Determinants of Capital Structure. Theories of Capital Structure. Working Capital Management and Its Estimation (Excluding Cash, Receivable and Inventory Management). Dividend Policy- Relevance and Irrelevance Theories.

Reference books:

1. J C Van Horne, "Financial Management and Policy", 12th Edition, New Delhi,Prentice Hall of India
2. J C Van Horne, J W Wachowicz, Jr. "Fundamentals of Financial Management"13th Edition, Prentice Hall of India
3. Prasanna Chandra, "Financial Management' Tata McGrawHill.
4. Khan and Jain, "Financial Management- Text and Problems" 2nd Edition, Tata McGraw Hill'
5. R A Brealey and S C Myers, "Principles of Corporate Finance", Tata McGraw Hill, 7th Edition
6. I M Pandey, "Financial Management", Vikas Publishing House, 9thEdition

BCM 603: ISSUES IN FINANCIAL REPORTING

Objectives: The main objective of this subject is to provide knowledge to the students about developments in financial reporting, and understanding of reporting issues at the national and international level.

Unit I

Financial reporting: Nature and Objectives, Benefits, Users of Financial Reports. General Purpose and Specific Purpose Report. Qualitative Characteristics of Accounting Information.

Conceptual Framework of Financial Reporting: FASB and IASB

International Financial Reporting Standards (IFRS): Role of IASB, Arguments for Global Conversion. Achievements of IASB and Obstacles in Conversion. Required Disclosures as per IFRS.

Unit II

Issues in Corporate Financial Reporting **-** Accounting for Changing Price Level, Social Reporting, Human Resource Accounting.

Indian Accounting Standard with reference to Segment Reporting, Interim Reporting, Leases and Intangible Assets.

Difference between IFRS and Indian Accounting Standards. US GAAP.

Recent Trends in Financial Reporting in the Indian context

Suggested Readings:

1. E.S. Hendriksen, Accounting Theory, Richard D.Irwin.
2. M.W.E. Glautier and B. Underdown, Accounting Theory and Practice.
3. Ahmed Riahi Belkaoui, Accounting Theory, Thomson Learning.
4. Henry I- Wolk, Jere R. Francis and Michael G- Tearney, Accounting Theory: A Conceptual and Institutional Approach, South Western Publishing Co.
5. Robert Bloom and Pieter T. Elagers, Accounting Theory and Policy, Harcourt Brace Joranovich.
6. L.S. Porwal, Accounting Theory, McGraw Hill Education (India)Ltd.
7. Jawahar Lal, Accounting Theory and Practice, Himalaya Publishing House, NewDelhi.

BCM604: SOCIAL AND BUSINESS ETHICS

Objectives: The course aims to educate that how the adoption of Business Ethics by organizations not only discourages corporate wrong-doing, but also contributes substantially in the achievement of corporate excellence.

Unit-I

Business Ethics, Definition, Nature, Purpose, Ethical Issues in Management, Causes of Unethical Behaviour, Ethical Abuse-Values, Morals and Business Ethics-Levels of Business Ethics, Myths of Business Ethics, Relationship between Value, Morals and Ethics., Conflict of Interest.

Ethics at Workplace: Individual in Organisation, Gender Issues, Harassment, Discrimination.

Ethics in Accounting &Finance.

Unit –II

Whistle Blower Policies-Meaning, Importance and Issues.

Corporate Social Responsibility under Company Act 2013.

Ethical issues in Environment -Protection of Natural Environment, Prevention of Pollution, Depletion and Conservation of Natural resources.

Marketing and Consumer Protection- Importance, Problems and Issues.

Suggested Readings:

1. Chakraborty , S.K. : ,Foundations of management Work - Contributions from Indian Thought: Himalaya Publishing HouseDelhi
2. Griffiths , B. : Themarriage of East and West , colling London
3. Gandhi , M.K. : The Study of My Experience with Truth, Navjivan Publishing House, Ahmedabad
4. Velasquez , M.G. : Business Ethics 5. Sekhar , R.C. : Ethical Choices in Business.

BCM 605: OPERATIONS RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operational Research—Meaning, Significance and Scope. Introduction to Linear Programming, Formulation of Linear Programming—Problem, Graphical Method, Simplex Method. Duality in Linear Programming, Definition of Dual Problem, General Rules in Converting any Primal into its Dual, Transportation Problem, Assignment Problem.

UNIT-II

Decision Theory: Decision Making under Uncertainty and Risk, Decision Trees. Replacement Problem (Individual and Group replacement Problems both). Games Theory : Two Persons Zero Sum Games, Pure Strategies, Mixed Strategies. Simulation; Meaning, Process, Advantages, Limitations and Applications.

Practical Work :

Use of Linear Programming in Industry.

Suggested Readings:

1. Paneerselvam, Operations Research, Prentice Hall of India, NewDelhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, NewDelhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd.,ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

BCM 606: SECTORAL ASPECTS OF INDIAN ECONOMY

Objectives: This course will provide insight into the various sectoral aspects of indian economy

Unit – I

i) Agriculture: Features, Agricultural Productivity and Income, Rural Indebtedness, Agricultural Marketing, Agricultural Finance and Agricultural Policy, New Development in Agriculture – Contract Farming, Organic Farming and Corporate Farming.

ii) Industrial Development during the Planning Period, Industrial Policy of Govt. of India, National manufacturing policy, Small Scale and Cottage industries in India: Importance, problems and Govt. Policy, Large Scale Industries – Iron & Steel, Cement and Petrochemicals.

Unit – II

i) Services Sector in India: Growth and Contribution of Services in India in Pre and Post Reform Period, Role and Problems of Public and Private Sector in India

ii) Problems of Indian Economy: Poverty, Unemployment, Inflation, Unequal distribution of Income and Wealth, Inter-State disparities in the Pattern of Development.

Suggested Readings:

1. Bhahmananda, P.R. And Panchmukhi, V.R.(eds.) 1987 – Development Process of Indian Economy, Himalaya Publishing House, Bombay.
2. Jalan, Bimal 1992: the Indian Economy – Problems and Prospects, Viking, NewDelhi.
3. Nagraj, R.2006: Aspects of India's Economic Growth and Reforms, academic Foundations, New Delhi.
4. Puri, V.K. and Misra, S.K.: Indian Economy, Latest Edition, Himalaya Publishing House
5. Datt and Mahajan: Indian Economy, S. Chand and Company, Latest Edition
6. Dhar, P.K.: Indian Economy – Its Growing Dimensions (Latest Edition), Kalyani Publishers
7. Economic Survey: Government of India, LatestIssue
8. Economic and Political Weekly: Various Issues

B.COM. (HONS.) 3rd SEMESTER

BCH 307: ACCOUNTING THEORY AND REPORTING PRACTICES

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding accounting theory.

UNIT-I

The History and Development of Accounting, Nature and Uses of Accounting, Traditional Approaches to the Formulation of An Accounting Theory, Regulatory Approach to the Formulation of An Accounting Theory; The Events, Behavioural and Human Information Processing Approach.

Unit –II

The Predictive and Positive Approaches to the Formulation of Accounting Theory, A Conceptual Framework for Financial Accounting and Reporting. The Structure of Accounting Theory, Alternatives Asset-Valuation and Income Determination Models.

Reference Books:

1. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
2. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
3. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting.
4. Elliott, B. & Elliott, J., Financial Accounting and Reporting.Harlow
5. K.S. Most, Accounting Theory, Holt, Rinehart &Winston.
6. Lev Baruch, Financial Statement Analysis - A New Approach, PrenticeHall.
7. S. Agarwal, Manual of Accounting Standards, SnowWhite.
8. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices,Taxman.

BCH 308: DEVELOPMENT ECONOMICS

Objective: The objective of the paper is to provide broad understanding to the students about the basic concepts, theories and policies regarding economic development and growth.

UNIT-1

Concept of Economic Development, Distinction between Growth and Development, Various Traditional and Modern Criteria to Measure Development, Determinants of Development, Balanced vs. Unbalanced Growth.

Concept of Sustainable Development, Importance, Indices of Development,

Classical Theories of Development-Adam Smith, Karl Marks and Schumpeter, Rostow's Stages of Growth, Kaldor Model of Growth.

UNIT-II

Economic Development Since Independence, India's Five Years Plans- Objectives, Strategies, Achievements and Constraints,
Models in Economic Planning- Harrod-Domar Model, Mahalanobis Model,
Role of State and Capital Formation in Economic Development, Growth and Distribution Trends and Policies regarding Poverty; Inequality and Unemployment in India,

Reference Books:

1. Agarwala, A.N. and S.P. Singh, Economics of Underdevelopment, Oxford University Press,London.
2. Misra, S. K. and Puri, Economics of Development and Planning, Mumbai: Himalaya Publishers.
3. Meier, Gerald M. and James E. Rauch, Leading Issues in Economic Development, Oxford University Press, NewDelhi.
4. Todaro, M.P., Economic Development in the Third World, Longman, NewYork.
5. Salvatore, D. and E. Dowling: Development Economics, Schaum's, Outline Series in Economics, McGraw Hill, NewYork.

BCH 309: ADVERTISING AND BRAND MANAGEMENT

Objective: The objective of the paper is to provide an understanding of the principles of advertising and brand management.

UNIT - I

Advertising: Introduction, Scope, Importance in Business : Role of Advertising in Social and Economic Development of India: Ethics in Indian Advertising. Advertising and Consumer Behaviour; Setting Advertising Objectives, DAGMAR; Determining Advertising Budgets; Advertising Planning and Strategy, Creative Strategy Development and Implementation. Role of Integrated Marketing Communication in the Marketing Programme; Process of Marketing Communication; Definition and Scope of Advertising Management; Determination of Target Audience. Media Planning: Setting Media Objectives; Developing Media Strategies, Evaluation of Different Media and Media Selection; Media Buying; Measuring Advertising Effectiveness.

UNIT – II

Brand-Concept: Nature and Importance of Brand; Brand vs. Generics, Brand Life Cycle, Brand Name and Brand Management; Brand Identity: Conceiving, Planning and Executing (Aaker Model), Brand Loyalty, Measures of Loyalty; Brand Equity: Concepts and Measures of Brand Equity-Cost, Price and Consumer Based Methods; Sustaining Brand Equity; Brand Personality: Definition of Brand Personality, Measures of Personality, Formulation of Brand Personality; Brand Image Vs Brand Personality. Brand Positioning: Concepts and Definitions, Repositioning, Celebrity Endorsement, Brand Extension; Differential Advantage: Strategies for Competitive Advantage, Brand Pyramid; Branding in different sectors; Role of Information in Brand Management; Role of e-Communities in Brand Management.

Reference Books:

1. Arens W.A. Contemporary Advertising, Tata Mc Graw Hill, NewDelhi

2. Batra. R. Myers, J.G. and Aaker D.A., Advertising management, prentice hall of India, New Delhi

BCH 310: BANK MANAGEMENT

Objectives: The paper aims at acquainting the students, the concepts of Bank Management and relevant aspects.

UNIT – I

Banking Structure in India – Banks and Regulatory Environment – Analysis of Balance Sheet and Profit and Loss Account – Financial Performance Analysis with Ratios – RBI and its role on Bank Performance – Banks and Risk Management, Types of Risks in Banking Industries – Risk and Return – Profitability – Liquidity – Solvency Trace off – Project Appraisal – Capital Adequacy Norms – MIM – Interest and Non – Interest Income – Lending Principles.

UNIT – II

NPA – Provisions, Types, Impact on Profitability. Warning Signals – NPA Management – How to Overcome NPA – Recent Measures by Regulatory Authority – Debt Recovery Tribunal – Provisions of Revenue Recovery Act – Portfolio Management in Banks – Allocation of Bank Funds – Investment Avenues for Banks – Asset Liability Management – Models – Importance – SARFESI Act – Information and Communication Technology and Bank Management.

Reference Books:

1. Donald,F., R. GupBenten E., Kolari, J.W., *Commercial Banking The Management of Risk*, South Western ThomsonLearning
2. Justin,P. and Padmalatha, S.,*Management of Banking and Financial Service*s, Pearson Education
3. Timothy,K.W. and MacDonald, *Bank Management*, The Dryden Press, Hascourt College Publisher

B.COM. (HONOURS) 4th SEMESTER

BCH407: CONTEMPORARY ISSUES IN ACCOUNTING

Objective: The paper aims at acquainting students with the contemporary issues in accounting.

UNIT – I

Role of International Accounting Standard Committee in Harmonisation of Divergent AccountingPractices.

Accounting for Human Resources.

Accounting for Price-Level Changes.

Accounting for Financial Instruments.

UNIT – II

Segment Reporting, Interim Reporting.

Forensic Accounting – Introduction – Historical Background, Essentials – Role of Forensic Accountant – Forensic Accounting in India.

Corporate Accountability Reporting- Basics of Sustainability Reporting- Social Reporting and Performance Reporting.

Accounting for Brand Equity – Introduction, Types of Brands, Objectives – Models, Environment Accounting.

Reference Books: -

1. L S Porwal. Tata McGraw-Hill Education,.
2. Hendriksen, Irwin Professional Publishing; 5 Sub edition,.
3. Accounting theory and practice / M.W.E. Glautier, B. UnderdownGlautier, M. W.(Michel WilliamEdgard).

BCH 408: INDUSTRIAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about concepts, theories and policies regarding industrial structure and growth.

Unit - I

Industrial Economics - Meaning, Scope, Need and Significance,

Pattern and Phases of Industrial Growth and Changes in Industrial Structure, Role of Industry in Economic Development,

Theories of Industrial Location- Weber, Sargent Florence, Factors Influencing Location of Industries, Localization and Decentralization on Industriesm, Industrial Productivity and Efficiency, Measures Required for Improving Productivity and Efficiency

Unit - II

Role of Industrialization in Economic Development, Factors for and Against Industrial Development, Problems of Industrialization in Developing Countries,

Industrial Finance in India- Scope, Importance and Sources, Industrial Growth in India during Plans, Impact of Economic Reforms on India's Industrial Growth,

India's Industrial Policies, Role and Performance of Public Sector Enterprises, Privatization of Public Sector Undertakings in India,

Performance and Problems of Micro, Small, Medium Enterprises in India

Reference Books:

1. Ahluwalia I.J., 'Industrial Growth in India,' Oxford University Press, New Delhi Barthwal R.R., 'Industrial Economics,' Wiley Eastern Ltd., NewDelh
2. Cherunilam, F. ,'Industrial Economics: Indian Perspective', Himalaya Publishing House,Mumbai.
3. Desai, B. , 'Industrial Economics in India,' Himalaya Publishing House,Mumbai
4. Hay, D. and D.J. Morries , Industrial Economy; Theory and Evidence,Oxford University Press, NewDelhi
5. Kuchhal, S.C.,'Industrial Economy of India,' Chaitanya Publishing House,Allahabad
6. Thakur, Srinivas V. , 'Industrialization and Economic Development' Popular Parkashan, Mumbai

BCH 409 : CONSUMER BEHAVIOUR

Objective: The paper aims at enabling students to understand the process of consumer behaviour, the various external and internal factors that influence consumer behaviour and to apply the concept to the development of marketing strategy.

UNIT- I

Introduction to Consumer Behavior: Scope and Relevance of Consumer Behavior Studies; Buying Decision Process; Basic Model of Consumer Behavior; Problem Recognition – Methods of Problem Solving; Information Search, Alternative Evaluation and Selection, Outlet Selection and Purchase, Post Purchase Behavior and Customer Satisfaction, Role of Involvement. Individual Determinants of Consumer Behaviour: Role of Motivation; Personality and Self Concept; Attention and Perception; Consumer Learning; Consumer Attitudes – Formation and Change; Consumer Values and Lifestyles. External Determinants of Consumer Behavior: Influence of Culture and Subculture; Social Class; Reference Groups and Family Influences; Diffusion of Innovations.

UNIT- II

Consumer Decision Process: Problem Recognition; Search and Evaluation of Alternatives; Purchase Process; Post Purchase Behaviour and Cognitive Dissonance. Models of Consumer Behaviour; Researching Consumer Behaviour; Online Customer Behaviour. Diversity of Consumer Behaviour; Role of Consumer Behaviour in Marketing Strategy.

Reference Books:

1. Schiffman L.G. and Kanuk L.L., Consumer Behaviour, 9th Edition, Prentice Hall of India, NewDelhi
2. Assel Henry, Consumer Behaviour, Biztantra, NewDelhi.
3. Hawkins, D. I. & Roger, J. B. and Kenneth, A.C. . ConsumerBehaviour-Building
4. Satish Batra& S. H. H. Kazmi: Consumer Behavior Text & Cases(Excel)

BCH 410: BANK LEGISLATION

Objective: The paper aims to acquire knowledge about the legal & regulatory framework of the banking system and the various laws and enactments.

UNIT–I

Evolution of Banking Laws in India- Provisions of Banking Regulation Act, 1949 – Its Amendments. Reserve Bank of India Act, 1934 – Role and Functions of RBI-Credit Control Techniques- Indian Evidence Act- Negotiable Instruments Act 1881. Payments and Settlements Systems Act 2007 and Amendments.

UNIT-II

Special Features of Recovery of Debts due to Banks and Financial Institutions Act, 1993, The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002, Grievance Mechanism and Banking Ombudsman- Lok-Adalats- Banking Codes and Standard Boards Board- Debts Recovery Tribunals.

Reference Books:

1. Banking Regulation Act, 1949.
2. RBI, Act, 1934.
3. J.N. Jain and R.K. Jain: Modern Banking and Insurance, Deep and DeepPublications.
4. R.K. Mittal, A.K. Sahni and Sanjay Dhingra: Emerging Trends in the BankingSector, Macmillan.
5. Arundeep Singh and N.S. Toor: Legal and Regulatory Aspects of Banking, Skylark Publications.
6. John C. Hull: Risk Management and Financial Institutions, Pearson Education.

B.COM. HONOURS
5th Semester

BCH 507: STRATEGIC FINANCIAL MANAGEMENT

OBJECTIVE: This Course aims at enabling the students to understand various financial management concepts and to apply financial management theories and techniques for strategic decision making and informed analysis. It aims at enabling students to manage basic corporate finance transactions besides investing more profitably and operate more efficiently.

.UNIT-I

Introduction to Strategic Financial Management. Interface of Financial Policy and Strategic Management. Significant references for Strategic Financial Management. Strategic Business Unit. Financing Choices and Decisions: Differences in Financing of Venture Firm, Mature Companies and Firms in High Growth Stage, Deal Structuring and Pricing, IPOs and their Under-pricing. Asset -stripping. Investment Appraisal Techniques, Capital Rationing, Impact of Inflation on Capital Budgeting Decisions.

UNIT-II

Financial aspects of Corporate Restructuring. Monitoring the Restructuring Process. Leveraged Buyouts (LBOs), Management Buyouts (MBOs), Spin Offs and Asset Divestitures Financial Engineering. Financial Innovation: Relevance, Drivers and Implications. Ethical Aspects of Strategic Financial Management. Financial Aspects of Supply Chain Management and Distribution Chain Management. Innovative Approach to Internal Cost-Profit Analysis. Valuation of a Business Enterprise.

Suggested Readings:

1. Allen, D: An Introduction to Strategic Financial Management, CIMA/Kogan Page,London.
2. Brealey, Richard A. and Myers, Stewart C, Principles of Corporate Finance, Tata McGrawHill.
3. Chandra, Prasanna: Financial Management, Tata McGraw Hill,Delhi.
4. Damodaran, Aswath, Valuation, John Wiley &Sons.
5. Foster, George, Financial Statement Analysis, Pearson Education Hampton, Jone, Financial Decision Making, PHI, NewDelhi.
6. Grinblatt, Mark and Titman, Sheridan, Financial Markets and Corporate Strategy, Tata McGraw Hill.
7. Jakhotiya,Dr.Girish: Strategic Financial Management, Vikas Publishing HouseLimited.
8. Kaplan, Robert S., and Cooper, Robin: Cost & effect: Using integrated cost systems to drive profitability and performance, Harvard BusinessPress.

BCH 508: Money and Banking

Objectives: This course exposes students to the theory and functioning of the monetary and banking sectors of the economy.

Unit –I

Money- Concept, Functions, Measures;
Fisher's Transactions Approach to the Quantity Theory of Money; Cambridge Cash- Balances Approach;
Keynes Demand Theory of Money; Friedman's Theory of Demand for Money;
Theory of Money Supply- H- Theory of Money;
Inflation- Concept, Types, Demand-Pull inflation, Cost-Push Inflation, Philips Curve, Structural Inflation in the Less Developed Countries;

Unit-II

Bank- Meaning, Functions, Liabilities and Assets;
Commercial banks; Co-operative banks; Development banks; Non-Bank Financial Intermediaries (NBFIs); Unregulated Credit Markets;
Reserve Bank of India- Goals, Current Monetary Policy;
Banking Sector Reforms in India

Suggested Readings:

1. Suraj B. Gupta, Monetary Economics: Institutions, Theory and Policy, S. Chand& CompanyLtd.
2. R.R. Paul, Money Banking and International Trade, KalyaniPublishers.
3. Michael R. Baye and Dennis W. Jansen, Money, Banking, and Financial Markets:An Economics Approach, Houghton Mifflin Company, U.S.A.
4. F.S. Mishkin, The Economics of Money Banking and Financial Markets Business School Edition, PearsonIndia.
5. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGrawHill,
6. L. M. Bhole, Collected Papers on Money, Interest and Monetary Policy, Amani InternationalPublishers.
7. Economic Survey, Ministry of Finance, Government of India, Latestedition
8. www.rbi.org.in

BCH 509: COMPENSATION MANAGEMENT

Objective: To enable the students to design and administer a compensation system that rewards employees fairly while satisfying customer demands and permitting the organization to operate profitably.

Unit I

Compensation Management - Concept, Principles and Practices; Theories of Compensation; Compensation in a Knowledge Based World. Foundations of Compensation - Performance Evaluation, Job Evaluation - Job Grading and Job Design; Executive Compensation. Compensation and Organizational Strategy- Monetary and Non-Monetary Rewards; Fringe Benefits, Developing Strategic Compensation Alternatives; Challenges of Compensation Design and Compensation Policies in India.

Unit II

Components of Compensation -Basic Pay, D.A., Incentives Plans, Profit Sharing Schemes, Provident fund, Gratuity and Pension. Payroll Accounting -Tax planning, Tax Efficient Compensation Package. International Compensation Management - Components and Approaches .Compensation Laws- Payment of Wages Act, Payment of Gratuity Act, Employees State Insurance Act, and Workmen's Compensation Act.

Suggested Readings:

1. Venkataratnam, C.S., and B. K. Srivastava,'Personnel Management and Human Resources', Tata McGrawHill.
2. Thomas, J. Bergman, V.G. Scarpllo and F.S. Hills.'Compensation Decision Making', Dryden Press.
3. Dunn, J.D. and F. M. Rachal, 'Wage and Salary Administration: Total Compensation System', McGraw Hill, NewYork.
4. Armstrong, M. and HellenMurlis,'Reward Management-A handbook of Remuneration Strategy'.
5. Henderson, Richard I., 'Compensation Management in a Knowledge Based world', Pearson Education.
6. Bhattacharya, Mousumi S. and Sengupta, Nilanjai, 'Compensation Management', Excel Books.

BCH 510: Electronic Banking and Risk Management

Objective: To provide an understanding and an appreciation of Electronic Banking and of Risk Management in order to enable the optimum strategy for the handling of risk in banks.

Unit-I

Electronic Banking– Core Banking –Electronic Products, On line Banking – Facilities provided and Security Issues, Cheque Truncation, Microfiche, Phone and Mobile Banking Electronic Funds Transfer Systems – Plain Messages (Telex or Data Communication) – Structured Messages (SWIFT, etc...) – RTGS, NEFT, Information Technology – Current Trends – Bank Net, RBI Net, Data Net, Nicnet, I–net, E– mail, etc.–Role and Uses ofTechnology Up-gradation – Global Developments in Banking Technology Impact of Technology on Banks – Effect on Customers and Service Quality – Computer Audit – Information System Audit.

Unit-II

Risk Management: Types of Risks in BANKS, Risk Management Framework in Banks: Enterprise –wide Risk Management in Banks; Elements of Risk Management Framework; Systematic Risk Management in Banks; Different Measures of Measuring Risks; Risk Management – Process and Techniques for Assessment and Management. Asset– liability Management in Banks, Role of RBI. Information System Security and Disaster Management.

Suggested Readings:

1. Marrison, Christopher Ian, "The fundamentals of risk measurement", New York: McGrwHill.

2. Marshall, Christopher Lee, "Measuring and Managing Operational Risks in Financial Institutions: Tools, Techniques, and Other Resources", Singapore, New York: JohnWiley.

3. MacDonald and Koch, "Management of Banking", Thomson,London.

4. Bidani, S.N., "Banking Risks", Vision Books. 5. Joshi, V.C. and Joshi, V.V., "Managing Indian Banks", Sage Publications.88

B.COM. (HONOURS)

6th Semester

BCH607: INVESTMENT MANAGEMENT

Objective and expected outcome of the course: This course provides a broad overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general. It aims at enabling the students to get theoretical and practical background in the field of investments, financial markets, valuation of investment and different investment strategies. Students will know the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.

Unit - I

Introduction to Investment Management

Financial System in India – Money Market, Capital Market, Debt Market, Need for correlating these – Bullion Market and Foreign Exchange Market.

Organization and Functioning of Securities Markets in India – Nature and Function, Organizational Structure, Role and Function of Primary Market and Secondary Markets, Type of Market Transactions based upon – Long and Short Orders, Size of Order, Price Limit of Orders, Time limit of orders, Special type of orders and order execution. Margin Trading.

Valuation of Securities – Valuation of Bonds, Valuation of Debentures, Valuation of Preference Shares, Valuation of Equity Shares and Share Valuation: CAPM Model.

UNIT - II

Market Indices – Concept, Method of Computing India's Leading Stock Indices, Overview of various Benchmark Indices, Market capitalization Indices, Sectoral Indices and Broad market Indices.

Security Credit Rating – Introduction, Factors Affecting Assigned Ratings, Credit Rating Agencies in India, Functions, Approaches and Framework Used and Business Models, Benefits of Credit Rating, Regulatory Concerns.

Risk Management Through Derivatives – Introduction to Derivatives Market and Securities, Forward and Future Contracts – Overview, Hedging, Optimal Hedge Ratio, Valuation, Application and Strategies. Options – Overview, Valuation Models and Strategies. Swaps.

Investing in Alternative Asset Classes - Hedge Funds, Characteristics of a Hedge Fund, Hedge Fund Strategies, Risk Arbitrage Investing, Hedge Fund Performance, Private Equity and Venture Capital.

Suggested Readings:

1. Babu.Dr.G.Ramesh, Portfolio Management including Security Analysis,Concept Publishing Company.
2. Dr.RaganathamM&Madhumathi R. Investment analysisPortfoliomanagement. Person Education, New Delhi.
3. Dr.BhallaV.K.Investment Management, S.Chand and Company, NewDelhi.
4. Fisher & Jordan, Security analysis and portfolio management, Prentice Hall of India, New Delhi.
5. Rustagi R.P, Investments Analysis and Portfolio management, Sultan Chand & Sons, New Delhi.
6. Sharpe, William and Gordon, Investments – Prentice hall of India, NewDelhi.

BCH 608: INTERNATIONAL ECONOMICS

Objective: The objective of the paper is to provide basic knowledge to the students about International Economics.

Unit-I

Adam Smith's Absolute Advantage Theory; Ricardo's Comparative Advantage Theory; Heckscher-Ohlin Theory of Trade; Terms of Trade

Free Trade vs Protection, Rationale of Protection Policy in Developing Countries, Barrier Tarriffs, Quotas to Trade.

Unit-II

Balance of Payments: Definitions and Concepts- Balance of Trade, Balance of Payments on Current Account, Balance of Payments on Capital Account, Autonomous and Accommodating Capital Flows; Causes and Measures to Correct the Disequilibrium

Exchange Rate: Meaning and Its determination; Fixed vs Flexible Exchange Rate, Theories of Exchange Rate: BoPs Theory, PPP Theory.

Suggested Readings:

1. H.G. Mannur, International Economics, Vikas Publishing House PvtLtd.
2. Bo Sodersten, International Economics, Macmillan PublishersLtd.
3. Bo Sodersten and Geoffrey Reed, International Economics, St. Martin'sPress.
4. R.R. Paul, Money Banking and International Trade, KalyaniPublishers.
5. Dominic Salvatore, International Economics, John Wiley and SonsInc.
6. Economic Survey, Ministry of Finance, Government of India, Latestedition.

BCH 609: TRAINING & DEVELOPMENT

Objectives: This Course aims at educating students regarding the concept of training and development in an organization.

UNIT – I

Introduction to Training Concept: Definition, Meaning, Need For Training, Importance Of Training, Objectives Of Training, Process Of Training: Steps In Training

Concept of Training Need; Identification of Training Need, Methods of Training and Techniques of Training, On the Job, Off the Job, Lecture, Role Play , Case Study, Vestibule Training, Simulation Techniques, in Basket Exercise, Syndicate Method, T- Group Training, Psychological Lab, Business Game, Activity Based Training, Programme Instruction Training, Choosing the Right Training Techniques.

UNIT – II

Designing Training and Development Programs: Organisation of Training and Development Programs, Training Design, Kinds of Training and Development Programs- Competence Based and Role Based Training; Orientation and Socialization

Evaluation of Training and Development Effectiveness: Reasons for Evaluating Training and Development Programs, Problems in Evaluation; Methods of Evaluating Effectiveness of Training Efforts.

Suggested Readings:

1. Prior, John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Noe, Raymond A., and Amitabh DeoKodwani, Employee Training and Development, Tata McGrawHill.
3. Blanchard, P. N. & Thacker, W. J. (1998). Effective Training: Systems, Strategies and Practices. Prentice Hall, NewJersey.
4. Raymond Noe, A. (2005). Employees Training and Development", McGraw Hill Publication.
5. Bhatia, S.K "Training And Development".

BCH 610: BANK MARKETING

Objective: The paper aims at acquainting the students application of marketing functions in banks, being directed at providing services to satisfy customers financial (and other related) needs and wants, more effectively and efficiently.

UNIT–I

Introduction of Marketing and Key Concepts–Definition Marketing and Market, Four Elements in Marketing Mix and Their inter-relationship. Marketing Planning–Micro and Macro Factors influencing the Market for an Organisation, Bank Marketing and Marketing Mix, Bank Distribution. The art of Customer Service as Applied to Banking. Customer Behaviour in Banking, Banking Consumer and Market Segmentation–Mass Marketing, Multiple Marketing, Steps in Strategy Formulation, Marketing Research in Banking– Types of Data–Primary and Secondary, Uses of Marketing Research. Relationship Marketing in Banking, Competitive Analysis in Banking.

UNIT–II

Bank's Product Strategy–Core, Value Added, Fundamental and Augmented Products, Product Item and Product Line , Difference between Product and Service , The Concept of Product/Service Delivery in Banking, Pricing Strategies and Its Applications in Banking—Elasticity of Demand , Break Even Analysis, Different Types of Products and Key Variables Banking Promotion Strategy– The Communication Process, Goals of Communication, Steps in Developing Effective Communication, Selling and Organising for Sales and Selling to Corporate Clients–Meaning of Corporate Clients, Relationship and Transaction Banking, Bank Organisation for large Corporate Clients, International Bank Marketing.

Suggested Readings:

1. Chacko, Oommen and Grewal, Rajendra, "Marketing of BankingServices". MacMillan IndiaLtd
2. Bank Marketing Association, "Bank Marketing", TheAssociation
3. Reidenbach, R. Eric and Pitts, Robert E, "Effective bank marketing: issues, Techniquesand Applications",1987, Bank AdministrationInstitute.

DEPARTMENT OF PHYSICAL EDUCATION

FACULTY OF EDUCATION
(PANJAB UNIVERSITY CHANDIGARH)

SYLLABUS FOR
BACHELOR OF PHYSICAL EDUCATION (B.P.Ed)
Two year course
(SEMESTER SYSTEM)
Examinations: 2020-2021

PREAMBLE:

The Bachelor of Physical Education (B.P.Ed) – Two Years (Four Semesters) Programme is meant for preparing quality teacher in Physical Education for Secondary Schools.

VISION

In line with the University mission, the Department has the aim of educating the "whole-person" and to produce quality teachers to serve as administrators in the profession of physical education and sports. Through improving our academic programme and services to the University and local community, we pledge to continually strive for academic excellence and to maintain our leadership role in our profession.

MISSION

1. To produce quality physical education teachers for imparting instructions in the subject of physical education.
2. To make people aware about the benefits of physical activity through extension lectures and demonstrations.
3. To provide excellent research and teaching in Physical Education in order to promote and develop the health and well being of people.
4. To promote health through specific physical activities, prescribed by a specialized physical educationalist.
5. To collaborate with the different organizations which are involved in promoting the quality life of the human beings i.e., educational institutions and NGOs.
6. To provide harmonious and stimulated academic environment for the promotion of quality teaching and research in the department.
7. To provide opportunity to faculty and students of the department for their self evaluations, accountability, autonomy and innovations in the area of physical education and sports.
8. To concentrate on quality research in the area of health, physical education and sports.
9. To introduce consultancy and training programmes for different educational institutions and other organizations for the conduct of sports and fitness events.
10. To update the curriculum and syllabi as per global needs and challenges.

OBJECTIVES:

This programme shall strive to achieve the following objectives:

General Objectives:

1. To enable teacher to understand the nature, purpose and philosophy of physical education at secondary stage.
2. To prepare teachers of physical education with broader educational perspective.
3. To develop for potentialities and organizing physical education programmes and activities.
4. To develop capacity to organized leisure and recreational activities.
5. To empower them to inspire their students to actively participate in physical and yogic exercises.
6. To enable teachers to develop personality, character, willpower, democratic values and positive games and sports.
7. To make teachers capable of imparting basic knowledge about health, hygiene and nutrition
8. To develop skills and competencies to organized school and community games and sports.
9. To cultivate the spirit of sportsmanship, mental and physical alertness, scientific temper and optimism.
10. To promote mental health, power of self- decision and self control, correct judgment and action emotional stability and equanimity, respect for others and acceptance of authority and rules
11. To promote appreciation and interest for indigenous games , sports and yogic exercises
12. To create awareness about health and hygiene in the community.

Specific Objectives

1. To lay down a sound foundation for higher and advance studies in Physical Education in India.
2. To produce quality teachers in physical education.
3. To prepare students for advance coaching Diplomas in disciplines – Athletics, Gymnastics, Hockey, Swimming, Basketball, Football etc.
4. To fulfill the eligibility criteria of Foreign Universities to get admission in post graduate courses abroad since it is a basic and global programme.
5. To generate employment in the fields of Health Fitness and Gym- Management, Physiotherapy, Journalism, Aquatics and Yoga.
6. To provide opportunity to talented students to excel in sports and become outstanding sports persons.
7. To promote mass participation in Physical Education activities (Games, Sports Displays etc) through intra – mural and Extra- mural programmes.

OUTLINES OF TESTS, SYLLABI AND COURSES FOR THE BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.) EXAMINATION (SEMESTER SYSTEM) FOR THE EXAMINATIONS- 2020-21

The course of instruction for the B.P.Ed Examination consists of three parts as under:

PART – I	Theory Papers	1600 Marks
PART – II	Practical Course (Skill and Prowess)	800 Marks
PART – III	Practice of Teaching	800 Marks
		Total: 3200

Marks

Note I:

- *Part-I will be evaluated externally.*
- *Part-II will be evaluated by a panel of three internal examiners appointed by the Chairman/Principal of the Department/Institution.*
- *Part-III will be evaluated with one external and one internal examiner.*

Successful candidate shall be classified as follows:

	Pass	Third Division	Second Division	First Division	Distinction
Part-I: Theory	35%	Less than 50% marks in Aggregate	50%	60%	75%
Part-II: Practical Course (Skill and Prowess)	40%	Less than 50% marks in Aggregate	50%	60%	75%
Part-III: Practice of Teaching	40%	Less than 50% marks in Aggregate	50%	60%	75%

Note: Since this is a professional course aimed at improving the standard of games and sports, it is essential that special attention be given to the practical aspect of Track and Field, Games and Sports. Therefore, specified 20 hours per week must be devoted to the practical teaching.

SEMESTER-I
PART–I: THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
I.	CC-101	History, Principles and Foundation of Physical Education	68	4	20	80	100
II.	CC-102	Anatomy and Physiology	68	4	20	80	100
III.	CC-103	Educational Technology and Methods of Teaching in Physical Education	68	4	20	80	100
Elective Course (Any One)							
IV.	EC-101	Olympic Movement	68	4	20	80	100
	EC-102	Officiating and Coaching					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-101	Track and Field (Sprints, Shot-Put, Long Jump, Relays)	68	4	40	-	40
	PC-102	Swimming, Gymnastics	68	4	20+20	-	40
	PC-103	Opening and Closing Ceremonies of Sports Events	68	4	40	-	40
	PC-104	Basketball, Football, Kabaddi, Kho-Kho	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
.	PT-101	A) Movement Lesson: Action Song & Motion Story (B)Track & Field (C) Games	68	4	-	50 75 75	200

Total: 800marks

Note:

1. Each candidate will be required to take a minimum of 10 supervised lessons in the movement lesson and 05 officiating lessons in schools. The candidate shall prepare a note book covering action song and motion story lessons which shall carry (20+20) 40 marks.

2. In Swimming (Skill & Prowess) observers will be appointed by Chairman, Department of Physical Education, Panjab University Chandigarh and where swimming pool facilities are not available Swimming practical's (Skill & Prowess) will be held at Panjab University Campus swimming pool.

Paper –I (CC-101)
HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT 1: INTRODUCTION
- Meaning, Definition and Scope of Physical Education
- Aims and Objective of Physical Education
- Importance of Physical Education in present era.
- Misconceptions about Physical Education.
- Relationship of Physical Education with General Education.
- Physical Education as an Art and Science.

UNIT- 2: HISTORICAL DEVELOPMENT OF PHYSICAL EDUCATION IN INDIA
- Indus Valley Civilization Period. (3250 BC 2500 BC)
- Vedic Period (2500 BC 600 BC)
- Early Hindu Period (600 BC 320 AD) and Later Hindu Period (320 AD 1000 AD)
- British Period (Before 1947)
- Physical Education in India (After 1947)
- Y.M.C.A. and its contributions.

UNIT- 3: FOUNDATION OF PHYSICAL EDUCATION
- Philosophical foundation:
  - Idealism
  - Pragmatism
  - Naturalism
  - Realism
  - Humanism and Existentialism
- Fitness and wellness movement in the contemporary perspectives
- Sports for all and its role in the maintenance and promotion of fitness.

UNIT-4: PRINCIPLES OF PHYSICAL EDUCATION
- Biological
  - Growth and development
  - Age and gender characteristics
  - Body Types
  - Anthropometric differences
- Psychological
  - Learning types, learning curve
  - Laws and principles of learning
  - Attitude, interest, emotions and sentiments
- Sociological
  - Society and culture
  - Leadership
  - Social integration and cohesiveness

REFERENCES:

1. Barow, H.M. (1971). *Man and His Movement*-Principles of Physical Education, Philadelphia, Lea and Febiger.
2. Bucher, C.A. (1972). *Foundations of Physical Education*, St. Louis; C.V. Mosby Co.
3. Kamlesh, M.L. (2004). *Principles and History of Physical Education and Sports,* Friends Publications (India), New Delhi.
4. Mohan, V. M. (1969). Principles of physical education. Delhi: Metropolitan Book Depot
5. Khan, E.A. (1964). *History of Physical Education,* Scientific Book Company. Patna.
6. Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
7. Obertuffer (1970). Delbert physical education. New York: Harper & Brothers Publisher.
8. Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
9. William, J. F. (1964). The principles of physical education. Philadelphia: W.B. Saunders Co.

Paper –II (CC-102)
ANATOMY AND PHYSIOLOGY

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: ANATOMY AND PHYSIOLOGY

- Introduction of Anatomy and physiology and its importance in the field of physical education and sports.
- Introduction of Cell and Tissue.
- The arrangement of the skeleton Function - of the skeleton Ribs and Vertebral column and the extremities.
- Joints of the body and their types
- Gender differences in the skeleton.

UNIT-II: SYSTEMS OF HUMAN BODY

- **Blood and circulatory system:** Constituents of blood and their function Blood groups and blood transfusion, clotting of blood, the structure of the heart-properties of the heart muscle, circulation of blood, cardiac cycle, blood pressure, Cardiac output.
- **The Respiratory system:** The Respiratory passage the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.
- **The Digestive system:** structure and functions of the digestive system, Digestive organs, Metabolism,
- **Excretory system:** Structure and functions of the kidneys and the skin.
- **The Endocrine glands:** Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.
- **Nervous systems:** Function of the Autonomic nervous system and Central nervous system. Reflex Action,

UNIT-III: NEUROMUSCULAR JUNCTIONS

- Muscles: Types of muscles, Properties and functions.
- Neuromuscular junction
- Fuel for muscular activity
- Role of oxygen- oxygen debt, second wind, vital capacity.
- Fatigue: Meaning and sites of fatigue.

UNIT-IV: EFFECTS OF EXERCISE ON VARIOUS SYSTEMS

- Effect of exercise and training on cardiovascular system.
- Effect of exercise and training on respiratory system.
- Effect of exercise and training on muscular system
- Physiological concept of physical fitness, warming up, conditioning.

REFERENCES:

1. Gupta, A. P. (2010). Anatomy *and physiology.* Agra: SumitPrakashan.
2. Hoeger, Werner W.K, Hoegen,Sharon A. (2004). Principles and Labs for fitness and wellness.
3. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication,1982.
4. Moorthy, A. M. (2014). *Anatomy physiology and health education.*Karaikudi: Madalayam Publications.
5. Pearce. E. (1989). Anatomy and Physiology for Nurses, Delhi, Oxford University Press.
6. Richardson, Seano, Anderson, Mark B. (2008). Overtraining Athletes: Personal Journey in Sports.
7. Wilmore, Jack H and Costill, David L. (1994).Physiology of Sports and Exercise. Human Kinetics.

Paper –III (CC-103)
EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION
- Education and Education Technology: Meaning and Definitions.
- Types of Education: Formal, Informal and Non- Formal education.
- Teaching: Meaning and Principles of teaching.
- Importance of technological devices used for imparting knowledge.

UNIT- II: TEACHING METHODS AND PRESENTATION TECHNIQUES
- Teaching Methods: Lecture method, Command method, Demonstration method, Imitation method, project method, Whole method, Whole- part- whole method, Part method, , At will method etc.
- Factors affecting teaching methods.
- Presentation Techniques: Personal and technical preparation, Steps of presentation.
- Types of class formations and Methods of classification of students.

UNIT- III: TEACHING AIDS
- Teaching Aids: Meaning, Importance, types of teaching aids.
- Criteria for selecting teaching aids.
- Team Teaching: Meaning, Principles and advantage of team teaching.
- Difference between Teaching Methods and Teaching Aid.

UNIT- IV: LESSON PLANNING AND TEACHING INNOVATIONS
- Lesson Planning: Meaning, Importance and Types
- Principles of lesson plans.
- Micro Teaching: Meaning, steps of micro teaching, advantages and principles
- Simulation Teaching: Meaning, Types and steps of simulation teaching.

REFERENCES:
1. Bhardwaj (2003).A *New media of educational planning*.New Delhi:Sarup of Sons.
2. Brar, R.S & Kanwar,S., (2008). Teaching Methodology and Education Technology in Physical Education, Kalyani Publisher, New Delhi.
3. Kochar, S.K. (2014). *Methods and techniques of teaching.* New Delhi: Sterling Publishers.
4. M.L. Kamlesh & Sangral, M..S., (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.
5. Walia, J.S. (1999). *Principles and methods of education.*Jullandhar:Paul Publishers.

Paper –IV (EC-101)
OLYMPIC MOVEMENT

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: ORIGIN OF OLYMPIC MOVEMENT
- Philosophy of Olympic movement
- The early history of the Olympic movement
- The significant stages in the development of the modern Olympic movement
- Educational and cultural values of Olympic movement

UNIT- II: MODERN OLYMPIC GAMES
- Significance of Olympic Ideals, Olympic Rings, Olympic Flag
- Olympic Protocol for member countries
- Olympic Code of Ethics
- Olympism in action
- Sports for All

UNIT- III: DIFFERENT OLYMPIC GAMES
- Para Olympic Games
- Summer Olympics
- Winter Olympics
- Youth Olympic Games

UNIT- IV: COMMITTEES OF OLYMPIC GAMES
- International Olympic Committee - Structure and Functions
- National Olympic committees and their role in Olympic movement
- Olympic commission and their functions
- Olympic medal winners of India

REFERENCES:
1. Osborne, M. P. (2004). *Magictree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York:* Random House Books for Young Readers.
2. Burbank, J. M., Andranovich, G. D. &Heying Boulder, C. H. (2001).Olympic dreams: the impact of mega-events on local politics: Lynne Rienner.

Paper –IV (EC-102)
OFFICIATING AND COACHING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION OF OFFICIATING AND COACHING
- Concept of officiating and coaching
- Importance and principles of officiating
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

UNIT- II: COACH AS A MENTOR
- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching

UNIT- III: DUTIES OF OFFICIAL
- Duties of official in general, pre, during and post game.
- Philosophy of officiating
- Mechanics of officiating position, singles and movement etc.
- Ethics of officiating

UNIT- IV: QUALITIES AND QUALIFICATIONS OF COACH AND OFFICIAL
- Qualities and qualification of coach and official
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments, preparation of TA, DA bills
- Integrity and values of sports

REFERENCES:
1. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
2. Dyson, G. H. (1963).*The mechanics of athletics*. London: University of London Press Ltd.
3. Singer, R. N. (1972).*Coaching, athletic & psychology*. New York: M.C. Graw Hill.
4. Brar. T. S. (2002). Officiating techniques in Track and Field, Gwalior. Bhargava Press.
5. De Souza A. J. (1999).Track Geography and Field Sites. Chennai. DBAC Sports Envisions.
6. Mortensen, J. and Cooper J. M. (1963). Track & Field for coach & athlete,. Prentice Hall Inc., Englewood Cliffs.

SEMESTER-II
PART – I THEORY PAPERS

Paper	Course Code	Subject	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
V.	CC-201	Yoga Education	68	4	20	80	100
VI.	CC-202	Health Education and Environmental Studies	68	4	20	80	100
VII.	CC-203	Organization and Administration	68	4	20	80	100
Elective Course (Any One)							
VIII.	EC-201	Contemporary issues in Physical Education, Fitness and Wellness	68	4	20	80	100
	EC-202	Sports Nutrition and Weight Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-201	Track and Field (Middle Distance Races, Hurdles, Discus Throw, High Jump)	68	4	40	-	40
	PC-202	Swimming, Gymnastics	68	4	20+20	-	40
	PC-203	Lezium, Indian Clubs	68	4	40	-	40
	PC-204	Hockey, Volleyball, Handball, Softball,	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-201	(A) Theory Lesson (B) Track & Field (C) Games	68	4	-	50 75 75	200

Total: 800 marks

Note:

1. Each candidate will be required to take a minimum of 10 supervised lessons (General and Theory Lessons) and 05 officiating lessons in schools. The candidate shall prepare a note book covering General and Theory Lessons which shall carry (20+20) 40 marks.

2. In Swimming (Skill & Prowess) observers will be appointed by Chairman, Department of Physical Education, Panjab University Chandigarh and where swimming pool facilities are not available Swimming practical's (Skill & Prowess) will be held at Panjab University Campus swimming pool.

Paper –V (CC-201)
YOGA EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION
- Meaning and Definition of Yoga
- Aims and Objectives of Yoga
- Yoga in Early Upanisads
- The Yoga Sutra: General Consideration
- Need and Importance of Yoga in Physical Education and Sports

UNIT- II: FOUNDATION OF YOGA
- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga

UNIT – III: ASANAS
- Effect of Asanas and Pranayama on various system of the body
- Classification of asanas with special reference to physical education and sports
- Influences of relaxtive, meditative posture on various system of the body
- Types of Bandhas and mudras
- Type of kriyas

UNIT- IV: YOGA EDUCATION
- Basic, applied and action research in Yoga
- Difference between yogic practices and physical exercises
- Yoga education centers in India and abroad
- Competitions in Yogasanas

REFERENCES:
1. Brown, F. Y.,(2000). *How to use yoga*. Delhi:Sports Publication.
2. Gharote, M. L. & Ganguly, H.(1988). *Teaching methods for yogic practices*. Lonawala: Kaixydahmoe.
3. Rajjan, S. M. (1985). *Yoga strengthening of relaxation for sports man.* New Delhi: Allied Publishers.
4. Shankar,G. (1998) *Holistic approach of yoga.* New Delhi:Aditya Publishers.
5. Shekar,K. C., (2003).*Yoga for health*. Delhi: Khel Sahitya Kendra.

Paper –VI (CC-202)
HEALTH EDUCATION AND ENVIRONMENT STUDIES

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

Unit- I: Health Education

- Concept, Dimensions, Spectrum and Determinants of Health
- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene

Unit- II: Health Problems in India

- Communicable and Non Communicable Diseases
- Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive Population,
- Personal and Environmental Hygiene for schools
- Objective of school health service, Role of health education in schools
- Health Services Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

Unit- III: Environmental Science

- Definition, Scope, Need and Importance of environmental studies.
- Concept of environmental education, Historical background of environmental education,
- Celebration of various days in relation with environment.
- Plastic recycling & probation of plastic bag / cover.
- Role of school in environmental conservation and sustainable development.

Unit- IV: Natural Resources and related environmental issues:

- Water resources, food resources and Land resources
- Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- Management of environment and Govt. policies , Role of pollution control board.

REFERENCES:

1. Agrawal, K.C. (2001). *Environmental biology*. Bikaner: Nidhi publishers Ltd.
2. Beotra, Alka (2001). Drug Education Handbook on Drug Abuse in Sports. Mumbai: Applied Nutrition Sciences.
3. Frank, H. &Walter, H. (1976). *Turners school health education*. Saint Louis: The C.V. Mosby Company.
4. Odum, E.P. (1971). *Fundamental of ecology*. U.S.A.: W.B. Saunders Co.
5. Pande, P. K. (1987). Outline of Sports Medicine, New Delhi : Jaypee Brothers.
6. Roy, Steven and Richard, Irvin (1983). Sports Medicine ,N.J. : Englewood Cliff.
7. Sharma, N.P.(2005). Sharir Rachna Tatha Sharir Kriya Vigyan . New Delhi : Khel Sahitya Kendra.

Paper –VII (CC-203)
ORGANIZATION AND ADMINISTRATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: ORGANIZATION AND ADMINISTRATION

- Meaning, definition and importance of Organization and Administration in physical education.
- Planning and their basic principles
- Program planning: Meaning, Importance, Principles of program planning in physical education.
- Qualification and Responsibilities of Physical Education teacher
- Importance of Pupil leader in Physical Education

UNIT- II: OFFICE MANAGEMENT, RECORD, REGISTER & BUDGET

- Office Management: Meaning, definition, functions and kinds of office management
- Records and Registers: Maintenance of attendance Register, stock register, cash register, physical efficiency record, Medical examination Record.
- Budget: Meaning, Importance of Budget making,
- Criteria of a good Budget, Sources of Income, Expenditure, Preparation of Budget.

UNIT- III: FACILITIES, & TIME-TABLE MANAGEMENT

- Facilities and equipment management: Types of facilities; Infrastructure-indoor, out door.
- Playfields: Area, Location, layout and care
- Equipment: Need, importance, purchase, care and maintenance.
- Time Table Management: Meaning, Need, Importance and Factor affecting time table.

UNIT- IV: COMPETITION ORGANIZATION

- Tournament and its importance.
- Types of Tournament and its organization structure - Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament, consolation tournaments and challenge Tournament.
- Organization structure of Athletic Meet.
- Sports Event Intramurals & Extramural Tournament planning.

REFERENCES:

1. Bucher, C. A. (1985). *Administration of Physical Education and Athletic programme.*St. Lolis: The C.V. Hosby Co.
2. M.L. Kamlesh and M.S. Sangral (1986). Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana.

3. Sharma, V.M. & Tiwari, R.H. (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
4. Thomas, J. P. (1967). Organization & administration of Physical Education. Madras: Gyanodayal Press.
5. Tirunarayan and Hariharan (1985). Methods in Physical education M.S C.T. & S. H. Allagappa College of Physical Education, Karaikuddi U.

Paper –VIII (EC-201)
CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS

Total Marks	*:*	*100*
Theory Marks	*:*	*80*
Sessional Marks	*:*	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: CONCEPT OF PHYSICAL EDUCATION AND FITNESS
- Definition, Aims and Objectives of Physical Education, fitness and Wellness
- Importance and Scope of fitness and wellness
- Modern concept of Physical fitness and Wellness
- Physical Education and its Relevance in Inter Disciplinary Context.

UNIT- II: FITNESS, WELLNESS AND LIFESTYLE
- Fitness Types of Fitness and Components of Fitness
- Understanding of Wellness
- Modern Lifestyle and Hypo kinetic Diseases Prevention and Management
- Physical Activity and Health Benefits

UNIT- III: PRINCIPLES OF EXERCISE PROGRAM
- Means of Fitness development aerobic and anaerobic exercises
- Exercises and Heart rate Zones for various aerobic exercise intensities
- Concept of free weight Vs Machine, Sets and Repetition etc
- Concept of designing different fitness training program for different age group.

UNIT- IV: SAFETY EDUCATION AND FITNESS PROMOTION
- Health and Safety in Daily Life
- First Aid and Emergency Care
- Common Injuries and their Management

REFERENCES:
1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). Sport *medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G. (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

Paper –VIII (EC-202)
SPORTS NUTRITION AND WEIGHT MANAGEMENT

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION TO SPORTS NUTRITION

- Meaning and Definition of Sports Nutrition
- Basic Nutrition guidelines
- Role of nutrition in sports
- Factor to consider for developing nutrition plan

UNIT- II: NUTRIENTS: INGESTION TO ENERGY METABOLISM

- Carbohydrates, Protein, Fat Meaning, classification and its function
- Role of carbohydrates, Fat and protein during exercise
- Vitamins, Minerals, Water Meaning, classification and its function
- Role of hydration during exercise, water balance, Nutrition daily caloric requirement and expenditure.

UNIT- III: NUTRITION AND WEIGHT MANAGEMENT

- Meaning of weight management Concept of weight management in modern era Factor affecting weight management and values of weight management
- Concept of BMI (Body mass index), Obesity and its hazard, Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss
- Obesity Definition, meaning and types of obesity,
- Health Risks Associated with Obesity, Obesity - Causes and Solutions for Overcoming Obesity.

UNIT- IV: STEPS OF PLANNING OF WEIGHT MANAGEMENT

- Nutrition Daily calorie intake and expenditure, Determination of desirable body weight
- Balanced diet for Indian School Children, Maintaining a Healthy Lifestyle
- Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss

REFERENCES:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6).
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a keycomponent of successful weight loss maintenance.*Obesity(Silver Spring). 15*(12).
3. Chu, S.Y. & Kim, L. J.(2007). Maternal obesity and risk of stillbirth: a metaanalysis. Am J ObstetGynecol, 197(3).
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. N Engl J Med,356(21).
5. Dixon, J.B., & O'Brien, P.E., Playfair, J. (2006). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized.

SEMESTER-III
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
IX.	CC-301	Computer Application in Physical Education	68	4	20	80	100
X	CC-302	Sports Psychology and Sociology	68	4	20	80	100
XI	CC-303	Sports Training	68	4	20	80	100
Elective Course (Any One)							
XII.	EC-301	Sports Medicine, Physiotherapy, and rehabilitation	68	4	20	80	100
	EC-302	Curriculum Design					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-301	Track and Field (Long Distance Races, Javelin Throw, Triple Jump, Steeple Chase)	68	4	40	-	40
	PC-302	Swimming, Gymnastics	68	4	20+20	-	40
	PC-303	Folk Dances	68	4	40	-	40
	PC-304	Cricket, Badminton, Table-Tennis, Lawn-Tennis	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-301	Teaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each candidate will be required to take a minimum of 10 supervised lessons (Games, Track & Field) and 05 officiating lessons in schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –IX (CC-301)
COMPUTER APPLICATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION TO COMPUTER

- Meaning, need and importance of information and communication technology (ICT). Application of Computers in Physical Education
- Components of computer, input and output device
- Application software used in Physical Education and sports

UNIT- II: MS WORD

- Introduction to MS Word
- Creating, saving and opening a document
- Formatting Editing features Drawing table
- Page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes

UNIT- III: MS EXCEL

- Introduction to MS Excel
- Creating, saving and opening spreadsheet
- Creating formulas
- Format and editing features adjusting columns width and row height understanding charts.

UNIT- IV: MS POWER POINT

- Introduction to MS Power Point
- Creating, saving and opening a ppt. file
- Format and editing features slide show, design, inserting slide number
- Picture, graph, table
- Preparation of Power point presentations

REFERANCES:

1. Irtegov, D.(2004). *Operating system fundamentals*. Firewall Media.
2. Milke, M. (2007). *Absolute beginners guide to computer basics*. Pearson Education Asia.
3. Barrett, R. (2007). Administrator's Guide to Microsoft Office 2007 servers.
4. Eric, L. Einspruch (2005). AN Introductory Guide to SPSS for Windows, Sage.
5. Kilman, Shin (1995). *SPSS GUIDE* Mc Graw – Hill Higher Education.
6. Murray, K. (2007). Faster smarter Microsoft office XP: Take charge of your Microsoft office programme.

Paper –X (CC-302)
SPORTS PSYCHOLOGY AND SOCIOLOGY

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT -I: INTRODUCTION
- Meaning, Importance and scope of Educational and Sports Psychology
- General characteristics of Various Stages of growth and development
- Types and nature of individual differences; Factors responsible -Heredity And environment
- Psycho-sociological aspects of Human behavior in relation to physical education and sports

UNIT-II: SPORTS PSYCHOLOGY
- Nature of learning, theories of learning, Laws of learning,
- Plateau in Learning; & transfer of training
- Meaning and definition of personality, characteristics of personality,
- Dimension of personality, Personality and Sports performance
- Nature of motivation: Factors influencing motivation; Motivation and techniques and its impact on sports performance.
- Mental Preparation Strategies: Attention focus, Self- talk, Relaxation, Imaginary.
- Aggression and Sports, Meaning and nature of anxiety, Kinds of anxiety
- Meaning and nature of stress; Types of stress, Anxiety, Stress, Arousal and their effects on sports performance

UNIT-III: RELATION BETWEEN SOCIAL SCIENCE AND PHYSICAL EDUCATION.
- Orthodoxy, customs, Tradition and Physical Education.
- Festivals and Physical Education.
- Socialization through Physical Education.
- Social Group life, Social conglomeration and Social group, Primary group and Remote group.

UNIT-IV CULTURE: MEANING AND IMPORTANCE.
- Features of culture,
- Importance of culture.
- Effects of culture on people life style.
- Different methods of studying Observation/ Inspection method, Questionnaire method, Interview method

REFERENCES:

1. Ball, D. W. & Loy, J. W. (1975). Sport *and social order; Contribution to the sociology of sport.* London: Addison Wesley Publishing Co., Inc.
2. Kamlesh, M.L. (1998). Psychology in physical education and sport. New Delhi: Metropolitan Book Co.
3. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1981). Sports culture and society. Philadelphia: Lea &Febiger.
4. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sport and social system. London: Addison Wesley Publishing Company Inc.
5. Skinnner, C. E.(1984). Education psychology. New Delhi: Prentice Hall of India.
6. William, F. O.& Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt Ltd.

Paper –XI (CC-303)
SPORTS TRAINING

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION TO SPORTS TRAINING

- Meaning and Definition of Sports Training ○ Aim and Objective of Sports Training
- Principles of Sports Training
- System of Sports Training Basic Performance, Good Performance and High Performance Training

UNIT- II: TRAINING COMPONENTS

- Strength Mean and Methods of Strength Development
- Speed Mean and Methods of Speed Development
- Endurance - Mean and Methods of Endurance Development
- Coordination Mean and Methods of coordination Development
- Flexibility Mean and Methods of Flexibility Development

UNIT- III: TRAINING PROCESS

- Training Load- Definition and Types of Training Load
- Principles of Intensity and Volume of stimulus
- Technical Training Meaning and Methods of Technique Training
- Tactical Training Meaning and Methods of Tactical Training

UNIT- IV: TRAINING PROGRAMMING AND PLANNING

- Periodization Meaning and types of Periodization
- Aim and Content of Periods Preparatory, Competition, Transitional etc.
- Planning Training session
- Talent Identification and Development

REFERENCES:

1. Bompa, Tudor, O. (1999). Periodisations Training for sports: Human Kinetic (U.S.A).
2. Dick, W. F. (1980). *Sports training principles.*London: Lepus Books.
3. Dick. W. Frank. (1980). *Sports Training Principles*, London: Lepus Birks.
4. Harre . Dictrich. (1982). *Principles of Sports Training*. Beslin : Sportulag.
5. Harre, D. (1982). *Principles of sports training.*Berlin: Sporulated.
6. Singh, Hardyal (1991). *Science of Sports Training*. D, V, S Publications. New Delhi.
7. Uppal, A.K. (1999). S*ports Training.*New Delhi: Friends Publication.

Paper –XII (EC-301)
SPORTS MEDICINE, PHYSIOTHERAPY AND REHABILITATION

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: - SPORTS MEDICINE:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education
- Prevention of injuries in sports Common sports injuries Diagnosis
- First Aid - Treatment - Laceration Blisters Contusion - Strain Sprain Fracture Dislocation and Cramps Bandages Types of Bandages trapping and supports.

UNIT-II: PHYSIOTHERAPY

- Definition Guiding principles of physiotherapy, Importance of physiotherapy, Introduction and demonstration of treatments - Electrotherapy infrared rays Ultraviolet rays short wave diathermy ultrasonic rays.

UNIT-III: HYDROTHERAPY:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast Bath, Whirlpool Bath Steam Bath Sauna Bath Hot Water Fomentation Massage: History of Massage Classification of Manipulation (Swedish System) physiological Effect of Massage.

UNIT-IV: THERAPEUTIC EXERCISE:

- Definition and Scope Principles of Therapeutic Exercise Classification, Effects and uses of Therapeutic exercise passive Movements (Relaxed, Forced and passive - stretching) active movements (concentric, Eccentric and static) application of the therapeutic exercise: Free Mobility Exercise Shoulder, Elbow Wrist and Finger Joints Hips, Knee, ankle and Foot joints Trunk. Head and Neck exercises.

REFERENCES:

1. Christine, M. D. (1999). *Physiology of sports and exercise*.USA: Human Kinetics.
2. Conley, M.(2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005). *Drugs in sports,* (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D.(1979). A *dictionary for physical educators.* In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.
5. Jeyaprakash, C. S. (2003). Sports Medicine, J.P. Brothers Pub., New Delhi.
6. Khanna, G.L. (1990). *Exercise physiology & sports medicine*. Delhi:Lucky Enterprises.
7. Pandey, P.K. (1987). Outline *of sports medicine*, New Delhi: J.P. Brothers Pub.,1987.

Paper –XII (EC-302)
CURRICULUM DESIGN

Total Marks	:	*100*
Theory Marks	:	*80*
Sessional Marks	:	*20*

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: MODERN CONCEPT OF THE CURRICULUM

- Need and importance of curriculum, Need and importance of curriculum development, the role of the teacher in curriculum development.
- Factors affecting curriculum - Social factors - Personnel qualifications - Climatic consideration - Equipment and facilities -Time suitability of hours.
- National and Professional policies, Research finding

UNIT- II: BASIC GUIDE LINE FOR CURRICULUM CONSTRUCTION; CONTEST (SELECTION AND EXPANSION).

- Focalization
- Socialization
- Individualization
- Sequence and operation
- Steps in curriculum construction.

UNIT- III: CURRICULUM-OLD AND NEW CONCEPTS, MECHANICS OF CURRICULUM PLANNING.

- Basic principles of curriculum construction.
- Curriculum Design, Meaning, Importance and factors affecting curriculum design.
- Principles of Curriculum design according to the needs of the students and state and national level policies.
- Role of Teachers

UNIT- IV: Under-graduate preparation of professional preparation.

- Areas of Health education, Physical education and Recreation.
- Curriculum design-Experience of Education, Field and Laboratory.
- Teaching practice.
- Professional Competencies to be developed-Facilities and special resources for library, laboratory and other facilities.

REFERENCES:

1. Barrow, H. M. (1983). *Man and movement: principles of physical education*. Philadelphia: Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby & Company.
3. Cassidy, R. (1986). *Curriculum development in physical education*. New York: Harper & Company.

SEMESTER-IV
PART – I THEORY PAPERS

Paper	Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course							
XIII.	CC-401	Measurement and Evaluation in Physical Education	68	4	20	80	100
XIV.	CC-402	Kinesiology and Biomechanics	68	4	20	80	100
XV.	CC-403	Research and Statistics in Physical Education	68	4	20	80	100
Elective Course (Any One)							
XVI.	EC-401	Theory of Sports and Games	68	4	20	80	100
	EC-402	Sports Management					
PART-II PRACTICAL COURSE (SKILL AND PROWESS)							
	PC-401	Track and Field (Race Walk, Road Race, Hammer throw, Pole Vault)	68	4	40	-	40
	PC-402	Swimming, Gymnastics	68	4	20+20	-	40
	PC-403	Mass Demonstrations	68	4	40	-	40
	PC-404	Wrestling, Judo, Boxing, Kabaddi (circle Style)	68	4	20+20+20+20	-	80
PART – III PRACTICE OF TEACHING							
	PT-401	Coaching Lesson (A) Games (B) Track & Field)	68	4	-	(A)80+20=100 (B)80+20=100	200

Total: 800 marks

Note:

Each trainee will be required to take a minimum of 10 supervised lessons (Games, Track & Field) and 05 officiating lessons in schools. The candidate shall prepare a note book covering lessons of above said Games and Track & Field events which shall carry (20+20) 40 marks.

Paper –XIII (CC-401)
MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: INTRODUCTION TO TEST & MEASUREMENT & EVALUATION
- Meaning of Test & Measurement & Evaluation in Physical Education
- Need & Importance of Test & Measurement & Evaluation in Physical Education
- Principles of Evaluation

UNIT-II: CRITERIA, CLASSIFICATION AND ADMINISTRATION OF TEST
- Criteria of good Test
- Criteria of tests, scientific authenticity (reliability, objectivity, validity and availability of norms)
- Type and classification of Test
- Administration of test

UNIT- III: PHYSICAL FITNESS TESTS
- AAHPER youth fitness test
- National physical Fitness Test
- Indiana Motor Fitness Test
- JCR test

UNIT- IV: SPORTS SKILL TESTS
- Lockhart and McPherson badminton test
- Johnson basketball test
- McDonald soccer test
- S.A.I volleyball test

REFERENCES:
1. Bangsbo, J. (1994). *Fitness training in football: A scientific approach*. Bagsvaerd, Denmark.
2. Barron, H. M., & Mchee, R. (1997). *A practical approach to measurement in physical education*. Philadelphia: Lea and Febiger.
3. Kansal, D.K. (1996). *Test and measurement in sports and physical education*. New Delhi: D.V.S. Publications.
4. Mathews, D.K. (1973). Measurement in physical education, Philadelphia: W.B.Sounders Compnay.

5. Pheasant, S.(1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
6. Phillips, D. A., &Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Willey and Sons.
7. Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

Paper –XIV (CC-402)
KINESIOLOGY AND BIOMECHANICS

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION TO KINESIOLOGY AND SPORTS BIOMECHANICS

- Meaning and Definition of Kinesiology and Sports Biomechanics
- Importance of Kinesiology and Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- Terminology of Fundamental Movements
- Fundamental concepts of following terms Axes and Planes, Centre of Gravity, Equilibrium, Line of Gravity

UNIT- II: FUNDAMENTAL CONCEPT OF ANATOMY AND PHYSIOLOGY

- Classification of Joints and Muscles
- Types of Muscle Contractions
- Posture Meaning, Types and Importance of good posture.
- Fundamental concepts of following terms- Angle of Pull, All or None Law, Reciprocal Innovation

UNIT- III: MECHANICAL CONCEPTS

- Force - Meaning, definition, types and its application to sports activities
- Lever - Meaning, definition, types and its application to human body.
- Newtons Laws of Motion Meaning, definition and its application to sports activities.
- Projectile Factors influencing projectile trajectory.

UNIT- IV: KINEMATICS AND KINETICS OF HUMAN MOVEMENT

- Linear Kinematics Distance and Displacement, speed and velocity, Acceleration
- Angular kinematics Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.
- Linear Kinetics Inertia, Mass, Momentum, Friction.
- Angular Kinetics Moment of inertia ,Couple, Stability.

REFERENCES:

1. Bunn, J. W. (1972).*Scientific principles of coaching.* Englewood Cliffs, N.J.: Prentice Hall Inc.
2. Hay, J. G. & Reid, J. G.(1982).*The anatomical and mechanical basis of human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
3. Hay, J. G. & Reid, J. G.(1988).*Anatomy, mechanics and human motion.* Englewood Cliffs, N.J.: prentice Hall Inc.
4. Hay, J. G. (1970).*The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc. Simonian, C. (1911).*Fundamentalsof sport biomechanics.* Englewood Cliffs, N.J.: Prentice Hall Inc.

Paper –XV (CC-403)
RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT- I: INTRODUCTION TO RESEARCH

- Definition of Research
- Need and importance of Research in Physical Education and Sports.
- Scope of Research in Physical Education & Sports.
- Classification of Research
- Research Problem, Meaning of the term, Location and criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations.

UNIT- II: SURVEY OF RELATED LITERATURE

- Need for surveying related literature.
- Literature Sources, Library Reading
- Research Proposal, Meaning and Significance of Research Proposal.
- Preparation of Research proposal / project.
- Research Report: A group project is to be undertaken by a small batch of students under the supervision of a teacher, wherein it is expected to survey school facilities of physical education, health assessment programme evaluation, fitness status of the students, staff and other stakeholders etc. and submit the report to the institution.

UNIT-III: BASICS OF STATISTICAL ANALYSIS

- Statistics: Meaning, Definition, Nature and Importance
- Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables
- Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram

UNIT- IV: STATISTICAL MODELS IN PHYSICAL EDUCATION AND SPORTS

- Measures of Central Tendency: Mean, Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data
- Measures of Variability: Meaning, importance, computing from group and ungroup data
- Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data

REFERENCES:

1. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc. +
2. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
3. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
4. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
5. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
6. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

Paper –XVI (EC-401)
THEORY OF SPORTS AND GAMES

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I: GENERAL INTRODUCTION OF SPECIALIZED GAMES AND SPORTS

Athletics, Badminton, Basketball, Cricket, Football, Gymnastic, Hockey, Handball, Kabaddi, Kho-Kho, Tennis, Volleyball and Yoga.

Each game or sports to be dealt under the following heads

o History and development of the Game and Sports o Ground preparation, dimensions and marking
o Standard equipment and their specifications o Ethics of sports and sportsmanship

UNIT-II: SCIENTIFIC PRINCIPLES OF COACHING: (Particular Sports And Game Specific)

o Motion Types of motion and Displacement, Speed, Velocity, Acceleration, Distance and Newtons Law of motions.
o Force Friction, Centripetal and Centrifugal force, Principles of force.
o Equilibrium and its types o Lever and its types
o Sports Training Aims, Principles and characteristics.
o Training load Components, Principles of load, Over Load (causes and symptoms).

UNIT-III: PHYSICAL FITNESS COMPONENTS: (Particular Sports and Game Specific)

o Speed and its types
o Strength and its types o Endurance and its types
o Flexibility and its types
o Coordinative ability and its types
o Training methods: Development of components of physical fitness and motor fitness through following training methods (continuous method, interval method, circuit method, fartlek /speed play and weight training)

UNIT-IV: CONDITIONING EXERCISES AND WARMING UP

o Concept of Conditioning and warming up.
o Role of weight training in games and sports.
o Teaching of fundamental skill & their mastery (technique, tactic and different phases of skill acquisition).
o Recreational and Lead up games
o Strategy Offence and defense, Principles of offence and defense.

REFERENCES:

1. Bunn, J. W. (1968). *The art of officiating sports*. Englewood cliffs N.J. Prentice Hall.
2. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood cliffs N. J. Prentice Hall.
3. Dyson, G. H. (1963). *The mechanics of athletics*. London: University of London Press Ltd.
4. Lawther, J.D. (1965). *Psychology of coaching*. New York: Pre. Hall.
5. Singer, R. N. (1972). *Coaching, athletic & psychology*. New York: M.C. Graw Hill.

Paper –XVI (EC-402)
SPORTS MANAGEMENT

Total Marks : 100
Theory Marks : 80
Sessional Marks : 20

Note: *Nine questions will be set. Question number one will be compulsory of 20 marks with ten short types of answers covering the entire syllabus. Four questions are to be attempted selecting one from each unit and each question will carry 15 marks.*

UNIT-I

- Nature and Concept of Sports Management.
- Progressive concept of Sports management.
- The purpose and scope of Sports Management.
- Essential skills of Sports Management.
- Qualities and competencies required for the Sports Manager.
- Event Management in physical education and sports.

UNIT-II

- Meaning and Definition of leadership
- Leadership style and method.
- Elements of leadership.
- Forms of Leadership.
  - Autocratic
  - Laissez-faire
  - Democratic
  - Benevolent Dictator
- Qualities of administrative leader.
- Preparation of administrative leader.
- Leadership and Organizational performance.

UNIT-III

- Sports Management in Schools, colleges and Universities.
- Factors affecting planning ○ Planning a school or college sports programme.
- Directing of school or college sports programme.
- Controlling a school, college and university sports programme.
  - Developing performance standard
  - Establishing a reporting system
  - Evaluation
  - The reward/punishment system

UNIT-IV

- Financial management in Physical Education & sports in schools, Colleges and Universities.
- Budget Importance, Criteria of good budget,
- Steps of Budget making
- Principles of budgeting

REFERENCES:

1. Ashton, D. (1968).Administration of physical education for women.New York: The Ronal Press
2. Bucher, C.A. (1978). Administration of physical education and athletic programme. 7th Edition, St. Louis: The C.V. Mosby Co.
3. Daughtrey, G. & Woods, J.B. (1976). Physical education and intramural programmes, organisation and administration. Philadelphia U.S.A. : W.B. Sounders Cp.
4. Earl, F. Z,& Gary, W. B. (1963).Management competency development in sports and physical education. Philadelphia: W. Lea and Febiger.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A./B.Sc. (Honours) Course
THIRD YEAR
(SEMESTER : FIFTH AND SIXTH)
Examination, 2020-2021

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OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE HONOURS SUBJECTS OF THE B.A./B.Sc. THIRD YEAR FOR THE EXAMINATION, 2020-2021

ENGLISH

SEMESTER V

PAPER : 20th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1.	G.B. Shaw	:	*Arms and the Man.*
2.	George Orwell	:	*Nineteen Eighty Four.*
3.	D. H. Lawrence	:	*The Rainbow.*
4.	W.B. Yeats	:	(i) *Among school Children* (ii) *The Second coming* (iii) *Lake of Isle Innisfree*

Testing :

There will be **Two Units.**
Unit I will consist of two compulsory questions.
Unit II will consist of four questions (with internal choice). The students will attempt any three

Unit I
There will be one question on the literary movement of 20th Century with internal choice

(15 marks)

There will be one question with reference to the context from writers at Serial No. 1 and 4. Two passages will be set from each writer with internal choice. Students will attempt one passage from each writer.

(15 Marks)

Unit II
There will be two essay type questions with internal choice on each of the four writers' texts. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH

SEMESTER VI

PAPER : INDIAN WRITING IN ENGLISH

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 Hours

Texts :

1. Tagore : (i) *The Joureny*, (ii) *Sea Shore.*, (iii) *Maya* — *Selection from Geetanjali*
2. Mulk Raj Anand : *Coolie.*
3. R.K. Narayan : *The Vender of Sweets*
4. Kamla Dass : (i) *An Introduction* (ii) *Forest Fire* (iii) *The Freaks* (iv) *My Grandmother's House*

Testing :

1. There will be one question with reference to context. Two stanzas with internal choice will be set from Tagore and Kamla Dass. Students will attempt one stanza from each Poet.. (10 marks)
2. Four questions (one on each author) of 20 marks each will internal choice. (20 × 4 = 80 marks)

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B.A./B.Sc. (Sanskrit Honours) Third Year Syllabus
बी.ए. (संस्कृत आनर्स) तृतीय वर्ष परीक्षा 2020-21
SEMESTER-V

तृतीय पत्र : पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः–

विद्यार्थियों को काव्य के स्वरूप, प्रयोजन इत्यादि से अवगत करना । इसी के साथ ही पाणिनीय सूत्रों के माध्यम से कारक तथा स्त्री प्रत्ययों के अध्ययनोपरान्त संस्कृत लेखन के प्रति उत्साहित करना ।

UNIT-I

(क) साहित्यदर्पण–प्रथम परिच्छेद 40 अंक

UNIT-II

(ख) लघुसिद्धान्तकौमुदी– 30 अंक

(i) विभक्त्यर्थ (कारक–प्रकरण) 15 अंक

(ii) स्त्री–प्रत्यय 15 अंक

UNIT-III

(ग) संस्कृत में निबन्ध (इन विषयों पर– संस्कृतभाषा, परोपकारः, गीता, वेदानां महत्त्वम्, आदर्श–छात्रः)। 20 अंक

नोट – पत्र का अध्यापन समय–नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

B.A./B.Sc. (Sanskrit Honours) Third Year Syllabus
बी.ए. (संस्कृत आनर्स) तृतीय वर्ष परीक्षा 2020-21
SEMESTER-VI

चतुर्थ प्रश्न -पत्रः पूर्णांकः 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10 लिखित परीक्षा- 90) समय : 3 घण्टे

उद्देश्यः-

उपनिषद् प्रतिपादित नचिकेता एवं यम के संवाद द्वारा विद्यार्थियों को रहस्यमय परमतत्त्व से परिचित कराना, इसके अतिरिक्त चतुर्वेद, ब्राह्मण तथा उपनिषद् ग्रन्थों के विषय-वस्तु का अध्ययन करवाना।

UNIT-I

(क) उपनिषद्-साहित्य 60 अंक

(i) कठोपनिषद्-(प्रथम अध्याय) अनुवाद एवं व्याख्या (6 में से 4 सन्दर्भ) 4×10 = 40 अंक

(ii) कठोपनिषद् से सम्बद्ध प्रश्न (2 में से 1 का उत्तर) 1×20 = 20 अंक

UNIT-II

(ख) वैदिक साहित्य का इतिहास 30 अंक

1. सहिंताएँ 2. ब्राह्मणग्रन्थ 3. उपनिषद 2×15 = 30 अंक

(विषय वस्तु से सम्बन्धित चार में से दो के उत्तर पूछे जायेगें) ।

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

Books Recommended :

1. Sanskrit Drama : A.B. Keith.
2. Classical Sanskrit literature : A.B. Keith.
3. A History of Sanskrit Literature : A.A. Macdone.
4. A History of Indian Literature, Vol. I : M. Vintenitz
5. History of Sanskrit Literature by V. Varadachari.
6. संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय
7. वैदिक साहित्य और संस्कृति : बलदेव उपाध्याय
8. संस्कृत वाड्मय का इतिहास : वाचस्पति गैरोला
9. संस्कृत साहित्य की रूपरेखा : चन्द्रशेखर पाण्डेय

Note : All books are available at the Chaukhamba Sanskrit Series, Chaukhamba, Varanasi and Motilal Banarasidas, Jawahar Nagar, Bunglow Road, Delhi.

PERSIAN

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-2021

SEMESTER V

PAPER-III : HISTORY OF PERSIAN LITERATURE

SAFIVID PERIOD

100 Marks

Time : 3 Hrs.

Books Recommended:

1. History of Persian Literature by Dr. Razazadeh Shafaq.
2. History of Persian Literature by Dr. Brown Vol. III.

PERSIAN

B.A.(HONOURS) THIRD YEAR EXAMINATION, 2020-2021

SEMESTER-VI

Paper-IV MODERN PERSIAN

100 Marks
Time : 3 Hrs

1. PROSE:
   (i) The following three short stories of Saeed-Nafisi
   (a) Azan-E-Maghrib
   (b) Khana-Ye-Pidari.
   (c) Janayat-E-Man

   (ii) The following three short stories of Mohammed Heijazi:
   (a) Khud Khusi.
   (b) Eedi.
   (c) Mah-e-man

Book Prescribed:

Nasib-Jadid-e-farsi, jayyed Press, Ballimaran, Delhi-6

2. POETRY:
   Quasidan
   1. Namund Namah by Bahar.
      "Dar Sher Band Mehro-Wafa Dilbari Namund."
   2. Ghazalliyat-E-Parveen Etisami by Mehdi Hameedi.
   3. Qataat by Mehdi Hameedi.

Books Recommended:

1. Barguzida-Ye-She'r-e-Farsi-Ye-Mu' aasir Part-I by Dr. Muneeb-al-Rehaman.
2. Edara-ye-Ulam-e-Islami, Danish gah-e-Islami,Aligarh.

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ARABIC

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2020-2021

(Kept in Abeyance)

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FRENCH

SEMESTER V

5th Semester: FRENCH LITERATURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

INTRODUCTION TO HISTORY OF FRENCH LITERATURE 17th -18thCENTURY

Questions should be asked strictly from the prescribed text book.

1.	Five questions of 8 marks each based on History of French Literature	40 Marks
2.	Fill in the blanks or multiple-choice questions on History of literature with maximum of 2 marks each.	20 Marks

Poetry: Explanation, central idea, critical appreciation of poems 30 Marks

1. L'amour et la folie (La Fontaine)
2. Le laboureur et ses enfants (La Fontaine)
3. Le lion et le rat (La Fontaine)
4. Le chêne et le Roseau (La Fontaine)
5. La Jeune veuve (La Fontaine)

Courses of Reading:

Mémento de Littératurefrançaise, by Hélène, Publication Hatier, ProfilLittérature. Only from 17-18 centuries to be studied.

Note: 1. The latest syllabus should be followed.
2. Choice should be given in questions.

Reference Books :

1. Collection littéraire- Moyen age-20eme siècle-Lagarde et Michard, Bordas.1`
2. Recueil de Textes littéraires français. Moyen Age-20eme siècle-Chassang et Senninger.
3. Moyen age-20eme siècle-Castex et. P. Surer, Hachette.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH

6th Semester: HISTORY OF LITERATURE, POETRY & VIVA-VOCE

Max. Marks	: 100
Theory	: 70 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours
Viva-Voce	: 20 Marks

History of literature 19th& 20th Centuries:

Introduction to the History of French Literature 19th& 20thcenturies.
Five questions of 8 marks each based on History of French Literature 40 Marks

Poetry: 30 Marks

Explanation, resume, central idea, critical appreciation of the poems

1. Les feuilles mortes (Jacques Prévert)
2. Chant d'automne (Baudelaire)
3. L'homme et la mer (Baudelaire)
4. Paysage (Baudelaire)
5. L'albatros (Baudelaire)

Viva-Voce : 20 Marks

1. Dictation of an unseen passage of about 200 words. 10 Marks

2. Oral questions based on the dictation passage and also general questions 10 Marks

Note: Questions in all the papers shall be asked and answered in French only.

For the information of private candidates:

1 Viva is compulsory

2. The theory paper would be proportionately marked out of 80 as there is no internal assessment.

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HINDI
(B.A. HONS. 3rd YEAR 5th SEMESTER 2020-2021)

PAPER-III (A)

तृतीय पाठ्यचर्या **पूर्णांक – 90 + 10 = 100**

समय – तीन घंटे

1. **कहानियाँ : आधार चयन–भीष्म साहनी, आधार पब्लिकेशन, पंचकूला ।**
2. **संस्मरण : अतीत के चलचित्र – महादेवी वर्मा, राधकृष्ण प्रकाशन, नई दिल्ली ।**

(क) प्रस्तुत दोनों कृतियों में से 10/10 अंकों के 4 व्याख्यांश पूछे जाएंगे । छात्रों को केवल दो की संदर्भ एवं काव्य–सौन्दय सहित व्याख्या करनी होगी । 10+10=20

(ख) दोनों कृतियों में से 4 समीक्षात्मक प्रश्न पूछे जाएंगे । जिनमें से छात्रों को 15–15 अंको के दो प्रश्नों के उत्तर देने होंगे । 15+15=30

(प्रत्येक कृति में से एक प्रश्न अवश्य करना होगा)

(चरित्र, मूल संवेदना, तात्विक समीक्षा, उद्देश्य, भाषा–शैली)

3. **काव्यशास्त्र** **अंक–30**

(क) शब्द शक्तियाँ – परिभाषा और उदाहरण

(ख) बिम्ब – परिभाषा एवं स्वरुप

(ग) रस – परिचय, प्रकार, लक्षण और उदाहरण

(घ) प्रतीक – परिभाषा एवं स्वरुप

खंड तीन से संबंध्ति चारों उपखंडों (क ख ग घ) में से कुल मिलाकर 20–20 अंकों के चार प्रश्न पूछे जाएंगे जिनमें से छात्रों को किन्हीं दो के उत्तर देने होंगे ।

4. **दो–दो अंकों के 5 वस्तुनिष्ठ प्रश्न करने होंगे ।**
8 प्रश्न पूछे जाएंगे । 5x2=10

5. **आंतरिक मूल्यांकन –** **अंक–10**

सहायक पुस्तकें :

1 **अन्धा युग : एक विवेचन, डॉ0 हरीश्चन्द्र वर्मा. नव भारती शंकर प्रतिष्ठान, नई दिल्ली**
2 **हिन्दी कहानी अन्तरंग परिचय : रामदरश मिश्र, नेशनल पब्लिकेशन, नई दिल्ली ।**
3 **हिन्दी कहानी अपनी जुबानी : डॉ0 इन्द्रनाथ मदान, संभावना पब्लिकेशन, हापुड़ ।**

HINDI

(B.A. HONS. 3rd YEAR 6th SEMESTER 2020-2021)

PAPER-IV (B)

चतुर्थ पाठ्यचर्या

पूर्णांक–90+10=100

समय – तीन घंटे

1. **काव्य–नाटक : एक कण्ठ विषयायी–दुष्यंत कुमार, लोकभारती**

   (क) इस कृति में से 10–10 अंकों के दो व्याख्यांश पूछे जाएंगे,

   इनमें से एक करना होगा ।

   (ख) इस कृति में से 16–16 अंकों के दो समीक्षात्मक प्रश्न पूछे जाएंगे,

   इनमें से एक करना होगा । अंक–26

2. **छंद : भुजंगप्रयात, मालिनी, मंदाक्रान्ता, शिखरिणी, अहीर**

   मनव, बरवै । अंक–20

3. **अंलकार : अन्योक्ति, तुल्योगिता, उल्लेख, व्याजस्तुति,**
   अनन्वय, विभावना अंक–20

(छात्रों को पाँच–पाँच अंकों के 4 छंदो और पाँच–पाँच अंकों के चार अलंकारों के लक्षण तथा उदाहरण लिखने होंगे । प्राश्निक को दुगना विकल्प देना होगा)

4. **भाषा : अंक–24**

   (i) हिन्दी की प्रमुख बोलियां–क्षेत्र और विशेषताएं
   विशेषतः ब्रज, अवधी का परिचय

(ii) **मानक हिन्दी की संरचना–शब्द संरचना, रूप–सरंचना**
वाक्य संरचना

(iii) **क. राजभाषा हिन्दी का परिचय तथा वर्तमानस्थिति ।**
ख. देवनागरी लिपि का अनुमोदित मानक रूप ।

विशेष : खंड 4 में से 15–15 अंकों के कुल चार प्रश्न पूछे जाएंगे । जिनमें से छात्रों को दो के उत्तर देने होंगे ।

5. आंतरिक मूल्यांकन : अंक–10

सहायक पुस्तकें :–

1. **अन्धा युग : पथ और प्रदर्शन, जयदेव तनेजा, वाणी प्रकाशन, नई दिल्ली ।**
2. **अन्धा युग और भारती के अन्य नाट्य प्रयोग : जयदेव तनेजा, नचिकेता प्रकाशन, नई दिल्ली ।**
3. **काव्य के तत्त्व : आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद ।**

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ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2020–21) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਪੰਜਵਾਂ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਕਾਵਿ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪ੍ਰਯੋਜਨ
2. ਕਾਵਿ ਦੀ ਆਤਮਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਨਿਰਧਾਰਨ
3. ਕਾਵਿ ਦੇ ਤੱਤ

(ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

1. ਧੁਨੀ ਸੰਪ੍ਰਦਾਇ
2. ਰਸ ਸੰਪ੍ਰਦਾਇ
3. ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ – ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਚੋਣਵੇ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਮਾਲੋਚਨਾ ਦਾ ਆਰੰਭ
2. ਨਾਮਕਰਣ
3. ਕਾਵਿ ਦਾ ਲੱਛਣ ਤੇ ਸਰੂਪ
4. ਕਾਵਿ ਤੇ ਸਾਹਿਤ
5. ਕਾਵਿ ਦੇ ਪ੍ਰਯੋਜਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2020–21) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਛੇਵਾਂ

ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਉਦੇਸ਼ ਅਤੇ ਖੇਤਰ
2. ਪੰਜਾਬੀ ਆਲੋਚਨਾ – ਆਰੰਭ ਤੇ ਵਿਕਾਸ
3. ਕਾਵਿ ਟਿੱਪਣੀਆਂ ਤੇ ਟੀਕਾਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਬਾਵਾ ਬੁੱਧ ਸਿੰਘ, ਕਿਸ਼ਨ ਸਿੰਘ, ਅਤਰ ਸਿੰਘ, ਹਰਿਭਜਨ ਸਿੰਘ।

(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸਾਹਿਤਿਆਰਥ – ਸੰਤ ਸਿੰਘ ਸੇਖੋ (ਪੰਜ ਚੋਣਵੇ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਪੁਰਾਤਨ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
2. ਆਧੁਨਿਕ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
3. ਅਧਿਆਤਮਿਕ ਕਵਿਤਾ
4. ਕਵਿਤਾ ਤੇ ਸਮਾਜਕ ਆਲੋਚਨਾ
5. ਕਵਿਤਾ ਤੇ ਵਿਗਿਆਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2020–21) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ – ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਸੱਤਵਾਂ

ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਪ੍ਰਯੋਜਨ
2. ਅਨੁਕਰਨ, ਵਿਰੇਚਨ ਅਤੇ ਉੱਦਾਤ
3. ਤ੍ਰਾਸਦੀ/ਦੁਖਾਂਤ : ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪਲੈਟੋ, ਅਰਸਤੂ, ਲੌਂਜਾਈਨਸ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ

(ਦੋ ਵਿਚੋ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਸ਼ਾਸਤ੍ਰ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ ਤੇ ਜੀਵਨ
2. ਸਾਹਿਤ ਤੇ ਸਮਾਜ
3. ਸਾਹਿਤ ਤੇ ਵਿਅਕਤੀ
4. ਵਾਰਤਕ ਕਲਾ
5. ਨਿਬੰਧ ਤੇ ਸ਼ੈਲੀ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)

ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2020–21) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ–ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਅੱਠਵਾਂ

ਪੱਛਮੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ : ਉਦੇਸ਼ ਤੇ ਖੇਤਰ
2. ਪੱਛਮੀ ਆਲੋਚਨਾ : ਪ੍ਰਮੁੱਖ ਸਥਾਪਨਾਵਾਂ
3. ਵਿਚਾਰਧਾਰਾ ਤੇ ਸਾਹਿਤ, ਅਜਨਬੀਕਰਨ ਤੇ ਸਾਹਿਤਕ ਪਾਠ
   (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮਾਰਕਸਵਾਦ, ਰੂਪਵਾਦ, ਮਨੋਵਿਸ਼ਲੇਸ਼ਣ, ਸੰਰਚਨਾਵਾਦ : ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ
(ਦੋ ਵਿਚੋ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਟੀ ਆਰ਼ ਵਿਨੋਦ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਆਲੋਚਨਾ ਵਿਚੋ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋ ਦੋ)

1. ਸਾਹਿਤ (ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਾਰਜ ਤੇ ਕਰਤੱਵ)
2. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਚਾਰ
3. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਤਿਬੱਧਤਾ
4. ਸਾਹਿਤ ਅਤੇ ਸੁਤੰਤਰਤਾ
5. ਸਾਹਿਤ ਅਤੇ ਚਿਤੰਨ

(ਅੰਕ : 15)

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URDU

SEMESTER V

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- I Novelette

Unit-I

Novelette-‘ Dilruba’ Ka tanqidi Jayeza 25 marks

Unit-II

Plot aur Character 20 marks

Unit-III

‘Agle Janam Mohe Bitiya na Kijo’ ka tanqidi jayeza 25 marks

Unit –IV

Plot aur character 20 marks

Books Prescribed:-

1. ‘ Char Novelette’by Qurrat-ul-ain Hyder,Educational Book House,Aligarh.
2. ‘Beesveen Sadi mein Urdu Novel’ by Dr. Usuf Sarmast, Education Book House, Aligarh.

URDU

SEMESTER VI

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- II Novelette

Unit-I

Ismat Chughtai Ka Novelette 'Ziddi' Ka Plot 25 marks

Unit-II

Character 20 marks

Unit-III

Critical notes on Ismat Chughtai ki novel nigari ki khususiaat 25 marks

Unit –IV

Ismat Chughtai ki life history 20 marks

Books Prescribed:-

1. Novelette'Ziddi' by Ismat Chughtai,Education Book House, Aligarh
2. 'Beesveen Sadi mein Urdu Novel'by Dr. Usuf Sarmast, Education Book House, Aligarh.

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GERMAN

SEMESTER V

Summary

Max. Marks: 100 marks (Total)
Paper-1 (Theory): 90 marks
Internal Assessment: 10 marks

Paper – 1 (Theory): 90 marks (Total)
Time: 3 hours
Note: Use of dictionary is allowed

i. Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:

i. Aufklärung

ii. Sturm und Drang.

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Geschichte der deutschen Dichtung, Fricke/Klotz.

ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

GERMAN

Summary

Max. Marks: 100 marks (Total)
Paper-2 (Theory): 90 marks
Internal Assessment: 10 marks

Paper - 2 Essay and Translation (Theory): 90 marks

Time: 3 hours
Note: Use of dictionary is allowed

i. Translation of an unseen text/s from German into English : 50 marks

ii. Translation of an unseen text/s from English into German : 20 marks

iii. Essay writing in German (about 250 words) : 20 marks

i. Länder und Leute

ii. Ausbildung und Berufswege (Indien / Deutschland)

iii. Politik (Indien / Deutschland / Europa / Welt)

iv. Umzug und Einrichtung

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:
1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

i. "Lagune-2" Kursbuch by Hartmut Aufderstraße a.o.

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GERMAN

SEMESTER VI

Summary

Max. Marks: 100 marks (Total)
Written Paper (Theory): 90 marks
Internal Assessment: 10 marks

Written Paper (Theory): 90 marks (Total)

Time: 3 hours
Note: Use of dictionary is allowed

Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:
i. Klassik
ii. Romantik

Internal Assessment : 10 marks (Total)
- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:
i. Geschichte der deutschen Dichtung, Fricke/Klotz.
ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:
i. Deutsche Literaturgeschichte - Von Anfangen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

Viva-voce (Oral exam)

Max. Marks : 100 marks (Total)

i. Reading, comprehension (question/answers) of an unseen text : 40 marks
ii. To speak on one of the given topics : 30 marks
iii. General conversation in German : 30 marks

Suggestions for preparation:

i. Magazine (Der Spiegel), Internet websites, Information on German-speaking countries etc.

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DEFENCE & STRATEGIC STUDIES
SEMESTER - V
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-21

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Paper : Area Studies China-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hrs.

Total Teaching Periods: 75

SECTION-I

1. Military Geography of China : Location, size and strategic importance.
2. Economic and Industrial resources (in brief).
3. Population, composition and characteristics of major ethnic groups.

SECTION-II

1. History of China in brief from the CH'IN to Manchus Dynasty.
2. Nationalist Revolution in China under Dr. Sun Yet Sen : Events and effects.

SECTION-III

1. Rise of Chiang Kai Shek.
2. The Nanking Government of China, long march in China.
3. The Civil War in brief.

SECTION-IV

1. Party-Army Relationship.
2. Communist party and its relationship with the Armed Forces.
3. Higher Defence Organisation.
4. Cultural Revolution.

BOOKS RECOMMENDED :

1.	Balance, Edger O.	:	The Red Army of China, Russell Square, London.
2.	Chatterji, B.R.	:	Modern China –A Short History, Meenakshi Printing, Meerut.
3.	Encyclopaedia of Britannica.		
4.	Gupta, R.S.	:	History of Modern China, Sterling Pub.
5.	Kapur, Harish	:	China in World Politics, Div. Pub., N.D.
6.	Liu, F.F.	:	A Military History of Modern China, Princeton Uni. Press.
7.	Mao Tse Tung	:	Communist Rule in China.
8.	Mc. Aleavy, Henry	:	The Modern History of China.
9.	Mitchison	:	Chinese Revolution.
10.	Nung Chen Li	:	The Political History of China, Princeton Uni. Press.
11.	Pelissier Roger	:	The Awakening of China, Secker and Warturg, London.
12.	Tregear, T.R.	:	A Geography of China, University of London.
13.	Wilson Dick	:	A Quarter of Mankind, Weidenfeld and Micholson Olson, London.

DEFENCE & STRATEGIC STUDIES
SEMESTER - VI
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-21

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Max. Marks : 100
Theory : 90 Marks
Int. Ass. : 10 Marks
Time : 3hrs

Total Teaching Periods: 75

Paper : Area Studies China-II

SECTION- I

SINO-INDIAN WAR (1962)

1. Events Leading to the war.
2. Operation in brief.
3. Lessions learnt

SECTION- II

1. Determinants of Chinese Foreign Policy.
2. China's Relations with India.
3. China's Relations with Pakistan and its impact on India.

SECTION–III

1. China's Relations with other neighbouring countries.
2. China's Relations with the U.S.A.
3. China's Relations with Russia.

SECTION-IV

1. Defence Potential of China.
2. China's Modernization Program.
3. China's Nuclear Weapon Development.

Books Recommended:

1. Dalvi, J.P. : Himalyan Blunder, Thackei' and Co., Bombay.
2. Griffith Samoul, B. : The Chinese People's Liberation Anny, Army Pub., N.D.
3. Kapur, Harish : China in World Politics, Div. Pub., N.D.
4. Mao TsiTung : CoIn;m~ist Rule ~Chin~. .
5. Sharma, B.L. : The Paklstan-'-Chma AXIS, Asia Pub., B~mbay.
6. Sinh~; K.K. : Problems of Defence of South and East Asia, Rawat Pub., Jaipur.
7. Tr~er N. Frank and : Twentieth Appraisal Year, Weidenfeld and Nicolson, London, William Genderson
8. Cassell & Company : Guerilla Warfare-Mac Tse- Tung & Guevera, Red Lion Sq.,London.

Journals: -

1. RAUSEN DATA : Problem of Communism.
2. Institute of Defence Studies & Analysis (India)
   i. Strategic Analysis.
   ii. Strategic Digest.
3. The China Quarterly.
4. The Institute of Strategic Studies, London. : Military Balance, IISS London.

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HISTORY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-21

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

SEMESTER V

Any one paper from the following:

(i) History of China

OR

(ii) History of Russia

(i) HISTORY OF CHINA:

Max. Marks:	**100**
Theory:	**90 Marks**
Internal Assessment:	**10 Marks**
Time	**3 hours**

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

CHINA IN THE 18TH CENTURY

1. Political and Economic Institutions
2. Social and Intellectual Conditions
3. Foreign Relations

UNIT-II

'OPENING' OF CHINA AND REBELLIONS

4. Canton Trade System, Opium Wars, Treaty Settlements
5. Taiping Revolution
6. Reform Movement of 1898

UNIT-III

REVOLUTION AND REFORM

7. Boxer Rebellion 1900
8. Intellectual, Social and Economic Change
9. Rise of Sun Yat Sen and Revolution

UNIT-IV

RISE OF THE REPUBLIC

10. Intellectual Revolution and National Unification
11. National Government 1928-37
12. Chinese People's Republic 1945-49

Recommended Readings:

1. Chesneaux, Jean Francoise Le : *China : From the Opium Wars to 1911 Revolution Vol.I.* Delhi : Khosla, 1978.
2. Hsu Immanuel : C.Y., *The Rise of Modern China*, New York : Oxford University Press, 1970.
3. Vinacke, Harold M. : *A History of the Far East in Modern Times*, New York : Appleton Century Crafts, 1961 (6th edn.).
4. Clyde, Paul Hibbert, : *The Far East : A History of the Impact of the West on Eastern Asia*, Englewood Cliffs, N.J. Prentice Hall : 1958 (3rd edn.).

(ii) HISTORY OF RUSSIA:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

1. *Liberalism and Reaction :* Alexander I; Nicholas I.
2. *Modernisation of Russia :* Alexander II; Alexander III & Nicholas II.

UNIT-II

3. *Russia and the Far East :* Interventions in China, Mongolia and Manchuria.

4. *Background of Russian Revolution 1905-1917 :* Revolution of 1905; Russia on the eve of the Revolution of 1917 – Polity, Society, Economy; Lenin's Contribution to the Revolution.

UNIT-III

5. *Causes of the Russian Revolution and its Aftermath :* The February Revolution and the Provisional Government, the Bolshevik (October Revolution), its impact on Russia and the World.

6. *Civil War :* Russian withdrawal from First World War; Peace of Brest Litovisk; Allied Intervention.

UNIT-IV

7. *The Soviet Economy :* War Communism; New Economic Policy and its impact.

8. *Planned Economy :* Weaning from the New Economic Policy and the First Five Year Plan.

Recommended Readings :

1. Barrington Moore (Jr.) : *The Social Origins of Dictatorship and Democracy.*
2. Paul Kennedy : *The Rise & Fall of Great Powers,* Fontana Press London, 1988.
3. Lionel Kochan : *The Making of Modern Russia,* Penguin Books, 1962.
4. Basil, Dymtrystyn : *History of Russia,* Prentice Hall, New Delhi, 1977.
5. E.H. Carr : *The Bolshevik Revolution,* Penguin Books Ltd., Victoria, 1971 (Reprint).
6. M.T. Florinsky : *Russia : A Short History,* Macmillan, London, 1971 (2nd ed.)

HISTORY

SEMESTER VI

Any one paper from the following :

(iii) Social Origins of Right And Left Wing Dictatorship Of Modern Times
OR
(iv) USA and the World c.1800-1960's

(iii) SOCIAL ORIGINS OF RIGHT AND LEFT WING DICTATORSHIP IN MODERN TIMES:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I: China

1. The Collapse of Imperial System, the emergence of War lords; the Kuomintang interlude; efforts at democracy and Capitalism.
2. The Peasant rebellions; Communist Revolutions; success against the Kuomintang

UNIT II: Russia

3. The Internal Collapse of the Tsarist Regime; Revolution of 1917- Feb/ March and October
4. The Establishment of a Communist Government; Forced industrialization and Collective Agriculture; Stalinist Totalitarianism.

UNIT III: Italy

5. Italy's problems with the Capitalist powers; Failure of Italian Democracy in Economic, Social and Foreign policy
6. The Fascist alternative: Ideology and the corporative state

UNIT IV: Germany

7. Germany's rise as a capitalist powers; Weimar republic and its failure.
8. The fascist stresses with western Europe; Nazi totalitarian programme.

Essential readings:

Barrington Moore : *Social Origins of Dictatorship and Democracy*, Penguin/Peregrine 1977. (reprint)

Reference Reading

Hannah Arendt : *The Origin of Totalitarianism*, Harcourt Brace, New York. 1951

F. Chabad : *A History of Italian Fascism* (Tr. Muricl Grindard) Weidenfeld and Nicolson, London 1961.

(iv) USA AND THE WORLD c.1800-1960's:

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time 3 hours

General Instruction:

1. In all ***nine*** questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt ***nine*** out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory.**
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt ***one*** question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I

1. US Foreign Policy 1789-97-Response to French; issues with Britain; Jay's Treaty 1799; Pinckney's Treaty 1797; Peace with France
2. Diplomatic Achievements 1800-1820's-Louisiana Purchase; Settlement with Britain; Acquisition of Florida; non colonization of Alaska; liberation of Latin America; Monroe Doctrine
3. Industrial Revolution in America-expansion of transportation; manufacturing; foreign trade and shipping

UNIT II

4. Expansion to the West in the 1830's –Early settlement in the West; Texas question; migration to Oregon
5. Manifest Destiny –Annexation of Texas; Oregon Treaty; Relations with Mexico; conquest of California
6. USA as a World Power-Expansion in Pacific region; Dispute with Venezuela; Results of War with Spain 1898; Policy in Caribbean and Mexico; Open Door Policy in South East Asia

UNIT III

7. USA and World War I-US attitude to war, entry into the war; 14 point programme, role in Paris peace conference 1919
8. Foreign Policy 1920,s-30's- Washington Treaties, Locarno Treaty, Relations with Mexico, Change in 'Big Stick' Policy, Good Neighbour policy, reaction to Chinese situation
9. USA and World War II- US attitude, US aid to War and War Production, Pearl Harbour

UNIT IV

10. New World Order-US Peace Programme and United Nations, Relations with Soviet Union and Containment, Pan, American Conference 1945, post War Europe
11. US in East Asia-American response to China, Japan, Korea, Vietnam
12. US in Europe and West Asia-US and NATO, issues with Egypt, support to Israelis, Eisenhower Doctrine

Recommended readings:

1. Henry Bamford Parkes : *The United States of America: A History*, 1964 (Reprint), Scientific Book Agency, Calcutta, 1976.
2. Richard Current & Others : *History of United States: A Survey,* Alfred A. Knopf, New York,1965.
3. Julius W. Pratt : *A History of United States Foreign Policy,* Prentice Hall (Second Edition), New Jersey, 1965.
4. Allen, G.C., : *Japan's Economic Recovery*, London Oxford University Press, 1958 (Reprint 1960).
5. Beckman, George H : *The Modernization of China and Japan*, New York : Harper and Row, 1962.

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POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2020-2021

Outlines of Tests, Syllabi and Courses of Reading

V SEMESTER : Option (i) International Relations since 1945.
OR
Option (ii) Modern Indian Political Thought.
OR
Option (iii) Women and Political Process.

VI SEMESTER : Option (i) Research Methods in (Political Science) Social Sciences.
OR
Option (ii) Modern Political Ideologies
OR
Option (iii) Western Political Thought.

V SEMESTER : Option (i) — INTERNATIONAL RELATIONS SINCE 1945

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims at mapping out some of the major transformations that have occurred in the realm of International Relations since 1945.

UNIT-I Post World War-II International Relations :

(a) Post War World Order.
(b) Emergence of Super Powers.

UNIT-II Democracy and Rise of IIIrd World :

(a) Non-Alignment: Meaning and Relevance.
(b) SAARC, European Union.

UNIT-III Transformation in Post World War II International Relations :

(a) Decline of Bipolarity.
(b) Nature of Emerging World Order.

UNIT-IV New Global Scenario and International Relations:

(a) Demand for New International Economic Order (NIEO)
(b) Issue of Global Terrorism.

Suggested Readings :

1. Peter Calvocoressi : *World Politics Since 1945*, London : Longman, 1945.
2. Budhraj, V.S. : *International Relations After Second World War* (in Hindi), Chandigarh, Haryana Sahitya Academy, 2000.
3. Keswani, K. B. : *International Relations in Modern World* (1900-1988), Bombay, Himalaya Publishing House, 1994.
4. Baylis and Steve Smith : *The Globalization of World Politics – An Introduction to International Relations*, Oxford, Oxford University Press, 2001.
5. Alan C. Lamborn and Joseph Lepgold : *World Politics into the Twenty First Century : Unique Context, Enduring Patterns*, New Jersey, Prentice Hall, 2003.

References :

1. Paul Kennedy : *The Rise and Fall of Great Power*, Fontana Press.
2. Henry Kissinger : *Diplomacy*, London, Simon & Soluster, 1994.
3. Paul R. Viotti & Mark V. Kauppi : *International Relations and World Politics : Security, Economy*, Identity Third Edition Pearson Education, 2007.
4. John Baylis and Steve Smith : *The Globalisation of World Politics* : An Introduction to International Relations, Second Edition, OUP, 2001.

OR

V SEMESTER : Option (ii) — MODERN INDIAN POLITICAL THOUGHT

Max. Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
Time : 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory

question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims at creating understanding about the evolution of political thought in modern India with special reference to the stated philosophers.

UNIT-I **Sir Syed Ahmed Khan :**

(a) As a Nationalist.
(b) Education.
(c) Muslim Nationalism-As a Communalist.

UNIT-II **M.K. Gandhi :**

(a) Satyagraha.
(b) Swaraj.
(c) Non-Violence.

UNIT-III **M.N. Roy :**

(a) Radical Humanism - critique of Marxism
(b) New Humanism

UNIT-IV **B.R. Ambedkar** :

(a) Annihilation of Caste
(b) Social Justice
(c) Democracy : Political and Social

Recommended Readings:-

1. Thomas Pantham & Deutsch (ed.) : *Political Thought in Modern India*, New Delhi, Sage, 1986.
2. Majumdar, B.B. : *History of Indian Social and Political Ideas,* Calcutta: Bookland, 1967.

References :

1. Parekh, Bhikhu : *Colonialism, Tradition, Reform : Analysis of Gandhi's Political Discourse*, New Delhi, Sage, 1989.
2. Iyer, Raghvan (ed.) : *Moral and Political Thought of Mahatma Gandhi*, New York, Oxford, 1973.
3. Appadorai, A : *Indian Political Thinkers in the Twentieth Century*, Delhi, Oxford, 1972.
4. Jatava, D.R. : *The Political Philosophy of B.R. Ambedkar*, Delhi; Arya Phoenix, 1965.
5. Hussain, M. Hadi, Syed Ahmed Khan : *Pioneer of Indian Resurgence Lahore*, Institute of Islamic Culture, 1970.
6. Imam, Zafar, : *Muslims in India*, New Delhi : Orient Longman, 1975.

7.	Chattarjee, Partha	:	*Nationalist Thought and the Colonial World, Delhi* : OUP, 1986.
8.	Lyer, Raghavan	:	*The Moral and Political Thought of Mahatma Gandhi*, Delhi : OUP, 1973.
9.	Pantham, Thomas, Parekh,	:	*Gandhi's Political Philosophy*, London, Macmillan, 1989, Bhikhu.
10.	Ghatak, B.K. (ed.)	:	*Dr. Ambedkar's Thought*, New Delhi : APH, 1997.
11.	Keer, Dhanajayay, Dr. Ambedkar	:	*Life and Mission, Bombay* : Popular Parkashan, 1964.
12.	Zelliot, Eleanor	:	*The Social and Political Thought of B.R. Ambedkar in Pantham and Deutsch*, 1986.
13.	Roy, M.N.	:	*New Humanism,* Calcutta : Renaissance, 1953.
14.	Roy, M.N.	:	*The Philosophy and Practice of Radical Humanism*, New Delhi : Radical Humanist Association, 1970.
15.	Roy, Samaren, M.N. Roy	:	*A Political Biography*, Hyderabad : Orient Longman, 1997.
16.	Ray, Sibnarayan (ed.), M.N. Roy	:	*Philosopher Revolutionary*, Delhi, Ajanta, 1995.
17.	Seth, Sanjay	:	*Marxist Theory and Nationalist Politics, The Case of Colonical India*, New Delhi : Sage, 1995.
18.	B.R. Ambedkar (Author) and Arundhati Roy (Introduction)	:	*Annihilation of Caste: The Annoted Critcial Edition,* Navayana, Delhi, 2014.
19.	Chitkara, MG	:	*Dr. Ambedkar and Social Justice,* APH Publishing Corporation, 2002.
20.	Christophe Jaffrelot	:	*Dr. Ambedkar and Untouchability: Analysing and Fighting Caste,* Columbia University Press, 2015.
21.	Gail Omvedt	:	Ambedkar: Towards An Enlightened India, Penguin India, 2008.

OR

V SEMESTER : Option (iii) — WOMEN AND POLITICAL PROCESS

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims to introduce students to the key approaches of Feminist thought contemporary debates concerning women and politics in India. It will include an analysis of the Indian State, the role of women's movement and the major feminist issues in contemporary Indian politics.

UNIT-I **Theoretical Approaches to Women Studies :**

(a) Liberal Feminism.
(b) Marxist / Socialist Feminism .

UNIT-II **Rise of Women's Movement, its role in Contemporary Societies :**

Historical Legacy :

(a) French Revolution, Civil Rights and Suffrage Movements in the West.
(b) Role and Contribution of Women in Indian National Movement.

UNIT-III **Women and Society in India :**

(a) Evolution of Women's position in India – an historical overview-
  (i) Vedic period
  (ii) Medieval Period (Post Vedic Period)
  (iii) Modern Period
(b) Social Position:
  (i) Demographic pattern- Sex Ratio.
  (ii) Legal, Political and Property Rights.
  (iii) Access to Education.

UNIT-IV **Women's Movement in Contemporary India:**

(a) Women Movement in India- Women Movements against Dowry & Rape
(b) Women and Political Participation in India-Status & Barriers, 73rd & 74th Amendment.

Recommended Readings :

1. Millet, Kate, *Sexual Politics*, New York, Doubleday, 1970.
2. Michele Barrett, *Women's Oppression Today*, London, Verso, 1980.
3. Lenin, V.I., *On the Emancipation of Women*, Moscow, Progress, 1981.
4. Eisenstein, Zillah, *Capitalist Patriarchy and the Case for Socialist Feminism*, New York, Longman, 1981 (also New York, Monthly Review Press, 1979).
5. Boserup, Easter, *Women's Role in Economic Development*, London, George Allen & Unwin, 1975.
6. Altback, E.M. (Ed.), *From Feminism to Liberation*, Cambridge, Massachusetts, Schenkman Hare Revised Ed., 1980.
7. Jayawardhane, Kumari (Ed.), *Feminism and Nationalism in the Third World*, New Delhi, 1987.

8. Phadnis, Urmilla and Malani Indira eds., *Women of the World : Illusion and Reality*, New Delhi, Vikas, 1978.

9. Desai, N., *Women in Modern India*, Bombay, Vora & Co., 1977.

10. Nanda, B.R. ed., *Indian Women from Purdah to Modernity*, New Delhi, Vikas, 1976.

11. *I.C.S.S.R., Status of Women's Committee Report*, New Delhi, ICSSR, 1975.

12. Mazumdar, Vina, *Towards Equality*, ICSSR, Delhi.

13. Desai, Neera and Krishanaraj, M., *Women and Society in India*, Delhi, Ajanta, 1987.

14. Chakaravarty, Shanti, *Rural Women's Claim to Priority*, New Delhi, C.W.D.S., 1986.

15. "Women's Struggles and Movement", Paper of Third National Conference, Chandigarh, IAWS.

16. Kaushik, S. (ed.), *Women's Oppression, Patterns and Perspective*, Vikas, New Delhi, 1984.

17. Kumar, Radha, *A History of Doing*, Kali Publications, New Delhi, 2006.

18. Gandhi, Nandita & Shah, Nandita, *The Issues at State*, New Delhi, Kali Publication, 1992.

19. Menon, Nivedita (ed.), *Gender & Politics in India*, New Delhi, Oxford University Press, 1999.

20. Rao, Anupama (ed.), *Gender & Caste*, Delhi, Sage Publications, 2005.

POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2020-2021

SEMESTER- VI

VI SEMESTER : Option (i) — RESEARCH METHODS IN (POLITICAL SCIENCE) SOCIAL SCIENCES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper endeavors to introduce the students about the tools of research methodology into social sciences. The paper would enable the students to take up research after Master's degree.

UNIT-I Research in Social Science with reference to Political Science—Definition, Nature and Limitations.

UNIT-II Methods – Traditional and Scientific, Survey Research Methods : Observation, Interviews, Questionnaire, Content–Analysis.

UNIT-III
(a) Sample and Sampling Techniques.
(b) Measures of Central Tendency—Mean, Mode and Median.
(c) Data Processing—Coding Tabulation and Analysis.

UNIT-IV Research Design : Formulation of Research problem, Hypotheses, Objective, relevance of study, Literature Review, Methodology Report Writing.

Suggested Readings :

1. Goode and Hatt, *Methods in Social Research*, Auddond (McGraw - Hill), New York, 1952.
2. Pauline Yong, *Scientific Survey and Research*, New Delhi, 1968.
3. Arnold Brecht, *Political Theory*, Times of India Press, 1970.
4. Michael S. Lewis-Beck, ed., *The Encyclopedia of Social Science Research Methods*, New Delhi, Sage, 2004.
5. Keith F. Punch, *Introduction to Social Research*, London, Sage, 2005.

6. Shapiro, Ian, Rogers M. Smith and Tarek E. Masoud, *Problems and Methods in the Study of Politics, Cambridge* : Cambridge University Press, 2004.

7. Van Evera, Stephen, *Guide to Methods for Students of Political Science*, Ithaca : Cornell University Press, 1997.

8. Goertz, Gary, *Social Science Concepts : A User's Guide*, Princeton : Princeton University Press, 2006.

9. Creswell, John W., *Research Design : Qualitative, Quantitative, and Mixed Method Approaches :* Thousand Oaks, Calif : Sage Publications, 2003.

OR

VI SEMESTER : Option (ii) : MODERN POLITICAL IDEOLOGIES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper refers to the basic tenets of modern political ideologies.

UNIT-I **Liberalism :**
a) Classical and Modern Liberalism.
b) Neo Liberalism.

UNIT-II **Socialism :**
a) Marxian Socialism.
b) Democratic Socialism

UNIT-III
a) Anarchism.
b) Fascism

UNIT-IV **Gandhism**
a) Gandhi's Idea of State:
b) Social and Political Ideas of Gandhi.

Suggested Readings :

1. Bandhyopadhya, J., *Political and Social Thought of Gandhi*, Bombay, 1969.
2. George Lichtheim, Marxism : An Historical and Critical Study, Routledge and Kegan Paul, London, 1962.
3. Noel O' Sullivan, Conservation, St. Martin's Press, New York, 1976.
4. Manning, D.J., Liberalism, St. Martin's Press, New York, 1976.

OR

VI SEMESTER : Option (iii) — WESTERN POLITICAL THOUGHT

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims to introduce to the students the major themes of Western Political Thought. This will be done by taking an in-depth study of the key thinkers of this tradition.

UNIT-I Hobbes.
- a) Nature of Man, State of Nature, Natural Laws.
- b) Social Contract.
- c) Individualism Vs. Absolutism.

UNIT-II Locke.
- a) Nature of Man, State of Nature, Natural Rights.
- b) Social Contract.
- c) Contribution of Locke to Liberalism.

UNIT-III Rousseau.
- a) State of Nature, Natural Man.
- b) Social Contract.
- c) Theory of General Will.

UNIT-IV Karl Marx.
- a) Historical Materialism, Economic Determinism.
- b) Theory of Surplus Value.
- c) Class Struggle.

Recommended Readings :

1. Sabine, G.H., *A History of Political Theory*, Bombay : Oxford & IBH, 1973.

2. Dunning, W.A., *A History of Political Theories*, 3 Vols., Allahabad : Central, 1973.

3. Sait, E.M. (ed.), *Masters of Political Thought*, 3 Vols., London : George and Harap, 1947.

4. William Ebenstien, *Great Political Thinkers—Plato to the Present*, OUP : New Delhi, 1966.

5. Jen Pike, Nigel Waaburton & Derek Matravers, *Reading Political Philosophy, Machiavelli to Mill*, London, Routledge, Open University, 2000.

6. Andrew Hacker, *Political Theory*, London, OUP, 1961.

7. David Boucher & Paul Kelly, *Political Thinkers, From Socrates to the Present*, Paperback U.K., 2003.

8. David Boucher & Paul Kelly, *The Social Contract*—from Hobbes to Rawls, Paperback, U.K., 1994.

References :

1. Rapheal, D.D., Hobbes, *Morals and Politics*, London, George Allen, 1978.

2. David Macdellan, *Marx*, London, Fontana Modern Masters Series, 1983.

3. Plamenatz, J., *Man and Society*, 2 Vols., New York, Longman, 1984.

4. Hall, J.C., Rousseau : *An Introduction to His Political Philosophy*, London, MacMillan, 1973.

5. John, Dunn, *The Political Thought of John Locke*, Cambridge, Cambridge University Press, 1969.

6. Roger, D. Masters, *The Political Philosophy of Rousseau*, Princeton, Princeton University Press, 1968.

7. Shlomo, Avineri, *The Social and Political Thought of Karl Marx*, New Delhi, S. Chand, 1968.

8. Jon Elster, *Making Sense of Marx*, Cambridge, Cambridge University Press, 1985.

9. Ernest Cassirer, *The Question of Jean Jacques Rousseau*, New Haven and London, Yale University Press, 1989.

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ECONOMICS

SEMESTER V

The candidates are required to study **one of the** following papers:

I Money and Banking.

II International Economics.

III Introduction to Econometrics.

Paper-I : MONEY AND BANKING

Max. Marks	: 100 Marks
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objective: Money and Banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude channels- market, non market, institutes and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutes in the process of growth and development. Accordingly, the paper on 'Economics of Money and banking' is an optimal interaction of monetary theory, banking and non- banking financial institutes, which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

(i) *The syllabus has been divided into four units.*

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions.It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two**questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

UNIT-I

Definition of Money, Money and Near Money Assets.
Supply of Money:Components, Determinants- High Powered Money and Money Multiplier, Measures of Supply of Money in India.

UNIT-II

Demand for Money: Classical Theory, Keynes Liquidity Preference Theory, Friedman's Restatement of Quantity Theory of Money.
Central Banking: Main Functions, Techniques of Monetary Management, Monetary Policy of Reserve Bank of India.

UNIT-III

Commercial Banking: Main Functions, Major Developments and Reforms in Indian Banking System since 1991.
Non-Banking Financial Institutions (NBFIs) – Role and Structure NBFIs in India.

UNIT-IV

International Monetary Fund- Features and Role.
World Bank: Features and Role.
Asian Development Bank: Features and Role.

Recommended Readings:

1. Diulio A. Eugene (latest Edition) : Theory and Problems of Money and Banking, International Edition (Schaum's Outline Series)
2. Gupta, S. B (2004) : Monetary Planning in India, S. Chand, New Delhi.
3. Khanna, Perminder (2005) : Advanced Study in Money and Policy : Relevance in the Indian Economy, Atlantic Publishers, New Delhi
4. Kulkarni, G (1999) : Modern Monetary Theory, McMillan, New Delhi
5. Laidler, D. E. W (1977) : The Demand for Money : Theories and Evidence, Allied Publishers, New Delhi.
6. Bofinger Peter (2001) : Monetary Policy: Goals, Institutions, Strategy and Instrument, Oxford University Press.

Supplementary Readings:

1. Reserve Bank of India Publications- (Latest).
2. Government of India: Economic Survey (latest)

Paper-II: INTERNATIONAL ECONOMICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital- both short-term and long-term- at the global level. The contents of the paper spread over the different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both as the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.
The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought the students writing assignments, tutorials and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to beof answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Pure Theory of International Trade:Theories of Absolute Advantage, Comparative Advantage andOpportunity Costs. Heckscher-Ohlin Theory. Factor Price Equalisation. Gains from Trade, their Measurement and Distribution. Terms of Trade, Secular Deterioration Hypothesis.

UNIT-II

Commercial Policy:The Theory of Tariffs, Optimum and Effective Rate of Tariff, Inter-relationship betweenTrade, Aid and Economic Development. The Theory of Economic Integration among Nations; Forms of Economic Integration. The Theory of Customs Union.

UNIT-III

Balance of Payments, Exchange Rate and Trade Structures:The Process of Adjustment in the Balance ofPayments. The Concept of Foreign Trade Multiplier. Fixed Vs. Flexible Exchange Rates and their Relative Merits and Demerits. Structure of Trade, Trade between Developing and Developed Countries. Unequal Exchange and its Impact on Balance of Payments. Current Problems of Trade and Finance of Developing Countries. Role of Multinational Corporations in the Developing Countries.

UNIT-IV

International Monetary System:IMF and International Monetary System, Present International Monetary System, problems of International Liquidity. Proposals for International Monetary Reforms. New International Economic Order.

Recommended Readings :

1. Soderston , B. O. (1994) : International Economics, 2nd Edition, Macmillan Press, London,
2. Salvatore, Dominick (latest edition) : International Economics, John Wiley & Sons.
3. Krugman P R &ObstifeldMaurice(latest edition) : International Economics – Theory and Policy, Addison- wesley.
4. Ghuman , Ranjit Singh (latest edition) : Antar-RashtriyaArthVigiyan, (Punjabi Medium) Punjabi University, Patiala.

Supplementary Readings :

1. Kindleberger, C. P. (1987) : International Economics, Richard Irwin, Homes wood, Illinois, Indian Edition.
2. Sir RaiHarrod (Trans. Pritam Singh Gill) : Antar-RashtriyaArthShastar, Punjabi University, Patiala.

Paper-III: - INTRODUCTION TO ECONOMETRICS

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: Application of economic theory need a reasonable understanding of economic relationship andstatistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant application of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous models.

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, is so far as possible, would be selected from everyday life/experience. The feedback would be sough through the students writing assignments and written examinations.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition and Scope of Econometrics. The Methodology of Economic Research. Specification and Estimation of an Econometric Model.
Single Equation Models*:*Ordinary Least Squares: Estimation and Properties of the Estimators

UNIT-II

Testing of Hypothesis*:*Basic Concepts; Type I and Type II errors. Simple and Composite Hypothesis.t and F tests. Maximum Likelihood Estimation.

UNIT-III

The General Linear Regression Model in Matrix Form: Estimation and Properties of the Estimators.
Tests of Significance of Coefficients. Partial Correlation Coefficients.
Multicollinearity:Its Detection and Solution.
Heteroscedasticity: Its Detection and Solution.

UNIT-IV

Dummy Variables*:*The dummy Variable Trap. Interpretation of Slope and Intercept.
Lagged Variables*:*Uses in Economics. Estimation Problems, Koyck Transformation, Partial and Stock Adjustment Models.

Recommended Readings :

1. Gujarati, Damodar (2007) : Basic Econometrics, McGraw Hill, New Delhi.
2. Ohnson, J. (1977) : Econometrics Methods, 2nd Edition, McGraw Hill, New

Supplementary Readings :

1. Intrilligator, M. D. (1978) : Econometric Models and Applications, Prentice Hall
2. Kendall, M. G. & A. Sturat (eds.) : Advanced Theory of Statistics, Vols. I & II, Griffin and Co., London.
3. Maddala, G. S. (1977) : Econometrics, New Delhi, McGraw Hill.
4. Wallis, K. F. (1973) : Topics in Applied Econometrics, London, Bray Hills

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ECONOMICS
SEMESTER VI

The candidates are required to study **one of the** following papers:

IV Environmental Economics
V Economics of Labour
VI Public Finance

Paper-IV : Environmental Economics

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: - This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our resources by optimally allocating them for future use.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Introduction to Environmental Economics: Introduction; the Economy and the Environment: Inter-Linkages; First Two Laws of Thermodynamics.
Economic Efficiency and Market Failures: Market Solution and Efficiency; Market Failures; Problem of Externalities; Public goods and Public bads; Common Property Recourse; Non-convexities; Asymmetric Information.

UNIT-II

Economic of Pollution*:* Damage Functions and Abatement Cost Functions; Marginal Decision; Optimal Level of Pollution; Market Solutions and Government Actions; Economic Incentives and least-Cost Solution; Command and Control Policies.

UNIT-III

Valuing the Environment: Economic valuation of Environment Goods: Types of Environmental Values; Monetary Valuation Techniques; Non-Monetary Valuation Techniques; Comparing Methodologies. The Environmental Kuznets Curve

UNIT-IV

Cost-Benefit Analysis and the Environment: The Theory of Cost Benefit Analysis; Idea of Discounting and Choice of Discount Rate; Framework for Cost – Benefit Analysis; Discounting and Future Generation.
International Environmental Issue: Economics of Climate Change: Trade & Environment.

Economic Growth and Sustainable Development: Economic Growth and Development; the Environmental Kuznets Curve; Economics of Sustainable Development.

International Environmental Issues: Economics of Climate Change; Trade and the Environment.

Recommended Readings :

1. Goodstein, E.S. (2002) : Economics and the Environment (3rd ed.) Prentice Hall.
2. Hanley, N., Shogern, J.F and White, B (1977) : Environmental Economics in Theory and Practice, Macmillan
3. Sankar, U. (ed) James, A.J., M.N. : Environmental Economics, Oxford University Press, New Delhi.
4. Murty and Smita Mishra (2006) : Murty and Smita Mishra (1999), Economics of Water Pollution- The Indian Experience, Oxford University Press, New Delhi
5. Varian. Hal R., (2006) : Intermedate Micro-Economics- A Modern Approach, 7th ed., East-West Press.
6. Cherry, S.N. and Vyasual, Vinod (2000) : Environmental Management- an Indian Perspectives, Macmillan, New Delhi.

PAPER- V: ECONOMICS OF LABOUR

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

COURSE OBJECTIVE: Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing "joblessness", the importance of issues such as employment and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India. The time–tested method of imparting verbal instructions through lectures would be used

The objective of the course is to provide students with the basic economic tools needed to understand and analyze how earnings are determined, how labour markets work and how various government policies may affect labour market.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit I

Nature and Scope of Labour Economics, Nature and Characteristics of Labour Markets in Developing Countries like India.
Theories of Wages, Concept of Minimum Wage, Living Wage and Fair Wage in Theories and Practice.

Unit II

Wage Determination in various Sectors- Rural, Urban, Organized, Unorganized and Informal Sectors.

Poverty and Unemployment in Developing Countries, Unemployment: Concept, Types and Employment Policy particularly in India.

Unit III

Impact of Rationalization, Technological Change and Modernization on Employment in Organized Private Industry and Public Sector; Employment in Agriculture Sector; Women and Child labour.

Unit IV

Role and Functions of Trade Unions, Growth, Pattern and Structure of Trade Unions in India, Achievements of Labour Unions, Collective Bargaining.
Industrial Disputes: Causes of Industrial Disputes, Their Settlement and Prevention Mechanism.

BOOKS RECOMMENDED:

1.	Binswanger, H. P. & M. R. Rosenzweig (eds.) (1984)	:	Contractual Arrangements, Employment, and Wages in Rural Labour Markets in Asia, Yale University Press, New Haven.
2.	Datt, G. (1996)	:	Bargaining Power, Wages and Employment; An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3.	Deshpande, L. K., P. R. Brahmananda and EAG Robinson (eds.) (1983)	:	Employment Policy in a Developing Economy, Vols. I & II, Macmillan, London.
4.	Deshpande, L. K. and J. C. Sandesara (eds.) (1970)	:	Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
5.	Deshpande, S. G. Standing and L. K. Deshpande (1998)	:	Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
6.	Foster, A. D. & M. R. Rosenberg (1993)	:	Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank, Washington D C.
7.	Campbell, R. McConnell and Stanley, L. A. Brue and D. A. Macpherson (2010)	:	Contemporary Labour Economics, 8th Ed. McGraw Hill Book

SUPPLEMENTARY READINGS:

1.	Hauseman, S. (1991)	:	Industrial Restructuring with Job Security: The Case of European Steel Harvard University Press, Cambridge, Mass.
2.	Hicks, J. R. (1932)	:	The Theory of Wages, Clarendon Press, Oxford.
3.	Lester, R. A. (1964)	:	Economics of Labour (2nd edition), Macmillan, New York
4.	McConnell, C. R. & S. L. Brue (1986)	:	Contemporary Labour Economics, McGraw- Hill, New York.
5.	McCormick, B. & Smith (eds.) (1968)	:	The Labour Market, Penguin, Harmondsworth
6.	Tyagi, B.P	:	Labour Economics and Social Welfare, Jai Parkash Nath and Co. (Latest edition)
7.	Pant, S C(1965)	:	Indian Labour Problems,Chaitanya Publishing House, Allahabad

Paper-VI: PUBLIC FINANCE

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives: Role and function of the Government in an economy have been changing with the passage of time. The term' Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income etc. there are vast array of fiscal institutions- tax system, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existing of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

The student would be evaluated at the end of each semester through subjective type questions/answer (both short and essay type). The scripts would be evaluated by the examiners having adequate graduate teaching experience in the paper/option concern.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Principle of Public Finance – Subjective and Objective Criteria.
Theory of Public Expenditure*:*Maximum Social Advantage, Theory of Social Goods: Distinction between
Public, Private and Merit Goods. Public Expenditure and Economic Growth. Effects of Public Expenditure on Production, Distribution, Social Over-head Capital, Stability and Innovation. Criteria of Public Expenditure.

UNIT-II

Public Revenue*:*Approaches of Equity in Taxation:Benefits principle Cost of Service Principle, Ability toPay Theory. Effects of Taxation. Analysis of Major Taxes – Income Tax, Expenditure Tax, Corporation Tax, Wealth Tax, Excise Duties, Sales Tax, and Custom Duties. The concept of Taxable Capacity. Taxation in a Developing Economy. Fiscal Incidence: Theories of Tax Shifting, Concepts of Incidence, Measurement of Incidence.

UNIT-III

Public Debt:Role of Public Debt. Different Forms of Public Debt. Burden of Public Debt, Redemption of Public Debt. Debt Management.
Budgetary Policy*:*Functional and Economic Classification of budgets and their Uses. PerformanceBudgets. Budget as an Instrument of Mobilization and Chanalization of Resources and Redistribution of Income and Wealth.

UNIT-IV

Balance and Unbalanced Budgets.
Fiscal Federalism*:*Principles of Federal Finance.
Development Finance*:*Functional Finance vs. Development Finance.
Mobilisation of Financial Resources for Planned Developments.

Suggested Readings:

1. Buchanan J.M. : Public Finance in the Demostic Process (Collected works of James M Buchanan), Library Fund, USA.
2. Musgrave, R. A. (1959) : Theory of Public Finance, McGraw- Hill Publishers.
3. Musgrave R A. & Musgrave P B (5th edition) : Public Finance in Theory and Practice, Mc Hill Publishers
4. Taylor P.E (1949) : The Economics of Public Finance, Macmillan Publishers, New York.

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SOCIOLOGY

SEMESTER V

Methods and Techniques of Social Research

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 =18 marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

The students will be introduced with basic methods and techniques in social research. The objective of this course is to familiarize the students with the basic elements of scientific method, various methods of data collection and social measurement.

Course Content :

UNIT-I

Scientific Method : Features; Concepts; Stages of social research; Hypothesis.

UNIT-II

*Sampling Technique: Meaning P*opulation and Census, Sampling frame
Types of Sampling: Probability: Simple random/stratified random/cluster/multi-stage. Non–Probability: Accidental/Quota/Purposive; Sampling Error.

UNIT-III

Techniques of Data Collection : Observation, Participant and Non-Participant Observation, Interview Schedule and Questionnaire (Structured/Unstructured); Case study method.

UNIT-IV

Measurement : Levels and Problems, Measures of Central Tendency: Mean, Mode, Median.

Essential Readings :

1.	*Sellltiz, Claire et.al*	*:*	*Research Methods in Social Relations (Revised ed.), New York: Henry Hold & Co. (latest edition).*
2.	*Goode, W.J. & Hatt, P.K. (2006)*	*:*	*Methods in Social Research, Delhi, Surjeet Publications*
3.	*Young, P.V.*	*:*	*Scientific Social Surveys and Research, New Delhi: Prentice Hall of India Private Ltd., (1988)*
4.	*Mukerjee, P.N.*	*:*	*Methodology on Social Research: Dilemmas and Perspectives, New Delhi: Sage, 2000.*

Further Readings :

1.	*Festinger, L. & Katz, D.*	*:*	*Research Methods in Behavioural Science, New York: Dryden Press, (1953)*
2.	*Lindzey, Gardner & Aronson*	*:*	*The Handbook of Social Psychology (2nd ed.), Addison: Wesley Pub. Comp.,(1968)*
3.	*Robson, Colin*	*:*	*Real World Research, Oxford: Blackwell, (2000)*
4.	*Bryman Alman, (2014)*	*:*	*Social Research Methods, New Delhi, Oxford University Press*
5.	*Neuman, W.L.,(2007)*	*:*	*Social Research Methods : Qualitative and Quantitative Approaches, Delhi, Pearson Education*

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SOCIOLOGY
SEMESTER VI

Option (i) Social Demography

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Option (i) Social Demography

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.

2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).

3. On an average, 15 hours are to be devoted to each unit.

4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The course exposes students to various components of population growth, data sources and basic theoretical problems of population. Concepts of mortality and fertility are discussed in general and with reference to India in particular. Students are apprised of the latest Population Policy in India.

Course Content :

UNIT-I

Population : Definition, Scope, Nature, Sources of Population Data-Census and Vital Registration.

UNIT-II

Population Theories : Malthusian theory of Population; Biological: Theory of Density Principle and Diet Theory; Social Theories: Social Capillarity and Theory of Diffusion: Theory of Demographic Transition.

UNIT-III

Concepts of Mortality : Causes of Mortality, Infant Mortality, Mortality Rate in India.

Fertility : Concept of Fertility, Factors affecting Fertility–Biological, Socio-Cultural and Psychological Fertility in India.

UNIT-IV

Population Policy in India, Female Foeticide (reference to PNDT Act).

Essential Readings :

1.	*Bhende, Asha & Kanitkar, Tara,(2014)*	*:*	*Principles of Population (revised ed.), Mumbai Himalaya Publishing House.*
2.	*Bogue, Donald, J.*	*:*	*Principles of Demography, New York: John Willey,(1969)*
3.	*Nam, Charles, P.*	*:*	*Population and Society,(1968)*
4.	*Premi, M.K.*	*:*	*An Introduction to Social Demography, Delhi: Vikas Publishing House, (1983)*
5.	*Weeks, J.R.*	*:*	*Population: An Introduction to Concepts & Issues, London: Wardworth Publishing Co., (1988)*
6.	*Raj Hans(2010)*	*:*	*Fundamentals of Demography, Delhi, Surjeet Publications*

Further Readings :

1.	*Bose, Ashish*	*:*	*India & The Asian Perspective, New Delhi: B.R. Publishing Corporation, (1993)*
2.	*Matras, Juda*	*:*	*A Sociological Approach, New Jersey: Prentice Hall, (1977)*
3.	*Government of India*	*:*	*National Population Policy (2000), Ministry of Health & Family Welfare, GOI.*
			(Latest Census Reports and Sample Registration Bulletins of the Government of India.)
4.	*Premi, M.K.*	*:*	*India's Population: Heading towards a Billion, Delhi: B.R. Publications, (1991)*
5.	*Dyson Tim,(2011)*	*:*	*Population and Development, The Demographic Transition,Jaipur, Rawat Publications*

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

To understand the contemporary social problems in society, the students are exposed to the basic concept of deviance, its theoretical perspectives and control mechanisms.

Course Content:

UNIT-I

Deviance : Definition, Concept (Relative and Absolute) Distinction between deviant behaviour and deviant role. Pathological theories (Biological and Psychological).

UNIT-II

Sociological Theories : Theories of social disorganization (C.H. Cooley, W.F. Ogburn).

Structural-Functional Theories : Theory of Anomie (Emile Durkheim, Robert K. Merton), Differential Association (E. Sutherland and D.R. Cressey).

Interactionist Theories : Theory of Labelling (Edwin M. Lemert and Howard S. Becker).

UNIT-III

Controlling Deviance : Socialization - means and agencies, Social Control: means and agencies, Social codes and customs; Sympathy: passive and active.

UNIT-IV

Selected Problems of Deviance: Sex Deviance, Delinquency, White Collar Crimes, Cyber Crime.

Essential Readings :

1.	*Becker, Howard S.*	*:*	*Outsiders: Studies in the Sociology of Deviance, Glenco, Free Press, (1987)*
2.	*Ferrell, R. & V.L. Swigert [ed.]*	*:*	*Social Deviance, New York: J.B. Lippincott Co. (1975).*
3.	*Haralambos, M.*	*:*	*Sociology – Themes & Perspectives, Delhi, Oxford University Press,(1984)*
4.	*Kelly, Delos H.*	*:*	*Deviant Behaviour: Readings in Sociology of Deviance, New York: Martin's Press, (1979)*
5.	*Lawson, T & T. Heaton*	*:*	*Crime & Deviance, New Delhi : Macmillan, (1999)*
6.	*Metta, Spencer*	*:*	*Foundations of Modern Sociology, New Jersey: Prentice Hall Inc., Englewood Cliff, (1979)*
7.	*Michael Mc Kee and Ian Robertson*	*:*	*Social Problems, Toronto: Random House Inc., (1976)*
8.	*Thio, Alex*	*:*	*Deviant Behaviour, London : Houghton Mifflin, (1978)*
9.	*Ahuja, Ram,(2012)*	*:*	*Criminology, Jaipur Rawat Publications*
10.	*Ahuja, Ram,(2015)*	*:*	*Social Problems in India, Jaipur, Rawat Publications*

Further Readings :

1.	Erdwin. H. Pfuhl	:	*The Deviance Process,* New York: D.Van Nostrand Co., (1980)
2.	Ian Robertson	:	*Sociology,* New York: Publisher Inc. (1977)
3.	John, J. Grant	:	*Social Problems as Human Concern,* San Francisco: Body & Fraser Publishing Company, (1976)
4.	Rubington, Weinberg	:	*Studies of Social Problems,* New York: Oxford University Press, (1977)
5.	Rushing, William A. [ed.]	:	*Deviant Behavior & Social Process:* Rand McNally College Pub. Co., (1985)
6.	Bansal,S.K.(2013)	:	*Cyber Crime, New Delhi, APH Publications*
7.	Sharma,Rajendra K,(1988)	:	*Social Disorganization, New Delhi :Attantic Publications*
8.	Byrne, David,(2009)	:	*Social Exclusion, Jaipur, Rawat Publications*

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-21
SEMESTER – V

Paper-A, Option (i) : PHILOSOPHY OF SCIENCE
OR
Paper-A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Paper-A Option (i) : PHILOSOPHY OF SCIENCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The aim of this paper is to analyse the concepts of philosophy and science, Einstein's Theory of Relativity i.e. space, time and relativity; Nature of observational language and theoretical language; causality, prediction and probability; Principle of Complimentarity.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

- The Nature and Scope of Philosophy of Science. Relation between Philosophy and Science.
- Einstein's Theory of Relativity : Space, time, reality.
- Methodological character of theoretical concepts. Observational language, theoretical language, a criterion of significance of theoretical terms. Dispositional concepts, Difference between theoretical terms and pure dispositional terms.

UNIT-II

- Causality, Prediction and Probability.
- Principle of Causality.
- Causality as the existence of Laws.

UNIT-III

- Causal Law and Statistical Laws.
- Induction and Probability.
- Theories of Probability.

UNIT-IV

- Rationality Debate & Theory Choice.
- Popper & Kuhn

Essential Readings :

Bridgman, P.W.(1958), The Logic of Modern Physics, Macmillan : New York
Earnest Nagel (1979), Structure of Science : Hackett Pub. Co.
Hans Reichenbac (1994), Rise of Scientific Philosophy :California University Press

Suggested Readings :

Minnesota Studies in the Philosophy of Science, Minnesota Centre for Philosophy of Science, 1958.
Phillip Frank (1957), *Philosophy of Science: The Link between Science and Philosophy* (Englewood Cliff : Prentice Hall)

OR

Paper – A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at understanding the nature of social and political philosophy and some of its fundamental concepts; its major social and political theories and Indian political thought.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

- Nature and Scope of Social and Political Philosophy :

- Relation between Social and Political Philosophy and Social Sciences such as Sociology and Political Science with special emphasis on the distinction between Philosophy and Science.
- Empirical and Scientific study of society and politics as distinct from philosophical study of society and politics.

UNIT-II

- Some Fundamental Concepts of Social and Political Philosophy :

- Distinction between Natural Facts and Social Facts.
- Normative Aspects of Socio-Political Reality.
- State and Civil Society.
- Liberty, Equality and Fraternity.
- Social Change and Social Progress.
- Tradition and Modernisation.
- Power and Authority.
- Reform and Revolution.
- Justice.

UNIT-III

- Major Social and Political Theories
- Liberalism.
- Egalitarianism.
- Anarchism.

UNIT-IV

- Indian Political Thought : Chanakya, Vivekananda, Gandhi, Ambedkar.

Essential Readings :

Ambedkar, B.R. (2003), *Writings and Speeches,* Government of Maharastra, Bombay., Vol. 18, 19 & 20

Bhattacharyya, K.C. (1983), Studies in Philosophy, Motilala (U.K.) Books of India, New Delhi

Gautam, S.P. (1991), *Samaj Darshan,* Haryana Sahitya Akademy, Chandigarh

Tagore (2002), *Religion of Man,* Rupa Publications, Paperback, New Delhi

Will Kymlica Kamal Nayan Chaubey (2010), Samkalin Rajniti – Darshan Ek Parichay, 2nd Ed. Pearson Delhi

Complete Works of Swami Vivekananda (relevant portions) Advaita Ashram, Calcutta, 1957.

Suggested Readings :

Menon, Nivedita (2013), Seeing like a Feminist, Zubaan: New Delhi

Miller, David (2003), Political Philosophy, A very short introduction, Oxford University Press, New York

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PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-21
SEMESTER – VI

Paper -B, Option (i) : LOGIC

OR

Paper-B Option (ii) : PHILOSOPHY OF CULTURE

OR

Paper -B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at training the students in skills of critical reasoning by introducing laws of thought, criteria for validity of arguments, deductive and inductive reasoning.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

- Nature and Scope of Logic.
- Deductive Inference.
- Laws of Thought.

UNIT-II

- Aristotelian Classification of Propositions.
- Immediate and Mediate Inference.
- Syllogism.

UNIT-III

- Truth Tables.
- Propositional Calculus.
- Quantifiers and Propositional Functions.
- Predicate Calculus.

UNIT-IV

- Inductive Logic.
- Probability.
- Scientific Method.
- Law and Explanation

Essential Readings :

Irving Copi (2004), I*ntroduction to Logic,* Prentice Hall

Irving Copi (1979), Nagel and *Symbolic Logic,* Prentice Hall

Cohen (2002), *Introduction to Logic and Scientific Method,* Simon Publications

Suggested Readings :

Russell (1970), Principles of Mathematics (Allen & Unwin London)

Jean Necod (1970), Foundations of Geometry and Induction (kegan Paul)

OR

Paper- B Option (ii) : PHILOSOPHY OF CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims to introduce the problems like origin and meaning of culture, civilization, tradition, the role of ideology and Utopia, Indian cultural tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT – I

- Origin and meaning of Culture.
- Culture, Civilization and the Individual.

UNIT – II

- Religion as an Apex of Culture.
- Culture and Language.

UNIT – III

- Culture, Tradition and Modernity. The metaphysical loss of Human.
- Sources of Indian Culture Tradition.

UNIT – IV

- Role of Science and Technology in Cultural Evolution.
- Inter – Cultural understanding and Hermeneutic Tradition.

Essential Readings:

Eliot (1962), Notes towards definition of Culture, Faber & Faber, London

Gadamer (2005), Truth and method. Continum International

G.C. Pandey (1972), Meaning and Process of Culture. Shivlal Aggarwal & Co. Agra

Sneh Pandit Ed. (1980), Perspectives on Philosophy of Culture, Delhi, S. Chand

Vellassery Sebastian & Geeta Manaktala (2008), Foundations of Indian Social Life: Cultural, Religious and Aesthetics. Booksurge Publishing U.S.

Wittgenstein (1980), Culture and Value. translated by Peter Winch, Oxford Blackwell

Suggested Readings :

A.J. Toynbee (1948), Civilization on Trial, Oxford University Press

Paul Ricouer (1984), Time and Narrative published by University of Chicago Press, London

OR

Paper – B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims at familiarizing the students with the meaning and scope of Aesthetics, art and society, aesthetic experience according to the Western and Indian tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.
There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

- Aesthetics, its meaning and scope.
- Nature and function of art.

UNIT-II

- The relation of art to society.

UNIT-III

- Meaning and purpose of art in the Indian Tradition.

UNIT-IV

- Nature of Aesthetic experience according to the Western and Indian traditions.

Essential Readings :

Hiriyanna (1954), Art Experience, Karyalaya Publications: Mysore

Susan, L. Feagin and Patrick Maynard (ed.) (1997), *Aesthetics,* Oxford University Press

Suggested Readings :

Meredith (220 &) The Critique of Judgement by Immanuel Kant Tr., J.C., Oxford University, Press

Morris Weitz (ed.) (1970), Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York

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PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-2021

SEMESTER V

PAPER: PSYCHOLOGICAL TESTING

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : *Introduction to Psychological Tests :*History of Psychological Testing; Nature of Psychological Tests. Classification of Tests; Use of Tests.

UNIT-II : *Item Writing and Item Analysis :*Characteristics of a Good Item; Various types of Items; Item Difficulty; Item Discrimination.

UNIT-III : *Reliability and Validity :Reliability :* Concept, Types, Factors Affecting Reliability. *Validity :* Concept, Types, Factors Affecting Validity; Relation between Reliability and Validity.

UNIT-IV : *Interpretation of Test Scores :Criterion Referenced Scores :* Content Referenced and Outcome Referenced Scores; Norms Referenced Scores; Concept of Norms, Types of Norms (Percentile Scale and T. Scale).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

Books Recommended

Suggested Readings :

1. Anastasi, A. (1998) : *Psychological Testing,* New York : Macmillan.

2. Gregory, R.J. (1996) : *Psychological Testing,* Singapore : Allyn and Bacon.

3. Guilford, J.P. and Fruchter, B. (1981):*Fundamental Statistics in Psychology and Education,* Singapore: McGraw Hill.

4. Guilford, J.P. (1954) : *Psychometric Methods,* New Delhi : Tata McGraw Hill.

Reference Books :

1. Freeman, F.S. (1962) : *Theory and Practice of Psychological Testing,* New Delhi : Oxford and IBH.

2. Cronbach, L.J. (1990) : *Essentials of Psychological Testing,* New York : Harper and Row.

3. Brown, F.G. (1976) : *Principles of Educational and Psychological Testing,* New York : Holt, Rinehart and Winston.

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2020-2021

SEMESTER VI

PAPER: Counselling and Organizational Psychology

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

(I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

UNIT-I : Concept of Counselling; Approaches to Counselling; Freudian, Experiential Client Centered, Gestalt, Existential, Cognitive Behaviour Therapy.

UNIT-II : Work Motivation: Early and Contemporary Theories.Strategies of Organizational Development.

UNIT-III : Concept and Nature of Health Protective Behaviour.Concept and types of Health Coronary Behaviour (Special reference to nicotine addiction and alcoholism).

UNIT-IV : Psychology of Exceptional Children with special reference to learning disabled and Gifted Children.

Books Recommended :

Suggested Readings :

1. Luthans, F. (1998) : *Organizational Behaviour,* New York : Irwin McGraw Hill.
2. Moorhead, G. and Griffin, R.W. (1999) : *Organizational Behaviour,* Delhi : AITBS.
1 . Parikh, M.R. & Gupta, R. (2010) : *Organizational Behaviour, Tata McGraw Hill Education* Private *Limited,* New Delhi : West Patel Nagar.
4. Robbins, S.P. (2000) : *Organizational Behaviour,* New York : Prentice Hall of India.
5. Rao, S.N. (1992) : *Counselling and Guidance,* New Delhi : Tata McGraw Hill.
6. Nystul, M.S. (1999) : *Introduction to Counselling – An Art and Science Perspective,* Boston : Allyn and Bacon.
7. Brannon, L. and Feist, J. (2007): *Introduction to Health Psychology*. New Delhi: Thomson – Wadsworth.
8. Mohan, J. and Sehgal, M. (2006): *Health Psychology*. New Delhi: Abhijeet Publications.
9. Narayan, J.(2003) : *Educating Children with Learning Problems in Regular Schools*, Secunderabad : NIMH.
10. Raj, F. (2010) : Breaking Through: A Hand book for parents and teachers of children with Specific Learning Disabilities, Secunderabad: Vifa Publishers.

Reference Books :

1. Newstrom, J.W. and Davis K. (1998) : *Organizational Behaviour,* New Delhi : Tata McGraw Hill .
2. Woolfe, R., and Dryden, W. (Eds.) (1996) : *Handbook of Counselling Psychology,* New Delhi : Sage Publications.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2020

SEMESTER V

Paper III: APPLIED GEOGRAPHY

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:
To understand the prevalent issues in environment, society and economy and to provide a geographical interpretation with special reference to India

Course Content:

Unit- I

Applied Geography: Meaning and concepts:

Meaning, nature and scope and significance of Applied Geography. Concept of planning region.

Regionalisation scheme with reference to economic regionalization. (25 lectures)

Unit- II

Applied Geography: Methods and technieques:

Cartographic techniqeues using point, line and area symbols. (10 lectures)

Unit- III

Applied Geography: Contributions:

Industrial location theory of Weber and its application in industrial planning.
Christaller's Central Place Theory and its application in location of central places.
Von Thunen's Agricultural Location Theory and its application in agricultural location.
Perroux's Growth Pole Theory and its application in regional development planning.

UNIT- IV

Land use studies: Rural and Urban.

Rural Land Use: Survey and Classification.

Urban Land Use : Survey and Classification.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

Books Recommended

Essential Readings:

1.	Carter, H.	:	The Study of Urban Geography, Arnold-Heinemann, New Delhi, 1979.
2.	Chorley, R.J. & P. Haggett (Ed.)	:	Models in Geography, Methuen & Co., London, 1967.
3.	Jones, Alun	:	Fieldwork in Geography, Longman, Green Co., London, 1968.
4.	Stamp, L.D.	:	Applied Geography, Penguin Books, England, 1960.
5.	Singh, R.L. (Ed.)	:	Applied Geography, National Geographical Society of India, Department of Geography, B.H.U., Varanasi, India.

Further Readings:

1.	Dawson, J.A.	:	Geography, Teach Yourself Books, Hodder and Stoughton, UK 1983.
2.	Misra, R.P. and others	:	Regional Development Planning in India, Vikas, New Delhi.1974
3.	Misra, V.C. & others	:	Essays in Applied Geography, University of Sagar, India.1976

4. Sen Gupta, P. &Sadasyuk Galina : Economic Regionalization of India, Problems and Approaches, Registrar General Census of India.
5. Singh, Jasbir & Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill, New Delhi, 1994.
6. World Report, World Bank & OUP (Annual Report)

Pedagogy:

- Exposure to media.
- National Five Year Plan documents and publications related to planning.
- Field work related to land –use and other socio-economic issues.

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GEOGRAPHY

B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2021
Semester VI

Any one of the following options:

Option (i)	**:**	**AGRICULTURAL GEOGRAPHY (An Elementary Course)**
Option (ii)	**:**	**POLITICAL GEOGRAPHY (An Elementary Course)**
Option (iii)	**:**	**ENVIRONMENTAL GEOGRAPHY (An Elementary Course)**

Option (i) AGRICULTURAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the concepts and development of agriculture;
- To examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialisation. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objective is also to discuss environmental, technological and social issues in agricultural sector with special reference to India.

Course Content:

Unit- I

Nature, scope and significance of agricultural geography.

General landuse classification.

Physical determinants of agricultural landuse: Relief, climate, soils.

Unit- II

Social and cultural determinants of agricultural landuse, land tenure, size and fragmentation of holdings and labour.

Economic determinants of agricultural landuse: Marketing facilities, transport facilities, tariff and import restrictions, price incentives, credit.

Unit-III

A critical review of Whittlesey's agricultural classification.

Characteristics and world patterns of the following:

Subsistence types of agriculture: Nomadic herding, shifting cultivation, rudimentary sedentary tillage, intensive subsistence tillage, subsistence crop and livestock farming.

Unit- IV

Commercial types of agriculture: livestock ranching, commercial plantation farming, commercial grain farming, mixed farming, commercial dairy farming.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each UNIT. The students will be required to attempt one question from each UNIT. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Alexander, J.W.: *Economic Geography*, Prentice Hall, Englewood Cliffs, latest Edition.
2. Husain, M. : *Systematic Agricultural Geography*, Inter-India Publications, New Delhi, 2000.
3. Singh, J. & Dhillon, S.S. : *Agricultural Geography*, Tata McGraw Hill Publishing New Delhi, 1994.

Further Readings:

1. Morgan, W.B. & Munton, R.J.C. : *Agricultural Geography*, Methuen, London, 1971.
2. Symons, L. : *Agricultural Geography*, G. Bell & Sons, London, 1964.

Pedagogy:

The teacher should impress the students the overall importance of agriculture in the global perspective. The world is fast changing and its impact is felt on agriculture. Population is increasing and demand of agricultural products is also on the increase. Contrary to it, the farm lands are decreasing, that necessitates infusion of technology in agricultural sector. It is causing environmental pollution. The teacher should interact with students on said issues. Examples from neighbouring areas may be given to the students for better perceptions.

Option (ii): POLITICAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To familiarise the students with the geographical factors which have a bearing on the political/ administrative organisation of space.
- To enhance awareness among the students of multi-dimensional nature of geo-political space.

Course Content:

Unit- I

Nature and scope of political geography, phases in the development of political geography. Physical elements of political geography: Location, size and shape, relief, climate, and seas and oceans.

Unit- II

Economic elements of political geography: Basic natural resources; food and power, minerals, industry, trade and transportation.

Human-cultural elements of political geography: Ethnographic structure of nations, language, religion, population, quantity and quality.

Unit- III

Concepts of frontiers and boundaries: Classification of boundaries.

Global distribution of political power: Views of Mackinder, Mahan and Spykman and their contemporary relevance.

Unit- IV

International tension: Identification of tension areas and factors contributing to tensions in different areas with special examples from Middle East and Indian Ocean.

Political Geography of the Indian Ocean.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. De Blij, H.J. Glassner, M. : *Systematic Political Geography*, John Wiley, New York, 1968.
2. Dikshit, R.D. : *Political Geography*: A Contemporary Perspective, Tata McGraw Hill, New Delhi, 1996.

Further Readings:

1. Adhikari, Sudeepta : *Political Geography*, Rawat, Jaipur, 1997
2. Muir, R. : *Modern Political Geography*, Macmillan, London,1981.
3. Prescott, J.R.V. : *Political Geography*, Methuen, London, 1992.
4. Prescott, J.R.V. : *The Geography of Frontiers & Boundaries*, Aldine Pvt. Ltd., Chicago, 1965.
5. Valkenberg, S.V. New& Stotz, Carl, L. : *Elements of Political Geography*, Prentice Hall of India, Delhi, 1963.

Pedagogy:

- Fieldwork to understand the political/administrative boundary configuration and people's problems and their perceptions.
- Consult political maps (large scale, small scale).
- Atlases and archival records.
- Collect relevant newspaper items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Option (iii): ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Max. Marks: 100
(Terminal Exam: 90 Marks)
(Internal Assessment: 10 Marks)
Time: 3 Hours

Objectives:

- To understand the significance of environment and its interrelationship with man.
- To understand the importance of soil and factors responsible for erosion.
- The importance of energy sources, forest and wildlife and their preservation to be studied.

Course Content:

Unit-I

Environment and Geography: Relationship between geography and environment; definition and scope of environmental geography; significance of environmental studies.

The Environment: Characteristics, components and functioning; concept of healthy environment.
(6 + 6 = 12 lectures)

Unit- II

The Soil System: Origin and composition; horizons, texture, chemistry, factors influencing soil types; soil erosion, soil conservation; and soil pollution.
Energy: Energy flow in the ecosystem; environmental impact of both conventional and non-conventional energy sources. (6 + 4 = 10 lectures)

Unit- III

Forests: Significance; world reserves; deforestation; and conservation strategies.

Wildlife: Wildlife and environment relationship, regional distribution; conservation of wildlife; and wildlife in India. (5 + 5 = 10 lectures)

Unit- IV

Population and Environment: Basic issues, environmental impact of population growth and agenda for action.

Global Environmental Issues: Water contamination; atmospheric pollution; acid rain; noise pollution; and control strategies.

Legislative strategies, environmental issues and the international community; Rio-de-Janeiro Earth Summit of 1992; selected environmental protection laws in India; Environmental Protection Act, National Environmental Tribunal Act, Wildlife Protection Act, Forest Conservation Act, Air Act, Water Act. (6 + 6 + 6 = 18 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Adam, W.M. : *Green Development: Environment & Sustainability in the Third World*, Routledge, London, 1990.
2. Chandna, R.C. : *Environment Awareness*, Kalyani Publishers, New Delhi. Clarendon Press, Oxford, 1998. Also available in Hindi & Punjabi.
3. Chandna, R.C. : *Environmental Geography*, Kalyani Publishers, New Delhi, 2001.
4. Goudie, A.S. : *The Human Impact on Environment*, Blackwell, Oxford, 1993.

Further Readings:

1.	Ehrlich, Paul, R. et. al	:	*Ecoscience – Population, Resources and Environment*, Freeman and Co., San Francisco, 1977.
2.	Goudie, A.S.	:	*Environmental Change, Contemporary Problems in Geography*, Clarendon Press, Oxford, 1992.
3.	Pickering, K.T.	:	*An Introduction to Global Environmental Issues*, Routledge, London, 1994.
4.	Singh, Savinder Allahabad,	:	*Environmental Geography*, Paryag Pustak Bhawan, 1991.
5.	Strahler, A.N. & Strahler, L.A.	:	*Geography and Man's Environment*, John Wiley & Sons, New York.

Pedagogy:

- The interaction of teacher and students is must on issues related to environment, energy resources, forest and soil preservation.
- A field visit to those areas where soil erosion is a serious problem be arranged and methods of conservation be taught.

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PUBLIC ADMINISTRATION
SEMESTER -V

Paper- III : RESEARCH METHODS AND STATISTICS

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time : 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding about the nature and scope of Social Research, Methods of Social Research, data collection and data processing. It would also acquaint the students with basics of sampling and statistical methods including measures of central tendency, dispersion, correlation and Chi-Squares Test.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Meaning, Nature and Scope of Social Research.
Concepts; Hypotheses : Meaning, Types and Significance.
Research Design - Meaning, Types and Components.
Methods of Social Research - Experimental–Survey and Case Study.

UNIT-II

Methods of Data Collection—Documents, Observation, Interview and Questionnaire.
Data Processing-Editing, Coding and Tabulation, The Use of Computer.
Report Writing.

UNIT-III

Sampling-Meaning, Types, Merits and Demerits.
Frequency Distribution – Meaning and Steps.
Measures of Central Tendency – Mean, Median and Mode.

UNIT-IV

Measures of Dispersion –Standard Deviation.
Correlation – Karl Pearson.
Chi-Square

Essential Readings :

Goode, W.J., & Hatt, P.K. (1990). *Methods in Social Research.* U.S.A. : McGraw Hill.
Gupta ,S.P. (1987) . *Statistical Methods.* New Delhi : Sultan Chand .
Moser, C.A. & Kalton. G. (1979).*Survey Methods in Social Investigations.* London : ELBS
Seltiz,C.et al. (1964) . *Research Methods in Social Relations* . New York : Rinehart & Winston.

Further Readings :

Bowley, A. (1947). *Elements of Statistics* (6th ed.) . New York : Staples.
Cohen, L. (1968) . *Statistical Method for Social Scientists* .New Delhi : Prentice Hall of India Private Ltd.
Ghosh., and Chowdhry. (2004). S*tatistics* (Rev. Enlarg. Ed.) Allahabad : Indian Press.

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PUBLIC ADMINISTRATION
SEMESTER-VI

PAPER IV : The candidates have to select one out of the following four options :

Option (i) : Organisation Behaviour
Option (ii) : Cooperative Administration in India
Option (iii) : Public Enterprise Management (with special reference to India)
Option (iv) : Environment Administration in India
Option (v) : Emerging Issues in Public Administration

Paper- IV : OPTION (i) : ORGANISATION BEHAVIOUR

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :
The objective of the paper is to give the student an in-depth insight into the various aspects and factors affecting individual, interpersonal and group behaviors in organisations. The key areas include study of human behavior and concepts like Attitudes, Morale, Leadership, Motivation and Organizational Change.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Organisation Behaviour : Concept and significance
Individual Behaviour : Concept; Nature; Individual Factors
Interpersonal Relations : Meaning; Dimensions; Factors

UNIT-II

Team Development : Importance; Types of Teams
Attitudes : Concept, Types
Morale : Concept; Significance; Building up High Morale

UNIT-III

Groups : Concept; Types
Leadership : Styles of Leadership
Motivation : Concept; Determinants

UNIT-IV

Organisational Change : Concept; Resistance to change
Organisational Development : Concept; Need; Techniques
Organisational Effectiveness : Concept; Approaches

Essential Readings :

Davis, K. (2001).*Organizational Behaviour* . NewYork: McGraw Hill.
Dubin, R. (1968). *Human Relations in Administration(*3rd ed.)*,* New Delhi: Prentice Hall.
Gupta, S. & Joshi, R. (2007).*Organizational Behaviour* . New Delhi: Kalyani Publishers.
Kolasa, B.J. (1969). *Introduction to Behavioural Sciences for Business.* New York: Wiley.
Prasad , L.M.(2000). *Organisational Behaviour*(3rd ed.).New Delhi: Sultan Chand
Sharma, K.K. & Sahni, P. (1988).*Organisational Behaviour* . New Delhi: Deep & Deep.

Paper- IV: OPTION (ii) : CO-OPERATIVE ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to acquaint the students with the evolution of cooperatives in India and its Principles. It will also deal with Legislation on Cooperatives, Registration, structure and Administration at the Union and State level. Further the students will gain an understanding of the forms and Role of Cooperatives, their managerial & personnel aspects.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Co-operation : Meaning, Significance and Evolution
Co-operative Principles
Co-operative Legislation : Government of India Act, 1912 and Punjab Co-operative Societies Act, 1961(as amended from time to time)

UNIT-II

Registration of a Co-operative Society
General Body, Board of Directors and Committees
Chief-Executive : Appointment, Functions and Role
Co-operative Administration at Union Level – Organisation and Functions

UNIT-III

Co-operative Department at State Level – Organisation and Functions
Registrar Co-operative Societies : Appointment and Role
Forms of Co-operatives : Role of Apex Federations and Primary Co-operatives
Co-operative Education

UNIT-IV

Human Resource Management : Recruitment and Training
Financial Management

Essential Readings :

Dubhashi, P.R. (1970) . *Principles and Philosophy of Cooperation* . Pune: VMNICM.
Goel, B.B. (1988). *Dynamics of Cooperative Administration* . Delhi: Deep and Deep.
Goel , S.L., & Goel, B.B. (1979). *Principles, Problems and Prospects of Co-operative Administration* .Delhi: Sterling.
Kamra, P.K. (1986) .*Cooperative Management* . Delhi: Deep and Deep.
Krishnaswami, O.R. (1978) . *Fundamentals of Cooperatives* .Delhi: S.Chand and Co.
Mathur, B.S.(1971). *Cooperation in India.* Agra: Sahitya Bhawan.

Further Readings :

Bhatia, B.S. (ed.). (1994). *Encyclopaedia of Cooperative Management.* New Delhi: Deep & Deep Publications Pvt. Ltd.
Dwivedi, R.C. (1982).*Democracy in Cooperative Movement.*New Delhi. National Cooperative Union of India.
Gill , M.S. (1983).*Agricultural Cooperatives* .Delhi: Vilas.
I.C.A. (1977).*Readings in Cooperative Management.*Delhi: ICA.
I.C.A. (1980).*Experts Consultation on Cooperative Member Education* . Delhi: ICA.
I.L.O.(n.d.).*Cooperative Management and Administration* .Geneva: I.L.O.
Puri, S.S.(1979). *Ends and Means of Cooperative Development* . Delhi: NCUI

Paper-IV: OPTION (iii): PUBLIC ENTERPRISE MANAGEMENT (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time :		3Hours

Objective of the Paper :

The objective of the paper is to give the student a detailed understanding of the concept, evolution, types, role and problems of public enterprises in India. It would also give an insight into legislative and government control over public enterprises, performance and reforms of the public enterprises and the concept of privatization.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Public Enterprise : Meaning and Evolution
Public Enterprises in India : Rationale and Role
Administrative and Managerial Problems of Public Enterprises

UNIT-II

Organisational Patterns: Departmental Undertakings, Public Corporation and Government Company
Board of Directors: Rationale, Constitution, Types and Functions

UNIT-III

Legislative Control over Public Enterprises
Government Control over Public Enterprises
Performance of Public Enterprises

UNIT-IV

Public Enterprise Reforms since 1991
Memorandum of Understanding
Privatization : Meaning, Rationale, Achievements and Failures

Essential Readings :

Dutt, Ruddra and Sundaram, K.P.M. (2009) .*Indian Economy* . New Delhi: S. Chand.
Khera, S.S. (1977) . *Government in Business* . Delhi : National.
Mathur, B.P. (1999) .*Public Enterprise Management* . New Delhi :Macmillan
Narain, Laxmi . (2005). *Public Enterprise Management and Privatisation* . New Delhi :S. Chand.
Parkash, Jagdish . (2002). *Administration of Public Enterprises in India* . Mumbai :Himalaya Publishing House.
Sengupta , N.K. (2007) . *Government and Business* . New Delhi :Vikas.

Further Readings:

Gedam, Ratnakar. (1995) . *Public Sector Management.*
Government of India. *Public Enterprises Survey, India, Ministry of Heavy Industry & Public Enterprises, Vol. 1, 2, 3* .DPE. New Delhi.
Gupta, K.R. (1975) . *Issues in Public Enterprises* . New Delhi: S.Chand.
Hanson , A.H. (1972).*Public Enterprises and Economic Development* . London : Routledge and Kegan.
Ramanadham, V.V.(1988). *The Working of Public Sector* . Bombay : Allied Publishers.
Ramanadham , V.V. *The Structure of Public Enterprises and Economics in India* . Bombay: Asia Publishing House.
United Nations. (1974). *Countries* . New York : V. N.

Paper-IV: OPTION (iv): ENVIRONMENT ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding of the concept and components of environment, environment administration and sustainable development. In addition, the students would be made aware of environment problems, threats and impact of development on environment. The student will also gain knowledge regarding the machinery for environment protection at the Union and State levels, Environmental Policy, priorities, global issues and role of NGOs in environment conservation would be dealt with.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Environment – Concept and Components
Environment Administration – Meaning, Nature and Scope
Sustainable Development – Concept, Issues and Strategy

UNIT-II

Environment Problems and Threats–Air, Water, Land, Human Settlements and Forests
Impact of Development, Urbanization and Industry on Environment
Organisation and Machinery of the Government at the Union Level for Environment Protection
Organisation and Machinery of the Government at the State Level for Environment Protection

UNIT-III

Pollution Control Boards–Organisation, Functions and Role

Environmental Policy with special reference to Water, Air and Forest; Constitutional Provisions; Legislative Measures

Environmental Priorities in India—Population Stabilisation; Forest Cover; Deforestation; Wildlife Protection; Recycling of Wastes

UNIT-IV

Environment and Global Issues— Conventions; Depletion of Ozone Layer; Global Warming

Environment Education, Awareness and Ethics; Role of NGOs in Environment Protection and Conservation

Essential Readings :

Chandana, R.C. (1998) .Environment Awareness . New Delhi : Kalyani.

Edmunds, S. and Latey, J. (1973). Environmental administration . New York : McGraw-Hill.

Nanda, V.K. (1997). Environmental Education .New Delhi : Anmol.

Sapru, R.K. (2002) . Development administration . New Delhi : Sterling.

Sapru ,R.K. (2004). Public Policy . New Delhi : Sterling.

Further Readings :

Agnihotri , Sheo Parkash. (1992). *Environment Conservation Management and Planning.* Allahabad : Chugh.

India, Centre for Science and Environment. (1982). *The state of India's Environment : A Citizen's Report* . New Delhi:Vishal Bhawan.

Kumar, Naresh.(1999) . *Air Pollution and Environment Protection : Legislative Policies, Judicial Trends and Social Perceptions* . New Delhi : Mittal.

Kumar, Naresh.(1999). *Air Pollution and Environment Protection:Legislative Policies,Judicial Trends and Social Perceptions* . New Delhi:Mittal

Monga, G.S. (2004).*Environment and D evelopment* . New Delhi : Deep and Deep.

Radha, S. and Sankhyan, A.S.(2004). *Environmental Challenges of the 21st Century . New Delhi:* Deep.

PAPER- IV: OPTION (V): Emerging Issues in Public Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to familiarize the students with the emerging issues in Indian Administration. At the end of the course the students will have an understanding of the concepts of disaster management, human rights, regulatory administration in India, consumer protection, right to information, new areas of governance in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Good governance – Concept and significance
E- governance – Concept and significance
Regulatory Administration - Concept and significance

Unit II

Transparency and Accountability in Administration – Significance
Mechanism – Social Audit, Results Framework Document (RFD)
Ethics and Integrity in Administration

Unit III

Human Rights - Concept and significance
Women Empowerment with special reference to National Mission for Empowerment of Women (NMEW)
Youth Empowerment with special reference to Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Unit IV

Sustainable Development - Concept and significance
Environment Administration - Concept and significance
Disaster Management - Concept and significance

Suggested Readings :

Arora , Ramesh K. (2013). *Ethical Governance in Business and government*. Jaipur : Aalekh Publishers.

Bhandari, Sunanda (2015).*MahilaSashaktikaranEvamRajkiyaYojanaye.* Jaipur: Ritu Publications.

Bystydzienski, Jill M. (2008).*Democratization & Women's Grassroot Movements.* JotiSekhon. Zubaan.

Centre for Good Governance.Social Audit Tool Kit,"n.d" from www.cgg.gov.in

Food & Agricultural Organization (F.A.O.*).A handbook for trainers on participatory local development: The Panchayat & Training Module on social Audit*

Kawadia, Ganesh & Ahuja, Kanhaiya. (2006) .*Environmental Issues of Development.*AmbalaCantt, India: The Associated Publishers.

Goel, S.L. (2006).*Encyclopedia of Disaster Management*, Deep and Deep Publication Pvt. Ltd.

Government of India. *Guidelines for Results Framework Document(RFD).* "n.d" retrieved from www.performance.gov.in

Government of India. (2006,September). *Second ARC – Third Report (Crises Management: From Despair to Hope).*

Government of India.(2006,june) . *Second ARC – First Report (Right to Information- Master Key to Good Governance).*

Government of India. (2008,December). *Second ARC – Eleventh Report (Promoting e-governance: The Smart Way Forward).*

Government of India.Ministry *of Skill Development and Entrepreneurship-*" *n.d'' retrived from* www.skilldevelopment.gov.in/pmkvy.html

Government of India*. Ministry of Women & Child Development,* "n.d'' retreived from www.nmew.gov.in.

Government of India. *E-governance for Citizen Empowerment National Information Centre*. ''n.d''retreived from www.nic.in

Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.

Verma, J.S. (2006). *The Universe of Human Rights.* Delhi: Universal Law Publishing Company.

Kumar, Abhishekand Tripathy, Pramod Kumar.*Skill Development in India – An Overview of Initiatives& Schemes.* New Delhi: Kanishka Publishers.

Mathur, B.P. (2014). *Ethics for Governance: Reinventing Public Services.* India: Routledge.

Jaswal, P.S.and Jaswal, Nishtha. (2000). *Environmental Law* . Pioneer Publications.

Palekar, S.A. (2012). *Development Administration*. New Delhi: PHI Learning Private Limited.

Manisha Priyam; Menon Krishna and Banerjee, Madhulika. (2009). *Human Rights, Gender and the Environment.* Pearson.

Trivedi, Priya Ranjan. (1999). *Encyclopedia of Ecology and Environment Volume 3 Environmental Education*. New Delhi :Indian Institute of Ecology and Environment.

Vayunandan, E. and Mathew, Dolly. (2003). *Good Governance Initiatives in India*. New Delhi : Prentice Hall of India.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – V

Note : The students shall have to opt for one paper for Semester - V examination out of the following two papers :

Outlines of Test :

Paper V : Archaeology

Paper VI : Spread of Indian Culture In Central Asia, China And Tibet

Paper-V: ARCHAEOLOGY

Total Marks	**: 100**
Theory	**: 90**
Internal assessment	**: 10**
Time	**: 3 Hours**

Objectives :

This course is a survey of the pre and pro to historic background to Indian history from the earliest times to the early historical period. Excavated sites are studied for an insight into the growth and development of early Indian culture.

Pedagogy of the CourseWork:

The students are made familiar with prehistoric, proto historic and historical sites. Slides, photographs of relevant sites, their significance in establishing chronologies is discussed in the class. Visits to museums is an important aspect through which students are made familiar with the material evidence.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

The Palaeolithic, Mesolithic and Neolithic cultural sequences in various parts of the Indian subcontinent.

UNIT-II:

(a) The background and the phenomenon of the Harappan civilization.
(b) The Chalcolithic cultures of western and southern India

UNIT-III:
The beginning of iron technology and the Painted Grey Ware Culture.

UNIT-IV :
Excavations of early historic cities of :
(a) Northern India and Gangetic doab : Taxila and Hastinapura.
(b) Eastern India : Sisupalgarh and Chandraketugarh.
(c) Southern India : Arikamedu and Brahmagiri.

Essential Readings :

1. Agrawal, D.P. : The Archaeology of India, Select Book Service Syndicate, New Delhi, 1984.
2. Allchin, B. and F.R. : The Rise of Civilization in India and Pakistan, Cambridge University Press, New Delhi, 1989.
3. Fagan, Brian M. : People of the Earth : An Introduction to Longman, Singapore, 2004.
4. Possehl, G. : Ancient Cities of the Indus, Vikas Publishers, New Delhi, 1979.
5. Ratnagar, S. : Understanding Harappa, Tulika, New Delhi, 2001.

Suggested Readings :

1. Roy, T.N. : The Ganges Civilization a critical archaeological study of the painted grey ware and northern black polished ware periods of the ganga plains of India, Ramanand Vidya Bhawan, New Delhi, 1983.
2. Tripathi, V. : The Painted Grey Ware An Iron Age Culture of Northern India Concept, Publisher Corporation, Delhi, 1976.

Paper VI: SPREAD OF INDIAN CULTURE IN CENTRAL ASIA, CHINA AND TIBET

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

1. The primary aim of this paper is to make the students study the spread of Indian culture and ideas in Central Asia, China and Tibet, generally termed in history as 'Greater India'. This forms an important phase of India's contribution to the world culture.

2. **Pedagogy of the Course Work :**
It is expected to acquaint the students with the background of Indian culture's spread and the factors responsible for it. While outlining the spread of Indian culture and religion, the spread of art, architecture and literature should also be taken care of. Visual aids wherever required should be used to familiarize students with Indian art and its influence in these countries.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

Spread of Indian Culture in the Central Asian States.

UNIT-II:

Introduction of Buddhism in China and the early contacts.

UNIT-III:

Chinese pilgrims in India – Fahien, Hiuen Tsang and I-Tsing.

UNIT-IV:

(a) Spread of Buddhism in Tibet up to 12th century A.D. with special reference to the missions of Padma Sambhava.
(b) Lamaism.

Essential Readings :

1. Bagchi, P.C. : *India and Central Asia,* National Council of Education Bengal, Calcutta, 1984.
2. Bapat, P.V. : *2500 Years of Buddhism,* South Asian Books, New Delhi, 1977.
3. Dougles, R : *China (The Story of the Nation),* Hesperidis, London, 1900, 2006.
4. Elliot, C. : *Hinduism and Buddhism,* Vols. II and III, Routledge, London, 1962.
5. Puri, B.N. : *Buddhism in Central Asia,* Motilal Banarsidass, Delhi, 1987.

Suggested Readings :

1. Upasak, C.S. : *History of Buddhism in Afghanistan,* Central Institute of Higher Tibetan Studies, Varanasi, 1990.
2. Waddell, A.L. : *Buddhism and Lamaism of Tibet* rpt., Vimar Publishing House, London, 1979.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – VI

Note : The students shall have to opt for one paper for Semester - VI examination out of the following two papers :

Outlines of Test :

Paper VII : Epigraphy and Numismatics

Paper VIII : Spread of Indian Culture in South-East Asia upto 12th Century A.D.

Paper-VII : EPIGRAPHY AND NUMISMATICS

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives :

The paper is aimed to prepare students to handle the original source material – inscriptions and coins, which make the backbone of Ancient Indian History, as without the knowledge of epigraphy and numismatics, the subject cannot be mastered.

Pedagogy of the CourseWork:

Students should be familiarized with the each topic in detail.Visual aids like the photographs/slides of the coins and inscriptions shall be used regularly. The decipherment of Asokan inscriptions shall be taught with the help of plates and paleographic charts to the students.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

(a) Origin and antiquity of writing in India with special reference to the origin of Brahmi script.

(b) Origin and antiquity of coinage in India.

UNIT-I

(a) Ashokan inscriptions – Pillar Edicts I to IV; Girnar Rock Edicts I, II and XIII. (Both for study and decipherment).

(b) Besnagar Pillar inscription of Heliodorus; Nasik Cave Inscription of Queen Balasri; Sarnath Buddha Image inscription of Kanishka's year 3; Junagarh Rock inscription of Rudradaman I, Saka year 72. (Study only). Gupta inscriptions—Allahabad Pillar inscription of Samudragupta, Mehrauli Iron Pillar inscription of Chandra, Bhitari Stone Pillar inscription of Skandagupta (Study only).

(c) Post-Gupta inscriptions : Mandasor Stone inscription of Malava Samvat 589, Banskhera Copper-plate of Harshavardhana, Pehowa inscription of Bhojadeva (Study only).

UNIT-III:

(a) Coins as source of ancient Indian history.

(b) Study of Punch marked coins.

UNIT-IV:

(a) Coins of the Kushanas.

(b) Coins of the Guptas.

Essential Readings :

1. Allan, John : *Catalogue of the Coins of Ancient India,* Trustees of the British Museum, London, 1967
2. Altekar, A.S. : *Coinage of the Gupta Empire,* Numismatic Society of India, Varanasi, 1957.
3. Buhler, G., : *Indian Paleography,* Munshiram Manoharlal, New Delhi, 2004
4. Dani, A.H., : *Indian Paleography*, Munshiram Manoharlal, New Delhi, 1997

Suggested Readings :

1. Gupta, P.L. : *Coins,* rpt. National Book Trust India, .New Delhi, 2006.
2. Hultzsh, E. : *Corpus Inscriptionum Indicarum,* Vol. I, rpt., Archaeological Survey of India, Delhi, 1991.

Paper-VIII : SPREAD OF INDIAN CULTURE IN SOUTH-EAST ASIA UPTO 12TH CENTURY A.D.

Total Marks :	100
Theory :	90
Internal Assessment:	10
Time :	3 Hours

Objectives:

This course enlightens the students about the spread of Indian culture in Burma, Indonesia, Combodia and Champa. In order to teach the students about the elements of Indian Culture, which made its impact felt in those countries, it is, therefore, necessary to discuss the political history, art, architecture and religion of those regions.

Pedagogy of the CourseWork:

The students are taught with the help of slides, photographs and maps. In addition to it, lectures, workshops, seminars, written assignments, class discussions and term papers are essential component of this course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

(a) Beginning of Indianisation in Burma.

(b) Art and Religion of Burma.

UNIT-II:

(a) Beginning of Indianisation in Indonesia.

(b) Study of Indo-Javanese Art.

UNIT-III:

(a) Beginning of Indianisation in Cambodia.

(b) Art of Cambodia.

UNIT-IV:

(a) Beginning of Indianisation in Champa.

(b) Study of Art and Archaeological remains of Champa.

Essential Readings :

1. Chatterji, B.R. : *Indian Cultural Influence in Cambodia,* University of Calcutta, Calcutta, 1933.
2. Coedes, C. : *The Making of South East Asia,* University of California Press, London, 1966
3. Coomaraswamy, A.K. : *History of Indian and Indonesian Art,* Kessinger Publishing, New Delhi, 1972.
4. Harrison, Brian, : *South East Asia, A Short History,* Macmillan Press, New York, 1966 .
5. Majumdar, R.C. : *Hindu Colonies in the Far East,* K.L. Mukhopadhaya, Calcutta, 1944.

Suggested Readings :

1. Majumdar, R.C. : *Suvarnadvipa, Ancient Indian Colonies in the Far East,* Modern Publication Syndicate, 1937.
2. Majumdar, R.C. : *Kambuja-Desa, or An Ancient Hindu Colony in Cambodia,* Lighting Source Incorporated, Madras, 1944.
3. Singhal, D.P. : *India and World Civilization,* Vols. I & II, Michigan State University Press, Calcutta, 1972.

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POLICE ADMINISTRATION

SEMESTER V

Semester V: Police Procedures and Investigation-I

(A) Course Objectives:

The course has been designed to impart students knowledge about the procedures followed and investigation done by the police after the incidence of crime. The students will be taught about the crime scene, its importance, inspection of crime scene and its preservation along with the investigation officer and his/ her role. Further the students would be made aware about investigation, interrogation and interview techniques with a focus on witnesses, women and juvenile offenders.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks)

(D) Course Content:

Unit-I

Investigating Officer: Power of observation and its importance in Investigation; and Qualities of investigating officer.

Unit-II

Crime Scene: importance of crime scene; inspection of crime scene; and preservation of crime scene.

Unit-III

Investigation; interrogation; and interviews.

Unit-IV

Examination of witnesses; interrogation of women accused; and interrogation of juvenile offenders.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 978.
5. International Association: Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, A.P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi,1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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POLICE ADMINISTRATION

SEMESTER VI

Semester VI: Police Procedures and Investigation-II

(A) Course Objectives:

The objective of this course is to introduce to the students about the use of scientific techniques in the field of investigation. After providing knowledge in death, types of death and bodily changes after death, the students would be imparted information on how to preserve finger prints, footprints, knowledge about handling of physical evidences, along with their packing and forwarding. In addition knowledge about the modern tools of investigation would also be provided.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Death; Types of death- death due to suffocation hanging, drowning, accident, suicide and murder. Bodily changes after death.

Unit-II

Preservation of finger prints, footprints, and blood at the scene of crime.

Unit-III

Physical evidence, handling packing and forwarding of physical evidence, and types of opinion to be obtained from physical evidence.

Unit-IV

Photography and its importance in police work; Polygraph; Brain mapping; and Narco Analysis.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 1978.
5. International Association : Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA, 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, P.H. Publishing Corporation, New Delhi,1999.

Further Readings

1.	Singh, S.P.	:	Combating Bio- terrorism with SpeciaL Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2.	Dutta, K.K.	:	Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3.	Ghosh, S.K. and Rustamji, K.F.	:	Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4.	Vadackumchery, James	:	Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5.	Vadackumchery, James	:	Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6.	Sharma, R	:	Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

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MUSIC (VOCAL AND INSTRUMENTAL)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper:-(Theory)

Total Marks	: 50
Theory	: 45 Marks
Internal Assessment	: 05Marks
Time	: 3 Hours

Note: There will be 10 questions in all and a student will attempt five questions choosing at least one from each unit.

UNIT-I

1. Definition with full explanation of the following :-

   Sthai, Antra, Khataka, Badhat, Jod-Alap, Lag Daat, Jugalbandi, Layakaries (Adi, Kaudi, Biadi)

2. Establishment of Swaras.

UNIT–II

1. Definition of Aesthetics in context of Indian Music
2. Rasa Sidhanta of Bharat

UNIT–III

1. Essay- Sangeet Sammelan
2. Knowledge of good qualities of a music performer (Vocalist or an Instrumentalist)
3. Elementary Knowledge of Harmonium,Tabla,Sitar

UNIT-IV

1. Description of Detailed & Non-detailed Ragas:-

   1. Detailed Raga :-
      `i) Marwa (ii) Purvi

   2. Non-detailed Raga: -
      (i) Sohni (ii) Purch

   3. Talas:- Tivra, Sultal

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.

Paper B: Practical (Choice & Viva) **:** 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) One Dhamar 2.5 marks

(c) Lokgeet, Lokdhun 2.5 marks

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Marwa
(ii) P u r v i

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Sohni
(ii) Pardi

(c) Talas : Tivara, Sultal on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas.

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single .

(iv) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1.	Sangeetanjali	:	Pt. Onkar Nath Thakur
2.	Abhinav Geetanjali	:	Pt. Ramashray Jha
3.	Saras Sangeet	:	Pradeep Kumar Dixit
4.	Aakashvani Evam Hindustani Shastriya Sangeet	:	Dr. Suchismita
5.	Sangeet Visharad	:	Basant
6.	Raag Parichay	:	Harish Chandra Srivastav
7.	Sangeet swarit	:	Dr. Ramanand Dwivedi
8.	Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand

MUSIC (VOCAL AND INSTRUMENTAL)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper-:-Theory

Total Marks	: 50
Theory	: 45 Marks
Internal Assessment	: 05Marks
Time	: 3 Hours

UNIT – I

1. Definition with full explanation of the following :-
   Kalavant,Vaggeykar, Swarsthan Niyam

UNIT-II

1. Essays:- i Role of Music in National Integration
   ii Lok Sangeet
   iii Music Appreciation

UNIT-III

1. Impact of Western Music on Indian Music
2. Study of Western Instruments:- Guitar, Keyboard, Octopad
3. Study of Dakshini Music System of the following:-
   i Swara
   ii Raga
   iii Tala

UNIT-IV

1. Description of Detailed & Non-detailed Ragas: -

   1. Detailed Raga: - (i) Patdeep
      (ii) Megh Malhar
   2. Non-detailed Ragas: - (i) Bhimpalasi
      (ii) Madhmad Sarang
   3. Talas:- Tilwada, Adachautal

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper B: Practical (Choice & Viva) 45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a)	Choice (Solo performance)	:	22.5 Marks
(b)	Practical Test	:	22.5 Marks
	(i) Tuning	:	5 Marks
	(ii) Capacity to play Talas on Tabla	:	2.5 Marks
	(iii) Capacity to play Harmonium	:	2.5 Marks
	(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

(i)	A Vilambit Khayal	:	7.5 marks
(ii)	A Drut Khayal	:	5 marks

OR

(i)	A Vilambit Gat	:	7.5 marks
(ii)	A Drut Gat	:	5 marks

(b) Tarana or one Fast Gat in Ektal 2.5 marks

(c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun

(a) Ability to write notation of the Vilambit and Drut Gat of Ragas prescribed in the course:-
Patdeep, Megh Malhar

Part-B: (VIVA)

(a) List of Detailed Ragas:
(i) Patdeep
(ii) Megh Malhar

(b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Bhimpalasi
(ii) Bahar

(c) Talas : Tilwada, Adachartala on Tabla.

(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

(d) Geet Ghazal

(ii) Two fast khayals or two fast gats with elaboration in each of the prescribed Ragas. 2.5 marks

(iii) Tuning of your instrument. 2.5 marks

(v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks

(vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

1. Bhatkhande Sangeet Shastra	:	Pt. Bhatkhande
2. Abhinav Geetanjali	:	Pt. Ramashray Jth
3. Sangeetanjali	:	Pt. Onkar Nath Thakur
4. Raag Parichay	:	Harishchandra Srivastav
5. Sangeet Visharad	:	Basant
6. Sawars Sangeet	:	Pradeep Kumar Dixit
7. Sangeet Swarit	:	Dr. Ramanand Dwivedi
8. Sangeet Prabodhika	:	Dr. Parmanand Bansal Dr. Gyan Chand
9. Art Education	:	Janardan Prasad

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HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Third year (SEMESTER SYSTEM) has been **KEPT IN ABEYANCE.**

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PHYSICS

B.Sc. (HONOURS) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2020-2021

SEMESTER-V

Paper V: Physics of Semiconductors

Unit I

Crystal Properties and Growth of Semiconductors: Semiconductor materials, Crystal lattices, Ge and Si crystal structure, production of electronic grade Si, Bulk crystal growth, Epitaxial growth.

Bonding forces and energy bands in solids, Metals, semiconductors and insulators, Direct and Indirect semiconductors, intrinsic and extrinsic semiconductors, compensation, Electrons and holes, effective mass, Fermi level, Conductivity and mobility, temperature dependence of Carrier concentration, effect of temperature, doping and field on mobility, Hall effect, Invariance of Fermi level at equilibrium.

Excess carriers in semiconductors: Optical absorption, Photoluminescence, Electroluminescence, Carrier lifetime and photoconductivity, photoconductive devices.

Unit II

Diffusion and drift of carriers: Einstein relation, built-in fields in semiconductors with different doping profiles, energy band diagrams. Steady state carrier injection, diffusion length, Haynes-Shockley experiment (qualitative discussion).

pn junction energy band diagrams, forward and reverse-biased junction, calculation of contact potential and depletion width in abrupt junction, diffusion and drift currents, Reverse-bias breakdown, Zener and Avalanche diode. Diffusion and depletion capacitance of pn junction, varactors.

Metal-semiconductor contacts, energy band diagrams of ohmic and rectifying contacts, Schottky diodes.

Recommended Books:

1. Solid State Electronic Devices: Ben Streetman, Sanjay Banerjee (Prentice Hall India, 2005).

Paper VI: Computational Physics

Note : The Computational Physics paper will consist of two parts (a) written examination of one hour duration and (b) Practical examination of two hours duration. Both the parts carry equal marks.

Unit I

C Programming Language

Types of Computer Systems and Operating Systems.
Introduction to Programming : Algorithms, Structured Programming. Basic idea of Compilers.
Data and Statements : Data Types. Constants and Variables. Mathematical, Relational, Logical and Bitwise Operators. Expressions and Statements. Block, Local and Global variables. Auto, Static and External Variables.
I/O Statements : printf, scanf, getc, getch, getchar, getche, etc.
Manipulators for Data Formatting: setw, width, endl and setprecision etc. ASCII Files I/O.
Preprocessor : #include and #define directives.
Control Statements :- If-statement. If-else Statement. Nested if Structure. Else-if Statement.
Ternary Operator. Goto Statement. Switch Statement. Unconditional and Conditional
Looping. While Loop. Do-while Loop. For Loop. Break and Continue Statements. Nested
Loops.
Arrays and Structures :- One and Two Dimensional Arrays. Idea of Structures, Strings and Pointers
Functions : Standard Library Functions and User-defined Functions.
Functions returning Values. Function Prototypes. Function Call by Value and by Reference.
Recursion.

Unit II

Design of algorithm and computer programs based on the numerical techniques read in Paper III "Statistics and Numerical Techniques".
Programs : (a) Data handling: find standard deviation, mean, variance, moments etc., (b) the least squared fitted curve for a data set, (c) roots of quadratic equations, (d) first order derivative at given x for a data set using Lagrange interpolation, (e) numerical integration on 1-D function using Simpson methods, (f) solving a differential equation using Euler/Runge-Kutta method, (g) Sum, Difference and Product of Matrices, (h) determinant of a matrix - its eigenvalues and eigenvectors.(h)Plotting and evaluation of mathematical functions.

Recommended Books:

1. Schaum's Outline of Programming with C, Byron Gottfried, McGraw-Hill.
2. Computer Programming in C, V. Rajaraman (Prentice Hall of India Pvt. Ltd.) (2006)
3. Computer Applications in Physics: S. Chandra (Narosa) (2008).
4. Computational Physics: R.C.Verma, P.K. Ahluwalia and K.C. Sharma (New Age) (2005).

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PHYSICS
SEMESTER-VI

Paper VII: Nuclear Radiations and Detection

Unit I

Radiation Sources:

Radioactive decays: Alpha decay, β^-, $\beta+$ and EC decays, Radioactivity units, gamma rays, Internal conversion, X-rays, Auger electron, Bremesstrahlung, Annhilation radiation.
Neutron sources- fission, radioisotope based sources and photoneutron sources, Accelerator based sources.
Radiation Interactions : Interaction of light and heavy Charged Particles, Stopping power, energy and range straggling.
Interaction of Fast Electrons - ionsation and radiative loss, backscattering.
Interaction of Gamma rays, photoelectric absorption, Compton scattering and pair production. Attenuation coefficient.
Interaction of Neutrons, Slowing down power, thermal neutrons.
Sources of Background: Natural radioactivity, Air borne radioactivity, Primary and secondary Cosmic rays.

Unit II

General Properties of Radiation Detectors: Modes of detector operation, Current mode, pulse mode, Pulse Height Spectra, Energy Resolution, Detection Efficiency, Dead Time-paralyzable and non-paralyzable models.
Radiation Detectors:
Ionization process in gases, Ion pair formation, fano factor, diffusion, charge transfer and recombination, Charge Migration and Collection.
Gas-filled detectors: Gas Multiplication, avalanche formation, Regions of detector operation.
Proportional Counters, fill gases and choice of geometry.
Geiger-Mueller counter, Fill Gases and Quenching mechanism, Recovery time and dead time, detection of charged particles, gamma and neutrons rays with G.M. counter.
Scintillation Detectors : Organic and Inorganic Scintillators; Characteristics and parameters associated with Gamma ray spectrum
Semiconductor detectors.
Detection of slow and fast neutrons by neutron-induced reactions.

Recommended Books:

1. Radiation detection and measurement: G.F. Knoll (Wiley, New York) (2000).

Paper VIII: Physics Practical

Note : The students are expected to perform any 6 experiments taking at least 3 from each section.

Unit I

1. Measurement of vacuum using the pirani/thermocouple gauge made using electric bulb filament.
2. To study Poisson and Gaussian distributions using a GM Counter.
3. To study absorption of gamma rays in Pb and Fe absorbers.
4. Strength of Alpha source using Solid state nuclear track detector.
5. To study regulated power supply and voltage multiplier circuits (using breadboard).

Unit II

6. To design an Astable multivibrator of given specifications using 555 Timer IC.
7. To design a monostable multivibrator of given specifications using 555 Timer IC and to measure the pulse-width of its output.
8. To study logic gates and clocked JK Master-Slave flip flops using IC's.
9. Study of photon intensity variation through crossed polariods and diffraction spectrum from diffraction grating using LDR/Photodiode.
10. To measure resistivity of semiconductor at different temperatures using four probe method and the deduce band gap of the semiconductor.

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CHEMISTRY

B.Sc. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2020

SEMESTER- V

Outlines of Tests

				Marks	
			Lecture Hours	*Theory*	*Internal Assessment*
Paper V	:	Inorganic Chemistry-A	20	45	05
Paper VI	:	Physical Chemistry-A	20	45	05

Paper V: INORGANIC CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Inorganic Chains: (5 lectures)

(a) Chains : Catenation including heterocatenation, silicate minerals, intercalation, One dimensional sulphur-nitrogen conductor.

Unit II

Inorganic Rings and Cages : (5 lectures)

(a) Rings : Borazines, phosphazenes and phosphazene polymers.

(b) Cages : Simple cage molecules; Phosphorus–oxygen and phosphorus-sulphur cages; introduction to carboranes and metallocarboranes

Unit III

Organometallics-I : (5 lectures)

Formation and reactions (i) carbonylate ions (ii) metal-carbonyl hydrides & (iii) metal carbonyl halides.

Unit IV

Organometallics-II : (5 lectures)

Transition metal-carbon multiple bonds : Chemistry of :

Alkylidene Complexes.

Alkylidyne complexes including bridged molecules.

Metallocumulenes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***All questions carry equal marks.***

Suggested Books:

1. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
2. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
3. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
4. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VI: PHYSICAL CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Transport Properties-I *:* (5 Lectures)

Recapitulation of Collision Properties of gases such as collision cross section, collision diameter, collision number, collision frequency and mean free path.
Meaning of transport, Properties of gases, Flux, General equation of transport. Thermal conductivity, kinetic theory of thermal conductivity (derivation of the expression).

Unit-II

Transport Properties-II *:* (5 Lectures)

Viscosity of gases, kinetic theory of gas viscosity, (derivation of the expression). Measurement of gas viscosity, Diffusion Coefficient. Kinetic theory of diffusion in gases. (derivation of the expression).
Diffusion in liquids, theory of diffusion in liquids, diffusion in solutions, laws of diffusion.

Unit-III

Dynamic Electro-Chemistry : (5 Lectures)

Processes at electrodes. The electric double layer (Gouy-Chapman, Helmholtz and Stern models-qualitative ideas. The potential difference, Rate of charge transfer, Bulter Volmer equation, Tafel plot, Overpotential Polarisation, Polarography, Fuel cells, Corrosion, Inhibition of Corrosion.

Unit-IV

Surface Chemistry : (5 Lectures)

Interfacial region, types of interfaces, surface tension, thermodynamics of surfaces, plane interface, curved surfaces, Laplace and Kelvin equations including their derivation.
Gibbs Adsorption Equation and its Thermodynamic derivation, Wetting and adhesion in solid-liquid systems, contact angle, Capillary rise and surface tension. Surface Films on liquids.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. All questions carry equal marks.

Suggested Books:

1. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
3. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
4. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
5. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
6. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

CHEMISTRY

SEMESTER VI

Outlines of Tests

			Lecture Hours	*Marks*	
				Theory	*Internal Assessment*
PaperVII	:	Inorganic Chemistry -B	20	45	05
PaperVIII	:	Physical Chemistry -B	20	45	05

Paper VII: INORGANIC CHEMISTRY-B

Total Marks : 50

Theory : 45

Internal Assessment : 5

Total Lectures : 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

(5lectures)

Complexes of aromatic systems with transition metals. M.O. description of bonding in Ferrocene.

Study of coordinative unsaturation, oxidative addition,

Unit-II (5 Lectures)

Insertion reactions in Organometallics.

Phenomenon of Fluxionality in Organometallics and its characterization.

Unit-III

Reaction Mechanism : (5 lectures)

Nature and classification of lignad substitution reactions, application of V.B. & C.F. theories to predict the substitution reactions. Mechanism of ligand replacement reactions, substitution in octahedral complexes acid hydrolysis, base hydrolysis, acid-catalysed, acid hydrolysis and acid hydrolysis for chelates.

Unit-IV (5 lectures)

Substitution in square planar complexes. The trans-effect & its Synthetic applications, M.O. theories and trans-effects. Electron transfer reactions & their mechanism. Molecular rearrangements, mechanistic pathways of substitution.

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

5. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
6. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
7. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
8. Huyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VIII: PHYSICAL CHEMISTRY-B

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Colloids-I : (5 Lectures)

The colloidal state; preparation of colloidal solutions, Methods of purification of colloidal systems, dialysis, electro-dialysis, filtration, Ultra-filtration. Classification of colloidal systems, their typical properties with special reference to optical properties (Tyndall effect).

Unit-II

Colloids-II : (5 Lectures)

The Brownian movement. Electrokinetic phenomena, Stabilization of colloidal systems and theories of stability; zeta potential, Coagulation, Flocculation of colloids by electrolytes and its mechanism. Association Colloids, Micellar system, Emulsions and their types, HLB value of emulsifiers, Introduction to microemulsions.

Unit-III

Quantum Chemistry-I : (5 Lectures)

ATOMS : Schrodinger equation for multi-electron atoms, Need for approximate Solutions. Basic ideas of the Variation theorem and the Perturbation methods. Self-Consistent Field methods (Hertree and Hertree-Fock)- Elementary treatment only. Indistinguishability of Electrons. Pauli exclusion principle, two electron spin functions; Slater determinants and Pauli principle. New Atomic term symbols. Spin-orbit coupling (Total orbital momentum, multiplicity, total angular momentum) vector model of atom, Hund's rules, atomic spectra and Selection rules.

Unit-IV

Quantum Chemistry-II : (5 Lectures)

Molecules :

Schrodinger equation for molecules, Born-Oppenheimer approximation.Valence bond theory and Molecular Orbital theory as two approaches for approximate solution of Schrodinger equation LCAO-MO treatments of H_2 and Valence bond treatment of H_2 (complete solutions not required. Only wave functions to be discussed) Comparison of MO and VB treatments. Brief Introduction to the electronic structure for polyatomic molecules. Metals, Insulators and Semiconductors. Band Theory of Solids (elementary discussion).

Instructions for paper setters and candidates:

iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
vi. *All questions carry equal marks.*

Suggested Books:

7. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
8. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
9. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
10. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
11. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
12. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

BOTANY

B.Sc. (Honours) Botany Fifth and Sixth Semester Syllabus

(Examination 2020-2021)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A:	Biology of Cryptogams and Seed Plants	3 hrs.	36	4	40
Theory Paper-B:	Genetics, Plant Breeding, Biochemistry, Molecular Biology and Biotechnology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs	18	2	20
Sixth Semester					
Theory Paper- A:	Microbiology and Plant Pathology	3 hrs.	36	4	40
Theory Paper-B:	Systematics of Angiosperms and Environmental Biology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	2	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY

B.Sc. (Honours) Fifth Semester (Examination December, 2020)

PAPER-A: BIOLOGY OF CRYPTOGAMS AND SEED PLANTS

Max. Marks : 40
Theory : 36
Internal Assessment : 04

Objective : The basic objective of this paper is to make the students understand the diversity in various life forms of plant kingdom. It provides knowledge about evolution of simpler forms to complex ones along with their morphology, anatomy and reproduction.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
BIOLOGY OF CRYPTOGAMS

Algae: Occurrence and distribution; thallus organization and evolutionary tendencies; ultrastructure of algal cell; criteria for classification, structure and life history of *Oedogonium* (Chlorophyceae), *Vaucheria* (Xanthophyceae), *Ectocarpus* (phaeophyceae), *Batrachospermum* (Rhodophyceae) and economic importance of algae.

Fungi: Occurrence and distribution; ultrastructure of fungal cell, cell wall composition, modern concepts in the classification of fungi; nutrition, reproduction, structure and life history of *Rhizopus* (Zygomycetes), *Peziza*, *Saccharomyces* (Ascomycetes), *Alternaria* (Deuteromycetes), *Agaricus* (Basidiomycetes); types of fungal spores and mode of their liberation and economic importance of fungi.

UNIT-II

Bryophytes: Comparative account of morphology, anatomy and reproduction in *Riccia, Marchantia, Anthoceros, Funaria*; evolution of sporophyte and gametophyte; classification, ecological aspects and economic importance.

Pteridophytes: The primary vascular plants; classification, comparative account of morphology, anatomy and reproduction in *Rhynia, Lycopodium, Selaginella, Equisetum, Marsilea, Pteris*; Telome theory; stelar evolution; heterospory and seed habit.

UNIT-III
SEED PLANTS

Phanerogams, the seed bearing plants: General characteristics and types.

The Living Cycads: Distribution; vegetative organography and anatomy; reproductive cycle –sporophytes and sporangia, gametophytes, fertilization, embryogeny and seed development of *Cycas*.

The Coniferales: General organography and anatomy; foliage leaves; storbilli and sporangia; reproductive cycle– sporogenesis, gametophytes, fertilization, embryogeny and seed development of *Pinus*.

The Gnetales: Habit and distribution; vegetative organography and anatomy; reproductive cycle – the storbilli, sporogenesis, male and female gametophytes, pollination, fertilization and embryogeny of *Ephedra*.

UNIT-IV

Alternatives for Reproduction: Vegetative and sexual reproduction.

Flower: Evolution, concept of flower as a modified determinate shoot and functions of flower.

Structure of Anther : Microsporogenesis: formation of pollen grains (male gametophyte); pollen germination; pollen tube growth.

Structure of Pistil**:** Ovules; megasporogenesis; development of embryo sac (female gametophyte).

Mechanisms and Agencies of Pollination: Pollen-stigma interaction; self-incompatibility; double fertilization, apomixis.

Seed and Fruit: Development of endosperm and embryo in monocotyledons and dicotyledons; storage of reserve materials and desiccation in seeds; dormancy and seed germination; fruit maturation; ripening and dispersal.

Suggested Readings

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 4th revised and enlarged edition. Vikas Publishing House, Delhi, India, 2000.
2. Bold, H.C., Alexopoulos, C.J. and Delevoryas, T. Morphology of Plant and Fungi (4th Edition), Harper and Foul Co., New York, 1980.
3. Cronquist, A. The evolution and classification of flowering plants, Thomas Nelson (Printers) Ltd., London and Edinburgh, 1968.
4. Delevoryas, Th. Plant Diversification, Modern Biology Series. Halt, Rinehart and Winston, New York, 1965.
5. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
6. Dube, H.C. An Introduction to Fungi, Vikas Publishing House Pvt. Ltd., Delhi, India, 1990.
7. Foster, A.S. and Gifford, A.E.M., Jr. The Comparative Morphology of Vascular Plants, Vakils, Peffer and Simons Pvt. Ltd, 1967.
8. Gifford, E.M. and Foster, A.S. Morphology and Evolution of Vascular Plants, W.H. Freeman & Co., New York, 1989.

9. Gilbert, M.S. Cryptogamic Botany, Vol. I & II (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1985.
10. Johri, B.M. Embryology of Angiosperms, Springer-Verlag, Berlin, 1984.
11. Kumar, H.D. Introductory Phycology, Affiliated East-West Press Ltd., New York, 1988.
12. Puri, P. Brophytes, Atmaram & Sons, Delhi, India, 1985.
13. Raghvan, V. Molecular Embryology of Flowering Plants, Cambridge University Press, New York, 1997.
14. Rangaswamy, G. and Mahadevan, A. Diseases of Crop Plants in India, Prentice Hall India Pvt. Ltd. New Delhi, India, 1999.
15. Singh, V, Pande, P.C. and Jain, D.K. Diversity of Microbes and Cryptogams, Rastogi Publications, Meerut, India, 2008.
16. Sporne, K.R. The Morphology of Angiosperms. B.I. Publication, Bombay, India, 1977.
17. Srivastava, H.N. Diversity of Microbes & Cryptogams, Vol. I, Pradeep Publications, Jalandhar, India, 2014.
18. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol.III, Pradeep Publications, Jalandhar, India, 2014.
19. Wilson, N.S. and Rothwell, G.W. Palaeobotany and the Evolution of Plants (2nd Edition), Cambridge University Press, UK, 1993.

Suggested Laboratory Exercises (Biology of Cryptogams)

1. Comparative study of algal genera with reference to the classes mentioned in theory.
2. Comparative study of fungal genera with reference to the classes mentioned in theory.
3. Comparative study of morphology, anatomy and reproductive structures in *Riccia, Marchantia, Anthoceros* and *Funaria.*
4. Comparative study of different members of Pteridophytes mentioned in the theory syllabus.
5. Comparative anatomical structure of stem/wood of Cycadales, Coniferales, Ephedrales, Gnetales and angiosperms, from sections and macerations.
6. Comparative structure of the male and female cones of Cycads (*Cycas*), Conifers (*Pinus*) and Ephedrales (*Ephedra*).
7. Comparative structure of leaf, leaf appendages, venation and stomata of gymnosperms and angiosperms.
8. Diversity in pollen grain structure among Cycads, Conifers, Ephedrales and angiosperms with respect to size, exine sculpturing, germ spore number, number of constituent cells and any other features.
9. Microsporogenesis and male gametophyte development in angiosperms through microtome sectioning and acetocarmine squash technique.
10. Pollen grain germination by hanging-drop and sitting-drop techniques in *Impatiens*, *Catharanthus roseus* (= *Vinca rosea*) or any other suitable material.
11. Diversity in the structure of stigma, style, stigmatic papillae and transmitting tissue of style.

BOTANY

SEMESTER – V

PAPER-B: GENETICS AND PLANT BREEDING, BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Objective: The course work of this paper deals with basic concepts of genetics, plant breeding, molecular biology and biotechnology. It deals with various types of plant reproduction and methods of plant improvement. It provides knowledge of molecular and cellular basis that would enable the students to understand the hereditary and evolutionary trends in plants kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
GENETICS

Cell division - Mitosis and Meiosis.

Mendel's Experiments and Principles of Inheritance: Backcross and test cross; gene interactions and modified dihybrid ratios – complementary, supplementary, duplicate and epistatic factors.

Quantitative Genetics: Quantitative traits and quantitative genetics; the multiple factor hypothesis; descriptive statistics.

Linkage and Recombination: Coupling and repulsion phases; two and three point testcrosses with their significance in chromosome mapping; interference and co-efficient of coincidence.

Maternal Influence on Inheritance: Shell coiling in snails and Kappa particles in Paramecium; cytoplasmic inheritance in yeast (mitochondria) and Mirabilis jalapa (plastids).

Changes in Chromosome Structure: Origin, types and effects of duplications, deletions, inversions and translocations; meiosis in structural heterozygotes.

UNIT –II

PLANT BREEDING

Methods of Plant Improvement: Pure line and mass selection; hybridization in self and cross pollinated crops; introduction and acclimatization; hybrid vigour.

Alterations in the Genetic makeup – changes at Genetic Level: Spontaneous and induced mutations; mutagens – types and mode of action; transitions, Transversions and frame-shift mutations; detection of mutations.

Alterations in Genetic makeup – changes in Chromosome Number : Origin, types and effects of auto and allopolyploidy; origin and meiosis in nullisomics, monosomics and trisomics.

Mutations and polyploidy as methods of plant improvement.

UNIT-III

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Nucleic Acids: Composition of nucleic acids and synthesis of nucleotides; DNA structure; A,B and Z forms of DNA; denaturation and renaturation of DNA; chromatin structure; DNA replication and recombination; DNA polymerases; different forms of RNA and their role.

Amino Acid and Protein Metabolism: Structure, characteristics and classification of amino acids; protein and non-protein amino acids; amino acid biosynthesis; GS/GOGAT cycle; transamination; peptide bond and polypeptide chain; primary, secondary, tertiary and quaternary structure of proteins; protein biosynthesis and its regulation; post-translational modification of proteins; protein targeting; protein degradation.

Carbohydrate Metabolism: Classification; structure of some representatives examples of monosaccharides, disaccharides, polysaccharides; stereoisomers, enantiomers and epimers; biosynthesis and degradation of sucrose and starch.

Lipid Metabolism: Saturated and unsaturated fatty acids; fatty acid biosynthesis; oxidation of fatty acids; storage and mobilization of fatty acids and lipids.

UNIT-IV

BIOTECHNOLOGY

Gene Structure, Expression and Regulation: Gene organization in prokaryotes and eukaryotes; operon concept; gene regulation in prokaryotes and eukaryotes; inducible, repressible, positive and negative gene regulation; interrupted genes in eukaryotes; RNA splicing; mRNA stability.

Recombinant DNA Technology: Restriction endonucleases: prokaryotic and eukaryotic cloning vectors; genomic and cDNA libraries; southern and northern analysis; various techniques of gene mapping and DNA fingerprinting (RFLP, RAPD, AFLP); chromosome walking; polymerase chain reaction; DNA sequencing.

Plant Biotechnology: Cellular differentiation and totipotency; organogenesis and embryogenesis; protoplast isolation and culture; somatic hybridization; clonal propagation; genetic engineering of plants; vectors for gene delivery; selectable markers and reporter genes; methods of gene delivery; Agrobacterium – the natural genetic engineer; salient achievements in crop biotechnology (with suitable examples) and prospects.

Suggested Readings:

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. Molecular Biology of Cell, Garland Publishing Co., Inc., New York, USA, 1999.
2. Atherly, A.G., Girton, J.R. and McDonald. The Science of Genetics, Saunders College Publishing Co., Fort Worth, USA, 1999.
3. Bhatia, K.N. and Dhand, Neelam. Cell Biology and Genetics, Trueman Book Company, Jalandhar, India, 2013
4. Buchanan, B.B., Gruissem, W. and Jones, R.L. Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists, Maryland, USA, 2000.
5. Dennis, D.T., Turpin, D.H., Lefebvre, D.D. and Layzell, D.B. (eds). Plant Metabolism (2nd Edition), Longman, Essex, England, 1997.
6. Gardener, J., Simmons, H.J. and Snustad, D.P. Principles of Genetics (8th Edition), John Wiley & Sons, New York, 1991.
7. Gupta, P.K. Cytogenetics, Rastogi Publications. Shivaji Road, Meerut, India, 1995.
8. Gupta, P.K. Cytology, Genetics and Molecular Biology, Rastogi Publications. Shivaji Road, Meerut, India, 2009.
9. Gupta, P.K. Genetics, Rastogi Publications. Shivaji Road, Meerut, India, 1994.
10. Hartl, D.L. and Jones, E.W. Genetics: Principles and Analysis (4th Edition), Jones & Bartlett Publishers. Massachusetts, USA, 1998.
11. Lea, P.J. and Leegood, R.C. Plant Biochemistry and Molecular Biology (2nd Edition), John Wiley and Sons, Chichester, England, 1999.
12. Lodish, H., Berk, A., Zipursky, S.L., Matsudaira, P., Baltimore, D. and Darnell, J. Molecular Cell Biology (4th Edition), W.H. Freeman and Co., New York, U.S.A, 2000.
13. Old, R.W. and Primrose, S.B. Principles of Gene Manipulation, Blackwell Scientific Publications, Oxford, UK, 1989.
14. Poehlmann, J.M. and Sleeper, D.R. Breeding Field Crops, Panima Publishing House, New Delhi, India, 1995.
15. Russel, P.J. Genetics (5th Edition), The Benjamin/Cummings Publishing Co., Inc., USA, 1998.
16. Sharma, J.R. Principles and Practice of Plant Breeding, Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1994.
17. Simmonds, N.W. Principles of Crop Improvement, Longman, London and New York, 1979.
18. Snustad, D.P. and Simmons, M.J. Principles of Genetics (2nd Edition), John Wiley & Sons, Inc., USA, 2000.
19. Srivastava, H.N. Cell Biology and Genetics, Vol.II, Pradeep Publications, Jalandhar, India, 2006.
20. Srivastava, H.N. Plant Physiology, Biochemistry and Biotechnology, Vol.V, Pradeep Publications, Jalandhar, India, 2013.
21. Verma, P.S. and Agarwal, V.K. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company (Reprint, 2010).

Suggested Laboratory Exercises:

1. Determination of chromosome count from dividing pollen mother cells and root tips.
2. Preparation of karyotypes from dividing root tip cells and pollen grains.
3. Determination of intraspecific variation in chromosome number from locally available taxa.
4. Correlation of floral structure with pollination system (e.g. *Salvia*, *Sesamum*, pea, *Lathyrus*, wheat, rice, maize).
5. Field exploration for detection of male sterile plants and estimation of their pollen fertility in locally grown crop plants e.g. *Sorghum*, tomato and *Linum*.
6. Estimation of pollen ovule ratio and its bearing on pollination system.
7. Emasculation and bagging of flowers of Brassicaceae, Poaceae, Papilionaceae, Malvaceae and Linaceae, pollinating them manually and estimating fruit and seed set.
8. Chemical tests to demonstrate the presence of starch, sugar, fat and protein in plant material.
9. To identify the amino acids in a mixture by resolving through paper chromatography or TLC.
10. To prepare the standard curve for protein and determine the protein content in unknown samples by Biuret method.
11. Colorimetric estimation of RNA using orcinol.
12. Colorimetric estimation of DNA using diphenyl amine.
13. Isolation of plant genomic DNA and its spooling.
14. Isolation of total RNA from plant tissue and its colorimetric estimation.
15. Preparation of tissue culture media, sterilization and inoculation of plant material.
16. Demonstration of techniques of in vitro culture of various explants.
17. Isolation of plant protoplasts (e.g. Tobacco, *Petunia*) using enzymes available commercially and estimation of their yield.

Note: In the practical classes, emphasis should be given on basic principles of spectro-photometry, chromatography, electrophoresis and rDNA technology and related fundamentals.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1 Identify classify & write illustrated morphological note on specimens A & B (unit I – III of paper A) 4
Q.2 Demonstrate and perform the experiment C (Biochemistry/Biotechnology) and show it to the examiner. 5
Q.3. Identify slides D & E giving at least two reasons for each. 4
Q.4 Practical note book 2
Q.5 Viva-Voce 3

BOTANY

B.Sc. (Honours) Sixth Semester (Examination May, 2021)

PAPER-A: MICROBIOLOGY AND PLANT PATHOLOGY

Objectives: The basic objective of this paper is to make students familiar with the systematic position of microorganisms, their ultrastructure, classification and industrial application. It also deals with the important aspects of plant diseases, their pathogens and disease management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I
(MICROBIOLOGY)

General account of Microorganisms and their characteristics features.

Ultrastructure of Microorganisms: Prokaryotic microorganisms; fine structure of prokaryotic cell; eukaryotic microorganisms; viruses – properties and classification; characteristic features of host-virus interaction; bacteriophage T4; tobacco mosaic virus; general account of mycoplasma and actinomycetes.

Industrial Application of Microorganisms: Organic acids, alcohol, food processing, milk products, antibiotics and biopesticides.

UNIT-II

Genetic Recombination in Prokaryotes: Conjugation, transformation and transduction.

Role of Microorganisms in biogeochemical cycling of nitrogen and carbon; Biological N_2 fixation.

UNIT-III

(PLANT PATHOLOGY)

Major Diseases of Plants, their symptoms and Control : Blast and brown spot of rice, rust and smuts of wheat, downy mildew and green ear disease of bajra, white rust of crucifers, late blight of potato, wilt of pigeon pea, damping off seedlings of tomato/mustard/chillies, Tikka or leaf spot of groundnut, citrus die back, powdery mildews of cucurbits and grapes, red rot of sugarcane.

Plant Disease Management: Chemical, biological; IPM systems; development of transgenics; biopesticides; plant disease clinics.

UNIT-IV

Pathogen Attack and Defense Mechanisms: Physical, physiological, biochemical and molecular aspects.

Plant Disease Epidemiology: Transmission and spread of plant pathogens; disease cycles, epidemics; modeling and disease forecasting.

Suggested Readings:

1. Agrios, G.N. Plant Pathology, Academic Press, London, 1997.
2. Albajes, R. Gullino, M.L., Van Lenteren, J.C. and Elad, Y. Integrated Pest and Disease Management in Green house crops, Kluwer Academic Publishers, 2000.
3. Bridge, P. et al. Molecular Variability of Fungal Pathogens, CAB International, UK, 1998.
4. Bridge, P. et al. Application of PCR in Mycology, CAB International, UK, 1999.
5. Bridge, P., Moore, D.R. and Scott, P.R. Informational Technology, Plant Pathology and Biodiversity, CAB International, UK, 1998.
6. Clifton, A. Introduction to the Bacteria, McGraw Hill Co., New York, 1958.
7. Mandahar, C.L. Introduction to Plant Viruses, Chand & Co. Ltd., Delhi, India,1998.
8. Persley, G.J. Biotechnologies and Integrated Pest Management, CAB International, UK, 1996.
9. Skerritt, J.H. and Apples, R. New Diagnostics in Crop Sciences, CAB International, UK, 1995.

Suggested Laboratory Exercises

1. Calibration of microscope: determination of dimensions of microorganisms (suggested model organisms: yeast, lactobacilli, cyanobacteria).
2. Cultivation media for autotrophic and heterotrophic microorganisms (cleaning of glasswares, mineral media, complex media, solid media, sterilization).
3. Isolation of microorganisms: streaking on agar plates/pour plate method, isolation of clones, preservation.
4. Preparation of Winogradsky column using pond bottom mud, observations on temporal sequence of appearance of microbes. (visual appearance, microscopic observations)
5. Observation on virus infected plants (symptoms).
6. Fermentation by yeast (inverted tube method, use of different substrates, e.g. glucose, fructose, cane sugar, starch)
7. Study of histopathology of various plant diseases included in theory.
8. Isolation and culture of plant pathogens (e.g. *Colletotrichum, Fusarium, Alternaria*) and establishment of Koch's postulates and their pathogenicity.
9. Study on antagonism between isolated antagonists and plant pathogens and test of biological control.
10. Demonstration of the assay of prohibitins (phytoalexins).
11. Demonstration of biopesticides (essential oils, neem, turmeric and garlic) against some pathogens.

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BOTANY

SEMESTER – VI

PAPER-B: SYSTEMATICS OF ANGIOSPERMS AND ENVIRONMENTAL BIOLOGY

Objective: This paper deals with taxonomy and species concept of plants. It provides a knowledge about identification, nomenclature and classification which forms the basis of future research work. It also deals with inter-relations of plants and environment as well as various environmental problems, role of national and international organization in environmental management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

ANGIOSPERM SYSTEMATICS

Introduction : Aims and components of systematics, introduction to identification, nomenclature, phylogeny and classification.

Systematics in Practice: Importance of herbarium specimens and their preparation; role of herbaria and botanical gardens; documentation (floras, monographs, manuals, journals, abstracts, indices and dictionaries); keys for identification of plants.

Taxonomic Hierarchy: Taxonomic category, taxonomic groups; concepts of species, genus and family.

Botanical Nomenclature: Principles and rules; ranks and names; type method; principle of priority and its limitations; names of hybrids and cultivars; concept of biocode.

UNIT-II

General characters of Angiosperms.

Systems of Classification: Bentham and Hooker's system. Engler and Prantl's system and Takhtajan's system.

Modern Taxonomy: Supporting evidences/inputs for taxonomy; taxonomy in relation to anatomy, embryology, palynology, ecology, cytology (cytotaxonomy), secondary metabolites in plants (chemotaxonomy).

A brief account of following families: Ranunculaceae, Brassicaceae, Rutaceae, Fabaceae, Cucurbitaceae, Apiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

UNIT-III

ENVIRONMENTAL BIOLOGY

Introduction: Inter-relationship between the living world and the environment; the components and dynamism; homeostasis; relevance to man.

Earth as a System: The biosphere, the hydrosphere, the atmosphere and the lithosphere; components within biosphere (Biomes); parameters delimiting individual biomes.

The Environment: Soil, water and atmosphere – general account and adaptations.

Organismal Ecology/Biotic components: Individuals, species, population communities and their characteristics.

Ecosystems: Concepts of ecosystem; homeostasis; structure of ecosystem; functions of ecosystem; transfer of energy and minerals via grazing and detritus chains and role of micro-organisms; cycles (hydrologic, gaseous); role of humans in maintaining biogeochemical cycles.
Diversity of Ecosystem: Aquatic (fresh water); terrestrial (forest/grassland); man-made ecosystems.

UNIT-IV

Human Ecology and Ecological Management: The human population; renewable and non-renewable natural resources and their management; conservation of biodiversity; endangered species; conventional and non-conventional energy sources.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Suggested Readings

1. Barbour, M.G., Burk, J.H. and Pitts, W.D. Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.
2. Bhojwani, S.S. Plant Tissue Culture: Applications and Limitations, Elsevier Science Publishers, New York, USA, 1990.
3. Collins, H.A., and Edwards, S. Plant Cell Culture, Bios Scientific Publishers, Oxford, UK, 1998.
4. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
5. Hill, M.K. Understanding Environmental Pollution, Cambridge University Press, 1997.
6. Kormondy, E.J. Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, India, 1996.
7. Mackenzie, A. et al. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, India, 1999.
8. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.
9. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.
10. Odum, E.P. Basic Ecology. Saunders, Philadelphia, 1983.
11. Raghavan, V. Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, New York, USA, 1986.
12. Smith R.K. Ecology and Field Biology. Harper Collins, New York, 1996.

13. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol. III, Pradeep Publications, Jalandhar, India, 2014.
14. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture, Kluwer Academic Publishers, The Netherlands, 1994.

Suggested laboratory Exercises

Description of the following flowers belonging to the various families included in theory syllabus:

1. Ranunculaceae : *Ranunculus, Delphinium*
2. Brassicaceae : *Brassica, Iberis*
3. Rutaceae: *Citrus, Murraya*
4. Fabaceae: *Lathyrus, Cassia, Mimosa* and *Acacia*
5. Cucurbitaceae: *Luffa*
6. Apiaceae; *Coriandrum*
7. Asteraceae: *Helianthus, Ageratum, Sonchus.*
8. Asclepiadaceae: *Calotropis.*
9. Solanaceae: *Solanum, Petunia*
10. Lamiaceae: *Ocimum, Salvia*
11. Chenopodiaceae: *Chenopodium*
12. Euphorbiaceae: *Euphorbia, Phyllanthus*
13. Liliaceae: *Asphodelus, Asparagus*
14. Poaceae: *Avena, Triticum.*

Suggested laboratory Exercises (Environmental Biology)

1. Mechanical analysis of soils by sieve method
2. Determination of water holding capacity and field capacity of soil.
3. Determination of permeability (capillarity and percolation) of different types of soils.
4. Determination of species area curve by minimal quadrat size.
5. Analysis of the herbaceous vegetation for frequency, density and abundance.
6. Effect of tree canopy on the distribution of herbaceous vegetation.
7. Field visit: students should be taken for field visits to places of ecological/environmental interest. They should submit detailed report of the visit in the form of project report in the final practical examination for evaluation. The report shall carry marks.

Note to teachers:

The students are to be familiarized with the families listed above in the practical classes with representative's species or any other that may be available locally. However, questions pertaining to these may be asked in the theory examinations.

Guidelines for Botany Practical Examination:

Max Marks	**:**	**20**
Practical	**:**	**18**
Int. Assessment	**:**	**2**
Time	**:**	**3 hrs.**

Q.1	Describe specimen A in technical terms & proper sequence. Draw F.D and V.S of the flower. Cut T.S of ovary and V.S of the flower and show it to the examiner. Write its F.F. as well.	6
Q.2	Identify specimen B and write Histopathological note on it.	3
Q.3.	Identify slides C by giving at least two reasons.	2
Q.4	Field Diary	2
Q.5	Practical note book	2
Q.6	Viva-Voce	3

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ZOOLOGY

SEMESTER – V

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

PAPER II: AQUATIC BIOLOGY-I

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Structure and functions of testis, epididymis, vas deferens.

UNIT –II

Seminal vesicle and prostate gland.
Semen composition, sperm maturation and capacatation.

UNIT -III

Structure and functions of ovary, oviduct, uterus and vagina.

UNIT -IV

Oestrous and menstural cycles.
Fertilization, implantation, gestation, parturition and lactation.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Greep, R.O. & Astwood, E.B.,(Eds), Handbook of Physiology, Kluwer Academic/ Plenum Publishers, New York, 2002.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Physico-chemical characteristics of marine environment

UNIT -II

Zonation in marine habitat : Pelagic and benthic zone and their flora and fauna.

UNIT -III

Freshwater zonation in a lake and stream : Supralittoral, littoral, sublittoral, profundal & limnetic zones of a lake. Pool zone and rapid zone of a stream.

UNIT -IV

Classification of freshwater habitats : Streams ponds, lakes, marshes and swamps.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Jhingran, V.G., Fish & Fisheries of India, Hindustan Publications Corporation, Delhi, 1991.

PRACTICALS

Practical based on both theory papers I & II :

I. Demonstration of male and female reproductive systems and their associated glands in rat/rabbit through charts.
II. Histology of testis, epididymis, vas deferens, prostate, seminal vesicle, ovary, uterus and vagina through permanent slides..
III. Study of permanent slides of the vaginal smear of human menstrual cycle and rat/mice oestrous cycle.
IV. Determination of the different phases of the oestrous cycle in living rat through permanent slides.
V. Study of mammalian sperm through slides/charts.
VI. Histological examination of placenta through slides/charts.
VII. Freshwater zonation in lake/stream and study of different communities (plankton, nekton, neuston, benthos and lotic communities).

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I Draw a labeled sketch of given system and show to examiner/Spot parts of system on the charts/models. (3)

II Identification of phases of oestrous cycle. (1)

III Record biota in a given sample from a lake. Make labeled sketches and demonstrate them to the examiner. (2)

IV Examine the water sample for various communities from different zones of a lake and draw labelled sketches. (2)

V Identify the specimens/slides/charts A-D. Give reasons of the identification. (4)

VI. Note book and charts. (3)

VII. Viva-Voce. (3)

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ZOOLOGY

SEMESTER – VI

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

PAPER II: AQUATIC BIOLOGY-II

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT –I

Neuro-Hormonal Regulation of production of Gonadal and Gonadotropic hormones.

UNIT –II

Neuro-Hormonal Regulation of production of Hypothalamic factors and Structural behaviour.

UNIT –III

Fertility Regulation

Contraception and modern contraceptive technology-natural, mechanical, chemical immunological and surgical methods and Fertilization *in vitro* (Test tube baby).

UNIT -IV

Application of fertility regulation in live stock:

i. Artificial insemination in farm animals.
ii. Milk yield.
iii. Egg production in poultry.

Books Recommended :

1. Milt, J. & Everitt, B.J.,Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Turner, C.P. & Bagnara, J.T., General Endocronology, Saunders Intern. Publications, 1984.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-II

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Ecosystem : Study of ecosystem with particular reference to the components of aquatic ecosystem. Food chains and food webs. Flow of energy in a food chain.

UNIT -II

Physico-chemical characteristics of freshwater environment : Temperature, light, current of water, density, pH, dissolved oxygen, carbon dioxide and nutrients.

UNIT -III

Productivity : Concepts of productivity, primary, secondary and tertiary productivity, yield and carrying capacity.

UNIT -IV

Ecological sucession : Succession, kinds of succession, changes in animal life during hydrarch concept of climax.
Adaptations of aquatic organisms.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Tronto Press, Tronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries , Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Odum, E.P., Fundamentals of Ecology, Saunders Co., Philadelphia, 2004.

PRACTICALS

Practical based on both theory papers I & II:

I. Study of permanent slides of mammalian ovary and testis.
II. Study of different techniques of contraception through charts/models/video clippings.
III. Study of artificial insemination, egg production through charts/models/video clippings.
IV. Study of components of lake ecosystem and grazing type of food chain.
V. Physico-chemical characteristics of freshwater environment. Temperature, Light. turbidity, current of water, density, pH, dissolved O_2, CO_2 and nutrients.
VI. Ecological succession in an aquatic habitat in the laboratory.

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

Note : 1. Practical will be of 4 hrs. duration.

2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

I	Draw a labeled sketch of techniques of contraception/artificial insemination.	(3)
II	Determine the physico-chemical factors in a given sample of fresh water. Write the procedure followed.	(4)
III	Draw labeled diagram of food chain (in aquatic/terrestrial environment)	(2)
IV	Identify the cells/part in slides A & B. Give reasons for identification and name the hormone secreted by it.	(3)
V.	Note book and charts	(3)
VI.	Viva-Voce.	(3)

****

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE)

SEMESTER-V

General Instructions:-

1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2) There would not be more than eight students in one section in practical examination.

3) There would be upto eight students in one section in practical class.

4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.

5) No electronic Instruments will be allowed for lehra in practical examination.

6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 practical periods per week) : 45 Marks

Paper-A Theory

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 3 Hours

Unit-I

1. Definitions:- Pharmaishi Chakardar paran, Chakardar paran, Hela, Kataksh, Anghar
2. Eyebrow movements
3. Comparison of Gat Nikas and Gat Bhav

Unit-II

1. Knowledge of dance forms:- Kuchipudi, Kathak
2. Costumes used in kathak in mughal and present period
3. Dance and festivals

Unit-III

1. Knowledge of modern dance
2. Contribution of Pt. Birju Maharaj in the field of kathak dance
3. Description of tribal dance i.e. Sammi and Santhal

Unit-IV

1. Notation of Thaat, Amad, Tora, Chakardar- Paran, Chatusjati Paran, Kavit in Teentaal2.
2. Notation of Thaat, Amad, Uthan, Tora, Ganesh Paran in swari Taal (15 Matra)
3. Notation of Tora, Tukra, Paran in sultaal (10 Matra)
4. Nagma of above mentioned Taals
5. Ekgun, Dugun, Tigun, Chaugun Layakries of above Taals prescribed in course

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper- B Practical

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 20 minutes

1. Teentaal (16 Matra)
   Thaat-1
   Amad-1
   Tora-2
   Chakardar Paran-1
   Chatusjati Paran-1
   Kavit-1

2. Swari Taal (15 Mara)
   Thaat-1
   Amad-1
   Uthan-1
   Tora-2
   Ganesh Paran-1

3. Sool Taal (10 Matra)
   Tora-2
   Tukra-1
   Paran-1

4. Gat Nikas :- Thaat and Murli
5. Paltas in Teentaal
6. Practical demonstration of Sammi and Naatti
7. Play Nagma in Teentaal and Swari Taal

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

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B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE)

SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would not be more than eight students in one section in practical examination.
3. There would be upto eight students in one section in practical class.
4. In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
5. No electronic Instruments will be allowed for lehra in practical examination.
6. While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks
Paper-B: PRACTICAL (Duration 45 minutes, 06 practical periods per week) : 45 Marks

Paper-A Theory

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 3 Hours

Unit-I

1. Definitions: - Chaturang, Trivat, Tarana, Sargam, Palta.
2. Neck Movements
3. Brief note on Choreography

Unit-II

1. Knowledge of Dance forms:- Kathakali and Kathak
2. Contribution of leading Institutions of Kathak Dance
3. Importance of Thumri and Hori in Kathak Dance

Unit-III

1. Contribution of Pt. Rajinder Gangani in the field of Dance
2. Status of Dance in Society
3. Detailed knowledge of dance

Unit-IV

1. Notation of Thaat, Amad, Uthan, Tora, Mishrjati -Paran, Kavit, Premlu in Teentaal
2. Notation of Thaat, Amad, Tora, Kavit in Basant Taal
3. Notation of Thaat, Tora, Premlu, Shiv Paran in Dhamar Taal.
4. Nagma of above mentioned Taals
5. Ekgun,Dugun, Chaugun, Layakaries of above mentioned Taals

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks : 50 marks
Theory : 45 marks
Int. Assessment : 05marks
Time : 20 minutes

1. Teentaal (16 Matra)
   - Thaat-1
   - Uthan -1
   - Amad-1
   - Tora-2
   - Mishrjati Paran-1
   - Kavit-1
   - Paremelu-1
2. Basant (9 Mara)
   - Thaat-1
   - Amad-1
   - Tora-2
   - Kavit-1
3. Dhamar (14 Matra)
   - Thaat-1
   - Tora-2
   - Premelu-1
   - Shiv Paran-1
4. Gat Nikas – Ghungat, Gagri
5. Paltas in Teentaal
6. Practical demonstration in Luddi and Haryanvi
7. Play Nagma in Teentaal and Dhamar

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) FIRST YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2020-2021

(SEMESTER : FIRST AND SECOND)

i.e

First Semester : November/December, 2020
Second Semester : April/May, 2021

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SCHEME FOR OPTING SUBJECTS
B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM)
EXAMINATION, 2020-2021

B.A. (General) 1st Year (Semester System) study programme consists of three compulsory subjects and three elective subjects :

Compulsory subjects :

(a) Punjabi
OR
History & Culture of Punjab

(b) English

(c) Environment, Road Safety Education, Violence against Women/Children and Drug Abuse ***

Elective Subjects : A student is required to take up 3 elective subjects in all, selecting *not more than one subject* from any of the following sets of combinations. :

1. English, Hindi, Punjabi, ** Bengali, Urdu, Persian, ** Tamil, French,** Arabic, Russian, German, ** Kannada, ** Malayalam, ** Telugu.
2. Economics, Defence & Strategic Studies, Fine Arts, Education, Adult Education, History of Art.
3. History, Mathematics.
4. Public Administration, Home Science, Gandhian Studies, Philosophy.
5. Political Science, * Statistics, Applied Statistics; Indian Classical Dance, Human Rights and Duties.
6. Sanskrit, Physical Education, Ancient Indian History, Culture & Archaeology, Psychology, Geography.
7. Computer Science, Agriculture, Sociology.
8. Music (Instrumental), Women's Studies, Music (Tabla), Environment Conservation, Religious and Sikh Studies
9. Music (Vocal), Police Administration, Journalism & Mass Communication.

Note: *The students can opt. only two elective subjects from the following :*
Music (Instrumental), Music (Vocal), Music (Tabla) and Indian Classical Dance.

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* Statistics can be opted only with Mathematics

** The Syllabus of Tamil, Telugu, Kannada, Malayalam, Arabic & Bengali Languages are **kept in abeyance**

*** This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he/she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

10. ** *Elective Vocational Subject (one of the following) :* *Pre-requisite subject at +2 level*

1.	Mass Communication –Video Production	Any
2.	Functional English	English
3.	Advertising, Sales Promotion & Sales Management	Any
4.	Foreign Trade, Practices and Procedures	Preferably with Economics or Commerce
5.	Office Management & Secretarial Practice	Any
6.	Computer Applications	Preferably Computer
7.	Functional Hindi	Hindi
8.	Tax Procedures & Practices	Accountancy/Business Studies
9.	Principles and Practice of Insurance	Any
10.	Information Technology	Any
11.	Fashion Designing	Any
12.	Early Childhood Care & Education	Any

**A student who opts for Computer Science as an Elective subject shall not take up Computer Applications/Information Technology as Elective Vocational subject and vice-versa.

Note :- Syllabus for the Subject at Sr. No. 1 is not framed.

FOR B.SC. (GENERAL) CANDIDATES :

(Besides the compulsory subject, a student shall offer any three elective subjects)

A	*Elective Vocational Subject*	*Other Two Elective Subjects*	*Pre-requisite subjects at +2 level*
1.	Clinical Nutrition Dietetics	Chemistry, Physics & Botany	PCB*
2.	Bio-Technology	Chemistry, Botany or Zoology	PCB
3.	Seed Technology	Botany, Chemistry	PCB
4.	Industrial Fish & Fishery	Zoology, Chemistry	PCB
5.	Instrumentation	Physics, Mathematics	PCM
6.	Mass Communication Video Production	Any two Science Subjects	Any
7.	Electronic Equipment Maintenance **(Kept In Abeyance)**	Physics, Chemistry/Maths.	PCM
8.	Computer Applications	Any two Science Subjects	Preferably Computer
9.	Industrial Chemistry	Chem., Maths./Botany/Zoology	PCM/B
10.	Industrial Microbiology	Chemistry and Botany or Zoology	PCB
11.	Food Science & Quality Control **(Kept In Abeyance)**	Chemistry and Botany/Zoology	PCB
12.	Information Technology	Any	Any

B			
13.	Bioinformatics, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
14.	Biotechnology, **Botany/Zoology*** and any one of the following Mathematics/Physics/Chemistry/Computer Science	:	PCM/PCB
15.	Electronics : Physics + Electronics +Mathematics	:	PCM
	OR		
	Chemistry + Electronics + Computer Science		
16.	1. Agriculture, Botany & Zoology	:	PCB
	2. Agriculture, Biotechnology, Botany/Zoology	:	PCB
	3. Agriculture, Microbiology, Chemistry/Botany/Zoology	:	PCB
	4. Agriculture, Chemistry, Physics/Botany/Zoology	:	PCB

* P stands for Physics, C stands for Chemistry, B for Biology and M for Mathematics.
** B for Botany.
*** Z for Zoology

Note :- Syllabus for the Subject at Sr. No. 1, 3, 4, 5 and 6 are not framed.

Guidelines for continuous internal assessment (10%) for regular students of Under-Graduate courses (semester system):

Criteria for Internal Assessment:

(i)	Class test	=	5%
(ii)	Academic Activities (Seminar, Project, Assignment)	=	3%
(iii)	Attendance	=	2%

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will be proportionately be increased to maximum marks of the paper in lieu of internal assessment.

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) i.e. FIRST SEMESTER NOVEMBER/DECEMBER 2020 AND SECOND SEMESTER APRIL/MAY 2021, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – I

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Text Prescribed :

English at Work, (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 1-4
Prose Chapters = 1-4

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type questions from Prose in not more than 100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Paragraph Writing (Descriptive and Narrative) ***One*** out of ***three*** to be attempted **05 marks**

Q.5. Comprehension of passage from Prose text **05 marks**

Q.6 Grammar - Voice, Determiners, Modals, Antonyms **10 marks**

Q.7. Translation from Vernacular to English. ***Four*** out of ***Six*** sentences (only tense based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ENGLISH (Compulsory)

SEMESTER – II

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Text Prescribed :

English at Work (Selection from Poetry & Prose), Eds T. Vijay Kumar, B. T. Seetha, A. V. Suresh Kumar, Y. L. Srinivas, New Delhi: Macmillan India Ltd. 2012, revised edition.

Poems = 5-8
Prose Chapters = 5-8

Section-A

Q.1. Reference to the Context from Poetry and Prose. ***Two*** out of ***four*** passages to be attempted**.** One each from Poetry and Prose. **05+05=10 marks**

Q. 2. Questions from poetry in not more than 50-60 words. ***Two*** out of ***five*** to be attempted. **05 marks**

Q.3 Essay type question from Prose in not more than100-120 words**.** ***Two*** out of ***three*** to be attempted. **06 marks**

Section B

Q.4. Letter Writing (Personal only) **05 marks**

Q.5. Grammar : Narration, Preposition, Conjunctions, Synonyms **10 marks**

Q.6 Comprehension of Unseen Passage **05 marks**

Q.7. Translation from Hindi to English. ***Four*** out of ***six*** sentences (only idiom based) **04 marks**

OR

For foreign students Paragraph Writing on Proverbs in not more than 100 words.

ਪੰਜਾਬੀ (ਲਾਜਮੀ)

ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 20 ਅੰਕ
2. ਲੇਖ ਰਚਨਾ 10 ਅੰਕ
3. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਾਵਿ-ਸੁਮੇਲ**, (ਸੰਪਾਦਕ) ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ ।
(ਹਰਭਜਨ ਸਿੰਘ ਹੁੰਦਲ ਅਤੇ ਹਰਭਜਨ ਸਿੰਘ ਰੈਣੂ ਸਿਲੇਬਸ ਵਿਚ ਨਹੀਂ ਹਨ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਕਾਵਿ-ਸੁਮੇਲ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) 5 ਅੰਕ

(ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਂਦਰੀ ਭਾਵ (ਦੋ ਵਿਚੋਂ ਇਕ) 5+5= 10 ਅੰਕ

2 ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਪ੍ਰਸ਼ਨਾ ਵਿਚੋਂ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ) 5×1= 5 ਅੰਕ

3. ਲੇਖ ਰਚਨਾ (500 ਸ਼ਬਦਾਂ ਵਿਚ) ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ 10 ਅੰਕ
(ਚਾਰ ਵਿਸ਼ਿਆਂ ਵਿਚੋ ਕੋਈ ਇਕ ਕਰਨਾ)

4. ਸੰਖੇਪ ਰਚਨਾ 5 ਅੰਕ

5. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ 6 ਅੰਕ

(i) ਵਿਆਕਰਨ : ਵਿਆਕਰਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹਤੱਵ ਤੇ ਤੱਤ (ਵਾਕ ਪ੍ਰਬੰਧ, ਰੂਪ ਪ੍ਰਬੰਧ, ਧੁਨੀ ਪ੍ਰਬੰਧ ਤੇ ਲਿਖਤ ਪ੍ਰਬੰਧ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ) (ਦੋ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨਾ ਹੈ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ) 2+2= 4 ਅੰਕ

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25–30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਭਾਗ ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ.ਏ. ਅਤੇ ਬੀ.ਐਸ.ਸੀ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁਲ ਅੰਕ: 50
ਲਿਖਤੀ ਅੰਕ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ — 20 ਅੰਕ
2. ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ — 10 ਅੰਕ
3. ਮੁਹਾਵਰੇ — 5 ਅੰਕ
4. ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 10 ਅੰਕ

ਕੋਰਸ

1. **ਕਥਾ ਕਹਾਣੀ**, (ਸੰਪਾਦਕ) ਡਾ. ਧਨਵੰਤ ਕੌਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) 'ਕਥਾ ਕਹਾਣੀ' ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 4+6= 10 ਅੰਕ

   (ਅ) ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚ ਸੰਮਲਿਤ ਕਹਾਣੀਆਂ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਣ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ) — 5 ਅੰਕ

2. ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ।) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ) — 5×1= 5 ਅੰਕ

3 ਸੂਚਨਾ ਹਿਤ ਨੋਟਿਸ ਲਿਖਣਾ (ਸਾਹਿਤਕ, ਸੱਭਿਆਚਾਰਕ ਤੇ ਖੇਡ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਤ) — 10 ਅੰਕ

4 ਮੁਹਾਵਰੇ : ਅਰਥ ਦਸ ਕੇ ਵਾਕ ਬਣਾਉਣੇ (ਸੱਤ ਵਿਚੋਂ ਕੋਈ ਪੰਜ ਕਰਨੇ) — 5 ਅੰਕ
(ਮੁਹਾਵਰੇ ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ਵਿਚੋਂ ਹੀ ਪੁੱਛੇ ਜਾਣ)

5 ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ — 6 ਅੰਕ

(i) ਧੁਨੀ ਤੇ ਧੁਨੀ ਗ੍ਰਾਮ : ਧੁਨੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੰਡੀ ਤੇ ਅਖੰਡੀ ਧੁਨੀਆਂ (ਸੰਖੇਪ ਜਾਣ ਪਛਾਣ)
ਪੰਜਾਬੀ ਸਵਰ ਧੁਨੀਆਂ ਤੇ ਵਿਅੰਜਨ ਧੁਨੀਆਂ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)

(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ — 2+2= 4 ਅੰਕ
ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਹਵਾਲੇ ਨਾਲ ਹੀ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ । (ਚਾਰ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਹਨ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ , 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ' , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ' , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, 'ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ' , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3= 9 ਪੀਰੀਅਡ ।

HISTORY AND CULTURE OF PUNJAB

(For B.A. Only)

B.A. (General) SEMESTER –I EXAMINATION, 2020-21

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO PRE-MAURYAN PERIOD

Objectives: To introduce the students to the history of the early history of the region.

Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.

3. **One question from Unit-IV shall be set on the map.**

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 06 places on map of 01 marks each and write explanatory note on any 02 of 02 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

UNIT I

Ancient Punjab: Physical features; impact on History
Historical Sources: Literary; archaeological
Harappan Culture: Extent and town planning.

UNIT II

Harappan Culture: Social, Economic and Religious life; causes of disappearance
Rig Vedic Age: The rise of Indo Aryans; main features of the life in early Vedic Age.
Later Vedic Age: Political, Social, Economic and Religious life of later Vedic Aryans.

UNIT III

Caste System: Origin and evolution.
The Epics: Historical importance of Ramayan and Mahabharat.
Political Condition on eve Alexander's invasion

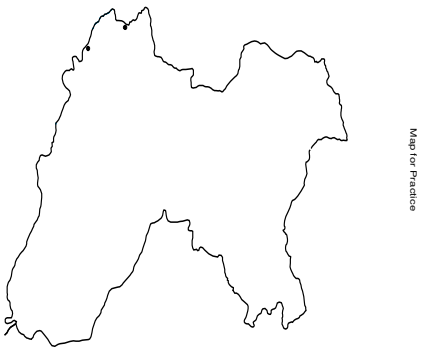
UNIT IV

Impact of Alexander's invasion on social and cultural life.
Position of women: Harappan, early Vedic and later Vedic Age

Map:

Important Historical places of Punjab: Mohenjodaro, Harappa, KotlaNihang Khan, Sanghol,Banawali, Taxila, Indraprastha, Hastinapur, Kurukshetra, Srinagar, Purusapura, Sakala.

Specimen Map for Examination:



Suggested Readings:

1. Joshi, L.M (ed.) :History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Fauja Singh,(eds) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRamManoharLal, Delhi, 1966

Note : The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.
(b) Ward of/and Defence Personnel and Central Government Employee/Employees who are transferable on all India basis.
(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(For B.A. Only)

B.A. (General) SEMESTER-II EXAMINATION, 2020-21

PAPER: HISTORY AND CULTURE OF PUNJAB FROM MAURYAN TIMES TO 1200 A.D.

Objectives: To introduce the students to the history of the early history of the region.

Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. **One question from Unit-IV shall be set on the map.**

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

3. In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 06 places on map of 01 marks each and write explanatory note on any 02 of 02 marks each.
4. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

UNIT I

The Mauryan Empire: Social, economic and religious life

Buddhism and Jainism: Impact on Punjab with special reference to 4th Buddhist Council.

The Kushanas: Impact of Kanishka's rule on Punjab

UNIT II

Gandhara School of Art: Salient features.
The Guptas: Cultural and scientific developments.
Position of Women: Under the Mauryas, the Guptas and the Vardhanas.

UNIT III

Depiction of Punjab in the accounts of Chinese travelers.Fahien and Hwen Tsang:
Main developments in literature.
Education: Significant developments; Taxila

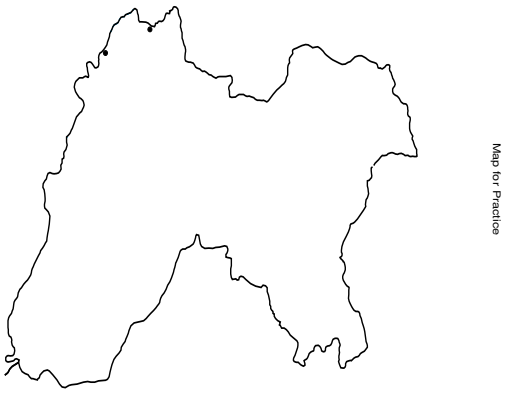
UNIT IV

Society and Culture on the eve of the Turkish invasion of Punjab
Punjab in the Kitab-ul-Hind of Alberuni .

Map:

Important Historical Places: Lahore, Multan Bathinda, Uchh, Jalandhar, Thanesar, Kangra, Taxila, Kundalvana, Pehowa, Thatta.

Specimen Map for Examination:



Suggested Readings:

1.Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)

2.Joshi, L.M and Fauja Singh(eds), : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977

3.Prakash, Buddha : Glimpses of Ancient Punjab, Punjabi University, Patiala, 1983

4.Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966

5.Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992

6.Sharma, B.N : Life in Northern India, MunshiRamManoharLal, Delhi, 1966

Note : The following categories of the students shall be entitled to take the option of History & Culture of Punjab in lieu of Punjabi as compulsory subject :

(a) That the students have not studied Punjabi upto class 10th.

(b) Ward of/and Defence Personnel and Central Government employee/employees who are transferable on all India basis.

(c) Foreigners.

HISTORY AND CULTURE OF PUNJAB

(All Candidates other than B.A.)

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious;
3. Growth and impact of Jainism and Buddhism in Panjab.

UNIT II

4. Society and Culture under Maurayas and Guptas.
5. Bhakti movement: Main features; prominent saints and their contribution.
6. Origin and development of Sufism.

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development- Manji, Masand, Sangat and Pangat
8. Transformation of Sikhism: Martyrdom of Guru Arjan; New policy of Guru Hargobind, martyrdom of Guru Tegh Bahadur.
9. Institution of Khalsa: New baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and other institutions - rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh.
12. MAP (of undivided physical geographical map of Punjab):
    Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi, 1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.

11. Chopra, P.N.,Puri, B.N. And Das,M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, Delhi 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

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B. Ward of/and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

…….

HISTORY AND CULTURE OF PUNJAB

(All Candidates other than B.A.)

SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit –IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 6 Marks
   Explanatory Note : 4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 marks each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab; Board of Administration.
2. Western Education: Growth of Education and rise of middle classes.
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas; Ad Dharam Movement
6. Development of Press & literature: growth of print technology; development in literature

UNIT III

7. Emergence Of Political Consciousness: Ghadar Movement; Jallianwala Bagh Massacre
8. Gurudwara Reform Movement; major Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: Non Cooperation Movement; HSRA and Bhagat Singh; Civil Disobedience Movement; Quit India Movement.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Post-Independence Punjab: Linguistic Reorganization; Green Revolution.
12. MAP (physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuswant : A History of the Sikhs, vol I: 1469-1839, oxford University Press, Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das, M.N. : A Social, Cultural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

ELECTRONICS

(KEPT IN ABEYANCE FOR THE EXAMINATION, 2020-2021)

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AGRICULTURE

SEMESTER-I

Paper-I : Basics of Agricultural Botany & Forestry (THEORY)

Max. Marks	:	75
Theory	:	70 marks
Internal Assessment	:	5 marks
Time	:	3 Hours

Period per week : 1. Theory - Six of 45 minutes duration each.
2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Plant Morphology - Root, Stem, Leaf - Their types and modifications.

Inflorescence - Types and classification.

Flower - Parts and their functions.

Fruit - Types and classification.

Unit-II

Pollination - Types, Significance, Emasculation, Techniques, mode of Reproduction and their significance

Life cycle of a typical angiosperm. Objectives of Plant Breeding, introduction to self – Incompatibility.

Unit-III

Cultivation practices including soil requirements, Water requirements, Improved varieties of the region for:

Cereals - Wheat, Rice, Maize.

Fibres – Cotton, Jute.

Oil Crops - Sarson, Soyabean.

Fruits - Mango, Grapes, Citrus, Sapota.

Unit-IV

Importance of forests, Important forest trees of India and status of forestry in Punjab, its significance.

Raising of Nurseries for forestry.

Social forestry: Definition, concept & its significance.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Study of root, stem, leaf modifications.

Raising of crops/visit to farms/fields to have knowledge of various agricultural tools, implements, and methods of crop production of related area.

Visit to Fruit and Forest nurseries.

Performance of emasculation techniques.

Books Recommended:

1. ICAR : *Hand Book of Agriculture,* New Delhi (2008).
2. S.S. Sinha, P. Gupta and A.K. Gupta : *Hand Book of Agricultural Science,* Kalyani Publishers, Ludhiana (2009).
3. P.A.U., Ludhiana (2010). : Rabi Crops *Package of Practices,*
4. P.A.U., Ludhiana (2010). : Kharif Crops *Package of Practices,*
5. Bhatia : *Elementary Biology,* Trumen Publishers, Jalandhar (2010).
6. Alan Stephens : *Dictionary of Agriculture,* Universal Book Stall, New Delhi (1998).
7. Chidda Singh, Prem Singh and Rajbir Singh : *Modern Techniques of Raising Field Crops,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2009).
8. B.S. Chundawat and S.K. Gautam : *Text Book of Agroforestry,* Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi (2006).

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AGRICULTURE

SEMESTER-II

Paper-II: Agricultural Economics and Agronomy (THEORY)

Max. Marks	:	75
Theory	:	70 marks Internal
Assessment	:	5 marks
Time	:	3 Hours

Period per week: 1. Theory - Six of 45 minutes duration each.

2. Practical - Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question I shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural Banking, Agricultural Loans – Its various types, repayment mode, form filling for agricultural loans.

National policy for agricultural loans.

Agriculture credit cards.

Fundamentals of land measurements and land revenue

Unit-II

Various legal aspects of import and export of raw crop and crop products.

Quarantine laws.

Fundamentals of agricultural economics.

Psychological pressure on farmer and villagers of different classes.

Unit-III

Storage of vegetables, Fruits, Grains at local and large level.

Vegetable and fruit preservation.

Unit-IV

Soil types, Management, Improvement and Amendments. Soil

Testing.

Fundamental of fertilizers and manures.

Important fertilizers and their uses.

Nitrogen fixation.

PRACTICAL

Max. Marks	: 25
Practical	: 20 marks
Internal Assessment	: 5 marks
Time	: 3 Hours

Visit to Agricultural, Rural Banks to have basic knowledge of loan processing and recovery.

Identification of financial problems of a village.

Identification and collection of fertilizers.

Preservation of fruits and vegetables in Pickle, Jam, Jellies, Squash and Sauce forms.

Books Recommended:

1. K.T. Acharya : *Every Day Indian Processed Foods,* National Book Trust, New Delhi (2008).
2. Malkit Nagi and Satinder Bajaj : *Home Preservation of Fruit and Vegetables,* P.A.U., Ludhiana (2008).
3. ICAR : *Hand Book of Agriculture,* New Delhi.
4. T.D. Biswas and S.K. Mukherjee : *Text Book of Soil Sciences,* Kalyani Publishers, Ludhiana (2008).
5. Girdhari Lal, G.S. Siddappa and G.L. Tandon : *Preservation of Fruit and Vegetables,* ICAR Publication, New Delhi (2008)
6. Das and Gupta : *Manures and Fertilizers,* Kalyani Publishers, Ludhiana (1999).

ENGLISH (Elective)
SEMESTER –I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Units from **Fluency in English** Ed., Promodini Verma**,** Mukti Sanyal, Tulika Prasad, New Delhi: Macmillan India, 2009 (**the prescribed text)** are recommended for **First Semester:**

Units: 1, 3, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17

Literary Terms: Ballad, Sonnet, Ode, Lyric, Elegy, Dramatic Monologue, Interior Monologue, Blank Verse, Free Verse, Mock-Epic, Metaphysical Conceit, Negative Capability, Egotistical Sublime, Fancy, Imagination, Irony, Paradox, Ambiguity, Alliteration, Assonance, Imagery.

Testing Pattern:

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do five in not more than 50-60 words. (15 marks)

Q.2. The examiner will set twelve short questions (to be answered in not more than 30-40 words) from **Fluency in English (the prescribed text),** out of which a student shall be expected to attempt any *ten.* (15 marks)

Q.3. The examiner shall give two passages from the anthology **Fluency in English** along with five questions. The students shall be expected to attempt only one passage of the two. In other words, this question shall have internal choice. This question shall test the comprehension, critical acumen and the presentation skills of a student. (15 marks)

Section -B

Q.4. Letter Writing (Official) (10marks)

Q.5. Applied Grammar:

(a) Voice, Direct/Indirect, Transformation of Sentences (simple, complex, compound) (15 marks)

(b) Articles, Preposition, Conjunctions (10 marks)

Q.6. Vocabulary:

Antonyms/Synonyms, Use of words/phrases in sentences (10 marks)

ENGLISH (Elective)

SEMESTER –II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	Three Hours

Section -A

The following Essays, Stories and Plays from the prescribed book **'A Collection of Essays, Short Stories & One Act Plays,** Ed., R.K Kaushik & S.C. Bhatia, New Delhi, OUP, 2006. (**Included in Section -A**) are recommended for **Second Semester:**

Essays 1-6
Stories 1-6
Plays 1-4

Literary terms/concepts*: Prose, Essay, Expository Essay, Analytical /Argumentative Essay, Lyrical Essay, Descriptive Essay, Imaginative Essay, Philosophical Essay, Short Story, Long Story, Drama, Dramatic Plot, Character, Incident, Setting, Structure, Tragedy, Comedy, Tragi-comedy*

Testing Pattern:

Q. 1. Literary terms/concepts (Five out of Eight) (15 marks)

Q. 2. Ten short questions to be attempted out of fourteen, based on **A Collection of Essays, Short Stories and One Act Plays'** (each to be answered in not more than 30-40 words.) (15 marks)

Q. 3. Long questions *five out of seven*, again based on **A Collection of Essays, Short Stories and One Act Plays' (**each to be answered in not more than 100-120 words) . (15 marks)

Section -B

Q. 4. Paragraph Writing (based on outline, a situation, a string of questions etc.) (15 marks)

Q. 5. Applied Grammar-

(a) Corrections (10 marks)
(b) Use of the same words as different parts of speech (10 marks)

Q. 6. Translation from Vernacular into English (10 sentences only) (10 marks)

OR

(For foreign students, a paragraph on any one of the two given topics, preferably, proverbs or idioms**)**

हिन्दी (ऐच्छिक)
सेमेस्टर-1

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1 कवितालोक :

सं. डॉ. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित।

इन चार कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई है-

कबीर, रैदास, गुरुनानक देव, सूरदास।

(क) 5-5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होंगी। कुल 4 संदर्भ पूछे जाएँगे। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल 2 प्रश्न पूछे जाएँगे। अंक : 06

इस खंड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछे जायेंगे। उत्तरों की शब्द-सीमा 200 होगी।

2 सजीव कहानियाँ :

सं. डॉ. लक्ष्मीचन्द्र खुराना, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित। निम्नलिखित सात कहानियाँ पाठ्यक्रम में हैं :-
शतरंज के खिलाड़ी, ममता, अशिक्षित का हृदय, मौत के मुँह में, व्याय मंत्री, गुलाब, सभ्य-असभ्य।

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी। कुल 4 व्याख्याएँ पूछी जाएँगी। अंक : 10

(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा। इस खंड में कथावस्तु, चरित्र-चित्रण एवं उद्देश्य से संबंधित कुल दो प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की शब्द-सीमा 200 तक होगी। अंक : 06

3 तीन-तीन अंकों के तीन लघु-उत्तरापेक्षी प्रश्न करने होंगे। अंक : 09

कुल 6 प्रश्न पूछे जाएँगे। प्रत्येक उत्तर की सीमा 50 शब्दों तक होगी। ये प्रश्न इस पत्र के पूर्वोक्त दो खंडों (कवितालोक एवं सजीव कहानियाँ) पर आधारित होंगे।

4 हिन्दी-साहित्य का इतिहास : अंक : 07

आदिकाल (अपभ्रंश साहित्य को छोड़कर) से निम्नलिखित शीर्षकों पर आधारित प्रश्न पूछे जाएँगे।

आदिकाल का नामकरण, काल-सीमा, परिस्थितियाँ, प्रवृतियाँ और पृथ्वीराज रासो तथा बीसलदेव रासो का परिचय।

7 अंकों का एक समीक्षात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगे। (शब्द-सीमा 200)

5 वस्तुनिष्ठ प्रश्न अंक : 10

इस पत्र के पूर्वोक्त तीनों खंडों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगे।

6 समीक्षा सिद्धान्त : अंक : 07

कहानी :- परिभाषा, तत्त्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगे। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200)

7 व्यावहारिक व्याकरण : अंक : 20

(क) विपरीतार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ख) समानार्थक शब्द (सात में से पाँच करने होगे।) 5 अंक

(ग) शब्द-शोधन और वाक्य-शोधन (सात में से पाँच करने होगे।) 5 अंक

(घ) वाक्यांश के लिए एक शब्द (सात में से पाँच करने होगे।) 5 अंक

8 परिभाषिक शब्दावली (सलग्न शब्दावली) अंक : 5

कुल आठ में से पाँच के उतर देने होगे।

9 आंतरिक मूल्यांकन : अंक : 10

सहायक पुस्तकें :

हिन्दी साहित्य का इतिहास : कुसुम वर्मा

निर्देश : छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होगे।

पारिभाषिक शब्दावली

	A	
1.	Abbreviation	संक्षिप्ति
2.	Absence	अनुपस्थिति, गैरहाजिरी
3.	Accommodation	आवास
4.	Advice	परामर्श, सलाह, सूचना, संज्ञापन
5.	Allegiance	निष्ठा
6.	Alteration	परिवर्तन, हेर-फेर
7.	Amendation	संशोधन
8.	Appendix	परिशिष्ट
9.	Assistant	सहायक
10.	Attendance	उपस्थिति, हाजिरी
	B	
11.	Basic pay	मूल वेतन
12.	Birth Date	जन्म तिथि, जन्म की तारीख़
13.	Block	खंड, ब्लाक
14.	Board	बोर्ड, मंडल
15.	Break in Service	सेवा में व्यवधान
16.	By Hand	दस्ती
	C	
17.	Cancel	रद्द करना
18.	Clarification	स्पष्टीकरण
19	Closing Balance	अंत-शेष, रोकड़ बाकी
20.	Committee	समिति
21.	Competence	सक्षमता
22	Conference	सम्मेलन
23.	Confirmation	पुष्टि
24.	Consolidated fund	समेकित निधि
25.	Conveyance allowance	वाहन भत्ता
26.	Corruption	भ्रष्टाचार
27.	Covering letter	सहपत्र

	D	
28.	Dealing Assistant	संबंधित सहायक
29.	Dearness Allowance	मंहगाई भत्ता
30.	Department	विभाग
31.	Deputy Secretary	उपसचिव
32.	Dissent	विसम्मति, विमति, (विधि), अहसमति
33.	Duplicate	अनुलिपि, दूसरी प्रति
34.	Duration	अवधि
35.	Duty	ड्यूटी, काम, कार्य, कर्त्तव्य, भार, शुल्क
	E	
36.	Encashment	भुनाना, तुड़ाना
37.	Entry	प्रविष्टि, इंदराज, प्रवेश
38.	Evidence	साक्ष्य, गवाही, प्रमाण
39.	Expert	विशेषज्ञ
40.	Export	निर्यात
41.	Extract	उद्धरण
	F	
42.	Fitness Certificate	स्वस्थता प्रमाणपत्र, योग्यता प्रमाणपत्र
43.	Fresh Receipt (F.R.)	नई आवती
44.	Further Action	आगे की कार्रवाई, अगली कार्यवाही
	G	
45.	General Manager	प्रधान प्रबंधक, महाप्रबंधक
46.	General Meeting	साधारण सभा, साधारण बैठक
47.	Grant-in-aid	सहायता-अनुदान
48.	Guidance	मार्गदर्शन, निर्देशन
	H	
49	Head Clerk	प्रधान लिपिक, हैड कलर्क
50.	Head of Account	लेखा-शीर्ष
51.	Head office	प्रधान कार्यालय
52.	Head Quarter	मुख्यालय
53.	Holiday	अवकाश

I

54.	Immediate officer	आसन्न अधिकारी
55.	Import	आयात
56.	Increment	वेतन-वृद्धि
57.	Inquiry	पूछताछ, जाँच
58.	Inspector	निरीक्षक
59.	Instruction	अनुदेश, हिदायत
60.	Instructor	अनुदेशक
61.	Interpretation	निर्वचन, व्याख्या
62.	Intimation	प्रज्ञापन, सूचना, इत्तिला
63.	Investigation	अन्वेषण, तफतीश, जाँच-पड़ताल
64.	Irrelevant	असंबद्ध, विसंगत
65.	Issue	(संज्ञा) निर्गम, प्रश्न, मसला, (क्रिया) जारी करना, भेजना, देना

J

66.	Job	नौकरी, जाँच, कार्य
67.	Joining Date	कार्यग्रहण-तारीख, कार्यारम्भ-तारीख
68.	Joint Secretary	संयुक्त सचिव

L

69.	Labour Welfare	श्रम-कल्याण
70.	Leave Salary	छुट्टी का वेतन
71.	Leave Vacancy	अवकाश-रिक्ति
72.	Length of Service	सेवाकाल

हिन्दी (ऐच्छिक)
सेमेस्टर-2

पूर्णांक : 90+10 = 100
समय : 3 घण्टे

1. कवितालोक :

सं. डा. शिवकुमार शर्मा, पब्लिकेशन ब्यूरो, पंजाब विश्वविद्यालय, चण्डीगढ़ द्वारा प्रकाशित ।
इन तीन कवियों की रचनाएँ पाठ्यक्रम में निर्धारित की गई हैं
मीरांबाई, तुलसीदास, गिरिध्र कविराय

(क) 5-5 अंकों की दो संदर्भसहित व्याख्याएँ करनी होंगी । कुल 4 व्याख्याएँ पूछी जाएँगी। अंक-10
(ख) 6 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल 2 प्रश्न पूछे जाएँगे। अंक-06

इस खण्ड में से कवि-परिचय, कविता-सार तथा उद्देश्य संबंधी प्रश्न पूछें जायेंगे। उतर की शब्द सीमा 200 होगी।

2. झांसी की रानी- वृंदावनलाल वर्मा, मयूर प्रकाशन, झांसी । अंक-16

नामकरण, कथावस्तु, चरित्र-चित्रण, उद्देश्य के आधर पर चार समीक्षात्मक प्रश्न पूछे जाएँगे, जिनमें से 8 अंको के कोई दो प्रश्न करने होंगे। (शब्द- सीमा 200-250)

3. हिन्दी साहित्य का इतिहास :
भक्तिकाल :- निम्न शीर्षकों पर आधारित 2 प्रश्न पूछें जाएँगें। एक का उतर देना होगा। (शब्द-सीमा 200) अंक-08
भक्तिकाल की परिस्थितियाँ, सन्तकाव्य, प्रेमाख्यानकाव्य, रामकाव्य और कृष्ण काव्य की विशेषताएँ, कबीर, जायसी, तुलसी और सूरदास

4. वस्तुनिष्ठ प्रश्न अंक-10
इस पत्र के पूर्वोक्त तीनों खण्डों के संबंध में 1-1 अंक के दस वस्तुनिष्ठ प्रश्नों के उतर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5. समीक्षा सिद्धान्त
उपन्यास:-परिभाषा, तत्व और वर्गीकरण संबंधी दो प्रश्न पूछे जाएँगें। 7 अंकों का केवल एक प्रश्न करना होगा।
(शब्द-सीमा 200) अंक-07

6. मुहावरे और लोकोक्तियाँ (सात में से पाँच के उतर देने होंगे।) अंक-10

7. निर्धारित विषय पर अनुच्छेद-लेखन (तीन में से एक प्रश्न करना होगा।) अंक-10

8. निजी पत्र-लेखन (दो में से एक प्रश्न करना होगा) अंक-08

9. पारिभाषिक शब्दावली-(संलग्न शब्दावली) अंक-05

आंतरिक मूल्यांकन अंक-10

निर्देश :-छह लेक्चर Text के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।

M

1..	Management	प्रबंध
2.	Medical	चिकित्सा
3.	Medical Leave	चिकित्सा-छुट्टी
4.	Medical Officer	चिकित्सा-अधिकारी
5.	Messenger	संदेशवाहक
6.	Ministry	मंत्रालय, मंत्रिमंडल
7.	Modification	संशोधन, रूपांतर
8.	Most Immediate	अति-तात्कालिक

N

9.	Nationality	राष्ट्रीयता
10.	Necessary Action	आवश्यक कार्रवाई
11.	Negligence	उपेक्षा, प्रमाद, गफलत
12.	No-Objection	अनापत्ति
13.	Non-Official	गैर-सरकारी, अशासकीय

O

14.	Obedience	आज्ञापालन, आज्ञानुवर्तन
15.	Objection	आपत्ति
16.	Offence	अपराध
17.	Offer	प्रस्ताव
18.	Office	कार्यालय, दफतर, पद
19.	Office Copy	कार्यालय-प्रति, दफतर की प्रति
20.	Office Hours	कार्यालय-समय
21.	Office Order	कार्यालय-आदेश
22.	Officer	अधिकारी, अफसर
23.	Officer-in-charge	प्रभारी अधिकारी
24.	Officiating	स्थानापन्न
25.	Option	विकल्प
26.	Original Copy	मूल प्रति
27.	Outstanding	बकाया
28.	Overtime	समयोपरि, अतिरिक्त समय

P

29.	Part Time	अंशकालिक
30.	Pay	वेतन

31.	Payment	अदायगी
32.	Penalty	दंड, अर्थ-दंड, जुर्माना
33.	Pending	अनिर्णीत पड़ा हुआ, रूका हुआ, लंबित
34.	Pension	पेंशन
35.	Planning	योजना, योजना बनाना
36.	Proceedings	कार्यवाही
37.	Proposal	प्रस्ताव
38.	Publicity	प्रचार
39.	Postpone	स्थगित करना, मुल्तवी करना
	Q	
40.	Qualification	अर्हता, योग्यता
41.	Quarterly	त्रैमासिक
	R	
42.	Rectification	परिशोधन
43.	Reference	संदर्भ, निर्देश, हवाला
44.	Remark	विचार, अभ्युक्ति
45.	Remuneration	पारिश्रमिक, मेहनताना
46.	Renewal	नवीनीकरण
47.	Revenue	राजस्व
	S	
48.	Satisfactory	संतोषजनक
49.	Scrutiny	संवीक्षा
50.	Seal	मुद्रा, मोहर
51.	Secret	गुप्त, गुप्त बात
52.	Security	प्रतिभूति, सुरक्षा
53.	Seniority	वरिष्ठता
54.	State Government	राज्य सरकार
55.	Stores	सामान, सामग्री, भंडार
56.	Summary	सारांश, संक्षेप
57.	Superintendent	अधीक्षक
58.	Supervisor	पर्यवेक्षक
	T	
59.	Target	लक्ष्य
60.	Technical	तकनीकी
61.	Testimonial	शंसापत्र
62.	Tour	दौरा
63.	Training	प्रशिक्षण
64.	Translation	अनुवाद

65.	Travelling Allowance	यात्रा-भत्ता
	U	
66.	Under Secretary	अवर-सचिव
67.	Unemployment	बेकारी, बेरोजगारी
68.	Unofficial Letter	अशासकीय पत्र
69.	Up-to-date	अद्यतन
	V	
70.	Verification	सत्यापन
71.	Violation	अतिक्रमण
	W	
72.	Waiting list	प्रतीक्षा-सूची
73.	Warning	चेतावनी
74.	Working days	कार्य-दिवस, काम के दिन
75.	Working Hours	कार्य-समय, काम के घंटे
76.	Working Knowledge	कार्य-साधक-ज्ञान
77.	Write off	बट्टे-खाते डालना
	Z	
78.	Zone	जोन, अंचल

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀਏ ਜਨਰਲ ਭਾਗ ਪਹਿਲਾ ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ : 100
ਲਿਖਤੀ : 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 10
ਸਮਾਂ : 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ	25 ਅੰਕ
2.	ਪੰਜਾਬੀ ਇਕਾਂਗੀ	25 ਅੰਕ
3.	ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ)	20 ਅੰਕ
4.	ਭਾਸ਼ਾ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	10 ਅੰਕ
5.	ਸਾਹਿਤ ਦੇ ਰੂਪ	10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਬਾਵਾ ਬਲਵੰਤ, ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ, ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ, ਡਾ. ਜਗਤਾਰ)

2. **ਛੇ ਦਰਸ਼ਨ**, ਸੰਤ ਸਿੰਘ ਸੇਖੋ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ। ('ਨਿਸ਼ਾਂਤ ਬਾਗ ਵਿੱਚ' ਇਕਾਂਗੀ ਨੂੰ ਛੱਡ ਕੇ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	**(ੳ)**	'**ਨਕਸ਼ ਨੁਹਾਰ**' ਪੁਸਤਕ ਵਿਚੋ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	**10 ਅੰਕ**
	(ਅ)	'ਛੇ ਦਰਸ਼ਨ' ਇਕਾਂਗੀ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
2.	(ੳ)	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ / ਥੀਮ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
	(ਅ)	ਇਕਾਂਗੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ)	10 ਅੰਕ
3.	ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		2 x 5=10 ਅੰਕ
4.	**ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ: ਤੱਕ)** : ਕਵਿਤਾ, ਨਾਟਕ ਤੇ ਇਕਾਂਗੀ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)		5 x 4=20 ਅੰਕ
5.	ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਮਹਤੱਵ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ
6.	ਸਾਹਿਤ ਦੇ ਰੂਪ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਤੱਤ ਕਵਿਤਾ, ਗੀਤ, ਗ਼ਜ਼ਲ, ਇਕਾਂਗੀ, ਨਾਵਲ, ਕਹਾਣੀ (ਦੋ ਵਿਚੋਂ ਇਕ)		10 ਅੰਕ

ਵਿਸ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. (ਜਨਰਲ ਭਾਗ) ਪਹਿਲਾ ਅਪ੍ਰੈਲ/ ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਵਲ 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1901 ਤੋਂ 2000 ਤੱਕ) 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ 10 ਅੰਕ
5. ਸਾਹਿਤ ਆਲੋਚਨਾ 10 ਅੰਕ

ਕੋਰਸ

1. ਨਕਸ਼ ਨੁਹਾਰ (ਸੰਪਾ.) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ, ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ(1901 ਈ: ਤੋਂ 2000 ਈ: ਤੱਕ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਪਾਸ਼, ਸੰਤ ਰਾਮ ਉਦਾਸੀ, ਸੁਰਜੀਤ ਪਾਤਰ, ਜਸਵੰਤ ਦੀਦ, ਨਵਤੇਜ ਭਾਰਤੀ, ਸੁਖਵਿੰਦਰ ਅੰਮ੍ਰਿਤ, ਦਰਸ਼ਨ ਬੁਲੰਦਵੀ, ਜਸਵਿੰਦਰ, ਸੁਖਪਾਲ)
2. **ਬਲਦੇ ਦੀਵੇ,** ਰਜ਼ੀਆ ਨੂਰ ਮੁਹੰਮਦ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) **ਨਕਸ਼ ਨੁਹਾਰ** ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
   (ਅ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ ਸਪਸ਼ਟ ਕਰੋ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
2. (ੳ) **ਬਲਦੇ ਦੀਵੇ** ਨਾਵਲ ਵਿਚੋਂ ਪ੍ਰਮੁੱਖ ਘਟਨਾਵਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
   (ਅ) ਨਾਵਲ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) **10 ਅੰਕ**
   (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ)
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਵਲ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰ ਤੋਂ ਵੱਧ ਨਾ ਹਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤਕ ਦਾ ਇਤਿਹਾਸ (1901 ਈ. ਤੋਂ 2000 ਈ. ਤੱਕ) : ਨਾਵਲ, ਕਹਾਣੀ ਤੇ ਸਫ਼ਰਨਾਮਾ 5 x4=20 ਅੰਕ
   ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ ਸੰਖੇਪ ਉੱਤਰ ਵਾਲੇ ਪ੍ਰਸ਼ਨ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ – ਉੱਤਰ 50 ਸ਼ਬਦ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : **10 ਅੰਕ**
   (ੳ) ਧੁਨੀ ਸੰਪਰਦਾਇ (ਅ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ)
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)
6. ਸਾਹਿਤ ਆਲੋਚਨਾ : ਸਾਹਿਤ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਿਰਤੀ, ਪ੍ਰਯੋਜਨ ਤੇ ਤੱਤ **10 ਅੰਕ**
   (ਦੋ ਸਵਾਲਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)

ਸਹਾਇਕ ਪੁਸਤਕਾਂ :

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ), ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪੱਤੀ ਤੇ ਵਿਕਾਸ, ਡਾ. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕ੍ਰਿਪਾਲ ਸਿੰਘ ਕਸੇਲ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.) 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
5. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.) 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
6. ਜੱਗੀ, ਰਤਨ ਸਿੰਘ (ਡਾ.). ਸਾਹਿਤ ਦੇ ਰੂਪ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
8. ਸ਼ੈਰੀ ਸਿੰਘ ਤੇ ਬ੍ਰਹਮ ਜਗਦੀਸ਼ (ਪ੍ਰੋ.), ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
9. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

संस्कृत (इलैक्टिव)
सेमेस्टर–1

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT - I

(क) **अपरीक्षितकारकम्** (1-4 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) **नीतिशतकम्** (1-25 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

UNIT – II

(ग) **व्यावहारिक संस्कृत शब्दावलीः** शरीरांग, फल एवं सब्जियाँ सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. अगूंठा-अङ्गुष्ठः	2. आँख-चक्षुः, लोचनम्, नेत्रम्, नयनम्	3. अंगुली-अङ्गुलिः
4. ओठ-ओष्ठः	5. कमर-श्रोणिः, कटिः	6. कलाई-मणिबन्ध:
7. कान-कर्णः, श्रोत्रम्	8. गर्दन-ग्रीवा	9. घुटना-जानुः
10. जीभ-जिह्वा, रसना	11. दाँत-दन्तः, दशनः	12. नाक-घ्राणम्, नासिका
13. पेट-कुक्षिः, उदरम्	14. बांह-बाहुः, भुजः	15. भौं-भ्रूः

16. माथा-ललाटम्	17. शरीर-गात्रम्, शरीरम्	18. अंगूर-द्राक्षा
19. अमरूद-आम्रलम्	20. आम-आम्रम्	21. काजू-काजवम्
22. किशमिश-शुष्कद्राक्षा	23. खजूर-खर्जूरम्	24. जामुन-जम्बूफलम्
25. तरबूज-तारबूजम्	26. खरबूजा-खर्बुजम्	27. नारियल-नारिकेलम्
28. लीची-लीचिका	29. सेव-सेवम्	30. अंजीर-अंजीरम्
31. नारंगी-नारंगम्	32. बेल-बिल्वम्, श्रीफलम्	33. बेर-बदरीफलम्
34. मेवा-शुष्कफलम्	35. आलू-आलुः	36. ककडी-कर्कटी
37. करेला-कारवेल्लम्	38. गोभी-गोजिह्वा	39. टमाटर-रक्ताङ्गम्
40. टिंडा-टिंडिशः	41. धनिया-धान्यकम्	42. पालक-पालकीर्ः
43. प्याज-पलाण्डुः	44. वैंगन-वंगनः	45. भिंडी-भिंडकः
46. मिर्च-मरीचम्	47. मूली-मूलकम्	48. लहसून-लशुनम्
49. शलगम-श्वेतकन्दः	50. साग-शाकः	

UNIT-III

(घ) वर्णों के उच्चारण स्थान **4x1=4अंक**

(ङ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

अत्र, तत्र, कुत्र, यत्र, अन्यत्र, सर्वत्र एकत्र, इतः, ततः, कुतः, कदा, तदा, यदा, सदा, तथा, यथा

(च) संख्या (गणना) वाची शब्द (1 से 50 तक (पाँच शब्द) **5x1=5अंक**

(छ) सामान्य- ज्ञान - तिथि, नक्षत्र, योग, करण, वार **5अंक**

(ज) स्वर सन्धि (पाँच सन्धियाँ प्रष्टव्य) **5x1=5अंक**

UNIT-IV

(झ) शब्दरूप : राम, लता, फल, मुनि, मति, नदी (दो शब्दरूप प्रष्टव्य) **2x4=8अंक**

(ञ) धातुरूप : पत, गम, पठ्, क्रीड, वद्, पा (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में, दो धातुरूप प्रष्टव्य) **2x4=8अंक**

UNIT-V

(ट) हिन्दी से संस्कृत में अनुवाद (5 वाक्य) **5x1=5अंक**

सहायक पुस्तकें – 1. अपरीक्षितकारकम्(विष्णुशर्मा)। 2. नीतिशतकम् (भर्तृहरि)। 3. शीघ्रबोध, चौखम्बा, वाराणसी।

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संस्कृत (इलैक्टिव)
सेमेस्टर–2

Paper - Sanskrit : **कथा, नीति एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को रोचक कथाओं के माध्यम से काम-क्रोध-लोभ-मोह-अहंकार, मात्सर्य तथा ईर्ष्या इत्यादि दुर्गुणों के वशीभूत न होकर जीवन-पथ पर अग्रसर होने, विद्या का वास्तविक अर्थ एवं बुद्धि की महिमा की शिक्षा देना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के अध्ययनार्थ, अव्ययों का प्रयोग, संख्यावाची शब्द, शब्दरूप, धतुरूप एवं अन्य सामान्य ज्ञान से परिचित करवाना ।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

(क) अपरीक्षितकारकम् (5-8 कहानी) **अंक-20**

(i)	गद्य-भाग (सप्रंसग अनुवाद - तीन में से एक)	05अंक
(ii)	सूक्ति/श्लोक (दो की सप्रसंग-व्याख्या)	10अंक
(iii)	कथासार	05अंक

(ख) नीतिशतकम् (26-50 श्लोक) **अंक-15**

(i)	श्लोक (दो की सप्रसंग व्याख्या)	10अंक
(ii)	सूक्ति-सप्रसंग अनुवाद/ व्याख्या (तीन में से एक)	05अंक

(ग) व्यावहारिक संस्कृत शब्दावली : पशु, पक्षी एवं वनस्पति सम्बन्धी (15 में से 10 शब्दों की संस्कृत) **अंक-10**

1. ऊँट-उष्ट्रः	2. खरगोश-शशकः	3. गधा-गर्दभः, खरः
4. गाय-गौः	5. गीदड़-श्रृगालः	6. गैंडा-गण्डकः
7. घोड़ा-अश्वः, घोटकः	8. चूहा - मूषकः	9. छिपकली-ललन्तिका
10. नेवला-नकुलः	11. बन्दर-वानरः, कपिः	12. बकरा-अजः
13. बिल्ली-मार्जारी	14. बैल-बलदः, बलीवर्दः, वृषभः	15. भैंस-महिषी
16. शेर-सिंहः	17. हाथी-गजः, दन्ती, करी	18. हिरन-मृगः, हरिणः, कुरंगः
19. उल्लू-उलुकः, कौशिकः	20. कबूतर-कपोतः, पारावतः	21. कोयल-कोकिलः

22. कौवा-काकः
23. गीध-गृधः
24. चकवा-चक्रवाकः
25. चिड़िया-चटका
26. तोता - शुकः
27. पपीहा-चातकः
28. बगला-बकः
29. बतख-वर्तकः, वर्तिका
30. बाज-श्येनः
31. मोर-मयूरः
32. मुर्गा-कुक्कुटः
33. हंस-हंसः
34. सारस-सारसः
35. आंवला-आमलकी
36. आम(वृक्ष)-आम्रः
37. जामुन (वृक्ष)-जम्बूः
38. नारियल (वृक्ष)-नारिकेलः
39. नीम-निम्बः
40. पीपल-अश्वत्थः
41. बेल (वृक्ष)-बिल्वः
42. गुलाब-स्थलपद्मम्
43. कमल-कुवलयम्, पुण्डरीकम्, पद्मम्
44. गेंदा-गन्धपुष्पम्
45. चमेली-मालती
46. चम्पा-चम्पकः
47. पराग-मकरन्दः
48. रात की रानी-रजनीगन्धा
49. पत्ता-पत्रम्, पर्णम्
50. लता-व्रततिः, वीरुत्

(घ) निम्नलिखित अव्ययों का वाक्यों में प्रयोग **5x1=5अंक**

कथम्, अद्यः, श्वः, ह्यः, परश्वः, सद्यः, पुरतः, पृष्ठतः, वामतः, दक्षिणतः, नीचै, उच्चैः, बहिः, अन्तः

(ङ) संख्या (गणना) वाची शब्द (51 से 100 तक) पाँच शब्द **5x1=5अंक**

(च) सामान्य- ज्ञान (राशि, मास, ग्रह एवं दश दिशाओं के नाम) **5अंक**

(छ) शब्दरूप : गुरु, पितृ, मातृ, भवत्, अस्मद्, युष्मद् (दो शब्दरूप प्रष्टव्य) **2x5=10अंक**

(ज) धातुरूप : लिख्, नी, दृश्, भू, त्यज्, स्मृ धातु (केवल लट्, लृट्, लोट्, लङ्, विधिलिङ् लकार में दो धातुरूप प्रष्टव्य) **10अंक**

(झ) हिन्दी से संस्कृत में अनुवाद (10 वाक्य) **5x2=10अंक**

सहायक पुस्तकें – अपरीक्षितकारकम् (विष्णुशर्मा)। नीतिशतकम् (भर्तृहरि)। शीघ्रबोध, चौखम्बा वाराणसी।

URDU (Elective)

SEMESTER - I

Essay and Composition:

Theory **: 90 marks**
Internal Assessment **(5+3+2) : 10 marks**
Time : 3 Hrs

Unit-I

Essay 30 marks

Unit-II

Letter/ Application 20 marks

Unit-III

Mutazad Alfaz, Mutaradif Alfaz, Wahid aur Jama, Tazkeer-o-Taanees 20 marks

Unit-IV

Muhaware, Correction of words/ sentences 20 marks

Books Recommended:

1. Guldasta-e- mazameen -Insha pardazi Part II by Dr. Arif Mohd. Khan, published by Educational Book House, AMU Market, Aligarh.
2. Urdu Qaedah-mae- Intekhaab Nasar-o-nazm by Dr. Haroon Ayub.

URDU (Elective)

SEMESTER - II

Prose and Poetry

Theory : 90 marks
Internal Assessment (5+3+2) : 10 marks
Time : 3 Hrs

Unit-I

Explanation of Prose Passages from : 30 marks
Urdu Zuban Hamari, Mirza Ghalib ki Seerat, Darogha ki Panchon Ghee mein, Nasooh ki Bimari.

Unit-II

Explanation of Ghazal verses from : 20 marks
Muhammed Valiullah Vali, Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Faiz Ahmed Faiz, Raghupati Sahay Firaq Gorakhpuri, Jigar Moradabadi.

Unit-III

Explanation of Nazm verses from : 20 marks
Ajanta, Taj Mahal, Kashmir, Shikast-e-zindan ka khwab, Dastan Shahzade ke ghayab hone ki, Farzi latifa, Ek chehlum par, Clerk.

Unit-IV

Summary of poem or a lesson from prose and poetry (given in Unit I & III) 20 marks

Books Prescribed

Urdu Nisab Part II, published by Educational Book House, A.M.U. Market, Aligarh.

PERSIAN (Elective)

Note : There will be one paper in each Semester i.e. 1st and 2nd Semester of 90 marks each and Internal Assessment 10 marks each Semester for the session of 2020-2021.

SEMESTER-I

Paper-A – Prose:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Translation of two passages into English, Urdu, Punjabi, Hindi or Persian. (Out of three question 2 have to be attempted)	Marks: 30
2.	Explanation of Hikayat or Intekhab into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the Hikayat from Gulistan-e-Saadi into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the authors.	Marks: 20

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. Complete Prose section.
   Hafiz Maulavi Mohd. Ayyub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Ilahabad.

PERSIAN (Elective)

SEMESTER-II

Paper-B – Poetry:

Time: 3 Hours
Written Paper: 90 Marks
Internal Asst. :10 Marks

Instructions to the paper setter/examiner and also the distribution of marks as follows:

1.	Explanation of poems into English, Urdu, Punjabi, Hindi or Persian (Out of three poems comprising five Ashaar two have to be attempted)	Marks: 30
2.	Explanation of the theme of the poem into English, Urdu, Punjabi, Hindi or Persian. (Choice must be given)	Marks: 30
3.	Summary of any one of the poem into English, Urdu, Punjabi, Hindi or Persian.	Marks: 10
4.	Simple and direct short biographical questions on the poets.	Marks: 20

Only the following poems from the book Guldasta-ye-Farsi:

(1) **انتخاب از سعدی**

شنیدم که در وقت نزع روان
شنیدم که دا رای فرخ تبار
مشتاقی وصبوری از حد گزشت یارا

(2) **غزلیات حافظ**

دوش وقت سحرا از غصه نجاتم دادند
دل می رود زدستم صاحب دلان خدار

Books Prescribed for this Paper:

1. Guldasta-ye-Farsi. From Hissa-ye-Nazm.
   Hafiz Maulavi Mohd. Ayub Khan
   Publisher: Ram Narayan, Beni Madhauv
   2, Katra Road Allahabad.

FRENCH (Elective)

SEMESTER - I

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. 20 marks

2. Comprehension of an unseen text (easier than the prescribed textbook). Ten questions to be put and answered in French. 10 marks

3. Translation from English into French and from French into English of a passage or short sentences based on the vocabulary of the prescribed textbook. 10+10 marks

4. Questions on applied grammar, including conjugation of verbs in applied form, pertaining to the text book. 30 marks

5. Write a dialogue of 150 words on the topics covered in the syllabus. 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 1-6) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Semester.

2. All questions are to be asked and answered in French (except questions on translation).

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (Elective)

SEMESTER – II

EXAMINATION : WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks : 100
Theory : 70 marks
Internal Assessment : 10 marks
Viva : 20 marks
Time : 3 hours

1. Ten questions (including General and based on Civilization) pertaining to the prescribed textbook. 20 marks

2. Comprehension of an unseen text. Ten questions to be put and answered in French. 10 marks

3. Questions on applied grammar, including conjugation of verbs in applied form pertaining to the text book. 30 marks

4. Write an essay/composition of 150 words on any topic covered in the syllabus 10 marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Version Originale-1 (Units 7-8) Version Originale-2 (Units 1-4) Méthode de Français/Livre de l'élève, Fabrice Barthélémy, Christine Kleszewski, Émilie, Perrichone Sylvie Wuattier, Conseil pédagogique et révision : Christian Puren, Editions Maison des Langues, Paris

(a) Livre de l'éléve

(b) Cahier d'exercices

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. First Year.

2. All questions are to be asked and answered in French

Viva:	**20 marks**
Reading	10 marks
Seen	05 marks
Unseen	05 marks
Conversation	10 marks

For the information of private candidates:

1. Viva is compulsory**.**
2. The theory paper would be proportionately marked out of 80 as there is no internal assessment.

GERMAN (Elective)

SEMESTER – I

Summary

Max. Marks	:	100 marks(Total)
Paper-A (Theory)	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 1-15 upto page 78 (5 questions) : 50 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1": Chapters 1-15 upto page 78 (3 out of 4 questions to be attempted) : 20 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 20 marks

i. Gefunden (Goethe)
ii. Da ich ein Knabe war (Hölderlin)
iii. Sehnsucht (Eichendorff)

Internal Assessment : 1**0 marks (Total)**

- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 1-15 upto page 78.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary Book:

"Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 1-15.

GERMAN (Elective)

SEMESTER –II

Summary

Max. Marks	:	100 marks(Total)
End-Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) Examination	:	30 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Note : Use of dictionary is allowed

I. Questions in applied grammer (including fill in the blanks) conforming to prescribed text-book "Lagune-1": Chapters 16-30 (5 questions) : 30 marks

II. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-1" : Chapters 16-30 (3 out of 4 questions to be attempted) : 15 marks

III. Paraphrasing of a poem or stanzas out of the following poems from "German Verse" by Kulkarni & Chapekar : 15 marks

i. Die Lorelei (Heine)
ii. Sommerbild (Hebbel)
iii. Abendlied (Keller)

Oral (viva-voce) Examination : 30 marks (Total)

i. Easy conversation in German
ii. Reading of a simple unseen text and answering questions there-on.

Internal Assessment : 10 marks (Total)

i. Continuous Evaluation
ii. Attendance

Note: 1. The mode of evaluation for Internal Assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in paper B)

Prescribed Textbook:

i. "Lagune-1" Kursbuch by Hartmut Aufderstraße a.o: Chapters 16-30.
ii. "German Verse" by Kulkarni & Chapekar

Supplementary book:

i. "Lagune-1" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 16-30.

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RUSSIAN (Elective)

SEMESTER - I

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks	**:**	**100**
Theory	**:**	**90 marks**
Internal Assessment (For regular students)	**:**	**10 marks**
Maximum Time	**:**	**3 hrs.**

1. Translation from simple Russian into English/Hindi/Punjabi (about 120 words) **15 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 100 words). **15 Marks**

3. Simple applied grammar: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

4. Questions on prescribed texts in Russian: 3 questions out of 5 (5 marks each) (Covered in Lessons 1-15, Wagner) **15 Marks**

5. Composition (One out of three) on the following topics: **15 Marks**
   1. My family. 2. My day. 3. Our class. 4. Working day.

6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper: **15 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi.(Lessons 1-15)

Books recommended for additional reading

1. A. K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.

2. S. Khavronina: Russian in Exercise,1978.

3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.

4. Dictionaries : English -Russian dictionary.
   Russian -English dictionary.

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RUSSIAN (Elective)
SEMESTER - II

Paper : (General Translation, Grammar, Composition and comprehension): Written

Max. Marks : 70
Theory : 60 marks
Internal Assessment : 10 marks
(For regular students)
Maximum Time : 3 hrs.

1. Translation from simple Russian into English/Hindi/Punjabi (about 80 words) **10 Marks**

2. Translation from simple English / Hindi / Punjabi into Russian (about 75 words). **10 Marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) (Covered in Lessons 16-31, Wagner) **12 Marks**

4. Questions on prescribed texts in Russian: 4 questions out of 6 (2 marks each) (Covered in Lessons 16-31, Wagner) **08 Marks**

5. Composition (One out of three) on the following topics: **10 Marks**
   1. Our city. 2. Our flat. 3. An evening party. 4. Birthday.

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper: **10 Marks**

Note : Use of dictionaries is allowed.

Book Prescribed :

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 16-31)

Books recommended for additional reading

1. A.K.Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S. Khavronina: Russian in Exercise,1978.
3. I. Pulkina : RUSSIAN A practical Grammar with Exercise. Russky Yazik. Pub. H. Moscow.
4. Dictionaries: English -Russian dictionary.
   Russian -English dictionary.

Oral/ Practical **Maximum Marks: 30**

Reading of text(s) and conversation in simple Russian.

1. V.N.Wagner : Russian, PPH, New Delhi. (Lessons 6-31)

SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabus for B.A.(GENERAL)
FIRST YEAR (SEMESTER SYSTEM) SYLLABUS has been
KEPT IN ABEYANCE

PHYSICAL EDUCATION

SEMESTER-I

THEORY :

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks, i.e two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Education :

- Meaning and concept of Education

Physical Education :

- Meaning and definition of Physical Education, its aim and objectives.
- Need and importance of Physical Education in the Modern Society and its relationship with other subjects.

History of Physical Education :

- Pre and Post Independence Development of Physical Education in India.

UNIT-III 12 Marks

Olympic Games, Asian Games & Common Wealth Games :

- Ancient Olympic Games.
- Modern Olympic Games.
- Asian Games; and
- Common Wealth Games.

UNIT-IV 12 Marks

Sports Schemes, National Institutions of Sports and National and International Governing Bodies of Olympic Games :

- Raj Kumari Amrit Kaur Coaching Scheme.
- Netaji Subash National Institute of Sports, Patiala (NSNIS, Patiala).
- Sports Authority of India (SAI).
- Indian Olympic Association (IOA).
- International Olympic Committee (IOC).

UNIT-V 12 Marks

Basics of Handball :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna Awardees of the game.

References :

1. Barrow, H. M. (1983) : *"Man and Movements : Principles of Physical Education",* Philadelphia, Lea and Febiger.
2. Brar, R.S. Walia, R., Gill, M., Kanwar, S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of physical education"* Kalyani Publisher, Ludhiana, Punjab.
3. Bucher, C. A. (1979) : *"Foundations of Physical Education,"* St. Louis C.V. Mosby Company.
4. Chauhan, S.S. (1985) : *"Advanced Educational Psychology",* New Print-India Pvt. Ltd., Sahibabad, U.P.
5. Khan, E. A. (1964) : *"History of Physical Education,"* Scientific Book Company.

6. Murti K. & Ram, P. N. (1990) : *"Educational Dimensions of Physical Education",* 2nd Revised Edition, Print India, New Delhi.

7. Moslon (1976) : *"The Olympian",* Olympic House, Canada.

8. Puni, A.T. (1980) : *"Sports Psychology",* An abridged Translated by G.S.Sandhu, NIS, Patiala.

9. Sharma, P.D. (1996) : *"Olympics : Athens to Atlanta, 1896-1996",* Friends Publications (India) Delhi.

10. Sheldon, W.H. (1940) : *"The Varieties of Human Physique",* New York, Harper and Row Publishers.

11. Singh, Ajmer et al (2000) : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana.

12. Skinner, C. E. (1964) : *"Educational Psychology",* 4th edition, Prentice Hall of India Pvt. Ltd.

13. Narayanan T. C. and Hariharan S. (1975) : *"An Analytical History of Physical Education",* South India Press, Karaikudi.

PRACTICAL

Max. Marks : 35
Practical : 30
Internal Assessment : 05

ATHLETICS

Sprints (Types of Start and Finish) :

(a) Crouch start-fixing of starting blocks, getting in and off the block, emphasizing on body position, need of starting blocks in a sprint race.

(b) Practice of starts with starting blocks using proper commands.

(c) Training the students for correct running style.

(d) Practice of Finishing the sprint with different techniques.

(e) Rules and Regulations of Sprint races.

Middle Distance, Long Distance and Walking Events :

(a) Marking of standard tracks, width of lanes and starting points for various races.
(b) Practical of Standing Start.
(c) Correct running and walking style, emphasis on proper body position and foot placement.
(d) Running tactics.
(e) Rules of competition.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under :

Athletics 15 marks, participation and achievement in Athletics 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover, in the absence of proper facilities required for the events mentioned above may prove to be injurious/ fatal to the students.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher /class for each semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

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PHYSICAL EDUCATION

SEMESTER-II

THEORY

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(a) There shall be nine questions in all, spread over Five Units.

(b) First question/Unit is **compulsory.** It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks i.e., two marks each question.

(c) Rest of the paper shall contain four Units for descriptive questions. Each Unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each Unit.

(d) All questions/Units will carry equal marks.

(e) Private candidates and the students of the University School of Open Learning (USOL) are not allowed to take this subject.

(f) The University paper shall be set in three languages i.e., English, Punjabi and Hindi.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/Unit of the question paper which is compulsory.

UNIT-II 12 Marks

Cell:

- Meaning and definition of Anatomy & Physiology, Structure and Functions of a cell.

Skeletal System :

- Meaning and functions of skeletal system.
- Types of Bones and names of various bones of the body.

Muscular System :

- Introduction of Muscular system, structure and function of muscular system.
- Effect of short and long duration physical Exercise on the muscular system.

UNIT-III 12 Marks

Warming up, Cooling down and Physical Fitness :

- Warming up and cooling down in sports and its singnificance
- Meaning, definition and components of Physical Fitness.
- Influence of age, sex, body composition, diet, climate, exercise and training on Physical Fitness.

Kho-kho:

- History of the game
- Basic fundamentals
- Equipment and specifications
- Marking/layout of court
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play); and
- Major tournaments and Arjuna Awardees of the game

UNIT-IV 12 Marks

Health & Health Education :

- Meaning and definition of health.
- Meaning, definition, objectives, scope, principles and importance of Health Education.
- Personal hygiene, its meaning and importance.

First Aid :

- Meaning and importance of First Aid in Physical Education and Sports with special reference to Drowning, Dislocation of a joint, Fracture of bone, Sprain and Strain.

UNIT-V 12 Marks

Biological Basis of Physical Education :

- Growth and Development, Differences between growth and development.
- Factors affecting growth and development.
- Heredity and Environment and its effects on Growth and Development.
- Various stages of growth and development.

References :

1. Brar, R.S. Walia, R., Gill, M., Kanwar,S., Kalta, S., & Thapa, A.S. (2011) : *Fundamentals of Physical Education"* Kalyani Publisher, Ludhiana Punjab.
2. Chaurasia, B.D. (1981) : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition.
3. Dandiya, P.C., Jafer, Z., Y.K. & Afifa J. (1996) : *"Health Education and Community Pharmacy",* Vallabh Prakashan, Pitampura, New Delhi.
4. Marley, W.P. (1982) : *"Health and Physical Fitness",* CBS College Publishing.
5. Mathews, D.K. and Fox, E.L. (1976) : *"The Physiological Basis of Physical Education & Athletics*", Second Edition, W.B. Saunders Co., Philadelphia.
6. Park, J.E. & Park, K. (1985) : *"Text Book of Preventive and Social Medicine",* 10th Edition, Banarasi Dass Bhanot, Jabalpur, India.
7. Rose & Wilson (1981) : *"Foundations of Anatomy and Physiology",* 5th Edition.
8. Sampath, K. & Maheshwar B.U. (1999) : *"Human Anatomy & Physiology",* First Edition, Birla Publications, Delhi.
9. Dinshaw, S.F. (1997) : *Fighting fit for ever.* The Marine Sports Publishing Division, Bombay.
10. Shaphard, R.J. (1978) : *"The Fit Athlete",* Oxford University Press.
11. Larry, S.G. (1982) : *Essential of exercise physiology.* Surjeet Publications, Delhi, First Indian Print.
12. Singh, Ajmer et. al. (2000) : *Modern text book of physical education, health and sports,* Kalyani Publishers, Ludhiana.
13. Wilmore, J. H. (1997) : *"Athletic Training and Physical Fitness",* Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Messachusetts.

PRACTICAL

Max. Marks : 35
Practical : 30 marks
Internal Assessment : 05 marks

Games :

Note : Volleyball or Kabaddi (NS) and any one game of the choice of the student (other than the two) which should be confined to the list of games approved by the Association of Indian Universities.

Volleyball

(a) Measurements (volleyball court, net, poles, antenna and ball).
(b) Number and position of players and officials.
(c) Types of service (under arm service, side arm service and tennis service).
(d) Types of passes (under hand and over head pass).
(e) Rules of the game.

OR

Kabaddi (NS)

(a) Measurements (Kabaddi court for men and women).
(b) Number of players and officials.
(c) Fundamental offensive skills, touching with hand, leg thrust, front kick, side kick, Mule kick, jump and dive counter.
(d) Defensive Skill (wrist catch, normal grip, ankle catch, knee catch and chain formation).
(e) Tactics : (a) getting bonus point (b) counter to bonus line crossing (c) Delaying tactics for getting lona.

Physical Fitness Tests : More emphasis shall be given on general physical fitness and principles of physical exercises (Speed and agility).

Test 1 SPEED : 50 mts dash test.

Test 2 AGILITY : Shuttle run test.

Division of Practical Marks :

Marks for each activity shall be divided as under : Games 15 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce 5 marks and internal assessment 5 marks based on overall performance of a student during the current academic session which will be assessed by the teacher concerned.

Note :

1. The choice of games by the students shall be confined to the list of games approved by the Association of Indian Universities.
2. 12 periods per week (6 periods for theory and 6 periods for practicals) shall be allotted to a Teacher/class semester.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory (Paper) shall consist of 65 marks and practical paper shall consist of 35 marks in each semester.
5. A student shall be given a project work related with athletics.

EDUCATION
SEMESTER – I

PAPER : EDUCATION AND SOCIETY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

GENERAL INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV and; 75 words for each short answer type question in Unit V) for answer.

Objectives :

To enable the students to understand :

1. The Meaning, Nature and Scope of Education along with its types.
2. Functions of Education in light of its aims.
3. Role of Education viz-a-viz present day needs.

Course Contents :

UNIT-I : (a) Meaning and Nature of Education : Education as a Socio-Political Process and Developmental Process.
(b) Informal, Formal and Non-Formal Education.

UNIT-II : (a) Aims of Education – Individual, Social, Vocational and Democratic.
(b) Functions of Education – Individual Development, Transmission of Cultural Heritage and Education for Social Change.

UNIT-III : (a) Education for Democratic Citizenship.
(b) National Integration and International Understanding.

UNIT-IV : (a) Value Education –Meaning of Values, their Development
(b) Transactional Strategies.

Books Recommended :

1. Bhatia, K.K. and Narang, C.L. : *Teacher and Education in Emerging Indian Society,* Tandon Publishers, Ludhiana, 2002.
2. Bhatia, K.K. and Sharma, S. : *Bhartiya Shiksha Ki Adhunik Samasyaein,* Parkash *et al* Bros., Ludhiana, 1986.
3. Bhatnagar, Suresh : *Kothari Commission Recommendations and Evaluation with a Text on National Policy on Education,* Loyal Book Depot, Meerut, 1982.
4. Govt. of India : *National Policy on Education,* Ministry of Human Resource Development, New Delhi, 1986.
5. Govt. of India, Ministry of Education : *Report of Education Commission (1964-66)—Education and National Development.*
6. Govt. of India, Ministry of Education : *Report of Secondary Education Commission* (1952-53), New Delhi.
7. Gupta, S.P. : *Sikhya de Sidhant ate Takneekan,* Hans Book Depot, Faridkot, 1989.
8. Kansal, M.R. : *Sikhya de Sidhant,* Punjab State University Text Book Board, Chandigarh.
9. Mathur, S. S. : *Shiksha Sidhant,* Vinod Pustak Mandir, Agra, 1981.
10. Sharma, T.R. : *Sikhya de Sidhant,* Punjabi University, Patiala.
11. Safaya, R.N. : *Principles and Techniques of Education,* Dhanpat Rai & Sons, Jallandhar.
12. Yadav, H. S. et al : *Adhunik Bhartiya Smaj Mein Shiksha,* Tandon Publishers, Ludhiana, 1995.
13. Yadav & Yadav : *Education in the Emerging Indian Society,* Tandon Publications, Ludhiana.

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EDUCATION
SEMESTER – II

PAPER : EDUCATION AND HUMAN DEVELOPMENT

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks in all. Each short question will carry 3 marks.

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt **6** short questions out of **8** in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit (300-350 words for Units I, II, III, IV; and 75 words for each short answer type question in Unit V) for answer.

Objectives :

To make the students understand :

1. The meaning, scope and uses of psychology in education.
2. Human growth and development upto the stage of childhood.
3. Meaning, purpose of learning and factors influencing learning.
4. The concept of intelligence - its meaning and measurements.
5. Causes and significance of individual differences.

Course Contents :

UNIT-I : (a) *Educational Psychology :* Meaning, Nature and Scope.
(b) Individual Differences – Causes, Significance and Educational Implications.

UNIT-II : (a) Nature of Human Growth and Development – Physical, Mental, Emotional and Social.
(b) *Stages of Human Development :* Infancy and Childhood, their Needs, Significance and Problems.

UNIT-III : (a) *Learning :* Meaning and Definition.
(b) Theories of Learning - Trial and Error by Thorndike and Classical Conditioning by Pavlov.

UNIT-IV : (a) *Intelligence :* Meaning, Types
(b) Measurement of Intelligence.

Books Recommended :

1. Aggarwal, J.C. : *Essentials of Educational Psychology,* Vikas Publishing House, Private Ltd., New Delhi, 1995.
2. Bhatia, H.R. : *A Textbook of Educational Psychology,* Asia Publishing House, New Delhi, 1977.
3. Bhatnagar, S. : *Shiksha Manovigyan,* International Publishing House, Meerut, 1977.
4. Dhingra, R. : *Educational Psychology and Guidance,* Punjab Katab Ghar, Jallandhar.
5. Kagan, J. and Lang, C. : *Psychology and Education,* Harcourt Brace Jovanovich, Inc., New York, 1978.
6. Kundu, D. : *Modern Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1974.
7. Kuppuswamy, B. : *Advanced Educational Psychology,* Sterling Publishers (P.) Ltd., New Delhi, 1994.
8. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
9. Mathur, S.S. : *Educational Psychology,* Vinod Pustak Mandir, Agra, 1998.
10. Sandhu, I.K. and Kaur, A. : *Shikhya Manovigyan,* Punjabi University, Patiala, 1976.
11. Walia, J. S. : *Foundations of Educational Psychology,* Paul Publishers, Jallandhar, 2001.

ADULT EDUCATION

SEMESTER-I

Max Marks	**:**	**100**
Theory	**:**	**45 Marks**
Internal Assessment	**:**	**05 Marks**
Practical	**:**	**45 Marks**
Internal Assessment	**:**	**05 Marks**
Time	**:**	**03 Hours**

GENERAL INSTRUCTIONS FOR THE PAPER SETTER.

The question paper will consist of five Units: I, II, III, IV & V. Units I, II, III and IV will have two questions from the respective Units of the syllabus and will carry 9 marks each. Unit V will consist of 6 short answer type questions which will cover the entire syllabus uniformly and will carry 9 marks in all. Each short question will carry 1½ marks comprising 6 questions.

GENERAL INSTRUCTIONS FOR THE CANDIDATE.

The students will be required to attempt one question each from Units I, II, III and IV. The students are required to attempt 6 short questions out of 8 in Unit V which will be **compulsory**. The question paper should preferably carry internal division of marks for all the sub-questions of one main question.

OBJECTIVES OF THE COURSE:

The main objectives of the paper are;

1. To introduce students with meaning, scope and components of adult education.
2. To provide an overview of history of adult education.
3. To equip students with objectives, strategies and implementation of National Literacy Mission's Programs.
4. To acquaint students with structuring of teaching- learning environment for an adult learner.
5. To explain to students the various forms of Adult Education.

THEORY:

Unit-I

- *Adult Education*: Concept, Meaning, Brief History during Post-Independence Period.
- *Village Level Planning Committees*: Structural Organisation, Functions, Preparation of Annual Plans, Recent Development.

Unit-II

- Scope and Components of Adult Education i.e. Literacy, Numeracy, Awareness and Functionality.
- *Post Literacy & Follow up*: Objectives, Scope and Strategies.

Unit-III

- *National Literacy Mission*: Objectives, Strategies and Implementation.
- *Sarv Siksha Abhiyaan*: Objectives, Implementation and Strategies.

Unit-IV

- *Sakshar Bhart Mission*: Objectives, Strategies and Implementation.
- *Life Long Learning:* Meaning, Concept and Importance.

Books Recommended:

1.	Datta, S.C.	:	Adult Education in India, Indian Adult Education Association, New Delhi, 1986.
2.	Directorate of Adult Education	:	The National Adult Education Programme, 1978.
3.	Directorate of Adult Education, Ministry of Education, Govt. of India.	:	Training of Adult Education Functionaries I-4, D.A.E., 1980
4.	Directorate of Adult Education	:	Fifty years of Adult Education in India.
5.	Dept. of Education, Ministry of Human Resource Development Govt. of India	:	National Literacy Mission, 1988.
6.	Kundu, C.L.	:	Adult Education : Principles, Practices and Prospects sterling Publishers, Delhi, 1984.
7.	Mali, M.G.	:	Adult Education in India, Deep and Deep Publication, New Delhi, 1984.
8.	Mathur, B.M.	:	Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
9.	Pangotra, N.N.	:	Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
10.	Sharma, I.P.	:	Adult Education in India, National Book Organization, 1985
11.	Singh, Sohan	:	History of Adult Education, The Indian Adult Education Association, New Delhi, 1957.
12.	Styler, W.E.	:	Adult Education in India, Oxford University Press, 1986.
13.	Yadav, R.S.	:	Adult Education Training & Productivity. The Indian publications, Ambala Cantt., 1991.
14.	N. Markandan	:	Village Planning Committee Origin and Evolution, Gandhigram Rural Institute (Deemed University, Gandhigram, Tamil Nadu, 1986.
15.	R.Rengasamy	:	A Hand Book on Post Literacy and Follow up Madurai Kamaraj University, Madurai-625002, 1985.
16.	J.C. Saxena J.L. Sachdeva	:	Role of Adult Education and Mass Media for Civic Education Indian Adult Education Association, New Delhi, 1986
17.	S.R.Ranganathan	:	Literature for Neo-Literates, Indian Adult Education Association, New Delhi, 1966
18.	S.R. Ranganathan N.D. Godbole Kesari Hanuman	:	Human Values in Adult Education, Indian Adult Education Association, R.M. Chetsingh Delhi, 1958.

19. S.C. Dutta & H.J. Fischer : Training of Adult Educators, Shakuntala Publishing House, Bombay-1972.

20. R.Rangasamy & S. Raju : Teaching AIDS for Adult Education, Madurai Kamaraj University

21. S. Mohanty : Lifelong and Adult Education, APH Publishing Corporation, Ansari Road, Darya Ganj, New Delhi, 2007

22. S.Sohan Singh Meher C. Nanavatty Mrs. Welthy Fisher S.C. Dutta : Adult Education in Community Development- Indian Adult Education Association, 30, Faiz Bazar, Delhi, 1956.

23. Arvinda Chandra & Anupama Shah : Non-Formal Education For All, Sterling Publishers Pvt. Ltd. Delhi, 1987

24. R.P. Singh : Non-Formal Education- An Alternative Approach, Sterling Publishers Pvt. Ltd., Delhi, 1987

25. J.L. Sachdeva & Asha Vohra : Non-Formal Adult Education for Women, Indian Adult Education Association, New Delhi, 1985

26. S.R. Mohsini J.L. Sachdeva Asha Sehgal : Towards A Comprehensive Adult Education programme Indian Adult Edu. Association, New Delhi, 1983.

27. Avabai B. Wadia : Population Education for the Younger Generation- Family Planning Association of India, Bombay, 1968

28. J.K. Friesen S.C. Dutta : University Adult Education- Indian Adult Education Association, New Delhi, 1985

ADULT EDUCATION

SEMESTER-II

Max. Marks	:	100
Theory	:	45 marks
Internal Assessment	:	05 marks
Practical	:	45
Internal Assessment	:	05 marks
Time	:	3 Hours

UNIT-I : 1. Structuring Teaching Learning Environment for Adult Learners: Identification of Areas.
2. Survey of the Community, Identification of Learners.
3. Human Values in Adult Education.
4. Meaning of Human Values, Aspects of Human Values ; Emotional, Intellectual , Spiritual and their Development.

UNIT-II: 1. Campaign for enrolment of Adult Learning, enrolment of the learners and day-to- day functioning of Adult Education Centre, Involvement of Community & Developmental Agencies.
2. Development of Material for Post Literary and Follow up.

UNIT-III : 1. Various forms of Adult Education i.e. Social Education, Social Education as Remedial Education for Removing Tensions, for strengthening Social Consciousness, for Expanding Mental Horizons and Family Life Education.
2. Vocational Skill Development for Adults.

UNIT-IV: 1. Basic Education and Life Long Education.
2. Impact of ICTs on Life Long Education, Integrated approaches to Life Long Education.

PRACTICAL/FILED WORK :

Participation of the students in the following and preparation of Project Report:
1. Preparation of profile of the area.
2. Organization of Adult Education Centres for Basic Literacy Development.

The break up of 50 marks allotted to practical is as under:

		External	*Internal*
(i)	Viva-Voce	15 marks	
(ii)	Written questions based on the Project	10 marks	5
(iii)	Project Report	20 marks }	

The Project Report must be submitted 15 days in advance from the date/s of practical examination, to the Principal of the concerned College/Institution.

Books Recommended:

1. Datta, S.C. : Adult Education in India, Indian Adult Education Association, New Delhi, 1986.

2. Directorate of Adult Education : The National Adult Education Programme, 1978.

3.	Directorate of Adult Education, Ministry of Education, Govt. of India.	:	Training of Adult Education Functionaries I-4, D.A.E., 1980
4.	Directorate of Adult Education	:	Fifty years of Adult Education in India.
5.	Dept. of Education, Ministry of Human Resource Development Govt. of India	:	National Literacy Mission, 1988.
6.	Kundu, C.L.	:	Adult Education : Principles, Practices and Prospects sterling Publishers, Delhi, 1984.
7.	Mali, M.G.	:	Adult Education in India, Deep and Deep Publication, New Delhi, 1984.
8.	Mathur, B.M.	:	Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
9.	Pangotra, N.N.	:	Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
10.	Sharma, I.P.	:	Adult Education in India, National Book Organization, 1985
11.	Singh, Sohan	:	History of Adult Education, The Indian Adult Education Association, New Delhi, 1957.
12.	Styler, W.E.	:	Adult Education in India, Oxford University Press, 1986.
13.	Yadav, R.S.	:	Adult Education Training & Productivity. The Indian publications, Ambala Cantt., 1991.
14.	N. Markandan	:	Village Planning Committee Origin and Evolution, Gandhigram Rural Institute (Deemed University, Gandhigram, Tamil Nadu, 1986.
15.	R.Rengasamy	:	A Hand Book on Post Literacy and Follow up Madurai Kamaraj University, Madurai-625002, 1985.
16.	J.C. Saxena J.L. Sachdeva	:	Role of Adult Education and Mass Media for Civic Education Indian Adult Education Association, New Delhi, 1986
17.	S.R.Ranganathan	:	Literature for Neo-Literates, Indian Adult Education Association, New Delhi, 1966
18.	S.R. Ranganathan N.D. Godbole Kesari Hanuman	:	Human Values in Adult Education, Indian Adult Education Association, R.M. Chetsingh Delhi, 1958.
19.	S.C. Dutta & H.J. Fischer	:	Training of Adult Educators, Shakuntala Publishing House, Bombay-1972.
20.	R.Rangasamy & S. Raju	:	Teaching AIDS for Adult Education, Madurai Kamaraj University

21. S. Mohanty : Lifelong and Adult Education, APH Publishing Corporation, Ansari Road, Darya Ganj, New Delhi, 2007

22. S.Sohan Singh, Meher C. Nanavatty, Mrs. Welthy Fisher, S.C. Dutta : Adult Education in Community Development- Indian Adult Education Association, 30, Faiz Bazar, Delhi, 1956.

23. Arvinda Chandra & Anupama Shah : Non-Formal Education For All, Sterling Publishers Pvt. Ltd. Delhi, 1987

24. R.P. Singh : Non-Formal Education- An Alternative Approach, Sterling Publishers Pvt. Ltd., Delhi, 1987

25. J.L. Sachdeva & Asha Vohra : Non-Formal Adult Education for Women, Indian Adult Education Association, New Delhi, 1985

26. S.R. Mohsini, J.L. Sachdeva, Asha Sehgal : Towards A Comprehensive Adult Education programme Indian Adult Edu. Association, New Delhi, 1983.

27. Avabai B. Wadia : Population Education for the Younger Generation- Family Planning Association of India, Bombay, 1968

28. J.K. Friesen, S.C. Dutta : University Adult Education- Indian Adult Education Association, New Delhi, 1985

MUSIC (Vocal)

SEMESTER – I

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section of Practical Class.

3. There should not be more than eight students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**

6. The candidate can take vocal music along with Instrumental Music/Tabla.

7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)				45 Marks
PRACTICAL (20 minute's duration)				45 Marks
(i)	Choice & Viva	:	35 Marks	
(ii)	Harmonium	:	05 Marks	
(iii)	Tabla	:	05 Marks	
Internal Assessment (Theory + Practical) (05+05)				10 Marks
			Total :	**100 Marks**

THEORY

Unit-I

1. Bhatkhande Notation System in Modern Period.
2. Elementary knowledge of Raga
3. Different Jaties of Ragas of ***the Present Raga System*** of North Indian Music

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words): Shruti, Swara (Shudh & Vikrit), Saptak, Alankar
2. Life sketch and contribution of Pandit V.N. Bhatkhande.
3. Sangeet: (Definition and Importance)

Unit-III

1. Brief description of Tanpura.
2. Definitions and types of Khayal.

Unit-IV

1. Notation & b r i e f d escription of Ragas prescribed in the course with Alap and Taans:- Alhaiya Bilawal, Bhopali
2. Notation & Description of Talas prescribed in the course:- Teentala, Dadra (Single & Double)

NOTE :- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: - Alhaiya Bilawal, Bhopali
2. One Sargamgeet in any of the prescribed ragas
3. Ability to play Dadra Tala on Tabla
4. Ability to recite bols of the tala prescribed in the course in Thah and Dugun by hand:-Teen tala, Dadra
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swaras and sing alongwith it.
6. Ability to sing national Anthem

Books Recommended:

1.	Sangeet Bodh	:	Paranjpe, Shartchandra Shridhar.
2.	Sangeet Shastra Vigyan	:	Panna Lal Madan.
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	Sangeet Sar Part (I)	:	Mrs. Veena Mankaran
5.	Raga Vigyan, Part I to IV	:	Pt. V.N. Patwardhan.
6.	Hamare Sangeet Ratan	:	Sangeet Karayalaya, Hathras.
7.	Sangeetanjali Part I to IV	:	Pt. Onkar Nath Thakur.
8.	Kramik Pustak Mallika Part I to III	:	Pt. V.N. Bhatkhande.
9.	Raag Parichay Part I,II,III	:	Sh. H.C. Srivastav.
10.	Sangeet Kaumudi Part II	:	V.S. Nigam.
11.	Sangeet Shastra Darpan Part II	:	Shanti Goverdhan.

MUSIC (Vocal)

SEMESTER-II

GENERAL INSTRUCTIONS :

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto10 students in one section of Practical Class.
3. There should not be more than eight students in a batch for practical examination.
4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
5. **While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.**
6. The candidate can take vocal music along with Instrumental Music/Tabla.
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

THEORY (3 Hours duration)			45 Marks
PRACTICAL (20 minutes duration)			45 Marks
(i) Choice & Viva		:	35 Marks
(ii) Harmonium		:	05 Marks
(iii) Tabla		:	05 Marks
Internal Assessment (Theory + Practical)	(05 + 05)	:	10 Marks

THEORY

Unit-I

1. Knowledge of Bhatkhande Thaat Paddhati
2. Study of Naad
3. Various developments (in brief) in the History of North Indian Music of Modern Period.

Unit-II

1. Elementary knowledge of the following Musical terms (not more than 100 words):
   Matra, Avartan, Sam, Tali, Khali, Vibhag, Aroh, Avaroh
2. Elementary knowledge of the Gun Dosh of Gayak

Unit-III

1. Elementary knowledge of the Laya & Taal in Music
2. Brief life sketch and contributions of : Pt. Vishnu Digambar Paluskar.

Unit-IV

Notation and Description of the prescribed Ragas and Talas :-

1. To write one drut khyal in each of the following ragas:- Yaman, Kafi with Alap and Taans
2. To write one bada khyal in any raga of the syllabus with Alap and Taans
3. To write the notation of Talas:- Ektal, Kehrwa.
4. To write the description of ragas of the syllabus

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Tala.

Unit-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PRACTICAL

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas : -Yaman, Kafi
2. One Vilambit Khayal in any of the prescribed Ragas.
3. Ability to play Teen Tala on Tabla
4. Ability to recite bols of the talas prescribed in the course in Thah and Dugun by hand:- Ek tal, Kehrwa
5. Ability to play on Harmonium at least three alankaras based on Shudh and Vikrit swars and sing along with it.

Books Recommended:

1.	*Sangeet Bodh*	:	Paranjpe, Shartchandra Shridhar.
2.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
3.	Sangeet Kala ka Itihas	:	Panna Lal Madan
4.	*Sangeet Sar Part (I)*	:	Mrs. Veena Mankaran.
5.	*Raga Vigyan, Part I to IV*	:	Pt. V.N. Patwardhan.
6.	*Hamare Sangeet Ratan*	:	Sangeet Karayalaya, Hathras.
7.	*Sangeetanjali Part I to IV*	:	Pt. Onkar Nath Thakur.
8.	*Kramik Pustak Mallika Part I to III*	:	Pt. V.N. Bhatkhande.
9.	*Raag Parichay Part I,II,III*	:	Sh. H.C. Srivastav.
10.	*Sangeet Kaumudi Part II*	:	V.S. Nigam.
11.	*Sangeet Shastra Darpan Part II*	:	Shanti Goverdhan.

MUSIC (Instrumental)

SEMESTER-I

GENERAL INSTRUCTIONS :-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music.

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i)	Viva	:	35 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla	:	05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit – I

1. Elementary knowledge of Raga
2. Sangeet (Definition & importance)
3. Different Jaties of Ragas of the Present Raga System of North Indian Music.

Unit – II

1. Elementary knowledge of the following terms: (not more than 100 words) :
   Swara, Saptak, Alankar. Aron, Avroh, Pakad, Thaat
2. Elementary knowledge of Bhatkhande Notation System.

Unit – III

1. Brief description of your own instrument.
2. Definition and types of Gat (Razakhani and Maseetkhani).

Unit – IV

Notation and Description of the prescribed Ragas and Talas :

1. Rag Bhopali (one Razakhani gat)
2. To write Alankars.
3. To write the notation of Tala (Dadra & Teental) with dugun layakaries

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. Demonstration of different Alankars of Shudh & Vikrit Swaras on your instrument.
2. One Razakhani gat of raga Bhopali
3. Knowledge of the non-detailed raga : Deshkar (only Aroh-Avroh and Pakad).
4. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries: Dadra, Teental .
5. Ability to play Shudh-Swaras on Harmonium.
6. Ability to play Dadra tala on tabla.

Books Recommended

1.	*Rag Parichaya Part II and III*	:	H.C. Srivastava.
2.	*Sangeet Kaumudi Part-II (Punjabi)*	:	V.S. Nigam
3.	*Sitar Marg, Part-II*	:	S. Bandopadhya.
4.	*Sangeet Sar, Part-I*	:	Mrs. Veena Mankaran.
5.	*Sangeetanjali, Part I & IV*	:	Pt. Onkar Nath Thakur.
6.	*Sangeet Manjusha*	:	Dr. Indrani Chakravarti.
7.	Sangeet Shastra Vigyan	:	Sh. Panna Lal Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna Lal Madan

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MUSIC (Instrumental)

SEMESTER-II

GENERAL INSTRUCTIONS

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto10 students in one section in Practical Class.

3. **There should not be more than eight students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting by one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 question of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**

8. The candidate can take vocal music or Tabla along with instrumental music

THEORY (3 Hours duration) 45 Marks

PRACTICAL (20 minutes duration) 45 Marks

(i)	Viva	: 35 Marks
(ii)	Harmonium	: 05 Marks
(iii)	Tabla	: 05 Marks

Internal Assessment (Theory + Practical) (05 + 05) : 10 Marks

THEORY

Unit-I

1. Various developments (in brief) in the History of Indian Music of Modern Period.
2. Knowledge of Bhatkhande That Paddhati.
3. Study of Nada

Unit-II

1. Elementary knowledge of the following terms (not more than 100 words) :
   Matra, Avartan, Sam, Tali, Khali and Vibhag
2. Study of various bols of Mizrab,Tora , Jhala

Unit-III

1. Elementary knowledge of Laya and Taal in Music
2. Brief life sketches and their contributions to Indian Music of the following great masters :-
   (i) Pt. Ravi Shanker
   (ii) Pt. V.N. Bhatkhande

Unit-IV

Definition and description of the prescribed Ragas and Tala :- Yaman , Kafi

1. One Maseetkhani Gat in any prescribed raga and talas :-Yaman , Kafi
2. To write the notation of Razakhani Gat of rag Kafi and Yaman with atleast four todas
3. Write in notation Jhaptala, Keharva Tala with dugan layakaries.

NOTE:- Both the questions from this part must contain one notation of Raga alongwith the notation of Talas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PRACTICAL

1. One Maseetkhani Gat in any raga of your syllabus.
2. Razakhani gats with toras & Jhala in the following ragas :-Kafi, Yaman
3. Ability to demonstrate the following talas by hand in Ekgun and Dugun layakaries :Talas : Jhaptal & Keharva
4. Ability to play Teen tala on Tabla
5. Ability to play Aroh, Avron of Raag Yaman & Kafi on Harmonium.
6. Ability to play National Anthem on your own instrument.

Books Recommended:

1.	Rag Parichaya Part II and III	:	H.C. Srivastava
2.	Sangeet Kaumudi Part-II (Punjabi)	:	V.S. Nigam
3.	Sitar Marg Part-II	:	S. Bandopadhya
4.	Sangeet Sar, Part-I	:	Mrs. Veena Mankaran
5.	Sangeetanjali, Part I & IV	:	Pt. Onkar Nath Thakur
6.	Sangeet Manjusha	:	Dr. Indrani Chakravarti
7.	Sangeet Shastra Vigyan	:	Sh. Panna La Madan
8.	Sangeet Kala ka Itihas	:	Sh. Panna La Madan

MUSIC (Tabla)

SEMESTER – I

GENERAL INSTRUCTION:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-I. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

Paper-B: **PRACTICAL** (20 minute's duration). : 45 Marks

(i)	Viva	30 Marks
(ii)	Harmonium	05 Marks
(iii)	Tabla (Tuning)	05 Marks
(iv)	Padhant on Hand	05 Marks

Internal Assessment (Theory+Practical) (5+5) 10 Marks

Total: 100 Marks

Paper-A THEORY

UNIT-I

1. Brief history of Tabla
2. Elementry knowledge of Taal
3. Sangeet (definition & Importance).

UNIT-II

1. Definitions : Sam, Tali, Khali, Vibhag, Bol, Theka, Avartan, Thah, Dugun
2. Brief description of Tabla.
3. Description of playing techniques of ten vernas.

UNIT-III

1. Life sketches and contributions of the following:-
    a. Ustad Siddhar Khan
    b. Miyan Kadar Baksh
    c. Pt. Chatur Lal

UNIT-IV

1. Ability to write in notation the composition prescribed Taal: (Teentaal, Chautal, Kehrva) Quaida, Simple Tukra, Tihai
2. To write description of Taal of the syllabus.
3. To write the notation of Taal in Single and Double.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B PRACTICAL

1. Taals Prescribed Teen Taal, Chautaal, Kehrwa
2. Laggi in Kehrwa Taal and its variety.
3. Teen Taal (Peshkara, Two Paltas, Two Kaydas, Two Mukhra)
4. Chautaal (Theka in Thah and Dugun)
5. Practice of playing the above Taals with Vocal and Instrumental performances.
6. Ability to play Nagma/Lehra on Harmonium in Teen Taal.

Books Recommended:

1. Taal Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadhya : M.P. Sharma
5. Hamare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

MUSIC (Tabla)

SEMESTER-II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-II. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.
3. Harmonium/Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A:	**THEORY** (3 Hours duration)	:	45 Marks
Paper-B:	**PRACTICAL** (20 minutes duration).	:	45 Marks
(i)	Viva	:	30 Marks
(ii)	Harmonium	:	05 Marks
(iii)	Tabla (Tuning)	:	05 Marks
(iv)	Padhant on Hand	:	05 Marks
Internal Assessment (Theory & Practical) (5+5)		:	10 Marks
	Total	:	**100 Marks**

Paper-A Theory

UNIT- I

1. Origin and development of Tabla
2. Definition of Baaj and Chhand.
3. Brief description of Bhatkhande Taal notation system.

UNIT- II

1. Importance of Taal in music.
2. Elementary knowledge of the following musical terms (not more than 100 words)
   Matra, Laya (Vilambit, Madya, Drut) Tukra, Ateet, Anagat
3. Gharana:- Definition and importance in the context of Tabla.

UNIT- III

1. Life sketches and contributions of the following:-
   a. Ustad Allah Rakha Khan.
   b. Ustad Ahmad Jaan Thirkava.
   c. Pt. Samta Parshad (Gudai Maharaj)

UNIT- IV

1. Teental, Ektaal, Dadra.
2. To write description of Taals of your syllabus.
3. To write the notation of Taal in Single Double and Chaugun

UNIT- V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Taals prescribed Dadra, Ektaal, Teen Taal
2. Laggi in Dadra and Kehrwa Taal.
3. Ektaal (One Qaida, Two Tukra, Two Tihai, One Paran)
4. Teentaal (One Rela, One Chakradar Paran, One Tukra, One Mohra)
5. Practice of Dholak playing in Kehrwa Taal.
6. Ability to play Nagma/Lehra on Harmonium in Ektaal.
7. Tuning of Tabla.

Books Recommended:

1. Tala Prabhakar Prashnottari : G.C. Srivastava.
2. Tabla Tarang : B.S. Nigam
3. Taal Prakash : Sangeet Karyalaya, Hathras.
4. Avanaddha Vadya : M.P. Sharma
5. Harmare Sangeet Ratan : Sangeet Karyalaya, Hathras.
6. Tabla ki Utpatti Evam Vikas : Yogmaya Sharma
7. Tabla Vadan Part-1 : Jagmohan Sharma
8. Tala Parichya Part-1 : G.C. Srivastava.

MUSIC (Indian Classical Dance)

SEMESTER-I

GENERAL INSTRUCTIONS:

1 In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2 There would be upto ten students in one section in practical class.
3 There would not be more than eight students in a batch for practical examination.
4 No electronic Instruments will be allowed for lehra in practical examination
5 The candidate can take Dance along with Vocal music.
6 The candidate can also take instrumental music with Dance.
7 While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8 In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
Internal assessment (Theory and Practical) (5 + 5)	10 Marks

Paper-A : Theory

Unit –I

1. Origin of Tandava
2. Four Neck movements
3. Eight eye glances

Unit-II

1. Defination of Mudra. Explain Asamyukta Mudras based on Abhinaya Darpan.
2. Definition of the following terms:
   Tora, Salami, Theka, Tehai, Amad.
3. Brief study of Kathak Dance in Ancient period .

Unit-III

1. Definition of folk Dance.
2. A study of folk dances of Punjab, their costumes and background music.
3. A study of folk dance of Haryana, their costumes and background music.

Unit-IV

1. Notation of Tatkar and Theka in Ekgun, Dugun and Chaugun laykaries.
2. Notation of Amad, Tukra, Salami, Tora and Tihai in Teentaal.
3. Notation of Nagma in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Practical: Paper-B

(A) Teen Taal:

i)Tatkar in Ekgun, Dugun and Chaugun laykaries. Theka and Tatkar with Ekgun. Dugun and Chaugun Layakaries

ii) Salami - 1
iii) Amad - 1
iv) Tora - 4
v) Tihai - 1
vi) Tukra - 1

B) Practical of all the technical part in Teentaal on hand
C) Theka of Teentaal on hand in Ekgun and Dugun laykaries
D) Theka of Teentaal on table.

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MUSIC (Indian Classical Dance)

SEMESTER –II

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours.)	45 Marks
PRACTICAL (20 minutes duration)	45 Marks
Internal assessment (Theory and Practical) (5 + 5)	10 Marks

Paper-A: THEORY

Unit –I

1. Study of Lasya Dance.
2. Six Eyebrow movements.
3. Nine Head movements.

Unit-II

1. Detail knowledge of Samyukta Mudras based on Abhinaya Darpan.
2. Essential characteristics of Bharatnatyam.
3. Detailed study of Kathak in mughal period.

Unit-III

1. Brief study of Abhinaya and its various parts.
2. Life sketch of Pt. Narayan Prasad.
3. Definition of Nritta, Nritya and Natya.

Unit IV

1. Notation of Theka of Jhaptaal in Ekgun, Dugun and Chougun layakaries.
2. Notation of Tatkar, Tora, Amad and Paran and Chakardar Paran in Jhaptaal.
3. Notation of Tatkar, Thaat, Tora, Tehai and Kavit in Teentaal.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B : PRACTICAL

(A) Teen Taal:

i) Tatkar in teentaal in Ekgun, Dugun and Chougun layakaries.

ii) Thaat - 1

iii) Tora - 2

iv) Kavit - 1

v) Tihai - 1

(B) Jhaptaal:-

i) Tatkar in Ekgun, Dugun and Chaugun layakaries.

ii) Tora - 2

iii) Amad - 1

iv) Paran - 1

v) Chakardar paran - 1

(C) Practice of prescribed material in both the taals on hand.

(D) Practical knowledge of Samyukta Mudras.

(E) Ability to play nagma in teentaal on Harmonium.

(F) Ability to play theka of Jhaptaal on Tabla.

FINE ARTS

SEMESTER – I

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

Instruction to paper-setters

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Pre-historic paintings from Bhim–Betka .
- Ajanta Cave Painting: Shaddanta Jataka, Padmapani, Avalokitesvara, Dying Princess, Mahajanaka Jataka, Decorative ceiling panels from Cave No. 2.

Unit-II : History of Indian Sculpture

- Indus Valley Civilization - Seals, Metal Dancing Girl, Red Sandstone Torso, Bust of Priest from Mohenjodaro.
- Mauryan Art: Rampurva Bull Capital, Lion Capital from Sarnath, Didarganj Yakshi.

Unit-III : History of Western Art

- Pre-historic Art - Wounded Bison (Altamira), Venus of Willendorf.
- Egyptian Art - Palette of King Narmer, Seated Scribe.
- Greek Art - Standing Youth, Discobolus, Laocoon Group.

Unit-IV : Definition of Key Terms and General Concepts

- Colour: Colour Theory, Colour wheel, Colour terminology and meaning of colour, Line - different types of lines and its meaning, Perspective: Linear and Aerial, Foreshortening.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3. Gupte and Mahajan : Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B : Painting of India, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : India and Modern Art, George Allen & Unwin Limited, London, 1959.
9. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
10. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
11. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
12. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
13. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
14. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
15. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks: 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects and to study the proportion, volume and rhythmic relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Pencil, charcoal or Pastel colours.
4. Size : ½ Imperial sheet

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Pencil Shading, charcoal
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

1. Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
2. Medium : Pencil Sketching or Pastel, Pencil colours.
3. Size : ½ Imperial sheet

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).

Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

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FINE ARTS

SEMESTER – II

Theory (History of Art)

Max. Marks	:	60
Written Paper	:	54 Marks
Internal Assessment	:	06 Marks
Total	:	60 Marks

INSTRUCTIONS TO PAPER-SETTERS

The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper.**

The first question shall be of short answer type containing 9 questions, spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 18 marks and shall be a **Compulsory** question.

8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempt 4 questions in all out of 8 questions. **Each question** would be of **9 marks.**

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of Indian Painting

- Sittanavasal - Lotus Pond.
- Eastern Indian Miniature Painting with special reference to Ashtasahasrika Prajnaparamita.
- Western Indian Miniature Painting with special reference to Nativity of Mahavira from Palm-leaf manuscripts.

Unit-II : History of Indian Sculpture

- Bharhut - Dream of Queen Maya, Yakshas and Yakshini figures.
- Amravati - The Great Departure, Subjugation of Nalagiri.

Unit-III : History of Western Art

- Roman Art - Augustus of Primaporta, Arch of Titus.
- Byzantine Art – Mosaic: Emperor Justinian and his Attendants in S. Vitale.
- Gothic Art - Madonna Enthroned by Duccio, The Lamentation by Giotto.

Unit-IV : Definition of Key Terms and General Concepts

Mural - Fresco and Tempera techniques, Miniature, Chiaroscuro (light-shade), Sculpture in round and in relief.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitons and art galleries are a part of study.

Suggested Readings :

1.	Kramrisch, Stella	:	Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2.	Majumdar, R.C. (editor)	:	The History and Culture of Indian People, Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
3.	Gupte and Mahajan	:	Ajanta, Ellora and Aurangabad Caves, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.
4.	Rowland, Benjamin	:	The Art and Architecture of India, Penguin Books, Great Britain, 1959.
5.	Saraswati, S.K.	:	A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6.	Ray, N.R.	:	An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
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12.	Aggarwala,V.S.	:	Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
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15.	Gardener, Helen	:	Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
16.	Gombrich, E.H.	:	The Story of Art, Phaidon Press Limited, New York, 1995.

PRACTICAL

This paper consists of three sections :

1.	**Still Life Study**	**Max. Marks : 30**	**Max.Time: 5 hours**
2.	**Drawing from Life**	**Max. Marks : 30**	**Max.Time: 5 hours**
3.	**Landscape Painting (on the spot)**	**Max.Marks : 30**	**Max.Time: 5 hours**
		Total : 90 Marks	

SECTION-I Still Life Study (30 Marks)

1. Drawing and Painting of a number of objects to study proportion, volume and rhythmic : relationship of masses, study and rendering of texture of different objects.
2. Number of objects : Three objects with display at the back.
3. Medium : Oil, acrylic or water colours.
4. Size : ½ Imperial sheet or Canvas Pad

SECTION-II Drawing from Life (30 Marks)

1. Portrait : From Live Model or Cast in Monochrome
2. Medium: Charcoal or Pastels (Monochrome)
3. Size: ½ Imperial size sheet.
4. Emphasis should be on structure, proportion, foreshortening, Textural Values, Posture & Individuality of the model.

SECTION-III Landscape Painting (on the spot) (30 Marks)

Landscape painting: Study relationship of objects, their arrangements in the foreground, middle and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.

1. Medium : Oil, acrylic or water colours.
2. Size : ½ Imperial sheet or Canvas pad

SESSIONAL MARKS : 50 (Based on work related equally to 3 sections).
Sessional marks will be given on the basis of the work done during the session in all the three sections. At least, three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50% of the aggregate of the sessional marks.

NOTE :

1. Choice of option to be offered would depend on the facility available in each Institution concerned.

2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classes (per week)

HISTORY OF ART

SEMESTER – I

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

HISTORY OF INDIAN PAINTING AND SCULPTURE Max. Marks : 100
Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Study of Indian Painting :

Unit-I

(a) Pre-historic Painting.

(b) *Ajanta :* Early Period, Classical Period and Post-Classical Period.

Unit-II

(a) Bagh

(b) Badami.

(c) Sittanavasal.

(d) Ellora.

Study of Indian Sculpture :

Unit-III

(a) Indus Valley Civilization.

(b) Mauryan Period.

(c) Bharhut.

(d) Sanchi.

Unit-IV

(a) Amaravati.

(b) Nagarjunikonda.

(c) Mathura under the Kushanas.

(d) Gandharan Art.

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Reprint Corporation, New Delhi, 1983.

2. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vols. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

3. Gupte and Mahajan : *Ajanta, Ellora and Aurangabad Caves,* D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay, 1962.

4. Rowland, Benjamin : *The Art and Architecture of India,* Penguin Books, Great Britain, 1959.

5. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.

6. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.

7. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.

8. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART

SEMESTER – II

Max. Marks : 100
Time : 3 Hours

Note :

1. Each paper carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory** question.
4. 8 questions are to be set from the entire syllabus consisting of 4 Units. Two questions will be set from each Unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each Unit. So, the candidate shall attempting 4 questions in all out of 8 questions. Each question would be of 18 marks**.**

STUDY OF WESTERN PAINTING AND SCULPTURE (from the earliest times to ca. 1400 A.D.) and Theory and Principles of Art Appreciation

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Western Art :

Unit-I

(a) Pre-historic Painting.

(b) Egyptian Art.

Unit-II

(a) Greek Art.

(b) Roman Art.

Unit-III

(a) Art of Early Christian Period.

(b) Byzantine Period.

(c) Gothic Period.

Unit-IV

Explanation through illustrations of the concept of :

(a) Space, Line, Colour, Form, Texture, Light and Shade, Design, Balance, Harmony, Composition, Perspective, Foreshortening.

(b) Mural, Fresco and Tempera techniques.

Pedagogy :

The students are expected to familiarize themselves with the art form as seen from the books, slides and related films.

Suggested Readings :

1. Read, Herbert : *Meaning of Art,* Faber & Faber, London, 1972.
2. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
3. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
4. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – I

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-I : HISTORY AND CULTURE OF INDIA FROM THE INDUS VALLEY CIVILIZATION TO 321 B.C.

Objectives :

The paper is a survey of the proto-historic and historic background to Indian history from the Harappan Civilization to 321 BC.

Pedagogy of the Course Work :

Students are familiarized with sources and with methods of reconstructing ancient history. An attempt is made to view the events in their situational context, locating the interconnection of social, economic and political developments, as far as their sources permit.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory paper will be of 90 marks and 10 marks will be for internal assessment.

2. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.

3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hours duration.

4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

5. The map question shall have the following topics :

   (a) Extent of the Harappan Civilization.

   (b) Location of the 16 Mahajanapadas.

   (c) Alexander's Indian campaign.

6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I

Sources of Ancient Indian history: Harappan Civilization: origin; extent; urban features and decline.

UNIT-II

Vedic Civilization (Rig Vedic and Later Vedic Period): society; polity; economy; culture and religion.

UNIT-III

The Sixteen Mahajanapadas with special reference to the rise of Magadha (from Bimbisara to the fall of the Nandas); The rise of Buddhism and Jainism.

UNIT-IV

The Iranian and Macedonian invasions: political and cultural impact on the Indian subcontinent.

Essential Readings :

1. Basham, A.L. : *The Wonder that was India,* Rupa, Mumbai, 1971.
2. Chakravarti, Ranabir *Exploring Early India: Upto C.AD 1300* Ratna Sagar, New Delhi 2016.
3. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
4. Majumdar, R.C. et al : *The Vedic Age,Vol.I, Bombay;* Bhartiya Vidya Bhavan, Mumbai, 1971.
5. Ratnagar, S. : *Understanding Harappa,* Tulika, New Delhi, 2001.
6. Raychaudheri, H.C. : *The Political History of Ancient India,* rev. ed. Oxford, New Delhi, 2011.
7. Sharma, R.S. : *Material Culture and Social Formation in Ancient India*, Machmillan, Delhi, 1983
8. Singh, Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century),* Pearson Education, Delhi, 2009
9. Thapar, R. : *A History of India,* Vol. I: *From Origins to 1300*, Penguin, 1990.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER – II

Max. Marks : 100
Theory : 90 Marks
Internal Assessment :10 Marks
Time : 3 Hours

Paper-II : HISTORY AND CULTURE OF INDIA FROM THE MAURYAS TO 319 A.D.

Objectives :

This course deals with the political and cultural history of India from Mauryas to the Post Kushana period.

Pedagogy of the Course Work :

The students are taught with the help of slides, photographs, topographical maps and political maps. In addition to it, lectures, workshops and seminars are arranged to facilitate the students to understand the subject in a better way.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The theory question paper will be of 90 marks and 10 marks will be for internal assessment.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (2) in the question paper.
3. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks. The paper shall be of 3 hrs. duration.
4. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks to be answered in 25 to 30 words. **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
5. The map question shall have the following topics :
   (a) Extent of the Mauryan empire.
   (b) Location of Ashokan inscriptions.
   (c) Extent of Kanishka's empire.
6. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper setter shall set 2 questions from each Unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each Unit. Each question shall carry 18 marks.

UNIT-I :

The Mauryan empire: sources; political and cultural relations; administrative organization; society and economy; Ashoka's dhamma; downfall of the Mauryan empire.

UNIT-II:

Sungas, Kanvas and Satvahanas: survey of the sources; political overview; society and economy; culture and religion.

UNIT-III:

The Indo Greeks, Shakas and Parthians: survey of the sources; polity; society and economy.

UNIT-IV:

Kushana and Post-Kushana Period: survey of the sources; social; political; economic; cultural and religious conditions.

Essential Readings :

1. Bongard Levin, G. : *Mauryan India,* Sterling, Delhi, 1985.
2. Chakravarti, Ranabir *Exploring Early India: Upto C.AD 1300* Ratna Sagar, New Delhi 2016.
3. Jha, D.N. : *Ancient India in Historical Outline,* Manohar, New Delhi, 1977.
4. Majumdar, R.C. et al, eds. : *The History and Culture of the Indian People,* Bhartiya Vidya Bhawan, Mumbai, 1951.
5. Mukherjee, B.N. : *The Rise and Fall of the Kushana Empire,* Firma KLM, Calcutta, 1988.
6. Narain, A.K. : *The Indo–Greeks,* Claerendon Press, Oxford, 1957.
7. Nilakantha Sastri, K.A. (ed.) : *The Age of the Nandas and Mauryas,* Motilal Banarsidass, New Delhi, 1988.
8. Raychaudhuri, H.C. : *The Political History of Ancient India,* Oxford, New Delhi, 2011
9. Shastri, A.M. : *Early History of the Deccan, Sandeep Prakashan,* New Delhi, 1987.
10. Shrimali, K.N. : *Prachin Bharat Ka Itihas,* Karyanvaya Nideshalay, Delhi University , Delhi 2009.
11. Singh Upinder : *A History of Ancient and Early Medieval India (From the Stone age to the 12th Century*), Pearson Education, Delhi, 2009.
12. Thapar, R. : *Ashoka and the Decline of the Mauryas,* Oxford, New Delhi, 2012.
13. Thapar Romila : *The Penguin History of Early India from the origin to AD 1300,* Penguin Books, New Delhi, 2002.

DEFENCE & STRATEGIC STUDIES

SEMESTER – I

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

PAPER : CONCEPT OF WARFARE

M. Marks : 70
Time : 3 Hrs.

Objective : This paper deals with the conceptual aspects of warfare focuses on the various aspects of warfare from conventional to Nuclear age.

SECTION-I

1. War : Its definition concept and evolution.
2. Principles of War, Historical Development, Meaning & Importance.

SECTION-II

3. Modern War : Meaning, Historical Development, Features and Humanization of War.
4. Non-Conventional Warfare with reference to Guerrilla War : Its Origin, Principles and Techniques.
5. Asymmetric Warfare

SECTION-III

6. Nuclear War, Beginning of Nuclear Era, Effects of Nuclear explosions, Nuclear strategy, Deterrence, Missiles and their classification.

SECTION-IV

7. Psychological aspects of war, Leadership, Motivation, Morale, Discipline, Panic and Fear.
8. Information Warfare.

Books Recommended :

1. Bernard, Brodie, Strategy in the Missile Age Rand Corp., Santa Monica, 2007.
2. Boring, E., Psychology in the Armed Services, National Academics, Washington 1945.
3. Clausewitz Von Carl, On War, Wilder Publications, United States, 2008.
4. Fuller, J.F.C, Armament and History, Da Press, New York,1998 .
5. Fuller, J.F.C., The Conduct of War, N.J. Rutgers University Press, New Brunswick, 1961.
6. Gerald, J., Defence Psychology, Pergamon Press, Michigan, 2008.
7. Harkabi Y., Nuclear War and Nuclear Peace, Transaction Publishers,Piscataway, New Jersey, 2008.
8. Hart, Liddle, Strategy of Indirect Approach, BiblioBazaar, 2011 Washington, 1945.
9. JFR Jacob, Surrender at Dacca, Birth of a Nation, Manohar Publishers & Distributors, New Delhi, 1997.
10. Malkasian Carter, A History of Modern Wars of Attrition, Greenwood Publishing Group, 2002.
11. May Larry, Emily Crookston, War: Eassy in Political Philosophy, Cambridge University Press, 2008.
12. Montgomery, A History of Warfare, Cleveland world Publishers,1968.
13. Palit, D.K., War in the Deterrent Age, Gardners Books, Delhi 2006.
14. Tripathi, K.S., Evolution of Nuclear Strategy, Vikas Publication, Delhi,1970.
15. Waelder Robert, Psychological aspects of war and peace, Geneva research Centre, Geneva, 1939.

Paper : PRACTICAL Total Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on Computer.

SECTION-A, Practical Test

Marks: 10

Note :

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Conventional Signs*:* Military and Geographical.
2. Introduction to Topographical Maps*:* Definition, features, classification, enlargement and reduction of maps.
3. Grid System*:* Four figure, six figure and eight figure map, references.

SECTION-B

Marks: 10

1. Practical Record 5 marks
2. Viva-Voce 5 marks

(Students be asked to prepare on current topics of general interest)

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DEFENCE & STRATEGIC STUDIES

SEMESTER – II

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note:

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : INTERNATIONAL RELATIONS, STRATEGIC ASPECTS

M. Marks : 70
Time : 3 Hrs.

Objective : This paper focuses on the various attributes of international relations and its role in maintaining peace & security.

SECTION-I

1. International Relations: Meaning, concept and its relationship with strategic aspects.
2. National interest and war: Definition of national interest & its relationship with security; War as an instrument of National Policy.

SECTION-II

3. Balance of Power: Meaning, Historical Development, Evaluation and its functioning.
4. Cold War: Definition, Cause and Means, Diplomatic, Psychological, Economic effects and Perspective.

SECTION-III

5. Collective Security: Meaning and Concept, Role of United Nations Organization in maintaining Collective Security.

SECTION-IV

6. Disarmament and Arms Control, Meaning and Concept, Efforts by UNO towards its achievement.

Books Recommended:

1. Flemming, D.F., *The Cold War and its Origin,* Doubleday, University of Michigan, United States, 1961.
2. Gaddis Lewis John, *The Cold War,* Penguin, UK, 2011.
3. Goldblat Jozef, *Arms Control: The New Guide to Negotiations and Agreements with New CD-ROM Supplement,* SAGE, London, 2002.
4. Griffiths Martin, *International Relations: The Key Concepts,* Psychology Press, 2002.
5. Joseph , Frankel , *The Making of Foreign Policy,* Oxford University Press, Oxford, 1963.
6. Knapp, W., *A History of War and Peace,* Oxford University Press, Oxford, 1967.
7. Kumar, Mahendra, *Theoretical Aspects of International Politics,* University of Notre Dame Press, Notre Dame, Ind., 1959
8. Lawrence Robert M., *Arms Control and Disarmament,* Burgers, 1973.
9. Lucas, *A History of Cold War,* Bloomsbury Publishing London, 2008.
10. Morgenthau, H., *Politics Among Nations,* McGraw-Hill New York, 1993.
11. Morton, Halperin , *Limited War in the Nuclear Age,* Greenwood Press, Michigan, 1978.
12. Orakhelashvili Alexander, *Collective Security,* Oxford University Press, UK, 2011.
13. Sarooshi Dan, *The United Nations and the Development of Collective Security: The Delegation by the UN Security Council of Its Chapter VII Powers,* Oxford University Press, UK, 1999.
14. Sheehan Michael J., *The Balance of Power: History and Theory,* Taylor & Francis, 1996.
15. Qamar, Hasanan, *Psychology for the Fighting Man,* Penguin Books, U.K, 1943.

Paper-B: PRACTICAL

Total Marks : 20
Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A, Practical Test

Marks: 10

Note:

1. There will be three questions in all and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Distance and Scale*:* Definition, types, methods of representing scale, inters conversion of statement, into representative fraction, construction of simple scale line and comparative scale lines.

2. Directions*:* Types of North, finding out True North, direction by equal altitude method, Watch method, Map method and Compass method.

3. Service Protector: Its type and uses.

SECTION-B

Marks: 10

1. Practical Record 5 marks
2. Viva-Voce 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER – I

PAPER:HISTORY OF INDIA UPTO 1200 A.D.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in Semester I AND II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 10 Marks
   Explanatory Note : 08 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 05 places on map of 02 marks each and write explanatory note on any 04 of 02 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the ancient period in Indian history.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Major Sources of History: LiterarySources- Indigenous Literature and Foreign Accounts; Archaeological findings; inscriptions; coins and monuments.
2. Harappan Civilization: Extent, town planning; social economic and religious life.
3. Life in Vedic Age: Political and Economic; social and religious.

UNIT II

4. Republics and Kingdom,600-321 B.C.: Mahajanpadas; the rise of Magadha.
5. Jainism and Buddhism: Life and teachings of VardhmanMahavir; Life and teachings of Gautam Buddha.
6. The Mauryan Empire: Central and ProvincialAdministration; revenue, judicial and local administration; Ashoka'sDhamma.

UNIT III

7. Post Mauryan Period: Decline of Mauryas and Kanishka and his achievements.
8. The Gupta Empire: The rise of Guptas and social, economic, cultural and scientific Developments under Guptas.
9. The Rise of Southern Kingdoms: Administration under Pallavas; Rashtrakutas;Chalukyas.

UNIT IV

10. Regional Kingdoms in the North:Administration under Harsh Vardhana; origin ofRajputs.
11. South Indian States: Administration under Cholas; Taxation and trade under Pandayas,

12. **Map:**
    (i) Map on important Historical places: Ajanta,Bodhgaya,Ellora, Harappa, Indraprastha, Kalibangan, Kalinga, Kannauj, Lothal, Nalanda, Patliputra, Sanchi,`Sopara,Taxila, Ujjain, Varanasi
    (ii) Extent of Harappan Civilization.
    (iii) Mauryan Kingdom under Ashoka.

Specimen Map for Examination:

Reading List

Basham, A.L, *The Wonder That Was India*, Calcutta: Rupa& Co., 1992.

Jha, D.N., *Ancient India : An Historical Outline*, Delhi: Manohar, 2nd Rev. Ed., 2005.

Sharma, R.S, *India's Ancient Past*, Delhi: OUP, 2005.

Sharma, R.S, Prarambhik Bharat Ka Parichay, Delhi: Orient Black Swan, 2007 (Hindi Medium).

Thapar, Romila, *Early India from the Origin to A.D. 1300,* U.K:Penguin, 2015.

Noboru, Karashima, *Concise History of South India,* OUP, Delhi, 2014.

ChakravartyRanbir, *Exploring Early India,* New Delhi: RatnaSagar Pvt. Ltd., *2016.*

HISTORY
SEMESTER – II

PAPER: HISTORY OF INDIA 1200-1750 A.D.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in Semester I AND II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	10 Marks
Explanatory Note	:	08 Marks

3. In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 05 places on map of 02 marks each and write explanatory note on any 04 of 02 marks each.
4. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	100
	Theory	:	90
	Internal Assessment	:	10
	Time	:	3 Hours

Objectives: To introduce the students to the history of Medieval India.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Establishment of Turkish rule under Muizuddin of Ghor; Consolidation underIltutmish and Balban.
2. The Khaljis: Administration; agrarian and market reforms of AlauddinKhailji.
3. The Tughlaqs: Muhammad Bin Tughlaq's administrative experiments and its impact;Feroz Shah Tughluq's administrative and economic reforms.

UNIT II

4. Vijaynagar Kingdom:Establishment; administration and economy.
5. Formation of the Mughal Empire: Political condition of India on the eve of Babur's invasions; conquests and causes of his success.
6. The Afghans: Establishment of Afghan power under Sher Shah Suri; administrative reforms.

UNIT III

7. The Mughal Empire: Central and Provincial administration;land revenue system.
8. The Mughal Empire: Mansabdari system; Jagirdari System.
9. Debates on the Decline of Mughal Empire.

UNIT IV

10. The Rise of the Marathas: Conquests of Shivaji; administration.
11. Evolution and main features:Bhakti movement; Sufism.
12. **MAP:**

    (i) Important Historical places: Lahore, Delhi, Agra, Mathura, FatehpurSikri, Chittor, Jaipur, Udaipur, Panipat, Lucknow,Ahmednagar, Poona, Surat, Golkonda, Bijapur, Daulatabad.

    (ii) Extent of Empire underAllauddinKhalji.

    (iii) Mughal Empire in 1707.

Specimen Map for Examination:

Reading List

Alam, Muzaffar and Sanjay Subrahmanyam, *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Chandra, Satish, *Medieval India from Sultanate to the Mughals Part-I (1206-1526*), New Delhi: Har-AnandPublicatinos Pvt. Ltd. , 2007.

Chandra, Satish, *Medieval India from Sultanate to the Mughals, Part-II* Mughal Empire (1526-1748)New Delhi: Har-AnandPublicatinos Pvt. Ltd., 2007.

Chandra, Satish, *Essay on Medieval Indian History*, New Delhi : Oxford University Press, 1987.

Chandra, Satish, *History of Medieval India*, Delhi : Orient Black Swan, 2007 (Hindi Medium).

Habib, Irfan, *Medieval India; The Study of Civilization*, New Delhi : National Book Trust, India, 2008.

Ray Chaudhri Tapan and Irfan Habib, *The Cambridge Economic History of India*, Vol. I, c 1200-c. 1750, New Delhi : Orient Longman, 2007.

Rizvi, S.A.A, *The Wonder That Was India*, Vol. II 1200-1700, New Delhi ; Rupa & Co., 1996.

Singh Navtej, *Madhkalin Bharat*, National Book Trust (Punjabi).

POLITICAL SCIENCE

SEMESTER – I

POLITICAL THEORY-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The objective of this paper is to introduce first year undergraduate students to some of the basic aspects, concepts and themes in the discipline of Political Science.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Political Sciene :* Meaning, Definition and Scope.

2. Relationship of Political Science with Economics, History and Sociology.

Unit-II

1. *The State :* Definition, Elements and its Distinction from Government and Society.

2. *Theories of the Origin of State :* Social Contract, Historical/Evolutionary.

Unit-III

1. *State :* Liberal, Marxian and Gandhian View.
2. *Welfare State :* Liberal and Socialist Perspective.

Unit-IV

1. *Sovereignty :* Definition, Attributes/ Characteristics and Types.
2. *Theories of Sovereignty :* Monistic and Pluralistic.
3. *Political System : a)* Meaning & Characteristics.
   Political System : b) Functions according to David Easton & Almond & Powell.

Books Recommended :

1. J.C. Johri : *Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2. A.C. Kapoor : *Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3. O.P. Gauba : *An Introduction to Political Theory,* Macmillan India Ltd., New Delhi, 2009.
4. Andrew Heywood : *Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5. Robert A. Dahl & Bruce S. Finebric Kner : *Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6. Frank Bealey, Richard Chapman and Michael Sheehan : *Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7. Andrew Heywood : *Political Theory : An Introduction,* MacMillan Press, London, 1999.
8. Aron I. Skoble & Fiber R. Maclian (eds.) : *Political Philosophy : Essential Selections,* Pearson Education, 1999.
9. Andrew Heywood : *Politics,* Macmillan, London, 1997.
10. M.P. Jain : *Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11. S.P. Verma : Modern *Political Theory,* General Publishing House, New Delhi. 1983.

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POLITICAL SCIENCE

SEMESTER – II

POLITICAL THEORY-II

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The aim of this paper is to deepen and expand the knowledge of the student in Political Science. It introduces higher level concepts and themes in political theory. It will provide students with the tools to engage with some key political issues of our times.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(a) There shall be **9** questions in all.

(b) In Question No. One, 15 short answer type questions be asked spreading over whole syllabus to be answered in 10-20 words each. The students shall have to attempt 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be a compulsory question.

(c) Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice. The candidates shall attempt one question from each Unit i.e. 4 in all of 18 marks each.

(d) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (d) in the question paper.

Unit-I

1. *Power, Authority, Legitimacy :* Meaning and Characteristics.
2. *Political Culture :* Meaning, Characteristics and Types.
3. *Political Socialisation :* Meaning, Characteristics and Agencies.

Unit-II

1. *Rights & Duties :* Meaning, Types and Co-relation between the two.
2. *Universal Declaration of Human Rights:* Meaning of Human Rights, Nature and Characteristics.

Unit-III

1. *Liberty :* Meaning, Types & its Safeguards.
2. *Equality :* Meaning, Types and Relationship between Liberty and Equality.
3. *Justice :* Meaning and its various Dimensions.

Unit-IV

1. *Social Change :* Meaning, Characteristics and Factors.
2. *Democracy :* Meaning, types, necessary conditions for the success of Democracy.
3. *Theories of Democracy:* Elite and Marxian.

Books Recommended :

1.	J.C. Johri	:	*Principles of Modern Political Science,* Sterling Publishers, New Delhi. 2009.
2.	A.C. Kapoor	:	*Principles of Political Science*, S. Chand & Company, New Delhi, 2009.
3.	O.P. Gauba	:	*An Introduction to Political Theory,* MacMillan India Ltd., New Delhi, 2009.
4.	Andrew Heywood	:	*Political Theory : An Introduction*, Third Edition, Palgrave MacMillan, 2004.
5.	Robert A. Dahl & Bruce S. Finebric Kner	:	*Modern Political Analysis,* Sixth Edition Pearson, Education, 2003.
6.	Frank Bealey, Richard Chapman and Michael Sheehan	:	*Elements in Political Science,* Edinburgh University Press, Edinburgh, 1999.
7.	Andrew Heywood	:	*Political Theory : An Introduction,* MacMillan Press, London, 1999.
8.	Aron I. Skoble & Fiber R. Maclian (eds.)	:	*Political Philosophy, Essential Selections,* Pearson Education, 1999.
9.	Andrew Heywood	:	*Politics,* Macmillan, London, 1997.
10.	M.P. Jain	:	*Political Theory,* Authors Guild Publication, Delhi (Punjabi & Hindi) 1990.
11.	S.P. Verma	:	*Modern Political Theory,* General Publishing House, New Delhi, 1983.

ECONOMICS

SEMESTER – I

Paper : MICRO ECONOMICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objective :

Microeconomics is concerned with the analysis of economic phenomena from the perspective of the individual. The course covers the basic concepts and tools needed to undertake the analysis of such problems that arise due to the law of scarcity. The course also aims at introduction of the functioning of competitive and noncompetitive product markets and performance of the markets for resources. The students are expected to develop rudimentary understanding of how and why consumers, firms, and markets in the economy function the way they do.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction : Definition, Meaning, Nature and Scope of Economics.

Theory of Demand and consumer Behaviuor : Utility Analysis and Indifference Curve Analysis. Law of Demand and its Exceptions, Elasticity of Demand and its measurement, Consumer Surplus and its measurement.

Unit-II

Theory of Production and Costs: Concept, Law of Variable Proportions and Laws of Returns to Scale, Cost Concepts and Cost Curves in Short and Long periods (Traditional Theory of Costs).
Market Forms and Revenue: Behaviour of Average Revenue and Marginal Revenue under Perfect Competition and Imperfect Competition. Relationship between Average Revenue, Marginal Revenue and Elasticity of Demand.

Unit-III

Price and Output Determination: Price and Output Determination of the Firm and Industry under Perfect Competition, Monopoly and Monopolistic Competition in Short and Long run, Concept of Discriminating Monopoly.

Unit-IV

Distribution: Marginal Productivity and Modern Theories of Wage Determination, Ricardian and Modern Theories of Rent. Classical and Loanable Funds Theory of Interest, Risk and Uncertainty theories of Profit.

Recommended Readings:

1. Chaudhary, Kalyanjit Roy(2012) : Modern Micro Economics, Vol. I & II Bookland Publishers, New Delhi.
2. Chopra, P.N., Singh, Joginder & Grewal, P.S. (Punjabi Medium) (Latest Edition) : Price Theory and Distrubution, Kalyani Publishers, Ludhiana.
3. Lipsey, R.G. & Crystal, K.A.(2011) : Principles of Economics, Oxford University Press, New Delhi.
4. Samuelson, P.A. (trans. Piar Singh) (1972) : Arth-Shastar Ek Prarmbhik Vishleshan, Punjabi University, Patiala
5. Stonier, A.W.. & Hague, D.C. (2005) : A Text Book of Economic Theory.

Supplementary Readings:

1. Ahuja, H.. (2012) : Advanced Economic Theory, S.Chand & Co., New Delhi.
2. Chopra, P.N.(2012) : Micro Economics Theory and Welfare Economics, Kalyani Publishers, New Delhi.
3. Dwivedi, D.N. (2012) : Microeconomics-Theory and Applications, Pearson Education Delhi.
4. Pindyck, Robert, S., Rubinfeld Dainel, L. and Mehta, P.L. (2013) : Microeconomics, Prentice Hall of India, New Delhi.
5. Ray, N.C. (1980) : An Introduction to Microeconomics, The Macmillan, New Delhi.
6. Robinson, John (Trans.) (Latest Edition) : Apuran Prityogita Di Arhiki, Punjabi University, Patiala.
7. Salvatore, D (2009) : Micro Economics: Theory & Applications, Oxford University Press, New York.
8. Singh, H.K. Manmohan (Trans Vashisht, Om Parkash) (1971) : Mang Sidhant Ate Mishrat Arth-Vivstha Vich Arthik Ganana, Punjabi University, Patiala.

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ECONOMICS

SEMESTER – II

Paper : MACRO ECONOMICS

Max. Marks	: 100
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 hours

Course Objective:

This paper aims to familiarize the student with the generally accepted principles of macroeconomics. It deals with aggregates i.e. consumers as a whole, producers as a whole, exporters and importers as a whole, the effects of government spending and taxation, and the monetary policy of the central bank. The course includes the basic theories of determination of income, consumption, investment, employment, money and interest, inflation, Monetary and Fiscal policies, and business cycles.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing **12** short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type question i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidate shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

Introduction: Nature, Meaning and Scope of Macro-Economics.

Consumption Function:
Average and Marginal Propensity to Consume, Keynes' Psychological Law of Consumption.
Investment Function:
Types of Investment, Investment Demand Schedule and Factors Affecting Investment Decisions, Marginal Efficiency of Capital, Static and Dynamic Multiplier.

Unit-II

Determination of Income and Employment:
Classical and Keynesian Theories of Income, Output and Employment, Say's Law of Markets. Principle of Effective Demand.

Unit-III

Money and Banking:
Money : Definition, Functions and Role
Quantity Theory of Money: Fisher's Equation and Cambridge Equation, Keynesian Liquidity Preference Theory.
Banking: Major Functions of Commercial Banks and Process of Credit Creation.

Unit-IV

Inflation and Macro-Economic Policies:
Cost-push and Demand-pull Theories of Inflation, Measures to Control Inflation. Monetary and Fiscal Policies for Stabilization.

Trade Cycle: Meaning and Phases.

Recommended Readings:

1. Dernburg, T.F. & McDougal, D.M.(1983) : Macro Economics, McGraw Hill, New York.
2. Ghuman, Ranjit Singh (latest edition) : Antar-Rashtriya Arth Vigyan, Punjabi University, Patiala.
3. Shapiro, E. (1996) : Macroeconomic Analysis, Galgotia Pub.(P) Ltd., New Delhi.
4. Sharma, O.P. (Punjabi Medium) (latest edition) : Macro Economics, Punjabi University, Patiala.
5. Vaish, M.C. (2010) : Macro Economic Theory, Oxford Unversity, Press, New Delhi.

Supplementary Readings:

1. Ackley, Gardner (1985) : Macro Economic Theory, McMillan, New York.
2. Ahuja, H.L. (2004) : Macroeconomics Theory and Policy, S.Chand Pub. New Delhi.
3. Baird, C.W. (1982) : Elements of Modern Economics, West Publishing Company.
4. Dwivedi, D.N. (2012) : Macroeconomics-Theory and Policy, Tata McGraw Hill Publication House, New Delhi.

SOCIOLOGY

SEMESTER - I

FUNDAMENTALS OF SOCIOLOGY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper aims at introducing Fundamentals of Sociology to the beginners of the subjec, the basic understanding about Sociology as a discipline. Study of various terms, concepts and processes will help students in formulating a Sociological Viewpoint and an easy comprehension of the discipline at later stages.

Course Content :

Unit-I

Introduction to Sociology: Origin and Development; Nature and Significance.

Relationship of Sociology with other Social Sciences –Anthropology, History and Psychology.

Unit-II

Understanding Society: Meaning, Characteristics, Theories of Origin of Society – Organic and Social-Contract. Relationship between Individual and Society.

Social Groups - Meaning, Characteristics and Classification Primary and Secondary Groups Ingroups & Outgroups, Reference Group.

Unit-III

Culture: Meaning and Features, Culture and Civilization, Cultural Lag, Acculturation, Assimilation, Cultural Pluralism.

Dimensions of Culture: Cultural Trait, Cultural Patterns, Cultural Complexes, Cultural Relativism.

Unit-IV

Socialization: Meaning, Stages, Agencies and Theories of Mead and Cooley.
Social Control: Meaning, Types and Agencies – Formal and Informal

Essential Readings:

1. *Bhushan Vidya & Sachdeva D.D. (2014)* : *An Introduction of Sociology Kitab Maaal, Allahabad*
2. *Bottomore, T.B. (1975)* : *Introduction to Sociology, Bombay : Blackie and Sons.*
3. *Bottomore, T.B. (1975)* : *Sociology : A Guide to Problems and Literature (Hindi and English), Bombay : Blackie and Sons.*
4. *Davis, Kingsley (1978)* : *Human Society, London : MacMillan Company.*
5. *Dube, S.C. (1990)* : *Understanding Society - A Text Book, NCERT.*
6. *Maciver, R.M. and C.H. Page* : *Society, London : MacMillan Company.*
7. *Macionis, John, J. (2005)* : *Society: The Basics, New York : Prentice Hall.*
8. *Madhurima (2015)* : *Readings in Sociology – Semester-1, Jalandhar : New Academic Publishing House (All Mediums).*
9. *Rao, Shankar, C.N. (2013)* : *Sociology—Primary Principles of Sociology. S.S. Chand and Company Ltd.*
10. *Sharma, R.N. (2001)* : *Samajshastra Ke Sidhant, New Delhi: Atlantic Publishers.*

Further Readings :

1. *Broom, L. and P. Selznick (1968)* : *Sociology, New York : Harper and Row.*
2. *Berger, Peter L. (1998)* : *Invitation to Sociology : A Humanistic Perspective, U.S.A. : Pelican Books.*
3. *Giddens, Anthony Sutton Philip M (2013)* : *Sociology : Seventh Edition, Polity press*
4. *Haralambos, M. (2010) Heald R.M.* : *Sociology : Themes & Perspectives, New Delhi : Oxford University Press.*
5. *Harlombos & Holborn (2014)* : *Sociology : Themes & Perspectives Collins Education E Editing Work*
6. *Schaefer, Richard, T. and Robert P. Lamm (1999)* : *Sociology, New Delhi : Tata-McGraw Hill.*

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SOCIOLOGY

SEMESTER - II

SOCIOLOGY STRATIFICATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12, i.e. 9 X 2 = 18 marks.
In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each Unit with internal choice carrying 18 marks each i.e. 4 X 18 = 72 marks. .

(ii) On an average, 15 hours are to be devoted for each Unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

All over the world, social groups are differentiated from one another and often ranked in terms of certain criteria. In this paper, students are exposed to the theoretical understanding of social stratification. In the Indian context, it is pertinent to apprise the students of the concept of social mobility and various factors that contribute to it. The major purpose of this course is to prepare the students to understand the hierarchical structure of groups in various societies and help them understand the social mobility.

Course Content

Unit-I

Social Stratification – Meaning, feature and functions; Inequalities – Social and Natural.
Elements : Differentiation, Hierarchy, Ranking, Reward, Evaluation.

Unit-II

Theories of Social Stratification :
Functionalist – Davis and Moore.

Conflict – Marx.
Class, Status, Party – Weber.

Unit-III

Forms of Social stratification: Caste, Class, Race and Gender. Interface between caste and class.

Unit-IV

Social Mobility – Meaning, types, factors.
Indicators – Education, Occupation, Income.

Essential Readings :

1. Bendix, R. & Lipset, S.M. (1974) : *Class, Status & Power : Social Stratification in Comparative Perspective,* London : Routledge & Kegan Paul.
2. Ghurye, G.S. (1983) : *Caste, Class and Occupation,* Bombay : Popular Prakashan.
3. Giddens, Anthony (2001) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
6. Sharma, K.L. (1980) : *Essays in Social Stratification*, Jaipur : Rawat.
7. Tumin, M. (1987) : *Social Stratification,* New Delhi : Prentice Hall.
8. Sharma K.L. (2009) : *Social Inequality in India, Jaipur Rawat Publication*

Further Readings :

1. Beteille, Andre (ed.) (1978) : *Social Inequality,* Auckland : Penguin Books.
2. Beteille, Andre (1996) : "Varna & Jati", *Sociological Bulletin,* Vol. 45, No. 1 (March) Pages 15-27.
3. Culvert (1982) : *The Concept of Class*, London : Hutchinson.
4. Gupta, Dipankar (2008) : *Social Stratification*, New Delhi : Oxford University Press.
5. Hughes, John *et al* (1995) : *Understanding Classical Sociology,* Marx, Weber & Durkheim, London : Sage.
6. Richardson, C.J. (1977) : *Contemporary Social Mobility*, L and Francies Printer.
7. Inglis David & John Bone (ed) (2006) : Social Stratification Dimensions of Social Stratification Caste ethnicity & Gender Taylor & Francis
8. Levine, Rhona (ed) (2006) : Social class & Stratification Rowman & Littlefield Publishers.
9. Singh, Yogendra, (2006) : Social Stratification and Change in India, New Delhi
10. Ritzer, George (2012) : Sociological Theory, Manohar Publication Tata McGrew Hill Education Private Limited, New Delhi
11. Mac Ion's John J, Plummmer Ken, (2014) : Sociology: A Global Introduction, New Delhi, Pearson
12. Samdna Peter (1990) : Social class & Stratification Routledge, N.Y.
13. Giddens, Anthony & Sutton W.Philip (2007) : Sociology: Introductory Readings Polity Press, Malden: M.A.
14. Schaefer, Richard, T. (2010) : Sociology: A brief Introductions Tata Mcgraw Hill., N.Y.

PUBLIC ADMINISTRATION

SEMESTER - I

PAPER : ADMINISTRATIVE THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	03 Hours

Objective of the Paper :

The objective of this paper is to acquaint the student with the basic concepts and principles of public administration. In addition, the paper would trace the evolution of public administration and its relationship with other social sciences.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning, Nature, Scope and Significance of Public Administration; Public and Private Administration; Public Administration as a Science or an Art; Relationship of Public Administration with other Social Sciences; Evolution of Public Administration since 1887.

Unit-II

Organization: Meaning, Types: Formal and Informal Organization
Forms of Organization: Department, Public Corporation, Government Company.
Principles of Organization: Hierarchy, Span of Control, Unity of Command, Authority and Responsibility.

Unit-III

Chief Executive- Types, functions and Role
Line, Staff and Auxiliary Agencies
Centralisation and Decentralisation
Decision Making: Meaning, types and process

Unit-IV

Coordination: Concept, Methods and Hindrances
Communication: Concept, Process and Barriers
Supervison: Concept and Methods
Leadership: Concept, Styles, Qualities of a Good Administrator

Essential Readings

Awasthi, A. and Maheshwari, S.R. (2011). *Public Administration*. Agra: Laxmi Narain Aggarwal Publication.

Basu, Rumki (1990). *Introduction to Public Administration*. New Delhi: Sterling Publishers.

Basu, Rumki (2008). *Public Administration: Theory and Concept*. New Delhi: Sterling Publishers.

Bhattacharya, Mohit (2002). *Public Administration: Structure, Process and Behaviour*. Calcutta: World Press.

Bhattacharya, Mohit (2012). *New Horizons of Public Administration*. New Delhi: Jawahar Publishers & Distributers.

Fadia, B.L. and Fadia, Kuldeep (2011). *Public Administration: Administrative Theories and Concepts*. Agra: Sahitya Bhawan Publication

Goel, S.L. (2003). *Public Administration: Theory and Practice*. New Delhi: Deep &Deep Publishers.

Mahajan, Chander Mohan. *Elements of Public Administration*, Patiala: Publication Bureau (Panjabi) Punjabi University.

Nigro, Felix A. and Nigro, Llyod G. (1970). *Modern Public Administration*. New York: Harper and Row.

Ojha, Pundrik and Sharma, Kiran (2009). *Public Administration: Theory and Practice* Jalandhar: Raj Publishers.

Puri,K.K .(2004). *Elements of Public Administration*. Jalandhar: Bharat Prakash

Sapru, R.K. (2008). *Administrative Theories and Management Thought*. New Delhi: Prentice-Hall of India.

Sharma, M.P. and Sadana, B.L. (2009). *Public Administration in Theory and Practice*. Allahabad: Kitab Mahal.

Singh, Sahib and Singh, Swinder (2015). *Public Administration: Theory and* Practice. Jalandhar: New Academic Publishing Co.

Further Readings

Gladden, E.N. (1964). *An Introduction to Public* Administration. London: Staples Press.

Golembiewski, Robert T. (1977). *Public Administration as a Developing Discipline*. New York: Marcel Dekker.

Henry, Nicholas (2012). *Public Administration and Public Affairs (12thed.)*. New Delhi: Prentice Hall of India Pvt. Ltd.

Koontz, H. and O' Donnel, Cyril (1972).*Principles of Management: An Analysis of Managerial Functions*. New York: McGraw Hill

Naidu, S.P. (2005). *Public Administration concept and Theories*. New Delhi, New Age International Publication.

Ojha, Pundrik and Sharma, Kiran (2012). *Public Administration: Theory and Practice.* Jalandhar: Raj Publishers.

Pfiffner John, M. and Presthus, R.Vance (1953). *Public Administration*. New York: Ronald Press.

Pfiffner, John M. and Sherwood, Frank P. (1960). *Administrative Organization*. New Delhi: Prentice Hall.

Phillip, A.T. and Rao. K.H. Sivaji (1989). *Indian Government and Politics.* New Delhi: Sterling Publishers.

Self, Peter. (1972). *Administrative Theories and Politics.* London: George Allen and Unwin.

PUBLIC ADMINISTRATION

SEMESTER - II

PAPER : : INDIAN ADMINISTRATION

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of Indian administration particularly the functioning of executive, legislature and judiciary at the union and state levels. It would also make them aware of the bureaucratic set up at these levels.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Features of Indian Administration
Union Executive: President; Prime Minister, and Council of Ministers
Union Legislature: Lok Sabha – Composition, Functions and Role: Rajya Sabha – Composition, Functions and Role

Unit-II

State Executive: Governor, Chief Minister and State Council of Ministers
State-Legislature: Legislative Assembly and Legislative Council – Composition, Functions and Role
Centre-State Relations: Administrative and Legislative

Unit-III

Union and State Judiciary: Supreme Court – Composition, Functions and Role
High Court – Composition, Functions and Role
Control over Administration: Legislative and Judicial
Delegated Legislation: Meaning, Reasons and Safeguards

Unit-IV

Cabinet Secretariat– Composition, Functions and Role
State Secretariat– Composition, Functions and Role
District Administration: Structure and Functions

Essential Readings

Arora, Ramesh. K and Chaturvedi, Geeta (2000). *Indian Public Administration: Institution and Issues.* New Delhi: WishwasPrakashan.

Awasthi, A. (1980). *Central Administration*. New Delhi: Tata McGraw Hill.

Fadia, B.L. and Fadia, Kuldeep (2011). *Indian Administration.* Agra: SahityaBhawan Publication.

Maheshwari, S.R. (1979). *State Government in India*. New Delhi: Mac. Millan.

Maheshwari, S.R. (2001). *Indian Administration*. New Delhi: Orient Longman.

Puri, K.K. (2006). *Indian Administration*. Jalandhar: Bharat Prakashan

Sapru, R.K. (2001). *Indian Administration*. Ludhiana: Kalyani Publishers.

Sharma, P.D. and Sharma, B.M. (2009).*Indian Administration Retrospect and Prospect*. Jaipur: Rawat Publication.

Singh, Sahib and Singh, Swinder (2007). *Public Administration: Theory and Practice*. Jalandhar: New Academic Publishing Co.

Further Readings

Government of India (2009). *Organisational Structure of Government of India - Fifteenth Report*. New Delhi: Second Administrative Reforms Commission.

Government of India (2009). *State and District Administration - Thirteenth Report*. New Delhi: Second Administrative Reforms Commission.

Pylee, M.V. (1965). *Constitutional Government in India*. Bombay: Asia Publishing House

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PHILOSOPHY

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

Paper : ELEMENTS OF PHILOSOPHY

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS & OBJECTIVES :

The aim of this paper is to familiarize the students with the subject, its branches, problems and methods. The contents of this paper provide the students with a wider canvas about tackling day-to-day problems from a larger perspective.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be 9 questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidates shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature of Philosophy (Introduction).
2. Problems of Philosophy with special focus on social equality, self knowledge and rationality.
3. Methods of Philosophy : Critical and Reflective approach.

Unit-II

4. Introduction to main branches of Philosophy : Metaphysics, Epistemology, Ethics, Social Philosophy and Aesthetics (The interrelation between the branches will be focused).
5. Relation of Philosophy with Science and Religion.
6. Nature of Art and Aesthetic Experience

Unit-III

7. Ethics and Social Philosophy : Good life and Good Society.
8. Morality in Public and Private life.
9. Individual and Society.

Unit-IV

11. Justice : Virtue, Fairness, Equality.
12. Tolerance : Respect for Cultural Pluralism and Social diversities.
13. Caste System in India : Jyoti Ba Phule, Gandhi, Ambedkar.

Essential Readings :

1. G.L. Chandramani : Hitopadesa, Jaico Publishing House, 1995.
2. Mandukya Upanisad, Yamuna Prasad Tripathi : Varanasi Bhartiya Vidya Prakashan, 1966.
3. Narvane, V.S. : Modern Indian Thought, Orient Longman Publishers, 1978.
4. Titus, H.H. : Living Issues in Philosophy, Oxford University, 1993.
5. Amartya Sen : The Idea of Justice, The Belknap Press of Harvard University Press Cambridge, Massachusetts, 2009.
6. Calvin Lewis Pinchin : Issues in Philosophy, Palgrave Macmillan, London, 2nd Ed. December, 2004.
7. Morris Weitz (ed.) : Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York, 1970.

Suggested Readings :

1. Aesop's Fables : Penguin Books, Harmondsworth, 1998.
2. Dr. B.R. Ambedkar : Annihilation of Caste, Navayana Publishers, New Delhi, 1936.
3. Jyotiba Phule : Gulamgiri (The Slavery), Hindi Translator S. Murti, Cultural Publishers, Lucknow, 3rd Ed. 1994.
4. Narayana Hitopadesa : Translated from Sanskrit by A.B.D. Haksar, Penguin Books, 1998.

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PHILOSOPHY

SEMESTER-II

Paper : LOGIC

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Lectures	:	75

AIMS AND OBJECTIVES :

This paper aims at a systematic study of the Science of Logic which is the most effective means of developing logical abstract thinking in us. It tries to provide students with a mastery of Logic so that they can think in clearer terms and be less prone to error.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) There shall be **9** questions in all.

(ii) The first question shall be of short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25-30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.

(iii) Rest of the paper shall contain 4 Units and each Unit shall have two questions with internal choice. The candidate shall attempt one question from each Unit i.e. – 4 in all.

(iv) For private and reappear candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iv) in the question paper.

Unit-I

1. Nature, Scope and Utility of Logic.
2. Terms and Propositions : Kinds of Terms, Connotation and Denotation of Terms. Aristotle's classification of proposition (Square of Opposition—Contradictories), Contraries, Sub-Contraries and Sub-Alterns.

Unit-II

3. Laws of Thought : Identity, Contradiction, Excluded Middle and Sufficient Reason.
4. Argument : Immediate Inference and Mediate Inference. Some kinds of immediate inference : Conversion, Obversion, Contraposition, Inversion.

Unit-III

5. Categorical Syllogism : The Structure and Rules of validity of Pure Categorical Syllogism, Figures and moods, Fallacies of Syllogism.
6. Introduction to Truth-Tables, Negation, Conjunction, Disjunction, Implications and Equivalences.

Unit-IV

7. Nature of Induction : Distinction between Deduction and Induction.
8. Kinds of Induction.
9. Causation : Nature of Cause, Plurality of Causes.

Essential Readings :

1. Copi, I. M. : Introduction to Logic (N.Y., Macmillan, 1972, Hindi Translation available); London : Routledge and Kegan Paul.
2. Copi, Irvin M. : Introduction to Symbolic Logic (Prentice Hall of India), New Delhi, 1998.
3. Cohen and Nagel : Introduction to Logic and Scientific Method (Allied Publishers), New Delhi, 2000.

Suggested Readings :

1. Alice Ambrose, Morris Lazerowitz : Fundamentals of Symbolic Logic, revised ed., Holt, Rinehart and Winston, New York, 1962.
2. F.H. Bradley : The Principles of Logic, Oxford University Press, London, 1950.
3. John Dewey : Logic, Henry Holt and Company, New York, 1938.

PSYCHOLOGY

SEMESTER –I

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-I

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Nature of Psychology, Goals and Branches of Psychology, Historical Evolution of Psychology, Development of Psychology in India.

Unit II

Emotions : Definition and Concept of Emotions, Types of Emotions, Theories of Emotions (James–Lange, Cannon Bard, Schacter-Singer Theory.), Introduction to Emotion Intelligence.

Unit III

Method of Psychology: Experimental Method, Observation Method.
Sampling Techniques, Survey Method.

Unit IV

Motivation: Definition, Nature, Concept. Types of Motives (Physiological, Psychological, Social): Theories of Motivation: Humanistic (Maslow), Need Theories (McClelland and Murray).

Note: The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Level of Aspiration.
2. Facial Expressions in Emotions
3. Public Opinion Survey.
4. Measurement of Motivation
5. Zeigarnik Effect
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2003). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (2014). Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966). Statistics in Psychology and Education, New Delhi : Vakils, Feffer and Simons.
6. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Rinehart and Winston.
7. Morgan, C.T., King, R.A., J.R. Weisz and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
8. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

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PSYCHOLOGY

SEMESTER –II

Objectives :

(I) The course introduces to the students the general concepts and historical viewpoints in general psychology. The students would also get an understanding of the principles and theories in different areas like personality, motivation, intelligence, etc. The course also apprises them of the concept of growth and development and also introduces them to the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : GENERAL PSYCHOLOGY-II

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Personality – Concept, Trait Theories (Eysenck, Costa and MCrae), Psychoanalytic Theory (Freud).

Humanistic Theory (Rogers). Measurement of Personality, (Self Report Measures, Projective Techniques and Behavioural Assessment)

Unit II

Statistics: Graphical Representation of Data: Measures of Central Tendency and Variability.

Correlation - Meaning of Correlation, Rank Order and Product Moment-Correlation and Interpretation.

Unit III

Development: Concept, Heredity and Environmental Influences. Theories of Development : Erickson, Psychosocial Theory, Piaget's theory of Cognitive Development.

Unit IV

Intelligence : Concept, Theories of Intelligence: Spearman, Thurstone, Cattell, Guilford. Measurement of Intelligence (Verbal and Non Verbal Test and Individual and Group Tests).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Verbal Test of Intelligence
2. Non Verbal Test of Intelligence
3. Performance Test of Intelligence.
4. McCosta & Crae NEO Big Five Personality Inventory.
5. Interest Inventory.
6. Familiarization of any five apparatuses

Suggested Readings:

1. Baron, R.A. (2002). Psychology, New Delhi : Pearson Education.
2. Ciccarelli, D. (2008). Introduction to Psychology, Delhi: Pearson.
3. Das, J.P. (1998). The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1996). Understanding Psychology, New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer and Simons.
6. Guilford, J.P., and Fruchter, B. (1981). Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000). Introduction to Psychology. New Delhi: Kalyani.
8. Kerlinger, F. N. (1964).Foundations of Behavioural Research. New York: Holy, Tinvsty snf Eindyon.
9. Morgan, C.T., King, R.A., Weisz ,J.R. and Schopler, J. (1987). Introduction to Psychology, Singapore: McGraw, Hill.
10. Singh, A.K. (1986). Tests, measurements and research methods in behavioural sciences. Tata McGraw-Hill.

GEOGRAPHY

SEMESTER - I

Paper-I : PHYSICAL GEOGRAPHY-I : Geomorphology

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

The course aims to familiarize the students with the fundamental concepts in physical geography, essentially geomorphology.

Course Content:

UNIT-I

Nature & Scope of Geography: Place of Physical Geography within the discipline of Geography, Divisions of Physical Geography (Geomorphology, Climatology Oceanography and Biogeography). (8 lectures)

Interior of the Earth: Constitution, Isostasy, Continental Drift (with special reference to Wegener's Theory and Plate Tectonics). (12 lectures)

UNIT-II

Movements of the Earth : Orogenic and Epeirogenic (with special reference to Geosyncline theory); landforms resulting from forces of Compression and Tension; Earthquakes and Volcanoes (causes, types and distribution) (20 lectures)

UNIT-III

Rocks: Origin, classification and characteristics. (8 lectures)

Major Land Forms: Mountains, plateaus and plains in the world. (10 lectures)

UNIT-IV

Geomorphic Agents and Landscapes: Fluvial, Glacial, Aeolian, Coastal and Karst. (22 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.
   The paper-setter must put note (5) in the question paper

List of Readings :

Essential Readings:

1. Blij, H.J. De & Petor O. Muller : *Physical Geography of the Global Environment,* John Wiley & Sons, Inc., New York, 1996.
2. Bryant, R.H. : *Physical Geography*, Rupa Publications India Pvt. Ltd., New Delhi, 2011.
3. Hussain, Majid : *Fundamentals of Physical Geography (3rd Edition),* Rawat Publication, Jaipur, 2011.
4. Hyndman, D. and D. Hyndman : *Natural Hazards and Disasters (2nd Edition),* Brooks/Cole Cengage Learning, Belmont, USA, 2009.
5. Khan, Nizamuddin : *An Introduction to Physical Geography*, Concept Publishing Company, New Delhi, 2001.
6. Lal, D.S. : *Physical Geography,* Sharda Pustak Bhawan, Allahabad, 2012.
7. Monkhouse, F.J. : *Principles of Physical Geography (8th Edition),* Hodder & Stoughton, London, UK, 1975
8. Pal, Saroj K. : *Physical Geography of India : A Study in Regional Earth Sciences,* Orient Longman, Calcutta, 1998.
9. Petersen, J.F., D. Sack and R.E. Gabler : *Physical Geography (10th Edition)*, Brooks/Cole Cengage Learning, Belmont, USA, 2011
10. Singh, Savindra : *Physical Geography,* Gyanodya Prakashan, Gorakhpur, 2012.
11. Strahler, Alan H. and Arthur N. Strahler : *Modern Physical Geography,* John Wiley, New York, 2003.

Further Readings:

1.	Bunnett, R.B.	:	*Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
2.	Dayal, P.	:	*A Text Book of Geomorphology*, Shukla Book Depot, Patna, 1995.
3.	Dury, G.H.	:	*The Face of the Earth,* Penguin, England, 1973.
4.	Gass, I.G.	:	*Understanding the Earth,* The Artemis Press, Sussex, 1973.
5.	Gautam, Alka		*Geomorphology,* Sharda Pustak Bhawan, Allahabad, 2012.
6.	Kaur, Dhian	:	*The Earth,* Kalyani Publishers, Ludhiana, 2000.
7.	Kale, V. and Gupta, A.	:	*Elements of Geomorphology,* Oxford University Press, Calcutta, 2001.
8.	Mamoria, C.P. and Niati, J.L.	:	*Bhautic Bhoogol Ke Tatwa* (in Hindi), Agra, 1976.
9.	Singh, Savindra	:	*Geomorphology,* Prayag Pustak Bhawan, Allahabad, 2004.
10.	Sparks, B.W.	:	*Geomorphology,* Longman, London, 1986.
11.	Thornbury, W.D.	:	*Principles of Geomorphology,* Second Edition, Wiley Eastern Ltd., New Delhi, 1993.

Pedagogy:

- Use of Audio-visual aids, maps, diagrams and other forms of illustrations especially in the Indian context are recommended.
- Relevant educational field trips must be arranged to illustrate the theory being taught.

Paper-II: CARTOGRAPHY-I Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (5+5)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography.
- To explain the elements of Map (Scale and Orientation) and steps in Map making.
- To introduce relief representation.

Course Content:

UNIT-I

Maps: Brief history of map making and types of maps.

Geometry of the Earth: Latitude, Longitude (Time Zones and International Date Line), Size and Shape of the Earth. (3 lectures, 6 lab sessions)

UNIT-II

Scales: Methods of representing scale;
Methods of construction of Graphic scales: Plain, Comparative, Time and Diagonal.
(6 lectures, 12 Lab. sessions)

UNIT-III

Directions and Bearings: Plotting of a course, True North, Magnetic North, finding True North with the Pole star, a watch and a rod; Bearing and its conversion. (6 lectures, 12 Lab. sessions)

UNIT-IV

Representation of Relief: Hill-shading, Hachures, and Layer Tints, Spot heights, Benchmarks, Contours.
(6 lectures, 12 Lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be in about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL.They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper.

List of Readings

Essential Readings:

1. Dink, Phyllis: *Map Work*, Atma Ram & Sons, 1962.
2. Khullar, D.R.: *Essentials of Practical Geography*, New Academic Publishing Company, Jalandhar, 2003.
3. Mishra, R.P. & Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
4. Sarkar, Asish: Practical Geography: A Systematic Approach (2nd Edition), Orient BlackSwan, Hyderabad, 2011.
5. Singh, Gopal: *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
6. Singh, R.L. & P.B. Singh: *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Bagulia, A.M.: *Practical Geography*, Anmol Publications Pvt. Limited, New Delhi, 2006.
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
3. Rather, G.M.: *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011.
4. Robinson et al.: *Elements of Cartography (6th Edition)*, Wiley India Pvt. Ltd., New Delhi, 2009.

Pedagogy:

- The use of topographical sheets of Survey of India
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

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GEOGRAPHY

SEMESTER - II

Paper-III: PHYSICAL GEOGRAPHY-II: Climatology & Oceanography

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To acquaint the students with the elements and attributes of climatology and oceanography
- To underscore the role of climate in human life
- To emphasize the significance of oceans within the global environmental system

Course Content:

UNIT-I

Definition of Climatology: Concepts of Climate and Weather, Nature and Scope of Climatology. (2 Lectures)
Climate: Elements and Controls. (4 Lectures)
Physical Structure of the Atmosphere: Troposphere, Tropopause, Stratosphere, Ozonosphere, Mesosphere, Thermosphere and Exosphere (attributes of these layers). (6 Lectures)
Physical and Chemical Composition of the Atmosphere: Dust particles, Vapour Particles, Active gases, Inert gases. (2 Lectures)
Insolation and Temperature: Distribution of Insolation (horizontal); Distribution of Temperature (vertical, horizontal, annual, seasonal and diurnal) (6 Lectures)

UNIT-II

Atmospheric Pressure and Wind Distribution: Atmospheric disturbances: Tropical Cyclones, Temperate Cyclones and Anticyclones. (8 Lectures)
Atmospheric Moisture: Condensation forms: cloud, dew, fog, frost and snow. (8 Lectures)
Precipitation: forms and types, world patterns (spatial and seasonal).
Introduction to Koppen's classification of world climate (4 lectures)
Role of Climate in Human Life : Atmospheric pollution and global warming: causes, consequences and measures of control (4 lectures)

UNIT-III

Oceanography : Definition, Nature and Scope (5 lectures)
Topography of the Ocean Basins; Continental Shelf, Continental Slope, Abyssal Plain, Ridges, Deeps and Trenches (5 lectures)
Temperature and Salinity of ocean waters: World patterns and controlling factors (6 lectures)

UNIT-IV

Movements of Oceanic Waters: Waves, Tides and Currents; Surface currents of the oceans;
Role of Ocean Currents in heat distribution over the globe. (10 lectures)
Marine Deposits and Corals: Origin and types. (10 lectures)

Note : 1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be about 25 words. Each part will carry 2 marks (Total 20 marks).

2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks. These will be in addition to the compulsory question I.

3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.

4. Internal assessment will be based on written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

5. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (5) in the question paper.

Essential Readings :

1. Critchfield, H.J. : *General Climatology,* Prentice Hall of India Private Ltd., New Delhi, 1975
2. Frederick K. and Edward J. Tarbuck : The Atmosphere: An Introduction to Meteorology, Prentice Hall of India Pvt. Ltd., New Delhi, 1995.
3. Hess Darrel, Dennis G Tasa : Mcknight's Physical Geography: A Landscape Appreciation (2011).
4. Khan, N. : *An Introduction to Physical Geography,* Concept, New Delhi, 2001.
5. Lal, D.S. : *Climatology,* Chaitanya Publishing House, Allahabad, 2009.
6. Sharma, R.C and Vatal, M : *Oceanography for Geographers*, Chetnya, Allahabad, 2005.
7. Singh, Malkit : Dimensions in Physical Geography, Rasmeet Parkashan, Jalandhar 2012.
8. Singh, Savindra : *Climatology,* Prayag Pustak Bhavan, Allahabad, 2004.
9. Trewartha, G.T. Delhi, : *An Introduction to Climate,* McGraw Hill Book Co., New International Student Edition, 1980.

Further Readings :

1. Bhutani, Smita : *Our Atmosphere,* Edited by R.C. Chandna, Kalyani Publishers, Ludhiana, Delhi, 2000.
2. Bunnett, R.B. *Physical Geography in Diagrams,* Pearson Education, Noida, 1987.
3. Gross, Grant M. : *Oceanography : A View of the Earth*, Prentice Hall, New Jersey, 1975.
4. Monkhouse, F.J. : *The Principles of Physical Geography*, University of London Press, London, 1959.
5. Pattersen, S. : *Introduction to Meteorology,* McGraw Hill Book Co., London, 2011
6. Stringer, E.T. : *Foundations of Climatology*, Surjeet Publications, Delhi, 1982.

Pedagogy:

- Conscious effort be made to make the students aware of the significance of climate and oceans to human life.
- Use of Slides, photographs and documentaries on climates and oceans strongly recommended.

Paper-IV: CARTOGRAPHY-II Max. Marks: 30

Time : 3 Hours

Written paper of 3 hours duration at college level (except USOL)	:	20 marks
Viva and Practical Record (10+10)	:	10 marks

Objective:

- To introduce the concept of maps and relevance of maps in Geography
- To explain the elements of Map (Scale and Orientation) and steps in Map making
- To introduce relief representation and weather symbolization on maps

COURSE CONTENT

UNIT-I

Brief History of Cartography
Elements of Map Design (6 lectures, 12lab sessions)

UNIT-II

Enlargement and Reduction of Maps: Graphic methods – Square and Similar Triangles.
Introduction to concept of Global Positioning System (GPS).

(6 lectures, 12 Lab. sessions)

UNIT-III

Interpretation of Indian Weather Maps: General introduction to the study of weather maps, the scheme of weather symbols including Beaufort's scale employed in Indian Daily Weather Maps.

(6 lectures, 12 lab. sessions)

UNIT-IV

Weather in India: Summer season (period of summer monsoon), winter season, Weather Forecasting through the study of weather maps and recent advances in weather forecasting.

(6 lectures, 12 lab. sessions)

Note :

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of Geography in the college.
3. **For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.**
4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should be about 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question I.
6. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 15 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
7. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
8. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
9. A fresh practical note book shall be prepared by failed/improvement candidates.
10. For practical classes, the number of students in one group shall not exceed fifteen.
11. There will be 3 hours of teaching per week for this paper.
12. For USOL, reappear/improvement candidates(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper-setter must put note (12) in the question paper

Essential Readings :

1. Mishra, R.P. & Ramesh, A. : *Fundamentals of Cartography*, Concept Publishing Co., New Delhi, 1989.
2. Singh, Gopal : *Mapwork and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 1995.
3. Singh, R.L. & Singh : *Mapwork and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.
4. Dink, Phyllis : *Mapwork*, Atma Ram & Sons, Latest Edition, 1962.
5. Anderle, R : *The Global Positioning System, Royal* Society of London, 1998.
6. Kulkarni, M.N : *The GPS and Its Applications, Training,* Volume GPS Training Course, Civil Engg. Dept., I.I.T. Bombay, 9-19 May, 2000.
7. Hoffman-Wellenhof, B. et. al.: *GPS Theory and Practice,* $4^{th\ Rev}$. Edition, Springer Wien, New York.

Further Readings:

1. Monkhouse, F.J. & Wilkinson, H.R. : *Maps and Diagrams*, Methuen & Co., London, Third Edition, 1976.
2. Robinson, A.H. & Randall, D. Sale: *Elements of Cartography*, John Wiley & Sons, New York (Sixth Edition), 1995.
3. Colombo, O.L. & Watkins, M.M.: *Satellite Positioning in US National Report to IUGG,* on Geodesy, 1991.
4. King, R.W. & Others: *Surveying with GPS,* University of New South Wales, Australia,1985.
5. Kulkarni, M.N.: *GPS from an Indian Perspective,* GIM International Journal, GITC Publication, The Netherlands, Vol. 14, Oct., pp. 43-45. (2000a).
6. Mueller, I.I.: *Global and Regional Geodynamics,* IAG Symposia 101, Springer Verlag, 1989.
7. Wells, D.E.: *Guideto GPS Positioning, Canadian* GPS Association, New Brunswick, Canada, 1988.

Pedagogy :

- The use of topographical sheets of Survey of India and weather maps.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.

GANDHIAN STUDIES
SEMESTER –I

MAHATMA GANDHI: FAMILY AND EARLY LIFE (INDIA, ENGLAND AND SOUTH AFRICA)

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives :

The paper is designed to acquaint the students with the early life of Mahatma Gandhi in India and in London.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Family and Schooling

a) Family Background – Parents, Rambha & others
b) Neighbourhood and Early Impact
c) Schooling
d) Influence of Indian Scriptures

UNIT-II

As a Law Student in London

a) Dilemma Before Going to London
b) As a Law Student
c) Vegetarianism
d) Self-transformation and Home Coming

UNIT-III

Gandhi in South Africa

a) Journey to South Africa
b) Encounter with Racial Discrimination/Apartheid
c) Conditions of Indians in South Africa
d) Birth of Satyagraha

UNIT-IV

Satyagraha in Practice

a) Disfranchisement of Indians
b) Establishment of Natal Indian Congress
c) Asiatic Law Amendment Ordinance
d) Home Coming

ESSENTIAL READINGS:

1 Bhattacharyya**,** Buddhadeva : *Evolution of the Political Philosophy of Gandhi* (Calcutta: Calcutta Book House), 1969.

2**.** Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.

3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 1986, 1995, 2004 editions.

4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1987.

5. Gandhi, M.K. : *Hind Swaraj (*Ahmedabad: Navajivan Publishing House), 1992.

6. Malhotra, S.L. **:** *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi : Deep & Deep Publication), 2001.

7. Mishra, Anil Dutta : *Reading Gandhi* (New Delhi: Dorling Kindersley Pearson), 2012.

8. Nanda, B.R. : *Mahatma Gandhi - A Biography* (London: George Allen and Unwin), 1976.

FURTHER READINGS:

1**.** Allen, Douglas (ed.) **:** *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.

2. Bandyopadhaya, J. **:** *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.

3**.** Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.

4. Nanda, B.R. **:** *Making of a Nation: India's Road to Independence* (New Delhi: Harper Collins), 1998.

5. Payne, Robert **:** *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997 edition.

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GANDHIAN STUDIES

SEMESTER –II

GANDHI IN FREEDOM STRUGGLE - SOUTH AFRICA AND INDIA

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Course Objectives:

The paper is designed to acquaint the students with life in South Africa and struggle against racial discrimination.

Pedagogy of the Course Work :

90% Lectures (including expert lectures).
10% Unit Tests, Snap Tests, assignments, attendance and class room participation.

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each units shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Struggle for Human Rights in South Africa

a) Green Pamphlet
b) Indian Opinion
c) Visit to London
d) Interaction and Confrontation : Race & Caste

UNIT-II

Establishing Ashrams

a) Experience of Community Life in South Africa
b) Phoenix Settlement
c) Tolstoy Farm
d) Return to India

UNIT-III

Western Influences-I

a) Influence of John Ruskin
b) Influence of Henry David Thoreau
c) Influence of Leo Tolstoy
d) Influence of Emerson

UNIT-IV

Gandhi's entry into Indian Politics

a) Early Political Activities
b) Champaran Satyagrah
c) Kheda Satyagrah
d) Ahmadabad Mill Strike

Essential Readings:

1. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
2. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
3. Fischer, Louis : *Life of Mahatma Gandhi* (New York: Harper and Row), 1983.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001.
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992.
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999.
7. Kripalani, J.B. : *Mahatma Gandhi, His Life and Thought* (New Delhi: Publications Division, Ministry of Information and Broadcasting), 1971.
8. Malhotra, S.L. : *Lawyer to Mahatma: Life, Work and Transformation of M.K. Gandhi* (New Delhi: Deep & Deep Publication), 2001.
9. Nanda, B.R. : *Making of a Nation : India's Road to Independence(New Delhi: Harper Collins), 1998.*
10. Parekh, Bhikhu : *Gandhi's Political Philosophy: A Critical Examination* (Delhi: Ajanta), 1989.

Further Readings :

1. Allen, Douglas (ed.) : *The Philosophy of Mahatma Gandhi for the Twenty First Century* (New Delhi: Oxford University Press), 2009.
2. Bandyopadhaya, J. : *Social and Political Thought of Gandhi* (Calcutta: Allied Publishers), 1969.
3. Bondurant, John V. : *Conquest of Violence: The Gandhian Philosophy of Conflict* (Bombay : Oxford University Press), 1959.
4. Chandran, Devansen D.S. : *Making of the Mahatma* (New Delhi: Orient Longman), 1969.
5. Fischer, Louis : *Life of Mahatma Gandhi* (Bombay: Bhartiya Vidya Bhawan), 1996.
6. Ganguly, Debjani & Docker, John (eds.). : *Rethinking Gandhi and Non-violence Relationlity Global Perspective* (New Delhi: Orient Blackswan Pvt.,), 2009.
7. Nanda, B.R. : *Mahatma Gandhi- A Biography (London :George Allen and Unwin), 1976.*
8. Payne, Robert : *The Life and Death of Mahatma Gandhi* (New Delhi: Rupa & Co.), 1997, edition.

JOURNALISM & MASS COMMUNICATION

SEMESTER –I

INTRODUCTION TO MASS COMMUNICATION - I

Max. Marks	:	100
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will introduce to the students the general concepts and historical viewpoints in communication and media. The students would also get an understanding of the basic models communication and gain an understanding of the current scenario of media industry in India.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Definition, nature and concept of communication; types of communication: intra; inter; group and mass.

Unit-II : Basic models of mass communication : S-R model; Schramm's Model; Model based on Lasswell formula; Mathematical Model.

Unit-III : Early Press History in India (1782-1947); Role of nationalist newspapers in freedom struggle; Laws to curb press freedom before Indian independence; Role of press in Post Independence era (1947-1975); Role of Press during Emergency (1975-1977); Press in modern India (1978-present)

Unit-IV : Brief overview of media industry in India with emphasis on growth of

- Press
- Radio
- TV
- New Media

PRACTICALS

Max. Marks : 20 Marks

1. Project on any one aspect of communication : 1 0 Marks
2. Case study of any one early newspaper : 1 0 Marks

Books Recommended:

Essential Reading :

1. Wilbur Schramm, (1960), *Mass Communication*, 2nd ed. Urbana, University of Illinois Pr.
2. Wilbur Schramm, (1953), *Process & Effects of Mass Communication*, Urbana, University of Illinois Press.
3. Lee Richardson, (1969), *Dimensions of Communication*, N.Y. Appleton- Century-Croft.
4. Kenneth K. Anderson, 1972, *Introduction of Communication: Theory and Practice*. Menlo Park, Cummings Pub. Co.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd..
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading:

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, NY
3. Blumler, Jay G & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.

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JOURNALISM & MASS COMMUNICATION

SEMESTER- II

PAPER : INTRODUCTION TO MASS COMMUNICATION-II

Max. Marks	**:**	**100**
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives:

This course will introduce students to the basic terminology of various forms of mass media as well as folk and new media. They will also be apprised with application areas such as Advertising & Public Relations.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I : Basic terms, concepts, definitions and nature of Print, TV and Radio Journalism.

Unit-II : Folk Media: Types, reach and relevance.

Unit-III : New Media: Cyberspace as a source of information, communication and entertainment.

Unit-IV : Definition, role of Advertising and Public Relations.

PRACTICALS

Max. Marks : 20 Marks

1.	Case study of any one newspaper, radio station or TV channel	:	10 Marks
2.	Project on either folk or new media	:	10 Marks

Books Recommended:

Essential Reading :

1. Luthra, H.P., 1984, *Indian Broadcasting*. Publications Division, Min. of I & B.
2. Rao, B.S.S., (1992), *Television for Rural Development.* Concept Publishers, New Delhi.
3. Shivastava, K.M., (1989), *Radio and TV Journalism,* Sterling Publications Pvt. Ltd., New Delhi.
4. Maloney, Martin J. & Rubenstein, Paul Max, (1980), *Writing for the Media*. Prentice Hall, New Jersey.
5. Deniel Ketz et al, (1962), *Public Opinion and Propaganda*, N.Y. Holt.
6. Anderson, Kenneth, (1972), *Introduction to Communication: Theory and Practice*. Cummings Publishing Co., California.
7. Everett M. Rogers, (1997), *A history of communication study*, The Free press.
8. S.K. Goel, (1999), *Communication Tomorrow*, Common, Wealth Publishers.
9. Steven G. Jones, (1998), *Cybersociety*, Sage Publication.
10. Michael Norton and Purba Dutt, (2003), *Getting started in Communication*, Sage Publications.
11. M.H. Syed, (2006), *History of Mass Media*, Anmol Publication Pvt. Ltd.
12. Keval J. Kumar, Jaico, (1995), *Mass Communications in India*, Publishing House.
13. Kevin Williams, (2003), *Understanding Media Theory*. Arnold Publication.
14. Roger Silverston, (1999), *Why study the Media?* Sage Publications.
15. Marie Winn, (1985), *The plug-in Drug,* Penguin Books.
16. Stanley J. Baran and Dennis K. Davis, (2002), *Mass Communication theory*. Thomson Wadsworth Publication.

Additional Reading :

1. Ball-Rokeach, Sandra & DeFleur, (1975), *Theories of Mass Communication*, Melvin, Longman, New York.
2. Berlo David, Rinehart & Winston, (1960), *The Process of Communication.* Holt, N.Y.
3. Blumler, Jay G. & Katz, Elihu (ed.), SAGE, Beverly Hills, 1974, The uses of Mass Communication.
4. De Sola Pool, (1972), *Handbook on Communication*, Ithiel (ed), Rand McNally College Publishing Co., Chicago.
5. Ken Fielding , *Introduction to Television Production* (Arizone State University) Longman New York & London.
6. Lynee S. Gross WCB, *Tele Communication- An Introduction to Electronic Media*. Wm. C. Brown Publisher.
7. Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York.
8. Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

POLICE ADMINISTRATION

SEMESTER – I

Outlines of Tests, Syllabi and Courses of Reading

PAPER : POLICE ADMINISTRATION IN INDIA

(A) Course Objectives :

The principal objective of this paper is to acquaint the students with the features of Indian Police Administration along with its history and growth. Considerable attention has been paid to the concept and significance of reforms in Police Administration with special reference to reform initiatives after independence. The endeavor of the course would be to familiarize the students with the Police Administration at the Union Level with special focus on the Union Ministry of Home Affairs and Central Armed Police Forces .The powers functions and role of Police at Union, State, District and Police Station level will also be discussed.

(B) Pedagogy of the Course Work :

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words . The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 =18 marks).
- Rest of the paper shall contain 4 Units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit-I

Concept, Role and Significance of Police; Origin and development of Police in Ancient, Medieval and British Period. Police Reforms in India after Independence.

Unit-II

Organization and Working of Union Ministry of Home Affairs; Organization and Working of Central Police Organizations with special reference to Central Bureau of Investigation (CBI); Intelligence Bureau (IB); Bureau of Police Research and Development (BPR & D); and National Crime Records Bureau (NCRB).

Unit-III

Origin, Structure and Working of Central Armed Police Forces (CAPFs) with Special Reference to BSF, CRPF, ITBP , CISF and SSB.

Unit-IV

Organization and Working of Police Administration at the State Level, District Level and Police Station Level. Commissionerate System of Policing.

Essential Readings:

1.	Gupta, Anandswarup	:	The Police in British India: 1861-1947, Bureau of Police Research & Development, New Delhi, 2007.
2.	Srivastava, Aparna	:	Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
3.	Sharma, P. D.	:	Indian Police – A Developmental Approach, Research Publications, New Delhi, 1977.
4.	Sen, Shankar	:	Indian Police Today, Ashish Publishing House, New Delhi, 1994.
5.	K.P Singh	:	Police Gyan Vigyan, Bright Law House, New Delhi, 2004.

Further Readings:

1.	Vadackumchery, James	:	National Police Commission: Issues for Rethinking, APH Publishing Corporation, New Delhi, 1998.
2.	Saxena, Anil K.	:	Professionalism in Indian Police, A.P.H. Publishing Corporation, New Delhi, 1997.
3.	Chaturvedi, J.C.	:	Police Administration and Investigation of Crime, Isha Books, Delhi, 2006.
4.	Bailey, David, H.	:	The Police and Political Development in India, Princeton University Press, New Jersey, 1969.

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POLICE ADMINISTRATION

SEMESTER – II

Paper : CONSTITUTION OF INDIA

(A) Course Objectives:

The objective of this course is to give an overview to the students the basic information about the Constitution of India. The students would be taught concepts such as Preamble, Citizenship, Fundamental Rights, Directive Principles of State Policy and Fundamental Duties. They are made to understand the political executive at the union and state level; the union and state legislature and judiciary at the Union and in the state. In addition, efforts would be made to discuss the mechanism available for ensuring police accountability.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :
(i) Internal Test-5%
(ii) Academic activities (Seminar, Project, Assignment)-3%
(iii) Attendance-2%

(C) Instructions for Paper Setters and Candidates :

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9×2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4×18 = 72 marks).

(D) Course Content:

Unit – I

Preamble, Citizenship, Fundamental Rights, Restrictions of Police Rights, Directive Principles of State Policy & Fundamental Duties.

Unit – II

Executive at the Union Level; President, Prime Minister and Council of Ministers; Union Legislature: Lok Sabha and Rajya Sabha; Judiciary at the Union Level: Supreme Court.

Unit-III

Executive at the State Level; Governor, Chief Minister and Council of Ministers. State Legislature: Vidhan Sabha and Vidhan Parishad. Judiciary in the State : High Court and Subordinate Courts.

Unit – IV

Public Accountability of Police through Constitutional and statutory bodies: National Commission for Schedule Caste, National Commission for Schedule Tribes, National Commission for Women, National Human Rights Commission. National Commission on Protection of Child Rights.

Essential Readings:

1.	Ramesh K. Arora and Rajni Goyal	:	Indian Public Administration: Institutions and Issues, Wishwa Prakashan, New Delhi, 1997.
2.	Avasthi and Avasthi	:	Indian Administration, Lakshmi Narain Agarwal, Agra, 1995.
3.	Norman D. Palmer	:	The Indian Political System, Houghton Hiffin, New York, 1975.
4.	Iqbal Narain (Ed.)	:	State Politics in India, Meenakshi Publications, Meerut, 1976.
5.	Granville Austin	:	The Indian Constitution : Cornerstone of a Nation, Oxford University Press, London, 1966.
6.	Sriram Maheshwari	:	State Government in India, Macmillan, New Delhi, 2000.

Further Readings :

1.	Bambri, C. P.	:	The Indian State – 50 Years, Shipra Publications, Delhi, 1977.
2.	Singh, Hoshiar (Ed.)	:	Indian Administration, Aalekh Publishers, Jaipur, 1990.
3.	Pye, Lucian W. and Sidney Verba (Eds.)	:	Political Culture and Political Development, Princeton University Press, New Jersey, USA, 1965.

WOMEN'S STUDIES

SEMESTER–I

Paper- : FOUNDATIONAL CONCEPTS IN WOMEN'S STUDIES

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives : The objective of this course is to conscientise the students about some of the key concepts in women's studies, their meaning from a feminist and gender perspective with special reference to India.

Course Contents :

Unit I: Gender

- Sex and Gender : Definition and Difference
- Gender Stereotypes: Genesis and Persistence through Family, School and Peer Group
- Social Construction of Gender: From infancy to Adulthood to Old age

Unit II: Patriarchy

- Definition and Origin of Patriarchy
- Manifestations of Patriarchy:
  - (a) Preference for Male Child
  - (b) Discrimination against girl-child and women in the family
  - (c) Violence against Women
  - (d) Discrimination against Women at the Workplace

Unit III: Empowerment

- Definition
- Types of Empowerment:
  - (a) Social – with reference to women's role in marriage and family
  - (b) Political – 73rd and 74th Constitutional Amendment Acts
  - (c) Economic – Employment and Property Rights

Unit IV: Women's Studies

- (a) Definition,
- (b) Rationale for Women's Studies,
- (c) Evolution of Women's Studies,
- (d) Women's Studies as a discipline.

NOTE:

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

1. Anderson, Margaret : *Thinking About Women,* Macmillan, New York, 1993.
2. Bhasin, Kamla : *What is Patriarchy?,* Kali for Women, New Delhi, 1994.
3. Bhasin, Kamla : *Understanding Gender,* Kali for Women, New Delhi, 2000.
4. Connel, R.W. : *Gender,* Polity, Cambridge, 2002.
5. Jain, Devaki and Rajput, Pam (eds.) : *Narratives from the Women's Studies Family,* Sage, New Delhi, 2003.
6. Poonacha, Veena : *Understanding Women's Studies*, RCWS, SNDT University, Mumbai, 1999.
7. Singh, Umesh Pratap, Garg, Rajesh Kumar and Nigam, Vivek Kumar : *Women Empowerment : Dimension and Direction,* Adhyayan Publishers and Distributors, New Delhi, 2012.
8. Woodward, Kath : *The Short Guide of Gender,* Rawat Publications, Jaipur, 2012.
9. Viz. M., Bhatia, M. and S.(eds) : *Women Studies in India: A Journey of 25 Years*, Rawat Publications, Jaipur, 2014

Further Readings :

1. Aravamudan, Gita : *Disappearing Daughters : The Tragedy of Female Foeticide,* Penguin, New Delhi, 2007.
2. Lerner, Gerda : *The Creation of Patriarchy,* Oxford University Press, New Delhi, 1986.
3. Lorber, Judith and Farell, Susan A. (ed.) : *The Social Construction of Gender,* Sage, New Delhi, 1991.
4. Makwana Ramesh H. : *Women Empowerment through Panchayati Raj,* ABD Publishers, Jaipur, New Delhi, 2012
5. Mies, Maria : *Indian Women and Patriarchy,* Concept Publishing Company, New Delhi, 1980.
6. Rajput, Pam & Kaur, Manvinder : "Women's Studies in Higher Education in India: Some Reflections", *Samyukta,* Vol. III, No.1, January, 2003.

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WOMEN'S STUDIES

SEMESTER -II

Paper : STATUS OF WOMEN IN INDIA-I

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives: The status of women in India has changed over time in relation to historical and cultural realities, levels of consciousness, perceptions and actions of individual women, women's groups and finally State initiatives. This course first aims to acquaint the student with women in the Indian tradition from ancient times to the present, a tradition which has arisen out of the heterogeneity of experience. Further it aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Course Contents

Unit I : Status of women in India in a historical perspective:

(a) Ancient India
(b) Medieval India
(c) Modern India

Unit II: Women and Family

(a) Origin of the family
(b) Types of family
(c) Gender Division of labour in family
(d) Female headed households

Unit III: Women, Religion and Caste

(a) Religion: Women's Status in major Indian religions - Hinduism, Islam, Sikhism, Christianity
(b) Caste: Introduction to caste system in India; Caste and Gender

Unit IV: Violence against Women

(a) Violence against Women: Definition as given by the United Nations
(b) Prevalent forms of violence against Women :

- Domestic violence
- Rape and Molestation
- Sexual Harassment
- Dowry Related Violence

NOTE:

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and internal assessment will be for 10 marks.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings :

1. Altekar, A.S. : *The Position of Women in Hindu Civilization,* Motilal, Banarsidass, Delhi, 1959.
2. Bader, Clarisse : *Women in Ancient India: Moral and Literary Studies,* Anmol Pub., Delhi, 1987.
3. Chatterjee, Meera : *A Report on Indian Women from Birth to Twenty*, NIPCCD, New Delhi, 1999.
4. Gopalan, Sarala and Shiva, Mira : *National Profile on Women, Health and Development,* VHAI, & WHO, 2000.
5. Gopalan, Sarala : *Towards Equality – The Unfinished Agenda : Status of Women in India-2001,* National Commission for Women, New Delhi, 2002.
6. Menon-Sen, Kalayani and Shiva Kumar, A.K. : *Women in India! How Free? How Equal?,* Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.
7. *National Human Development Report, 2001,* Planning Commission, Govt. of India, March, 2002.
8. Pruthi, Raj Kumar, Devi, Rameshwari and Pruthi, Romila, (eds.) : *Status and Position of Women: In Ancient, Medieval and Modern India,* Mangal Deep, Jaipur, 2001.
9. Sagade, J. : *Child marriage in India: Socio-Legal and Human Rights Dimensions,* Oxford University Press, New Delhi, 2012.

Further Readings :

1. Ali, Azra Asghar : *The Emergence of Feminism Among Indian Muslim Women,* 1920-1947, Oxford, Karachi, 2000.
2. Anand, Meena : *Dalit Women : Fear and Discrimination,* Isha Books, Delhi, 2005.
3. Bhattacharya, Rinki (eds.) : *Behind Closed Doors: Domestic Violence in India,* Sage, New Delhi 2004.
4. Choudhary, Prem : *Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India,* OUP, New Delhi, 2007.
5. Desai, Neera and Krishnaraj, Maithreyi (eds.) : *Women and Society in India,* Ajanta Publication, New Delhi, 1987.
6. Goodman, Jacqueline : *Global Perspectives on Gender and Work : Readings and Interpretations Reprint,* Rowman and Little Field Publishers, New York, Toronto Plymouth, UK, 2012.
7. Jacobson, Doranne and Wadley, Susan S. : *Women in India: Two Perspectives,* Manohar, New Delhi, 1986.
8. Kumar, Hajira (ed.) : *Status of Muslim Women in India,* Aakar Books, Delhi, 2002.
9. Mohanti, Bedabati : *Violence Against Women : An Analysis of Contemporary Realities,* Kanishka Publications, New Delhi, 2005.
10. Mohini Giri, V. : *Deprived Devis : Women's Unequal Status in Society,* Gyan, New Delhi, 2006.
11. Nagar, N.S. : *Changing Status of Indian Women,* Vista International Pub., Delhi, 2008.
12. Rajawat, Mamta : *Dalit Women: Issues and Perspectives,* Anmol Pub., New Delhi, 2005.
13. Thomas, P. : *Indian Women Through the Ages,* Asia Publishing House, Bombay, 1964.
14. Yadav, Ravi Prakash and Barsa Kumar Chandradeep : *Women Workers in India,* New Century Publications, New Delhi, India, 2012.

HUMAN RIGHTS AND DUTIES

SEMESTER-I

Paper : HUMAN RIGHTS AND DUTIES : CONCEPTUAL UNDERSTANDING

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

The course is designed to provide adequate theoretical understanding about humans rights and duties. It purports to develop a broad understanding of human rights and duties, awareness about the theoretical origins of human rights and their correlation with governance issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72

UNIT-I

THE CONCEPT OF HUMAN RIGHTS:

- Meaning and nature of Human Rights
- Classification of Rights
- The Concept of Human Rights

UNIT-II

CONCEPT OF HUMAN DUTIES:

- Meaning and nature of Human Duties; Moral, ethical, social, economic, political and cultural universal
- Classification of Human Duties: Individual, family, Community, Nation-State, Human kind and Mother Earth.
- Relationship between Rights and Duties.

UNIT-III

INTRODUCTION TO THEORIES OF HUMAN RIGHTS:

- Natural Rights Theory
- Liberal Theory of Rights,
- Legal/ positivist Theory of Rights
- Marxist Theory of Rights.
- Feminist Theory of Rights

UNIT-IV

DEMOCRATIC GOVERNANCE:

- Democracy and People's participation.
- Rule of Law: Non-arbitraries.
- Role of Civil Society

Essential Readings:

1. Brundlad Report : *Our Common future,* (1986) Oxford.
2. David Robert son : *A Dictionary of Human Rights,* (2004) Europa Publications, London.
3. Darren, J.O. Byrne : *Human Rights: An Introduction*, Pearson, (2005) Education Pvt. Ltd., Singapore.
4. Ian Brownlie, et al. (eds.): *Basic Documents on Human Rights,* (2006) Oxford
5. Jayapalan, N. : *Human Rights,* Atlantic Publishers, (2000) New Delhi.
6. Kalpana Kammabiran : C*rafting Human Rights Cultures* (2006), NALSAR University of Law, Hyderabad.
7. Gandhi, P.R. (ed.) : *Blackstone's International Human Rights Documents,* (2001) University, Delhi.

Further Readings

1. Baxi Upendra (ed.) : *The Right to be Human ,* (1987) *Lancer International,* New Delhi.
2. Sanajaoba, N. : *Human Rights in the New Millennium,* (2000) Manas Publications, New Delhi
3. Tripathi, Mani B.N. : *Jurisprudence,* (2008) *Faridabad*: Allahbad Law Agency
4. Lakhani, M.V. : *Studies in Juris Prudence*, (2013), Tech Publications New Delhi: Cyber

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HUMAN RIGHTS AND DUTIES

SEMESTER-II

Paper : HUMAN RIGHTS : INTERNATIONAL DIMENSIONS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :

This paper purports to deal with promotion and protection of human rights in the international context, particularly in the UN bodies. It aims to create awareness regarding the Universal Declaration of Human Rights, 1948, significant Covenants along with the Optional Protocols.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note : (i) For written paper, the students will be required to attempt **five** questions in all. **Question No. I** will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of twelve i.e. 9×2=18 marks.

(ii) In addition to it, Questions Nos. II to IX will consist of long answer (Essay Type) questions i.e., 2 questions from each unit with Internal choice carrying 18 marks each i.e., 4×18=72 marks

UNIT-I

INTERNATIONAL NORMS AND MECHANISMS:

- League of Nations
- The United Nations Charter and the development of Human Rights.

UNIT-II

INTERNATIONAL BILL OF RIGHTS:

- Universal Declaration of Human Rights (UDHR), 1948
- International Covenant on Civil and Political Rights (ICCPR), 1966; Optional Protocol
- International Covenant on Economic Social and Cultural Rights (ICESCR), 1966; Optional Protocol

UNIT-III

HUMAN RIGHTS AND UNITED NATIONS BODIES (I):

- UN General Assembly
- Economic and Social Council (ECOSOC)
- UN Human Rights Council

UNIT-IV

HUMAN RIGHTS AND UNITED NATIONS BODIES (II):

- International Labour Organization (ILO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Health Organization (WHO)

Essential Readings:

1. Philip (ed.) : *United Nations and Human Rights* (1966), Clearndon Press, Oxford.
2. Henry Steiner J. et al (eds.) : *International Human Rights in Context* (1966), Chapter 10, Clarendon Press, Oxford.
3. Saxena, J.N. et al (ed.) : *United Nations for Better World* (1986), Lancers Books, New Delhi.
4. Henkin Louis : *International Bill of Rights: The Covenant on Civil and Political Rights* (1981), Columbia University Press, New York.
5. Krasno Jean A. : *The United Nations* (2005), Viva books, New Delhi.
6. Lauterpacht, Hersch : *An International Bill of the Right of Man* (1945), Columbia University Press, New York.
7. Morsink, Johannes : *The Universal Declaration of Human Rights : Origins, Drafting and Intent* (1999), University of Pennsylania Press, Philadelphia

Further Readings

8. UN Centre for Human Rights : *International Human Rights Standards for Law Enforcement*(1966), World Campaign for Human Rights, Geneva.
9 Kapoor, S.K. : *Human Rights,* (2005) Allahabad Central Law Agency:
10 Aggarwal, H.O : *International Law and Human Rights*, (2008) Central Allahabad Law Agency:

RELIGIOUS AND SIKH STUDIES

SEMESTER- I

PAPER-I, HINDUISM

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious and Sikh Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course as one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness regarding the origin, features and teachings of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9x2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4x18).

Course Contents

Unit. I. Vaishnavism : origin, development; features and institutions

Unit. II. Shaivism: origin, development; features and institutions

Unit. III. Shaktism: origin, development; features and institutions

Unit. IV. Bhakti Movement in India: growth and development; with special reference to Ramanuj and Chaitanya

Essential Readings:

1. Bhandarkar, R.G., *Vaishnavism, Shaivism and Minor Religious Systems*, Varanasi 1965.
2. Jayaswal, Suvira, *the Origin and Development of Vaishnavism*, New Delhi, 1981.
3. Majumdar, A.K., Chaitanya, *His Life and Doctrine: A Study in Vaishnaism,* Bombay: Bhartiya Vidya Bhavan, 1969.
4. Sharma, Krishna, *Bhakti and the Bhakti Movement: A New Perspective*, New Delhi: Munshiram Manoharlal, 1987.
5. ਉਪਾਧਿਆਇ **ਬਲਦੇਵ, *ਭਾਰਤੀ ਦਰਸ਼ਨ ਕੀ ਰੂਪਰੇਖਾ*** (ਹਿੰਦੀ), ਪ੍ਰਕਾਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ,2016 ਪੇਪਰ ਬੈਕ.
6. **ਸਿੰਘ ਸਰਬਜਿੰਦਰ, ਡਾ.**(ਸੰਪਾ.) **'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪਤ੍ਰਿਕਾ**
7. ਸਿਨਹਾ, ਹਰੇਂਦ੍ਰ ਪ੍ਰਸਾਦ (ਡਾ.), *ਧਰਮ ਦਰਸ਼ਨ ਕੀ ਰੂਪ ਰੇਖਾ,* ਮੋਤੀਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ, 1985.
8. **ਦੱਤਾ ਅਤੇ ਚੈਟਰਜੀ, *ਭਾਰਤੀ ਦਰਸ਼ਨ*** (ਹਿੰਦੀ), ਪਬਲੀਕੇਸ਼ਨ ਹਾਊਸ, ਦਿੱਲੀ, 1973
9. **ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: 'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●5**
11 ਨਿਰਾਕਾਰੀ, ਆਰ. ਡੀ. *ਭਾਰਤੀ ਦਰਸ਼ਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1994.
12 ਪੰਨੂੰ, ਹਰਪਾਲ ਸਿੰਘ (ਡਾ.), *ਭਾਰਤ ਦੇ ਪੁਰਾਤਨ ਧਰਮ*, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2000.
13 ਮਿਸ਼ਰ, ਉਮੇਸ਼ (ਡਾ.), *ਭਾਰਤੀ ਦਰਸ਼ਨ, ਉਤਰ ਪ੍ਰਦੇਸ਼,* ਹਿੰਦੀ ਸੰਸਥਾਨ, ਲਖਨਊ, 2003.

Further readings:

- Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.

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RELIGIOUS AND SIKH STUDIES

SEMESTER- II

PAPER-II NEW FAITHS AND SAINTS

Maximum Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

Pedagogy:

The Pedagogy of the course involves classroom lectures, assignments, discussions, special lectures. Field trip and feedback from the students.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. The students are required to attempt any four out of these eight essay type questions selecting one question from each Unit. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit I. Jainism: Life and Teachings of Mahavira ; origin and development of Jainism

Unit. II. Buddhism: Life and Teachings of Lord Buddha; origin and development of Buddhism

Unit. III. Sant Kabir: Life, Teachings and Contribution

Unit. IV. Sant Ravidas: Life, Teachings and Contribution

Essential Readings:

1. Chatterjee, Asim Kumar, *A Comprehensive History of Jainism,* Delhi: Munshilal Manoharlal Publishers, 2000.
2. Dutt R.C., *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983.
3. Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.
4 Vandeville, Charlotte, *A Weaver Named Kabir*, Oxford: India Paperbacks, 1997.
5 ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ' ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●9
6 ਸਿੰਗਲ, ਧਰਮ ਪਾਲ ਡਾ., *ਗੁਰੂ ਰਵਿਦਾਸ, ਜੀਵਨ ਤੇ ਵਿਚਾਰ,* ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ, 2●●1
7 ਸਰਾਓ, ਕਰਮਤੇਜ ਸਿੰਘ, *ਪ੍ਰਾਚੀਨ ਭਾਰਤੀ ਬੁੱਧ ਧਰਮ: ਉਦਭਵ, ਵਿਕਾਸ ਤੇ ਪਤਨ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2007.
8 ਕੁਮਾਰ ਲਾਲ ਬਸੰਤ, *'ਸਮਕਾਲੀ ਭਾਰਤੀ ਦਰਸ਼ਨ*, ਮੋਤੀ ਲਾਲ ਬਨਾਰਸੀ ਦਾਸ, ਦਿੱਲੀ 2●●6 (ਹਿੰਦੀ)
9 ਜੋਸ਼ੀ, ਐਲ. ਐਮ., (ਸੰਪਾ.), *ਧੱਮਪੱਦ,* ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1990.
10 ਬ੍ਰਹਮਜਗਦੀਸ਼ ਸਿੰਘ, *ਸੰਤ ਕਬੀਰ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਬਾਣੀ,* ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●2
11 ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ: *'ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ' ਦਸੰਬਰ 2●●5-ਅੰਕ ਦੂਜਾ* ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2●●1

Further readings:

1. Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.
2. Lopez, Jr., Donald S. (Ed.) *Buddhism in Practice,* New Delhi, 1998.
3. Vandeville, Charlotte, *Myths, Saints and Legends in Medieval India*, Delhi: Oxford University Press, 1999.

HOME SCIENCE

SEMESTER- I

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	45	05	1	3	45	05	100
									Total :	**100**

Note : 1. Each Practical group will have 12-15 students.

PAPER : FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : **50**
Theory : **45**
Int. Ass. : **05**
Periods : **6 Hours per Week**

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 9 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 9 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I (a) Meaning & Importance of Home Science.
(b) Functions of Home.

II (a) Home Scientist as an Entrepreneur.
(b) Agencies promoting Entrepreneurship- Commercial Banks, District Industries, Co-operative Societes.

Section B

III Interior Decoration

(a) Elements of Art - Line, Form, Pattern, Texture, Colour, Light and Space.
(b) Principles of Art in relation to interior decoration - Harmony, Balance, Rhythm, Proportion & Emphasis.

IV Colour

(a) Characteristics of colour
(b) Colour wheel
(c) Colour schemes

Section C

V Hygiene & Health

(a) Definition of Hygiene, Health
(b) Definition of infection, sources, carrier and control
(c) Definition and types of immunity.
(d) Immunization schedule

VI Causes & Spread of following diseases.

(a) Caused by insects – Malaria & Dengue
(b) Conveyed by ingestion – Enteric Fever, Cholera, Dysentery & Diarrhea
(c) Spread by droplet infection- chickenpox, measles, mumps & TB.
(d) Sexually transmitted diseases -AIDS.

Section D

VII Food Hygiene

(a) Definition
(b) Hygiene during preparation, service and storage of food.
(c) Domestic purification of water-
- Aquaguard
- Reverse Osmosis

VIII Food Adulteration

(a) Definition
(b) Common food adulterants and their effects on health.
(c) Household Methods of testing food adulteration.

PRACTICAL

Max. Marks : 50 Marks
Practical Theory : 45 Marks
Inter. Asses. : 05 Marks
Time : 3 hours per week.

1. Floor Decoration - Making of Alpana and Rangoli for different occasions.
2. Methods of detecting adulteration in any five foods such as ghee, castor sugar, milk, honey, red chili powder, tea leaves, turmeric powder etc.
3. Table setting, Table manners and Napkin foldings.
4. Making of a Chart/Model/Poster of Colour Wheel or Colour Schemes.
5. Survey of 5 households to study Immunisation schedule.

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HOME SCIENCE
SEMESTER- II

Scheme of Examination

	Theory					Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Family Resource Management, Hygiene & Health	1	3	45	05	1	3	45	05	100
									Total :	**100**

Note: 1. Each Practical group will have 12-15 students.

PAPER: FAMILY RESOURCE MANAGEMENT, HYGIENE & HEALTH

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Periods : 6 Hours per Week

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 9 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 9 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

Section A

I. Resources

(a) Introduction
(b) Classification

II. Time Management

(a) Steps in making time plans.
(b) Tools in time management- peak loads, work curves and rest periods.

III. Money Management
(a) Types of Income
(b) Budget- Types, Advantages and limitations of budgeting, factors affecting budget, basic steps in planning of budget.
(c) Means of supplementing family income.

IV. Energy Management

(a) Fatigue – Types, Symptoms & Effects.
(b) Work Simplification (Mundel)

Section B

V. Furniture

(a) Factors affecting selection of furniture.
(b) Furniture requirement and arrangement for different rooms.
(1) Master Bedroom
(2) Drawing Room
(3) Dining Room
(4) Children's Room

VI. Flower Arrangement
(a) Definition and Types
(b) Principles of art in flower arrangement
(c) Material and Essential equipment used in Flower Arrangement.

Section C

VII. The Home maker as a Consumer
(a) Concept and objectives of Consumer Education.
(b) Rights and responsibilities of a Consumer.
(c) Malpractices in the production of consumer goods.
(d) Consumer guides- Standardized marks, labels, packaging, media and consumer redressal forum.

VII. Health Education
(a) Aims and Objectives
(b) Scope
(c) Importance

Section D

IX. Digestive System
(a) Diagram of Alimentary Canal
(b) Functions of mouth, stomach, intestines (Small and Large)
(c) Digestion of Carbohydrates, proteins and fats.

X. Simple first aid for burns, poisoning, electric shock, bleeding, drowning, fainting, fractures, insect bite, snake bite, nose bleeding, sunstroke, sprain, heart attack.

PRACTICAL

Max. Marks : 50 Marks
Practical : 45 Marks
Inter. Asses. : 05 Marks
Time : 3 hours per week.

1. Making of fresh flower arrangement for a corner and centre table.
2. Introduction to basic first aid techniques.
3. Cleaning & Polishing of household metals: brass, copper, silver, iron, aluminium, plastic and nonstick ware.
4. Cleaning and polishing of Wooden Furniture.
5. Cleaning of Glass windowpanes.

References

1. Anna Hong Rutt : *Home Furnishing,* Wiley Eastern Ltd., New Delhi, 1973.
2. Hazel Thompson, Criag old Day Rush : *Home with character,* Univesal Book Stall, Delhi, Kanpur 1969.
3. Betty Pepis : *Interior Decoration A to Z,* Doubleday & Co., Inc. New York, 1965.
4. Ray Faulkiner, Sarah Faulkner : *Inside Today's Home,* Holt, Rinehart & Winston, 1973.
5. R.S. Deshpandae : *Modern Ideal Home for India,* United Book Corporation, Poona, 1983.
6. R.S. Deshpandae : *Build your own Home,* United Book Corporation, Poon, 1983.
7. M.A. Varghese, N.M. Ogale, K. Srinivisan : *Home Management,* Wiley Eastern Ltd., 1985.
8. The Educational Planning Group, Delhi : *Home Management,* Arya Publishing House, New Delhi, 1986.
9. Stella Sournderaj : *A text book of Household Arts,* Orient Longman Ltd., 1974.
10. A Margaret Kaye : *A Student Hand Book of Housewifery,* J.M. Dent and Sons Ltd., London, 1958.
11. Ball, Vetrio Kloss : *Art of Interior Design,* The Macmillan Co., New York, 1962.
12. Goldstein H.I. and Goldstein V. : *Art in Everyday Life,* Macmillan, New York, 1964.
13. Swanson, Betty : *Introduction to Home Management,* Macmillan Co., New York, 1981.
14. Julia Elements : *101 ideas for flower arrangement,* C. Arthur Persons Ltd., London, 1963.
15. Halse A.O. : *The Use of Colour in Interior,* Mcgraw Hill Book Co., New York, 1961.
16. Walter Ian Fischman, Richerd Demsbe, William Bernard: *Basic Home Repairs,* A Grosset Super Good Life Book Publishers, New York, 1975.
17. Saxena, R. R. (1990) *Social and Preventive Medicine,* CBS Publishers and Distributors, Delhi.
18. Selman, A. C. (1992) *Health & Longevity,* Oriental watchman Publishing house, Park, Poona, India.
19. Bedi, Y. P. : *Hygiene and Public Health.*
20. Pearce Evelyn. C., Anatomy and Physiology for Nurses, Oxford University.
21. Best, Charles, H.and Taylor, N.B., The Living Body – A Text in Human Physiology, Asia Publishing House.
22. Phadke : Aids to Hygiene
23. Bhatia, B.C. and Sri P.N. (1968), Elementary Hygiene, Oriental Longman.
24. Seetharam, (2005) *An Introduction to Family Resource Management*, CBS Publishers and Distributors, Delhi.
25. Kaur and Macneil, (1994), *Theory and Practice of Home Science*, Subject Publication, New Delhi.

Journals

1. Indian Journal of Home Science, Home Science Association of India, Sri Avinashilingam Home Science College for Women, Coimbatore.
2. Inside Outside, Edited and Published by Malika Sarabhai, Wadia Building, 19/21 Dalal Street, Bombay.
3. Journal of Home Economics, American Home, A Venue, NW Wahington.

ENVIRONMENT CONSERVATION

SEMESTER – I

Paper : ENVIRONMENT AND FORESTRY

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	65	10	25	-	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:
There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : ENVIRONMENT AND FORESTRY

UNIT-I

Environment: **Definition, Scope & importance** of Environment. A brief introduction of Physical & biological environment.

Ecosystem: Concept of Ecosystem, Biotic & abiotic components, food chain, food web trophic levels, types of ecosystems, terrestrial and aquatic. Biogeochemical cycles - nitrogen, carbon, phosphorous and sulphur cycle.

UNIT-II

Natural Resources: Definition, type of natural resources (Renewable and nonrenewable natural resources) and the policies of their conservation. Energy resources; Fossil fuel, Alternative source of energy (Solar energy, wind power, geothermal energy, dung energy and wood energy.

UNIT-III

Forestry: Forestry, Concept, types of forests in India & the world. Deforestation, reforestation and afforestation. Major and minor forest products. Reasons of forest destruction and its impact on Environment. Community forestry, Farm forestry, Social forestry and Agroforestry.

UNIT-IV

Indoor Environment: Pollution of the in house environment pollutants in the offices, workplaces (School, Bus stand, College and Kitchens). Environmental problems linked to urban and rural lifestyle, Adulterants; Food adulterants (Wheat flour, milk, red chili powder, mustard oil, desi ghee, sweets, artificial sweetness, dyes, food allergens).

PRACTICAL

(*Based on theory paper*)

Laboratory work: Tests of food adulterants.

Study the forest products with help of charts and specimens.

Survey reports of indoor environmental pollutants and local forests.

A visit to forest to study different components of these ecosystems.

Books Recommended :

1. Purochit, S.S., Shammi, Q.J. & Agarwal, A.K. : Text Book of Environment Sciences, Saraswati Pub., Jodhpur, 2007.
2. Dhaliwal, G.S & Kukul, S.S. : Essentials of Environmental Sciences, Kalyani Pub., Ludhiana, 2008.
3. Chundawat, B.S. & Gautam, S.K : Text Book of Agroforestry, Raju Primalai, New Delhi. 2006.
4. Chandna, R.C. : Environmental Geography, Kalyani Pub., Ludhiana, 2006.
5. Sagreiya, K.P. : Forests and Forestry, National Book Trust, New Delhi, 2007.
6. Ralhon, P.K., Dhaliwal, G.S. & Avtar Singh : The Forests-Production and Management, Kalyani Pub., Ludhiana.
7. Arora, S. : Fundamentals of Environmental Biology, Kalyani Pub., Ludhiana, 2008.
8. Dwivedi, A.P. : Forestry in India, Surya Publications, Dehradun, 1993.

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ENVIRONMENT CONSERVATION

SEMESTER – II

PAPER : SOIL AND WATER POLLUTION

Theory hours	Practical hours	Theory marks	Internal Assessment Marks	Practical marks	Practical-Internal Assessment Marks	Total marks
6	4	68	7	22	3	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practical.

Instructions for paper setters:
There will be 9 questions in all, two each from Section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from Section I to IV and the first compulsory question.

PAPER : SOIL AND WATER POLLUTION

UNIT-I

Lithosphere: Meaning of Soil profile, its components, types of soil, physical-chemical properties of soil.

Soil Fertility: Micro-and macro-nutrients, technique of testing soil sample. Methods of increasing soil fertility, merits and demerits of fertilizers, role of soil microorganisms.

UNIT-II

Degradation of soil: Soil erosion (Water and Wind erosion) causes of effect of erosion. Soil pollution: Different types of soil pollutants (Chemicals, Pesticides, Fertilizers & manure, discarded material. Pollution and control measures.

UNIT-III

Hydrosphere: Major sources and uses of water. Overutilization of surface & ground water, floods, drought. Conflicts over water. Potable water, its characteristics. Water cycle (Global and Biological)

UNIT-IV

Water pollution: Definition, Types & Sources of water pollution, its consequences and control measures. Different types of diseases due to water pollution. Treatment of wastewater by green method (Root-zone technology), Marine pollution - a brief account.

PRACTICAL

Determination of soil pH

Use of Portable Kit

Determination of organic matter in soil

Determination of $CaCO_3$ in soil.

Determination of available Nitrogen in soil.

Identification of different fertilizers.

Determination of pH of water.

Determination of organic carbon.

Determination of microbial carbon.

Determination of available Nitrogen.

Determination of dissolved Oxygen, BOD.

Determination of hardness and alkalinity of water.

Survey reports of different water samples in local and adjoining areas and interpretation of water test report.

Books Recommended

1. Singh, R.A. : Soil Physical Analysis, Kalyani Publishers, Delhi, India, 1989.
2. Rao, Sitaram : Introduction to Soil Forestry, Oxford and IBH, New Delhi, 1979.
3. Gupta, P.K. : A Handbook of Soil Fertilizer and Manure, Agrobios, Jodhpur, India, 2003.
4. Miller, R.W. and Donahue, R.L. : Soils in our Environment , Prentice Hall, USA, 1995.
5. Mahajan, S.P. : Air Pollution, Control, TERI Press, Delhi, India, 2009
6. Kudeshia, V.P. : Water Pollution, Prgati Parkashan, New Delhi, India, 2009
7. Hooja, R. : Management of water for Agriculture: Irrigation, Watersheds, and Drainage, Rawat Publications, India, 2009.
8. Goel, P.K. : Water Pollution: Causes, Effects and Control, New Age International Publishers, New Delhi, 2006
9. Ramachandra, T.V. : Soil and Groundwater Production from Agricultural Activities, TERI Press, New Delhi, India, 2006

MATHEMATICS

SEMESTER – I

Paper-I : PLANE GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes in two dimensions: Shifting of origin, rotation of axes, invariants.

Pair of Straight Lines :
Joint equation of pair of straight lines and angle between them, Condition of parallelism and perpendicularity, Joint equation of the angle bisectors, Joint equation of lines joining origin to the intersection of a line and a curve.

Circle :
General equation of circle, Circle through intersection of two lines, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, angle of intersection and orthogonality, power of a point w.r.t. circle, radical axis, co-axial family of circles, limiting points.

Unit-II

Conic :
General equation of a conic, tangents, normals, chord of contact, pole and polar, pair of tangents from a point, equation of chord in terms of mid-point, diameter. Conjugate diameters of ellipse and hyperbola, special properties of parabola, ellipse and hyperbola, conjugate hyperbola, asymptotes of hyperbola, rectangular hyperbola. Indentification of conic in general second degree equations.

References :

1. S. L. Loney : *The Elements of Coordinate Geometry,* Macmillan and Company, London, 2nd Edition 2007.
2. P.K. Jain and Khalil Ahmad : *A Text Book of Analytical Geometry of Two Dimensions, Wiley Eastern Ltd., 1999.*
3. Erwin Kreyszig : *Advanced Engineering Mathematics, John Wiley & Sons,1999.*
4. Gorakh Prasad and H.C. Gupta : *Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahabad, 1955.*

Paper-II : CALCULUS - I

Max. Marks : 30
Time : 3 Hours

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Properties of real numbers :
Order property of real numbers, bounds, l.u.b. and g.l.b. order completeness property of real numbers, archimedian property of real numbers.

Limits:
ε - δ definition of the limit of a function, basic properties of limits, infinite limits, indeterminate forms.

Continuity:

Continuous functions, types of discontinuities, continuity of composite functions, continuity of $|f(x)|$, sign of a function in a neighborhood of a point of continuity, intermediate value theorem, maximum and minimum value theorem.

Unit-II

Mean value theorems:
Rolle's Theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, their geometric interpretation and applications, Taylor's theorem, Maclaurin's theorem with various form of remainders and their applications.

Hyperbolic, inverse hyperbolic functions of a real variable and their derivatives, successive differentiations, Leibnitz's theorem.

References :

1. J. D. Murray & M . R. Spiegel : *Theory and Problems of Advanced Calculus,* Schaum's Outline Series, Schaum Publishing Co., New York.
2. P.K. Jain and S. K. Kaushik : *An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.*
3. Gorakh Prasad : *Differential Calculus, Pothishala Private Ltd., Allahabad.*
4. G.B. Thomas & R.L. Finney : *Calculus and Analytic Geometry (Ninth Edition), Pearson Publication.*
5. Shanti Narayan and P.K. Mittal : *Differential Calculus, Edition 2006, S. Chand & Co., New Delhi.*

Paper III: TRIGONOMETRY AND MATRICES

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

D'Moivre's theorem, application of D'Moivre's theorem including primitive n^{th} root of unity. Expansions of $\sin n\theta$, $\cos n\theta$, $\sin^n \theta$, $\cos^n \theta$ $(n \in N)$. The exponential, logarithmic, direct and inverse circular and hyperbolic functions of a complex variable. Summation of series including Gregory Series.

Unit-II

Hermitian and skew-hermitian matrices, linear dependence of row and column vectors, row rank, column rank and rank of a matrix and their equivalence. Theorems on consistency of a system of linear equations (both homogeneous and non-homogeneous). Eigen-values, eigen-vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix. Diagonalization.

References:

1. K.B. Datta : *Matrix and Linear Algebra*, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.
2. S. R. Knight and H.S. Hall : *Higher Algebra, H.M. Publications, 1994.*
3. R.S. Verma and K.S. Shukla : *Text Book on Trigonometry, Pothishala Pvt. Ltd., Allahabad.*
4. Shanti Narayan and P.K. Mittal : *A Text Book of Matrices, S. Chand & Co., New Delhi, Revised Edition, 2007.*

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MATHEMATICS

SEMESTER – II

Paper-I : SOLID GEOMETRY

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Transformation of axes:
Shifting of origin and rotation of axes.

Sphere:
Section of a sphere and a plane, spheres through a given circle, intersection of a line and a sphere, tangent line, tangent plane, angle of intersection of two spheres and condition of orthogonality, power of a point w.r.t. a sphere, radical axis, radical center, co-axial family of spheres, limiting points.

Cylinder:
Cylinder as a surface generated by a line moving parallel to a fixed line and through a fixed curve, different kinds of cylinders such as right circular, elliptic, parabolic and hyperbolic cylinders in standard forms, enveloping cylinders.

Unit-II

Cone:
Cone with a vertex at the origin as the graph of a homogeneous equation of second degree in x,y,z, cone as a surface generated by a line passing through a fixed curve and a fixed point outside the plane of the curve, reciprocal cones, right circular and elliptic cones, right circular cone as a surface of revolution obtained by rotating the curve in a plane about an axis, enveloping cones.

Conicoid:
Equations of ellipsoid, hyperboloid and paraboloid in standard form. Reduction of second degree equation in three variables in standard form.

References:

1. P.K.Jain and Khalil Ahmad : A Text Book of Analytical Geometry of Three Dimensions, Wiley Eastern Ltd., 1999.
2. Shanti Narayan and P. K. Mittal : Analytical Solid Geometry, Seventeenth Revised Edition, S. Chand & Co., New Delhi, 2006.
3. R.J.T. Bill : Elementary Treatise on Coordinate Geometry of Three Dimensions, Macmillan India Ltd., 1994.

Paper-II : CALCULUS - II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Concavity, convexity and points of inflexion, Multiple points, Asymptotes, Tracing of curves (Cartesian and parametric co-ordinates only).

Curvature:
Curvature of a curve at a point, radius of curvature of cartesian, parametric, polar curves and for implicit functions , evolute and involute, chord of curvature.

Unit-II

Integral calculus:
Integration of hyperbolic and inverse hyperbolic functions. Reduction Formulae.

Numerical Integration: Trapezoidal, Prismoidal and Simpson Rules.

Application of definite integral: Summation of Series, Quadrature, rectification, volumes and surfaces of solids of revolution (Cartesian co-ordinates only)

References:

1. G. B. Thomas & R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
2. Gabriel Klambauer : Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
3. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.
4. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co. New Delhi, 2000.

Paper III: THEORY OF EQUATIONS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester

Unit-I

Euclid's algorithm, synthetic division, roots and their multiplicity. Complex roots of real polynomials occur in conjugate pairs with same multiplicity. Relation between roots and co-efficients. Transformation of equations. Descartes' Rule of Signs.

Unit-II

Newton's method of divisors, Solution of cubic and bi-quadratic equations, Cardan's method of solving a cubic, discriminant and nature of roots of real cubic, trigonometric solutions of a real cubic with real roots. Descarte's and Ferrari's method for a bi-quadratic.

References:

1. S.R. Knight and H.S. Hall : Higher Algebra, H. M. Publications, 1994.

2. Chandrika Prasad : Text Book on Algebra and Theory of Equations, Pothishala Private Ltd., Allahabad.

COMPUTER SCIENCE

SEMESTER-I

SCHEME OF EXAMINATION

FIRST SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS01	**Theory-A**	**Computer Fundamentals**	**3**	**30**	**5**	**35**
Paper –CS02	**Theory-B**	**PC Software**	**3**	**30**	**5**	**35**
Paper – PCS01	**Practical-C**	**Practical Based on Paper – CS01**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS01 : Computer Fundamentals

Objective : To teach the students the fundamentals of computer related to its hardware & software.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

UNIT –II

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

UNIT – III

Types of software: System and Application software; **Programming Languages**: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison. **Range of Applications**: Scientific, Word Processing, Spread Sheets, E-commerce, Business, Educational, Industrial, National level weather forecasting, Remote Sensing, Planning Multilingual Applications.

UNIT – IV

Operating Systems : Components of Operating System; Functions of Operating System; Types of Operating System; Linux/Dos/Windows. **Computers and Communication**: Single user, multi-user, workstation, and client server systems. Computer networks, Network protocols. LAN, WAN, Services offered by Internet.

Suggested Readings :

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications

Paper-CS02: PC Software

Objective : To teach the basic functionality of Disk Operating System & Windows. To impart detailed knowledge for creating word processing, spreadsheet & presentation documents.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Concept of files and directories; Disk Operating System: DOS, System Files, types of DOS commands: Internal and External commands: Introduction to AUTOEXEC.BAT, Directory commands: XCOPY, DEL, RENAME, ATTRIB, BACKUP, RESTORE, FIND, SYS; General commands: TYPE, DATE, TIME, PROMPT; Batch Files, Wild Cards, Line Editor.

UNIT – II

Introduction to graphical user interface, window operating system, Anatomy of windows, organizing folders and files, recycle bin, my computer, windows explorer, control panel.

UNIT – III

Word Processing : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement; Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Sorting blocks, Adjusting Margins and Hyphenating Documents, Creating Master Documents, Creating Data Source, Merging Documents, Using Mail merge feature for labels and envelops; Inserting Pictures, Tables, Working with equations.

UNIT – IV

Spread Sheet : Worksheet overview, Row, Column, Cells, Menus, Creating Worksheet, Opening, Saving, Printing Worksheets; Calculations, Auto fill, Working with Formulae, Data Formatting (number formatting, date formatting), Working with Ranges, Establishing Worksheet links; Creating, Sorting and Filtering Data Base; Creating chart, Adding Titles, Legends etc. to charts, Printing Charts, Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons, Functions (Statistical, Financial, Mathematical, String, Date and Time).

MS-Power Point: Creating, Saving, Printing Presentation; Selecting Design Templates, Animations and Transitions, Auto Content Wizard.

Suggested Readings :

1. Ludd Robbins : *Mastering DOS.*
2. Alan R. Miller : *The ABC's of DOS-6.2.*
3. Richard Allen King : *MS-DOS H. B.*
4. Gilbert Held : *IBM PC and PCXT User's Reference Manual.*
5. Cowart, Robert : *Using Microsoft Windows 2000 Professional,* Que Publishing, 2000.
6. Taxali, Ravikant : *PC Software Made Simple,* New Delhi.
7. Mansfield, Ron : *Compact Guide to Windows, Word & Excel.*

Paper – PCS01 : Practical : Practicals Based on Paper CS02

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COMPUTER SCIENCE
SEMESTER-II

SCHEME OF EXAMINATION

		SECOND SEMESTER	Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS03	**Theory-A**	**Operating System Concepts**	**3**	**30**	**5**	**35**
Paper –CS04	**Theory-B**	**C Programming**	**3**	**30**	**5**	**35**
Paper – PCS02	**Practical-C**	**Practical Based on Paper – CS04**	**3**	**30**	**--**	**30**

Paper-CS03: Operating System Concepts

Objective : To teach the students various operating system concepts relating to managing processes, memory and deadlocks.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, need of operating system and functions of operating system, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems; Structure of Operating System;

UNIT - II

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling.

UNIT - III

Deadlocks: Introduction, Necessary and sufficient conditions for Deadlocks, Resource allocation graph, Introduction to methods for handling deadlocks, deadlock prevention, deadlock avoidance: Banker Algorithm, deadlock detection and recovery.

UNIT - IV

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

Suggested Readings :

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.

Further Reading :

2. Brinch, Hansen, Operating System Principles, Prentice Hall of India
3. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delhi

Paper-CS04 : C Programming

Objective : To teach the student basic constructs of 'C' programming language and enable them to create 'C' based applications.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.

Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.

UNIT – II

Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.

Loop Control Structure: While and do-while, for loop and Nested for loop,

Case Control Structure: Decision using switch, The goto statement.

UNIT – III

Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function.

UNIT – IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handlingfunctions(strlen(), strcpy(), strcmp(), strcat()).

Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Union, Difference between Structure and Union .

Suggested Readings :

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading :

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

Paper – PCS02 : Practical : Practical Based on Paper CS04.

STATISTICS

SEMESTER - I

Note :
1. A candidate shall offer this subject in B.A./B .Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. There are two papers code named papers 101 and 102 in the subject of Statistics in B.A./B.Sc. 1st Semester. These are to be taught simultaneously throughout the Semester.
3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 101: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-I

Max. Marks	:	75
Theory	:	65
Internal Assessment	:	10
Time	:	3 Hours

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach. This course will lay the foundation to probability theory of outcomes of real life random experiments. The focus will be on theoretical as well as practical approach.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical tables and log tables will be provided on request.

Unit-I

Important Concepts in Probability: Random experiment, trial, sample point and sample space, definition of an event, mutually exclusive, exhaustive, independent and equally likely events. Definition of probability – classical and relative frequency approach to probability, their demerits and axiomatic approach to probability. Properties of probability based on axiomatic approach, conditional probability, Bayes' theorem and its applications (concepts and simple applications).

Random Variables: Definition of discrete random variables, probability mass function, continuous random variable, probability density function, illustrations of random variables and their properties, distribution function and its properties, expectation of a random variable and its properties – moments, (only definition), moment generating function. Two dimensional random variables- joint, marginal and conditional distributions . Distribution of random variables.

Unit-II

Collection of Data: Primary data – designing a questionnaire and a schedule. Secondary data- its major sources including some government publications. Concept of a Statistical Population and samples from a population; qualitative and quantitative data; discrete and continuous data.

Presentation of Data: Diagrammatic representations of data, frequency distribution, graphical representation, histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display, Box and whisker plot.

Analysis of Quantitative Data: univariate data concepts of central tendency, dispersion and relative dispersion, skewness and kurtosis and their measures including those based on quartiles and moments. Sheppard's correction for moments (without derivation).

Suggested Readings

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications*. Addison Wesley.

2. Goon A.M., Gupta M.K., Dasgupta.B. (2005) :*Fundamentals of Statistics*, Vol. I, World Press, Calcutta.

3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics* (7th edition) Wiley.

Additional Readings

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.

2. Miller, I. and Miller, M. (2002) : John E. Freunds's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.

3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.

4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.

5. Lipshut Z, S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.

6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper-102 : PRACTICAL (SEMESTER-I)

Maximum Marks : 25
Time Allowed : 3 Hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Presentation of data by Frequency tables
2. Diagrams: Bar, Multiple Bar, Stacked Bar, Line and Pie
3. Graphs: histogram, frequency polygon, frequency curves and ogives, stem-and-leaf-display
4. Measures of central tendency
5. Measures of dispersion
6. Measures of Skewness
7. Box and Whisker Plot
8. Measures of Kurtosis.

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STATISTICS

SEMESTER-II

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. There are two papers code named papers 103 and 104 in the subject of Statistics in B.A./B.Sc. 2nd semester. These are to be taught simultaneously throughout the semester.

3. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 103: PROBABILITY THEORY and DESCRIPTIVE STATISTICS-II

Maximum Marks : 75
Theory : 65
Internal Assessment : 10
Time allowed : 3 hours

Objective: This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.
The objective of the course is to make the students conversant with various techniques used in analysis of data.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed**.**

3. Statistical **tables** and log tables will be provided on request.

Unit-I

Standard Univariate Distributions and their Properties: Discrete uniform, Binominal, Poisson, Hyper geometric, Geometric and negative binomial distributions, uniform, normal , exponential, gamma, beta distributions.

Bivariate normal distribution and associated marginal and conditional probability distributions (without derivation).

Chebyshev's inequality and its applications, statements and applications of weak law of large numbers, and Central Limit Theorems (De-moivre's – Laplace and Lindeberg -Levy).

Unit-II

Bivariate Data: scatter diagram, product moment correlation coefficient, properties and coefficient of determination. Spearman's rank correlation coefficient. Simple linear regression and its properties, principle of least square, fitting of linear regression and related results

Multivariate Data: multiple and partial correlation in three variables. (only results no derivations).

Analysis of Categorical Data (using 2x2 contingency table): consistency of categorical data independence and association of attributes. Various measures of association:-Yule coefficient, coefficient of colligation & coefficient V_{AB}.

References:

1. Meyer P.L (1971) : *Introductory Probability and Statistical applications.* Addison Wesley.
2. Goon A.M., Gupta M.K., Das Gupta.B. (2005) : *Fundamentals of Statistics*, Vol. I, World Press, Calcutta.
3. Daniel, W.W. and Cross C.L.(2013) : *Biostatistics*: A Foundation for analysis in the Health Sciences, Tenth Edition, Wiley

Additional References:

1. Mood A.M, Graybill F.A and Boes D.C. (1977) : *Introduction to the Theory of Statistics*, McGraw Hill.
2. Miller, I. and Miller, M. (2002) : John E. Frends's *Mathematical Statistics* (6th addition, low price edition). Prentice Hall of India.
3. Sheldon M.R. (2000) : *Introduction to Probability Models*, Fourth Edition.
4. Croxton F.E, Cowden D.J and Kelin S (1973) : *Applied General Statistics*, Prentice Hall of India.
5. Lipshut Z,S., Lipson, Lipson, M.L. and Jain, K. (2010) : Schaum's outlines on Probability, Second Special Indian Edition, Tata McGraw Hill Education Private Limited.
6. Spiegel, M.R, Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4th edition) Tata McGraw Hill Education Private Limited.

Paper - 104: PRACTICAL (Semester-II)

Maximum Marks: 25
Time allowed : 3 hours

(Viva voce: 5 marks; record of the semester; 5 marks; Annual Paper: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

Viva voce and record of the year will carry 5 marks each.

1. Product Moment Correlation.
2. Spearman's rank correlation
3. Linear Regression of two variables.
4. Fitting of Curves (reducible to linear form) by the least square method.
5. Multiple and Partial correlations
6. Fitting of Binomial, Poisson and Normal distributions

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APPLIED STATISTICS

SEMESTER - I

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 101AS in B.A. /B.Sc. Semester-I having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 101AS: MATHEMATICAL METHODS – I

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective: The objective of the course is to provide knowledge of the basic concepts in Calculus, Trigonometry, Algebra and Geometry.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I (CALCULUS AND TRIGONOMETRY)

Limits and continuity of functions, derivatives and their geometrical interpretations. Applications of derivatives to maxima and minima, exponential and logarithmic functions, integrals of functions of one variable, geometrical interpretation of integral as area, integration of standard functions, integration by substitution and parts.

Trigonometry: Definition of an angle, its various measures and relations between them, graphs circular functions.

UNIT-II (ALGEBRA AND GEOMETRY)

The solution of linear and quadratic equations in one variable, arithmetic, geometric and harmonic progressions, permutations and combinations, principle of induction, Binomial theorem for positive integral index.

Elementary Analytical Geometry: Equations of straight line, parabola, and hyperbola.

Books Recommended

1. Allen, R.G.D (2006) : Mathematical Analysis for Economists, Chapter-II (Units 2.1, 2.2, 2.8), Chapter-III (Units 3.1, 3.6), Chapter – IV (Units 4.1, 4.7), Chapter VI (Units 6.1 – 6.8), Chapter VII, Chapter VIII (Unit 8.2), Chapter IX (Units 9.1 – 9.4), Macmillan Delhi.

2. Gurhard Tintner (1970) : Mathematics and Statistics for Economists Chapter – VI., Rinehart : New York

3. Loney, S.L. (2010) : Plane Trigonometry, Part – I, Chapter – I (Units I to 22), Part – II, Chapter V (Units 61, 65),Aitbs Publishers, India.

Additional references:

1. Arye, F. Jr. (1999) : First Year College Mathematics (Schaum's Series).Mc Graw Hill, New York.

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APPLIED STATISTICS

SEMESTER – II

Note: 1. This course shall not be opted for along with courses in B.A. /B.Sc Mathematics and/ or B.A. / B.Sc. Statistics.
2 The candidate opted for this course will not be eligible for admission to M.A./ M.Sc. Statistics.
3. There is one paper with code 102AS in B.A./B.Sc. Semester-II having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

Paper- 102AS: PROBABILITY

Maximum Marks : 100
Theory : 90
Internal Assessment : 10
Time allowed : 3 hours

Objective:. This course will lay the foundation to probability theory of outcomes of real life random experiments through various Statistical distributions.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2. Simple non-programmable calculators are allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I

Random experiments, sample space, events probability, Finite sample spaces, equally likely outcomes, conditional probability, Bayes theorem, independent events, random variables, discrete and continuous probability density functions.

UNIT –II

Expectation and variance of random variable.
Binomial, Poisson, geometric, hypergeometric, uniform, exponential and normal distribution

Books Prescribed

1. P.L.Meyer , (1971) : Introductory Probability and Statistical Applications, Addison Wesley, chapters 1, 2, 3, 4, 5, 8 and 9.
2. Goon, A.M., Gupta, M.K. & Dasgupta,B (2005). : Fundamentals of Statistics, Vol. I. The world press private Ltd.
3. Murray Spiegel, John Schiller & A. Srinivasan (2002) : Schaum's Easy outline of Probability and Statistics, Mc Graw Hill, New York.

Additional References:

1. Sheldon M. Ross (2009) : Introduction to Probability Models, Academic Press: San Diego.

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PHYSICS

B.Sc. (GENERAL) FIRST YEAR (1st and 2nd Semester) EXAMINATION, 2020-21

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3 (three) marks for the Internal assessment. **The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the second semester examination.**
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper as well as practical paper will be three hours.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems/exercises in the question paper should be 25-30%.
6. Student will attempt two questions from each Unit (I-II) and any six parts of question seven.
7. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

Papers, marks and teaching hours allocation :

Paper A :	Mechanics	Total Teaching hrs. 30
Paper B :	Vibrations, Waves and EM Theory	Total Teaching hrs. 30
Paper C :	Electricity and Magnetism	Total Teaching hrs. 30
	Physics Practicals	Total Teaching hrs. 45

* marks allotted for internal assessment.

PHYSICS

SEMESTER – I

Paper A: MECHANICS-I (30 Hrs.)

UNIT-I

Cartesian and spherical polar co-ordinate systems, Two- and three-dimensional coordinate systems, area, volume, displacement, velocity, and acceleration in these systems, solid angle.
Centre of mass, linear momentum, angular momentum, torque, potential energy and kinetic energy of a system of particles.
Relationship of conservation laws of linear momentum, angular momentum and energy, and symmetries of space and time.

UNIT-II

Various forces in nature, relative strengths and spatial dependence,
Motion under force obeying inverse square law, equivalent one body problem.
Motion under central forces, equation of motion under central force, equation of orbit and turning points, Kepler's Laws.
Elastic collision in Lab. and C.M. systems, relationships of velocities, angles, and kinetic energies in these two systems, cross section of elastic scattering, Rutherford scattering.

Books Suggested :

Essential Readings :

1. Mechanics, H.S. Hans & S.P. Puri.
2. Mechanics, Berkeley, Vol. I, C. Kittle.

Further Readings :

1. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
2. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-I (30 Hrs.)

UNIT-I

Simple harmonic motion, energy of a SHM, Compound Pendulum, Torsional Pendulum, Electrical Oscillations, Transverse Vibrations of a mass on a string, composition of two perpendicular SHM of same period and of period in ratio 1: 2. Decay of free vibrations due to damping, differential equation of motion, types of damping, determination of damping co-efficient; Logarithmic decrement, relaxation time and Q- Factor. Electromagnetic damping (Electrical oscillator).

UNIT-II

Differential equation for forced mechanical and electrical oscillators, Transient and steady state behaviour. Displacement and velocity variation with driving force frequency, variation of phase with frequency, resonance. Power supplied to an oscillator and its variation with frequency. Q-value and band width. Q-value as an amplification factor. Stiffness, coupled oscillators, Normal co-ordinates and normal modes of vibration, Inductance coupling of electrical oscillators.

Books Suggested :

Essential Readings :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper–C : ELECTRICITY AND MAGNETISM-I (30 Hrs.)

UNIT-I

Basic ideas of Vector Calculus, Gradient, Divergence, curl in Cartesian coordinates and their useful relations, physical significance and applications, Conservative field, Greens's theorem in a plane, Laplacian in Rectangular coordinates. Stoke's theorem, Gauss's divergence theorem, Coulomb's Law for point charges and continuous distribution of charges, electric field due to dipole, line charge, charged ring, circular disc and sheet of charge, Gauss's Law and its differential form.

UNIT-II

Work and potential difference, Potential difference as line integral of field, Electric potential due to dipole and quadrupole and its applications in Electrostatic field, Electric field as gradient of scalar potential, curl $\mathbf{E} = 0$. Calculation of $\mathbf{E}$ due to a point charge and dipole from potential. Poisson and Laplace's equation, Concept of electrical images. Calculation of electric potential and field due to a point charge placed near an infinitely conducting sheet.

Polarisation of matter, atomic and molecular dipoles, induced dipole moment and atomic polarizability. Electric susceptibility and polarization vector. Relation $K= 1 + \chi$, Gauss's law for dielectrics. Displacement vector, Div. $\mathbf{D} = 0$, Energy stored in dielectric medium.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism* by A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The activities given in the section "Analysis of Experimental Data" are compulsory for all the students in the First semester.

The students are required to perform all the Nine experiments from each of the Units I and Unit II. The Practical examination will be held along with the second semester examinations.

The aim of project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepara a project report of about 10 pages. Assessment of the project work will be done on the basis of effort put in the execution of the project, report prepared, and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section-A will consist of 4 experiments from each of Unit I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section–A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **12**.
7. In a single group, no experiment to be allotted to more than three examinees in the group.

Analysis of Experimental Data (Compulsory for all students in first semester):

Objectives :

(i) Knowledge of propagation of errors.
(ii) Knowledge of significant figures, Determination of standard deviation and probable error and their use in interpretation of the experimental result.
(iii) Familiarity with the method of least square fitting of experimental data to a curve.

LIST OF EXPERIMENTS :

UNIT-I

MECHANICS

I. Measurements :

Objectives :

(i) Measurements of time, length, thickness and curvature, pressure, humidity
(ii) Concepts of least count, horizontal, vertical and angular alignments

Activities :

(i) To measure internal/external diameter of a hollow cylinder using Vernier calipers
(ii) To measure thickness of wire
(iii) To measure curvature of a lens
(iv) To measure pressure using Barometer
(v) To measure humidity using dry and wet thermometer

II. Rotation :

Objectives :

(i) Study of rotational motion.
(ii) Establishing relationship between different quantities.

Activities :

(i) To study the dependence of moment of inertia on distribution of mass (by noting time periods of oscillations using objects of various geometrical shapes but of same mass).

(ii) To establish relationship between torque and angular acceleration using fly wheel.

III. One-Dimensional Collisions :

Objectives :

(i) Conservation of linear momentum and kinetic energy in elastic collisions.
(ii) Dependence of fraction of kinetic energy transferred on the masses of colliding bodies.
(iii) Idea of coefficient of restitution.

Activities :

To determine energy transfer, coefficient of restitution and verify laws of conservation of linear momentum and kinetic energy in elastic collisions using one dimensional collisions of hanging spheres.

IV. Compound Pendulum :

Objectives :

(i) Idea of equivalent simple pendulum.
(ii) Concepts of centre of suspension and oscillation.
(iii) Dependence of time period on moment of Inertia .
(iv) Radius of gyration.
(v) Determination of g.

Activities :

(i) Measure time period as a function of distance of centre of suspension (oscillation) from centre of mass, plot relevant graphs, determine radius of gyration and acceleration due to gravity.
(ii) Find the value of g by Katers' or Bar pendulum.

V. Torsion Pendulum :

Objectives :

(i) Idea of torsional vibration, dependence of time period on M.O.I. and restoring torque.
(ii) Modulus of rigidity.

Activity :

Measure time period of oscillation of a Maxwell needle and determine modulus of rigidity of the material of a given wire.

VI. Damped Oscillator :

Objectives :

(i) Study damped oscillations.
(ii) Coefficient of damping, quality factor etc.

Activities :

To measure/obtain logarithmic decrement, coefficient of damping, relaxation time, and quality factor of a damped simple pendulum.

VII. Elasticity :

Objective :

Knowledge of elastic constants and related quantities.

Activities :

(i) Study of bending of beams and determination of Young's Modulus.
(ii) Determination of Poisson's ratio for rubber/plastic.

VIII. Standing waves :

Objective :

Standing waves on a string and in air.

Activities :

(i) Melde's experiment.
(ii) Kundt's tube.

IX. Viscosity :

Objective :

Knowledge of viscosity of liquids.

Activity :

Determination of coefficient of viscosity of a given liquid by Stoke's method and study its temperature dependence.

Computer based activities : Elementary C language programs, flowcharts and their interpretation.

1. To print out all natural even/odd numbers from a given series of natural numbers.
2. Numerical solution of equations of motion.
3. To calculate first ten prime numbers.

UNIT-II

ELECTRICITY AND MAGNETISM

I. Objective :

Measurement of resistance, voltage, current and electric energy.

Activities :

(i) To use a multimeter for measuring AC and DC voltage and resistance.
(ii) Measurement of resistance of LDR - To study inverse-square law (concept of solid angle and inverse square law) using linear LDR and light source.
(iii) Observations and measurements using an Electric energy meter. To find wattage of given bulb or heater.
(iv) To study the efficiency of an electric kettle or heater element with varying input voltage.

II. Low Resistance Measurements :

Objectives :

(i) Inadequacy of Wheatstone bridge to measure low resistances.
(ii) Acquaintance with a method of measuring low resistances.

Activity :

To determine low resistance with Carey Fosters Bridge.

III. Magnetic Field :

Objectives :

(i) Familiarity with the magnetic field produced by a solenoid.
(ii) Dependence of solenoidal field on number of turns and current.
(iii) Permeability of air.

Activities :

To study the magnetic field produced by a current carrying solenoid using a search coil and calculate permeability of air.

IV. Electromagnetic Induction :

Objective :

Verification of laws of electromagnetic induction.

Activity :

To study the induced e.m.f. as function of the velocity of the magnet.

V. Magnetism and current :
Objectives and Activities :

Force on a conductor carrying current in a magnetic field.

VI. LCR Circuits :

Objective :

Study of phase relationship between currents and voltages in ac circuits.

Activity :

Study of phase relationships using impedance triangle for LCR circuit and calculate impedance.

VII. Resonant Circuits :

Objective :

Concepts of resonance and Q-value.

Activities :

(i) Resonance in a series LCR circuits for different R-value and calculate Q-value.
(ii) Resonance in a parallel LCR circuits for different R-value and calculate Q-value.
(iii) To determine the dielectric constant of a solid by resonance method.

VIII. Capacitance :

Objectives :

(i) Measurement of capacitance, dielectric constant.
(ii) Concept of time constant and time base circuit.
(iii) Knowledge of a-c Bridges.

Activities :

(i) Capacitance by flashing and quenching of a neon lamp.
(ii) Measurement of capacitance, determination of permittivity of a medium, air and relative permittivity by De-Sauty's bridge.

IX. Self Inductance :

Objectives :

(i) Knowledge of a-c bridges.
(ii) Concept of self-inductance.

Activities :

(i) To determine L using Anderson Bridge.

Computer based activities: Elementary C language programs, flowchart and their interpretation.

1. To rearrange a list of numbers in ascending and descending orders.
2. To compile a frequency distribution and evaluate moments such as mean; standard deviation etc.
3. To evaluate sum of finite series and the area under a curve.

Texts and Reference Books :

1. *"B.Sc. Practical Physics by C.L. Arora, S.Chand & Co. (2014).*
2. *"A Laboratory Manual of Physics for Undergraduate Classes"* by D.P. Khandelwal.
3. *"Programming with C, Schaum series"* by Byron Gottfried & Jitender Chhabra

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PHYSICS

SEMESTER–II

Paper A : MECHANICS – II

UNIT-I

Rigid Body motion; Rotational motion, principal moments and Axes, Euler's equations, precession and elementary gyroscope.
Galilean transformations and Invariance, Transformation equations for inertial frames inclined to each other, Non-Inertial frames. Fictitious forces in a rotating frames of reference, Centrifugal and Coriolis forces due to rotation of earth, Foucault's pendulum.
Concept of stationery universal frame of reference and ether, Michelson-Morley experiment and its results.

UNIT-II

Postulates of special theory of relativity, Lorentz transformations, Kinematical consequences of Lorentz transformations – length contraction and time dilation, Twin paradox, Transformation of velocities, Simultaneity of relativity, Velocity of light in moving fluid, Relativistic Doppler effect.
Variation of mass with velocity, mass-energy equivalence, rest mass in an inelastic collision, relativistic momentum & energy, their transformation, concepts of Minkowski space, four vector formulation.

Books Suggested :

Essential Readings :

1. Mechanics, Berkeley, Vol. I, C. Kittle.
2. Mechanics, H.S. Hans & S.P. Puri.

Further Readings :

1. *Mechanics & Relativity (3rd Edition)*, Vidwan Singh Soni (PHI Learning, New Delhi, 2013)
2. *An Introduction to Machines,* Daniel Kleppner & Robert J. Kolenkow (TMH).
3. *Introduction of Classical Mechanics,* R.G. Takwale & P.S. Puranik (TMH, 2000).
4. *Basic Concepts of Relativity,* R.H. Good (East-West Press, New Delhi, 1974).

Paper B: VIBRATIONS, WAVES & E.M. THEORY-II (30 Hrs.)

UNIT-I

Waves in physical media, Wave equation and its solution, Types of waves, particle velocity, acceleration and energy in progressive waves. Longitudinal waves on a rod.
Transverse waves on a string, characteristic impedance of a string, Waves in absorbing media.
Reflection and Transmission of transverse waves on a string at discontinuity, Reflection and transmission of energy.
Reflection and transmission of longitudinal waves at a boundary.
Standing wave ratio, Impedance matching, Energy of vibrating string. Wave and group velocity.

UNIT-II

Physical interpretation of Maxwell's equations, E.M. waves and wave equation in a medium having finite permeability, permittivity and conductivity. Energy flow due to EM wave - Poynting vector, Impedance of a dielectric to EM waves. EM waves in a conducting medium and skin depth. Impedance and Refractive index of a dielectric and a conductor.
Reflection and transmission of EM waves at a boundary of two dielectric media for normal and oblique incidence.
Reflection of EM waves from the surface of a conductor at normal incidence.

Essential Readings :

Books Suggested :

1. *Text Book of Vibrations and Waves* by S.P. Puri (Macmillan India Ltd.).
2. *Physics of Vibrations and Waves* by H.J. Pain, ELBS & John Wiley, London.
3. *EM Waves and Radiating Systems* by Edward C. Jordan and K.G. Balmain, Prentice Hall.

Further Readings :

1. *Vibrations and Waves* by A.P. French (Arnold Heinemann India, New Delhi).
2. *The Mathematics of Waves and Vibrations* by P.K. Ghosh (Mcmillan India).
3. *Waves and Oscillations* by N. Subrahmanayam & B. Lal (Vikas Pub., Delhi).

Paper-C: ELECTRICITY AND MAGNETISM-II (30 Hrs.)

UNIT-I

Current and current density, equation of continuity. Microscopic form of Ohm's Law ($\mathbf{J} = \sigma\mathbf{E}$) and conductivity. Failure of Ohm's Law. Invariance of charge. **E** in different frames of reference. Field of a point charge moving with constant velocity. Force between parallel currents.
Behaviour of various substances in magnetic field. Definition of M and H and their relation to free and bound currents. Permeability and susceptibility and their interrelationship. B-H curve and energy loss in hysteresis, Langevin theory of diamagnetism.

UNIT-II

Lorentz's force. Definition of **B**. Biot Savart's Law and its application to long straight wire, circular current loop and solenoid. Ampere's Circuital law and its application. Divergence and curl of **B**. Hall effect, expression and co-efficient. Vector potential, Definition and derivation, current density— definition, its use in calculation of change in magnetic field at a current sheet. Energy stored in magnetic field, Faraday's Law of EM induction, Displacement current, Mutual inductance and reciprocity theorem. Self inductance for solenoid.

Books Suggested :

Essential Readings :

1. *Electricity & Magnetism,* A.S. Mahajan & A.A. Rangwala (Tata McGraw Hill).
2. *Fundamentals of Electricity and Magnetism* by Arthur F. Kipp.
3. *Electricity and Magnetism, Berkeley Physics Course, Vol. II* by E.M. Purcell.
4. *Introduction to Classical Electrodynamics* by David Griffith, Prentice Hall.

Further Readings :

1. *Electricity & Magnetism,* 4th Edition, W.J. Duffin.
2. *EM Waves and Radiating Systems,* Edward C. Jordan and K. G. Balmain, Prentice Hall.

PHYSICS PRACTICALS

The Practical examination will be held along with the second semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester I.

CHEMISTRY
SEMESTER – I

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
I	Inorganic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
II	Organic Chemistry-A	30	3 periods per week	22 + 3 internal assessment
III	Physical Chemistry-A	30	3 periods per week	22 + 3 internal assessment
IV	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper 1 – INORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Atomic Structure

Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, Schrodinger wave equation, significance of Ψ and Ψ^2, quantum numbers, radial and angular wave functions and probability distribution curves, shapes of *s*, *p*, *d* orbitals. Aufbau and Pauli exclusion principles, Hund's multiplicity rule. Electronic configurations of the elements and ions.

UNIT-II (7 Hrs.)

Periodic Properties

Position of elements in the periodic table; effective nuclear charge and its Calculations Atomic and ionic radii, ionization energy, electron affinity and electronegativity – definition, methods of determination or evaluation, trends in periodic table and applications in predicting and explaining the chemical behaviour.

UNIT-III (7 Hrs.)

Chemistry of Noble Gases and *s*-Block Elements

Chemical properties of the noble gases, chemistry of xenon, structure and bonding in xenon compounds. Comparative study, diagonal relationships, salient features of hydrides, solvation and complexation tendencies including their function in biosystems, an introduction to alkyls and aryls.

UNIT-IV (8 Hrs.)

Chemical Bonding-I

Covalent Bond – Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions. BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, $SnCl_2$, XeF_4, BF_4^-, PF_6^-, $SnCl_6^{2-}$. Valence shell electron pair repulsion (VSEPR) theory to NH_3, H_3O^+, SF_4, ClF_3, ICl_2^- and H_2O. MO theory, homonuclear (elements and ions of 1st and 2nd row), and heteronuclear (BO, CN, CO^+, NO^+, CO, CN^-), diatomic molecules. Percentage ionic character from dipole moment and electronegativity difference.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-II: ORGANIC CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Structure and Bonding:
Hybridization, bond lengths and bond angles, bond energy, localized and delocalized chemical bond, Van der Waals interactions, resonance, hyperconjugation, aromaticity, inductive and field effects, hydrogen bonding.

Mechanism of Organic Reactions:
Curved arrow notation, drawing electron movements with arrows, half-headed and double-headed arrows, homolytic and heterolytic bond breaking. Types of reagents-electrophiles and nucleophiles. Types of organic reactions. Energy considerations.

Reactive intermediates-Carbocations, carbanions, free radicals, carbenes, arynes and nitrenes (with examples). Assigning formal charges on intermediates and other ionic species.

Methods of determination of reaction mechanism (product analysis, intermediates, isotope effects, kinetic and stereochemical studies).

UNIT –II (7 Hrs.)

Alkanes and Cycloalkanes:
Isomerism in alkanes, sources, methods of formation (with special reference to Wurtz reaction, Kolbe reaction, Corey-House reaction and decarboxylation of carboxylic acids), physical properties and chemical reactions of alkanes
Mechanism of free radical halogenation of alkanes: Orientation, reactivity and selectivity. Cycloalkanes – nomenclature, methods of formation, chemical reactions, Baeyer's strain theory and its limitation. Ring strain in small rings (cyclopropane and cyclobutane), theory of strainless rings. The case of cyclopropane ring: banana bonds

UNIT-III (8 Hrs.)

Stereochemistry of Organic Compounds I:
Concept of isomerism, Types of isomerism.
Optical isomerism – Elements of symmetry, molecular chirality, enantiomers, stereogenic center, optical activity, properties of enantiomers, chiral and achiral molecules with two stereogenic centers, diastereomers, threo and erythro diastereomers, meso compounds, resolution of enantiomers, inversion, retention and racemization.

Relative and absolute configuration, sequence rules, D & L and R & S systems of nomenclature.

UNIT-IV **(7 Hrs.)**

Stereochemistry of Organic Compounds II:

Geometric isomerism: Determination of configuration of geometric isomers. E & Z system of nomenclature, geometric isomerism in oximes and alicyclic compounds.

Conformational isomerism – Conformational analysis of ethane and n-butane; conformations of cyclohexane, axial and equatorial bonds, conformation of mono and disubstituted cyclohexane derivatives. Newman projection and Sawhorse formulae, Fischer and flying wedge formulae.
Difference between configuration and conformation.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-III: PHYSICAL CHEMISTRY-A

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills**.**

UNIT-I (8 Hrs.)

Mathematical Concepts and Evaluation of Analytical Data:

Logarithmic relations, curve sketching, linear graphs and calculation of slopes, differentiation and integration of functions like e^x, x^n, sin x, log x; maxima and minima, partial differentiation and reciprocity relations.

Terms of mean and median, precision and accuracy in chemical analysis, determining accuracy of methods, improving accuracy of analysis, data treatment for series involving relatively few measurements, linear least squares curve fitting, types of errors, standard deviation.

UNIT-II (7 Hrs.)

Gaseous States:

Postulates of kinetic theory of gases, deviation from ideal behavior, Van der Waal's equation of state.

Critical Phenomena: PV isotherms of real gases, continuity of states, the isotherms of Van der Waal's equation, relationship between critical constants and Van der Waal's constants, the law of corresponding states, reduced equation of state.

Molecular Velocities*:* Root mean square, average and most probable velocities. Qualitative discussion of the Maxwell's distribution of molecular velocities, collision number, mean free path and collision diameter. Liquification of gases (based on Joule-Thomson effect).

UNIT-III (8 Hrs.)

Chemical Kinetics-I

Chemical kinetics and its scope, rate of a reaction, factors influencing the rate of a reaction- concentration, temperature, pressure, solvent, light, catalyst. Concentration dependence of rates, mathematical characteristics of simple chemical reactions – zero order, first order, second order, pseudo order, half life and mean life. Determination of the order of reaction – differential method, method of integration, method of half life period and isolation method.

Radioactive decay as a first order phenomenon.

UNIT-IV (7 Hrs.)

Chemical Kinetics-II

Theories of Chemical Kinetics: Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.

Simple collision theory based on hard sphere model, transition state theory (equilibrium hypothesis). Expression for the rate constant based on equilibrium constant and thermodynamic aspects.

Catalysis and general characteristics of catalytic reactions, Homogeneous catalysis, acid-base catalysis and enzyme catalysis including their mechanisms, Michaelis Menten equation for enzyme catalysis and its mechanism.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-IV: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

INORGANIC CHEMISTRY

(a) QUALITATIVE ANALYSIS:

Semimicro Analysis, cation analysis, separation and identification of ions from groups I, II, III, IV, V and VI. Anion analysis (4 ions).

Instruction to Examiners: Four ions with no interference (anions such as PO_4^{3-}, BO^{3-}_3 and similar anions like Cl^-, Br^-, I^- etc. and cattons from the same group) may not be given.

(b) QUANTITATIVE ANALYSIS:

Volumetric titrations involving acid-base, $KMnO_4$ and $K_2Cr_2O_7$.

There are three experiments - one involving acid-base titrations, one involving $KMnO_4$ and one involving $K_2Cr_2O_7$.

1. Determination of strength of Na_2Co_3 solution by titrating it against a standard solution of HCl.
2. Determination of molarity of $KMnO_4$ solution by titrating it against a standard solution of Oxalic acid.
3. Standarise the given $K_2Cr_2O_7$ solution by titrating it against a standard solution of Mohr's Salt.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Qualitative Analysis : 10 marks

Q.No. II. Quantitative Analysis : 06 marks

Q.No. III. Viva-Voce :03 marks

Ask three questions (1 marks each) related to chemistry practicals. :03 marks

Q.No. IV. Note Book

Books Suggested (Laboratory Courses)

1. Svehla, Vogel's Qualitative Inorganic Analysis (revised); 7th edition Pubs: Orient Longman, 1996.
2. Bassett, J., Denney, R.C., Jeffery, G.H., Mendham, J., Vogel's Textbook of Quantitative Inorganic Analysis (revised); 4th edition, 1978.
3. Palmer, W.G., Experimental Inorganic Chemistry; 1st edition, Pubs: Cambridge, 1954.
4. Brauer, Handbook of Preparative Inorganic Chemistry; 2nd edition, Pubs: Academic Press, 1963, Vol. I, & 1965, Vol. II.
5. Audrieth, L.F., Inorganic Synthesis; Pubs: McGraw Hill, 1950, Vol. 3rd; E.G. Rochow, 1960 Vol. VI; J. Kleinberg, 1963, Vol. 7; S.Y. Tyree, 1967 ,Vol.9; E.L. Muetterties, 1967, Vol.10; W.L. Jolly 1986, Vol 11; R.W. Parry 1970, Vol. 12; F.A. Cotton 1972, Vol. 13; A.G. Mac Diarmid, 1977, Vol. 17.
6. Bansal, R.K., Laboratory Manual of Organic chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

CHEMISTRY
SEMESTER –II

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
V	Inorganic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VI	Organic Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VII	Physical Chemistry-B	30	3 periods per week	22 + 3 internal assessment
VIII	Laboratory Practicals		6 periods per week	22 + 3 internal assessment
		Total :	**15 periods/week**	**100**

Paper V – INORGANIC CHEMISTRY –B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (7 Hrs.)

Chemical Bonding-II

Ionic Solids – Concept of close packing., Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF_2 and antifluorite), radius ratio rule and coordination number, limitation of radius ratio rule, lattice defects, semiconductors.

UNIT-II (8 Hrs.)

Chemical Bonding-III

Lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids, polarizing power and polarisability of ions, Fajan's rule. Metallic bond-free electron, valence bond and band theories. Weak Interactions – Hydrogen bonding, Van der Waals forces.

UNIT-III (7 Hrs.)

***p*-Block Elements-I**

Comparative study (including diagonal relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane and higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.

UNIT-IV (8 Hrs.)

***p*-Block Elements-II**

Comparative study of groups 15-17 elements, compounds like hydrides, oxides, oxyacids and halides of groups 15-17, silicates (structural principle), tetrasulphur tetranitride, basic properties of halogens, interhalogens and polyhalides.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman & Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Douglas, B., Medaniel, D., Atenander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994,
5. Porterfeild, W.W., Wesky, A., Inorganic Chemistry; Pubs: Addison-Wesky Publishing Company, 1984.
6. Miessler, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004,
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Limited, 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B.Saunders Company, 1977.
9. Puri, B.R., Sharma, L.R., Kalia, K.K., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-VI: ORGANIC CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30 Hrs. (2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Alkenes, Cycloalkenes

Nomenclature of alkenes, methods of formation, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halides, regioselectivity in alcohol dehydration. The Saytzeff's Rule, Hofmann elimination, physical properties and relative stabilities of alkenes.

Chemical reactions of alkenes – mechanisms involved in hydrogenation, electrophilic and free radical additions, Markownikoff's rule, hydroboration – oxidation, oxymercuration-reduction. Epoxidation, ozonolysis, hydration, hydroxylation and oxidation with $KMnO_4$. Polymerization of alkenes. Substitution at the allylic and vinylic positions of alkenes. Industrial applications of ethylene and propene.

UNIT-II (7 Hrs.)

Dienes and Alkynes

Methods of formation, conformation and chemical reactions of cycloalkenes.

Nomenclature and classification of dienes : Isolated, conjugated and cumulated dienes. Structure of allenes and butadiene, methods of formation, polymerization. Chemical reactions – 1,2 and 1,4 additions, Diels-Alder reaction.

Nomenclature, structure and bonding in alkynes. Methods of formation. Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation, metal-ammonia reductions, oxidation and polymerization.

UNIT-III (8 Hrs.)

Arenes and Aromaticity:

Nomenclature of benzene derivatives. The aryl group, Aromatic nucleus and side chain, Structure of benzene : Molecular formula and Kekule structure. Stability and carbon-carbon bond lengths of benzene, resonance structure, MO picture.

Aromaticity: The Huckel rule, aromatic ions.

Aromatic electrophilic substitution – General pattern of the mechanism, role of σ and π – complexes. Mechanism of nitration, halogenation, sulphonation, mercuration and Friedel-Crafts reaction. Energy profile diagrams. Activating and deactivating substituents, orientation and ortho/para ratio. Side chain reactions of benzene derivatives. Methods of formation and chemical reactions of alkylbenzenes, alkynyl benzenes and biphenyl.

UNIT-IV **(7 Hrs.)**

Alkyl and Aryl Halides

Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms of nucleophilic substitution reactions of alkyl halides, S_N2 and S_N1 reactions with energy profile diagrams.
Polyhalogen compounds : chloroform, carbon tetrachloride.
Methods of formation of aryl halides, nuclear and side chain reactions. The addition-elimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions.
Relative relativities of alkyl halides vs. allyl, vinyl and aryl halides.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.
3. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson education, 2008.
4. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985.
5. Carey, F.A., Sundberg, R.J., Advanced Organic Chemistry Part B: Reactions and Synthesis; 5th edition, Pubs: Springer, 2007.

Paper-VII: PHYSICAL CHEMISTRY-B

Time: 3 Hrs.
Max. Marks: 22+3
30Hrs.
(2 Hrs/week)
3 Periods/week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Physical Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance may be given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Thermodynamics-I:

Definition of Thermodynamic Terms: System, surroundings etc. Types of systems, intensive and extensive properties. State and path functions and their differentials. Thermodynamic process. Concept of heat and work.

First Law of Thermodynamics: Statement, definition of internal energy and enthalpy, Heat capacity, heat capacities at constant volume and pressure and their relationship. Joule's Law-Joule-Thomson coefficient and inversion temperature. Calculations of w, q, dU & dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process.

UNIT-II (7 Hrs.)

Thermochemistry:

Standard state, standard enthalpy of formation-Hess's Law of constant Heat Summation and its applications. Heat of reaction at constant pressure and at constant volume. Enthalpy of neutralization. Bond dissociation energy and its calculation from thermo-chemical data, temperature dependence of enthalpy. Kirchoff's equation.

UNIT- III (7 Hrs.)

Colloidal State:

Definition of colloids, classification of colloids.

Solids in liquids (sols): Properties –kinetic, optical and electrical; stability of colloids, protective action, Hardy-Schulze rules, gold number.

Liquids in liquids (emulsions) : Types of emulsions, preparation. Emulsifier.

Liquids in solids (gels): Classification, preparation and properties, inhibition, general applications of colloids.

UNIT-IV (8 Hrs.)

Solutions, Dilute Solutions and Colligative Properties:

Ideal and non-ideal solutions, methods of expressing concentrations of solutions, activity and activity coefficient.

Dilute solution, colligative properties, Raoult's law, relative lowering of vapour pressure, molecular weight determination. Osmosis, law of osmotic pressure and its measurement, determination of molecular weight from osmotic pressure. Elevation of boiling point and depression of freezing point, Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression of freezing point. Experimental methods for determining various colligative properties.

Abnormal molar mass, degree of dissociation and association of solutes.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems; Pubs:Wiley Eastern Limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 2002.
9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book company, 1989.

Paper-VIII: LABORATORY PRACTICALS **Max. Marks: 22+3**
6 Periods/week

ORGANIC CHEMISTRY AND GREEN CHEMISTRY PRACTICALS
Crystallization and determination of melting points

Concept of induction of crystallization
1. Phthalic acid from hot water (using fluted filter paper and stemless funnel).
2. Acetanilide from boiling water.
3. Benzoic acid from water

PHYSICAL CHEMISTRY

1. Refractive indices
   Determine the Refractive indices of given liquids (water, acetone, methanol, ethylacetate, cyclohexane) by Abbe's refractometer & calculate their specific refractions.
2. Viscosity
   To determine the viscosity of Brine Solution (20%), n-Butyl alcohol, cyclohexane
3. Surface Tension
   To determine the surface tension of Brine Solution (20%), n-Butyl alcohol, cyclohexane

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:
Q.No. I. Physical Chemistry : 10 marks
Q.No. II. Organic Chemistry : 06 marks
Q.No. III. Viva-Voce : 03 marks
Ask three questions (1 marks each) related to chemistry practicals.

Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition Pubs: R. Chand & Co., New Delhi, 2002.
2. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1998.
3. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

SEMESTER-I

First Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A	Plant Diversity-I	3 hrs.	36	04	40
Theory Paper-B	Cell Biology	3 hrs.	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Second Semester					
Theory Paper –A	Plant Diversity-II	3hrs	36	04	40
Theory Paper-B	Genetics	3hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3hrs.	18	02	20
		Total			**200**

Note: 1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of nine questions. Question No.1 will be compulsory and will consist of 12 parts (one mark each) comprising 6 MCQ and the rest 6 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 12 marks and the rest of 8 questions will be of 6 marks each.

Paper-A: PLANT DIVERSITY-I

Objective: The basic objective of this paper is to make students aware about the diversity in various life forms of plant kingdom. It gives an idea about the most simple group of plants. A systematic study of algae and fungi included in this group would familiarize students not only with structural differentiation but also provide an insight about the heterotrophic and autotrophic modes of nutrition in the plant kingdom. This paper in fact forms the basis of any advance study in Botany.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bacteria: Salient features, types and cell structure.

Algae: General Characters; systematic position, structure and life history of *Oscillatoria* (Cyanophyceae) *Volvox*, *Cladophora* (Chlorophyceae); *Vaucheria* (Xanthophyceae).

UNIT-II

Systematic position, structure and life history of *Dictyota* (Phaeophyceae); *Batrachospermum* (Rhodophyceae) and economic importance of algae.

UNIT-III

Fungi: General characters; systematic position, structure and life history of *Albugo* (White rust of crucifers: *Albugo candida*), *Rhizopus* and *Saccharomyces*.

UNIT-IV

Systematic position, structure and life history of *Agaricus*, *Ustilago* (Loose smut of wheat: *Ustilago tritici*), *Puccinia* (Black rust of wheat: *Puccinia graminis tritici*), *Colletotrichum* (Red rot of sugarcane: *Colletotrichum falcatum*); general account of Lichens and their economic importance.

Suggested Readings :

1. Alexopoulos, C. J. Mims, C. W`. and Blackwell, M. 1996. Introductory Mycology. John Wiley and Sons, Inc. USA.
2. Dube, H.C. 1990. An Introduction to Fungi. Vikas Publishing House Pvt. Ltd., Delhi.
3. Goyal, J. P. Dhand, Neelam and Saini, Aruna. 2011. Foundations of Botany. Trueman Book Company Jalandhar.
4. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi.
5. Sharma, O.P. 1992. Text Book of Thallophytes, McMillan India Ltd., New Delhi.
6. Sharma, P.D. 1991. The Fungi. Rastogi & Co., Meerut.
7. Smith, G.M. 1971. Cryptogamic Botany. Vol. 1, Algae & Fungi, Tata McGraw Hill Publishing Co. New Delhi.
8. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
9. Srivastava, H.N. 2013. Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
10. Vishishta, B. R. 1999. Botany for Degree Students. Algae. S. Chand and Company Ltd., New Delhi.
11. Vishishta, B. R. 1999. Botany for Degree Students. Fungi. S. Chand and Company Ltd., New Delhi.

Paper-B: Cell Biology

Objective: This paper deals with the basic structural unit of life i.e. Cell & its organelles. It provides an insight into structural and cytological basis of functional differentiation in plants. Coupled with the study of prokaryotic and eukaryotic diversity of life forms included in Paper-A, the course material of this paper gives an idea about cellular, molecular and biochemical basis of such differentiation.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Ultrastructure and functions of a typical plant cell and its organelles: Nucleus, Mitochondrion, Plastids, Ribosome, Endoplasmic reticulum, Golgi apparatus, Lysosomes; Structure and functions of cell wall and plasma membrane: fluid mosaic model only.

UNIT-II

Physical structure of chromosome; Giant chromosomes: Polytene and Lampbrush chromosomes; Chromosomal alterations (deletion, duplication, inversion, translocation) and their importance; Variations in chromosome number, (aneuploidy and polyploidy) introduction and their importance.

UNIT-III

Cell divisions: Mitosis and Meiosis in plants and their significance, Synaptonemal complex, DNA: Structure (Watson and Crick model), Nucleosome, types of DNA and role of DNA, Replication of DNA.

UNIT-IV

Structure and concept of gene: One gene-one enzyme hypothesis; Genetic Code: Characteristics, exceptions, Wobble hypothesis; RNA: Structure and types; Transcription and translation; Regulation of gene expression in prokaryotes (Lac operon and Tryptophan operon) and in eukaryotes (a brief account).

Suggested Readings :

1. Alberts, B., Gray, D. Lewis, J. Raff, M., Roberts, K. and Watson, I.D. 1999. Molecular Biology of Cell. Garland Publishing Co., Inc., New York, USA.
2. Bhatia, K.N. and Dhand Neelam. 2013. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. A Text-book of Cell and Molecular Biology. Rastogi Publications, Meerut, India.
4. Kleinsmith, L.J. and Kish, V.M. 1995. Principles of Cell and Molecular Biology (2nd edition). Harper Collins College Publishers, New York, USA.
5. Lodish, H., Berk, A., Zipursky, S.L. Matsudaira, P., Baltimor, D. and Darnell, J. 2000. Molecular Cell Biology. W.H. Freeman & Co., New York, USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Wolfe, S.L. 1993. Molecular and Cell Biology. Wadsworth Publishing Co., California, USA.

Suggested laboratory exercises for First Semester :

1. Study of morphology of various genera included in algae and fungi.
2. Study of Crustose, Foliose and Fructicose types of Lichen thalli.
3. Histopathological study of White rust of crucifers, Loose smut of wheat, Black rust of wheat and Red rot of sugarcane.
4. To study cell structure from onion leaf peels; demonostration of staining and mounting method.
5. Preparation of temporary slides to show different stages of mitosis from root tips of *Allium cepa* and *A. sativum.*
6. Preparation of temporary slides to show different stages of meiosis from floral buds of *Allium/Brassica*.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1.	Identify and write illustrated morphological note on specimens A and B.	05
2.	Prepare a squash mount of specimen C to show the stage of cell division visible in the slide and show it to the examiner. Identify it giving at least one reason. Draw the stage of cell division and show it to the examiner.	05
3.	Identify and the slides D and E giving at least two reasons for each.	04
1.	Practical Note-book	02
2.	Viva-voce	02

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BOTANY

SEMESTER – II

Paper-A: Plant Diversity-II

Objective: The basic objective of this paper is to make the students aware about the diversity in various life forms of plant kingdom. It gives an idea about how different life forms have evolved from simpler to complex ones. A sequential study ranging from Bryophytes (the amphibians of plant kingdom) and then to Pteridophytes -the first vascular land plants, would enable students to have a broad prospective of evolutionary trends in plant kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT – I

Bryophyta: General characters; systematic position, structure, reproduction and life cycle of *Marchantia* and *Riccia* (Hepaticopsida) excluding developmental stages.

UNIT-II

Systematic position, structure, reproduction and life cycle of *Anthoceros* (Anthocerotopsida) and *Funaria* (Bryopsida) excluding developmental stages.

UNIT–III

Pteridophyta: General characters; systematic position, structure, reproduction and life cycle of *Rhynia* (Psilophytopsida) and *Selaginella* (Lycopsida) excluding developmental stages.

UNIT-IV

Systematic position, structure, reproduction and life cycle of *Equisetum* (Sphenopsida) and *Pteris* (Pteropsida) excluding developmental stages.

Suggested Readings

1. Goyal, J. P. Dhand, Neelam and Saini, Aruna 2011. Foundations of Botany. Trueman Book Company Jalandhar.
2. Pandey, B.P. 2009. Botany for Degree Students. S. Chand & Co. Ltd., New Delhi
3. Puri, P. 1980. Bryophyta. Atma Ram & Sons, Delhi.
4. Sharma, O.P. 1990. Text Book of Pteridophyta, McGraw Hill Publishing Co., New Delhi.
5. Singh, V. Pandey, P.C. and Jain, D.K. 2012. Text Book of Botany, Diversity of Microbes and Cryptogams. Rastogi Publications, Meerut & New Delhi.
6. Smith, G.M. 1971. Cryptogamic Botany. Vol. II, Bryophytes and Pteridophytes, Tata McGraw Hill Publishing Co., New Delhi.
7. Srivastava, H.N. 2013.Pradeep's Botany Vol. I (Diversity of Microbes and Cryptogams), Pradeep Publications, Jalandhar (India).
8. Vishishta, B. R. 1999. Botany for Degree Students. Bryophyta. S. Chand and Company Ltd., New Delhi.

Paper-B : Genetics

Objective: This paper deals with various aspects of hereditary trends observed in successive generations. It provides an insight into genetic basis of such evolutionary trends in plants. Coupled with the study of variations in life forms included in Paper A, the course material of Paper B provides an idea about the important role that genetics plays in structural and functional differentiation of plants.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Mendelism : Mendel's experiments and results, Mendel's Laws of Dominance, Segregation and Independent assortment; Linkage: complete and incomplete linkage, linkage groups, linkage maps, importance of linkage, cytological interpretation of Mendelism.

UNIT-II

Non-allelic Gene Interactions: Dominant and recessive epistasis, supplementary genes, complementary genes, quantitative or polygenic inheritance, duplicate genes. Allelic gene interactions: Incomplete dominance, codominance, multiple alleles, pleiotropic genes.

UNIT-III

Chromosome theory of heredity, parallelism between chromosome and Mendelian factors, Sex linked inheritance; Characteristics and examples (Haemophilia, colour-blindness); Cytoplasmic or extranuclear inheritance: mitochondrial and plastid DNA; plastid inheritance in *Mirabilis*, mitochondrial inheritance in Yeast.

UNIT–IV

Genetic variations: Continuous and Discontinuous; Mutations: characteristics, types, importance, factors affecting mutations; Mutagens: Physical and chemical, mechanism of gene mutations; DNA damage and repair: Types of damage (Single base change and structural distortion), types of repair system in prokaryotes and eukaryotes.

Suggested Readings :

1. Atherly, A.G., Girton, J.R. and McDonald, J.F. 1999. The Science of Genetics. Saunders College Publishing, Fort Worth, USA.
2. Bhatia, K. N. and Dhand Neelam 2013.. Cell Biology and Genetics. Trueman Book Company, Jalandhar.
3. Gupta, P.K. 1999. Genetics. Rastogi Publications, Meerut, India.
4. Russel, P.J. 1998. Genetics. The Benjamin/Cummings. Publishing Co. Inc., USA.
5. Snustad, D.P. and Simmons, M.J. 2000. Principles of Genetics, John Wiley & Sons, Inc., USA.
6. Srivastava, H. N. 2013. Pradeep's Botany Vol. II Cell Biology and Genetics, Pradeep Publications, Jalandhar (India).
7. Stent, G.S. 1986. Molecular Genetics. CBS Publications.

Suggested laboratory exercises for Second Semester:

1. Study of morphology of various genera mentioned in Bryophyta and Pteridophyta.

2. I. Preparation of permanent stained slides of :

Marchantia	(V.S. Thallus)	*Selaginella*	(T.S. Stem)
Riccia	(V.S. Thallus)		
Anthoceros	(V.S. Thallus)	*Equisetum*	(T.S. Aerial stem passing through internode)
Funaria	(T.S. Stem)	*Pteris*	(T.S. Petiole and leaflet)

II. Study through permanent slides:

Marchantia

i) L.S. Antheridiophore
ii) L.S. Archegoniophore
iii) L.S. Mature sporogonium

Riccia

L.S. Mature sporogonium

Anthoceros

i) T.S. Thallus passing through antheridia
ii) T.S. Thallus passing through archegonia
iii) L.S. Mature sporogonium.

Funaria

i) L.S. Male receptacle
ii) L.S. Female receptacle
iii) L.S. Capsule
iv) Primary protonema

Selaginella

L.S. Sporangiferous spike

Equisetum

i) L.S. Strobilus
ii) T.S. Strobilus

Pteris

Mature prothallus

3. Problems related to Mendalism and gene interactions.

Guidelines for Botany Practical Examination:

Max. Marks	:	20
Practical	:	18
Internal Assessment	:	02
Time	:	3 hrs

1. Cut T.S., stain and make a permanent mount of specimen A. Identify, draw its labelled diagram and show the slide to the examiner. 06

2. Problem related to Mendalism or gene interaction (to be announced by the examiner). 04

3. Identify the slides B and C giving at least two reasons for each. 04

4. *Viva-voce* & Practical Note-book. 2+2= 04

ZOOLOGY

FIRST SEMESTER

	Time	Theory	Internal Assessment	Marks
Paper-I : Biodiversity & Cell Biology – I	3 hrs.	36	4	40
Paper-II: Biodiversity & Cell Biology – II	3 hrs.	36	4	40
Practical: One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
			Total marks :	100

SECOND SEMESTER

	Time	Theory	Internal Assessment	Marks
Paper-I : Biodiversity & Ecology - I	3 hrs.	36	4	40
Paper-II: Biodiversity & Ecology - II	3 hrs.	36	4	40
Practical: One paper covering entire syllabus of both the papers.	4 hrs.	18	2	20
			Total marks :	100

Note : The number of hours for Theory and Practical per week shall be 6 and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Semester-I and Semester-II in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

ZOOLOGY

FIRST SEMESTER

PAPER–I : BIODIVERSITY & CELL BIOLOGY-I (ZOO. 01)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following protozoan types :
Amoeba, Paramecium and Plasmodium.

Classification up to orders with ecological notes and economic importance (if any) of the following :
Entamoeba, Trypanosoma, Giardia, Noctiluca, Eimeria, Opalina,Vorticella, Balantidium and Nyctotherus.

UNIT – II

Detailed study of the following animal types :

Parazoa (Porifera)	:	Sycon (*Scypha*)
Cnidaria (Coelenterata)	:	*Obelia*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Parazoa (Porifera)	:	*Grantia, Euplectella, Hyalonema and Spongilla*
Cnidaria (Coelenterata)	:	*Hydra, Sertularia, Plumularia, Obelia, Tubularia, Bougainvillea, Porpita, Velella, Physalia, Rhizostoma Millipora, Aurelia, Alcyonium, Tubipora, Zoanthus, Metridium, Madrepora, Favia, Fungia and Astrangia.*

UNIT – III

Methods in Cell Biology	:	Principles and applications of light (simple, compound & phase contrast) and electron (SEM & TEM) microscopes Fixation & fixatives, staining techniques. (simple and double staining)
Organisation of Cell	:	Concept of Prokaryotic and Eukaryotic cell, extra nuclear and nuclear organization of cell.
Plasma membrane	:	Structure with particular references to Fluid Mosaic Model, Osmosis, active and passive transport, endocytosis and exocytosis.

UNIT – IV

Endoplasmic reticulum	:	Structure, types, associated enzymes and functions.
Mitochondria	:	Structure, mitochondrial enzymes and the role of mitochondria in respiration. Mitochondrial DNA.
Golgi complex	:	Structure, associated enzymes and functions.

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A molecular approach – G. M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PAPER–II : BIODIVERSITY & CELL BIOLOGY - II (ZOO. 102)

Max. Marks	: 40 marks
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 Hrs.

UNIT – I

Detailed study of the following animal types :

Platyhelminthes : *Fasciola,Taenia*

Aschelminthes : *Ascaris*

Parasitic adaptations in Helminths

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Platyhelminthes : *Dugesia, Schistosoma and Echinococcus.*

Aschelminthes : *Ascaris, Oxyuris, Wuchereria.*

UNIT – II

Detailed study of the following animal type :

Annelida : *Pheretima*

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Annelida : *Nereis, Polynoe, Eunice, Arenicola, Aphrodite, Amphitrite, Chaetopterus, Tubifex and Pontobdella.*

UNIT – III

Lysosomes : Lysosomal enzymes, Polymorphism and functions.

Ribosomes : Types of ribosomes, their structure and functions.

Centrosome : Structure and functions.

UNIT-IV

Nucleus : Structure and functions of nuclear membrane, nucleolus and chromosomes. Euchromatin & Heterochromatin

An elementary idea of cell transformation in Cancer : Introduction, difference between normal and Cancer cells, types of cancer, basic idea of transformation.

An elementary idea of cellular basis of immunity : Cellular & Humoral immunity. Elementary idea of cells & organs of immune system .

Books Recommended :

1. Essential Cell Biology – Alberts, Garland Publishers, New York, 3rd edition, 1997.
2. The Cell : A Molecular approach – G.M. Cooper, Robert & Hausman Sinauer Associates Inc., 4th edition, 2007.
3. Molecular Cell Biology – Harvey Lodish, Arnold Berk, Chris A. Kaiser, Monty Kriegr, Mathew P. Scott. Anthony Bretscher, Hiddle Ploegh, W.H. Freeman, 6th edition, 2007.
4. Cell & Molecular Biology – G. Karp. John Wiley & Sons, 2001.
5. Cell & Molecular Biology - De Robertis, E.D.P. & De Robertis, E.M.F., W.B. Saiunders Co., Philadelphia, 8th edition, 1995.
6. Cell Biology - Powar, C.B., Himalaya Publishing House, Bombay, 1999.
7. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
8. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
9. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
10. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
11. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
12. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
13. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.

PRACTICALS : Practical based on Theory Papers ZOO-101 & ZOO-102 (ZOO-151)

1. Examination of cultures of *Euglena* and *Paramecium.*
2. Classification upto orders with ecological notes and economic importance, if any, of the following animals :
   Slides : *Amoeba, Euglena, Trypanosoma, Noctiluca, Eimeria, Monocystis, Paramoecium* (Binary fission and conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus & Polystomella.*

Parazoa (Porifera) :	Specimens: *Sycon, Grantia, Euplectella, Hyalonema, Spongilla, Euspongia.*	
Cnidaria (Coelenterata)	(a)	Specimens : *Porpita, Velella, Physalia, Aurelia, Rhizostoma Metridium, Millipora, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia and Astrangia.*
	(b)	Slides : *Hydra* (W.M.) *Hydra* with buds. *Obelia* (colony and medusa). *Sertularia, Plumularia, Tubularia, Bougainvillea* and *Aurelia larva.*
Aschelminthes	:	*Ascaris* (male and female), *Trichinella, Ancylostoma.*
Platyhelminthes	(a)	Specimens : *Dugesia, Fasciola, Taenia, Echinococcus.*
	(b)	Slides : Miracidium, Sporocyst, Redia, Cercaria of *Fasciola*, Scolex and Proglottids of *Taenia* (mature and gravid).
Annelida	:	*Pheretima, Nereis, Heteronereis, Polynoe, Eunice, Aphrodite, Chaetopterus, Arenicola, Tubifex* and *Pontobdella.*

3. Study of the following permanent stained preparations :
   - L.S. and T.S. *Sycon,* gemmules, spicules and spongin fibres of a sponge.
   - T.S. *Hydra* (Testis and ovary region).
   - T.S. *Pheretima* (Pharyngeal and typhlosolar regions); setae, septal nephridia, spermathecae and ovary of *Pheretima*
   - T.S. *Fasciola* (Different regions).
   - T.S. *Ascaris* (Male & female).

4. Preparation of the following slides :
   Temporary preparation of *Paramecium*, Euglena and vorticella.

5. Demonstration of dissection of earthworm through video clipping/models/charts ets.

6. Make a preparation of sex-chromatin from buccal smear.

7 . Introduction to the following through photographs/lab. visits :
   - Gel electrophoresis, TEM & SEM, ultrastructure of cell organelles.

8. Study of slide of striated muscle fibre and Animal cell.

Note : . Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labelled sketch of the any given system and show to examiner/Spot any four parts of anatomy in given models/charts. 2 marks

2. Make a temporary mount of the material "A". Identify and draw its labelled sketch and show it to the examiner. 1 marks

3.Identify the slides (B-C) and give two important reasons for each identification. 3 marks

4.Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks

5. Identify the cell organelle through photograph and give two important reasons for Identification/Buccal smear/striated muscle fibre/paper chromatography. 2 marks

6.Viva voce 2 marks

7.Practical records and chart 2 marks

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ZOOLOGY

SECOND SEMESTER

Paper- I : BIODIVERSITY & ECOLOGY - I (ZOO-201)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type Questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Detailed study of the following animal types :

Arthropoda : *Periplaneata*
Social organizations in insects (honey bee and termite).

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Arthropoda : *Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper) *Gryllus* (Cricket), *Mantis* (Preying Mantis), *Cicada, Forficula* (Earwig), *Cimex*, *Scarabaeus (*Dung beetle*), Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth).

UNIT –II

Detailed study of the following animal types :

Arthropoda : Prawn (*Palaemon*)
Life cycle of *Anopheles* and *Culex*.

Classification upto orders with brief ecological note and economic importance (if any) of the following:

Peripatus, Prawn, Lobster, *Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

UNIT – III

Ecology	:	Subdivisions and Scope of ecology.
Ecosystem	:	Components, ecological energetics, food web, introduction to major ecosystems of the world.
Ecological factors	:	Temperature, light and soil as ecological factors.

UNIT – IV

Nutrients	:	Biogeochemical cycles & concept of limiting factors.
Ecological Adaptations	:	Morphological, physiological and behavioural adaptations in animals in different habitats.
Population	:	Characteristics and regulation of population.

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

Paper-II BIODIVERSITY & ECOLOGY - II (ZOO-202)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT – I

Detailed study of the following animal type :

Mollusca : *Pila*

Classification up to orders with ecological notes and economic importance (if any)

Mollusca : *Chiton, Anodonta, Mytilus, Ostrea, Cardium, Pholas, Solen* (Razor Fish), *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus and Dentalium*

UNIT – II

Detailed study of the following animal types :

Echinodermata : *Asterias*, Echinoderm Larvae.
Hemichordata : *Balanoglossus*, External characters and affinities.

Classification up to orders with ecological notes and economic importance (if any)

Echinodermata : *Echinus, Cucumaria, Ophiothrix, Antedon and Asterias.*
Hemichordata : *Balanoglossus.*

UNIT – III

Inter and intra ecological relationships : Competition, predation, parasitism, commensalism, ammensalism & mutualism

Biotic community : Characteristics, ecological succession, ecological niche.

UNIT – IV

Natural resources : Renewable and nonrenewable natural resources and their conservations.

Environmental Degradation : Causes, impact and control of environmental pollution. (Air, Water, Land, Noise)

Wildlife conservation : Basic concepts

Books Recommended:

1. Invertebrates Vol.I-VI- L.H. Hyman, Mcgraw Hill, 1955.
2. Invertebrate Zoology – E.L. Jorden, S. Chand, 2001.
3. Modern Text Book of Zoology : Invertebrate – R.L. Kotpal, Rastogi Publications, 10th edition, 2009.
4. A Manual of Practical Zoology : Invertebrate – P.S. Verma by S. Chand, 2005.
5. Practical Zoology Invertebrate – S.S. Lal – Rastogi Publications, 2009.
6. Text Book of Zoology – Dhami & Dhami, Pardeep Publications, 1983.
7. Zoology for Degree Students – V.K. Aggarwal, S. Chand Publications, 2011.
8. Fundamentals of Ecology – E.P. Odum, Akash Publications, Indian Reprint, 2008.
9. Concepts of Ecology – E.J. Kormondy, Prentice – Hall of India, 1999.
10. Zoogeography – P.J. Darlington, John Willy & Sons Inc., 1957.
11. Ecology & Environment – P.D. Sharma by Rastogi Publications, 2007.
12. Adaptation – Bruce Wallace & Adrian, Prentice – Hall, 1961.
13. Introduction to Animal Ecology & Environmental Biology – H.R. Singh, Vishal Publications, 2001.

PRACTICALS : Practical based on Theory Papers ZOO-201 & ZOO-202 (ZOO 152)

1. Classification upto orders with ecological notes and economic importance, if any, of the following animals :

   Arthropoda : *Peripatus, Palaemon, Lobster, Cancer* (Crab), *Sacculina, Eupagurus* (Hermit crab), *Lepas, Balanus, Apis, Lepisma* (Silver Fish), *Schistocerca* (Locust), *Poecilocerus* (Ak Grasshopper), *Gryllus* (Cricket), *Mantis* (Praying Mantis) *Cicada, Forficula* (Earwig), *Scarabaeus (*Dung beetle*),* *Agrian* (Dragon fly), *Odontotermes* (Termite queen), *Cimex* (bed bug), *Cicindela* (Tiger beetle), *Polistes* (Wasp), *Bombyx* (Silk moth), *Julus* (Millipede), *Scolopendra* (Centipede), *Palamnaeus* (Scorpion), *Aranea* (Spider) *and Limulus* (King crab).

   Mollusca : *Anodonta, Mytilus, Ostrea, Cardium,Pholas, Solen* (Razorfish) *Pecten, Haliotis, Patella, Aplysia, Doris, Limax, Loligo, Sepia, Octopus, Nautilus shell* (Complete and T.S.), *Chiton and Dentalium.*

   Echinodermata : *Asterias, Echinus, Ophiothrix* and *Antedon Cucumaria*

   Hemichordata : *Balanoglossus*.

2. Study of the following permanent stained preparations :
   Trachea, mouth parts of *Periplaneta*
   Radula and osphradium of *Pila*.
   T.S. Star fish (Arm).

3. Demonstration of dissection of the following animals through video clippings/charts/models:
   Periplaneta : Digestive and nervous systems; mouth parts and trachea.
   Pila : Pallial complex, digestive and nervous systems, Radula.
4. Study of animal adaptations with the help of specimens, charts and models.
5. Study of Zoogeographical regions and their fauna.
6. Study of biotic components of an ecosystem.
7. Study of different types of nests in birds.
8. Study & preparation of zoogeographical charts/maps.

Note: Candidates will be required to submit their original note books containing record of their laboratory work (Drawing etc.) initialed and dated by their teachers at the time of practical examination.

Guidelines for the conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled diagram of any given system of an animal and explain it to the examiner Sketch and demonstrate it to the examiner. 2 marks
2. Identify the slides (A-C) and give two important reasons for each identification. 3 marks
3. Identify and classify the specimens (D-G) up to orders. Write a short note on the habitat, special features, feeding habit and economic importance. 6 marks
4. Identify the type of adaptation/type of nest/biotic components with a short note. 1 marks
5. Mark Zoogeographical region on the given physical map along with endemic fauna and climate. 2 marks
6. Viva voce 2 marks
7. Practical record, charts/maps and project report of excursion to a place of zoological interest 2 marks

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BIOCHEMISTRY
Semester I

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper-A: Carbohydrates and Lipids **Marks: 45+5**

(*Three periods per week)*

Objective: To learn about biomolecules, their structure and functional significance.

SECTION-I

(Lectures: 6)

Introduction to biochemistry and its scope. Water: physical properties, as a biological solvent and structure of water,dissociation of water. pH and pOH, buffer solution. Henderson Hasselbalch equation, acid-base indicators, buffers and physiologically important buffers, dialysis and osmosis.

SECTION-II

(Lectures: 8)

Definition and classification of carbohydrates. Fischer and Haworth structures of carbohydrates. Stereoisomerism, and mutarotation. Anomeric forms of monosaccharides. Derivatives of monosaccharides (glycosides, deoxysugars,amino sugars and other derivatives of biological importance). Oligosaccharides of biological importance (structure of maltose, lactose, sucrose, cellobiose, trehalose, raffinose). Characteristic reactions of monosaccharides: reactions with hydrazine, hydrogen cyanide, hydroxylamine; reduction and oxidation of sugars; periodic acid oxidation; action of alkali upon sugars; acylation and methylation of sugars. Homo-and hetero-polysaccharides (structures of amylose, amylopectin, starch, inulin, pectins, dextrins, glycogen, cellulose, chitin). GAGs as components of connective tissue.Polysaccharides of bacterial cell wall, glycoproteins

SECTION-III

(Lectures: 8)

Definition and classification of fatty acids (saturated and unsaturated). Essential fatty acids. Important reactions of functional groups present in fatty acids. Characteristics of fatty acids and fats (saponification, iodine, acid, acetyl and peroxide values). Refractive index, m. p., b.p. and their relation to molecular size. Properties of glycerol. Fats as source of energy. Waxes.Structures, characteristics and functions of lipids: triacylglycerols, phospholipids: lecithins (Phosphotidylcholines), lysolecithins, cephalins (phosphotidylethanolamines), phosphatidylserines, Phosphatidyl inositol, sphingomyelins, plasmalogens), cerebrosides, gangliosides, sulfatides.

SECTION-IV

(Lectures: 6)

Lipoproteins– composition, classification and biological functions. Liposomes.
Terpenes and steroids – Terpenes of biological significance e.g. carotenes, phytol. Cholesterol and other animal sterols. Colour reactions of sterols. Sterols of yeast and fungi (mycosterols). Phytosterols. Steroidal hormones. Bile acids.
Structure and properties of eicosanoids-prostaglandins, leukotrienes, thromboxanes, prostacyclins

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay Edition,	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

1. Qualitative tests for carbohydrates.
2. Estimation of carbohydrate by anthrone method.
3. Estimation of ascorbic acid by dye method.
4. Verification of Beer-Lambert law for nitrophenol or cobalt chloride.
5. Qualitative tests for cholesterol and lipids
6. Determination of saponification value of fats
7. Determination of iodine value of fats.
8. Estimation of phospholipids by vanillin method.

Paper-B: Nitrogen containing Biomolecules Marks: 45+5

SECTION–I

(Lectures: 7)

Amino acids: common structural features. Stereoisomerism and RS system of designating optical isomers. Classification based on the nature of "R" groups. Amino acids present in proteins and non-protein amino acids. Specialized role of amino acids. Physical and chemical properties of amino acids. Titration of amino acids. Rigid and planar nature of a peptide bond. Folding of peptide chains into regular repeating structures (α helix, β pleated sheets). β -turn in polypeptides. Chemical synthesis of polypeptides. Biologically active peptides.

SECTION–II

(Lectures: 8)

Proteins: levels of protein structure. Determination of primary structure of proteins. Forces stabilizing structure and shape of proteins. Native proteins and their conformations. Behaviour of proteins in solutions. Salting in & salting out of proteins. Denaturation of proteins. Structural and functional diversity of proteins, fibrous proteins (keratins, collagen & elastin), globular proteins (hemoglobin, myoglobin) and conjugated proteins.

SECTION-III

(Lectures: 8)

Nucleic Acids: structure and properties of purine and pyrimidine bases. Nucleosides and nucleotides. Biologically important nucleotides. Double helical model of DNA and forces responsible for it. Different forms of DNA (A,B and Z type), denaturation of DNA. Physical and chemical properties of nucleic acids. Chemical and enzymatic hydrolysis of nucleic acids. Sequencing of polynucleotides. Types of RNA and ribozyme.

SECTION-IV

(Lectures: 6)

Porphyrins: porphyrin nucleus and classification of porphyrins. Heme and other metalloporphyrins occurring in nature. Detection of porphyrins spectrophotometrically and by fluorescence. Chemical nature and physiological significance of bile pigments.

Suggested Books:

1. Nelson D.L.Cox M M	:	Biochemistry, Worth Publishers Inc., New York. (4th Edition, 2005)
2. Conn E.E&Stumpf. P.K.	:	Outlines of Biochemistry, John Wiley & Sons, U.S.A.
3. G.Zubay Edition,	:	Biochemistry, Maxwell Macmillan Pub. Com., New York. (4th 1998).
4. Robert K. Murrary P.A. D.K. Granner and V.W. Rodwell	:	Harper's Illustrated Biochemistry, Prentice Hall Int., London (27th Edition, 2006).

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

1. Qualitative tests for Amino acids and proteins
2.Titration curve for amino acids and determination of pKa value.
3. Estimation of:
   (a) Amino acids by ninhydrin method.
   (b) Protein by biuret and Lowery method
   (c) DNA by diphenylamine method
   (d) RNA by orcinol method
4. Spectrophotometic measurements of DNA and RNA solutions

BIOCHEMISTRY
Semester II

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper- A: Biochemical Techniques **Marks: 45+5**

Credit: 3+0+0
Objective: To learn various biochemical techniques

Section-I

(Lectures: 7)

Beer-Lambert's law. Light absorption and its transmittance. Determination and application of extinction coefficient. Applications of following spectroscopic techniques in elucidating structure of Biomolecules:- visible, U.V., Infra-red and fluorescence spectroscopy

Section-II

(Lectures: 8)

Chromatography: general principles, distribution coefficient, partition chromatography-normal phase and reverse phase liquid chromatography. Modes of chromatography-column, thin layer and paper chromatography. Principles, matrices and applications of gel permeation, adsorption, ion exchange and affinity chromatography.Gas chromatography (GC) and High Performance Liquid Chromatography (HPLC).

Section-III

(Lectures: 7)

Various centrifugation techniques and their applications in Biochemistry.Preparative and analytical ultracentrifugation procedures.Application of partial specific volume, diffusion coefficient and viscosity measurements in the study of macromolecules of biochemical importance.

Section-IV

(Lectures: 8)

Electrophoresis: General principle, support media, types of electrophoresis.
Electrophoresis of proteins: native and SDS-PAGE. Isoelectric focusing, 2D-PAGE, detection and recovery of proteins.Molecular weight determination.Immuno electrophoresis. Electrophoresis of nucleic acid: agarose-gel electrophoresis of DNA and RNA, pulsed-field gel electrophoresis, Northern and Southern transfer procedure.

SUGGESTED BOOKS

1. Biochemical Techniques: Theory and practice by Robyt, J.F. and White, B.J, 1987, Brooke/Cole Publishing Company, California.
2. Principles and techniques of Biochemistry & Molecular biology by K Wilson & J Walker 6th Ed.Cambridge University press
3. Fundamentals of analytical chemistry by Skoog /West/Holter/Crouch Thompson/Brooks/Cole

PRACTICALS: **Marks: 25**

One practical of 3 hours per week

I. Estimation of proteins using UV absorbance and biuret method.
II. Estimation of proteins using Lowry/Bradford method.
III. Isoelectric pH of casein.
IV. Ammonium sulphate fractionation of serum proteins.
V. Separation of albumin from serum using anion-exchange chromatography.
VI. SDS-PAGE analysis of proteins.

Paper-B: Enzymes and Bioenergetics **Marks: 45+5**

Objective: To learn principles of thermodynamics, nature of enzymes, their mode of action and enzyme kinetics

SECTION-I

(Lecture: 7)

Introduction to enzymes.General characteristics of enzymes.IUB system of nomenclature and classification of enzymes.Prosthetic group.Holoenzyme, apoenzyme, cofactors, isoenzymes and their clinical significance and zymogens, coenzymes (NAD/NADP,FMN/FAD, coenzyme A,TPP, pyridoxal phosphate, tetrahydrofolate) and their biochemical functions, assay of enzyme activity, units of enzyme activity. Active site of enzymes

SECTION-II

(Lectures: 8)

Enzymes as catalysts. Theories of enzymes catalysis: proximity and orientation effects, acid base catalysis, covalent catalysis. Role of metals in enzyme catalysis
Monomeric enzymes, oligomeric enzymes & multienzyme complexes.Mechanism of action of chymotrypsin and pyruvate dehydrogenase.

SECTION-III

(Lectures: 8)

Factors affecting velocity of enzyme catalysed reactions: enzyme concentration, pH and temperature. Michaelis-Menten equation.Determination of Km and its significance.
Enzyme inhibition: Various types of enzyme inhibitions. Determination of Ki value.Enzyme inhibitors and their importance.Introduction to multisubstrate enzymes. Allosteric enzymes and enzyme regulation.

SECTION-IV

(Lectures: 8)

Concepts of bioenergetics, principles of thermodynamics & their application in Biochemistry, concept of free energy.Biological oxidations.Redox potential. ATP and High energy phosphate compounds: introduction, phosphate group transfer potential, enzymes and co-enzymes involved in oxidations and reductions. Mitochondrial electron transport chain and oxidative phosphorylation.Substrate level phosphorylation, mechanism of oxidative phosphorylation.

Books Recommended:

1. J.R. Whitaker : Principles of Enzymology for the Food Sciences, 2nd Ed., Marcel Dekker, Inc., New York.
2. J.E. Bell and E.T. Bell : Protein and Enzymes, Prentice Hall Inc, New Jersey.
3. Berg J. M, LubertStryer : Bio-chemistry, W.F. Freeman and Co., New York, Edition 7th, 2002.
4. Nelson D.L & Cox M. M. : Principles of Bio-chemistry, Worth Publishers, Inc., New York, edition 4th 2005.
5. Conn E.E &Stumpf P.K. : Outlines of Bio-chemistry, Bruening & Doi John Wiley & Sons.
6. T. Palmer : Enzymes: Biochemistry, Biotechnology and Clinical chemistry, 2nd Ed. (2008) Affiliated East-West press Pvt. Ltd. New Delhi.

PRACTICALS: **Marks: 25**
One practical of 3 hours per week

I. Preparation of casein from milk
II. Determination of achromatic point of saliva
III. (a) Assay of serum alkaline phosphatase activity.
(b) Effect of pH on enzyme activity.
(c) Effect of temperature on enzyme activity and determination of energy of activation.
(d) Effect of substrate concentration on enzyme activity and determination of Km.
IV. Inhibition of alkaline phosphatase by EDTA.
V. Demonstration of potato polyphenoloxidase activity.

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INTRODUCTION TO COMPUTER SCIENCE
(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module I while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III.

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lecturers per week	Max. Marks			Exam Hours
	First Semester			Ext.	Int.		
1	A	Fundamentals of Information Technology	6	25	5	30	3
2	C	Practical on Paper – A	6	-	-	20	3
	Second Semester			Ext.	Int.		
3	B	Computer Programming Using C	6	25	5	30	3
4	D	Practical on Paper – B	6	-	-	20	3

SEMESTER I

Paper A
Paper Title: Fundamentals Of Information Technology
Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

Objective : To familiarize students with basic concepts of Computer and Information Technology, Students will get understanding of concepts related to operating systems and application softwares.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.
2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
   ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation. Input/Output devices.

UNIT-II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.
4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin
5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp.
   Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT-III

6. **Word Processing Software**:
   Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.
   Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus
   Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns
   Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables
   Clipart: Using clip art, Creating Word Art
   Mail merge: Creating merged envelops, creating merged mailing labels

UNIT-IV

7. **Spreadsheet Software:**
   Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

   Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

   Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

   Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts
8. **Presentation Software**:
   Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References:

1.	Basandra, S.K.	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K.	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K.	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M.	Computers Todays by McGraw Hill, New York, 3rd ed., N.Y. Int. ed.
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron.	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper – C : Practical on Paper - A

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

INTRODUCTION TO COMPUTER SCIENCE

SEMESTER II

Paper B
Paper Title: Computer Programming Using C

Max. Marks : 25 **Time : 3 Hrs**
Theory: Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60
Objective : To make student understand programming concepts of 'C' language including functions, arrays, input/output etc.

Note:

i. The Question Paper will consist of Four Units.

ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.

iii. The students are required to attempt ONE question from each Unit and the Compulsory question.

iv. All questions carry equal marks unless specified.

UNIT-I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Input/Output, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes:** automatic, external, static, register
5. **Preprocessor:** #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT-II

6. **Functions:** library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions

UNIT-III

8. **Strings**: Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
9. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures

UNIT-IV

10. **Console Input/Output**: Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
11. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File, Text Files and Binary Files.

References:

1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi, 8th Edition.
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series, N.D., TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications.
4.	Salaria, R.S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper – D : Practical on Paper - B

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to practical note-book and assignments.

MICROBIOLOGY

B.Sc. (GENERAL) FIRST YEAR (SEMESTER SYSTEM) EXAMINATION (2020-21)

Note : 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

Scheme of Examination		*Duration*	*Marks*
	FIRST YEAR		
	Semester I		
THEORY		6 hrs	75 (66+9*)
MIC 101:	**Fundamentals of Microbiology -I**	3 hrs.	37.5 (33 + 4.5*)
MIC 102 :	**Microbial Physiology—Metabolism – I**	3 hrs.	37.5 (33 + 4.5*)
PRACTICAL			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 101 and MIC 102		6 hrs	25 (22+3*)
	Semester II		
THEORY		6 hrs	75 (66+9*)
MIC 201:	**Fundamentals of Microbiology -II**	3 hrs.	37.5 (33 + 4.5*)
MIC 202 :	**Microbial Physiology—Metabolism –II**	3 hrs.	37.5 (33 + 4.5*)
Practical			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 201 and MIC 202		6 hrs	25 (22+3*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

OUTLINES OF TESTS AND SYLLABI
MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 101 : FUNDAMENTALS OF MICROBIOLOGY (I)

Semester-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. History, development, scope and applications of Microbiology.
2. Methods of Microbiology, isolation of pure cultures, theory and practice of sterilization.
3. Nature of Microbial World : Prokaryotes and eukaryotes, growth pattern in microbes.

SECTION-B

1. Morphology and fine structure of bacteria, fungi, actinomycetes and algae.
2. Organization of cell wall, cell membrane, flagella and capsules in bacteria.
3. Morphogenesis in bacteria, formation of spores and cysts.

SECTION-C

1. Recombinant DNA technology: genetic engineering and gene cloning in microorganisms.
2. Strategies of genetic engineering: Restriction enzymes, vectors and plasmids.

SECTION-D

1. Microorganism Association with Vascular Plants: Rhizosphere and Rhizoplane microorganisms and Mycorrhizae.
2. Nitrogen fixation: Symbiotic and nonsymbiotic and biofertilizers.
3. Biopesticides.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M.Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008)

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 102 : MICROBIAL PHYSIOLOGY—METABOLISM (I)

Semester-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth, and enzymes.

SECTION-A

1. Microbial Nutrition : Requirements for Growth. Physical requirement (temperature, pH, osmotic pressure), chemical requirements (C, N, S, P, O).
2. Culture Media : Chemically defined media, complex media, anaerobic growth media, selective & differential media, and enrichment culture. Cultivation of Aerobes and Anaerobes.

SECTION-B

1. Enzymes : Chemical and physical properties of enzymes.
2. Classification and nomenclature of Enzymes.
3. Factors affecting enzyme activity.

SECTION-C

Microbial Metabolism :

1. Respiration and fermentation.
2. Glycolysis.
3. Pentose Phosphate pathway,
4. The Entner Doudoroff pathway.
5. Tricarboxylic acid cycle.
6. Glyoxylate cycle.

SECTION-D

Bacterial Genetics :

1. Conjugation.
2. Transformation.
3. Transduction (generalized transduction, specialized transduction).
4. The Regulation of Gene Expression : Lac operon, tryptophan operon. Recommended

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Textbook of Microbiology, S. Chand and Company.

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
Semester I

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

PRACTICALS

1. Preparation of culture media, spread plates, pour plates, selective media, differential media.
2. Separation of pure cultures and study the effect of selective nutrients on prokaryotes.
3. Isolation of Soil Bacteria, Soil Fungi, Soil Actinomycetes.
4. Selective media for Soil microflora and use of growth factors, Study of Rhizosphere interactions, Quantitative measurements of Soil nutrients and Rhizosphere microflora and preparation of starter cultures of Rhizobium, Azotobacter.
5. Measurement of Soil Enzymes.
6. Use of ultraviolet light for its germicidal effect.
7. The replica plating technique.
8. Effect of temperature, Osmotic pressure, energy source etc. on growth of prokaryotes.

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 201 : FUNDAMENTALS OF MICROBIOLOGY (II)

Semester-II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

To provide basic knowledge about the fundamental concepts of Microbiology including history of Microbiology, Microscopic examination of microbes and providing information in frontier areas of genetic engineering, environmental science and agriculture.

SECTION-A

1. Microscopic examination of micro-organism, bright field microscopy, dark field microscopy, phase contrast microscopy and electron microscopy.
2. Staining of microbes, theory of Gram staining.

SECTION-B

1. Animal Viruses : Morphology, cultivation and viral disease cycle.
2. Bacteriophages : Morphology, multiplication, detection and enumeration.
3. Biotransformation of
   (a) D-Sorbitol to L-Sorbose.
   (b) Antibiotics.
   (c) Steroids.

SECTION-C

Genetic engineering for human welfare:

1. Production of pharmaceuticals.
2. Insect pest control.
3. Use of Genetically Engineered Microorganisms (GEMs) for control of pollution.

SECTION-D

1. Biogeochemical Cycling—Carbon cycle, Nitrogen cycle, Phosphorus and Sulphur cycle with role of microorganisms.
2. Sewage (waste-water) treatment, chemical characteristics, microbiological characteristics, waste water treatment processes.

Recommended Books :

1. Fox, S.W., Dose, K. (1994), Molecular Evolution and the Origin of Life, University of Chicago Press.
2. Stanier, R.Y., Doudoroff, M., Adelberg, E.A. (1999), General Microbiology, Mc Millan Press, London.
3. Pelczar, M.J., Sun Chan E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
4. Davis, (1996), Fundamental of Microbiology.
5. Reard, (1995), Introduction of Microbiology.
6. Robert, L. (1995), Soil Microbiology, John Wiley and Sons.
7. Alexander, M. (2003), Soil Microbiology, Wiley, 2003.
8. Waksman, S.A. (2003), Introduction to Soil Microbiology, John Wiley, 2003.
9. Prescott, Harley, and Klein's Microbiology by Joanne M.Willey, Linda M. Sherwood and Christopher J. Woolverton, Mc Graw Hill (2008)

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
MIC 202 : MICROBIAL PHYSIOLOGY—METABOLISM (II)
Semester – II

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note : The question paper will consist of four sections (A-D). There will be **nine** questions, out of which **five** questions have to be attempted. Question I will span the complete syllabus and will be compulsory. Rest of the eight questions will be from different sections of the syllabus. There will be four questions from each of the two sections and two is to be attempted from each section. Each question should be sub-divided into 2-4 sub parts.

Objective :

The paper provides basic information on complex integrated network of biochemical reactions that make up the metabolism of the micro-organisms including nutrition, growth, and enzymes.

SECTION-A

1. Microbial Growth : Growth in population, bacterial growth curve, mathematical nature and expression.
2. Factors affecting growth in microorganisms.
3. Methods for measurement of growth in microorganisms. .

SECTION-B

1. Mechanisms of enzymes action.
2. Inhibition, control and regulation of enzyme activity .
3. Enzyme kinetics: Michaelis-Menten equation.

SECTION-C

Microbial Metabolism :
1. Catabolism of lipids and proteins.
2. Beta oxidation
3. Electron transport chain.
4. Biochemical mechanisms of generation of ATP.

SECTION-D

Microbial Utilization of Energy & Biosynthesis :
1. Transport of nutrient by bacteria.
2. Synthesis of Amino Acids : Glutamate, lysine, glutamine, serine, arginine family.
3. Structures and biosynthesis of cell wall peptidoglycan.
4. Biosynthesis of Carbohydrates (gluconeogenesis) & Phospholipids.
   Replication of DNA molecules, Transcription & Translation (process of protein synthesis).

Recommended Books :

1. Stanier R.Y., Doudoroff M., Adelberg, E.A. (1999), General Microbiology, McMillan Press, London.
2. Pelczar, M.J., Sun Chan, E.C., Krieg, N.R. (1986), Microbiology, Tata Mc Graw Hill Publication, New Delhi.
3. Tortora, G.J., Funke, B.R., Case, C.L. (2009), Microbiology : An Introduction, Benjamin/Cummings Publishing Company inc.
4. Postgate, J.R. (2000), Microbes and Man, Cambridge University Press.
5. Dubey, R.C., Maheshwari, D.K., (2005), A Text Book of Microbiology, S. Chand and Company.

MICROBIOLOGY
B.Sc. (GENERAL) FIRST YEAR EXAMINATION
Semester -II

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

PRACTICALS

1. Use of microscope in examination of unstained bacteria, fungi, algae, parasites and stained cell preparations including simple staining, Gram's staining, acid fast staining, capsule staining, spore staining using prokaryotic and eukaryotic cells, hanging drop preparation.
2. Presumptive, confirmed and completed tests for safety of water supplies.
3. Relation of free oxygen to microbial growth, monitoring of dissolved oxygen in various effluents.
4. Determination of COD in Industrial effluents.
5. Effects of antimetabolites on Microbial culture (Inhibition by Sulfanilamide).
6. Determination of Water Activity of various substrates and assay of surface active agents.
7. Turbidimetric/spectrophotometric monitoring of growth using liquid cultures.
8. Efficiency of photosynthesis in photoautotrophs.

Environment, Road Safety Education, Violence against Women/Children and Drug Abuse

SEMESTER II

Instructions :

- The total duration of the whole paper (consisting of four parts) shall be of 2 hours carrying 100 marks in whole, divided into the ration of 40:20:20:20
- The teaching hours for the Environment portion of this paper, would be 20 and of Road Safety, Violence against Women/Children and Drug Abuse shall be 10 hours each.

Part - I (Environment)

Note: *The syllabus has 15 topics to be covered in 20 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.*

1. **Environment Concept :**
Introduction, concept of biosphere—lithosphere, hydrosphere, atmosphere; Natural resources—their need and types; principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. **Atmosphere :**
Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. **Hydrosphere :**
Types of aquatic systems. Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. **Lithosphere :**
Earth crust, Soil—a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. **Forests :**
Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. **Conservation of Environment :**
The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems—soil, water, air, wildlife, forests.

7. **Management of Solid Waste :**
Merits and demerits of different ways of solid waste management—open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. **Indoor Environment :**
Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. **Global Environmental Issues :**
Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. **Indian Laws on Environment :**
Indian laws pertaining to Environmental protection : Environment (Protection) Act, 1986; General information about Laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. **Biodiversity :**
What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. **Noise and Microbial Pollution :**
Pollution due to noise and microbes and their effects.

13. **Human Population and Environment :**
Population growth and family welfare programme, Human Health, HIV/AIDS, Human rights.

14. **Social Issues :**
Environmental Ethics : Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. **Local Environmental Issues :**
Environmental problems in rural and urban areas, Problem of Congress grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practicals:

Depending on the available facility in the college, a visit to Vermicomposting units or any other such non-poluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern :

A qualifying paper of 40 marks comprising of 40 multiple choice questions (with one correct and three incorrect alternatives and no deducation for wrong answer or unattempted question), and of 1 hour duration.

The students have to obtain 33% marks to quality the paper. The marks are not added/included in the final mark sheet.

Part - II (Road Safety Education)

1. Concept and Significance of Road Safety.
2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

- The Environment and Road Safety paper is 60 marks.
- Sixty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong or un-attempted questions).
- The paper shall have two units: **Unit I (Environment) and Unit II (Road Safety).**
- Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10.
- The entire syllabus of Unit II is to be covered in 10 hours.
- All the questions are to be attempted.
- Qualifying Marks 33 per cent
- Duration of examination : 60 minutes
- The paper setter is requested to set the questions strictly according to the syllabus.

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

(a) www.chandigarhpolice.nic.in

(b) www.punjabpolice.gov.in

(c) www.haryanapolice.gov.in

(d) www.hppolice.nic.in

Part - III (Violence against Women / Children)

1. Concept and Types of Violence: Meaning and Definiton of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women:

Dowry Death – Section 304B;
Rape – Sections 375, 376(1), 376(A), 376B, 376C, 376D and 376E;
Cruelty - Section 498A;
Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve- teasing. These are Sections 294, 354 and 509 of Indian Penal Code. Section 509 of the Indian Penal Code defines (Word, gesture or act intended to insult the modesty of a women), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty).
Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;
Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;
Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution- Sections 370 and 370A

3. **Protective Laws for Women:**

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. Protective Provisions of IPC regarding Sexual Violence against Children:

Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305(abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361(kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B (importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 **The Protection of Children from Sexual Offences Act, 2012:** An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

- Unit III of the paper dealing with Violence against Women and Children is of 20 Marks.
- It shall have 20 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions).
- Minimum two questions from each topic must be covered.
- All the questions are to be attempted
- Qualifying Marks 33 percent
- Duration of Examination 30 Minutes
- The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

- The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.
- The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), *Violence against Women*, New Delhi: Rawat Publication
NRHM, *Child Abuse*, A Guidebook for the Media on Sexual Violence against Children
The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).
The Protection of Children from Sexual Offences Act, 2012
The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
UNO, *United Nations Secretary-General's Study on Violence against Children*, adapted for Children and Young People
www.slideshare.net/HRLNIndia/a-life-free-from-violence
http://hrln.rg/admin/issue/subpdf/Sexual_Harrassment_at_Workplace.pdf

UNIT IV (Drug abuse: problem, prevention and management)

1. Problem of drug abuse
   Meaning and concept; types of drugs often misused;antibiotics, steroids and their misuse with suitable examples;habit forming drugs and their effects; drug addiction; drug tolerance and withdrawal symptoms;various signs and symptoms of drug abuse;vulnerable groups (age, gender and socio-economic status)
2. Prevention and management of drug abuse
   Medical treatment through deaddiction center, support of family, media and school education; Government policies, programs and laws to prevent drug abuse.

Instructions to the examiners

1. Unit IV of the paper dealing with Drug abuse would be of 20 marks comprising of twenty multiple choice questions carrying one mark each having four options a, b, c, d with one correct and three incorrect alternatives.
2. The question paper shall be set strictly according to the syllabus uniformly
3. All the questions are to be attempted

Note: The teaching hours for the Unit IV will be 10 hours

Suggested readings

1. Kapoor T (1985) Drug epidemic among Indian Youth. New Delhi: Mittal Pub
2. Modi, Ishwar and Modi, Shalini (1997) Drugs: addiction and prevention, Jaipur: Rawat publications
3. World drug Report 2019, Booklet 1, Executive summary, United Nations Office of drug and crime
4. Bansal R and Kumar A (2020) Drug abuse, addiction and recovery

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) SECOND YEAR
(SEMESTER SYSTEM)
EXAMINATIONS, 2020-2021

(SEMESTER : THIRD AND FOURTH)

i.e

Third Semester : November/December, 2020
Fourth Semester : April/May, 2021

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1.	English (Compulsory) (for B.A. Candidates only)		1
2.	English (Compulsory) (for B.Sc. Candidates only)		5
3.	Panjabi (Compulsory) (for B.A. Candidates only)		9
4.	History and Culture of Punjab (for B.A. Candidates only)		11
5.	English (Elective)		15
6.	Hindi (Elective)		19
7.	Panjabi (Elective)		28
8.	Sanskrit (Elective)/		30
9.	Urdu (Elective)		34
10.	Persian (Elective)		36
11.	French (Elective)		38
12.	German (Elective)		42
13.	Russian (Elective)		44
14.	Arabic (Elective)	(KEPT IN ABEYANCE)	46
15.	Bengali (Elective)	(KEPT IN ABEYANCE)	46
16.	Tamil (Elective)	(KEPT IN ABEYANCE)	46
17.	Kannada (Elective)	(KEPT IN ABEYANCE)	46
18.	Malayalam (Elective)	(KEPT IN ABEYANCE)	46
19.	Telugu (Elective)	(KEPT IN ABEYANCE)	46
20.	Physical Education		47
21.	Education		57
22.	Adult Education		61
23.	Music (Vocal)		69
24.	Music (Instrumental)		75
25.	Music (Tabla)		81
26.	Music (Indian Classical Dance)		85
27.	Fine Arts		89
28.	History of Art		95
29.	Ancient Indian History, Culture & Archaeology		99
30.	Defence and Strategic Studies		103
31.	History		108
32.	Political Science		114
33.	Economics		119
34.	Sociology		123
35.	Public Administration		127
36.	Philosophy		131
37.	Psychology		135
38.	Geography		139
39.	Gandhian Studies		149
40.	Journalism & Mass Communication		155
41.	Police Administration		159
42.	Women's Studies		163
43.	Human Rights and Duties		169
44.	Religious & Sikh Studies		173
45.	Environment Conservation		177
46.	Mathematics		181
47.	Computer Science		187
48.	Statistics		194
49.	Applied Statistics		198
50.	Physics		202
51.	Chemistry		212
52.	Botany		226
53.	Zoology		236
54.	Bio-Chemistry		245
55.	Microbiology		251
56.	Electronics	**(KEPT IN ABEYANCE)**	257
57.	Agriculture		258
58.	Home Science		262
59.	Introduction to Computer Science		268

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) SECOND YEAR (SEMESTER SYSTEM) i.e. THIRD SEMESTER NOVEMBER/DECEMBER 2020 AND FOURTH SEMESTER APRIL/MAY 2021, EXAMINATIONS.

ENGLISH (Compulsory)

SEMESTER – III

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	03 Hours

Objective:

- To teach finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G Damodar, D Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Ode to Autumn

ii. The Road Not Taken

iii. Money Madness

iv. I, Too

Prose Section:

i. Mr. Know All

ii. Film Making

iii. Not Just Oranges

iv. A Tale on Advertising

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section-B

Q.4. Note making (**one** out of **two** is to be attempted) 4 marks
(The examiner will set **two** paragraphs based on the prescribed text for note making. The students be asked to attempt any **one** of the **two**).

Q.5. Grammer:

i. Non finite verbs 5 marks
ii. Punctuation (A short paragraph) 5 marks
iii. Do as directed (based on transformation of sentences) 10 marks

(The examiner will set **three** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities, students have done in the class are adequately covered.)

ENGLISH (Compulsory)

SEMESTER – IV

(FOR B.A. CANDIDATES ONLY)

Max. Marks	:	50
Theory	:	45 marks
Internal Assessment	:	05 marks
Time	:	3 Hours

Objective:

- To Teach Finer nuances of language through an integrated approach.
- To acquire extensive knowledge of English as a language in its various textual forms and to become thoughtful, imaginative and effective communicators in a diverse and changing society.
- To write an effective business document (such as notice, advertisement etc.) which enable them to think analytically.
- To enhance their writing skill.
- To acquire knowledge about various literary aspects through the text which capacitates them to enrich their literary and cultural values.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

English for Empowerment, Eds., G. Damodar, D. Venkateshwarlu, M. Narendra, M. Sarat Babu, G. M. Sunderavalli, Hyderabad: Orient Blackswan, 2009.

Poetry Section:

i. Goodbye Party for Miss Pushpa T.S.

ii. I Will Embrace Only the Sun

iii. Refugee Mother and Child

iv. This is a Photograph of Me

Prose Section:

i. On Shaking Hands

ii. No Man is an Island

iii. Freedom of the Press

iv. An Except From Decolonizing the Mind

TESTING SCHEME:

Section – A

Q.1. Reference to the context from Poetry. **One** out of **two** passages to be attempted. 5 marks

Q.2. Short answer type question from Poetry (in about 50-60 words). **Five** out of **eight** are to be attempted. 10 marks

Q.3. Long answer type questions from Prose (in about 100-120 words). **Two** out of **Four** are to be attempted. 6 marks

Section – B

Q.4. Paragraph writing (based on post-reading activities suggested in the prescribed texts)
One out of **three** is to attempted. 5 marks
(The examiner will set **three** topics for paragraphs writing from the post reading activities suggested in the prescribed texts. While selecting this question, special care must be taken to borrow ideas from the text or suitably modify them so as to identify viable topics that the students of B.A.(compulsory)can easily handle.)

Q.5. Report writing (with internal choice) 4 marks
(The examiner will give information about some social issue, an event/incident, some topic of current affairs etc. and will ask the students to write a report in about 100 words on the given topic. The information can also be given in form of a dialogue on some issue of general interest. The examiner will set this question with an internal choice).

Q.6. Grammer:
i. Using nouns as verbs or vice-versa 5 marks
ii. Combining pairs of sentences using words given in the brackets 5 marks
iii. Text-based Idioms and Phrases 5 marks
(The examiner will set **four** different grammar excercises for every section of Q.5 based on the prescribed text in such a way that most of the activities students have done in the class are adequately covered.)

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ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-III

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 1-4
Drama : Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical work:-

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and one from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here. **5 marks**

Q.5. Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6. One short question to test the students' understanding of various aspects of Business Communication.

5 marks

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ENGLISH (Compulsory)
(FOR B.Sc. CANDIDATES ONLY)

SEMESTER-IV

Note:

(i) There will be one paper of 40 marks, 5 marks are reserved for the Internal Assessment and 5 for the Practical Work. Total is 50.

(ii) The paper shall consist of Two Units. Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression,** Ed. A. H. Tak, Foundation Books. Only four prose chapters and two dramas have been recommended for the study. The relevant sections, however, are as follows:

Unit I

Prose : Chapters 5-8
Drama : Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Writing Skills: This section shall focus on précis-writing, curriculum vitae, short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations.Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication. How to Prepare for an Interview & Group Discussion etc.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

(Note*: In case of private candidates and students of University School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1. It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which a student will be expected to attempt any four, **Two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems.

10 marks

Q.2. It shall consist of four long questions – **Two** from **Prose** and **two** from **Drama** (not exceeding 100-150 words) out of which a student will be expected to attempt **two**- one from Prose and **one** from Drama.

5 marks

Note: The question 1 & 2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

Unit II

Q.4. Short Survey Report (150-200 words) with internal choice. **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6. Definition/Format of modern forms of communication to be tested.
(e-mail, fax, videoconferencing) **5 marks**

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ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਬਾਰੇ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਚਿੱਠੀ ਪੱਤਰ	8 ਅੰਕ
3.	ਪੰਜਾਬੀ ਭਾਸ਼ਾ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਪੰਜ-ਆਬ, (ਸੰਪਾ.) ਪ੍ਰੋ. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ)	‘ਪੰਜ -ਆਬ’ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ)	4+6=10 ਅੰਕ
	(ਅ)	ਨਿਬੰਧਾਂ ਦੀ ਪੁਸਤਕ ਵਿਚ ਆਏ ਸਭਿਆਚਾਰਕ ਸੰਕਲਪਾਂ (ਇਸ਼ਟ, ਅਖਾਣ, ਲੋਕਗੀਤ, ਵਿਰਾਸਤੀ ਖੇਡਾਂ, ਲੋਕ ਵਿਸ਼ਵਾਸ, ਮੇਲੇ, ਤਿਉਹਾਰ, ਗਿੱਧਾ, ਲੋਕ ਚਿਕਿਤਸਾ ਤੇ ਲੋਕਧਾਰਾ) ਬਾਰੇ ਪ੍ਰਸ਼ਨ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	5 ਅੰਕ
2.		‘ਪੰਜ-ਆਬ’ ਪੁਸਤਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਵਿਚੋਂ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	1 x 5= 5 ਅੰਕ
3.		ਚਿੱਠੀ ਪੱਤਰ (ਦਫ਼ਤਰੀ, ਵਪਾਰਕ, ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਮਸਲਿਆਂ ਬਾਰੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ) (ਦੋ ਵਿਚੋਂ ਇਕ)	8 ਅੰਕ
4.		ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਜਨਮ , ਵਿਕਾਸ ਤੇ ਵਰਤਮਾਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	7 ਅੰਕ
5.		ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	6 ਅੰਕ
	(i)	ਸ਼ਬਦ ਤੇ ਸ਼ਬਦ ਰਚਨਾ:ਪਰਿਭਾਸ਼ਾ ਤੇ ਵਰਗੀਕਰਨ, ਭਾਵੰਸ਼: ਬੰਦ ਤੇ ਖੁੱਲ੍ਹੇ ਭਾਵੰਸ਼, ਧਾਤੂ ਤੇ ਵਧੇਤਰ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)	
	(ii)	ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ	2+2= 4 ਅੰਕ
		ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ। (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫਤੇ ਦੇ 6+3 = 9 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

(ਸਿਰਫ਼ ਬੀ.ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਇਕਾਂਗੀ ਤੇ ਨਾਟਕ	20 ਅੰਕ
2.	ਪੈਰ੍ਹੇ ਦਾ ਅਨੁਵਾਦ (ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ)	8 ਅੰਕ
3.	ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਛੇ ਛੱਲਾਂ (ਸੰਪਾ.) ਡਾ.ਆਤਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਕੱਲਰ, ਸਵਰਾਜਬੀਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ)	‘ਛੇ ਛੱਲਾਂ’ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	4+6 =10 ਅੰਕ
	(ਅ)	‘ਛੇ ਛੱਲਾਂ’ ਤੇ ‘ਕੱਲਰ’ ਨਾਟਕ ਵਿਚੋਂ ਪਾਤਰ ਚਿਤਰਨ ਕਰਨਾ (ਤਿੰਨ ਵਿਚੋਂ ਇਕ)	5 ਅੰਕ
2.		ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠਾਂ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ ਕਰਨੇ)	1 x 5=5 ਅੰਕ
3.		ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ (ਲਗਭਗ 100 ਸ਼ਬਦਾਂ ਵਿਚ)	8 ਅੰਕ
4.		ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ	7 ਅੰਕ
		ਨੋਟ: ਉਪਭਾਸ਼ਾਵਾਂ ਉਪਰ ਸਵਾਲ ਸਿਰਫ ਪੂਰਬੀ ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ (ਮਾਝੀ, ਮਲਵਈ, ਦੁਆਬੀ ਤੇ ਪੁਆਧੀ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਪੁੱਛਿਆ ਜਾਵੇ। (ਦੋ ਵਿਚੋਂ ਇਕ)	
5.		ਵਿਆਕਰਨ :ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	6 ਅੰਕ
	(i)	ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਕੋਸ਼ਗਤ ਤੇ ਵਿਆਕਰਨਕ ਸ਼ਬਦ, ਵਿਕਾਰੀ ਤੇ ਅਵਿਕਾਰੀ ਸ਼ਬਦ, ਸਧਾਰਨ,ਸਮਾਸੀ ਤੇ ਮਿਸ਼ਰਤ, ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨੇਮ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ)	
	(ii)	ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ	2+2= 4 ਅੰਕ
		ਨੋਟ: ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ ਤੇ ਹੀ ਸੰਖੇਪ ਰੂਪ ਵਿਚ ਪੁੱਛੇ ਜਾਣ।(ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981.
3. ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ ਅਤੇ ਹੋਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਭਾਗ-ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997.
4. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ , ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
5. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.) ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ , ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002.
6. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ , ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ, 2008.
7. ਜੱਸਲ ਕਵਲਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ , ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ, ਅੰਮ੍ਰਿਤਸਰ, 2012.
8. ਮਨਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋਂ ਤੇ ਬਣਤਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਨੋਟ:
1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ।
3. ਹਫ਼ਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ।

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HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)

SEMESTER-III

Objectives: To introduce the students to the history of the history of the region during medieval times.
Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER III AND IV)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. **One question from Unit-IV shall be set on the map.**

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 06 places on map of 01 marks each and write explanatory note on any 02 of 02 marks each.

3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: HISTORY AND CULTURE OF PUNJAB 1200-C- 1700 A.D

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Unit-I

Society and Culture in Punjab during the Turko-Afghan rule
The Punjab under the Great Mughals
Guru Nanak : His teachings, concept of Langar and Sangat.

Unit-II

Salient features of the Bhakti movement
Main Features of Sufism in Punjab.
Development of Sikhism (1539-1581): Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das for the development of Sikhism

Unit III

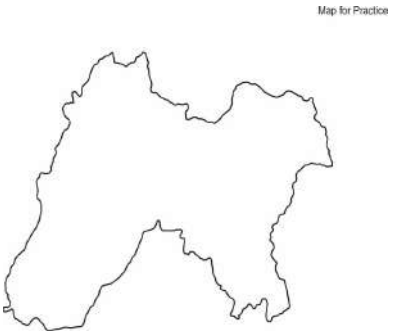
Transformation of Sikhism : Compilation of Adi-Granth; Martyrdom of Guru Arjan Dev
Guru Hargobind's New policy
Martyrdom of Guru Tegh Bahadur

Unit IV

Foundation of the Khalsa
Post Khalsa activities of Guru Gobind Singh

MAP: Important Historical Places Delhi;Lahore;Sarhind; Multan;Kartarpur;Amritsar;Kiratpur;Tarn Taran; Anandpur Sahib; Fatehgarh Sahib; Paonta Sahib;Machhiwara;Muktsar.

Specimen Map for Examination:



Suggested Readings:

1. Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

2. Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.
3. Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.
4. Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.
5. Chopra, P.N., Puri, B.N., and Das, M.N. : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.
6. Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

HISTORY AND CULTURE OF PUNJAB

(For B.A. candidates only)
SEMESTER-IV

Objectives: To introduce the students to the history of the history of the region in the later medieval period.

Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER IN SEMESTER III AND IV)

The syllabus has been divided into four Units.
There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (2) in the question paper.
One question from Unit-IV shall be set on the map.
Explanation:

Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 06 places on map of 01 marks each and write explanatory note on any 02 of 02 marks each.

The paper-setter would avoid repetition between different types of question within one question paper.

Paper: HISTORY AND CULTURE OF PUNJAB 18TH AND EARLY 19TH CENTURIES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

UNIT I

Banda Bahadur and his achievements
Sikh Struggle for Sovereignity from 1716-1765
Role of Dal Khalsa, Rakhi, Gurmata and Misls

UNIT- II

Ranjit Singh's rise to Power
Civil and Military administration
Relations with the British

UNIT-III

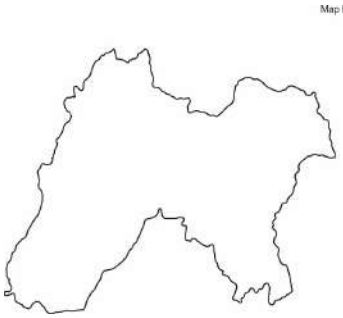
Political Developments 1839-1845
Anglo-Sikh Wars
Annexation of the Punjab

UNIT-IV

New Developments in literature,art and architecture in the Punjab region
Social life with special reference to the position of women, fairs, festivals, folk music, dance and games in the Punjab.

MAP: Important Historical Places Lohgarh; Sarhind; Gujranwala; Lahore; Amritsar; Multan; Peshawar;Sialkot; Ferozepore; Ambala; Gujrat; Mudki; Ludhiana

Specimen Map for Examination:



Suggested Readings :

Singh, Kirpal : *History and Culture of the Punjab,* Part II (Medieval Period), Publication Bureau, Punjabi University, Patiala, 1990 (3rd edn.).

N.B. : The required detail and depth would conform to the treatment of the subject in the above survey. (This book will also form the basis of the short answer questions).

Singh, Fauja (ed.) : *History of the Punjab*, Vol. III, Punjabi University, Patiala, 1972.

Grewal, J.S. : *The Sikhs of the Punjab,* The New Cambridge History of India, Orient Longman, Hyderabad, 1990.

Singh, Khushwant : *A History of the Sikhs*, Vol. I : 1469-1839, Oxford University Press, Delhi, 1991.

Chopra, P.N., Puri, B.N., and Das, M.N : *A Social, Cultural & Economic History of India*, Vol. II, Macmillan, Delhi, 1974.

Hussain, Yusuf : *Glimpses of Medieval Indian Culture,* Asia Publishing House, Bombay, 1973 (rep.).

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ENGLISH (Elective)

SEMESTER-III

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower an average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

William Shakespeare: *The Merchant of Venice*

LITERARY TERMS:

Drama, Myth of Dionysus, Liturgical Drama, Miracle Plays, Mystery Plays, Interlude, Mimesis, Catharsis, Tragic Hero, Organic Unity, Revenge Tragedy, Poetic Drama, Verse Drama, Myth & Drama, Ritual & Drama, Yaksgana, Theory, Indian Theory of Drama, Puppetry, Ardhnarishwra.

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks
2. Reference to the Context from the prescribed play. 15 marks
   (*The examiner will set three passages/stanzas from the prescribed play. The students will attempt any two out of these three.*)
3. Long answer type question in about 300-350 words form the prescribed text. One out of two is to be attempted. 15 marks

Section - B

4. Dialogue writing
(*The examiner will set one descriptive passage of about 300-400 words and ask the students to re-write the same in dialogue form. The examiner, however, must ensure that the passage can easily be converted into dialogue form.*) 10 marks

5. Identifying figures of speech in sentences (unseen):
Simile, Metaphor, Alliteration, Assonance. 10 marks
(*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Idioms and Phrases 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
(The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

ENGLISH (Elective)

SEMESTER IV

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10
Time Allowed	:	3 hrs

Objectives:

- To provide critically sensitive and analytical understanding of literary terms, concepts and genres to the students to develop their ability to appreciate and analyze different lliterary texts.
- To empower the students to read, analyze and write about a text in an independent manner.
- To enhance students ability to use grammatical conventions appropriately.
- To sharpen their writing skills to write clearly, coherently and cohesively.
- To enable the students to explore, discuss and express their views on various topics.
- To motivate the students to develop basic tools of analyzing a variety of literary texts.
- To enable them to have a comprehensive knowledge of English language and literature.
- To empower average student in such a way that English learning becomes a pleasurable endeavour.

TEXT PRESCRIBED:

An Anthology of English Verse
Ed. Department of English, Deen Dayal Upadhayaya, Gorakhpur University. New Delhi: OUP, 2004

Prescribed poems:

i. John Donne: *The Sun Rising*
ii. Alexander Pope: *From Essay on Man*
iii. Thomas Gray: *Elegy Written in the Country Churchyard*
iv. William Blake: *The Tiger*
v. William Wordsworth: *Tintern Abbey*
vi. John Keats: *Ode to a Nightingale*
vii. Tennyson: *Ulysses*
viii. Browning: *My Last Duchess*
ix. Matthew Arnold: *To Marguerite*
x. Hopkins: *Pied Beauty*
xi. A. K. Ramanujan: *History*
xii. W.B. Yeats: *A Prayer for my Daughter*
xiii. T.S. Eliot: *Journey of the Magi*
xiv. Thomas Hardy: *The Darkling Thrush*
xv. Philip Larkin: *The Trees*

LITERARY TERMS:

Allegory, Allusion, Antithesis, Epic, Epithet, Hyperbole, Internal Rhyme, Rhyme Royal, Terza Rima Metaphor, Metonymy, Medias Res, Oxymoron, Mood, Tone, Personification, Stanza, Spenserian Stanza, Satire, Free paragraph

TESTING SCHEME:

Section-A

1. Five literary terms out of eight are to be attempted in about 50-60 words. 15 marks

2. Short answer type question in about 50-60 words from the prescribed text. Five out of seven are to be attempted. 15 marks

3. Long answer type of questions in about 100-120 words from the prescribed text. Three out of five are to be attempted. 15 marks

Section – B

4. Precis Writing 10 marks

5. Identifying figures of speech in sentences (unseen)
   Metonymy, Epithet, Oxymoron, Epigram, Metonymy 10 marks
   (*The examiner will set ten different lines with an instruction to identify the figure(s) of speech in each sentence. The sentences should be examples of different figures of speech as mentioned above. The students are required to answer all. There will be no choice.*)

6. Grammar:

   i. Choose the correct meaning of the word 5 marks
   ii. Complete the incomplete sentences 5 marks
   iii. One word substitution 5 marks

7. Comprehension (Unseen passage of about 1000 words) 10 marks
   (The examiner will set an unseen passage of about 1000 word for comprehension. The passage will be followed by 5 questions to be answered in not more than 20-30 words each.)

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हिन्दी (ऐच्छिक द्वितीय वर्ष)
सेमेस्टर–3

पूर्णांक : 90+10=100

समय : 3 घण्टे

1. **तरंगिणी– मनोहर लाल आनन्द, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो, चण्डीगढ़।**
निम्नलिखित कवि पाठ्यक्रम में निध रित है:–
मैथिलीशरण गुप्त, जयशंकर प्रसाद, सूर्यकान्त त्रिपाठी निराला, सुमित्रानन्दन पन्त

   क) 5–5 अंकों की दो सन्दर्भ–सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाऐंगी। अंक–10

   ख) कवि–परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जायेंगे। 8 अंकों का एक ही प्रश्न करना होगा। प्रत्येक उत्तर की शब्द सीमा 200 होगी। अंक–08

2. **एक सत्य हरिश्चन्द्र– डॉ0 लक्ष्मीनारायण लाल, राजपाल एण्ड सन्ज, नई दिल्ली।**

   क) संदर्भ सहित व्याख्या के लिए दो प्रश्न पूछे जाएँगे; उत्तर एक का ही देना होगा। अंक–05

   ख) पात्रों के चरित्र–चित्रण, तत्वों के आधार पर नाटक की समीक्षा तथा समस्या संबंधी दो प्रश्न पूछे जायेंगें। 8 अंकों का एक ही प्रश्न करना होगा। (शब्द–सीमा 200) अंक–08

3. **इस खण्ड में 3–3 अंकों के तीन लघुत्तरी प्रश्नों के उत्तर देने होंगे। कुल 6 प्रश्न पूछे जायेंगे। ये प्रश्न इस पत्र के पूर्वोक्त दो खण्डों (तरंगिणी व एक सत्य हरिश्चन्द्र) पर आधारित होंगे। (शब्द–सीमा 50) अंक–09**

4. **हिन्दी साहित्य का इतिहास– रीतिकाल : (केवल काव्य–खंड) अंक–08**
रीतिकाल की परिस्थितियाँ, नामकरण, सीमा–निर्धारण, प्रवृतियाँ रीतिबद्ध और रीतिमुक्त काव्य की प्रमुख विशेषताएँ, प्रमुख कवि– केशव, बिहारी, घनानंद, के संबंध में 8 अंकों का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगें। (शब्द–सीमा 200–250)

5. **वस्तुनिष्ठ प्रश्न** **अंक–10**

इस पत्र के पूर्वोक्त तीनों खण्डों के आधर पर 1–1 अंक के दस वस्तुनिष्ठ प्रश्नों के उत्तर देने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

6. **समीक्षा सिद्धान्त– केवल 'नाटक'** **अंक–07**

परिभाषा, तत्व और वर्गीकरण पर आधरित नाटक से संबंध्ति दो प्रश्न पूछे जायेंगे। जिनमें से 7 अंकों का एक प्रश्न करना होगा। (शब्द सीमा 200)

7. **व्यावहारिक व्याकरण–** **अंक–15**

क)	**समाकृति, भिन्नार्थक शब्द–युग्म**	**3)**	**(चार में से तीन)**
ख)	**स्वर–सन्धि एवं व्यंजन–संधि**	**3)**	
ग)	**सन्धि–विच्छेद(केवल व्यावहारिक)**	**3)**	**(चार में से तीन)**
घ)	**वाक्य–शोध्न**	**3)**	**(चार में से तीन)**
ड.)	**विराम–चिह्न**	**3)**	

8. **तकनीकी शब्दावली (केवल प्रशासकीय शब्दावली)** **अंक–10**

(सलंग्न शब्दावली)

15 में से 10 का उत्तर देना होगा।

आंतरिक मूल्यांकन– **अंक–10**

निर्देश :–छह लेक्चर Text **के और तीन लेक्चर व्याकरण के अनिवार्य होंगे।**

प्रशासनिक शब्दावली

1.	Acceptance	**स्वीकृति**
2.	Account	**लेखा, खाता, हिसाब**
3.	Accuse	**अभियोग लगाना**
4.	Acknowledge (fact etc.)	**अभिस्वीकार करना, मानना कबूल करना**
5.	Acknowledgement due	**रसीद, पावती सहित**
6.	Addressee	**पाने वाला**
7.	Adjournment	**स्थगन**
8.	Administration	**प्रशासन**

9.	Admissible	ग्राह्य, स्वीकार्य
10.	Affidavit	शपथ लेना, हलफनामा
11.	Agent	अभिकर्ता, एजेन्ट
12.	Agitation	आन्दोलन
13.	Agreement	करार, अनुबंध,सहमति
14.	Allowance	भत्ता
15.	Amenity	सुख-सुविधा
16.	Anti-Corruption Officer	भ्रष्टाचार निरोध अध्किारी
17.	Appeal	अपील, अपील करना
18.	Appointment	नियुक्ति
19.	Appoint	नियुक्ति करना
20.	Approval	अनुमोदन
21.	Article	अनुच्छेद, नियम,वस्तु
22.	Association	संघ, समाज, संगम
23.	At Par	सममूल्य पर
24.	Attendant	परिचर
25.	Attestation	साक्ष्यांकन, अनुप्रमाणन
26.	Audit	लेखा परीक्षा
27.	Ballot Paper	मतपत्र, मतपर्ची
28.	Ban	प्रतिबंध, रोक, पाबंदी
29.	Bonafide	सद्भावी, वास्तविक, असली
30.	Book –Fair	पुस्तक मेला
31.	Bureau	कार्यालय, ब्यूरो
32.	Cabinet	मंत्री मंडल
33.	Candidate	अभ्य ार्थी, प्रार्थी, उम्मीदवार
34.	Care-taker	रखवाला, अवधायक
35.	Cashier	रोकड़िया
36.	Censure	निंदा प्रस्ताव, परिनिंदा
37.	Certificate of Medical Fitness	आरोग्य प्रमाण-पत्र
38.	Character Certificate	चरित्र प्रमाण-पत्र
39.	Charge Sheet	आरोप पत्र, फर्द, जुर्म
40.	Circular	परिपत्र, गशती-चिट्ठी
41.	Circulation of Traffic	यातायात परिचालन
42.	Circus	क्रीड़ा रंग, रंगमंडप
43.	Citation	प्रशास्ति, उद्धरण, अनुलेखन
44.	City Booking Office	नगर टिकट घर, नगर बुकिंग-कार्यालय

45.	City Compensatory Allowance	नगर भत्ता
46.	Civil	नागरिक
47.	Civil Pole	नगर निर्वाचन
48.	Civil Sense	नागरिक भावना
49.	Civil-air-craft	असैनिक वायुयान
50.	Claimant	दावेदार, दावी
51.	Collector	समाहर्ता, संग्रहक, संकलनकर्ता,कलेक्टर
52.	Colony	बस्ती, उपनिवेश
53.	Colosal	विशाल, वृहत्काय
54.	Colour Blindness	वर्णान्धता
55.	Communique	विज्ञप्ति
56.	Complaint	शिकायत
57.	Complementary	पूरक
58.	Completion Report	समापन रिपोर्ट
59.	Certified Copy	प्रमाणित प्रतिलिपि
60.	Complementary Copy	उपहार प्रति,मानार्थ प्रति
61.	Composite	मिला जुला, सम्मिश्रण संशिष्ट
62.	Comprehension	व्यापक कार्य बोध
63.	Contingencies	आकस्मिक व्यय
64.	Contractor	ठेकदार, संविदाकार
65.	Confiscate	जब्त करना, अधिहरण करना
66.	Corporation	निगम
67.	Custody	अभिरक्षा
68.	Decorum	शिष्टता, शालीनता
69.	Defacto	वस्तुतः
70.	Defaulter	त्रुटिकारी, चूक करने वाला,बाकीदार
71.	Defendant	प्रतिवादी
72.	Depreciation Charge	मूल्यह्रास प्रभार,अवक्षय प्रभार
73.	Design	अभिकल्प, अभिकल्पना,रूपांकन, डिज़ाइन
74.	Dispatch	प्रेषण,रवानगी, प्रेषित करना, रवाना करना
75.	Dignitary	उच्च पदधरी, महिमान्वित
76.	Director	निदेशक
77.	Disbursement	संवितरण
78.	Discipline	अनुशासन
79.	Discrepancy	विसंगति, गलती
80.	Discretion	विवेक, विवेकाधिकार

81.	Dissent	विसम्मति, असहमति
82.	Disqualified	अयोग्य
83.	Division	विभाजन, मंडल, श्रेणी, प्रभाग, डिवीजन
84.	Eligible	पात्रता, प्राप्त,पात्र
85.	Emergency	आपात, आपात्-स्थिति, आपतिक
86.	Emigrant	उत्प्रवासी
87.	Employment	रोजगार, नौकरी, नियोजन
88.	Employment Exchange	रोजगार कार्यालय, रोजगार दफतर
89.	Employment Officer	रोजगार अधि कारी
90.	Enquiry	पूछताछ,जाँच
91.	Enrolment Number	नामांकन संख्या
92.	Enrolled	नामांकित
93.	Evacuee	निष्क्रान्त
94.	Executive Engineer	कार्यपालक अभियन्ता, कार्यपाल इंजीनियर
95.	Faculty	संकाय
96.	Finance	वित्त, रूपया लगाना
97.	Gazetted Officer	राजपत्रित अधिकारी
98.	Gazetteer	राजविवरणिका
99.	Gazetted post	राजपत्रित पद
100.	Grant	अनुदान, स्वीकार करना
101.	Incentive	प्रोत्साहन
102.	Index	सूचक, अनुक्रमणी
103.	Initials	आद्यक्षर
104.	Insured Letter	बीमा किया हुआ पत्रा
105.	Interim	अन्तरिम
106.	Intelligence	गुप्तवार्ता, आसूचना
107.	Intelligentia	प्रबुद्ध वर्ग, बुद्धिजीवी वर्ग
108.	Intensive reading	गहन पठन
109.	Intention	अभिप्राय, आशय
110.	Judgment	निर्णय
111.	Jurisdiction	अधिकार- क्षेत्र
112.	Ledger	खाता
113.	Lessee	पट्टेदार
114.	Liaision Officer	संपर्क अधिकारी
115.	Maintenance	अनुरक्षण, भरण-पोषण, रख-रखाव
116.	Major	व्यस्क, बालिग, मेजर,प्राप्तत्य

117.	Manager	प्रबंधक, व्यवस्थापक, मैनेजर
118.	Minor	अवस्यक, नाबालिग, अप्राप्तव्य
119.	Monopoly	एकाधिकारी, एकाधिपत्य
120.	Motion	प्रस्ताव
121.	Nationalization	राष्ट्रीयकरण
122.	Negotiation	संधिवार्ता, समझौते की बातचीत
123.	Note of Dissent	विसन्मति लेख, असहमति लेख
124.	Notification	अधिसूचना
125.	Oath Commissioner	शपथ आयुक्त
126.	Offender	अपराधी
127.	Permissible	अनुभेय, अनुज्ञेय,क्षम्य
128.	Planning Commission	योजना आयोग
129.	Precedence	पूर्वता, अग्रता
130.	Procedure	कार्यविधि
131.	Public	सार्वजनिक,आम,सरकारी,लोक
132.	Quorum	गणपूर्ति, कोरम
133.	Receipt	पावती, प्राप्ति रसीद
134.	Recruitment	भर्ती
135.	Receiver	पानेवाला
136.	Reminder	स्मरण–पत्र
137.	Representative	प्रतिनिधि
138.	Senior	वरिष्ठ, ज्येष्ठ
139.	Sine die	अनिश्चित काल के लिए
140.	Statutory	कानुनी, विधिक,संविधिक
141.	Stenographer	आशुलिपिक
142.	Subordinate	अधीन, अधीनस्थ
143.	Tender	निविदा,टेंडर
144.	Transfer	बदली, स्थानांतरण, अंतरण
145.	Treasurer	कोषपाल
146.	Unofficial	अशासकीय
147.	Vacancy	रिक्ति
148.	Vigilance Officer	सतर्कता अधिकारी, निगरानी अधिकारी
149.	Warrant	अधिपत्र, वारंट

हिन्दी (ऐच्छिक द्वितीय वर्ष)

सेमेस्टर–4

पूर्णांक : 90+10=100

समय : 3 घण्टे

1. तरंगिणी–मनोहर लाल आनन्द, पंजाब विश्व विद्यालय, पब्लिकेशन ब्यूरो, चण्डीगढ़ से प्रकाशित निम्न कवि पाठ्यक्रम में निधरित हैः–
महादेवी वर्मा, अज्ञेय, धर्मवीर भारती।

   क) 5–5 अंकों की दो संदर्भ सहित व्याख्याएँ करनी होगी। कुल चार व्याख्याएँ पूछी जाएंगी। अंक–10

   ख) कवि परिचय, सार और उद्देश्य संबंधी कुल दो प्रश्न पूछे जाएंगे। 8 अंको का एक प्रश्न करना होगा। उत्तर सीमा 200 शब्दों की होगी। अंक–08

2. आदर्श एकांकी संग्रह – सं. डॉ0 संसार चन्द्र, पंजाब विश्व विद्यालय पब्लिकेशन ब्यूरो चण्डीगढ़ द्वारा प्रकाशित

   क) एकांकी के तत्वों के आधार पर समीक्षात्मक प्रश्न (सार–लेखन, चरित्र–चित्रण, उद्देश्य संबंधी) दो प्रश्न पूछे जायेंगे। 8 अंकों का एक प्रश्न करना होगा। अंक–08

   ख) संदर्भ सहित व्याख्या नहीं पूछी जाएगी।

3. हिन्दी साहित्य का इतिहास : आधुनिक काल (केवल काव्य–खण्ड)
आधुनिक काल के भारतेन्दु–युग, द्विवेदी युग,छायावाद, प्रगतिवाद, प्रयोगवाद और नई कविता की केवल प्रमुख प्रवृतियों से संबंधित 10 अंको का एक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएँगें। (शब्द सीमा–सीमा 250) अंक–10

4. वस्तुनिष्ठ प्रश्न अंक–10
इस पत्रा के पूर्वोक्त तीन खण्डों के आधार पर एक–एक अंक के दस वस्तुनिष्ठ प्रश्न करने होंगे। कुल पन्द्रह प्रश्न पूछे जाएँगें।

5.	**संलग्न 50 टिप्पणियों का अभ्यास :** **पूछी गई दस टिप्पणियों में से पाँच का उत्तर देना होगा।**	**अंक–10**
6.	**समीक्षा सिद्धान्त : केवल 'एंकाकी'** **एकांकी के तत्व, परिभाषा और वर्गीकरण से संबंधित दो प्रश्न पूछे जाएँगें। 10 अंको का केवल एक प्रश्न करना होगा।** **शब्द–सीमा 250)**	**अंक–10**
7.	**सार लेखन**	**अंक–8**
8.	**शासकीय पत्र लेखन (दो में से एक)**	**अंक–8**
9.	**विस्तारण**	**अंक–8**
	आंतरिक मूल्यांकन	**अंक–10**

निर्देश : 6 लेक्चर Text **के और 3 लेक्चर व्याकरण के अनिवार्य होंगे।**

50 टिप्पणियाँ

1.	A brief note is placed below	**संक्षिप्त टिप्पणी नीचे प्रस्तुत है ।**
2.	Acknowledge receipt of this	**इसकी पावती भेजिए ।**
3.	Action as proposed may be taken	**यथा प्रस्तावित कार्यवाही की जाए।**
4.	Agenda of the meeting is put up	**बैठक की कार्यसूची प्रस्तुत है ।**
5.	Application may be rejected	**आवेदन अस्वीकार कर दिया जाए ।**
6.	Approved as proposed	**प्रस्ताव के अनुसार अनुमोदित**
7.	Administrative approval may be obtained	**प्रशासनिक अनुमोदन प्राप्त किया जाए ।**
8.	Await reply	**उत्तर की प्रतीक्षा करें ।**
9.	Await further report	**और विवरण की प्रतीक्षा करें ।**
10.	Ascertain this position please	**कृपया स्थिति का पता लगायें ।**
11.	Amended draft is submitted for approval	**संशोधित प्रारूप अवलोकनार्थ प्रस्तुत हैं ।**
12.	Brief resume of the case is given below	**मामले का संक्षिप्त सार नीचे दिया गया है।**
13.	Call for explanation	**स्पष्टीकरण माँगे**
14.	Call for report	**रिपोर्ट मँगवाए ।**
15.	Comply with the orders	**आदेशों का पालन करें ।**
16.	Clarify the position please	**कृपया स्थिति का स्पष्ट करें ।**
17-	Copy enclosed for ready reference	**सुलभ संदर्भ के लिए प्रतिलिपि संलग्न है ।**
18.	Copy is enclosed	**प्रतिलिपि संलग्न है ।**

19.	Copy forwarded for information and Necessary action	प्रतिलिपि सूचनार्थ एवं आवश्यक कार्यवाही के लिए प्रषित है ।
20.	Case may be kept pending	मामले को अभी अनिर्णीत रखा जाए ।
21.	Delay should be avoided	विलम्ब न किया जाए।
22.	Disciplinary proceedings may be initiated	आनुशासनिक कार्यवाही शुरू की जाए ।
23.	Draft reply is put up	उत्तर का मसौदा प्रस्तुत है
24.	Enquiry may be conducted	जाँच की जाएं
25.	Expedite action	शीघ्र कार्यवाही करें ।
26.	Explanation may be called for	स्पष्टीकरण माँगा जाए ।
27.	Facts for the case may be put up	मामलों के तथ्य प्रस्तुत करें ।
28.	For perusal and return	देखकर लौटाने के लिए
29.	For comments please	कृपया टिप्पणी दें ।
30.	For sympathetic consideration	सहानुभुतिपूर्ण विचार के लिए।
31.	Forwarded and recommended	प्रेषित और संस्तुत।
32.	I concur with the proposal	मैं इस प्रस्ताव से अपनी सहमति प्रकट करता हूँ।
33.	I have no remarks to offer	मुझे कोई टिप्पणी नहीं करनी हैं ।
34.	Inform all concerned	सभी संबंधित व्यक्तियों को सूचित करें ।
35.	Issue a circular	परिपत्र जारी करें ।
36.	Keep pending	निर्णय के लिए रोक रखें ।
37.	Kindly accord sanction	कृपया स्वीकृति दीजिए ।
38.	Kindly confirm	कृपया पुष्टि करें।
39.	Matter is under consideration	मामला विचाराधीन है ।
40.	No action is necessary	कोई कार्यवाही अपेक्षित नहीं है
41.	Needful has been done	आवश्यक कार्यवाही की गई है ।
42.	Order may be issued	आदेश जारी किया जाए ।
43.	Please see the proceeding notes	कृपया पिछली टिप्पणियाँ देख लें ।
44.	Put up the relevant papers	संबधित कागज प्रस्तुत करें ।
45.	Reminder may be sent	अनुस्मारक भेजा जाए ।
46.	Report compliance immediately	अनुपालन करके तुरन्त सूचित करें ।
47.	Specific reason may be given	विशिष्ट कारण दिया जाए ।
48.	Submitted for information	सूचना के लिए प्रस्तुत है ।
49.	This may be treated as confident	इसे गोपनीय समझा जाए ।
50.	Verified and found correct	जाँचा और सही पाया ।

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ) ਭਾਗ ਦੂਜਾ, ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਤੀਜਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ — 25 ਅੰਕ
2. ਸਫ਼ਰਨਾਮੇ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
(ਨਿਰਧਾਰਤ ਕਵੀ: ਬਾਬਾ ਵਜੀਦ, ਅਲੀ ਹੈਦਰ, ਸੱਯਦ ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਸੱਯਦ ਵਾਰਿਸ ਸ਼ਾਹ, ਨਜਾਬਤ ਅਤੇ ਪੀਰ ਮੁਹੰਮਦ)
2. **ਦੁਨੀਆ ਇਕ ਮਹਿਲ ਹੈ,** ਗੁਰਬਖ਼ਸ਼ ਸਿੰਘ ਕਪੂਰ, ਕਸਤੂਰੀ ਲਾਲ ਐਂਡ ਸੰਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) "ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ" ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ -ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) "**ਦੁਨੀਆ ਇਕ ਮਹਿਲ ਹੈ**" ਸਫ਼ਰਨਾਮਾ ਪੁਸਤਕ ਦੇ ਆਧਾਰ ਉੱਤੇ ਪ੍ਰਮੁੱਖ ਥਾਵਾਂ ਤੇ ਘਟਨਾਵਾਂ ਦੇ ਵੇਰਵੇ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) **ਸਫ਼ਰਨਾਮੇ ਦੀ ਸਾਹਿਤਕ ਪਰਖ** (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਸਫ਼ਰਨਾਮੇ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
(ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ: ਤੱਕ ਸੂਫ਼ੀ ਕਾਵਿ-ਧਾਰਾ ਤੇ ਕਿੱਸਾ - ਕਾਵਿ ਧਾਰਾ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਚਾਰ - ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5 x 4=20 ਅੰਕ
5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ), ਰਸ ਸੰਪ੍ਰਦਾਇ, ਵਕ੍ਰੋਕਤੀ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ: ਟਕਸਾਲੀ ਭਾਸ਼ਾ, ਵਿਅਕਤੀ ਭਾਸ਼ਾ, ਅਪਭਾਸ਼ਾ, ਗੁਪਤ ਭਾਸ਼ਾ, ਰਜਿਸਟਰ, ਪਿਜ਼ਨ ਤੇ ਕ੍ਰਿਓਲ (ਚਾਰ ਵਿਚੋਂ ਦੋ) — 10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ 6 + 6 = 12 ਪੀਰੀਅਡ।

ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)
ਬੀ.ਏ. (ਜਨਰਲ) ਭਾਗ ਦੂਜਾ, ਅਪ੍ਰੈਲ/ ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੈਸਟਰ ਚੌਥਾ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲ ਦੀ ਚੋਣਵੀਂ ਕਵਿਤਾ — 25 ਅੰਕ
2. ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਤੋਂ 1900 ਤੱਕ) — 20 ਅੰਕ
4. ਸਾਹਿਤ ਆਲੋਚਨਾ — 10 ਅੰਕ
5. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ (ਸੰਪਾ.) ਡਾ. ਧਰਮ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਹਾਸ਼ਮ ਸ਼ਾਹ, ਕਵੀ ਸੌਂਧਾ, ਕਾਦਰਯਾਰ, ਸ਼ਾਹ ਮੁਹੰਮਦ ਅਤੇ ਭਗਵਾਨ ਸਿੰਘ)
2. ਕਥਾ -ਪ੍ਰਵਾਹ (ਸੰਪਾ.) ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਸੁਗੰਧੀਆਂ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਿਰਧਾਰਤ ਕਾਵਿ-ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ- ਬੰਦ ਦੀ ਵਿਹਾਰਕ ਸਮੀਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਕਥਾ-ਪ੍ਰਵਾਹ ਪੁਸਤਕ ਵਿਚੋਂ ਘਟਨਾਵਾਂ , ਥੀਮ, ਪਾਤਰ ਚਿਤਰਨ ਤੇ ਕਥਾ ਜੁਗਤਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਹਾਣੀ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2 x 5=10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701 ਈ: ਤੋਂ 1900 ਈ:) ਵਾਰ ਕਾਵਿ, ਜੰਗਨਾਮਾ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) — 5 x 4=20 ਅੰਕ
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)
5. ਸਾਹਿਤ ਆਲੋਚਨਾ: ਸਾਹਿਤ ਤੇ ਸਮਾਜ, ਸਾਹਿਤ ਤੇ ਸਖ਼ਸ਼ੀਅਤ, ਸਾਹਿਤ ਤੇ ਸ਼ੈਲੀ, ਸਾਹਿਤ ਤੇ ਮਨੋਵਿਗਿਆਨ, ਸਾਹਿਤ ਤੇ ਵਿਗਿਆਨ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
6. ਉਪਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਉਪਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਭਾਸ਼ਾ ਤੇ ਉਪਭਾਸ਼ਾ, ਉਪਭਾਸ਼ਾ ਦੀਆਂ ਪਛਾਣ ਵਿਧੀਆਂ। — 10 ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (1701-1900), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
3. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, 'ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ', ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998.
5. ਸੰਘਾ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਆਹੂਜਾ, ਰੌਸ਼ਨ ਲਾਲ (ਡਾ.), ਸਾਹਿੱਤ ਸ਼ਾਸਤਰ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002.
8. ਉਹੀ, 'ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ', ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
9. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), 'ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012.
10. ਜੋਸ਼ੀ, ਜੀਤ ਸਿੰਘ, ਪੰਜਾਬੀ ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ ਬਦਲਦੇ ਪਰਿਪੇਖ, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਵਿਸ਼ੇਸ਼ ਨੋਟ: ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6+6= 12 ਪੀਰੀਅਡ।

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संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष

SEMESTER-III

Paper - Sanskrit : **श्रीमद्भगवद्गीता एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- विद्यार्थियों को भारतीय दर्शन के अद्वितीय ग्रन्थ रत्न श्रीमद्भगवद्गीता (चतुर्थ अध्याय) में प्रतिपादित निष्काम कर्मयोग, समत्व योग में स्थित योगी पुरुषों का आचरण एवं उनकी महिमा, विभिन्न प्रकार के ज्ञानयज्ञ तथा ज्ञान का महत्त्व इत्यादि विषयों का अध्ययन करवाना ।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) गीता (चतुर्थ - अध्याय) (दो सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **2X10= 20 अंक**

(ख) गीता (चतुर्थ अध्याय) पर आधारित समीक्षात्मक लघुप्रश्न **05 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : वस्त्र, आभूषण एवं श्रृंगारपरक (15 में से 10 शब्दों की संस्कृत) **10X 1 = 10 अंक**

1. कंबल-कम्बलः	2. कुरता-कञ्चुकः	3. कोट-प्रावारः
4. चादर-प्रच्छदः, शय्याच्छादनम्	5. जूता-उपानत्	6. तकिया-उपधानम्
7. दरी-आस्तरणम्	8. दुपट्टा-उत्तरीयम्	9. धोती-अधोवस्त्रम्,
10. पगड़ी-शिरस्त्रम् उष्णीकम्	11. परदा-यवनिका	12. पायजामा-पादयामः
13. पैंट-आप्रपदीनम्	14. रुमाल-करवस्त्रम्	15. शेरवानी-प्रावारकम्
16. साड़ी-साटिका	17. स्वेटर-उर्णावरकम्	18. कपड़ा-वस्त्रम्, वसनम्, चीरम्
19. अंगूठी-अङ्गुलीयकम्, मुद्रिका	20. कंगना-कंकणः	21. कान की बाली-कुण्डलम्
22. गहना-अलङ्कारः, आभरणम्	23. घुंघरू -किंकिणी	24. चूड़ी-काचवलयः, काचवलयम्
25. नथ-छोलिका	26. पाजेब-नूपुरः, नूपुरम्	27. बाजूबंद (ब्रेस लेट)-केयूरम्
28. हार-हारः	29. सोने का कड़ा-कटकः	30. आयना (शीशा)-दर्पणः, आदर्शः

31. इत्र (सैंट)-गन्धतैलम्	32. उबटन - उद्वर्तनम्	33. कंघी-प्रसाधनी
34. काजल-अञ्जनम्, कज्जलम्	35. क्रीम-शरः	36. ड्रेसिंग टेबल-शृंगारफलकम्
37. तिलक-तिलकम्	38. दाँत का ब्रुश-दन्तधावनम्,दन्तकूर्चः	39. नेल पोलिश-नखरंजनम्
40. बिन्दी-बिन्दुकः	41. पाउडर-चूर्णकम्	42. मंजन-दन्तचूर्णम्
43. मेहदी-मञ्जिष्ठा	44. लिपस्टिक-ओष्ठरंजनम्	45. साबुन-फेनिलम्, फेनकम्
46.. सिंदूर-सिन्दूरम्	47. दांत कूरेदने की सूई-दन्तशोधनी	48. महावर-अलक्तका
49. रूज-कपोलरंजनम्	50. सिंगारदान-शृंगारधानम् , शृंगारपिटकम्	

UNIT-III

(घ) व्यञ्जन सन्धि **5x1=05अंक**

(ङ) द्वन्द्व- समास **5x1=05अंक**

(च) तद्धित प्रत्यय : अण् , मतुप् , तरप् , तमप् - केवल उदाहरण ही प्रष्टव्य हैं) **5x1=05अंक**

UNIT-IV

(छ) शब्दरूप : तत् , एतत् , यत्(तीनों लिंगों में) राजन् तथा चन्द्रमस् **2x5=10अंक**

(ज) धातुरूप : अस् , दा, कुप् , शक् , प्रच्छ्, मिल् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(झ) छन्द : अनुष्टुप् , वंशस्थ, इन्द्रवज्रा, उपेन्द्रवज्रा, उपजाति (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **2x5=10अंक**

UNIT-V

(ञ) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

संस्कृत (इलैक्टिव)

बी.ए.(जनरल) द्वितीय वर्ष

SEMESTER-IV

Paper - Sanskrit : **नाटक एवं व्याकरण** पूर्णांकः 90+10=100

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- संस्कृत नाट्यविद्या के स्वरूप और प्रवृत्तियों से परिचित कराना।
- इसके अतिरिक्त व्यावहारिक शब्दावली द्वारा विद्यार्थियों की संस्कृत के प्रति रुचि जागृत करना।
- संस्कृत पूर्ण वैज्ञानिक एवं व्याकरणनिष्ठ भाषा है । अतः विद्यार्थियों को संस्कृत व्याकरण के प्रमुख नियमों का बोध कराना।
- पत्र का अध्ययन समय नौ पीरियड(प्रतिघण्टा) प्रतिसप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होंगे।
- सभी प्रश्नों में शतप्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं ।

UNIT-I

(क) दूतवाक्यम् - भास (तीन सूक्ति/श्लोक : सप्रसंग अनुवाद एवम् व्याख्या) **3x10=30 अंक**

(ख) समीक्षात्मक लघु प्रश्न, पात्र चरित्र चित्रण, लेखक परिचय, रचनाएँ व दूतवाक्यम् की विषयवस्तु **5 अंक**

UNIT-II

(ग) व्यावहारिक संस्कृत शब्दावली : अन्न, भोजन एवं तत्सम्बद्ध पात्र (15 में से 10 शब्दों की संस्कृत) **10x1=10 अंक**

1. अरहर-आढकी
2. उड़द-माषः
3. गेहूँ-गोधूम:
4. गेहूँ का आटा - गोधूमचूर्णः
5. चना-चणकः
6. जौ-यवः
7. चावल-तण्डुलः, व्रीहिः
8. ज्वार-यवनालः
9. तिल-तिलः
10. दाल-द्विदलम्
11. धान-धान्यम्, शालिः
12. बाजरा-प्रियङ्गुः
13. बेसन-चणकचूर्णम्
14. मसूर-मसूरः
15. मूंग-मुद्गः
16. सत्तु-सक्तुः
17. सरसों-सर्षपः
18. हल्दी-हरिद्रा
19. अचार-सन्धितम्
20. गरम भोजन-उष्णभोजनम्
21. खिचड़ी-कृशरः
22. चटनी-अवलेहः
23. चिकना-चिक्कणम्
24. ठंडाभोजन-शीतभोजनम्
25. भरता-भर्ता
26. भात-ओदनः, ओदनम्
27. मट्ठा-तक्रम्
28. रसोई-रसवती, पाकशाला, महानस
29. रायता-राज्यक्तम्
30. रोटी-रोटिका
31. शक्कर-शर्करा
32. समोसा-समोषः
33. सौंफ-मधुरः
34. हींग-हिंगुः
35. अंगीठी-हसन्ती
36. कटोरा-कटोरम्
37. कड़ाही-कटाहः, स्वेदनी
38. कांच का गिलास - काचकंसम्, काचचषकः

39. गिलास-कंसम् , चषकः	40. घड़ा-घटः, कुम्भः	41. चम्मच-चमसः
42. चीमठा-सन्दंशः	43. टव-द्रोणी	44. थाली-स्थालिका, थालिका
45. प्लेट - शरावः	46. बाल्टी-उदञ्चनम्	47. लोटा-करकः
48. स्टोव-उद्ध्मानम्	49. बेलन-वेलनम्	50. चाकू-छुरिका

UNIT-III

(घ) तत्पुरुष - समास **5x1=05अंक**

(ङ) कृदन्त प्रत्यय : क्त, क्तवतु , क्त्वा तथा तुमुन् प्रत्यय **5x1=05अंक**

(गम् , पठ् , पत् , क्रीड् , वद् , पा, लिख् , नी, दृश् , भू , त्यज् , स्मृ , अस् , दा, कुप् , शक् , प्रच्छ् , मिल् , कृ , क्री , ग्रह , ज्ञा , श्रु , कथ् - इन धातुओं के योग में)

(च) शब्दरूप : किम् व सर्व (तीनों लिंगों में), महत् व बलवत् (पुलिङ्ग में) एवं कति **2x5=10अंक**

UNIT-IV

(छ) धातुरूप : कृ, क्रीञ् , ग्रह् , ज्ञा, श्रु तथा कथ् (केवल लट्, लोट्, लृट्, लङ्, विधिलिङ् लकार में) **2x5=10अंक**

(ज) कारक (केवल सामान्य नियम-अशुद्ध वाक्यों को शुद्ध करना) **5x1=05अंक**

UNIT-V

(छ) छन्द : शिखरिणी, मन्दाक्रान्ता, मालिनी, वसन्ततिलका तथा भुजंगप्रयात (दो के ही सोदाहरण लक्षण प्रष्टव्य हैं) **10अंक**

सहायक पुस्तक:- शीघ्रबोध, चौखम्बा प्रकाशन,वाराणसी

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URDU (Elective)

SEMESTER-III

Prose and Poetry

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

i. Explanation of Verses(Ghazaliat) :
Mir Taqi Mir, Khwaja Mir Dard, Ibrahim Zauq, Mirza Asadullah Khan Ghalib, Momin Khan Momin, Hasrat Mohani, Raghupati Sahay Firaq Gorakhpuri.

20 marks

ii. Explanation of Nazms:
Search Results

Allama Iqbal	-	Chand aur Tare, Mulla aur Bahisht
Nazir Akbrabadi	-	Mele ki Sair
Brij Narayan Chakbast	-	Ramayan ka ek Scene

10 marks

Unit-II

Explanation of prose:

Mir Amman	-	Sair Pehle Darvesh Ki	
Sir Syed Ahmed Khan	-	Sarab-e-hayat	
Farahatullah Baig	-	Murda Badast Zinda Ast	
Munshi Prem Chand	-	Roshni	
Rashid-ul-Kheri	-	Toonfan-e-Hayat Ka Ek warq	30 marks

Unit-III

Central idea of a lesson or nazm (from Unit I & II above) 15 marks

Unit-IV

Introduction and literary contribution of the poets & prose writers
Poets: Mir Taqi Mir, Mirza Asadullah Khan Ghalib, Nazir Akbarabadi
Prose writers : Sir Syed Ahmed Khan, Altaf Hussain Hali, Munshi Prem Chand 15 marks

Books Prescribed:

1. Khyaban-e-Adab by, Azimul Haq Junedi, Educational BookHouse, AMU Market, Aligarh.

URDU (Elective)

SEMESTER-IV

Novel: Ek Chadar Maili Si

Theory : 90 marks
Internal Assessment : (5+3+2) 10 marks
Time: 3 Hrs.

Unit-I

Novel - One question each on its Plot and Characters 30 marks

Unit-II

Explanation of Paragraph from Novel 30 marks

Unit-III

Rajinder Singh Bedi Ki Novel Nigari Ki Khususiyat

Or

Novel Ke Ajza-e-Tarkibi 15 marks

Unit-IV

Unseen paragraph (candidate will be asked three questions from it) 15 marks

Books Prescribed :

1. Ek Chadar Maili Si, by Rajinder Singh Bedi.

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PERSIAN (Elective)
SEMESTER-III

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2020-2021.

Paper-A : Prose

Marks : 90
Internal Assessment : 10
Time : 3 hours

1.	Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian.	20 marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye-Kutah.	20 marks
4.	Simple direct questions on the life and works of the authors.	30 marks

Books prescribed

Nisabe Jadide Farsi
(Published By Jayyad Press Ballimaran Delhi)
Only following portions from Prose Section.

i. Intekhab-e-Sarzamin-e-Hind-Ali Asghar Hikmat.

ii. Dastan-e-Kutah by Mohammad Hejazi.

PERSIAN (Elective)

SEMESTER-IV

Instructions to the paper setter/examiner :

There will be one paper in each Semester i.e. 3rd and 4th Semester of 90 marks each and Internal Assessment of 10 marks for the session of 2020-2021.

Paper-B : Poetry

Marks : 90
Internal Assessment : 10
Time : 3 hours

Distribution of marks :

1. Translation of text pieces into English, Hindi, Urdu, Panjabi or Persian. 20 marks
2. Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian. 20 marks
3. Central idea of the poem. 20 marks
4. Simple direct questions on the life and works of the poets as prescribed in the text. 30 marks

Books prescribed

Nisab-e-Jadeed-e-Farsi(Published by Jayyad Press Ballimaran, Delhi). Only following portions from Prose Section.

Az Gzalliyat-e-Hafiz

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.

Saaqi Benur Badah Bar Afrooz Jam-e- Maa.

Doosh deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:

Jan Ze Tan Burdi-o- Dar Jaani Hunooz.

Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

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FRENCH (ELECTIVE)

SEMESTER-III

WRITTEN COMPREHENSION AND EXPRESSION, GRAMMAR IN CONTEXT AND CREATIVE WRITING

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 hours

I Questions:

(a) Five Questions (including General and based on Civilization) from the prescribed Text book (4 marks each) 20 Marks

(b) Questions on applied grammar, including conjugation of verbs in applied form, from the textbook. 20 Marks

(c) Composition based on the subject or theme from the text. 15 Marks

(d) Comprehension of an unseen text.
Ten questions to be put in French and to be answered in French. 15 Marks

II Prose:

Direct simple questions based on the prescribed text (Tintin au Tibet) to be asked and answered in French, Questions should be of 5 marks each. 20 Marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: 1. Saison-2 (Units 0-4)Méthode de Français par Marie-Noëlle Cocton, Anneline Dintilhac, Dorothée Dupleix, Delphine de Ripaux, Anouchka Oliveira, Les Editions Didier, 2014.

(a) Livre de l'éléve

(b) Cahier d'exercices

Prose: -Tintin Au Tibet,Casterman

Note: 1. Questions on composition and unseen passage to be based on the vocabulary and grammar of the textbook covered by the students in B.A. 3rd Semester.

2. All questions are to be asked and answered in French.

For the information of private candidates:

The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH (ELECTIVE) 4TH SEMESTER:

CREATIVE WRITING : GRAMMAR AND POETRY

Max. Marks : 100
Theory : 60 Marks
Internal Assessment: 10 Marks
Viva : 30 Marks
Time : 3 hours

I Selected Readings in Poetry:
Questions, explanation of stanzas or of poems, central ideas and summaries of poems to be asked and answered in French. 5X5 Choice 25 Marks

II (a) Questions (including General and based on Civilisation) from the prescribed Text book (4 marks each). 20 Marks

(b) Questions on applied grammar, including conjugation of verbs in applied form from the textbook. 15 Marks

CHOICE TO BE GIVEN IN ALL QUESTIONS

Courses of Reading

Text Book: Saison-2 (Units 5-9) Méthode de Français par Marie-Noëlle Cocton, Anneline Dintilhac, Dorothée Dupleix, Delphine de Ripaux, Anouchka Oliveira, Les Editions Didier, 2014.

(a) Livre de l'éléve
Cahier d'exercices

Poetry:

The following 5 poems to be studied: Comprehension, explanation, literary appreciation of the poems.

1. Charles BAUDELAIRE
   Recueil : *Fleurs du mal*

   L'horloge

   http://fleursdumal.org/poem/200

2. La Fontaine
   L'amour et la folie

3. Paul VERLAINE
   Il pleure dans mon cœur

4. Pierre de Ronsard
   Mignonne,allons voir si la rose

5. Jacques PRÉVERT
   Le temps perdu

6. Alphonse de LAMARTINE
   Recueil *: Nouvelles méditations poétiques*
   Le papillon
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

7. Gérard de NERVAL
   ***Recueil* : Odelettes**
   Le point noir
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

8. *Jean-Pierre Claris de FLORIAN*
   ***Recueil :* Chanson**
   Plaisir d'amour
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

All questions are to be asked and answered in French.

Viva:	30 Marks

Reading:

Seen	5 Marks
Unseen	5 Marks
Conversation	10 Marks
Dictation	10 Marks

For the information of private candidates:

1 Viva is compulsory

2. The theory paper would be proportionately marked out of 70 as there is no internal assessment.

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GERMAN (Elective)

SEMESTER-III

Summary

Max. Marks	:	100 marks (Total)
Paper-A(Theory)	:	90 marks
Internal Assessment	:	10 marks

Paper A-Theory: 90 marks
Time: 3 hours
Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks) conforming to prescribed text-book "Lagune-2": Chapters1-17 upto page 87 50 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed book text-book "Lagune-2": Chapters 1-17 upto page 87 20 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book "Texte zum Lesen und Nacherzählen", from pages 1-12 20 marks

Internal Assessment **10 marks(Total)**

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 1-17 upto page 87.
ii. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, upto page 12.

Supplementary book:

i. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters1-17

GERMAN (Elective)

SEMESTER-IV

Summary

Max. Marks	:	100marks(Total)
End Semester Exam Paper-B (Theory)	:	60 marks
Oral (viva-voce) examination	:	30 marks
Internal Assessment	:	10 marks

Paper B-Theory : 60 marks(Total)

Time : 3 hours

Note: Use of dictionary is allowed

i. Questions in applied grammer(including fill in the blanks)confirming to prescribed text-book "Lagune-2": Chapters 18-34 30 marks
(5 questions)

ii. Questions on "Culture & Civilization" from the prescribed text-book "Lagune-2": Chapters 18-34 15 marks
(4 out of 5 questions to be attempted)

iii. Summary in German of any one short-story from Prescribed book " Texte zum Lesen und Nacherzählen", from pages 12-21 15 marks

Oral (viva-voce) Examination : 30 marks(Total)

i. Conversation in German
ii. Reading of a simple unseen text and answering questions there-on

Internal Assessment : 10 marks(Total)

i. Continuous Evaluation
ii. Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

iii. "Lagune-2" Kursbuch **(2006 Edition)** by Hartmut Aufderstraße a.o: Chapters 18-34.
iv. Texte zum Lesen und Nacherzählen by Hans-Joachim Arndt, Hueber Verlag, page 12-21.

Supplementary book:

ii. "Lagune-2" Arbeitsbuch by Hartmut Aufderstraße a.o: Chapters 18-34

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RUSSIAN (Elective)

SEMESTER-III

Paper-A (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 100**
			Theory	**: 90 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) **15 marks**
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) **15 marks**
3. Simple applied grammar: 3 question out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
4. Question on prescribed texts in Russian : 3 questions out of 5 (5 marks each) **15 marks**
   (Covered in Lessons 31-37, Wagner)
5. Composition (One out of three) on the following topics: **15 marks**
   1. My friend 2. My Country 3. My favorite writer 4. Our Library
6. Comprehension: 5 questions out of 7 (3 marks each) on the unseen texts to be reproduced in the question paper **15 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 31-37)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary
   Russian-English dictionary

RUSSIAN (Elective)
SEMESTER-IV

Paper-B (General Translation, Grammar, Composition and Comprehension): Written

Maximum Time	**:**	**3 hrs.**	**Max. Marks**	**: 70**
			Theory	**: 60 marks**
			Internal Assessment (For regular students)	**: 10 marks**

1. Translation from simple Russian into English/Hindi/Punjabi. (about 80 words) **10 marks**

2. Translation from simple English/Hindi/Punjabi into Russian (about 75 words) **10 marks**

3. Simple applied grammar: 3 questions out of 5 (4 marks each) **12 marks**
(Covered in Lessons 38-45, Wagner)

4. Questions on prescribed texts in Russian : 4 questions out of 6 **08 marks**
(2 marks each)
(Covered in Lessons 38-45, Wagner)

5. Composition (One out of three) on the following topics: **10 marks**
1. Our City 2. Our University 3. A Cultural evening 4. Journey/Excursion

6. Comprehension: 5 questions out of 7 (2 marks each) on the unseen texts to be reproduced in the question paper **10 marks**

Note: Use of dictionaries is allowed

Book Prescribed

1. V. N. Wagner: Russian, PPH, New Delhi. (Lessons 38-45)

Books recommended for additional reading

1. A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
2. S Khavronina: Russian in Exercise, 1978
3. I. Pulkina: RUSSIAN A Practical Grammar with Exercise, Russky Yazik. Pub. H. Moscow
4. Dictionaries: English-Russian dictionary.
Russian-English dictionary.

(iii) **Oral/Practical** **Maximum Marks:30**

Reading of text(s) and conversation in simple Russian

1. V. N. Wagner: Russian, PPH, New Delhi.(Lessons 31-45)

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SUBJECT :

ARABIC (Elective)

BENGALI (Elective)

TAMIL (Elective)

TELUGU (Elective)

KANNADA (Elective)

MALAYALAM (Elective)

The above Syllabi for B.A.(GENERAL)
SECOND YEAR (SEMESTER SYSTEM) has been
KEPT IN ABEYANCE

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PHYSICAL EDUCATION

B.A. (GENERAL) THIRD SEMESTER EXAMINATION, 2020-2021

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Psychological Basis of Physical Education :

- Meaning of Psychology and Sports Psychology.
- Psychological factors effecting physical performance.
- Meaning of Learning.
- Laws of Learning.
- Learning curve, its types, characteristics and implications in Physical Education and Sports.
- Psychological characteristics and problems of an adolescent.
- The role of Physical Education and Sports in solving the problems of an adolescent.

UNIT-III 12 Marks

Motivation:

- Meaning, definitions, types and methods of motivation.
- Importance of motivation in Physical Education and Sports.

Transfer of Training:

- Meaning, definitions, types and factors affecting transfer of training.

UNIT-IV 12 Marks

Personality:

- Meaning, definitions, characteristics, dimensions and traits of personality.
- Factors affecting development of personality (Heredity and Environment).
- Role of physical activities in Personality Development.

Sports and Socialization:

- Meaning and definitions of socialization, socialization through sports.

UNIT-V 12 Marks

Politics, Economy, Media and Sports Performance :

- Role of politics and economy in the promotion of games and sports.
- Role of media in promotion of sports.
- Causes of deterioration and suggestions for the improvement of Sports Performance.

Softball:

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking/layout of field.
- Rules and regulations (number of players, number of officials required and general rules of play).
- Major tournaments of the game.

References :

1. Blair Jones & Simpson :*"Educational Psychology ",* The MacMillan Co., New York, 1962.
2. Brown, R. : *"Social Psychology",* Free Press, New York, 1965.
3. Bucher, Charles A. : *"Foundations of Physical Education",* St. Louis, 1979, The C.V. Mosby Company.
4. Conger, J.J.: "*Adolescence and Youth : Psychological Development in a Changing World,"* 22nd Edition, 1977, Harper and Row, New York.

5. Cratty, B.J.: *" Psychology and Physical Activity"*, Englewood Cliffs, N.J., Prentice Hall, 1968

6. Hollander, E.P.: *" Principles and Methods of Social Psychology"*, New York, 1971, Oxford University Press.
7. Linsa, M.I., *"Child-Adults, Peers : Patterns Communication",* Progress Publishers, Moscow, 1985.
8. Linggren, H.E.: *" Educational Psychology in the Class Room"*, John Wiley & Sons, New York, 1962.

9. Loy, John W. and Kenyon Gerald, S. *: "Sport, Cultural and Society : A Reader on the Sociology of Sport",* London, 1969, The MacMillan Co.
10. Hurlock, E.B. : *"Adolescent Development",* Appleton Century Crofts, New York,1956.

11. Rushall, Brent S. and Siedentop : *"The Development and Control of Behaviour in Sport and Physical Daryl Education"*, Philadelphia, 1972, Lea and Febiger.
12. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

13. Singh, Ajmer et. al. : *Modern Text Books of Physical Education, Health and Sports,* Kalyani Publishers, Ludhiana, 2000.
14. Talamini, John T. and Page & Charles, H. : *"Sport & Society – An Anthology",* Boston, 1973, Little Brown Co.
15. Walia, J.S. : *"Foundations of Educational Psychology",* Paul Publishers, Jalandhar City, 1992.

16. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc., 470, Atlantic Avenue, Boston, Massachusetts.

PRACTICAL

Max.Marks : 35
Practical : 30
Internal assessment: 5

ATHLETICS

a) History of athletics
b) List of track and field events
c) Marking of standard track, width of lanes and starting points for various races.

LONG JUMP:

(a) Approach run (b) Take off (c) Flight (d) Landing (e) Brief information of various styles and practice of any one style depending upon the facilities available (f) Rules and regulations of the long jump.

PHYSICAL FITNESS TESTS:

More emphasis shall be given on physical fitness with regard to specific physical fitness components (Endurance and Strength).

Test 1 : ENDURANCE : 9/12 min. run and walk test.
Test 2 : STRENGTH : Standing broad jump test.

***Division of Practical Marks**:* Marks for each activity shall be divided as under:

Athletics 10 Marks, Participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
4. The theory and practical papers shall consist of 65 and 35 marks each.
5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students :***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods :***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. ***Teaching Work Load :***

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. ***Division of Marks (Theory and Practical) :***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

PHYSICAL EDUCATION
B.A. (GENERAL) FOURTH SEMESTER EXAMINATION, 2020-2021

Max. Marks	:	65
Theory	:	60 marks
Internal Assessment	:	05 marks
Time	:	3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS :

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning (USOL) will not be allowed to take this subject.

UNIT-I 12 Marks

Entire syllabus given in the Units II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II 12 Marks

Respiratory System :

- Meaning of Respiration, types of Respiration, Organs of the Respiratory System.
- Functions of the Respiratory System. Vital capacity and its measurement.
- Mechanism and Neural Control of Respiration.

Digestive System :

- Meaning, Importance and Organs of Digestive System.
- Functions, processes, mechanism and nerve regulators of Digestive System.

UNIT-III

12 Marks

Circulatory System :

- Meaning of the circulatory system.
- Heart, its structure, functions and control of the heart rate.
- Various types of blood vessels and their functions.
- Cardiac Cycle.

Blood :

- Meaning, functions and composition of blood.
- Maintenance of blood supply.
- Blood groups and their importance.
- Blood Clotting.

UNIT-IV

12 Marks

Communicable Diseases :

Meaning of a communicable disease. Communicable diseases such as HIV/AIDS, Viral Hepatitis—A, B & C and Tetanus, their modes of transmission and methods of prevention.

Yoga:

- Meaning and aim of Yoga.
- Meaning, Principles and Importance of Asanas.
- Meditative poses (Padamasna, Vajrasana, and Sukhasana), their technique, precautions and effects/advantages.
- Cultural poses (Savasna, Halasana, Bhujangasana Sarvangasana, and Dhanurasana), their technique, precautions and effects/advantages.

Basics of Tennis :

- History of the game.
- Basic fundamentals.
- Equipment and specifications.
- Marking / layout of court.
- Rules and regulations (number of players, duration of game, number of officials required and general rules of play).
- Major tournaments and Arjuna awardees of the game.

UNIT-V 12 Marks

Sports Injuries :

- Basis of Sports Injuries.
- Common Sports Injuries, such as sprains, strains, fracture, dislocation, abrasions, contusion, bruise, tennis elbow. Their causes, preventive and remedial measures.
- Treatment and care (RICE) of sports injuries.

Disability and Rehabilitation :

- Meaning, types, causes and preventive measures of disability.
- Problems of the disabled. Physical Activity and health for disabled.
- Meaning and scope of Rehabilitation.

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.
2. Dandiya, P.C., Jafer, Z.Y. K. and Jafer Afifa: *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.
3. Govt. of India : *"Occupational Diseases : A Guide to Recognition and Notification",* Chief Adviser Factories, Ministry of Labour and Employment, New Delhi, 1955.
4. Park, J.E. & Park, K. : *"Text Book of Preventive and Social Medicine",* 10th Edition, 1985, Banarsi Dass Bhanot, Jabalpur, India.
5. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Assistant Professors",* Lend : Edward Arnold Ltd., 1983.
6. Rao, M.N. and Lundgren, N.P.V. : *"A Review of Occupational Health Research in India",* ICMR, New Delhi, 1955.
7. Rose & Wilson : *"Foundations of Anatomy and Physiology",* 5th Edition, 1981, Reprinted in 1985.
8. Winter Griffith, H. : *"Complete Guide to Sports Injuries",* First Indian Edition, 1989, Metropolitan Book Co. Pvt. Ltd., New Delhi.
9. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999- 2000, Birla Publications, Delhi.
10. Singh, Ajmer et. al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.
11. Smith, Olive and F. Guthrie : *"Rehabilitation and Remedial Exercise",* Bailliere, Tindall and Cox Limited, London, 1949.
12. Sri Anand : *"The Complete Book of Yoga : Harmony of Body and Minds",* Orient Paper Back, New Delhi, 1980.
13. Staford, T. & Ellen Davis Kelly : *"Preventive and Corrective Physical Education",* Third Edition, 1958, Ronald Press Co., New York.
14. Swami Kuvalyananda : *"Kaivalyadhama",* Lonavala, Bombay, 1933.
15. Vijayendra Pratap : *"A Teacher's Guide for Beginning Yoga",* First Edition, 1987, Sky Foundations, Philadelphia, Pennsylavania, U.S.A.
16. World Health Organisation : *"Health Hazards of the Human Environment",* Geneva,1962.

PRACTICAL

Max. Marks	:	35
Practical	:	30
Internal Assessment	:	05

GAMES

Basketball or Ball badminton and any other one game of the choice of the student.

Basketball

(a) Measurements (Basket ball ground).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental and basic skills.

Football

(a) Measurements (Field & ball).
(b) Number of players and officials.
(c) Rules and Regulations of the game.
(d) Fundamental Skills.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. ***Admission Criteria:***

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.
(ii) This subject should be offered to the normal students (not to disabled one).
(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.
(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. ***Periodical Physical Inspections :***

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. ***Strength of Students:***

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. ***Infrastructure/facilities and Supporting personnel:***

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. ***Number of Periods:***

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6.Teaching Work Load:

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. ***Division of Marks (Theory and Practical):***

65% and 35% weightage shall be given to each theory and practical papers.

Note : **STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) WHICH VIOLATES THE ABOVE INSTRUCTIONS.**

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper-III : FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :
The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer type question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :
The students will be required to attempt one question each from Units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV; and 75 words for each short answer type in Unit V.

Objectives :

1. To acquaint the students with major foundations underlying Education.
2. To enable the students to understand the concept of Philosophy of Education.
3. To enable the students to understand the concept of Educational Sociology and Educational Technology.
4. To enable the students to understand major Philosophies and their Educational implications.

COURSE CONTENTS :

UNIT-I

Philosophical, Sociological, and Technological Foundations of Education—Concept and their Role in Education.

UNIT-II

Philosophy of Education – Definition, Nature and Scope.

Difference between Educational Philosophy and Philosophy of Education.

UNIT-III

Educational Sociology – Definition, Nature and Scope.

Information and Communication Technology—Role in Education.

UNIT-IV

Major Philosophies of the World—Idealism, Naturalism and Pragmatism—Main Features and their Contribution to Education.

Books Recommended :

1. Aggarwal, J.C. : *Theory and Principles of Education,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.
2. Bhatia, K.K. and Narang, C.L. : *Philosophical and Sociological Bases of Education,* Tondon Publications, Ludhiana, 2002.
3. Sataya, R.N. and Shaida, B.D. : *Development of Educational Thought and Practice,* Dhanpat Rai Publishing Company (P.), New Delhi, 1996.
4. Taneja, V.R. : *Foundations of Education,* Mohindra Capital Publishers, Panchkula, 1998
5. Singh, K. : *Vidiyak Manovigian,* Gujral Book Depot, Patiala, 1999.

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EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION

SEMESTER-IV

Paper-IV : PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five units : I, II, III, IV and V. Unit I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of **eight** short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in Unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for Units I, II, III, IV and 75 words for each short answer question in Unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from units I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in Unit V. The words limit will be 300-350 words for Unit I, II, III and IV and 75 words for short answer type question in Unit V.

Objectives :

1. To enable the students to understand the perspective roles of heredity and environment in educational development of a child.

2. To enable the students to understand the concept of personality and its place in Education.

3. To make the students familiar with the concept of Special Education; the special needs of the Gifted, Backward and Delinquent Children and their Educational implications.

4. To make the students familiar with the concepts of Emotions, Stress and Stress management among adolescents.

COURSE CONTENTS :

UNIT-I

Difference between Psychology and Educational Psychology, Significance of Educational Psychology.

Heredity and Environment – Concepts and their role in Educational development.

UNIT-II

Personality : Concept, Assessment and its Educational Implications.

UNIT-III

Special Education : Meaning and Concept.

Types of Exceptional Children with special reference to the Gifted, Backward and Delinquents (Their Characteristics and Educational Implications).

UNIT-IV

Emotions and Stress – Concept, Types of Stress (Physical, Psychological and Social), Stress Management with Special Reference to Adolescents.

Books Recommended :

1. Batra, Promod : *Simple Ways to Manage Stress,* Think Inc., Delhi, 1997.
2. Carewell, M., Clark, L. & Meldrum, C. : *Psychology,* Harper Collins Publishers Ltd., London, 2000.
3. Clare, Sylvia : *Emotions –Releasing Your Child's Potential,* UBS Publishers and Distributors, New Delhi, 2003.
4. Chauhan, S.S. : *Advanced Educational Psychology,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.
5. Dhaliwal, A.S. : *Vidyak Mnovigian,* Punjabi University, Patiala, 2001.
6. Dutt, Sunil & Sodhi, G.S. : *Teaching Learning – A Process Approach,* Samir Publications, Chandigarh, 1995.
7. Goleman Daniel : *Emotional Intelligence,* Baanam Books, New York, 1995.
8. Kirk, Semual : *Educating the Exceptional Child,* I.B.H. Publishing Co., Calcutta, 1992.
9. Mangal, S.K. : *Advanced Educational Psychology,* Prentice Hall of India Ltd., New Delhi, 2002.
10. Panda, K.C. : *Education of Exceptional Children,* Vikas Publishing House Pvt. Ltd., New Delhi, 2003.

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ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION

Semester –III

Max Marks	**:**	**50 Marks**
Theory	**:**	**45 Marks**
Internal Assessment	**:**	**05 Marks**
Time	**:**	**03 Hours**
Max Marks	**:**	**50 Marks**
Practical	**:**	**45 Marks**
Internal Assessment	**:**	**05 Marks**
Time	**:**	**03 Hours**

GENERAL INSTRUCTIONS FOR THE PAPER SETTER.

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt 1 question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3X3=9). All units (I, II, III , IV, V) are of 9 marks each (9X5=45).

GENERAL INSTRUCTIONS FOR THE CANDIDATE.

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

OBJECTIVES OF THE COURSE:

The main objectives of the paper are:

1. To acquaint students with the psychology of adult learner and the strategies employed to motivate them.
2. To impart knowledge to students on adult characteristics and their psychology.
3. To impart knowledge on suitability of teaching- learning material and audio visual material used by new –Literates, Prerakes and Nodal Prerakes.
4. To acquaint students with various agencies involved in adult education program.
5. To provide knowledge to students regarding concept, need, methods and procedures involved in monitoring process.
6. To impart knowledge to students on the concept, meaning, scope and significance of Adult Education.
7. To acquaint students with the knowledge, how adult education play an important role in social and economic development

Unit-I

- Characteristics of Adult and Psychology of Adult Learners involved in Adult Literacy Program, Learning Styles and Learning Principles.
- Adult Education in Modern Society: Goals, Work-based Adult Education.
- Role of Motivational Strategies in Adult Educational Program.
- Adult Education for Equity and Social Transformation.

Unit-II

- Suitability of Teaching – Learning and Audio- Visual Material used for Neo-Literates.
- Low Cost Teaching Aids, Skill in using Aids, Literacy and Numeracy Games,
- Recruitment of Prerak and Nodal Preraks, Training program, Production of Literature.
- Role of Play and Simulation.
- Suitability of Training Material for Preraks and Nodal Preraks.

Unit-III

- Agencies of Adult Education: Government and Private.
- Indian Adult Education Association: Its Role in Promotion of Adult Education Programme and Research.
- Monitoring of Adult Education Program: The Paradigm Content, General Consideration, Need for Monitoring.
- Evaluation of Adult Learners and Adult Literacy Programme.

Unit-IV

- Meaning of Adult Education, its Scope, Aims and Significance.
- Role of Mass-Media in Adult and Continuing Education and Life Long Learning.
- Role of Adult Education in Social, Community and Economic Development.

Practical/ Field Work:

Max Marks : 50 Marks.
External : 45 Marks.
Internal : 05 Marks.

Participation of the Students in the following:
1. Survey of the Area- A brief report.
2. Planning and Organization of Awareness Generating Activities for Adults.

Books Recommended:

1. Datta, S.C. : Adult Education in India, Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : The National Adult Education Programme, 1978.
3. Directorate of Adult Education, Ministry of Education, Govt. of India. : Training of Adult Education Functionaries I-4, D.A.E., 1980
4. Directorate of Adult Education : Fifty years of Adult Education in India.
5. Dept. of Education, Ministry of Human Resource Development Govt. of India : National Literacy Mission, 1988.
6. Kundu, C.L. : Adult Education : Principles, Practices and Prospects sterling Publishers, Delhi, 1984.
7. Mali, M.G. : Adult Education in India, Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.

9. Pangotra, N.N. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
10. Sharma, I.P. : Adult Education in India, National Book Organization, 1985
11. Singh, Sohan : History of Adult Education, The Indian Adult Education Association, New Delhi, 1957.
12. Styler, W.E. : Adult Education in India, Oxford University Press, 1986.
13. Yadav, R.S. : Adult Education Training & Productivity. The Indian publications, Ambala Cantt., 1991.
14. N. Markandan : Village Planning Committee Origin and Evolution, Gandhigram Rural Institute (Deemed University, Gandhigram, Tamil Nadu, 1986.
15. R.Rengasamy : A Hand Book on Post Literacy and Follow up Madurai Kamaraj University, Madurai-625002, 1985.
16. J.C. Saxena, J.L. Sachdeva : Role of Adult Education and Mass Media for Civic Education Indian Adult Education Association, New Delhi, 1986
17. S.R.Ranganathan : Literature for Neo-Literates, Indian Adult Education Association, New Delhi, 1966
18. S.R. Ranganathan, N.D. Godbole, Kesari Hanuman : Human Values in Adult Education, Indian Adult Education Association, R.M. Chetsingh Delhi, 1958.
19. S.C. Dutta & H.J. Fischer : Training of Adult Educators, Shakuntala Publishing House, Bombay-1972.
20. R.Rangasamy & S. Raju : Teaching AIDS for Adult Education, Madurai Kamaraj University
21. S. Mohanty : Lifelong and Adult Education, APH Publishing Corporation, Ansari Road, Darya Ganj, New Delhi, 2007
22. S.Sohan Singh, Meher C. Nanavatty, Mrs. Welthy Fisher, S.C. Dutta : Adult Education in Community Development- Indian Adult Education Association, 30, Faiz Bazar, Delhi, 1956.
23. Arvinda Chandra, Anupama Shah : Non-Formal Education For All, Sterling Publishers Pvt. Ltd. & Delhi, 1987
24. R.P. Singh : Non-Formal Education- An Alternative Approach, Sterling Publishers Pvt. Ltd., Delhi, 1987
25. J.L. Sachdeva & Asha Vohra : Non-Formal Adult Education for Women, Indian Adult Education Association, New Delhi, 1985

26. S.R. Mohsini, J.L. Sachdeva, Asha Sehgal : Towards A Comprehensive Adult Education programme Indian Adult Edu. Association, New Delhi, 1983.

27. Avabai B. Wadia : Population Education for the Younger Generation- Family Planning Association of India, Bombay, 1968

28. J.K. Friesen, S.C. Dutta : University Adult Education- Indian Adult Education Association, New Delhi, 1985

ADULT EDUCATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
Semester –IV

Theory			**Time**	**Practical**		
Marks	+	Internal Assessment	3 Hours	Marks	+	Internal Assessment
45	+	05		45	+	05

GENERAL INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five units. Unit I, II, III & IV will have 2 questions in each unit from the syllabus out of which students have a choice to attempt I question in each unit. Unit V is compulsory. It will consist of 3 questions and will cover the entire syllabus uniformly. Each short question in Unit V will carry 3 marks (3x3=9). All units (I, II, III & IV) are of 9 marks (9x5=45).

GENERAL NSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt at least one question from each unit I, II, III and IV. Unit V is compulsory and it will consist of 3 questions and will cover the entire syllabus uniformly. All questions carry equal marks.

[OBJECTIVES OF THE COURSE :

The main objective of the paper are:

1. To provide an overview on History of Adult Education in India.
2. To impart knowledge to students on various Target Groups involved Under Adult Literacy Programs.
3. To expose students with the Teaching Learning Methodologies for teaching Adults.
4. To acquaint students with the Role and Responsibilities assumed by Preraks and Nodal Preraks.
5. To expose students with Concepts and Strategies involved under Total Literacy Campaign.
6. To acquaint students with the Knowledge of various agencies involved in Adult Education Programs.
7. To expose students with the Preparation and Planning of Continuing Education and Awareness Generating Programs.
8. To impart knowledge to students on Linkage of Adult Education with Development.

THEORY

UNIT-I

(i) History of Adult Education in India.
(ii) Target Groups involved under Adult Education Programs.
(iii) Adult Education in Rural Setup.
(iv) Adult Education in Modern Society.

UNIT-II

(i) Methodology of Teaching Adults in Adult Literacy Programs.
(ii) Role of Library Services in Promotion of Post Literary, Follow-up and Continuing Education.
(iii) Role of Mass-Media in promotion of Post Literary, Follow-up and Continuing Education.
(iv) Role of Preraks and Nodal Preraks in Adult Education.

UNIT-III

(i) Total Literacy Campaign : Its Concept and Strategies.
(ii) Post Literacy Project: Planning, Administration, Suppression.
(iii) Agencies Involved under Adult Education : Government and Non-Government.
(iv) Global Perspectives on Adult Education.

UNIT-IV

(i) Preparation and Planning of Adult Education Programs: Continuing Education, Awareness Generating Programs, Skill Development and Individual Interest Programs.
(ii) Adult Education and its Linkage with Development.
(iii) Life wide Dimension of Life-Long Learning.
(iv) Governing of Life Long Learning: Private Sector, Quality Assurance Mechanism, Accreditation of Institutions.

Max Marks	:	50 Marks
External	:	45 Marks
Internal	:	5 Marks

Participation of the Students in the following:

1. Visits to the 5 Government and Non-Government Agencies – A brief Report in the form of file to be submitted in the practical exam.
2. Preparation of Teaching – Learning Aids used for Teaching Adults.

Books Recommended:

1. Datta, S.C. : Adult Education in India, Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : The National Adult Education Programme, 1978.
3. Directorate of Adult Education, Ministry of Education, Govt. of India. : Training of Adult Education Functionaries I-4, D.A.E., 1980
4. Directorate of Adult Education : Fifty years of Adult Education in India.
5. Dept. of Education, Ministry of Human Resource Development Govt. of India : National Literacy Mission, 1988.
6. Kundu, C.L. : Adult Education : Principles, Practices and Prospects sterling Publishers, Delhi, 1984.

7. Mali, M.G. : Adult Education in India, Deep and Deep Publication, New Delhi, 1984.

8. Mathur, B.M. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.

9. Pangotra, N.N. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.

10. Sharma, I.P. : Adult Education in India, National Book Organization, 1985

11. Singh, Sohan : History of Adult Education, The Indian Adult Education Association, New Delhi, 1957.

12. Styler, W.E. : Adult Education in India, Oxford University Press, 1986.

13. Yadav, R.S. : Adult Education Training & Productivity. The Indian publications, Ambala Cantt., 1991.

14. N. Markandan : Village Planning Committee Origin and Evolution, Gandhigram Rural Institute (Deemed University, Gandhigram, Tamil Nadu, 1986.

15. R.Rengasamy : A Hand Book on Post Literacy and Follow up Madurai Kamaraj University, Madurai-625002, 1985.

16. J.C. Saxena J.L. Sachdeva : Role of Adult Education and Mass Media for Civic Education Indian Adult Education Association, New Delhi, 1986

17. S.R.Ranganathan : Literature for Neo-Literates, Indian Adult Education Association, New Delhi, 1966

18. S.R. Ranganathan N.D. Godbole Kesari Hanuman : Human Values in Adult Education, Indian Adult Education Association, R.M. Chetsingh Delhi, 1958.

19. S.C. Dutta & H.J. Fischer : Training of Adult Educators, Shakuntala Publishing House, Bombay-1972.

20. R.Rangasamy & S. Raju : Teaching AIDS for Adult Education, Madurai Kamaraj University

21. S. Mohanty : Lifelong and Adult Education, APH Publishing Corporation, Ansari Road, Darya Ganj, New Delhi, 2007

22. S.Sohan Singh Meher C. Nanavatty Mrs. Welthy Fisher S.C. Dutta : Adult Education in Community Development- Indian Adult Education Association, 30, Faiz Bazar, Delhi, 1956.

23. Arvinda Chandra & Anupama Shah : Non-Formal Education For All, Sterling Publishers Pvt. Ltd. Delhi, 1987

24. R.P. Singh : Non-Formal Education- An Alternative Approach, Sterling Publishers Pvt. Ltd., Delhi, 1987

25. J.L. Sachdeva & Asha Vohra : Non-Formal Adult Education for Women, Indian Adult Education Association, New Delhi, 1985

26. S.R. Mohsini J.L. Sachdeva Asha Sehgal : Towards A Comprehensive Adult Education programme Indian Adult Edu. Association, New Delhi, 1983.

27. Avabai B. Wadia : Population Education for the Younger Generation- Family Planning Association of India, Bombay, 1968

28. J.K. Friesen S.C. Dutta : University Adult Education- Indian Adult Education Association, New Delhi, 1985

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MUSIC (Vocal)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto ten students in one section in practical class.

3. There should not be more than ten students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. The candidate can take vocal music along with instrumental music or tabla.

6. The candidate can also take instrumental music with tabla or Vocal Music.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent for dealing branch.

8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit**. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

Paper-A: THEORY (3 Hours duration) : 45 marks
(Duration 45 minutes 06 practical+ 02 Theory periods per week)

Paper-B: Practical (20 minutes duration) : 45 marks

(i) Viva : 35 marks
(ii) Harmonium : 05 marks
(iii) Tabla : 05 marks

Internal Assessment (Theory + Practical) (05 +05) : 10 marks

Total : 100 marks

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Brief knowledge of Gram.
2. Kanth Sadhana.
3. Gharana: definition and importance
4. Historical development of North Indian music from 13-15th Century.

Unit–II

1 Knowledge of Alap, and its various forms.
2 Explain the following: - Upaj, Mukhda, Bol-Baant, Khatka, Murki, Kan.
3 Knowledge of Lakshans of Ragas in Modern Period.

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.

(i) Ustad Alladiya Khan
(ii) Pt. Bhimsen Joshi
(iii) Sh. Krishan Rao Shankar Pandit.

Unit–IV

1 Description and Notations of the prescribed Ragas and Talas : -

(i) To write drut khyal in any one of the prescribed ragas :-Malkauns, Bhairav with Alap and Taans
(ii) To write prescribed ragas of the syllabus with Alap and Taans
(iii) To write the notation of Tala :- Jhaptala, Chartala and Keherva (S & D)
(iv) To write the description of detailed and non detailed Ragas: Chandrakauns, Kalingda.

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas:Malkauns, Bhairav.
2. One lakshana geet/ Sargam geet in any prescribed ragas
3. Ability to play Kehrva on Tabla
4. Ability to recite following talas by hand: Jhaptal, Chartala
5. Ability to play on Harmonium at least three alankaras based on Shudh swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Chandrakauns, Kalingda.
8. Ability to sing one Drut khayal of your course with harmonium

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	Sangeet Kala ka Itihas	:	Panna Lal Madan

MUSIC (Vocal)

SEMESTER-IV

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be upto ten students in one section in practical class

3. There should not be more than ten students in a batch for practical examination.

4. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.

5. The candidate can take vocal music along with instrumental music or Tabla.

6. The candidate can also take instrumental music with Tabla or vocal music.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also to be sent for Dealing Branch.

8. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	:	45 marks
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
	(i) Viva	:	35 marks
	(ii) Harmonium	:	05 marks
	(iii) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical development (in brief) of North Indian Music during 15^{th} to 17^{th} Century.
2. Brief knowledge of Murchhana.
3. Importance of Notation system.

Unit-II

1. Importance of Tanpura and Sahayak Nada
2. Varieties of Gamak
3. Explain the following :- Meend, Bol-Alap, andolan, boltana, Badhat.

Unit-III

1. Brief life sketches of great masters of music and their contributions:

   i) Ustad Amir Khan Sahib
   ii) Ustad Faiyaz Khan Sahib
   iii) Pt. Onkar Nath Thakur

Unit-IV

1. Description and Notations of the prescribed Ragas and Talas :-
   i) To write in notation a drut khyal in any one of the prescribed Raga of the syllabus:- Bihag, Bhimplasi
   ii) To write in notation a vilambit khyal in any prescribed raga of the syllabus.
   iii) To write the notations of Talas: Roopak, Tilwada & Ektaal (Single & Double)
   iv) To write the description of Ragas :- Non detailed: Maru Bihag, patdeep

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1.The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Drut Khayal in each of the following Ragas with Alaps and Tanas: Bihag, Bhimplasi.
2. One vilambit Khayal in any of the detailed ragas prescribed in the course with extempore alaps and tanas.
3. Ability to play Ek taal on Tabla
4. Ability to recite following talas by hand: Tilwada, Roopak
5. Ability to play on Harmonium at least three Alankaras based on komal and Teevra Swaras and sing alongwith it.
6. Ability to recognize the prescribed ragas sung by the examiner
7. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad with Tanpura: Maru Bihag, patdeep.
8. Ability to sing one Drut khayal of your course with harmonium

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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MUSIC (Instrumental)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-III

General Instructions

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. **There should not be more than ten students in a batch for practical examination.**

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent for dealing branch.**

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper A : THEORY (3 Hours duration) **(Duration 45 minutes 06 practical + 02 Theory periods per week)**		:	45 marks
Paper-B: PRACTICAL (20 minutes duration)		:	45 marks
(i) Viva	: 35 marks		
(ii) Harmonium	: 05 marks		
(iii) Tabla	: 05 marks		
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1 Brief knowledge of Gram.
2 Gun and Dosh of Vadak.
3 Historical development of North Indian Music from 13th to 15th Century

Unit–II

1. Gharana of Instrumental Music (definition and importance)
2 Importance of Alap, and its various forms.
3. Knowledge of Avirbhav and Tirobhav, Alaptav- Bahutav

Unit–III

1 Brief life sketches of the great masters of Music and their contributions.
   (i) Ustad Inayat Khan
   (ii) Ustad Allaudin Khan
   (iii) Pt. Vishnu Digambar Paluskar

Unit–IV

Description and Notation of the prescribed Ragas of Syllabus: -

1. To write one Razakhains/Drut Gat (in any prescribed raga of your course with Toras)
2. Description and notation of Raga:- Bihag, Bhimplasi with toda
3. Notation of Ektal and Rupak tala with dugun layakaries
4. Non detailed Ragas: Maru-Bihag, Patdeep

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Razakhani (Drut) Gat in each of the following Ragas with Todas and Jhalas :
   Bihag, Bhimplasi
2. Knowledge of the following Non-detailed Raga: Ability to sing Aroh, Avroh and Pakad : Maru Bihag, Patdeep
3. Use of one swara meend and kan.
4. Ability to play Teevra on Tabla
5. Ability to sing three alankras of Shudh swaras with the help of harmonium.
6. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Ektala, Rupak & Teevra

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

MUSIC (Instrumental)
B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.

2. There would be up to ten students in one section in practical class.

3. There should not be more than ten students in a batch for practical examination.

4. Harmonium can be used while singing Alankars.

5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**

6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.

7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.

8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**			: 45 marks
Paper-B: PRACTICAL (20 minutes duration)			: 45 marks
(i) Viva		: 35 marks	
(ii) Harmonium		: 05 marks	
(iii) Tabla		: 05 marks	
Internal Assessment (Theory + Practical)	(05 +05)		: 10 marks
		Total :	**100 marks**

PAPER-A: THEORY (Duration 45 minutes, 02 Theory periods per week)

Unit-I

1. Historical developments in North Indian Music during 15th to 17th Century.
2. Brief knowledge of Murchhana system
3. Classification of Indian Musical Instruments

Unit-II

1. A Study of Shuddh, Chhaya Lag and Sankiran & Parmel Praveshak Ragas
2. Time theory of Indian Ragas
3. Definitions and explanations of the musical terms (not more than 100 words):-
   Kampan, Meend, Ghaseet, Zamzama, Krintan

Unit–III

1. Brief life sketches of great masters of music and their contributions:
   - i) Ustad Vilayat Khan
   - ii) Ustad Abdul Halim Zafar Khan
   - iii) Smt. Annapurna Devi Ji

Unit–IV

Description and Notation of the prescribed Raga of syllabus :-

- i) To write one Maseetkhani Gat (in any prescribed raga of your course.
- ii) To write the notation of Razakhani/Drut Gat of with Toras: Raga Madhuwanti, Hamir
- iii) To write the notation of Sultal and Dhamar with dugun
- iv) Non-detailed Ragas: Multani, Chhayanat

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carrying 01 marks each.**

PAPER-B PRACTICAL (Duration 45 Minutes, 06 practical periods per week)

1. One Maseetkhani Gat in any raga from your course
2. One Razakhani/ Drut Gat in each of the following Ragas with Todas and Jhalas:- Hamir, Madhuwanti.
3. One Madhya laya gat with alap and todas in any prescribed raga other than teentala.
4. Knowledge of the following Non-detailed Raga: Aroh, Avroh and Pakad : Multani, Chhayanat
5. Use of two swara meend and kan.
6. Ability to play Jhaptala on Tabla
7. Ability to sing three alankars of komal and teevra swaras with the help of harmonium.
8. Ability to demonstrate the following talas by hands in Ekgun and Dugun Layakaries: Dhamar & Sultaal.

Books Recommended:

1.	*Sangeet Visharad*	:	Sangeet Karyalaya, Hathras (U.P.).
2.	*Rag Parichaya Part II*	:	H.C. Srivastav, Sangeet Sadan Prakashan, 134, South Malaka, Allahabad.
3.	*Sangeet Kaumudi Part IV (Punjabi)*	:	S.S. Kareer, published by Punjabi University, Patiala.
4.	*Hamare Sangeet Ratna*	:	Sangeet Karyalaya, Hathras (U.P.).
5.	*Sangeet Sar Part II*	:	Mrs. Veena Mankaran, Raj Publishers (Regd.) Adda Tanda, Jalandhar City.
6.	*Kramik Pustak Malika Part I to IV*	:	Pt. V.N. Bhatkhande, Sangeet Karyalaya, Hathras.
7.	*Rag–Vigyan Part I to VII*	:	Pt. V. Patwardhan.
8.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan
9.	*Sangeet Kala ka Itihas*	:	Panna Lal Madan

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Music (Tabla)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-III. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A : THEORY (3 Hours duration) : 50 marks

Paper-B : PRACTICAL (20 minutes duration) : 50 marks

(i)	Viva	:	35	marks
(ii)	Harmonium	:	05	marks
(iii)	Tabla (Tuning)		05	marks
(iv)	Padhant on Hand	:	05	marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

1. Origin of Tala
2. Classification of musical instruments.
3. Study of Delhi Gharana

UNIT-II

1. Elementary knowledge of the following musical terms (not more than 100 words)
   Mukhda, Tihai, Mohra, Uthan
2. Study of das Pranas of Taal
3. Classification of Taal (Margi & Deshi)

UNIT-III

1. Life sketches and contributions of the following:-
    a. Ustad Amir Hussain Khan
    b. Ustad Bahadur Singh
    c. Abdul Latif Ahmad Khan

UNIT-IV

Detailed Study of the Following Taals :

1. Jhaptaal, Rupak and Sultaal
2. To write the description of Taals of your course
3. To write the notation of Taal in Single, Double, Tigun & Chougun

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.

Paper-B: PRACTICAL

1. Proper Badhat of following Talas on Tabla : Jhaptal, Sultal, Rupak
2. Improvisation of laggi in Keherva
3. Jhaptal- Peshkar, Two Palatas, Two quaida and Two Palatas, One simple Tukra
4. Sultal – Thah, Dugun & Chaugun
5. Practical Knowledge of Khemta Taal
6. Ability to play Nagma on Harmonium in Jhaptal
7. Tuning of Tabla

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras.
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla.
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-I	:	G.C. Srivastava

Music (Tabla)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-IV. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A : THEORY (3 Hours duration) : 50 marks

Paper-B : PRACTICAL (20 minutes duration) : 50 marks

(i)	Viva	:	35	marks
(ii)	Harmonium	:	05	marks
(iii)	Tabla (Tuning)		05	marks
(iv)	Padhant on Hand	:	05	marks

Total : 100 marks

Paper-A : THEORY

UNIT-I

1. Laya and Layakaries
2. Folk Taal instruments of Punjab.
3. Brief description of Pt. V.D. Pulaskar Taal notation system.

UNIT-II

1. Elementary knowledge of the following :

   Rela, Paran, Gat, Kayda, Chakrdar Paran
2. Elementary knowledge of karnatka Taal system
3. Study of Ajarada Gharana

UNIT-III

1. Life sketches and contributions of the following:-
   a. Ustad Habibuddin Khan
   b. Ustad Natthu Khan
   c. Pt. Kanthe Maharaj

UNIT-IV

1. Tivra, Rupak, Aada-Chartaal
2. To write descriptions of Taals of your syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chougun and aad

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

1. Proper Badhat of following Talas on Tabla :Rupak, Tivra, Ada-chartaal.
2. Improvisation of laggi in Dadra
3. Rupak- Peshkar, Two Palatas, One quaida and two Paltas, One Mohra
4. Teental – Two Rela with Two Paltas, Two Charkraddar Paran, One Charkrdaar Tukra
5. Practical Knowledge of Playing above taalas with vocal & instrumental music performance
6. Ability to play Nagma on Harmonium in Rupak
7. Tuning of Tabla

Note:- It is understood that candidate must have knowledge of tala of Semester 3rd also.

Books Recommended:

1.	Taal Prabhakar Prashnottari	:	G.C. Srivastava
2.	Tabla Tarang	:	B.S. Nigam
3.	Taal Prakash	:	Sangeeta Karyalaya, Hathras
4.	Avanaddha Vadya	:	M.P. Sharma
5.	Hamare Sangeet Ratan	:	Sangeet Karyalaya, Hathras.
6.	Tabla ki Utpatti Evam Vikas	:	Yogmaya Shukla.
7.	Tabla Vadan Part-1	:	Jagmohan Sharma
8.	Taal Parichay Part-I	:	G.C. Srivastava

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Music (Indian Classical Dance)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic Instruments will be allowed for lehra in practical examination
5. The candidate can take Dance along with Vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Kasak-Masak, Bhramari, Chari, Stuti
2. Present status of Kathak Dance.
3. Survey of essential characteristics of Manipuri Dance.

Unit-II

1. Life Sketch of Pt. Shambhu Maharaj
2. Importance of Gayan and Vadan in Kathak Dance
3. Guru Shishya Prampra

Unit-III

1. Comparision of Classical and Folk Dance.
2. Folk Dance of Himachal.
3. Brief. Study of Rasa.

Unit-IV

1. Theka and Bol Tatkar in Ekgun,Dugun and Chaugun layakaries of Ada Chautal, Ektaal and Teental
2. Notation of Salami, Amad,Tora and Tihai in Ada Chautaal.
3. Notation of Thaat, Amad, Tora and Paran in Teentaal.
4. Write Nagma in Teental and Adachautaal.
5. Theka and Tatkar of Ektaal in Ekgun, Dugun and Chougun layakaries.

Unit-V

1 The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.

Paper-B : PRACTICAL

I. Ada Chautal:

1.	Theka and Tatkar with Ekgun, Dugun and Chaugun Layakaries.		
2.	Salami	:	1
3.	Tora	:	2
4.	Amad	:	1
5.	Nagma	:	1
6.	Tihai	:	1

II. Teentaal

1.	Tatkar with Ekgun, Dugun and Chaugun Layakaries		
2.	Thaat	:	1
3.	Amad	:	1
4.	Tora	:	2
5.	Paran	:	2
6.	Nagma	:	1

III Ektaal:

a. Theka with Ekgun and Dugun Layakari

2 Tatkar with Ekgun and Dugun Layakari

III. One Gat of Ghunghat

IV. Padhant of above mentioned material on hand in teen taal and Ada chautaal

V. Ability of play Nagma in teentaal

VI. Theka of Ektaal in Ekgun Layakari on hand

VII. Practical Demonstration of Gidha.

Music (Indian Classical Dance)

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

General Instructions:

1. In case of private candidates, there would be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

THEORY (Time duration 3 hours)	:	45 Marks
PRACTICAL (20 minutes duration)	:	45 Marks
Internal Assessment (Theory and Practical) (5+5)	:	10 Marks

Paper-A: THEORY

Unit-I

1. Definition of the following:
   Gati, Paran, Tisrajali Paran, Chatusrajati Paran, Premlu.
2. Brief knowledge of Kathakali.
3. Importance of Ghungroo in Kathak Dance

Unit-II

1. Gharanas of Kathak Dance and their comparison
2. Merits and demerits of Kathak Dance
3. Contribution of Pt. Rajender Gangani ji in the field of Kathak Dance

Unit-III

1. Knowledge of thumri
2. Knowledge of Chhau Nritya.
3. Knowledge of different Instruments used in Kathak Dance.

Unit-IV

1. Notation of Theka and Bol-Tatkar in Ekgun, Dugun and chaugun layakaries in Ada chautaal, Teentaal and Ektaal.
2. Notation of Chakardar Tora Chakardar paran, Kavit, Tihai and Nagma in Teentaal.
3. Write Tihai, Thaat, Paran, Chakardar Paran, Kavit and Nagma.in Ada Chautal
4. Theka of Ektaal in Ekgun, Dugun and Chaugun layakaries with Tihai, Tora and Amad.

Unit-V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL

I. **Adachautal :**

1. Tatkar with Ekgun, Dwigun and Chaugun Layakari
2. Paran : 1
3. Chakardary Paran : 1
4. Thaat : 1
5. Tihai : 1
6. Kavit : 1
7. Nagma : 1

II. **Teentaal :**

1. Tatkar with Ekgun, Dugun, Chaugun and Athgun layakaries.
2. Kavit : 1
3. Chakardar Tora : 1
4. Chakardar Paran : 1
5. Tihai : 1
6. Nagma : 1

III **Ektaal**

a. Amad Tatkar with Ekgun, Dugun and Chaugun Layakari : 1
b. Tora : 1
c. Tihai : 1

IV One Gat Nikas of Mataki
V. Padhant of above mentioned technical terms in teen taal and Ada Chautaal and Ektal on hand
VI. Ability to play Nagma in Ada Chautaal
VII. Theka of Ekgun and Dwigun Layakaries of above mentioned taals.
VIII. Practical Demonstration of a Bhangra steps.

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FINE ARTS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper A : Theory (History of Art) **Max. Marks : 54**

Time : 3 Hours

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions. Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Western Indian Minitaure Painting -- Decorative Designs and Paintings of the 1439 Kalpasutra Manuscript.
- Pre Mughal Paingting -- Chaurapanchashika and Nimat Nama Manuscript Paintings

Unit-II : History of Indian Sculpture

- Gandhara –Fasting Buddha and Mahaparinirvana of Buddha
- Mathura –Portraits of the Kushana Kings.
- Sarnath –Seated Buddha.
- Sultanganj –Bronze Buddha.

Unit-III : History of Western Art

- Early Renaissance : Masaccio-Expulsion; Holy Trinity.
- High Renaissance: Leonardo Da Vinci – Last Supper; Michelangelo—Creation of Adam from the Sistine ceiling; Pieta.
- Northern Renaissance : Durer – Knight, Death and the Devil.

Unit-IV : Definition of Key Terms and General Concepts

- Composition – Volume, Texture, Space, Unity, Harmony, Rhythm, Proportion.
- Six Limbs of Indian Painting.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

	Max. Marks	*Max. Time*
1. Landscape Painting (on the spot)	30	5 hours
2. Life Sketching	30	5 hours
3. Poster & Book Cover Design or Clay Modelling	30	5 hours
	Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

FINE ARTS

SEMESTER-IV

Paper A : Theory (History of Art) **Max. Marks : 54**
Time : 3 Hours

Objectives :
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

INSTRUCTIONS FOR PAPER SETTER AND CANDIDATES:

1. The paper carries **54** marks.
2. The paper-setter is required to **set 9 questions in all**. The candidate is to **attempt 5 questions** as per the instructions given in the question paper.
3. The **first question** shall be of short answer type **containing 12 questions** spread over the whole syllabus. Students are required to **attempt 9 questions**. Each question is to be answered in about 25-30 words. It shall **carry 18 marks** and shall be a **Compulsory** question.
4. **8 questions** are to be set from the entire syllabus consisting of **4 units**. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall **attempt 4 questions** in all out of 8 questions.
   Each question would be of **9 marks**.

Unit-I : History of Indian Painting

- Mughal Paintings of Hamza-Nama ; South Kensington Akbar Nama ; Jahangiri Portraits and illustrations of birds and animals.
- Deccani Paintings –Tarif-i-Hussain-Shahi from Ahmednagar ; Najam-ul-Ulum from Bijapur.

Unit-II : History of Indian Sculpture

- Deogarh –Vishnu Anantashayana.
- Ellora—Ravana Shaking Mount Kailasha.
- Mahabalipuram –Descent of Ganges (Kiratarjuniyam panel).

Unit-III : History of Western Art

- Baroque : Rubens –Garden of Love.
- Neo-Classicism and Romanticism : David –The Death of Socrates; Constable-The Haywain.
- Realism : Courbet –Artist's Studio.

Unit-IV : Definition of Key Terms and General Concepts

- Art and Craft ; Design ; Mosaic ; Tribal Art ; Folk Art ; Piece-mould ; Waste-mould.

Pedagogy : The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings :

1. Kramrisch, Stella : Survey of Painting in the Deccan, Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
4. Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
5. Ray, N.R. : An Approach to Indian Art, Publication Bureau, Panjab University, Chandigarh, 1974.
6. Barrett, D. and Gray, B. : Painting of India, The World Publishing Co., Ohio, 1963.
7. Brown, Percy : Indian Painting under the Mughals, Cosmo Publications, New Delhi, 1981.
8. Aggarwala,V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
9. Aggarwala,V.S. : Indian Art (English), Varanasi, 1965.
10. Aggarwala,V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
11. Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.
12. Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
13. Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
14. Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
15. Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.

Paper–B : PRACTICAL

This paper consists of **three sections** :

	Max. Marks	*Max. Time*
1. Landscape Painting (on the spot)	30	5 hours
2. Life Sketching	30	5 hours
3. Poster & Book Cover Design or Clay Modelling	30	5 hours
	Total : 90 marks	

Note : The paper-setter is required to set papers in all three options in Section-3.

SECTION-I : LANDSCAPE PAINTING (on the spot)

LANDSCAPE PAINTING : To study relationships of objects, their arrangements in the foreground, middle distance and distance, texture, relative size of masses, tones and colours, use of linear and aerial perspective.
Medium : Oil, Water or Pastel colours. **Size** : ½ Imperial.

SECTION-II : LIFE SKETCHING

LIFE SKETCHING : From live Model or Cast-Monochrome in any medium, ½ Imperial Sheet.
Emphasis should be on structure, proportion, foreshortening, textural values, posture and individuality of the model.

SECTION-III : POSTER & BOOK COVER DESIGN OR CLAY MODELLING

POSTER :

Commercial and advertising designing.
Understanding of Colour harmony and contrast.
Imparting understanding of Printing purposes.

BOOK COVER DESIGN :

Concept of Lettering : Block lettering, Roman lettering, Script lettering and free hand brush lettering. To design book cover with illustration and title, author's name etc. in three colours (excluding the background colour)

Medium : Pen & Ink, Poster Colours. **Size :** 25 cms. × 20 cms.

OR

CLAY MODELLING :

To render animal or human forms in clay in relief. Minimum number of three forms to be composed. Size of slab minimum 30 cms × 25 cms. Creative Pottery—Creative Pot making in clay—any size.

SESSIONAL MARKS : 50 (based on work related equally to 3 sections).

Sessional Marks will be given on the basis of the work done during the session, in all the 3 sections. At least three works will be submitted in each section. Sessional marks shall be given by external and internal examiners jointly. In case of difference of opinion, marking may be done separately by each examiner giving marks out of 50 % of the aggregate of the Sessional Marks.

NOTE :
1. Choice of option to be offered would depend on the facility available in each Institution concerned.
2. Minimum of 9 hours' teaching per week be assigned to the subjects and out of nine hours, six hours be earmarked for practical classes and three hours for theory classess (per week).

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HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF INDIAN PAINTING (from ca. 9th century to ca. 1800 A.D.) AND SCULPTURE (from ca. 4th century A.D. to ca. 6th century A.D.)

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I

Development of Miniature Painting :

(a) Eastern Indian.

(b) Western Indian.

Unit-II

Painting under the Mughals :

(a) Akbar.

(b) Jahangir.

(c) Shahjahan.

Unit-III

Indian Miniature Painting :

(a) Rajasthani Schools—Mewar, Bundi, Kishangarh.

(b) Pahari Schools—Basohli, Guler, Kangra.

Unit-IV

Indian Sculpture in the Classical Phase :

Sculpture under the Guptas – Mathura, Sarnath, Deogarh, Ajanta.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Kramrisch, Stella : *Survey of Painting in the Deccan,* Oriental Books Corporation, New Delhi, 1983.
2. Majumdar, R.C. (editor) : *The History and Culture of Indian People, Vols. I, II and III* (Sculpture and Painting Sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
3. Goswamy, B.N. & E. Fischer : *Pahari Masters : Court Painters of Northern India,* Museum Reitberg, Zurich Switzerland, 1992.
4. Khandalvala, Karl : *Pahari Miniature Painting,* The New Book Co. Pvt. Ltd., Bombay, 1958.
5. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
6. Saraswati, S.K. : *A Survey of Indian Sculpture,* Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
7. Barrett, D. and Gray, B. : *Painting of India,* The World Publishing Co., Ohio, 1963.
8. Brown, Percy : *Indian Painting under the Mughals,* Cosmo Publications, New Delhi, 1981.
9. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.

HISTORY OF ART

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-IV

Max. Marks : 100
Time: 3 Hours

Note:

1. Each paper Carries 100 marks.
2. The paper-setter is required to set 9 questions in all. The candidate is to attempt 5 questions as per the instructions given in the question paper.
3. The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry 28 marks and shall be a **Compulsory question.**
4. 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt 4 questions in all out of 8 questions. Each question would be of 18 marks.

HISTORY OF EUROPEAN PAINTING AND SCULPTURE (from 1300 A.D. to ca. 1850 A.D.) and THEORY AND PRINCIPLES OF ART APPRECIATION

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

Unit-I : History of European Painting and Sculpture

(a) Early Renaissance–Masaccio, Donatello.

(b) High Renaissance–Lenoardo Da Vinci, Michelangelo, Raphael, Titian.

Unit-II: Baroque Period

Caravaggio, Rubens, Rembrandt, Bernini, Claude Lorrain.

Unit-III:

(a) Neo-Classicism and Romanticism–David, Ingres, John Constable, W. Turner.

(b) Realism–Courbet.

Unit-IV : Theory and Principles of Art Appreciation

(a) Definition of the term Miniature Painting

(b) Six limbs of Indian Painting (Shadanga) and their manifestations in actual works.

(c) Indian concept of primary colours and their symbolic meaning.

(d) Indian theory of Rasa, Bhava and Beauty.

Pedagogy :
The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings :

1. Janson, H.W. : *History of Art,* Thames & Hudson, London, 2001.
2. Gardener, Helen : *Art Through the Ages,* Harcourt Brace & Co., U.S.A., 1991.
3. Gombrich, E.H. : *The Story of Art,* Phaidon Press Limited, New York, 1995.
4. Turner, Jane (ed.) : *The Dictionary of Art,* Macmillan Publishers Limited, New York, 1996.
5. Aggarwala,V.S. : *Heritage of Indian Art,* Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
6. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
7. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
8. Murray, Peter and Linda Murray : *A Dictionary of Art & Artists,* Penguin Reference Book, Great Britain, 1959.
9. Rowland Benjamin (Jr.) : *Art in East and West,* Beacon Press, Toronto, 1964.
10. Ray, Niharanjan : *An Approach to Indian Art,* Publication Bureau, P.U., Chandigarh, 1974.
11. Majumdar, R.C. (editor) : *The History and Culture of Indian People,* Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.

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ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper-III : HISTORY AND CULTURE OF INDIA FROM 320 A.D. TO 650 A.D.

Max.Marks : 100
Theory : 90 Marks
InternalAssessment : 10 Marks
Time : 3Hour

Objectives :

The main objective of this paper is to make students study the political history and cultural development starting from the Gupta period till the death of Harsha.

Pedagogy of the Course Work :

The students are expected to have an idea of the original sources for the reconstruction of the history of the period. Maps and transparencies should be put to use in class for better understanding by the students.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The paper-setter is required to set **9** questions in all. All questions shall carry equal marks.

2. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** a question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

3. The map question shall have the following topics :
   (a) Extent of Chandragupta II's empire.
   (b) Extent of Harsha's empire.
   (c) Distribution of monuments of the Gupta-Vakataka period.

4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper-setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

5. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (5) in the question paper.

UNIT-I

1. (a) Political condition of Northern India on the eve of the rise of the Guptas.
   (b) Foundation of the Gupta Empire.

2. The Imperial Gupta rulers : Samudragupta: Chandergupta II and Kumargupta

UNIT-II

1. Decline of the Gupta Empire.
2. The Gupta Administration.
3. Cultural and Economic Achievements during the Gupta period.

UNIT-III

1. The Vakatakas of the Deccan.
2. The Huna Invasions and their impact.

UNIT-IV

1. The Aulikaras of Daspura, the Maukharis and the Later Guptas.
2. The Pushyabhutis of Thanesar : Political and Cultural survey.

Essential Readings :

1. Agrawal, Ashvini : *Rise & Fall of the Imperial Guptas,* Motilal Banarsidass, Delhi, 1989.
2. Altekar, A.S. & Majumdar, R.C. : *The Vakataka-Gupta Age,* rpt., Motilal Banarsidass, Delhi, 2006.
3. Goyal, S.R., : *The Imperial Guptas: A Multidisciplinary Political Study,* Kusum-anjali Book World, Jodhpur, 2005
4. Majumdar, R.C. & Dasgupta, K.K. (Eds.) : *The Comprehensive History of India, Vol. III,* Pt. 1, People Publishing House, Delhi 1981, (Chapters Dealing with the Gupta and the Post Gupta History).

Suggested Readings:

1. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003.
2. Mookerji, R.K. : *The Gupta Empire,* Motilal Banarsidass, Delhi, 1989.
3. Thaplyal, K.K. : *The Imperial* Guptas: *A political History*, Aryan Books *International*, New Delhi, 2012
4. Tripathi, R.S. : *History of Ancient India,* rpt., Delhi, 1977.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

Paper-IV : HISTORY AND CULTURE OF INDIA FROM 650 A.D. TO 1200 A.D.

Max.Marks	: 100
Theory	: 90 Marks
InternalAssessment	: 10 Marks
Time	: 3Hours

Objectives :

The primary objective of this paper is to acquaint the students with the historical development in India after the death of Harsha. A detailed study of the various dynasties ruling in the different parts of our country will be taken up.

Pedagogy of the Course Work :

The students should be given an outline of the original sources which help to reconstruct the history of the period. Slides and transparencies should be used in the class room lectures to help the students to comprehend the developments in different fields.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The paper-setter is required to **9** questions in all. All questions shall carry equal marks.

2. The first question shall be of short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each short answer type question shall be of 2 marks **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.

3. The map question shall have the following topics :
   (a) Extent of Pratihara Empire.
   (b) Distribution of Temples—Lingaraja, Konark, Jagannath, Kandariya Mahadev, Parsvanath, Lakshman, Osian and Mahabalipuram.
   (c) Important Centres of Education—Nalanda, Ujjain, Pushpagiri and Nagarjunakonda.

4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. The paper- setter shall set 2 questions from each unit and the candidate shall be given internal choice i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.

5. For Private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper-setter must put note (5) in the question paper.

UNIT-I :

1. Pratiharas
2. Palas

UNIT-II :

1. Paramaras
2. Chahamanas

UNIT-III :

1. Gahadavalas
2. Chandellas

UNIT-IV :

1. Rashtrakutas
2. Cholas.

Essential Readings :

1. Altekar, A.S. : *Rastrakutas and Their Times,* 2nd ed. Oriental Book Agency, Poona, 1967.
2. Bhatia, Pratipal : *The Paramaras,* Munshiram Manoharlal, New Delhi, 1970.
3. Chakravarti, Ranbir : *Exploring Early India upto C. AD 1300,* Machmillan, 2010
4. Majumdar, R.C. : *Ancient India,* rpt., Manohar, Delhi, 2003
5. Majumdar, R.C. : *History & Culture of Indian People,* Vol. IV, *The Age of Imperial Kanauj,* Bhartiya Vidya Bhawan, Bombay, 1955 (Relevant Chapters) Vol. V, *The Struggle for Empire,* Bombay 1957 (Relevant Chapters).

Suggested Readings :

1. Puri, B.N. : *The History of the Gurjara-Pratiharas, Manohar,* Delhi, 1986.
2. Ray, H.C. : *Dynastic History of India,* 2 Vols, Calcutta 1931,1936.
3. Sastri, K.A.N. : *A History of South India, 4th ed.* Oxford University Press, Madras, 1976.
4. Tripathi, R.S. : *History of Kanauj to the Muslim Conquest, 4th ed.,* Motilal Banarsidass, Delhi, 1989.

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DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE IN INDIA

M. Marks : 70
Time : 3 Hrs.

Objective :

This paper deals with the salient features of Indian warfare with emphasis on Military Organization, Battle techniques and Leadership.

SECTION-I

1. Battle of Hydaspes and Alexander's Art of War.
2. Kautilya's Philosophy of War.

SECTION-II

3. Military Organizations and Battle Techniques of Rajputs and Turks with particular reference to Battle of Tarrain, 1192 A.D.
4. Military Organizations and Battle Techniques of Mughals and Afghans with particular reference to First Battle of Panipat, 1526 A.D.

SECTION-III

5. Battle techniques of Southern Muslim Sultans with particular reference to Battle of Talikota, 1565 A.D.
6. Military Organization and Battle Techniques of Marathas under Shivaji.

SECTION-IV

1. Military organization and Battle Techniques of Sikh Army under Maharaja Ranjit Singh.
2. Warfare under East India Company with particular reference to Battle of Assaye 1803 A.D. and Chilianwala 1849 A.D.
3. Indian Armed Forces 1858 to 1947: General Evolution and Development (A Broad Perspective).

Books Recommended :

1. Bajwa, F.S., The Military Systems of Sikhs, Motilal Banarsidas Delhi, 1964.
2. Dass, S.T., An Introduction to the Art of War, Sagar Publications, Delhi, 1970.
3. Erskin, Memories of Babur, Biblio Bazaar, 2012.
4. JFC, Fuller, Generalship of Alexander, The Great, Eyre and Spottiswoode, 1958.
5. Kangle, K.P., Kautilya's Arthshastra, Motilal Banarsidas Publishers Pvt. Ltd., Delhi, 1986.
6. Majumdar, B.K., Military Systems in Ancient India, Firma K.L. Mukopadhayay Publishers, Delhi, 1960.
7. Mallesan, Decisive Battle of India, Read Books Design, 2010.
8. Nath, Rajendra, Military Leadership in India, Vedic Period to Indo-Pak Wars, Lancers Books, California, 1990.
9. Sarkar, J.N., Military History of India, Orient Longmans, Virginia, 1960.
10. Sen., S.N., Military System of the Marathas, Orient Longmans, Michigan, 1958.
11. Sharma, Gautam, Indian Army through the Ages, Allied Publishers, University of Michigan, 1966.
12. Singh, Gurcharan, Battles of Panipat, Army Educational Stores, 1966.
13. William, Irvin, Army of the Indian Mughals, Low Price Publishers, 1994.

Paper: **PRACTICAL**

Max. Marks : 20
Time: 1 hrs

Note:

1. There will be of 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION-A Practical Test

Marks : 10

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Bearing: Definition, Types and Inter conversion of Bearing in detail.
2. Liquid Prismatic Compass: Features and Funcitons of its various parts.
3. Determination of Individual Compass Error

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva Voce Marks : 5

DEFENCE & STRATEGIC STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS

Note : 1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question form each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular and correspondence students.. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper : EVOLUTION OF WARFARE

M. Marks : 70
Time : 3 Hours

SECTION-I

1. Military Organizations and Battle techniques of Macedonians and Persians with particular reference to Battles of Arbella, 331 B.C.
2. Military Organization and Battle Technique of Romans and Carthagenians with particular reference to the Battles of Cannae, 216 B.C.
3. Military Organizations and Battle Techniques of Barbarians with particular reference to Battle of Adrianople, 378 A.D.

SECTION-II

4. Military Organizations and Battle Techniques of the English and French with reference to the Battle of Hastings, 1066 A.D.
5. The Mongol Art of War under Changez Khan and his successors.

SECTION-III

6. Industrial revolution and its Impact on Weapons, Communications and Tactics.
7. Elements and Principles of Napoleonic Warfare.

SECTION-IV

8. Naval Warfare with particular reference to the Battle of Trafalgar, 1805.
9. American Civil War (1861-65) : Causes and Events.

Books Recommended :

1. Barrie and Rackett, The Ancient Art of War Vols. I & II., Barrie and Rockliff, 1957.
2. Bullock, H., Military History of the Western World,Vol. 1, Da Capo Press, 1978.
3. Fuller, JFC, Armament and History, Da Capo Press, New York, 1998.
4. Fuller, JFC, Conduct of War, Eyre & Spottiswoode (Publisher) Ltd., Great Britain, 1962.
5. Fuller, JFC, Machine Warfare, the Infantry Journal, University of Michigan, 1943.
6. Fuller, JFC, Military History of the Western World, Da Capo Press, New York, 1987.
7. Montgomery, F.M., A History of Warfare, World Publication Co. The University of Michigan, 1968.
8. Montress, L., War through the Ages, Harper & Brothers, Indiana University, New York, 1987.

Paper : PRACTICAL

Max. Marks : 20

Time : 1 hrs

Note:

1. There will be 3 hours of teaching per week for practical.For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A : Practical Test

Note:

1. There will be three questions in all carrying five marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course contents for practical

1. Setting of Map: With Compass and without Compass.
2. Marching by Compass: To set the Compas in a particular direction for Night March.
3. Finding position on the Maps: Determine One's and Enemy's position on the Map by Resection and Intersection method.

SECTION-B

Marks : 10

1. Practical Record Marks : 5
2. Viva-Voce Marks : 5

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HISTORY

SEMESTER-III

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

The paper-setter must put note (iii) in the question paper.

Explanation:

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under :
   Map : 10 marks
   Explanatory Note : 08 marks

   Note: In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 05 places on map of 02 mark each and write explanatory note on any 04 of 02 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper : HISTORY OF INDIA, 1750-1964 A.D.

Max. Marks	: 100
Theory	: 90
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objectives: To introduce the students to the broad developments in the history of India in Modern times.

Pedagogy : Lectures, library work and discussions.

UNIT-I

1. Foundation of British Rule: Circumstances leading to the battles of Plassey and Buxar and their significance; Reforms of Warren Hastings.
2. Administrative Reforms: Reforms of Cornwallis; William Bentinck and Dalhousie.
3. The Uprising of 1857: Political, socio-religious, economic and immediate causes; failure; results.

UNIT-II

4. Economic Changes and Response: British Agrarian policies and commercialization of agriculture; rural indebtedness; Tribal and Peasant Uprisings w.r.t. Santhal, Bhil, Munda Rebellions.
5. Socio-Religious Reform Movements: Brahmo Samaj; Arya Samaj; Ramakrishna Mission; Aligarh Movement.
6. Depressed Classes Movement: Contribution of Jyotiba Phule; Dr.B.R. Ambedkar and Mahatma Gandhi.

UNIT-III

7. Growth of Political Consciousness: Foundation and growth of the Indian National Congress from 1885-1905; Growth of Nationalism 1905-1919
8. Indian National Movement: Circumstances leading to the Non-Cooperation Movement 1920-22; the Civil Disobedience Movement.
9. Rise of Communal Politics: Factors responsible for the growth of communal politics; Separate electorate; Muslim League and Pakistan Resolution.

UNIT-IV

10. Towards Partition and Independence: Quit India Movement; British proposals for independence; Indian Independence Act of 1947.
11. Significant Developments after Independence,1947- 64 : Making of the constitution; integration of princely states; the reorganisation of states.
12. Map:
    (a) Important Historical Places – Delhi, Calcutta, Madras, Bombay, Goa, Surat, Plassey, Buxar, Gwalior, Jhansi, Hyderabad, Sabarmati, Amritsar, Lucknow, Lahore and Aligarh.
    (b) Extent of the British Empire in 1856.
    (c) Republic of India in 1950.

Specimen Map for Examination:

Reading List:

Abdul Kalam Azad, *Azadi Ki Kahani* (Hindi Medium), Delhi: Orient Black Swan, 2007.

Bandyopadhyay, Sekhar, *From Plassey to Partition: A History of Modern India,* Delhi Orient Black Swan, 2007 (Also available in Hindi Medium).

Chandra, Bipin, *History of Modern India*, Hyderabad: Orient Blacksman, 2009.

Chandra, Bipan, *Communalism in Modern India,* Delhi: Vikas Publishers, 1987.

Chandra, Bipan *et al., India's Struggle for Independence, 1875-1947,* Delhi: Viking/Penguin Books,1989.

Chandra, Bipan, *Aitihasik Sangharsh – EPIC Struggle* (Hindi Medium), Delhi: Orient Black Swan, 2007.

Desai, A R, *Social Background of Indian Nationalism*, Punjabi University, Patiala: Publication Bureau, 2005 (Punjabi).

Nanda, B.R., *Making of a Nation: India's Road to Independence,* New Delhi: Harper-Collins, 1998.

Gopal,S, *British Policy in India*, Punjabi University, Patiala: Publication Bureau, 2011.

Sarkar, Sumit, *Modern India, 1885-1947*, New Delhi: Mcmillan, 2014.

HISTORY

SEMESTER-IV

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third to one half of a topic detailed in the syllabus.

2. The distribution of marks for the map question would be as under :
   Map : 10 marks
   Explanatory Note : 08 marks

   Note: In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 05 places on map of 02 mark each and write explanatory note on any 04 of 02 marks each.
3. The paper-setter would avoid repetition between different types of questions within one question paper.

Paper: HISTORY OF THE PUNJAB, 1469-1966 A.D.

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objectives: To introduce the students to the broad developments in the history of the Punjab from the mid 15th to the mid 19th century i.e. the medieval period
Pedagogy: Lectures, library work and discussions.

UNIT-I

1. Foundation of Sikhism: Life and teachings of Guru Nanak Dev; Contribution of Guru Angad and Guru Amar Das for the development of Sikhism.
2. Consolidation of Sikhism: Guru Ram Das and Guru Arjun Dev; Compilation of Adi Granth; Causes and Significance of Martyrdom Guru Arjun Dev.
3. Transformation of Sikhism: Guru Hargobind's new policy; Causes and Significance of Martyrdom of Guru Teg Bahadur; Creation of Khalsa by Guru Gobind and its significance.

UNIT-II

4. Sikh Struggle in the 18th century: Establishment of Independent Rule by Banda Singh Bahadur; Sikh misls, Dal Khalsa and Gurmata.
5. Punjab under Ranjit Singh: Civil, Military and Revenue Administration; Anglo-Sikh relations up to 1839.
7. Modern Punjab: Anglo-Sikh Wars and annexation; New Administrative Structure, 1849-1857.

UNIT-III

8. New British Policies: Education; Irrigation; Transport and Communication.
9. Socio-Religious Reform Movements: Nirankaris; Namdharis; Ad-dharm; Singh Sabha and Ahmediyas.
10. Political Awakening: Agitation of 1907; Gadhar Movement.

UNIT-IV

11. Growth of Political Consciousness: Jallianwala Bagh; Bhagat Singh; Gurudwara Reform Movement.
12. Developments from 1947-1966: Circumstances leading to Partition and Rehabilitation; Demand for Punjab Suba.

13. **MAP**:

Important Historical Places - Anandpur Sahib, Goindwal, Khadur Sahib, Hargobindpur, Kartarpur, Nankana Sahib, Lahore, Mukhlispur, Qadian, Ropar, Amritsar, Lyallpur, Montgomery, Sargodha, Machhiwara, Jaito.

Specimen Map for Examination:

Reading List:

Banerjee, I.B., *Evolution of the Khalsa,* 2 Vols, Calcutta: A Mukherjee & Co., 1979 (2nd edn.).

Banga, Indu (ed.), *Five Punjabi Centuries: Polity, Economy, Society and Culture c. 1500-1900,* New Delhi: Manohar, 1997.

Chopra P.N., B.N. Puri and M.N. Das, *A Social, Cultural & Economic History of India,* Vol. III, Macmillan, Delhi, 1974.

Fauja Singh, *State and Society under Maharaja Ranjit Singh,*Master Publishers,Delhi.

----------, *Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.

Grewal, J.S., *The Sikhs of the Punjab: The New Cambridge History of India,* New Delhi: Cambridge University Press, 1999 (2nd edn.).

----------, *The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.

Gupta Monica Das, T.N. Krishna & Lincon C. Chen, *Women's Health in India, Risk and Vulnerability, Oxford, OUP, 1998.*

Johar R.S. and J.S Khanna, *Studies in Punjab Economy,* GNDU, Amritsar, 1983.

Khushwant Singh*, A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi, 1991.

McLeod, W.H., *Sikhs and Sikhism,* New Delhi: Oxford University Press, 2000.

Satya, M. Rai*, Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.

Sinha, N.K., *Rise of the Sikh Power,* Calcutta, A Mukherjee & Co., 1973

Teja Singh and Ganda Singh, *A Short History of the Sikhs, 1469-1765* ,Vol.I, Patiala : Punjabi University, 1983.

Yadav K.C.and S.M. Fogat, *Haryana Aitihasik Simhavalokan* (Hindi), Haryana Sahitya Akademy, Chandigarh, 1991.

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POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

INDIAN GOVERNMENT AND POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives: This paper provides students with a basic knowledge of the fundamental elements and institutions of government, politics and processes in India at both the centre and state levels.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Basic Features of Indian Constitution.
2. Preamble and its perceptions.
3. Indian Federalism- Meaning & its features.
4. Centre State Relations (Legislative, Administrative & Financial)

Unit-II

1. Fundamental Rights (Art14-Art 32)- Meaning, Explanation, Criticism & Importance.
2. Fundamental Duties- Meaning, Explanation, Evaluation (Criticism & Importance).
3. Directive Principals of State Policy (Art 36- Art 51)- Liberal, Socialist, International, Gandhian- Meaning, Explanation, Sanctions, Criticism & Importance

Unit-III

1. President : Election, powers, position and changing role.
2. Parliament : Composition, powers and role.
3. Cabinet –
   a) Parliamentary features
   b) Prime Minister : Election, powers, position and changing role.
4. Supreme Court : Composition, powers & Judicial Review.

Unit-IV

1. Governor : Appointment, powers and role.
2. State Legislature : Composition, powers and role of Legislative Assembly/Vidhan Sabha.
3. Council of Ministers and Chief Minister : Election, powers, position and role.
4. High Court : Composition, powers and its role.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.
20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.
21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.
22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.
23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.
24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.
25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.
26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

POLITICAL SCIENCE

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

INDIAN POLITICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours.

Objectives :

The aim of this paper is to enrich the student's understanding of the working of the Indian political system with reference to political parties, the party system, elections and voting behaviour. Units III and IV of the paper examine in detail certain key issues and debates in contemporary India.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units :*

There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

1. Nature of party system in India : A critical evaluation.
2. National Political Parties [Indian National Congress, BJP, CPI, CPI(M), BSP] : Ideology, Policy and Programmes
3. Regional Political Parties (SAD, DMK, AIDMK) : Ideology, Policy and Programmes.

Unit-II

1. The Election Commission : A critical evaluation and electoral reforms in India.
2. Pressure Groups in Indian Politics- Types & Role
3. Voting Behaviour in India – its Determinants.

Unit-III

1. Emerging Trends in Indian Politics.
2. Role of Caste, Religion in Indian Politics.
3. Regionalism in Indian Politics-its causes & impact.

Unit-IV

1. Basic principles and determinants of Indian Foreign Policy.
2. Non-alignment : Meaning and Nature.
3. Non-alignment Movement- its Relevance.

Books Recommended :

1. Rajiv Sikri, *Challenge and Strategy : Rethinking India's Foreign Policy,* Sage Publications, New Delhi, 2009.
2. S.D. Muni, *India's Foreign Policy : The Democracy Dimension,* Foundation Books, Cambridge University Press India, New Delhi, 2009.
3. Sumit Ganguly (ed.), *India's Foreign Policy : Retrospect and Prospect,* OUP, 2009.
4. F.R. Frankel, *India's Political Economy 1947-2004 : The Gradual Revolution,* Oxford, Oxford University Press, 2005.
5. C. Raja Mohan, *Crossing the Rubicon : The Shaping of India's New Foreign Policy,* Palgrave Macmillan, 2004.
6. Zoya Hasan, E. Sridharan and R. Sudarshan (ed.), *India's Living Constitution : Ideas*, *Practices*, *Controversies,* Permanent Black, New Delhi, 2004.
7. Zoya Hasan, *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
8. Niraja Gopal Jayal (ed.), *Democracy in India*, Oxford University Press, Delhi, 2001.
9. A.G. Noorani, *Constitutional Questions in India*, Oxford University Press, 2000.
10. G. Austin, *Working a Democratic Constitution : A History of the Indian Experience,* New Delhi, Oxford University Press, 1999.
11. Partha Chatterjee (ed.), *State and Politics in India*, Oxford University Press, 1999.
12. M.V. Pylee, *An Introduction to the Constitution of India*, New Delhi, Vikas, 1998.
13. C.P. Bhambri, *The Indian State Fifty Years,* New Delhi, Shipra, 1997.
14. P. Brass, *Ethnic Groups and the State*, London, Croom Helm, 1995.
15. D.D. Basu, *An Introduction to the Constitution of India*, New Delhi, Prentice Hall, 1994.
16. P. Brass, *Politics of India Since Independence,* Hyderabad, Orient Longman, 1990.
17. R. Kothari, *State Against Democracy : In Search of Human Governance*, Delhi, Ajanta, 1988.
18. P. Brass, *Caste, Faction and Party in Indian Politics, Vol. II :* Election Studies, Delhi, Chanakya Publications, 1985.
19. B.L. Fadia, *State Politics in India, Vol. II,* New Delhi, Radiant Publishers, 1984.

20. M.V. Pylee, *Constitutional Government in India,* Bombay, Asia Publishing House, 1977.

21. P. Brass, *Language, Religion and Politics in North India*, London, Cambridge University Press, 1974.

22. R. Kothari, *Politics in India*, New Delhi, Orient Longman, 1970.

23. R. Kothari, *Party System and Election Studies,* Bombay, Asia Publishing House, 1967.

24. Iqbal Narain (ed.), *State Politics in India*, Meerut, Meenakshi Parkashan, 1967.

25. S.P. Verma, and C.P. Bhambri (ed.), *Election and Politics Consciousness in India,* Meerut, Meenakshi Parkashan, 1967.

26. G. Austin, *The Indian Constitution : Corner Stone of a Nation*, Oxford, Oxford University Press, 1966.

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ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper : PUBLIC FINANCE AND INTERNATIONAL ECONOMICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective : The primary course objective is to introduce the students to the basics of public finance and international trade. The first two units aim to introduce students to the primary functions of government to generate resources from the people and to spend money improving their lives. The last two units are concerned with basic theories of international trade and commercial policies, balance of payments, determination of exchange rates and role of international financial institutions.

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) *The syllabus has been divided into four units.*

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Introduction to Public Finance : Nature, Scope and its Importance.

Public Expenditure: Canons, Principle of Maximum Social Advantage, Wagner's Law, Wiseman Peacock Hypothesis. Causes for the Recent Growth of Public Expenditure in India.

Taxation : Classification and Canons, Characteristics of a Good Tax System.

Unit-II

Incidence and Impact of Taxation : Demand and Supply Theory.
Taxable Capacity : Absolute and Relative Capacity, Determinants of Taxable Capacity.
Public Debt : Its types and Role, Burden of debt and Methods of its Redemption.
Deficit Financing : Objectives and Limitations.

Unit-III

Pure Theory of International Trade : Classical and Heckscher - Ohlin Theories, The Theory of Reciprocal Demand.

Terms of Trade : Concept and Types

Commercial Policy : Free Trade Vs. Protection, Regional Blocks: ASEAN, SAFTA Problems and prospects. Impact of W.T.O. on Less Developed Countries.

Unit-IV

Balance of Payments: Meaning, Concept and Components of Balance of Payments. Disequilibrium in the Balance of Payments : Causes and Measures to corret the disequilibrium

Exchange Rate : Meaning and its Determination, Fixed Vs. Flexible Rate of Exchange and Purchasing Power Parity Theory.

IMF and IBRD : Objectives, Working and Achievements.

Recommended Readings :

1. Musgrave, A.R. & Musgrave, P.B. (2011) : *Public Finance in Theory and Practice,* McGraw Hills, International Students' Edition.
2. Kindleberger, C.P. (1987) : *International Economics,* Richard Irwin Homewood, Illiois, Indian Edition
3. Sharma, O.P. (latest edition) : *Sarvjnik Vit,* Punjabi University, Patiala.
4. Ghuman, Ranjit Singh (latest edition) : *Antar-Rashtriya Arth Vigyan,* Punjabi University, Patiala.
5. Soderston B.O. (1994) : *International Economics,* McMillan Press Ltd.

Supplementary Reading :

1. Bhatia, H.L. (2008) : *Public Finance*, Vikas Publishing House Pvt. Ltd.
2. Dalton, H. (1978) : *Principles of Public Finance,* Routledge and Kegan Paul, London.
3. Tyagi, B.P. (1994) : *Public Finance,* Jai Prakash Math & Co, Meerut.

ECONOMICS

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

Semester-IV

Paper : QUANTITATIVE METHODS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objective :

The objective of the course is to train the students in the use of basic mathematical and statistical tools in analyzing various economic phenomenons. It deals with the design of how data is presented, the analysis of the data, and the drawing of conclusions from the data. The course aims to improve decision-making accuracy of the students and enabling them to test new ideas.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

1. There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 09 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.
2. Use of simple calculator is allowed.
3. The paper setter may in general stick to the distribution of marks of 1/3 to theory and 2/3 to numericals.

Unit-I

Elementary Idea of Sets and Functions : Simple and Partial Derivatives, Differentiation of Simple functions – Polynomial (x) and Exponential functions. Maxima and Minima of functions of one variable only. Their Applications of Micro and Macro Economics.

Unit-II

Matrices : Definition and Types, Operations (Sum, Difference, Product and Transpose), Adjoint and Inverse of a matrix (upto 3 · 3), Solution of Equations (upto 3) by Matrix Methods and Crammer's rule.
Measures of Central Tendency : Mean, Median, Partition Values, Mode, Measures of Dispersion, Skewness.

Unit-III

Correlation Analysis—Karl Pearson's (except grouped data) and Spearman's formula, Simple Regression Analysis.
Interpolation – Binomial, Expansion, Newton's (Advancing Difference Method) and Lagrange's Method.

Unit-IV

Index Numbers : Concepts, Problems and Importance, Simple Index Number, Lespeyre's and Fisher's Index Numbers only (among weighted index numbers), Reversibility Tests.
Time Series Analysis : Components of Time Series, Determination of Trend, Least Square and Moving Average Method.

Books Recommended

1.	Archibald, G. C. and Lipsey, R. G. (1977)	:	*An Introduction to a Mathematical Treatment of Economics,* English Language Book Society, Weidenfeld and Nicolson.
2.	Gupta, S.C. (1992)	:	Fundamentals of Statics, Mumbai, Himalaya Publishing House.
3.	Kandoi, Balwant (2011)	:	Mathematics for Business and Economics with Applications, in 2 Vol., Himalaya, Mumbai.
4.	Sanchati, D. C. & Kapoor, V. K. (1987)	:	*Business Mathematics,* Sultan Chand & Sons, New Delhi.
5.	Yamane, Taro (1972)	:	Economists, Prentice Hall, New Delhi.

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

SOCIAL STRUCTURE AND SOCIAL CHANGE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective :

This paper basically introduces students both to conceptual and some theoretical understanding of social structure and social change. Students are introduced to characteristics and elements of social structure and to understand the meaning, process and factors of social change.

Course Content

Unit-I

Social Structure : Meaning, Characteristics, Elements – Status, Role, Power and Prestige. Norms and Values.

Unit-II

Social Change : Meaning and Features.
Types of Social Change : Evolution (Comte), Revolution (Marx), Development – Changing Connotations.

Unit-III

Factors of Social Change: Economic, Demographic, Education, Legislative, Scientific and Technological

Unit-IV

Processes of Social Change : Sanskritization, Westernization, Modernization and Secularization, Globalization and its impact on Society.

Essential Readings :

1. Bierstedt, Robert (1970) : *Social Order,* New York : McGraw Hill.
2. Haferkand, H. and Smelser, N.J. (1992) : *Social Change and Modernity,* Berkeley : University of California Press.
3. Macionis, John, J. (2005) : *Society : The Basics,* New York : Prentice Hall.
4. Madhurima (2016) : *Readings in Sociology – Semester-II,* Jalandhar : New Academic Publishing House (All Mediums).
5. Moore, Wilbert (2004) : *Social Change*, New Delhi, Prentice Hall.
6. Singh, Yogendra (1993) : *Social Change in India,* New Delhi : Haranand Publications.
7. Srinivas, M.N. (1963) : *Social Change in Modern India,* Berkeley : University of California Press.

Further Readings :

1. Radcliffe-Brown, A.R. (1979) : *Structure and Function in Primitive Society*, London : Routledge and Kegan paul.
2. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
3. Talcott, Parsons (1959) : *Social System*, London : Tavistock Publications.
4. Singh, Yogendra (1996) : "Sociology and the Emerging Challenge of Change", *Sociological Bulletin,* Volume 45, No. 1, March, Page 1-14.
5. Singer, M. (1972) : *When a Great Tradition Modernizes : An Anthropological Approach to Indian Civilization,* New York : Praeger Publishers.
6. Yogendra Singh, (2008) : Social Change in India, New Delhi, Har Anand Publications
7. Srinivas, M.N., (2011) : Social Change in Modern India, Hyderabad, Orient Black Swan
8. Kuppu (Swamy, B, 2001) : Social Change in India, Delhi, Konark

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SOCIOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER IV

SOCIAL INSTITUTIONS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

(i) For written paper, the students will be required to attempt five questions in all. Question No. I will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt 9 short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted for each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective:

In this paper, social institution as a concept is introduced to the students. Study of various institutions which are foundations of human society, will help students to look at society in an objective and analytical way.

Course Work

Unit-I

Institutions – Meaning, Features; Normative and Relational aspects of Institutions.
Types – Social, Political, Economic and Cultural.
Difference of Institutions with Society Community and Association

Unit-II

Social Institutions :
Marriage –Types : Monogamy and Polygamy; Rules of Mate Selection, Contemporary Trends.
Family – Meaning, Types, Structure, Function; Development Cycle and Changing Trends.
Kinship – Meaning, Significance and a Brief Understanding of Incest, Consanguinity, Affinity, Clan, Lineage, Contemporary Trends.

Unit-III

Political Institutions – State, Government and Political Parties – Features and Functions.
Economic Institutions – Features and Functions, Property, Division of Labour (Emile Durkheim).

Unit-IV

Cultural Institutions – Religion : Meaning elements, Types, Functions (Emile Durkheim & Max Weber),Dysfunctions

Essential Readings :

1. Christensen, H.(ed.) (1964) : *Handbook of Marriage & Family,* New Delhi: Allyn and Bacon.
2. Fox, Robin (1967) : *Kinship and Marriage : An Anthropological Perspective; Baltimore : Penguin Books.*
3. Giddens, Anthony (2013) : *Sociology : A Text Book for the Nineties,* London : Polity.
4. Haralambos, M. (1998) : *Sociology : Themes and Perspectives,* New Delhi : Oxford University Press.
5. Johnson, Harry, M. (1998) : *Sociology : A Systematic Introduction*, Delhi : Allied Publishers.
6. Macionis, John J. (2005) : *Society : The Basics,* New York : Prentice Hall.
7. Giddens, Anthony & Sutton W. Philip (2010) : *Sociology : Introductory Readings,* U.K.: Polity Press.
8. Schacfer, Richard, T.(2010) : *Sociology : A Brief Introductions,* N.Y.: Tata McGraw Hill.

Further Readings :

1. K.M. Kapadia (1996) : *Marriage & Family in India, Delhi, Oxford University Press*
2. Bronislaw Malinowski (1944) : *A Scientific Theory of Culture & other Essay (ed.) Huntington Cairns, C Hapel Hall,* The University of North Caroliva Press.
3. Particia Uberoi (1997) : *Family, Kinship & Marriage in India, New Delhi, Oxford University Press*
4. Max Weber (1968) : *The Protestant Ethic and the Spirit of Capitalism-R.H. Tawney (ed.) Unvwin University, Book London.*
5. Radcliff Brown, A.R. (1979) : *Structure and Functions in Primitive Society, London: Routledge and Kegan Paul.*
6. Madan, T.N.(2002) : *Religion in India, Delhi-Oxfored UniversityPress,Atal,yogesh,2012,Sociology,Delhi ;Pearson*
7. Marlom bos & Holborn,(2016) : *Cociology Themes and perspectives,London, Collins*
8. Madan, T.N.,(2001) : *Family and Kinship,New Delhi, Oxford University Press*
9. Froer, Peggy,(2010) : *Religious Divisions and Social Conflict,New Delhi, Esha Beteille*

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PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER – III

PAPER : PERSONNEL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of public personnel administration particularly recruitment, training and promotion. Contemporary issues like grievance redressal machinery, corruption, morale etc. concerning administration of human resources in government will also be examined.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

For Private/University School of Open Learning (USOL) students who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.
The Paper-Setter must put note in question paper in this regard.

The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Personnel Administration – Meaning and Significance.
Bureaucracy: Meaning, Characteristics, Demerits and Remedies.
Civil Service: Meaning, Features and Role.
Position and Rank Classification Systems: Significance and Features

Unit-II

Recruitment: Meaning, Methods and Problems.
Recruitment System of Higher Civil Services in India.
UPSC: Composition, Functions and Role.
SPSC: Composition, Functions and Role.

Unit-III

Training – Meaning, Types, Methods, Training of Higher Civil Services in India.
Conduct, Discipline and Ethics in Public Services.
Promotion: Meaning, Significance and Principles.

Unit-IV

Morale, Causes of Low Morale and Measures for Improvement.
Corruption in Administration - Causes and Remedies.
Administrative Tribunals: Meaning, Types, Advantages and Disadvantages.

Essential Readings :

Davar , R.S.(1976). *Personnel Management and Industrial Relations* . NewDelhi : Vikas Publishers.

Goel, S.L.(2008).*Public Personnel Administration* . New Delhi : Sterling Publishers.

Stahl,O.G.(1975).*Public Personnel Administration.* New Delhi : Oxford and IBH Publications.

Tyagi, A.R.(2001).*Public Administration: Principles and Practice* .Delhi: Atma Ram and Sons Publishers.

Further Readings :

Government of India, Administrative Reforms Commission(1967). *Report on Personnel Administration.* New Delhi : Manager of Publications.

Government of India, 2nd Administrative Reforms Commission.(2010) *10th Report :Refurbishing of Personal Administration – Scaling New Heights.* New Delhi : Manager of Publications.

Indian Institute of Public Administration(1970). *Personnel Adminstration*.New Delhi : IIPA.

Paul Pigors and C.A. Myers(1973). *Personnel Administration : A Point of View and Method.*

New York:McGraw Hill.

Sinha , V.M. (1986).*Personnel Administration.* Jaipur : RBSA.

PUBLIC ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

PAPER : FINANCIAL ADMINISTRATION (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objectives of the Paper:

The objective of this paper is to give the student an in-depth understanding of various aspects of financial administration like budgeting, auditing, centre-state financial relations etc. It would also make them aware of: institutions like ministry of finance, union finance commission, parliamentary committees; and concepts like direct taxes, indirect taxes, deficit financing, public debt.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Financial Administration: Meaning and Significance .
Aspects of Public Finance.
Budget: Meaning, Types and Principles.
Budget: Preparation and Enactment.

Unit-II

Union Ministry of Finance: Organisation, Functions and Role.
Centre-State Financial Relations.
Union Finance Commission: Composition and Functions.

Unit-III

Audit: Concept, Objectives and Types.
Comptroller and Auditor General of India(CAGI) : Appointment, Functions and Role.
Concepts: Deficit Financing, Fiscal Deficit, Public Debt and Public Expenditure.

Unit-IV

Legislative Control over Finance.
Public Accounts Committee:Composition, Functions and Role.
Estimates Committee:Composition, Functions and Role.

Essential Readings

Goel,S.L.,(1993).*Financial Management and Administration.* New Delhi: Sterling Publication.

Lall,G.S..*Financial Administration in India* .Delhi: H.P.J.Kapoor, 4th ed.

Mookerjee ,S.S. *Indian Public Finance and Financial Administration* . New Delhi.

S.Sahib and S.Swinder.(2016)*Public Personnel and Financial Administration* Jalandhar: New Academic Publishers Co.

Thavaraj,M.J.K.(1978).*Financial Administration of India* . New Delhi: Sultan Chand Publications.

Further Readings

Government of India, 2nd ARC .14th Report-*Strengthening Financial Management System.*

Government of India,Administrative Reforms Commission.(1967). *Report on Financial Administration*. New Delhi : Manager of Publications.

Government of India,Administrative Reforms Commission. *Report on Financial Accounts and Audit* (1967). New Delhi.

Government of India,Administrative Reforms Commission(1967).*Report on Centre-State Relations*. New Delhi : Manager of Publications.

Mahajan S. and Mahajan,A.(2014). *Financial Administration in India*. Delhi : PHI Learning Private Limited.
Sinha, R.K.(1986). *Centre-State Financial Relations in India: Various Aspects, Irritants, Framework for Action* .New Delhi: Deep & Deep Publications.

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

Outlines of tests, syllabi and courses of reading

SEMESTER-III

Paper : INDIAN ETHICS (Theory)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper highlights the ethical philosophies propounded in the different Indian Philosophical Systems. It exposes the students to the main tenets of Buddhism, Sikhism, Gandhism, Gita and Vedic Culture.

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical Philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*
There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (ii) in the question paper.

Unit-I

- Salient Features of Indian Ethics with reference to Purusartha : Yuga Dharma and Sanatan Dharma.
- Varna Vyastha and Ashrama Dharma : A Contemporary Analysis.
- Concept of Sreyas and Preyas.

Unit-II

- Buddhist Ethics : Four Noble Truths, Eight Noble Paths, Ahimsa and Karma Bhava Chakra, Sila.
- Jaina Ethics : Triratnas.
- Sikh Ethics : Hukum, Nirbhau, Nirvair, Parupkar, Sewa and Sahaj.

Unit-III

- Gita : Anasakta Karma, Lok Samgraha, Sva-Dharma
- Gandhi : Ahimsa, Satyagraha and Antyodaya.

Unit-IV

- Yoga and Stress Management .
- Yoga : Yama, Niyama, Asana, Pranayama, Pratyahara, Dharna, Dhyan, Samadhi.

Essential Readings :

Maitra S. K. (1956) The Ethics of the Hindus, New Delhi: Asian Publication Services

Singh Avtar (1970) Ethics of the Sikhs, Patiala: Punjabi University.

Sharma I.C. (1965) Ethical Philosophies of India London: George Allen and Unwin

Vivekananda (1992) Raja Yoga, Calcutta: Advaita Ashram

Suggested Readings :

Dasgupta Surama (1994) Development of Moral Philosophy in India, New Delhi : Munshi Ram Manoharlal Pub.,

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PHILOSOPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER – IV

Paper: WESTERN ETHICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :

This paper gives an insight into the nature of Ethics, moral notions and basic moral theories as propounded by Western Ethical philosophers. This paper also deals with problems of applied ethics.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

(i) *The syllabus has been divided into four units.*
There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper-setter must put note (ii) in the question paper.

Unit-I

- The Nature of Ethics : Virtues and Goodness, its concerns, Relation of Ethics with Aesthetics, Psychology and Religion.
- The notion of Truth, Beauty & Goodness, Reflective Customary Morality.
- Object of Moral Judgement : Actions, Intentions, Situations and Character.

Unit-II

- Virtue Ethics : Aristotle.
- De-Ontological Ethics: Kant's Categorical Imperativeion.

Unit-III

- Teleological Ethics :
  (i) Hedonism
  (ii) Utilitarianism :
  (a) Mill
  (b) Bentham

Unit-IV

- Moral Rights of Foetus and Female Foeticide.
- Sexual harassment and Gender Justice.
- Environmental Ethics : Pollution, Land Degradation and Organic Farming and Global Warming.

Essential Readings :

1. Aristotle (2001) Nicomachean Ethics, Dordrecht : D. Reidel, Penguin Harmondsworth
2. Lillie William (1957) An Introduction to Ethics : London, Matheun
3. Singer Peter (1995) Practical Ethics (Second Edition), Cambridge University Press
4. Verma Ved Parkash (1987), Neeti Shastra (in Hindi), New Delhi : Allied Publishers

Suggested Readings :

1. Hospers John, Human Conduct: An introduction to the Problems of Ethics
2. Hursthome Rosaline (1061), Virtue Ethics, Harcourt: New York.
3. Frankena W., (1994) Ethics, New Delhi: Englewood Cliffs, Prentice Hall, India
4. Macbott J.D. (1966) An Introduction to Ethics Hutchinson: London

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PSYCHOLOGY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in experimental psychology. The students would also get an understanding of the Nervous System, Psychophysics, Learning. This course will also give an insight into psychophysics, statistics and cognitive aspects of Psychology.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper: EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

The Nervous System: Structure and functioning of the neuron; division of nervous system – Central Nervous System and Peripheral Nervous System; Structure and functioning of the brain.

Unit II

Sensation

Concept and types; Vision-The Visual Stimulus, Structure and Functioning of the Eye , Theories of Colour Vision; Audition: The Auditory Stimulus,Structure and Functioning of the Ear, Theories of Hearing.

Unit III

Psychophysics

Thresholds; Psychophysical Methods of Limits, Constant stimuli and Average Error.

Unit IV

Learning

Concept, Classical Conditioning, Operant Conditioning, Observational Learning.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of six :

1. Two Point Threshold
2. Muller Lyer Illusion
3. Differential Threshold
4. Method of Paired Comparison
5. Maze Learning
6. Bilateral Transfer of Training

Suggested Readings :

1. Baron, R.A. (2003): Psychology. New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology. Delhi: Pearson.
3. Das, J.P. (1998): The Working Mind: An Introduction to Psychology. New Delhi: Sage.
4. Feldman, R.S. (1998) : Understanding Psychology. New Delhi : Tata McGraw Hill.
5. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
6. Garrett, H.E. (1966) : Statistics in Psychology and Education. New Delhi : Vakils, Feffer and Simons.
7. Guilford, J.P. and Fruchter, B. (1981) : Fundamental Statistics in Psychology and Education. Singapore: McGraw Hill.
8. Kerlinger, F. N. (1964) : Foundations of Behavioural Research. New York: Rinehart and Winston.
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987) : Introduction to Psychology. Singapore: McGraw Hill.

PSYCHOLOGY

SEMESTER-IV

Objectives:

(I) The course introduces to the students the general concepts and historical viewpoints in General Psychology. The students would also get an understanding of the principles and theories in different areas like Sensation, Perception and Thinking. The course also introduces the elementary statistics.

(II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

Paper : EXPERIMENTAL PSYCHOLOGY

Max. Marks	:	80
Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

There shall be **9** questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be **Compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Memory
Sensory Register; Short-Term and Long -Term Memory; Levels of Processing; Measurement of Memory; Forgetting with special reference to retro-active and pro-active inhibition

Unit II

Perception:Concepts , Types of Perception of Form,Space and Movement
Attention: Nature, Types anf Factors.

Unit III

Thinking :Nature, Tool & Types and Factors
Problem Solving: Nature ,Stages and Factors.
Creativity: Concept; Torrance's Theory of Creativity.

Unit IV

Statistics
Normal Probability Distribution: Properties and Applications: Hypothesis Testing – Type I and Type II Errors; Chi-square Test Application to one – way and Two-way classifications.

Note : The use of non-programmable calculators and statistical tables are allowed in the examination.

PSYCHOLOGY PRACTICALS

Max Marks : 20
Time : 3 Hrs.

Four practicals have to be performed out of the following :

1. Division of Attention
2. Span of Attention
3. Comparing Recall and Recognition as Measures of Memory
4. Retroactive Interference
5. Concept Formation.

Suggested Readings:

1. Baron, R.A. (2003): *Psychology,* New Delhi : Pearson Education.
2. Ciccarelli, D. (2008): Introduction to Psychology, Delhi: Pearson.
3. Das , J.P. (1998):The Working Mind: An Introduction to Psychology, New Delhi: Sage.
4. Feldman, R.S. (1998) :Understanding Psychology, New Delhi: Tata McGraw Hill.
5. Garrett, H.E. (1966): Statistics in Psychology and Education, New Delhi Vakils, Feffer And Simons.
6. Guilford, J.P., and Fruchter, B. (1981):Fundamental Statistics in Psychology and Education Singapore: McGraw Hill.
7. Jain, S. (2000) : Introduction to Psychology, New Delhi: Kalyani
8. Kerlinger, F.N. (1964): Foundations of Behavioural Research, New York Holy, Rinehart and Wintson
9. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J. (1987): Introduction to Psychology, Singapore: McGraw Hill

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GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-III

Paper –V: GEOGRAPHY OF INDIA

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

To foster an understanding of the physical and cultural landscape of India and its spatial diversity

Course Content

Unit-I

Introduction: India in the context of South Asia, Asia and the World. (05 lectures)
Physiography: Relief, drainage, climate, vegetation, soils. (15 lectures)

Unit-II

Agriculture: Characteristics and problems of Indian agriculture; irrigation, major crops (rice, wheat, maize, sugarcane, cotton, jute and tea), Food security with special reference to India. (15 lectures)
Natural hazards in India: Flood, Drought and Earthquake. (05 lectures)

Unit III

Population: Distribution and density, Growth, Migration, Urbanization (05 lectures)
Mineral and Power Resources: Iron ore, manganese, mica, copper and gold; Coal, Petroleum, Hydroelectricity and Non- conventional Power resources. (15 lectures)

Unit IV

Industries: Distribution and localization factors of major industries (Iron and Steel, Cotton Textiles, Sugar, Fertilizers, Automobile). (15 lectures)
Trade &Transport: Rail, Road, Airways and Waterways; International Trade (05 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests,(5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance(2%).
6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings:

Essential Reading:

1. Deshpande, C.D. : *India: A Regional Interpretation,* Indian Council of Social Science Research, New Delhi, 1992.
2. Johnson, B.L.C. : *India: Resources and Development,* Arnold Heinemann, London, 1980.
3. Johnson, B.L.C. : *South Asia,* Heinemann, London, 1981.
4. Khullar, D.R. : *India: A Comprehensive Geography,* Kalyani Publishers, New Delhi, 2011.
5. Majid Hussain : *Geography of India*, Tata McGraw-Hill, Delhi, 2013.
6. Spate, O.H.K. and ATA : *India & Pakistan*: *Land, People and Economy,* Methuen, London, Learmonth, 1967.
7. Tiwari, R.C : *Geography of India,* Pravalika Publications, Allahabad, 2013.

Further Readings :

1. Singh, Gopal : *A Geography of India,* Atma Ram & Sons, New Delhi, 1995
2. Singh, Jagdish : *India: A Comprehensive Systematic Geography,* Gyanodaya Prakashan, Gorakhpur, 2nd Edition, 2003.
3. Singh, R.L. : *India: A Regional Geography (Ed.),* National Geographical Society of India, Varanasi, 1971.
4. Singh, Savindra : *Environmental Geography,* Pravalika Publications, Allahabad, 2014
5. Sharma, T.C. and O. : *Economic and Commercial Geography of India,* Vikas Publishing, House, New Delhi, 2005.
6. Tirtha, Ranjit & Gopal Krishan : *Emerging India,* Conpub Ann Arbour Publishers, Michigan, 1992.

Pedagogy:

- Use of visual aids especially maps.
- Students should be encouraged to use an atlas in the classrooms.
- Audio-video shows on different parts of India.

Paper-VI: CARTOGRAPHY-III

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives:

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Nature of Geographic Data: Spatial and Attribute (Climatic, Population, Agriculture and Industrial)
Symbolization & Scaling of Geographical Data: Point, Line and Area

(4 lectures, 4 lab sessions)

UNIT-II

Choice, Use and Representation of Data using Point Symbols: Columnar Diagrams (Simple, Multiple, Compound, Percentage); Dot, Circle and Sphere

(6 lectures, 12 lab sessions)

UNIT-III

Choice, Use and Representation of the following Point Symbols: Graphs (Line Graph, Climograph, Hythergraph, Ergograph, Wind Rose, Combined and Bar Graph)

(8 lectures, 20 lab sessions)

UNIT-IV

Choice, Use and Representation of Data using: Line Symbols (Isopleth and Flow Lines); and Area Symbols (Choropleth)

(6 lectures, 12 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. A separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.

2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.

3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.

6. Three hours Practical Classes in a week are compulsory.

7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.

10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.

11. For practical classes, the number of students in one group shall not exceed fifteen.

12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Khullar, D.R. : *Essentials of Practical Geography, New Academic Publishig Co.*, Jalandhar, 2009.
2. Robinson, A.H. : *Elements of Cartography, 6th Edition*, John Wiley, New York, 2009.
3. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
4. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
5. Singh, R.L. & P.B. Singh : *Map Work and Practical Geography*, Central Book Depot, Raghunandan Allahabad, 2007.

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
4. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- The students need to be trained in the use of symbols to depict various geographic data.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

GEOGRAPHY

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

Paper-VII: GEOGRAPHY OF PUNJAB

Max. Marks	:	70
Theory	:	60 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

- To understand the regional setting of Punjab state in detail through physical and political maps.
- To examine the cultural patterns of the regions.
- To study the distribution of major crops, industries and transport links in the state.
- To understand the intra regional variations in select aspects.

Course Content:

Unit –I

Introduction: Location, Evolution, Cultural Regions (Majha, Doaba & Malwa) and Administrative Divisions of the State. (15 lectures)

Unit –II

Physical Base: Relief, Drainage, Climate, Soils and Vegetation (12 lectures)
Resources: Mineral and Power; Water with special reference to river water sharing. (8 lectures)

Unit-III

Agriculture: Main Characteristics and Problems; Agro-climatic Regions; Green Revolution & its Ecological Implications; Irrigation; Main crops (wheat, rice, cotton, sugarcane) and their distribution, Livestock and dairying. (20 lectures)

Unit –IV

Population: Distribution, Density, Growth, Migration, Sex Ratio, Urbanization. (7 lectures)
Industries: Main characteristics, Distribution Patterns of Major Industries (Cotton Textile, Sugar, Hosiery Engineering) Industrial Concentration, Problems of Industrialization. (15 lectures)
Trade &Transport: Road, Rail and Air Transport; Inter-State Trade. (3 lectures)

Note :

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts. The answer of each part should be in about 25 words. Each part will carry 2 marks (Total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, two from each Unit. The students will be required to attempt one question from each Unit. Each question will carry 10 marks (Total 40 marks). These will be in addition to the compulsory question.
3. Special credit will be given to suitable use of maps and diagrams. Use of unmarked map stencils and colour pens/pencils are allowed.
4. Six hours Theory Classes in a week are compulsory.
5. Internal assessment will be based on (i) class tests, (5%) (ii) academic activities, Seminar, Project, Assignment (3%) and (iii) attendance (2%).

6. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (6) in the question paper.**

List of Readings

Essential Readings:

1. Mankoo, Darshan Singh : *Geography of Punjab, 4th Edition,* Kalyani Publishers, Ludhaina 2009.
2. Mavi, H.S. & Tiwana, D.S. : *Geography of Punjab*, National Book Trust, Delhi, 1993.
3. Singh, Jaspal : *Geography of Punjab,* Twenty First Century Publications, Patiala, 2014
4. Singh, Malkit : *Geography of Punjab*, Rashmeet Parkashan, Jalandhar, 2004

Further Readings:

1. Deshpande ,C.D. : *India: A Regional Interpretation* , Indian Council of Social Science Research, New Delhi, 1992.
2. Economic and Statistical Organization of Punjab : *Statistical Abstract of Punjab*, Economic and Statistical Organization of Punjab, Chandigarh, 2014
3. Gosal, G.S. & Gopal Krishan : *Regional Disparities in Level of Socio-Economic Development in Punjab*, Vishal Publications, Kurukshetra , 1984.
4. Gupta S.P. : *The Punjab: An Overview*, ESS PEE Publications, Chandigarh, 2004.
5. Kahlon, Simrit : *Punjab: regional reflections,* Man and Development, 29 (2), 2007.
6. Singh Pritam : *Punjab Economy: The Emerging Patterns*, Enkay Publishers, New Delhi, 1995.
7. Singh, R.L. : *India: A Regional Geography (Ed)*, National Geographical Society of India, 1990, Reprint.
8. Spate, O.H.K. & Learmonth A.T.A. : *India and Pakistan: A General and Regional Geography*, Methuen, London, 1967

Pedagogy

- Extensive and intensive use of maps to understand the regional setting.
- A component of field visit to some areas of each region may be planned for effective understanding of the region.

Paper-VIII: CARTOGRAPHY-IV

Max. Marks : 30
Time : 3 Hours

Distribution of Marks:

Written paper of 3 hours duration	:	20 marks
Viva and Practical record (5 + 5)	:	10 marks

Objectives :

- To apprise the students with symbolization of different types of geographical data and depiction of various spatial data.
- To provide training in application of various graphical methods of depicting geographic data.
- To train the students to interpret the topographical sheets at different scales.

Course Content:

UNIT-I

Topographical Maps: Nomenclature (Classification), Study and Interpretation; Significance and Application in Geographical Studies

(4 lectures, 4 lab sessions)

UNIT-II

Profiles: Serial, Composite, Superimposed and Projected
Longitudinal and Transverse; Profiles of rivers

(8 lectures, 16 lab sessions)

UNIT-III

Elementary Remote Sensing : Definition, Concept, History, Application Areas and Types of platforms

(10 lectures, 8 lab sessions)

UNIT-IV

Introduction to Concept of GIS and Computer Cartography.
Definition, Development, Database (Spatial and Non Spatial) GIS Components (Hardware & Software) and Application.
Preparation of Line Graphs, Bars and Pie Charts using Computers.

(10 lectures, 10 lab sessions)

Note:

1. The written and practical examination including viva-voce shall be conducted at the respective college itself except USOL. However, the format of the question paper shall be uniform. For college students, a separate paper of 20 marks shall be prepared on the spot by the examiners from the prescribed syllabus.
2. Practical examination at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teachers of Geography in the college.
3. For students of USOL, a written theory paper for 20 marks shall be conducted by the University along with the University examination. A separate paper of 20 marks shall be prepared by the University for USOL students from the prescribed syllabus.

4. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).
5. The whole syllabus has been divided into 4 Units. Eight questions will be set out of the whole syllabus, i.e. 2 from each Unit. Each question will carry 4 marks (Total 16 marks). The students will be required to attempt one question from each Unit. These will be in addition to the compulsory question.
6. Three hours Practical Classes in a week are compulsory.
7. Evaluation of Practical Record will be done at the time of viva-voce examination. A minimum of 12 sheets are to be prepared by the students. There will be no laboratory exercise at that time.
8. There will be no viva-voce examination for the candidates appearing through USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of Open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).
9. For the students of University School of Open Learning, there will be an internal assessment of 10 marks in lieu of the viva-voce examination.
10. A fresh practical note book shall be prepared by failed/improvement/reappear candidates.
11. For practical classes, the number of students in one group shall not exceed fifteen.
12. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. **The paper-setter must put note (12) in the question paper.**

List of Readings

Essential Readings:

1. Bhatta, Basudeb : *Remote Sensing and GIS,* Oxford, 2nd Edition, New Delhi, 2011
2. Guha, P.K. : *Remote Sensing For The Beginner,* East-West Press, 3rd Edition, New Delhi, 2013..
3. Khullar, D.R. : Essentials of Practical Geography, New Academic Publishing Co., Jalandhar, 2009.
4. Robinson, A.H. : *Elements of Cartography, 6th Edition,* John Wiley, New York, 2009.
5. Sarkar, Asish : *Practical Geography*: A Systematic Approach, 2nd Edition, Orient BlackSwan, Hyderabad, 2011.
6. Singh, Gopal : *Mapwork & Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 2009.
7. Singh, R.L. & Singh, P.B. : *Map Work and Practical Geography, Central Book Depot, Raghunandan Allahabad, 2007.*

Further Readings:

1. Birch, T.W. : *Maps: Topographical & Statistical*, Clarendon Press, Oxford, 1949.
2. Garnett, A. : *Geographical Interpretation of Topographical Maps*, George Harrap & Co., London, 1953.
3. Joseph, George : *Fundamentals of Remote Sensing,* Universities Press (India) Private Limited, 2nd Edition, Hyderabad, 2005
4. Monkhouse, F.J. : *Maps and Diagrams*, Methuen & Co., London, 1994 reprint.
5. Panda, B.C. : *Remote Sensing: Principles and Applications,* Viva Books, New Delhi, 2008
6. Rather, G.M. : *A Text of Practical Geography,* Arina Publishers, New Delhi, 2011

Pedagogy:

- They should learn to comprehend the topographical maps by deriving slopes and drawing profiles.
- A well equipped cartographic laboratory with necessary instruments to prepare exercises.
- Students should be encouraged to use computers while preparing practical exercises.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

SOCIAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Social Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Social Thought

1. Truth
2. Non-violence
1. Sarvodaya

UNIT-II

Man and State

4. Human Rights
5. Ideal Society, State and Rama Rajya

UNIT-III

Gandhi and Ethics

6. Education
7. Theory of Civilization
8. Morality and Religion

UNIT-IV

Gandhi and Social Justice

9. Drive against Untouchability :
   (a) Caste System
   (b) Communal Award
   (c) Poona Pact

10. Women Empowerment

Essential Readings :

1. Bandyopadhyaya, J. : *Social and Political Thought of Mahatma Gandhi,* (Bombay : Allied Publisher) 1969.
2. Bharathi, K.S. : *Social and Political Thought of Mahatma Gandhi* (New Delhi : Concept) 1995.
3. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navjivan Publishing House), 2001
4. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
5. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
6. Mishra, Anil Dutta : *Reading Gandhi,* (New Delhi : Pearson), 2012
7. Varma, V.P. : *Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1998.

Further Readings :

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.
3.	Suda, J.P.	:	*Main Currents of Social and Political Thought of Modern India,* Vol. II, Meerut (K. Nath & Co.) 1973.
4.	Unnithan, T.K.N.	:	*Gandhi and Social Change,* New Delhi (Arnold Heinemann India), 1973.

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GANDHIAN STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

POLITICAL THOUGHT OF MAHATMA GANDHI

Max. Marks	:	100 marks
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Course Objectives :

The paper is designed to acquaint the students with the Political Thought of Mahatma Gandhi.

Pedagogy of the Course Work :

90% Lectures (including expert lectures)

10% Unit tests, Snap tests, assignments, attendance and class room participation

Note :

1. The syllabus has been divided into four (4) units.
2. There shall be **9** questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words The candidate is required to attempt any **9** short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit – 4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (5) in the question paper.

UNIT-I

Fundamentals of Gandhi's Political Thought

1. Truth & Non-violence
2. Theory of Ends & Means
3. State : Ideal Society and State

UNIT-II

Democracy & Decentralization

4. Panchayat Raj/Gram Swaraj
5. Freedom & Equality
6. Rights and Duties

UNIT-III

Religion and Politics

7. Satyagraha : Meaning, Essentials, Forms & Significance
8. Satyagraha & Passive Resistance
9. Spiritualization of Politics

UNIT-IV

Contemporary Relevance

10. Communal Harmony
11. Assessment and Contemporary Relevance

Essential Readings

1. Bhattacharyya, Buddhadeva : *Evolution of Political Thought of Gandhi,* Calcutta: Calcutta Book House, 1969.
2. Brown, Judith, M. : *Gandhi's Rise to Power: Indian Politics 1915-1922* (London: Cambridge University Press), 1972.
3. Dhawan, G.N. : *Political Philosophy of Mahatma Gandhi,* Ahmedabad (Navajivan Publishing House) 1990, 4th Edition.
4. Gandhi, M.K. : *An Autobiography or The Story of My Experiments with Truth* (Ahmedabad: Navajivan Publishing House), 2001
5. Gandhi, M.K. : *Satyagraha in South Africa* (Ahmedabad: Navajivan Publishing House), 1992
6. Gandhi, M.K. : *Hind Swaraj* (Ahmedabad: Navajivan Publishing House), 1999
7. Mishra, Anil Dutta : *Reading Gandhi,* New Delhi (Dorling Kindersley, Pearson), 2012
8. Varma, V.P. : *The Political Philosophy of Mahatma Gandhi & Sarvodaya,* Agra (Laxmi Narain Aggarwal), 1981.

Further Readings:

1	Bandyopadhyaya, Jayantaja	:	*Social and Political Thought of Mahatma Gandhi,* (Allied Publishers, Bombay), 1969.
2	Iyer, Raghaavan N.	:	*The Moral & Political Thought of Mahatma Gandhi, London,* Oxford University Press, 1973.
3.	Mishra, Anil Dutta (ed.)	:	Perspectives on Human Rights (New Delhi, Radha Publications)2002.
4.	Nanda, B.R.	:	*Making of a Nation : India's Road to Independence* (New Delhi: Harper Collins), 1998.

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JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

PRINT JOURNALISM

Max. Marks: 100	
Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives:
This course will introduce students to the basic techniques of sourcing news stairs and features. They will also be trained in the art and science of writing and presenting print media content.

B. Pedagogy of the Course Work:
80 % Lectures (including expert lectures).
20 % assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Definition, nature and types of news and features

Unit-II: Sources of News, Idea generation in features, Story Structure

Unit-III: Role and responsibility of a sub-editor; basic copy editing; importance and writing of headlines.

Unit-IV: Font design & structure, vocabulary and Principles of Design

PRACTICALS **Max. Marks : 20**

1. Prepare a Current Affairs file of news and features. 20 Marks

Books Recommended :

ESSENTIAL READING

1 Bruce D. Itule, Dougles A Anderson,, (2006), *News Writing and Reporting for Today's Media*, Mc Graw Hill

2 De Bono, E. (2007) *How to Have Creative Ideas.* Random House

3 Ludwig, Mark D., (2005), *Modern News Editing,* Willy Blackwell, New York

4 Meera, R. (2009) *Feature Writing.* New Delhi: PHI Learning Pvt. Ltd.

5 Melvin Mencher, (2007), *News Reporting & Writing*, McGraw Hill

6 Miller, B & Paola, S. (2012) *Tell it Slant: Creating, Refining and Publishing Creative Non-fiction.* McGraw-Hill

7 Sims, N. (2008) *True Stories: A Century of Literary Journalism*. Northwestern University Press

8 Stephen G. Bloom, (2002), *Writing Narrative Journalism: Inside the Writers mind*, Iowa State University Press.

9 Tim Harrower, (2006), *Inside Reporting, A Practical guide to the Craft of Journalism*, McGraw Hill.

ADDITIONAL READING

1 Anaa McKane, (2006), *News Writing*, Sage.

2 Bell, James Scott,(2008), *Revision and Self Editing (Write great Fiction),* Writers Digest Books, New York

3 Bowles, D., & Borden, (2000), *Creative Editing*, (3rd ed.) Belmont, CA: Wadsworth

4 Boynton, R.S. (2005) Introduction to *The New Journalism: Conversations with America's Best Nonfiction Writers on Their Craft*. Vintage Books.

5 Johnson, C., (2005), *21st Century: Feature Writing*. New York: Allyn and Bacon

6 K.Tim Walkmeyer,(2009), *Online News Writing*, Wiley Blackwell,

7 Om Gupta, (2006), *Encyclopedia of Journalism and Mass Communication*, Gyan Books Pvt. Ltd. ND

8 Prof. Ramesh Chanha, (2004), *Analysis of Media and Communication Trends*, Gyan Books Pvt. Ltd. ND

9 Rachel Bard, (2005), News Writing Guide, Universe.

10 Rajan, Nalin (Eds), (2007), 21st Century Reporting in India, Indiana, New Delhi.

11 Rajnish, (2007), Review Reporting and Journalism, Indiana, New Delhi.

12 Wray, C., (2005), Writing for Magazines, (2nd ed.). Boston: McGraw Hill.

JOURNALISM & MASS COMMUNICATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER- IV

RADIO & TV JOURNALISM

Max. Marks: 100

Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives :
The course will introduce students to the basic techniques of writing & presenting for the radio and TV medium.

B. Pedagogy of the Course Work :
80 % lectures (including expert lectures).
20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Basic principles of gathering, treatment and presentation of news for Radio; Basic principles of gathering, treatment and presentation of news for Television

Unit-II: Reporting and writing for Radio and TV; Pronunciation and modulation in Radio/TV reporting: Pitch, volume, tempo, vitality.

Unit-III: Introduction to the stages of Radio/TV Production (pre-production, production, post production)

Unit-IV: Camera Perspective, Principles of Camera Composition

PRACTICALS

Max. Marks : 20

1. Compilation of 5-minute weekly TV news bulletins — 10 Marks
2. Compilation of 10-minute weekly radio bulletins. — 10 Marks

ESSENTIAL READING

1 Fedler, Fred, bender, John R., Davenport, huanda, Drager, Michael W., (2005), *Reporting for the media.* Oxford University Press, New York.

2 Kaushik, Sharda, (2000), *Script to Screen: An Introduction to TV Journalism*, Macmillan, New Delhi,

3 Machin, David & Niblock, Sarah, (2006), *News production: Theory and Practice,* Routledge, New York

4 Shukla, A.K, (2008), *Handbook of Journalism and Mass Communication*. Rajat Publications, New Delhi

ADDITIONAL READING

1 Caywood, Clark L., (2004), *The Handbook of Strategic Public Relations and Integrated Communications*, Tata McGraw Hill, New York.

2 Shrivastava, K.M, (2005), *Broadcast Journalism in the 21st century New Dawn Press Group*, New Delhi.

3 Shrivastava, K.M, (2005), Broadcast Journalism in the 21st century New Dawn Press Group, New Delhi.

4 Zettl, Herbert, 2003, The Handbook of Strategic Public Relations and Integrated Communications. Tata McGraw Hill, New York,

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POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Police Personnel Administration

(A) Course Objectives:

The objective of this course is to give inputs to the students on the various aspects of personnel relevant to police administration. Effort is made to impart knowledge to the candidates about the meaning, nature, scope and significance of Police Personnel Administration in India. In addition, job analysis, job description, pay policy, compensation and fringe benefits have been discussed. Further, the recruitment, training and promotion system in Police Service in India has been included in the syllabus. The students are also taught about the performance appraisal, police ethics, corruption in police, code of conduct and discipline along with doctrine of pleasure.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Police Personnel Administration; Significance of Police Personnel Administration in India; Career System in Police Administration.

Unit-II

Job Analysis and Job Description of Police Personnel – Concept and Significance; Pay Policy, Compensation and Fringe Benefits.

Unit-III

Recruitment: Meaning and Methods; Recruitment of Police Personnel in India; Training: Meaning and Types; Training of IPS Officers and State Police Services in India; Promotion: Meaning and Principles; Promotion of Police Personnel in India.

Unit-IV

Performance Appraisal; Police Ethics and Code of Conduct; Corruption – Meaning and Causes; Corruption in Police Force; Disciplinary Actions; Doctrine of Pleasure – Safeguards against Arbitrary Punishment.

Essential Readings:

1.	Administrative Reforms Commission	:	Report on Personnel Administration, 11th Report, Government of India, New Delhi.
2.	Goel, S.L.	:	Public Personnel Administration, Deep & Deep Publication Pvt. Ltd., New Delhi, 2006.
3.	Mamoria, C.B.	:	Personnel Management, Himalaya Publishing House, Mumbai, 2007.
4.	Zehra, Kaneez	:	Training of I.P.S., Ashish Publishing House, New Delhi, 1993.
5.	Muthuswamy, P.	:	Swamy's Manual on Disciplinary Proceedings, Swamy Publishers (p) Ltd., Madras, 1986.

Further Readings

1.	Saxena, A.P.	:	Training and Development in Government, The Indian Institute of Public Administration, New Delhi, 1974.
2.	Singh, Sahib Bhayana, Singh, Swinder and Dogra, R.K.	:	Public Personnel and Financial Administration, New Academics, Jalandhar, 1990.
3.	Ghosh, P.	:	Personnel Administration in India, Sudha Publications Private Limited, New Delhi, 1973.

POLICE ADMINISTRATION

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

Law and Order Administration

(A) Course Objectives:

The principal objective of the syllabi is to acquaint the students with the basics of Law and Order Administration in India. Specifically, the students will be imparted the knowledge about the meaning, nature, scope and significance of Law and Order Administration in India along with some basic issues and emerging patterns. The endeavour is to discuss in detail the role and significance of Primary and Auxiliary Agencies of Law and Order Administration. Further, the role of Law and Order Administration in crowd management, communal riots, agrarian and industrial conflicts has also been discussed. The students are also taught about the challenges before Law and Order Administration. In addition, the concept of National Security along with challenges to it, in contemporary terms have been included in the syllabus.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Meaning, Nature and Scope of Law and Order Administration; Significance of Law and Order Administration in India; Law and Order Administration – Some Basic Issues and Emerging Patterns.

Unit-II

Role, Significance and interrelationships of Law and Order Administration Agencies at the District level : The Police; Civil Administration; Court of Law; Prisons; and Health.

Unit-III

Role of Law and Order Administration in Crowd Management, Communal Riots and Industrial & Agrarian Conflicts. Challenges before Law and Order Administration.

Unit-IV

National Security: Concept and Significance. Challenges to National Security in India – Contemporary Issues.

Essential Readings:

1. Bailey, David, H. : The Police and Political Development in India, Princeton University Press, New Jersey, 1969.
2. Sharma, K.K. : Law and Order Administration, National Book Organization, New Delhi, 1985.
3. Srivastava, Aparna : Role of Police in a Changing Society, A.P.H. Publishing Corporation, New Delhi, 1999.
4. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume - I, Ashish Publishing House, New Delhi, 1993.
5. Bharti, Dalbir : *Police Evam Log: Donon ke Adhikar Va Zimmedarian,* A.P.H. Publishing Corporation, New Delhi, 2007.
6. Singh, Yogendra : Social Change in India: Crisis and Resilience, Har-Anand Publications Pvt. Ltd., New Delhi, 2007.

Further Readings

1. Mayhall, Pamela D.et.al. : Police-Community Relations and the Administration of Justice, Prentice-Hall Inc., New Jersey, 1995.
2. Ghosh, S.K. : Keeping the Peace: For Whom the Bell Tolls (Police Then and Now), Ashish Publishing House, New Delhi, 1989.
3. Vadackumchery, James & Kattakayam, John : Human Behaviour and Law Enforcement, Ashish Publishing House, New Delhi, 1995.
4. Owens, R.Glynn and Ashcraft, J. Barrie : Violence: A Guide for the Caring Professions, Croom Helm, New Hampshire, USA, 1985.
5. Singh, K.P. ` : Police Gyan Vigyan, The Bright Law House Delhi, 2003.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper : FEMINIST THEORY

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective :
This course offers the prominent theories that feminists have formulated to explain the matrix of gender inequality from the nineteenth century to the present. It further seeks to introduce the student to the key debates within feminist theories as well as the shifts in feminism.

Note : The students are expected to have a general understanding of the various strands of feminism and not of any specific feminist thinker in this course.

Course Contents :

Unit-I : Feminism

(a) Definition,

(b) Emergence of Feminism with special focus on

- Women in French Revolution,
- Suffrage Movement in the U.S.A. (with reference to Seneca Falls Convention and Declaration of Sentiments),
- Suffrage Movement in the U.K.

(c) Three waves of Feminism.

Unit-II : Strands of Feminism-I

(a) Liberal Feminism,

(b) Socialist Feminism,

(c) Marxist Feminism.

Unit-III : Strands of Feminism-II

(a) Radical Feminism

(b) Post modern Feminism

(c) Psycho-analytic Feminism (Freudian).

Unit-IV : Strands of Feminism-III

(a) Black Feminism

(b) Cultural Feminism

(c) Eco-Feminism.

NOTE :

- In each of the papers, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

Agarwal, Bina, **The Gender and Environment Debate: Lessons from India, Feminist Studies,** Vol. 18, No.1, Spring 1992, pp 119-158.

Anderson, Margaret, **Thinking About Women,** Macmillan, New York, 1993.

Beasley, Chris, **What is Feminism?,** Sage, London, 1999.

Bell Hooks, **Ain't I a Woman: Black Women and Feminism,** Pluto Press, London, 1982.

Chatterjee, Mohini, **Feminism and Gender Equality,** Aavishkar, Jaipur, 2005.

Collins, Patricia Hill, **Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment,** Routledge, New York, 1999.

Desai, Leela, **Issues in Feminism,** Pointer Pub., Jaipur, 2004.

Molyneux, Maxinne and Steiberg, Deborah Lynn, ***Mies and Shiva's Ecofeminism: A New Testament,*** **Feminist Review,** No. 49, Spring 1995, pp 86-10.

Further Readings :

Banks, Olive, **Faces of Feminism: A Study of Feminism as a Social Movement,** St. Martin's Press, New York, 1981.

Freeman, Jo (ed.), **Women: A Feminist Perspective,** Palo Alto, California : Mayfield, 1975.

Kosambi, Meera, **Crossing Thresholds: Feminist Essays in Social History**, Permanent Black, New Delhi, 2007.

Mishra, Binod (ed.), **Critical Responses to Feminism,** Sapru & Sons, New Delhi, 2006.

Shukla, Bhaskar A., **Feminism : From Mary Wollstonecraft to Betty Friedan,** Sapru & Sons, New Delhi, 2007.

Spender, Dale, **Feminist Theorists: Three Centuries of Women's Intellectual Traditions,** The Women's Press, London, 1982.

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WOMEN'S STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

Paper : Status of Women in India – II

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective : This course aims to sensitize the student with the status of women in contemporary India, with a special focus upon the factual situation apart from the major issues confronting Indian women.

Unit-I : Demographic Trends

(a) Sex Ratio, Age Specific Sex Ratio : Trends

(b) Change in Sex Ratio : Causes and Consequences

(c) Fertility Rates

(d) Definitions: Infant Mortality Rate, Child Mortality Rate, Total Mortality Rate, Maternal Mortality Rate;

Causes of Gender Differentials in Mortality Rates

Unit-II : Women and Education

(a) Gender Gaps in Literacy Rates, School Enrolment and Dropout Rates and Right to Education

(b) Women in Higher Education : Gender Gaps

(c) Obstacles to Women's Education : Socio Cultural, Economic and Infrastructural

Unit-III : Women and Health

(a) Why Health is a Gender Issue?

(b) Definition : Health & Reproductive Health

(c) Factors affecting Women's Health Status

(d) Issues relating to women's health status : Nutritional health status of women and girl child in India.

Unit-IV : Women and Work :

(a) Changing definition of Household work.

(b) Gender differential in Work Participation Rates

(c) Sexual Division of Labour

(d) Sexual Harassment at the Workplace

(e) Obstacles to Women's Workforce Participation : Cultural, Skill development etc.

NOTE :

- In each of the papers the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.

- There shall be 9 questions in all. The first question shall be compulsory containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18 marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit-4 in all. Each question will carry 18 marks.

Essential Readings :

1. Chatterjee, Meera , **A Report on Indian Women from Birth to Twenty,** NIPCCD, New Delhi, 1999.

2. Gopalan, Sarala and Shiva, Mira, **National Profile on Women, Health and Development,** VHAI & WHO, 2000.

3. Gopalan, Sarala, **Towards Equality - The Unfinished Agenda : Status of Women in India -2001,** National Commission for Women, New Delhi, 2002.

4. Menon-Sen, Kalayani and Shiva Kumar, A.K., **Women in India ! How Free?, How Equal?** Report Commissioned by the Office of the United Nations Resident Coordinator in India, New Delhi, 2001.

5. **National Human Development Report, 2001**, Planning Commission, Govt. of India, March, 2002.

Further Readings :

1. Ali, Aruna Asaf, **Resurgence of Indian Women,** Nehru Memorial Museum and Library, New Delhi, Radiant ,1991.

2. Ali, Azra Asghar, **The Emergence of Feminism Among Indian Muslim Women,** 1920-1947, Oxford, Karachi, 2000.

3. Anand, Meena **Dalit Women : Fear and Discrimination,** Isha Books, Delhi, 2005.

4. Bhattacharya, Rinki (ed.), **Behind Closed Doors : Domestic Violence in India,** Sage, New Delhi, 2004.

5. Choudhary, Prem, **Contentious Marriages : Eloping Couples : Gender, Caste and Patriarchy in Northern India**, OUP, New Delhi, 2007.

6. Desai, Neera and Krishnaraj, Maithreyi (ed.), **Women and Society in India**, Ajanta Publication, New Delhi, 1987.

7. Kumar, Hajira (ed.), **Status of Muslim Women in India**, Aakar Books, Delhi, 2002.

8. Mohanti, Bedabati, **Violence Against Women: An Analysis of Contemporary Realities**, Kanishka Publication, New Delhi, 2005.

9. Mohini, Giri, V., **Deprived Devis : Women's Unequal Status in Society Gyan**, New Delhi, 2006.

10. Rajawat, Mamta, **Dalit Women : Issues and Perspectives**, Anmol Pub, New Delhi, 2006.

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HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

PAPER : HUMAN RIGHTS & DUTIES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:
The course is designed to make students aware about the human rights and duties framework in India. An attempt has been made to deal the issue within the ambit of evolution of the concepts of human rights and duties; Constitutional structure and Implementation mechanisms.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: EVOLUTIONARY PHASE

(i) Evolution of the concept of Human Rights in India
(ii) The notion and significance of Duties in India
(iii) Values and relevance of composite culture of India: non-violence; secularism and fraternity

UNIT II: CONSTITUTIONAL FRAMEWORK

(i) The Preamble
(ii) Fundamental Rights
(iii) Directive Principles of State Policy
(iv) Fundamental Duties

UNIT III: KEY AREAS IN THE CONTEMPORARY PHASE

(i) Right to food security
(ii) Right to Education
(iii) Right to Information
(iv) Right to clear environment

UNIT IV: IMPLEMENTATION OF HUMAN RIGHTS

(i) Constitutional Machinery: Role of Judiciary
(ii) Statuary Machinery: National Human Rights Commission and State Human Rights Commissions

Essential Readings:

1. Aarti Singh Introduction to Human Rights and Duties: An Introuction to Human Rights: Concepts in Human Rights and the United Nations (2016), Lambert Acdemic Publishing (LAP).
2. Kaur, Amrit Pal, Promotion of Human Rights Law & Implementation,(2014) New Era Law Publications, New Delhi.
3. Lexis Manp/Kumar Sinha, Implementation of Basic Human Rights (2013), Nexis, New Delhi.
4. Brownlie Ian, et al.(eds), *Basic Documents on Human Rights*, (2006) Oxford.
5. David Robertson, *A Dictionary of Human Rights*, Europa Publications, (2004), London.
6. Ray, Arun National Human Rights Commission of India: Formation Functioning and Future Prospects (Vol.# 2), (2004), Atlantic Publication, New Delhi.
7. Nirmal, C.J., Human Rights in India: Historical, Solcial and Political Perspectives (2002) Oxford New Delhi.
8. Gandhi, P.R. (ed), *Blackstone's International Human Rights Documents* (2001),Universal, Delhi.
9. Basu, D.D., *Introduction to the Constitution of India,* (1997), New Delhi: Prentice Hall of India.
10. Henry J. Steiner, et al., (eds.), *International Human Rights in Context*, Chapter 10, (1996) Clarendon Press, Oxford.
11. Brundland Report, *Our Common Future,* (1986), Oxford.

Further Readings:

1. Kapoor, S.K:, *Human Rights under International Law and Indian Law*, (2014) Central Law Publications, Allahabad.
2. Kapoor, S.K:, *Human Rights under International Law*, (2009) Central Law Publications, Allahabad.
3. Paul, R.C., *Situation of Human Rights in India,* (2000) Commonwealth New Delhi: Publishers.
4. Rao, Ashiwini, *Status of Human Rights in India*, (2010) New Delhi, Pacific.
5. South Asian Human Rights Documentation Centre : *Human Rights and Humanitarian Law,* (2008) South Asian Human Rights Documentation Centre, New Delhi.
6. South Asian Human Rights Documentation Centre: *Introducing Human Rights,* New Delhi, (2006) South Asian Human Rights Documentation Centre, New Delhi.

HUMAN RIGHTS & DUTIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

PAPER : HUMAN RIGHTS ISSUES IN INDIA

Max. Marks	:	100 Marks
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective:

The Paper deals with a few specific issues in India along with some key responses emerging from the Indian society for the protection and Promotion of human rights.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine short answer type questions out of 12 i.e. 9x2 = 18 marks.

In addition to it, Questions No. II to IX will consist of long answer (Essay Type) questions i.e. 2 questions from each Unit with internal choice carrying 18 marks each i.e. 4x18=72.

UNIT I: HUMAN RIGHTS & LABOUR

(i) Bonded Labour
(ii) Unorganized labour
(iii) Child Labour

UNIT II: STRUCTURAL PROBLEMS AND IMPACT ON HUMAN RIGHTS

(i) Poverty
(ii) Illiteracy
(iii) Unemployment

UNIT III: HUMAN RIGHTS & CRIMINAL JUSTICE

(i) Concept of Criminal Justice System in India
(ii) Rights of the accused
(iii) Rights of the victim

UNIT IV: SOCIAL AUDITING FOR HUMAN RIGHTS

(i) Definition, significance of social auditing
(ii) Agent of Social Auditing including Human Rights Defenders
(iii) Role of Media in social auditing
(iv) Role of Civil Society in social auditing

Essential Readings:

1. Pavithran, K.S., Human Rights in India: Discourses and Contestations (2018) Gyan Publishing, Mumbai.
2. Singh Karamjeet and Kaur Navleen, Gender Mainstreaming in Higher Education: An Inclusive Approach (2018), Bharti, Publications, New Delhi.
3. Gupta Namita, Human Rights in India: Contemporary Issues and Challenges (2017) Regal Publication, New Delhi.
4. Aggarwal, H.O., Human Rights, (2014), Central Law Publications, New Delhi
5. Anuradha, K.P., Human Rights Issues in India (2010), Adhyayan Publishers & Distributors, New Delhi.
6. Satish C. Shastri(ed), *Human Rights, Development and Environmental Law: An Anthology,* (2007), Jain Book Agency, Delhi.
7. Amrita Aggarwal, Human Rights for Survival of Civilization, (2004) Kalinga Publications.
8. V.R.Krishna lyer, *Human rights – A judge's Miscellany,* (1995) B. R. Publishing Corporation, Delhi.
9. Kalpana Kannabiran, *Crafting Human Rights Cultures*, (2006), NALSAR University of Law.
10. Upendra Baxi (ed.), *The Right to be Human*, (1987), Lancer International, New Delhi.
11. R.C.Mishra, *Human Rights and Policing*, Authors Press, (2005), New Delhi.

Further Readings:

1. K.I. Vibhute, *Criminal Justice A Human Rights Perspective of the Criminal Justice Process in India*, (2004), Eastern Book Company, Lucknow.
2. Khanna, S.K., *Children and the Human Rights,* (1998), Commonwealth, New Delhi.
3. Pandit Kamalkar, Human Rights and Criminal Justice, (2010), Asia Law House, Hyderbad.
4. Pachauri, S.K., *Children and Human Rights,* (1999), APH Publications, Delhi.
5. Pachauri, S.K. *Women and Human Rights,* (1999), APH Publications, New Delhi.

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RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

PAPER- III, SIKH RELIGION AND HISTORY

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs.

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Life, Teachings and Contribution: Guru Nanak Dev, Guru Angad Dev, Guru Amar Das, Guru Ram Das and Guru Arjun Dev; Martyrdom of Guru Arjan Dev.

Unit - II

Life, Teachings and Contribution: Guru Hargobind, Guru Har Rai, Guru Harkrishan,Guru Teg Bahadur and Guru Gobind Singh; Martyrdom of Guru Tegh Bahadur.

Unit - III

Life, Teachings and Contribution:Bhagats and Bhatts

Unit - IV

Compilation of the *Adi Granth*; Foundation of the Khalsa

Essential Readings

- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ, ਡਾ. (ਮੁਖ ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀਕਾਰ ਵਿਸ਼ੇਸ਼ ਅੰਕ-57 ਮਾਰਚ 2●●3, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅਜਮੇਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਖੋਜ ਪਤ੍ਰਿਕਾ, ਪ੍ਰਗਟਯੋ ਖਾਲਸਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਰਾਜਿੰਦਰ ਸਿੰਘ ਜਾਲੀ, ਸਿਖ ਇਤਿਹਾਸ ਦੀਆਂ ਝਲਕੀਆਂ, ਜਾਲੀ ਲਿਟਰੇਟਚਰ ਹਾਊਸ ਦਿੱਲੀ-ਅਮਰੀਕਾ
- ਹਰਚਰਨ ਸਿੰਘ, ਡਾ., ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਨਾਨਕ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਅੰਮ੍ਰਿਤਪਾਲ ਕੌਰ , ਡਾ. , ਖੋਜ ਪਤ੍ਰਿਕਾ, ਬਾਣੀ ਸੰਪਾਦਨਾ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਡਾ. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿਲੋ, ਗੁਰੂ ਰਾਮਦਾਸ, ਰੂਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਨਗਰ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਅੰਮ੍ਰਿਤ ਲਾਲ ਪਾਲ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ- ਜੀਵਨ ਤੇ ਬਾਣੀ, ਸੰਗਮ ਪਬਲੀਕੇਸ਼ਨ
- ਗੁਰਮੁਖ ਸਿੰਘ, ਗੁਰੂ ਅਰਜਨ ਦੇਵ: ਜੀਵਨ ਦਰਸ਼ਨ ਤੇ ਬਾਣੀ, ਰੂਹੀ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਸਤਿਬੀਰ ਸਿੰਘ, 'ਗੁਰ ਭਾਰੀ' ਜੀਵਨੀ ਗੁਰੂ ਹਰਿਗੋਬਿੰਦ ਜੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਖੋਜ ਪਤ੍ਰਿਕਾ, ਗੁਰੂ ਅਮਰਦਾਸ- ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).
- Grewal, J.S., *Guru Nanak in History*, Chandigarh: Panjab University, 1979.
- Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: Oxford University Press, 1968.
- G.S. Talib: *Guru Nanak; His personality & Vision*

Further Reading

- ਇੰਦੂਭੂਸ਼ਨ ਬੈਨਰਜੀ, ਖਾਲਸੇ ਦੀ ਉਤਪਤੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਿਆਰ ਸਿੰਘ, (ਸੰਪਾ.) ਸ੍ਰੀ ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ (ਫਾਰਸੀ ਸਰੋਤ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਡਾ. ਗੁਰਸ਼ਰਨ ਜੱਗੀ, ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਬਾਣੀ, ਗੁਰਮਤ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ
- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).
- Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

RELIGIOUS & SIKH STUDIES

B.A. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

PAPER- IV SIKH LITERATURE AND INSTITUTIONS

Max. Marks :100
Written : 90
Internal : 10
Time : 03 hrs

Objectives:

The course is designed for the students who want to pursue semester based graduate degree programme with Religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. I would carry 18 marks (9X2).

In addition to it, Questions No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4X18).

Course Contents

Unit - I

Unity of Guruship; Institution of Gurdwara

Unit -II

Different sects within the Sikh Movement (Udasis, Minas, Dhirmalya , Ram Raiyas) origin and development

Unit - III

Study of *Japji* and *Chandi Di Var* (Message and Formation)

Unit - IV

Study of Janam Sakhis; Tika; Parmarath; Gost. (Definition and Features) (Two out of three)

Essential Readings

- ਨਰਿੰਦਰ ਕੌਰ ਭਾਟੀਆ ਅਤੇ ਜਸਵਿੰਦਰ ਕੌਰ ਢਿਲੋਂ, ਡਾ. (ਸੰਪਾ.) ਪ੍ਰਮੁੱਖ ਸਿੱਖ ਸੰਸਥਾਵਾਂ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
- ਤਾਰਨ ਸਿੰਘ, ਗੁਰਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਦਰਸ਼ਨ ਸਿੰਘ, ਡਾ., ਧਰਮ ਅਧਿਐਨ ਅਤੇ ਸਿੱਖ ਅਧਿਐਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਬ੍ਰਹਮ ਜਗਦੀਸ਼ ਸਿੰਘ, ਜਪੁਜੀ, ਵਿਚਾਰਧਾਰਾ, ਪ੍ਰਬੰਧ ਤੇ ਪਾਠ, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
- ਰਾਮ ਸਿੰਘ, ਡਾ. ਜਪੁਜੀ ਦੇ ਪੰਜ ਖੰਡ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ, ਚੰਡੀ ਦੀ ਵਾਰ, ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
- ਰਤਨ ਸਿੰਘ ਜੱਗੀ, ਚੰਡੀ ਦੀ ਵਾਰ, ਗੁਰਮਤਿ ਪ੍ਰਕਾਸ਼ਨ ਪਟਿਆਲਾ
- ਹਰਬੰਸ ਸਿੰਘ ਗਿਆਨੀ, ਚੰਡੀ ਦੀ ਵਾਰ ਸਟੀਕ, ਸਹਿਗਲ ਪ੍ਰਿੰਟਿਰਜ਼ ਜਲੰਧਰ

Further Reading

- Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: Cambridge University Press, 1999 (2nd ed.).
- Grewal, J.S., *Sikh Ideology, Polity and Social Order*, New Delhi: Manohar, 1996.
- Mcleod, W.H., *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999.
- Jagraj Singh: A complete guide to Sikhism, Unistar Chandigarh, 2011

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ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper : Air Pollution and Climate Change

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Paper : AIR POLLUTION AND CLIMATE CHANGE

Unit-I

Atmosphere: Composition of atmosphere, Air Pollution: Sources, Classification (Natural and anthropogenic sources; primary and secondary pollutants), Smoke, Smog, Particulate Matter and Acid rain. Effects of air pollution on human health, plants, animals and material. Air (Prevention and Control of Pollution) Act, 1981.

Unit-II

Green House Effect: Definition, Green house gases, Sources of green house effect, Global Warming.

Stratospheric ozone layer depletion. Role of agriculture to green house effect (paddy and livestock, biomass burning) in GHE.

Unit-III

Noise pollution: Definition, Sources, Noise standards, Silence Zones, Consequences of noise pollution.

Radioactive Pollution: Definition**,** Sources, effect on human health.

Mineral Resources: Types and Importance of minerals; Mineral extraction and environmental problems (limestone mining in Moussourie hills, coal mining in Jharkhand).

Unit-IV

Control: Measures and techniques to control air pollution in vehicles and industries, Green building concept, CDM (Clean Development Mechanism), Carbon sequestration. Control of noise pollution.

PRACTICAL

To monitor the level of Dust fall, SPM in surrounding atmosphere.

To monitor the level of NOx and SO_2 in surrounding atmosphere.

To prepare a survey report on different sources causing air pollution in local area.

To prepare a survey report on noise pollution in your locality.

To visit, collect data and prepare report regarding air and water pollution from sugar mill, thermal plant, cement factory in the adjoining area like Nawanshahr, Ropar, and Hoshiarpur.

ENVIRONMENT CONSERVATION

B.A. /B.Sc.(GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

Paper : SOLID WASTE AND DISASTER MANAGEMENT

Theory Hours	Practical Hours	Theory Marks	Internal Assessment Marks	Practical Marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and practical per week shall be 6 hours and 4 hours respectively.

Note: The practical will include survey and its project reports carrying 5 marks, and 20 marks will be allotted to laboratory practicals.

Instructions for paper setters :-

There will be 9 questions in all, two each from section I to 1V. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidates will attempt five questions in all, selecting one each from section I to IV and the first compulsory question.

Unit-I

Solid waste: Sources, nature and characteristics; categories of solid waste, Biodegradable and non-biodegradable waste; Plastic nuisance. Solid waste disposal: Sanitary landfills, Composting, optimum conditions for composting, Pyrolysis, Incineration and Refuse Derived Fuels. Fly Ash utilization, MSW Handling Rules, 2000.

Unit-II

Natural disasters: Floods, earthquakes, Tsunami, land slides, drought, forest fire and Tropical cyclones.

Disaster management: pre-disaster phase, actual disaster phase, post- disaster phase.

Unit-III

Bioenergy and waste water treatment: Biogas plant: Construction and working of biogas plants, its advantages and disadvantages. Vermi-culture and Vermi-composting, Biofertilisers, Biofuels.

Waste water treatment (STP and ETP), A brief account of primary, secondary and tertiary treatment.

Unit-IV

Organic farming: Definition, Need of Organic Farming, Methods: Soil management, weed management, control of pests. Its advantages. Organic Food, its benefits.

Waste lands: Definition, Categories of waste lands, Desertification, ways of reclamation.

PRACTICAL

A visit to Composting/Vermicomposting Unit.

To prepare a survey report of municipal waste of your city (Generation to disposal).

Classify the waste of your municipality waste (Source based and Waste based)

To visit any landfill site and prepare a tour report.

To prepare a list of herbicides / pesticides / insecticides commonly used in this area

To make a list of various botanical pesticides available in the market

Assignments/project as assigned by the teacher

Books Recommended

1. Critchfield, Howard J., General Climatology, Second Edition, Prentice-Hall, Inc., 1982.
2. Houghton, J., Global Warming, The Complete Briefing, 3rd Edition, Cambridge Univ. Press, 2006.
3. Hill, M. K., Understanding Environmental Pollution, Cambridge Univ. Press, 2008.
4. Malsin, M., Global Warming, A Very Short Introduction, Oxford Univ. Press, 2009
5. Tchobanogloas, G., Integrated Solid Waste Management: Engineering, Principle and Management. McGraw Hill, USA. 1993.
6. Singh, H.M., Solid Waste Management. Alfa Publications, Delhi. 2010.
7. Bhatnagar R.K. & Palta R.K., Earthworm Vermin Culture & Vermi Composting, Kalyani, Pub. 2007.
8. Ranganathan L.S, Vermi biotechnology: From Soil Health to Human Health, Updesh Purodit Pub. Jodhpur, 2006.
9. Aggarwal, A. K., Water Pollution, APH Publications, New Delhi, 2008.
10. American Public Health Association, Standard Methods for Examination of Water and Wastewater, APHA, New York, 2003.
11. Sengupta, B., John, S. & Abraham, T. Forth Estate, A Handbook on Air, Water and Land Pollution. IDMA Foundation for Sustainable Development and BR Publications Corporation, Delhi. 2006.
12. Aggarwal, A. K., Noise Pollution. APH Publications, New Delhi, 2008.
13. Veeresh, G. K., Organic Farming. Foundation Books, Delhi, 2006.
14. Gehlot, D., Organic Farming: Components and Management, Agrobios, Jodhpur, 2010.
15. Singh, K. K. & Aleyer, L., Disaster Management: Manmade Disasters. APH Publications. 2010.
16. Dhunna, M., Disaster Management, Vayu Education of India, Delhi, 2009.
16. Sharma & Sharma, Natural Disasters, APH Publications, 2009.
17. Dara, S.S., A Textbook of Environmental Chemistry. 2nd Edition. S. Chand & Company Ltd., Ram Nagar, New Delhi, 2010.

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MATHEMATICS
B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-III

Paper-I : ADVANCED CALCULUS-I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	4 Marks

Note : 1. The syllabus has been split into two Units : Unit-I and Unit-II. Four questions will be set from each Unit.

2. A student will be asked to attempt five questions in all selecting at least two questions from each unit. Each question will be of 6 marks.

3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorials.

4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Limit and continuity of functions of two and three variables. Partial differentiation. Change of variables. Partial derivation and differentiability of real-valued functions of two and three variables. Schwarz and Young's theorem. Statements of Inverse and implicit function theorems and applications.

Vector differentiation, Gradient, Divergence and Curl with their properties and applications.

Unit-II

Euler's theorem on homogeneous functions. Taylor's theorem for functions of two and three variables. Jacobians. Envelopes. Evolutes. Maxima, minima and saddle points of functions of two and three variables. Lagrange's multiplier method.

References

1.	Gabriel Klaumber	:	Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
2.	T.M. Apostol	:	Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
3.	R.R.Goldberg	:	Real Analysis, Oxford & I.B.H. Publishing Co., New Delhi, 1970.
4.	D. Soma Sundaram and B. Choudhary	:	A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.
5.	P. K. Jain and S. K. Kaushik	:	An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6.	Gorakh Prasad	:	Differential Calculus, Pothishala Pvt.Ltd., Allahabad.

7.	J. D. Murray & M. R. Spiegel	:	Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
8.	S.C.Malik	:	Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
9.	Shanti Narayan	:	A Course of Mathematical Analysis, S. Chand and Company, New Delhi
10.	J. D. Murray & M.R. Spiegel	:	Vector Analysis, Schaum Publishing Company, New York.
11.	N.Saram and S.N. Nigam	:	Introduction to Vector Analysis, Pothishala Pvt. Ltd., Allahabad.
12.	Shanti Narayan	:	A Text Book of Vector Calculus, S. Chand & Co., New Delhi.

Paper II : DIFFERENTIAL EQUATIONS- I

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Exact differential equations. First order and higher degree equations solvable for x, y, p. Clairaut's form. Singular solution as an envelope of general solutions. Geometrical meaning of a differential equation. Orthogonal trajectories. Linear differential equations with constant coefficients.

Unit-II

Linear differential equations with variable coefficients- Cauchy and Legendre Equations. Linear differential equations of second order- transformation of the equation by changing the dependent variable/the independent variable, methods of variation of parameters and reduction of order. Simultaneous Differential Equations

References

1.	Erwin Kreyszig	:	Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2.	D.A. Murray	:	Introductory Course on Differential Equations, Orient Longmen, (India), 1967.
3.	A.R. Forsyth	:	A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4.	Ross, S.L.	:	Differential Equations, John Willey & Sons, 2004.

Paper III : STATICS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination per paper in a Semester

Unit-I

Basic notions. Composition and resolution of concurrent forces – Parallelogram law of forces, Components of a force in given directions, Resolved parts of a force, Resultant of any number of coplanar concurrent forces, Equilibrium conditions for coplanar concurrent forces, equilbrium of a body resting on a smooth inclined plane. Equilibrium of three forces acting at a point – Triangle law of forces, $\lambda - \mu$ theorem, Lami's theorem. Parallel Forces.

Unit-II

Moments and Couples – Moment of a force about a point and a line, Centre of Parallel forces, theorems on moment of a couple, Equivalent couples, Varignon's theorem, generalized theorem of moments, resultant of a force and a couple, resolution of a force into a force and a couple, reduction of a system of coplanar forces to a force and a couple. Equilibrium conditions for any number of coplanar non-concurrent forces.

Friction: definition and nature of friction, laws of friction, equilibrium of a particle on a rough plane, Problems on ladders, rods, spheres and circles.

References

1. S.L. Loney : Statics, Macmillan and Company, London.
2. R.S. Verma : A Text Book on Statics, Pothishala Pvt. Ltd., Allahabad.
3. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics. S Chand and Company
4. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.

MATHEMATICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-IV

Paper I: ADVANCED CALCULUS II

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination per paper in a Semester

Unit-I

Definition of a sequence, Bounds of a sequence, Convergent, divergent and oscillatory sequences, Algebra of limits, Monotonic Sequences, Cauchy's theorems on limits, Subsequences, Bolzano-Weirstrass Theorem, Cauchy's convergence criterion.

Sequential continuity and Uniform continuity of functions of single variable.

Unit-II

Series of non-negative terms. P-Test. Comparison tests. Cauchy's integral test. Cauchy's Root test. Ratio tests : Kummer's Test, D'Alembert's test, Raabe's test, De Morgan and Bertrand's test, Gauss Test, Logarithmic test. Alternating series. Leibnitz's theorem. Absolute and conditional convergence, Rearrangement of absolutely convergent series, Riemann's rearrangement theorem

References:

1. D. Soma Sundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi 1997.
2. P. K. Jain and S. K. Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi 2000.
3. Murray R. Spiegel : Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York.
4. S.C.Malik : Mathematical Analysis, Wiley Eastern Ltd., New Delhi.
5. O.E.Stanaitis : An Introduction to Sequences, Series and Improper Integrals, Holden – Dey, Inc., San Francisco, California.
6. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.
7. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper II : DIFFERENTIAL EQUATIONS- II

Max. Marks	:	30
Time	:	3 Hours
Int. Assesment	:	3 Marks

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Series solution of differential equations-Power Series method, Bessel and Legendre equations.

Bessel functions of First and Second kind. Legendre function. Generating function. Recurrence relation and orthogonality of Bessel and Legendre function.

Partial Differential Equations: Origin of first order Partial Differential Equations, Linear Equation of first order, Integral surfaces passing through a given curve, surfaces orthogonal to a given system of surfaces.

Unit-II

Inverse Laplace transforms- Linearity property, Shifting properties, Change of Scale Property. Inverse Laplace transforms of derivatives and integrals, Convolution theorem.

Applications of Laplace Transforms - Solution of differential equations with constant coefficients, Solution of differential equations with variable coefficients, Solution of simultaneous differential equations.

Laplace Transformation-Linearity of the Laplace transformation. Existence theorem for Laplace transformations, Shifting Theorems, Laplace transforms of derivatives and integrals, Multiplication of t^n, Division by t.

References:

1. Erwin Kreyszig : Advanced Engineering Mathematics, John Wiley & Sons Inc., New York, 1999.
2. D.A. Murray : Introductory Course on Differential Equations, Orient Longmen, (India) 1967.
3. A.R. Forsyth : A Treatise on Differential Equations, Macmillan and Co. Ltd., London.
4. Sneddon, I.N. : Elements of Partial Differential Equations, McGraw Hill, 1957.
5. J. D. Murray & M. R. Spiegel : Schaum Series, Laplace Transforms.

6. Ross, S.L. : Differential Equations, John Willey & Sons, 2004.

7. Earl D. Rainville : Infinite Series, The Macmillan Company, New York.

8. N. Piskunov : Differential and Integral Calculus, Peace Publishers, Moscow.

Paper III : DYNAMICS

Max. Marks : 30
Time : 3 Hours

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination per paper in a Semester

Unit-I

Motion of a particle with constant acceleration, acceleration of falling bodies, motion under gravity, motion of a body projected vertically upwards: Newton's Laws of Motion, Motion of two particles connected by a string, motion along a smooth inclined plane, constrained motion along a smooth inclined plane. Variable acceleration: Simple harmonic motion, elastic string.

Unit-II

Curvilinear motion of a particle in a plane: Definition of velocity and acceleration, projectiles, motion in a circle.

Work, power, conservative fields and the potential energy, work done against gravity, potential energy of a gravitational field.

Relative motion, relative displacement, velocity and acceleration, motion relative to a rotating frame of reference.

Linear momentum, angular momentum, conservation of angular momentum, impulsive forces, principle of impulse and momentum, motion with respect to centre of mass of a system of particles, collisions of elastic bodies, loss of energy during impact.

References:

1. S.L. Loney : An Elementary Treatise on the Dynamics of a Particle and of Rigid bodies, Cambridge University Press, 1956.
2. K.R.Chaudhery and A.C.Aggarwal : Elements of Mechanics, Statics and Dynamics. S Chand and Company
3. S. L. Loney : The elements of Statics and Dynamics, 5th edition, Cambridge University Press, 1947.
4. Donald T. GreenWood : Principles of Dynamics, Second Edition, Prentice Hall of India.
5. M . Ray : A Text Book on Dynamics , S. Chand and Company- 1989

COMPUTER SCIENCE
SEMESTER-III

SCHEME OF EXAMINATION

THIRD SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS05	**Theory-A**	**Computer Organization**	**3**	**30**	**5**	**35**
Paper –CS06	**Theory-B**	**Object Oriented Programming using (C++)**	**3**	**30**	**5**	**35**
Paper – PCS03	**Practical-C**	**Practical Based on Paper – CS06**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS05 : Computer Organization

Objective : To teach the students the basics of computer organization, Microprocessor & basic know how about system maintenance.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT - I

Representation of Information : Number system: Binary, Decimal, Hexadecimal, Octal; Conversions; integer and floating point representation, character codes (ASCII, EBCDIC), error detection and correction codes: Parity bit method, Hamming code; Boolean algebra.

UNIT – II

*Basic Building Blocks :*Combinatorial logic design : Gates, Half Adder, Full Adder, Encoder, Decoder, Multiplexer : Sequential Building Block : Flip-Flops, Registers, Counters: Synchronous and Asynchronous Counters, Bus.

Microinstructions : Register Transfer, Arithmetic, Logical and Shift Operations; Instruction : Instruction Format, Instruction Cycle; Interrrupt: Interrupt types, Interrupt Cycle.

UNIT – III

Micrprocessor : Architecture of 8086/8088 Processor Model; Instruction Set; Addressing Modes: Registgers used in Mircoprocessor.

Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/Output.

UNIT – IV

System Maintenance : Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, types of displays and other peripheral devices, installing software; Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection of Viruses, Protection from Viruses.

Suggested Readings :

Essential :

1. Mano, M.M. : *Computer System Architecture,* 3rd Ed., Dec., 1998, PHI.

Further Reading :

2. Tannenbaum, A.S. : *Structured Computer Organization,* 3rd Ed., Oct., 1993, PHI.

3. Gear, C.W. : *Computer Organisation and Programming,* McGraw Hill, 1975.

4. Langholz, G., Grancioni, J. & Kandel, A. : *Elements of Computer Organization,* Prentice Hall International, 1988.

5. Hayes : *Computer Architecture and Organization,* McGraw Hill, International Edition.

6. Sloan, M.E. : *Computer Hardware and Organization,* 2nd Edition, Galgotia Pvt. Ltd.

Paper-CS06 : Object Oriented Programming (using C++)

Objective : To teach the students the implementation of various object oriented programming concepts through C++ programming

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts of Object Oriented Programming(OOP) : Object, Class, Encapsulation, Data Hiding, Inheritance, Polymorphism. Analysis and design of system using Object Oriented Approach, Benefit of OOPs.

Structure of a C++ Program : Include files, Declaration of class, Main function, I/O streams.

Classes : Class Declaration : Data Members, Member Functions, Private and Public members, data hiding and encapsulation, arrays within a class.

Objects : Creating Objects, Accessing class data members, Accessing member functions, Methods of passing arguments to functions.

UNIT – II

Object Concepts: Arrays of Objects, Objects as function arguments: Pass by value, Pass by Reference, Pointers to Objects.

Functions in C++ : Member function definition inside the class declaration and outside the class declaration, scope resolution operator, Private and Public member function, Nesting of member functions, Static and Friend functions.

UNIT – III

Constructors and Destructors: Constructors: Declaration and Definition, Default Constructors, Parameterized Constructors, Copy Constructors. *Destructors*: Definition and use.

Inheritance – Extending Classes : Concept of inheritance, base class, derived class, defining derived classes, visibility modes, private, public, protected; single inheritance : privately derived, publicly derived; making a protected member inheritable, access control to private and protected members by member functions of a derived class, multilevel inheritance, nesting of classes.

UNIT – IV

Polymorphism : Definition, types, Function overloading, Operator Overloading, Virtual functions and pure virtual functions.

Suggested Readings :

Essential :

1. Stroustrup : ***The C ++ Programming Language,*** **Addison Wesley.**
2. E. Balaguruswamy : ***Object Oriented Programming with C++,*** **TMH.**

Further Reading :

3. Robert Lafore : ***OOP in Turbo C++,*** **Galgotia.**
4. Herbert Schildt : ***Schildt's Advanced Win 95 Prog. in C & C++,*** **TMH.**
5. Herbert Schildt : ***C++ The Complete Reference,*** **TMH.**

Paper – PCS03 : Practical Based on Paper CS06

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COMPUTER SCIENCE
SEMESTER-IV

SCHEME OF EXAMINATION

FOURTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS07	**Theory-A**	**Database Concepts**	**3**	**30**	**5**	**35**
Paper –CS08	**Theory-B**	**Data Structures**	**3**	**30**	**5**	**35**
Paper – PCS04	**Practical-C**	**Practical Based on Paper – CS08**	**3**	**30**	**--**	**30**

Note : Practical marks will include the appropriate weightage for proper maintenance of Lab. Record.

Paper-CS07: Database Concepts

Objective : To teach the underlying concepts of database system in depth to students.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach; Data Independence.

UNIT – II

Relational Data Model: Relational model concepts, Integrity constraints over Relations, Conventional Data Models : An overview of Network and Hierarchical Data Models. The 12 Rules (Codd's Rule) for an RDBMS; Entity Relationship model.

UNIT – III

Relational Algebra and Calculus: Storage Organization for Relations, Relational Algebra: Operations - union, intersection, difference, Cartesian product, projection, selection, division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

UNIT – IV

Advance concepts: Client-Server Architecture, 3-tier Architecture of database, Distributed databases, Normalization: First, second and third Normal Form, Boyce Codd Normal Form; Database Integrity: entity and referential; Security: , Concurrency, Recovery

Suggested Reading

Essential :

1. Date, C.J., 1981 : *An Introduction to Data Base Systems,* Vols. I and II, Addison-Wesley.

Further Readings

2. Ullman, Jeffrey D., : *Principles of Data Base Systems,* 2nd Edition, Galgotia Publ. Pvt. Ltd. 1982.
3. Whittington, R.P. : *Data Base System Engineering,* Clavendon Press.
4. Pratt, P., 1987 : *Data Base Systems Management and Design,* Boyd and Fraser Publ. Comp.

Paper-CS08 : Data Structures

Objective : To teach the students various data structures and operations performed on them using algorithms. The students will be capable to implement these operations using any programming language.

Note : (i) The question paper will consist of Four units.

(ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering the whole syllabi.

(iii) The students are required to attempt **ONE** question from each unit and the compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT – I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures; **Arrays**: Introduction, Types of Array, Memory representation, Applications and operations. **Stacks**: Introduction, memory representation, Applications and operations

UNIT – II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation; **Queue**: Introduction, Types, Memory Representation and Applications.

UNIT – III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Binary Search tree; **Graphs**: Introduction, Memory Representation, Graph Traversal (DFS and BFS).

UNIT – IV

Searching: Binary and Linear Search; **Sorting**: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Readings :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.

Paper – PCS04 : Practical Based on Paper CS08 – Implement Data Structures Operations using C / C++.

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STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Note :

1. A candidate shall offer these subjects in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.
2. A candidate shall offer B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.
3. There are two papers with codes 201 and 202 in the subject of Statistics in B.A./B.Sc. 3rd semester. These are to be taught simultaneously throughout the semester.
4. 8 lectures (of 45 minutes each) for theory per week and 4 lectures (of 45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper- 201 : STATISTICAL INFERENCE

Maximum Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to provide a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Concept of a statistic and its sampling distribution. Point estimate of a parameter, concept of unbiasedness, consistency, efficiency and sufficiency (only the definitions and examples). Maximum likelihood estimation (standard distributions) Standard errors of sample mean and sample proportion. Sampling distribution of sum of independent binomial and Poisson random variables. Independence of sample mean and variance in random sampling from a normal distribution (without derivation).

Statements and sampling distributions of chi-square, t & F distributions and their relationships.

UNIT-II

Statistical Tests and Interval Estimation : Null and alternative hypothesis, two types of errors, level of significance and p-value. Testing for the mean and variance of a normal distribution, testing of equality of means and variances of two univariate normal distributions, and their related confidence intervals. Testing the significance of sample correlation coefficient.

Large Sample Tests : Use of central limit theorem for testing and interval estimation of a single mean and a single proportion, difference of two means and two proportions. Fisher's Z-transformation and its uses. Chi-square test for goodness of fit and testing of independence of attributes, Yale's correction.

References :

1. Goon A.M., Gupta M.K., Dasgupta. B. (2005) : Fundamentals of Statistics, Vol. I, World Press, Calcutta.
2. Miller, I. and Miller, M. (2002) : John E. Freund's Mathematical Statistics (6^{th} addition, low price edition), Prentice Hall of India.

Additional References :

1. Mood A.M., Graybill F.A. and Boes D.C. (1974) : Introduction to the Theory of Statistics, McGraw Hill.
2. Bhat B.R., Srivenkatramana T and Rao Madhava K.S. (1997) : Statistics : A Beginner's Text, Vol. I, New Age International (P) Ltd.
3. Snedecor G.W and Cochran W.G. (1967) : Statistical Methods. lowa State University Press.
4. Spiegel, M.R , Stephens, L.J. and Kumar N. (2010) : Schaum's outlines *Statistics*, (4^{th} edition) Tata McGraw Hill Education Private Limited

Paper- 202: PRACTICAL (SEMESTER-III)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce : 5 marks; record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Drawing random samples from standard distributions : Uniform, Exponential and Normal.
2. Tests of significance based on t, chi-square and F for one sample, two samples and paired sample problems; significance of correlation coefficient. Use of Z-Transformation for testing $\rho = \rho_0$.
3. Large sample tests for means and proportions, tests of goodness of fit and independence of attributes in contingency tables.
4. Confidence intervals for one and two sample problems (mean, variance and proportion).

STATISTICS

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-IV

Note : 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2. A candidate shall offer this subject in B.A./B.Sc. 2nd year only if he/she had taken up the corresponding subject in B.A./B.Sc. 1st year.

3. There are two papers code named papers 203 and 204 in the subject of Statistics in B.A./B.Sc. 4th semester. These are to be taught simultaneously throughout the semester.

4. 8 lectures (45 minutes each) for theory per week and 4 lectures (45 minutes each) for practical per week amounting in all to 12 lectures per week for two papers (one theory and one practical) shall be allotted for the teaching.

Paper - 203 : SAMPLE SURVEYS, DESIGN AND ANALYSIS OF EXPERIMENTS

Maximum Marks	**:**	**75**
Theory	**:**	**65**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of this course is to acquaint the students about the need & merits of sampling over census and the implementation of various sampling schemes along with their merits, demerits and comparisons in appropriate practical situations. The students will get exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.

Notes :

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.

2. Simple non-programmable calculator is allowed.

3. Statistical tables and log tables will be provided on request.

UNIT-I

Concepts of population and sample, need for sampling, census and sample surveys, basic concepts in sampling. Sample selection and sample size. Sampling and non-sampling errors.

Some basic sampling methods for estimation of population mean, variance and standard error of estimates : simple random sampling (SRS) with and without replacement, stratified random sampling under various allocations and systematic sampling.

UNIT-II

Linear Models : concepts of fixed effect, random effect and mixed effect models. Analysis of variance for one way, two-way (with one observation per cell and with multiple but equal observations per cell) classifications under the fixed effect models.

Need for design of experiment, three fundamental principles of design, basic designs-CRD, RBD, LSD and their analysis.

References:

1. Goon A.M., Gupta M.K., Das Gupta. B. (2005) : Fundamentals of Statistics, Vol. II, World Press, Calcutta.
2. Singh, D. and Chaudhary, F.S (1986). : Theory and Analysis of Sample Survey Designs, John Wiley and sons.

Additional References:

1. Sukhatme, B.V (1984) : Sample Survey Methods and Its Applications, Indian Society of Agricultural Statistics.
2. Murthy M.N (1967) : Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
3. Sampath S. (2000) : Sampling Theory and Methods, Narosa Publishing House.
4. Dass M.N. and Giri (1986) : Design and Analysis of Experiments, Springer Verlag.
5. Cochran W.G. and Cox G.M (1992) : Experimental Designs, John Wiley and Sons.
6. Montgomery, D. C. (2000) : Design and Analysis of Experiment, John Wiley, New York.

Paper - 204: PRACTICAL (SEMESTER-IV)

Maximum Marks : 25
Time allowed : 3 hours

(Viva voce : 5 marks; record of the year : 5 marks; Annual Paper : 15 marks)

Note : The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Selection of sample and determination of sample size : Simple random sampling (SRS), stratified SRS, allocation problems in stratified SRS and systematic sampling.
2. Analysis of variance for one-way and two-way classifications. Analysis of CRD, RBD and LSD.

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APPLIED STATISTICS

SEMESTER-III

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 201AS in B.A./B.Sc. Semester-III having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

PAPER - 201AS: MATHEMATICAL METHODS - II

Maximum Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to provide an exposure to the Coordinate Geometry of three dimensions, Calculus of several variables and theory of Matrices.

Note : There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.

UNIT-I

Coordinate Geometry of 3 Dimensions : Cartesian, spherical coordinates, equations of line, plane, sphere and ellipsoid.

Matrices and Linear Algebra : Determinants, algebra of matrices, rank of a matrix, inverse of a matrix, symmetric matrices (upto 4×4 matrices only).

UNIT-II

Matrices and Linear Algebra : Systems of Linear equations and their solutions.

Calculus of Several Variables : Functions of two variables, Partial derivatives and double integrals. Applications to evaluation of area.

Books Prescribed

1. Ayres F. (1999) : First Year College Mathematics, Schaum Series, Mc Graw Hill, New York.

2. Ayres F. (1980) : Matrices, Schaum Series, Mc Graw Hill, New York.

Books suggested for supplementary Reading

1. Kindle J.H. (1990) : Analytical Geometry, Schaum Series, Mc Graw Hill, New York.

2. Ayres F. (1999) : Calculus, Schaum Series, Mc Graw Hill, New York.

3. Spiegel M.R. (2002) : Advanced Calculus, Schaum Series, Mc Graw Hill, New York.

APPLIED STATISTICS

SEMESTER-IV

Note :
1. This course shall not be opted for along with courses in B.A./B.Sc Mathematics and/or B.A./B.Sc. Statistics.
2. The candidate opting for this course will not be eligible for admission to M.A./M.Sc. Statistics.
3. There is one paper with code 202AS in the subject of Applied Statistics in B.A./B.Sc. Semester IV, having a total of 100 marks.
4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching.

PAPER- 202 AS: STATISTICAL METHODS

Maximum Marks	**:**	**100**
Theory	**:**	**90**
Internal Assessment	**:**	**10**
Time allowed	**:**	**3 hours**

Objective: The objective of the course is to make the students conversant with various techniques used in summarization and analysis of data. The focus will be both on theoretical as well as practical approach.

Note :
1. There will be in all nine (9) questions. The first question is compulsory and will be of short answer type covering the whole syllabus. This question will have (9) parts of 2 marks each. Of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidates will be required to attempt five (5) questions in all including the compulsory first question and two questions from each Unit.
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT-I

Compilation, classification, tabulation and diagrammatic representation of statistical data. Concepts of Statistical population, random sample and frequency curve, measures of location, dispersion, skewness and kurtosis.

Two dimensional random variable, joint probability distributions, marginal and conditional probability distributions, conditional expectation, covariance and correlation coefficient.

UNIT-II

Measures of association and contingency, correlation and linear-regression involving two variables. Bivariate normal distributions.

Statement of weak law of large numbers and central limit theorem for independent and identical random variables. Sampling distributions of means, chi-square, t and F in sampling from normal populations (without proof).

Books recommended

1. Goon, A.M., Gupta, M.K. and Dasgupta, B (2005). : Fundamentals of Statistics, Vol.1 Chapter 1 to 6, 9, 10, 13 (only the relevant portion from these chapters as suggested by the body of the syllabus).

2. P.L.Meyer, (1971) : Introductory Probability and Statistical Applications, Addison Wesley. American Pub. Co.

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PHYSICS

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2020-2021

General Instructions for teachers, students and paper setters:

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal Assessment. The Practical examination is of 25 marks including 3 (three) marks for the Internal assessment. The exams will be conducted every semester.

2. The number of lectures per week will be three for each theory paper and six for practicals.

3. The examination time for each theory paper as well as practical paper will be three hours.

4. Each theory paper will consist of seven questions comprising of three sections. First two sections will comprise of three questions from each of Units I and II of syllabus, and the third section will comprise of one compulsory question of ten short answer type parts covering whole syllabus. The question paper will be set for 44 marks - All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks. Student will attempt two questions from each of the first two sections and any eight parts of the compulsory questions. After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.

5. The numerical problems/exercises in the question paper should be 25-30%.

6. The use of Non-programmable calculators will be allowed (paper setter should explicitly mention this in the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pages are not allowed in the examination hall.

7. External examiners will be sent for Practical examinations.

PHYSICS

SEMESTER-III

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – I	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –I	Total Teaching hrs. 30
Paper C	:	Quantum Physics-I	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-I (30 Hrs.)

UNIT-I

Basic ideas of Statistical Physics, Scope of Statistical Physics, basic ideas about probability, distribution of four distinguishable particles in two compartments of equal size. Concept of macrostates, microstates, thermodynamic probability, effects of constraints on the system, distribution of n particles in two compartments, deviation from the state of maximum probability, equilibrium state of dynamic system, distribution of distinguishable n particles in k compartments of unequal sizes.

UNIT-II

Phase space and its division into elementary cells, three kinds of statistics. The basic approach in the three statistics. Maxwell-Boltzman statistics applied to an ideal gas in equilibrium, experimental verification of Maxwell-Boltzman's law of distribution of molecular speeds.
Need of quantum statistics--B.E. statistics, derivation of Planck's law of radiation, deduction of Wien's displacement law and Stefan's law from Planck's law, F.D. statistics, Comparison of M.B., B.E. and F.D. statistics.

Books Suggested :

Essential Readings :

1. "*Statistical Physics and Thermodynamics*", V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar).
2. "*A Treatise on Heat*" Saha and Srivastava (Indian Press, Ahmedabad, 1972).

Further Readings:

1. *Thermal Physics* by C. Kittel & H. Kroemer, CBS Pub., 1987.
2. *Thermal Physics*, S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-I **(30 Hrs.)**

UNIT-I

Interference : Concept of coherence, spatial and temporal coherence, coherence time, coherence length, area of coherence. Conditions for observing interference fringes. Interference by wavefront division and amplitude division. Young's double slit experiment. Lloyd's mirror and Fresnel's biprism, phase change on reflection. Newton's rings,Michelson interferometer—working, principle and nature of fringes. Interference in thin films, Role of interference in anti-reflection. Multiple beam interference, Fabry-Perot interferometer, nature of fringes, finesse.

UNIT-II

Diffraction : Huygen-Fresnal theory half period zones, zone plates. Distinction between Fresnel and Fraunhofer diffraction. Fraunhofer diffraction due to single slit and intensity distribution,double slits & multiple slits(qualitative). Fraunhofer diffraction at rectangular (qualitative discussion)and circular apertures. Effects of diffraction in optical imaging, resolving power of microscope and telescope, diffraction grating, its use as a spectroscopic element, resolving power, Moire's fringes.

Polarization : Concept and analytical treatment of unpolarised, plane polarized and elliptically polarized light. Double refraction, Nicol prism, sheet polarisers, retardation plates. Production and analysis of polarized light (quarter and half wave plates).

Books Suggested :

Essential Readings:

1. *Optics*, Jenkins and White, McGraw Hill.
2. *Optics*, Ajoy Ghatak, McMillan India.
3. *Physics for Degree Students,* C. L. Arora and P .S. Hemne, S. Chand & Co., 2014.

Further Readings:

1. *Optics*, Born and Wolf, Pergamon.

Paper-C : QUANTUM PHYSICS-I (30 Hrs.)

UNIT-I

Formalism of Wave Mechanics :

(i) Plancks's formula of Black body radiation and energy quantization,
Wave-particle duality – Photoelectric effect, X-ray diffraction, Compton effect, Pair production, Photon and gravity.
De Brogile waves, wave packet, Phase velocity and Group velocity, Electron microscope, Particle in a box, Particle diffraction, Davisson-Germer experiment, Interferferometry with particles.
Uncertainty principle with illustrations, Principle of complementarity. (Chapters 2 and 3 of book 1 or Chapters 1-3 of book 2)

(ii) Quantum mechanics, Wave equation, Plausible arguments leading to time-dependent Schrodinger equations, Born's interpretation of Wave function, complex character, continuity and boundary conditions, probability interpretation, normalization, Probabilty current, Probability conservation equation, Principle of superposition.

(iii) Fundamental postulates of quantum mechanics. Eigenvalues and eigenfunctions. Operator formalism, Position, momentum and energy operators, expectation values, Ehrenfest theorem, Hermitian operators.

(Chapter 5 of book 1 and book 2)

UNIT-II

Problems in One and Three Dimensions :

(a) Steady-state Schrodinger equation, Appliction to stationary states for one dimension, Potential step. potential barrier, Tunnel effect examples, Scanning Tunneling microscope, rectangular potential well, Linear harmonic oscillator.

(Chapter 5 of book 1 and book 2)

(ii) Schrödinger equation for spherically symmetric potential, spherical harmonics, hydrogen atom energy levels and eigenfunctions, Principal, Orbital and Magnetic quantum numbers, Electron probability density.

(Chapter 6 of book 1 and book 2)

Books Suggested :

Essential Readings :

1. *Concept of Modern Physics, A. Beiser, S. Mahajan and S. R. Choudhury, Tata McGraw Hill, 6th Edition.*
2. *Quantum Physics of Atoms, Molecular, R. Eisberg & R.Resnick, Second Edition, John Wiley, 2002.*
3. *Physics for Degree Students, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014*

Further Readings :

1. *Modern Physics,* J. Bernstein, P.M. Fishbane, S.G. Gasiorowicz, Pearson, 2000.
2. *Elements of Modern Physics*, S.H. Patil, McGraw Hill, 1998.
3. *Quantum Mechanics*, E. Merzbacaher, II Ed., John Wiley.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II .The Practical examination will be held along with the fourth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment,fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i) One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii) One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii) Viva-Voce and Record (Practical file)	10
(iv) Project	8
(v) Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.
3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.
4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.
5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.
6. Number of candidates in a group for practical examination should not exceed **20**.
7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

UNIT-I

A. Statistical Physics and Thermodynamics :

I. To study adiabatic expansion of a gas.

II. To measure thermal expansion of crystal using interference fringes.

III. To measure thermal conductivity in poor conductor by Lee's method.

IV. Thermo emf calibration, comparison.

V. Total radiation law, temperature dependence of radiation.

VI. To study Probability distribution using coloured dice, coins.

B. Optics and Lasers :

VII. To determine the refractive index of a liquid using spectrometer.

VIII. To determine the Cauchy's constants.

IX. To study the refractive index of a doubly refracting prism.

X. Study of rotation of plane of polarization with a polarimeter.

XI. To determine the wave length of a given light using biprism.

Exercises :

1. To measure the thermo e.m.f.
2. To determine the heating efficiency of an electric kettle with varying voltages.
3. To measure the angle of rotation of plane of polarization for the given liquid.
4. To determine the least count and setup the spectrometer for minimum deviation position of the prism.

Computer Based Activities : Elementary C language programs.

1. Motion of particle in a central force field.
2. Calculation of days between two dates of a year.
3. To check if triangle exists and the type of the triangle.

UNIT-II

C. Optics and Lasers :

I. To determine the wave length and dispersive power using plane diffraction grating (use Hg source).

II. To determine the resolving power of a telescope.

III. To determine the resolving power of a grating.

IV. Set up Newton's rings to determine wave length of sodium light.

V. To measure an inaccessible height using sextant.

VI. To determine the principal points of a lens system.

VII. To determine the divergence and wave length of a given laser source.

D. Quantum Physics:

VIII. To study the Photoelectric effect and determine the value of Planck's constant.

IX. To study the gas discharge spectrum of hydrogen.

X. To study the absorption spectra of iodine vapours.

XI. To determine the ionization potential of mercury.

Exercises :

1. To measure the diameter of Newton's rings.
2. Study of variation of light intensity using photovoltaic cell/inverse square law.
3. To determine the angle of wedge using interference method.
4. To measure the angle of elevation of a tall building.

Computer Based Activities : Elementary C language programs.

1. To find the sum of the sine and cosine series and print out the curve.
2. To find Sum and Product of Matrices
3. Motion of a projectile using computer simulation.

Text and Reference Books :

1. *A Laboratory Manual of Physics for Undergraduate Classes,* D.P. Khandelwal.
2. *B.Sc. Practical Physics, C.L.* Arora (S. Chand) & Co. (2014)
3. *Numerical Analysis* by C. Dixon.
4. *Programming with C, Schaum series* by Byron Gottfried & Jitender Chhabra.

PHYSICS

SEMESTER – IV

Papers, marks and teaching hours allocation:

Paper A	:	Statistical Physics and Thermodynamics – II	Total Teaching hrs. 30
Paper B	:	Optics and Lasers –II	Total Teaching hrs. 30
Paper C	:	Quantum Physics-II	Total Teaching hrs. 30
		Physics Practicals	Total Teaching hrs. 45

Paper A : STATISTICAL PHYSICS AND THERMODYNAMICS-II (30 Hrs.)

UNIT-I

Statistical definition of entropy, change of entropy of a system, additive nature of entropy, law of increase of entropy, reversible and irreversible processes with examples. Work done in a reversible process. Examples of increase of entropy in natural processes. Entropy and disorder.
Brief review of the terms and Laws of Thermodynamics, Carnot's Cycle. Entropy changes in Carnot's Cycle. Applications of thermodynamics to thermoelectric effect, change of entropy along a reversible path in a P.V. diagram, entropy of a perfect gas. Equation of state of ideal gas from simple statistical consideration. Heat death of the universe.

UNIT-II

Derivation of Maxwell's thermodynamical relations and applications, cooling produced by adiabatic stretching, adiabatic compression, change of internal energy with volume. Expression for (C_p-C_v), change of state and Clayperon Equation. Thermodynamical treatment of Joule-Thomson effect. Use of Joule-Thomson effect for liquification of helium. Production of very low temperature by adiabatic demagnetisation.

Books Suggested :

Essential Readings:

1. *"Statistical Physics and Thermodynamics",* V.S. Bhatia, (Shoban Lal Nagin Chand, Jalandhar)
2. *"A Treatise on Heat"* Saha and Srivastava (Indian Press, Ahmedabad, 1972.)

Further Readings :

1. *Thermal Physics by C.* Kittel & H. Kroemer, CBS Pub., 1987
2. *Thermal Physics,* S.C. Garg, R.M. Bansal, and C.K. Ghosh, TMH, 2000.

Paper-B : OPTICS AND LASERS-II **(30 Hrs.)**

UNIT-I

Laser Fundamentals :
Interacation of light with matter : Absorption, spontaneous emission, stimulated emission, Wave mechanical explanation, Properties of Spectral Lines, Temporal and spatial coherence, Charatertistics of stimulated emission, Einstein coefficients and their relations, Light amplification and threshold condition ,Population inversion, Kinetics of optical absorption (qualitative account only), Qualitative account of Collisional broadening, Doppler broadening & Natural broadening, Mechanism of Luminescence.
Lasing action, Components of Laser, Elementary theory of optical cavity, longitudinal and transverse modes, Principal pumping schemes, Three level and four level laser schemes.

UNIT-II

Laser Systems : Types of lasers, Ruby and Nd : YAG lasers. He–Ne, Dye and CO_2 lasers – construction, mode of creating population inversion and output characteristics.
Applications of lasers—a general outline, Holography. Principle, recording of hologram and reconstruction of image.
Fiber Optics : Photonics, Optical fibre, Construction, Numerical aperture, acceptance angle, skip distance, Step index fibre – single mode and multimode, Graded index fibre, Losses in optical fibre, Material losses and Rayleigh scattering, bending losses, Intermodal and intramodal dispersion.
Splicing techniques, Optical fibre based communication system, Medical applications.

Books Suggested :

Essential Readings :

1. *Laser Fundamentals,* W.T. Silfvast, Foundation Books.
2. *Lasers and Non-linear Optics,* B.B. Laud, Wiley Eastern Limited.
3. *A text book of Optics,* Subtahmanyam N., Lal B. and Avadhanulu, M. N., S. Chand & Co., 2012.
4. *Optical Fiber Communication,* Keiser, MH.

Further Readings :

1. *Lasers,* Svelto Pergmon.

Paper-C : QUANTUM PHYSICS-II (30 Hrs.)

UNIT-I

Radiative transitions, selection rules and life times,
Spectrum of hydrogen atom.
Normal Neeman effect and experiment, Degeneracy of H-atom energy levels, fine structure, Electron angular momentum, Larmor's frequency, electron spin angular momentum, Exclusive principle, Stern-Gerlach experiment, spin-orbit coupling, electron magnetic moment, total angular momentum, Hyperfine structure, examples of one electron systems, Anomalous Zeeman effect, Lande-g factor (sodium D-lines). Paschen-Back Effect, Stark Effect.

(Chapters 6 & 7 of Book 1, Chapters 8-10 of Book 2)

UNIT-II

Symmetric and Antisymmetric wave functions, exclusion principle, Many electron atoms, Slater determinant, Electronic configurations, Hund's rule, Spin-Orbit coupling, L-S coupling, J-J couplings, term symbols. Atomic spectra of H, Na, He and Hg, selection rules.

X-ray spectra, nomenclature, Selection rules, Mosley law, Auger effect.

Molecular bonding, H_2^+ ion and H_2 molecules, Complex molecules, molecular spectra, selection rules, symmetric structures, rotational vibrational levels and spectra of diatomic molecules,vibration-rotation spectra, electronic spectra of molecules, Franck Condon principle, fluorescence and phosphorescence, Raman Effect, Magnetic resonance experiments.

(Chapters 7 & 8 of Book 1, Chapter 12 of Book 2)

Books Suggested :

Essential Readings :

1. *Concepts of Modern Physics,* A. Beiser, S. Mahajan and S. R. Choudhary, Tata McGraw Hill, 6th Edition.
2. *Quantum Physics of Atoms, Molecular,* R. Eisberg & R. Resnick, Second Edition, John Wiley, 2002.
3. *Physics for Degree Students,* C.L. Arora and P.S. Hemne, S.Chand & Co., 2014.
4. *Elements of Modern Physics,* S.H. Patil, McGraw Hill, 1998.

Further Readings :

1. *Fundamentals of Molecular Spectroscopy,* C.N . Banwell, T.M.H., 1972
2. *Atomic and Molecular Spectra*, Rajkumar (Kedarnath Ramnath Prakashan, Meerut).
3. *Atomic Spectra,* H.G. Kuhn, Academic Press, N.Y.

PHYSICS PRACTICALS

The Practical examination will be held along with the fourth semester examinations. General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester III.

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CHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

Scheme of Teaching and Examination

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Total Marks

SEMESTER-III- 100

SEMESTER-IV- 100

200

CHEMISTRY

SEMESTER-III

Paper	Course	Teaching Hrs.		Max. Marks
IX	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
X	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XI	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XII	Laboratory Practicals		6 periods per week	22+3 internal assessment
	Total	**15 periods/week**		**100**

Paper-IX: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Chemistry of Elements of First Transition Series:
Characteristic properties of *d*-block elements.

Properties of the elements of the first transition series, their simple compounds and complexes, illustrating relative stability of their oxidation states, coordination number and geometry.

UNIT-II **(7 Hrs.)**

Chemistry of Elements of Second and Third Transition Series:
General characteristics, comparative treatment with their 3*d*-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and stereochemistry.

UNIT-III **(8 Hrs.)**

Chemistry of Coordination Compounds-I
Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds

UNIT-IV **(7 Hrs.)**

Chemistry of Coordination Compounds-II
Valence bond theory of transition metal complexes. Properties of Coordination compounds i.e. magenetic properties, colours (Qualitative approach only), use of coordination compounds.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-X: ORGANIC CHEMISTRY-A **Time : 3 Hrs**
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Alcohols and Phenols:

Classification and nomenclature

Monohydric alcohols-Nomenclature, methods of formation by reduction of aldehydes, ketones, carboxylic acids and esters. Hydrogen bonding. Acidic nature. Reactions of alcohols. Dihydric and Trihydric alcohols-Nomenclature, methods of formation, chemical reactions of vicinal glycols and glycerol.

Preparation of phenols, physical properties and acidic character. Comparative acidic strengths of alcohols and phenols, resonance stabilization of phenoxide ion. Reactions of phenols-electrophilic aromatic substitution, acylation and carboxylation. Mechanisms of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, and Reimer-Tiemann reaction.

UNIT-II **(8 Hrs.)**

Aldehydes and Ketones I

Nomenclature and structure of the carbonyl group. Synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chorides, synthesis of aldehydes and ketones using 1,3-dithianes, synthesis of ketones from nitriles and from carboxylic acids. Physical properties.

UNIT-III **(7 Hrs.)**

Aldehydes and Ketones-II

Mechanism of nucleophilic additions to carbonyl group with particular emphasis on benzoin, aldol, Perkin and Knoevenagel condensations. Condensation with ammonia and its derivatives. Wittig reaction, Mannich reaction.

Use of acetals as protecting group. Oxidation of aldehydes, Baeyer-Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen, Wolff-Kishner, $LiAlH_4$ and $NaBH_4$ reductions.

UNIT-IV

Carboxylic Acids: **(7 Hrs.)**

Nomenclature, structure and bonding, physical properties, acidity of carboxylic acids, effects of substitutions on acid strength. Preparations of carboxylic acids. Reactions of carboxylic acids. Hell-Volhard-Zelinsky reaction. Synthesis of acid chlorides, esters and amides, Reduction of carboxylic acids. Mechanism of decarboxylation. Methods of formation and chemical reactions of halo acids. Hydroxyl acids: Malic, tartaric and citric acids(structural features only).

Methods of formation and chemical reactions of unsaturated monocarboxylic acids.

Dicarboxylic acids: Methods of formation and effects of heat and hydrating agents.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.

4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.

5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XI: PHYSICAL CHEMISTRY-A

Time : 3 Hrs.
Max. Marks:22+3
60 Hrs. (2 Hrs./Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Liquid State:
Intermolecular forces, structure of liquids (a qualitative description).
Structural differences between solids, liquids and gases.
Liquid Crystals : Difference between liquid crystal, solid and liquid. Classification, structure of nematic and cholestric phases. Thermography and seven segment cell.

UNIT-II **(7 Hrs.)**

Chemical Equilibrium:
Equilibrium constant and free energy. Thermodynamic derivation of law of mass of mass action. Le - Chatelier's principle.
Reaction isotherm and Reaction isochore-Clapeyron equation and Clausius –Clapeyron equation, applications.

UNIT-III **(8 Hrs.)**

Thermodynamics-II:
Second Law of Thermodynamics: Need for the law, different statements of the law, Carnot cycle and its efficiency, Carnot theorem. Thermodynamic scale of temperature.

Concept of Entropy: Entropy as a state function, entropy as a function of V & T, entropy as a function of P & T, entropy change in physical change, Clausius inequality, entropy as a criteria of spontaneity and equilibrium. Entropy change in ideal gases and mixing of gases.

UNIT-IV **(7 Hrs.)**

Thermodynamics-III:
Third Law of Thermodynamics: Nernst heat theorem, statement and concept of residual entropy, evaluation of absolute entropy from heat capacity data. Gibbs and Helmholtz functions; Gibbs function (G) and Helmholtz functions (A) as thermodynamic quantities, A & G as criteria for thermodynamic equilibrium and spontaneity, their advantage over entropy change. Variation of G and A with P, V and T.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XII: LABORATORY PRACTICALS

Max. Marks:22+3

Inorganic Chemistry **6 Periods/week**

Quantitative Analysis

Volumetric Analysis:

a) Estimation of calcium content in chalk as calcium oxalate by permanganometry.
b) Estimation of hardness of water by EDTA.
c) Estimation of ferrous and ferric by dichromate method.
d) Estimation of copper using sodium thiosulphate

Gravimetric Analysis

Analysis of Cu as CuSCN and Ni as Ni (dimethylgyoxime)$_2$.

Physical Chemistry

Thermochemistry:

a) To determine the solubility of benzoic acid at different temperatures and to determine ΔH of the dissolution process.
b) To determine the enthalpy of neutralization of a weak acid/weak base versus strong base/strong acid and determine the enthalpy of ionization of the weak acid/weak base. pH of a Buffer solution, Determination of ionization constant of a weak acid.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Inorganic Chemistry	: 09 marks
Q.No. II. Physical Chemistry	: 06 marks
Q.No. III. Viva-Voce	: 04 marks
Ask four questions (2 marks each) related to chemistry practicals.	
Q.No. IV. Note Book	: 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs:Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R. Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

CHEMISTRY

SEMESTER-IV

Paper	Course	Teaching Hrs.		Max. Marks
XIII	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XIV	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XV	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XVI	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	**15 periods/week**	**100**

Paper-XIII: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Chemistry of Lanthanide Elements:
Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

Chemistry of Actinides:
General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from U, similarities between the later actinides and the later lanthanides.

UNIT-II (7 Hrs.)

Acids and Bases:
Arrhenius, Bronsted-Lowry, the Lux-Flood, solvent system and Lewis concepts of acids and bases.

UNIT-III (8 Hrs.)

Oxidation and Reduction:
Use of redox potential data – analysis of redox cycle, redox stability in water – Frost, Latimer and Pourbaix diagrams. Principles involved in the extraction of the elements.

UNIT-IV **(7 Hrs.)**

Non-aqueous Solvents:
Physical properties of a solvent, types of solvents and their general characteristics, reactions in non-aqueous solvents with reference to liquid NH_3 and liquid SO_2.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books Suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 3rd edition, Pubs: John Wiley Sons. 1995.

2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman Hall Ltd., 1991.

3. Shriver, D.E., Alkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Oxford Publisher: Oxford University Press, 2006.

4. Douglas, B. McDamiel, D., Alexander, J., Concepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1994.

5. Porterfield, W.W., Wesley, A., Inorganic Chemistry; Pubs: Addison-Wesley Publishing Company, 1984.

6. Miessler, G.L., Larr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.

7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: McGraw-Hill Publishing Company Limited, 1991.

8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.

9. Puri, B.R., Sharma, L.R., Kalia, K.C., Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publisher, 2006-07.

Paper-XIV: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Carboxylic Acid Derivatives:
Structure and nomenclature of acid chlorides, esters, amides and acid anhydrides. Relative stability & reactivity of acyl derivatives. Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution.

Preparation of carboxylic acid derivatives, chemical reactions. Mechanisms of esterification and hydrolysis (acidic and basic).

UNIT-II (8 Hrs.)

Ethers , Epoxides Fats, Oils and Detergents:
Nomenclature of ether and methods of their formation, physical properties. Chemical reaction-cleavage and autoxidation, Ziesel's method.

Synthesis of epoxides. Acid and base-catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides.

Natural fats, edible and industrial oils of vegetable origin, common fatty acids, glycerides, hydrogenation of unsaturated oils. Saponification value, iodine value, acid value. Soaps, synthetic detergents; alkyl and aryl sulphonates.

UNIT-III (7 Hrs.)

Organic Compounds of Nitrogen:
Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanisms of nucleophilic substitution in nitroarenes and their reductions in acidic, neutral and alkaline media. Picric acid.

Structure and nomenclature of amines, physical properties. Stereochemistry of amines, Separation of a mixture of primary, secondary and tertiary amines. Structural features effecting basicity of amines. Amine salts as phase-transfer catalysis. Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel-phthalimide reaction, Hofmann bromamide reaction.

UNIT-IV

Heterocyclic Compounds: **(7 Hrs.)**

Introduction: Moleculer Orbital picture and aromatic character of pyrrole, furan, thiophene, pyridine. Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution. Mechanism of nucleophilic substitution reactions in pyridine derivatives.Comparision of basicity of pyridine, piperidine and pyrrole.

Introduction to condensed-five and six-membered heterocycles. Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis. Skraup synthesis and Bischler-Napieralski synthesis. Mechanism of electrophilic substitution reactions of indole, quinoline and isoquinoline.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

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Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: Wiley Eastern Limited, 1985, Vol. I, II, III.

4. Solomons, T.W., Fryhle, C.B., Organic Chemistry; 9th edition, Pubs: Wiley India, 2007.

5. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XV: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
60 Hrs. (2 Hrs/Week)
3 Periods/Week

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I (8 Hrs.)

Phase equilibrium:

Statement and meaning of the terms – phase, component and degree of freedom, derivation of Gibbs phase rule, phase equilibria of one component system—water, CO_2 and S systems.

Phase equilibria of two component system –solid –liquid equilibria, simple eutectic – Bi-Cd system, desiliverisation of lead.

Solid solutions—compound formation with congruent melting point (Mg-Zn) and incongruent melting point, (NaCl-H_2O) system. Freezing mixtures, acetone-dry ice.

Partially Miscible Liquids –Phenol-water, trimethylamine – water, nicotine –water systems.

Nernst distribution law-thermodynamic derivation, applications.

UNIT-II (7 Hrs.)

Electrochemistry –I:

Electrical transport –Conduction in metals and in electrolyte solutions, specific conductance and equivalent conductance, measurement of equivalent conductance, variation of equivalent and specific conductance with dilution.

Migration of ions and Kohlrausch Law, Arrhennius theory of electrolyte dissociation and its limitations, weak and strong electrolytes, Ostwald's dilution law, its uses and limitations. Debye-Huckel-Onsager's equation for strong electrolytes (elementary treatment only). Transport number, definition and determination by Hittorf method and moving boundary method.

UNIT-III (8 Hrs.)

Electrochemistry-II:

Types of reversible electrodes – gas metal – ion, metal –insoluble salt – anion and redox electrodes. Electrode reactions, Nernst equation, derivation of cell E.M.F. and single electrode potential, standard hydrogen electrode – reference electrodes – standard electrode potential, sign conventions, electrochemical series and its significance.

UNIT-IV **(7 Hrs.)**

Electrolytic and Galvanic cells – reversible and irreversible cells, conventional representation of electrochemical cells.

E.M.F. of a cell and its measurements. Computation of cell E.M.F. Calculation of thermodynamic quantities of cell reactions (ΔG, ΔH and K), Polarization, over potential and hydrogen overvoltage.
Concentration cell with and without transport, liquid junction potential, application of concentration cells, valency of ions, solubility product and activity coefficient, potentiometric titrations.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each..

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.

2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.

3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Companies Inc, 1996.

4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.

5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.

6. Albert, R.A., Silbey, R.J., Physical Chemistry; 1st edition, Pubs: John Wiley & Sons Inc., 1992.

7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern Limited, 1991.

8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.

9. Moore, W. J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd, 1983.

10. Metz, C.R., Theory and problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.

Paper-XVI LABORATORY PRACTICALS

Max. Marks: 22+3
6 Periods/week

Organic Chemistry

Laboratory Techniques:

a) Determination of R_f values and identification of organic compounds. Separation of isometric mixture of Ortho and paranitroaniline using hexane and ethyl acetate (8.5 : 1.5) by thin layer chromatography.

b) Extraction of caffeine from tea leaves.

Qualitative Analysis:

Detection of elements (N, S and halogens) and functional groups (phenolic, carboxylic, carbonyl, esters, carbohydrates, amines, amides, nitro and anilide), in simple organic compounds.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. I. Organic Chemistry: (analysis of organic compound) : 09 marks
Q.No II. TLC experiment, Extraction of caffeine) : 06 marks
Q.No. III. Viva-Voce : 04 marks
Ask four questions (2 marks each) related to chemistry practicals.
Q.No. IV. Note Book : 03 marks

Books Suggested (Laboratory Courses)

1. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

2. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs : Wiley Eastern Limited, New Delhi, 1994.

3. Furniss, B.S., Hannaford, A.J., Smith, P.W.G., Tatchell, A.R., Vogel's Textbook of Practical Organic Chemistry; 5th edition, Pubs: Dorling Kindersley (India) Pvt. Ltd. Delhi., 2006.

4. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

5. Das, R.C., Behra, B., Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

6. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman Group Ltd., London & New York, 1978.

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BOTANY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2020-2021

Third Semester		**Time**	**Theory**	**Int Assess.**	**Max Marks**
Theory Paper-A:	Diversity of Seed Plants and their Systematics-I	**3 hrs.**	**36**	**04**	**40**
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-I	**3 hrs**	**36**	**04**	**40**
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Fourth Semester					
Theory Paper-A:	Diversity of Seed Plants and their Systematics-II	3 hrs.	36	04	40
Theory Paper-B:	Structure, Development and Reproduction in Flowering Plants-II	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY

B.Sc.(General) Third Semester (Examination December, 2020)

THEORY PAPER- A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS- I

Objective: This paper deals with highly advance and evolved group of plants with naked seeds i.e. Gymnosperms. The course work of this paper gives a fair idea about the general features, economic importance and study of fossil as well as living gymnosperms.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various plant forms.

UNIT-I

General characteristics and economic importance of gymnosperms; differences between gymnosperms and angiosperms; differences between manoxylic and pycnoxylic wood.

UNIT-II

Fossil gymnosperms : Geological time Scale, Brief account of fossils, their formation and types (excluding details).

Lyginopteris: Introduction, external structure of stem; internal structure of primary stem, root and leaf; reproduction.

Williamsonia: Introduction, external morphology; internal structure; reproductive organs, male and female flowers.

UNIT-III

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of Cycas.

UNIT-IV

Structure, reproduction (male and female strobilus; structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of:

a) Pinus
b) Ephedra

Suggested Reading:

1. Bhatnagar, S.P. and Moitra, A. Gymnosperms, New Age International Limited, New Delhi, 1996.
2. Chopra, G.L. Text book of Gymnosperms, S. Nagin, Delhi, 1976.
3. Dhand, N. Systematics of Spermatophyta. Trueman Publications, Jalandhar, 2012
4. Pandey, B.P. College Botany, Vol. II. S. Chand & Company Ltd., New Delhi, 1994.
5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
6. Sporne, K.R. The Morphology of Gymnosperms, Hutchinson & Co (Publishers) Ltd., London, 1965.
7. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III. Pradeep Publications, Jalandhar, 2014.

PAPER –B: STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-I

Objective: This paper deals with the basic body plan and diversity in flowering plant forms. The course work of this paper covers vegetative and reproductive morphology of these plants and will familiarize the students with plants bearing the enclosed seeds.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

The basic body plan of a flowering plant.
Diversity in plant form in annuals, biennials and perennials.
Root system: Tap root and adventitious root system and their various types; structural and anatomical modifications for storage, respiration and reproduction.

UNIT-II

Stem : Modifications of aerial and underground stem.
Leaf: Venation, phyllotaxy, simple and compound leaves, functions and modifications; internal structure (dicot and monocot leaves).

UNIT-III

Flower : As a modified shoot, functions; structure of anther and pistil; structure and development of male and female gametophytes.

UNIT-IV

Double fertilization and its significance; different types of ovules and embryo-sacs.

Suggested Readings :

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 5th edition. Vikas Publishing House Pvt. Ltd., Delhi, 2009.

2. Goyal J.P. and Saini, A. Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.

3. Pandey, S.N., Chadha, A. Plant Anatomy and Embryology, Vikas Publishing House Pvt. Ltd., Delhi, 1996.

4. Singh, V. Plant Anatomy and Embryology of Angiosperms, Global Media Publications, Delhi 2010.

5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.

6. Srivastava, H.N. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.

Suggested laboratory exercises:

1. *Cycas*:
   - i) Habit, armour of leaf bases on the stem, young and old foliage leaves, scale leaves, male cone, megasporophyll, seed.
   - ii) Preparation of permanent stained slides of *Cycas* (T.S. leaflet, rachis and coralloid root).

2. *Pinus*:
   - i) Dwarf shoot; Male cone; Female cones (first year, second year and third year); Seed.
   - ii) Preparation of permanent slide of T.S. needle and pollen grains.
   - iii) Study through permanent slides :
     - a) L.S. male cone
     - b) L.S. female cone
     - c) L.S. ovule

3. *Ephedra*:
   - i) Habit and structure of male and female cones
   - ii) Preparation of permanent slide of T.S. stem (young).
   - iii) Study through permanent slides:
     - a) L.S. female cone
     - b) L.S. male cone

4. Modifications of **root, stem and leaf**.

5. Study through preparation of permanent slides :
   i) V.S. dicot leaf
   ii) V.S. monocot leaf

Guidelines for Botany Practical Examination:

Max. Marks:	**20**
Practical:	**18**
Int. Assessment:	**2**
Time:	**3 hours**

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify, draw its well labeled diagram and show it to the examiner. 6
2. Identify, write illustrated morphological note on specimen B (from gymnosperms) and C from root/stem/leaf modifications. 4
3. Identify slides D and E giving at least two reasons. 4
4. Practical note book and Viva-voce 2+2=4

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BOTANY

B.Sc. (GENERAL) Fourth Semester (Examination May, 2021)

PAPER-A: DIVERSITY OF SEED PLANTS AND THEIR SYSTEMATICS-II

Objectives: This paper deals with highly advance and evolved group of plants i.e. Angiosperms. The study of gradual transition from seedless plants to seed plants would make students familiar with origin of structural and functional complexity in plant kingdom. The systematics part of this paper is in fact backbone of the study of Botany. Without having knowledge of taxonomy and species concept, no further research work can be pursued. The identification, nomenclature and classification of the concerned plants make the first step of any research work in Botany.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc. Students will be taken for field excursions to various hill stations/forests to familiarize them with the flora of the area covering various families of flowering plants.

UNIT-I

General characters of Angiosperms. Plant nomenclature and International Code of Botanical Nomenclature : Common names and scientific names, principles and rules; taxonomic ranks; type concept (Holotype, Isotype, Syntype, Paratype, Lectotype, Neotype and Topotype); principle of priority, aims and objectives of plant taxonomy.

A brief account of Bentham and Hooker's System of classification, its merits and demerits.

UNIT-II

Terminology pertaining to floral description.

General account and diagnostic features of the following families (excluding economic importance) :

Liliaceae	:	*Asphodelus/Asparagus*
Gramineae (Poaceae)	:	*Triticum*
Ranunculaceae	:	*Ranunculus* and *Delphinium*
Brassicaceae	:	*Brassica*

UNIT-III

General account and diagnostic features of the following families (excluding economic importance):

Rutaceae	:	*Citrus* and *Murraya*
Malvaceae	:	*Hibiscus*
Fabaceae	:	*Lathyrus, Cassia* and *Acacia*
Umbelliferae (Apiaceae)	:	*Coriandrum*

UNIT-IV

General account and diagnostic features of the following families (excluding economic importance) :

Compositae (Asteraceae)	:	*Helianthus/Ageratum*
Asclepiadaceae	:	*Calotropis*
Solanaceae	:	*Solanum* and *Petunia*
Labiatae (Lamiaceae)	:	*Ocimum*
Chenopodiaceae	:	*Chenopodium*

Suggested Readings:

1. Chopra, G.L. Angiosperms: Systematic and Life Cycle, Pradeep Publications, Jalandhar, 1987.
2. Dhand, N. Systematics of Spermatophyta, Trueman Publications, Jalandhar, 2012.
3. Maheshwari, J.K. Flora of Delhi, CSIR, New Delhi, 1963.
4. Singh, G. Plant Systematics: Theory and Practice, Oxford and IBH Pvt. Ltd., New Delhi, 1999.
5. Singh, V., Pande, P.C. and Jain, D.K. A Text Book of Botany: Diversity and Systematics of Seed Plants, Rastogi Publications, Meerut, 2013.
6. Srivastava, H.N. Diversity of Seed Plants and their Systematics, Vol. III, Pradeep Publications, Jalandhar, 2006.
7. Vasishta, P.C. Taxonomy of Angiosperms. R. Chand & Co., New Delhi, 1997.

PAPER-B: **STRUCTURE, DEVELOPMENT AND REPRODUCTION IN FLOWERING PLANTS-II**

Objectives: This paper deals with structure development and reproduction in flowering plants – the most fascinating group of plants on earth. The course material of this paper deals with internal structure of various plant parts, their growth patterns and abnormalities in structural development. The vast range of variation found in this group of plants provides a platform to students for acquiring basic knowledge of flowering plants which makes a foundation of applied branches like horticulture, floriculture, olericulture and arboriculture.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Tissue systems: Meristematic, shoot apex, root apex; simple and complex permanent tissues, special tissues; internal structure of primary dicot stem & root (*Helianthus*); secondary growth in dicot stem & root (*Helianthus*); internal structure of monocot stem & root (*Zea mays*); differences between dicot stem and monocot stem; differences between dicot root and monocot root.

UNIT-II

Anomalous stem structure in *Boerhaavia*, *Nyctanthes*, *Mirabilis* and *Dracaena*.
Various methods of vegetative propagation; micropropagation, basic technique and its importance.

UNIT-III

Types of pollination, advantages and disadvantages of self and cross-pollination; contrivances for self and cross-pollination, various agencies to bring about cross-pollination, characters of flowers pollinated by different agencies.

UNIT-IV

Seed formation: Development of endosperm and embryo. Fruit development, maturation and parthenocarpy. Significance of seed: Suspended animation; ecological adaptation and dispersal strategies.

Suggested Readings:

1. Esau, K. Anatomy of Seed Plants, 2nd edition, John Wiley & Sons, New York, 1977.
2. Fahn, A. Plant Anatomy, 2nd Edition, Pergamon Press, Oxford, 1974.
3. Goyal J.P. and Saini, A. Angiosperms: Structure Development and Reproduction, Trueman Book Co. Jalandhar & New Delhi, 2006.
4. Singh, V. Pande, P.C. and Jain, D.K. A Text book of Botany: Structure Development and Reproduction in Angiosperms, Rastogi Publications, Meerut, 2013.
5. Srivastava, H.N.. Structure, Development and Reproduction in Flowering Plants, Vol. IV. Pradeep Publications, Jalandhar, 2014.
6. Vasishta, P.C. A Text book of Plant Anatomy, S. Nagin & Co., Delhi, 1979.

Suggested Laboratory Exercises:

1. Preparation of permanent stained slides to show:

    a. Anomalous internal structure of stem in *Boerhaavia, Nyctanthes, Mirabilis* and *Dracaena*.
    b. T.S. dicot stem & root (*Helianthus*)
    c. T.S. monocot stem & root (*Zea mays*)
    d. Types of Placentation

2. Description of flowers in technical terms, drawing F.D., V.S., T.S. ovary, writing F.F. and reference to their respective families of the genera mentioned in different families in theory syllabus.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical : 18
Int. Assess. 02
Time : 3 hours

1. Cut T.S. of specimen A. Make its permanent stained slide. Identify and draw its well labeled diagram and show it to the examiner. 5

2. Describe specimen B or C in technical terms and proper sequence. Draw F.D. and V.S. of flower B or C. Cut T.S. of ovary and V.S. of flower and show them to the examiner. Write F.F. also. Refer specimen B or C to its respective family. 5

3. Identify slides D and E giving at least one reason. 2

4. Practical note book 2

5. Plant Album 2

6. *Viva-voce* 2

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ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

Paper I	:	Biodiversity (Chordates) & Evolution-I	40	(36+ 4) marks
Paper II	:	Biochemistry & Physiology-I	40	(36 + 4) marks
Practical		(Covering the entire syllabus) of 4 hours duration	20	(18+ 2) marks
		Total :	**100 marks**	

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER–I : BIODIVERSITY (CHORDATES) & EVOLUTION-I (ZOO 301)

Max. Marks	:	40
Theory Exam.	:	36 Marks
Internal Assessment	:	4 Marks
Time	:	3 Hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Chordates – Origin, Parental care and migration.
Protochordates –Urochordata-Type Study – *Herdmania* except development,
Cephalochordata- Type Study – *Amphioxus* (except development)

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Protochordates	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa, Oikopleura & Branchiostoma (*excluding development*).*

UNIT-II

Cyclostomata – External Characters of *Petromyzon* & affinities of Cyclostomata
Pisces- Scales & fins, Type study-*Labeo*.

Cyclostomata	:	*Myxine, Petromyzon* & *Ammocoetes* larva.
Chondrichthyes	:	*Zygaena*(Hammer headed shark), *Pristis* (saw fish), *Narcine* (electric ray), *Trygon*, *Rhinobatus* and *Chimaera*(rabbit fish).
Actinopterygii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus* (lung fish)

UNIT-III

Amphibia – Type study-Hoplobatrachus Tigerinus.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Amblystoma* and its Axolotl Larva, *Triton, Salamandra, Hyla, Rhacophorus.*

UNIT-IV

Concept and evidences of organic evolution.
Theories of organic evolution.
Origin of life.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.

4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.

5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt. Ltd., 1993.

PAPER II : BIOCHEMISTRY AND PHYSIOLOGY-I (ZOO 302)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Biochemistry and its scope;
Carbohydrates, proteins, lipids and nucleic acids: their classifications and functions.

UNIT-II

Enzymes : Nature, nomenclature, mode of action, their classification, coenzymes and cofactors.

Carbohydrate metabolism : The Embden Meyerhoff, Parnas pathway (glycolysis), the tricarboxylic acid cycle, the hexose monophosphate shunt**,** glycogenesis and glycogenolysis.

UNIT-III

Digestion : Digestion of dietary constituents, regulation of digestive processes and absorption. extra and intra cellular digestion, enzymatic digestion and symbiotic digestion.

Respiration : Exchange and transport of respiratory gases, Oxygen dissociation curve of haemoglobin, Bohr effect, chloride shift, Haldane effect and control of breathing.

UNIT-IV

Blood : Composition and functions of blood and lymph. Function of hemoglobin, blood clotting. Blood groups including Rh. Factor.

Heart : Origin and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, blood pressure and micro-circulation.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.
2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.
3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990
4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 301 & 302 (ZOO 251)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Urochordata	:	*Herdmania, Molgula, Pyrosoma, Doliolum, Salpa & Oikopleura.*
Cephalochordata	:	*Amphioxus.*
Cyclostomata	:	*Myxine, Petromyzon & Ammocoetes* Larva.
Chondrinchthyes	:	*Zygaena* (Hammer headed shark), *Pristis* (Saw fish), *Narcine* (Electric ray), *Trygon*, *Rhinobatus* and *Chimaera* (Rabbit fish).
Actinoptergii	:	*Polypterus, Acipenser, Lepisosteus, Muraena, Mystus, Catla, Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, cheneis* and *Solea.*
Dipneusti (Dipnoi)	:	*Protopterus*
Amphibia	:	*Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva, *Triton, Salamandra, Hyla, Rhacophorus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Herdmania	:	General anatomy
Labeo	:	Digestive**,** reproductive systems, heart, afferent and efferent branchial arteries and cranial nerves.

3. Study of the skeleton of *Labeo, Hoplobatrachus Tigerinus*(frog)
4. Study of the following prepared slides :
   T.S. *Amphioxus* through various regions.
   Spicules & pharynx of *Herdmania* & pharynx of *Amphioxus.*
5. Study of the following prepared slides :
   Histology of frog (compound tissues).
6. Recording of blood pressure of man
7. Demonstration of equipment used for estimating haemoglobin content.
8. Demonstrate the presence of amylase in saliva, denaturation by pH and temperature.
9. Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks : 20
Practical Exam. : 18 marks
Internal Assessment : 2 marks
Time : 3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)
2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)
3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)
4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)
5. Identify the slides F-H giving two reasons for each identification. (2)
6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)
7. Viva-voce. (2)
8. Note book and Project Report. (2)

ZOOLOGY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-IV

Paper I: Biodiversity (Chordates) & Evolution – II	40 (36 + 4) marks
Paper II : Biochemistry & Animal Physiology-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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	Total : 100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to B.Sc. (General) Part-II, in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER – I : BIODIVERSITY (CHORDATES) & EVOLUTION- II (ZOO 401)

UNIT-I

Reptilia- Type study-*Uromastix*, Poisonous and non-poisonous snakes, Poison apparatus in snakes.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Reptilia : *Chelone*(turtle) and *Testudo*(Tortoise), *Hemidactylus* (wall lizard), *Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Bungarus, Naja, Hydrus, Vipera, Crocodilus, Gavialis* and Alligator.

UNIT-II

Aves-Type study-Pigeon, Flight adaptations in birds.

Classification of the animals up to orders relating to the following groups along with brief ecological notes of the following :

Aves : *Ardea, Milvus, Pavo, Tyto, Alcedo, Eudynamis* and *Casuarius*.

UNIT- III

Mammals-Type study-Rat, Dentition in mammals.

Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus* (Kangaroo), *Loris, Macaca, Manis* (Scaly ant eater), *Hystrix* (porcupine), *Funambulus* (Squirrel) *Panthera, Canis,Herpestes* (Mongoose), *Capra, Pteropus*.

UNIT-IV

Concept of micro, macro and mega-evolution.
Biological concept of species.
Fossils and dating of fossils.
Evolution of man.

Suggested Readings

1. Parker, T.J. and Haswell, W.A : Text Book of Zoology, Vol. II (Verterbrates), ELBS and Macmillan Press Ltd., 1981.
2. Dobzhansky, T., Ayala, F.J., Stebbins, G.L. and Valentine, J.W. : Evolution, WH Freeman, 1952.
3. Colbert, E.H. : Evolution of Vertebrates, IInd edition, Wiley Eastern Ltd., 1989.
4. Dhami, P.S. and Dhami, J.K. : Vertebrates, R. Chand & Co., New Delhi, 1998.
5. Bhamrah, H.S. and Juneka, K. : Cytogenetics & Evolution, Anmol Publication Pvt.Ltd., 1993.

PAPER II : BIOCHEMISTRY AND PHYSIOLOGY-II (ZOO 402)

Max. Marks	:	40
Theory Exam.	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT-I

Lipid metabolism : B-oxidation of fatty acids, fate of glycerol and gluconeogenesis, interaction of carbohydrates and lipids, lipogenesis in tissues, ketosis.

UNIT-II

Protein metabolism : Metabolism of amino acids (Oxidative deamination, transamination and decarboxylation), hydrolysis of proteins and Ornithine cycle).

UNIT-III

Excretion : Structure and types of nephron, urine formation, osmoregulation and counter current mechanism, composition of urine.

Muscles : Ultrastructure, chemical and physiological basis of skeletal muscle contraction.

UNIT-IV

Neural Integration : Structure of neuron, resting membrane potential, origin and propagation of impulse along the axon, synapse and myoneural junction.

Endocrine System : Structure, hormones and functions of thyroid, parathyroid, adrenal, pineal, hypothalamus, pituitary, pancreas, gonads, thymus, hormones of alimentary canal and kidney.

Suggested Readings

1. Taneja, S.K. : Biochemistry & Animal Physiology, Trueman Book Co.,1997.

2. Guyton, A.S. : Text Book of Medical Physiology, 7th edition, W.B. Saunders Company, 1994.

3. Robert, K., Murray, R.K., Daryl, M., Granner, K., Victor, W. and Woodwell. : Harper's Biochemistry, 22nd edition, Prentice – Hall International, Inc.,1990

4. Nelson, D.L. and Cox, M.M. : Lehninger Principles of Biochemistry, 5th edition, W.H., Freeman and Company, New York, 2008.

PRACTICALS : Practical based on Theory Papers ZOO 401 & 402 (ZOO 252)

1. Classification up to orders habits, habitats, distinctive characters and economic importance(if any) of the following animals :

Reptilia	:	*Chelone*(Turtle) and *Testudo* (Tortoise), *Hemidactylus, Calotes, Draco, Varanus, Phrynosoma, Chamaeleon, Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera,Crocodilus, Gavialis.*
Aves	:	*Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
Mammalia	:	*Ornithorhynchus, Echidna, Didelphis, Macropus,Loris, Macaca, Manis, Hystrix, Funambulus,Panthera, Canis, Herpestes,Capra,Pteropus.*

2. Demonstrate the dissection of following animals through video clipping, charts, models etc.

Chick	:	Digestive, arterial, venous and urinogenital systems.
White Rat	:	Digestive, arterial, venous and urinogenital systems.

3. Study of the skeleton of *Varanus, Gallus* and Rat/ *Oryctolagus* (Rabbit).
4. Study of the following prepared slides :
   Histology of rat/rabbit (compound tissues)
5. Study of blood smear of a mammal.
6. Identification of food stuffs:starch, glucose, proteins and fats in solution.
7. Demonstration of osmosis and diffusion.
8. Analysis of urine for urea, chloride, glucose and uric acid.
9. An idea of location of endocrine glands in mammals through charts / models/ video clippings
10. Tracing of human evolution through models.

Field study : Visit to a fossil Park/Museum. Familarity with the local vertebrate fauna and report.

Guidelines for conduct of Practical Examination

Max. Marks	:	20
Practical Exam.	:	18 marks
Internal Assessment	:	2 marks
Time	:	3 hours

1. Draw a labeled sketch of --------system of given animal and explain it to the examiner. (2)

2. Identify the given bones A & B. Make labelled sketches of their respective _____views. (2)

3. Minor experiment of physiology related to blood /osmosis /diffusion. (1½)

4. Perform the given physiology experiment, write the procedure and show it to the examiner such as identification of some food stuffs/presence of chloride or glucose in urine etc./Salivary Amylase/Blood. (2)

5. Identify the slides D & E giving two reasons for each identification. (2)

6. Identify and classify the specimens F to I upto orders. Write a short note on habitat of F, special feature of G, feeding habit of H and economic importance of specimen I. (4½)

7. Viva-voce. (2)

8. Note book and Project Report. (2)

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BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021

SEMESTER-III

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Carbohydrate & Lipid metabolism **Marks: 45+5**

Objective: To learn about digestion and absorption of carbohydrates and lipids and major metabolic pathways pertaining to them.

SECTION-I

(Lectures 8)

Metabolic pathways of carbohydrates, glycolysis and alcoholic fermentation, the pentose phosphate pathway, metabolism of fructose, galactose, TCA cycle and pyruvate dehydrogenase complex.

SECTION-II

(Lectures 8)

Glucuronate and glyoxylate pathway, gluconeogenesis,cori cycle, glycogenolysis & glycogenesis, biosynthesis of starch and ascorbic acid.

SECTION-III

(Lectures 7)

beta-Oxidation of fatty acids including odd chain fatty acids. Alpha and omega oxidation of fatty acids. Formation and utilization of ketone bodies. Biosynthesis of saturated and unsaturated fatty acids.

SECTION-IV

(Lectures 7)

Biosynthesis and degradation of phospholipids and triglycerides.Cholesterol biosynthetic pathway. Biosynthesis of cerebrosides; sulfatides and gangliosides. Biosynthesis of prostaglandins, thromboxanes, leukotrienes, lipooxins and prostacyclins.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey& D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Grannerand V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

Paper B: Protein & Nucleic acid metabolism **Marks: 45+5**

Objective: To learn major metabolic pathways pertaining to nitrogenous compounds proteins & nucleic acids.

SECTION-I

(Lectures 6)

Digestion & absorption of proteins, nitrogen balance, general reactions of amino acids: deamination, transamination and decarboxylation. Urea cycle.

SECTION-II

(Lectures 8)

Catabolism of carbon skeletons of amino acids: glycine, alanine, serine and threonine, phenylalanine and tyrosine, tryptophan, histidine, leucine, valine and isoleucine, cysteine and methionine, lysine, glutamic acid and glutamine, aspartic acid and asparagine.

SECTION-III

(Lectures7)

Biosynthesis of nutritionally non-essential amino acids : glutamate and glutamine, aspartate and asparagine, proline, alanine, cysteine & selenocysteine, tyrosine, serine, glycine. conversion of amino acids to specialized products : polyamines, catecholamines, glutathione, creatinine, melanin, serotonin.

SECTION-IV

(Lectures 9)

Nucleic Acids

Degradation and biosynthesis of purines and pyrimidines nucleotides, salvage pathway, formation of deoxyribonucleotides, biosynthesis and degradation of heme. Disorders of purine & pyrimidine metabolism, anticancer drugs.

Books:

1. Biochemistry by LubertStryer, Ed.7th 2013, W.F. Freeman and Co., New York.
2. Lippincott's Illustrated Reviews: Biochemistry by P.C.Champe, R.A. Harvey & D.R. Ferrier, Indian Edition, 2005.
3. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 29th Ed. 2012, Prentice Hall International Ltd. (U.K.).
4. Voet D and Voet JG. Biochemistry 4th Edition, John Wiley and Sons Inc., 2011.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Separation of serum and plasma.

2. Estimation of blood glucose by the methods of (i) Folin Wu (ii) Nelson Somogyi.

3. Separation and identification of amino acids by Paper chromatography

4. Seperation of lipids by Thin layer chromatography.

5. Estimation of Ca2+ in serum.

6. Estimation of total cholesterol in serum.

7. Estimation of total lipids in serum by Vanillin method.

8. Estimation of pyruvic acid.

9. Estimation of creatinine

10.Colorimetric estimation of inorganic phosphate

BIOCHEMISTRY

B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-2021
SEMESTER-IV

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Advanced Biochemical Techniques **Marks: 45+5**

Objective: To understand the principles and applications of cell biology techniques, spectroscopic, radioisotopic & spectrometry techniques.

SECTION-I

(Lectures: 8)

General Laboratory Techniques:

Membrane/ultra filtration, dialysis, diffusion, surface tension, viscosity and their applications to biological systems. Cell biology techniques: microbial, animal and plant cell/tissue culture, cell disruption/homogenization/sonication, cell sorting, cell counting, cryopreservation.

SECTION-II

(Lectures: 6)

Fluorescence spectroscopy: principle, applications of fluorescence activated cell sorting (FACS), different fluorescence in situ hybridization (FISH), fluorescence immunoassay.

SECTION-III

Radio isotopic techniques: **(Lectures: 10)**

Nature of isotopes and radioisotopes. Radioactive decay. Properties of radioactive emissions. Units of radioactivity. Techniques used to measure radioactivity; GM counter and liquid scintillation counting and gamma counter. Labelling of biochemical compounds and autoradiography. Use of radioactive tracers in the study of enzyme reaction mechanisms and metabolic pathways. Radioimmuno assay. Biological hazards of radiation and safety measures in handling radioisotopes.

SECTION-IV

(Lectures: 6)

Nuclear magnetic resonance (NMR) and Electron spin resonance (ESR) : theory, applications. atomic spectrometry; mass spectrometry: matrix assisted desorption ionization (MALDI)

Books Suggested:

1. Biochemical Techniques – Theory and Practice by John. F. Robyt and Bernard J. White Cole Publishing Co. (U.S.A.).
2. Physical Biochemistry: Application to Biochemistry and Molecular Biology by David Freifelder W.H. Freeman and Company (U.S.A.).
3. A Biologist's Guide to Principles and Techniques of Practical Biochemistry by K.H. Goulding and Keith Wilson, Edward Arnold (U.K.), Ltd.

Paper B: Membrane Biochemistry **Marks: 50**

Objective: to make students aware of structural and functional aspects of membranes. Highlighting the significance of their compositional heterogeneity and to various cell functions.

SECTION-I

(Lectures 7)

Introduction: membrane structure and organization: physical and biological models of membranes structure. Protein- lipid interactions in membranes, fluid mosaic model of membrane structure, its merits and demerits. Constituents of biological membranes in prokaryotes and eukaryotes. Asymmetry of biomembranes. Structure of RBC membrane.

SECTION –II

(Lectures 7)

Membrane dynamics: Physical properties of membrane lipids, membrane fluidity, Phase transitions, cytological biochemical probes and methods to study membrane fluids. Membrane transport: Typical properties of membrane transport, passive diffusion, facilitative diffusion, Carrier mediated active transport. Role of Na, K- ATPase.Ca-ATPase & H^+-ATPase. Ionophores and siderophores, structure and functions.

SECTION –III

(Lectures 8)

Membrane analysis: isolation and characterization of cell membrane, criteria of membrane purity. Solubilization of membranes and their reconstitution. Labeling of membrane probes and determination of transbilayer distribution of membrane components. Liposomes: unilamelar and multilamelar vesicles. Methods of their preparation, characterization and their applications in targeting drugs and gene therapy.

SECTION –IV

(Lectures 8)

Biogenesis and turnover of membranes: Synthesis of membrane components and their trafficking, signal hypothesis, coated vesicles. Regulation and coordination of membrane component synthesis. Membrane disorders: erythrocyte deformities, transport disorders. Disorders of membrane lipids

Books Suggested

1. Jain, MK. Introduction to Biological membranes, John Wiley and sons New York, 1988
2. Vance, DE & Vance JE, Biochemistry of lipids and Biomembranes, Benzamin Cummings, 1985
3. Jones MN & Chapman D. Micelles monolayers and biomembranes, Wiley-Lis New York, 1995
4. Lodish H. Molecular Cell biology, WH Freeman and Company, 2013
5. Various review articles.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Electrophoresis of nucleic acids.
2. Gram staining of cells.
3. Cell fractionation and cell isolation estimation of marker enzyme
4. Paper chromatography of carbohydrates.
5. Cell counting/counting viability.
6. Demonstration of hypotonic ,hypertonic and osmotic media.
7. Preparation of starch from potato and its hydrolysis by salivary amylase.
8. Haemocytometer

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MICROBIOLOGY

B.Sc. (GENERAL) SECOND YEAR (3rd and 4th Semester) EXAMINATION, 2020-2021

Note: 1. A student who has passed the + 2 examination under 10+2+3 system of education of a recognized University/Board/Council or any other examination recognized by the Panjab University as equivalent thereto shall be eligible to offer the subject of Microbiology at the B.Sc. level, if he/she has passed the +2 examination with Physics, Chemistry, Mathematics, Biology as his/her subjects.

2. Only such colleges which have all necessary infrastructure or equipment and staff shall admit students to the subject of Microbiology. The infrastructure must be approved by the University as per usual practice.

SEMESTER-III

Scheme of Examination		Duration	Marks
THEORY		**6** hrs	75 (33+33+9*)
MIC 301:	**Introduction to Medical Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 302 :	**Introductory Immunology – I**	3 hrs.	37.5 (33+4.5*)
PRACTICAL			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 301 and MIC 302		3 hrs	25 (22+3*)

Semester IV

THEORY		6 hrs	75 (33+33+9*)
MIC 401:	**Introduction to Medical Microbiology-II**	3 hrs.	37.5 (33+4.5*)
MIC 402 :	**Introductory Immunology –II**	3 hrs.	37.5 (33+4.5*)
PRACTICAL			
One Practical examination pertaining to the entire syllabus included in Theory Papers MIC 401 and MIC 402		3 hrs	25 (22+3*)

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY
SEMESTER-III

MIC 301 : INTRODUCTION TO MEDICAL MICROBIOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Brief introduction to terminology of infectious diseases, Frequency of disease, Recognition of infectious disease, Infectious disease cycle.

Section B

Nomenclature and classification of microbes of medical importance, criteria of classification

Section C

Microbial adherence, Active penetration into body, Passive penetration into body, Microbial production of enzymes in the body

Section D

Development of chemotherapy, General characteristics of antimicrobial drugs, Determining level of antimicrobial activity, Mechanism of action of antimicrobial drugs, Factors influencing the effectiveness of antimicrobial drugs.

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MIC 302 : INTRODUCTORY IMMUNOLOGY-I

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction and history of immunology, Non-specific defence; Physical barriers, Chemical barriers, Cellular, Phagocytosis, Inflammatory barriers, Inflammation, Fever, Types of Immunity, Active and Passive Immunity, Immunological memory

Section B

Humoral Immune Response, Antibodies/ Immunoglobulins, Structure, function and type of antibodies

Section C

Cell Mediated Immune System (CMI), Mechanism of CMI, Types of effector T cells, Helper T cells, Suppressor T cells, Cytotoxic T cells, Killer T cells, Interactions between T and B lymphocytes

Section D

Antigen-antibody interactions,: Precipitation reaction, Immunodiffusion test, Counter current Immuno electrophoresis, Complement fixation tests

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

MICROBIOLOGY
PRACTICAL
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
Semester-III

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1 Staining- Gram staining, Albert and ZNCF staining
2 Isolation and maintenance of pure cultures
3 Physiological characteristics of bacteria and its use for their identification
4 Assay of antimicrobials
5 Preparation of serum/plasma

MICROBIOLOGY
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
MIC 401 : INTRODUCTION TO MEDICAL MICROBIOLOGY-II

Semester IV

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Virulence and mode of transmission, Emerging and reemerging infectious diseases, Global travel and health considerations, Nosocomial infections

Section B

Origin of normal flora, Germ free and gnotobiotic life, Distribution and occurrence of Normal flora of skin, eye, respiratory tract, mouth, intestinal tract and genitourinary tract

Section C

Events in infection following penetration, Microbial virulence factors

Section D

Antibacterial drugs viz. sulphonamides, Quinolones, Penicillins, Cephalosporins, Tetracyclines, Erythromycin, and Chloramphenicol, Drug resistance, Antifungal and antiviral drugs

Recommended Books :

1. Bergey's Manual of Systematic Bactriology. Vol-I (2001), The Archae and the Deeply Branching Phototrophic Bacteria, David, R. Boone and Richard, W. Castenholz (author) George Garrity (editor).

2. Prescott, L.M., Harley, J.P., Klein, D.A. (2002), Microbiology, Mc Graw Hill.

3. Tortora, G.J., Funke, B.R., Case C.L (2004), Microbiology, An Introduction, Pearson Education.

4. Mims, C., Playfair J., Roitt I., Wakelin D., Williams R., (2000), Medical Microbiology , Mosby, London, St. Louis.

MICROBIOLOGY
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
MIC 402 : INTRODUCTORY IMMUNOLOGY-II

Semester IV

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Primary and secondary lymphoid organs, Mucosa associated lymphoid tissues (MALT), Cutaneous associated lymphoid tissues (CALT), Lymphocyte traffic, Cells of Immune system, Antigens; Factors affecting Immunogenicity, Epitopes, Haptens

Section B

Antigenic combining regions of antibodies, Factors influencing antibody production, Genetic model, Multigene organisation, Generation of antibody diversity

Section C

Cytokines, Lymphokines, Colony stimulating factors, Tumour necrosis factors, Interferons, Accessory cells (Macrophages), the complement system, Classical and alternate pathway, HLA, Monoclonal antibody technology and its applications

Section D

Antigen-antibody Interactions: Widal test, Wasserman's test, Weil-Felix reaction, Western blotting, Types of Vaccines

Recommended Books :

1. T.J. Kindt, R.A.G.B.A. Osborne, J. Kuby (2006), Immunology, W.H. Freeman and Company, USA.
2. N.Shetty (2005), Immunology, Introductory Text Book, New Age International (P.) Limited, (Formerly Wiky Eastern Limited).
3. Paul, W.E (2008), Fundamental Immunology, Lippincott Williams & Wilkins.
4. Roitt, I.M., Brostoff, J., Male D.K. (2001), Immunology, Illustrated Publishers, Mosby.
5. Lydyard, P.M., Whelan, A., Fanger, M.W. (2003), Instant Notes in Immunology, Viva Books Private Limited.
6. Kannan, I. (2007), Immunology, M.J.P. Publishers.
7. Hannigan, B.M. (2008), Immunology, Viva Books Private Limited.

MICROBIOLOGY
PRACTICAL
B.Sc. (GENERAL) SECOND YEAR EXAMINATION
Semester - IV

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1. Sterilization- Introduction to autoclave, hot air oven, filter sterilization

2. Demonstration of Immune organs in dissected animals

3. Demonstration of Immune cells in smears prepared from Immune organs

4. Complement fixation

5. Antigen-antibody interactions:

-Agglutination

-Precipitation

-Blood grouping

-Immunodiffusion

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ELECTRONICS

(KEPT IN ABEYANCE)

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AGRICULTURE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2020-2021

SEMESTER-III

Paper – III : Agricultural Diversification and Machinery

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration each.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1. The syllabus of this paper has been diveided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit-I

Agricultural aid on works :
Dairy
Poultry
Fishery
Mushroom Cultivation
Animal Husbandry
Bee Keeping

Unit-II

Maintenance of grassy lawns and flower beds.
Raising of winter and summer ornamental flowers (rose, gladioli, dahlias, dianthus, foliage plants).
Fundamentals of landscape of an educational institute, factory, panchayat lands and office buildings.

Unit-III

Introduction to medicinal, aromatic and spice plants.
Growing of non-conventional plants.
Basic idea of Gentically Modified crops.
Fundamentals of land measurements and land revenue.

Unit-IV

Important parts of the tractor, combine, thresher and their maintenance.
Study of various agricultural tools and implements.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Poultry Farms, Fish Ponds, Apiary, Dairy Farms
Raising various ornamental flowers of different seasons
Maintenance of grassy lawns
Study the parts of engines, tractor and combine

Books :

1. Agriculture Engineering Vol.I and Vol. II, A. M. Michae, T.P. Ojha, 2006, Jain Brothers, New Delhi.
2. Mushroom Growing, 1997, H. S. Garcha, P. A. U., Ludhiana.
3. Hand Book of Agriculture, 2008, ICAR, New Delhi.
4. Farm Machinery, An Approach, S.C. Jain and Grace Philips, 2006, Standard Publishers, Distributors, New Delhi.
5. Fundamentals of Dairy Chemistry, Wong, Jenness, Keeney and Marth, 1998, CBS Publishers and Distributors, New Delhi.
6. Milk and Milk Products, Clarence Henry Eckles, Willes Barnes Combs and Harold Macy, Delhi, 2006, Tata McGraw Hill Publishing Company Limited, New Delhi.
7. Introduction to Plant Biotechnology, H. S. Chawla, 2008, Oxford and IBH Publishing Company Pvt. Ltd., New Delhi 2.
8. Plant Biotechnology, B. D. Singh, 2009, Kalyani Publishers, Ludhiana.
9. Aquarium and Fish Keeping, C. B. L. Srivastava, 2006, Kitab Mahal Allahabad.
10. Medicinal Plants of India, R. Zafar, 2006, CBS Publishers and Distributors, New Delhi.
11. Spices and Condiments, J. S. Pruthi, 2008, National Book Trust, New Delhi.

AGRICULTURE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATIONS, 2020-2021
SEMESTER-IV

Paper – IV : Cultivation Practices of Vegetables, Timber and basic statistical methods

Max. Marks	:	75 Marks
Theory	:	70 Marks
Internal Assessment	:	5 Marks
Time	:	3 Hours

Period per week : 1. Theory – Six of 45 minutes duration.
2. Practical – Two of three hours duration.

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENTS :

1 The syllabus of this paper has been divided into four units.

2 Question paper shall comprise of 9 question in all.

3 Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory**. Each question will carry 1 (one) mark.

4 Units I, II, III and IV shall have two questions each from respective Units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.

5 Total five questions are to be attempted.

Unit – I

Tillage, Fundamentals and Principles of Tillage, Zero Tillage, Tillage Implements.

Unit – II

Cultivation Practices of Potato, Tomato; Bhindi, Cabbage; Onion and Asparagus

Unit – III

What are Timbers and Lumbers ?
Raising of Dalbergia; Tectona; Poplar; and Eucalyptus

Unit- IV

Statistical Methods for Agricultural workers including Mean, Mode, Median, Chi-Square, Standard Deviation.

PRACTICAL

Max. Marks	:	25 Marks
Practical	:	20 Marks
Internal Assessment	:	5 Marks
Time	:	3 hours

Visit to Agricultural Farms for Fundamental Aspects of Tillage
Raising Forest Nursery
Cultivation of Seasonal Vegetables
Numerical Problems of Statistics

Books :

1. Principles of Agronomy**,** T. Yellamanda Reddy and G. H. Sankara Reddy, 2008, Kalyani Publishers, Ludhiana.

2. Statistical Methods for Agricultural Workers, V.G. Panse and P.V. Sukhatme, 1997, ICAR, New Delhi.

3. Modern Techniques for Raising Field Crops, Chidda Singh, Prem Singh and Rajbir Singh, 2009, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

4. Vegetable Crops of India, P.C. Das, 1998, Kalyani Publishers, Ludhiana.

5. Potato Cultivation, 1998, Nandpuri and Kumar, P.A.U., Ludhiana.

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HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION, 2020-21
SEMESTER- III

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textiles	1	3	45	05	1	3	45	05	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-III

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 6 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 9 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 9 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

Note: 1. Internal assessment should be based on: Assignment/test/Seminars & Attendance for Theory & Practical.

2. Practical examination will be held before the final Theory Exams.

3. Practical group should have 12-15 students.

SECTION-A

1. Equipment & supplies used for Clothing construction - their use & care
2. Sewing Machine :
   (a) Parts of Sewing Machine and its accessories.
   (b) Common defects in sewing machine & their remedies.
   (c) Care of Sewing Machine.

SECTION-B

1. Recording of body measurements & care to be taken while taking body measurements.
2. Preparation of fabric for construction- shrinking and straightening.
3. Tools of Drafting, Steps involved in drafting from measurement to garment construction, points to be kept in mind while making a draft.
4. Terms used in construction i.e. Seam Allowance, Ease, Selvedge, Dart, Grain line, Stay stitching.

SECTION-C

1. Classification of textile fibres
2. Manufacture and Properties of fibres:
   Cotton, Silk, Wool, Nylon.

SECTION-D

1. Different types of yarns:

   Simple, Novelty and Textured Yarns.

2. Fabric Construction –

   (A) Weaving - Parts of a loom, Process of weaving & Types
   a. Simple weaves – Plain, Rib, Basket
   b. Twill weaves
   c. Satin weave & Sateen weave

   (B) Knitting, Felting and Bonding.

(SEMESTER-III)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 45
Internal Assessment: 05
Time : 6 Hours per week

1. Make samples of the following :
   (a) Tacking, running stitch, hemming, Back Stitch, Fasteners using buttonhole stitch
   (b) Seams—Flat seam, Counter hem, Mantua maker, French Seam & Run & Fell seam.
   (c) Processes—Continuous wrap, two piece placket opening, pleats, gathers into a band, tucks.
   (d) Joining- shaped facing on V neck line & piping on round neck.

2. Embroidery—any "10" fancy stitches.

3. Drafting of the following:
   (a) Jangia
   (b) Bloomer
   (c) Child's bodice block
   (d) Sleeve- Plain sleeve, Puff sleeve
   (e) Collars- Baby, Cape & Peter Pan

4. Construction of following :
   (a) Jangia
   (b) Bloomer
   (c) Gathered frock with any sleeve and collar.

HOME SCIENCE

B.A./B.Sc. (GENERAL) SECOND YEAR EXAMINATION,2020-21
SEMESTER- IV

SEMESTER-IV

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Clothing & Textile	1	3	45	05	1	3	45	05	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

SEMESTER-IV

CLOTHING & TEXTILE (THEORY)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 6 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections : A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 9 marks each. Section E will consist of 8 objective type questions covering the entire syllabus uniformly and will carry 9 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C & D of the question paper and the entire section E.

SECTION-A

1. Elements of art such as colour, form, texture, shape and line
2. Principles of design such as Harmony, Balance, Rhythm, Emphasis, Proportion in relation to clothing

SECTION-B

1. Introduction to Fashion, Fad and Style.
2. Selection of suitable clothes for following age groups :
   Infants, Toddlers, School going children, Adolescents, Adults, Elderly.
3. Care & Storage of garments of cotton, wool, silk.

SECTION-C

1. Bleaches- Oxidising, reducing bleaches & their suitability to different fabrics.
2. Finishing- types & importance. Different Finishes- Sizing, Desizing, Calendering, Sanforising, Mercerization, Crease resistant, Water proof & Water repellent, Flame resistant & Flame proof.

SECTION-D

1. Application of colour on fabrics
   (a) Dyeing-Simple dyeing of cotton
   (b) Resist-Tie, Dye and Batik
2. Printing-Block printing, screen printing, roller printing
3. Methods of Laundry/Washing.

(SEMESTER-IV)

CLOTHING & TEXTILE (PRACTICAL)

Maximum Marks : 50
Paper : 45
Internal Assessment: 05
Time : 6 Hours per week

1. Laundry :
   a) Testing of cotton, wool silk and nylon by burning test.
   b) Stain Removal : Rust, Coffee, Tea, Paint, Nail Polish, Lipstick, Perfume, Blood, Boot Polish, Ink (Ball Pen), Curry and Juice.
2. Laundry & finishing of following garments :
   * Cotton : Salwar, Kameez.
   * Synthetic : Gathered Frock/Pleated Skirt.
   * Woollen : Cardigan/Pullovers.
   * Spot cleaning of a Shawl.

3. Preparation of samples of Tie and Dye & Block Printing.
4. Drafting and construction of the following garments:
   a. Petticoat
   b. Lady's kameez and salwar
5. Project on Care Labels of Garments or Market survey of Laundry Products.

Reference Books :

1. Singer Sewing Book, Mary Brocks Bichen, McGraw Hill Book Company, Inc., New York, Toronto, London, 1953.
2. Basic Processes & Clothing Construction, Sherie Doongaji & Raushni Deshpande, Raaj Prakashan, New Delhi (Fourth Revised edition).
3. Pattern Drafting Vol. III, Dress Making, Kamakura—Shobo Publishing Co. Ltd., Tokyo, Japan, 1972 (Fifth Edition).
4. A Manual of Children Clothing, Savitri Pandit, Orient Longmans Ltd., Bombay, 1967.
5. Practical Dress Design, Principles of Fitting and Pattern Making, Mabel D. Erwin, The Macmillan Company, New York, Ninth Printing, 1966.
6. Indian Embroidery, Its Variegated Charms, Savitri Pandit, Faculty of Home Sciences, Baroda, 1976, First Edition.
7. The Basic Book of Sewing, Eve Harlow Pub. Octopids Books Ltd., London.
8. Simple Dress Making 2, Maureen Guddsworthy Pub. Mills & Boon Ltd., London.
9. Encyclopaedia of Dress Making, Pub. Marshall Caven Dish Books Ltd., London.
10. Textile Fabrics and their Selection, Isable B. Wingate Prentice Hall, Inc., Englewood Cliffs, N.J., 1970.
11. Fundamentals of Textiles and their Care, Susheela Dantyagi, Orient Longmans, Bombay, Calcutta, Madras, New Delhi, Reprinted, 1968.
12. Household Textiles and Laundry Work, Durga Deulkar, Atma Ram & Sons, New Delhi, 1973.
13. Ideas for Fabric Printing and Dyeing Gooch, Peter H. Charles Cribner's, New York, 1974.
14. Encyclopaedia of Textiles, Fabrics, Grayson Martin, John Wiley, New York, 1984.
15. Tie-Dyed Textiles of India—Veronica Murphy & Rosemary Crill, Pub. Mapiu Publishing Pvt. Ltd., Ahmedabad.
16. Fashion and Textile Design, Neelima.
17. Printing and Washing of Textile, Neelima
18. Handbook of Fashion and Textile Designing, R. K. Sahu.
19. Traditional Embroidery of India, Shailajan D. Naik.

INTRODUCTION TO COMPUTER SCIENCE

(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module 1 while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lectures per week		Max. Marks			Exam. Hours
		Third Semester			Ext.	Int.		
1	A	Programming In C++	6		25	5	30	3
2	C	Practical on Paper – A	6		-	-	20	3
		Fourth Semester						
3	B	Web Applications And Java	6		25	5	30	3
4	D	Practical on Paper – B	6		-	-	20	3

THIRD SEMESTER

Paper – A
Paper Title : Programming in C++

Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

Objective: The course enables the students to get familiar with the features of Object Oriented programming language and develop programs using different concepts.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Concepts of Object Oriented Programming**: Object, Class, Encapsulation, Data hiding, Inheritance, Polymorphism. Analysis and design of system using object oriented approach
2. **Introduction to C++**: Structure of a C++ Program, Include files, Declaration of an object, main function, I/O streams.
3. **Introduction to Classes:** Class Declaration, Data Members, Member Functions, Private and Public members, data hiding and encapsulation.

UNIT - II

4. **Classes and Objects**: Member Function definition inside the class declaration and outside the class declaration, Scope resolution operator, Private and Public member function, Nesting of Member functions. Creating Objects, Accessing class data members, Accessing member functions, Arrays of Objects, Objects as function arguments: Pass by value, Pass by Reference, Pointers to Objects.

UNIT - III

5. **Constructors**: Declaration and Definition, Default Constructors, Parameterized Constructors, Copy Constructors. Destructors: Definition and use
6. **Polymorphism**: Function Overloading, Operator overloading, virtual functions.
7. **Inheritance**: Extending Classes, Concept of inheritance, Base class, Derived class, Defining derived classes, Visibility modes: Private, Public, Protected; Single inheritance: Privately derived, Publicly derived; Making a protected member inheritable, Access Control to private and protected members by member functions of a derived class, Multilevel inheritance, Nesting of classes.

UNIT - IV

8. **Data Structures**: Basic Concepts and notations, introduction to Complexity, Data Structure operations, applications of Data Structure ;
9. **Arrays**: Introduction, Types of Array, Memory representation, applications and operations.
10. **Linked List**: introduction, declaration, operations:-traversing, searching, inserting, deleting; Introduction to circular list.
11. **Stacks:** Array representation of a stack, operations- initialization, push, pop, empty, and full; applications;
12. **Queue**: introduction, memory representation, operations- add, remove, initialization; applications ;

REFERENCES:

1.	Stroustrup, Bjarne	C++ Programming Language,
2.	Robert Lafore	Object Oriented Programming in Turbo C++, Galgotia Pub.
3.	Balaguruswamy, E.	Object Oriented Programming with C++, TMH
4.	Lipschuitz L. Seymou	Data Structure, Schaum Outline Series, TMH, New Delhi
5.	Salaria, R. S	Test Your Skills in Data Structures, Khanna Book Publishing Co. (P.) Ltd., New Delhi
6.	Tanenbaum	Computer Networks, Dorling Kindessley,

Paper – C : Practical on Paper - A

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and assignments.

INTRODUCTION TO COMPUTER SCIENCE
FOURTH SEMESTER

Paper B
Paper Title: Web Applications and JAVA

Max. Marks : 25 **Time : 3 Hrs.**

Theory	: Ext. 25 + Int. 5	= 30
Practical	: Ext. 20 --	= 20

Total Periods (6 Periods/week): 60

Objective : To familiarize students with basic concepts of Networking, HTML, JAVA Scripts and to enable them write programs in JAVA.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. Networking: Definition, Network hardware and Software, Network Topologies, Types and uses of Computer Networks, Brief Introduction to OSI reference model and TCP/IP reference Model. Internet, WWW, URL, Introduction to Search engines.

2. **HTML**: Introduction to HTML, Building blocks of HTML, lists, links, images, tables, frames, forms, Introduction to cascading style sheets (CSS) defining and applying CSS.

UNIT - II

3. **Java Script**: Features, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.

4. **Fundamentals of Java**: Java Vs. C++, Byte code, Java virtual machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructions, method overloading.

UNIT - III

5. **Arrays, String handling Inheritance**: Basics, member access, using super to call super class constructors, creating a multi level hierarchy, method overriding, Dynamic method dispatch, using abstract classes, using Final.

6. **Packages and Interfaces**: Defining a package, understanding CLASSPATH, Access protection: Importing packages, Interfaces: Defining an Interface, Implementing. Interfaces, Applying, Interfaces, Variables in Interfaces. Exception Handling: Fundamentals, exception types, using Try and catch, Multiple Try and Catch clauses, Nested Try statements, Built – in exceptions.

UNIT - IV

7. **Multi-threaded Programming**: The Java Thread model, Thread priorities, synchronizations, messaging. The thread class and runnable Interface, The Main Thread: Creating a Thread, Implementing Runnable, Extending Thread, creating Multiple Threads, Thread Priorities; synchronizations: Methods, statements, Inter Thread communication, Deadlock, suspending, Resuming and stopping Threads
8. **Applet Programming**: Applet fundamentals: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets

REFERENCES:

1.	Liang, Daniel	:	An Introduction to Java Programming, PHI, New Delhi, Pearson
2.	Balaguruswamy, E.	:	Programming with Java, A Primer, TMH, New Delhi
3.	Wanger & Wyke	:	Java Script Unleased, Pearson, New Delhi.
4.	Bayross, Ivan	:	Java 2 by BPB publication
5.	Bayross, Ivan	:	Html,Dhtml, javascript by BPB
6	Schildt , Herbert	:	The Complete Reference Java 2, TMH,

Paper – D : Practical on Paper – B

Total Periods (6 Periods/week): 60 Max Marks: 20 Exam Hours: 4

Note for the Paper setter: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and assignments.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

B.A. & B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) EXAMINATIONS, 2020-2021

(SEMESTER : FIFTH AND SIXTH)

i.e

Fifth Semester : November/December, 2020
Sixth Semester : April/May, 2021

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PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN VARIOUS SUBJECTS FOR B.A./B.Sc. (GENERAL) THIRD YEAR (SEMESTER SYSTEM) i.e. FIFTH SEMESTER NOVEMBER/DECEMBER 2020 AND SIXTH SEMESTER APRIL/MAY 2021, EXAMINATIONS.

ENGLISH (Compulsory)
(For B.A. Candidates Only)
SEMESTER V

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

Note:

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.

(ii) Section A shall deal with the text and Section B with composition and grammar.

(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan), **Panjab University Edition.**

Unit I to III (Unit II- Chapter 'Emotional Intelligence' deleted)

Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five** selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting, at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4. Write an essay (in not more than 500 words), choosing one topic out of the given **four**. A wide range of topics should be given and in this respect ideas may be drawn from the prescribed text. **10Marks**

Q.5. (a) Antonyms –***ten*** out of ***fifteen*** **. 5 Marks**

(b) Correct the sentences- ***ten*** out of ***fifteen.*** **5 Marks**

……..

ENGLISH (Compulsory)
(For B.A. Candidates Only)
SEMESTER VI

Max. Marks	:	50
Written	:	45 Marks
Int. Ass.	:	05 Marks
Time	:	03 Hours

(i) The paper shall be divided into two sections i.e **section A & B.** The distribution of marks in each section shall be indicated separately against the questions.
(ii) Section A shall deal with the text and Section B with composition and grammar.
(iii) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

Text Prescribed:

INSIGHTS: A Course in English Literature and Language (by K. Elango, Hyderabad: Orient Blackswan) , **Panjab University Edition.**

Unit IV-VI
Section-A (Poetry & Prose)

Q.1. Reference to the context only from Poetry. **One** out of **two** given stanzas. **5 marks**

Q.2. The examiner will set **eight** short questions from Poetry & Prose Sections of the prescribed text, out of which a student shall be expected to attempt only **five**, selecting, at least, **two** from each section (to be answered in not more than 60-80 words). These questions may be drawn from each of the units given in the text **10 Marks**

Q.3. The examiner shall set ***four*** questions (on the pattern of questions for **Critical Analysis** suggested in the prescribed text) again from *Poetry & Prose* Sections of the text, out of which a student is expected to attempt only ***two*** selecting at least, **one** from each section (to be answered in not more than 150-180 words), The questions should be chosen in such a manner that all the units given in the text are covered**.** **10 Marks**

Section-B (Composition & Grammar)

Q.4.A question on Précis writing shall be set, without any internal choice. For this purpose, the passage chosen should be simple, lucid and coherent and must not exceed 240-250 words. **10 Marks**

Q.5 (a) Idioms and Phrases to be used in sentences. ***ten*** out of ***fifteen*** **5 marks**

(b) One word substitution – ***ten*** out of ***fifteen*** **5 Marks**

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

ਬੀ. ਏ. ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

(ਬੀ .ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਪੈਰ੍ਹਾ ਰਚਨਾ	8 ਅੰਕ
3.	ਲਿੱਪੀ	7 ਅੰਕ
4.	ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ (ਸੰਪਾ.) ਅਤਰ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ) ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾ ਪੁਸਤਕ **ਵਿਚੋਂ** ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ **ਵਿਚੋਂ** ਇਕ) (ਅ) ਕਵਿਤਾ ਦਾ ਸਾਰ ਤੇ ਕੇਦਰੀ ਭਾਵ (ਦੋ **ਵਿਚੋਂ** ਇਕ)	5 ਅੰਕ 5+5= 10 ਅੰਕ
2.	ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ (ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ)	5×1 = 5
3.	ਪੈਰ੍ਹਾ ਰਚਨਾ (ਲਗਪਗ 250 ਸ਼ਬਦਾਂ ਵਿਚ) (ਮਨੁੱਖੀ ਸੁਭਾਅ, ਜੀਵਨ ਦਰਸ਼ਨ ਅਤੇ ਜੀਵਨ ਦੇ ਹਲਕੇ ਫੁਲਕੇ ਵਿਸ਼ਿਆਂ ਨਾਲ ਸੰਬੰਧਤ) (ਚਾਰ ਵਿਸ਼ਿਆਂ **ਵਿਚੋਂ** ਕੋਈ ਇਕ ਕਰਨਾ)	8 ਅੰਕ
4.	ਲਿੱਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: ਲਿੱਪੀ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਜਨਮ ਤੇ ਵਿਕਾਸ	7 ਅੰਕ
5.	ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ (i) ਵਾਕੰਸ਼, ਨਾਂਵ ਵਾਕੰਸ਼ ਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪਛਾਣ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) (ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	6 ਅੰਕ

ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਦੇ ਆਧਾਰ 'ਤੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ। 2+2=4 ਅੰਕ

.....

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)
ਬੀ. ਏ. ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ/ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
(ਬੀ. ਏ. ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ)
ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 50
ਲਿਖਤੀ: 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5
ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1.	ਨਾਵਲ ਦਾ ਅਧਿਐਨ	20 ਅੰਕ
2.	ਅਖ਼ਬਾਰ ਲਈ ਪ੍ਰੈਸ ਨੋਟ	10 ਅੰਕ
3.	ਗੁਰਮੁਖੀ ਲਿੱਪੀ	5 ਅੰਕ
4.	ਵਿਆਕਰਨ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ	10 ਅੰਕ

ਕੋਰਸ

1. ਅਨੂਪ ਕੌਰ, ਹਰਨਾਮ ਦਾਸ ਸਹਿਰਾਈ, ਪੰਜਾਬ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	(ੳ) **ਅਨੂਪ ਕੌਰ** ਨਾਵਲ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ)	5 ਅੰਕ
	(ਅ) ਨਾਵਲ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ ਤੇ ਪਾਤਰ ਚਿਤਰਨ (ਦੋ ਵਿਚੋਂ ਇਕ)	10 ਅੰਕ
2.	ਨਾਵਲ ਵਿਚੋ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਉੱਤਰ ਤਿੰਨ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) (ਅੱਠ ਪ੍ਰਛਨਾਂ ਵਿਚੋ ਪੰਜ ਦੇ ਉੱਤਰ ਦਿਓ)	5×1 = 5 ਅੰਕ
3.	ਅਖ਼ਬਾਰਾਂ ਲਈ **ਪ੍ਰੈਸ** ਨੋਟ ਤਿਆਰ ਕਰਨੇ : ਕਾਲਜ ਦੀਆਂ ਸਾਹਿਤਕ, ਸਭਿਆਚਾਰਕ, ਖੇਡਾਂ ਅਤੇ ਅਕਾਦਮਿਕ ਖੇਤਰ ਨਾਲ ਸੰਬੰਧਿਤ ਸਰਗਰਮੀਆਂ ਬਾਰੇ। (ਲਗਪਗ 200 ਸ਼ਬਦਾਂ ਵਿਚ) ਨੋਟ : ਸਿਰਫ਼ ਇਕ **ਪ੍ਰੈਸ** ਨੋਟ ਤਿਆਰ ਕਰਨ ਲਈ ਹੀ ਕਿਹਾ ਜਾਵੇ।	8 ਅੰਕ
4.	ਗੁਰਮੁਖੀ ਲਿੱਪੀ ਦੀ ਮੁੱਢਲੀ ਜਾਣ- ਪਛਾਣ: ਗੁਰਮੁਖੀ ਲਿੱਪੀ ਦਾ ਨਾਮਕਰਣ, ਗੁਰਮੁਖੀ ਲਿੱਪੀ ਦੀ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਲਈ ਅਨੁਕੂਲਤਾ, ਪ੍ਰਮੁੱਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਲਿਖਣ ਵਿਧੀ (ਆਰਥੋਗ੍ਰਾਫ਼ੀ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇਕ ਸਵਾਲ)	7 ਅੰਕ
5.	ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ (i) ਵਾਕ ਤੇ ਉਪਵਾਕ ਦੀ ਪਰਿਭਾਸ਼ਾ: ਵਾਕ ਬਣਤਰ ਤੇ ਕਾਰਜ ਬਣਤਰ: ਸਧਾਰਨ, ਸੰਯੁਕਤ ਤੇ ਮਿਸ਼ਰਤ ਵਾਕ ਕਾਰਜ: ਪ੍ਰਸ਼ਨਵਾਚੀ, ਆਗਿਆਵਾਚੀ ਤੇ ਬਿਆਨੀਆ ਵਾਕ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ)	6 ਅੰਕ
	(ii) ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ (ਚਾਰ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਕੋਈ ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨੇ)	2+2=4 ਅੰਕ
	ਨੋਟ : ਪੇਪਰ ਸੈਟਰ ਵਲੋਂ ਉਪਰੋਕਤ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਹੀ ਸੰਖੇਪ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣ।	

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਹਰਕੀਰਤ ਸਿੰਘ (ਡਾ.), ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜ੍ਹ ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ , 1999
2. ਸੰਘਾ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 1997
3. ਜੱਸਲ, ਕਵਲਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਹਾਲ ਬਾਜ਼ਾਰ,ਅੰਮ੍ਰਿਤਸਰ,2012
4. ਪੰਜਾਬੀ ਸੰਚਾਰ ਯੋਗਤਾ ਅਭਿਆਸ, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ,2008
6. ਧਾਲੀਵਾਲ ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.), ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਮਦਾਨ ਪਬਲਿਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
7. ਅਗਨੀਹੋਤਰੀ, ਵੇਦ, ਪਰਿਚਾਇਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ, 1981

ਨੋਟ: 1. ਟੈਕਸਟ ਲਈ ਹਫ਼ਤੇ ਦੇ ਛੇ ਪੀਰੀਅਡ।
2. ਕੰਪੋਜੀਸ਼ਨ ਲਈ 25-30 ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਗਰੁੱਪ ਅਤੇ ਹਫ਼ਤੇ ਦੇ ਤਿੰਨ ਹੋਰ ਪੀਰੀਅਡ
3. ਹਫਤੇ ਦੇ 6+3=9 ਪੀਰੀਅਡ

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER V

PAPER: HISTORY AND CULTURE OF PUNJAB: COLONIAL PERIOD

Objectives: To introduce the students to the history of the history of the region and the impact of colonial rule.

Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. **One question from Unit-IV shall be set on the map.**

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 06 places on map of 01 marks each and write explanatory note on any 02 of 02 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

UNIT 1

Early British Administration: Board of Administration 1849-1853; Reforms under John Lawrence
Colonial Policy: Agriculture; Trade & Industry
Spread of Modern Education

UNIT II

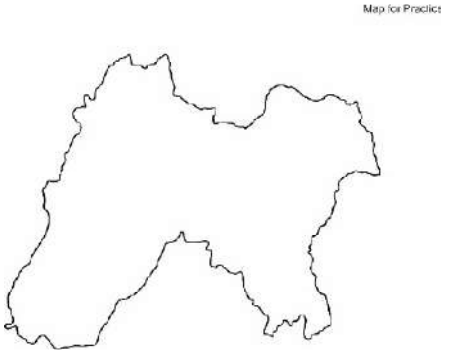
Impact of Socio-Religious Reform Movements: Namdharis; Singh Sabha
Impact of Socio-Religious Reform Movements: Arya Samaj; Ahmediyas
Uprising of 1907: Causes and Consequences

UNIT III

Ghadar Movement: Origin and Activities
JallianwalaBagh: Circumstances and Consequences
Gurudwara Reform Movement: Causes and Consequences

UNIT IV

Response to Non Co-operation ; Civil Disobedience
Partition : Circumstances; Impact
Map: Delhi, Amritsar, Lahore, Lyallpur, Montgomery, Jaito, Nankana Sahib, Khemkaran, Tarn Taran, Jalandhar, Sargodha, Sialkot, Ambala
Specimen Map for Examination:



Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	Khushwant Singh	*A History of the Sikhs*, Vol. II, 1839-1988, Oxford University Press, Delhi,1991.
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana AitihasikSimhavalokan*(Hindi), Haryana SahityaAkademy,Chandigarh, 1991.

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HISTORY AND CULTURE OF PUNJAB
(FOR B.A ONLY)
SEMESTER VI

PAPER: HISTORY AND CULTURE OF PUNJAB: POST INDEPENDENCE PERIOD

Objectives: To introduce the students to the history of the history of the region in the post 1947 period.
Pedagogy: Lectures, library work and discussions.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 marks for each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. **One question from Unit-IV shall be set on the map.**

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

3. In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 06 places on map of 01 marks each and write explanatory note on any 02 of 02 marks each.
4. The paper-setter would avoid repetition between different types of question within one question paper.

Paper:	Max. Marks	:	50
	Theory	:	45
	Internal Assessment	:	05
	Time	:	3 Hours

UNIT I

Migration and its Socio-Economic impact
Rehabilitation and Resettlement
Demand for Punjabi Suba; Reorganization Act 1966

UNIT II

Green Revolution and its impact
Development of Education
Political and Economic Development post 1966

UNIT III

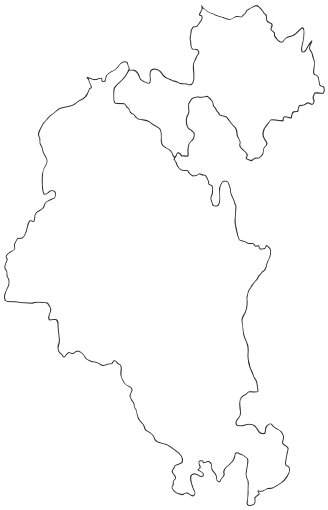
Issues of Boundary; water; Chandigarh
Socio-Economic Development in the 1980's
Operation Bluestar and its impact

UNIT IV

New Social issues-gender discrimination, drug menace, farmer suicide
Development of Punjabi literature :BhaiVir Singh; Shiv Kumar Batalvi;AmritaPritam

Map: Delhi,Amritsar,Khemkaran,TarnTaran,Jalandhar,Ambala,Ludhiana,Panipat,Karnal,Qadian,Gurdaspur, Hissar, Chandigarh.

Specimen Map for Examination:



Suggested Readings:

1.	Fauja Singh (ed.)	*History and Culture of the Punjab, Part II,* Publication Bureau, Punjabi University, Patiala, 1987.
2.	Fauja Singh	*Freedom Struggle in the Punjab,* Punjabi University, Patiala, 1974.
3.	J.S. Grewal	*The Sikhs of the Punjab*, The New Cambridge History of India, Orient Longman, 1990, Foundation Books, New Delhi, 1994.
4.	R.S. Johar, and J.S. Khanna	*Studies in Punjab Economy,* GNDU, Amritsar, 1983
5.	Satya, M. Rai	*Heroic Tradition in the Punjab,* 1900-1947, Punjabi University, Patiala, 1978.
6.	P.N. Chopra, B.N. Puri and M.N. Das	*A Social, Cultural & Economic History of India,* Vol. III, Macmillan 1974
7.	K.C. Yadav and S.M. Fogat	*Haryana AitihasikSimhavalokan*(Hindi), Haryana SahityaAkademy,Chandigarh, 1991.

ENGLISH (ELECTIVE)

SEMESTER V

Max.Marks 100
Written 90
Int. Assessment 10

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding.The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II .**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

1. Modern Indian Literature: Poems and Short Stories, Edited by the Dept. of , University of Delhi, OUP, 2007 New Delhi.

Section I

(Literary terms/Concepts: *Literatures Indian Languages, Colonialism, Post-colonial, Multicultural Society: Orientalism, Hybridity, Ideology, Gender, Race, Class, Caste, Nation, Importance of Translation in India, Methods of Translation)*

Q.1. It shall be on literary terms/concepts. Eight terms shall be given in all and the students will be required to do *five.* 15 marks

Q.2 The examiner will set seven short questions (each to be answered in 60-80 words) based on Modern Indian Literature: Poems and Short stories out of which the students shall be required to attempt only *five.* 15 marks

Q.3. There will be three long questions, out of which two long questions are to be answered each in about 180-200 words. These questions shall be based on *Modern Indian Literature: Poems and Short Stories.* 15 marks

Section II

Q.4 Note-making (A passage of about 1000 words is to be given for this Purpose) 15 marks

Q.5. An unseen passage for Comprehension (about 1000 words again) With ten multiple choice questions is to be given. 15 marks

Q.6 Applied Grammar:

(a) 5 Pairs of words to be used in sentences. (altar/alter/compliment/complement etc.) (1x5=5 marks)

(b) First find one word for many and then use it in a sentence. 5 marks

(c) First change the form of nouns/verbs/adjectives and then make sentences. (1x5=5 marks)

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ENGLISH (ELECTIVE)

SEMESTER VI

Max.Marks	**100**
Written	**90**
Int. Assessment	**10**

Objective: The main aim of teaching English (Elective) to B.A.III students is to enable them to approach a wide variety of literary texts and genres with critically sensitive and analytical understanding. The idea is to introduce the students to the basic concepts of literature and also empower them to read, analyze and write about a poem, prose essay or drama in an independent manner. It is with this modest aim in mind that the new text books have been selected for B.A English Third Year (Elective) courses. The focus of the new text books is two-fold: to teach finer nuances of literature and language through an integrated approach; and to help and motivate for students to develop basic tools of analyzing a variety of literary texts/genres.

Note:

(i) There will be two semesters in all the three years of B.A English (Elective) courses. Rather than divide the papers vertically, there will be horizontal division in terms of texts, composition and grammar. As two books are prescribed for each course, these two books shall be distributed across two papers/semesters and shall not be included in the same paper/semester. So, **Modern Indian literature: Poems and Short Stories** shall figure in **Semester V** and **R.K.Narayan's The Guide** shall be included in **Semester VI.** Questions on composition and grammar shall, however, be included in Paper B/Semester VI. This is being done to help the students, who shall now find both the papers proportionately divided and so easily manageable.

(ii) Each theory Semester shall be of 90 marks, as 10 marks in each semester shall be reserved for internal Assessment. Each semester shall be further sub-divided into two sections i.e Section I & Section II. The mode of distribution of marks shall, however, vary from paper to paper. There shall be six questions in each semester. All the questions will be compulsory. Though internal choice may be offered in some of the questions, there will be no external choice.

(iii) Each paper shall include minimum 15 literary terms/concepts appropriate to the particular literary genre included in that paper.

(iv) The paper shall be divided into two sections i.e **section I & II.**

(v) Section I shall deal with the text and Section II with composition and grammar

(vi) The questions should be set strictly in accordance with the pattern of question paper outlined in the syllabus.

(vii) For the successful implementation of this syllabus, it is necessary that we reflect upon objectives of this course. First in our teaching practices and then in designing question paper/s and evaluating answer scripts of the students. The examination shall be held at the end of each semester as is recommended by the university from time to time.

Text Prescribed:

R.K.Narayan's Novel: The Guide

SECTION I

(Literary Concepts/Terms: *Fiction, Non-fiction, Narrative, Bildungsroman, Picaresque Novel, Novel of Sensibility, Historical Romance, Gothic Novel, Realistic Novel, Psychological Novel, Political Novel, Regional Novel, Point of View, Omniscient Author, First Person Narrator, Stream of Consciousness, Protagonist/ antagonist, Plot/Story, Character, Structure)*

Q.1	Literary terms/concepts (*five out of eight*)	15 marks
Q.2.	Short question based on the prescribed novel, *Five out of Seven* (each in 60-80 words).	15 marks
Q.3	Long questions based on the novel *three out of five* dealing with the incidents, theme(s) Character(s), symbols etc.(each in 180-200 words)	15 marks

SECTION II

Q.4	Essay on any one (out of the given four) topic of international importance (in about 700 words)	20 marks
Q.5.	Report-writing (in about 300 words) on an incident/situation , conference/seminar, problem/state of education/poverty /unemployment or similar issues.	10 marks
Q.6.	Translation from Hindi/Punjabi into English (Passage of about 400 words)	
	OR	
	Paragraph on any *one* out of the *two* given topics (for foreign students only)	15 marks

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हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य तृतीय वर्ष) सेमेस्टर-5

पूर्णांक **90+10=100**
समय- 3 घंटे

1. **कुरुक्षेत्र**

रामधारी सिंह 'दिनकर' प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।

(क) 6-6 अंकों की दो संदर्भ सहित व्याख्याएं करनी होगी। कुल चार काव्यांश दिए जायेंगे।

(ख) 15 अंकों का एक आलोचनात्मक प्रश्न करना होगा। कुल दो प्रश्न पूछे जाएंगे। अंक-27

2. **समीक्षा सिद्धांत :**

क. काव्य की परिभाषा तथा भेद, महाकाव्य, खंडकाव्य, गीतिकाव्य की परिभाषा तथा विशेषताएँ

ख. गद्य विधाएं-निबंध, संस्मरण, जीवनी तथा आत्मकथा के स्वरूप और तत्वों का सामान्य परिचय। अंक-30

उपर्युक्त खंडों क ख में से संबंधित 15-15 अंकों के चार प्रश्न पूछे जाएंगे इनमें से केवल दो के उत्तर देने होंगे ।

3 **अलंकार :**

केवल निम्नलिखित अलंकार निर्धारित हैं।
अनुप्रास, यमक, श्लेष, वकोक्ति, उपमा, रूपक, अतिशयोक्ति, विरोधभास, उत्प्रेक्षा, प्रतीप । 6 X 3=18

4 **लघूत्तरापेक्षी :**

प्रथम दो खंडों (कुरुक्षेत्र एवं समीक्षा सिद्धांत) में से पांच-पांच अंक के तीन प्रश्न करने होंगे, 6 प्रश्न पूछे जाएंगे । (शब्द सीमा - 50 शब्द) अंक-15

5. **आंतरिक मूल्यांकन** अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

हिन्दी (ऐच्छिक)

बी0 ए0 (सामान्य) (तृतीय वर्ष) सेमेस्टर-6

पूर्णांक **90**+10=100
समय- 3 घंटे

1. निबंध लेखन (केवल साहित्यिक और सामाजिक विषयों पर) अंक-20
कुल आठ निबंधों में से किसी एक विषय पर लिखने के लिए कहा जाएगा।

2. गद्य फुलवारी, सम्पादक डॉ0 शहाबुद्दीन शेख, प्रकाशक-राजपाल एण्ड सन्स, नई दिल्ली।
केवल निम्नलिखित पाठ निर्धारित है । अंक-16

'आसुओं की होली' (प्रेमचंद), 'अकेली' (मन्नु भंडारी), 'चीफ की दावत' (भीष्म साहनी)
'सुभान खाँ' (रामवृक्ष बेनीपुरी) 'भाभी' (महादेवी वर्मा), 'सदाचार का ताबीज (हरिशंकर परसाई), महात्मा गांधी' (रामकुमार वर्मा), 'मैं घोबी हू¡' शिवपूजन सहाय), 'गप-शप' (नामवर सिंह), 'जमनोत्री की यात्रा' (विष्णु प्रभाकर)

(क) 6 अंकों की एक सन्दर्भ सहित व्याख्या करनी होगी । कुल दो व्याख्याँए पूछी जाएंगी ।

(ख) 10 अंकों का एक समीक्षात्मक प्रश्न करना होगा । कुल दो प्रश्न पूछे जाएंगे ।

3. हिन्दी साहित्य का इतिहास अंक-24
केवल निम्नलिखित गद्य-विधाओं का उद्भव और विकास : उपन्यास, कहानी,
नाटक, निबंध, आत्मकथा, जीवनी, संस्मरण, रेखाचित्र ।
इन गद्य- विधाओं में से 12-12 अंकों के कम से कम चार प्रश्न पूछे जाएंगे,
छात्रों को केवल दो प्रश्नों के उत्तर लिखने होंगे ।

4. छन्द-परिचय- निम्नलिखित छन्द निर्धारित हैं । अंक-15
दोहा, सोरठा, चौपाई, रोला, कुण्डलियां, सवैया, द्रुतविलम्बित, हरिगीतिका, उपेन्द्रवज्रा, इन्द्रवज्रा ।
पाँच छन्दों के लक्षण और उदाहरण पूछे जाएंगे, जिनमें से तीन का उत्तर देना होगा ।

5. हिन्दी भाषा और उसकी लिपि अंक-10
देवनागरी लिपि : विकास, गुण दोष, सुधार के उपाय 10 अंकों के कुल दो प्रश्न पूछे जाएंगे, जिनमें से केवल एक प्रश्न का उत्तर देना होगा ।

6. निमन्त्रण पत्र, प्रेस, विज्ञप्ति, विज्ञापन का प्रारूप तैयार करना । अंक-5
दो प्रश्न पूछे जाएंगे, छात्राों को एक प्रश्न का उत्तर देना होगा।

आंतरिक मूल्याकंन अंक-10

सहायक पुस्तकें :

1. हिन्दी का आत्मकथा-साहित्य, विश्वबंधु, व्यथित राधा पब्लिकेशन, नई दिल्ली
2. काव्य के तत्व, आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद

संस्कृत (इलैक्टिव)
5th Semester

Paper - Sanskrit : **उपनिषद्, रामायण, शब्दावली व व्याकरण** पूर्णांकः 90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।-
- ईश्वर, त्याग, कर्म, विद्या, अविद्या, सम्भूति, असम्भूति आदि औपनिषदिक विषयों का अध्ययन कराना।
- आदि काव्य वाल्मीकि रामायण तथा लौकिक काव्य के सौन्दर्य का दिग्दर्शन कराना ।
- संस्कृत के समृद्ध शब्दभण्डार द्वारा छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT - I

(क) ईशोपनिषद्

(1) मन्त्र/मन्त्रांश का अनुवाद एवं व्याख्या 1x10=10अंक

(2) समीक्षात्मक प्रश्न / सूक्ति व्याख्या 1x10=10अंक

(ख) वाल्मीकिरामायण (सुन्दरकाण्ड, सर्ग-15, गीता प्रैस गोरखपुर) श्लोक व्याख्या 2x7½=15अंक

UNIT – II

(ग) व्यावहारिक संस्कृत शब्दावली: वाद्य, खेल एवं युद्ध सम्बन्धी (15 में से 10 शब्दों की संस्कृत) 1x10=10अंक

1. उतार – अवरोहः	2. चढ़ाव-आरोह	3. जलतरंग-जलतरङ्गः
4. ढिंढोरा - डिण्डिमः	5. ढोल - पटहः	6. ढोलकः - ढोलक
7. तवला - मुरजः	8. तानपुरा - तानपुराः	9. तुरही (शहनाई) - तूर्यम्
10. नगाड़ा - दुन्दुभिः	11. पियानो - तन्त्रीवाद्यम्	12. बांसुरी - मुरली
13. मंजीरा-मञ्जीरम्	14. सारंगी (वायलिन)-सारंगी	15. सितार-वीणा
16. हारमोनियम-मनोहारिवाद्यम्	17. गेंद-कन्दुकः	18. टेनिस का खेल-टेनिस-क्रीडा
19. नेट-जालम्	20. फुटबाल-पादकन्दुकः	21. बैड मिंटन-पत्रिक्रीडा
22. मैच-क्रीडाप्रतियोगिता	23. रेफरी-निर्णायकः	24. रैकेट-काष्ठपरिष्करः
25. बालीबालक्षेपकन्दुकः	26. हाकी का खेल-यष्टिक्रीडा	27. बिगुल-संज्ञाशंखः
28. कोमलस्वर-मन्द्रः स्वरः	29. तीव्रस्वर-तारःस्वरः	30. मध्यमस्वर- मध्यः, मध्यस्वरः

31.एटमबम-परमाणु अस्त्रम्	32. क्वच-वर्मन्	33.कृपाण-असिः
34. गण्डासा-तोमरः	35. गदा- गदा	36. गोली-गुलिका
37. छावनी-शिविरम्	38. टीयर गैस-धूम्रास्त्रम्	39. तेप-शतघ्नी
40. जल सेनापति-भूसेनाध्यक्षः	41. थल सेनापति- भूसेनाध्यक्षः	42. वायुसेनापति-वायुसेनाध्यक्षः
43. धनुष- धनुः, कोदण्डः, चापम्, कार्मुकम्	44. पिस्तौल-लघुभुशुण्डिः	45. बन्दूक-भूशुण्डिः
46. बम-आग्नेयास्त्रम्	47. हाइड्रोजन बम-जलपरमाण्वस्त्रम्	48. बारूद-अग्निचूर्णम्
49. लड़ाई का जहाज-युद्धपोतः	50.लड़ाई का विमान-युद्धविमानम्	

UNIT - III

(घ) विसर्ग सन्धि 5x1=5अंक

(ङ) अव्ययीभाव समास 5x1=5अंक

(च)अंलकार : अनुप्रास, यमक, अर्थान्तरन्यास, श्लेष, अतिशयोक्ति व दृष्टान्त 2x7½=15अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT - IV

(छ) वैदिक इतिहास (लघु प्रश्न/टिप्पणी) 2x5=10अंक

(i) वेदों का सामान्य परचिय

(ii) वेदांग साहित्य का सामान्य परिचय

UNIT - V

(ज) हिन्दी से संस्कृत में अनुवाद (10 में से 5 वाक्य) 5x2=10अंक

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संस्कृत (इलैक्टिव)

6th Semester

Paper - Sanskrit : **लौकिक काव्य, इतिहास, निबन्ध व व्याकरण** पूर्णांकः90+10=100 अंक

(आन्तरिक परीक्षा- 10, लिखित परीक्षा- 90) समय-3 घण्टे

निर्देश तथा उद्देश्य-

- प्रश्नपत्र का माध्यम हिन्दी होगा । उत्तरों का माध्यम संस्कृत, हिन्दी, पंजाबी या अंग्रेजी में से कोई एक भाषा होगी।
- लौकिक काव्य के रचनासौष्ठव से परिचय कराना।
- संस्कृत के समृद्ध शब्दभण्डार से छात्रों में संस्कृत के प्रति रुचि उत्पन्न करना।
- पत्र का अध्ययन समय नौ पीरियड (प्रतिघण्टा) प्रति सप्ताह होगा, जिसमें तीन पीरियड कम्पोजिशन के होगें।
- सभी प्रश्नों में शत-प्रतिशत अथवा निर्दिष्ट विकल्प आवश्यक हैं।

UNIT - I

(क) रघुवंश (प्रथम सर्ग) - कालिदास

i) श्लोकों का सप्रसंग अनुवाद व व्याख्या 2x10=20अंक

ii) सूक्ति-सप्रंसग व्याख्या (तीन में से एक) 1x10=10अंक

UNIT – II

(क) संस्कृत शब्दावली : सम्बन्धसूचक एवं प्रशासनिक शब्द 10x1=10अंक

1.पिता/माता - जनकः, /जननी

2. चाचा, चाची-पितृव्यः, पितृव्या

3. पति, पत्नी-पतिः, पत्नी (भार्या, जाया)

4. नाना, नानी-मातामहः, मातामही

5. छोटा भाई, बड़ा भाई-अनुजः, अग्रजः

6. दादा, दादी-पितामहः, पितामही

7. पुत्र, पुत्री-पुत्रः/आत्मजः, पुत्री/आत्मजा

8. जीजा-भगिनीपतिः

9. जंवाई (दामाद)-जामाता

10. देवर, देवरानी-देवरः, याता

11. मामा, मामी-मातुलः, मातुली

12. साला, साली-श्यालः (स्यालः), श्याली (स्याली)

13. सास, ससुर-श्वश्रूः, श्वशुरः

14. समधी (कुड़म), समधिन (कुड़मनी) -सम्बन्धी, सम्बन्धिनी

15. पोता, पोती-पौत्रः, पौत्री

16. भतीजा, भतीजी-भ्रातृपुत्रः /भ्रातृव्यः, भ्रातृपुत्री /भ्रातृव्या

17. भानजा, भानजी-भागिनेयः, भागिनेयी

18. चचेरा भाई, चचेरी बहिन-पितृव्यपुत्रः, पितृव्यपुत्री

19. भाभी-भ्रातृजाया

20. Administration-प्रशासनम्

21.Appeal-निवेदनम्

22. Approval-अनुमोदनम्

23. Ban-प्रतिबन्धः
24. Cabinet-मन्त्रिमण्डलम्
25. Corporation-निगमः
26. Director-निदेशकः
27. Employment-आजीविका, वृत्तिः
28. Initials-आद्यक्षरम्
29. Judgement-निर्णयः
30. Gazetted Officer-राजपत्रिताधिकारी
31. Notification-अधिसूचना
32. Procedure-कार्यविधिः
33. Receipt-प्राप्तिः
34. Senior-वरिष्ठः
35. Subordinate-अधीनस्थः
36. Transfer-स्थानान्तरणम्
37. Vacancy-रिक्तिः
38. Character Certificate-चरित्रप्रमाणपत्रम्
39. Civic-नागरिकः

(ii) पंजाबी में प्रयुक्त संस्कृत के तत्सम तथा तद्भव शब्दों की सूची (15 में से किन्हीं 10 पंजाबी शब्दों को संस्कृत में लिखें):- 10अंक

संस्कृत शब्द	**पंजाबी शब्द**	**संस्कृत शब्द**	**पंजाबी शब्द**
1. चिरम्-(विलम्ब, देरी, दीर्घकाल)	चिर	**21.** रटितम् (रटा हुआ)	रटंत
2. वेला (समय, अवसर)	बेला	**22.** लोहितम् (खून)	लहूं
3. शाकः (हरि सब्जी)	साग	**23.** वसितम्, वसितिः (वस्ती)	वसूं, वसों
4. कर्करम् (ढेला, कंकर)	कंकर	**24.** हृदयम् (हृदय, दिल)	हिउं, हियां
5. चतुष्कम् (चौंक)	चौंक, चौंका	25. श्वश्रूः (सास)	सस्सू
6. द्वयम् (दो, जोड़ा)	दोह	26. वधूः (बहू)	वहू
7. धावनम् (धोना)	धावण	27. अद्य (आज)	अज्ज
8. नखम् (नाखून)	नउंह, नहुं, नौंह	28. अर्ध (आधा)	अद्धा
9. निषिद्धम् (बुरा, अपवित्र)	नखिंध	29. उच्चैः (ऊँचा)	उच्चा
10. नीलम् (एक रत्न)	नीलम, लीलम	30. कदा (कब)	कद
11. पदम् (पैर)	पउं	31. तदा (तब)	तद
12. नयनम् (नेत्र)	नैणूं	32. यदा (जब)	जद
13. पुच्छम् (पूंछ)	पूंछ	33. कृतः (किया)	कीत्ता
14. बाल्यम् (बचपन)	बालम	34. चन्द्रः (चांद)	चन्द
15. बीजम् (बीज)	बीं, बीउं	35. त्वम् (तुम)	तूं
16. भयम् (डर)	भैं, भउं, भंऊ	36. निम्बः (नीम)	निम्म
17. माषम् (उड़द)	मांह, महां	37. पिप्पलः (पीप	पिप्पल

18. मनःघटितम् (स्वकल्पित)	मनघडंत	38. बलदः (बैल)	बलद, बौलद
19. मुखम् (मुंह)	मूंह, मूं	39. हस्तः (हाथ)	हत्थ
20. युगलम् (जोड़ा)	जुगलां	40. सर्वः (सब)	सब्भ

UNIT-III

(ख) णिजन्त व सन्नन्त प्रयोग (प्रथम पुरुष का एकवचन ही प्रष्टव्य है।) 5x1= 5 अंक

(i) णिच् प्रत्यय केवल भू, पठ्, हस्, गम्, कृ, अधिइङ्, खाद्, चल्, नश्, व नम् धातु से ही प्रष्टव्य हैं।

(ii) सन् प्रत्यय केवल स्वप्, घ्रा, पठ्, कृ, गम्, मृ, मुच्, दा, तृ तथा भू धातु से ही प्रष्टव्य हैं।

(ग) बहुव्रीहि समास 5x1= 5 अंक

(घ) अलंकार : उपमा, उत्प्रेक्षा, रूपक, विभावना, विशेषोक्ति तथा विरोधाभास 2x5=10अंक

(तीन में से दो के लक्षण, उदाहरण व स्पष्टीकरण प्रष्टव्य हैं।)

UNIT - IV

(ङ) लौकिक संस्कृत साहित्य के निम्नलिखित लेखकों की कृतियों का परिचय 2x5= 10 अंक

(भास, कालिदास, भवभूति, बाणभट्ट, माघ, भर्तृहरि व दण्डी)

UNIT - V

(च) संस्कृत निबन्ध (तीन में से एक विषय पर दस पंक्तयों में) 1x10=10अंक

विषय – संस्कृतभाषाया महत्त्वम्, मम प्रियः कविः, मम प्रियं पुस्तकम्, दीपावली, सत्संगतिः तथा पर्यावरणसुरक्षा)

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. ਭਾਗ ਤੀਸਰਾ ਦਸੰਬਰ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਪੰਜਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ. ਤੱਕ) — 20 ਅੰਕ
4. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਸਾਹਿਤ ਦੇ ਰੂਪ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.) ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
(ਨਿਰਧਾਰਤ ਕਵੀ : ਸ਼ੇਖ ਫਰੀਦ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ, ਗਰੂ ਅਰਜਨ ਦੇਵ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ, ਭਾਈ ਗੁਰਦਾਸ)

2. ਜਿਨੁ ਸਚੁ ਪਲੇ ਹੋਇ, ਡਾ. ਗੁਰਦਿਆਲ ਸਿੰਘ ਫੁੱਲ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ

2. (ੳ) ਜਿਨੁ ਸਚੁ ਪਲੇ ਹੋਇ ਨਾਟਕ ਦੇ ਵਾਰਤਾਲਾਪੀ ਅੰਸ਼ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਾਟਕ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਸਾਹਿਤਕ ਪਰਖ ਵਿਚ ਵਿਸ਼ੇ, ਵਿਧੀ, ਪਲਾਟ ਤੇ ਪਾਤਰ ਚਿਤਰਨ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ) (ਦੋ ਵਿਚੋਂ ਇੱਕ) — 10 ਅੰਕ

3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਾਟਕ ਵਿਚੋਂ ਲਘੂ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) — 2x5 = 10 ਅੰਕ
   (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ -ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)

4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋ 1700 ਈ. ਤੱਕ) — 5X4= 20 ਅੰਕ
   ਗੁਰਮਤਿ, ਵਾਰ ਕਾਵਿ ਅਤੇ ਵਾਰਤਕ ਸਾਹਿਤ ਵਿਚੋਂ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ
   (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ)
   (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ -ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)

5. ਭਾਰਤੀ ਕਾਵਿ-ਸ਼ਾਸਤਰ: ਰੀਤੀ ਸੰਪ੍ਰਦਾਇ, ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ

6. ਸਾਹਿਤ ਦੇ ਰੂਪ : ਜਨਮਸਾਖੀ, ਸ਼ਲੋਕ, ਕਾਫ਼ੀ, ਕਿੱਸਾ, ਵਾਰ, ਸੀਹਰਫ਼ੀ (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ) — 10 ਅੰਕ

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ਪੰਜਾਬੀ (ਇਲੈਕਟਿਵ)

ਬੀ.ਏ. ਭਾਗ ਤੀਸਰਾ ਅਪ੍ਰੈਲ /ਮਈ 2021 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਸਮੈਸਟਰ ਛੇਵਾਂ

ਕੁੱਲ ਅੰਕ: 100
ਲਿਖਤੀ: 90
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 10
ਸਮਾਂ: 3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਕਾਵਿ — 25 ਅੰਕ
2. ਪੰਜਾਬੀ ਨਿਬੰਧਾਂ ਦਾ ਅਧਿਐਨ — 25 ਅੰਕ
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ. ਤੱਕ) — 20 ਅੰਕ
4. ਪੱਛਮੀਂ ਕਾਵਿ ਸ਼ਾਸਤਰ — 10 ਅੰਕ
5. ਭਾਸ਼ਾ ਵਿਗਿਆਨ — 10 ਅੰਕ

ਕੋਰਸ

1. ਸ਼ਬਦ ਸਵੇਰਾ, (ਸੰਪਾ.), ਹਰਿਭਜਨ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
   (ਨਿਰਧਾਰਤ ਕਵੀ: ਸ਼ਾਹ ਹੁਸੈਨ, ਦਮੋਦਰ, ਹਾਫਿਜ਼ ਬਰਖੁਰਦਾਰ, ਮਿਰਜ਼ਾ ਸਾਹਿਬਾ
2. ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼, (ਸੰਪਾ.) ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਕਾਵਿ ਪੁਸਤਕ ਵਿਚੋਂ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ ਥੀਮ ਸਪਸ਼ਟ ਕਰਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
2. (ੳ) ਸ਼ਬਦ ਸਵੇਰਾ, ਤੇ ਨਿਬੰਧ ਪ੍ਰਕਾਸ਼ ਪਾਠ ਪੁਸਤਕ ਵਿਚੋਂ ਕਿਸੇ ਇਕ ਕਾਵਿ-ਬੰਦ / ਵਾਰਤਕ ਅੰਸ਼ਾਂ ਦੀ ਵਿਹਾਰਕ ਆਲੋਚਨਾ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
   (ਅ) ਨਿਬੰਧ ਦੀ ਸਾਹਿਤਕ ਪਰਖ (ਦੋ ਵਿਚੋਂ ਇਕ) — 10 ਅੰਕ
3. ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਤੇ ਨਿਬੰਧ ਸੰਗ੍ਰਹਿ ਵਿਚੋਂ ਲਘੂ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਅੱਠ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਪੰਜ) (ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਤਿੰਨ-ਚਾਰ ਸਤਰਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ)। — 2x5 = 10 ਅੰਕ
4. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਦਿ ਕਾਲ ਤੋਂ 1700 ਈ: ਤੱਕ) ਸੂਫੀ, ਕਿੱਸਾ ਤੇ ਜੰਗਨਾਮਾ ਸਾਹਿਤ ਵਿਚੋ ਇਤਿਹਾਸ ਨਾਲ ਸੰਬੰਧਤ (ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ) (ਛੇ ਵਿਚੋਂ ਕੋਈ ਚਾਰ-ਉੱਤਰ 50 ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਾ ਹੋਵੇ) — 5x4 = 20 ਅੰਕ
5. **ਪੱਧਤੀ** ਕਾਵਿ-ਸ਼ਾਸਤਰ: (ੳ) ਅਰਸਤੂ ਦਾ ਅਨੁਕਰਣ ਸਿਧਾਂਤ (ਅ) ਮਨੋਵਿਸ਼ਲੇਸ਼ਣੀ ਵਿਧੀ (ਏ) ਮਾਰਕਸਵਾਦ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ
6. ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਖੇਤਰ ਤੇ ਹੋਰ ਵਿਗਿਆਨਾਂ ਨਾਲ ਸੰਬੰਧ (ਮਨੋਵਿਗਿਆਨ, ਸਮਾਜ ਵਿਗਿਆਨ ਤੇ ਮਾਨਵ ਵਿਗਿਆਨ) (ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚੋਂ ਇਕ ਕਰਨਾ) — 10 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : **ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ** 6+6 = 12 **ਪੀਰੀਅਡ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਡਾ. ਸੁਰਿੰਦਰ ਸਿੰਘ ਕੋਹਲੀ, ਪੰਜਾਬ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
2. ਡਾ.ਗੋਪਾਲ ਸਿੰਘ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
3. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
4. ਪਰਮਿੰਦਰ ਸਿੰਘ ਤੇ ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਈਸ਼ਰ ਸਿੰਘ ਤਾਂਘ, ਪੱਛਮੀਂ ਸਮੀਖਿਆ ਦੇ ਸਿਧਾਂਤ, ਦੀਪ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਸ਼ਹਿਰ।
6. ਸਿੱਧੂ, ਪਰਮਜੀਤ ਸਿੰਘ (ਡਾ.), ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1998
7. ਹਰਿਭਜਨ ਸਿੰਘ, ਅਧਿਐਨ ਤੇ ਅਧਿਆਪਨ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
8. ਧਾਲੀਵਾਲ, ਪ੍ਰੇਮ ਸਿੰਘ (ਡਾ.), ਰੂਪ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002
9. ਧਾਲੀਵਾਲ,ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਡਾ.), ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਮਦਾਨ ਪਬਲੀਕੇਸ਼ਨਜ਼, ਪਟਿਆਲਾ, 2002
10. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ ,ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ 2012

URDU (ELECTIVE)
SEMESTER-V

Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Paper-A

Unit-I

Explanation of prose passage from following lessons: 30 Marks

1.
- Ek khuda parast shahzadi (Meer Amman)
- Shahzade ke pahle safar ka aaghaz (Rajab Ali Baig Suroor)
- Guzra hua zamana (Sir Syed Ahmed Khan)
- Qatil ki maa (Prem Chand)

Unit-II

2. (i) Explanation of Verses from following ghazals 30 Marks
- Jo is shor se Meer rota rahega (Meer Taqi Meer)
- Maqdur nahin uski tajalli ke bayan ka (Sauda)
- Tohmaten chand apne zimme dhar chale (Khawaja Mir Dard)
- Dil-e-nadan tujhe hua kya hai (Mirza Asdullah Khan Ghalib)
- Tamannaon mein uljhaya gaya hun (Shad Azimabadi)
- Duniya meri bala jane, mahngi ya sasti hai (Fani Badayuni)
- Na jane ashk se aankhon mein kyon hain aaye hue (Firaq Gorakhpuri)
- Mauje gul, mauje saba, mauje sehar lagti hai (Jam Nisar Akhtar)

(ii) Explanation of verses from following nazams
- Daastan shehzade ke ghayab hone ki (Meer Hassan)
- Aadmi Nama (Nazeer Akbar Abadi)
- Badli Ka Chand (Josh Malihabadi)
- Raat aur rail (Asrar-ul Haq Majaz)
- Kutte (Faiz Ahmed Faiz)

Unit-III

3. Summary of a lesson or a poem from Unit I and II 15 Marks

Unit-IV

4. Question on the basis of the following forms of prose and poetry 15 Marks

1. Ghazal 2. Nazam 3.Qasida 4.Novel 5.Afsana

Books Prescribed:
Shaoore Adab: Intikhab Nasar-o-nazam,Maktaba Jamia,New Delhi

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URDU (ELECTIVE)
SEMESTER-VI

Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Paper-B

Short story and literary history of Urdu literature

Unit-I

1. Urdu adab ki ibtida aur irtiqa — 30 Marks
2. Fort William College Ki adabi khidmaat

Unit-II

Contribution of Urdu Poetry with special reference to: — 30 Marks

- Asadullah Khan Ghalib
- Brij Narayan Chakbast
- Allama Iqbal
- Faiz Ahmad Faiz

Unit-III

Contribution of Urdu prose with special reference to: — 15 Marks

- Sir Syed Ahmed Khan
- Altaf Husain Hali
- Quratulain Haider
- Ismat Chughtai

Unit-IV

Urdu Afsane Inshaiye — 15 Marks

- Bhola
- Hajj e Akbar
- Manzoor
- Election

Book Prescribed:
Tarikh-e-Adab Urdu by, Dr.Ram Babu Saxena
Afsane Inshaiye aur drame, compiled by Mohammad Qasim Siddiqui,
Education Book House Aligarh

Books Recommended:
Tarikh-e-Adab Urdu, by Dr. Aijaz Hussain

PERSIAN (ELECTIVE)
SEMESTER-V

There will be two Paper Setters/Examiner.

PAPER-A : PROSE

Marks: 90
Time : 3 Hrs
Internal Assessment : 10

1.	Translation of text pieces into English,Hindi,Urdu, Panjabi or Persian.	20 Marks
2.	Explanation of text pieces into English,Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Summary or central idea of the text prescribed as in Dastanha-ye- Kuath	20 Marks
4.	Simple direct questions on the life works of the authors	20 Marks
5.	Short notes.	10 Marks
	Total:-	90 marks

Books prescribed:

Nisabe Jadide Farsi (Published By Jayyad Ballimaran, Delhi) Only following portion from Prose Section.

(i) Intekhab Sarzamin-e-Hindi-Ali Asghar Hikmat,P.33-60
(ii) Dastanha-ye-Kutah:-
  (a) Azzan-e- Maghrib by Saeed Nafisi.
  (b) Khukushi By Mohd. Hijazi.

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PERSIAN (ELECTIVE)
SEMESTER-VI

Paper-B POETRY

Marks 90
Time 3 Hours
Internal Assessment 10

1.	Translation of text pieces into English, Hindi,Urdu, Panjabi Or Persian.	20 Marks
2.	Explanation of text pieces into English, Hindi, Urdu, Panjabi or Persian	20 Marks
3.	Central idea of the poem	20 Marks
4.	Simple direct questions on the life works of the Poets	20 Marks
5.	Short notes.	10 Marks
	Total:	90 Marks

Books Prescribed:

Nisabe Jadide Farsi(Published by Jayyad Ballimaran, Delhi). Only following portions form poetry section:-

Az Gzalliyat-e-Hafiz:

Agar Aan Turke Shirazi Be Dast Aarad Dile Maara.
Saaqi Benur Badah Bar Afrooz Jam-e-Maa.
Doosh Deedam Keh Malayek Dare Maiykhaneh Zadand.

Gazalliyat-e-Khdsrow:
Jan Ze Tan Burdi-o-Dar Jaani Hunooz.
Madeh Pandam Ke Man Dar Seeneh Saudayee Digar Daram.

Masanaviy-e-Maulana Rum:
Deed Musa Yek Shabani Rah Be Rah.
Wahi Aamad Suy-e-Musa Az Khusa

Wassayad-e-Urfi
Dar Wasf-e-Kashmir

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FRENCH (ELECTIVE)
SEMESTER-5TH

INTRODUCTION TO FRENCH DRAMA, PROSE AND GRAMMAR

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

I	Literary Master Pieces Drama, ***Ma Vie u'est plus un roman***, Michel Déon.	30 Marks
	Questions on character sketches and Critical appreciation of the drama to be asked and answered in French.	
II	Grammar	20 Marks
III	General questions to be based on the prescribed text. (4 questions of 5 marks each)	20 Marks
	Questions on French civilization in the form of fill in the blanks, multiple choice and short answers of 1-2 sentences.	20 Marks

Courses of Reading:

1. Drama : Ma Vie n'est plus un roman Déon
2. Textbook : Saison – 3 (Units 1-4) Marie- Noëlle Cocton, Isabelle Cros, Carolino Mraz, Dorothée Dupleix (DELF), Delphine de Ripaud, Les Editions Didier, 2014.

CHOICE TO BE GIVEN IN ALL QUESTIONS

Note for Private Candidates: -The theory paper would be marked proportionately out of 100 as there is no internal assessment**.**

FRENCH (ELECTIVE)

SEMESTER-6th

FRENCH POETRY, APPLIED GRAMMAR, CREATIVE WRITING AND VIVA-VOCE

Max. Marks	: 100
Theory	: 60 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours

1.	Summary, explanation and analysis of prescribed poems	20 Marks
2.	A composition on a topic with in the textbook of about 200-300 words	15 Marks
3.	Questions on applied grammar [Questions to be based on grammar section of Prose - Saison-3 (Units 5-9)	25 Marks
4.	**Viva-Voce:**	
1.	Dictation of an unseen passage of about 100 words.	10 Marks
2.	Conversation (general)	10 Marks
3.	Reading (Unseen passage)	10 Marks

Courses of Reading:

Poetry:

The following five poems are to be studied:
Comprehension, explanation, literary, appreciation and criticism of the poems to be studied.

1. Alfred De MUSSET
   Recueil : *Premières poésies*
   Sonnet : Que j'aime le premier frisson d'hiver
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

2. Victor HUGO
   Recueil : Les quatre vents de l'esprit
   Cent mille hommes, criblés d'obus et de mitraille
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

3. Alphonse de LAMARTINE
   Recueil : *Méditations poétiques*
   L'Automne
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

4. Théophile GAUTIER
   Premier sourire du printemps
   http://poesie.webnet.fr/lesgrandsclassiques/poemes/theophile_gautier
5. Jean-Baptiste CLEMENT
   Le temps des cerises
   http://poesie.webnet.fr/lesgrandsclassiques/poemes

Note: 1. The latest syllabus should be strictly followed.
2. Choice should be given in questions.

Text Books for Reference:

1. French Poetry for students by - A.W. Bains.
2. Paroles édition Folio by Jacques Prevert.
3. Le francais et la Vie-Tome III G. Mauger/M.Bruezier.
4. Collection Litteraire XIX & XX Siecle-Nouveaux classique Larousse.
5. Poèmes choisis-A de. Musset-edition-Nouveaux classique Larousse.
6. Les Textes français - XIX et XX Siècles. R. Chevalier P.Audiat, Hachette.

Courses of Reading :

Prose - Saison-3 (Units 5-9)Marie-Noëlle Cocton, Isabelle Cros, Carolino Mraz, Dorothée Dupleix (DELF), Delphine de Ripaud, Les Editions Didier, 2014.

N.B.: (1) The latest syllabus to be followed strictly and the question paper should be of B.A.III level.

(2) Choice in questions must be given.

(3) Eight periods of one hour weekly – Six hours for text and two hours for composition.

(4) The composition and the unseen passages should be based on the vocabulary and grammar covered till B.A. III.

(5) The paper will be set and answered in French (except Translation).

Note for Private Candidates: - The theory paper would be marked proportionately out of 70 as there is no internal assessment.

GERMAN (Elective)
Semester - V

Summary

Max. Marks :100 marks(Total)
Paper – A (Theory) : 90 marks
Internal Assessment: 10 marks

Paper A - Theory : **90 marks**

Time: 3 hours

Note: Use of dictionary is allowed

i. Explanation and interpretation of any **two** poems or **three** stanzas from the prescribed book "German Verse" (Kulkarni & Chapekar) : 30 marks

- i. Hyperions Schicksalslied (Hölderlin)
- ii. Der Karussel (Rilke)
- iii. Des Schiffers Traum (Arndt)
- iv. Der Zauberlehrling (Goethe)
- v. Ganymed (Goethe)
- vi. Einkehr (Uhland)

ii. Characterization / Literary questions (2) on the prescribed drama "Andorra" (Max Frisch) : 30 marks

iii. Translation of unseen text/s from German into English : 30 marks

5.2 **Internal Assessment** : **10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbook:

i. "German Verse" (Kulkarni & Chapekar)
ii. "Andorra" (Max Frisch)

……

GERMAN (Elective)

Semester - VI

Summary

Max. Marks: 100 marks (Total)
End-semester Exam Paper-B (Theory) : 60 marks
Oral (viva-voce) examination : 30 marks
Internal Assessment : 10 marks

Paper B - Theory		:	**60 marks (Total)**
	Time Note: Use of dictionary is allowed	:	3 hours
i.	Translation of unseen text/s from German into English	:	20 marks
ii.	Translation of unseen text/s from English into German	:	10 marks
iii.	Characterization / Literary questions (2 out of 3) on the prescribed novel "Der Verdacht" (Dürrenmatt)	:	30 marks
Oral (viva-voce) Examination		**:**	**30 marks (Total)**
i.	Conversation in German		
ii.	Reading of a simple unseen text and answering questions there-on.		
Internal Assessment		:	**10 marks (Total)**

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination and, wherever applicable, total of both written & oral examination (e.g. in Paper B)

Prescribed Textbooks:

i. "Deutsche Texte zum Übersetzen", Max Hueber Verlag.
ii. "Der Verdacht" (Dürrenmatt)

……

Russian (Elective)
SEMESTER -V

Paper –Option (i) (General Translation & Grammar): Written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) Cases(Nouns, Pronouns, Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes). 20 Marks

Note: Use of dictionaries is allowed.

OR

Paper: Option(ii) (Scientific & technical Translation & Grammar): written
Maximum Time : 3 hrs.

Maximum Marks: 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Translation from simple Russian (Scientific & technical material) into English/Hindi/Punjabi. (about 120 words) 35 Marks
2. Translation from simple English/Hindi/Punjabi into Russian (about 100 words) 35 Marks
3. Applied grammar: 4 questions out of 6 (5 marks each) 20 Marks

   Cases (Nouns, Pronouns, Adjectives, numerals (Singular and plural), Verb aspects, Direct and indirect narration, Verbal-adverbs, Participles, Gerund, Verbs of Motion (with and without prefixes).

Note: Use of dictionaries is allowed.

Extra material to be provided by the department.

RUSSIAN (ELECTIVE)
SEMESTER -VI

Paper : Written (Literature)
Maximum Time : 3 hrs.

Maximum Marks : 100
Theory : 90 Marks
Internal Assessment : 10 Marks
(For regular students)

1. Biographies of Russian writers from prescribed text books **20 marks**
Biographies 2 out of 4 (10 marks each)

A.S.Pushkin
N.V.Gogol
A.P.Chekhov
M.Gorky
Leo Tolstoy
Chigiz Aitmatov
Konstantin Paustovsky

2. Literary works
(2 Question out of 4(10 marks each) on the following works: **20 marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

3.
a/ Reference to the context (Poetry): **10 marks**

a) Nyane	A.S.Pushkin
b) V Sibri	A.S.Pushkin
c) Parus	M.V.Lermontov

Poetry paragraph from the text studied (1 out of 2)

b/ Reference to the context (Prose): **10 Marks**

Tolsti I Tonki:	A.P. Chekhov
'Belaya Raduga'	Konstantin Paustovsky (page 76) Dorogi
'Goluboi Zeleony	Yuri Kazakov: (page 20-29) do
Posle Bala	Leo Tolstoy

Prose paragraph from the text studied (1 out of 2)

iii) Oral/Practical **30 marks**

Practical (Dissertation: Independent translation of about 2500 words from Russian literary, socio-political, popular science texts into English/Hindi/Punjabi) **15 marks**

OR

Verbal Narration in Russian on any two of the following topics:
1.Biography of any Indian/Russian personality 2. Native state 3. My favorite Russian Literary work.
4. Russia 5. India 6. Sport, 7. India-Russia commercial/Trade Relation.

General Conversation **15 marks**

Books Recommended for additional reading

N.S.Burlakov & C.N. Chakravarti : A Cherstomathy of Russian Literature. 1970
Nikolai Bannikov; Three centuries of Russian Literature. Progress Publishers, Moscow,1980.
A.K. Maurya: ESSENTIAL RUSSIAN, University of Delhi, 2004.
T.E. Pecherista : DOROGI – Stories by Soviet writers Russian language,Moscow,1979.
S Khavronnia: Russian in Exercise, 1978.
I Pulkina: RUSSIAN A Practical Grammar with Exercise. Russky Yazik. Pub. H.Moscow.
Dictionaries: English-Russian dictionary.
Russian-English dictionary
B.I.Balin and R.M.Bakaya: An Introductory Russian course for students of Science and technology, Asia publishing house, Delhi (For Scientific & technical Translation group)

Note: Extra materials to be provided by the department.

FOLLOWING SUBJECTS ARE KEPT IN ABEYANCE FOR THE SESSION 2020-2021:-

1. **ARABIC (ELECTIVE)**
2. **BENGALI (ELECTIVE)**
3. **TAMIL (ELECTIVE)**
4. **KANNADA (ELECTIVE)**
5. **MALAYALAM (ELECTIVE)**
6. **TELUGU (ELECTIVE)**

PHYSICAL EDUCATION

B.A. /B.Sc. (GENERAL) FIFTH SEMESTER EXAMINATION (2020-2021)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(i) There shall be nine questions in all, spread over five units.

(ii) First question/unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.

(iii) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.

(iv) All questions/units will carry equal marks.

(v) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Play:

– Meaning and Definition of Play.
– Various theories of play and their significance in Physical Education and Sports.

Recreation:

– Meaning, definition, characteristics, aim, objectives and types of recreation and recreational activities.
– Significance of recreation in the modern society.
– Recreation providing agencies.

UNIT-III **12** Marks

Competitions:

– Meaning, importance and conduct of intramural and extramural competitions.
– Meaning and types of tournament and their merits and demerits.
– Draw of fixtures of various tournaments.

Camps:

– Meaning, aim and objectives of the camp.
– Advantages of camping/outdoor education.
– Types and agencies promoting camping.
– Organization of camps and factors affecting its organization.
– Educative values of a camp.

Athletic Meet:

– Organization of an athletic meet.
– Importance/significance of an athletic meet.

UNIT-IV **12** Marks

Posture:

– Meaning, types and importance of a good posture.
– Causes, preventive and remedial measures of a poor posture.

Postural Deformities:

– Postural deformities (Kyphosis, lordosis, scoliosis and flat foot), their causes, preventive and remedial measures.

Physical Activities and their effects on various physical parameters and vice versa:

– Physical activities/training and their effects on aging, body composition, and obesity.
– General problems of obesity.
– Health related risk factors of obesity.
– Obesity and physical activity.
– Causes, preventive and remedial measures of obesity.

UNIT-V **12** Marks

Massage:

– Brief history of massage.
– Meaning and definition of massage.
– Principles/guidelines for massage.
– Types of massage and their benefits.
– Effects of massage on skin, blood circulation, nervous system and muscles.

Basics of Cricket:

History of the game
Basic fundamentals
Equipment and specifications
Marking / layout of field
Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
Major tournaments and Arjuna awardees of the game.

References :

1. Bell, A.J. : *"Massage and the Physiotherapist : Physiotherapy",* 1964.
2. Butler, G.D. : *"Introduction to Community Recreation",* McGraw Hill Book Company, Inc. New York, 1959.
3. Garinder, M. Dena : *"The Principles of Exercise Therapy",* Fourth Edition, 1985, CBS Publishers and Distributors, Delhi.
4. Gladys Scott, M. : *"Analysis of Human Motion",* 2nd Edition, 1970, Eurasia Publishing House Pvt. Ltd., New Delhi.
5. Lee Joseph : *"Play in Education, National Recreation Association",* New York, 1942.
6. Meyer, Herold D., and Charles K. Brightbill : *"Recreation Administration : A Guide to its Practices",* Prentice Hall Inc., Englewood Cliffs, N.J., 1956.
7. Mitchell, Elmer D., and Bernard S. Mason : *"Theory of Play",* The Ronald Press Co., New York, 1948.
8. Nash, Jay B. : *"Philosophy of Recreation and Leisure",* The C.V. Mosby Co., St. Louis, 1953.
9. Parameswara Ram, N. : *"Kinesiology – Physical Education and Sports",* Parkash Brothers – Educational Publishers, 1988.
10. Piscopo, John and Baley, James A. : *"Kinesiology : The Science of Movement",* John Wiley & Sons, Inc., 1981.
11. Singh, Ajmer *et.al.* : *Modern Text Book of Physical Education, Health and Sports* Kalyani Publishers, Ludhiana, 2000.
12. Struna, Monika and Church, Connie : *"Self Massage : Touch Techniques of Relax, Soothe and Stimulate your Body",* Hutchinson & Co. Ltd., London, 1983.
13. Tirunarayanan, C. Hariharasarma, S. : *"Methods in Physical Education",* The South India Press, Karaikudi.
14. Wilmore, Jack H. : *"Atheltic Training and Physical Fitness",* 1977, Allyn and Bacon, Inc. 470, Atlantic Avenue, Boston Massachusetts.
15. Wood, Elizabeth C. and Becker, Paul D. : *"Beard's Massage",* Third Edition, 1981, W.B. Saunders Company, Philadelphia, P.A.

PRACTICAL

Max. Marks : 35 Marks
Practical : 30 Marks
Internal assessment : 5 Marks

ATHLETICS

(a) History of athletics

(b) List of track and field events

(c) Marking of standard track, width of lanes and starting points for various races.

1. THROWS:

Throws (Shot-put or Discuss Throw or Javelin Throw) and one event of the choice of the student.

(a) **Shot-put** (The holding the stance, the glide, the delivery and the reverse or the recovery).

OR

Discuss Throw (The handhold, the initial stance, the preliminary swings, turn the delivery and the reverse or the recovery).

OR

Javelin Throw (The grip, the carry, the run way approach, the last five strides, the delivery, the reverse or the recovery).

(b) Measurements of equipment and the throwing circles or the approach run, the arc and the throwing area/the sectors.

2. PHYSICAL FITNESS TESTS: More emphasis shall be given on variety of physical exercises for the development of Flexibility and strength components of physical fitness.

Test 1- Flexibility: Sit and reach test

Test 2- Strength: Medicine Ball Throw.

Division of Practical Marks: Marks for each activity shall be divided as under:

Athletics and Physical fitness 15 marks, Participation and achievement in sports/games 5 marks, viva voce/ practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note : 1. Polevault, Hammer Throw Hurdles, Relay Races and steeple chase men are not included in the practical syllabus/course due to the fact that these events are highly technical. Moreover in the absence of proper facilities required for the events mentioned above may prove to be injurious /fatal to the students.

2. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.

3. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.

4. The theory and practical papers shall consist of 65 and 35 marks each.

5. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.

6. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.

7. A student is required to prepare a practical notebook on athletics with complete marking of standard track and starting points for various races and an event (long jump) mentioned in the syllabus.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

(iii) To measure Physical Fitness through Cardiovascular Fitness Test, Cooper's 9 Minutes or 12 Minutes Run-Walk Test should be conducted.

(iv) The date of Physical Fitness Test must be mentioned in the prospectus of the College.

2. *Periodical Physical Inspections:*

The University/Authorities with the collaboration of the Department of Physical Education, Panjab University, shall make Periodical Physical inspections of the various colleges to ensure that the teacher student ratio is maintained by all the affiliated colleges for this subject **as per the University Guidelines**, and for them to ensure that infrastructure (facilities), equipment, books/professional journals and groundmen, a game boy are provided as per the requirements of the subject and directions of the Panjab University, Chandigarh.

3. *Strength of Students :*

For imparting effective teaching, the strength of students in a theory class shall be between 60-80 while it shall be 30-40 students in practical class.

4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements:

(i) A track atleast of 200 mtrs., it should, however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ teachers on the ground/playfield/arena.

(iv) A store-keeper for the proper maintenance/accountability of sports equipments in the stores.

5. *Number of Periods :*

The number of periods for theory and practical shall be 12 periods per week (6 periods each for theory and practical) for classes i.e. B.A. First to sixth semester.

Practical period shall be projected in the college time table itself.

6. *Teaching Work Load :*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the Maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teachers in Physical Education.

7. *Division of Marks (Theory and Practical) :*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

PHYSICAL EDUCATION

B.A. / B.Sc. (GENERAL) SIXTH SEMESTER EXAMINATION (2020-2021)

Time : 3 Hrs.

Max. Marks : 65
Theory : 60 marks
Internal Assessment : 05 marks

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

(a) There shall be nine questions in all, spread over Five Units.
(b) First question/Unit is compulsory. It will contain six short answer type questions, spread over the whole syllabus to be answered in brief. It will carry 12 marks.
(c) Rest of the paper shall contain four units for descriptive questions. Each unit shall have two questions and the students shall be given internal choice i.e. the students shall attempt one question from each unit.
(d) All questions/units will carry equal marks.
(e) Private candidates and the students of the University School of Open Learning will not be allowed to take this subject.

UNIT-I **12** Marks

Entire syllabus given in the Unit-II to V will be covered to set six short answer type questions in first question/unit of the question paper which is compulsory.

UNIT-II **12** Marks

Nervous System:

– Meaning of Nervous System.
– Main organs of Nervous System and their functions.
– Reflex action and Reciprocal Innervations.
– Functional classification of Nervous System.

Excretory System:

– Meaning of Excretory System.
– Main organs of Excretory System and their structure and functions.

Endocrine System:

– Meaning of **Endocrine System**.
– Meaning of Glands, their location and functions/Harmones produced by them.

UNIT-III **12** Marks

Sports Training,

– Meaning, definition, aim, objective, characteristics and principles of sports training.

General Physiological concept:

– Physiological concepts such as vital capacity, second wind, stitch in the side and its causes.
– Definition of oxygen debt/excess post exercise oxygen consumption (EPOC) and its implication.
– Meaning definition and types of fatigue.
– Muscular contractions such as isotonic, isometric, eccentric and isokinetic.
– Meaning of Blood pressure, Hypertension: Its causes, effects and treatment, exercise and Hypertension.

Effects of Physical Exercise / Training on body systems:

– Effects of Physical exercise/Training on muscular, respiratory and circulatory systems of the body.

UNIT-IV **12** Marks

Carrier aspects in Physical Education:

– Carrier options in Physical Education.
– Different avenues in Physical Education.
– Self assessment for carrier choices.
– Courses and institutions available for Physical Education profession.

UNIT-V **12** Marks

Coach:

– Coaching, coaching philosophy, definition of a coach.
– Qualification and characteristics of a coach.
– Responsibilities of a coach.

Basics of Table Tennis:

– History of the game
– Basic fundamentals
– Equipment and specifications
– Marking / layout of T.T Table
– Rules and regulations (number of players, duration of game, number of officials required and general rules of play)
– Major tournaments and Arjuna awardees of the game

References :

1. Chaurasia, B.D. : *"Handbook of General Anatomy",* CBS Publishers and Distributors, First Edition, 1981.

2. Dandiya, P.C., Jafer, Z.Y.K. and Jafer Afifa : *"Health Education and Community Pharmacy",* Second Edition, 1996, Reprinted in 1998, Vallabh Prakashan, Pitampura, New Delhi.

3. Dick, Frank, W. : *"Sports Training Principles",* Lepus Books, London, 1980.

4. Jensen, C.R. and Fisher, A.G. : *"Scientific Basis of Athletic Conditioning",* Lea and Febiger, Philadelphia, 1979.

5. Matveyer, L. : *"Fundamentals of Sports Training",* Mir Publication, Moscow, 1981.

6. Mathews, D.K. and Fox, E.L. : *"The Physiological Basis of Physical Education & Athletics",* Second Edition, W.B. Saunders Co., Philadelphia, 1976.

7. McArdle, William D., Katch Frank I., and Katch, Victor, L.

: *"Exercise Physiology : Energy, Nutrition and Human Performance",* Lea and Febiger, Philadelphia, 1981.

8. Morgan, R.E. and Adamson, G.T. : *"Circuit Training",* Bell and Sons, London, 1958.

9. Morehouse, L.E. and Miller, A.T. : *"Physiology of Exercise",* The C.V. Mosby Co., St. Louis, 1965.

10. Parrot, J.W. : *"Anatomy and Physiology for Physical Education Teachers",* Lend Edward Arnolod Ltd., 1983.

11. Rose & Wilson : *"Foundations of Anatomy and Physiology*, 5th Edition,1981, Reprinted in 1985.

12. Sampath, K. & Uma Maheshwar, B. : *"Human Anatomy & Physiology",* First Edition, 1999-2000, Birla Publications, Delhi.

13. Shaphard, R.J. : *"The Fit Athlete",* Oxford University Press, 1978.

14. Shaver, Larry G. : *"Essential of Exercise Physiology",* Surjeet Publications, Delhi First Indian Print, 1982.

15. Singh, Ajmer, Et.al. : *"Modern Text Book of Physical Education, Health and Sports",* Kalyani Publishers, Ludhiana, 2000.

16. Singh, Hardyal : *"Sports Training-General Theory and Methods",* Netaji Subhash National Institute of Sports, Patiala, 1984.

17. Wilmore, Jack H. : *"Athletic Training and Physical Fitness",*1977, Allyn and Bacon, Incl., 470, Atlantic Avenue Boston, Massachusetts.

PRACTICAL

Max Marks : 35
Practical : 30
Internal assessment : 5

GAMES

(Badminton or Hockey and any other one game of the choice of the student).

Badminton:

(a) Measurement (Badminton Court, Net, Racket and Shuttle cock) for singles and doubles.
(b) Number of players and officials.
(c) Holding the racket and shuttle cock.
(d) Types of Service: High and Low.
(e) Types of Strokes: fore hand, back hand, over head.
(f) Shots: Smash, Lob shot, net shot, dive shot.
(g) Rules and regulations of the game.

Hockey :

(a) Measurements (Hockey ground, goalpost, hockey stick, ball and flags) for men and women.
(b) Number and position of players and officials.
(c) Fundamental skills (grip, hitting, stopping dribbling, push, scoop and flick).
(d) Rules and regulations of the game.

Division of Practical Marks: Marks for each activity shall be divided as under:

Game 10 marks, participation and achievement in sports/games 5 marks, Physical fitness 5 marks, viva voce/practical file 10 marks and internal assessment 5 marks based on overall performance of a student during the current semester which will be assessed by the teacher concerned.

Note:

1. 12 periods per week (6 periods each for theory and practical) shall be allotted to a class.
2. The theory and practical class shall consist of 60-80 students and 30-40 students respectively.
3. The theory and practical papers shall consist of 65 and 35 marks each.
4. As per the Panjab University Calendar, Chapter XIX (Page 324) Volume III, 1990, the maximum teaching work load for an Assistant Professor in Physical Education for B.A. Pass Course is 24 periods per week, which includes theory as well as practical.
5. The choice of games by the students shall be confined to games approved by the Association of Indian Universities.
6. A student is required to prepare a practical notebook of a game given in the syllabus and any one game of choice.

Mandatory Instructions for the Colleges:

1. *Admission Criteria:*

(i) Any student opting to have Physical Education as an Elective Subject irrespective of the background of the students (sports or non-sports students) must appear in the physical fitness test. Ranking should be prepared and the top 60-80 students should be offered this subject.

(ii) This subject should be offered to the normal students (not to disabled one).

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3. *Strength of Students:*

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4. Infrastructure/facilities and Supporting personnel:

For the introduction/to continue with this subject, a college must fulfil the following mandatory requirements such as:

(i) A track atleast of 200 mtrs., it should however, preferable be raised to 400 mtrs. track.

(ii) Bare minimum two Malies-cum-Groundmen for maintenance of the grounds and other infrastructure facilities etc.

(iii) A game boy to supply the sports equipments and water to the students/ Assistant Professors on the ground/playfield/arena.

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6. *Teaching Work Load:*

(i) As per the Panjab University Calendar Chapter XX (Page 298) Volume-III, 1996, the maximum teaching work load for a Assistant Professor in Physical Education for B.A. Pass course is 24 periods per week which includes theory as well as practical.

(ii) Teachers who are preparing 6 teams for the Panjab University Inter College Competition, their work load shall be counted by including six periods per week in the teaching load of concerned teacher in Physical Education.

7. *Division of Marks (Theory and Practical):*

65% and 35% weightage shall be given to each theory and practical papers.

Note : STRICT ACTION SHALL BE TAKEN BY THE UNIVERSITY AGAINST THE COLLEGE(S) THAT VIOLATES THE ABOVE INSTRUCTIONS.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2020-2021

SEMESTER –V

Paper- : INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

GENERAL INSTRUCTIONS FOR THE CANDIDATE:

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. The students are required to attempt **6** short answer type questions out of **8** in Unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives:

1. To enable the students to know about History of Indian Education.
2. To enable the students to understand the problems of pre-primary Education.
3. To make the students familiar with the concept of Universalization of Elementary Education and its problems.
4. To make the students familiar with the constitutional provisions of Education and role of different agencies in Education.

Course Contents :

UNIT-I : Education in the ancient and medieval period of Indian History.

UNIT-II : Current status and problems of pre-primary education. Public schools and their future.

UNIT-III : Importance of Elementary Education.
Universalization of Elementary Education. Problems of Elementary Education and Role of the State in Elementary Education.
Sarav Sikhiya Abhiyan – Concept, Objectives & Implementation.

UNIT-IV : Constitutional Provisions of Education.
Provisions for Education of Weaker Sections of Society.

Books Recommended :

1. Kaur, Kuldip : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh Centre for Research in Rural and Industrial Development, 1985.
2. Narula and Naik, J.I. : *Bharat Wich Vidyak Sikhya Da Itihas,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi 1953.
4. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-65), New Delhi, 1966.
5. Kochhar, S.K. : *Pivotal Issue of Education,* New Delhi, Sterling Publisher, 1984.
6. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* New Delhi, 1986.
7. Govt. of India : *Seventh Five Year Plan,* New Delhi.
8. Govt. of India : *Challenges of Education, A Policy Perspective,* New Delhi, 1986.
9. Sodhi, T.S. : *Bharti Sikhya Ate Us Diyan Samasiyavan,* Bawa Publications, Patiala.
10. Govt. of India, Ministry of Human Resource Development : *National Policy on Education, Programme of Action*, New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.

EDUCATION

B.A. / B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2020-2021

SEMESTER –VI

PAPER : MODERN INDIAN EDUCATION

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER :

The question paper will consist of five Units : I, II, III, IV and V. Units I, II, III and IV will have two questions from the respective Unit of the syllabus and will carry 18 marks each. Unit V will consist of eight short answer type questions which will cover the entire syllabus uniformly and will carry 18 marks. The students are required to attempt 6 short answer type questions out of 8 in unit V which will be compulsory. The question paper should preferably carry internal division of marks for all the sub-questions of one main question. Preferably set the words limit for answer (300-350 words for units I, II, III, IV and 75 words for each short answer question in unit V).

INSTRUCTIONS FOR THE CANDIDATE :

The students will be required to attempt one question each from Unit I, II, III and IV. Unit V will be compulsory. Students are required to attempt 6 short answer type questions out of 8 in unit V. The words limit will be 300-350 words for unit I, II, III and IV and 75 words for each short answer question in unit V.

Objectives :

1. To make the students familiar with the structure of Secondary Education in India.
2. To enable the students to know about different policies of education.
3. To make the students familiar with the problems of education for 21st century.
4. To enable the students to know about the need and importance of vocationalisation of education.
5. To enable the students to know about Adult, Continuing and Environmental Education.

Course Contents :

UNIT-I : Secondary Education – Structure, Recommendations of Kothari Education Commission and National Policy of Education.

RMSA(Rashtriya Madhmik Shiksha Abhiyan) – Concept Objectives and Implementation.

UNIT-II: Implementation of National Policy of Education of 1986 and 1992.

Education in the Twelveth Five Year Plan.

Problems and Prospects of Education for the 21st century.

UNIT-III : Vocationalisation of Education – Meaning, Need and Importance.

Aims, Objectives and Problems of Secondary Education.

Role of different Agencies – NCERT, NCTE AND DIET.

UNIT-IV : Adult, Continuing and Distance Education.

Environmental Education, ICT in Education.

Books Recommended :

1. Narula & Naik, J.P. : *Bharat Wich Vidyak Sikhya Da Ithas,* Patiala, Punjabi University.
2. Sharma, T.R. : *Bharti Sikhya Dian Samasiyan,* Patiala, Punjabi University.
3. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992.
4. Govt. of India, Ministry of Education : *Secondary Education Commission Report* (1952-53), New Delhi, 1953.
5. Govt. of India, Ministry of Education : *Report of Education Commission* (1964-66), New Delhi, 1966.
6. Kochhar, S.K. : *Pivotal Issues in Education,* New Delhi, Sterling Publishers, 1984.
7. Kaur, K. : *Education in India (1781-1985), Policy, Planning and Implementation,* Chandigarh : Centre for Research in Rural and Industrial Development, 1985.
8. Govt. of India, Ministry of Human Resource Development : *National Policy on Education,* New Delhi, 1986.
9. Govt. of India : *Seventh Five Year Plan,* New Delhi.
10. Govt. of India : *Challenge of Education : A Policy Perspective,* New Delhi, 1986.
11. Govt. of India, Ministry of Human Resource Development : *National Policy of Education,* 1986 (with modifications undertaken in 1992), New Delhi, 1992

ADULT EDUCATION

SEMESTER-V

Max. Marks	:	100
Theory	:	40 marks
Internal Assessment	:	10 marks
Time	:	3 hours

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND FOR THE CANDIDATE:

The question paper will consist of five Units: I, II, III, IV & V. Units II, III, IV and V will have two questions from the respective Units of the syllabus and will carry 8 marks each. The students are requested to attempt one question from each Unit i.e. (II, III, IV and V). Unit I will consist of eight short answer type questions which will cover the entire syllabus and is compulsory and carrying one mark for each question.

OBJECTIVES OF THE COURSE:

The objectives of the paper are:

1. To expose students to the concept, importance and scope of continuing education.
2. To acquaint students with the basis of life skills education, its concept, meaning and its various forms.
3. To expose students with Life Long Learning and its future perspectives.
4. To equip students with role of universities in adult and continuing education programs.
5. To explain students extension as third dimension.

ADULT EDUCATION
SEMESTER-V

THEORY:

Unit-I

Adult and Continuing Education:

- Adult Literacy in reference to National Literacy Mission 1985, its Objectives.
- Continuing Education: Concept, Importance, Scope and Objectives.
- Vocational Education: Concept, Importance, Objectives and its Dimensions.
- Population Education: Concept, Need, Importance and its Objectives.

Unit-II

Saakhshar Bharat Mission 2009.

- Saakhshar Bharat Mission 2009, its Targets and Specific Objectives.
- Flexi Approach to Saakhshar Bharat Mission 2009 and Continuing Education.
- National Literacy Mission- its Concept, Vision and Objectives.
- National Urban Livelihood Mission (NULM): Concept, Vision, Mission & Objectives

Unit-III

Life Long Learning

- Life Long Learning: Concept, Needs, Scope and Objectives.
- Implications and its Future Perspectives.
- Planning, Management and Implementation of Life Long Learning Programms.
- Life Long Learning Issues for Women, Aged People and Youth.

Unit-IV

Extension Education

- Extension as Third Dimension of Education.
- Thrust Area, Programs and Activities of Extension Education.
- Role and Qualities of Extension Workers.
- Agencies Responsible for Extension Activities; Their Role and Functions.

Practical/ Field Work:

50 Marks.

1. Organization of Two Awareness Generating Programs and Report Writing.

The break up of 50 marks allotted to practical is as under:-

		External	Internal
i)	Viva-Voce	10 Marks	3
ii)	Written Questions Based on the Project	20 Marks	2
iii)	Project Report	10 Marks	5

Books Recommended:

1. Datta, S.C. : Adult Education in India, Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : The National Adult Education Programme, 1978.
3. Directorate of Adult Education, Ministry of Education, Govt. of India. : Training of Adult Education Functionaries I-4, D.A.E., 1980
4. Directorate of Adult Education : Fifty years of Adult Education in India.
5. Dept. of Education, Ministry of Human Resource Development Govt. of India : National Literacy Mission, 1988.
6. Kundu, C.L. : Adult Education : Principles, Practices and Prospects sterling Publishers, Delhi, 1984.
7. Mali, M.G. : Adult Education in India, Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
9. Pangotra, N.N. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
10. Sharma, I.P. : Adult Education in India, National Book Organization, 1985
11. Singh, Sohan : History of Adult Education, The Indian Adult Education Association, New Delhi, 1957.
12. Styler, W.E. : Adult Education in India, Oxford University Press, 1986.
13. Yadav, R.S. : Adult Education Training & Productivity. The Indian publications, Ambala Cantt., 1991.

14. N. Markandan	:	Village Planning Committee Origin and Evolution, Gandhigram Rural Institute (Deemed University, Gandhigram, Tamil Nadu, 1986.
15. R.Rengasamy	:	A Hand Book on Post Literacy and Follow up Madurai Kamaraj University, Madurai-625002, 1985.
16. J.C. Saxena J.L. Sachdeva	:	Role of Adult Education and Mass Media for Civic Education Indian Adult Education Association, New Delhi, 1986
17. S.R.Ranganathan	:	Literature for Neo-Literates, Indian Adult Education Association, New Delhi, 1966
18. S.R. Ranganathan N.D. Godbole Kesari Hanuman	:	Human Values in Adult Education, Indian Adult Education Association, R.M. Chetsingh Delhi, 1958.
19. S.C. Dutta & H.J. Fischer	:	Training of Adult Educators, Shakuntala Publishing House, Bombay-1972.
20. R.Rangasamy & S. Raju	:	Teaching AIDS for Adult Education, Madurai Kamaraj University
21. S. Mohanty	:	Lifelong and Adult Education, APH Publishing Corporation, Ansari Road, Darya Ganj, New Delhi, 2007
22. S.Sohan Singh Meher C. Nanavatty Mrs. Welthy Fisher S.C. Dutta	:	Adult Education in Community Development- Indian Adult Education Association, 30, Faiz Bazar, Delhi, 1956.
23. Arvinda Chandra & Anupama Shah	:	Non-Formal Education For All, Sterling Publishers Pvt. Ltd. Delhi, 1987
24. R.P. Singh	:	Non-Formal Education- An Alternative Approach, Sterling Publishers Pvt. Ltd., Delhi, 1987
25. J.L. Sachdeva & Asha Vohra	:	Non-Formal Adult Education for Women, Indian Adult Education Association, New Delhi, 1985
26. S.R. Mohsini J.L. Sachdeva Asha Sehgal	:	Towards A Comprehensive Adult Education programme Indian Adult Edu. Association, New Delhi, 1983.
27. Avabai B. Wadia	:	Population Education for the Younger Generation- Family Planning Association of India, Bombay, 1968
28. J.K. Friesen S.C. Dutta	:	University Adult Education- Indian Adult Education Association, New Delhi, 1985

ADULT EDUCATION
SEMESTER-VI

Max Marks	**:**	**100**
Theory	**:**	**40 Marks**
Internal Assessment	**:**	**10 Marks**
Time	**:**	**03 Hours**

GENERAL INSTRUCTIONS FOR THE PAPER SETTER AND FOR THE CANDIDATE.

The question paper will consist of five Units: I, II, III, IV & V. Units II, III, IV and V will have two questions from the respective Units of the syllabus and will carry 8 marks each. The students are requested to attempt one question from each Unit i.e. (II, III, IV and V). Unit I will consist of eight short answer type questions which will cover the entire syllabus and is compulsory and carrying one mark for each question.

OBJECTIVES OF THE COURSE:

The objectives of the paper are:

1. To expose students to the concept, importance and scope of continuing education.
2. To acquaint students with the basis of life skills education, its concept, meaning and its various forms.
3. To expose students with Life Long Learning and its future perspectives.
4. To equip students with role of universities in adult and continuing education programs.
5. To explain students extension as third dimension.

ADULT EDUCATION
SEMESTER-VI

THEORY:

Unit-I

Adult and Continuing Education:

- Different types of Programmes in Continuing Education.
- Role of Universities in Adult & Continuing Education.
- Adult Education Policy Prevalent in India.
- Role of Jan Shikshan Sansthans.

Unit-II

Life Skills:

- Life Skill Education: Its Meaning, Concept and their need.
- NCERT CORE LIFE SKILLS

  Problem-Solving, Decision: Making, Empathy, Creative- Thinking, Critical- Thinking, Stress Management, Time Management, Emotional Security, Communication Skills, Recreation Skills.
- Organisation of Economic Cooperation and Development (OECD)'s Life Long Learning Policy: Its Objectives and Targets.
- Life Skills Application and Training: Steps involved.

Unit-III

National Policy on Skill Development 2015:

- National Policy on Skill and Entrepreneurial Development 2015, its Objectives and Targets.
- Its Policy Frame Work, Governance and Financing.
- Skill India Campaign: Its History, Content Importance and Scope.
- National Skill Development Mission: Its Objectives, Targets and Vision.

Unit-IV

Extension Education:

- Swachh Bharat Mission- Objectives, Targets.
- Women Empowerment Challenges and Issues, Its Need and Importance.
- Extension Methods and Approaches- Classification, Characteristics and Selection.
- Extension Work and NGOs: Their Role and Activities.

PRACTICAL/ FIELD WORK:

50 Marks.

1. Organization of Two Extension Lectures in Slum/ Village and Report Writing.

The break up of 50 marks allotted to practical is as under:-

		External	Internal
i)	Viva-Voce	10 Marks	3
ii)	Written Questions Based on the Project	20 Marks	2
iii)	Project Report	10 Marks	5

Books Recommended:

1. Datta, S.C. : Adult Education in India, Indian Adult Education Association, New Delhi, 1986.
2. Directorate of Adult Education : The National Adult Education Programme, 1978.
3. Directorate of Adult Education, Ministry of Education, Govt. of India. : Training of Adult Education Functionaries I-4, D.A.E., 1980
4. Directorate of Adult Education : Fifty years of Adult Education in India.
5. Dept. of Education, Ministry of Human Resource Development Govt. of India : National Literacy Mission, 1988.
6. Kundu, C.L. : Adult Education : Principles, Practices and Prospects sterling Publishers, Delhi, 1984.
7. Mali, M.G. : Adult Education in India, Deep and Deep Publication, New Delhi, 1984.
8. Mathur, B.M. : Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.

9.	Pangotra, N.N.	:	Adult Education & Social Change, The Associated Publishers, Ambala Cantt., 1989.
10.	Sharma, I.P.	:	Adult Education in India, National Book Organization, 1985
11.	Singh, Sohan	:	History of Adult Education, The Indian Adult Education Association, New Delhi, 1957.
12.	Styler, W.E.	:	Adult Education in India, Oxford University Press, 1986.
13.	Yadav, R.S.	:	Adult Education Training & Productivity. The Indian publications, Ambala Cantt., 1991.
14.	N. Markandan	:	Village Planning Committee Origin and Evolution, Gandhigram Rural Institute (Deemed University, Gandhigram, Tamil Nadu, 1986.
15.	R.Rengasamy	:	A Hand Book on Post Literacy and Follow up Madurai Kamaraj University, Madurai-625002, 1985.
16.	J.C. Saxena J.L. Sachdeva	:	Role of Adult Education and Mass Media for Civic Education Indian Adult Education Association, New Delhi, 1986
17.	S.R.Ranganathan	:	Literature for Neo-Literates, Indian Adult Education Association, New Delhi, 1966
18.	S.R. Ranganathan N.D. Godbole Kesari Hanuman	:	Human Values in Adult Education, Indian Adult Education Association, R.M. Chetsingh Delhi, 1958.
19.	S.C. Dutta & H.J. Fischer	:	Training of Adult Educators, Shakuntala Publishing House, Bombay-1972.
20.	R.Rangasamy & S. Raju	:	Teaching AIDS for Adult Education, Madurai Kamaraj University
21.	S. Mohanty	:	Lifelong and Adult Education, APH Publishing Corporation, Ansari Road, Darya Ganj, New Delhi, 2007
22.	S.Sohan Singh Meher C. Nanavatty Mrs. Welthy Fisher S.C. Dutta	:	Adult Education in Community Development- Indian Adult Education Association, 30, Faiz Bazar, Delhi, 1956.
23.	Arvinda Chandra Anupama Shah	:	Non-Formal Education For All, Sterling Publishers Pvt. Ltd. & Delhi, 1987
24.	R.P. Singh	:	Non-Formal Education- An Alternative Approach, Sterling Publishers Pvt. Ltd., Delhi, 1987
25.	J.L. Sachdeva & Asha Vohra	:	Non-Formal Adult Education for Women, Indian Adult Education Association, New Delhi, 1985
26.	S.R. Mohsini J.L. Sachdeva Asha Sehgal	:	Towards A Comprehensive Adult Education programme Indian Adult Edu. Association, New Delhi, 1983.
27.	Avabai B. Wadia	:	Population Education for the Younger Generation- Family Planning Association of India, Bombay, 1968
28.	J.K. Friesen S.C. Dutta	:	University Adult Education- Indian Adult Education Association, New Delhi, 1985

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MUSIC (Vocal)

SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than ten students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music or tabla.
5. The candidate can also take instrumental music with tabla or vocal music.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent for conduct branch.**
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 02 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	:	45 marks
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
	(i) Viva	:	35 marks
	(ii) Harmonium	:	05 marks
	(iii) Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total :		**100 marks**

Paper-A : THEORY (Duration 45 minutes 02 Theory per week)

UNIT-I

1. Explain the following Gayan Shaillies:-Tappa, Dharupad, Tarana.
2. Special features of time Theory of Indian Ragas
3. Raganga Paddhti
4. Historical Development to North Indian Music from Pre Historic to 4th Cetury.

UNIT-II

Detailed study of the following:-

1. Manch- Pradarshan
2. Professions in Music
3. Lok Sangeet of Punjab

UNIT-III

Contribution in detail and life sketches in brief of the following: -

1. Pt. Kumar Gandharv
2. Smt. Gangu Bai Hangal
3. Ustad Bade Gulam Ali Khan Sahib

UNIT-IV

Description and Notation of the prescribed Ragas:-

1. To write notation of Vilambit / Drut khyal in the prescribed Ragas with Alaps and Taans : -Vrindavani Sarang, Jaunpuri.
2. To write notations of Talas in Ekgun & Dugun of :- Jhumra, Sultala
3. To write the description of Ragas:- Non-detailed Ragas:Des, Asavari.

NOTE: Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

Unit-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: -Vrindavani Sarang & Asavari
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dharupad in proper style.
4. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
5. Ability to play teevra on Tabla.
6. Ability to recite the following Talas in Thah, Dugun by hand:-Jhumra, Sultala
7. Ability to sing any two Drut Khayals of your course on Harmonium.
8. Knowledge of non-detailed Ragas:
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Des, Asavari
9. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*	:	Panna Lal Madan

MUSIC (Vocal)
SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There should not be more than ten students in a batch for practical examination.
3. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
4. The candidate can take vocal music along with instrumental music or tabla.
5. The candidate can also take instrumental music with tabla vocal music.
6. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
7. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
8. There would be upto ten students in one section in practical class

Paper-A:	**THEORY** (3 Hours duration) **(Duration 45 minutes 06 practical+ 02 Theory periods per week)**	:	45 marks
Paper-B:	**Practical** (20 minutes duration)	:	45 marks
(iv)	Viva	:	35 marks
(v)	Harmonium	:	05 marks
(vi)	Tabla	:	05 marks
Internal Assessment (Theory + Practical)	(05 +05)	:	10 marks
	Total	**:**	**100 marks**

Paper-A: THEORY (Duration 45 minutes 02 Theory per week)

UNIT –I

1. History of Indian Music i.e. from 4^{th} to 13^{th} Century.
2. Explain the following Gayan Shaillies: - Dhamar, Bhajan , Shabad, Thumri
3. Varieties of Tana

UNIT –II

Contribution in detail and life sketches in brief of the following great masters:-

1. Ustad Vilayat Hussain Khan
2. Pt. Dalip Chandra Bedi
3. Pt. V. N. Patvardhan

UNIT-III

Detailed study of the following:-

1. Role of Akashwani and Doordarshan towards the popularisation of Indian Classical Music
2. Role of Electronic mediums (Basic Instruments) i.e Electronic, Tabla, Tanpura
3. Sansthagat Sangeet Shikshan Pranali

UNIT-IV

Description and Notations of the prescribed Ragas and Talas :-

1. To write in notation of Vilambit gat / drut khyal in the prescribed Ragas with Alap & Taans:-- Multani & Darbari- kanada.
2. To write in notations of talas:-Deepchandi, Dhamar & Adachartal (Single + Double)
3. To write the description of Ragas:- Non detailed Ragas: Madhuwanti, Adana

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 02 marks each.**

Paper-B : PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Drut Khayal with Alaps & Tanas in each of the following Ragas: Multani & Darbari Kanhada
2. One Vilambit Khayals in any two of the prescribed Ragas in the course with extempore –alaps and taanas.
3. Ability to sing one Dhamar in proper style.
4. One Tarana in any of the detailed Ragas prescribed in the course.
5. Ability to sing notations (in swaras) of Drut Khayals in each of the prescribed Ragas.
6. Ability to play Adachartala on Tabla.
7. Ability to recite the following Talas in Thah, Dugun by hand: Deepchandi, Dhamar & Ada-Chartal.
8. Ability to sing any two Drut Khayals of your course on Harmonium.
9. Knowledge of non-detailed Ragas :
   Ability to sing their Arohas, Avrohas and Pakad with the help of Tanpura : Madhuwanti & Adana
10. Tuning of Tanpura.

Books Recommended:

1.	*Hamare Sangeet Ratna*	:	Sangeet Karyalayas, Hathras.
2.	*Sangeet Sar Part III*	:	Mrs. Veena Mankaran.
3.	*Folk Instruments of Punjab*	:	Prof. Anil Narula.
4.	*Sangeetanjali, I & IV*	:	Pt. O.N. Thakur.
5.	*Rag Vigyan Part III & IV*	:	Pt. V.N. Patwardhan.
6.	*Bhartiya Sangeet Ka Itihas*	:	Thakur Jaideva Singh.
7.	*Sangeet Shastra Vigyan*	:	Panna Lal Madan.
8.	*Sangeet Kala Ka Itihas*		Panna Lal Madan

MUSIC (Instrumental)

SEMESTER-V

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. **There should not be more than ten students in a batch for practical examination.**
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45 marks

(i)	Viva	: 35 marks
(ii)	Gayan	: 05 marks
(iii)	Tabla	: 05 marks
Internal Assessment (Theory + Practical)		: 05+05 = 10 marks
		Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. Explain & define the different Vadan Shaillies (Styles) of your own instrument.
2. Historical development of Indian Musical Scale.
3. Varieties of Tana / Tora & its Varicties.
4. Historical development of Indian Music From Pre Historic to 4th Century.

UNIT-II

1. Importance of Laya and Tala in Music
2. Folk Instruments of Punjab.
3. Scope of Instrumental Music.

UNIT-III

Brief life sketches and their contributions:-

1. Ustad Bismillah Khan
2. Ustad Hafiz Ali Khan
3. Pt. Nikhil Banerji

UNIT-IV

Notations and Description of ragas and Talas:- Malkauns, Jai Jaiwanti

1. To write one Maseetkhani Vilambit Gat with Todas
2. To write Razakhani Drut Gat with Todas of ragas Malkauns, Jai Jaiwanti
3. To write single and double of Tala :- Deepchandi, Tilwada, Chartal.
4. Non- detailed raga:- Chandrakauns, Des

NOTE: -Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ Description of Ragas.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas : Malkauns, Jai Jaiwanti
2. One Maseet Khani Vilambit Gats with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:- Chandrakauns, Des.
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Deepchandi, Tilwada.
5. Ability to play Chartal on Tabla.
6. One Dhun.
7. Ability to play techniques of your Instruments: Meend, Kan, Krintan,Ghaseet.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
4	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla

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MUSIC (Instrumental)
SEMESTER-VI

GENERAL INSTRUCTIONS:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be up to ten students in one section in practical class.
3. There should not be more than ten students in a batch for practical examination.
4. Harmonium can be used while singing Alankars.
5. In all, *nine* questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.**
6. In Instrumental Music, the candidates have the option to take any one of the following instruments: Sitar, Sarangi, Veena, Sarod, Dilruba, Violin, Guitar, Bansuri, Shahnai, Santoor.
7. **While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.**
8. The candidate can take vocal music or Tabla along with instrumental music.

Paper-A: THEORY (Instrumental) (3 hrs. duration) : 45 marks
(Duration 45 minutes 06 practical + 02 Theory periods per week)

Paper-B : PRACTICAL (20 minutes duration) : 45marks

(i)	Viva	:	35 marks
(ii)	Gayan	:	05 marks
(iii)	Tabla	:	05 marks
Internal Assessment (Theory + Practical)		:	05+05 = 10 marks
			Total: 100 marks

Paper-A: THEORY (Duration 45 minutes 02 theory periods per week)

UNIT-I

1. Historical Development of Indian Music i.e. from 4th to 13th Century.
2. Notational System, origin and development
3. Knowledge of Uttari and Dakshani Sangeet Paddhati

UNIT-II

1. The life Sketches and contributions of the following great musicians :-
   (i) Dr. Lal Mani Mishra
   (ii) Dr. Panna Lal Ghosh
   (iii) Smt. Sharan Rani

UNIT-III

Essays:-

(i) Chitrpat Sangeet Mein Vadyon Ki Bhoomika.
(ii) Role of the Akashvani and Doordarshan in popularizing Instrumental Music.
(iii) Manch Pradarshan

UNIT-IV

Notation and Description of the prescribed Ragas and Talas:-

1. Ragas:- Mian-Ki-Todi, Mian Malhar.
2. Talas :- Jhumra , Panjabi theka /Addha tal & Jat tal.
3. Non detail Raga :- Gujri -Todi, Bahar

- To write one maseetkhnai Drut Gat with todas in any prescribed rag
- To write a Razakhani Gat with Todas
- To write single and double of prescribed Talas
- To write the description of detailed and non detailed raga

NOTE: - Both the questions from this part must contain one notation of Raga alongwith the notation of Talas/ description of Ragas.

UNIT-V

1. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B: PRACTICAL (Duration 45 minutes 06 practical periods per week)

1. One Razakhani Drut Gat with Alaps and Toras & Jhalas in each of the following Ragas: Mian-Ki-Todi, Mian- Malhar
2. One Maseet Khani Vilambit Gat with Alap-Jod and Toras in any of the prescribed ragas.
3. Knowledge of the following non-detailed ragas:Gujri-Todi, Bahar
4. Ability to demonstrate by hands in Ekgun and Dugun layakaries of the following talas : Jhumra , Panjabi theka /Addha tal & Jat tal.
5. Ability to play Tilwada on Tabla.
6. One Sitarkhani gat with toras in any prescribed ragas.
7. Ability to play techniques of your Instruments: Zamzma , Khatka.
8. Ability to sing shudh, komal and tivra swaras with the help of harmonium.
9. Tuning of your Instrument.

Books Recommended:

1.	Sangeet Kala Ka Itihas	:	Dr. Panna Lal Madan
2.	Sangeet Shastra Vigyan	:	Dr. Panna Lal Madan
3.	*Rag Parichaya Part III & IV*	:	H.C. Shrivastava.
4	*Folk Instruments of Punjab*	:	Prof. Anil Narula (Published by Punjabi University, Patiala).
5.	*Hamare Sangeet Ratna*	:	Sangeet Karayalaya, Hathras.
6.	*Sangeet SAR Part III*	:	Mrs. Veena Mankaran.
7.	*Sangeet Granth atey Bharti Sangeet Da Itihas*	:	Chander Kanta, Khosla

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MUSIC (TABLA)
SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-V. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: THEORY (3 Hours duration) : 50 marks

Paper-B: PRACTICAL (20 minute's duration) : 50 marks

(i)	Viva	: 35 marks
(ii)	Harmonium	: 05 marks
(iii)	Tabla (Tuning)	: 05 marks
(iv)	Padhant on Hand	: 05 marks

Total **:** **100 marks**

Paper-A Theory

UNIT-I

1. Gun- Dosh of Tabla Vadak.
2. Various development of Tabla 19th Century onwards.
3. Comparative study of Pt. V.N. Bhatkhande and Pt. V.D. Pulaskar Taal notation system

UNIT-II

1. Elementary knowledge of the following
   Kriya, Kaal Palta, Laggi, Baant, Peshkaar
2. Use of Taals in accompaniment with Gayan and Vadan shailies
3. Study of Farrukhabad and Punjab Gharana

UNIT-III

1. Life sketches and contribution of the following:-
   a. Pt. Ram Sahai
   b. Pt. Anokhe Lal Mishra
   c. Pt. Bhairav Sahai

UNIT-IV

1. Teentaal, Jhumra, Deepchandi and Punjabi taal
2. To write description of Taal of your syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chaugun, Aad and Kuaad

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.**

Paper-B: PRACTICAL

1. Playing of Talas prescribed in the course:- Jhumra, Deepchandi and Punjabi Tala
2. Playing proper Badhat of Ada-Chautal, Ektal
3. Playing all the prescribed Talas with Vocal and Instrumental performances as well as solo items.
4. Tuning of Tabla/Pakhawaj
5. Practical knowledge of the following in the prescribed Talas:
   (i) Ada chartala:- simple Paran, Mukhra, Mohra, Uthan
   (ii) Ektal:- Peshkar, Quaida, Palta, Rela, Paran.

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe

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MUSIC (TABLA)
SEMESTER-VI

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. In all, nine questions will be set from the whole syllabus of Semester-VI. The question paper will be divided into five units. First four units contain 02 questions each, out of which the candidates are to attempt one question from each unit, unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.
3. Harmonium/ Sarangi will be allowed to play Nagma/Lehra. No electronic Lehra machine will be allowed for practical examination.
4. Practical Paper shall be set from the syllabus for Paper-B (Practical).

Paper-A: THEORY (3 Hours duration) : 50 marks

Paper-B: PRACTICAL (20 minute's duration) : 50 marks

i)	Viva	:	35 marks
ii)	Harmonium	:	05 marks
iii)	Tabla (Tuning)	:	05 marks
iv)	Padhant on Hand	:	05 marks

Total **: 100 marks**

Paper-A Theory

UNIT-I

1. Detailed study of the following:-
    a. Manch Pardarshan
    b. Profession in music (Tabla)
    c. Comparative study of North Indian and Karnatka Taal system

UNIT-II

1. Elementary knowledge of the following:
   Quida, Laggi, Baaj, Ladi, Farmaishi Chhakardar, Paran
2. Role of electronic instrument in the context of rhythm.
3. Study of Lucknow and Banaras Gharana.

UNIT-III

1. Life sketches and contributions of the following:-
    a. Pt. Biroo Mishra
    b. Pt. Kishan Maharaj
    c. Ustad Zakir Hussan

UNIT-IV

1. Dhamar, Jhaptaal, Chartall
2. To write description of Taal of the syllabus
3. To write the notation of Taal in Single, Double, Tigun, Chaugun, Aad, Kuaad, Biaad Layakaris

UNIT-V

1. **The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.**

Paper-B: PRACTICAL

1. Playing of Talas prescribed in the course:- Dhamar, Chartaal and Jhaptala
2. Playing proper Badhat of Dhamar:- Chartall and Jhaptala
3. Playing all the prescribed Talas with Vocal and Instrumental performance as well as solo item.
4. Tuning of Tabla/Pakhawaj
5. Practical knowledge of the following in the prescribed Talas:
   (i) Dhamar:-Chakardar Paran, Farmaishi Paran, Tukra
   (ii) Tilwara:-Vilambit, Theka with accompaniment in Vocal

Books Recommended:

1.	Tala Parichya Part I, II &III	:	G.C. Srivastav
2.	Bhartiya Taalon ka Shastriya Vivechan	:	Arun Kumar Sen
3.	Taal Maartand	:	B.S. Sharma
4.	Bhartiya Sangeet Vadya	:	L.M. Mishra
5.	Harmare Sangeet Ratna	:	Sangeet Karyalay, Hathras
6.	Tala Vadya Shastra	:	Manohar Bhalchand Marathe
7.	Taal Prasson	:	Chhote Lal Mishra
8.	Avanaddha Vadhya	:	M.P. Sharma

INDIAN CLASSICAL DANCE
SEMESTER –V

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

PAPER-A THEORY

Unit –I

1. Definations of the following terms:
   Kataksh, Ang, Upang, Pratyanga, Hela.
2. Origin of Taal and its dash pranas.
3. Technique of Indian Ballet.

Unit-II

1. Dance and Nature
2. Brief study of Natya Shastra
3. Brief study of Nayak Bheda

Unit-III

1. Essential characteristics of Mohini Attam.
2. Brief note on Bhava.
3. Brief note on Folk Dances of Rajasthan.

Unit-IV

1. Description of Teen Tala anad Sawari and Dhamar
1. Notation of Theka, Bol Tatkar, thaat, Amad, Chakardar, Tora, Tihai, Premelu and Nagma in Teen Taal.
2. Notation of Theka, Bol-Tatkar, Tihai, Amad, Paran, Chakardar- Paran, Tukra, Kavit and Nagma in Sawari Tala.
3. Notation of Theka, Bol -Tatkar and Tihai in Dhamar.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions carrying 01 marks each.

PAPER-B PRACTICAL (Duration 45 minutes 06 periods per week)

Unit - I

1. Swari Tala
   b) Theka
   c) Bol Tatkar
   d) Tukra - 2
   e) Amad - 1
   f) Chakardar Paran - 1
   g) Tihai - 1
   h) Paran - 1
   i) Kavit - 1
   j) Nagma - 1

Teen Taal:

2. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Thaat - 1
   d) Amad - 1
   e) Chakardar Tora - 1
   f) Tihai - 1
   g) Premula - 1
   h) Nagma - 1

3. Dhamar Taal:

   I Tatkar
   II Tihai

4. a) Knowledge of any one Folk Dance of Rajasthan practically
   b) Play Theka of Sawari on Tabla
   c) Gat Nikas of Ghungat and Matki
   d) All the practical work on Hand

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INDIAN CLASSICAL DANCE

SEMESTER –VI

GENERAL INSTRUCTIONS:

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. There would be upto ten students in one section in practical class.
3. There would not be more than eight students in a batch for practical examination.
4. No electronic instruments will be allowed for lehra in practical examination.
5. The candidate can take Dance music along with vocal music.
6. The candidate can also take instrumental music with Dance.
7. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper should also be sent.
8. In all, nine questions will be set. The question paper will be divided into five Units. Four Units will contain two questions each and the candidates are required to attempt four questions selecting at least one question from each Unit. The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of 01 marks each.

Paper-A: **THEORY** (3 Hours duration) : 45 Marks

(Duration 45 minutes, 02 Theory periods per week)

Paper-A Theory

Unit- I

1. History of Kathak Dance.
2. Brief study of Nayika Bheda.
3. Knowledge of Dakshini Taal System.

Unit-II

1. Essential characteristics of Odissi.
2. Loka Dharmi and Natya Dharmi.
3. Life sketch of Achhan Maharaj Ji.

Unit III

1. Brief study of Abhinaya Darpan.
2. Dance and Fine Arts.
3. History of Stage.

Unit IV

1. Description of Dhamar with Theka, Two Toras, Tihai, Amad and Pakshiparan.
2. Notation of Theka, Amad, Tihai, Tora, Kavit and Chatusjati paran in Teen Taal.
3. Notation of Theka, Paran, Chakardar Paran, Tisarjati Paran, Kavit in Sawari Taal.
4. Nagma and Bol Tatkar in Dhamar, Teen Taal and Sawari.

Unit –V

1. The ninth question of unit v is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical (Duration 45 minutes, 06 periods per week)

1. Dhamar (Matra 14)
   a) Bol Tatkar
   b) Theka
   c) Toras-
   d) Tihai-1
   e) Pakshiparan
   f) Amad

2. Swari Tala (Matra 15)
   a) Theka
   b) Bol Tatkar
   c) Paran-1
   d) Chakardar Paran-1
   e) Tisarjati Paran-1
   f) Kavit-1
   g) Toda-2
   h) Tihai -1

3. Teen Tala (Matra 16)
   a) Theka
   b) Bol Tatkar
   c) Amad -1
   d) Tihai -1
   e) Tora - 2
   f) Kavit -1
   g) Chatusjati paran
   h) Shivparan -1

4. a) Knowledge of Sammi Dance practically
   b) Play Theka of Dhamar on Tabla
   c) Gat Nikas of Murli and Ghungat
   d) All the practical work on Hand
   e) Gat Bhava (Panghat ki Chhed Chhaad).

BOOKS RECOMMENDED:

1.	Kathak	:	Sunil Kothari
2.	Bhartiya Sanskriti mein Kathak Parampara	:	Mandavi Singh
3.	Bharatiya Nritya Kala	:	Keshav Chander Verma
4.	Dance in Thumri	:	Projesh Banerji
5.	Dances of Asia	:	Kiets Sakakibera
6.	Kathak Darpan	:	T. R. Azad
7.	Kathak Nritya Shiksha Part - I & Part - II	:	Puru Dadhich
8.	Natya Shashstra of Bharatmuni	:	
9.	Abhinaya Darpan aur Geet – Gobind	:	Dr. Laxmi Narayan Garg
10.	Abhinaya Darpan	:	Dr. Aarohi Walia
11.	Nritya Abhigyan	:	Shobha Koser
12.	Kathak Gyaneshwari	:	T. R. Azad
13.	Bhartiya Lok Nritye Mein Haryana aur Rajasthan	:	Neera Sharma
14.	Etihasik Paripeksh Mein Kathak Nritya	:	Maya Tak
15.	Kathak	:	Shikha Khare
16.	Bhartiye Sangeet Vadya	:	Lal Mani Mishra
17.	Kathak Kalpdrum	:	Dr. Chetna Jyotshi
18.	Indian Art	:	K. Bharatha Iyer
19.	Indian Sculpture and Painting	:	E.B. Havell
20.	Fine Art	:	Kulwant Singh

FINE ARTS

SEMESTER V

THEORY

Paper A : History of Art **Max. Marks : 54**
Max. Time : 3 hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Rajasthani Painting – Chavand Raagmala from Mewar, Raag-Raagini from Bundi and Nayika from Kishangarh
- Pahari Painting – Ramayana from Basohli, Gita-Govinda from Kangra

Unit II : History of Indian Sculpture

- Mahabalipuram – Maheshasuramardini
- Elephanta – Ardhanarishwara
- Chola Bronzes – Nataraja and Parvati Images

Unit III : History of Western Art

- Beginning of Modern Painting – Manet
- Impressionism – Monet
- Neo Impressionism-Seurat
- Post Impressionism-Van Gogh

Unit IV : Definition of Key terms, General Concepts and Techniques

- Form and Content, Art and Religion, Art and Society, Tradition, Modernity

Pedagogy:

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

FINE ARTS
SEMESTER VI

THEORY

Paper A : History of Art **Max. Marks : 54**
Max.Time : 3hrs

Objectives :

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India and the West. The emphasis will be to make them aware of the different terms, concepts, forms and subject-matter of these works.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

1. Each paper carries 54 marks.
2. The paper-setter is required to set nine questions in all. The candidate is to attempt five questions as per the instructions given in the question-paper.
3. The first question shall be of short-answer type containing nine questions spread over the whole syllabus. Each question is to be answered in about 25-30 words. It shall carry 18 marks and shall be a compulsory question.
4. Eight questions are to be set from the entire syllabus consisting of four units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall attempt four questions in all out of eight questions. Each question would be of nine marks.

Unit I : History of Indian Painting

- Company Painting
- Folk Style – Kalighat and Maithili

Unit II : History of Indian Sculpture

- Khajuraho – Mother and Child
- Konark – Musician Figures
- Sravanbelgola – Bahubali

Unit III : History of Western Art

- Expressionism – Edvard Munch
- Fauvism-Matisse
- Cubism-Picasso

Unit IV : Definition of Key terms, General Concepts and Techniques

- Beauty, Rasa and Bhava, Gestures, Postures and Movements, Stained Glass, Cire-perdue (lost-wax casting)

Pedagogy :

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films. Visits to Museums, exhibitions and art galleries are a part of study.

Suggested Readings

1. Majumdar, R.C. (editor) : *The History and Culture of Indian People*, Vols. I, II and III (Sculpture and Painting Sections only), Bhartiya Vidya Bhawan, Bombay, 1988, 1990, 1996.
2. Goswamy, B.N. & Fischer, E. : *Pahari Masters : Court Painters of Northern India*, Museum Reitberg, Zurich, Switzerland, 1992.
3. Khandalwala, Karl *: Pahari Miniature Painting*, The New Book Co. Pvt. Ltd., Bombay, 1958.
4. Rowland, Benjamin : *The Art and Architecture of India*, Penguin Books, Great Britain, 1959.
5. Saraswati, S.K. : *A Survey of Indian Sculpture*, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
6. Ray, N.R. : *An Approach to Indian Art*, Publication Bureau, Panjab University, Chandigarh, 1974.
7. Barrett, D. and Gray, B. : *Painting of India*, The World Publishing Co., Ohio, 1963.
8. Archer, W.G. : *India and Modern Art*, George Allen & Unwin Limited, London, 1959.
9. Aggarwala,V.S. : *Heritage of Indian Art*, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
10. Aggarwala,V.S. : *Indian Art* (English), Varanasi, 1965.
11. Aggarwala,V.S. : *Bhartiya Kala* (Hindi), Prithvi Prakashan, 1977.
12. Read, Herbert : *Meaning of Art*, Faber & Faber, London, 1972.
13. Janson, H.W. : *History of Art*, Thames & Hudson, London, 2001.
14. Gardener, Helen : *Art Through the Ages*, Harcourt Brace & Co., U.S.A., 1991.
15. Gombrich, E.H. : *The Story of Art*, Phaidon Press Limited, New York, 1995.
16. Arnason, H.H. : *A History of Modern Art*, Thames & Hudson, London, 1988.

HISTORY OF ART

SEMESTER - V

History of Indian Painting (from ca. 1800 to the present times) and Sculpture (from ca. 600 to 1300 A.D.)

Max.Marks: 100
Time: 3 Hr

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set **9 questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:

The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in India. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of Indian Painting

Unit-I

- Company painting.
- Early oil painters - Raja Ravi Verma.
- Bengal School with special reference to Abanindranath Tagore

Unit-II

- New Trends: Nandlal Bose, Rabindranath Tagore, Gaganendranath Tagore, Jamini Roy, Amrita Shergil, D.P. Roy Chowdhury, Sobha Singh, M.F.Hussain, Satish Gujral.

History of Indian Sculpture

Unit-III

- Sculptures of Pala and Sena Period - Bengal, Bihar, Orissa

Unit-IV

- Pratihara Sculpture of Central and Western India.
- Chola Sculpture in Stone & Bronze

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Archer, W.G : India and Modern Art, George Allen & Unwin Limited, London, 1959.
- Archer, M. & Archer W.G. : Indian Painting for the British, 1770-1880, Oxford University Press, London, 1955.
- Chaitanya, Krishna : A History of Indian Painting, The Modern Period, Abhinav Publications, New Delhi, 1994.
- Appasamy, Jaya : Abanindranath Tagore and the Art of his Times, Lalit Kala Akademi, New Delhi, 1968.
- Mago, P.N. : Contemporary Art in India, A Perspective, National Book Trust of India, New Delhi, 2000.
- …… : Lalit Kala Monographs, Lalit Kala **Akademi, Delhi.**
- Journals and Periodicals : Lalit Kala Contemporary, Roopa-lekha, Marg.
- Parimoo, Ratan : The Paintings of the Three Tagores, Maharaja Sayajirao University, Baroda, 1973.
- Majumdar, R.C. (editor) : The History and Culture of Indian People, Vol. I, II and III. (Sculpture and Painting sections only) Bhartiya Vidya Bhawan Bombay, 1996, 1990, 1988.
- Rowland, Benjamin : The Art and Architecture of India, Penguin Books, Great Britain, 1959.
- Saraswati, S.K. : A Survey of Indian Sculpture, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi, 1975.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.

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HISTORY OF ART
SEMESTER-VI

History of European Painting and Sculpture (from ca. 1850 A.D. onwards), and Theory and Principles of Art Appreciation.

Max.Marks: 100
Time: 3 Hrs

NOTE 1: The paper carries 100 marks.

NOTE 2: The paper-setter is required to set 9 **questions** in all. **The candidate is to attempt 5 questions as per the instructions given in the question paper**.

NOTE 3: The first question shall be of short answer type containing 14 questions spread over the whole syllabus. Each question is to be answered in about 25 to 30 words. It shall carry **28 marks** and shall be a **Compulsory question**.

NOTE 4: 8 questions are to be set from the entire syllabus consisting of 4 units. Two questions will be set from each unit and the candidates shall be given internal choice i.e. a candidate shall attempt one question from each unit. So in all, the candidate shall be attempting 4 questions in all out of 8 questions. Each question would be of **18 marks.**

Objectives:
The aim of the paper is to introduce to the students various schools, styles and phases of the developments in painting and sculpture in the west. The emphasis will be to make them aware of the different terms, concepts, forms and subject matter of these works.

History of European Painting and Sculpture

Unit-I

- Impressionism - Monet, Degas, Renoir.
- Post-impressionism - Van Gogh, Cezanne, Gauguin.

Unit-II

- Cubism - Picasso, Braque
- Expressionism - Munch, Nolde.
- Abstract Art - Kandinsky
- Abstract Expressionism - Jackson Pollock.

Theory and Principles of Art Appreciation

Unit-III

- Function of Art.
- A brief study of Indian and Western approaches to Art.

Unit-IV
Explanation of the term

- Form, Content, Abstraction, Modernity, Contemporaneity, Pointillism, Collage, Lithograph, Etching and Ready-made with the help of relevant examples.

Pedagogy

The students are expected to familiarize themselves with the art forms as seen from the books, slides and related films.

Suggested Readings

- Janson, H.W. : History of Art, Thames & Hudson, London, 2001.
- Gardener, Helen : Art Through the Ages, Harcourt Brace & Co., U.S.A., 1991.
- Gombrich, E.H. : The Story of Art, Phaidon Press Limited, New York, 1995.
- Arnason, H.H. : A History of Modern Art, Thames & Hudson, London, 1988.
- Ray, Niharanjan : An Approach to Indian Art, Publication Bureau, P.U., Chandigarh, 1974.
- Aggarwala, V.S. : Heritage of Indian Art, Publications Division, Ministry of Information & Broadcasting, Govt. of India, New Delhi, 1976.
- Aggarwala, V.S. : Indian Art (English), Varanasi, 1965.
- Aggarwala, V.S. : Bhartiya Kala (Hindi), Prithvi Prakashan, 1977.
- Read, Herbert : Meaning of Art, Faber & Faber, London, 1972.

ANCIENT INDIAN HISTORY, CULTURE AND ARCHAEOLOGY
SEMESTER V

Paper-V (VOCATIONAL) : EXCAVATIONS, MONUMENTS AND SCULPTURES IN STONE AND BRONZE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives :

The primary objective of this paper is to prepare the students to become professional archaeologists through the study of various excavated and explored archaeological sites, monuments and antiquities such as stone and bronze sculptures. The study of this paper is designed for preparing students to persue advanced study in the subject.

Pedagogy of the Course Work :

It is expected to familiarize students with brief outline of the topics with the help of visual aids like slides and transparencies. Field work trips to museums and sites may be undertaken.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.
2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The map work shall consist of 12 marks for the map and 06 marks for the explanatory notes.
3. The map question shall have the following topics :
   (a) Location of important archaeological sites mentioned in Unit I.
   (b) Location of important monuments mentioned in Unit II.
   (c) Location/Provenance of important sculptures mentioned in Units III and IV.
4. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice, i.e. the candidate shall attempt one question from each unit. Each question shall carry 18 marks.
5. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper.

UNIT-I:

Excavations : (Note: Instructions will be confined only to the location of the site and important results obtained). Kalibangan, Lothal Mitathal, Sugh, Sanghol, Inamgaon.

UNIT-II:

Monuments : Asokan Pillars, Stupa of Sanchi, Rock-cut-architecture of Ajanta and Ellora, Temples: Kandariya, Mahadev, Lingaraja and Konark..

UNIT-III:

Sculptures : Stone-Harappan, Sculpture of Rampurva Ashokan Bull, Didarganj Yakshi, Katra Buddha, Sarnath Seated Buddha, Gomatesvara at Sravanavelagola, Maheshamurti, (Elephanta), Krishna holding Govardhana (Halebid), Sun Image of Konark, Kasia reclining Buddha (Mahaparinirvana).

UNIT-IV:

Bronze : Sultanganj Buddha, Nalanda Image of Balarama and Buddha, Kurkihar Avalokitesvara, Indra and Padmapani from Nepal, Tanjore (Chola), Nataraja, Balakrishna Kaliyadamana and Somaskanda Murti.

Essential Readings :

1. Agrawala, V.S. : *Indian Art,* Prithvi Prakashan, Varanasi, 1965.
2. Allchin, B. and Allchin, F.R. : *The Rise of Civilization in India and Pakistan,* Cambridge University, Cambridge, 1982.
3. Bajpai, K.D. : *Five Phases of Indian Art,* Vidya Prakashan Jodhpur, 1991.
4. Brown, Percy : *Indian Architecture (Buddhist and Hindu Period),* Vol-1, rpt. D.B. Tara Gorevala sons, Bombay, 1971

Suggested Readings

1. Lal, B.B. : *The Early Civilization of South Asia,* Aryan Books, *New* Delhi, 1997.
2. Saraswati, S.K. : *A Survey of Indian Sculpture,* 2nd ed. Munshiram Manoharlal, New Delhi 1975.
3. Upinder Singh : *A History of Ancienty and Early Medieval India,* Pearson, New Delhi, 2009.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY
SEMESTER VI

Paper-VI: EPIGRAPHY AND NUMISMATICS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Objectives:

This course makes the students aware of major scripts of Ancient India, their origin and development upto 6th century A.D. It also provides knowledge about the origin, antiquity and main features of ancient Indian coins.

Pedagogy of the Course Work :

The students are to be taught with the help of slides, photographs and maps. In addition to it, special lectures, workshops, seminars, written assignments, class discussions, and term papers, should be included while teaching this course.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. The paper setter is required to set 9 questions in all. All questions shall carry equal marks.

2. The first question shall be short answer type containing 15 short questions spread over the entire syllabus. The candidate is required to answer any 9 short answer type questions. Each question shall be of 2 marks to be answered in 25-30 words each. **OR** A question on map. The question on map shall consist of the location of the sites of important inscriptions of Asoka.

3. The rest of the paper shall contain 4 Units. The entire syllabus has been divided into 4 Units. Each unit shall have two questions and the candidate shall be given internal choice i.e. the candidate will attempt one question from each unit. Each question shall carry 18 marks.

4. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (4) in the question paper.

UNIT-I:

(a) Epigraphy : Major scripts of Ancient India.

(b) Their origin and development up to 6th century A.D.

UNIT-II:

Rock and pillar edicts of Asoka.

UNIT-III:

(a) Origin and Antiquity of Punchmarked coins.

(b) Origin and date of Tribal coins : Yaudheyas, Kunindas, Audumbaras and Malavas.

UNIT-IV:

(a) Kushana Coins.
(b) Gupta Coins.

Essential Readings :

1 Allan, John : *Catalogue of Coins of Ancient India,* Vol.I, rpt., Delhi, 1974.

2. Altekar, A.S. : *Coinage of the Gupta Empire and its imitations,* Numismatic Society of India, BHU, Varanasi, 1957.
Varanasi, 1957.

3. Chattopadhya, B. : *The Age of Kushanas,* A Numismatic Study, Calcutta, 1970.

4. Gupta, P.L. : *Coins,* rpt., National Book Trust, New Delhi, 2006.

Suggested Readings :

1 Hultzsch, E. : *Corpus Inscriptionum Indicarum,* Vol.I, rpt. Archaeological Survey of India, Delhi, 1991.

2. Pandey, R.B. : *Indian Palaeography,* Munshiram Manoharlal, Banaras, 1952.

3. Dani A.H. : *Indian Palaeography,* Munshiram Manoharlal, New Delhi, 1997.

DEFENCE & STRATEGIC STUDIES
SEMESTER –V

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.
2. Practical examination will be compulsory for regular, USOL and private students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper - <u>NATIONAL SECURITY, CONCEPTIONAL ASPECTS</u>

M. Marks: 70
Time: 3 hours

Objective : This paper deals with the conceptual aspects of national security and the role of economy & military organizations in furthering national pursuits.

SECTION -I

1. National Security, National Power & National Interest: Definition, Concept and Core Values
2. Elements of National Security: Geography, Mineral Resources, Economic Stability, Military preparedness, Socio-Political Factors, Science and Technology.

SECTION -II

3. Emerging Trends in Nature and Character of Threats to National Security
4. Non-Traditional Dimensions of Security: Energy, Food, Water, Health Environment, Drug Trafficking, Money Laundering, Cyber Security etc

SECTION -III

5. Regional Groupings and their Objectives, Achievements and Problems:
   (a) ASEAN
   (b) BIMSTEC
   (c) SAARC
   (d) SCO

SECTION -IV

6. Collective Security Arrangements: Security Relevance of UN in the modern context, Role of NATO in the Post-Cold War Era.
7. Non-Aligned Movement and National Security: History, Features, Problems, Achievements and Current Relevance

Books Recommended

1. Abhyankar, M.G., Defence Principles and Organisation, Usha Publications, Longmans, Michigan, 1966.
2. Aditya, Chibber , National Security Doctrine, Lancers International, New Delhi, 1990.
3. Alva, Myrdal , The Game of Disarmament, Pantheon Books, New York ,1982.
4. Bandhyopadhyay, J., India's Foreign Policy Making, Allied Publishers Private Ltd., Mumbai, 1970.
5. Choudhary, Subrata Roy, Military Alliances and Neutrality in War and Peace, Orient Longmans, Bombay, 1966.
6. Hadley Arthur T., The Nation's Safety and Arms Control, Viking Press, University of Michigan, 1961.
7. Hans, J. Margenthau , Politics Among Nations, McGraw-Hill, New York, 1993.
8. Misra, K.P., Studies in Indian Foreign Policy, Vikas Publications, Delhi, 1969.
9. Rana, A.P., The Imperative of Non-Alignment, McMillan Cop. of India, 1976.
10. Shah, A.B., India's Defence and Foreign Policies, Manaktalas , 1966.
11. Singh, Jasbir, Indian Defence Year Book 2012-13, Natraj Publishers, Dehradun, 2001.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Relief features and their representation on Map.
2. Degree of Slopes, Gradients and Inter-visibility of Points.
3. Study of Field Craft with reference to the following:

   (a) Ground
   (b) Cover
   (c) Camouflage
   (d) Observation

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

DEFENCE & STRATEGIC STUDIES

SEMESTER –VI

INSTRUCTIONS FOR THE PAPER SETTER AND THE STUDENT

1. There will be one-theory paper of 70 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 questions of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition to it there will be four sections of the question paper containing 2 questions each. The candidate will be required to attempt one question from each of the four sections. Theory paper will be of three hours duration.

2. Practical examination will be compulsory for regular, USOL and prive students. It will be of 20 marks. There will be 3 hours of teaching per week for practical and the number of students in one group shall not ordinarily exceed fifteen.

Paper: NATIONAL SECURITY OF INDIA

M. Marks: 70
Time : 3 hours

Objective - This paper covers the various factors related to National Security in India.

SECTION -I

1. India's Security Problems since 1947:
   (a) Geo-political effects of Partition: Boundaries and Frontiers.
   (b) Integration of States: J & K, Junagarh, Hyderabad and Goa.
   (c) An overview of India's Security problems related to Pakistan and China.

SECTION -II

2. Indian Ocean and India's Maritime Security.
3. Nuclear Policy of India: History, Evolution and Policy options.

SECTION -III

4. Internal Dimensions of India's National Security with particular reference to Insurgency, Terrorism and Low Intensity Conflict.
5. Disaster Management in India and the role of Civil Defence.

SECTION -IV

6. Economic Mobilization for National Defence.
7. Planning and Production for National Defence with particular reference to India's Defence Production and DRDO.
8. Higher Defence Organization in India

Books Recommended

1. Barnawal, S.P., Military Year Book, A Guide Publication, New Delhi, 2012.
2. Chopra, Maharaj, K., India the Search for Power: India and the Indian Ocean, Lalwani Publication House, Delhi, 1969.
3. Cohen Stephen, P. , The Indian Army, Oxford University Press, New Delhi,1990.
4. Kaul, Ravi, India's Strategic Spectrum, Chanakya Publishing House, Delhi, 1969.
5. Kavic, L.J., India's Quest for Security, Cambridge University Press, London,1967.
6. Klaus, Knorr, War Potential of the Nation, Greenwood Press, Northwestern University, 1979.
7. Khera, S.S. , India's Defence Problem, Orient Longmans, University of California,1968.
8. Kohli, S.N., Sea Power in the Indian Ocean, Tata McGraw Hill, Delhi, 1978.
9. Misra, R.N., Indian Ocean and India's Security, Mittal Publications, Delhi, 1986.
10. Pathak, K.K., Nuclear Policy of India, Gitanjali Prakashan, Delhi, 1980.
11. Panikkar, K.M.
    (i) Defence Problems of India.
    (ii) India and the Indian Ocean, G.Allen & Unwin, Ltd., 1945.
12. Rao, PVR, Defence Without Drift, Popular Prakashan, Delhi, 1970.
13. Rao, Rama, (i) Self Reliance and Security, Radiant , University of Michigan,1984.
    (ii) Role of Defence Production, Radiant, University of Michigan, 1984.
14. Singh, Bhupinder, Textbook of Defence Studies (Part III Punjabi), B.C. Publishers, Patiala,1983.
15. Singh, Jasbir, Defence Year Book, 2012-13, Natraj Publication, Dehradun, 2001.
16. Singh, Jasjit , Nuclear India, Knowledge World, Delhi, 1998.
17. Singh, Jaswant , Defending Indian Hemisphere , McMillan, Basingstoke, 1998.
18. Thomas, Raju G.C., The Defence of India (A Budgetary Perspectives), McMillan, Delhi, 1970.
19. Subrahmanyam, K.
    (i) Indian Security Perspectives, ABC Publishing House, New Delhi,1982
    (ii) Planning for Defence.

Paper: PRACTICAL

Max. Marks: 20
Time: 1 hrs

Note :

1. There will be 3 hours of teaching per week for practical. For practical classes, the number of students in one group shall not ordinarily exceed fifteen.
2. Practical exercise should be carried out on drawing sheets with explanatory notes or on computer.

SECTION –A Practical Test Marks:10

1. There will be three questions in all carrying 5 marks each and candidates will be required to attempt any two questions.
2. Examiners are required to set the question paper at least half an hour before the examination.

Course Contents for Practical

1. Tactical Formations: Section and Platoon.
2. Application of Fire: Fire Control, Fire Control Orders and Sequence of Fire Control Orders.
3. Military Messages: Verbal and Written.

SECTION-B

Marks: 10

1. Practical Record = 5 marks
2. Viva-Voce = 5 marks

(Students be asked to prepare on current topics of general interest)

HISTORY

SEMESTER- V

PAPER: WORLD HISTORY 1500-1870 A.D.

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	10 Marks
Explanatory Note	:	08 Marks

3. In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 05 places on map of 02 mark each and write explanatory note on any 04 of 02 marks each.
4. The paper-setter would avoid repetition between different types of question within one question paper.

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives: To introduce the students to the history of the Modern World.

Pedagogy: Lectures, library work and discussions.

Unit-I

1. World Around 1500: Feudalism, features and its decline, Rise of Mercantilism and its impact.

2. Politico-Religious Changes: Renaissance; Reformation; Rise of absolute states in France and Prussia

3. Rise of Parliamentary Government: The Glorious Revolution and its effects.

Unit-II

4. The American Revolution: Its social, political and economic causes; its consequences.

5. The French Revolution 1789: Causes and impact.

6. Napoleon Bonaparte: Reforms and his continental system.

Unit-III

7. Congress of Vienna 1815: Motives, working, principles, provisions and significance.

8. The Industrial Revolution (1750-1850); causes for its origins in England; New inventions; spread to Europe; impact on society.

9. Eastern Question: Greek War of Independence; Mehmet Ali and Egypt; Crimean War.

Unit-IV

10. Unification of Italy: Different stages in unification of Italy; role of Mazzini, Cavour and Garibaldi.

11. Unification of Germany: Rise of Nationalism and role of Bismarck in the unification of Germany.

12. **Map**:

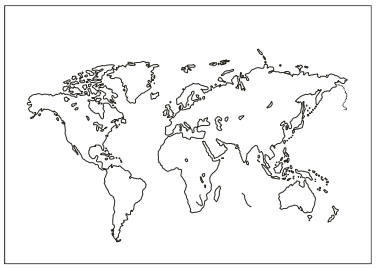
(a) **Important Historical Places** - Paris, London, Rome, Berlin, Frankfurt, Vienna, Waterloo, Moscow, New York, Crimea, Trafalgar, Venice, Bonn and Budapest.

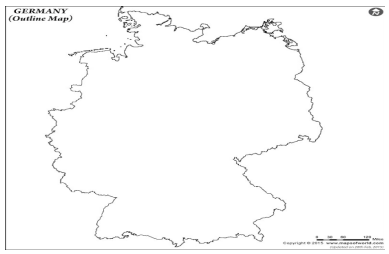
(b) Unification of Germany.

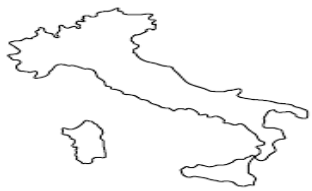
(c) Unification of Italy.

Specimen Maps for Examination:

(a) **(b)** **(c)**







Reading List:

Davis, H.A.,*An Outline History of the World*, OUP, 1964, 4th Edition.

Davies, Norman, *Europe: A History*, Oxford University Press, 1996.

Fisher, H.A.L, *A History of Europe (From Beginning of the 18th century to 1937),*Anrold& Co., 1935.

Garraty John A. & Peter Gay (ed.),*The University History of the World*, United Kingdom, New Orchard Edition, 1985.

Grant and Temperley*, Europe in the Nineteenth and Twentieth Centuries 1789-1950* (6th edition), Harlow: Longman, 1952.

Gupta, P.S.,AdhunikPaschimKaUday, Hindi MadhyamKaranvayaNideshalaya, Dilli :DilliVishavidhalaya, 1997 (Hindi Medium).

Gupta, P.S., Europe KaItihas, Hindi MadhyamKaranvayaNideshalaya, Dilli :DilliVishavidhalaya, 1996 (Hindi Medium).

Hayes, C. J. H, *Modern Europe to 1870*, New York: The Macmillan &Co., 1939.

Hazen, C. D., *Modern European History*, New York,: Henry Holt and Company, 1917.

Hinsley, F.H. (ed.), Material Progress and World Wide Problems, 1870-1898, Cambridge University Press, 1976.

Ketelbey, C.D.M, *AHistory of Modern Times from 1789*, London: George G Harrap& Co. Ltd, 1937.

Lipson, E., *Europe in the 19th and 20th Centuries 1815-1939*, Adam & Charles Black, 1962
.
Mason, David S., A Concise History of Modern Europe, New Delhi: Orient Blackswan, 2012.

Merriman, J., *A History of Modern Europe*, N.W. Norton Company, 2009.

Stavrianos, L.S.,The World Since 1500, Delhi: Prentice Hall of India, 1965.

Thomson, David, *Europe since Napoleon*, London: Penguin Books, 1990.

HISTORY

SEMESTER-VI

PAPER: WORLD HISTORY (1871 to 1991 A.D.)

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES:

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit and 4 questions in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	10 Marks
Explanatory Note	:	08 Marks

3. In case, a paper setter chooses to set a question on important historical places, the paper setter will be required to ask the students to mark 05 places on map of 02 mark each and write explanatory note on any 04 of 02 marks each.
4. The paper-setter would avoid repetition between different types of question within one question paper.

Paper: World History 1871 to 1991

Max. Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives : To introduce the students to the history of the Modern World in the period of European Domination.

Pedagogy : Lectures, library work and discussions.

Unit-I

1. New Imperialism 1871-1914: Main features; Partition of Africa – Causes, colonization and impact.

2. Congress of Berlin 1878: Circumstances, Provisions and Significance.

3. Diplomatic Developments in Europe: Circumstances leading to the formation of Triple Alliance of 1882 and Triple Entente.

Unit-II

4. World War I: Division of Europe into two blocks; Causes of the First World War.

5. Paris Peace Conference: Treaty of Versailles 1919; Provisions, major defects and their impact.

6. Russian Revolution 1917: Causes and consequences.

Unit-III

7. Nationalism and Communism in China: Causes for the nationalist revolution of 1911 and its results; circumstances leading to the revolution of 1949 and its results.

8. Modernization of Japan: Meji restoration and modernization.

9. The Great Depression of 1929: Causes of the Great Depression in the USA; its spread to Germany, France and Britain; its impact; Roosevelt's New Deal.

Unit-IV

10. Fascism and Nazism and World War II: Circumstances responsible for rise of Fascism under Mussolini in Italy; Nazism in Germany under Adolf Hitler.

11. Post War Foundations and the Rise of Unipolar World: NATO, SEATO and Cold War; Factors leading to the collapse of Soviet Communism and Soviet Union, 1985-1991; End of Cold War and US Ascendancy in the World as Lone superpower.

12. **Map:**

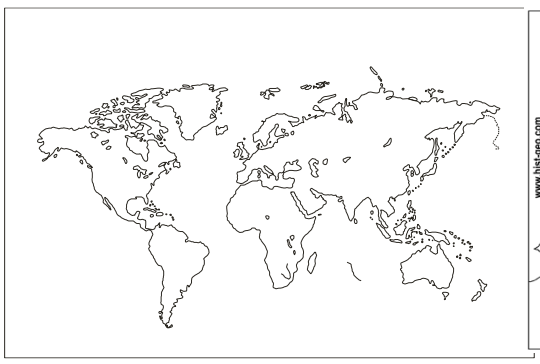
(a) **Important Historical Places** - Geneva, Washington, Tokyo, Versailles, Constantinople, Peking, Beijing, Manchuria, Nanking, Frankfurt, Johannesburg, Cairo, Jerusalem, Nagasaki, Warsaw and Stalinguard.

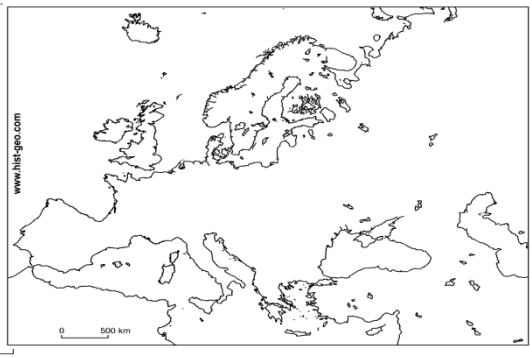
(b) Europe on the eve of World War I.

(c) Europe on the eve of World War II.

Specimen Maps for Examination:

(a) **(b, c)**





Reading List:

Ashworth, W.: A Short History of the International Economy, 1850-1950, London: Longmans, 1954.

Brecher, Michael: The Foreign Policy System of Israel, Toronto: Oxford University Press, 1972.

Chabod, Fredrico : History of Italian Fascism, London : Weidenfeld, 1961.

Davies, Norman, *Europe: A History*, Oxford University Press, 1996.

Fisher, H.A.L, *A History of Europe (From Beginning of the 18th century to 1937),* Anrold& Co., 1935.

Grant and Temperley*, Europe in the Nineteenth and Twentieth Centuries 1789-1950* (6th edition), Harlow: Longman, 1952.

Gupta, P.S.,EuropeKaItihas, Hindi MadhyamKaranvayaNideshalaya, Dilli : DilliVishavidhalaya, 1996 (Hindi Medium).

----------.*AdhunikPaschimKaUday*, Hindi MadhyamKaranvayaNideshalaya, Dilli :DilliVishavidhalaya, 1997 (Hindi Medium).

Garraty John, A. &Peter Gay (ed.): *The Columbia History of the World*, United Kingdom: New Orchard Edition, 1985.

Hayes, C.J.H., *Contemporary Europe since 1870*, Delhi: Surjeet Publications.

Langsam, W.C., *World since 1919*, Collier Macmillan Ltd., 1971.

Lipson, E., *Europe in the 19th and 20th Centuries 1815-1939*, Adam & Charles Black, 1962.

Lowe, Norman, *Mastering Modern World History*, 2018.

Marriott, J.A.R, *A History of Europe*, Methuen & Co., 1945.

Mason, David S., *A Concise History of Modern Europe*, New Delhi: Orient Blackswan, 2012.

Robert, J.M., *The Penguin History of Europe*, Penguin,UK, 1998.

Thomson, David, *Europe since Napoleon*, London: Penguin Books, 1990.

POLITICAL SCIENCE
SEMESTER - V

COMPARATIVE POLITICAL SYSTEMS (UK AND USA)

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : The purpose of this paper is to serve as an introduction to the field of comparative politics. It provides a broad overview of the field of comparative politics and examines some key approaches. The major part of the paper is devoted to understanding and analyzing the origins and working of two political systems, the UK and the USA. The student will not only become familiar with the working of these two political systems but also understand how the concepts of comparative politics can be used to understand real world politics.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit–4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

   The paper setter must put note (2) in the question paper.

Unit-I: Theoretical Framework

(i) Meaning, Nature and Scope of Comparative Government and Politics
(ii) Comparative Method.

Unit-II: U.K.

(i) The British Political System - Salient Features and Conventions.

(ii) Executive
   (a) Monarchy:- Difference b/w King and Crown, Powers of Crown, Nominal and Real position Justification of Monarchy
   (b) Features of Parliamentary/ Cabinet Government
   (c) Prime Minster:- Composition, Powers, Position and Role

   Legislature
   (a) House of Lords:- Composition, Powers, Criticism & Utility
   (b) House of Commons:- Composition, Powers, Mutual relations between House of Lords and House of Commons

(iii) Judiciary
   (a) Organisation of Courts in U.K.
   (b) Rule of Law.

Unit-III : U.S.A.

(i) The Constitutional framework of U.S.

(i) Salient features
(ii) Separation of Powers & Checks & Balances
(iii) Federal System- Meaning, Features, Tendency towards Centralisation and its future.

(ii) Executive

(i) Elections of U.S. President

(ii) Composition, Powers & Position of U.S. President.

Legislature/Congress

(i) House of Representative- Composition, Power, House of Representative is the weakest chamber
(ii) Senate – Composition, Powers, Most Powerful Second Chamber, Mutual relations b/w House of Representative & Senate

Judiciary

(i) Supreme Court - Organisation, Composition, Powers & its Role.

(ii) Power of Judicial review

Unit-IV

(i) Political Parties and Interest/Pressure Groups of U.K- Nature & Role.
(ii) Political Parties and Interest/ Pressure Groups of U.S.A. - Nature & Role.

Books Recommended :

1. Hague and Harrop : *Comparative Government and Politics*, Palgrave, New York, 2001.
2. V.N. Khanna Comp., : *Comparative Study of Government and Politics*, S. Chand and New Delhi 1999.
3. Andrew Heywood : *Politics*, Macmillan Palgrave, New York, 1997.
4. A.C. Kapoor : *Select Constitutions*, S. Chand and Company, New Delhi 1995.
5. Vishnu Bhagwan and Vidya Bhushan : World Constitutions, Sterling Publisher, New Delhi 1993.
6. J.C. Johari : *Major Modern Political Systems*, Vishal Publication, Delhi 1986.
7. J.C. Johari : *Comparative Politics*, Sterling Publishers, New Delhi 1982.
8. K.R. Bombwall Ambala : *Major Contemporary Constitutional Systems*, Modern Publication, Cantt 1978.
9. Mackintosh London, : *The Government and Politics of Britain*, Hutchinson and Comp., 1977.
10. Herman Finer London, : *Theory and Practice of Modern Government*, Theuen and Comp., 1963.

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POLITICAL SCIENCE

SEMESTER-VI

INTERNATIONAL POLITICS : THEORY AND PRACTICE

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 hours

Objectives : This paper provides students with an overview of the broad theories and concepts used to understand international politics. It also examines key issues in contemporary global history from an international politics perspective.

GENERAL INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

1. *The syllabus has been divided into four units :*
   There shall be **9** questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 10-20 words each. The candidates are required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions, and the candidate shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper setter must put note (2) in the question paper.

Unit-I

1. Meaning, Nature and Scope of International Politics.
2. Realist and Idealist approaches to International Politics.

Unit-II

1. National Power : Its Elements and Limitations.
2. Balance of Power - Its critical evaluation.
3. Collective Security –Meaning & Feature, Difference between Balance of Power & Collective Security

Unit-III

1. Bipolar, Unipolar and Multi-Polar World.
2. Nature of Emerging World Order.

Unit-IV

1. Regional Organisations : SAARC and EU.
2. New International Economic Order (NIEO).

Books Recommended :

1. H. Bull, *The Anarchical Society : A Study of Order in World Politics,* London, Macmillan 2002.
2. John Baylis and Steve Smith, *The Globalisation of World Politics,* OUP, Oxford, 2001.
3. A. Roberts, "The UN and International Security"*, Survival*, Vol. 35, No. 1, Spring 1993.
4. A. Hurell, "Collective Security and International Order Revision", *International Relations*, Vol. II, No. 1, April 1992.
5. S.P. Verma, *International System and the Third World,* New Delhi, Vikas, 1988.
6. H.J. Morgenthau, *Politics Among Nations : The Struggle for Power and Peace*, 6th Edn., revised by K.W. Thompson, New York, Alfred Knopf, 1985.
6. S.H. Hoffman (ed.), *Contemporary Theory in International Relations,* Massachusetts, Addison-Wesley, 1979.
8. N.D. Palmer and H. Perkins, *International Relations,* Calcutta Scientific Book Company, 1971.
9. J. Frankel, *The Making of Foreign Policy,* London, Oxford University Press, 1963.
10. E.H. Carr, *Conditions of Peace,* New York, The Macmillan Company, 1944.
11. E.H. Carr, *The Twenty Year Crisis,* London, Macmillan, 1939.

ECONOMICS
SEMESTER - V

ECONOMICS OF DEVELOPMENT

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The primary course objective is to introduce the students to the basic features, determinants, and theories and strategies of development of underdeveloped economies. It also introduces students to the theory of how control and direction of economic activity by a central public authority can be used as an alternative to market by the underdeveloped economies.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

Unit-I

Economic Growth and Development- Concept and Measurement. Main Features of an Underdeveloped Economy.
Determinants of Economic Development. Capital Formation:It's Source, Nurkse's Thesis of Disguised Unemployment. Lewis Theory of Unlimited Supply of Labour.

Unit-II

Classical Model of Growth; HarrodDomar Model of EconomicGrowth; One Sector Neo-classical Model of Growth. Solow Model of Growth. *Dualism :* Social and Technological.

Unit-III

Theory of Big Push. Leibenstein's Critical MinimumEffect Thesis. Strategies of Economic Development:Balanced Vs. Unbalanced Growth. Rostow's Theory of Stages of Growth.

Unit-IV

Theory of Planning in Developing Countries:Need, Objectives, Strategies and Problems of Planning. Price Mechanism and Planning. Investment Criteria. Choice of Technique. Emerging Strategies: Export Promotion and Import Substitution Strategy.

Books Recommended :

1 Higgins, Benjamin (1994) : Economic Development : Principles, Problems and Policies, Norton Publisher, New York.

2 Meier, G.M. (1995) : Leading Issues in Economic Development, Oxford University Press, New York.

3 Meier, G. M. and Rauch, James E. (2006) : Leading Issues in Economic Development, Eighth Edition, Oxford University Press

4 Nurkse, R. (1992) : Problems of Capital Formation in Underdeveloped Countries, Oxford University, Press

5 Rostow, W. W. (1960) : Stages of Economic Growth, Cambridge University Press.

6 Thirlwal, A P (2011) : Economics of Development, Palgrave Macmillan Publishers, UK.

Supplementary Readings:

Todaro, Michael. P (1989) : Economic Development in the Third World, Orient Longman, London.PalgraveMacMillan,UK

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ECONOMICS
SEMESTER- VI

INDIAN ECONOMY

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Course Objective: The objective of the paper is to familiarize the students with the features and characteristics of the Indian Economy. It also includes performance and problems of Industrial development, Indian tax structure, external trade and balance of payments, and objectives, strategy and performance of Indian planning. The course aims to develop analytical understanding of the students by exposing them to the basic issues of the Indian economy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

(i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit-I

Indian Economy on the Eve of Independence. Features and Characteristics of Indian Economy since Independence: Agriculture: Importance of Agriculture; Causes of Backwardness and Low productivity; New Agricultural Strategy, Green Revolution and Critical Evaluation with Special Reference to Environmental Degradation; Land Reforms: Need, Implementation and Evaluation.

Unit-II

Industry: Problems of Industrial Development; Public and Private Sector; Industrial Policy since 1956 with Special Emphasis on Recent Trends of Liberalization; Role and Problems of Small and Large Scale Industries in the era of Globlisation. Major Large Scale Industries: Iron& Steel, Cotton Textile, Petroleum & I.T.

Unit-III

Principal Features of Indian Tax Structure. Division of Financial Recourses between Centre and the States. Direction and Composition of Exports and Imports and Changes there in since Economic Reforms; Balance of Payment problems; Critical Evaluation of the Role of MNCs in India.

Unit-IV

Planning: Importance, Objectives, Strategy and Achievements of Indian Planning; Critical Evaluation of the Latest Five Year Plan (Plan wise details to be excluded); Major Indian Economic Problems: Inflation, Unemployment and Poverty; Introduction to Consumer Education and Consumer Protection (elementary ideas).

Books Recommended :

1	Dhar, P.K (Latest Edition)	: Indian Economy, Kalyani Publishers, Ludhiana.
2	Gill, K	: Evolution of Indian Economy, NCERT, New Delhi.
3	Aggarwal, A N (Latest Edition).	Indian Economy, Wiley Eastern Ltd.
4	Datt, Rudder & Sundram, KPM	: Indian Economy, S. Chand & Co. (Latest Edition)
5	Soni .R. N.	: Leading Issues in Agriculture Economics , Sohan Lal Nagin Chand & Sons.
6	Ghosh. A (Trans. Avtar Narinder Singh)	: Bhartiy Arth Vivshta (Punjabi University, Patiala).
7	Singh, Chander Gupt	: Bharti Arth Shastar (PunjabiUniversity, Patiala).
8	Mishra, S.K. & Puri, V.K. (English & Hindi Medium)	: Indian Economy, Himalaya Publishing House, Mumbai (Latest Edition).
9	Tondon, B.B. & Tondon, K.K	: Indian Economy, Tata McGraw Hills Pub. Co., New Delhi(1998).

Supplementary Readings:

1. Government of India: Five Year Plan (latest).
2. Government of India: Economic Survey (latest).

SOCIOLOGY
SEMESTER - V

SOCIETY IN INDIA

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper–setter must put note (iii) in the question paper.

Objective

The objective of this paper is to present a comprehensive view of Indian Society. The students are exposed to the tribal, rural and urban societies and are presented with the social structure and social institutions to understand these segments of Indian Society. Through this paper, the students are also introduced to the problems of the underprivileged in Indian Society.

Course Content

Unit-I

Tribal Society: Meaning, Characteristics; Classification of tribes.

Institutional Features: Family, Marriage, Economy and Changing trends.

Unit-II

Rural Society: Meaning; Characteristics.

Institutional Features : Family, Marriage; Economy and Polity (Village Panchayat); Changing Trends.

Unit-III

Urban Society : Meaning and characteristics, Concepts of urbanization and urbanism;

Institutional features; Urban family - features and changes; Economy; Voluntary associations; Slums.

Unit-IV

Under-privileged Sections—Women, Physically Disabled, Scheduled Castes and Scheduled Tribes: Measures to improve their status.

Essential Readings:

1. Bose, N.K. (1980) : *Tribal Life in India,* National Book Trust.
2. Desai, A.R. (1969) : *Rural Sociology in India,* Bombay: Popular Prakashan.
3. Desai, A.R. (2006) : *Social Background of Indian Nationalism, Mumbai Popular Prakashan*
4. Lal, S.N. & Nahar, U.R. (1992) : *Rural Social Transformations,* Jaipur : Rawat.
5. Madan & Majumdar (1989) : *An Introduction to Social Anthropology,* New Delhi: National Publications (Hindi & English).
6. Madhurima (2009) : *Readings in Sociology-Part-3*, Jalandhar: New Academic Publishing House [All Mediums].
7. Mandelbaum, G. (1970) : *Society in India,* Bombay: Popular Prakashan (Hindi & English).
8. Sen, Pujan Kumar,(2012) : *Indian Society:Continuity and Change Pearson, New Delhi*
7. Shah, Ghanshyam (ed.) (2002) : *Caste & Democratic Politics in India,* New Delhi: Permanent Black.
8. Sharma, R.K. (2004) : *Indian Society: Institutions & Change,* New Delhi: Atlantic Publications.
9. Singh, K.S. (2002) : *The Scheduled Castes*, New Delhi: Oxford University Press.

Further Readings:

1. Ahuja, Ram (2015) : *Social Problems in India,* Jaipur, Rawat Publications.
2. Mahajan, Sanjeev (2004) : *Gramin Samajshastra,* New Delhi: Arjun Publishing House.
3. Punit, A.E. (1978) : *Social Systems in Rural India,* New Delhi: Sterling Publications.
4 Rao, M.S., Chandrashekar Bhatt, L.N. Kelkar (eds.) (1991) : *A Reader in Urban Sociology,* New Delhi: Orient Longman.
5. Shah, D.S. & Sisodia, Y.S. (ed.) (2004) : *Tribal Issues in India,* Jaipur: Rawat Publications.
6. Singh, K. Suresh (2001) : *The Scheduled Tribes,* New Delhi: Oxford University Press.
7. Vardhan,Ranjay, (2008) : Single Women, A Study of Spinsters, Delhi, Indian Publishers Distributors

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SOCIOLOGY
SEMESTER -VI

DISORGANISATION AND EMERGING PROBLEMS

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES:

(i) For written paper, the students will be required to attempt **five** questions in all. Question No. 1 will be **compulsory** comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt **nine** short answer type questions out of 12 i.e. $9 \times 2 = 18$ marks.

In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two questions from each unit with internal choice carrying 18 marks each i.e. $4 \times 18 = 72$ marks.

(ii) On an average, 15 hours are to be devoted to each unit.

(iii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper-setter must put note (iii) in the question paper.

Objective

This paper exposes the students to social disorganization, its levels and current problems. It helps students to understand social realities and also equips them to utilize their knowledge in various theoretical and practical exercises.

Course Content

Unit-I

Social Disorganization : Concepts and Levels –Personal, Familial and Societal.

Unit-II

Personal Problems: Problems of Adolescence; Alcoholism; Drug Addiction, Suicide.

Unit-III

Familial Problems: Domestic Violence, Violence against Children; Female Headed Households; Problems of Working Women.

Unit-IV

Societal Problems : Poverty; Corruption; Problems of the Aged, Cyber Crime

Essential Readings:

1. *Ahuja, Ram (2015)* : *Social Problems in India, Jaipur: Rawat Publications.*
2. *Elliot, H.V. & Merill, F. (1950)* : *Social Disorganization, New York: Harper Brothers.*
3. *Gill, S.S. (1998)* : *Pathology of Corruption, New Delhi: Harper Collins.*
4. *Macionis, John J. (2005)* : *Social Problems, New York: Prentice Hall.*
5. *Madan, G.R. (1978)* : *Indian Social Problems, New Delhi: Allied Publishers.*
6. *Mitra, S.M. (2005)* : *Indian Problems, New Delhi: Eastern Book Corporation.*
7. *Mohan, J. & Sehgal, M. (2004)* : *Youth & Drugs, New Delhi: Abhijit Publications.*
8. *Narasaiah, M.L. (2005)* : *Poverty & Environment, New Delhi: Discovery Publishing House.*
9. *Rai, Bhartiya (2004)* : *Samajik Samasyaein, New Delhi: Arjun Publishing House.*
10. *Shankar Rao,(2015)* : *Indian Social Problems: A Sociological Perspective,S. Chand & Company, New Delhi*
11. *Vardhan, Ranjay (1999)* : *Female Headed Households in Patriarchal Society: A Sociological Study, Delhi: Indian Publishers Distributors.*

Further Readings:

1. *Chakraborty, Rajgopal Dhar (2004)* : *The Greying of India : Population, Ageing in the Context of Asia, New Delhi : Sage.*
2. *Mahajan, Amarjit & Madhurima (1994)* : *Family Violence and Abuse in India, New Delhi : Deep and Deep Publications.*
3. *Natrajan, P.S. (2003)* : *"A Theory of Indian Communalism" in Think India Quarterly, Vol. 6, No. 3, July-Sept.*
4. *Pavrala, Vinod (1996)* : *Interpreting Corruption, New Delhi : Sage.*
5. *Phandaris, Urmila (1989)* : *Ethnicity and Nation Building in South Asia, New Delhi: Sage.*
6. *Shankar Rao, C.N. (2007)* : *Indian Society, Delhi: S. Chand and Company.*
7. *Bansal,S.K.(2013)* : *Cyber Crime, New Delhi,APJ Publications*
8. *Pendse Neelkanth Ganjan, Sarkar Sukanta,(2015)* : *Social Problems in India, Delhi,Kalpur Publications*

PUBLIC ADMINISTRATION
SEMESTER -V

PAPER: LOCAL GOVERNMENT (WITH SPECIAL REFERENCE TO PUNJAB

Max. Marks	:	100
Theory	:	90 Marks
Internal assessment:		10 Marks
Time	:	3 Hours

Objective of the Paper:

The objective of the paper is to give the student an understanding of the concept, significance and evolution of local government in India. It would also acquaint them with the pattern and working of divisional and district administration. The key areas covered are the types, structure, functions, finances and personnel of rural and urban local governments. It would also include the concept of state control over local bodies, provincialisation and rural-urban relationship with reference to Punjab.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Meaning and Significance of Local Government
Evolution of Local Government since 1882
Role of Deputy Commissioner; Divisional Commissioner
Rural and Urban Development: Dimensions and Issues

Unit-II

The 73rd Constitutional Amendment – Provisions and its Impact
Gram Sabha – Composition Functions and Powers
Panchayati Raj Institutions in Punjab – Structure, Functions, Sources of Finances and Personnel

Unit-III

The 74th Constitutional Amendment – Provisions and its Impact
Urban Local Bodies – Structure, Functions and Sources of Finance
Mayor – Position, Functions and Powers
Municipal Commissioner – Position, Functions and Powers

Unit-IV

State Control over Local Bodies
State Finance Commission: Composition, Functions and Role
Provincialisation of Municipal Services
Rural- Urban Relationship – Challenges and Remedies

Essential Readings:

Goel, S.L. & Ramesh, S. (2003). *Panchayati Raj in India* .New Delhi: Deep & Deep Publishers.
Hochgesang, T.W. (1994). Rural Local Self -Government in India.Hyderabad: NIRD.
Maheshwari, S.R. (2002). *Local Government in India*. Agra : L.N. Aggawal.
Puri, K.K. and.Barara, G.S.(2008) *Local Government in India*. Jalandhar: Bharat Prakashan.
Sahib, S & Singh, S. (2000). *Local Government in India*. Jalandhar: New Academic Publishers.

Further Readings

Government of India, Second Administrative Reforms Commission, 6th Report – Local Governance

Khanna, B.S. (1991). *Rural Developments in South Asia.*New Delhi: Deep & Deep Publications.

Singh, H.B. (2003). *Revitalised Urban Administration in India*. Delhi: Kalpaz Publishers.

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PUBLIC ADMINISTRATION

SEMESTER - VI

PAPER: DEVELOPMENT ADMINISTRATION (WITH SPECIAL REFERENCE TO PUNJAB)

Max. Marks : 100
Theory : 90 Marks
Internal assessment: 10 Marks
Time : 3 Hours

Objective of the Paper:

The objective of the paper is to give the student an in-depth understanding about the concept & significance of development administration, features of developed & developing countries, planning machinery at Centre & State level and the emergence of India as a welfare state. The paper would also give an understanding about the concept, forms, role and problems of public enterprises as well as the working of select Union Ministries and agencies in Welfare and Development Administration.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit-I

Development: Meaning, Features and Aspects
Development Administration: Meaning, Nature, Scope and Significance
Features of Developed and Developing Countries

Unit-II

India as a Welfare State.
Planning: Meaning, Objectives and Significance
Planning Machinery in India at National, State and Local

Unit-III

Public Enterprises: Concept and Forms
Role of Public Enterprises in Economic Development
Managerial Problems of Public Enterprises
Public Enterprise Reforms since 1991; Concept of Privatisation

Unit-IV

Administration of Rural Development at the local level
Education and Development; Role of State Administration in Primary and Secondary Education
Health and Development; Role of the Ministry of Health and Family Welfare
Role of Voluntary Sector in Development

Essential Readings

Bava, N.J. (1997). *Non-Governmental Organisations in Development: Theory and Practice*.Ed. New Delhi: Kanishka

Dhar, P.K. (2007). *Indian Economy-Its Growing Dimensions*.New Delhi: Kalyani Publishers.

Dwivedi, O.P. (1994). Development Administration: From Underdevelopment to Sustainable Development. London: Macmillan.

Mathur, B.P. (1999). *Public Enterprise Management* .Macmillan India: New Delhi.

Sapru, R.K. (2003). 2nd Ed. *Development Administration.* New Delhi: Sterling Publishers.

Singh, S. & Singh S. (2010). *Public Administration: Development and Local Administration*. Jalandhar: New Academic Publishers.

Website of Ministry of Health and Family Welfare: mohfw.gov.in/

Website of Planning Commission: planningcommission.nic.in/data/ngo/npvol07.pdf

Further Readings

Goel, S.L. (2003). *Advanced Public Administration*. New Delhi: Deep & Deep Publications.

Jain, R.B. (2002). *Public Administration in India – 21st Century Challenges for Good Governance.* Delhi: Deep & Deep Publications Pvt. Ltd.

Parikh, S. & Radhakrishna, R. (2002). *Indian Development Report* .Indira Gandhi Institute of Development. New Delhi: Oxford University Press.

Rao, Vasudeva. B.S. (2007). *Rural Development Strategies & Role of Institutions*; *Issue Innovations and Initiatives.* Ambala: The Associated Publishers.

Rattan,V.(1997). *Women and Child Development Programme Administration.* New Delhi: S. Chand.

Srivastava, S.P. (1998). *The Development Debate: Critical Perspectives.* Jaipur & New Delhi: Rawat Publications.

PHILOSOPHY

SEMESTER – V

PAPER : INDIAN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives :
This paper discusses the main epistemological and metaphysical issues as discussed in the various Indian Philosophical Systems.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

- There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.

- For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

  The paper setter must put note (2) in the question paper.

Unit–I

- Salient features of Indian Epistemology and Metaphysics.
- Concept of Prama and Pramana according to Nyaya
  i) Pratyaksa
  ii) Anumana
  iii) Sabda
  iv) Upamana
  v) Arthapatti
  vi) Anuplabdhi

Unit–II

- Materialism (Swabhava vada) of Charvakas.
- Anekantavada of Jainism.
- Aryasatyas, Pratityasamutpada of Buddhism.

Unit–III

- Concept of Self and Consciousness with special reference to Mandukya Upanishads.
- Advaita Vedanta : Sankara on Brahman and Maya.

Unit - IV

- Samkhya. : Theory of Causation. (Satkaryavada)
- Vaisesika : Nature and kinds of Padartha (Categories)
- Sikhism : Nature of Ultimate Reality, Mand and the World.

Essential Readings:

Chatterjee, S.C. & Datta, D.M. (1993), An Introduction to Indian Philosophy, Calcutta University, Calcutta University

Hiriyanna, M. (1999), Outlines of Indian Philosophy, London (Allen and Unwin, London, 1999) (Hindi Translation Available)

Tarka (1992) Samgraha of Annambhatta (Poona:Bhandarkar Oriental Research Institute).

Suggested Readings:

Ananikana (1991), A Nyaya Manual, Ed. Sri. Krishna Sarma, Chennai : Adyar Library and Research

Chatterjee, S.C. (1995), The Nyaya Theory of Knowledge , Calcutta :University of Calcutta

Panchapagesha Sastri (1999), The Philosophy of Aesthetic Pleasure (Annamalai University)

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PHILOSOPHY

SEMESTER – VI

PAPER : WESTERN EPISTEMOLOGY AND METAPHYSICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours
Lectures	:	75

Aims and Objectives:

This paper aims at exposing the students to main epistemological and metaphysical theories and problems of western philosophy. It also deals with basic themes of existentialism, logical positivism and analytical philosophy.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

1. There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. Rest of the paper shall contain 4 units. Each unit shall have two essay type questions and the candidates shall be given internal choice of attempting one question from each unit – 4 in all. Each question will carry 18 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (2) in the question paper.

Unit-I

- Nature of Philosophy with special reference to Metaphysics and Epistemology (introductory).
- Materialism : Mechanical and Dialectical.
- Idealism : Objective (Plato), Subjective (Berkeley).

Unit-II

- Nature of Knowledge : Knowing subject, Act of knowing and object of Knowledge.
- Theories of Truth : Coherence, Correspondence and Pragmatic

Unit-III

- Theories of Knowledge :

  Rationalism.

  Empiricism.

  Transcendentalism of Kant.

Unit-IV

- Universal and Particulars : Concept of Being (Parmenides) and Becoming (Heraclites).
- Substance (Spinoza) Causality (Hume).
- Existentialism : Being in itself; Being for itself; Choice and Freedom.

Essential Readings :

Ewing, A.C., (1999), Fundamental Questions of Philosophy ,London : Routledge & Kegan Paul

Titus, H.H. (1999) Living Issues in Philosophy, New Delhi : Eurasia Pub. House, 4th ed., Prentice Hall Pub.

Macquire, John (1972), Existentialism, , New York : Philosophical Library

Suggested Readings :

Ayer, A.J.(2002), Twentieth Century Philosophy, Harmondsworth, Penguin Books

Ayer, A.J.(1969) Language, Truth and Logic, Dover Publications, Soft Cover ISBN 0486200108

Korner, Stephen (2002) Fundamental Questions of Philosophy (Penguin), Harmondsworth

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PSYCHOLOGY
SEMESTER - V

Objectives :

(I) The course will enable the students to get an introductory knowledge about Clinical Psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: CLINICAL PSYCHOLOGY

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry 14 marks and shall be Compulsory question. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Nature and Criteria of abnormality, *Viewpoints Regarding Abnormality:* Historical, Psychodynamic, Behavioural, Cognitive, Humanistic and Interpersonal;

UNIT-II : *Causes of Abnormal Behaviour:* Biological, Psychological and Sociocultural Causes.

UNIT-III : *Stress:* Concept of Stress; Types of Stressors; Etiology of Stress; Coping Strategies: Problem Focussed and Emotion Focussed, Effects of Stress.

UNIT-IV : *Significance of Statistics :* Mean, Standard Deviation, Correlation. Significance of Difference Between Means (Correlated and Uncorrelated).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. The use of Biofeedback.
2. Presumptive Stressful Life Event Scale.
3. Adjustment Inventory.
4. Mental Health Inventory.
5. Sentence Completion Test.
6. Word Association Test.

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003).*Abnormal Psychology and Modern Life,* New York : Pearson Education.

2. Davison, G.C. and Neale, J.M. (1998) . *Abnormal Psychology,* New York : John Wiley and Sons.

3. Feldman, R.S. (2014).*Understanding Psychology,* New Delhi : Tata McGraw Hill.2.

4. Garrett, H. E. (1966) . *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons.

5. Guilford, J.P., and Fruchter, B. (1981) . *Fundamental Statistics in Psychology and Education.* Singapore: McGraw Hill.

6. Sarason, B.R. & Sarason, I.G. *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_Prentice Hall of India.

7. Singh, A.K.(1986).*Tests, measurements and research methods in behavioural sciences.*Tata McGraw Hill.

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PSYCHOLOGY
SEMESTER - VI

Objectives :

(I) This course will enable the students to get an introductory knowledge about Clinical psychology with emphasis on the dynamics of some of the behavioural disorders and therapies. Students will also have some knowledge about stress and coping; and will get acquainted with elementary inferential statistics.

(II) Pedagogy of the Course Work :

80 % Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

PAPER: BEHAVIOURAL DISORDERS

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :
The syllabus has been divided into four units.

(a) There shall be 9 questions in all. The first question shall be short answer type containing 12 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 7 short answer type questions i.e. 2 marks of each. It shall carry14 marks and shall be Compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit - 4 in all.Each question will carry 14 marks.

(b) The practical will be of 20 marks.

UNIT-I : Anxiety Based Disorders viz. Phobia; OCD; Panic; Generalized Anxiety Disorder. Conversion Disorders, Dissociative Disorders : Types, Symptoms and Etiology.

UNIT-II : *Mood Disorders :* Types, Symptoms and Etiology.

UNIT-III : *Schizophrenia Types :* Symptoms and Etiology.

UNIT-IV : *Psychotherapies :* Psychodynamic Therapy, Behaviour Therapy, Cognitive- Behaviour Therapy, Humanistic Therapy.

PSYCHOLOGY PRACTICALS

Max. Marks : 20
Time : 3 Hours.

Four practicals have to be performed out of the following :

1. Clinical Interview.
2. TAT.
3. Depression Inventory (Beck).
4. State Trait Anxiety Inventory
5. Self Efficacy
6. Aggression Scale

Books Recommended:

Suggested Readings :

1. Carson, R.C.; Butcher, J.N.; and Mineka, S. (2003) : *Abnormal Psychology and Modern Life,* New York : Pearson Education.
2. Davison, G.C. and Neale, J.M. (1998) : *Abnormal Psychology,* New York : John Wiley and Sons.
3. Garrett, H. E. (1966) : *Statistics in Psychology and Education,* New Delhi : Vakils, Feffer, and Simons

Reference Books

1. Feldman, R.S. (2014) : *Understanding Psychology,* New Delhi : Tata McGraw Hill.2.
2. Guilford, J.P. and Fruchter, B. (1981) : *Fundamental Statistics in Psychology and Education* Singapore: McGraw Hill.
3. Sarason, B.R. & Sarason, I.G. : *Abnormal Psychology: The Problem of Maladaptive Behavior* (11/e)_ Prentice Hall of India.

GEOGRAPHY
SEMESTER-V

Paper-IX: WORLD REGIONAL GEOGRAPHY- I

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:

To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:

Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to Regional Groupings (European Union, North Atlantic Treaty Organization, North American Free Trade Agreement and Commonwealth of Independent States).

UNIT-I

(i) Anglo America (20 lectures)

UNIT-II

(ii) Latin America (20 lectures)

UNIT-III

(iii) Europe (20 lectures)

UNIT-IV

(iv) Russia & Commonwealth of Independent States (30 lectures)

(v) Oceania

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words each. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 Marks) and (iii) attendance (2marks).

7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 7 in the question paper.

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective*. Prentis Hall, New Jersy, 1995.
2. Blij, Harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cairns, G. O. et. al. : *Australia. Macmillan Co.* New York, 1962.
4. Coysh, A. W. and M. E. Tomlinson : *The Southern Continents.* University Tutorial Press, London, 1980.
5. English, Paul Ward & James, A.Miller : *World Regional Geography: A Question of Place, John Wiley*, New York, 1989.
6. Gilbert, Alan : *Latin American Development: A Geographical Perspective.* Hanswoodsworth Penguin, Middlesex, London, 1974.
7. Gottmann, Jean : *A Geography of Europe. Harrape & Co*. London, 1969.
8. Gregory, J. S. ed. : *The Geography of USSR*. Novosti Press Agency, Moscow, 1985.
9. Hudson, F. S. : *North America. Mc. Donald & Evans*, Fly Mouth, 1975.
10. Jackson, Richard H. & Lloyd E.Hudman : *World Regional Geography: Issues for Today, John Wiley*, New York, 1991.
11. Kromm, D. E. : *World Regional Geography, Saunders Publishing*, New York, 1980.
12. Malmstorm, V. H. Englewood Cliffs : *Geography of Europe: A Regional Analysis*. Prentice Hall, New York, 1991.
13. Patterson, J. H. : *North America. Oxford University Press,* New York, 1995.
14. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando, 1998.

Further Readings:

1. Don R. Hoy (Ed.) 1980. : *Essentials of Geography and Development,* Macmillan, New York,
2. Hussain, Majid : *World Regional Geography, Rawat Publications*, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the Wold, Kalyani Publishers,* Ludhiana, 2009.
4. Tikkha, R. N., Bali, P.K. and Sekhon, M. S. : *World Regional Geography,* New Academic Publishers, 2007.
5. Singh, Malkit : *World Regional Geography,* Rasmeet Prakashan, Jalandhar, 2009.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents.Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - X: MAP PROJECTIONS

Max. Marks: 30
Time: 3 hours

Distribution of Marks:

(i) Written paper of three hours covering entire syllabus shall be held for students of USOL. For others it shall be at respective colleges. 20 marks

(ii) Practical Record relating to Map Projections and Viva voce on Practical Record relating to Map Projections. 10 marks

Objective:

- To provide an analytical understanding of use of common map projections.

Course Content:

Unit- I

Map Projections:
General introduction , classification of projections, general principles of identification and choice of projections.
(6 lectures)

Unit- II

Construction, properties and limitations of following projections

Cylindrical : Simple, Equal area, Mercator's (4 lectures, 6 lab. sessions)

Unit- III

Construction, properties and limitations of following projections

Conical : One Standard Parallel, Two Standard Parallel , Bonne's, Polyconic and International
(4 lectures, 6 lab. sessions)

Unit- IV

Construction, properties and limitations of following projections

Zenithals : Gnomonic, Stereographic, Orthographic, Equidistant and Equal Area (Polar cases only)
Conventional : Sinusoidal and Molleweide's (normal cases only) (7 lectures, 7 lab. sessions)

Note:

1. A compulsory question containing 6 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 4 parts. The answer of each part should not exceed 25 words. Each part will carry 1 mark (Total 4 Marks).

2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher of geography in the college.

3. Evaluation of Practical Record and Field Report will be done at the time of viva-voce examination.A minimum of 20 sheets are to be prepared by the students. There will be no laboratory exercise at that time.

4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Practical Note Book (Practical files) with the University School of open Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Note Books (Practical files) will be evaluated by two examiners (including at least one from the USOL).

5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in practical record and field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Practical Record.

6. A fresh practical note book shall be prepared by failed /improvement candidates.

7 For Practical classes, the number of students in one group shall not exceed fifteen.

8. There will be 3 hours of teaching per week for this paper.

9. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 9 in the question paper.

Books Recommended

Essential Readings

1. Kellaway, George P. : *Map Projections*, Methuen and Co., London. Year 1956
2. Steers, J.A. : *Map Projections*, University of London Press, London,1957 Year .
3. Garnett, William : *Map Projections,* George Phillip and Sons, London.

Essential Readings

3. Singh, R.L & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

Basic fundamentals of map projections are introduced by demonstration of construction exercises in class.

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GEOGRAPHY
SEMESTER-VI

Paper-XI: WORLD REGIONAL GEOGRAPHY- II

Max. Marks	:	70
Theory	:	60
Internal Assessment	:	10
Time	:	3 Hours

Objectives:
To provide an understanding of the concept of world regions with respect to Land, People, Polity and Economy; the physical and human resource base and their interface with economic development; development problems and prospects.

Course Content:
Study of the following regions of the world in terms of constituent countries: strategic location, salient physical, demographic and economic features, cultural patterns, resource base, economic development, problems, prospects and issues related to regional groupings (South Asian Association of Regional Cooperation, Association of South East Asian Nations, Organization of Petroleum Exporting Countries and Organization of African Unity).

UNIT-I

(i) East Asia (20 lectures)

UNIT-II

(ii) South East Asia (iii) South Asia. (30 lectures)

UNIT-III

(iv) Middle East and North Africa (20 lectures)

UNIT-IV

(v) Africa South of Sahara (20 lectures)

Note:

1. Questions will be put on region(s) as a whole and not on individual country. The questions should focus on regional perspective.
2. A map based compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The students shall attempt any 10 parts in about 30 words. Each part will carry 2 marks (Total 20 marks).
3. The whole syllabus will be divided into 4 units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. Each question will carry 10 marks. (Total 40 marks) These will be in addition to the compulsory question.
4. Special credit will be given to suitable use of maps and diagrams. Use of unmarked stencils and colours will be allowed.
5. Six hours theory classes in a week are compulsory.
6. Internal assessment will be based on (i) class tests, (5marks) (ii) academic activities , seminar, Project , Assignment (3 marks) and (iii) attendance (2 marks).
7. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned. (**The paper setter must put note 7 in the question paper.)**

Books Recommended

Essential Readings:

1. Baerwald, T. J. and C. fraser : *World Geography: A Global Perspective.* Prentis Hall,New Jersy, 1995.
2. Blij, harm J. de Peter, O. Muller : *Geography : Regions and Concepts, John Wiley*, New York, 1993.
3. Cressy, G. B. : *Asia's Land and People*. McGraw Hill, London, 1963.
4. Dobby, E. H. G. : *South East Asia*. University of London Press, London, 1980.
5. English, Paul Ward & James, A. : *World Regional Geography: A Question of Place*,John Miller Wiley, New York, 1989.
6. Fisher, W. B. : *The Middle East.* Methuen, London, 1978.
7. Ginsburg, Norton. Ed. : *The Pattern of Asia*. Englewood Cliffs, New Jersey, 1958.
8. Hance, William, A. : *The Geography of Modern Africa*. Columbia University Press, London, 1965.
9. Jackson, Richard H. & Lloyd E. Hudman : *World Regional Geography: Issues for Today*, John Wiley, New York, 1991.
10. Kromm, D. E. : *World Regional Geography,* Saunders Publishing, New York, 1980.
11. Prichard, J.M. : *Africa,* Longman, London, 1981.
12. Salter, C. L., J.J. Hobbs et. al. : *Essentials of World Regional Geography,* Saunders College Publishing and Harcourt Brace College Publishers, Orlando,1998.
13. Spencer, J. E. and L. T. William : *Asia, East by South: A Cultural Geography.* John Willey & Sons, New York, 1971.
14. Spate, O. H. K. and A. T. A. Learmonth : *India and Pakistan: A General and Regional Geography*,Methuen, London, 1967.

Further Readings:

1. Don R. Hoy (Ed.) : *Essentials of Geography and Development*, Macmillan, New York, 1980.
2. Hussain, Majid : *World Regional Geography*, Rawat Publications, Jaipur, 2009.
3. Mankoo, Darshan Singh : *A Regional Geography of the World*, Kalyani Publishers, Ludhiana, 2009.
4. Singh, Malkit : *World Regional Geography*, Rasmeet Prakashan, Jalandhar, 2009.
5. Tikkha, R. N., Bali, P.K. and Sekhon, M. S : *World Regional Geography*, New Academic Publishers, 2007.

Pedagogy:

Teacher should involve maximum use of detailed maps of the countries and continents. Students should be encouraged to use atlas in classrooms. Video shows about culture, physiography and economy of these countries may be arranged if possible.

Paper - XII: FIELD SURVEY BASED REPORT

Max. Marks: 30
Time : 3 hours

- To acquaint the students with the importance of field work as one of the methodologies in geography.
- To familiarise the students about pre-field work and post-field work i.e. data processing and analysis and writing of field work report.

Distribution of Marks

i) Viva-Voce : 10 Marks ii) Field Report: 20 Marks

Fieldwork (Theory):

(i) Role of fieldwork in Geography.

(ii) Scale of study and fieldwork methodology.

(iii) Methods of collecting primary data : Observation, Interview and Questionnaire and Measurement.

(iv) Methods of field study of: a farm, a village, and a town. (20 lectures)

Note: The teachers should familiarize the students in the class before collection of primary data for preparation of field work.

Fieldwork (Practical): A field report of minimum 20 pages will be prepared based on primary data on problems such as (a) local market survey, (b) service area of school/ or hospital; (c) traffic flow, and (d) socio-economic characteristics of student's village/ mohalla/ sector.

(25 lab. Sessions)

Note:

1. There will be no written paper for USOL and college students.
2. Practical exam at the respective colleges shall be conducted by one internal and one external examiner. The external examiner shall be appointed by the Principal of the respective colleges in consultation with the senior most teacher the Geography in the college.
3. Evaluation of Field Report will be done at the time of viva-voce examination. There will be no laboratory exercise at that time.
4. There will be no viva-voce examination for the candidates appearing through the USOL. They will be required to submit their Field Report with the University School of Learning (Department of Geography) at least 10 days before the commencement of their examination. Their Field Report will be evaluated by two examiners (including at least one from the USOL).
5. For the students of USOL there will be an internal assessment of 10 marks in lieu of the viva-voce examination in field report. The marks obtained by the candidate will be added to the marks awarded by the internal and external examiners evaluating the Field Report. .
6. All students are required to submit a practical record based on theoretical component listed as fieldwork (theory)
7. A fresh field report shall be prepared by failed /improvement candidates.
8. For Practical classes, the number of students in one group shall not exceed fifteen.
9. There will be 3 hours of teaching per week for this paper.
10. For USOL, reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

The paper setter must put note 10 in the question paper.

Books Recommended

Essential Readings

1. Jones, P.A. : *Fieldwork in Geography*, Longman, London, 1968.
2. Archer, J.E. & Dalton, T.H. : *Fieldwork in Geography,* E.T. Bastford Ltd., London, 1968.
3. Singh, Gopal : *Mapwork and Practical Geography*, Surjeet Book Depot, Delhi,1993.

Further Readings

1. Hudson, F.S. : *A Geography of Settlements*, MacDonald, London, 1970.
2. Singh, L.R. & Singh, Raghunandan : *Mapwork and Practical Geography*, Central Book Depot, Allahabad, 1993, Reprint.

Pedagogy:

The students need to be trained to collect primary data, its processing and cartographic representation through taking up field exercises.

GANDHIAN STUDIES
SEMESTER-V
ECONOMIC THOUGHT OF MAHATMA GANDHI

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the Economic Thought of Mahatma Gandhi.

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:
1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Bases of Gandhian Economic Thought

1. Indian Influences on Gandhi's Economic Thought
2. Western Influences on Gandhi's Economic Thought
3. Fundamental Principles of Gandhi's Economic Thought

UNIT-II- Critique of Mechanization

4. Gandhi's Views on Machinery
5. Labour-Capital Relations
6. Theory of Trusteeship
7. Gandhi & Role of Corporate Social Resposibility

UNIT-III-Essence of Gandhian Economy

8. Doctrine of Swadeshi
9. Bread Labour
10. Concept of Wantlessness
11. Concept of Sarvodaya

UNIT-IV-Gandhi and Contemporary Idealogies

12. Gandhi's Views on Communism
13. Gandhi on Capitalism
14. Gandhian Socialism
15. Relevance of Gandhi's views in Globalized World

ESSENTIAL READINGS:

1. Biswas, S.C.(ed.) : *Gandhi: Theory and Practice, Social Impact and Contemporary Relevance* (Shimla: Indian Institute of Advanced Studies), 1960, pp.183-247.

2. Dasgupta, Ajit, K. : *Gandhi's Economic Thought* (London: Routledge), 1996.

3. Diwan, Romesh & Lutz : *Essays in Gandhian Economics* (Delhi: Gandhi Peace Foundation),1985.

4. Kumarappa, J.C. : *Gandhian Economic Thought* (Varanasi: Sarva Seva Sangh), 1962.

5. Mehta, Usha : *The Multi-Dimensional Thought of Mahatma Gandhi* (Mumbai : Mani Bhavan Gandhi Sangrahalaya), 2008.

6. Sethi, J.D. : *International Economic Disorder, A Theory of Economic Darwinism & A Gandhian Solution*, (Shimla: Indian Institute of Advanced Studies), 1996.

FURTHER READINGS

1. Dantwala,M.L. : *Gandhism Reconsidered* (Bombay: Padma Publications Publications), 1945.

2. Gandhi, M.K. : *Hind Swaraj or Indian Home Rule* (Ahmedabad: Navajivan Publishing House), 1982 edition.

3. Mehta, J. K. : *A Philosophical Interpretation of Economics* (London: Oxford University Press), 1956.

4. Schumacher, E.F. : *Small is Beautiful* (London: Abacus), 1989.

5. Sethi, J.D. : *Gandhi Today* (New Delhi: Vikas Publishing House), 1976.

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GANDHIAN STUDIES

SEMESTER-VI

Peace and Conflict Resolution

Maximum Marks : 100 marks
Theory : 90 marks
Internal Assessment : 10 marks
Time : 3 hours

Course Objectives:

The paper is designed to acquaint the students with the understanding of the concept of Peace and different methods of Conflict Resolution

Pedagogy of the Course Work

90% Lectures (including expert lectures)
10% Unit Tests, Snap Tests, assignments, attendance and class room participation

Note:

1. The Syllabus has been divided into four (4) units.
2. There shall be 9 questions in all.
3. The first question is compulsory and shall be short answer type containing 15 short answer type questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 18 marks i.e. 2 marks of each. It shall carry 18 marks and shall be compulsory question.
4. Rest of the paper shall contain four (4) units and each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each unit-4 in all. All questions shall carry 18 marks.
5. For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (5) in the question paper

UNIT-I-Understanding Peace

1. Meaning & basic components of Peace
2. Approaches to Peace
3. Obstacles to Peace
4. Gandhi's approach to Peace

UNIT-II- Peace Movements

1. Social Movements-Environment, Women, Dalit
2. NGOs
3. Civil Right movements in United States

UNIT-III-Understanding Conflict

1. Concept of Conflict
2. Causes of Conflicts
3. Types of Conflicts

UNIT-IV- Methods and Agencies of Conflict Resolution

1. Pacific methods of Conflict Resolution
2. Peace making
3. U.N. Peace Keeping & Peace Building

ESSENTIAL READINGS:

1. Barash, David, P. : *Approaches to Peace: A Reader in Peace Studies* (New York: Oxford University Press), 2000.
2. Brock, Peter : *Mahatma Gandhi & Mother India, Essay on Gandhi's Non-Violence & Nationalism* (Ahmedabad: Navajivan Publishing House), 1983.
3. Brock, Peter : *Twentieth Century Pacifism* (New York: Van-Nostrand Reinhold Company), 1970.
4. Galtung, Johan : *Peace by Peaceful Means* (New Delhi: Sage Publications), 1996.
5. Gultung, Johan : *The Struggle for Peace* (Ahmedabad: Peace Research Centre, Gujarat Vidyapeeth), 1984.
6. Melasuo, Tuomo (ed.) : *National Movements and World Peace* (U.S.A.: Avebury-Aldershot Brook),
7. Misra, R.P. : *Gandhian Model of Development and World Peace* (New Delhi: Concept Publishers), 1988.
8. Murty, K. S : *Quest for Peace* (Delhi: Ajanta), 1986.
9.. Murty, K. S. and Boughet, A.C. : *Studies in the Problems of Peace* (Bombay: Asia Publishers), 1960.
10. Peter, Wallen Steen (ed.) : *Peace Research: Achievements and Challenges* (London: West View), 1988.
11. Rennie, Linda and Preagar, Forcey (eds.) : *Peace: Meanings, Politics and Strategies* (London: West View),1986.
12. Sethi, J. D. : *Gandhian Critique of Western Peace Movement* (Delhi: Chanakya), 1989.
13. Sharp, Gene : *Politics of Non-Violent Action* (Boston: Sergent Publications), 1973.
14. Bondurant, J.V. : *Conquest of Violence* (Bombay: *O.U.P*), 1959.
15. Burton, J.W. : *Global Conflict* (London: Wheatsheef),1984.
16. Burton, John (ed.) : *Conflict Resolution and Preventive Human Needs Theory* (New York: St. Martin Press), 1990.
17. Chernyak, Yefim : *Ambient Conflicts* (Delhi: Progress Press), 1987.
18. Conlon, D.E. : "The Mediation-Intervention, Discussion-Towards an Integrated Perspective". *Negotiation Journal*, Vol. 4, No.2 of 1988, pp. 143-148.
19. Galtung, Johan : "Institutionalized Conflict Resolution-A Theoretical Paradigm*" Journal of Peace Research*, 1965, pp 348-395
20. Khanna, D.D. & Kueck Gert W. (eds.) : *Conflict Resolution, Human Rights and Democracy* (New Delhi: Shipra Publications), 2003
21. Kriesberg, Louis : *Social Conflicts* (Englewood Cliffs: Prentice Hall), 1982.
22. Kulkarni, V.B. : *Conflict in Indian Society* (Bombay: Bhartiya Vidya Bhavan), 1987
23. Shridharani, K.L. : *War Without Violence* (Bombay: Bhartiya Vidya Bhavan),1962.
24. Thakur, Ramesh : *International Conflict Resolution* (Bombay: West View),1998.
25. Weber, Thomas : *Conflict Resolution & Gandhian Ethics* (New Delhi: Gandhi Peace Foundation), 1991.

FURTHER READINGS:

1.	Danesh, H.B.	:	"Towards on Integrative Theory of Peace Education", *Journal of Peace Education*, Vol. 3, No.1, 2006.
2.	Elsie Boulding	:	"Peace Culture" in *Encyclopedia of Violence, Peace and Conflict* (San Diego: Academic Press), 1999.
3.	Kant , Immaunel	:	*Perpetual Peace: A Philosophical Essay* (London: Swan Sunne), 1902.
4.	UNESCO	:	*From a Culture of Violence to a Culture of Peace* (Paris: UNESCO), 1996.
5.	Azar, E.E. & Buitor J.W. (ed.)	:	*International Conflict Resolution: Theory & Practice (Brighton: Wheatsheef), 1986.*
6.	Burton, J.W.	:	*Conflict Resolution & Prevention (Basingstoke: Macmillan),1990.*
7.	Darby J. & Mac. Ginty R.	:	*Contemporary Peace Making (Palgrave: Macmillan), 2002.*
8.	Juergensmeyer, Mart	:	*Gandhi Way: A Handbook of Conflict Resolution (Berkeley: University of California Press), 2002.*
9.	Kriesbery, Lawis	:	*International Conflict Resolution (New Heven: Yale University Press), 1992.*
10.	Mitchell, C.R.	:	*Handbook of Conflict Resolution: An Problem Solving Approach (London), 1996.*
11.	Ramsbothan D. & Miall, H.	:	*Contemporary Conflict Management (New York : Blackwell), 2005.*
12.	Sustac, Zeno & Claudin Ignet	:	*Alternative Ways of Solving Conflicts (ADR) (New Delhi: Promila and Co. Publishers), 2001.*

JOURNALISM & MASS COMMUNICATION

SEMESTER V

MEDIA MANAGEMENT, ETHICS AND LAWS

Max. Marks: 100

Theory	70 marks
Internal Assessment	10 marks
Time	3 Hours
Practical	20 marks

A. Objectives :
The course will introduce the students to the basic structure of media organizations and the regulatory framework and laws of the journalistic profession.

B. Pedagogy of the Course Work:
80% Lectures (including expert lectures)
20% assignments, discussion and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit I

Types of ownership patterns: Sole Proprietorship, Partnership, Joint Stock Company, Conglomerate, Chain, Trust/Societies/Association, Cross Media Ownership

Unit II

Basic principles of Management given by Henry Fayol and their application in media organizations. Organizational structure of Large Daily Newspaper, Radio station and TV station

Unit III

Role & responsibility of journalist, Press Council of India guidelines for Ethical conduct

Unit IV

Brief overview of: Right to Information Act, Copyright Act, Law of Defamation, Law of Obscenity, Contempt of Court, Contempt of Legislature, IT Act (specific portion)

PRACTICALS **Max. Marks : 20**

1 Case study of any one type of ownership pattern of Indian media organisations. 20 Marks

Books Recommended

ESSENTIAL READING

1. Albarran Alan B(2002,*Management of Electronic Media*,. (2nd ed)., Wadsworth,
2. Bagdikian Ben H,(2004), *The New Media Monopoly*,.Beacon Press
3. Borjesson Kristine(2002),*Into the Buzzsaw: Leading Journalists Expose the Myth of a Free Press*, ed. by Prometheus Books
4. Downie Jr Leonard, Kaiser Robert G, (2003),*The News About the News: American Journalism in Peril*, Vintage
5. Edward S. Herman and Robert W. McChesney(2002) *Manufacturing Consent: The political economy of mass media*, Random House,
6. Ganaratne Shelton ,(2000) *Handbook of the media*, Sage
7. Kohli Vanita, (2003), *The Indian Media Business*, Sage.
8. McChesney Robert W. (2004)*The Problem of the Media*, Monthy Review Press
9. McCord, Richard(2001),*The Chain Gang: One Newspaper versus the Gannett Empire*, 2nd ed., Universityof Missouri Press
10. News Broadcasting Association (2008)*Code of Ethics and Broadcasting Standards*, NBA (Available online: http://www.nbanewdelhi.com/assets/uploads/pdf/code_of_ethics_english.pdf).
11. Picard Robert G. (2002),*The Economics and Financing of Media Companies*, Fordham University Press
12. Press Council of India (2010) *Norms of Journalistic Conduct*, PCI (Available online: http://presscouncil.nic.in/norms2010.pdf).
13. Redmond James and Trager Robert, (2004),*Balancing on the Wire: The Art of Managing Media Organizations*, 2nd ed., Atomic Dog
14. Roberts Gene (2002),*Breach of Faith: A Crisis of Coverage in the Age of Corporate Newspapering*, ed. (University of Arkansas Press
15. Sanders, K. (2003) Ethics and Journalism, New Delhi: Sage.
16. Taparia Jay(2004)*Understanding Financial Statements: A Journalist's Guide*, Marion St. Press

ADDITIONAL READING

1. Adarsh Kumar Varma (2003), *12 ½, Management Mantras of Journalism*, Kanishka Publishers, New Delhi
2. Kundra, S (2005), *Media management*, Saujanya books Pvt Ltd, New Delhi
3. N.D.Shamsi N Afeque, (2006*), Media Organisation And Management*, Anmol Publications Pvt. Ltd, New Delhi
4. Potter, W.J. (2012) *Media Literacy*. Thousand Oaks, London, New Delhi, Singapore: Sage Publications.
5. Robert H. Wicks, Jan LeBlanc Wicks, Ardyth Broadrick Sohn, (2003), *Media management: A Casebook Approach, Lea's Communication Series* , Lawrence Erlbaum Associates
6. Shamsi N Afeque, (2006*), Media Organisation And Management*, Anmol Publications Pvt. Ltd, New Delhi

JOURNALISM & MASS COMMUNICATION

SEMESTER- VI

ADVERTISING & PUBLIC RELATIONS

Max. Marks: 100

Theory	:	70 marks
Internal Assessment	:	10 marks
Time	:	3 Hours
Practical	:	20 marks

A. Objectives :

The course will make students conversant with strategic communication by imparting training in writing advertising copy and press releases amongst other tools.

B. Pedagogy of the Course Work :

80 % lectures (including expert lectures).

20 % assignments, discussion and seminars

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

There shall be **9** questions in all. The first question shall be short answer type containing 10 short questions spread over the whole syllabus and each to be answered in about 50 to 75 words. The candidate is required to attempt any 7 short answer type questions i.e. of 2 marks each. It shall carry 14 marks and is a **compulsory** question. Rest of the paper shall contain **4** Units. Each Unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all. Each question will carry 14 marks.

Unit-I: Definition & types of advertising; Place of Advertising in marketing mix; Brief Introduction to Advertising and Branding

Unit-II: Concept & definition of advertising copy; Elements of a typical advertisement; Basic principles of writing advertising copy

Unit –III: Concepts & types of Public in PR; Brief introduction to Public Relations in Govt. Public & Private Sector

Unit – IV: Brief introduction to PR tools & Media Relations

PRACTICALS

Max. Marks : 20

1	Portfolio of five self-designed advertisements	10 marks
2	Prepare a file of PR tools used by anyone organization	10 marks

Books Recommended

ESSENTIAL READING

1 Ajanta Chakravarty, (2003), *Advertising*, Rupa Co.

2 Caywood, Clark L., (2004), *The Handbook strategic Public Relations and integrated communications*. Tata McGraw hill, New York

3 Gupta OM, (2005), *Advertising in India*, Kalpaz publications

4 Haig Matt, (2003), *Brand failures*, Kogan Page Ltd.

5 Kapoor Jagdeep, (2002), *Brand Naamkaran for Desi Khari English Marie segments*, BPI (India) Pvt. Ltd.

6 Levy, Stuart M., (2006), *Public Relations and integrated communications*, Lotus Press, New Delhi

7 Parameswaran MG, (2001), *Brand building advertising*, Tata McGraw Hall Publisher

8 White Roderick, (2000), *Advertising*, McGraw Hall book company international Ltd.

9 Zettl, Herbert, (2003), *Television Production handbook*. Wadsworth, CA.

ADDITIONAL READING

1 Brierley Sean, (2002), *The Advertising Handbook*, Routledge

2 Ghosal Subhas, (2002), *The making of Advertising'*, Mac Millian India Ltd.

3 John Philip Jones, (2002), *The ultimate secrets of Advertising*. Sage Publication Inc.

4 Tiwari Sayay, (2003), *The (un) Common Sense of Advertising*, Response Books

5 Valladares Juae A., (2000), *The Craft of Copywriting*. Response Books

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POLICE ADMINISTRATION
SEMESTER - V

Organisational Behaviour With Special Reference to Police Administration

(A) Course Objectives:

The objective of this course is to familiarize the students with the concept, nature and significance of organizational behavior with special reference to police administration. The course also aims to discuss the foundations and models of organisational behavior. In particular, the students would be taught the concepts such as motivation, morale, leadership, communication, decision-making, and transactional analysis. Further, the inputs regarding the concept and rationale of organizational change and organizational development would be imparted to the students.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of:

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks each (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

Organisational Behaviour: Concept, Nature and Significance. Foundations of Organisational Behaviour – Scientific Management, Human Relations, Systems and Contingency. Models of Organisational Behaviour.

Unit-II

Motivation: Concept; and Theories – Maslow's Need Hierarchy and McGregor's Theory X & Y. Morale: Concept; and Factors to Build-up Morale in India Police. Leadership: Concept, Theories – Trait and Situational; and Qualities.

Unit-III

Communication: Concept, Process, Types and Barriers. Communication Modes in Indian Police. Decision-Making: Concept; Types; and Simon's Rational Comprehensive Theory. Transactional Analysis: Meaning; and Types of Transactions.

Unit-IV

Organizational Change: Concept; Rationale; and Resistance to Change. Organisational Development: Concept and Rationale.

Essential Readings:

1. Prasad, L.M. : Organisation Behaviour, Sultan Chand & Sons, New Delhi, 2008.
2. Aswathappa, K. : Organisational Behaviour, 7th Edition, Himalaya Publishing House, New Delhi, 2007.
3. Moorhead, Gregory & Ricky W. Griffin : Organizational Behaviour: Managing People & Organizations, Biztantra, New Delhi, 2005.
4. Robbins, Stephen P. : Organizational Behaviour, Prentice-Hall of India Private Limited, New Delhi, 2001.
5. Sharma, K.K. & : Organisation Behaviour, Deep & Deep Sahni, Pradeep Publishers, New Delhi,1988.
6. Dubin, Robert : Human Relations in Administration, Prentice-Hall of India Private Limited, New Delhi, 1968.
7. George, C. S. : History of Management Thought, Prentice-Hall of India Private Limited, New Delhi.
8. Simon, Herbert A. : Administrative Behaviour: A Study of Decision Making Process in Administrative Organisation, Macmillan, New York, 1976.
9. Sapru, R. K. : Theories of Administration, S. Chand, New Delhi, 1996.
10. Maheshwari, S. R. : Administrative Thinkers, MacMillan, New Delhi, Latest Edition.
11. Saiyadain, Mirza S. : Organisational Behaviour, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2006.
12. McShane, Steven L.; Glinow, Mary Ann Von; & Sharma, Radha R. : Organisational Behaviour, Tata McGraw-Hill, Publishing Company Ltd., New Delhi, 2006.

Further Readings

1. Argyris, Chris : Personality and Organisation: The Conflict Between System and the Individual, Harper and Row, New York, 1957.
2. Argyris, Chris : Integrating Individual and Organisation, Wiley, New York, 1964.
3. Mayo, Elton : The Social Problems of an Industrial Civilisation, Routledge and Kegan Paul Limited, London, 1957.
4. Hicks, Herbert G. : The Management of Organisation: a system and human resource approach, McGraw Hill, New York,1972.
5. Vadackumchery, James : Police Leadership: The Inside Story, APH Publishing Corporation, New Delhi, 1999.
6. Pugh, D. S. (ed.) : Organisation Theory, Penguin Books, Harmondsworth, 2nd Edition, 1984.

POLICE ADMINISTRATION
SEMESTER- VI

Law and Police Administration

(A) Course Objectives:

The police system in India has to work within the ambit of legal framework laid down by the Constitution and by the enacted laws. The major responsibility of the police is to ensure the implementation of such laws. The course has been designed to impart knowledge to the students on the laws governing the 'prevention and detection of crime' which is laid down as the primary duty in the Indian Police Act 1861. The endeavour of the course is to familiarize the students with the main provisions of the Indian Penal Code 1860, the offences under it and the offences affecting the human body. In addition, meaning and definition of terms covered under Section 2 relevant to the police administration along with the powers of the police officer have been discussed.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

i. Internal Test-5%;
ii. Academic activities (Seminar, Project, Assignment)-3%;
iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:

Unit-I

THE INDIAN PENAL CODE 1860: MAIN PROVISIONS

(i) Jurisdiction (Sections 1-5)
(ii) General Explanations (Sections 6-52-A)
(iii) Punishments (Sections 53, 53A, 54, 55, 60, 63, 73)
(iv) Joint & Constructive Liability Section 34 & Section149

Unit-II

Offences under the Indian Penal Code 1860

(i) Abetment (Section 107 & 108)
(ii) Criminal Conspiracy (Sections 120-A, 120-B)
(iii) Offences against the State (Sections 121, 121-A, 124-A)
(iv) Offences Against Public Tranquility (Sections 141-147)

Unit-III

Offences Affecting Human Body

-Culpable Homicide (Section 299) & Murder (Section 300)
-Causing death by rash and negligent act (Section 304A)
-Dowry Death (Section 304B)
-Hurt (Section 319), Grievous Hurt (Section 320)
-Wrongful Restraint and Wrongful Confinement (Sections 339, 340)
-Assault (Section 351)
-Sexual Harassment (Sections 354 A, 354 B, 354 C & 354 D)
-Kidnapping and Abduction (Sections 359-362)
-Rape (Sections 375, 376 A to D)

Unit-IV

Classification of offences in CRPC:

-Bailable and non-bailable offence;
-Cognizable and non-cognizable offence;
-Compoundable offences;
-Summons Case;
-Warrant Case;

Role of Police Officer:

-Lodging of First Information Report (Section 154) & Effects of Refusal to lodge FIR
-Police investigation
-Arrest (Section 41) & Rights of Arrested Persons
-Search (Section 165)

Essential Readings:

1. Tandon, Mahesh : The Indian Penal Code, Allahabad Law Agency, Prasad & Tandon, Rajesh Latest Edition.
2. Gandhi, B. M. : Indian Penal Code, Eastern Book Company, 2nd Edition.
3. Bhattacharya, T. : Indian Penal Code, Central Law Agency, Allahabad, 2007.
4. Mishra, S.N. : Indian Penal Code, Central Law Publications, Allahabad, 2007.
5. The Indian Penal Code : Bare Act with Short Notes, Universal Law Publishing Co. Pvt. Ltd., Delhi, 2008.

Further Readings

1. Lal, Rattan and Dhiraj Lal : Indian Penal Code
2. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
3. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.

WOMEN'S STUDIES

SEMESTER - V

PAPER: NATIONAL AND INTERNATIONAL INITIATIVES FOR WOMEN

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objective: This course aims to conscientise the students about the efforts made by national and international organizations, both governmental and non-governmental, towards women's empowerment and increased participation in social, economic and political life. The course exposes the student particularly to the U.N. initiatives in empowering women, putting an end to age old discrimination against them.

Course Contents

Unit I – Constitution of India and Women's Rights:

a) Fundamental rights and women's rights: de jure and de facto position
b) Directive Principles of State Policy and women's rights with special reference to Articles 39, 42, 43 and 44
c) Factors inhibiting effective implementation of Constitutional provisions

Unit II – Women and Law in India:

a) Dowry Prohibition Act, 1961 (as amended in 1984 & 1986);
b) Protection of Women from Domestic Violence Act, 2005,
c) Women's Rights in Property as Coparcener (as per 2005 Amendment of Hindu Succession Act, 1956)

Unit III – UN Conferences on Women:

a) Mexico (1975)
b) Copenhagen (1980)
c) Nairobi (1985)
d) Beijing (1995)
e) Beijing +5 (2000)
f) Beijing + 10 (2005)

Unit IV – UN Conventions for Women and Children:

a) Convention on the Political Rights of Women 1952
b) Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) 1979
c) Convention on the Rights of the Child (CRC), 1990, Optional Protocol

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

Essential Readings:

Aggarwal, Nomita : **Women and Law in India**, New Century Publication, Delhi, 2002.

Basu,D.D. : **Introduction to The Constitution of India**, Wadhwa & Co. Agra, 2001.

Jain, Devaki : **Women Development and the UN: A Sixty Year Quest for Equality and Justice**, Orient Longman, Delhi, 2006.

Shukla, Surinder : **United Nations and Empowerment of Women**, Arun Pub. House, Chandigarh, 2009.

United Nations and The Advancement of Women *(*1945-1996), United Nations Publication, 1996.

Further Readings:

Diwan, Paras : **Dowry and Protection to Married Women**, Deep and Deep Publication, New Delhi, 1987.

Ghosh, S. K. : **Women in Changing Society**, Ashish Publishing House, New Delhi, 1984.

Ratra, Amiteshwar; Parveen Kaur & Chhikara,Sudha : **Marriage and Family: In Diverse and Changing Scenario,** Deep & Deep, New Delhi, 2006.

Singh, Indu Prakash : **Women, law and Social Change in India**, Radiant, New Delhi, 1989.

Readings in Hindi:

Anthony,M.J. : **Kanooni Salha**, Hind Pocket Books, New Delhi, 2006.

Bansal, Bandna **Panchayati Raj Mein Mahila Bhagyadari**, Kalpaz Pub., New Delhi, 2004.

Gupta, Kamlesh Kumar : **Bharatiya Mahilayen Shoshan**, Utpidan avam Adhikar, Book Enclave, Jaipur, 2005.

Natani, Prakash : **Mahila Jagriti aur Kanoon**, Aavishkar Pub., Jaipur, Narayan 2005.

Natani, Prakash Narayan : **Manavadhikar avam Mahilayen**, sublime Pub., Delhi, 2005.

Sanyukt Rashtr, Karavahi Hatu Ghushana-Patra Tatha Beijing Ghushana, Campewell Publication, New Delhi, 1995.

Mathew, D.P. : **Hindu Vivaha Aur Talaq**, Indian Social Institute, New Delhi, 1986.

Mathew, D.P. : **Atam Raksha**, New Delhi, 1984.

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WOMEN'S STUDIES

SEMESTER-VI

PAPER : WOMEN'S DEVELOPMENT AND EMPOWERMENT IN INDIA

Max. Marks : 100
Theory : 90 Marks
Int. Ass : 10 Marks
Time : 3 Hrs.

Objectives: This paper focuses on the issues related to the process of development and its impact on women, particularly in the context of a developing nation like India. The attempt is to equip the student to understand the major aspects of critique of development through a gender lens in its global and local contexts.

Course Contents

Unit I – Concept of Development

- Changing concept from Growth to Development;
- Human Centric Development;
- Why is gender a development issue?
- Indices of development: Human Development Index (HDI), Gender Development Index (GDI), Gender Empowerment Measure (GEM)

Unit II – Strategies for Women's Development

- Women in Development (WID), Women and Development (WAD) and Gender and Development (GAD),
- Empowerment and Sustainable Development;
- Microcredit

Unit III - Policy Initiatives

- Changing approaches from welfare to development to empowerment with special reference to Five Year Plans (First to Twelth Plan)
- National Policy for Empowerment of Women

Unit IV – Implementation Machinery

- Social Welfare Boards,
- National Commission for Women (NCW),
- Ministry of Women and Child Development (MOWCD),
- National Institute of Public Cooperation and Child Development (NIPCCD)

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

- In this paper, the candidate will be assessed for 90 marks on the basis of a written examination and for 10 marks internal assessment.
- There shall be 9 questions in all. The first question shall be compulsory containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidate is required to attempt any 09 short answer type questions carrying 2 marks each (18marks). Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidate shall attempt one question from each unit- 4 in all. Each question will carry 18 marks.

ESSENTIAL READINGS

Ahooja-Patel, Krishna : **Women and Development**, Ashish Publishing House New Delhi, 1995.

Govt. of India, Five Year Plans (1st to 11th), Planning Commission, New Delhi.

Gupte, Shakuntla : **Women Development in India**, Anmol Pub, New Delhi, 2005.

Mathu, Anuradha (ed) : **Facets of Women's Development**, Kalpaz Pub, Delhi, 2006.

South Asia Human Development Reports 2000 and 2004, Mahbub ul Haq Human Development Centre.

UNDP Human Development Reports, 1995-2007.

Further Readings

Heyzer, Noeleen and Gita,(ed.), : **Gender, Economic Growth and Poverty**, Kali for Sen, Women, New Delhi, 1994.

Jain, Devaki : **Development as if Women Mattered**, Monograph, ISS, New Delhi,1983.

Krishanaraj, Maitreyi, : **Women and Development: The Indian Experience**, Subhada Publishers.

Rajput, Pam & Swarup Hemlata (ed.), : **Women and Globalization**, Ashish Pub. House, New Delhi, 1994

Reddy, V Narayana et al (eds), : **Women in Development: Challenges and Achievements,** Serials Pub, Delhi, 2005.

Singh, Gopal : **Economic Empowerment of Rural Women in India,** et al (eds) RBSA Pub, Jaipur, 2003

Verma, S.B, Jiloka, S.K. Kushwah, K.J, (eds), : **Rural Women Empowerment,** Cambridge Univ Press, & U.K.,2005.

Readings in Hindi:

Kumar, Raj (ed.) : **Bhartiya Mahila**, Arjun Publishing, New Delhi, 2003.

Sarawat, Sawapnal : **Mahila Vikas AK Paridrashay**, Nayanprakashan, New Delhi,

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HUMAN RIGHTS & DUTIES
SEMESTER-V

PAPER: HUMAN RIGHTS RESPONSES TO SELECT PROBLEMS INTERNATIONAL AND NATIONAL PERSPECTIVE

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with a few select problems that have been addressed internationally through the UN Conventions to ensure protection of human rights. The objective is to regard to problems such as racial discrimination; custodial violence; and socially vulnerable groups including women, children, Specially-Abled and Internally Displaced Persons.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

Note: (i) for written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9 x 2 = 18 marks. (ii) In addition to it, Question Nos. II to IX will consist of long answer of long answer (easy) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4 x 18 = 72 marks.

UNIT-I

Racial Discrimination: International Convention and Related Mechanism

(a) Convention on the prevention and punishment of the Crime of Genocide, 1948.
(b) International Convention on Elimination of All Forms of Racial Discrimination 1965.
(c) Refugees and the Refugee Convention, 1951

UNIT –II

Custodial Violence and Safeguards:

(a) Custodial Violence a
  (i) Torture and Death in Police Custody
  (ii) Fake Encounters and Enforced Disappearances
  (iii) Human Indignity against Women and Children
(b) Convention against Torture and Other Cruel and Human of Degrading Treatment or Punishment, 1984.

UNIT-III

Social Vulnerability and Protection –I: Women and Children

(a) Understanding Discrimination and Violence against Women and Children
(b) Convention on the Elimination of All Forms of Discrimination against Women, 1979.
(c) Convention on the Rights of the Child, 1989.
(d) Human Trafficking and United Nations Convention against Transnational Organized Crime, 2000

UNIT- IV

Social Vulnerability and Protection- II: Aged, Specially-Abled and Internally Displaced Persons.

(a) Problems of Aged and specially – Abled Persons.
(b) Convention of the Rights of Persons with Disabilities, 2006.
(c) International Mechanism for the Rights of the Aged.
(d) Internally Displaced Persons and Related Mechanism.

Essential Readings:

1. Ayabn, L, Tesch-Romer,C.,Contemporary Perspective on Ageism, (2018), United Sttes: Springer International Publishing.
2. Gullete-Morganroth,M., Ending Ageism or How Not to Shoot Old People, (2017) London, Rutgers University Press.
3. Dovey, Ceridwen, What Old Age is Really Like? (2015), New York, Grand Central Publishing.
4. Ghai Anita, Rethinking Disability in India, (2015) New Delhi, Routledge.
5. Burch, Susan and Rembis, Michael, Disability, (2014) Histories, Chacago, University of Illinois Press.
6. Kuppers, Petra, Studying Disability Arts and Culture: An Introduction, (2014), Palgrave Macmillan Press, New York.
7. Addlakha, Renu, Disability Studies in India: Global Discourse, Local Realities, (2013) London, Rontledge Taylor and Francis.
8. Addlakha, Renu and Blume, Stuart et. Al: Disability and Society: A Reader, (2009), Orient Black Swan, Hyderabad.
9. Aggarwal, H.O: *Human Rights*, (2010), Central Law Publications, Allahbad.
10. Aggarwal, H.O: *International Law and Human Rights, (2010,)* Central Law Publications, New Delhi.
11. Ahuja, Ram: *Social Problems in India*, (2009), Rawat jaipur.
12. Biswal, Tapan: *Human Rights*, *Gender and Environment,* (2006), New Delhi.
13. Kapoor, SK.: *Human Rights under International Law*,(2009), Central Law Publications, Allahabad.
14. Karna, G.N.:Disability Studies in India: Retrospect and Prospect, (2001), New Delhi:Gyan Publishing House.
15. Lauterpacht, Hersch: *An International Bill of the Rights of the Man*,(1945), New York: Columbia University Press
16. South Asian Human Rights Documentation Centre: *Human Rights and Humanitarian Law,(2008),* South Asian Human Rights Documentation Centre, New Delhi, 2008.
17. Wolf, Sherry: Sexuality and Socialism: History, Politics, Theory of LGBT Liberalization, (2009), Chicago: Haymarket Books

Further Reading:

1. Rao, Mamta: Law Relating to Women and Children, (2008), Eastern Book Company, Luck.
2. Verma, R.S.: Human Rights: Burning Issues of the World, Volumes I, II and III (2000), Delhi: Radiant Publishers.
3. Langley, Winstore E.: Encyclopedia of Human Rights Issues Since 1945,(1999), London: Fitzroy Dearborn Publishers.
4. Pachauri, S.K. : Children and Human Rigths , (1999), New Delhi: APH Publications.
5. Pacuhauri, S.K: Women and Human Rights, (1999), New Delhi: APH Publications.
6. Karna, G.N: United Nations and the Rights of Disabled Persons: A Study in Indian Perspective, (1999), New Delhi: APH Publishing Co.

HUMAN RIGHTS & DUTIES
SEMESTER-VI

PAPER: REGIONAL HUMAN RIGHTS INSTRUMENTS, STANDARDS AND MECHANISM

Max. Marks: 100 Marks
Theory: 90 Marks
Internal Assessment: 10 Marks
Time: 3 Hours

Objective: The paper deals with key features of regional human rights standards and mechanisms. The objectives of the paper are twofold. Firstly, it is familiarize the students that regional initiatives complement the international initiatives in promoting and protecting human rights. Secondly, it is to train students to locate countries of the specific region on an outline map of the world.

INSTRUCTIONS FOR THE PAPER SETTER AND THE CANDIDATES: Note: (i) for the written appear, the students will be required to attempt five questions in all. Question No. I will be compulsory comprising of 12 short answers type questions of 2 marks each and will cover the entire syllabus. The students shall be required to attempt 9 short answer type questions out of 12 i.e. 9x2 =18 marks. (ii) In addition to it. Questions Nos. II to IX will consist of long answer (essay) type questions i.e. two questions from each unit with internal choice carrying 18 marks of each i.e. 4x18=72 marks per Unit where students will be asked to located countries that are party to the Regional Conventions or have either ratified specific Conventions or have not ratified the given Conventions on the attached world outline map.

UNIT-I

Europe:

a. European Convention on the Protection of Human Rights (ECHR), 1950.
b. European Social Charter (ESC), 1961 (Revised 1996)
c. Charter of Fundamental Rights of the European Union, 2000.

UNIT-II

America:

a. American Convention on Human Rights (ACHR), 1969
b. Inter- American Convention to Prevent and Punish Torture, 1985
c. Inter- American Convention on Forced Disappearance of Persons, 1994

UNIT-III

Africa and Arab:

a. African Charter on Human and Peoples' Rights (Banjul Charter), 1981.
b. Convention Regarding the Specific aspects of Refugee Problems in Africa
c. Arab Charter on Human Rights, 2004

UNIT-IV

South and South-East Asia

a. SAARC Conventions: (i) Conventions on Regional Arrangements for the Promotion of Child Welfare in South Asia; (ii) Convention on Preventing and Combating the Trafficking in Women and Children for Prostitution
b. ASEAN Charter on Rights, 2007.

REFERENCES:

Essential Readings:

1. Aggarwal, H.O.: *Human Rights, Central Law Publications,* Allahabad. 2010.

2. Aggarwal, H.O.: *International Law and Human Rights*, Central Law Publications, New Delhi, 2010

3. Chodhury, A.R. and Bhuiyan, J.H.: *An introduction to international Human Rights Law*, Brill, 2010

4. Kappor, S.K: *Human Rights Under International Law,* Central Law Publications Allahbad. 2009.

5. Jacobs, Francis G and R.C.A White: *The European Convention on Human Rights,* Oxford: Clarendon University Press. 1996

Further Readings:

1. Arora, Lalit Kumar: *Major Human Rights Instruments,* Isha Book, New Delhi, 2006.

2. Vincent O. Orlu Nmehielle: *The African Human Rights System: it's Law Practice and Institutions*, Kluwer Law International, The Netherlands, 2001.

3. South Asia Human Rights Documentation Centre: *Human Rights and Humanitarian Law*, South Asian Human Rights Documentation Centre, New Delhi, 2008

4. Sarkar, Sukanta: *Human Rights Violations of Minorities*, Anmol Publications, New Delhi, 2015.

RELIGIOUS & SIKH STUDIES

SEMESTER- V

Max. Marks: 100
Written : 90 marks
Internal : 10 marks

PAPER- V, RELIGIOUS REFORM MOVEMENTS IN MODERN INDIA

Objectives:

The course is designed for the students who want to pursue semester bases graduate degree programme with religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. 1 would carry 18 marks (9X2). In addition to it, Question No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4 X 18).

Course Contents:

Unit I. Brahmo Samaj and Arya Samaj: Leaders, Principles and Contribution

Unit II. Namdharis and Singh Sabha Movement: Leaders, Principles and Contribution

Unit III. Anjumans and Ahmadiyahs: Leaders, Principles and Contribution

Unit IV Swami Vivekanand; Sir Syed Ahmad Khan and Bhai Kahn Singh Nabha

Essential Readings

- ਤਾਰਨ ਸਿੰਘ, ਗੁਰ*ਬਾਣੀ ਦੀਆਂ ਵਿਆਖਿਆ ਪ੍ਰਣਾਲੀਆਂ ,* ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ ਪਟਿਆਲਾ
- ਡਾ. ਸਰਬਜਿੰਦਰ ਸਿੰਘ, (ਸੰਪਾ.) ਧਰਮ ਸੰਪ੍ਰਦਾਇ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Farquhar, J.N., *Modern Religious Movements in India*

- Jones, K.W., *Arya Dharm,* Delhi: Manohar, 1989.
- Lavan, Spencer, *The Ahmadiyah Movement: A History and Prespactive,* Delhi: Manohar, 1974.
- Radice, William (ed.), *Swami Vivekananda and the Modernisation of Hinduism,* Delhi : OUP, 1998.
- Jones, K.W., *Socio Religious Reform Movements in British India,* New Cambridge History, Delhi: Foundation Books, Delhi, 1994.

Further Reading

- Sen, S.P., *Social and Religious Reform Movement in the 19th & 20th Century,* Calcutta: 1999.
- Banga, Indu, ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1900,* New Delhi: Manohar, 1997.
- Shan Muhammad, *Sir Syed Ahmad Khan: A Political Biography,* Meenakshi Prakshan.

RELIGIOUS & SIKH STUDIES

SEMESTER- VI

Max. Marks: 100
Written : 90 marks
Internal : 10 marks

PAPER-VI SEMITIC RELIGIONS

Objectives:

The course is designed for the students who want to pursue semester bases graduate degree programme with religious Studies as an elective subject. It is open to any student drawn from multiple disciplinary backgrounds after completion of 10+2 course. As one of the elective subject at the graduate level curriculum, it purports to develop a broad understanding of Indian Religions and awareness about the origin, features and purpose of different religions.

INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

Note: (i) For written paper, the students will be required to attempt five questions in all. Question No. 1 will be compulsory comprising of 12 short answer type questions of 2 marks each and will cover the entire syllabus. The students are required to attempt nine answer type questions out of twelve. Question No. 1 would carry 18 marks (9X2). In addition to it, Question No. II to IX will consist of **eight** long answer (Essay Type) questions which will be further divided into four units with each Unit having **two questions** to ensure internal choice to the candidate. In all, each question in this section shall carry 18 marks and this section shall carry 72 marks (4 X 18).

Course Contents:

Unit I Islam: origin and development in India

Unit II Sufi Tradition: origin and development in India

Unit III Christianity: origin and development in India

Unit IV Sects within Christianity: Catholics and Protestants

Essential Readings

- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ ਗ੍ਰੰਥ, ਸੰਪ੍ਰਦਾਇ ਅਤੇ ਚਿੰਤਕ ਭਾਗ ਤੀਜਾ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- ਸਰਬਜਿੰਦਰ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ.) ਨਾਨਕ ਪ੍ਰਕਾਸ਼ ਪੱਤ੍ਰਿਕਾ, 'ਵਿਸ਼ਵ ਧਰਮ ਬਾਨੀ 'ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
- Mishra, Neeru, *Sufis and Sufism: Some Reflectons,* New Delhi: Manohar, 2004.
- Rizvi, S.A.A., A *History of Sufism in India,* Vol.1, New Delhi: Munshiram Manoharlal, 1997.

Further Readings

- Grewal, J.S., *Religious Movements and Institutions in Medival India,* PHISPC*, New Delhi:* Oxford University Press, 2006.
- Webster, John C.B. *The Christian Community and Change in 19th Century North India,* Delhi: Manohar, 1976.
- Frykenberg, Robert Eric, Christianity in India: From Beginnings to the Present, New York: OUP, 2010.

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COMPUTER SCIENCE
SEMESTER-V

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS09	**Theory-A**	**Project Management**	**3**	**30**	**5**	**35**
Paper –CS10	**Theory-B**	**Relational Database Management System**	**3**	**30**	**5**	**35**
Paper – PCS05	**Practical-C**	**Practical Based on Paper – CS10**	**3**	**30**	**--**	**30**

Paper Code: CS09

Paper Title: Project Management

Objective: The student will come to know how a project needs to established, organized , coordinated ,controlled and evaluated.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii) The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. Concepts of Project Management :
Concept of a project, Characteristic features of a project, Categories of project, Project life cycle phases, Project Management Concepts, Tools and Techniques for Project Management, Introduction of Computerised project management systems, Roles and Responsibilities of a Project Manager.

2. Establishing the Project :
Feasibility Report : Raw material survey, Demand study, Technical study, Location study; Financing Arrangements, Preparation of Cost Estimates, Finalisation of Project Implementation Schedule, Evaluation of the Project Profitability, Fixing the zero date.

UNIT II

3. Organizing human resource:
Delegation, Project organization: Matrix, Tax force and Totally projectized organization;

4. Organizing the Project:
Working of Systems, Design of Systems, Project Work System Design, Work Breakdown Structure, Project Execution Plan, Project Procedure Manual, Project Control System, Planning, Scheduling and Monitoring.

UNIT III

5. Project Directions, Coordination and Control:
Project Direction, Communications in a Project, Project Coordination, Project Control, Scope/Progress Control, Performance Control, Schedule Control, and Cost Control.

6. Project Management Performance:
Performance Indicators, Performance Improvement, Project Management Environment.

UNIT IV

7. Report Writing - I:
Characteristics of Reports, Importance of Reports, Types of Reports, Structure and layout of Reports: front matter, main body, back matter;Preparatory Steps to Writing Reports: Evaluation of material, Note making, Organising material, Principle of organisation, Making outline

8. Report Writing- II:
Elements of Style; Use of Illustrations: types; Writing the Report: Rough draft, Process of writing, Order of writing, Final draft, Check list for reports;SpecimenReports: technical report;

REFERENCES

1. Choudhary, S., 1988 : Project Management, Tata McGraw-Hill Publishing CompanyLimited, 1988 (Recommended as a text-book for the syllabus contents upto Unit III).
2. Sharma, R.C., and Krishna Mohan, 1996 : Business Correspondence and Report Writing, Second Edition, Tata McGraw-Hill Publishing Company Ltd., 1978 (Recommended as a text-book for the syllabus contents for Unit IV).
3. Gopalakrishnan, P. & Rama Moorthy, V.E., 1993. : Text Book of Project Management, Mac Million India Ltd.
4. Harrison, F.L., 1992. : Advanced Project Management, A Structured Approach (Third Edition), Metropolitan.
5. Srinath, I. S., 1989. : PERT & CPM, Principles and Applications, Third Edition, Affiliated East-West Press Pvt. Ltd.
6. Rodrigues, M.V., 1992 : Effective Business Communication, Concept Publishing Company, 1992.

Paper Code: CS10

Paper Title: Relational Database Management System

Objectives: This course will enable the student to get well versed with the SQL and PL/SQL concepts.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. Interactive SQL : SQL commands; Data Definition Language Commands; Data Manipulation Language Commands; Data types, Insertion of data into the tables; Viewing of data from the tables; Conditional viewing of data; Deletion operations; Updating the contents of the table; Modifying the structure of the table; Renaming table; Destroying tables.

2. Data Constraints: Types of Data Constraints; Column Level Constraints; Table Level Constraints; Null value concepts; The UNIQUE Constraint; The PRIMARY Constraint; The FOREIGN key Constraint; The CHECK Constraint; Viewing the User Constraint.

UNIT – II

3. SQL Operators and Functions: Arithmetic operators, Logical operators, Range searching, Pattern matching; Using DUAL, SYSDATE;SQL Functions: Group, Scalar, Aggregate, Numeric, String and Date Functions.

4. Grouping data from tables in SQL : GroupBy , Having clause, Subqueries, Collating Information: Equi Joins, Cartesian Joins, Outer Joins, Self Joins; SET Operators: Union, Intersect, Minus; Nested Queries.

UNIT III

5. Indexes: Creation, Types, Dropping an index; Introduction to Views, Manipulating the Base table(s) through views, Rules of DML Statements on Join Views, Dropping a View, Inline Views, Materialized Views.

6. Sequences: Creation, Reference and Alteration; Database Security and Privileges: Grant Command, Revoke Command, Application Privileges Management, COMMIT and ROLLBACK.

UNIT IV

7. PL/SQL-I: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL block structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data types, Variables and constants, Scope and visibility of a variable, Assignments and expressions, Operator precedence, Conditional and iterative control, SQL within PL/SQL, writing PL/SQL code.

8. PL/SQL-II: Cursor management in PL/SQL, Cursor manipulation, Implicit and Explicit cursor attributes, Exceptional Handling, Subprograms in PL/SQL, Procedure, Functions, and Triggers.

References:

1. Ivan Bayross: SQL, PL/SQL the programming language of oracle, BPB publications.
2. Kevin Loney :Oracle Complete Reference, McGraw-Hill
3. James T. Perry &Josesph G. Lateer: Understanding Oracle, BPB
4. Mukhi, Vijay 1992: Mastering Oracle 6.0, BPB Publications.

Paper – PCS05 : Practical Based on Paper CS10 – Relational Database Management System.

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COMPUTER SCIENCE
SEMESTER-VI

SCHEME OF EXAMINATION

FIFTH SEMESTER			Exam . Hrs	Ext.	Int.	Max. Marks
Paper – CS11	**Theory-A**	**E-Commerce**	**3**	**30**	**5**	**35**
Paper –CS12	**Theory-B**	**Web Programming**	**3**	**30**	**5**	**35**
Paper – PCS06	**Practical-C**	**Practical Based on Paper – CS12**	**3**	**30**	**--**	**30**

Paper Code: CS11

Paper Title: E-Commerce

Objective: To develop an understanding of concepts of E-Commerce

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT I

1. E-Commerce: Introduction, History, Motivation for E-Commerce, Types of Ecommerce, Advantages, Limitations, E-Commerce applications : Business-to-consumer, Business-to-Business, Consumer-to-Business, Consumer-to-Consumer, Business-within-Business.

2. Internet and www: Introduction, History, Benefits of www, Internet Service Providers, Web and Electronic commerce,Web architecture and its components, Interactive web applications, Web and database integration, Web software development tools, Search engines.

UNIT II

3. Website designing and hosting: Life cycle of website building, Website content andtraffic management, Working of ISPs, Choosing an ISP, Choosing and registering a domain name.

4. Implementation and Maintenance of E-Commerce: Implementation strategies, Maintenance strategies, Legal and Ethical issues in E-commerce.

UNIT III

5. Payment Systems : From Barter to money, Requirements of Internet-based payments,Electronic payment media : Credit cards, Debit cards, Smart cards, e-wallets, Issues and implications of payment systems, Latest trends in payment systems.

6. Marketing on the Internet: Internet marketing techniques and cycles, Attracting and Tracking customers, Pros and cons of online marketing.

UNIT IV

7. Firewalls and Network Security: Types of firewall, Gateways, Proxy Servers and its advantages and disadvantages; Transaction Security: Types of transaction, Requirements for transaction, Encryption: asymmetric and symmetric encryption; Digital signatures, Digital certificates, Implementation and management issues.

REFERENCES :

1. Kalakota Ravi & Andrew B. Whinston, 1997 : Electronic Commerce, A manager's Guide, Person Education.
2. Elias M. Awad, 2006 : Electronic Commerce from vision to fulfillment, PHI.
3. P.T. JOSEPH, S.J., 2015 : E-COMMERCE, Fifth Edition: AN INDIAN PERSPECTIVE, PHI.
4. PKenneth C, Landon, Carol Guercio Traver, 2010 : E-Commerce – Business Technology society, Pearson Education.

Paper Code: CS12

Paper Title: Web Programming

Objectives: This course will enable the student to build and publish web sites using HTML, CSS, JavaScript and PHP.

Note: (i) The syllabus of this paper has been divided into four units.
(ii) Examiner will set total nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii)The students are required to attempt one question from each unit and the entire Compulsory question.
(iv) All questions carry equal marks, unless specified.

UNIT - I

1. Basic Terminology : Web Server; Web Browser, Understanding Communication between a Browser and Web Server, Webpage, Website, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL.

2. HTML : HTML Program Structure, Paragraph Breaks, Line Breaks; Emphasizing Text: Heading Styles, Drawing Lines; Text Styles :Bold, Italics, Underline; Other Text Effects: Centering of text and images etc; Lists: Unordered List, Ordered Lists, Definition lists; Adding Graphics to HTML Documents using the Border, Width, Height and Align; Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

3. Linking Documents : Anchor tag, External Document References, Internal Document References and Image Maps; Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

4. DHTML: Introduction to Cascading Style Sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External; Forms: Attributes of Form element: Input element, Text Element, Password, Button, Submit Button, Reset Button, Checkbox, Radio, TextArea, Select and Option.

UNIT - III

5. JavaScript: Introduction and Features of JavaScript, Writing JavaScript into HTML,Tokens, Data Types, Variables, Operators, Control Constructs, Strings Arrays, Functions, Document Object Model, CoreLanguage Objects, Client Side Objects, Event Handling, Applications related to client side formvalidation, Built-In Objects in JavaScript: String Object, Math Object, Date Object;

UNIT - IV

6. Introduction to PHP : PHP Installation and Configuration; Naming files, Comments,Variables, Operators, Arrays, Flow Control Structures, More language basics; User-defined functions; Input validation, Working with Mathematical, String, Date and Time functions

REFERENCES

1. Bayross, Ivan : Wen enabled commercial applications development using HTML, Javascript , DHTML and PHP by BPB, Latest reprint
2. Wanger&Wyke : Java Script Unleased, Pearson Education, New Delhi.2
3. Thomas Powell : HTML & CSS: The Complete Reference
4. John Pollock : JavaScript, A Beginner's Guide
5. Steven Holzner PHP: The Complete Reference, Tata McGraw Hill
6 Kelvin Tetroi: Programming PHP , O'Reilly Media

Paper – PCS06 : Practical Based on Paper CS12 – Web Programming.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER-V

Paper: Biodiversity and Conservation

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	5	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question NO. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Biodiversity and Conservation

Section-I

Biodiversity: Definition, levels, importance, threats to biodiversity, hot spots of biodiversity in India. Environment Protection Act, 1986, Water (Prevention and Control of Pollution Act) 1974, Forest (Conservation) Act, 1980.

Section-II

Conservation: Causes of extinction of biodiversity**,** Strategies of conservation (in-situ and ex-situ). Protected Areas (National Parks, Sanctuaries and Biosphere reserves). Wild Life Protection Act, 1972.
Joint Forest Managemnt (JFM)

Section-III

Environmental Ethics: Role of religion in Environment Protection. Role of Indian tradition in environment conservation, Sustainable agriculture.
Different possible measures to make aware localties about environmental hazards and its remedies. Public Interest Litigation(PIL).

Section-IV

Cultivation Practices: Role of tree & plants in conservation; use of medicinal plants; cultivation methods *(Aloe vera, Calotropis (AK), Mentha, Ocimum*, Neem, *Ricinus, Jatropa, Accacia, Khair* (Katha).

Practical

Collection of local flora and fauna.
Study of vegetation of local area/college campus.
Collection of ten pests.
Identification of weeds.
Study of vegetation density by quadrat method
Plantation of medicinal plants**.**
Adaptation features of plants and animals.
Assignments/project as assigned by the teacher.

ENVIRONMENT CONSERVATION (ELECTIVE)

SEMESTER -VI

Paper: Public Awareness and Environment Issues

Theory hours	Practical Hours	Theory marks	Internal Assessment Marks	Practical marks	Practical Internal Assessment Marks	Total Marks
6	4	65	10	20	05	100

The number of hours for theory and Practical per week shall be 6 hours and 4 hours, respectively.

Note: The practical will include survey and its project reports carrying 5 marks (Internal Assessment) and 20 marks will be allotted to Laboratory practicals.

Instructions for paper setters:

There will be 9 questions in all, two each from section I to IV. All questions will carry equal marks (13 marks each). Question No. I will be short answer type & will cover the whole syllabus. Candidtes will attempt five questions in all, selecting one each from section I to IV and the first compulsory questions.

Paper : Public Awareness and Environment Issues

Section-I

Current Environmnet Issues: Climate Change, Global Warming, Population Explosion, Rain water harvesting, relamation of mining areas, impact of green revolution on environment with special referencve to Punab, Tehri Dam, Narmada Project, Bhopa Gas Tragedy, River Cleaning Project of Sant B.S. Seechewal (Punjab).

Section-II

Environmental Protection: Role of Non - Governmental Organizations (NGOs) in environmental protection (Chipko movement, For a Living Ganga by WWF, Transformation DTC fleet to CNG driven transport, Earth Hour, Green Peace (Nitrate Pollution in Punjab), KVM, Jaito). Role of individual in environment protection. Role of environmental education.

Section-III

Environmental Agencies: Role of International & National Agencies: UNEP, UNDP, WWF, MOEF, CPCB, in environment conservation and management.
A brief account on Ramsar convention, CITES (Convention on International Trade in Endangered Species), UNFCC, Montreal Protocol, Kyoto Protocol, Copenhagen Summit.

Section-IV

RS and GIS: Definition, Application in Environment**.**
Biostat: Mean mode, median, standard deviation, co-relation, Regression.

Practical

Public/Mass awareness programmes in different villages and their reports.
Survey report on different diseases based theory.
Visit to a dam to study its construction and working.
To visit any NGO working for environment.
To study various indoor pollutants in houses like LPG, AC, Paints, Polish, Cosmetics, Detergents, Shampoo, Hair dyes.
To study the different tools of stat in data interpretation.
Assignments/project as assigned by the teacher.

Books Recommended:

Jaswal & Jaswal	:	Environmental Law, APH Publications, New Delhi, 2006.
Khitoliya, R. K.	:	Environment Protection and Law, APH Publications, 2009.
Trivedi, R.K.	:	Handbook of Environmental Laws, Acts, Guidelines, Compliance and Standards, Vol. I & II, B.S. Publications, Hyderabad. 2004.
Srivastava, A.K.	:	Environmental Ethics, APH Publications, 2004.
Lillesand, T.M. and Kiefer, R.W.	:	Remote Sensing and Image Interpretation, John Wiley, Cambridge, 1987.
Fazal, S.	:	Remote Sensing Basics, Kalyani Pub. 2008.
Patel, A.N. & Singh, S.	:	Remote Sensing: Principles and Applications, Scientific Books, Jodhpur, 2009.
Jensen, J.	:	Remote Sensing of the Environment, Pearson Education, Prentice Hall, 2007.
CSE, Delhi	:	A Water Harvesting Manual, 2010.
Arora, P.N.	:	Biostatistics, Himalayan Pub. House, 2008.
Spencere, J.	:	Biodiversity: Beginners Guide, One World Publication, Oxford, 2009.
Chaudhari, A. B.	:	Biodiversity Endangered, Scientific Books, 2009.
Singh, Oraon & Prasad.	:	Medicinal Plants, APH Publications, 2009

MICROBIOLOGY

SEMESTER -V

THEORY		6 hrs	75(33+33+9*)
MIC 501:	**Pathogenic Microbiology-I**	3 hrs.	37.5 (33+4.5*)
MIC 502:	**Food and Industrial Microbiology-I**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical examination pertaining to the entire syllabus 3 hrs 25 (22+3*)
included in Theory Papers MIC 501 and MIC 502

Semester VI

THEORY		6 hrs	75(33+33+9*)
MIC 601:	**Pathogenic Microbiology-II**	3 hrs.	37.5 (33+4.5*)
MIC 602:	**Food and Industrial Microbiology-II**	3 hrs.	37.5 (33+4.5*)

PRACTICAL

One Practical examination pertaining to the entire syllabus 3 hrs 25 (22+3*)
included in Theory Papers MIC 601 and MIC 602

Note : * Denotes marks for the Internal Assessment.

MICROBIOLOGY

MIC 501-PATHOGENIC MICROBIOLOGY-I

SEMESTER- V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Streptococcus, Pneumococcus, Neisseria, Corynebacterium, Bacillus, Clostridium, Proteus*. The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Rabies, Polio, Small pox and Measles.

Section C

Introduction to Human mycotic infections viz Superficial, Cryptococcosis and Dermatophytosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz. amoebiasis, Kala-azar and Toxoplasmosis.

MICROBIOLOGY

MIC502-FOOD AND INDUSTRIAL MICROBIOLOGY-I

SEMESTER -V

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Food as substrate for microorganisms, Nutritive value of food stuffs, Effect of Hydrogen ion concentration (pH), moisture requirement on food, Important food borne diseases viz. Staphylococcal intoxication, Botulism, Salmonellosis and Shigillosis.

Section B

Contamination, preservation and spoilage in various foods viz. cereal and cereal products (cereal grains, flour, bread, pasta, macroni), Sugar and sugar products (Maple, Syrup, Honey, Candy).

Section C

Production strains, Isolation and screening techniques, preservation and genetic modification of Industrial microorganisms.

Section D

Yeast (Baker's) and its uses, Fermentation of Beer, Wine and Alcohol.

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.

5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.
6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY

PRACTICAL

SEMESTER- V

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1. Identification of both Gram positive and Gram negative bacteria on the basis of:
   i) Morphology
   ii) Biochemical characteristics
   iii) Serological reactions
2. Demonstration of pathogens (Viruses, fungi, parasites) in permanent mounted slides
3. Demonstation of cysts/ ovas of Protozoa/ Helminths.
4. Demonstration of Laboratory grown fungi on Sabauraud's agar
5. Germ tube test for *Candida albicans*

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MICROBIOLOGY

MIC601-PATHOGENIC MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS: 37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.

(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Introduction to important diseases caused by *Shigella, Salmonella, Vibrio, Yersinia, Hemophilus*and *Mycobacterium.* The operative mechanisms, laboratory diagnosis, prevention and control of these diseases.

Section B

Morphology, pathogenesis, life cycle, laboratory diagnosis, prevention and control of viral diseases viz. Herpes, Influenza and AIDS

Section C

Introduction to Human mycotic infections viz Blastomycosis, Opportunistic mycosis; Candidiasis and Aspergillosis.

Section D

Life cycle, pathogenic mechanisms and control of parasitic infections viz.Ascariasis, Filariasis and Hook worm infections

MICROBIOLOGY
MIC602-FOOD AND INDUSTRIAL MICROBIOLOGY-II

SEMESTER- VI

MAX. MARKS:37.5 MARKS
THEORY: 33 MARKS
INTERNAL ASSESSMENT: 4.5 MARKS
TIME: 3 HRS.
(THREE PERIODS PER WEEK)

Note: The question paper will consist of four sections (A-D). There will be nine questions and five questions have to be attempted. Question 1 will span the complete syllabus and will be compulsory. Rest eight questions will be from different sections of the syllabus. There will be two questions from each of four sections and one is to be attempted. Each question will be subdivided into 2-4 sub-parts.

Section A

Qualitative and Quantitative analysis of food components (proteins, lipids, carbohydrates), Microbiological examination of food products including dairy products, food poisoning caused by bacteria and fungi.

Section B

Contamination, preservation and spoilage in various foods viz. Vegetables and fruits, Meat (Fresh meat, fresh beef, hamburger, fish), Milk and milk products (Cheese, butter)

Section C

Fermentation media, Characteristics of Ideal production media, Common substrates used in Ideal fermentations, Batch and continuous fermentations

Section D

Production of organic acids viz. acetic acid, lactic acid, propionic acid, butyric acid and mixed acids. Mass transfer in aerobic fermentations

Recommended Books :

1. Ananthanarayan, R. Panikar, C.K.J(2002), *Textbook of Microbiology*, Orient Longman Ltd., 160, Anna Salai, Chennai.
2. Brooks, G.F, Butel J.S, Morse, S.A (2002), *Jawetx. Malnick and Adelberg's Medical Microbiology* Mc Graw Hill.
3. Tortora, G.J., Funke, B.R., Case, C.L (2009), *Microbiology: An Introduction*, Benjamin/Cummings Publishing Company Inc.
4. Frazier, W.C., Westhoff, D.C. (1988), *Food Microbiology*, Mc Graw Hill.
5. Jay, J.M., Loessher, M.J., Golden, D.A. (2005), *Modern Food Microbiology* (Edition 7), Illustrated Publishers Springer.

6. Potter, N.N., Hotchkiss, J.H. (1997), *Food Science*, CBS Pulishers.
7. Admas, M.R., Moss, M.O. (2005), *Food Microbiology,* Edition 3, Illustrated Publishers Royal Society of Chemistry.
8. Montville, T.J.,,Metthews, K.R.(2005), *Food Microbiology, An Introduction*, ASM Press Washington, D.C.
9. Prescott, S., Dunn, C.G.(1994), *Industrial Microbiology*, Mc Graw Hill, New York, CBS Publishers and Distributors.
10. Casida, (1995), *Industrial Microbiology*, N.Y., Wiley.

MICROBIOLOGY
PRACTICAL
B.Sc. (GENERAL) THIRD YEAR EXAMINATION
Semester- VI

MAX. MARKS: 25 MARKS
PRACTICAL: 22 MARKS
INTERNAL ASSESSMENT: 3 MARKS
TIME: 3 HRS.

1. Demonstration of Fungi through normal saline/KOH preparation
2. Quantitative examination of microbial types in raw processed preserved food stuffs
3. Direct microscopic examination of bacteria in raw, pasteurised milk
4. Methylene reductase test for milk
5. Various biochemical tests and their importance in Food Microbiology

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MATHEMATICS

SEMESTER V

Paper I : ANALYSIS - I

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Countable and uncountable sets.
Riemann integral, Integrability of continuous and monotonic functions, Properties of integrable functions, The fundamental theorem of integral calculus, Mean value theorems of integral calculus.
Beta and Gamma functions.

Unit-II

Improper integrals and their convergence, Comparison tests, Absolute and conditional convergence, Abel's and Dirichlet's tests, Frullani's integral.
Integral as a function of a parameter. Continuity, derivability and integrability of an integral of a function of a parameter.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa New Delhi, 1997.
5. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.
6. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
7. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
8. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.

Paper II: MODERN ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Groups, Subgroups, Lagrange's Theorem, Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems, Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of A_n, $n \geq 5$ (without proof).

Unit-II

Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings, Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings.

References :

1. S. Singh and Q. Zameerudin : *Modern Algebra*, 8th Edition, Vikas Publication, New Delhi.
2. I.N. Herstein : *Topics in Algebra*, Wiley Eastern Ltd., New Delhi.
3. J.A. Gallian : *Contemporary Abstract Algebra*, Narosa Publication House, New Delhi.
4. M. Artin : *Algebra*, Prentice Hall of India, New Delhi, 1994.

Paper III : PROBABILITY THEORY

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Review of notion of Probability, conditional Probability and independence, Bayes' Theorem.

Random Variables : Concept, probability density function, cumulative distribution function, discrete and continuous random variables, expectations, mean, variance, moment generating function, skewness and kurtosis.

Discrete Random Variables : Bernoulli random variable, binomial random variable, negative binomial random variable, geometric random variable, Poisson random variable.

SECTION B

Continuous Random Variables : Uniform random variable, exponential random variable, Beta random variable, Gamma random variable, Chi-square random variable, normal random variable.

Bivariate Random Variables : Joint distribution, joint and conditional distributions, Conditional Expectations, Independent random variables, the correlation coefficient, Bivariate normal distribution.

References

Ross, S.M. : Introduction to Probability Models (Sixth edition) Academic Press, 1997.

Hogg., R.V and Craig, A.T : Introduction to Mathematical Statistics, MacMillan, 2002.

I. Blake : An Introduction to Applied Probability, John Wiley & Sons,1979.

J. Pitman : Probability, Narosa,1993.

P. L. Meyer : Introductory Probability and Statistical Applications, 2nd Edition, Oxford and IBH Publishing Co

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MATHEMATICS
SEMESTER VI

Paper I : ANALYSIS - II

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Double and triple integrals : Double Integral over A Rectangle, Repeated Integrals in $\mathbf{R}^2$, Double Integrals over Bounded Non-rectangular Regions, Area of Bounded Regions in Plane, Double Integrals as Volumes, Change of Variables in Double Integrals, Change to Polar Coordinates, Area in Polar Coordinates, Triple Integral in Rectangular Coordinates, Triple Integrals over General Regions in $\mathbf{R}^3$, Repeated Integrals in $\mathbf{R}^3$, Volume of a Region in $\mathbf{R}^3$, Change of Variables in a Triple Integral to Cylindrical and Spherical Coordinates
Vector Integration : Line, Surface and Volume integration. Gauss divergence theorem, Stokes' theorem, Green's theorem.

Unit-II

Sequences and series of functions : Pointwise and uniform convergence, Cauchy criterion for uniform convergence, Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence, uniform convergence and continuity, uniform convergence and Riemann integration, uniform convergence and differentiation, Weierstrass approximation theorem(Statement only), Abel's and Taylor's theorems for power series.

Fourier series : Fourier expansion of piecewise monotonic functions, Fourier Series for Odd and Even Function, Half Range Series, Fourier Series in the Intervals $[0, 2\pi]$, $[-1, 1]$ and $[a, b]$.

References:

1. T. M. Apostol : Mathematical Analysis, Norosa publishing House, New Delhi, 1985.
2. R. R. Goldberg : Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970.
3. S. Lang : Undergraduate Analysis, Springer-Verlag, New York, 1983.
4. Shanti Narayan : A Course of Mathematical Analysis, S. Chand & Co., New Delhi.

5. P.K.Jain and S.K.Kaushik : An Introduction to Real Analysis, S. Chand & Co., New Delhi, 2000.
6. S.C.Malik and Savita Arora : Mathematical Analysis, 2nd edition, New Age International Publishers.
7. G.B.Thomas and R. L. Finney : Calculus and Analytic Geometry (Ninth edition), Pearson Publication.
8. D. Somasundaram and B. Choudhary : A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1997.

Paper II : LINEAR ALGEBRA

Max. Marks : 30
Time : 3 hrs.

Note:
1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

Unit-I

Vectror Space : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors, Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements

Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations

Unit-II

Linear transformations and matrices, Change of basis.

Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value, Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix).

References :

1. K. Hoffman and R. Kunze : *Linear Algebra*, 2nd Edition, Prentice Hall, New Jersy, 1971.
2. P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, First Course in Linear Algebra (Wiley Eastern Delhi).
3. J. Gilbert and L. Gilbert: Linear Algebra and Matrix Theory (Academic Press).
4. I.N. Herstein, Topics in Algebra (Delhi Vikas).
5. V.Bist and V. Sahai, Linear Algebra (Narosa, Delhi).

Paper III : NUMERICAL ANALYSIS

Max. Marks : 30
Time : 3 hrs.

Note: 1. The syllabus has been split into two Units: Unit-I and Unit-II. Four questions will be set from each Unit.
2. A student will be asked to attempt five questions selecting at least two questions from each Unit. Each question will carry 6 marks.
3. The teaching time shall be five periods (45 minutes each) per paper per week including tutorial.
4. If internal assessment is to be conducted in the form of written examinations, then there will be only one written examination in a Semester.

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SECTION A

Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials.
Interpolation: Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation

Formulas using Difference.

Numerical Differentiation.
Numerical Quadrature: Newton-Cote's Formulas, Gauss Quadrature Formulas, Chebychev's Formulas.

SECTION B

Linear Equations: Direct Methods for Solving Systems of Linear Equations (Gauss Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, Gauss-Seidel, Relaxation Methods).
The Algebraic Eigenvalue problem: Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.
Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods.

References

1. C.E. Froberg : *Introduction to Numerical Analysis* (Second Edition),Addison-Wesley, 1979.
2. Melvin J. Maron : *Numerical Analysis : A Practical Approach,* Macmillan Publishing Co., New York, 1982.
3. M.K. Jain, S.R.K. Iyengar and R.K. Jain : *Numerical Methods for Scientific and Engineering Computation,* New Age International (P.) Ltd., 1999.
4. R.Y. Rubistein : *Simulation and the Monte Carlo Methods,* John Wiley, 1981.
5. D. J. Yakowitz : *Computational Probability and Simulation,* Addison-Wesley, 1977.
6. S.S. Sastry : *Introductory Methods of Numerical Analysis,* 3rd Edition (2000), Prentice Hall of India Pvt. Ltd., New Delhi.

STATISTICS

SEMESTER-V

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2 A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A. /B.Sc First and Second years.

3 There are two papers with codes 301 and 302 in the subject of Statistics in B.A./B.Sc., Semester-V. These are to be taught simultaneously throughout the Semester.

4 For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lectures per week for theory and practical, shall be allotted for the teaching.

Paper 301: DEMOGRAPHY AND ECO NOMIC STATISTICS

Maximum Marks	**: 75**
Theory	**: 65**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of this course is to acquaint students with the basic concepts of Microeconomictheory and the analysis of Statistical concepts used in the context of economic set up. They will also be exposed to the basic concepts in Demography.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.

UNIT –I

Sources of demographic data-census, vital statistical registers, adhoc surveys and hospital records. Measurement of mortality - crude death rate, specific death rates, standardized death rate, infant mortality rate and cause of death rate, complete life Table and its description. Measurement of fertility - crude birth rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate.

Economic time series, its different components, illustrations, additive and multiplicative models, determination of trend, growth curves (exponential and modified exponential), analysis of seasonal fluctuations, construction of seasonal indices.

UNIT –II

Index numbers**,** definition, Methods to construct price, quantity and value index numbers. Problems involved in the construction of index numbers, use of averages, simple aggregative and weighted average methods. Laspeyre's, Paasche's, Edgeworth - Marshall and Fisher's index numbers. Time and factor reversal tests of index numbers. Chain Base index numbers, Cost of living index number, interpretation and applications of index numbers.

Static laws of demand and supply, price elasticity of demand, Pareto distribution, log normal distribution and their properties.

References:

1. Goon A.M., Gupta M.K. Gupta. B.(2005) : Fundamentals of Statistics, Vol. II, World Press, Das Calcutta.
2. Srivastava O.S (1983) : A Textbook of Demography, Vikas Publishing.

Additional References:

1. Croxton F.E and Cowden D.J. (1969) : Applied General Statistics, Prentice Hall of India.
2. Gupta and Mukhopadhyay P.P (1999) : Applied Statistics, Central Book Agency.
3. Gupta, S. C. & . Kapoor, V. K (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

PAPER 302 : PRACTICAL (SEMESTER-V)

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1. Computing measures of mortality & fertility, construction of complete life table and examples involving users of life tables.
2. Construction of Index Numbers by Laspeyre's, Paasche's, Edgeworth-Marshall's and Fisher's methods.
3. Determination of trend, construction of seasonal indices in a time series.

STATISTICS
B.A. /B.Sc. (GENERAL) THIRD YEAR EXAMINATION
SEMESTER-VI

Note: 1. A candidate shall offer this subject in B.A./B.Sc. only if he/she takes up Mathematics as a subject in B.A./B.Sc.

2 A candidate shall offer these subjects in B.A./B.Sc. Third year only if he/she had taken up the corresponding subject in B.A./B.Sc. First and Second years.

3 There are two papers with codes 303 and 304 in the subject of Statistics in B.A./B.Sc., Semester-VI. These are to be taught simultaneously throughout the Semester.

4 For theory, 8 lectures (of 45 minutes each) per week and for practical 4 lectures (of 45 minutes each) per week, amounting to 12 lectures per week for theory and practical, shall be allotted for the teaching.

Paper 303: STATISTICAL QUALITY CONTROL AND COMPUTATIONAL TECHNIQUES

Maximum Marks : 75
Theory : 65
Internal Assessment : 10
Time allowed : 3 hours

Objective: This course teaches the application of Statistics to maintain quality in Enginnering or industrial set up. Linear programming with applications in the management and Administration of military, government, commercial, and industrial systems, is used to maximize the utility of limited resources. The objective is to acquaint the students ith different techniques for optimization.

Notes:

1 There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**

2 Simple non-programmable calculator is allowed.

3 Statistical tables and log tables will be provided on request.

UNIT –I

Importance of Statistical methods in industrial research and practice, meaning of quality, quality assurance and process control. General theory of control charts, causes of variations in quality, control limits, sub-grouping summery of out of control criteria. Charts for variables - $\overline{X}$ and R charts. Charts for attributes - np, p, c and u - charts.

Principle of acceptance sampling- problem of lot acceptance, stipulation of good and bad lots, concepts of producer's and consumer's risks, AQL, LTPD, AOQL, ATI, ASN and OC functions. Single and double sampling plans and their ATI, ASN and OC functions.

UNIT –II

Difference tables and methods of interpolation, Newton's and Lagrange's methods of interpolation, divided differences, numerical differentiation and integration. Trapezoidal rule, Simpson's one third formula, iterative solution of linear equations by Gauss – Seidel Method.

Linear Programming: elementary theory of convex sets, definition of general linear programming problems (LPP), formulation of LPP, examples of LPP. Graphical and simplex methods of solving an LPP, artificial variables, duality of LPP ,Transportation problem (non-degenerate and balanced cases), initial basic feasible solution through North-West Corner Rule, Matrix Minima & VAN method.

References:

1. Goon, A.M, Gupta, M.K. and Dasgupta, B. (2005) : Fundamental of Statistics Vol. I. World Press, Calcutta.
2. Goon, A.M, Gupta, M.K. and Dasgupta, B. (2005) : Fundamental of Statistics Vol. II. World Press, Calcutta.
3. Jain M.K., Iyengar S.R.K. & Jain R.K. (2010) : Numerical Methods, 5th edition.
4. Montgomery, D.C (2001) : Introduction to Statistical Quality Control; Wiley
5. Swarup, K, Gupta, P.K. and Manmohan, M. (2008) : Operation research, Sultan Chand & Sons Educational Publishers New Delhi.

Additional References:

1. Grant E.L (1964) : Statistical Quality Control, McGraw Hill.
2. Duncan A.J (1974) : Quality Control and Industrial Statistics, Taraporewala and Sons.
3. Gass S.I (1975) : Linear Programming Methods and Applications, McGraw Hill.
4. Rajaraman, V (1981) : Computer Oriented Numerical Methods, Prentice Hall.

PAPER 304 : PRACTICAL (SEMESTER-V)

Marks : 25
Time : 3 Hours

(Viva voce: 5 marks; record of the year: 5 marks; Final Exam: 15 marks)

Note: The Practical Question Paper will contain five questions from the following topics. A student will be required to attempt three questions, each of 5 marks, in three hours duration.

1 Drawing of $\overline{X}$, R, np, p,c and u – charts, Drawing of OC, AOQ and ATI curves for single and double sampling plans for attributes.

2 Construction of difference tables, use of Newton, Lagrange and divided difference interpolation formulae, numerical evaluation of integrals using Trapezoidal and Simpson one-third formulae, solution of system of linear equations by Gauss – Seidel iterative method.

3 Formulation of LPP's and their duals. Solving LPP's by graphical and Simplex methods, solution of transportation problem.

APPLIED STATISTICS

SEMESTER-V

Note:
1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/or B.A./ B.Sc. Statistics.
2 The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.
3. There is one paper with code 301AS in the subject of Applied Statistics in B.A./B.Sc. Semester-V, having a total of 100 marks.
4 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 301 AS: ESTIMATION AND TESTING OF HYPOTHESIS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide

(i) a systematic account of testing and closely related theory of point estimation and confidence sets, together with their applications.
(ii) exposure to various statistical designs leading to the analysis of variance, elimination of heterogeneity of the data and construction of designs.
(iii) an insight into Multivariate Techniques.

Notes:

1 There will be in all nine (9) questions, all of equal marks. The first question is compulsory and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit.

2 Simple non-programmable calculator is allowed.
3 Statistical tables and log tables will be provided on request.

UNIT –I

Estimators and estimates, unbiased, consistent, efficient estimators. Methods of moments, maximum likelihood estimators for the parameters of Binomial, Poisson and normal distributions, confidence intervals.

Tests of a statistical hypothesis, two types of errors, power of a test, Tests for the parameters of Binomial, Poisson and normal distributions, Chi-squared tests of goodness of fit. Wilcoxon and sign test.

UNIT –II

Analysis of variance, one and two way classifications. Estimates of main effects, tests of significance for equality of effects.

Principles of design of experiments- Randomization, replication and local control. Completely randomized and randomized block designs.

Multivariate Techniques (upto 4 variables only). Estimators of mean vector and variance-covariance matrix of multivariate (upto 4) normal distribution, multiple regression, multiple correlation and partial correlation.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B (2005) : Fundamentals of Statistics, Vol. I Chapters: 14 to18 (only the relevant portion from these chapters as suggested in the syllabus)

2. Goon, A.M., Gupta, M.K. and Das Gupta, B (2005) : Fundamentals of Statistics, Vol. II, Chapters: 1, 2 (only the relevant portion from these chapters as suggested in the syllabus)

Additional references:

1. Daniel, W.W. and Cross C.L. (2013) : Biostatistics. A foundation for analysis in the health Sciences, (10^{th} edition) Wiley India: New Delhi.
2. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

APPLIED STATISTICS

SIXTH SEMESTER

Note: 1. This course shall not be opted for along with courses in B.A./B.Sc. Mathematics and/ or B.A./ B.Sc. Statistics.

2. The candidate opting for this course will not be eligible for admission to M.A./M. Sc. Statistics.

3. There is one paper with code 302AS in the subject of Applied Statistics in B.A./B.Sc. Semester VI, having a total of 100 marks.

4. 9 Lectures of 45 minutes each per week shall be allotted for the teaching

Paper- 302AS: ECONOMICS AND INDUSTRIAL STATISTICS

Maximum Marks	**: 100**
Theory	**: 90**
Internal Assessment	**: 10**
Time allowed	**: 3 hours**

Objective: The objective of the course is to provide an idea about different sampling methods, use of index numbers and time series. It also provides exposure to the knowledge about controlling quality in industry. Different measures used in demography are described.

Notes:

1. There will be in all nine (9) questions, all of equal marks. The first question is **compulsory** and will be of short answer type covering the entire syllabus. Out of the remaining eight (8) questions, four (4) questions will be set from each Unit. The candidate will be required to attempt five questions in all including the compulsory first question and two questions from each Unit**.**
2. Simple non-programmable calculator is allowed.
3. Statistical tables and log tables will be provided on request.
4. 4 to 5 lectures (40 minutes each) per paper per week amounting in all to 9 lectures for two papers shall be allocated for the teaching.

UNIT-I

Sampling: Simple random and stratified sampling, optimum allocation in stratified sampling. Ratio and regression estimates.

Index Numbers: Index Numbers-as weighted averages, Price Index numbers, Quantity index numbers, Fisher's tests for index numbers.

Time Series: The four components of a time series, moving average, the Slutsky Yule effect, determination of trend by curve fitting and moving average methods.

UNIT –II

Quality Control: Construction, use and interpretation of control charts for mean, range, fraction defective and number of defects. Single sampling inspection plans. Concepts of producer's and consumer's risks, O.C. and A.O.Q. Curves.

Vital Statistics: Rates and ratios, crude death rate, age specific death rate, infant mortality rates, standardized death rates, direct and indirect methods. Measurement of fertility, crude birth rate, general, specific and total fertility rates. Standardized birth rates. Calendar Year rates.

Books Recommended

1. Goon, A.M., Gupta, M.K. and Das Gupta, B. (2005) : Fundamentals of Statistics, Vol. II, Ch. 3, 4, 6, 7, 9. (only the relevant portion from these chapters as suggested in the syllabus)

2. Daniel, W.W. and Cross C.L. (2013) : Biostatistics, A foundation for analysis in the health Sciences, Tenth edition Wiley India: New Delhi.

Additional References:

1. Gupta S.C. & Kapoor V.K. (2001) : Fundamentals of Applied Statistics, Sultan Chand & Sons Educational Publishers New Delhi.

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PHYSICS

B.Sc. (GENERAL) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2020-2021

General Instructions for teachers, students and paper setters :

1. There will be three papers of theory and one laboratory (practical course). Each of the theory papers is allocated 25 marks including 3(three) marks for the Internal assessment.
   The Practical examination is of 50 marks including 5 (Five) marks for the Internal assessment and will be held along with the sixth semester examination.
2. The number of lectures per week will be three for each theory paper and six for practicals.
3. The examination time for each theory paper will be three hours and it will be four hours for practicals.
4. Each theory paper will consist of **seven** questions comprising of three sections. First two sections will comprise of **three** questions from each of Units I and II of syllabus, and the third section will comprise of **one compulsory** question of **ten** short answer type parts covering whole syllabus. The question paper will be set for 44 marks - **All the questions in first and second sections will carry 9 (nine) marks each and the compulsory question will carry 8 marks.** Student will attempt two questions from each of the first two sections and any eight parts of the compulsory question. **After evaluation of the answer books out of 44 marks, the marks will be given out of 22 marks.**
5. The numerical problems /exercises in the question paper should be 25-30%.
6. The use of Non-programmable calculators will be allowed (paper setters should explicitly mention this on the question paper) in the examination centre but these will not be provided by the University/College. Mobile phones and pagers are not allowed in the examination hall.

PHYSICS

SEMESTER – V

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - I	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - I	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - I	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - I (30 Hrs.)

UNIT-I

Crystal structure: Symmetry operations for a two dimensional crystal. Two dimensional Bravais lattices, Three dimensional Bravais lattices, Basic primitive cells, Crystal planes and Miller indices, Diamond and NaCl structure. Crystal diffraction : Bragg's Law, Determination of crystal structure, Laue equations, Reciprocal lattices of SC, BCC and FCC, Bragg's law in reciprocal lattice, Brillouin zones and its derivation in two dimensions, structure factor and atomic form factor.

UNIT-II

Band Theory of solids, periodic potential and Bloch theorem, Kronig-Penney model, band gaps, band structures in conductors, direct and indirect semiconductors and insulators.
Free electron theory of metals, effective mass, drift current, mobility and conductivity (carrier concentration and mobility of carriers) and their variation with temperature in semi-conductors, Fermi level positions in intrinsic and extrinsic semiconductors, Wiedemann-Franz law, Hall effect in metals and semiconductors.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition, S.O.* Pillai, *New Age International Publishers.*
4. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - I (30 Hrs.)

UNIT-I

Concepts of current and voltage sources, Thevenin's theorem, Norton's theorem, Source conversion.
CRO, Block diagram, construction and principle of working, Use of CRO for frequency, time period, special features of dual trace, phase measurements.

Energy band diagrams in semiconductors, Direct and indirect semiconductors, Formula to calculate Position of Fermi level in p and n semiconductors, Barrier formation, energy band diagram of p-n junction, Formula for Depletion width, Qualitative ides of current flow mechanism in forward and reverse biased diode, v-i characteristics, static and dynamic resistance, Depletion and diffusion capacitance, zener diode, LED, photodiode and solar cell.

(Book 1, Book 3)

UNIT-II

Diode circuits, Clipping circuits, Rectification: half wave, full wave and bridge rectifiers, filter circuits (C, LC and π filters), rectification efficiency and ripple factor in LC filter, voltage regulation circuit using zener diode, voltage multiplier circuits.
Bipolar Junction transistors : Structure and working, different currents in transistor, switching action. Characteristics of CB, CE and CC configurations, Active, cutoff and saturation regions.
Load line analysis of transistors, Q-point, Transistor biasing and stabilization of operating point, fixed bias, collector to base bias, bias circuit with emitter resistor, voltage divider biasing circuit.
Working ans analysis of CE amplifier using h-parameters, current, voltage and power gain, input and output impedance. Class A, B and C amplifiers.

(Book 1, Book 2)

Recommended Books :

Essential Readings :

1. Electronic Devices and Circuit Theory, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, *7th ed.* McGraw Hill
3. *Solid State Electronic Devices,* 6th Ed., Ben G. Streetman and S. Banerjee, Eastern Economy Edition.

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata Mc Graw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha, and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - I (60 Hrs.)

UNIT-I

General properties of Nuclei : Constituents of nucleus and their intrinsic properties, Quantitative facts about nuclear size, mass, density, binding energy and its variation with mass number, Wave mechanical properties of nucleus, angular momentum, parity; magnetic moment and electric moments of the nucleus. properties of nuclear forces and saturation, meson theory of nuclear forces
Nuclear Models : Liquid drop model, semi-empirical mass formula, most stable isobar.
Evidence for nuclear shell structure, Nuclear shell model, concept of mean field.

UNIT-II

Radioactive decay, Units of radioactivity (Ci and Bq), Successive disintegration, Natural radioactivity, Radioactive series, Carbon dating.
Alpha decay, energetic, alpha spectrum, Gamow's theory of alpha decay, Geiger-Nuttal rule.
Beta decay, Qualitative discussion of beta spectrum, Evidence of existence of Neutrino, Conservation of nuclear energy in Beta minus, Beta plus and Electron capture decays.
Gamma-ray emission, selection rules, Internal conversion.

Nuclear Reactions: Types, Concept of compound and direct (pickup and stripping) reactions, Reaction differential and integral cross section, units, conservation laws and kinematics, Q-value equation, Coulomb (Rutherford) scattering cross section and distance of nearest approach.
Energy classification of neutrons, Nuclear fission in reactors, Reactor facilities available in India, Nuclear fusion in stars.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.

Further Readings :

1. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.
2. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
3. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The students are required to perform all the Nine experiments from each of the Units I and Unit II . The Practical examination will be held along with the sixth semester examination.

The aim of the project work is to develop the scientific and technical temper in the students and as such it may consist of development of a laboratory experiment, fabrication of a device or electronic circuit etc. The student will prepare a project report of about 10 pages. Assessment of the project work will be done on the basis of the effort put in the execution of the project, report prepared and viva-voce.

General Guidelines for Physics Practical Examinations :

Total : 50 marks

1. The distribution of marks is as follows :

(i)	One full experiment out of section–A requiring the student to take some data, analyse it and draw conclusions. (Candidates are expected to state their results with limits of error).	20
(ii)	One exercise based on experiment or Computer Programming from the Unit assigned to the student for the semester	7
(iii)	Viva-Voce and Record (Practical file)	10
(iv)	Project	8
(v)	Internal Assessment	5

Note for Examiners :

2. The marks scored under each head must be clearly written on the answer sheet.

3. There will be one session of 3 hours duration. The paper will have two sections. Section–A will consist of 4 experiments from each of Units I and Unit II, out of which an examinee will mark 3 experiments from either of units and one of these is to be allotted by the external examiner.

4. Section–B will consist of exercises/computer based activities which will be set by the external examiner on the spot. The length of the exercises should be such that any of these could be completed in one hour.

5. The examiner should take care that the experiment allotted to an examinee from section-A and exercise allotted from section–B are not directly related to each other.

6. Number of candidates in a group for practical examination should not exceed 12.

7. In a single group, no experiment be allotted to more than three examinees in the group.

List of Experiments :

Note : Each student should perform ***at least Nine experiments*** in the laboratory.

UNIT-I

I CONDENSED MATTER PHYSICS:

(i) Measurement of reverse saturation current in p-n junction diode at various temperatures and to find the approximate value of energy gap.
(ii) To draw forward and reverse bias characteristics of a p-n junction diode and draw a load line.
(iii) Study of a diode as a clipping element.
(iv) To measure the magnetic susceptibility of $FeCl_2$ solution by Quincke's method.

II ELECTRONICS AND SOLID STATE DEVICES :

(v) To study the response of RC-circuit to various input voltages (square, sine and triangular).
(vi) To measure the efficiency and ripple factors for (a) Half-wave, (b) Full wave, and (c) Bridge rectifier circuits.
(vii) To study the reduction in the ripples in the rectified output with RC, LC and π-filters.
(viii) To draw the characteristics of a Zener diode and LED using constant current source.
(ix) To study the stabilization of output voltage of a power supply with Zener diode.
(x) To set up an oscillator and study its output on CRO for different V values.
(xi) To study the characteristics of a thermistor and find its parameters.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. Print a 2D array in spiral form.
2. To find determinant of a given matrix.
3. To find inverse of a given matrix.
4. To interpolate the data values from the given set.

UNIT-II

I CONDENSED MATTER PHYSICS:

(i) To trace the B-H curves for different materials using CRO and find the magnetic parameters from these.
(ii) To find the conductivity of a given semi-conductor crystal using four probe method.
(iii) To determine the Hall coefficient for a given semiconductor.

II ELECTRONICS AND SOLID STATE DEVICES :

(iv) To measure and plot Common Emitter Characteristics of a transistor (pnp or npn).
(v) To plot Common Base Characteristics and determine h-parameters of a given transistor.
(vi) To draw output and mutual characteristics of an FET and determine its parameters.
(vii) To study the gain of an amplifier at different frequencies and to find band-width and gain-band- width product.

III NUCLEAR PHYSICS :

(viii) To draw the Plateau of a GM counter and find its dead time.

(ix) To study the statistical fluctuations using GM counter.

(x) To study the absorption of beta-particles and determine the end point energy using GM counter. Also determine the absorption co-efficient (for aluminium) from it.

(xi) Verification of Rutherford Scattering experiment-mechanical analogue.

Exercises :

1. Any one exercise based on the above given experiments.

Computer Based Activities : Elementary C language programs.

1. To solve simultaneous equations by elimination method.
2. Fitting a straight line or a simple curve of a given data.
3. Convert a given integer into binary and octal/hexadecimal system and vice versa.

Text and Reference Books :

1. *"A Laboratory Manual of Physics for Undergraduate Classes" by D.P.* Khandelwal.
2. *"B.Sc. Practical Physics" by C.L. Arora, S. Chand & Co. (2014)*
3. *"Numerical Analysis" by C. Dixon*
4. *Programming with C,* Byron Gottfried & Jitender Chhabra, *Schaum series*

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PHYSICS

SEMESTER – VI

Papers, marks and teaching hours allocation:

Paper A :	Condensed Matter Physics - II	Total Teaching hours 30
Paper B :	Electronics and Solid State Devices - II	Total Teaching hours 30
Paper C :	Nuclear & Particle Physics - II	Total Teaching hours 30
	Physics Practicals	Total Teaching hours 45

Paper A : CONDENSED MATTER PHYSICS - II (30 Hrs.)

UNIT-I

Lattice Dynamics : Lattice vibrations and phonons, Scattering of photons by phonons, Dynamics of a linear chain of similar atoms and chain of two types of atoms, optical and acoustic modes, Density of modes, Einstein and Debye theories of specific heats of solids.

Magnetic classification of materials (Dia, para, ferro, ferri, antiferro), Langevin theory of dia and paramagnetism, Quantum theory, Weiss's theory of Ferromagnetism, temperature dependence, hysteresis of ferromagnetic materials.

UNIT-II

Dielectric constant & polarizability, electric susceptibility, Clausius Mosotti equation, frequency dependence, ferroelectrics and Piezoelectrics.

Liquid crystals, various types and properties. Applications.

Superconductivity: Meisner effect, London's equation and penetration depth, critical magnetic field and temperature, DC and AC Josephson effect, BCS theory (formation of cooper pairs), ground state and energy gap.

Basic ideas of materials at nanoscale: Difference from bulk material properties, Nanoparticles, introduction to fabrication and characterization techniques, Carbon Nanostructures - nanotubes, grapheme. Applications of nanotechnology in various fields.

Recommended Books :

Essential Readings :

1. *Introduction to Solid State Physics, C.* Kittel, Wiley Eastern
2. *Elements of Modern Physics,S.*H. Patil, Tata McGraw Hill, 1985.
3. *Solid State Physics, 6th Edition,* S.O. Pillai, New Age International Publishers.
4. *Fundamental of Physics, Vol. II,* R.M.P. Jaiswal, S.K. Gupta and A. Rani, R. Chand and Co.

Further Readings :

1. *Elements of Solid State Physics,* 2nd Edition, J.P. Srivastava, Prentice Hall.
2. *Elementary Solid State Physics,* M. Ali Omar, Pearson.
3. *Crystallography for Solid State Physics,* A.R. Verma, O.N. Srivastava, Wiley Eastern.

Paper-B : ELECTRONICS AND SOLID STATE DEVICES - II (30 Hrs.)

UNIT-I

Structure and working of JEFT, characteristics, drain and transconductance curve, FET amplifier and its voltage gain, Structure and working of MOSFET.

Feed back in amplifiers, voltage gain of negative feedback amplifier, advantages of negative voltage feedback, negative current feedback circuit, emitter follower.

Theory of sinusoidal oscillations, loop gain and phase, Lead-lag RC circuit, Wein bridge oscillator. Barkhausen criterion of sustained oscillations, positive feedback amplifier, LC oscillators, Colpitts and Hartley oscillators.

(Book1, Book2)

UNIT-II

Operational amplifier (black box approach) : Characteristics of ideal and practical opamp 741, open-loop and closed-loop gain, characteristics and applications - inverting and non-inverting amplifiers, adder, subtractor, differentiator and integrator, Comparator, Timer IC555, pin diagram and its applications as astable and monostable multivibrator.

(Book1, Book2)

Analog and digital circuits, binary numbers, decimal to binary conversions, AND, OR, NOT gates, NAND NOR gates as universal gates, XOR and XNOR gates.

De Morgan's theorem, Simplification of logic circuit using Boolean algebra, Minterms and Maxterms, Conversion of a truth table into an equivalent logic circuit by Sum of products method. (Book 3)

Analog and digital communication systems, Amplitude and Frequency modulation, Power in AM wave, generation and detection, Brief account of Satellite communication, Sky-wave communication, and mobile communication.

Recommended Books :

Essential Readings :

1. *Electronic Devices and Circuit Theory*, 7th Ed., R. Boylestad, L. Nashelsky, Prentice Hall Inc.
2. *Electronic Principles, A.P.* Malvino, and D.J. Bates, 7th *ed.* McGraw Hill
3. Digital Principles and Applications, 7th Ed., A.P. Malvino, D.P. Leach and Saha, 2011, Tata McGraw Hill

Further Readings :

1. *Basic Electronics,* 5th Edition, B.L. Thareja, S. Chand.
2. *Basic Electronics and Linear Circuits, N.N.* Bhargave, D.C. Kulshreshtha, and S.C. Gupta,Tata McGraw Hill.
3. *Foundations of Electronics, D.* Chatopadhyay, P.C. Rakshit, B. Saha and N.N. Purkit, New Age International

Paper-C : NUCLEAR AND PARTICLE PHYSICS - II (30 Hrs.)

UNIT-I

Interaction of nuclear radiation with matter: Energy loss due to ionization (Bethe Bloch formula), Range and energy straggling, Energy loss of electrons and positrons, radiation loss by fast electrons, Bremsstrahlung, electron-positron annihilation, production of Cerenkov radiation,
Gamma-ray interaction with matter, photoelectric effect, Compton scattering, pair production (qualitative description).
Detectors for nuclear radiation: Gas-filled detectors, Ionization chamber, proportional counter, G.M. counter, Scintillation detector and Photomultiplier tube, Brief account of Semiconductor detectors.

UNIT-II

Particle Physics : Particle interactions : basic features and their exchange particles, Classification of elementary particles, properties, decay modes of leptons and mesons, Antiparticles, charge conjugation
Symmetries and Conservation principles, Lepton number, baryon number, Isospin, Hypercharge, Strangeness and charm, Gell-mann Nishijima formula
Concept of the quark model, color quantum number and gluons.
Origin and composition of Cosmic rays, Secondary cosmic rays, Effect of magnetic field of earth, Van Allen belts.
Particle accelerators: Cockcroft-Walton accelerator, Van-de Graaff generator, Tandem accelerator Linear accelerator, Cyclotron. Brief account of Syncrhrotron, Accelerator facilities available in India.

Recommended Books :

Essential Readings:

1. *Concept of Modern Physics,* 6th Ed., A. Beiser, S. Mahajan and S.R. Choudhury, Tata McGraw Hill.
2. *Nuclear Physics, I.* Kaplan,Addition-Wesley, Publishing Company Inc.
3. *Physics for Degree Students*, C.L. Arora and P.S. Hemne, S. Chand & Co., 2014.
4. *An Introduction to Nuclear Physics, M.R.* Bhiday, and V.A. Joshi, Orient Longman.

Further Readings :

1. *Concepts of Nuclear Physics, B.L.* Cohen, Tata McGraw Hill
2. *Fundamentals of Nuclear Physics, J.* Verma, CBS.

PHYSICS PRACTICALS

The Practical examination will be held along with the sixth semester examinations.General Guidelines for Physics Practical Examinations and syllabus is given in syllabus for Semester V.

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

SEMESTER-6th

Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Total Marks

SEMESTER-5-100

SEMESTER-6-100

200

CHEMISTRY

SEMESTER-5th

Scheme of Teaching and Examination

Paper	*Course*		*Teaching Hrs.*	*Max. Marks*
XVII	Inorganic Chemistry-A	30	3 periods per week	22+3 internal assessment
XVIII	Organic Chemistry-A	30	3 periods per week	22+3 internal assessment
XIX	Physical Chemistry-A	30	3 periods per week	22+3 internal assessment
XX	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XVII: INORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Metal – Ligand Bonding in Transition Metal Complexes:

Limitations of valence bond theory, an elementary idea of crystal – field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal – field parameters, Spectro chemical Series.

UNIT-II **(7 Hrs.)**

Thermodynamic and Kinetic Aspects of Metal Complexes :

A brief outline of thermodynamic and Kinetic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes.

UNIT-III **(8 Hrs.)**

Organometallic Chemistry:

Definition, nomenclature and classification of organometallic compounds. Preparation, properties, bonding and applications of alkyls and aryls of Li, Al , Hg, Sn and Ti, a brief account of metal – ethylenic complexes and homogeneous hydrogenation, mononuclear carbonyls and the nature of bonding in metal carbonyls

UNIT-IV **(7 Hrs.)**

Bioinorganic Chemistry:
Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin. Biological role of alkali and alkaline earth metal ions. Nitrogen fixation.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2. Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3. Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4. Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5. Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6. Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7. Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8. Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9. Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XVIII: ORGANIC CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I

Electromagnetic Spectrum: Absorption Spectra –I: **(7 Hrs.)**
Ultraviolet (UV) absorption spectroscopy – Absorption laws (Beer – Lambert Law), molar absorptivity, presentation and analysis of UV spectra, types of electronic transitions, effect of conjugation. Concept of chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. UV spectra of conjugated enes and enones.

Woodward Fieser Rules and their applications in calculating maximum values of conjugated alkenes (cyclic as well as acyclic) and conjugated carbonyl compounds.

UNIT-II **(7 Hrs.)**

Electromagnetic Spectrum: Absorption Spectra-II:

Infrared (IR) absorption spectroscopy – Molecular vibrations, Hooke's law, selection rules, intensity and position of IR bands, measurement of IR spectrum, fingerprint region, characteristic absorptions of various functional groups and interpretation of IR spectra of simple organic compounds.

Problems pertaining to the structure elucidation of simple organic compounds using UV, IR and PMR spectroscopic techniques.

UNIT-III **(8 Hrs.)**

Spectroscopy:

Nuclear magnetic resonance (NMR) spectroscopy.
Proton magnetic resonance (^{1}H NMR) spectroscopy, nuclear shielding and deshielding, chemical shift and molecular structure, spin-spin splitting and coupling constants, area of signals, interpretation of PMR spectra of simple organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,1,2-tribromoethane, ethyl acetate, toluene and acetophenone.

UNIT-IV **(8 Hrs.)**

Carbohydrates:

Classification and nomenclature. Monosaccharides, mechanism of osazone formation, interconversion of glucose and fructose, chain lengthening and chain shortening of aldoses. Configuration of monosaccharides. Erythro and threo diastereomers. Conversion of glucose into mannose. Formation of glycosides, ethers and esters. Determination of ring size of monosaccharides. Cyclic structure of D (+) – glucose. Mechanism of mutarotation.

Structure of ribose and deoxyribose.

An introduction to disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose) without involving structure determination.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1. Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.
2. Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.
3. Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.
4. Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.
5. Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.
6. Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XIX: PHYSICAL CHEMISTRY-A

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Elementary Quantum Mechanics-I:

Black-body radiation, Planck's radiation law, photoelectric effect, heat capacity of solids, Bohr's model of hydrogen atom (no derivation) and its defects, Compton effect.

De Broglie hypothesis, the Heisenberg's uncertainty principle, Sinusoidal wave equation, Hamiltonian operator, Schrodinger wave equation and its importance, physical interpretation of the wave function, postulates of quantum mechanics, particle in a one dimensional box.

Schrodinger wave equation for H-atom, separation into three equations (without derivation), quantum numbers and their importance, hydrogen like wave functions, radial wave functions, angular wave functions.

UNIT-II (7 Hrs.)

Elementary Quantum Mechanics-II:

Molecular orbital theory, basic ideas – criteria for forming M.O. from A.O., construction of M.O.'s by LCAO – H_2^+ ion. Calculation of energy levels from wave functions, physical picture of bonding and antibonding wave functions, concept of σ, $\sigma*$, π, π^* orbitals and their characteristics. Hybrid orbitals – sp, sp^2, sp^3; calculation of coefficients of A.O.'s used in these hybrid orbitals.

Introduction to valence bond model of H_2, comparison of M.O. and V.B. models.

UNIT-III (8 Hrs.)

Photochemistry-I:

Interaction of radiation with matter, difference between thermal and photochemical processes. Laws of Photochemistry: Grothus – Drapper law, Stark – Einstein law, Jablonski diagram depicting various processes occurring in the excited state.

UNIT-IV (7 Hrs.)

Photochemistry-II:

Qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions – energy transfer processes (simple examples).Photochemistry of carbonyl compounds and alkenes.

Instructions for paper setters and candidates:

i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.

iii. Compulsory question carries six marks and remaining all questions carry four marks each.

Books suggested

1. Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2. Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3. Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4. Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5. Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6. Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7. Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8. Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9. Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10. Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11. Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12. Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13. Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XX: LABORATORY PRACTICALS **Max. Marks: 22+3**

INORGANIC CHEMISTRY

Synthesis and Analysis: **6 Periods/ week**

(a) Preparation of sodium trioxalatoferrate (III), $Na_3[Fe(C_2O_4)_3]$ and determination of its composition by permaganometry.
(b) Preparation of copper tetraammine complex $[Cu(NH_3)_4]SO_4$.
(c) Preparation of cis-and trans-bisoxalatodiaqua chromate (III) ion.

Instrumentation
Solvent Extraction
Separation and estimation of Mg(II) and Fe(II).

PHYSICAL CHEMISTRY

Electrochemistry

(a) To determine the strength of the given acid conductometrically using standard alkali solution.
(b) To determine the solubility and solubility product of a sparingly soluble electrolyte conductomertircally.
(c) To study the saponification of ethyl acetate conductometrically.
(d) To determine the ionization constant of a weak acid conductometrically.
(e) To study the distribution of iodine between water and CCl_4.
(f) To study the distribution of benzoic acid between benzene and water.

Molecular Weight Determination

(a) Determination of molecular weight of a non – volatile solute by Rast method.
(b) Determination of the apparent degree of dissociation of an electrolyte (e.g. NaCl) in aqueous solution of the substance.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an inorganic complex : 7 marks

Q.No. 2. Physical Chemistry : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1. Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.
2. Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.
3. Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.
4. Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.
5. Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.
6. Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.
7. Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.
8. Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.
9. Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.
10. Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

CHEMISTRY
SEMESTER-6th
Scheme of Teaching and Examination

Paper	*Course*	*Teaching Hrs.*		*Max. Marks*
XXI	Inorganic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXII	Organic Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIII	Physical Chemistry-B	30	3 periods per week	22+3 internal assessment
XXIV	Laboratory Practicals		6 periods per week	22+3 internal assessment
		Total	*15 periods/week*	*100*

Paper-XXI: INORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course
To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Silicones and Phosphazenes:

Silicones and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.

UNIT-II **(8 Hrs.)**

Hard and Soft Acids and Bases (HSAB):

Classification of acids and bases as hard and soft Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, theoretical basis of hardness and softness, electronegativity and hardness and softness.

UNIT-III **(8 Hrs.)**

Electronic Spectra of Transition Metal Complexes:
Types of electronic transitions, L – S coupling, selection rules for *d-d* transitions, spectroscopic ground states, Orgel – energy level diagram for d^1 and d^9states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-IV **(7 Hrs.)**

Magnetic Properties of Transition Metal Complexes:

Types of magnetic behaviour, methods of determining magnetic susceptibility, spin-only formula. Correlation of μ_s and μ_{eff} values, orbital contribution to magnetic moments, application of magnetic moment data for 3*d*-metal complexes.

Instructions for paper setters and candidates:

i ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Cotton, F.A., Wilkinson, G., Gaus, P.L., Basic Inorganic Chemistry; 2nd edition, Pubs: John Wiley and Sons, 1995.
2 Lee, J.D., Concise Inorganic Chemistry; 4th edition, Pubs: Chapman and Hall Ltd., 1991.
3 Shriver, D.E., Atkins, P.W., Langford, C.H., Inorganic Chemistry; 4th edition, Pubs: Oxford University Press, 2006.
4 Dauglas, B., McDaniel, D., Alexander, J., Conepts and Models of Inorganic Chemistry; 3rd edition, Pubs: John Wiley and Sons Inc., 1999.
5 Porterfeild, W.W., Inorganic Chemisty; Pubs: Addison-Wesley Publishing Company, 1984.
6 Miessur, G.L., Tarr, D.A., Inorganic Chemistry; 3rd edition, Pubs: Pearson Education Inc., 2004.
7 Jolly, W.L., Modern Inorganic Chemistry; 2nd edition, Pubs: Tata McGraw-Hill Publishing Company Ltd., 1991.
8 Purcell, K.F., Kotz, J.C., Inorganic Chemistry; Pubs: W.B. Saunders Company, 1977.
9 Puri, B.R., Sharma, L.P., Kalia, K.C. Principles of Inorganic Chemistry; 30th edition, Pubs: Milestones Publishers. 2006-07.

Paper-XXII: ORGANIC CHEMISTRY-B

Time : 3 Hrs
Max. Marks: 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(8 Hrs.)**

Amino Acids, Peptides, Proteins and Nucleic Acids:

Classification, structure and stereochemistry of amino acids. Acid- base behavior, isoelectric point and electrophoresis. Preparation and reactions of α - amino acids.

Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid – phase peptide synthesis. Structures of peptides and proteins. Levels of protein structure. Protein denaturation/renaturation.

Nucleic Acids : Introduction. Constituents of nucleic acids. Ribonucleosides and ribonucleotides. The double helical Structure of DNA.

UNIT-II **(7 Hrs.)**

Synthetic Polymers:

Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization, Ziegler – Natta polymerization and vinyl polymers.

Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins, urea formaldehyde resins, epoxy resins and polyurethanes.

Natural and synthetic rubbers.

UNIT-III **(7 Hrs.)**

Organic Synthesis via Enolates:

Acidity of ά-hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: the Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.

UNIT-IV **(8 Hrs.)**

Organometallic Compounds:

Organomagnesium Compounds: The Grignard reagents – Formation, structure and chemical reactions.

Organozinc Compounds: Formation and Chemical reactions.

Organolithium Compounds: Formation and Chemical reactions.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***

ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***

iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Morrison, R.T., Boyd, R.N., Organic Chemistry; 6th edition, Pubs: Prentice-Hall, 1992.

2 Wade Jr., L.G., Singh, M.S., Organic Chemistry; 6th edition, Pubs: Pearson Education, 2008.

3 Mukherji, S.M., Singh, S.P., Kapoor, R.P., Organic Chemistry; Pubs: New Age International, 1985, Vol. I.II, III.

4 Carey, F.A., Organic Chemistry; 4th edition, Pubs: McGraw-Hill, 2000.

5 Solomons, T.W., Fundamentals of Organic Chemistry; 5th edition, Pubs: John Wiley & Sons, 1997.

6 Streitwieser, A., Clayton, Jr., Heathcock, H., Introduction to Organic Chemistry; 3rd edition, Pubs: Macmillan Publishing Company, 1989.

Paper-XXIII: PHYSICAL CHEMISTRY-B

Time : 3 Hrs
Max. Marks : 22+3
30 Hrs. (2 Hrs/Week)
3 Periods/Week

Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (GENERAL) (Semester system) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

UNIT-I **(7 Hrs.)**

Solid State-I:

Definition of space lattice, unit cell and Miller Indices

Laws of Crystallography – (i) Law of Constancy of Interfacial Angles, (ii) Law of Rationality of Indices, (iii) Law of Symmetry. Symmetry elements in crystals.

UNIT-II **(8 Hrs.)**

Solid State-II:

X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure of NaCl, KCl and CsCl (Laue's method and powder method). Applications of Powder diffraction for structure determination, Thermal and photochemical reaction in solid state

UNIT-III **(8 Hrs.)**

Spectroscopy :
Introduction : Electromagnetic radiation, regions of the spectrum, basic features of different spectrometers, statement of the Born-Oppenheimer approximation, degrees of freedom.

Rotational Spectrum:
Diatomic molecules. Energy levels of a rigid rotor (semi – classical principles), selection rules, spectral intensity, determination of bond length, qualitative description of non-rigid rotor, isotope effect.

UNIT-IV **(7 Hrs.)**

Vibrational Spectrum:
Infrared Spectrum : Energy levels of simple harmonic oscillator, selection rules, pure vibrational spectrum intensity, determination of force constant and qualitative relation of force constant and bond energies, effect of anharmonic motion and isotope on the spectrum, idea of vibrational frequencies of different functional groups. Raman Spectrum : Concept of polarizability, pure rotational and pure vibrational, Raman spectra of diatomic molecules, selection rules.

Electronic Spectrum:
Concept of potential energy curves for bonding and antibonding molecular orbitals, qualitative description of selection rules and Franck- Condon principle.

Qualitative description of σ, π – and n M.O., their energy levels and the respective transitions.

Instructions for paper setters and candidates:

i. ***Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.***
ii. ***The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.***
iii. ***Compulsory question carries six marks and remaining all questions carry four marks each.***

Books suggested

1 Atkins, P., Paula, J.de, Atkins Physical Chemistry; 8th edition, Pubs: Oxford university press, 2008.
2 Puri, B.R., Sharma, L.R., Pathania, M.S., Principles of Physical Chemistry; 43rd edition, Pubs: Vishal Publishing Co., 2008.
3 Barrow, G.M., Physical Chemistry; 6th edition, Pubs: McGraw Hill Company Inc, 1996.
4 Rao, C.N.R., University General Chemistry; Pubs: Macmillan of India, 1985.
5 Berry, R.S., Rice, S.A., Ross, J., Physical Chemistry; 2nd edition, Pubs: Oxford University Press, 2000.
6 Albert, R.A., Silbey, R.J., Physical Chemistry; I edition, Pubs: John Wiley & Sons Inc., 1992.
7 Dogra, S.K., Dogra, S., Physical Chemistry Through Problems, Pubs: Wiley Eastern limited, 1991.
8 Levine, I.N., Physical Chemistry; 5th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd, 2002.
9 Moore, W.J., Basic Physical Chemistry; Pubs: Prentice Hall of India Pvt. Ltd., 1983.
10 Metz, C.R., Theory and Problems of Physical Chemistry; Schaum's outline series, 2nd edition, Pubs: McGraw-Hall Book Company, 1989.
11 Banwell, C.N., McCash, E.M., Fundamentals of Molecular Spectroscopy; 4th edition, Pubs: Tata McGraw Hill Publishing Co. Ltd., 1999.
12 Atkins, P. Friedman, R. Molecular Quantum Mechanics; 4th edition Pubs: Oxford University Press, 2007.
13 Levine, I.N., Quantum Chemistry; 5th edition, Pubs: Prentice Hall International Inc., 2000.

Paper – XXIV: LABORATORY PRACTICALS **Max. Marks: 22+3**

ORGANIC CHEMISTRY
Laboratory Techniques
Column Chromatography
Separation of fluorescein and methylene blue.
Separation of leaf pigments from spinach leaves.

Synthesis of Organic Compounds

(a) Aliphatic electrophilic substitution.
Preparation of iodoform from ethanol and acetone.
(b) Aromatic electrophilic substitution.
Nitration

Preparation of m-dinitrobenzene
Preparation of p-nitroacetanilide
Preparation of p-iodoaniline from aniline.
Preparation of methyl orange from N,N-dimethyl aniline and sulphanilic acid.

Halogenation

Preparation of p-bromoacetanilide

Preparation of 2,4,6 – tribromophenol

(c) Oxidation

Preparation of benzoic acid from toluene.

(d) Reduction

Preparation of aniline from nitrobenzene

Preparation of m-nitroaniline from m - dinitrobenzene

Stereochemical study of Organic Compounds via Models

R and S configuration of optical isomers.

E, Z configuration of geometrical isomers

Conformational analysis of cyclohexanes and substituted cyclohexanes.

General Instruction to the Examiners:

Note: Practical examination will be of four hours duration & shall consist of the following questions:

Q.No. 1*. Preparation of an organic compound : 7 marks

Q.No. 2. Experiment based onLaboratory Technique : 7 marks

Students shall be allowed the choice to opt for one experiment out of the three offered. The candidate will write theory, short procedure and calculations of that experiments in the next 10 minutes. Note – Book / Books is/are not allowed during writing.

Q.No. 3. Viva-Voce : 5 marks

Minimum of four questions (2 marks each) be asked on the background of practical course.

Q.No. 4. Note Book : 3 marks

*If a question on preparation is asked, then the students shall be required to give Equation, requirements & short procedure in the first 10 minutes. Note Books are not allowed during writing.

Books Suggested (Laboratory Courses)

1 Denny, R.C. Vogel's Quantitative Inorganic Analysis; 4th edition, Pubs: English Language Book Society, 1985.

2 Harwoor, L.M., Moody, J., Experimental Organic Chemistry; 1st edition, Pubs: Blackwell Scientific Publicaitons, 1989.

3 Palmer, W.G., Jamer, C., Swinehart, S., Experimental Inorganic Chemistry; 1st edition, Pubs: Perlkin-Elmer Corporation, 1969.

4 Forniss, B.S., Rogers, V., Vogel's Text Book of Practical Organic Chemistry; Pubs: Dorling Kindhsky Pvt. Ltd., 1989.

5 Garland, C.W., Experiments in Physical Chemistry; 1st edition, Pubs: McGraw Hill Book Company, 1989.

6 Bansal, R.K., Laboratory Manual of Organic Chemistry; 3rd edition, Pubs: Wiley Eastern Limited, 1994.

7 Furniss, B.S., Hannaford, A.J., Rogers, V., Smith, P.W.G., Tatchell, A.R., Vogel's Text Book of Practical Organic Chemistry; 4th edition, Pubs: Longman group, 1978.

8 Khosla, B.D., Garg, V.C., Gulati, A., Senior Practical Physical Chemistry; 11th edition, Pubs: R.Chand & Co., New Delhi, 2002.

9 Das, R.C., Behra, B. Experimental Physical Chemistry; Pubs: Tata McGraw Hill Publishing Co. Ltd., 1983.

10 Levitt, B.P., Findlays Practical Physical Chemistry; 8th edition, Pubs: Longman group Ltd. London & New York, 1978.

BOTANY

B.Sc. (General) Botany Fifth and Sixth Semester Syllabus (Examinations, 2020-2021)

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper-A:	Plant Physiology-I	3 hrs.	36	04	40
Theory Paper-B:	Plant Ecology	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
Sixth Semester					
Theory Paper-A:	Plant Physiology-II	3 hrs.	36	04	40
Theory Paper-B:	Economic Botany	3 hrs	36	04	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	02	20
		Total			**200**

Note:

1. The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.

2. There will be two theory papers (A&B) in each semester. Each paper will consist of **9** questions. Question No.1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A&B. The remaining 8 questions in papers A&B shall include two questions from each unit. Candidates shall be required to attempt one question from each unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY

SEMESTER -V

THEORY PAPER- A: PLANT PHYSIOLOGY-I

Objectives: The basic aim of this paper is to familiarize the students with various concepts of functions and metabolism of plants. The course material of this paper would enable the students to correlate structural diversity of various plant forms with functional differentiation and its biological aspects including biological nitrogen fixation and mineral nutrition. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc.

UNIT-I

Plant Water Relations: Importance of water to plant life; physical properties of water; imbibition, diffusion, osmosis, plasmolysis and deplasmolysis, concept of osmotic potential, water potential and pressure potential; absorption of water, active and passive mechanism of water absorption; transport of water, mechanism and theories to explain ascent of sap; transpiration types, mechanism of opening and closing of stomata, mechanism of transpiration, factors affecting transpiration, antitranspirants.

UNIT-II

Mineral nutrition: Hydroponics and its importance; essential macro-and micro elements, essentiality criteria, deficiency symptoms and their role; mineral uptake; mechanism of mineral uptake (active, passive absorption and modern concepts).

UNIT-III

Nitrogen Metabolism: Biological nitrogen fixation; importance of nitrate reductase and its regulation; ammonia assimilation.

Lipid Metabolism: Structure and function of lipids; β – oxidation; saturated and unsaturated fatty acids.

UNIT-IV

Proteins: Classification, role and structure (primary, secondary and tertiary) of proteins.

Basics of enzymology: Discovery and nomenclature; classification, structure, properties, factors affecting enzyme activity, mechanism of enzyme action.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
3. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
4. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
5. Taiz, L. and Zeiger, E. Plant Physiology (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010
6. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.

PAPER-B: PLANT ECOLOGY

Objective: The basic objective of this paper is to make students aware about the role of environment in causing structural and functional variation in plants. Since the present day problems of varied nature like pollution, Global Warming etc. are directly or indirectly related to ecology, it is more than desired to provide the students with knowledge of basic concepts of ecology.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Definition, scope, relationship with other sciences.

Plant Environment: Climatic, edaphic, topographic and biotic factors affecting growth and distribution of plants.

UNIT-II

Ecosystem : Concept, structure; abiotic and biotic components; trophic levels, food chain, food web, ecological pyramids, energy flow, biogeochemical cycles of carbon, nitrogen and water.

UNIT-III

Community Ecology: Community characteristics, frequency, density cover, life forms, biological spectrum; ecological succession – Hydrosere and Xerosere.

UNIT-IV

Applied Ecology :

a) Air, water and soil pollution and their control.

b) Conservation and management of natural resources. (renewable and non-renewable)

Suggested Readings

1. Kormondy, E.J. Concepts of Ecology. Prentice-Hall of India Pvt. Ltd., New Delhi, 1996.
2. Odum, E. and Barrett, G.W. Fundamentals of Ecology, Cengage Learning Publisher, 2004.
3. Odum, E.P. Basic Ecology, Saunders, Philadelphia, 1983.
4. Saini A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
5. Sharma, P.D. Ecology and Environment, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To determine osmotic pressure of cell sap by plasmolytic method.

2. To demonstrate imbibition pressure using:

   i) Imbibition pressure apparatus.
   ii) Plaster of Paris cone.

3. To demonstrate osmosis through animal membrane/potato osmoscope.

4. To demonstrate plasmolysis and deplasmolysis.

5. To demonstrate mechanical and electrical adsorption.

6. To demonstrate the measurement of transpiration using simple potometer.

7. To demonstrate transpiration pull.

8. To study the effect of light intensity, and wind velocity on the rate of transpiration using Ganong's potometer.

9. To compare the rate of transpiration from the two sides of a leaf using :

   i) Vaseline method
   ii) Cobalt chloride method

10. To demonstrate the mechanism of opening and closing of stomata.

11. To demonstrate the path of ascent of sap.

Plant Ecology:

1. Study of ecological adaptations in external characters of :

   Hydrilla, Potamogeton, Ceratophyllum, Vallisneria, Lemna, Eichhornia Nelumbium, Calotropis, Nerium, Acacia, Zizyphus, Casuarina, Capparis, Asparagus, Ruscus, Opuntia, Euphorbia royleana.

2. To prepare permanent stained slide to show ecological adaptations in the internal structure of the following:

   a) T.S. stem of *Hydrilla*

   b) T.S. leaf and petiole of *Eichhornia*

   c) T.S. leaf and petiole of *Nelumbium*

   d) T.S. leaf of *Nerium*

   e) T.S. stem of *Casuarina* and *Capparis*

3. To determine soil pH using pH paper/solution/pH meter.

4. To determine water holding capacity of soil.

Guidelines for Botany Practical Examination

Max. Marks: 20
Practical: 18
Int. Assess. 02
Time: 3 hours

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner. 6
2. Identify and cut T.S. of stem, leaf or petiole (to be announced by the examiner) of specimen B. Make its permanent stained slide and show it to the examiner. Draw its labelled diagram and write its morphological and anatomical characters of ecological importance. 6
3. Practical note-book 3
4. *Viva-voce* 3

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BOTANY

SEMESTER -VI

PAPER-A: PLANT PHYSIOLOGY-II

Objectives: The main objective of this paper is to familiarize the students with growth and metabolic processes of the plants. It also deals with the plant development, differentiation and their regulatory mechanism along with basic concepts in tissue culture.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students will be familiarize with the various experiments pertaining to theory syllabus.

UNIT-I

Photosynthesis: Significance, historical aspect; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems, cyclic and non- cyclic photophosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration; factors affecting photosynthesis; transport of organic substances: Mechanism of phloem transport, source-sink relationship, factors affecting translocation.

UNIT-II

Respiration: ATP – The biological energy currency; aerobic and anaerobic respiration; Krebs cycle; electron transport mechanism (Chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway; respiratory quotient.

UNIT-III

Growth and development: Definitions; phases of growth and development; kinetics of growth, factors affecting growth; plant movements; the concept of photoperiodism, physiology of flowering; florigen concept; roles of plant hormones– auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery.

UNIT-IV

Biotechnology: Functional definition; basic aspects of plant tissue culture, its applications and somatic hybridization.

Suggested Readings:

1. Bhatia, K.N. Plant Physiology- A Modern Treatise, Trueman Book Co. Jalandhar, 2015.
2. Bhojwani, S.S. Plant Tissue Culture: applications and Limitations. Elsevier Science Publishers, New York, USA, 1990.
3. Hopkins, W.G. Introduction to Plant Physiology. John Wiley & Sons, Inc. New York, U.S.A., 1995.
4. Salisbury, F.B. and Ross, C.W. Plant Physiology (4th Edition) Wadsworth Publishing Co. California, USA, 1992.
5. Srivastava, H.N. Plant Physiology, Biochemistry & Bio-technology. Pradeep Publication, Jalandhar, 2008.
6. Srivastava, H.S. Plant Physiology, Bio-chemistry & Bio-technology, Rastogi Publications, Meerut, 2008.
7. Srivastava, H.S. and Shankar, N. Plant Physiology and Bio-chemistry, Rastogi Publications, Meerut, 2012.
8. Verma, B. Plant Physiology (1st Edition), Athena Academic, St. John Street, London, UK, 2007.
9. Taiz, L. and Zeiger, E. Plant Physiology (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010

PAPER-B: ECONOMIC BOTANY

Objective: The basic objective of this paper is aimed to give an insight into plant wealth such as medicinal plants; crop plants; beverages; spices; condiments; sugar; fiber; pulp & oil yielding plants of commercial & economic importance. Both the aspects of this paper give a sound basis of ecology and economic botany so that students can venture into fields like Environmental Biology, Conservation Biology, Forestry, Agriculture, Horticulture and Crop production etc.

Teaching Methodology: Teaching methodology includes series of lectures making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Cereals (Wheat, Rice and Maize)
ii) Fibres (Cotton)
iii) Vegetables (Potato)

UNIT-II

Crop production: Area of cultivation, soil requirement, cultivation practices and high yielding varieties of :

i) Fruits (Mango, Grapes, Lemon)
ii) Sugar-yielding plants (Sugarcane)
iii) Oil-yielding plants (Groundnut, Mustard)

UNIT-III

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Wheat, Maize, Rice, Moong, Gram (Food).
ii) Teak, Shisham, Deodar, Sal (Timbers).
iii) Cotton, Jute, Coir, Flax (Fibres).
iv) Fennel, Coriander, Turmeric, Ginger, Mint, Clove (Spices and Condiments).

UNIT-IV

Elementary knowledge of the following plants (Botanical names, families, parts used and economic importance) :

i) Bamboo, Eucalyptus (Pulp plants).
ii) Liquorice, Belladona, Aconite, Ashwagandha, Arjun, Poppy, Amla (Medicinal plants).
iii) Tea and Coffee (Beverages).

Forestry: Forest conservation, wood seasoning and its preservation.

Suggested Readings

1. Kochhar, S.L. Economic Botany in Tropics, (4th edition). Macmillan India Ltd., New Delhi, 2012.
2. Saini, A. Ecology and Economic Botany, Trueman Book Co., Jalandhar, 2015.
3. Sharma, O.P. Hill's Economic Botany (Late Dr. A.F. Hill, Adapted by O.P. Sharma). Tata McGraw Hill Co. Ltd., New Delhi, 1996.
4. Simpson B. and Ogorzaly, M. Economic Botany: Plants in our World (3rd edition). McGraw Hill Publisher, 2000.
5. Taiz, L. and Zeiger, E. Plant Physiology (5th edition), Sinauer Associates, Inc., Publishers, Massachusetts, USA, 2010
6. Singh, V., Pande, P.C. and Jain, D.K. Economic Botany, Rastogi Publications, Meerut, 2012.

Suggested laboratory exercises:

Plant Physiology:

1. To demonstrate that chlorophyll is necessary for photosynthesis.
2. To demonstrate that light is necessary for photosynthesis.
3. To demonstrate that CO_2 is essential for photosynthesis.
4. To demonstrate evolution of oxygen during photosynthesis in an aquatic plant.
5. To study the effect of light intensity and CO_2 concentration on the rate of photosynthesis using an aquatic plant.
6. To demonstrate aerobic respiration using flask method.
7. To demonstrate anaerobic respiration in germinating seeds or yeast.
8. To demonstrate the activity of amylase.
9. To demonstrate the activity of catalase in plant tissue (germinating seeds).
10. To demonstrate phototropism.
11. To demonstrate geotropism using clinostat.
12. To test for the presence of starch, proteins, amino acids, and reducing sugars in plant material.

Economic Botany:

Identification and morphology of economically important part/s of crop plants mentioned below:
Cereals (wheat, rice); Fibres (cotton); Vegetables (potato); Fruits (mango, grapes, lemon); sugar-yielding plants (sugarcane) and oil-yielding plants (groundnut, mustard).

Guidelines for Botany Practical Examination

1. Write material required, procedure and precautions for physiology experiment A (to be announced by the examiner). Perform the experiment, record observations, calculations if any, and results and show the experiment to the examiner.
2. Identify and write illustrated morphological notes on specimens B & C giving their economic importance.
3. Practical note-book
4. *Viva-voce*

ZOOLOGY
SEMESTER -V

Paper I: Developmental Biology	40 (36 +4) marks
Paper II: Applied Zoology-I	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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Total :	100 marks

Note : The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester V,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: DEVELOPMENTAL BIOLOGY (ZOO-501)

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

UNIT-I

Gametogenesis with particular reference to differentiation of spermatozoa. Vitellogenesis, role of follicle/subtesticular cells in gametogenesis.
Egg maturation : egg membranes : polarity of egg.

UNIT-II

Fertilization, parthenogenesis.

Cleavage : Types of cleavage patterns depending upon amount and distribution of yolk and position of spindle. Blastula and types of blastula.

Fate maps of chick and frog embryos.

UNIT-III

Induction: cell to cell interactions: juxtacrine, paracrine, gap junctions; basic concepts of organizers and inducers and their role. Determination and differentiation.

Development up to three germ layers in *Herdmania, Amphioxus*, frog, chick and rabbit.

UNIT-IV

Foetal membranes, their formation and role.

Mammalian placenta – its formation, types and functions.

Metamorphosis in *Herdmania* and *Rana* (frog)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Ballinsky, B.I. — An Introduction to Embryology, 5th edition, Saunders Co., 1981.
2. Gilbert, S.F. — Developmental Biology, 10th ed.,Sinauer Ass., Inc. Publ., 2014.
3. Urspaung, H. — Major Problems in Developmental Biology, Academic Press, New York, 1966.
4. Gardner, E.J., Simmons, M.J. and Snustad, — Principles of Genetics, 8thed., John Wiley and Sons, Inc. New York, 2004.
5. Wolport, Lewis — Principles of development, Oxford University press, Oxford, 2007

Practical based on Theory Paper

1. Study of the development of frog from permanent slides.
2. Window preparation and identification of stages of development in chick egg.
3. Study of the development of chick embryo from permanent slides up to 96 hours.
4. Study of the following permanent slides:
    a. Stages of gametogenesis, structure of egg and sperm of a mammal.
    b. Larva of *Herdmania*.
5. Study of metamorphosis of *Herdmania* and Frog through charts/video.

Paper II: APPLIED ZOOLOGY-I

Max. Marks	: 40
Theory	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-I
2. Economic Entomology and Pest Management-I
3. Inland Fisheries & Aquaculture-I

OPTION I: MEDICAL ZOOLOGY & MEDICAL LABORATORY TECHNOLOGY-I
(ZOO-502A)

UNIT-I

Introduction to parasitology (pertaining to various terminologies in use).
Brief introduction to pathogenic microbes. (Dengue, Chikangunya, Japanese encephalitis, tuberculosis).
Epidemic diseases, such as typhoid, cholera, small pox; their occurrence and eradication programmes.

UNIT-II

Brief accounts of life history, mode of infection and pathogenicity of the following pathogens with reference to man; prophylaxis and treatment:

Pathogenic protozoans : *Entamoeba, Trypanosoma, Leishmania, Giardia, Trichomonas* and *Plasmodium.*

UNIT-III

Pathogenic helminthes: *Fasciolopsis, Schistosoma, Echinococcus, Ancylostoma, Trichinella, Wuchereria, Dracunculus* and *Oxyuris*.

UNIT-IV

Life cycle, disease caused and control measures of arthropod vectors : *Anopheles stephensi, A culicifaces,Aedes aegypti, A. albopictus*, *Culex fatigans, C.tritaeniorhynchus*, *Mansonia* sp., *Xenopsylla cheopis,Pediculus*.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Chatterjee, K.D. : Parasitology, Protozoology and Helminthology, 13th ed., CSB Publishers and Distributors Pvt. Ltd., 2009.
2. Garcia, L.S. Diagnostic Medical Parasitology, 4th ed., ASM Press Washington, 2001.
3. Parija, S.C. Text book of Medical Parasitology, Protozoology and Helminthology, 1st edition, 2001.

Practicals based on Theory Paper ZOO-502A (ZOO-352A)

1. Introduction to Medical Entomology to various orders.
2. Study of permanent slides and specimens of parasitic protozoans, helminthes and arthropods mentioned in theory syllabus.

OPTION-II:ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-I (ZOO-502B)

UNIT-I

Introduction to Entomology with various orders.
Comparative studies of mouth parts in Grasshopper, Honeybee, Butterfly, Red-Cotton bug, House fly and Mosquito.
Major modifications in the antennae and legs of insects.
Development of Insects: Different type of metamorphosis along with a study of different kinds of larvae and pupae.
Systematic position, habits and nature of damage of the following pests of crops and vegetables :

I. Sugarcane :

1. Sugarcane leaf hopper (*Pyriliaperpusila*) alongwith life cycle and control measures.
2. Sugarcane top borer (*Scirpophaganivella*)
3. Sugarcane stem borer (*Chilotreainfuscatellus*)

II. Cotton :

1. Pink bollworm (*Pectinophoragossypiella*) alongwith life cycle and control measures.
2. Red cotton bug (*Dysdercuscinglulatus*)
3. Cotton grey weevil (*Myllocerusmaculosus*)
4. Surface grasshopper (*Chrotogonustrachypterus*)
5. Cotton jassid (*Empoascadevastans*)

UNIT-II

III. Paddy :

1. Rice Gundhy Bug (*Leptocorisavaricornis*) alongwith life cycle and control measures.
2. Rice grasshopper (*Hieroglyphyusbanian*)
3. Rice Hispa (*Dicladispaarmigera*)

IV. Wheat :

1. Wheat stem borer (*Sesamiainferens*) alongwith life cycle and control measures.
2. Termites (*Microtermesobesi*)
3. Aphids (*Macrosiphummiscanthi*) Jassids (*Amrasca sp.*)

V. Vegetables :

1. Red pumpkin beetle (*Aulacophorafoveicollis*)
2. Pumpkin fruit fly (*Dacuscucurbitae*) alongwith life cycle and control measures.
3. Hadda beetle (*Epilachnavigintioctopunctata*)

UNIT-III

VI. Pests of Stored Grains : Systematic position, habits and nature of damage of the following pests of stored grains :

1. Pulse Beetle (*Callosobruchus maculates*) alongwith life cycle and control.
2. Rice weevil (*Sitophilus oryzae*)
3. Khapra beetle (*Trogodermagranarium*)
4. Rust red flour beetle (*Tribolumcastaneum*)
5. Lesser grain borer (*Rhizoperthadominica*)
6. Rice moth (*Corcyra cephalonica*)

UNIT-IV

Systematic position, disease caused and control of the following insects of Medical and Veterinary importance :

1. Mosquitoes (Aedes,Anopheles, Culex)
2. Sand fly (*Phlebotomus minutus*)
3. House fly (*Musca domestica*) along with life cycle of house fly.
4. Horse fly (*Tabanus striatus*)
5. Blow fly (*Calliphora erythrocephala*)
6. Warble fly (*Hypoderma lineatum*)
7. Poultry louse(*Menopon gallinae*)
8. Sucking louse/(*Haematopinus surysternus*)
9. Fleas (*Xenopsylla cheopis*)

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. Attwal, A.S., : Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991.
2. Nair, M.R.G.K. : Insects and Mites of Crops in India, ICAR, New Delhi, 1975.
3. Kumar, A. and Nigam, P.M. : Economic and Applied Entomology, Emkay Publications, 1991.
4. Matheson, R. : Medical Entomology, Comstock Publishing Company, Inc., 1950.
5. Metcalf, R.L. & Metcalf, R.A. : Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-502B (ZOO-352B)

1. External morphology and identification marks of the crops and vegetables pests : P*yrillaperpusilla* (Sugarcane leaf hopper), *Pectinophora gossypiella* (Pink bollworm), *Leptocorisa varicornis* (Gunbdhy bug) *Hieroglyphus banian* (Paddy grass hopper), *Dacus cucurbitae* (Pumpkin fruit fly).
2. External morphology and identification marks of the following stored grain pests : *Sitophilus oryzae* (Rice weevil), *Tribolium castaneum* (Rustred flour beetle), *Rhizopertha dominica* (Lesser grain borer/susri),*Trogoderma granarium* (Khapra beetle), *Callosobruchu smaculatus* (Pulse beetle/Dhora).
3. External morphology and identification marks of the following insects of Medical/Veterinary importance-Mosquitoes (*Culex, Anopheles and Aedes*), house fly (*Musca domestica*), blow fly (*Calliphora erythrocephala*), warble fly (*Hypoderma lineatum*) and horse fly (*Tabanus striatus*).
4. A study of different types of larvae and pupae of insects through slides, charts etc.
5. Project- Study of life cycle of any insect.

OPTION III: INLAND FISHERIES & AQUACULTURE-I (ZOO-502C)

UNIT-I

- Components of Aquaculture: Capture, Culture, Intensive, Extensive, Semi-Intensive, Pen Culture, Cage Culture.
- Morphology of a typical fish (Carp, Catfish, Eel, Perch)
- Culturable fishes: Characters of culturable fishes, Indian major carps, saltwater fishes, exotic species and air breathing fishes.

UNIT-II

- Structure of mouth of different fishes in relation to feeding habits
- Bionomics of *Labeorohita, CatlaCatla, Cirrhinusmrigala, Wallago attu.*
- Food value of Fish (Vitamins, Amino acids, Minerals etc.)

UNIT-III

- Exotic fishes: History, their introduction, morphology, their role in fish culture and impact on native fish fauna.
- Induced Breeding: History, technique, chemicals involved in induced breeding and impact on fish culture.

UNIT-IV

- Pond culture: Construction of pond, types of pond, hydrobiological factors of water and soil of a fish pond, fertilization of pond, maintenance of pond.
- Aquatic weeds and their control both biological and chemical.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

1.	Jhingran, V.G. ,	:	Fish and Fisheries of India, Hindustan Publishing Corporation of India, Delhi, 1991.
2.	Day, F.	:	Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3.	Johal, M.S. &Tandon,	:	Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4.	Agarwal, S.C. &Johal M.S.	:	Fishery Development, Narendra Publishing House, Delhi, 1997.
5.	Johal, M.S. &Tandon K.K.	:	Fishes of Punjab, Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6.	Karl, F.L.	:	Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7.	Brian, R.M. &David W.W.(ed.).,	:	Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

Practicals based on Theory Paper ZOO-502C (ZOO-352C)

1. Morphology of a Carp, Cat fish and Perch.
2. Morphometric and meristic characters of a typical fish.
3. Identification of the following fishes using keys to the species :
   Notopterus n*otopterus*. ; *Labeo rohita, L. colbasu, L. bata, Cirrhinus mrigala, Catla catla, Puntius sarana, Tor putitora, Schizothorax richardsonii, Aorichthys seenghala, Wallago attu, Bagarius bagarius, Heterpneustus fossilis, Channamaruluis, C. striatus, Xenentondon cancila, Cyprinus carpio, Hypophthalmichthys molitrix,Ctenopharyngodon idellaus, Colisa fasciatus, Mastacembelus armatus.*

   For the identification of the fishes, the students can use already prepared keys or can prepare their own keys.

4. Determination of maturity stages (both male and female) of any commercial fish (preserved specimens) through slides/charts etc.
5. Preparation of permanant slides of phytoplanktons and zooplanktons which constitute the food of commercial fishes. Their identification and study of important characters.
6. Identification of common aquatic weeds of a fish pond.
7. Study of various exotic fishes (*Hypophthalmichthys molitrix, Ctenopharyngodon idellaus, Cyprinus carpio, Gambusia affinis, Salmo trutta fario, salmo gairdneri, gairdneri*) with respect to the purpose with which they were introduced.
8. Study of endemic culturable fish species *(Catla catla, Labeo rohita, Cirrhinus mrigala)*
9. Study of types of fins and scales.

Guidelines for the conduct of Practical Examinations:

Max. Marks : 20 marks
Practical Exam : 18 marks
Internal Assessment : 2 marks
Time : 4 hours

1. Identify the developmental stage of chick embryo by window preparation. 2.5
2. Identify the slides A , B& C. Give two reasons for each identification 4.5
3. Viva-Voce 2
4. Practical Note Book and Project Report 2

Option-I

5. To identify the specimens D, E&F. Write the disease caused by each and two reasons for their identification. 4.5
6. Identify the given instrument. Write about its uses and functions. 2.5

Option- II

5 To identify the specimens D, E & F belonging to crop and stored grain pests. Give one outstanding character of each. 4.5

6 Identify specimen/ slide G. Give its one outstanding morphological character and medical/ veterinary importance. 2.5

Option- III

5. Giving two identification features identify specimen D&E. 2

6. Identify specimen 'F'. Give the purpose for which this fish has been introduced. 1

7. Identify the slides G & H. Give one identification features of each. 2

8. Identify the weed 'I' and write its common identification features. 2

ZOOLOGY

SEMESTER -VI

Paper I: GENETICS	40 (36 +4) marks
Paper II: APPLIED ZOOLOGY-II	40 (36 + 4) marks
Practical (Covering the entire syllabus) of 4 hours duration	20 (18 +2) marks
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Total :	100 marks

Note: The number of hours for Theory and Practical per week shall be 6 hours and 4 hours, respectively.

OBJECTIVES OF THE COURSE

The syllabus pertaining to **B.Sc. (General) Semester VI,** in the subject of Zoology has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Zoology working in the Panjab University, Chandigarh and affiliated colleges.

The syllabus contents are duly arranged section wise as well as unit wise. The contents are included in such manner so that due importance may be given to skill oriented components.

The course contents are also given due stress for excursion/field trips to Zoological Parks, Sea-shores, Hill Stations, Museum, Fossil Park and Apiary/godowns for better academic outlook. The Department of Zoology, P.U., Chandigarh usually organizes workshop/seminars from time to time for updating the teachers.

PAPER I: GENETICS (ZOO-601)

UNIT-I

Mendelism and Mendeliar Ratios.
Modification of Mendelian ratios .
Non-allelic gene interaction, Modified F_2 ratios.

(9:7, 9:3:4, 9:3:3:1, 12:3:1, 13:3,15:1,9:6:1)

Gene modifications due to incomplete dominance, lethal factors (2:1), Pleiotropic genes.

Multiple Alleles : Blood group inheritance,eye colour in *Drosophila*, pseudo-allelism.

Multiple factors : Qualitative and quantitative characters, inheritance of quantitative traits (skin colour in man).

UNIT-II

Linkage, crossing over and recombination : Linkage, sex-linked characters, crossing over, frequency of crossing over, cytological basis of crossing over, synaptonemal complex. Recombination in Fungi, (tetrad analysis).
Gene and Genetic Code : Structure of nucleic acids (DNA & RNA). Replication of DNA and transcription.Expression of gene (protein synthesis in Prokaryotes and Eukaryotes). Properties of genetic code, codon assignment, wobble hypothesis.
Extranuclear inheritance : Kappa particles in *Paramecium*.

UNIT-III

Mutations : Spontaneous and induced mutations, physical and chemical mutagens.
Detection of mutations in *Drosophila*. Inborn errors of metabolism in man (Phenylketonuria, Alcaptonuria, Albinism).Somatic mutations and carcinogenesis.
Regulation of gene expression in prokaryotes (Operon model) and in eukaryotes.

UNIT-IV

Population genetics : Equilibrium of gene frequencies and Hardy Weinberg Law.
Genetic recombination in bacteria (conjugation, transduction and transformation) plasmids.
Applied Genetics : Recombinant DNA,genetic cloning and its applications in medicine and agriculture, DNA finger printing.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1. De Robertis, E.D.P. and De Robertis, E.M.F : Cell and Molecular Biology, W.B. Saunders Co., Philadelphia, 1995.
2. Powar, C.B. : Cell Biology, Himalaya Publishing House, Bombay, 1999.
3. Swanson, C.P., Merz, T. and Young, W.J Division, : Cytogenetics – The Chromosome in Inheritance and Evolution, Prentice Hall, 1981.
4. Gupta, P.K. : Cytology, Genetics and Molecular Biology, Rastogi Publishers, Meerut, 1993.
5. Chaudhry, S. and Sharma, A. : PV's Cytology& Ecology, S. Vikas& Co., Jallandhar, 2003.
6. Gardner, E. J., Simmons, M.J. and Snustad, D.P. : Priciples of Genetics, 8th ed., John Wiley and Sons, Inc., New York, 2004.

Practicals based on Theory Paper ZOO-601(ZOO-353)

1. Demonstration of Law of segregation, Independent assortment and epistasis (use of coloured beads or capsules etc.). Numericals for segregation and Independent assortment.
2. Segregation demonstration in preserved material (Maize).
3. Cytoplasmic inheritance in *Mirabilis jalapa*.
4. Inheritance of other human characteristics, ability to taste, PTC, thiourea.
5. Comparison of variance in respect of pod length and number of seeds/pods.
6. Calculation of gene frequencies and random mating (coloured beads or capsules).
7. Study of polytene chromosomes of *Chironomus*/*Drosophila* through photographs.
8. Dermatographics: Palm print taking and finger tip patterns.

Paper II: APPLIED ZOOLOGY-II

Max. Marks	:	40
Theory	:	36 marks
Internal Assessment	:	4 marks
Time	:	3 hours

Note: Students are required to opt any one of the following:

1. Medical Zoology and Medical Laboratory Technology-II
2. Economic Entomology and Pest Management-II
3. Inland Fisheries & Aquaculture-II

OPTION I: MEDICAL ZOOLOGY AND MEDICAL LABORATORY TECHNOLOGY-II (ZOO-602A)

UNIT-I

Brief introduction to Cells, organs, specific and non specific defence mechanisms.
Humoral and cell mediated immune-response, Antigens-physical & chemical properties.

UNIT-II

Antibodies - structure and function of immunoglobulin M, G, A, E and D.
Antigen and antibody interactions :Serodiagnostic assays.
Vaccines and their types.

UNIT- III

Laboratory safety rules, hazards and precautions during sample collection and laboratory investigations.

Laboratory techniques: Colorimetry, Microscopy (student's and electron microscope), Autoclaving., Centrifugation, Spectrophotometry.

Haematology : Collection of blood (Venous and Capillary), Anticoagulants (merits and demerits), Romanowsky's stains,

UNIT- IV

Bacteriology : Sterilisation, (dry heat, moist heat, autoclave, filtration), Disinfection, Staining techniques (gram's stain, AFB stain, etc), Culture media (Defined & Synthetic media & routine laboratory media), Bacterial culture (aerobic and anaerobic), Antibiotic sensitivity.

Biochemistry : Protein estimation, Estimation of blood urea, blood sugar and urine analysis.

Histopathology : Common fixatives and staining techniques, Histochemistry : Principle and method : Staining of carbohydrates, proteins and fats with bromo phenol blue, Periodic acid Schiff, Sudan Black blue and Feulgen reaction.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Baker, F.J. and Silverton, R.E.	:	Introduction to Medical Laboratory Technology, 6th edition, Butterworth and Co. Ltd., 1985.
2.	Cheesborough, M.	:	Medical Laboratory Technology for Tropical countries, 2nd edition, Butterworth and Co. Ltd., 1987.
3.	Talib, V.H.	:	Essential Laboratory Manual, Mehta Publishers, New Delhi, 1999.
4.	Goldsby, R.A., Kindt, T.J. Osborne, B.A. and Kuby, J	:	Immunology, 6th edition, Freeman, W.H. & Co., New York, U.S.A., 2007.
5.	Kuby	:	6th Edition

Practicals based on Theory Paper ZOO-602A (ZOO-354A)

1. Demonstration of safety rules in laboratory like proper handling of patients specimens and disposal of syringes, needles etc.
2. Demonstration of the use of autoclave, centrifuge and spectrophotometer.
3. Cleaning and sterilization of glassware using hot air oven, autoclave etc.
4. Demonstration of various equipments for the estimation of hemoglobin, WBC, RBC, ESR.
5. Estimation of sugar and protein in a sample.
6. Procedure of Fixation, embedding, cutting of tissue sections and their staining (Routine Haematoxylin and Eosin and special staining with BPB,PAS, SBB and Feulgen reaction) (Theory only).
7. Study of permanent slides-Thymus, spleen & lymph mode.
8. Demonstration of parts of microscope, its functioning and care.

OPTION-II: ECONOMIC ENTOMOLOGY AND PEST MANAGEMENT-II (ZOO-602B)

UNIT-I

1. Sericulture

(i) Species of silkworm
(ii) Requirements of Sericulture Industry
(iii) Grainage Management
(iv) Pre and Post-cocoon processing (Stifling & Reeling)
(v) Diseases of silkworm.

UNIT-II

2. Apiculture

(i) Species of Honeybees
(ii) Flora for Apiculture
(iii) Methods & Appliances of Bee Keeping
(iv) Products - (a) Honey (b) Bee wax (c) Propolis (d) Pollen (e) Royal Jelly (f) Bee Venom
(v) Diseases of Honey bee

3. Lac Culture

(i) Species and varities of Lac insect
(ii) Host Plants
(iii) Cultivation of Lac
(iv) Processing of Lac
(v) Lac Industry
(vi) Enemies of Lac insect.

UNIT-III

I. **Chemical Control** : Types and Classification of Insecticides (a) Insecticides of plant origin with special reference to vicotine; Pyrethrum; Rotenone and Azadirachtin (b) Chlorinated Hydrocarbons insecticides with special reference to DDT; Toxaphene; BNC; Chlordane; Aldrin; Endrin and Endosulfan (c) Organophosphorus Insecticides with special reference toMalathion;TEPP; Parathion and DDVP (d) Carbamate Insecticides with reference to Carbaryl and Carbofuran (e) Fumigants with reference to Hydrogen cyanide; Methyl bromide; Ethylene dichloride; Carbon tetrachloride and Aluminium phosphide. Hazards of chemical control. List of banned pesticides.

UNIT-IV

II. **Recent methods of Pest Control**:

- **Biological Control** : History; Techniques in biological control, Agents of biological Control (a) Vertebrates (b) Nemathelminthes (c) Arthropods (d) Protozoan; Microbial control with the help of Bacteria, Virus and Fungi.
- **Integrated Pest Control**: Introduction of IPM: Pre-requisites; Implementation Strategy; Framework of IPM programme and perspectives in IPM.

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books Recommended

1.	Attwal, A.S.,	:	Agricultural Pests of India and South East Asia, Kalyani Publishers, New Delhi, 1991
2.	Dent, D.	:	Integrated Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1995.
3.	Howse, P., Stevens, I. & Jones, O	:	Insect Pheromones and their use in Pest Management, Chapman & Hall, London, New York, Tokyo, Madras, 1998.
4.	Mishra, R.C.	:	Honey Bees and their Management in India, ICAR Publication, New Delhi, 1995.
5.	Kumar, A. and Nigam, P.M.,	:	Economic and Applied Entomology, Emkay Publications, 1991.
6.	Metcalf, R.L. & Metcalf, R.A.	:	Destructive and Useful Insects, McGraw Hill Book Company, Inc., New York, Toronto, London, 1951.

Practicals based on Theory Paper ZOO-602B (ZOO-354B)

1. Study of Mouth parts of honey bee, butterfly and red cotton bug from permanent mounts.
2. Study of different types of antennae, legs and wings through preserved specimens and permanent slides.
3. A study of life stages of silk worm, honey bees and lac insect.
4. Structure and working of common sprayers: Hand Compression sprayer, Knap sack sprayer.
5. Visit to apiary and godowns for study of infestation and project report.

OPTION III - INLAND FISHERIES & AQUACULTURE-II (ZOO-602C)

UNIT-I

- Fishing gears: Classification of the fishing gears according to the habitats in which they are being used, Electrical fishing.
- Culture systems: Monoculture and polyculture

UNIT-II

- Integrated fish farming: Duck-cum-fish farming, Dairy-cum-fish farming and Poultry-cum-fish farming.
- Pearl culture in India: Species used, implantation procedures, water quality requirements and economics
- Fish seed resources and their transport

UNIT-III

- Prawn culture: Culture of fresh water prawn, culture technology
- Cold water fisheries: Mahseer fisheries and trout fisheries
- Fish Diseases and their control: Viral, bacterial, fungal, protozoan, helminth, crustacean, diseases due to nhygienic conditions, diseases during transportation.

UNIT-IV

- Fish by-products
- Fish marketing
- Fish preservation: Principles of fish preservation, preservation by curing (Drying, Salting and Smoking), Chilling and freezing of fish, Canning of fish and fish products, Spoilage of fish, Rigor mortis

Note: Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

Books recommended

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2. Day, F. : Fishes of India,Vol. I & II, Reprinted Edition, Jagmander Book Agency, New Delhi, 1994.
3. Johal, M.S. &Tandon, : Monograph on the Fishes of Reorganised Punjab, K.K., Punjab Fisheries Bulletin., Vols. I & II, 1979-1980.
4. Agarwal, S.C. &Johal M.S. : Fishery Development, Narendra Publishing House, Delhi, 1997.
5. Johal, M.S. &Tandon K.K. : Fishes of Punjab,Res. Bull., Panjab University, Vol. 32, pp. 143-154, 1981.
6. Karl, F.L. : Freshwater Fishery Biology, Wm. C-Brown Company Publ., Dubuque, IOWA, USA, 1969.
7. Brian, R.M. &David W.W.(ed.)., : Fisheries Techniques: American Fisheries Society, Bethesda Maryland, USA, 1996.

<u>Practicals based on Theory Paper</u> ZOO 602C (ZOO-354C)

1. Determination of food and feeding habits of locally available fishes on the basis of stomach analysis adopting the following methods :
   a. Frequency occurrence method
   b. Feeding intensity
   c. Point method.
2. Estimation of following chemical parameters of the water of a fish pond:
   a. Temperature
   b. pH
   c. Dissolved oxygen
   d. Phosphates
   e. Total dissolved solids
   f. Nitrates
   g. Hardness
   h. Chlorides
3. Visits to various fish ponds and fish market.
4. Study of various fresh water prawn species cultured in India.

Guidelines for the conduct of Practical Examinations

Max. Marks	: 20
Practical Exam	: 18 marks
Internal Assessment	: 2 marks
Time	: 4 hours

1. Demonstrate the law of independent assortment/segregation/epistasis from the material provided. Identify the characters involved showing the dominance/recessiveness of characters.

   OR

   Calculate the gene frequency from a known sample of characteristics using Hardy-Weinberg Law. 3
2. Make a dermatographic print of your finger tips or palm pattern and classify the various visible patterns with the help of diagrams and demonstrate it to the examiner. 3
3. Identification of polytene chromosomes from the photograph provided. 1
4. Viva-Voce 2
5. Practical Note Book and Project Report 2

Option-I

6. Identify the slide and give two reasons for identification. 2
7. Identify the instrument/apparatus (Autoclave/centrifuge/spectrophotometer/microtome etc.). Write about its uses and working. 2
8. Quantitative estimation of sugar/protein in the given sample 3

Option- II

9. Identification of mouth parts/antennae/legs/wings from charts/slides/specimens 2
10. Mention the type of larva/pupa/stages of life history of silkworm, honeybees, lac insect. Write a note on its external morphology. 2
11. Name the apparatus provided. Draw its well labeled diagram and explain its structure and working. 3

Option- III

12. Identify the gear 'A' and draw its well labeled diagram. 2
13. Identify specimens B & C giving one identification feature of each. 2
14. Determine the Temperature/pH/Dissolved oxygen/Phosphates/Total dissolved Solids/Nitrates/Hardness/Chlorides in given water sample. 1
15. Write the habit and habitat of given specimen (Cold water fish)'D'. 2

BIO-CHEMISTRY
SEMESTER V

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total no. of questions will be nine. All questions carry equal marks.
2. Q. no. 1 will be compulsory. It will consist of short questions covering the entire syllabus.
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – I **Marks: 45+5**

Objective: To understand aspects of storage and expression of genetic information. Membrane structure and function.

SECTION-I

(Lectures: 10)

Experimental proof for DNA as genetic material. Watson-Crick model of DNA. A&Z-DNA, structure of chromatin topology of DNA & topoisomerases. Organization of genes in different genomes. Extra nuclear genomes.

SECTION-II

(Lectures: 10)

Types & biochemical basis of mutations, DNA replication: semiconservative, semicontinuous, bidirectional & from a unique origin. Enzymes & proteins of DNA replication. Mechanism of DNA repair, DNA recombination.

SECTION-III

(Lectures: 10)

Transcription in prokaryotes and eukaryotes: promoter sequences, initiation, elongation, Rho dependent and rho independent termination, regulation, processing, alternative splicing, mRNA editing & Inhibitors of transcription.

SECTION-IV

(Lectures: 10)

Translation in prokaryoties and eukaryoties: Genetic code, Wobble hypothesis, structure of tRNA, amino acid activation, initiation, elongation, termination and inhibitors of translation, post translational modification of proteins.

Books Suggested :

1. Biochemistry, 5th Ed., 2002., Berg, J. M. & L. Stryer, W.H. Freeman, San Francisco.
2. Molecular Biology by David Freifelder, 1987.
3. Genes XI, by Benjamin Lewin, 2014.
4. Molecular Cell Biology by James Darnell, Harvey Lodish and Davit Baltimore, 7th Edition, 2014.

Paper B: Applied Biochemistry – I **Marks: 45+5**

Objective: To understand general aspects of vitamins, hormones, nutrition, immunology, blood coagulation, muscle contraction and nerve impulse transmission.

SECTION-I

(Lectures: 10)

Vitamins: water soluble & fat soluble, their sources, structure & biochemical function. Role of Thiamine, Riboflavin, Niacin, Pyridoxine, Pantothenic Acid, biotin, folic acid and Ascorbic acid. Role of Vitamin A in the visual cycle, Role of Vitamin D, Vitamin E and Antioxidant theory, role of Vitamin K in Coagulation.

SECTION-II

(Lectures: 10)

Essential nutrients. Protein energy malnutrition, starvation and obesity. Respiratory quotient (R.Q.) of carbohydrates, proteins and lipids. Basic metabolic rate and factors influencing it. Specific dynamic action of foods.

SECTION-III

(Lectures: 10)

Biochemical principles of toxicology. Phase I reactions and cytochrome P 450 enzyme systems. Phase II reactions and various conjugation systems. Effects of nutritional status and metabolic induction on xenobiotic toxicity; importance of physico–chemical properties of toxic chemicals. Biochemical basis of organophosphate and carbamate pesticides toxicity.

SECTION-IV

(Lectures: 10)

Hormones: classes, modes of action, endocrine glands & their hormones. Hypothalmic and posterior pituitary hormones, Anterior pituitary hormones, PTH, Calcitonin, insulin, glucagon, steroid hormones, thyroid hormones.

Books Suggested :

1. Berg, J. M., Lubert Stryer *:* Bio-chemistry*,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. Biochemical Toxicology of Environmental Agents by A. De Bruin, Elsevier Pub.
4. Human Nutrition & Dietetics by R. Passmore & M.A. Eastwood.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1. Extraction of DNA
2. Estimation of DNA by diphenylamine method.
3. Effect of temperature on the Viscosity of DNA using Oswald's viscometer.
4. Assays of SGPT and SGOT in serum.
5. Extraction of RNA from yeast .
6. Estimation of RNA by Orcinol method.
7. Determination of total protein and A/G ratio in serum.
8. Separation of serum proteins using paper electrophoresis.
9. Demonstration of Western Blotting technique.

BIO-CHEMISTRY

SEMESTER -VI

INSTRUCTIONS FOR PAPER SETTER AND STUDENTS:

1. Total No. of questions will be nine. All questions carry equal marks.
2. Q. No. 1 will be compulsory. It will consist of short questions covering the entire syllabus
3. Besides question Number 1, there will be 4 sections of 2 questions each.
4. All other questions may contain 2-3 parts.
5. Questions should be uniformly spread over the entire syllabus.
6. Students will be required to attempt 5 questions in all including Q. No. 1 and at least one question from each of the 4 sections.

Paper A: Molecular Biology – II **Marks: 45+5**

Objective: To understand aspects of storage, expression and regulation of genetic information.

SECTION-I

(Lectures: 10)

Targetting of proteins to different cell organelles. Post & co-translational modification of proteins. DNA binding domains of protein. Regulation of prokaryotes gene expression. Concept of operon, regulation of lac operon, trp-operon, phage infection (lysogenic & lytic mode)

SECTION-II

(Lectures: 10)

Regulation of enkaryotic gene expression. transcription factors: Zn fingers and leucine zipper. Roles of RNA regulators. hormonal control of transcription.

SECTION-III

(Lectures: 10)

Gene cloning: different types of vectors, libraries & isolation of gene. Yeast gal gene and mat locus. Mechanism of development in Drosophila.

SECTION-IV

(Lectures: 10)

Analysing genome, genome size, genome sequencing, microarrays, DNA finger printing, SNPs and applications in diseases and forensic.

Books Suggested :

1. Freifelder's Essentilas of Molecular Biology Malacinski GM 4th edition Narosa New Delhi 2005
2. Molecular Biology of Gene Watson JD 7th edition 2007 CSH New York 2013.
3. Genes XI, Benzamin Lewin, 2014 Oxford press Oxford.
4. Molecular cell biology Lodish H et al 8th edition 2016 McMilian Publishers, London.
5. Genomes 3 Brown TA. Garland Science New York 2007.

Paper B: Applied Biochemistry – II **Marks: 45+5**

Objective: Providing the student a comprehensive knowledge of physiology with emphasis on immune system and techniques in use; blood, muscle and nerve. This course will explain and demonstrate important techniques being used for analysis of blood. It will also enable the students to understand how the fundamental systems work in tandem for keeping the body fit.

SECTION-I

(Lectures: 10)

Basics of immune system. Cells & organs involved in immune response. Molecules associated: antigen, hapten & immunoglobulins- their structure, properties & functions. Innate & adaptive responses. Complement system- types, mechanism & functions. Humoral & cell mediated immune responses.

Immunological techniques-their principle, method & applications: precipitation, agglutination, Immunofluorescence, radio-immunoassay (RIA), enzyme liked immunosorbent assay (ELISA) and immunoblotting.

SECTION-II

(Lectures: 10)

Blood: composition, groups, functions; coagulation. Anticoagulants. Hemoglobin- forms, roles and disorders: hemoglobinopathies, anaemia.Buffers in the body: acid base equilibrium. Systems responsible for maintenance of acid-base balance- erythrocytes, respiration, liver, kidneys. Disturbances in acid base balance and compensation.

SECTION-III

(Lectures: 10)

Muscle: basic components of muscle cell, arichitecture of muscular organization, types. Microscopic & electron microscopic structure-skeletal, smooth & cardiac. Role of muscle proteins & calcium.

Mechanism of skeletal and smooth muscle contraction and relaxation. Sliding filament theory. Excitation-contraction coupling.

SECTION-IV

(Lectures: 10)

Central nervous system, peripheral nervous system, action potential, neurotransmitters, synapses & nerve gases. Mechanism of nerve impulse transmission: structure, classification and functions of neurons and neuroglias. The resting membrane potential & action potential.

Properties of nerve fibers : excitability, conductivity, all or none law, accommodation, adaptation, summation, refractory period, indefatigability.

Synapses : types, structure, synaptic transmission of the impulse, synaptic potentials, neurotransmitters, cotransmitters, neuromodulators. The neuromuscular junction : structure, transmission, end-plate potential.

Books Suggested :

1. Berg, J. M., Lubert Stryer *:* Bio-chemistry*,* W.F. Freeman and Co., New York, Edition 5th, 2002.
2. Harper's Illustrated Biochemistry by R.K. Murray, P.A. Mayes, D.K. Granner and V.W. Rodwell, 27th Ed. 2006, Prentice Hall International Ltd. (U.K.).
3. Essential Immunology by Ivan M. Roitt, English Language Book Society (ELBS) 8th Ed.,1994.

PRACTICALS: **Marks : 25**

One Practical of three hours per week

1.Demonstration of western blotting

2. Use of different anticoagulants.

3. Estimation of haemoglobin in blood.

4.Demonstration of ELISA.

5. Determination of clotting time of blood.

6. Determination of proteins by dye binding assay.

7. Visualizing antigen-abtibody precipitation in gel.

8. Agglutination assay.

9. Separation of proteins by SDS-Polyacrylamine Gel Electrophoresis

10. Liver function tests.

11. Estimation of urea and creatinine.

ELECTRONICS

(Kept in Abeyance)

AGRICULTURE
B.A/B.Sc. 5th and 6th Semester System

SEMESTER-V

Paper-V: Agrodiversity and Physiology

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Unit I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

History of Agroforestry
Agroecological Zonification
Socioeconomic Aspects of Agroforestry
Agroforestry System for Small Holdings
Arid Land Agroforestry

Unit – II

Establishment of Orchard
Basic Cultural Practices
Elemental Role and Needs of Nutrients
Propagation – Principles and Techniques
Stock –Scion relationship and their incompatibility
Fruit Physiology

Unit – III

Respiration- Glycolysis, Citric Acid Cycle, Photorespiration
Photosynthesis – Light Reaction, Dark Reaction, C_4 – Cycle, CAM Plants
Growth Hormones and their role in Agriculture
Enzymes and Vitamins
Vernalization
Photoperiodism

Unit – IV

Intellectual Property Right
Informatics in Agriculture
Seed Production and Technology
Indigenous Technical Knowledge in Agriculture
Introduction to Crop Biotechnology
Agrobiodiversity

PRACTICAL

Max. Marks	: 25 Marks
Practical	: 20 Marks
Internal Assessment	: 05 Marks

Planning an Orchard
Study of Agroforestry of Local Area
Scion- Stock relationship study
Study the effect of temperature and light duration on various crop plants of an area
Role of computer in Agriculture
GM crops and techniques
Study of Agrobiodiversity of Punjab

BOOKS

Plant Physiology, 2010 – K.N. Bhatia – Trumen Publishers, Jalandhar
Plant Physiology, 2010 – H.N. Srivasava – Pardeep Publishers, Jalandhar
Fruits – Ranjit Singh and S.K. Sexena - National Book Trust, New Delhi, 2008
Fruit Physiology – Amar Singh – Kalyani Publishers, Ludhiana, 1997

AGRICULTURE

SEMESTER-VI

Paper-VI: Insect Pests and Diseases of Crop

Max. Marks	: 75 Marks
Theory	: 70 Marks
Internal Assessment	: 5 Marks
Time	: 3 Hours

Period per week: 1. THEORY – Six of 45 minutes duration each.
2. PRACTICAL – Two of three hours duration.

Instructions for the paper setter and the students:

1. The syllabus of this paper has been divided into Four Units.
2. Question paper shall comprise of 9 questions in all.
3. Question 1 shall comprise of 10 short answer type questions covering the whole syllabus and will be **compulsory.** Each question will carry 1 (one) mark.
4. Units I, II, III and IV shall have two questions each from respective units, out of which one question from each unit is to be attempted. Each question will be of 15 (fifteen) marks.
5. Total five questions are to be attempted.

Unit – I

Plant Protection
Crop diseases ? How to control them?
Biological control, chemical control
Systemic fungicides
Weedicides
Compatibility of various fungicides and weedicides
Rodenticides

Unit – II

Diseases of Crop Plants

1. Crop-Wheat

Type of Disease	Name of Disease	Causal Organism
Fungal	Loose smut of Wheat	*Ustilago tritici*
Bacterial	Tundu disease of Wheat	*Corynebacterium tritici*
Viral	Chloris striate mosaic	Chloris striate mosaic virus (CSMV)

2. Crop- Rice

Type of Disease	Name of Disease	Causal Organism
Fungal	Blast of Rice	*Piricularia oryzae*
Bacterial	Bacterial Blight of Rice	*Xanthomonas oryzae*
Viral	Rice Tungro disease	Rice tungro Bacilliform virus (RTBV)

3. Crop- Maize

Type of Disease	Name of Disease	Causal Organism
Fungal	Black kernal rot	*Lasiodiplodia theorbrome*
Bacterial	Stalk rot of Maize	*Erwinia cartovora*
Viral	Maize chlorotic dwarf	Maize chlorotic dwarf virus (MCDV)

4. Crop-Citrus

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Citrus black spot	*Guignardia citricarpa*
Bacterial	Citrus canker	*Xanthomonas citri*
Viral	Citrus Yellow Mosaic	Badnavirus

5. Crop-Grapes

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Powdery Mildew of grapevine	*Unicinula nectator*
Bacterial	Crown gall	*Agrobacterium tumifaciens*
Viral	Cork bark	Grapevine virus B

6. Crop-Cotton

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Cotton Rust	*Puccinia schedonnardii*
Bacterial	Bacterial Blight of Cotton	*Xanthomonas citri*
Viral	Leaf curl	Bigeminivirus or Cotton Leaf curl virus (CLCuV)

7. Vegetables

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Late Blight of Potato	*Phytopthora infestans*
Bacterial	Bacterial canker of Tomato	*Clavibacter michiganensis*
Viral	Yellow vein mosaic of Bhindi	Yellow vein mosaic virus

8. Oil Crops: Mustard

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	White rust of crucifers	*Albugo candida*
Bacterial	Black rot of crucifers	*Xanthomonas campestris*
Viral	Rai Mosaic virus	Yellow Mosaic Virus

9. Oil Crops: Groundnut

Type of Disease	**Name of Disease**	**Causal Organism**
Fungal	Tikka Disease of groundnut	*Cercospora s*p.
Bacterial	Bacterial wilt	*Pseudomonas solanacearum*
Viral	Groundnut crinkle	Groundnut crinkle virus

Unit – III

General account of Insects and pests
Classification of Insects
Parts of Insect body
Control measures of Insect pests and diseases of crop

Unit – IV

Insect and nematode diseases of Cereal (Wheat, Maize, Rice) crops; Oil (Sunflower, Groundnut, Mustard) crops; Fruit (Mango, Guava, Citrus) crops

Vegetable crops

Rabi Crops	**Kharif Crops**
Green Peas	Chilli
Chick Peas (Cicer arientinum)	Okra
Onion (Allium cepa)	Bitter Gourd
Tomato (Solanum lycopersicum)	Bottle Gourd
Potato (Solanum tuberosum)	Brinjal

PRACTICAL

Max. Marks : 25 Marks
Practical : 20 Marks
Internal Assessment : 05 Marks

Study of all the diseases mentioned in theory
Symptoms and their control measures

Books

Plant Pathology – R.S. Singh, 2007 – Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi

Plant Pathology – R.S. Malhotra and Aggarwal, 2009 – Tata MacGraw Hill Publishing, New Delhi

Economic and Applied Entomolgy – Kumar and Nigam, 2008 - Emkay Publishing, New Delhi

Fungicides– Y.L. Naine and Thaplial, 2008 – Oxford and IBH Publishing Co. Pvt. Ltd., Calcutta, Bombay

Elements of Entomology – Rajendra Singh, 2007 – Rastogi Publications, Meerut

A Text book of Applied Entomology – Vol I and Vol II – Srivastva, 2007- Kalyani Publishers, Ludhiana

Indian Crop Pests - Kumar and Nigam, 2007 – Emkay Publishers, Allahabad

Integrated Pest Management – G.s. Dhaliwal and R. Arora, 2006 – Kalyani Publishers, Ludhiana

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HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2020-21
SEMESTER- V

Scheme of Examination

Theory						**Practical**				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time in hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	45	05	1	3	45	05	100

Total : **100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 06 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER:

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 9 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 9 marks.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I. Importance and Functions of Food :

(a)Physiological; (b) Psychological; (c) Social

II. Food Constituents : Carbohydrates, Proteins and Fats—Functions, sources, requirements and deficiency.

III. Methods of Cooking : Boiling, Steaming, Frying, Baking, Roasting and Microwave cooking.

SECTION B

IV. Functions, recommended allowances, deficiency, excess and food sources of the following nutrients:

(a) Vitamins–A, B_1, B_2, B_3 , Vit. C, Vit. D.
(b) Minerals– Calcium, Phosphorous, Iron, Sodium, Iodine.

V. Balanced Diet

(a) Concept
(b) Classification of food based on the five/seven food groups.

SECTION-C

VI. Pregnancy

1. Signs and symptoms of pregnancy.
2. Discomforts and Complications.
3. Care during pregnancy
4. Preparation for delivery
5. Post natal care- Importance of breast feeding, bottle feeding, weaning and different types of weaning foods

VII. Methods of family planning

SECTION D

VIII Definition and importance of Child Development.

(a) Differences between growth and development; (b) Principles of development.

IX Developmental tasks at various stages of development

PRACTICAL

Max. Marks	**:**	**50**
Practical	**:**	**45**
Int. Ass.	**:**	**05**
Hours	**:**	**03 Hours per week**

I. Preparation of following dishes using various methods of cooking
   a. Soups- stimulating and nourishing (any two)
   b. Snacks- savory and sweet (two each)
   c. Salads- decorative and nutritious (two each)
   d. Bakery items (any two)
   e. Preparation with cereal pulse combination (any two)
   f. Desserts (any two)

II. Hot and cold beverages (at least two each).

III. Preparation of low cost nutritious recipes (at least two)

IV. Recipes- enhancing nutritive value (at least two)

V. Project

- Survey of Food Labels in order to study their nutritional facts

OR

- Survey of eating habits of five students

Reports to be submitted

List of Equipments for a practical group of 12-15 students :

1.	Gas Burners	15
2.	Cooking Range	01
3.	Ovens	05
4.	Mixers and Grinders	05
5.	Weighing Scales (for food)	05
6.	Gas Lighters	15
7.	Dustbin-Small	15-Big-1
8.	Vegetable Racks	02
9.	Plate Racks	15
10.	Storage Jars and Containers	25
11.	Refrigerator	01
12.	Icing Sets	05

Cooking Utensils

1.	Pressure Cooker	15
2.	Patila with Lid	30
3.	Kadahai	15
4.	Parat	15
5.	Tawa	15
6.	Chakla-Belna	15
7.	Grinding Stone	15
8.	Saucepans	15
9.	Karchhi	15
10.	Palta	15

11.	Poni	15
12.	Soup Strainers	15
13.	Sieves	15
14.	Enamel Bowls	15
15.	Baking Trays and Tins	15
16.	Cookie Trays	15
17.	Serving Trays	15
18.	Cutting Knives	15
19.	Peelers	15
20.	Jelly Moulds	15

Crockery and Cutlery

1.	Full Plates	30
2.	Half Plates	30
3.	Quarter Plates	30
4.	Cups & Saucers	30
5.	Soup Bowls	30
6.	Glasses	36
7.	Katoris (Vegetables Bowls)	30
8.	Dongas	30
9.	Forks	30
10.	Table Knives	30
11.	Table Spoons	48
12.	Tea Spoons	48
13.	Serving Spoons	24
14.	Tea Sets	05
15.	Dinner Sets	05
16.	Borosil Bowls	15
17.	Casseroles	15

HOME SCIENCE

B.A./B.Sc. (GENERAL) THIRD YEAR EXAMINATION, 2020-21
SEMESTER- VI

Scheme of Examination

Theory						Practical				
Sr. No.	*Name of Paper*	*No. of Papers*	*Time in hrs.*	*Marks allotted*	*Int. Ass.*	*No. of Papers*	*Time In hrs.*	*Marks Allotted*	*Int. Ass.*	*Total Marks*
1.	Food, Nutrition and Child Development	1	3	45	05	1	3	45	05	100
									Total:	**100**

Note : 1. Each Practical group will have 12-15 students.

FOOD, NUTRITION AND CHILD DEVELOPMENT (Theory)

Max. Marks : 50
Theory : 45
Int. Ass. : 05
Hours : 06 Hours per week

INSTRUCTIONS FOR THE PAPER SETTER :

The question paper will consist of five Sections: A, B, C, D and E. Sections A, B, C and D will have **two** questions from the respective sections of the syllabus and will carry 9 marks each. Section E will consist of objective type questions covering the entire syllabus uniformly and will carry 9 marks.

INSTRUCTIONS FOR THE CANDIDATES :

Candidates are required to attempt one question each from the Sections A, B, C and D of the question paper and the entire section E.

SECTION-A

I Food Preservation :
- (a) Definition, Importance & Principles.
- (b) Causes of food spoilage.
- (c) Household methods of food preservation—sun drying, use of salt, oil, spices, sugar & chemical preservatives.

II Meal Planning:
- (a) Definition
- (b) Importance
- (c) Principles of meal planning (physiological, psychological and economical)

SECTION-B

III. Therapeutic Diets & Modification of Normal Diet:
- (a) Principles of therapeutic diets.
- (b) Concept of soft, bland, liquid diets with examples.

IV. Therapeutic diets in the following conditions with principles involved :
- (a) Fever
- (b) Diarrhoea
- (c) High blood pressure/ Hypertension
- (d) Diabetes Mellitus.

SECTION-C

VI. Emotional Development of the child from infancy up to 6 years
- (a) Characteristics of children's emotions.
- (b) Common childhood emotions—Fear, angers, jealousy, curiosity love and affection.

VII. Language Development.
- (a) Stages of language development.
- (b) Factors affecting language development

SECTION-D

VIII. Play
- (a) Significance of play.
- (b) Types of play.
- (c) Play materials/equipment required for various age groups.

IX. Common behavioural problems and their remedies—Bed wetting, thumb sucking, nail biting, temper tantrums.

PRACTICAL

Max. Marks	**:50**
Practical	**:45**
Int. Ass.	**:05**
Hours	**:03 Hours per week**

I Planning & Preparation of diets for the following:
- (a) Pre-Schooler;
- (b) School going/packed lunch;
- (c) Adolescent;
- (d) Pregnant and lactating woman.

II Cooking and serving of the following : Soft, liquid, fluid diets (two each)

III Preservation- preparation of pickle, jam, chutney and squash (one each)

IV Project

- Safety measures of play equipment
  OR
- Visit to a nursery school
  OR
- Preparation of any one play item

Reports to be submitted

- **List of Equipments for a practical group of 15 students : SAME AS OF SEMESTER V**

Reference Books :

1. *Applied Nutrition,* R. Rajalakshmi, Oxford & IBH Publishing Co. Pvt. Ltd., N. Delhi.
2. *Principles of Nutrition-Dietetics,* Dr. M. Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 88, Mysore Road, Bangalore.
3. *Food & Nutrition, Educational Planning Group,* Arya Publishing House, Karol Bagh, New Delhi-5.
4. *Normal and Therapeutic Nutrition,* Br Corinne, H. Robinson, Marlya R. Lowler, Macmillan Publishing Co., New York, Collier Macmillan Publishers, London.
5. *Textbook of Nutrition and Dietetics*. Kumud Khanna, Sharda Gupta, Santosh Jain Passi, Rama Seth, Ranjana Mahna, Seema Puri. 2nd Edition. Elite Publishing House Pvt Ltd 2013
6. *Diet Nutrition and Health*. Rakesh Mittal
7. *Diet and Nutrition*. Huma Zaidi
8. *Nutritive Value of Indian Foods,* G. Copalen, B.V. Rama Sastri, and S.C. Balasubramaniam, National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, India.
9. *Human Development,* Graing J. Graig, 5th Edition, 1989/Prentice Hall, Englewood Cliffs, New Jersey, 07632.
10. *The Modern Parents Guide to Baby & Child Care-Violet,* Broadribb, R. N.H.S. & Henry F. Loc. M.E., 1973 Macdonald's and Jane's London.
11. *Good House Keeping's Baby Book V—The Good Housekeeping,* 12th ed., 1959.
12. *Child Psychology.* Dr. Nisha Sharma
13. *These are your children—Dadys,* Gardner Jenkins and Helen Shacter, 4th ed., Scott, Foresman and Co., Glenview Illinios.
14. Hurlock, E.B., *Child Development,* 6th ed., McGraw Hill International Book Company, 1978.

INTRODUCTION TO COMPUTER SCIENCE
(Additional Optional Subject)

Note : The students with no background of Computer knowledge will opt for Module 1 while those familiar with the use of Computer system at the operating system level and application level, may opt either Module II or Module III.

Course Duration for each semester: 60 hours for Theory and 60 hours for Practical

Sr. No.	Paper	Name of Paper	Lectures per week	Max. Marks			Exam. Hours
		Fifth Semester		Ext.	Int.		
1	**Paper IIIA :**	Database Management System	6	25	5	30	3
2	**Paper PIIIA**	Practical on Paper – IIIA	6	-	-	20	3
		Sixth Semester					
3	**Paper IIIB :**	Relational Data Base Management System	6	25	5	30	3
4	**Paper PIIIB:**	Practical on Paper – B	6	-	-	20	3

FIFTH SEMESTER

Paper IIIA

Paper Title: DATABASE MANAGEMENT SYSTEM

Max. Marks : 25 **Time : 3 Hrs.**

Theory : Ext. 25 + Int. 5 = 30
Practical : Ext. 20 -- = 20

Total Periods (6 Periods/week): 60

Objectives of the Module: The objective of the module is to create skills in development of information system using DBMS. The students should be able to independently develop computer based projects.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. Data Base Concept

Data Base Vs file oriented approach, Basic DBMS terminology, Data independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantage and Disadvantages of DBMS, Functions of a Database Administrator

(15 hours)

UNIT – II

2. Data Base Design

Introduction to Data Models, Entity Relationship Model, Entities, Attributes, Relationships, Relationship constraints, E-R Models, Generalization and Aggregation, Conceptual Design of a relational data base model. Comparison of Network, Hierarchical and Relational Model, Schemas, Sub-schemas, keys, Designing data base for Commercial application like inventory control, financial management and personal management, Storage organization for Relations.

(15 hours)

UNIT - III

3. Normalization: 1NF, 2NF, 3NF and BCNF.

4. Application of DBMS: MS Access

Features of MS Access, Creating a database in MS Access, Tables in MS Access: creating tables, inserting data into tables, inserting keys, modifying design. Properties of fields: field size, field format, input mask, caption, default value, validation rule, validation text. Establishing relationships between tables in MS Access: creation, modification and deletion of relationships.

(15 hours)

UNIT - IV

5. Queries in MS Access: creating queries, defining calculated fields, saving, running and modifying queries, multitable queries, including summary functions, expressions, search criteria. Crosstab queries, Action queries. Updata, append and delete queries. Forms in MS Access: creating and editing forms. Reports in MS Access: creating and printing reports, grouping and sorting the data in a report. Saving database with a password in MS Access, Importing external data and exporting the database in MS Access.

(15 hours)

References:

1.	Desai, B.C.	An Introduction to Database Systems, Galgotia Pub. New Delhi
2.	Date, C. J.	Database Systems Vol. I & II, Narosa Publ., New Delhi (Indian student ed.)
3.	Henry F. Korth, Abraham,	Database System Concepts, McGraw Hill Inc., New York International ed
4.	Mukhi, Vijay	Mastering Oracle, BPB Publication, NewDelhi
5.	James T. Perry	Understanding ORACLE, BPB Publications
6.	O'Reilly	Oracle PL/SQL Programming, Shroff Publications Mumbai
7.	Rowski, Bob	Oracle Client server Computing, BPB publications

Paper PIIIA: Practical Based on Paper III-A

INTRODUCTION TO COMPUTER SCIENCE
SIXTH SEMESTER

Paper IIIB : **Relational Data Base Management System**

Max. Marks : 50

Theory : Ext. 25 + Int. 5 = 30

Practical : Ext. 20 -- = 20

Course Duration : 30 hours (for both Theory and Practical)
Pre-requisite: Computer Fundamentals and Problem Solving

Objectives of the Module: The objective of the module is to create skills in development of information system using DBMS. The students should be able to independently develop computer based projects.

Note :

i. The Question Paper will consist of Four Sections & a Compulsory question .
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. The Relational Model:

Relational Model: Database relations, properties of a relation, Attributes, Domains, Tuples, Relations and their schemes, Relational representation, Degree and cardinality, Extensions and intensions, Integrity constraints, Relational constraints, Relational operations: insertion, deletion and updation, Relational operators: union, intersection, difference, product, project, select, join, division.

(15 hours)

UNIT - II

2. Introduction to SQL

Oracle Data types, Starting SQL *Plus, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Ordering the Result of a Query, Aggregate Functions, Grouping the Result of a Query, ROLLUP Operation: Getting Sub Totals, CUBE Operation: Getting Cross Tabs, Command Summary of SQL *Plus Editor. Querying Multiple Tables: Collating Information: Equi Joins, Cartesian Joins, Outer Joins, Self Joins; SET Operators: Union, Intersect, Minus; Nested Queries. Functions: Functions, Column Functions: Arithmetic Functions, Character Functions, Date Functions, General Functions; Group Functions. Data Manipulation and Control: Data Definition Language (DDL), Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) From a Table, Dropping a Column.

(15 hours)

UNIT - III

3. SQL contd..

Introduction to VIEWs, Manipulating the Base table(s) through VIEWs, Rules of DML Statements on Join Views, Dropping a VIEW, Inline Views, Materialized Views. Database Security and Privileges, GRANT Command, REVOKE Command, Application Privileges Management, Enhancing Performance, Sequences, Maintaining Database Objects, COMMIT and ROLLBACK.

4. **PL/SQL:** Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Referencing Non-PL/SQL Variables, Built-in-Functions.

(15 hours)

UNIT - IV

5. **PL/SQL contd..**

Conditional and Iterative Control, SQL Within PL/SQL, Writing PL/SQL Code, Composite Data types. Cursor Management in PL/SQL, Cursor Manipulation, Implicit Cursor Attributes, Exception Handling in Pl/SQL; Predefined Exceptions, User Defined Exceptions. Subprograms in PL/SQL, Advantages of Subprograms, Procedure, Functions, Actual versus Formal Parameters, Argument Modes, Stored Packages, Advantages of Packages, Dropping a Procedure, Dropping a Function, Dropping a Package, Using Stored Function in SQL Statements, Database Trigger, Types of Triggers, Dropping Triggers, Storage for Triggers.

(15 hours)

References :

1.	Desai B.C., 1983	:	An Introduction to Database Systems, Galgotia Pub.
2.	Date, C.J.	:	Database Systems Vol. I & II, Narosa Publ
3.	Parkash, Naveen 1983	:	Introduction to Database Management, TMH.
4.	Henry F. Konth Abraham, 1997	:	Database System Concepts, McGraw Hill Inc.
5.	Bobrowski Steve 1996	:	Mastering Oracle 7.0 BPB Publication.
6.	James T. Perry; Joseph G. Lateer	:	Understanding ORACLE, BPB Publications

Paper PIIIB: Practical Based on Paper III-B

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 — enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

BACHELOR OF COMPUTER APPLICATIONS (B.C.A)

(SEMESTER SYSTEM)
PART-I, II, III
(FIRST to Sixth Semester)
FOR

2020 – 2021 SESSIONS

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Panjab University, Chandigarh

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Scheme of Examination and Syllabus of BCA w.e.f. 2020 - 2021.

Bachelor of Computer Applications Semester – I

Paper Code	Title	L	T		Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-101	English(Compulsory)-A	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-102	Fundamentals of Mathematical Statistics	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-103	Computer Fundamentals and Computing Software	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-104	Problem Solving Through C	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-105	Lab based on BCA-16-103	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-106	Lab based on BCA-16-104	-	-	6	6	-	50	50	4 Hrs	2
	Environment & Road Safety Education									
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – II

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-201	English (Compulsory)-B	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-202	Computer Organization	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-203	Fundamentals of Web Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-204	Object Oriented Programming using C++	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-205	Lab based on BCA-16-203	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-206	Lab based on BCA-16-204	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**40**	**360**	**400**		**16**

***The Environment, Road Safety Education, Drug Abuse & Violence against Women is a compulsory qualifying paper which the students have to study in the B.C.A. 1st year (2nd Semester). If the students failed in qualify the paper during 2nd Semester, he / she / they be allowed to appear / qualify the same in the 4th or 6th semester/s.**

Bachelor of Computer Applications Semester – III

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-301/ BCA-16-302	Punjabi-A/ History & Culture of Punjab – A	6	-	-	6	05	45	50	3 Hrs	3
BCA-16-303	Information System Design and Implementation	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-304	Computer Oriented Numerical Methods	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-305	Data Structures	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-306	Lab based on BCA-16-304	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-307	Lab based on BCA-16-305	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**1**	**12**	**37**	**35**	**340**	**375**		**16**

Bachelor of Computer Applications Semester – IV

Paper Code	Title	L	T	P	Total	Int	Ext	Total		Credits
BCA-16-401/ BCA-16-402	Punjabi-B/History & Culture of Punjab – B	6	-	-	6	05	45	50	3 Hrs	3
BCA-16-403	Software Project Management	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-404	Operating System Concepts and Linux	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-405	Database Management System	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-406	Lab based on BCA-16-404	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-407	Lab based on BCA-16-405	-	-	6	6	-	50	50	4 Hrs	2
	Total	**24**	**-**	**12**	**36**	**35**	**340**	**375**		**16**

Bachelor of Computer Applications Semester – V

Paper Code	Title :	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-501	Computer Networks	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-502	Discrete Mathematical Structure	6	1	-	7	10	65	75	3 Hrs	3
BCA-16-503	Java Programming	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-504	Web Application Development using PHP	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-505	Lab based on BCA-16-503	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-506	Lab based on BCA-16-504	-	-	6	6	-	50	50	4 Hrs	2
		24	**1**	**12**	**37**	**40**	**360**	**400**		**16**

Bachelor of Computer Applications Semester – VI

Paper Code	Title	L	T	P	Total	Int	Ext	Total	Exam. Duration	Credits
BCA-16-601	E-Commerce	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-602	Application Development using VB.Net	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-603	Computer Graphics and Multimedia Applications	6	-	-	6	10	65	75	3 Hrs	3
BCA-16-604	Lab based on BCA-16-603	-	-	6	6	-	50	50	4 Hrs	2
BCA-16-605	Major Project and Seminar	-	-	12	12	10	115	125		5
	Total	**18**	**-**	**18**	**36**	**40**	**360**	**400**		**16**

* This is a compulsory qualifying paper, which the students have to study in the B.A./B.Sc./B.Com./B.C.A.1st year. The students are required to qualify this paper either in the first year, second year and third year of the course. The examination will be conducted by the University.

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FIRST SEMESTER

: **English (Compulsory) – A**
BCA-16-101

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Semester I

Book Prescribed: **Colours of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (1& 2)
One essay type question on summary/Character/Incident (one out of two with internal choice)
10 marks

II) **Prose (1 to 3)**
Long essay type question on Summary/Theme(one out of two with internal choice)
10 marks

III) **Poetry** (1 to 6) **15 marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context (one out of two with internal choice) **5 marks**

Section B

1) Word formation from Prose and Stories and their use in sentences (5 out of 8)
10 marks

2) Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3) Translation from Hindi/Punjabi to English **5 marks**
(a small Paragraph)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Official, Business and Letters to the Editors **5 marks**

Fundamentals of Mathematical Statistics
: **BCA-16-102**

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the basic techniques of Statistical Methods. After completing this course students will be able to solve various Financial, Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Basic (Non-programmable) type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Basic Statistics: Types of Statistics, Different Statistical Techniques, Steps in Statistical Investigation, Uses and Limitations of statistics, Collection of Data: Sources of collecting primary and Secondary Data, Limitations of Secondary Data, Criteria of evaluating secondary data, Organization of data, Graphs of Grouped Frequency Distribution, Tabulation of Data, Parts of Table

Measures of Central Tendency: Kinds of measures of central tendency (statistical averages or averages):

Arithmetic Mean: Simple Arithmetic Mean, Methods of calculating Simple Arithmetic Mean, Arithmetic Mean in case of Individual Series, Discrete series and continuous series, Weighted Arithmetic Mean, Combined Arithmetic Mean.

Geometric Mean: Simple Geometric Mean, Methods of calculating Simple Geometric Mean, Geometric Mean in case of Individual Series, Discrete series and continuous series, Weighted Geometric Mean, Combined Geometric Mean.

Harmonic Mean: Simple Harmonic Mean, Methods of calculating Simple Harmonic Mean, Harmonic Mean in case of Individual, Discrete series and continuous series, Weighted Harmonic Mean, Combined Harmonic Mean.

UNIT - II

Median: Methods of Calculating Median in case of Individual, Discrete series and continuous series

Partition Value: Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles

Mode: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series

Range: Computation of Range, Inter Quartile Range, Computation of Inter Quartile Range, Percentile Range and Computation of Percentile Range.

Mean Deviation, Computation of Mean Deviation, Standard Deviation, Calculation of Standard Deviation, Variance, Calculation of Standard Deviation for individual Series, Discrete Series and Continuous Series, Coefficient of Standard Deviation and coefficient of variation, Combined Standard Deviation, Correcting incorrect Standard Deviation

UNIT - III

Correlation Analysis : Correlation Analysis: Definition, Types of Correlation: Positive, Negative, Simple, Multiple, Partial, Total, Linear and Non-Linear. Need of Correlation Analysis, Correlation and Causation, Techniques for Measuring Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation: Correcting incorrect coefficient of correlation, calculating Karl Pearson's coefficient of correlation in case of grouped series, Probable Error, Coefficient of Determination, Spearman's coefficient of Correlation (Rank correlation): Calculation of Correct Coefficient of rank correlation, Difference between Rank Coefficient and Karl Pearson's coefficient of coefficient, Coefficient of concurrent deviation.

UNIT - IV

Regression Analysis (Linear Regression): Definition, Difference between Correlation and Regression, Types of Regression Analysis: Simple, Multiple, Partial, Total, Linear and Non-Linear, Objectives of Regression Analysis, Methods of obtaining regression analysis: Regression Lines, Regression Equations. Methods of obtaining regression equations: Normal Equations and Regression Coefficient, Properties of Regression Coefficient, Standard Error of Estimate, Regression Coefficient in case of Grouped Data, Uses of Regression Analysis and Limitations of Regression Analysis.

Suggested Readings:

1. Gupta S.C, Kapoor V.K. : Fundamentals of mathematical Statistics, Sultan Chand & Sons.
2. Gupta, S.P., 2003 : Statistical Methods, S. Chand.
3. Affi, A.A, 1979 : Statistical Analysis: A Computer Oriented Approach, Academic Press, Inc.

Computer Fundamentals and Computing Software
: **BCA-16-103**

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: The objective of this course is to familiarize students with complete Fundamentals and the packages commonly used in computing software.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Appreciation: Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms–Hardware, Software, Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

Types of software: System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.

UNIT - II

Understanding Operating System using DOS : Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. Batch Files: Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

Understanding Graphical User Interface using Windows: Fundamentals of Windows, Types of Windows, Anatomy of windows, Icons, Recycle bin, Operations on Folders, Registry of Windows: Basics, Editing; Control panel.

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UNIT - III

Word Processing Package: Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools, word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, auto-formatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge, Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms.

UNIT - IV

Spreadsheet Package: Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes, Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, Printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros.

Presentation Packages: Basics of creating a presentation, Parts of main window, workspace views, creating a presentation, Incorporation of Animation.

Note: Any word processing, spreadsheet and presentation package may be used. Focus should be on open source software's.

Suggested Readings:

1. Basandra, S.K. : Computers Today, Galgotia.
2. Sinha P.K. & Sinha Priti : Computer Fundamentals, BPB Publications
3. Mathur Rajiv, 1995: DOS 6.2 Quick Reference, Galgotia.
4. OOoAuthors Team : Getting Started with OpenOffice.org 3.3, Friends of OpenDocument
5. Singleton, Roderick G.: OpenOffice.org User Guide.

Problem Solving Through C
: **BCA-16-104**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to make the student understand programming language concepts, mainly control structures, reading a set of data, stepwise refinement, function and arrays. After completion of this course, the student is expected to analyze the real life problem and write programs in 'C' language to solve problems. The main emphasis of the course is on problem solving aspect.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging.
Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.
Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.

UNIT - II

Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause.
Loop Control Structure: While and do-while, for loop and Nested for loop,
Case Control Structure: Decision using switch, Thegoto statement.
Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C.

UNIT - III

Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function: Call by value and call by reference, Arrays of characters, Insertion and deletion operations, Searching the elements in an array, Using matrices in arrays, Passing an Entire Array to a Function.

Pointers: Pointer declaration, Address operator "&", Indirection operator "*", Pointer and arrays, Pointers and 2-Dimensional Arrays, Pointer to an Array, Passing 2-D array to a Function, Array of Pointers.
Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions.

UNIT - IV

String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handling functions(strlen(), strcpy(), strcmp(), strcat()).
Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers, Union.
Files in C: Introduction, Opening and Closing files, Basic I/O operation on files.

Suggested Readings:

Essential :

1. Yashavant P. Kanetkar : Let us C, BPB Publications, New Delhi.

Further Reading:

2. Salaria, R.S. : Test Your Skills in C, Salaria Publications, New Delhi.
3. C. Balaguruswami : Programming with C Language, Tata McGraw Hill, New Delhi.
4. Byron S. Gottfried : Programming in C, McGraw Hills Publishers, New York.
5. M.T. Somashekara : Programming in C, Prentice Hall of India.

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SECOND SEMESTER

English (Compulsory) – B
BCA-16-201

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L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Semester II

Book Prescribed: **Colour of Expression** by Harbhajan Singh published by Publication Bureau, Panjab University, Chandigarh

Section A

1) **Short Stories** (3-5)
One essay type question on summary/Character/Incident (one out of two with internal choice) **10 marks**

2) **Prose (4-5)**
Long essay type question on Summary/Theme (one out of two with internal choice) **10 marks**

3) Poetry (7-11) **15marks**
Summary (one out of two with internal choice) **5 marks**
Short Questions (two out of three) **5 marks**
Reference to the Context(one out of two with internal choice) **5 marks**

Section B

1) Paragraph Writing(Descriptive and Narrative) **10 marks**

2). Use of textual words and idioms in sentences (5 out of 8) **10 marks**

3). Translation from Hindi/Punjabi to English **5 marks**
(isolated sentences)

OR

For Foreign Students (Paraphrase of Poetry Passage)

4) Transformation of all types (5 out of 5) **5 marks**

Computer Organization
BCA-16-202

L	T	P	Cr	
6	1	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to understand the basic organization of computer system and system maintenance.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Organisation: Evolution of Computers, Von Neumann Architecture, Combinatorial Blocks : Gates, Half Adder, Full Adder, Multiplexers, Decoders, Encoders; Sequential Building blocks : Flip Flops, Registers, Counters,
Information representation: codes, fixed and floating point representation
Arithmetic: Addition and subtraction for sign magnitude and 2's complement numbers, integer multiplication using Booth's algorithms

UNIT - II

Architecture of a Simple Processor: Architecture of 8086/8088 microprocessor, instruction set, Addressing Modes.
Instruction: Microinstructions: Register Transfer, Arithmetic, Logical and Shift, Types of Instructions, Instruction Cycle.
Interrupt: Types, Interrupt Cycle
I/O organization: Strobe based and Handshake based communication, DMA based data transfer;

UNIT - III

Memory Organisation: Memory Hierarchy, RAM (Static and Dynamic), ROM Associative memory, Cache memory organisation, Virtual memory organisation.
Assembly Language : Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/ Output.

UNIT - IV

System Maintenance: Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection, prevention and protection from Viruses.

Suggested Readings:

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Essential :

1. M. Morris Mano, 1993. : Computer System Architecture, Prentice Hall International, 3rd Ed.,

Further Reading :

2. P. Pal Choudhri, 1994. : Computer Organisation and Design, Prentice Hall of India.
3. Biswal, Sadasiva, 2001 : Basic Electronics, Pub-Atlantic, New Delhi.
4. B. Govindarajalu, 1994. : IBM-PC and Clones - Hardware Troubleshooting and Maintenance, Tata-McGraw-Hill.

Fundamentals of Web Programming

: **BCA-16-203**

L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: This course will enable the student to build and publish web sites using HTML, DHTML, CSS, JavaScript and Dreamweaver.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Terminology: Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL

HTML: Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.)

Lists: Unordered List, Ordered Lists, Definition lists

Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes

Tables: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

UNIT - II

Linking Documents: Anchor tag, External Document References, Internal Document References and Image Maps

Frames: Introduction to Frames: The <FRAMESET> tag, The <FRAME> tag, Targeting Named Frames

DHTML: Introduction to cascading style sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External

Forms: Attributes of Form element, Input element, The Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option , Bootstrap Library.

UNIT - III

Java Script: Introduction and Features of JavaScript, Writing JavaScript into HTML, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.

Other Built-In Objects in JavaScript: The String Object, The Math Object, The Date Object;

UNIT - IV

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Introduction to Dreamweaver: Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.

Web Hosting: Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools

Suggested Readings:

Essential :

1	Wanger & Wyke	:	Java Script Unleased, Pearson Education, New Delhi.
2	Bayross, Ivan :	:	HTML, DHTML, Java Script by BPB, Latest reprint
3	Schildt , Herbert	:	The Complete Reference Java 2, TMH, Latest reprint
4	Joseph Lowery	:	Adobe Dreamweaver CS5 Bible Paperback Edition

Further Reading :

5	Thomas Powell	:	HTML & CSS: The Complete Reference
6	John Pollock	:	JavaScript, A Beginner's Guide
7	Janine C. Warner	:	Dreamweaver CS5 For Dummies Paperback Edition
8	David Powers	:	The Essential Guide to Dreamweaver CS4

Object Oriented Programming using C++
: BCA-16-204

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives: By the end of the course, students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, and explore advanced C++ techniques.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Principles of Object Oriented Programming (OOP): Introduction to OOP, Difference between OOP and Procedure Oriented Programming; Concepts: Object, Class, Encapsulation, Abstraction, Polymorphism and
Inheritance, Applications of OOP. Special operators: scope resolution operator, Member Dereferencing operators, Memory management operators, Manipulators and Type cast operator
Structure of a C++ Program and Classes and Objects : Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions; Class Function Definition: Member Function definition inside the class declaration and outside the class declaration.

UNIT - II

Friend function, inline function, Static members, Function Overloading, Arrays within a class. Arrays of Objects; Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects.
Constructors: Declaration and Definition, Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use.
Operator Overloading & Type Conversion: Conversion from basic type to user defined type, User defined to basic type and one user defined conversion to another user defined type.

UNIT - III

Inheritance: Extending Classes Concept of inheritance, Base class, Defining derived classes, Visibility modes : Public, Private, Protected ;Types of Inheritance: Single inheritance :

Privately derived, Publicly derived; Making a protected member inheritable, multilevel inheritance, multiple Inheritance and ambiguity of multiple inheritance, Hierarchal Inheritance, Hybrid, Nesting of classes.

Polymorphism: Definition, Application and demonstration of Data Abstraction, Encapsulation and Polymorphism. Early Binding, Polymorphism with pointers, Virtual Functions, Late binding, pure virtual functions.

UNIT - IV

Exception Handling: Definition, Exception Handling Mechanism : Throwing mechanism and Catching Mechanism, Rethrowing an Exception

File Processing : Opening and closing of file, Binary file operations, structures and file operations, classes and file operations, Random file processing.

Suggested Readings :

Essential :

1. E. Balaguruswamy, 2008 : Object Oriented Programming with C++, TMH.

Further Reading :

2. Bjarne Stroustrup, 2009 : The C++ Programming Language, Addison-Wesley Publishing Company.
3. Robert Lafore, 2003 : Object Oriented Programming in Turbo C++, Galgotia Pub.
4. Salaria, R. S. : Object Oriented Programming Using C++, Khanna Book Publishing Co. (P.) Ltd., New Delhi.

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THIRD SEMESTER

Punjabi – A
BCA-16-301

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ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ,
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
   (ਭਾਈ ਵੀਰ ਸਿੰਘ- ਗੁਲਾਬ ਦਾ ਫੁੱਲ ਤੋੜਨ ਵਾਲੇ ਨੂੰ, ਵਿਛੋੜਾ-ਵਸਲ, ਖੇੜਾ, ਪੂਰਨ ਸਿੰਘ- ਜਵਾਨ ਪੰਜਾਬ, ਸਮੁੰਦਰ ਕਿਨਾਰੇ ਮੈਂ ਉਡੀਕਾਂ, ਗਰਾਂ ਦਾ ਮਿਹਨਤੀ ਬਲਦ, ਧਨੀ ਰਾਮ ਚਾਤ੍ਰਿਕ- ਰਾਧਾ ਸੰਦੇਸ਼, ਏਕੇ ਦੀ ਬਰਕਤ, ਪੰਜਾਬੀ ਦਾ ਸੁਪਨਾ, ਮੋਹਨ ਸਿੰਘ- ਮਾਂ, ਦੇਸ਼ ਪਿਆਰ, ਹਵਾ ਦਾ ਜੀਵਨ ਅਤੇ ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ- ਆਖਾਂ ਵਾਰਸ ਸ਼ਾਹ ਨੂੰ, ਸੱਤ ਵਰ੍ਹੇ ਅਤੇ ਅਸ਼ੋਕਾ ਚੇਤੀ ਕਵਿਤਾਵਾਂ)
2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ
   ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
   (ਏਹੁ ਨਿਦੋਸਾ ਮਾਰੀਐ, ਸਵਰਗ ਦੀ ਝਲਕ, ਮਾਮਲਾ, ਉਜਾੜ, ਬਸ਼ੀਰਾ ਅਤੇ ਰੱਬ ਤੇ ਰੁੱਤਾਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1.	ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1)	5 ਅੰਕ
2.	ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (3 ਵਿਚੋਂ 1)	5 ਅੰਕ
3.	ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ)	5 ਅੰਕ
4.	ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ (ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਸੁਜਾਨ ਸਿੰਘ, ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ ਅਤੇ ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ) (2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)	8 ਅੰਕ
5.	ਲੇਖ : ਸਮਾਜਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਆਮ ਵਾਕਫ਼ੀ ਨਾਲ ਸੰਬੰਧਤ (500 ਸ਼ਬਦਾਂ ਤੱਕ)	7 ਅੰਕ
6.	ਸ਼ਬਦ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜਾਂ ਵਿੱਚੋਂ 7)	7 ਅੰਕ
7.	ਵਾਕ ਸ਼ੁੱਧੀ (10 ਅਸ਼ੁੱਧ ਵਾਕਾਂ ਵਿੱਚੋਂ 8)	8 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

HISTORY AND CULTURE OF PUNJAB – A
BCA-16-302

HISTORY AND CULTURE OF PUNJAB – I

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks
   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER : HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of the Punjab region.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning and socio-economic life.
2. Life in Vedic Age: socio-economic and religious.
3. Growth of Jainism and Buddhism in Punjab on the region.

UNIT II

4. Society and Culture under Maurayas
5. Society and Culture under Gupta
6. Cultural Reorientation: main features of Bhakti; origin and development of Sufism

UNIT III

7. Evolution of Sikhism: teaching of Guru Nanak; Institutional Development -Manji, Masand, Sangat and pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society in 18th century: social unrest; emergence of misls and institutions-rakhi, gurmata, dal khalsa.
11. Society and Culture of the people under Maharaja Ranjit Singh
12. MAP (of undivided physical geographical map of Punjab): Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, Munshi Ram Manohar Lal, Delhi,1966
7. Singh,Kirpal : History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) : History of the Punjab, Vol.III, Punjabi University, Patiala, 1972
9. Grewal, J.S. : The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant : A History of the Sikhs, vol I: 1469-1839, Oxford University Press Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.:A Social, Cultural and Economic History of India, Vol. II, and Das, M.N. Macmillan, Delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Information System Design and Implementation

: **BCA-16-303**

L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students about the various aspects of Information Systems to be developed their analysis and design. The motive is to aware the learners about pre requisite of software development and associated paradigms. After completing this course students will be able to be analyse and design information systems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Systems Concepts and Information Systems Environment: Definition and characteristics of a system. Elements of a system Environment: Boundaries and interface. Types of systems: Physical or Abstract Systems, Open and Closed System, Man - made information systems.

The System Development Life Cycle: Introduction to various phases-Recognition of Need, Feasibility Study, Analysis, Design, Implementation, Post– Implementation and Maintenance.

The Role of System Analyst: Skills of a System Analyst, various roles of the Analyst.

UNIT - II

System Planning and the Initial Investigation: Bases for planning in system analysis, Initial investigation, determining the users information requirements, Problem definition and Project Initiation, Background Analysis, Fact Finding, Fact Analysis, Determination of Feasibility.

Information Gathering: Introduction, Information Gathering tools: Review of Literature, Procedures and forms. On -site observation. Interviews and questionnaires.

Tools of Structured Analysis: Various tools of structured analysis: Data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table, Pros and cons of each tools.

UNIT - III

Feasibility Study: System Performance-statement of Constraints, Identification of Specific System Objectives, description of Outputs. Feasibility Study – Feasibility considerations, Steps in feasibility analysis. Feasibility Report.

System Design: The Process of Design-Logical and Physical Design, Design methodologies: Structured design, Functional Decomposition

System Testing and Quality Assurance: Testing, System testing, Quality assurance and its goals in its system life cycle, Levels of quality assurance, Trends in testing.

UNIT - IV

Implementation and Software Maintenance: Introduction, Conversion- Activity network for Conversion, File Conversion, User Training: Elements of user Training Post implementation review. Software Maintenance - Primary activities of a Maintenance Procedure, Reducing Maintenance Costs.

Hardware and Software Selection: Types of Software, Procedure for Hardware/Software selection: Major phases in selection, Evaluation and Validation, Vendor Selection, Post – Installation Review. Software selection- Criteria for Software Selection, the evaluation process.

Suggested Readings:

1. E.M. Awad: Systems Analysis and Design,Galgotia Publications(P)Ltd.

Further Reading :

2. Hardgrave Bill C. ,Siau Keng, Chiang Roger H.L., Systems Analysis and Design : Techniques, Methodologies, Approaches and Architectures 1st Edition, M.E. Sharpe Publications.

Computer Oriented Numerical Methods
: BCA-16-304 (Session 2020 – 2021)

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students the essential techniques of Numerical Methods. After completing this course students will be able to solve various Scientific and Engineering fields' problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.
v. **The student can use only Basic (Non-programmable) type of Calculator.**
vi. **Log tables are allowed. Students may be provided the same for computation.**

UNIT - I

Introduction to differentiation, integration and matrix algebra.

(No. of Lectures – 05)

Data Representation and Computer Arithmetic: Introduction, Concept of Exact and Approximate Numbers, Concept of Significant digits, Representation of Numbers in Memory, Storage of Integer Numbers: Signed Representation, 1's Complement Representation, 2's Complement Representation, Floating Point Numbers and their storage, Floating Point Arithmetic, Normalization and their consequences, Errors, Measures of Accuracy: Absolute Error, Relative Error and Percentage Error, Error types: Data Errors, Truncation Errors, Round-Off Errors, Computational Errors, Rules, Relationship between Relative Error and Significant digits and Error Propagation: Error Propagation in Addition Operation, Subtraction Operation, Multiplication Operation and Division Operation.

(No. of Lectures – 10)

UNIT - II

Solution of Non-Linear Equations: Introduction, Types of Non-Linear Equations: Polynomial Equations, Transcendental Equations, Methods of Finding Solutions of Non-Linear equations: Direct Method, Iterative Method.

Iterative Methods: Bisection Method, False-Position Method, Secant Method, Newton - Raphson Methods, Zeros of a polynomial using Birge – Vieta Method. Convergence of Iterative Methods, Comparison between Iterative Methods.

(No. of Lectures – 08)

Simultaneous Linear Equations: Solution of Simultaneous Linear Equations using Direct and Iterative Methods: Direct Methods: Gauss – Elimination Method, Gauss-Jordan Method, Concept of Pivoting, Iterative Method: Gauss-Seidal Method.

(No. of Lectures – 07)

UNIT - III

Interpolation: Introduction, Lagrange Interpolation, Inverse Interpolation, Finite Differences: Forward Differences, Backward Differences, Divided Differences, Difference Tables: Forward Difference Table, Backward Difference Table, Divided Difference Table, Observations regarding Difference Tables, Newton's Method of Interpolation: Newton' s Forward Difference Interpolation Formula, Newton' s Backward Difference Interpolation Formula, Newton' s Divided Difference Interpolation Formula.

(No. of Lectures – 10)

Numerical Integration: Introduction, Newton-Cotes Integration Formulae: Trapezoidal Rule, Simpson's 1/3rd Rule, Simpson's 3/8th Rule.

(No. of Lectures – 05)

UNIT - IV

Approximation: Approximation of functions: Taylor Series Representation, Chebyshev Polynomials.

(No. of Lectures – 07)

Solution of Ordinary Differential Equations: Introduction**,** Euler's Method, Runga–Kutta Methods: 2nd order & 4th order, Predictor Corrector Methods: Modified Euler's Method.

(No. of Lectures – 08)

Suggested Readings:

Essential :

1. Salaria,R.S. : Computer Oriented Numerical Methods,5th Edition, Khanna Book Publishing Co. (P.) Ltd., New Delhi

Further Reading :

2. Rajaraman,V.,2004 : Computer Programming in C, Prentice Hall of India.
3. S.S. Shastry : Introductory Methods of Numerical Analysis
4. H.C. Saxena : Finite differences and Numerical Analysis

Data Structures
: **BCA-16-305**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students various data structures and the basic operations performed using them. At the end of course the student will have complete knowledge of data structures, thus will be able to use them for solving real world problems.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures.
Arrays: Introduction, Types of Array, Memory representation, Applications and operations.
Stacks: Introduction, memory representation, Applications and operations, Recursion.

UNIT - II

Linked List: Operations:-traversing, searching, inserting, deleting, operations on header linked list, circular linked list, doubly linked list, memory representation, Applications, polynomial manipulation.
Queue: Introduction, Types, Memory Representation and Applications.

UNIT - III

Trees – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree.
Graphs: Introduction, Memory Representation, Graph Traversal (DFS and BFS)

UNIT - IV

Searching: Binary and Linear Search;
Sorting: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort.
Comparison of various Searching and Sorting algorithms.

Suggested Readings :

Essential :

1. Lipschuitz L. Seymour, 2001 : Data Structure, Schaum Outline Series, TMH, New Delhi.

Further Reading :

2. Tannenbaum, Aaro M., 1990 : Data Structure Using C, Pearson.
3. Salaria, R. S. : Data Structures & Algorithm Using C, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
4. Salaria, R. S., Test Your Skills in Data Structures, Khanna Book Publishing Co. (P.) Ltd., New Delhi.
5. Sofat Sanjeev, Data Structure with C and C++, Khanna Book Publishing Co.
6. Patel, R.B., Expert Data Structure in C, Khanna Book Publishing Co.

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FOURTH SEMESTER

Punjabi (Compulsory) – B
BCA-16-401

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ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਅਪ੍ਰੈਲ /ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ

ਕੁੱਲ ਅੰਕ : 50
ਥਿਊਰੀ : 45
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 05
ਸਮਾਂ: 3 ਘੰਟੇ

ਸਿਲੇਬਸ

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀਆਂ ਚੋਣਵੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਅਧਿਐਨ
2. ਚੋਣਵੀਆਂ ਪੰਜਾਬੀ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ
3. ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਲੇਖਕਾਂ ਦਾ ਸੰਖੇਪ ਜੀਵਨ ਤੇ ਰਚਨਾ/ਯੋਗਦਾਨ

ਕੋਰਸ

1. ਸੁਰ-ਸੰਵੇਦਨਾ, ਸੰਪਾ: ਡਾ.ਸਤਿੰਦਰ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 15 ਕਵਿਤਾਵਾਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ
(ਫ਼ੀਰੋਜ਼ਦੀਨ ਸ਼ਰਫ਼- ਪੰਜਾਬ, ਭਾਰਤ, ਮਾਂ ਦਾ ਦਿਲ, ਨੰਦ ਲਾਲ ਨੂਰਪੁਰੀ- ਭੋਲਾ ਪੰਛੀ, ਚੁੰਮ ਚੁੰਮ ਰਖੋ, ਸ਼ੌਕਣ ਮੇਲੇ ਦੀ, ਸ਼ਿਵ ਕੁਮਾਰ- ਲੱਛੀ ਕੁੜੀ, ਕੀ ਪੁੱਛਦਿਉ ਹਾਲ ਫ਼ਕੀਰਾਂ ਦਾ, ਬਿਰਹੜਾ, ਪਾਸ਼- ਇਨਕਾਰ, ਅਸੀਂ ਲੜਾਂਗੇ ਸਾਥੀ, ਗੀਤ, ਸੁਰਜੀਤ ਪਾਤਰ- ਖ਼ਤਾਂ ਦੀ ਉਡੀਕ, ਗ਼ਜ਼ਲ (ਕੋਈ ਡਾਲੀਆਂ 'ਚੋਂ) ਅਤੇ ਗ਼ਜ਼ਲ (ਮੇਰਾ ਸੂਰਜ ਡੁਬਿਆ ਹੈ) ਕਵਿਤਾਵਾਂ)

2. ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ, ਸੰਪਾ: ਗੁਰਦਿਆਲ ਸਿੰਘ ਵਿਚੋਂ ਚੋਣਵੀਆਂ 6 ਕਹਾਣੀਆਂ, ਪ੍ਰਕਾਸ਼ਕ: ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਓਰੋ, ਚੰਡੀਗੜ੍ਹ।
(ਗਧੀ ਵਾਲਾ, ਕੁਰਸੀ, ਬਾਕੀ ਸਭ ਸੁੱਖ-ਸਾਂਦ ਹੈ, ਰੋਹੀ ਬੀਆਬਾਨ, ਜਿੱਥੋਂ ਸੂਰਜ ਉੱਗਦਾ ਹੈ ਅਤੇ ਪਰਛਾਵੇਂ ਕਹਾਣੀਆਂ)

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. ਸੁਰ-ਸੰਵੇਦਨਾ ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (2 ਵਿਚੋਂ 1) — 5 ਅੰਕ
2. ਕਿਸੇ ਇੱਕ ਕਵਿਤਾ ਦਾ ਸਾਰ ਜਾਂ ਕੇਂਦਰੀ ਭਾਵ (4 ਵਿਚੋਂ 1) — 5 ਅੰਕ
3. ਇਕ ਕਹਾਣੀ ਦਾ ਸਾਰ (ਪੰਜਾਬੀ ਕਥਾ-ਕਿਤਾਬ ਵਿਚੋਂ) — 5 ਅੰਕ
4. ਕਿਸੇ ਇੱਕ ਕਵੀ ਜਾਂ ਕਹਾਣੀਕਾਰ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਅਤੇ ਯੋਗਦਾਨ — 8 ਅੰਕ
(ਸ਼ਿਵ ਕੁਮਾਰ, ਪਾਸ਼, ਸੁਰਜੀਤ ਪਾਤਰ, ਗੁਰਦਿਆਲ ਸਿੰਘ, ਰਘੁਬੀਰ ਢੰਡ ਅਤੇ ਵਰਿਆਮ ਸੰਧੂ)
(2 ਵਿਚੋਂ 1, ਇੱਕ ਕਵੀ ਅਤੇ ਇੱਕ ਕਹਾਣੀਕਾਰ ਵਿੱਚੋਂ)
5. ਕਾਲਜ ਨਾਲ ਸਬੰਧਤ ਪ੍ਰੈਸ-ਨੋਟ (2 ਵਿਚੋਂ 1) — 8 ਅੰਕ
6. ਕਾਰੋਬਾਰੀ ਇਸ਼ਤਿਹਾਰ (2 ਵਿਚੋਂ 1) — 7 ਅੰਕ
7. ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ — 7 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ : ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

: **History and Culture of Punjab – B**
BCA-16-402

HISTORY AND CULTURE OF PUNJAB-II

Instructions for the paper-setter and candidates: (for paper in Semester I & II)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions. Each question will carry 1 mark. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:
   Map : 06 Marks
   Explanatory Note : 04 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in the Modern times.
Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule in Punjab: Annexation of Punjab, Board of Administration
2. Western Education: Growth of Education and rise of middle classes
3. Agrarian Development: Commercialization of agriculture; canalization and colonization.

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar Movement.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas; Activities of Babbar Akalis.
9. Struggle for Freedom: activities of revolutionaries - Naujawan Bharat Sabha; Kirti Kissan Movement; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP(Physical geographical map of undivided Punjab): Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh, Kirpal :History and Culture of the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N.And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Software Project Management
: BCA-16-403

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: To teach the students important concepts, terms related to various phases during the development of a software project. At the end of the course the student will be able to apply software project management techniques to manage a software project.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Software Project Management and Process Groups: Introduction to project and project management, role of a project manager in project management, a system view of project management, Stakeholders of Project, Project phases and product life cycles, Evolution of software economics, Improving software economics: reducing product size, software processes, team effectiveness, automation through software environments, Principles of modern software management.

UNIT - II

Project Management Framework: Project Management Framework, Software Tools for Project Management, Issues in Project Staff Acquisition and Team formation and Development, Model based software architectures, Workflows of the process, Checkpoints of the process.

Project Integration: Integration Management: Project selection, project management plans, project execution, project monitoring and controlling, integrated change control;

UNIT - III

Scope Management: Scope Management: project scope statement, Work breakdown structures, Scope verification and scope control, Process instrumentation and seven core metrics.

Software management disciplines: Iterative process planning, Project organizations and responsibilities, Process automation.

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UNIT - IV

Project Scheduling: Time Management; Importance of Project Schedules, Sequencing and Scheduling Activity, Project Network Diagrams, PERT/CPM, Gantt charts, Critical chain scheduling.

Cost Management: Project Cost Management - Importance and Principles of Project Cost Management, Resource Planning, Cost Estimating Techniques and. Expert Judgment, Estimating by Analogy, COCOMO Model, Cost Budgeting and Control

Suggested Readings :

Essential :

1. Kathy Schwalbe, Information Technology Project management, Thomson Publication.
2. Bob Hughes and Mike Cotterell, Software Project Management, Tata McGraw-Hill.

Further Reading :

3. Walker Royce, Software Project Management - A Unified, Addison-Wesley.
4. Pankaj Jalote, Software Project Management in Practice, Pearson Education.
5. S.A. Kelkar, Software Project Management, A Concise Study, Prentice-Hall India.

: Operating System Concepts and Linux

BCA-16-404

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the module is to create skills of students in operating systems concepts and Linux commands.

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Operating Systems (OS): Introduction, its needs and services, Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems

Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling

UNIT - II

Deadlocks: Necessary and sufficient conditions for Deadlocks, Introduction to methods for handling deadlocks, deadlock detection and recovery

Memory Management: Logical vs Physical address space, Swapping, Introduction to Paging, Segmentation, Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU

UNIT - III

Introduction to Linux: Linux's shell, Kernel, Features of Linux, History, Minimum system requirements, Boot and Root disks , Starting and stopping Linux system, passwords, logging in and out, terminal Handling commands: who, Understanding wildcards, Environment variables.

Understanding I/O Redirection and Piping: Introduction, cut, paste, sort, tee; Introduction to Regular Expressions and grep .

Using file system: Introduction to common types of files, Filenames, Introduction to different types of directories: Parent, Subdirectory, Home directory; rules to name a directory, Important directories in Linux File System, Absolute and relative filenames, creating files and directories, listing files (ls), pwd, moving and copying files (mv, cp), moving directories, Removing files and directories, using wildcards with files and directories, File and directory permissions using relative and absolute methods, Changing group ownership, umask settings

UNIT - IV

Process Management: Types of processes, ps, bg, fg, nice, kill.
Understanding System Administration activities: Superuser (su) command, Taking backups using tar, Managing disk space, Mounting and Un-mounting file system, Managing users, Managing printers with lpd, mknod, lpc, lpq, lprm.
Vi editor: starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text.

Suggested Readings:

Essential :

1. Peterson, J.L.& Silberschatz, A., Operating System Concept, Addison Wesley, reading.
2. John Goerzen: Linux Programming Bible, IDG Books, New Delhi, 2000.

Further Reading :

3. Brinch, Hansen, Operating System Principles, Prentice Hall of India
4. Haberman, A.N., Introducing to Operating System Design Galgotia Publication, New Delh.
5. Sumitabha Das: Your Unix - The Ultimate Guide, TMH, 2000.

Database Management System
: **BCA-16-405**

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving the students the insight of the underlying concepts of database management system and **implement them using Database software.**

Note :

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of the Data Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS, Implication of Database approach.
Data Base Systems Concepts and Architecture: Schemas and Instances, DBMS architecture and Data Independence, Data base languages & Interfaces, DBMS functions and component modules.
Entity Relationship Model: Entity Types, Entity Sets, Attributes & Keys, Relationships, Relationship Types, Roles and Structural Constraints, Design issues, weak entity types, E-R Diagrams. Design of an E-R Database Schema, Reduction of an E-R Schema to Tables.

UNIT - II

Relational Data Model : Relational model concepts, Integrity constraints over Relations, Relational Algebra - Basic Operations.
Conventional Data Models : An overview of Network and Hierarchical Data Models.
Relational Data Base Design : Functional Dependencies, Decomposition, Desirable properties of decomposition, Normal forms based on primary keys (1 NF, 2 NF, 3 NF and BC NF).
RDBMS: Terminology, The 12 Rules (Codd's Rule) for an RDBMS.

UNIT - III

Understanding SQL-1: Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, ordering the result of a

Query Aggregate Functions, Grouping the Result of a Query, creation and deletion of Views, Managing privileges with Grant and Revoke Command, COMMIT and ROLLBACK, Functions: Character Functions, Date Functions, Group Functions

UNIT - IV

Understanding SQL-II: Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries

PL/SQL: Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Conditional and Iterative Control, Cursor Management in PL/SQL, Implicit/explicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions, Database Trigger, types of triggers, dropping triggers, storage for triggers.

Suggested Readings:

Essential

1. Elmasri & Navathe: Fundamentals of Database systems, 3rd Edition, Addison Wesley, New Delhi.
2. Ivan Bayross : SQL, PL/SQL-The Program Language of ORACLE, BPB Publication, New Delhi.

Further Reading :

3. Korth & Silberschatz : Database System Concept, 4th Edition, McGraw Hill International Edition.
4. Raghu Ramakrishnan & Johannes Gehrke: Database Management Systems, 2nd edition, Mcgraw Hill International Edition.
5. C.J.Date : An Introduction to Data bases Systems 7th Edition, Addison Wesley, New Delhi.
6. Bipin C.Desai : An Introduction to Database System, Galgotia Publication, New Delhi
7. Abbey, Abramson & Corey : Oracle 8i-A Beginner's Guide Tata McGraw Hill Publishing Company Ltd.

FIFTH SEMESTER

Computer Networks
BCA-16-501

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the course is to:

- Offer knowledge about computer network related hardware and software using a layered architecture.
- Provide good understanding of the concepts of network security, wireless and various emerging network technologies.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Network: Network Hardware and Software, Network Topologies, Uses of Computer Networks, OSI Reference Model, TCP/IP reference model, Comparison of OSI with TCP/IP model.

Physical Layer: Transmission media: Twisted pair, Coaxial cable, Fiber optics, Wireless Transmission (Radio, Microwave, and Infrared), Switching: Circuit Switching, Message Switching, Packet Switching & their comparisons. ISDN and its services, Multiplexing: Frequency Division, Time Division, Wave Length Division, MODEMS.

UNIT - II

Data Link Layer: Design Issue, Framing, Errors Detection and Correction Code: Check sum, CRC, Hamming code, Data Link Protocols for noisy and noiseless channels, Sliding Window Protocol: Stop and Wait ARQ, Go-back-N ARQ, Selective Repeat ARQ.

Medium Access Sub-Layer: Introduction to Static and Dynamic channel allocation, IEEE standards 802.3.

UNIT - III

Network Layer: Design Issues, network layer addressing, network layer datagram, IP addressed Classes. Sub netting-Sub network, Subnet mask, Routing Algorithm: Shortest Path Routing, Flooding, Broadcast and Multicast routing, Congestion control: Principles of Congestion Control, Congestion prevention policies, Leaky bucket and token bucket algorithms.

UNIT - IV

Application Layer: Domain Name system (DNS), DNS name space, DNS Servers, World Wide Web, HTTP, e-mail: Architecture and Services, Message Component, Multipurpose Internet Mail Extensions (MIME), Simple Mail Transfer Protocol (SMTP), Post Office Protocol (POP), Remote Login and File transfer protocol, Introduction to Network Security.

REFERENCES:

1. Andrew S. Tanenbaum, “Computer Networks”, Pearson Publication.
2. Behrouz A. Foroużan, “Data Communication and Networking”, Tata McGraw Hill.
3. Theodore S. Rappaport, “Wireless Communication: Principle and Practices”, Pearson Publication.
4. Charlie Kaufman, Radio Perlman, Mike Speciner, “Network Security”, PHI.
5. Mayank Dave,” Computer Networks”, Cengage Learning.

Discrete Mathematical Structure
BCA-16-502

L	T	P	Cr	External Marks: 65
6	1	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objectives : In this paper, Students will learn and be able to acquire the knowledge of Logic, Relations and Functions. Algebric Functions and Graph Theory will also be discussed in this paper.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Set Theory : Relations and Functions : Set Notation and Description, subset, basic set operations, Venn Diagrams, laws of set theory, partitions of sets, min sets, duality principle, basic definitions of relations and functions, graphics of relations, properties of relations: injective, surjective and bijective functions, compositions.

UNIT - II

Recurrence : Recurrence Relations and Recursive Algorithms – Linear-Recurrence Relations with Constant Coefficients; Homogeneous Solutions : Particular Solution, Total Solution, Solution by the Method of Generating functions.

UNIT - III

Graph Theory : Graph and planar graphs – Basic Terminology, Multi-graphs, Weighted Graphs, Paths and Circuits, Shortest Paths, Eulerian Paths and Circuits. Travelling Salesman Problem, Planar Graphs.

UNIT - IV

Automata Theory : Finite State Machines–Equivalent Machines, Finite State Machines as language Recognizers; Analysis of Algorithms - Time Complexity, Complexity of Problems.

References :

1. Doerr,A.and Kenneth, L.,Applied Discrete Structures for Computer Science, 1989 Galgotia Publications Pvt. Ltd.
2. Liu, C. L., 1985, Elements of Discrete Mathematics, McGraw Hill.
3. Seymour Lipschutz and Lipson, :2000 Solved Problems in Discrete Mathematics, McGraw- Hill., 1992

Java Programming
BCA-16-503

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course aims at giving student knowledge about all the programming concepts of JAVA programming language.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT I

Java and the Internet: The Java programming language and its characteristics; Java development kit, Java run- time environment; Java compiler

Fundamentals of Java: Java Vs. C++, Byte Code, Java Virtual Machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructors, Garbage Collection, method overloading,
Inheritance: Different types of Inheritance, member access, using super keyword to call super class constructors, creating a multilevel hierarchy, method overriding, dynamic method dispatch, using abstract classes, using Final keyword.

UNIT II

I/O Basics: streams, the predefined streams; Reading console Input, Writing console Output.
Arrays and Strings: One-dimensional and two-dimensional Arrays, String Handling using String and StringBuffer class, String Functions.
Packages: Types of packages, defining a package, Importing packages, Access protection
Interfaces: Defining an Interface, Implementing Interfaces, Variables in Interfaces, Achieving multiple inheritance using interfaces, Interface and Abstract classes.

UNIT III

Exception Handling: Java Exception handling model, Types of exception, using Try and catch, Multiple Try and Catch clauses, Nested Try statements, finally block, user defined exceptions.
Multi-threaded Programming: The Java Thread model, the Thread class and Runnable interface, Creating a Thread using Runnable Interface and extending Thread, Creating Multiple Threads, Thread Priorities, Synchronizations: Methods, Statements, Inter Thread Communication, Deadlock, Suspending, Resuming and Stopping Threads.
Applet Programming: Introduction, Types of applet, Life Cycle, Incorporating an applet into web page using Applet Tag, running applets, using Graphics class and its methods to draw lines, rectangles, circles, ellipses, arcs and polygons.

UNIT IV

Using AWT controls: Introduction to AWT, Creating GUI Applications using AWT, AWT controls: Label, TextBox, TextArea, Check Boxes, Radio Buttons, Choice lists, Understanding Layout Managers: FlowLayout, BorderLayout, GridLayout; Introduction to Event handling using Delegation Event Model.

Introduction to Java Database Connectivity (JDBC): JDBC Architecture, JDBC Drivers, Java.SQL package, Connecting to the Database and performing basic database operation like Insert, Delete, Update and Select.

References:

1. Balaguruswamy, E. : Programming with Java, A Primer, TMH, New Delhi, Latest reprint.
2. Bayross, Ivan : Java 2 by BPB publication
3. Schildt , Herbert : The Complete Reference Java 2, TMH.
4. Arora, Indu : JAVA Programming

Web Application Development using PHP
BCA-16-504

L	T	P	Cr	
6	-	-	3	

External Marks: 65
Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: This course enables students to do web programming using PHP and MySQL.It would enable them to develop websites and other web based applications.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Introduction to web applications: Client Side Scripting Vs Server Side Scripting, Understanding Web Servers: Local Servers and Remote Servers, Installing WAMP and configuring PHP environment, Static website Vs Dynamic website development, Embedding PHP code in Web Pages

PHP Basics: Tokens, Variables, Variable Scope, Constants, Data Types, number handling in PHP, operands, operators, expressions, operator precedence, comments, echo and Print statement

Control structures: Branching statements: if-else, ternary operator, switch; looping statements: while, do-while, for; file inclusion Statements

UNIT - II

Functions: Function definition, Creating and invoking user-defined functions, Formal parameters versus actual parameters, Function and variable scope, Recursion, Library functions

String Handling: interpolation with curly braces, characters and string indexes, string operators, heredoc, string functions, Formatting Strings, Comparing and searching Strings and substrings

Arrays: PHP Arrays, Creating Arrays, Accessing Array elements, Multidimensional Arrays, Inspecting Arrays, Deleting from Arrays, Iterating with each() and foreach(), Iterative functions: current(), next(), prev(), reset(), end()

UNIT - III

Forms: Working with HTML Form controls and PHP, Super global variables, super global array, importing user input, Accessing user input

Integrating PHP and Database: Connecting to database, Making SQL queries, Executing queries, Fetching data sets, Integrating Forms and Databases**:** Basic form submission to a database, editing data with an HTML form

UNIT - IV

Maintaining User State: Introduction to Cookies, Setting time in a cookie with PHP, Deleting a cookie, creating session cookie, Introduction to sessions, Starting a session, Registering Session variables, working with session variables, Destroying session, passing session Ids , encoding and decoding session variables, increase session expire time, working of session without cookie.

Working with File System: Understanding PHP file permissions, Opening and closing a file, File reading and writing functions, File system and directory functions

References:

1. PHP6 and MySQL Bible, Steve Suehring, Wiley India edition, 2015 reprint
2. PHP: The Complete Reference, "Steven Holzner", Tata McGraw Hill
3. PHP6, Apache, MySQL Web development, Timothy Boronczyk, Wiley India edition
4. Programming PHP, Rasmus Lerdorf, Kevin Tetroi (O'Reilly, ISBN 1565926102).
5. PHP, MySQL, and JavaScript: A Step-By-Step Guide to Creating Dynamic Websites by Robin Nixon O'Reilly Media
6. Core PHP Programming. Leon Atkinson (Prentice Hall, ISBN 0130463469).

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SIXTH SEMESTER

E-Commerce
BCA-16-601

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of this course is to understand the process of electronic commerce and familiarizes students with the technology involved in it.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

An Overview of E-Commerce:
Definitions: E-commerce, E-business, difference between E-commerce and E-business, Problems with Traditional business systems, Aims of E-commerce, Types of E-commerce: B2B, B2C, C2C, B2G, G2H, G2C, Operational & Strategic benefits of E-commerce, Issues & Challenges in E-commerce.
Electronic Data Interchange (EDI): Definition; Traditional versus EDI enabled system for document exchange; Components of EDI: EDI Standards, EDI Software, Communication Networks; EDI Message Structure; EDI Notification Structure; EDI in India; EDI enabled procurement process; Benefits of EDI: Direct Benefits, Strategic Benefits; EDI Implementation issues; Legal Aspects

UNIT - II

Web based E-Commerce: Definition; Need for web based business, Steps in setting up business on Internet: Selection & registration of domain name, Website development : Planning a website, Steps for creating a website, Elements of a webpage, web authoring tools, Hosting a website: Website hosting considerations.
Online Promotion tools & techniques: Getting links to your site, banner advertisements & measuring advertisement effectiveness; Web Traffic Analysis: Hits, View pages, Visits and Other web-reporting tools, various measures, What is Search Engine optimization

UNIT - III

Electronic Payment Systems: E-cash: Purchasing & using of e-cash; Electronic Purses their loading with cash and use; E-cheque payment system; Online Third Party Verified Payment System through Credit & Debit Cards; ATM based cash disbursement system; Electronic Bill Payment System; Inter bank clearing system.

UNIT - IV

Mobile Commerce: Definition, Benefits of Mobile Commerce, Issues in Mobile Commerce, Mobile Commerce Framework
Applications of E-Commerce & Case Studies: Applications of e-commerce, Case studies in Retailing, Banking and e-governance; Cyber Crimes: Types, Cyber Forensics, Cyber crimes and IT Act - 2000.

References:

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1. Bhasker, Bharat: Electronic Commerce: Framework, Technologies and Applications; Tata McGraw- Hill.
2. Bajaj, Kamlesh & Nag, Debjani: E-Commerce-The Cutting Edge of Business; Tata McGraw- Hill.
3. Young, Margaret Levine : The Complete Reference: Internet; Tata McGraw Hill.
4. KalaKota, Ravi & Whinston, Andrew B.: Frontiers of Electronic Commerce; Addison Wesley.
5. Stallings, William: Network Security Essentials: Applications & Standards; Pearson Education.
6. Minoli, Daniel & Minoli, Emma: Web Commerce Technology Handbook; Tata McGraw
   Hill.
7. Murthy CSV: e-Commerce: Concepts, Models, Strategies; Himalayas Publishing House.
8. Kosiur, David: Understanding E-Commerce; Microsoft Press.

Application Development using VB.Net
BCA-16-602

L	T	P	Cr	External Marks: 65
6	-	-	3	Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The course is designed to enable the students to develop applications using event driven programming with VB.net (as front end) and accessing database at back end.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Overview of the Visual Studio .NET IDE: Introduction to .NET Framework and the Common Language Runtime, Introduction to Visual tudio.NET IDE: Menu Bar and Tool Bar, Solution Explorer, Toolbox, Using different controls of Toolbox and their commonly used properties and methods: TextBox, Label, Check Box, Radio Button, Button, Frame, List Box, Combo Box, Picture, Image, Shape, Drive, File, directory related controls, Introduction to Menus

UNIT - II

Basics of VB.Net: Constants, Variables, data types, assignment operator, Operators: Arithmetic, Relational and logical operators, Assignment operators, Control structures: If, if/then/else selection structures, Select case Multiple-selection structure, While, do while, do until, For/Next repetition structure

Procedures: Introduction, sub Procedures, function procedures, event procedures, commonly used Form events, msgBox function, InputBox function.

Arrays and Strings: declaring and allocating Arrays, Using Strings and String functions: len, right, left, ucase, lcase, ltrim, trim;

Control Arrays: Introduction, creating and using Control Arrays

UNIT - III

Writing ASP .NET applications and Deploying ASP .NET Applications: Introduction to ASP.NET, Difference between ASP and ASP.NET, Understanding Web Forms, Using Validation Controls :
RequiredFieldValidator,RangeValidator,CompareValidator,RegularExpressionValidator,CustomValidator,ValidationSummary; , Managing State in ASP.NET Web Applications using Session object, Cookie and Query String ,Creating ASP.NET application, Deploying ASP.NET Applications with Windows Installer, Introduction to Web Services.

UNIT - IV

Accessing Data with ADO.NET: Understanding ADO.net, ADO.NET Object model: Connected model and Disconnected model, architecture, components, Understanding Provider classes, using Data Reader to read data from database, Data Adapter and Data sets, Using DataAdapter for Data Navigation and Data Manipulation, connecting to and querying a data source, using Data Grid view control with ADO.NET data sources.

Reference Books:

1. Dave Grundgeiger, Programming Visual Basic .NET, O'Reilly Publisher.
2. Michael McMillan, Object Oriented programming usning Visual Basic.Net, Cambridge University Press.
3. Cameron Wakefield Henk-Evert Sonder Wei Meng Lee, VB.NET Developer's Guide, Global Knowledge, Syngress Publishing.
4. Evangelos Petroutsos, Mastering Visual Basic .NET, SYBEX Publishing
5. Deitel, Visual Basic.NET How to Program, Pearson Education
6. Lowell Mauer, Teach Yourself more Visual Basic.net in 21 days, SAMS

Computer Graphics and Multimedia Applications
BCA-16-603

L	T	P	Cr	
6	-	-	3	**External Marks: 65**
				Internal Marks: 10

Time Duration: 3 Hrs. Number of Lectures : 60

Objective: The objective of the course is to introduce basic computer graphics concepts and algorithms. The student will also learn about essential concepts used in developing multimedia applications.

Note :

i. The Question Paper will consist of Four Sections.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Section and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Section and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Computer Graphics: A Survey of Computer Graphics : Computer Aided Design, Presentation Graphics, Computer art, Entertainment, Education and Training, Visualization, Image Pressing, Graphical User Interfaces.
Overview of Graphics Systems: Video Display Devices, Cathode Ray Tube, CRT monitors, Flat panel displays: Plasma Panel display, Thin-film electroluminescent displays, LED, Liquid Crystal Displays (LCD), Raster Scan Systems, Random Scan Systems. Graphics Monitors and Workstations, Input Devices, Hard-copy devices, Graphics Software.

UNIT - II

Studying the Features and Developing Computer Graphics Using Standard Graphics package Auto CAD: Features and applications of AutoCAD, Interface, System Requirements, The X, Y coordinate system, Dimensioning, Drawing commands, Cleaning Up the drawing, Positioning Commands, Editing Commands, Construction Commands, Display Commands.
Developing Computer Graphics Using 'C': Input-output primitives, setting character and text attributes, changing line styles, Using fill styles to fill images. Use these primitives to develop programs like drawing concentric circles, Ellipses, Sine curves, Histograms, Pie charts and human face.

UNIT - III

Multimedia Applications: What is multimedia, Components of Multimedia, Need of Multimedia, Features of a Multimedia System, Benefits and problems of using Multimedia?
System Components: Multimedia system and a conventional system, Basic System components, Subsystems and functions of a Multimedia computer, Multimedia Add-on Cards. Applications: Multimedia in the Real World, Training and Education, Image

Processing, Multimedia in home and office

Multimedia Platforms: Personal computer as a Multimedia System, Limitations of the early Personal Computer as a Multimedia System, The evolution of MPC, Hardware Platforms, Software Platforms.
Development Tools: Types of development tools, Commercial tools, Stages of Multimedia Application Development.

UNIT - IV

Image: Sources of image, Types of images, Basic editing operations, Introduction to Image Compression: Lossy and Lossless compression, Image file formats.
Audio: Hardware for Audio, Digital Audio, Audio editing operations, MIDI, Audio file formats
Video: Hardware Components of a Video System, introduction to Video compression, MPEG, Video file formats.
Storage for multimedia: magnetic media, Optical media, Compact disk specifications.
Studying features and use of Multimedia authoring tools like Photoshop and Macromedia Director.
Photoshop- Features, Interface, Toolbox, Color models, Layers, Filters
Macromedia Director- Features, Stage, Cast, Score, Control Panel, Sprite, Channels, Text Inspector, Tools for creating cast members

References

1. Hearn and Backer, Computer Graphics, Second Edition, PHI, New Delhi
2. Kanetkar Yashwant, Graphics Under 'C', BPB Publications
3. Judith Jeffcoate, Multimedia in Practice, Technology and Applications, PHI
4. Foley, Vandom, Fenier, Hughes, 'C'; Addison Wesley Publishers
5. Ian R. Sinclair, Multimedia on the PC (with CDROM), BPB Publications
6. Hillman, David, Multimedia Technology and Applications, ITP
7. Vaughan, Tay, Multimedia Making it Work, Osborne Publishers.
8. Ze-Nian, Li.Mark, S. Drew, Fundamentals of Multimedia, Pearson Education

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947 — enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. (Hons.) Biotechnology (Semester System)

(SEMESTER SYSTEM)

(1st to 6th Semester)

FOR

2020 – 2021 SESSIONS

B.Sc. (Hons.) Biotechnology (Semester System)
Examinations (Session 2020-21)

B.Sc. (Hons.) 1st year (1st Semester) (July 2020)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-101-T	50	-	-
2.	Punjabi/HCP	BIOT-102A/102A-T	50	-	-
3.	Mathematics/ Life Sciences	BIOT-103A/103A-T	75	BIOT-103A/103B-P	25
4.	Chemistry	BIOT-104-T	75	BIOT-104-P	25
5.	Physics	BIOT-105-T	75	BIOT-105-P	25
6.	Introduction to Biotechnology	BIOT-106-T	75	BIOT-106-P	25

Total Marks = 500

B.Sc. (Hons.) 1st year (2nd Semester) (January 2021)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-201-T	50	-	-
2.	Punjabi/HCP	BIOT-202B/202B-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-203-T	75	BIOT-203-P	25
4.	Basic Biochemistry	BIOT-204-T	75	BIOT-204-P	25
5.	Cell Biology	BIOT-205-T	75	BIOT-205-P	25
6.	General Microbiology	BIOT-206-T	75	BIOT-206-P	25

Total Marks = 500

Environment, Road Safety Education, Violence Against Women/Children & Drug Abuse is a compulsory qualifying paper, which the students have to study in the B.Sc. 1st year (2nd Semester). If the student/s failed to qualify the paper during the 2nd Semester, he /she/they be allowed to appear/qualify the same in the 4th or 6th Semester/s.

B.Sc. (Hons.) 2nd year (3rd Semester) (July, 2020)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Biochemistry	BIOT-Sem-III-I-T	75	BIOT-Sem-III-I-P	25
2.	Genetics	BIOT-Sem-III-II-T	75	BIOT-Sem-III-II-P	25
3.	Immunology-I	BIOT-Sem-III-III-T	75	BIOT-Sem-III-III-P	25
4.	Plant Tissue Culture	BIOT-Sem-III-IV-T	75	BIOT-Sem-III-IV-P	25
5.	Animal Cell Culture	BIOT-Sem-III-V-T	75	BIOT-Sem-III-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester) (January, 2021)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

B.Sc. (Hons.) Biotechnology (Semester System) Examinations (Session 2020-21)

B.Sc. (Hons.) 3rd year (5th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Environmental Biotechnology	BIOT-Sem-V-II-T	75	BIOT-Sem-V-II-P	25
3.	Bioinformatics	BIOT-Sem-V-III-T	75	BIOT-Sem-V-III-P	25
4.	Enzymology	BIOT-Sem-V-IV-T	75	BIOT-Sem-V-IV-P	25
5.	Summer Training	---	--	BIOT-Sem-V-V-P	100

B.Sc. (Hons.) 3rd year (6th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-VI-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-VI-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-VI-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-VI-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreneurship	BIOT-Sem-VI-V-T	100		

Total Marks = 500

B.Sc. (Hons.) 1st year (1st Semester)

S. No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-101-T	50	-	-
2.	Punjabi/HCP	BIOT-102A/102A-T	50	-	-
3.	Mathematics/ Life Sciences	BIOT-103A/103B-T	75	BIOT-103A/103B-P	25
4.	Chemistry	BIOT-104-T	75	BIOT-104-P	25
5.	Physics	BIOT-105-T	75	BIOT-105-P	25
6.	Introduction to Biotechnology	BIOT-106-T	75	BIOT-106-P	25

Total Marks = 500

Paper: English
Code No: BIOT-Sem-I-I-T

Semester I

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communication and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 1-4
Drama: Dramas 1-2

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:

Business Communication: It shall focus on different aspects of communication in general and business communication in particular, communication within organizations, types of communication, and significance of positive attitude in improving communication.

Writing Skills: This section shall focus on letters of all kinds, tender notices, auction notices, public notices; and memos.

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Learning, the marks obtained by them out of 40 will be proportionately increased out of 50).*

Testing Scheme:

The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Unit I shall be as follows:

Section I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which, a student will be expected to attempt any **two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama.

5 marks

Note; The question 1 &2 should be so designed as to cover all the chapters prescribed (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 This question shall test a student's ability to write letter of various kinds (not more than 200 words). Again, there will be internal choice here.

5 marks

Q.5.Memos/Tender Notices/Auction Notices/Public Notices. **10 marks**

Q.6 One short question to test the students' understanding of various aspects of Business Communication.

5 Marks

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਕੁੱਲ ਅੰਕ: *50*

ਲਿਖਤੀ: *45*

ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: *5*

ਸਮਾਂ: *3* ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ

ਪੱਤਰ-ਵਿਹਾਰ

ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ),

ਸੰਪਾਦਕ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, *2006*

ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਵਿਤਾ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਚੋਂ ਇੱਕ)	*5* ਅੰਕ
ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਵਿਤਾਵਾਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇੱਕ)	$3 + 5 = 8$ਅੰਕ
ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਵਿਤਾਵਾਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿਚੋਂ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ (*7* ਚੋਂ *5*)	*5* ਅੰਕ
ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	*7* ਅੰਕ
ਵਿਆਕਰਣ:	(3+3+4=10ਅੰਕ)
ਉ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
ਏ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	*10*ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ :ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫ਼ਤੇ ਵਿਚ *6* ਪੀਰੀਅਡ

BIOT - Sem-I--II-T

SEMESTER I

HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

1. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
2. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
3. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB FROM THE EARLIEST TIMES TO 1849

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Harappan Civilization: extent and town planning; socio-economic life.
2. Vedic Age: socio-economic life; development of caste; position of women.
3. Religion: vedic religion; impact of Buddhism and Jainism on the region.

UNIT II

4. Society and Culture c. 1000 A.D.: Socio-economic life; religious life; education
5. Cultural Reorientation: main features of Bhakti; origin and development of Sufism
6. Society and Culture c. 1500A.D: socio-economic life under the Lodhis; religious beliefs and practices-Vainavism, Shaivism, Shaktism, Islam.

UNIT III

7. Sikhism: new ideology of Guru Nanak; evolution of Sikh community-guruship,manji,masand; new institutions-gurdwara, sangat-pangat.
8. Transformation of Sikhism: martyrdom of Guru Arjan; martyrdom of Guru Tegh Bahadur; impact.
9. Institution of Khalsa: new baptism; significance

UNIT IV

10. Changes in Society: social unrest; emergence of new rulers-rakhi, gurmata, dal khalsa.
11. Society and Culture under Maharaja Ranjit Singh: social mobility; painting and architecture; literature.
12. MAP: Major Historical Places: Harappa, Mohenjodaro, Sanghol, Ropar, Lahore, Amritsar, Kiratpur, Anandpur Sahib, Tarn Taran, Machhiwara, Goindwal, Khadur Sahib.

Suggested Readings:

1. Joshi, L.M (ed.) : History and Culture of the Punjab, Part-I, Publication Bureau, Punjabi University, Patiala, 1989 (3rd edn.)
2. Joshi, L.M and Singh, Fauja (ed.) : History and Culture of the Punjab, Vol. I, Punjabi University, Patiala, 1977
3. Prakash, Buddha : Glimpses of Ancient Punjab, P.U., Patiala, 1983
4. Thapar, Romila : A History of India, Vol. I, Penguin Books, 1966
5. Basham, A.L : The Wonder That was India, Rupa Books, Calcutta (18th rep.),1992
6. Sharma, B.N : Life in Northern India, MunshiRam Manohar Lal, Delhi, 1966
7. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
8. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
9. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
10. Singh, Khuwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
11. Chopra, P.N.,Puri, B.N.:A Social, Cu.ltural and Economic History of India, Vol.II, And Das,M.N. Macmillan, delhi, 1974.
12. Hussain ,Yusuf : Glimpse of Medieval Indian Culture, Asia Publishing House, Bombay, 1973(rep.).

Note: The following categories of the students shall be entitled to take option of History & Culture of Punjab in lieu of Punjabi as compulsory subject:

A. That the students who have not studied Punjabi upto class 10th.
B. Ward of / and Defence Personnel and Central Govt. Employee/Employees who are transferrable on all India basis.
C. Foreigners

Paper: Mathematics
Course No: BIOT-103A-T

Theory : 67 marks
Int. Assessment : 08 marks
Total : 75 marks

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: -

- To study the different concepts of limits, differentiation, integration and calculus so as to apply these concepts in biotechnology.
- To learn solutions to quadratic, cubic equations, differential equation, linear equation and thus study the applications in biotechnology.

UNIT – I

Numbers
Different kinds of numbers, integer, rational and irrational, surds and their properties, Fractional indices.
Complex numbers, conjugate, modulus and argument of a complex number.

UNIT – II

Set, relation and function
Set, product sets, relations, functions (polynomials, trignometric, nexponential), graphical representation of functions.
Limit
Sequences, limits of sequences, series, limits of functions

UNIT – III

Calculus
Differentiation: Calculating gradients of chords first and higher order derivatives. Applications increasing and decreasing functions, maximum and minimum points, Derivatives as rates of change.

Integration
Finding a function from its derivative, definite integral, indefinite integral, calculating areas for bounded regions.

Differential Equations
Forming differential equations solving first order differential equation and second order differential equation with constant co-efficients, growth equation, applications.

UNIT – IV

Linear Programming
Elementary statistics

Representation of Data: Discrete data, continuous data, histogram, polygons, frequency curves
The Mean, variability of data-The standard deviation Median, quintiles, percentile Skewness.

Reference Books:
1. Arya J.C, Lardner R.W (1990). Mathematics for the biological sciences

(Prentice Hall. International, New Delhi).
2. Mathematics: Text book for class XI & XII (2006) (National Council of Education Research and Training, New Delhi).

Mathematics (Practicals)
Course No: BIOT-103A-P

Practical : 22Marks
Int. Assessment : 03 Marks
Total :25 Marks

1. Computation of mean, variance and standard deviation using given (preferably biological) data (2 to 3 practicals).
2. Sets (Venn-Diagram, Union, Intersection, Difference of sets, Symmetric Difference of sets, Complement of sets) (2 practicals).
3. Relations (graphical representation of relation from set A to set B or set A to set A) (1 practical).
4. Functions (Graph of standard functions, modulus, greatest, integer, exponential, logex, signum, sin, cos, tan, cot, sec, cosec,) (2 to 3 practicals).
5. Increasing and Decreasing (Polynomial functions) – wavy curve method (2 practicals).

Paper: Life Sciences
Course No: BIOT-103B-T

Theory: 67 marks
Internal Assessment: 8marks

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: -

- To increase scientific vocabulary and understanding of a variety of life science concepts.
- To learn about the anatomy and physiology of animals and animal systems.
- To study ecology and ecosystems.

Unit-I

An introduction to life on earth.
Plant Anatomy and Physiology:-
Structure of land plants: Vascular system of dicot and monocot plants
Nutrition and Transport phenomena in plants.
An Introduction to Plant reproduction.
Plant responses to the environment (Short day and Long day Plants).

Unit-II

Ecology:- Community interactions.
Ecosystems:- Definition and components.
Food chain and food web.
Habitat.
Ecological succession.
Types of succession.

Unit-III

Animal Anatomy and Physiology:-
Homeostasis and organization of animal body.
Circulation: Human Circulatory system, Mechanism of Circulation, Cardiac cycle

Respiration: Organs of respiration, mechanism of breathing, Exchange of gases
Nutrition and digestion: Mechanism of digestion of proteins and carbohydrates.
The immune response in Animals: B Cells and T Cells

Unit-IV

Animal Anatomy and Physiology:-

The endocrine system: Define glands, Pitutary, Pancreas, Thyroid and Parathyroid
Action and support by the muscles and skeleton system.
Reproduction: An introduction to reproduction in animals.

Reference Books:

1. Life Sciences (2001) by Rastogi and Dubey, S. Chand & Co., New Delhi.
2. Basics of Biotechnology–I: Introduction to Life Sciences (2005) by Sobti& Sharma, Vishal Publishing Co. Jalandhar.
3. Ecology- Principles and applications (2004) by Chapman and Reiss, Cambridge University Press, Cambridge, U.K.
4. Microbial Ecology- fundamentals and applications, (2000) by R. Atlas and R. Bartha, Benjamin / Cummings Science Publishing, California.
5. Animal Physiology (2008) by R. C. Sobti, Narosa publishing house Pvt. ltd, New Delhi.

Life Sciences (Practical)

Course No: BIOT-103B-P

Practical : 22Marks
Int. Assessment : 03 Marks
Total : 25 Marks

1. To study cell structure from onion leaf peels.
2. To study ultra structure of cell organelles through photographs.
3. To study digestive, Respiratory, Circulatory, Endocrine and Reproductive system of Human body through charts/ model.
4. Study of the slides/specimens and identification with reasons – Bacteria, oscillatoria, Spirogyra, Rhizopus, Mushroom, yeast, liverwort, moss, fern, lichen, one monocotyledon and dicotyledon.
5. Study of the slides/specimens and identification with reasons –Amoeba, Hydra, Tapeworm, Roundworm, Earthworm, Cockroach, Pila, Starfish, Shark Labeo, Frog, Lizard, Pigeon and Rabbit

Paper : Chemistry
Course No: BIOT-104-T

Theory : 67 marks
Int. Assest. : 08 marks
Total : 75marks

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective:

Without chemical reactions, biological systems cannot work. So understanding the concepts of basic chemistry inorganic, organic and various laws and their applications in Biotechnology is important.

UNIT – I

a) **Chemical bonding:** Elementary treatment of valence bond theory and molecular orbital theory. Ionic bonding, multiple bonds, multi-centerbonds, metallic bonding. hydrogen bonding and its significance.

b) **Periodic properties:** Position of elements in the periodic table, effective nuclear charge and its calculation, atomic and ionic radii, ionization energy, electron affinity, electronegativity. Trends in periodic table and application in predicting and explaining the chemical behavior.

c) **Molecular Spectroscopy:** Difference between atomic and molecular spectroscopy, absorption and emission spectroscopy, regions of electromagnetic spectrum. Infrared and Raman spectra, basic principle and information from Infrared and Raman spectra. Principle of NMR, chemical shift values and its applications. Importance of mass spectroscopy in chemistry and biology.

UNIT – II

a) **Solutions:** Ideal and non- ideal solutions, method of expression concentrations of solution, activity and activity coefficients, dilute solution, Osmotic pressure, its law and measurements, Elevation of boiling point and depression of freezing points.

b) **Chemical kinetics:** Scope, rate of reaction, influencing factors such as concentration, temperature, pressure, solvent *etc*. theories of chemical kinetics. Arrhenius equation, concept of activation energy.

UNIT – III

a) **Photochemistry:**

Absorption of light, Lambert-Beer Law, Photochemical principles, Stark-Einstein Law of Photochemical equivalence, Quantum yield of a photochemical reaction (with example). Fluorescence and Phosphorescence.

b) Coordination compounds:

Introduction, Wener's coordination theory, naming of coordination compounds, isomerism and stereochemistry in coordination compounds.

UNIT – IV

a) Fundamentals: inductive effect electromeric effect, resonance, hyperconjugation, types of reagents, electrophiles and nucleophiles, types of organic reaction intermediates, carbocations, free radicals, carbenes (with example). Nomenclature and classification of Alkyl halide, method of formation, chemical reaction, mechanisms and stereochemistry of nucleophillic substitution reaction of Alkyl halides, SN2, and SN1 reaction with energy diagram.

b) Carboxylic Acids and derivatives: Structure of carboxylic acids and derivatives. Acidity of carboxylic acids, effects of substitution on acidic strengths, chemical properties of carboxylic acids. HVZ reaction with mechanism. Relative stability and reactivity and reactivity of acid chloride, esters, anhydrides, amides, mechanism of esterification.

Reference Books:

1. Bruce H Mahan (1987). University Chemistry Edition 3rd (Narosa Publishers).
2. R. T. Morrison, R. N. Boyd (2001). Organic Chemistry (Prentice-Hall of India Pvt. Ltd).
3. J.D Lee. (2008). Concise Inorganic Chemistry, (Wiley-India).
4. B. R. Puri, L. R. Sharma. (1989). Principles of inorganic chemistry (Shoban Lal Nagin Chand and Co).
5. Walter J Moore (1986). Basic physical chemistry (Prentice Hall of India).

Paper: Chemistry (Practicals)
Course No: BIOT-104-P

Practical : 22 marks
Int. Assessment : 03 Marks
Total : 25marks

1. Four ions including interfering ions.
2. Iodimetry and Iodometry

3. Redox titrations using cericsulphate, potassium dichromate and potassium permanganate
4. Complexometric titration using EDTA of Ca++, Mg++ and Zn++
5. Analysis of a given organic compound (solid): Elemental Analysis,

Reference Books:

1. L. Saland (1989). Practical chemistry labs: A resource manual (Walch Education).
2. J. Leonard, B. Lygo, G. Procter (1998). Advanced practical organic chemistry. (CRC publications).
3. P. Kelter, M. Mosher, A. Scott (2008). Chemistry: The practical science (Publisher Houghton Mifflin).
4. G. Svehla (1996). Vogel's quantitative inorganic analysis (Prentice Hall).

Paper: Physics **Theory: 67 Marks**
Code No: BIOT-105-T **Int Assess: 08 Marks**

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: -
Physics is one of the important basic sciences and Biotechnology is based upon these. Introduction to basic course of Physics will enhance the grasping of subject.

UNIT – I

Science, Physics and Life Sciences- An introduction to apparent differences and the underlying overlap (atomic nature of matter). Units of measurement and ranges (from the smallest to the largest known) for different physical quantities viz. mass, length, time, current, temperature, luminosity, etc. with suitable examples from bio/physical sciences.

UNIT – II

Coulomb's law for point charges; electric field due to point charge and electric dipole (on axial line and equator line), electric flux; Gauss's theorem and its applications (line of charge and sheet of charge).

Electric potential due to point charge, group of charges and dipole (on axial line and equatorial line), potential difference as line integral of electric field, capacitance; series and parallel arrangements, energy stored in the electric field of capacitor, current, current density, equation of continuity, Ohm's law in vector form.

UNIT - III

Interference of waves, phase and path differences, theory of interference fringes, Young's experiment, coherent sources, Llyod's mirror, Fresnel Biprism, intensities of maxima and minima.

Diffraction of light, rectilinear propagation, Fresnel and Fraunhofer diffraction, Fraunhofer diffraction at single slit, Rayleigh criterion for resolving power, Resolving power of telescope and microscope, Compound Microscope (Principle, construction, ray diagram, formula for magnifying power), fluorescent microscope(concept only,. Polarization introduction.

UNIT – IV

Quantum
theory of light, X-rays diffraction, Compton effect, Bragg's law, de Broglie wave equation, phase velocity and group velocity, electron microscope, Uncertainty Principle (statement only), applications of Uncertainty Principle (particle in a box, existence of electron in Nucleus and atom).

Radioactivity and its laws ; half-life and mean life, uses of radioactivity.

Reference Books:
1. H.S. Hans & S.P. Puri : Mechanics (Tata Mcgraw Hill 1984)
2. Electricity and Magnetism : Berkeley physics course vol. II.
3. AjoyGhatak : Optics (Tata Mcgraw Hill 2004)
4. Jenkins &White : Fundamental of optics (Tata Mcgraw Hill 1991)
5. D.P. Khandelwal : Text book of optics and atomic physics (Himalaya Pub. 2005)
6. Arthur Beiser : Modern Physics (Tata Mcgraw Hill 1981)

Paper: Physics (Practical)
Course No: BIOT-105-P **Practical: 22 Marks**
Int Asset: 03 Marks

1. Introduction and practice the concepts of proper measurement, data recording, and data presentation; stress to be laid on use of proper units, least count, error & its propagation, graph plotting & least square fitting. (Simple measuring devices available in the lab may be used to create basic data).
2. Resolving power of Telescope/Microscope.
3. Rotation of the plane of polarization of a solution using a Polarimeter.
4. Use of C.R.O. as a display & measuring device.
5. Capacitance by flashing and quenching of a neon lamp.

Reference Books:
1. Laboratory Manual of Physics for Undergraduate classes by D. P.Khandelwal.
2. B.Sc. Physics Practicals by C. L. Arora.

Paper: Introduction to Biotechnology **Theory: 67 Marks**
Course No: BIOT-106-T **Int Ass: 08 Marks**

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: -
This course will introduce the basic concepts of biotechnology to the students. They will learn about the history of biotechnology; the foundations of modern biotechnology; the role of biotechnology in fermentation industry, environment and modern medicine and the ethical implications of biotechnology.

Unit-I

Advent, scope and basics of biotechnology
Bacteria as workhorses of biotechnology; *E. coli* as the model bacterium
Saccharomyces cerevisiae and *Neurospora* in Biotechnology
Introduction to multicellular organisms as research models: *Drosophila melanogaster*, *Caenorhabditis elegans*, *Daniorerio*, *Musmusculus.*
Arabidopsis thaliana as model for plant genetics
Role of viruses and bacteriophages in biotechnology

Unit-II

Structure and function of the cell: the basic unit of life
Prokaryotic and Eukaryotic cells
Biomolecules in a cell (DNA, RNA and proteins)

Introduction to concept of genomics, transcriptomics, proteomics and metabolomics;
Introduction to basic techniques like sterilization, centrifugation, electrophoresis, chromatography, sonication.
Fundamentals of recombinant DNA technology: Restriction Enzymes, Type II Restriction endonucleases, Vectors based on E.coli plasmids and their properties: pBR322, pBR327, pUC8.

Unit-III

Applications of biotechnology: today and tomorrow
Basics of Biotechnology in fermentation processes.
Green technology to control pollution.
Role of biotechnology in diagnostics, introduction to gene therapy.

Unit-IV

Biotechnology and society: genetically modified organisms (GMOs) - transgenic plants and animals and their applications in biotechnology.
Public concerns and risks associated with genetic engineering: Bioterrorism and biowarfare.
Ethical, social and legal implications of biotechnology.

Reference Books:

1. Comprehensive Biotechnology, Murray Moo-Young, 2nd edition (2011), Pergamon Press.
2. Introduction to Biotechnology, William J. Thieman& Michael A. Palladino, 3rd edition (2012), Benjamin Cummings.
3. Biotechnology Expanding Horizons, BD Singh, 4th edition (2012), Kalyani Publishers.
4. The Ethics of Biotechnology (Biotechnology in the 21st Century), Jonathan Morris, Chelsea House Pub (L), 1st edition (2005).
5. Biotechnology, Applying the Genetic Revolution, David P. Clark & Nanette J. Pazdernik, 1st edition (2008), Academic Cell.
6. Molecular Biotechnology, Sandy B. Primrose, 2nd edition (1991), Blackwell Scientific Publications, ISBN.
7. Biotechnology: Demystifying the concepts, David Bourgaize, Thomas R. Jewell & Rodolfo G. Buiser, 1stedition(1999), Benjamin Cummings.
8. Ethical Issues in Biotechnology, Richard Sherlock & John D. Morrey, 1st edition (2002), Rowman& Littlefield Publishers.

Introduction to Biotechnology (Practical)
Course No: BIOT-106-P

Practical : 22 Marks
Int. Assess: 03 Marks

1. Introduction and use of basic equipment's in a biotechnology laboratory (Auto-pipettes, pH meter, centrifuges, light microscope, electrophoretic apparatus, vortex mixer, magnetic stirrer, rocker, laminar hoods, autoclave, sonicator)
2. Handling and disposal of hazardous reagents (acids, carcinogenic chemicals like acrylamide, ethidium bromide) and concept of chemical hoods
3. Good laboratory practices followed in biotechnology laboratory (DNAse/ RNAse free space, separate area for protein work, possible means of contamination and its control etc)
4. Cell disruption and cell lysis of animal/plant/bacterial cell
5. Sterilization techniques
6. Introduction to bioinformatic tools used in biotechnology.

B.Sc. (Hons.) 1st year (2nd Semester) (January 2021)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	English	BIOT-201-T	50	-	-
2.	Punjabi/HCP	BIOT-202B/202B-T	50	-	-
3.	Statistics & Computer Fundamentals	BIOT-203-T	75	BIOT-203-P	25
4.	Basic Biochemistry	BIOT-204-T	75	BIOT-204-P	25
5.	Cell Biology	BIOT-205-T	75	BIOT-205-P	25
6.	General Microbiology	BIOT-206-T	75	BIOT-206-P	25

Total Marks = 500

ENVIRONMENT, ROAD SAFETY EDUCATION, VIOLENCE AGAINST WOMEN & CHILDREN and Drug Abuse (SEMESTER – II)

*** Total duration of the whole paper(Consisting of four parts) shall be of 2 hours, carrying 100 marks in whole, divided into the rations of 40:20:20:20**

Note: The syllabus has 15 topics to be covered in 20 hour lectures in total, with 2 lectures in each topic from 2 to 11 and one each for the topics 1 and 12 to 15.

1. Environment Concept:

Introduction, concept of biosphere – lithosphere, hydrosphere, atmosphere; Natural resources – their need and types; Principles and scope of Ecology; concepts of ecosystem, population, community, biotic interactions, biomes, ecological succession.

2. Atmosphere:

Parts of atmosphere, components of air; pollution, pollutants, their sources, permissible limits, risks and possible control measures.

3. Hydrosphere:

Types of aquatic systems; Major sources (including ground water) and uses of water, problems of the hydrosphere, fresh water shortage; pollution and pollutants of water, permissible limits, risks and possible control measures.

4. Lithosphere:

Earth crust, soil – a life support system, its texture, types, components, pollution and pollutants, reasons of soil erosion and possible control measures.

5. Forests:

Concept of forests and plantations, types of vegetation and forests, factors governing vegetation, role of trees and forests in environment, various forestry programmes of the Govt. of India, Urban Forests, Chipko Andolan.

6. Conservation of Environment:

The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation; conservation of life support systems – soil, water , air, wildlife, forests.

7. Management of Solid Waste:

Merits and demerits of different ways of solid waste management– open dumping, landfill, incineration, resource reduction, recycling and reuse, vermicomposting and vermiculture, organic farming.

8. Indoor Environment:

Pollutants and contaminants of the in-house environment; problems of the environment linked to urban and rural lifestyles; possible adulterants of the food; uses and harms of plastics and polythene; hazardous chemicals, solvents and cosmetics.

9. Global Environmental Issues:

Global concern, creation of UNEP; Conventions on climate change, Convention on biodiversity; Stratospheric ozone depletion, dangers associated and possible solutions.

10. Indian Laws on Environment:

Indian laws pertaining to Environmental protection: Environment (Protection) Act, 1986; General information about laws relating to control of air, water and noise pollution. What to do to seek redressal.

11. Biodiversity:

What is biodiversity, levels and types of biodiversity, importance of biodiversity, causes of its loss, how to check its loss; Hotspot zones of the world and India, Biodiversity Act, 2002.

12. Noise and Microbial Pollution:

Pollution due to noise and microbes and their effects.

13. Human Population and Environment:

Population growth and family welfare programme, Human Health. HIV-AIDS. Human Rights.

14. Social Issues:

Environmental Ethics: Issues and possible solutions, problems related to lifestyle, sustainable development; Consumerisms and waste generation.

15. Local Environmental Issues:

Environmental problems in rural and urban areas. Problem of Congress Grass & other weeds, problems arising from the use of pesticides and weedicides, smoking etc.

Practical

Depending on the available facility in the college, a visit to vermicomposting units or any other such non-polluting eco-friendly site or planting/caring of vegetation/trees could be taken.

Examination Pattern:

A qualifying paper of 40 marks comprising of forty multiple choice questions (with one correct and three incorrect alternatives and no deduction for wrong answer or un-attempted question), and of 1 hour duration.

The students have to obtain 33% marks to qualify the paper. The marks are not added / included in the final mark sheet.

UNIT II (ROAD SAFETY)

1. Concept and Significance of Road Safety.

2. Role of Traffic Police in Road Safety.
3. Traffic Engineering – Concept & Significance.
4. Traffic Rules & Traffic Signs.
5. How to obtain Driving License.
6. Traffic Offences, Penalties and Procedures.
7. Common Driving mistakes.
8. Significance of First-aid in Road Safety.
9. Role of Civil Society in Road Safety.
10. Traffic Police-Public Relationship.

Note : Examination Pattern :

Road Safety paper is 20 marks.

Unit II shall comprise of 20 questions with minimum of 1 question from each topics 1 to 10. The entire syllabus of Unit II is to be covered in 10 hours.

All the questions are to be attempted.

Qualifying Marks 33 per cent

The paper setter is requested to set the questions strictly according to the syllabus**.**

Suggested Readings

1. The Motor Vehicle Act, 1988 (2010), Universal Law Publishing Co. Pvt. Ltd., New Delhi.
2. Road Safety Signage and Signs (2011), Ministry of Road Transport and Highways, Government of India.

Websites:

1. www.chandigarhpolice.nic.in
2. www.punjabpolice.gov.in
3. www.haryanapolice.gov.in
4. www.hppolice.nic.in

SYLLABUS ON "VIOLENCE AGAINST WOMEN & CHILDREN" AT UNDER-GRADUATE LEVEL

Unit – III

VIOLENCE AGAINST WOMEN & CHILDREN

1. Concept and Types of Violence: Meaning and Definition of violence; Types of Violence against women – domestic violence, sexual violence (including rape), sexual harassment, emotional/psychological violence; Types of Violence against children – physical violence, sexual violence, verbal and emotional abuse, neglect & abandonment.

2. Protective Provisions of IPC on Domestic Violence & Sexual Violence against Women: Dowry Death – Section 304B;

Rape – Sections 375, 376(1), 376A, 376B, 376C, 376D and 376E; Cruelty – Section 498A;

Insult to Modesty – The Indian Penal Code does not define the word eve-teasing; there are three sections which deal with crime of eve-teasing. These are Sections, 294, 354 and 509of Indian Penal Code. Section 509 of the Indian penal code defines (Word, gesture or act intended to insult the modesty of a woman), Section 294 – (Obscene acts and songs) and Section 354 (Assault or criminal force to woman with intent to outrage her modesty);

Hurt & Grievous Hurt Provisions – Sections 319 to 326;
Acid Attacks – Sections 326A and 326B;

Female Infanticide – Section 312, Section 313 of Indian Penal Code (Causing miscarriage without women's consent) and section 314;

Sexual Harassment – For providing protection to working women against sexual harassment, a new section 354 A is added; 354 B (Assault or use of criminal force to women with intent to disrobe); 354 C Voyeurism; 354 D (Stalking). All these provisions are added in IPC to protect women against acts of violence through Criminal Law (Amendment) Act, 2013; Human Trafficking and Forced Prostitution-Sections 370 and 370A

Protective Laws for Women:

3.1 Provisions of Protection of Women Against Domestic Violence Act 2005 – Definition, Powers of the Magistrate and Protection Officers, Protection order, Residence order, Monetary relief, Custody order and Compensatory order.

3.2 The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 – Definition, Internal Complaint Committee, Local Complaint Committee, Procedure adopted by Committee for punishing accused.

4. Protective Provisions of IPC regarding Sexual Violence against Children: Section 293(sale etc. of obscene objects to young persons); 294 (obscene acts & songs); 305 (abetment of suicide of child); 315 to 317 (act causing death after birth of a child etc.); 361 (kidnapping from lawful guardianship); 362 (abduction); 363 (punishment for kidnapping); 363A (kidnapping or maiming a minor for purposing of begging); 364A (kidnapping for ransom etc.); 366 (kidnapping etc. to compel woman for marriage etc.); 366A (procuration of minor girl for illicit forced intercourse); 366B

(importation of girl from foreign country); 367 (kidnapping/abduction in order to subject person to grievous hurt, slavery etc.); 369 (kidnapping adductive child under 10 year with intent to steal from its person); 372 & 373 (selling & buying minor for purposes of prostitution etc.).

4.1 The Protection of Children from Sexual Offences Act, 2012: An overview of the POCSO, relevant legal provisions and guidelines for the protection of children against sexual offences along with punishments; role of doctors, psychologists & mental experts as per rules of POCSO.

Note: Instructions for Examination:

Unit III of the paper dealing with Violence against Women and Children is of 20 Marks. It shall have 20 multiple-choice questions (with one correct and three incorrect choice options and no deduction of marks for wrong or un-attempted questions). Minimum two questions from each topic must be covered.

All the questions are to be attempted Qualifying Marks 33 percent

Duration of Examination 30 Minutes

The Paper Setter is requested to set the questions strictly according to the syllabus.

Pedagogy:

The entire syllabus of Unit III is to be covered in ten hours in total, with each lecture of one-hour duration.

The purpose behind imparting teaching-learning instructions is to create basic understanding of the contents of the Unit III among the students.

RELEVANT READING MATERIAL

Ahuja, Ram (1998), Violence against Women, New Delhi: Rawat Publication

NRHM, Child Abuse, A Guidebook for the Media on Sexual Violence against Children The Indian Penal Code (Universal Law Publishing Co. Pvt. New Delhi).

The Protection of Children from Sexual Offences Act, 2012 The Protection of Women from Domestic Violence Act 2005
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

UNO, United Nations Secretary-General's Study on Violence against Children, adapted for Children and Young People

Unit –IV
Drug Abuse

UNIT IV (Drug abuse: problem, prevention and management)

1. **Problem of drug abuse**
   Meaning and concept; types of drugs often misused;antibiotics, steroids and their misuse with suitable examples;habit forming drugs and their effects; drug addiction; drug tolerance and withdrawal symptoms;various signs and symptoms of drug abuse;vulnerable groups (age, gender and socio-economic status)

2. **Prevention and management of drug abuse**
   Medical treatment through deaddiction center, support of family, media and school education; Government policies, programs and laws to prevent drug abuse.

Instructions to the examiners

1. Unit IV of the paper dealing with Drug abuse would be of 20 marks comprising of twenty multiple choice questions carrying one mark each having four options a, b, c, d with one correct and three incorrect alternatives.
2. The question paper shall be set strictly according to the syllabus uniformly
3. All the questions are to be attempted

Note: The teaching hours for the Unit IV will be 10 hours

Suggested readings

1. Kapoor T (1985) Drug epidemic among Indian Youth. New Delhi: Mittal Pub
2. Modi, Ishwar and Modi, Shalini (1997) Drugs: addiction and prevention, Jaipur: Rawat publications
3. World drug Report 2019, Booklet 1, Executive summary, United Nations Office of drug and crime
4. Bansal R and Kumar A (2020) Drug abuse, addiction and recovery

Paper: English
Code No: BIOT-Sem-II-I-T

Semester II

Note: (i) There will be one paper of 40 marks, 5 marks are reserved for the Internal assessment and 5 for the Practical work. Total is 50.

(ii) The paper shall consist of Two Units, Unit I will be text specific and Unit II shall deal with different aspects of Communications and Language Skills.

(iii) For Unit I, the prescribed text is **Varieties of Expression** Ed. A.H.Tak. Foundation Books. Only four Prose chapters and two dramas have been recommended for study. The relevant sections, however, are as follows:

Unit I

Prose: Chapters 5-8
Drama: Dramas 3-4

Unit II

Note (iv) No text book is recommended for Unit II, but a few books that may be used for this Unit are listed towards the end. Unit II shall consist of the following:
Writing Skills: This section shall focus on précis-writing, curriculum vitae; short, formal reports (not exceeding 200 words) and advertisements relating to product promotion etc.,

Modern Forms of Communication: Here special emphasis shall be given to teaching the format of E-mails, Fax Messages, Audio-Visual Aids and Power-Point Presentations. Apart from this, the students shall also be given basic lessons in Effective Listening, Non-Verbal Communication, How to Prepare for an Interview & Group Discussion etc

Practical Work:

Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline i.e. business, commerce, accounts etc. Preferably, they should be given minor projects (to be completed within less than two weeks, and length not exceeding 20 pages) in consultation with teachers of commerce. However, the evaluation of the projects should be done only by the Language Teachers, who must keep all the basic criteria of good writing in mind while doing so.

Note: *In case of private candidates and students of School of Open Leaning, the marks obtained by them out of 40 will be proportionately increased out of 50.*

Testing Scheme: The examination paper shall be divided into two sections, corresponding to two units already proposed in the syllabus. The distribution of questions and marks in Section I shall be as follows:

Unit I (It is text-based and corresponds to Unit I in the syllabus)

Q.1 It shall consist of six short questions. Three from Prose and three from drama (not exceeding 50-60 words) out of which , a student will be expected to attempt any four. **Two** from **Prose** and **two** from **Drama**. This question shall be based upon the prescribed text **Varieties of Expression** and cover a wide range of issues, topics and problems. **10 marks**

Q.2 It shall consist of four long questions-**Two** from **Prose** and **two** from **Drama**(not exceeding 100-150 words) out of which a student will be expected to attempt **two-**one from Prose and one from Drama.

5 **marks**

Note; The question 1 &2 should be so designed as to cover all the chapters prescribe (Prose & Drama)

Q.3. It shall exclusively be a test of vocabulary, but designed strictly on the lines of various exercises given at the end of each chapter in the prescribed text. The candidate shall be given **five** words in one column and asked to match them with words/meanings in the next column. **5 marks**

UNIT II

Q.4 Short Survey Report (150-200 words) with internal choice**.** **5 marks**

Q.5. Precis of 200 words. **10 marks**

Q.6 Definition/Format of modern forms of communication to be tested.

ਸਮੈਸਟਰ ਦੂਜਾ

ਕੁੱਲ ਅੰਕ: 50

ਲਿਖਤੀ: 45

ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ: 5

ਸਮਾਂ:3 ਘੰਟੇ

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ
2. ਪੱਤਰ-ਵਿਹਾਰ
3. ਵਿਆਕਰਣ

ਕੋਰਸ

ਆਤਮ-ਅਨਾਤਮ (ਕਵਿਤਾ ਤੇ ਕਥਾ ਸੰਗ੍ਰਹਿ)

ਸੰਪਾਦਕ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ ਤੇ ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਪ੍ਰਕਾਸ਼ਕ: ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2006

1.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ (ਦੋ ਚੋਂ ਇੱਕ)	5 ਅੰਕ
2.	ਆਤਮ-ਅਨਾਤਮ ਪੁਸਤਕ ਵਿਚਲੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਵਿਸ਼ਾ ਦੱਸ ਕੇ ਸਾਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇੱਕ)	8ਅੰਕ
3.	ਕੋਰਸ ਵਿਚਲੀ ਪਾਠ-ਪੁਸਤਕ (ਆਤਮ-ਅਨਾਤਮ) ਦੀਆਂ ਕਹਾਣੀਆਂ ਨਾਲ ਸੰਬੰਧਤ ਪੁਸਤਕ ਵਿਚ ਦਿੱਤੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ (7 ਚੋਂ 5)	5 ਅੰਕ
4.	ਸਰਕਾਰੀ ਅਤੇ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਚਲੰਤ ਮਸਲਿਆਂ ਬਾਰੇ ਪੱਤਰ ਲਿਖਣਾ (ਦੋ ਚੋਂ ਇਕ)	7 ਅੰਕ
5.	ਵਿਆਕਰਣ:	5 ਅੰਕ
	ੳ) ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ	
	ਅ) ਵਾਕਾਂ ਨੂੰ ਹਰ ਪੱਖੋਂ ਸੋਧ ਕੇ ਲਿਖਣਾ	
	ਏ) ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ	
6.	ਪੁਸਤਕ ਵਿਚ ਸ਼ਾਮਿਲ ਕਵੀਆਂ ਦਾ ਜੀਵਨ, ਰਚਨਾ ਤੇ ਯੋਗਦਾਨ	5 ਅੰਕ

ਵਿਸ਼ੇਸ਼ ਨੋਟ :ਸਮੁੱਚੇ ਪਾਠ ਕ੍ਰਮ ਲਈ ਹਫਤੇ ਵਿਚ 6 ਪੀਰੀਅਡ

OR

SEMESTER II

HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

INSTRUCTIONS FOR THE PAPER –SETTER AND CANDIDATES: (FOR PAPER in semester 1 AND 2)

1. The syllabus has been divided into four Units.
   There shall be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 5 short answer type questions carrying 5 marks i.e. 1 mark each. Rest of the paper shall contain 4 units. Each Unit shall have two essay type questions and the candidate shall be given internal choice of attempting one question from each Unit-IV in all. Each question will carry 10 marks.
2. For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
   The paper-setter must put note (2) in the question paper.
3. One question from Unit-IV shall be set on the map.

Explanation:

4. Each essay type question would cover about one-third or one-half of a topic detailed in the syllabus.
5. The distribution of marks for the map question would be as under:

Map	:	6 Marks
Explanatory Note	:	4 Marks

   In case a paper setter chooses to set a question of map on important historical places, the paper setter will be required to ask the students to mark 6 places on map of 1 mark each and write explanatory note on any two of 2 marks each.
6. The paper-setter would avoid repetition between different types of question within one question paper.

PAPER: HISTORY AND CULTURE OF PUNJAB IN THE COLONIAL AND POST INDEPENDENCE TIMES

Max. Marks	:	50
Theory	:	45
Internal Assessment	:	05
Time	:	3 Hours

Objectives: To introduce the students to the history of Punjab region in modern times.

Pedagogy: Lectures, library work and discussions.

UNIT I

1. Introduction of Colonial Rule: administrative changes; means of communication; western education.
2. Agrarian Development: Commercialization of agriculture; canalization and colonization.

3. Social Classes: agrarian groups; new middle classes

UNIT II

4. Early Socio Religious Reform: Christian Missionaries; Namdharis; Nirankaris.
5. Socio Religious Reform Movements: activities of Arya Samaj; Singh sabhas; Ahmadiyas.
6. Development of Press & literature: growth of press; development in literature

UNIT III

7. Emergence Of Political Consciousness: Agrarian uprising 1907; Ghadar.
8. Gurudwara Reform Movement: Jallianwala Bagh; foundation of SGPC and Akali Dal; Morchas.
9. Struggle for Freedom: activities of revolutionaries - Babbar Akalis, Naujawan Bharat Sabha; participation in mass movements – non co-operation, civil disobedience, Quit India.

UNIT IV

10. Partition and its Aftermath: resettlement; rehabilitation
11. Social Concerns In Post Independence Punjab: language; immigration; socio-economic issues.
12. MAP: Major Historical places: Delhi, Kurukshetra, Jaito, Ferozepur, Ambala, Amritsar, Lahore, Ludhiana, Qadian, Jalandhar, Lyallpur, Montgomery.

Suggested Readings:

1. Singh,Kirpal :History and Culture os the Punjab, Part II(Medieval Period), Publication Bureau, Punjabi University, Patiala 1990(3rd edn.).
2. Singh, Fauja(ed.) :History of the Punjab, Vol.III, Punjabi University, Patiala 1972.
3. Grewal, J.S. :The Sikhs of the Punjab, the New Cambridge History of India, Orient Longman, Hyderabad,1990.
4. Singh, Khushwant :A History of the Sikhs, vol I: 1469-1839, oxford University Press,. Delhi, 1991.
5. Chopra, P.N.,Puri, B.N. And Das,M.N. :A Social, Cu.ltural and Economic History of India, Vol.II, Macmillan, delhi, 1974.

Paper: Statistics & Computer Fundamentals **Theory: 67 Marks**
Course No: BIOT-203-T **Int Assess: 08 Marks**

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objectives: -

- To learn applications of statistics in the field of biology.
- To study concepts of probability, averages, distributions, tests of deviations, correlation and linear regression.
- To learn to design experiments and analysis of results by tests of significance or analysis of variance.

UNIT – I

An introduction, types of data, collection, classification and tabulation of the primary data, secondary data, discrete data and continuous data, diagramatic and graphical representation of
grouped data, frequency distribution {univariate and bivariate},cumulative frequency distribution and their graphical representation, histogram frequency polygon.

Concept of central tendency or location and their measures, partition values: quantiles, deciles and percentiles, dispersion and their measures, relative dispersion.

UNIT – II

Binomial distribution, Poisson distribution as a limiting form of binomial distribution and properties of these distributions, moments, moment generation function, cumulate generating function,geometric distribution and exponential distribution and properties of these distributions.
Normal distribution
Correlation and regression analysis
Hypothesis testing
Markov models
Cluster analysis

- Nearest neighbour search
- Search using stem numbers
- Search using text signature

Concepts of Probability.

UNIT – III

Computers: General introduction to computers, organization of computers, digital and analogue computers, computers algorithms.
Introduction to computers and its uses: Milestones in hardware andsoftware-batch oriented/online/real time applications.
Compute as systems: Basic concepts, stored programs, functional units and their interrelation- communication with computer.

UNIT – IV

Data storage devices:
Primary storage: Storage address and capacity, type of memory.
Secondary storage devices: Magnetic tape-data representation and R/W Magnetic disks, fixed and removable, data representation and R/W; Floppyand hard disks, optical disks CD-Rom, mass storage devices.
Input/output devices: Key-tape/diskette devices, light pin Mouse, joystick, source data automation.
Printed outputs: Serial, line, page, printers, plotters, voice response units.

Reference Books:

1. P.N. Arora & P.K. Malhotra (1996).Biostatistics (Himalaya PublishingHouse, Mumbai).
2. Sokal&Rohlf(1973). Introduction to biostatistics (Toppan Co. Japan).
3. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics: Anintroduction (Springer).
4. P.K. Sinha (2004). Computer fundamentals (BPB).
5. Suresh K. Basandra (2008). Computers today (Galgotia Publications Pvt.Ltd., New Delhi).

Paper: Statistics and Computer Fundamentals (Practical) **Pract: 22 Marks**
Course No: BIOT-203-P **Int Assess: 03 Marks**

1. Presentation of data by frequency tables, diagrams and graphs.
2. Calculation of measures of central tendencies, skewness and Kurtosis.
3. Calculation of dispersion.
4. Fitting of binomial distribution and Poisson distribution.
5. Probability
6. Basics of computer: Basic commands-File creation, copying, moving and deleting in DOS & windows, Using e-mail, browsers, search engines.

Reference Books:

1. W.J. Evens, G.R. Grant (2005). Statistical methods in bioinformatics:An introduction (Springer).
2. P.K. Sinha (2004). Computer fundamentals (BPB).
3. Suresh K. Basandra (2008). Computers today (Galgotia PublicationsPvt. Ltd., New Delhi).

Paper: Basic Biochemistry **Theory: 67 Marks**
Course No: BIOT-204-T **Int Assess: 08 Marks**

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Course Objectives
To make student conversant with the biochemical aspect of cell, chemical structure & function of various biomolecules.

UNIT – I

Water: Physico chemical properties of water, dissociation and association constants. pH and buffers, pI, pka, Henderson Hasselbatch equation and its implications.

Carbohydrates: Structure of important mono, di-, oligo- and polysaccharides, glycoproteins, peptidoglycan, glycolipids and lipopolysaccharides. Storage polysaccharides and cell walls. Enantiomers and anomers. Acid mucopolysaccharides. Reaction of monosaccharides.

UNIT II

Lipids: Classification of lipids and fatty acids, general functions and structure of major lipid subclasses, acylglycerols, phosphoglycerols, phosphoglycerides, sphingolipids, glycosphingolipids and terpenes, sterols, steroids: Prostaglandins.

UNIT – III

Vitamins and hormones: Types of vitamins and their chemistry, vitamins as co-factors, steroids and peptide hormones.
Nucleic Acids: Structures of RNA & DNA

UNIT IV

Proteins: Structure of amino acids, nonprotein and rare amino acids and their chemical reactions.
Structural organization of proteins (primary, secondary, tertiary and quaternary domain structure), protein classification and function. Forces stabilizing primary, secondary and tertiary structure.

Reference Books:

1. Lehninger A.L., Nelson D.L. and Cox M.M. (2005).Principles of biochemistry (W. H. Freeman, USA).

2. Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).
3. Rawn J.D. (1989). Biochemistry (Neil Patterson Publishers).
4. G.L. Zubay, W.W. Parson, D.E. Vance. (1995). Principles of biochemistry:Student study art notebook (Wm.C. Brown).
5. Bucke C. (1999). Carbohydrate biotechnology protocols (Humana Press).
6. H.R. Horton, A.J. Scism, L.A. Moran, R.S. Ochs, J.D Rawn, K.G. Scrimgeour. (2006). Principles of biochemistry (Prentice Hall).

Paper: Basic Biochemistry (Practical)
Course No: BIOT-204-P

Practical: 22 Marks
Int. Assess: 03 Marks

1. Preparation of physiological buffers.
2. Verification of Beer-Lamberts law for p-nitrophenol.
3. Determination of Ka value of p-nitrophenol.
4. Estimation of carbohydrates in given solution by Anthrone method.
5. The determination of acid value and saponifaction value of a fat.
6. Methods of protein estimation.
7. Methods for Lipid estimation.

Paper: Cell Biology **Theory: 67 Marks**
Course No: BIOT-205-T **Int Assess: 08 Marks**

Instructions for paper setters and candidates
• Set nine questions in all. All questions carry equal marks.
• Five questions to be attempted.
• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).
• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Course Objectives

- To understand the detailed overview of eukaryotic cell and its inner components
- To understand the processes of cell transport and cell locomotion
- Introduction to stem cells and their applications

Practical skills will be imparted to the students through critically designed practical related to the subjects.

Unit I

Cell as a basic unit of living systems: the cell theory, pre-cellular evolution, artificial creation of "cells", broad classification and ultrastructure of cell types (PPLOs, Bacteria, eukaryotic microbes, plant and animal cells), tissue, organ and organism at different level of organization of other genetically similar cells; biochemical comparison of cells (proteins, lipids, carbohydrates, nucleic acids and metabolic pool).

Ultrastructure of cell membrane and cell organelle: structure and function of cell organelles, ultrastrucure of cell membrane, cytosol, golgi bodies, vacuoles, endoplasmic reticulum (rough and smooth), ribosomes, cytoskeletal structures (actin microtubules etc), mitochondria, chloroplast, lysosomes, peroxisomes, nucleus (nuclear membrane, nucleoplasm, nucleolus).

Unit II

Cellular transport: Passive & active transport, permeases, sodium, potassium, Calcium, ATPase pumps, lysosomal and vacuolar membrane, ATP dependent proton pumps, co-transport symport, antiport, transport into prokaryotic cells, endocytosis and exocytosis, entry of viruses and toxins into cells.

Unit III

Cell locomotion: Amoeboid, Flagellar and Ciliar.

Chromosomes: discovery, morphology, chemical composition, structural organization of chromatids, centromere, telomere, chromatin, nucleosome organization, euchromatin and heterochromatin, special chromosomes (polytene, lampbrush chromosomes), banding patterns in human chromosomes.

Unit IV

Basics of stem cells: Introduction to concepts in stem cell biology, Cell differentiation in multicellular organisms: (renewal, potency: Totipotent, pleuripotent, multipotent); types of stem cells: early embryonic stem cells, blastocyst embryonic stem cells, fetal stem cells, umbilical cord stem cells, adult stem cells; applications; ethical issues related to stem cells.

Reference Books:

1. The World of the Cell (2008) Becker, Klein Smith & Hardin Pearson education Inc
2. Cell and Molecular Biology (2010) E.D.P De Robertis and E.M.F. De Robertis, Jr.
3. Molecular Cell Biology (2007) Lodish et al. Freeman & Co
4. Molecular Biology of the Cell (2007) Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter.
5. The Cell: A Molecular Approach (2013) Geoffrey M. Cooper and Robert E. Hausman
6. Cells and Cell Function: Advanced Level (2007) Sally Morgan
7. Stem Cells: An Insider's Guide (2013) Paul Knoepfler

Paper: Cell Biology (Practical) **Practical : 22 Marks**
Course No: BIOT-205-P **Int. Assess: 03 Marks**

1. To study the parts and function of a light microscope
2. To prepare a wet mount of onion peel for microscopy
3. Counting of cells using haemocytometer
4. Subcellular fractionation of spinach cells
5. To study cell locomotion of amoeba
6. To study flagellar motility in bacteria by hanging drop technique
7. To study cell transport in cell membrane by following experiments
    1) Diffusion through artificial membrane: transport of albumin and glucose solution through dialysis bag.
    2) To study the effect of membrane disrupting agents in beet root
8. Quantitative analysis of cell membrane lipids by TLC

Paper: General Microbiology **Theory: 67 Marks**
Course No: BIOT-206-T **Int Asess: 08 Marks**

Instructions for paper setters and candidates.

- Pattern Change should be UNIT wise.

Course Objectives

Microbes play significant role in understanding medical science and industries so study of microbes from basic to advance level, with understanding of biochemistry, cell structure and application makes this paper significant.

UNIT – I

History of Microbiology: A. Leewenhook, L. Pasteur, R. Koch, J. Lister, J.Tyndall, Koch postulates, discovery of antibiotics.

Principle of microscopy: Bright field, dark field, phase contrast, fluroscent, electron microscopy.

UNIT – II

Microbial classification: Bacteria, fungi

Morphology of bacteria, viruses and fungi with major emphasis on bacterial structure specially cell wall. Gram positive and Gram negative bacteria. Microbial spores, sporulation/ germination process.

UNIT – III

Microbial growth, nutritional biodiversity, phases of growth, generation time, growth rate, monoauxic, diauxic and synchronous growth. Chemostat

Physical and chemical agents to kill microbes, sterilization and pasteurization processes.

UNIT –IV

Normal micro flora in human. Types of microbial pathogens and diseases caused by them. Microbial interactions like symbiosis and antibiosis. Host defense mechanism against pathogens.

Reference Books:

1. Tortora, G.J., Funke, B.R. and Case, C.L. (2009) Microbiology: An introduction (Benjamin/ Cummings publishing company, Inc).
2. R. Y. Stanier, M. Doudoroff, E. A. Adelberg (1999). General microbiology (MacMillian press London).
3. M.J. Pelczar, E.C. Sun Chan, N.R. Krieg (1986). Microbiology (Tata McGraw Hill Publication, New Delhi).
4. H.G. Schlegel, C.Zaborosch, M. Kogut (1993).General microbiology (Cambridge University Press).
5. S.C. Prescott, C.G. Dunn (1959). Industrial microbiology (McGraw- Hill).
6. Purohit, S.S. (2003). Microbiology: Fundamentals and applications (Agrobios, India).
7. Postgate, J.R. (2000). Microbes and man (Cambridge University Press).

Paper: General Microbiology (Practical) **Practical: 22 Marks**
Course No: BIOT-206-P **Int Assess: 03 Marks**

1. Cleaning of glass wares, preparation of media, cotton plugging and sterilization.
2. Isolation of microorganisms from air, water and soil samples.
3. Dilution and pour plating techniques.
4. Gram staining, spore staining
5. Growth curve of microorganisms.
6. Antibiotics sensitivity of microbes using antibiotic discs.
7. Testing of water quality.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual, (Pearson Benjamin Cummings).

B.Sc. (Hons.) 2nd year (3rd Semester)

Paper: Biochemistry

Course No.: BIOT-Sem-III-I-T

Theory : 67 marks

Internal assest : 08 marks

Total : 75 marks

Instructions for paper setters and candidates:-:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: To familiarize the students with the biochemical activities taking place at cellular level, highlighting the enzymatic reactions, metabolic pathways and biochemical aspect.

Unit- I

Metabolism: Metabolic pathways, biochemical reaction mechanism, energy rich metabolites. Coupled reactions, substrate level phosphorylation. Importance of ATP: Structural basis of high phosphoryl transfer potential of ATP. Sources of cellular energy, activated carriers. Regulation and evolution of metabolic pathways.

Unit- II

Carbohydrate metabolism: Biosynthesis and degradation of glucose; feeder pathways of glycolysis; Kreb cycle, amphibolic nature of the Kreb cycle; regulation of Kreb cycle, regulation of gluconegenesis. Glycogen metabolism.

Mitochondrial electron transport chain, oxidative phosphorylation; regulation of ATP synthesis.

Unit- III

Lipid Metabolism: Biosynthesis and degradation of fatty acids; β-oxidation of saturated, unsaturated and polyunsaturated fatty acids. Formation of ketone bodies, their function and

physiological significance. Fatty acid synthesis: multifunctional enzyme complex in eukaryotes, function of citrate. Regulation of fatty acid metabolism.

Cholesterol metabolism: Biosynthesis of cholesterol and its regulation.

Unit- IV

Amino acid metabolism: Biosynthesis of nutritionally non-essential amino acids; catabolism of carbon skeleton of amino acids. Conversion of amino acids to specialized products; amino acids as precursors of porphyrins, bile pigments and biogenic amines.

Nucleic acid metabolism: Biosynthesis of purine and pyrimidine nucleotides; salvage reactions. Catabolism of purines and pyrimidines, urea cycle.

Reference Books:

1. **Lehninger A.L., Nelson D.L., Cox M.M. (2005). Principles of biochemistry (W. H. Freeman, USA).**
2. **Stryer L, J. M. Berg, J.L. Tymoczko (2001). Biochemistry (W.H. Freeman and Company, New York).**
3. **Rawn J.D. (1989). Biochemistry (Neil Patterson).**
4. **Voet D., Voet, J.G. (2004).Biochemistry (John Wiley & Sons).**
5. **Voet, D., Voet, J.G. and Pratt, C.W. (2008). Fundamentals of biochemistry: Life at the molecular level (John Wiley & Sons).**

Biochemistry (Practical)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Estimation of DNA by the diphenylamine reaction.**
2. **Determination of reducing sugars using 3, 5-dinitrosalicylic acid and Benedict's test.**
3. **Determination of iodine number of fat.**
4. **Determination of extinction coefficient of nucleic acids.**
5. **Biuret assay for protein estimation..**
6. **Quantitative estimation of amino acids using ninhydrin reaction.**
7. **Estimation of RNA by means of orcinol reaction.**

Paper: Genetics

Course No.: BIOT-Sem-III-II-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: The focus of this course is on the science of heredity with emphasis on the basics of Mendelian and molecular genetics. It will familiarize students with chromosome organization, linkage, chromosome mapping, chromosome aberrations, mutations and microbial genetics.

Unit – I

Mendelian laws of inheritance, Sex determination in drosophila, plants and animals, sex linkage, Non-disjunction as a proof of chromosomal theory of inheritance. Numerical chromosome aberrations: polyploidy, aneuploidy, Chromosomal aberrations: Delition, duplications, inversions, translocations, position effects.

Unit – II

Gene interactions, sex linked inheritance. Crossing over: molecular mechanism and cytological proof, Recombination, linkage, gene mapping, Three point testcross, interference, coincidence, recombination frequencies, Tetrad analysis, somatic cell hybridization for gene linkage studies, Hereditary defects.

Unit – III

Population genetics: Hardy-Weinberg equilibrium, gene and genotypic frequencies, Chi-square test, probability, pedigree analysis.

Mutation: Spontaneous versus induced mutations, types of mutations, mutagenic agents: Physical, chemical and radiation, molecular basis of mutations, mechanisms of DNA repair, mutations frequency, correlation between mutagenicity and carcinogenicity,

Unit – IV

Basic microbial genetics: Conjugation, transduction, transformation, isolation of auxotrophs, replica plating techniques, analysis of mutations in biochemical pathway, one gene – one enzyme hypothesis. Extra chromosomal inheritance: mitochondrial and chloroplast genetic systems.

Reference Books:

1. **Birge, E.A. (2006). Bacterial and bacteriophage genetics (Springer).**
2. **Dale J., Park S. (2005) Molecular genetics of bacteria (John Wiley and SonsInc).**
3. **Freifelder, D. (2005). Molecular biology (Jones and Bartlett).**
4. **Synder, L., Champness W. (2007). Molecular genetics of bacteria (ASM Press).**
5. **Turn N.J, Trempy J.E. (2006). Fundamental bacterial genetics (Wiley Blackwell).**
6. **T.A. Baker, J.D. Watson, S. Bell. (2004). Molecular biology of the gene (Benjamin B. Cummings).**
7. **A.J.F. Griffiths, S.R. Wessler, R.C. Lewontin, S.B. Carroll (2007). Introduction to genetic analysis (W.H.Freeman & Co Ltd).**
8. **Strickberger M.W. (2006) 3rd edition. Genetics (Macmillan).**
9. **Verma P.S (2012)Genetics (S.Chand & Company Ltd.)**
10. **Sanders M.F. and Bowman J.L.(2012) Genetic Analysis (Pearsons)**

Genetics (Practical)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Examination of permanent slides of various stages of mitosis and meiosis and different types of chromosomes.**
2. **Demonstration of law of segregation and independent assortment (use of dried peas, colored peas, capsules etc.).**
3. **Numerical for segregation and independent assortment.**

4. **Use of Chi-square for prediction of phenotype/genotype frequencies of parents from progeny and vice-versa, epistasis.**

5. **Detection of blood groups (ABO & Rh factors).**

6. **Calculation of variance in respect of pod length and number of seeds/pod.**

7. **Calculation of gene frequencies and random mating (colored beads, capsules).**

8. **Dermatographics: Palm print taking and finger tip patterns.**

Paper: Immunology-I

Course No.: BIOT-Sem-III-III-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objectives: To understand general aspects of immune system like different components of the immune system, Generation and functions of these components, Knowledge of basic immunological techniques.

Unit-I

1. **Introduction**
   i) Overviews of immune system – Historical perspectives

   ii) Innate and acquired immunity
   iii) Clonal nature of immune response.

2. **Cells of the immune system : Hematopoiesis and differentiation, lymphocyte trafficking, B-lymphocytes, T-lymphocytes, macrophages, dendritic cells, Natural killer cells and lymphocyte activated killer cells, eosinophils, neutrophils & mast cells.**

Unit-II

3. **Organs of the immune system : Primary and secondary lymphoid organs, systemic function of immune system.**

4. **Lymphocyte Trafficking: Cell surface proteins, Cell Adhesion molecules (Integrin, Selectin, Cadherin family and Ig Superfamily).**

5. **Antigen – Immunogenicity Vs. antigenicity, factors effecting immunogeniticity, nature of immunogen, epitopes, heptans and antigenicity, pattern recognition receptors.**

Unit-III

6. **Immunoglobulins: Structure of antibody, antibody effector function, antibody classes and biological activities, antigenic determinants on Immunoglobulins, Immunoglobulins superfamilies.**
7. **Major histocompatibility complex: General organization and inheritance, MHC molecules and genes, genetic map, cellular distribution, regulation of MHC expression and disease susceptibility, antigen presentation.**

Unit-IV

8. **Hybridoma Technology: Production of Monoclonal Antibodies, applications of polyclonal and monoclonal antibodies.**

9. **Antigen–Antibody interactions : Strength of interaction, cross reactivity, antibody affinity, avidity. Antigen-antibody interactions as tools for research and diagnosis: precipitation and agglutination reactions, immunodiffusion, immunoelectrophoresis, immunoassays, Enzyme linked immunosorbent assay (ELISA), Radioimmunoassay (RIA), western blot, Immunofluorescence.**

Reference Books:

1. **Kuby Immunology (2006) by Thomas J. Kindt, Richard A. Goldsby, Barbara A. Osborne, Janis Kuby (W.H. Freeman).**

2. **Immunology- A short course (2009) by Richard Coico, Geoffrey Sunshine (Wiley Blackwell).**

3. **Fundamentals of immunology (1999) by William Paul (Lippincott Williams & Wilkins).**
4. **Immunology (2001) by Ivan Maurice Roitt, Jonathan Brostoff, David K. Male (Mosby).**

5. **Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) WH Freeman & Co. New York; 2006.**

6. **Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley Blackwell; 2011.**

Paper: Immunology-I (Practicals)

Course No.: BIOT-Sem-III-III-P

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Lymphoid organs and their microscopic organization.**
2. **Differential leucocytes count.**
3. **Separation of serum from blood.**
4. **Separation of plasma from blood.**
5. **Ouchterlony Double Diffusion**
6. **Radial immuno diffusion test using specific antibody and antigen.**
7. **Agglutination (Blood group testing).**

Paper: Plant Tissue Culture

Course No.: BIOT-Sem-III-IV-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: To introduce the students with fundamentals and applications of plant tissue culture. This course will expose students to the methods of culturing, maintaining and regenerating plants species.

Unit – I

Cellular totipotency and differentiation in plants.

Plant Culture Media and their composition.

Sterilization techniques for glassware and tissue culture media.

Micropropagation: Establishment of aseptic culture, various stages, advantages and disadvantages.

Unit –II

Organogenesis; somatic embryogenesis; somaclonal variation, its genetic basis and application in crop improvement. Cell/callus line selection for resistance to herbicide, stress and diseases. Role of tissue culture in rapid clonal propagation, production of pathogen - free plants and "synthetic seeds" haploid and Triploid plant production & their application.

Unit – III

Protoplast and somatic hybridization: Isolation, culture and plant regeneration, protoplast fusion, identification and characterization of somatic hybrids, applications of protoplast hybridization technology.

Unit – IV

Secondary metabolites: Secondary Plant products from cultured cells and their industrial applications. Cryopreservation of germplasm: Short term and long term conservation of plant genetic resources, In situ and Ex situ conservation of plants

Reference Books:

1. **Razdan, M.K. (2007). Introduction to plant tissue culture (India Book House Pvt. Ltd)**

2. Narayanaswamy, S (1994). Plant cell and tissue culture (Tata Mc-Graw Hill Publishing Co.Ltd, New Delhi).

3. Rudolf, E. (1994). Plant cell biotechnology (Spinger Verlag).

4. Bhojwani, S.S., Razdan, M.K. (1996), Plant tissue culture: Theory and practice (Elsevier Science, Netherlands).

5. Gamborg, O.L., Phillips, G.C. (1995). Plant cell, tissue and organ culture: Fundamental methods (Illustrated, Publisher Springer).

6. HS Chawla (2003). Plant biotechnology: A practical approach (Science Publishers, USA). Plant Tissue Culture and Biotechnology

Plant Tissue Culture (Practical)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. Laboratory design set up for a plant tissue culture laboratory.
2. How to clean glass/plastic ware.
3. Preparation of complex nutrient medium (Murashige and Skoog's medium).
4. To select, prune, sterilize and prepare an explant for culture.
5. To culture different explants for raising callus cultures.
6. Significance of growth hormones in culture medium.
7. To demonstrate various steps of micropropagation.

Paper: Animal Cell Culture

Course No.: BIOT-Sem-III-V-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: The major emphasis of this course is to introduce the students to the field of Animal cell-culturing and its importance to mankind. The students will also learn the techniques involved in animal cell culture.

Unit – I

History of development of cell cultures, natural surroundings for animal cells, simulating natural conditions for animal cells, metabolic capabilities of animal cells.

Biology of cultured cells : The culture environment, cell adhesion, proliferation, differentiation, signaling, evolution of cell lines. Equipments and materials for animal cell culture technology.

Unit II

Introduction to the balanced salt solutions and simple growth medium. Brief discussion on the chemical, physical and metabolic functions of different constituents of culture medium. Role of carbon dioxide. Role of serum and supplements.

Serum & protein free defined media and their application.

Animal cell culture Techniques: Dispersion and disruption of tissues; primary cultures, anchorage and non-anchorage dependent cells; secondary culture, transformed animal cells.

Unit – III

Established/continuous cell lines, commonly used animal cell lines, their origin and characteristic. Maintenance and growth kinetics of cells in culture, differentiation of cells,

Measurement of growth and viability of cells in culture. Cytotoxicity assays & their applications,

Unit – IV

Characterization of Cell lines and their authentication, Cell fusion and production of monoclonal antibodies.

Transformation and immortalization, cryopreservation.

Bio-Safety & Bioethics.

Reference Books:

1. **R. Ian Freshney, (2010) 6th Edition, Wiley-Blackwell. Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications**
2. **P.R. Yadav and Rajeev Tyagi, Discovery Publishing House, (2006) Biotechnology of Animal Tissues**
3. **Julio, E., Celis. (2006) Cell Biology. A laboratory handbook, Vol. I-IV (Elsevier Academic)**
4. **Butler, M (1996) Mammalian cell biotechnology. A practical approach (IRL, Oxford University Press)**
5. **Gareth, E.J. (Edition Illustrated, Humana Press) (1996) Human cell culture protocols.**

Animal Cell Culture (Practical)

Practical : 22 marks

Int. assessment : 03marks

Total : 25 marks

Time : 3 hours

3. **Fumigation of animal cell culture laboratories.**
4. **Maintenance of aseptic conditions and sterilization method.**
5. **Preparation of Minimal Essential Growth medium for cell culture.**
6. **Isolation of lymphocytes for culturing.**

B.Sc. (Hons.) 2nd year (4th Semester)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Immunology-II	BIOT-Sem-IV-I-T	75	BIOT-Sem-IV-I-P	25
2.	Biophysical and Biochemical Techniques	BIOT-Sem-IV-II-T	75	BIOT-Sem-IV-II-P	25
3.	Plant Biotechnology	BIOT-Sem-IV-III-T	75	BIOT-Sem-IV-III-P	25
4.	Animal Biotechnology	BIOT-Sem-IV-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Agro & Industrial Biotechnology	BIOT-Sem-IV-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. (Hons.) 2nd year (4th Semester)

Paper: Immunology-II

Course No.: BIOT-Sem-IV-I-T

Theory : 65 marks

Int. assessment : 10 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: This course will introduce students to the principles of advanced Immunology, both at the molecular and cellular levels.

Unit-I

3. **B Cell Activation, Differentiation: B-Cell Activation and Proliferation, In Vivo Sites for Induction of Humoral Responses, T-dependent and T-independent antigens.**

4. **Organization and expression of Immunoglobulins gene: Genetic model, multigene organization, generation of antibody diversity.**

Unit-II

5. **Receptors and Signaling: T-Cell Receptors: Structure and Roles, T-Cell Receptor Complex.**

6. **T-Cell Maturation, Activation, and Differentiation: Thymic Selection of the T-Cell Repertoire, T_H-Cell Activation, T-Cell Differentiation, Cell Death and T-Cell populations, Peripheral-T-Cells.**

7. **Complement system: Function, Components- Classic, Alternative, Mannose binding proteins, activation, Regulation of the Complement System, Biological Consequences of Complement Activation.**

Unit-III

6. **Hypersensitivity: Type I, Type II, Type III and Type IV Hypersensitivity reactions and their implications.**

7. **Autoimmunity: Organ specific autoimmune diseases : Hashimoto's Thyroditis, Insulin-dependent Diabetes Mellitus, Grave's disease, Mysthenia Gravis.**

   Systemic Autoimmune Disease: Systemic lupus Erythmatosus (SLE).

Unit-IV

8. **Transplantation immunology- Immunologic Basis of Graft Rejection, Clinical Manifestations of Graft Rejection, General Immunosuppressive Therapy, Specific Immunosuppressive Therapy, Immune Tolerance to Allografts, Clinical Transplantation**
9. **Vaccines and Vaccination – principles of vaccination, passive & active immunization, immunization programs, adjuvants, bacterial vaccines, viral vaccines, polysaccharide vaccines, DNA vaccines, recombinant vaccines, vaccines to other infectious agents, tumor vaccines.**

Reference Books:

1. **Kindt TJ, Goldsby RA, Osborne BA, Kuby J. Immunology. (6th Ed.) W.H. Freeman & Co. New York; 2006.**
2. **Delves PJ, Martin SJ, Burton DR, Roitt IM. Roitt's essential immunology. Wiley- Blackwell; 2011**
3. **Peakman M, Vergani D, Pyne DJ, Woodward M. Basic and clinical immunology. (1st Ed.) Churchill Livingstone; 1997.**
4. **Roitt I, Brostoff J, Male D. Immunology. (6th Ed.) Harcourt Health Sciences, 2001.**
5. **Clinical Immunology and serology: A laboratory perspective (1997) by Stevens Dacis Company, Phialadelphia).**

Immunology-II (Practical)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Performing enzyme linked immunosorbent assay (ELISA).**
2. **Rocket immuno-electrophoresis for antigen antibody interaction.**
3. **Isolation of mononuclear cells from peripheral blood and viability test by dye exclusion methods.**
4. **Total leucocyte count (TLC).**
5. **Isolation of IgG from serum.**

Paper: Biophysical and Biochemical Techniques

Course No.: BIOT-Sem-IV-II-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: To enable the students learn important tools and techniques based on biophysical and biochemical principles so that they can understand application of these techniques in biotechnology

Unit – I

Principle, working and applications of Spectrophotometry (UV& visible) and spectroflourimetry, Atomic absorption spectrophotometry: Equipment used and applications

Infrared and Raman spectroscopy. ORD and circular dichroism, Nuclear Magnetic Resonance and Electron Spin Resonance spectroscopy, Magnetic Resonance Imaging. Electrophoresis: Principle, types & applications.

Unit – II

Microscopy: Properties; Light and Bright field Microscopy, Dark field Microscopy; Phase contrast, Fluorescent and Confocal microscopy,

Electron microscopy: Scanning and Transmission Electron Microscopy.

Centrifugation: Principle, types & applications.

Unit – III

Crystallography: Physical basis of crystallization; formation of crystals; Mounting of crystals

X-ray diffraction: Braggs law; Diffraction of x-rays by crystals
Overview of chromatography; Gas chromatography and HPLC

Unit – IV

Radioisotope techniques: Radiotracers; GM counter, proportional and scintillation counters, autoradiography.

Mass spectrometry: Physical basis; Instrument used; ionization modes; Applications

Collaboration of MS with other techniques: GCMS and LCMS.

Reference Books:

1. **K Wilson, J Walker (2000) Principles and techniques of biochemistry and Molecular Biology Seventh Edition, (Cambridge University Press).**
2. **SR Mikkelsen, E Cortin (2004). Bioanalytical Chemistry (2004) (John Wiley & Sons)**
3. **David Sheehan (2009). Physical Biochemistry: Principles and Applications, Second Edition. (John Wiley & Sons)**
4. **P. Carmona, R. Navarro, A, Hernanz (1997) Spectroscopy of biological molecules: Modern trends (Illustrated, Publisher Springer)**
5. **Bernard Valeur (2001). Molecular fluorescence: Principles and application (Wiley-VCH).Plenum USA].**
6. **Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).**
7. **Bansal, D.D., K Hardori, R & Gupta, M.M. (1985). Practical biochemistry (Standard Publication, Chandigarh).**

Biophysical And Biochemical Techniques (Practicals)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25marks

Time : 3 hours

1. **Identification of the provided sample using some of the spectroscopic techniques.**
2. **Quantitative analysis by UV/Visible spectrophotometry.**
3. **Use and care of light microscope.**
4. **Demonstration of radioisotopic techniques**
5. **Gel filtration chromatography**

Paper: Plant Biotechnology

Course No.: BIOT-Sem-IV-III-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: The objective of this course is to familiarize the students with different aspects of plant molecular biotechnology and techniques for plant genetic manipulations.

Unit – I

Genetic material of plant cells with an introduction to chloroplast and mitochondrial DNA.

Plant Promoter, Plant Selection markers and reporter genes.

Transformation of plant cells; different type of vectors including viral vectors and their benefits.

Unit –II

Modes of gene delivery in plants: Particle bombardment, electroporation, microinjection; Advantages and disadvantages

Agrobacterium mediated gene transfer, natural pathogen mode of infection,

vir gene functions, Ti / Ri plasmids, Screening and selection of transformants, PCR and hybridization methods; Transgene selection and silencing; Generation and maintenance of transgenic plants.

Unit – III

Transgenic plants: Genetic modification of plants for herbicide resistance, Pest resistance, virus resistance

Bacterial and fungal resistance. : Delayed fruit ripening, improved protein composition.

Bt cotton, golden rice and some others as examples.

Unit – IV

Plant cell as factories for production of industrial enzymes, biodegradable plastics, antibodies, edible vaccines; manipulation of metabolic pathways for production of fatty acids, industrial oils, terpenoids, flavanoids.

Reference Books:

1. **Draper, J.R., Scott. P., Armitage, R. Walden (1988). Plant Genetic Transformation and Gene Expression – A Laboratory Manual. Blackwell Scientific Publications, Oxford.**
2. **Ashihara et al. (2011) Plant Metabolism and Biotechnology, John Wiley & Sons, Ltd. ISBN: 978-0-470-74703-2**
3. **Old, R.W., and Primrose, S.B. (2004). Principles of Gene Manipulation : An Introduction to Genetic Engineering. Blackwell Scientific Publications, Oxford.**
4. **Peter J. Lea and Richard C. Leegood, Plant Biochemistry and Molecular Biology, Wiley Publishing.**
5. **Singh R.P. & Jaiwal P.K. (2003) Plant Genetic Engineering Vol. 1 – 4. SCI Tech Publishing LLC, U.S.A.**
6. **Gupta, P.K. (1990). An Introduction to Biotechnology, Rastogi Publications, Meerut.**

Plant Biotechnology (Practicals)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Aseptic culture techniques for establishment and maintenance of cultures**
2. **Preparation of stock solutions of MS basal medium and plant growth regulator stocks.**
3. **Micropropagation of Tobacco plant by leaf disc culture.**
4. **Isolation of plant genomic DNA by modified CTAB method.**
5. **DNA check run by Agarose Electrophoresis.**
6. **Agrobacterium tumefaciens-mediated plant transformation.**

Paper: Animal Biotechnology

Course No.: BIOT-Sem-IV-IV-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: The major emphasis of this course is to introduce the students to the advances in the field of Animal and their importance to mankind.

Unit-I

Organotypic and histotypic cultures: Organotypic culture: Gas and nutrient exchange, structure integrity, growth, differentiation, advantages and applications. Methods, advantages and applications of histotypic culture.

Three dimensional culture and tissue engineering: Concept of tissue engineering, components of tissue engineering, cells imaging in 3D construct.

Unit-II

In vitro fertilization (IVF) in Humans and Embryo Transfer in Livestock.

Cell culture based vaccines: Cells as virus host/cell culture based vaccines, cells as protein factory/cell expression system and cells as antigen presenter/personalized vaccine.

Scaling up of the animal cell culture: different methods of scale up at laboratory and industrial level.

Unit-III

Transgenic animals and their applications: Concept of transgenics, Methods of gene transfer, selection of clone containing DNA insert and application of transgenic animals (Food, environment, recombinant proteins, drugs etc.). Safety and ethical issues of transgenic animals.

Unit-IV

Production of various products of human use using animal cell culture:

Antibiotics production

Human Growth factors

Insulin and other Hormones

<u>Essential Readings:</u>

1. **Culture of animal cells (2009). RI Freshney, Sixth ed. John Willey & Sons.**
2. **Culture of animal cells: A manual of basic technique and specialized applications. John Wiley & Sons, (2011).**
3. **Animal cell culture and technology by Michaelis Butler. BIOS Scientific Publisher (2003).**
4. **Animal cell biotechnology XVI 2nd Edition (2007) by Ralf Partner Humana Press.**
5. **Textbook of animal biotechnology (2012) by B Singh, S K Gautam, and M S Chauhan..**
7. **Principles of tissue engineering by Robert Lanza, Robert Langer, Joseph P. Vacanti. Academic Press, (2011) - Science - 1344 pages.**

8. **Transgenic animal technology, 2nd Edition: A Laboratory Handbook by Carl A. Pinkert. Academic Press; 2nd edition (2002).**

Animal Biotechnology (Practicals)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Growing the cell monolayers, in vitro.**
2. **Trypsinization of the monolayers and cell counting using hemocytometer.**
3. **To check the viability of the cells using Trypan Blue dye exclusion assay.**
4. **Checking the cytotoxicity of the compounds using MTT Assay.**

Paper: Agro & Industrial Biotechnology

Course No.: BIOT-Sem-IV-V-T

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates:-

•Set nine questions in all. All questions carry equal marks.

•Five questions to be attempted.

•Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

•Set two questions from each Unit, and each question should be further divided in two to three parts.

Any one question to be attempted from each unit.

Objective: This course will introduce students to the concepts of agriculture as industry. This course will help students to understand the application of fundamental concepts like transgenic approaches to improve crop plants, microbial culture maintenance, and metabolite purification at industrial level.

Unit I

Basic concept of agriculture as industry: Industrially important microbes, its screening, selection and identification.

Maintenance and preservation of industrially important microbial cultures.

Differences between microbial industrial process and chemical industrial process.

Unit II

Improvement programme of industrial microbes, mutational programme of penicillin producing microorganisms, selection pressure in maintaining the hyper producer, lowering of production due to reversal of mutations, media formulation and process optimization of industrial and agro industrial microbes.

Unit III

Microbes in agro industries and industrial biotechnology: Introduction of primary and secondary metabolites, production of vitamin B12, alcohol, wine, beer, cheese, bread, citric acid, gluconic acid, antibiotics (penicillin), enzymes (amylases, cellulases, lipases and proteases) and their industrial applications.

Unit IV

Emerging energy technologies in agro industries: production of vermiculture, composting, herbicides and biopesticides, production of biofertilizers: Blue green algae, azolla, fungi, mycorrhiza (VAM), bacteria – Azospirrilum, microbial biotransformations, single cell proteins (bacterial, fungal and algal).

Reference Books:

1. **Marwaha, S.S., Arora, J.K. (2003). Biotechnological strategies in agro-Processing (Asiatech publishers Inc. New Delhi, India).**
2. **Stanbury, P.F., Whitaker A. (2011) 2nd edition. Principles of fermentation technology.**
3. **Singh, BD. (2008). Biotechnology: Expanding horizons (Kalyani Publishers, India).**
4. **Patel A.H. (2007). Industrial microbiology (New Age International Publishers).**
5. **Loessner, J. M, Jay J.M, D.A. Golden (2005). Modern food microbiology (Golden Springer).**
6. **Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).**

Agro & Industrial Biotechnology (Practicals)

Practical : 22 marks

Int. assessment : 03 marks

Total : 25 marks

Time : 3 hours

1. **Counting of Microbial cells by serial dilution techniques (Spread plate and pour plate).**
2. **Measurement of bacterial size.**
3. **Screening of industrial enzymes (cellulase, protease, amylase etc.) from different soil samples.**
4. **Production of enzymes by submerged and solid state fermentation.**

B.Sc. (Hons.) 3rd year (5th Semester) (July, 2018)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Molecular Biology	BIOT-Sem-V-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioanalytical tools	BIOT-Sem-V-II-T	75	BIOT-Sem-IV-II-P	25
3.	Environmental Biotechnology	BIOT-Sem-V-III-T	75	BIOT-Sem-IV-III-P	25
4.	Bioinformatics	BIOT-Sem-V-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Enzymology	BIOT-Sem-V-V-T	75	BIOT-Sem-IV-V-P	25

Total Marks = 500

B.Sc. Hons Biotechnology 3rd year (5th Semester)

BIOT-Sem-V-I-T MOLECULAR BIOLOGY

Theory : 67 marks

Int. asset : 08 marks

Total : 75 marks

Time : 3 hours

Objectives: To make the students understand the fundamental concepts which includes DNA structure, replication, transcription, translation, mutation, gene regulation.

UNIT-I

1. DNA: Chemical composition of DNA DNA structure-single stranded DNA, detailed account of double stranded DNA, BDNA, Z.DNA and other structural forms and their importance.

2. Genome organization in prokaryotes: Molecular nature of the genetic material, Composition and structure of prokaryotic DNA and RNA.

3. Genome organization in eukaryotes: Composition and structure of eukaryotic DNA and RNA. Characteristic features of highly repetitive DNA, Tandemly repetitive DNA and Mini and microsatellite DNA and Insertional elements and their role and importance

UNIT-II

4. DNA replication: Prokaryotic DNA replication; replication origin and site and structure and DNA Ter regions and structure. DNA polymerases, composition and features, replication factors and the mechanism of replication, leading strand and lagging strand synthesis, procesessivity and fidelity. Replication of single stranded DNA, M13 viral DNA.

5. Eukaryotic DNA replication; origins, replication initiation complexes and their assembly, licensing factors, DNA polymerases and their composition, telomerase and mode of action, replication factors, disassembly of chromatin components and reassembly during replication.

UNIT-III

6. Gene Expression: Overview of central dogma

7. RNAs: types, rRNAs; Structural features of rRNAs- prokaryotic and eukaryotic. tRNAs: structural features, their anticodon feature. mRNAs- prokaryotic and eukaryotic mRNAs, structural features,

8. Transcription: regulatory elements and mechanism of transcription regulation in prokaryotes and eukaryotes

UNIT IV

9. Translation: Overview and mechanism of translation process in prokaryotes, characteristics of the genetic code, structure and charging of tRNA,

10. Gene Regulation: Regulation of gene expression in response to environmental conditions. Operon concept- the Lactose and the Tryptophan operon.

REFERENCE BOOKS:

Lewin, B., 2004, Genes VIII, Oxford Univ. Press, Noida, India.

Ingraham, John.L.2004, Introduction to Microbiology, 3 Ed., Thomson brocks/Cole Inc.

Malacinski, George M., 2005, Freifelder's. Essentials of Molecular Biology, Narosa Publishing House, ND.

Karp, Gerald, 2005, Cell and Molecular Biology, Wiley International, USA. Snusted and Simmons, 2006, Principles of genetics, John Wiley and Sons, Inc Brown, T.A, 2007, Genomes 3, Garland Science. Weaver R.F., Molecular biology (2005), McGraw

BIOT-Sem-V-I-T: Molecular Biology (Practical)

Practical : 20 marks

Int. assessment : 05marks

Total : 25 marks

Time : 3 hours

1. **Preparation of Reagents for DNA isolation.**
2. **DNA isolation from plants.**
3. **Agarose gel electrophoresis of DNA.**
4. **Plasmid DNA isolation.**
5. **Isolation of genomic DNA from Bacteria.**
6. **Restriction digestion of DNA.**

Reference Books:

Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar.

BIOT-Sem-V-II-T : ENVIRONMENTAL BIOTECHNOLOGY

Theory : 67 marks
Int. assessment : 08 marks
Total : 75 marks
Time : 3 hours

Instructions for paper setters and candidates

• Set nine questions in all. All questions carry equal marks.

• Five questions to be attempted.

• Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

• Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Objective:

The course focuses on an introduction to environment, major threats to environment by various polluting agents and the remedies for the same, incorporating design and monitoring of waste treatment processes. As well as learning environmental technology fundamentals, with special focus on biological treatment processes, environmental management. The course is use of biotechnology to design cleaner manufacturing processes and to solve pollution problems. It is ideal for under graduates just embarking on their career, or scientists and engineers who have been working for a few years and wish to develop their career in this direction.

UNIT-I

Basics of Environment and Environmental pollution, air, water, soil and noise.

Air – Types, Sources & Effects,

Soil - Physicochemical and bacteriological analysis of soil, soil pollutants (fertilizers,

insecticides fungicides, pesticides).

Noise pollution, its control and impact on human health.

Renewable and Non Renewable resources. and their Environmental Impacts.

Modern Fuels (gasohol, hydrogen and solar energy) and their Environmental Impacts.

UNIT-II

Water pollution and its management: Measurement of water, pollution, sources of water pollution. Microbiology of waste water treatment, aerobic processes, activated sludge, oxidation ponds, trickling filters, and rotating biological contactors.

Anaerobic processes: Anaerobic digesters, upward flow anaerobic sludge blanket reactors.

General strategies for wastewaters treatment.

UNIT-III

Bioremediation of contaminated soil and its applications

Degradation of pesticides and other toxic chemicals by microorganism. Integrated Pest management Biodegradation of environmental pollutants: pesticides, hydrocarbons, dye, etc.

Biofertilizers for clean environment– Nitrogen fixing microorganism, enrichment of the soil with assimilable nitrogen

UNIT IV

Introduction to solid waste and municipal solid waste management: Sources, types, composition.

Bioabsorption of metals:- Role of Microorganisms in biosorption and bioleaching. ,

Enrichment of ores by microorganisms

Bioindicators for detection of pollution

References Books:

1. **Environmental Biotechnology: Principles and applications Bruce, E. Rittmann and Perry L.Mc. Corty, Mc. Graw Hill Publications, New York, 2000.**
2. **Environmental Biotechnology 2nd Edition, Alan Scragg, 2005, Oxford University Press.**

3.Environmental Biotechnology (2007) S.K. Agarwal APH Publishing Corporation.

4. Wastewater engineering–Treatment, disposal and reuse (2009) by Metcalf and Eddy, Inc. (Tata Mc Graw Hill, New Delhi).

5. Comprehensive biotechnology (2004) by Murray Moo Young, Alan T Bull, Howard Dalton, Set 4 Vol (Elsevier India P Ltd).

6. Comprehensive biotechnology: The principles and regulation of biotechnology in industry, agriculture and medicine (1985) by Charles L Cooney, Arthur E Humphrey, Vol.2 (Pergamon Press).

7. **Environmental chemistry (2006) by Aniol Kumar De (New Age International (P) Ltd).**

8. Introduction to biodeterioration (2004) by D. Allsopp, Kenneth J. Seal, Christine C. Gaylarde (Cambridge University Press).

Practical:- ENVIRONMENTAL BIOTECHNOLOGY
BIOT-Sem-V-II-T

Practical : 20 marks

Int. assessment : 05 marks

Total : 25 marks

Time : 3 hours

1. **Detection of coli forms for determination of the purity of potable water.**
2. **Determination of chlorine in water**
3. **Determination of total alkalinity of water**
4. **Determination of dissolved oxygen concentration of water sample.**
5. **Determination of biological oxygen demand (BOD) of a sewage sample.**
6. **Determination of chemical oxygen demand (COD) of sewage sample.**
7. **Isolation of phosphate solubilizing microorganisms from soil.**

Reference Books:

1. **Microbiology: A laboratory manual (2007) by Cappuccino J.G and Sherman N. (Publisher Pearson Benjamin Cummings).**
2. **Biotechnology Laboratory Manual by Swamy, P.M. Rastogi Publications (2008).**
3. **Practical Microbiology by Dr R.C. Dubey and D.K. Maheshwari, S.Chand Publications.**

BIOINFORMATICS

Theory : 67 marks

Int. assessment : 08 marks

BIOT-Sem-V-III-T

Total : 75 marks

Time : 3 hours

UNIT – I

Introduction to Bioinformatics, Biological Databases and Sequence analysis Introduction, overview and needs of bioinformatics technology.

Primary Databases: Primary Sequence database i.e. GenBank & EMBL.

Secondary Databases: SwissProt/TrEMBL, Pfam.

Molecular Structure Databases: Protein Data Bank (PDB), SCOP, CATH. Understanding the structure of each database and using it on the web.

UNIT – II

Sequence Alignment

Introduction to sequence alignment and its applications.

Pair wise sequence alignment: Concept of global and local alignment, Dot Plot, algorithm for pair wise sequence alignment (Needleman Wunsch, Smith-watterman methods), Introduction to BLAST, types of BLAST, algorithm of BLAST and interpretation of its result.

Substitution matrices: Introduction to substitution matrices: PAM and BLOSUM matrices, concept of log odd ratio.

Multiple sequence alignment: Methods of multiple sequence alignment. Introduction to consensus sequences, motifs and profiles.

UNIT – III

Phylogenetic Analysis: Introduction to phylogenetic analysis and its application, phylogenetic tree topologies, methods of phylogenetic tree construction and tools.

Genome Annotation: Concept of genome annotation, methods of gene identification. Tools of gene

identification: GenScan and Glimmer.

UNIT IV

Protein Structure Prediction: Concepts and strategies of protein structure prediction, methods of secondary structure prediction, and methods of protein tertiary structure prediction. Structure visualization tool – RasMol.

BIOT-Sem-V-IV-P: BIOINFORMATICS (Practicals)

Practical : 20 marks

Int. assessment : 05 marks

Total : 25 marks

Time : 3 hours

1. **Searching literatures over PubMed.**
2. **Performing DOTPLOT on web.**
3. **Retrieving amino acid and nucleotide sequence from sequence databases using Entrez.**
4. **Performing BLASTp/n and interpreting its results.**
5. **Performing PSI-BLAST.**
6. **Performing multiple sequence alignment using Clustalw.**
7. **Finding ORF in nucleotide sequence using NCBI ORF FINDER**
8. **Using GenScan to identify exons in nucleotide sequence.**
9. **Download protein structure form PDB and visualize it using RasMol.**

BIOT-Sem-V-IV-T Paper: ENZYMOLOGY

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

UNIT – I

Structure and functions of enzymes: Historical background and general properties of enzymes, concept of active centre, binding sites, stereo specificity and ES complex formation, activation energy, Evidences for enzyme-substrate complex; Lock and key, Induced fit and Transition state hypotheses, Coenzymes and Cofactors- Prosthetic group, coenzymes involved in different metabolic pathways.

UNIT – II

Factors Affecting the Enzyme Activity: Concentration, pH and temperature. Kinetics of a single substrate enzyme catalysed reaction, derivation of Michealis-Menten Equation, significance of Km value, Vmax, Turnover number, Kcat. Enzyme activity, international units, specific activity, Enzymes as thrombolytic agents, Anti-inflammatory agents, streptokinase, Isoenzymes

UNIT-III

Enzyme Regulation: Feedback inhibition, Allosteric Regulation, Covalent Modification and Proteolytic Activation. Organization of enzymes in the cell, localization, enzymes in membranes. Acid-base catalysis, covalent catalysis, Metal ion catalysis, multienzyme complexes and ribozymes, catalytic antibodies, Allosteric enzymes.

UNIT – IV

Applications of Enzymes: Immobilized enzymes, industrial applications of immobilized enzymes, Thermophilic enzymes, amylases, lipases, Proteolytic enzymes in meat and leather industry, enzymes used in fermentation processes, cellulose degrading enzymes, Metal degrading enzymes.

Reference Books:

1. **Fundamentals of Enzymology : Nicholas Price & Lewis Stevens**
2. **Biochemistry text books by Stryer, Voet and Lehninger**
3. **Methods in enzymology Vol.185 (1990) Gene Expression technology edited by D.V. Goeddel (Academic Press Inc. San Diego).**
4. **Enzymes: biochemistry, biotechnology and clinical chemistry (2001) by Trevor Palmer (Horwood).**

5. **Fundamentals of enzymology: The cell and molecular biology of catalytic proteins (2003) by Nicholas C. Price, Lewis Stevens, Lewis Stevens published (Oxford University Press, USA).**
6. **Principles and reactions of protein extraction, purification, and characterization (2004) edited by Hafiz Ahmed PhD (CRC, Taylor Francis Group).**

BIOT-Sem-V-IV-P: Enzymology (Practicals)

Practical : 20 marks

Int. assessment : 05 marks

Total : 25 marks

Time : 3 hours

1. **Estimation of enzyme activity.**
2. **To study the Effect of pH on activity of enzyme.**
3. **To study the Effect of temperature on activity of enzyme.**
4. **To study the effect of substrate concentration on enzyme activity.**
5. **To estimate Km and Vmax of an enzyme and plot Line-Weaver Burk plot.**

Reference Books:

1. **An introduction to practical biochemistry (2004) by Plummer D.T. (Tata McGraw Hill Publishers Co. Ltd., New Delhi).**
2. **Practical Enzymology (2004) By Hans Bisswanger (Wiley- VCH, Weinheim)**
3. **Introductory practical biochemistry (2005) by S.K. Sawhney, Randhir Singh (Alpha Science International).**

BIOT-Sem-V-IV-P **Paper: SummerTraining**

Training : 80 marks

Int. assessment : 20 marks

Total : 100 marks

The students will undergo summer training after completion of 4th Semester and will be assessed in the 5th semester. The duration of training will be 4 to 6 weeks.

B.Sc. (Hons.) 3rd year (6th Semester) (Jan 2019)

S.No.	Course/Paper	Code			
		Theory		Practical	
		Course No.	Marks	Course No.	Marks
1.	Genetic Engineering	BIOT-Sem-VI-I-T	75	BIOT-Sem-V-I-P	25
2.	Bioprocess Engineering and Technology	BIOT-Sem-VI-II-T	75	BIOT-Sem-V-II-P	25
3.	Food Biotechnology	BIOT-Sem-VI-III-T	75	BIOT-Sem-IV-III-P	25
4.	Genomics and proteomics	BIOT-Sem-VI-IV-T	75	BIOT-Sem-IV-IV-P	25
5.	Intellectual property rights and Ethical Issues in Biotechnology and Entrepreneurship	BIOT-Sem-VI-V-T	100		

Total Marks = 500

B.Sc. (Hons.)3rd year (6th Semester)

BIOT-Sem-VI-I-T Paper: GENETIC ENGINEERING

: 67 marks

Int. assessment: 08 marks

Total : 75marks

Time : 3 hours

Objectives:

Genetic engineering refers to the process of manipulating the characteristics and functions of the original genes of an organism. The objective of this process is to introduce new physiological and physical features or characteristics. The students will learn how the genes can be cut and paste from one organism to another and what are its implications.

UNIT-I

1. Introduction to genetic engineering. Why gene cloning and DNA analysis is important. . How to clone a gene - What is clone, Overview of the procedure

2. Tools in Recombinant DNA Technology:

Restriction and modifying enzymes, Type I , Type II and Type III enzymes and their characteristic features; restriction sequences, isoschizomers, rare cutting enzymes, enzyme cutting similar sequence in different manner.

DNA Modifying enzymes: Characteristics and applications of Nucleases – DNase and RNase, DNA-Pol I, Klenow fragment, T4DNA polymerase, T7 DNA polymerase, T4 Polynucleotide kinase, Phosphatase, Reverse transcriptase, Taq polymerase and Ligase. Terminal deoxy ribonucleotidyl transferase.

3. Polymerase Chain Reaction: Types and applications

UNIT II

Basic biology of plasmids and Phage vectors Basic features of plasmids, plasmid classification, Bacteriophage λ, lytic & lysogeny, Promoter control circuits. linear and circular forms of lambda vector, DNA cloning with single stranded DNA vectors.

DNA cloning vectors Cloning vectors for E. coli- Nomenclature, pBR 322, pBR 327, pUC 8, pGEM3Z. insertion and replacement vectors; Vectors based on M13. Methods of identification of recombinants: Insertional inactivation, blue/white selection. Cloning vectors for yeast- YEp, Ylp, YRp.

Advanced Vectors: cosmid, phagemid, Bacterial Artificial Chromosomes (BACs), shuttle vectors, yeast artificial chromosomes.

UNIT-III

Preparation of genomic and cDNA library: Partial digests, Choice of vectors, Construction and Evaluation of a genomic library. cDNA library: mRNA enrichment, cDNA synthesis, Random, arrayed and Ordered library.

Finding The Right Clone: Gene identification, Nucleic acid hybridization, screening Procedure, Probe selection, immuno screening, functional complementation. Southern blotting, northern blotting.

Preparation of nucleic acid probes: DNA and RNA labeling techniques, nick translation , random priming, end labelling, radioactive and non- radioactive labels.

UNIT-IV

Site directed mutagenesis (cassette , primer extension, RT, real time, multiplex, inverse), DNA sequencing (Maxam-Gilbert, Sanger, pyro).

Production of Protein from Cloned Genes: Special vectors for expression of foreign genes in E. coli, General problems with the production of recombinant protein in E. coli. Production of recombinant protein by eukaryotic cells.

Suggested readings:

1. **Recombinant DNA by Watson, J.D. et.al., 1993, Scientific American Books, New York.**
2. **Principles of Gene Manipulation by Old., R.W. and Primrose, S.B., 2004, Blackwell Publishing, UK.**
3. **Methods in Gene Technology by Dale, J.N., 1994, JAI Press Ltd. London, England.**
4. **Recombinant Principles of gene manipulation and genomics, primrose & Twyman 2006, Blackwell, U.K.**
5. **Gene cloning and DNA analysis: An introduction by T.A. Brown (5th Ed.) 2006, Blackwell Science Ltd.**
6. **Molecular cloning: A laboratory manual Vol. I-III Sambrook J. and Russel, David N. 2001 Cold Spring Harbar,**

BIOT-Sem-VI-I-P : GENETIC ENGINEERING (PRACTICAL)

Practical : 20 marks

Int. assessment : 05 marks

Total : 25 marks

Time : 3 hours

1. **Demonstration of PCR.**
2. **Demonstration of Southern blotting.**
3. **Preparation of competent cells.**

4. **Transformation of competent cells and blue/white selection.**

5. **Spectrophotometer analysis of DNA.**

BIOT-Sem-VI-II-T: BIOPROCESS ENGINEERING AND TECHNOLOGY

Theory : 67 marks

Int. assessment: 08 marks

Total : 75marks

Time : 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. Five questions to be attempted.**
- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**

Unit – I

Fundamental principles of biochemical engineering.

Sterilization of air and media sterilization, design of batch sterilization process.

Del factor, sterilization cycle, continuous sterilization process

Unit – II

Microbial growth kinetics Simple kinetics of microbial growth (Batch and Continuous, Feed Back System), yield coefficient, doubling time, specific growth rate, internal and external feedback systems, metabolic and Biomass productivities, effect of temperature and pH on the product formation

Unit – III

Design of fermenter:

Components of Fermenter, Aseptic operation of the fermenters, control and measurement equipment of fermenters, pH and DO probes, impeller and spargers,

Unit – IV

Downstream processing

Removal of microbial cells and other solid materials, foam separations, filtration, industrial filters, centrifugations and industrial centrifuges, cell Disruption, aqueous two phase extraction system, super critical extraction, whole broth process.

Waste water treatment for fermentation process

Reference Books:

1. **Madigan, M.T., Martinko, J.M, P.V. Dunlap, T.D. Brock, D.P. Clark (2008). Brock biology of mMicroorganisms (Pearson Benjamin Cummings).**
2. **Prescott, L.M. Harley, J.P., Klein, D.A. (2001). Microbiology (McGraw-Hill, Boston).**
3. **Schaechter, M., Ingraham, J.L., Neidhardt, F.C., (2006). Microbe (ASM Press, Washington, DC).**
4. **Prescott, L.M. (1999). Microbiology with microbes in motion (McGraw-Hill).**
5. **Bailey J.E., Ollis, D.F. (1986). Biochemical engineering fundamentals (McGraw-Hill).**
6. **Schuler, M.L., Kargi F. (2002). Bioprocess engineering: Basic concepts (Prentice hall PTR, Upper Saddle River NY).**

BIOT-Sem-VI-II-P: Bioprocess Engineering and Technology (Practicals)

Practical: 20 marks

Int. assessment: 05 marks

Total: 25 marks

Time: 3 hours

1. **Demonstration of components and sterilization of fermenters and other accessories.**
2. **Determination of doubling time, yield coefficient for growth of microorganism.**
3. **Effect of temperature and pH and growth and product formation.**
4. **Determination of Specific growth rate and maximum specific growth rate**
5. **Cell disruption by Sonicator**
6. **Demonstration of normal flow and cross flow filtration process.**

Reference Books:

1. **Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory (Pearson Benjamin Cummings).**
2. **Plummer D.T. (2004). An introduction to practical biochemistry (Tata McGraw Hill Publishers Co. Ltd., New Delhi).**

BIOT-Sem-VI-III-T : FOOD BIOTECHNOLOGY

Theory: 67 marks

Int. assessment: 08 marks

Total: 75 marks

Time: 3 hours

Instructions for paper setters and candidates

- **Set nine questions in all. All questions carry equal marks.**
- **Five questions to be attempted.**
- **Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).**
- **Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.**

UNIT – I

Food and Microorganisms: History and scope of Food biotechnology, food as substrates for microbes, factors affecting growth of microorganisms, Detection of microorganisms in food: Sampling plan & procedure for microbial analysis; Qualitative methods to isolate pathogenic microorganisms, test for bacterial toxins in foods; Quantitative methods for microbial enumeration: Direct enumeration, indirect estimations and standard and recommended methods; Applications of enzymes in food technology. .

UNIT – II

Principles of food preservation: Physical, chemical, and biological methods of preservations.

Contamination, preservation and spoilage of different kind of foods: Milk and milk products (milk, butter, yoghurt and cheese), beverages (beer, wine, tea and coffee), meat and fish products (sausages, vegetables and fruits.

UNIT – III

Food adulterants and food additives: Major food adulterants, types and their methods of assay, food additives their function and uses, flavoring agents, coloring agents and vitamins as food additives.

Fermented foods and their production: Bakers yeast, Bread, cheese, yoghurt, tofu, miso, tempeh, sauerkraut,meat and alcoholic beverages (beer and wine)

Production of algal, fungal and other microbial proteins(SCP and mushroom etc)

Probiotics, prebiotics,fortified and biofortified foods, functional foods, nutraceuticals, organic foods.

Genetically modified food (Golden rice, Favr savr tomato, protato, pomato etc)

UNIT –IV

Food and water borne diseases: Shigellosis, Salmonellosis, Cholera.

Food borne intoxications: Staphylococcal, Bacillus and Clostridium botulinum Exotoxins and Endotoxins, their mechanism of action

Rapid and advanced estimation methods (Immunoassays, nucleic acid probe)for detection of pathogens.

Reference Books:

1. **Frazier W.C., Westhoff, D.C. (Ed). (1988). Food microbiology (McGraw-Hill).**
2. **Admas, M.R., Moss, M.O (2005). Food microbiology (Edition 3, Illustrated Publisher Royal Society of Chemistry).**
3. **SriLakshmi B. (2003) Food science (New Age International Publishers, India).**
4. **Jay J.M., M.J. Loessner, D.A. Golden. (2005). Modern food microbiology (Edition 7,**

Illustrated Publisher Springer).

5. B. Sivasankar (2004). Food processing and preservation (PHI Private Ltd, New Delhi).

6. Michael P. Doyle (1989). Food borne bacterial pathogens (Edition illustrated, Publisher Marcel Dekker).

BIOT-Sem-VI-III-P: FOOD BIOTECHNOLOGY (Practicals)

Practical : 20 marks

Int. assessment : 05 marks

Total : 25 marks

Time : 3 hours

1. Isolation and identification of microorganisms in spoiled food (fungi and bacteria).

2. Inhibitory effect of low temperature on microbial growth.

3. Production and estimation of ethanol.

4. Estimation of lactose in milk.

5. Methylene blue reductase test (MBRT) for determination of quality of milk.

6. Plating the milk samples for microbial contamination.

7. Demonstration for the identification of mushrooms by spore prints.

8. Checking the effect of pasteurization of milk by alkaline phosphatase.

Reference Books:

1. Cappuccino J.G., Sherman N. (2007). Microbiology: A laboratory manual (Pearson Benjamin Cummings).

BIOT-Sem-VI-IV-T: GENOMICS AND PROTEOMICS

Theory : 67 marks

Int. assessment : 08 marks

Total : 75 marks

Time : 3 hours

Instructions for paper setters and candidates

Set nine questions in all. All questions carry equal marks. Five questions to be attempted.

Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

UNIT I

Introduction to Genomics, DNA sequencing methods – manual & automated: Maxam & Gilbert and Sangers method. Pyrosequencing, Genome Sequencing: Shotgun & Hierarchical (clone contig) methods, Computer tools for sequencing projects: Genome sequence assembly software.

UNIT II

Managing and Distributing Genome Data: Web based servers and softwares for genome analysis: ENSEMBL, VISTA, UCSC Genome Browser, NCBI genome. Selected Model Organisms' Genomes and Databases.

UNIT III

Introduction to protein structure, Chemical properties of proteins. Physical interactions that determine the property of proteins. Short-range interactions, electrostatic forces, van der waal interactions, hydrogen bonds, Hydrophobic interactions. Determination of sizes (Sedimentation analysis, gel filteration, SDS-PAGE); Native PAGE, Determination of covalent structures – Edman degradation.

UNIT IV

Introduction to Proteomics, Analysis of proteomes. 2D-PAGE. Sample preparation, solubilization, reduction, resolution. Reproducibility of 2D-PAGE. Mass spectrometry based methods for protein identification. De novo sequencing using mass spectrometric data.

PRACTICALS

1. **Use of SNP databases at NCBI and other sites**
2. **Use of OMIM database**
3. **Detection of Open Reading Frames using ORF Finder**
4. **Proteomics 2D PAGE database**
5. **Softwares for Protein localization.**
6. **Hydropathy plots**
7. **Native PAGE**
8. **SDS-PAGE**

SUGGESTED READING

1. **Genes IX by Benjamin Lewin, Johns and Bartlett Publisher, 2006.**
2. **Modern Biotechnology, 2nd Edition, S.B. Primrose, Blackwell Publishing, 1987.**
3. **Molecular Biotechnology: Principles and Applications of Recombinant DNA, 4th Edition, B.R. Glick, J.J. Pasternak and C.L. Patten, 2010.**

4. Russell, P. J. (2009). iGenetics- A Molecular Approach. III Edition. Benjamin Cummings.

5. Molecular Cloning: A Laboratory Manual (3rd Edition) Sambrook and Russell Vol. I to III, 1989.

6. Principles of Gene Manipulation 6th Edition, S.B.Primrose, R.M.Twyman and R.W. Old. Blackwell Science, 2001.

7. Snustad, D.P., Simmons, M.J. (2009). Principles of Genetics. V Edition. John Wiley and Sons Inc. 3. Klug, W.S., Cummings, M.R., Spencer, C.A. (2009). Concepts of Genetics. IX Edition. Benjamin Cummings.

BIOT-Sem-VI-V-T

INTELLECTUAL PROPERTY RIGHTS AND ETHICAL ISSUES IN BIOTECHNOLOGY AND ENTREPRENEURSHIP

Theory : 90 marks

Int. assessment : 10 marks

Total : 100marks

Time : 3 hours

Instructions for paper setters and candidates

Set nine questions in all. All questions carry equal marks.

Set two questions from each Unit, and each question should be further divided in two to three parts. Any one question to be attempted from each unit.

Five questions to be attempted.

Question number one will be compulsory having 7-10 short answer types covering the whole syllabus (Not objective type and no short notes).

Objective: To introduce the students to intellectual rights and how to use the current intellectual property system to protect and commercialize their biotechnological invention. This course also covers the ethical issues, controversies and social-ethical impact of biotechnology on society.

UNIT – I

IPR: Introduction to Intellectual Property Rights. Tangible and intangible property. Patents: Introduction to patent law and brief history (early GATT and TRIPS), conditions for patentability; procedure for obtaining patents, patent filing through PCT, rights of a patentee; patent infringements and litigation. Indian patent laws and amendments. Patents from an international perspective.

UNIT- II

Design, copyright and Trademark:

Copyright: Registration procedure and copyright authorities; assignment and transfer of copyright, copyright infringement and exceptions to infringement; software copyright.

Designs: Introduction to the law on industrial designs; registration and piracy; international perspective; commercial exploitation and infringement.

Trademark: Importance, Registration, Trademark infringement and piracy.

UNIT – III

Patenting in biotechnology: Biotechnology patents and its economic, ethical and depository considerations. Patentable subject matter and legal aspects of transfer of biotechnology in India. Other multilateral treaties & International conventions – Paris convention, CBD, UPOV, PGRFA. Writing a patent specification.

Information sources in patent literature search.

UNIT – IV

Entrepreneurship:

Entrepreneur and its types, Women Entrepreneurship. Selection of a product, Product line design and development processes, economics on material and energy requirement, stock the product and release the same for making

The basic regulations of excise: Demand for a given product, feasibility of its production under given constraints of raw material, energy input, financial situations export potential.

Reference Books:

1. **J.E. Smith (2004). Biotechnology (Cambridge Univ. Press).**
2. **V. Santaniello (2000). Agriculture and intellectual property rights:**

economic institutional, and implementation issues in biotechnology (Edition illustrated Publisher CABI).

3. **Thackerey, A (ed) (1998). Private science: Biotechnology and the rise of the molecular sciences (Univ. of Pennsylvania Press, Phil).**
4. **Inderpal Singh and Baljinder Kaur (2006) Patent law and Entrepreneurship. Kalyani Publishers, India.**

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI

AND

COURSES OF READING FOR M. Sc. BOTANY

(TWO YEARS' COURSE)

SEMESTER SYSTEM

1ST TO 4TH SEMESTERS

EXAMINATIONS of 2020-21

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M. Sc. BOTANY (TWO- YEAR COURSE) SEMESTER SYSTEM EXAMINATIONS of 2020-21 & 2021-22

FIRST SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
I	- Phycology	75 (60A+ 15 HT*)	25 (20+5HT*)
II	- Bryology	75 (60A+ 15 HT *)	25 (20+5HT*)
III	- Mycology and Microbiology	75 (60A+ 15 HT*)	25 (20+5HT*)
IV	- A) Computer Applications & Biostatistics B) Lab. Techniques	75 (60A+ 15 HT*)	25 (20+5HT*)
V-	Anatomy of Angiosperms	75 (60A+ 15 HT *)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 =		**500**

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT* : House Test

SECOND SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
VI	- Pteridophytes	75 (60A+ 15 HT)	25 (20+5HT*)
VII	- Gymnosperms	75 (60A+ 15 HT)	25 (20+5HT*)
VIII	- Angiosperm Morphology, Taxonomy and Phylogeny	75 (60A+ 15 HT)	25 (20+5HT*)
[IX	- Reproductive Biology of Angiosperms	75 (60A+ 15 HT)	25 (20+5HT*)
X	- Plant Pathology	75 (60A+ 15 HT)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS : 375+ 125 =		**500**

TEACHING HOURS : THEORY : 19 Hours per week
PRACTICAL : 15 Hours per week for a group of 10 students

HT * : House Test.

SECOND YEAR

3rd and 4th SEMESTERS

THIRD SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XI	- Molecular Biology	75 (60A+ 15 HT*)	25 (20+5HT*)
XII	- Plant Physiology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIII	- Biotechnology	75 (60A+ 15 HT*)	25 (20+5HT*)
XIV	- Cytogenetics	75 (60A+ 15 HT*)	25 (20+5HT*)
XV	- Ecology and Environment	75 (60A + 15 HT*)	25 (20+5HT*)
	Total Marks	**375**	**125**
	GRAND TOTAL OF MARKS: 375 + 125 =		**500**

TEACHING HOURS: THEORY: 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

FOURTH SEMESTER

PAPER	SUBJECT	THEORY Max. Marks	PRACTICAL Max. Marks
XVI	- Plant Biochemistry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVII	- Forestry	75 (60A+ 15 HT*)	25 (20+5HT*)
XVIII	- Genetics and Plant Breeding	75 (60A+ 15 HT*)	25 (20+5HT*)
XIX	- Plant Resource, Utilization and Conservation	75 (60A+ 15 HT*)	25 (20+5HT*)
XX -	A) Research Project/Field Study Report	---	60
	B) Seminar	---	40
	Total Marks	**300**	**200**
	GRAND TOTAL OF MARKS: 300 + 200 =		**500**

TEACHING HOURS : THEORY : 18 Hours per week

PRACTICAL: 16 Hours per week for a group of 10 students

HT* : House Test.

*** The duration of each paper for the examination is 3 hours**

FIRST YEAR
1st and 2nd SEMESTERS
EXAMINATIONS 2020-21

FIRST SEMESTER

PAPER I: PHYCOLOGY

Objective of the paper is to impart knowledge about Algae on various aspects like Classification, Life cycles, Thallus organization and Reproduction in various groups; Evolution, Habitats and Economic importance of algae.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical, the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Criteria for algal classification (pigments, reserve food, flagella, chloroplasts, pyrenoids, eye spots, endoplasmic reticular membrane etc.); Comparative account of important systems of classification (Fritsch, Round, Chapman and Lee).
2. Salient features: Cell structure, thallus organization, reproduction and broad classification of i) Cyanophyta ii) Xanthophyta iii) Bacillariophyta iv) Dinophyta.

UNIT-II

3. Salient features : Cell structure, thallus organization , reproduction and broad classification of v) Chlorophyta vi) Phaeophyta vii) Cryptophyta and viii) Rhodophyta.

UNIT-III

4. Diversity in algal habitats (terrestrial, freshwater and marine).
5. Thallus organization in algae including evolutionary trends.
6. Reproduction (vegetative, asexual and sexual), origin and evolution of sex, life cycles.
7. Current concepts and relationships of protochlorophycean algae.

UNIT-IV

8. Rhythms and bioluminescence in dinoflagellates.
9. Economic importance of algae (algal biofertilizers , algal blooms, algae as food and feed , uses in industries etc.)
10. Algae in Biotechnology.

PRACTICALS

Max. Marks :20

1. Algal collections from different habitats and their identification.
2. Morphology and reproductive stages of following genera:

Cyanophyta *: Chroococcus, Microcystis, Oscillatoria, Lyngbya, Nostoc, Anabaena, Gloetrichia, Cylindrospermum, Scytonema*.

Chlorophyta: *Volvox, Hydrodictyon, Chlorella, Pediastrum, Scenedesmus*, *Oedogonium, Bulbochaete, Cosmarium, Closterium, Zygnema, Sphaeroplea, Cladophora, Pithophora, Spirogyra, Caulerpa, Codium, Valonia, Halimeda, Acetabularia, Chara, Nitella, Coleochaete, Dreparnaldia.*

Xanthophyta *: Vaucheria, Botrydium.*

Bacillariophyta *: Pinnularia, Synedra, Navicula, Cyclotella.*

Phaeophyta : *Ectocarpus, Fucus, Laminaria, Dictyota, Desmortestia, Sporochnus, Sargassum.*

Rhodophyta : *Erythrotrichia, Porphyra, Nemalion, Batrachospermum, Corallina, Gelidium, Polysiphonia*

ESSENTIAL READINGS

.

1. Chapman, V.J. and D.J. Chapman. *The Algae.* ELBS and Macmillan , NY. 1977.
2. Lee, R. E., *Phycology,* Cambridge University Press, Cambridge, 2008
3. VanDen Hock, C., Mann, D.G. and Jahns, H. M. *Algae : An Introduction to Phycology,* Cambridge University Press, Cambridge, 1995.

SUGGESTED READINGS

1. Ahluwalia, A.S., (Ed.) *Phycology: Principles, Processes and Applications*, Daya Publishing House, New Delhi, 2003
2. Kumar, H.D., *Introductory Phycology,* East West Press, New Delhi, 1999
3. Lee, R.E. *Phycology*. 4th Ed. Cambridge University Press, London. 2008.

PAPER II : BRYOLOGY

Objective of the paper is to impart knowledge about Bryophytes on various aspects like Classification, structural organization and developmental studies of gametophyte and sporophyte in various groups; Ecology, Water relations, Chemistry, Cytology, Fossil bryophytes, Origin and evolution, Experimental studies and Economic Importance.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class room. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25 (20A+5HT)

THEORY

Max. Marks: 60

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics of Bryophytes: systems of classification with salient features of Anthcerotophyta, Marchantiophyta and Bryophyta.
2. Structure and development of sex organs in Bryophytes.
3. Economic Importance of Bryophytes.
4. Ecology of Bryophytes: Habitats, Growth forms, Bryophytes as Pollution Indicators.
5. Water Relations: Drought Tolerance ; Dessication and Rehydration ; Ectohydric ,Endohydric and Mixohydric mosses.

UNIT-II

6. Comparative structural organization of gametophyte and sporophyte; Asexual reproductive structures; distribution of sex organs; protective structures associated with archegonia and developing sporogonia; spore and elaters / peristome teeth ; spore dispersal mechanisms and spore germination in
    a) **Hornworts** (Anthocerotales)
    b) **Liverworts** (Calobryales, Jungermanniales, Metzgeriales, Marchantiales, Monocleales and Sphaerocarpales.)

UNIT-III

    c) **Mosses** (Sphagnopsida, Andreaeopsida – *Andreaea* and *Takakia* , Archidiopsida, and Peristomiopsida -- Tetraphidae, Buxbaumidae, Polytrichidae and Bryidae).

7. Experimental studies: Effect of various factors on protonemal differentiation and bud formation; Apogamy and Apospory.

UNIT-IV

8. Chemistry of Bryophytes: A brief account of distribution of various organic compounds in different groups of Bryophytes ; Chemistry in relation to taxonomy.
9. Cytological studies in Bryophytes: Chromosome numbers in major groups of Bryophytes, Polyploidy in brief, m-chromosomes and sex-chromosomes, Cytology in relation to taxonomy.
10. Fossil Bryophytes (A brief account).
11. Origin of Bryophytes.

PRACTICALS **Max. Marks : 20**

1. Structural details of *Marchantia, Asterella, Plagiochasma, Targionia, Pellia, Frullania, Porella, Notothylas, Anthoceros, Sphagnum, Pogonatum, Barbula, Bryum and Entodon* and *Thuidium.*
2. Study of diagnostic features of following genera: *Dumortiera, Athalamia, Conocephalum, Cryptomitrium, Reboulia, Riccia, Riccardia, Metzgeria, Blasia, Sewardiella, Plagiochila, Fissidens , Atrichum* , *Mnium* and *Thuidium.*
3. Field trips to familiarize with natural habitats, growth forms and diversity of bryophytes.
4. To study permanent slides / photographs of m-Chromosomes and Sex- chromosomes.

ESSENTIAL READINGS

1. Goffinet , B. and Shaw, A.J. *Bryophyte Biology*. Cambridge University Press, Cambridge, pp. 476, 2000.
2. Richardson, D. H. S. *Biology of Mosses*, Blackwell Scientific Publications, Oxford, pp. 220, 1981.
3. Schofield, W.B. *Introduction to Bryology*, Macmillan Publishing Company, New York, pp. 431, 1985.

SUGGESTED READINGS

1. Kashyap, S.R. *Liverworts of Western Himalayas and the Punjab plains. Vols I II.* Researchco Publications, New Delhi. 1932
2. Kumar, S.S. *An approach towards Phylogenetic Classification of Mosses*. Jour. Hattori Bot. Lab. Nichinan , Japan. 1984.
3. Rashid, A. *An Introduction to Bryophyta*. Ist Ed. Vikas Publishing House Pvt. Ltd., New Delhi. 298 pp. 1998.

PAPER III : MYCOLOGY AND MICROBIOLOGY

Objective of the paper is to impart knowledge about Classification, Mycelium, Reproduction in various groups of Fungi.; Nomenclature, Classification, Structure, reproduction, importance of Bacteria, Viruses, MLOs, Spiroplasmas, Viroids, Mycoviruses; Translocation and distribution in host plants, infection, replication and transmission of plant viruses.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Recent trends in the classification of Fungi.
2. General account of Myxomycota, Oomycota and Chytidriomycota

UNIT-II

3. General account of Zygomycota, Ascomycota , Basidiomycota and anamorphic fungi.

UNIT-III

4. Tissue systems in Fungi.
5. Types of Centrum development in Ascomycota.
6. Heterokaryosis and Parasexuality.
7. Mycorrhizal application in agriculture and plant growth.

UNIT-IV

8. Nomenclature, classification, morphology, translocation and distribution in host plants, infection, replication and transmission of plant viruses.
9. Nomenclature, classification, structure, reproduction, nutrition and economic importance of Eubacteria ; General account of Archaebacteria.
10. Brief account of MLOs, Spiroplasma, Viroids and Mycoviruses.

PRACTICALS

Max. Marks: 20

1. Study of morphological and reproductive structures of following genera :
   MYXOMYCOTA: *Stemonitis, Physarum.*
   OOMYCOTA: *Saprolegnia, Albugo, Peronospora, Phytophthora*, *Bremia.*
   CHYTIDRIOMYCOTA: *Synchitrium, Allomyces, Blastocladia.*
   ZYGOMYCOTA: *Mucor, Rhizopus, Pilobolus.*
   ASCOMYCOTA: *Protomyces, Aspergillus, Penicillium, Claviceps, Phyllactinia, Xylaria, Morchella, Peziza*
   BASIDIOMYCOTA: *Puccinia, Melampsora, Agaricus, Ustilago, Polyporus, Ganoderma, Cyathus, Hydnum , Geasterum.*
   ANAMORPHIC FUNGI: *Fusarium, Cercospora, Colletotrichum, Alternaria, Helminthosporium.*
2. Preparation of media to isolate fungi, bacteria and other microbes.
3. Isolation of *Rhizobium* from legume root nodules.
4. Sensitivity tests of bacteria using different antibiotics.

SUGGESTED READINGS

1. Alexopolous, C.J., C.W. Mims and M. Blackwell. *Introductory Mycology.* 4th Ed. John Wiley & Sons, New York. 880 pp. 2007.
2. Webster, J. and Webes R. *Introduction to Fungi*. Cambridge University Press, Cambridge 3rd Edition, 2007.
3. Bos, L. *Introduction to Plant Virology.* Longman, New York. 160 pp. 1992

SUGGESTED READINGS

1. Bilgrami,K.S. and R.N.Verma. *Physiology of Fungi.*2nd Ed. Vikas Publication House, New Delhi
2. Pelczar M.J. Jr., E.C.S.Chan and N.R.Krieg. *Microbiology.* 5th Ed. Tata McGraw Hill, New Delhi. 2007.
3. Kendrick, B. *The Fifth Kingdom*. Focus Publishing, Newburyport, M.A. U.S.A, 2000

PAPER IV : A) COMPUTER APPLICATIONS AND BIOSTATISTICS

B) LABORATORY TECHNIQUES

Objective: Now-a-days life sciences have become interdisciplinary. The aim of this paper is to converse and train the students with different modern biological and physico-chemical techniques employed in the study of biological materials.

This paper also aims to impart basic knowledge of Computer (Computer Hardware, software and programming languages etc.) and Biostatistics and use the information in analyzing the biological data.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector, LCD projector etc. The students also make group discussions in the class rooms. In practical the students learn the working of different instruments and computer.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

SECTION A : COMPUTER APPLICATIONS AND BIOSTATISTICS

UNIT-I

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

UNIT-II

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of central tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence interval.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chi square – test, Z-test, F-test, Student t-Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation; Simple & multiple regression.

ESSENTIAL READINGS

1. Daniel, W.W. *Biostatistics: A foundation for Analysis in the Health Sciences*. Wiley and Sons, Singapore, 2006, pp. 755.
2. Kothari, C.R. *Research Methodology – Methods and Techniques*. 2nd revised ed. New Age International Publishers, India, 2009, pp.401.
3. Sinha, P.K. *Computer Fundamentals.* 4th Ed. B.P.B. Publication. 404 pp. 2003.

SUGGESTED READINGS

1. Hunt, R. and J. Shelly. *Computer and Common Sense.* 4th Ed. Prentice Hall, India. 224 pp. 2002
2. Dobbs, S. and Miller, J. *Statistics 1*. Cambridge University Press, UK, 2006, pp. 184
3 Dobbs, S. and Miller, J. *Statistics 2*. Cambridge University Press, UK, 2006, pp. 178.

SECTION B : LABORATORY TECHNIQUES

UNIT-III

1. Principles and applications of Light, Phase Contrast, Fluorescence, Scanning and Transmission Electron Microscopy.
2. Principles and applications of Tracer Techniques in Biology: Radioactive Isotopes and Half Life of isotopes; Autoradiography.
3. pH metery – Principles and applications.
4. Principles, procedure and application of Paper Chromatography, Thin Layer Chromatography , Gel filtration, Ion Exchange and Affinity Chromatography, High Pressure Liquid Chromatography.

UNIT-IV

5. Electrophoresis and Isoelectric focusing: Principle , working and applications of Electrophoresis.
6. Colorimetery and Spectrophotometery: Lambert Beer Law, Basic components, applications.
7. Centrifugation: Technique and principles; Preparative and Analytical Centrifugation.

PRACTICALS Max. Marks :20

1. Data collection, presentation, plots, Chi-square test, Goodness of fit, determination of correlation coefficient.
2. Genomic DNA isolation.
3. DNA and Protein analysis by Gel electrophoresis.
4. To demonstrate Beer's law using different dyes.
5. Preparation of Phosphate Buffers of different pH values.
6. Practicals pertaining to Chromatographic techniques: Column Chromatography (Exclusion and Affinity Chromatography), Paper Chromatography and Thin Layer Chromatography.
7. Practicals pertaining to centrifugation.

ESSENTIAL READINGS

1. Mahajan, B.K. *Methods in Biostatistics for Medical Students and Research Workers*. Jaypee Brothers Medical Publishers, India, 2006, pp. 341
2. Potter, G.W.H. *Analysis of Biomolecules : An introduction to Principles, Instrumentation and Techniques*. Chapman and Hall, London.252pp. 1995
3. Wilson, K. and J. Walker. *Principles and Techniques of Practical Biochemistry.* Cambridge University Press, Cambridge.784pp. 2000.

SUGGESTED READINGS

1. Plummer, D.T. *An Introduction to Practical Biochemistry*. Tata McGraw Hill Publishing Ltd., New Delhi.352pp. 1994.
2. Primrose, S.B., R.M. Twyman and R.W. Old. *Principles of Gene Manipulation.* Blackwell Publ., U.K.390pp. 2001.
3. Sawhney, S.K. and R. Singh. *Introductory Practical Biochemistry.* Narosa Publishing House, New Delhi.470pp. 2002.

PAPER V : ANATOMY OF ANGIOSPERMS

Objective: This paper deals with the structure, origin, differentiation and phylogeny of meristems cell, tissues and organs of the plant body.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the plant materials using Microscopes, Micrometers, Camera Lucida, Computer and Image Projecting system and permanent glass slides of plant materials

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Shoot Development :** Various theories regarding the organization and activity of shoot apical meristem (SAM) ; Transition to flowering , Floral meristem and Floral development in *Arabidopsis* and *Antirrhinum* .
2. **Root development:** Organization of Root Apical Meristem (RAM); Vascular tissue differentiation; lateral roots .

UNIT-II

3. **Leaf growth and differentiation**: Phyllotaxy, Leaf development, differentiation of epidermis (with special reference to stomata and trichomes) and mesophyll, Kranz Anatomy and Leaf abscission.

UNIT-III

4. Structure, differentiation and phylogeny of Xylem; Reaction wood.
5. Structure, differentiation and phylogeny of Phloem

UNIT-IV

6. Transfer Cells.
7. Structure and activity of vascular and cork cambium.
8. Seed coat anatomy with reference to legumes and cereals.

PRACTICALS

Max. Marks : 20

1. Study of anomalous type of secondary growth through transverse sections.
2. Maceration of wood.
3. Study of living shoot apices .
4. Study of cyto-histological zonation in the shoot apical meristem and. examination of shoot apices in both T.S. and L.S. to show the origin and arrangement of leaf primordia.
5. Study of V.S. of various types of leaves.
6. Study of leaf epidermis.
7. Study of T.S. of Seed Coat.

ESSENTIAL READINGS

1. Beck, C.D. *An Introduction to Plant Structure and Development: Plant Anatomy for the 21st Century.* Cambridge Univ. Press,. 452 pp. 2009.
2. Burgess, J. *An Introduction to Plant Cell Development.* Cambridge Univ. Press, Cambridge. 266 pp. 1985.
3. Fahn, A. *Plant Anatomy*. 3rd Ed. Pergamon Press, Oxford. 544 pp. 1989.

SUGGESTED READINGS

1. Esau, K. *Anatomy of Seed Plants*. John Wiley, New York. 550 pp. 1977.
2. Ray, F.E. and S.E.Eichhorn. *Esau's Plant Anatomy : Meristems, Cells and Tissues of the Plant Body: their Structure, Function and Development.* 3rd Ed. Wiley-Lis . 624 pp. 2006.
3. Steeves, T.A. and I. M. Sussex. *Patterns in Plant Development.* 2nd Ed. Cambridge Univ. Press, Cambridge. 408 pp. 1989.

SECOND SEMESTER

PAPER VI : PTERIDOPHYTES

Objective of the paper is to impart knowledge about Pteridophytes on various aspects like Classification, Structural organization and Developmental studies of sporophyte and gametophyte of extant and extinct Pteridophytes, Economic importance , Cytological and Experimental studies.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In the practical the students make observations and work on the plant materials (including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics, The emerging concepts and Classification of pteridophytes.
2. Geological Time Table ; Fossils- their types, formation and methods of study ; Calculation of age of rocks / fossils.
3. Distribution, habitat, range , organography, external and internal morphology of sporophyte, spores and their mechanism of dispersal, gametophytic generation and sexuality and embryogeny of following classes of Pteridophytes with reference to the genera mentioned :

A: PSILOPSIDA

i) Rhyniales : *Rhynia, Horneophyton, Yarravia, Cooksonia*
ii) Trimerophytales : *Trimerophyton, Psilophyton*

iii) Zosterophyllales : Zosterophyllum , *Kaulangiophyton, Crenaticaulis, Sawdonia*

B: PSILOTOPSIDA

Psilotales : *Psilotum* and *Tmesipteris* ; A discussion on the systematic position of this group in pteridophytes.

UNIT-II

C: LYCOPSIDA

i) Protolepidodendrales : *Drepanophycus, Asteroxylon, Protolepidodendron,*
ii) Lycopodiales : A brief account of *Lycopodium* and *Phylloglossum*
iii) Lepidodendrales : *Stigmaria*
Family Lepidodendraceae , Family Bothrodendraceae,
Family Sigillariaceae, Family Pleuromeiaceae
iv) Isoetales : *Isoetes, Nathorstiana* , Brief account of *Stylites*
v) Selaginellales : *Selaginella* (A brief account)

D: SPHENOPSIDA

i) Hyeniales : *Hyenia*
ii) Sphenophyllales : *Sphenophyllum, Shenophyllostachys, Eviostachya, Cheirostrobus*
iii) Calamitales : *Asterocalamites, Protocalamites, Calamites, Calamostachys,Paleostachys*
iv) Equisetales : *Equisetum* (A brief account)

UNIT-III

E: PTEROPSIDA

a) Primofilices

i) Cladoxylales : *Cladoxylon, Pseudosporochnus*
ii) Coenopteridales : *Stauropteris, Botryopteris, Rhacophyton*

b) Eusporangiatae

Brief account of Marattiales and Ophioglossales
i) Marattiales: *Psaronius, Angiopteris, Marattia*
ii) Ophioglossales : *Ophioglossum, Botrychium , Helminthostachys*

c) Osmundidae : Osmundales – *Osmunda*

d) Leptospangiatae

General Account of Marsileales, Salviniales and Filicales
i) Marsileales : A brief account
ii) Salviniales : *Salvinia, Azolla*
iii) Filicales: General account of sporophyte morphology, stellar organization, soral and sporangial characters, gametophytes and embryogeny.

UNIT-IV

4. Apogamy and Apospory
5. Reproductive Biology of ferns.
6. Heterospory and its significance.
7. Cytological evolution and Species Concepts – Cytological evolutionary role of polyploidy in the evolution of pteridophytes.
8. Economic importance of Pteridophytes

PRACTICALS **Max. Marks :20**

1. Study of morphology and anatomy of vegetative and reproductive organs using cleared whole mounts, sections , macerations and permanent preparations of following living genera :
Psilotum, Lycopodium, Isoetes, Selaginella, Equisetum, Angiopteris, Ophioglossum, Botrychium, Osmunda, Marsilea, Salvinia, Azolla, Lygodium, Hymenophyllum,

Cyathea, Pteris, Asplenium, Dryopteris, Polystichum, Adiantum, Polypodium, and *Lepisorus.*

2. Study of some fossil pteridophytes through specimens and permanent slides .
3. Preparation of permanent slides / charts.
4. Field trips to familiarize with the diversity of pteridophytes in their natural habitats.

ESSENTIAL READINGS

1. Khullar, S.P. *An Illustrated Fern Flora of West Himalayas* (Vols. I and 2). International Book Distributors, Dehradun, 2000.
2. Rashid, A. A*n Introduction to Pteridophyta*. Vikas Publishers, New Delhi, 1999.
3. Sporne, K.R. *The Morphology of Pteridophytes*. B.I., Publications, Bombay, Delhi, Madras, 1982.

SUGGESTED READINGS

1. Parihar, N.S. *An Introduction to Embryophyta Vol. II, Pteridophytes*. Central Book Depot, Allahbad. 1965.
2. Pryer, K.M., H.Schneider, A.R.Smith, R.Cranfill, P.G.Wolf, J.S.Hunt and S.D.Sipes. *Horsetails and Ferns are a monophyletic group and the closest living relatives to seed plants*. Nature 409: 618-622, 2001.
3. Raghavan, V. *Developmental Biology of Fern Gametophytes (Developmental and Cell Biology Series).* Cambridge Univ. Press, Cambridge. 384 pp. 1989.

PAPER VII : GYMNOSPERMS

Objective of the paper is to impart knowledge about Gymnosperms on various aspects like classification, structural organization and developmental studies of sporophyte and gametophyte of extant and extinct Gymnosperms, Economic importance , Cytological studies and Phytogeography.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students make observations and work on the plant materials(including fossils) using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. General characteristics and Classification of Gymnosperms (Broad outlines).
2. Detailed study of the vegetative morphology, reproductive organs, structure and evolution of the following orders and families (with reference to the genera mentioned)

I . CLASS : PROGYMNOSPERMOPSIDA

i) ORDER : ANEUROPHYTALES
Family: Aneurophytaceae : *Aneurophyton, Tetraxylopteris, Triloboxylon, Proteokalon*

ii) ORDER : PROTOPITYALES
Family : Protopityaceae : *Protopitys*

iii) ORDER : ARCHAEOPTERIDALES
Family : Archaeopteridaceae : *Archaeopteris*

UNIT-II

II. CLASS : CYCADOPSIDA

i) ORDER : PTERIDOSPERMALES
a) Family Lyginopteridaceae : *Lyginopteris, Lagenostoma, Telangium, Crossotheca*
b) Family Glossopteridaceae : *Vertebraria, Glossopteris,*
c) Family Medullosaceae : *Medullosa, Codonotheca Pachytesta,Whittleseya, Goldenbergia*
d) Family Caytoniaceae : *Sagenopteris, Caytonia*

ii) ORDER : BENNETTITALES (CYCADEOIDEALES)
a) Family Bennettitaceae (= Cycadeoideaceae) : *Bennettites* (= *Cycadeoidea*)
b) Family Williamsoniaceae : *Williamsonia*
c) Family Wiellandiellaceae : *Wielandiella, Williamsoniella*

iii) ORDER : CYCADALES
a) Family Cycadaceae : *Macrozamia, Zamia*

iv) ORDER : PENTOXYLALES
a) Family Pentoxylaceae : *Pentoxylon, Nepanioxylon, Carnoconites, Sahnia*

UNIT-III

III CLASS : CONIFEROPSIDA

i) ORDER : CORDAITALES
Family Cordaitaceae : *Cordaites, Cordianthus, Mitrospermum*

ii) ORDER : CONIFERALES
a) General account with reference to the families : Pinaceae, Taxodiaceae, Podocarpaceae, Cephalotaxaceae, Araucariaceae, Sciadopityaceae
b) Range of form, structure and evolution of Female Cones in Coniferales

iii) ORDER : GINKGOALES
Family Ginkgoaceae : *Ginkgo*

iv) ORDER : TAXALES
Family Taxaceae : *Taxus*

IV CLASS : GNETOPSIDA

i) ORDER : GNETALES
a) Family Gnetaceae : *Gnetum*
b) Family Welwitschiaceae : *Welwitschia*

UNIT-IV

3. Male gametophytes in Gymnosperms.
4. Distribution of Living Gymnosperms in India.
5. Structure and Evolution of Archegonium in Gymnosperms.
6. General survey of cytology of Gymnosperms .
7. Economic importance of gymnosperms.

PRACTICALS Max. Marks : 20

1. Study of morphology and anatomy of vegetative and reproductive parts of *Cycas, Zamia, Cedrus, Abies, Pinus, Picea, Cupressus, Cryptomeria, Agathis, Araucaria, Taxodium Taxus, Cephalotaxus , Ginkgo, Ephedra* and *Gnetum.*
2. Study of some Fossil Gymnosperms through specimens and permanent slides.
3. Field trips to familiarize various gymnosperms in nature and field identification of Indian Gymnosperms.
4. Preparation of permanent slides / charts.

ESSENTIAL READINGS

1 Beck, C. E. *Gymnosperm Phylogeny,* Bot. Rev., 51: 176-294, 1985.
2. Bhatnagar, S.P. and Moitra, A. *Gymnosperms*. New Age International Limited, New Delhi, 1996.
3. Sharma, O.P. ad Dixit, S. *Gymnosperms*. Pragati Prakashan, Meerut, 2001.

SUGGESTED READINGS

1. Meyen, S.V. *Basic Features of Gymnosperms, Systematics and Phylogeny as Evidenced by the Fossil Record,* Bot. Rev., 50 : 1-112, 1984.
2. Rothwell, G.W. *The Role of Comparative Morphology and Anatomy in Interpreting the Systematics of Fossil Gymnosperms*, Bot. Rev., 51: 318-327, 1985.
3. Sporne, K.R. *The Morphology of Gymnosperms,* B. I. Publications, Delhi, 1974

PAPER VIII : ANGIOSPERM MORPHOLOGY, TAXONOMY AND PHYLOGENY

Objective of the paper is to impart knowledge about Angiosperms on various aspects like Taxonomy, Phylogeny, Classification, Botanical gardens, Herbaria, Floras, Manuals, Periodicals and Botanical Survey of India and Biodiversity and structural organization of vegetative and reproductive organs of various groups.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students study flowers of different families.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the

whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. Principles of Plant Classification with emphasis on modern tools of taxonomy ; Taxonomy as a SYNTHETIC DISCIPLINE , Numerical Taxonomy, Chemotaxonomy, Serology and Taxonomy, Biosystematics.
2. Taxonomic literature, General Indexes, Floras, Manuals, Important periodicals with emphasis on Indian floristics.
3. Important Botanical Gardens and Herbaria.
4. Botanical Survey of India – its organization and role.
5. Botanical Nomenclature and International Code of Botanical Nomenclature.

UNIT-II

6. Phylogenetic systems of classification - Hutchinson, Cronquist , Takhtajan , Dahlgren and Thorne.
7. Phylogeny of Angiosperms: Origin, Evolution and inter-relationship of dicots and monocots.

UNIT-III

8. Salient features of following families:

(a) DICOTYLEDONS

Ranunculaceae, Magnoliaceae , Fumariaceae, Cruciferae, Papaveraceae, Capparidaceae, Caryophyllaceae, Malvaceae, Sterculiaceae, Rutaceae, Meliaceae, Rhamnaceae, Anacardiaceae, Leguminosae, Rosaceae, Combretaceae, Myrtaceae, Solanaceae , Lythraceae, Cucurbitaceae, Cactaceae, Umbelliferae, Compositae, Primulaceae, Oleaceae, Asclepediaceae, Apocynaceae, Boraginaceae, Scrophulariaceae, Bignoniaceae, Acanthaceae, Labiatae Verbenaceae, Amaranthaceae, Polygoniaceae, Nyctaginaceae, Euphorbiaceae, and Cannabinaceae.

UNIT-IV

(b) MONOCOTYLEDONS:

Orchidaceae, Cannaceae, Amaryllidaceae, Liliaceae, Palmae, Araceae, Cyperaceae and Graminae.

9. The Species Concept, Taxonomic hierarchies : Species, Genus, Family and other Categories.
10. Evolution of Stamen and Carpel.

PRACTICALS **Max. Marks : 20**

1. Study of morphology, primitive and advanced characters of cultivated and wild representatives of various families. Study of basic structure of flower, variations, floral parts in detail, floral symmetry, insertion of floral parts etc.
2. Location of key characters and use of keys to derive families.
3. Field study of angiosperms in different types of habitats and preparation of Plant album.
4. Training in using floras for identification of specimens described in field or class.

ESSENTIAL READINGS

1. Cronquist, A. *An Integrated System of Classification of Flowering Plants.* Columbia University Press, Columbia. 1262 pp. 1981.
2. Eames, A.J. *Morphology of Angiosperms*. McGraw – Hill Inc., New York. 518 pp. 1961
3. Sporne, K.R. *The Morphology of Angiosperms*. B.I. Publication, Bombay, Calcutta, Delhi. 207 pp. 1986.

SUGGESTED READINGS

1. Shivana, K.R. and N.S .Rangaswamy. *Pollen Biology : A Laboratory Manual*. Springer-Verlag, Berlin. 1992.
2. Sharma, O.P. *Plant Taxonomy*. Tata McGraw Hill Publishing Co. Pvt. Ltd., New Delhi.482 pp. 2002.
3. Subramaniam, N.S. *Modern Plant Taxonomy*. Vikas Publishing House Pvt. Ltd., Delhi.494 pp. 2007.

PAPER IX: REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

Objective of the paper is to impart knowledge about various biological aspects of reproduction in Angiosperms like structure of male and female Gametophyte, Palynology, Pollination, Pollen-pistil interaction, Self incompatibility, Apomixis, Fertilization, Endosperm, Embryo and Seed formation.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and work on the reproductive parts of the plant materials using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides of plant materials.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE: Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Apomixis**: Types and evolutionary significance.
2. **Male Gametophyte:** Structure of anthers; Microsporogenesis; Role of tapetum; Pollen development; Sperm dimorphism.
3. **Palynology:** Pollen wall structure; Male sterility; Hybrid seed production; Pollen viability and storage.

UNIT-II

4. **Female Gametophye** : Ovule development ; Megasporogenesis; organization of Embryo sac, structure of embryo sac cells.
5. **Pollination, Pollen-pistil interaction and fertilization:** Floral characteristics; Pollination mechanisms and vectors ; breeding systems; structure of the pistil ; Pollen-stigma interactions and pollen tube growth and guidance.

UNIT-III

6. Sporophytic and gametophytic self – incompatibility (cytological , biochemical and molecular aspects).
7. Double fertilization, *in vitro* fertilization.

UNIT-IV

8. **Endosperm**: Development and types.
9. **Embryo**: Development of embryo in Monocots and Dicots.
10. **Seed**: Structure and formation.

PRACTICALS

Max. Marks: 20

1. Study of microsporogenesis and gametogenesis in sections of anthers.
2. Examination of modes of anther dehiscence and collection of pollen grains for microscopic examination (maize , grasses, *Cannabis sativa, Crotolaria, Tradescantia, Brassica, Petunia, Solanum melongena* etc.
3. Tests for pollen viability using stains and *in vitro* germination . Pollen germination using hanging drop and sitting drop cultures, suspension culture and surface culture.
4. Study of ovules in cleared preparations ; study of monosporic , bisporic and tetrasporic types of embryo sac development and embryos through examination of permanent stained serial sections
5. Field study of several types of flowers with different pollination mechanisms (Wind pollination, Bee / butterfly pollination, Bird pollination).

ESSENTIAL READINGS

1. Johri, B.M. (Ed.) . *Embryology of Angiosperms.* Springer-Verlag, Berlin. 830 pp. 1985.
2. Maheshwari, P. *Recent advances in Embryology of Angiosperms.* Int. Soc. Pl. Morphologists, Delhi. 463 pp. 1963.
3. Raghavan, V. *Embryogenesis in Angiosperms – A Developmental and Experimental Study*. Cambridge University, Cambridge. 303 pp. 1986.

SUGGESTED READINGS

1. Bhojwani, S.S. and S.P. Bhatnagar. *The Embryology of Angiosperms. 4th ed.* Vikas Publishing House , New Delhi.357 pp. 2000
2. Shivana, K.R. and B.M. Johri. *The Angiosperm Pollen: Structure and* Function. Wiley Eastern Ltd. New Delhi. 337 pp. 1985.
3. Swamy, B.G.L. and K.Y. Krishnamurthy. *From flower to fruit: Embryology of Flowering plants.* Tata McGraw-Hill, New Delhi. 1980.

PAPER X : PLANT PATHOLOGY

Objective of the paper is to impart knowledge on various aspects of Plant Pathology like Symptomatology, Defence mechanisms, Host Parasite interactions, Role of enzymes and toxins in pathogenesis, Nutrition of fungi and Disease forecasting . It also aims to study the Etiology, Epidemiology and Control of different plant diseases caused by Fungi and other micro-organisms.

Teaching methodology includes delivery of lectures by the teacher using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students make observations and study the diseased specimens using Microscopes, Micrometers, Computer and Image Projecting system and permanent glass slides.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks: 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. History, concept of plant diseases.
2. Role of enzymes and toxins in pathogenesis.
3. Defense mechanism.
4. Host-parasite interactions.

UNIT-II

5. Disease forecasting and assessment.
6. Principles of Plant Disease control; Biocontrol
7. Nutrition in Fungi.

UNIT-III

8. Etiology , epidemiology and control of following diseases:

    i) Paddy: Paddy Blast, Brown Leaf Spot, Bacterial Blight
    ii) Wheat: Rusts, Bunt and Smuts, Tundu Disease
    iii) Maize: Smut leaf blight, powdery mildew
    iv) Sugarcane: Red Rot, Smut
    v) Grapes: Downy and Powdry Mildews
    vi) Peach: Leaf Curl
    vii) Groundnut: Tikka disease
    viii) Apple: Apple Scab
    ix) Mustard: White Rust, Downy Mildew
    x) Potato: Early and Late Blight, Wart Disease
    xi) Linseed: Rust
    xii) Damping off of the seedlings
    xiii) Ergot of Rye

UNIT-IV

9. Diseases caused by plant viruses, MLOs, Spiroplasma, Viroids and Mycoviruses: General symptoms and Principles of Control.

PRACTICALS

Max. Marks: 20

1. Study and diagnosis of plant diseases mentioned in Theory syllabus.
2. Isolation, purification and single spore culture of pathogens.

ESSENTIAL READINGS

1. Agrios, G.N. *Plant Pathology*. Elsevier Academic Press, 2005, pp.922
2. Mehrotra, R.S. and Aggarwal, A. *Plant Pathology*, Publ., Tata McGraw Hill, 2003, pp. 846.
3. Sharma, P. D. *Plant Pathology*, Rastogi Publ., Meerut, 1998.
4.

SUGGESTED READINGS

1. Bilgrami, K.S. and Dube, H.C. *A Text Book of Modern Plant Pathology,* Vikas Publishing House, New Delhi, 1990, pp. 344
2. Sharma, P.D. *The Fungi and Allied Organisms* . Ist Ed. Alpha Science International Ltd., 300 2005.
3. Singh, R.S. *Plant Diseases.* 8th Ed. Oxford & IBH, New Delhi. 721 pp. 2008.

SECOND YEAR
THIRD SEMESTER

PAPER XI : MOLECULAR BIOLOGY

Objective of the paper is to impart knowledge about various aspects of Molecular Biology like Chemical nature and Biosynthesis of Genetic material, Mechanism of Translation, Control function of genes, Cancer, Antigens, Cell cycle and Apoptosis.
Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students learn techniques of histochemical localization, extraction and estimation of DNA, RNA and Protein and Antigen- antibody reaction.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified

UNIT-I

1. **Cell cycle and Apoptosis & control mechanisms**: Role of cyclins and cyclin dependent kinases, mechanism of programmed cell death.
2. **Chemical Nature of Genetic Material** : Nomenclature, composition and structure of nucleic acids; three dimensional structure of DNA (Prokaryotes, eukaryotes and viral); shape of DNA studied from various physico-chemical properties *(A-, B- , Z-DNA)* ; Structure and functions of different types of RNA ; Biosynthesis of Nucleotides and Biological importance of the nucleotides.

UNIT-II

3. Mechanism of Nucleic Acid Biosynthesis :

a) Replication of DNA (Double-stranded and single stranded); rolling circle model of replication; types of DNA polymerase, DNA topoisomerase, DNA ligase, DNAase, Reverse transcriptase.

b) Biosynthesis of different types of RNA: Transcription factors and machinery, Formation of Initiation complex, Transcription activators and repressors, RNA polymerases, elongation and termination, RNA Processing: RNA editing, Splicing, Polyadenylation, Capping ; RNA transport.

UNIT-III

4. **Mechanism of Translation:** Structure of ribosomes; initiation, elongation and termination of polypeptide chain; Translational proof reading; post-translational processing of polypeptide chain; Inhibitor of protein synthesis .
5. **Control Functions of the Gene :** Constitutive and induced genes; Regulatory genes, structural genes and repressors; Regulation of gene expression in phages; Regulation of gene expression in Prokaryotes; operon model, Role of cAMP in the transcription of operon, lactose and arabinose operons; Regulation of gene expression in eukaryotes, histone, non-histone proteins; different models of control, translation enzymatic and hormonal control.

UNIT-IV

6. **Cancer :** Biochemistry and molecular biology of cancer, Genetic rearrangements in progenitor cells, Oncogenes and Tumour suppressing genes, Cancer and Cell cycle , Virus induced cancer , Metastasis, Interaction of cancer cells with normal cells, Apoptosis, Therapeutic interventions of uncontrolled cell growth, Chemical carcinogenesis.
7. **Antigen :** Structure and functions of different clauses of immunoglobulins; Primary and Secondary immune response; lymphocytes and accessory cells; Humoral and Cell Mediated Immunity ; MHC; Mechanism of Immune response and generation of immunological diversity; Genetic control of immune response, Effector mechanisms; Application of Immunological principles (Vaccines and Diagnostics).

PRACTICALS Max. Marks: 20

1. Histochemical localization of DNA, RNA and Proteins.
2. To draw a standard curve of proteins
3. Estimation of protein content of plant tissues by Lowry's method.
4. Extraction and estimation of DNA contents of plant material.
5. Extraction and estimation of RNA contents of plant material.
6. Demonstration of Antigen – Antibody reactions.

ESSENTIAL READINGS

1. Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P. *Molecular Biology of the Cell* (5TH Edition) Macmillan Publishers Ltd, New York, USA, 2005.
2. Cooper GM and Hausman RE. *The Cell: A Molecular Approach* **(6th Edition)** ASM Press and Sinauer Associates, 2014.
3. Cox, M.M., Doudna J.A., O. Donnell M. *Molecular Biology: Principles and Practices* (1st Edition). W.H. Freeman and Company, 2012.

SUGGESTED READINGS

1, Karp G. *Cell and Molecular Biology* (7th Edition), J. Wiley & Sons, USA, 2013.
2. Nelson, D.L. & M.M. Cox. *Lehninger Principles of Biochemistry*. 5th Ed. W.H. Freeman Publishers. 1100 pp. 2008.
3. Robertis de, C.D.P. and E.M.S. de Robertis. *Cell and Molecular Biology.* Lea and Febiger**,** Philadelphia. 733pp.

PAPER XII : PLANT PHYSIOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Physiology like Cellular organelles, Membranes, Water relations of plants, Inorganic nutrition , Photosynthesis, Respiration, Nitrogen metabolism, Phytohormones, Growth, Stress physiology and Role of plant physiology in agriculture.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions in the class rooms. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Structural organization and function of intracellular organelles** : Cell wall, Nucleus, mitochondria, Endoplasmic Reticulum, Golgi bodies, Peroxisomes, Lysosomes, Vacuoles, Plastids, Structure and function of cytoskeleton and its role in motility.
2. **Membrane structure and function** : Structure of model membrane, Lipid bilayer and membrane protein, diffusion, osmosis, ion channels, active transport, ion pumps, mechanism of sorting and regulation of intracellular transport, electrical properties of membranes.
3. **Water Relations of Plants:** Modern thermodynamic concepts of physical state of water in plant cells and tissues, movement of water in the Soil – Plant – Atmosphere Continuum. Transpiration, stomatal control and mechanism of guard cell movement.

UNIT-II

4. **Inorganic Nutrition:** Occurrence, availability and physiological roles of *various* elements, ion uptake and active and passive transport, Role of calmodulin, phloem transport.
5. **Photosynthesis :** Energy pathways in photosynthesis, Chloroplast as an energy transducing organelle, composition and characterization of photosystems I and II, electron flow through cyclic and non-cyclic photophosphorylation, pathway of CO_2 Fixation, differences between C_3 and C_4 photosynthesis, different kinds of C_4 pathways, CAM pathway – occurrence, biochemical events, and adaptive advantage. Regulation of photorespiration, Factors affecting photosynthesis, photorespiration and photophosphorylation.
6. **Respiration***:* Glycolysis, Krebs cycle and Electron Transport Chain (Cytochrome System), Gluconeogenesis, Factors affecting respiration.

UNIT-III

7. **Nitrogen Metabolism :** Nitrogen fixation of free living and symbiotic organisms, mechanism of Nitrogen fixation, Soil nitrogen sources, nitrogen uptake and assimilation, nitrate reductase system and induction, Light substrate-controlled induction, interrelationship between photosynthesis and nitrogen metabolism, transport of nitrogen in plants.
8. **Phytohormones :** Auxins, gibberellins, cytokinins, abscissins and ethylene : their transport, biosynthesis, physiological roles and mechanism of action; phenols, synthetic regulators, retardants and inhibitors.

UNIT-IV

9. **Growth :** Process, phases and dynamics of growth. External and internal factors affecting growth, growth and yield analysis, Source – Sink relationship, photoperiodism, phytochrome, endogenous rhythms, tropisms. Seed and bud dormancy and germination.
10. **Stress Physiology:** Mechanism of plant response to water (low and high), temperature (low and high), Salt (Salinity and Alkalinity) and biotic stresses (Pathogens and insects).
11. Applications of Plant Physiology in Agriculture.

PRACTICALS

Max. Marks : 20

1. Experiments pertaining to photosynthesis, respiration and water relations.
2. Determination of water potential by various methods.
3. Determination of Chlorophyll a and Chlrophyll b ratio in C3 and C4 plants.
4. Spectroscopic determination of Chrophyll a , Chlorophyll b , Carotenoids and Anthocyanin under varied environmental conditions.
5. Experimental study of hormonal effects in plant material.
6. Bioassays of hormones.
7. Study of seed germination as effected by different factors.
8. Experimental study of stress physiology.

ESSENTIAL READINGS

1. Wilkins, M.B., *Advanced Plant Physiology,* Pitman, New York, 1984.
2. Taiz, L. and Zeiger, E. *Plant Physiology,* (5th Edition), Sinauer Associates, Inc., Massachusetts, USA, 2010.
3. Hopkins, W.G. *Introduction to Plant Physiology*, John Wiley & Sons, Inc., N.Y., USA, 1999.

SUGGESTED READINGS

1. Malik, C.P. *Plant Physiology*. 3rd Ed. Kalyani Publishers India. 2002.
2.. Noggle, G.R. and G.J. Fritz. *Introductory Plant Physiology*. 2nd Ed. Prentice Hall of India Pvt. Ltd., New Delhi. 1991.
3. Salisbury, F.B. and C.Ross. *Plant Physiology.*4th Ed. CBS Publisher and Distributors.682 pp. 1992

PAPER XIII: BIOTECHNOLOGY

Objective of the paper is to impart knowledge about various aspects of Plant Biotechnology like Concept, Scope, Tools, Tissue Culture Techniques, Protoplast Culture and Somatic Hybridization, Anther and Pollen Culture, Recombinant DNA Technology, Biosensors and Application of Biotechnology in Medicines , Agriculture, Transgenic plants , Industry and Pollution control etc.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **History and Scope of Biotechnology and tools.**
2. **Tissue Culture Techniques**: Introduction to the techniques of plant tissue culture, concept of cellular totipotency, Nutritional requirements, cell and organ differentiation, Somaclonal variation, Somatic embryogenesis, Mentor pollen technology, Embryo culture, Embyro rescue, Germplasm storage including Cryopreservation.

UNIT-II

3. **Protoplast Culture and Somatic Hybridization:** Isolation of protoplasts, culture and fusion methods, selection of fusion products, production of hybrids and cybrids.
4. **Anther and Pollen Culture***:* Culture procedures for the induction of haploids, media and nutritional requirements, significance of haploids.

UNIT-III

5. **Recombinant DNA Technology:** Isolation and purification of DNA from plant cells, DNA sequencing, DNA engineering through cutting and joining DNA molecules, Restriction Endonucleases, Ligases.
6. **Application of Biotechnology** in Medicines, Agriculture, Transgenic production and role in Human Welfare.

UNIT-IV

7. **Scope and applications of Microbes** *in* (a) Agriculture with special reference to Biological N_2 fixation, (b) Industry Fermentation (Ethanol, Cheese, Curd) (c) Food (Single Cell Protein), (d) Pollution (degradation of pesticides and Hydrocarbons) and (e) Biogas Production.
8. **Biosensors:** Principles of detection and Applications.
9. **Biosafety and IPR** (a) Objectives of biosafety, guidelines, risk assessment, containment and planned introduction of GMOs and GEMs (b) Intellectual property and protection of IPR, protection of Biotechnological inventions, PBR and management of IPR.

PRACTICALS **Max. Marks :20**

1. Composition and preparation of various culture media :

(a) Knop's medium, (b) Knudson's medium, (c) Moore's medium

2. (d) Murashige & Skoog's medium.
3. Inoculation of Plant Materials, , leaf, root, stem.
4. Demonstration and or experimentation to study callus induction, organogenesis, plant regeneration, anther culture, embryo culture, protoplast isolation and fusion *in vitro*.
5. Visit to university/regional laboratories for demonstration of modern instruments employed in recent biotechnological techniques.

ESSENTIAL READINGS

1. Bhojwani, S. S. and Razdan, M. K. *Plant Tissue Culture - Theory and Practice.* Elsevier Science Pub. Co. Inc., New York, pp. 471, 1983.
2. Old, R.W. and Primrose, S.B. *Principles of Gene Manipulation : An Introduction to Genetic Engineering.* Blackwell Scientific Publications, Oxford, pp. 403, 1985.
3. Street, H. E. *Plant Tissue and Cell Culture.* Blackwell Scientific Publications, London, pp. 614, 1973.

SUGGESTED READINGS

1. Bajaj, Y.P.S. *Biotechnology in Agriculture and Forestry Plant Protoplasts and Genetic Engineering I.,* Springer Verlag, Berlin. 1989.
2. Singh, B.D. *Biotechnology: Expanding Horizon.* Kalyani Publishers, New Delhi.860 pp. 2007.
3. Smith, R.H. *Plant Tissue Culture, Technique and Experiments.* 2nd Ed. Academic Press, New York.231pp. 2000.

PAPER XIV : CYTOGENETICS

Objective of the paper is to impart knowledge about various aspects of Cytogenetics like Chromatin organization, types of chromosomes and karyotype, Structural and numerical changes in chromosomes, Molecular cytogenetics, Restriction mapping, Alien gene transfer, Transposons, Mutations , DNA Damage and DNA Repair mechanisms.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study different types of chromosomes, mitosis and meiosis of diploids. They also study the meiosis of polyploids and translocation heterozygotes.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Chromatin Organization:** Chromosome structure and packaging of **DNA**; Molecular organization of centromere and telomere; nucleolus and ribosomal RNA genes; Unique and Repetitive DNA ; Euchromatin and heterochromatin.
2. **Karyotype** : Karyotype analysis ; Karyotype evolution; Various banding techniques and their uses.
3. **Specialized types of chromosomes**: polytene, lampbrush, B- chromosomes and sex chromosomes.

UNIT-II

4. **Structural changes in Chromosomes:** Origin, meiosis, breeding behaviour and evolutionary significance of Duplication, Deficiency, Inversion and Translocation heterozygotes ; Translocation tester sets; Robertsonian translocations ; B-A translocations.
5. **Numerical Changes in Chromosomes:** Origin, occurrence, production and meiosis of Haploids, Aneuploids and Euploids; origins and production of Autopolyploids; chromosome

and chromatid segregation; Allopolyploids; types, genome constitution and analysis; induction and characterization of Trisomics and Monosomics; Use of monosomics and trisomics in chromosome mapping.

UNIT-III

6. **Restriction Maps and Molecular Genetic Maps:** Restriction mapping RFLP as marker for mapping; chromosome walking; *in situ* hybridization as an aid in physical mapping of chromosome, FISH, GISH; chromosome jumping; Random amplified polymorphic DNA and AFLP techniques.
7. **Molecular Cytogenetics :** Nuclear DNA contents; C-value paradox, cot curve and its significance; Southern Northern and Western Blotting Techniques, Polymerase Chain Reaction.
8. **Alien Gene Transfer through Chromosome Manipulations:** Transfer of whole genome, transfer of individual chromosomes and chromosome segments; methods for detecting alien chromatin, production, characterization and utility of alien addition and substitution lines.

UNIT-IV

9. **Transposable Elements in prokaryotes and eukaryotes**: Cut and Paste transposons, Replicative transposons and Retrotransposons; Mutations induced by transposons.
10. **Mutations:** Spontaneous and induced mutations; physical and chemical mutagens; molecular Basis of gene mutations, site-directed mutagenesis applications of mutations.
11. **DNA damage and repair mechanisms**: Sources and types of DNA damage. Light dependent repair, Base Excision repair, Nucleotide Excision repair, Mismatch repair, Double- strand breaks Repair and Error-prone repair; Prokaryotic SOS response and Eukaryotic transcriptional response to DNA damage.

PRACTICALS

Max. Marks : 20

1. Study of meiosis in materials *Allium, Phlox, Chrysanthemum, Delphinium, Papaper*, Pollen and seed fertility and fruit set.
2. Mitotic studies and Karyotype analysis.
3. Linear differentiation of chromosomes through banding techniques, such as G-banding, C-banding and Q-banding (Photographs/Slides).
4. Orcein and Feulgen staining of the salivary gland chromosomes of *Chironomas and Drosophila* (Photographs/Slides).
5. Study of B chromosomes using maize or any other appropriate material.
6. Induction of polyploidy using colchicines, different methods of the application of colchicines.
7. Meiosis of complex translocation heterozygotes.

ESSENTIAL READINGS

1. Griffiths, A.J.F., W.M. Gelbart and J.H. Lewontin. *Modern Genetic Analysis.* 2nd ed. W.H. Freeman & Company, U.S.A. 2002.
2. Swanson, C.P., W.J. Young & T. Merz. *Cytogenetics: The Chromosomes in Division, Inheritance and Evolution.* Prentice Hall, Englwood Cliffs, New Jersey.577 pp. 1981.
3. Schulz-Schaeffer, J. *Cytogenetics.*2nd Ed. Springer-Verlag, Berlin. 446 pp. 1980.

SUGGESTED READINGS

1. Gupta, P.K. *Cytogenetics*. Rastogi Publication, Meerut.418 pp. 2004
2. Khush, G.S. 1974. *Cytogenetics of Aneuploids.* Academic press, New York
3. Snustad, D.P. & M.J. Simmons. *Principles of Genetics.* 5th Ed. John Wiley & Sons Inc., U.S.A. 848 pp. 2008.

PAPER XV: ECOLOGY AND ENVIRONMENT

Objective of the paper is to impart knowledge about various aspects of Ecology and Environment like Plant Communities and Ecosystems, Population Ecology, Biosphere Reserves, Biogeochemical cycles, Biodiversity and its conservation strategies, Pollution, Natural Resources and Non-conventional sources of energy, Climate change, Global Warming, Ozone depletion, Alien plant's invasion and Weed management.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students study the soil samples for pH, conductivity, water holding capacity etc. They also study the ecosystems using Quadrat methods.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Environment & Ecosystem:** Concept and Principles.
2. **Population Ecology:** Characteristics of a population, Population growth curve, Population regulation, Life history strategies, Concept of metapopulation – Demes and dispersal, Intrdemic extinctions, Age structured populations.
3. **Plant Communities:** Definition, quantitative characters of Plant Communities. Different sampling techniques to study quantitative characters of plant communities.

UNIT-II

4. **Biosphere Reserve :** The concept, Major functions, Nilgiri Biosphere Reserve (a brief account)
5. **Bio-Geochemical Cycles:** General account types, brief account of the following bio-geochemical cycles: Carbon cycle, Nitrogen cycle, Phosphorus cycle and Sulphur cycle. .
6. **Biodiversity:** Concept, level, measuring of biodiversity; significance in terms of economic, spiritual, scientific, educational, ecological and genetical values; reasons for depletion, magnitude, distribution and conservation strategies; diversity loss from monoculture plantations. Concepts of phytogeography: Endemism, Hotspots and hottest hotspots; Plant Explorations; Invasions and Introductions.

UNIT-III

7. **Pollution:** Definition, different types of pollutants. **Air pollution;** different pollutants of air, control of Air pollution; **Water pollution** : different sources of water pollution, control of water pollution; **Land pollution** : sources, control of land pollution ; Bioremediation and Phytoremediation.

8. **Management and Conservation of Natural Resources :** Aims and objectives of conservation; renewable and non-renewable resources; special interest and total ecosystem conservation policy; maintenance of ecological processes; management of agriculture, forest and soil; preservation of plant genetic diversity; conservation strategies required at national and international level, sustainable development.
9. **Non Conventional Sources of Energy:** Solar Energy, Hydro Power, Wind Power, Biogas, Geothermal Energy, Ocean Thermal Energy, Tidal Energy, Wind Energy.

UNIT-IV

10. **Ozone Depletion:** Reasons and its effects on plants, methods to check ozone depletion.
11. **Invasion of Alien Plants;** Concept, ecological impact and management
12. **Global Warming and Climate Change:** Reasons, effects and the techniques used to control global warming.
13. **Weed Management:** The impact, use and ecological role of weeds in agro-ecosystems, weed characteristics related to success; Major weeds of the world; Ecological approach to weed management, Problems of the weeds; Allelopathy, its mode and Exploitation in weed management.

PRACTICALS

Max. Marks: 20

1. Techniques for collection of soil samples. Chemical analysis of soil samples taken from different types of soils and to assess their suitability for healthy plant growth.
2. To determine soil pH, conductivity, soil texture and water holding capacity of soil.
3. Chemical analysis of underground water samples taken from different depths and to assess its suitability for healthy plant growth.
4. To work out the size of the quadrat and number of Quadrats required to study the ecosystem of a given locality.
5. To determine density, abundance and frequency of species by quadrat method.
6. To determine the Importance Value Index (IVI) and Species Diversity Index of grassland ecosystem.
7. To study the stomatal behaviour in response to herbicides and pesticides.

ESSENTIAL READINGS

1. Primack, R.B. *Essentials of Conservation Biology*. Sinauer Associates, USA, 2010, pp. 601.
2. Singh, J.S., Singh, S.P. and Gupta, S.R. *Ecology, Environmental Science and Conservation*. S. Chand Publishing, India. 2015, pp. 929.
3. Stiling, P. *Ecology: Theories and Applications*. Prentice Hall, India, 2002, pp. 403

SUGGESTED READINGS

1. Odum, F.P. *Fundamentals of Ecology.* 3rd Ed. W.B. Saunders & Co. Philadephia, U.S.A. 534 pp. 1971.
2 Shukla, R.S.&P.S. Chandel. *Plant Ecology and Soil Science.* S.Chand & Company Ltd., ND.552 pp. 1993.
3. Sharma, P.D. *Ecology and Environment.* Rastogi Publications, Shivaji Road, Meerut, 660 pp. 1996.

FOURTH SEMESTER

PAPER XVI : PLANT BIOCHEMISTRY

Objective of the paper is to impart knowledge about various aspects of Plant Biochemistry like Bioenergetics, Role of Water, Structure, types, properties and metabolism of Amino acids and Proteins, Enzymes, Carbohydrates and Lipids ; Compounds of energy transfer and Redox reactions, Catabolism and Generation of phosphate bond energy ; Vitamins and Secondary metabolites.
Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students perform experiments pertaining to the syllabus using different equipment.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Bioenergetics:** Concept of free energy changes, Laws of Thermodynamics, Exergonic and Endergonic Reactions, Entropy and Energy, Free Energy and Equilibrium Constant, Redox potential.
2. **Water:** Structure and Properties ; Weak intereactions in aqueous systems, Ionization of water Weak acids and Weak bases; Buffering against pH changes in biological systems, Henderson-Hassalbach equation. The fitness of the aqueous environment for living organisms.

UNIT-II

3. **Amino acids and Proteins:** Structure types, properties and Metabolism of Amino acids; Primary, Secondary, Tertiary and Quatenary structure of proteins ; domains, motif and folds; stability of protein structure ; Classification of proteins based on composition, solubility function; Reverse turns and Ramachandran plot.

4. **Enzymes:** Nomenclature and Classification; Enzyme Kinetics; Mode and Mechanism of Enzyme Action ,Enzyme Regulation, Activators, Inhibitors and Isoenzymes : Allosteric enzymes.

UNIT-III

5. **Carbohydrates:** Classification, composition and structure of Carbohydrates (Polysaccharides, Glycoproteins and Peptidoglycan), Stereoisomerism, Transformation of Carbohydrates, Synthesis and degradation of Sucrose, Starch, Cellulose.

6. **Lipids:** Classification, Structure and functions; Biosynthesis of Fatty Acids.

7. **Compounds of Energy Transfer and Redox Reactions:**
   a. Compounds of Energy Transfer *:* Adenosine Triphosphate, Uridine Triphosphate. Cytidine Triphosphate, Guanosine Triphosphate. Biosynthesis of purines and pyrimidines.

b. Compounds of Redox Reactions *:* Nicotinamide Adenine Dinucleotide (NAD). Nicotinamide Adenine Dinucleotide Phosphate (NADP), flavin Mononucleotide (FMN), Flavin Adenine Dinucleotide (FAD), Ascorbic Acid, Coenzyme, Cytochromes.

UNIT-IV

8. **Catabolism and Generation of Phosphate Bond Energy:** Sites and mechanism of Oxidative phosphorylation; Coupled Reactions, Group Transfer, Biological energy Transducers ; Oxidation of Carbohydrates (Regulation and Mechanism of T.C.A. cycle) and Oxidation of fats.

9. **Vitamins:** Structure, and functions of Thiamine, Riboflavin, Nicotinic Acid, Pantothenic Acid, Pyridoxine, Biotin, Folic Acid, Vitamin B12 , Ascorbic Acid, Vitamin A , D , E and K.

10. **Secondary Metabolites:** Biosynthesis of terpenes and phenols and alkaloids and their role.

PRACTICALS **Max. Marks : 20**

1. Detection of reducing, non reducing and total sugars: Molisch test, Fehling's test, Benedict's test, Barafoed's test, Saliwnoffs test and Iodine test.
2. Quantitative estimation of total carbohydrates by anthrone reagent. Preparation of potato starch, its microscopic structure and solubility test. Histochemical localization of starch.
3. Qualitative tests of protein like Biuret test, Xanthoproteic test, Ninhydrin test.
4. Quantitative estimation of amino acid and phenols by using Spectrophotometer.

ESSENTIAL READINGS

1. Lehninger, A. *Principles of Biochemistry.* Worth Publishers, 1982.
2. Conn, E.E. and Stumpf, P.K *Outlines of Biochemistry.* 5th Ed. Academic Press, London, 1987.
3. Deb, A.C. *Fundamentals of Biochemistry*. 9th ed. New Central Book Agency Pvt. Ltd., Kolkata, 2008.
4. Jain and Jain. *Fundamentals of Biochemistry*. S. Chand Pvt. Ltd., 2005

SUGGESTED READINGS

1 Buchanan, Bob. B., Gruissem, W. and Russeel, L. Jones(eds.). *Biochemistry & Molecular Biology of Plants.* Wiley Publishers, USA. 1280pp. 2015.
2. Malik, C.P. and M.B. Singh. *Plant Enzymology and Histoenzymology.* Kalyani Publishers. 1980.
3. Nelson, D.L. & M.M. Cox. *Lehninger's Principles of Biochemistry*. 5th ed. W.H.Freeman & Co., USA. 1100 pp. 2008.

PAPER XVII: FORESTRY

Objective of the paper is to impart knowledge about various aspects of Forestry like Silviculture, Forest Protection, Social and Urban Forestry, Forest Laws, Conservation of Forests, Types of Forests and Effects of forests.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical the students measure the diameter and height of trees. They study anatomy, moisture contents and

specific gravity of common timber trees of Punjab. They also take an account of the nearest natural forest visited by them.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Silviculture:** Definition, Regeneration : Types, Natural regeneration from seeds (different factors on which regeneration depends, seedlings establishment period), Regeneration from vegetative parts (Coppice, Root suckers, Cuttings, Layering, Grafting, Budding, Pollarding, Lopping and Pruning); Nursery making.
2. **Forest Protection:** Protection, causes and control of forest fires; Major diseases of forest plants.

UNIT-II

3. **Social and Urban Forestry:** Social forestry - Non commercial farm forestry, scope and limitations of Non commercial forestry, community forestry, scope and limitations of community forestry, social land allocation programmes (Taungya system). Economic benefits of social forestry, Urban forestry.
4. **Forest Laws and Forest Conservation:** Salient features of the Indian Forest Act 1972 (preliminary, reserved forests, protected forests), different methods employed for conservation of forests.

UNIT-III

5. **Forests Types:** Climate of India, different climatic regions of India. Central characters and distribution of the different forest types of India, Mensuration.

UNIT-IV

6. **Forest Effects :** General effects of forests on climate, control of runoff, effects on snow, soil erosion, wild life, pollution control, nutrient cycling, social values and ecotourism, economic values, floods, green belts and control of temperature.

PRACTICALS

Max. Marks : 20

1. To measure diameter at breast height (dbh), diameter over bark (dob) and diameter under bark (dub) and girth of trees.
2. To measure height of standing trees by Abney's level. .
3. To determine the moisture content, specific gravity and weight density of common timber trees of Punjab.
4. To compare the anatomy of Hard wood and soft wood .
5. Students should be taken to nearest natural forests and they should prepare a field report regarding the following points :
   Height above Sea level, Mean annual rain fall and temperature, Soil texture, soil pH, Topography Dominant tree species and the general characters of the forest (Distribution of trees in different storeys, ground flora, nature of leaf fall, average height of dominant tree species etc.) The students will submit the field report.

6 Propagation studies on important common forest trees of Punjab regarding Height and diameter increments (under similar soil conditions) at two months intervals under natural conditions of day length and temperature for young tree saplings of known age and represent the results in a graphic form.
7 Visit to the nearby forest nursery.

ESSENTIAL READINGS

1. Chaturvedi, A.N. *Forest Mensuration.* International Book Distributors, Dehradun. 403 pp. 1982.
2. Dwivedi, A.P. *A Text Book of Silviculture.* International Book Distributors, Dehradun. 505 pp. 2006.
3. Gopikumar, K., S. Gopakumar and E.V.Anoop. *Forest Nursery and Tree Husbandry*. International Book Distributors, Dehradun, 169 pp. 2003.

SUGGESTED READINGS

1. Negi, S.S. *Elements of General Silviculture*. International Book Distributors, Dehradun. 316 pp. 2003.
2. Negi, S.S. *Hand Book of Forest Ecology and Biology*. Internat BookDistributors, Dehradun. 268 pp. 2004.
3. Puri, G.S., Gupta, R.K. Mehr-Homji, V.M. and Puri, S. *Forest Ecology.* Vol. 2, Oxford & IBH, New Delhi. 708 pp. 1989.

PAPER XVIII: GENETICS AND PLANT BREEDING

Objective of the paper is to impart knowledge about various aspects of Genetics like Linkage, Gene Mapping, Microbial Genetics, Quantitative Genetics, Population Genetics and Human Genetics. The paper also deals with various methods of breeding in plants reproducing sexually and asexually.

Teaching methodology includes delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. The students make analysis of different problems relating to genetics.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY **Max. Marks : 60**

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer /MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. **Allelism and Linkage**: Multiple Alleles, Pseudo-alleles, Complementation tests, Pleiotropy, Genomic imprinting, Penetrance and Expressivity, Phenocopy, Linkage and Crossing over, Sex Linkage, Sex limited and Sex influenced characters.
2. **Genetic Recombination and Gene Mapping methods** : Recombination, Molecular Mechanism of Recombination, Role of RecA and RecBCD enzymes, Site-specific recombination, Linkage maps, Tetrad analysis - Centromere mapping in linear tetrads and Analysis of unordered tetrads.

UNIT-II

3. **Extrachromosomal Inheritance:** Introduction, mitochondrial DNA and chloroplast DNA.
4. **Microbial Genetics***:* Mapping the bacteriophage genome; phage phenotypes; genetic recombination in phage; genetic transformation, conjugation and transduction in bacteria
5. **Multigene families:** Multigene families and their evolution.

UNIT-III

6. **Quantitative Genetics:** Polygenic inheritance, Heritability and its measurements, QTL mapping.
7. **Human Genetics***:* Pedigree analysis, Lod score for linkage testing, Genetic disorders.
8. **Population Genetics :** Gene pool, Gene frequency, Hardy- Weinberg Law , Concepts and rate of change in gene frequency through mutation, natural selection and migration ; random genetic drift.

UNIT-IV

9. **Principles of Plant Breeding :** Principles and objectives; important conventional methods of breeding of self and cross pollinated crops, Heterosis and Hybrid vigour, Utility of hybrids in Genetics and Plant Breeding.
10. **Asexual Breeding Systems**: Methods of breeding of vegetatively propagated crops; Non-conventional methods; Applications of polyploidy in improvement of crop plants; gene variability.
11. **Male Sterility:** Concept, Genetic control and Breeding utility.

PRACTICALS

Max. Marks : 20

1. Study of problems on Mendelian Genetics , Gene Interactions, Multiple alleles and Multiple gene inheritance.
2. To test the Genetic Hypothesis by Chi- Square Test and study goodness of fit.
3. Preparation of Linkage Maps in Diploids using three point test cross method.
4. Tetrad analysis and Centromere mapping in ordered and unordered tetrads.
5. Pedigree analysis.
6. Problems relating to Population genetics.

ESSENTIAL READINGS

1. Singh, B.D. *Plant Breeding Principles and Methods*. Kalyani Publishers, Ludhiana. 2009.
2. Brooker, R.J. *Genetics.* Addison-Wesley. Longman Publication. U.S.A. 1999.
3. Poehlman, J.M., Sleper, D.A., *Breeding Field Crops,* AVI. Publ., U.S.A, 1995.
4. Snustad, D. P., Simmons, M.J., *Principles of Genetics,* J. Wiley and Sons, USA, 2003.

SUGGESTED READINGS

1. Hayward, M.D., Bosemark, M.O., Romagosa, I., *Plant Breeding: Principles and Prospects*, Chapman and Hall, U.K, 1993.
2. Stickberger, M.W. *Genetics*, 2nd ed., MacMillan, New York. 842 pp. 1977.
3. Weaver, R.F.& P.W. Hedrick. *Genetics.* 3rd Ed. William C. Brown Publishers, U.S.A. 656 pp. 1997.

PAPER XIX : PLANT RESOURCE, UTILIZATION AND CONSERVATION

Objective of the paper is to impart knowledge about various economic aspects of plants like Origin of Agriculture; Origin, Distribution, Types, Botany ,Cultivation, Harvesting and Uses of different Cereals, Fruits, Vegetables, Spices, Beverages and Legumes; Medicinal plants and Insecticides; Uses of important plant products like Gums , Tannins, Vegetable oils and fats, Fibres and Wood ; Unexploited plants of economic value and Genetic resources and their conservation.

Teaching methodology include delivery of lectures by the teachers using black board and many other tools like Visual Charts, Over Head projector etc. The students also make group discussions. In practical students study morphology, anatomy and histochemistry of cereals, vegetables, fruits , spices and oil yielding plants.

Theory : 75(60A+ 15HT)
Practical : 25(20A+5HT)

THEORY

Max. Marks : 60

NOTE : Question paper will have ***four*** sections. Examiner will set a total of nine questions comprising two questions from each unit, and one compulsory question of short answer/MCQ type covering the whole syllabus. Students will attempt one question from each unit and the compulsory question. All questions may carry equal marks, unless specified.

UNIT-I

1. History of Agriculture: Ancient and modern agriculture.
2. World Centres of Primary diversity of domesticated plants: The Indo-Burmese Centre, Plant Introductions and Secondary Centres.
3. Origin and Distribution, Wheat, Rice and agronomic practices. .
4. Cultivation and uses of following fruits and vegetables: Citrus, Mango, Apple, Banana, Potato, Allium, Cabbage, Spinach, Tomato, Brinjal and Sweet Potato.

UNIT-II

5. **General Account of the Spices:** Ginger, Turmeric, Cinnamon, Clove, Umbelliferous spices and Peppers.
6. **Beverage Plants:** Source and general account of Tea and Coffee.
7. **Legumes:** Origin, Botany, Cultivation and uses of Pigeon pea, Chick pea, Cluster bean, French bean etc.
8. **Medicinal Plants and Insecticides:** History and classification of drugs, antibiotics, plants as sources of drugs, parts used, composition and uses. Insecticides of plant origin, Pyrethrum and Rotenone.

UNIT-III

9. **Gums:** Important commercial gums and their uses.
10. **Tannins and Dyes:** Sources and their uses.
11. **Vegetable Oils and Fats:** Distinction between fatty and essential oils. Drying (Soyabean and linseed), nondrying (Groundnut and Mustard oil) and Semi drying (cottonseed and Sunflower oil) oils and their uses.
12. **Fibres:** Classification, uses, type of fibres - Soft fibres, Hard fibres, Surface fibres, Brush fibres and Braiding fibres.

UNIT-IV

13. **Wood and its Uses:** Soft woods and hard woods, wood as fuel, construction material (Pilings, Veneers, Plywood), wood containers (cooperage), chemically derived products and wood distillation.
14. Unexploited plants of potential economic value; plants as a source of renewable energy.
15. Genetic Resources and their conservation.

PRACTICALS

Max. Marks : 20

1. Morphology, Anatomy, Microchemical tests of stored food materials of Wheat, Rice, Chick Pea, Potato, Sweet Potato; Comparison of Starch grains of Wheat, Rice, Potato and Mung.
2. Morphology of fruits and vegetables pertaining to theory syllabus.
3. Histochemical tests for cellulose, cutin, suberin, hemicellulose, fat, oils, proteins and starch.
4. Morphology and microscopic structure of umbelliferous fruits, turmeric and clove.
5. Vegetable Oils: Mustard, groundnut, soya bean, coconut, sunflower, castor; Morphology, microscopic structure of the oil yielding tissues, tests for oil.
6. Prepare a list of 10 important sources of firewood and timber in your locality. Give their local names, scientific names and families to which they belong. Mention their properties.
7. The students should be taken to a recognized Botanical Garden or a Museum to show different plants of economic importance.

ESSENTIAL READINGS

1. Chrispeels, M.J. and Sadava, D. *Plants, Food and People*, W.H. Freeman and Co., San Francisco, 1977
2. Dastur, J.F. *Medicinal Plants of India and Pakistan.*3rd Ed. Meyerbooks, 1985
3. Simpson, B.B. and Conner-Ogorzaly. E.M. Economic Botany- Plants in Our World. McGraw-Hill Book Company, New York, 1986.
4. Randhawa, M.S. *History of Agriculture*.Vol. II, ICAR, New Delhi, 1982.

SUGGESTED READINGS

1. Kocchar, S.L. *Economic Botany of the Tropics*, 2nd edition, Macmillan India Ltd., Delhi, 1998.
2. Sharma, O.P., *Hill's Economic Botany* (Late Dr. A.F. Hill, adapted by O.P. Sharma), Tata McGraw Hill Co. Ltd., New Delhi, 1996.
3. Swaminathan, M.S. and Kocchar, S.L., (Eds.). *Plants and Society*, MacMillan Publications Ltd., London, 1989

PAPER-XX: RESEARCH PROJECT / FIELD STUDY REPORT AND SEMINAR

Max. Marks : 100

This paper aims at inculcating the aptitude for research in the students so that after completing their postgraduate course they can opt for M. Phil. and / or Ph.D. courses.

Field study provides the students an opportunity to study the plant diversity in their natural habitats.

The purpose of presenting seminar is to train the students to prepare the topic and to deliver it before the students and teachers using the recent tools like Computer, CDs, LCD projector etc. This would instill a sense of confidence in the students to deliver lectures in classrooms and to present any paper before the academicians and scientists.

A): RESEARCH PROJECT/FIELD STUDY REPORT

Max. Marks: 60

RESEARCH PROJECT

The students will be given a small research project under the guidance of a supervisor which will be evaluated by a panel of two examiners.

OR

FIELD STUDY REPORT

The students will visit the field for study of plants pertaining to Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms. The students will also submit a Field Study Report on the flora of the place visited by them.

A panel of 2-3 examiners will evaluate the field study report.

B): SEMINAR **Max. Marks: 40**

The Seminar will be presented by all the students and it will be compulsory for all the students to attend the seminars.

The break-up of 40 marks will be as under:-

1. Presentation 30
2. Contents 10

Every seminar will be evaluated by a team of two examiners individually and the average of marks awarded by these examiners will be considered as the "Marks obtained".

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE SYLLABI FOR

M. Sc. INFORMATION TECHNOLOGY
(SEMESTER SYSTEM)

EXAMINATIONS 2020- 2021

--:O:--

PANJAB UNIVERSITY, CHANDIGARH

Outlines of Tests, Syllabi and Courses of Reading for M. Sc. Information Technology (Two Year Degree Programme) for Session 2020- 2021.

FIRST YEAR					
		FIRST SEMESTER			
Paper Code	**Paper Name**	**Theory & Practical Lectures**	**Univ. Exam. Marks**	**Int. Exam. Marks**	**Exam. Hours**
MS-66	Linux Administration and Programming	6	80	20	3
MS-61	Software Engineering	6	80	20	3
MS-62	Computer Algorithms	6	80	20	3
MS-42	Operating System Concepts	6	80	20	3
MS-63	Minor Project Based on 66	6	80	20	3
MS-64	Minor Project Based on 62	6	80	20	3
		SECOND SEMESTER			
MS-45	Advance Java and Network Programming	6	80	20	3
MS-65	E- Commerce and Emerging Trends	6	80	20	3
MS-60	Advanced Database System and MySQL	6	80	20	3
MS-67	Artificial Intelligence	6	80	20	3
MS-27	SEMINAR	2	-	50	
MS-56	Minor Project Based on MS-45& MS-60	6	80	20	3
MS-68	Minor Project Based on MS-67	6	80	20	3
SECOND YEAR					
		THIRD SEMESTER			
MS-32	.NET Framework and C#	6	80	20	3
MS-69	Theory of Computation	6	80	50	3
MS-39	Computer Graphics	6	80	20	3
MS-14	Systems Approach to Management and Optimization Techniques	6	80	20	3
MS-18	SEMINAR	2	-	50	
MS-33	Minor Project Based on MS-32	6	80	20	3
MS-59	Minor Project Based on MS- 39	6	80	20	3
		FOURTH SEMESTER			
MS-21	**Major Project**		**320**	**80**	

The project period will be of 6 months duration.

The project will involve development of application/system software in industrial/ commercial/ scientific environment

The report should consist of the following :

- Cover page including Project title, Name of the student, Name of the Department and Names of the Project Guides (both External and Internal).
- Acknowledgements.
- Certificates from company and department duly signed by external guide, Principal and internal guide.
- Contents with page numbers.
- Introduction (includes background and application or importance of the project)
- Objectives
- **System Analysis** System Feasibility study
- Software requirement specifications
- Design with system flowcharts and input/output design.
- Implementation and Testing

- Hardware and software used
- Listing of well commented programs with result/output or detailed algorithms with input and output.

Further scope of the project

- Bibliography
- Appendices (any other information related to project)

Each student should observe the following norms while submitting the synopsis/thesis for the Project :

(a) Use both sides of the paper instead of only single side.
(b) Use one and half interline spacing in the text (instead of double space)
(c) Stop using a blank sheet before the page, carrying figure or table.
(d) Try to insert figure/table in the text page itself (instead of using a fresh page for it, each time.)

Students must consult/inform the internal guides regarding the progress of their work at least once in 20 days. It is the duty of the student to be in touch with his internal guide. The student must prepare 5 copies of the report including one copy for self. The remaining four are to be submitted before 31st May every year as per the following :

1. Main Library
2. Department Library
3. Internal Guide
4. Company

One softcopy of the work is to be submitted to the concerned head of the department/institution along with the report. The student must present his/ her work in 15 minutes mainly focusing on his/her contribution with the help of slides followed by demonstration of the practical work done. The project Viva will be completed before 15th June every year exact dates will be informed before 31st May every year.

An external examiner, internal examiner and the internal guide will conduct project viva.

SEMESTER I

Paper Code: MS - 66
Paper Title: Linux Administration and Programming
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	**P**
6	**8**

Objective: This course enables students to get familiar with Linux system, its commands, files & directories, system, shell programming, PERL programming and system administration. After the completion of this course, student will be able to:

- Work in the Linux environment for Linux server administration
- Write the shell programs, PERL programs and C-program with system calls

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT –I

1. **Introduction to Linux:** Functions of an **o**perating system, Linux's History, different flavors of Linux, Minimum System Requirements for installing Linux: Using LILO; Linux's fdisk.

2. **Using Linux:** Starting and Stopping your Linux System, Linux Shutdown Commands, Login, Passwords; Linux Error Messages, Search Paths, Input and Output Redirection, Man pages, Wildcards: * and ?, Environment Variables, process Commands: ps, kill, su command; GREP pattern searching command, vi text-editor.

UNIT-II

3. **Using the File System** : Files Overview, Common types of files, file and directory management commands, Absolute and relative filenames; pwd, cd, rm, cat, mkdir, mv, cp;, Important directories in the Linux file System: / , /home, /bin, /usr, /usr/bin, /usr/spool, /dev, /usr/bin, /sbin, /etc.

4. **File and Directory Permissions**: File and Directory ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions; Bourne Again Shell (BASH): Command-line Completion, Wildcards, Command History, Aliases, Pipelines, setting shell prompts, Job control, Customizing bash, bash variables.

UNIT-III

5. **Shell Programming:** Creating and Running Shell Programs, Using variables, Positional Parameters and other built-in Shell Variables; importance of quotation marks, test Command, Conditional Statements: if Statement, case Statement; Iteration Statements: for Statement, while Statement, until Statement, shift Command, select Statement, repeat Statement, Functions.

6. **Linux for System Administrators:** System Administration Basics, The root Account, Starting and Stopping the System; Mounting File Systems: Mounting a Device, Creating a New file System, Un-mounting file Systems, Checking file Systems, Compressing files with gzip and compress: Using tar, Backups, Setting the Login Message, Setting of DNS, Ping, WWW, and e-mail.

UNIT-IV

7. **PERL:** Creating and Executing Perl Programs, Handling Data in Perl: Variables, Numbers, Strings, File Operators: Arrays, Perl Programming Constructs: Statement Blocks, If Statements, unless Statements, for Statements, for each Statements, while Statements, until Statements, Functions: Passing Arguments to Functions, Using Return Values; Perl Operators.

8. **System Calls:** C as System Programming Language, I/O system calls – umask(); create(); open(); read(); write(); lseek(); dup(); link(); access(); chmod(); chown(); Process management system calls; fork(); getpid(); getppid(); exit(); wait(); sleep() ; Signal system calls – kill(); signal().

REFERENCES:

1. Tim Parker: Linux Unleashed, Techmedia Publishing House.
2. Norton, P.: Complete guide to LINUX, Techmedia.
3. Komarinski, M.: LINUX System Administration Handbook, AW.
4. John Goerzen: Linux Programming Bible, IDG Books, New Delhi.
5. Venkateshmurthy, M.G.: Introduction to Unix& Shell Programming, Pearson Education.
6. Linux Network Administration Guide by Tery Dawson, Gregor N. Purdy, Tony Bautts – Oreilly.
7. Stones, Richard and Mathew Neil: Beginning Linux Programming, 3rd Edition, Wrox.
8. Jones, Tim: GNU/Linux Application Programming, Wiley India Pvt. Ltd.

Paper Code: MS - 61
PaperTitle: Software Engineering
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand Software Configuration Managements Tools and Techniques. After the completion of this paper, student will be able to

- Use principles, concepts, methods, and techniques of the software engineering approach to produce quality software.
- Apply software engineering principles and practices in the planning and development of an actual software product.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Software Engineering:** Definition, Software Engineering goals, Characteristics of well-engineered software, Software Process Models: Waterfall Model, Prototyping Model, Spiral Model, RAD, Agile Modelling.
2. **Software Requirement Specification (SRS):** Software Requirements, Definition of SRS, Characteristics of SRS, Components of SRS, Designing of SRS.
3. **System Analysis:** Principles of Structures Analysis, DFDs, E-R Diagrams, Data Dictionary.

UNIT - II

4. **Software Design:** Design Objectives, Design Principles, Concepts, Design Process, Design Methodologies: Structured Design, Modular Design, Object Oriented Design, User Interface Design and its elements and its Characteristics.

5. **Software Project Planning & Scheduling:** Objectives, Decomposition techniques, Planning and Scheduling Tools: GANTT Chart, PERT Chart, Critical Path Method and Work Breakdown Structure; Cost estimation, Cost estimation Models: Single Variable Model, COCOMO Model; Software Risks, Risk Assessment.

UNIT – III

6. Software Metrics**:** Role of Metrics and Measurement, Types of Software Metrics: Product Metrics, Software Size Metrics: LOC and Function Points, Process Metrics, People Metrics**.**
7. System Maintenance and Reliability**:** Maintenance and its types; Factors Affecting Software Reliability, Software Reliability vs Hardware Reliability, Software Reliability Metrics.

UNIT-IV

8. **Software Testing Techniques:** Introduction to Software Testing Process, Objectives of Software Testing. BBT & its Techniques: Boundary Value Analysis, Equivalence Class Testing, and Cause- Effect Graph, White-Box Testing and its Techniques: Domain and Boundary Testing, Logic Based Testing, Data Flow Testing and Basic Path Testing.
9. **Software Testing Strategies:** Characteristics, Integration Testing, Functional Testing, Object Oriented Testing, Alpha and Beta Testing.

REFERENCES:

1. Pressman : Software Engineering, Tata-McGraw Hill Publishing House.
2. Sommerville, I: Software Engineering, Pearson Education.
3. Rajib Mall: Fundamentals of Software Engineering, PHI Learning Pvt. Limited
4. Jalota, Pankaj: An integrated approach to Software Engineering, Narosa Publishing Company.
5. Ali Behforooz : Software Engineering Fundamentals, Oxford University Press. Frederick J.H
6. William E. Perry, WILEY: Effective methods for Software Testing
7. Gill, Nasib Singh: Software Engineering: Software reliability, Testing and Quality Assurance. Khanna Book Publishing

Paper Code: MS - 62
Paper Title: Computer Algorithm
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	8

Objective:
The objective of the module is to create skills in students to design and analyze algorithms. After studying this subject students will be able to

- Understand algorithms and give theoretical estimates for the resources needed by any algorithm.
- Analyze Algorithms.
- Have an empirical approach to gauge the comparative performance of a given set of algorithms.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Data Structures**: Definition, Types of Data Structures, Stacks and its operations(Push, Pop), Queue and its operations (Insert, Delete), Tree (Binary Tree, General Tree and its Traversal), Graph(Types and its Traversal).
2. **Algorithms and Analysis:**Definition; Analysing algorithms; space and time complexity, Asymptotic Notation (O, Ω, θ) practical complexities, Best, average and worst case performance of algorithms, examples, Recursive algorithms, Introduction to recurrence relations.

UNIT – II

3. **Divide and Conquer:** General method, Binary search, Merge sort, Quick sort, Selection problem, Strassen's matrix multiplication and analysis of these problems.

4. **Greedy Method:** General Method, Knapsack problem, Job sequencing with deadlines, Minimum spanning Trees (Prim's Algorithm, Kruskal's Algorithm), Single source shortest paths and analysis of these problems.

UNIT - III

5. **Dynamic Programming:** General method, Optimal binary search trees, 0/1 Knapsack, the traveling salesperson problem, Single Source Shortest Path Problem (Bellman Ford Algorithm), All pair shortest path problem (Floyd's Algorithm).

6. **Back Tracking:** General method, N queen's problem, Graph coloring, Hamiltonian cycles, Analysis of these problems.

UNIT - IV

7. **Branch-And-Bound:** General Method, 0/1 Knapsack, Traveling Salesperson problems.

8. **NP-hard and NP-complete problems:** Basic concepts, Statement of Cook's Theorem, Satisfiability SAT, Examples of NP-hard graph [Clique Decision Problem, Chromatic Number

Decision Problem] and NP-scheduling problems [Scheduling Identical Processors, Job Shop Scheduling].

REFERENCES:

1. Lipschutz, Seymour, 1986: Theory & Problems of Data Structures, Schaum Series.
2. Horowitz, Ellis and Sahni, Sartaj: Fundamentals of Computer Algorithms, Galgotia Publications.
3. Aho, A.V., Hopcroft, J.E., Ullman, J.D.: The Design and Analysis of Computer Algorithms, Addison-Wesley.
4. Goodman, S.E. &Hedetniemi: Introduction to the Design and Analysis of Algorithms, McGraw-Hill Book Comp.
5. Knuth, D. E.: Fundamental of Algorithms: The Art of Computer Programming, Vol.-1, NareshPubl.House.
6. Brassad, Gilles and Bartley, Paul: Fundamentals of Algorithms, Prentice Hall of India.

Paper Code: MS - 42
Paper Title: Operating System Concepts
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 Minutes duration)

L	P
6	0

Objectives: This course enables students to understand **the concepts of Operating System.** After the completion of this paper, student will be able to

- Manage various processes and use the scheduling algorithms.
- Handle the deadlock conditions.
- Manage the files on the disk with effective outcome.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Operating System:** History, Structure of OS, Functions/ Operations of OS, Types: Single User, Multi-user, Simple Batch Processing, Multiprogramming, Multitasking, Parallel systems, Distributed system, Real time system.
2. **Process Management:** Process, Process state, Process Control Block; Process scheduling: Scheduling queues, Schedulers, Context switch; Operation on process: Process creation and termination; interrupt mechanism, threads, Scheduling Algorithms: Pre-emptive and non pre-emptive scheduling, FCFS, SJFS, RRS, priority scheduling, Multilevel queue scheduling, Multilevel feedback queue scheduling, Inter process communication: Shared memory systems, Message passing systems.

UNIT - II

3. **Process Synchronization:** Concurrent Processes, Race condition, Shared data; Critical section problem: Mutual exclusion, Progress, Bounded waiting; Software solution: Busy form of waiting, lock and unlock primitives, Peterson's solution; Synchronization: Semaphores, Monitors, Reader Writer Problem, Producer Consumer Problem, Dinning Philosopher Problem.
4. **System Deadlock:** System Model; Deadlock Characterization: Necessary conditions, Resource Allocation graph; Deadlock prevention: Mutual Exclusion, Hold and Wait, No Preemption, Circular wait; Deadlock Avoidance: Safe state, unsafe state, Resource Allocation graph Algorithm, Banker's Algorithm; Deadlock Detection & Recovery from deadlock: Wait-for-graph

UNIT - III

5. **Memory Management:** Hierarchy of memory types, Cache memory: Types: Associative memory, direct mapped, set associative.
6. **Memory Allocation:** Address binding, Address Space, Memory Protection, Contiguous and Non- Contiguous allocation, Swapping, Fragmentation; Paging: Protection, Shared pages, Techniques for structuring of page table; Segmentation: Segmentation with paging; Virtual

Memory: Demand paging; Page replacement Algorithms: FIFO, Optimal, LRU, LFU, MFU, Working set, Thrashing;

UNIT - IV

7. **Storage Management:** File(s): Attributes, Operations, Types, Structure; Access Methods: Sequential, Direct access, Index; Directory Structure: Single level, Two level, Tree Structured, Acyclic Graph; File System mounting; File sharing; Protection: Types of access, access control.
8. **File system** structure, File system implementation, Directory implementation, Allocation methods: Contiguous Allocation, Linked Allocation, Indexed Allocation; Disk scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Disk management; Swap space management; RAID.

REFERENCES:

1. Galvin P.B., Silberschatz A., Gagne G.: Operating System Concepts, Wiley Publications.
2. Deitel, H.M.: An Introduction to Operating System, Addision-Wesley Publishing Company.
3. Milenkovic, M.: Operating System - Concepts and Design, McGraw-Hill International Editions.
4. Madnick and Donovan: Operating System, McGraw-Hill Publishing Company.
5. Hansen P. Brineh: Operating System Principles, Prentice-Hall India.

SEMESTER II

Paper Code: MS - 45
Paper Title: Advance Java and Network Programming.
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L	P
6	4

Objectives: This paper enables student to enhance the programming skills using object oriented programming approaches. After the completion of this paper, student will be able to

- To create enterprise and standard applications Java.
- To develop web applications with database support.
- To develop client server based applications.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Review of Java Basics:** Applets, Multithreading, AWT Controls, Event Handling.
2. **Swing:** Features, components, Swing vs AWT, swing containers, controls, using Dialogs, sliders, progress bars, tables, creating user interface using swing.

UNIT-II

3. **Java Database Connectivity:** Connectivity model, Java. SQL package, JDBC Exception classes, Database connectivity, Data manipulation and navigation, Using Prepared Statement, creating database applications
4. **Java RMI:** Distributed object technologies, RMI architecture, creating RMI applications.

UNIT-III

5. **Java Servlets:** Servlets vs CGI, Servlet Lifecycle, creating and running servlets.
6. **Networking:** Networking basics, Client / server model, Java and the Net, TCP/IP client sockets, TCP/IP server sockets, Inet Address, URL, Data grams, creating networking applications.

UNIT-IV

7. **Java Beans :** Component architecture, Components, Advantages of Beans, Bean Developer kit (BDK), JAR files, introspection, developing Beans, Using Bound properties, The Java Beans API, Introduction to EJB (Enterprise Java Beans),Types of EJB, Uses of EJB.
8. **Java Server Pages:** Introduction, JSP Architecture, JSP Elements: Implicit Objects, Comments, Directives, Action Elements, Scripting Elements., developing simple Web Applications.

REFERENCES:

1. Schildt, Herbert: The Complete Reference Java 2, TMH.
2. Ivan Bayross: Web Enabled Commercial Application Development using Java 2.0, BPB.
3. Cornell, Gary and Horstmann Cay S.: Core Java, Vol I and Vol II, Sun Microsystems Press.
4. Keogh, James: J2EE: The Complete Reference.
5. Martin Bond, Debbie Law, Andy Longshaw, Dan Haywood, PeterRoxburgh: SAMS: Teach Yourself J2EE in 21 days, Pearson.
6. Java 6 Programming Black Book, Kogent Solution Inc., Dream Tech Press.

Paper Code: MS – 65
Paper Title: E-Commerce and Emerging Trends
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	0

Objectives: This course enables students to be familiar with Fundamentals of Electronic Commerce and Emerging Technologies such as Parallel Computing, Cloud Computing, Grid Computing, Mobile Computing, and Concept of Big Data.
Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Electronic Commerce:** Traditional Commerce vs Electronic Commerce, Types of E-Commerce, E-Commerce infrastructure: Hardware and Software requirements, **Electronic Data Interchange (EDI):** EDI enabled procurement process and its benefits; Components of EDI system: EDI standards, EDI software, communication networks; **Electronic Payment Methods:** Types of Electronic Payment Systems, Digital Token Based Electronic Payment Systems, Smart cards and Electronic payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic payment Systems.

2. **Issues in E-commerce:** The legal and policy environment of E-Commerce; Intellectual Property, advertising and consumer protection; Copyright Law; Patent Law; Network Security and Firewalls; Client-Server Network Security Threats; Data and Message Security; Encrypted Documents and E-mail; Digital Signatures.

UNIT-II

4. **Business Intelligence:** Introduction to Business Intelligence, Digital data and its types – structured, semi-structured and unstructured, Introduction to Online Transaction Processing (OLTP), Online Analytical Processing (OLAP), Different OLAP architectures: MOLAP, ROLAP, HOLAP, Comparison of OLTP and OLAP. BI Definitions and need, BI Component Framework, Business Applications of BI.

5. **Case Studies:** Supply Chain management, Banking, Online Reservation Systems, Online Publishing

UNIT-III

6. Parallel Computing: Introduction and use, Flynn's Classical Taxonomy: SISD, SIMD, MISD, MIMD; Parallel Computer Memory Architectures: Shared Memory, Distributed Memory, Hybrid Distributed-Shared Memory; Parallel Programming Models: Shared Memory Model, Threads Model, Distributed Memory/Message Passing Model, Data Parallel Model, Hybrid Model, SPMD and MPMP, Introduction to Parallel Virtual Machine and Message Passing Interface, Supercomputers.
7. Cloud Computing: Introduction and use, Architecture, Service Models: infrastructure as a service, platform as a service, and software as a service;

UNIT-IV

8. Grid computing: Introduction and benefits, virtual organisations, grid Architecture and its relationship to other distributed technologies, grid application areas.

9. Mobile Computing : Definition, Guided Transmission, Unguided Transmission; Mobile computing architecture, Mobile Devices, Mobile System Networks: Cellular, WLAN, Ad hoc networks; Introduction to : GSM,CDMA,GPRS,EDGE; Introduction to Mobile Databases; Mobile Applications; Mobile Application Languages; features of Mobile Operating system: Palm OS , Symbian, Android.

REFERENCES :

1. Ravi KalaKota and Andrew B. Whinston: Frontiers of Electronic Commerce, Addison Wesley 1996
2. Kamlesh K. Bajaj and Debjani Nag: E-Commerce The Cutting Edge of Business, McGraw Hill Education.
3. R. N. Prasad and Seema Acharya , Fundamentals of Business Analytics , Wiley 2011
4. M. Sasikumar, Dinesh Shikhare, P. Ravi Prakash: Introduction to Parallel Processing, PHI.
5. Barry Wilkinson, Michael Allen, Parallel Programming: Techniques and Applications Using Networked Workstations and Parallel Computers, Pearson Education.
6. Joshy Joseph, Craig Fellenstein : Grid Computing, Pearson Education.
7. ZarekNabrzyski, Jennifer M. Schopf, Jan Weglarz: Grid Resource Management - State of the Art and Future Trends, Kluwer Academic Publishers.
8. Kamal, Raj, Mobile Computing, Oxford Higher Education.
9. Perkins, Mobile Computing, Pearson Education.
10. Jochen Schiller: "Mobile Communications", PHI/Pearson Education.

Paper Title : Advanced Database System and MySQL
Paper Code: MS-60
Maximum Marks: 100 (External : 80 + Internal : 20) Time : 3 Hrs.
Number of Lectures: 90 (45 Minutes dduration)

Objectives:
The course aims at providing the students through insight on few DBMS principles and practices. Students will learn and implement the operations for making and using databases with help of SQL and PL/SQL.
Note :

i) The Question Paper will consist of Four Units.
ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii) The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv) All questions carry equal marks unless specified.

UNIT - I

1. **Database Management Systems**: Definition, Characteristics, Advantages of Using DBMS Approach, Classification of DBMSs, Data Models, Database Schema and Instance, Three Schema Architecture, Data Independence – Physical and Logical data Independence.
2. **Entity- relationship model**: Entities, Relationships, Representation of entities, attributes, Representation of relationship set, Generalization, aggregation.
3. **Normalization**: Functional Dependency, Full Functional Dependency, Partial Dependency, Transitive Dependency, Normal Forms– 1NF, 2NF, 3NF, BCNF, Multi-valued Dependency.

UNIT - II

4**. Relational Algebra and Relational Calculus**: Relational Algebra: Operations- Union, Intersection, Difference, Cartesian product, Projection, Selection, Division and relational algebra queries; Relational Calculus: Tuple oriented and domain oriented relational calculus and its operations.

5. **Transaction and Concurrency control**: Concept of transaction, ACID properties, Serializibility, States of transaction, Concurrency control: Locking techniques, Time stamp based protocols, Granularity of data items, Deadlock.

UNIT - III

6. **MySQL**: Introduction; Why MySql; Tools provided with MySQL; MySQL Architectural Terminology; Databases:Creating, Selecting, Dropping and Altering Databases; Tables: Creating, dropping, Altering, Indexing Tables; Adding new rows, Retrieving Information, Deleting or Updating Existing rows; Obtaining MySQL Metadata; Joins; Subqueries; Views; Multiple Tables Deletion and Updation; Foriegn Keys and Referential Integrity; MySQL Data Types; Sequences.

UNIT - IV

10.**Data Warehousing**: Introduction; Features; Data modeling for Data Warehousing; Building Data warehouse; Comparison between Data Warehouse and DBMS Metadata; Problems and issues in Data Warehouse.

11. **Data Mining**: Overview; Goals of Data Mining; Techniques: Association rules(Market Basket Algorithm, Apriori Algorithm); Classification: Decision Tree, Induction Algorithm; Applications of Data Mining.

References:

1. Elmarsi&Navathe, “Fundamentals of Database Systems” 4th Edition, 2004.
2. Jiawei Han and MichelineKamber,"Data Mining: Concepts and Techniques", Elsvier.
3. William H. Inmon, "Building the Data Warehouse",Fourth Edition, Willey.
4. C.J.Date “Introduction to database system”, 8th Edition, Galgotia Publications, 2004.
5. Paul DuBois, "MySQL Developer's Library", Fourth Edition, Addison Wesley.
6. Bipin C. Desai, An Introduction to Database System
7. Silberschatz, Korth, Sudershan “Database System Concepts” 4th Edition, McGraw Hill Education, 2002.
8. Ivan Bayross, “SQL/PLSQL: The Programming Language of Oracle, 3rd Revised Edition, 2006

Paper Code: MS - 67
Paper Title: Artificial Intelligence
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives: The paper enables students to understand Artificial Intelligence techniques and the language LISP. After the completion of this paper, student will be able to

- Apply standard AI techniques to solve problems.
- Characterize the Knowledge Acquisition
- Differentiate various expert systems
- Write programs of AI using PROLOG.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Artificial Intelligence (AI)** : Introduction and Applications, History of AI from Alan Turing and developments in AI, application areas; Criteria for success; Problem Characteristics; Problem representation-State space representation, problem reduction representation, production system; Introduction to agents, intelligent software systems, Applications, Intelligent architectures, components of intelligent agent based distributed systems.
2. **Search and Control Strategies:** Data driven and goal driven search; Uninformed search-Breadth -first Search and Depth-First Search methods; Heuristic Search Techniques - Hill Climbing, Best first Search, A*, AO*, Constraint satisfaction and means-ends analysis techniques.

UNIT - II

3. **Knowledge Representation** : Information and Knowledge, Knowledge Acquisition and Manipulation, Issues in Knowledge Representation, Knowledge Representation Methods, Propositional Logic and First Order Predicate Logic, Resolution: Definition, Conversion to ClauseForm, Resolution in Propositional and Predicate Logic, Unification and Resolution Principle; Horn's Clauses, Semantic Networks, Partitioned Semantic Nets, Frames, Scripts and Conceptual Dependencies.
4. **Game Playing:**Minimax Search Procedure, Adding Alpha-Beta Cutoffs.

UNIT - III

5. **Expert Systems** : Definition and Applications, Characteristics of Expert systems, Architecture of a typical Expert System, Expert System Shells, Building an Expert System, Case studies of Expert Systems like MYCIN, Specific Application of AI. Definition of Neurons, Communication and Learning in Neural Networks, Definition of Fuzzy / Logic set.

6. **Natural Language understandingand Processing**: Complexity of the problem, Syntactic processing: Grammars and Parsers, Augmented Transition Networks; Semantic Analysis: Semantic Grammars, Case Grammars; Discourse and Pragmatic processing:Using Focus in Understanding, Modeling Beliefs; Introduction to Perception :Vision using Low-Level and High-Level Image Features and Action: Navigation and Manipulation.

UNIT - IV

7. **AI Language PROLOG**: Features of Prolog, Elementary Data Types, Compound objects in Prolog, Writing simple program in Prolog, Understanding Default flow control of the Prolog Program, Controlling Program Flow with cut and fail, List Manipulation, String manipulation, Arithmetic Operators and evaluation of Arithmetic expressions, Input /Output statement. Some simple example problems: Tower of Hanoi, Sorted Tree Dictionary, Sorting, Searching Graphs, Searching a Maze.

REFERENCES:

1. Rich Elaine and Knight Kevin: Artificial Intelligence; Tata-McGraw Hill Company, New Delhi.
2. George F Luger; William A. Stubblefield: Artificial Intelligence; Structures and Strategies for Complex problem solving, Pearson Education.
3. Patterson, Dan W.: Introduction to Artificial Intelligence and Expert Systems, Prentice-Hall of India Pvt. Ltd., New Delhi.
4. W.F. Clofisin and C.S. Mellish, “Programming in PROLOG”, Narosa Publishing Co.
5. SanjivaNath, “Turbo PROLOG”, Galgotia Publications Pvt. Ltd.
6. Bharti&Chaitany: Natural Language Processing, PHI.
7. Russel, Sturat&Norviig, Peter: Artificial Intelligence; A modern Approach; Person Education Pvt. Ltd.

SEMESTER – III

Paper Code: MS - 32
Paper Title: .NET FRAMEWORK AND C#
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90(45 minutes duration)

L	P
6	8

Objectives: This course aims at making a student capable of developing console, windows and web applications using C# on .NET platform.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt **ONE** question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Introduction to .NET environment:** The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach.
2. **Introduction to C#** :Introducing C#, Overview of C#, Literals, Variables, Data Types, Operators, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, Enumerations, difference between C++ and C#, difference between Java and C#.

UNIT-II

3. **Object Oriented Aspects of C#** : Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Errors and Exceptions.
4. **I/O and Object Serialization:** I/O: System. I/O, Streams, TextWriter, TextReader, BinaryWriter, Binary Reader, File Stream, File; Serialisation: Binary, SOAP, XML and Custom Serialisation.

UNIT-III

5. **Writing Windows Forms Applications and Deploying Windows Forms Applications**: Writing Windows Forms Applications: Understanding Windows Forms, Window form controls, Menus, MDI Forms, Using Inheritance in Windows Forms, Using Common Dialog Controls, Deploying Windows Forms Applications: Introduction to deployment, Click Once deployment, Creating an Installation Package for project.
6. **Writing ASP .NET applications and Deploying ASP .NET Applications:** Introduction to ASP.NET, Using Validation Controls, Managing State in ASP.NET Web Applications, Deploying ASP.NET Applications with Windows Installer.

UNIT-IV

7. **Accessing Data with ADO .NET:** ADO .NET Architecture, Components, Database, DataReader, DataAdapter, DataSet, Viewing data using Data Grid View Control, Creating Applications.

REFERENCES:
1. Jones, Bradley L.: Sams Teach Yourself C# in 21 Days.
2. Balagurusamy, E.: Programming in C#, Tata McGraw-Hill.
3. Liberty, J.: Programming C#, O'Reilly.
4. Schildt, Herbert: The Complete Reference: C#, Tata McGraw-Hill.
5. Robinson: Professional C#, Wrox Press.
6. Jason Beres: SAMS Teach Yourself Visual Studio.Net in 21 days.
7. Watsel, Nagel, Pedersen, Reid, Skinne, White: Beginning Microsoft Visual C#, Wrox Publications.

Paper Title: THEORY OF COMPUTATION
Paper Code: MS - 69
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

Objectives:
The goal of this course is to provide students with an understanding of basic concepts of Theory of Computation.

Note :
(i) The Question paper will consist of Four Units.
(ii) Examiner will set total of nine questions comprising two questions from each unit and one compulsory question of short answer type covering whole syllabi.
(iii) The students are required to attempt one question from each unit and the compulsory question.
(iv) All questions carry equal marks.

UNIT I

1. **Theory of Automata**: Definition, Description of Automata, Transition Systems, Language, Grammar, Deterministic & Non-Deterministic Finite State Machines, Equivalence of DFA and NDFA, Finite State Machine with output (Moore Machine and Meally Machine), Conversion of Moore Machine to Meally Machine & vice-versa, Minimization of Finite Automata.
2. **Formal Languages**: Chomsky Classification of Languages, Languages and their Relations, Languages and Automata.

UNIT II

3. **Regular Sets and Regular Grammars**: Regular Expressions, Finite Automata and Regular Expressions, Conversion of NDFA to DFA, Arden's Theorem, Construction of FA equivalent to Regular Expression, Equivalence of two Finite Automata, Equivalence of two Regular Expressions, Pumping lemma for Regular Sets and applications, Closure Properties of Regular Sets, Construction of Regular Grammar generating Transition System for a DFA, Construction of Transition System accepting Language for a Regular Grammar , limitations of finite state machine.

UNIT III

4. **Context Free Languages**: Context free grammar, Simplification of Context Free Grammars, Normal Forms for Context Free Grammers: Chomsky Normal Form, Greibach Normal Form, Pumping Lemma, CYK algorithm.
5. **PDA**: Push down stack machine, Design of deterministic and non-deterministic push-down stack, Parser design.

UNIT IV

6. **LR(K) Grammars**: Properties of LR(K) Grammar, Closure properties of Languages.
7. **Turing Machine**: Turing machine definition and design of Turing Machine, Church-Turing Thesis, Variations of Turing Machines, combining Turing machine, Universal Turing Machine, Post Machine, Chomsky Hierarchy, Halting problem, Post Correspondence problem.

References:

1. Mishra, K.L.P and Chandrasekaran, N.: Theory of Computer Science, Automata, Languages and Computation.
2. Lewis, Harry R. and Papadimitriou, Christos H.: Theory of Computation, Prentice Hall of India, 1996.
3. Hopcroft, John E. and Ullman, Jefrey D.: Introduction to Automata Theory, Languages and Computation, Addison-Wesley Publishing Company Inc.
4. Brady, J.M.: Theory of Computer Science, Wiley.
5. A.V. Aho, J.E. Hopcroft and J.D. Ullman, 'Introduction to Automata, Languages and Computations, Addison Wesley, 1980.
6. M.Davis and E.J. Weyuker 'Computability, Complexity and Languages' Academic Press, 1982.

Paper Code: MS – 39
Paper Title: Computer Graphics
Maximum Marks: 100 (External : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	8

Objectives:
This paper enables students to understand graphics hardware and various 2D and 3D algorithms. After the completion of this paper, student will be able to:
- Implement the principles and commonly used paradigms and techniques of computer graphics.
- Use OpenGL proficiently using C / C++.

Note:
i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer Graphics**: Overview of Graphics Systems, Display Devices, Display Processors, Character Generation; Interactive graphical techniques; Positioning, (Elastic or Rubber Band lines, Inking, zooming, panning)
2. **Raster Scan Graphics**: Line Drawing algorithms-Direct method, DDA and Bresenham's; Circle drawing algorithm- 2-point, 4-point, trigonometric method, 8-point, Bresenham method, Bresenham Midpoint method.

UNIT - II

3. **Two Dimensional Geometric Transformation & Viewing**: homogeneous coordinate system; Basic Transformations- Translation, Rotation, Scaling, Reflection, Shear, composite transformation like- Rotation about an Arbitrary Point, Reflection through an Arbitrary Line; transformation of points and unit square.
4. **Clipping: Point clipping Line clipping algorithms**: Cohen-Sutherland and Liang-Barsky, Polygon Clipping; Window to viewport coordinate transformation.

UNIT - III

5. **Graphics Programming using C/C++**: Basic Graphical functions; Mouse Programming, Graphic Languages: Primitives (Constants, actions, operators, variables), display subroutines, plotting and geometric transformations, Concept of Animation, Saving, Loading and Printing graphics images from/to disk. Animated algorithms for sorting, Towers of Hanoi.

6. **Open GL using C/C++**: Geometric Primitives and Attributes; Viewing; Color; Lighting, Animation**.**

UNIT - IV

7. **Three Dimensional Concepts & Object Representations**: Three Dimensional Display Methods, Parallel Projection, Perspective Projection; Translation, Rotation, Scaling, Composite Transformation; Hidden line and surface elimination-Z-buffer, back face, scan line, depth sorting.

8. **Shading-**Modelling light intensities- flat shading, gouraud shading, phong shading. Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces.

REFERENCES:

1. Giloi, W.K.:Interactive Computer Graphics; Prentice-Hall India Ltd.
2. Newman, W., Sproul, R.F.: Principles of Interactive Computer Graphics, McGraw- Hill.
3. Rogers, D.F.: Procedural Elements for Computer Graphics, McGraw-Hill.
4. Foley, J.D., Van Dam A.: Fundamentals of Interactive Computer Graphics, Addison-Wesley.
5. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
6. Roy, Plastock, Theory & Problems of Computer Graphics, Schaum Series
7. Hearn, D., Baker P.M: Computer Graphics, Prentice-Hall.
8. Dave Shreiner, Mason W., Jackie N., Tom Davis; The OpenGL Programming Guide – The Red Book, Addision-Wesley.

Paper Code: MS – 14
Paper Title: Systems Approach to Management and Optimization Techniques
Maximum Marks: 100 (Ext ernal : 80 + Internal : 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

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Objective: This course enables students to be familiar with different types of Info systems, basics of DR and its practical problems.

Note:

i. The Question Paper will consist of Four Units.
ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT-I

1. **Concepts of Computer Based Systems**: Data, Information, Information Systems, Model ofcomputer based information system; Introduction to Management Information System,Decision Support System and Knowledge Based Systems.
2. **Accounting Information System**: Characteristics, sample system, subsystems for fillingcustomer order, order replenishment stock, performing general ledger processes; features anduse of Accounting Information System Package-Tally.
3. **Marketing Information System**: Basic concepts, model, subsystems including MarketingResearch, Marketing Intelligence, Product, Place, Promotion and Pricing subsystems.

UNIT-II

4. **Manufacturing Information System**: Model and subsystems including Accounting information, Industrial Engineering, Inventory, Quality and Cost Subsystems.
5. **Financial Information System**: Model and Subsystems including Forecasting, FundsManagement and Control Subsystems.
6. **Human Resources Information Systems**: Model and Subsystems including humanresources research, human resources intelligence, HRIS Database, HRIS output.

UNIT-III

7. **Basics of Operations Research (OR)**: Origin and Development of OR, Characteristics ofOR, Models in OR, OR and Decision Making, Role of Computers in OR, Limitations of OR.
8. **Linear Programming**: Mathematical Formulation, Graphical and Simplex method, Dualityin Linear programming, Dual Simplex Method, The Revised Simplex Method, SensitivityAnalysis.

UNIT-IV

9. **Special types of Linear Programming problems**: Transportation and Assignmentproblems.
10. **Integer Programming**: Introduction, Branch and Bound Techniques, Binary LinearProgramming, Assignment & Traveling salesman problems.
11. **Dynamic Programming**: Deterministic & Probabilistic Dynamic Programming.

REFERENCES

1. Basandra, Suresh K. : Computer Systems Today, Wheeler Publishing
2. Murdick, R.G. & Ross J.E. &Claggtt J.R.: Information Systems for Modern Management, Prentice Hall
3. Swarup, Kanti, Gupta, P.K. &Manmohan: Operations Research, Sultan Chand & Sons.
4. Gupta, Prem Kumar &Hira, D.S.: Operations Research.
5. Rao, S. S.: Introduction to Optimization: Theory & Applications, Wiley Eastern.
6. Taha, H.A.: Operations Research – An Introduction, McMillan Publishing Company
7. S.D. Sharma: Operation Research, Sultan Chand & Sons.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF BUSINESS MANAGEMENT & COMMERCE

SYLLABI

FOR

M.COM. [SEMESTER SYSTEM] EXAMINATIONS, 2017-18

(For Regular College/University/USOL Students)

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SCHEME, SYLLABI AND COURSES OF READING FOR M. COM. (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2017-2018

Note : 1. The duration of the examination in each subject will be 3 hours.

2. Maximum marks for external/written examination are 80 marks and Internal Assessment is 20 marks.

3. **The marks for Internal Assessment will be divided as Follows:**

For Regular Students

(a) Attendance : 20%

(b) Written Assignments : 30%

(c) Mid Semester Test : 50%

For University School of Open Learning (USOL) Students:

100% Internal Assessment will be based on Written Assignments

N. B.: Use of non-programmable calculators by the students in the Examination Hall is allowed. The calculators will not be provided by the University.

INSTRUCTIONS TO THE PAPER SETTERS :

IF THERE ARE TWO UNITS : Set 10 questions in all. Five questions from each unit. The students are required to answer five questions in all selecting at least 2 questions from each unit.

IF THERE ARE THREE UNITS : Set 10 questions in all. Three or four questions from each unit. The students are required to answer five questions in all selecting at least one question and not more than two from each unit.

IF THERE ARE FOUR UNITS : Set 10 questions in all. Two or three questions from each unit. The students are required to answer five questions in all selecting at least one question from each unit.

IF THERE ARE FIVE UNITS : Set 10 questions in all. Two questions from each unit. The students are required to attempt five questions in all selecting one question from each unit.

SCHEME OF EXAMINATION

SEMESTER-I

Paper 1	**M.C.101**	MANAGERIAL ECONOMICS	100 Marks
Paper 2	**M.C.102**	QUANTITATIVE METHODS FOR BUSINESS	100 Marks
Paper 3	**M.C.103**	MODERN ACCOUNTING THEORY & REPORTING PRACTICES	100 Marks
Paper 4	**M.C.104**	ORGANISATION THEORY AND BEHAVIOUR	100 Marks
Paper 5	**M.C.105**	MARKETING MANAGEMENT	100 Marks
Paper 6	**M.C.106**	MANAGEMENT INFORMATION SYSTEM	100 Marks
Paper 7	**M.C.107**	WORKSHOP ON IT APPLICATIONS IN COMMERCE (For Regular Students Only)	100 Marks
	M.C.107 A	IT APPLICATIONS IN COMMERCE (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-II

Paper 1	**M.C.201**	BUSINESS ENVIRONMENT	100 Marks
Paper 2	**M.C.202**	RESEARCH METHODOLOGY IN COMMERCE	100 Marks
Paper 3	**M.C.203**	FINANCIAL MANAGEMENT AND POLICY	100 Marks
Paper 4	**M.C.204**	PRODUCTION AND MATERIALS MANAGEMENT	100 Marks
Paper 5	**M.C.205**	OPERATIONS RESEARCH	100 Marks
Paper 6	**M.C.206**	BUSINESS POLICY & STRATEGIC MANAGEMENT	100 Marks
Paper 7	**M.C.207**	SUMMER TRAINING REPORT AND VIVA VOCE (For Regular College Students)	100 Marks
	M.C.207 A	ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (For USOL Students Only)	100 Marks
		OR	
	M.C.207 B	FINANCIAL SERVICES (For USOL Students Only)	100 Marks
		Total	700 Marks

SEMESTER-III

Paper 1	**M.C.301**	BUSINESS PERFORMANCE MEASUREMENT	100 Marks
Paper 2	**M.C.302**	TAX PLANNING AND MANAGEMENT	100 Marks

For Paper 3, Paper 4, Paper 5, Paper 6 Students has to select two groups from the given groups A to F having two papers each. (MC. 303 to MC. 314)

Paper-3		Select Group from A-F	100 Marks
Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7			
	M.C.315	MC. 315-WORKSHOP ON FINANCIAL MARKETS AND INSTRUMENTS (For Regular Students Only)	100 Marks
	M.C.315 A	FINANCIAL MARKETS AND INSTRUMENTS (Theory paper For USOL Students Only)	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 303	Integrated Marketing Communication & Brand Equity	100 Marks
MC. 304	Marketing Research	100 Marks

Group B: Human Resource Management

MC. 305	Human Resource Development	100 Marks
MC. 306	Industrial Relations	100 Marks

Group C: International Business

MC. 307	Indiaôs Foreign Trade and Investment	100 Marks
MC. 308	Management of International Business Operations	100 Marks

Group D: Accounting & Finance

MC. 309	Strategic Cost Management	100 Marks
MC. 310	International Accounting	100 Marks

Group E: Applied Economics

MC. 311	Industrial Economics	100 Marks
MC. 312	Applied Econometrics	100 Marks

Group F: Banking and Insurance

MC. 313	Bank Management	100 Marks
MC. 314	Insurance Management	100 Marks

SEMESTER-IV

Paper 1	**M.C.401**	PROJECT PLANNING AND CONTROL	100 Marks
Paper 2	**M.C.402**	KNOWLEDGE MANAGEMENT	100 Marks
Paper 3	**M.C.403**	BUSINESS ETHICS AND CORPORATE GOVERNANCE	100 Marks

Every student has to select any one group from the two groups selected in the third semester (Selected group in the 4th semester will be having three papers) (MC. 404 to MC. 421)

Paper 4		Select Group from A-F	100 Marks
Paper 5		Select Group from A-F	100 Marks
Paper 6		Select Group from A-F	100 Marks
Paper 7	**M.C.422**	COMPREHENSIVE VIVA-VOCE	100 Marks
		Total	700 Marks

Group A: Marketing

MC. 404	Advertising and Sales Management	100 Marks
MC. 405	Services Marketing	100 Marks
MC. 406	Consumer Behavior	100 Marks

Group B: Human Resource Management

MC. 407	Organizational Change and Development	100 Marks
MC. 408	Training and Development	100 Marks
MC. 409	Compensation Management	100 Marks

Group C: International Business

MC. 410	International Business Environment	100 Marks
MC. 411	Global Financial Management	100 Marks
MC. 412	International Marketing Management	100 Marks

Group D: Accounting & Finance

MC. 413	Advanced Corporate Accounting	100 Marks
MC. 414	Security Analysis and Portfolio Management	100 Marks
MC. 415	Advanced Auditing	100 Marks

Group E: Applied Economics

MC. 416	Macro Economic Analysis and Policy	100 Marks
MC. 417	Economics of Services	100 Marks
MC. 418	World Trading System	100 Marks

Group F: Banking and Insurance

MC. 419	Bank Legislation	100 Marks
MC. 420	Risk Management	100 Marks
MC. 421	Actuarial Practice	100 Marks

SEMESTER-I

PAPER 1: MC. 101- MANAGERIAL ECONOMICS

Objective: The objective of the course is to acquaint students with the concepts of microï economic theory and their use in business decision making. The effort is to make them capable of using various concepts to deal with business problems in a global economic environment.

UNIT-I

Nature and scope of managerial economics, relationship with economic theory, decision sciences, and functional areas of business; Theory of the Firm: Reasons for existence of the firms & their functions, the objective and value of the firm, constraints on the operation of the firms, limitations of the theory of the firm; Nature & Functions of Profits: Business vs. Economic Profits, theories of profit, functions of profit; Tools of Analysis: Marginal Analysis, Optimization, Decision and Game Theory - Concepts; The International Framework of Managerial Economics.

UNIT-II

The demand for a commodity: Individualôs demand, Market demand, and the firm demand; Price, Income & Cross elasticity of demand; Using elasticityôs in managerial decisions; Theories of consumer behavior.

UNIT-III

Pricing Practices and Risk Analysis**:** Price and Output relationship under different market structures; Pricing Theories; Pricing of multiple products; Price discrimination - International price discrimination & Dumping, Transfer Pricing; Risk and Uncertainties in managerial decision making; Measuring risk with probability distribution; Utility Theory and risk aversion.

UNIT-IV

Technological change and the global market economy: Impact of technological change on productivity, labor and market structure; Industrial innovation and technology and technological environmental forecasting.

Reference Books:

1. Koutsyiannis, A., Modern Microeconomics, Macmillan Press Ltd.
2. Varian, Micro-Economic Analysis (ed. 3), Norton.
3. Pindyck Robert S. and Daniel L. Rubinfeld, Micro Economics, Third Edition, Prentice Hall of India, New Delhi.
4. Madala, G.S. and Ellen Miller, Micro Economics, Theory and Applications, McGraw Hill Book Company, New York.
5. Gould, John P., Edward P. Lazear, Micro-Economic Theory, Richard D. Irwin, Inc., Homewood Illinois.
6. Sen Anindya, Micro-Economics: Theory and Applications , Oxford University Press, New Delhi.
7. Tirole J., The Theory of Industrial Organization, Cambridge MIT Press.

PAPER 2: MC. 102 - QUANTITATIVE METHODS FOR BUSINESS

Objective: The objective of the course is to acquaint students with some of the important statistical techniques for managerial decision making. The emphasis will be on their applications to business and economic situations.

UNIT-I

Probability and Probability Distribution: Definitions - Probability Rules ï Application of Probability Rules- Conditional Probability- Bayes theorem- Random Variable and Probability Distributions; Binomial Distribution- Poisson Distribution and Normal Distribution.

UNIT-II

Statistical Estimation and hypothesis testing: Introduction to Hypothesis testing ï Meaning of Population, sample and sampling distribution - parameters and statistics - Central limit theorem - Concept of Standard Error - Confidential limits - Estimation of population parameters - properties of a good estimator - Point and interval estimation ï Hypothesis Formulation and testing procedure - Type I and Type II errors - one tail and two tail tests - Sampling of Attributes - Estimation and testing Number and Proportions of Successes, Difference between two proportions.

UNIT-III

Sampling Variables : Large Samples - Difference between large and small samples - Estimating population mean - testing the significance of Mean - Significance of the difference between means of two samples - Significance between the standard deviations of two samples - Small Samples -âô test - fixing fiducial limits to population mean ï testing the significance of the mean - testing the significance of the difference between two independent means - testing the significance of the difference between two dependent means- F test - meaning - Applications of F test - ANOVA - Assumptions - Procedure - one way and two-way analysis of variance.

UNIT-IV

Statistical Quality Control - Introduction - Chance and Assignable Causes of Variation Uses of SQC - Process Control and Product Control- Control Charts - Control Charts for Variables -X: Chart ï Range chart ï Standard deviation chart - Control charts for attributes - C chart -p chart - np chart. Decision Tree Analysis ï Decision Making under Uncertainties.

Reference Books:

1. Levin, R.I. and D.S. Rubin: Statistics for Management, Prentice-Hall of India.
2. S.C. Gupta : Fundamentals of Statistics, Himalaya Publishing House, New Delhi.
3. Anderson Quantitative Methods for Business Decision, Thomson.

4. Barry Render, Ralph M. Stair Jr., Michael E. Hanna: Quantitative Analysis for Management, Prentice Hall of India.
5. Anderson, Introduction to Management Science: Quantitative Techniques for Decision Making, Thomson.
6. D.C. Sancheti & V.K. Kapoor : Statistics, Sultan Chand & Sons, New Delhi.
7. Sharma, J.K.: Operations Research ï Theory & Applications, Macmillan India Ltd.
8. Gupta, S.P: Statistical Methods, S. Chand & Sons, New Delhi.

PAPER 3: MC. 103 - MODERN ACCOUNTING THEORY & REPORTING PRACTICES

Objective: In view of the convergence of the Indian Accounting Standards with the IFRS, it is desirable to equip the students with the required knowledge of International financial reporting standards and practices. The students are expected to achieve a clear conceptual understanding of the IFRS and possess sufficient knowledge expected out of an expert.

UNIT-I

The Regulatory and Financial Reporting Framework: The International Accounting Standards Board (IASB)-The role and the standard setting process. Progress towards international harmonization. The IASB-Framework for the Preparation and Presentation of Financial Statements; The first time adoption of international financial reporting standards : Objective of financial statements, Qualitative characteristics of financial statements, Elements of financial statements, Recognition and measurement of elements of financial statements, Fair value basis of measurement, Concepts of capital and capital maintenance.

UNIT-II

Elements of financial statements as per International Financial Reporting Standards: (a) Property, plant and equipment (b). Intangible assets inventories (c). Construction contracts (d). Liabilities (e). Financial instruments (f). Provisions and contingencies (g). Employment and post-employment benefits (h). Accounting for tax (i). Accounting for agriculture (j). Share based payment (k). IFRS- 6: Exploration for and evaluation of mineral resources.

UNIT-III

Presentation and additional disclosures as per International Financial Reporting Standards (a). Events after the balance sheet date (b). Earnings per share (c). Related party disclosures (d). Interim financial reporting (e). Effects of changes in foreign exchange rates (f.) Segment reporting.

UNIT-IV

Preparation of external financial reports for single entities as per International Standards (a) Income statements and discontinuing operations (b) Cash flow statements (c) Statement of changes in equity

(d) Preparation of external financial reports for combined entities and joint ventures (e) Definitions of subsidiaries, investments in associates and joint ventures (f) Exclusions from consolidations (g) Preparation of consolidated balance sheets and income statements (h) Equity accounting (i) Proportionate consolidation and joint ventures.

Reference Books:

1. Elliott, B. & Elliott, J. (2008), Financial Accounting and Reporting. 12th ed. Harlow: Pearson/Prentice Hall.
2. Chartered Institute of Management Accountants. CIMA Dictionary of Finance and Accounting. London: Bloomsbury.
3. S. Agarwal, Manual of Accounting Standards, Snow White.
4. T.P. Ghosh, Accounting Standards and Corporate Accounting Practices, Taxman.
5. Bhabatosh Banerjee, Regulation of Corporate Accounting and Reporting in India, World Press.
6. Lev Baruch, Financial Statement Analysis - A New Approach, Prentice Hall.
7. Bernstein & Wild, Financial Accounting Theory - Issues and Controversies, McGraw Hill.
8. K.S. Most, Accounting Theory, Holt, Rinehart & Winston.

PAPER 4: MC. 104 - ORGANISATION THEORY AND BEHAVIOUR

Objective: The objective of the course is to develop a theoretical understanding among students about the structure and behavior of organization as it develops over time. The course will also make them capable of realizing the competitiveness for firms.

UNIT-I

Organizational Theories and Behaviour: Classical, Neo - classical and Contemporary. Authority, Power, status, formal and informal structure. Flat and Tall structures. Bureaucratization of organizations. Organizational Behaviour Concepts, determinants, models, challenges and opportunities of OB. Transaction cost and organizational behaviours. Contributing disciplines to the OB. Individual Behaviour: Foundations of individual behaviour, values, attitudes, personality and emotions. Theory X and Theory Y, Chris Argyris behaviour patterns, Perceptual process.

UNIT-II

Group Decision making and Communication: Concept and nature of decision making process, Individual versus group decision making, Nominal group technique and Delphi technique, models of communication, communication effectiveness in organizations. Feedback, TA, Johari Window. Motivation: Need hierarchy, Maslowôs Need Hierarchy, Two factor theory, Contemporary theories of motivation (ERG, Cognitive evaluation, goal setting, and equity) expectancy model. Behaviour modification, Motivation and organizational Effectiveness.

UNIT-III

Leadership, Power and Conflict: Concept and theories, Behavioral approach, Situational approach, Leadership effectiveness, Contemporary issues in leadership. Power and conflict. Bases of Power, power tactics, sources of conflict patterns, levels and conflict resolution strategies. Transactional Analysis (TA) - Work Stress.

UNIT- IV

Organizational Culture, Organizational Development and Stress Management: Concept and determinants of organizational culture, Organizational Development: Concept and intervention techniques. Individual and organizational factors to stress, Consequences of stress on individual and organization, management of stress. Case Studies: Some cases of real business world are required to be discussed.

Reference Books:

1. Stephen Robbins, Organisational Behaviour, Pearson Education.
2. Fred Luthans, Organizational Behavior, McGraw Hill.
3. Wagner, Organizational Behavour, Thomson Learning.
4. S.S. Khanka, Organisational Behaviour, S.Chand & Co., New Delhi .
5. Dr. S. Shajahan & Linu Shajahan, Organisational Behaviour, New Age International Publishers, New Delhi.
6. Hellriegel, D & J.W. Slocam, Organizational Behavior, Thomson Learning.
7. McSchane, Organization Behavior, TMH.
8. New Storm Davis Organisation Behavior, THM, New Delhi.
9. Slocum, Fundamentals of Organizational Behavior, Thompson Press (Indian Edition).

PAPER 5: MC. 105 - MARKETING MANAGEMENT

Objective: The objective of the course is to familiarize the students with the basic concepts and principles of marketing and to develop their conceptual and analytical skills to be able to manage marketing operations of a business firm.

UNIT-I

Introduction to Marketing Management**;** Marketing - Meaning and approaches, Role of Marketing in Organizations, 4Ps & beyond, Marketing Challenges, Marketing Process and Marketing Planning, Marketing information system.

UNIT –II

Analyzing Market Opportunities ; Analyzing the Marketing Environment- Economic, Demographic, Social, Cultural, Technical, Political & Legal Buying Behaviour- Consumer, Business & Industrial Measuring and Forecasting Market Demand.

UNIT –III

Product management**:** Product - Meaning and Classifications, New Product Development. Managing Product Life Cycles, Brand Strategies and Management. Managing Service - Idea, Institution, Person, Place and Event.

UNIT–IV

Pricing, Distribution and Promotion Pricing- Influencing factors, Approaches, Strategies and Programmes. Channels of Distribution and Logistics. Promotion Strategies - Advertising, Sales Promotion & Public Relations.

Reference Books:

1. Kotler, Philip: Marketing Management Analysis, Planning Implementation and Control (Prentice Hall of India, N. Delhi, 2005).
2. Kotler, Keller, Koshy & Jha: Marketing Management, Pearson Education, N. Delhi.
3. Stone, Marilyn A. & John, Desmond: Fundamentals of Marketing, Routledge, UK.
4. Kumar and Minakshi, Marketing Management, Vikas Publ. House, New Delhi.
5. Kurtz : Principles of Marketing, Cengage Learning India Pvt. Ltd., New Delhi.
6. Stern, Luis W. & El-Ansary, Adel I: Marketing Channels, Prentice Hall of India, N. Delhi.
7. Markin, Ram: Marketing Strategy and Management, John Willey & Sons.
8. Kelly, E.J.& Lazer, William: Managerial Marketing ï Perspectives, Richard D. Irwin Inc, Illinois.

PAPER 6: MC. 106 - MANAGEMENT INFORMATION SYSTEM

Objective: The objective of the paper is to offer a comprehensive overview of Management information systems (MIS). It will explore technical, strategic and tactical issues related to MIS. Basic concepts in analyzing and designing information systems will be presented.

UNIT-I

MIS Definition - Characteristics - Evolution of MIS: Concepts; framework for understanding and designing MIS in an organization; MIS and other related disciplines: MIS and Management Accounting,

MIS and Computer Science, MIS and OR, MIS and Organizational Behavior, MIS and Management. Concept of information : definition, features, types, process of generation and communication; quality of information; information overload; techniques for managing overload; summarizing; filtering; inferences and message routing. System concepts : definition, types and characteristics of system-control in systems: feedback: positive and negative; negative feedback control system, input, process and output control; law of requisite variety.

UNIT-II

Structure of MIS: Basic structural concepts: formal and informal information systems; public and private information systems; multiple approaches to the structure of MIS: Operational elements (physical components, process, outputs for users), activity subsystems, functional subsystems and decision support ï synthesis of multiple approaches into a conceptual structure for MIS.

UNIT-III

Information systems: Transaction Processing Systems, Office Automation Systems, Information Reporting Systems, Decision Support Systems, Executive Support Systems, Expert systems.

UNIT-IV

Systems Development and Implementation: System development methodologies; SDLC approach; prototyping approach and user development approach - Systems Analysis; Systems Design; Concepts of database and database design; system implementation; management of information system projects; system documentation ï information system audit. Security of information resources; threats to information resources; security systems for risk management. Enterprise Resource Planning Systems ï Features-ERP Modules - implementation of ERP.

Reference Books:

1. OôBrien, James A: Management Information Systems, Tata McGraw Hill, New Delhi.
2. George M. Scott: Management Information Systems, McGraw Hill Book Company, New Delhi.
3. Schultheis, Robert and Summer, Mary: Management Information Systems, Tata McGraw Hill, New Delhi.
4. Gordon B Davis, et. El: Management Information Systems, Prentice Hall of India, New Delhi.
5. Kenneth C.Laudon and Jane P. Laudon: Management Information Systems ï Managing the Digital Firm, Pearson Education Asia, New Delhi.
6. Effy Oz, Management Information Systems, Vikas Publishing House, New Delhi.
7. Haag, Cummings and Mccubbrey: Management Information Systems for the Information Age, Tata McGraw Hill, New Delhi.
8. Post, Gerald V and Anderson, David L: Management Information Systems, Tata McGraw Hill, New Delhi.
9. Alex Leon: Enterprise Resource Planning ï Tata McGraw-Hill, New Delhi.

PAPER 7: MC. 107 - WORKSHOP ON IT APPLICATIONS IN COMMERCE

(For Regular Students studying in Colleges/University Department Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas - An Overview of Management Science and Quantitative Analysis: The Management Science Process - Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet- Understanding basic features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios - Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database-features- components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing- Data mining. Features of RDBMS -Database design and application development ï Tables- creation- relationships- Forms designing forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (e) Presentation session of the students on the assigned project.

Reference Books:

1. Hoffer, Jeffrey A, Marry B. Prescott, and Fred R. McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi.
3. Novathe and Elmasri: Fundamentals of Database Systems, Addison Wesley.

4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.

5. Ullmann, Jeffry D, Principles of Database Systems, Galgotia, New Delhi.

6. Post, Gerald V., Database Management Systems, Tata McGraw Hill.

7. Stephan G Powell and Kenneth R Baker Management Science, Art of Modeling with Spread Sheets, Wiley India(p) Ltd., New Delhi.

8. Elmasri and Nawathe- Fundamental of Database Systems, Pearson Education Asia, New Delhi.

PAPER 7: MC. - 107A - IT APPLICATIONS IN COMMERCE

(For USOL Students Only)

Objective: The objective of the course is to expose the students with the use of IT technologies to solve business problems regarding various functional areas of business.

UNIT-I

IT applications in commerce-application areas- An Overview of Management Science and Quantitative Analysis: The Management Science Process-Model development- Steps in modeling- Benefits of Business models.

UNIT-II

Introduction to Spread sheet - Understanding Basic Features of Spread sheet ï Statistical functions- Database Functions -Finance Functions - Logical statements and formula creation- Creating Charts.

UNIT-III

Building decision models and data analysis through Spreadsheets - Forecasting Analyzing Financial Statements using accounting ratios- Project Appraisal IRR,NPV, MIRR - Inventory management ï EOQ and Quantity discounts- Leasing decisions ï Flexible budgets -Break even analysis-goal seek- scenario management and pivot table applications.

UNIT-IV

Database management systems - Concept of database ï features - components of DBMS, Types of databases hierarchical, network, relational,-Normalization- Database administrator- Data warehousing-Data mining. Features of RDBMS -Database design and application development ï Tables- creation-relationships- Forms designing, forms queries- types of queries- reports- report design-use of RDBMS in business decisions.

Reference Books:

1. Hoffer, Jeffrey A, Marry B.Prescott, and Fred R.McFadden: Modern Database Management, Pearson Education, New Delhi.
2. Silberschatz, Korth and Sudarshan: Database System and Concepts, Tata McGraw Hill, New Delhi .
3. Novathe and Elmasri : Fundamentals of Database Systems, Addison Wesley.
4. Loney, Kevin and George Kochi, Oracle 9i, The Complete Reference, Tata McGraw Hill, New Delhi.
5. Ullmann, Jeffry D. : Principles of Database Systems, Galgotia, New Delhi.
6. Post, Gerald V. : Database Management Systems, Tata McGraw Hill.
7. Stephan G Powell and Kenneth R Baker : Management Science ï Art of Modeling with Spread Sheets - -, Wiley India (P)Ltd., New Delhi.
8. Elmasri and Nawathe : Fundamental of Database Systems- Pearson Education Asia, New Delhi.

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SEMESTER-II

PAPER 1: MC. 201 - BUSINESS ENVIRONMENT

Objective: The objective of the course is to acquaint students with the concepts of macro ï economics and the macro environment in which a business organization operates. The course would also make the student capable of analyzing and understanding the macro economic policies of the government implemented from time to time and assess their impact on business.

UNIT-I

Business Environment: Cultural, social, political, technological, economic and legal environment - scanning - techniques of environmental forecasting - SWOT ï Internal environment - their impact on policy formulation.

UNIT-II

Economic reforms in India - Liberalization - privatization and globalization ï Competitive Strength of Indian industry - Impact of liberalization policy on different sectors ï Foreign Investments policy in India. Multi-national corporations - Their participation in India ï Their strategies, competitive strengths policies and performance.

UNIT-III

Industrial Policies: A brief review of industrial policies since independence, Industrial policy of 1991 and recent developments, Policy on foreign direct investment in Indian industry. Fiscal Policy: Public revenues, public expenditure, public debt, development activities financed by public expenditure, an evaluation of recent fiscal policy of Government of India ï Monetary Policy: Demand for and supply of money, Objectives of monetary and credit policy, recent trends - Role of Finance Commission. Integration of Worldôs economies and its impact on Indian Business.

UNIT-IV

Money and Capital market: Features and components of Indian Financial system, objectives, features and structure of Money market and capital market, recent developments - Stock Exchanges, Investor Protection and Role of SEBI. Legal Framework: Consumer Protection Act, 1986, Right to Information and Right to Service Acts and its implications for business.

Reference Books:

1. Wheelen, Concepts of Strategic Management and Business Policy, Pearson Education, New Delhi.
2. William Gluck & L R Jauch, Business Policy & Strategic Management, McGraw-Hill., New Delhi.
3. Kazhmi Azhar , Business Policy, TMH.

4. Gupta, Liberalisation - Its Impact on Indian Economy, Macmillan.
5. K.V.Sivayya and VBM Das: Indian Industrial Economy, Sultan Chand Publishers, Delhi.
6. Suresh Bedi: Business Environment, Excel, New Delhi.
7. Francis Cherunilam: Business Environment - Text & Cases, Himalayan Publishing House, Mumbai.
8. M. Adhikari: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
9. Prof. Laxmi Narain : Globalization , Liberalization and Privatization of Public Enterprises, Sultan Chand & Co., New Delhi.
10. Pandey, G.N., Environmental Management, Vikas Publishing House.

PAPER 2: MC. 202 - RESEARCH METHODOLOGY IN COMMERCE

Objective: The objective of this paper is to impart knowledge about various stages of the research processes and their application in Commerce and Management Education.

UNIT-I

Introduction: - Meaning of the Research ï Qualities of a research worker ï Scientific Method ï Definition ï stages of scientific study ï Different steps in scientific study ï Logical Methods ï Inductive & Deductive Methods ï Nature of the Phenomena & the use of the scientific methods. Approach to a Research Project **:-** Purpose of Research ï Functions in Research ï Research Programme ï Problem solving through research /financial aspects of research ï Research Design (Selective topic, Coverage, Hypothesis) ï Sources of Information ï Nature of study ï Definition of terms ï Techniques of study ï Collection, Analysis & presentation of the data ï Testing hypothesis ï Stating results.

UNIT-II

Use of the Library: - Finding the correct sources of information ï Uses of books, periodicals & encyclopedia ï Taking down notes ï Collection & organization of Material. Research Method :- Sampling Method ï Observation Method ï Case Study Method ï Interview Method ï Survey Method ï Experimental Method ï Questionnaire Method - Library Method ï Documentary Method ï Suitable Combination & Selection of Method ï advantages, disadvantages & limitations of methods.

UNIT-III

Presentation of Information:-Analysis of information ï Classification, tabulation & interpretation ï Presentation of data & its application ï Pictorial presentation ï Composition of information (quotation, footnotes, bibliography - tables, standards, abbreviations) - style of writing. Coordinating contents :- Front matter (blank sheet, title page, dedication, preface, table of contents, list of tables, list of figures, list of appendices etc.) ï Text proper (Chapter wise information) ï Back matter (appendices, glossary, bibliography, index, blank sheet).

UNIT-IV

Multivariate analysis ï an overview of dependence and interdependence methods (multiple regression, discriminate analysis, conjoint analysis, factor analysis, cluster analysis); research report; ingredients and constructions of research report ï procedure of preparation of reference and bibliography. Research Findings and Preparation and writing of a Research Report: - Benefits of implementation of actual research findings ï carrying forward the studies ï Management of research unit ï Preparation and writing of a ôResearch Reportô.

Reference Books:

1. Methods of Social Survey and Research, S. R. Bajpai, Kitab Ghar, Kanpur.
2. Zikmund, Millian G., Business Research Methods, Thomson Learning, Bombay.
3. Cooper, Donald R. and Pamels Schindler, Business Research Methods, Tata McGraw Hills, New Delhi.
4. Geode, Millian J. & Paul K. Hatl, Methods in Research Methods, Tata McGraw Hills, New Delhi.
5. Shekhran, Uma, Business Research Method, Miley Education, Singapore.
6. Kothari, C.R., Research Methodology- Methods and Techniques, New Age International Publishers.

PAPER 3: MC. 203 - FINANCIAL MANAGEMENT AND POLICY

Objective: The objective of the course is to acquaint the students with the basic analytical techniques and methods of financial management of business firms. The course also provides students the exposure to certain sophisticated and analytical techniques that are used for taking financial policy decisions.

UNIT-I

Financial management - Scope, finance functions and its organization, objectives of financial management; time value of money; sources of long term finance. Financial Forecasting: Sales Forecast Preparation of Performa Income Statement and Balance Sheet Growth and External Funds Requirement (EFR).

UNIT- II

Investment decisions; importance, difficulties, determining cash flows, methods of capital budgeting; risk analysis (risk adjusted discount rate methods and certainly equivalent methods) cost of different sources of raising capital; weighted average cost of capital.

UNIT- III

Capital Structure decisions - Leverage: Measuring and analyzing the implications of Leverage Operating Leverage, Financial Leverage and Total Leverage; capital structure theories - NI, NOI, traditional and M-M theories; Capital Structure Policy: Business & Financial Risk, A Total Risk Perspective Business & Financial Risk, A Market Risk Perspective Determinants of Capital Structure Decision Approach to Estimating the Target Capital Structure Variations in Capital Structures, EBIT / EPS Analysis and ROI/ROE Analysis.

UNIT- IV

Determinants of dividend models - Walter, Gordon & M.M. models. Working Capital ï Meaning, need, determinants; estimation of working capital need; management of cash; inventory & receivable.

Reference Books:

1. Pandey, I.M. Financial Management, Vikas Publishing House, New Delhi.
2. Khan M.Y. and Jain P.K. Financial Management, Tata McGraw Hill, New Delhi.
3. Keown, Arthu J., Martin, John D., Petty, J. William and Scott, David F., Financial Management, Pearson Education.
4. Chandra, Prasanna, Financial Management, TMH, New Delhi.
5. Van Horn, James C., Financial Management and Policy, Prentice Hall of India.
6. Brigaham & Houston, Fundamentals of Financial Management, Thomson Learning, Bombay.
7. Kishore, R., Financial Management, Taxmans Publishing House, New Delhi.

PAPER 4: MC. 204 - PRODUCTION AND MATERIALS MANAGEMENT

Objective: To impart knowledge regarding production and management techniques, process, tools, and acquaint the students with the knowledge of marketing functions, techniques and strategies.

UNIT-I

Introduction to Production Management - Nature, Scope, Importance and Functions Materials Management - Evolution, Importance, Scope and Objectives - Interface with other functions. Introduction of Inventory Control, Static Inventory problem under risk. Dynamic Model under risk, policy coordinated, Replacement with discount. Introduction to purchasing, Functions of purchasing, procedure of purchasing, Selection Sources of Supply, Negotiation with Suppliers.

UNIT-II

Price determination; Price Cost Analysis, Quality determination and control value analysis. Scope & functions of operations management, Forecasting of demand. Delphi. Methods, Statistical Quality Control Technique.

UNIT-III

Facilities Location & Layout ï Strategic importance - Factors affecting location & layout - Installation of facilities ï Single location, multi-location decisions. Principles and Types of Facilities Layout. Importance and Functions of Production Planning & Control. Introduction to PERT / CPM - Network Crashing.

UNIT-IV

Productivity - Work Study - Objectives, Scope and Uses - Methods Study ï Flow process chart, Flow diagram & Process mapping - Work Measurement - Elements ï Performance Rating - Allowances - Standard Time - Synthetic Time Standards ï Work Sampling.

Reference Books:

1. Alan Mulemann, John Oakland, Keith Locker, ôProduction and Operations Managementô Macmillan India Ltd.
2. Datta, A.K., Materials Management : Procedures, Text and Cases, Prentice Hall of India.
3. Gaither, Operations Management , Thomas Learning.
4. S.A. ShunwalIa *&* Patel, Production and Operations Management, Himalaya Publishing.
5. R. Panneerselvan, Production and Operations Management, Prentice Hall of India.
6. P. Saravanavel, S. Sumathi, Production and Materials Management, Margham Publication.
7. Mukhoipadhyay, Production Planning and Control, TMH.

PAPER 5: MC. 205 - OPERATIONS RESEARCH

Objective: To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.

UNIT-I

Operations Research: Evolution, methodology and role in decision making; Linear programming: Meaning, assumptions, advantages, scope and limitations: Formulation of Problem and its solution by graphical and simplex methods (Including Big M Method and Two Phase Simplex Method); special cases in simplex method; infeasibility, degeneracy, unboundedness and multiple optimal solutions; duality. Dual Simplex Method.

UNIT-II

Transportation problems including transshipment problems; Special cases in transportation problems; unbalanced problems, degeneracy; maximization objective and multiple optimal solutions; assignment problems including travelling salesmanôs problem. Special cases in assignment problems; unbalanced problems, maximization objective and multiple optimal solutions.

UNIT-III

PERT/CPM: Difference between PERT and CPM, network construction, calculating EST, EFT, LST, LFT and floats, probability considerations in PERT, time cost trade off. Decision theory: decision making under uncertainty and risk, Bayesian analysis, decision trees. Replacement problem (Individual and Group replacement problems both).

UNIT-IV

Game theory, pure and mixed strategy games; principle of dominance; two person zero sum game; Queuing theory: concept, assumptions and applications; analysis of queue system, Poisson distributed arrivals and exponentially distributed service time model (MMI and MMK); simulation; meaning, process, advantages, limitations and applications.

Reference Books:

1. Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.
2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.
3. Vohra, N.D., Quantitative Techniques in Management, Tata McGraw Hills Publishing Company Ltd., New Delhi.
4. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.
5. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.
6. Kalavathy, Operations Research, Vikas Publishing House, ND.

PAPER 6: MC. 206 - BUSINESS POLICY & STRATEGIC MANAGEMENT

Objective: The objective of the course is to help the students develop an understanding of the basic inputs in making and implementing corporate strategic decisions and also familiarize them with the issues and practices involved.

UNIT-I

Strategic Management - An Introduction - Evolution of business policy as a discipline - Strategy and the

Quest for Competitive Advantage: Military origins of strategy ï Evolution - Concept and Characteristics of strategic management ï Defining strategy ï Mintzerbgôs 5Ps of strategy ï Corporate, Business and Functional Levels of strategy - Strategic Management Process.

UNIT-II

Strategic Options Porterôs Generic Strategies Integration Strategies, Intensive Strategies. Diversification and Differentiation Strategies, Functional Strategy - Manufacturing, Financial, Marketing, Human Resource, Research & Development. Strategic Intent & Strategy Formulation: Vision, mission and purpose ï Business definition, objectives and goals ï Stakeholders in business and their roles in strategic management ï Corporate Social Responsibility, Ethical and Social Considerations in Strategy Development.

UNIT-III

Strategy implementation - Project implementation ï Procedural implementation ï Resource Allocation ï Organization Structure ï Matching structure and strategy. Behavioral issues in implementation ï Corporate culture ï Mc Kinseyôs 7s Framework - Concepts of Learning Organization. Strategy Evaluation - Importance - Symptoms of malfunctioning of strategy - Organization anarchies - Operations Control and Strategic Control - Measurement of performance - Analyzing variances - Role of organizational systems in evaluation.

UNIT-IV

New Business Models and strategies for Internet Economy: Shaping characteristics of E-Commerce environment ï E-Commerce Business Model and Strategies ï Internet Strategies for Traditional Business ï Key success factors in E-Commerce ï Virtual Value Chain. Cases in strategic management. A minimum of 10 cases encompassing the above topics to be analyzed and discussed in the class. Cases to be incorporated in the Question Paper.

Reference Books:

1. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting & Executing Strategy ï The Quest for Competitive Advantage, Tata McGraw Hill.
2. Ranjan Das, Crafting the Strategy: Concepts and Cases in Strategic Management, Tata McGraw Hill.
3. Henry, Mintzberg, Bruce, Ahlstrand and Joseph, Lampel, Strategy Safari, Free Press, New York.
4. Gary, Hamel and Prahalad, C. K.. Competing for the Future, HBS Press.
5. Ed. C.A. Montgomery, M.E. Porter, Strategy ï Seeking and Securing Competitive Advantage, Harvard Business Review Publications.
6. Peter F. Drucker, Managing in a Time of Great Change, Truman Talley Books/Plume Penguin Group.
7. Kazmi, A, Business Policy and Strategic Management, Tata Mcgraw Hill, New Delhi.
8. Wheelen, T.L. and Hunger, J.D, Strategic Management and Business Policy, Pearson Education, (LPE), New Delhi.

Paper 7: MC. 207- SUMMER TRAINING REPORT AND VIVA VOCE

(For Regular Students Only)

After the Completion of Second Semester Examination the students will go on 6-8 Weeks summer training in various Industrial undertakings, banking and financial services institutions, and Retail Sector organizations, undertake a project there to study a particular problem and file three copies of summer training report within 15 days completion of the training. The student has to file a certificate of completion of training issued by training organization. A VIVA-VOCE Examination will be conducted by the External examiner appointed by the University on the problems undertaken in the summer training report. Principal of the College/Chairperson of the Department must appoint one internal supervisor for the guidance of the student regarding the Summer Training Project. The List of the internal supervisors so appointed must be communicated to the Controller of examination within 10 days from the date of appointment. The Internal supervisor will also be acting as Internal Examiner at the time of Conduct of VIVA-VOCE and sit with External Examiner.

PAPER 7: MC. 207-A - ENTREPRENEURSHIP DEVELOPMENT & PROJECT MANAGEMENT

(For USOL Students Only)

Objective: The purpose of this paper is to prepare a ground where the students view Entrepreneurship as a desirable and feasible career option. In particular the paper seeks to build the necessary competencies and motivation for a career in Entrepreneurship.

UNIT-I

Foundations of Entrepreneurship Development: Concept and Need of Entrepreneurship Development, Definition of Entrepreneur, Entrepreneurship, Innovation, Invention, Creativity, Business Idea, Opportunities through change. Concepts of Entrepreneur, Manager, Intrapreneur / Corporate Entrepreneur ï comparative study - Roles, Responsibilities, Career opportunities. Entrepreneurship as a career, Entrepreneurship as a style of management, The changing role of the entrepreneur: mid career dilemmas ï Closing the window: Sustaining Competitiveness - Maintaining competitive advantage.

UNIT-II

Theories of Entrepreneurship: Innovation Theory by Schumpeter & Imitating Theory of High Achievement by McClelland ,X-Efficiency Theory by Leibenstein, Theory of Profit by Knight, Theory of Social change by Everett Hagen Influences on development.

UNIT-III

Project Management Technical, Financial, Marketing Personnel and Management feasibility Reports Financial schemes offered by various financial institutions like Commercial Banks, IDBI, ICICI, SIDBI, SFCs, Venture Capital Funding, Angle Capitalist.

UNIT-IV

Entrepreneurship Development and Government Role of Central Government and State Government in promoting Entrepreneurship with various incentives, subsidies, grants etc. ï with special reference to ôExport oriented unitesô Role of the following agencies in the Entrepreneurship Development DIC ï District Industrial Center, SISI ï Small Industries Services Institute, EDII ï Entrepreneurship Development Institute of India NIESBUD ï National Institute of Entrepreneurship and Small Business Development. NEDB ï National Entrepreneurship Development Board.

Recommended Books:-

1. Brandt, Steven C., The 10 Commandments for Building a Growth Company, Macmillan Business Books, Delhi.
2. Bhide, Amar V., The Origin and Evolution of New Business, Oxford University Press, New York.
3. Dollinger M.J., ôEntrepreneurship Strategies and Resourcesô, 3rd edition, Pearson Education, New Delhi.
4. Desai, Vasant Dr., Management of Small Scale Enterprises, Himalaya Publishing House, New Delhi.
5. Taneja, Gupta, Entrepreneur Development New Venture Creation, 2nd ed., Galgotia Publishing Company.
6. Holt, David H., Entrepreneurship: Strategies and Resources, Illinois, Irwin.
7. Panda, Shiba Charan, Entrepreneurship Development, New Delhi, Anmol Publications.
8. Patel, V.G., The Seven Business Crises and How to Beat Them, Tata-Mcgraw, New Delhi.

OR

PAPER 7: MC. 207-B - FINANCIAL SERVICES

(For USOL Students Only)

Objective: To provide insight to the structure, working and problems of financial, system in India as well as to enable students to appreciate and understand the concepts, mechanism and utility of different financial services.

UNIT – I

An overview of Indian financial system: Introduction, structure, components and mechanism of the financial system. Financial Services: An overview. Introduction to SEBI.

UNIT–II

Merchant Banking: Functions and SEBI regulations and Non Fund-based and Fund-based activities including role in mobilization of funds. Depository Services in India (including regulatory aspects).

UNIT–III

Leasing - Introduction, financial evaluation of lease from lessorôs and lesseeôs point of view, lease structuring, Tax, legal and accounting aspects especially in Indian context. Factoring: Features, process and agreement for factoring.

UNIT–IV

Mutual Fund: Introduction, management, regulations, working, and Indian experiences. Credit Rating: Concepts, functions and process of debt rating and SEBI regulations.

REFERENCES:

1.	L.M. Bhole	Financial Institutions and Markets
2.	J.C. Verna	Merchant Banking Organisation and Management
3.	Lalit K. Bansal	Merchant Banking and Financial Services
4.	M.Y.Khan	Financial Services
5.	V.A. Avadhani	Investment and Securities Markets in India.
6.	S. Ramesh & Arun Gupta	Venture Capital and Indian Financial Sector.

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SEMESTER-III

PAPER 1: MC. 301 - BUSINESS PERFORMANCE MEASUREMENT

Objective: The objective of this paper is to make the students familiar with the performance measurement techniques for business.

UNIT-I

Corporate Performance Measurement - Need and Importance; Historical Overview; Product Costing in price estimates and profit management; Techniques to measure and enhance profitability and quality of products and services; Activity Based Management, Target and Kaizen costing; benchmarking and environmental costing; Flexible Budgeting, and Activity Based Budgeting.

UNIT-II

Setting of performance goals and incentives, and the use of diagnostic tools and control; systems to achieve the goals; Strategic Profitability Analysis; Measuring performance using Economic Value Added (EVA) methodology; Comparison between Return on Investment (ROI) and EVA methodology of measuring performance.

UNIT-III

Measurement of Corporate Performance through Balanced Scorecard and its value creation potential;. Rationality behind balance score card; performance dimensions of the balance score card; Throughput Accounting; Comparison of Activity Based Costing.

UNIT-IV

Information Systems aspects of management control; Control-needs of Information flow, and its consolidation in multi-locational setting; Management Control System and its applications; Responsibility Accounting - Meaning and Methodology, types of responsibility centres, organizational structure of responsibility centres; objectives and methods of transfer pricing, pricing corporate services and administration of transfer pricing.

Reference Books:

1. Anthomu, R.N. and Govindrajan, V., Management Control System, Tata McGraw-Hill New Delhi.
2. Atkinson, A., R.S. Kaplan and S.M. Young, Management Accounting (4th ed). New Jersey: Prentice Hall
3. Friedlob, George T, Lydia, L.F., Essentials of Corporate Performance Measurement, John Wiley and Sons inc.
4. Manzoni, Alex, Islam Sardar, M.N, Performance Measurement in Corporate Governance, Springer
5. Simon, R., Performance Measurement and Control System for Implementing strategy-Text and Cases, Prentice Hall
6. Merchant, K and Van-der-stede, W.A., Management Control System: Performance Evaluation and Incentives, Prentice Hall.
7. Marvin T. Howell, Actionable Performance Measurement - A Key to Success, American Society for Quality, Quality Press, Milwaukee.
8. Merchant, K.A., Modern Management Control System: Text and Cases, Pearson Education Inc.

PAPER 2: MC. 302 - TAX PLANNING AND MANAGEMENT

Objective : The aim of this course is to familiarize the student with major latest provisions of the Indian tax laws and related judicial pronouncements pertaining to corporate enterprises having implications for various aspects of Corporate planning with a view to derive maximum possible tax benefits admissible under the law.

UNIT-I

Structure of Direct and Indirect Taxes in India. Concepts, Significance and Problems of Tax Planning, Tax Avoidance and Tax Evasion ï Recognized methods of Tax Planning : Ensuring maximum claims for deduction for companies with special emphasis on depreciation allowance, expenses of scientific research, amortization of preliminary expenses and amounts not claimed otherwise. Taking advantages of available reliefs, rebates and tax free sources of income.

UNIT-II

Definition of various kinds of companies - Meaning of company under IT Act. Residential status of companies and implications for Tax Planning. Assessment of companies including carry forward and set off of losses.

UNIT-III

Tax implications in planning of business unit as Proprietorship, Partnership, Pvt. Ltd. & Public Ltd. Tax planning in the context of exemptions, incentives, export promotions & various deductions under Chapterï VI of Income Tax Act. Setting up of a new Industrial Establishment: location aspects; nature of business; planning for tax holiday benefits. Specific management decisions such as (1) make or buy; (2) own or lease, (3) repair or replace; (4) export vs. local sale; (5) shut down or continue; (6) expand or contract.

UNIT-IV

An overview of goods and service tax: Introduction to GST, reasons for introducing GST, pros and cons of GST. Registration procedure of trader / service provider under GST. Levy and collection of CGST/SGST under GST. Composite levy scheme of GST. Levy and collection of IGST. Input tax credit and relief to consumers and traders under GST. Applicable rates of tax on various goods and services under GST.

Reference Books:

1. Singhania, V.K.: Direct Taxes: Laws and Practice , Taxman N. Delhi.
2. Singhania, V.K. : Direct Tax planning and Management Taxman N. Delhi.
3. Prasad, Bhagabati: Direct Tax Law & Practice, New Age Publ., N. Delhi.
4. Merhotra, H.C.: Direct Taxes Planning, Sahitya Bhavan, Agra.
5. Srinivas, E.A.: Corporate Tax Planning, TMG, New Delhi.
6. Lakhotia, R.N. Corporate Tax Planning, Vision Publications, N. Delhi
7. Ahuja, Girish & Gupta, Ravi: Systematic Approach to Income tax.
   Goods and Service Tax Act,2017

SEMESTER-III (ELECTIVES)
GROUP A: MARKETING

MC. 303 - INTEGRATED MARKETING COMMUNICATION & BRAND EQUITY

Objective: The objective is to introduce the students to the integrated role of promotion techniques with the special emphasis on advertising.

UNIT-I

Marketing communication; functional areas of marketing communication; integrated marketing communication; types of advertising agencies; media partners and their role; compensating the advertising agencies; agency evaluation; brands - its meaning; creating and maintaining the brand; selecting desired brand position; developing brand identification; creating a brand image; creating and maintaining brand relationship with customers; brand-customer touch points; prospects and customers; AIDA model; think/feer/do models; brand decision making process; attitude formation and attitude change; brand likeability.

UNIT-II

Branding concepts; branding challenges and opportunities; brand equity concept; strategic brand management process; customer based equity; building a strong brand and its implications; identifying and establishing brand positioning; defining and establishing brand values; internal branding.

UNIT-III

Campaign planning; IMC planning process; internal marketing; segmenting and targeting; types of segmentation; message and profitability targeting; digitization of brand information; customer database; building relationship through data management; developing creative message strategy; process of developing IMC message strategy; methods of getting creative ideas; brand-message execution; copywriting; writing for point and electronic media; print layout and design; executional and strategic consistency.

UNIT-IV

Media classification; media strength and weakness; wireless communication; e-mail marketing; website marketing; integrating online brand communication; media planning; consumer sales promotion; sales promotion tools; determining consumer sales promotion strength and limitations of sales promotion; trade promotion; trade promotion for new products and existing brands; trade promotion strategies; objectives of co-marketing communication.

Reference Books:

1. Duncan, Tom; Principles of Advertising and IMC; Tata McGraw Hill, New Delhi.
2. Clow, Kenneth & Baack, Donald; Integrated Advertising, Promotion and Marketing Communication; Pearson Education, New Delhi.
3. Belch, George and Belch, Michael; Advertising and Promotion; Tata McGraw Hill, New Delhi.
4. Wells, William, Burnett, John ad Moriarty, Sandra; Advertising Principles and Practice; Pearson Education; New Delhi.
5. Jethwaney, Jaishree and Jjain, Shruti; Advertising Management; Oxford University Press; New Delhi.

MC. 304 - MARKETING RESEARCH

Objective: The course aims at exposing the students to the concept, tools and techniques of marketing research and developing their skills to be able to apply research techniques to aid marketing decision making.

UNIT I

Introduction : Meaning, nature and importance of marketing research; Marketing research and scientific method; Research reliability and validity; Problems in conducting marketing research; Marketing Information System (MIS); Ways of conducting marketing research; Syndicated research. Marketing Research Process: Steps involved in conducting marketing research; Problem identification; Determining information needs; Developing marketing research proposal.

UNIT II

Research Design : Meaning and importance; Types of research designs ï explorative, descriptive and conclusive researches; Secondary data ï sources, uses and limitations; Primary data collection methods ï questioning techniques and observation methods; Online data sources and research; Questionnaire preparation. Sample Design and Field Work : Defining universe and sampling unit; Determining sampling frame; Probability and non - probability sampling methods; Sample size determination; Field work and data collection ï sampling and non-sampling errors.

UNIT III

Data Analysis and Report Preparation: Data editing, coding tabulation and graphical presentation; Univariate and multivariate data analyses techniques and their applications in marketing research; Report preparation, presentation and follow - up. Marketing Research Applications: Consumer research ï behaviour and motivation research, attitude measurement and scaling techniques.

UNIT IV

Product research; Advertising research; Marketing and sales forecasting; Sales analysis. Marketing Research in India: Status, organization and developments; Ethical issues in marketing research.

Suggested Readings:

1. Harper W. Boyd, Ralph Westfall and Stanley F. Stasch, Marketing Research: Text and Cases.
2. Malhotra, Naresh K., Marketing Research, 5th Ed., Prentice Hall of India.
3. Cooper, Donald R. and Pamela S. Schindler, Marketing Research, Tata McGraw Hill.
4. Paul E. Green, et.al., Research for Marketing Decisions, Prentice-Hall of India Pvt. Ltd, New Delhi.
5. Donald S. Tull and Del I. Hawkins, Marketing Research: Measurement and Methods, Prentice-Hall of India Pvt. Ltd., New Delhi.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 305 – HUMAN RESOURCE DEVELOPMENT

Objective: The objective of the course is to make student aware of the concepts, techniques and practices of human resource development. This course is intended to make students capable of applying the principles and techniques as professionals in organizations they work for.

UNIT I

Human resource development: Concept and evolution, human resource mobilizations, HRD Conceptual base, strategic interventions in HRD sector and target groups, HRD mechanisms, processes and outcomes, HRD instruments, HRD. HRD and Management: Attitude of top management towards HRD, Motivational aspects of HRD, Trends and Practices, Line manager and HRD.

UNIT II

HRD Activities: HRD culture and climate, Elements of HRD climate, measurement of HRD climate, factors to HRD climate, Determinant needs, developmental supervisor, HRD for Workers: HRD mechanisms for workers, Role of trade unions.

UNIT III

HRD in Organizations: Government organizations, educational institutions, armed forces, police and industry, private sectors and public sectors units.

UNIT IV

Emerging Issues in HRD: Creating awareness and commitment to HRD, Industrial relations and HRD, Utilization of HRD efforts, Future of HRD, International comparison of HRD (Commonalities and differences).

Reference Books:

1. Werner, Jon M. and Randy L. Desimone, Human Resource Development, South-Western Educational Publishing.
2. Nadler, L (ed), Corporate Human Resources Development, Van Nostrand Reinhold.
3. Parek V. and T.V. Rao, Designing and Planning Human Resource Systems, Oxford and IBH, New Delhi.
4. Strategic HRM ï Jeffery Mello, Thompson Publication, New Delhi.
5. Strategic HRM- Charles Greer, Pearson Education Asia , New Delhi.
6. Strategic HRM-Michael Armstrong, Kogan Page, London.
7. Strategic HRM- Agrwal, Oxford University Press , New Delhi.
8. Human Resource Management- Garry Dessler, PHI, New Delhi.

MC. 306 – INDUSTRIAL RELATIONS

Objective: The objective of the course is to make student aware of the concept of industrial relations. The course will make them understand the importance of industrial relations for an organization and how these relations provide dynamics to organizations.

UNIT I

Industrial Relations: Concepts and scope, Historical development, Unilatarist, Pluralist and Marxist perspective of IR. Trade Unionism: role of trade unions, trade union in India, national level federations, Goals and objectives of unions and union leadership, weaknesses in trade unions, trade unions, politics and government. Theories of trade unionism. Cross cultural aspects of union management relations.

UNIT II

Trade Union Act 1926: An overview. Union recognition; de-unionization strategies. Union Management Relations: conceptual framework, union management perspectives, organizational factors affecting union management relations. Public policies and union management relations, role of state, constitution and labour policies, ILO, Major events and international issues, changes affecting HR/IR perspectives, perspectives in India.

UNIT III

Industrial Democracy: Concepts and scopes of industrial democracy, Workerôs participation: Strategy, practices, behavioral science input/contribution and models. Rationale for participation, Issues in participation, strategies for making participation work and making participation more effective. Methods of industrial relation machinery in India; Statutory and non-statutory methods of industrial dispute resolution; Conciliation, mediation, arbitration and adjudication.

UNIT IV

Comparative Industrial Relations: Principles of comparative analysis, variables of comparative analysis (culture, values, ideologies, politico-economic structure). Experience of UK, Yugoslavia, West Germany, Scandinavian countries and Japan. Managing Industrial Relations: Regulatory mechanisms, employee discipline, suspension, dismissal and retrenchment, employee grievance handling, Collective bargaining, negotiation skills, industrial conflict resolution. Labour Welfare: Rationale need and requirements.

Reference Books:

1. Katz, Harry, Thomas A. Kochan, & A. J.S. Colvin, An Introduction to Collective Bargaining and Industrial Relations, The McGraw Hill Companies.
2. C.S. Venkat Ratnam, Industrial Relations: Text and Cases, Oxford University Press, Delhi.
3. Michael Salamon, Industrial Relations: Theory & Practice , Pearson Higher Education.
4. Farnham and Limlott, J., Understanding Industrial Relations Cassell.

GROUP C : INTERNATIONAL BUSINESS

MC. 307 - INDIA'S FOREIGN TRADE AND INVESTMENT

Objective: The objective of this course is to acquaint the students with structure and policy framework of Indiaôs foreign trade and investments.

UNIT I

Indiaôs Foreign Trade: Pattern and Structure of Indiaôs foreign trade; Indiaôs trade in service; Terms of trade; India on the world trading map; Analysis of thrust export products and markets. Foreign Trade Policy and Economic Relations: Policy making body and regulatory framework; Trends and developments in Indiaôs foreign trade policy; Bilateralism and multilateralism in Indiaôs trade relations; India and WTO, WTO and emerging trading environment, Indiaôs trade and economic relations with EU and other regional groupings; India and regional economic cooperation in South Asia.

UNIT II

Export Promotion Measures and Facilities: Export promotion measures and schemes; Export and trading houses, Import facilities for exports; Export processing/special economic zones (EPZs/SEZs) and 100% EOUs ï Policy framework and operational aspect. Institutional Arrangements and Infrastructure Support: Export promotion councils, Commodity boards/export development authorities; other service organizations; Infrastructure Support ï Transportation and warehousing infrastructure, Indian ports and shipping system.

UNIT III

Procedural and Documentary Framework ï An Overview: Trade operations and documentation; Procedure for getting started in export ï import business. Trade contract and INCO terms; Export payment terms and UCDPC; quality inspection; Excise and customs clearance. Foreign Trade Finance and Insurance: Pre - shipment and post-shipment finance; Sources and schemes of foreign trade finance; Exim Bank and foreign trade finance; Coverage of Credit, transit, commercial and political risks; ECGC and risk coverage.

UNIT IV

Foreign Exchange facilities and Regulations; Foreign exchange facilities and exchange rate mechanism; Regulatory framework ï FEMA and its objectives and provisions; Other acts and regulations. Foreign Investments: Indiaôs foreign investment policy and flows: Indiaôs investments abroad ï pattern and structure; Indian Joint ventures in foreign countries and their operations. Balance of Payment Account: Indiaôs Balance of Payment account and adjustment policies; foreign reserves and debt situation.

Reference Books:

1. Ministry of Commerce, Export Import Policy, Government of India, New Delhi.
2. Ministry of Commerce, Handbook of Procedures, Vols. I and II, Government of India, New Delhi.
3. Customs and Excise Laws, Various issues.
4. Nayyar Deepak, Foreign Trade Sector, Planning and Industrialisation in India, in Terance J. Byres (ed.), The State Development Planning and Liberalisation in India, Delhi.
5. Nayyar Deepak, Indiaôs Exports and Export Policies in 1960, Cambridge University Press. Meier G.M., Trade Policy and Development in Scott Maurice and Deepak Lal.
6. Public Policy and Economic Development ï Essays in Honour of lan Little, Oxford.
7. Nayyar Deepak, Indiaôs Export Performance 1970-85, Underlying Factors and Constraints, in Robert E.B. Lucas and Gustav F. Pipanek (ed.), Indian Economy Recent Development and Future Prospects, New Delhi.

MC. 308 - MANAGEMENT OF INTERNATIONAL BUSINESS OPERATIONS

Objective: The course intends to acquaint the students with the management of international business operations of a business firm.

UNIT I

International Business Management: Complexities and issues; Approaches to international management; Cross -cultural values and business management; Foreign market entry mode decisions and level of international involvement; International management orientation; International business management -A strategic perspective. International Planning: Environmental scanning and monito ring; Resource allocation and portfolio compositions of a global firm; Linkages and synergies among business units across borders; Locus of decision making; Headquarter ï subsidiary relationships in international business enterprises; International management information system.

UNIT II

Organizational and Control Aspects of International Operations: Organizational design and structure of international companies; Managing communication across cultures; Co-ordinating and controlling international business operations. International Production and Procurement: International production and location decisions; Procurement for international operations ï International sourcing World class manufacturing and international quality standards; Supply chain management and global business operations.

UNIT III

International Marketing Management: International Market segmentation, targeting and positioning; International marketing mix planning ï Product, price, promotion and distribution decisions. Management of International Financial Operations; International capital budgeting and portfolio investment decisions; International capital structure decision, International working capital management, International accounting and taxation issues.

UNIT IV

International Human Resource Management: Selection, training and development of people in international firms; Compensation and reward systems among international firms; Motivation and leadership in international firms. International Business Negotiations: Process and skills; Management of International Collaborative Arrangements.

Reference Books:

1. Danoes, John D. Radebaugh, Lee H., and Daniel P. Sullivan, International Business: Environment and Operations, Prentice Hall.
2. Griffin, Ricky W. and Pustay, Michael W., International Business: A Managerial Perspective, Prentice Hal.
3. Hill, Charles, W.L., International Business, McGraw Hill Company, New York.
4. Ball, Donald, Wendall H. McCulloch, Miachel Geringer, Michael S. Minor and Jeanne M. McNett, International Business: The Challenge of Global Competition, McGraw Hill Co.

GROUP D: ACCOUNTING AND FINANCE

MC. 309 - STRATEGIC COST MANAGEMENT

Objective: This course aims to acquaint the students with concepts and various aspects of cost management from strategic perspective.

UNIT-I

Conceptual framework of SCM, environmental influences in cost management practices, role of SCM in strategic positioning; cost management tools-life cycle costing, target costing, kaizen costing, JIT & theory of constraints, BPR and bench marking.

UNIT-II

Nature of activity-based costing (ABC); benefits and limitations of ABC; limitation of volume-based costing system, indicates of ABC; activity hierarchic; cost drivers; designing an ABC system, Activity-based management; operational and strategic application of ABC; customer profitability analysis, process value analysis, financial measures of activity efficiency; Nature of value-chain analysis; activity analysis an linkage analysis; application of linkage analysis in cost reduction and value addition.

UNIT-III

Functional-based planning and control; budgeting ï nature, administration and effectiveness; budgeting cycle; activity-based budgeting; kaizen approach; ZBB; performance budgeting; human aspects of budgeting; responsibility centers and financial control - nature and role of responsibility centers; accounting and evaluation of responsibility centers, measuring the performance of investment centre ï ROI, RI, EVA; transfer pricing and its applications.

UNIT-IV

Strategic-based performance measurement system: Balanced score card-prospective and limitations; establishing objectives and performance measures in different perspectives of balance score card; productivity measurement and control; productivity efficiency; partial and total productivity measurement; measuring changes in activity and process efficiency; quality cost management and reporting.

Reference Books:

1. Drury, Colin, Management Accounting and Control, Thomson Learning.
2. Horngren, Datar Foster, Cost Accounting, Pearson Education.
3. Hansen and Mowen, Cost Mangement, Thomson Learning.
4. Kaplan, Atkinson and Young, Management Accounting, Pearson Education.
5. Kaplan, Atkinson, Advanced Management Accounting, Pearson Education.
6. Anthony, Robert N., and Vijay, Management Control System, McGraw Hill.

MC. 310 - INTERNATIONAL ACCOUNTING

Objective: The objective of this course is to develop some conceptual knowledge and Understanding of international accounting issues among students. In addition, this course makes students capable of tackling issues in prevailing regulatory environments.

UNIT-I

International Dimensions of accounting and control: Multinational enterprise, Inter-nationalisation of capital markets, Internationalization of accounting profession. Operational and conceptual issue. Foreign currency translations, methods and practices.

UNIT-II

Specific Reporting Issues: Regulatory Disclosure Requirements; Foreign Operations Disclosure; Social Responsibility Disclosures. Managerial Accounting Issues: Strategic Planning; Management Control Systems; Performance Evaluation of foreign operations.

UNIT-III

International Accounting Standard Board and International Financial Reporting Standards (IFRS): Advantages, supporting and deterring forces; International and Regional Efforts in Standard Setting; International Standards setting process, Harmonization; Financial Statement Analysis of companies and countries differences in accounting principles, foreign currency statements and Ratio Analysis.

UNIT-IV

Transfer pricing, methods, objectives, strategies. Emerging issues in International Accounting.

Reference Books:

1. Radebaugh L. H. and S.J. Gray, International Accounting, and Multinational Enterprises, John Wiley & Sons.
2. Sandagaran S.M., International Accounting, South Western.
3. Gray, S.J., International Accounting and Transnational Decisions , Butterworth, London, U.K.
4. Holzer H. Peter, International Accounting, Horper and Row Publishers, New York.
5. Frederick D.S. Choi and Gary K. Meek, International Accounting, Pearson Education.
6. Shirin Rathore, International Accounting, Prentice Hall of India.

GROUP E: APPLIED ECONOMICS

MC. 311 - INDUSTRIAL ECONOMICS

Objective: The objective of the course is to acquaint students of economic concepts as applied to industrial behaviour. The course makes student capable to analyse and take decisions in respect of a firmôs or industryôs operations.

UNIT-I

Scope and Methods of Industrial Economics: Objectives of Industrial Economics, Firms, Industry and Markets. Industrial and Market Structure: Pattern of Industrial Structure, Industrial inter-dependence, Structure and performance, determinants of Market -Structure.

UNIT-II

Economies of size: Economies of size, vertical and horizontal integration, diversification, economies of scale and scope. Merger, acquisition and takeover, innovation, export led industrialization. Economies of location and spatial structure. Economics of ownership structure.

UNIT-III

Economics of Non-Price Decision of firm: Research and Development and Innovation: R & D expenditure decision, Financing R &D, Relationship between R & D and valuation, Economics of R & D, Structure of Market and R & D, Transfer of Technology.

UNIT-IV

Performance measurement: Profitability, Productivity and capacity utilization, Accounting measure and growth. Perfect and workable competition. State intervention in private sector, legal and institutional framework, competition policy, public policy and development of corporate sector.

Reference Books:

1. Divine P.J., N. Lee, R.M. Jones and W.J. Tyson, An Introduction to Industrial Economics, Anmol Publications.
2. Hay, A. Donald and Derek J. Morris, Industrial Economics: Theory and Evidence, Oxford University Press.
3. Scherer F.M. and David Ross, Industrial Market Structure and Economic Performance, Houghton Miffin Company, Boston.
4. Mukherjee, Dilip (Ed.), Indian Industry, Policies and Performance, Oxford University, Calcutta, India.
5. Seth, V.K. and A.K. Seth, Dynamics of Labour Absorption in Industry, Deep and Deep Publication, New Delhi.
6. Koutsoyiannis A., Economics of Non-Price Decision of Firms, Macmillan 1980, London.
7. Seth, V.K., Capacity Utilisation Industrial: Theory and Evidence, Deep and Deep Publisher, New Delhi.
8. Nayyar Deepak (ed.), Industrial Growth and Stagnation: The Debate in India , Sameeksha, Trust, Bombay.

MC. 312 - APPLIED ECONOMETRICS

Objective: The objective of the course is to acquaint students of the methodology of econometrics and make them capable of applying it to business problems. The emphasis will be on application aspects with theoretical understanding.

UNIT-I

Basic Concepts: Definition and scope of econometrics; model specification; desirable qualities of models; evaluating an econometric model; Random variables, stochastic variables and the stochastic error term; probability distributions (review); estimators, desirable qualities of a good estimator; maximum likelihood estimators (definition). The multiple regression model; The 3 variable model; partial regression and correlation coefficients; assumptions of the classical linear model; Derivation of Ordinary Least Squares Estimators; Properties of OLS estimators, OLS AS BLUE; Variances and Standard deviations; Goodness of fit: R -squared and adjusted R-squared; Tests of significance t and F tests; Hypothesis testing involving more than one parameter; Forecasting; Evaluation of Forecasts; Mean Squared error, RMS error.

UNIT-II

Extensions of the basic linear model: 1) Model transformable to linear form: Estimation of elasticity by log-linear models; Growth rates by semi -log models; linear -log models; polynomial regression models (espquadratic). 2) Qualitative variables: Qualitative independent variables and dependent variables (into only); applications of dummy variables; Time dummy, intercept dummy and structural change.

UNIT-III

Relaxing the assumptions of the basic linear model: 1) Multicollinearity: Perfect and imperfect multicollinearity; consequences of multicollinearity, detection and solution. 2) Heteroscedasticity: Nature and Causes; Consequences; Detection by graphical analysis of residuals and Parks test; Solution of Heteroscedasticity: Weighted Lease Squares. 3) Autocorrelation: nature and causes; Consequences; Detection by graphical analysis and D-W Test, Solution for AR. 4) Error in measurement. 5) Specification bias. 6) Simultaneous Equation Bias.

UNIT-IV

Estimation and specifications: Demand, Sales, Cost, Production and Consumption functions. Simultaneous equation system: Identification and Estimation of the model.

Reference Books:

1. Pindyck R.S. and D. Rubinfied, Econometric Theory and Models, McGraw Hill.
2. Gujarati, D.E., Essentials of Econometrics, McGraw Hill.
3. Koutsoyiannis, A., Theory of Econometrics, 3rd ed., Macmillan.
4. Julia Malden, Application of Econometrics, Hartiage Publishers.
5. Johnston, J., Econometric Methods, McGraw Hill Book Company, New Delhi.
6. Judge George G. et. al. Introduction to the Theory Practice of Econometric, John Wiley and Sons, New York.
7. Pesaran M. Hashem and Peter Schmiod (Ed.), Handbook of Applied Econometric, Vol. I & II Blackwell Publishers.
8. Intricigalor Michael D., Ronal G. Bodkin, Cheng Hsiao, Econometric Models, Techniques and Applications, Prentice Hall.

GROUP F: BANKING AND INSURANCE

MC. 313 - BANK MANAGEMENT

UNIT-I

Banking structure in India - banking functions and services - Foreign commercial banks - Private commercial banks - capital adequacy. Principles of lending - financial adequacy assessing the borrower - project appraisal - structural and Infrastructural analysis ï legal formalities - follow up loans, asset management companies.

UNIT-II

Non Performing Assets (NPAs) - Early Warning Signals - Management of NPAs - Remedies Available - Recent Measures - loan recovery tribunals - Provisions of Revenue Recovery Act.

UNIT-III

Investment management - priorities in allocation of bank funds - investment in governments securities - maturity and yield - quality and diversification, profitability management - profit planning.

UNIT-IV

Traditional Banking vs. E-Banking - facets of E-Banking - Internet Procurement - E - Banking Transaction - Electronic Delivery Channels - Truncated Cheque ï Complete Centralized Solution - Features of CCS - Advances of E-Banking - Constraints in E-Banking - Security Measures.

Reference Books :

1. Varshney, PN. Banking Law & Practice, Sultan Chand, New Delhi.
2. S.N.Maheswari, Banking Law & Practice, Ludhiana, Kalyani Publications.
3. Vasant Desai, Principles of Bank Management, Mumbai, Himalaya Publications.
4. K.Subramanian, Banking Reforms in India, TMH, New Delhi.
5. Joseph Sinkey, Commercial Bank Financial Bank Financial Management, Pearson Education (Prentice Hall)
6. E.Gordon and Dr. K. Natarajan, Banking Theory Law and Practice ï Himalaya Publishing House.

MC. 314 - INSURANCE MANAGEMENT

Objective: This course aims at a familiarizing the participants with the concept of insurance, the risk and its management, various insurance policies and their structure along with the legal dimensions involved. This course also aims at providing the knowledge of Insurance Companyôs Management.

UNIT-I

Conceptual Framework: Risk, Peril and hazard, classification and burden of risk. Insurance as a device to hedge risk. Elements of insurable risk. Development life. Functions of Insurer, Government as Insurer and a regular. Structure of Indian Insurance Industry. Principles and Practices of General Insurance: Meaning, Functions and Scope of Fire, Engineering, Accident, Marine and Aviation Insurance. Fire Insurance ï Types of Policies ï Floating Policies and Declaration Policies; Endorsements and Clauses ï Fire Protection System, Discounts ï Special Rating of Large Industrial Risks.

UNIT-II

Industrial Risk Insurance. Consequential Loss Insurance ï Standard Consequential Loss Policy Form ï Conditions. Engineering Insurance: Machinery Breakdown Insurance ï Contractors All risks Insurance and various other policies ï Miscellaneous Annual Policies ï Advance Loss of Profits Insurance. Motor Insurance ï type of: Vehicles and their Policies ï Rules & Regulations ï Policy Forms. Public Liability Policy: Professional Indemnities ï Employersô Liability Insurance. Personal Accident: Scope of Various covers. Miscellaneous (Accident) Insurance: Fidelity Guarantees and Bonds ï Burglary Insurance ï Money-in-transit Insurance, Bankerôs Indemnity Insurance and other important insurance covers.

UNIT-III

Aviation insurance: Special Features ï types of Cover, Marine Insurance including Inland Rail/Road transit insurance. Life and Health Insurance: Life Insurance and annuities broad classification of Life insurances, special purpose policies; Family income, Family maintenance, Family policy, Joint Life Policies, Classes of life insurance, Health Insurance: Medical Insurance Types of Health Insurance Coverages, types of losses covered. Health insurance contract. Buying a health insurance policy.

UNIT-IV

Legal frame work of Insurance: Insurance and Law of Contracts, characteristics of an Insurance Contract, Interpretation of the Contract, Doctrine of informal Warranties and beneficent interpretation, Exclusion of Coverageôs. Organization and Administration of Insurance: Management Organization: Departmentalisation, marketing, Claims, and loss control, underwriting and pricing of insurance, retention and re-insurance; Financial Structure, reserves of property and liabilities of insurer, earned surplus and profitability, Insurerôs Investments, Financial Reporting.

References Books:

1. W.A. Dinsdale, ñElements of Insuranceò, Pitaman, 1971.
2. Dorfman Marks S., ñIntroduction to Risk Management and Insuranceò, 5th Edition, Prentice Hall Inc., Englewood Cliffs N.J .
3. Nicholas Legh ï Jones, John Birds and David Owen, ñMacGillivray on Insurance Lawò, 11th Edition, Sweet & Maxwell, London, 2008.
4. Denis Riley, ñConsequential Loss Insurance and Claimsò, 4th edition, London: Sweet & Maxwell, 1977.

PAPER 7: MC. 315 - WORKSHOP ON FINANCIAL MARKETS & INSTRUMENTS
(For Regular Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT – I

Indian Financial System: Constituents, Functions of the Financial System Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System.

UNIT – II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits, Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT – III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT – IV

Innovative Financial Instruments and Financial Services: Bonds, features and innovations : Ex-interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System, Tata McGraw, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi
4. Desai, V: Indian Financial System and Development (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services, Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds, (Business Publications Inc.)
7. Dietrich, J.K: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K : Development of Indiaõs Financial System, Sarup & Sons.

Note: The workshop will include (a) Regular training of the students in labs and through interactions with experts and presentations. (b) Assigning a project to the students as per the curriculum of the subject (c) Internal Examination to be conducted by the subject teacher (d) Presentation session of the students on the assigned project.

PAPER 7: MC. 315-A - FINANCIAL MARKETS & INSTRUMENTS
(For USOL Students Only)

Objective: To provide an overview of the financial system in India and functioning of various segments of the financial markets and the financial instruments traded in those markets.

UNIT–I

Indian Financial System: Constituents, Functions of the Financial System, Inter-relationship between Financial System and Industrial Development Efficiency Indicators of Financial System, Financial Development Ratios RBI and Financial System Monetary Policy and Stability of Financial System, Financial Sector Reform in India, Globalisation of Indian Financial System

UNIT–II

Financial Markets: Major Segments of Financial Markets: Money Market, Capital Market, Foreign Exchange Market and Govt. Security Market, Money Market: Call Money Market, Bill Market, Repo Market, T Bill, Commercial Paper, Certificate of Deposits Capital Market: Primary and Secondary Market, Cash/Spot Market and Derivative Market, and Equity and Debt Market.

UNIT–III

Securities Market: Methods of Issue of securities, Securities trading and Settlement, and Listing of securities, Functions of Stock Exchanges: Operations of OTCEI, and NSE, Role of SEBI: Fair market practice and Investor Protection Recent Trends and developments in Security market.

UNIT–IV

Innovative Financial Instruments and Financial Services: Bonds features and innovations: Ex- interest debentures, Deep discount bonds, and Secured premium notes. Hybrid Securities: Convertible Debentures and bonds Derivatives: Options, Futures and Swaps and other contemporary bond instruments. Innovative financial services: Factoring, Angel financing, Securitisation, and mergers and acquisitions.

Reference Books:

1. Khan, M. Y.: Indian Financial System, Tata McGraw, N. Delhi.
2. Bhole, L.M.: Indian Financial System , Tata McGraw Hill, N. Delhi.
3. Fabozzi and Modigliani, Capital Markets: Institutions and Instruments (Prentice Hall of India, New Delhi.
4. Desai, V: Indian Financial System and Development. (Himalaya Publishing House, N. Delhi.)
5. Khan, M. Y.: Financial Services , Tata McGraw, N. Delhi, 2005.
6. Frasen and Rose: Financial Institutions and Markets in a Changing Worlds (Business Publications Inc.
7. Dietrich, J.K.: Financial Services & Financial Institutions, Prentice Hall, New Jersey.
8. Prasad, K: Development of Indiaôs Financial System, Sarup & Sons.

SEMESTER-IV

PAPER 1: MC. 401 – PROJECT PLANNING AND CONTROL

Objective: The objective of the course is to provide the student with skills necessary to create, plan and control a new Enterprise.

UNIT – I

Project Identification, Formulation and Planning : Understanding environment for business opportunities Idea generation, short listing and selection of product/service stages in Venture Appraisal- Technical, Financial, Economic and Social Appraisal Location, Factory Design and Layout. Commercial vs. National Profitability Social Cost - Benefit Analysis (broader concept only). Feasibility Report Preparation for new Enterprise - format and contents.

UNIT – II

Market and Financial Appraisal : Market Survey ï Design, Data Sources and Methodology, Market Segmentation and product differentiation, Forecasting Future demand and Distribution Analysis, Preparation of the Sales Plan and Report Estimation of Financial Requirement.

UNIT – III

Application of Capital Budgeting Techniques, Risk and Uncertainty Analysis for the new enterprise, Planning Capital Structure and Financing Project Financial viability Study.

UNIT – IV

Project Implementation and Management : Project Organisation and Control Network Analysis ï PERT & CPM Cost and Time Over-run Project Follow up and Monitoring.

Reference Books:

1. Chandra, Prasanna : Project Prepartation, Appraisal and Implementation, Tata Mc Graw Hill, N. Delhi.
2. Desai, Vasant : Entrepreneurial Development, Vol.II Project Formulation Appraisal and Financing for Small Industry, Himalaya Publ. N. Delhi.
3. Nicholas : Project Management for Business and Technology: Principles and Practice (Prentice Hall of India, N. Delhi.
4. Pitala : Project Appraisal Techniques, Oxford & IBH Publication.
5. Yound, Trevour L. : Planning and Implementing Project, Sterling Publishing Ltd.
6. Krishnan and Moorthy : Text Book of Project Management, Mac Millan India Ltd.
7. Singh, Narendra : Project Management & Control, Himalaya Publ., N. Delhi.

PAPER: 2 MC. 402 - KNOWLEDGE MANAGEMENT

Objective: The main aim of the course is to create awareness amongst the students to know the details of Knowledge Management in the changing scenario and its significance in framing the business strategy.

UNIT-I

Concept of knowledge, Major Philosophical Schools, Knowledge in economic and management theories, Knowledge as competitive resource, Knowledge intensive organization, Knowledge value chain.

UNIT-II

Knowledge management systems, Barriers to knowledge sharing, Expert systems.

UNIT-III

Knowledge creation as a tool of excellence, tacit and explicit knowledge, Models of knowledge creation process, Critical enabling conditions, Cross leveraging knowledge.

UNIT-IV

Knowledge management strategy and business strategy, Knowledge architecture, Organizational design for knowledge management, Role of Top and Middle management, Knowledge based reward systems.

Reference Books:

1. Devenport, T. H. and Prusak, L. : Working Knowledge; How Organizations Manage What They Know; Harvard Business School Process.
2. Dorothy Leonard Barton : Well Springs of Knowledge, Harvard Business Process.
3. John Sparrow : Knowledge in Organisations, Sage Publications..
4. J.W. Cortada, and J. A. Woods : Knowledge Management Year Book 1999-2000, Butterworth.
5. Richard Huseman and Jon Goodman : Leading with Knowledge, Sage.
6. Ikujiro Nonako and Hirotaka Tekeuchi : Knowledge Creating Company, OUP.
7. Madhukan Shukla : Competing Through Knowledge, Response Books.

PAPER 3: MC. 403 – BUSINESS ETHICS AND CORPORATE GOVERNANCE

UNIT-I

Business Ethics: Introduction to Business Ethics, Ethics, Morals & Values, Concepts of Utilitarianism and Universalism ï Theory of rights, theory of Justice ï Virtue ethics ï ethics of care ï Law and Ethics. The Nature of Ethics in Management Business Standards and Values, Value Orientation of the Firm. Typical Problems in Business Ethics: Environmental Pollution & Society, Marketing Ethics (in Products, Pricing, Promotion and Place) and Consumer protection ï Ethics in Human Resources management (Recruitment and promotion policies, Working Conditions,, Down Sizing Workforce), Ethical issues at the top management, Ethics in financial markets and investor protection ï Ethical responsibility towards competitors and business partners.

UNIT-II

Complexity of Ethical Issues: Conflicts in decision making from ethical and economic point of view, Ethical Dilemma, Solving ethical dilemma Managerial integrity and decision making. Ethical Leadership: Personal Integrity and self development ï wisdom based leadership. Corporate Governance: History of Corporate form and models, Corporate Objectives and goals, Ownership pattern ï Issues in managing public limited firms ï Agency problems. Nature & Evolution of Corporate Governance: Global and National Perspectives ï Global Corporate Governance models, Anglo American and Relationship model (Germany, Japan and France) Claims of Various Stakeholders, Why governance ï Changes in eighties Cadbury Report, Hampel Report and OECD Committee Recommendations ï SOX Act.

UNIT-III

Internal Corporate Governance Mechanism: Board of Directorsð Functional Committees of Board; Code of conduct, whistle blowers. External Corporate Governance Mechanism: Regulators, Gate keepers, Institutional Investors, Corporate raiders, Corporate Governance Ratings Corporate Governance in India: corporate form in India 50s to 90s ï developments in Corporate Governance in India in nineties and 2000s ï CII, Kumaramangalam, Narayanamoorthy, Naresh Chandra, JJ Irani Committee reports ï Legal and Regulatory Changes ï introduction and modification of Clause 49, Corporate governance in practice in India .

UNIT-IV

Cases:

1. A Dent in Wal Martôs Public Image - The PR Strategy.
2. China Aviation Oilôs Collapse: Singapore INCôs challenges.
3. Child labor in Coca Industry.
4. Obesity Concerns: Burger Kings Product Revenges.
5. Bhopal Gas Tragedy

Source

(a) Case Studies for Managers, Vol. II, IBSPCD
(b) BECG Main Reference Book

Reference Books:

1. Velasquez, M. G., Business Ethics: Concepts and Cases, Prentice Hall of India.
2. Monks, R. / Minow, N. Corporate Governance, Blackwell.
3. Banks, Eric., Corporate Governance, John Wiley.
4. Fernando, A C., Corporate Governance, Pearson Education.
5. N. Gopalsamy : Corporate Governance : The New Paradigm, Wheeler Pub., New Delhi.
6. Surendar Kumar : Corporate Governance : A Question of Ethics, Galgotia Pub., New Delhi.
7. N. Balasubramanian : Corporate Boards and Governance, Sterling Pub., New Delhi.
8. Harvard Business Review : Harvard Business Review on Corporate Governance, Boston Harvard Business School.

SEMESTER IV (ELECTIVES) GROUP A: MARKETING MANAGEMENT

MC. 404 - ADVERTISING AND SALES MANAGEMENT

Objective: The course aims at enabling the students to develop an in-depth understanding of the modern concepts and latest techniques of advertising and personal selling and sales force Management which constitute a fast -growing area of marketing.

UNIT-I

Advertising: Communication Basics: Role of communication; Communication process and flows; Planning the promotion mix; Advertising: Nature and importance; Advertising and the economy; Advertising and publicity; Advertising management process ï an overview; Determining target audience; Advertising objectives and positioning decisions; Advertising budget decisions. Message Decision: Determining advertising message; Developing advertising copy ï Headline main copy, logo, illustration, appeal, layout, creativity in advertising.

UNIT-II

Advertising through the internet; Media selection; Media scheduling. Organization of Advertising Operations: In -house vs. advertising agency arrangements; Managing advertising agency relations; valuation of advertisement and campaign effectiveness ï Before - and ï after advertising tests and techniques. Advertising in India; Social and regulatory aspects of advertising. Recent developments and issues in advertising.

UNIT-III

Sales Management: Fundamentals of Personal Selling: Nature and importance of Selling; Types of selling; Personal selling, salesmanship and sales management; Process of effective selling; Strategic Sales management. Sales Planning: Setting personal selling objective; Market analysis and sales forecasting; Sales budget; Sales territory; Sales quota.

UNIT-IV

Sales Organization: Organization structure; relationship of sales department with other departments; Distribution networks relationship. Sales Force Management: Recruitment and selection; training and development; motivating, supervising and compensating sales personnel; Controlling the sales effort; Evaluation of sales personnel; Sales and cost analysis. Ethical and legal aspects of selling.

Reference Books:

1. Aaker, David A., Rajeev Batra and John G. Mayers, Advertising Management, Prentice Hall of India, New Delhi.
2. Belch,. George and Michael Belch, Advertising and Promotion : An Integrated Marketing Communications Perspective , McGraw Hill.
3. Mandell, Maurice, Advertising , Prentice- Hall of India, New Delhi.
4. Still, Richard R. Edward W. Cundiff and Norman A.P.Govoni, Sales Management: Decisions, Strategies and Cases, Prentice Hall of India, New Delhi.
5. Anderson B. Robert, Professional Selling, Prentice-Hall Inc.
6. Spiro, Rosann, William J. Stanton and Greg Richo, Management of a Sales Force, McGraw Hill/Irwin.
7. Pederson Carlton A/, Miburn D. Wright, Barton A., Weitz, Selling Principles and Methods, Richard D. Irwin, Illinois.

MC. 405 - SERVICES MARKETING

Objective: To understand the service product and key elements of services marketing mix. Another objective deals with managing the service delivery process and the implementation of services marketing.

UNIT-I

Introduction to services marketing: role of services marketing; consumer behaviour in service encounters; customer interaction, purchase process, needs and expectations of customers; positioning services in competitive markets; search for competitive advantages; market segmentation, positioning vis-à-vis competitors.

UNIT-II

Creating the service product: Identifying and classifying supplementary services, planning and branding service-products, new service development; designing communication mix; branding and communication; effective pricing objectives and foundations for setting prices; distributing services; options for service delivery, place and time decisions, delivery in cyberspace, role of intermediaries.

UNIT-III

Designing and managing service processes; service process redesign, customer misbehavior; balancing demand and capacity: fluctuations in demand, capacity constrain, planning the service environment; consumer responses to and dimensions of service environment; managing people for service advantage: service leadership and culture.

UNIT-IV

Managing relationship and building loyalty; customer-firm relationship, analyzing and managing customer base; customer management relationship system in services marketing; customer feedback and service recovery; customer complaining behaviour, principles and responses to effective service recovery, service quality and the gap model, measuring and improving service quality, defining, measuring and improving service productivity; organizing for service leadership; search for synergy in service management, creating a leading service organization.

Reference Books:

1. Lovelock, Christopher, Wirtz, Jocken and Chatterjee, Jayanta; Services Marketing - People, Technology, Strategy; Pearson Education; New Delhi.
2. Zeithaml, Valarie A. & Bitner, Mary Jo, Services Marketing ï Integrating Customer Focus Across the Firm; Tata McGraw Hill, New Delhi.
3. Rao, K., Rama Mohana, Services Marketing, Pearson Education, New Delhi.
4. Hoffman & Bateson, Essentials of Service Marketing; Thomson Asia Ptc. Ltd., New Delhi.
5. Rampal, M.K. & Gupta, S.L., Services Marketing; Galgotia Publications; New Delhi.
6. Shanker Ravi, Services Marketing ï The Indian Perspective, Excel Books, New Delhi.

MC. 406 - CONSUMER BEHAVIOUR

Objective: Knowledge of consumer behaviour is a prerequisite for developing effective marketing strategy. The purpose of the course is to provide an in-depth understanding of the consumer and industrial buying processes and their determinants as relevant for marketing decision making.

UNIT-I

Consumer Behaviour: Importance and nature of consumer behaviour; Types of consumers and their role; Consumer buying process and determinants; Changing profile of Indian consumers.

UNIT-II

Individual Differences in Consumers: Needs and motivation; Perception; Attitude and attitude change; Learning and learning theories; Personality and life style analysis.

UNIT-III

External determinants of Consumer Behaviour: Family and its influence on consumer buying behaviour; Group and their influences; Social class; Culture and sub-culture.

UNIT-IV

Models of consumer behaviour; Business buying behaviour. Cross-cultural dimensions of consumer behaviour; Consumer research ï complexities and issues.

Reference Books:

1. Schiffman, L.G. and L.L. Kanuk, Consumer Behaviour, Pearson, Ltd., New Delhi.
2. Engel, J.F., Roser D. Blackwell and Paul W. Miniard, Consumer Behaviour, Cengage Learning.
3. Peter, J. Paul, and Jerry C. Olson, Consumer Behaviour and Marketing Strategy, McGraw Hill.
4. Assael, H., Consumer Behaviour and Marketing Action, Cengage Learning.
5. Hawkins Dell, Roger J. Best, Kenneth A. Conej, Consumer Behaviour, Building Marketing Strategy.

GROUP B: HUMAN RESOURCE MANAGEMENT

MC. 407 - ORGANISATIONAL CHANGE AND DEVELOPMENT

Objective: This course is designed to provide I depth understanding of behavioural interventions and enable the students to apply these intervention for building individual, team, system, systems and process related competencies and helping organizational to achieve peak performance and become self sustaining.

UNIT-I

Organizational Change - Meaning, nature, types; theories of planned change; Organizational development ï nature and characteristics; process of organizational development.

UNIT-II

Human Process Interventions - T-group, process consultation, third party interventions, team building; organizational confrontation meeting, coaching and mentoring, role focused interventions.

UNIT-III

Techno structural Interventions - Restructuring organization, reengineering, employee involvement, work design; Strategic Interventions ï Organisation and environment relationships, organization transformation.

UNIT-IV

Contemporary issues and applications ï Organizational development in global context, organizational development in service sector, OD Practioners ï role, competencies requirement, professional ethics and value and experiences; future trends in OD.

Reference Books:

1. Cummings, Thomas G. and Christopher G. Worley, Organisation Development and Change, Thomson Learning.
2. Ramnarayan S., T.V. Rao and Kuldeep Singh, Organisation Development Interventions and Strategies, Response Books, New Delhi.
3. French, Wendell L. and Lecil H. Bell, Organisation Development, PHI, New Delhi.
4. Chowdhury, Subir, Organisation 21C, Pearson Education.

MC. 408 - TRAINING AND DEVELOPMENT

Objective: The objective of the course is to familiarize the students with basic concepts and principles of Training and Development of Human Resource and train them to understand the learning environment of a firm. The knowledge so obtained will make them capable of providing training to Human Resource of a business firm.

UNIT-I

Conceptual Framework: The functions of training, relationship of training to organizational and individual goals, Factors effecting successful training process, Skills of a successful trainer ï Internal and external trainer. Training and Learning: The learning process, learning curve, principles of learning, training guidelines, experience versus training, kinds of training, system approach to training, programmed instruction, transfer of training.

UNIT-II

Training Needs Assessment and Curriculum Development: Identification of Training and Development needs, training needs assessment - various approaches (the job and the Individual), Advantages and disadvantages of basic needs assessment techniques.

UNIT-III

Assessing curriculum needs, curriculum standards, matching organizational training needs, Developing training materials. Training Methods: Three Stages of training (Preparatory, implementation and follow - up stage), On the job and off -the job methods,, experiential versus non-experiential methods.

UNIT-IV

Evaluation of Training and Development, and Emerging Pattern: Reasons of evaluating training, Criteria for evaluation, problems of evaluation, steps involved in evaluation, methods for training evaluation, analysis and costing of training. Emerging Pattern of Training and development in India.

Reference Books:

1. Prior John, Handbook of Training and Development, Jaico Publishing House, Bombay.
2. Donald F. Michalak and Edwin G. Yager, Making the Training Process Work, Harper and Row, New York.
3. Jack J. Phillips, Handbook of Training Evaluation and Measurement Methods , 3rd Edition,
   Houston, Gulf Publishing Co.
4. Lynton R., Pareek, U., Training for Development, 2nd Edition, New Delhi, Vistaar.

MC. 409 - COMPENSATION MANAGEMENT

Objective: This course is designed to promote understanding in issues related to compensation in corporate sector and impart skills in designing, analyzing and restructuring compensation management system, policies and strategies.

UNIT-I

Role of compensation in organization: Economic and behavioural theories related to compensation; strategic perspectives of compensation; compensation as motivational tool; compensation policy.

UNIT-II

Internal and external equities in compensation system; determining the worth of jobs; understanding inter and intra-industry compensation differentials, designing pay structure and administrating compensation package; understanding different components of compensation package like fringe benefits, incentives and retirement plans; pay for performance plans.

UNIT-III

Compensation of special group: Corporate Directors, Chief Executives, Senior Managers; components of executive compensation package; compensation of professionals and knowledge workers, R&D staff, sales compensation plan, international compensation.

UNIT-IV

Statutory provisions governing different components of reward system; working of different institutions related to reward system like wage boards, pay commissions, role of trade unions in compensation management; tax planning.

Reference Books:

1. Milkovich, George T. and Newman J.M., Compensation, Tata McGraw Hill.
2. Henderson, R.O., Compensation Management, Pearson Education.
3. Martocchio, J.J., Strategic Compensation, Pearson Education.
4. Armstong, M. and Murlis H., Reward Management, Kogan Page, UK.
5. Singh, B.D., Compensation Reward Management, Excel Books, New Delhi.

GROUP C: INTERNATIONAL BUSINESS

MC. 410 - INTERNATIONAL BUSINESS ENVIRONMENT

UNIT-I

An Overview of International Business Environment ï Economic environment ï political and regulatory environment ï demographic environment ï social, cultural and technological environment, International Economic Environment ï Regional integration and trade blocks ï Types of integration ï theory of customs union, European union ï regional groupings ï integration of developing countries ï SAARC, SAPTA, international commodity agreements ï quota agreements ï Cartels ï Bilateral & Multi lateral contracts ï Economic institutions ï International Monetary Funds (IMF) ï World Bank, Asian Development Bank, UNCTAD, UNIDO, International Trade Centre, WTO, GATT, GATS, TRIM, TRIPS.

UNIT-II

International Trade and Investment Theory - Historical developments of Modern Trade theory ï Investment theories ï Theory of capital movements ï Market imperfections ï Internationalisation ï Appropriability ï Location specific advantage ï eclectic. International Trade and Payments: Government Influence on Trade: Trade in merchandise ï Trade in services ï Global sourcing ï degree of dependence ï balance of payments ï trade and BOP of India. Cultural contacts of global management ï Understanding the role of culture ï communicating across cultures ï cross cultural negotiations and decision making.

UNIT-III

International Investment : Types and significance of foreign investments ï factors affecting international investment ï growth and dispersion of FDI ï cross border mergers and acquisitions ï foreign investment in India ï The New Policy ï EURO/ADR issuesï M&Aï Indian companies going global. Multi National Corporation : Definition and Meaning ï Importance and dominance of MNCs ï Code of conduct ï MNCs in India ï Transfer of Technology ï global competitiveness ï indicators of competitiveness - competitive advantage of nations ï Technology and Global competitiveness.

UNIT-IV

International Monetary System and Foreign Exchange Marketing: The Pre- Bretton Woodôs period, Break down of Bretton Wood system and emergence of EMS, EU and EURO. Social Responsibilities and Ethics, MNE Social Responsibilities, Efficiencies, Perspectives, Ethics, Technological Perspective, Foreign Corrupt Practices Act.

Reference Books:

1. The International Business Environment by Anant K. Sundaram / J. Stewart Black-Prentice Hall
2. International Business environments and Operations, John Daniel, Lee H Radebaugh, Daniel P Sulivan- Pearson Education.
3. International Management Managing Across Borders and Cultures, Fourth Edition by Helen Deresky ï PHI
4. Dynamics of Successful International Business Negotiations by Robert T. Moran, William G. Stripp ï JAICO
5. The International Environment of Business by Gerald M. Meierï Oxford Press.

MC. 411 - GLOBAL FINANCIAL MANAGEMENT

UNIT-I

Global Financial Environment : Financial Goal and Corporate Governance - Macro & Micro Intõl. Finance, - Intõl Monetary System & Crisis - Balance of Payment. Foreign Exchange Theory and Market: The Foreign Exchange Market and Problem, The Foregin Exchange Rate Determination.

UNIT-II

Foreign Currency Derivatives: Forward, Future and Option Market, PPP, IRP IFE, and International Parity Condition: International Triangula Arbitrage-Covered Interest Arbitrage.

UNIT-III

Forex Exposure & Risk Management - Transaction, Operating/Economy & Translation/Accounting Exposure - Currency Hedging Strategy. Transaction Exposure Management : - International Financial Engineering; Working Capital Management in Multinational Corporations.

UNIT-IV

Financing the Global Firm : - Global Cost of Capital & Available of Capital ï Sourcing Equity Globally - Financing Structure & International Debt - International Portfolio Theory - FDI Theory & Strategy.

Reference Books:

1. Madura J. : International Corporate Finance, 8th Edition, South Western Publishing Company.
2. Alan C. Shapiro, Multinational Financial Management, 6th Edition, Prentice-Hall International Inc.
3. Solnik, B. McLeavey, D. : Global Investment, 6th edition, Pearson Addison Wesley.
4. Richard M. Levich, International Financial Market, Prices and Polices , McGraw-Hill.
5. Hamdy Hady, Manajemen Keuangan Internasional edisi 3, YAI dan PT. Hecca Mitra Utama.

MC. 412 - INTERNATIONAL MARKETING MANAGEMENT

UNIT-I

Introduction: Basic Concepts of International Marketing, Definition and Dimensions of International Markets, Differences Between Domestic and International Marketing, Benefits of International Marketing, EPRG Framework in International Marketing, Changes of Development into Global Marketing.

UNIT-II

Environment of International Business: Introduction, Political and Legal Environment, Cultural Environment, Financial and Monetary Environment. Indian Foreign Trade: Indian Trade Policy, Recent Transit in Indiaגs Foreign Trade, Export Assistance, Institutional Infrastructure for Export Promotion in India, EXIM Policy of India.

UNIT-III

Identification of Foreign Markets: Product Planning for Exports, Export Pricing, Market Entry and Overseas Distribution System, Promoting Products, Internationally Role of WTO .

UNIT-IV

Overseas Market research, Marketing Plan for Exports, New Techniques in International Marketing, International Sub-Contracting, Joint Ventures, Multinationals Exports Finance, Risk Export Documents and Procedures.

Reference Books :

1. R. Srinivasan, International Marketing, Prentice Hall of India, New Delhi.
2. Onkvisit & Shaw ï International Marketing: Analysis and Strategy. (PHI)
3. Keegan, Global Marketing Management, PHI.
4. Rathore & Rathore, International Marketing, Himalaya Publishing , New Delhi.
5. Gitman, Global Marketing, Pearson.
6. Francis Chernnilam, International Marketing, Himalaya Publishing Home.

GROUP D: ACCOUNTING & FINANCE

MC.413: ADVANCED CORPORATE ACCOUNTING

Objectives: Corporation is the most important part of the economic development of a company. With pace of development of the emerging scenario, the corporate accounting is also becoming little bit tougher. This paper will enable the students to learn the advanced accounting in the field of corporate world.

UNIT-I

Business Acquisition and Conversion of partnership into limited company and Limited Liability Partnership (LLP): Profit/ loss prior to incorporation; Accounting for Acquisition of business. Conversion of Partnership into Limited Company ï with and without same set of books Amalgamation of firms, accounting in the books transferor and transferee firm.

Investment Accounts : Maintenance of Investment Ledger; Preparation of Investment Account (transaction with brokerage, STT, cum & ex-interest), Valuation of Investment under FIFO and Average method; Investment Account for Shares (with Right Shares, Bonus Shares and Sale of Right). Relevant Accounting Standard.

UNIT-II

Company Merger and Reconstruction: Amalgamation, Absorption and Reconstructionï Meaning; relevant standard and meaning of different terms, Accounting in the books of Transferor Company. Accounting in the books of Transferee (both for amalgamation in the nature of Merger and of Purchase); inter-company transactions (including inter-company share holding). Internal reconstruction ï meaning, provisions and Accounting, Surrender of Shares for redistribution; preparation of Balance Sheet after reconstruction.

UNIT-III

Valuation: Goodwill ï Valuation using different methods i.e., Average Profit, Super Profit, Capitalization and Annuity. Shares ï Valuation using different methods: Intrinsic, Earnings, Dividend Yield, Earnings-Price, Cum-div and Ex-div, Majority and Minority view and Fair Value.

UNIT-IV

Meaning of Holding Company & Subsidiary Company; relevant standard; Consolidation of Balance Sheets of Parent & Subsidiary (only one); Minority Interest ï Basic principles and preparation of CBS; CBS with loss balance of Subsidiary Treatment for: Revaluation of Assets of Subsidiary, Intergroup Transactions, Holding of different securities. Consideration of dividend paid or proposed by Subsidiary in CBS; Bonus Shares issued or proposed to be issued by Subsidiary (excluding shares acquired on different dates by the Parent company, chain and cross holding).

Reference Books:

1. Sukla, Grewal, Gupta, Advanced Accountancy, Vol. II, S. Chand.
2. R. L.Gupta & Radheswamy, Advanced Accountancy Vol. II, S. Chand.
3. Maheshwari & Maheshwari, Advanced Accountancy Vol. II, Vikash Publishing.
4. Sehgal & Sehgal, Advanced Accountancy Vol. I II, Taxman Publication.
5. Hanif & Mukherjee, Corporate Accounting, TMH.
6. L.S.Porwal, Accounting Theory, Tata Mcgraw Hill.
7. Gokul Sinha, Accounting Theory & Management Accounting.
8. B. Banerjee, Regulation of Corporate Accounting & Reporting in India, World Press.
9. Frank Wood, Business Accounting Vol II, Pearson.
10. V.K.Goyal, Corporate Accounting, Excel Books.

MC. 414 - SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Objective: To enable the students to understand various techniques of analysis used in investment decisions, portfolio analysis and efficient portfolio management.

UNIT-I

Security Market Analysis: Investment environment, Types of return and risk; Sources of risk Technical Analysis, Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis.

UNIT-II

Forms of Market Efficiency and Valuation of Securities : Random Walk Theory Form of Market efficiency Analysis of Bond/ Debentures: Valuation of bonds Analysis of risk in bonds-duration and convexity Valuation of Equity and Options.

UNIT-III

Portfolio Analysis : Portfolio Management ï Meaning, Evaluation & Role Risk & Return of a Portfolio, Risk Diversification Markowtiz Risk-Return Optimisation Single Index Model-Portfolio Tufel Risk. Portfolio Market Risk, Portfolio Unique Risk Sharpeôs Optimisation Solution.

UNIT-IV

Portfolio: Theory, Construction & Evaluation : Capital Market Theory - CAPM, Risk Free Lending Borrowing Arbitrage Pricing Theory Techniques of Portfolio Construction Active and Passive portfolio management, Bond portfolio management strategies - passive, semi-active and active along with immunization strategies Portfolio Performance Evaluation.

Reference Books:

1. Fuller & Farrel: Modern Investment & Security Analysis, McGraw Hill.
2. Strong, Robert. A: Portfolio Management Handbook, Jaico Publishing House, Delhi.
3. Singh, Preeti: Investment Analysis, Himalaya Publishing House.
4. Jordan & Fischer: Security Analysis & Portfolio Management, Prentice Hall India, N. Delhi.
5. Avadhani, V.A: Security Analysis & Portfolio Management.(Himalaya Publishing House).

MC. 415 - ADVANCED AUDITING

Objectives: The basic purpose of this paper is to provide in-depth knowledge of the auditing contemporary issues particularly related to the company audit.

UNIT-I

Company Audit: Qualification, Disqualification, Appointment, Removal, Remuneration of Auditors. Audit Ceiling-Status, Power, Duties and Liabilities of auditors. Branch Audit - Joint Audit - Special Audit. Maintenance of Books of Account ï Related Party Disclosures- Segment Reporting. Divisible Profit, Dividend and Depreciation (Companies Act, Standards on Accounting, Legal Decisions and Auditorôs Responsibility). Representations by Management - Contents of Annual Report (A Brief Idea).

UNIT-II

Audit Report and Certificate: Definition - Distinction between Report and Certificate - Types of Reports/Opinion 35 (Clean, Qualified, Disclaimer, Negative and Piecemeal) Contents of Audit Report (As per Companies Act and Standards on auditing). True and Fair View (Concept and Guiding Factors)- Materiality(Concepts and Relevance) - Limited Review- Disclosures. Certificate on Corporate Governance- Cash Flow Statement Reporting.

UNIT-III

Audit of Different Institutions: Banks - Legislation Relevant to Audit of Banks, Approach to Bank Audit, Internal Control Evaluation, Non-Performance Assets (Concept, Provisions), Long Form Audit Report. Insurance Companies - Legislation Relevant to Audit of Insurance Companies (Life and General Insurance), Review of Internal Control, Audit Report (Matters as per IRDA). Educational Institutions and Hospital Features and Basic Principles of Government Audit - Local Bodies and Non-Profit Seeking Organizations (including NGOs). Comptroller and Auditor General and its Constitutional Role. Investigation Meaning, Purpose - Distinction between Investigation and Auditing Approach to Investigation - Types of Investigations. Assessing a Business (Due Diligence Review, Valuation). Investigations to Detect Fraud, Misappropriations and Defalcations - Investigations with respect to Business Combinations.

UNIT-IV

Other Thrust Areas: Cost Audit - Concepts, Objectives, Advantages, Relevant Provisions of Comp. Act. Management Audit - Tax Audit - Systems Audit - Social Audit-Environment Audit Energy Audit - Forensic Audit-Peer review (Concepts, Objectives and Regulatory Requirements). Ethics in Auditing ï Auditorôs Independence. Auditing in CIS Environment. Standards on Auditing (Concepts, Purpose and Present Position as to Number and Title as issued by ICAI).

Note: Topics to be studied with reference to Standards on Auditing and Accounting including Applicable Indian Financial Reporting Standards.

Reference Books :

1. Gupta, Kamal, Contemporary Auditing, TMH.
2. Tandon, B.N., Principles of Auditing, S. Chand & Co.
3. Sharma, T.R., Auditing Principles & Problems, Sahitya Bhavan, Agra.
4. Spicer & Pegler, Practical Auditing.
5. Woolf, Emile, Auditing Today.
6. Basu, Sanjib Kumar, Fundamentals of Auditing, Pearson.
7. Auditing Assurance Standards and Guidelines issued by ICAI.

GROUP E: APPLIED ECONOMICS

MC. 416 - MACRO ECONOMIC ANALYSIS AND POLICY

Objectives: The Course seeks to provide grounding in basic macroeconomic theory and policy, with a focus on applications, especially in context of developing economies like India.

UNIT-I

Basic accounting concepts and tools in closed and open economies: National income accounting, nominal and real exchange rates and balance of payments, Keynesian theory of the short-run : Analysis of fiscal and monetary policies in the closed and open economy IS-LM models, including the Mundell-Fleming model, Interest rates in open and closed economies: Yield curve, covered and uncovered interest parity condition.

UNIT-II

The labour market and policy analysis in the medium and long run : AS-AD analysis, Analysis of inflation and unemployment : The Phillips curve; theories of unemployment conditional convergence.

UNIT-III

Theory of business cycles, Classical theories of economic growth : The Solow model; evidence on convergence and Theories of endogenous growth.

UNIT-IV

Open economy analysis : Models of currency crisis, exchange rate volatility. Expectations theory and financial markets, including rational expectations model.

Reference Books:

1. Blanchard, O. , Macroeconomics, Pearson Education, New Delhi .
2. Abel, A.S. and B.S. Bernanke, Macroeconomics, New Delhi Pearson Education.
3. Barro, R. and X. Sala-i-Martin , Economic Growth, India, Prentice Hall.
4. De Souza, E. , Macroeconomics, Pearson Education, New Delhi.
5. Dornbusch. R., S. Fischer and R. Start, Macroeconomics, Tata Mc Graw Hill, New Delhi .
6. Jones, C., Introduction to Economic Growth, W.W. Norton, New York.
7. Keynes, J., The General Theory of Employment, Interest and Money, New York Harcourt.
8. Krugman, P. and M. Obstfeld, International Economics, New Delhi, Addison Wesley .

MC. 417- ECONOMICS OF SERVICES

Objective: The objective of this paper is to acquint the students with the economics of various kinds of services and its related issues.

UNIT-I

Introduction: Basic concepts of services, trade in services, classification of services (CPC), economic growth and structural shifts in favour of services, cost disease hypothesis and its implications on growth, empirical evidence, service sector in India, causes of growth, implications of the service sector growth for long run growth.

UNIT-II

Economics of education: Micro theories of education, Beckerôs theory, Mincerian equation, over education, measuring micro effects of education, signaling theory of education, new growth theories and macro economic effects of education, human resources and human capital development empirical evidence government policies, government funding and issues, PPP in education, the case for universal, free, primary education, structure of higher education and problems of its financing in India, other issues in education policy; Health: Economic dimensions of health care - demand and supply of health care, Grossmanôs model of health care services, determinants of health - poverty, malnutrition, illiteracy and lack of information, Micro effects of health, health dimensions of macro economics development; health policy, financing of health care and resource constraints, inequalities in health - class and gender perspectives, institutional issues in health care delivery, economics of health insurance, community based health insurance.

UNIT-III

Economics of Infrastructure services : Role of infrastructure in economic development, natural monopoly and economics of infrastructure regulation, rate of return regulation, performance based regulation, pricing for infrastructure sector, role of subsidies, restructuring and privatisation of infrastructure sector with special reference to India, reform acts, competition in infrastructure sector, issues in infrastructure finance, modes of project financing, development of infrastructure projects - BOO, BOOT, BOLT etc.

UNIT-IV

Economics of ICT: ICT industry: An introduction, growth of the global ICT industry, measuring the impact of ICT, impact of IT on economic performance and trade, Impact of ICT on markets and society at large, direct and indirect macroeconomic impact on growth, theory and empirical evidence, specificities of information markets and network goods, need for specific sectoral regulation (discussions on case studies), familiarity with e-governance. The evolution of the sectoral regulation since the liberalisation of the Telecommunicat ions market in 1998 in India.

Reference Books/Journals:

1. Dasgupta S. and Singh A., Will services be the new engine of economic growth in India, working paper No. 310, Centre for business research, University of Cambridge, UK. Wolff A. (2005): The service economy in OECD countries, STI working paper 2005/3, statistical analysis of science, technology and industry.
2. Gordon J. and Gupta P., Understanding Indiaôs services revolution, working paper, IMF
3. Banga R. , Role of services in the growth Process, a survey, New Delhi, CRIER ÅGovernment of India (2005): Report on the CABE committee on autonomy of higher education institutions, ministry of human resource development
4. NCAER (2006):E readiness report , India

MC. 418 - WORLD TRADING SYSTEM

UNIT-I

Basic economic principles relating to international trade mercantilism, Comparative advantage and gains from trade, Factor endowments and trade patterns, Qualifications to the case for free trade, reciprocity, the optimal tariff, infant industries, strategic trade theory, revenue-raising considerations, and national security considerations.

UNIT-II

Evolution of the multilateral trading system under GATT : Emergence of discriminatory trade policies in the inter-war years leading up to the Bretton Woods Conference in 1944, The formation the GATT ï the Havana Charter and the failed attempt to establish the International Trade Organisation, Core principles of the GATT (MFN and national treatment), GATT and its changing character during the 1950s and 1960s, The emergence of the idea of special and differential treatment for developing countries and non-reciprocity, Exceptions to the GATT rules ï textiles and agriculture ï their implications, maturing of the GATT during the 1970s, GATT and the Uruguay Round.

UNIT-III

Analysis of the covered Agreements of the WTO: Agriculture, non-agricultural market access, rules, anti-dumping, subsidies, safeguards, trade facilitation, services, trips, environment, dispute settlement, attempts to expand the remit of the WTO, investment (MAI), labour standards.

UNIT-IV

Challenges to the Multilateral Trading System: The rise of regional trading agreements and free trade areas (FTAs), Relationship with the multilateral trading system, A ñspaghetti bowlò syndrome?, North-South FTAs and South-South FTAs, US unilateralism, Use of Section.

Reference Books:

1. Das B.L, The World Trade Organisation, A Guide to the Framework for International Trade, London and New York : Zed books and TWN.
2. Hoda A., Developing Countries in the International Trading System, New Delhi: Allied.
3. Aggarwal A., Anti-dumping and Developing Countries, An Introduction, New Delhi, Oxford University Press.
4. Kumar, S. : Trade in Services: Advantage, New Delhi , Bookwell Publications.
5. Marchetti J. and Roy M., Opening Markets for Trade in Services, London, Cambridge University Press.

GROUP F: BANKING AND INSURANCE

MC. 419-BANK LEGISLATION

Objective: The objective of this course is to apprise the students with the banking law and practice and develop an understanding of various laws affecting banks.

UNIT-I

Evolution of banking law : Banking Regulation Act, 1949; Reserve Bank of India Act, Bank Nationalization Act, 1969; A Study of Negotiable Instruments Act, 1881 based on case law.

UNIT-II

Banker and customer relations : Banks as borrowers; cheques - payment of customers cheques: collecting banker and customers accounts.

UNIT-III

Employment of funds; Guarantees; Advances secured by collateral securities; Advances against goods and documents of title to goods; Analysis of banks balance sheet, Electronic funds transfer and other electronic payments; Internet banking.

UNIT-IV

The Foreign exchange Management Act, 1999, Provisions relating to: Preliminary (Sec 1-2), Regulation and Management of Foreign Exchange (Sec 3 to 9). Authorized person (Section 10 to 12) Contravention and penalties (Section 13 to 15) Adjudication and Appeal (Sections 16 to 21 and sections 34-35) Directorate of enforcement (section 36 to 38).

Reference Books :

1. P.N. Varshney : Banking Law and Practice.
2. B.M. Lall Nigam : Banking Law and Practice.
3. Tannan : Banking Law and Practice in India.
4. Tax mann : Bankerôs Manual.
5. Diwan, Prag and Sunil Sharma : Electronic Commerceï A Managerôs Guide to E. Business, Varity Books International, Delhi.
6. V.K. Jain and Hemlata : Electronic and Mobile Commerce, Cyber-tech Pub. New Delhi. Uppal, K.K., Chawla, A.S. & Chawla & Malhotra Keshav : Banking Towards 21st Century, Published by Deep and Deep Publications, New Delhi.

MC.420-RISK MANAGEMENT

Objective: To provide an understanding and an appreciation of the principles and practices of risk management in order to enable production of the optimum strategy for the handling of risk in an organisation.

UNIT-I

Nature and Sources of Financial Risk: Introduction to Financial Risks, definition, including: Business Risk, Operational Risk, Financial Risk (market risk, credit risk, liquidity risk), Legal Risk; Introduction to risk management; Principles, essential features and objectives of risk management; Function and duties of a risk manager and the risk management department of a company; Content and purposes of a companyôs risk management philosophy, statement, manual and report; Location and structure risk management within the organizational structure; Risk and Return.

UNIT-II

Process of Risk Management; Techniques used in identifying sources of risk ; Quantitative and qualitative techniques used to identify and assess potential risks to an organization and the advantages and disadvantages of each technique. Techniques for gathering data. Methods of measuring, representing and comparing data for analysis and the relative advantages of each method. Probability theory, the ways in which probabilities are derived and their uses. Application of probability distribution.

UNIT-III

Risk Measurement and Control: The measurement of risk, Controlling risk: With insurance and without insurance. Objective and techniques of loss control management ï Property, Security, Employee and Liability risk control; Features of a contingency plan. Disaster Recovery, Crisis Management and Business Continuity.

UNIT-IV

Value at Risk (VaR): Meaning, Measuring Value at Risk Monte Carlo Simulatio-, application of VaR, Hedging- Concepts and Types; Hedging Process - Initiation, Monitoring, closing and roll over. Risk Management Information System (RMIS) - fundamental concepts, Evolution of RMIS, components, potential benefits and limitations of RMIS, Designing RMI, Implementing RMIS

Reference Books :

1. Redja, Principles of Risk Management and Insurance ,Pearson Education, N. Delhi.
2. Marrison The Fundamentals of Risk Mangement, Tata Mc Graw Hill, N. Delhi.
3. John C. Hull, Fundamentals of Futures & Options Markets (Prentice Hall.
4. Jorian, Phillippe Value at Risk: The New Benchmark for Managing Financial Risk McGraw-Hill.
5. Saunders, A. and M. Cornett., Financial Institutions Management: A Risk Management Approach, 6th ed. Boston: McGraw-Hill.
6. Harrington, S. and G. Niehaus. Risk Management and Insurance, McGraw-Hill.
7. Rivai, V., A. Veithzal, and F. Idroes. Bank and Financial Institutions Management: Conventional and Sharia System. Jakarta: Rajawali Pers.

MC. 421-ACTUARIAL SCIENCES

Objective: The purpose of this course is to equip the student with the principles and techniques of actuarial practice. The paper requires at least a prior general knowledge of mathematics and statistics.

UNIT-I

Basic Mathematics: Basic functions, Annuities - certain, Loans repayable by installments, Simple methods of determining the rate of interest in a transaction, Capital redemption assurance, Valuation of simple loans and debentures.

UNIT-II

Life Contingencies: Mortality tables, Elementary functions, the central death rate, Single life annuities and assurances, Commutation columns, Temporary and deferred annuities and assurances, Conversion tables.

UNIT-III

Special annuities and assurances, Periodical payments, Complete annuities, Policy value, Select and other tables.

UNIT-IV

Joint-life Annuities and Assurances: Value of and premiums for joint -life and contingent annuities and assurances.

Reference Books:

1. Donald D.W.A. ñCompound Interest and Annuities ï Certainò, 2nd Ed., Cambridge [Eng.] Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press.
2. R.E. Underwood, ñThe Elements of Actuarial Science ò, 4th Edition, Pitman.
3. Harry Freeman, ñMathematics for Actuarial Students ò, Cambridge at the University Press.

MC. 422- COMPREHENSIVE VIVA-VOCE

The Comprehensive VIVA-VOCE will be conducted at the end of the 4th Semester by the External Examiner appointed by the University. The VIVA-VOCE will be based on the content of the subjects studied by the student during the all four semesters.

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Published by **: Prof. A.K. Bhandari, Registrar, Panjab University, Chandigarh**

Department of Microbial Biotechnology (DMBT)

Panjab University

Chandigarh

Syllabus: 2019-2020, 2020-2021, 2021-2022 (M. Sc.)

SYLLABUS -2019-2020, 2020-2021, 2021-2022

M.Sc. Microbial Biotechnology

M.Sc. 1st year (1st Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Microbial Biodiversity and Physiology	MBT-101T	75	MBT-101 P	25	4
2.	Immunology and Immunotechnology	MBT-102T	75	MBT-102 P	25	4
3.	Genetics and Recombinant DNA Technology	MBT-103 T	75	MBT-103 P	25	4
4.	Microbial Biochemistry and Enzymology	MBT-104 T	75	MBT-104 P	25	4
5.	Bioprocess Engineering	MBT-105 T	75	MBT-105 P	25	4

Total Credits= 20
Total Marks = 500

M.Sc. 1st year (2nd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Medical Microbiology	MBT-201 T	75	MBT-201 P	25	4
2.	Molecular Biology	MBT-202 T	75	MBT-202 P	25	4
3.	Industrial Microbiology-1 (Health, Food, Enzymes)	MBT-203 T	75	MBT-203 P	25	4
4.	Bioinformatics & Biostatistics	MBT-204 T	75	MBT-204 P	25	4
5.	Intellectual Property Rights (IPR), Bioethics & Entrepreneurship	MBT-205 T	75	MBT-205 P	25	4

Total Credits= 20
Total Marks = 500

M.Sc. 2nd year (3rd Semester)

S. No.	Course/Paper	Code				Credits
		Theory		Practical		
		Course No.	Marks	Course No.	Marks	
1.	Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)	MBT-301 T	75	MBT-301 P	25	4
2.	Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)	MBT-302 T	75	MBT-302 P	25	4
3.	Bioinstruments and their Applications	MBT-303 T	75	MBT-303 P	25	4
4.	Microbial Identification, Diagnostics & Nanobiotechnology	MBT-304 T	75	MBT-304 P	25	4
5.	Tutorials	MBT-305 T	75	MBT-305 P	25	4

Total Credits= 20
Total Marks =500

M.Sc. 2nd year (4th Semester)

Sr. No.	*Course/Paper*	Code		Credits
		Theory		
		Course No.	**Marks**	
1.	Seminar &Journal Club	MBT-401 T	***100***	***4***
2.	Dissertation and Viva	MBT-402 T	***300+100***	***16***

Total Credits= 20
Total Marks = 500

Consolidation of Marks and Credits

Sr. No.	Class	Total Marks	Total No. of Credits
1.	M.Sc. 1st Yr	1000	40
2.	M.Sc. 2nd Yr	1000	40
Grand Total		**2000**	**80**

Department of Microbial Biotechnology (DMBT)

Syllabus
for
M.Sc. MICROBIAL BIOTECHNOLOGY
2019-2020, 2020-2021, 2021-2022

Semester I

1. MBT-101: Microbial Biodiversity and Physiology
2. MBT-102: Immunology and Immunotechnology
3. MBT-103: Genetics and Recombinant DNA Technology
4. MBT-104: Microbial Biochemistry and Enzymology
5. MBT-105: Bioprocess Engineering

Semester II

1. MBT-201: Medical Microbiology
2. MBT-202: Molecular Biology
3. MBT-203: Industrial Microbiology-1 (Health, Food, Enzymes)
4. MBT-204: Bioinformatics and Biostatistics
5. MBT-205: Intellectual Property Rights (IPR) Bioethics & Entrepreneurship

Semester III

1. MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics, Metabolomics)
2. MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)
3. MBT-303: Bioinstruments and their Applications
4. MBT- 304: Microbial Identification, Diagnostics & Nanobiotechnology
5. MBT-305: Tutorials

Semester IV

1. MBT-401: Seminar and Journal Club
2. MBT-402: Dissertation and Viva

MBT-101: Microbial Biodiversity and Physiology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) the diversity of microbes, (ii) growth & nutrientrequirements (iii) unique metabolic pathways.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit -I

1. Relevance of microbiology as a field of Biotechnology.
2. Historical milestones in Microbiology and Biotechnology
3. Structures and functions of bacteria, yeast and fungi.
4. Control of microbes by the use of physical and chemical agents.
5. Basic principles of evolution
6. Principles of protein stability

Unit – II

7. Biodiversity of

(a) Archaea
(b) Bacteria
(c) Fungi
(d) Algae
(e) Viruses
(f) Extremophiles

Unit – III

8. Nutritional requirements of microbes
9. Bacterial growth and its kinetics.
10. Chemostat, Turbidostat, Synchronous growth.
11. Mechanisms involved in transport of nutrients in microbes
12. Microbial interactions

Unit - IV

13. Brief introduction to common metabolic pathways.
14. Unique pathways of microbial metabolism: ED, PK pathways; Respiration; Fermentations; Amphibolic pathways; Anaplerotic reactions.
15. Bacterial cell wall biosynthesis
16. Integration of biochemical processes in the context of cells, tissues, and whole organisms

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical -20)*

1. Use of basic instruments in Microbiology (Light microscope, pH meter, Autoclave, Laminar flow chamber, Centrifuge, Spectrophotometer).
2. Staining of bacteria, yeast and fungi.
3. Purification of mixed cultures by streaking technique
4. Determination of viable count
5. Correlation of viable counting and optical density of cultures
6. Isolation of microbes from environment
7. Bacteriophage screening
8. Preparation of complex and synthetic medium.
9. Sterilization of liquid and solid items.
10. Storage of microbes

Suggested readings:

1. Microbial Biotechnology by A.R. Alagawadi, P.U. Krishnaraj, K.S. Jagadeesh, S. Kannaiyan. (2006) Publisher: Alpha Science Intl Ltd; First Edition (2006), ISBN-10: 8173197253 ISBN-13: 978-8173197253.

2. Prescott's Principles of Microbiology by Joanne Willey, Linda Sherwood, Chris Woolverton. (2017) Publisher: Mc Graw Hill Publisher. 10th Edition, 2017. ISBN10:1259670953 | ISBN13: 9781259670954

3. Fundamentals of Microbiology by Jeffrey C. Pommerville. (2017). Publisher: Jones and Bartlett Learning. ISBN: 978-1-284100952
4. Microbiology: An Application Based Approach by Michael J. Pelczar. (2009) Publisher:Tata McGraw Hill Education Private Limited. ISBN:1283187299, 9781283187299

5. Essential Microbiology by Staurt Hogg. (2013). Publisher: John Wiley & Sons, Publishing, Second edition. 2013. ISBN: 978-1-119-97891-6

6. Bacterial Physiology and Metabolism by Byung Hong Kim, Geoffrey Michael Gadd. (2008).Publisher: Cambridge University Press Publishing. ISBN: 978-0-521-84636-3

7. Microbes: Concepts and Applications by Prakash S. Bisen, Mousumi Debnath, G. B. Prasad. (2012). John Wiley & Sons, Publishing. ISBN: 978-0-470-90594-4

MBT-102: Immunology and Immunotechnology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To introduce the students to (i) the basics of immune system (ii) the response of humanstoforeign bodies (iii) the techniques involved in immunoassays (iv) vaccines*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided intofive units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Overview of the human immune response: adaptive and innate immunity; immune cells and immune organs
2. B cell biology: Development, selection, B cells as central players of humoral immunity
3. T cell biology: Development, thymic education, TCR rearrangement, basic functions of cells during immune response, T cells subsets
4. Immunoglobulins: Structure and functions of Immunoglobulins, Immunoglobulin rearrangement, molecular genetics of BCR generation
5. Antigens, haptens and adjuvants

Unit-II

6. Major Histocompatibility Complex (MHC): Structure, function and immunogenetics of MHC, MHC-TCR interactions, cell biology of antigen processing and presentation
7. Chemokine, cytokine and cell signaling: Their roles in activation and differentiation of cells of immune system, importance in response to pathogens
8. Immunological tolerance and autoimmunity
9. Hypersensitivity-mediated diseases

Unit-III

10. Antigen-antibody reactions, interaction, cross reactions, precipitation and agglutination
11. Radioimmunoassay, ELISA, Western blotting
12. Hybridomas and Monoclonal antibodies
13. Recent advances in immunological tools for diagnosis of diseases

Unit-IV

14. Immune response to infectious diseases: Responses to different classes of pathogens such as intracellular bacteria, viruses and extracellular and intracellular parasites
15. Vaccines and their types: killed and live, sub unit, recombinant, multivalent, DNA, edible vaccines
16. Cancer: immune-surveillance, tumorantigens, immunological intervention
17. Antibodies as immunotherapeutics
18. Cytokine therapy

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Total Leukocyte Count (TLC) and Differential Leukocyte count (DLC) of blood samples
2. Isolation of peripheral blood mononuclear cells from blood samples
3. Determination of cell viability
4. Immunoassays
5. Animal handling
6. Routes of immunization
7. Drawing blood from animals

Suggested readings:

1. Kuby Immunology by Judith A. Owen, Jenni Punt, Sharon A. Stranford and Patricia P. Jones. 2013; Publisher: Macmillan Higher Education; 7th edition. ISBN-13: 978-14641-3784-6, ISBN-10: 1-4641-3784-6
2. Roitt's Essential Immunology by Peter J. Delves, Seamus J. Martin, Dennis R. Burton and Ivan M. Roitt. 2016; Publisher: Wiley-Blackwell; 13th edition. ISBN: 978-1-118-41577-1
3. Basic Immunology byAbul Abbas Andrew H. Lichtman Shiv Pillai. 2015; Publisher: Elsevier Health; 5th edition. ISBN: 9780323390828
4. Janeway'sImmunobiology by Kenneth Murphy. 2011; Publisher: Garland Science; 8th edition. ISBN: 9780815342434

MBT-103: Genetics and Recombinant DNA Technology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) genetics of microbes (ii) permanent changes in thegenetic material (iii) techniques involved in the cloning of genetic elements*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit-I

1. Mendelian principles, concept of allele, multiple alleles, pseudoallele, co-dominance, incomplete dominance, gene interaction, pleiotropy, linkage, crossing over, sex-linked, sex-limited and sex-influenced characters.
2. Significance of genetic recombination
3. Homologous genetic recombination (Transformation, Transduction, Conjugation) and heterologous genetic recombination (IS, Tn, Mu phage)
4. Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers, mapping by using somatic cell hybrids

Unit - II

5. Mutations: Fluctuation test, Replica plating, Mutagenicity testing
6. Physical and chemical mutagens
7. Types of mutations
8. DNA Repair mechanisms

Unit – III

9. Host restriction/modification systems, Enzymes involved in gene cloning
10. Natural Plasmids and their types, Role of plasmids in transfer of genes
11. Plasmids as gene cloning vectors, Commercial vectors
12. Strategies involved in cloning of gene(s)
13. Construction of genomic, cDNA and meta-genomic libraries

Unit – IV

14. DNA sequencing
15. PCR and its applications and modifications
16. Phage display technology and its applications.
17. Yeast two-hybrid system and variants; Combinatorial library generation and use

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Isolation of chromosomal DNA
2. Isolation of plasmid
3. Preparation of competent cells
4. Transformation and Electroporation
5. Restriction digestion (complete and partial) of DNA
6. Cloning and expression of a gene in *E.coli*
7. Amplification of DNA by PCR

Suggested readings:

1. Principles of Genetics, by Eldon John Gardner, Michael J. Simmons, D. Peter Snustad. (Publisher: Wiley India; 8th Edition ISBN: 978-81-265-1043-6
2. Modern Microbial Genetics by Uldis N. Streips and Ronald E. Yasbin. (2002) Publisher: Wiley-Liss; 2nd edition, ISBN-10: 0471386650 ISBN-13: 978-0471386650
3. From Genes to Genomes: Concepts and Applications of DNA Technology by Jeremy W. Dale and Malcolm von Schantz. (2007), Publisher: Wiley-Interscience; 2nd edition ISBN-10: 0470017333, ISBN-13: 978-0470017333
4. Gene and Genome Technology: Principles and Applications of Recombinant DNA and Genomics by Sandy Primrose and Richard Twyman. (2007) Publisher: Blackwell Publishing Limited ISBN-10: 140515666X ISBN-13: 978-1405156660
5. Principles of Gene Manipulation and Genomics by Sandy Primrose, Richard Twyman, Bob Old, and Giuseppe Bertola. (2006) Publisher: Blackwell Publishing, Incorporated; 7th edition ISBN-10: 1405135441 ISBN-13: 978-1405135443
6. Manipulation and Expression of Recombinant DNA, by Sue Carson and Dominique Robertson. (2005) Publisher: Academic Press; 2nd edition, ISBN-10: 0120884186, ISBN-13: 978-0120884186
7. Gene Cloning and DNA Analysis: An Introduction by T. A. Brown. (2010) Publisher: Blackwell Publishing, Incorporated; 6th edition ISBN-9781405181730 (paperback) and 9781444334074 (hardback)
8. Recombinant DNA Technology by O.S. Reddi (2000), Publisher: Allied Publishers Pvt. Ltd. ISBN-10: 8170239958

MBT-104: Microbial Biochemistry and Enzymology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) macromolecular interactions (ii) structure and functions of biomolecules (iii) enzymes: their functions, regulation and industrial applications*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Buffers and physiological buffers.
2. Thermodynamics and Principles of thermodynamics, free energy, enthalpy and entropy.
3. Macromolecular interactions: van-der waal's, hydrogen bonding, ionic, hydrophobic, covalent etc.
4. Structure and functions of Carbohydrates, Proteins, Lipids, Nucleotides(DNA, RNA) and Vitamins.
5. Conformation of proteins (secondary, tertiary and quaternary structure; domains; motifs and folds; Ramachandran plot).

Unit – II

6. Metabolism of Carbohydrates (Glycolysis, TCA, HMP, Gluconeogenesis).
7. Metabolism of Lipids (Fatty acid metabolism, Phospholipid metabolism, Cholesterol biosynthesis).

Unit – III

8. Metabolism of protein (Digestion of proteins, General reactions of amino acids, Fate of carbon skeletons of amino acids, Regulation of amino acid biosynthesis).
9. Electron transport chain and Oxidative phosphorylation.

Unit – IV

10 Enzymes: General distinctive features, nomenclature and industrial applications.
11. Enzyme kinetics, Factors affecting enzymatic activity
12. Allosteric enzymes, Different types of inhibitors/ modulators
13. Feed back inhibition and Feedback repression mechanisms.
14. Multienzyme complexes: advantage and examples.
15. Biocatalysis: Definition, chirality, advantages/disadvantages of biocatalysis over chemical catalysis, different types of biocatalysis.

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Qualitative and quantitative assay of Sugars.
2. Qualitative and quantitative assay of Proteins.
3. Qualitative and quantitative assay of Lipids.
4. Qualitative and quantitative assay of Nucleic acids.
5. Assay of enzymes.
6. Substrate specificity and efficiency of enzymatic catalysis.
7. Kinetics of enzyme catalyzed reactions.
8. Effect of pH and temperature on enzyme activity.
9. Enzyme immobilization.

Suggested readings:

1. Enzyme Kinetics and Mechanism by P. Cook (2007), Publisher: Garland Science; 1st edition ISBN-10: 0815341407 ISBN-13: 978-0815341406.
2. Enzymatic Reaction Mechanisms by Perry A. Frey and Adrian D. Hegeman (2006), Publisher: Oxford University Press, USA; 1st edition ISBN-10: 0195122585 ISBN-13: 978-0195122589.
3. Enzyme Kinetics: A Modern Approach by Alejandro G. Marangoni (2002) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471159859 ISBN-13: 978-0471159858.
4. Introduction to Biocatalysis Using Enzymes and Microorganisms by S. M. Roberts, Nicholas J. Turner, Andrew J. Willetts, and M. K. Turner (1995) Publisher: Cambridge University Press ISBN-10: 0521430704 ISBN-13: 978-0521430708.
5. Principles of Biochemistry by David L. Nelson, Michael M. Cox. (2008, 5th edition), Publisher: W. H. Freeman, ISBN-13: 978-0716771081, ISBN-10: 071677108X.

MBT-105: Bioprocess Engineering

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to the (i) bioreactor and its types (ii) production of bioactivemolecules /cells in a bioreactor (iii) purification of bioactive molecules (iv) fermentation processes*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to a bioreactor design. Control panels of a bioreactor. Types of bioreactors. Kinetics of growth product formation and substrate utilization.
2. Operation of bio-reactors.

Unit – II

3. Mass and Heat Transfer in Bioreactors: Aeration and Agitation in Bioreactors, Concept of mass transfer correlation and scale up.

Unit – III

4. Up Stream Process (USP): Inoculum development, Media composition, Sterilization etc.
5. Down Stream Process (DSP): Cell disruptions, Flocculation, Filtration, Ultra filtration, Centrifugation, Ultracentrifugation, Chromatographic methods, two phase aqueous separations, solvent – solvent extraction, centrifugation, pre treatment, crystallization etc.
6. Characterization of protein structure and function

Unit – IV

7. Fermentations and Fermentative processes like Submerged, Solid state, Batch, Fed Batch, Continuous system etc.
8. Hygiene and safety in fermentation laboratory/processes.

Practicals

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Components and Operation of a Bioreactor
2. Batch fermentation in conical flask
3. Production of the enzyme/s in shake flask
4. Solid state fermentation
5. Fermentation strategies for proteins/polysaccharides
6. Purification strategies (simulation)

Suggested readings:

1. Biotransformations and Bioprocesses (Biotechnology and Bioprocessing Series). Mukesh Doble, Anil Kumar Kruthiventi and Vilas Ganjanan Gaikar (2004). Publisher: CRC; 1st edition, ISBN-10: 0824747755, ISBN-13: 978-0824747756.
2. Bioprocess Engineering Basic Concepts (2002).Publisher: Prentice Hall; 2nd ISBN-10: 8120321103 ISBN-13: 978-8120321106.
3. Principles of Fermentation Technology. P.F. Stanbury, A.Whitaker and S. Hall. (2001)
4. Bioprocess Engineering: Basic Concepts. Michael L, Shuler and Fikret Kargi (2001). Publisher: Prentice Hall PTR; 2nd edition ISBN-10: 0130819085, ISBN-13: 978-0130819086.
5. Solid-State Fermentation Bioreactors: Fundamentals of Design and Operation. David A. Mitchell, Nadia Krieger, and Marin Berovic (June 2006). Publisher: Springer; 1st edition ISBN-10: 3540312854, ISBN-13: 978-3540312857.
6. Bioreactors for Tissue Engineering: Principles, Design and Operation. Julian Chaudhuri and Mohamed Al-Rubeai (2005). Publisher: Springer; 1st edition.
7. Multiphase Bioreactor Design. Joaquim M.S. Cabral, Manuel Mota and Johannes (2001).Publisher: CRC ISBN-10: 0415272092, ISBN-13: 978-0415272094.

MBT-201: Medical Microbiology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To introduce the students to (i) Major infections in clinical settings (ii) Recent trends andtopics in microbial pathogenesis (iii) Antimicrobial chemotherapy (iv)Drug resistance*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided intofive units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Human microbiome in health and disease
2. Revisiting the basic concepts of infectious diseases: host parasite relationship; molecular Koch postulates; modes of transmission; virulence and pathogenicity; pathogenesis of infectious diseases; microbial mechanisms for escaping the host defenses; measures of disease occurrence and outcome
3. Microbial toxins (exotoxins and endotoxins) and their cellular targets
4. Quorum sensing and microbial pathogenicity

Unit – II

5. *Staphylococcus* species as a pathogenetic enigma
6. Molecular pathogenesis of infections caused by intracellular bacteria, with an emphasis of *Salmonella*, *Shigella*, *Listeria monocytogenes* and *Rickettsia*
7. Immunopathology, with an emphasis on *Mycobacterium tuberculosis*
8. Virulence mechanisms of other bacterial pathogens including streptococci, *Corynebacterium diphtheriae, Bordetella pertussis*, *Bacillus anthracis, Vibrio cholerae,* pathogenic *E. coli*, *Clostridium botulinum, Clostridium tetani, Clostridium perfringens,Helicobacter pylori, Yersinia pestis, Brucella abortus, Treponema pallidum, Borrelia burgdorferi*

Unit – III

9. Overview of viral pathogens, including Herpesviridae, Orthomyxoviridae, Paramyxoviridae, Flaviviridae, Hepatitis viruses, Rabies virus, Rhinovirus, Norwalk virus, Papilloma virus, Polio virus; Prion diseases
10. Viruses that changed the world: HIV and Ebola
11. Common fungal infections
12. Pathophysiology of malaria, amoebiasis and giardiasis

Unit – IV

13. Antimicrobial drugs and their cellular targets
14. Antimicrobial susceptibility testing in clinical laboratories
15. Mechanisms of drug resistance in microbes
16. Microbial biofilms and their clinical implications

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Culture identification of representative Gram-positive bacterial pathogens: *Staphylococcus,Streptococcus*
2. Culture identification of representative Gram-negative bacteria: *E. coli*, *Salmonella, Shigella,Proteus, Klebsiella, Pseudomonas*
3. Culture identification of fungal pathogens (*Candida, Aspergillus*)
4. Antimicrobial susceptibility testing of pathogenic bacteria
5. Collection, handling and storage of clinical samples

Suggested Readings:

1. Mims' Medical Microbiology by Richard Goering, Hazel Dockrell, Mark Zuckerman, Ivan Roitt and Peter L. Chiodini. 2012; Publisher: Elsevier; 5th edition. ISBN: 9780723436010
2. Mims' Pathogenesis of Infectious Disease by Anthony Nash, Robert Dalziel and J. Fitzgerald. 2015; Publisher: Elsevier; 6th edition. ISBN: 9780123971883.
3. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases by Gerald Mandell, John Bennett and Raphael Dolin. 2009; Publisher: Elsevier; 7th edition. ISBN: 9781437720600, 9781455708727
4. Manual of Clinical Microbiology. Editors: James H. Jorgensen, Michael A. Pfaller, Karen C. Carroll, Guido Funke, Marie Louise Landry, Sandra S. Richter and David W. Warnock. 2015; Publisher: American Society for Microbiology Press; 11thedition. ISBN: 9781555817374
5. Ananthanarayan and Paniker's Textbook of Microbiology by Reba Kanungo. 2017; Publisher: Universities Press; 10th edition. ISBN: 9789386235251
6. Bailey & Scott's Diagnostic Microbiology by Patricia Tille. 2016; Publisher: Elsevier; 14th edition. ISBN: 9780323354820

MBT-202: Molecular Biology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to the mechanism of (i) DNA replication (ii) DNAtranscription (iii) protein synthesis (iv) regulation of gene expression (v) signal transduction*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. DNA and its various forms, super coiling of DNA, DNA melting, repetitive sequences, $c_o t$ and $R_o t$ curves/analysis, C-value paradox, DNA protein interaction
2. Unit of DNA replication, enzymes involved in replication, origin and replication fork, fidelity of replication.
3. Replication of bacterial chromosome, chromosome structure and organization of genes on chromosome, operon context.
4. Replication of eukaryotic chromosomes, cell division and cell cycle

Unit-II

5. RNA synthesis and processing: transcription factors and machinery, formation of initiation complex, transcription activator and repressor, RNA polymerases, RNA capping, elongation, and termination, RNA processing, RNA editing, splicing, and polyadenylation, structure and function of different types of RNA, non coding RNA, RNA transport.

Unit – III

6. Protein synthesis and processing: Ribosome structure, genetic code, aminoacylation of tRNA, formation of initiation complex, initiation factors and their regulation, elongation and elongation factors, termination, translation proof-reading, translational inhibitors, Post-translational modification of proteins.
7. Control of gene expression at transcription and translation level

Unit – IV

8. Cell signaling: signal transduction pathways and their regulation, bacterial two-component systems, bacterial chemotaxis and quorum sensing.
9. Cancer Biology: Genetic rearrangements in progenitor cells, oncogenes, tumor suppressor genes, cancer and cell cycle, metastasis. Microbes in cancer: carcinogenesis and treatment
10. Gene silencing strategies and applications

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Spectrophotometric analysis of DNA
2. Isolation of RNA
3. Characterization of different types of RNA molecules
4. Construction of cDNA
5. Separation of *Escherichia coli* soluble proteins on non-denaturing gels.
6. Separation of *Escherichia coli* total proteins on denaturing gels.
7. Cell Proliferation/Cytotoxicity assays

Suggested readings:

1. Molecular Biology of the Gene, by James D. Watson, Tania A. Baker, Stephen P. Bell, and Alexander Gann (2007), Publisher: Benjamin Cummings; 6th edition ISBN-10: 080539592X ISBN-13: 978-0805395921
2. Fundamental Molecular Biology by Lizabeth A. Allison (2007), Publisher: Wiley-Blackwell; 1st edition ISBN-10: 1405103795 ISBN-13: 978-1405103794
3. Molecular Biology by Robert F. Weaver (2007) Publisher: Mcgraw-Hill College; 4th edition ISBN-10: 0072995246 ISBN-13: 978-0072995244
4. Cell and Molecular Biology: Concepts and Experiments by Gerald Karp (2013) Publisher: Wiley; 7th edition ISBN-10: 0470042176 ISBN-13: ISBN 13 978-1118-20673-7/978-1118-30179-1
5. Molecular Biology of the Cell by Bruce Alberts, Alexander Johnson, Julian Lewis, and Martin Raff Publisher: Garland Science; 5th edition, ISBN-10: 0815341059 ISBN-13: 978-081534105
6. Principles of Biochemistry by David L. Nelson, Michael M. Cox. (2008, 5th edition), Publisher: W. H. Freeman, ISBN-13: 978-0716771081, ISBN-10: 071677108X.

MBT-203: Industrial Microbiology- I (Health, Food, Enzymes)

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) Industrially important metabolites produced by microbes especially in the areas of health, food and enzymes (ii) immobilization of enzymes/cells*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Primary and Secondary metabolites of industrial importance.
2. Techniques involved in screening/detection of industrially important metabolites from microbes.
3. Pyruvate as the hub molecule
4. Microbial therapies and diagnostics

Unit - II

5. Biosynthesis and fermentation process involved in

(a) Health & Pharma- Antibiotics (Penicillin, Streptomycin,), Alkaloids (ergot, lysergic acid), Biotransformations (Steroids, chirals), Therapeutic proteins (Interferons, Insulin).

(b) Food and Beverages- Beer, Wine, Whisky, Vinegar

(c) Traditional fermented foods; Food additives: Vitamins, Bioflavors

Unit – III

6. Microbial Enzymes - Pharma related enzymes, Detergent enzymes, Processing of starch and related carbohydrates, Fruit juice production, Textile & leather manufacture, Treatment of wood pulp, Organic synthesis, Diagnostics

Unit – IV

7. Immobilization of enzymes and cells: Parameters for choosing a matrix for immobilization, types of methods for immobilizations. Applications of immobilization techniques.

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Screening of microbes for production of industrially important enzymes.
2. Optimization of conditions for optimal production of enzyme: - Media composition, Incubation temperature, Aeration, Incubation time.
3. Wine fermentation
4. Purification of antimicrobial metabolites from a microbe.
5. Enzyme immobilization
6. Design of fermentation processes for the production of fuels, chemicals and foodstuffs

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers. Doyle (2007). Publisher: American Society Microbiology; 3rd edition ISBN-10: 1555814077, ISBN-13: 978-1555814076.
2. Food Microbiology: An Introduction. Montville (2005). Publisher: American Society Microbiology; 1st edition ISBN-10: 1555813089, ISBN-13: 978-1555813086.
3. Environmental Microbiology: A Laboratory Manual. Ian L. Pepper and Charles P. Gerba(2004). Publisher: Academic Press; 2nd edition ISBN-10: 0125506562, ISBN-13: 978-0125506564.
4. Advances in Food & Nutrition Research. Steve Taylor (2003). Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479.
5. Environmental Microbiology. Raina M. Maier, Ian L. Pepper, and Charles P. Gerba(2000). Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705.
6. Applied Dairy Microbiology. Elmer H. Marth and James Steele (2001).Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367.
7. Peter F Drucker. Innovation and Entrepreneurship. Harper & Row, 1985
8. Prasanna Chandra- Projects: Preparation Appraisal and Super implementation. Tata Mc-Graw-Hill Co. Ltd
9. J.D. West & F.K. Levy. A management guide to PERT/CPM, Prentice Hall, India

MBT-204: Bioinformatics and Biostatistics

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) basic understanding of computers (ii) computationaltools developed for understanding of genetic material and proteins*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I (Biostatistics)

1. Basic definitions and applications. Data collection and representation. Measure of central tendencies (Mean, Median and Mode) and dispersal; measure of variability (standard deviation, standard error, range, mean deviation, coefficient of variation); probability distributions (Binomial, Poisson and Normal), sampling distribution
2. Difference between parametric and non-parametric statistics, confidence interval, errors, levels of significance
3. Regression and correlation, t-test, analysis of variance, chi-square test
4. Basic introduction to Multivariate statistics

Unit – II (Biological databases)

5. Brief on programming languages commonly used in Biological Sciences
6. Database- introduction, Primary, Secondary and Tertiary databases; Type and kind of databases; Literature search (PUBMED and MEDLINE).
7. Nucleic acid (GenBank, EMBL *etc.*); Structural databases- PDB, PDBsum, NDB, CATH, SCOP etc. Motifs and Pattern Databases- PROSITE, Pfam, iPfam *etc.*
8. Protein databases (SWISS PROT, UNIPROT *etc.*); Structural databases- PDB, PDBsum, NDB, CATH, SCOP *etc*; Motifs and Pattern Databases- PROSITE, Pfam, *etc*.
9. Sequence retrieval (SRS, Entrez) and Data submission.

Unit – III (Sequence analysis)

10. Sequence alignment- introduction and concepts, Local and Global alignment concepts.
11. Similarity and Percent identity score (open, extended gap penalty). Multiple sequence alignment (MSA) - introduction and concepts. Types of multiple sequence alignment techniques. Description of major softwares (MSA, CLUSTAL variants (X, W2, OMEGA), PILEUP, T-Coffee, PROS, CONS).
12. Database Scanning and Sequence similarity searches. Algorithm of FASTA. Description of BLAST algorithm. Various BLAST programs (BLASTP, BLASTN, BLASTX, PHI-BLAST, PSI-BLAST etc).
13. Protein Structure: Classification, Structure Analysis, Secondary structure predictions, Comparative/Homology modeling, Modeling using Swiss Model Server.

Unit – IV (Genome analysis)

14. Introduction to genomes. Sequencing techniques. Sequencing of whole genomes
15. NextGen Sequencing (NGS); Assembling of genomes from short reads
16. Concept of Metagenomics;Types of repeats and repeat finding techniques; Structure of genes; Prediction of gene in prokaryotic and eukaryotic genomes (GENESCAN, GeneMark, GeneSeqer *etc.*); Promoter prediction in *E. coli* and in eukaryotes
17. Description of major gene prediction methods

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Sequence (DNA & Protein) alignments
2. Genome sequence studies
3. Designing ideal primers for amplification of genetic material
4. Deciphering 3-D structure of proteins
5. Designing inhibitors of enzymes

Suggested readings:

1. Understanding Bioinformatics by Marketa Zvelebil and Jeremy Baum (2007) Publisher: Garland Science; 1st edition ISBN-10: 0815340249, ISBN-13: 978-0815340249
2. Essential Bioinformatics by Jin Xiong (2006) Publisher: Cambridge University Press; 1st edition ISBN-10: 0521600820, ISBN-13: 978-0521600828
3. Bioinformatics: Sequence and Genome Analysis by David W. Mount (2004). Publisher: Cold Spring Harbor Laboratory Press; 2nd edition ISBN-10: 0879697121 ISBN-13: 978-0879697129
4. An Introduction to Bioinformatics Algorithms (Computational Molecular Biology) by Neil C. Jones and Pavel A. Pevzner (2004) Publisher: The MIT Press; 1st edition ISBN-10: 0262101068, ISBN-13: 978-0262101066
5. Bioinformatics: A Biologist's Guide to Biocomputing and the Internet by Stuart M. Brown (2000). Publisher: Eaton Publishing Company/Biotechniques Books ISBN-10: 188129918X, ISBN-13: 978-1881299189

MBT-205: Intellectual Property Rights (IPR), Bioethics and Entrepreneurship

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) understanding of patents (ii) filing of patents (iii)ethical and social issues in biotechnology*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Introduction: General Introduction
2. Patent Claims, the legal decision-making process
3. Ownership of Tangible and Intellectual Property.
4. Basic requirements of patentability, patentable subject matter, novelty and the Public Domain; Non-obviousness, Foreign Patents
5. Special issues in Biotechnology Patents: Disclosure Requirements, Ethical issues, Plant Biotechnology- UPOV and plant breeder's rights, Case studies/ experiences from developing and developed countries, IPR issues in the Indian context.
6. Contract law, IP reform, Policy implications of IP

Unit - II

7. Copyright and Patents; International Treaties and Conventions; Business Software Patents
8. Patent Litigation: Substantive and Procedural Aspects
9. IT Act, 2000 : Aims and Objectives; Overview of the Act; Jurisdiction; Role of Certifying Authority; Regulators under IT Act; Cyber Crime-offences and Contraventions; Grey Areas on IT Act.

Unit - III

10. Biotechnology and hunger: Challenges for the Indian Biotechnological research and industries.
11. The Cartagena protocol on biosafety
12. Social and ethical implication of biological weapons
13. Intersection of Biotechnology with globalization, trade, poverty, food security, and environmental sustainability

Unit - IV

14. Entrepreneurship: Need, scope, philosophy and classification. Creativity and Entrepreneurship. Entrepreneurship competencies and traits, factors affecting Entrepreneurship development
15. Functions of entrepreneurship, Entrepreneurship with the motive of economic growth, theory of social change, family structure, migration and enterprise.

16. Barriers to entrepreneurship, community and entrepreneurship.
17. Funding challenges for an entrepreneur, Business planning and investment pitch, Identify and evaluate business opportunities, Risk assessment and management Opportunities for entrepreneurship in emerging markets

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Searching of Indian Patent databases
2. Drafting and filing of Indian Patent application.
3. Searching of International Patent databases
4. Drafting and filing of International Patent application.
5. How to formulate well-structured research questions, recognize appropriate research methods, and assess research reports

Suggested readings:

1. Intellectual Property Rights in the Global Economy. Maskus, K.E. (2000), Publisher: Peterson Institute, ISBN 0881322822, pp. 1-266.
2. Intellectual property: patents, copyright, trade marks and allied rights. Cornish, W.R. (2003). Universal Law Publishing, Delhi. ISBN-10: 0421781203, pp. 1-895.
3. Intellectual Property Rights: Infringement and Remedies. Padmanabhan A. (2012).Publisher: Lexis Butterworths Wadhwa Inc. ISBN: 9788180387937. pp.1-638.
4. Access to Knowledge in the Age of Intellectual Property. Krikorian G, Kapczynski A. (2010). Publisher: Zone Books Inc. ISBN/ASIN: 9781890951,pp.1-640
5. The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company. Blanck, S and Dorf, B. (2012). K&S Ranch Inc., California, USA ISBN-10: 0984999302 | ISBN-13: 978-0984999309, pp.1-557.
6. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses Ries, E. (2011). Crown Publishing Group, New York, USA, ISBN 978-0-307-88789-4, pp.1-309

MBT-301: Advances in Microbial Biotechnology (Genomics, Proteomics & Metabolomics)

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to recent trends in the field of Microbial Genomics,Proteomics & Metabolomics.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Introduction to Microbial genomes
2. Genome sequencing of different microbes and their importance
3. Techniques for genome research (chromosome walking, RFLP etc.)
4. Application of microbial genomic variability for utilizing in human welfare (applications)
5. Phylogenetic relationships between various genera of microbes

Unit – II

6. Sequences as Biological Information - Cells obey the Laws of Chemistry and Physics
7. Evolution by Genome Expansion and Reduction
8. Metagenomics
9. Methods to Compare Genomes
10. Archaeal Genomics
11. Microbial Genome Annotation
12. Genomics for pathogenic microbes – Search for better vaccines

Unit – III

13. Introduction to microbial proteomics
14. Techniques for Proteome research (2 – D gel electrophoresis, DIGE, PROTOMAP, COFRADIC, MALDI-ToF, Protein purification work station)
15. Gel free Mass Spectrometry based microbial proteomics - methodology and application
16. Microbial pathogenesis at the proteome level
17. Proteome research for novel drug targets
18. Structural proteomics and computational analysis
19. Proteomics of Archaea
20. High throughput proteomic screening for novel enzymes

Unit – IV

21. Techniques for metabolic engineering
22. Genetic and epigenetic manipulation of useful microbes
23. Strain improvement methods and strategies - Classical *vs* metabolic engineering, developing/ emerging/ novel

24. Production and yield enhancement of valuable products (fuels, amino acids, drugs *etc*) by metabolic engineering

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. RAPD/RFLP/16S rRNA-sequencing of bacterial isolates (e.g., *Escherichia coli* isolates) and phylogenetic tree construction
2. Isolation of metagenomic DNA from soil or water source
3. Demonstration of 2-D gel electrophoresis
4. Demonstration of MALDI – ToF
5. Demonstration of DNA/Protein Microarray system
6. Practicals on Microbial Genomics/Proteomics/Metabolomics using computational tools
7. Comparison of genomes. Genome projects and sequence archive databases.

Suggested readings:

1. Microbial Proteomics: Functional Biology of Whole Organisms by Ian Humphery-Smith and Michael Hecker (2006) Publisher: Wiley-Interscience; 1st edition ISBN-10: 0471699756, ISBN-13: 978-0471699750
2. Microbial Genomics and Drug Discovery by Thomas J. Dougherty and Steven J. Projan (2003) Publisher: CRC; 1st ed. ISBN-10: 0824740416, ISBN-13: 978-0824740412
3. Metabolic Engineering by Sang Yup Lee and E. Terry Papoutsakis (1999) Publisher: CRC; 1st edition ISBN-10: 082477390X, ISBN-13: 978-0824773908
4. Advances in Microbial Biotechnology by Rajhi Gupta, Jagjit Singh, T.N. Lakhanpal, and J.P. Jewari (1999) Publisher: A.P.H. Pub. Corp. ISBN-10: 8176480789, ISBN-13: 978-8176480789
5. Discovering Genomics, Proteomics and Bioinformatics by A. Malcolm Campbell, Laurie J. Heyer Publisher: Pearson Education India; 2nd edition (2007) ISBN-10: 8131715590, ISBN-13: 978-8131715598

MBT-302: Industrial Microbiology-II (Environment, Biofuels, Chemicals, Biomass, Protocols)

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to (i) the benefits of microbes/their products in cleaning theenvironment (ii) large scale production of useful microbial biomass (iii) production of biofuels and chemicals (iv) useful protocols*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise of objective type/short notes covering the complete syllabus.*

Unit – I (Environment)

1. Waste water and effluent treatment,
2. Biodegradation of Xenobiotics, Bioremediation, Biomining
3. Biodegradable plastics
4. Bioinsecticides
5. Microbes as N and P Biofertilizers

Unit – II (Biomass)

6. Manufacture of Baker's yeast
7. Single cell protein production especially *Spirulina*
8. Mushroom cultivation especially *Agaricus bisporus*
9. Probiotics, Prebiotics, Synbiotics

Unit – III (Biofuels & Chemicals)

10. Biofuel production especially Ethanol, Butanol, Methane, Hydrogen, Electricity, Biodiesel
11. Organic acids especially Amino acids (glutamic acid, lysine), Citric acid, Acetic acid, Lactic acid
12. Microbial exopolysaccharides

Unit – IV (Protocols)

13. Good Lab Practices guidelines
14. Good Manufacturing Processes guidelines
15. Guidelines for use of recombinant microbes
16. Important Biotech companies of India and the World
17. Equipment validation, Analytical method validation, Process validation

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Estimation of BOD levels of a water sample
2. Isolation of P-solubilizers from the soil
3. Estimation of P-solubilizing activity of P-solubilizer
4. Isolation of *Lactobacilli* from milk/ curd
5. Production of bacteriocin by probiotics
6. Effect of temperature on the preparation of curd from milk
7. Effect of type of milk on the preparation of curd from milk

Suggested readings:

1. Food Microbiology: Fundamentals and Frontiers by Doyle (2007) Publisher: American Society Microbiolgy; 3rd edition ISBN-10: 1555814077 ISBN-13: 978-1555814076
2. Food Microbiology: An Introduction by Montville (2005) Publisher: American Society Microbiolgy; 1st edition. ISBN-10: 1555813089 ISBN-13:978-1555813086
3. Environmental Microbiology: A Laboratory Manual by Ian L. Pepper and Charles P. Gerba (2004) Publisher: Academic Press; 2nd edition ISBN-10: 0125506562 , ISBN-13: 978-0125506564
4. Advances in Food & Nutrition Research by Steve Taylor (2003) Publisher: Academic Press; 1st edition ISBN-10: 0120164477, ISBN-13: 978-0120164479
5. Environmental Microbiology by Raina M. Maier, Ian L. Pepper, and Charles P. Gerba (2000) Publisher: Academic Press; 1st edition ISBN-10: 0124975704, ISBN-13: 978-0124975705
6. Applied Dairy Microbiology, by Elmer H. Marth and James Steele (2001) Publisher: CRC; 2nd edition ISBN-10: 082470536X, ISBN-13: 978-0824705367

MBT-303: Bioinstruments and their Applications

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To expose the students to the variety of instruments used in the study ofMicrobial Biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit - I

1. Microscopy: Light microscope, Field Microscope, Fluorescent microscope, Phase contrast microscope, AFM, SCM, TEM, SEM, STM.
2. Spectrophotometer: UV and Visible
3. Mass spectroscopy, Infrared and Raman spectroscopy. CD spectroscopy, NMR, ESR.

Unit - II

4. Centrifugation: Theory and its applications to biological systems, centrifuges, rotors-fixed angle/swing out, concept of vertical, buoyant density centrifugation.
5. Electrophoresis: Theory, different methods of electrophoresis for proteins and nucleic acids.

Unit – III

6. Chromatography: GC, Paper Chromatography, TLC, HPLC, FPLC,
7. Crystallography and X-Ray diffraction, Electron diffraction, Neutron diffraction.
8. Radioisotope techniques: radiotracers GM Counter, Proportional and Scintillation counters, autoradiography

Unit – IV

9. Protein purification workstation
10. GCMS, LCMS
11. MALDI-ToF

Practicals:

Total Marks: 25 Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)

1. Operation of Microscopes: TEM, and SEM.
2. Running TLC; R_f value using TLC
3. Operation of Centrifuges (microfuge and high speed centrifuge and ultracentrifuge).
4. Operation of GC, HPLC
5. Operation of MS, LCMS, NMR.

Suggested Readings:

1. Advances in Chromatography. Eli Grushka and Nelu Grinberg (2007). Publisher: CRC: 1st edition. ISBN-10: 1420060252, ISBN-13: 978-1420060256, Volume 46.
2. Understanding NMR Spectroscopy. James Keeler (2005). Publisher: Wiley; 1st edition ISBN-10: 0470017872, ISBN-13: 978-0470017876.
3. Physical Principles of Electron Microscopy: An Introduction to TEM, SEM, and AEM. Ray F. Egerton (2005). Publisher: Springer; 1st ed.. ISBN-10: 0387258000, ISBN-13: 978-0387258003.
4. Fundamentals of Light Microscopy and Electronic Imaging. Douglas B. Murphy (2001). Publisher: Wiley-Liss; 1st edition ISBN-10: 047125391X, ISBN-13: 978-0471253914.
5. Principles and Techniques of Practical Biochemistry. Keith Wilson & John Walker(2000). Cambridge University Press.
6. Introduction to Spectroscopy. Donald L. Pavia, Gary M. Lampman, and George S. Kriz (2000). Publisher: Brooks Cole; 3rd edition. ISBN-10: 0030319617, ISBN-13: 978-0030319617.

MBT-304: Microbial Identification, Diagnostics and Nanobiotechnology

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *To introducethe students to (i) the various methods used in microbial identification & (ii)applications of nanotechnology in biotechnology.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will be divided intofive units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit willcomprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Principles of microbial diagnostics: conventional and molecular approaches
2. Microscopic examination: applications of light microscopy, fluorescent microscopy and electron microscopy in microbial identification
3. Serological diagnosis of infectious diseases
4. Automated detection systems: BACTEC, VITEK, FAME and Biolog

Unit - II

5. Nucleic-acid based detection: fluorescent in situ hybridization; line probe assay; PCR and its various types; transcription mediated amplification (TMA); nucleic acid sequence based amplification (NASBA); branched DNA (bDNA); Qβreplicase; hybrid capture
6. Epidemiological molecular typing: pulsed field gel electrophoresis, RFLP, RAPD and MLST
7. Flow cytometry and fluorescence-activated cell sorting
8. Microarray: types and applications

Unit – III

9. Basic components of a sensor
10. Types of biosensors and their applications
11. Biosensors in research and diagnostics
12. Lateral flow assays
13. Lab on a Chip technology

Unit – IV

14. Understanding Nanobiotechnology and its importance to society
15. Microbial nanoparticle production
16. Nanoparticles for biological applications
17. Luminiscent quantum dots for biological labeling

Practicals:

Total Marks: 25 *Int. Asses.-05. Based on the performance of the students during the practical Exam. – 20 (Practical - 20)*

1. Case studies in infectious disease diagnostics: clinical-case discussions and hands on
2. Chromogenic media for microbial identification
3. Microbial identification using VITEK, BACTEC, BIOLOGS and FAME (demonstration)
4. Microbial identification and typing by molecular methods
5. Practical on biosensors
6. Microbial synthesis of nanoparticles

Suggested readings:

1. Bailey & Scott's Diagnostic Microbiology by Patricia Tille. 2016; Publisher: Elsevier; 14th edition. ISBN: 9780323354820
2. Mackie &Mccartney Practical Medical Microbiology. Editors: J.G. Collee, A.G. Fraser, B.P. Marmion and A. Simmons. 1999; Publisher: Elsevier; 14th edition. ISBN: 9788131203934
3. Molecular Microbiology: Diagnostic Principles and Practice. Editors: David H. Persing, Fred C. Tenover, Randall T. Hayden, Margareta leven, Melissa B. Miller, Frederick S. Nolte, Yi-Wei Tang, Alex van Belkum. 2016; Publisher: American Society for Microbiology Press; 3rd edition. ISBN: 9781555819088
4. Nanotechnology in Diagnosis, Treatment and Prophylaxis of Infectious Diseases. Editors: MahendraRai and KaterynaKon. 2015; Publisher: Elsevier; 1st edition. ISBN: 9780128013175
5. Chemical Sensors and Biosensors by Brian R. Eggins. 2002. Publisher: Wiley; 1stedition. ISBN: 9780471899143
6. Nanobiotechnology: Concepts, Applications and Perspectives. Editors: C.M. Niemeyer, C.A. Mirkin. 2004. Publisher: Wiley; 1st edition. ISBN: 9783527306589
7. Nanobiotechnology II: More Concepts and Applications. Editors: C.A. Mirkin and C.M. Niemeyer. 2007. Publisher: Wiley; 1st edition. ISBN: 9783527316731
8. Handbook of Nanotechnology by Bharat Bhushan. 2010. Publisher: Springer; 3rd edition. ISBN:9783642025242

MBT-305: Tutorials

Total Marks: 75 (Exam-60 + Int. Asses.-15)

Objective: *(i) To overcome the academic deficiencies of students and to expose the students tothose parts of Microbial Biotechnology which have not been covered in the syllabus (ii) Invited lectures from experts.*

Exam Pattern: *Five questions to be attempted from a total of nine questions, which will bedivided into five units. Each unit will comprise of two questions and students would be required to attempt one question from each unit. The last unit will comprise objective type/short notes covering the complete syllabus.*

Unit – I

1. Quantitative PCR: Theory, Practice, Problems and Solutions.
2. Myths and misconception about diseases e.g., Tuberculosis, Leprosy, Rabies, Anthrax, Brucellosis.
3. Giant viruses and Virophages: Characteristics and evolutionary implications.

Unit - II

4. Biosafety, biosecurity and dual use research of concern.
5. Biomedical waste management.
6. Exceptions to the classical bacterial definition.

Unit - III

7. Diversity of antimicrobial peptides.
8. Role of integrons in microbial drug resistance.
9. Non-Rhizobium PGPRs and their role in crop productivity.

Unit - IV

10. Radiations in diagnostics.
11. Phosphorescence, Florescence and Luminescence
12. Applications of non-aqueous enzymology

Practicals:

Total Marks: 25 Int. Asses.-05. Project Report-20

The practical is intended to apprise the students of the research methodology including techniques and prepare for dissertation/research work. The overall assessment of the project report will be based on the quality of final project report (review/overview of literature and general methodology update of the assigned field) submitted.

Suggested Readings:

1. Real-time PCR, M. Tevfik Dorak (ed.) (2006). Publisher: Taylor & Francis Group. ISBN: 0–203–96731–3 (Master e-book)/ 0-4153-7734-X(Print Edition). For recent updates on detection, instrumentation and application of quantitative PCR, refer to the websites of the major QPCR reagent and instrument providers
2. Disease information and advisory websites http://www.who.int/en/; http://www.cdc.gov/; http://www.keelpno.gr/; http://www.ncdc.gov.in/
3. Vasquez M, Hallam SJ, Raoult D and Abrahão J (Eds). (2016). Megaviromes [Special Section]. Current Opinion in Microbiology, 31:1-234 (ISSN 1369-5274)

4. Bio-Medical Waste Management Rules, 2016. Ministry of Environment, Forest and Climate Change, Government of India. [Published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i)]
5. Laboratory Biosafety Manual. 3rd edition. (2004) Publisher: World Health Organization, Geneva. ISBN 92 4 154650
6. http://www.dbtindia.nic.in/ (Policies and Regulations regarding Bio-Medical Waste Management)
7. Antimicrobial databases: http://aps.unmc.edu/AP/main.php; http://www.camp.bicnirrh.res.in/
8. Journals: Biotechnology Advances; Current opinion in Microbiology; Nature Biotechnology; Analytical chemistry; Critical reviews in Biotechnology; Critical reviews in Microbiology

MBT-401: Seminar and Journal Club

Total Marks: 100 (Exam-80 + Int. Asses.-20)

Objective: *This course will help the students to know the type of research going on in variouscountries. It will also help the students in preparing, delivering and defending a 'talk'.*

The Internal assessment will be made from the attendance and the interaction of the student during the seminars and tutorials.

Students will be asked to deliver a talk on current issues pertaining to Microbiology, Biotechnology and other important topics. Some guest lectures will be arranged.

MBT-402: Dissertation and Viva

Total Marks: 400 (Dissertation: 300 + Viva: 100)

Objective: *To prepare the students as how to carry out independent research work*

Each student will be given an independent research project. The evaluation will be based on the presentations, knowledge of the topic of research, quality of the compiled Dissertation.

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PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estted. under the Pan jab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

For

M.Sc. Two Year Course (Zoology)

EXAMINATION 2020-21

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.Sc. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM) 2018-2019

FIRST SEMESTER

		Marks
Paper - I :	Structure and Functions of Invertebrates - I	80
	Practical based on Paper - I	20
Paper - II :	Lower Chordates. Comparative Anatomy of Vertebrates -I	80
	Practical based on Paper-II	20
Paper III :	Animal Physiology	80
	Practical based on Paper III	20
Paper IV :	Ecology and Animal Behaviour	80
	Practical based on Paper IV	20
Paper V :	Biostatistics and Computer Application	80
	Practical based on Paper V	20

SECOND SEMESTER

Paper VI :	Structure and Functions of Invertebrates - II	80
	Practical based on Paper - VI	20
Paper VII :	Comparative Anatomy of Vertebrates -II	80
	Practical based on Paper-VII	20
Paper VIII :	Biosystematics and Evolution	80
	Practical based on Paper-VIII	20
Paper IX :	Endocrinology and Neural Physiology	80
	Practical based on Paper IX	20
Paper X :	Immunology	80
	Practical based on Paper X	20

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.SC. (TWO YEAR COURSE) IN ZOOLOGY (SEMESTER SYSTEM)

THIRD SEMESTER

Paper XI :	Developmental Biology -I	80
	Practical based on paper XI	20
Paper XII :	Biochemistry,	80
	Practical based on Paper XII	20
Paper XIII :	Cell and Molecular Biology	80
	Practical based on Paper-XIII	20
Paper XIV :	Instrumentation and Methodology	80
	Practical based on Paper XIV	20
Paper XV :	Advances in Entomology	80
	Practical based on Paper XV	20

FOUR SEMESTER

Paper XVI :	Developmental Biology -II	80
	Practical based on paper XVI	20
Paper XVII :	Advances in Parasitology	80
	Practical based on Paper XVII	20
Paper XVIII :	Advances in Fish and Fisheries	80
	Practical based on Paper XVIII	20
Paper XIX :	Environmental Biology & Wild life	80
	Practical based on Paper XIX	20
Paper XX :Cytogenetics and Molecular Genetics		80
	Practical based on Paper-XX	20

PAPER-I : STRUCTURE AND FUNCTIONS OF INVERTEBRATES -I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment : 15
Annual Theory Exam. : 65
Practical : 20
Internal Assessment : 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates.

UNIT-I

1. Phylum Protozoa : General organisation of Protozoa with special reference to feeding, locomotory organelles and locomotion, reproduction, parasitism and pathogenic protozoans.

2. Phylum Porifera : General organisation of phylum Porifera with special reference to canal system, skeleton and development.

3. Phylum Coelenterata : General organisation of phylum Coelenterata with special reference to polymorphism, corals and coral reefs, development and alternation of generation.

UNIT-II

4. Phylum Platyhelminthes : General organisation of phylum Platyhelminthes with special reference to body wall, digestive system, excretory system and reproductive system. Development and life cycles of *Fasciola, Schistosoma, Taenia* and *Echinococcus*.

5. Phylum Aschelminthes : General organisation of phylum Aschelminthes. Life cycle of *Ascaris lumbricoides. Wuchereria bancrofti*, *Dracunculus medinensis.*

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - I

Classification upto orders and study of the specimens mentioned against each phylum with ecological note.

1. Protozoa.
   a. Permanent stained preparation from the culture of *Amoeba, Euglena Paramecium* and *Vorticella*.

   b. Prepared slides of *Amoeba, Trypanosoma, Euglena, Noctiluca, Eimeria, Monocystis, Paramecium* (binary fission), *Paramecium* (conjugation), *Opalina, Vorticella, Balantidium, Nyctotherus,* Radiolarian oozes and Foraminiferan oozes.

2. Porifera
   a. Specimens : *Scypha, Grantia,Spongilla, Euplectella, Hyalonema, Euspongia.*
   b. Prepared slides : Spicules, gemmules, *Sycon* (T.S and L.S).
   c. Preparation of permanent slides : gemmules and spicules.

3. Coelenterata
   a. Specimens: *Porpita, Velella, Physalia, Aurelia, Metridium, Alcyonium, Tubipora, Zoanthus, Madrepora, Favia, Fungia, Gorgonia* and *Pennatula*.

   b. Prepared slides : *Hydra* (W.M.), T.S. through regions of testis and ovary, *Obelia* (colony, medusa and polyp), *Sertularia, Plumularia, Tubularia Bougainvillea, Aurelia, Pennaria*.
   c. Preparation of permanent slides : *Hydra, Obelia, Sertularia* and *Plumularia*.

4. Platyhelminthes
   a. Specimens : *Planaria, Dugesia, Fasciola, Taenia*, and *Echinococcus.*
   b. Slides : *Fasciola* (miracidium, sporocyst, redia and cercaria), scolex and proglottids of *Taenia* (Mature and gravid L.S. & T.S.).
   c. Stained preparation of : Amphistome, proglottid of a cestode.

5. Aschelminthes
   a. Specimens : *Ascaris* (Male and female)
   b. Slides : *Ascaris* (T.S. of male and female gravid).

6. Project based on general information on animals, selecting at least one representative from each phylum.

Books Recommended

1. *Invertebrates* Vols.I, II, III, IV & V by L.H. Hyman, Mcgraw Hill, New York (1940- 51)
2. *Text book of Zoology* by Marshall and Williams (1962).
3. *Invertebrates Structure and function* by E.J.W. Barrington. English Language Book Society & Nelson (1969).
4. *Protozoology* by Kudo, R.R., Books and Periodicals Corp.(India) New Delhi (1986).

5. *Introduction to Animal Parasitology* by J.D. Smyth. Hodder & Stoughton, London (1976).

PAPER - II : LOWER CHORDATES. COMPARATIVE ANATOMY OF VERTEBRATES - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of protochordates.
To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT - I

Introduction to chordates. *Organisation* and affinities of *Herdmania* and *Amphioxus*.

Comparative account of following systems of the vertebrates with evolutionary trends from Pisces to Mammals.

Integumentary system : Integument and its derivatives.
Skeletal system : Chondrocranium, Splanchnocranium, Dermatocranium, Jaw suspension.

UNIT-II

Digestive system : Alimentary canal and associated glands. (Types of teeth, dental formulae and functions, Types of stomach, small and large intestines, Glands : Salivary, gastric, Pancreas and liver).

Circulatory system : Evolution of heart & aortic arches in different classes of vertebrates.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper II (MZL 6052)

1. Classification upto orders, excepting pisces and Aves,where classification upto subclasses is required, Habits, Habitats, external characters and economic importance (if any) of the following animals:

Chondrichthyes : *Zygaena, Pristis, Narcine, Trygon, Rhinobatus, Chimaera.*
Actinopterygii : *Polypterus, Acipenser, Lepidosteus, Muraena, Mystus, Catla. Hippocampus, Syngnathus, Exocoetus, Anabas, Diodon, Tetradon, Echeneis* and *Solea*.
Dipneusti (Dipnoi) : *Protopterus* (Lung fish)
Amphibia : *Uraeotyphlus, Necturus, Amphiuma, Ambystoma* and its Axolotl larva. *Triton, Salamandra, Hyla, Rhacophorus*.

Reptilia : *Hemidactylus,,Calotes, Draco, Varanus, Phrynosoma, Chamaeleon.*
Typhlops, Python, Eryx, Ptyas, Bungarus, Naja, Hydrus, Vipera, Crocodilus. Gavialis, Chelone and *Testudo*.

2. Demonstration of dissection of *Labeo* through video clipping/models/charts : Digestive and reproductive systems, Circulatory system : heart, afferent and efferent branchial arteries, Nervous system : cranial nerves and internal ear.

3. Study of the skeleton of *Labeo*, *Rana* and *Varanus.*
4. Study of histology of different organs of frog through permanent slides.
5. Study of poison apparatus in snakes through charts.
6. Project based on general information on animals selecting atleast one representative from each class/Parental care.

Books Recommended

1. *A Text Book of Zoology*, Vol.II Vertebrates by A.J. Marshall, MacMillan & Co. Ltd., New York (1972).
2. *Anatomy of Chordates* by C.K. Weichert, McGraw Hill Book Co. Inc. London (1958).
3. *Biology of Vertebrates* by H.E. Walter and L.P. Sayles, McMillan Co. New York (1949).
4. *Comparative Anatomy of Vertebrates* by G.C. Kent, Torpen Co.Ltd., Tokyo (1954).
5. Anatomy of Comparative Vertebrates. Hyman, Libbie Heneietta Satish secial pub. House 2004.

Paper III : Animal Physiology

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to know about all the physiological processes going on in animal/human body.

To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT – I

Nutrition : Chemistry, metabolic role and sources of vitamins & deficiency diseases due to them. Biological significance and regulation of minerals and deficiency diseases due to them. Physiology of digestion.

Circulation : Chemistry of blood components and their functional significance; origin, formation,molecular regulation and maturation of RBCs and WBCs; biochemistry of haemoglobin and myoglobin; biochemical interconversions during blood coagulation and homeostasis. Cardiac cycle and its regulatory mechanisms. Cardiac output and the factors that affect cardiac output, micro circulation, blood pressure, factors influencing blood pressure and its regulation.

Respiration : Concept of respiration, mechanism of breathing; biochemistry of respiratory exchange; Transport of respiratory gases; Regulatory mechanisms (humoral and neural) of respiration. Respiratory acidosis, alkalosis and regulation of pH.

UNIT – II

Excretion : Concept of excretion and nitrogenous wastes; functional anatomy of renal unit; biophysical and chemical mechanisms of ultrafiltration, reabsorption and secretion, transport mechanisms, urine formation & regulatory control of sugar, urea, Na^+ K^+, and H^+; Role of kidneys in regulation of acid-base balance and osmoregulation, counter current mechanism.

Physiology of Muscles : Types of muscles and their components; Molecular organization of myosin, role of heavy and light meromyosin, molecular organization of actin; interaction of actin and myosin, AT Pase activity of myosin, power-stroke, ATP binding and hydrolysis; Role of troponin and tropomyosin and Ca^{++} in regulation of muscle contraction. Contraction of smooth muscles, role of phosphorylation, Ca^{++} and kinases; Role of actin and myosin in eukaryotic cells (microtubles and microfilaments).

Stress Physiology Physiological adaptations in response to high, low ambient temperature, physiological adaptation at high altitude and in deep sea environment.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper III

1. To demonstrate that the optimum activity of salivary amylase is pH dependent.
2. Demonstration of estimation of Haemoglobin.
3. Demonstration of determination of TLC, DLC, RBC &Count.
4. Demonstration of determination of bleeding and clotting time.
5. Demonstration of determination of blood groups.
6. Demonstration of measurement of blood pressure.
7. Demonstration of estimation of ESR.
8. To study the effect of exercise on cardiovascular and respiratory systems.
9. Demonstration of estimation of the glucose level in blood of mammal, Haematocrit.

BOOKS RECOMMENDED

1. Guyton, A.X., Text Book of Medical Physiology, 7th edition, Saunders Company (1986).
2. Best, J.P., Best and Taylor's Physiological basis of medical practice, 11th ed. William and Wilkins (1985).
3. Hoar, W.S., General and Comparative Physiology, Adaptation and Environment, 3rd ed. Cambridge University, Press (1985).
4. Vander, A.J., Sherman, J.H. and Luciana, D.S., Human Physiology, McGraw Hill Publ. Co. (1990).
5. Gillian Pocock and Christopher D. Richards. Human Physiology. The Basis of Medicine Oxford University Press (2001).

PAPER IV : ECOLOGY AND ANIMAL BEHAVIOUR

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the habitat and interactions of diverse animal groups with their environement.
To acquaint the students with characteristic behavioural aspects of animal life.

UNIT – I : ECOLOGY

1. **Introduction** : Definition, subdivision & scope of ecology.
2. **Abiotic Factors** : Temperature, light and soil as ecological factors.
3. **Principles of limiting factors** : Liebig's law of minimum, Shelfords law of tolerance and the combined concept of limiting factors.
4. **Ecosystem** : Definition, components,food chain & food web, energy flow through ecosystem, ecological pyramids, Major ecosystems of the world.
5. **Biogeochemical Cycles** : Definition, different types of gaseous and sedimentary biogeochemical cycles.
6. **Population**: Characteristics, ecological niche
7. **Biotic community** : Characteristics of biotic community, ecological niche.
8. **Ecological succession** : Definition, types of succession, xerarch & Hydrarch concept of climax community, theories of succession.
9. **Ecological Adaptations** : Desert, aerial, fusorial and aquatic adaptations in animals.

UNIT – II : ANIMAL BEHAVIOUR

1. Feeding
2. Learning, reasoning, instinctive and motivative behaviour.
3. Social and sexual behavior of animals
4. Circadian rhythms
5. Mimicry and Protective colouration – Definition, types of mimicry with examples.
6. Migration of fishes and birds.
7. Parental care
8. Intra and interspecific relationships.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IV

1. To study the phototactic behaviour of an insect.
2. To study the geotactic behaviour of an insect.
3. To study nesting behaviour in birds.
4. To study the soil fauna.
5. To determine the pH of the soil.
6. To determine the moisture content of soil
7. To determine the salinity of the soil.
8. To study desert adaptations in animals.
9. To study aquatic adaptation in animals.
10. To study aereal adaptation in animals.
11. To study inter specific relationships.
12. To study the biotic components of an ecosystem.

Books recommended

1. Fundamentals of Ecology by E.P. Odum, Saunders College Publishing, Philadelphia, 1971.
2. Natural Resources Conservation : An Ecological Approach by O.S. Qwen, Mac Millan Publ. Co. N.T., 1994.
3. Ecology by Kreb J. Charles, Harper & Row Publ. New York, 1982.
4. *Principles of Animal Behaviour* by Dugatkin, Lee A, W.W. Norton, New York, 2004.
5. Animal Behaviour (Ethology) by V.K. Ahggarwal, 2010.
6. *Handbook of Ethological Methods* by Lehner, Phillip N, 2nd ed. Cambridge University Press, Cambridge, 1996.

Paper V : Biostatistics & Computer Applications

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course

To acquaint the students of basic statistics applicable in biological studies.

To make the students computer literate to be able to use the vast store of knowledge on the internet and to be able to use computers for studies.

UNIT-I (Biostatistics)

1. Principles and practice of statistical methods in biological research samples and populations.
2. Basic statistics, average statistics of dispersion. Measures of Central Tendency and measures of dispersion.
3. Coefficient of variation, standard error, confidence linuty.
4. Probability distribution, binomial, Poisson and normal.
5. Tests of statistical significance (Chisquare - test, Z-test, F-test, Student t- Test).
6. Analysis of variance – one way ANOVA. Coefficient of correlation ; Simple & multiple regression.

UNIT-II (Computer Applications)

1. General awareness of Computer Hardware i.e., CPU and other peripheral devices.
2. Introduction to MS Office software, covering word processing, spread sheet & presentation software.
3. Introduction to internet and its applications.
4. Introduction to programming in C & its functions.
5. FORTRAN; Preparation of programme.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practical based on theory paper V

1. Calculation of dispersion
2. Calculation of measure of central tendency
3. Fitting of Binomial distribution
4. Fitting of Poisson distribution
5. Tests of statistical significance
6. Write programme to demonstrate conditional statements using C language.
7. To perform mail merge.

8. Use of Excel and Power point.
9. Use of E-mail and internet.

Books Recommended

1. Daniel, W.W. 1983. Biostatistics : A Foundation for analysis in the Health Sciences. John Wiley and Sons, New York.
2. Dunn, O.J. and V.A. Clark. 2001. Basic Statistics : A primer for Biomedical Science. John Wilety and Sons, New York.
3. Goon, A.M., M.K. Gupta and B. Dasgupta. 1983. Fundamentals of Statistics. Vol.I.
4. Hunt, R. and J. Shelly. Computer and Common Sense. Prentice Hall.
5. Kanetker, Y. Let us 'C' B.P.B. Publication.
6. Rajaraman, V. Vomputer Programming in FORTRAN. IV. Prentice Hall.
7. Rajaraman, V. and T. Radhakrishanan. An Introduction to Digital Computers. Prentice Hall.
8. Sinha P.K. and Priti Sinha Computer Fundamentals. 3rd Ed. B.P.B. Publication.
9. Banerjee P.K. Introduction to Biostatistics (A Textbook of Biometry) S. Chand and company Ltd.

SECOND SEMESTER

PAPER-VI : STRUCTURE AND FUNCTIONS OF INVERTEBRATES –II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the classification and general organization of invertebrates. To make the students know about the habitat, habits, morphology and economic importance of various types of invertebrates including minor phyla.

UNIT-I

1. Phylum Annelida : General organisation of phylum Annelida with special reference to segmentation, digestive, excretory and reproductive systems.

2. Phylum Arthrpoda : General organisation of Arthrpoda. Larval forms of crustaceans. Modifications of mouth parts, wings and legs of insects. Social organisation of insects (Termites, honey bee and ants).

UNIT-II

3. Phylum Mollusca : General organisation of Mollusca with special reference to feeding, respiration and shell diversity, podium or foot in Mollusca, torsion and detorsion in Gastropoda.

4. Phylum Echinodermata : General organisation of Echinodermata, Comparative account of water vascular system, haemal and perihaemal systems, Larval forms in Echinodermata

5. Minor Phyla : Concept and significance. Organisation and general characters of different minor phyla. Rotifera, Gastrotricha, Kinorhyncha and Nematomorpha.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals Based on Theory Paper - VI

1. Annelida
   a. Demonstration of dissection of Earthworm (digestive, nervous and reproductive systems) through video clippings/models/charts.

b. Specimens : *Nereis,Heteronereis, Polynoe, Tubifex, Eunice, Aphrodite, Chaetopterus, Arenicola, Pontobdella, Amphitrite* and *, Hirudinaria.*

c. Prepared slides : Earthworm (T.S. typhlosolar region, setae, pharyngeal nephridium, septal nephridium, integumentary nephridium). *Nereis* (Parapodium),Leech (T.S.through different regions).

2. Arthropoda
   a. Demonstration of dissection of *Palaemon* (appendages,digestive, nervous and reproductive systems) through video clippings/models/charts..
   b. Specimens : *Peripatus, Lepisma*, Cockroach, Grasshopper, Praying mantis, Earwig, Dragonfly, Termite (queen and other castes), Ant, Butterfly, Moth, Beetles, Wasp, Honeybee,Crab, Prawn, *Lepas*, *Balanus, Apus, Limulus,* Scorpion, Spider, Millepede and Centipede.
   c. Prepared slides : Body louse, Bed-bug, Rat flea, *Cypris, Cyclops*, *Daphnia*, trachea of insects, gill and statocyst of Prawn. Trachea of insect, mouthparts of Cockroach, Mosquito, Honeybee, Housefly and butterfly,
3. Mollusca
   a. Demonstration of dissection of *Anodonta* (digestive and nervous systems) through video clippings/models/charts.
   b. Specimens :*Anodonta, Mytilus, Pholas, Pecten, Haliotis, Aplysia, Doris, Limax, Pila, Sepia,Octopus, Nautilus, Chiton* and *Dentalium*.
   c. Prepared Slides : Glochidium larva, radula *of Pila*, gill lamina of *Anodonta*.

4. Echinodermata
   a. Demonstration of anatomy of *Asterias* through charts/model/ video clipping.
   b. Specimens : *Asterias, Echinus, Cucumaria, Antedon, Ophiothrix.*
   c. Prepared slides : T.S. arm of Starfish, tube feet, larval forms of echinodermata

5. Project based on general information on animals selecting atleast one representative from each phylum.

Note : Candidates will be required to submit duly signed note books of practical record.

Books Recommended

1. *Invertebrates* Vols.I, II, III, IV & V by L.H. Hyman, Mcgraw Hill, New York (1940- 51)
2. *Text book of Zoology* by Marshall and Williams (1962).
3. *Invertebrates Structure and function* by E.J.W. Barrington. English Language Book Society & Nelson (1969).
4. *Imm's Text Book of Entomology* by Richards and Davies. Methuen & Co. Ltd. New York:EP Dutton & Co. Inc.(1983).
5. *Principles of Insect Morphology* by R.E. Snodgrass. Mcgraw Hill, New York (1935).
6. *The Insects : Structure and Function* by R.F. Chapman.English Language Book Soc. & Hodder and Sloughton, G. Britain (1978).

PAPER-VII : COMPARATIVE ANATOMY OF VERTEBRATES – II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a comparative account of anatomy of vertebrates and hence to understand the evolution of different systems in vertebrates.

UNIT-I

Comparative account of the following systems of the vertebrates with evolutionary trends found pisces to mammals :

Respiratory system : Respiratory organs.
Types of respiratory mechanisms (gills, lungs, skin and accessory respiratory organs).

Urinogenital system : Succession of kidney (archinephros, pronephros, mesonephros, and metanephros), osmoregulation, evolution of gonads and urinogenital ducts.

UNIT-II

Nervous system : Comparative account and evolution of brain, spinal cord and cranial nerves.

Sense organs : Chemoreceptors, photoreceptors and mechanoreceptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VII

1. Aves : *Casuarius, Ardea, Anas, Milvus, Pavo, Eudynamis, Tyto* and *Alcedo*.
2. Mammalia : *Ornithorhynchus, Echidna, Didelphis, Macropus, Loris, Macaca,Manis, Hystrix, Funambulus, Panthera, Canis, Herpestes, Capra,Pteropus*.
3. To study the skeleton of *Gallus, Oryctolagus*.
4. Demonstration of dissection of Chick and White Rat through video clipping/models/charts.
   Chick : Digestive, arterial, venous and urinogenital systems.
   White Rat : Digestive, arterial, venous and urinogenital systems.
5. Study of the histology of different organs of frog and rat/rabbit through permanent stained slides.
6. Project based on general information on animals selecting atleast one representative from each class/Bird migration.

Books Recommended

1. *A Text Book of Zoology*, Vol.II Vertebrates by A.J. Marshall, MacMillan & Co. Ltd., New York (1972).
2. *Anatomy of Chordates* by C.K. Weichert, McGraw Hill Book Co. Inc. London (1958).
3. *Biology of Vertebrates* by H.E. Walter and L.P. Sayles, McMillan Co. New York (1949).
4. *Comparative Anatomy of Vertebrates* by G.C. Kent, Torpen Co.Ltd., Tokyo (1954).
5. Anatomy of Comparative Vertebrates. Hyman, L. H. Satish Serial Pub. House 2004.

PAPER VIII : BIOSYSTEMATICS AND EVOLUTION

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students to identify, classify and name the organisms according to international code of Zoological nomenclature.

To acquaint the students with different type of keys. To make the students understand the concept of speciation, origin of life and evolution.

UNIT-I

1. Definitions and perspectives of systematics, classification and taxonomy, goals and importance of taxonomy.
2. Procedures of taxonomy -identification, classification, nomenclature, phena, taxa, category.
3. Key and its significance.
4. Higher taxa and Linnean hierarchy
5. Qualitative and quantitative methods of analysis of variations
6. History and theories of classification
7. International code of Zoological nomenclature-principles, objectives and rules for nomenclature, type system and priority for different taxa.
8. Population structure of species
9. Polytypic species, race, variety, cline, subspecies, semispecies, super species.
10. Speciation.
11. Species concepts - Typological species concept, nominalistic species concept, biological species concept, evolutionary species concept.
12. Difficulties in applying biological species concept.

UNIT- II

1. Mutation theory of evolution : mutations, variations and natural selection; modern concept and interpretation of evolution and future of evolutionary process, sexual selection and co-evolution.
2. Interrelationship among different phyla of Invertebrates and their evolutionary significance.
3. Origin of vertebrates; Pisces, Amphibia, Reptilia, Aves and Mammalia.
4. Ancestry of man, horse, camel and elephant.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to

be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper VIII

1. Use of key to identify the fishes of the region, representing different families.
2. Methods of describing common insects representing different orders, with particular reference to the recording of taxonomic characters.
3. Study of ancestory of man, horse, camel and elephant through charts/models.
4. Visit to a fossil park/Geology and Anthropology museums.
5. Study of origin of invertebrate and vertebrate groups through charts.

Books Recommended

1. Genetics and the origin of species by T. Dobzhansky, Columbia University Press (1951).
2. Principles of Systematic Zoology by E. Mayr, Tata McGraw Hill Publishing Co. Ltd., New Delhi (1976).
3. Taxonomy by R.E. Blackwelder, John Wiley & Sons, New York (1967).
4. Organic Evolution by Lull, MacMillan Co., New York (1947).
5. Time, life and man by R.A. Stirton, John Wiley and Sons, New York (1959).
6. Evolution of the Vertebrates by E.H. Colbert, Willy Eastern Ltd., New Delhi (1969).

Paper IX : Endocrinology and Neural Physiology (MZL 7001)

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the functions of hormones and their mode of action at molecular level.

UNIT- I

Endocrinology : Chemical nature of hormones, steroid hormones, amino acid derived hormones, catecholamines and peptide hormones.

Mechanism of hormone action, steroid hormone-receptor interactions and signal transduction.

Autocrine, paracrine and telocrine regulation of hormones.

Pineal-hypothalmo-hypophyseal-gonadal axis.

Hormonal elaborations of Hypothalamus, pitutiary, pancreas, adrenals, thyroid, parathyroid and their role in regulation of carbohydrate, lipid, protein, calcium and phosphorus metabolism.

Hormones of gastro-intestinal tract.

Prostaglandins, their synthesis and biological functions.

Endocrine control of spermatogenesis, oogenesis and folliculogenesis in mammals.

UNIT-II

Nervous system and sense organs : Neuron as the basic unit of nerve physiology; Methyl-accepting chemotaxis proteins and chemotactic signals of the plasma membrane; Na^+ and K^+ permeability and action potentials, structure of Na^+ and K^+ channels.

Neurotransmitters : Molecular mechanism of acetylcholine, dopamine, serotonin γ-amino butyric and glycine neurotransmetters, acetylcholine receptor channels and their inhibitors; Retinal rod cell excitation and molecular biology of visual cycle, colour vision. Power of accommodation, myopia, hypermetropia, astigmatism, cataract, glaucoma. Mechanisms of auditory and olfactory responses. Gustatory receptors.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper IX

1. To identify the stage of oestrous cycle through photographs and slides.
2. To show the endocrine glands in rat through charts/models/video clipping.
3. Preparation of permanent histology slides from testis, pancreas and adrenal of goat/sheep obtained from slaughter house.
4. To study the histology of endocrine glands.
5. To study the corrective measures for myopia, hypermetropia, astigmatism, cataract.
6. To study the structure of eye, ear and different types of neurons through charts/models.

BOOKS RECOMMENDED

1. Turner, C.D. and Bagnars, W.B., General Endocrinology, Saunders Company (1976).
2. Highnam, K.C. and Hill, L., Comparative Endocrinology of Invertebrates, Enwaral Arnold Ltd., London (1981).
3. Golds Worthy, G.J. Robinson, J. and Mordue, W., Endocrinology, John Wiley and Sons, New York (1981).
4. Tombes, A.S., An Introduction to Invertebrates Endocrinology, Academic Press, New York (1970).
5. Bentley, P.J., Comparative Vertebrate Endocrinology, Cambridge Univ. Press (1998).
6. Mac E. Hadley. Endocrinology. 4th edition, Prentice Hall (1996).

PAPER X : IMMUNOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with the defense mechanisms of animals/bodies.

UNIT-I

1. Organs and cells of the immune system and their functions : primary and secondary lymphoid organs, lymphocytes, mononuclear cells and granulocytic cells.
2. Antigens : Factors affecting immunogenicity, B and T cell epitopes, haptens and adjuvants.
3. Immunoglobulins :Basic and fine structure of Immunoglobulins, biological activities of different classes of Immunoglobulins.
4. Cellular and Humoral immune response -Role of T and B lymphocytes, Primary and secondary immune response.

UNIT-II

5. Major Histocompatibility Complex : MHC molecules and genes,regulation of MHC expression, its relation to immune responsiveness and disease susceptibility.
6. Complement System : Complement activation, regulation and biological effects mediated by complement components.
7. Antigen Antibody Interactions : Precipitation & agglutination reactions, radioimmunoassay, ELISA, Immuno fluorescence, Western blotting, Southern and Northern blotting. Immunoprecipitation and flow cytometry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper X

1. To demonstrate the agglutination reaction by typing of human blood into A,B, AB, O and Rh factor.
2. To demonstrate the different types of white cells in a stained blood film of a normal individual and compare with that of a diseased individual (allergy, parasitic infection etc.).
3. To study the sections of different lymphoid organs thymus, spleen, lymph node, intestine etc. from prepared slides.
4. To demonstrate Ouchterlony diffusion assay through Kit .
5. To demonstrate dot ELISA through kit.

Books recommended

1. Kuby Immunology (VI edition) by T.J. Kindt, R.A. Golds by and B.A. Osbome, W.H. Freeman Publishers (2007).
2. Essential Immunology by Roitt, I.M, Mosby, Harcourt Publishers (2001).
3. Immunology : A short course by E. Benjamini, R. Coico and G. Sunshine, Wiley Liss Publishers (2000).
5. Fundamental Immunology by W.E. Paul, Lippincott Raven Publishers (1998).
6. Immunology An Introduction by I.R.T. Zard, Thomson Publishers (1998).
7. Jameway, Charles. A – Immnunbiology – 6th ed. Luttmann, Werner & others – Immunology U.S.A., Academic Press.(2006).

THIRD SEMESTER

PAPER XI : DEVELOPMENTAL BIOLOGY - I

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students understand the pattern of development at molecular level.
To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT - I

1. Basic concepts of Development : Potency, commitment, specificiation Induction, Instructive and permissive interactions, competence ,determination and differentiation.
2. Molecular basis of differentiation, transdifferentiation and dedifferentiation. Pattern formation in *Drosophila*, Amphibian, chick and *C. elegans*
3. Cleavage patterns and fate maps of Tunicate, *Drosophila*, Amphibia, chick and *C. elegans*.
4. Gene regulation in Development in *Drosophila*.

UNIT – II

1. Gametogenesis in animals.
2. Molecular events during fertilization.
3. Zygote formation, Blastula formation and embryonic fields. Gastrulation and formation of germ layers in animals.
4. Regeneration .

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XI

1. To study the different stages of development in frog and chick through permanent slides.
2. To study the spermatogenesis of rat and grasshopper through slides/charts./photographs.
3. Types of eggs in animals through charts/photographs/models.

Books recommended

1. An Introduction to Embryology by B.I. Balinsky, Saunders, Philadelphia (1981).
2. Major Problems in Developmental Biology by H. Urspaung, Academic Press, New York, (1972).
3. The Control of Gene Expression in Animal Development by J.B. Gurdon, Harvard University, Press, Oxford (1974)..
4. Gene activity in Early Development by Davdson, E.H. Academic Press, London (1977).
5. Development Biology by Scott .F. Gilbert, Sinauer Associators Inc. Publishers 8th edition (2006).
6. Development Biology (Vol.II) by Browder, L.W, Saunders (1984).

PAPER XII : BIOCHEMISTRY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To enable the students know about structure and functions of various metabolite in animal body. To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Carbohydrates : General structure, chemical properties & classification. Homo and heteropolysaccharides. Bacterial polysaccharides. Mucopolysaccharides. Biological functions of polysaccharides.

Glycolysis, TCA cycle, phosphogluconate pathway & glycogenolysis.

Bioenergetics of Carbohydrate matabolism.

Lipids : General structure and chemical properties of simple lipids. Structure and function of phospholipids. Biological functions & structure of cholesterol and steroid hormones. Oxidation of fatty acids; biosynthesis of saturated and unsaturated fatty acids.

UNIT-II

Proteins : Amino acids and their properties, Protein structure and shape. Ramachandran Plot. Nucleic acids and protein interaction. Conjugated proteins : Lipoproteins, glycoproteins, nucleo proteins.

Biosynthesis of purines and pyrimidines. miRNA, Ramachandran plot.

Enzymes : Enzyme kinetics, mode of action of enzyme and biochemical role of coenzymes and isoenzymes, effect of enzyme concentration, effect of substrate concentration and pH on enzyme activity, allosteric enzymes, feed back inhibition, covalent modifications, irreversible and reversible. Ribozyme and Abzyme.

Electron transport chain : Mechanism of oxidative phosphorylation (Mitochondrial), inhibitors of electron transport chain Intibitors and uncouplers of mitochondrial oxidative phosphorylation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XII

1. Estimation of alkaline and acid phosphatases in the liver procured from local market.
2. Quantitative estimation of glycogen, cholesterol protein in tissue procured from local market.
3. Qualitative estimation of carbohydrates, lipids and protein in tissue procured from local market.

BOOKS RECOMMENDED:

1. Beckatt, A.H. and Stenlake, J.B., Practical Biochemistry, the Athlone Press, London (1988).
2. Freefelder, D, Practical Biochemistry : Application to Biochemistry and Molecular Biology, W.H.Freeman, (1982).
3. Wilson, Keith and Walker, John, Practical Biochemistry : Principles and techniques, 5th Edition Edited, Cambridge University Press (2000).
4. Kuby, Janis, Immunology, W.H. Freeman and Company (2000).
5. Alberts, Bruce and others Molecular Biology of the Cell. (2002)
6. Lewin, Benjamin and others Cells Canada Jonas and Bartle (2007).
7. Lehninger – Principles of Biochemistry & Bartle. Nelson & Cox. 4th edition. W H Freeman and Company, New York.
8. Eric E. Conn, Paul K. Stumf and others. Outlines of Biochemistry 5/E. John Wiley and Sons. (1995).
9. Jeremy M. Berg, John L. Tymoczko and lubert Stryer. Biochemistry. 5th edition W.H. Freeman and Company, New York (2006).
10. Donald Voet and J.G. Voet, Biochemistry, 3rd edition. John Wiley and Sons (2004).

Paper - XIII : CELL AND MOLECULAR BIOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

To clarify the concept of population genetics to the students through Hardy-weinberg law.

UNIT- I

1. Fixation and staining techniques : Non -chemical and chemical fixatives, chemistry of staining of acidic and basic dyes.
2. Structure and functions of cell and its organelles (Nucleus, plasma membrane, mitochondria, Golgi bodies, endoplasmic reticulumn, ribosomes and lysosomes).
3. Plasma membrane : Structure and organisation of membranes, Glycoconjugates and proteins in membrane system,ion transport, Na+/K+ATPase, model membranes, liposomes.
4. Protein sorting in ER, Golgi and targeting of proteins to Mitochondria, secretory and endocytotic pathway.

UNIT- II

1. Cell-Cell signalling : Cell surface receptors, Second messenger system, MAP kinase pathways, Signalling from plasma membrane to nucleus.
2. Cytoskeletal elements : Microtubules and microfilaments.
3. Cell division : Cell Cycle, Molecular basis of cell division,mitotic apparatus, modification and abnormalities of cell division, chromosome movement (forces of cell division).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIII

1. Study of permanent histological slides of testis and ovaries of insects/ mice/rat.
2. Basis of reaction and demonstration of the sites of proteins, nucleic acids, lipids & carbohydrates in ovaries of insects/rat/mice through slides and photographs.
3. Study of stages of mitosis and meiosis from permanent slides from animal and plant materials through slides/charts/photographs.

Books recommended

1. Cell Biology and Molecular Biology by D.Robertis, EDP & DE Robertis E.M.F, 8tn ed., Saunders & Co. Philadelphia (1995).
2. Cell Biology by C.B. Powar, 3rd ed., Himalaya Pub., Bombay (1984).
3. Advances in Cell and Molecular Biology by Dupraw, E.J., eds. Academic Press, New York & London (1971).
4. Cell Biology. Pollard, Thomas, D.S.Earnshan, William C, Saunders. USA. (2002).
5. The Cell : A Molecular Approach by Cooper GM & H 5th edition (2009).
6. Molecular Biology of the Cell, 5th edition by Alberts, John Raff. Roberts & Walter (2008).
7. Cell and Molecular Biology : Concepts and Experiments 5th edition by Gerald Karp. John Wiley and Saunders.
8. Molecular Cell Biology by Lodish *et. al*. W.H. Freeman Co. New York (2008).

Paper XIV : Instrumentation and Methodology

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various instruments and methodological techniques enable them to persue scientific research in future.

UNIT-I

Microscopy : Principle, structural parts and applications of compound microscope, phase – contrast microscope, fluorescence microscope, interference microscope, polarization microscope, dark field microscope, transmission electron microscope and scanning electron microscope.

Cell fractionation method : Principle of centrifugation and ultracentrifugation, different types of ultracentrifugations (in brief) and their applications, structural parts of an analytical ultracentrifuge, ultracentrifugation and buoyant density.

Spectrophotometry : Principle and structural parts of a colorimeter and a spectrophotometer and their applications.

Chromatography : Principles of chromatography, paper chromatography, thin layer chromatography, gas chromatography, gel permeation chromatography, ion exchange chromatography, high pressure liquid chromatography, affinity chromatography.

UNIT-II

Electrophoresis : Principles of electrophoresis, (Brief introduction to paper electrophoresis, polyacrylamide gel electrophoresis, disc gel electrophoresis,) SDS-PAGE, agarose gel electrophoresis, isoelectric focussing, applications of electrophoresis, Phage DNA, detection of plasmids, separation of DNA molecules.

Polymerase chain reaction (PCR) and its application.

Tissue culture techniques : Introduction to basic culture technique in Cell culture, organ culture, Aseptic techniques, sterilization technique, specialized culture technique, , Monolayer culture, suspension culture, leucocyte cultures. factors affecting cell growth *in vitro.*

Radioisotopes : Principles and applications of tracer techniques in biology, radiation dosimetry, radioactive isotopes and half life of isotopes, liquid scintillation counter, principles and applications of autoradiography and cerenekov radiation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIV

1. To study the parts of the compound microscope and phase-contrast microscope and their maintenance.
2. To study the living material under the phase contrast microscope.
3. Finding out the diameter, area and circumference with the help of stage micrometer and oculometer.
4. To sketch the diagram of any tissue with the help of camera lucida and to draw its magnification line.
5. Demonstration of section cutting and mounting of sections on the grid for SEM and TEM. Demonstration of SEM & TEM in the CIL lab., P.U., Chandigarh.
6. Demonstration of working of ultracentrifuge.
7. Demonstration of the working of PCR and Western blotting, Deptt. of Zoology, P.U., Chandigarh.
8. To separate a sample of amino acid with the help of paper chromatography.
9. Demonstration of SDS-PAGE, Agarose gel electrophoresis.

BOOKS RECOMMENDED:

1. Bacq, Z.M. and Alexender, P, Fundamentals of Radiography, Pergamon Press, London (1989).
2. Benett, A.H. and Usterbere, H, Phase Microscopy: Principle and applications, John Wiley and Sons, London (1951).
3. Dawes, C.J.,Techniques for Transmission and Scanning Electron Microscopy, Ladd Rew. Ind.,Inc.,Publishers (1981).
4. Freshrey, R.I. and Allen, R, Culture of Animal Cell : A manual of basic techniques, Lis Inc., New York. (1983).
5. Watt, J.M., The Principles and Practice of Electron Microscopy, Watt (1985).
6. Michael G, Flow Cytometry : A Practical Approach, 3rd Edition Edited Michael G. Ormerod Oxford University Press (2000).
7. In-vitro Cultivation of Animal Cells. BIOTOL, Elsevier (2004).

PAPER : XV ADVANCES IN ENTOMOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To make the students aware of various pests of food crops and food products and various insect control methods.

To educate the students about economic importance and techniques of Apiculture and sericulture

UNIT-I

1. Salient features with suitable examples of the various insect orders : Thysanura, Odonata, Isoptera, Orthoptera, Hemiptera, Coleoptera, Lepidoptera, Hymenoptera and Diptera.
2. Strucure and function of the following systems in insects :
   a. Digestive System
   b. Respiratory System
   c. Nervous System
   d. Reproductive System
3. Post embryonic development and types of metamorphosis in insects. Structural modifications in the larvae & pupae.
4. Parthenogenesis in insects.
5. Effect of temperature and photopteriod on the lives of insects, details of onset, termination and significance of diapause.

UNIT-II

1. Plant host-insect interaction.
2. Practices of Sericulture, Apiculture & Lac culture
3. Systematic position, habits, nature of damage and outlines of the life cycles of following pests of crops, vegetables & fruits.

A. CROPS

Cotton :

(i) *Pectinophora gossypiella* (Pink boll worm)
(ii) *Bemisia tabaci* (Cotton white fly)
(iii *Dysdercus cingulatus* (Red cotton bug)

Sugarcane

(i) *Pyrilla perpusilla* (Sugarcane leaf hopper)
(ii) *Scirpophaga nivella* (Sugarcane top borer)

Paddy

(i) *Hieroglyphus banian* (Rice grass hopper)
(ii) *Leptocorisa varicornis* (Gundhi bug)

Wheat
(i) *Tanymecus indicus* (Ghujhia weevil)
(ii) *Sesamia inferens* (Wheat stem borer)

B. VEGETABLES
(i) *Dacus cucurbitae* (Pumpkin fruit fly)
(ii) *Raphidopalpa foveicollis* (Red pumkin beetle)

C. FRUITS
(i) *Drosicha mangifera* (Mango mealy bug)
(ii) *Diaphorina citri* (Citrus psylla)

3. Pests of stored food products with particular reference to their systematic position, habits, nature of damage caused by them along with the outlines of their life cycles :
(i) *Callosobruchus maculatus* (Pulse beetle)
(ii) *Sitophilus oryzae* (Rice weevil)
(iii) *Tribolium castaneum* (Rust red floor beetle)
(iv) *Sitotroga cerealella* (Angoumois grain moth).

4. Insect control :
(a) Chemical control : Categories of pesticides, important examples, their application and mode of action; Insect repellents and attractants.
(b) Biological Control : Principles, History, use of parasites, predators and pathogens.
(c) Integrated Pest Management (IPM).

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XV

1. Study of insect biodiversity in natural environment and preparation of project based on the observation.
2. Identification marks and taxonomic status of insect pests of crops vegetables, fruits and stored products mentioned in theory syllabus.
3. Demonstration of dissection of insects for the study of following systems through charts/models/video clippings. :
   a. Digestive System
   b. Nervous System
   c. Reproductive System.
4. Systematic position upto family and ecology of the following medical and veterinary pests :
   a. *Anopheles* b. *Culex* c. *Aedes* D. Blow fly e. Bot fly f. Horse fly g. Flesh fly.
5. Introduction to apiculture practices and handling of Beehives in insects.
6. Study of male and female external genitalia of insects through permanent slides.

7. Study of different types of larvae and pupae with the help of charts/ photographs/ diagrams.

Books recommended

1. General Entomology, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, Calcutta, Bombay by M.S. Mani,1990.
2. The Insects, Structure & Function, English Language Book Society Hodder and Sloughton, G. Britain by R.F. Chapman,1978.
3. Imms Text Book of Entomology Methuen & Co. Ltd. New York: EP. Dutton & Co. INC. by Richards & Davies, 10th edition (1997).
4. Honey bees and their management in India, ICAR Publications by R.C. Mishra, 1995.
5. Agricultural Pests of India and South East Asia by A.S. Attwal, Kalyani
6. Insects and Mites of Crops in India by MRGK. Nair, ICAR, N.Delhi, 1975.
7. Economic and Applied Entomology by Kumar and Nigam, Emkay Publications, Delhi, 2000.
8. Destructive and Useful Insects by Metcalf and Metcalf, McGraw Hill Publications, New York, 1951.
9. Integrated Pest Management by David Dent, Chapman & Hall, London, New York, Madras, 1995.
10. Insect Pheromones and their use in Pest Management by House Sevens and Jones, Chapman Hall,London, New York,Madras, 1998.
11. Beekeepy for Profile and Pleasure. Addison Webb. Agrobios, 2004.
12. Textbook of Applied Entomology. P. Srivastava. Vol.1. Kalyani Publishers, 2005.

FOURTH SEMESTER

PAPER XVI : DEVELOPMENTAL BIOLOGY - II

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To draw a correlation between evolution of animals and changes in environment.
To acquaint the students with the latest concept of Haemopoetic stem cells and gene therapy.

UNIT – I

1. Organogenesis : Vulva formation in *C. elegans,* Eye lens induction. Epitheliomesenchymal interactions, Differentiation of neuron.
2. Primary and secondary embryonic induction, chemical nature of evocators.
3. Introduction to stem cells, stem cell related disorders, gene therapy.
4. Metamorphosis.

UNIT – II

I Teratogenesis : Critical period dose, classes of cytotoxic teratogens, human teratogenesis.
2. Totipotency & nuclear transfer experiment.
3. Cell surface adhesion, inter cellular adhesion, adhesive molecules - cadherins.
4. Environmental evolution and animal development: Environmental cues and effects, Malformations and disruptions, Changing evolution through development modularity, Developmental constraints.
5. Sex determination.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVI

1. To prepare the permanent stained slides of developing stages from fertilized egg of hen.
2. To study different larvae in invertebrates from permanent slides.
3. To study through PS of larvae of invertebrates (Redia, Cercaria, Arthropod larvae, Glochidium larva).

Books recommended

1. An Introduction to Embryology by B.I. Balinsky, Saunders, Philadelphia (1981).
2. Major Problems in Developmental Biology by H. Urspaung, Academic Press, New York, (1972).
3. The Control of Gene Expression in Animal Development by J.B. Gurdon, Harvard University, Press, Oxford (1974)..
4. Gene activity in Early Development by Davdson, E.H. Academic Press, London (1977).
5. Development Biology by Scott .F. Gilbert, Sinauer Associators Inc. Publishers 8th edition (2006).
6. Development Biology (Vol.II) by Browder, L.W, Saunders (1984).

PAPER XVII : ADVANCES IN PARASITOLOGY

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To introduce the students to various pathogens causing diseases and the reactions of the body against them.

UNIT-I

1. Introduction to Parasitology, different types of animal associations : definitions; Parasitism, Mutualism, Hyperparasitism
2. Parasite Host Specificity : Kinds of parasite host specificity, specificity factors related to infection and growth.
3. Molecular, Celluclar and Physiological basis of Host Parasite Relationship : in Protozoans, trematode, cestode and nematode parasites.

UNIT-II

1. Immunity to Parasites : Brief account of immunity to malaria, leishmaniasis, trypanosomiasis, schistosomiasis and ascariasis.
2. Vectors - Brief account of various insect vectors of human parasitic infections.
3. Parasite Transmission : Introduction, mechanism, circardian rhythem.
4. Ecology of parasites : Ecological niche, host size, and parasite numbus, biological control, role of metazoan parasites in transmission of microbial infection.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVII

1. To study the protozoans and helminth parasites infecting frog, toad and common household insects through slides/charts.
2. To study the helminth parasites infecting gut of the sheep and goat obtained from slaughter house.
3. To study the parasites from stained blood smears - *Leishmania, Plasmodium* and *Trypanosoma*.
4. To study the vectors of different parasitic infections (Mosquito, ticks, sandfly etc.).

Books recommended

1. Parasitology : The Biology of Animal Parasites V edition by E.R. Noble and G.A. Noble, Lea & Febiger Philadelphia, 1982.
2. Physiology of Parasites by L.H. Chapell, Blackie, Glosgow, London, (1979).
3. Immunology of Infection by Kaufmann, Academic Press (1999).
4. An Introduction to Animal Parasitology by Smyth, J.D., Hodder & Stoughton, London (1976).

PAPER : XVIII : ADVANCES IN FISH AND FISHERIES

Theory hours per week : 4 hours	Total Marks : 100
	Theory : 80
Practical hours per week : 3 hours	Internal Assessment: 15
	Annual Theory Exam.: 65
	Practical : 20
	Internal Assessment 05
	Final Practical : 15

Objectives of the Course :

To acquaint the students with aquatic animal life and its economic importance.

UNIT-I

1. Introduction: History and scope of aquaculture, Different kinds of aquaculture-traditional, extensive, intensive, semi-intensive..
2. Criteria for candidate species selection and criteria for site selection for various culture practices, Farming methods: ponds, lens, cages, raceway, raft, rope, monoculture, polyculture, sewage fed culture and organic aquaculture.
3. Principle of composite fish culture, Composite fish culture of endemic and exotic fishes in India.
4. Limnological parameters: influence of the environmental parameters on fish abundance and distribution, aquaculture and other anthropogenic activities on fish populations.
5. Induced breeding: History, technique, different kinds of hatcheries and advantages of induced breeding in fishes. Use of synthetic chemicals for induced breeding.
6. Ecological classification of aquatic organisms other than fishes.
7. Characteristics of lotic environment (river/stream) as per zonation, major abiotic and biotic factors in a stream/river affecting the body form in hillstream fishes, Body form in hillstream fishes.
8. Productivity: Concept of productivity, estimation of primary productivity by different methods and classification of water bodies on the basis of productivity.

UNIT-II

1. Major and minor constituents of fish including minerals and trace elements in fish. Post mortem changes in fish- rigor mortis, autolysis, auto-oxidation and their significance, biochemical and microbial spoilage of fish.
2. Fish diseases: Fungal, bacterial, protozoan, worm and crustacean diseases of fishes.
3. Principles of fish preservation, Preservation of fish by curing (drying, salting and smoking), Chilling and freezing of fish, canning of fish and fish products. Fish transportation and marketing
4. Biological control of weeds/algal blooms using fishes.
5. Concept of Transgenic fish and bio-safety regulations.
6. Concept of molecular markers (mitochondrial//nuclear) with a brief description of different kinds of markers (RFLP, RAPD, AFLP, SSR or Microsatellite, SNP)
7. Hard parts used for age determination with advantages and disadvantages of each hard part.
8. Determination of growth of fish using length-weight equation.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XVIII

1. To estimate the dissolved oxygen in water.
2. To estimate the pH of water.
3. To estimate the phosphate of water.
4. To determine the BOD of water.
5. To study the benthic organisms.
6. To study the different types of fishing gears.
7. To study the Indian culturable fishes.
8. To study the Exotic culturable fishes.
9. Estimation of total alkalinity in a given water sample.
10. Estimation of total chlorides in a given water sample.
11. Estimation of total hardness in a given water sample.

Books recommended

1. Fish and Fisheries of India by V.G. Jhingran, Hindustan Publ. House, N. Delhi,1991.
2. Aquaculture Production FAO Fisheries Circular No.815 by FAO Rome,1991.
3. Aquaculture in Asia by M.M. Joseph, Asian Fisheries Soc., Mangalore, 1990.
4. Inland Fisheries of India Vol. I & II by P.K. Talwar and A.G. Jhingran, Oxford & IBH, New Delhi, 1991.
5. Freshwater Fishery Biology by K.F. Lagler, WmC. BrownCo. Publ. Dubuque, IOWA, 1969.
6. Methods for Assessment of Fish Production in Freshwaters, IBH Handbook No.3, Blackwell Scientific Publ., Oxford, 1970.
7. Fundamentals of Ecology by E.P. Odum, W.B. Saunders Co. Philadelphia, 1971.
8. Limnology by P.S. Welch McGraw Hill Book Co., New York, 1952.
9. Limnology by R.G. Watzel, R.G., W.B. Saunders Co Philadelphia, 1983.
10. The Biology of Polluted Waters by H.B.N. Hynes, Liverpool Univ. press, Liverpool, 1978.
11. Fundamentals of Limnology by F. Ruttner, Univ. Press Toronto, 1975.
12. Fishes : An Introduction to Ichthyology by P.B. Moyle and J.C. Cech. Prentice Hall Inc. Jersey USA, 1986.
13. Fishery Development by S.C. Agarwal and M.S. Johal. Narendra Publishing House, Delhi, 2004.
14. History of Fishes by J. Norman revised by P.H. Greenwood. Ernst Brown, London 1999.
15. Biology of Fishes by Kyle H.M. Biotech. Books, Delhi, 2007.
16. Freshwater Ecology : Concepts and environmental applications. Dodds, Walter K. Academic Press. USA., 2002.
17. The Biology of Fishes. New Introduction by Dr. Vijay Dev Singh. M. Hary. Kyle. Biotech. Books, 2007.
18. Fish Management and Aquatic Environment. Arvind Kumar and Pushplata Dukey. Daya Publishing House, 2006.

PAPER XIX : ENVIRONMENTAL BIOLOGY AND WILD LIFE

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To educate the students about the basic environmental phenomena like pollution, ecosystem, biogeochemical cycles, etc.
To educate the students about the importance of wild life conservation.

UNIT-I

1. **Environmental Pollution** : Causes impact and control measures of air, water and noise pollution, management of wastes, Environment Protection Act 1986.
2. **Natural resources** : Natural resources and their conservation.
3. **Energy resources** : Study of renewable and non-renewable energy resources.
4. **Environmental education** : Goals, objectives, and methods of teaching of environmental education.
5. **Ecosystem Dynamics and Management** :Stability and complexity of ecosystems. Speciation and extinctions, environmental impact assessment, sustainable development.

UNIT-II

1. **Zoogeography** : Zoogeographical regions and their fauna.
2. **Wildlife of India** : Different types with references to animals, causes of depletion, significance and conservation of wildlife.
3. **Sanctuaries and National Parks** : Location and Important fauna of the sanctuaries and national parks of India.
4. **Wildlife Projects** : Tiger Project, Crocodile Breeding Project, Hangul project, Gir lion Sanctuary project.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XIX

1. To study the distribution of animals through zoogeographical maps.
2. A visit to a zoological park to study different wild animals and make a report.
3. To estimate the alkalinity of water.
4. To estimate the chlorides of water.
5. To estimate the nitrates of water.
6. To study the different types of phytoplankton.
7. To study the different types of zooplankton.

Books recommended

1. Environment Pollution by H.M. Dix, John Wiley Pub. N.Y.,1984.
2. Environmental Studies by D.B. Botkin and E.A. Keller, Merill Publ. Co.Toronto, London, 1987.
3. Wildlife in India by Saharia, V.B. Natraj Publ. Deharadun (U.P.).
4. Wildlife Biology by Raymond F Dasmann, Wiley Eastern Ltd.,New Delhi, 1982.

Paper XX : CYTOGENETICS AND MOLECULAR GENETICS

Theory hours per week : 4 hours

Practical hours per week : 3 hours

Total Marks : 100
Theory : 80
Internal Assessment: 15
Annual Theory Exam.: 65
Practical : 20
Internal Assessment 05
Final Practical : 15

Objectives of the Course :

To acquaint the students with various techniques to study histology and histochemistry of various animal tissues and to know about fixation and staining techniques. To enable the students understand the molecular basis of cell-cell signalling, cell division and transport of ions across cell membranes.

To clarify the concept of population of genetics to the students through Hardy-weinberg law.

UNIT-I

1. Chromosome structure and function : Law of DNA constancy and C. value paradox. Specialized chromosomes (Salivary gland and Lampbrush chromosomes).
2. Molecular mutation : Molecular basis of mutation, physical and chemical mutagens, radiation mutagenesis, site directed mutagenesis, target theory.
3. Regulation of gene function : Operon hypothesis;Pro and eukaryotic operons;Induction and repression;Complex gene clusters.
4. Hardy Weinberg Law and Calculation of gene frequencies.

UNIT-II

1. Linkage and Genetic maps.
2. Dosage compensation.
3. Properties of Genetic code, mutations in genetic code, Wobble's hypothesis.
4. Fine structure of gene, Eukaryotic genome organization (structure of chromatin, coding and non-coding sequences, and satellite DNA); DNA damage and repair, DNA replication, amplification and rearrangements.
5. Organization of transcriptional units; Mechanism of transcription of prokaryotes and eukaryotes; RNA processing (capping, polyadenylation, splicing, introns and exons); Ribonucleoproteins, structure of mRNA.
6. Protein Synthesis.
7. Principles and methods of genetic engineering and Gene targeting; Applications in agriculture, health and industry.

Note : Nine questions to be set. First question of 15 marks, covering the whole syllabus will be compulsory and will consist of 10 short answer questions of 1½ marks each. For the remaining 8 questions, 4 to be set from each Unit I and II and 2 to be attempted from each Unit. Each question from Units I and II will carry 12½ marks.

Practicals based on theory paper XX

1. Preparation of chromosomes from onion root tip for mitosis by squash method.
2. Study of salivary gland chromosomes of larvae of chironomus/Drosophila from permanent slides.
3. Study of metaphase karyotypes from photographs/permanent slides of Drosophila, grasshopper and man/rat.
3. Study of sex-chromatin Bars body from human buccal mucosa.
4. Demonstration of monohybrid and dihybrid cross, Co-dominance, Incomplete dominance and Epistasis with the help of beads and photographs.
5. Study of genetic disorders with the help of photographs.
6. Study of structural and numerical alteration of chromosomes : Deletion, duplication, inversion, translocation and ploidy with the help of photographs.

Books recommended

1. Genetics – U. Goodenough, IIIrd ed., Saunders College Pub., Philadelphia, (1984).
2. Cytogenetics - The Chromosome in Division, Inheritance and Evolution by C.P. Swanson, T. Merz and W.J. Young , IInd ed., Prentice Hall of India, New Delhi (1982).
3. Principles of Genetics by E.J. Gardner and D.P. Shustad, 7th ed., John Wiley, New York (1984).
4. Genetics - A survey of the Principles of Heredity by A.M. Winchestor, 3rd ed., Oxford and IBH Pub., Calcutta (1972).
5. Genetics: A text book for University students by P.K. Gupta, 3rd ed., Rastogi Pub., Meerut (1996).
6. Cytology, Genetics and Molecular Biology by P.K. Gupta, Rastogi Pub., Meerut (1991).
7. Genetics by Strickberger, Monroe W., 3rd ed., Macmillan Pub., New York, (1985).
8. Eukaryotic Chromosomes by Bostock, C.J. & Sumner, A.T., Amsterdam North Holland (1978).
9. Principles of Genetics by Sinnott, E.W. & Dunn, L.C., 3rd ed., McGraw-Hill, New York (1939).
10. Science of Genetics by Hexter, William and Yost, Henry T., Prentice Hall of India, New Delhi (1977).
11. Handbook of Molecular Cytology by Lima-De-Faria, A.ed. North Holland Publishing Company, Amsterdam, London(1969).
12. Principles of Genetics – 2nd edition. Snustad and Simmons. Joh Wiley & Sons.(2002)
13. Genetics. A Molecular Approach. T.A. Brown 3rd edition BIOS Scientific Publishers (2004).
14. Genetics. A Molecular Approach. Peter A. Russell. 2nd ed., Pearson. Benjamin Cummiy (2006).

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF LANGUAGES

Outlines of tests, syllabi and courses of reading

for

M.A. English (1st to 4th Semester)

FOR THE SESSION **2020-21**

Syllabus of Master of Arts (English)

General Directions

1. The entire course of M.A. (English) consists of **18 (eighteen) papers**. Semester I &II shall have four papers each (a total of 8 out of which four shall be compulsory and four optional); Semester III & IV shall also have five papers each (a total of 10 out of which two shall be compulsory and eight optional). One paper (paper XIII) shall be allotted to dissertation-work. If a student does not want to undertake dissertation-work, he/she can opt for a paper named 'Research Methods'. One more paper—'skill Enhancement/Social Outreach' (paper XVIII, Sem IV) based on practical training is to be opted in the second year. In case a student does not want to take this paper based on practical skills, he/she can opt for paper named 'Creative Writing and Soft Skills'. The details of these papers (XIII & XVIII) along with their corresponding alternatives appear later in the document.
2. At the beginning of every session, each department would announce the options it would offer to students on the basis of available resources.
3. There are two compulsory papers in Semester I, and correspondingly in Semester II, whereas in Semester III & IV, there is only one compulsory paper each semester.
4. For the optional papers, the students are advised to choose corresponding options across the semesters. For instance, anyone who opts 'Academic Writing –I' in Semester I, for sake of specialization, is advised to opt for 'Academic Writing –II'. Similarly anyone who opts 'Cultural Studies –I' in Semester I, for the sake of specialization, is advised to opt for 'Cultural Studies –II'.
5. All the books prescribed as well as suggested are available either online or in the printed form. The teachers are expected to teach only those parts or excerpts (of the texts) that have been prescribed in the course.
6. Each paper shall be evaluated both internally and externally. Out of a total of 100 marks per paper, each candidate shall be externally evaluated for 80 marks, and internally evaluated for 20. The internal assessment would be given on the basis of attendance (5 marks), class participation (5 marks) and mid-term examination (10 marks). The papers (except Paper XIII that involves Dissertation-work & Paper XVIII which is based on practical skills) across all the semesters have been divided into five units. In the final examination of each paper, five questions (one from each unit) would be asked with internal choice. Each question shall carry 16 marks with a word limit of about 500- 600words.
7. Those appearing in the capacity of private candidates shall be evaluated externally only. For them each paper shall carry 100 marks (20X5= 100).

The paper-wise division of the syllabus is given below:

M.A. I

Semester I

Two compulsory papers

Paper I

Literary Movements–I

Paper II

Approaches to Literary Criticism – I

Two optional papers, one each from cluster III & IV

Paper III

1. Cultural Studies –I
2. Language and Linguistics –I
3. British Literature – I

Paper IV

1. Introduction to Literary Genres –I
2. British Literature -II
3. Academic Writing – I

Semester II

Two compulsory papers

Paper V

Literary Movements –II

Paper VI

Approaches to Literary Criticism –II

Two optional papers, one each from cluster VII & VIII

Paper VII

1 Cultural Studies –II
2 Language and Linguistics –II
3 British Literature – III

Paper VIII

1. Introduction to Literary Genres –II
2. British Literature -IV
3. Academic Writing – II

M.A.II

Semester III

One compulsory paper:

Paper IX
Critical Theory – I

Four papers: Choose one paper each from cluster X, XI & XII, XIII .

Paper X
Indian Writings (in English) – I
Cultural Studies -- III
Shakespeare –I
Stylistics

Paper XI
Postcolonial Literatures –I
New Media Writing – I
World Literature –I
Literature and Ecology –I

Paper XII
Indian Literary Criticism and Theory -I
Writings from Punjab – I
Introduction to Literary Genres –III
American Literature –I
Paper XIII
Dissertation-Work
Or
Research Methods
(for private students and those who do not want to undertake dissertation-work)

Semester IV
One compulsory paper

Paper XIV
Critical Theory – II

Four papers: Choose one paper each from cluster XV, XVI & XVII, XVIII

Paper XV
Indian Writings (in Translation) – II
Cultural Studies -- IV
Shakespeare –II
English Language Teaching (ELT)

Paper XVI
Postcolonial Literatures –II
New Media Writing – II
World Literature –II
Literature and Ecology –II

Paper XVII
Indian Literary Criticism and Theory –II
Writings from Punjab – II
Introduction to Literary Genres –IV
American Literature –II

Paper XVIII
Skill Enhancement/ Social Outreach
Or
Creative Writing and Soft Skills
(for private students and those who do not want to undertake dissertation-work)

Instructions for private candidates and all those regular candidates who do not want to opt for dissertation work in paper XIII & Skill Enhancement/Social Outreach paper XVIII:

1. Paper XIII offers an internal choice. Either the student opts for dissertation or a paper named as 'Research Methods'

2. Paper XVIII also offers an internal choice. Either the student opts for 'Skill Enhancement/Social Outreach' or he/she appears in a paper named 'Creative Writing and Soft Skills'. This would mean that the candidate in Sem IV shall have a total of five papers (one compulsory and four optional).

3. It is reiterated that in the interest of specialization, the students should prefer corresponding optional papers in Sem. III and Sem. IV.
3. The aggregate score of M.A. in case of private students and for those who do not want to undertake dissertation work and also do not want to opt for 'Skill Enhancement/Social Outreach' would amout to 1800. For those opting for dissertation work XIII & paper on Skill Enhancement/Social Outreach XVIII, the aggregate score would be 1600.
4. Those who opt for 'Dissertation-Work' in Paper XIII, shall have to opt for 'Skill Enhancement/Social Outreach' in Paper XVIII. Similarly those who opt for 'Research Methods' in paper XIII, shall have to opt for 'Creative Writing and Soft Skills' in Paper XVIII.

(Semester I)
Compulsory Papers

Paper I
Literary Movements –I

Many distinct literary movements mark the journey of writing from ancient times to the very contemporary. The paper identifies some of the major literary movements that form the essential frame of reference for a critical engagement with the vast corpus of literature. Movements such as classicism, romanticism or realism constitute the primer of critical vocabulary and therefore a basic understanding of these movements is necessary for a nuanced understanding of varieties of literary articulation. Each movement has its own specific set of aesthetic, cultural and ethical values and preferences. The writers and writings that fall within a movement, despite their heterogeneity and particularities, do converge in terms of fostering an identifiable literary taste and trend. Though these movements do occur in literatures of the world, and across languages, yet the focus of this course is primarily on European literature, with special accent on the British. The emphasis of the paper is on the historical and conceptual understanding of various literary movements. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit I What is a literary movement?

1. François Jost, "The Challenge of Literary Movements", *Comparative Literature Studies*, Vol. 18, No. 3, Papers of the Seventh Triennial Meeting of the American Comparative Literature Association (Sep., 1981) 278-286.

2. Micah Mattix, "Periodization and Difference", *New Literary History*, Vol. 35, No. 4, Forms and/of Decadence (Autumn, 2004) 685-697.

Unit II Classicism

1. Jean Hytier and June Guicharnaud, "The Classicism of The Classics", *Yale French Studies*, No. 38, *The Classical Line: Essays in Honor of Henri Peyre* (1967) 5-17.
2. Horace, "Ars Poetica", *The Poetry of Criticism: Horace, Epistles II and Ars Poetics, Ross S. Kilpatrick* (Edmonton: The University of Alberta Press, 1990) 72-83
3. Longinus, *On the Sublime*. Chapters VIII-XXII. Trans H.L.Havell (London & New York, Macmillan & Co., 1890)14-48

Unit III Renaissance

1. George Parfitt, "Renaissance", *Encyclopedia of Literature and Criticism*. Eds. Martin Coyle, Peter Garside, Malcolm Kelsall and John Peck (London & New York: Routledge, 1990) 83-92.
2. Machiavelli: *Prince*. Oxford World Classics. Trans. & Edited by Peter Bondanella, (New York: OUP, 2005) 53-78.
3. Erasmus, *The Praise of Folly*, trans. & edited Hoyt Hopewell Hudson (Princeton: Princeton University Press, 2015) First Eight Sections, 1-20.

Unit IV Neo-Classicism

1. Thomas Kaminski, "Neoclassicism", from *A Companion to the Classical Tradition*, edited by Craig W. Kallendorf (Malden & Oxford: Blackwell, 2007) 57-71.
2. Samuel Johnson, "The Necessity of Good Humour", *The Rambler* 72, November 24, 1750 in *Samuel Johnson: Selected Writings*. Ed Peter Martin (Cambridge & Massachusetts: The Belknap Press of Harvard University Press, 2009) 97-100
3. Henry Fielding, "Author's Preface" to *Joseph Andrews* (Penguin, 1999) 25-31

Unit V Romanticism

1. Seamus Perry, "Romanticism: The Brief History of a Concept", *A Companion to Romanticism*, ed. Duncan Wu (Malden &Oxford: Blackwell, 1999) 3-12.
2. M. H. Abrams: "Romantic Analogues of Mind and Art", *The Mirror and the Lamp*: *Romantic Theory and the Critical Tradition* (OUP: Oxford, London & New York, 1953) 47- 56.
3. Coleridge, "Chapter XIII – On the Imagination or the Esemplastic Power", *Biographia Literaria*(Princeton UP, 1984) 116-128.

Secondary Readings

- Gerald Abraham, *Romanticism*: 1830-1890 (Oxford: Oxford University Press, 1990)
- David Galen, *Literary movements for students: presenting analysis, context, and criticism on literary movements*, Volume 1 (Pennsylvania State University, Gale Cengage, 2002)
- Anthony Grafton, Glenn W Most and Salvatore Settis, *The Classical Tradition* (Harvard: Harvard University Press, 2010)
- Christopher Gillie, *Movements in English Literature: 1900-1940* (Cambridge: Cambridge Univ. Press, 1978)
- Margaret Healy and Thomas Healy. *Renaissance Transformations: The Making of English Writing*, 1500-1650 (Edinburg: Edinburgh University Press, 2009)
- Richard Jenkyns,.*Classical Epic* (Bristol Classical Press, 1992)
- Hugh Honour,.*Neo-classicism* (Penguin, 1968)
- Richard Jenkyns, *Classical Literature: A Pelican Introduction* (Penguin Books UK, 2015)
- Siobhan Keenan. *Renaissance Literature* (Edinburg: Edinburgh University Press 2008)
- Dominique Secretan. *Classicism* (London & New York: Routledge 2017)

Model Test Paper

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are the advantages of dividing the history of literature into precise periods or literary ages?
Or
Summarize the arguments posited in Micah Mattix's essay "Periodization and Difference".

What is classicism? Give detailed answers through examples. Or
How do Horace and Longinus theorize classical virtues of literature in their own respective ways?

What are the new debates on 'Renaissance' as an age of discovery? or
Critically analyze Machiavelli and Erasmus as renaissance prose writers.

Q. 4. What are the salient features of Neo-classicism?
Or
Explain the features of neo-classical prose through your critical reading of the prescribed essay of Samuel Johnson and Henry Fielding's "Author's Preface" to *Joseph Andrews*.

Q. 5 What are the key characteristics of romanticism?
Or
Critically summarize the views of M.H. Abrams on romantic art.
****

Paper II
Approaches to Literary Criticism – I

The objective of the course is to familiarize students with various approaches to literature, and the particular worldviews these are based on. The students should able to relate literary texts to their lives in terms of their own times and location. The number of approaches suggests that there is no one privileged way to understand a text, and that a text can yield multiple meanings if it is accessed through different worldviews. Each approach has a claim to total meaning till it is countered by another equally compelling approach. Each approach has its own well-argued theoretical base, a set of tested tools and a sustained methodology to help the student to navigate through the text with a degree of precision. These approaches put together give rise to what is often called as critical pluralism.
Testing: The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there should be questions of a practical nature in which the candidate has to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. M. H. Abrams, "Orientation of Critical Theories", *The Mirror and the Lamp: Romantic Theory and the Critical Tradition*, (Oxford UP, 1958), 3-29.

Unit II

1. Wilfred Guerin et al, eds., "Historical and Biographical Approaches (I, IIA, IIB); Moral and Philosophical Approaches (I, IIA, IIB)" , A*Handbook of Critical Approaches to Literature* (Oxford: OUP, 2005) 5th Ed.

2. Hippolyte Taine, "Introduction" to *History of English Literature*, Vol. I, (New York: Holt & Williams:, 1871) 1-21.

Unit III

1. Chapter 5 of Wilfred Guerin's *Handbook*: The Formalist Approach (I, II, III, IV, VA, VD)
2. Cleanth Brooks, "The Heresy of Paraphrase", *The Well Wrought Urn* (London: Dobson Books1960 2nd Impression) 176-196.

Unit IV

1. Chapter 6 of Wilfred Guerin's *Handbook*: The Psychological Approach: Freud (I, IIA, IIG)
2. Lionel Trilling, "Freud and Literature", *The Liberal Imagination* (New York: Viking Press, 1950) 34-57.

Unit V

1. Chapter 7 of Wilfred Guerin's *Handbook*: Mythological and Archetypal Approaches (I, II, IIIA, IIIB)
2. Northrop Frye, " The Archetypes of Literature", *The Kenyon Review*,Vol. 13, No. 1 (Winter, 1951), 92-110.

Suggested Readings

- David Lodge, ed. *20th Century Literary Criticism: A Reader* (Longman, 1989)
- David Lodge, ed., *Criticism and Theory: A Reader* (Pearson Education, Ist Indian Rpt., 2003)
- David Daiches, *Critical Approaches to Literature*, 2nd ed. (Orient Longman, 1970)
- M.A.R. Habib. *A History of Literary Criticism: From Plato to the Present* (Blackwell, 2005)
- Patricia Waugh, *Literary Theory & Criticism: An Oxford Guide* (Oxford: OUP, 2006)
- M. S Nagarajan, *English Literary Criticism & Theory: An Introductory History.* (Orient Longman, 2006)
- David Robey and Ann Jefferson. *Modern Literary Theory* (Batsford, 1986)
- Frank Lentriccia. *After the New Criticism* (Chicago: Chicago UP, 1980)
- Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2003)
- Peter Barry, *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed. (Manchester: Manchester UP, 2004)
- Raman Selden, *A Reader's Guide to Contemporary Literary Theory (*Pearson, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How does M.H. Abrams categorize different approaches to literary criticism?

Or

What are the characteristics of the mimetic approach to literature?

Q. 2. What are the major concerns of historical approach to literary criticism?

Or

How do 'man, moment and milieu' influence literary work? Use Taine's view to answer your question.

Q. 3 What is the importance of close-reading of a text in the formalist analysis of a work?

Or

What are the pitfalls of paraphrasing poetry?

Q. 4. What are the major concepts of Freud that are used by literary critics to understand the psychological make-up of a literary work?

Or

Trilling observes that literature brings out "the night-side of life". Do you agree?

Q. 5 What are the assumptions of archetypal approach with respect to literary criticism?

Or

What is it that constitutes "the coordinating principle" of literary criticism, according to Frye?

****

Paper III

(Choose any one option)

(1) Cultural Studies – I

Culture as a concept is often used synonymously with 'civilization', 'religion' or even 'ideology'. The objective of this foundational paper is to introduce to the students the concept of culture in terms of its relationship with the discourses of 'civilization', 'religion', 'everyday life', 'science' and 'ideology'. The distinctions are subtle, but not oppositional n fundamental ways. Culture, however, tends to subsume all other discourses of life, be it religious, ideological or civilizational. The paper through a reading of primary essays and secondary responses written over the last two centuries

by eminent culture critics and theorists like Matthew Arnold, F.R. Leavis, T.S.Eliot and Raymond Williams tends to cover the evolutionary trajectory of debate. Before the discourse of culture opens up to accept the everyday aspects of life as its material praxis, it goes through a series of intellectual bouts with the votaries of religion, science and ideology. The paper consists of five units. The end-semester paper shall consist of five questions, one from each unit with internal choice. The paper carries a total of 80 marks.

Unit I Nature-Nurture Debate

1. John Locke, *An Essay Concerning Human Understanding*, Book I (T. Tegg and Son, 1836)1-48.
2. Leibniz, *New Essays on Human Understanding*, Book I (Cambridge UP, 1996) 69-108.

Unit IICulture and Civilization

1. John Storey, "The 'culture' and 'civilization' tradition", *Culture Theory and Popular Culture* 18-28.
2. Matthew Arnold, "Chapter 1", *Culture and Anarchy*, Jane Garnett (ed.), (Oxford University Press, 2006) 32-53.

Unit III Culture and Religion

1. T.S. Eliot, "Religion and Literature", *T.S. Eliot: Selected Essays* (Faber and Faber, 1932) rpt. 1972, 388-401.
2. T.S. Eliot, "The 'Three' Senses of Culture", *Notes Towards the Definition of Culture*, (HMH, 2014), 19-32.

Unit IV Culture and Science

1. C.P. Snow, *Two Cultures*, Stefan Collini (ed.), (Cambridge University Press, 2012).
2. F.R. Leavis, "Two Cultures? The Significance of C.P. Snow", *Two Cultures? The Significance of C.P. Snow*, (Cambridge University Press, 2013) 53-76.

Unit V Culture and Everyday Life

1. Raymond Williams, "Culture is Ordinary", *Resources of Hope: Culture, Democracy, Socialism*, (Verso, 1989), 3- 18.
2. John Storey, "Culturalism", *Culture Theory and Popular Culture*, (Wiley, 2003), 38-51.

Suggested Readings

- A.L.Kroeber & Clyde Klucichohn, *Culture: A Critical Review of Concepts and Definitions* (Cambridge & Massachusetts: The Museum, 1952).
- Andrew Milner, *Re-imagining Cultural Studies: The Promise of Cultural Materialism*, (London: Sage Publications, 2002).
- Andrew Singleton, *Religion, Culture and Society: A Global Approach*, (Sage, 2014).
- Andrew Tudor, *Decoding Culture: Theory and Method in Cultural Studies*, (1999).
- Anthony Easthope, *Literary into Cultural Studies*, (New York: Routledge, 1991).
- Ben Highmore, *Culture*, (New York: Routledge, 2016).
- Brian Longhurst, Greg Smith, et al. *Introducing Cultural Studies* (Pearson, 2008).
- Catherine Driscoll, *Modernist Cultural Studies*, (University Press of Florida, 2010).
- Chris Barker, *Cultural Studies: Theory and Practice*, (Sage Publications, 2011).
- Chris Barker, *Making Sense of Cultural Studies*, (Sage Publications, 2002).
- Helen Thomas, "Culture/ Nature", *Core Sociological Dichotomies*, ed., Chris Jenks (SAGE, 1998)110-122.
- Hermann von Helmholtz and David Cahan, *Science and Culture: Popular and Philosophical Essays* (University of Chicago Press, 1995).
- John Hartley, *A Short History of Cultural Studies*, (Sage Publications, 2003).
- John Storey *What is Cultural Studies?: A Reader* (Bloomsbury, 2009).
- Jolyon P. Mitchell and Sophia Marriage, *Mediating Religion: Studies in Media, Religion, and Culture*, (A&C Black, 2003).
- Michael Ryan, *Cultural Studies: A Practical Introduction*, (Wiley Blackwell, 2010).
- Richard Johnson, Deborah Chambers, et al, *The Practice of Cultural Studies*, (New Delhi: Sage Publications, 2004).
- Simon During, *The Cultural Studies Reader*, (Routledge, 1999).
- Simone During, *Cultural Studies: A Critical Introduction*, (New York: Routledge, 2005).
- Terry Eagleton, *The Idea of Culture* (Blackwell, 2008).
- Toby Miller, *A Companion to Cultural Studies*, (Wiley Blackwell, 2001).

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 Explain Locke's thesis of mind as *tabula rasa*.
Or
How does Leibnitz bring new perspectives to the understanding of human nature?

How does John Storey relate 'culture' with 'civilization'? Explain. Or
Arnold asserts that culture is "a study of perfection". What is critical response to Arnoldian idea of culture?

Q. 3 How does Eliot foreground the role of religion in the shaping of culture? Discuss critically.
Or
Eliot postulates "three senses of culture". Explain with the help of examples.

C P Snow discovers two cultures in a framework of juxtaposition. Do you agree with his reductionist model?
Or
How does F R Leavis critique Snow's thesis of "two cultures"? Does Leavis not show his bias towards high classical values?

What does John Storey mean by "culturalism". Explain with examples. Or
Raymond Williams provides an anti-elitist notion of culture. Argue.
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(2) Language and Linguistics – I

The course aims to introduce study of language, its origin, nature, structure and function in human society. This involves the development of an awareness of philosophical, historical, comparative, structural, social and psychological perspectives on language as it evolves as a system related to the human need for communication as well as its cognitive aspects and its social functions. The course is aimed at tracing the main directions that the study of language has taken through the readings of thinkers in the field of linguistics.

Unit I Philosophy of Language

1. George Yule, "Animal and Human Languages", *The Study of Language* (CUP, 2010)10-20.

2. Saussure, "The Object of Linguistics" (7-17), "The Nature of Linguistic Sign" (65-78), "Synchronic Linguistics Part II Chapter I" (101 -102) & "Diachronic Linguistics Part III" (140-143), *Course in General Linguistics*,
3. F.H. Colson, "The Analogist and Anomalist Controversy",*The Classical Quarterly*, Vol. 13, Issue 1, January 1919, 24-36.

Unit II Language: Its Origin, Change and Universal Grammar

1. Fromkin, Rodman & Hyames, "Language Change" **(Chapter 10),** *An Introduction to Language* (Wadsworth 2011, 9th ed.) 488-539.
2. Noam Chomsky, "Knowledge of Language as A Focus of Inquiry", *Knowledge of Language* (Praeger, 1986) 1-14.

Unit III Language and Mind

1. Fromkin, Rodman & Hyams, "Language Processing : Human and Computers", (Chapter 8) *An Introduction to Language* (Wadsworth, 2011, 9th ed.)375-407.
2. Steven Pinker, "How Language Works", *The Language Instinct* (Penguin Books) 83-125.
3. R. Jakobson, "Two Aspects of Language and Two Types of Aphasic Disturbances", *Roman Jakobson: Selected Writings* (Mouton, 1971) 239-259.

Unit IV Language, Society and Culture

1. Fromkin, Rodman & Hyams, "Language in Society", (Chapter 9) *An Introduction to Language* (Wadsworth 2011, 9th ed.) 430-487.
2. Dell Hymes, "On Communicative Competence", in Pride and Holmes ed. *Sociolinguistics: Selected readings*, (Penguin, 1972) 269-281.
3. Halliday, M., "Language as Social Semiotic" (Chapter II.6), *Language as Social Semiotic* (Edward Arnold, 1978) 108-126.
4. John Lyons "Sapir-Whorf hypothesis", *Language and Linguistics* (CUP, 1981) 2009 rpt. 303-312

Unit V Indian Linguistics: Theory of *Sphota*

1. Bimal Krishna Matilal, (Chapter-7) "*Sphota* Theory: Early History and Patanjali's Views",(Chapter-8) "Bhartrihari's View of *Sphota*" & (Chapter – 9) "Critics of the Sphota Theory and Views of Later Grammarians", *The Word and the World* (OUP, 1992) 77-105..

Suggested Readings

- Michael Devitt, Richard Hanley, *The Blackwell Guide to the Philosophy of Language* (Wiley-Blackwell, 2006).
- Michael Morris, *An Introduction to the Philosophy of Language* (Cambridge University Press, 2007).
- Barry Lee (edt.), *Philosophy of Language: The Key Thinkers* (Continuum, 2011).
- John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970).
- M. A.K. Halliday, Jonathan J. Webster, *On Language and Linguistics* (Continuum, 2006).\
- Roman Jakobson, *Selected Writings: Word and Language* (de Gruyter Mouton, 1971).
- Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics* (Routledge, 1999).
- Leonard Bloomfield, *Language* (George Allen & Unwin Ltd., 1933).
- David Crystal, *How Language Works* (Avery Trade, 2007).
- Noam Chomsky, *Language and Thought* (Moyer Bell, 1993).
- Noam Chomsky, *Syntactic Structures,* 2nd Edition (Mouton de Gruyter, 2002).
- Steven Pinker, *The Stuff of Thought: Language As a Window into Human Nature* (Penguin, 2008).
- Steven Pinker, *How the Mind Works*, (W. W. Norton & Company, 2009).
- Jean Piaget, *The Child's Conception of the World* (Routledge & Kegan Paul Ltd.,1929).
- Roy Harris, *Language, Saussure and Wittgenstein: How to Play Games with Words* (Routledge, 1990).
- David Crystal,*The Cambridge Encyclopedia of Language* (Cambridge University Press, 1997).
- Fromkin, Rodman and Hyams, *An Introduction to Language* (Thomson Wadsworth, 2004) Indian Reprint.
- Janet Holmes, *An introductionto sociolinguistics* (Routledge, 2012).
- Martin Montgomery, *An Introduction to Language and Society* (Routledge, 1995).
- Board of Editors, *Linguistics: An Introduction* (Orient Black Swan. 2015)
- Syal and Jindal *An Introduction to Linguistics* (Prentice Hall of India, 2016)
- Bimal Krishna Matilal,*The Word and the World: India's Contribution to the Study of Language* (Oxford University Press, 1990).
- Narayan R Joshi, "Sphota Doctrine in Sanskrit Semantics Demystified", *Annals of Bhandarkar Oriental Research Institute*, ed. MG Deshpande& G U Thite, Vol. LXXXVII, 2007, 183-197.

- Harold G Coward, "Part Two: The *Sphota* Theory of Language as Revelation", *Sphota Theory of Language: A Philosophical Analysis* (MotilalBanarsidass, 1997) 69-137

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks
Language and Linguistics-I

What is the Analogist and Anomalist controversy in Language? Or
Discuss Saussure's dichotomy of Synchronic and Diachronic Linguistics.

Discuss the diachronic changes in English with respect to sound and spelling.
Or
"TG Grammar is an improvement on the structuralists' view of Grammar". Discuss.

How does Generative Grammar help to understand the language instinct? Or
What is an aphasic disturbance? How does it affect language?

Q. 4 Write an essay on Hymes's concept of Communicative Competence.
Or
"We dissect nature according to the lines laid by our native languages". Elaborate.

Q. 5 Give a detailed historical account of *Sphota* Theory.
Or
Discuss Bharthari's view of *Sphota*. How do other Sanskrit grammarians respond to the theory of *sphota*?

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(3) British Literature – I

The objective of the paper is to provide an overview of the literature of the English Renaissance, Reformation and Restoration times. The Renaissance, fourteenth to sixteenth century, was a vibrant period of European history, which began in Italy and marked a revival of classical learning and was seen as a political, scientific, social, economic, philosophical, intellectual and cultural 'rebirth' after the Middle Ages. Humanism (*studia humanitatis*) shaped the sciences, literature, religion, art, politics and culture of the period. The course will concentrate on English Renaissance 1500-1660 during which the students will be introduced to the spirit of optimism, unlimited potential, stoic English character and underlying complexities of an age that produced some of the greatest works of literature the world has known. The goal will be to trace the key political, cultural and artistic transformations while paying close attention to

continuities with medieval tradition. At the end of the course the students will not only be well versed with the iconic writers and representative texts of the time but will also be critically aware of the important intellectual shift that occurred in the human thought during the Renaissance. Renaissance overlaps with most of Reformation of the Western Church. Protestant Reformation was the foundation of Protestantism which contrary to the common practice of the time emphasized salvation through individual faith. The paper also focuses on the political, social and cultural impact of the Reformation in England and the literature of the time in addition to covering the English Restoration Period (1660-1700). The objective again is to familiarize the students with the major trends, ideas, genres, poetic forms and prose of these periods. The students at the end of the course would have explored a very turbulent chapter in English history.

Unit I

1. Martin Luther, "Freedom of a Christian", *Luther's Works: Career of a Reformer*, Vol. 31, Ed. Harold. J. Gimm, (Muhlenberg Press, 1957)327-377.
2. Francis Bacon, "Of Seditions and Troubles" & "Of Atheism", *Essays* (London: Penguin Books, 1985).(Courier Corporation, 2012) 42-51

Unit II

1. Christopher Marlowe, *Edward II* (London: Bloomsbury, 2014).

Unit III

1. Geoffrey Chaucer**,** "Wife of Bath's Prologue", *Canterbury Tales*. Ed. Jill Mann (Penguin Classics, 2003), 1-52.
2. John Milton, *Paradise Lost.* Book I (London: Penguin Classics, 2003), 1-26.

Unit IV

1. William Shakespeare, *Hamlet*. Ed. Ann Thompson and Neil Taylor (Bloomsbury, 2017).

Unit V

1. John Dryden, *Absalom and Achitophel,* 5th Edition. (Leopold Classic Library, 2017).

Suggested Readings

- Derek Traversi, *The Canterbury tales: A Reading* (Newark: University of Delaware Press, c1983).
- Piero Boitani and Jill Mann (eds.), *The Cambridge Companion to Chaucer* (Cambridge University Press, 2004).

- Andrew Hadfield (ed.), *The Cambridge Companion to Spenser* (Cambridge University Press, 2001).
- Frank Kermode, "Introduction", *Shakespeare, Spenser, Donne* (Routledge & Kegan Paul, 1971).
- Harold Bloom, ed. *Modern Critical Interpretations: William Shakespeare's As You Like It* (Chelsea House Publishers, 1988).
- Jay L. Halio, *Twentieth Century Interpretations of As You Like It: A Collection of Critical Essays* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968).
- William C Carroll, *The Metamorphoses of Shakespearean Comedy* (Princeton: Princeton University Press, 1985).
- Northrop Frye, *A Natural Perspective: The Development of Shakespearean Comedy and Romance* (New York: Columbia University Press, 1965).
- T.B. Tomlinson, *A Study of Elizabethan and Jacobean Tragedy* (Cambridge UP,1964).
- Bonamy Dobrée, *Restoration Comedy, 1660-1720* (OUP,1924).
- Deborah Payne Fisk (ed.), *The Cambridge Companion to English Restoration Theatre* (Cambridge University Press, 2000).
- John Milton, *The Major Works,* Stephen Orgel and Jonathan Goldberg, eds.(Oxford World's Classics, 2008).
- Dennis Richard Danielson, *The Cambridge companion to Milton*, (Cambridge, New York: Cambridge University Press, 1989).
- Noam Reisner, *John Milton's Paradise Lost: A Reading Guide* (Edinburgh: Edinburgh University Press, c2011).
- Boris Ford (ed.), *From Donne to Marvell*, (Penguin Books,1990).
- Derek Hirst and Steven N. Zwicker (eds.), *The Cambridge Companion to Andrew Marvell* (Cambridge University Press, 2010).
- Samuel I. Mintz, "Leviathan as Metaphor" (*Hobbes Studies* 2 (1989): 3-9).
- Shapin, Steven and Simon Shaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton University Press, 1985).
- Robert E Stillman, "Hobbes's *Leviathan*: Monsters, Metaphors, and Magic" (*ELH* 62.4 (1995): 791-819).
- Samuel Johnson,*Lives of the Poets* (Oxford World's Classics).
- James Engell, *The Creative imagination: Enlightenment to Romanticism* (Cambridge, Mass: Harvard University Press, 1981).
- Nigel Smith, *Literature and Revolution in England, 1640-1660* (Yale University Press, 1997).
- Michael Hattaway, ed. *A Companion to English Renaissance Literature and Culture* (Blackwell, 2003).
- D.H. Craig (ed.), *Ben Jonson: The Critical Heritage 1599-1798* (Routledge,1995).

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 "A Christian is perfectly free lord of all, subject to none. A Christian is a perfectly dutiful servant of all, subject to all." With reference to this paradoxical statement, explain Martin Luther's role in the formation of a new reformed church.
Or
Critically analyze Francis Bacon's position on atheism as summed up in his essay "Of Atheism". Discuss also his use of language in dealing with such a sensitive theme.

Q. 2 Critically comment on the politics of sexuality and power in Marlowe's *Edward II*.
Or
Analyze *Edward II* as a Renaissance play.

Q. 3 Based on your understanding of the portrayal of Wife of Bath in *Canterbury Tales*, do you consider Chaucer to be an early feminist? Give a detailed answer.
Or
Critically analyze the theme of darkness in *Paradise Lost* book 1 with reference to Milton's own blindness.

Q. 4 Attempt a psychoanalytic reading of Shakespeare's *Hamlet*.
Or
Discuss the theme of death in Shakespeare's *Hamlet*.

Q. 5 Discuss *Absalom and Achitophel* as a political satire.
Or
Critically comment on the use of biblical allegory in Dryden's *Absalom and Achitophel*.

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Paper IV
(Choose any one option)

(1) Introduction to Literary Genres –I

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the major genres that gained classical proportions mainly during the ancient period. Even as these genres acquired canonical value in the ancient times, their currency in subsequent history has not diminished. The effort is to

provide a brief overview of each selected genre in terms of its historical evolution and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice.

Unit I What is a Genre?

1. Alastair Fowler, "Concepts of Genre", *Kinds of Literature: An Introduction to the Theory of Genres and Modes* (Oxford: Clarendon Press, 1982) 37-53.

Unit IIEpic

1. Peter Toohey, "Epic: The Genre, Its Characteristics", *Reading Epic: An Introduction to Ancient Narratives* (London & New York: Routledge, 1992) 1-19.
2. John Milton, *Paradise Lost,* Book I (New Delhi: Oxford University Press, 2005).

Unit III Tragedy

1. Aristotle, Chapter VI-XVI, *Poetics*, trans. S. H. Butcher (London: Macmillan and Co.,1895).
2. Sophocles, "The Oedipus Rex", *The Three Theban Plays* (Penguin Classics, 1984).

Unit IV Comedy

1. Aristotle, "Tractatus Coislinianus", *An Aristotelian Theory of Comedy*, trans and ed. by Lane Cooper (New York: Harcourt, Brace and Company,1922) 224-226. [available online at https://ia802609.us.archive.org/27/items/aristoteliantheo030524mbp/aristoteliantheo030524mbp.pdf]
2. Aristophanes, "Frogs", *Frogs and Other Plays*(Penguin Classics, 2007).

Unit V Fable

1. M.O. Grenby, "Fables", *Children's Literature* (Edinburg: Edinburg University Press, 2008) 10-31.
2. Visnu Sharma, "Book IV: Loss of Gains", *The Panchatantra*, trans. Chandra Rajan (New Delhi: Penguin Books, 1993) 351-392.
3. Aesop, "The Good Things and the Bad Things", "The Man Selling a Holy Statue", "The Eagle and the Fox", "The Eagle and the Scarab Beetle", and "The Eagle, the Jackdaw and the Shepherd", *The Complete Fables* (Penguin Classics, 1998) 1-5.

Secondary Readings

- Katherine Callen King, *Ancient Epic* (Wiley Blackwell, 2009).
- Harold Bloom, *The Epic* (Philadelphia: Chelsea House Publishers, 2005).
- John Miles Foley, *A Companion to Ancient Epic* (Blackwell Publishing, 2006).
- Matthew Bevis, *Comedy: A Very Short Introduction* (Oxford: OUP,2013).
- Ritchie Robertson, *Mock-Heroic: From Pope to Heine* (Oxford & New York: OUP, 2009).
- Georg Lukacs, *The Theory of the Novel: A Historico-philosophical Essay on the Forms of Great Epic Literature*, trans. by Anna Bostock (London, The MIT Press, 1971).
- Raymond Williams, *Modern Tragedy*. Ed Pamela McCallum (Toronto: Broadview Encore Editions, 2006).
- Clifford Leech, *Tragedy* (London & New York: Routledge, 1969).
- Rebecca Bushnell, *Tragedy: A Short Introduction* (Blackwell Publishing, 2008).
- Holzberg, N. *The Ancient Fable: An Introduction*, translated by Christine Jackson Holzberg. (Bloomington & Indianapolis: Indiana University press, 2002).
- Marcel Cornis-Pope, ed., *New Literary Hybrids in the Age of Multi-Media Expression: Crossing Borders, Crossing Genres* (Amsterdam and Philadelphia: John Benjamin's Publishing Company, 2014).
- Peter Hunt, ed., *International Companion Encyclopedia of Children's Literature* (London & New York: Routledge, 2004).
- Matthew Kieran, "Tragedy versus Comedy: On Why Comedy is Equal of Tragedy", *Ethical Perspectives*, 20, no.3 (2013), 427-450.
- John Frow, *Genre: New Critical Idiom* (London & New York: Routledge).
- Andrew Stott, *Comedy* (London & New York: Routledge, 2014).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q,1. What do you mean by 'recategorization'? How did the Russian formalist exemplify the term?

Or

What is 'genre'? Is generic approach to literature a composite way of reading literature?

What is Epic? Write about its origin. Or

What is the difference between 'Mythological Epic' and 'Miniature Epic'?

Aristotle gives preference to 'Tragedy' over 'Epic'. Explain critically. Or

Aristotle suggests that the most powerful elements in a tragedy are *Peripetia* and *Anagnorisis.* Explain the two terms with reference to *Oedipus Rex.*

Is there any kind of catharsis in comedy too, akin to what we have in tragedy? Explain.

Or

"Frogs" by Aristophanes is a classical comedy. On the basis of your reading of the play, identify the major elements of classical comedy.

How do*Panchatantra* fables combine metaphysis with morality? Explain with examples.

Or

What are the general features of "fable"? Explain with examples from fables of Aesop.

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(2) British Literature – II

The end of the eighteenth century and early nineteenth century saw a momentous shift in philosophical, artistic and literary movement in Europe - Romanticism. It flourished until the mid-nineteenth century. Romanticism celebrated imagination and intuition in the enduring search for individual rights and liberty. It marks a shift from objectivism to subjectivism, from reason to power of imagination and emotive response. The objective of the paper is to introduce students to these tenets of Romanticism in general and to English Romanticism in particular. During the course they will be introduced to major English poets and prose writers of the period. Through the reading, the students will be familiarized with the English Romantic imagination, its stress on Nature, poetic inspiration, freedom, individualism and spontaneity; and the role language plays in it. Gothic fiction is also explored in the paper. At the end of the course the students will be familiar with major themes, ideas and concepts of Romanticism and English Literature. They will be cognizant of the historical, cultural, political and aesthetic milieu of the time. Students will study Romanticism as a reaction against the philosophical rationalism and neoclassicism of the Enlightenment. At the end of the course, they would have in-depth knowledge of a movement that not only captured the imagination of people with their ideas of liberty and freedom but also fuelled the avant-garde movements well into the twentieth century.

Unit I

1. Mary Shelley, *Frankenstein*. Foreword by Ruskin Bond (Collins Classics, 2018).

Unit II

1. William Wordsworth, *Preface to Lyrical Ballads* (Create Space Pub, 2016).

Unit III

1. William Blake, "The Chimney Sweeper" & "The Tyger", *Songs of Innocence and of Experience* (Oxford UP, 1967).
2. William Wordsworth, "Lines Written in Early Spring", "Ode: Intimations of Immortality" &"London 1802", *Selected Poems* (Penguin Classics, 2004).

Unit IV

1. John Keats, "Ode on Grecian Urn", "Ode to a Nightingale" & "Ode to Autumn", *Selected Poems* (Penguin Classics, 2007).
2. Samuel Taylor Coleridge, "Rime of the Ancient Mariner*", 'Rime of the Ancient Mariner and the Other Poems* (Collin Classics, 2016).

Unit V

1. Charles Lamb, "Dream Children: A Reverie" & "The Praise of Chimney-Sweepers", *The Essays of Elia and Eliana* (G. Bell & Sons, Ltd).
2. William Hazlitt:

- 'On Reading Old Books', from *The Spirit of the Age* (Vintage, 2009).
- 'On Gusto', *The Fight and Other Writings* (Penguin Classics, 2000).

Suggested Readings

- Anita Brookner, *Romanticism and Its Discontents* (New York: Farrar, Straus & Giroux, 2000).
- Stuart Curran (ed), *The Cambridge Companion to British Romanticism* (Cambridge University Press, 1996).
- Giovanni Carsaniga, "The Age of Romanticism, 1800-1870", *The Cambridge History of Italian Literature,* eds. Peter Brand and Lino Pertile (CUP, 1999) 399-437.
- C.M. Bowra, *The Romantic Imagination* (OUP,1949).

- Walter Jackson Bate, *From Classic to Romantic: Premises of Taste in Eighteenth-century England* (Harvard Univ. Press,1946).
- M.H. Abrams (ed.), *English Romantic Poets: Modern Essays in Criticism* (OUP USA, 1975).
- Harold Bloom and Lionel Trilling, *The Oxford Anthology of English Literature,* Vol. II (New York: Oxford University Press, 1973) pp. 594–611,766–68, 777–8.
- Jean-Jacques Rousseau, 'Preface' to *Emile: or On Education*, trans. Allan Bloom (Penguin,1991).
- Jacob Bronowski, *William Blake, 1757-1827: A Man without a Mask* (Penguin Books,1954).
- D.W. Harding, "William Blake", *From Blake to Byron*: *The Pelican Guide to English Literature* ed. Boris Ford, Vol.5 (Penguin, 1957).
- Mark Schorer, *William Blake: The Politics of Vision* (H. Holt and Company, 1946).
- Morton D. Paley (ed.), *Twentieth Century Interpretations of Songs of Innocence and of Experience* (Prentice-Hall,1969).
- Northrop Frye, "Northrop Frye on Milton and Blake", *Collected Works of Northrop Frye* Vol.16, ed. by Angela Esterhammer (Uni. of Toronto Press, 2005).
- Northrop Frye, *Fearful Symmetry: A Study of William Blake*, ed. Nicholas Halmi(University of Toronto Press; 2nd Revised ed. edition, 2004).
- Morris Eaves (ed.), *The Cambridge Companion to William Blake* (CUP, 2003).
- Stephen Gill (ed.), *The Cambridge Companion to Wordsworth* (CUP, 2003).
- Lucy Newlyn (ed.), *The Cambridge Companion to Coleridge* (CUP, 2002).
- Angela Leighton, *Shelley and the Sublime. An Interpretation of the Major Poems* (Cambridge: CUP, 1984).
- Stuart Sperry, *Shelley's Major Verse: The Narrative and Dramatic Poetry* (Harvard Uni. Press, 1988).
- G.S. Fraser (ed.), *John Keats: Odes* (Macmillan,1971).
- Stuart Sperry, *Keats: The Poet* (Princeton Univ. Press, 1973).
- J. Cox (ed.), *Keats's Poetry and Prose* (Norton Critical Edition, 2008).
- Susan Wolfson (ed.), *The Cambridge Companion to Keats* (CUP, 2001).
- Drummond Bone (ed.), *The Cambridge Companion to Byron* (CUP, 2004).
- Bernard Blackstone, *Byron: A Survey* (Longman, 1975).
- Jerome McGann, *Byron and Romanticism* (Cambridge: CUP, 2002).
- William Hazlitt, *The Fight and Other Writings*, edsTom Paulin and David Chandler (Penguin Classics, 2000).
- John Kinnaird, *William Hazlitt: Critic of Power* (Columbia University Press, 1978).
- Tom Paulin, *The Day-Star of Liberty: William Hazlitt's Radical Style* (Faber & Faber, 1999).

Model Paper

British Literature – II

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1Discuss how romanticism informs Mary Shelley's *Frankenstein*.

Or

Mary Shelley's *Frankenstein* unfolds the irony of a victor becoming a victim of his own creation.

Q. 2 Discuss *Preface to Lyrical Ballads* as a manifesto of literary primitivism.

Or

How does William Wordsworth's *Preface to Lyrical Ballads* open the debate of poetic diction?

Q. 3 Discuss the theme of exploitation in "The Chimney Sweeper"?

Or

In the "Ode: Intimations of Immortality", Wordsworth attempts to reconcile the loss of the 'visionary gleam' of childhood with the growth of the 'philosophic mind' of adulthood. Discuss.

Q. 4 Explain the theme of 'permanence' versus 'mutability' in the poem "Ode to a Nightingale"?

Or

How does "Rime of the Ancient Mariner" explore penance and redemption?

Comment on Lamb's prose style as seen in his essay "Dream Children: A Reverie".

Or

Critically analyze Hazlitt's concept of 'gusto'.

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(3) Academic Writing – I

The paper is designed to develop an awareness of the elements and conventions of academic writing. Students need to understand how academic writing is different from general writing; especially when they make the transition to higher education. The course will empower the students with the skills to convert a general text into an academic text and vice versa. It will equip them with summarizing skills so they can convert their articles into bulleted points for power point presentations. The paper will

equip the students with paraphrasing skills so that they can build upon the bullet-points of power-points and convert them into academic journal articles. The course will focus more on the application of the learnt principles rather than the memorization of theoretical aspects.

The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the characteristics of academic writing and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the actual, hands on writing of academic documents. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I Academic Writing

1. Definition
2. Forms

Unit II Language and Style

1. Words and Phrases
2. Structures
3. Conventions of register specific academic writing
4. Ways of portraying Research Findings
5. Dealing with New Words (Academic Vocabulary Building)

Unit III Summarizing and Paraphrasing

1. Skimming a text
2. Scanning a book for specific details
3. How to paraphrase – changing word-order, changing word-class and vocabulary substitution
4. Paraphrasing and Quoting Sources
5. Using Direct Quotations
6. Referencing

Unit IV Discourse Level- Coherence and Cohesion

1. Introduction: Identifying effective and ineffective writing styles.
2. Macrofeatures
3. Microfeatures
4. Exercises to test Structure, Flow, Sequencing etc.

Unit V Writing Field Reports and Term Papers

1. Function
2. Planning: making a Mind Map
3. Developing a theme
4. Integration: Structure and format
5. Synopsis writing as a mind map of the proposed research
6. Abstract writing

Suggested Readings:

Note: The books by Stella Cottrell and Renu Gupta can be used as textbooks in the classroom.

- Cottrell, Stella 2003. *The Study Skills Handbook.* China: Palgrave Macmillan
- Murphy, Raymond. 1992. *Elementary English Grammar (2nd edition).* Cambridge University Press.
- Murphy, Raymond. 1994. *Intermediate English Grammar (2nd edition).* Cambridge University Press.
- Hewings, Martin. 1999. *Advanced English Grammar.* Cambridge University Press.
- Gupta, Renu. 2010. *A Course in Academic Writing.* Orient Blackswan, New Delhi.
- McCarthy, Michael and Felicity O'Dell. 2009. *Academic Vocabulary in Use: 50 Units of Academic Vocabulary Reference and Practice; Self-study and Classroom Use.* Cambridge University Press.
- Hoshima, Alice and Hogue, Ann. 2007 3rd Ed. *Introduction to Academic Writing*. Pearson Longman: New York.
- Hayot, Eric. 2014. *The Elements of Academic Style: Writing for the Humanities*. Columbia Univ. Press: New York.
- Murray, Rowena & Moore, Sarah. 2006 .The Handbook of Academic Writing. Open University Press, McGraw Hill.
- Zemach, E Dorothy & Rumisek, Lisa A. 2006 Academic Writing: From Paragraph to Essay. Macmillan.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q 1. Explain the difference between academic writing and writing in our daily life. Give examples to illustrate.

Or

Describe the forms of academic writing.

Q.2Given below are 20 incomplete sentences from an academic article. Select any 16 and complete them with the appropriate words/ phrases.

1. Karl Popper, an_____20th-century philosopher of science, thought that the fundamental feature of a scientific theory is that it should be falsifiable.
2. To call a theoryfalsifiable is_____that it is false.
3. Rather, it means that the theory makes some_____predictions thatare capable of being tested against experience.
4. If these predictions turn out to be wrong, then the theory has been falsified, or _____
5. So a falsifiable theory is one that we_____false - it is not compatible with every possible course of experience.
6. Popper thought that some_____scientific theories did not satisfy this condition and thus did not deserve to be called science at all; rather they were merely pseudo-science.
7. Freud's psychoanalytic theory was one of Popper's_____pseudo-science.
8. According to Popper, Freud's theory_____any empirical findings whatsoever.
9. Whatever a patient's behavior, Freudians could find an_____it in terms of their theory - they would never admit that their theory was wrong.
10. The same_____Marx's theory of history, Popper maintained.
11. Marx claimed that in_____societies around the world, capitalism would give way to socialism and ultimately to communism.
12. But when this didn't happen, instead of admitting that Marx's theory _____ ,Marxists would invent an ad hoc explanation for why what happened was actually perfectly consistent with their theory.
13. For example, they might say that the inevitable progress to communism had been temporarily slowed by the rise of the welfare state, which 'softened' the proletariat and weakened their_____zeal.
14. Popper_____Freud's and Marx's theories with Einstein's theory of gravitation, also known as general relativity.
15. Unlike Freud's and Marx's theories, Einstein's theory made a very definite prediction: that light rays from distant stars_____by the gravitational field of the sun.
16. _____, this effect would be impossible to observe - except during a solar eclipse.
17. In 1919 the English Sir Arthur Eddington organized two expeditions both of which found that starlight was indeed deflected by the sun, by almost exactly the amount Einstein had predicted.

18. Popper_____by this.
19. Einstein's theory had made a definite, precise prediction, which_____by observations.
20. Had it_____that starlight was not deflected by the sun, this would have showed that Einstein was wrong.

Or

Write a brief essay on the conventions of register-specific academic writing, giving apt examples.

Q 3. Write a précis of the passage given below, reducing it to one-third of its length.

The human brain is said to be the most complex object in the known universe. Relative to body weight, human brains are larger than those of any other species, and by a long way. They are about three times larger than you would expect by comparing them with those of our closest relatives, the other great apes. A human brain weighs nearly one and a half kilograms and consists of over a billion neurons (nerve cells), with many billions of interconnections. Out of all these connections come our extraordinary abilities: perception, learning, memory, reasoning, language, and – somehow or another –consciousness. We know that the brain is intimately involved in consciousness because changes in the brain cause changes in consciousness. For example, drugs that affect brain function also affect subjective experiences; stimulation of small areas of the brain can induce specific experiences such as hallucinations, physical sensations, or emotional reactions; and damage to the brain can drastically affect a person's state of consciousness. This much we know for sure, but what remains a mystery is why we should be conscious at all.

Or

Write the paraphrase of the poem given below.

"The Road Not Taken" by Robert Frost (1874-1963)

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;
Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,
And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.
I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

Analyze the passage given below for features of coherence and cohesion.

Why are people so happy? Is it simply that positive emotions are more frequent in life than negative ones, and so the balance is in the black? This may be true, but there are also other reasons people might report better-than-middling happiness when asked. Chronic unhappiness might indicate perceived failure to achieve life goals, or unfavorable comparisons with the achievement of others. As well as being things to avoid for their own sake, these are, to paraphrase evolutionary psychologist, Geoffrey Miller, things you might not want to admit to on a first date. That is, unhappiness is not just unfortunate; it is unattractive in a potential mate, friend, or colleague. This effect was pointed out by Adam Smith, father of free-market economics, who was an accomplished theoretician of emotions. Thus, one reason for such high self-reported happiness is that people are aware of the signals they are giving off and so they impression manage. Some indication that this effect is significant comes from the finding that people report higher levels of well-being in face-to- face interviews than in postal surveys. This effect is particularly pronounced when the interviewer is of the opposite sex. It is easy to understand the temptation to do this. (It is also worth remembering when you feel down, that if everyone seems happier than you are, that may only mean that they are good at seeminghappy.)

Or

The piece of writing given below has been rated as ineffective writing. Rewrite it, improving on it to make it more effective.

A community volunteer programme was initiated in rural Jamaica in May 1990. The main aim of the programme was to monitor the growth of children less than 36 months of age through community health volunteers (CHVs) and improve their nutritional status. At the end of the second year the programme was evaluated to determine its effectiveness. The results of the evaluation indicated that almost all (95.6%) of the children were covered by the CHVs. In addition the participation rate was high (78.5%). However, only 50% of the children were adequately covered. Nonetheless, 81% of them gained adequate weight. Indeed, malnutrition levels declined by 34.5%. The annual cost per child per year for the total programme was fairly moderate (US$14.5) with growth monitoring accounting for nearly half (42.7%). The results suggest that CHVs can play an important role in primary health care programmes in developing countries.

Q 5.. Create a Mind Map for a 2000 word article you will write on ‘The Definition and Features of Effective Academic Writing’.

Or

Define and describe the parts of a Field Report.

Semester II

Compulsory Papers:

Paper V
Literary Movements –II

Many distinct literary movements mark the journey of writing from ancient times to the very contemporary. The paper identifies some of the major literary movements that form the essential frame of reference for a critical engagement with the vast corpus of literature. Movements such as classicism, romanticism or realism constitute the primer of critical vocabulary and therefore a basic understanding of these movements is necessary for a nuanced understanding of varieties of literary articulation. Each movement has its own specific set of aesthetic, cultural and ethical values and preferences. The writers and writings that fall within a movement, despite their heterogeneity and particularities, do converge in terms of fostering an identifiable literary taste and trend. Though these movements do occur in literatures of the world, and across languages, yet the focus of this course is primarily on European literature, with special accent on the British. The course is divided into five units. Each unit consists of general introductory essays on the specific movement and some primary texts that belong to the movement. The emphasis of the paper is on the historical and conceptual understanding of various literary movements. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit I Realism

1. Ian Watt, "Realism and the Novel Form", *The Rise of the Novel*, (University of California Press, 2001) 11-36.
2. George Eliot, Chapter 17, *Adam Bede*, Volume 3,(William Blackwood and Sons, 1859) 223-244.

Unit II Modernism

1. Malcolm Bradbury and James McFarlane, "The Name and Nature of Modernism" from *Modernism: A Guide to European Literature 1890-1930*, ed. By Malcolm Bradbury and James McFarlane (Penguin, 1976), 19-35.

2. Ezra Pound, "A Few Don'ts by an Imagiste", https://www.poetryfoundation.org/poetrymagazine/articles/58900/a-few-donts-by-an-imagiste

Unit III Postmodernism

1. Linda Hutcheon, "Theorizing the Postmodern: Toward a Poetics", *A Poetics of Postmodernism: History, Theory, Fiction* (Routledge, London & New York, 1988) 3-21.
2. Ihab Hassan, "Toward a Concept of Postmodernism", *The Postmodern Turn* (Ohio: Ohio State University Press, 1987) 1-10.
3. Borges, Jorge Luis. "The Library of Babel", *Collected Fictions*. Trans. Andrew Hurley (New York: Penguin, 1998) 112-118.

Unit IV Postcolonialism

1. Bill Ashcroft, Gareth Griffiths, Helen Tiffin. Eds. "Introduction" to *The Empire Writes Back* (Routledge: London & New York, 1991) 2002, 2nd Ed. 1-13.
2. Ngugi wa Thiong'o ,"The Language of African Literature", *Decolonizing the Mind: The Politics of Language in African Literature* (Harare: Zimbabwe Publishing House, 1987) 1994 rpt. 3-33.

Unit V Debating 'Periodization' in History

1. Ted Underwood, "The Disciplinary Rationale for Periodization and a Forgotten Challenge to It (1886–1949)", *Why Literary Periods Mattered: Historical Contrast and the Prestige of English Studies* (Stanford & California: Stanford University Press, 2013) 114-135.
2. Eric Hayot, "Against Periodization; or, On Institutional Time", *New Literary History*, Vol. 42, No. 4, (Autumn 2011), 739-754.

Secondary Readings

- Ann L. Ardis, *Modernism and Cultural Conflict*, 1880-1922 (Cambridge: Cambridge University Press, 2002)
- Bill Ashcroft, *Key Concepts in Post-colonial Studies* (London & New York: Routledge, 1998)
- Chris Baldick, *The Modern Movement: 1910-1940* (Oxford: Oxford University Press, 2004)
- Norman F Cantor. *Twentieth-Century Culture: Modernism to Deconstruction* (Peter Lang, 1988)
- Peter Childs. *Modernism* (London & New York, Routledge, 2000)
- Leela Gandhi, *Postcolonial Theory* (Allen & Unwin, 1998)

- Ania Loomba, *Colonialism/Postcolonialism* (London & New York: Routledge 1998)
- Pam Morris, *Realism:* The New Critical Idiom (London & New York: Routledge, 2006)
- Dennis Walder, *The Realist Novel* (London & New York: Routledge, 1995)
- Ira Mark Milne, Project Editor, *Literary Movements for Students* (Gale Cengage Learning, 2009)
- John McLeod, *Beginning Postcolonialism* (Delhi: Viva Books, 2000)

Model Paper

Literary Movements II
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q.1 What is realism? How does it lead to the rise of novel?
Or
How does George Eliot approach the need of realism in fiction? Answer your question in the light of arguments made in Chapter 17 of her novel *Adam Bede*.

Q. 2 What are the general features of 'modernism'? How does it shape literature in the first half of twentieth century?
Or
Discuss in detail the role of Ezra Pound's theory of imagism. How did it influence the aesthetics of modern poetry?

Q. 3 How does Linda Hutcheon sum up the poetics of postmodernism?
Or
How is postmodernism different from modernism? Discuss Ihab Hasan's formulations in this context.

Q.4 What do you mean by the expression "empire writes back"? Discuss the political implications of writing back.
Or
Does writing in a native tongue decolonize mind?

Q. 5 What are the limitations of writing literary history in terms of periods?
Or
Choose any one literary movement and map its scope and limitations.
****

Paper VI

Approaches to Literary Criticism – II

The objective of the course is to familiarize students with various approaches to literature, and the particular worldviews these are based on. The students should able to relate literary texts to their lives in terms of their own times and location. The number of approaches suggest that there is no one privileged way to understand a text, and that a text can yield multiple meanings if it is accessed through different worldviews. Each approach has a claim to total meaning till it is countered by another equally compelling approach. Each approach has its own well-argued theoretical base, a set of tested tools and a sustained methodology to help the student to navigate through the text with a degree of precision. These approaches put together give rise to what is often called as critical pluralism. The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there should be questions of a practical nature in which the candidate has to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. Andrew Bennett and Nicholas Royle,"The beginning," "Readers and reading," "The author," and "The text and the world", *An Introduction to Literature, Criticism and Theory* (Pearson Longman, 2004, 3rd Edition) Chapters 1-4 (1-33).

Unit II

1. Terry Eagleton, "Literature and History", *Marxism and Literary Criticism* (London & New York: Routledge: 1976), 1-9.

Unit III

1. Wilfred L. Guerin et al, eds., "Feminism and Gender Studies (I, II, III, IVA, IVB, V)" A *Handbook of Critical Approaches to Literature* (Oxford: OUP, 2005) 5th Ed.
2. Charlotte *Krolokke* and Ann Scott Sorensen, "Three Waves of Feminism: From Suffragettes to Grrls", *Gender Communication Theory and Analyses: From Silence to Performance* (Thousand Oaks, London & New Delhi: SAGE, 2006) 1-24.

Unit IV

1. Chapter 9 of Wilfred Guerin's *Handbook*: Cultural Studies (I, II, IIIA, IIIB)
2. Stuart Hall, "The Formation of Cultural Studies", *Cultural Studies 1983: A Theoretical History* (Durham & London: Duke University Press, 2016) 5-24.

Unit V

1. Chapter 10 of Wilfred Guerin's *Handbook*: The Play of Meanings (I, II, III)
2. Umberto Eco, "The Open Work", *The Open Work*, trans. Anna Cancogni (Cambridge & Massachusetts: Harvard University Press, 1989) 1-23.

Suggested Readings

1. Andrew Bennett, and Nicholas Royle, *An Introduction to Literature, Criticism and Theory (*Pearson, 2004) (Third Edition is availableonline)
2. David Lodge, ed. *20th Century Literary Criticism: A Reader* (Longman, 1989)
3. David Daiches, *Critical Approaches to Literature*, 2nd ed. (Orient Longman, 1970)
4. M.A.R. Habib. *A History of Literary Criticism: From Plato to the Present* (Blackwell, 2005)
5. Patricia Waugh, *Literary Theory & Criticism: An Oxford Guide* (Oxford: OUP, 2006)
6. M. S Nagarajan, *English Literary Criticism & Theory: An Introductory History.* (Orient Longman, 2006)
7. David Robey and Ann Jefferson. *Modern Literary Theory* (Batsford, 1986)
8. Frank Lentriccia. *After the New Criticism* (Chicago: Chicago UP, 1980)
9. Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2003)
10. Peter Barry, *Beginning Theory: An Introduction to Literary & Cultural Theories*, 2nd ed. (Manchester: Manchester UP, 2004)
11. Raman Selden, *A Reader's Guide to Contemporary Literary Theory (*Pearson, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1. How does a literary text multiply its beginning(s)?

Or

What is meant by "framed acts of reading"? Discuss the number of frames suggested by Andrew Bennet in this context.

Q.2 How important is the place of history in approaching a literary text?

Or

How does Terry Eagleton theorize the relationship of history with literature and vice versa?

Feminism as a movement has undergone many phases. Delineate these phases with examples from literary texts.

Or

Literary texts are invariably gendered and therefore are always implicated in the politics of gender. Discuss feminist approach to literature in this regard.

Discuss the methodological conundrums of the project of cultural studies. Or

Explain critically the rise of cultural studies as a project in Britain and later on across the globe.

Why does Umberto Eco describe text as "an open field"? Or

Does a literary text yield any essential meaning or does it engender many possibilities of meaning. Argue.

****

Paper VII
(Choose any one of the options)

(1) Cultural Studies – II

There are cultures within culture. The objective of the paper is to explore these various layers of cultures that begin to emerge due to intervention of new technologies in the lives of people. From a canonical understanding of culture, the paper moves on to unfold the arrival of popular culture, and within it various other subcultures that playfully subvert the dominance of the classical culture. The paper also provides a critical perspective on other shades of culture such as 'mass culture' or 'celebrity culture' that in the name of entertainment, pleasure or leisure often stupefy masses into a mode of uncritical consumerism. The paper introduces the students to some of the key theorists of the project of Cultural Studies such as Stuart Hall, John Fiske, Adorno and Habermas. The units contain essays both of theoretical and illustrative nature.

Unit I Popular Culture

1. Stuart Hall, "Notes on Deconstructing the Popular", *People's History and Socialist Theory*, ed. Raphael Samuel (Routledge Revival: 1981) 227-241.
2. John Fiske "Medonna", *Reading the Popular* (London & New York: Routledge, 1989) 95-114.

Unit II Subculture

- Dick Hebdige, "The Function of Subculture", *The Cultural Studies Reader*, ed. Simon During (London & New York: Routledge, 1993)2nd Edition 1999, 441-450.
- Paul Willis, "The Motor Bike and Motor Bike Culture", *Popular Culture: Past and Present, A Reader*, edited by Bernard Waites, Tony Bennett and Graham Martin (London & New York: Routledge, 1982) 284-293.

Unit III Public Sphere

1. Alan McKee, "Introduction" to *The Public Sphere: An Introduction* (Cambridge University Press, 2005) 4-14.
2. Jürgen Habermas, "From Culture Debating to Culture Consuming Society", *Towards Transformation of Public Sphere*, (John Wiley and Sons, 2015) 159-174.

Unit IV Mass Culture

1. Alan Swingewood, "The Theory of Mass Society", *The Myth of Mass Culture* (London: Macmillan, 1977) 1-23.
2. Theodor W Adorno, "Free Time", *The Culture Industry* (London & New York: Routledge, 1991 ed.) 187-197.

Unit V Celebrity Culture

1. Michael Ryan, "Audience, Performance and Celebrity", *Cultural Studies: A Practical Introduction* (Wiley Blackwell, 2010) 150-160.
2. Ellis Cashmore, "Cultivating/ Tastes: What parts did the media and consumer society play in turning us into celebrity-doters?" *Celebrity/ Culture* (Routledge, 2006), 1-16.

Suggested Readings

- Alexander Dhoest, Steven Malliet,et al., *The Borders of Subculture: Resistance and the Mainstream*, (Routledge, 2015)
- Andy Bennett and Keith Kahn-Harris, *After Subculture: Critical Studies in Contemporary Youth Culture*, (Palgrave Macmillan, 2004).
- Arthur Asa berger, *The Objects of Affection: Semiotics and Consumer Culture: Semiotics and Popular Culture* (Palgrave Macmillan, 2010).
- Chris Jenks, *Subculture: The Fragmentation of the Social*, (Sage, 2005).
- Craig J. Calhoun, *Habermas and the Public Sphere*, (MIT Press, 1992).
- Dick Hebdige, *Subculture: The Meaning of Style*, (Routledge, 1979).
- Dominic Strinati, *An Introduction to Theories of Popular Culture*, (Routledge, 2004).

- Ellis Cashmore, *Celebrity Culture: Key Ideas*, (Routledge, 2006).
- Gary Burns, *A Companion to Popular Culture*, (Wiley Blackwell, 2016).
- J.M. Adorno and Bernstein, *The Culture Industry: Selected essays on Mass Culture*, (Routledge, 2004).
- John A. Weaver, "From Culture and Images to Popular Culture Images", *Popular Culture: Primer*, (Peter Lang, 2005) 1-24.
- John Storey, *Cultural Theory and Popular Culture: An Introduction*, (Routledge, 2015).
- Jostein Gripsrud, Hallvard Moe, et al., *The Idea of the Public Sphere: A Reader* (Lexington Books, 2010).
- Jurgen Habermas and Thomas Berger, *The Structural Transformation of the Public Sphere*, (MIT Press, 1989).
- Peter Dahlgren, *Television and the Public Sphere: Citizenship, Democracyand the Media*, (Sage Publications, 1995).
- Robert W. Witkin, *Adorno on Popular Culture*, (Routledge, 2002).
- Ross Haenfler, *Subcultures: The Basics*, (Routledge, 2013).
- Rupa Haq, *Beyond Subculture: Pop, Youth and Identity in a Postcolonial World*, (Routledge, 2006).
- Su Holmes and Sean Redmond, *Framing Celebrity: New Directions in Celebrity Culture*, (Routledge, 2006).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q.1 Explain how Stuart Hall favors 'popular culture' as a site of social transformation.

Or

'Madonna's popularity is a complexity of power and resistances, of meanings and counter meanings, of pleasures and the struggle for control'. Explain the above statement with your understanding of popular culture.

Q. 2 Discuss Paul Willis' 'The Motor Bike and Motor Bike Culture' as an argument in favor of subculture.

Or

With your reading of Dick Hebdige's "Function of the Culture" discuss how subculture resists the hegemony of the dominant culture.

Q.3 What transformation does Habermas' notice in the making of public sphere?

Or

What do you mean by "public sphere", and how is it different from "civil society" and "mass culture"?

Q. 4 Explain Adorno's concept of "Free Time". Discuss the commodification of our hobbies in the age of consumerism.
Or
How does Allen Swingewood theorize "mass society"?

"Celebrity culture is a phenomenon that is simultaneously well known and little known." Discuss the implications of the statement in light of Ellis Cashmore's prescribed essay.

Or
Discuss the role of media in fomenting 'Celebrity' Culture.

(2) Language and Linguistics – II

The aim of this paper is to develop an understanding of how language can be described at the levels of phonology, syntax, semantics and pragmatics. The English language is to be studied as a reference point, while comparison and consideration of structures in other languages will also be relevant. An important objective is the development of a practical and analytical approach to the study of languages, while extending the scope of linguistics to communication between languages, as in the activity of translation.

Unit I Phonetics and Phonology

- Fromkin, Rodman &Hyames, "Phonetics: The Sound of Language", *An Introduction to Language* (Wadsworth 2010, 9th ed.) 189-215.
- Fromkin, Rodman &Hyames, "Phonology: The Sound Patterns of Language", *An Introduction to Language* (Wadsworth 2010, 9th ed.) 224-263.

Unit II Morphology and Grammar

- Adrain Akmajian et al, "Morphology" (Chapter 2), *Linguistics – An Introduction to Language and Communication* (MIT, 2010) 6th Ed., 13-66.
- Frank Palmer, *Grammar*(Penguin, 1971) rpt.1996, 9-40 & 149-194.
- Noam Chomsky, "The Theory of Transformational Generative Grammar", *Topics in the Theory of Generative Grammar* (Moulton, 1978) 5th print, 51-75.

Unit III Semantics

- Adrain Akmaijian et al, "Semantics: The Study of Linguistic Meaning" (Chapter 6),*Linguistics –An Introduction to Language and Communication (*MIT, 2010) 6th Ed. 225-272.
- David Crystal, "Semantics" (Chapter 17) *The Cambridge Encyclopaedia of Language* (CUP, 1997) 42-49.

- John Lyons, "Part 2 Lexical Meaning", *Linguistic Semantics: An Introduction* (Cambridge University Press, 1995) 2005 rpt.,46-71.

Unit IV Pragmatics

- J. Habermas, "What is Universal Pragmatics?" *On the Pragmatics of Communication* (MIT, 1988) 21-104.
- Kent Back, "Speech Acts and Pragmatics", *The Blackwell Guide to the Philosophy of Language*, edited Michael Devitt and Richard Hanley (Blackwell, 2006) 147-167

Unit V Translation

- Peter Newmark, "Theory and Craft of Translation", Language Teaching / Volume 9 / Issue 01 / January 1976, 5 – 26.
- Peter Newmark, "Translating Methods" (45-53), "Literal Translation" (68-80), "The Other Translation Procedures" (81-93), *A Textbook of Translation* (Prentice Hall, 1988).
- J.C Catford, *A Linguistic Theory of Translation* (OUP, 1967) 20-72.

Suggested Readings

- John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970).
- M. A.K. Halliday, Jonathan J. Webster, *On Language and Linguistics* (Continuum, 2006).
- Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics* (Routledge, 1999).
- David Crystal,*The Cambridge Encyclopedia of Language* (Cambridge University Press, 1997).
- James S. Holmes (ed.), *The Nature of Translation: Essays on the Theory and Practice of Literary Translation* (Walter de Gruyter, 1970).
- Chris Fox, Shalom Lappin, *The Handbook of Contemporary Semantic Theory* (Wiley-Blackwell, 2015).
- John Lyons, *Linguistic Semantics: An Introduction* (Cambridge University Press, 1996).
- Yehuda N. Falk, *Subjects and Universal Grammar: An Explanatory Theory* (Cambridge University Press, 2006).
- Noam Chomsky, *Topics in the Theory of Generative Grammar* (De Gruyter Mouton, 1978).
- Thomas R. Hofmann, *Realms of Meaning: An Introduction to Semantics* (Routledge, 1993).
- Noam Chomsky, *Syntactic Structures,* 2nd Edition (Mouton de Gruyter, 2002).

- Bas Aarts, David Denison, Evelien Keizer, Gergana Popova-*Fuzzy Grammar: A Reader* (Oxford Univ Press, 2004).
- Geert Booij, *The Grammar of Words: An Introduction to Linguistic Morphology* (Oxford University Press, 2005).
- Richard J Bernstein, *The Pragmatic Turn* (Wiley_Polity, 2010).
- Paul Cobley (edt.), *The Routledge Companion to Semiotics and Linguistics,* (Routledge. 2005).
- Daniel Weissbort, Astradur Eysteinsson (edt.), *Translation-Theory and Practice: A Historical Reader* (OUP, 2006).
- David Crystal, *Making Sense: The Glamorous Story of English Grammar* (Oxford University Press, 2017).
- Gould Brown, *The Grammar of English Grammars* (Amazon Digital Services, 2004).
- M.A.K. Halliday: *Language as Social Semiotic: The Social Interpretation of Language and Meaning* (Edward Arnold, 1978).
- Steven Pinker, *How the Mind Works*, (W. W. Norton & Company, 2009).
- Jean Piaget, *The Child's Conception of the World* (Routledge & Kegan Paul Ltd.,1929).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are speech sounds? How do we classify vowel and consonant sounds?
Or
Define phonology. Discuss phonemes as the phonological units of language.

Q. 2 How does Morphology help to understand the structure of complex words?
Or
Give a critical account of Transformational Generative Grammar.

Q. 3. What is meaning? What are the different approaches to the study of meaning in language.
Or
Define Semantics. Discuss the following semantic concepts with examples:
I) Synonymy and Antonymy
II) Homonymy and Polysemy

Q. 4 Discuss in detail Habermas's concept of Universal pragmatics.
Or
Explain critically Austin's idea of "doing things with words.

Q. 5 What are the different methods of translating a text? How do these methods correspond to different text types?
Or
Give a critical account of Newmark's theory of translation.

(3) British Literature – III

The Victorian Period (1832-1901) covers the long and successful reign of Queen Victoria. It was a period of colonial expansion, strengthening of the British Empire, industrial revolution, and scientific and technological progress. The objective of the paper is to explore the major writers and texts of the time and focus on the ideological, political, social and cultural impact on Victorian culture as a consequence of industrialization, urbanization, class conflict, Darwin and religious crisis, issue of gender, empire and imperial expansion and much more. The paper will also analyze the Victorian Gothic novel and its impact and continued popularity. Students will explore the creation of 'other' in Gothic writing and the monstrosity associated with it. The paper will furthermore familiarize the students with the genre of science fiction. At the end of the course the students will be conversant with the major writers, representative works and will be able to engage critically on the issues regarding empire, race, class, gender, impact of science, 'the woman question' and other significant events of the period.

Unit I

1. Robert Browning,"Grammarian's Funeral" & "The Last Ride Together", *The Poems of Robert Browning* (Wordsworth, 1994).
2. Alfred Lord Tennyson, "Defense of Lucknow", **"**The Higher Pantheism" [available online <www.bartleby.com/297/629.html> and <https://www.poetryfoundation.org/poems/45323/the-higher-pantheism>]
3. Christina Rossetti, "Better Resurrection" & "Amor Mundi", *Complete Poems* (Penguin, 2001).

Unit II

1. Charles Dickens, *Hard Times* (Penguin Classics, 2003).

Unit III

1. Mathew Arnold, 'Barbarians, Philistines and Populace' (Chapter 3), *Culture and Anarchy* (Oxford UP World's Classics, 2009).
2. John Ruskin, "Unto this Last", *Unto this Last and Other Writings of John Ruskin*, ed. Clive Wilmer (Penguin Books, 1985)155-228.

Unit IV

1. H G Wells,*The Time Machine* (New York: Signet Classics, 2007).

Unit V

1. Bram Stoker, *Dracula* (Wordsworth Classics, 2000).

Secondary Readings:

- Anthony Jenkins, The*Making of Victorian Drama* (Cambridge UP, 1991).
- Deirdre David (ed.), *The Cambridge Companion to the Victorian Novel* (Cambridge UP, 2012).
- Gregory Tate, *The Poet's Mind: The Psychology of Victorian Poetry 1830-1870* (Oxford UP, 2012).
- Isobel Armstrong, *Victorian Poetry: Poetry, Poetics and Politics* (Routledge, 2005).
- Joseph Bristow (ed.), *The Cambridge Companion to Victorian Poetry* (Cambridge UP, 2002).
- Josephine M. Guy, *The Victorian Social-Problem Novel: The Market, the Individual and Communal Life* (Macmillan 1996).
- Nicola Diane Thompson (ed.), *Victorian Women writers and the Woman Question* (Cambridge UP, 2000).
- Richard Cronin et al. (eds.), *A Companion to Victorian Poetry* (Blackwell, 2007).
- Paul Young, Globalization and the Great Exhibition: The Victorian New World Order (Palgrave Macmillan, 2009).
- Harold Bloom (ed.), The Victorian Novel (Chelsea House, 2004).
- Philip Davis, Why Victorian Literature Still Matters (Blackwell, 2008).
- Lauren M.E Goodlad, Victorian Literature and the Victorian State: Character and Governance in a Liberal Society (The John Hopkins UP, 2003).
- M.K.Gandhi, *Unto this Last: A Paraphrase* (Navjivan Publishing House, Ahmedabad)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Critically analyze Browning's dramatic monologues. How do they capture the doubts of Victorian England?

Or

Comment on the language of Tennyson's poems. How does it differ from the language of his contemporary poets?

Q. 2. "Now, what I want is Facts. Teach these boys and girls nothing but facts." What kind of education do children receive in Mr. Gradgrind's school? Critically explore the philosophical sub-text of *Hard Times*.

Or

Hard Times has many striking images. The use of agricultural images, in particular, lends thickness to the texture of the novel. Argue through citation of textual references.

Q. 3. Ruskin's *Unto this Last* combines ethics with economics. Argue.
Or
Critically analyze Matthew Arnold' s "Barbarians, Philistines and Populace". Bring out the elitist biases of Arnold.

Q. 4 *The Time Machine* is traditionally identified as science fiction. Is it possible to see it as a horror story?
Or
What are the qualities that make the Time Traveller a sympathetic, if flawed character in the story?

Q. 5 Critically analyze Dracula's lines, "Yes, I too can love; you yourselves can tell it from the past." Does he have a tragic love story in the past? At what points in the novel does Stoker seem to elicit the reader's sympathy for Dracula?
Or
Discuss the structure of the novel *Dracula*. Why do you think Stoker chose to construct it as a series of journal entries and letters from multiple points of view?

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Paper VIII

(1) Introduction to Literary Genres – II

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the major genres that emerged and ossified during and after 18th century in Europe and elsewhere. Even as these genres almost overwhelmed the literary space, posing a challenge to the entrenched classical modes, their presence in current literary history is no less important. The effort is to provide a brief overview of each selected genre in terms of its historical evolution and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice.

Unit I Mock Epic

1. Ritchie Robertson, "Elements of Mock-Epic", *Mock-Epic Poetry: From Pope to Heine* (Oxford: OUP, 2009) 35-70.
2. Alexander Pope, "The Rape of the Lock", *The Rape of the Lock and Other Major Writings* (Penguin Classics, 2011).

Unit II Novel

1. George Lukacs, *The Theory of Novel* (Cambridge and Massachusetts: MIT Press, 1971, 1st Edition) 56-84.
2. Daniel Defoe, *Robinson Crusoe* (Penguin Classics, 2003).

Unit III Essay

1. G Doughlas Atkins, "In-Betweeness: The Burden of Essay", *Tracing the Essay: From Experience to Truth* (Athens & London: The University of Georgia Press, 2005) 145-162.
2. Johnson, Samuel. "*The Rambler* No. 184." 1751. *Quotidiana.* Ed. Patrick Madden. 12 Mar 2007. 05 Jul 2018 <http://essays.quotidiana.org/johnson/rambler_no_184/>
3. Addison, Joseph. "On the essay form." 1711. *Quotidiana.* Ed. Patrick Madden. 18 Jan 2007. 05 Jul 2018 <http://essays.quotidiana.org/addison/essay_form/>
4. Lamb, Charles. "The genteel style in writing." 1833. *Quotidiana.* Ed. Patrick Madden. 25 Feb 2007. 05 Jul 2018 <http://essays.quotidiana.org/lamb/genteel_style_in_writing/

Unit IV Gothic

1. David Punter and Glennis Byron, "Gothic in the Eighteenth Century", *The Gothic* (Blackwell Publishing, 2004) 7-12.
2. Mary Wollstonecraft Shelley, *Frankenstein* (Penguin Classics, 1985).

Unit V Tragicomedy

- John Orr, "Modernism and Tragicomedy", *Tragicomedy and Contemporary Culture* (London: Macmillan, 1991) 1-10.
- Samuel Beckett, *Waiting for Godot* (New York: Grove Press, 1954).

Suggested Readings:

- Verna A Foster, *The Name and Nature of Tragicomedy* (Routledge: London & New York, 2017).
- Karl Siegfried Guthke, *Modern Tragicomedy: An Investigation into the Nature of the Genre* (Random House, 1966).
- David L. Hirst, *Tragicomedy* (Methuen, 1984).
- Andrew Smith, *Gothic Literature* (Edinburgh: Edinburg University Press, 2007).

- Michael Edwards, "A Meaning for Mock-Heroic", *Poetry and Possibility* (London: Macmillan, 1988) 32-51.
- T.W.Adorno, Bob Hullot-Kentor, Fredric Will, "The Essay as Form*", New German Critique*, No. 32 (Spring-Summer, 1984) 151-171.
- Catherine Spooner and Emma McEvoy, eds.,*The Routledge Companion to Gothic* (London & New York: Routledge, 2007).
- Benedict Anderson, *Imagined Communities* (London & New York: Verso, 2nded 2006).
- Mikhail Bakhtin, *The Dialogic Imagination: Four Essays* (Texas: University of Texas Press, 2008 17th Ed.).
- Frank Humphrey Ristine, *English Tragicomedy: Its Origin and History* (The Columbia University Press, 1910) 1-25.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

What are the elements of mock-epic? Use Richie Robertson's prescribed essay to trace the rise of this genre.

Or

Discuss the nature of super-natural machinery in *The Rape of the Lock.*

Why does Lucas term novel as a genre of exile from transcendence? Or

Discuss Defoe's *Robinson Crusoe* as a new form of narrative that foregrounds this-worldliness of human experience.

Q. 3 Why does G Douglas Atkins attribute "In-Betweeness" to the genre of essay?

Or

Discuss the differences in style and content of essays of Addison and Charles Lamb.

Q. 4 What do you mean by gothic art? Differentiate gothic fiction from mainstream fiction.

Or

Critically discuss *Frankenstein* as a gothic novel.

Q. 5 Modern plays are neither tragic nor comic. Argue with the help of suitable examples.

Or

Discuss *Waiting for Godot* as a tragi-comedy.

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(2) British Literature – IV

An era of conflict and uncertainty, the twentieth century marked a break from the the preceding Victorian period. The old was rejected, 'Make itNew' announced Ezra Pound and 'new it indeed was'. It was an age of literary experimentation, which broke away from established rules, traditions and conventions. The focus was to search for new ways of looking at man, universe, and man's role in it. A period of shifting perspectives, class struggle, gender equality, devastating wars, and collapse of traditional notions of culture and aesthetics. Modernist avant-gardes challenged and often shocked the people with their ideas, styles and techniques. The objective of the paper is to study and understand the ways in which political, historical, economic, scientific, intellectual, environmental, social and cultural events have shaped the art and literature of the time. The students will be introduced to the innovative literary techniques, intellectual trends and change in themes of this turbulent period. At the end of the course they will be familiar with the representative texts, literary terminology, and the socio-political and cultural events that shaped twentieth century literature.

Unit I

1. T.S. Eliot, "The Burial of the Dead" Canto I, *The Waste Land;* "Love Song of Alfred J Prufrock", *The Complete Poems and Plays of T.S. Eliot* (Faber, Main Edition, 2004).
2. W.B. Yeats, "Easter 1916", "A Prayer for My Daughter" &"Sailing to Byzantium" *Yeats: Poetry and Prose* (Norton Critical Editions, 2001).
3. W.H. Auden, "The Shield of Achilles", "September 1, 1939" & "Musée des Beaux Arts", *W.H. Auden: Collected Poems*. Ed. Edward Mendelson (Vintage International, 1991).
4. D. H. Lawrence, "Mosquitoes" & "Snakes", *Complete Poems of D.H. Lawrence* (London: Wordsworth, 1994).

Unit II

1. Samuel Beckett, *Waiting for Godot* (Pearson, 2012).

Unit III

2. James Joyce, *Portrait of An Artist as a Young Man* (Vintage Classics, 2012).

Unit IV

- Aldous Huxley, *Brave New World* (Vintage Classics, 2004).

Unit V

1. George Orwell, "Notes on Nationalism", "The Prevention of Literature" & "Reflections on Gandhi", *George Orwell: Essays* (Penguin UK, 2000), also available at www.orwellfoundation.com
2. Virginia Woolf, *A Room of One's Own. London* (Penguin Modern Classics, 2002).

Secondary Readings

- Alex Davis and Lee M., The Cambridge Companion to Modernist Poetry (Cambridge UP, 2007).
- Jane Goldman, Modernism, 1910-1945: Image to Apocalypse (UK: Macmillan Education, 2003).
- Jessica Berman, Modernist Fiction, Cosmopolitanism and the Politics of Community (Baltimore: University of Maryland, August 2001).
- LAC Dobrez, The Existential and Its Exits: Literary and Philosophical Perspectives in the Works of Beckett, Ionesco Genet and Pinter (UK: Athlone Press, 1986).
- Malcolm Bradbury, The Modern British Novel (Penguin, 2001).
- Martin Puchner, Stage Fright: Modernism, Anti-Theatricality, and Drama (John Hopkins UP, 2002).
- Michael Levenson, Modernism and the Fate of Individuality (Cambridge UP, 1991).
- Michael North, Reading 1922: A Return to the Scene of the Modern (Oxford: Oxford UP, 1999).
- Rebecca Beasley, Theorists of Modernist Poetry: T.S. Eliot, T.E. Hulme, Ezra Pound. (Routledge, October 2007).
- R.P. Draper, An Introduction to Twentieth-Century Poetry in English (London: Macmillan, 1996).
- Susan C.W. Abbotson, Thematic Guide to Modern Drama (Greenwood Press, 2003).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Discuss Yeats as poet of Irish aristocratic values.

Or

What type of images does Eliot use in his poems to contrast mythical past with modern present?

Q. 2 Who could be Godot in "Waiting for Godot"?

Or

Critically analyze the use of language in "Waiting for Godot"?

Q. 3. Compare and contrast Stephen's perception of art with his perception of religion, family, school, or country in the novel *Portrait of an Artist as a Young Man*. What makes art such an appealing escape for Stephen?
Or
Describe how *Portrait of an Artist as a Young Man* is a study of the conditions of the development of an artist.

Q. 4 Discuss the relation between the sexes in the World State as depicted in *Brave New World*. Who holds the power in social situations, in the workplace, and in the government?
Or
Analyze how important elements of *Brave New World* are "distorted," and explain how these distortions contribute to the effectiveness of the work.

Q. 5 What predictions does Woolf make for women's writing in the future? How do they look from our current vantage point? (*A Room of One's Own*).
Or
George Orwell offers a critique of imperialism from the position of an insider. Argue.

****

(3) Academic Writing -- II

The paper is designed to help students develop the use of effective learning strategies which will help in academic writing. The classes will expose the students to various forms of referencing and citation so that their work never comes under plagiarized texts. The classes will provide sufficient practice in order to empower the students to be able to write a coherent and cohesive text with a logical flow that demonstrates precision and clarity. The two papers on academic writing are designed to fulfill the requirements of higher education, so the focus in the classroom will be on consistent and regular writing practice. The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the characteristics of academic writing and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the actual, hands on writing of academic documents. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I Reading and Critical Thinking

1. Reading Broadly and Narrowly
2. Critical Reading towards Critical Writing

3. How to Get the Most out of Reading
4. Committing tentatively to a position
5. Taking a position on the Question

Unit II Note Taking and Note Making

1. Note taking techniques
2. Taking Notes from Research Reading (Recommended Strategies, Direct and Indirect Quotes)
3. Note making effectively

Unit III Presentations

1. Preparation and Planning
2. Creating Interest
3. Establishing a Relationship with the Audience

Unit IV Re-reading for Grammar, Punctuation and Style

1. Errors in Grammar
2. Errors in language use
3. Punctuation Errors
4. Referencing style and format

Unit V Plagiarism

1. Definition
2. Parameters
3. Strategies to avoid plagiarism
4. Spotting plagiarism

Suggested Readings

Note: The first two books can be used as textbooks in the classroom.

- Cottrell, Stella 2011. *Critical Thinking Skills.* China: Palgrave Macmillan
- Jordan, R. R. 1999. *Academic Writing Course.* Harlow: Longman.
- Leki, Ilona 1998. *Academic Writing.* India: Cambridge University Press.
- Morley, John et al. 2007. *University Writing Course.* Newbury, Berkshire: Express Publishing.
- Oshima, Alice and Ann Hogue. 2007. *Introduction to Academic Writing (The Longman Academic Writing Series).* Longman.
- Strunk, William Jr. 2000. *The Elements of Style.(4th edition).* Boston: Allyn &Bacon.
- Swales, John M. and Christine B. Feak. 2004. *Academic Writing for Graduate Students.* Ann Arbor: University of Michigan Press.

MODEL PAPER

Time: 3hrs. **Maximum Marks: 80**

Q. 1 Explain the difference between reading broadly and narrowly in our daily life, giving examples to illustrate.

Or

Give a critical reading to the passage given below, writing down your observations on the passage.

The Depiction of Women in Indian Cinema

Indian Women have excelled in every field and have engraved their names in many parts of the universe, but there still seems to be a long route ahead before she attains equal status in the minds of Indian men. 'Most agricultural civilizations downgraded the status and potential of women, at least according to modern Western standards and to the implicit standards of hunting-and gatheringsocieties. Agricultural civilizations were characteristically patriarchal; that is,they were run by men and based on the assumption that men directed political,economic, and cultural life. Furthermore, as agricultural civilizations developed over time and became more prosperous and more elaborately organized, the status of women deteriorated from its initial level.'

In a well-defined patriarchal society like India, even the cinematic world deems to project women as in factual life. This is a good thing as films have mass appeal and at least some if not all carry out a message to the public and try to create awareness. There is a myth that women are characterized in films to prop up the male role rather than characterize them as the one who keeps the narrative structure sinuous. Women are insinuated in films as bearing the burden of sexual objectification that male roles cannot. Hence, they become the bearer, and not the maker of meaning says Laura Mulvey. Most Indian women live a silent life with enormous amount of sacrifices and retain their frustration within themselves for the sake of societal pressure.

Women in Indian cinema are born with certain assumptions ranging from cult movies to celluloid blockbusters like Sholay to more recent Fashion that employ themselves as in severe gender issues. They are portrayed either as damsels in distress or demented feminists or simple belly-shaking glam dolls whose sole ambition is to attract the attention of the male gender. In many Indian films it is a common trend to insert 'item numbers' which bear no rational connection to the film in anyways but with an assumption that the film is easily associated. As Bindu Nair says, 'Sometimes the one song ends up making the film a hit, such as 'Chamma Chamma' from the film China gate.'Occasionally, do we see a female being the protagonist of a film than merely being objects of sexual desire. In some cases there appears to be a clash between 'modern feminism' and 'traditional values'. Indian cinema often acts like an emotional register and is very resourceful while reading the characterization of 'Women'.

Q. 2 Write the notes you will make for the passage given below.

'Big' Data Science

If you could possibly take a trip back in time with a time machine and say to people that today a child can interact with one another from anywhere and query trillions of data all over the globe with a simple click on his/her computer they would have said that it is science fiction !

Today more than 2.9 million emails are sent across the internet every second. 375 megabytes of data is consumed by households each day. Google processes 24 petabyte of data per day. Now that's a lot of data!! With each click, like and share, the world's data pool is expanding faster than we comprehend. Data is being created every minute of every day without us even noticing it. Businesses today are paying attention to scores of data sources to make crucial decisions about the future. The rise of digital and mobile communication has made the world become more connected, networked and traceable which has typically resulted in the availability of such large scale data sets.

So what is this buzz word "Big Data" all about? Big data may be defined as data sets whose size is beyond the ability of typical database software tools to capture, create, manage and process data. The definition can differ by sector, depending on what kinds of software tools are commonly available and what sizes of data sets are common in a particular industry. The explosion in digital data, bandwidth and processing power – combined with new tools for analyzing the data has sparked massive interest in the emerging field of data science. Big data has now reached every sector in the global economy. Big data has become an integral part of solving the world's problems. It allows companies to know more about their customers, products and on their own infrastructure. More recently, people have become extensively focused on the monetization of that data.

According to a McKinsey Global Institute Report[1] in 2011, simply making big data more easily accessible to relevant stakeholders in a timely manner can create enormous value. For example, in the public sector, making relevant data more easily accessible across otherwise separated departments can sharply cut search and processing time. Big data also allows organizations to create highly specific segmentations and to tailor products and services precisely to meet those needs. This approach is widely known in marketing and risk management but can be revolutionary elsewhere. Big Data is improving transportation and power consumption in cities, making our favorite websites & social networks more efficient, and even preventing suicides. Businesses are collecting more data than they know what to do with. Big data is everywhere; the volume of data produced, saved and mined is startling. Today, companies use data collection and analysis to formulate more cogent business strategies. Manufactures use data obtained from the use of real

products to improve and develop new products and to create innovative after-sale service offerings. This will continue to be an emerging area for all industries. Data has become a competitive advantage and necessary part of product development.

Or

Describe the process of note-taking while listening to a lecture. What are the conventions that you shall use?

Q. 3 Rewrite the sentences given below, correcting the errors of grammar and punctuation.

a. They had been living in this house for 2007.
b. write in pencil
c. we had great time in paris
d. will you please borrow me a copy of our textbook
e. the money was equally divided among the two
f. why is you followed me asked the man
g. this is a amazed experience we never seeing something likes that said the girl
h. an booty was be sharing between a three thiefs
Or
Describe the various kinds of reference styles used, giving clear examples.

Q. 4 What is the importance of the audience during a presentation? How will you capture audience interest?
Or
Outline the steps in preparing for a presentation.

Q5. Create a set of strategies for avoiding plagiarism to be shared with young researchers.
Or
Define plagiarism and describe its parameters.

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M.A. II(Semester III)

Compulsory Paper

Paper IX
Critical Theory – I

With the changing contours of power dynamics and a sustained emphasis on representational politics, a reassessment of the methodology of the Literature classroom has been effected. Not only is the canon spilling outside the erstwhile ambit of "Wulf to Woolf", the tools of analysis have, likewise, witnessed a shift. From literary benchmarks to extra literary- to progressively borrowing from diverse fields, viz., economics to psychology, history to sociology, theory represents a wide spectrum. Today this eclectic field is thoroughly aligned to the purposes of the study of literature and collected under the rubric of "theory." The effect of literary theory on study of literature has clearly transcended the original impulse of text analysis andis witnessing a more integral role, with theory asserting a tangible influence on the production of literature itself.The course is designed with the intent of introducing an MA classroom to core texts representing a range of literary theory. The selected texts represent a historical progression of literature analysis as well as the ideological impulses that have modified the practice of literary studies.

Unit I

1. M.H. Abrams, "What's the Use of Theorizing about the Arts?",*Doing Things with Texts* (London & New York: Norton Paperback, 1991) 31-72.

Unit II

1. Roman Jakobson, "Two Aspects of Language", *Literary Theory: An Anthology*, eds. Julie Rivkin and Michael Ryan (Blackwell, 2004, 2nd Ed.) 76-80.
2. Roland Barthes, "The Death of the Author",*Image/ Music/ Text.* Trans. Stephen Heath (Hill and Wang,1977) 142-147.

Unit III

1. Jacques Derrida,"Letter to a Japanese Friend",*Derrida and Differance.* Eds. David Wood and Robert Bernasconi(Evanston III: Northwestern University Press, 1988) 1-6.
2. Jean Francois Lyotard,"Answer to the Question, What is the Postmodern?" (1-16)& "Note on the Post- in Postmodern" (75-80), *ThePostmodernExplained*: *Correspondence 1982-85*(Minnesota & London: University of Minnesota Press, 1992)

Unit IV

1. Michel Foucault, "Panopticism" from "Discipline & Punish: The Birth of the Prison",*Race/Ethnicity: Multidisciplinary Global Contexts*, Vol. 2, No. 1, The Dynamics of Race and Incarceration: Social Integration, Social Welfare, and Social Control (Autumn,2008)1-12.
2. Giles Deleuze, "Postscript on the Societies of Control",*October*, Vol. 59 (Winter, 1992), 3-7.

Unit V

1. Jean Baudrillard, "The System of Objects" (10-28) &"Simulacra and Simulations" (166-184), *Jean Baudrillard: Selected Writings*, ed. Mark Poster (Stanford: Stanford University Press, 1988)

Secondary Readings

- Peter Barry, *Beginning Theory* (Oxford: OUP, 2017)
- Hans Bertens, *Literary Theory: The Basics* (London & New York: Routledge, 2017)
- Ryan Bishop, (ed.). *Baudrillard Now: Current Perspectives in Baudrillard Studies* (Polity, 2009)
- Steven Connor, *The Cambridge Companion to Postmodernism* (Cambridge: Cambridge University Press, 2004)
- Jonathan Culler, *Literary Theory: A Very Short Introduction* (Oxford: Oxford University Press, 2011)
- Simon During, *Foucault and Literature: Towards a Genealogy of Writing* (London & New York, Routledge, 2013)
- Terry Eagleton, *After Theory* (Penguin UK, 2004)
- Pelagia Goulimari, *Literary Criticism and Theory: From Plato to Postcolonialism,* (London & New York: Routledge, 2014)
- Wilfred L. Guerin, *A Handbook of Critical Approaches to Literature* (Oxford: Oxford University Press, 2005)
- Hayes, Bruce, et al. Victoria A. Fromkin (ed.) *Linguistics: An Introduction to Linguistic Theory (*John Wiley & Sons, 2013)
- Klages, Mary. *Key Terms in Literary Theory*. A&C Black, 2012.
- Vincent B Leitch, and William E Cain. *Norton Anthology of Theory and Criticism*. (W. W. Norton & Company, 2010)
- Irene Rima Makaryk, *Encyclopedia of Contemporary Literary Theory: Approaches, Scholars, Terms* (Toronto: University of Toronto Press, 1993)
- Julie Rivkinand Michael Ryan. *Literary Theory: An Anthology* (John Wiley & Sons, 2017)

- Lois Tyson, *Critical Theory Today* (London & New York: Routledge, 2014)
- Patricia Waugh, *Literary Theory and Criticism: An Oxford Guide* (Oxford: Oxford University Press, 2006)
- Tim Woods, *Beginning Postmodernism* (Manchester: Manchester University Press, 1999)

Model Paper

Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1 How is literary theory different from literary criticism? What led to the rise of literary theory?
Or
How does M.H.Abrams explain the usefulness of literary theory? Do you agree with his views?

What, according to Jakobson, are the two aspects of language? How do his ideas enable us to critically analyze a literary text?
Or
How does the death of the author facilitate the birth of the reader?

Derrida says "deconstruction is everything and nothing". Explain the difficulties in defining 'deconstruction'.
Or
What are the semantic possibilities of the prefix 'post-' in post-modernism?

How does Foucault use the structure of panopticon to theorize all-pervasive gaze of power?
Or
Increasingly we are heading towards societies of control, without being subjected to external institutional controls. Explain.

The images are more real than the real. Explain Baudrillard's concept of simulacrum.
Or
What is the future of truth according to Baudrillard?
****

Paper X

(Choose any one option)

(1) Indian Writings (in English) – I

Indian Literature in English has captured the attention of readers both home and abroad as it transforms the art of oral Indian narrative and indigenous experience in an adopted language, giving it a new dimension. The present course aims at presenting a sweep of Indian writing in English, representative in multiple genres and voices. Indian writers took to English as a consequence of the introduction of English as the medium of instruction by the British. From raising questions against the colonial enterprise, to encapsulating disillusionment of post-Independence India, and receiving a definitive fillip in the 1980s, it has negotiated a convoluted terrain. And from being 'twice born' to flowering into a playful self-conscious writing, it indeed has been a long journey. The course aims at acquainting students with the diverse range of Indian writing in English. Further, the list of texts will call for a thorough contextual discussion as the genre has grappled with contentious issues of authenticity, language, nation, identity and idiom. The paper has 5 units. The testing pattern will include one question with internal choice from each unit. All questions will be compulsory.

Unit 1 Non-Fictional Prose

1. Rabindranath Tagore, "Nationalism in India", *Nationalism*, (BoD, 2018)41-55.
2. Arvind Krishna Mehrotra, "From "The Emperor Has No Clothes," ed. Amit Chaudhuri, *The Picador Book of Modern Indian Literature* (New Delhi: Picador, 2001) 456-477.
3. Amit Chaudhuri, "The Construction of the Indian Novel in English," ed. Amit Chaudhuri, *The Picador Book of Modern Indian Literature* (New Delhi: Picador, 2001) xxiii –xxxi.

Unit 2 Fiction I

- Raja Rao. *Kanthapura,* New Delhi: Orient, 1971

Unit 3 Fiction II

- Githa Hariharan. *The Thousand Faces of Night.* New Delhi: Penguin, 2008.

Unit 4 Poetry

1. A.K. Ramanujan: "Extended Family" and "Small Scale Reflections on a Great House", *The Collected Poems of A.K.Ramanujan* (Delhi:OUP, 1995)
2. Arun Kolatkar: "Meera" (26-33) and "Knucklebones" (66-69), *Kala Ghoda Poems* (Mumbai, Pras Prakashan, 2004)

3. Agha Shahid Ali: "The Dacca Gauzes", "Beyond English" from *The Veiled Suite- The Collected Poems.* WW Norton &Company, 2009.

Unit 5 Drama

- Mahesh Dattani. *Final Solutions*. Oxford University Press, 2005.

Suggested Readings

- Meenakshi Mukherjee. *Twice Born Fiction* (Heinemann, 1971).
- ---. *Reality and Realism: The Novel and Society in India*, "From Purana to Nutana" (Oxford University Press, 1994).
- ---. *The Perishable Empire: Essays on Indian Writing in English* (Oxford University Press, 2000).
- Susie Tharu and K. Lalitha, ed. *Women Writing in India 600 B.C. to the Present*, 2 volumes (Oxford University Press, 1995).
- A.K. Mehrotra, ed. *An Illustrated History of Indian Literature in English* (Permanent Black/Orient Longman, 2003).
- Vinay Dharwadkar, ed. *The Collected Essays of A. K. Ramanujan*, "Where Mirrors Are Windows: Towards an Anthology of Reflection" (Oxford University Press, 1999).
- William Walsh, *Indian Literature in English* (Longman Publishers, 1990).
- Bruce King, *Modern Indian Poetry in English* (Oxford University Press, 1987).
- M. K. Naik, *Raja Rao*, Twayne's World Author Series 234 (Twayne Publishers Inc. 1972).
- K. R. S. Iyengar, *Indian Writing in English* (Sterling,1985).
- GJV Prasad, *Continuities in Indian English Poetry. Nation Language Form* (Pencraft International, 1999).
- Shahane Vasant and M Sivaramakrishna, ed. *Indian Poetry in English: A Critical Assesment.* (Macmillan, 1990).
- Sara Suleri, *The Rhetoric of English India.* (Penguin, 2004).
- Gauri Viswanathan, *Masks of Conquest: Literary Study and the British Rule in India.* (Faber and Faber, 1990).
- Sunder Rajan, Rajeshwari,ed.*The Lie of the Land: English Literary Studies in India.* (Oxford University Press, 1992).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Tagore's ideas of nationalism are defined by Indian values of co-existence. Discuss.

Or

Amit Chaudhuri argues that Indian vernacular literatures are themselves modernity's offspring. Discuss.

Q. 2 Raja Rao's *Kanthapura* mirrors nationalism and spiritualizes the socio-politics in India in the wake of the national struggle for Independence. Discuss.

Or

How does Raja Rao Indianize the foreign tongue in his novel *Kanthapura*?

Q. 3 Gita Hariharan in her novel *The Thousand Faces of the Night* focuses on the ceaseless quest for self-realization and liberation from the rigid social structure in which the Indian woman is caught between tradition and modernity. Discuss.

Or

Discuss the use of mythology in Gita Hariharan's *The Thousand Faces of the Night*.

Modern Indian English poetry is a field of individual talents. Compare and contrast the poetic style of the three poets prescribed to you.

Or

How do modern Indian poets combine their personal experience with national past and mythical ancestry?

Q. 5 Mahesh Dattani's play *Final Solutions* brings forth the limitations of the politics of communalism through a deft exposure of contradictions in characters. Discuss

Or

Discuss the importance of stage directions in *Final Solutions*.

(2) Cultural Studies – III

The focus of the paper is on various mediums of communication that inform and shape culture in fundamental ways. From the arrival of radio to YouTube, the production, circulation and reception of culture as a whole has undergone paradigmatic shifts. The paper introduces to the students distinct cultural regimes that mediums like television or film have generated and ossified over the years. The paper intends to provide students a theoretical perspective on cultural politics of entertainment and information with special reference to the role of media and its ever-evolving technologies. The prescribed essays are inter-disciplinary as they explore the

dimensions of aesthetics, ethics and politics of distinct platforms of cultural production or dissemination.

Unit I Television

1. John Fiske, "The modes of television", *Reading Television* (London & New York: Routledge, 1978) 85-100.
2. Simon During, "Television", *Cultural Studies: A Critical Introduction* (Routledge, 2005), 109-123.

Unit II Film

1. Sarah Berry-Flint, "Genre", *A Companion to Film Theory*, eds Toby Miller and Robert Stam (Blackwell, 1999) 25-44.

Unit III Radio

1. Andrew Crisell, "Characteristics of Radio", *Understanding Radio* (London & New York: Routledge, 1986) 3-16.
2. Christina Dunbar-Hester, "Making Old Technologies Anew: Reinventing FM Radio in the Twenty-First Century", *Low Power to the People* (MIT Press, 2014), 129-160.
3. Walter Benjamin, "Reflections on Radio", *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media* (The Belknap Press of Harvard University Press, 2008) 391-392.

Unit IV YouTube/Facebook/ Social Media

1. Jean Burgess and Joshua Green, "You Tube's Cultural Politics", *YouTube: Online Video and Participatory Culture* (Polity, 2009), 75-99.
2. Bernard Stiegler, "The Carnival of the New Screen: From Hegemony to Isonomy," *The YouTube Reader*, eds. Pelle Snickars And Patrick Vonderau (National Library of Sweden, 2010), 40-59.

Unit V Comics/ Graphic Narratives

1. Thierry Groensteen, "The Impossible Definition", *A Comics Studies Reader*, eds. Jeet Heer and Kent Worcester (University Press of Mississippi, 2009), 124-131.
2. W J T Mitchell, "Comics as Media: Afterword", *Critical Inquiry* 40 (Spring 2014): 255–265.

Suggested Reading

- Carol Vernallis, *Unruly Media: YouTube, Music Video, and the New Digital Cinema*, (Oxford University Press, 2013).
- Chris Jenks, *Culture*, (Routledge, 2006).
- David Gauntlett, *TV Living: Television, Culture and Everyday Life*, (Routledge, 1999).
- David Morley, *Television, Audience and Cultural Studies*, (Routledge, 1992).
- Frederick Levy, *15 Minutes of Fame: becoming a Star in the YouTube Revolution*, (Penguin, 2008).
- Hugh Chignell, *Key Concepts in Radio Studies*, (Sage, 2009).
- Jean Burgess and Joshua Green, *YouTube: Online Video and Participatory Culture*, (Polity, 2009).
- John Nathan Anderson, *Radio's Digital Dilemma: Broadcasting in the Twenty-First Century*, (Routledge, 2013).
- M. Thomas Inge, *Comics as Culture*, (University Press of Mississippi, 1990)
- Michael Keith, *Radio Cultures: The Sound Medium in American Life*, (Peter Lang, 2008).
- Patrick Vonderau, *The YouTube Reader*, (National Library of Sweden, 2009).
- Paul Rixon, *Radio Critics and Popular Culture*, (Palgrave Macmillan, 2018).
- Randy Duncan and Matthew Smith, *The Power of Comics: History, Form and Culture*, (Continuum, 2009).
- Rhonda Hammer and Douglas Kellner, *Radio's Digital Dilemma: Broadcasting in the Twenty-First Century*, (Peter Lang, 2009).
- Ron Lembo, *Thinking through Television*, (Cambridge University Press, 2000).
- Ryan and Michael, *An Introduction to Criticism: Literature, Film, Culture*, (Wiley Blackwell, 2012).
- Shane Denson, Christina Meyer, et al., *Transnational Perspectives on Graphic Narratives: Comics at the Crossroads*, (A&C Black, 2013).
- Stuart Hall, "The Work of Representation", *Cultural Representations and Signifying Practices*, ed. Stuart Hall (SAGE, 2003 rpt.) 16-27.
- Toby Miller and Robert Stam, *A Companion to Film Theory* (Wiley Blackwell, 2000).
- Toby Miller, "What it is and what it isn't: Introducing … Cultural Studies", *A Companion to Cultural Studies* (Blackwell, 2001), 1-20.

- Zygmunt Bauman, "From Pilgrim to Tourist - or a Short History of Identity", *Questions of Cultural Identity*, eds. Stuart Hall and Paul Du Gay (SAGE, 1996), 18-36.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 The tools of literary criticism are inadequate to understand television. Do you agree?

Or

What is cultural studies approach to television? How does it differ from other approaches to it?

Q. 2 What are the distinctive features of film as a genre which set it apart from the rest of media?

Or

There are various genres of films. Is it culturally tenable to slot a film into a pre-defined genre?

Q. 3 What are the characteristics of radio as medium? How has FM radio re-invented the medium?

Or

What are the views of Walter Benjamin on radio? Does he view radio as a medium of social change?

Q. 4 YouTube empowers every individual to create and watch his/her type of video. Does this freedom of the individual any way challenge the hegemony of state or big-time capitalist conglomerates in producing entertainment for him/her?

Or

YouTube seems to offer a choice of entertainment to the viewer, but it has its own cultural politics. Do you agree? Argue.

Q. 5 What do we mean by 'graphic narratives'? Define the key features of a graphic narrative.

Or

Do comics constitute a significant part of media? Discuss in detail about the recent resurgence in the world of comics.

(3) Shakespeare – I

Shakespeare, the Bard of Avon, looms large as a dominant, if not hegemonic, presence in the domain of English Studies. His plays have withstood the test of time in terms of their reception across cultures. Critics have subjected his plays to multiple interpretations, but what has really lent a resounding after-life to Shakespeare is the

growing corpus of multiple re-writings of his plays. The emerging matrices of race, gender and nationalism have often lead creative writers, theatre artists and film directors to re-fashion, re-contextualize and re-write his plays in alternative ways. These alternative ways at times take radical subversive turn as lead characters stand reduced into marginal ones and the absent characters emerge from nowhere to displace the iconic ones. The paper intends to introduce students to some of the re-written plays of the great playwright along with the originals ones to underscore the discourse of Shakespeare in contemporary times.

Unit I

1. Ania Loomba and Martin Orkin, "Shakespeare and the post-colonial question", *Postcolonial Shakespeares*. Eds. Ania Loomba & Martin Orkin (Routledge: London & New York, 1998): 1-21. Print.

Unit II

1. William Shakespeare, *Antony and Cleopatra*, A.R. Braunmuller, ed. (New York: Penguin Books, 1999). Print.

Unit III

1. John Dryden, *The Works of John Dryden: Plays: All for Love, Oedipus, Troilus and Cressida*, Volume XIII, Alan Roper and Vinton A. Dearing, eds. (University of California Press, 1984). Print.
2. George Bernard Shaw, Caesar and Cleopatra, (The Floating Press, 2011). Print.

Unit IV

1. William Shakespeare, *Othello*, Norman Sanders, ed. (Cambridge University Press, 2003). Print.

Unit V

1. Toni Morrison and Traoré Rokia, *Desdemona*, (Oberon Books, 2015). Print.
2. Paula Vogel, *Desdemona, A Play about Handkerchief*, *Adaptations of Shakespeare: A Critical Anthology of Plays from the Seventeenth Century to the Present*. Eds. Daniel Fischlin and Mark Fortier (Routledge, London & New York, 2000). Print.

Secondary Readings

1. Rob Nixon, "Caribbean and African Appropriations of 'The Tempest'", *Critical Inquiry*, Vol. 13, No. 3, Politics and Poetic Value, (Spring, 1987), pp. 557-578. Print.
2. Jonathan Goldberg, *Tempest in the Caribbean* (University ofMinnesota Press, 2003). Print.

3. Carroll, Rachel, ed. *Adaptation in Contemporary Culture: Textual Infidelities*. (London: Continuum International Publishing Group, 2009). Print.
4. Ben Okri, *A Way of Being Free*. (London: Phoenix House, 1998). Print.
5. Jon Drakakis, ed. *Alternative Shakespeares*. (Routledge, 1985). Print.
6. Peter Hume and William H Sherman, eds. *'The Tempest' and Its Travels*. (London: Reaktion Books, , 2000). Print.
7. Terence Hawkes, ed. *Alternative Shakespeares*. Vol 2. (Routledge, 1996). Print.
8. Fischlin, Daniel, and Mark Fortier, eds. *Adaptations of Shakespeare: A Critical*
9. *Anthology of Plays from the Seventeenth Century to the Present*. (London: Routledge, 2000). Print.
10. Stephannie S. Gearhart, "Lear's Daughters, Adaptation and the Calculation of Worth", *Borrowers and Lenders*, (7.2, Fall/Winter 2012). Web.
11. Roshni Mooneeram, *From Creole to Standard: Shakespeare, Language, and Literature in a Postcolonial Context*, (New York: Rodopi, 2009). Print.
12. Lynne Bradley, *Adapting King Lear for the Stage*. (Burlington: Ashgate, 2010). Print.
13. Sarah Hatchuel, *Shakespeare, From Stage to Screen*, (Cambridge: Cambridge University, Press, 2004). Print.
14. Julie Sanders. *Adaptation and Appropriation*. (New York: Routledge, 2006). Print.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 With reference to Ania Loomba and Martin Orkin's "Shakespeare and the postcolonial question," explain how the Shakespearean text later became a colonial battlefield.

Or

Critically comment on Ania Loomba and Martin Orkin's analysis of circulation of Shakespeare in post-colonial and neocolonial world.

Q. 2 Critically comment on the representation of Rome versus Egypt with respect to the characters of Antony and Cleopatra in Shakespeare's play.

Or

Ambivalence makes for a prominent theme in Shakespeare's *Antony and Cleopatra*. Critically comment.

Q. 3 Critically comment on Shaw's representation of the "Girl Queen", Cleopatra and her gradual transformation in the play *Ceaser and Cleopatra.*

Or
Critically comment on the preface to *Oedipus: A Tragedy* by John Dryden.

Q. 4 Give a Machiavellian reading of the character of Iago in Shakespeare's *Othello*.
Or
Describe the role of miscommunication and lack of communication in Shakespeare's *Othello*.

Q. 5 Critically comment on Paula Vogel's attempt at giving voice to the voiceless heroine Desdemona from Shakespeare's *Othello*.
Or
Critically analyse Toni Morrison's dealings with the issue of race in her play*Desdemona.*

(4) Stylistics

Objective: The paper is designed to give a complete grounding in Stylistics and related areas for a student and would-be teacher. The goal is give an understanding of the major aspects of the field. The classroom aspect of the course will focus more on the application of the learnt principles rather than the memorization of theoretical aspects.

Testing: The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the application of concepts taught and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the analysis of language passages. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I

1. The relationship of language and literature. Standard language and poetic language. Emotive and scientific language. Speech and writing. Creativity in language. Connotation and metalanguage. Aesthetics, poetics, literary criticism and semiotics.
2. Asghar Ali Ansari . Understanding Language and Literature.
3. Edward Sapir. *Language: An Introduction to the Study of Speech* (1921). Chapter 9. Language and Literature

Unit II

1. Stylistics: field, historical overview, types of stylistics and its applications. A few literary texts to be taken as examples to illustrate features of literary language-deviation, foregrounding, parallelism and poetic diction.
2. Lesley Jeffries .*Stylistics*. Oxford Bibliographies.

Unit III

1. Discourse analysis and critical discourse analysis. Language and ideology: language, discourse and ideology; hegemony of English; language and gender; literacy and its politics; orality and literacy; language in mass media and advertising.
2. Peter L Berger. *The Politics of Language*. https://www.the-american-interest.com/2012/09/12/the-politics-of-language/
3. *Critical discourse analysis.* https://archives.history.ac.uk/1807commemorated/media/methods/critical.html
4. Patricia Dunmire. *Political Discourse Analysis: Exploring the Language of Politics and the Politics of Language*. ResearchGate.

Unit IV

1. Pragmatics: field, historical overview and its applications. Speech Act theory. Conversation analysis: definition and overview. Principles along with some passages for analysis.
2. John Searle, *What is a Speech Act?* ISBN 978-0521096263

Unit V

1. The role of literature in the language learning paradigm. Pedagogic stylistics. Creating tasks and activities from literary texts for language learning.
2. Geoff Hall, Part-I, *Literature in Language Education* Palgrave Macmillan UK 2015 :978-1-137-33184-7
3. ZN Patil. *Culture, Language and Literature: Developing Intercultural Communicative Competence through International Literature.*
4. VineetKaul. *Language through Literature through Language*.

Suggested Readings:

1. Norman Fairclough*Language and Power* Third ed. Routledge ISBN 978-1-138-79097-1
2. H.G.Widdowson *Stylistics and the Teaching of Literature* Routledge ISBN 0582550769
3. Edward Sapir. *Language: An Introduction to the Study of Speech.* ISBN 0486437442
4. Pushpinder Syal, DV Jindal. *An Introduction to Linguistics: Language, Grammar and Semantics*. ISBN 9788120332164
5. ParthaSarathiMisra.*An Introduction to Stylistics.* ISBN 9788125036784
6. Peter Verdonk. *Stylistics*.ISBN 9780194372404
7. Widdowson, Henry George. *Text, context, pretext: Critical issues in discourse analysis*. ISBN 0631234519
8. George Yule. *Pragmatics*.ISBN 9780194372077.

MODEL TEST PAPER

MM: 8Time: 3 hrs

I. What is the role of standard language in the study of creative language?

OR

Is there a difference between the scope of literary criticism and semiotics? Give examples to illustrate.

II. Define Stylistics and describe its types.

OR

What are the applications of Stylistics?

III. Attempt a CDA of the given passage.

OR

Define Discourse Analysis and describe its applications.

IV. Attempt a Conversation Analysis of the dialogue given here.

OR

Define Pragmatics.

V. How does Stylistics help the teacher of language?

OR

Design tasks for a given literary text in order to use Stylistics in the classroom.

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Paper XI
(Choose any one option)

1. Postcolonial Literatures – I

This introductory course will examine some key concepts and debates in postcolonial writing, theory and criticism. It begins with the British Raj and its accompanying literature, leading to an understanding of some conceptual categories of postcolonial studies—its assumptions, contexts, pitfalls. In Units I and II, the course will explore the origins and meaning of the history of colonialism and postcolonialism to understand the effect of imperialism on the colonized world. In Units III, IV and V, focus will shift to self-representation and resistance, to postcolonial activism and to theories of language and nationalism in the formerly colonized societies. The emphasis in this semester will be on texts rather than simply on theories. Literary texts will be primary to the discussions so that all theoretical insights will be seen as emerging from these significant texts. We shall try and place theory and texts in a dialogue so that theory will act as an accompanying method for understanding the writing of the texts. Each unit has a list of reference books students are advised to consult.

The course has five units. Each unit is so designed that it contains one critical introductory essay on the history or politics of colonialism/postcolonialism along with a corresponding novel, play or prose essay. The paper will have five compulsory questions – one from each unit, and each question shall have internal choice. It is recommended (though not necessary) that questions be based on the integration between theory and the corresponding text in each unit in order to encourage theory-based preparation of the text. The paper carries 80 marks.

Unit I The British Raj

1. Edward Said, Introduction to *Orientalism*. London: Routledge, 1978: 1-28.
2. William Shakespeare, *The Tempest*, ed. Frank Kermode (Arden). London and New York: Methuen, 1984.

Unit II Language and Discourse

1. Alastair Pennycook, "English and the Cultural Constructs of Colonialism." *English and the Discourses of Colonialism*. London and New York: Routledge, 1998: 1-32.
2. Daniel Defoe, *Robinson Crusoe*. Harmondsworth: Penguin Classics, 2003.

Unit III Resistance: Linguistic, Cultural, Ideological

1. Frantz Fanon, "The Pitfalls of National Consciousness". *The Wretched of the Earth*. Harmondsworth: Penguin, 1967: 119-65.
2. Chinua Achebe: *Things Fall Apart*. Oxford: Heinemann, 1958.

Unit IV New Nations and Nationalisms

1. Gandhi, M. K. *Hind Swaraj* [Indian Home Rule] (1908; 1968), in Narayan, Shriman (ed.), *The Selected Works of Mahatma Gandhi*, vol. 4. Ahmedabad: Navajivan.
2. Raja Rao: *Kanthapura*. Delhi: Orient Paperbacks, 1938.

Unit V Rewriting History

1. Benedict Anderson, "The Origins of National Consciousness". *Imagined Communities*. London: Verso, 1983: 37-46.
2. J. M. Coetzee, *Foe*. New York: Viking, 1986.

Suggested Readings

- AijazAhmad, *In Theory: Classes, Nations, Literatures*, Verso, 1993.
- Ania Loomba, *Colonialism/*Postcolonialism. London: Routledge, 1998.
- Ashcroft, Bill, Griffiths, Gareth, and Tiffin, Helen, *The Empire Writes Back: Theory and Practice in Post-Colonial Literatures*. London: Routledge, 1989.
- C. L. R. James, *Beyond a Boundary*. UK: Random House, 1994.
- David Macey, *Frantz Fanon*. Picador, 2001.
- Gauri Viswanathan,*Masks of Conquest: Literary Study and British Rule in India*, Oxford University Press, Delhi, 1998.
- Gilles Deleuze and Felix Guattari, "What is Minor Literature?" *Mississippi Review*, Vol. 11, No. 3, Winter/Spring, 1983, pp. 13-33.
- Homi Bhabha (ed.), *Nation and Narration*, London: Routledge, 1990.
- Homi Bhabha, *Location of Culture*, London: Routledge, 1994.

- John McLeod, *Beginning Postcolonialism*. Manchester: Manchester University Press, 2000.
- Karl Marx and Friedrich Engels, *On Colonialism*, Moscow: Progress Publishers, 1981.
- Peter Childs and Patrick Williams, *An Introduction to Post-Colonial Theory.* London: Prentice Hall, 1997).
- Rana Kabbani, *Imperial Fictions:Europe's Myths of the* Orient. London: HarperCollins, 1994.
- Robert J. C. Young,and *Postcolonialism: An Historical Introduction*. Oxford: Blackwells, 2001.
- Sara Suleri, *The Rhetoric of English India*. Chicago and London: University of Chicago Press, 1992.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How does Edward Said transform our understanding of the Orient?

Or

Caliban's protest against Prospero and his resistance to colonial power using the language taught by the colonizer helps us interpret the play as a postcolonial text. Explain.

Q. 2 Summarize critically the ideas presented in Pennycook's *English and the Cultural Constructs of Colonialism.*

Or

How are non-Europeans depicted in Daniel Defoe's *Robinson Crusoe*?

Q. 3 How does Franz Fanon caution against "the pitfalls of national consciousness"?

Or

Discuss how Chinua Achebe's *Things Fall Apart* is a novel of resistance.

Q. 4. Explain Gandhi's concept of 'Swaraj'. Does it offer a credible theory of India as a nation?

Or

Decide whether Raja Rao has succeeded in explaining the true meaning of nationalism in his novel *Kanthapura.*

Q. 5. What does Anderson mean by "print capitalism"? Explain its role in the making of the modern nation-state.

Or

Analyze the theme of power and language in J.M. Coetzee's *Foe*. Does the novel re-write *Robinson Crusoe*?

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2 New Media Writing (Theory) –I

The course intends to explore the emerging relationship between New Media and writing. New media is an umbrella term used for various kinds of electronic communications that are conceivable due to innovation in computer technology.The 'old' media largely consisted of newspapers, magazines, books, television and other such non-interactive media; the new media includes websites, online video/audio streams, email, online social platforms, online communities, online forums, blogs, web advertisements, online-education and much more. The students will gain perspective on the cultural uses and practices of writing since the development of literacy 2700 years ago through a reading and discussion of conceptual essays and new media texts. In the course the emphasis is the history, theory and politics of new media. The course is divided into five units. Each unit consists of general introductory essays on the historical and conceptual understanding of various aspects of new media writing. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a total of 80 marks.

Unit –I

1. Marshall McLuhan, "Media: Hot and Cold", *Understanding Media: The extensions of man*. (First MIT Press Edition, 1994) 22-32.
2. Ithiel de Sola Pool, "Electronics Takes Command", *Technologies of Freedom* (Cambridge, Massachusetts and London: The Belknap Press of Harvard University Press, 1983) 23-54.

Unit – II

1. Lev Manovich, "What is new media", *The Language of New Media* 43-65.
2. Martin Lister, Jon Dovey, Seth Giddings, Iain Grant and Kieran Kelly "The characteristics of new media: some defining concepts", *New Media: A Critical Introduction* (London & New York: Routledge, 2009) 2003 Ist. Ed. 13-43.

Unit –III

1. George P. Landow. "Hypertext and Critical Theory", *Hypertext 3.0: Critical Theory and New Media in an Era of Globalization*(Baltimore: John Hopkins University Press, 1992) 2006 Ed. 53-68.

Unit-IV

- The Digital Humanities Manifesto 2.0 can be accessed from http://jeffreyschnapp.com/wp-content/uploads/2011/10/Manifesto_V2.pdf
- Matthew G. Kirschenbaum "What Is Digital Humanities and What's It Doing in English Departments?" *Defining Digital Humanities Reader*. Eds Melissa Terras, Julianne Nyhan, Edward Vanhoutte (Farnham and Burlington: Ashgate Publishing House, 2013) 195-204.

Unit- V

1. George P. Landow, "The Politics of Hypertext: Who Controls the Text" *Hypertext 3.0: Critical Theory and New Media in an Era of Globalization*(Baltimore: John Hopkins University Press, 1992) 2006 Ed. 321-376.

Suggested Readings:

- Pablo Boczkowski. *Digitizing the News* (Cambridge, MA: MIT Press, 2005)
- Fred Turner. *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: University of Chicago Press, 2006)
- Jonathan Sterne. "The MP3 as Cultural Artifact." *New Media & Society* 8 (2006): 825-842
- Christopher Kelty, *Two Bits: The Cultural Significance of Free Software* (Duke University Press, 2008).
- Crispin Thurlow and Kristine Mroczek, *Digital Discourse: Language in the New Media,* (Oxford: Oxford University Press, 2011)
- Kim H Veltman, *Understanding New Media: Augmented Knowledge and Culture*. (Calgary: University of Calgary Press, 2006)
- Noah Wardrip-Fruin, *The New Media Reader* (MIT Press, 2003)
- Marshall McLuhan, *The Essential McLuhan* (Basic Books, 1995)
- Anna Everett and John T. Caldwell. *New Media: Theories and Practices of Digitextuality* (London & New York, Routledge, 2003)
- Roger Fidler, *Mediamorphosis: Understanding New Media* (Pine Forge Press, 1997)
- Terry Flew and Richard Keith Smith. *New Media: An Introduction* (Oxford: Oxford University Press, 2018)
- Carolyn R. Miller and Ashley R. Kelly, ed., *Emerging Genres in New Media Environments* (Macmillan: Palgrave, 2017)
- Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1977)

- Leo Marx. "Technology: The Emergence of a Hazardous Concept." *Technology and Culture, Volume* 51, Number 3 (2010): 561-577.
- Friedrich Kittler, *Gramophone, Film, Typewriter* (Stanford: Stanford University Press, 1999)
- Raymond Williams, *Television: Technology and Cultural Form* (New York: Schocken Books, 1974)
- Lawrence Lessig. "Code is Law." *Code and Other Laws of Cyberspace*. New York: Basic Books, 2000. 3-8.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

What, according to Marshall McLuhan, is 'hot' and 'cold' media? Or

How has electronics taken control of media communications?

What is 'new' in New Media? Or

What are the defining characteristics of New Media?

Q. 3 What is a hypertext? How does it add depth to the text?

Or

What is the relationship between hypertext and literary theory?

What are the main tenets of Digital Humanities Manifesto 2.0? How does it differ from the earlier one?

Or

How can Digital Humanities be used for the purposes of literary criticism?

Hypertexts, like texts, also have their political underside. Explain. Or

The hypertext is an ever-evolving form of text. Discuss the phases of the growth of hypertext.

*****

3 World Literature – I

Far from being an aggregation of literatures produced by European nations, the idea of world literature has acquired wider cosmopolitan expansiveness. As writings from 'other' cultures such as Latin America, Africa, India, China, and Arab nations make their headway by virtue of their cultural specific experience and aesthetics, World Literature as a category has become more inclusive. This paper would help the

students understand the concept of world literature. It is designed around classical and canonical ancient and medieval and modern texts and as such offers opportunities to re-map one's literary horizons at a global scale. It encourages a comparatist perspective, and would inculcate an awareness of the best in world literature.

Unit I Theory

- Johann Wolfgang (von) Goethe, "On World Literature" (1827), *World Literature- A Reader* (Routledge, 2013) 9-16.
- Milan Kundera, "Die Weltliteratur*"* (2005), *World Literature: A Reader* (Routledge, 2013), 289-301.

Unit II Play

- Kalidasa, *Abhijnana Sakuntalam* (The Recognition of Shakuntala) ed and trans. by Somadeva Vasudeva (New York: The Clay Sanskrit Library & New York University Press, 2006).

Unit III Tales/ Fables

- "The Tale of Ox and Donkey", "The Tale of the Husband and the Parrot", & "The Tale of Hunchback", *The Arabian Nights*, trans Husain Haddawy (Norton, 1990)
- "How the Moon Became Beautiful", "The Animals' Peace Party" & "The Widow and Her Son", *Chinese Fables and Folk Stories*, trans., Mary Hayes Davis & Chow-Leung (New York, Cincinatti & Chicago: American Book Company, 1908)

Unit IV Poetry

- Rig Ved, "Creation" and "Speech". *The Rig Veda: An Anthology: One Hundred and Eight Hymns*. (Penguin Books,1981).
- Dante Aligheri, Canto IV-VI, *Inferno* (Penguin Classic, 2013).

Unit V Novel

a. Cervantes, *Don Quixote* (Penguin Classics, 2011).

Suggested Readings

- Alexander Beecroft, *An Ecology of World Literature: From Antiquity to the Present Day* (Verso, 2015).
- Bede Scott, *On Lightness in World Literature* (Palgrave Macmillan US, 2013).
- Brenda Deen Schildgen,Gang Zhou, Sander L. Gilman, *Other Renaissances: A New Approach to World Literature* [First Edition] (Palgrave Macmillan, 2006).
- Christopher Prendergast, Benedict Anderson, Emily Apter, Stanley Corngold, Nicholas Dew, Simon Goldhill, Stephen Heath, Stefan Hoesel-Uhlig, Peter Madsen, Franco Moretti, Francesca Orsini, Timothy J. Reiss, Bruce Clunies Ross, Elisa Sampson Vera Tudela, John Sturrock, *Debating World Literature*, 2004.
- David Pinault, *Story-Telling Techniques in the Arabian Night* (Brill, 1992).
- Diane Rayor, *Sappho's Lyre: Archaic Lyric and Women Poets of Ancient Greece* (University of California Press, 1991).
- Gayatri Chakravorty Spivak, *Death of a Discipline* (Columbia University Press, 2003)
- John Pizer, *The Idea of World Literature: History and Pedagogical Practice* (LSU Press, 2006).
- Longxi Zhang, *From Comparison to World Literature* (State University of New York Press, 2015).
- Mads Rosendahl Thomsen, *Mapping World Literature: International Canonization and Transnational Literatures* (Bloomsbury Academic, 2009).
- Manuel Duran, Fay R Rogg, Fighting Windmills: Encounters with Don Quixote (Yale University Press).
- Martin Seymour-Smith, *Guide to Modern World Literature* (Macmillan Education UK, 1985).
- Michael Caesar, Dante: The Critical Heritage (Routledge, 1995, pp 288, 383, 412, 631).
- Panday Shobhana, *A Critical Appraisal of Kalidasa's Abhijnanasakuntalam in the Light of the Rasa Theory* (University of Durban-Westville, 1996).
- Pheng Cheah, *What Is a World? On Postcolonial Literature as World Literature* (Duke University Press Books, 2016).
- Robert Irwin and Tauris Parke, *The Arabian Nights: A Companion* (Paperbacks, 2004).
- Robert S. Haller (trans. &ed.) *Literary Criticism of Dante Alighieri* (Lincoln: University of Nebraska Press, 1973).
- Roberto Gonzalez Echevarria, *Cervantes' Don Quixote: A Casebook* (Oxford University Press 2005).
- Romila Thapar, *Sakuntala: Texts, Readings, Histories* (Columbia University Press, 2010)

- Rossella Ciocca, Neelam Srivastava (eds.), *Indian Literature and the World: Multilingualism, Translation, and the Public Sphere* (Palgrave Macmillan UK, 2017).
- Saree Makdisi and Felicity Nussbaum, *The Arabian Nights in Historical Context: Between East and West* (Oxford University Press, 2008).
- Saswati Sengupta and Deepika Tondon (eds.), *Revisiting Abhijnanashakuntalam: Love, Lineage and Language in Kalidasa's Nataka* (Orient Blackswan, 2011).
- Theo D'haen, *The Routledge Concise History of World Literature* (Routledge, 2011).
- Thomas William Rhys Davids, *Buddhist Birth-stories (Jataka Tales)*: *The Commentarial Introduction,* Buddhaghosa, 1999.
- Ulrich Marzolph (ed.), *The Arabian Nights Reader* (Wayne State University Press, 2006).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

"National Literature is not a rather unmeaning term; the epoch of world literature is at hand and everyone must strive to hasten its approach." Critically comment with reference to Goethe.

Or

Milan Kundera's idea of world literature constricted in its approach and is inclined towards Eurocentricism. Give a reasoned answer in favour or against the given statement.

Q. 2 Discusshow Kalidas unfolds the emotion of love in the play *Abhijana Shakuntalam*.

Or

What are the distinct features of Kalidasa's *Abhijana Shakuntalam* as a play? Does the play differ from the Euro-centric poetics of a play in fundamental ways?

Q. 3 Critically comment on the folklore of the Middle Eastern region with reference to any two stories in your syllabus.

Or

Discuss the influence of Chinese folklore on other media with reference to any two stories in your syllabus.

Q.4 Rig Vedic hymns combine poetry with metaphysics. Explain

Or

Critically comment on the structure of Dante's 'hell' with reference to the cantos prescribed in your syllabus.

Q. 5. Discuss the intertextuality in Cervantes' *Don Quixote*.

Or

Don Quixote is a satire of orthodoxy and the narrow literary conventions of the chivalric romance literature. Critically comment with examples from the text.

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4 Literature and Ecology--I

Literary imagination has always been propelled by the vistas of physical environment. However, with the environmental exigencies impinging upon us in the present, the relationship/correspondence between literature and environment gains special significance. This paper introduces students to how nature or environment has been conceived in various genres (such as fiction, poetry and creative non-fiction, etc.) by creative writers from different parts of the world in the contemporary period. The paper will acquaint students to various theoretical debates and positionings vis-à-vis the interdisciplinarity of literature, ecology and environmentalism which include notions of nature/environment/*prakriti*, eco-criticism, postcolonial ecocriticism, eco-feminism, sense of place, deep ecology, Gaia, environmental humanities, nature-culture, biopolitics, Anthropocene, eco-poetry, eco-fiction, toxic discourse, etc. The effort is to provide the students an understanding of the increasing dissonance in the relationship of human beings with their environment as well as to explore the possibilities of sensitizing them towards mending it.

Unit I Contexts

1. Cheryll Glotfelty, "Introduction: Literary Studies in an Age of Environmental Crisis" from *Ecocriticism Reader: Landmarks in Literary Ecology*edt. by Cheryll Glotfelty & Harold Fromm (Uni. of Georgia Press, 1996.), xv-xxv.
2. Lawrence Buell, "The World, the Text and the Ecocritic" from*The Future of Environmental Criticism: Environmental Criticism and Literary Imagination* (Oxford: Blackwell Publishing, 2005), 29-61.

Unit II Poetry

1. Seamus Heaney poems, "Digging", "Bogland", and "Gifts of Rain" [Seamus Heaney, *New and Selected Poems*, London: Faber & Faber, 2013].
2. Pablo Neruda poems, "The Heights of Macchu Picchu" (part VI—Then up the ladder…) from *Canto General* and "Poetry" and "The Night in Isla Negra" from *Memorial de Isla Negra* [*Pablo Neruda: Selected Poems*, edited by Nathaniel Tarn (London: Vintage Books, 2012)].
3. Wendell Berry poems, "The Broken Ground" and "Window Poems (part 1, 8, 12)" [*The Selected Poems of Wendell Berry* (Berkley: Counterpoint, 1998)].

Unit III Short-fiction

1. Italo Calvino, "Mushrooms in the City" from *Marcovaldo or The Seasons in the City,* trans. by William Weaver (London: Vintage Books, 2001), pages 1-4.
2. Doris Lessing, "Lions, Leaves, Roses…" from *Stories* (London: Vintage International, 1980).
3. J.M. Coetzee, "The Poets and the Animals" from *The Lives of Animals* (Princeton: Princeton University Press, 1999).

Unit IV Fiction

1. Margaret Atwood, *Oryx and Crake* (London: Anchor, 2004).

Unit V Prose/ Non-fiction

1. Aldo Leopold, "January", "April" and "The Land Ethic" from *The Sand Country Almanac and Sketches Here and There* (London: Oxford University Press, 1968).
2. Eduardo Galeano, *Days of Night of Love and War* trans. by Judith Brister (New York: Monthly Review Press, New York), 17-49.

Secondary Readings

- William Cronon, "The Trouble with Wilderness or Getting Back to the Wrong Nature", from *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W. W. Norton & Co., 1995), pages 69-90.
- Raymond Williams, *The Country and the City* (Oxford: Oxford University Press, 1973).
- Raymond Williams, "Ideas of Nature" from *Culture and Materialism* (London: Verso, 2005), pages 67-85.
- Kate Soper, "Representing Nature" (*Capitalism, Nature, Socialism* 9:4, 61-65, 1998).
- Richard Kerridge, "Ecocritical Approaches to Literary form and Genre: Urgency, Depth, Provisionality, Temporality" from*The Oxford Handbook of Ecocriticism*edt. by Greg Garrard (New Delhi: OUP, 2014), pages 361-377.
- Lawrence Buell, *Writing for an Endangered World:Literature, Culture, and Environment in the U. S. and Beyond* (London: Harvard University Press, 2001).
- Cheryll Glotfelty & Harold Fromm (edt), *Ecocriticism Reader: Landmarks in Literary Ecology* (Uni. of Georgia Press, 1996).

- Laurence Coupe (edt.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London: Routledge, 2000).
- Gregg Garrard, *Ecocriticism* (New Delhi: Routledge, 2004)
- Greg Garrard (edt.), *The Oxford Handbook of Ecocriticism* (New Delhi: OUP, 2014).
- Kate Soper, "Naturalized Woman, Feminised Nature" from *The Green Studies Reader: From Romanticism to Ecocriticism* ed. by Laurence Coupe (London: Routledge, 2000), pages 139-143.
- Val Plumwood, *Feminism and the Mastery of Nature* (London: Routledge, 2003).
- Vandana, Shiva, *Staying Alive: Women, Ecology and Survival in India.*(New Delhi: Kali for Women. 1988).
- Dana Phillips, *The Truth of Ecology: Nature, Culture, and Literature in America* (New Delhi: OUP, 2003).
- Vandana Shiva, "Principles of Earth Democracy" from *Earth Democracy: Justice, Sustainability, and Peace* (London: Zed Books, 2005), pages 1-12.
- Ramchandra Guha, *Environmentalism: A Global History,* (New Delhi: Penguin Random House India, 2016).
- Rachel Carson, *Silent Spring* (New Delhi: Penguin Classics, 2000).
- Eduardo Galeano, *Open Veins of Latin America: Five Centuries of The Pillage of a Continent* trans. by Cedric Belfrage (New York: Monthly Review Press, New York).
- Gary Snyder, "The world is Places" from *The Practice of the Wild: Essays by Gary Snyder* (San Francisco: North Point Press, 1990), pages 25-29.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. I What is Eco-criticism? Discuss its importance and scope in the future.

Or

How is eco-critical reading of a text different from a general understanding of a text in naturalistic terms?

Q. 2. Write an essay on Wendell Berry's fundamental concerns in his poem "The Broken Ground".

Or

"The Heights of Macchu and Picchu" is heavily influenced by Neruda's communist beliefs. Describe how the poet's political beliefs shape the poem.

Q. 3 In his enduring short story "Mushrooms in the City," Calvino symbolically contrasts the dangers of capitalism with the safeties of socialism. Explain.

Or

How does Coetzee foreground the issue of animal rights in his "The Poets and the Animals"?

Q. 4 The ending of the novel *Oryx and Crake* is open, allowing for tantalizing speculation. How do you envision Snowman's future? What about the future of humanity—both within the novel, and outside its pages?
Or
Oryx and Crake includes many details that seem futuristic, but are in fact already apparent in our world. What parallels were you able to draw between the items in the world of the novel and those in your own?

Q. 5 Explain the seminal role of non-fiction writers as interventionists in matter concerning environment.
Or
How does Eduardo Galeano expose the politics of multinational capitalism in plundering the forests of Latin America?

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Paper XII
(Choose any one of the options)

(1) Indian Literary Criticism and Theory –I

This paper shall focus singularly on Indian poetics – its various schools and theories so as to provide an alternative perspective of literary theory from an indigenous perch. The corpus of Indian Poetics is very rich and multivalent; the paper shall however deal with basic concepts and would therefore be introductory in nature and scope. From essays on what constitutes 'literariness' on the Indian context, the course offers a critical understanding of major concepts of Sanskrit aesthetics like *rasa*, *dhvani* and *vakrokti*. There is one unit on ancient Tamil poetics too. The prescribed texts are available in English translation and there is no dearth of secondary material also. The students would be encouraged to take a critical view of ancient 'poetics' and its relevance in the postcolonial contexts.

Testing: The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there could be questions of practical nature in which the candidate may be asked to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. Rabindranath Tagore, "What is Art?", anthologized in G.N.Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002) 137-152.
2. Krishna Rayan, "What is Literariness?" anthologized in G.N.Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002) 177-183.

Unit II

- *Rasa-Siddhanta* with special reference to Bharatmuni, "On Natya and Rasa: Aesthetic of Dramatic Experience" from the *Natyashastra*, anthologized in G.N.Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002) 3-14.

Unit III

- *Dhavni–Siddhanta* with special reference to Anandvardhana, "Dhavni: Structure of Meaning" from *Dhavanyaloka*, anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002) 31-40.

Unit IV

- *Vakrokti-Siddhanta* with special reference to Kuntak, "Language of Poetry and Metaphor" from *VakroktiJivita*, anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002) 46-60.

Unit V

- A.K.Ramanujan, "On Ancient Tamil Poetics" anthologized in G.N. Devy's edited book *Indian Literary Criticism* (Hyderabad, Orient Longman, 2002) 346-374.

Suggested Readings

- Rajan, P.K., *Indian Literary Criticism in English: Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).
- Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London, OUP, 1992).
- Devi, G.N., In Another Tongue (Delhi, MacMillan, 1993).
- _____and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).
- Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banarsidas, 1993).
- Mukherjee, Meenakshi, *The Perishable Empire*(Delhi, OUP , 2000).
- _____, *Reality and Realism*(Delhi, OUP, 1983).
- Suder Rajan, Rajeswari, Ed., *The Lie of the Land* (Delhi, OUP, 1991).

- Gauri, Viswanathan, *Masks of Conquest* (New York, Colombia University Press, 1989).
- Narasimhaiah, C.D. and Srinath, C.N. Eds.,*A Common Poetic for Indian Literature* (Mysore, Dhavanyaloka, 1984).
- Rayan, Krishna, *The Burning Bush* (Delhi, B.R. Publishing, 1989).
- _____, *Text and Sub-text* (Delhi, Arnold Heinemann, 1989).
- _____, *Sahitya, A Theory* (Delhi, Arnold Heinemann, 1991).
- Paranjape, Makarand Ed., *Nativism: Essays in Criticism* (Delhi; Sahitya Akademi, 1998)
- Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi, OUP 1991).
- Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ., 1964).
- Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasidass, 1971, 4th ed.)
- Pollock, Sheldon, *The Language of Gods in the World of Men* (Berkeley and Los Angles: University of California Press, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How does Rabindranath Tagore connect art with human experience in his essay "What is Art?"

Or

Critically analyze Krishna Rayan's "What is Literariness?"

Q. 2 Critically explain the basic tenets of *rasa* theory?

Or

Can *rasa* theory be applied to moderate poetry? Support your answer with suitable examples.

Q. 3 Discuss *Dhvani* as theory of meaning with suitable examples?

Or

How does *Dhvani* theory lapse into *rasa-siddhant*? Is it critically fair to give *Dhvani*-theory an independent status outside *rasa*-theory?

Q. 4 Discuss various types of *vakrata* employed in poetry. Does such an explanation take us to the soul of a poem?

Or

Vakrokti theorists pioneered practical school of criticism in Sanskrit literature. Discuss critically.

Q. 5 What are the two major types or genres of poetry as described in "Tolkappiyam?"

Or

What is the concept of *tinai*? Describe the role of landscape in classical Tamil poetry.

(2) Writings from Punjab –I

Given its geopolitical location, Punjab has always been vulnerable to invasions and diverse influences. As a response to burgeoning ills in the social fabric, Punjab witnessed the flowering of Sikh faith and *Sufi- Bhakti* movements from fifteenth century onwards. These movements led to the creation of a vast literary resource, consolidated in theflowing corpus of Sufi writings and the *Granth Sahib*, which was egalitarian to the extent that it included writings from across faiths. The performative aspect of these texts is alive in Punjab even today, both in the religious and secular spheres. The course examines evolution in the narrative through writings from Punjab, between 15th and 19th centuries and attempts to include the distinctly "Punjabi" works in different genres spread across a period of about 500 years. From the corpus of Gurbani, to Sufiana *kaav*, to *bhakti* literature, the paper encompasses a vast sweep. Apart from acquainting the students with representational texts, an attempt would be made to situate the paper in the larger socio-economic matrix of medieval Punjab. A powerful syncretic strain that touches a high point with *Qissa Kaav* has been the characteristic touchstone of Punjabi ethos. The languages represented are medieval Punjabi and Persian, the genres range from poetry to hymns from Granth Sahib to epistle on the battle field with *Zafarnama* to *Qissa Kaav*. The course focuses on touching a little of all significant writings of Punjab. An attempt has been made to include multiple perspectives that emerged during the aforesaid historical period and which will enable students to comprehend how literary ground was being set up through these writings.In the end-Semester examination, there will be five essay-type questions of 16 marks each (to be answered in about 500 – 600 words each). One question with internal choice will be set from each of the following five prescribed texts/units:

Unit I Writings of the Gurus

1. Guru Nanak Dev. "Hymns from Siddha Goshta" (pp. 96-103), "Hymns from Barah Mah" (pp 104-110),*Hymns of Guru Nanak*. Ed. & Trans. by Khushwant Singh (Hyderabad: Orient Longman, 1991)
2. Guru Gobind Singh*, Zafarnamah*. Trans. Navtej Sarna (UK: Penguin, 2015)

Unit II Bhakti-poets

1. Kabir, "*Garabvas mein kul nahi jaati" (212-13), "Aval Allah Noor Upaya Kudrat de sab bande" (215)* "*Hirdai Kapat mukh gyani" (213)*

2. Ravi Das, "Begumpura shehar ka naam" (230), "Nagar jaana meri jaat bikhyat chamara" (232)& "Tohi Mohi Mohi Tohi" (230)

(The source-text for the two poets and their poems in translation is *Selections from the Sacred Writings of the Sikhs, translated by Trilochan Singh, Bhai Jodh Singh, Kapur Singh, Bawa Harkishen Singh & Khushwant Singh, Introduction by S. Radhakrishnan* (Ruskin House George Allen Unwin Ltd, London, 1960)

Unit III Sufis

1. Sheikh Farid: "*Tap tap loh loh hath maroranl kia bhavain"* (220), *Shloks:*
Farida je ti akal latif
Farida jo tain maaran mukian
Farida ja lab taneh kia
Farida jangal jangal
Farida galian chikadd dur ghar
Bhijo sijo kambli allah vasau meh
Farida bure da bhala kar
Farida mai jania dukh dukh mujh ko (220-222)

(The source-text for Sheikh Farid's poems in translation is *Selections from the Sacred Writings of the Sikhs, translated by Trilochan Singh, Bhai Jodh Singh, Kapur Singh, Bawa Harkishen Singh & Khushwant Singh, Introduction by S. Radhakrishnan* (Ruskin House George Allen Unwin Ltd, London, 1960)

2. Bulle Shah, "Bullah Ki Jaana Main Kaun" (184) "Ik Nukta" (37) & "Kar Kattan wal Dhian Kure" (91), *Bullhe ShahSufi Lyrics*, Shackle, Christopher, ed. & trans. Massachusetts, London: Murty Classical Library of India, 2015

Unit IV Historiography

1. Janamsakhi "Introduction" (1-6), "The Sacred Thread" (Ch 1), "There is No Hindu, No Mussalman" (Ch 20), *Janamsakhis: Ageless Stories*. Ed. & Trans. by Harish Dhillon New Delhi: Hay House Publishing, 2015.

Unit V Qissa

1. Waris Shah, Section 1-6 (pp. 13-38), 8 (pp. 48-52) and Section 12 (69-81",*The Love of Hir and Ranjha*. Trans by Sant Singh Sekhon (Ludhiana: PAU, 1978) (Also available at ApnaOrg).

Secondary Readings

- Abidi, S A H. "Indian Stories in Indo-Persian Literature". *Indian Literature*, Vol. 9, No. 3 (JULY-SEPTEMBER 1966), 28-42. Also available at http://www.jstor.org/stable/23329498.

- Mir, Farina. "A Punjabi Literary Formation". *The Social Space of Language*. LA: U of California Press, 2010. (91-122)
- Mir, Farina. "Genre and Devotion in Punjabi Popular Narratives: Rethinking Cultural and Religious Syncretism". *Comparative Studies in Society and History*. Vol. 48, No. 3 (Jul., 2006), 727-758.
- Shan, Harnam Singh. "Tragic Love Legends East and West". *Journal of South Asian Literature*, Vol. 35, No. 1/2, Miscellany (2000), 101-114. Also available at https://www.jstor.org/stable/40873763
- Singh, Pashaura and Louis E Fenech. *The Oxford Handbook of Sikh Studies*. Oxford: OUP, 2014.
- Meeto (Kamaljit Bhasin-Malik), *In the Making*: *Identity Formation in South Asia.* (Three Essays Collective, 2008).
- Harjot Oberoi, *The Construction of Religious Boundaries: Culture, Identity and Diversity in the Sikh Tradition* (South Asia Books, 1994).
- Ian Talbot, "State, Society and Identity: The British Punjab, 1875–1937" in Gurharpal Singh and Ian Talbot (eds.), *Punjabi Identity: Continuity and Change* (South Asia Books, 1996).
- J S Grewal, *The Sikhs of the Punjab* (Cambridge, 1990).
- Richard G Fox, *Lions of the Punjab: Culture in the Making* (Low Price Publications, 1985).
- Roger Ballard, "Panth, Kismet, Dharm, te Qaum: Continuity and Change in Four Dimensions of Punjabi Religion" in Pritam Singh and Shinder Thandi (eds.), *Punjabi Identity in a Global Context* (Oxford University Press, 1999).
- Indu Banga and J.S. Grewal (eds.), *Early 19th Century Punjab: From Ganesh Das's Char Bagh-i-Punjab* (Routledge (Manohar), 2016).
- Anil Sethi, "The Construction of Religious Boundaries in the Punjab, 1850–1920", Unpublished Ph.D. Dissertation (Cambridge University, 1998).
- Anna Bigelow, "Practicing Pluralism in Malerkotla, Punjab", *Items and Issues*, Social Science Research Council, 3:1-2 (Spring, 2002).
- Harnam Singh, "Tragic Love Legends East and West". *Journal of South Asian Literature*, Vol. 35, No. 1/2, Miscellany (2000), pp. 101-114. JSTOR: https://www.jstor.org/stable/40873763
- Pashaura Singh, *The Guru Granth Sahib. Canon, Meaning and Authority*. (Oxford University Press, 2000).
- Pashaura Singh and Louis E Fenech, *The Oxford Handbook of Sikh Studies*. (Oxford University Press, 2014).
- Vanderville, Charlotte. *A Weaver Named Kabir.* New Delhi: OUP, 1997.
- Anshu Malhotra, Farina Mir, *Punjab Reconsidered*, (Oxford University Press, 2012).

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1 Discuss how Guru Nanak's *Barahmaah* illustrates seasons as a motif for change against the relentless unchanging suffering of a woman lover that can only be resolved by overcoming ignorance stemming out of attachment to duality .
Or
Explain how Guru Gobind Singh reinstates morality as the core principal of righteous war in *Zafarnama*.

Q. 2 How does Kabir lament the hierarchies of caste and inequality in dispersal of knowledge in erecting social divides?
Or
What is the utopic vision of a casteless society envisioned in Ravi Das' poetry?

Q. 3 Explain how Sheikh Farid uses everyday tropes to expose social hypocrisy and advocate a better human conduct.
Or
Bulleh Shah's poetry is suffused with the idea of a grander ideal of love. Explain with examples from his poetry.

Q. 4 Explain how *Janamsakhis*, as distinct from *Guru Granth Sahib*, have erected the ethos of Sikh consciousness.
Or
Would you consider *Janamsakhi* a reliable source of history?

Q. 5 Waris Shah's qissa "Heer Ranjha" rests on the ethos of a moralrebellion. Discuss.
Or
Discuss how "Heer Ranjha" transcends its romantic text to finally leap towards deeper metaphysics?

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(3) Introduction to Literary Genres – III

Despite distinction of idiom, expression and style, writers over the years have operated through a gamut of settled conventions, modes and genres. The paper will introduce students to some of the new genres that overwhelmed the (post-) modern literary space. As new mediums open up, literature re-defines itself through variety of self-reflexive modes and genres. The effort is to provide a brief overview of each selected genre in terms of its

distinctive innovativeness and its basic characteristics. Each unit consists of critical essay(s) and corresponding literary text(s) so that the students are able to relate theory with practice. In the end-Semester examination, there will be five essay-type questions of 16 marks each (to be answered in about 500 – 600 words each). One question with internal choice will be set from each of the following five prescribed texts/units:

Unit I Parody

1. M. Rose, "Ways of Defining Parody", *Parody: Ancient, Modern and Post-modern* (Cambridge: Cambridge University Press, 1993) 5-35.
2. Shashi Tharoor, "Forbidden Fruit", *The Great Indian Novel* (Penguin Books, 1989) 110-131.
3. Gautam Bhatia, "The Material Ascetic", "The Brahmin and the Organs Bazaar" & "The Lion and the Critic", *Panchatantra* (Penguin Books India, 1998) 41-72.

Unit II Metafiction

1. Patricia Waugh, "What is metafiction and why are they saying such awful things about it?"*Metafiction: The Theory and Practice of Self-Conscious Fiction* (London & New York: Routledge, 1984) 1-21.
2. John Fowles, Chapter 13, *The French Lieutenant's Woman* (London, Vintage Books, 2004).
3. Jorge Luis Borges, "Borges and I", from *The Maker* [*Collected Fiction,* Jorge Luis Borges, translated by Andrew Hurley (London: Penguin, 2018)].
4. John Barth, "Lost in the Funhouse", *Lost in the Funhouse* (New York: Anchor Books, 1988).

Unit III Autobiography

1. Georges Gusdorf, "Conditions and Limits of Autobiography", James Olney, ed., *Autobiography: Essays Theoretical and Critical* (Princeton & New Jersey: Princeton University Press, 1980) 28-48.
2. Mahatma Gandhi, Part V, *The Story of My Experiments with Truth* (333-455).
3. Elie Wiesel, *Night* (Penguin Modern Classics, 2008).

Unit IV Comics/ Graphic Novels

1. Randy Duncan and Matthew J. Smith, "Defining Comic Books as aMedium", *The Power of Comics* (New York: Continuum, 2009) 1-19.
2. Art Spiegelman, *Maus: A Survivor's Tale 1: My Father Bleeds History* (Pantheon Graphic Novels, 1986).
3. Stan Lee & Steve Ditko, *Amazing Spiderman*, Marvel Comics, 15 August, 1962.

Unit V Travelogue

1. Debbie Lisle, "Between Fact and Fiction: The Genetic Boundaries of Travel Writing", *The Global Politics of Contemporary Travel Writing* (Cambridge: Cambridge University Press, 2006) 28-67.
2. V.S. Naipaul, Part III, *An Area of Darkness: A Discovery of India* (Vintage, Reprint edition, 2002).
3. William Dalrymple, "The Monk's Tale" & "The Idol Maker", *Nine Lives: In Search of the Sacred in Modern India* (New York: Alfred A Knopf, 2010).
4. Amitav Ghosh, "At Large in Burma", *Dancing in Cambodia and At Large in Burma* (Delhi: Ravi Dayal, 1998).

Suggested Readings

- Garin Dowd, Lesley Stevenson & Jeremy Strong, *Genre Matters: Essays in Theory and Criticism* (Bristol: Intellect, 2006).
- Linda Hutcheon, *A Theory of Parody: The Teachings of Twentieth-Century Art Forms* (London: Methuen, 1985).
- B. Müllered, ed., *Parody: Dimensions and Perspectives* (Amsterdam: Rodopi. 1997).
- Casey Brienza & Paddy Johnston, eds.,*Cultures of Comics Work*, New York: Palgrave Macmillan, 2016).
- Linda Hutcheon, Narcissistic Narrative: The Metafictional Paradox (Waterloo: Wilfrid Laurier University Press, 1980).
- Karin Kukkonen, *Studying Comics and Graphic Novels* (Oxford: Wiley Blackwell, 2013).
- Simon Dentith, *Parody* (London & New York: Routledge, 2000).
- Ann Heilmann and Mark Lleweliyn, eds.,*Metafiction and Metahistory in Contemporary Women's Writing* (New York: Palgrave Macmillan, 2007).
- Sidonie Smith and Julia Watson, *Reading Autobiography: A Guide for Interpreting Life Narratives* (Minneapolis And London: University of Minnesota Press, 2001).
- Michael A. Chaney, ed., *Graphic Subjects: Critical Essays on Autobiography and Graphic Novels* (Wisconsin: The University of Wisconsin Press, 2011).
- Jeet Heer and Kent Worcester, eds.,*A Comics Studies Reader* (Jackson: University Press of Mississippi, 2009).
- Carl Thomson, *Travel Writing* (New York & London: Routledge, 2011).
- Peter Hulme and Tim Youngs, eds.,*The Cambridge Companion to Travel Writing* (Cambridge: Cambridge University Press, 2002).
- Julia Kuehn and Paul Smethurst, eds.*New Directions in Travel Writing Studies* (Palgrave Macmillan, 2015).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Why is parody often described as 'double discourse'? Explain.

Or

How does Gautam Bhatia parody the tales of *Panchatantra*?

What is metafiction? How does it engender an element of self-reflexivity in the narrative?

Or

Discuss the artistic complexities that metafiction affects in an otherwise normal narrative. Illustrate your answer with the help of tales prescribed in your syllabus.

Q. 3 What is conventional structure of an autobiography? How does it differ from other forms of life-writing?

Or

Autobiographies recount tales of survival – sometimes heroic, sometimes non-heroic.

Explain the poetics of graphic narratives. How do they differ from verbal narratives?

Or

Graphic narratives change the process of reading fundamentally both in terms of speed and reception. Answer your question by referring to the two graphic narratives prescribed in your syllabus.

What are the generic conventions of travel-writing? Answer your question with relevant examples.

Or

Travel-writings combine fact with fiction, research with creativity. Critically analyze Amitav Ghosh's *At Large in Burma* in the light of this observation.

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(4) American Literature I

(Poetry and Drama: 1900 to the Present)

The course explores the immense vitality of American Literature over the course of the 20th century through transformative works of acclaimed writers who have shaped the contours and developments of the American literary tradition. It offers critical insights into the historical and cultural influences, literary movements and major literary figures of a highly fecund century. The texts that have been selected for detailed study are representative of adynamic literary tradition that emerges from multiple perspectives such as those of race, gender, ethnicity, socio-economic class and historical period.

Testing Pattern: The question paper will contain five questions with internal choice, corresponding to the five units of the course. All the questions would carry equal marks. The candidates would be required to answer allfive questions. In addition to specific text-based questions, the paper will also focus on various literary and cultural movements/concepts/trends/terms related to American literary history.

Unit I

Langston Hughes: "The Weary Blues", "A Dream Deferred", "Let America be America Again", "The Negro Speaks of Rivers", "I, Too, Sing America", [*The Collected Poems of Langston Hughes* (Vintage Classics)]

Unit II

Allen Ginsberg: "Howl", "Kaddish", "Supermarket in California", "America" [*Collected Poems 1947-1997* (Harper Perennial Modern Classics)]

Unit III

Adrienne Rich: "Planetarium", "Cartographies of Silence", "Stepping Backward" [*Collected Poems: 1950–2012* (W. W. Norton & Company)]

Unit IV

Sam Shepard, *Buried Child* (Knopf Doubleday Publishing Group, Revised 2nd Edition)

Unit V
August Wilson: *The Piano Lesson* (Penguin USA; Reprint edition, 1990)

Suggested Readings

- Christopher Beach, *The Cambridge Introduction to Twentieth-Century American Poetry* (Cambridge University Press, 2003).
- Alan Golding, *From Outlaw to Classic: Canons in American Poetry* (Wisconsin Press, 2009).
- Edward J. Mullen, *Critical Essays on Langston Hughes* (G.K. hall, 1986).
- Henry Louis Gates, *Langston Hughes: Critical Perspectives Past and Present* (Harper Perennial 2000).
- Thomas F. Merrill, *Allen Ginsberg* (Twayne Publishers, 1988).
- Jonah Raskin, *American Scream: Allen Ginsberg's Howl and the Making of the Beat Generation* (Uni. of California Press, 2004)

- Claire Keyes, *The Aesthetics of Power: The Poetry of Adrienne Rich* (University of Georgia Press, 2008).
- Albert Gelpi and Barbara C.Gelpi ed., *Adrienne Rich's Poetry and Prose* (Norton Critical Editions, 1993).
- Matthew Charles Roudane, *The Cambridge Companion to Sam Shepard* (Cambridge University Press, 2002).
- Leonard Wilcox, *Rereading Shepard: Contemporary Critical Essays on the Plays of Sam Shepard* (Palgrave Macmillan, 1993).
- Harold Bloom, *August Wilson* (Chelsea House Publications, 2009).
- Harold Bloom (ed.), *Bloom's Modern Critical Views: August Wilson* (Bloom's Literary Criticism, 2009).
- Mary L. Bogumil, *Understanding August Wilson* (University of South Carolina Press, 1999,).
- Peter Wolfe, *August Wilson* (Twayne, 1999).
- Christopher Bigsby, *The Cambridge Companion to August Wilson* (Cambridge University Press, 2007).
- Christopher Bigsby, *A Critical Introduction to Twentieth-Century American Drama* (Cambridge University Press, 1982).
- Christopher Bigsby, *Modern American Drama, 1945-2000* (Cambridge University Press, 1982).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 Discuss Langston Hughes as a poet of Harlem Renaissance.

Or

Write a note on the poetic idiom of Langston Hughes. Discuss in particular the impact of oral culture on his poetic style.

Q.2 Allen Ginsberg brings together popular culture with the culture of dissent. Argue.

Or

Discuss critically the key themes in the poetry of Allen Ginsberg.

Q. 3 Confession is the ready stuff of poetry. Discuss Adrienne Rich's poetry in the light of this statement.

Or

Where would you place Adrienne Rich's poetry in the debate of feminist theories? Does she belong to the feminist or female phase of women's writing?

Q. 4. Discuss the stage worthiness of the play *Buried Child*.

Or

Critically analyze the play *Buried Child* in the context of American recession in '70s.

Q. 5 "*The Piano Lesson* deals with the historical phenomenon of the African American migration from the southern, agrarian way of life to the large industrial cities of the North in search of freedom, dignity, and economic opportunities." Argue.
Or
What does "piano" stand for in the play *The Piano Lesson*? Give textual references to answer the question.
*****

Paper XIII

Dissertation-Work

This paper involves dissertation-work. Every student shall submit a dissertation (4000-6000 words) on a topic of his/ her choice before the end of Semester III before the beginning of end-semester examinations. There shall not be any formal teaching of the paper. The Department shall however conduct a weeklong workshop to train the students about the basics of research and dissertation writing. The students shall be trained about MLA Handbook (Latest Edition). The dissertations should be submitted to the Department after a proper anti-plagiarism check and certification. The dissertations would be evaluated internally in the grades of A (Outstanding), B (Very Good), C (Average) and D (Below Average). Those who are awarded grade 'D' shall have to re-submit revised dissertation to qualify for the final award of the degree of MA. The grades would be reflected in the final detailed marks sheet (DMC) of MA. The dissertations (batch-wise) shall be kept in the department-libraries (of the college/ university department) both in the hard and soft versions.

Or

Research Methods

Research involves systemic exploration of subject-matter for creating new knowledge or extending the frontiers of existing knowledge. This paper has been designed keeping in view the increasing importance of research for Master's students in the emerging contexts. The paper is of introductory nature. It aims to impart the basic understanding of research tools and techniques, research ethics, research theory, online and print sources and documentation to the students. The paper consists of five units, with each containing prescribed readings. The readings in the Unit I, Unit II and Unit III are primarily theoretical, whereas Unit IV and Unit V are mainly of practical nature. The students are expected to learn the theoretical aspects of research as well as their practical applicability. The end-semester examination will contain five questions, each with internal choice, from each of the five units. The paper will be of 80 marks (16x5=80) for regular students and 100 marks (20x5=100) for private candidates.

Unit I Basics

1. Chapter 1: "Research Basics", from Nicholas William's *Research Methods: The Basics* (Routledge, 2015), 7-14.
2. Chapter 4: "Research Ethics", from Nicholas William's *Research Methods: The Basics* (Routledge, 2015), 42-51.

Unit II Theory

1. Theoretical concepts: abduction (1-2), deduction (207-208), induction (429-430), empiricism (255-260), idealism (411-415), pragmatism (671-675), realism (731-735), positivism (646-650), relativism (749-753), constructivism (116-120), essentialism (269-273), hermeneutics (385-388).

   [For each concept, refer to the prescribed page numbers in Lisa M. Given's *The SAGE Encyclopedia of Qualitative Research* Methods (Sage Publications, 2008)].

Unit III Sources

1. ShafquatTowheed, "Tools and techniques for literary research: using online and printed sources", from *The Handbook to Literary Research*, edited. by Delia da Sousa Correa and W.R. Owens (Routledge, 2010, 2nd edition), 9-35.

Unit IV Research Proposal

1. Chapter 13: "Writing a Research Proposal", from *Research Methodology: A Step-by-Step Guide for Beginners* by Ranjit Kumar, (Sage, 2014, 4th edition), 255-278.

Unit V Documentation

1. "Creating Your Documentation", from *MLA Handbook*, 8th Ed. (The Modern Language Association, 2016), 19-58.

Suggested readings

- Nicholas Walliman, *Social Research Methods* (SAGE Course Companions, 2006).
- Nicholas Walliman, *Your Research Project: A Step-by-Step Guide for the First-Time Researcher* (Sage Publications Ltd, 2000).
- John Biggam, *Succeeding with Your Master's Dissertation: A Step-By-Step Handbook (*McGraw-Hill, 2011).

- Gabriele Griffin, edt. *Research Methods for English Studies* (Rawat Publications, 2007).
- Angela Thody, *Writing and Presenting Research* (Sage Study Skills Series, 2006).
- David Silverman (Ed.), *Qualitative Research: Theory, Method and Practice* (Sage 2004).
- Lisa M. Given, *The SAGE Encyclopedia of Qualitative Research* Methods (Sage Publications, 2008).
- Victor Jupp, *The SAGE Dictionary of Social Research Methods* (SAGE Publications, 2006).

Model Paper

Time: 3 hours

Note: Attempt all questions. Each question carries 20 marks.

Q. 1 What do you understand by research design? Discuss major types of research design.

Or

What constitutes the domain of research ethics? Discuss with examples.

Q. 2 Compare the positivist and relativist approaches to research.

Or

Write short notes on the following: induction, constructivism, relativism.

Q. 3 Write a detailed note on the online sources of research.

or

What is an archive? How are archives important for research?

Q. 4. What are the characteristics of a good research proposal?

Or

Assume a research topic of your choice and write a brief research proposal for the same.

Q. 5. Rewrite the following bibliographic details according to *MLA Handbook* 8th edition (any 10)—

i. Giorgio Agamben's book, Homo Sacer: Sovereign Power and Bare Life, published by Stanford University Press, publication year 1998.

ii. ÉtienneBalibar's book, Citizenship, translated by Thomas Scott-Railton, published by Polity Press, publication year 2016.

iii. The Crown of Columbus, a book written by David Michael and Louise Erdrich, pub year 1999, publisher-HarperCollins.

iv. Beowulf, translated by Alan Sullivan and Timothy Murphy and edited by Sarah Anderson. Publication year 2004, publisher-Pearson.

v. The Future of the Book, a book edited by Geoffrey Nunberg. Publisher U of California P, pub. year 1996.

vi. Consequences of Rapid Population Growth in Developing Countries, a book authored by United Nations and published by Taylor and Francis, pub. Year 1991.

vii. A newspaper article by PrafulBidwai in The Guardiantitled,India floods: a man-made disaster, Date, Fri 28 Jun 2013.

viii. A scholarly article by Lawrence Buell titled, Toxic Discourse, published in the journal Critical Inquiry, vol 24, issue 3, year 1998, page numbers 639-665.

ix. Postcolonial Ecologies: Literatures of the Environment, a book edited by Elizabeth DeLoughrey and George Handley, pub by OUP, pub year 2011.

x. The Memory of Catastrophe, a research article co-authored by Peter Gray and Oliver Kendrick, published in the journal History Today, year 2001, volume 51, issue 2.

xi. Buffy the Vampire Slayer, a movie directed by Fran RubelKuzui and produced by Twentieth Century Fox, year 1992.

Petty Hurts, a song by Beyoncé from the album, Beyoncé, produced by Parkwood Entertainment, year 2013. Web source—www.beyonce.com/album/beyonce/?media_view=songs.

M.A. II

Semester IV

Compulsory Paper

Paper XIV

Critical Theory – II

Post-1980, the gap between literary theory and cultural theory has narrowed down. Literary theory is no longer contained to our thinking about the production or reception of literary works alone; rather it has brought about changes in the ways in which we conceptualize larger discourses of history, colonialism, gender and ideology. The ambit of theory has further widened due to a strident inner questioning. This paper, to be seen in conjunction with Literary Theory – I, maps the subsequent development and new interrogations in the field. The collation of texts is with the intent of exposing students to later developments in the field of literary theory.The paper focuses on essays that deal with theoretical understanding of history, ideology, gender and colonialism.

Unit I

Hayden White: "Historical Text as Literary Artifact", *Tropics of Discourse: Essays in Cultural Criticism* (The John Hopkins University Press, 1986), 81-100.

Unit II

Raymond Williams, "From Reflection to Mediation" (95-100), "Dominant, Residual and Emergent" (121-127), *Marxism and Literature* (Oxford and New York: OUP, 1977)

Unit III

Judith Butler, "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory", *Theatre Journal*, Vol. 40, No. 4 (Dec., 1988), 519-531.

Unit IV

Homi Bhabha, "Of Mimicry and Man: The Ambivalence of Colonial Discourse", *October*, Vol. 28, Discipleship: A Special Issue on Psychoanalysis (Spring, 1984), 125-133

Unit V

Aijaz Ahmad, "Literary Theory and Third World Literature", *In Theory: Classes, Nations, Literatures* (London & New York: Verso, 1992) 2000 rpt. 43-71 & 327-330.

Secondary Readings

- Francis Barker, Peter Hulme, and Margaret Iverson, *Colonial Discourse/ Postcolonial Theory* (Manchester: Manchester University Press, 1996)
- Jonathan Culler, *Literary Theory: A Very Short Introduction* (Oxford: OUP, 1997)
- Lisa Disch and Mary Hawkesworth, *The Oxford Handbook of Feminist Theory* (Oxford: Oxford University Press, 2018)
- Robert Doran, *The Ethics of Theory: Philosophy, History, Literature*. (Bloomsbury Publishing, 2016)
- Leela Gandhi, *Postcolonial Theory: A Critical Introduction* (Allen & Unwin, 1998)
- Geoffrey H. Hartman, *Criticism in the Wilderness: The Study of Literature Today* (Yale: Yale University Press, 2007)
- bellhooks, *Feminism is for Everybody: Passionate Politics* (London & New York: Routledge, 2014)
- bell hooks, *Feminist Theory: From Margin to Center* (London and New York: Routledge, 2014)
- Reina Lewis, *Feminist Postcolonial Theory: A Reader* (London & New York: Routledge, 2013)
- Padmini Mongia, *Contemporary Postcolonial Theory: A Reader*. Oxford: OUP, 2000)
- Paul Sutermeister, *Hayden White: History as Narrative: A Constructive Approach to Historiography* (GRIN Verlag, 2008)
- Hayden White, *Tropics of Discourse: Essays in Cultural Criticism* (John Hopkins University Press, 1985)

Model Paper
Time: 3 hours **Total Marks 80**
Note: Attempt all questions. Each question carries 16 marks

Q. 1 Hayden White's "The Historical Text as a Literary Artefact" lays bare the relationship between the writing of history with the writing of literary texts. Explain critically.
Or
Read White's essay "The Historical Text as a Literary Artefact" as a manifesto of New Historicism.

Q. 2. Why should Raymond William entertain the category of the 'residual' in mapping the emergent discourse of culture? How does he distinguish 'residual' from 'archaic'?
Or
Critically examine William's ideas about the artistic components of the superstructure? Should art just reflect the society or can it mediate also towards its transformation?

Q. 3 Explain the concept of performativity, as foregrounded in Butler's "Performative Arts and Gender Construction".
Or
What does Butler mean by "gender construction"?

Q. 4 Explain how colonialism results in 'irony, mimicry and repetition'?
Or
Explain the ambivalence present in the colonial relationships?

Q. 5 How does Aijaz Ahmed approach postcolonial theory? Why does he resent the growth of new literary theory?
Or
Differentiate between post-colonialism and postcolonialism?

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(Semester IV)

Paper XV (Choose any one)

(1) Indian Writings (in Translation) – II

One of the most fascinating aspects of Indian life is its bewildering array of languages and sub-cultures. This diversity has been flowering since millennia and has led to profusion of writing in multiple languages. From epics like *Mahabharata*, *Ramayana*,

Bhagavad-Gita, *Panchatantra* to contemporary prose, fiction, poetry and drama, Indian languages offer a magnificent canvas of the multi-lingual, multi-cultural and multi-dimensional body of Indian Literature. However, most readers are limited to experiencing literature only from their respective regions. In the present course, an attempt is made to bridge the gap by offering an array of linguistically diverse texts in translation. A representative selection of texts from multiple genres, translated from Indian languages is curated for the Postgraduate students. Through the extra textual and critical readings, the course aims to provide a context for the contentious issues of identity and authenticity, as are presented in translated texts. This course is an opportunity for students to acquire a deeper understanding of the varied influences on the terrain of Indian writing in a tangible way. The paper consists of 5 units. There will be one question from each section with internal choice.

Unit 1 Fiction

Gurdial Singh. *Marhi da Deeva* (*The Last Flicker).* New Delhi: National Book Trust, 2017.

Unit 2 Life Writing

Urmila Pawar, *The Weave of My Life: A Dalit Woman's Memoirs*. Trans., Maya Pandit. New York: Colombia University Press. 2009.

Unit 3 Short Story/ Short Fiction

1. Prem Chand: "Kafan", "The Thakur's Well", Trans. David Rubin in *The World of Prem Chand: Selected Short Stories,* Delhi, Oxford University Press, 2001.
2. Mahashweta Devi: "Draupadi" and "The Breast Giver", Trans. Gayatri Chakarvarty Spivak. *Breast Stories*. Calcutta: Seagull, 1997.
3. Vaikom Muhammad Basheer "Walls" (47) and "The Card Sharper's Daughter" (27) both stories from *Basheer Katha Classics.* New Delhi: Katha, 1997.

Unit 4 Poetry

1. Surya Kant Tripathi Nirala: "Beggar", "Breaking Stones", from *A Season on the Earth*. Trans. David Rubin, New Delhi, Oxford University Press, 2003.
2. Faiz Ahmed Faiz: "A Letter from Prison" "Don't Ask Me for that Love Again" , " A Prison Daybreak." available in *The Rebel's Silhouette* Trans. Agha Shahid Ali. New Delhi: OUP, 2005.
3. Namdeo Dhasal. "Hunger" from *Poet of the Underworld*. Delhi: Narayana, 2007.

Unit 5 Play

Girish Karnad: *Tughlaq.* New Delhi: Oxford University Press, 2005.

Suggested Reading:

- Meenakshi Mukherjee, *Reality and Realism: The Novel and Society in India*, "From Purana to Nutana" (Oxford University Press, 1994).
- K. Satchidanandan, *Indian Literature: Position and Propositions* (Pencraft,1999).
- Sisir Kumar Das, ed. *History of Indian Literature*, Vol I-X (Sahitya Akademi,1995).
- Priya Joshi, *In Another Country* (Oxford University Press, 2002).
- K M George, *Comparitive Indian Literature* (Macmillan,1984).
- Ananda Lal, ed. *Theatres of India: A Concise Companion* (Oxford University Press, 2009).
- G. N. Devy,*Indian Literature in English Translation*, Vol. 28, issue 1, pg 123-38, The Journal of Commonwealth Literature, March 1, 1993.
- G. N. Devy, *After Amnesia* (Orient Longman,1992).
- A.K. Mehrotra, ed. *An Illustrated History of Indian Literature in English*, (Permanent Black/Orient Longman, 2003).
- Sheldon I. Pollock, ed. *Literary Cultures in History: Reconstructions from South Asia* (University of California Press, 2003).
- Tutun Mukherjee, ed. *Girish Karnad's Plays: Performance and Critical Perspective* (New Pencraft, 2008).
- Sujit Mukherjee, *A Dictionary of Indian Literature: Beginnings-1850,*(Orient Blackswan, 1990).
- Susie Tharu and K. Lalitha, ed. *Women Writing in India 600 B.C. to the Present*, 2 volumes (Oxford University Press, 1995).
- Tabish Khair, *Babu Fictions: Alienation in Contemporary Indian English Novels* (Oxford University Press, 2001)
- Aijaz Ahmed, *In Theory: Classes, Nations, Literatures* (Verso, 1992)
- Aparna Dharwarkar, *Theatres of Independence: Drama, Theory, and Urban Performance in India Since 1947* (University of Iowa Press, 2005)

Model Paper

Q. 1 Discuss the role of Jagseer in Gurdial Singh's *Marhi da Deeva* (The Last Flicker).
Or
Bring out the elements of realism in Gurdial Singh's *Marhi da Deeva* (The Last Flicker).

What are the distinctive features of Dalit autobiography? How does it differ in case of a woman Dalit autobiographer?

Or

How does Urmila Pawar describe her childhood in her autobiography *The Weave of My Life*? How does it differ from average Indian childhood?

How does Prem Chand's realism take a new turn in his story "Kafan"? Explain Or

Basheer mixes humour with pathos. Discuss the art of his story-telling in this context.

How do Nirala and Faiz combine progressive ideals with those of romanticism in their poems?

Or

Namdeo Dhasal's "Hunger" forges an altogether new aesthetics of realism. Discuss and explain through relevant quotes from the poem.

Tughlaq is a political allegory, relevant for all times. Discuss. Or

In Girish Karnad's plays, the minor characters add to the conflicts of the protagonist. Explain this statement in the context of the play *Tughlaq*.

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(2) Cultural Studies – IV

Cultural Studies as an interdisciplinary enterprise draws its theoretical impetus largely from the practices of Frankfurt and Birmingham of Cultural Studies. Indian culture however has its own specificities and distinct configurations. Its approaches to culture too are very different and therefore have their own compelling indigenous frameworks. Right from Vedanta to bhakti period, and then from Gandhism to Ambedkarism, there is a vast array of cultural approaches, which demand critical attention. Various cultural regions within India too have their own aesthetic poetics and ethical viewpoints. The paper focuses on the study of some of the key Indian cultural concepts/ approaches such as *bhakti*, *swaraj* and *bhasha*. The prescribed texts include seminal texts like Gandhi's *Hind Swaraj* and Ambedkar's *Annihilation of Caste*. One unit has been devoted to Mumbai-based Indian film culture to understand the dynamics of popular entertainment in the native context.

Unit I ***Yoga***

1. Patanjali, "Book I: *Samadhi Pada*", *Yoga Sutra*, trans. Shyam Ranganathan (Penguin Classic, 2008)

Unit II ***Bhakti***

1. A.K.Ramanujan, "Varieties of Bhakti", *The Collected Essays of A.K.Ramanujan* (OUP, 1999) 324-331.
2. Arundhathi Subramanium, "Introduction" to *A Book of Bhakti Poetry: Eating God* (Penguin Ananda, 2014) ix-xxviii

Unit III ***Swaraj***

1. Gandhi, *Hind Swaraj*, ed. Anthony J Parel, (Cambridge University Press, 1997)

Unit IV **Caste**

1. B.R. Ambedkar, "Annihilation of Caste", *The Doctor and the Saint*. Ed Arundhati Roy, (Heymarket Books, 2017)
2. Manifesto of Dalit Panthers available atshodhganga.inflibnet.ac.in/bitstream/10603/14528/15/15_appendicies.pdf
3. Arjun Dangle, ed. *The Corpse in the Well*: Translations from Modern Marathi Dalit Autobiographies (Disha Books: 1992) 13-51.

Unit V **Bollywood**

- Ravi Vasudevan, "The Contemporary Film Industry-I: The Meanings of 'Bollywood", *The Melodramatic Public* (Permanent Black, 2010) 334-361.
- Vijay Mishra, "Melodramatic Staging", *Bollywood Cinema: Temples of Desire* (Routledge, 2012) 35-60.

Suggested Readings

- Tejaswini Ganti, *Bollywood: A Guidebook to Popular Hindi Cinema* (Routledge, 2004).
- Ajay Gehlawat, *Twenty-First Century Bollywood*, (Routledge, 2015).
- Anthony G. Parel (ed.), *Gandhi: 'Hind Swaraj' and Other Writings*, (Cambridge University Press, 1997).
- John Stratton Hawley, *Three Bhakti Voices: Mirabai, Surdas, and Kabir in Their Time and Ours*, (Oxford UP, 2005).
- Karen Pechilis Prentiss, *The Embodiment of Bhakti*, (Oxford University Press, 2000).
- Raghuramaraju, *Debating Gandhi: A Reader* (Oxford University Press, 2010).
- Akeel Bilgrami, "Gandhi, the Philosopher." *Economic and Political Weekly* (September 27, 2003), pp 4159-4165.
- Gopal Guru and Sundar Sarukkai, *The Cracked Mirror: An Indian Debate on Experience and Theory* (OUP, 2012).

- Ashis Nandy, *The Secret Politics of Our Desires: Innocence, Culpability, and Indian Popular Cinema* (Zed, London, 1999).
- Rajinder Kumar Dudrah, *Bollywood: Sociology Goes to the Movies* (Sage, 2006).
- Amartya Sen, *The Argumentative Indian* (Penguin, 2005).
- Sunil Khilnani, *The Idea of India* (Penguin, 1997).
- Rana Nayar, Pushpinder Syal, Akshaya Kumar (eds.), *Cultural Studies in India* (Routledge, 2017).
- A.L. Basham, (ed), *A Cultural History of India* (OUP, 1975)
- Ziauddin Sardar and Jerome Ravetz, *Cyberfutures: Culture and Politics on the Information Superhighway* (Pluto Press, London, 1966).
- Kavita Panjabi (Eds.), *Poetics and Politics of Sufism and Bhakti in South Asia: Love, Loss and Liberation* (Orient Blackswan 2011
- Shakuntala Banaji, *Reading 'Bollywood': The Young Audience and Hindi Films*, (Palgrave Macmillan, 2006).
- Sujatha Gidla, *Ants Among Elephants: An Untouchable Family and Making of Modern India*, (Macmillan, 2017).
- Tejaswini Ganti, *Bollywood: A Guidebook to Popular Hindi Cinema*, (Routledge, 2004).
- U.R. Ananthamurthy, *Hindutva or Hind Swaraj*, (Harper Collins India, 2016).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How does Patanjali define Yoga? Use your reading of the first chapter of Yoga Sutras to answer your question.

Or

What are the stages of samadhi? Is *Nirvikalpa Samadhi* possible without desires?

Q. 2 What is Bhakti? What is the relation between *bhakti* and *prem* as described in *The Collected Essays* of A. K. Ramanujan?

Or

Why does Arundhati Subramaniam prefer to describe bhakti hymns as "poems"?

Q. 3 What are Gandhi's views on education in *Hind Swaraj*?

Or

Discuss Gandhi's *Hind Swaraj* as first serious attempt towards the formulation of self-rule.

Q. 4 What kind of comparison does Arundhati Roy set up between Ambedkar and Gandhi in her extended Introduction to *Annihilation of Caste?*

Or

What are the key arguments of Ambedkar's *Annihilation of Caste*?

Q. 5 What does it mean to say Indian movies are melodramatic? Discuss in relation to The *Melodramatic Staging.*
Or
What role has cinema played in the emergence of new economic forms, consumer cultures and digital technologies in a globalising India in *Bollywood Cinema: Temples of Desire*?

(3) Shakespeare – II

Shakespeare, the Bard of Avon, looms large as a dominant, if not hegemonic, presence in the domain of English Studies. His plays have withstood the test of time in terms of their reception across cultures. Critics have subjected his plays to multiple interpretations, but what has really lent a resounding after-life to Shakespeare is the growing corpus of multiple re-writings of his plays. The emerging matrices of race, gender and nationalism have often led creative writers, theatre artists and film directors to re-fashion, re-contextualize and re-write his plays in alternative ways. These alternative ways at times take radical subversive turn as lead characters stand reduced into marginal ones and the absent characters emerge from nowhere to displace the iconic ones. The paper, an extension of Shakespeare- I, semester III, intends to introduce students to some more re-written plays of the great playwright along with the originals ones to underscore the ever-expanding discourse of Shakespeare in contemporary times.

Unit I

Daniel Fischlin and Mark Fortier "General Introduction", *Adaptations of Shakespeare: A Critical Anthology of Plays from the Seventeenth Century to the Present*. (New York: Routledge), 2000.1-22. Print.

Unit II

William Shakespeare, *King Lear*, Stanley Wells, ed. (Oxford University Press, 2000). Print.

Unit III

Jane Smiley, *A Thousand Acres: A Novel*, (Anchor Books, 2003). Print.

Unit IV

William Shakespeare, *The Tragedy of Hamlet: Prince of Denmark*, Sylvan Barnet, ed. (Penguin Books, 2006). Print.

Unit V

Tom Stoppard, *Rosencrantz and Guildenstern are Dead*, (Grove Press, 2007). Print.

Suggested Readings:

- Rob Nixon, Caribbean and African Appropriations of "The Tempest", *Critical Inquiry*, Vol. 13, No. 3, Politics and Poetic Value (Spring, 1987), pp. 557-578. Print.
- Jonathan Goldberg, *Tempest in the Caribbean* (University of Minnesota Press, 2003). Print.
- Carroll, Rachel, ed. *Adaptation in Contemporary Culture: Textual Infidelities*. (London: Continuum International Publishing Group, 2009). Print.
- Ben Okri, *A Way of Being Free*. (London: Phoenix House, 1998). Print.
- Jon Drakakis, ed. *Alternative Shakespeares*. (Routledge, 1985). Print.
- Peter Hume and William H Sherman, eds. *'The Tempest' and Its Travels*. (Reaktion Books, London, 2000). Print.
- Terence Hawkes, ed. *Alternative Shakespeares*. Vol 2. (Routledge, 1996). Print.
- Fischlin, Daniel, and Mark Fortier, eds. *Adaptations of Shakespeare: A Critical*
- *Anthology of Plays from the Seventeenth Century to the Present*. (London:
- Routledge, 2000). Print.
- Stephannie S. Gearhart, "Lear's Daughters, Adaptation and the Calculation of Worth", *Borrowers and Lenders*, (7.2, Fall/Winter 2012). Web.
- Roshni Mooneeram, *From Creole to Standard: Shakespeare, Language, and Literature in a Postcolonial Context*. (New York: Rodopi, 2009). Print.
- Lynne Bradley, *Adapting King Lear for the Stage*. (Burlington: Ashgate, 2010). Print.
- Sarah Hatchuel, *Shakespeare, From Stage to Screen*, (Cambridge: Cambridge University Press, 2004). Print.
- Julie Sanders. *Adaptation and Appropriation*. (New York: Routledge, 2006). Print.
- Gordon Bottomley, *King Lear's Wife*, Paul R. Reynolds, (New York, 1915). Print.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1Is it possible to distinguish the writer Shakespeare from the writing effect that is Shakespearean?

Or

'Desdemona: A Play about a Handkerchief' presents a woman's world. Elucidate.

'In *King Lear* the good characters are imaginative and the evil characters are coolly rational.' Do you agree with this view?

Or

To what extent is *King Lear* a play about sacrifice?

Q. 3 What is it that provides *A Thousand Acres* with its autonomy despite its borrowed plot and characters?

Or

Which of the issues explored in *A Thousand Acres* are unique to rural life in America? What does the novel reveal about variations and consistencies in the so-called American character?

Q.4. There are several soliloquies within the play*Hamlet*, most of them by Hamlet. What do you consider to be the function and nature of Hamlet's soliloquies?

Or

Shakespeare was himself a man of the theatre. Why, and with what effects, do you think he introduces players and the play-within-a play in Hamlet?

Q. 5. How would you characterize Rosencrantz and Guildenstern – existential heroes or anti-heroes?

Or

Comment on the theme of absurdity in *Rosencrantz and Guildenstern are Dead.*

(4) English Language Teaching (ELT)

Objective: The paper is designed to give a complete grounding in ELT for a student and would-be teacher. The goal is to give an understanding of the major aspects of the

field. The classroom aspect of the course will focus more on the application of the learnt principles rather than the memorization of theoretical aspects.

Testing: The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in ELT and not just the memorization of principles and techniques. There should be questions of a practical nature that demand the creation of syllabi or selection of methodology for a particular classroom. Each question shall have internal choice with one option that will be theory-based and the other application-based, wherever possible. Each question is to be answered in 400-500 words. The paper shall carry a total of 80 marks.

Unit I

- Approaches and methods in language teaching: Difference between approach and method. Methods and approaches: Direct, Grammar Translation, Audio-lingual, Structural-situational, Communicative Language Teaching and the Communicative Approach. The future of methods.
- Jack C. Richards: *Curriculum Approaches in Language Teaching: Forward, Central and Backward Design* RELC Journal 44(1) 5–33 © The Author(s) 2013 Reprints and permission: sagepub.co.uk/journals Permissions.nav DOI: 10.1177/0033688212473293 rel.sagepub.com

Unit II

- Brief Historical overview of English Language Teaching with reference to the Problematic of Teaching English in India .Pre and Post Independence Language Policies, Multilingualism, mother tongue influence and choice of a model for teaching.
- V.Saraswathi: *English in India* in *English Language Teaching: Principles and Practice* by V.Saraswathi, Orient Longman ELT 2006, Hyderabad. Available as PDF online.

Unit III

- Approaches to teaching Skills: LSRW, vocabulary and grammar at primary, secondary and tertiary/ advanced levels. Practical exercises in each of the skill

areas. Making a language syllabus: needs analysis. Teaching of English for specific purposes.

- West, R. (1994). *Needs analysis in language teaching. Language Teaching, 27*(1), 1-19. doi:10.1017/S0261444800007527

Unit IV

- Testing Language: Principles, relationship between teaching and testing, wash back effect and purposes of tests. Evaluation: Criteria, grading and determining levels of proficiency.
- Alan Davies. Introduction. *Fifty Years of Language Assessment.* Vol I https://doi.org/10.1002/9781118411360.wbcla127

Unit V

- Test types and task formats; written (paper and pencil), oral tests and performance tests; Selection and supply type task formats, (problem of stems and distracter in multiple choice items); Discrete point and integrative tests; tests of extended writing /speaking, mixed skills and interaction in dyadic and group settings; special test types: Cloze, C-test, portfolio assessment, meta-linguistic ability tests.
- J. Charles Anderson and Jayanti Banerjee, *Language and Assessment Part I,*http://www.research.lancs.ac.uk/portal/en/publications/language-testing-and-assessment-part-1(b5195a1f-15f0-4b94-9378-d6a19dc0c4a4).html

SUGGESTED READINGS:

- *Communicative language Teaching Today* https://scholar.google.co.in/scholar?cluster=8799637161368943712&hl=en&as_sdt=0,5&sciodt=0,5
- https://www.professorjackrichards.com/wp-content/uploads/Richards-Communicative-Language.pdf
- *Approaches and Methods in Language Teaching* ,Jack.C. Richards and Theodore S. Rodgers, Third Edition, Cambridge Language Teaching Library, ISBN-13: 978-1107675964

- *Testing for Language Teachers*, Arthur Hughes, Cambridge Language Teaching Library ISBN 9780511732652
- *Teaching and Learning English: A Sourcebook for Teachers and Teacher-trainers* , M.L.Tickoo,Orient Longman 2003, ISBN 9788125023074
- *The Story of English in India* Krishnaswamy, N., &Krishnaswamy, L. (2006).. Foundation Books.
- *A Basic Introduction to English Language Teaching* Ray Mackay. ISBN: 9780199457625.
- *Teaching and Learning English* MLTickoo.. ISBN: 9788125023074
- *English Language Teaching in India: The Shifting Paradigms* SPDhanavel.. ISBN: 9780071333283
- *The Practice of English Language Teaching.* Jeremy Harmer. ISBN: 978-1447980254
- *Teaching English As A Second Language: A New Pedagogy for A New Century* Manish A. Vyas, Yogesh A. Patel.. ISBN: 978-8120351523.

MODEL PAPER

MM: 80 Time: 3hrs.

I. Explain the difference between approach and method, giving examples to illustrate.

OR

Design five lesson plans based on the Direct Method, in order to teach English to a group of six -year old students who have not been exposed to the language.

II. Briefly describe the trajectory of language policy in India since the British Rule.

OR

Write a brief essay on the multilingual aspects of Indian society and how they affect pedagogic decisions.

III. What is ESP and how does it relate to needs analysis?

112.

OR

Give an outline of a curriculum you will create for a group of blue collar adult employees who need to learn Spoken English.

IV. Give a brief critical description of the basic principles of test design.

OR

What is the wash back effect? Is it important in a language classroom?

V. Attempt a critical description of the types of tests used in language assessment.

OR

Design a test for assessing the English language proficiency of a group of students who are doing post graduation in English Literature.

Paper XVI (Choose any one)

(1) Postcolonial Literatures – II

Scope: In this semester, students will move on to examining more contemporary essays and texts, ranging from issues of history-writing to hybridity, from decolonization to rapidly globalizing third-world economies, and finally to blackness, terror and migration. It will consider how postcolonialism has changed its agendas, having migrated to the United States by transcending national boundaries.

Aims: This course attempts to move beyond an introductory study of colonialism/postcolonialism to focus on the enormous minefield Postcolonial Studies has become. It will probe whether the discipline maintains links with the literature of dissent and resistance examined in Semester I. This course will endeavour to both analyse the meanings and implications of postcolonialism today as well as critique the discipline and interrogate its wide-ranging scope. Each unit has a list of reference books students are advised to study.

Method of Testing: The course has five units. Each unit is so designed that it contains one critical introductory essay on the history or politics of colonialism/postcolonialism along with a corresponding novel, play, collection of poems or prose essay. The paper will have five compulsory questions – one from each unit, and each question shall have internal choice. It is recommended (though not necessary) that questions be based on the integration between theory and the corresponding text in each unit in order to encourage theory-based preparation of the text. The paper carries 80 marks.

There shall be one context-based question of 20 marks in which the candidate shall have to attempt four out of six short notes, to be answered in 200 words each. The notes are likely to cover a range of terms/concepts/trends/movements specific to the course, and may be author or text-based.

Unit I Hybridity and Diaspora

1. Robert J. C. Young, "Hybridity and Diaspora", *Colonial Desire: Hybridity in Theory, Culture and Race*. London and New York: Routledge, 1995: 1-28.
2. Jean Rhys: *Wide Sargasso Sea*. London: Penguin, 1968.

Unit II Gender, Subalternity and Marginality

1. Sharmila Rege, "The Significance of Dalit Testimonios", *Writing Caste/Writing Gender: Narrating Dalit Women's Testimonies*. New Delhi: Zubaan, 2006.
2. Bama, *Karukku*. Trans. Lakshmi Holmstrom. New Delhi: Oxford India Paperbacks,1992.

Unit III Race and Counterculture

1. Paul Gilroy, "The Black Atlantic as a Counterculture of Modernity." *The Black Atlantic*, Cambridge, Mass: Harvard University Press, 1994: 1-40.
2. Toni Morrison, *Beloved*. New York: Knopf, 1987.

Unit IV Globalization

1. Eduardo Galeano, "Introduction: 120 Million Children in the Eye of the Hurricane", *Open Veins of Latin America: Five Centuries of the Pillage of a Continent*, trans. Cedric Belfrage. New York: Monthly Review Press, 1977: 1-8.
2. Margaret Atwood, *Surfacing*. Canada: McClelland and Stewart, 1972.

Unit V Post 9/11 Writing

1. Samuel P. Huntington, "The Clash of Civilizations?" *Foreign Affairs*, Vol. 72, No. 3 (Summer 1993): 22-49.
2. Mohsin Hamid, *The Reluctant Fundamentalist*. Harmondsworth: Penguin, 2008.

Suggested Readings

- Arjun Dangle (ed.), *Poisoned Bread* (Selected poems). Hyderabad: Orient Blackswan, 2009.
- Bill Ashcroft, *Post-Colonial Transformations*. London: Routledge, 2001.

- Chakravarti, Uma (1993) " Conceptualising Brahmanical Patriarchy in Early India: Gender, Caste, Class and State", *Economic and Political Weekly*, April 3, 579-85.
- Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference*. New Jersey: Princeton University Press, 2000.
- Elleke Boehmer, *Empire, the National and the Postcolonial*. Oxford: Oxford University Press, 2002.
- Gayatri Chakravorty Spivak, 'Can the Subaltern Speak?: Speculations on Widow Sacrifice', in Cary Nelson and Lawrence Grossberg (eds.), *Marxism and the Interpretation of Culture* (London: Macmillan, 1988), 271-313.
- Gopal Guru, " Dalit Women Talk Differently", *Economic and Political Weekly*, October 14-21, 1995: 2548-49.
- Henry Louis Gates(ed.),*Black Literature and Literary* Theory. London: Methuen, 1984.
- Iliah, Kancha, *Why I am not a Hindu : A Shudra Critique of Hindutva Philosophy, Culture and Political Economy*. Calcutta: Samya, 1996.
- Lazarus, Neil (ed.), *The Cambridge Companion to Postcolonial Literary Studies*. Cambridge: Cambridge University Press, 2004.
- Ngugi wa Thiong'o, *Decolonizing the* Mind. London: James Currey, 1986.
- Partha Chatterjee, *Nationalist Thought and the Colonial* World. London: Zed, 1986.
- Paul Gilroy, "There Ain't no Black in the Union Jack: The Cultural Politics of Race and Nation." London: Hutchinson, 1987.
- Robert J. C. Young, *White Mythologies: Writing History and the West*. London: Routledge, 1992.
- Robert J. C. Young, *Empire, Colony, Postcolony*. Oxford: Wiley Blackwell, 2015.
- Sharmila Rege, *Against the Madness of Manu: B.R. Ambedkar's Writings on Brahmanical Patriarchy*, New Delhi: Navyana, 2013.
- Talal Asad (ed.), *Anthropology and the Colonial Encounter*, New Jersey: Humanities Press, 1995.

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1How does Robert J.C. Young problematize 'Englishness' in the essay "Hybridity and Diaspora"?

Or

Antoinette Cosway is Rhys' version of Bronte's devilish "madwoman in the attic". Explain.

Q. 2. How do the concepts of caste and gender intersect in Sharmila Rege's *The Significance of Dalit Testimonies?*
Or
Discuss the ways in which Bama brings up the plight of subaltern and marginal in *Karukku.*

Give a critical summary of *The Black Atlantic as a Counterculture of Modernity* by Paul Gilroy.
Or
Discuss the treatment of 'race' in Toni Morrison's *Beloved.*

Why does Eduardo Galeano describe Latin America as a region of "open vein"? Or
Explain how globalization plays an important role in the plot construction of Margaret Atwood's *Surfacing*.

Give a critical commentary on Samuel P. Huntington's *The Clash of Civilizations?* Point out the limitations of his theory.
Or
"Yes, despicable as it may sound, my initial reaction was to be remarkably pleased." Explain what made Changez give this statement in Mohsin Hamid's *The Reluctant Fundamentalist.*

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(2) New Media Writing (Practice) – II

The course intends to explore the emerging relationship between New Media and writing. New media is an umbrella term used for various kinds of electronic communications that are conceivable due to innovation in computer technology.The 'old' media largely consisted of newspapers, magazines, books, television and other such non-interactive media; the new media includes websites, online video/audio streams, email, online social platforms, online communities, online forums, blogs, web advertisements, online education and much more. The students will gain perspective on the cultural uses and practices of writing since the development of literacy 2700 years ago through a reading and discussion of conceptual essays and new media texts. In the course the emphasis is on the genres of new media literature/ writing.The course is divided into five units. Each unit consists of essays on various aspects of the writing practices in new media. The students are expected to study the prescribed texts closely. The students are also expected to study books and articles

mentioned in the suggested readings to enhance their understanding of the primary texts, but there will be no question on the suggested readings. The paper shall consist of five compulsory questions – one each from a unit. Each question shall however have internal choice. The paper shall carry a totalof 80 marks.

Unit I

1. N. Katherine Hayles, "Electronic Literature: What is It?",*Electronic Literature: New Horizons for the Literary* (Notre Dame: University of Notre Dame Press, 2008) 1-42.
2. Roger Filder, "the mediamorphic role of language",*Mediamorphosis: Understanding New Media* (Thousand Oaks, California, New Delhi & London: Pine Forge Press, 1997) 53-80.

Unit II

1. George P. Landow. "Reconfiguring Narrative", *Hypertext 3.0: Critical Theory and New Media in an Era of Globalization*(Baltimore: John Hopkins University Press, 1992) 2006 Ed. 215-271.

Unit III

1. Bronwen Thomas, "140 Characters in Search of a Story: Twitterfiction as an Emerging Narrative Form", *Analyzing Digital Fiction*. Eds. Alice Bell, Astrid Ensslin and Hans Kristian Rustad (London & New York: Routledge, 2014) 94-108.
2. Chindu Sreedharan. "Arjuna's Day", *Epic Retold: Mahabharata #Twitterfiction #Bhima # 140 Characters* (HarperCollins *Publishers*India, 2014). 63-69.

Unit IV

1. Eric Vos, "Media Poetry – Theories and Strategies", *New MediaPoetry*. Ed.Eduardo Kac. 199-212.
2. (i) Camille Utterback and Romi Achituv "Text Rain", http://camilleutterback.com/vitae/statement/
   (ii) Robert Kendall, "Faith", http://www.wordcircuits.com/faith/title_page.htm
   (iii) Emmett Williams, "Like Attracts Like", http://www.bestlibrary.org/murray/files/EWilliams_Like_Attracts_Like.pdf

Unit V

1. Diana M. Lewis, "Online News: A New Genre?",*New Media Language*. Eds Jean Aitchison and Diana M.Lewis (London and New York: Routledge, 2003) 95-104.
2. Sarah Pedersen, "What is a blog?" from Introduction to Why Blog? Motivation for Blogging (Oxford, Cambridge, New Delhi: Chandos Publishing, 2010) 3-5.
3. David Gauntlett, "Case Study: Wikipedia" *Digital Cultures: Understanding New Media*. Eds Glen Creeber and Royston Martin (McGraw Hill, Open University Press, 2009) 39-45.
4. Naomi S. Baron, "Why email looks like speech: Proofreading, pedagogy and public face", *New Media Language*. Eds Jean Aitchison and Diana M.Lewis (London and New York: Routledge, 2003) 85-9

Suggested Readings

- Ed Folsom, "Database as Genre: The Epic Transformation of Archives", *PMLA*, Vol. 122, No. 5, Special Topic: Remapping Genre (Oct., 2007), pp. 1571-1579
- Greg Myers. "Genre: What is a blog? What is a wiki?",*Discourse of Blogs and Wikis* (London & New York: Continuum International Publishing Group, 2010) 15-27
- Jodi Dean, "The Death of Blogging", *Blog Theory: Feedback and Capture in the Circuits of Drive* (Malden & Cambridge: Polity, 2010) 33-60.
- Dhiraj Murthy, *Twitter: Social Communication in the Twitter Age* (Cambridge & Malden: Polity, 2013), 1-50.
- Kevin Stein, "A Digital Poetry *Play*list: Varieties of Video and New Media Poetries", *Poetry's Afterlife: Verse in the Digital Age* (California: University of Michigan Press, 2010) 114-137.
- Richards Roger, "Debanalising Twitter: The Transformation of an Object of Study" *Twitter and Society*. Eds. Katrin Weller, Axel Bruns, Jean Burgess, Merja Mahrt, & Cornelius Puschmann (New York, Oxford et al: Peter Lang, 2014) ix-xxvi.
- Harold Innis. *Empire and Communications*. Chapters 4, 6-7. Toronto: Dundurn Press, 2007.
- Steven Shapin. "What Else Is New?" *The New Yorker*, May 14, 2007.
- Merritt Roe Smith and Leo Marx, *Does Technology Drive History?* (Cambridge, MA: MIT Press, 1994)
- Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991)
- N. Katherine Hayles, *How We Became Posthuman* (Chicago: University of Chicago Press, 1999)
- Julian Orr. *Talking About Machines: An Ethnography of a Modern Job* (Ithaca, NY: Cornell University Press, 1996)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 What are the challenges of Electronic Literature?
Or
How does Roger Filder apply the principles of mediamorphosis to understand the development of new media?

Q. 2 Digital manifestation of scholarly output requires us to rethink how we present scholarly narratives in light of the 'stylistics of digital scholarship'. Enunciate through your reading of Landlow's "Reconfiguring Narrative".
Or
Comment on visual structuring of hyperfiction narratives in light of Landlow's "Reconfiguring Narrative".

Q. 3 "It is possible to distinguish between Twitter fictions in which the story is contained within one tweet and those that take a serialized form by continuing over a longer series of tweets". Explain.
Or
Explore Chindu Shreedharan's invention of a new generic form to wrap up his narrative to suit the mood of the readers of the 'twitter generation', with reference to the text prescribed in the syllabus.

Q. 4 How does neoconcrete poetic art reassert itself in the domain of new media? Illustrate with examples from Eric Voss's Media Poetry.
Or
Comment on Avant-Gardism in new media poetry with reference to the texts prescribed in your syllabus.

Q. 5 Comment on how online news has changed the flood of information.
Or
How does Wikipedia embody the essence of web 2.0?

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(3) World Literature in Translation – II

This course would help the students understand the concept of world literature. It is designed around modern canonical texts and offers an opportunity to widen one's literary horizons, encourage a comparative perspective, and inculcate an awareness of the best in world literature.

Unit I Theory

1. Selected chapters from *World Literature in Theory* by David Damrosch, 2014 ("World Literature in Theory and Practice," "Conversations with Eckermann on Weltliteratur 1827" and "What is World Literature").

2. Franco Moretti, "Conjectures on World Literature", *Debating World Literature,* Christopher Pendergast, ed. (Verso, 2004, pp 148-163).

Unit II Non-Fiction

1. M.K. Gandhi, *The Story of My Experiments with Truth* (Maple Press, 2011).

Unit III Play

1. Bertolt Brecht, *Mother Courage and her Children.* (Bloomsbury Academic, 2009).

Unit IV Novel

1. Gabriel Garcia Marquez, *One Hundred Years of Solitude* (Harper, 2003).

Unit V Poetry

1. Pablo Neruda: 'A Song of Despair,' 'Enigmas' 'Brown & Agile Child' [*The Poetry of Pablo Neruda* (Farrar, Straus and Giroux, 2005)]. Also available onlne.
2. Octavio Paz: 'A Tree Within,' 'No More Cliches' 'Tomb of Amir Khusru' [*Collected Poems of Octavia Paz*, (New Directions; Bilingual ed. edition, 1991)]. Also available online.
3. Joseph Brodsky: 'Elegy,' Odysseus to Telemachus,' 'Folk Tune' [*Collected Poems in English* (Farrar, Straus and Giroux, 2002)]. Also available online.
4. CP Cavafy: "Waiting for the Barbarians," "Ithaka," "The City", [*C.P. Cavafy: the Collected Poems* (Oxford World's Classics, 2007).
5. Anna Akhmatova: "He Did Love," "You will hear Thunder," "Lot's Wife", [Available online at<https://www.poemhunter.com/poem/he-did-love>, <https://www.poets.org/poetsorg/poem/lots-wife>, and <https://www.poemhunter.com/poem/you-will-hear-thunder/comments/>]

Suggested Readings

- Alexander Beecroft, *An Ecology of World Literature: From Antiquity to the Present Day* (Verso, 2015).
- Bede Scott, *On Lightness in World Literature* (Palgrave Macmillan US, 2013).
- Brenda Deen Schildgen,Gang Zhou,Sander L. Gilman, *Other Renaissances: A New Approach to World Literature* [First Edition] (Palgrave Macmillan, 2006).
- Christopher Prendergast, Benedict Anderson, Emily Apter, Stanley Corngold, Nicholas Dew, Simon Goldhill, Stephen Heath, Stefan Hoesel-Uhlig, Peter Madsen, Franco Moretti, Francesca Orsini, Timothy J. Reiss, Bruce Clunies

Ross, Elisa Sampson Vera Tudela, John Sturrock, *Debating World Literature*, 2004.

- David Damrosch, *What Is World Literature?* (Princeton University Press, 2003).
- Gene H. Bell-Villada (ed.), *Gabriel García Márquez's One Hundred Years of Solitude: A Casebook* (Oxford University Press, 2002).
- Harold Bloom(ed.) *Pablo Neruda* (Chelsea House Pub,1989).
- John. M. Fein, *Toward Octavio Paz: A Reading of His Major Poems, 1957-1976* (The University Press of Kentucky, Reprint edition, 30 July 2014).
- Meg Mumford, *Bertolt Brecht- Routledge Performance Practitioners* (Routledge, 2009).
- Pheng Cheah, *What Is a World? On Postcolonial Literature as World Literature* (Duke University Press Books, 2016).
- Philip Swanson (ed.), *The Cambridge Companion to Gabriel García Márquez* (Cambridge University Press, 2010).
- Sarah Brouillette, Mathias Nilges, Emilio Sauri (eds.), *Literature and the Global Contemporary* (Palgrave Macmillan, 2017).
- Susan Amert*In a Shattered Mirror: The Later Poetry of Anna Akhmatova* (Stanford University, 1992).
- Theo D'haen, *The Routledge Concise History of World Literature* (Routledge, 2011).
- Theo D'haen, César Domínguez, Mads Rosendahl Thomsen, *World Literature: A Reader* (Routledge, 2012).
- Walkowitz, Rebecca L, *Born translated: the contemporary novel in an age of World literature* (Columbia University Press, 2015).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1. Close-reading constricts our perspective of the canon. Franco Moretti's "Conjectures on World Literature" points towards a different kind of reading. Comment.

Or

Critically examine how the emerging global perspectives have challenged the Euro-centric notions of world literature.

Q. 2 M.K. Gandhi's *My Experiments with Truth* is more spiritual than historical.

Or

Discuss *My Experiments with Truth* as an autobiography of Gandhi.

Q. 3 Bertolt Brecht breaks the fourth wall in *Mother Courage and her Children* as a means to awaken political consciousness of the audience. Critically comment.

Or

Discuss Brecht's *Mother Courage and her Children* as an anti-war play.

Q. 4 History and time are integral aspects of *One Hundred Years of Solitude*. Critically comment.

Or

Marquez's magic realism is exemplary in *One Hundred Years of Solitude*. Critically comment.

Q. 5 Pablo Neruda was a poet actively involved in social change. Discuss critically with reference to his poems in your syllabus.

Or

Discuss the role of history and myth in shaping the poetic idiom with reference to poems of any two poets in your syllabus.

(4) Literature and Ecology—II

Literary imagination has always been propelled by the vistas of physical environment. However, with the environmental exigencies impinging upon us in the present, the relationship/correspondence between literature and environment gains special significance. This paper introduces students to how nature or environment has been conceived in various genres (such as fiction, poetry and creative non-fiction, etc.) by creative writers from India in the contemporary period. The paper will acquaint students to various theoretical debates and positionings vis-à-vis the interdisciplinarity of literature, ecology and environmentalism which include notions of nature/environment/*prakriti*, eco-criticism, postcolonial ecocriticism, eco-feminism, sense of place, deep ecology, Gaia, environmental humanities, nature-culture, biopolitics, Anthropocene, eco-poetry, eco-fiction, toxic discourse, etc. The effort is to provide the students an understanding of the increasing dissonance in the relationship of human beings with their environment as well as to explore the possibilities of sensitizing them towards mending it.

Unit I Poetry

1. Kedarnath Singh, "The Carpenter and the Bird", "The History of Nests" & "Cranes in the Drought", *Benaras and Other Poems*, ed. K.Satchidanandan (Delhi: Sahitya Akademi, 2015)
2. O.N.V. Kurup poems, "In the Woods" [Indian Literature, Vol. 44, No. 5 (199) (Sep-Oct, 2000)] and "A Requiem to Mother Earth" [*The Oxford Indian Anthology of Modern Malayalam Literature Vol. 1,* edt. by P.P. Raveendran vbcand G.S. Jayasree (New Delhi: OUP, 2017)].
3. Mamang Dai poems, "The Voice of the Mountain", "The Sorrow of Women", and "An Obscure Place" [*The Oxford Anthology of Writings from North-East India: Poetry and Essays* edt. by Tilottoma Misra (New Delhi: OUP, 2011)].

Unit II Short fiction

1. A. K. Ramanujan, "A Flowering Tree" from *A Flowering Tree and Other Oral Tales from India* (New Delhi: Penguin Books, 2014), pages 53-62.
2. Manoj Das, "The Submerged Valley" from *Selected Fiction* (New Delhi, Penguin Books, 2001), pages 87-95.
3. Mahasweta Devi, "The Hunt" from *Imaginary Maps* trans. by Gayatri Charavorty Spivak (London: Routledge, 1994).

Unit III Play

1. Rabindranath Tagore – *Mukta-dhara* from *Three Plays* trans. by Marjorie Sykes (London OUP, 1950), pages 1-81.

Unit IV Fiction

1. Indra Sinha, *Animal's People* (London: Simon & Schuster, 2007)

Unit V Non-fiction

1. Amitav Ghosh, *Countdown,* pages 1-35 (Delhi: Ravi Dayal Publisher, 1999).
2. Satnam, "Entering the Jungle", *Jangalnama: Travels in a Maoist Guerrilla Zone* trans. by Vishav Bharati (New Delhi: Penguin India, 2010), pages 1-16.

Secondary Readings

- Rabindranath Tagore, *Selected Essays: Rabindranath Tagore* (New Delhi: Atlantic, 2012).
- Mahatma Gandhi, *Hind Swaraj* from *CWMG-X* (Ahmedabad: Publication Division, 1963).
- Meera Baindur, *Nature in Indian Philosophy and Cultural Traditions,* (New Delhi, Springer India, 2015)
- Arundhati Roy, *The Algebra of Infinite Justice* (New Delhi: Penguin, 2002).
- Vandana Shiva, "Principles of Earth Democracy" from *Earth Democracy: Justice, Sustainability, and Peace* (London: Zed Books, 2005), pages 1-12.
- Vandna, Shiva, *Staying Alive: Women, Ecology and Survival in India.* (New Delhi:Kali for Women. 1988).
- Val Plumwood, *Feminism and the Mastery of Nature* (London: Routledge, 2003).
- Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable,* (Penguin Random House India, 2016).
- Ramchandra Guha, *Environmentalism: A Global History,* (New Delhi: Penguin Random House India, 2016).

- Lawrence Buell, *Writing for an Endangered World:Literature, Culture, and Environment in the U. S. and Beyond* (London: Harvard University Press, 2001).
- Cheryll Glotfelty & Harold Fromm (edt), *Ecocriticism Reader: Landmarks in Literary Ecology* (Uni. of Georgia Press, 1996).
- Laurence Coupe (edt.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London: Routledge, 2000).
- Gregg Garrard, *Ecocriticism* (New Delhi: Routledge, 2004)
- Greg Garrard (ed.), *The Oxford Handbook of Ecocriticism* (New Delhi: OUP, 2014).
- Wolfgang Sachs (ed.)*, The Development Dictionary: A Guide to Knowledge as Power,* (London: Zed Books, 1992).
- Graham Huggan and Helen Tiffin, *Postcolonial Ecocriticism: Literature, Animal and Environment* (London: Routledge, 2010).
- Holmes Rolston III, "From Beauty to Duty: Aesthetics of Nature and Environmental Ethics" from *Environment and the Arts: Perspectives on Environmental Aesthetics* ed. by Arnold Berleant (Aldershot, Hampshire, UK, 2002), 127-141.
- Rob Nixon, *Slow Violence and the Environmentalism of the Poor,* (London: Harvard University Press, 2011).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q.1 How do poets like Kedarnath Singh, Kurup or Mamang Dai reconcile the demand of aesthetics with their activist concerns in their poetry? Argue through illustration from prescribed poems.

Or

The so-called green-poetry is monotonous and rhetorical. Do you agree?

Q. 2 Evaluate the thread of tribal repression in Mahasweta Devi's short story "The Hunt".

Or

How is Ramanujan's story "A Flowing Tree" a push towards sustainable development?

Q. 3 What is the relevance of the play *Mukta-Dhara* in the age of global warming?

Or

Muktadhara "has been interpreted as a symbolic play that indicates Tagore's admiration for Gandhi and his rejection of themachine in favour of the spirit oflife." Comment.

Q.4. Discuss the ecological otherness of the human and non-human beings in Indra Sinha's *Animal's People*?

Or

Do you think that Indra Sinha's *Animal's People* is critique of neocolonialism?
Q. 5 Do you agree that Amitav Ghosh's *Countdown* is a quest for international peace and prosperity, harmony and integrity?
Or
Jangalnama offers us a first-person account of an activist-writer about the life deep inside the forests. Discuss the intimate details that Satnam weaves in his travel-write up.
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Paper XVII (Choose any one)

(1) Indian Literary Criticism and Theory II

This paper is an extension of the paper on Indian literary criticism introduced in Semester III. Here the focus would be on twentieth century texts and literary Interventions. Right from the days of the Freedom Movement, Indian literary criticism has increasingly taken political turns. At one level, attempts have been made to de-colonize literary theory by way of excavating schools and theories of the ancient past, at another level, the endeavour has been to search for critical alternatives from within the historical past. While in the previous paper, the thrust has been on well-evolved and taxonomically rich critical frames of *rasa*, *dhavni* and *vakrokti*, here the emphasis is on theoretical debate about the possibilities of multiple critical authorizes that exist in Indian culture.The paper shall consist of five questions of 16 marks each, one from each unit. The questions shall be designed in such a way that they focus more on the candidate's understanding of the issues involved in literary studies, and not just his/her capability for memorizing information. Also, there could be questions of practical nature in which the candidate may be asked to apply his/her analytical skills to literary texts. Each question shall have internal choice, and is to be answered in 500-600 words. The paper shall carry a total of 80 marks.

Unit I

1. Anand Coomaraswamy, "The Dance of Shiva", *The Dance of Shiva* (Delhi: Munshiram Manoharlal Publishers, 1999 ed). 83-95.
2. Raja Rao, *The Meaning of India* (Vision Books, 2007 2nd Edition). 153-174.

Unit II

1. Aurobindo, "Indian Literature", *The Foundations of Indian Culture,* Vol. 14 Birth Centenary Library, Pondicherry(255-322)
2. Vinayak Krishna Gokak, ""The Idea of a National Literature: Indian Literature", *The Concept of Indian Literature* (Delhi: Munshiram Manoharlal Publishers, 1979) 75-85.

Unit III

1. G.N.Devy, "After Amnesia", *AfterAmnesia: Tradition and Change in Indian Literary Criticism* (Hyderabad: Orient Longman, 1992)
2. Bhalchandra Nemade, "Nativism in Literature", translated and edited by Arvind Dixit and Makarand Paranjape, *Nativism: Essays in Criticism* (Delhi Sahitya Akademi).

Unit IV

1. Bhikhu Parekh, "Indianisation of Autobiography", *Colonialism, Tradition and Reform* (Delhi, Saga, 1989)
2. G.N. Devy, "Two Paradigms of History", *Of Many Heroes* (Hyderabad: Orient Longman, 1998).

Unit V

1. "Manifesto" of the Indian Progressive Writers Association, London, 1935, https://archiveseducate.files.wordpress.com/2014/02/manifesto-of-the-indian-progressive-writers-association.pdf
2. Saran Kumar Limbale, "Dalit Literature and Aesthetics" in *Towards an Aesthetics of Dalit Literature* (Delhi: Orient Blackswan, 2004).

Suggested Readings

- Rajan, P.K., *Indian Literary Criticism in English; Critics, Texts, Issues* (Delhi & Jaipur, Rawat, 2004).
- Aijaz Ahmed, *In Theory; Classes, Nations, Literatures* (London; OUP, 1992).
- Devi, G.N., *In Another Tongue* (Delhi, MacMillan, 1993).
- _____and Dallamayr Fred, *Between Traditions and Modernity* (Delhi; Sage, 1998).
- Chari, V.K., *Sanskrit Criticism* (Delhi, Motilal Banrasidas, 1993).
- Sethuraman, V. Ed., *Indian Aesthetics: An Introduction* (Delhi, MacMillan, 1992).
- Dangle Arjun Ed., *Poisoned Bread* (Hyderabad, Orient Longman, 1992).
- Mukherjee, Meenakshi, *The Perishable Empire*(Delhi, OUP, 2000)
- _____, *Reality and Realism*(Delhi, OUP, 1983)
- Narasimhaiah, C.D. and Srinath, C.N. Eds.,*A Common Poetic for Indian Literature* (Mysore; Dhavanyaloka,1984).
- Rayan, Krishna, *The Burning Bush*(Delhi; B.R. Publishing, 1989).
- _____.*Text and Sub-Text* (Delhi; Arnold Heinemann, 1989).
- _____. *Sahitya; A Theory* (Delhi; Arnold Heinemann, 1991).
- Paranjape, Makarand, Ed., *Nativism; Essays in Criticism* (Delhi; Sahitya Akademi, 1998).

- Krishna, Daya, *Indian Philosophy: A Counter-Perspective* (Delhi; OUP, 1991).
- Krishnamoorthy, K, *Essays in Sanskrit Criticism* (Dharwar, Karnatak Univ. 1964).
- Kane, P.B., *History of Sanskrit Poetics* (Delhi, Motilal Banarasi Das, 1971, 4th ed.).
- Jalil, Rakshanda, *Linking Progress, Loving Change* (OUP, 2014)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 "The Dance of Shiva" is an example of classical Indian art. How does Coomaraswamy explain its classicism?
Or
"India is not a country, it is a perspective." Explain in the light of *The Meaning of India* by Raja Rao.

Q. 2 "Poetry written from reason and intellect is full of ingenious arguments whereas poetry that rises from the heart is a turbid stream of imagination." Illustrate in the light of Aurobindo's "Indian Literature".
Or
Describe Vinayak Krishna Gokak's concept of nationalist literature.

Q. 3 What does G.N. Devy mean by cultural amnesia in his essay "After Amnesia"?
Or
Write a critical note on Balachandra Nimade's "Nativism in Literature".

Q. 4 How does Bhikhu Parekh draw on his deeper understanding of Gandhi in tradition of 19th century reformist discourse? Comment in light of "Indianisation of Autobiography".
Or
Critically summarize G.N. Devy's "Two Paradigms of History".

Q. 5 Critically analyze the aims of the Manifesto of the Indian Progressive Writers' Association.
Or
How is Dalit aesthetics different from mainstream aesthetics? Discuss in the light of arguments given Saran Kumar Limbale in his "Dalit Literature and Aesthetics".

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(2) Writings from Punjab – II

Twentieth century Punjab contributed its fair share of struggle in the Indian Independence movement, which for its people, culminated in the cataclysmic event of Partition. With 14 million displaced and a million dead, scarcely any household

remained untouched by the human tragedy. Apart from this, civil strife in the 1980s ripped apart the social fabric of a society that had syncretic roots. With these events, the idea of community was decidedly disrupted. The period has additionally been marked with struggles for a more strident Dalit identity and women's liberation. Importantly, the experience of the community has also found echoes in the burgeoning diasporic space. Thus as a region, having undergone multiple divisions, there are many Punjabs -- one inside the nation, and the other beyond the border, and yet another it in its ever-expanding diaspora. All this has found way into the literary writings of this era. A representational list of texts is drawn up to acquaint students with these trends as well as genres. There is an attempt to showcase the continuing syncretic ethos of Punjab by including languages such as Urdu and Hindustani in addition to Punjabi and the multiple identities that have gone on to shape *Punjabiyat.* Additionally, the course seeks to explore the shifting contours of literary trends of Punjab in the modern period. The chosen texts contend with the intersection of class, caste, gender and the multiple pasts and geographies of Punjab.There will be five essay-type questions of 16 marks each (to be answered in about 500 words each). One question with internal choice will be set from each of the following five prescribed texts/units:

Unit I

- Sa'dat Hassan Manto, "Toba Tek Singh" from *Black Margins: Sa'dat Hasan Manto, Stories*, Translated & Selected by M. Asadudin. Katha, 2001.
- Bhishm Sahni, "We have Reached Amritsar", *The Stories about the Partition of India*, Vol. I, ed. Alok Bhalla. New Delhi: Manohar, 2012.
- Amrita Pritam's "Ajj Akhan Waris Noo", translated by Amrita Pritam, *Selected Poems of Amrita Poems*, ed. Pritish Nandy, Kolkata: Dialog Calcutta Publication (Available at ApnaOrg)
- Urvashi Butalia, "Ranamama", Blood, Part I, *The Other Side of Silence*, New Delhi: Penguin) 27-52.

Unit II

1. Dalip Kaur Tiwana, *Gone are the Rivers*, Macmillan, 1999.
2. Krishna Sobti, *Memory's Daughter*, translation of *Dar Se Bichudi*, Tr. Menakshi Bhardwaj, Katha, 2007.

Unit III

1. Mulk Raj Anand, "The Barber's Trade Union" from *The Barber's Trade Union and Other Stories*. Mumbai: Jaico, 2012.
2. Balbir Madhopuri " Sunshine Through Clouds" (69-75) and "Flowering of the Cactu`s" (40-52) from *Chhangiya Rukh – Against the Night*. New Delhi: OUP, 2010.
3. Lal Singh Dil, "Friends and Foes" from Nirupama Dutt: *Poet of the Revolution: The Memoirs and Poems of Lal Singh Dil*. Viking Penguin, 2012.

Unit IV

1. Bhai Vir Singh. " The Song of the Godavari" (66) and "O Flower Gatherer" (34) Trans Puran Singh. *Nargas: Songs of a Sikh*. New Delhi: Bhai Vir Singh Bhawan. Available online on https://www.vidhia.com/Bhai%20Veer%20Singh%20Ji/Nargas-Bhai%20Vir%20Singh%20English.pdf
2. Faiz Ahmad Faiz: "Love, Do not Ask" (65-68), "Dogs" (83- 85), *Poems by Faiz*. Tr. V G Kiernan. (Oxford India, 2000)
3. Shiv Kumar. "Birha Tu Sultan" (Separation, You are the King) & "Maye Ni Maye" (Hawk), Trans, Suman Kashayap atPoemHunter.Com
4. Pash, "To a Police Constable" (112-116), "Ma, You are Wearing Out" Pash. *Pash: A Poet of Impossible Dreams*. Tr. T C Ghai. (Delhi: Pash Memorial Trust, 2010)

Unit V

1. Daljit Nagra: "The Balcony Song of Raju and Jaswinder" & "The Punjab", *Tippoo Sultan's Incredible White-Man-Eating Tiger Toy Machine!!!*. London, Faber and Faber, 2011.
2. Ajmer Rode: "Playing with Big Numbers", "Mustard Flowers" http://www.ajmerrode.com/?page_id=2790
3. Raghbir Dhand, "Third Eye", *Stories of the Soil*, Trans &ed by Nirupama Dutt.

Suggested Readings

- Gyanendra Pandey. *Remembering Partition Violence, Nationalism and History in India*.
- Rekha.*Gender, Space and Creative Imagination: The Poetics and Politics of Women's Writing in India.* New Delhi: Primus, 2015.
- Rakhshanda Jalil. *Liking Progress, Loving Change: A Literary History of the Progressive Writers' Movement in Urdu.*Oxford.
- Talat Ahmed. *Literature and Politics in the Age of Nationalism: The Progressive Writers' Movement in South Asia, 1932-56.* Routledge**.**
- Roger Ballard, "Panth, Kismet, Dharm, te Qaum: Continuity and Change in Four Dimensions of Punjabi Religion" in Pritam Singh and Shinder Thandi (eds.), *Punjabi Identity in a Global Context* (Oxford University Press, 1999).
- Anna Bigelow, "Practicing Pluralism in Malerkotla, Punjab", *Items and Issues*, Social Science Research Council, 3:1-2 (Springer)
- Pashaura Singh and Louis E Fenech, *The Oxford Handbook of Sikh Studies*. (Oxford University Press, 2014).

- Anshu Malhotra, Farina Mir, *Punjab Reconsidered*, (Oxford University Press, 2012).
- Anjali Gera Roy, ed.Imagining Punjab, Punjabi and Punjabiat in the Transnational Era (Routeldge, 2015).

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Q. 1 How do writers from Punjab respond to the tragedy of Partition? Do you notice any heterogeneity of response?

Or

What are the chosen correlatives of rupture that Punjabi writers invoke to capture the gravity of trauma caused by Partition?

Tiwana's women characters are placed between two timeframes – one of feudal Punjabi past and another of modern democratic values. Discuss.

Or

Krishna Sobti portrays a very intimate clash of two generations of women in the form of mother-daughter dialogue. Discuss.

Mulk Raj Anand's depiction of dalit characters is largely determined by his progressive considerations. Argue.

Or

How do dalit writers of modern Punjab lend a voice of agency to their dalit characters?

Poetry from Punjab undergoes many cultural shifts. Compare poetry of Bhai Veer Singh with that of Pash in terms of their distinct ideological orientation.

Or

Discuss how Faiz invests progressivism into decadent feudal poetic forms to bring an element of unrest in his idiom.

Discuss Daljit Nagra as a poet of pop-Punjlish (Punjab plus English). Or

How do Punjabi diaspora writers combine the trope of*bhakti* and *sufi* mystical meanderings with that of their dispersal across globe?

(3) Introduction to Literary Genres – IV

Indian literary culture has its own region-specific genres and forms through which it has articulated its aesthetics of love, separation, protest and assimilation. In this course, the students would be introduced to some of the major Indian literary forms and genres which have not only survived time, but continue to inform contemporary literary imagination in fundamental ways. These genres have undergone mutations with the passage of time, however their basic protocols – aesthetic or moral, continue to remain relevant. Some of these genres have been reinvented in English with aesthetic finesse and fidelity, and now have become integral part of the variety of the world literature. The paper consists of 5 units. There will be one question each from a unit with internal choice. The paper carries 80 marks.

Unit I Barahmasa

a. Charlotte Vaudeville "Origin and Development of the Barahmasa Form", *Barahmasa in Indian Literatures* (Delhi, Varanasi, Patna & Madras: Motilal Banarsidass, 1986) 3-44.
b. Bulle Shah, "The Twelve Months", *Bulle Shah: Sufi Lyrics*, ed. and trans Christopher Shackle (Murty Clasical Library of India, 2015) 279-291.
c. Kalidas, "Rtusamharam", *Kalidasa: For the 21st Century Reader*, translated by Mani Rao (Delhi: Aleph Book Company, 2014) 173-179
d. A.K.Ramanujan, "August", *The Collected Poems of A.K.Ramanujan* (Delhi: OUP, 1995)

Unit II Ghazal

a. Christopher Shackle, "Ghazal", https://www.soas.ac.uk/south-asia-institute/keywords/file24804.pdf
b. Agha Shahid Ali, "Beyond English" (361-62) & "Forever" (369-70), *The Veiled Suite: The Collected Poems* (Penguin Books, 2014)

Unit III Akam/Puram

1. A.K.Ramanujan, "Form of Classical Literature", *The Collected Essays of A.K.Ramanujan*, ed., Vinay Dharwadker (Oxford: OUP, 1999) 197-218.
2. A.K.Ramanujan, trans., *Poems of Love and War: From the Eight Anthologies of Ten Long Poems of Classical Tamil* (Oxford: OUP, 1985) 67-93 & 155-175.

Unit IV Jataka

a. Naomi Appleton, "What is a Jataka?", Jataka Stories in Theravada Buddhism: Narrating the Bodhisatta Path (Ashgate, 2010)1-20.

b. "Crossing the Wilderness" & "Determination in the Desert", *Jataka Tales of Buddha*,retold by Ken and Visakha Kawasaki (Buddhist Publication Society, Kandy, Sri Lanka, 2010

Unit V Charita

a. Ipshita Chanda, "Charit as Genre?https://www.sahapedia.org/charit-genre
b. Dandin, Chapter 1-5, *Dasakumarcharita*: Tales of Ten Princes (Penguin Classics)

Suggested Readings

- Roger Allen, "Narrative Genres and Nomenclature: A Comparative Study", *Journal of Arabic Literature*, Vol. 23, No. 3 (Nov., 1992), 208-214
- Pasha M. Khan, "A Handbook for Storytellers: The *Tiraz al-akhbar* and the *Quissa* Genre", *Tellings and Texts: Music, Literature and Performance in North India*, eds., Francesca Orsini and Katherine Butler Schofield (Cambridge: Openbook Publishers, 2015)
- Ipshita Chandra, *Tracing the Charit as A Genre: An Exploration of Comparative Research Methodology* (Jadavpur: DSA, Department of Comparative Literature, 2003)
- Raja Rao, *The Meaning of India* (Delhi: Vision Books, 2007 2nd Ed.)
- Sushil Kumar De, "The Akhyayika and the Katha in Classical Sanskrit", *Bulletin of the School of Oriental Studies*, University of London, Vol. 3, No. 3(1924), pp. 507-517
- Harnam Singh Shan, "Tragic Love Legends East and West", *Journal of South Asian Literature*, Vol. 35, No. 1/2, Miscellany (2000), pp. 101-114.
- Jernej Habjan, Fabienne Imlinger, eds.,Globalizing Literary Genres: Literature, History, Modernity (New York: Routledge, 2015)
- Teun A. van Dijk, *Discourse and Literature: New Approaches to the Analysis of Literary Genres* (Amsterdam: John Benjamins Publishing, 1985)
- Bert Roest, Herman L. J. Vanstiphout, eds.,*Aspects of Genre of and Type in Pre-Modern Literary Cultures*, (Brill, 1999)
- David Duff, ed., *Modern Genre Theory* (New York & London: Routledge, 2000)
- Nalini Natrajan, Emmanuel Sampath Nelson, *Handbook of Twentieth Century Literatures of India* (Connecticut & London: Greenwood Press, 1996)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Tracing the tradition of *barahmasa* poetry, write down the major turns in the style of *barahmasa*s?

Or

How do modern *barahmasa*s differ from the traditional ones?

What are the distinctive features of *ghazal* as a form of poetry? Give examples to answer the question.

Or

How does Agha Shahid Ali urduize his English to write *ghazal*s in English?

Define the features of *akam* poetry. Give examples to answer your question. Or

Define features of *puram* poetry. Give examples to answer your question.

What is a jataka? Trace its tradition and its shifting protocols of telling. Or

Choose any Jataka tale to show how it combines morality, aesthetics and metaphysics.

Trace the tradition of *charita*-kavya. Does *charita* as a form evince consistency of style.

Or

Discuss how *charita* as a form is executed in *Daskumaracharita*.

(4) American Literature -- II

(Multicultural American Fiction: 1980 to the Present)

This course explores the breadth and diversity of recent and contemporary American Fiction. The genre in this period, reveals a rich heterogeneity through the emergence of a wide spectrum of writers from divergent ethnic groups possessing unique and distinctive traditions and strands of thought. The critically acclaimed novels of these writers serve as literary-cultural landmarks in American history and offer interesting insights into the dynamics of race, ethnicity, socio-economic class, sexuality and gender. The texts that have been selected for detailed study are drawn from diverse traditions ranging from African American, Jewish American, Mexican American and Native American backgrounds. The question paper will contain five questions with internal choice, corresponding to the five components of the course. All the questions will carry equal marks. The questions would test the candidate's comprehension of the formal and aesthetic aspects of specific texts as well as a grasp of literary movements/ trends/concepts and terms related to the historical and cultural aspects that distinguish the text within American literary history. The candidates will be required to attempt one question each from all the five units.

Unit I. Toni Morrison, *God Help the Child* (Vintage, 2015).

Unit II. Saul Bellow, *Ravelstein* (Penguin,2001).

Unit III Sandra Cisneros, *The House on Mango Street* (Vintage,1991).

Unit IV Louise Erdriche, *The Round House* (Harper Perennial,2012).

Unit V Ronald Takaki, *A Different Mirror: A History of Multicultural America* (Selections)(Revised edition, Little Brown and Co., 2008).

Suggested Readings

- Nancy J. Peterson, *Toni Morrison: Critical and Theoretical Approaches* (John Hopkins University Press, 1997).
- Linden Peach, *Toni Morrison* (Palgrave Macmillan, 1998).
- Harold Bloom, *Saul Bellow* (Chelsea House, 2000).
- Gerhard Bach, *Critical Response to Saul Bellow* (Greenwood Press 1995).
- Katharine B. Payant, *The Immigrant Experience in North America: Carving Out a Niche*
- (Greenwood Press, 1999).
- Hector Calderon, *Narratives of Greater Mexico: Essays on Chicano Literary History, Genre and Borders* (University of Texas Press, 2004).
- Lorena Stookey, *Louise Erdrich: A Critical Companion* (Greenwood Press, 1999).
- Allan Chavkin, *Chippewa Landscape of Louise Erdrich* (University of Alabama Press, 1999).
- Ronald Takaki, *Strangers from a Different Shore* (Little Brown and Co., 1998).
- Richard T. Schaeffer, *Race and Ethnicity in the United States* (7th Edition Pearson 2013).
- Ronald Takaki, *Debating Diversity: Clashing Perspectives on Race and Ethnicity in America* (Oxford University Press, 2002)
- Hector Calderon and Jose David Sadivar, *Criticism in the Borderlands: Studies in Chicano Literature, Culture, and Ideology* (Duke University Press, 1991).
- Alvina E. Quintana, *Home Girls: Chicana Literary Voices* (Philadelphia: Temple University Press, 1996).
- Peter Beidler and Gay Barton, *A Reader's Guide to the Novels of Louise Erdrich* (University of Missouri Press, 2006)

Model Paper

Time: 3 hours **Total Marks 80**

Note: Attempt all questions. Each question carries 16 marks

Morrison opens *God Help the Child* with a character insisting, "It's not my fault, so you can't blame me." How does this opening set the tone for the rest of the narrative?

Or

Multiple themes weave through the novel -- childhood trauma, skin colour, social class, freedom. What would you say is the primary theme and why?

Comment on the anti-Semitic sentiment prevalent in Saul Bellow's *Ravelstein*. Or

Ravelstein marks the progression of Bellow's naturalistic humanism to political humanism. Comment.

Q. 3 Comment on the significance of the titular house in Sandra Cisneros' novel.

Or

Esperenza feels different than other girls in the story. From your perspective, is she different? If so, how?

Q. 4. *The Round House* is a bildungsroman. Illustrate this by commenting on Joe's adolescent experiences.

Or

What impact does the friendship of Joe and Cappy have on the events that unfold in the novel?

Q. 5 How is American history depicted in Takaki's *A Different Mirror*?

Or

What is Takaki's concept of "master narrative of American history"?

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Paper XVIII

Skill Enhancement/Social Outreach

The syllabus introduces 'Paper XVIII' which can be opted only in Sem. IV of MA II, it would be shown only in the Detailed Marks Sheet (DMC) of MA II. The students will have to opt **one** of the six options given below. There shall not be any formal teaching of the course. The Department(s) will have to ensure workshops on any one or more options of at least of one week by inviting resource persons who have expertise in these different domains. The degree would not be granted until a student qualifies one of the following courses. Each department (whether in the University or in a college) shall form a committee of teachers (preferably teacher-in charge of these courses) to evaluate students in four grades viz., A (for outstanding),

B (very good), C (average) & D (below average). The result prepared will be approved by the faculty of the entire department of the college or university department concerned and sent to Controller of Examinations (PU) before the onset of the final examination of Semester IV. Those placed in grade D shall be deemed 'fail' till they clear this paper in either of the top three grades (A,B or C). Each department is required to maintain a record of the activities of the students accomplished under the scope of this paper at least for five years. The students (in case of they opt either Creative Writing or Translation or Film-making) shall submit an undertaking that the entries submitted by them are original and not borrowed from any source.

1. **Drama in Practice**: Those who opt for this paper shall have to stage a play or take part in some other form of performance.Videos of the production and rehearsals are to be preserved by the department(s).
2. **Creative Writing**: The students will have to give at least 5-7 poems, two short stories or one chapter of a novel or write in some other genre of his/her choice. The department shall invite creative writers and experts to train students through at least a weeklong workshop. The writings produced by the students shall have to be maintained and placed in the library of the department.
3. **Translation**: The student shall be asked to translate 15-30 pages of an un-translated text either from Hindi to English or from Punjabi to English. The department shall invite practicing translators and experts to train students through at least a weeklong workshop. The translations produced by the students shall have to be maintained and placed in the library of the department.
4. **Film-making**: The students are expected to make short a filmof duration about 3-5 minutes on a theme of his/her choice. The department shall maintain the record of the films produced. The screening of the films shall be video graphed.
5. **Community Outreach**: The students would be expected to go to interiors of the region to collect/ record oral narratives/ biographies of marginal sections of society in any language. The department shall organize a short-term field trip, and the department would maintain the narratives thus collected.
6. **Classroom Teaching for Weak Students in Local Schools**: The students will take classes of weak students in local government schools for the duration of at least a week (five working days). The Department shall facilitate and coordinate this outreach activity. The activity would be video graphed for record.

Or

Creative Writing and Soft Skills

The objective of the paper is to impart a keener understanding of the finer aspects of creative writing, translation and other soft skills. Though in each unit of the paper,

there are theoretical essays, yet the emphasis is on the practical application of the ideas related to the use of language in different situations. The students would be examined in terms of their skills of writing creatively on given situations and also translating paragraphs from one language to another. The essays are of introductory nature and have been prescribed to provide the students general guidelines in dealing with questions of applied nature. In the end-semester examination, there would be five questions – one each from a Unit with internal choice. The paper shall be of 80 marks (16x5=80) for regular students and 100 marks (20x5=100) for the private students.

UNIT I Creative Writing

1. Linda Anderson, "Part I The Creative Process" in *Creative Writing: A Workbook with Readings* Ed. Linda Anderson (Routledge, 2006) 19-69
2. Steve May, "Part III "Writers' habits, writers' skills" from *Doing Creative Writing* (Routledge, 2007) 87-116.

UNIT II Art of Description

1. Werner Wolf, "Description as a Transmedial Mode of Representation
General Features and Possibilities of Realization in Painting, Fiction and Music", *Description in Literature and Other Media*, Edited by Werner Wolf and Walter Bernhart (Rodopi: Amsterdam - New York, 2007) 1-36
2. Mark Doty, "World into Word", *The Art of Description* (Graywolf Press, 2010) 3-12.

UNIT III Translation and Paraphrase

1. Peter Newmark, *A Textbook of Translation* (Prentice Hall, 1988) 19-53.
2. Frank J. D'Angelo, "The Art of Paraphrase" *College Composition and Communication*, Vol. 30, No. 3 (Oct., 1979), 255-259

UNIT IV Content Writing

1. Timothy Garrand, "Interactive Media and the Writer: Chapters 2-5" in *Writing for the Multimedia and the Web*(Focal Press, 2006) 3-84.

2. Janice (Ginny) Redish, "Breaking up and Organizing Content" in *Letting Go of the Words* (*Morgan Kaufmann* , 2012), 101-123

UNIT V Writing a CV

1. Julie Ann-Amos, *Write a Winning CV* (Essentials, 2001), 9-84

2. Paul McGee, *How to Write a CV that Works* (HowtoBooks, 1997), 1-91.

Suggested Readings:

- Paul Mills. *The Routledge Creative Writing Coursebook* (Routledge, 2006)
- Steven Earnshaw. Ed. *The Handbook of Creative Writing* (Edinburgh University Press, 2007)
- Vicki Urquhart and Monette McIver. Eds. *Teaching Writing in the Content Areas* (ASCD & MREL, 2005)
- Jane Spiro. *Creative Poetry Writing* (OUP, 2004)
- "Paraphrasing: The Author's Thoughts in Your Words" https://writing.colostate.edu/textbooks/informedwriter/chapter3.pdf
- Sonia Colina. *Fundamentals of Translation* (Cambridge University Press, 2015)
- NunoVenturinha. *Description of Situations: An Essay in Contextualist Epistemology* (Springer, 2018)
- Janice Hewlett Koelb. *The Poetics of Description* (Palgrave, 2006)
- Lynda Felder, *Writing for the Web* (New Riders, 2012)
- Mona Baker. *In Other Words: A Coursebook on Translation* (Routledge, 2011, 2nd Ed.)
- Monica Wood. *Description* (Writer's Digest Books, 1995)

Model Paper

Time 3 hours

Note: All questions are compulsory.

Write a poem or a short story on and around the phrase "last night" (maximum in 300 words).

Or

Submit a creative write-up for your college magazine on your favourite "four-letter word" (maximum in 300 words).

Q. 2. What are the challenges involved in describing a thing or a situation? Does description lack critical depth?

Or

Describe your favourite dress in about 500 words.

Q.3. You are assigned the job of writing contents for a webpage of an NGO working towards the promotion of handicrafts of the tribal in a region. What all shall you write?

Or

What are challenges of writing for multimedia? Does writing undergo change with the change in medium?

You have been a student leader. You want to apply for a ticket from a national party to contest in the LokSabha elections. Write your CV to justify your claims.

Or

You are a sportsperson with some track record of achievements in national and international tournaments. You seek to apply for a position in the federation of the sports you practice. Write your CV accordingly.

Translate the following Hindi passage in English (about 300 words long para of Hindi)

Or

Translate the following Punjabi passage in English (about 300 words long para in Punjabi)

Or

Paraphrase the following:

My own heart let me more have pity on; let
Me live to my sad self hereafter kind,
Charitable; not live this tormented mind
With this tormented mind tormenting yet.
I cast for comfort I can no more get

By groping round my comfortless, than blind
Eyes in their dark can day or thirst can find
Thirst's all-in-all inall a world of wet.
Soul, self; come, poor Jackself, I do advise
You, jaded, let be; call off thoughts awhile
Elsewhere; leave comfort root-room; let joy size
At God knows when to God knows what; whose smile
's not wrung, see you; unforeseen times rather — as skies
Between pie mountains — lights a lovelymile.

PANJAB UNIVERSITY, CHANDIGARH
(Established under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M. A. HISTORY

(SEMESTER SYSTEM)

EXAMINATIONS, 2020-21

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DEPARTMENT OF HISTORY, PANJAB UNIVERSITY, CHANDIGARH

MA Programme at the Department of History2020-21

Courses and Syllabus (Semester System)

The MA programme at the Department of History is spread over two years divided into four semesters. This programme is governed by the Calendar of the Panjab University and various rules and regulations put in place by the university from time to time.

A candidate has to earn 64 credits in MA programme.

Note: The Syllabus for Semester I to IV below is applicable to candidates admitted in July 2020.
Some papers shall not be offered at present, in the Current Session, due to non availability of the faculty as indicated in the Course Outline below.

Course Outline

Semester I		**Code**	**Title of paper**	**Credits**
	Paper I:	HIS 111	The Punjab (mid-fifteenth to seventeenth centuries)	4 credits
	Paper II	HIS 231	Ancient India: An Overview	4 credits
	Paper III	HIS 221	Medieval India: Political Processes	4 credits
	Paper IV	HIS 211	Modern India: Political Processes	4 credits
Semester II		**Code**	**Title of paper**	**Credits**
	Group-IPaper I:	HIS 125	Punjab in the Eighteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 713	Opt. (i)Agrarian Economy of Ancient India	4 credits
		HIS 712	Opt. (ii)Agrarian Economy of Medieval India	4 credits
		HIS 711	Opt. (iii)Agrarian Economy of Modern India	4 credits
		HIS 721	Opt. (iv)Industry, Trade & Urbanization in Medieval India	4 credits
		HIS 730	Opt. (v)Industry and Trade in Modern India	4 credits
		HIS 733	Opt. (vi)Urbanization in Modern India(**Not offered to students in this Session)**	4 credits
	Group-III and IV Paper III and IV Any two of the following:	HIS 831	Opt. (i)Modern World (Mid 15th - 19th Century)	4 credits
		HIS 844	Opt. (ii)China & Japan (1840-1950)	4 credits
		HIS 821	Opt. (iii)History of Canada(**Not offered to students in this Session)**	4 credits
		HIS 811	Opt. (iv)American Imperialism in the Nineteenth and Twentieth Centuries(**Not offered to students in this Session)**	4 credits
		HIS 812	Opt. (i)USA (1820-1973)	4 credits
		HIS 832	Opt. (ii)World in the Twentieth Century	4 credits
Semester III	**Group-IPaper I:**	HIS 123	Punjab in the Nineteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 431	Opt. (i)Evolution of Ancient Societies	4 credits
		HIS 421	Opt. (ii)Feudal Society in Western Europe	4 credits
		HIS 411	Opt. (iii)History of Capitalism	4 credits

		HIS 412	Opt. (iv)Rise and Growth of Colonialism in India	4 credits
		HIS 602	Opt. (v)History of Secularism in Modern India(**Not offered to students in this Session)**	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 432	Opt. (i)Cultural History of Ancient India	4 credits
		HIS 604	Opt. (ii)Sacred Centres in Indian Civilization	4 credits
		HIS 424	Opt. (iii)Medieval Indian Art and Monuments.	4 credits
		HIS 601	Opt. (iv)Gender Relations in Modern India	4 credits
		HIS 455	Opt. (v)Diaspora in Colonial India **(Not offered to students in this Session)**	4 credits
		HIS 603	Opt. (vi)Science, Technology & Medicine in Colonial India	4 credits
		HIS 213	Opt. (vii)Constitutional Development in Modern India, 1773-1947	4 credits
		HIS 212	Opt. (viii)National Movement in India 1858-1947	4 credits
		HIS 214	Opt. (ix)British Policy and Princely States(**Not offered to students in this Session)**	4 credits
		HIS 263	Opt. (x)Contemporary India 1947-1992	4 credits
Semester IV	**Group-IPaper I:**	HIS 126	Punjab in the Twentieth Century (compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 911	Opt.(i) History and Historiography	4 credits
		HIS 912	Opt.(ii) History and Historical Method	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 720	Opt. (i) Religious and Social Processes in Ancient India	4 credits
		HIS 438	Opt. (ii) Buddhism in India	4 credits
		HIS 428	Opt. (iii) Religious Developments in Medieval India	4 credits
		HIS 426	Opt. (iv) Islamic Traditions of Medieval India	4 credits
		HIS 471	Opt. (v) Dalit Movements in Modern India	4 credits
		HIS 731	Opt. (vi) Working Class Movements in Modern India	4 credits
		HIS 467	Opt. (vii) Peasant Movements in Modern India	4 credits
		HIS 418	Opt. (viii) Socio-Religious Reform Movements in Modern India	4 credits
		HIS 462	Opt. (ix) History of Caste and Caste Politics in Modern India	4 credits

Semester I		Code	Title of paper	Credits
	Paper I:	HIS 111	The Punjab (mid-fifteenth to seventeenth centuries)	4 credits
	Paper II	HIS 231	Ancient India: An Overview	4 credits
	Paper III	HIS 221	Medieval India: Political Processes	4 credits
	Paper IV	HIS 211	Modern India: Political Processes	4 credits

PAPER I: THE PUNJAB (MID-FIFTEENTH TO SEVENTEENTH CENTURIES)

COURSE CODE: HIS 111

Objective: This paper aims to examine the politico-administrative, social and religious milieu of Guru Nanak in order to understand his response to the contemporary environment and the foundation of Sikh movement. It also deals with growth of Sikh movement under his first four successors, the phase of confrontation with Mughal state and its culmination under Guru Gobind Singh. It also attempts to discuss the administrative structure, agrarian and urban economy of the Punjab under the Mughals.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms

Sultan; Muqaddam; Baburvani; Hadith; Nirguna Bhakti; Hukum; Raza; Maya; Sachkhand; Jogi and Nathas; Udasi(travels)of Guru Nanak DevJi; Udasi Sect; Manji System; Masand System; Guru; Gurudwara; Guru Janamsakhi writings; Concept of Sahadat in Sikhism; Akal Takht; Miri and Piri; Khalsa Panth; Zafarnama; Suba; Pargana; Faujdar; Commercialisation of agriculture;Function of Urban Centres; Land Transport, River Transport

Unit I

Political developments and socio cultural milieu under the Afghans; response of Guru Nanak to contemporary religious systems ; response of Guru Nanak to contemporary social order; response of Guru Nanak to contemporary politics.

Unit II

New Institutions established by Guru Nanak; development of Sikh Panth with special reference to Guruship and Gurdwara;Janam Sakhis as sources of history; making of the Sikh scripture and its structure; emergence of different sects within the Sikh movement

Unit III

Martyrdoms of Sikh Gurus; politicization of the Sikh Community under Guru Hargobind;; the new baptism and its implications; historical significance of the Zafarnama.

Unit IV

Provincial administration under the Mughals; major crops and commercialization of agriculture; economic base of urban centres; means and routes of transport.

Essential Readings

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, New Delhi: Munshiram Manoharlal, 1979 (2nd ed.)

Banerjee, I.B., *Evolution of the Khalsa*, 2 vols., A. Mukherjee & Co., 1972 (2nd edn.).

Fenech Louis E,*Martyrdom in the Sikh tradition*, : Oxford University Press, 2000.

Harbans Singh, *Guru Tegh Bahadur*, New Delhi: Manohar, 1994.

Grewal, J.S., *The Sikhs of the Punjab, The New Cambridge History of India*, New Delhi: CambridgeUniversity Press, 1999 (2nd ed.).

Grewal, J.S., *Guru Nanak in History*, Chandigarh: PanjabUniversity, 1979.

Mcleod, W.H., 'The Janam–Sakhis as Historical Sources', in *Sikhs and Sikhism*, Oxford: Oxford University Press, 1999, pp.248-67.

Singh, Chetan, *Region and Empire: Punjab in the Seventeenth Century*, New Delhi: Manohar, 1991.

Singh Sulakhan, *Hetrodoxy in the Sikh Tradition*, Jalandhar:ABS Publication, 1999

Teja Singh and Ganda Singh, *A Short History of the Sikhs: 1469-1765,* Vol.I, Patiala: Punjabi University, 1983 (rep.).

Suggested Readings

Bhai Jodh Singh (tr.), *Varan Bhai Gurdas,* 3 vols., Patiala: Vision and Vantura, 1998.

Grewal, J.S., 'Cleavage in the Panth,' *Sikh Ideology, Polity and Social Order*, Manohar, 2007, pp: 78-85

Mann, Gurinder Singh, *The Making of the Sikh Scripture*, New York: 2001.

Mcleod, W.H., *Guru Nanak and the Sikh Religion*, Oxford: OxfordUniversity Press, 1968.

Talib, Gurbachan Singh (tr.), *Sri Guru Granth Sahib*, Patiala: Publication Bureau, PunjabiUniversity, IV Vols., 1999.

Paper II: Ancient India: An Overview

COURSE CODE: HIS 231

Objective: Building upon a prior basic knowledge of the history of ancient India, this course introduces the student to the major currents in the study of that history. It focusses on the the political processes that underlay the structures of the state and society but also takes the student into the details of social and cultural history.

Pedagogy: Lectures and tutorial discussions are the basic tools used in this course.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mehargarh; Gopati; Bhupati; Vidatha; Janapada; Mahajanapada; Gana-Sangha; Gahapati; Karshapana(Punch Marked Coins); Ashoka's Dhamma; Saptanga(Seven Limb's of The State /Rajya); Stri-Dhana; Silk-Route; Sreni; Bali/Bhaga/ Shulka; Vishti; Prasasti; Mahayana; Hinayana; Puranic Hinduism; Agraharas; Devadana; Vanigramma; Samanta; Varnasamkara(Inter-Mixing of Varnas); Tirthankara/Arhat; Uttarapatha;Dakshinapatha; Concept Of Urban Decay; Kali Age Crisis; Mandapika; Nagaram.

Unit I: From Stone Age to Vedic Age: Palaeolithic and Neolithic Ages; The Indus Valley Civilization (Urban Centres, Economy and Decline- various Debates); Vedic Age (Aryan Homeland debate, Polity, Society and Economy).

Unit II: Age of Mahajanapadas: Emergence of the State Systems (Sixteen Mahajanapadas); Society (Buddhism and Jainism) and Economy (Urbanization, Trade, Crafts and Agriculture).

Unit III: The Maurya and Post Mauryan Period: The Mauryan Empire (Rulers, Administration and Ashoka's Dhamma); Post Mauryan Polities (Kushanas, Satavahanas and Sangam Chiefdoms); Economy (Indo-Roman Trade).

Unit IV: The Gupta and Post-Gupta Period: Political Developments (Guptas, Pushyabhutis and Pallavas); Social Developments (Caste Proliferation and Untouchability); Indian Feudalism Debate.

Essential Readings

Chakravarti, Ranabir, *Exploring Early India up to c. AD 1300*, New Delhli: Primus Books, 2016 third edition.

Habib, Irfan, *A People's History of India 6- Post Mauryan India, 200 BC- AD 300: A Political and Economic History*, New Delhi: Tulika Books, 2012.

Sharma, R. S., *Early Medieval Indian Society: A Study in Feudalization*, New Delhi: Orient Blackswan, 2014 reprint.

Sharma, Rimjhim and Kumar, Ashish, *Early India, up to c. 300 AD*, Delhi: Book Age Publications, 2019.

Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Delhi: Pearson Longman, 2009.

Suggested Readings

Chattopadhyaya, B. D., *Making of Early Medieval India*, New Delhi: Oxford University Press, 2012 second revised edition.

Chakrabarti, Kunal and Sinha, Kanad, *State, Power and Legitimacy: The Gupta Kingdom*, New Delhi: Primus Books, 2018.

Chauhan, G. C., *Early Indian Feudal Society and Its Culture*, Delhi: Munshiram Manoharlal, 2015.

Chakravarti,Ranabir, 'The Mauryas' and 'The Kushanas,' in *History of Ancient India, Vol. IV, Political History and Administration (c. 200 BC- 750 AD), (From the end of the Mauryan Rule to the Beginning of the Dominance of Regional Dynasties),* (ed.) Dilip K. Chakrabarti and M. Lal, New Delhi: Aryan Books International, pp. 35-68, 231-275, 2014.

Habib, Irfan and Jha, Vivekanand, *A People's History of India: 5- Mauryan India*. New Delhi: Tulika Books, 2011 reprint.

Kulke, Hermann, *History of Precolonial India: Issues and Debates* (English edition revised and edited by B. P. Sahu), New Delhi: Oxford University Press, 2018.

Sahu, B. P. and Kulke, Hermann, *Interrogating Political Systems: Integrative Processes and States in Pre-Modern India*, Delhi: Manohar, 2015.

Sharma, R.S., *Aspects of Political Ideas & Institutions in Ancient India*, New Delhi: Motilal Banarsidass, 2015 reprint.

Shrimali, K. M., *A People's History of India 4-The Age of Iron and the Religious Revolution, c.700-c.350 BC*, New Delhi: Tulika Books, 2011 reprint.

PAPER III: MEDIEVAL INDIA: POLITICAL PROCESSES

COURSE CODE: HIS 221

Objective: This paper seeks to examine the major political developments in the Indian subcontinent during a span of nearly five centuries i.e. from the thirteenth to the seventeenth century. It aims at an in-depth analysis of the processes of state formation in the Delhi Sultanate and Mughal Empire. It lays emphasis on (1) the long-term strategies that enabled these two states to establish political control and (2) to explore the functioning of political institutions and the articulation of political ideologies. It pays equal attention to the changing composition of the ruling class as well as the response of the powerful local elements.

Pedagogy: In the teaching of this paper, effort is made to gradually build on the foundation of knowledge laid at the undergraduate level. Discussions on various sub-themes need to be interspersed with critical references to the contemporary sources as well as divergent historiographical approaches.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.
(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.
(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.
(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Nasir Amir ul Mominin; Dar al-Harb; Dar-al-Islam; Dar-al-Sulah; Zimmi; Shaik ul-Islam; Wasaya; Mawali ; Bandagan i Khass/ Amir-i-Chahalgani; Tazik; Balban's Theory of Kingship; Paibos; Sijdah;Akhlaq And Adab Literature; Hukm i Masahat Bafa i Biswa; Sera iAdl; Charai And Gharai ; Amir I Sada; Taccavi (Taqavi);Diwan I Khairat, Kharaj iJizya; Patta And Qabuliyat; Farr i Izidi; Mahzar; Sulh i Kul; Tauhid i-Iilahi;Ibadat Khana, Mansab; Ain i-Dahsala; Watan Jagir; Satnamis; Jats' Revolt In Doab; Chauth; Sardeshmukhi..

Unit I

Ilbaris and Khalji:Consequences of the Ghorian invasions; political consolidation under Iltutmish; problems and policies of Balban; nobility during the thirteenth century; agrarian reforms of Alauddin Khalji; mechanism of his market regulations and their impact.

Unit II

Tughluqs and Afghan: Political and religious orientation of Muhammad bin Tughluq; rationale, implementation and consequences of his projects; administrative reforms of Firuz Shah Tughluq; nobility under the Tughluqs; the Afghan concept of monarchy.

Unit III

Mughal State: Abul Fazl's concept of monarchy; Experiment of Din-i- Ilahi and its critique; evolution of the mansab system; development of the land revenue system under Akbar; Mughal-Rajput Relations.

Unit IV

Crisis in Mughal Empire: Mughal expansion in the Deccan during the first half of the seventeenth century; popular uprisings in northern India during the reign of Aurangzeb; his breach with Mewar and Marwar; his military conflict with the Marathas; his conquest of Bijapur and Golconda.

Essential Readings

Chandra, Satish, *Medieval India: From Sultanat to the Mughals,* 2 vols., New Delhi: Har-Anand Publications, (Reprint), 2003.

Habib, Mohammad & Khaliq Ahmad Nizami, (eds.), *A Comprehensive History of India, Vol.V: The Delhi Sultanate 1206-1526*, New Delhi: Peoples Publishing House, (Reprint), 1993.

Jackson, Peter, *The Delhi Sultanate: A Political and Military History*, Cambridge: Cambridge University Press, 1999.

Nigam, S.B.P., *Nobility under the Sultans of Delhi*, New Delhi: Munshiram Manoharlal, 1971.

Nizami, Khaliq Ahmad, *Religion and Politics in India during the Thirteenth Century,* New Delhi: Oxford University Press, New Edition, 2002.

Qureshi, Ishtiaq Husain, *The Administration of the Mughal Empire,* Patna: Janaki Prakashan, (reprint), 1979.

Richards, John F., *The Mughal Empire,* New Delhi: Foundation Books/ Cambridge University Press, 1993.

Singh, Surinder, *Madh Kalin Bharat Da Itihas,* Patiala: Punjabi University, 1997.

Tripathi, R.P., *Some Aspects of Muslim Administration*, Allahabad: Central Book Depot. (reprint), 1976.

Suggested Readings:

Alam, Muzaffar and Sanjay Subrahmanyam, (eds.), *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Ali, M. Athar, *Mughal India: Studies in Polity, Ideas, Society and Culture*, New Delhi: Oxford University Press, 2006.

Chandra, Satish, *Mughal Religious Policies, the Rajputs and the Deccan,* New Delhi: Vikas Publishing House, 1993.

Chandra, Satish, *Essays on Medieval Indian History,* New Delhi: Oxford University Press, 2003.

Hasan, S. Nurul, *Religion, State and Society in Medieval India*, Edited and Introduced by Satish Chandra, New Delhi: Oxford University Press, 2005.

Husain, Agha Mahdi, *The Rise and Fall of Muhammad bin Tughluq,* Delhi: Idarah-I-Adabiyat-I-Delli, (Reprint), 1972.

Jauhri, R.C., *Firoz Tughluq (1351-1388 AD)*, Jalandhar: ABS Publications, (Reprint), 1990.

Lal, Kishori Saran, *History of the Khaljis*, New Delhi: Munshiram Manoharlal, (Revised Edition), 1980.

Siddiqui, Iqtidar Husain, *Some Aspects of Afghan Despotism in India*, Aligarh: Three Men Publications, 1969.

Streusand, Douglas E., *The Formation of the Mughal Empire,* New Delhi: Oxford University Press, 1989.

PAPER IV: MODERN INDIA: POLITICAL PROCESSES

COURSE CODE: HIS 211

Objective: The paper is a study of British colonialism in which India can be studied as a classic case of British Imperialism. The historical context has been undertaken with a holistic interpretation of different approaches and interpretations such as Colonialist, Nationalist, Marxist, Subaltern, and Gandhian. The construction of the colonial state in north and south India followed constitutional changes which further enhanced to establish British control. Indian nationalism responded starting with peasant and tribal revolts, mutiny of 1857, emergence of Indian National Congress, militant movements, Subhas Bose, feminist movements.

Pedagogy: Methodology adopted would include lectures, discussions, review, seminars, and power point presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Colonialist historiography; Nationalist historiography; Marxist historiography; Subalterns; Treaty of Salbai; Punjab Annexation-a breach of trust; Treaty of Seringapatam(1792); Mal-administration of Oudh; Treaty of Aix La-Chapelle(1748); Civilizing mission; Separate Electorates; Dyarchy; Provincial Autonomy; Board of Control;Montagu Declaration; Santhals; Mundas; Lathiyals; Revolt-First War of Indian Independence; Revolt-Military Uprising; Safety valve theory; Moderates; Rowlatt Act; Revolutionaries; Indan National Army; Swaraj; Non-Cooperation; Civil Disobedience; Quit India.

Unit I

Historiography on the modern Indian state – approaches and interpretation: Colonialist, Nationalist, Marxist, Subaltern.

Unit II

Construction of colonial state policy and programme of expansion in north and south India: Bengal;Oudh; Deccan;Mysore; Marathas; Punjab.

Unit III

Constitutional developments: Regulating Act of 1773, Pitts India Act of 1784; The Indian Councils Act 1909; The Government of India Act 1919; The Government of India Act 1935.

Unit IV

Colonial state and Indian response:Peasant and Tribal Movements;Emergence;Programme and Policies of Indian National Congress; Gandhian Mass Movements; Militant Movements; Subhas Chandra Bose and INA; Women Participation in National Movement.

Essential Readings

Alavi, Seema (ed.), *The Eighteenth Century in India*, New Delhi: Oxford University Press, Reprint 2007.

Bayly, C.A., *Indian Society and the Making of the British Empire*, Cambridge, Cambridge University Press, Reprint, 2014.

Bipan, Chandra, *Communalism in Modern India*, Har Anand Publications, Delhi, 2016.

Brown, Judith, *Gandhi's Rise to Power: Indian politics 1915-1922*, Cambridge: Cambridge University, Press, 1972.

Chandra, Bipan *et al.*, *India's Struggle for Independence,1857-1947*, Delhi: Viking/Penguin Books, Reprint 2016.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India.* New Delhi: Har Anand Publications, 2016.

Ishita Banerjee Dube, *A History of Modern India,* Cambridge University Press, New Delhi, 2015.

Guha, Ranajit, 'On some aspects of Historiography of Colonial India', in Ranajit Guha ed. *Subaltern Studies I,* Delhi: Oxford University Press, 1986.

Mishra, B.B., *Administrative History of India*, Oxford University Press, Delhi, 1983.

Nanda, B.R., *Making of a nation: India's Road to Independence*, Delhi: Harper-Collins, 1998.

Sarkar, Sumit, *Modern India, 1885-1947*, Delhi: Pearson Education India, 2014.

Sen, S.P. ed., *Historians and Historiography in Modern India*, Institute of Historical Studies, Calcutta, 1973.

Sreedharan E: A Text Book of Historiography (500 B.C to A.D 2000, New Delhi: Orient Longmen, 2004

Suggested Readings:

Alam, Muzaffar, *Crisis of Empire in Mughal North India: Awadh and the Punjab, 1707-1748*, Delhi: Oxford University Press, Paperback, 2013.
Banerjee, A.C., *Constitutional History of India*, Vol. II & III.

Brown Judith, *Modern India, The Origins of an Asian Democracy* 2nd ed., Delhi: Oxford University Press, 1994.
Guha, Ranajit, *Elementary Aspects of Peasant Insurgency in Colonial India*, Delhi: Oxford University Press, 1983.
Hasan, Mushirul, *Nationalism and Communal Politics in India*, New Delhi: Manohar, Reprint 2000.
Josh, Bhagwan, *Struggle for Hegemony in India, 1920-47*, New Delhi: Sage, 1992.
Marshall, P.J., *The Eighteenth Century in Indian History*, New Delhi: Oxford University Press, 2003.
Partha, Chatterjee, *The Nation and its Fragments, Colonial and Post Colonial Histories*, New Delhi: Oxford University Press, reprint, 1994.
Sarkar, Sumit., *Swadeshi Movement in Bengal*, Delhi: Permanent Black, Second Edtion, 2011.
Talbot, Ian, *Punjab and the Raj, 1849-1947*, Delhi: Manohar, 1988.

Semester II		Code	Title of paper	Credits
	Group-IPaper I:	HIS 125	Punjab in the Eighteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 713	Opt. (i)Agrarian Economy of Ancient India	4 credits
		HIS 712	Opt. (ii)Agrarian Economy of Medieval India	4 credits
		HIS 711	Opt. (iii)Agrarian Economy of Modern India	4 credits
		HIS 721	Opt. (iv)Industry, Trade & Urbanization in Medieval India	4 credits
		HIS 730	Opt. (v)Industry and Trade in Modern India	4 credits
		HIS 733	Opt. (vi)Urbanization in Modern India(**Not offered to students in this Session)**	4 credits
	Group-III and IV Paper III and IV Any two of the following:	HIS 831	Opt. (i)Modern World (Mid 15th - 19th Century)	4 credits
		HIS 844	Opt. (ii)China & Japan (1840-1950)	4 credits
		HIS 821	Opt. (iii)History of Canada(**Not offered to students in this Session)**	4 credits
		HIS 811	Opt. (iv)American Imperialism in the Nineteenth and Twentieth Centuries(**Not offered to students in this Session)**	4 credits
		HIS 812	Opt. (i)USA (1820-1973)	4 credits
		HIS 832	Opt. (ii)World in the Twentieth Century	4 credits

PAPER I : PUNJAB IN THE EIGHTEENTH CENTURY (COMPULSORY)

COURSE CODE: HIS 125

Objective: This paper challenges the notion of the eighteenth century as a 'dark period' in the Indian history andbrings out the political process by which over a hundred new centres of power and not only the 'twelve misaldars' came up in the Punjab after the decline of the Mughal Empire. It deals with all the new rulers, Sikh as well as non-Sikh, in terms of their political organization, administrative arrangements, patterns of state patronage and the main features of urban as well as agrarian economy.

Pedagogy: The classroom teaching is supplemented by familiarizing the students with the maps of the area besidesdistribution of outlines for greater effectiveness. The evaluation is based on continuous internal assessment which comprises of unit tests, presentation of seminars, classroom participation and attendance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks).The duration of written examination will be 3 hours. In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mukhlispur; Banjaras; Suzerainty;Vassal; Watan jagir; Intermediary zamindar; Paibaqi;Ijaradar; Absentee Jagirdar; Third Battle of Panipat; Khalisa Land;Kardar; Pargana;Dal Khalsa; Gurmatta; Rakhi; Misl; Batai;Kankut; Katra;Bunga; Trini;Haq- Buha; Ghiana; Inam jagir; Gobind Shahi coin; Nanak Shahi coin; Hundi;Madad-i-ma'ash.

Unit I

Establishment of independent rule under Banda Singh Bahadur and basis of his support; measures of the Mughal State; Impact of the decline of the Mughal Empire on administrative functioning and finances of the Punjab; struggle for power among the Mughals, the Afghans and the Marathas; Ahmad Shah Abdali and the Sikhs.

Unit II

Emergence of the new powers in the second half of the eighteenth century: the Rajput chieftains in the hills;the Muslim rulers in the plains; the Sikhs as rulers; role of Gurmatta, Dal Khalsa and Rakhi System in the political process; re-construction of 'eighteenth century as Misaldari period'.

Unit III

Civil and military administration under the new rulers; conception of suzerainty and coinage; Agrarian conditions and land revenue System.

Unit IV

Features of Jagirdari System; working and recepients of dharmarth grants; development of urban centres; trade and manufacture; eighteenth Century debate and the Punjab.

Essential Readings

Alam Muzaffar, *Crisis of Empire in Mughal North India*: *Awadh and the Punjab, 1707-48*, New Delhi: Oxford University Press, 2013 (2nd ed.).
Alavi, Seema, *The Eighteenth Century in India: Debates in Indian History and Society*, Oxford India Paperback, New Delhi, 2007

Chetan Singh, *Region and Empire: Punjab in the Seventeenth Century*, Delhi: Oxford University Press, 1991.

Ganda Singh, Life of *Banda Singh Bahadur*, Publicaton Bureau, Punjabi University, Patiala, 2006.

Ganda Singh, *Ahmad Shah Durrani*, Bombay: Asia Publishing House, 1959.

Sachdeva, Veena, *Polity and Economy of the Punjab during the Late Eighteenth Century*, New Delhi: Manohar,1993.
Sachdeva, Veena, *Atharvi Shtabdi ke Antim Charan Mein Punjab Ki Rajnaitik Tatha Arth Vyavastha,* Chandigarh: Unistar, 2014 (Hindi Medium); *Mughal Raj de Patan Uprant da Punjab* (Atharvi Sadi), Chandigarh: Unistar, 2015 (Punjabi Medium)

Suggested Readings

Banga, Indu, ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1900*, New Delhi: Manohar, 1997.
Bhagat Singh, *Sikh Polity in the Eighteenth and Nineteenth Centuries*, New Delhi: Oriental Publishers & Distributors, 1978.

Grewal, J.S., *The Sikhs of the Punjab: The New Cambridge History of India*, New Delhi: Cambridge University Press, 2003.

Gupta, Hari Ram, *History of the Sikh Confederacies (1708-1769),* New Delhi: Munshiram Manoharlal, 1978 (3rd edn.).
Sachdeva Veena, 'Social Base of Sikh Movement under Banda Singh Bahadur', *Research Journal Social Sciences*, Vol.22, No.3, 2014, Panjab University, Chandigarh, pp.14-24.

Sharma, T.R., *Maharaja Ranjit Singh: Ruler and Warrior*, Chandigarh: Panjab University, 2005.

Sinha, N.K., *Rise of the Sikh Power*, Calcutta: A. Mukherjee & Co., 1973.

Surinder Singh, *Sikh Coinage – Symbol of Sikh Sovereignty,* New Delhi: Manohar, 2004.

PAPER II: OPT. (I) AGRARIAN ECONOMY OF ANCIENT INDIA

COURSE CODE: HIS 713

Objective: This course enlightens the students about the beginning of food production and agriculture system with special reference to bronze and iron ages. The role of agriculture and other allied trades to generate the state revenue. It also acquaints the students with the duties of the state administration to bestow all peasants and other vocational with various facilities and endowments to boost up the production and revenue of the state. It throws light on the origin and evolution of Levy system in ancient India, its determination and mode of collection.

Pedagogy: The students are taught with the help of slides, photographs, topographical maps, political maps etc. In addition to it lectures, workshops, seminars and field trips are arranged to enhance the articulating skill of the students and to understand the subject in a better way.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mehargarh; Gramani/gramika; kutumbika; gahapatis; Dasa-karmakars; Bali/Bhaga; Paranaya; Sali/Vrihi; Rajuka/Agronomoi; Sitadhyakasha; Sudarshana lake; Vishti; Agrahara; Brahamdeya; Deva-agrahara/devagrahara; devadana; vaishyagrahara; Kara-shasana; Samanta; Bhumicchidra-nyaya; urban decay; Kosambi's two stage theory of feudalism; Araghatta/ghatiyantra; Kupa/vapi; Damaras; Kali age crisis; tamra-patra/tamra-patta/tamra-sasana; hatta; mandapika; pentha; nagaram; Kaivartas; Kalabharas.

Unit I:
Evolution of Agriculture: Neolithic Age (Beginning of Agriculture and Domestication of Animals); Bronze Age (Agricultural Techniques, and Irrigation); Iron Age (Cultivation Techniques, Processes, Crop Patterns and Irrigation).

Unit II:
State and Land Systems: Land Rights (Communal Rights, Individual Rights, and Royal Rights); State and Private Property (Demarcation of Land, and Boundary Disputes); Land Revenue and Tax Relief Provisions.

Unit III:
Peasantry: Peasant Hierarchy in Early India; Political and Social Relationships between Peasantry, Donors, and Donees; Peasant Unrests (Causes and Nature of Peasant Unrests; Kaivarta and Kalabhara Uprisings).

Unit IV:
Land Grants and Expansion of Agriculture: Land Grants (*agrahara*, *devadana*, *vaishyagrahara* and *kara-shasana*); Study of the *Krishiparasara* (Agricultural processes and Techniques); Early Medieval Agrarian Changes.

Essential Readings

Chattopadhyaya, B. D. (ed.), *Essays in Ancient Indian Economic History*, New Delhi: Primus Books, 2015 reprint.

Gopal, L., *Aspects of the History of Agriculture in Ancient India*, Allahabad: University of Allahabad, 1987.

Gopal, L., 'Agriculture', in *History of Technology in India- Vol. I: From Antiquity to c. 1200 AD*, ed. A. K. Bag, New Delhi: Indian National Science Academy, pp. 391-436, 1997.

_____, *The Economic Life of Northern India, circa A.D. 700-1200*, Motilal Banarsidass Publishers, Varanasi, 1989.

Sahu, B. P., ed. *Land System and Rural Society in Early India*, New Delhi: Manohar, 2003 reprint.

Sharma, R. S., *Early Medieval Indian Society: A Study in Feudalization*, New Delhi: Orient Blackswan, 2014 reprint.

Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Pearson Longman: Delhi, 2009.

Suggested Readings

Chakravarti, Ranabir, 'Agricultural Technology in Early Medieval India (c. AD 500-1300)', in *The Medieval History Journal*, Vol. 11, No. 2, pp. 229-258, 2008.

Chakravarti, Ranabir, 'Interacting with Hydraulic Resources: Early Indian Experience', in *Science, Literature and Aesthetics- Vol. 15, Part-3*, ed. Amiya Dev, (HSPCIC) New Delhi: Munshiram Manoharlal, pp. 343-369, 2009.

Chattopadhyaya, B. D., *Aspects of Rural Settlements and Rural Society in Early Medieval India*, New Delhi: Primus Books, 2017.

Chauhan, G. C., *Economic History of Early Medieval Northern India*, Delhi: Atlantic Publishers, 2003.

Ghosh, Suchandra, 'Understanding Boundary Representations in the Copper-Plate Charters of Early Kamarupa', in *Indian Historical Review*, Vol. 41, No. 2, pp. 207-222, 2014.

Jha, D. N., *Revenue System in Post-Mauryan and Gupta Times*, Calcutta: Punthi Pustak, 1967.

Mandal, Krishna Kumar, 'Note: Forms of Peasant Protest in the "Jatakas",' in *Social Scientists*, Vol. 35, No. 5/6, pp. 39-46, 2007.

Mozumdar, G. P., and Banerji, S. C., ed. & tr., *Krisi-Parasara,* Kolkata: The Asiatic Society, reprint 2001 (or Any other suitable translation).

Thakur, V. K., and Aounshaman, Ashok, eds. *Peasant in Indian History- I*, Patna: Janaki Publishers, 1996.

PAPER II OPT. (II) AGRARIAN ECONOMY OF MEDIEVAL INDIA

COURSE CODE: HIS 712

Objective: This paper aims at a multi-dimensional picture of the historical changes that occurred in the agrarian economy during the medieval period. For the sake of clarity and convenience, it is divided into two chronological phases, the Delhi Sultanate and Mughal Empire. It seeks to make an in-depth analysis of the social structure, with particular reference to the various classes of peasantry as well as the intermediaries. It pays adequate attention to the technological aspects of agriculture and irrigation, besides the land rights and agrarian revolts. It also examines the mechanism evolved by the state to extract the social surplus.

Pedagogy: Since it is assumed that the student is quite familiar with the political history of medieval India, it is possible to delve into advanced writings of historians like Irfan Habib and Satish Chandra. Changes in the agrarian economy are studied in relation to the social structure and state formation, with stress on interpreting evidence from contemporary documentation.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Village Aristocracy; Khuts; Chaudhuri; Zayad Crop; Rabi And Kharif; Noria And Saqiya; Persian Wheel; Khwaja; Kharaja'; Hukm i Masahat Bafa i Biswa; Iqta; Madad-i-Ma'ash; Abwab; Zamindar ; Banth and Talpad; Jins i-Kamil; Sair Land; Malikana; Deh Kharj; Panch Mukadamman; Khudh Ka'sht; Karori Experiment (1574-75); Ain-i-Dahsala; Nasq; Kankut;Zabti System; Jama and Hasil;Gaz-i-Ilahi; Jagirdari Crisis; Zamindar Zortalab;

Unit I

Structure of the rural society in the Delhi Sultanate; aristocracy, intermediaries and peasantry; methods of cultivation and types of crops; means of irrigation and water lifting devices; projects of agrarian expansion; prices of agricultural produce.

Unit II

Agrarian taxation in the Delhi sultanate; from tribute to a uniform land tax; magnitude of state share and methods of collection; salient features of the iqta system; stages in the evolution of the iqta system.

Unit III

Conditions of peasantry in Mughal India; stratification among the peasantry; the nature of agrarian property; structure of the village community; zamindars and nature of their income; genesis, composition and strength of the zamindars.

Unit IV

Assessment of land tax under the Mughals; magnitude of state share and mechanism of its collection; salient features of the jagirdari system; jagirdari system: fiscal rights and management; crisis in the jagirdari system; nature of the agrarian revolts.

Essential Readings

Farooqi, M.A., *The Economic Policy of the Sultans of Delhi*, New Delhi: Konark Publishers, 1991.

Habib, Irfan, *The Agrarian System of Mughal India*, New Delhi: Oxford University Press, 2nd Revised Edition, 1999.

Habib, Irfan, *Essays in Indian History: Towards A Marxist Perception*, New Delhi: Tulika, 1995.

Naqvi, H.K., *Agricultural, Industrial and Urban Dynamism under the Sultans of Delhi,* New Delhi: Munshiram Manoharlal, 1986.

Raychaudhuri, Tapan, & Irfan Habib, (Eds.), *The Cambridge Economic History of India, Vol.I*, Hyderabad: Orient Longman, (Reprint), 2004.

Suggested Readings

Alam, Muzaffar & Sanjay Subrahmanyam (eds.), *The Mughal State 1526-1750*, New Delhi: Oxford University Press, 1998.

Chandra, Satish (Ed.), *Essays on Medieval Indian Economic History,* New Delhi: Munshiram Manoharlal, 1987.

Grover, B.R., "Nature of Land Rights in Mughal India", in*The Indian Economic and Social History Review,* Vol.I, 1963.

Habib, Irfan, "Technological Changes and Society: 13th and 14th Centuries", in *Proceedings of the Indian History Congress*, Varanasi, 1969.

Habib, Irfan, "Economic History of the Delhi Sultanate: An Essay in Interpretation", in *The Indian Historical Review,* Vol. IV, No.2, 1978.

Hasan, S. Nurul, *Thoughts on Agrarian Relations in Mughal India*, New Delhi: Peoples Publishing House, 1973.

Moreland, W.H., *The Agrarian System of Moslem India: A Historical Essay with Appendices*, Cambridge Library Collection-South Asian History, Cambridge University Press (paperback), 2011.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595: A Statistical Study*, New Delhi: Oxford University Press (2nd ed.), 2015

Singh, Surinder, "Dynamics of Statecraft in the Delhi Sultanate: A Reconstruction from the Letters of Ainul Mulk Mahru",in *Proceedings of the Indian History Congress,* 61st Session, Calcutta, 2001.

COURSE CODE: HIS 711

Objective: This course examines the impact of colonialism on India's agrarian economy in the nineteenth and early twentieth centuries.

Pedagogy: Class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Agrarian Society; Ryotwari; Mahalwari; Permanent Settlement of Bengal; Classical Theory of Rent; Jajmani System; Rural Indebtedness; Commercialization of Agriculture; Canalization; ICAR; Central Banking Enquiry Committee; Royal Commission of Agriculture; Cooperative Movement; Self Sufficient Village Economy; Agrarian Relations; Famine Relief; Cash Crops; Agricultural Labour; Taccavi Loan; Agricultural Technology; Punjab Land Alienation Act; Famine Relief Fund; Pattidar; Miras Land; Agricultural Trade; War Financing; Debt Relief.

Unit I

Agrarian Context: Mid 18th century background and British Agrarian Policy; Agrarian settlements: Permanent; Ryotwari; Mahalwari; consequences of periodic settlements.

Unit II

Agrarian Production and Technology;Commercialization of agriculture;Famine and the Peasantry; rural indebtedness

Unit III

Agrarian Relations: Northern and Central India; Eastern India; Western India; South India.

Unit IV

Development of irrigation in colonial times; Canalization and colonization of Punjab; Trade in Agricultural Produce; Agricultural Labour.

Essential Readings:

Ali, Imran, *The Punjab under Imperialism (1885-1947)*, OUP, New Delhi, 1989.

Bagchi, Amiya Kumar, *Colonialism and Indian Economy,* OUP, New Delhi, 2010.

Banerjee, Himadri, *Agrarian Society of the Punjab (1849-1901)*, Manohar, New Delhi, 1982.

Bhatia, B.M., *Famines in India: A Study in Some Aspects of the Economic History of India with Special Reference to Food Problems, 1860-1990,* Sangam Books, Delhi, 1991.

Bhattacharya, Dhires, *A Concise History of the Indian Economy (1750-1950),* Prentice Hall, New Delhi, 1979(Second Edition).

Bhattacharya, Neeladri, *The Great Agrarian Conquest: The Colonial Reshaping of a Rural World,* Permanent Black, Ranikhet, 2018.

Dalrymple, William,*The Anarchy:The East India Company, Corporate Violence and the Pillage of an Empire*, Bloomsbury, 2019

Kumar, Dharma(ed.), *The Cambridge Economic History of India, 1757-1970, Vol.II*, Orient Blackswan, Hyderabad, 2015(First Published 1984).

Dutt, R.C., *The Economic History of India in the Victorian Age,* Kegan Paul, London, 1903.

Dutt, R.P., *India Today,*Popular Parkashan, Bombay, 1949.

Gopal, S., *The Permanent Settlement in Bengal and its Result*, Allen and Unwin, London, 1949.

Roy, Tirthankar, *The Economic History of India(1858-1947),* OUP, New Delhi, 2006.

_____, *An Economic History of Early Modern India,* Routledge, London, 2017 (First Published 2013).

Singh, V.B. (ed.), *Economic History of India, 1857-1955,*Allied Publications, Bombay, 1965.

Suggested Readings:

Amin, Shahid, ' Agrarian Bases of Nationalist Agitations in India: An Historiographical Survey,' in D.A. Low, *The Indian National Congress*, Manohar, Delhi, 1988.

Bayly, C.A., *Rulers, Townsmen and Bazaars: North Indian Society in the Age of British Expansion(1770-1870),* OUP, New Delhi, 2012(First Published 1983).

Choudhuri, B.B.,'Trends in the Recent Studies in the Agrarian History of Colonial India' in T. Banerjee (ed.) *Indian Historical Research since Independence*, Calcutta, 1986.

Desai, A.R., *Social Background of Indian Nationalism*, Popular Prakashan, Bombay, 2004(First Published 1948).

Dhanagare, *Peasant Movements in India1920-1950*, OUP, New Delhi,. 1983.

Hardiman, David, *Peasant Resistance in India* 1858-1914, OUP, New Delhi 1992.

Kulke, Harman and Rothermund, Dietmar, *A History of India,* Routledge, London, 2010(First Published 1986).

Mukherjee, Mridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism*, Sage Publications, New Delhi, 2005.

Rothermund, D.,*Government Landlord and Peasant in India: Agrarian Relations under British Rule*, 1865-1935, Weisbaden, 1978.

Sen, Sunil, K., *Agrarian Relations in India, 1793-1947*, People's Publishing House, New Delhi, 1979.

Tomlinson, B.R., *The New Cambridge History of India: The Economy of Modern India (1860-1970),* Cambridge University Press, New Delhi, 2005(First Published 1998).

PAPER-II OPT. (IV) INDUSTRY, TRADE & URBANIZATION IN MEDIEVAL INDIA

COURSE CODE: HIS 721

Objective: This paper focuses on the Urban Economy of the Medieval period and looks with detail at the Urban pattern, Trade and Industry, Administration of towns and Social Classes in towns. It aims to introduce the urban dimension to students of Medieval India to add to their basic understanding of the period.

Pedagogy: Students will be introduced to new readings on the theme and a familiarization with debates on several issues.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each

unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Urban Centre; Qasbah;Temple Urbanism; Urbanization; Dynastic Towns; Mohalla; Katra; Tripolia; Qahwakhana; Kotwal; Mir-i-Mohalla; Pol; Rach Bharmar; Talimguru; Chikandoz; Naqqash; Baradari; Karkhana; Jital; Ganj; Ahl-i-Saif; Ahl-i-Qalam; Hakeem; Hunarmardan; Balda; Urban Revolution 13th Century; Hundi; Asharfi; Qadam Sharif; Nakhas; Manzil

Unit I

Urban pattern in the early medieval period; urban revolution in the 13th century; urban development upto mid 18th century; types of urban centres; morphology of towns; administration of towns.

Unit II

Major industries – textiles, metal work,; forms of organization; technology and labour; profile of medieval craftsmen; state policy; case studies – Shahjahanabad, Agra, Surat.

Unit III

Major trade routes; organization of trade; items, volume and trade pattern; currency, credit and monetary system; markets; state control; case studies—Chief Trading Centres.

Unit IV

Urban classes; nobility; commercial and trading classes; professional classes; artisans and craftsmen; labouring classes and slaves; courtly and popular culture.

Essential Readings

Abul Khan Muhammad Farooque, *Roads and Communications in Mughal India*, Adab-I-Adabiyat-i-Delhi, Delhi, 1977.

Ashraf, K.M., *Life and Conditions of the People of Hindustan*, Delhi, 1978.

Blake, Stephen, *Shahjahanbad*, Cambridge University Press, 1993.

Chattopadhyaya, B.D., *The Making of Early Medieval India*, Delhi: Oxford University Press, 1994.

Grewal, Reeta, 'Urbanization in Medieval India' in *The State & Society in Medieval India* (ed, J.S. Grewal), Delhi: 2005, Oxford University Press, PHISPC, 396-429.

Gupta, I.P., *Urban glimpses of Mughal India: Agra the Imperial Capital,* Discovery, Delhi, 1986.

Habib, Irfan and Tapan Raychaudhari, eds., *The Cambridge Economic History of India*, Vol.I, Orient Longman, 1984.

Habib, Mohammad, 'Introduction' to *Elliot and Dawson's History of India*, Vol.II, Aligarh reprint, 1-102.

M.P. Singh, *Town, Market, Mint and Ports Towns in the Mughal Empire*, Delhi: Adam, 1985.

Naqvi, H.K., *Urban Centres & Industries in Upper India*, Bombay: Asia, 1968.

Naqvi, H.K., *Urbanization and Urban Centres under the Great Mughals*, Shimla: IIAS, 1971.

T.Chitchern, A.I., *India: Changing Economic Studies in 16th-18th Centuries*, Delhi: Manohar, 1998.

Vanina, Eugenia, *Urban Crafts and Craftsmen in Medieval India*, Delhi: Munshiram Manoharlal, 2004.

Suggested Readings

Bayly, C.A., *Rulers, Townsmen and Razaars: North India Society in the Age of British Expansion*, Oxford University Press.

Chenoy, Shama Mitra, *Shahjahanabad: City of Delhi 1638-1857*, Delhi: Munshiram Manoharlal, 1998.

Mallick, B.S., *Money Banking & Trade in Mughal India*, Jaipur: Rawat, 1991.

Moosvi, Shireen, *The Economy of the Mughal Empire c.1595*, Delhi: Oxford University Press, 1987.

Moreland, W.H., *India at the Death of Akbar: An Economic History*, Atma Ram & Sons, 1962.

Moreland, W.H., *From Akbar to Aurangzeb*, Delhi: Oriental Books, 1972 (reprint).

Naqvi, H.K., *Agriculture, Industry and Urban Dynamism under Sultans of Delhi*, Delhi: Munshiram Manoharlal, 1986.
Richards, J.F. ed., *The Imperial Monetary System of Mughal India*, Delhi: Oxford University Press, 1987.
Subramanyam S., ed., *Money and Markets in India*, Delhi: Oxford University Press, 1998.

PAPER-II OPT. (V) INDUSTRY AND TRADE IN MODERN INDIA

COURSE CODE: HIS 730

Objective: To examine the manner of early trade and industry in India and the evolution of private enterprise.

Pedagogy: Class room lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Mercantilism; Imperialism; Nationalism; Balance of Trade;Exchange Banks;De-industrialization; East India Company; Subsidiary Alliance; Public Limited Company; Private Limited Company; Equality; Wootz; Free Trade; Chintz; Scientific temper; Swadeshi; Non –cooperation; Swarajya; Civil Disobedience; Dyarchy; Artisan; Trade Union; Factory Act; Labour Legislation; Industrial Enterpreneurship; Colonialism; Commercialization of Agriculture organized Sector.

Unit I

Trade and East India Company: Growth; Composition; value of Trade; Balance of Trade; Impact of Presidency banks and Exchange banks on trade.

Unit II

Foreign Trade 1857-1947: Reasons of Trade expansion, Composition; Export and Import; Balance of Trade; Direction; Impact of two world wars on Indian foreign trade.

Unit III

The traditional artisanal industries: the de-industrialisation question; Nature of modern industry under the colonial rule- major industries- Cotton, textile, Jute, Iron and Steel; reasons of industrial expansion; Industrial entrepreneurship.

Unit IV

Industrial Labour under the Colonial rule: Wages and Standard of living; Trade union movement; Labour Disputes, Labour Legislation.

Essential Books

Asiya, Siddique, *Trade and Finance in Colonial India*, *1750-1860*, Oxford: Oxford University Press, 1995

Bagchi, A.K., *Private Investment in India, 1900-1939*, Cambridge: Cambridge University Press, 1972.

Buchanan, D.H., *The Development of Capitalistic Enterprise in India,* New York: Macmillan, 1939.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India*, New Delhi: PPH, 1982 (reprint).

Godgil, D.R., *The Industrial Evolution of India in Recent Times, 1860-1939*, Bombay: Oxford University Press, 1975 (reprint).

Mehta, S.D., *The Cotton Mills of India*, 1854-1954, Bombay: Textile Association, 1954.

Ray Chaudhary and Dharma Kumar (eds)., *The Cambridge Economic History of India, 1757-1970*, Vol.II, Hyderabad, 1984.

Suggested Readings

Morris, M.D.,*The Emergence of an Industrial Labour Force in India,* Berkeley: University Press, 1965.

Chaudhari, K.N., *The Economic Development of India under the East India Company, 1814-1858*, Cambridge: Cambridge University Press, 1971.

Sen, S.K., *Studies in Industrial Policy and Development of India, 1858-1914,* Calcutta: Progressive Publishers, 1964.

Singh, V.B.(ed.),*Economic History of India, 1857-1956*, Bombay: Asia, 1965

Thorner, D., 'De-industrialization in India' in his *Land and Labour in India*, Bombay: Asia, 1962.

Tirthankar, Roy, *Cloth and Commerce: textiles in colonial India*, New Delhi: Sage, 1996.

PAPER –II OPT. (VI) URBANIZATION IN MODERN INDIA(**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 733

Objective: The course introduces a new perspective and analyses the process of urbanization in India from the mid 18th to the 20th century. The changing patterns of urban development in the regional context; new urban forms, new social and economic institutions, urban administration and urban problems are examined. Case studies allow for an indepth analysis of the urban dimensions adding to our understanding of history and the impact of urbanization on society.

Pedagogy: The key concepts and context are taken up in class discussion which incorporates urban studies from allied disciplines as well. Maps and diagrams form an integral part of study.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Urban Centre; Urbanization; Metropolis; Megalopolis; Urban Pattern; Mofussil Town; Qasbah; New Urban Forms; Hill Station; Cantonement; Colony Town; Civil Lines; Brides of The Sea; Black Town; Municipal Committee; Octroi; Municipal Corporation; Notified Area; Civic Amenities; Pseudo Urbanization; Over Urbanization; Ribbon Development; Economic Institutions In Towns; Slums; Circulation Of Traffic; Leaf Plan Of Chandigarh; Superblock; Garden City; Million City; Maximum City.

Unit I

Urban patterns in the mid 18th century; urban development in the colonial period; factors influencing urbanization; types of urban centers; case study of New Delhi- phases of growth, town planning and society.

Unit II

New Urban Forms: the hill station; cantonement; civil lines; colony town; the port cities; case study- Bombay- growth, morphology and social structure.

Unit III

Early administration in towns; introduction of municipal government; municipal functions and working; resources; nature of urban government in colonial times.

Unit IV

Urbanization in post-independence India; regional patterns; classification of urban places; urban problems- slums, lack of civic amenities, haphazard growth; urbanization policy; case study- Chandigarh- plan, growth and social dimensions.

Essential Readings

Avasthi, A. *Municipal Administration in India,* Agra: Lakshmi Narayan, 1972.

Banga, Indu (ed.), *The City in Indian History*, Delhi: Manohar, 1994.

Banga, Indu (ed.), *Ports and their Hinterlands in India 1700-1950*, Delhi: Manohar, 1991.

Banga, Indu and J.S. Grewal (eds), *Studies in Urban History*, Amritsar: GNDU, 1983.

Bayly, C.A., *Rulers Townsmen and Bazaars*, Delhi: Oxford University Press, 1992.

Frykenberg, R.E. (ed), *Delhi Through the Ages,* Delhi: Oxford University Press, 1993.

Gadgil, D.R., *The Industrial Evolution of India in Recent Times*, Delhi: Oxford University Press, 1994.

Gupta, Narayani, *Delhi Between Two Empires*, Delhi: Oxford University Press, 1981.

Kalia, Ravi; *Chandigarh: The Making of an Indian City*, Delhi: Oxford University Press, 1988.

King, Anthony; *Colonial Urban Development*, London: Routledge & Kegan Paul, 1976.

Ramachandran, R., *Urbanization and Urban Systems in India*, Delhi: Oxford University Press, 1999 (8th impression, 1st published 1989).

Sharma, Kavita et al., *Chandigarh Lifescape: brief social history of a planned city,* Chandigarh: Chandigarh Administration, 1999.

Suggested Readings:

Bose, Ashish, *India's Urbanization,* Delhi: Tata Mcgraw Hall, 1978.

Broeze, Frank (ed), *Brides of the Sea: Port Cities of Asia from the 16th to the 20th centuries*, New South Wales University Press, 1983.

D'Souza, Victor S., *Social Structure of a Planned City*: *Chandigarh*: Bombay: Orient Longman, 1968.

Didee, Jayamala and Rangaswamy (eds), *Urbanization Trends, Perspectives and Challenges*, Jaipur: Rawat Publications, 1993.

Heggade, Odeyar D., *Urban Development in India*, Delhi: Mohit, 1998

Prakasa Rao, V.L.S., *Urbanization in India: Spatial Dimensions,* Delhi: Concept, 1983.

Mitra, Asok, *Functional Classification of Indian Towns,* : Delhi: Institute of Economic Growth, 1973.

Sunderam, K.V., *Urban and Regional Planning in India*, Delhi: Vikas, 1977.

PAPERS III

PAPERS IV OPT. (I) MODERN WORLD (MID 15TH-19TH CENTURY)

COURSE CODE: HIS 831

Objectives: The paper focuses on the Modern phase of World history with particular reference to Modern ideas with emphasis on 'humanism', politics revolving around Europeon State System and colonial and economic developments are highlighted. The social and economic change which took place in Europe from 17th to 19th century effecting the transition from Feudalism to Capitalism and the rise of Nationalism in the 19th century are focused in the course.

Pedagogy: The Course is taught on the basis of lectures, seminars, discussions & tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Rennaisance; Humanism; Reformation; Enlightenment;Socialism; Utopian; Soialists; Commercial Revolution; Price Revolution; Bloodless Revolution; Industrial Revolution; Scientific Revolution; Liberty; Equality; Constitutionalism;Nationalism; State Building; Feudalism; Capitalism; Parliamentary Monarchy;Liberalism; Democracy;Absolutism;Nation State; New World; Age of Exploaration; Free Trade; Continental System;

Unit I

Enlightenment and Modern Ideas: Renaissance, its social roots, humanism and its spread in Europe; Reformation, its origins, course and significance; Spread of Enlightenment, outside Europe; Rise of Socialist ideas (to Marx).

Unit II

Origins of Modern Politics: European States System- Spain, France and England; Colonial expansion and economic developments; early colonial empires of Portugals and Spain; shift of economic balance from Mediterranean to the Atlantic, commercial revolution and price revolution.

Unit III

Europe in the 17^{th} and 18^{th} Centuries: Economic, Social and Political dimensions-The English Revolution; Scientific Revolution; American Revolution and the constitution; French Revolution and its aftermath; European political patterns in the 18^{th} century- parliamentary monarchy and patterns of Absolutism in Europe.

Unit IV

Modern Nation State System: English Industrial Revolution, transition from feudalism to capitalism; Rise of Nationalism in the 19^{th} century; state building in Germany and Italy; liberalism and democracy in Britain; Disintegration of Empires through emergence of nationalities; 19^{th} century European revolutions.

Essential Readings

Clark, G., *Early Modern Europe*, Oxford University Press, 1964.

Clough, Shepherd, *Economic Development of the Western World*, London: Macraw Hill Book Company.

Davis, H.A., *Outline History of the World. Ed.5* 1968.

Gay, P and J. Goratty(eds) *Columbia History of the World,* New York: Harper Row, 1972.

Hale, J.R., *Renaissance Europe*, London: Collins Sons & Co.Ltd., 1971.

Hinsley, F.H.(eds) *Material Progress and World Wide Problems, 1870-1898,* Cambridge University Press, 1976.

Hobsbawm, Eric., *Age of Empire 1875-1914*, Delhi: Viking, 1975.

Hobsbawm, Eric., *Age of Revolution 1789-1848,* Delhi: Viking, 1975.

Palmer, R.A., *A History of Modern World,* Macgraw, 1982.

Stavrianos, L.S., *The World Since 1500*, Delhi: Prentice Hall of India, 1965.

Stavrianos., L.S., *Readings in World History*, USA: Allen & Bacon, Inc., 1962.

Suggested Readings

Lefebvre, G., *The French Revolution*
Rude, George, *Revolutionary Europe*, Collins, 1964.
Thompson, Davis, *Europe Since Napoleon,* Australia: Penguin, 1966.

PAPER III OPT. (II) CHINA AND JAPAN (1840-1950)

COURSE CODE: HIS 844

Objective: This courses aims to trace the various phases of history of China and Japan in modern times in context of their struggle against invasion of west. Also the present course seeks to evaluate the internal struggle as well as various efforts made within these nations which were directed towards the quest of their identities as important powers of the world.

Pedagogy: The said course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and term given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Opening of China; Cutting of the Chinese Melon; Open Door Policy; Co–hong; Taiping Rebellion; Battle of Concessions; Boxer Society; Li-Ito Convention; Campradores; Warlords; K.M.T.; League of Common Alliance; C.C.P.; Communism; Communes; Modernization of Japan; Meiji Restoration; Opening of Japan; Perry expedition; Tonghaks' rebellion; Most Favoured Nation Treatment; Right of Extra Territoriality; Treaty of Shimonoseki; Triple Intervention; Treaty of Portsmouth; 21 Demands; Aims of Washington Conference; Five Power Naval Treaty; Zaibatsu; Japanese militarism; Manchurian Crisis; Fall of Japan.

Unit I

Opening of China w.s.r.t. the First Opium War and the Second Opium War; Taiping rebellion; Battle of Concessions (1895-98); Boxer movement (1900); the Impact of foreigners in China – disintegration of family centered society and the rise of new classes.

Unit II

Sun Yat Sen and the revolution of 1911; Cultural awakening between 1917-1919; May 4th 1919 Movement; C.C.P.'s relations with K.M.T. till 1949 and triumph of communism; the inauguration of first Five Year Plan and land reforms; the role of communes.

Unit III

Opening of Japan w.s.r.t. Perry expedition and its significance; Meiji restoration and reforms for modernisation-end of feudalism, reorganization of central administration, reforms in education, industrial and agricultural reforms, the new Japanese Constitution of 1889; the first Sino-Japanese War (1894-95); Anglo- Japanese Alliance (1902); Russo-Japanese War (1905).

Unit IV

Japan's role in World War I and presentation of 21 demands; Washington Conference (1921); Causes and growth of Japanese militarism; Japan from Manchurian Crisis to the Second World War; monetary and banking systems in post-war Japan; the role of Zaibatsu in post-war economy.

Essential Readings

Allen, G.C., *Japan's Economic Recovery*, *Opium Wars to 1911 Revolution Vol.I,* Delhi: Routledge, 2000.

Donnithorne Audrey, *China's Economic Systems,*London: Routledge, 1st Edition 2016.

Flath David, *The Japanese Economy,* New York: Oxford University Press, Reprint 2014.

Hsu Immanuel, C.Y., *The Rise of Modern China,* New York: Oxford University Press, Reprint 2000.

Hughes, T.J. & Luard D.E.T., *The Economic Development of Communist China (1949-60),*Connecticut, US: Green Wood Press, 1975.

Vinacke, Harold M., *A History of the Far East in Modern Times*, New York: Appleton Century Crafts, 1961 (6th edn.)

Clyde, P. H. and Burton B.F., *The Far East: A History of the Impact of the West on Eastern Asia,* Englewood Cliffs, N.J. Prentice Hall, 1966.

Kennedy Paul, *The Rise and Fall of the Great Powers- Economic Change and Military Conflict from 1500 to 2000,* London: William Collins, Reprint 2017.

PAPERS III OPT. (III) HISTORY OF CANADA(**NOT OFFERED TO STUDENTS IN THIS SESSION)**

COURSE CODE: HIS 821

Objective: An introductory course focusing on the main developments in politics, economy and society of Canada from its inception to recent times. The major changes and its impact on the people is highlighted to understand the kind of transformation taking place in time and the making of a multi-cultural society.

Pedagogy: As the course is being introduced for the first time, basic standard reading would be utilized along with maps and perspectives to help study the country in some detail.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Inuit; First Nations; Runners Of The Woods;Skraelings; Seigneurs; New France; Quebec Act 1774; Canada Bill 1791; Reciprocity Treaty 1854; Dominion Day; Halifax Award 1877; Alien Question;Gold Rush; NEP; Bits And Pieces Programme; Conscription; "Rep By Pop"; Staples Theory; Baby Boom; Dirty Thirties; Parti Canadien; GATT; Parti Quebecois; Two Nationalisms; Cultural Genocide'; Referendum; October Crisis; Bilingualism;Hyde"Park Agreement;"Ethnic Ghetto"; Multiculturism;White Paper ; Meechlake Conference; Gang of Eight; Bill 22/101; CANDU Model;

Unit I

First nations and their contact with early European settlers; French and English in Canada in 17th century; Anglo-French activity in 18th century; Canada c.1800.

Unit II

Transformation 1815-40; The Dominion of Canada 1867; Expansion 1867-96; Economic boom 1896-1914; Impact of World War I, Relations with Britain

Unit III

Politics and Economics of the 1920's; Developments in 1930's; Canada and World War II; Post War developments upto 1963, Relations with USA.

Unit IV

Economic Developments 1960-80; Changing Canada; Problems for Government. in 1970s-80s; Multi culturalism.

Essential Readings

Bothwell, Robert, *The Penguin History of Canada*, Penguin, Canada, 2006.

Morton, Desmond, *A Short History of Canada*, McChelland & Stewart, Toronto, 2006 (6th edn., 1st published 1987).

Bumstead, J.M., *A History of the Canadian Peoples*, Oxford University Press, Toronto, 2007 (3rd ed.)

Nelles, H.V., *A Little History of Canada*, Oxford University Press, Toronto, 2005.

Suggested Readings

Douglas R. Francis, Richard Jones and Donald B. Smith, *Origins: Canadian History to Confederation*, 6th ed., Nelson, Toronto, 2008.

Douglas R.Francis, Richard Jones and Donald B. Smith, *Destinies: Canadian History since Confederation*, Nelson, Toronto, 2006.

Dickason, Olive Patrica, *A Concise History of Canada's First Nations*, Oxford University Press, Toronto, 2006.

PAPER–II OPT. (IV) (A) AMERICAN IMPERIALISM IN THE NINETEENTH AND TWIENTIETH CENTURIES(**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 811

Objective: From an Indian perspective, this course examines the nature of American imperialism and its spread in the nineteenth and twentieth centuries. It presumes a prior knowledge of the broad trends in the history of America, India and the world.

Pedagogy: The course is based on class room discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Imperialism; Monroe Doctrine; industrialization; Mahan Doctrine;Americanization; Louisiana Purchase; great powers;League of Nations; 14 points; Cold War; NAM; McCarthy Era; Cultural imperialism;brain drain;American

Independence; French and Indian War 1754-1763; Colonial Grieviences in America; Spanish Empire in the America; Spanish American Wars; State Power and Industrilization; US expansion in 19th Century; American Intraventions outside the Western Sphere; US and Russia; US and Great Britain; First World War; Anticommunism in the US; US and the Muslim World;US and Israel; Indo-US relations before 1947

Unit I

Introduction to the Nature of Imperialism: The economic bases of imperialism; the strategic bases of imperialism; the altruistic-moral bases of imperialism; The empires of the eighteenth and nineteenth century: the British Empire in India; the Partition of Africa; the various European imperial interests in the Americas; American independence: the French and Indian War 1754-1763; The British empire in America and colonial grievances; the economic and moral bases for claiming independence for America as expressed in its culture, polity and society during the eighteenth and nineteenth centuries.

Unit II

The Monroe Doctrine: The United States replaces the Spanish Empire in the Americas and the Pacific; various Spanish American wars and their consequences; evolution of a moral basis for imperial expansion in the foreign policy; The American civil war**:** the link between state power and industrialisation; the use of moral positions for war like aggression. US expansion in the nineteenth and early twentieth century: Purchasing territories in America and the Pacific; the Mahan Doctrine and military strength; American interventions outside the western hemisphere in the nineteenth and early twentieth century.

Unit III

"Americanisation of the world" in the early twentieth century: The relative industrial and economic strength of the great powers; President Wilson's interventions before joining the First World War; American role in establishing peace after the First World War and the League of Nations. The growth of American power between the Two Wars: Economic interventions in Europe; the US and Russia; the US and Great Britain. The Cold War and American foreign policy: anti-communism in the US and the McCarthy Era; influence of internal concerns on US foreign policy; economic and human costs of American interventions within the US and outside.

Unit IV

US and the third world: US hostility to NAM 1950s to 1990s; US and the Muslim World; US and Israel; US as a soft power: "Cultural imperialism"; the brain drain from across the world to the US; Indian opposition to US cultural imperialism, 1960s to 1990s; Impact of American imperialism on south Asia: Indo-US relations before independence; Indo-US relations from 1947 to 1971; Indo-US relations from 1971 to the 1990s.

Essential Readings

Ferguson, Nial, *Colossus: The Rise and Fall of the American Empire*, Penguin books, London, 2005, multiple reprints in Indian edition.

Gilbert, Martin, *A History of the Twentieth Century, 3 volumes*, Harper Collins, London, 2000, multiple reprints in Indian edition.

Handlin, Oscar, *The History of the United States,* Holt, Reinhart and Winston, New York, 1968, multiple reprints.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000,* Fontana Press, New York, 1988, multiple reprints in Indian edition.

Suggested Readings

Brecher, Michael,*The Foreign Policy System of Israel*, Oxford University Press, Toronto, 1972.

Chandra, Bipan, *Essays on Colonialism*, Orient Longman, New Delhi, 2000.
Desai, A.R, *The Social Background of Indian Nationalism*, Popular Prakashan, Bombay, 1954, multiple reprints.
Dutt, R.P., *India Today,* PPH, Bombay, 1949, multiple reprints.
Gilbert, Felix, *End of the European Era, 1890 to the Present* Norton, London, 1981.

Huntington, Samuel P., "The Clash of Civilizations?" in Foreign Affairs, 1993 Also, http://history.club.fatih.edu.tr/103%20Huntington%20Clash%20of%20Civilizations%20full%20text.htmLenin, V.I., *Imperialism, the Highest Stage of Capitalism: a popular outline***,** various editions, 1916.

Moore, Barrington Jr., *The Social Origins of Dictatorships and Democracies: Lord and Peasant in the Making of the Modern World*, Beacon Press, New York, 1966, also in Indian edition.

Owen, Roger and Bob Suttcliffe, (eds.), *Studies in the Theory of Imperialism*, Longman, London, 1972.

COURSE CODE: HIS 812

Objective: The emergence of America as a world leader was substantially based on the transformations taking place in that country as it tries to adjust itself to the post-Napoleonic world order of the nineteenth century. This course traces the main currents in American history to find an understanding of that transformation.

Pedagogy: Class room discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Nation State; Freedom; Big Business; Scientific Temper; Industrial Revolution; Imperialism; Communism; Foreign Policy Based on Neutrality; Carpet Baggers; Scallywags; Populism; Slavery; League of Nations; Free Trade; Peace Of Paris; Progressive Movement; Hooverville; New Deal; Economic Depression; Balance of Trade; Feminism; Social Justice; Civil Rights; Foreign Policy of Appeasement.

Unit I

The new territories in the west: Expansion in Texas, the war with Mexico; Moral and ideological tensions: Growth of sectionalism, causes and consequences of the Civil War, Reconstruction of the South; The new economy: growth of industrialisation and new technologies, Big Business, 1875-1900; Growth of cities.

Unit II

Emergence as a World Power: War with Spain; causes and results; decision for economic imperialism; Overseas Expansion: The Carribean and the Pacific, 1896-1915; World Involvement: Unnatural neutrality; the U.S.A. at World War-I; The Treaty and the League.

Unit III

Populist and Progressive Movements: Leaders and achievements, 1890-1917; The onset of Great Depression: Causes and impact; the Hoover Program; The New Deal: New Deal Legislation; foreign policy during the New Deal period.

Unit IV

The Second World War: Issue of neutrality; the U.S.A. at war, planning a new World order; balance of terror: Colder war: Origins; diplomacy of Cold war; containment of communism; Détente; Social Movements: Movements for Social Justice: The Feminist Movement; Temperance; Suffrage; Civil Rights.

Essential Readings

Faragher, John Mack, Mari Jo Buhle, Daniel Czitrom, Susan H. Armitage,*Out of Many: A History of the American People*, Prentice Hall /Longman, New York, 2009.

Tindall, G B and D E Shi,*America: A narrative history*, WW Norton, New York 2009. Also available as ebook from [http://www.wwnorton.com/college/history/america7]

Zinn, Howard, *People's History of the United State, 1492-Present*. Revised edition 2005 (first published 1980).

Suggested Readings

Blum, John M., Bruce Cotton, *The National Experience: A History of the United States*, New York: 1970.

Current, Richard, N.T. Williams et al., *American History: A Survey*, Vol.II, Calcutta:Scientific Book Agency, 1975 (4th edition).

Faulkner, H.U., *American Economic History*, London: Harper and Row Publishers, 1954.

Morrison**,** S.E., H.S. Commager and W.E. Leuchtenburg, *The Growth of the American Republic,* New York: Oxford University Press, 1969.

Parkes, Henry Bamford, *The United States of America*, Calcutta: Scientific Book Agency, 1967 (reprint).
Pratt, Julius, W., *A History of United States Foreign Policy*, N.J.: Englewood Cliffs, 1957.
Wittner, Lawrence S., *Cold War America, From Hiroshima to Watergate*, New York: Praeger Publishers, 1974.

PAPER –IV OPT. (II) WORLD IN THE TWENTIETH CENTURY

COURSE CODE: HIS 832

Objectives: Structures of international systems in the early twentieth century were drawn on the plank of imperialism, colonialism, nationalism leading to emergence of a bipolar world, organised into military blocks with non military organisations such as United Nations acting as arbiters of international peace. The impact of a bipolar world and its political dynamics were visible, especially in the middle east. New trends in human and civil rights marked contemporary foreign policies while feminism, working class and students movements, gained momentum in the international landscape.

Pedagogy: The methodology will include lectures, discussions, review, seminars and power point presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Imperialism;Neo-Imperialism; Colonialism; Neo-Colonialism; Socialism; Nationalism;Communism;Capitalism; Revolution; Human Rights; Feminism; Working Class; Commonwealth; NAM; United Nations; Student Movement; Middle East; Military Blocs; Civil Rights;Foreign Policy; Third World; Non-Alignment; NATO; Warsaw Pact;Glasnost; Perestroika;Menshevik; Bolshevik;Arab Politics.

Unit I

On the Eve and aftermath of the First World War: Imperialism and Colonialism with reference to the First World War; The Ideology of Nationalism with special reference to India and China; The Russian Revolution of 1905; Causes and impact of the Revolution of 1917, collapse of the Soviet Union.

Unit II

Human and Civil Rights and New Trends: The idea of Civil and Human rights in the Third World; Role of Civil and Human rights in contemporary foreign policy Strategies; Trends within the growth of feminism, working class, and students movement.

Unit III

Military Blocs and Non-Military Organizations: Non-military organizations; U.N. as an arbiter of international peace; Changing facets of Commonwealth and its irrelevance; growth of NAM as a critic of Imperialism and Neo-Colonialism.

Unit IV

Political Dynamics in the Middle East: Regional Arab politics and the conflict with Israel; U.S.S.R. and the Middle East; U.S.A.'s policy towards the Middle East with special reference to Iraq, Israel and Iran.

Essential Readings

Anderson, Eugene N., *Modern Europe in World Perspective*: *1914 to the Present*, Holt, New York: Rinehart and Winston, 1961.

Brar, B.S., *Explaining Communist Crises*, New Delhi: Ajanta, 1994.

Gilbert, Felix, *End of the European Era*, *1890 to the Present* London: Norton, 1981.

Hammond, Paul Y. (ed), *Political Dynamics in the Middle East*, New York: I.N.C., 1972.

Hobsbawn, E.J., *Age of Extremes*, Delhi: Viking, 1995.

Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*, London: Unwin and Hyman, 1988.

Spanier, John., *Games Nations Play*, Delhi: Macmillan India Ltd., 1990.

Suggested Readings

Ashworth, W., *A Short History of the International Economy*, *1850-1950*, London: Longmans, 1954.
Bergson, Abram & H.S., Levine, eds., *Soviet Economy Towards the Year 2000,* London: Unwin, 1983.
Brecher, Michael., *The Foreign Policy System of Israel*, Toronto: Oxford University Press, 1972.
Brezinski Zbignew., *The Soviet Bloc: Unity and Conflict,* Cambridge: The Harvard University Press, Mass, 1960.
Brezinski, Zbignew and S.P. Huntington., *Political Power: USA/USSR*, London: Chatto and Windus, 1964.
Chandra, Bipan, *Essays on Colonialism*, New Delhi: Orient Longman, 2000.
Chesneaux, Jean et. al. (eds.)., *China*, Vols. 1 and 2 Delhi: Khosla, 1978.
Clyde, Paul and Burton Beers., *The Far East: A History of Western Impacts and Eastern Responses, 1830-1975*, New Delhi: Prentice Hall, 1976.
Forsythe, David P., *Human Rights in International Relations*, Cambridge: Cambridge University Press, 2000.
Freeman, Michael., *Human Rights*, Black well Publishers Malden, 2003.
Holland, R.F., *European Decolonization, 1918-1981: An Introductory Survey,* London: Macmillan, 1985.
Horowitz, David., *Imperialism and Revolution,* London: Penguin Press, 1969.
Karsh, Efraim and Rautsi, Irari., *Saddam Hussein: a Political Biography*, Wheaton: B.P.C.C., 1991.
Kennan, George F., *Democracy and the Student Left*, London: Hutchison, 1968.
Kennan, George F., *The Fateful Alliance: France, Russia and the Coming of the First World War,* New York: Pantheon, 1984.
Kochan, Lionel & Richard Abraham., *The Making of Modern Russia*, London: St. Martin, 1984.

Lichteim, George., *Short History of Socialism,* London: Fontana, 1975.
Owen, Roger & Bob Suttchliffe, (eds.)., *Studies in the Theory of Imperialism,* London: Longmans, 1972.
Porter, Bernard., *The Lion's Share, A Short History of British Imperialism, 1850-1970*, London: Oxford University Press, 1976.
Porter, Brian, (ed.)., *International Politics, 1919-69*, London: Oxford University Press, 1972.
Samir, Amin., *Maldevelopment :anatomy of global failure,* London: Zed books, 1990
Singer, Hans W. and Javed Ansari., *Rich and Poor Countries*, London: Unwin, 1982.
Stevens, Georgiana G., *The United States and the Middle East*, Prentice – Hall Inc N.J., 1964.
The Cambridge Modern History, Vol. 12., *The Shifting Balance of Power,* Cambridge: Cambridge University Press, 1958.

Semester III	**Group-IPaper I:**	HIS 123	Punjab in the Nineteenth Century (Compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 431	Opt. (i)Evolution of Ancient Societies	4 credits
		HIS 421	Opt. (ii)Feudal Society in Western Europe	4 credits
		HIS 411	Opt. (iii)History of Capitalism	4 credits
		HIS 412	Opt. (iv)Rise and Growth of Colonialism in India	4 credits
		HIS 602	Opt. (v)History of Secularism in Modern India **Not offered to students in this Session)**	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 432	Opt. (i)Cultural Histhisory of Ancient India	4 credits
		HIS 604	Opt. (ii)Sacred Centres in Indian Civilization	4 credits
		HIS 424	Opt. (iii)Medieval Indian Art and Monuments.	4 credits
		HIS 601	Opt. (iv)Gender Relations in Modern India	4 credits
		HIS 455	Opt. (v)Diaspora in Colonial India **(Not offered to students in this Session)**	4 credits
		HIS 603	Opt. (vi)Science, Technology & Medicine in Colonial India	4 credits
		HIS 213	Opt. (vi)Constitutional Development in Modern India, 1773-1947	4 credits
		HIS 212	Opt. (viii)National Movement in India 1858-1947	4 credits
		HIS 214	Opt. (ix)British Policy and Princely States(**Not offered to students in this Session)**	4 credits
		HIS 263	Opt. (x)Contemporary India 1947-1992	4 credits

PAPER I PUNJAB IN THE NINETEENTH CENTURY(COMPULSORY)

COURSE CODE: HIS 123

Objective: The aim of the present course is to make an assessment of British policy and programme in Punjab and study the construction of State. It critically examines and evaluates administrative, social, cultural, economic developments as well as socio-religious resurgence in the province between 1849-1901.

Pedagogy: The present course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each

unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Suba; Pargana; Kardar;Nazim; Batai;Kankut; Banwazaree; Suzerain;Vassalage;Dharmarth; Jagir; Ijara; Army Panches;Treaty of Amritsar 1809; Treaty Of Bhairowal 1846; Agricultural Loans; Commercialization of Agriculture; Canalization; Board ofAdministration; Punjab Frontier Force; Shuddhi; Nirankar; Kukas; Chief Khalsa Diwan; Mahdi; Socio-Religious Movement; Christian Missionaries;Aims of Anjumans; Agri-Horticultural Society;Modern Technology In Agriculture.

Unit I

Formation of the Kingdom of Lahore; land revenue system, agricultural production and development; trade, industry and urbanization.

Unit II

State and Polity: Nature of state, political developments 1839-1849; factors leading to the decline of the kingdom of Lahore; annexation of the Punjab.

Unit III

The early British administration 1849-59; British agrarian policies; application of modern science and technology in agriculture; canal colonies.

Unit IV

Socio Religious Reform Movements: Christian missionaries and their activities; Arya Samaj and Dev Samaj; Muslim Anjumans and Ahmediyas; Nirankaris, Namdharis and Singh Sabhas.

Essential Readings:

Ali, Imran: *The Punjab under Imperialism*, 1885-1947Princeton: Princeton University Press, 2016.

Bal, S.S., *British Policy towards the Punjab (1844-49)*, Calcutta, 1971.

Banerjee, Himadri: *Agrarian Society of the Punjab*1849-1901*,* Delhi: Manohar,2005.

Banga, Indu (ed.), *Five Punjabi Centuries*, Delhi: Manohar, 2000.

Banga, Indu and J.S. Grewal, eds., *Maharaja Ranjit Singh: Society and Economy*, Amritsar: GNDU, 2001.

Banga, Indu, *Agrarian System of the Sikhs,* Manohar, Delhi: 1978.

Fauja Singh, *Some Aspects of State and Society under Ranjit Singh*, New Delhi: Master Publishers, 1982.

Grewal, J.S. and Indu Banga, eds., *Maharaja Ranjit Singh and His Times*, Amritsar: GNDU, 1980.

Grewal, J.S., *The Reign of Maharaja Ranjit Singh: Structure of Power, Economy and Society*, Patiala: Sita Ram Kohli Memorial Lectures, 1981.

Grewal, J.S., *The Sikhs of the Punjab*, New Cambridge History of India, 1994.

Grewal Reeta and Sheena Pall, eds., *Pre-Colonial and Colonial Punjab*, Delhi: Manohar, 2005.

Grewal, Reeta, 'Polity, Economy and Urbanization: Early 19th Century Punjab' *Journal of Regional History*, Vol. IV, 56-72.

Jones, Kenneth W.: *Socio-Religious Reform Movements in British India*, Cambridge: Cambridghe University Press, 2006.

Khilnani, N.M: *British Power in the Punjab, 1839-1858,* Bombay: Asia Publishing House, 1972

Khushwant Singh, *History of the Sikhs*, Vol.II, Princeton: Princeton University Press, 2005.

Sukhwant, Singh: *Technological Breakthrough and Peasant Enteprise*, Delhi: Manpreet Prakashan, 2002.

Suggested Readings

Banga, Indu & J.S. Grewal, *Civil and Military Affairs of Ranjit Singh*, Amritsar: GNDU, 1987.

Farquhar, J.N: *Modern Religious Movements in India*, Delhi: Munshiram Manoharlal, 2010.

Goswamy, B.N., *Painters at the Sikh CourtI,* Delhi: Aryan Books, 1999.

Goswamy, B.N., *Piety and Splendour: Sikh Heritage in Art*, Delhi: National Museum, 2000.

Jones, Kenneth W.: *Arya Dharam: Hindu Concoiusness in the Nineteenth Century, Punjab*, Delhi: Manohar, 2006.

Lafont, S., *Maharaja Ranjit Singh: Land of Five Rivers*, Delhi: Oxford University Press, 2002.

Sharma, Radha, *Peasantry and the State Early 19th century Punjab*, Delhi: K.K. Publishers, 2000.

Sukhdev Singh Sohal: *The Making of Middle Classes in Punjab*, Jalandhar: ABS Publishers, 2008

Grewal J.S., *Early 19th Century Punjab*, Routledge, 2017.

PAPER –II OPT. (I) EVOLUTION OF ANCIENT SOCIETIES

COURSE CODE: HIS 431

Objective: This course provides an introduction to the form of existence of the earliest human societies and their relationship with the study of history.

Pedagogy: The course depends on class room discussions and visits to the various museums of history.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Hunters-Gatherers; Neolithic; Tribal Society; Chiefdom; Shamanism; Urban Revolution; Urbanization; Bronze Age; Democracy; Slavery; Reciprocity; Market Exchange; Gift Giving; Primitive Valuables; Domestic Mode Of Production;State; Process Of Urbanization;

Unit –I

Hunting-gathering Societies in Asia;Characteristics of Neolithic societies in Western Asia; Stone culture of European societies with reference to Paleolithic and Mesolithic culture;shamanism in western Asia

Unit-II

The urban revolution and the processes of urbanization in Mesopotamia; features of Persian culture and the Zoroastrian religion; Religion and art in Egypt;Socio-economic life in Egypt.

Unit-III

The study of Shang period in Chinese civilization and its features; Neolilthic culture of China; Cultural and religious progress under the Chou; the political and ethical philosophy of Confucius;

Unit –IV

The evolution of the city state with reference to Greek idea of democracy;slavery and religion in Greek;Roman society and Economy;Decline of Roman Civilization

Essential Readings

Adams, R.M., 'Patterns of Urbanization in early Southern Mesopotamia' in P J Ucko et al, eds., *Man, Settlement and Urbanism*, London: Duckworth, 1972.
Adams, R.M., 'Water, Land and Life' in *Heartland of Cities*, Chicago: University of Chicago Press, 1981.
Alfody, G., *The Social History of Rome*, London: Routledge, 1988.
Andreev, Y.V., 'Urbanization as a Phenomenon of Social History', *Oxford Journal of Archaeology,* 8(2), 1989.
Andrewes, A., *The Greek Society,* London: Penguin, 1971.
Belshaw, C., *Traditional Exchange and Modern Markets,* Englewood Cliffs: Prentice-Hall, 1965.
Binford, L., ' Post-Pleistocene Adaptation', in S and L Binford, *New Perspectives in Archaeology,* Chicago: Aldine, 1968.
Bohannan, P. & G. Dalton(eds.), *Markets in Africa,* Evanston: Northwestern University Press, 1962.
Childe, V.G., , 'The Neolithic Revolution', in V.G. Childe, *Man Makes Himself,* London: Moonraker Press, 1956.

Suggested Readings

Adams, R.M., *The Evolution of Urban Society,* London: Weidenfeld & Nicolson, 1966.
Childe, V.G., 'The Urban Revolution in Mesopotamia' in *What Happened in History*, Harmondsworth: Penguin, 1954.
Clark, G and S Piggott, *Prehistoric Societies*, London, Hutchinson, 1965.
Earle, T. How., *Chiefs Come to Power*, Stanford: Stanford University Press, 1997.
Ehrenberg, V., *The Greek State*, Oxford: Basil Blackwell, 1960.
Ellen, R., 'Modes of Subsistence: Hunting and Gathering to Agriculture and Pastoralism', in T. Ingold ed., *Companion Encyclopedia of Anthropology*. London/New York: Routledge, 1994.
Finley, M.I., *Ancient Slavery and Modern Ideology*, London: Penguin, 1980.
Finley, M.I., *The Ancient Economy*, London: Chatto & Windus, 1973.
Harris, D.R. (ed)., , *The Origins and Spread of Agriculture in Eurasia,* Washington: Smithsonian Institution Press, 1996.
Ingold, T et al, *Hunter and Gatherers*, Volume One, New York/Oxford: Berg, 1988.
Jones, A.H.M., *The Roman Economy*, Oxford: Basil Blackwell, 1974.
Service, E.R., *The Hunters,* Englewood Cliffs: Prentice Hall, 1966.
Thomas, J., *Understanding the Neolithic*, London/New York: Routledge, 1999.
Wason, P.K., *The Archaeology of Rank,* Cambridge: Cambridge University Press, 1994.

PAPER –II OPT. (II) FEUDAL SOCIETY IN WESTERN EUROPE

COURSE CODE: HIS 421

Objectives: This paper is essentially devoted to the social history of medieval western Europe. It traces the transformation of the slave-owning society into the feudal society, besides exploring the institution of vassalage, with reference to the fief and manor. These structural changes are examined in the context of improvements in agricultural and industrial production, besides the expansion of trade and urbanization. This paper aims at understanding the methods of historical analysis that were developed by Marc Bloch, Henri Pirenne and Parry Anderson. It also enables us to sharpen our understanding of parallel developments in medieval India, as it opens the avenues of comparative analysis.

Pedagogy: The teacher is required to exercise considerable patience and diligence, so as to clarify key concepts like modes of production, kinship ties, vassalage, fief and manor. Equal attention is paid to material aspects of human life like agriculture, industry and trade. The study of historical maps, particularly relating to trade routes and urban centres, promises to benefit the young learners.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Latifundium; Roman Proletarii; Clan Optimates; Vendetta; Solidarity Of Kindred Group; Vassal; Allod; Benificium; Precaria, Fief De Reprise, Fiefs De Dignité; Liege Homage; Ceremony Of Investiture; Demesne; Manor; Banalities,Three Field Rotation in Agriculture; Heavy Plough; Weaving Loom, Gothic Architecture;Romanesque Architecture; Catalan Forge; Whipple Tree; Trebuchet; Guilds; Urban Centres; Champagne Fairs; Journeyman ; Hanse; Corvée.

Unit I

Decline of Roman Empire with special reference to its political and social structure; the slave mode of production; consequences of the Germanic invasions; the role of kinship ties; practice of vendetta and ownership of property; structure of the family.

Unit II

Origin, development and symbolism of the feudal ties; mutual obligations of lords and vassals; plurality of homage; evolution and types of fiefs; inheritance and sale of fiefs; nature and working of the manorial system.

Unit III

Methods of agricultural production; changes in the agricultural technology and cropping pattern; salient features of textile production; contribution of building industry; development of mining industry.

Unit IV

Features of internal trade with special reference to champaigne fairs; international trade and the role of Hanse; emergence of urban centres; the organisation of guilds; the hierarchy of artisans; peasant and artisan revolts.

Essential Readings

Anderson, Perry, *Passages from Antiquity to Feudalism*, London: Verso (Rep.), 2013.

Bloch, Marc, *Feudal Society,* Vol.I, London: Routledge and Kegan Paul, (Rep.), 1975, New Delhi: Asha Jyoti Booksellers and Publishers (ndian ed.), 2006.

Bloch, Marc, *Samanti Samaj*, Vol.I, Hindi Translation, Krishnakant Sharma, New Delhi: Granth Shilpi, 2001.

Hodgett, Gerald A.J., *A Social and Economic History of Medieval Europe,* London*:* Routledge (Rep.), 2006.

Pirenne, Henri*, Economic and Social History of Medieval Europe*, Eastford (USA): Martino Fine Books (Rep.), 2014.

Suggested Readings

Cipolla, Carlo, (Ed.), *The Fontana Economic History of Europe: The Middle Ages,* London: Collins/Fontana Books, 1976.

Ganshoff, F.L., *Feudalism*, London: Longmans Green and Co. Ltd, 3rd Edition, 1963.

Pounds, N.J.G., *An Economic History of Medieval Europe*, London: Longman, 1974.

PAPER –II OPT. (III) HISTORY OF CAPITALISM

COURSE CODE: HIS 411

Objective: To trace the broad patterns in the history of capitalism since its rise in the sixteenth century through its emergence as the most powerful socio-economic system in the late nineteenth and early twentieth centuries.

Pedagogy: Class room lectures and discussions form the basis of instruction in this course.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Feudalism; Capitalism; Socialism; Marxism; Liberalism; Dialectical Materialism; Scientific Temper; Protestantism; Reformation; Banking system; Equality; Brotherhood; Liberty; Imperiakisms; Trade Unions;Spinning Jenny; Enclosures; agricultural revolution; industrial revolution; Feminism; Stalinism; Absolutist state; Totalitarianism; Welfare State.

Unit I

Transition from feudalism to capitalism: The role of colonial pillage in the emergence of capitalism 1500-1850; Mercantilism and its various forms, various chartered companies and their political and economic activities, the rise of the bourgeoisie, colonial expansion and critics of mercantilism; the emerging link between the generation of wealth and science; the scientific revolution and its relationship with war and the growth of trade in the 16th and 17th centuries.

Unit II

The rise of industrial capital, 1750-1914 with specific reference to Cotton Textile, Coal, Steam, Iron and Steel; the contribution of agriculture to capitalism: the various agricultural revolutions in the 17th, 18th and 19th centuries with special reference to enclosures, animal husbandry, food adequacy and population growth; creation of an infrastructure for economic growth; the factory system, the transport revolution, credit systems, banks, insurance, joint stock companies.

Unit III

Working Class: The Chartist Movement, trade unions, their role and growth, controversies over living conditions; social unrest and the revolutions of the 1840s in England, France, Germany and Italy; the middle classes: spread of education, growth of socialist and liberal ideas; women and public affairs, organization of local government.

Unit IV

Imperialism in the industrial era: great power rivalry in Europe, Asia and Africa; Debates on the nature and origins of 19th century imperialism; the various economic depresses of the 19th and early 20th centuries and their social and political impact; national responses to the crises: the growth of totalitarian and liberal politics in the form of Fascism, Nazism, Stalinism and the liberal welfare state.

Essential Readings

Beaud, Michel, *A History of Capitalism 1500-2000*, New Delhi: Akar, 2004.
Kennedy, Paul, *The Rise and Fall of the Great Powers: Economic change and Military conflict from 1500 to 2000*, New York: Random House, 1988.
Landes, David S., *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*, Cambridge: Cambridge University Press, 1969.

Suggested Readings

Marx, Karl, *The Capital*, Vol. I, especially the following 6 chapters:

'Bloody Legislation against the Expropriated, from the end of the 15th Century.

'Forcing down of Wages by Act of Parliament'

'Genesis of the Capitalist Farmer'

'Reaction of the Agricultural Revolution on Industry. Creation of the Home-Market for Industrial Capital'

'Genesis of the Industrial Capitalist'

'Historical Tendency of Capitalist Accumulation'

'The Modern Theory of Colonisation'

Mendelsohn, K, *Science and Western domination*, London: Thames and Hudson, 1976.

Rostow, W.W., *The Stages of Economic Growth: A Non-Communist Manifesto*, Cambridge: Cambridge University Press, 1960.

PAPER –II OPT. (IV) RISE AND GROWTH OF COLONIALISM IN INDIA

COURSE CODE: HIS 412

Objective: This course aims to introduce the student to the broad trends in the rise and growth of colonialism and its specific form in India in modern times.

Pedagogy: The course is based on class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Colonialism; Colonial Structure; Imperialism; Colonial State; Imperial Historiography; Nationalist Historiography; Subaltern Historiography; Economics Of Colonialism; Mercantilist Economy; Commercialization Of Agriculture; De-Industrialization; Labour; Balance Of Trade; Charter Act Of 1813; Finance Imperialism; Economic Drain; Old Guarantee System; New Guarantee System; Rural Indebtedness; Ethnic Identities; Neo-Colonialism; Unequal Development; Capitalist Class;National Planning Committee; Political Economy;

Unit I

Introduction to Colonialism: Colonial Structure & State; Stages of Colonialism; Economics of Colonialism; Historiography of Colonialism.

Unit II

Colonialism in India: East-India Company and Mercantilist Colonialism 1751-1813; 'Free Trade' 1813-1858, Impact on Agriculture; Trade and Industry; Labour Colonialism.

Unit III

Modern India and Imperialism: Theory of Imperialism; Finance Imperialism 1858-1947; The Indian Capitalist Class; The Nationalist Economic Agitation.

Unit IV

Colonialism and Modernization in India; Debates on impact of Colonialism on India; Colonialism and Ethnic Identities in India; British and Indian Ideas on Indian Economic development, 1858-1905; Danger of Neo-Colonialism after 1947.

Essential Readings

Bagchi, Amiya Kumar, *Colonialism and Indian Economy,* OUP, New Delhi, 2010.

_____, *Merchants and Colonialism,* OUP, New Delhi, 2019.

Bhattacharya, Neeladri, *The Great Agrarian Conquest: The Colonial Reshaping of a Rural World,* Permanent Black, Ranikhet, 2018.

Chandra Bipin , *The Rise and Growth of Economic Nationalism in India,*Peoples Publishing House, New Delhi, 1978.

_____, *Essays on Colonialism*, Orient Longman, New Delhi, 2006(First Published 1999)..

_____, *Nationalism and Colonialism in Modern India*, Orient Longman, Delhi, 2006(First Published 1979).

Cohen, Benjamin J.,*The Question of Imperialism, The Political Economy of Dominance and Dependence*, Macmillan, 1973.

Cohn, Bernard S., *Colonialism and its Forms of Knowledge: The British in India,* Princeton University, Princeton, 1996.

Dalrymple, William,*The Anarchy:The East India Company, Corporate Violence and the Pillage of an Empire*, Bloomsbury, New Delhi, 2019.

Dutt, R.P., *India Today,*Popular Parkashan, Bombay, 1949.

Fieldhouse, D.K., *Colonialism: An Introduction*, Weidenfeld and Nicolson, London, 1981.

Habib, Irfan, *Essays in Indian History,* Tulika, New Delhi, 2007(First Published 1995).

Loomba, Ania, *Colonialism/ Post Colonialism,* Routledge, London, 2007.

Mohan, Kamlesh, "Colonialism & Ethnic Identities in India: 19th to Early 20th Century", in Kaisar, A.J. & Verma, S.P.(eds.), *Art and Culture: Endeavours in Interpretation,*New Delhi, 1996, pp.171-191.

Subramaniyam, Sanjay, *Europe's India: Words, People, Empires(1500-1800),* Harvard University Press, London, 2017.

Tharoor, Shashi, *An Era of Darkness: The British Empire in India,* Aleph, New Delhi, 2016.

Tomlinson, B.R., *The New Cambridge History of India: The Economy of Modern India 1860-1970,* Cambridge University Press, New Delhi, 1993.

Suggested Readings

Barrat, Brown, M., *The Economics of Imperialism*, London, 1974.

Bhattacharya, Dhires, *A Concise History of the Indian Economy (1750-1950),* Prentice Hall of India Pvt. Limited, New Delhi, 1979(Second Edition).

Chandra, Bipan, "Colonialism, Stages of Colonialism and the Colonial State",*Journal of Contemporary Asia*, Vol. 10, No. 3, 1980.

Fanon, Frantz, *The Wretched of the Earth,* Penguin, New Delhi, 2001(First Published 1961).

Fisher, Michael H., *Counterflows to Colonialism: Indian Travellers and Settlers in Britain(1600-1947),* Permanent Black, Delhi, 2004.

Habib, Irfan, *A People's History of India: Indian Economy(1858-1914),* Tulika Books, New Delhi, 2006.

_____,*A People's History of India: Indian Economy under Early British Rule(1757-1857),* Tulika Books, New Delhi, 2013.

Hobsbawm, Eric, *The Age of Revolution(1789-1848),* Weidenfeld and Nicolson, London, 1962.

_____, *The Age of Capital,* Weidenfeld and Nicolson, London, 1975.

Marx, Karl and Engels, Frederich, *On Colonialism,* Aakar Books, New Delhi, 2016(First Published 1848).

Owen, Roger and Bob Suttcliffe (eds.), *Studies in the Theory of Imperialism*, Longman, London, 1972.

Roy, Tirthankar, *The Economic History of India(1858-1947),* OUP, New Delhi, 2006.

_____, *An Economic History of Early Modern India,* Routledge, Oxon, 2017 (First Published 2013).

Said, Edward, *Orientalism: Western Conception of the Orient,* Penguin, New Delhi, 2001(First Published 1978).

PAPER –II OPT. (V):**HISTORY OF SECULARISM IN MODERN INDIA(NOT OFFERED TO STUDENTS IN THIS SESSION)**

COURSE CODE: HIS 602

Objective: Here we examine the idea of secularism, its origins in the west and the dilemmas in implementing this idea in India.

Pedagogy: Class room lectures and discussions form the bases of instruction.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Define Secularim, Fundamentalism, Pluralism, Social Science Perspective of Secularism, Nation State, Western Secularism, Influence of Enlightenment on Secularism, The Sikh Idea of Secularism, Islamic Traditions And Secularism, Muslim Nationalists, Nationalist Muslims, Maulana Mohammad Ali, Maulana Abul Kalam Azad, Hindu Nationalism, Revivalism, Glorious Past, RSS, Gandhian Perspective Of Secularism, Nehru's Idea of Secularism, Secularism According to Indian Constitution, Give Two Constitutional Provisions About Secularism, Communalism

Unit 1

Scope, concepts and method:

Secularisation and secularism: Social Science perspectives;

The emergence of the nation state and its relationship with secularism and religion.;

Secularism in the Enlightenment tradition and thereafter in Europe.

Unit II

Efforts to engage diverse traditions and interests:

The Sikh traditions and the idea of a secular state: Ranjit Singh;

Maulana Mohamed Ali, Maulana Abul Kalam Azad, the idea of a secular state and the conflict between pluralism and fundamentalism within the Islamic traditions;

Reform and revivalism in the nineteenth century Hindu tradition, Vivekananda, Arya Samaj and the RSS.

Unit III

Secularism in the formation of an Indian identity

The Gandhian perspective;

The Nehruvian perspective;

The Constitution of India and legislating for secularism;

Unit IV

The struggle for ideological space in recent times

The majority-minority conundrum.

Communalism and communal riots since independence.

The conflicting perspectives of Fundamentalism and Pluralism.

Essential Readings:

Madan, T N., *Modern myths, locked minds: secularism and fundamentalism in India,*Oxford University Press, New Delhi, 2003.

Chandra, Bipan, *Communalism in modern India*, Vikas, New Delhi, 1984.

Saberwal, Satish, *India: the crisis within*, Oxford University Press, 1996.

Smith, Donald Eugene, *India as a secular state*, Oxford University Press, Oxford, 1968.

Suggested Readings:

Ahmed, Akbar S., *Rediscovering Islam: making sense of Muslim history and society*, Routledge and Kegan Paul, London, 1988.

Azad, A. K., *India wins freedom,* Bombay, Orient Longman, 1959.

Babb, Lawrence A.,*Redemptive encounters: three modern styles in the Hindu tradition*, University of California Press, Berkeley, 1986.

Baxi, Upendra and Bhiku Parekh eds., *Crisis and change in contemporary India*, Sage, New Delhi, 1995.

Bayly, Chris A., *Indian society and the making of the British empire***,** Orient Longman, Hyderabad.

Berger, Peter L., *The social reality of religion*, Penguin, London, 1973.

Bhaduri, Amit *et. al.,* **"**A statement on scientific temper", *Mainstream,* 25 July 1981.

CAD., *Constitutent Assembly debates: 1948-49*, Loksabha Secretariat, New Delhi [also available for download on the website of the Parliament of India].

Chatterjee, Partha., **"**Secularism and toleration", *Economic and Political weekly,*1994 pp. 1768-77.

Datta, V. N., *Masulana Azad,*Manohar, New Delhi, 1990.

Dube, S. C. and Basilov V. N. eds., *Secularization in multi-religious societies*, Concept, New Delhi, 1988.

Gandhi, Rajmohan., *Understanding the Muslim mind*, Penguin, New Delhi, 1987.

Glasner, Peter., *The sociology of secularization*, Routledge and Kegan Paul, London, 1977.

Goyal, D. R., *Rashtriya Swayamsewak Sangha*, Radhakrishna Prakashan, New Delhi, 1979.

Haq Mushirul., *Islam in secular India*, Indian Institute of Advanced Studies, Simla, 1972.

Hardy, Peter., *The muslims of British India*, Cambridge University Press, Cambridge, 1971, reissued in 1996.

Hasan, Mushirul, *Mohamed Ali*, Manohar, New Delhi, 1981.

Nehru, Jawaharlal, *The discovery of India*, The Signet Press, Calcutta, 1946 [many later reprints also available].

O'Connell, Joseph T. *et al.* eds., *Sikh history and religion in the twentieth century,* University of Toronto, Toronto, 1988.

Singh, Mohinder, *The Akali movement*, Macmillan, New Delhi, 1978.

PAPERS –III & IV OPT. (I) CULTURAL HISTORY OF ANCIENT INDIA

COURSE CODE: HIS 432

Objective: To examine the cultural history of Ancient India

Pedagogy: Class room lectures, discussions, visits to museums and places of cultural importance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Vedas; Aranyakas; Upanishads; Vedangas; Pitikas; Dharmasutras; Manusmriti; Arthashastra; Nayanar Saints; Alavar Saints; Puranas; Jatakas; Sangam Literature; Stupa; Nataraja-Shiva; Chaitya; Vihara; Mathura Sculptural Art; Gandhara Sculptural Art; Sanchi Stupa; Nagara Style Temple Architecture; Dravida style Temple architecture; Chola Bronze; Buddhist cave paintings; Temple paintings; Ajanta; Ellora; Natyashastra; Raga; Rasa; Bhava; Chitralakshana; Types of Abhinaya; Shakuntala.

Unit I:
Sanskrit and Pali Literature: Vedic Corpus (*Vedas*, *Aranyakas*, *Brahmana*, *Upanishadas* and *Vedangas*), Shastras (*Manusmriti*, *Arthashastra* and *Kamasutra*), Puranas and Epic (*Mahabharata* and *Ramayana*); Pali Literature (*Vinayapitaka*, *Suttapitaka, Abhidhammapitaka,* and the *Jatakas*); Sangam Literature.

Unit II:
Art and Architecture: Mauryan Art; Buddhist Architecture (Stupa, Chaitya and Vihara); Temple Architecture (Nagara and Dravida Temples).

Unit III:
Sculpture and Paintings: Sculptural Art (Mathura, Gandhara and Amravati School), the Pallava Art and the Chola Bronze Art; Ajanta and Ellora Paintings.

Unit IV:
Interpretations and Perspectives: Indian Art- Various Theories; Study of the *Vishnudharmottara Purana*-Chitralakshana; Study of the *Natyashastra* (Natya, Nritya, Rasa, Bhava, Types of Abhinaya, Regional Theatre).

Essential Readings

Basham, A. L., *The Wonder That Was India (A survey of the history and culture of the Indian sub-continent before the coming of the Muslims)*, London: Picador an imprint of Pan Macmillan Ltd, 2004 reprint.
Dhar, Parul Pandya, ed. *Indian Art History: Changing Perspectives*, New Delhi: DK Printworld and National Museum Institute, 2011.
Gupta, S. P. and Asthana, S. Prabha, *Elements of Indian Art (Including Temple Architecture, Iconography and Iconometry),* New Delhi: D. K. Printworld, 2007 reprint.
Rangacharya, Adya, *The Natyasastra,* (English translation with critical notes), New Delhi: Munshiram Manoharalal, 1999 (or Any other suitable translation).
Sahu, B. P., *A People's History of India 7- Society and Culture in Post-Mauryan India, c. 200 BC- AD 300*, (with a chapter on language and literature by Kesavan Veluthat), New Delhi: Tulika Books, 2015.
Shah, Priyabala, tr. *Vishnudharmottara Purana*, Delhi: Parimal Publications, 2002 (or Any other suitable translation).
Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Delhi: Pearson Longman, 2009.

Suggested Readings

Agrawala, V. S., *Indian Art [A History of Indian Art from the Earliest Times up to the Third Century AD]*, Varanasi: Prithivi Prakashan, 1965.
Dehejia, Vidya, ed. *Representing the Body: Gender Issues in Indian Art*, New Delhi: Kali for Women and The Book Review Literary Trust, 1997.
Deva, Krishna, *Temples of North India*, New Delhi: National Book Trust, 2010 reprint.
Kaul, Shonaleeka, ed. *Cultural History of Early South Asia,* New Delhi: Orient Blackswan, 2014.
Sivaramamurti, C., *Indian Painting*, New Delhi: National Book Trust, 2013 reprint.
Srinivasan, K. R., *Temples of South India*, New Delhi: National Book Trust, 2010 reprint.
Winternitz, M., *A History of Indian Literature- Vol. 1, 2, 7 3,* Delhi: Motilal Banarsidass, 1991 third edition.
Zvelebil, Kamil V., *A History of Indian Literature Vol. X: Tamil Literature*, Wiesbaden: Otto Harrassowitz, 1974.

PAPERS –III & IV **OPT. (II) SACRED CENTRES IN INDIAN CIVILIZATION**

COURSE CODE: HIS 604

Objective: The aim of this paper is to acquaint the students with the evolutionary, functional and financial aspectsof the sacred places of major systems of religious beliefs which served as important centres of pilgrimage. One national level centre of each major religious systems like Vaishnavism, Shaivism, Shaktism, Sufism and Sikhism has been taken as a case study to reflect the multi-cultural character of Indian subcontinent.

Pedagogy: The classroom teaching is supplemented by showing the slides of each sacred centre and power pointpresentation for greater effectiveness. The continuous evaluation is based on internal assessment which comprises of unit tests, presentation of seminar and classroom participation of the students.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Devadasi;Kannata Pandit; Trishuli;Arjitha Seva; Nabakalebra;Muktimandapa;Chhatis Nijoga; Pandas;Tilkayat;Birat System; Baris; Jajmani System; Panchkosi Parikarma; Nilkantha Syndrome; Kumbha Fair; Tabarruk; Degh; Chishti Silsila; Sama; Khuddam; Sajjada-i-Nashin; Mutwalli;Ghusal;Granthi; Dastur-ul-Amal.

Unit I

Notion of Sacred and spread of centres; social, cultural and economic functions; resources and patronage; temple functionaries: Priestly class, non-priestly and managerial class; Devadasis.

Unit II

The temple at Tirumala-Tirupati: its resources and patronage; the temple of Jagannath at Puri and its administration; emergence of temple towns in Gokul and Nathdwara; its mode of worship.

Unit III

Emergence of Varanasi as a Shaiva Centre: continuity of its traditions; Shakta centres in Himachal; rituals and practice of religious suicide in Prayag; the Kumbha fair at Prayag.

Unit IV

Emergence of Dargahs in India; Ajmer Sharif - the functionaries and the Urs festival; history and control of the Golden Temple; its mode of worship.

Essential Readings

Currie, P.M., *The Shrine and Cult of Mu 'in-al-Din Chishti of Ajmer,* Delhi: Oxford University Press, 2006 (reprint).

Dubey, D.P., *Prayaga- The Site of Kumbha Mela*. New Delhi: Aryan Books International, 2001.

Jindal, Rajendra, *Culture of a Sacred Town*, Bombay: Popular Prakashan, 1976.

Kaur, Madanjit, *The Golden Temple: Past and Present*, Amritsar: Guru Nanak Dev University, 1983.

Mishra, K.C., *The Cult of Jagannatha*, Calcutta: K.L. Mukhopadhyay, 1971.

Sachdeva, Veena, 'Emergence of Temple Towns in North India: Gokul and Nathdwara', *Research Journal SocialSciences*, Vol.13, Number 1, 2005, pp.121-31.

Saraswati, Baidyanath, *Kashi: Myth and Reality of a Classical Cultural Tradition,* Shimla: Indian Institute of Advanced Study, 1975.

Sitapati, P. Srivenkateswara, *The Lord of the Seven Hills*, Bombay: Tirupati, Bhartiya Vidya Bhavan, 2001.

Troll, Christian W., *Muslim Shrines in India: Their Character, History and Significance*, Delhi: Oxford University Press, 2003 (reprint).

Suggested Readings

E. Hein, "Temple Town & Hinterland: The Present Network of 'Religious Economy in Puri" in Eschmann, Annsharlot, Hermann Kulke and Gaya Charan Tripathi, *The Cult of Jagannath and the Regional Tradition ofOrissa*, Delhi: Manohar , 1978, pp. 439-448.

Jordan, Kay K., *From Sacred Servant to Profane Prostitute*: *A History of Changing Legal Status of theDevadasis in India,* 1857-1947, Delhi: Manohar, 2003, pp. 493-504.

Nandi, R.N., *Religious Institutions and Cults in the Deccan*, Delhi: Motilal Banarsidass, 2008 (reprint).

Pande, Rekha, "The Devadasis", in J.S. Grewal, *Religious Movements and Institutions in Medieval India,* Vol. VII, Part II, New Delhi: Oxford University Press, 2006,pp. 493-504.

Patnaik, N., *Cultural Tradition in Puri*, Shimla: Indian Institute of Advanced Study, 1977.

Reddy V. Narayana & A. Munirathnam Reddy, "History and Patronage of Tirumala- Tirupati Devasthanam," *Social Anthropology of Pilgrimage*, (ed Makhan Jha), Inter-India Publications, New Delhi, 2009, pp. 140-73.

Ramanaiah, J., *Temples of South India*, New Delhi: Concept Publishing Company, 1989.

Sachdeva, Veena, "Sikh Regurgance and Control: The Golden Temple, *Social Transformation in North-Western India during the 20th Century* (ed. Chetan Singh)", New Delhi: Manohar, 2010, pp 53-82.

Saraswati Baidyanath, *The Spectrum of the Sacred*, New Delhi: Concept Publishing Co., 1986.

Sharma, Mahesh, *The Realm of Faith, Subversion, Appropriation and Dominance in Western Himalaya*, Shimla, Indian Institute of Advanced Study, 2001.

PAPERS –III & IV OPT . (III) **MEDIEVAL INDIAN ART AND MONUMENTS**

COURSE CODE: HIS 424

Objective: The aim of this paper is to acquaint the students with architectural monuments constructed during themedieval period. In fact, each of the Muslim dynasties which established itself in the Indian subcontinent created its own architectural style and bequeathed a wealth of outstanding secular and religious buildings, this paper studies the main features of these buildings. It also discusses the developments in painting, dance & music.

Pedagogy: Lectures, visits to museums and monuments, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Quwat-ul-Islam; Mimber; Mehrab;Alai Minar; Iron Pillar in Qutb Complex: Hauz Khas;Sher Shah Suri's Tomb; Madrasa Mahmud Gawan; Gagan Mahal; Ibrahim Rauza; Char Minar; Mecca Masjid; Lotus Mahal; Elephants Stable;Gol Gumbad; Humayun's Tomb; Din Panah;Sher Mandal; Ibadat Khana;Buland Darwaza; Anoop Talab; Panch Mahal; Chini Khana; Shahjahanabad; Moti Masjid; Bibi ka Makbara; Pietra Dura; Hamza Namah; Kitab Khana;Shahi Qalam; Razmnamah; Hamzanamah.

Unit I

Forms of Architecture of the Sultanate period; detailed study of Qutb Complex; the Tughlaq Monuments; Sayyid, Lodhi and Sur Architecture.

Unit II

Deccan Style of Architecture**:** Bidar; Golconda; Bijapur; Vijaynagar.

Unit III

Early phases of Mughal Architecture; Akbar's buildings at Fatehpur Sikri; elements of change under Jahangir; crystallisation of Mughal style under Shah Jahan; Islamization of architecture under Aurangzeb.

Unit IV

Establishment of Shahi Qalam; emergence of new traditions under Jahangir; response to European techniques and themes; paintings at the courts of Rajput rulers of the Punjab hills.

Essential Readings

Asher, Catherine B., *Architecture of Mughal India*, The Cambridge History of India, Part I, Vol. 4, New Delhi: Cambridge University Press, 1995.

Beach, Milo Cleveland, *Mughal and Rajput Painting*, Cambridge: The New Cambridge History of India, 2014 (reprint).

Brown, Percy, *History of Indian Architecture (Islamic Period), D.B. Taraporevala Sons & Co. Pvt. Ltd., Mumbai,2010.*

Juneja Monika (ed.), *Architecture in Medieval India*, Delhi: Permanent Black, 2001.

Koch, Ebba, *Mughal Architecture: An Outline of its History and Development (1526-1858),* New Delhi: Oxford University Press, 2002.

Merklinger, Elizabeth Schotten, *Sultanate Architecture of Pre-Mughal India*, New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd., 2005.

Suggested Readings

Ahmed, Aziz, *Studies in Islamic Culture in the Indian Environment*, New Delhi: Oxford University Press, 2000.

Chandra, Satish, *Medieval India From Sultanate to the Mughals*, *Delhi Sultanate (1206-1526), Part One*, New Delhi: Har Anand Publications Pvt. Ltd., 2010 (repirint).

Goswamy, B.N. & B. Fisher, *Wonders of a Golden Age,* Zurich, Museum Rietberg, 1987.

Hussain Yusuf, *Glimpses of Medieval Indian Culture,* Bombay: Asia Publishing House, 1973 (reprint).

Koch, Ebba, *Mughal Art and Imperial Ideology Collected Essays,* New Delhi: Oxford University Press, 2001.

Majumdar, R.C.(ed.), *The History and Culture of the Indian People, Vol.VII*, Bombay: Bhartiya Vidya Bhavan, 2015 (reprint).

Qaisar, Ahsan Jan and Verma, Som Parkash, (eds.), *Art and Culture: Endeavours in Interpretation*, New Delhi: Abinav Publications, 1996.

Sharma, Sunil, *Painting the Mughal Experience*, New Delhi: Oxford University Press, 2005.

Verma, Som Parkash, *Mughal Painters and Their Work: A Biographical Survey and Comprehensive Catalogue*, New Delhi: Oxford University Press/Centre of Advanced Study in History, Aligarh Muslim University, 1994.

Rizvi, S.A.A., *The Wonder That was India*, Vol.II, Picador India, 2005.

PAPERS –III & IV OPT(IV). GENDER RELATIONS IN MODERN INDIA

COURSE CODE: HIS 601

Objective: The subject of Gender in our era has become a focus of thought and study. There is concern for and discussion of women's roles, rights, economics and womens' studies.

Gender relations in Indian history is a critical understanding of Social reality from the Gender perspective. The crucial insight that while sex is biologically given, gender is socially constructed is the basic premise on which the paper is based. In virtually every area of social change, gender has become a category of analysis, which is to say that political, economic and development issues are thought of in terms of women's participation and their consequences for society.

The aim of the paper is to give an overview of Gender Relations in 19th& 20th Century India. To understand the subject and its structure, the first unit deal with the different perspectives on writings of the subject. A background is given of the position of women in ancient and Medieval India. A unit is devoted to the Colonial period. Two units demarcate the Initiatives and strategies employed post-independence to better the condition of women in every sphere.

Pedagogy: The course is based on class room lectures and tutorial discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Feminism; Liberal Feminism; Radical Feminism; Socialist Feminism; Patriarchy; Polygamy; Stridhan; Wood's Despatch; Pratiloma/Anuloma; Sati; Jauhar; Infanticide; Concubinage; Age of Consent;Re-Socialization; Patrilinear; Matrilinear; Joint Family; Nuclear Family; Infant Mortality; Sexual Harassment; Dowry Death; Devadasi; Naribahini; Zenana; Andarmahal; Custodial Rape; Domestic Violence; Female Foeticide; Gender

Unit I

Historiography of Gender Relations, Different Perspective of women in Ancient India; Socio-cultural practices in Medieval India; Women in major religious traditions; structures of Patriarchy.

Unit II

Colonial Period: Impact of Social Reforms, personal and customary law; Impact of education on women; Formation of women's organisation; Women's struggle and participation in the national Movement.

Unit III

Post-Independence Initiative: Role of the state in Empowering Women; Political Participation; Legal Provisions; Development of Women's Movement; Women's struggle for rights; Peasant and Dalit Women's Movement.

Unit IV

Locating women in post independence India:Education and change; Role of women in economy; Social Position; Violence against Women; Images of Women in the Media; Continuity and Change.

Essential Readings

Agarwal, Bina, *Structures of Patriarchy: State Community and Household in Modernising Asia*, New Delhi: Kali for Women, 1988.

Altekar A.S., *The Position of Women in Hindu Civilization: Retrospect & Prospect, Delhi 1979*

Calman,Leslie J., *Towards Empowerment, Women and Movement Politics in India*, Oxford: Westview Press, 1992.

Desai, Neera & Maithreyi Krishnaraj, *Women and Society in India*, New Delhi: Ajanta Publications, 1987.

Gandhi, Nandita & Nandita Shah, *The Issues at Stake Theory and Practice in the Contemporary Womens Movement in India*, New Delhi: Kali for Women, 1992.

Kumar, Radha, *The History of Doing: An illustrated Account of Movements for Women's Rights and Feminism in India 1800-1990*, New Delhi: Kali for Women, Lied, 1997.

Leela Kasturi, G. & Vina Majumdar (ed)., *Women and Indian Nationalism*, New Delhi: Vikas, 1994

Nair, Janaki, *Women and Law in Colonial India: A Social History*, New Delhi: Kali for Women, 1996.

Nanda, B.R. (ed.), *Purdah to Modernity*, Delhi: Vikas Publishing, 1976.

Pawar, Kiran (ed.), *Women in Indian History*, Patiala: Vision and Venture, 1996.

Ray, Bharati & Aparna Basu (ed.), *From Independence Towards Freedom: Indian Women since 1947*, New Delhi: Oxford University Press, 2000.

Sangari, Kumkum and Sudesh Vaid (eds.), *Recasting Women*, New Delhi: Kali for Woman, Reprint, 1993.

Siddiqui, M. Mazheruddin, *Women in Islam*, Delhi: 1991.

Suggested Readings

Chanana, Karuna, *Socialisation, Education & Women, Exploration in Gender Identity,* Orient Longman, New Delhi, 1988.

Dietrich, Gabriel, *Women's Movement in India: Conceptual and Religious Reflections*, Bangalore, 1988.

Haksar, Nandita, *Demystification of Law for Women*, New Delhi, 1986.

Jacobson and Wadlkey S., *Women in India: Two Persepctives*, New Delhi, Manohar, 1986

Mathur, Kanchan, Countering Gender Violence, Sage, New Delhi, 2004.

Mazumdar, Vina (ed.), *Symbols of Power: Studies on the Political Status of Women in India*, Bombay: 1979.

PAPERS –III & IVOPT. (V) DIASPORA IN COLONIAL INDIA (**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 455

Objectives: The course aims to familiarize the students to the concept of 'Diaspora' and trace the different categories of Indian Diaspora. The different stages of colonial migrations to British plantation colonies are discussed with reference to the nineteenth and twentieth centuries. The course highlights the social and economic position vis-à-vis other ethnic communities and India's policy towards her diaspora.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:
Diaspora, Origin Of Indian Diaspora, NRI, People Of Indian Origin, Diasporic Identities, Caste Divisions Of Indian Diaspora, Reginal Divisions Of Diaspora, Linguistic Differences Of Indian Diaspora, Categories Of Indian Diaspora, Emigrations, British Plantation Colones, Migrations, Colonial Migrations, Social Status Of Migrants, Kangani System, Economic Conditions Of Migrants, Ethnic Communities, Cultural Activities, India's Policy Towards Its Diaspora, Race, Ethnicity, Migrations, Guef Countries, Professional Classes in USA And Canada, Migrations To United Kingdom, Migrations Towards Australia, Economic Positions Of Indian's In South Africa.

Unit I

Diaspora: the concept; origin; evolution and contemporary usage; Diasporic identities and their nature; categories of Indian Diaspora; People of Indian Origin and NRIs; Regional, linguistic, religious and caste divisions.

Unit II

Different Stages of Colonial Migrations: Emigration to British Plantation colonies Fiji; Surinam; Guyana; Mauritius; Malaysia; Trinidad & South Africa; their economic position and social status.

Unit III

Migrations in the 20th century: Indian Diaspora in Western Countries (USA, UK and Canada); Migration to Canada & the USA in late 19th and 20th centuries; Migration between 1920s to 1947; Migrations of professionals to USA, Canada, Australia and other developed nations; Migrations to Gulf Countries.

Unit IV

Indian Diaspora, Social and Economic Position: Indian Diaspora with reference to their social status (Race and Ethnicity); Economic position vis-à-vis other ethnic communities; participation and cultural activities; India's policy towards her Diaspora.

Essential Readings:

Arasaratnam, Sinnappah; *Indians in Malaysia and Singapore*, 1970, Reprint, Bombay: Oxford University Press, 1979.

Aurora, Gurdip Singh, *The New Frontiersmen: A Sociological Study of Indian Immigrants in the United Kingdom*, Bombay: Popular, 1967.

Barrier, N. Gerald, and Verne A. Dusenbery, ed; *The Sikh Diaspora: Migration and Experience Beyond Punjab*, Columbia: Modern South Asian Books, 1989.

Bachu, P.K., *Twice Emigrants: East African Sikh Settlers in Britain*, New York: Tavistock Publications, 1985.

Buchignani, Norman., *Immigration and Adaptation and the Management of Ethnic Identity: An Examination of Fijian East Indians in British Columbia*, Ph.D. thesis, Simon Fraser University, 1977.

Buchinani, Norman and Doreen M. Indra; *Continuous Journey: A Social History of South Asian in Canada:* Toronto, Mcclelland and Stewart, 1985.

Desai, Rashmi, *Indian Immigrants in Britain*, London: Oxford University Press, 1963.

Gillion, K.L., *Fiji Indian Migrants: A History of the End of Indentrial in 1920,* Melbourne: Oxford University Press, 1962.

Hardwick, Francis C; (ed), *From Beyond the Western Horizon: Canadians from the Sub-Continent of India*, Vancover: Tantalus Research, 1974.

Helweg, A.W, *The Sikhs in England: The Development of a Migrant Community, 1979* (ed), Delhi: Oxford University Press, 1986.

Hirabyashi, Gordon and K. Victor Ujimoto, *Visible Minorities and Multiculturalism: Asians in Canada,* Toronto: Bullerworth, 1980.

Jain, Sushil K, *East Indians in Canada*, Windsor Canadian Bibliographic Centre, 1970.

Jain, Sushil K,*Indian Diaspora In The Era of Globalisation*, Kalpaz Publications, 2012

Jane Singh, et al. eds., *South Asians in North America*, Berkeley: Centre for South and Southeast Asia Studies*,* University of California, 1988.

Jensen, Joan M, *Passage from India: Asian Indian Immigrants in North America*, Yale University Press, 1988.

Johnston, Hugh, *The Voyage of Kama Gata Maru: The Sikh Challenge to Canada's Colour Bar*, Delhi: Oxford University Press, 1979.

Lepervanche, Marie, M.De; *Indians in White Australia*, London: George Allen and Univin, 1984.

Mangat, J.S., *A History of the Asians in East Africa*, Oxford: Claredon Press, 1970.

Mcleod, W.H., *Punjabis in New Zealand*, Amritsar: GNDU Press, 1986.

Robinson, Vaughn, *Transients, Settlers and Refugees,* Oxford: Clarendon Press, 1986.

Sandhu, K.S., *Indians in Malaya,* Cambridge University Press, 1969.

Watson, J.L. ed., *Between Two Cultures*, Oxford: Basil Blackwell, 1977.

Suggested Readings

Agnihotri, *For Migratory Patterns with Punjab to Canal Colonies*, 1987.

Bains, Tara Singh and Hugh Johston,*The Four Quarters of the Night: The Life-Journey of an Emigrant Sikh,* Mc Gill-Queen's Studies in Ethnic History, 1995

Ballantyne, Tony, *B/W Colonialism and Diaspora Sikh Cultural Formation in an imperial world,* Duke University Press, USA, 2006.

Bali, Judith & Manohar S. Bal (ed), *Sikh in Ontario*, Toronto: Ontario Council of Sikhs, 1993.

Basran, Gurcharan S. and B. Singh Bolaria, *The Sikhs in Canada – Migration, race, class and gender*, New Delhi: Oxford University Press, 2003.

Basch, Glick Schiller & Szanton Blanc, *Nations Unbound: Transnational Projects Post-colonial predicaments & detenitoulization nations states*, Amsterdam: Gordon and Breech, 1993.
Dogra, Ravi, *Indo-Canadian*, Tantallon: N.S. Yeast Publications, 1987.

Ghosh, Ratna & Rabindra Kanungo, *South-Asian Canadians: Current issues in politics of culture*, Calgary: Shastri Indo-Canadian Institute, 1992.

Gundara, Jaswinder, *Splinkered Dreams: Sikhs in Southern Albata*, Calgary: Awsha International Development Resources Centre, 1985.

Hall, Patricia Wong & Victor M. Hwang (eds), *Anti Asian Violence in North America: Asian American & Asian Canadian rejection on Hate, Healing & Resistance*, Walnut Greek: Altanica Press, 2001.

Heather, C. Hudak, *Sikhs in Canada,* Weigh Educational Publishers (distributed by Saunders books, 2005).
Jagpal Sarjeet Singh, *Decomong Canadian: Pioneer Sikhs in their own words*, Columbia: Harbour Publishing Vancouver, 1994.

Mc Leod W.H., *Who is a Sikh? The Problem of Sikh Identity*, Oxford University Press, 1989.

Mukherjee, Miridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism,* SAGE Publication, New Delhi, 2005

Minhas, Manmohan Singh (Moni), *The Sikh Canadians* , Edmonton Alberta: Reidmore Books Inc., 1994.

Ralston, Helen, *The Lived Experiences of South Aian Immigrant Women on Atlantic Canada: The Interconnections of Race, Class and Gender*, Lewiston, N.Y.: Edwin Mellon Press, 1996.

Sandeep S. Brar, *Century of Struggle and Success: The Sikhs Canadians experience.*

Singh, Kesar, *Canadian Sikh (Part I) & Kamaghata Maru massacre*, British Columbia: Kesar Singh, Suney, 1989.

PAPERS –III & IVOPT. (VI): SCIENCE, TECHNOLOGY AND MEDICINE IN COLONIAL INDIA (**NOT OFFERED TO STUDENTS IN THIS SESSION**)

COURSE CODE: HIS 603

Objective: The course examines a new theme in Indian history and looks at the introduction of science, technology and medicine by the colonial power. The objectives of colonial authorities, the organizational structure and the responses of the people are studied to understand the social impact of these new elements in Indian society.

Pedagogy: The course builds on the basic information of the colonial time and introduces the student to recent works on the theme to understand the larger context of colonial rule.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Science And Technology; Transfer Of Technology; Colonial Science;Technical Education; Diffusionist Model Of Basalla;Wootz; Arogyavihara; Jurzail Burdar; Gate Keepers; Scientific Soldiers; 'Natinalist'scientists; Pinjarapole; Persian Wheel; Blue Terror; GTSI; Tata Scheme; BSA; Variolation; Cordone Sanitaire; Experimental Farms; Unani System Of Medicine;Samrat Yantra; Colonizing The Body; Basant Rog;Shitla Mata; Variolation;Ola Candi;Bombay Plan; Pilgrim Theory;Apartheid In Science.

Unit I

Science in pre-colonial times; development of colonial scientific policy; exploration and surveys- Rennel, Mackenzie, Lambton, Buchanan; administration of science; science in education and research.

Unit II

Technology and the Raj: Transfer of technology and British perspective; technology and agriculture; technology and railways; introduction of the telegraph; techology and shipping; technical education.

Unit III

Indigenous medicine and folk practices; early initiatives for health and medicine; colonial state and epidemics-smallpox, cholera, plague; nature of British medical policy; health and hegemony.

Unit IV

Response and Resistance to colonial science, technology and medicine; nationalist views; emergence of Indian scientific community; role of scientific leaders; science, state and nation.

Essential Readings

Arnold, David, *Colonizing the Body*, Delhi: Oxford University Press, 1993.
Arnold, David, *Science, Technology and Medicine in Colonial India*, Cambridge University Press, 2000.
Baber, Zaheer, *Science of Empire*, Delhi: Oxford University Press, 1998.
Deepak Kumar, *Science and the Raj*, Delhi: Oxford University Press, 1995.
Roy Macleod and Deepak Kumar, *Technology and the Raj*, Delhi, Sage.

Suggested Reading

Kerr, Ian J., *Building the Railways of the Raj 1850-1900*, Delhi: Oxford University Press, 1995.

Sangwan, S., *Science, Technology and Colonization*, Delhi: Anamika, 1990.

Sen, S.N., *Science and Technological Education in India*, Delhi: INSA, 1991.

Stone, Ian, *Canal Irrigation in British India*, Delhi: Oxford University Press, 1986.

PAPERS –III & IV OPT. (VII) CONSTITUTIONAL DEVELOPMENT IN MODERN INDIA, 1773-1947

COURSE CODE: HIS 213

Objective: To examine the various aspects of constitutional development in India.

Pedagogy: Lectures, tutorials and discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Charter Act; Queen's Declaration 1858; significance of Council's Act 1867; Dyarchy; Separate Electorate; Simon Commission; Nehru Committee; Provincial Autonomy; Cripps Proposals; Wavell Plan; Cabinet Mission; Mountbatten Plan; Nationalism; Constitutionalism; Constituent Assembly; Shimla Conference; Muddiman Committee; Swaraj; Poona Pact; Reserved Subjects; Transferred subjects; Emergency Powers; Communal Award; August Offer; Dominion Status; Commonwealth, Lucknow Pact; Constituent Assembly; Draft Committee.

Unit I

Constitutional Development during East India Company's rule; Government of India Act 1858, Significance of Queen Victoria's Declaration; Indian Councils Act.

Unit II

A new constitutional experiment: Act of 1909 (Morley–Minto Act); Significance of Montague- Chelmsford Report; The Act of 1919 and Dyarchy System in provinces.

Unit III

Nehru Committee Report; Simon Commission Proposals; the Act of 1935; Provincial Autonomy in operation.

Unit IV

Political Movements and Reform Proposals- Cripps Proposals and Indian reaction; the Wavell Plan; the Cabinet Mission; the Constituent Assembly; the Indian Independence Act; The Constitution of 1949.

Essential Readings:

Austin, Granville, *The Indian Constitution: Cornerstone of a Nation,* OUP, New Delhi, 1999.

Banerjee, A.C., *The Constitutional History of India*, Vol.II. 1858-1919, Macmillan, Delhi, 1978.

Chakrabarty, Bidyut, *Indian Constitution: Text, Context and Interpretation,* Sage, New Delhi, 2017.

Chaturvedi, Archna, *A Constitutional History of India,* Commonwealth Publishers, New Delhi, 2006.

Coupland, R. *The Constitutional Problem in India*, Part I, London, 1944.

Dube, Ishita Banerjee, *A History of Modern India,* Cambridge University Press, New Delhi, 2015.

Kashyap, Subhash G., *Constitutional History of India: Polity, Governance and the Constitution,* Centre for Studies in Civilizations, New Delhi, 2015.

Keith, A.B., *Constitutional History of India*, Central Book Depot, Allahabad, 1961(First Published 1936).

Khosla, Madhav, *The Indian Constitution,* OUP, New Delhi, 2012.

Mehrotra, S.R., *India and Commonwealth,* London, 1965.

Mukherjee, Mithi, *India in the Shadow of Empire: A Legal and Political History (1774-1950),* Oxford India Paperbacks, New Delhi, 2011.

Menon, V.P, *The Transfer of Power in India,* Orient Blackswan, New Delhi, 2017(First Published 1957).

Pylee, M.V., *Constitutional Government in India,* Asia Publishing House, Bombay, 1965(First Published 1960).

Sharma, Sri Ram, *A Constitutional History of India,* Macmillan, Bombay, 1955.

Suggested Readings

Bhatia, Udit, The *Indian Constituent Assembly,* Francis and Taylor, London, 2017.

Chakrabarty, Bidyut and Pandey, Rajendra Kumar, *Modern Indian Political Thought,* Sage, New Delhi, 2009.

Chand, Tara, *History of the Freedom Movement in India, 2 Vols.,* New Delhi, 1967.

Guha, Ramchandra, *Makers of Modern India,* Penguin, New Delhi, 2012.

_____, *Gandhi: The Years that Changed the World(1914-48),*Penguin Allen Lane, New Delhi, 2018.

Prasad, B. *The Origins of Provincial Autonomy*, Central Book Depot, Allahabad, 1941.

Roy, S.N., *Indian Politics and Constitutional Development*, New Delhi, 1976.

Seal, Anil*, The Emergence of Indian Nationalism*, Cambridge University Press, Cambridge, 1968.

PAPERS –III & IVOPT. (VIII) NATIONAL MOVEMENT IN INDIA 1858-1947

COURSE CODE: HIS 212

Objective: The course aims to trace the Indian National Movement from 1858 to 1947 focusing on how different historiographic schools view Indian Nationalism. Emphasis of the course is on the role played by INC from 1885 to 1947 and Gandhi in leading the country to freedom in 1947. The other strands of the National Movement particularly the Revolutionary and Left wing and youth organizations along with the communal strands are highlighted.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts andTerms:

Imperialism; Nationalism; Colonialism; Secularism; Nation- in-the making; militant nationalism; communalism; non –cooperation; civil disobedience; satyagraha; Home-Rule; Subaltern; Swadeshi; Praja Mandal; Gadhar; Khudai Khidmatgars; Trade Unionism; Indian National Army; Partition; Independence; Drain of Wealth; Swarajists; Moppila;Eka Movement; Khilafat Movement; Non-violence; Secretary of State;Minto Morley Reforms; Montague Chelmsford Reforms.

Unit I

Indian Nationalism 1859 – 1885;-Different historiographic schools of Indian Nationalism: early associations and peasant uprisings 1859-1880s; theories of origin and foundation of the Indian National Congress; social basis of the Indian National Congress.

Unit II

National awakening in India in its early phase: National Awakening and Socio-Religious Social Reforms; the Moderate phase of the Indian National Congress; Partition of Bengal and Swadeshi; Growth of Extremism; Home-Rule Movement.

Unit III

Nationalism under Gandhi's leadership: emergence of Gandhi and his ideology of mass participation; critical assessment of Non-cooperation and Khilafat Movement, civil disobedience movement; 1940 Satyagraha and Quit India Movement; Freedom Struggle in the princely states.

Unit IV

Other strands of the National Movement: Revolutionary Movement since 1905; Left wing Politics and Youth Organizations; the Indian National Army; Communal strands; Muslim League and Hindu Mahasabha; last phase of the struggle; freedom and partition why Congress and Gandhi accept partition.

Essential Readings

Abel M, Glimpses of Indian National Movement, The ICFAI University Press, India, 2005

Bandyopadhyay Sekhar, *Nationialist Movement of India: A Reader,*Oxford University Press, 2009

Chandra, Bipan, Mridula Mukerjee, Aditya Mukerjee, K.N. Pannikar, Sucheta Mahajan, *India's Struggle for Independence 1857-1947*, New Delhi: Penguin Books, 1989.

Chandra Bipan, *Nationalism and Colonialism in Modern India*, Delhi: Orient Longman, 1979.

Chandra, Bipan, *Communalism in Modern India,* Vikas, New Delhi, 1984.

Chandra Bipan, *Indian National Movement: Long Term Dynamics*, Har Anand Publiction, New Delhi,2010.

D.N. Dhanagare, *Agrarian Movements and Gandhian Politics*, Oxford University Press, 1970.

Desai, A.R., *Social Background of Indian Nationalism*, Bombay: Popular Parkashan, 1966.

Guha, Ranjit, *Subaltern Studies, I – IX*, Delhi: Oxford University Press, 1982-86.

Jaffrelot Christophe, *Hindu Nationalist Movement and Indian Politics 1925 to the 1990s*, Penguin Books, India, 1999

Low, D.A. *Britain and Indian Nationalism*: *The imprint of Antiquity,* 1997

Mahajan, Sucheta, *Independence and Partition,* New Delhi: Sage, 2000.

Mehrotra, S.R., *Emergence of Indian National Congress*, Delhi: Manohar, 1971.

Mehrotra, S.R., *Towards India's Freedom and Partition,* New Delhi, 1979.

Nanda, B.R., *The Making of Indian Nation*, Collins: Harper, 1998.

Pathak, B.N. (ed.), *History of Indian National Congress*, 3 vols., New Delhi, 1985.

Singh, Anita Inder, *The Origins of Partition of India*, New Delhi: Oxford University Press, 1987.

Suggested Readings

AICC, *A Century History of the Indian National Congress*, Vols. II & III.

Aloysius, G., *Nationalism without a Nation in India*, Oxford University Press, 1998.

B.R. Nanda, Mahatma Gandhi: A Biography, Bombay: Allied Publishers, 1978.

Chandra, Bipan, *The Rise and Growth of Economic Nationalism in India,* New Delhi: People's Publishing House, 1982 (reprint).

Farquhar, J.H., *Modern Religious Movements in India*, Delhi: Munshi Ram, Manohar Lal, 1976.

Gopal, S., *British Policy in India*, Cambridge: Cambridge University Press, 1965.

Joshi, Shashi, and Josh, B., *Struggle or Hegemony in India 1920-47,* Vol.I to III, New Delhi: Sage.

Low, D.A. (ed.), *Congress and the Raj,* New Delhi: Arnold Heinemann, 1977.

Massellos, Jim, *Nationalism on the Indian Subcontinent*, Melbourne: Thomas Nelson, 1972.

Rai Lala Lajpat, *Young India: An Interpretation and a History of Nationalist Movement,* Ocean Books Pvt Ltd., 2008

Salil Misra, *A Narrative of Communal Politics, UP 1937 -39.* New Delhi: Sage, 2001.

Sumit Sarkar , *The Swadeshi Movement in Bengal, 1903-1908*, New Delhi: Macmillan, 1977.

Tara Chand; *History of the Freedom Movement in India, 2 Vols.,* Delhi: Publication Division, 1963.

Vishalakshi Menon, *From Movement to Government,* Delhi: Sage India, 2005.

PAPERS –III & IVOPT. (IX) BRITISH POLICIES AND PRINCELY STATES **(NOT OFFERED TO STUDENTS IN THIS SESSION)**

COURSE CODE: HIS 214

Objective: This paper aims to understand and study the multiple patterns of British policy towards the Princely States of India. It seeks to examine the various facets of British paramountcy in different matters of the Native States and point out the variations and peculiarities thus found. Also the objective of the paper is to evaluate the Princely Chiefs' responses, their sensitiveness and changes in their attitude towards the British policy during the colonial period.

Pedagogy: The course is taught on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Ring Fence Policy; Policy of Subordinate Isolation; Policy of Subordinate Union; Subsidiary Alliance System; Doctrine of Lapse; Queen's Proclaimation; Adoption Sanads; Canning's Dispatch; Minority Administration; British Paramountcy; Theory of One Charge; Universal British Policy of Coinage; Native Coinage Act; Imperial Sevice Troops;British Policy towards Railways; New Salt Policy; New Opium Policy; International Postal Union; Aims of Chamber of Princes; Indian States Committee; Instrument of Accession; Integration of States; Change In British Policy in 1905; Annexation Of Oudh; Annexation Of Punjab; Reason for Rendition of Mysore; Justification of Deposition of Gaekwar (Baroda); Assertion of Paramountcy by Curzon; Dereliction of Duty of Native Chief; Constitution of Chamber of Princes.

Unit I

Policy of 'Ring Fence' under Clive, Warren Hastings and Cornwallis; Departure from the policy and Wellesley's Subsidiary Alliance System; Extension of Wellesley's policy under Marquis of Hastings; Dalhousie's policy of annexation of States by the application of 'doctrine of lapse' and other means.

Unit II

Adoption of new policy under the Crown after the revolt of 1857-58 – Queen's Proclamation, Canning's Despatch of April 1860 and Adoption Sanads; Succession matters w.s.r.t. minority administration; Deposition of Gaekwar of Baroda (1875), Rendition of Mysore (1881), the Manipur Case; Growth of Paramountcy under Curzon (1898-1905).

Unit III

The theory of 'one charge' – economic matters w.s.r.t. coinage and currency, salt and opium; means of communications- railways, post and telegraph; military establishment in the States and Organisation of Imperial Service Troops.

Unit IV

Change in the British policy after 1905 under Minto and Hardinge; Organisation of Chamber of Princes (1921) – its constitution and role; Indian States Committee (1927); Independence and integration of States.

Essential Readings

Arora, A.C., *British Policy towards the Punjab States 1858-1905,* Jalandhar: Export India Publications, 1982

Copland, Ian, *The Princes of India in the endgame of empire 1917-1947*, Cambridge: Cambridge University Press, revised edition 2010.

Fraser, Lovat, *India under Curzon and After,* Nabu Press, 2010.

Jeffrey, Robin (ed.), *People, Princes and Paramount Power: Society and Politics in the Indian Princely States*, New Delhi: Oxford University Press, 1978.

Lee-Warner, Sir William, *The Protected Princes of India*, Chizine Publications, Toronto, 2017.

Lee-Warner, Sir William, *The Native States of India*, London: Macmillan, 1910.

Majumdar, R.C. *et al*., *The History and Culture of the Indian People*, Vol.IX: *British Paramountcy and Indian Renaissance*, Part I, Bombay: Bhartiya Vidya Bhavan, 1963.

Menon, V.P., *The Story of the Integration of the Indian States*, New Delhi: Orient Blackswan, 2014.

Pannikar, K.M., *Indian States and the Government of India,* Delhi: Kaushal, 1985

Phadnis, Urmila, *Towards the Integration of Indian States 1919-1947,* Bombay: Asia, 1968

Ramasuck, Barbara N., *The Indian Princes and their States,* Cambridge: Cambridge University Press, revised edition 2008.

Verma, S.M., *Chamber of Princes,* New Delhi: National Book Organization, 1990.

PAPERS –III & IVOPT. (X) CONTEMPORARY INDIA 1947-1992

COURSE CODE: HIS 263

Objective: This course provides an introduction to the major strands in the history of contemporary India.

Pedagogy: The course involves the student in class lectures, discussions and term papers.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Contemporary History;Modern History;Nationlism;Freedom;Nation State;socialism;Spiritualism;Five Year Plans;Running Plan;Demographic Dvidend;Private Public Partnership;Public Sector;Green Revolution;Lnad Consodition;Equitable distribution of land;Khal;istan;Nagalim;Naxalism;Casteism;Civil Rights;Duties of Citizen; Secularism; Communalism; NAM; SAARC.

Unit I

Historiographic survey for Contemporary India including the emergence of the sub-discipline of Contemporary Indian History; Various ideological streams with special reference to Ambedkar, Gandhi, Nehru and Vivekananda.

Setting up an institutional structure for a new country: the making of the constitution, debates on its nature and changes made to it. The structure of the bureaucracy and the police and changes over time in their relationship with the legislative arm of the state and with civil society.

Rehabilitation after partition: settling the people, creating new towns and agricultural settlements, creating new opportunities for the displaced.

Unit II

Economic growth: Demographic trends;the Planning Process and Five Year Plans.

Industrial growth: Debates on the nature and value of the public and the private sector; Labour relations.

Land Reforms and agrarian changes: Green Revolution with special reference to the Punjab Peasant unrest and its changing forms, especially in Punjab, Bihar, Andhra Pradesh and Maharashtra.

Unit III

The States: The continuous reorganization of States since the 1950s. Changing nature of Centre-State relations.

The Emergency of 1975: its causes and consequences. Various political responses to the emergency. Emergence of a civil democratic rights movement and the varied responses of the state.

Political and economic relations with the World. Changing Patterns of friendship and enmity with neighbouring countries. Relations, political, social and economic with the so-called Great Powers.

Unit IV

Depressed classes, tribals, and women.
Political and social assertions by different regions: the Northeast, Tamilnadu and Punjab.
The emergence and articulation of an Indian identity: The problem of national integration versus adjusting conflicting claims in a democratic space.

Social change: changing patterns of assertion by marginalized groups:

Essential Readings

Consisting of books which give a broad, but essential, overview of various themes in the course and/or set the paradigm for understanding the history of Contemporary India. It is highly recommended that candidates browse through the collection of the AC Joshi Library, Panjab University for more detailed information about various topics.

Chandra Bipan, Mridula Mukherjee and Aditya Mukherjee, *India after independence, 1947-2000,* Delhi: Penguin, 2002.

Kohli, Atul, *The State and Poverty in India: The Politics of Reform*, Cambridge: Cambridge University Press, 1987

Kohli, Atul ed., *India's Democracy: An Analysis of Changing State Society Relations*, Princeton, Princeton University Press, 1988

Moore, Barrington M., James C. Scott, Edward Friedman, *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*, New York: Beacon Press, 1993.

North, Douglass C. et al. *Violence and Social Orders: A Conceptual Framework For Interpreting Recorded Human History*, Cambridge, Cambridge University Press, 2009.

Spear, Percival*, The Oxford History of Modern India 1740-1975*, New York: Oxford University Press, 1979.

Suggested Readings

Austin, Granville*, Working a Democratic Constitution: The Indian Experience*, New York and Delhi: Oxford University Press, 1999.

Bardhan, Pranab*, The Political Economy of Development in India,* Delhi: Oxford University Press, 1998.

Dreze, Jean and Amartya Sen, *India: Economic Development And Social Opportunity*, Delhi: Oxford University Press, 1996.

Karlekar, Hiranmay, ed., *Independent India: the first fifty years*, Delhi: ICCR and Oxford University Press, 1998.

Morris Jones, W.H., *The Government and Politics of India,* Delhi: Oxford University Press1987.

Omvedt, Gail, *Dalits and the democratic Revolution: Dr. Ambedkar and the Dalit Movement in Colonial India*, Thousand Oaks, CA: Sage, 1994.

Raghuramaraju, A., *Debates in Indian Philosophy Classical, Colonial, and Contemporary*, New Delhi: Oxford University Press, 2006.

Semester IV	**Group-IPaper I:**	HIS 126	Punjab in the Twentieth Century (compulsory)	4 credits
	Group-IIPaper II: Any one of the following	HIS 911	Opt.(i) History and Historiography	4 credits
		HIS 912	Opt.(ii) History and Historical Method	4 credits
	Groups-III& IV Papers III& IV: Any two of the following	HIS 720	Opt. (i) Religious And Social Processes In Ancient India	4 credits
		HIS 438	Opt. (ii) Buddhism in India	4 credits
		HIS 428	Opt. (iii) Religious Developments in Medieval India	4 credits
		HIS 426	Opt. (iv) Islamic Traditions of Medieval India	4 credits
		HIS 471	Opt. (v) Dalit Movements in Modern India	4 credits
		HIS 731	Opt. (vi) Working Class Movements in Modern India	4 credits
		HIS 467	Opt. (vii) Peasant Movements in Modern India	4 credits
		HIS 418	Opt. (viii) Socio-Religious Reform Movements in Modern India	4 credits
		HIS 462	Opt. (ix) History of Caste and Caste Politics in Modern India	4 credits

PAPER I, PUNJAB IN THE TWENTIETH CENTURY (COMPULSORY)

COURSE CODE: HIS 126

Objective: The course traces the history of Punjab from 1901 to 1966 focusing on how the agrarian policies and legislations passed by the British Raj in these years affected the Punjab Peasantry. How the discontentment led the Peasantry to join the National Movement which Gandhi spearheaded. Punjab's participation in the various phases is discussed particularly the phase of partition and how the province was further bifurcated in 1966.

Pedagogy: The course is to be taught through class room lectures and discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Jallianwala Bagh; Ghadar; Unionist Party; Rowlatt Satyagraha; Martial Law; Mahants; Babbar Akalis; Kirti Kisan Party; provincial autonomy; demand for Pakistan; Demand for Khalistan; Azad Punjab; Punjabi Suba; Shromani Prabandhak Committee; Akali Dal; Akali Party; Reorganization Act of 1966; Sarbarah; Muslim League; Central Sikh League; Keys Affair; Jaito ka morcha; Land Alienation Act; Colonization;

Unit I

Punjab from 1901 to 1920's: Land Alienation Act of 1901- The Agrarian Agitation of 1907, The Ghadar Movement; Rowlatt Satyagraha, Jallianwala Bagh and the marital law; formation of Punjab National Unionist Party, 1923.

Unit II

Punjab in 1920's: The Akali Agitation or Gurdwara Reform Movement; The Babbar Akalis 1921-22; The politics of Contestation in 1920: Congress and Arya Samaj; Left wing groups of parties-1920's; Peasants Protests -1924-29.

Unit III

Punjab in 1930's-1940's The Civil Disobedience and Punjab; agitations around Land revenue; Unionists under Provincial Autonomy; responses to the demand of Pakistan; Congress and Sikh Politics 1940-1947, Communalism and partition of the Punjab.

Unit IV

Punjab after partition: Resettlement and Rehabilitation; Towards the Punjabi Province 1947-1966; Reorganization of Punjab 1966; Green Revolution

Essential Readings

Ali, Imran, *The Punjab under Imperialism 1890-1947*, Delhi: Oxford University Press, 1989.

Bal, S.S., *A Brief History of Modern Punjab,*Ludhiana: Lyall Book Depot, 1974

Bal, S.S. *British Administration in the Punjab and its Aftermath*; Amritsar, Guru Nanak Dev University, 1986.

Banerjee, Himadri, *Agrarian Society in the Punjab, 1849-1901,* New Delhi: Manohar, 1982.

Banga, Indu, (ed.), *Five Punjabi Centuries: Polity, Economy, Society and Culture c.1500,* Delhi: Manohar 1997.

Banga, Indu, *Agrarian System of the Sikhs*, New Delhi, Manohar, 1978.

Barrier, N.G., *The Sikhs and their Literature,* New Delhi: Manohar, 1970.

Dayal, Ravi (ed.) *We fought together for freedom*; Indian Council of Historical Research, Oxford University Press, Delhi, 1995

Dutta, V.N. Jallianwala Bagh, Lyall BVook Depot, 1969,

Mohan, Kamlesh, *Militant Nationalism in the Punjab*, New Delhi: Manohar, 1985.

Mukherjee, Mridula, *Colonializing Agriculture*, Modern Indian History Series, New Delhi: Sage India, 2005.

Mukherjee, Mridula, *Peasants in India's Non-violent Revolution,* Modern Indian History Series, New Delhi: Sage India, 2004.

Ram, Raja, *The Jallianwala Bagh Massacre*, Panjab University, Chandigarh,1978.

Riar, Sukhmani Bal, *The History and Politics of the Central Sikh League,* Chandigarh : Unistar, 2006.

Riar, Sukhmani Bal, *The Politics of the Sikhs 1940-1947*, Chandigarh: Unistar, 2006.

Singh, Mohinder, *The Akali Movement,* New Delhi: Macmillan, 1985.

Singh Parambakshish and Verma Devinder Kumar, *Punjab and the Freedom Struggle*, Patiala, Punjabi University, 1998.

Talbot, Ian, *Punjab and the Raj, 1849-1947*, Delhi: Manohar, 1988.

Tai Yong Tan and Gyanesh Kudaisya, *The Aftermath of Partition in South Asia,* Routledge Studies in the Modern History of Asia, London: 2000.

Tuteja, K.L., *Sikh Politics, 1920-1940,* Kurukshetra, 1984.

Van den Dungen, P.H.M., *The Punjab Tradition: Influence and Authority in the Nineteenth Century India*, London, 1972.

Suggested Readings

Grewal, J.S., *The Sikhs of the Punjab,New Cambridge History of India*, New Delhi: Orient Longman, 1990.

Grewal, J.S., *The Akalis: A Short History,* Chandigarh: Punjab Studies Publications, 1966.

Islam, M.M., *Irrigation, Agriculture and the Raj, Punjab 1887-1947*, New Delhi: Manohar, 1997.

Kirpal Singh, *The Partition of the Punjab,* Patiala: Punjabi University, 1972.

Mahajan Sucheta, *Anti British Agitation in 1907 Punjab*, Punjab History Conference Proceedings fifteenth session, 1981.

Pritam Singh and Shinder S.Thandi (eds.), *Punjabi Identity in a Global Content,* Delhi: Oxford, 1999.

Rai, Satya.M., *Legislative Politics and Freedom Struggle in Punjab 1897-1947,* New Delhi: Peoples Publishing House, 1984.

Singh, Parduman and Joginder Singh Dhanki, eds., *Buried Alive: Autobiography, Speeches and Writings of an Indian Revolutionary*, New Delhi: Sardar Ajit Singh, 1984.

Sukhwant Singh, *Agricultural Growth under Colonial Constraints in the Punjab: 1849-1947,* Delhi: Manmeet Prakashan, 2000.

Talbot Ian, *The Growth of the Muslim League in the Punjab, Journal of Commonwealth and Comparative Politics,* 20, 1, 1982.

Tanwar, R, *Politics of Sharing Power: The Punjab Unionist Party 1923-1947*: New Delhi: Manohar, 1999.

Paper II: Any one from the following:

Opt. (i) History and Historiography

COURSE CODE: HIS 911

Objective: This paper provides an understanding of the meaning and nature of history and emphasizes on the value and interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Historical Fact; Reliability of Evidence; Genuineness of Evidence; PrimarySources; Secondary Sources; Accidental Causes; Rational Causes; Determinism in History; Chance in History; Objectivity in history; Group Bias;Aeriel Photography; Quantitative history; Psycho history; Role Theory; Cliometrics;Annales School; Concept of Total History; Orientalists; Administrator historians; Nationalist historians; Marxist historians; Subaltern history;Feminism; Post Modernism; Social Dynamics in History; Historical interpretation; Elitist Historiography; Non-elite historiography;Imaginative understanding;Cleopatra's nose; All History as Contemporary History; Colonialism and Indian Natinalism.

Unit I

Definition, historical facts; purpose and scope; value of studying history; categories of historical evidence; questions of genuineness and reliability of evidence; question of bias and objectivity; meaning of causation and handling of causes.

Unit II

History as Literature and as Science; History and Allied Disciplines of Archaeology, Geography; Sociology and Social Anthropology; Psychology and Economics; contribution of "The Annales School".

Unit III

Orientalists with special reference to William Jones; concerns of the Administrator-Historians; Nationalist historiography- its emergence, concerns, assumptions, strength and limitations.

Unit IV

Marxist historiography- its new perspectives and strength and limitations; treatment of Colonialism and Indian Nationalism; Subaltern historiography – their critique of existing historiography; themes, sources, techniques and strength and limitations; emerging new trends with special reference to feminist history and postmodernism.

Essential Readings

Aymard, Maurice and Harbans Mukhia eds., 'Introduction', *French Studies in History,* New Delhi: Orient Longman, 1989, 2 vols.

Carr, E.H., *What is History*, Melbourne:Penguin Books, 2018 (also available in Hindi and Punjabi translation).

Chandra, Bipan, 'Nationalist Historians' Interpretations of the Indian National Movement', *Situating Indian History for Sarvapalli Gopal*, eds. Sabyasachi Bhattacharya and Romila Thapar, Delhi: Oxford University Press, 1986.

Chandra, Bipan and others, 'Introduction', *India's Struggle for Independence, 1857-1947*, Delhi: Viking/Penguin Books.

Elton, G.R, *The Practice of History*, Oxford: Blackwell, 2002

Guha, Ranjit, 'On Some Aspects of Historiography of Colonial India', *Subaltern Studies I,* Delhi: Oxford University Press, 1986.

Jenkins, Keith, *On What is History*, London: Routledge, 2014.

Marwick, Arthur, *The New Nature of History*, Palgrave Macmillan, New York, 2001.

Mathur, L.P., *Historiography and Historians of Modern India*, New Delhi: Inter-India Publications, 1987.

Mukhopadhyay Subodh Kumar, *Evolution of Historiography in Modern India, 1900-1960,* Calcutta, K.P. Bagchi, 2002.

Sen, S.P. (ed)., *Historians and Historiography in Modern India,* Calcutta: Institute of Historical Studies, 2013.

Sheik Ali, B., *History: Its Theory and Method*, Chennai, Laxmi Pub., 2014.

Sreedharan, E., *A Textbook of Historiography: 500 B.C. to A.D. 2000,* New Delhi: Orient Longman, 2004.

Stone, Lawrence:, *History and Social Sciences in the Twentieth Century: The Future of History* ed. Charles F. Delzell, Nashville: Vanderbilt Univ. Press, 1997.

Webster, C.B. John:, *Studying History,* New Delhi, 2001.

Suggested Readings

Banga, Indu, *Causation in History*, Shimla: Indian Institute of Advanced Study, 1992.

Bhattacharya, Sabyasachi, 'Reflections on Concept of Regional History', *Perspectives on Indian Society and History*, ed. Hetukar Jha, New Delhi: Manohar, 2002, 81-90.

Bloch, Mark, *The Historian's Craft*, Manchester: Manchester University Press, 2004 (translated by Peter Putnam).

Chandra, Satish, "Decentring of History", *Essays on Medieval Indian History*, New Delhi: Oxford University Press, 2003.

Thapar, Romila, 'Ideology and Interpretation on Early Indian History', *Interpreting Early India*, Delhi: Abe Book Sellers, 2010.

OPT (II) HISTORY AND HISTORICAL METHOD

COURSE CODE: HIS 912

Objective: This paper provides an understanding of the meaning and nature of history and emphasizes on the value of interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Historical Fact; Social Forces; Scientific Method; Imaginative Understanding; Cleopatra's Nose; Determinism; Objectivity; Bias in History; Cyclic View of History; Teleological View of History; Value Judgement;Oral History; Demography; Archaeology; Social Anthropology; Geography; Economics; Causation; Rational Causes; Accidental Causes; Great Man; Rebel In History; Primary/Secondary Sources.

Unit I

The historical fact; relationship between the historian and the facts; society and historian; importance of social forces; history as science; history as literature.

Unit II

History as a study of causes; problem of determinism; problem of chance; value judgments in history; objectivity in history.

Unit III

Categories of primary sources; problems of genuineness and reliability of literary sources; oral evidence; evaluation of secondary sources; questions historians ask.

Unit IV

Widening scope of history; history and archeology; history and geography, demography and economics; history and sociology and anthropology; history and literature; the value of history.

Essential Readings:

1. Carr, E.H., *What is History*, Melbourne: Penguin Books, 2018 (also available in Hindi and Punjabi translation).
2. Webster, John C.B., *Studying History*, Delhi: Macmillan, 2001.

Suggested Readings:

Appleby, Joyce, Lynn Hunt and Margaret Jacob, *Telling the Truth about History*, New York: W.W. Norton, 1995.

Banga, Indu, *Causation in History*, Shimla: Indian Institute of Advanced Study, 1992.

Barzun, Jaques and Henry F. Graff, *The Modern Researcher*, California: Wadsworth Publishing, 2003

Bloch, Mark, *The Historian's Craft*, Manchester: Manchester University Press, 2004 (translated by Peter Putnam).

Elton, G.R., *The Practice of History*, Oxford: Blackwell, 2002.

Gottschalk, Louis, *Understanding History, A Primer of Historical Method*, New Delhi: Alfred A. Knopf, 1968.

Hexter, J.H. *The History Primer*, New York: Basic Books, 1971.

Jenkins, Keith, *On What is History*, London: Routledge, 2014.

Landes, David S. and Charles Tilly (eds.), *History as Social Science*, Englewood Cliffs: Prentice-Hall, 1971.

Marwick, Arthur, *The New Nature of History*, New York: Palgrave Macmillan, 2001.

Rosenau, Pauline Marie, *Post-Modernism and the Social Science: Insights, Inroads and Intrusions*, Princeton: Princeton University Press,1992.

Singh, Surinder and Ishwar Dayal Gaur (eds.), *Popular Literature and Pre- Modern Society in South Asia*, New Delhi: Pearson-Longman, 2007.

Stone, Lawrence, 'History and Social Sciences in the Twentieth Century', *The Future of History,* ed. Charles F Delzell, Nasville: Vanderbilt University Press, 1997.

Vansina, Jan, *Oral Tradition: A Study in Historical Methodology*, London: Eurospan, 2006 (trs. H. M. Wright).

PAPERS III & IV OPT(I)RELIGIOUS AND SOCIAL PROCESSES IN ANCIENT INDIA

COURSE CODE: HIS 720

Objective: The aim of the paper is to highlight the role of social processes in the shaping of the religious discourse and philosophical speculations in relation to Brahmanism-Hinduism, Buddhism and Jainism.

Pedagogy: The said paper is pursued on the basis of lectures, seminars, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:
Rigveda; Upanishada; Aranyaka; Vedanga;Dana-Dakshina; Caturaryasatya; Ashatangika-marga; Tirthankara; Lokayata; Ajivika; Buddhist Triratnas; Jain Triratna; Anekantavada; Mahayana; Hinayana; Vajrayana; Boddhisattva; Svetambara; Digambara; Shankhya; Yoga; Nyaya; Vaisheshika; Mimamsa; Vedanta; Nayanar Saints; Alavar Saints; Tantrism; Bhakti; Puranas; Gahapati; Setthi.

Unit I

Vedic Religion: Vedic Gods and Goddesses; Prayers, Sacrifices, and the Role of Brahmanas; Concept of Dana-Dakshina.

Unit II

Upanishads and Heterodox Sects: Philosophy of Upanishads, Buddhism, Jainism, Ajivaka and Lokayata; Material Background of Jainism and Buddhism; Women in Buddhism and Jainism.

Unit III

Schisms and Philosophical Differences: Buddhism (Hinayana and Mahayana) and Jainism (Svetambara and Digambara); Hindu Philosophical Schools (Shankhya, Yoga, Nyaya, Vaisheshika, Mimamsa and Vedanta).

Unit IV

Puranic Hinduism: Theistic Cults (Vishnavism, Shaivism) and Bhakti Movement (Nayanar-Alavar Saints); Tantrism and Its Impact on Hinduism and Buddhism.

Essential Readings

Basham, A. L., *The Wonder That Was India (A survey of the history and culture of the Indian sub-continent before the coming of the Muslims),* London: Picador an imprint of Macmillan, 2004 reprint.

Jaini, S. Padmanabh, *Gender and Salvation: Jaina Debates on the Spiritual Liberation of Women*, (with a forward by Robert P. Goldman), New Delhi: Munshiram Manoharlal, 1992.

Radhakrishnan, S., *Indian Philosophy, Vol. 1 & 2*, (with an introduction by J. N. Mohanty), New Delhi: Oxford University Press, 2008.

Singh, Upinder, *A History of Ancient and Early Medieval India: From Stone Age to the 12th Century*, Delhi: Pearson Longman, 2009.

Thapar, Romila, *Ancient Indian Social History: Some Interpretations* (particularly, 'Dana and Dakshina as Forms of Exchange', pp. 94-108), New Delhi: Orient Blackswan, 2016 reprint.

Suggested Readings

Chakrabarti, Kunal, *Religious Process: The Puranas and the Making of a Regional Tradition*, Delhi: Oxford University Press, 2018 second edition.
Chattopadhyaya, D. P., *Indian Philosophy: A Popular Introduction*, New Delhi: People's Publishing House, 2015 reprint.
Doniger, Wendy, *The Hindus: An Alternate History*, New Delhi: Speaking Tiger, 2015.
Dundas, Paul., *The Jains*, London: Routledge, 2002 reprint.

Habib, Irfan and Thakur, Vijay Kumar, *A People's History of India: 3- The Vedic Age.* New Delhi: Tulika Books, 2011 reprint.

Sahu, B. P., *A People's History of India 7- Society and Culture in Post-Mauryan India, c. 200 BC- AD 300*, (with a chapter on language and literature by Kesavan Veluthat), New Delhi: Tulika Books, 2015.

Shrimali, K. M., *A People's History of India 4-The Age of Iron and the Religious Revolution, c.700-c.350 BC*, New Delhi: Tulika Books, 2011 reprint.

Singh, Anand, ed. *Dana: Reciprocity and Patronage in Buddhism*, New Delhi: Primus Books, 2017.

PAPERS III & IV OPT. (II) BUDDHISM IN INDIA

COURSE CODE: HIS 438

Objective: To trace the origins of Buddhism in India since ancient times.

Pedagogy: Class room lectures, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Ajivikas; lokayatas;Gahapatis/ Setthis;Karshapana(puch marked coins); Pitakas/ Pali Canonical Literature; Jatakas; Ajanta Paintings; Stupa; Chaitya; Vihara; Mathura Sculptural Art; Gandhara Sculptural Art; Janapada/Mahajanapada; Gana-Sangha; Mahayana; Hinayana; Caturaryasatya; Ashtangikamarg; Vajrayana; Bodhisattva; Concept of Tara; Buddhist Tri-Ratnas; Therigatha; Four Buddhist Councils; Chinese Travelers(Fa Hsien And Xuan Zang).

Unit-I

Theravada its major schools; Origin and growth; Organization and Doctrine;Buddhist notion of Ahimsa; The Agendas and significance of Buddhist Councils

Unit-II

Hinayana and Mahayana- their major schools; Growth and Organization;Doctrines of Hinayana and Mahayana;Socio-economic foundations of early Buddhism;Women in early Buddhism

Unit-III

Emergence of Vajrayana and Tantrayana; Different aspects of Tantrayana; Doctrines of Vajrayana;Prominent Siddhacarya such as Nagarjuna,Vajraghanta,Padamasambhave,Indrabhuti and Sarahapa; SocialRole of Tantrayana

Unit IV

Origin and growth of Buddhist arts; architectural features of Stupas and the Chatayas;development of Sculpture arts of Gandhara. Ajanta Paintings- its stylistic features; The Buddhist Religion with reference to Dhayani Buddhas.

Essential Readings

Bapat, P.V. (ed.),*2500 years of Buddhism*, Mahabodhi Int. Meditation Centre, Leh-Ladakh, 1996.

Chakravarti, Uma, *The Social Dimensions of Early Buddhism,* Delhi, Oxford University Press, 1987.

Dutt, R.C, *Buddhism & Buddhist Civilization in India*, Seema Publication, Delhi, 1983

Goyal, S.R., *A History of Indian Buddhism*, Kusumanjali Prakashan, Meerut, 1987.

Horner, I.B., *Women under Primitive Buddhism*, Delhi: Motilal Banarsidas, 1995.

Joshi, L.M, *Studies in the Buddhist Culutre of India, Motilal Banarsidas*, Second Revised Edition, Delhi, 1977

Moharana, *S.K, Tantric Buddhism*, Aryan Book International , Delhi, 2001

Narain, A.K, *Studies in History of Buddhism*, B.R Publisher, Delhi, 1980

Sarao, K.T.S., *Origin and Nature of Ancient Indian Buddhism*, Taiwan, Buddha Educational Foundation (4^{th} ed.), 2004.

Suzuki, B.L, *Mahayana Buddhism, George Allen & Unwin Ltd.*, London, 1967

Suggested Readings

Conze, E., *Buddhist Thought in India*, George Allen & Unwin Ltd., London, 1967

Dube, S.N., *Cross Current in Early Buddhism*, Manohar Pub., 1980.

Duerlinger, *Indian Buddhist Theories of Persons,* Routledge Curzon, London, 2005.

Dutt, N., *The Spread of Buddhism and Buddhist Schools*, Rajesh Publication, Delhi, 1980.

Lee-Kwangsu, *Buddhist Ideas and Rituals in Early India and Korea*, Manohar, Delhi, 1998.

Murti, T.R.V., *Buddhism*, Harper Coelins, Noida, 1998.

Nakamura, H., *Indian Buddhism: A Survey*, Motilal Banarsidas, Delhi, 1980.

Oldenberg, H., *Buddha: His Life and Doctrines*, Aravati Book, Delhi, 1997.

Pande, G.C., *Studies in the Origin of Buddhism*, Univ. of Allahabad, 1957.

Pande, G.C , *Buddhist Studies in India*, Motilal Banarsidas, Delhi, 1975.

Paul, Gronen, *A History of Indian Buddhism*, Motilal Banarsidas, Delhi, 1993.

Pathak, R.K., *Historical Survey of Indian Buddhism*, Ramanand Vidhya Bhawan, Delhi, 1989.

Sengupta, Sudha, *Buddhism in the Classical Age (400-750 AD)*, Sandeep Prakashan, Delhi, 1985.

PAPERS III & IV OPT. (III) RELIGIOUS DEVELOPMENTS IN MEDIEVAL INDIA

COURSE CODE: HIS 428

Objective: The aim opf this paper is to examine the developments in different religious systems during the medieval period of Indian history. It focuses on the continuity and change within Shaiva, Shakta and Vaishnava systems. It also deals with Krishna bhakti and its regional manifestations in Maharashtra, Bengla, Assam, Rajasthan and Gujarat. The objective of this paper is also to discuss Islam in its various forms and monotheistic movement started by kabir, Ravidas, Dadu and Guru Nanak.

Pedagogy: Class room teaching, evaluation based on continuous internal assessment comprising of unit tests, presentation of seminars, classroom participation and attendance.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Alvars; Nayanars; Shaiv Siddhanta; Kadambaguhadhivasi ; Shakti Peeth; Matrikas; Panchratra Agamas; Advaita; Visishtadvaita of Ramanuj; Tirtavali; Varkari ; Gaudiyas; Harinam Kirtan;Nama Parsanga ; Pushtimarg; Ramanandis; Ramlila; Raslila; Silsila; Shaikh; Waliyat, Raushanayas, Khanqah; Sama; Futuh; Fiqh; Chilla-e-Makus; Wahadat al Wujud,Wahadat al Shuhud; Mahdi, Imam; Saguna Bhakti; Nirguna Bhakti; Guru; Adi Granth; Khalsa; Khande Ke Pahul, Dasam Granth.

Unit I

Early Movements: Shaivism and its features: Principles and Development ofShaiv Sidhanta; Origin and eveolutions of Shaktism; Main features of Sri Vaishnavism;Evolution **of**Rama Bhakti.

Unit II

The Cults of Krishna: The Varkaris in Maharashtra; Emergence of Gaudhiya Vaishnavism in Bengal; The Vallabhacharya in Rajasthan and Gujrat; Mirabai- A voice of female protest in bhakti tradition.

Unit III

Islam in Medieval India: The religious beliefs and practices of Sunnis; Beliefs and Practices of the Shias; Sufis orders: Chishtis, Suhrawardis, Qadaris, Naqashbandis.

Unit IV

The Saints and the Sikhs: Kabir, his social outlook, formation and development of Kabir-Panth; Philosophy of Sant Ravidas; Dadu and Dadu-Panth; The Sikh Movement- Guru Nanak to Guru Gobind Singh.

Essential Readings

1. Bhandarkar, R.G., *Vaishnavism, Shaivism and minor Religious Systems*, New York; Routledge, 2016.
2. Burz Richard, *The Bhakti Sect of Vallabhacharya*, Faridabad: Thomson Press (India), 1976.
3. Deberry, William Theodore et.al. (ed), *Sources of Indian Tradition*, Delhi: Munshiram Manoharlal, 1963.
4. Grewal, J.S., *Religious Movements and Institutions in Medieval India*, PHISPC, New Delhi: Oxford University Press, 2006.
5. Mishra, Neeru, *Sufis and Sufism: Some Reflections*, New Delhi: Manohar, 2004.
6. Rizvi, S.A.A., *Muslim Revivalist Movements in Northern India in the Sixteenth and Seventeenth Centuries*, New Delhi: Munshiram Manoharlal, (rep.), 1993.
7. Vandenille Charlotte, *Myths, Saints legends in Medieval India*, Delhi: Oxford University Press, 1999.
8. Vandenille Charlotte, *A Weaver named Kabir*, Oxford: India Paperbacks, 1997.

Suggested Readings

1. Ahmad Tarique, *Religio-Political Forment in the North-West Frontier during the Mughal Period (The Raushanya Movement)*, Delhi: Idarah-I-Adabiyat-Dilli, 1982.
2. Grewal, J.S., *The Sikhs of the Punjab*, Cambridge: Cambridge University Press, 1993.
3. Nandi, R.N., *Religious Institutions and Cults in the Deccan,* Delhi: Motilal Banarsidas, 1973.
4. O'Cannel, Joseph T., *Organisational and Indian Aspects of Indian Religious Movements,* Shimla: Indian Institute of Advanced Study, 1999.
5. Schomer Karine and W.H. Mcleod, eds., *The Saints: Studies in a Devotional Tradition of India,* Delhi: Motilal Banarsidas, 1987.

PAPERS III & IV: OPT. (IV) **ISLAMIC TRADITIONS OF MEDIEVAL INDIA**

COURSE CODE: HIS 426

Objectives: This paper places the Islamic traditions of medieval India in the larger context of the rise of Islam

inWest Asia. Apart from the theological and mystical dimensions of Islam in medieval India, it highlights the emergence of the popular syncretic culture that grew around the major sufi shrines. It also seeks to study the process of Islamization in two regions viz. Punjab and Bengal. This paper assumes significance in the light of the crisis that seems to afflict the Islamic societies in different parts of the world, besides serving as an intellectual response to the growing misunderstanding regarding Islam and its historical role.

Pedagogy: The teaching of this paper is based on the pioneer works of stalwarts like Khaliq Ahmad Nizami andSaiyid Athar Abbas Rizvi. In a large measure, it relies on the contributions of Richard M. Eaton that have fundamentally changed our understanding of the subject. While discarding monolithic explanations and unscientific stereotypes, this paper opens the mind to a complex and multi-layered past.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal ContinuousAssessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short questions carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Isra; Rightly guided Caliphs; Hijri; Shariah; Zakat; Classical Schools of Fiqh; Hadis; Sheikh-al-Islam; Mufti; Battle of Karbala; Wilayat; Khilafat Namah;Deg;Sama; Urs; Roshni;Khanqah; Jama'at Khanah; Khuddam; Karka; Sajjada-Nishin; Ghusl; Barakat; Bihishati Darwaza; Imam; Tawiz; Ghazi Miyan; Dargah;Chakki Namah.

Unit I (Theology and Mysticism)

Rise and expansion of Islam in West Asia; political, legal and theological structure of Islam; Muslim religious life and Ulama in India during the thirteenth century; features of mystic ideology.

Unit II (Cult of Shrines)

The role of saints in Islam; rituals and management of the Ajmer shrine; the legend of Salar Masud Ghazi, structure, festivities and practices at the Bahraich shrine.

Unit III (Liberal and Revivalist Trends)

The socio-religious outlook of Abul Fazl; The mission of Shaikh Ahmad Sirhindi and its impact; the works of Dara Shukoh on mysticism.

Unit IV (Process of Islamization)

Conventional theories of religious conversion; rooting of Islam in Bengal; Islamization in south-west Punjab and the Pakpattan shrine; the role of sufi folk literature in the diffusion of Islam.

Essential Readings

Ahmad, Aziz, *Studies in Islamic Culture in the Indian Environment*, New Delhi: Oxford University Press (reprint), 2003.

Alavi, Azra, *Socio-Religious Outlook of Abul Fazl,* Delhi: Idarah-I-Adabiyat-I-Delli (reprint), 1983.

Currie, P.M., *The Shrine and Cult of Muinuddin Chishti of Ajmer*, New Delhi: Oxford University Press (reprint),

2006.

Eaton, Richard M., *The Rise of Islam and the Bengal Frontier 1204-1760*, New Delhi; Oxford University Press (reprint), 1997.

Eaton, Richard M., *Essays on Islam and Indian History*, New Delhi: Oxford University Press, 2000.

Friedmann, Yohanan., *Shaykh Ahmad Sirhindi: An Outline of His Thought and a Study of His Image in the Eyes ofPosterity,* New Delhi: Oxford University Press (reprint), 2000.

Nizami, Khaliq Ahmad, *Religion and Politics in India During the Thirteenth Century*, New Delhi: Oxford University Press (new edition), 2002.

Rizvi, Saiyid Athar Abbas*, Muslim Revivalist Movements in Northern India in the Sixteenth and SeventeenthCenturies,* New Delhi: Munshiram Manoharlal (reprint), 1990.

Singh, Surinder and Ishwar Dayal Gaur (ed.) *Sufism in Punjab: Mystic Literature and shrines,* Delhi: Akar, 2009.

Troll, Christian W., (ed.), *Muslim Shrines in India: Their Character, History and Significance,* New Delhi: Oxford University Press, 2003.

Vanina, Euginia*, Ideas and Society in India from 16thto 18thCentury*, New Delhi: Oxford University Press, 1996.

Yasin, Mohammad, *A Social History of Islamic India*, New Delhi: Munshiram Manoharlal (reprint), 1974.

Suggested Readings

Amin, Shahid, "On Retelling the Muslim Conquest of North India", in *History and the Present*, Ed., Partha Chatterjee & Anjan Ghosh, New Delhi: Permanent Black, 2002.

Eaton, Richard M., (ed.), *India's Islamic Traditions 711-1750*, New Delhi: Oxford University Press, 2003.

Ernest, Carl W., *Eternal Garden: Mysticism, History and Politics at a South Asian Sufi Centre,* New Delhi: Oxford University Press (second edition), 2004.

Hasrat Bikramjit, *Dara Shukoh: Life and Works*, New Delhi: Munshiram Manoharlal (reprint), 1982.

Islam, Riazul*, Sufism in South Asia: Impact on Fourteenth Century Muslim Society,* Karachi: Oxford University Press, 2003.

Jafri, S.Z.H. & Helmut Reifeld (eds.), *The Islamic Path: Sufism, Society and Politics in India*, New Delhi: Conrad Adenauer Stiftung & Rainbow Publishers, 2006.

Nizami, Khaliq Ahmad*, The Life and Times of Shaikh Nizamuddin Auliya*, New Delhi: Idarah-i-Adabiyat-i-Delli, 1991.

Schimmel, Annemarie, *Islam in the Indian Subcontinent*, Leiden: E.J. Brill, 1980; Lahore: Sang-e-Meel Publications (reprint), 2003.

PAPERS III & IV OPT. (V) DALIT MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 471

Objective: The paper accounts for and interprets the phenomena of caste in India as a stratified social hierarchy prevalent from ancient times. Academic debates on the evolvement of caste, and the concept of jati and varna, reaction to Brahmanical strategies as arbiters of moral order and the rise of Bhakti saints , give an understanding on the emergence of the Dalit identity in the Indian context. The paper also discusses caste and gender and the movement for social justice, political participation and autonomy for dalits. Recent political parties have generated a new consciousness of equality in society among the dalits.

Pedagogy: Method would include lectures, discussions, review, seminars, powerpoint presentations.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Caste, Varna System, Dalit, Untouchables, Dalit Revolt, Bhaktimodes of legitimacy, Chokhamela, Eknath, Ravidas, Mahar, Non- Brahman Movement, Orientalists, Dalit Movement, Ideology of Ambedkar, Ambedkarism, Conflict between Gandhi and Ambedkar, Gender, Scheduled Castes, Conversion Movement, Revival of Buddhism, Dalit Identity, Reservation, B.S.P, and S.P.

Unit I

Historical origins and Development of Caste; Bhakti modes of legitimacy for modern change; Chokhamela; Eknath; Ravidas; The context of Dalit revolt.

Unit II

Nineteenth Century back ground of Mahar and Non-Brahman movement in Maharashtra; Emergence of Dalit Movement 1900-1930, Nagpur; Hyderabad; Mysore and Punjab; Western 'Orientalists' and the colonial perception of caste; Caste and Gender.

Unit III

Ideology of Ambedkar; The American experience of Ambedkar; 'Ambedkarism' the Theory of Dalit Liberation; A Study in Leadership of Gandhi: Ambedkar; Revival of Buddhism.

Unit IV

Constitutional Safeguards; Caste based reservations; Non Political activism between 1970s-1990s; Political Parties-B.S.P., S.P.; Dalit Identity in Contemporary India.

Essential Readings

Ambedkar, B.R.,*The Untouchables,* Bombay: Thacker & Company, 1948.

Bayly, Susan, *Caste Society and Politics in India from the Eighteenth Century to the Modern Age*, Cambridge: Cambridge University Press, 1999.

Brass, Paul.R, *Caste, Faction and Party in Indian Politics* Vol.I, New Delhi: Chanakya Publications, 1983.

Chalam, K.S., *Caste Based Reservations and Human Development in India*, New Delhi: Sage, 2007.

Dhaka, S. & Dhaka, R., *Behind the Veil: Dalit Women in Panchayati Raj*, New Delhi: Abhijeet, 2005.

Kothari, Rajni ed., *Caste in Indian Politics*, New Delhi: 1970

Mohanty, Monoranjan*, Class Caste Gender*, New Delhi, Sage: 2007.

Omvedt, Gail, *Dalits and the Democratic Revolution*, New Delhi: Sage, 1992

Report of the Backward Class Commission, *Also known as the Mandal Commission Report,* available in soft format at http://www.socialjustice.in/documents/, 1980.

Shah, Ghanshyam (Ed). *Dalit Identity and Politics,* New Delhi: Saga Publications, 2001.

Zelliot, Eleanor*, From Untouchable to Dalit*, New Delhi: Manohar Publishers.

Suggested Readings

Ambedkar, B.R., *What Congress and Gandhi have done to the Untouchables*, Bombay: Thacker & Company, 1945.

Chandel, K. *Social and Cultural Development of Indian Dalits.,* New Delhi: A.B.P. Publishers, 2007.

Ghurye, G.S., *Indian Sadhus,* Bombay: Popular Parkashan, 1964

Gupta, Depankar, *Caste in Question Identity or Hierarchy*, New Delhi: Sage, 2007.

Gupta, S.K., *The Scheduled Castes in Modern Indian Politics; Their Emergence as a Political Power*, New Delhi, 1985.

Hutton, J.H. *Caste in India: its nature, function and origin*, London: Oxford University Press, 1963.

Kamble, N.D., *Atrocities on Scheduled Castes: In Post Independence India*, New Delhi: Ashish Publications House, 1981.

Khare R.S. *The Untouchables as himself: ideology, identity and pragmatism among the Lucknow Chamars*, Cambridge: Cambridge UniversityPress, 1984.

Michael, S.M. (Ed.).*Dalits in Modern India*, New Delhi: Vistar Publications, 1999.

Michael, S.M., *Dalit in Modern India*, New Delhi: Sage, 2007.

Omvedt, Gail, *The Anti Caste Movement and the Construction of an Indian Identity*, New Delhi: Orient Longman, 2006.

Rai, Sudha*., Dalit Assertion and the Unfinished Democratic Revolution: The Bahajuna Samaj Party in Uttar Pradesh Cultural Subordination and the Dalit Challenge.* New Delhi: Sage, 2002.

Rao, V., *Dr. B.R. Ambedkar: Champion of Human Rights in India*, Delhi: Manak, 2006.

Satyanaryana, A*., Dalits and Upper Caste: Essays in Social History*, New Delhi: Kanishka, 2005.

Shah, Ghanshyam, *Dalit Identity and Politics: Cultural Subordination and the Dalit Challenge*, New Delhi: Sage, 2001.

Singh, Rajendra, *The Depressed Classes of India*, New Delhi: B.R. Publishing House, 1986.

PAPERS III & IV OPT. (VI) WORKING CLASS MOVEMENT IN MODERN INDIA

COURSE CODE: HIS 731

Objective: The present paper traces the history of working class movement and studies the formation and working of trade unions in India. It examines the factors facilitating or retarding the growth of the trade union movement. The constitution and functioning of the AITUC and other unions are also analysed.

Pedagogy: Lectures, discussions, tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concept and Terms:

Industrial labour, Plantation Industry, Modern Factory System, Marxian Socialism, Factory Legislation, Labour Union, Neel Darpan, Condition of Child Labour, Any two provisions of Indian Factory Act 1881, Indian Factory Act 1891, Indian Factory Act 1911, Factory Legislations, Unrest among labour, Effect of Russian Revolution on labour, ILO, AITUC, Role of CPI in labour movement, Split of AITUC 1929, Congress Socialist Party, Trade Union, Role of Working Class in National Movement, Government's attitude towards working class movement

Unit I

Rise and growth of plantation industries- indigo, coffee, tea and rubber, railway and coal mining; development of modern factory industries- cotton, jute, iron and steel industries and the rise of industrial labour force; impact of Marxian Socialism w.s.r.t. Karl Marx in India; repercussions of the factory legislations, emergence and working of labour unions of Europe in India.

Unit II

Condition of Indian workers including women and child labour; Factory Legislations - Indian Factory Act of 1881, 1891 and 1911; Outbreak of the First World War and large industrial unrest among workers - their strikes; Russian Revolution of 1917 and its impact.

Unit III

Formation of I.L.O. (1919) and the foundation of All India Trade Union Congress (AITUC, 1920); the constitution of AITUC; the functioning of AITUC; role of communist party of India between 1925-29, organization of Workers' and Peasants' Parties, Split in AITUC (1929).

Unit IV

Role of Left Wing - Congress Socialist Party and CPI; reunion of 1935 and spurt in the activities of Trade Unions (1936-1939); Indian Working Class and the National Movement; Government's attitude towards it; Second World War and its impact, resurgence in Working Class activities (1945-1947).

Essential Readings

Chandra Bipan, *Rise and Growth of Economic Nationalism in India*, New Delhi: People's Publishing House, 2016.

Dutt Palme, *India Today,* Bombay: People's Publishing House Ltd., revised Edition 2008.

Dutt Romesh, *The Economic History of India in the Early Age*, Delhi: Routledge, 2000

Gadgil D.R., *The Industrial Evolution of India in Recent Times,* 1860-1939, Bombay: Oxford University Press, 1971 (5th ed.)

Kumar Dharma and Raychaudhri Tapan (ed.), *The Cambridge Economic History of India*, Volume 2: c.1757-c.1970, New Delhi: Orient Longman and Cambridge University Press, 1991.

Mehta, B.L., *Trade Union Movement in India,* Delhi: Kanishka Publishing House, 1991.

Suggested Readings

Chandra, Bipan, Mukherjee Mridula and others, *India's Struggle for Independence 1857-1947,* Delhi: Penguin Books. 2016.

Desai A.R., *Social Background of Indian Nationalism*, Bombay: Popular Prakashan, (fifth ed. 1976) Bombay, revised edition 2011.

Giri V.V., *My Life and Times*, Volume I, Delhi: Macmillan, 1976.

Sarkar Sumit, *Modern India,* Delhi: Macmillan, 1983.

Forbes, Geraldine, *The New Cambridge History of India, IV.2 Women in Modern India*, Cambridge: Cambridge University Press, 2000 (2nd reprint).

PAPERS III & IV OPT. (VII) PEASANT MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 467

Objectives: This course introduces the student to the complex issue of peasant movements in India in the twentieth century.

Pedagogy: The course is based on lectures, discussions and tutorials.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms given below. The candidate is required to attempt any 10 short questions in 25-30 words each. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Peasantry; Tenants; Landless Labour; Bonded Labour; Kinship Group; Landlordism; Commercialization Of Agriculture;Rent Enhancement;Peasant Movement;Satyagraha;Kisan Sabha; Telengana Movement; Bardoli Agitation; Famine Relief; Drought; Colonizing Agriculture;Peasant Insurgency; Moplah Rebellion; Agrarian Society; Champaran;Kheda Movement; Agrarian Relations; No Rent Movement; All India Kissan Sabha; Class Consciousness; Kinship Ties; Land Relation; Surplus Production.

Unit I

Historiography of the Peasant Movements in India; Definition of Peasants; Class consciousness; Family and kinship ties, caste and peasantry in India

Unit II

Classification of peasants; Growth of modern landlordism; Commercialization of agriculture & its impact on land relations.

Unit III

Agrarian Conditions(1900-1947): Movements of prices, Impact of First World War on Peasantry, Great Depression & Peasantry, Peasant Movements: Champaran Satyagraha, Kheda Movement, Kisan Sabha , Moplah uprising.

Unit IV

Peasant Movements (1928-1947): Bardoli agitation (1928), Peasant movements during the Civil Disobedience Movement (1930-1934), Formation of the first All India Kisan Sabha (1938), Telangana Uprising, The National Movement and the Indian Peasantry.

Essential Readings:

Chandra, Bipan, *The Rise and Growth of Economic Nationalism*, Peoples Publishing House, New Delhi, 1966.

Chaudhury, B.B.,"History of Peasant Movements in British India: Some New Perspectives",*Indian Historical Review,* July 1983-84, New Delhi.

Desai, A.R., *Social Background of Indian Nationalism*, Popular Parkashan, Bombay, 2004(First Published 1948).

Desai, A.R.(ed.),*Peasant Struggles in India,* OUP, New Delhi, 1979.

Dhanagare, D.N., *Peasant Movements in India 1920-1950,*OUP, New Delhi, 1989.

Guha, Ranjit, *Elementary Aspects of Peasant Insurgency in Colonial India*, OUP, New Delhi, 1983.

Habib, Irfan, "Peasant in Indian History", *Social Scientist,* Vol. 11, No.3, March 1983, pp.21-64.

Hardiman, David, *Peasant Resistance in India, 1858-1914, OUP,* New Delhi, 1992.

Stokes, Eric, *The Peasant and the Raj: Studies in Agrarian Society and Peasant Rebellion in Colonial India*, Cambridge University Press, Cambridge, 1978.

Suggested Readings

Dhanagare, D.N., *Agrarian Conflict, Religion and Politics: The Moplah Rebellions in Malabar in the 19th and early 20th centuries, Past and Present*, No.74, February 1977, pp.112-41.

Dutt, R.C., *The Economic History of India*, Vol.II, New Delhi, 1972 (Reprint).

Dutt, R.P., *India Today,*Popular Parkashan, Bombay, 1949.

Ghosh, Arun, Agrarian Structure and Peasant Movements in Colonial and Post-Independence India: An Annotated Bibliography, K.P. Bagchi, Calcutta, 1990.

Henringham, Stephen, *Peasant Movements in Colonial India*: North Bihar 1917-1942, Canberra, 1982.

Hobsbawm, Eric, *Primitive Rebels: Studies in Archaic Forms of Social Movements in the Nineteenth and Twentieth Century,* Abacus, London, 2017(First Published in 1959).

Kumar, Dharma (ed.). *The Cambridge Economic History of India, 1757-1970*, Vol.II, Orient Longman, Hyderabad, 1984.

Mukherjee, Mridula, *Peasant in India's Non-Violent Revolution: Practice and Theory,* New Delhi, 2003.

Mukherjee, Mridula, *Colonializing Agriculture: The Myth of Punjab Exceptionalism*, Sage Publications, New Delhi, 2005.

Rothermund, D., *Government Landlord and Peasant in Indian Agrarian Relations under British Rule, 1865-1935,* Weisbaden, 1978.

Singh, V.B. (ed.), *Economic History of India*, 1857-1936,Bombay, 1965.

Sohal S.S, *Credit, Rural Debit and the Punjab Peasantry, 1849-1947,* Guru Nanak Dev University, Amritsar, 2012.

PAPERS III & IV OPT. (VIII) SOCIO-RELIGIOUS REFORM MOVEMENTS IN MODERN INDIA

COURSE CODE: HIS 418

Objective: The course seeks to examine the variety of socio-religious reform movements in response to colonial rule in the regional context. The common links between them and their contrasts, and our understanding of the changes in the colonial times. Specific themes related to education, depressed classes, gender and identity are highlighted to study the conflict and competition in the socio-religious reform movements.

Pedagogy: The course utilizes recent research on the subject and critically examines 'stereotypes' on reform and debates on different issues to understand the larger context.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Trasitional movements; acculturative movements; Faraiz; Dar-ul- Islam; nava samhita; Vedanta; bai'at; mujaddid; varnashramadharma; arsha-unarsha; shuddhi; niyoga; saranam/darshanan; Theosophists; anjuman; ijtihad; sehajdhari; keshdhari; sanatan dharm; paramhansa; tariqah; gurukul; madhi; hadith; fatwa; militant/moderate groups in Arya Samaj; identity; discrimination by caste; karewa; chadar dalna; sanatan dharma.

Unit I

Society in the 18th century- traditional groups; new social categories; colonial society; the historical origins of caste; western perceptions of caste; impact of western education; critique of Indian society..

Unit II

Ideologies and Impact of reform movements: Brahmo Smaj, Arya Smaj, Aligarh, Deoband, Singh Sabha, Ahmadiyas

Unit III

Agenda of social reformers: Attitudes towards the Depressed classes; debates on sati and widow remarriage; age of consent

Unit IV

Formation of socio-religious identities- Hindu consciousness; Muslim solidarity; Sikh identity; issues of conflict and competition; agents of social change.

Essential Readings

Bayly, Susan*, Caste, Society and Politics in India*, Cambridge University Press, 1999.

Desai, A.R., *Social Background of Indian Nationalism*, Delhi, 1962 (reprint).

Farquhar, J.N., *Modern Religious Movements in India*.

Grewal, J.S., *Perspectives of Sikh Identity*, Patiala, Punjabi University, 2001.

Jones, K.W., *Socio Religious Reform Movements in British India*, New Cambridge History, Delhi: Foundation Books, Delhi, 1994.

Lata Mani, *Contentious Traditions: Debate on Sati*, Delhi: Oxford University Press, 1998.

Nair, Janaki, *Women and Law in Colonial India*, Delhi: Kali for Women, 1996.

Rao, MSA, *Social Movements and Social Transformation,* Delhi, 1979.

Sen, S.P., *Social and Religious Reform Movement in the 19th& 20th Century*, Calcutta: 1999.

Suggested Readings

Ahmad, *The Wahabhi Movement in India*, Delhi: Manohar, 1994.

Balrd, Robert, ed., *Religion in India*, Delhi: Manohar, 1975.

Heimseth, Chailes, *Indian Nationalism and Hindu Social Reform.*

Jones, K.W., *Arya Dharm*, Delhi: Manohar, 1989.

Metcalfe, Barbara, D., *Islamic Revival in British India*, Princeton, 1982.

Sudhir Chandra, *Social Transformation and Creative Imagination*, Delhi: 1984.

Webster, John C.B., *The Christian Community and Change in 19th Century North India*, Delhi: Manohar, 1976.

PAPERS III & IV OPT. (IX) HISTORY OF CASTE AND CASTE POLITICS IN MODERN INDIA

COURSE CODE: HIS 462

Objective: To trace the evolution of caste and caste politics in modern India.

Pedagogy: Class lectures, tutorials, discussions.

Note: The candidate will be evaluated on the basis of a written examination (80 marks) and Internal Continuous Assessment (20 marks). In the written examination, the question paper will have the following format:

The maximum marks in this paper/option will be 80 and duration of written examination will be 3 hours..

(i) There will be 9 questions in all. The candidate will be required to attempt 5 questions.

(ii) Question No.1 will be compulsory and carry 20 marks. It will consist of 15 short questions from the list of concepts and terms.given below. The candidate is required to attempt any 10 short questions in 25-30 words each.. Each short question carries 2 marks.

(iii) Remaining part of the question paper will be divided into four units, corresponding to the four units of the syllabus for each option. The paper setter will set 2 essay type questions from each unit. The candidate will attempt 4 essay type questions, selecting one from each unit. Each essay type question will carry 15 marks.

(iv) The paper setter is expected to follow the Essential Readings and set questions on the sub-themes or parts of a theme, rather than the topic as a whole.

Concepts and Terms:

Caste; varna system; Religious explanation of caste; occupational theory of caste; "Indian Rennaissance"; Forms of Social Discrimination ; Dalit; Depressed Clases; Scheduled Castes; Ambedkarism; Ideology of Gandhi; Non-Brahman Movement; Mahar; Reservation; Mandal Commission; Politicization of Caste; Politics of Inclusion; Affirmative Action; Constitutional provisions; Anti colonial Movement; Upliftment.

Unit I

Scope, concepts and method

An introduction to the debates about caste; its historiography and the nature of power in society; The debate on the nature of hierarchies in society in India and the west; the caste-class conundrum; Presence of caste in the historiography of the national movement.

Unit II

The period of the anti-colonial movements

The "Indian renaissance" of the nineteenth century and the issue of caste; Manifestations of caste based exclusion; and protest against caste discrimination in the 19th and early 20th century; Efforts and inclusions based on caste during the national movement.

Unit III

Creation of a formal infrastructure for social inclusion and its working

Caste and the constitution of 1950; Antinomies in operationalising the constitutional provisions; and State sponsored social and economic welfare schemes for the upliftment of the people in a plural society; The Mandal Commission of 1979, an analysis of its recommendations; and the social and political impact on politics in modern India.

Unit IV

The democratisation of India's polity since the 1960s

Politicisation of caste in the electoral arena, 1950-1967; the rise to power of regional parties; and their caste based successes; The politics of inclusion and its impact on national integration.

Essential Readings

It is recommended that the extensive collection with the A C Joshi library at Panjab University, the British Council Library, Sector 9 Chandigarh and the Central State Library, Sector 34, Chandigarh be consulted for a more extended reading list

Bayly, Susan, *Caste, Society and Politics in India from the Eighteenth Century to the Modern Age*, Cambridge University Press, Cambridge, 1999.

Dirks, Nicholas, *Castes of Mind*, Princeton University Press, Princeton, 2001.

Guha, Ramchandra, *India after Gandhi: the History of the World's Largest Democracy***,** Picador,New Delhi, 2007.

Kothari, Rajni ed., *Caste in Indian politics*, New Delhi 1970.

Quigley, Declan, *The interpretation of caste*, Oxford University Press, Delhi, 1999.

Report of the Backward Classes Commission, *Also known as the Mandal Commission Report***,** available in soft format at http://www.socialjustice.in/documents/, 1980.

Suggested Readings

Jaffrelot , Christophe , *India's Silent Revolution*, Columbia University Press, New York, 2003.

Khilnani, Sunil, *The Idea of Indi*a**,** Farrar, Straus and Giroux**,** London 1999

*Report of the National Commission to Review the Working of the Constitutio***n** (Venkatachaliah report), "Pace of social change" available at http://lawmin.nic.in/ncrwc/finalreport/v1ch10.htm, 2002.

Satyanarayana, A, *Dalits and Upper Caste: Essays in Social History*, Kanishka, New Delhi, 2005.

Srinivas, M.N. , "The Social System of a Mysore Village", in McKim Marriot, ed, *Village India***,** Chicago University Press, Chicago, 1955, pp. 1-35.

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) EXAMINATIONS, 2020-21

- : 0:-

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST-GRADUATE COURSES of M.A. Political Science (Semester System)
(Effective from the First Year Admissions for the Academic Session 2005-2006)

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :

   (i) Terminal Evaluation : 80 %
   (ii) Continuous Assessment : 20 %
   (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :

(a)	Written Test	:	25 (reduced to 5)
(b)	Snap Test	:	25 (reduced to 5)
(c)	Participation in Class Discussion	:	15 (reduced to 3)
(d)	Term Paper	:	25 (reduced to 5)
(e)	Attendance	:	10 (reduced to 2)
		Total :	**100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break–up of marks for **attendance component** for theory papers shall be as under :

Attendance Component			*Mark/s for Theory Papers*
(a)	75 % and above upto 85 %	:	1
(b)	Above 85 %	:	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the *proforma* obtainable from the Examination Branch.

SPECIAL NOTES :

(i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For the private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.
(iii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.
(iv) The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2004 will be shown separately in the Detailed-Marks-Card (D.M.C.).

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF POLITICAL SCIENCE FOR M.A. (Semester System) i.e. 1st and 3rd SEMESTERS NOVEMBER/DECEMBER, 2020 AND 2nd and 4th SEMESTERS APRIL/MAY, 2021 EXAMINATIONS

Outlines of Test

Note : Each paper/course shall carry 4 credits/100 marks.

A semester shall have at least 60 hours of lectures and 15 hours of seminars in the papers included in the syllabus.

FIRST SEMESTER

Course I : Western Political Thought-I

Course II : Key Concepts in Political Analysis

Course III : Indian Politics : Institutions at work (Compulsory)

Course IV : International Relations : An Historical Overview

SECOND SEMESTER

Course V : Western Political Thought (II)

Course VI : Comparative Politics : Understanding Advanced Industrial Societies

Course VII : Indian Politics : Political Processes (Compulsory)

Course VIII : Theories of International Relations

OR

Approaches to the Study of International Relations

THIRD SEMESTER

Course IX : Indian Political Thought-I (Compulsory)

Course X : Comparative Politics-II : Understanding Developing Societies (Compulsory)

OR

Comparative Political Systems with special reference to USA, UK, China, Japan & Switzerland (Compulsory)

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) International Organization

Option (b) Transnational Actors in International Politics

Option (c) Politics of Development in India

Option (d) Peace and Conflict Resolution

Option (e) Rethinking Geopolitics : Criactial Perspectives

Option (f) Theories of Development

Option (g) Public International Law-I

Course XII : ***The candidates are required to offer any one of the following courses :***

Option (a) Democracy in India

Option (b) Government & Politics of India's Neighbours (Pakistan, Bangladesh, Nepal and Sri Lanka).

Option (c) Women and Politics in India

Option (d) Rights : Ideas and Movements

Option (e) Nationalism : Theory and Context

Option (f) New Political Geography in Comparative Perspective

Option (g) Policies and Politics of Development in India

Option (h) Public Administration

FOURTH SEMESTER

Course XIII : Indian Political Thought-II (Compulsory)

Course XIV : Foreign Policy of India (Compulsory)

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) Parties and Electoral Politics in India

Option (b) State Politics in India

Option (c) Decentralized Governance and Local Level Institutions in India

Option (d) Political Sociology with special reference to India

Option (e) Representing "India" : Geopolitical Imaginations

Option (f) Dalit Movements and Issues in India

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) Feminist Political Theory

Option (b) Major themes in Recent Political Philosophy

Option (c) Readings in the Philosophy of Resistance and Liberation

Option (d) Contemporary Debates in 20th Century Marxism

Option (e) Introducing Federalism

Option (f) Public International Law-II

M.A. POLITICAL SCIENCE (SEMESTER SYSTEM) SYLLABUS

FIRST SEMESTER

Course I : WESTERN POLITICAL THOUGHT-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students to the major themes of western political thought. This will be done by undertaking an in-depth study of the key thinkers of this tradition.

Unit-I
1. Plato.
2. Aristotle.

Unit- II
1. St. Augustine.
2. St. Thomas Aquinas.

Unit-III

1. Machiavelli.
2. Hobbes.

Unit-IV
1. Locke.
2. Rousseau.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following secondary literature :

General Text Books :

1. Dunning, W.A., *A History of Political Theories,* Allahabad (any edition).
2. Ebenstein, William, *Great Political Thinkers,* IBH, Oxford (any edition).
3. Sabine, G.H., *A History of Political Theory,* Oxford and IBH, Bombay (any edition).
4. Russell, Bertand, *History of Western Philosophy,* Simon and Schuster, New York (any edition).
5. Strauss, Leo and Joseph Cropsey, *History of Political Philosophy,* Rand McNally, 1968.

Suggested Readings :

1. Allen, J.W., *A History of Political Thought in the Sixteenth Century,* Methuen, London, 1964 (Ch. II Machiavelli).
2. Bakshi, O.P., *Politics and Prejudice : Notes on Aristotle's Political Theory,* University of Delhi,1975.
3. Barker, E., "Introduction" in E. Barker (ed.), *The Politics of Aristotle,* OUP, Oxford.
4. Barker, E., *Greek Political Theory : Plato and His Predecessors,* Methuen, London, 1947.
5. Barnes, Jonathan, *Articles on Aristotle, Vol. 2, Ethics and Politics,* Duckworth, London, 1977.
6. Berlin, Isaiah, *The Originality of Machiavelli in I. Berlin, Against the Current,* OUP, Oxford, 1981.
7. Brian R. Nelson, *Western Political Thought,* Pearson, Delhi, 2004.
8. Brown, Keith C. (ed.), *Hobbes Studies,* Basil Blackwell, 1965.
9. Cole, G.D.H. (Translator), *The Social Contract and Discourses* by Jean Jacques Rousseau (Author) J.H. Brumfitt (Revised), London, Everyman's Library, 1993.
10. Colletti, Lucio, "Rousseau as Critic of Civil Society" in Lucio Colletti ed. From Rousseau to Lenin, OUP, Delhi, 1978.
11. Croix, GEM De Ste, *The Class Struggle in the Ancient Greek World,* Duckworth, London, 1981.
12. Crombie, I.M., *An Examination of Plato's Doctrines,* Vol. I R.K.P., London, 1962.
13. Cross, R.C. & A.B. Woozley, *Plato's Republic,* Macmillan, 1964.
14. Deane, Herbert, A., *The Politics and Social Ideas of St. Augustine,* Columbia University Press, New York, 1963.
15. Dunn, John, Locke, *Past Masters Series*, OUP, Oxford, 1984, Chs. 1 & 2.
16. Dunn, John, *The Political Thought of John Locke,* Cambridge University Press, Cambridge, 1969.
17. Filed, G.C., *The Philosophy of Plato,* London, 1969.
18. Gilby, Thomas, B., *The Political Thought of Thomas Aquinas,* University of Chicago Press, Chicago,1958.
19. Grimsley, Ronald, *The Philosophy of Rousseau,* OUP, London, 1973.
20. Hall, J.C., *Rousseau, Introduction to His Political Philosophy,* Macmillan, 1971.
21. Levinson, R.B., *In Defence of Plato,* Harvard University Press, Harvard, 1953.
22. Macpherson, C.B., "Introduction" in C.B. Macpherson (ed.), *Leviathan of Hobbes,* Penguin, Harmondsworth, 1968.
23. Macpherson, C.B., *Political Theory of Possessive Individualism, Hobbes to Locke,* OUP, London, 1962.
24. Masters, Roger D., *The Political Philosophy of Rousseau,* Princeton, 1968.
25. Muglan, R., *Aristotle's Political Theory,* Clarendon, Oxford, 1977.
26. Newman, N.L., *The Political Thought of Aristotle,* 4 Vols., Clarendon, Oxford, 1887-1902.
27. Pocock, J., *The Machiavellian Moment,* Princeton, 1975.
28. Popper, Karl, *The Open Society and Its Enemies,* Vol. I : The Spell of Plato, R.K.P., London, 1945.
29. Raphael, D.D., *Hobbes : Morals and Politics,* George Allen & Unwin, London, 1977.
30. Skinner, Q., *Machiavelli, Past Masters Series,* OUP, Oxford, 1981.
31. Skinners, Q., *Foundations of Modern Political Thought, Vol. 1 : The Rennaissance,* Cambridge University Press, Cambridge, 1978 (Chs. 4, 5, 6).

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Course II : KEY CONCEPTS IN POLITICAL ANALYSIS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course aims at introducing students to the key concepts which are the building blocks of political analysis. Each concept will be studied in terms of the main debates over its nature and scope in the discipline and its relationship with other concepts. After dong this course, the student will be able to discern the conceptural debates which underlie political phenomena.

Unit-I

Politics and the Political - Conflict, Consensus, Class, Patriaarchy, Public and the Private Power – Three Dimensional View of Power, Power to and Power over, Influence, Exploitation, Hegemony, Power/Knowledge.

Unit-II

State- Political Authority and Political Obligation, Modern State,Theories of the state, Govern mentally, State-Society relationship

Civil Society- Historical evolution of the concept, Civil Society as market, public sphere, civic virtue; associational life, State/ civil society, relationship

Unit III

Democracy- Who should rule and why? Liberal democracy and its critics, Representation and Participation
Liberty – Negative and Positive models, Civil and Political liberty, Freedom of expression, Alienation, Social conditioning

Unit-IV

Equality and Justice – Why equality; Equality of What/ Distributive justice: Universality and difference, Care
Rights- Natural, legal rights, human rights; Three generations of rights, Individual and group rights

Essential Readings:-

1. Andrew Heywood, *Political Theory*, Palgrave Macmillan, 2004 (Third Edition)
2. Andrew Heywood, *Politics*, Palgrave Macmillan, 2013 (Fourth Edition)
3. Rajeev Bhargava and Ashok Acharya (ed)*Political Theory: An Introduction* (Available in Hindi translation), Pearson Education, 2008
4. Andrew Vincent, *Modern Political Ideologies,* Wiley-Blackwell, 2010 (Third Edition)
5. Will Kymlicka, *Contemporary Political Philosophy* (Available in Hindi translation), OUP, 2002 (Second Edition)
6. Dudley Knowles, *Political Philosophy*, Routledge, 2001
7. Jonathan Wolff, *An Introduction to Political Philosophy,* OUP, 1996
8. John Dryzek, Bonnie Honig and Anne Phillips (eds), *The Oxford Handbook of Political Theory,* OUP, 2008
9. Jean Hampton, *Political Philosophy*, New Delhi, Oxford University Press, 1998

Suggested Readings:-

1. Adrian Leftwich: *What is Politics: The Activity and Its Study,* Polity Press, 2004
2. Amartya Sen, "Equality of What?" in S.M.McMurrin, ed., *The Tanner Lectures on Human Values*, Cambridge University Press, 1980, pp 195220.
3. Bhikhu Parekh, "Equality in a Multicultural Society", in *Rethinking Multiculturalism*, Palgrave, 2000
4. Colin Gordon et.al, eds., *The Foucault Effect: Studies in Governmentality*, University of Chicago Press, 1991
5. Craig Calhoun, "Civil Society and Public Sphere", in *Public Culture*, Vol 5, No2,1995.
6. David Held, *Models of Democracy*, Polity, 2006 (Third Edition)
7. David Held, *Political Theory and the Modern State*, Polity Press, 1989
8. David Miller: *The Liberty Reader*, Paradigm Publishers, 2006
9. John Rawls,' Justice as Fairness: Political not Metaphysical', *Philosophy and Public Affairs,* Vol 14 (3), 1985.
10. Michael Walzer, "Complex Equality", in *Spheres of Justice: A Defence of Pluralism and Equality*, Martin Robertson, 1983
11. Noberto Bobbio, 'Gramsci and the conception of civil society' in Chantal Mouffe (ed)*Gramsci and Marxist Theory*, Routledge,1979.
12. Robert Nozick, "Distributive Justice", in *Anarchy, State and Utopia*, Oxford, Blackwell, 1974
13. Ronald Dworkin, 'What is Equality? Part I: Equality of Welfare', *Philosophy and Public Affairs*, Vol 10/3, 1981
14. Ronald Dworkin, 'What is Equality? Part II: Equality of Resources', *Philosophy and Public Affairs*, Vol 10/4, 1981.
15. Selma Sevenhuijsen, 'The Place of Care: The Relevance of the Feminist Ethic of Care for Social Policy' in *Feminist Theory*, 4(2), 2003.
16. Simone Chambers and Will Kymlicka, eds., *Alternative Conceptions of Civil Society*, Princeton University Press, 2002.
17. Steven Lukes, *Power*: *A Radical Critique*, Palgrave Macmillan, 2005.

Semester-I

Course-III - Indian Politics: Institutions at Work (compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
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The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course*:*: Recent India has witnessed a major thrust in the study of India's political and economic processes. An important component of many such studies has been to refer to the relevant constitutional and institutional aspects. Such studies, sensitive to the constitutional experiences of a 'new democracy', have enriched themselves by undertaking an in-depth analysis of the way the constitutional provisions have been put into practice and also by making an attempt to explore the core ideas that guided the constitution-makers during the deliberations in the Constituent Assembly. The paper aims at making the students aware of the text of the Constitution of India, important debates and the way the institutions have worked over the last more than six and half decades.

1. Making of Political Institutions
a) Constituent Assembly Debates: Secularism, Rights
b) Preamble, Fundamental Rights and the Directive Principles of State Policy
c) Constitutional Amendments related to Right to Property: Nature, Problems and Politics

2. Federal Institutions
a) Strong Centre Framework: Reading Relevant Constitutional Text
b) Autonomy and Devolution: Sarkaria Commission Recommendations
c) Local Self Government: Politics of Decentralization

3. Executive and Legislature
a) President and Prime Minister: Modes of exercise of powers
b) Governors and Chief Ministers: Changing Role and Institutional Relationship
c) Union Parliament: Composition, Powers, Reservations and Parliamentary Committees

4. Judicial Power and Rule of Law
a) Supreme Court: Jurisdictions
b) Judicial Independence, Judicial Review
c) Judicial Activism, Public Interest Litigation
d) Election Commission of India and Electoral Reforms

Essential Readings

- Austin, Granville, *The Indian Constitution: Cornerstone of a Nation*, Oxford University Press, Delhi, 1966.
- Austin, Granville, *Working a Democratic Constitution: A History of the Indian Experience*, Oxford University Press, Delhi, 1999.
- Basu, D.D., *Introduction to the Constitution of India*, Lexis Nexis, Gurgaon, 2015.
- Bhargava, Rajeev, ed., *Politics and Ethics of the Indian Constitution*, Oxford University Press, New Delhi, 2008.
- Brass, Paul R., *The Politics of India since Independence*, Cambridge University Press, London, 1994.
- Chaube, S. K., *Constituent Assembly of India, Springboard of Revolution,* People's Publishing House, New Delhi, 1973.
- Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
- Hasan, Zoya et al., eds., *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, New Delhi, 2002.
- Kapur, Devesh and Pratap B Mehta (eds.) *Public Institutions in India: Performance and Design*, Oxford University Press, New Delhi, 2007.

Suggested Readings:-

Unit I

1. Arora, Balveer and Douglas Verney**,** eds., *Multiple Identities in a Single State*: *Indian*
2. Bandyopadhyay, Sekhar (ed.) *Nationalist Movement in India*, Oxford University Press, New Delhi, 2009.
3. Constituent Assembly Debates (Selections).
4. *Federalism in Comparative Perspective*, Konark Publishers, New Delhi, 1995.
5. Mehta, Pratap Bhanu, *The Burden of Democracy*, Penguin, New Delhi, 2003
6. Mehta, V. R. and Thomas Pantham (ed.), *Political Ideas in Modern India,* Delhi, Sage, 2006.
7. Mukherji, Nirmal and Balveer Arora, eds., *Federalism in India: Origins and Development*, Vikas Publishing House, New Delhi, 1992.
8. Rao Shiva B., *The Framing of India's Constitution, A Study and Select Documents*, Tripathi, Bombay, 1968.
9. Saez, Lawrence, *Federalism without a Centre*: *The Impact of Political and Economic Reforms on India's Federal System*, Sage, New Delhi, 2002.

Unit II

1. Baxi Upendra, *The Supreme Court in Indian Politics*, Eastern Book Company, New Delhi, 1980.
2. Baxi, Upendra, *Courage Craft and Contention: The Indian Supreme Court in the*
3. *Eighties,* N.M. Tripathi, Bombay, 1985.
4. Kashyap Subash, ed., *Constitutional Reforms*: *Problems, Prospects and Perspectives*, Radha Publications, New Delhi, 2004.
5. Kripal B.N. et al., eds., *Supreme but not Infallible*: *Essays in Honour of the Supreme Court of India*, Oxford University Press, New Delhi, 2000.
6. Sathe S.P., *Judicial Activism in India: Transgressing Borders and Enforcing Limits*, Oxford University Press, New Delhi, 2002.
7. Singh Ujjwal Kumar, *State, Democracy and AntiTerror Laws*, Sage Publications, New Delhi, 2007.

Unit III

1. *2002 Jammu and Kashmir Assembly*, Penguin, New Delhi, 2004.
2. Bhagat A.K., *Elections and Electoral Reforms*, Vikas Publications, New Delhi, 1996.
3. Bhambhri, C.P., *The Indian Prime Minister: A Framework for Political Analysis,* The Indian Law Institute, New Delhi.
4. *Change*, Vol II, Oxford University Press, New Delhi, 2008.
5. Konark Publishers, New Delhi, 1996.
6. Lyngdoh J. M., *Chronicle of an Impossible Election*: *The Election Commission and the*
7. Manor James, ed., *Nehru to the Nineties: The Changing Office of Prime Minister in India*, Viking Press, New Delhi, 1994.
8. Mehra Ajay K. and V. A. Pai Panandiker, *The Indian Cabinet: A Study in Governance***,**
9. Morris Jones W.H., *Parliament in India*, University of Pennsylvania Press, Philadelphia,
10. Noorani, A G, *Constitutional Questions in India: The President, Parliament and the States*, Oxford University press, New Delhi, 2002.

Unit IV

1. Baxi, Upendra and Bhikhu Parekh (ed.), *Crisis and Change in Contemporary India,* Sage, New Delhi, 1994.
2. Dhavan, Oxford University Press, Delhi, 1989.
3. Frankel Francine et al., eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
4. Galanter Marc, *Law and Society in Modern India*, edited with an introduction by Rajeev
5. Hardgrave Robert L., *India*: *Government and Politics in a Developing Nation*, Harcourt,
6. Jovanovich, New York, 1980.
7. Kaushik, Susheela (ed.), *Indian Government and Politics* (Hindi), Directorate of Hindi Implementation, Delhi University, 1990.
8. Keith A.B., *Constitutional History of India*, Methuen and Co, London, 1936.
9. Khan, Rasheeduddin (ed.), *Rethinking Indian Federalism, Indian Institute of Advanced Studies,* Shimla, 1997
10. Kohli Atul, ed., *The Success of India's Democracy*, Cambridge University Press, London,
11. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Cambridge University Press, Cambridge, 1991.
12. Noorani A.G., *Constitutional Questions in India***:** *The President, Parliament and the States***,** Oxford University Press**,** Delhi, 2000.
13. Palkivala, N.A., *Our Constitution Defaced and Defiled,* Macmillan, Delhi, 1974.
14. Pylee M.V., *India's Constitution*, Asia Publishing House, New Delhi, 1962.
15. Rao K.V. and K.M. Munshi, *Parliamentary Democracy of India*, The World Press Private Ltd, Calcutta, 1965.
16. Sudarshan, R., 'The Political Consequences of Constitutional Discourse' in T.V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Vol. I, OUP, Delhi, 1997.
17. Thakur, Ramesh, *The Government and Politics of India,* London, Macmillan Press, 1986
18. Vora, Rajendra and Suhas Palshikar (eds.), *Indian Democracy: Meanings and Practices,* Sage, New Delhi, 2003.
19. Weiner Myron, *The Indian Paradox*: *Essays in Indian Politics*, edited by Ashutosh Varshney, Sage Publications, New Delhi, 1989.

Journals to be Consulted

- ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues only on web)
- ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm

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Course IV : INTERNATIONAL RELATIONS : AN HISTORICAL OVERVIEW

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The purpose of this paper is to provide an historical overview of major developments in International Relations since the beginning of the twentieth century.

Unit-I

Crisis and Collapse of the 19th Century International System.
Two World Wars : Their causes and consequences.
Decolonization, rise and decline of third worldism.

Unit-II

Emerging of super powers, forms and phases of Bioplarity in the cold war.
Nuclear Politics : Issues of Proliferation, Discrimination and Hegemony.

Unit-III

Collapse of the Socialist Bloc : Alternative interpretation of its causes, consequences and future possibilities. End of cold war.
Emerging Issues in a Changing World : Ethnicity, environment, sustainable development, gender & peace.

Unit-IV

Emerging world order. Globalization, Regionalism and Trading,Trading blocks (NAFTA, APEC, EU & SAPTA) Changing role of IMF and The World Bank : Structural Adjustment Programmes. Transformation Facilities and Conditionalties, world trade organization.

Essential Reading

1. Rumki Basu, *International Politics: Concepts, Theories and Issues, SAGE,* 2012.
2. John Baylis, Steve Smith, Patricia Owens, *The Globalization of World Politics: An Introduction to International Relations,* Oxford University press, 2014.
3. Peter Calvocoressi, *World of Politics since 1945,* Longman, 1989 edn.

4. Christian Reus-Smit and Duncan Snidal, The Oxford Handbook of International Relations, OUP, 2010.
5. Mark V. Kaupp Paul R. Viotti, *International Relations And World Politics: Security, Economy, Identity* , Prentice Hall- Gale, 1996.
6. V. N. Khanna, *International Relations*, S.Chand (G/L) & Company Ltd; Fifth edition 2013

Suggested Readings :

1. Eric Hobsbawm, *Age of Extremes, The Short Twentieth Century,* 1914-91, Viking, 1995.
2. Paul Kennedy, *The Rise and Fall of Great Powers : Economic Change and Military Conflict from 1500 to 2000,* Fontana, 1988.
3. Paul Kennedy, *Preparing for the Twenty-First Century,* Indus, Harper Collins, 1993.
4. Kanta Ahuja *et al* (ed.), *Regime Transformations and Global Realignments* : Indo-European Dialogue *on Post-Cold War World,* Sage, 1993.
5. Peter Calvocoressi, *World of Politics Since 1945,* Longman, 1989 edn.
6. R. Giplin, *The Political Economy of International Relations,* Princeton, 1987.
7. Rama S. Melkote and A. Narasimha Rao, *International Relations,* Sterling, 1992.
8. R. Stubbs and G.R.D. Underhill, *Political Economy and the Changing Global Order,* Macmillan, 1994.
9. G. Hastedt (ed.), *One World, Many Voices : Global Perspectives on Political Issues,* Prentice Hall, 1995.
10. J.A. Camilleri and J. Falk, *The End of Sovereignty : The Politics of a Shrinking and Fragmenting World,* Edward Elgar, 1992.
11. Bhupinder Brar, *Explaining Communist Crises,* Ajanta, 1994.
12. Richard Little and Michael Smith (eds.), *Perspectives on World Politics,* Routledge, 2006.
13. Chris Brown, *Understanding International Relations,* Palgrave, 2001.
14. Peter Calvocoressi, *World Politics : 1945-2000,* Pearson Education, 2005.

SECOND SEMESTER

Course V : WESTERN POLITICAL THOUGHT (II)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims to introduce to the students the major themes of western political thought. For this purpose, the paper undertakes a study of the key thinkers of this tradition.

Unit-I

1. Jeremy Bentham.
2. J.S. Mill.

Unit-II

1. Hegel.
2. Karl Marx.

Unit-III

1. Antonio Gramsci .
2. Herbert Marcuse.

Unit-IV

1. Hannah Arendt.
2. John Rawls.

Essential Readings :

In addition to some sections from the original texts of the thinkers mentioned in the course (to be specified by the course-teacher), the students may refer to the following literature :

1. Plamenatz, John, *The English Utilitarians,* Basin Blackwell, Oxford, 1949.
2. Thakurdas, Frank, *The English Utilitarians and Idealists,* Vishal, Delhi, 1978.
3. Brinton, Crane, *English Political Thought in the 19th Century,* Havard University Press, 1954.

Suggested Readings :

1. Parekh, Bhikhu, *Bentham's Political Thought,* Barnes, and Noble, New York, 1973.
2. Marcuse, H., *Reason and Revolution : Hegel and the Rise of Social Theory,* RKP, London, 1955.
3. Evans, Michael, *Karl Marx*, George Allen & Unwin, 1975.
4. Kolakowski, Leszek, *Main Currents of Marxism, Vol. I,* The Founders, OUP, Oxford, 1978.
5. Cohen, G.A., *Karl Marx's Theory of History : A Defence,* Clarendon, Oxford, 1978.
6. Avineri, Shlomo, *The Social and Political Thought of Karl Marx,* S. Chand, New Delhi, 1968.
7. Ollman, Bertell, *Alienation : Marx's Concept of Man in Capitalist Society,* Cambridge University Press, Cambridge, 1977.
8. Althusser, Louis, *For Marx,* New Left Books, 1977.
9. Bottomore, T.B. (ed.), *A Dictionary of Marxist Thought,* Blackwell, Oxford, 1983.
10. Hoare, Q. and Smith, G.N. (ed.), *Selection from the Prison Notebooks of Antonio Gramsci,* International Publishers, New York, 1971.
11. Mouffe, C. (ed.), *Gramsci and Marxist Theory,* Routledge, 1979.
12. Sassoon, Anne, S., *Gramsci's Politics,* Croom Helm, London, 1980.
13. Arendt, Hannah, *The Origins of Totalitarianism,* Harcourt Brace, New York, 1951.
14. Arendt, Hannah, *The Human Conditions,* Chicago, University Press, Chicago, 1958.
15. Canovan, Margaret, *The Political Thought of Hannah Arendt,* Harcourt Brace, New York, 1974.
16. Parekh, Bhikhu C., *Hannah Arendt and the Search for A New Political Philosophy,* Humanities Press, Atlantic Highlands, 1991.
17. Rawls, John, *A Theory of Justice,* Oxford University Press, Oxford, 1971.
18. Rawls, John, *Political Liberalism,* Columbia University Press, New York, 1993.
19. Marcuse, Herbert, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society,* Beacon, Boston, 1964.
20. Anthony de Crespigny and Kenneth Minogue, *Contemporary Political Philosophers,* Dodd, Mead, and Company, New York, 1975.
21. Bhikhu, Parekh, *Contemporary Political Thinkers,* Martin Robbertson, Oxford, 1982.

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Course VI: COMPARATIVE POLITICS-I : UNDERSTANDING ADVANCED INDUSTRIAL SOCIETIES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with recent debates and theories concerning advanced industrial societies, and this will be undertaken in a comparative framework.

Unit-I

Comparative Politics: Meaning, Significance, Evolution, Nature and Content.
Comparative Method: Problems of comparative political analysis.

Unit-II

Modernity in Western Societies: meaning, evolution of modernity since the Christian era, nature and forms-political , social , economic and cultural.
Recent Debates: Modernity and class, Modernity and gender.

Unit-III

State and Civil Society: Theories and recent debates.
Constitutionalism: Theory and Practice in Contemporary States.

Unit-IV

Understanding Culture and Social change: Political Culture and Political Socialisation.
Political Participation and Representation: Political parties, Pressure groups and new social movements.

Readings:

Students are advised to see the relevant entries in the following reference books—

Seymour Martin Lipset (ed. in chief). The Encyclopedia of Democracy, Volumes I, II and III, Routledge, London, 1955; Vernon Bogdanor (ed.), The Blackwell Encyclopedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Essential Readings :

1. Almond, G., 'The Return to the State', *American Political Science Review,* 82, No. 3, September, 1998.
2. Caramani, Daniele, *Comparative Politics*, OUP, New Delhi.
3. Carnoy, Martin, *The State and Political Theory,* Princeton University Press, Princeton, 2016 (1984)
4. Chandhoke, Neera, "Limits of Comparative Political Analysis," *Economic and Political Weekly,* Vol. XXXI, No. 4, January 27, 1996.
5. Chilcote, Ronald, *Comparative Politics: The Search for a Paradigm Reconsidered,* Westview, Boulder (Second Edition), 1994.
6. Hague, Rod, Martin Harrop and Shaun Breslin, *Comparative Government and Politics: An Introduction,* Macmillan, London, 1993
7. Jessop, B., *State Theory : Putting Capitalist States in their Place,* Polity Press, Cambridge, 1990.
8. Johary, J.C. , *Comparative Politics*, Sterling Publisher, New Delhi, 2011.
9. Synder, R. (2001). 'Scaling Down: The Subnational Comparative Method'. *Studies in Comparative International Developmen*t. 36(1): 93-110
10. Tillin, Louis (2013). 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2): 235-240.

Suggested Readings

1. Almond, G.A., and S. Verba (eds.), *The Civic Culture Revisited,* Little Brown, Boston, 1980.
2. Almond, Gabriel G. Bingham Powell, Kaare Strom and Russel T. Dalton, *Comparative Politics Today,* Pearson Education, Delhi, 2005.
3. Anthias, Floyas and Nira Yuval-Davis, *Racialized Boundaries, Race, Nation, Gender, Colour and Class and the Anti-Racist Struggle,* Routledge, London, 1992.
4. Ball, A., and F. Millward, *Pressure Politics in Industrial Societies,* Macmillan, London, 1986.
5. Bellamy, Richard and Dario Castiglone (ed.), *Constitutionalism in Transformations : European and Theoretical Perspectives, Political Studies Vol. XLIV,* Special Issue, 1996.
6. Block, F., 'Beyond Relative Autonomy' in Ralph Miliband and John Saville (eds.), *The Socialist Register,* Merlin, London, 1980.
7. Blondel, J., *The Discipline of Politics,* Butterworth, London, 1981.
8. Bogdanor, V., (ed.), *Constitutions in Democratic Politics,* Gower, Aldershot, 1988.
9. Bombwall, K.R., *World Constitutions,* Modern Publishers, Ambala, 1980.
10. Calvert, Peter, *Revolution and Counter Revolution,* Open University Press, Milton Keynes, 1990.
11. Cammack, P., 'Statism, New Institutionalism and Marxism' in Ralph Miliband and Leo Panitch (eds.), *The Socialist Register,* Merlin, London, 1990.
12. Cantori, Louis J., and Andrew H. Ziegler (eds.), *Comparative Politics in the Post-Behavioural Era,* Lynne Rienner Publisher, Boulder, 1988.
13. Cigler, C., and B. Loomis (eds.), *Interest Group Politics, Congressional Quarterly* Press, Washington DC, 1985.
14. Dalton, Russel, J., "Comparative Politics of the Industrial Democracies : From the Golden Age to Island Hopping" in William Crotty (ed.), *Comparative Politics Policy and International Relations,* Northwestern University Press, Evanstone, 1991.

15. Dalton, Russell and Manfred Kurchler (eds.), *Challenging the Political Order,* New York, 1990.
16. Dogan, Mattei and Ali Kazancigilli (eds.), *Comparing Nations, Concepts, Strategies, Substance,* Blackwell, Oxford, 1994.
17. Dogan, Mattei and Dominique Pelassy, *How to Compare Nations, Strategies in Comparative Politics,* Chatham House, 1984 (Indian reprint) Vision Books, New Delhi, 1988.
18. Dunleavy, P., and B. O' Leary, *Theories of the State,* Macmillan, London, 1987.
19. Easton, David, 'The Political System Beyond the State', *Political Theory, No. 3,* 1981.
20. Eckstein, Harry and David E., Apter (ed.), *Comparative Politics, A Reader,* The Free Press of Glencoe, Collier-Macmillan, London, 1993.
21. Elster, Jon, 'Ways of Constitution-making' in Axel Hadenius (ed.), *Democracy's Victory and Crisis,* Cambridge University Press, Cambridge, 1997.
22. Evans Peter B., P.D. Rueschemeyer and T. Skocpol (ed.), *Bring the State Back in,* Cambridge University Press, Cambridge, 1985.
23. Gellner, E., 'Civil Society in Historical Context', *International Social Science Journal, No. 129,*1991.
24. Gellner, Ernest, *Nations and Nationalism,* Blackwell, Oxford, 1983.
25. Gibbins, J., (ed.), *Contemporary Political Culture : Politics in a Post-Modern Age,* Sage, London,1989.
26. Glazer, N., and D. Moynihan (eds.), *Ethnicity: Theory and Experience,* Harward University Press,Cambridge, 1975.
27. Graham, B.D., *Representation and Party Politics: A Comparative Perspective,* OUP, Oxford, 1990.
28. Hall, Stuart and Bram Gieben, *Formations of Modernity,* Polity, Cambridge, 1992.
29. Hawkesworth, Mary and Maurice, Kogan (ed.), *Encyclopedia of Government and Politics,* Routledge, London, 1992.
30. Held, D., *Political Theory and the Modern State,* Polity Press, Cambridge, 1989, 1990.
31. Hobsbawm, Eric, *Nations and Nationalism since 1780,* Cambridge, 1991.
32. Hoffman, J., *State Power and Democracy,* Wheatsheaf, Sussex, 1988.
33. Hutchinson, J., and A.D. Smith (eds.), *Nationalism,* OUP, Oxford, 1994.
34. Lane, J.E., *Constitutions in Political Theory,* Manchester University Press, Manchester, 1996.
35. Lane, Jan-Erik and Svante Ersson, *Comparative Politics : An Introduction and New Approach,* Polity, Cambridge, 1994, (Ch. 1, Comparative Approaches, Ch. 6, The Logic to Model Building in Comparative Government).
36. LaPalombara, Joseph and Myron Weiner (ed.), *Political Parties and Political Development,* Princeton University Press, Princeton, 1966.
37. Larrain, Jorge, *Theories of Development,* Polity, Cambridge, 1989. 1.12 Mohanty, Manoranjan, "Moving the Centre in the Comparative Study of Politics, An Approach to Creative Theory", Unpublished Paper (Photostat copy in Political Science Departmental Library, Panjab University).
38. Michael G. Ruskin, Robert L. Cord, James A. Medeiros and Walter S. Jones (eds.), *Political Science: An Introduction,* Prentice Hall, New Jersey, 2005.
39. Miliband, Ralph, *The State in Capitalist Societies,* Weidenfeld and Nicolson, London, 1968.
40. Moore Jr., Barrington, *Social Origins of Dictatorship and Democracy : Lord and Peasant in the Making of the Modern World,* Penguin, 1967.

41. Mueller-Rommel, F. (ed.), *New Politics in Western Europe,* Boulder, 1989.
42. Nordlinger, E., 'The Return to the State, Critique', *American Political Science Review,* Vol. 82, 3 September, 1988.
43. Preuss, Ulrich, K., 'Constitutionalism – Meaning, Endangerment, Sustainability' in Satish Saberwal and Heiko Sievers (ed.), *Rules, Laws, Constitutions,* Sage, New Delhi, 1998.
44. Sartori, G., *Parties and Party Systems: A Framework for Analysis,* Cambridge University Press, Cambridge, 1976.
45. Sartori, Giovanni, 'Compare Why and How, Comparing, Miscomparing and the Comparative Method' in Mattei Dogan and Ali Kazancigil (ed.) *Comparing Nations,* Blackwell, Oxford, 1994, Pp. 14-34.Wiarda, H. J., *New Directions in Comparative Politics,* Westview Press, Boulder, 1991.
46. Skocpol, Theda, *States and Social Revolutions: A Comparative Analysis of France, Russia nad China,* Cambridge University Press, Cambridge, 1979.
47. Smith, A.D., *The Ethnic Origins of Nation,* Basil Blackwell, Oxford, 1986.
48. Taylor, Charles, 'Modes of Civil Society', *Public Culture, Vol. 3,* No. 1, Fall 1990.
49. Wilson, G., *Interest Groups,* Blackwell, Oxford, 1990.

Course VII: INDIAN POLITICS: POLITICAL PROCESSES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course aims to introduce students to politics in India as it has evolved after decolonization. The themes discussed during the course will be those that are crucial to the understanding of the way political processes in the largest democracy of the world unfold in varying form. The paper takes up the issues for discussion related to the way democratic politics in India has evolved and been shaped in an underdeveloped, multi-ethnic setting along the lines of caste, class, and linguistic and religious identities. It also focuses on the way India's democratic state has fared in promoting economic development, both growth and equity.

1. ***Democratic Politics in Independent India***
a) Legacies of the Nationalist Movement.
b) Challenges of Democratic Transition and Consolidation
c) Nature of Indian State: Class, Gender

2. ***Political Parties and Electoral Politics***
a) Evolution and Shifts in Party System: Dominant Party System, It's Breakdown, Rise of Regional Parties and Coalition Politics
b) Electoral Politics and Party System: Emerging Trends Since 2014

3. ***Caste, Religion and Region***
a) Caste and Politics: Rise of Dalit and Backward Caste Politics
b) Religion and Politics: Secularism, Communalism and Rise of Hindutva
c) Region and Politics: Linguistic Identities and Reorganization of States; Politics of New States

4. ***State, Economy and Development***
a) Development Planning Model: Concept, Strategies, Policies, and Critique
b) Economic Transition: Causal Explanations
c) New Economic Policies: Social and Regional implications

Essential Readings

1. Brass, Paul, *The Politics of India since Independence*, Cambridge University Press, Cambridge, 1994, Introduction.
2. Chandhoke, Neera and Praveen Priyadarshi, *Contemporary India: Economy, Society, Politics,* Pearson Education, New Delhi, 2009
3. Corbridge, Stuart and John Harriss, *Reinventing India*, Oxford University Press, Delhi, 2000.
4. deSouza, Peter and E Sridharan, *India's Political Parties*, New Delhi, Sage, 2007.
5. Francine, Frankel, et al, eds., *Transforming India*: *Social and Political Dynamics of Democracy*, Oxford University Press, Delhi, 2000.
6. Jayal, Niraja Gopal, ed., *Democracy in India,* Oxford University Press, New Delhi, 2001.
7. Kaviraj Sudipta, *The Trajectories of the Indian State*, Permanent Black, New Delhi, 2010.
8. Kohli, Atul, ed., *The Success of India's Democracy*, Cambridge University Press, Cambridge, 2001.
9. Mehta, Pratap Bhanu and Niraja Gopal Jayal, *The Oxford Companion to Politics of India*, New Delhi, Oxford University Press, 2010.
10. Menon, Nivedita, *Gender and Politics in India*, Delhi, Oxford University Press, 2001.
11. Morris-Jones W.H., *The Government and Politics in India*, B.I. Publications, New Delhi,
12. Mukherji, Rahul, *India's Economic Transition: The Politics of Reforms*, *Oxford* University *Press, New Delhi, 2014.*
13. Varshney, Ashutosh, *Battles Half Won: India's Improbable Democracy. Penguin, New Delhi, 2014.*

Suggested Readings

Unit I

1. Chhibber, Pradeep, *Democracy without Associations*, University of Michigan Press, Michigan, 1999.
2. Dubey, Abhay Kumar (ed.), *Loktantra Ke Saat Adhaya,* Vaani Prakashan, Delhi, 2002.
3. Hasan, Zoya, E. Sridharan and R. Sudarshan (eds.), *India's Living Constitution: Ideas, Practices, Controversies,* Permanent Black, Delhi, 2002.
4. Jenkins, Rob, *Democratic politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
5. Kaviraj, Sudipta, "A Critique of the Passive Revolution", *Economic and Political Weekly*, Vol. 23, No. 45/47, Special Number, Nov. 1988.
6. Kaviraj, Sudipta, "The Culture of Representative Democracy" in Partha Chatterjee (ed.), *Wages of freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1988.
7. Kohli, Atul, *India's democracy: An Analysis of Changing State-Society Relations*, Princeton University Press, Princeton, 1988.
8. Kothari, Rajni, "The Democratic Experiment" in Partha Chatterjee (ed.), *Wages of Freedom, Fifty Years of the Indian Nation-State,* OUP, Delhi, 1998.
9. Mehta, Pratap Bhanu, *Burden of Democracy,* Penguin, New Delhi, 2004.
10. Morris –Jones, W. H., *Politics Mainly Indian*, Orient Longman, New Delhi, 1978.
11. Nayyar, Deepak, 'Economic Development and Political Democracy-Interaction of Economics and Politics in Independent India', *Economic and Political Weekly, 33(49*), 5 December, 1998.
12. Nayyar, Deepak, 'Economic Growth in Independent India', *Economic and Political Weekly,* 41(15), 15 April, 2006.

13. Rudolph, Lloyd and Susanne, *In Pursuit of Lakshmi*: *Political Economy of the State in India*, University of Chicago Press, Chicago, 1987.
14. Satyamurthy, T.V., ed., *State and Nation in the Context of Social Change*, vol. l, Oxford University Press, Delhi, l994.
15. Vora, Rajendra and Suhas Palshikar, eds, *Indian Democracy: Meanings and Practices*, Sage, New Delhi, 2004.

Unit II

1. Adeney, Katherine and Saez Lawrence, eds., *Coalition Politics and Hindu Nationalism*, Routledge, London, 2005.
2. Brass, Paul R. and Marcus F. Franda, (eds), *Radical Politics in South Asia*, MIT Press, Cambridge, 1973.
3. Hansen, Thomas and Jaffrelot Christophe, eds., *The BJP and the Compulsions of Politics in India,* Oxford University Press, New Delhi, 1998.
4. Hasan, Zoya ed., *Parties and Party Politics in India*, Oxford University Press, New Delhi, 2002.
5. Kothari, Rajni, *State against Democracy: In Search of Humane Governance*, Ajanta, Delhi, 1988.
6. Mehra, Ajay K., Khanna, D.D., and Gert W. Kueck, eds., *Political Parties and Party Systems,* Sage, New Delhi, 2003.
7. Weiner, Myron, *Party Politics in India: The Development of a Multiparty System,* Princeton University Press, New Jersey, 1957.
8. Yadav, Yogendra and Suhas Palshikar (eds) Political Parties and Elections in Indian States :1990-2003, *Journal of Indian School of Political Economy,* 2003.

Unit III

1. Agarwal Bina, ed., *Structures of Patriarchy*: *State, Community and Household in Modernizing Asia*, Kali for Women, New Delhi, 1988.
2. Bardhan, Pranab*, The Political Economy of Development in India,* Oxford University Press, New Delhi, 1998.
3. Baruah, Sanjeeb (ed.) *Ethnonationalism in India: A Reader*, Oxford University Press, New Delhi, 2010.
4. Baruah, Sanjeeb, *India against Itself*: *Assam and the Politics of Nationality*, Oxford University Press, New Delhi, 2003.
5. Bhargava, Rajeev, ed., *Secularism and Its Critics*, Oxford University Press, New Delhi, 1998.
6. Brass, Paul, *Language, Religion and Politics in North India,* Cambridge University Press, London, 1974.
7. Fernandes, Leela, *India's New Middle Class*: *Democratic Politics in an Era of Economic Reform*, University of Minnesota Press, 2006.
8. Frankel, Francine and M.S.A. Rao, eds., *Dominance and State Power in India*: *Decline of a Social Order,* Oxford University Press, New Delhi, 1989.
9. Ganguly, Sumit (ed.) The State of India's Democracy, Oxford University Press, New Delhi, 2009.
10. Guru, Gopal (ed.), *Humiliation: Claims and Context*, Oxford University Press, New Delhi, 2009.
11. Jaffrelot, Christophe, *India's Silent Revolution: The Rise of the Low Castes in Northern Indian States,* Permanent Black, Delhi, 2003.
12. Jaffrelot, Christophe, *The Hindu Nationalist Movement and Indian Politics, 1925 to the 1990s,* Penguin Books, New Delhi, 1996.
13. Jenkins, Rob (ed.), *Regional Reflections: Company Politics across India's States,* Oxford University Press, New Delhi, 2004.
14. Kanungo, Pralay, *RSS's Tryst with Politics: from Hedgewar to Sudarshan,* Manohar, Delhi, 2002.
15. King, Robert D., *Nehru and Language Politics in India,* Oxford University Press, Delhi, 1995.

16. Kohli, Atul and Prerna Singh, edited, Handbook of Indian Politics, Routledge Press, 2013
17. Mcguire, John and Ian Copland (eds) *Hindu Nationalism and Governance*, Oxford University Press, Delhi, 2008.
18. Menon, Nivedita ed., *Gender and Politics in India*, Oxford University Press, New Delhi,
19. Misra B.B., *The Indian Middle Class- Their Growth in Modern Times*, Oxford University Press, Delhi, 1978.
20. Mohanty, Manoranjan ed., *Caste, Class and Gender*, Sage, Delhi, 2000.
21. Pai Sudha, *Dalit Assertion and the Unfinished Democratic Revolution*: *The Bahujan Samaj Party in Uttar Pradesh*, Sage, New Delhi, 2002.
22. Pai, Sudha , ed., *Handbook on Politics in the Indian States Regions*, *Political Parties and Economic Reforms,* Oxford University Press, New Delhi, 2013.
23. Prakash, Amit, *Jharkhand*: *Politics of Development and Identity*, Orient Longman, Hyderabad, 2001.
24. Samaddar, Ranabir, *The Politics of Autonomy: Indian Experience,* Sage, New Delhi, 2005.
25. Sarangi, Asha (ed.) *Language and Politics in India*, Oxford University Press, New Delhi, 2010.
26. Sathyamurthy T.V. ed., *Region, Religion, Caste, Gender and Culture in India*, Oxford University Press, Oxford, 1998.
27. Shah Ghanshyam ed., *Dalit Identity and Politics*, Sage, New Delhi, 2001.
28. Vanaik, Achin, *Communalism Contested: Religion, Modernity and Secularization,* Vistaar Publications, New Delhi, 1997.
29. Weiner Myron, *Sons of the Soil*: *Migration and Ethnic Conflict in India,* Oxford University Press, New Delhi, 1987.
30. Wilkinson, Steven I (ed.) *Religious Politics and Communal Violence*, Oxford University Press, New Delhi, 2007.

Unit IV

1. Bardhan, Pranab, *The Political Economy of Development in India,* Oxford University Press, Delhi, Revised Edition, 1997.
2. Brar, Bhupinder and Pampa Mukherjee, eds, *Facing Globality: Politics of resistance, Relocation and Reinvention in India,* New Delhi, Oxford University Press, 2012.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and the Politics of Identity in India* , Pearson-Longman, New Delhi , 2008.
4. Chatterjee Partha, ed., *Wages of Freedom*: *Fifty Years of the Indian Nation State*, Oxford University Press, New Delhi 1998.
5. Choudhry, Sujit, Madhav Khosla, Pratap Bhanu Mehta ,eds, *The Oxford Handbook of the Indian Constitution,* Oxford , Oxford University Press, 2016.
6. Frankel, Francine R., *India's Political Economy,* 1947-2004, 2nd edition, Oxford University Press, New Delhi, 2005.
7. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, OUP, Delhi, 1999
8. Kaviraj Sudipta, *The Enchantment of Democracy and India*, Permanent Black, New Delhi, 2010.
9. Kohli, Atul, *Democracy and Development in India: From Socialism to Pro-business,* Oxford University Press, New Delhi, 2010.
10. Kohli, Atul, *Poverty amid Plenty in the New India*, Oxford University Press, New Delhi, 2012.
11. Lakshman, Narayan, *Patrons of the Poor: Caste Politics and Policy Making in India,* Oxford University Press, New Delhi, 2011.
12. Mooji, Jos, *The Politics of Economic Reforms in India,* Sage, New Delhi, 2005.
13. Nayar, Baldev Raj (ed.) Globalization and Politics in India, Oxford University Press, New Delhi, 2010.

14. Patnaik, Prabhat, "Political Strategies of Economic Development," in Partha Chatterjee, ed., *Wages of Freedom, Fifty Years of the Indian Nation-State* Oxford University Press, New Delhi, 1998.
15. Rudolph, L. and Susanne Rudolph, *In Pursuit of Lakshmi: The Political Economy of Indian States,* Orient Longman, Delhi, 1988.
16. Shah, Ghanshyam, ed., *State and Social Movements,* Sage, Delhi, 1999.

Journals/Newspapers to be Consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web also check on JSTOR)
2. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
3. ***Studies In Indian Politics, Sage Journal***
4. ***The Hindu and Indian Express***

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Course-VIII: Theories of International Relations

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives of the Course: The key objective of this course is to provide a comprehensive overview of the major theories in IR, covering the entire disciplinary spectrum from mainstream approaches such as realism, liberalism and constructivism to critical approaches such as postcolonialism, postmodernism and feminism. Whereas the course content remains largely theoretical, both historical and contemporary practices are taken as illustrative examples, particularly illuminating non-Western perspectives. This course is expected to act as a catalyst for students to think creatively and critically in search of 'global' International Relations that is inclusive of non-Western perspectives and traditions.

The course has four units and each unit is presented with the help of key concepts. Each unit has essential readings that offer a basic introduction to the topic. Students are advised to familiarize themselves with the essential readings before the lecture and follow up with the specified recommended readings. During class discussion, they will be expected to critically evaluate the essential readings and attempt to uncover all possible nuances of an argument.

Unit-I

I. Introducing Practice-Theory Interface:
International practices, disciplinary lineage of IR, role and significance of theory, units and levels of analysis, practices of IR.

II: Mainstream IR Theories:
Realism (national interest, national power, national security, security dilemma, balance of power, structural realism, defensive/offensive realism)**;** *Liberalism* (interdependence**,** neoliberal institutionalism, commercial liberalism, democratic peace theory, international law, regimes, world public opinion).

III. Constructivism and the 'English School':
Identity, social construction of knowledge and the construction of social reality

IV: Critical IR theories and Non-Western Perspectives:
Marxism, post structuralism, postmodernism, post colonialism, feminism, ecological, 'global'IR

READINGS

Unit I
Essential Readings:

1. Adler, E. and Pouliot, V. (2011) 'International Practices', *International Theory*, 3(1): 1-36.
2. Brown, C. and Ainley, K. (2005) 3rd Edition, *Understanding International Relations Houndmills*: Palgrave Macmillan.
3. Snyder, J. (2004) 'One World, Rival Theories', *Foreign Policy,* 145: 52–62.
4. Walt, S. M. (1998) 'International Relations: One World, Many Theories,'*Foreign Policy* (Spring 1998): 29-46.

Suggested Readings:
1. Donnelly, J. (2015) 'The Discourse of Anarchy in IR', *International Theory: A Journal of International Politics, Law and Philosophy*, 7(3): 393-425.
2. Holsti, K.J. (1998) 'Scholarship in an Era of Anxiety: The Study of International Politics during the Cold War', *Review of International Studies* 24(5): 17-46.
3. Sørensen, G. S. (1998) 'IR Theory after the Cold War', *Review of International Studies*, 24(5): 83-100.

Unit II
Essential Readings

1. Doyle, M. (1997) *Ways of War and Peace: Realism, Liberalism, and Socialism*, New York: W.W. Norton & Company.
2. Jackson, R. and Sørensen, G. (2007) *Introduction to International Relations: Theories and Approaches*, Oxford: Oxford University Press.
3. Keohane, R. O. and Nye, J. S. (2001) *Power and Interdependence*, Pearson, 4th edition.
4. Dunne, T. and Schmidt, B. (2008), 'Realism', in John Baylis et al. (eds.), *The Globalization of World Politic, 3rd ed.,* Oxford: Oxford University Press.
5. Dunne, T. (2008), 'Liberalism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.
6. Morgenthau, H. J. (1948) *Politics among Nations: The Struggle for Power and Peace*, New York: Alfred Knopf
7. Vasquez, J.A. (1998) *The Power of Power Politics: From Classical Realism to Neotraditionalism*, Cambridge: Cambridge University Press.
8. Waltz, K. (2010) *Theory of International Politics*, Reading: MA: Addison-Wesley. *First Edition.*

Suggested Readings

1. Baldwin, D. ed. (1993) *Neorealism and Neoliberalism: The Contemporary Debate*, New York: Columbia University Press.
2. Burchill, S. (2005), 'Liberalism' in Burchill et al. *Theories of International Relations.*
3. Keohane, R. O. ed. (1986) *Neorealism and Its Critics*, New York: Columbia University Press.
4. Mearsheimer,J.(2001) *The Tragedy of Great Power Politics*, New York: Norton, pp.1-28.
5. Moravcsik, A. and Legro, J. (1999), 'Is Anybody Still a Realist?'*International Security*, 24 (2): 5-55.
6. Schroeder, P. (1994), 'Historical Reality vs. Neo-realist Theory', *International Security*, 19 (1): 108-148.
7. Schweller, R. (1992), 'Domestic Structure and Preventive War: Are Democracies More Pacific?'*World Politics*, 44 (2): 235-269

Unit III

Essential Readings:

1. Barnett, M. (2008), 'Constructivism' in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.
2. Buzan, B. (2001), 'The English School: An Underexploited Resource in IR', *Review of International Studies*, 27 (3): 471-488.
3. Dunne, T. (2008), 'The English School' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.
4. Hurd, I. (2008) 'Constructivism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of International Relations*, Oxford: Oxford University Press: 298–316.
5. Wendt, A. (1992) 'Anarchy Is What States Make of It: the Social Construction of Power Politics,' *International Organization*, 46: 391-425.

Suggested Readings:

1. Bull, H. and Watson, A. (eds.) (1985) *The Expansion of International Society*, Oxford: Clarendon Press.
2. Bull, H. (1977) *The Anarchical Society: A Study of Order in World Politics*, New York: Columbia University Press.
3. Buzan, B. and Little, R. (2000)*International Systems in World History: Remaking the Study of International Relations*, New York: Oxford University Press.
4. Emanuel, A. (2002) 'Constructivism and International Relations' in Walter Carlsnaes, Thomas Rise and Simmons (eds.) *Handbook of International Relations*, London: Sage.
5. Guzzini, S. (1993) 'Structural Power: the Limits of Neorealist Analysis,'*International Organization*, 43 (3): 443-478.

6. Little, R. (2003), 'The English School vs. American Realism: A Meeting of Minds or Divided by a Common Language?' *Review of International Studies*, 29: 443-460.

7. Linklater, A. (2005) 'The English School' in Scott Burchill et al. (eds.) *Theories of International Relations*, Hampshire: Palgrave Macmillan

8. Ted Hopf, T. (1998) 'The Promise of Constructivism in IR Theory,'*International Security*, Vol. 23, No. 1 (Summer 1998): 171-200.

Unit IV

Essential Readings:

1. Bajpai, K. and Mallavarapu, S. (2005) *International Relations in India: Bringing Theory Back Home*, New Delhi: Orient Blackswan.

2. Derian, J.D. (1995) *International Theory: Critical Investigations*, Houndmills: Macmillan.

3. Linklater, A. (1990) *Beyond Realism and Marxism: Critical Theory and International Relations*, Houndmills: Macmillan.

4. Neuman, S.G. (1998) *International Relations Theory and the Third World*, Houndmills: Macmillan.

5. Smith, S. and Owens, P. (2008), "Alternative Approaches to International Theory: Feminism", in John Baylis et al. (eds.), *The Globalisation of World Politics: An Introduction to IR*, Oxford: Oxford University Press.

6. Tickner, J. A. and Sjoberg, L. (eds.) (2011), *Twenty Years of Feminist International Relations: A Conversation about the Past, Present and Future*. London and New York: Routledge.

7. Burke, A. (2008), 'Postmodernism' in Christian Reus-Smit and Duncan Snidal (eds.) *The Oxford Handbook of IR*, Oxford: Oxford University Press.

8. Hobson, J. (2012) *The Eurocentric Conception of World: Western International Theory, 1760-2010*, Cambridge: Cambridge University Press.

9. Acharya, A. and Buzan, B. (2009) *Non-Western International Relations Theory: Perspectives On and Beyond Asia*, London: Routledge.

10. Neumann, Stephanie (ed.) (1998), International Relations and the Third World, New York: St. Martins Press.

11. Ling, L. H. M. (2002) *Post Colonial International Relations*: *Conquest and Desire between Asia and the West*, Palgrave Macmillan.

12. Tickner, A. B. and Wæver, O. (2009) *International Relations Scholarship Around the World*, London: Routledge.

Suggested Readings:

1. Devetak, R. (1996) 'Critical Theory', in Scott Burchill et al., *Theories of International Relations*, New York: St. Martinís: 145-178.
2. Mohammed, A. (2002) 'Inequality and Theorizing in International Relations: The Case for Subaltern Realism', *International Studies Review*, 4:2: 27-48.
3. Linklater, A. (1996) 'The Achievements of Critical Theory' in Steve Smith, Ken Booth and Marysia Zalewski (eds.) *International Theory: Positivism and Beyond*, Cambridge: Cambridge University Press.

OR

Course-VIII: APPROACHES TO THE STUDY OF INTERNATIONAL

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The purpose of this paper is to be familiarize students with alternative and diverse frameworks which seek to explain Internation Relations.

Unit-I

"Idealist"(Legal-Intitutional) Approach: Major Assumptions and Tenets; Roles assigned to International Law, Internatinal Organisations, World Public Opinon and International Morality. Proposals of World Government and Collective Security; World Order Models: Critical appraisal.

Unit-II

"Realist" (Power Politics) Approach: Major Assumptions and Tenets. Centrality of State, National Interest and National Power. Balance of Power and Deterrence. Neo-Realist Variants of Realism. Geopolitical Discourses. Critical Approaisals.

Unit-III

"Scientific" Approach: Therories of System, Decision-making, Bargaining and Communication. Critical appraisal.

Unit- IV

Radical Approaches: Marxism, Dependency Theory and World-System Analysis. Critical appraisal.

Essential Readings

1. Robert L. Pfaltzqraff and James Dougherty, Contending Therories of International Relations, Harper and Row, 1980.
2. Misra, K.P. and Richard Smirth Beal (eds), International Relations Theory: Western and Non-Western Perspectives, Vikas, 1980.
3. Taylor, Trevor (ed.), Approaches and Theories in International Relations, Longman, New York, 1978.
4. Ekkehart Krippendorff, International Relations as a Social Science, Radiant, New Delhi, 1982.
5. Kubalkiva, V., and Albert Cruickshank, Marxism and Inernational Relations, Clarendon, New York, 1958.
6. Keohane, R. (ed.) Neo-Realism and Its Critics, Columbia University,New York,m1986.
7. Parkinson, F., The Philosophy of International Relations: A Study in the History of Thought, Sage, California, 1977.
8. Immanuel Wallerstien, The ModernWorld Systems, 3 Vols., Academic Press, 1974, 80, 89.

Suggested Readings

1. Light, M. and A.J.R., Groom, International Relations: A Handbook of Current Therory, Frances Printer, 1995.
2. Brown, C, International Relations Theory: New Normtive Approaches, Hemel Henpstead, Harvester Wheatsheaf, 1992.
3. Bull, Hedley, The Anarchical Society: A study of Order in World Politics, Macmillan, 1977.
4. Cox, R., Producation, Power and Workd Order: Social Forces in the Making of History,Columbia University Press, 1987.
5. Frast. M., Towars a Naormative Theory of International Relations Relations, Combridge University Press, 1986.
6. Hollis, M. and Smith, S., Explaining and Understanding International Relations, Clarendon Press, 1990.
7. Keohane, R., After Hegemony: Cooperation and Discord in the World Political Economy, Princeton University Press, 1984.
8. Linklater, A. Beyond Realism and Marxism: Critical Theory and International Relations, Macmillan, 1990.
9. Little, R. and Smith, M. (ed.), Perspectives and International Politics, Second edn., Routledge, 1991.
10. Mamsbach, R. and Vasquez, J., In Search of Theory: A New Paradigm for Global Politics, Polity Press, 1992.
11. Olson, W. and Groom, A., International Relations Then and Now: Origins and Trends in Interpretation, Harper Collins, 1991.
12. Viotti, P. and M. Kauppi, International Relations Theory: Realism, Pluralism, Globaliosm, Second edn., Macmillan, 1993.
13. Derian, J.D., International Theory: Critical Investigations, Macmillan, 1995.
14. Charles W.Kegley, Jr. Controversies in International Relations Theory: Realism and Neoliveral.
15. Challenge, St. Martin Press, 1995.
16. Booth, Ken and Steve Smith (ed.), International Relations Theory Today, Polity Press, 1995.
17. Taylor, P.J., ed., Political Geography of Twentieth Century: A Global Analsis, Belhaven Press, 1983.
18. Brunn, S.D. and T.R. Leinbach (ed.) Collapsing Spac and Time: Geographic Aspects of Communication and Information, Harper Collins, 1991.
19. Glassner, M.I.,Political Geography, John Wiley and Sons, 1993.
20. J.O. Loughlin, (ed.),Dictionary of Geopolitics, Greenwood Press, 1993.
21. Calvocovessi, Peter, World Politics: 1945-2000, Pearson Education, Delhi, 2005.

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THIRD SEMESTER

Course IX: INDIAN POLITICAL THOUGHT-I (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The paper aims to introduce students to different discourses in the domain of Indian Political Thought. It includes historical roots, medieval socio-cultural traditions, renaissance and nationalist narratives.

Unit-I

Historical Roots and Medieval Socio-Cultural Traditions:

1. Dharmashastra and Arthashastra Traditions.
2. Bhakti and Sufi challenges to Hegemonic Religious Traditions.

Unit-II

Indian Renaissance and Social Reform Movements:

1. Meaning, Nature and Critical evaluation with Special reference to gender, caste and modernity.
2. Raja Rammohan Roy, Sir Syed Ahmed Khan, Pandita Ramabai, Jyotiba Phule.

Unit-III

Indian Liberalism and Nation-building:

Nehru, Tagore, Ranade, Gokhale

Unit-IV

Religious Nationalism:

1. Vivekananda, Tilak, Aurobindo and Savarkar.
2. Iqbal and Jinnah.

General Readings:

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century from Naroji to Nehru* (London : OUP, 1971).
2. Brown, D.M. (ed.), *The White Umbrella: Indian Political Thought from Manu to Gandhiji* (Bombay, Jaico, 1970).

3. Dallamayr, F.R. and Devy, G.N. (eds.), *Between Tradition and Modernity : India's Search for Identity* (London, Sage, 1998).

4. Dalton, D.G., *Indian Idea of Freedom* (Gurgaon, Academic Press, 1982).

5. Doctor, Adhi H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).

6. Karunakaran, K.P., *Religion and Political Awakening in India* (Meerut, Meenakshi, 1969), 2nd Edition.

7. Mahadevan, T.M.P. and G.V. Saroja, *Contemporary Indian Philosophy* (New Delhi, Sterling, 1981).

8. Mehta, V.R., *Foundations of Indian Political Thought* (New Delhi, Manohar, 1996).

9. Naravane, V.S., *Modern Indian Thought* (Bombay, Asia, 1964).

10. Pantham, Thomas and K.L., Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

11. Verma, V.P., *Modern Indian Political Thought* (Agra, Laxminarayan, 1996), Eleventh Revised Edition).

12. Verma, V.P., *Ancient and Medieval Indian Political Thought* (Agra, 1996).

13. Nandy, Ashis, *The Intimate Enemy : Loss and Recovery of Self under Colonialism*, Delhi, Oxford, 1983.

14. Guha, Ramachandra, 'The Absent Liberal', *Economic and Political Weekly,* December 15 2001.

15. Christopher Jaffrelot (edited), *Hindu Nationalism: A Reader,* Ranikhet, Permanent Black, 2007.

16. Quayum, Mohammad A, *'Imagining "One World": Rabindranath Tagore's Critique of Nationalism',* Interdisciplinary Literary Studies, Vol 7, No 2, Spring 2006.

17. Jahanbegloo, Ramin, 'Tagore and the Idea of Civilization', *India International Centre Quarterly,* Vol 34, No. 1, Summer, 2007.

18. Chakravarti, Uma, *Rewriting History: The Lives and the Times of Pandita Ramabai,* Delhi, Kali for Women, 1998.

19. Kosambi, Meera, 'Women, Emancipation and Equality: Pandita Ramabai's Contribution to Women's Cause', *Economic and Political Weekly,* October 29, 1988.

20. Lamba Rinku, 'Bringing the State Back in, Yet Again: The Debate on Socio-religious Reform in Late-Nineteenth-Century India', *Comparative Studies of South Asia, Africa and the Middle East,* Volume 29, Number 2, 2009.

21. Zachariah, Bhikhu, *'Nehru'* Routledge, 2004

22. Parekh, Bhikhu, 'Nehru and the National Philosophy of India', *Economic and Political Weekly*, Janurary 5 1991

23. Deshpande G. P. (ed.), *Selected Writings of Jotirao Phule, Delhi, Leftword Books,* 2002.

24. Omvedt, Gail, *Seeking Begumpura,* Delhi, Navayana, 2008.

25. Gopal, S, 'The Formative Ideology of Jawaharlal Nehru', *Economic and Political Weekly,* May 22 1976.

Suggested Readings:

1. Altekar, A.S., *State and Government in Ancient India* (Patna, Motilal Banarasi Dass, 1971), 3rd Edition.
2. Chausalkar, Ashok, 'Politics of Arthashastra Tradition', *Indian Journal of Political Science*, January-March, 1981.
3. Chaudhri, R.K., *Kautilya's Political Ideas and Institutions* (Varanasi, Chowkhamba Sanskrit Series, 1971).
4. Ghoshal, U.N., *A History of Indian Political Ideas* (London, OUP, 1959).
5. Jayaswal, K.P., *Hindu Polity* (Bangalore, 1978), 5th Edition.
6. Kangle, R.P., *The Kautilya Arthashastra Parts-I-III* (Delhi, Motilal Banarasidass, 1986).
7. Kohli, Ritu, *Kautilya's Political Theory* (New Delhi, Deep and Deep, 1995).
8. Parekh, Bhikhu, 'Some Reflections on Hindu Tradition of Political Thought' in Pantham and Deutsch (ed.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
9. Prasad, Beni, *Theory of Government in Ancient India* (Allahabad, Center Book, 1968), 2nd Revised Edition.
10. Ray, B.N., *Tradition and Innovation in Indian Political Thought* (Delhi, Ajanta, 1998).
11. Saletore, B.A., *Ancient Indian Political Thought and Institutions* (Bombay, Asia, 1963).
12. Singh, N.P., *Political Ideas and Ideals in the Mahabharata* (Bombay, Popular Prakashan, 1976).
13. Spellman, J., *The Political Theory of Ancient India* (Oxford, Clarendon Press, 1964).
14. Vanna, V.P., *Studies in Hindu Political Thought and Its Metaphysical Foundation* (Delhi : Motilal Banarasidass, 1954).
15. Anand, B.S., *Baba Farid* (New Delhi, Sahitya Akademy, 1975).
16. Bains, J.S., 'Political Ideas of Guru Nanak', *Indian Journal of Political Science,* 1962.
17. 'Political Ideas of Guru Gobind Singh', IIAS, *Sikhism and Indian Society*, Shimla, 1967.
18. Bihari, Bankey, *Sufism Mystics and Yogis of India* (Bombay, Bhartiya Vidya, Bhawan, 1962).
19. Kohli, S.S., *Bule Shah* (Sahitya Academy, 1987).
20. Majumdar, A.K., *Bhakti Renaissance* (Bombay, Bhartiya Vidya Bhawan, 1965).
21. Muller, Max, *Ram Mohan to Ramakrishna* (Calcutta, Susil, 1952).

22. Vaudeville, C., *A Weaver Named Kabir* (Delhi, OUP, 1997).

23. Westcott, G.H., *Kabir and the Kabir Panth* (Calcutta, Susil, 1953).

24. Aurobindo, Sri, *The Renaissance in India in Dallmayer,* Fred and G.N., Devy (ed.), 1998.

25. Bishop, Donald H. (ed.), *Thinkers of Indian Renaissance* (New Delhi, Wiley, 1982).

26. De, Barun, A Historical Critique of Renaissance Analogues for Nineteenth Century India, in Barun De (ed.), *Perspectives in Social Sciences I,* (Calcutta, 1977).

27. Majumdar, B.B., *History of Indian Social and Political Ideas* (Calcutta, Firma, KLM, 1996).

28. Mehta, V.R., 'Renaissance and the Beginning of Modern Thought', Ch. 8 in his *Foundations of Indian Political Thought* (New Delhi, Manohar, 1992).

29. Sarma, D.S., *The Renaissance of Hinduism in the Nineteenth and Twentieth Centuries* (Varanasi, Banaras Hindu University, 1944).

30. Vyas, K.C., *The Social Renaissance in India* (Bombay, Vohra and Company, 1957).

31. Zacharis, H.C.E., *Renascent India : From Rammohan Roy to Mohandas Gandhi* (London, George Allen and Unwin, 1933).

32. Buch, M.R., *Rise and Growth of Indian Liberalism* (Baroda, 1938).

33. Chakravarti, Uma, *Rewriting History : The Life and Times of Pandita Ramabai* (New Delhi, Kali for Women, 1998).

34. Chakravarti, Uma, *Gender, Class and Nation—Ramabai and the Critique of Brahmanical Patriarchy* (Delhi, OUP, 1998).

35. Joshi, V.C. (ed.), *Rammohan Roy and the Process of Modernisation in India* (Delhi, Vikas, 1975).

36. Kosambi, Meera, 'Indian Response to Christianity, Church and Colonialism : Case of Pandita Ramabai', *Economic and Political Weekly,* 24-31, October, 1992.

37. Mansani, R.P., *Dadabhai Naoroji : The Grand Old Man of India* (London, George Allen and Unwin, 1939).

38. Nanda, B.R., *Gokhale : The Indian Moderates and the British Raj* (Delhi, OUP, 1998).

39. Tucker, Richard P., *Ranade and the Roots of Indian Nationalism* (Bombay : Popular Prakashan, 1977).

40. Vora, Rajendra, 'Two Strands of Indian Liberalism : Ideas of Ranade and Phule' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).

41. Aurobindo, Sri, *On Nationalism* (Pondicherry, Sri Aurobindo Ashram, 1965).

42. *Bankim–Tilak –Dayananda,* (Calcutta : Aryan, 1940).

43. Banerjee Sumanta, 'Hindutva – Ideology and Social Psychology', *Economic and Political Weekly,* 19 January, 1991).

44. Basu, Tapan, *et al* (eds.), *Khaki Shorts and Saffron Flags* (New Delhi, Oriented Longman, 1991).

45. Bose, N.S., *Swami Vivekananda* (New Delhi, Sahitya Akadami, 1994).
46. Dixit, Prabha, 'The Ideology of Hindu Nationalism' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
47. Embree, A.T., *Utopias in Conflict, Religion and Nationalism in Modern India* (Delhi, OUP, 1991).
48. Graham, B., *Hindu Nationalism and Indian Politics* (Cambridge, Cambridge University Press, 1990).
49. Heehs, Peter (ed.), *Essential Writings of Sri Aurobindo* (Delhi, OUP, 1998).
50. Joshi, V.C., *Aurobindo : An Interpretation* (Delhi, 1973).
51. Kaviraj, Sudipto, *The Unhappy Consciousness : Bankimchandra Chattopadhyaya and the Formation of Nationalist Discourse in India* (Delhi, OUP, 1995).
52. Savarkar, V.D., *"Hindutva Or Who is a Hindu"?* (Bombay, Veer Savarkar Prakashan, 1923).
53. Segupta, S.C., *Bankim Chandra Chatterjee* (New Delhi, Sahitya Akademi, 1982).
54. Shay, T.L., *Legacy of Lokmanya : Political Philosophy of Bal Gangadhar Tilak* (London, OUP, 1956).
55. Singh, Karan, *Prophet of Indian Nationalism* (Bombay, Bhartiya Vidya Bhawan, 1970).
56. Baljon, J.M.S., *The Reforms and Religious Ideas of Sir Sayyid Ahmad Khan* (Leiden : E.J. Bill, 1949).
57. Banerjee, A.C., *Two Nations: The Philosophy of Muslim Nationalism* (New Delhi, Concept, 1980).
58. Dar, B.A., *A Study of Iqbal's Philosophy* (Lahore, Md. Ashraf, 1933).
59. Hamid, Abdul, *Muslim Separatism in India* (London, OUP, 1967).
60. Hasan, Mushirul (ed.), *India's Partition : Process, Strategy and Mobilization* (Delhi, OUP, 1993).
61. Hussain, M. Hadi, *Syed Ahmed Khan: Pioneer of Indian Resurgence* (Lahore, Institute of Islamic Culture, 1970).
62. Imam, Zafar, *Muslims in India* (New Delhi: Orient Longman, 1975).
63. Mohammed, Shan, *Sir Syed Ahmad Khan: A Political Biography* (Meerut, Meenakshi Prakashan, 1969).
64. Mujahid, Sharif, *Quaid-i-Azam-Jinnah: Studies in Interpretation* (Delhi, B.R., 1985).
65. Naim, C.M. (ed.), *Iqbal, Jinnah and Pakistan* (Delhi, Jinnah Publi. House, 1982).
66. Shakir, Moin, 'Dynamic of Muslim Political Thought' in Pantham and Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
67. Brohi, A.K., *Iqbal and The Concept of Islamic Socialism* (Karachi, Al-Karimi, 1967).
68. Hussain, Raiz, *Iqbal, Poet and His Politics* (New Delhi, Uppal Pub. House, 1987).
69. Burney, S.M., *Iqbal : Poet-Patriot of India* (New Delhi, Vikas, 1987).
70. Masud, Mohamad K. and Mumtaz Liaqat, *Iqbal Through Western Eyes (*Sterling, 1989).
71. Malik, Hafeez, *Iqbal : Poet-Philosopher of Pakistan* (New York : Columbia University Press, 1971).

Course X: COMPARATIVE POLITICS (II): UNDERSTANDING DEVELOPING SOCIETIES (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
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The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debates in comparative politics with special reference to developing societies.

Unit-I

Approaches to the politics of developing countries :

- Political Sociology. –Systems theory, structural functionalism, political Culture, political development and institutionalism
- Political Economy. – Modernisation Theory, Dependency Theory and World System Analysis
- Alternative Approaches. New Institutional approach

Unit-II

- *Colonialism and Its Impact:* Politics, Economy and Culture.
- Nationalism and Anti-colonial Movement : Ideology, social base, strategies of mobilization and outcome with refrence to India, China and Latin America(creole nationalism)

Unit-III

- *Civil Society:* Ethnic, National and Regional identities.
- *Globalisation:* Definitin, difference between old and new, Its impact on the Developing World.

Unit-IV

- State- Nature of the state in Developing world with reference to Hamza Alavi, J.S. Saul and Colin Leys work, Political regimes- military, Islamic , etc ,
- Constitutionalism and Political parties.

Essential Readings

1. Alavi, H., *The State in Post-Colonial Societies: Pakistan and Bangladesh*, New Left Review, No. 74, 1972.
2. Allen, C. and G. Willams (eds.), *Sociology of* 'Developing Societies', Sub-Saharan Africa, Macmillan, London, 1982.
3. Cammack, Paul, David Pool and William Tordoff, *Third World Politics: A Comparative Introduction*, John Hopkins University Press, Baltimore, 1993.
4. Caramani, Daniele, *Comparative Politics*, Oxford University Press, Oxford, 2014.
5. Clapham,C., Third World Politics: An Introduction, Routledge, London 1985.
6. Dickovick, J. Tyler and Jonathan Eastwood, *Comparative Politics: Integrating Theories,* Methods, and Cases, Oxford University press, Oxford, 2014.
7. Eckstein, Harry and David, E. Apter, *Comparative Politics : A Reader,* The Free Press of Glencoe, London, 1994
8. Manor, James (ed.), *Third World Politics*, Longman, London, 1991.
9. Mohanty, Manorajan, P. Mukherji with O. Tornquist, *People's Rights, Social Movements and the State in the Third World*, Sage, New Delhi, 1998.
10. Randall, V., *Political Parties in the Third World*, Sage, London, 1988.
11. Smith, Anthony D., *State and Nation in the Third World: The Western State and African Nationalism*, Wheatsheaf, Sussex, 1983.

Students are advised to see the relevant entries in the following reference books Seymour Martin Lipset (ed. in chief). The Encylopaedia of Democracy, Volumes I, II and III, Routledge, London, 1995 : Vernon Bogdanor (ed.). The Blackwell Encyclopaedia of Political Institutions, Blackwell, Oxford, 1987; Joel Krieger (ed. in chief), The Oxford Companion to the Politics of the World, OUP, Oxford, 1993; Tom Bottomore (ed.), A Dictionary of Marxist Thought, Blackwell, Oxford, 1983.

Suggested Readings

1. . Alavi, Hamza and Teodor Shanin (eds.), *Introduction to the Sociology* of 'Developing Societies', Macmillan, London, 1982.
2. Amin, Samir, 'Social Movements at the Periphery' in P. Wignaraja (ed.), *New Social Movements in the South*, Zed, London, 1993.
3. Archetti, E. et al., *Latin America*, Macmillan, London, 1987.
4. Ayoade, J.A., 'States Without Citizens: An Emerging African Phenomenon' in D. Rothchild and N. Chazan (ed.), *The Precious Balance : State and Society in Africa*, Westview Press, Boulder, Colorado, 1988.
5. Bayart, J.F., 'Civil Society in Africa' in Chabal, P. (ed.), *Political Domination in Africa : Reflections on the Limits of Power*, Cambridge University Press, Cambridge, 1986.
6. Berger, M., 'The End of the Third World', *Third World Quarterly*, Vol. 15, No. 2, 1994.
7. Bratton, M., and Van der Walle, N., 'Towards Governance in Africa : Popular Demands and State Responses' in G. Hayden and M. Bratton (eds.), *Governance and Politics in Africa*, Boulder, Colorado, 1991.

8. Callaghy, T., 'Vision and Politics in the Transformation of the Global, Political Economy : Lessons from the Second and the Third World's in R. Slater, Schutz, B. and Dorr, S. (eds.), *Global Transformation and the Third World*, L. Rienner Pub., Boulder, Colorado, 1993.
9. Chabal, P., Introduction : 'Thinking About Politics in Africa', in Chabal, P. (eds.), *Political Domination in Africa : Reflections on the Limits of Power,* Cambridge University Press, Cambridge, 1986.
10. Chezan, N., 'Between Liberalism and Statism : African Political Cultures and Democracy' in Diamond, Larry (ed.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
11. Diamond, L., 'Introduction : Political Culture and Democracy', in L. Diamond (eds.), *Political Culture and Democracy in Developing Countries*, L. Rienner, Boulder, Colorado, 1993.
12. Diamond, L., 'The Globalisation of Democracy' in Slater, R., Shutz, B., and Dorr, S. (ed.), *Global Transformation and the Third World*, L. Rienner, Boulder, Colorado, 1993.
13. Dixon, Chris and Michael J. Heffernan (eds.), *Colonialism and Development in the Contemporary World*, Mansell, New York, 1991.
14. Eliott, Carolyn, *Civil Society : A Reader*, Oxford University Press, New Delhi, 2003.
15. Engles, Dagmar, and Shula Marks (eds.), *Contesting Colonial Hegemony : State and Society in Africa and India*, British Academic Press, London (1994).
16. Fatton, R., *Predatory Rule, State and Civil Society in Africa*, L. Rienner, Boulder, Colorado, 1992.
17. Frank, A.G., *Capitalism and Underdevelopment in Latin America*, Penguin, Harmondsworth, 1971(Kumar, Ashutosh, 'Hamza Alavi and Post-Colonial State', *Economic and Political Weekly*, August 7, 2004).
18. Garreton, M.A., 'Political Democratisation in Latin America and the Crisis of Paradigms' in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
19. Geddes, Barbara 'Paradigms and Sand Castles in Comparative Politics of Developing Areas' in Crotty, William (ed.), *Comparative Politics, Policy and International Relations*, Northwestern University Press, Evanston, 1991.
20. Hawthorn, G., "Waiting for a Text?" Comparing 'Third World Politics in Manor, J. (ed.), *Rethinking Third World Politics*, Longman, London, 1991.
21. Haynes, Jeff, *Third World Politics, A Concise Introduction,* Blackwell, Oxford, 1996.
22. Huntington, S., *Political Order in Changing Societies*, Yale University Press, New Haven, 1968.
23. Huntington, S., The Third Wave, Democratisation in the Late Twentieth Century, University of Oklohoma Press, Norman, 1991.
24. Jayaram, N., On Civil Society : Issues and Perspective, Sage Publications, New Delhi, 2005.
25. Kamrava, M., Politics and Society in the Third World, Routledge, London, 1993.
26. Kaviraj, S., 'On State, Society and Discourse in India' in Manor, J. (ed.), Rethinking Third World Politics, Addison-Wesley Longman, London, 1993.
27. Luckham, R., 'Introduction : The Military, The Developmental State and Social Forces in Asia and the Pacific : Issues for Comparative Analysis' in Selochan, V. (ed.), The Military, The State, and Development in Asia and Pacific, Westview, Boulder, 1991.

28. Mamdani, M., T, Mkandawire, and E. Wamba-dia-Wamba, 'Social Movements and Democracy in Africa' in Wignaraja, P. (ed.), *New Social Movements in the South*, Zed Books, London, 1993.
29. Migdal, J., *Strong Societies and Weak States : State Society Relations and State Capabilities in the Third World*, Princeton University Press, Princeton, 1988.
30. Mitra, S. (ed.), *The Post-Colonial State in Asia*, Wheatsheaf, Hemel Hampstead, 1990.
31. Mouzelis, N., *Politics in the Semi-Periphery*, Macmillan, London, 1986.
32. Nkruman, K., *Neo-colonialism : The Last Stage of Capitalism*, Nelson, London, 1965.
33. O'Donnell, G., *Modernisation and Bureaucratic Authoritarianism, Institute of International Studies*, Berkeley, 1973. O' Donnell, G., Authoritarian Rule : Prospects for Democracy, John Hopkins University Press, Baltimore, 1973.
34. Parpart, J., 'Women and the State in Africa'; in D. Rothchild and N. Chazan (eds.), *The Precarious Balance : State and Society in Africa*, Westview, Boulder, 1988.
35. Potter, D., "Democratisation in Asia" in D. Held (ed.), *Prospects for Democracy : North, South, East, West,* Polity, Cambridge, 1985.
36. Pye, L., *Asian Power and Politics : The Culture Dimension of Authority*, Harvard University Press, Cambridge, 1985.
37. Randall, V., and Theobold, R., *Political Change and Underdevelopment : A Critical Introduction to Third World Politics,* Macmillan, London, 1985.
38. Rudolph, S., 'State Formation in Asia – Prolegemenon to a Comparative Study', *Journal of Asian Studies*, 46, 4, 1987.
39. Saul, John S., 'The State in Post-Colonial Societies : Tanzania' in Ralph Miliband and John Saville (ed.), *The Socialist Register*, Merlin, London, 1974.
40. Sisson, R., 'Culture and Democratisation in India' in Diamond, L. (ed.), *Political Culture and Democracy in Developing Countries*, Lynne Reiner, Boulder, 1993.
41. Smith, B.C., *Understanding Third World Politics, Theories of Political Change and Development,* Palgrave Macmillan, Basingstoke, 2003.
42. Taylor, Peter, J., 'The Legacy of Imperialism' in Dixon Chris and Michael, J Heffernan (eds.), *Colonialism and Development in the Contemporary World,* Mansell, New York, 1991.
43. Thomas, Clive, Y., *The Rise of the Authoritarian State in Peripheral Societies*, Monthly Review Press, New York, 1980.
44. West, David "New Social Movements" in Gerald F. Gaus and Chandran Kukathas, Handbook of Political Theory, Sage, London, 2004.

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OR

Course X : COMPARATIVE POLITICAL SYSTEMS WITH SPECIAL REFERENCE TO USA, UK, CHINA, JAPAN AND SWITZERLAND (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting **one question** from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: The objective of the course is to familiarize students with key issues and debate in comparative politics with special reference to USA, UK, China, Japan and Switzerland.

UNIT-I

(i) Historical Antecedent of Contemporary Political Systems.
(ii) Evolution of the Constitution and Constitutional Systems.

UNIT-II

(i) Executive
(ii) Legislature

UNIT-III

(i) Political Parties
(ii) Pressure Groups

UNIT-IV

(i) Elections, Electoral Process
(ii) Political Participation, Voting Behavior

Readings:

1. Jean Blondel : *An Introduction to Comparative Government,* Praeger, 1969.
2. G. Almond and B. Powell : *Comparative Politics* : *A Development Approach*, Little Brown, 1966.
3. Robert Ward & Roy Macrides (Eds.) : *Modern Political Systems*, Prentice Hall, 1972.
4. M. Irish & J.W. Protho : *The Politics of American Democracy*, Prentice Hall, 1968.
5. D. J. Weller : *The Government of Politics of Communist China*, Hutchinson, 1970.

6. Peter Bormhead : *Britains Developing Constitution,* St. Martin's Press,1974.
7. John P. Mackintosh : *The Government and Politics of Britain,* Hutchinson, 1971.
8. P.J. Madgwick : *Introduction to British Politics*, Hutchinson, 1971.
9. A.H. Birch : *The British System of Government*, Allen & Unwin, 1980.
10. Lucian Pye : *The Spirit of Chinese Politics*, Cambridge, 1970.
11. Richard Rose : *Studies in British Politics*, Macmillan, 1966.
12. Shanti Swarup : *A Study of the Chinese Communist Movement (only Introduction)*, Clarendon, 1966.
13. Robert Wesson : *Communism and Communist Systems*, Prentice-Hall, 1978.
14. Richard H. Solomon : *Mao's Revolution and the Chinese Political Culture*, Oxford University, 1971.

Course XI : ***The candidates are required to offer any one of the following courses :***

Option (a) : INTERNATIONAL ORGANISATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is designed to introduce the students to the relevance and functioning of international organizations in Contemporary World Politics. It takes up for the purpose a detailed study of some of the major specialized international agencies under the auspices of the United Nations.

UNIT-I

Evolution of International Organisation.

Theoretical approaches to the study of international organization : Classical, neo-realist, functionalist, conflict resolution, world society approach and the Marxist approach.

UNIT-II

Role and function of :

(i) International government organization.

(ii) International non-governmental organization.

Making of the United Nations : Its purpose, principles and structure.

United Nations and maintenance of international peace and security, collective security and its alternative.

UNIT-III

Major specialized agencies : ILO, UNESCO, WHO, FAO.
United Nations and Human Rights.

UNIT-IV

United Nations in the Post-Cold War Era :
UN and disarmament, revision of UN Charter, UN and emerging deterioration in international relations.
Limitations and constraints.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty First Century : Unique Contexts, Enduring Patterns* (New Jersey, Prentice Hall, 2003).
3. A. LeRoy Bennett, *International Organization : Principles and Issues* (New Jersey, Prentice Hall, 1991).
4. B.N. Mehrish, *International Organisations : Structures and Processes* (Jallandhar, Vishal Publications, 1996).
5. Shambhavi Vendantam, *United Nations : Putting Words to Work* (New Delhi, Vikash, 1996).
6. K. P. Saksena, *Reforming the United Nations : The Challenge of Relevance* (New Delhi, Sage, 1993).
7. C. Archer, *International Organisations* (London, Routledge, 1992).
8. P. R. Baehr and L. Gordenker, *The United Nations in 1990s* (Hamshire, Macmillan, 1994).
9. Boutros-Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
10. Abi-Saab Georgeas (ed.), *The Concept of International Organisation* (Paris, UNESCO, 1981).
11. Thomas G. Wein, David P. Forsyth, Roger A. Coate, *The United Nations and Changing World Politics* (Boulder, Westview Press, 1994).
12. William Burch, *The Evolution of the United Nations Peace Keeping : Case Studies and Comparative Analysis* (St. Martin Press, 1993).
13. Paul Taylor and A.R.J. Groom (eds.), *International Organisation : A Conceptual Approach* (London, Frances Printer, 1978).
14. J.W. Burton, *World Society* (London, Cambridge University Press, 1972).
15. Freidrich Kratochwil and Edward Mansfield (eds.), *International Organisation : A Reader* (New York, Harper Collins, 1994).

Option (b) : TRANSNATIONAL ACTORS IN INTERNATIONAL POLITICS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course is designed to introduce the students to the changing dynamics of the emerging world order in which various transnational actors have come to play an increasingly important role in shaping the responses of the state actors to some of the most crucial issues in contemporary history.

UNIT -I

The politics of terminology : From "Non-state actors" to "Transnational actors".
Limitations of state-centric framework and emergence of transnational actors.

UNIT -II

Theorizing different types of transnational actors in International Politics.
Transnational companies; Regional economic groupings; strategic and security actors; Non-legitimate groups and liberation movements; and Non-governmental organizations.

UNIT -III

Post-War Economy and the International Monetary System : International Monetary Fund and World Bank.
Dynamics of Regional Integration : European experience.
Beyond Europe: The global rise of regionalism (special reference to ASEAN and SAARC).

UNIT -IV

Cartelization of Natural Resources in the Age of Globalization : OPEC.
Issues and challenges in international environmental politics.

Suggested Readings :

1. John Baylis and Steve Smith, *The Globalization of World Politics : An Introduction to International Relations* (Oxford University Press : New York, 2001).
2. R. O. Keohane and J. S. Nye (eds.), *Transnational Relations and World Politics* (Cambridge Mass: Harvard University Press, 1972).

3. T.G. Weiss and L. Gordenker (eds.), *NGOs, the UN and Global Governance* (Boulder, Colo. : Lynne Rienner, 1996).
4. P. Willets (ed.), *Pressure Groups in the Global System : The Transnational Relations of Issue-Oriented Non-Governmental Organizations* (London : Pinter, 1982).
5. P. Willets (ed.), *'The Conscience of the World' : The Influence of Non-Governmental Organizations in the UN System* (London: Hurst and Co., 1996).
6. T. Risse-Kappen (ed.), *Bringing Transnational Relations Back In* (Cambridge : Cambridge University Press, 1995).
7. J. N. Rosenau, *The Study of Global Interdependence : Essays on the Transnationalisation of the World Affairs* (London : Pinter, 1990).
8. A.J.R. Groom and P. Taylor, *Frameworks for International Co-operation* (London : Pinter, 1990).
9. Michael Nicholson, *International Relations : A Concise Introduction*, Second Edition (New York: Palgrave, Macmillan, 2002).
10. Robert Keohane, *International Institutions and State Power : Essays in International Relations Theory* (Boulder: Westview, 1989).
11. John Madeley, *Big Business, Poor Peoples: The Impact of Transnational Corporations in the World's Poor* (London: Zed Books, 1999).
12. Joel Krieger (ed.), *The Oxford Companion to the Politics of the World* (New York : Oxford University Press, 1993).
13. John E. Spero and Jeffery A. Hart, *The Politics of International Economic Relations,* 5th ed. (New York, St. Martin's Press, 1997).
14. Alan C. Lamborn and Joseph Lepgold, *World Politics into the Twenty-First Century : Unique Contexts, Enduring Patterns*, (New Jersey : Prentice Hall, 2003).

Option (c) : POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper attempts to understand development issues and problems in India with reference to theoretical advances in development studies.

UNIT -I

Development, meaning and changing conceptions.
Economic growth.
Human development.
Sustainable development.

UNIT -II

Theory of the Developmentalist State.
Impact of Development on the Political Process.
Development Strategies and State Policies in India – Priorities, Strategies, Target Groups.

UNIT -III

Socio-Economic Problems and Developmental Issues in India.
Poverty, Social Backwardness and Disparities.
Displacement, Resettlement and Environmental degradation.

UNIT -IV

Democratic decentralization and development in India.
Developmental Interventions, Non Governmental Initiatives and Empowerment.
Globalization, Changing Policies, Strategies and their implications in India.

Readings :

1. Bardhan, Pranab, 1984, *The Political Economy of Development in India*, New York, Blackwell.
2. Jalan, Bimal (ed.) 1992, *The Indian Economy : Problems and Prospects*, New Delhi, Viking.
3. Cassen, Robert and Vijay Joshi (eds.), 1992, *India : The Future of Economic Reform*, New Delhi, Oxford University Press.
4. Dreze, Jean & Amartya Sen, 1995, *India : Economic Development & Social Opportunity*, Delhi, Oxford University Press.
5. Frankel Francis et. al (eds.) 2000, *Transforming India : Social and Political Dynamics of Democracy*, Delhi, Oxford University Press.
6. Jayal, Niraja Gopal (ed.) 2001, *Democracy in India*, New Delhi, Oxford University Press.
7. Kaviraj Sudipta, 1987, "Dilemmas of Democratic Development in India" in Adrian Leftwich ed. *Democracy and Development Theory and Practice*, Cambridge, Polity Press.
8. Kohli Atul, 1987, *The State and Poverty in India : The Politics of Reform*, Cambridge, Cambridge University Press.
9. Lewis, John P., 1995, *Governance and Reform : Essays in Indian Political Economy*, Delhi, Oxford University Press.

10. Mathur Kuldeep (ed.) 1996, *Development Policy and Administration*, Delhi, Sage Publications.

11. Satyamurthy, T.V., 1999, *Social Change and Political Discourse in Indian Structures of Power, Movements of Resistance,* Delhi, Oxford University Press.

12. Sen Amartya, 2000, *Development as Freedom*, Delhi, Oxford University Press.

Option (d) : PEACE AND CONFLICT RESOLUTION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to introduce students to the meaning and contending approaches in the discipline of peace and conflict studies. It also brings into broader context the concept and theories of conflict and conflict resolution and the different strategies and tactics of non-violent resolutions.

UNIT-I

Peace Studies :

1. Meaning, scope and approaches.
2. Peace-keeping, Peace-making, Peace-building and post-peace confidence building measures.

UNIT-II

Peace Movements :

1. Civil Rights Movements.
2. Green Peace Movements.

UNIT-III

Conflict and Conflict Resolution : Conceptual and Epistemological dimensions:

1. Conflict: Typologies and Causes.
2. Conflict Resolution: Meaning and Scope.

UNIT-IV

Conflict Resolution and Transformation : General Strategies and Tactics :

1. Pacific Methods (Mediation, Arbitration and Adjudication), and Analytical problem solving approach (notably of John Burton).
2. Non-Violent techniques of conflict resolution (Gandhian).

Recommended Books :

1. Bondurant, J.V., *Conquest of Violence* (London, Princeton Uni. Press, 1958).
2. Coser, L., *The Function of Social Conflict* (N.Y., The Free Press, 1956).
3. Simmel, G., *Conflict and the Web of Group-Affiliation* (New York, 1955).
4. Weber, Thomas, *Conflict Resolution and Gandhian Ethics* (New Delhi, Gandhi Peace Foundation, 1991).
5. Wallensteen, Peter (ed.), *Peace Research : Achievements and Challenges* (Boulder & London, Westview Press, 1988).
6. Holsti, K.J., "Paths to Peace ? Theories of Conflict Resolution and Realities of International Politics," in Thakur, Ramesh (ed.), *International Conflict Resolution* (Boulder and London, Westview Press, 1988).
7. Galtung, J., *Peace by Peaceful Means* (London, Sage, 1996).
8. Galtung, J., *The Way is the Goal : Gandhi Today* (Ahmedabad, Gujarat, Vidyapeeth, 1992).
9. Boulding, Elise (ed.), *New Agenda for Peace Research* (Boulder and London, Lynee Reimer, 1992).
10. Boutras, Boutros Ghali, *An Agenda for Peace* (New York, United Nations, 1992).
11. Burton, J. Dukes, Frank, *Conflict : Practices in Management, Settlement and Resolution* (London, Macmillan, 1990).
12. Sandole, Dennis, J.D. and Merwe, Hugo Van der (ed.), *Conflict Resolution Theory and Practice* (New York, Manchester University Press, 1993).

Option (e) : RETHINKING GEOPOLITICS : CRITICAL PERSPECTIVES

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on the premise that geopolitics needs to be re-conceptualized as twenty-first century unfolds. The intention is to rethink and radicalize its components 'geo' and 'politics' so that the self-evident character and nuance of the sign 'geopolitics' can be conceptualized and pluralized. Once conceptualized in a critical way as a problematic of geopolitics or geographical politics, geopolitics becomes a much broader social and cultural phenomena that is normally described and understood by the geopolitical tradition of 'wise-men' statecraft.

UNIT-I

Modern Geopolitical Imagination and Visualizing Global Space : Blocks, Worlds and Zones of identity and difference.
Epochs of Geopolitics (Imperial Geopolitics, Cold War Geopolitics, and the Geopolitics of the 'New World Order'.

UNIT-II

Twenty-First Century Geopolitics (End of History? The Clash of Civilizations?).
National Identity and Geopolitical Visions (USA, Russia, India and Pakistan).

UNIT-III

The Geopolitics of Global Dangers ('rogue states', the 'coming anarchy', diseases and disasters).
The Geopolitics of Terror (with special reference to 11 September and its aftermath).

UNIT-IV

Critical Geopolitics (anti-geopolitics, social movements and alternative political geographies).
Gender and Geopolitics.

Suggested Readings :

1. Andrew Herod, Gearoid O Tuathail and Susan M. Roberts (eds.), An *Unruly World ? Globalisation, Governance and Geography*, London and New York : Routledge, 1998.
2. Ciro, E., Zoppe (ed.), *Charles Zorgbibe : On Geopolitics, Classical and Nuclear,* Boston, Nijhoff, 1985.
3. David, Hoosan (ed.), *Geography and National Identity*, Oxford, U.K. and Cambridge : USA : Blackwell, 1994.
4. Geoffrey, Parker, *Geopolitics : Past, Present and Future*, London and Washington : Pinter, 1998.
5. Gertjan, Dijkink, *National Identity and Geopolitical Visions*, London, New York : Routledge, 1996.
6. Gearoid, O. Tuathail, *Critical Geopolitics : The Politics of Writing Global Space*, London and New York : Routledge, 1996.
7. Gearoid, O. Tuathail, Simon Dalby and Paul Routledge (ed.), *The Geopolitics Reader*, London and New York, Routledge, 1998.
8. Gearoid, O. Tuathail, Simon Dalby (eds.), *Rethinking Geopolitics,* London and New York : Routledge, 1998.

9. Sloan, G.R., *Geopolitics in United States Strategic Policy, 1890-1987*, Brighton Wheatsheaf Books, 1988.
10. Jan Nederveen Pieterse, *World Orders in the Making : Humanitarian Intervention and Beyond*, Houndmills, Macmillan, 1998.
11. Jan Nijman, *The Geopolitics of Power and Conflict : Superpowers in the International Systems*, London and New York : Belhaven Press, 1993.
12. John, Agnew and Stuart Corbridge, *Mastering Space, Hegemony, Territory and Political Economy*, London, New York : Routledge, 1995.
13. John, Agnew, *Geopolitics : Revisioning World Politics*, London and New York : Routledge, 1998.
14. Klaus, John Dodds, "Geopolitics, Cartography and the State in South America," *Political Geography* 12 (4), July 1993 : 361-381.
15. Kurt Mills, *Human Rights in the Emerging Global Order, A New Sovereignty*, Houndmills : Macmillan Press Limited, 1998.
16. Mathew, B. Fielden, "The Geopolitics of Aid : The Provision and Termination of Aid to Afghan Refugees in North West Frontier Province, Pakistan," *Political Geography*, 1998, 17 (4) : 459-487.
17. Simon, Dalby, *Creating the Second Cold War*, London : Pinter, 1990.

Journals :

1. *Geopolitics* (see Special Issue on "11 September and its Aftermath : The Geopolitics of Terror", Volume 8, Number 3, September 1998.
2. Agnew, J., "American Hegemony into American Empire", *Antipode*, 35(5) : 871-885, 2003.
3. Gregory, D., *The Colonial Present*, Oxford: Blackwell, 2004.
4. Kelly, P., "A Critique of Critical Geopolitics", *Geopolitics*, 11 (1) : 24-53, 2006.

Option (f) : THEORIES OF DEVELOPMENT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This Course introduces students to the significant ways in which development has been conceptualised. It tracks the main grounds on which mainstream models of development have been critiqued and the key issues facing contemporary development theory.

UNIT-I

Development as economic growth–capitalist and socialist models.
Theories of modernisation.
Neo-liberalism and globalisation.
Role of the state, welfare and redistribution.

UNIT-II

Dependency, Underdevelopment and world system analysis.
Human development–Basic Needs, capability approach, rights based approaches.
Notion of social capital.

UNIT-III

Ecology and Nature, Sustainable Development.
Gender and Development.
Culture and Development.
Impact of Postmodernism on Development studies and the Post development rejection of Development.

UNIT-IV

Issues in Development studies today

1. Aid, Role of Non-government Organisations and International Agencies.
2. Democracy and Development.
3. Displacement.
4. Poverty.

Reading List :

1. G. Rist, *A History of Development*, London, Zed Books, 1997.
2. J. Crush, *Power of Development*, Routledge, 1995.
3. Ashis Nandy, *Bonfire of Creeds*, New Delhi, OUP, 2004.
4. Richard Peet and Elaine Hartwick, *Theories of Development*, New Delhi, Rawat, 2005.
5. Jan Nederveen Pieterse, *Development Theory, Constructions/Deconstructions*, New Delhi, Vistaar, 2001.
6. Naila Kabeer, *Reversed Realities, Gender Hierarchies in Development Thought*, W.W. Norton & Co., 1994.
7. R.W. Shenton and M.P. Cowan, *Doctrines of Development*, Routledge, 1996.
8. Nalini Visvanathan (Co-ordinator), Lynn Duggan, Laurie Nisonoff & Nan Wiegersma (Eds.), *The Women, Gender and Development Reader*, Zubaan Books.

9. Kriemild Saunders (Ed.), *Feminist Post-Development Thought : Rethinking Modernity, Post-colonialism and Representation*, Zubaan Books.

10. M. Rahnema & V. Bawtree (Eds.), *The Postdevelopment Reader*, New York, Zed Books, 1997.

11. Wolfgang Sachs, *The Development Dictionary,* Zed Books, London, 1992.

12. Amartya Sen*, Development as Freedom*, New Delhi, OUP, 2002.

13. John Hariss, *Depoliticising Development*, Leftword Books, New Delhi, 2001.

14. Susanne Schech, Jane Haggis, *Culture and Development : A Critical Reader*, Blackwell, 2000.

Option (g) : PUBLIC INTERNATIONAL LAW-I

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper introduces the students to the fundamentals and various other aspects of Public International Law.

Unit-I : Introducing International Law

Definition, basis and nature.
Distinction between Private International Law and Public International Law.

Sources.
Subjects of International Law – States, Individual and the International Institutions.
Relation of International Law to Municipal Law.

Unit-II : Law of Peace

Intervention.
Recognition – Theories, Modes and Consequences.
State Responsibility.
State Succession.

Unit-III : Force and International Law

Disputes :

Settlement by peaceful means.

Settlement through the agencies – U.N. and the International Court of Justice.

Settlement through means of short of war.

War :

General Laws of Warfare (Land, Maritime and Air)

Geneva Conventions.

War Crimes.

Neutrality

Blockade, Contraband and Prize Courts.

Unit-IV : International Transactions

Diplomatic Agents.

Consuls.

Treaties.

Books

1. Aggarwal, H.O. (2014), *International Law & Human Rights.* Jain Book Agency, New Delhi.
2. Cassese, Antonio (2005), *International Law.* Oxford University Press, USA.
3. Clapham, Andrew (2012), *Brierly's Law of Nations : An Introduction to the Role of International Law in International Relations.* Oxford University Press, USA.
4. Crawford, James (2013), *Brownlie's Principles of Public International Law.* Oxford University Press, USA.
5. Crawford, James and Koskenniemi, Martti (2012), *The Cambridge Companion to International Law (Cambridge Companions to Law).* Oxford University Press, USA.
6. Dixon, Martin (2013), *Textbook on International Law.* Oxford University Press, USA.
7. Evans, Malcolm (2010*), International Law.* Oxford University Press, USA.
8. Gray, Christine (2004), *International Law and the Use of Force.* Oxford University Press, USA.
9. Janis, Mark W. (2003), *An Introduction to International Law (Introduction to Law Series).* Oxford University Press, USA.
10. Lowe, Vaughan (2007), *International Law (Clarendon Law Series*). Oxford University Press, USA.
11. Malanczuk, Peter (1997), *Akehurst's Modern Introduction to International Law.* Routledge.
12. Shaw, Malcolm (2014), *International Law.* Cambridge University Press.
13. Tandon, M.P. and Anand, V.K. (2012), *International Law & Human Rights*. Jain Book Depot.

Journals

1. *American Journal of International Law* (AJIL), American Society of International Law, 1907.
2. Brooklyn Journal of International Law
3. *European Journal of International Law* (EJIL) : European University Institute, 1990.
4. *Indian Journal of International Law* : Indian Society of International Law, 1960.
5. *International and Comparative Law Quarterly* (ICLQ), British Institute of International and Comparative Law, 1952.
6. *Journal de droit international* (Clunet): founded by Edouard Clunet in 1874; now published by Lexis Nexis.
7. *Recueil des Cours / Collected Courses,* Hague Academy of International Law, 1923.
8. *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht, or Heidelberg Journal of International Law, (*ZaoRV / HJIL*):* Max Planck Inst. for Comparative Public Law and International Law, 1929.

Key websites

Listed below are a few key websites of the American Society of International Law:

1. Electronic Resource Guide (ERG): the American Society of International Law's guide to international law resources on the web, arranged in subject-based chapters.
2. Eagle-i : gateway to law websites, including international law sites, provided by IALS Library
3. Electronic Information System for International Law (EISIL) : gateway to international law websites, provided by the American Society of International Law.
4. International Law Commission (ILC): this UN body develops and codifies international law; its website provides ILC publications from 1949 onwards, and a research guide.
5. *Researching Public International Law:* substantial, detailed research guide by Kent McKeever, Director of the Arthur W. Diamond Law Library at Columbia University in the US (last updated 2006).
6. UN International Law page: information, resources and links relating to the UN's work in the field of international law
7. UN Treaty Collection: free access to the UN Treaty Series, League of Nations Treaty Series and related information.
8. United Nations Documents: gateway to the documentation of the UN General Assembly, Security Council, Secretariat and other UN bodies. (See also the IALS UN Research Guide.)
9. World LII Internaational Law Library: free collection of treaties, international court decisions, journals and other international law materials.

Oxford's unrivalled reference works available online

Oxford Scholarly Authorities on International Law

Online

Access the product: http://opil.ouplaw.com/home/OSAIL

Virginia Journal of International Law

Course XII : ***The candidates are required to offer any one of the following courses :***
Option (a) : DEMOCRACY IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : The paper aims at enabling the students to understand and reflect upon the theory and practice of democracy in India.

Unit-I

Indian Democracy : Colonial Inheritance.
Idea of Democracy : Constituent Assembly Debates.
State of Democracy in Contemporary India.

Unit-II

Democracy and Development.
Development Planning.
Economic Reforms.

Unit-III

Identities, Citizenship and Rights : Mobilisation and Contestation.
Gender.
Minority Rights.
Dalits and Backward Classes.

Unit-IV

Political Institutions and Democratic Consolidation.
Indian Federalism in Transition.
Democracy and Decentralisation: Panchayati Raj.
Representation, Participation and Electoral Politics.

Selected Readings :

1. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India : Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).
2. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.), *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).
3. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).
4. Kuldeep Mathur (ed.), *Development Policy and Administration* (New Delhi : Sage, 1996).
5. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi: Sage, 2002).
6. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence*, (New Delhi : Oxford, 1998).
7. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 : 1251-68.
8. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II-The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 : 1361-70.
9. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India*, (New Delhi : Oxford, 2001).
10. Rajendra Vohra and Suhas Palishkar, *Indian Democracy : Meanings and Practices,* (New Delhi : Sage, 2004).
11. Peter Ronald deSouza (ed.), *Contemporary India : Transitions* (New Delhi : Sage, 2000).
12. Pratap Bhanu Mehta, *The Burden of Democracy* (New Delhi : Penguin, 2003).
13. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004* (New Delhi : Oxford, 2005), 2nd Edition.
14. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution : The Bahujan Samaj Party in Uttar Pradesh* (New Delhi : Sage, 2002).
15. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003), 2nd Edition.
16. Madhu Purinima Kishwar, *Deepening Democracy : Challenges of Governance and Globalisation in India* (New Delhi : Oxford, 2005).
17. Abhay Kumar Dubey, *Loktantra Ke Saat Adhyaya* (Delhi : Vani, 2002).
18. Abhay Kumar Dubey, *Bharat Ka Bhumandalikaran* (Delhi : Vani, 2003).

Option (b) : GOVERNMENT & POLITICS OF INDIA'S NEIGHBOURS (PAKISTAN, BANGLADESH, NEPAL AND SRI LANKA)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper aims at introducing the students to some of the dominant issues in South Asia and their long-term implications on bilateral relations among the states of the region. A critical assessment of India's role in the region is the special focus of this course.

UNIT–I

Impact of Geography, History and Lingo-cultural influences on the Government and Politics of India's neighbours.
Major political institutions and political parties in these countries.

UNIT–II

Social change, ethnicity and demography's impact on politics with special reference to forces of modernization and religious fundamentalism.
Political economy of the neighbouring states and its equation with globalization and liberalisation processes.

UNIT–III

Internal Conflict in South Asia : Causes and Dynamics.

UNIT–IV

India as a factor in the politics of these countries with emphasis on bilateral relations and multilateral SAARC.

Suggested Readings

1. Sugata Bose and Ayesha Jalal, *Modern South Asia : History, Culture, Political Economy* (New Delhi, Oxford University Press, 2004).
2. S. Mahmud Ali, *The Fearful State : Power, People and Internal War in South Asia* (London, Zed Books, 1993).
3. Paul R. Brass, *The Politics of South Asia since Independence* (Cambridge, Cambridge University Press, 1990).

4. Dipankar Gupta, *The Context of Ethnicity : Sikh Identity in a Comparative Perspective* (New Delhi, Oxford University Press, 1996).
5. Ashutosh Varshney, *Ethnic Conflict and Civic Life : Hindus and Muslims in India* (New Delhi, Oxford University Press, 2005).
6. Gurpreet Mahajan, *Identities and Rights : Aspects of Liberal Democracy in India* (New Delhi, Oxford University Press, 2001).
7. Tapan K. Bose and Rita Manchanda (eds.), *States, Citizens and Outsiders : The Uprooted Peoples of South Asia* (Kathmandu, South Asian Forum for Human Rights, 1997).
8. Ranabir Samaddar, *The Marginal Nation : Transborder Migration from Bangladesh to West Bengal* (New Delhi, Sage Publications, 1999).
9. Sanjeev Baruah, *Durable Disorder : Understanding the Politics of Northeast India* (New Delhi, Oxford University Press, 2005).
10. Urmila Phadnis, *Ethnicity in South Asia* (New Delhi, South Asian Publishers, 1986).
11. Urmila Phadnis, Kalim Bahadur, S.D. Muni (eds.), *Domestic Conflicts in South Asia : Political Dimensions,* Vol. I (New Delhi, South Asian Publishers, 1986).
12. Urmila Phadnis, S.D Muni, Kalim Bahadur, *Domestic Conflicts in South Asia : Economic and Ethnic Dimensions,* Vol. II (New Delhi, South Asian Publishers, 1986).
13. Veena Kukreja, *Civil-Military Relations in South Asia* (New Delhi, Sage Publications, 1991).
14. Ponna Wignaraja and Akmal Hussain, *The Challenge in South Asia : Development, Democracy and Regional Cooperation* (New Delhi, Sage Publications, 1989).
15. Paul R. Brass, *Ethnicity and Nationalism : Theory and Comparison* (New Delhi, Sage Publications, 1991).

Option (c) : WOMEN AND POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course looks at Indian politics through the lens of gender and draws attention to the main themes and debates regarding gender in modern India. It undertakes an analysis of the issues raised by the women's movement in India and the Indian state. In doing so, it will examine the debates on nationalism, social reform, law, citizenship, development, environment and explore inter-sectionality of identities and structures in India. It is an interdisciplinary course which draws on the academic domain of feminist studies.

Unit I

Social reform and national movements- debate on the position of women; modernity, colonialism and patriarchy; Gandhi and women
Modern Indian State- Institutional and legal provisions, Equality provisions, Family and the state

Unit II

Women's movement in Contemporary India – Phases, key campaigns,autonomy, relationship with political parties and critical assessment
Violence - Law, Sexualities, State; Public and private violence, Censorship

Unit III

Community, Identity and Citizenship
Gender and Caste- Reservations for women, Ambedkar, Periyar, Dalit feminism
Gender and Religion- Personal Laws, UCC Debate, Partition, Communalism

Unit IV

Gender and Development: Impact of development policies, Employment and work, ecology and gender
Human development- Health, education

Essential Readings:

1. Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
2. Mary John (ed) *Women's Studies in India: A Reader,* Penguin, 2008
3. Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
4. Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999
5. Radha Kumar, *A History of Doing*, Kali for Women, 1997

Suggested Readings

Unit 1

1. Anupama Roy, *Gendered Citizenship*,('The Womanly Vote'), Orient Blackswan, 2005
2. Bina Agarwal, 'The Family in Public Policy', in Maya Khullar (ed*) Writing the Women's Movement: A Reader*, Zubaan, 2005
3. Brinda Bose, *Gender and Censorship,* Women Unlimited, 2006
4. Geraldine Forbes, Women in Modern India, OUP, 2008
5. Janaki Nair, *Women and Law in Colonial India*, Kali for Women, 1996
6. Joanna Liddle and Rama Joshi, 'Gender and Imperialism in British India', *EPW*
7. Kameshwari Jandhyala, State Initiatives, *Seminar*, September 2001
8. Kumkum Sangari and Sudesh Vaid (ed) *Recasting Women* (Chapters by Uma Chakravarti – Whatever Happened to the Vedic Dasi, Partha Chatterjee- Nationalist Resolution of the Women's Question), kali for Women, 1990
9. Leela Kasturi and Vina Mazumdar (ed) *Women and Indian Nationalism*, (Introduction), Vikas Publishing House, 1994
10. Madhu Kishwar, Gandhi on Women, *EPW,* 5 October 1985
11. Rajeshwari Sunder Rajan, *The Scandal of the State*, (Introduction), Permanent Black, 2003
12. Ratna Kaur and Brenda Crossman, 'On Women, Equality and the Constitution' in Nivedita Menon (ed) *Gender and Politics in India*, OUP, 1999

13. Sadhna Arya, 'National Commission for Women, An Overview of its Performance', *EPW*, May 4 2013
14. Sujata Patel, 'Construction and Reconstruction of Woman in Gandhi', *EPW,* 20 February 1988
15. Sumit Sarkar and Tanika Sarkar (ed) *Women and Social Reform* (Introduction),

Unit II

1. Arvind Narrain, ' The Verma Committee: Alchemizing anger to hope', Kafila.org
2. Gail Omvedt, 'Women's Movement: Some ideological Debates' in Maitrayee Chaudhury (ed) *Feminism in India*, Women Unlimited, 2004
3. Indira Jaising, 'Bringing Rights Home: Review of the Campaign for a Law on Domestic Violence', *EPW*, Oct 31 2009
4. Jayati Ghosh, 'Violence against Women: Economic Reforms and Increasing Insecurities', 29 January 2008 (http://www.macroscan.org/cur/jan08/cur290108Violence.htm)
5. Madhu Mehra, 'Taking Stock of the new Anti Rape Law', Kafila.org
6. Nivedita Menon, 'Conundrum of Agency in Sexual Violence' January 2014, Kafila.org
7. Nivedita Menon, 'Rights, Bodies and Law' in Nivedita Menon (ed) *Gender and Politics in India,* OUP, 1999
8. Radha Kumar, *A History of Doing* (Chapters 6-11), Kali for Women, 1997
9. Srimati Basu, 'The Politics of Giving: Dowry and Inheritance as Feminist Issues' in Basu (ed)*Dowry and Inheritance,* Women Unlimited, 2005
10. Susie Tharu and Tejaswini Niranjana, 'Problems for a Contemporary Theory of Gender' in Nivedita Menon, *Gender and Politics in India*, OUP, 1999
11. V Geetha, 'Periyar, Women and an Ethic of Citizenship' in Anupama Rao (ed) *Gender and Caste*, Women Unlimited, 2003
12. Veena Das, 'Sexual Violence, Discursive Formations and the State', *EPW,* Special Issue, Sepetember 1996

Unit III

1. Bina Agarwal, 'A Field of One's Own' in Srimati Basu (ed) Dowry and Inheritance
2. Bina Agarwal, 'Landmark Step to Gender Equality', *The Hindu*,September 25 2005
3. Flavia Agnes, 'Economic Rights of Women in Muslim Law', *EPW*, Oct 12 1992
4. Gopal Guru, 'Dalit Women Talk Differently', *EPW*, Oct 14 1995
5. Janaki Abraham , 'Contingent Caste Endogamy and Patriarchy', *EPW*, Jan 11 2014
6. Meena Dhanda (ed) *Reservations for Women* (Introduction), Women Unlimited, 2008
7. Nida Kirmani, 'Claiming their Space: Muslim Women's Networks and Women's Movement in India', *Journal of International Women's Studies*, Nov 2009.
8. Nivedita Menon, 'Elusive Woman: Feminism and Women's Reservation Bill in Dhanda (ed)
9. Nivedita Menon, 'Uniform Civil Code: The Women's Movement Perspective', kafila.org
10. Pratima Pardeshi, 'Ambedkar and women's liberation', *the Dalit*, March-April 2002

11. R. Geetha, 'Panchayat Raj Institution and Women's Reservation' in Dhanda (ed)
12. Rajeshwari Sunder Rajan, 'Women between Community and State' in Rajan (ed) *The Scandal of the State*
13. Sharmila Rege, (ed) *Against the Madness of Manu*(Introduction), Navayana Books, 2013
14. Sharmila Rege, 'Dalit Women talk Differently: A Critique of 'Difference' and towards a Dalit Feminist Standpoint', *EPW*, Oct 31 1998
15. Tanika Sarkar, 'Women, Community and Nation' in Jaffrey and Basu (ed)
16. V. Geetha, 'Of Bodily Love and Hurt' in Mary E John and Janaki Nair (eds) *A Question of Silence: The Sexual Economies of Modern India,* Kali for Women, 1998
17. Zoya Hasan, 'Gender Politics, Legal Reform, and the Muslim Community in India' in Patricia Jaffrey and Amrita Basu (ed)*Appropriating Gender: Women's Activism and Politicized Religion in South Asia*, Routledge, 1998

Unit IV

1. Besty Hartmann and Mohan Rao, 'India's Population Programme', *EPW*, Oct 31 2015
2. Bina Agarwal, 'The Gender and Environment Debate' in N.Menon (ed) *Gender and Politics in India*, OUP, 1999
3. Dipta Bhog, 'Gender and Curriculum', *EPW*, April 27 2002
4. Executive Summary of the National Focus Group on Education, NCERT 2005
5. Geeta Nambissan, 'Integrating Gender Concerns', *Seminar*, April 2004
6. Harini Narayan, 'Women's Health, Population Control and Collective Action', *EPW*, Febuary 19, 2011
7. Indrani Mazumdar, Neetha N, 'Gender Dimensions: Employment Trends in India, 1993-94 to 2009-10, *EPW,* 22 October 2011
8. Kalpana Vishwanath, 'Whose Body, Whose Health' *Seminar*, Sept 2001
9. Kalyani Menon-Sen and Kalpana Kannabiran, "Microcredit: Magic Bullet or Poison Pill' in Michele Kelley and Deepika D'Souza (eds) *The World Bank in India,* Orient Blackswan, 2010
10. Leela Kasturi, 'Development, Patriarchy and Politics: Indian Women in the Political Process 1947-92', Occasional Paper, CWDS.
11. Maitrayee Chaudhuri, 'Citizens, Workers and emblems of Culture: An analysis of the First Plan Document on women', *Contributions to Indian Sociology,* 29 (no 1 and 2), 1995
12. Mary E John, 'Gender and Development in India, 1970s-1990s', *EPW*, Nov 23 1996
13. Mary E John, 'Reframing Globalisation: Perspectives from the Women's Movement' EPW, March 7 2009
14. Nirmala Banerjee, 'Whatever Happened to the Dreams of Modernity?' *EPW*, April 25, 1998.
15. NIrmala Buch, 'State Welfare Policy and Women, 1950-1975', *EPW*, 25 April 1998

16. Padmini Swaminathan (ed) Women and Work: Essays from EPW (Introduction), Orient Blackswan, 2012
17. Saheli Women's Resource Centre, 'Reproductive Rights in the Indian Context' (Also available in Hindi)
18. Sujatha Gothoskar, 'The Plight of Domestic Workers', *EPW*, June 1 2013.

Option (d) : RIGHTS : IDEAS AND MOVEMENTS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

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The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the various ways in which the notion of rights has been conceptualized in theory and the debates emerging from the rights-based movements.

Unit-I

Notions of Rights : Philosophical foundations, historical developments and normative framework (natural rights, civil rights, democratic rights and human rights).

Unit-II

Contextualizing Rights : Debate on universalism and cultural relativism of rights.
Development debates and human rights.

Unit-III

Human Rights Movements : Ideology and social basis of civil liberties and democratic rights movements in India : National Human Rights Commission; International Human Rights Movement – ideology and social basis.

Unit-IV

Current Challenges : State and rights of citizens (child, women, rights of victims of repression); community rights (minorities, ethnic groups), rights of migrants, displaced people and refugees.

Suggested Readings :

1. Arnold, Christopher, *Ideas and Ideology : Human Rights,* Edward Arnold, 1978.
2. Baviskar, Amita, *In the Belly of the River : Tribal Conflicts Over Development in the Valley,* OUP, Delhi, 1995.
3. Bose, Tapan K. and Rita Manchanda, States, Citizens and Outsiders : The Uprooted Peoples of South Asia, *South Asia Forum for Human Rights,* Kathmandu, 1998.
4. Butalia, Urvashi, *The Other Side of Silence : Voices from the Partition of India,* Viking, Delhi, 1998.
5. Claude, Richard Pieree and Burns H. Weston, *Human* Rights in the World Community : Issues and Actions, University of Pennsylvania Press, Philadelphia, 1989.
6. Dubois, M, "The Governance of the Third World : A Foucauldian Perspective on Power Relations in Development", *Alternatives, 16, 1, Winter,* 1991.
7. Freeden, Michael, *Rights, World View,* Delhi, 1998.
8. Gordenker, Leon, *Refugees in International Politics,* Columbia University Press, New York, 1987.
9. Gudwin-Gill, Guy S., *The Refugee in International Law,* Clarendon, Oxford, 1983.
10. Kochler, Hans, "The Concept of the Nation and the Question of Nationalism : The Traditional "Nation State" vs. a Multiculture 'Community State' in Michael Dunne and Tizianno Bonazzi (eds.) *Citizenship and Rights in Multicultural Societies,* Keele University Press, Keele, 1995.
11. Kothari, Smitu and Harsh Sethi (ed.), *Rethinking Human Rights, Challenges for Theory and Action,* Lokayan, 1989.
12. Kothari, Smitu, "The Human Rights Movement in India," *Social Action*, January-March, 1990, Pp. 1-15.
13. Kumar, Radha, *Divide and Fall? Bosnia in the Annals of Partition,* Verso, London, 1997.
14. Kymlicka, Will, *Multicultural Citizenship: A Liberal Theory of Minority Rights,* Clarendon, Oxford, 1996.
15. Donnelly, Jack, *The Concept of Human Rights,* Croom Helm, London, 1985.
16. Macfarlane, L. J., *The Theory and Practice of Human Rights,* Maurice Temple Smith, London, 1985.
17. Macpherson, C. B., "Problems of Human Rights in the Twentieth Century in C.B. Macpherson, *The Rise and Fall of Economic Justice,* OUP, Oxford, 1987.
18. Mills, Kurt, *Human Rights in the Emerging Global Order,* Palgrave Macmillan, 1998.
19. Mohanty, Manoranjan, Partha Nath Mukherji with Olle Tornquist (ed.), *People's Rights, Social Movements and the State in the Third World,* Sage, New Delhi, 1998.
20. Mani, S. D. and Lok Raj Baral (eds.), *Refugees and Regional Security in South Asia,* Konark, New Delhi, 1996.
21. Paraguli, P., "Power and Knowledge in Development Discourse : New Social Movements and State in India," *International Social Science Journal,* 127, February, 1991.
22. Ray, Ashwini, "Civil Rights Movement and Social Struggle in India", *Economic and Political Weekly,* Vol. XXI, No. 28, 12 July, 1986.
23. Rentein, Alison Dundes, *International Human Rights : Universalism vs Relativism,* Sage, 1990.
24. Rubin, B., "Civil Liberties Movements in India : New Approaches to the State", Asian Survey, Vol. 27, 1987, Pp. 371-92.
25. Singh, Pritam, "Sectarianism and Human Rights Discourse : The Politics of Human Rights in the Post-Colonial Punjab" in Michael R. Anderson and Sumit Guha (eds.), *Changing Concepts of Rights and Justice in South Asia,* OUP, Delhi, 1998.
26. Staunhagen, Rodalfo, *The Ethnic Question : Conflicts, Development and Human Rights,* United Nations University Press, Tokyo, 1990.

27. Steriner, Henry J. and Philip Alston, *International Human Rights in Context : Law, Politics and Morals,* Clarendon Press, Oxford, 1996.
28. Tambiah, Stanley, J., *Levelling Crowds : Ethnonationalist Conflicts and Collective Violence in South Asia,* Vistaar Publications, New Delhi, 1997.
29. UNESCO, *Violation of Human Rights : Possible Rights of Recourse and Forms of Resistance,* 1984.
30. UNHCR, *The State of the World's Refugees – A Humanitarian Agenda,* OUP, Oxford, (Latest edition).
31. Vincent, R. J., (ed.), *Foreign Policy and Human Rights,* Cambridge University Press, Cambridge, 1986.
32. Weiner, Myron, *The Global Migration Crisis : Challenge to States and to Human Rights,* Harper Collins, New York, 1995.
33. Wilmer, Frank, *The Indigenous Voice in World Politics : Since Time Immemorial,* Sage, Newbury Park, 1993.
34. Young, Iris, Marion, *Justice and the Politics of Difference,* Princeton University Press, Princeton, 1990.
35. Zolberg, Aristide R., Astri Suhyke and Sergio Aguayo, *Escape From Violence : Conflict and the Refugee Crisis in the Developing World,* OUP, New York, 1989.

Option (e) : NATIONALISM : THEORY AND CONTEXT

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
(iii) The question paper will include the following instructions for the candidates:

(a) The first question is compulsory. It contains 15 questions covering the entire syllabus. The candidates are required to attempt any 10 of them, providing answers to each question in about 25 to 30 words. Each question carries 2 marks.

(b)The remaining question paper consists of 4 units. Each unit carries two questions. The candidates are required to answer one question from each Unit. Each question carries 15 marks.

OBJECTIVES:- This paper examines various theories of nationalism by placing them in the context of their origin. In the process, it examines the concept of nation, its relationshipwith other identities and new challenges it faces in the age of globalization.

UNIT-I

Nation, State and Nation-State: Conceptual Distinctions and Interrelationships.
Origins and Development of Nationalism: European and non-European contexts.
Various forms of nationalism.

UNIT-II

Primordialist theories of nationalism: socio-biological approach (Pierre van der Berghe); culturalist approach (Edward Shils and Clifford Geertz); perennialism (Adrian Hastings).Ethnosymbolist theories: (John Armstrong, Anthony D. Smith).

Modernist theories: nationalism as politics (JohnBreuilly, Paul R. Brass, Erich Hobsbawm); nationalism as social transformation (Ernest Gellner, Benedict Anderson).

UNIT-III

Marxist approach (Marx, Lenin, Rosa Luxemburg, Otto Bauer). Neo-Marxist approaches (tom Nairn, Michael Hector).
Feminstapproach (Nira Yuval-Davis).

UNIT-IV

Postcolonial theory (ParthaChatterjee).
Nationalism and Globalisation

ESSENTIAL READINGS

1. Hutchinson, J. and A.D. Smith (eds.), *Nationalism*,OUP, Oxford, 1994.
2. Ozkirimli, Umut, *Theories Of Nationalism: A Critical Introduction* (second edition), Palgrave Macmillan, New York,2010.

SUGGESTED READINGS

1. Alter, P., Nationalism, Edward Arnold, London, 1989.
2. Anderson, Benedict, *ImaginedCommunities: Reflection on the Origins and Spread of Nationalism*, Verso, London, 1991.
3. Anthiyas, Floya and Nira Yuval-Divas, *Women and the Nation-State*, Macmillan, London, 1989.
4. Balibar, Etienne and Immanuel Wallerstein, *Race, Nation, Class: Ambiguous Identities*, Verso, London, 1991.
5. Chatterjee, Partha, *The Nation and its Fragments*, Oxford University Press, 1994.
6. Connor, Walker, *The National Question in Marxist-Leninist Theory and Strategy*, Princeton University Press, Princeton, 1994.
7. Featherstone, Mike (ed.), *Global Culture: Nationalism, Globalization and Modernity,* Sage, London, 1990.
8. Gellner, Ernest, *Nations and Nationalism*, Blackwell, Oxford, 1983.
9. Hechter, Michael, *Internal Colonialism: The Celtic Fringe in British National Development, 1536-1966*, Routledge and Kegan Paul, London, 1975.
10. Hobsbawm, E.J., *Nations and Nationalism since 1780, Programme, Myth and Reality*, Cambridge University Press, Cambridge, 1990.
11. Ignatieff, Michael, *Blood and Belonging, Journeys into the Nationalism*, BBC Books and Chatto and Windus, London, 1993.
12. Jayawardena, K., *Feminism and Nationalism in the Third World*, New Delhi, 1986.
13. McGraw, A.G. et al (ed.), *Global Politics :Globalization and the Nation-State,* Polity, Oxford, 1992.
14. Nairn, Tom, *The Break-up of Britain: Crisis and Neo-Nationalism*, New Left Books, London, 1977.
15. Smith, Anthony, D., *The Ethnic Origins of Nations*, Blackwell, Oxford, 1986.
16. Smith, Anthony, D., *Theories of Nationalism*, Duckworth, London, 1971
17. Tiech, Mikulas and Roy Porter (eds.), *The National Question in Europe in Historical Context*, Cambridge University Press, Cambridge, 1993

Option (f) : NEW POLITICAL GEOGRAPHY IN COMPARATIVE PERSPECTIVE

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : Political Geography is concerned with the reciprocal impact of spatial patterns, features and structures, and political ideas, institutions. Above all, it focuses on the twin ideas of territory and territoriality. This course is based on the premise that with the Post-World War era coming to a decisive end, a new political geography –one offering fresh perspectives on the relationship between geography and politics—is in the making. Such a political geography recognizes that spatial patterns of political processes are not confined only to national boundaries. The nation-state is a part of a globalizing world, and the resultant geopolitical map contains nested regions with over-lapping boundaries. It is equally important to examine the geopolitical economy of so-called 'resource wars', that is armed conflicts revolving to a significant degree over the pursuit or possession of critical materials. The course will draw upon a number of case studies from different parts of the globe (especially Afro-Asia, Polar Regions and the Indian Ocean region) to enable students develop a better understanding of the politics of space and spaces of politics.

Unit-I

Understanding Key Concepts : Power, Territory/Territoriality, Space and Spatiality.
Globalization and the Regionalization : Integration and Fragmentation.

Unit-II

Territory and the Power of Ethnic Nationalism.
The Geopolitics of 'Resource Wars'.

Unit-III

Environmental Geopolitics and Sustainability (with special reference to the polar regions).
International Migration, Refugee Flows and Diasporas.

Unit-IV

New States and the Geopolitical Transition (with special reference to Central Asian Republics).
Changing nature and role of international boundaries and border regions.

Suggested Readings

1. David Slater, "Geopolitical Imaginations Across the North-South Divide : Issues of Difference, Development and Power," *Political Geography 16 (8)*, November 1997 : 631-654.
2. Ghazi Flah, "The Spatial Manifestation of Threat : Israelis and Palestinian Seek a 'Good' Border," *Political Geography,* 1995, 14 (8) : 689-706.
3. Ian Bremmer and Ray Taras (eds.), *New States, New Politics : Building the Post-Soviet Nations*, Cambridge : Cambridge University Press, 1997.
4. Leif Ohlsson (ed.), *Hydropolitics : Conflicts Over Water as a Development Constraint*, Dhaka University Press Limited, 1996.
5. Linda Weiss, *The Myth of the Powerless State : Governing the Economy in a Global Era,* Cambridge : Polity Press, 1998.
6. Malcolm Anderson*, Frontiers : Territory and State Formation in the Modern World,* Cambridge, Polity Press, 1996.
7. Mekonnen Tesfahuney, "Mobility, Racism and Geopolitics", *Political Geography*, 1998, 17 (5), 499-515.
8. Ramesh Dutta Dikshit, *Development in Political Geography : A Century of Progress*, New Delhi : Sage, 1997.
9. Robert Bennett and Robert Estall (eds.), *Global Change and Challenge : Geography for the 1990s*, London, New York : Routledge, 1991.
10. Sanjay Chaturvedi, *The Polar Regions : A Political Geography*, Chichester : John Wiley & Sons, 1996.
11. Sarah A. Radcliff, "Frontiers and Popular Nationhood : Geographies of Identity in the 1995 Ecuador-Peru-Border Dispute," *Political Geography*, 1998, 17 (3) : 273-293.
12. Stanley D. Brunn & Thomas R. Leinbach (eds.), *Collapsing Space & Time : Geographical Aspects of Communication & Information*, London : Harper Collins Academic, 1991.
13. Tapan K. Bose and Rita Manchanda, *State, Citizens and Outsiders : The Uprooted Peoples of South Asia*, Kathmandu : South Asia Forum for Human Rights, 1997.
14 Vladimir Kolossov and Andrei Treivish, "The Political Geography of European Minorities : Past and Future", *Political Geography*, 1998 : 17 (5) : 517-534.
15 Rajat Ganguli, *Kin State Intervention in Ethnic Conflicts : Lessons from South Asia*, New Delhi : Sage Publications, 1998.
16 Feroz Ahmed, *Ethnicity and Politics in Pakistan*, Karachi : Oxford University Press, 1998.
17 Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism : Essays North-South,* Delhi : Oxford University Press, 1997.
18 Stephen Castles & Mark J. Miller, *The Age of Migration : International Population Movements in the Modern World,* Houndmills, MacMillan, 1998 (Second Edition)
19 Agnew, J., *Making Political Geography*, London : Arnold, 2002.

20 Blackwell, M., *Political Geography*, London : Routledge, 2002.

21 Cox, K.R., *Political Geography: Territory, State and Society*, Oxford : Blackwell, 2002.

22 Dodds, K., *Geopolitics in a Changing World*, Harlow : Pearson Education, 2000.

23 Glassner, M. and Fahrer, C., *Political Geography*, Chichester : John Wiley & Sons, 2003.

24 Jones, M., *An Introduction to Political Geography*, London : Routledge, 2004.

25 Loughlin, John O. *Dictionary of Geopolitics*, Westport : Greenwood Press.

26 Painter, J., *Politics, Geography and 'Political Geography'*, London : Arnold, 1995.

27 Tuathail, G.O., Dalby, S. and Routledge, P., *The Geopolitics Reader*, London : Routledge, 2007.

28 Rumley, D. and Chaturvedi, S., *Energy Security and the Indian Ocean Region*, New Delhi : South Asian Publishers, 2005.

Journals

Political Geography.
Progress in Human Geography.

*Geopolitics** A Frank Cass Journal, (see in particular *Special Issue* on "The Geopolitics of Resource Wars", Volume 9, number 1, Spring 2004 : Special Issue on "Boundaries, Territory and Post-Modernity, Volume 3, Number 1, Summer 1998).

*Note : This journal is also available on line at Panjab University library website.

Option (g) : POLICIES AND POLITICS OF DEVELOPMENT IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper familiarises students with the various trajectories of the Indian development experience and their interaction with politics since independence.

Unit-I

The Colonial Experience.
National Movement : Debates on Development.
Planning and its precursors.

Unit-II

Agriculture and the Institutional Strategy.
Politics of land reforms.
New Agricultural Policy.
Green Revolution and the Rise of agrarian power/capitalism.

Unit-III

Politics of industrial Policy.
State and Business : Labour, Import Substitution and Nationalisation.
Politics of business groups.

Unit-IV

Economic Reforms : Background, Scope and Content.
Political Economy of Reforms.
Economic Reforms, Democracy and Electoral Politics.

Readings

1. Amit Bhaduri and Deepak Nayar, *The Intelligent Person's Guide to Liberalisation* (New Delhi : Penguin, 1996).

2. Ashutosh Varshney, *Democracy, Development and the Countryside : Urban-Rural Struggles in India*, (Cambridge : Cambridge University Press, 1995).

3. Atul Kohli, 'Politics of Economic Liberalisation in India', *World Development* 17(3), 1989 : 305-28.

4. Atul Kohli, The Politics of Economic Growth in India, 1980-2005: Part I-1980s, *Economic and Political Weekly* XLI (13) April 1, 2006 :1251-68.

5. Atul Kohli, The Politics of Economic Growth in India, 1980-2005 : Part II- The 1990s and Beyond, *Economic and Political Weekly* XLI (14) April 8, 2006 :1361-70.

6. Atul Kohli, *The State and Poverty in India : The Politics of Reform* (Cambridge : Cambridge University Press, 1987).

7. Baldev Raj Nayar, *Globalisation and Nationalism : The Changing Balance in India's Economic Policy*, 1950-2000 (New Delhi: Sage, 2001).

8. Baldev Raj Nayar, *India's Mixed Economy : The Role of Ideology and Interest in its Development* (Bombay : Popular Prakashan, 1989).

9. Baldev Raj Nayar, "Policy and Performance under Democratic Coalitions : India's United Front Government and Economic Reforms, 1996-98", *Journal of Commonwealth and Comparative Politics*, 37(2) July 1999 : 22-56.

10. Bimal Jalan (ed.), *Indian Economy : Problems and Prospects*, (New Delhi : Oxford, 1993).

11. Bipan Chandra, *The Rise and Growth of Economic Nationalism in India.*

12. Deepak Naayar, 'Economic Development and Political Democracy : Interaction of Economics and Politics in Independent India', *Economic and Political Weekly* 39(21) : 2079-31.

13. Dige Jorgen Pedersen, 'Explaining Economic Liberalisation in India : State and Society Perspectives', *World Development*, 28(2) 2000 : 265–82.

14. Donald Horowitz, 'Is there a third-world policy process', *Policy Sciences*, 22, 1989 : 197–212.

15. E. Sridharan, "Economic Liberalisation and India's Political Economy : Towards a Paradigm Synthesis", *Journal of Commonwealth and Comparative Politics*, 31(3), November, 1993.

16. Francine R. Frankel, *India's Political Economy : The Gradual Revolution 1947-2004*, (New Delhi : Oxford, 2005) 2nd Edition.

17. G. Thimmaiah, 'The Political Economy of Populist Programmes', *Journal of Indian School of Political Economy*, 8(1),1996 : 40–63.

18. Ian Little and Vijay Joshi (eds.), *India's Economic Reforms*, 1964-91, (Delhi : Oxford, 1998).

19. Isher Judge Ahluwalia, *Industrial Growth in India : Stagnation since the Mid-Sixties* (Delhi : Oxford, 1985).

20. Jagdish Bhagwati, *India in Transition : Freeing the Economy*, (New Delhi : Oxford, 1993).

21. Jeffrey D. Sachs, Ashutosh Varshney and Nirupam Bajpai (eds.) *India in the Era of Economic Reforms* (New Delhi : Oxford, 1999).

22. Jos Mooij (ed.), *The Politics of Economic Reforms in India* (New Delhi : Sage, 2005).

23. Lawrence Saez, *Federalism without a Centre : The Impact of Political and Economic Reform on India's Federal System* (New Delhi : Sage, 2002).

24. Lloyd Rudolph and Susanne Rudolph, *In Pursuit of Lakshmi : The Political Economy of the Indian State* (Chicago : Chicago University Press, 1987).

25. Mark Robinson and Gordon White (ed.), *Democratic Developmental State* (Delhi, 1998).

26. Niraja Gopal Jayal and Sudha Pai (eds.), *Democratic Governance in India: Challenges of Poverty, Development and Identity* (New Delhi : Sage, 2001).

27. Pradeep Chhibber, 'Political Parties, Electoral Competition, Government Expenditures and Economic Reforms in India', *Journal of Development Studies*, 32(1), 1995 : 74–96.

28. Pranab, Bardhan, *The Political Economy of Development in India* (expanded edition with an epilogue on the Political Economy of Reform in India) (New Delhi, Oxford, 1998).

29. Rob Jenkins, *Democratic Politics and Economic Reform in India* (Cambridge University Press, New Delhi, 1999).

30. Robert Cassen and Vijay Joshi (eds.), *India : The Future of Economic Reforms* (New Delhi : Oxford, 1995).

31. Robert Wade, 'The Market for Public Office : Why the Indian State is not Better at Development', *World Development*, 13(4), 1985 : 467–97.

32. Sanjay Kumar, 'Impact of Economic Reforms on Indian Electorate', *Economic and Political Weekly* 39(16): 1621-30.

33. Stanley Kochanek, 'Liberalisation and Business Lobbying in India', *Journal of Commonwealth and Comparative Politics* 34(3), 1996: 155–73.

34. Stanley Kochanek, 'The Transformation of Interest Politics in India', *Pacific Affairs*, 68 (4), 1996 : 529–50.

35. Stanley Kochanek, *Business and Politics in India* (Berkeley : University of California Press, 1974).

36. Stuart Corbridge and John Harris, *Reinventing India : Liberalisation, Hindu Nationalism and Popular Democracy* (New Delhi : Oxford, 2003) 2nd Edition.

37. Sukhamoy Chakravarthy, *Development Planning : The Indian Experience* (New Delhi : Oxford, 1987).

38. Terence J. Byres (ed.), *The Indian Economy : Major Debates Since Independence* (New Delhi: Oxford, 1998).

39. Terence J. Byres (ed.), *The State, Development Planning and Liberalisation in India* (New Delhi : Oxford, 1997).

40. Vanita Shastri, 'The Politics of Economic Liberalization in India', *Contemporary South Asia*, 6(1), 1997 : 27–56.

41. Vivek Chibber : *Locked in Place : State Building and Late Industrialisation in India,* (New Delhi : Tulika, 2004).

Course XII: Option (h) : PUBLIC ADMINISTRATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper will introduce students to different aspects of public administration with special reference to India.

UNIT-I

Development of Public Administration as a discipline – Basic concepts of administration – Nature and Scope – private and public administration – control over Administration, Executive, Legislative, Judiciary.

UNIT-II

Principles of Organization : Line & Staff Agencies
Type of Organization : Formal & Informal
Forms of Organization, Departmental, Public Corporation and Board.

UNIT-III

Personnel Administration, Bureaucracy and Civil Service, Recruitment, Promotion, Training and Civil Service Neutrality.

Financial Administration : Importance of Fiscal Management Budgetary Process in India. The Finance Ministry, Organization and Functions, Budgetary Control – Financial Committees of Parliament – Public Account Committee and Estimate Committee – Audit in India, Comptroller and Auditor General.

UNIT-IV

Administration Law, Delegated Legislation : Need for Delegation, Delegated Legislation in India; Parliamentary Control of Delegated Legislation.

Administration Tribunals : Emergence and significance of Administrative Tribunals, Judiciary and Administrative Tribunals.

Administrative Improvement and Reforms ; Lok Pal and Lok Ayukta.

Books Recommended :

1. M. P. Sharma & B.L. Sadana : *Public Administration in Theory and Practice*, Kitab Mahal, 2004.

2. C.P. Bhambari : *Administration in Changing Society,* National, 1978.

3. C.P. Bhambari : *Public Administration (Theory and Practice),* J.P.Nath & Co., 1972.

4. A. Avasthi and S. Maheshwari : *Public Administration,* Lakshmi Narain Agarwal, 1966.

5. Ramesh K. Arora : *Comparative Public Administration : An Ecological Perspective, Associate Publishing House, 1972.*

6. R.S. Milne : *Concepts and Models in Public Administration,* IIPA, 1966.

7. Chester Barnard : *The Functions of the Executive,* Cambridge, 1928.

8. J.S. Bhalla : *Public Enterprise in U.K., U.S.A., and India,* 1969.

9. Lee, Hahn Been and Samonte, Abelardo G. (eds) : *Administration Reforms in Asia, EROPA, 1970, See Particularly J.N. Khosla " Administration Reforms in Asia",* pp 270-286.

10. Pfiffner & Sherwood : *Administrative Organisation, Prentice-Hall, 1968.*

11. Amitai Etzioni : *Modern Organisation, Prentice Hall, 1972.*

12. Edwin B. Flippo : *Principles of Personnel Management (Fourth Edition), McGraw-Hill, Kogakusha Ltd., 1976.*

13. HPA : *Personnel Administration-Implementing the Reforms, IIPA, 1967.*

14. Administrative Reforms Commission Report on Personnel Administration (New Delhi : 2010)

15. C.P. Bhambri : *Public Administration (Theory and Practice (Meerut : Educational Published 21th edition 2010)*

16. Mohit Bhattacharya : *Public Administration (Calcutta : World Press, 2000)*

17. S. L. Kaushik and Pardeep Sahni (eds.) : *Public Administration in India : Emerging Trends (Allahabad : Kitab Mehal, 2007)*

18. William A. Niskanen : *Bureaucracy and Representative Government (Chicago: Atherton, 2007)*

FOURTH SEMESTER

Course XIII : INDIAN POLITICAL THOUGHT-II (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces the major themes of Indian Political Thought particularly during the Indian National Movement through a study of the contribution of key thinkers during this period.

Unit-I

- M.K. Gandhi : Politics of Non-violence.
- Satyagraha and Swaraj.
- Sarvodaya.

Unit-II

- Challenging Brahminical Discourse : B.R. Ambedkar.
- Critique of Brahminical Hinduism.
- Class, Caste and Democracy.

Unit-III

- Politics and Philosophy of M. N. Roy : Theory of Radical Humanism, Roy-Lenin Controversy.
- The Ideology of Communist Movement in India.

Unit-IV

- Indian Socialist Tradition : Jawaharlal Nehru, R.M. Lohia and Jayprakash Narayan.

Essential Readings

1. Appadorai, A., *Indian Political Thinking in the Twentieth Century : From Naoroji to Nehru* (London, OUP,1971).
2. Bali, D.R., *Modern Indian Thought* (New Delhi, Sterling, 1980).
3. Baxi Uppendra & Parekh, B. (eds.), *Crisis and Change in Contemporary India* (New Delhi, Sage, 1995). Doctor, A.H., *Political Thinkers of Modern India* (New Delhi, Mittal, 1997).
4. Brown, D.M., *Nationalist Movement : Indian Political Thought from Ranade to Bhave* (Berkeley : University of California Press, 1965).
5. Pantham, Thomas and Deutsch, K.L. (eds.), *Political Thought in Modern India* (New Delhi, Sage, 1986).
6. Pantham, Thomas, *Political Theories and Social Reconstruction* (New Delhi, Sage, 1995).
7. Parekh, B. and Pantham, Thomas (eds.), *Political Discourse: Exploration in Indian and Western Political*
8. Parel, Anthony J. & Keith Ronald C. (eds.), *Contemporary Political Philosophy* (New Delhi, Sage, 1992). Vanna, V.P., *Modern Indian Political Thought* (Agra : Lakshami Narain, 1996), 11th Revised Edition. *Thought* (New Delhi, Sage, 1987).

Specific Readings

1. Arooran, A. N., *Tamil Renaissance and Dravdian Nationalism,* 1905-44 (Madurai : Koodal, 1980).
2. Chandra, Bipan (ed.), *The Indian Left : Critical Appraisal* (New Delhi, Vikas, 1983).
3. Chatterjee, Partha, *Nationalist Thought and The Colonial World* (Delhi : OUP, 1986).
4. Chatterji, Bhola, *Conflict in J. P.'s Politics* (New Delhi : Ankur, 1984).
5. Dalton, Dennis, "The Ideology of Sarvodaya" in *Pantham and Deutsch,* 1986.
6. Das, M. N., *Political Philosophy of Nehru* (London : George Allen and Unwin, 1961).
7. Dasgupta, Biplab, *The Naxalite Movement* (Bombay, Allied, 1974).
8. Doctor, Adi H., "Low Caste Protest Movements in 19th and 20th Century Maharashtra : A Study of Jyotirao Phule and B. R. Ambedkar," *Indian Journal of Social Science,* IV (2), April-June, 1991.
9. Gard, R.A., *Buddhist Political Thought : A Bibliography* (Washington : School of Advanced International Studies, 1952).
10. Ghatak, B.K. (ed.), *Dr. Ambedkar's Thought* (New Delhi : APH, 1997).
11. Ghose, Shankar, *Socialism and Communism in India* (Bombay, Allied, 1971).
12. Guha, Ranjit, "Dominance Without Hegemony and its Historiography" in Guha (ed.), *Subaltern Studies VI* (Delhi : OUP, 1989).
13. Gupta, S. D., *Comintern, India and the Colonial Question* (Calcutta : K. P. Bagichi, 1980).
14. Haiah, Kancha, "Towards the Dalitaization of the Nation in Partha Chatterjee" (ed.), *Wages of Freedom* (Delhi : OUP, 1988).
15. Irschik, F., *Politics and Social Conflict in South Asia : The Non-Brahmin Movement and Tamil Separatism,* 1916-29 (Berkeley : University of California Press, 1969).
16. Iyer, Raghavan, *The Moral and Political Thought of Mahatma Gandhi* (Delhi : OUP, 1973).
17. Jatava, D. R., *The Political Philosophy of B. R. Ambedkar* (Agra Phoenic, 1965).
18. Josh, Bhagwan, *Struggle for Hegemony in India, 1920-1947,* Vol., II : 1934-41 (New Delhi : Sage, 1992).

19. Juergensmeyer, Mark, "Shoring up the Saint : Some Suggestions for Improving Satyagraha" in John, Hick and Lamont, C. Hempel (eds.), *Gandhi's Significance for Today* (London : Macmillan, 1989).
20. Kantowsky, D., *Sarvodaya : The Other Development* (New Delhi : Vikas, 1980).
21. Kaviraj, Sudipta, "The Heteronomous Radicalism of M. N. Roy" in *Pantham and Deutsch,* 1986.
22. Keer, Dhanajayay, *Dr. Ambedkar : Life and Mission* (Bombay : Popular Parkashan, 1964).
23. Martyshin, Orest, *Jawaharlal Nehru and His Political Views* (Moscow : Progress, 1989).
24. Mehrotra, N. C., *Lohia : A Study (*Delhi *:* Atma Ram and Sons, 1978).
25. Mohanty, Manoranjan, "Ideology and Strategy of the Communist Movement in India" in *Pantham and Deutsch,* 1986.
26. Mukherjee, Partha N., "Sarvodaya After Gandhi" in Ramashray Roy (ed.), *Contemporary Crisis in Gandhi* (Delhi : Discovery, 1986).
27. Nagaraj, D. R., "A Tibetian Dog, The Silent Sadhus and Peasants of Champaran Notes on Violence, Non-Violence and Counter-Violence in Gandhi" in Ramashray Roy (ed.), *Gandhi and the Present Global Crisis* (Shimla : IIAS, 1996).
28. Nandy, Ashis, "From Outside the Imperium : Gandhi's Cultural Critique of the West" in *Roy,* 1986.
29. O'Hanlon, Rosalind, *Caste, Conflict and Ideology : Mahatma Jotirao Phule and Low Caste Protest in Nineteenth Century Western India* (London : Cambridge, University Press, 1985).
30. Omvedt Gail, *Dalits and the Democratic Revolution : Dr. Ambedkar and the Dalit Movement in Colonial India* (Delhi : Sage, 1994).
31. Omvedt, Gail, *Cultural Revolution in a Colonial Society : The Non-Brahman Movement in Western India 1873 to 1940* (Bombay : SSET, 1976).
32. Omvedt, Gail, *Dalit Visions* (New Delhi : Orient Longman, 1995).
33. Ostergaard, Geoffrey, "The Gandhian Movement in India since the Death of Gandhi" in *Hick and Hempel,* 1989.
34. Overstree, G. D. and Marshall Windmiller, *Communism in India* (Bombay, Perennial Press, 1969).
35. Pantham Thomas, "Understanding Nehru's Political Ideology" in Amal Ray (et. al.) (eds.), *The Nehru Legacy : An Appraiser* (Delhi : Oxford and IBH, 1991).
36. Pantham, Thomas, "Gandhi's Quest for Non-Violent Political Philosophy" in L. Rouner (ed.), *Celebrating Peace* (Notre Dame, University of Notre Dame Press, 1991).
37. Pantham, Thomas, "Gandhi's Theory of Non-Violence : His Reply to the Terrorist" in Neol O'Sullivan (ed.), *The Theory and Practice of Terrorism* (Sussex, 1986).
38. Pantham, Thomas, "Habermas's Practical Discourse and Gandhi's Satyagraha" in *Parekh and Pantham,* 1987.
39. Pantham, Thomas, "Postrelativism in Emancipatory Thought : The Significance of Gandhi's Swaraj and Satyagraha", in Sheth, D.L. and Nandy, Ashis (eds.), *The Multiverse of Democracy* (Delhi : OUP, 1997).
40. Pantham, Thomas, Parekh, Bhikhu, *Gandhi's Political Philosophy* (London, Macmillan, 1989).
41. Pillai, R. C., "The Political Thought of Jawaharlal Nehru" in *Pantham and Duetsch,* 1986.
42. Prasad, Bimal, *Jayprakash Narayan : Quest and Legacy* (New Delhi, Vikas, 1982).
43. Prasad, N. (ed.), *J. P. and Social Change* (Delhi, Radiant, 1982).
44. Prasad, R. A., *Socialist Thought in Modern India* (Delhi : Meenakshi, 1974).

45. Ram, Mohan, *Indian Communism : Split Within a Split,* (New Delhi : Vikas, 1969).
46. Rao, K. Raghavendra, "Communication Against Communication : The Gandhian Critique of Modern Civilization in Hind Swaraj" in *Parekh and Pantham, 1987.*
47. Ray, Sibnarayan (ed.), *M. N. Roy : Philosopher Revolutionary* (Delhi, Ajanta, 1995).
48. Roy, M. N., *New Humanism* (Calcutta : Renaissance, 1953).
49. Roy, Samaren, *M. N. Roy : A Political Biography* (Hyderabad : Orient Longman, 1997).
50. Seth, Sanjay, *Marxist Theory and Nationalist Politics : The Ease of Colonial India* (New Delhi : Sage, 1995).
51. Sinha, L. P., *The Left Wing in India* (Muzaffarpur, New Publishers, 1965).
52. Srinivasan, R., "The Ideological Genesis of the Dravidian Movement", *Indo-British Review,* January-June, 1987.
53. Srivastava, R.K., "Sarvodaya; Vision and Reality" in Roy, 1986.
54. *The Philosophy and Practice of Radical Humanism* (New Delhi : Radical Humanist Association, 1970).
55. Yopadgtata, P.C., "A Celebration of the Gandhian Alternative", *Economic and Political Weekly,* 2nd December, 1989.
56. Zelliot, Eleanor, "The Social and Political Thought of B. R. Ambedkar" in *Pantham and Deutsch,* 1986.

Course XIV : FOREIGN POLICY OF INDIA (Compulsory)

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The course tries to underline the changes, which the shifting nature of world order has induced into the more enduring elements and themes of Indian foreign policy. At the same time, India's growing assertion on the world stage as an important international actor is assessed in the light of its role in various global regimes.

Unit –I: Making of Indian Foreign Policy

1. Legacies and Actors
2. Principal Phases of Indian Foreign Policy
3. Transition from Nehruvianism to Neoliberalism

Unit-II: India's Economic Foreign Policy

4. Global Setting: IMF, WB, and WTO
5. Regional Setting: SAARC and Beyond

Unit–III: India's Strategic Foreign Poicy

6. India's Strategic concerns at global and regional level
7. India's Nuclear Policy

Unit-IV: India's Environmental Policy:

8. Climate Change
9. Energy Security

Essential Readings

1. C Raja Mohan , *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).
2. A. Appadorai and M. S. Rajan, *India's Foreign Policy and Relations* (South Asian Publishers, 1988).
3. Achin Vanaik, *India in a Changing World* (Orient Longman, 1995).
4. C. Raja Mohan, *Modi's World*: *Expanding India's Sphere of Influence* (Harper Collins, 2015).
5. David Malone, C. Rajamohan, Srinath Raghavan (Eds.), *The Oxford Handbook of Indian Foreign Policy* (Oxford Handbooks 2015).
6. Imtiaz Ahmed (ed.), *Indian Foreign Polic* (Delhi , Vikas Publishing House, 1993).
7. J. N. Dixit, *Makers of Indian Foreign Policy: From Raja Ram Mohan Roy to Yashwant Sinha*, 2003. (New Delhi: Harper Collins, 2003)
8. J.N. Dixit, *Indian Foreign Policy, 1947-2003* (New Delhi, D. K. Publications, 2003).
9. Kanti Bajpai and Harish V. Pant (eds.), *India's Foreign Policy*: *A Reader* (Oxford University Press, 2013)
10. Kanti Bajpai, *India and the world*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.
11. Kanti P. Bajpai and Amitabh Mattoo eds., *Securing India: Strategic Thought and Practice*, (New Delhi, Manohar Publishers, 1996).
12. Muchkund Dubey, *India's Foreign Policy: Coping with the Changing World* (Pearson, 2012)
13. R. S. Yadav, Bhartiya Videsh Niti (Hindi Edition).
14. Sumit Ganguly, *Indian Foreign Policy* (Oxford India Short Introductions Series, 2015).
15. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
16. Sunil Khilnani, Rajiv Kumar, Pratap Bhanu Mehta et al, *NONALIGNMENT 2.0: A Foreign and Strategic Policy for India in the Twenty First Century,* New Delhi, 2012
17. V. P. Dutt, *India's Foreign Policy* (New Delhi, Vikas, 1984).

Suggested Readings

1. A. Kapur and A. J. Wilson, *The Foreign Policy of India and her Neighbours*, (Basingstroke: Macmillan, 1996).
2. A.P. Rana, *The Imperatives of Non-Alignment*: *A Conceptual Study of India's Foreign Policy Strategy in the Nehru Period*, (Macmillan, 1976).

3. Bimal Prasad (ed.), *Indian Foreign Policy* (New Delhi, Vikas).

4. C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's Foreign Policy* (Palgrave, Macmillan, 2004).

5. Harish Kapur, *India's Foreign Policy, 1947-1992*: *Shadows and Substance* (New Delhi, Sage, 1994).

6. Iqbal Singh, *Between Two Fires: Towards an Understanding of Nehru's Foreign policy,* (Hyderabad: Orient Longman, 1998).

7. Itty Abraham, *The Making of the Indian Atomic Bomb, Science, Secrecy and the Postcolonial State*, (Zed Books, 1998).

8. J. N. Dixit, *Indian Foreign Policy and its Neighbours* (New Delhi, Gyan Books, 2001).

9. J.N. Dixit, *Across Borders: Fifty Years of India's Foreign Policy* (New Delhi, Picus Books, 1998).

10. J.N. Dixit, *My South Block Years: Memoirs of a Foreign Secretary*, (New Delhi, UBSPD), 1996.

11. K. Subrahmanyam, "Nehru and the India-China Conflict of 1962", in *Indian Foreign Policy: The Nehru Years*, ed. B.R. Nanda, (New Delhi, Vikas, 1976)`.

12. Lalit Mansingh et al. (eds), *Indian Foreign policy: Agenda for the 21st Century* (New Delhi: Konark Publishers, 1997).

13. M. S. Rajan, *India and International Affairs: A Collection of Essays* (New Delhi, Lancers Books, 1999).

14. M.J. Akbar, *Nehru: The Making of India*, (London, Penguin Books, 1988).

15. N. Jayapalan, *Foreign Policy of India* (Delhi, Atlantic, 2001).

16. Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

17. Robert W. Bradnock, *India's Foreign Policy Since 1971.* (London, Pinter Publishers, 1990.

18. Ronald, Inden, *Imaging India* (Cambridge, MA, Blackwell, 1992).

19. Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York, Simon and Schuster, 1996).

20. Stepehn D. Krasner, *Structural Conflicts: The Third World Against Global Liberation* (Berkeley, University of California Press, 1985).

21. Sumit Ganguly, *Indian Defence Policy*, in Nirja Gopal Jayal and Pratap Bhanu Mehta (eds.), *The Oxford Companion to Politics in India*, OUP, 2010.

22. Surjit Mansingh, *India's Search for Power, Indira Gandhi's Foreign Policy, 1966-1982* (Delhi, Sage, 1984.)

23. V. P. Dutt, *India's Foreign in a Changing World* (New Delhi, Vikas, 1999).

Course XV : ***The candidates are required to offer any one of the following courses :***

Option (a) : PARTIES AND ELECTORAL POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : It helps the students to understand the evolution and transformation of political parties in India. It also analyses different issues that impinge on party politics and challenges posed by parties and party system to Indian democracy.

Unit-I

Political Parties and Party Politics in Contemporary India :

- A political, sociological and economic analysis.
- Federalism, regionalism and political parties.
- Party system in transition.

Unit-II

National Political Parties :

- Ideology and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-III

Regional and State Parties :

- Origin and Development.
- Social bases and leadership pattern.
- Electoral performance.

Unit-IV

Electoral Politics in India :

- Role of Social cleavages and elections.
- Electoral reforms and the Electoral process.
- New Social Movements, NGOs and their impact on political parties.

Selected Readings

1. Chatterjee, Partha (Ed.), *State and Politics in India*, OUP, 1999.
2. Hasan, Zoya, (Ed.), *Parties and Party Politics in India*, New Delhi, Oxford, 2001.
3. Mehra, Ajay Kumar, D.D. Khanna and Gert W. Kueck (Ed.) , *Political Parties and Party Systems*, Sage Publications, New Delhi, 2003.
4. Mitra, Subrata K. and V.B. Singh, *Democracy and Social Change in India : A Cross Sectional Analysis of the National Electorate*, Sage, 1999.
5. Kohli, Atul, *Centralization and Powerlessness : India's Democracy in a Comprehensive Perspective* in Midgal, Joe, Atul Kohli and Vivenne Shue (Eds.) , *State Power and Social Forces*, Cambridge University Press, 1994.
6. Roy, Ramashray and Paul Wallace (Eds.), *India's 1999, Elections and 20th Century Politics*, Sage, New Delhi, 2003.
7. Vora, Rajendra and Suhas Palshikar (Eds.), *Indian Democracy*, Sage, New Delhi, 2003.

Option (b) : STATE POLITICS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: There is much recognition and appreciation of the regional states to be viewed as important political and economic units for developing a theoretical framework for analysing politics and economy undergoing a transition in recent India. The regional states are being considered as critical to the understanding of the issues pertaining to emergent national politics and economy. This course aims to explore the multiple dimensions of state as well as sub-state level politics in India in a comparative perspective.

Unit -I

A Theory of State Politics in India

a. Rise of State Politics as an Autonomous Discipline: Survey of Literature
b. Beyond Nation-State: Framing Regional Politics in India

Unit-II

Language, Region and Federal Polity

a. Reorganization of States in Independent India: 1953-1999
b. Recent Demands for New States: Shifting Bases
c. Politics of Autonomy/Self-determination: Punjab, Jammu and Kashmir
d. Regionalization of Politics: State Level Parties, Coalitional Politics at the State Level

Unit -III

Dalit and Backward Classes Movements

a. Tamil Nadu : Dravidian Movement and Lower Castes Assertion
b. Uttar Pradesh: Lower and Middle Castes Political Assertion
c. Punjab: Ad-Dharm Movement, Dalit Cultural Assertion

Unit-IV

Regional Roots of Development Politics in India: State Level Experiences

a. State, Political Regimes and Social Welfare Policy: Stark Variations across the States
b. Agrarian Politics in the States: Green Revolution, Farmers' Movements, Farmers' Suicides
c. Politics of Economic Reforms and Growing Spatial Disparity: Regional States and Sub-Regions

Essential Readings

1. Frankel, Francine and M.S.A. Rao, eds, *Dominance and State Power in Modern India,*
2. Jenkins, Rob, *Regional Reflections: Comparing Politics across India's States, Oxford* University Press, New Delhi, 2004.
3. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
4. Narain, Iqbal, ed., *State Politics in India*, Meenakshi Prakashan, Meerut, 1976.
5. Pai, Sudha , *Handbook on Politics in the Indian States Regions, Political Parties and Economic Reforms (*Ed.). Oxford University Press, New Delhi, 2013.
6. Weiner, Myron, ed., *State Politics in India*, Princeton University Press, New Jersey, 1968.
7. Wood John R, ed., *State Politics in Contemporary India: Crisis or Continuity*, Westview Press, Boulder, 1984.

Suggested Readings:

Unit I

1. Crane, Robert I. (ed.), *Regions and Regionalism in South Asian Studies: An Exploratory Study*, Duke University Monograph series, 1967.
2. Fadia, B., *State Politics in India*, Radiant Publishers, New Delhi, 1984.
3. Gould, W. *Hindu Nationalism and the Language of Politics in Late Colonial India*, Cambridge University Press, Cambridge, New York, 2004.
4. Heller, Patrick, 'Degrees of Democracy: Some Comparative Lessons from India', *World Politics*, 52, July, 2000. 484-519.
5. Iyer, L., 'Direct versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, 92(4), 2010, 693–713.
6. Jacob, Suraj, 'Towards a Comparative Sub-national Perspective on India', *Studies in Indian Politics*, December 2015 vol. 3 no. 2 229-246
7. Kailash, K. K., 'Varieties of Comparative State Politics Research in India', Seminar, 620, 2011, 66-71.
8. Kohli, Atul and Prerna Singh (eds.), *Handbook of Indian Politics*, Routledge, London, 2013.
9. Kumar, Ashutosh, ed., *Rethinking State Politics in India: Regions within Regions,* Routledge, New Delhi, 2011.
10. Markovits, C., *A History of Modern India*, 1480–1950, Anthem, London, 2002.

11. Pai, Sudha, *State Politics New Dimensions: Party System, Liberalization and Politics of Identity.* Shipra Publications, New Delhi, 1999.
12. Palshikar, Suhas and Rajeswari Deshpande, 'Redefining State Politics in India', 2009, http://www.lokniti.org/newsletter/theme_note.pdf
13. Shastri, Sandeep and K. C. Suri and Yogendra Yadav, eds., *Electoral Politics in Indian States*, Oxford University Press, New Delhi, 2009.
14. Sinha, Aseema, 'Scaling Up: Beyond the Sub-national Comparative Method for India', *Studies in Indian Politics*, 3(1), June, 2015, 128-133.
15. Synder, Richard, 'Scaling Down: The Subnational Comparative Method', *Studies in Comparative International Development*, 36(1), March, 2001, 93-110
16. Tillin, Louise, 'National and Subnational Comparative Politics: Why, What and How', *Studies in Indian Politics*, 1(2), December, 2013, 235-240.

Unit II

1. Ahmed, B., 'Elections and Party Politics in India: A Symposium'. *Asian Survey* 10(11), November, 979–92, 1970.
2. Bose, Sumantra, *States, Nations, Sovereignty: Sri Lanka, India and the Tamil Eelam Movement*, Sage, New Delhi, 1999.
3. Brar, Bhupinder, Ashutosh Kumar and Ronki Ram, eds, *Globalization and Politics of Identity in India*, Pearson-Longman, New Delhi, 2008.
4. Brass, Paul R, *Language Religion and Politics in North India,* Cambridge University Press, 1974.
5. Chadha Behera, Navneeta, *State, Identity and Violence; Jammu, Kashmir and Ladakh*, Manohar, New Delhi, 2000.
6. Chandra, K. and S. Wilkinson, 'Measuring the Effect of 'Ethnicity,' Comparative Political Studies 41(4–5), 2008, 515–63.
7. Chandra, K. *Why Ethnic Parties Succeed: A Comparative Study of the Bahujan Samaj Party Across Indian States*, Cambridge University Press, New York, 2000.
8. Chhibber, Pradeep K. and I. Nooruddin, 'Do Party Systems Count? The Number of Parties and Government Performance in the Indian States', *Comparative Political Studies,* 37(2), 2004, 152–87
9. Dasgupta, J., *Language Conflict and National Development: Group Politics and National Language Policy in India,* University of California Press, Berkeley, 1970.
10. Jaffrelot, Christophe and Sanjay Kumar, eds, *Rise of the Plebeians: The Changing Face of Indian Legislative Assemblies*, New Delhi, Routledge, 2009.
11. Kailash, K.K., 'Federal Calculations in State Level Coalition Governments', *India Review*, 10(3), July–September, 2011, 246–282.
12. Kudasia, Gyanesh, *Region, Nation, "Heartland": Uttar Pradesh in India's Body Politic*, New Delhi, Sage, 2006.
13. Mawdsley, Emma, 'Redrawing the Body Politic: Federalism, Regionalism and the Creation of New States in India', *Journal of Commonwealth and Comparative Politics*, 40(3): pp. 34-54.
14. Robinson, John, 'Regionalizing India: Uttarakhand and the Politics of Creating States', *South Asia: Journal of South Asian Studies*, 24(2):189-212, 2001.
15. Samaddar, Ranabir, ed., *The Politics of Autonomy: Indian Experiences*, Sage, New Delhi, 2005.
16. Sarangi, Asha, ed., *Language and Politics in India,* Oxford University Press, New Delhi, 2009.
17. Stepan, Alfred, J. Linz, and Yogendra Yadav, *Crafting State-Nations: India and Other Multinational Democracies,* Johns Hopkins University Press, Baltimore, 2011.
18. Wallace, Paul, ed., Region *and Nation in India,* Oxford University Press, Delhi, 1985.

19. Wilkinson, Steven, *Electoral Competition and Ethnic Violence in India.* Cambridge University Press, Cambridge and New York, 2004

Unit III

1. Deliege, R., *The World of the "Untouchables": Paraiyars of Tamil Nadu*, Oxford University Press, New Delhi, 1997.
2. Geeta, V., Rajdurai, 'Dalits and Non-Brahmin Consciousness in Colonial Tamil Nadu' *Economic and Political Weekly*, 28(39), September 25, 1993.
3. Hasan, Zoya, *Dominance and Mobilization: Rural Politics in Western Uttar Pradesh 1930-1980,* New Delhi, 1989.
4. Irschick, E. F., *Politics and Social Conflict in South India, the Non-Brahman Movement and Tamil Separatism*, 1916–1929. University of California Press, Berkeley and Los Angeles, 1969.
5. Jaffrelot, Christophe, *India's Silent Revolution the Rise of the Low Castes in North Indian Politics, Permanent* Black, New Delhi, 2003.
6. Jayal, Niraja Gopal, '*Federal Anxieties, Democratic Desires: The Politics of Governance Reform in Two Indian States'*, LSE, London, 2006. www.crisisstates.com.
7. Kumar, Ashutosh, 'Deras as Sites of Electoral Mobilization in Indian Punjab: Explaining Why Political Parties Do Flock to the Deras', *Asian Ethnicity*, Routledge, London, 17(3): 335-350, (June), 2014.
8. Pai, Sudha , *Dalit Assertion*, Short Introduction, Oxford University Press, 2013.
9. Pai, Sudha, *Dalit Assertion and the Unfinished Democratic Revolution: The BSP in Uttar Pradesh,* Sage Publications, New Delhi, 2002.
10. Pandey, Gyan, *The Construction of Communalism in Colonial North India*, Oxford University Press, Delhi, 1990.
11. Pandian, M. S. S., *Brahmin & Non-Brahmin: Genealogies of the Tamil Political Present,* New Delhi: Permanent Black, 2003.
12. Ram, Ronki (2016) 'Religion, identity and empowerment: the making of Ravidassia Dharm (Dalit Religion) in contemporary Punjab', in Knut A. Jacobsen (ed.) *Routledge Handbook of Contemporary India.* 371-83. London: Routledge.
13. Ram, Ronki, 'Social Exclusion, Resistance and Deras: Exploring the Myth of Casteless Sikh Society in Punjab', *Economic and Political Weekly*, 42(40), October 6-12, 2007, 4066-74.
14. Ram, Ronki, 'Untouchability in India with a Difference: Ad Dharm, Dalit Assertion and Caste Conflicts in Punjab', *Asian Survey*, XLIV (6), November-December 2004, 895-912
15. Shah, Ghanshyam, *Caste and Democratic Politics in India*, Anthem Press, London, 2004.
16. Subramanian, Narendra, *Ethnicity and Populist Mobilization: Political Parties, Citizens and Democracy in South India*, Oxford University Press, Delhi, 1999.
17. Varshney, Ashutosh, 'Is India Becoming More Democratic?' *The Journal of Asian Studies*, 59(1), 2000.
18. Yadav, Yogendra and Suhas Palshikar, 'From Hegemony to Convergence: Party System and Electoral Politics in the Indian States, 1952-2002', in Peter Ronald deSouza and E. Sridharan (eds) *India's Political Parties*, Sage, New Delhi, 2006.
19. Yadav, Yogendra and Suhas Palshikar, 'Ten Theses on State Politics in India', *Seminar*, 591, November, 2008

20. Yadav, Yogendra, 'India's Third Electoral System: 1989-1999', *Economic and Political Weekly*, 34(34-35), 1999, 2393-99
21. Yadav, Yogendra, 'Reconfiguration in Indian Politics: State Assembly Elections 1993-1995, *Economic and Political Weekly*, 31(2), January 13, 1996.

Unit IV

1. Ahluwalia, Montek Singh 'Economic Performance of States in Post-Reforms Period', *Economic and Political Weekly,* 6 May, 2000.
2. Bhalla, G.S. ed., *Economic Liberalization and Indian Agriculture,* Institute for Studies in Industrial Development, New Delhi, 1994.
3. Corbridge, Stuart, Glynn Williams, Rene Veron and Manoj Srivastava, *Seeing the State*, Cambridge University Press, New Delhi, 2008.
4. Dasgupta, Biplab, *The New Agrarian Technology and India,* Geneva UN, 1977.
5. Datt, G. and M. Ravallion, 'Is India's Economic Growth Leaving the Poor Behind?' *Journal of Economic Perspectives*, 16(3), 2002, 89–108.
6. Dreze, Jean & Amartya Sen, *India: Development and Participation*, Oxford University Press, Delhi, 2002.
7. Dreze, Jean & Amartya Sen, Indian *Development: Selected Regional Perspectives*, Oxford University Press, Delhi, 1998.
8. Frankel, Francine & M.S.A Rao (eds.) *Dominance and State Power in India,* Oxford University Press, New Delhi, 2 Vols. 1989, 1990.
9. Harriss, John, 'Comparing Political Regimes across Indian States: A Preliminary Essay, *Economic and Political Weekly*, November 27, 1999, 3367-3377.
10. Jenkins, Rob, *Democratic Politics and Economic Reform in India*, Cambridge University Press, Cambridge, 1999.
11. Joshi, Vijay and I.E. Little, *India's Economic Reforms: 1991-2001*, Oxford University Press, New Delhi, 1996.
12. Kohli, Atul, 'Politics of Economic Growth in India, 1985-2005; Part 1: The 1980's and Part 11: The 1990's and Beyond', *Economic and Political Weekly*, April 1, 2007.
13. Kohli, Atul, *Democracy and Discontent: India's Growing Crisis of Governability,* Oxford University Press, Delhi, 1991.
14. Kohli, Atul, *The State and Poverty in India,* Cambridge University Press, Cambridge, 1987.
15. Kohli, Atul, *The Success of India's Democracy,* Cambridge; Cambridge University Press, New York, 2001.
16. Mitra, Subrata K., *The Puzzle of India's Governance: Culture, Context and Comparative Theory*, Routledge, London, 2006.
17. Mooij, Jos, ed., *The Politics of Economic Reforms in India*, Sage, New Delhi, 2005.
18. Paul, Samuel, and KS Sridhar, The Paradox of India's North–South Divide: **Lessons** from the States and Regions, New Delhi, Sage, 2016.
19. Prakash, Amit, *Jharkhand: Politics of Development and Identity*, Orient Longman, Hyderabad, 2002.
20. Rao, Govinda and Nirvikar Singh , *Political Economy of Federalism in India*, Oxford University Press, New Delhi, 2006.

21. Sachs, Jeffrey, Ashutosh Varshney, and Nirupam Bajpai, eds., *India in the Era of Economic Reforms***,** Oxford University Press, New Delhi, 1999.
22. Singh, Jagpal, *Capitalism and Dependence; Agrarian Politics in Western Uttar Pradesh, 1951-1991,* Manohar, New Delhi, 1992.
23. Singh, P. (2015). *How Solidarity Works for Welfare: Subnationalism and Social Development in India,* New York: Cambridge University Press
24. Sinha, Aseema, 'Ideas, Interests, and Institutions in Policy Change: A Comparison of West Bengal and Gujarat' in Jenkins, Rob , ed., *Regional Reflections: Comparing Politics across India's States*, New Delhi, Oxford University Press, Delhi, 2004.
25. Sinha, Aseema, *The Regional Roots of Developmental Politics in India: A Divided Leviathan*, Indiana University Press, Bloomington and Indianapolis, 2005.
26. Tillin L. & Deshpande, R. & Kailash, KK (Eds) (2016). *Politics of Welfare*: *Comparisons across Indian States*, Oxford, Oxford University Press.
27. Varshney, Ashutosh, Democracy, Development, and the Countryside: Urban-Rural Struggles in India. Cambridge University Press, Cambridge, 1998.

Journals/ Newsmagazine/Newspapers to be consulted

1. ***Economic and Political Weekly***: Individual Articles/commentaries on Indian states and also all special issues on state assembly elections from 1989 onwards (Free access to four latest Issues on web. Also check on JSTOR)
2. ***Front Line***
3. ***Seminar*** Selected issues (Free access to Archive on Web) type start search http://www.india-seminar.com/semsearch.htm
4. ***Studies in Indian Politics***
5. ***The Hindu and Indian Express***

Option (c): DECENTRALIZED GOVERNANCE AND LOCAL LEVEL INSTITUTIONS IN INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice i.e. attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The objective of the course is to familiarize students with the concept of decentralized and democratic governance in India, both theoretically and at the level of institutional functioning at the local level. The emphasis of the course is on the process of democratic governance in both at the grassroots.

Unit-I

- Democratic Decentralization in India : Issues and Perspectives.
- Decentralization & Contemporary concerns—globalization and changing role of the state.

Unit-II

- Planning Urban Development – approaches, policies & programs.
- Urban local governance – Institutional aspects and functioning of urban local bodies with special reference to 74th Amendment.

Unit-III

- Planning Rural development—approaches, policies and programmes.
- Democracy at the grassroots—Growth, Development and functioning of PRI from 1952 to present.

Unit-IV

- Relationship between rural and urban local institutions.
- Role of NGOs in local governance & development.
- Challenges of Governance at the local level-autonomy, finance, personnel, participation.

Readings

1. Abdul, Aziz, *Decentralised Planning,* New Delhi, Sage, 1993.
2. Bose, Ashish, *National Commission on Urbanization,* Ministry of Urban Development, New Delhi, 1988.
3. Behra, M.C., *Globalising Rural Development*, Sage, Delhi, 2006.
4. Handy, Femida, Meenaz Kassuu, Suzanne Fervey (eds.), *Grass-Roots NGOs by Women for Women*, Sage, New Delhi, 2006.
5. Kumar, Girish, *Local Democracy in India*, Sage, Delhi, 2006.
6. Issaac Thomas & Richard W. Franke, *Local Government and Development : People's Campaign for Decentralized Planning in Kerala,* Delhi, Leftword, 2000.
7. Jain, L.C., Krishnamurthy, B.V. and Tripathi, P.M., *Grass without Roots : Rural Development Under Government Auspices,* New Delhi, Sage, 1987.
8. Maddick Henry, *Panchayati Raj : A Study of Rural Local Government in India,* London, Longman, 1970.
9. Mathur, O.M. (ed.), *India : The Challenge of Urban Governance,* New Delhi, National Institute of Public Finance & Policy, 1999.
10. Mishra, B.B., *District Administration and Rural Development in India,* Delhi, Oxford University Press, 1983.
11. Mukherjee Amitava, *Decentralization : Panchayats in the Nineties,* New Delhi, Vikas, 1994.

12. Prasad Kamta, *Planning and Poverty Alleviation,* New Delhi, Agricole, 1985.
13. Ravillion, M. and G. Datt, *Growth and Poverty in Rural India,* Washington D.C., World Bank, 1995.
14. Sen, Amartya, *Development as Freedom,* Delhi, Oxford University Press, 2000.
15. Chaturvedi, T.N. and Jain, R.B., *Panchayati Raj* (New Delhi, IIPA, 1981).
16. Bhattacharya, Mohit, *Municipal Government—Problems and Prospects* (Delhi Research Publications).
17. Jha, S.N. and Mathur, P.C., *Decentralization and Local Politics,* Sage, 1999.

Option (d) : POLITICAL SOCIOLOGY WITH SPECIAL REFERENCE TO INDIA

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives: This paper aims at highlighting some of the major areas in the domain of political sociology with reference to India. The paper intends to familiarize the students with the social, cultural and economic structures of power in the Indian society and their mechanism of functioning in a critical perspective.

Unit I

Political Sociology : Thematic Concerns :

1. Nature, meaning and scope.
2. Historical Development.

Unit II

Social Stratification :

1. Concepts and Theoretical Contexts (Marx, Dahrendorf, Weber, and L. Dumont).
2. Caste, Class and Power.

Unit III

Conflict Formation :

1. Theoretical dimensions (Simmel, Coser, Marx and Dahrendorf).
2. Caste and Communal conflicts.

Unit IV

Political Sociology of Agrarian Relations :

1. Zamindari Abolition and Land Reforms.
2. Pressure Groups : Farmers and Labourers.

Books Recommended

1. Effrat, Andrew, *Perspective on Political Sociology*, New York, The Bobbs-Merrill, 1972.
2. Dowse, Robert E. & Hughes, John A., *Political Sociology*, London, John Wiley, 1975.
3. Horowitz, *Foundations of Political Sociology*, New York, Harper & Row, 1972.
4. Das, Hari Hara and Choudhary, B.C., *Introduction to Sociology*, New Delhi, Vikas, 1997.
5. Tumin, M.M., *Social Stratification*, New Jersey, Prentice Hall, 1978.
6. Gupta, Dipankar (ed.), *Social Stratification*, Delhi, OUP, 1991.
7. Scott, John, *Stratification and Power*, Cambridge, Polity, 1996.
8. Sharma, K.L., *Social Stratification in India*, New Delhi, Sage, 1997.
9. Singh, Yogendra, *Social Change in India*, New Delhi, Har Anand, 1993.
10. Layder, Derek, *Understanding Social Theory*, London, Sage, 1996.
11. Jaiswal, Suvira, *Caste : Origin, Function and Dimensions of Change*, Delhi, Manohar, 1998.
12. Srinivas, M.N., *Social Change in Modern India*, New Delhi, 1969.
13. Runciman, W.S., *Social Science and Political Theory*, Cambridge, 1971.
14. Lukes, *Steven, Power : A Radical View*, Hong Kong, Macmillan, 1974.
15. Barnes, Barry, *The Nature of Power*, Cambridge, Polity, 1988.

Option (e) : REPRESENTING 'INDIA' : GEOPOLITICAL IMAGINATIONS

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course investigates how India has been represented by groups and individuals, political elites and the dominant institutions and intellectuals of statecraft. It intends to probe how a variety of geopolitical imaginations have come to compete with one another, as different actors seek to implant maps of meaning, relevance and order on to highly complex and dynamic political universe they inhabit, observe, try to understand and sometimes even desire to dominate. How various geopolitical idioms, myths and representational practices have been used to inscribe something called India and endow that entity with a content, history, meaning and trajectory. The intention of this course is exploratory and not normative.

Unit-I

1. Pre-colonial India : An Overview.
2. India in British Colonial Imagination.

Unit-II

3. Partition of British India and its Legacies.
4. Integration of Princely States.

Unit-III

5. The India Diaspora : Dynamics and Dilemmas of Migration.
6. Gender in Indian Geopolitics.

Unit-IV

7. Nationalist Constructions of India's Identity (with special reference to Nehru and Savarkar).
8. Rise of Hindutva and the Search for Alternative Geopolitical Imaginations.

Suggested Readings

1. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* I (4) : 53-71.
2. Bhargava, R. (ed.) (1998), *'Secularism and Its Critics' :* Delhi, Oxford University Press.
3. Bose, Sugata (1997), "Nation as Mother : Representations and Contestations of 'India' in Bengali Literature and Culture", in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press, 50-75.
4. Bose, Sumantra (1997), "Hindu Nationalism" and the Crisis of the Indian State : A Theoretical Perspective in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press.
5. Brecher, M. (1968), *India and World Politics : Krishna Menon's View of the World,* London : Oxford University Press.
6. Butalia, Urvashi (1998), *The Other Side of Silence,* New Delhi : Viking.
7. Cohn, B.S. (1997), *Colonialism and Its Forms of Knowledge : The British in India,* Delhi : Oxford University Press.
8. Dijkink, G. (1996), *National Identity and Geopolitical Visions : Maps of Pride and Pain,* London : Routledge.

9. Fisher, M. H. (1993), *The Politics of the British Annexation of India 1757-1857,* Delhi : Oxford University Press.
10. Graham, B. (1993), *Hindu Nationalism and Indian Politics : The Origins and Development of the Bharatiya Jana Sangh,* Cambridge, Cambridge University Press.
11. Hasan, M. (1996), "The Myth of Unity : Colonial and National Narratives" in D. Ludden (ed.) *Making India Hindu, Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
12. Jalal, A. (1997), "Exploding Communalism : The Politics of Muslim Identity in South Asia", in S. Bose and A. Jalal (eds.), Nationalism, Democracy and Development : State and Politics in India, Calcutta : Oxford University Press : 76-103.
13. Kakar, Sudhir (1995), *The Colours of Violence,* New Delhi : Penguin Books.
14. Kumar, R. (1997), "State Formation in India : Retrospect and Prospect", in M. Doornbos and S. Kaviraj (eds.), *Dynamics of State Formation : India and Europe Compared,* New Delhi : Sage : 359-409.
15. Katzenstein, M. F., Mehta, U. S. and Thakkar, U. (1998), "The Rebirth of Shiv Sena in Maharashtra : the Symbiosis of Discursive and Institutional Power" in A. Basu, and A. Kohli (eds.), *Community Conflicts and the State in India,* Delhi : Oxford University Press : 215-238.
16. Kaviraj, Sudhir (1993), "The Imaginary Institution of India," in P. Chatterjee and G. Pandey (eds.), *Subaltern Studies,* Delhi : OUP, Vol. VII : 1-39.
17. Kaviraj, S. (1994), "Crisis of the Nation-State in India," *Political Studies,* XLII : 115-129.
18. Kaviraj, S. (1997), "On The Structure of Nationalist Discourse", in T. V. Sathyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi : Oxford University Press.
19. Khilnani, S. (1998), *The Idea of India,* London : Penguin Books.
20. Kothari, R. (1997), "Fragments of a Discourse : Towards Conceptualization", in T.V. Sathyamurthi (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
21. Kothari, R. (1998), *Communalism in Indian Politics,* Ahmedabad, Rainbow Publishers Limited.
22. Krishna, B. (1995), *Sardar Vallabbhai Patel : India's Iron Man,* New Delhi : Indus.
23. Krishna, S. (1994), "Cartrographic Anxiety: Mapping the Body Politics in India," *Alternatives 19 : 507-521.*
24. Larson, G. J. (1997), *India's Agony Over Religion,* Delhi, Oxford University Press.
25. Ludden, D. (1996) (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
26. Mahanta, A. (1977), "The Indian State and Patriarchy" in T. V. Satyamurthy (ed.), *State and Nation in the Context of Social Change,* Delhi, Oxford University Press.
27. Malik, Y.K. and Singh, Y.B. (1994), *Hindu Nationalists in India : The Rise of the Bharatiya Janata Party,* New Delhi, Vistaar Publications.
28. Mayo, Katherine (1928), *Mother India,* New York : Harcourt Brace and Company.
29. Metcalf, T. R. (1995), *Ideologies of the Raj,* Cambridge : Cambridge University Press (The New Cambridge History of India).
30. Nandy, A. H., Trivedi, S. Mayaram and Yagnik, A. (eds.) (1995), *Creating a Nationality : The Ramjanambhumi Movement and the Fear of the Self,* Delhi : Oxford University Press.
31. Nehru, J. (1936), *An Autobiography,* London, John Lane.

32. Nehru, J. (1981), *The Discovery of India,* New Delhi : Jawaharlal Nehru Memorial Fund, Oxford University Press (First Published 1946 by the Signet Press, Calcutta).
33. Nehru, J. (1956), *Independence and After : A Collection of Speeches* 1946-1949, Delhi : Government of India.
34. Pandey, G. (1990), *The Construction of Communalism in Colonial North India,* Delhi, Oxford University Press.
35. Pandey, G. (1994) "The Prose of Otherness," *Subaltern Studies* (Delhi, OUP, Vol. VIII).
36. Parker, G. (1998), "Geopolitical Perspectives on India and Indian Foreign Policy" in The Ford Foundation Lectures in International Relations Studies, Departmental of Political Science, The Maharaja Sayajirao University of Baroda.
37. Pattanaik, D. D. (1998), *Hindu Nationalism in India : Conceptual Foundation,* New Delhi : Deep and Deep Publications.
38. Radhakrishnan, R. (1992), "Nationalism, Gender, and the Narrative of Identity" in Andrew Parker et al (eds.), *Nationalism and Sexuality,* New York, Sage.
39. Sarkar, T. (1996), "Imagining Hindurastra : the Hindu and the Muslim in Bankim Chandra's Writings" in D. Ludden (ed.), *Making India Hindu : Religion, Community, and the Politics of Democracy in India,* Delhi : Oxford University Press.
40. Sarkar, T. (1992), "The Hindu Wife and the Hindu Nation : Domesticity and Nationalism in Nineteenth Century Bengal," *Studies in History* (Sage, Delhi) 8 (2).
41. Savarkar, V. D. (1969), Hindutva, Bombay, Savarkar Prakashan 5th Edn.
42. Sen, A. (1998a), "On Interpreting India's Past" in S. Bose and A. Jalal (eds.), *Nationalism, Democracy and Development : State and Politics in India,* Calcutta : Oxford University Press (Oxford India Paperbacks).
43. Sen, A. (1998b), "Secularism and its Discontents" in Bhargava, R. (ed.), *Secularism and its Critics,* Delhi : Oxford University Press.
44. Varshney, A. (1993), "Contesting Meanings : India's National Identity, Hindu Nationalism, and the Politics of Anxiety", *Daedalus, 122, 3 : 227-261.*
45. Van Hear, N. (1998), *New Diasporas : The Mass Exodus, Dispersal and Regrouping of Migrant Communities,* London, UCL Press.
46. Weiner, M. (1997), "Minority Identity", in S. Kaviraj (ed.), *Politics in India,* Delhi, Oxford University Press : pp 241-254.
47. Ali, D., 1999, *Invoking the Past : The Uses of History in South Asia,* New Delhi : Oxford University Press.
48. Behera, N. C. (1998), "Perpetuating the Divide : Political Abuses of History in South Asia", *Indian Journal of Secularism,* 1(4) : 53-71.
49. Bianchini, B., Chaturvedi, S., Ivekovic, R. and Samaddar, R., 2005, *Partitions : Reshaping Minds and States,* London : Frank Cass.
50. Chaturvedi, S., 2000, "Representing Post-Colonial India: Inclusive/Exclusive Imaginations" in David Atkinson and Klaus Dodds (eds), *Geopolitical Traditions : Critical Histories of a Century of Geopolitical Thought,* London : Routledge.
51. Chaturvedi, S., 2005, "Diaspora in India's Geopolitical Visions : Linkages, Categories and Contestations", *Asian Affairs : An American Review,* 32(3).

52. Deshpande, S., 2003, *Contemporary India : A Sociological View,* New Delhi : Viking.
53. Jayaram, N., 2004 (ed.), *The Indian Diaspora : Dynamics of Migration,* Delhi : Sage.
54. Krishna, S., 1999, Post-*Colonial Anxieties : India, Sri Lanka and the Question of Nationhood,* Minneapolis : University of Minnesota Press.
55. Ludden, D., 2002, *India and South Asia : A Short History,* Oxford : One World.
56. Sen, A., 2006, *Identity and Violence : The Illusion of Destiny,* London : Allen Lane/Penguin.
57. Sen, A., 2005, *Argumentative Indian Writings on Indian History, Culture and Identity,* London : Allen Lane/Penguin.

Option (f): Dalit Movements and Issues in India

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES:

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.
There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: The purpose of this paper is to make students familiar with major Dalit Movements and issues in India.

UNIT-I

Anti-Caste and Adi Movements in the Colonial period-I
Jotiba Phuleand Satyashodhak Samaj,
Mangoo Ram andAd-Dharm Movement,
Periyar and Self-Respect Movement

UNIT-II

Anti-Caste Movements in the Colonial period-II
Dalit Movement and B.R.Ambedkar
Caste and Untouchability
Democracy and Repsentation of Minorities

UNIT-III

Politics of Assertion and Representationin Independent India

Republican Party of India
Dalit Panthers
Bahujan Samaj Party

UNIT-IV

Dalits and Contemporary Issues

Reservation and Politics of Inclusion
Dalits and Globalization
Dalit Women's Issues

Essentail Readings

1. *Aditya Nigam, "In search of a Bourgeoisie: Dalit politics enters a New Phase."* Economic and Political Weekly*, March 30, 2002, pp. 1190-1193.*
2. *Aditya Nigam, "Secularism, Modernity, National: Epistemology of the Dalit Critique."* Economic and Political Weekly*, November 25, 2000.*
3. Aryama and SukhadeoThorat (ed.), *Ambedkar in Retrospect: Essays in Economics, Politics & Society*, Rawat Publications, New Delhi, 2007.
4. *B.L.Mungekar, "Globalization and the Dalits."* Radical Humanist, *65(1): April 2001: 9-10.*
5. B.R.Ambedkar, *Dr. Babasaheb Ambedkar: Writings and Speeches*, Vol.1-17 (compiled by Vasant Moon), Education Department, Government of Maharashtra, Bombay.
6. Christophe Jaffrelot,*India's Silent Revolution the Rise of the Low Castes in North Indian Politics,* Permanent Black,New Delhi, 2003.
7. Dhananjay Keer, *Dr. Ambedkar Life and Mission*, Popular Prakashan, Bombay1991.
8. *Dipankar Gupta, "Positive Discrimination and the Question of Fraternity: Contrasting Ambedkar and Mandal on Reservation."* Economic and Political Weekly, *32(31): 2 August 1997.*
9. Eleanor Zelliot, Ambedkar *and Mahar Movement.* University of Pennsylvania, 1982.
10. Eleanor Zelliot, *From Untouchable to Dalit: Essay on Ambedkar Movement.* Manohar: New Delhi, 1992.
11. G.P. Deshpande, (ed) *Selected Writings of Jotirao Phule,* Left World: New Delhi, 2002.
12. Gail Omvedit, *Dalits and Democratic Revolution: Dr. Ambedkar and Dalit Movement in Colonial India.* Sage*:* New Delhi, 1994.
13. *Gail Omvedt, "Peasants, Dalits and Women: Democracy and India's New Social Movements."* Journal of Contemporary Asia: *24 (1): 1994.*
14. *Gail Omvedt*, Ambedkar Towards an Enlightened India. Penguin: New Delhi, 2004.
15. Gail Omvedt, *Cultural Revolt in a Colonial Society: The Non – Brahman Movement in Western India.* Scientific Socialist Education Trust: Bombay, 1976.
16. Gail Omvedt, *Dalit Vision.* Orient Longman: New Delhi, 1996 first Published 1995.

Suggested Readings

1. Geeta, V., Rajdurai 1993 "Dalits and Non-BrahminConsciousness in ColonialTamil Nadu" *Economic and Political Weekly*,28(39), September 25.
2. *George Mathew, "Will Reservation Ensure Participation."* Social Welfare: *42 (5-6): August-September, 1995.*
3. Harish K. Puri, (ed.) *Dalits in Regional Context. Rawat*: New Delhi, 2004.
4. *J. Mencher, "The Caste System Upside Down,"* Current Anthropology*: 15: 469-93: 1974.*
5. J.Massey, *Downtrodden: The Struggle of Indian Dalits for Identity, Solidarity and Liberation.* WCC Publications: Geneva, 1997.
6. Jaffrelot, Christophe, *Dr.Ambedkar and Untouchability*. Permanent black: New Delhi, 2004.
7. Mark Juergensmeyer, *Religious Rebels in Punjab: The Social Vision Of Untouchables*. Ajanta: Delhi, 1988.
8. Michael Mahar, (ed) *The Untouchables in Contemporary India.* University of Arizona press, 1972.
9. *N.S.Gehlot, "Dr. Ambedkar, Mahatma Gandhi and Dalit movement,"* Indian Journal of Political Science, *54(3-4): July-December 1993.*
10. *Pradeep Kumar, "Reservation within Reservations: Real Dalit Bahujans,"* Economic and Political Weekly*, 15 September 2001, 3305-3307.*
11. *Ramaswamy R. Iyer, "Towards Clarity on Reservation Question,"* Economic and Political Weekly*, 26(9) and 10: 2-9 March 1991.*
12. Ramnarayan Rawat, "Making Claims for Power: A New Agenda In Dalit Politics of Uttar Pradesh, 1946-48", Modern Asian Studies, Vol. 37, No. 3, 2003.
13. *Ronki Ram, "From servitude to assertion: Ambedkar's Subalterns Approach to Nationalism and Dalit liberation."* Social Sciences Research Journal, *Vol. 9, November 2, 2001, p.160.*
14. Rosalind O' Hanlon, *Caste, Conflict and Ideology: Mahatma Phule and Low Caste Protest in the 19th Centurary*, CUP, 1985.
15. Sudha Pai, *Dalit Assertion and the Unfinished Democratic Revolution.The Bahujan Samajwadi Party in Uttar Pradesh.*, Sage : New Delhi, 2002.
16. *V. Geetha, and S.V. Rajadurai. "Dalits and non-Brahmin Consciousness in Colonial Tamil Nadu*." Economic and Political Weekly*, 28(3): 25 September 1993.*
17. *V. Jha, "Stages in History of Untouchables,"* Indian Historical Review, *2: 1975: 14-31.*
18. Valrian Rodrigues, (ed) *The Essential Writings of B.R. Ambedkar*, Oxford: New York,2002.
19. *Webster, John C.B. "Understanding the Modern Dalit Movement."* Sociological Bulletin *45 (2): September 1996.*

Course XVI : ***The candidates are required to offer any one of the following courses :***

Option (a) : FEMINIST POLITICAL THEORY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course aims to introduce students to the major interventions of feminism in political theory. After introducing students to the feminist critique of mainstream political theory and the key conceptual categories in feminism, this course in the latter units examines 5 main issues to understand the major debates within various strands of feminism.

Unit-I

Feminism and the redefinition of the Political.
Feminist critiques of mainstream political theory.

Unit-II

Key Feminist concepts—Patriarchy, Sex-Gender distinction, Production and Reproduction.
Destabilizing the category of 'woman'.

Unit-III

Key Issues in Feminist theory 1.
Abortion.
Pornography.

Unit-IV

Key Issues in Feminist theory 2.
Race/Religion/Culture.
Anti-Militarism.

Reading List

1. Anne Philips, *Engendering Democracy,* Cambridge, Polity Press, 1991.
2. Allison Jagger, *Feminist Politics and Human Nature*, Rowman & Allanheld, 1983.
3. Judith Butler, *Gender Trouble : Feminism and the Subversion of Identity*, New York, Routledge, 1990.
4. Carole Pateman, *The Sexual Contract*, Stanford University Press, 1989.
5. Iris Marion Young, *Justice and the Politics of Difference*, Princeton University Press, 1990.
6. Kate Millet, *Sexual Politics*, Granada Publishing, 1969.
7. Simone de Beauvoir, *The Second Sex*, 1949 (translated by H.M. Parshley, Penguin 1972).
8. Germaine Greer, The Female Eunuch, 1970.
9. Nancy Fraser and Linda J. Nicholson, Social Criticism without Philosophy : An Encounter between Feminism and Postmodernism in *Theory Culture Society,* 1988; 5.
10. Susan Moller Okin : *Women in Western Political Thought*, Princeton, Princeton University Press, 1979.

Option (b) : MAJOR THEMES IN RECENT POLITICAL PHILOSOPHY

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the questionpaper as follows:
The syllabus has been divided into four units.
There shall be 9 questions in all.

The first question is compulsory and shall be short answer type containing 15 short questions spread over the wholesyllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each.

Rest of the paper shall contain 4 units. Each unit shall have two questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective of the Course: This course is intended to be a companion to the compulsory courses on Western Political Thought and Key Concepts in Political Theory. It carries forward the discussion by focusing on themes and concerns which have occupied debates particularly since the late twentieth century.

Unit-I

1. Environmentalism.
2. Pacifism.

Unit-II

3. Feminism.
4. Multiculturism.

Unit-III

5. Neo-liberalism.
6. Post Marxism.

Unit-IV

7. Postcolonialism.
8. Postmodernism.

ESSENTIAL READINGS:

Relevant portions from the following textbooks and histories:

1. Colin Farelly, Contemporary Political Theory, Sage, 2004.
2. Gerald F. Gaus and ChandranKukathas, Handbook of Political Theory, Sage, 2004.
3. R.E. Goodin and P. Petit, A Companion to Contemporary Political Philosophy, Blackwell, 1995.
4. Terence Ball and Richard Bellamy (ed.), The Cambridge History of Twentieth Century Political Thought, Cambridge University Press (CUP), 2003.
5. Will Kymlicka, Contemporary Political Theory : An Introduction, OUP, 2002

SUGGESTED READINGS

Environmentalism:

6. John Dryzek and Scholberg, Debating the Earth : The Environmental Politics Reader, OUP, 1998.
7. Lorraine Eliot, Global Politics of Environment, Macmillan, 1998.
8. Ramchandra Guha and Juan Martinez-Alier, Varieties of Environmentalism: Essays on North and South, OUP, 1998.

Pacifism:

9. Allen Eickelmann, Eric Nelson and Tom Lansford, Violence, Pacifism and Cultural Transformation, Ashgate, 2005.
10. Peter Brock and Nigel Young, Pacifism in the Twentieth Century, Syracuse Univ. Press, 1999.

Feminism:

11. Alison Jaggar and Iris Marion Oung (ed.), A Companion to Feminist Philosophy, Blackwell, 1998.
12. Anne Phillips (ed.), Feminism and Politics, OUP, 1998.
13. Judith Butler and J.W. Scott (ed.), Feminists Theories : The Political, Routledge, 1992.

Multiculturalism:

14. Bhikhu Parekh, Rethinking Multiculturalism, Palgrave, 2006.
15. GurpreetMahajan, The Multicultural Path, Sage, 2002.

Neoliberalism:

16. Alfredo Saad-Filho and Deborah Johnson (eds.), Neo-Liberalism: A Critical Reader, Pluto Press, 2005.
17. David Harvey, A Brief History of Neo-Liberalism, OUP, 2005.

Post- Marxism:

18. Stuart Sim, Post Marxism: An Intellectual History, Routledge, 2000.

Postmodernism:

19. David Harvey, TheCondition of Postmodernity, Basil, Blackwell, 1989.
20. David Lyon, Postmodernity, Viva Books, 2002.

Postcolonialism:

21. Bill Ashcroft, Gareth Griffins and Helen Zigfin (eds.), The Postcolonial Studies Reader,Routledge, 2006.
22. ZiauddinSardar, Orientalism, Viva Books, 2002

Option (c) : READINGS IN THE PHILOSOPHY OF RESISTANCE AND LIBERATION

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This course is based on original texts. It seeks to study the ideas of resistance through the writings of the following Political Philosophers :

Unit-I

Gandhi : *Hind Swaraj* (1909), (Ahmedabad, Navjivan Trust, 1938).

Unit-II

Frantz Fanon : *The Wretched of the Earth* (London, Pluto Press, 1986).

Unit-III

Ernesto Che Guevara : *The Guerrilla Warfare*, with an Introduction and Case Studies by Brian Loveman and Thomas M. Davies, JR. (Lanchester University Press, 1985).

Unit-IV

Stokely Carmichael : *Black Power: The Politics of Liberation in America*, 1967.

Suggested Readings

1. Horace B. Davis, "Social Classes and the Formation of Nations : Fanon, Cabral and the African National Struggle" in Horace B. Davis, *Toward A Marxist Theory of Nationalism* (New York, Monthly Review Press, 1978, pp. 202-239).
2. Homi Bhabha, "Remembering Fanon: Self, Psyche and the Colonial Condition", Foreword to Frantz Fanon, *Black Skin, White Masks* (London, Pluto Press, 1986).
3. Irene Gentizier, *Frantz Fanon – A Critical Study* (New York, Vintage, 1973).
4. Renate Zahar, *Frantz Fanon : Colonialism and Alienation* (New York, Monthly Review Press, 1975).
5. Aristide R. Zolberg, "Frantz Fanon" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).

6. Ashis Nandy, "Oppression and Human Liberation: Towards a Post-Gandhian Utopia", in Thomas Pantham and Karl Deutsch (eds.), *Political Thought in Modern India* (New Delhi, Sage Publications, 1986).
7. Anthony J. Parel (ed.), *Hind Swaraj and Other Writings*, Cambridge University Press, New Delhi, Foundation Books, 1997).
8. Donald C. Hodges (ed.), *The Legacy of Che Guevara* (London, Thames and Hudson, 1977).
9. Michael Lowy, *The Marxism of Che Guevara : Philosophy, Economics and Revolutionary Warfare*, (New York, Monthly Review Press, 1973)
10. Renneth Minogue, "Che Guevara" in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
11. George Feaver, "Black Power", in Maurice Cranston (ed.), *The New Left* (London, The Bodley Head, Indian Reprint, National Academy, Delhi, 1973).
12. Stokely Carmichael, "Black Power", in David Cooper (ed.), *The Dialectics of Liberation*, Harmondsworth, Penguin, 1968.
13. Frantz Fanon, *The Wretched of the Earth* (Harmondsworth, Penguin, 1967).
14. Deborah Wyrick, *Fanon for Beginners* (Hyderabad, Orient Longman, 1998).
15. Sergio Sinay, *Che for Beginners* (Hyderabad, Orient Longman, 1997).

Option (d) : CONTEMPORARY DEBATES IN THE 20TH CENTURY MARXISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : This paper seeks to familiarize students with the Marxist engagement with critical issues in the late twentieth century.

Unit-I

Structure and Agency : Marxian Debates.

Unit-II

Feminism and Marxism : Production, Reproduction and Power.

Unit-III

Environmentalism and Marxism, Capitalism, Colonialism, Socialism and Environmental Degradation.

Unit-IV

Nationalism, Internationalism and Marxism.
Globalization and Marxist Critique.

Readings :

(Students are expected to consult the journals *Monthly Review, New Left Review* and *Socialist Register* regularly).

1. Groz, A., *Farewell to the Working Class*, Pluto Press, London, 1982.
2. Barret, Michele, *Women's Oppression Today : Problems in Marxist Feminist Analysis*, Verso, London, 1980.
3. Landes, Joan, 'Marxism and the Women Question' in Sonia Kruks, Rayana Rapp and Marilyn B. Young (ed.), *Promissory Notes : Women in the Transition to Socialism,* Monthly Review Press, New York, 1989.
4. Mies, Maria, *Patriarchy and Accumulation on a World Scale*, Zed Books, London, 1986.
5. Mies, Maria, 'World Economy, Patriarchy and Accumulation' in Nelly Stromquist (ed.), *Women in the Third World*, Garland, New York, 1998.
6. Bahro, Rudolph, *From Red to Green*, 1984.
7. Foster, John Bellamy, *The Vulnerable Planet, A Short Economic History of the Environment,* Monthly Review Press, New York, 1994 (Indian Reprint) Cornerstone Publication, Kharagpur, 1999.
8. Foster, John Bellamy, *Marx's Ecology : Materialism and Nature,* Monthly Review Press, New York, 2000.
9. Harvey, David, 'The Nature of Environment : Dialectics of Social and Environmental Change' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register,* The Marlin Press, London, 1993.
10. Pratt, Larry and Wendy Montgomery, 'Green Imperialism, Pollution, Penitence, Profits in Leo Panitch (ed.), *Socialist Register*, Marlin Press, London and K.P. Bagchi & Compnay, Calcutta, 1997.
11. Davis, Horace B., *Toward a Marxist Theory of Nationalism,* Monthly Review Press, New York, 1978.
12. Lowy, Michael, 'Why Nationalism?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Marlin Press, London, 1993.
13. Munck, R., *The Difficult Dialogue, Marxism and Nationalism*, Zed, London, 1986.
14. Magdoff, Harry, 'Globalisation –To What End?' in Ralph Miliband and Leo Panitch (eds.), *Socialist Register*, The Merlin Press, London, 1992.

Option (e) : INTRODUCING FEDERALISM

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objectives : The paper introduces certain key concepts and issues in federalism. The aim of the paper is to enable the student to obtain a broad perspective on federalism in a comparative perspective and to evaluate its utility as a tool for accommodating diversity.

Unit-I

The Essence of the Federal Idea.
Core features of Federations.
Models and variants of Federalism : Successive Waves.
Presidential and Parliamentary variant.

Unit-II

Approaches and Paths to Federalism.
Institutionalist Explanations of Origins.
Society-Centred Theories.
The William Riker- Alfred Stepan debate.

Unit-III

Federal Democracy and the Articulation of Diversity.
Federalism as a device for accommodating groups and interests.
Centralisation and Decentralisation in Federal Systems.
Asymmetric Federalism : India and Canada.

Unit-IV

The Making and Unmaking of Federal Systems.
Stress and Strains of Federalism : Failed Federations : USSR, Czechoslovakia, Yugoslavia.
New, Emerging, Incipient and Federal-type Solutions : South Africa, Belgium, Spain, Sri Lanka and the European Union.
Relevance of Federalism in a globalising world.

Readings

1. Alfred Stepan, "Federalism and Democracy : Beyond the US Model," *Journal of Democracy,* 1999, 10 : 4, 19-34.
2. Alfred Stepan, "Russian Federalism in Comparative Perspective," *Post-Soviet Affairs,* 2000b, 16 : 2, 133-176.
3. Alfred Stepan, *Arguing Comparative Politics* (Oxford : Oxford University Press, 2001).
4. Andrea Bosco (ed.), *The Federal Idea : The History of Federalism Since 1945* (London: Lothian Foundation Press, 1992).
5. Arendt Lijphart, 1977, *Democracy in Plural Societies: A Comparative Exploration,* New Haven, London, Yale University Press.
6. Arend Lijphart, Ronald Rogowski and R. Kent Weaver, "Separation of Powers and Cleavage Management," in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings, 1997), 302-344.
7. Balveer Arora, and Douglas V. Verney, 1995, *Multiple Identities in a Single State : Indian Federalism in Comparative Perspective,* New Delhi : Konark Publishers.
8. Bertus de Villiers (ed.), *Evaluating Federal Systems* (Cape Town : Jutta & Co., 1994).
9. Birch, A.H., 'Approaches to the Study of Federalism,' *Political Studies*, 1966, 14(1), 15-33.
10. C.D. Tarlton 1965, "Symmetry and Asymmetry as Elements of Federalism : A Theoretical Speculation," *The Journal of Politics*, 27.
11. Carol Skalnik Leff, "Democratization and Disintegration in Multinational States : The Break up of the Communist Federations," *World Politics*, 1999, 51, 205-35.
12. Daniel J. Elazar, "From Statism to Federalism - A Paradigm Shift," *International Political Science Review,* 1996 17(4), 417-429.
13. Daniel J. Elazar, "International and Comparative Federalism," *PS : Political Science and Politics*, 1993 (June).
14. Daniel J. Elazar, Federalism, in David Sills (ed.), *International Encyclopaedia of Social Sciences* (New York : Macmillan, 1968) 353-367.
15. Daniel J. Elazar, *Exploring Federalism* (Tuscaloosa : University of Alabama Press, 1987).
16. Graham Smith (ed.), *Federalism : The Multiethnic Challenge* (New York : Longman, 1995).
17. Graham Smith, "Russia Multiculturalism and Federal Justice," *Europe-Asia Studies*, 1998, 50(8), 1393-1411.
18. J. Coakley, 1994, "Approaches to the Resolution of Ethnic Conflict : The Strategy of Non-territorial Autonomy", *International Political Science Review*, Vol. 15, No. 3: 297-314.
19. Juan Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation : Southern Europe, South America and Post-Communist Europe*, (Baltimore, Johns Hopkins University Press, 1996).
20. Juan Linz and Alfred Stepan, "Political Identities and Electoral Consequences : Spain, the Soviet Union and Yugoslavia," *Daedalus*, 1992, 121.
21. Ivo Duchacek, *Comparative Federalism*, (Lanham Md : Reissued by University Press of America, 1987).
22. K.C. Wheare, *Federal Government*, Second Edition, London and New York : Oxford University Press, pp.1-34 (1951).

23. Michael Burgess and Alain-G. Gagnon (ed.), *Comparative Federalism and Federation* (Harvester: Wheatsheaf) (1993).

24. Michael Stein (1971), "Federal Political Systems and Federal Societies", in J. Peter Meekison (ed.), Canadian Federalism : Myth or Reality?, Second Edition, Toronto: Methuen, 37-48.

25. Peter C. Ordershook, "Russia's Party System : Is Russian Federalism Viable?" *Post-Soviet Affairs,*1996, 12(3), 195-217.

26. Richard Gunther and Anthony Mughan, "Political Institutions and Cleavage Management" in *Do Institutions Matter*, R. Kent Weaver and Bert A. Rockman (Brookings), 1997, 272-301.

27. Robert Agranoff (ed.) (1999), *Accommodating Diversity : Asymmetry in Federal States,* Baden-Baden: Nomos.

28. Robert Sharlet, "The Prospects for Federalism in Russian Constitutional Politics," *Publius* 1994, 24 (Spring), 115-127.

29. Ronald L. Watts, "Canada : Three Decades of Periodic Federal Crises," *International Political Science Review,* 1996 17(4), 353-371.

30. Ronald L. Watts, "Intergovernmental Relations : Conceptual Issues", in Norman Levy and Chris Tapscott (ed.), *Intergovernmental Relations in South Africa : The Challenges of Co-operative Government* (West Cape : IDASA, 2001) 22-42.

31. Ronald L. Watts, *Comparing Federal Systems in the 1990s* (Institute of Intergovernmental Relations, Queens University Ontario, 1999).

32. Ronald L. Watts, "Asymmetrical Decentralization : Functional or Dysfunctional", *Indian Journal of Federalism,* 2004, 1-42.

33. Steven Solnick, "Will Russia Survive? Centre and Periphery in the Russian Federation," in Barnett R. Rubin and Jack Snyder (ed.), *Post-Soviet Political Order : Conflict and State Building* (London: Routledge, 1998), 58-80.

34. William Riker, "Federalism", in Fred I. Greenstein and Nelson W. Polsby (eds.), *Handbook of Political Science : Governmental Institutions and Processes,* Vol. 5 : (Reading : Addison-Wesley, 1975), 93-172.

35. William S. Livingston (1952), "A Note on the Nature of Federalism", *Political Science Quarterly*, 67, 81-95.

36. Peter C. Ordeshook and Olga Shvetsova, "Federalism and Constitutional Design", *Journal of Democracy,* 8.1 (1997) 27-42.

Option (f) : PUBLIC INTERNATIONAL LAW-II

INSTRUCTIONS FOR THE PAPER-SETTERS AND CANDIDATES :

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 15 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 10 short answer type questions carrying 20 marks i.e. 2 marks for each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions, and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Objective : This paper introduces the students to certain specific subjects and the recent trends of Public International Law.

Unit-I : States in general

State Territory :

Land Territory, National Waters, Territorial Sea, Air-Space and Subsoil under Earth, Modes of acquiring and losing State Territory.

State Jurisdiction :

Territorial Jurisdiction

Jurisdiction on High Seas

Jurisdiction on Aircraft

Jurisdiction on Antarctica and Outer-Space

Unit-II : Law of the Sea

The First and the Second United Nations Conference on the Law of the Sea

Third United Nations Conference on the Law of the Sea (UNCLOS III)

Convention on the Law of the Sea, 1982

Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (1994).

Unit-III : Individual in International Law

Nationality
Aliens
Extradition
Asylum
Human Rights

Unit-IV : Recent Trends

Recent Trends and the changing structure of International Law

Feminist Perspectives of International Law

Some new approaches to the study of International Law

The conflicts of Political Ideologies and the universality of International Law with particular reference to the Communist Approach to International Law, the Third and Fourth World Countries and International Law.

Books Recommended

1. Stark, J.G., *Introduction to International Law,* Butterworths, 1963.
2. Wolfgang Friedmann, *The Changing Structure of International Law,* Columbia University Press, 1964.
3. Gerhard Von Glahn, *Law Among Nations : An Introduction to Public International Law,* Longman, 1966.
4. D.P. O'Connell, *International Law,* Stevens and Sons, 1965, 2 Vols.
5. Richard A. Falk, *The Status of Law in International Society,* Princeton University Press, 1970, pp 447-539.
6. Anand, R.P., *Asian States and the Development of Universal International Law,* Vikas, 1972.
7. Anand, R.P., *New States and International Laws,* Vikas, 1972.
8. Ian Brownlie, *Principles of Public International Law,* Oxford University Press, 1973.
9. Grigory Tunkin, *Contemporary International Law,* Progress Publishers, 1969.
10. Corbett, P.E., *The Growth of World Law,* Princeton, 1971.
11. Quincy Wright, *Contemporary International Law : A Balance Sheet,* Random House, 1963.
12. *Journals :* (i) American Journal of International Law
    (ii) Indian Journal of International Law
13. Dallmeyer, G. Droninda (ed.), Reconceiving Reality : Women and International Law, American Society of International Law, 1999.

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PANJAB UNIVERSITY, CHANDIGARH

(Established under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M. A. PUBLIC ADMINISTRATION
(SEMESTER SYSTEM)

EXAMINATIONS, 2020-21.

- : o: -

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES of Public Administration

(Semester System)

1. (i) Terminal Evaluation 80%
   (ii) Continuous Assessment 20%
   (iii) Continuous Assessment may include Written Assignment, Snap Test, Participation in class discussions, Term Paper, Attendance etc.
   (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:
      (a) Written Test (one per semester): 25 (reduced to 5)
      (b) Snap Test: 25 (reduced to 5)
      (c) Term Paper/s: 25 (reduced to 5)
      (d) Participation in Class Discussions: 15 (reduced to 3)
      (e) Attendance: 10 (reduced to 2) *

   Total: 100 reduced to 20 (50 will be reduced to 10 in case of papers with Max Marks 50)

   *Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

   Attendance Component Mark/s for Theory Papers
   (a) 75% and above up to 85%: 1
   (b) Above 85%: 2

2. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the subject and, thus he/she shall have to secure pass marks in the total of Internal Continuous Assessment and University examinations.

3. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the examination on the Pro-forma obtainable from the Examination Branch.

4. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes will be shown separately in the Detailed-Marks-Card (D.M.C.)

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE SUBJECT OF PUBLIC ADMINISTRATION FOR M.A. (PUBLIC ADMINISTRATION) SEMESTER SYSTEM (2019-20)

The M.A. Programme in Public Administration is multi-disciplinary and job oriented. The Curriculum integrates theoretical and practical perspectives in the field of Public Administration.

This is a four-semester programme. Each semester has three core papers and two optional papers. Each paper is of four (4) credits except for papers VIII(a) and VIII(b) in Semester III that are of two (2) credits each. A candidate must successfully complete 20 credits at the end of 2nd Semester to join the 3rd Semester and 28 credits at the end of the 3rd Semester to join the 4th Semester. There will be six contact hours per week per 4 credits. (4 lectures and two tutorials).

Pedagogy: The pedagogy is designed to nurture the attributes of intellectual inquiry, scholarship, research and writing. This will include lectures, seminars, class discussion, term papers and other writing assignments, presentations, role play, case studies, field visits etc. and will be Information and Communication Technology supported. The use of these methods should equip the student with listening, writing and presentation skills along with the capacity for analysis and evaluation. Peer evaluation, people skills, navigating public spaces, leadership and team work will be skills expected to develop and to prepare the student for the world of work.

SEMESTER I

Core Papers

1. Administrative Theory
2. Indian Administration
3. Comparative and Development Administration

Optional Papers

4. Citizen Centric Administration
5. Administration of NGOs
6. Environment Administration
7. Office Management
8. Economic Administration

SEMESTER II

Core Papers

1. Administrative Thought
2. Public Finance and Financial Administration
3. Public Personnel Administration

Optional Papers

4. Organisational Psychology
5. Police Administration
6. Project Management
7. International Administration
8. MIS and E-Governance

SEMESTER III

Core Papers

1. Research Methods and Statistics
2. Local Governance in India
3. Social Systems and Welfare Administration

Optional Papers

4. Disaster Management
5. Management of Disciplinary Proceedings
6. Public Health Policy and Administration
7. Corporate Governance
8. Advanced Research Methods with Dissertation **(cannot be opted by Private Students)**
   (a). Advanced research Methods
   (b). Dissertation

SEMESTER IV

Core Papers

1. Public Policy and Analysis
2. Administrative Law
3. Organisational Development and Administrative Improvement

Optional Papers

4. Ethics in Governance
5. Education Policy and Administration
6. Labour Policy and Administration
7. Regulatory Governance
8. Public Enterprise Management

Semester 1
CORE PAPERS
PAPER I: Administrative Theory

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper will familiarize the student with the basic concepts of Public Administration in developed and developing countries. In addition, the course will also cover new areas and developments in the field of Public Administration. The paper will also cover various theories of organization. Apart from regular classroom teaching, special talks/lectures from experts as well as practitioners will be organized to establish links between theory and practice and develop the student's critical skills.

Unit I

Meaning, Nature and Scope of Public Administration
Evolution of the discipline and its present status in developed and developing countries
New Public Administration; New Public Management; Principal-Agent Theory
Concept: New Public Service; Post-modernism; Post-structuralism

Unit II

Organization: Meaning; Types: Formal and Informal Organizations;
Hierarchy; Unity of Command; Span of Control; Centralisation; Decentralisation
The Chief Executive: Types, Functions and Role

Unit III

Line and Staff Agencies; Headquarter and Field Relationships
Communication: Concept, Process and Barriers
Supervision: Concept, Process and Barriers
Coordination: Concept, Process and Barriers

Unit IV

Accountability of Administration: Legislative, Executive and Judicial
Citizen and Administration Interface: Concept and Philosophy; Citizen Charter
Administrative Reforms: Concept and Philosophy
Good Governance: Concept, Application and Rationale

Essential Readings

Arora, R. K. (Ed.). (1979). *Perspectives in Administrative Theory*. New Delhi: Associated.

Awasthi and Maheshwari (2017). *Lok Prashasan*. Agra: Lakshmi Narain Agarwal Educational Publishers.

Awasthi and Maheshwari (2017). *Public Administration.* Agra: Lakshmi Narain Agarwal Educational Publishers.

Bhambri, C. P. (2010). *Public Administration Theory and Practice* (21st ed.). Meerut: Educational Publishers.

Bhattacharya, M. (2000). *Public Administration*. Calcutta: World Press.

Bhattacharya, Mohit (2007). *LokPrashasanKeNayeAyaam*. New Delhi:Jawahar Publishers.

Bhattacharya, Mohit (2016). *New Horizons of Public Administration*. New Delhi: Jawahar Publishers.

Denhardt, Robert B. &Denhardt, Janet V. (2000). The New Public Service: Serving Rather than Steering. *Public Administration Review*. 60(6): 549-559

Drucker, P. F. (1999). *Management: Tasks, Responsibilities, Practices*. Bombay: Allied Publishers.

Etzioni, A. (1995). *Modern Organizations*. New Delhi: Prentice Hall.

Fadia, B.L. and Fadia, Kuldeep (2017). *Bharat Mein LokPrashasan*. Agra: SahityaBhawan.

Fadia, B.L. and Fadia, Kuldeep (2017). *Public Administration in India*. Agra: SahityaBhawan.

Government of India Second Administrative Reforms Commission. (2008). First Report: Ministry of Personnel, Public Grievances and Pensions, Department of Administrative Reforms and Public Grievances, New Delhi

Henry, N. (2012). *Public Administration and Public Affairs* (12th ed.). New Jersey: Prentice Hall.

Hersey, P., & Blanchard, K. H. (2007). *Management of Organisational Behaviour* (5th ed.). New Delhi.

Nigro, F. A., &Nigro, C. (1989). *Modern Public Administration* (7th ed.). New York: Lloyd Harper and Row.

Polinaidu, S. (2014). *Public Administration*. New Delhi: Galgotia Publications

Sharma, M.P. and Sadana, B.L. (2013). *LokPrashasan: SidhantEvamVyavhaar*. New Delhi: Kitab Mahal

Sharma, M.P. and Sadana, B.L. (2010). *Public Administration in Theory and Practice*. New Delhi: Kitab Mahal.

Further Readings

Blumenthal, S. C. (1960). *Management Information System: A Framework for Planning and Development* (5th ed.). Englewood Cliffs NJ: Prentice Hall.

Denhardt, Robert B. &Denhardt, Janet V. (2010). *Public Administration*. New Delhi: Cengage Learning.

Fox, N.J. (2014). 'Post-Structuralism and Post-Modernism'. In Cockerham, W.C., Dingwall, R. and Quah, S.R. (eds.) *The Wiley BlackswellEncyclopedia of Health Illness, Behaviour and Society.* Chichester: Wiley.

Golembiewsky, R. T. (1977). *Public Administration as a Developing Discipline* (2nd ed.). New York: Marcel, Publisher CRC Press.

Government of India, Cabinet Secretariat. *Performance Management.* Retrieved from http://performance.gov.in/RFD.html

Gross, B. (1964). *The Managing of Organisations*. London: Free Press.

Hicks, H. G., &Gutlet, R. C. (2008). *Organisations: Theory and Behaviour* (2nd ed.). New York: McGraw Hill.

Kaushik, S. L., &Sahni, P. (Eds.). (1983). *Public Administration in India: Emerging Trends*. Allahabad: Kitab Mahal.

Koontz, H., & O'Donnell, C. (1986). *Principles of Management.* 4th Edition. Tokyo: McGraw Hill.

Marx, Fritz Morstein (Ed.) (1946). Elements of Public Administration. New York: Prentice Hall, Inc.

Newman, W. M., Summer, C., & Warren, E. (1976). *Management: Concepts, Behaviour and Practice*. New Delhi: Prentice Hall.

Niskanen, W. A. (2007). *Bureaucracy and Representative Government*. Chicago: Atherton.

Osborne, D., &Gaebler, T. (1993). *Re-inventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. New York: Addison Wesley.

Pfiffner, J., & Sherwood, F. (1984). *Administrative Organization*. New Delhi: Prentice Hall.

Raadschelders, Jos C. N. (2011). *Public Administration: The Interdisciplinary Study of Government.* New York: Oxford University Press.

Robinson, Mark (2015). *From Old Public Administration to the New Public Service – Implication for Public Sector Reform in Developing Countries*. Singapore: UNDP Global Centre for Public Service Excellence.

Tullock, G. (1987). *The Politics of Bureaucracy*. Washington DC: Public Affairs Press.

Vickers, J. S., & Yarrow, G. K. (1997). *Privatization: An Economic Analysis* (7th ed.). Cambridge: MIT Press.

PAPER-II
Indian Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper attempts to familiarize the student of Public Administration with the basic philosophy and features of the Indian Constitution, particularly those serving as the basis of the administrative set up in India. The students will also be familiarized with the institutions that make up the system alongwith a conceptual and historical understanding. Class room teaching, lectures by experts, seminars and field trips will form the pedagogical scheme of instruction.

UNIT I

Philosophy and Features of the Indian Constitution
Union Executive: President, Prime Minister and Council of Ministers
Union Legislature - Lok Sabha and Rajya Sabha: Composition and Functions

UNIT II

State Executive: Governor, Chief Minister, Council of Ministers
State Legislature: Legislative Assembly, Legislative Council
Centre-State Relations: Legislative and Administrative

UNIT III

Central Secretariat: Structure, Functions and Role
Cabinet Secretariat: Significance, Functions and Role; Prime Minister Office
Election Commission: Structure, Functions and Role; Electoral Reforms
Judiciary: Supreme Court; High Court; Judicial Review; Judicial Reforms

UNIT IV

Relationship between Political and Permanent Executive
Generalist and Specialist in Administration
Indian Administration: Problems and Challenges

Essential Readings

Arora, R. K. and Goyal, R. (1997). *Indian Public Administration.* New Delhi: VishwaParkashan.

Austin, G. (2009). *Indian Constitution*. Oxford: Claredon.

Avasthi and Avasthi. (2001). *Indian Administration*. Agra: LuxmiNarain Aggarwal

Avasthi &Avasthi (2017). BhartiyaPrashasan. Agra: LaxmiNarain Aggarwal

Basu, D. D. (2013). *Introduction to the Constitution of India*. (21st Edition). New Delhi: Lexus Nexus.

Chakraborty, Bidyut (2016). *Indian Administration.* New Delhi: Sage.

Fadia, B.L. and Fadia, Kuldeep (2017). *Bharat Mein LokPrashasan*. Agra: SahityaBhawan.

Fadia, B.L. and Fadia, Kuldeep (2017). *Public Administration in India*. Agra: SahityaBhawan.

Kapur, Devesh, Mehta, PratapBhanu&Vaishnav, Milan (eds.) (2007) *Rethinking Public Institutions in India.* New Delhi: Oxford University Press.

Maheshwari, S. (2001). *Indian Administration*. (6th edition). New Delhi: Macmillan.

Narain, I. (Ed.). (1976). *State Politics in India*. Meerut: Meenakshi.

Sharma, M.P. and Sadana, B.L. (2013). *LokPrashasan: SidhantEvamVyavhaar*. New Delhi: Kitab Mahal

Sharma, M.P. and Sadana, B.L. (2010). *Public Administration in Theory and Practice*. New Delhi: Kitab Mahal.

Singh, H. (ed.). (2008). *Indian Administration*. Jaipur: Aalekh Publishers.

Singh, M and Singh, H. (1989). *Public Administration in India*. New Delhi: Sterling Publishers.

Relevant websites

Further Readings

Almond, G.A. & Coleman, J.S. (1966). *The Politics of Developing Areas*. Princeton: Princeton University Press.

Badyal, J.S. (1993). *Indian Political System* (5th ed.). Jalandhar: Sohal Lal Khanna.

Hyman, H.H. (1972). *Political Socialization: A Study in the Psychology of Political Behavior*. New Delhi: American Publishing.

Palmer, N.D. (1961). *Indian Political System*. London: George Allen and Unwin Ltd.

Palmer, N.D. (1976). *Elections and Political Development: The South Asian Experience*. New Delhi: Vikas Publishing House.

Pye, L. (1966). *Aspects of Political Developments.* Boston: Little Brown.

PAPER -III
Comparative and Development Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This course will equip the student with knowledge and understanding of the concepts and approaches used in the study of Development Administration and Comparative Public Administration, features of developed & developing countries, planning machinery at Centre, State and district levels in India and the emergence of India as a Welfare state. They will be able to apply the comparative approach through the theoretical formulations studied in Unit I to the economic, social, political and administrative systems and their working in the countries listed. Teaching and learning will be through lecture, seminars, group work, case study analysis and presentations.

UNIT I

Comparative Public Administration: Meaning nature, scope and significance.
Evolution and Relevance of Comparative Public Administration.
Environment of Administration in Developed & Developing Countries: economic, political social and cultural.

UNIT II

Approaches: Structural Functional Approach; Ecological approach
Administrative and Political Systems: UK; USA; France; Japan

UNIT III

Concept and Significance of Development and Sustainable Development
Development Administration: Concept and significance
Administrative Capability and Role of Bureaucracy for Development Administration

UNIT IV

Organization for Development Planning a Centre, State and District Levels in India.
Role of United Nations System in Development
Overview of Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)
Gender and development

Essential Readings

Avasthi, A. P. (2013); *VikasPrashashan*. Agra: Lakshmi Narain Agarwal

Arora, R.K. (1972). *Comparative Public Administration: An Ecological Perspective*. New Delhi: Associated Publishing House.

Arora, R.K. & Sharma, S. (Eds.) (1992). *Comparative and Development Administration: Ideas and Actions*. Jaipur: Arihand Centre for Administrative Change.

Dwivedi, O.P. (1994). *Development Administration: From Underdevelopment to Sustainable Development.* London: Macmillan.

Farazmand, A. (Eds.) (2001). *Handbook of Comparative and Development Public Administration* (2nd ed.) New York: Marcell Dekker Inc.

Nadkarni, V & Noonan, N.C. (Eds) (2013). *Emerging Powers in a Comparative Perspective: The Political and Economic Rise of the BRIC Countries.* USA: Bloomsbury Academic.

Ray, S.N. (2004). *Modern Comparative Politics: Approaches, Methods and Issues.* New Delhi: Prentice Hall of India.

Sapru, R.K. (2003). *Development Administration* (2nd Ed.) New Delhi: Sterling Publishers.

Singh, S. & Singh, S. (2010). *Public Administration: Development and Local Administration*. Jalandhar: New Academic Publishers.

Chakravarty, Bidyut and Prakash Chand Kandpal (2018). *VaishvikritDuniyameinLokPrashasan: SiddhantaurPaddhatiyan* (Hindi Edition). New Delhi: Sage Bhasha.

Further Readings

Almond, G. & Powel, G. B. (1972). *Comparative Politics: A Developmental Approach*. New Delhi: Amerind.

Bhatt, A.&Ranjan, R. (2010). *Comparative Government and Politics* (Ist ed.). New Delhi: Anmol Publications Pvt. Ltd.

Heady, F. & Stokes, S.L. (1962). *Papers in Comparative Public Administration*. U.S.A: Institute of Public Administration University of Michigan.

Heady, F. (2001). *Public Administration: A Comparative Perspective* (6th ed). New York: Marcell Dekker Inc.

Riggs, F.W. (1961). *The Ecology of Public Administration*. Bombay: Asia Publishing House.

Riggs, F.W. (1964). *Administration in Developing Countries: The Theory of Prismatic Society*. Boston: Houghton Mifflin Co.

Srivastava, S.P. (1998). *The Development Debate: Critical Perspective*. Jaipur & New Delhi: Rawat Publications.

W.J. Siffin. (1959). *Towards the Comparative Study of Public Administration*. Bloomington: Indiana University Press.

OPTIONAL PAPERS
PAPER–IV
Citizen-Centric Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The paper is designed to acquaint the student both with the participatory and rights based approaches. Good governance and citizen centric administration are inextricably linked. The paper will also cover various cases of citizen engagement initiatives. Apart from regular classroom teaching, special talks/lectures from experts as well as practitioners from the civil service will be organized to establish links between theory and practice and develop the student's critical skills.

UNIT I

Concept of Citizen Centric Administration: Concept, Evolution, Features and Significance.
Rights and Obligations of Citizens: Civic Culture
Service providing and Developmental functions of the Government

UNIT II

Citizen Charter - Evolution, Features and Applications
Social Audit - Evolution, Features and Applications
Citizens' Participation in Administration: Concept, Significance and Limitations
Citizen Engagement initiatives of GoI (My-Gov) at national level; Select state government initiatives (Bhagidari, Delhi; Citizen Report Card, Bengaluru)

UNIT III

Right to Information Act, 2005
Lok Pal and Lok Ayukta in India
Grievance – Meaning; Agencies for Redressal of Grievances at centre and state levels in India

UNIT IV

Consumer Protection: Concept and Rationale
Consumer Protection Act, 1986
Punjab Transparency and Accountability in delivery of Public Service Act 2018

Essential Readings

Bakshi, P.M. (2008). Consumer Protection and Professionals reported in *Law India*, the ILI Publication.

Biswal, T. (2016). *Governance and Citizenship.* Jaipur: Rawat

Chaudhary, R.N.P. (2010). *Consumer Protection Law: Provisions and Procedure*. Deep & Deep, New Delhi.

Chakrabarty, Bidyut and Prakash Chand. (2016). *Public Policy: Concept, Theory and Practice.* New Delhi: Sage

Government of India Second Administrative Reforms Commission. (2008). '*Refurbishing of Personnel Administration – Scaling New Heights*', Tenth Report: Ministry of Personnel, Public Grievances and Pensions, Department of Administrative Reforms and Public Grievances, New Delhi.

Government of India Second Administrative Reforms Commission. (2009). '*Promoting e-Governance: The Smart Way Forward*', 11th Report: Ministry of Personnel, Public Grievances and Pensions, Department of Administrative Reforms and Public Grievances, New Delhi.

Government of India Second Administrative Reforms Commission. (2009). *'Citizen Centric Administration - The Heart of Governance*', Twelfth Report: Ministry of Personnel, Public Grievances and Pensions, Department of Administrative Reforms and Public Grievances, New Delhi.

Public Affairs Centre. (2007). *India's Citizen's Charters- A Decade of Experience*, Public Affairs Centre: Bangalore

Singh, Shivani. Ed.) (2016). *Governance: Issues and Challenges.* Sage: New Delhi

Further Readings

Agarwal, Meenu. (2006). *Consumer Behaviour and Consumer Protection in India*, Eastern Book Corporation.

Bynoe, Ian. (1996). *Beyond the Citizens' Charters - New Directions for Social Rights*, Institute of Public Policy Research: London.

Citizens Charters – A Handbook. (2008). Centre for Good Governance: Bangalore Citizens Charters – A Handbook Government of India Ministry of Personnel Public Grievances and Pension Department of Administrative Reforms and Public Grievances, New Delhi.

Gupta, Dipankar (2017). *From 'People' to 'Citizen': Democracy's Must Take Road.* New Delhi: Social Science Press.

Madsen, Pirie. (1991). *Citizens Charter.* Adam Smith Institute: London

Majumdar, P.K. (2008). *Law of Consumer Protection in India*, Orient Publishing Company.

Paul, Samuel. (2008). "India's Citizen's Charters: In Search of a Champion", Economic and Political Weekly, Vol. 43, No. 7 (February 16 - 22), pp. 67-73.

. **Online sources:**

Aiyar, Yamini et al. A Guide to Conducting Social Audits: Learning from the Experience of Andhra Pradesh http://www.accountabilityindia.in/sites/default/files/guidelines_-_le.pdf

Department of Information Technology Framework for Citizen Engagement in eGovernancehttp://indiagovernance.gov.in/files/citizen_engagement_in_egovernance.pdf

https://mygov.in/ http://righttoinformation.gov.in/rti-act.pdf http://rtspunjab.gov.in/Act.aspx

Social Audit: A Toolkit A Guide for Performance Improvement and Outcome Measurement http://unpan1.un.org/intradoc/groups/public/documents/cgg/unpan023752.pdf 132 PUB 504

PAPER–V

Administration of NGOs

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This Paper is designed to prepare future NGO and Public Administrators to understand the theoretical conceptualization of the NGO and the NGO Sector in the framework of a developing economy and society. Lectures, case study analysis, presentations and field trips will be used to teach this course. At the end of the course the student will have an understanding of the commonly adopted organizational forms and governance structures pertaining to NGOs; issues of governance, capacity building and accountability; funding sources, making grant applications and project proposals; and also gain an understanding of the NGO-Government interface and its impact on the working of NGOs. Case studies of three international and domestic NGOs will further deepen the understanding and equip them to work as managers in the NGO sector in combination with the other papers in this programme.

UNIT I

Non-Governmental Organisations (NGOs): Concept, Rationale and Scope
National Policy on the Voluntary Sector 2007
NGO-Government Interface in India with special reference to the NITI Aayog, Ministries and Departments

UNIT II

Organisational Forms and Governance Structures of NGOs: Trust; Society; Company
NGO-Government & NGO-Private sector partnerships: Rationale and practice

Sources of NGO Funding; Government and Foreign Grants: Eligibility, Requirements & Procedures with special reference to Foreign Contributions

UNIT III

Issues of Governance; Capacity Building; Autonomy; Ethics
Accountability of NGOs: Rationale, Mechanisms and Problems
Formulation of a Welfare/Development Project Proposal including Monitoring and Evaluation arrangements

UNIT IV

Case Studies:
Self Employed Women's Association (SEWA): Organisation, Functions and Working
Red Cross Society of India: Organisation, Functions and Working
Voluntary Action Network India (VANI)
OXFAM India

Essential Readings

Bava, N. (ed.) (1997). *Non-Government Organisations in Development: Theory and Practice*. New Delhi: Kanishka Publishers.

Chandra, Suresh. (2015). *Non-Government Organisations.* Jaipur: Rawat.

Dantwala, M. L., Sethi Harsh and PravinVisaria (eds.) (1998) *Social Change Through Voluntary Action*. New Delhi: Sage Publications.

Government of India (2007). *Report of the Steering Committee on Voluntary Sector for The Eleventh Five-Year Plan* (Planning Commission (2007). New Delhi: Planning Commission.

Handy, C. (1990). *Understanding Voluntary Organizations – How to make them Function Effectively.* London: Penguin Books.

Jain, R. B. (1995). *NGOs in Development Perspective*. New Delhi: VivekPrakashan. Self Employed Women's Association http://www.sewa.org/

Mohanty M. and Singh A. (n.d) *Voluntarism and Government: Policy, Programme and Assistance, Voluntary Action Network India (VANI).* http:pcserver.nic.in/ngo/reports.aspx

NanavatyMeher and Kulkarni P. (1998). *NGOs in the Changing Scenario*. New Delhi: Uppal Publishing House

OXFAM India.www.oxfamindia.org.

SEWA sewa.org

Voluntary Action Network India. www.Vaniindia.org. (VANI)

Further Readings

Chatterjee, A. (1998). *NGOs: An Alternative Democracy in HiranmayKarlekar Independent India: The First Fifty Years.* New Delhi: Indian Council for Cultural Relations and Oxford University Press.

Five Year Plan Documents and Approach Papers. Planning Commission, New Delhi

Gangrade, K. D. and Jain S. (1995). *NGOs: Retrospect and Prospect*. New Delhi: Friedrich Ebert Stiftung.

Government of India (1994). An Action Plan to bring about Collaborative Relationship between Voluntary Organizations and Government. CAPART. New Delhi: Government of India. http:pcserver.nic.in/ngo/reports.aspx

Indian Red Cross http://www.indianredcross.org/

Jain, N. (2009). *Handbook for NGOs: An Encyclopaedia for Non-Governmental Organisations and Voluntary Agencies*. (I & II). New Delhi: Nabhi Publications.

Kalima, R. (1992). *Where Women Are Leaders: The Sewa Movement in India.* New Delhi: Vistaar Publications.

Planning Commission. (2002)**.** *Proceedings of the All India Conference On The Role Of The Voluntary Sector In National Development.* http:pcserver.nic.in/ngo/reports.aspx

Prasad, K. (ed.). (2000). *NGOs and socio-Economic Development Opportunities*. New Delhi: Deep and Deep Publications Pvt. Ltd.

GOI. (2002). Report of the Steering Committee on Voluntary Sector for The Tenth Five-Year Plan (Planning Commission). New Delhi: http:pcserver.nic.in/ngo/reports.aspx

Smith-Sreen, P. (1995). *Accountability in Development Organisations: Experiences of Women Organisations in India* New Delhi: Sage Publication.

Voluntary Organisations Database and Reports http:pcserver.nic.in/ngo/

PAPER– VI
Environment Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This course studies environmental policy, primarily in India. It will examine the nature and scope of environmental, energy, and natural resource problems; contrasting perspectives on their severity and policy implications; scientific, economic, political, and institutional forces that shape policymaking and implementation; approaches to environmental policy analysis; and selected issues in environmental policy both within India and globally.

UNIT I

Environment:

Key Concepts and Issues: Climate, Biodiversity, Waste Management, Air, Water, Energy, Ecosystem Balance; Natural Resource Conservation & Management
Environmental Hazards and Risk Management
Environmentally Sustainable Development; Corporate Social Responsibility

UNIT II

Environmental Policy:

Introduction to Environmental Policies
Environmental Economics & Regulatory Framework
Environmental Impact Assessment: Impact Prediction, Evaluation and Mitigation
Strategic Environmental Assessment (SEA); Forecasting Environmental Changes

UNIT III

Environmental Administration: Law and Institutions

Overview of Laws and Institutions for Environmental Administration in India
Central Pollution Control Board: Structure, functions and role
State Pollution Control Board: Structure, functions and role

UNIT IV

International Perspective

Global Agenda for Environment Conservation
Sustainable Development Goals and Environment, Climate Change and Environmental Justice
Case Studies

Essential Readings

Bhatt, M.S., Ashraf, S., &Illiyan, A. (Eds.) (2008). *Problems and Prospects of Environment Policy: Indian Perspective.* Delhi: Aakar Books.

Divan, S., &Rosencranz, A. (2001). Environmental Law & Policy in India (18th edition). New Delhi: Oxford University Press.

Dwivedi, O.P. (1997). *India's Environmental Policies, Programmes and Stewardship*. London, UK: Palgrave Macmillan.

Krishnamoorthy, B. (2017). *Environmental Management: Text and cases (3rd ed.).* New Delhi: PHI Learning Private Limited.

Kulkarni, V., & Ramachandra, T.V. (2006). *Environmental Management.* New Delhi: TERI Press.

Roberts, J. (2011). *Environmental Policy (2nd ed.).* Abingdon, Oxon: Routledge

Further Readings

Agenda 21; http://www.un.org/esa/sustdev/documents/agenda21/english

Galatchi, L. D. (2008). Global Environmental Change and the International Efforts Concerning Environmental Conservation. In: Liotta P.H., Mouat D.A., Kepner W.G., Lancaster J.M. (eds) *Environmental Change and Human Security:*

Recognizing and Acting on Hazard Impacts. NATO Science for Peace and Security Series C: Environmental Security. Dordrecht: Springer.

Jaswal, P.S. (2009). *Environmental Law* (3rd Edn.). New Delhi: Allahabad Law Agency.

McKinney. M., Schoch, R.M., Yonavjak, L. &Mincy, G.A. (2017). *Environmental Science: Systems & Solutions (6th Ed.).* USA: Jones & Bartlett Learning

Miranda, Marie Lynn, Douglas A. Hastings, Joseph E. Aldy, and William H. Schlesinger. (2011). The Environmental Justice Dimensions of Climate Change. *Environmental Justice* 4(1), 17-25. Retrieved From https://dash.harvard.edu/bitstream/handle/1/9639982/aldy-environmentaljustice.pdf.

Speth, J. G. (2006). The global environmental agenda: origins and prospects. In Speth, J.G & Haas, P.M (Eds.) *Global Environmental Governance*. (pp. 1–20). Washington DC: Island Press.

Theodore, M.K., & Theodore, L. (2010). *Introduction to Environmental Management.* Boca Raton, FL: CRC Press.

Therivel, R. (2010). *Strategic Environmental Assessment in Action.* Abingdon, Oxon: Taylor & Francis

Uberoi, N.K. (2007). *Environmental Management (2nd ed.).* New Delhi: Excel Books.

UNEP. (2015). *Embedding the Environment in Sustainable Development Goals. Post-2015 Discussion Paper 1 Version*. Retrieved from https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=972&menu=35.

Vyas, Harishchandra (2004); Jansankhya, PradooshanaurParyavaran; VidyaVihar

PAPER–VII
Office Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: Administrative efficiency has, at its core, the systematization of organization and procedures thereby evolving work systems that are appropriate and procedures that eliminate unnecessary delays and allow the office work to be done effectively and at a reasonable cost. The Objectives of the course is to train the student to look at the

setting up and working of an efficient and cost-effective office by familiarizing him with the core areas and issues of office administration.

UNIT-I

Administrative and Office Management: Nature and scope
Office organization: Role, functions and qualifications of office supervisor/office manager
Office layout and Space management

UNIT-II

Physical and Psychological factors in the office – colour, light, noise, air-conditioning, safety
Office Furniture, Machines and Equipment
Office Stationery and Supplies: standardization and codification; purchase, receipt, issue, disposal; store layout and store accounting

UNIT-III

Office communication: Role, Types & Means; handling incoming and outgoing mail
Records Management: Features of good records management; Filing, Classification and Indexing of records; Records Retention Schedules; Preservation of records and Disposal of unwanted records; Centralized and Decentralized record keeping systems

UNIT-IV

Office procedure and office manuals; forms designing and control
Quantitative and Qualitative office work control
Statutory and other Meetings: Drafting, Circulation, Preparation of agenda; Preparation and Confirmation of minutes and proceedings of meetings

Essential Readings

Chopra, K. R. (2008). *Office Management.* Mumbai: Himalaya Books.

Ghosh, Prasanta K. (2003). *Office Management: Principles and Practice.* New Delhi: Sultan Chand & Sons.

K, Zane &Qiible. (1977). *Introduction to Administrative Office Management.* Cambridge: Winthrop Publishers.

N. P, Reddy & R.H, Appannaiah. (1990). *Office Organisation and Management.* New Delhi: Himalaya Publishing House.

R. G, Terry. (1958). *Office Management and Control: The Administrative Managing of Information.* Irwin: Home Wood.

Rachel, Littlefield. (1981). *Management of Office Operations.* New Delhi: Prentice Hall.

Robinson, M. E & I. H. W, Leffingwel. (1986). *Text Book of Office Management.* New Delhi: McGraw Hill.

S, Gadkari. (1997). *Office Management for Public Administration-Principles and Techniques.* New Delhi: Concept Publishing Company.

Relevant Websites /Internet Sources

Further Readings

Carl, Heyel. (1972). *Handbook of Office Management and Administrative Services*. New York: McGraw Hill.

G, Whitehead. (1982). *Office Practice Made Simple*. London: The English Language Book Society.

Gopalkrishan, P. (1999). *Handbook of Materials Management*. New Delhi: Prentice Hall of India.

K. R, Sharma., Gupta, K. Shashi &Nayyar, Sushil. (2002). *Office Management.* Ludhiana: Kalyani Publishers.

PAPER–VIII
Economic Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: During the course of study the student will be familiarized with the economic models of the government, industrial policies and economic legislations. In addition, the students would be taught about the promotional role of State by referring to various promotional and infrastructural public sector undertakings. Apart from regular classroom teaching, special talks/lectures from experts as well practitioners from the civil service/industry will be organized to establish links between theory and practice and develop the student's critical skills.

UNIT I

Relevance of Economics to Public Administration
Concepts: Market Mechanism, Perfect Competition, Monopoly, Monopolistic Competition, National Income
Concept and Features: Free Market Economy; Centrally Planned Economy; Mixed Economy

UNIT II

Sustainable Socio-economic Development; SDGs and the Indian economy
Structure and Growth of the Indian Economy
Indian Economic Reforms: Concept, Rationale and Evaluation

UNIT III

Economic Administration: Nature and Scope
Market Failure: The Rationale for Government Intervention; State versus Market Debate

Monetary Policy: Objectives, Instruments and Administration
Fiscal Policy: Objectives, Instruments and Administration

Unit IV

Economic Legislation: Rationale, Philosophy and Overview
Industrial (Development and Regulation) Act, 1951
Foreign Exchange Management Act, 1999
Competition Act, 2002

Essential Readings

Bailey, S. J. (2001). *Public Sector Economics: Theory, Policy and Practice (2nd ed.).* London: Palgrave.

Chakraborty, Lekha S. (2016). *Fiscal Consolidation, Budget Deficits and the Macro Economy.* New Delhi: Sage.

Jha, L.K. (1986). *Economic Administration in India – Retrospect and Prospect.* New Delhi: IIPA.

Kuchhal, S.C. (1989). *Industrial Economy of India.* Allahabad: Chaitanya Publishing House.

Marathey, S.S. (1986). *Regulation and Development.* New Delhi: Sage Publications.

Mishra, S.K. and Puri, V.K. (2010). *Indian Economy: Its Development Experience.* New Delhi: Himalaya Publishing House.

Ministry of Finance, https://www.finmin.nic.in/

Ramanadham, V.V. (1965). The Working of Public Sector. Bombay: Allied Publishers.

Ray, Partha (2013), Monetary Policy, Oxford Press, New Delhi

United Nations. (1974). Organisation, Management and Supervision of Public Enterprises in Developing Countries. New York: U.N.

_____https://sustainabledevelopment.un.org/?menu=1300

World Bank. (1995). Bureaucrats in Business: The Economics and Politics of Government Ownership. New York: World Bank.

Further Readings

Govt. of India. Five Year Plan Documents

Padmanabhan, G (2013), " Administering FEMA (Foreign Exchange Management Act) – evolving challenges", Inaugural Address at the Authorised Dealers' Conference, Agra, 30 November 2013 online available at https://www.bis.org/review/r131206b.pdf

Singh, Vijay Kumar (2011), " Competition Law and Policy in India: The Journey in a Decade", *NUJS Law Review*, Vol.4, No. 4, pp. 524-566 online available at http://nujslawreview.org/wp-content/uploads/2016/12/vijay-kumar-singh.pdf

Taxmann's. (2009). *Economic Laws.* New Delhi: Taxmann Publications (P) Ltd.

Vaishmapayan, J.V. (2013). *SamashtiArthashastra. SiddhantEvamNeeti.* Lucknow: New Royal Book Company.

SEMESTER II
CORE PAPERS

PAPER-I
Administrative Thought

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper attempts to make the student aware of theories and thoughts of various classical, neo-classical and modern thinkers in the area of administration and organization. The study of this paper will equip the student with a deep understanding of the historical evolution of administrative thought, various conceptualizations and their application. Pedagogy will include lectures, assignment writing and presentations.

UNIT I

Classical Approach
Identity of Public Administration: Woodrow Wilson
Principles of Management: Henri Fayol, Luther Gulick and L.B. Urwick
Scientific Management: Frederick Winslow Taylor
Bureaucratic Theory: Max Weber, Karl Marx

UNIT II

Human Relations and Behavioural Approach
Elton Mayo (Hawthorne Experiments)
Mary Parker Follett (Conflict and Leadership)
Chester I. Barnard (Functions of Executive)
Herbert Simon (Decision making)

UNIT III

Chris Argyris (Immaturity-Maturity Theory)
Rensis Likert (Systems Management)
Motivation: Abraham Maslow (Needs Hierarchy); Frederick Herzberg (Motivation – Hygiene); Douglas McGregor (Theory X and Theory Y)

UNIT IV

Fred W. Riggs (Ecological Approach)
Peter Drucker (Modern Management)

Vincent Ostrom (Public Choice Theory)
Kautilya (Principles and elements of public administration; Saptanga Theory of State; Recruitment and Training)

Essential Readings

Maheshwari, S. R. (2003). Administrative Thinkers (2nd Edition). Delhi: Macmillan India Limited

Ostrom, Vincent. (1975). Public Choice Theory: A New Approach to Institutional Economics; *American Journal of Agricultural Economics*, Vol. 57, No. 5, Proceedings Issue (Dec., 1975), pp. 844-850

Ostrom, Vincent and Allen, Barbara. (2007). *The Intellectual Crisis in American Public Administration*. Alabama: The University of Alabama Press.

Etzioni, A. (1964). *Modern Organizations*. New Delhi: Prentice Hall.

Prasad, D. R. & Prasad, V.S., Satyanarayana, P., Pardhasaradhi, Y. (2017). *Administrative Thinkers*. New Delhi: Sterling.

Sapru, R.K. (2006). Administrative Theories and Management Thought. New Delhi: PHI

Gross, B. (1968). *Organizations and their Managing*. New York: Free Press.

Pugh D.S., Hickson D.J. &Hinings C.R. (2007). *Writers on Organizations*. Harmondsworth: Penguin.

Evans, Michael. (2004). *Karl Marx*. London: Routledge.

Fadia, B.L. and Fadia, Kuldeep. (2017). *LokPrashasan*. Agra: SahityaBhawan.

Pugh, Derek S. (Ed.) (1990). *Organization Theory: Selected Readings*. Third Edition. London: Penguin Business

Riggs, Fred Warren. (1962). *Ecology of Public Administration*. USA: Asia Publishing House

Riggs, Fred W. (1964). *Administration in Developing Countries: The Theory Of Prismatic Society*. Boston: Houghton Mifflin.

Further Readings

Allen, V.L. (1975). *Social Analysis*. London: Longman.

Blau, P. M. (1987). *Bureaucracy in Modern Society*. New York: Random House.

Dubhashi, P.R. (2016). *Administrative Reforms.* Delhi: B.R. Publishing Corporation.

Foucault, M. (1975). *Discipline and Punishment*. Hammondsworth: Penguin.

George, C.S. (1974). *The History of Management Thought*. New Delhi: Prentice Hall.

Hofstede, G. &Kassem, M.S. (1976). *European Contributions to Organization Theory*. Assen: Van Gorcum.

Jerzy, Z. (1922). *History of Social Thought*. West post: Greenwood.

Mouzelis, N. P. (2009). *Organization and Bureaucracy – An Analysis of Modern Theories*. London: Routledge.

Ostrom (2015). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press: Cambridge, U.K.

Peters, T. (1994). *Liberation Management*. New York: Fawcett Columbine.

Pollard, H.R. (1978). *Further Development in Management Thought*. London: Heinemann.

Pollard, S. (1965). *The Genesis of Modern Management*. London: Arnold.

Silverman, D. (2008). *The Theory of Organizations*. London: Heinemann.

Waldo, D. (1948). *The Administrative State*. New York: Ronald.

White, Leonard D. (1948). *Introduction to the Study of Public Administration* (3rd edition). New York: Macmillan Company

Wren, D. A. (2009). *The Evolution of Management Thought*. New York: Ronald.

PAPER– II
Public Finance and Financial Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper seeks to familiarize the students of Public Administration regarding various aspects of financial administration, particularly Budgeting in India. In addition, the students would be made aware of the role of Comptroller and Auditor General, mobilisation of resources and fiscal federalism. Diverse teaching pedagogies like class room lectures, discussion, seminars, budgeting exercises etc. will be used to deliver course content. At the end of the course, the student will be able to present reports and develop analytical skill regarding the monetary and fiscal system in India.

UNIT I

Meaning and Significance of Public Finance and Public Financial Administration
Principles of Taxation; Tax Administration Issues and Reforms in India
Resource Mobilization: Tax and Non-Tax Sources, Public Borrowings and Deficit Financing
Budget: Concept, Principles

UNIT II

Types of Budgets: Line-item Budgeting; Performance Budgeting; Zero-Base Budgeting
Budget as an Instrument of Financial Administration and Public Policy
Budget Preparation, Authorisation and Execution with special reference to India

UNIT III

Union Ministry of Finance: Organisation, Functions and Role
Union-State Financial Relations
Finance Commission: Composition, Role and Functions

UNIT IV

Audit: Concept and types; Comptroller and Auditor General of India
Legislative Control over Finances with special reference to Parliamentary Committees
Significance of Monetary and Fiscal Policy

Essential Readings

Burkhead, J. (1956). *Government Budgeting*. New York: Wiley Sons.

Chand, P. (2010). *Control of Public Expenditure in India* (2nd edition). New Delhi: Allied Publishers.

Chand, P. (2010). *Performance Budgeting* (2nd edition). New Delhi: Allied Publishers.

Goel, S. L. (2002). Public Financial Administration. New Delhi: Deep and Deep Publications

Gupta, B. N. (2006). *Indian Federal Finance and Budgetary Policy*. Allahabad: Chaitanya Publishing House.

Indian Administrative Reforms Commission. (1969). *Report on: (i) Financial Administration (ii) Finance, Accounts and Audit (iii) Centre-State Relations*. New Delhi: Manager of Publications, Government of India.

Indian Institute of Public Administration. (1983). *Special Number on Administrative Accountability, Vol. XXIX* (3). New Delhi.

Lall, G. S. (1979). *Public Finance and Financial Administration in India*. New Delhi: Kapoor.

Mahajan, Sanjeev Kumar and AnupamaPuri Mahajan (2014). *Financial Administration in India.* New Delhi: PHI Learning.

Shome, Parthasarathi (ed.) (2013). Indian Tax Administration: A Dialogue. New Delhi: Orient Blackswan

Singh, RajivaRanjan (2016); Challenges Of Indian Tax Administration. Gurugram: Lexis Nexis

Thavaraj, M. J. K. (2001). *Financial Administration in India* (6th ed.). Delhi, Sultan Chand.

Further Readings

Cox, Raymond, Vetter, Daniel E., Stout and R. Gene. (1996). *Financial Administration and Control.* New Jersey: Wiley.

Garner, C. William. (1991). *Accounting and Budgeting in Public and Non-profit Organizations: A Manager's Guide*. New Jersey: Wiley.

Green, Mark T. and Thompson, Fred (1998). *Handbook of Public Finance*. London: Routledge.

Hillman, Arye L. (2009). *Public Finance and Public Policy: Responsibilities and Limitations of Government* 2nd Edition. Cambridge: Cambridge University Press.

Miller, Gerald J. (2011). *Government Budgeting and Financial Management in Practice*. London: Routledge.

Reed, B. J. and Swain, John W. (1996). *Public Finance Administration.* 2nd Edition. Sage.

Sury, M. M. (1990). *Government Budgeting in India*. New Delhi: Commonwealth Publishers.

PAPER– III
Public Personnel Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The syllabus of the paper attempts to familiarize the student with the concepts of Public Personnel Administration, career systems and classification in India, various aspects of Human Resource Development, civil services, rules of service, code of conduct and ethics, disciplinary action, negotiation machinery etc. Presentations, interaction with experts, case studies and discussions will be used for delivery of course content. The students will develop group work, leadership and analytical skills.

UNIT I

Meaning and Significance of Public Personnel Administration
Role of Public Services
Career Systems – Concept and Types
Rank and Position Classification – Concept and Bases

UNIT II

Concepts and Significance: Human Resource Development, Manpower Planning, Recruitment, Training, Promotion and Performance Appraisal.

UNIT III

Constitutional Provisions regarding Civil Services in India
Pay Commissions in India
Union Public Service Commission (UPSC): Role and Functions

UNIT IV

Code of Conduct
Disciplinary Action

Employer-Employee Relations: Staff Associations and Unions; Joint Consultative and Negotiation Machinery

Essential Readings

Bhayana, S. S. and Singh S. (2016). *Public Personnel and Financial Administration* (4th ed.). Jalandhar: New Academics.

Davar, Rustom S. (2008). *Personnel Management and Industrial Relations in India* (2nd ed.). New Delhi: Vikas Publishing House.

Fadia, B.L. and Fadia, Kuldeep (2017). Bharat Mein LokPrashasan. Agra: SahityaBhawan

Goel, S. L. and Rajneesh, S. (2002). *Public Personnel Administration*. New Delhi: Sterling.

Government of India, 2nd Administrative Reforms Commission. (2010). *10th Report: Refurbishing of Personnel Administration - Scaling New Heights*. New Delhi: Manager of Publications. https://darpg.gov.in/sites/default/files/personnel_administration10.pdf

Government of India. (1988). *Report of the Commission on Centre-State Relations*. Nasik: General Manager.

Stahl, O. Glenn. (1971). *Public Personnel Administration* (6th ed.). New Delhi: Oxford and IBH Publishing.

United Nations. (2008). *New Approaches to Personnel Policy for Development*. New York.

Further Readings

Flippo, E. (2008). *Principles of Personnel Management* (4th ed.). Kogakusha: McGraw Hill.

Koontz, H and O'Donnell, Cyril. (2008). *Principles of Management* (5thed). Tokyo: McGraw Hill.

Pigors, P. and Myers, C.A. (1969). *Personnel Administration: A Point of View and a Method* (6thed). Kogakusha: McGraw Hill.

Rouse, John E. (2008). *Public Administration in American Society*. Michigan: Gale Research.

Saxena, A.P. (2010). *Training and Development in Government*. New Delhi.

OPTIONAL PAPERS

PAPER–IV
Organisational Psychology

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2

marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The paper will make the students familiar with the basic concepts of Organisational Psychology. Functional aspects of Organizational Psychology like human relations, employment, attitudes, groups, personality and work stress would be taught to the students. Course material will be supplemented by activities like role play, case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

UNIT-I

Organisational and Industrial Psychology: Concept, Nature and Scope
Leadership: Concept; Theories – Trait; Situational; Behavioural
Employee Needs: Concept, Hierarchy of Needs and Need Satisfaction

UNIT-II

Attitude: Concept, Nature and Significance
Industrial Morale: Concept, Nature and Determinants
Motivation of Industrial Employees: Concept and Determinants

UNIT-III

Personality: Concept, Significance and Types
Job Satisfaction: Concept, Significance and Determinants
Groups: Concept, Types and Inter-Group Relations

UNIT-IV

Fatigue: Concept, Causes and Remedies
Monotony and Boredom: Concept, Causes and Effects
Work Stress and its Management

Essential Readings

Buchanan, David A. (Ed.) (2016). Organizational Behaviour (9th edition). U.K.: Boffin

Cooper, Cary L. (Ed.) (2000). Industrial and Organizational Psychology: Linking Theory with Practice. USA: John Wiley and Sons

Luthans, Fred. (2010). Organizational Behavior. New York: McGraw-Hill Education

Norman, R. F. Maier. (1970). *Psychology in Industry*. Oxford and IBH.

Stephan P. Robbins, SeemaSanghi, Timothy Judge. (2009). *Organizational Behaviour: Concepts, Controversies and Applications*. New Delhi: Pearson 13th Edition.

Further Readings

Brown, J.A.C. (1954). *The Social Psychology of Industry*. U.K.: Penguin.

Ganguli, H.C. (1983). *Structure and Process of Organization*. Mumbai: Asia Publishing House.

Katz and Kahn.(1979). *Social Psychology of Organizations. USA:* Wiley.

McShane, Steven, Lattimore (2015); Organisational Behaviour, 5th edition; New York: Mcgraw-Hill

Schein, Edgar. (1988). *Organizational Psychology*. USA: Prentice Hall.

Zedeck, Sheldon (2011). *APA Handbook of Industrial and Organizational Psychology* (Part of the APA Handbooks in Psychology Series and APA Reference Books Collection). USA: APA.

PAPER–V
Police Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The students will understand the complex role of police in contemporary society. Pedagogical tools to be used by teachers include: short films, role plays, field visits, case studies, visits to police stations. The students will develop analytical and critical skills and develop an understanding of working of police administration.

UNIT I

Police Administration: Evolution; Concept and Significance
Police: Powers and Functions
Reforms in Police Administration after Independence
Crime: Types, Causes and Remedies

UNIT II

Police set up at National Level: Organisation, Functions and Role
Police set up at State Level: Organisation, Functions and Role
Police set up at District Level: Organisation, Functions and Role
Police set up at Local Level: Organisation, Functions and Role

UNIT III

Police Personnel IPS and State Police Service
Recruitment, Promotion, Training, Conduct and Discipline

UNIT IV

Community Policing: Concept, Role and Significance
Police and Human Rights: Emerging Issues and Challenges
Police and Women

Essential Readings

Chaturvedi, J. C. (2006). *Police Administration and Investigation of Crime*. New Delhi: Isha Books.

Ghosh, G. (2010). *Re-legitimizing Indian Police.* New Delhi: Radha Publication.

Ghosh, S. (1973). *Police Administration: Organization and Procedure*. Eastern Law House.

Ghosh, S.K. & Hummer, Don. (2008). *Encyclopedia of Police in India.* Volume I. New York: Taylor & Francis Group.

Jim, R &Rustamji, K.F. (1993). *Handbook of Police Administration*. CSR Press. New Delhi: Ashish Publishing House.

Srivastava, A. (1999). *Role of Police in a Changing Society*. New Delhi: APH Publishing.

Subramanian, K. S. (2007). *Political Violence and the Police in India*. SAGE Publications India.

Further Readings

Hunter, R.D., Barker, T &Mayhall, P.D. (2010). *Police Community Relations and the Administration of Justice*. Prentice Hall.

Rohit, C. (2009). *Policing: Reinventing Strategies in a Marketing Framework.* New Delhi: Sage Publication.

Rohtagi, M. (2007). *Spy System in Ancient India.* New Delhi: Gyan Books Pvt. Ltd

Swanson, C. R., Territo, L., & Taylor, R. W. (2011). *Police Administration: Structures, Processes, and Behavior*. Prentice Hall.

PAPER–VI
Project Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Course: Project Management continues to grow as a profession. Project management techniques are now used outside the traditional project industries and a management-by-project approach has increasingly been adopted in development projects funded by the UN, World Bank and other international agencies; it is also sought to be adopted in government funded welfare and development projects. The relevance of the

course is derived from this context and the objectives are to impart a deep understanding of all the stages of project management and the techniques supporting project management.

UNIT I

Project Management: Organisation, Planning including Prerequisites for Successful Project Implementation and Control

Project Planning: Resource Allocation Framework; Generation and Screening of Project Ideas

UNIT II

Project Analysis: Market and Demand Analysis; Technical Analysis; Financial Analysis

Project Selection I: Project Appraisal Criteria – Project Cash Flow; Time Value of Money; Cost of Capital

UNIT III

Project Selection II:

Project Risk Analysis;

Social cost benefit analysis: Rationale and approaches

Shadow Pricing applications in India

UNIT IV

Project Implementation:

Project Management Techniques: Network Analysis (PERT/CPM),

Project Monitoring and Review: Integrated Cost Planning and Budgeting; Monitoring Information; Reporting System and Evaluation

Essential Readings

Burke, Rory (2004). *Project Management: Planning and Control Techniques*. Singapore: John Wiley & Sons Asia (Pvt Ltd.).

Prasanna, Chandra (1995). *Projects: Preparation; Appraisal, Implementation*. New Delhi: Tata McGraw Hill

Srinath, L.S. (1996). *PERT and CPM – Principles and Applications.* New Delhi: Affiliated East-West Press.

UNIDO (1978). *Guide to Practical Project Appraisal: Social Benefits Cost Analysis, Project Formulation and Evaluation*. Delhi: Oxford and IBH.

Further Readings

Choudhry, Sadan (1988). *Project Scheduling and Monitoring in Practice*. Delhi: South Asian Publishers.

Clifton, David S. and Fyefe, David E. (1977). *Project Feasibility Analysis*. New York: John Wiley.

Harrison, F.L. (1992). *Advance Project Management* (2nd ed.). London: Gower.

Little, I.M.D. and Mirlees, J.A. (1976). *Project Appraisal and Planning for Development Countries*. London: Heinemann Educational Books.

Lock, Dennis (2007). *Project Management.* England: Gower.

Planning Commission (1975). *Guidelines for Preparation of Feasibility Reports of Industrial Projects*. Delhi: Government of India.

PAPER– VII
International Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The important international organisations at the global and regional level including specialized agencies will be studied and their role and working critically understood in light of their effectiveness in influencing the national policy agendas. A focused and critical study of various institutions and agencies will provide a deep understanding about their working and role.

Unit I

Role of International Organisations in Development: Rationale and Overview of the global scenario
United Nations: Genesis and Evolution; Issues in performing its role
UN structure: Organisation, Functions and Working of General Assembly, Security Council, Secretariat, International Court of Justice and Economic and Social Council

Unit II

Specialized Agencies of the United Nations:
Organisational Structure, functions/ programmes and working of
UNESCO; UNICEF; ILO; WHO; UNDP; UNEP

Unit III

Regional Organisations:
Organisational structure, functions, role and issues in working of SAARC; ASEAN; G-20; and European Union

Unit IV

International Economic Organisations:
Organisational structure, functions, role and issues in working of WTO (World Trade Organisation); World Bank (WB); International Monetary Fund (IMF); and Asian Development Bank (ADB)

Essential Readings

Banerjee, Ajit M. &Murari R. Sharma. (2007). *Reinventing the United Nations.* New Delhi: Prentice Hall of India

Cable, V. (1999). *Globalization and Global Governance*. London: Royal Institute of International Affairs.

Goel, S.L. (1976). *International Administration.* New Delhi: Sterling Publishers.

Pease, Kelly-Kate S. (2017). *International Organisations.* New York: Routledge.

Relevant Websites including www.un.org/, www.saarc-sec.org/, www.ilo.org/, www.aseansec.org/

Further Readings

Krasvo, Jean E. (Ed.) (2005). *The United Nations: Confronting the Challenges of a Global Society.* New Delhi: Viva Books

Narasimhan, C. V. (1988). *The United Nations: An Inside View*. New Delhi. United Nations Publication.

Saksena, K. P. (1993). *Reforming the United Nations: The Challenge of Relevance*. New Delhi. Sage Publications.

PAPER– VIII
MIS and E-Governance

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the paper: The paper aims to develop an understanding of the concept, development and applications of MIS in organisations; discuss the relevance of MIS in context of various functional areas of organization. Understanding data and its management along with networking is basic to understanding e governance systems. Thus, this will provide a sound basis for understanding the concept of e-governance, its evolution, scope and significance, and how different models lead to different outcomes of information flow. The students will learn to critically evaluate different e-governance projects implemented in India. The pedagogical tools used will include lectures, case studies, seminars and presentations.

UNIT I

Meaning, Role, Evolution of Management Information Systems
Components and activities of an Information System

Operations and Management Classification of Information Systems; MIS and Decision Making
Building and Maintaining Information Systems; The Information Systems Department

UNIT II

DBMS and RDBMS
Data Mining and Data Warehousing
Networking; Local and Wide Area Networks
Internet and Internet customer interfaces

UNIT III

E - Governance: Concept, Evolution, Significance and Scope
E-Governance Models: Broadcasting/ Wider Dissemination Model, Critical Flow Model, Comparative Analysis Model, Mobilisation and Lobbying Model, Interactive service Model
Computer Security, Crime and Ethics

UNIT IV

Significant features of IT Act 2000
Digital India Program – An overview
Case studies:
Agriculture: e Agriculture;Gyandoot
Land: BHOOMI; CARD
Public service: PRAJA; Rural E-Seva;LokMitra

Essential Readings

Basandra, S.K. (1999). *Computers Today*. New Delhi: Galgotia Publishers Pvt. Ltd.

Bedi, K., Singh, P. & Srivastava, S. (2001). *Government@net.* New Delhi: Sage Publications.

Bhatnagar, S. (2004). *E Government: From Vision to Implementation (A Practical Guide with Case Studies.* New Delhi: Sage Publications.

Bhattacharya, J. (2012). *E-Gov2.0: Policies, Progresses and Technologies*. New Delhi, Tata McGraw-Hill

Brien, J &Marakas, G. M. (2011). *Management Information Systems*. India: Tata McGraw Hill Publishing Company Limited.

Hodson, P. (1998). *Local Area Networks.* New Delhi: BPB (Retreived from http://www.msofficetutorial-training.com/)

Laudon, K. C. & Laudon, J. P. (2011). *Management Information Systems: Managing the Digital Firm (*12th ed). New Delhi: Pearson Education. Prabhu, C.S.R. (2011). *E Governance, Concepts and Case Studies.* New Delhi, Prentice Hall.

Relevant websites

Further Readings

Davis, G. B., Olson & Margrethe, A. (1985). *Management Information Systems: Conceptual Foundations, Structure and Development.* New York: Tata McGraw Hill.

Leon, A & Leon, M. (1999). *Introduction to Computers*. New Delhi: Vikas Publishing House Pvt. Ltd.

Lucas, H. C. Jr. (2000). *Information Technology for Management*. New Delhi: Tata McGraw-Hill.

Murdick, R., Ross, C., Joel E. &Claggett, J. R. (1984). *Information Systems for Modern and Management*. New Delhi: Prentice Hall.

Norton, P. (2006). *Introduction to Computers.* New Delhi: Tata Publications.

Semester III
CORE PAPERS

PAPER– I
Research Methods and Statistics

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper aims to acquaint the student with the knowledge of rationale and methodology of conducting good quality research in social sciences with special reference to Public Administration. The major Objectives of this paper is to prepare students for undertaking quality research at Masters' leveland a basis for pursuing research as a career. The course seeks to equip students in structuring research design, formulating research questions/hypotheses, tools to collect data and analyze it with the help of suitable statistical techniques. Pedagogy will include lectures, research writing, undertaking data collection exercises and preparing a research proposal. Teaching-learning will be supplemented by presentations, seminars and use of Information and Communication Technology.

UNIT I

Meaning and Objectives of Research; Steps in Research
Types of Research: Fundamental; Applied; Evaluative
Concepts and Theory; Variables and Unit of Analysis
Hypotheses: Definition; Features and Types; Testing Procedures

UNIT II

Research Design: Definition; Contents; Types
Sampling: Concept and Types
Methods of Data Collection: Documents, Observation, Interview and Questionnaire
Data Processing: Editing, Coding and Tabulation

UNIT III

Measures of Central Tendency: Mean, Median and Mode
Dispersion
Linear and Rank Correlation

UNIT IV

Regression Analysis
Tests of Significance; Parametric Tests- t, F and Z tests
Chi-Square ($\dot{x}^2$) and goodness of fit

Essential Readings

Ahuja, Ram (2003). SamajikSarvekshanEvamAnusandhan. Jaipur: Rawat

Ahuja, Ram (2003). Research Methods. Jaipur: Rawat

Bajpai, S. R. (1960). Methods of Social Survey and Research. New Delhi: KitabGhar.

Goode, W. J. &Hatt, P.K. (2006). *Methods in Social Research*. New Delhi: McGraw Hill Series.

Gupta, S.P. (2001). *Statistical Methods*. New Delhi: Sultan Chand & Sons.

Kothari, C.R. (2004). Research Methodology: Methods and Techniques. New Delhi: New Age International.

Nachmias, D. &Nachmias, C. (1981). *Research Methods in the Social Sciences.* New York: St. Martin's Press.

Rawat, Harikrishna. (2013). Samajik Shod Ki Vidhiyan. New Delhi: Rawat Publications

Young, P. V. (2007). *Scientific Social Research and Surveys*. India: Asia Publishing House.

Further Readings

Bowley, A. L. (1937). *Elements of Statistics*. New York: Staples Press Inc.

Johnston, Erik, W.(Ed.). (2015). Governance in the Information Era: Theory and Practice of Policy Informatics). New York: Routledge.

Miller, D. C. &Salkind, N. J. (1981). *Handbook of Research Design and Social Measurement*. New Delhi: Sage.

Moser, C.A. &Kalton, G. (1993). *Survey Methods in Social Investigation*. London: The English Language Book Society and Heinemann.

Seltiz, C. & Cook, S. W. (1964). *Research Methods in Social Relations*. New York: Holt Rinehart and Winston.

Spiegel, M. R. (2008). *Theory and Problems of Statistics*. New York: Mc Graw-Hill.

Thiel, Sandra Van (2014). *Research Methods in Public Administration and Public Management: An Introduction.* London: Routledge.

PAPER– II
Local Governance in India

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The course will help students develop an understanding of the concept and theories of decentralisation and the nature of local institutions both at the urban and rural level. Apart from covering problems and challenges of urban and rural development, various programmes for the same will be studied. The important pedagogical tools in this paper include discussions, presentations and field visits to have a feel of working of urban and rural local bodies. The students will be able to critically evaluate the functioning of these institutions and make constructive suggestions.

UNIT I

Meaning and Significance of Local Government
Historical Development and Landmarks in evolution of Local Government
District Administration: Role of Divisional Commissioner; Deputy Commissioner (DC); District Development and Panchayat Officer (DDPO); Block Development and Planning Officer (BDPO)

UNIT II

Urban Governance:
Urbanisation: Concept, Trends & Challenges
Structure, Function and Role of Urban Local Bodies: Municipal Corporation; Municipal Council/Committee; Nagar Panchayat
Critical Evaluation of 74th Constitutional Amendment Act
Urban Development Programmes: Atal Mission for Rejuvenation and Urban Transformation (AMRUT);DeendayalAntyodayaYojna – National Urban Livelihoods Mission (DAY-NULM); Smart Cities

UNIT III

Rural Governance:
Rural Development: Perspectives, Policy & Strategies
Structure, Functions and Role of Panchayati Raj Institutions
Critical evaluation of the 73rd Constitutional Amendment Act
Rural Problems and Challenges
Rural Development Programmes: Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA); DeendayalAntyodayaYojna – National Rural Livelihoods Mission (DAY-NRLM)

UNIT IV

Issue Areas:
Rural-Urban Relationship
Local Government Finances; State Finance Commission
State Control over Local Bodies
Administrative Reforms in Local Governance

Essential Readings

Rawat, Harikrishna 2013; Samajik Shod Ki Vidhiya; New Delhi: Rawat Publications

Ahluwalia, Isher Judge. (2017). *Urbanisation in India.* New Delhi: Sage.

Arora, R. K. &Goyal, R. (1996). *Indian Public Administration*. New Delhi: VishwaPrakashan.

Aziz, A. (1996). *Decentralised Governance in Asian Countries*. Ed. New Delhi: Sage.

Bhadouria, B. D. S. & Dubey, V. P. (1989). *Panchayati Raj and Rural Development*. New Delhi: Commonwealth Publishers.

Bhattacharya, Mohit. (1976). *Management of Urban Government in India*. New Delhi: Uppal.

Sachdeva, Pradep. (2011). Local Government in India. Delhi: Pearson

Maheshwari, S. R. (2003). *Local Government in India*. Agra: Lakshmi Narain Aggarwal.

Maheshwari, S.R. (2017); Bharat Me SthaniyaShasan; Agra: Lakshmi Narain Agarwal

Mathew, G. (1994). *Panchayati Raj in India: From Legislation to Movement*. New Delhi: ISS.

Oommen, M. A. &Datta, A. (1995). *Panchayats and their Finance*. New Delhi: ISS.

Oommen, M. A. (1995). *Devolution of Resources from the State to the Panchayati Institutions*. New Delhi: ISS.

Further Readings

Burns, D. et. al. (1994). *The Politics of Decentralisation: Revitalising Local Democracy*. London: Macmillan.

Chaturvedi, T. N &Datta, Abhijit. (1984). *Local Government*. New Delhi: IIPA.

Cheema, G. S. &Ponoinelli D. (1983). *Decentralisation and Development Policy Implementation in Developing Countries*. Ed. London: Sage.

Hochgesang, T. W. (1994). *Rural Local Self-Government in India*. Hyderabad: NIRD.

Khanna, B. S. (1992). *Rural Development in South Asia*. 4 Volumes. New Delhi: Deep and Deep.

Mathur, S. N. (1997). *Nyaya Panchayats as Instruments of Justice*. New Delhi: ISS.

---- (1986). *Panchayati Raj Bureaucracy and Rural Development*. New Delhi: IIPA.

---- (1996). *New Panchayati Raj in Action*. New Delhi: Mittal Publication.

Oakley, P et. al. (1984). *Approaches to Participation in Rural Development.* Geneva: I.L.O.

Oakley, P. (1991). *Projects with People: The Practice of Participation in Rural Development*. Geneva: I.L.O.

Sivaramakrishanan, K. C. (1993). Ed. *Urbanisation in India: Basic Services and People's Participation*. New Delhi: ISS.

PAPER– III
Social Systems and Welfare Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type

questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The endeavour is to make the student understand the multi-disciplinary nature of the subject of Public Administration and the relationship between Sociology and Public Administration. The students will be apprised about the basic concepts of social structure, social change in contemporary Indian Society and social tensions and their relevance in the field of Public Administration. Apart from the lecture methods, presentations and documentaries (audio-visual aids), case studies and special lectures by experts will be organized. The students will develop public speaking and analytical skills to understand Indian Society and link this with social policy and administration.

Unit I

Relevance of Sociology to Public Administration
Concept and Elements of Social Structure: Groups; Status and Role; Norms and Values
Social Stratification: Caste; Class - Difference and Convergence
Welfare State: Concept & Philosophy

Unit II

Social Change: Concept; Sources; Resistance
Social Change in Contemporary Indian Society
Social Tensions and Resolutions – Communalism; Regionalism; Violent Class Struggle

Unit III

Social Policy and Legislation in India: An Overview with special focus on SDGs
Reservation for SC, ST and OBC: Critical Analysis of Policy and Administration
Protection of Women from Domestic Violence Act, 2005
The Juvenile Justice (Care and Protection of Children) Act, 2013

Unit IV

Union Ministry of Social Justice and Empowerment: An Analysis of Provisions and Implementation Structures for Social Policy; Major programmes implemented
State Social Welfare Department
Central Social Welfare Board; State Social Welfare Board

Essential Readings

Bulsara, J.F. &Verma (2006). *Perspective in Social Welfare in India*. New Delhi: S. Chand & Co.

Chowdhary, D.P. (1976). *Social Welfare Administration.* Delhi: Atma Ram and Sons.

Dube, S.C. (2009). *Modernization and Development: The Search for Alternative Paradigms*. 2nd ed. New Delhi: Sage Publishers.

Kuppuswamy, B. (2006). *Social Change in India.* Delhi: Konark Publisher Pvt. Ltd.

Moore, W.E. (1965). *Social Change*. New York: Prentice Hall.

Pandey, Tejaskar and Pandey, Baleshwar (2019). *SamajKalyanPrashasan*. Jaipur: Rawat.

Smelser, Neil J. (1970). *Introduction to Sociology.* New York: Wiley.

Further Readings

Dreze, Jean. (2017). *Social Policy.* Hyderabad: Orient Blackswan

Encyclopedia of Social Change. Vol. 5. (n.d.). New Delhi: Anmol Publishers.

Friedlander, W. &Apte, R. (2006). *Introduction to Social Welfare*. 5th Ed. New Delhi: Prentice Hall.

Gangrade, K.D. (1978). *Social Legislation in India*. Delhi: Concept Publishing House.

Madan, G.R. (2006). *Indian Social Problems*. Vol. II: Social Work. New Delhi: Allied Publishers Ltd.

Mendelbaum, David G. (1972). *Society in India*. Bombay: Popular Prakashan.

Ministry of Information and Broadcasting (1987). *Encyclopedia of Social Welfare in India*. Vol. IV. New Delhi: GoI Publications Division.

Ministry of Social Justice & Empowerment Govt. of India, Recent Annual Reports

Planning Commission (2007-12). Eleventh Five Year Plan. New Delhi: Government of India.

Relevant Acts of Parliament and Reports of Commission, Committees & Study Teams. Research, Reference and Training Division (2010). *A Reference Manual*. New Delhi: GOI Publications Division.

Robson, W. A. (1976). *Welfare State and Welfare Society*: Illusion and Reality. 2nd ed. London: Allen and Unwin.

Roy, K. (2000). *Women and Child Development*. New Delhi: Commonwealth Publishers.

Sachdeva, D.R. (2009). *Social Welfare Administration*. Allahabad: Kitab Mahal.

Sankhdher, M.M. (1995). *Welfare State*. New Delhi: Deep & Deep.

Sharma, G. D., (2016). *Indian Social System.* Delhi: Wisdom Press.

Singh, Y. (1986). *Indian Sociology: Social Conditioning and Emerging Concerns*. New Delhi: Vistaar Publications.

United Nations. https://sustainabledevelopment.un.org/?menu=1300

OPTIONAL PAPERS
PAPER– IV
Disaster Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of

which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper seeks to makethe student of Public Administration aware about different types of disasters and their management in India. Apart from developing and understanding of the strategy for disaster course will develop leadership and management skills of the disaster management. Case studies, role plays, mock drills, field visits, documentaries and interaction with experts in the field of disaster management will form the pedagogical scheme of instruction.

UNIT-I

Disaster: Concept & Dimensions
Natural Disasters: Earthquakes, Volcanic Eruptions, Floods, Cyclones, Climate Change
Man-made Disasters: Anthropogenic, Soil degradation, Desertification, Deforestation

UNIT-II

Disaster Management Act 2005
Organisational Framework for Disaster Administration in India at the Union, State and Local levels (including Nodal Agency, National Disaster Management, Authority, State Authority)

UNIT-III

Role of Information and Communication Technology Systems in Disaster Management
Interstate and International Cooperation for Disaster Management
Role of NGOs and Army in Disaster Management

UNIT-IV

Disaster Risk Reduction – Sustainable Development
Disaster Preparedness; Relief and Rehabilitation
Disaster Management Training

Essential Readings

Goel, S. L. (2006). *Encyclopedia of Disaster Management*. New Delhi: Deep and Deep.

Lal, Rammohan&Shrivastav, Madhu (2016); AapdaPrabandhanKeNayeSiddhant; New Delhi: Hindi Book Centre

Monappa, K. C. (2004). *Disaster Preparedness.* New Delhi: Akshay Public Agencies.

Narayan, B. (2009). *Disaster Management.* New Delhi: A.P.H. Publishing Corporation.

Vyas, Harishchandra. (2004). Jansankhya, PradooshanaurParyavaran. Mumbai: VidyaVihar

Further Readings

Anderson, J. (2008). *Public Policy Making: An Introduction*. 5th ed. Boston: Houghton-Mifflin.

Asian Development Bank. (1991). *Disaster Mitigation in Asia and the Pacific.* Manila: ADB.

Dynamics of the Emergency Management System. *Public Administration Review.*56(3) 235-244.

Govt. of India/UNDP. (2002-07). *Disaster Risk Management Programme: Community Based Disaster Preparedness and Risk Reduction through Participation of Committees and Local Self Governments* www.ndmindia.nic.in/EQProjects/goiundp2.0.pdf

Princen, T. Y. (1994). *Environmental NGO's in World Politics.* London: Routledge.

Sahni, P. Ariyabandu, M. Malagoda, M. (2003). *Disaster Risk Reduction in South Asia*. New Delhi: Prentice Hall.

Satendra and Sharma,V. K. (2004). *Sustainable Rural Development for Disaster Management.*New Delhi:

Schnneider, Saundra K. (2009). *Flirting with Disaster: Public Management in Crisis Situations*. NY:

Wamsley, Gary L. and Aaron D. (May/June 1996). Escalating in a Quagmire: Changing

PAPER– V
Management of Disciplinary Proceedings

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This paper covers an important area of Public Administration relating to Disciplinary Proceedings and the remedies available to public servants in India. The students would be made familiar with the procedures of enquiries, punishments and application of other legal measures. Apart from lectures case study method will be used to explain different proceedings to the students.

UNIT-I

Disciplinary Proceedings: Concept and Significance
Position of Public Servants under the Constitution and Statutes
Meaning and Scope of Reasonable Opportunity
Conduct Rules

UNIT-II

Major Punishments: Suspension; Dismissal; and Termination
Minor Punishments: Censure; Withdrawal of Promotion and Incentives; Pay Recovery
Fundamentals of Departmental Enquiries

UNIT-III

Role and Scope of Rules of Natural Justice in Disciplinary Proceedings
Corruption/Embezzlement in Public Services
Application of Legal Measures

UNIT-IV

Remedies for Public Servants against Unconstitutional and Illegal Actions of the State

1) Departmental Remedies
2) Tribunal Remedies
3) Ombudsmanic Remedies
4) Court Remedies

Essential Readings

Basu, D. D. (2008). *Constitution of India*. New Delhi: Wadhwa and Company Law Publishers.

Ghaiye, R. K. (1988). *Law and Procedure of Departmental Enquiries*. Lucknow: Eastern Book Company.

Maheshwari, S.R. (2002). *Administrative Reforms in India.* New Delhi: Macmillan India Ltd.

Massey, I.P. (1985). *Administrative Law.* Lucknow: Eastern Book Co.

Muthuswamy, P. (1993). *Swamy's Manual on Disciplinary Proceedings.* Madras: Swamy Publishers.

Wade, R.W. R. (1981). *Administrative Law.* Oxford: Clarendon

Suggested Readings

Government of India (1987). Administrative Tribunals Act, 1985 with Rules Central Administrative Tribunal (Procedure) Rules.

Jain, N. S & Jain, P.M. (1979). *Principles of Administrative Law.* Nagpur: Wadhwa and Company.

Karishan, Rama V.P. (1974). *Guide to Departmental Enquiries against Government Servants.* Andhra Law Times.

Saxena, R. D. (1987). *Ombudsman-Lokpal*. New Delhi: Deep and Deep Publication.

Sharma, B. Girhar. (1981). *Implementation of Ombudsman Plan in India*. New Delhi: Ashish Company

Singh, Balbir&Kagzi, J. C. M. (1979). *A Case Book of Administrative Law.* New Delhi: Metropolitan Book Company Ltd.

PAPER – VI
Public Health Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objectives of the Paper: The paper prepares students in the area by exposing them to theoretical issues related to the challenges of Public Health Administration besides implementation. The student will understand healthcare policies and programmes including organizational set up at the union, state and local levels. Focused study of some health care programmes is included besides the concept of hospital management. The study of the

structure and role of the National Institute of Health and Family Welfare and Medical Council of India and the World Health Organization (WHO) will inform the student of the national and international institutional structures of health administration. Special Seminars and workshops will be organized to impart specialist knowledge to students. Field trips will also be organized to expose the student to health administration on the ground.

UNIT – I

Public Health Administration - Nature, Significance and Scope
Challenges of Public Health Administration
Implementation and Evaluation of Healthcare Policies and Programmes

UNIT – II

Union Ministry of Health and Family Welfare: Organization, Functions and Role
Health Administration at the State Level: Organization, Functions and Role of Department of Health
Administration of Primary Healthcare at the Local Level

UNIT – III

Healthcare Programmes in India - Family Welfare Programme; Reproductive Child Healthcare; Immunization Programme; National Health Mission (NHM)
Hospital Management: Organization, Function and Role

UNIT – IV

National Institute of Health and Family Welfare: Structure, Functions and Role
Medical Council of India: Structure, Functions and Role
WHO: Structure, Functions and Role in Asia

Essential Readings

Goel, S.L. (1980). *Health Care Administration*. New Delhi: Sterling Publishers

Goel, S.L. (2010). *Organisational Structure of Health Care System and Hospital Administration*. New Delhi: Deep & Deep.

Ballabh, C. (2007). *Health Care Services in Hospital.* New Delhi: Alfa Publication.

Suggested Readings

Ghosh, B. (1948). *A Treatise on Hygiene and Public Health*. Calcutta: Scientific Publishing Company.

Hanlon, John. H. (2008). *Principles of Public Health Administration.* St. Louis: C.V. Mosley Co.

Mahal, A. DebroyB.and Bhandari. L. (2010). *India Health Report.* New Delhi: B S Books.

Government of India, Ministry of Health (1959). *Report of the Health Survey and Planning Committee.*(1959-61).Vol.I. https://www.nhp.gov.in/sites/default/files/pdf/Mudalier_Vol.pdf.

Sanjivini, K.S. (2007). *Planning India's Health.* New Delhi: Orient Longman.

PAPER–VII
Corporate Governance

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The Objectives of this paper is to acquaint the student with the concept and theories of corporate governance. The student will also be instructed about the various aspects of corporate governance with focus on ethics, corporate social responsibility and current issues and problems, primarily focusing on India.

UNIT I

Corporate Governance: Concept, Rationale and Evolution in India
Theories of Corporate Governance: Stakeholders Theory: Agency Theory; Sociological Theory
Principles of Corporate Governance with special reference to Principles of Organisation for Economic Co-operation and Development (OECD)

UNIT II

Structure and Forms of Organisations – Ministries/Departments, Corporations, Companies, Boards and Commissions, Adhoc& Advisory Bodies, Regulatory Authorities, Public Private Partnerships
Corporate Social Responsibility

UNIT III

Board of Directors: Types; Composition & Functions
CEO: Appointment, Functions & Role
Rights and Privileges of Share Holders and Investors

UNIT IV

Corporate Governance in Public Enterprises
Corporate Governance in NGOs
Future Trends of Corporate Governance in India

Essential Readings

Bansal, C.L. (2005). *Corporate Governance – Law Practice & Procedures with Case Studies.* New Delhi: Taxman Allied Services Pvt. Ltd.

Bhatia, S.K. (2004). *Business Ethics and Corporate Governance* . New Delhi: Deep and Deep Publication Pvt. Ltd.

Dewan, S.M. (2006). Corporate Governance in Public Sector Enterprises. New Delhi: Dorling Kindersley India Pvt. Ltd.

Millin, C.A. (2007). *Corporate Governance.* New Delhi: Oxford University Press

Prasad, D. (2006). *Corporate Governance.* New Delhi: Prentice Hall of India Pvt. Ltd.

Suggested Readings

Fernando, A.C. (2009). *Corporate Governance – Principles, Policies & Practices* (3rd ed.). India: Dorling Kindersley Pvt. Ltd.

Gopalsamy, N. (1998). *Corporate Governance – The New Paradigm.* New Delhi: Wheeler Publishing.

Hazarika, A. (1999). *Corporate Governance – Balancing Value Creation & Obligation in Oil industry.* New Delhi: Tata McGraw Hill Publishing Company Ltd.

Kumar, S. (2002). *Corporate Governance – A Question of Ethics.* New Delhi: Galgotia Publishing Company.

Mathur, U.C. (2005). *Corporate Governance and Business Ethics.* New Delhi: Macmillan India Ltd.

PAPER – VIII
Advanced Research Methods and Dissertation

Cannot be opted by private students

The request for this option will be considered only for those who apply for it within 15 days of normal admission to Semester III (i.e. without late fee) provided that such students have obtained at least 50% marks in the aggregate of Semester I and II. The paper is in two parts (a) and (b) for which candidate will require to obtain pass marks in each paper individually. Students for this paper will be selected on the basis of merit in M.A. I. Selected students will be notified within 20 days from the date of normal admissions.

(a) Advanced Research Methods

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 50 (out of which 10 marks are for internal assessment) Time allowed will be 2 Hours.
- The candidate shall attempt 3 questions (one compulsory and one long question each from two units –Unit I & Unit II).

- The compulsory question shall comprise of 8 short-answer type questions, covering the Unit I & Unit II, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 5. Each question will carry 2 marks.
- Rest of the paper shall contain 2 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: This course has been formulated in continuation to the core course on Research Methods and Statistics and aims to advance the knowledge of the student in philosophy of social science research with a focus on both qualitative and quantitative approaches. The major objective of this paper is to prepare students for undertaking quality research at Masters' level. This will provide a sound basis for higher research degrees and for pursuing research as a career. It will enable learners to look critically at contemporary problems in the area of social science research, including Public Administration. Pedagogy will include lectures**,** writing book reviews, review paper, research paper, undertaking data collection exercises and preparing a research proposal. Teaching-learning will be supplemented by presentations, seminars and use of Information and Communication Technology.

UNIT I

Nature of Science and Scientific Method
Approaches to Social Sciences Research: Quantitative and Qualitative
Selection and Formulation of Research Problem under Quantitative and Qualitative Research Approach
Review of Literature

UNIT II

Survey Research and Case Study
Qualitative Research Tools: Focus Group Discussion; In-Depth Interviews
Participatory Research; Action Research
Research Writing: Elements (clarity, coherence, argument building); Referencing & Bibliography; Plagiarism

Essential Readings

Creswell, John W. (1994). Research Design: Qualitative, Quantitative and Mixed Methods: Approaches. London: Sage Publications.

Denzin, Norman K. & Lincoln, Yvonna S. (Eds.). (2005). Handbook of Qualitative Research. New Delhi: Sage Publications.

Goode, William J. &Hatt, Paul K. (2006). Methods in Social Research. USA: McGraw Hill Book Company, 1st Indian Reprint.

Gupta, S.P. (2011). Statistical Methods. (4th Edition). New Delhi: Sultan Chand and Sons.

Mathur, Kuldeep (Ed.). (1986). Survey of Research in Public Administration 1970-79. New Delhi: Concept.

Miller, Delbert C. (2002). Handbook of Research Design and Social Measurement. (6th Edition). London: Sage Publications, London.

Mishra, S.K., &Binwal, J.C. (1991). Computer in Social Science Research. New Delhi: HarAnand.

Nachmias, David &Nachmias, Chava. (2008). Research Methods in the Social Sciences. (7th edition). New York: St. Martin's Press Inc.

PaiPanandikar, V.A. (Ed.). (1997). A Survey of Research in Public Administration 1980-1990. Delhi: Konark Publishers Pvt. Ltd.

Young, Pauline V. (2008). Scientific Social Surveys and Research (4th Edition). New Delhi: PHI Learning.

Suggested Readings

Bailey, Daniel E. (Ed.). (1978). Computer Science in Social and Behavioural Science Education. New Jersey: Education Technology Publishers.

Burton, Dawn (Eds.). (2000). Research Training for Social Scientists. New Delhi: Sage Publications.

Denzin, Norman K. &Lincoln, Yvonna S. (Eds.). (1998). The Landscape of Qualitative Research. New Delhi: Sage Publications.

Lincoln, Yvonna S. (ed.). (2003). The Landscape of Qualitative Research: Theories and Issues. New Delhi: Sage Publications.

McNabb, David E. (2012). Research Methods in Public Administration and Non-profit Management. New Delhi: PHI Learning Private Limited.

Mason, Jennifer (2002). Qualitative Researching. New Delhi: Sage Publications.

Meredith, Edwards. (2004). Social Science Research and Public Policy: Narrowing the Divide.

Occasional Paper 2/2004, Academy of the Social Sciences in Australia, Canberra.

Rhodes, R.A.W. et al. (1995). The State of Public Administration: A Professional History, 1970- 1995. Public Administration: An International Quarterly, Spring: Blackwell Publishing Ltd.

Seale, Clive, Gobo, Giampietro, Jaber F. Gubrium& David Silverman(eds.). (2004). Qualitative Research Practice. New Delhi: Sage Publications.

Selltiz, Claire et. al. (1981). Research Methods in Social Relations. New York: Holt Rinehart and Winston.

Silverman, David (Ed.) (2012), Qualitative Research. New Delhi: Sage Publications.

Singleton Jr, Royce A.& Straits, Bruce C. (1999). Approaches to Social Science Research, Oxford: Oxford University Press.

UK Commission on Social Sciences. (2004). Great Expectations: The Social Sciences in Britain. London: Transaction Publishers.

White, Jay D. & Adams, Guy B. (Eds.). (1994). Research in Public Administration Reflection on Theory and Practices. London: Sage Publications.

VIII(b): DISSERTATION

(i) Students will submit the proposed title and brief synopsis of their dissertation within four weeks from the date of notification to them, but not later than 15th November of the respective year, to be placed before the Postgraduate Board of Studies for approval.

(ii) Each student opting for dissertation from University School of Open Learning will have to be in contact with the supervisor for a minimum of eight weeks.

(iii) All candidates opting for dissertation will submit the thesis one week prior to the commencement of final examination.

(iv) Panel of examiners for this course will be appointed by the PG Board of Studies.

(vii) The evaluation of the dissertation will be by an External Examiner and an Internal Examiner. The average of the marks awarded by these examiners will be sent confidentially to the Examination Branch through the Chairperson. If the difference between the two is more than 07 marks, a third examiner will be appointed. The marks awarded by the third examiner will be final.

SEMESTER IV

CORE PAPERS

PAPER I
Public Policy and Analysis

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: This core course on Public Policy comprehensively introduces the concept and significance of public policy, the history of policy sciences and the public policy process. At the end of the course the student will understand the evolution of policy sciences, the significance and different stages of the public policy process in terms of the theoretical formulations as well as the working of this process with special reference to India. The pedagogical tools used will include lectures, case studies, policy analysis exercises, seminars

and presentations. Thus, the student will develop a critical understanding of the policy process as well as the capacity to undertake policy analysis in substantive areas of public policy.

UNIT I

Public Policy: Concept, Significance and Scope; Evolution of Policy Sciences
Policy Transfer: Concept; Rationale; Types (Copying, Adaptation, Hybridization and Synthesis).
Policy Analysis: Concept and Significance
Public Policy Approaches and Models with special reference to the Incrementalist and Rationalist Paradigms

UNIT II

Public Policy Making Process:
Role of Legislature, Executive, Judiciary, Planning Machinery at the Central and State levels in Policy Making
Role of other Stakeholders in Policy-making: Political Parties, Interest Groups, Mass-media, Civil Society and International Agencies.

UNIT III

Public Policy Implementation, Monitoring and Control:
Approaches to Policy Implementation
Role of Executive (with special reference to Bureaucracy), Legislature, Judiciary, Non-Governmental Organisations, Pressure Groups
Issues in Policy Implementation

UNIT IV

Policy Evaluation:
Approaches to Policy Evaluation and Policy Impact
Criteria for Evaluation
Role of Staff, CAG, Parliamentary and Departmental Committees in Evaluation
Issues in Policy Evaluation

Essential Readings

Anderson, J E. (2005). *Public Policy Making* (6th ed.). New York: Houghton Mifflin Co.

Ayyar, Vaidyanathan R V. (2009). *Public Policy Making in India*. New Delhi: Pearson.

Dolowitz, D.P. & Marsh, D. (2000). Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance: An International Journal of Policy and Administration*, *13(1)*, 5-24.

Farzmand, Ali. (ed.) (2018). Global Encyclopaedia of Public Administration, Public Policy and Governance. Berlin: Springer

Gerston, Larry N. (2010); Public Policy Making: Process and Principles. (3rd Edition); U.K.: Routledge

Henry, N. (2009). *Public Administration and Public Affairs* (11th ed.). New Jersey: Prentice Hall.

Hill, Michael &FrédéricVarone. (2016). *The Public Policy Process*. London: Routledge.

Hillman, Arye L. (2009); Public Finance and Public Policy: Responsibilities and Limitations of Government 2nd Edition; U.K.: Cambridge University Press

Nagel, S.S. (1991). *Public Policy: Goals, Means and Methods*. New York: St. Martin Press.

Rabin J., Hildreth, W. & Miller, G. (2007). *Handbook of Public Administration* (3rd ed.). Florida: Taylor & Francis Group.

Sapru, R.K. (2011). *Public Policy: Art and Craft of Policy Analysis* (2nd ed.). New Delhi: Prentice Hall of India learning.

Suggested Readings

Basu, D.D. (2011). *Constitution of India* (20th ed.). New Delhi: Prentice Hall of India.

Chakraborty, Bidyut& Chand, Parkash (2016). *Public Policy: Concept, Theory and Practice.* New Delhi: Sage

Chakraborti, Rajesh (2017). *Public Policy in India*. New Delhi: Oxford University Press

Dubhashi, P.R. (1986). *Policy and Performance*. New Delhi: Sage Publications.

Dye, T. (2002). *Understanding Public Policy*. New Delhi: Pearson Education Singapore (Pte) Ltd.

Madan, K.D. (1982). *Policy Making in Government*. New Delhi: Publications Division, Government of India.

Mathur, K. (1996). *Development Policy and Administration*. New Delhi: Sage.

Munger, M.C. (2000). *Analysing Policy: Choices, Conflicts and Practices.* New York: W.W. Norton & Company.

Nedley, A. (2004). Policy Transfer and the Developing Country Experience Gap: Taking a Southern Perspective. In Mark Evans (Ed.), Policy Transfer in Global Perspective. (pp. 165-187). New York: Routledge.

Page, E.C. (January 2000). *Future Governance and the Literature on Policy Transfer Lesson Drawing*. Prepared for the ESRC Future Governance Programme Workshop on Policy Transfer. London: Britannia House. Retrieved from: http://personal.lse.ac.uk/Pagee/Papers/EdPagePaper1.pdf

Rose, R. (1993). *Lesson-Drawing in Public Policy: A Guide to Learning Across Time and Space*. New Jersey: Chatham House.

Stone, D. (2000). *Learning Lessons, Policy Transfer and the International Diffusion of Policy Ideas*. "n.d." http:// poli.haifa.ac.il/~levi/res/stone-2000.pdf

PAPER– II

Administrative Law

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: Administrative Law is an integral part of Public Administration and the basis of administrative activity and its control. The student is expected to develop an understanding of the various components of administrative law along with the principles of natural justice, rule of law, administrative legislation, adjudication and much more. In this paper the most important pedagogical tool is the study and analysis of case law. By the end of the course, a student should be able to specify the significance of administrative law, rule of law and the quasi-legislative, quasi-judicial procedures within administration.

UNIT I

Meaning, Growth and Scope of Administrative Law
Distinction between Constitutional Law and Administrative Law
Droit Administratif
Concept of Rule of Law and Principles of Natural Justice

UNIT II

Delegated Legislation: Need, Classification and Safeguards
Judicial Review of Administrative Action: Principles and Modes
Liability of the Administration; Contract and Tort

UNIT III

Administrative Tribunals: Concept, Rationale and Types
Central Administrative Tribunal: Structure, Function and Role
Central Vigilance Commission: Structure, Functions, Role and Significance

UNIT IV

Institution of Ombudsman: Concept and Genesis
Lok Pal and LokAyukta in India: Significance, Functions and Role
Fundamentals of Departmental Proceedings: Suspension, Charge sheet, Enquiry and Penalties

Essential Readings

Diwan, P. (2007). *Indian Constitution* (2nd ed.). Allahabad: Law Agency.

Massey, I.P. (2008). *Administrative Law*. New Delhi: Eastern Book Company.

Upadhyaya, J.J.R. (2016). Administrative Law. Prayagraj: Central Law Agency

Upadhyaya, J.J.R. (2017). PrashasnikVidhi. Prayagraj: Central Law Agency

Suggested Readings

Chhabra, S. (1990). *Administrative Tribunals.* New Delhi: Deep and Deep.

Kagzi, M. C. J. (2008). *Indian Administrative Law* (2nd ed.). Delhi: Metropolitan.

Mehta, S.M. (1990). *Indian Constitutional Law*. New Delhi: Deep and Deep.

Sathe, S.P. (1998). *Administrative Law* (6th ed.). Bombay: Tripathi.

Sharma, S.K. (2007). *Directive Principles and Fundamental Rights*. New Delhi: Deep and Deep.

Swami, P.M. (1989). *Swami's Manual of Disciplinary Proceedings for Central Government Employees.* Madras: Swami Publishers.

PAPER– III
Organisational Development and Administrative Improvement

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: Organisational Development and Administrative improvement are important aspects of administrative management. The objectives of this paper are to comprehensively deal with the varied reference points leading to promoting administrative efficiency. The students will therefore gain an understanding of the ways in which change can be managed in an organisation at the operations and policy planning levels. A thorough study of the reports of the Government of India Commissions on Administrative Improvement and Reforms and the working of the O&M Division of the Government of India will link the theoretical and operational aspects of administrative improvement in public administration.

UNIT I

Introduction to Organisation Development: Concept, Relevance, History & Evolution; Concept of Organizational culture
The Nature of Planned Change: Theories, Models, Types & Change Agents
Challenges of Organizational Change: Cultural, Institutional and Technological

UNIT II

Organizational Learning and Transformation; Determinants of Organizational Design
Diagnosing the Problem
Intervention strategies for organization development - Individual, Group & Interpersonal Interventions
Organisational Analysis and Development of Organisational Structure

UNIT III

Human Resources: Systems and Processes
Role of Human Resource in Organizational Change and Development
HRM Interventions: Goal Setting, Performance Appraisal and Reward Systems
Managing Workforce Diversity

UNIT IV

Techniques of Administrative Improvement: Organisation and Methods; Qualitative and Quantitative Work Control
Innovations in Management; Quality Circles, Total Quality Management
Management by Objectives; Performance Measurement in Administration
Working of O&M Division of Government of India; Pay Commissions and Administrative Improvement

Essential Readings

Currie, R. and Faraday. (1972). *Work Study*. London: Pitman.

Government of India. (2008). *Ministry of Personnel, Public Grievances and Pension.*

Government of India. (2008). *Second Administrative Reforms Commission Reports.*

Maheshwari, S. R. (2002). *Administrative Reforms in India*. New Delhi: Macmillan India Ltd.

Maheshwari, S. R. (2006). *Indian Administration*. New Delhi: Orient Longman Private Limited.

Reddin, W.J. (1971). *Effective Management by Objectives*. New York: McGraw Hill.

Srinath, L.S. (1996). *PERT and CPM – Principles and Applications*. New Delhi: Affiliated East-West Press.

United Nations. (1972). *Use of Modern Management Techniques in the Public Administration of Developing Countries.* New York.

Suggested Readings

Armstrong, Michael. (1995). *Handbook of Management Techniques*. New Delhi: Excel Books.

Brazzel, M. & Jones, B. B. (2006). The NTL Handbook of Organization Development and Change: Principles, Practices, and Perspectives. Wiley

Cummings, T. G. & Worley C. G (2008). Organization Development & Change (9th ed.). Cengage Learning.

Department of Personnel and Administrative Reform: Administrative Reforms Wing.

Department of Personnel and Training: Report of Sixth Pay Commission.

Gopalkrishan, P. (1999). *Handbook of Materials Management*. New Delhi: Prentice Hall of India.

Government of India. *Management in Government*. Quarterly Journal published by the

I.L.O. (2008). *Introduction to Work Study*. Oxford & IBN Publishing Co. Pvt. Ltd.

OPTIONAL PAPERS

PAPER– IV
Ethics in Governance

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objectives of the Paper: The aim of the paper is to acquaint the students with the concept and philosophy of ethics with special reference to ethics in public life and accountability of public services in India. The paper through teaching in case studies will enhance the problem solving skills on situations relating to integrity, probity in public life and problem solving approach to various issues and conflicts face by him in dealing with society. The students will learn to effectively communicate ethics and governance concepts and arguments in a logical manner.

UNIT I

Ethics: Concept and Significance; Introducing Key Concepts: Right, Duty, Obligation, Virtue, Freedom, Equality, Compassion, Fraternity, Karma, Purusharthas, Dharma, Rta (Cosmic Order)

Contribution of Kautilya (Character Building, Measures to tackle Corruption), Vivekananda (Practical Vedanta and Idea of Daridra-Narayana) and Mahatma Gandhi (Satyagraha and Truth)
Contribution of Western Administrative Thinkers to Ethics with special reference to Socrates (Moral Theory), Immanuel Kant (Deontological Theory) and J.S. Mill (Utilitarianism)

UNIT II

Presuppositions of Ethics: Freewill, Self, God
Applied Ethics: Issues of Inequality, Prejudice & Discrimination, Abortion, Foeticide, Suicide, Animal Killing, Environment Degradation, Capital Punishment
Nature of Moral Dilemmas

UNIT III

Ethics in Public Life: Civil Service Neutrality and Anonymity
Significance of Ethical and Moral Values in Governance
Code of Ethics and Code of Conduct for Civil Services in India

UNIT IV

Probity in Governance- Corruption: Concept and Causes
Overview of Institutional Arrangements for fighting Corruption in India
Work Culture- Concept, Significance and Characteristics of a good work culture
Case Studies on Ethics in Public Administration

Essential Readings

Arora, R. K. (2008). *Ethics in Governance: Innovations Issues and Instrumentalities*. Jaipur: Rawat.

Arora, Ramesh K. (Ed.) (2014) *Ethics, Integrity and Values in Public Service*. New Delhi: New Age International

Bhattacharya, Mohit. (2007). LokPrashasanKeNayeAyaam. New Delhi: Jawahar Publishers and Distributors.

Fox, W. (2009). *A Theory of General Ethics – Human Relationships, Nature and The Built Environment.* New Delhi: PHI Learning

Gandhi, Mahatma (2009). *Hind Swaraj.* Delhi: Rajpal& Sons

Ghere, R. K. & Frederickson, H. G.(Eds.). (2007). E*thics in Public Management.* New Delhi: PHI Learning.

Lillie, William (1948). *Introduction to Ethics.* Methuen: London

Rangarajan, L.N. (ed.) (1987). *The Arthashastra*. New Delhi: Penguin Books

Vivekananda (3rd Vol.). *Complete Works of Swami Vivekananda*. Kolkatta: Advaitya Ashram. http://www.advaitaashrama.org/cw/content.php

Suggested Readings

Bhargava, R. (2006). *Politics and Ethics of the Indian Constitution.* New Delhi: OUP.

Chaturvedi, T.N.(Eds.). (1996). *Ethics in Public Life*. New Delhi: IIPA.

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Godbole, M. (2003). *Public Accountability and Transparency: The Imperatives of Good Governance*. New Delhi: Orient Longman.

Hooja, R. (2008). *Corruption, Ethics and Accountability Essays by an Administrator*. New Delhi: IIPA

Huberts, L. W. J. C. *et.al.* (2008). *Ethics and Integrity of Governance: Perspectives Across Frontiers.* (New horizons in public policy series). California: Edward Elgar Publishers.

Martinez, J. M. (2009) *Public Administration Ethics for the 21st Century*. Santa Barbara: ABC-CLIO.

Mathur, B.P. (2014). *Ethics for Governance: Reinventing Public Services*. New Delhi: Routledge Taylor and Francis Group.

Menzel, D. C. (2010*). Ethics Moments in Government.* (American Society of Public Administration). Boca Raton: CRC.

Sawshilya, A. (2012). *Ethics and Governance*. New Delhi: Pearson Education.

Second Administrative Reforms Commission. (2007). *Ethics in Governance.* New Delhi: GOI

Sheeran, P. J. (2006). *Ethics in Public Administration – A Philosophical Approach*. Jaipur: Rawat.

PAPER– V
Education Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India.

Objectives of the Paper: The basic Objectives of this paper is to familiarize the students with the concepts of various systems of education and educational administration in India. In particular, the paper covers the provisions of the National Policy on Education, Five Year Plans and SarvaShikshaAbhiyan. The organizational set up for administration of education and various agencies would also be taught. The pedagogical tools used will include lectures, case studies, policy analysis exercises, seminars and presentations.

Unit I

Educational Administration: Concept, Significance and Scope
Concepts: Universalization of Elementary Education, Non-Formal Education, Vocationalization of Secondary Education, Autonomous Colleges
Problems and Challenges of Educational Administration

Unit II

National Policy on Education, 1986 as modified in 1992 (Plan of Action, 1992)
Education and Five-Year Plans: Approaches, Priorities and Investments; RTE
Main Features, Organisation and administration of an Indian University

Unit III

Organization and Administration of Education at the Central Level with special reference to the Department of Education
University Grants Commission: Structure, Functions and Role
National Council of Educational Research and Training: Structure, Functions and Role

Unit IV

Socio-economic Problems of Educational Development – Equality of Opportunity, Employment and Productivity, Nation Building and Citizenship; Globalization and Education
Implementation and Evaluation of SarvaSikshaAbhiyan

Essential Readings

Goel, S. L. (1994). Education Policy and Administration. New Delhi: Deep and Deep Publication. Government of India. (1966).

Report of the Education Commission. Selected Chapters.

Manning, Kathleen. (2017). Organisational Theory in Higher Education. New York: Routledge.

Mukherji, S. N. (1962). Administration of Education, Planning and Finance. Baroda: Acharya Book Depot.

Suggested Readings

Ghosh, Suresh Chandra. (2015). The History of Education in Modern India 1757-2012 Fourth Edition. New Delhi: Orient Blackswan.

Kapur, Devesh and Mehta, PratapBhanu. (Ed.) (2017). Navigating the Labyrinth – Perspectives on India's Higher Education. Hyderabad: Orient Blackswan.

Lulla, B. P. &Murty, S. K. (1976). Essentials of Educational Administration. Chandigarh: Mohindra Capital Publishers.

Naik, J. P. (1975). Policy and Performance in Indian Education. New Delhi: Orient Longman.

Naik, J. P. (1975). Quantity, Quality and Equality in Indian Education. Bombay: Allied Publishers.

Relevant websites including mhrd.gov.in; ssa.nic.in; nuepa.org

PAPER– VI
Labour Policy and Administration

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.

  The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objectiveof the Paper: By the end of the semester the student will comprehend various concepts and dimensions related to labour policy and administration, employee welfare and will become fully acquainted with the institutional structure dealing with labour administration at both union and state levels in India. Tools to be employed for the effective teaching of the subject includecase study method, audio visuals techniques, brainstorming on various issues, power point presentation, study visits to industries etc. Use of these tools will develop the analytical skills and enhance the knowledge quotient of the students.

UNIT-I

State and Labour: Theoretical Aspects
Indian Labour: Characteristics
Industrialization and Growth of Indian Labour

UNIT-II

Evolution of Labour Policy in India
Labour Policy and Five Year Plans
Labour Policy with special reference to Terms and Conditions of Employment; Industrial Relations and Wages

UNIT-III

Organisation, Functions and Role of Union Ministry of Labour and Employment; Labour Bureau and Directorate General of Labour Welfare of Government of India
Labour Department at the State Level

UNIT-IV

Labour Policy and Legislation in India
Employee Welfare: Concepts; Significance; Approaches
2nd National Commission on Labour

Essential Readings

Government of India. (1969). *Report of the National Commission on Labour.*

Jagdish (ed.) (2004). *Labour Welfare Administration: Theories and Legal Provisions*. New Delhi: Akansha.

Kumar, Anil. (2003). *Labour Welfare and Social Security: Awareness, Implementation and Utility of Labour Laws*. New Delhi: Deep and Deep Publication.

Suggested Readings

Bhagoliwal T.N. (1982). *Economics of Labour and Industrial Relations*. Agra: SahityaBhawan.

Mamkoottam, Kuriakose. (2003). *Labour and Change: Essays on Globalisation, Technological Change in Labour in India*. New Delhi: Response Book.

Mamoria, C.B. (1991). *Dynamics of Industrial Relations.* Bombay: Himalaya.

Misra, S.N. (2002). *An Introduction to Labour and Industrial Laws*. Allahabad: Allahabad Law Agency, 2nd edition.

PAPER – VII
Regulatory Governance

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Objective of the Paper: The course deals with rationale of regulatory governance. The key areas covered are the theoretical perspectives of regulatory governance and some key sectors where regulatory agencies have been set up in India post 1991. Teaching and learning will be through lectures, seminars, group work, assignment writing, tutorials and presentations.

UNIT I

Regulation- Concept, Rationale and Theories

Regulatory Governance: Concept, significance and limitations.

Independent Regulatory Commission: Concept and Rationale

UNIT II

Regulatory Failure: Reasons and Remedies

Independence of Regulator

Transparency and Accountability of Regulator

UNIT III

Sectoral Regulation

Telecom Regulatory Authority of India (TRAI); Structure, Functions and Role

Insurance Regulatory and Development Authority of India (IRDAI): Structure, Functions and Role

Central Electricity Regulatory Commission (CERC): Structure, Functions and Role.

UNIT IV

University Grants commission(UGC): Composition, Functions and Role

Food Standards and Safety Authority of India (FSSAI): Structure, Functions and Role

Central Pollution Control Board (CPCB): Composition, Functions and Role

Essential Readings

Baldwin, R., Cave, M., & Lodge, M. Understanding Regulation: Theory, Strategy and Practice (**2nd ed.).** London: Oxford University Press. 2011

Government of India, Second Administrative Reforms Commission, Creating an Effective Regulatory Framework, 13th Report Chapter 6, New Delhi: Ministry of Personnel. Public Grievances and Pensions, Department of Administrative reforms and Public Grievances

Government of India, Approach to Regulation: Issues and Options, Planning commission New Delhi, 2006.

Government of India, Report of the Working Group on Business Regulatory Framework, Towards Optional Regulatory Government in India, New Delhi: Government of India . Retrieved from planningcommission.nic.in/aboutus/committee/.../wg,,,brf 2013.pdf

Government of India, Approach to Regulation of Infrastructure, Planning commission Retrieved from infrastructure.gov.in/event-Regulation_Law_and_Policy_final.pdf .

Rosenbloom, D.H. Public Administration: Understanding Management, Politics and Law in the Public Sector, New York : McGraw-Hill Book Company (1989).

Online Sources:

www.trai.gov.in

www.cercind.gov.in

www.fssai.gov.in

www.ugc.ac.in

www.irdai.gov.in

www.cpcb.nic.in

Suggested Readings

Dudley, S.E, & Brito, J, Regulation: A Primer. Washington: George Washington University 2012

Kessides, I.N. Reforming Infrastructure , Privatization, Regulation and competition, Washington DC: World Bank and Oxford University Press, 2004.

Levi-Faur, D. Regulation & Regulatory Governance, Jerusalem Papers in Regulation & Governance Working Papers Series (working Paper 1). Israel: the Hebrew University, 2010.

OECD, Regulatory Enforcement and Inspection: OECD Best Practice Principles for Regulatory Policy Paris: OECD Publishing 2014.

Stern.J. What Makes an Independent Regulator Independent? Business Strategy Review, 8(2), 67-74 (1997).

Stigler, G.J. The Theory of Economic Regulation. The Bell Journal of Economics and Management Science, 2 (1), 3-21

PAPER –VIII

Public Enterprise Management

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- The Maximum Marks for the paper will be 100. The question paper will be of 80 marks and internal assessment of 20 marks. Time allowed will be 3 Hours. For private students, who have not been assessed for the internal assessment, the marks secured by them in the paper will be proportionately increased in lieu of the internal assessment.
  The Paper-Setter must put a note in question paper in this regard.
- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The compulsory question shall comprise of 15 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 10. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be expected to attempt one. Each question from the units will carry 15 marks.

Special Note: This paper will be taught with special reference to India

Objectives of the Paper: This paper covers various aspects of the public sector and public enterprises in India. In particular, the paper deals with the concept and role of public sector enterprises, governing boards, privatization and performance of central public sector enterprises in India. Issues of management, control, pricing and finally public sector reforms will be studied. Course material will be supplemented by activities like case study discussions and interaction with experts. Public speaking, critical thinking, group work, presentation skills will be developed during these activities.

UNIT I

Public Enterprise: Concept, Rationale and Objectives
Role of Public Sector in the Indian Economy
Industrial Policy Resolutions and Public Sector Enterprises

UNIT II

Governing Boards: Types, Functions, Size and Composition
Legislative Control over Public Enterprises
Ministerial Control over Public Enterprises

UNIT III

Pricing and Public Enterprises
Public Sector Reforms: Rationale;
Performance Contract System/Memorandum of Understanding (MOU);
Professionalisation of Boards of Governance in India

UNIT IV

Disinvestment: Objectives, Methods, Machinery and Assessment
Privatisation: Theory, Objectives, Methods, Procedure, and Assessment; Lessons from the U.K. Experience
Contracting Out: Concept & Rationale; Contracting Out Local Services

Essential Readings

Bailey, S.J. (2001). *Public Sector Economics: Theory, Policy and Practice*. 2nd ed. London: Palgrave

Bos, D. (1991). P*rivatization: A Theoretical Treatment*. Oxford: Oxford University Press.

Dubhashi, P.R. (1976). *Economics, Planning and Public Administration*. Bombay: Somaiya Publications Pvt. Ltd.

Jha, L.K. (1986). *Economic Administration in India – retrospect and prospect.* New Delhi: IIPA

Khera, S.S. (1977). *Government in Business*. New Delhi: National Publishing House

Relevant websites including dpe.nic.in; finmin.nic.in

Suggested Reading

Administrative Reforms Commission (1967). *Report of the Study Team on Public Sector Undertakings*. New Delhi: Government of India.

Gupta, K.R. (1975). *Issues in Public Enterprises.* 2nd ed. New Delhi: S. Chand.

Hanson, A.H. (1972). *Public Enterprises and Economic Development*. London: Routledge and Kegan,

Kuchhal, S.C. (1976). *Industrial Economy of India.* Allahabad: Chaitanya Publishing House

Marathe, S.S. (2008). *Regulation and Development*. New Delhi: Sage Publishers.

Narain, L. (1980). *Principles and Practices of Public Enterprises Management*. New Delhi: S. Chand.

Planning Commission. *Five Year Plan Documents.* GOI.

Ramanadham, V.V. (1988). *The Working of Public Sector*. Bombay: Allied Publishers.

United Nations Organisation. (1974). *Management and Supervision of Public Enterprises in Developing Countries*. New York: V.N.

United Nations (1970). *Measures for Improving the Performances of Public Enterprises in Developing Countries*. New York: V.N.

Vickers, J. & Yarrow, G. (1988). *Privatization: An Economic Analysis*. Cambridge: MIT Press.

World Bank. (1995). *Bureaucrats in Business – The Economics and Politics of Government Ownership*. New York: World Bank.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF LANGUAGES

Outlines of tests, syllabi and courses of reading for

M.A. Punjabi
(1st to 4th Semesters)

FOR THE SESSION **2020-21**

SYLLABI AND COURSES OF READING OF M.A. PART I & II (SEMESTER SYSTEM)
FOR THE EXAMINATION OF 2020-2021

ਐਮ. ਏ. ਪੰਜਾਬੀ

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਪਹਿਲਾ – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ	(MPI)
ਪਰਚਾ ਦੂਜਾ – ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ	(SSP)
ਪਰਚਾ ਤੀਜਾ: ਆਪਸ਼ਨ (i) – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ	(MPK)
ਪਰਚਾ ਤੀਜਾ : ਆਪਸ਼ਨ (ii) – ਗੁਰਮਤਿ ਅਤੇ ਸੂਫ਼ੀ ਕਾਵਿ	(GSK)
ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (i) – ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ	(PNA)
ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (ii) – ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ	(PKA)

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਪੰਜਵਾਂ – ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ	(API)
ਪਰਚਾ ਛੇਵਾਂ – ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਵਿਹਾਰਕ ਅਲੋਚਨਾ	(PKS)
ਪਰਚਾ ਸੱਤਵਾਂ: ਆਪਸ਼ਨ (i) – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ–II	(MPK)
ਪਰਚਾ ਸੱਤਵਾਂ : ਆਪਸ਼ਨ (ii) – ਸੂਫ਼ੀ, ਕਿੱਸਾ ਅਤੇ ਬੀਰ ਕਾਵਿ	(SKB)
ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (i) – ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ	(PNA)
ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (ii) – ਪੰਜਾਬੀ ਅਤੇ ਪਰਵਾਸੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ	(PPK)

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਨੌਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	(BVP)
ਪਰਚਾ ਦਸਵਾਂ : ਸਭਿਆਚਾਰ, ਲੋਕਧਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ	(SLP)
ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ : (i) : ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ – I	(APK)
ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ (ii) : ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ – I	(ABK)
ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (i) : ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ–I	(PNR)
ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : ਵਿਸ਼ਵ ਦਾ ਅਨੁਵਾਦਤ ਨਾਟਕ	(PAV)

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਤੇਰ੍ਹਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ	(BPG)
ਪਰਚਾ ਚੌਦਵਾਂ : ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਅਤੇ ਲੋਕ ਸਾਹਿਤ	(PLS)
ਪਰਚਾ ਪੰਦਰਵਾਂ : ਆਪਸ਼ਨ (i) : ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ –II	(APK)
ਪਰਚਾ ਪੰਦਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : ਆਧੁਨਿਕ ਬਿਰਤਾਂਤਕ ਪੰਜਾਬੀ ਕਵਿਤਾ –II	(ABK)
ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (i) : ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ–II	(PNR)
ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (ii) : ਪੰਜਾਬੀ ਵਿਚ ਅਨੁਵਾਦਿਤ ਵਿਸ਼ਵ ਨਾਟਕ	(PAV)
ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (iii) : ਪੰਜਾਬੀ ਵਾਰਤਕ ਦਾ ਅਧਿਐਨ	(PVA)

ਪੰਜਾਬੀ

ਐਮ. ਏ. ਭਾਗ ਪਹਿਲਾ

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਪਹਿਲਾ – <u>ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ –** ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ, ਮੱਧਕਾਲੀ ਸਾਹਿਤਕ ਸੰਦਰਭ ਅਤੇ ਪੂਰਵ ਨਾਨਕ ਕਾਲ (15●● ਈ. ਤਕ) ਦਾ ਸਾਹਿਤ: 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ –** ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ (15●1 ਈ. ਤੋਂ 185● ਈ. ਤਕ) 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ – ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ, ਮੱਧਕਾਲੀ ਸਾਹਿਤਕ ਸੰਦਰਭ ਅਤੇ ਪੂਰਵ ਨਾਨਕ ਕਾਲ (15●● ਈ. ਤਕ ਦਾ ਸਾਹਿਤ)** 3● ਅੰਕ
   (i) ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ; ਪੰਜਾਬੀ ਸਾਹਿਤ ਇਤਿਹਾਸਕਾਰੀ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਅਤੇ ਸੰਭਾਵਨਾਵਾਂ; ਕਾਲ ਵੰਡ ਦੇ ਮਸਲੇ
   (ii) ਸਮੁੱਚੇ ਮੱਧਕਾਲ ਦਾ ਇਤਿਹਾਸਕ ਅਤੇ ਸਭਿਆਚਾਰਕ ਸੰਦਰਭ; ਮੱਧਕਾਲੀ ਚੇਤਨਾ; ਮੱਧਕਾਲੀ ਸਾਹਿਤ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ
   (iii) ਪੂਰਵ ਨਾਨਕ ਕਾਲ (15●● ਈ. ਤੋਂ ਪਹਿਲਾਂ) ਦੀਆਂ ਸਾਹਿਤਕ ਧਾਰਾਵਾਂ : ਨਾਥ ਜੋਗੀ ਕਾਵਿ, ਸੂਫੀ ਕਾਵਿ, ਬੀਰ ਕਾਵਿ, ਲੋਕ ਕਾਵਿ
2. **ਭਾਗ ਦੂਜਾ – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ (15●1 ਤੋਂ 185● ਈ. ਤਕ)** 3● ਅੰਕ
   (i) ਸੂਫ਼ੀ ਕਾਵਿ; ਗੁਰਮਤਿ ਕਾਵਿ; ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ ਦੀ ਇਤਿਹਾਸਕ, ਦਾਰਸ਼ਨਿਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਸਾਹਿਤਕ ਵਿਸ਼ੇਸ਼ਤਾ
   (ii) ਕਿੱਸਾ ਕਾਵਿ ਅਤੇ ਬੀਰ ਕਾਵਿ ਦਾ ਇਤਿਹਾਸ ਮੂਲਕ, ਸਭਿਆਚਾਰਕ ਅਤੇ ਸਾਹਿਤਕ ਅਧਿਐਨ
   (iii) ਇਸ ਕਾਲ (15●1–185●) ਦੇ ਸਾਹਿਤ ਦਾ ਸਦੀਵਾਰ ਅਧਿਐਨ; ਮੱਧਕਾਲੀ ਵਾਰਤਕ ਦਾ ਵਿਕਾਸ ਅਤੇ ਪ੍ਰਮੁਖ ਵੰਨਗੀਆਂ
3. **ਭਾਗ ਤੀਜਾ –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ:

1. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਆਲੋਚਨਾਤਮਕ ਇਤਿਹਾਸ,** ਪੈਪਸੂ ਬੁੱਕ ਡੀਪੂ, ਪਟਿਆਲਾ
2. ਧਰਮਪਾਲ ਸਿੰਗਲ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
3. ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ ਅਤੇ ਗੋਬਿੰਦ ਸਿੰਘ ਲਾਂਬਾ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ,** ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
4. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ
5. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ) ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
6. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਜਿਲਦ ਦੂਜੀ ਤੋਂ ਚੌਦਵੀਂ ਤੱਕ) ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ
7. ਬਿਕਰਮ ਸਿੰਘ ਘੁੰਮਣ ਤੇ ਹਰਭਜਨ ਸਿੰਘ ਭਾਟੀਆ (ਸੰ.), **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ** (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
8. **ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਵਿਵੇਕ**, ਡਾ. ਅਮਰਜੀਤ ਸਿੰਘ ਕਾਂਗ, ਡਾ. ਜਸਪਾਲ ਕੌਰ ਕਾਂਗ, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
9. ਮੋਹਨ ਸਿੰਘ ਦੀਵਾਨਾ, **ਪੰਜਾਬੀ ਅਦਬ ਦੀ ਮੁਖ਼ਤਸਰ ਤਾਰੀਖ਼**, ਕਸਤੂਰੀ ਲਾਲ ਐਂਡ ਸਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ
10. **ਬਾਣੀ ਸੰਵੇਦਨਾ**, ਜਸਪਾਲ ਕੌਰ ਕਾਂਗ, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕ ਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
11. Mohan Singh Diwana, **A History of Panjabi Literature**, Kasturi Lal & Sons, Amritsar.
12. Mohan Singh Diwana, **Introduction to Panjabi Literature**, Nanak Singh Pustakmala, Amritsar.
13. Sant Singh Sekhon & Kartar Singh Duggal, **History of Punjabi Literature**, Sahitya Academy, New Delhi.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ **12** ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਦੂਜਾ – <u>ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ- ਸ਼ਾਸਤਰ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ ਅਤੇ ਵਾਦ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਆਲੋਚਨਾ : ਵਿਕਾਸ ਪੜਾਅ ਅਤੇ ਮੂਲ ਸਥਾਪਨਾਵਾਂ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ –ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ–ਸ਼ਾਸਤਰ ਅਤੇ ਵਾਦ** 3● ਅੰਕ
   (i) ਸਾਹਿਤ: ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਪ੍ਰਯੋਜਨ; ਰਹੱਸਵਾਦ, ਰੁਮਾਂਸਵਾਦ, ਯਥਾਰਥਵਾਦ
   (ii) ਗਰੀਕੋ–ਰੋਮਨ ਕਾਵਿ–ਸ਼ਾਸਤਰ:
      (ੳ) ਅਰਸਤੂ – ਅਨੁਕਰਨ, ਤ੍ਰਾਸਦੀ, ਵਿਰੇਚਨ;
      (ਅ) ਲੌਂਜਾਈਨਸ – ਉਦਾੱਤ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਸੋਮੇ;
   (iii) ਭਾਰਤੀ ਕਾਵਿ–ਸ਼ਾਸਤਰ:
      (ੳ) ਰਸ ਸੰਪਰਦਾਇ – ਰਸ ਨਿਸ਼ਪੱਤੀ ਅਤੇ ਸਾਧਾਰਨੀਕਰਨ
      (ਅ) ਧੁਨੀ ਸੰਪਰਦਾਇ – ਸ਼ਬਦ ਸ਼ਕਤੀਆਂ
      (ਏ) ਅਲੰਕਾਰ ਸੰਪਰਦਾਇ : ਅਲੰਕਾਰ ਵਰਗੀਕਰਨ
2. **ਭਾਗ ਦੂਜਾ – ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਅਤੇ ਸਾਹਿਤਕ ਵਾਦ** 3● ਅੰਕ
   (i) ਮਾਰਕਸਵਾਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦੀਆਂ ਮੂਲ ਸਥਾਪਨਾਵਾਂ
   (ii) ਰੂਪਵਾਦੀ/ਸੰਰਚਨਾਵਾਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦੀਆਂ ਮੂਲ ਸਥਾਪਨਾਵਾਂ:
   (iii) (a) ਉੱਤਰ–ਆਧੁਨਿਕਤਾਵਾਦ : ਪਰਿਭਾਸ਼ਾ, ਸੰਕਲਪ ਅਤੇ ਮੂਲ ਲੱਛਣ
      (b) ਅਸਤਿਤਵਵਾਦ : ਪਰਿਭਾਸ਼ਾ, ਸੰਕਲਪ ਅਤੇ ਪ੍ਰਮੁੱਖ ਲੱਛਣ
3. **ਭਾਗ ਤੀਜਾ –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਨਰੋਂਦਰ **ਅਰਸਤੂ ਦਾ ਕਾਵਿ–ਸ਼ਾਸਤਰ,** (ਅਨੁ: ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ) ਐਸ. ਚਾਂਦ ਐਂਡ ਕੰਪਨੀ, ਦਿੱਲੀ।
2. ਅਚਾਰੀਆ ਵਿਸ਼ਵਨਾਥ, **ਸਾਹਿਤਯ ਦਰਪਣ**, (ਅਨੁ.: ਦੁਨੀ ਚੰਦਰ) ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
3. ਹਰਿਭਜਨ ਸਿੰਘ ਭਾਟੀਆ, **ਵੀਹਵੀਂ ਸਦੀ ਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਦਾ ਸਰੂਪ**, ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
4. ਹਰਿਭਜਨ ਸਿੰਘ ਭਾਟੀਆ, **ਚਿੰਤਨ ਪੁਨਰ ਚਿੰਤਨ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●1●
5. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ., **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਕਾਵਿ–ਸ਼ਾਸਤਰ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1997
6. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ), **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਚਿੰਤਨ: ਸਮਕਾਲੀ ਸਰੋਕਾਰ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ, 2●●3
7. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਸਾਹਿਤ ਅਧਿਐਨ ਪ੍ਰਣਾਲੀਆਂ,** ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
8. ਕੁਲਵੰਤ ਸਿੰਘ, **ਨਵ–ਆਲੋਚਨਾ: ਬਦਲਦੇ ਪਰਿਪੇਖ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●1●
9. **ਖੋਜ ਪਤ੍ਰਿਕਾ**, ਵਾਦ ਅੰਕ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
10. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ ਪਾਠ**, ਸ਼ਬਦ ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
11. ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ, **ਭਾਰਤੀ ਕਾਵਿ–ਸ਼ਾਸਤਰ,** ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
12. ਭਰਤਮੁਨੀ, **ਨਾਟਯ–ਸ਼ਾਸਤਰ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
13. ਲੌਂਜਾਈਨਸ, **ਉੱਦਾਤ ਬਾਰੇ** (ਪੰਜਾਬੀ ਅਨੁਵਾਦ: ਹਰਿਭਜਨ ਸਿੰਘ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
14. ਰਵਿੰਦਰ ਕੁਮਾਰ, **ਸਾਹਿਤ ਨਵ ਸਿਧਾਂਤ (ਪੂਰਬਵਾਦ ਤੋਂ ਕੌਮਵਾਦ ਤੱਕ)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
15. ਡਾ. ਧਰਮਚੰਦ ਵਾਤਿਸ਼, **ਅਸਤਿਤਵਵਾਦ ਦੀ ਸਮਝ**, ਗੋਰਕੀ ਪਬਲਿਸ਼ਰਜ਼, ਲੁਧਿਆਣਾ, 2●17
16. ਡਾ. ਯੋਗਰਾਜ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ–ਧਾਰਾਵਾਂ ਦਾ ਸੁਹਜ–ਸ਼ਾਸਤਰ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
17. ਡਾ. ਯੋਗਰਾਜ (ਪਟਿਆਲਾ), **ਚੇਤਨਾ ਦਾ ਉਕਾਬ : ਭਰਥਰੀ**, ਪਬਲੀਕੇ ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
18. David Lodge, **Twentieth Century Criticism,** Orient Longman
19. David Lodge and Nigel Wood, **Modern Criticism and Theory,** Pearson

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ–ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ–ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ–ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਤੀਜਾ: **ਆਪਸ਼ਨ (i) – <u>ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ</u>**

ਕੁਲ ਅੰਕ : 1●●

ਲਿਖਤੀ : 8●

ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਦਾ ਇਤਿਹਾਸਕ ਸੰਦਰਭ ਅਤੇ ਸਿਧਾਂਤਕ ਪੱਖ (ਗੁਰਮਤ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ ਅਤੇ ਕਿੱਸਾ ਕਾਵਿ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ; ਦਾਰਸ਼ਨਿਕ ਪਿਛੋਕੜ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ) 15 ਅੰਕ
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਕਵੀ: ਗੁਰੂ ਨਾਨਕ, ਸ਼ਾਹ ਹੁਸੈਨ, ਹਾਸ਼ਮ 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰੂ ਨਾਨਕ ਦੇਵ : **ਜਪੁਜੀ**
2. ਸ਼ਾਹ ਹੁਸੈਨ: **ਕਾਫ਼ੀਆਂ**
3. ਹਾਸ਼ਮ: **ਸੱਸੀ ਪੁੰਨੂੰ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਅਤਰ ਸਿੰਘ**, ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਸੁਰਿੰਦਰ ਸਿੰਘ ਕੋਹਲੀ ਤੇ ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਗੁਰੂ ਨਾਨਕ, ਜੀਵਨ, ਸਮਾਂ ਤੇ ਰਚਨਾ,** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
4. ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਗੁਰੂ ਨਾਨਕ ਦਾ ਸ਼ਾਹਕਾਰ ਜਪੁਜੀ**, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
5. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਅਤੇ ਅਧਿਆਪਨ**, ਗੁਰੂ ਨਾਨਕ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ ।
6. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਕਾਵਿ ਸ਼ਿਮੋਣੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
7. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਬਾਣੀ ਦਾ ਸੱਚ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਰਾਮ ਸਿੰਘ, **ਜਪੁਜੀ ਦਾ ਵਿਸ਼ਾ ਤੇ ਰੂਪ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
9. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਸ਼ਾਹ ਹੁਸੈਨ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪਬਲੀਕੇਸ਼ਲ ਬਿਉਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
10. ਗੁਰਦਿਆਲ ਸਿੰਘ ਢਿੱਲੋਂ, **ਸ਼ਾਹ ਹੁਸੈਨ, ਦਰਸ਼ਨ ਸਾਧਨਾ ਤੇ ਕਲਾ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
11. ਗੁਰਦਿਆਲ ਸਿੰਘ ਢਿੱਲੋਂ, **ਸ਼ਾਹ ਹੁਸੈਨ, ਦਰਸ਼ਨ, ਸਾਧਨਾ ਤੇ ਕਲਾ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1996
12. ਡਾ. ਜਗਤਾਰ (ਸੰਪਾ.), **ਮਿੱਤਰਾਂ ਦੀ ਮਿਜਮਾਨੀ ਖਾਤਰ: ਸ਼ਾਹ ਹੁਸੈਨ ਜੀਵਨ ਤੇ ਰਚਨਾ,** ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
13. ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਸੱਸੀ ਹਾਸ਼ਮ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
14. ਲਾਜਵੰਤੀ ਰਾਮ ਕ੍ਰਿਸ਼ਨ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਵੀ**, (ਅਨੁਵਾਦ) ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
15. ਹਰਨਾਮ ਸਿੰਘ ਸ਼ਾਨ, **ਹਾਸ਼ਮ ਸ਼ਾਹ: ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਸਾਹਿਤ ਅਕਾਡਮੀ, ਦਿੱਲੀ।
16. ਜਗਜੀਤ ਸਿੰਘ, **ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾ ਨ, ਮੋਹਾਲੀ-ਚੰਡੀਗੜ੍ਹ, 2●18
17. ਡਾ. ਜਗਜੀਤ ਸਿੰਘ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਾਵਿ ਪ੍ਰਵਚਨ**, ਬਲਵੰਤ ਪ੍ਰਕਾਸ਼ਨ, ਜਲੰਧਰ।
18. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੇਧਾਂ ਤੇ ਸਾਰਾਂ ਤੇ ਹੋਰ ਲੇਖ**, ਜਸਵੰਤ ਪ੍ਰਿੰਟਰਜ਼, ਲੁਧਿਆਣਾ।
19. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਭਾਰਤੀ ਸੂਫ਼ੀ ਪਰੰਪਰਾ ਤੇ ਸਾਹਿਤ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
20. ਡਾ. ਜਗਬੀਰ ਸਿੰਘ, **ਮੱਧਕਾਲੀ ਸ਼ਬਦ ਸਭਿਆਚਾਰ**, ਰਵਿੰਦਰ ਸਿੰਘ, WZ-13, ਮਨੋਹਰ ਪਾਰਕ, ਨਵੀਂ ਦਿੱਲੀ, 1989
21. ਡਾ. ਜਗਬੀਰ ਸਿੰਘ, **ਗੁਰਬਾਣੀ: ਵਿਸ਼ਵ ਦ੍ਰਿਸ਼ਟੀ ਤੇ ਵਿਚਾਰਧਾਰਾ**, ਵੈੱਲਵਿਸ਼ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1997
22. ਡਾ. ਹਰਚਰਨ ਕੌਰ (ਸੰਪਾ.), **ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਸਾਹਿਤ**, ਪੁਨਰ ਵਿਚਾਰ, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ, 1989
23. ਪ੍ਰੋ. ਪ੍ਰੀਤਮ ਸਿੰਘ (ਸੰਪਾ.), **ਸਿੱਖ ਫ਼ਲਸਫ਼ੇ ਦੀ ਰੂਪ ਰੇਖਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ,
24. ਡਾ. ਜਸਬੀਰ ਸਿੰਘ ਆਹਲੂਵਾਲੀਆ, **ਸਿੱਖ ਚਿੰਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
25. ਗੁਰਮੀਤ ਸਿੰਘ ਟਿਵਾਣਾ, **ਧਰਮ ਅਤੇ ਮਾਰਕਸਵਾਦ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
26. ਡਾ. ਰਤਨ ਸਿੰਘ ਜੱਗੀ, **ਵਿਚਾਰਧਾਰਾ**, ਮਦਾਨ ਪਬਲਿਸ਼ਰਜ਼, ਪਟਿਆਲਾ।
27. ਡਾ. ਜਸਬੀਰ ਕੌਰ (ਸੰਪਾ.), **ਸ੍ਰੀ ਗੁਰੂ ਅਰਜਨ ਦੇਵ ਤੇ ਉਨ੍ਹਾਂ ਦਾ ਯੁੱਗ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
28. ਡਾ. ਜਸਵਿੰਦਰ ਕੌਰ ਢਿੱਲੋਂ, **ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਦੀਆਂ ਬਾਣੀਆਂ ਦਾ ਦਾਰਸ਼ਨਿਕ ਅਧਿਐਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀ., ਅੰਮ੍ਰਿਤਸਰ।
29. ਡਾ. ਮਹਿੰਦਰ ਕੌਰ ਗਿੱਲ, **ਗੁਰਬਾਣੀ ਸਮੀਖਿਆ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
30. ਡਾ. ਓਮ ਪ੍ਰਕਾਸ਼ ਵਸ਼ਿਸ਼ਟ, **ਚਿੰਨ੍ਹ ਵਿਗਿਆਨ ਅਤੇ ਗੁਰੂ ਨਾਨਕ ਬਾਣੀ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
31. ਡਾ. ਜਸਪਾਲ ਸਿੰਘ, (ਸੰਪਾ.) **ਸ਼੍ਰੀ ਗੁਰੂ ਗ੍ਰੰਥ ਸਾਹਿਬ, ਸਦੀਵੀ ਪ੍ਰੇਰਨਾ ਸਰੋਤ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਤੀਜਾ : ਆਪਸ਼ਨ (ii) – <u>ਗੁਰਮਤਿ ਅਤੇ ਸੂਫ਼ੀ ਕਾਵਿ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਮੱਧਕਾਲੀ ਕਾਵਿ ਦਾ ਇਤਿਹਾਸਕ ਸੰਦਰਭ ਅਤੇ ਸਿਧਾਂਤਕ ਪੱਖ 15 ਅੰਕ
(ਗੁਰਮਤ ਕਾਵਿ-ਧਾਰਾ, ਸੂਫ਼ੀ ਕਾਵਿ ਧਾਰਾ ਅਤੇ ਬੀਰ ਕਾਵਿ ਧਾਰਾ ਦਾ ਇਤਿਹਾਸ ਅਤੇ ਕਾਵਿ-ਸ਼ਾਸਤਰ; ਦਾਰਸ਼ਨਿਕ ਪਿਛੋਕੜ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ)
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਕਵੀ: ਗੁਰੂ ਨਾਨਕ, ਬਾਬਾ ਫ਼ਰੀਦ, ਭਾਈ ਗੁਰਦਾਸ 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰੂ ਨਾਨਕ ਦੇਵ : **ਆਸਾ ਦੀ ਵਾਰ**
2. ਬਾਬਾ ਫ਼ਰੀਦ: **ਸ਼ਲੋਕ ਅਤੇ ਸ਼ਬਦ**
3. ਭਾਈ ਗੁਰਦਾਸ: **ਪਹਿਲੀ ਵਾਰ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
2. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
3. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਕਾਵਿ ਸ਼ਿਰੋਮਣੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਭਾਈ ਗੁਰਦਾਸ ਇਕ ਅਧਿਐਨ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਸਾਹਿਬ ਸਿੰਘ, **ਆਸਾ ਦੀ ਵਾਰ ਸਟੀਕ**, ਸਿੰਘ ਬ੍ਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।
6. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਅਤੇ ਅਧਿਆਪਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
7. ਹਰਿਭਜਨ ਸਿੰਘ, **ਮੁੱਲ ਤੇ ਮੁੱਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
8. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਬਾਣੀ ਦਾ ਸੱਚ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
9. ਜਗਜੀਤ ਸਿੰਘ, **ਸ਼ੇਖ਼ ਫਰੀਦ ਦਾ ਕਾਵਿ ਪ੍ਵਚਨ**, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਜਗਜੀਤ ਸਿੰਘ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਾਵਿ ਪ੍ਵਚਨ**, ਬਲਵੰਤ ਪ੍ਰਕਾਸ਼ਨ, ਜਲੰਧਰ।
11. ਗੁਰਸ਼ਰਨ ਕੌਰ ਜੱਗੀ, **ਵਾਰਾਂ ਭਾਈ ਗੁਰਦਾਸ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
12. ਮੁਹੰਮਦ ਆਸਫ਼ ਖਾਨ, **ਆਖਿਆ ਫਰੀਦ ਨੇ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ

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ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (i) – <u>ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਬਿਰਤਾਂਤ ਅਤੇ ਬਿਰਤਾਂਤਕਾਰੀ; ਪੰਜਾਬੀ ਨਾਵਲ : ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
2. ਪੰਜਾਬੀ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਨਾਵਲਕਾਰ (196● ਤੋਂ ਪਹਿਲਾਂ) 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਨਾਨਕ ਸਿੰਘ : **ਪਵਿੱਤਰ ਪਾਪੀ**, ਸਿੰਘ ਬ੍ਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।
2. ਸੋਹਣ ਸਿੰਘ ਸੀਤਲ, **ਜੁਗ ਬਦਲ ਗਿਆ**, ਸੀਤਲ ਪੁਸਤਕ ਭੰਡਾਰ, ਲੁਧਿਆਣਾ।
3. ਜਸਵੰਤ ਸਿੰਘ ਕੰਵਲ: **ਪੂਰਨਮਾਸ਼ੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

<u>ਸੁਝਾਈਆਂ ਪੁਸਤਕਾਂ</u>

1. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਨਾਵਲ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਸਮਾਂ ਤੇ ਸੰਵਾਦ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਮਸਲੇ ਗਲਪ ਦੇ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
4. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜ ਪੰਜਾਬੀ ਨਾਵਲ : ਇਕ ਮੁਲਾਂਕਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

5. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
6. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਸਾਂਸਕ੍ਰਿਤਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
7. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਦਿਆਲ ਸਿੰਘ ਦੀ ਗਲਪ-ਚੇਤਨਾ**, ਲੋਕਾਇਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਨਰਿੰਜਨ ਤਸਨੀਮ (ਸੰਪਾ.), **ਆਧੁਨਿਕ ਪ੍ਰਵਿਰਤੀਆਂ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●5.
9. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਨਾਵਲ: ਸਰਵੇਖਣ ਤੇ ਮੁਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਕਰਮਜੀਤ ਸਿੰਘ ਤੇ ਟੀ. ਆਰ. ਵਿਨੋਦ (ਸੰਪਾ.), **ਗੁਰਦਿਆਲ ਸਿੰਘ ਅਭਿਨੰਦਨ ਗ੍ਰੰਥ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
11. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ (ਸੰਪਾ.), **ਨਾਵਲ ਦੀ ਵਿਧਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
12. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ, **ਪ੍ਰਗਤੀਵਾਦ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 1986
13. ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਿਵੇਸ਼ਵਰ (ਸੰਪਾ.) **ਨਾਵਲ ਸ਼ਾਸਤਰ ਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਯੂਨੀਸਟਾਰ ਬੁੱਕਸ, ਚੰਡੀਗੜ੍ਹ, 2●●2
14. ਗੁਰਪਾਲ ਸਿੰਘ ਸੰਧੂ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਚਿਹਨ-ਵਿਗਿਆਨਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
15. ਤ੍ਰਿਲੋਕ ਸਿੰਘ ਕੰਵਰ, (ਸੰਪਾ.) **ਸ਼ੋਧ-ਪ੍ਰਬੋਧ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
16. ਹਰਦਰਸ਼ਨ ਸਿੰਘ, **ਪੰਜਾਬੀ ਨਾਵਲ ਵਿਚ ਨਾਇਕ ਦਾ ਵਿਗਠਨ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੋਸਾਇਟੀ, ਲੁਧਿਆਣਾ, 1987.
17. ਕਰਮਜੀਤ ਸਿੰਘ (ਸੰਪਾ.), **ਨਾਵਲਕਾਰ ਸੋਹਨ ਸਿੰਘ ਸੀਤਲ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਜਜ਼, ਦਿੱਲੀ, 1973.
18. ਬਲਕਾਰ ਸਿੰਘ, **ਸੋਹਨ ਸਿੰਘ ਦੇ ਨਾਵਲਾਂ ਦਾ ਨਾਵਲੀ ਅਵਚੇਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਲ, ਚੰਡੀਗੜ੍ਹ, 2●●6
19. ਡਾ. ਨਰੇਂਦਰ ਮੋਹਨ (ਸੰਪਾ.), **ਆਧੁਨਿਕ ਹਿੰਦੀ ਉਪਨਿਆਸ**, ਮੈਕਮਿਲਨ ਕੰਪਨੀ, ਨਵੀਂ ਦਿੱਲੀ, 1975
20. ਡਾ. ਨਾਮਵਰ ਸਿੰਘ, **ਪ੍ਰੇਮਚੰਦ ਔਰ ਭਾਰਤੀ ਸਮਾਜ**, ਰਾਜਕਮਲ ਪ੍ਰਕਾਸ਼ਲ, ਨਵੀਂ ਦਿੱਲੀ, 2●●9

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਪਹਿਲਾ

ਪਰਚਾ ਚੌਥਾ: ਆਪਸ਼ਨ (ii) – <u>ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਕਹਾਣੀ: ਬਿਰਤਾਂਤ ਤੇ ਬਿਰਤਾਂਤਕਾਰੀ, ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
2. ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਕਹਾਣੀਕਾਰਾਂ ਦਾ ਅਧਿਐਨ 15× 3= 45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, '**ਸਮਾਚਾਰ**', ਲਾਹੌਰ ਬੁਕ ਸ਼ਾਪ, ਲਧਿਆਣਾ।
2. ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ, '**ਦੁਆਦਸ਼ੀ**', ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1987
3. ਵਰਿਆਮ ਸੰਧੂ, '**ਚੌਥੀ ਕੂਟ**', ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ

ਸੁਝਾਈਆਂ ਪੁਸਤਕਾਂ

1. ਧਰਮਪਾਲ ਸਿੰਗਲ, ਗੁਰਲਾਲ ਸਿੰਘ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ: ਨਵੀਨ ਪ੍ਰਵਿਰਤੀਆਂ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਗੁਰਬਖਸ਼ ਸਿਘ ਫਰੈਂਕ, **ਨਿੱਕੀ ਕਹਾਣੀ ਅਤੇ ਪੰਜਾਬੀ ਨਿੱਕੀ ਕਹਾਣੀ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਅਧਿਐਨ**, ਲੋਕ ਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
4. ਜੋਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ, **ਕਹਾਣੀ ਦੀ ਵਿਧਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●6
5. ਧਨਵੰਤ ਕੌਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਬਿਰਤਾਂਤ-ਸ਼ਾਸਤਰੀ ਅਧਿਐਨ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਹਰਿਭਜਨ ਸਿੰਘ, **ਖਾਮੋਸ਼ੀ ਦਾ ਜਜ਼ੀਰਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਿਆਰ ਤੇ ਪਰਿਵਾਰ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
8. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
9. ਬਿਕਰਮ ਸਿੰਘ ਘੁੰਮਣ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ ਸਿਧਾਂਤ, ਸਰੂਪ ਤੇ ਵਿਕਾਸ**, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਸਵਿੰਦਰ ਸਿੰਘ ਉੱਪਲ, **ਪੰਜਾਬੀ ਕਹਾਣੀ : ਸਿਧਾਂਤ, ਸਰੂਪ ਤੇ ਵਿਕਾਸ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
11. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ: ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
12. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ, **'ਵਰਿਆਮ ਸੰਧੂ ਦੀ ਕਹਾਣੀ: ਸਰੂਪ ਤੇ ਵਿਵੇਕ'**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●7
13. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ, **ਵਿਸ਼ਵੀਕਰਨ ਅਤੇ ਪੰਜਾਬੀ ਕਹਾਣੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●7
14. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਸਫ਼ਰ ਤੇ ਸ਼ਾਸਤ੍ਰ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।
15. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀਆਂ ਕਹਾਣੀਆਂ ਵਿਚ ਕਪਾਲ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਪੰਜਵਾਂ – <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ</u>

ਕੁਲ ਅੰਕ : 1●●

ਲਿਖਤੀ : 8●

ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਸੰਕ੍ਰਾਂਤੀ ਕਾਲ (185● ਈ. ਤੋਂ 19●● ਈ. ਤਕ) ਦਾ ਸਮੁੱਚਾ ਸਾਹਿਤ ਅਤੇ ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦਾ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ — 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦੇ ਪੰਜਾਬੀ ਗਲਪ, ਨਾਟਕ ਦਾ ਵਿਕਾਸ — 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ – ਸੰਕ੍ਰਾਂਤੀ ਕਾਲ (185● ਈ. ਤੋਂ 19●● ਈ. ਤਕ) ਦਾ ਸਮੁੱਚਾ ਸਾਹਿਤ ਅਤੇ ਵੀਹਵੀਂ ਸਦੀ (19●1-2●●●) ਦਾ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ** — 3● ਅੰਕ
   - (i) ਪੰਜਾਬੀ ਸਾਹਿਤ ਵਿਚ ਆਧੁਨਿਕਤਾ ਦਾ ਆਰੰਭ ਤੇ ਵਿਕਾਸ; ਮੱਧਕਾਲੀ ਤੇ ਆਧੁਨਿਕ ਬੋਧ ਵਿਚ ਅੰਤਰ; ਸੰਕ੍ਰਾਂਤੀ ਕਾਲ ਦੇ ਲੱਛਣ; ਧਾਰਮਕ ਪੁਨਰਜਾਗਰਤੀ ਦੀਆਂ ਲਹਿਰਾਂ ਦਾ ਸਾਹਿਤ; ਈਸਾਈ ਮਿਸ਼ਨਰੀਆਂ ਦੀ ਦੇਣ; ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਰੂਪਾਂ ਦਾ ਜਨਮ ਤੇ ਵਿਕਾਸ
   - (ii) 185● ਈ. ਤੋਂ 19●● ਈ. ਤਕ ਰਚਿਆ ਗਿਆ ਸਾਹਿਤ (ਕਿੱਸਾ ਕਾਵਿ; ਸੂਫ਼ੀ ਕਾਵਿ; ਵਾਰਾਂ ਤੇ ਜੰਗਨਾਮੇ ਆਦਿ)
   - (iii) ਵੀਹਵੀਂ ਸਦੀ ਦੀ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਇਤਿਹਾਸਮੂਲਕ ਅਤੇ ਪ੍ਰਵਿਰਤੀਮੂਲਕ ਅਧਿਐਨ (ਨਵ ਰਹੱਸਵਾਦੀ, ਰੁਮਾਂਟਿਕ, ਪ੍ਰਗਤੀਵਾਦੀ, ਪ੍ਰਯੋਗਵਾਦੀ, ਜੁਝਾਰਵਾਦੀ ਅਤੇ ਉੱਤਰ ਜੁਝਾਰਵਾਦੀ ਕਾਵਿ-ਧਾਰਾਵਾਂ ਦੇ ਹਵਾਲੇ ਨਾਲ)
2. **ਭਾਗ ਦੂਜਾ – ਵੀਹਵੀਂ ਸਦੀ ਦੇ ਪੰਜਾਬੀ ਗਲਪ, ਨਾਟਕ ਅਤੇ ਵਾਰਤਕ ਰੂਪਾਂ ਦਾ ਵਿਕਾਸ** — 3● ਅੰਕ
   - (i) ਪੰਜਾਬੀ ਗਲਪ (ਨਾਵਲ ਤੇ ਕਹਾਣੀ) ਦੀਆਂ ਪ੍ਰਮੁਖ ਪ੍ਰਵਿਰਤੀਆਂ ਅਤੇ ਵਿਕਾਸ ਪੜਾਅ
   - (ii) ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦੀਆਂ ਪ੍ਰਮੁਖ ਪ੍ਰਵਿਰਤੀਆਂ
   - (iii) ਪੰਜਾਬੀ ਵਾਰਤਕ ਰੂਪਾਂ (ਨਿਬੰਧ, ਜੀਵਨੀ, ਸਵੈ-ਜੀਵਨੀ, ਸਫਰਨਾਮਾ ਤੇ ਰੇਖਾ ਚਿੱਤਰ) ਦਾ ਇਤਿਹਾਸਮੂਲਕ ਅਧਿਐਨ
3. **ਭਾਗ ਤੀਜਾ – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** — 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ ਚਿੰਤਨ – (I ਅਤੇ II)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
2. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਨਾਟ ਚਿੰਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਆਲੋਚਨਾਤਮਕ ਇਤਿਹਾਸ,** ਪੈਪਸੂ ਬੁੱਕ ਡੀਪੂ, ਪਟਿਆਲਾ
4. ਪਰਮਿੰਦਰ ਸਿੰਘ, ਕਿਰਪਾਲ ਸਿੰਘ ਕਸੇਲ ਅਤੇ ਗੋਬਿੰਦ ਸਿੰਘ ਲਾਂਬਾ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਉਤਪਤੀ ਤੇ ਵਿਕਾਸ,** ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ
5. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ ਤੇ ਦੂਜਾ), ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ
6. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਜਿਲਦ ਦੂਜੀ ਤੋਂ ਚੌਦਵੀਂ ਤੱਕ) ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ
7. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ** (ਭਾਗ ਪਹਿਲਾ, ਦੂਜਾ ਤੇ ਤੀਜਾ) ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
8. **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਜਿਲਦ 1, 3, 3),** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
9. ਪ੍ਰੀਤਮ ਸਿੰਘ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੀ ਇਤਿਹਾਸਕਾਰੀ**, ਕੌਂਦਰੀ ਪੰਜਾਬੀ ਲੇਖਕ ਸਭਾ, ਪੰਜਾਬ
10. ਯੋਗਰਾਜ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾਵਾਂ ਦਾ ਸੁਹਜ ਸ਼ਾਸਤਰ,** ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ
11. ਵਣਜਾਰਾ ਬੇਦੀ, **ਪੰਜਾਬੀ ਸਾਹਿਤ ਇਤਿਹਾਸ ਦੀਆਂ ਲੋਕ-ਰੂੜ੍ਹੀਆਂ**, ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਨਵੀਂ ਦਿੱਲੀ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜੇ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਛੇਵਾਂ – <u>ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ –ਸ਼ਾਸਤਰ ਅਤੇ ਵਿਹਾਰਕ ਅਲੋਚਨਾ</u>

ਕੁਲ ਅੰਕ : 1●●

ਲਿਖਤੀ : 8●

ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ –ਸ਼ਾਸਤਰ 15×3=45 ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਵਿਹਾਰਕ ਆਲੋਚਨਾ 15 ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ – ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ–ਸ਼ਾਸਤਰ** 45 ਅੰਕ
   - (i) ਰੂਪਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ
     - (ੳ) ਰੂਸੀ ਰੂਪਵਾਦ : ਮੂਲ ਸੰਕਲਪ
     - (ਅ) ਨਵ–ਅਮਰੀਕੀ ਸਕੂਲ: ਮੂਲ ਸੰਕਲਪ
   - (ii) ਸੰਰਚਨਾਵਾਦ ਅਤੇ ਉੱਤਰ–ਸੰਰਚਨਾਵਾਦ
     - (ੳ) ਸੰਰਚਨਾਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ: ਸੋਸਿਊਰ: ਭਾਸ਼ਕ ਮਾਡਲ; ਰੋਲਾਂ ਬਾਰਤ: ਬਿਰਤਾਂਤ ਸਿਧਾਂਤ
     - (ਅ) ਉੱਤਰ–ਸੰਰਚਨਾਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ: ਮੂਲ ਸੰਕਲਪ
   - (iii) **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ**
     ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਸਿਧਾਂਤ ਦੇ ਮੁੱਖ ਸੰਕਲਪ: ਵਿਚਾਰਧਾਰਾ, ਵਸਤੂ ਤੇ ਰੂਪ, ਪ੍ਰਤੀਬਧਤਾ; ਨਵ–ਮਾਰਕਸਵਾਦ ਦੇ ਮੂਲ ਲੱਛਣ ,
2. **ਭਾਗ ਦੂਜਾ – ਵਿਹਾਰਕ ਆਲੋਚਨਾ** 15 ਅੰਕ
   (ੳ) ਮੱਧਕਾਲੀ ਕਾਵਿ ਵਿਚੋਂ ਇਕ ਕਵਿਤਾ
   (ਅ) ਆਧੁਨਿਕ ਕਾਵਿ ਵਿਚੋਂ ਇਕ ਕਵਿਤਾ
   } ਦੋ ਵਿੱਚੋਂ ਇੱਕ
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਅਤਰ ਸਿੰਘ, **ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
3. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਸਾਹਿਤਿਆਰਥ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਸਤਿੰਦਰ ਸਿੰਘ, **ਵਿਹਾਰਕ ਸਮੀਖਿਆ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
5. ਸੁਰਜੀਤ ਸਿੰਘ ਭੱਟੀ, **ਮਾਰਕਸਵਾਦੀ ਪੰਜਾਬੀ ਆਲੋਚਨਾ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
6. ਸੁਰਜੀਤ ਸਿੰਘ ਭੱਟੀ, **ਵਾਦ ਚਿੰਤਨ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
7. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ., **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਕਾਵਿ–ਸ਼ਾਸਤਰ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1997
8. ਸੁਖਦੇਵ ਸਿੰਘ, ਡਾ. (ਸੰਪਾ), **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਚਿੰਤਨ: ਸਮਕਾਲੀ ਸਰੋਕਾਰ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ, 2●●3
9. ਹਰਿਭਜਨ ਸਿੰਘ, **ਸਾਹਿਤ ਵਿਗਿਆਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਾਰਗਾਮੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
11. ਹਰਿਭਜਨ ਸਿੰਘ, **ਰੂਪਕੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
12. ਹਰਿਭਜਨ ਸਿੰਘ, **ਰਚਨਾ ਸੰਰਚਨਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
13. ਗੋਪੀ ਚੰਦ ਨਾਰੰਗ, **ਸੰਰਚਨਾਵਾਦ, ਉੱਤਰ–ਸੰਰਚਨਾਵਾਦ ਅਤੇ ਪੂਰਬੀ ਕਾਵਿ ਸ਼ਾਸਤਰ**, ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
14. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ–ਪਾਠ,** ਸ਼ਬਦ ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
15. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੱਚ ਸਦਾ ਅਬਾਦੀ ਕਰਨਾ**, ਸਾਹਿਤ ਕਲਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
16. ਨਾਹਰ ਸਿੰਘ, **ਮਾਰਕਸੀ ਰੂਪ ਚਿੰਤਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹੰਦ।
17. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਸਾਹਿਤ ਦੀ ਸਮਝ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
18. ਰਵਿੰਦਰ ਸਿੰਘ ਰਵੀ, **ਅਮਰੀਕਾ ਦੀ ਨਵੀਨ ਆਲੋਚਨਾ ਪ੍ਰਣਾਲੀ**, ਸੇਧ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ।
19. ਡਾ. ਯੋਗਰਾਜ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ–ਧਾਰਾਵਾਂ ਦਾ ਸੁਹਜ–ਸ਼ਾਸਤਰ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
20. ਡਾ. ਯੋਗਰਾਜ ਪਟਿਆਲਾ, **ਚੇਤਨਾ ਦਾ ਉਕਾਬ : ਭਰਥਰੀ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
21. ਰਾਜਿੰਦਰਪਾਲ ਸਿੰਘ ਬਰਾੜ, **ਉੱਤਰ ਆਧੁਨਿਕਤਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
22. Jon Simons (ed.), **Contemporary Critical Theorists**, Edinburg University Press
23. David Lodge, **Twentieth Century Criticism,** Orient Longman
24. David Lodge and Nigel Wood, **Modern Criticism and Theory,** Pearson
25. ਮਨਮੋਹਨ, **ਮਿਸ਼ੈਲ ਫੂਕੋ,** ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
26. ਗੁਰਭਗਤ ਸਿੰਘ, **ਦੈਰਿਦਾ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
27. ਤਸਕੀਨ, **ਰੋਲਾਂਬਾਰਥ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ।
28. ਟੈਰੀ ਈਗਲਟਨ, **ਮਾਰਕਸਵਾਦੀ ਸਾਹਿਤ ਆਲੋਚਨਾ**,

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁੱਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਹੋਣਗੇ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਵਿਦਿਆਰਥੀ ਨੇ ਕੋਈ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਦੂਜੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਵਿਹਾਰਕ ਆਲੋਚਨਾ ਵਾਲੇ ਭਾਗ ਦੇ ਤਿੰਨਾਂ ਖੰਡਾਂ ਵਿਚੋਂ ਸਿਰਫ਼ ਦੋ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਵਿਦਿਅਰਥੀ ਨੇ ਕੋਈ ਇਕ ਸਵਾਲ ਕਰਨਾ ਹੋਵੇਗਾ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ–ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਸੱਤਵਾਂ: ਆਪਸ਼ਨ (i) – ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ-II

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ 15 ਅੰਕ
(ਮੱਧਕਾਲੀ ਕਾਵਿ-ਚੇਤਨਾ, ਮੱਧਕਾਲੀ ਪ੍ਰਗੀਤਕ ਅਤੇ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ ਦੇ ਪ੍ਰਮੁੱਖ ਲੱਛਣ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ)
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਕਵੀ: ਗੁਰੂ ਅਰਜਨ ਦੇਵ, ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ, ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰੂ ਅਰਜਨ: **ਸੁਖਮਨੀ**
2. ਬੁੱਲੇ ਸ਼ਾਹ: **ਕਾਫੀਆਂ**
3. ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ: **ਚੰਡੀ ਦੀ ਵਾਰ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
2. ਅਤਰ ਸਿੰਘ, **ਸਮਦਰਸ਼ਨ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਕਾਵਿ ਸ਼ਿਰੋਮਣੀ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਅਤੇ ਅਧਿਆਪਨ,** ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
5. ਕੁਲਜੀਤ ਸ਼ੈਲੀ, **ਸੂਫੀ ਕਾਵਿ ਦਾ ਬਿੰਬ ਵਿਵੇਕ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
6. ਜਗਜੀਤ ਸਿੰਘ, **ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾ ਨ, ਮੋਹਾਲੀ-ਚੰਡੀਗੜ੍ਹ, 2●18
7. ---------- (ਸੰਪਾ.) **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਾਵਿ ਪ੍ਰਵਚਨ**, ਬਲਵੰਤ ਪ੍ਰਕਾਸ਼ਨ, ਜਲੰਧਰ।
8. ਰਾਮ ਸਿੰਘ, **ਸੁਖਮਨੀ ਸਰਬਪੱਖੀ ਅਧਿਐਨ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।
9. ਹਰਿਭਜਨ ਸਿੰਘ, **ਮੁੱਲ ਤੇ ਮੁੱਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਲਾਜਵੰਤੀ ਰਾਮ ਕ੍ਰਿਸ਼ਨ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਵੀ** (ਅਨੁਵਾਦ) ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
11. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੇਧਾਂ ਸਾਰਾਂ ਤੇ ਹੋਰ ਲੇਖ**, ਜਸਵੰਤ ਪ੍ਰਿੰਟਰਜ਼, ਲੁਧਿਆਣਾ।
12. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀ., ਪਟਿਆਲਾ।
13. ਡਾ. ਜਗਤਾਰ, **ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ: ਜੀਵਨ ਅਤੇ ਰਚਨਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
14. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿੱਲੋਂ, **ਬੁੱਲ੍ਹੇ ਸ਼ਾਹ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਨੈਸ਼ਨਲ ਬੁੱਕ ਟਰਸਟ ਇੰਡੀਆ, ਦਿੱਲੀ।
15. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਭਾਰਤੀ ਸੂਫ਼ੀ ਪਰੰਪਰਾ ਤੇ ਸਾਹਿਤ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਡਮੀ, ਲੁਧਿਆਣਾ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਸੱਤਵਾਂ : ਆਪਸ਼ਨ (ii) – ਸੂਫੀ, ਕਿੱਸਾ ਅਤੇ ਬੀਰ ਕਾਵਿ

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਾਪਤੀਆਂ 15 ਅੰਕ
(ਮੱਧਕਾਲੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ; ਮੱਧਕਾਲੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ ਦੇ ਲੱਛਣ; ਕਿੱਸਾ ਕਾਵਿ ਅਤੇ ਵਾਰ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ)
2. ਮੱਧਕਾਲ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਕਵੀ 15×3=45 ਅੰਕ
(ਇਕ ਸੂਫ਼ੀ ਕਵੀ, ਇਕ ਕਿੱਸਾਕਾਰ ਅਤੇ ਇਕ ਜੰਗਨਾਮਾਕਾਰ)
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਸੁਲਤਾਨ ਬਾਹੂ: **ਸੀ-ਹਰਫ਼ੀਆਂ**
2. ਵਾਰਿਸ ਸ਼ਾਹ : **ਕਿੱਸਾ ਹੀਰ-ਰਾਂਝਾ**
3. ਸ਼ਾਹ ਮੁਹੰਮਦ : **ਜੰਗ ਸਿੰਘਾਂ ਤੇ ਫਰੰਗੀਆਂ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਹਰਿਭਜਨ ਸਿੰਘ ਡਾ., **ਕਿੱਸਾ**, ਪੰਜਾਬ ਨੈਸ਼ਨਲ ਬੁੱਕ ਟ੍ਰਸਟ, ਦਿੱਲੀ।
2. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਹੀਰ ਵਾਰਿਸ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ
3. ਅਤਰ ਸਿੰਘ, **ਸਾਹਿਤ ਸੰਵੇਦਨਾ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
5. ਸੀਤਾ ਰਾਮ ਕੋਹਲੀ, **ਵਾਰ ਸ਼ਾਹ ਮੁਹੰਮਦ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਲੁਧਿਆਣਾ
6. **ਸ਼ਾਹ ਮੁਹੰਮਦ : ਇਕ ਸਰਵੇਖਣ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. **ਖੋਜ ਪਤ੍ਰਿਕਾ**, ਕਿੱਸਾ ਕਾਵਿ ਅੰਕ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ-ਪਾਠ**, ਸ਼ਬਦਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
9. **ਪੰਜਾਬੀ ਬੀਰ ਸਾਹਿਤ**, ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ।
10. **ਵਾਰਿਸ ਸ਼ਾਹ : ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ।
11. Robert Scholes, **The Naturte of Narrative,** Oxford University Press,
12. ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, **ਸੋਧਾਂ ਤੇ ਸਾਰਾਂ**, ਜਸਵੰਤ ਪ੍ਰਿੰਟਰਜ਼, ਲੁਧਿਆਣਾ.
13. ਦੇਵਿੰਦਰ (ਸੰਪਾ.), **ਚੰਬੇ ਦੀ ਬੂਟੀ**, ਸਾਹਿਤ ਅਕਾਦੇਮੀ, ਦਿੱਲੀ
14. ਹਰਜਿੰਦਰ ਸਿੰਘ ਢਿੱਲੋਂ, **ਸੁਲਤਾਨ ਬਾਹੂ ਚਿੰਤਨ, ਕਲਾ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੁਸਾਇਟੀ, ਲੁਧਿਆਣਾ।
15. ਲਾਜਵੰਤੀ ਰਾਮ ਕ੍ਰਿਸ਼ਨ, **ਪੰਜਾਬੀ ਸੂਫ਼ੀ ਕਵੀ** (ਅਨੁਵਾਦ) ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
16. ਹਿਰਦੇਜੀਤ ਸਿੰਘ ਭੋਗਲ, **ਸੂਫ਼ੀ ਲੋਕ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
17. ਡਾ. ਦੀਵਾਨ ਸਿੰਘ, **ਸੂਫ਼ੀਵਾਦ ਤੇ ਹੋਰ ਲੇਖ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
18. ਅਜਮੇਰ ਕਵੈਂਟਰੀ, **ਕਿੱਸਾ ਹੀਰ ਵਾਰਸ ਸ਼ਾਹ**, (ਲਿੱਪੀ ਅੰਤਰ) ਪੰਜਾਬੀ ਸੱਥ, ਲਾਂਬੜਾਂ, ਜਲੰਧਰ।
19. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ (ਸੰਪਾ.) **ਹੀਰ ਵਾਰਿਸ: ਜਗਤ ਤੇ ਜੁਗਤ**, ਸਾਹਿਤ ਅਕਾਦੇਮੀ, ਦਿੱਲੀ।
20. ਗੁਰਦੇਵ ਸਿੰਘ, **ਜੰਗਨਾਮਾ: ਸਰੂਪ, ਸਿਧਾਂਤ ਤੇ ਵਿਕਾਸ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
21. ਗੁਰਤੇਜ ਸਿੰਘ, **ਸਾਂਝੇ ਪੰਜਾਬ ਦਾ ਦਰਦ**, ਸਿੰਘ ਬ੍ਰਦਰਜ਼, ਅੰਮ੍ਰਿਤਸਰ
22. ਭੀਮ ਇੰਦਰ ਸਿੰਘ, **ਸ਼ਾਹ ਮੁਹੰਮਦ ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
23. ਸੁਲੱਖਣ ਸਰਹੱਦੀ, **ਸੁਲਤਾਨ ਬਾਹੂ ਦਾ ਅਸਲ ਕਲਾਮ, ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
24. ਡਾ. ਜਸਪਾਲ ਕੌਰ ਕਾਂਗ, **ਕਿੱਸਾ ਸੰਵਾਦ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
25. ਡਾ. ਅਮਰਜੀਤ ਸਿੰਘ ਕਾਂਗ, **ਕਿੱਸਾ ਪਰਿਪੇਖ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ :

ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (i) – <u>ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1.	ਬਿਰਤਾਂਤ ਤੇ ਬਿਰਤਾਂਤਕਾਰੀ; ਪੰਜਾਬੀ ਨਾਵਲ: ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ	15 ਅੰਕ
2.	ਪੰਜਾਬੀ ਦੇ ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਨਾਵਲਕਾਰ (196● ਤੋਂ ਬਾਅਦ)	15×3=45 ਅੰਕ
3.	ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ	2● ਅੰਕ

ਕੋਰਸ

1. ਗੁਰਦਿਆਲ ਸਿੰਘ, **ਅੱਧ ਚਾਨਣੀ ਰਾਤ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ
2. ਕਰਮਜੀਤ ਸਿੰਘ ਕੁੱਸਾ, **ਰਾਤ ਦੇ ਰਾਹੀ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1987
3. ਮਿੱਤਰਸੈਨ ਮੀਤ, **ਕੌਰਵ ਸਭਾ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●2

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਨਾਵਲ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਸਮਾਂ ਤੇ ਸੰਵਾਦ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਮਸਲੇ ਗਲਪ ਦੇ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ।
4. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜ ਪੰਜਾਬੀ ਨਾਵਲ : ਇਕ ਮੁਲਾਂਕਣ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
6. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਸਾਂਸਕ੍ਰਿਤਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
7. ਪ੍ਰੋ. ਕਿਸ਼ਨ ਸਿੰਘ, **ਗੁਰਦਿਆਲ ਸਿੰਘ ਦੇ ਨਾਵਲਾਂ ਦੀ ਗਲਪ-ਚੇਤਨਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਨਰਿੰਜਨ ਤਸਨੀਮ (ਸੰਪਾ.), **ਆਧੁਨਿਕ ਪ੍ਰਵਿਰਤੀਆਂ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 2●●5.
9. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਨਾਵਲ: ਸਰਵੇਖਣ ਤੇ ਮੁਲਾਂਕਣ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
10. ਕਰਮਜੀਤ ਸਿੰਘ ਤੇ ਟੀ. ਆਰ. ਵਿਨੋਦ (ਸੰਪਾ.), **ਗੁਰਦਿਆਲ ਸਿੰਘ ਅਭਿਨੰਦਨ ਗ੍ਰੰਥ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
11. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ (ਸੰਪਾ.), **ਬਿਰਤਾਂਤਕ ਗਲਪ: ਆਧੁਨਿਕ ਦ੍ਰਿਸ਼ਟੀ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
12. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਰੂ, **ਪ੍ਰਗਤੀਵਾਦ ਅਤੇ ਪੰਜਾਬੀ ਨਾਵਲ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 1986
13. ਨਰਵਿੰਦਰ ਸਿੰਘ, **ਗੁਰਦਿਆਲ ਸਿੰਘ ਦਾ ਗਲਪ-ਪੈਰਾਡਾਈਮ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।

14. ਗੁਰਪਾਲ ਸਿੰਘ ਸੰਧੂ, **ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਚਿਹਨ-ਵਿਗਿਆਨਕ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
15. ਤ੍ਰਿਲੋਕ ਸਿੰਘ ਕੰਵਰ, (ਸੰਪਾ.) **ਸ਼ੋਧ-ਪ੍ਰਬੋਧ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
16. ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ (ਸੰਪਾ.), **ਸਮਾਜ, ਸੱਤਾ ਤੇ ਸਮਕਾਲੀ ਨਾਵਲ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●2
17. ਹਰਦਰਸ਼ਨ ਸਿੰਘ, **ਪੰਜਾਬੀ ਨਾਵਲ ਵਿਚ ਨਾਇਕ ਦਾ ਵਿਗਠਨ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੋਸਾਇਟੀ, ਲੁਧਿਆਣਾ, 1987.
18. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ (ਸੰਪਾ.), **ਕਰਮਜੀਤ ਸਿੰਘ ਕੁੱਸਾ ਦੇ ਨਾਵਲ: ਬਿਰਤਾਂਤ ਚੇਤਨਾ ਦੇ ਆਧਾਰ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ, 1999
19. ਐਸ. ਤਰਸੇਮ ਤੇ ਰਵੀ ਰਵਿੰਦਰ, **ਨਾਵਲਕਾਰ ਮਿੱਤਰਸੈਨ ਮੀਤ-ਸੰਵਾਦ ਦਰ ਸੰਵਾਦ**, ਮਾਤਾ ਭਾਗਵੰਤੀ ਸੇਵਾ ਟਰਸਟ, ਮਲੇਰਕੋਟਲਾ
20. ਅਮਰਜੀਤ ਸਿੰਘ ਗਰੇਵਾਲ, **ਪ੍ਰਸੰਗ ਕੌਰਵ ਸਭਾ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●6
21. ਪਰਮਜੀਤ ਸਿੰਘ ਢੀਂਗਰਾ, **ਨਾਵਲੀ ਭਾਸ਼ਾ: ਸੰਚਾਰ ਤੇ ਵਿਹਾਰ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।

ਲਾਜ਼ਮੀ ਪ੍ਰਸ਼ਨ ਲਈ ਮਾਡਲ ਪ੍ਰਸ਼ਨ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਦੂਜਾ

ਪਰਚਾ ਅੱਠਵਾਂ : ਆਪਸ਼ਨ (ii) – <u>ਪੰਜਾਬੀ ਅਤੇ ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ: 2●

ਪਾਠਕ੍ਰਮ

1.	ਕਹਾਣੀ: ਬਿਰਤਾਂਤ ਅਤੇ ਬਿਰਤਾਂਤਕਾਰੀ, ਕਹਾਣੀ: ਸਿਧਾਂਤ, ਪੰਜਾਬੀ ਅਤੇ ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਇਤਿਹਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ	ਪੰਜਾਬੀ	15 ਅੰਕ
2.	ਦੋ ਪੰਜਾਬੀ ਅਤੇ ਇਕ ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀਕਾਰਾਂ ਦੇ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ		15×3=45 ਅੰਕ
3.	ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ		2● ਅੰਕ

ਕੋਰਸ

1. ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ, **ਮੇਰੀਆਂ ਸ਼੍ਰੇਸ਼ਟ ਕਹਾਣੀਆਂ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
2. ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼, **ਮੁਕਤੀ**, ਲੋਕਾਇਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
3. ਜਰਨੈਲ ਸਿੰਘ, **ਟਾਵਰਜ਼**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਧਰਮਪਾਲ ਸਿੰਗਲ, ਗੁਰਲਾਲ ਸਿੰਘ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ: ਨਵੀਨ ਪ੍ਰਵਿਰਤੀਆਂ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਗੁਰਬਖਸ਼ ਸਿਘ ਫਰੈਂਕ, **ਨਿੱਕੀ ਕਹਾਣੀ ਅਤੇ ਪੰਜਾਬੀ ਨਿੱਕੀ ਕਹਾਣੀ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਅਧਿਐਨ**, ਲੋਕ ਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
4. ਜੋਗਿੰਦਰ ਸਿੰਘ ਨਿਰਾਲਾ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਵਿਚ ਤਣਾਓ: ਸੀਮਾਂ ਤੇ ਸੰਭਾਵਨਾ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
5. ਧਨਵੰਤ ਕੌਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਹਾਣੀ: ਬਿਰਤਾਂਤ-ਸ਼ਾਸਤਰੀ ਅਧਿਐਨ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਹਰਿਭਜਨ ਸਿੰਘ, **ਖਾਮੋਸ਼ੀ ਦਾ ਜਜ਼ੀਰਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
7. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਿਆਰ ਤੇ ਪਰਿਵਾਰ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
8. ਅਤਰ ਸਿੰਘ, **ਦ੍ਰਿਸ਼ਟੀਕੋਣ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
9. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀ ਕਥਾ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ
10. ਜੋਗਿੰਦਰ ਸਿੰਘ ਰਾਹੀ, **ਪੰਜਾਬੀ ਕਹਾਣੀ ਦਾ ਸਫ਼ਰ ਤੇ ਸ਼ਾਸਤਰ**, ਨਾਨਕ ਸਿੰਘ ਪੁਸਤਕਮਾਲਾ, ਅੰਮ੍ਰਿਤਸਰ
11. ਅਮਰਜੀਤ ਕੌਰ (ਸੰਪਾ.), **ਪੰਜਾਬੀ ਕਹਾਣੀ ਸਿਧਾਂਤ, ਸਰੂਪ ਤੇ ਵਿਕਾਸ**, ਵਾਰਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
12. ਬਲਦੇਵ ਸਿੰਘ ਧਾਲੀਵਾਲ, **ਵਿਸ਼ਵਕਰਨ ਅਤੇ ਪੰਜਾਬੀ ਕਹਾਣੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●7
13. ਡਾ. ਤੇਜਵੰਤ ਗਿੱਲ (ਸੰਪਾ.), **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀ ਕਥਾ ਦਾ ਅੰਤਰਬੋਧ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●3
14. ਡਾ. ਰਜਨੀਸ਼ ਬਹਾਦਰ ਸਿੰਘ (ਸੰਪਾ.), **ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਦੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਪਾਠਗਤ-ਵਿਸ਼ਲੇਸ਼ਣ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●●4
15. ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਡਾ. ਹਰਸਿਮਰਨ ਸਿੰਘ ਰੰਧਾਵਾ (ਸੰਪਾ.), '**ਟਾਵਰਜ਼: ਵਸਤੂ, ਵਿਧੀ ਅਤੇ ਦ੍ਰਿਸ਼ਟੀ**', ਐਮ.ਪੀ. ਪ੍ਰਕਾਸ਼ਨ, ਦਿੱਲੀ, 2●●6
16. ਹਰਚੰਦ ਸਿੰਘ ਬੇਦੀ, **ਪਾਠ ਤੇ ਪ੍ਰਸੰਗ: ਪਰਵਾਸੀ ਪੰਜਾਬੀ ਕਹਾਣੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 1998
17. ਹਰਚੰਦ ਸਿੰਘ ਬੇਦੀ, **ਪਰਵਾਸ ਤੇ ਪਰਵਾਸੀ ਸਾਹਿਤ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2●●5
18. ਹਰਚੰਦ ਸਿੰਘ ਬੇਦੀ, **ਪਰਵਾਸੀ ਸਾਹਿਤ ਦਾ ਸਭਿਆਚਾਰਕ ਪ੍ਰਸੰਗ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ, 2●●7
19. ਡਾ. ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਬਿਰਤਾਂਤ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●12
20. ਡਾ. ਅਮਰਜੀਤ ਕੌਰ (ਸੰਪਾ.), **ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ ਸਿਮਰਤੀ ਗ੍ਰੰਥ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀ., ਪਟਿਆਲਾ।
21. ਡਾ. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਗਲਪ ਚਿੰਤਨ**, (ਸੰਪਾ.) ਡਾ. ਜਸਬੀਰ ਕੇਸਰ, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
22. ਸਵਰਨ ਚੰਦਨ, **ਸੰਵੇਦਨਾ ਤੇ ਸਾਹਿਤ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1987
23. ਜੁਗਿੰਦਰ ਸਿੰਘ ਨਹਿਰੂ, **ਕਨੇਡੀਅਨ ਪੰਜਾਬੀ ਸਾਹਿਤ**, ਲੋਕਾਇਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 1998
24. ਅਕਾਲ ਅੰਮ੍ਰਿਤ ਕੌਰ, **ਪੰਜਾਬੀ ਗਲਪ, ਪਰਵਾਸੀ ਸਭਿਆਚਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਪੰਜਾਬੀ

ਐਮ. ਏ. ਭਾਗ ਦੂਜਾ

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਨੌਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਭਾਸ਼ਾ ਅਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਧੁਨੀ ਵਿਗਿਆਨ ਅਤੇ ਰੂਪ ਵਿਗਿਆਨ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ – ਭਾਸ਼ਾ ਅਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ** 3● ਅੰਕ
   (i) ਸੰਰਚਨਾਤਮਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ : ਭਾਸ਼ਾ ਇਕ ਚਿਹਨ-ਪ੍ਰਣਾਲੀ ਦੇ ਰੂਪ ਵਿਚ; ਭਾਸ਼ਾ ਤੇ ਉਚਾਰ; ਚਿਹਨ, ਚਿਹਨਕ ਤੇ ਚਿਹਨਿਤ; ਵਿਨਿਆਸ ਮੂਲਕ ਅਤੇ ਸਹਿਚਾਰੀ ਸੰਬੰਧ; ਇਕਾਲਕਤਾ ਤੇ ਦੁਕਾਲਕਤਾ
   (ii) ਰੂਪਾਂਤਰੀ ਵਿਆਕਰਨ-ਭਾਸ਼ਾਈ ਸਮਰੱਥਾ ਅਤੇ ਨਿਭਾਉ, ਰੂਪਾਂਤਰਣ: ਗਹਿਨ ਸੰਰਚਨਾ ਅਤੇ ਸਤਹੀ ਸੰਰਚਨਾ
   (iii) ਪ੍ਰਕਾਰਜੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ – ਭਾਸ਼ਾ ਦਾ ਸੰਚਾਰ ਮਾਡਲ; ਭਾਸ਼ਾ, ਸਭਿਆਚਾਰ ਅਤੇ ਸਾਹਿਤ
2. **ਭਾਗ ਦੂਜਾ – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਧੁਨੀ ਵਿਗਿਆਨ ਅਤੇ ਰੂਪ ਵਿਗਿਆਨ** 3● ਅੰਕ
   (i) ਧੁਨੀ-ਵਿਗਿਆਨ (phonetics) : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਅਧਿਐਨ ਸੱਤਰ; ਧੁਨੀ ਉਚਾਰਨ, ਵਾਰਵਾਰਤਾ ਅਤੇ ਤੀਬਰਤਾ, ਪਿੱਚ; ਪੰਜਾਬੀ ਦੀਆਂ ਸਵਰ ਅਤੇ ਵਿਅੰਜਨ-ਧੁਨੀਆਂ ਦੀ ਉਚਾਰਨੀ ਸੰਰਚਨਾ;
   (ii) ਪੰਜਾਬੀ ਧੁਨੀ-ਵਿਉਂਤ (phonology) : ਧੁਨੀਗ੍ਰਾਮ ਦਾ ਸੰਕਲਪ; ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਧੁਨੀ-ਵਿਉਂਤ: ਖੰਡੀ ਧੁਨੀ ਗ੍ਰਾਮ; ਅਖੰਡੀ ਧੁਨੀ ਗ੍ਰਾਮ: ਸੁਰ-ਪ੍ਰਣਾਲੀ (tonal system), ਵਾਕ-ਸੁਰ (intonation), ਅਨੁਨਾਸਿਕਤਾ ਅਤੇ ਸੰਗਮ; ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਉਚਾਰ-ਖੰਡੀ (syllabic) ਸੰਰਚਨਾ
   (iii) ਪੰਜਾਬੀ ਰੂਪ-ਵਿਗਿਆਨ (morphology) : ਰੂਪਗ੍ਰਾਮ ਦਾ ਸੰਕਲਪ ਅਤੇ ਪਛਾਣ; ਪੰਜਾਬੀ ਸ਼ਬਦ-ਸ਼੍ਰੇਣੀਆਂ; ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ ਅਤੇ ਰੂਪਾਂਤਰ: ਅਗੇਤਰ ਤੇ ਪਿਛੇਤਰ, ਵਿਉਤਪਤੀ ਤੇ ਵਿਕਾਰ (derivation and inflection)
3. **ਭਾਗ ਤੀਜਾ** –ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਹਰਕੀਰਤ ਸਿੰਘ, **ਰੂਪਾਂਤਰੀ ਵਿਆਕਰਨ**, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ, ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
2. ਹਰਕੀਰਤ ਸਿੰਘ ਅਤੇ ਬਾਹਰੀ, **ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ** ਭਾਸ਼ਾ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
3. ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ (ਸੰਪਾ.), **ਭਾਸ਼ਾ ਵਿਗਿਆਨ: ਸੰਕਲਪ ਤੇ ਦਿਸ਼ਾਵਾਂ**, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ।
4. ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ, **ਸਿਧਾਂਤਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ,** ਮਦਾਨ ਪਬਲਿਸ਼ਰਜ਼, ਪਟਿਆਲਾ।
5. ਪਰਮਜੀਤ ਸਿੰਘ ਸਿੱਧੂ, **ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
6. ਪਰਮਜੀਤ ਸਿੰਘ ਢੀਂਗਰਾ, **ਭਾਸ਼ਾ: ਸਿਧਾਂਤ ਤੇ ਸਰੋਕਾਰ**, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
7. ਜਾਨ ਲਾਇਨਜ਼, **ਭਾਸ਼ਾ ਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਜੋਗਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ, ਗੁਰਮੁਖੀ ਲਿੱਪੀ: ਸੋਮੇ ਤੇ ਵਿਕਾਸ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
9. ਵੇਦ ਅਗਨੀਹੋਤਰੀ, **ਸ਼ਬਦ ਸਰੋਕਾਰ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।
10. Balbir Singh Sandhu, **A Descriptive Grammar of Puadhi**, **Parkh**, 1968, Vol. II, Panjab University, Chandigarh.
11. Balbir Singh Sandhu, **Articulatory and Acoustic Structure of Panjabi Consonants**, Punjabi University, Patiala.
12. Gill and Gleason, **A Refereence Grammar of Punjabi**, Punjabi University, Patiala
13. John Lyons, **Introduction to Theoretical Linguistics**, Cambridge University Press, Cambridge.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਦਸਵਾਂ : <u>ਸਭਿਆਚਾਰ, ਲੋਕਧਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਸਭਿਆਚਾਰ ਅਤੇ ਲੋਕਧਾਰਾ : ਸਿਧਾਂਤਕ ਪੱਖ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦਾ ਅਧਿਐਨ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ –ਸਭਿਆਚਾਰ ਅਤੇ ਲੋਕਧਾਰਾ : ਸਿਧਾਂਤਕ ਪੱਖ** 3● ਅੰਕ
   (i) ਸਭਿਆਚਾਰ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ; ਸਭਿਆਚਾਰ ਦੇ ਪ੍ਰਮੁੱਖ ਅੰਗ ਅਤੇ ਪੱਖ; ਸਭਿਆਚਾਰ–ਵਿਗਿਆਨ; ਸਭਿਆਚਾਰ–ਵਿਗਿਆਨ ਦੇ ਮੂਲ ਸੰਕਲਪ; ਸਭਿਆਚਾਰਕ ਪਰਿਵਰਤਨ ਦੇ ਆਧਾਰ ਅਤੇ ਨੇਮ
   (ii) ਲੋਕਧਾਰਾ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ; ਲੋਕਧਾਰਾ ਦੇ ਅੰਗ ਅਤੇ ਪੱਖ; ਲੋਕਧਾਰਾ ਵਿਗਿਆਨ; ਲੋਕਧਾਰਾ ਦੇ ਮੂਲ ਸੰਕਲਪ (ਲੋਕ ਮਨ, ਲੋਕ ਰੂੜ੍ਹੀ, ਲੋਕ ਸੰਸਕ੍ਰਿਤੀ, ਲੋਕ ਵਿਸ਼ਵਾਸ)
   (iii) ਸਭਿਆਚਾਰ ਅਤੇ ਸਾਹਿਤ; ਲੋਕਧਾਰਾ ਅਤੇ ਸਾਹਿਤ: ਅੰਤਰ ਸੰਬੰਧ
2. **ਭਾਗ ਦੂਜਾ – ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦਾ ਅਧਿਐਨ** 3● ਅੰਕ
   (i) ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦਾ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਪੜਾਅ; ਨਿੱਖੜਵੇਂ ਲੱਛਣ;
   (ii) ਵਿਸ਼ਵੀਕਰਣ ਦਾ ਵਰਤਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਦੀ ਸਥਿਤੀ; ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਨਵੇਂ ਬਦਲਾਵ ਅਤੇ ਨਵੀਆਂ ਵੰਗਾਰਾਂ
   (iii) ਪੰਜਾਬੀ ਪਰਿਵਾਰ ਦੀ ਬਣਤਰ; ਪੰਜਾਬੀ ਦੇ ਸਾਕ ਸਕੀਰੀ ਸਬੰਧ; ਸਭਿਆਚਾਰਕ ਮੁੱਲ ਵਿਧਾਨ; ਪਰੰਪਰਕ ਪੰਜਾਬੀ ਪਿੰਡ ਦੀ ਭੂਗੋਲਕ ਬਣਤਰ; ਪਰੰਪਰਕ ਪੰਜਾਬੀ ਪਿੰਡ ਦੀ ਸਭਿਆਚਾਰਕ ਬਣਤਰ; ਪਰੰਪਰਕ ਪੰਜਾਬੀ ਪਿੰਡ ਦੀਆਂ ਮੁੱਖ ਸੰਸਥਾਵਾਂ
3. **ਭਾਗ ਤੀਜਾ – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਗੁਰਬਖਸ਼ ਸਿੰਘ ਫਰੈਂਕ, **ਸਭਿਆਚਾਰ ਤੇ ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ — ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ**, ਪੰਜਾਬੀ ਰਾਈਟਰਜ਼ ਕੋਆਪਰੇਟਿਵ ਸੁਸਾਇਟੀ ਲਿਮਟਿਡ, ਲੁਧਿਆਣਾ।
2. ਟੀ. ਆਰ. ਵਿਨੋਦ, **ਸੰਸਕ੍ਰਿਤੀ: ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਨਾਹਰ ਸਿੰਘ, **ਮਾਂ ਸੁਹਾਗਣ ਸ਼ਗਨ ਕਰੇ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
4. ਨਾਹਰ ਸਿੰਘ, **ਬਾਗੀਂ ਚੰਬਾ ਖਿੜ ਰਿਹਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
5. ਵਣਜਾਰਾ ਬੇਦੀ, **ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਵਿਸ਼ਵ ਕੋਸ਼** (ਜਿਲਦ ਪਹਿਲੀ ਤੋਂ ਅੱਠਵੀਂ ਤੱਕ), ਨੈਸ਼ਨਲ ਬੁੱਕ ਸ਼ਾਪ, ਨਵੀਂ ਦਿੱਲੀ।
6. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, **ਪੰਜਾਬੀ ਮਿੱਥਕ ਕਥਾਵਾਂ ਦੀ ਚਿੰਨ੍ਹ ਜੁਗਤ**, ਪੈਪਸੂ ਬੁੱਕ ਡਿਪੂ, ਪਟਿਆਲਾ
7. ਮਨਜੀਤ ਸਿੰਘ, **ਪਿੰਡ ਵਿਉਂਤ ਤੇ ਸਭਿਆਚਾਰ,** ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
8. ਜਸਵਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਸਭਿਆਚਾਰ ਪਛਾਣ ਚਿੰਨ੍ਹ**, ਪੁਨੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਪਟਿਆਲਾ।
9. ਗਿਆਨੀ ਗੁਰਦਿਤ ਸਿੰਘ, **ਮੇਰਾ ਪਿੰਡ**, ਸਾਹਿਤ ਸਦਨ, ਚੰਡੀਗੜ੍ਹ

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ : (i) : <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ – I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਭਾਗ ਪਹਿਲਾ: ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਪ੍ਰਵਿਰਤੀਆਂ/ਕਾਵਿ-ਧਾਰਾਵਾਂ ਤੇ ਪ੍ਰਾਪਤੀਆਂ (ਆਧੁਨਿਕਤਾ ਅਤੇ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ, ਪ੍ਰਮੁੱਖ ਕਾਵਿ-ਧਾਰਾਵਾਂ ਅਤੇ ਪ੍ਰਮੁੱਖ ਰੁਪਾਕਰ) 3● ਅੰਕ
2. ਤਿੰਨ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀ (ਇਕ-ਇਕ ਕਾਵਿ-ਸੰਗ੍ਰਹਿ ਦੇ ਹਵਾਲੇ ਨਾਲ) 3● ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ***ਖੁੱਲ੍ਹੇ ਮੈਦਾਨ***, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ। 3● ਅੰਕ
2. ***ਮੇਰੀ ਚੋਣਵੀਂ ਕਵਿਤਾ***, ਮੋਹਨ ਸਿੰਘ, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ। 3● ਅੰਕ
3. ***ਸੁਗੰਧ ਸਮੀਰ***, ਬਾਵਾ ਬਲਵੰਤ, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਕਰਮਜੀਤ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾਵਾਂ ਦੇ ਵਿਚਾਰਧਾਰਾਈ ਆਧਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
2. ਸਤਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਾਵਿ-ਰੂਪ ਅਧਿਐਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
3. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ I ਅਤੇ II, ਜਸਬੀਰ ਕੇਸਰ (ਸੰਪਾ.)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਅਤਰ ਸਿੰਘ, **ਸਾਹਿਤ ਸੰਵੇਦਨਾ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
5. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, **ਮੋਹਨ ਸਿੰਘ ਦਾ ਕਾਵਿ-ਜਗਤ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਸਿਧਾਂਤਕ ਪਰਿਪੇਖ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ, ਦਿੱਲੀ।
7. ਰਵਿੰਦਰ ਸਿੰਘ ਰਵੀ, **ਵਿਰਸਾ ਤੇ ਵਰਤਮਾਨ**, ਪੰਜਾਬ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਅਤਰ ਸਿੰਘ, **ਕਾਵਿ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹੰਦ।
9. ਸੁਖਦੇਵ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਕਾਵਿ-ਸ਼ਾਸਤਰ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
10. ਯੋਗ ਰਾਜ, **ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਸੁਹਜ-ਸ਼ਾਸਤਰ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
11. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਸ਼ਾਇਰੀ ਸਮਕਾਲੀ ਸੰਦਰਭ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
12. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਕਵਿਤਾ : ਪ੍ਰਤੀਰੋਧ ਦੇ ਨਵ-ਸੰਦਰਭ**, ਸਪਤਰਿਸ਼ੀ ਪਬਲੀਕੇਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●18
13. ------- (ਸੰਪਾ.), **ਸੁਰਜੀਤ ਪਾਤਰ : ਪ੍ਰਤਿਭਾ ਸੰਗ ਸੰਵਾਦ**, ਪਬਲੀਕੇ ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ, 2●19
14. ਐਸ. ਤਰਸੇਮ, **ਬਾਵਾ ਬਲਵੰਤ ਕਾਵਿ ਮੁਲਾਂਕਣ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
15. ਕੁਲਵੀਰ ਸਿੰਘ ਕਾਂਗ, **ਬਾਵਾ ਬਲਵੰਤ ਦਾ ਕਾਵਿ ਸੰਸਾਰ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ, ਦਿੱਲੀ।
16. ਤਰਲੋਕ ਸਿੰਘ ਕੰਵਰ, **ਪਾਠ ਤੇ ਪ੍ਰਸੰਗ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ, ਦਿੱਲੀ।
17. ਹਰਿਭਜਨ ਸਿੰਘ, **ਅਧਿਅਨ ਤੇ ਅਧਿਆਪਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
18. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪੂਰਨ ਸਿੰਘ ਰਚਨਾ-ਵਿਰਚਨਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
19. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਸਰੋਕਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
20. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
21. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
22. ਸ. ਤਰਸੇਮ, **ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ ਦੀ ਸਮੀਖਿਆ ਤੇ ਸੰਕਲਪ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
23. ਬਲਜੀਤ ਕੌਰ, **ਵੀਹਵੀਂ ਸਦੀ ਦੀ ਪੰਜਾਬੀ ਕਵਿਤਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਗਿਆਰਵਾਂ : ਆਪਸ਼ਨ (ii) : <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਬਿਰਤਾਂਤਕ ਕਵਿਤਾ – I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਪ੍ਰਵਿਰਤੀਆਂ/ਕਾਵਿ-ਧਾਰਾਵਾਂ ਤੇ ਪ੍ਰਾਪਤੀਆਂ (ਆਧੁਨਿਕ ਕਾਵਿ-ਸੰਵੇਦਨਾ ਅਤੇ ਪ੍ਰਮੁੱਖ ਰੁਪਾਕਾਰ) 15 ਅੰਕ
2. ਦੋ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵੀਆਂ ਦੀ ਇਕ-ਇਕ ਬਿਰਤਾਂਤਕ ਰਚਨਾ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ਪ੍ਰੋਫੈਸਰ ਪੂਰਨ ਸਿੰਘ: **ਪੂਰਨ ਨਾਥ ਜੋਗੀ**
2. ਸ਼ਿਵ ਕੁਮਾਰ: **ਲੂਣਾ**

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਕਰਮਜੀਤ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਧਾਰਾਵਾਂ ਦੇ ਵਿਚਾਰਧਾਰਾਈ ਆਧਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀ., ਅੰਮ੍ਰਿਤਸਰ।
2. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ I ਅਤੇ II, ਜਸਬੀਰ ਕੇਸਰ (ਸੰਪਾ.)**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਅਤਰ ਸਿੰਘ, **ਸਾਹਿਤ ਸੰਵੇਦਨਾ**, ਰਘਬੀਰ ਰਚਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
4. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪਤਰਾਂਜਲੀ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
5. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ ਸਿਧਾਂਤਕ ਪਰਿਪੇਖ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
6. ਯੋਗ ਰਾਜ (ਸੰਪਾ.), **ਸੁਰਜੀਤ ਪਾਤਰ : ਪ੍ਰਤਿਭਾ ਸੰਗ ਸੰਵਾਦ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ., ਚੰਡੀਗੜ੍ਹ, 2●19
7. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
8. ਗੁਰਚਰਨ ਸਿੰਘ ਅਰਸ਼ੀ (ਸੰਪਾ.), **ਲੂਣਾ: ਸਮੀਖਿਆ-ਵਿਧੀ ਮੂਲਕ ਦ੍ਰਿਸ਼ਟੀ-ਬਿੰਦੂ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ
9. ਹਰਿਭਜਨ ਸਿੰਘ, **ਪੂਰਨ ਸਿੰਘ : ਰਚਨਾ ਵਿਰਚਨਾ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ
10. ਅਤਰ ਸਿੰਘ, **ਕਾਵਿ ਅਧਿਐਨ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹੰਦ।
11. ਮਹਿੰਦਰ ਸਿੰਘ ਰੰਧਾਵਾ (ਸੰਪਾ.), **ਪੂਰਨ ਸਿੰਘ, ਜੀਵਨੀ ਤੇ ਕਵਿਤਾ**, ਸਾਹਿਤ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ।
12. **ਸਮਦਰਸ਼ੀ**, ਪੂਰਨ ਸਿੰਘ ਵਿਸ਼ੇਸ਼ ਅੰਕ, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ। (ਪੁਸਤਕ ਵੀ ਛਪ ਗਈ ਹੈ)

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (i) : <u>ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ-I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਨਾਟਕ ਤੇ ਰੰਗਮੰਚ ਦਾ ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ — 15 ਅੰਕ
2. ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਨਾਟਕਕਾਰਾਂ ਦਾ ਇਕ, ਇਕ ਨਾਟਕ — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ਬਲਵੰਤ ਗਾਰਗੀ : ***ਲੋਹਾ ਕੁੱਟ***, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1976
2. ਕਪੂਰ ਸਿੰਘ ਘੁੰਮਣ, **ਰਾਣੀ ਕੋਕਿਲਾਂ**, ਨਿਊ ਬੁੱਕ ਕੰਪਨੀ, ਜਲੰਧਰ।
3. ਅਜਮੇਰ ਸਿੰਘ ਔਲਖ : **ਝਨਾ ਦੇ ਪਾਣੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਹਰਚਰਨ ਸਿੰਘ, **ਨਾਟਕ ਕਲਾ ਤੇ ਹੋਰ ਲੇਖ**, ਪੈਪਸੂ ਬੁੱਕ ਡਿਪੋ, ਪਟਿਆਲਾ।
2. ਸੁਰਜੀਤ ਸਿੰਘ ਸੇਠੀ, **ਨਾਟਕ ਕਲਾ**, ਪੰਜਾਬੀ ਨਾਟਕ ਅਕਾਦਮੀ, ਪਟਿਆਲਾ।
3. ਬਲਵੰਤ ਗਾਰਗੀ, **ਰੰਗਮੰਚ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
4. ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਤੇ ਗੁਰਦਿਆਲ ਸਿੰਘ ਫੁੱਲ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਨਾਟਕ**, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
5. ਸਬਿੰਦਰਜੀਤ ਸਿੰਘ ਸਾਗਰ, **ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਇਤਿਹਾਸ**', ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1998
6. Peter Szondi, **Theory of Modern Drama**, Manchester University Press.
7. Eric Bentley, **Theory of Modern Stage**, Penguin Books.
8. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ, ਰਵੇਲ ਸਿੰਘ (ਸੰਪਾ.), **ਬਲਵੰਤ ਗਾਰਗੀ: ਪੁਨਰ ਮੁੱਲਾਂਕਣ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਦਿੱਲੀ, 2●●5
9. ਗੁਰਦਿਆਲ ਸਿੰਘ ਫੁੱਲ, **ਪੰਜਾਬੀ ਨਾਟਕ ਦਾ ਇਤਿਹਾਸ**, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ, 1998
10. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਅਜਮੇਰ ਔਲਖ ਦੀ ਨਾਟ-ਭੂਮੀ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●2
11. ਬਲਜੀਤ ਕੌਰ, **ਪੰਜਾਬੀ ਰੰਗਮੰਚ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਤੇ ਇਤਿਹਾਸ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਤੀਜਾ

ਪਰਚਾ ਬਾਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : <u>ਪੰਜਾਬੀ ਵਿਚ ਅਨੁਵਾਦਿਤ ਵਿਸ਼ਵ ਨਾਟਕ–I</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਦੁਖਾਂਤ ਤੇ ਸੁਖਾਂਤ ਨਾਟਕਾਂ ਦੇ ਲੱਛਣ ਤੇ ਪਰੰਪਰਾ ਤੇ ਨਾਟ–ਸਿਧਾਂਤ 15 ਅੰਕ
2. ਯੂਨਾਨੀ, ਅੰਗਰੇਜੀ ਤੇ ਸੰਸਕ੍ਰਿਤ ਵਿਚੋਂ ਇਕ, ਇਕ ਅਨੁਵਾਦਤ ਨਾਟਕ 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. *ਸੋਫੋਕਲੀਜ਼*, **ਰਾਜਾ ਈਡੀਪਸ**, ਅਨੁ. ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਨਵੀ ਦਿੱਲੀ।
2. ਸ਼ੈਕਸਪੀਅਰ, **ਮੈਕਬਥ**, ਅਨੁ. ਡਾ. ਗੋਪਾਲ ਸਿੰਘ, ਵਰਡ ਬੁਕ ਸੈਂਟਰ, ਨਵੀਂ ਦਿੱਲੀ।
3. ਕਾਲੀਦਾਸ, **ਸ਼ਕੁੰਤਲਾ**, ਅਨੁ. ਨਿਹਾਲ ਸਿੰਘ ਰਸ, ਭਾਸ਼ਾ ਵਿਭਾਗ, ਪੰਜਾਬ, ਪਟਿਆਲਾ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਨਗੇਂਦਰ, **ਅਰਸਤੂ ਦਾ ਕਾਵਿ–ਸ਼ਾਸਤਰ** (ਪੰਜਾਬੀ ਅਨੁਵਾਦ: ਡਾ. ਹਰਿਭਜਨ ਸਿੰਘ), ਐਸ. ਚਾਂਦ ਐਂਡ ਕੰਪਨੀ, ਦਿੱਲੀ।
2. ਹਰਿਭਜਨ ਸਿੰਘ, **ਤ੍ਰਾਸਦੀ**, ਵਿਦਵਾਨ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਬਾਲਾ ਛਾਉਣੀ।
3. ਨਵਨਿੰਦਰਾ ਘੁੰਮਣ, **ਨਾਟਕੀ ਸਾਹਿਤ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1991
4. ਡਾ. ਕਮਲੇਸ਼ ਉੱਪਲ, **ਥੀਏਟਰ ਦੇ ਥੰਮ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●●
5. ਡਾ. ਕਮਲੇਸ਼ ਉੱਪਲ, **ਰੰਗਮੰਚ ਦੇ ਸ਼ਾਹਕਾਰ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ, 2●●●
6. A.C. Bradley, **Shakespearian Tragedy**, Macmillan, London.
7. George Thomson, **Aeschylus and Athens**, Lawrence and Wishart, London.
8. Auerbach, **Mimesis**, Princeton University Press, N.J.
9. A.B. Keith, **The Sanskrit Drama**, Oxford University Press, 1966.
10. H.B.F. Kitto, **Greek Tragedy**, A Double Day Anchor Book, Garden City, New York.
11. Qrich Segal (ed.), **Greek Tregedy: Modern Essays in Criticism**, Harper & Row Publishers, New York.
12. Thomas Woodward (ed.), **Sophocles A Collection Critical Essays**, Prentice Hall Inc. Englewood Cliff.
13. Walten Ruben, **Kalidasa: The Human Meaning of His Work**, PPH 1984

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ–ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਤੇਰ੍ਹਵਾਂ – ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਵਾਕ ਵਿਗਿਆਨ ਤੇ ਅਰਥ ਵਿਗਿਆਨ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਇਤਿਹਾਸਕ ਵਿਕਾਸ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** – ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ – ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਸੰਰਚਨਾ : ਵਾਕ ਵਿਗਿਆਨ ਤੇ ਅਰਥ ਵਿਗਿਆਨ** 3● ਅੰਕ
   (i) ਵਿਆਕਰਨਕ ਪ੍ਰਵਰਗ (Grammatical Categories) ਅਤੇ ਕਾਰਜ : ਲਿੰਗ, ਵਚਨ, ਕਾਰਕ, ਕਾਲ, ਬਿਰਤੀ, ਪੱਖ, ਪੁਰਖ, ਵਾਚ, ਸੰਕੇਤਵਾਚਕ ਪ੍ਰਵਰਗ, ਅਕਰਮਕਤਾ ਅਤੇ ਸਕਰਮਕਤਾ
   (ii) ਪੰਜਾਬੀ ਵਾਕ–ਵਿਗਿਆਨ : ਵਾਕ ਸੰਰਚਨਾ – ਵਾਕ, ਵਾਕੰਸ਼ ਅਤੇ ਉਪਵਾਕ; ਵਾਕਾਤਮਕ ਬਣਤਰਾਂ; ਮੇਲ ਤੇ ਅਧਿਕਾਰ; ਪੰਜਾਬੀ ਦੇ ਨਾਂਵ ਅਤੇ ਕਿਰਿਆ ਵਾਕੰਸ਼ਾਂ ਦੀ ਬਣਤਰ; ਪੰਜਾਬੀ ਦੇ ਸਵਾਧੀਨ ਤੇ ਪਰਾਧੀਨ ਉਪਵਾਕਾਂ ਦੀ ਸੰਰਚਨਾ

(iii) ਪੰਜਾਬੀ ਅਰਥ-ਵਿਗਿਆਨ : ਅਰਥ ਦਾ ਸੰਕਲਪ; ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ ਦੀ ਅਰਥਮੂਲਕ ਸੰਰਚਨਾ: ਸਮਾਨਾਰਥਕ, ਵਿਰੋਧਾਰਥਕ, ਬਹੁਅਰਥਕ, ਸਮੂਹ-ਅਰਥਕ (Hyponymy), ਪ੍ਰਤਿਕੂਲਤਾ (incompatibility), ਸਮਰੂਪਕ ਸ਼ਬਦ; ਅਰਥ-ਪਰਿਵਰਤਨ

2. **ਭਾਗ ਦੂਜਾ - ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਇਤਿਹਾਸਕ ਵਿਕਾਸ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ** 3● ਅੰਕ

(i) ਭਾਰਤੀ ਆਰਿਆਈ ਭਾਸ਼ਾ ਪਰਿਵਾਰ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ; ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਨਿਕਾਸ ਅਤੇ ਇਤਿਹਾਸ: ਵਿਭਿੰਨ ਪੜਾਅ ਅਤੇ ਵਰਤਮਾਨ ਸਥਿਤੀ

(ii) ਭਾਸ਼ਾ ਅਤੇ ਉਪਭਾਸ਼ਾ; ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ ਦਾ ਵਰਗੀਕਰਨ ਅਤੇ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ

(iii) ਗੁਰਮੁਖੀ ਲਿਪੀ: ਗੁਰਮੁਖੀ ਆਰਥੋਗ੍ਰਾਫੀ; ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਸੰਰਚਨਾ; ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀ ਪ੍ਰਾਚੀਨਤਾ; ਪੰਜਾਬੀ ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਪ੍ਰਮਾਣੀਕਰਨ ਦੇ ਮਸਲੇ

3. **ਭਾਗ ਤੀਜਾ - ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਆਤਮ ਸਿੰਘ, **ਸਮਾਜ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਇਤਿਹਾਸ,** ਭਾਸ਼ਾ ਵਿਭਾਗ ਪੰਜਾਬ, ਪਟਿਆਲਾ।
3. ਹਰਕੀਰਤ ਸਿੰਘ ਅਤੇ ਬਾਹਰੀ, **ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ** ਭਾਸ਼ਾ, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
4. ਬਲਦੇਵ ਸਿੰਘ ਚੀਮਾ, **ਪੰਜਾਬੀ ਵਾਕ ਪ੍ਰਬੰਧ ਬਣਤਰ ਅਤੇ ਕਾਰਜ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
5. ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ (ਸੰਪਾ.), **ਭਾਸ਼ਾ ਵਿਗਿਆਨ: ਸੰਕਲਪ ਤੇ ਦਿਸ਼ਾਵਾਂ**, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ
6. ਵਿਦਿਆ ਭਾਸ਼ਕਰ ਅਰੁਣ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਕਾਸ**, ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਲੁਧਿਆਣਾ
7. ਜਗਜੀਤ ਸਿੰਘ, **ਪੰਜਾਬੀ ਵਿਆਕਰਨ : ਸ਼ੈਲੀਆਂ ਤੇ ਇਕਾਈਆਂ**, ਨਿਊ ਬੁੱਕ ਕੰਪਨੀ, ਜਲੰਧਰ
8. ਜੀ. ਬੀ. ਸਿੰਘ, **ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਜਨਮ ਤੇ ਵਿਕਾਸ,** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
9. ਦੁਨੀ ਚੰਦ੍, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਆਕਰਣ**, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
10. ਦੁਨੀ ਚੰਦ੍, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਕਾਸ,** ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ
11. ਪਰਮਜੀਤ ਸਿੰਘ ਸਿੱਧੂ, **ਮਾਨਵ ਵਿਗਿਆਨਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ
12. ਲਾਲ ਸਿੰਘ ਤੇ ਹਰਕੀਰਤ ਸਿੰਘ, **ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ,** ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀ. ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ
13. ਪਰਮਜੀਤ ਸਿੰਘ ਢੀਂਗਰਾ, **ਭਾਸ਼ਾ: ਪ੍ਰਬੰਧ ਤੇ ਵਿਹਾਰ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ
14. ਬੂਟਾ ਸਿੰਘ ਬਰਾੜ, **ਪੰਜਾਬੀ ਭਾਸ਼ਾ: ਸਰੋਤ ਤੇ ਸਰੂਪ**, ਵਾਰਿਸਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ
15. Balbir Singh Sandhu, **A Descriptive Grammar of Puadhi**, **Parkh**, 1968, Vol. II, Panjab University, Chandigarh
16. Gill and Gleason, **A Reference Grammar of Punjabi**, Punjabi University, Patiala.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਚੌਦਵਾਂ : <u>ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਅਤੇ ਲੋਕ ਸਾਹਿਤ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. **ਭਾਗ ਪਹਿਲਾ** - ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਦਾ ਅਧਿਐਨ 3● ਅੰਕ
2. **ਭਾਗ ਦੂਜਾ** - ਪੰਜਾਬੀ ਲੋਕ ਸਾਹਿਤ ਦਾ ਅਧਿਐਨ 3● ਅੰਕ
3. **ਭਾਗ ਤੀਜਾ** -ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਯੂਨਿਟ ਅਤੇ ਥੀਮ

1. **ਭਾਗ ਪਹਿਲਾ - ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਦਾ ਅਧਿਐਨ** 3● ਅੰਕ

(i) ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਦੀਆਂ ਵਿਧਾਵਾਂ ਦੀ ਵਰਗਵੰਡ; ਪੰਜਾਬੀ ਲੋਕ ਵਿਸਵਾਸ਼ ਅਤੇ ਲੋਕ ਸਿਆਣਪਾਂ

(ii) ਪੰਜਾਬੀ ਰੀਤਾਂ ਰਸਮਾਂ (ਜਨਮ, ਵਿਆਹ, ਮੌਤ)

(iii) ਪੰਜਾਬ ਦੇ ਤਿਉਹਾਰ ਤੇ ਮੇਲੇ, ਲੋਕ ਨਾਚ ਅਤੇ ਲੋਕ ਨਾਟ,

2. **ਭਾਗ ਦੂਜਾ - ਪੰਜਾਬੀ ਲੋਕ ਸਾਹਿਤ ਦਾ ਅਧਿਐਨ** 3● ਅੰਕ

(i) ਲੋਕ ਸਾਹਿਤ ਦੀ ਪ੍ਰਕਿਰਤੀ, ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਅਤੇ ਸਭਿਆਚਾਰਕ ਮਹੱਤਵ; ਪੰਜਾਬੀ ਲੋਕ ਸਾਹਿਤ ਦੀਆਂ ਪ੍ਰਮੁਖ ਵਿਧਾਵਾਂ ਦੀ ਰੂਪ ਰਚਨਾ (ਸੁਹਾਗ, ਘੋੜੀ, ਸਿੱਠਣੀ,

ਹੇਅਰਾ, ਟੱਪਾ, ਲੰਮੀ ਬੋਲੀ, ਕੀਰਨਾ, ਅਖਾਣ, ਮੁਹਾਵਰਾ, ਬੁਝਾਰਤ, ਮਿੱਥ ਕਥਾ, ਦੰਤ ਕਥਾ, ਲੋਕ ਕਹਾਣੀ, ਪਰੀ ਕਥਾ, ਨੀਤੀ ਕਥਾ);

(ii) ਪੰਜਾਬੀ ਲੋਕ ਕਥਾ ਰੂਪਾਂ ਦੀ ਵਰਗਵੰਡ; ਪੰਜਾਬ ਵਿਚ ਲੋਕ ਬਿਰਤਾਂਤ ਦੀ ਪਰੰਪਰਾ; ਪੰਜਾਬੀ ਮਿੱਥ ਕਥਾਵਾਂ ਦੇ ਮੂਲ ਪੈਟਰਨ; ਪੰਜਾਬੀ ਲੋਕ ਬਿਰਤਾਂਤ ਦੀਆਂ ਲੋਕ ਰੂੜ੍ਹੀਆਂ; ਲੋਕ ਬਿਰਤਾਂਤ ਦੇ ਪਾਤਰ ਅਤੇ ਸਮੱਸਿਆਵਾਂ

(iii) ਪੰਜਾਬੀ ਲੋਕ ਕਾਵਿ ਦੀ ਵਰਗ ਵੰਡ; ਪੰਜਾਬੀ ਲੋਕ ਕਾਵਿ ਵਿਚ ਔਰਤ ਦੀ ਸਥਿਤੀ ਅਤੇ ਸਿਰਜਣਕਾਰੀ; ਪੰਜਾਬੀ ਲੋਕ ਕਾਵਿ ਦੇ ਮੁੱਖ ਵਿਸ਼ੇ (ਰੱਬ; ਮੌਤ; ਇਸ਼ਕ; ਪੇਕਾ-ਸੁਹਰਾ ਤੇ ਪਰਿਵਾਰਕ ਰਿਸ਼ਤੇ);

3. **ਭਾਗ ਤੀਜਾ - ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ** 2● ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਦੇਵਿੰਦਰ ਸਤਿਆਰਥੀ, **ਗਿੱਧਾ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਨਵੀਂ ਦਿੱਲੀ।
2. ਮਹਿੰਦਰ ਸਿੰਘ ਰੰਧਾਵਾ ਤੇ ਦੇਵਿੰਦਰ ਸਤਿਆਰਥੀ, **ਪੰਜਾਬੀ ਲੋਕਗੀਤ**, ਭਾਰਤੀ ਸਾਹਿਤ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ
3. ਵਣਜਾਰਾ ਬੇਦੀ, **ਮੱਧਕਾਲੀਨ ਪੰਜਾਬੀ ਕਥਾ : ਰੂਪ ਤੇ ਪਰੰਪਰਾ**, ਪਰੰਪਰਾ ਪ੍ਰਕਾਸ਼ਨ, ਜੇ-11/8●, ਰਾਜੌਰੀ ਗਾਰਡਨ, ਨਵੀਂ ਦਿੱਲੀ
4. ਵਣਜਾਰਾ ਬੇਦੀ, **ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਵਿਸ਼ਵਕੋਸ਼** (ਜਿਲਦ 1 ਤੋਂ 8 ਤਕ), ਨੈਸ਼ਨਲ ਬੁੱਕ ਸ਼ਾਪ, ਨਵੀਂ ਦਿੱਲੀ
5. ਵਣਜਾਰਾ ਬੇਦੀ, **ਬਾਤਾਂ ਮੁੱਢ ਕਦੀਮ ਦੀਆਂ**, ਨਵਯੁਗ ਪ੍ਰੈਸ, ਨਵੀਂ ਦਿੱਲੀ
6. ਨਾਹਰ ਸਿੰਘ, **ਲੋਕ ਕਾਵਿ ਦੀ ਸਿਰਜਨ ਪ੍ਰਕਿਰਿਆ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
7. ਨਾਹਰ ਸਿੰਘ, **ਬਾਗੀਂ ਚੰਬਾ ਖਿੜ ਰਿਹਾ (ਜਿਲਦ ਪੰਜਵੀਂ)**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
8. ਨਾਹਰ ਸਿੰਘ, **ਮਾਂ ਸੁਹਾਗਣ ਸ਼ਗਨ ਕਰੇ (ਜਿਲਦ ਸੱਤਵੀਂ),** ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
9. ਨਾਹਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਲੋਕ ਨਾਚਾਂ ਦੀ ਸਭਿਆਚਾਰਕ ਭੂਮਿਕਾ ਅਤੇ ਸਾਰਥਕਤਾ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
10. ਭੁਪਿੰਦਰ ਸਿੰਘ ਖਹਿਰਾ, **ਲੋਕਧਾਰਾ, ਭਾਸ਼ਾ ਤੇ ਸਭਿਆਚਾਰ**, ਪੈਪਸੂ ਬੁੱਕ ਸ਼ਾਪ, ਪਟਿਆਲਾ।
11. ਕਰਨੈਲ ਸਿੰਘ ਥਿੰਦ (ਸੰਪਾ.), **ਲੋਕਯਾਨ ਅਧਿਐਨ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
12. ਜਸਵਿੰਦਰ ਸਿੰਘ, **ਪੰਜਾਬੀ ਲੋਕ-ਸਾਹਿਤ ਸ਼ਾਸਤਰ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
13. ਜੋਗਿੰਦਰ ਸਿੰਘ ਕੈਰੋਂ, **ਪੰਜਾਬੀ ਲੋਕ ਕਹਾਣੀਆਂ ਦਾ ਸੰਰਚਨਾਤਮਕ ਅਧਿਐਨ ਅਤੇ ਵਰਗੀਕਰਨ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
14. Raymond Williams, **Culture**, Fontana Publication.

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ **ਦੋ ਭਾਗਾਂ** ਵਿਚੋਂ **ਚਾਰ-ਚਾਰ** ਭਾਵ ਅੱਠ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਦੋ ਭਾਗਾਂ ਦੇ ਹਰ ਭਾਗ ਵਿਚੋਂ **ਦੋ-ਦੋ** ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ।

ਤੀਜਾ ਭਾਗ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਇਸ ਵਿਚ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ **ਦੋ-ਦੋ** ਅੰਕਾਂ ਦੇ 12 ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ **1●** ਸਵਾਲਾਂ ਦੇ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਪੰਦਰਵਾਂ : ਆਪਸ਼ਨ (i) : <u>ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ -II</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਸਮਕਾਲੀ ਪੰਜਾਬੀ ਕਵਿਤਾ : ਕਾਵਿ-ਬੋਧ, ਪ੍ਰਮੁੱਖ ਝੁਕਾਅ, ਆ ਰਹੇ ਬਦਲਾਅ ਅਤੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਕਾਰ) 15 ਅੰਕ
2. ਤਿੰਨ ਸਮਕਾਲੀ ਪੰਜਾਬੀ ਕਵੀ (ਇਕ-ਇਕ ਰਚਨਾ ਦੇ ਹਵਾਲੇ ਨਾਲ) 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ 2● ਅੰਕ

ਕੋਰਸ

1. ***ਪਰਵੇਸ਼ ਦੁਆਰ***, ਡਾ. ਜਗਤਾਰ
2. ***ਸਾਡੇ ਸਮਿਆਂ ਵਿਚ***, ਪਾਸ਼, ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ, ਲੁਧਿਆਣਾ।
3. ***ਹਨੇਰੇ ਵਿਚ ਸੁਲਗਦੀ ਵਰਣਮਾਲਾ***, ਸੁਰਜੀਤ ਪਾਤਰ, ਯੂਨੀਸਟਾਰ ਬੁੱਕਸ, ਚੰਡੀਗੜ੍ਹ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ-I, ਅਤੇ ਕਾਵਿ-ਚਿੰਤਨ II**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
2. ਕਰਮਜੀਤ ਸਿੰਘ, **ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਾਵਿ-ਧਾਰਾਵਾਂ ਦੇ ਵਿਚਾਰਧਾਰਾਈ ਆਧਾਰ**, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀ., ਅੰਮ੍ਰਿਤਸਰ।
3. ਤੇਜਵੰਤ ਸਿੰਘ ਗਿੱਲ, **ਪਾਸ਼ : ਜੀਵਨ ਤੇ ਰਚਨਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
4. ਤੇਜਵੰਤ ਸਿੰਘ ਗਿੱਲ, **ਸੁਰਜੀਤ ਪਾਤਰ**, ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
5. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਸ਼ਾਇਰੀ: ਸਮਕਾਲੀ ਸੰਦਰਭ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
6. ਸੁਖਦੇਵ ਸਿੰਘ, ਪਾਲ ਕੌਰ (ਸੰਪਾ.), **ਪਾਸ਼: ਜਿਥੇ ਕਵਿਤਾ ਖਤਮ ਨਹੀਂ ਹੁੰਦੀ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਸਰਹਿੰਦ।
7. ਯੋਗ ਰਾਜ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਉਤਰ ਪੰਜਾਬ ਸੰਕਟ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
8. ਯੋਗ ਰਾਜ, **ਨਵੀਂ ਪੰਜਾਬੀ ਕਵਿਤਾ : ਪ੍ਰਤੀਰੋਧ ਦੇ ਨਵ-ਸੰਦਰਭ**, ਸਪਤਰਿਸ਼ੀ ਪਬਲੀਕੇਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ, 2●18
9. ਯੋਗ ਰਾਜ (ਸੰਪਾ.), **ਸੁਰਜੀਤ ਪਾਤਰ : ਪ੍ਰਤਿਭਾ ਸੰਗ ਸੰਵਾਦ**, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ., ਚੰਡੀਗੜ੍ਹ, 2●19

10. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
11. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਸਰੋਕਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
12. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ
13. ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ ਅਤੇ ਵਨੀਤਾ (ਸੰਪਾ.), **ਸੁਰਜੀਤ ਪਾਤਰ ਦੀ ਕਵਿਤਾ ਦਾ ਸੰਵਾਦ**, ਪੰਜਾਬੀ ਅਕਾਡਮੀ, ਦਿੱਲੀ।
14. ਸਰਬਜੀਤ ਸਿੰਘ (ਸੰਪਾ.), **ਡਾ. ਜਗਤਾਰ ਸ਼ਬਦ ਸੰਵਾਦ**, ਦੀਪਕ ਪਬਲਿਸ਼ਰਜ਼, ਜਲੰਧਰ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਪੰਦਰ੍ਹਵਾਂ : ਆਪਸ਼ਨ (ii) : <u>ਆਧੁਨਿਕ ਬਿਰਤਾਂਤਕ ਪੰਜਾਬੀ ਕਵਿਤਾ -II</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਸਿਧਾਂਤ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ: 1947 ਤੋਂ ਬਾਅਦ ਦੀ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦੇ ਮੁੱਖ ਝੁਕਾਅ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ, ਮਗਰਲੇ ਦੌਰ ਦੀ ਬਿਰਤਾਂਤਕ ਪੰਜਾਬੀ ਕਵਿਤਾ: ਸਿਧਾਂਤ ਅਤੇ ਇਤਿਹਾਸ — 15 ਅੰਕ
2. ਦੋ ਆਧੁਨਿਕ ਕਵੀਆਂ ਦੀ ਇਕ-ਇਕ ਬਿਰਤਾਂਤਕ ਕਾਵਿ ਰਚਨਾ — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ***ਸਿਮ੍ਰਤੀ ਦੇ ਕਿਰਨ ਤੋਂ ਪਹਿਲਾਂ*** : ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ
2. ***ਰੁੱਖ ਤੇ ਰਿਸ਼ੀ***, ਹਰਿਭਜਨ ਸਿੰਘ, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, **ਕਾਵਿ-ਚਿੰਤਨ-I, ਅਤੇ ਕਾਵਿ-ਚਿੰਤਨ II**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
2. ਮਹਿੰਦਰ ਕੌਰ ਗਿੱਲ, **ਸੁਹਜ ਸਿਰਜੀ ਹਰਿਭਜਨ ਸਿੰਘ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
3. ਜਗਜੀਤ ਸਿੰਘ, **ਪਾਠ ਉੱਤਰ ਪਾਠ**, ਸ਼ਬਦ ਲੋਕ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।
4. ਯੋਗ ਰਾਜ (ਸੰਪਾ.), **ਸੁਰਜੀਤ ਪਾਤਰ : ਪ੍ਰਤਿਭਾ ਸੰਗ ਸੰਵਾਦ**, ਪਬਲੀਕੇ ਨ ਬਿਊਰੋ, ਪੰਜਾਬ ਯੂਨੀ., ਚੰਡੀਗੜ੍ਹ, 2●19
5. ਸੁਖਦੇਵ ਸਿੰਘ, **ਪੰਜਾਬੀ ਕਵਿਤਾ: ਪੁਨਰ ਸੰਵਾਦ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
6. ਸੁਖਦੇਵ ਸਿੰਘ, **ਕਾਵਿ ਵਿਹਾਰ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
7. ਮਹਿੰਦਰ ਕੌਰ ਗਿੱਲ, **ਕਲਾ ਕਰਮੀ ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ**, ਨਵਯੁਗ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ।
8. ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ, **ਮੇਰੀ ਸਾਹਿਤਕ ਸਵੈ ਜੀਵਨੀ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
9. ਗੁਲਜ਼ਾਰ ਸਿੰਘ ਸੰਧੂ (ਸੰਪਾ.), **ਹਰਿਭਜਨ ਸਿੰਘ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (i) : <u>ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ-II</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ — 15 ਅੰਕ
2. ਤਿੰਨ ਨਾਟਕਕਾਰ (ਇਕ ਇਕ ਨਾਟ-ਰਚਨਾ ਦੇ ਹਵਾਲੇ ਨਾਲ) — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ਚਰਨਦਾਸ ਸਿੱਧੂ, **ਬਾਬਾ ਬੰਤੂ**, ਨੈਸ਼ਨਲ ਬੁੱਕ ਸ਼ਾਪ, ਦਿੱਲੀ।
2. ਆਤਮਜੀਤ, **ਕੈਮਲੂਪਸ ਦੀਆਂ ਮੱਛੀਆਂ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. *ਸਵਰਾਜਬੀਰ, **ਸ਼ਾਇਰੀ***, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਡਾ. ਰਵਿੰਦਰ ਸਿੰਘ, ਚਰਨਦਾ**ਸ ਸਿੱਧੂ ਦੇ ਨਾਟਕਾਂ ਦਾ ਆਲੋਚਨਾਤਮਕ ਅਧਿਐਨ**, ਮਨਪ੍ਰੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਦਿੱਲੀ, 2●●3
2. ਡਾ. ਸੁਖਦੇਵ ਸਿੰਘ (ਸੰਪਾ.), **ਕੈਮਲੂਪਸ ਦੀਆਂ ਮੱਛੀਆਂ: ਸੰਵਾਦ ਤੇ ਸਮੀਖਿਆ**, ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਡਾ. ਸਰਬਜੀਤ ਸਿੰਘ (ਸੰਪਾ.), **ਸਵਰਾਜਬੀਰ ਮਿੱਥ ਅਤੇ ਚਿੰਤਨ**, ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

ਸਮੈਸਟਰ ਚੌਥਾ

ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (ii) : ਪੰਜਾਬੀ ਵਿਚ ਅਨੁਵਾਦਿਤ ਵਿਸ਼ਵ ਨਾਟਕ–II

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਨਾਟਕ ਦਾ ਸਿਧਾਂਤ ਅਤੇ ਵਿਭਿੰਨ ਨਾਟ ਜੁਗਤਾਂ — 15 ਅੰਕ
2. ਤਿੰਨ ਅਨੁਵਾਦਤ ਨਾਟਕਕਾਰ (ਇਕ ਨਾਟ-ਰਚਨਾ ਦੇ ਹਵਾਲੇ ਨਾਲ) — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲਾ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. ਬਰਤੋਲਤ ਬਰੈਖ਼ਤ, **ਇੰਜ ਹੋਇਆ ਇਨਸਾਫ**, ਅਨੁ. ਸਤੀਸ਼ ਕੁਮਾਰ ਵਰਮਾ, ਸਾਹਿਤ ਅਕਾਦਮੀ, ਦਿੱਲੀ
2. ਲੋਰਕਾ, **ਅੱਗ ਦੇ ਕਲੀਰੇ**, (ਅਨੁ. ਸੁਰਜੀਤ ਪਾਤਰ), ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
3. ਯਾਂ ਜਿਰਾਦੂ, **ਸ਼ਹਿਰ ਮੇਰੇ ਦੀ ਪਾਗਲ ਔਰਤ**, (ਅਨੁ. ਸੁਰਜੀਤ ਪਾਤਰ), ਲੋਕਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. William Raymond, **Modern Tragedy**, Verso Edition, 1979.
2. Eric Bentley (ed.), **The Theory of the Modern Stage:** (An Introduction to Modern Theatre and Drama), Penguin Books, 1972
3. Eric Bentley (ed.), **The Playright as Thinker**, Medidian Books, 1965
4. Marvin Carlson, **Theories of the Theatre: A Historicial and Critical Survey, From Greek to the Present**, Cornell University Press, Ithaca, 1984
5. Peter Demetz, **Brecht** (A Collection of Critical Essays), Prentice-Hall Inc. Englewood Cliffs, N.J.
6. Manuel Duran, **Lorca** (A Collection of Criticial Essays), Prentice-Hall Inc. Englewood Cliffs, N.J.

ਪਰਚਾ ਸੋਲਵਾਂ : ਆਪਸ਼ਨ (iii) : <u>ਪੰਜਾਬੀ ਵਾਰਤਕ ਦਾ ਅਧਿਐਨ</u>

ਕੁਲ ਅੰਕ : 1●●
ਲਿਖਤੀ : 8●
ਸਮਾਂ : 3 ਘੰਟੇ ਇੰਟ. ਅਸੈਸਮੈਂਟ 2●

ਪਾਠਕ੍ਰਮ

1. ਪੰਜਾਬੀ ਵਾਰਤਕ: ਸਿਧਾਂਤ, ਇਤਿਹਾਸ ਤੇ ਪ੍ਰਵਿਰਤੀਆਂ ਨਿਬੰਧਕਾਰੀ ਦੇ ਪ੍ਰਮੁੱਖ ਲੱਛਣ — 15 ਅੰਕ
2. ਤਿੰਨ ਪ੍ਰਮੁੱਖ ਵਾਰਤਕ ਰਚਨਾਵਾਂ (ਇਕ, ਇਕ ਨਿਬੰਧ-ਸੰਗ੍ਰਹਿ ਜਾਂ ਸਾਖੀ ਦੇ ਹਵਾਲੇ ਨਾਲ — 15×3=45 ਅੰਕ
3. ਸਮੁੱਚੇ ਪਾਠਕ੍ਰਮ ਉੱਤੇ ਆਧਾਰਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ — 2● ਅੰਕ

ਕੋਰਸ

1. **ਪੁਰਾਤਨ ਜਨਮ ਸਾਖੀ**, ਸੰਪਾ. ਭਾਈ ਵੀਰ ਸਿੰਘ, ਖਾਲਸਾ ਸਮਾਚਾਰ ਪ੍ਰੈਸ, ਅੰਮ੍ਰਿਤਸਰ
2. ਤੇਜਾ ਸਿੰਘ, **ਨਵੀਆਂ ਸੋਚਾਂ**, ਕਸਤੂਰੀ ਲਾਲ ਐਂਡ ਸੰਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ
3. ਗੁਰਬਖ਼ਸ਼ ਸਿੰਘ, **ਸਾਵੀਂ ਪੱਧਰੀ ਜ਼ਿੰਦਗੀ**, ਆਰਸੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. **ਜਨਮ-ਸਾਖੀ ਪਰੰਪਰਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. **ਪੁਰਾਤਨ ਜਨਮ ਸਾਖੀ**, (ਸੰਪਾ.) ਭਾਈ ਵੀਰ ਸਿੰਘ, ਸਾਹਿਤ ਸਦਨ, ਨਵੀਂ ਦਿੱਲੀ
3. **ਪੁਰਾਤਨ ਪੰਜਾਬੀ ਵਾਰਤਕ**, ਸੁਰਿੰਦਰ ਸਿੰਘ ਕੋਹਲੀ (ਸੰਪਾ.), ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ।
4. ਜੀਤ ਸਿੰਘ ਸੀਤਲ, **ਵਾਰਤਕ ਤੇ ਵਾਰਤਕ ਸ਼ੈਲੀ**, ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀਵਰਸਿਟੀ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ।
5. **ਪੰਜਾਬੀ ਵਾਰਤਕ ਸੈਮੀਨਾਰ**, ਪੰਜਾਬੀ ਅਕਾਦਮੀ, ਨਵੀਂ ਦਿੱਲੀ।
6. ਵਾਰਤਕ ਅੰਕ, **ਖੋਜ ਪੱਤ੍ਰਿਕਾ**, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।

ਪੇਪਰ ਸੈਟਰ/ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ :

ਇਸ ਪਰਚੇ ਦੇ **ਤਿੰਨ ਭਾਗ** ਹੋਣਗੇ ਅਤੇ ਕੁਲ **9 ਸਵਾਲ** ਪੁੱਛੇ ਜਾਣਗੇ। ਪਹਿਲੇ ਪੰਦਰਾਂ ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ, ਦੂਜੇ 45 ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਛੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ। ਤੀਜੇ 2● ਅੰਕਾਂ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ 12 ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਸਵਾਲ ਪੁੱਛੇ ਜਾਣਗੇ।

ਪ੍ਰੀਖਿਆਰਥੀ ਨੇ ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਇਕ, ਦੂਜੇ ਭਾਗ ਵਿਚੋਂ ਤਿੰਨ ਸਵਾਲ ਕਰਨੇ ਹੋਣਗੇ। ਤੀਜੇ ਭਾਗ ਦੇ ਸਵਾਲ ਵਿਚੋਂ ਦਸ ਸਵਾਲਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਇਸ ਭਾਗ ਵਿਚ ਬਾਹਰਮੁਖੀ ਭਾਂਤ ਦੇ ਸਵਾਲ ਹੋਣਗੇ। ਹਰੇਕ ਛੋਟੇ ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ **5●** ਸ਼ਬਦਾਂ ਤੋਂ ਵੱਧ ਨਹੀਂ ਹੋਵੇਗਾ।

PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

FACULTY OF ARTS

SYLLABI

FOR

M.A. SOCIOLOGY (SEMESTER SYSTEM)

EXAMINATIONS, 2020-2021

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Note :

A candidate for M. A. examination shall offer Psychology or Sociology or Statistics or Public Administration only if he / she has completed the prescribed courses in an affiliated college or the Department concerned of this University.

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students whether old or new.

GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS OF POST GRADUATE COURSES of Sociology (Semester System)
(*Effective from the First Year Admissions for the Academic Session 2010-11)*

1. The Syndicate has approved the following Guidelines, Mode of Testing and Evaluation including Continuous Internal Assessment of students:

(i)	Terminal Evaluation	80%
(ii)	Continuous Assessment	20%

(iii) Continuous Assessment may include Written Test, Snap Test, Participation in Discussions in the class, Term Paper, Attendance etc.

(iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges\Department will conduct tests as quantified below:

(a)	Written Test (one per semester)	:	25	(reduced to 5)
(b)	Snap Test	:	25	(reduced to 5)
(c)	Term Paper/s	:	25	(reduced to 5)
(d)	Participation in Class Discussions	:	15	(reduced to 3)
(e)	Attendance	:	10	(reduced to 2)*

Total: 100 reduced to 20

*Weightage of 2 marks for **Attendance** component out of 20 marks for Continuous Assessment shall be available only to those students who attend **75% and more** of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under:

Attendance Component			Mark/s for Theory Papers
(a)	75% and above up to 85%	:	1
(b)	Above 85%	:	2

2. **In the case of Paper SOC R 439: Methods & Techniques in Social Research:**

The system of evaluation for Internal Assessment shall be based on field work–data collection, report writing and presentation of report. The break-up of the marks shall be as under:

Data Collection	:	25	(reduced to 5)
Report Writing	:	50	(reduced to 10)
Presentation of Report	:	25	(reduced to 5)
Total		**100 reduced to 20**	

<u>Note:</u> " In view of the peculiarity of distance education courses, students admitted to USOL in M.A. Sociology (Semesters I to IV) shall be given Internal Assessment for all the courses, including SOC-R-439 (3rd Semester), on the basis of Assignments as in the previous system."

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 80%, i.e. the remaining marks allocated to the particular subject and, thus he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.

4. Continuous Internal Assessment awards from the affiliated Colleges/Department must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the Proforma obtainable from the Examination Branch.

5. The marks obtained by a candidate in Continuous Internal Assessment in Postgraduate Classes from the admissions of 2006 will be shown separately in the Detailed-Marks-Card (D.M.C.)

***

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READINGS IN THE SUBJECT OF SOCIOLOGY, SESSION 2020-21

SCHEME FOR OPTING COURSES

SEMESTER-I		
Course no.	**Title**	
SOC R 411	History of Social Thought	
SOC R 412	Sociology of Family and Gender	
SOC R 413	Sociology of Development	
SOC R 414	Social Stratification: Concepts & Theories	
SEMESTER-II		
SOC R 425	Positivistic Sociological Theories	
SOC R 426	Methodology of Social Research	
SOC O 521	Population and Society	
SOC O 621	Social Dimensions of Development	
SOC O 721	Sociology of Urban Settlements	
SOC O 821	Structural Moorings of Gender Oppression	
SOC O 921	Peasants and Rural Society In India	
SOC O 922	Organizational Theory and Behaviour	
SOC O 923	Basic Social Statistics	
SEMESTER-III		
SOC R 438	Interpretive Sociological Theories	
SOC R 439	Methods & Techniques in Social Research	
SOC O 532	Basic Methods in Population Studies	
SOC O 632	Social Development in India	
SOC O 633	Rural Development in India	
SOC O 732	Problems of Urban India	
SOC O 832	Family in Cross Cultural Perspective	
SOC O 931	Sociology of Aging	
SOC O 932	Organizational Structure and Development	
SOC O 933	Sociology of Deviance: Concepts and Theories	

SOC O 934 Sociology of Crime
SOC O 935/945 Dissertation (III and IV Semesters)*
SOC O 936 Advanced Social Statistics
SOC O 937 Sociology of Education

SEMESTER-IV

SOC R 440 Perspectives on Indian Society
SOC O 543 Determinants and Consequences of Population Growth
SOC O 544/744 Sociology of Human Migration
SOC O 644 Environmental Crisis and Sustainable Development
SOC O 645 Entrepreneurship and Development
SOC O 743 Cities, Urban Planning and Development
SOC O 843 Family Dynamics in Contemporary India
SOC O 844 Gender and Development
SOC O 941 Fundamentals of Industrial Sociology
SOC O 942 Social Problems
SOC O 943 Political Sociology
SOC O 944 Sociology of Marginalized Communities
SOC O 945/935 Dissertation (IIIrd and IVth semesters)*
SOC O 946 Media and Culture

There will be **two** categories of courses and each course will be of 4 credits.

(1) SOC R level are Required or Compulsory Courses.
(2) SOC O level are Open Courses (including Dissertation).

The students will be required to complete 64 credit hour courses successfully in the total duration of four semesters. The break up of the credit hours is as follows:

Course Category		**No. of Courses to be completed**	**Credits**
1.	Required or Compulsory Courses (SOC R level)	9	9x4= 36
2.	Open Courses (SOC O level)	7	7x4= 28
		Total credits	**64**

Each student shall take up all four Required Courses in the First Semester. In the Second Semester, in addition to two Required Courses, each student shall opt for two Open Courses out of those offered in that particular Semester. In the Third Semester again, in addition to two Required Courses, each student shall opt for two Open Courses, out of those offered during that Semester, including Field Dissertation, depending upon his/her eligibility for the same. In the Fourth Semester, apart from one Required Course,

each student shall opt for three Open Courses (two in case he/she already has dissertation)*.

***Note: Since the Semester system in M.A. Sociology is just being introduced in colleges from the session 2011-12, SOC O 935/945 Dissertation shall continue to be offered only in the Department and USOL. Its introduction in the colleges shall be subject to approval by the concerned university authorities as per university norms.**

Further, offering of Optional Courses by the Department/College will depend upon the availability of faculty for teaching the course(s). In this way, the candidates will exercise their choice in the following manner:

Semester	Required Course	Open Course
I	4	-
II	2	2
III	2	2
IV	1	3
	9	**7**

***Note**: The Dissertation (SOC O 935/945) will carry 8 credits (200 marks) and will spread over two Semesters, i.e. Semesters III and IV. Only those students who have scored 480 marks during the 1st year (1st and 2nd semesters), taking not more than a total of 32 credits, will be allowed to take up dissertation.

In Colleges affiliated to Panjab University offering M.A. (Semester System) in Sociology,

" There will be six contact hours per week (4 lectures and 2 tutorials)."

Areas of Specialization

There are four Areas of Specialization within the Open Courses. These are:

1. Development Studies
2. Population Studies
3. Family & Gender Studies
4. Urban Studies

A candidate who successfully completes at least 3 Open Courses during M.A. programme in one of these four areas of specialization, will be issued a Certificate of Specialization in that area.

For the purpose of providing specialization, various courses have been grouped under the areas as follows:

1. **Development Studies**
   i) SOC O 621: Social Dimensions of Development (Sem. II)
   ii) SOC O 632: Social Development in India (Sem. III)
   iii) SOC O 633: Rural Development in India (Sem. III)
   iv) SOC O 644: Environmental Crisis and Sustainable Development (Sem. IV)
   v) SOC O 645: Entrepreneurship and Development (Sem. IV)
   vi) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   vii) SOC O 844: Gender and Development (Sem. IV)
2. **Population Studies**
   i) SOC O 521: Population and Society (Sem. II)
   ii) SOC O 532: Basic Methods in Population Studies (Sem. III)
   iii) SOC O 543: Determinants and Consequences of Population Growth (Sem. IV)
   iv) SOC O 544/744: Sociology of Human Migration (Sem. IV)

3. **Family and Gender Studies**
   i) SOC O 821: Structural Moorings of Gender Oppression. (Sem. II)
   ii) SOC O 832: Family in Cross-Cultural Perspective (Sem. III)
   iii) SOC O 843: Family Dynamics in Contemporary India (Sem. IV)
   iv) SOC O 844: Gender and Development (Sem. IV)

4. **Urban Studies**
   i) SOC O 721: Sociology of Urban Settlements (Sem. II)
   ii) SOC O 732: Problems of Urban India (Sem. III)
   iii) SOC O 743: Cities, Urban Planning and Development (Sem. IV)
   iv) SOC O 744/544: Sociology of Human Migration (Sem. IV)

Thrust Areas

- **Sustainable Development** (in the context of Globalization, Information, Communication and Technology)

- **Family and Gender Studies**

- **Population, Health and Aging**

- **Social Control and Deviance** (with special reference to Activism, Terrorism and Cyber Crime)

Additional Areas of Interest

Social Development, Deviance & Social Problems, Development and Social Change, Urban Studies, Peasant and Rural Studies, State and Society

M.A. (SOCIOLOGY) SYLLABI AND COURSES OF READING

SEMESTER-I

SOC R 411: HISTORY OF SOCIAL THOUGHT

Objective:

1. To introduce students to historical evolution of sociological thought.
2. To sensitize students to a detailed study of Classical Sociologists, i.e. Karl Marx, Max Weber and Emile Durkheim.
3. To apply the formulation of these thinkers to contemporary issues.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to the maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline:

Unit-I

A brief review of Enlightenment Thought with special reference to Rousseau; and of the Conservative Reaction to it, with special reference to St. Simon and Auguste Comte.

Unit-II

Karl Marx: Methodology - the concepts of Totality: Historical Materialism, Human Praxis.

Basic Concepts: Means, Relations and Modes of Production: Base and Super-structure; Contradiction; Exploitation; Alienation.

Epochs of social development with special reference to Capitalism; Classes and Class Conflict.

Unit-III

Max Weber: Methodology-Verstehen, Value-Neutrality and Objectivity, Generality and the Ideal Type;

Basic concepts: Social action and its Types, social relationships; Power, Domination and Legitimate Order.

Protestant Ethic and the Spirit of Capitalism; the Rationalization process, Bureaucracy, distribution of Power and Social Stratification.

Unit-IV

Emile Durkheim: Methodology-the nature of Social Facts and their Causation.

Basic concepts: Individual and Collective Conscience, Social Solidarity and Anomie; the Sacred and Profane, the nature of Religion, Suicide as social fact.

Mechanical to Organic Solidarity, Differentiation and Social Division of Labour.

Suggested Readings

1. Aron, Raymond, (Reprint 1990), *Main Currents in Sociological Thought* (Vols. I & II), London, Pelican.
2. Avineri S. (1970) *The Social and Political Thought of Karl Marx*, London, Cambridge University Press.
3. Bendix R. (1960) Max Weber: *An Intellectual Portrait*, New York, Doubleday.
4. Durkheim E. (1960) *The Division of Labour in Society*, Illinois, Free Press of Gilencoe.
5. Giddens, Anthony (1971) *Capitalism and Modern Social Theory*, London, Cambridge, U. Press.
6. Irving M. Zeitlin (1969) *Ideology and the Development of Sociological Theory*, New Delhi, Prentice Hall.
7. Marx, K. and Engels F. (1971), *The Manifesto of the Communist Party*, Moscow, Progress Publishers.
8. Max Weber (1965), *Protestant Ethic and the Spirit of Capitalism*, London, Allen & Unwin.

Additional Readings

1. Ritzer, George, (1996) *Sociological Theory*, London, Sage Publications.
2. Hughes, John A. et. al., (1995), *Understanding Classical Sociology* - Marx, Weber and Durkheim, London, Sage Publications.
3. Pampel Fred C., (2000) *Sociological Lives and Ideas*: *An Introduction to the Classical Theorists*, N.Y., Worth Publishers.

SOC R 412: SOCIOLOGY OF FAMILY AND GENDER

Objective

This course is aimed at sensitizing the students regarding the basic concepts and approaches used for explaining and understanding family and gender. It also aims at sensitizing students about the process of gender socialization within the framework of family. Finally, it exposes the student to specific problems and legal provisions made available to counter these problems relating to gender inequality in the Indian context.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Approaches to Family

Concepts-Family, Household and Domestic function;

Approaches- Structural Functional, Conflict, Symbolic-Interactionist,

Unit-II

Concept and Construction of Gender

i) Concepts- Sex, Gender, Gender-Identity and Gender-roles

ii) Basic understanding of Patriarchy, Masculinity and Femininity, Gender Socialization and Gender Stereotyping through the institutions of family, education, work, media and religion.

Unit-III

Approaches to Gender

Feminism: Meaning; Liberal, Radical, Socialist-Marxist and Post Modernist Feminism

Unit-IV

Gender Equality through Legislation (in Indian Context)

i) Dimensions of Gender Inequality: Female Foeticide, Neglect of Girl Child , Bride Burning and Status of Elderly Women.

ii) Brief introduction to PNDT Act, Dowry Prohibition Act and Domestic Violence Act, Sexual Harrassment of Women at Workplace, Prevention, Prohibition and Redressal Act.

Suggested Readings

1. Bender, Donald R. (1970) 'A Refinement of the Concept of Household: Families, Co-residence and Domestic Functions', *American Anthropologist*, Vol.32,No.1, PP 1-15.
2. Chanana, Karuna (1988) *Socialization, Education and Women: Explorations in Gender-Identity*, New Delhi: Orient Longman.
3. Lipman, Jean Blumen (1984), *Gender-Roles and Power*, New Jersey, Prentice Hall Inc.
4. Oakely, Ann (1972 *Sex, Gender and Society*, London : Harper & Row Pub.
5. Patel, Tulsi (2005), *The Family in India: Structure And Practice,* New Delhi: Sage Publications.
6. Saradamoni K.(ed) (1992), *Finding the Household: Conceptual and Methodological Issues*, New Delhi: Sage Publication.
7. Shah. A.M. (1973), *The Household Dimension of Family*, New Delhi: Orient Longman.
8. White James M. & David M. Klein (2002), *Family Theories*. Thousand Oaks: Sage Publications (Second Edition).
9. Wood, Julia T (1999*), Gendered Lives.* London: Wadsworth Pub. Company (Third Edition).
10. Wykes, Maggie and Barrie, Gunter (2005) *The Media and Body Image*, New Delhi: Sage Publications.
11. Padia, Chandrakala (2011). Theorizing Femisnism: A Cross-Cultural Exploration, Jaipur, Rawat Publications.
12. Bhagwat, Vidut (2004), Feminist Social Thought: An introduction to Six Key Thinkers, Jaipur, rawat Publications
13. Bhasin, Kamla(1993) What is Patriarchy, Kali for Women, Delhi
14. Bhasin ,Kamla (2000) Understanding Gender . Kali for Women, Delhi
15. Bhasin Kamla (2004) Exploring Masulinity, Women Unlimited . Delhi
16. Handbook on Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act, 2013, Government of India, Ministry of Women and Child Development , November 2015

Additional Readings

1. Bare Acts: PNDT Act, Dowry Prohibition Act, Protection of Women Against Domestic Violence Act, Hindu Succession Act.
2. Burr, Wersley R. et.al (1997), *Contemporary Theories about Family*, New York: Free Press.
3. Das, Man Singh & Gupta, Vijay Kumar (eds.) (1995), *Gender Roles and Family Analysis*, New Delhi: M.D. Pub.
4. Dube, Leela (1997), *Women and Kinship: Contemporary Perspectives on Gender in South and South-East Asia*, Tokyo: United Nations Univ. Press.
5. Hofstede, Geert and Associates (1998*), Masculinity and Femininity*, Thousand Oaks: Sage Publication.
6. Lancy, Lobo (1992), 'Household and Family among Thakurs in a North Village', *Sociological Bulletin*, Vol. 41, No. 1&2, pp 46-66.
7. Lengermann, Patrician M. & Jill Niebrugge-Brantley (1996) 'Contemporary Feminist Theory', in George Ritzer, *Sociological Theory,* (Fourth Edition), pp. 436-486, New York : McGraw-Hill.
8. Thorne, Barrie & Marilyn Yalom (eds.) (1982), *Rethinking the Family: Some Feminist Questions,* New York: Longman.
9. Weitz, Shirley (1977), *Sex-Roles*, London: George Allen & Unwin.

SOC R 413: SOCIOLOGY OF DEVELOPMENT

Objective

Keeping in view the relevance of the theme of development, especially in the less developed societies, this course aims (a) to familiarize the students with the various ways that development has been conceptualized; (b) to critically evaluate the modernization theory in its economic, sociological, social-psychological and political forms; (c) to provide a review of the underdevelopment theory given by the Latin American political economists; and (d) to re-assess the various paths to development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development: The concept and its changing connotations (liberal and socialist); Operational Indicators.

Unit-II

Modernization Theories:

Economic (Gunnar Myrdal, W. W. Rostow);
Sociological (Neil J. Smelser, Daniel Lerner,
Social-Psychological (David C. McClelland, Everett E. Hagen);
Political (Gabriel A. Almond & James S. Coleman);
Their Critical Assessment

Unit-III

Theories of Underdevelopment: Centre-
Periphery (A. G. Frank, Samir Amin);

Unequal exchange (Paul Baran); World system (Immanuel Wallerstein);
Their Critical Assessment

Unit-IV

Paths of Development:

Capitalist, Socialist, Mixed;
Globalization as a Strategy of Development.

Suggested Readings

1. Coleman, J. (1968), "Modernization: Political Aspect", in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences* Vols. 9 & 10 (L-M), London: MacMillan.
2. Desai, Vandana and Robert B Potter, (2008), *The Companion to Development Studies*, London: Hodder Arnold Publication.
3. Gray, J. (1969), "The Economics of Maoism" in H. Bernstein (ed.) *Underdevelopment and Development-The Third World Today*, N.Y.: Penguin Pub. (pp. 254-273).
4. Harrison D. (1988), *The Sociology of Modernization and Development*, New Delhi: Routledge.
5. Horowitz, I. L. (1966), *Three Worlds of Development*, N.Y.: Oxford University Press (Selected chapters).
6. Lerner, D. (1968), "Modernization: Social Aspects" in D. L. Sills (ed.) *The International Encyclopedia of Social Sciences*, Vols. 9 & 10 (L-M) (pp. 387-394), London: MacMillan.
7. McMichael, Philip (2008), *Development and Social Change: A Global Perspective*, Newbury Park, CA: Pine Forge Press.

8. Mehta, S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
9. Myrdal, Gunnar (1968), *An Approach to Asian Drama*, Harmondsworth: Penguin.
10. Ness, G. D. (1970), *Sociology of Economics Development: A Reader*, N.Y.: Harper and Row (Selected Chapters).
11. Pandey, R. (1985), *Sociology of Development*, New Delhi: Mittal Pub.
12. Pandey, R. (1986), *Sociology of Underdevelopment*, New Delhi: Mittal Pub.
13. Parsons, Talcott (1966), *Societies: Evolutionary and Comparative Perspectives*, Englewood Cliffs, N. J.: Prentice-Hall, (pp. 20-29).
14. Sabbarwal, Sherry (2010), "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
15. Sharma, S. L. (1980), Criteria of Social Development, *Journal of Social Action*, Jan.-March.
16. Sharma, S. L. (1986), *Development: Socio-Cultural Dimensions*, Jaipur: Rawat (Chapter I).
17. Smelser, N. J. (1968), *Essays in Sociological Explanation*, Englewood Cliffs, N. J.: Prentice-Hall, (Chapter 6).
18. Walby, Sylvia (2009), *Globalization and Inequalities: Complexity and Contested Modernities*, Newbury Park, CA: Pine Forge Press.
19. Went, Robert (2000), *Globalization: Neo-Liberal Challenge, Radical Responses*. London: Pluto Press.

Additional Readings

1. Abraham, M. F. (1990), *Modern Sociological Theory: An Introduction*. New Delhi: OUP.
2. Apter, D. (1987), *Rethinking Development*, London: Sage.
3. Blomstrom, M. and B. Hettne (1984), *Development Theory in Transition*, London: Zed Books.
4. Desai, A. R. (1983), *India's Path of Development: A Marxist Approach*. New Delhi, OUP.
5. iddens, A. (1990), *The Consequences of Modernity*, Cambridge: Polity Press.
6. Haq, Mahbub Ul (1995), *Reflections on Human Development*, New Delhi: OUP.
7. Larrain, J. (1991), *Theories of Development: Capitalism, Colonialism and Dependency*, Cambridge, Polity Press.
8. Leeson, P. F. and Minogue, M. (eds.) (1988), *Perspectives on Development: Cross-Disciplinary Themes in Development*, Manchester: Manchester University Press.
9. Mehta, S.R. (2010), New Understanding of Indian Society: Incounters with Sociology, Shimla, Indian Institute of Advanced Study.
10. Mehta, Rani and Mehta, S.R. (2010), Social Transformation of an Island Nation: Development Wonder in Mauritius, New Delhi, Kalpaz Publications.
11. Schuurman, F. J. (1993), *Beyond the Impasse: New Directions in Development Theory*, London: Zed Books.

SOC R 414: SOCIAL STRATIFICATION: CONCEPTS & THEORIES

Objective

1. To sensitize students about elements of discrimination, exploitation, inequality and prevalence of hierarchies in everyday life.
2. To give a background of important sociological concepts.
3. To give theoretical formulations of important thinkers like Max Weber, Karl Marx, Talcott Parsons, Davis and Moore and Ralph Dahrendorf.
4. To sensitize students in terms of understanding contemporary formulations like the emerging of middle class and changing dimensions of caste and class.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts

Inequality, Differentiation; Ranking, Hierarchy and Social Stratification
Dimensions of Social Stratification
Caste, Class, Race, Ethnicity and Gender

Unit-II
Theoretical Formulations:
i) Functional Theory: Parsons, Davis and Moore;
ii) Conflict Theory: Karl Marx, R. Dahrendorf
iii) Multidimensional Theory: Max Weber

Unit-III

Emerging Class System
Class, Middle Class, New Middle Class
Correlates of Social Class: Occupation, Education and Income

Unit-IV

Changing Caste System

Change and Continuity in Caste in India

Resurgence of Caste (with special reference to Politics and Khap Panchayats)

Affirmative Action with regard to Scheduled Castes.

Suggested Readings

1. Beteille, Andre (1977) *Inequality Among Men*, Delhi, Oxford University Press.
2. Bendix, R & S. M. Lipset (eds.) (1970) *Class, Status and Power*, London, Routledge & Kegan Paul.
3. Beteille, Andre (ed.) (1969) *Social Inequality*, Penguin Books.
4. Cottrell, Allin (1984) *Social Classes in Marxist Theory*, London, Routledge & Kegan Paul.
5. Culvert, P (1982) *The Concept of Class*, London, Hutchison.
6. D'Souza V. S. (1981) *Inequality and its Perpetuation*, Delhi, Manohar Publication.
7. Eisenstadt, S. N. (1971) *Social Differentiation and Stratification*, London, Scott, Foresman & Co.
8. Giddens A. (1980*) The Class Structure of the Advanced Societies*, London, Unwin Hyman.
9. Gupta, Dipankar (ed) (1991) *Social Stratification*, Delhi, OUP.
10. Johnson, D. L. (1982*) Class and Social Development: A New Theory of the Middle Class,* Baverly Hills, Sage Pub.
11. Malik, S. C. (1986) *Determinants of Social Status in India*, Delhi, Motilal Banarsidas.
12. Sharma, K. L. (1986) *Social Stratification in India*, New Delhi, Manohar.
13. Srinivas, M. N., ed. (1996) *Caste: Its Twentieth Century Avatar*, New Delhi, Viking.
14. Singh G. (1985) *The New Middle Class in India: A Sociological Analysis*, Jaipur, Rawat Publication.
15. Singh, Yogendra (1977) *Social Stratification & Social Change*, Delhi. Manohar Publication.
16. Tumin, M. M. (1978) *Social Stratification*, Prentice Hall.

Additional Readings

1. Beteille, Andre (2002) *Equality and Universality: Essays in Political Theory*, Delhi, OUP.

2. Beteille, Andre (2002) *The Antinomies of Society*, Delhi, OUP.

3. Johnson, D. L. (ed.) (1985) *Middle Classes in Dependent Countries*, Beverly Hills, Sage Publication.

4. Lane, David (1982) *The End of Social Inequality*, New York, George Allen & Unwin.

5. Lloyd, Peter (1983) *The Third World Proletariat*, Boston, George Allen & Unwin.

6. Meale, R. S. (1984) *History and Class*, Oxford, Basic Blackwell.

7. Stinchcombe, A. L. (1986) *Stratification and Organization,* Cambridge, Cambridge University Press.

SEMESTER-II

SOC R 425: POSITIVISTIC SOCIOLOGICAL THEORIES

Objectives

This course exposes the students to the writings of sociologists constituting the School of Positivistic Theories who actually treat Sociology as a natural science. It also includes the more recent theories such as Structuration, Post-structuralism, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Positivism: Definition; Contribution of Auguste Comte, Emile Durkheim
Functionalism: Definition; Anthropological functionalism–Radcliffe-Brown, Malinowski

Unit-II

Structural-Functionalism: Talcott Parsons
Functional analysis of Robert K.Merton
Neo-Functionalism: Jeffrey Alexander

Unit-III

Structuralism: Levi-Strauss
Structural Marxism: Louis Althusser
Structuration: Anthony Giddens

Unit-IV

Conflict Theories: Karl Marx, Ralf Dahrendorf, Randall Collins

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2002) *Contemporary Sociological Theory,* California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory,* California, Pine Forge Press.
3. Alexander, J. (1985) *Neofunctionalism*, Beverley Hills, California, Sage.
4. Alexander, J. (1982) *Theoretical Logic in Sociolog*y, Berkeley, California, University of California Press.
5. Bauman, Z. (1976) *Towards a Critical Sociology: An Essay on Commonsense and Emancipation*, London, Routledge and Kegan Paul.
6. Clarke, S. (1981) *The Foundation of Structuralism*, Brighton, Harvest Press.
7. Colomy, P. (ed.) (1990*) Functionalist Sociology*, London, Edward Elgar.
8. Colomy, P. (ed.) (1990*) Neofunctionalist Sociology*, London, Edward Elgar.
9. Craib, Ian (1984) *Modern Social Theory*, Brighton, Harvester Press.
10. Derek, Layder (2006) *Understanding Social Theory*, New Delhi: Sage Publications.
11. Giddens, A. (1987) *Social Theory and Modern Sociology,* Cambridge, Polity Press.
12. Giddens, A. and J.H. Turner (1987) *Social Theory Today*, Cambridge, Polity Press.
13. Helle, H.J. and S.N. Eisenstadt (eds.) (1985*) Macro-Sociological Theory,* London, Sage.
14. Lane, M. (ed.) (1970) *Structuralism: A Reader*, London, Jonathan Cape.
15. Ritzer, G. (1988*) Sociological Theory*, N.Y., McGraw-Hill.
16. Turner, J.H. (1978) *The Structure of Sociological Theory,* Homewood, Dorsey Press.

Additional Readings

1. Craib, Ian (1992) *Modern Social Theory: From Parsons to Habermas*, London, Harvester Press.
2. Collins, Randall (1997) *Sociological Theory*, Jaipur, Rawat.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat.
4. Westby, David L. (1991) *The Growth of Sociological Theory*, New Jersey: Prentice Hall.
5. Zeitlin, I.M. (1998) *Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat.

SOC R 426: METHODOLOGY OF SOCIAL RESEARCH

Objective

This course familiarizes the students with the major Epistemological Schools in methodology of social sciences. It will also acquaint the students with the basic elements of social research and the major problems confronted by social scientists in arriving at objectivity and value neutrality.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Major Epistemological Schools in Methodology in Social Research

Positivistic and Interpretive; Rationalism and Empiricism; Objectivism and Constructivism

Unit-II

Major Methodological Dilemmas in Social Research

Subjectivity and Objectivity
Value neutrality
Methodological Individualism versus Methodological Collectivism
Limits of Quantification in Social Research
Logic of Triangulation

Unit-III

Sampling

Meaning and Importance
Universe, Population, Sampling Frame, Sampling Error
Types of Sampling:
Probability Sampling- Meaning, Types, Advantages and Disadvantages
Non- Probability Sampling- Meaning, Types, Advantages and Disadvantages
Theoretical Sampling

Unit-IV

Qualitative Research

Ethnography, Participatory Research, Action Research, Interviewing as Conversation, Narratives, Grounded theory, Naturalistic Inquiry, Strengths and Weaknesses of Qualitative Research.

Suggested Readings

1. Bernard, H. Russell (2000) *Social Research Method — Qualitative and Quantitative Approaches,* New Delhi, Sage Publication India Pvt. Ltd.
2. Bryman, Alan (2001) *Social Research Methods,* New York, Oxford University Press.
3. Cicourel, A.V. (1964), *Method and Measurement in Sociology,* Glencoe, Free Press.
4. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
5. Mukherjee, Partha N. (2000), *Methodology in Social Research*, New Delhi: Sage Publication.
6. Strauss, Anselm (1990) *Basics of Qualitative Research Grounded Theory Procedures and Techniques*, New Delhi: Sage Publication. —

Additional Readings

1. Bose, P. K. (1997) "Problems and Paradoxes of Inductive Social Science: A Critique of Ramkrishna Mukherjee", *Sociological Bulletin*, 46 (2), Sept.
2. Bryant, G.A., (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Hanmond, Michael, Howarth, Jane and Keat, Russel (1991) *Understanding Phenomenology,* Basil Blackwell.
4. Himmelstrand, Ulf (1986) *The Sociology of Structure and Action*, New Delhi, Sage Publication.
5. Hindess, Barry (1977*) Philosophy and Methodology in Social Sciences*. The Harvester Press.
6. Jenks, Chris (ed.) (1998) *Core Sociological Dichotomies*, New Delhi, Sage Publication.

SOC O 521: POPULATION AND SOCIETY

Objective

The course intends to discuss the inter-linkages between size, growth, composition and quality of population with societal components. It introduces the students to the importance of population issues in ancient thought to modern times. The course would include theoretical contributions from Malthusian-Neo-Malthusian, Marxian-Neo-Marxian and Developmentalist perspectives. Discussion will focus mainly on issues in India but of course in comparative context at the global and regional levels.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Population and Society:

Development of Early Thought- A Brief view from Roman, Greek, Chinese, Arabian and Indian writings.

Emergence of ideas from these thoughts on Population Equilibrium, Optimum Population, Population Control, Regulating Population through the institution of Marriage, Family and the State

Unit-II

Theoretical Contribution:

Malthus and Neo-Malthusian
Marxian and Neo-Marxian
Demographic Transition
Family Planning and Developmentalist Perspectives
Middle Path Approach

Unit-III

Trends of Population Growth at Global and Regional level and Future Growth.
Trends of Population Growth in India:

Pre and Post Independence Period, Future Growth by mid of 21st century.
Distribution of Population by Regional Balances.

Compositions of Population by Age, Gender, Rural-Urban, Education, and Broad Industrial Classification Categories.

Unit-IV

Towards Population Stabilization in India: Population Policy 2000 –Goals and Strategies Continuity and Change from earlier Population Policy in the Post Independent India. Reproductive & Child Health Approach.

Suggested Readings

1. Bhende, Asha & Tara Kanitkar (1999) *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, Donald J. (1969) *The Principles of Demography*, N.,Y. John Wiley.
3. Bose, Ashish (1991) *Demographic Diversity in India*, Delhi, B.R. Publishing.
4. Census of India (2001), Paper 2 (Rural-Urban Totals).
5. Chambliss, R. (1954), *Social Thought: From Hammurabi to Comte,* New York, Dryden Press.
6. Haberland, Nicole and Diana Measham (eds.) (2002) *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning,* New York, Population Council.
7. *International Encyclopaedia of Population*, 2 Vols.
8. Kleinmann, Davis S. (1980) *Human Adaptation and Population Growth: A Non-Malthusian Perspective*, New York, Monclairef.
9. Nam, Charles (1968) *Population and Society*, Boston, Houghton, Miffin Co.
10. *National Population Policy (2000),* Government of India.
11. Pachauri, S. (ed.) (1999), *Implementing Reproductive Health Agenda in India: the Beginning*, New Delhi, Population Council.
12. Petersen, William (ed.) (1972*), Readings in Population*. N.Y., Macmillan.
13. Population Studies, (1996) *Golden Jubilee Special Issue*, Great Britain (select papers).
14. Premi, M.K. (1991), *India's Population: Heading Towards a Billion*, Delhi, B.R. Publishing.
15. Sen, Amartya and Jean Dreze (1996), *Indian Development*, Oxford University Press.
16. Simon, Julian L. (1981), *The Ultimate Resource,* Princeton, Princeton University Press.
17. U.N., (1973) *Determinants and Consequences of Population Growth*, (Chapter-Introduction), NY.
18. U.N. (2002) *World Population Reports*, N.Y.

Additional Readings

1. Agarwala, S.N. (1984), *Population,* New Delhi: National Book Trust, India.
2. Agarwala, S.N. (1977), *India's Population Problems*, New Delhi: Tata McGraw Hill.
3. Hans,Raj (2001)*, Fundamentals of Demography*, New Delhi: Surjeet Publications.
4. Kulkarni, P.M. (2000), "Prospective Changes in the size and structure of India's Population – Implications of PFI Projections up to 2051" *in Millennium Conference on Population, Development and Environment Nexus*, New Delhi: PHD Chamber of Commerce and Industry.

5. Panandikar, V.A Pai (2000), "India's Demography and Democracy", in *Millennium Conference on Population, Development and Environment Nexus,*
New Delhi: PHD Chamber of Commerce and Industry.
6. Thompson, Warren, S. (1953), *Population Problems*, New York: McGraw-Hill.

SOC O 621: SOCIAL DIMENSIONS OF DEVELOPMENT

Objective

Economic development in society cannot remain unaffected by social-structural factors. Similarly, the social structure, too, is influenced by economic growth and modernization. With this in view, the present paper (a) provides the Gandhian, Marxist, Ecological, Post-modernist, Feminist and Sociological critiques of the economic growth and modernization models of development; (b) discusses how structural factors like caste, tradition, religion and population can impede or facilitate development; (c) examines how economic development and modernization can, in turn, lead to problems related to ethnicity, disparity, displacement and (d) discuss some of the new trends in development studies.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Critiques of Economic Paradigm of Development:

Gandhian, Marxist, Ecological, Feminist, and Sociological

Unit-II

Social-Structural and Cultural Factors in Economic Development:

Caste, Religion, Population, Traditions and Values

Unit-III

Socio-Cultural Consequences of Economic Development: Disparity, Displacement and Resettlement, Ethnic Resurgence, Erosion of Traditions and Values.

Unit-IV

New Directions in the Understanding of Development:
Capability Approach (Amartya Sen)
New Modernity and Risk Society (Ulrich Beck)
Human Rights and Development (Peter Uvin)
Inclusive Development

Suggested Readings

1. Biswas, S. C. (ed.) (1969) *Gandhi, Theory and Practice: Social Impact and Contemporary Relevance*, Shimla, IIAS. (Articles by V. Palshikar & Raj Krishna).
2. Boyne, Roy (2003) *Risk (Concepts in the Social Sciences)*, Berkshire: Open University Press.
3. Cernea, M. M. (1988) "Involuntary Resettlement and Development" *Finance and Development*, Sept. (pp.) 44-46.
4. Desai, Vandana and Robert B Potter, (2008) *The Companion to Development Studies*, London: A Hodder Arnold Publication.
5. Development and Populations, Special Issue (1990) *Yojana*, Vol. 34, Nos. 1 & 2, Jan. 26.
6. Dube, S. C. (1958) *India's Changing Villages: Human Factors in Community Development*, London: Routledge & Kegan Paul (Chapter 6).
7. Ferreira, Francisco H. G. and Michael Walton (2006) *World Development Report: Equity and Development*, Washington DC: World Bank & N.Y.: Oxford University Press.
8. Mehta, Rani (2014) Sociology and Environmental Sustainability, Jaipur, Rawat Publications.
9. Mishra, G. P., D. M. Diwakar and Ashok Mathur (2006) *Deprivation and Inclusive Development,* Lucknow: New Royal Book Co.
10. Pieterse, Jan Nederveen (2010) *Development Theory*, Newbury Park, CA: Pine Forge Press.
11. Quinlivan, Gary and Antony Davies (2003) "Ethical Development and the Social Impact of Globalization", *International Journal on World Peace*, Vol. 20.
12. Rao, M. S. A. (1969) "Religion and Economic Development" *Sociological Bulletin*, Vol. XVIII, No. 1, March (pp.1-15).
13. Sabbarwal, Sherry (2010) "Globalization, Democracy and Human Rights" in S. R. Mehta (ed.) *Socio-Cultural Diversities and Globalization: Issues and Perspectives*, Shimla: Indian Institute of Advanced Study.
14. Sardar Sarovar Project: Review of Resettlement and Rehabilitation in Maharashtra (1993) report by the Tata Institute of Social Sciences, in *Economic and Political Weekly*, Aug. 21, (pp. 1705-1714).
15. Sen, Amartya (2000) *Development as Freedom*. Oxford: Oxford University Press.
16. Sharma, S. L. (1994) "Salience of Ethnicity in Modernization: Evidence from India", *Sociological Bulletin*, Vol. 39, Nos. 1 & 2 (pp. 33-51).

17. Sharma, S.L. (1988) "Modernization of Indian Society: A Symbolic Intreractionist Perspective", *The Journal of Sociological Studies*, Vol.7, Jan. (pp.10-33).
18. Sinha, D. and S. R. Kao (eds.) (1988) *Social Values and Development*, New Delhi: Sage (Introduction and Chapter I).
19. "Sustainable Development" Special Issue (1991) *The European Journal of Development Research*, Vol. 3, No. I June.
20. UN, (2007) *Globalization and Inclusive Development (Note by the UNCTAD Secretariat)*, Geneva: United Nations Pub.
21. UN, (2009) *Millennium Development Goals Report 2009*, N.Y.: United Nations Publication.
22. Uvin, Peter (2004) *Human Rights and Development*, West Hartford, Connecticut: Kumarian Press.

Additional Readings

1. Apthorpe, Raymond, J. and A. Krahl (1986) *Development Studies: Critique and Renewal*, Leiden, the Netherlands: Brill.
2. Chakraborty, M. (1987) "Resettlement of Large Dams Oustees in India" in *People and Dams, Published by the Society for Participatory Research in Asia*, New Delhi.
3. Foster, G. M. (1973) *Traditional Societies and Technological Change*, New Delhi: Allied Pub. (Chapter 5).
4. Giddens, A. (1996) "Global Problems and Ecological Crisis" in *Introduction to Sociology*, IInd edition, New York: W.W. Norton & Co.
5. Momsen, J. (1991) *Women and Development in the Third World*, N.Y.: Routledge.
6. Nusebaum, Martha (1993) *The Quality of Life*, Oxford: Oxford University Press.
7. Pieterse, J. N. (ed.) (1992) *Emancipations, Modern and Postmodern*, London: Sage.
8. Pimpley, P. N., "Development and Downward Social Mobility in Independent India", Unpublished Monograph.
9. Sabbarwal, Sherry (1992-93) "Ethnicity: A Critical Review of the Conceptions and Perspectives", *Social Science Research Journal*, Vol. 1, Nos. 1 & 2, March-Sept., 1992-93.
10. Sharma S. L. (1986) *Development: Socio-cultural Dimensions*; Jaipur: Rawat Publications (Chapters 1, 7, 8, 9).
11. Sharma, S. L. (1989), "Social Development: Reflection on the Concept and the Indian Experience", *Guru Nanak Journal of Sociology*, Vol.10, Nos. 1 & 2 (pp. 37-55).

SOC O 721: SOCIOLOGY OF URBAN SETTLEMENTS

Objective

This course has been devised to introduce the students to the history of urban settlements and emergence of Urban Sociology as a discipline. The course would acquaint the students with the basic concepts, approaches and theoretical formulations relating to urban typology, urban ecology, urbanism etc., with a special focus on the diverse experiences of western and non-western, particularly Indian, regions. This course will provide the basic understanding to the students who wish to specialize in urban sociology.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Urbanization in Historical Perspective

Emergence of Urban Settlements
Urbanization in Developed and Developing Countries
Suburbanization
Pre-industrial, Industrial and Post-industrial and Colonial city
Metropolitan and Mega city

Unit-II

Approaches to Urban Society

Ecological-Classical Neo-Classical and Socio-Cultural
Technological and Demographic
Urbanism as a Way of Life
Rural-Urban Continuum
Marxist Approach to City

Unit-III

Internal Structure of Cities
Concentric-Zone Theory, Star theory, Sector theory, Multiple-Nuclei theory

Location of Cities

Central Place theory, Break-in-transportation, Specialized
Functions Urban Primacy and Rank-Size Rule.

Unit-IV

Urban Functions

Basic and Non-basic Functions
Generative and Parasitic Cities.
Functional Classification of Cities
Cultural Role of Cities

Suggested Readings

1. Castells, Manuel, (1997), *The Urban Question*, London, Edward Arnold.
2. Gill, Rajesh, (2009) *The Contemporary Indian Urban Society — Gender, Ethnicity and Governance*, Jaipur, Rawat Publication.
3. Gill, Rajesh (1989), "Some Issues in the Conceptualization of Urbanism", *Journal of Sociological Studies,* Vol. 8, Jan., 75-85.
4. Gill, Rajesh, (2000), 'Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization', *Sociological Bulletin*, Vol. 49, No. 2, September, pp. 211-228.
5. Guglar, Joseph (ed.), (1988), *Urbanization of the Third World*, Oxford, Oxford University Press.
6. Hatt, P.K. and Reiss, A.J. (eds.) (1951), *Cities and Society,* Illinois, The Free Press.
7. Lewis, Oscar, (1970), *"Further Observations on the Folk-Urban Continuum and Urbanization with special reference to Mexico City",* in Hauser and Schnore (eds.), *The Study of Urbanization,* New York, John Wiley and Sons.
8. Redfield, Robert and Milton B. Singer, (1954), "Cultural Role of Cities", in *Economic Development and Cultural Change,* Vol. 3, 53-73.
9. Sjoberg, Gideon, (1960), *The Pre-Industrial City,* Illinois, The Free Press.
10. Theodorson, G.A. (ed), (1982), Urban Patterns, Studies in Human Ecology, University Press.
11. Theodorson, George, (1961), *Studies in Human Ecology, Evanstow,* Harper and Row.
12. Weber, Max, (1960), *The City,* Translated by Martindale, London, Heinemann.
13. Wirth, Louis, (1938), "Urbanism as a Way of Life", *American Journal of Sociology,* Vol. 44, 1-24.

Additional Readings

1. Ficker, V.B. & H.S. Graves, (1971), *Social Science and Urban Crisis*, New York, The Macmillan Company.
2. Flanagan, William G., (1990), *Urban Sociology, Images and Structure*. Boston, Allyn and Bacon.
3. Gans, Herbert J., (1968), "*Urbanism and Sub-Urbanism as ways of Life: A Re-evaluation of Definitions*" in Sylvia F. Fava (ed.), *Urbanism in World Perspective*, New York, Thomas Y. Crowell Co.
4. Hoselitz, Bert F., (1960), *Sociological Aspects of Economic Growth,* Illinois, Free Press.
5. Spates, James, (1982), *The Sociology of Cities,* New York, St. Martin Press.

SOC O 821: STRUCTURAL MOORINGS OF GENDER OPPRESSION

Objective

The course aims at understanding the social-structural underpinnings of gender oppression persisting in India and worldwide. The agenda of gender empowerment fails to yield the desired outcomes because of structural impediments which are, nevertheless, difficult to overcome. On the one hand, there is the socially given identity of 'otherness' of the woman and on the other, there are contested spaces and processes of self-identity formation. Various contemporary issues, perspectives and challenges in feminist scholarship, movements, agency and empowerment will be explored in a holistic framework through the course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Unit-I

Social construction of gender: Structural myths of femininity and masculinity. Patriarchy and gendered division of labour.

Reflections on structural gender inequity in nature-culture debates.

Unit-II

Approaches to gender:
Black Feminism
Dalit Feminism

Unit-III

International Conventions with special reference to CEDAW Reports: Govt. of India, 2000 & 2007 (Articles 2 & 3)

Gendering the Human Development Indices: Recasting the Gender Development Index and the Gender Empowerment Measure for India: Govt. of India, 2009.

Changing Status of Women in India: Historical and Contemporary Perspective

Unit-IV

Women's movement in India: National Commission of Women

Gender Narratives in Indian Epics: Sita and Draupadi

Suggested Readings

1. Agarwal, Bina (ed.), 1994, *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge, Cambridge University Press.
2. Agarwal, Bina (ed.), 1998, *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi, Kali for Women.
3. Beauvoir, Simone de, 1989, *The Second Sex*, New York, Vintage Books.
4. Blumberg, Rae Lesser (ed.), 1991, *Gender, Family and Economy: The Triple Overlap*, California, Sage.
5. Bose, Mandakranta, 2000, *Faces of the Feminine in Ancient, Medieval and Modern India*, New Delhi, OUP.
6. Butler, Judith, 1999, *Gender Trouble: Feminism and the Subversion of Identity*, New York, Routledge.
7. Cohen, Beth (ed.), 1995, *The Distaff Side: Representing the Female in Homer's 'Odyssey'*, New York, OUP.
8. Collins, Patricia Hill, 2000, *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*, New York, Routledge.
9. Friedan, Betty, 1984, *The Feminine Mystique*, New York, Dell Publications.
10. Grogan, Sarah, 1999, *Body Image: Understanding Body Dissatisfaction in Men, Women and Children*, New York, Routledge.
11. Hooks, Bell, 2000, *Feminist Theory: From Margin To Center*, London, Pluto Press.
12. Jackson, Stevi & Jackie Jones, 1998, *Contemporary Feminist Theories*, Edinburgh, Edinburgh University Press.

13. Kalleberg, Arne L. & Rachael A. Rosenfield, 1990, *"Work in the Family and the Labour Market: Cross-national Reciprocal Analysis."* In *Journal of Marriage and Family*, Vol. 52, No. 2 (May), pp. 331-346.
14. Kimmel, Michael S., 2000, *The Gendered Society*, New York, OUP.
15. Lerner, Gerda, 1986, *The Creation of Patriarchy*, Oxford, OUP.
16. Leslie, Julia, 1991, *Roles and Rituals for Hindu Women*, Madison, Fairleigh University Press.
17. Lorber, Judith & Susan A. Farrell (eds.), 1991, *The Social Construction of Gender*, California, Sage.
18. Mandelker, Amy, 1993, *Framing Anna Karenina: Tolstoy, the Woman Question and the Victorian Novel*, Columbus, Ohio State University Press.
19. Mazumdar, Vina, 1979, *Symbols of Power: Studies on the Political Status of Women in India*, Mumbai, Allied Publishers.
20. Mies, Maria, 1980, *Indian Women and Patriarchy*, New Delhi, Concept.
21. Oakley, Ann, 1985, *Sex, Gender and Society*, London, Gower.
22. Omvedt, Gail, 1990, *Violence Against Women: New Movements and New Theories in India*, New Delhi, Kali for Women.
23. Ray, Raka, 2002, *Fields of Protest: Women's Movements in India*, New Delhi, Kali for Women.
24. Rege, Sharmila, 2006,*Writing Caste/ Writing Gender: Narrating Dalit Women's Testimonies*, New Delhi, Zubaan.
25. Roman, Leslie G. & Linda Eyre (eds.), 1997, *Dangerous Territories: Struggles for Difference and Equality in Education*, New York, Routledge.
26. Weitz, Rose (ed.), 1998, *The Politics of Women's Bodies: Sexuality, Appearance and Behaviour*, New York, OUP.

Additional Readings

1. Agnes, Flavia, Sudhir Chandra & Monmayee Basu (eds.), 2004, *Women and Law in India*, New Delhi, OUP.
2. Desai, Neera & Maitreyi Krishnaraj (eds.), 1987, *Women and Society in India*, New Delhi, Ajanta.
3. Desai, Neera (ed.), 1988, *A Decade of the Women's Movement in India*, New Delhi, Himalaya.
4. Leslie, Julia (ed.), 2000, *Invented Identities: The Interplay of Gender, Religion and Politics in India*, New Delhi, OUP.
5. Shulamith, Firestone, 2003, *The Dialectic of Sex : The Case For Feminist Revolution*, New York, Farrar, Straus and Giroux.

SOC O 921: PEASANTS AND RURAL SOCIETY IN INDIA

Objective

The basic purpose of the course is to apprise the students about the basic differences of rural sociology *vis-a-vis* the urban sociology, and the crucial role played by the peasantry therein. Also how the traditional social institutions, agricultural economy and the caste system together build up social structure which is entirely different from the ideal market-oriented capitalist institutions. The course would also throw light on the nature of changes taking place in the rural social structure after the presentation of money and market economy linked to the global capital.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course outline

Unit-I

Significance of the study of Rural Society as a separate subject
Basic concepts/definition: Peasant, Rural Society, Village and Indian Village.
Rural Social Institutions: Family, Kinship, Class, Tribe, Caste System, Jajmani System, Religion, Political Institutions and Factions.

Unit-II

Rural India under the British rule:
Introduction of limited Land Reforms

Introduction of Commercial Crops and their Social and Political Repercussion
Introduction of Modern Industry and New Rural-Urban Linkages

Social Transformation in Independent India:
Shift from Feudal to Capitalist form of Agriculture and Change in Social Structure.
Role of Land Reforms
Role of Peasant Movement

Unit-III

Globalization and Crises of Rural Society
Impact on Economy
Impact on Social Institutions

Unit-IV

Emerging Social Ecology
Democratic Process and Caste-Ethnic Relations
Panchayati Raj Institutions and Neo-Village Republics

Suggested Readings

1. Desai, A.R. (1977) *Rural Sociology in India,* Bombay: Popular Prakashan.
2. Frankel, F.R. and Rao, M.S.A. (1989) *Dominance and State Power in Modern India*, Bombay: OUP.
3. Mencher, J.P, (1983) *Social Anthropology of Peasantry*, Part-III, OUP.
4. Mishra, Rajeeb (2006) *Voluntary Sector and Rural Development: Concepts, Practice and New Approach to Remove Rural Poverty,* New Delhi, Rawat Publications.
5. Omvedt, Gail (ed.) (1982) *Land, Caste and Politics in India*, Delhi: OUP.
6. Reddy, A.Vinayak and Charyulu, M.Yadagira. (Eds.). (2008). *Rural Development in India: Politics and Initiatives,* New Delhi, New Century.
7. Shanin, Theodor (ed.), (1987) *Peasants and Peasant Society*, New Delhi: Penguin.

Additional Readings

1. Appadurai, Arjun, (1996) *Modernity at Large: Cultural Dimensions of Globalization*; New Delhi, OUP
2. Beck, Ulrich (2000) *What is Globalization?* London: Polity.
3. Berch, Berberogue, ed. (1992) *Class, State and Development in India,* New Delhi: Sage Publications.
4. Thorner, D and Thorner, E. (1962) *Land and Labour in India,* Bombay: Asia Publications.
5. Walter, C. Neala, (1990) *Developing Rural India: Policies, Politics and Progress*, New Delhi, Allied Publishers.

SOC O 922: ORGANIZATIONAL THEORY AND BEHAVIOUR

Objective

The course provides (a) an introduction to the concept of organization; (b) discusses the various theoretical approaches to organizations; (c) familiarizes the student with the concepts of organizational ideologies and culture; and (d) focuses on the behavioral dimensions in organizations.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.
The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Organization:

Definition, Features and Typologies based on Function, Regulation, Technology and Structure and Environment

Unit-II

Theoretical Perspectives:

Classical – Marx, Weber, Taylor (Scientific Management);

Neo-Classical – Human Relations approach with special reference to the Hawthorne studies;

Modern – Systemic (closed, open and socio-technical systems approach by the Tavistock School) and Interactional (Goffman and the total institution)

Unit-III

Organizational Ideologies and Culture:

Ideologies – Structuralism, Psychologism, Consensualism, Welfarism and Legalism; Culture- sub-cultures and socialization

Unit-IV

Behaviour in Organizations:

Job satisfaction, Job Commitment, Decision making and Stress Management

Suggested Readings

1. Baron, Robert A. (1976) *Behavior in Organizations*, N.Y.: John Wiley.
2. Beach, L. R. (1997) *Psychology of Decision Making: People in Organizations*, Thousand Oaks: Sage.
3. Biddle, D. and R. Evenden (2000) *Human Aspects of Management*, New Delhi: JAICO Publishing House.
4. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: OUP
5. Eldridge, J. E. T. & A. D. Crombie (1974) *A Sociology of Organization*, London: Nelson.
6. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London: Sage Publications.
7. Pestonjee, D. M. (1999) *Stress and Coping: The Indian Experience*, New Delhi: Sage.
8. Robbins, S. P. (1999) *Organization Theory: Structure, Designs and Applications*, New Delhi: Prentice-Hall.
9. Wieland, George F. & R. A. Ullrich (1976) *Organizations: Behavior, Design and Change*, Homewood, Illinois: Richard D. Irwin Inc.

Additional Readings

1. Blau, P. M. & W. R. Scott (1963) *Formal Organizations: A Comparative Approach*, London: Routledge and Kegan-Paul.
2. Blumberg R. L. (1987) *Organizations in Contemporary Society*, Englewood Cliffs: N. J. Prentice Hall Inc.
3. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.
4. Etzioni, A. (eds.) (1969) *A Sociological Reader on Complex Organizations*, 2nd ed., N.Y.: Hold & Reinhard & Winston.
5. Etzioni, A. (1972) *Modern Organizations*, N. Delhi: E.E.E. Prentice-Hall of India.
6. Hall, Richard H. (1972) *Organizations: Structure and Process*, 2nd ed., Englewood Cliffs: N.J. Prentice Hall Inc.
7. Litterer, J. A. (ed.) (1969) *Organizations: Structure and Behavior*, N.Y.: Wiley & Sons.
8. Porter, L. W. *et al.* (1975) *Behavior in Organizations*, N.Y.: McGraw Hill.

9. Reitz, H. J. (1977) *Behavior in Organizations*, Homewood Illinois: Richard D. Irwin.
10. Sharma, K. L. (1981) *Voluntary Business Associations in Organizational Frame*, Department of Sociology: Panjab University, Chandigarh.
11. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 923: BASIC SOCIAL STATISTICS

Objective

This paper is designed to familiarize the students about basic statistical concepts, quantitative techniques for description and induction of sociological data. In the first and second units, students are introduced to measures of central tendency and measures of dispersion, bivariate distribution, etc. The third unit includes measures of association, probability, standard scores, etc. In the last unit, students are exposed to various inferential methods.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be **9** questions in all. The first question is **compulsory** (Theory portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable Electronic Calculators and Statistical Tables is permitted for the examination.

Course Outline

Unit-I

Statistics in Social Analysis - Functions of Statistics in social analysis, Limitations of Statistics

Variables-discrete and continuous, quantitative and qualitative; independent and dependent

Levels of measurement-Nominal, ordinal and interval

Frequency distribution, grouping error, cumulative frequency distribution, Arithmetic mean, median and mode

Unit-II

Range, semi-interquartile range, average absolute deviation, variance, standard deviation, coefficient of variation, Symmetry and Kurtosis

Bivariate distributions-Bivariate contingency tables, rules for percentaging bivariate frequency tables

Unit-III

Measures of Association-Lambda, Cramer's V, Spearman's rank correlation, Gamma and Pearson's product moment correlation coefficient

Elements of probability- 'a priori' & empirical probability, properties of probability Normal probability distribution, area under the normal curve, standard scores, use of standard scores

Unit-IV

Statistical Inference-Simple random sampling, sample and universe, statistic and parameter, sampling distribution, standard error of statistic, level of significance, critical region

Tests of significance-Z and `t' tests for significance of mean (2 independent samples); Chi-square test for AXB contingency table.

Suggested Readings

1. Blalock, H.M. (1979*) Social Statistics*, New York, McGraw Hill Book Company.

2. Loether, H.J. and Tavish, Mac D.G. (1974) *Descriptive Statistics for Sociologists: An Introduction,* Boston, Allyn and Bacon, Inc.

3. Mark Sirkin R. (1995) *Statistics for the Social Sciences*, London, Sage Publications.

4. Muller John and Kar. F. Schusseller and Herbert, L. Costner, *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.

5. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

6. Weiss, Roberts (1968) *Statistics in Social Research*, New York John Wiley & Sons, Inc.

Additional Readings

1. Jane, L. Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*; Sage Publications: London.

2. Deshpande, J.V., Gore, A.P., Shanubhogve (1995), *Statistical Analysis of Nominal Data*: New Age International Publishers: New Delhi.

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SEMESTER-III

SOC R 438: INTERPRETIVE SOCIOLOGICAL THEORIES

Objective

This course sensitizes the students to the works and ideas of sociologists who have contributed to the perspective of Interpretive Sociology, as against the Positivistic sociology. It focuses on the work of Action theorists, Interactionist theorists and the scholars belonging to the Frankfurt School of Critical Theory.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Action Theories : Max Weber, Talcott Parsons

Unit-II

Symbolic Interactionism : G.H. Mead, H. Blumer

Phenomenology : E. Husserl, A. Schutz

Unit-III

Dramaturgy : E. Goffman

Ethnomethodology : H. Garfinkel

Unit-IV

Critical Theory : J. Habermas

H. Marcuse

Suggested Readings

1. Adams, Bert N. and Sydie, R.A. (2001) *Sociological Theory*, California, Pine Forge Press.
2. Adams, Bert N. and Sydie, R.A., (2002) *Contemporary Sociological Theory*, California, Pine Forge Press.
3. Alexander, J. (1982) *Positivism: Presuppositions and Current Controversies*, Vol. I of Theoretical Logic in Sociology, Barkeley and Los Angeles, University of California Press.
4. Bernstein, R.J. (ed.) (1985) *Habermas and Modernity,* Cambridge Polity Press.
5. Blumer, H. (1969) *Symbolic Interactionism*, Englewood Cliffs, Prentice Hall.
6. Craib, Ian (1984) *Modern Social Theory,* Brigton, Harvestor Press.
7. Douglas, J. (ed.) (1971) *Understanding Everyday Life*, London, Routeledge & Kegan Paul.
8. Garfinkel, H. (1984*), Studies in Ethnomethodology*, Cambridge, Polity Press.
9. Giddens. A. (1987*) Social Theory and Modern Sociology*, Cambridge, Polity Press.
10. Gill, Rajesh, 2005 "Controversies in Sociology: An Introspection", *Kerala Sociologist*, Vol. XXXIII, No. 2, December, pp. 49-61.
11. Goffman, E. (1959) *The Presentation of Self in Everyday Life*, New York, Doubleday.
12. Gurwitsch, A. (1962) "The Commonsense World as Social Reality", *Social Research*, 28-1, 71-93.
13. Habermas, J. (1984) *Theory of Communicative Action*, Cambridge, Polity Press.
14. Heritage, John C. (1987) "Ëthnomethodology" in A. Giddens and Turner (eds.), *Social Theory Today*, Cambridge Policy Press, 347-382.
15. Heritage, J. (1989) *Garfinkel and Ethnomethodology*, Cambridge, Polity Press.
16. Joas, H. (1987) "Symbolic Interactionism" in A. Giddens and J. H. Turner (eds.) *Social Theory Today*, Cambridge, Polity Press, 82-115.
17. Natanson, M. (1970) "Phenomenology and Typification: A Study in the Philosophy of A. Schutz", *Social Research* 37 (1), 1-22.
18. Parsons, Talcott, (1951) *The Social System*, Glencoe, III, The Free Press.
19. Weber, Max (1947) *The Theory of Social and Economic Organization*, Glencoe, III, The Free Press.
20. Zaner, R. M. (1961) "Theory of Intersubjectivity: Alfred Schutz", *Social Research*, 28-1, 1-17.

Additional Readings

1. Collins, Randall (1997*) Sociological Theory*, Jaipur, Rawat Publications.
2. Elliott, Anthony and Bryan S. Turner (eds.) (2001) *Profiles in Contemporary Social Theory*, London, Sage Publications.
3. Turner, J. (1995) *The Structure of Sociological Theory*, Jaipur, Rawat Publications.
4. Zeitlin, I.M. (1998*) Rethinking Sociology, A Critique of Contemporary Theory*, Jaipur, Rawat Publications.

SOC R 439: METHODS AND TECHNIQUES IN SOCIAL RESEARCH

Objective

Students in this Semester are supposed to do field work as a part of this Course. Hence, the Course familiarizes the students with basic elements of scientific method, apart from the process of field work, data collection and finally report writing. This course trains the students as to how to draw influences and conclusions out of empirical research.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Scientific Method:

i) Definition and Aims: Explanation; Generalization; Prediction; Control
ii) Basic Elements: Concepts, Constructs, Hypotheses, Fact, Theory
iii) Induction and Deduction

Unit-II

Research Design:

Exploratory, Descriptive, Experimental, Quasi-experimental, Comparative, Longitudinal and Panel studies

Problems of Experimental Studies in Social Research.

Unit-III

Measurement and Scaling:

Measurement: Meaning, Levels, Indices, Operationalization, Problems

Scaling Techniques - Thurstone, Likert, Guttman and Bogardus Scales Reliability and Validity of Scales.

Unit-IV

Field Work:

Meaning and Uses

Techniques of Data Collection:

Observation: Structured and Unstructured; Participant and Non-Participant;

Interview Schedule: Structured and Unstructured

Interview: Types; Advantages and Disadvantages

Questionnaire: Types, Advantages and Disadvantages

Case Study; Content Analysis;

Data Analysis: Coding, Tabulation and Report Writing

Suggested Readings

1. Bailey, K. D., (1997) *Methods of Social Research*, New York, The Free Press.
2. Bernard, H. Russell (2000) *Social Research Methods – Qualitative and Quantitative Approaches*, New Delhi, Sage Publications India Pvt. Ltd.
3. Colin, R. (2000) *Real World Research* Oxford, Blackwell,
4. Goode, W.J. and Hatt P.K. (1952), *Methods in Social Research*, New York: McGraw Hill, International Students Edition.
5. Kerlinger, Fred N. (1973), *Foundations of Behavioural Research*, New York, Holt, Rinehart & Winston, INC.
6. Moser and Kalton (1980) Survey *Methods in Social Investigation.* Heinemann Educational Books.
7. Punch, K. F, (1998) *Introduction of Social Research, Quantitative & Qualitative Approach*, New Delhi, Sage Robson,
8. Seltiz, Claire, et.al. (1959) *Research Methods in Social Relations,* New York, Henry Holt & Co.
9. Tashakkori, A. and Charles Teddlie, (2003) *Handbook of Mixed Methods,* New Delhi, Sage.
10. Tim, May, (2001) *Social Research: Issues, Methods and Process*. Buckingham, Open University Press.

Additional Readings

1. *Barly, Kenneth, D. (1978) Methods of Social Research,* New York. The Free Press.
2. Bryant, G.A. (1985) *Positivism in Social Theory and Research*, Macmillan.
3. Giddens, Anthony, (1974), *Positivism and Sociology*, London: Hienmann.
4. Hindess, Barry (1977) *Philosophy and Methodology in Social Sciences*,
5. The Harvester Press.
6. Madge, John, (1976) *The Tools of Social Science*, London, Longman.

SOC O 532: BASIC METHODS IN POPULATION STUDIES

Objective

To understand the basic dynamics of population, it is important to have basic knowledge of demographic methods. This course prepares the students to explore the sources of demographic data, learn basic techniques to handle these data and develop measures to understand changes in population size, fertility, mortality and marriage.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Sources of Demographic Data: Census, Civil Registration, Population Surveys, and UN Sources of Demographic Data. Nature and Quality of these Data Sources.

Changes in Population Size: Intercensal Change, Average Annual Growth Rate, Linear Growth Rate, Geometric Growth Rate, Exponential Growth Rate; Interpolation and Extrapolation.

Unit-II

Population Composition and Distribution: Literacy Rate, Rural-Urban, Labour Force Participation Rate.

Age and Sex Composition: Problems related to Age Data, Age Distribution, Age Heaping Effects, and Adjustment of Age Data. Dependency Ratios. Construction of Age-sex pyramids, Sex Ratio.

Unit-III

Measures of Mortality: Computation of Crude Death Rate, Age-Specific Death Rates; Infant Mortality Rate, Perinatal, Neonatal, Post-Neonatal Mortality Rate.

Life-Table Method: Types of Life Tables, Basic Columns of Life Tables. Life Table Stationary Population. Application of Life Table approach.

Unit-IV

Measures of Fertility: Computation of Crude Birth Rate and its uses, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate, Child Woman Ratio

Contraceptive Prevalence Rate, Abortion Rate & Foetal Wastage

Measure of Marriage & Divorce: Crude Marriage Rate, Divorce Rate. Mean Age at Marriage from Census and Survey Data.

Suggested Readings

1. Census of India*, Age and Life Tables*, Series of India, Paper 2 , GOI, 1974.
2. Hanp, Arthur and Thomas, T. (2001*) Population Reference Bureaus,* Population Handbook, 4th ed., Washington, PR3.
3. Mishra, Bhaskar D. (1993) *Introduction to the Study of Population.* New Delhi, National Book Population Reference Bureau, Trust (Latest Edition)
4. Shryock, Henry S. Jacob S. Siegel and Others (1976) *Methods and Materials of Demography.* (Condensed Edition) Harcourt Brace, Academic Press.
5. Spiegelman, Mortimer, (1968) *Introduction to Demography*, Cambridge, Harvard University Press.
6. *UN Manuals* Nos. 1, 2 & 3, United Nations.

Additional Readings

1. Cox, Peter (1959), *Demography,* London: Cambridge University.
2. Haupt, A. and Kane, T. (1998), *Population Handbook*, Washington DC, Population Reference Bureau.
3. Newell, Colin (1988), *Methods and Models in Demography*, London, Belhaven Press.

SOC O 632: SOCIAL DEVELOPMENT IN INDIA

Objective

This paper examines the development process in India focusing mainly on the issues of

(a) the India State and planned development; (b) the role of voluntary sector in India's development; (c) the assessment of the problems of, and measures taken to improve the conditions of the underprivileged groups such as the SCs, STs and BCs; and (d) to consider the phenomenon of globalization and its consequences for the Indian society.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Social Development: Concept, Meaning and Indicators
Development Planning in India Historical Overview and present status Planning Commission-Niti Aayog)

Unit-II

Voluntary Sector and Development: Voluntary sector organizations, their Potential and Limitations as Agencies of Social Transformation; Case Studies of Voluntary organisations.

Unit-III

Development of Disadvantaged Groups: Problems of Scheduled Castes (SCs), Scheduled Tribes (STs) and Backward Classes (BCs); Compensatory Discrimination through Constitutional and Legal measures; Development Schemes for SCs, STs and BCs; Commissions and their Recommendations: Mandal Commission and the Reservation Debate; Sociological Appraisal of the Development Policies for STs, SCs and BCs

Unit-IV

Globalization and its Social Implications in India: Impact on Agriculture and Labour; Women and Youth.

Suggested Readings

1. Basu, A. R. (1985) *Tribal Development Programmes and Administration in India*, New Delhi: National Book Organization. (Chapters 2 & 15)
2. Basu, D. K. and R. Sisson (eds.) (1986) *Social and Economic Development in India: A Re-assessment*, New Delhi: Sage, (Chapters by Ser & Galanter).
3. Chitnis, Suma (1981) *A Long Way to Go: Report of a Survey of Scheduled Caste High School and College Students*, New Delhi: Allied Pub. (pp. 107-143).
4. Choudhary, K. (1990) "Reservations: A Systematic Compulsion", *Mainstream*, March 3. (pp. 23-26)
5. Conference Number on "Economic Restructuring in India and Labor" (1992) *The Indian Journal of Labor Economics*, Vol. 35, No. 4. Oct-Dec.
6. Desai A. R. (1985) *India's Path of Development: A Marxist Approach*, Bombay: Popular Prakashan (Chapter 2).
7. GO, (1993) "Farmers Movement: Fighting for Liberalization", *Economic and Political Weekly*, December 11 (pp. 2708-2710)
8. Jain, Devaki, (1980) *Quest for Power: Five Indian Case Studies*, Ghaziabad, Vikas
9. Jena, N. A. (1994) "An Inquiry into Popular Participation", *Participation and Governance*, Vol. I, No. I, July (pp.8-17)
10. Khan, Murtaz Ali (1980) *Scheduled Castes and Their Status*, New Delhi: ICSSR, (Introduction)
11. McPhail, T. L. (1992) "Electronic Colonialism and the World Information Order" in A. Giddens (ed.) *Human Societies: A Reader, Cambridge*, Polity Press (pp.289-291)
12. Mehta , S.R. (2010), Socio-Cultural Diversities and Globalization: Issues and Perspectives (ed.), Shimla, Indian Institute of Advanced Study.
13. Misra, S. K. and V. K. Puri (1994) *Indian Economy: Its Development Experience*, Bombay: Himalaya Pub.
14. Mowli, V. C. (ed.) (1990) *Role of Voluntary Organizations in Social Development*, New Delhi: Sterling Pub. (Preface & Conclusion)
15. Petras, James (1994) "Cultural Imperialism in Late 20th Century", *Economic and Political Weekly*, Aug. 6 (pp. 2070-2073)
16. Pimpley, P. N. (1988) *Voluntaristic Approach to Development*, Unpublished Monograph.
17. Rajput, Pam and H. L. Swarup (eds.) (1994) *Women and Globalization: Reflections, Options and Strategies*, New Delhi: Ashish Pub. House.
18. Rao, V. M. (1994) "Agriculture and Liberalization: Some Implications for Development Policies", *Economic and Political Weekly*, April 16-23 (pp.999-1003)
19. Redelift, Michael (1984) *Development and the Environmental Crisis: Red or Green Alternatives?* London: Methuen Inc.
20. Sabbarwal, S. (1997) "Ecological and Socio-Economic Consequences of International Tourism for the Less Developed Countries" in S. R. Mehta (ed.)
21. *Poverty, Population and Sustainable Development: Essays in Honour of Professor V. S. D'Souza*, Jaipur: Rawat.
22. Schchiananda (1977) *Harijan Elite: A Study of their Status, Network, Mobility and Role in Social Transformation*, New Delhi: Thomson Press (Chapter 6).
23. Shankar, K. (1989) "Planning Ethos in India", *Mainstream*, Sept. 23 (pp.7-8)

24. Sharma, S. L. (1992) "Social Action Groups as harbingers of Silent Revolution", *Economic and Political Weekly*, Vol. 27, No. 47
25. Singh, A. K. (1984) *Tribal Development in India*, New Delhi: Amar Prakashan, Chapters 2, 7 & 8
26. Singh, S. N. (1994) *Reservations: Problems and Prospects*, New Delhi: Uppal Pub. House, (Introduction & Chapter 3)
27. "Sustainable Development", Special Issue (1991), *The European Journal of Development Research*, Vol. 3, No. 1, June
28. "Symposium on Implications of Globalization" (1995) *Sociological Bulletin*, Vol. 44, (Articles by Mathew, Panini & Pathy)
29. Yadav, K. C. (1994) *India's Unequal Citizens: A Study of OBCs*, New Delhi: Manohar Pub. (Introduction & Chapters 3 & 5).

Additional Readings

1. Appadurai, A. (1997) *Modernity at Large: the Cultural Dimensions of Globalization*, New Delhi: OUP
2. Dereze, J. and Amartya Sen (1996) *India: Economic Development and Social Opportunity*, New Delhi: OUP
3. Keily, R. and P. Marflet (eds.) (1998) *Globalization and the Third World*, London: Routledge.
4. Peet, R. (1991) *Global Capitalism: Theories of Societal Development*, Routledge
5. Waters, M., (1995) *Globalization*, New York: Routledge & Kegan Paul.

SOC O 633: RURAL DEVELOPMENT IN INDIA

Objective

The objective of the course is to familiarize the students with the history of rural development in India, role of the state and farmers in it, and the impact of Market forces on agriculture.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Perspectives on Rural Development:
Liberal, Marxist, Gandhian

Unit-II

State and Rural Development: Land Reforms
Community Development Programs
State and Alleviation of Rural Poverty through Various Programs: SGSY, IAY, EAS, JRY. etc.
State and Education of Rural Masses
Role of Panchayati Raj Institutions

Unit-III

Rural Development and the Role of Peasant Movements:
Pre-Independence Period: Tribal Revolts, Kisan Sabha, Gandhi and Peasants and Telangana Uprising
Post-Independence Period: Tenant Movement, Naxalite Movement and Fresh move for Land Reforms, Farmers Movement.

Unit-IV

Rural Development and the Market Forces:
Green Revolution and its Impact on Rural Society
Globalization, Commercialization of Agriculture,
Impact on Non-Farm Employment and Distributive Justice
W.T.O. and the Process of Marginalization
Challenges of Sustainable Rural Development

Suggested Readings

1. Berch, Berberogue, (ed.) (1992) *Class, State and Development in India*, New Delhi, Sage Publications.
2. Desai, A.R. (ed.) (1979) *Peasant Struggles in India*, Bombay: Oxford University Press.
3. Desai, A.R (ed.) (1986) *Agrarian Struggles in India after Independence*, Oxford University Press.
4. Desai, A.R. (1977) *Rural Sociology in India,* Bombay, Popular.
5. Dhanagre, D.N. (1983) *Peasant Movements in India,* Delhi: Oxford Univ. Press.
6. Nadkarni, M.V. (1987) *Farmers' Movement in India*, Delhi, Allied Publishers.

7. Radhakrishana, P. (1989) *Peasant Struggles: Land Reforms and Social Change in Malabar 1836-1982,* New Delhi: Sage.
8. Shah, Ghanshyam (1990) *Social Movements in India: A Review of Literature*, New Delhi: Sage.
9. Singh, K.S. (1982) *Tribal Movements in India*, New Delhi: Mandra.

Additional Readings

1. Franda Marcus (1979), *India's Rural Development: An Assessment of Alternatives*, London: Indian Univ. Press.
2. Hoogvelt, Ankie (1998) *The Sociology of Development*, London: Macmillan.
3. Jain, L.C. (1979) *Grass Without Roots- Rural Development Under Government*, New Delhi: Sage.
4. Mehta, S.R. (1984) *Rural Development: Policies and Programmes*, New Delhi: Sage Publications.
5. Rao, S.K. (ed.) (1981) *Rural Development in India: Some Facets*, Hyderabad: NIRD.
6. Rao, S.V. (1985) *Education and Rural Development*, New Delhi: Sage Publications.
7. Rao, V.M. and Aziz, Abdul (1989) *Poverty Alleviation in India-Programme and Action,* New Delhi: Ashish.

SOC O 732: PROBLEMS OF URBAN INDIA

Objective

This course familiarizes the students with the contemporary urban situation in India, apart from the historical trends and patterns of urbanization in India. Focus shall be on the recently emerging urban problems and the approaches which have been used to tackle them. The students will be exposed to the most pertinent issues and controversies relating to urban population of India, so as to enable them to develop research problems for further specialization in the given area.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

India's Urbanization

Historical account of Urbanization in India:
Trends and Pattern, Features
Urbanism and Urbanization, Over-urbanization
Rural-Urban Migration. Urban Informal Sector, Tertiarization
Mega Cities of India

Unit-II

Urban Basic Services

Definition, Intra and Inter-City variations:
Water Supply, Power, Sanitation and Sewerage, Solid Waste Management, Education, Health, etc.

Environmental Pollution

Cities and Pollution, Causes, Types and Remedies.
Urban Transport and Traffic Management.

Unit-III

Approaches to Urban Management

Approaches:
Public Provision, Privatization and People's Participation,
Community Participation- Strengths and Weaknesses.
Lessons from Empirical Cases

Unit-IV

Urban Poverty in India

Concept of Urban Poverty; Theoretical Explanations- Structural and Cultural,
Economic and non economic indicators.

Culture of Poverty, Critique.

Empirical situation of Urban poverty in India, Housing, Slums, Features of Indian slums and Causes, Women and Child Poverty.

Suggested Readings

1. Bose, Ashish, (1994). *India's Urban Population- 1991 Census Data.* New Delhi, Wheeler Publishing Co. Ltd.

2. Bose, Ashish (1970). *Urbanization in India: An Inventory of Source Materials,* Bombay, Academic Books Ltd.

3. Census of India, every successive Report.

4. Dentler, Robert A., (1977). *Urban Problems, Perspectives and Solutions*. Chicago, Rand, McNally College Publishing Co.

5. D'Souza, Victor S., (1979). "Socio-Cultural Marginality: A Theory of Urban Slums and Poverty in Cities", in *Sociological Bulletin,* Vol. 28, Nos. 1-2.

6. Flanagan, William G. (1990). *Urban Sociology, Images and Structure.* Boston, Allyn and Bacon.

7. Gill, Rajesh (2009). *The Contemporary Indian Urban Society: Ethnicity, Gender and Governance*. New Delhi, Bookwell.

8. Gill, Rajesh 1993. "Urban Poverty in India: Theoretical Understanding and Policy Implications", in *Urban India.* Vol. XIII, July-Dec., No. 2.

9. Gill, Rajesh 1997. "Issues and Perspectives on Urban Poverty: The Indian Experience" in *Urban India,* Vol. XVII, Jan.-June/July-Dec. Nos. 1&2.

10. Misra, R.P. and K. Misra.1998. Million Cities of India. New Delhi, Sustainable Development Foundation.

11. Sovani, N.V. 1966. *Urbanization and Urban India.* Bombay, Asia Publishing House.

12. Tiwari, Vinod K. and Rao, W.P. (eds.) 1986. Indian Cities-Ecological Perspectives. New Delhi, Concept Publishing House.

13. Wratten, Ellen 1995. "What is Urban Poverty? Definitions and Characteristics". In *Environment and Urbanization*. Vol. 7 No.1.

Additional Readings

1. Garber, Judity A. & Turner, R.S. (eds.) 1995. *Gender in Urban Research*. Urban Annual Review, Sage Publications.

2. Gill, Rajesh 2000. "Cities and Ethnic Identities: A Case of De-ethnicization or Re-ethnicization?", in *Sociological Bulletin.* Vol. 49, No. 2, Sept.

3. Gill, Rajesh 1999. "Seventy-Fourth Constitution Amendment and Political Empowerment of Women in Punjab: A Study in Urban Governance", in *Urban India,* XIX(1).

4. Misra, R.P. and Misra, Kamlesh, 1998. *Million Cities of India.* New Delhi, Sustainable Development Foundation.

5. Mohanty, Bidyut (ed.) 1993. *Urbanization in Developing Countries, Basic Services and Community Participation.* New Delhi, Concept Publishing Company.
6. National Institute of Urban Affairs, 1988. *State of India's Urbanization.* New Delhi, NIUA.

7. National Commission on Urbanization 1988, *Report,* Vols. 1&2.

8. Pactone, Michael 1990. *Urban Problems-An Applied Urban Analysis.* London, Routledge.

9. Press, Irwin and Smith, M.F. *Urban Place and Process-Readings in The Anthropology of Cities.*

10. Ramachandran, R. 1989. *Urbanization and Urban Systems in India.* New Delhi, Oxford University Press.

11. Rao, M.S.A. 1974. *Urban Sociology in India, Reader and Source Book.* New Delhi, Orient Longmans Ltd.

12. Spates, James. 1982. *The Sociology of Cities.* New York, St. Martin Press.

13. Wit, J.W. 1996. *Poverty, Policy and Politics in Madras Slums-Dynamics of Survival, Gender and Leadership.* The Hague, Institute of Social Sciences, Development Studies, Sage.

SOC O 832: FAMILY IN CROSS-CULTURAL PERSPECTIVE

Objective

Students' exposure to this course intends to facilitate their comparative understanding of family and gender relations in different societies. Another aim is to make the students aware whether the family is the basic institution in all societies and whether family as an institution is near the point of extinction or restructuring itself and as a consequence many alternative lifestyles to traditional marriage and family living are emerging.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Family and Gender-Relations

In Highly-Developed, Developing and Under-Developed Countries

- Japan, Belgium
- India, Iran, Brazil
- Afghanistan and Ethiopia

Unit-II

Universality of Family

- Family As a Universal Social Institution- Views of Bronislaw Malinowski, George Murdock, Talcott Parsons, Norman W. Bell and Ezra F. Vogel

- Fate of Family among the Blacks in The Islands of West Indies, Parts of Central America and the U.S.A.; The Nayars of Central Kerala in India.

Unit-III

Emerging Alternative Lifestyles

- Singlehood – Never Married
- Cohabitation – Living Together Without Marriage

- Single parent – Male/Female Headed Households
- Group Living – Communes (The Kibbutz of Israel)

Unit-IV

Future of Family in the light of

- Gender Equity
- Ageing
- Migration

Suggested Readings

1. Allen, Katherine (1990) *Single Women/Family Ties*, New Delhi: Sage Publications.
2. Bell Norman W. and Eza F. Vogel (1986) *A Modern Introduction to the Family* (Revised edition), New York: The Free Press.
3. Bender, David L. and Gray E. McCuen (eds.) (1972) *Is Family Obsolete*? Minnesota: Green Heaven Press.
4. Boh Katja and et. al (1990) *Changing Patterns of European Family Life*, New York: Routledge.
5. Chakraborty, Krishna (2002) *Family in India*, New Delhi: Rawat Publications.
6. Das Man Singh & Clinton K. Jesser (eds) (1980) *The Family in Latin America,* New Delhi: Vikas Publishing House Pvt. Ltd.
7. Das Man Singh (ed.) (1990) *Family in the Muslim World*, Delhi: M.D. Publications.
8. Hereda, Rudolf C. and Mathas, Edward (1995) *Family in Changing World: Women, Children and Strategies of Intervention*, New Delhi: Indian Social Institute.
9. Leeder, Alaine, (2004) *The Family in Global Perspective*. New Delhi: Sage Publications.
10. Macklin, Eleanord D and Roger H. Rubin (1983) *Contemporary Families and Alternative Life Styles*, New Delhi. Sage Publications.
11. Vardhan Ranjay (1999) Female Headed Households in Patriarchal Society: A Sociological Study, Delhi, Indian Publishers Distributors

Additional Readings

1. Aidala, Angela A. (1989) 'Communes and Changing Family Norms', *Journal of Family Issues,* Vol. 10, No. 3, (Sept), PP 311-338.
2. Allan, Graham (1984) *Family Life: Domestic Roles and Social Organization*, New York: Basil Blackwell.
3. Bharat, Shalini (1984) 'Single-Parent Families- Consequences for Single Parents', *Indian Journal of Social Work*, Vol XLIX, No. 3, PP 227-238.
4. Bumpass, Larry L. James. A. Sweet and Andrew Cherlin (1991) 'The Role of Cohabitation in Declining Rates of Marriage'*, Journal of Marriage and Family*, Vol. 53. No. 4, (Nov.), PP 913-927.
5. Uberoi, Patricia (ed.) (1993) *Family, Kinship and Marriage in India*, Delhi: Oxford University Press.
6. Vardhan Ranjay (2008) Single Women: A Study of Spinsters, Delhi, Indian Publishers Distributors

SOC O 931: SOCIOLOGY OF AGING

Objective

Owing to breakdown of traditional values and institutional framework in societies such as India, the aged are facing a number of socio-economic and psycho-medical problems. The worldwide trends indicate that the proportion of aged people in the populations of different societies is ever increasing. This has far reaching implications for the societies across the world. Social scientists are looking at this issue as a matter of serious concern. So, there is an urgent need to study the aged to understand their plight and problems, to study the problems created by increasing aging population as well as to formulate possible interventions for their welfare. This course is an attempt in this direction.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Aging:

- Biological & Physiological, Social and Psychological Aging
- Myths and Facts about Old Age
- Demographic Dimensions of the Elderly

Unit-II

Sociological Perspectives of Aging

Micro-Perspectives:

- Role Theory (Aging and the Individual),
- Activity Theory,
- Disengagement Theory,

Macro Perspectives:

- Modernization Theory,
- Age Stratification Theory,
- Political Economy Theory

Unit-III

Society, Family and Aging:

- Status of the Aged in the Family-Urban and Rural Settings.
- Neglect and Abuse of Elderly in Family.
- Aged in Different Societies- Tribal, Traditional, and Modern.
- Status and Treatment which they get in Traditional Hindu Society.

Unit-IV

Problems of aged and Rehabilitation:

- Economic, Social, Physical and Psychological Problems.
- Emerging Factors Responsible for Aggravating Problems of the Aged.

- Strategies for Coping with the Problems of the Aged, Social Security Schemes and other Developmental Programmes.

Suggested Readings

1. Bose, A. & Gangrade, K.D. eds. (1988) *Aging in India*, New Delhi: O.U.P.
2. Bhatia, H.S. (1983) *Aging and Society*, Udaipur: Aryan Publishers.
3. Dandekar, Kumudini (1996)*The Elderly in India*, New Delhi: Sage Pub. Pvt. Ltd.
4. Desai, Murli & Siva Raju (2000) *Gerontological Social Work in India: Some issues & Perspectives*, New Delhi: B.R. Pub Corp.
5. Donald , Cowgill (1972) *Aging & Modernization*, New York: Meredith Corp.
6. Sharma, M.L.; and Dak, M.K. (1987) *Aging in India*, Delhi: Ajanta Pub.
7. Wilson, Gail (2000) *Understanding Old Age: Critical and Global Perspectives*, New Delhi, Sage Publications.

Additional Readings

1. Cohen, Lawrence (1999) *No Aging in India: Modernity, Senility and the Family,* New Delhi: O.U.P.
2. Dandekar, Kumudini (1993), 'The Aged, their Problems and Social Interventions in Maharashtra', *Economic and Political Weekly*, Vol. XXVII, No. 23, June 5, pp. 1189-94.
3. Rajan, S. Irudaya, Mishra, V.S. and Sarma, P. Sankara, (1999), *India's Elderly: Burden or Challenge?*, New Delhi, Sage Publications.
4. Sati, P.N. (1988*) Retired and Aged People*, Delhi, Mittal Publications.

SOC O 932: ORGANIZATIONAL STRUCTURE AND DEVELOPMENT

Objective

This course focuses on a) the structural dimensions of organization; b) the phenomena of organizational power and environment; c) the emerging salience of information technology in organizational communication; and d) the processes of organizational change and development.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Organizational Structure and Goals:

Structural Dimensions – Complexity, Centralization, Bureaucratization, Professionalization; Goals – Types, Goal Multiplicity and Goal Conflict, Goal Succession and Displacement

Unit-II

Organizational Regime and Environment:

Leadership – Definition, Theories and Styles

Power in Organizations – Authority (Weber)

Power and Compliance (Etzioni)

Environment – Definition and Types

Unit-III

Communication and Information Technology in Organizations:

Communication – Formal and Informal networks

Role of Information Technology (IT) in Modern Organizations

Unit-IV

Planned Change and Organizational Development (OD):

Definition, Nature and Approaches

The Process and Techniques of OD – Systemic and Interpersonal

Suggested Readings

1. Bhatnagar, Subhash (2000) *Information and Communication: Technology in Development*, New Delhi: Sage Publications.
2. Drummond, H. (2000) *Introduction to Organizational Behavior*, New York: Oxford University Press.
3. Fiedler, F. E. (1967) *A Theory of Leadership Effectiveness*. N.Y.: McGraw-Hill.
4. Haslam, S. A. (2001) *Psychology in Organizations: The Social Identity Approach*, London, Sage.
5. Kaur, K. P. (1993) *The Professional Management in Industrial Organizations*. New Delhi: Deep and Deep.
6. Luthans, F. (2000) *Organizational Behavior*, Boston, Irwin McGraw-Hill.

7. Manuel, C. (1996) *The Rise of Network Society*. London: Blackwell.

8. Marguilies, N. and A. Raja (eds.) (1978) *Conceptual Foundations of Organizational Development*. N.Y.: McGraw-Hill.

9. Melkote, S. (2001) *Communication for Development in the Third World*. New Delhi: Sage.

10. Sabbarwal, S. (1990) *Organizational Approach to Environmental Control*. New Delhi: Ashish Pub.

11. Sharma, R. A. (2000) *Organizational Theory and Behavior* (2nd edition), New Delhi: Tata McGraw-Hill.

12. Singh, N. (2000) *Human Relations and Organizational Behavior*, New Delhi, Deep and Deep.

13. Zrkocrzy, P. and N. Heap (1995) *Information Technology*. N.Y.: Pitman.

Additional Readings

1. Blumberg, R. L. (1987) *Organizations in Contemporary Society*, Englewood: Cliffs, N. J.: Prentice-Hall.

2. Champion, D. J. (1975) *The Sociology of Organization*, New York: McGraw Hill Book Company.

3. Gross, E. (1969) "The Definition of Organizational Goals" *British Journal of Sociology*, Vol. 20, (pp 277-294).

4. Harlow, D. N. & J. J. Hall, Richard H. (1972) *Organizations: Structures and Process*, N. Y.: Wiley.

5. Haralambos, M. (1980) *Sociology: Themes and Perspectives*, New Delhi: Oxford University Press.

6. Litterer J. A. (1969) *Organizational Structure and Behavior*, N.Y.: Wiley.

7. Perrow, C. (1961) "The Analysis of Goals in Complex Organizations", *American Journal of Sociology*, Vol. 66, pp 335-341.

8. Sabbarwal, S. (1988) "Approaches to Organizational Structure and Effectiveness", *Sociological Bulletin*, 37 (1 & 2) March-September.

9. Sofer, C. (1973) *Organization in Theory and Practice*, London: Heinemann.

SOC O 933: SOCIOLOGY OF DEVIANCE: CONCEPTS AND THEORIES

Objective

This paper aims at sensitizing the students regarding the concept of deviance and its related terms. Students will also be made aware of different explanations of deviance ranging from pathological to interactionist perspectives.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Deviant Behaviour:

Definition, Concept – Relative/Absolute.

Distinction between Deviant Behaviour and Deviant-Role

Pathological Perspective of Deviance – Biological and Psychological theories.

Unit-II

Social Disorganization and Value-Conflict Perspective:

Causes of Social Disorganization
Theories of Social Disorganization:

C.H. Cooley, W.I. Thomas and Florian Znaniechi, W.F. Ogburn. Theory of Conflict of Values: Richard C. Fuller & Richard R. Myers.

Unit-III

Structural-Functional Perspective:

Theory of Anomie: Emile Durkheim and Robert K. Merton

Theory of Differential Association: Edwin Sutherland and Donald R. Cressey.

Unit-IV

Inter-actionist Perspective:

Theory of Labelling: Edwin M. Lemert and Howard S. Becker Social and Psychological Effects of Labelling for Primary and Secondary Deviance, Social Consequences of Stigma

Social Consequences of Stigma and Labelling.

Suggested Readings

1. Aggleton, Peter (1987) *Deviance,* New York: Tavistock Publication.
2. Becker, H. and Aluin Boskoff (eds.) (1989) *Modern Sociological Theory: In Continuity and Change*, New York: Dryden.
3. Downes, David and Rock Paul (1982*) Understanding Deviance: A Guide to the Sociology of Crime and Rule-Breaking,* Oxford Clarendon Press.
4. Edwin H (1980) *The Deviance Process*, New York: D. Van Vost & Co.
5. Kelly Delos H (1979) *Deviant-Behaviour: Readings in the Sociology of Deviance.* New York: Martin's Press
6. Schur, Edwin M (1971) *Labelling Deviant Behaviour: Its Sociological Implications,* New York : Harper & Row Pub.
7. Singh R.G. (1985*) Sociology of Deviance*, New Delhi: Jain Sons Publications.
8. Thio, Alex (1978) *Deviant Behaviour.* London: Houghton Mifflin Co.

Additional Readings

1. Becker, Howard S. (1963) *Outsiders: Studies in the Sociology of Deviance*, Glenco: Free Press.
2. Gibbons, Don C. (1978) *Society, Crime and Criminal Careers* (3rd ed.) New Delhi: Prentice-Hall of India Pvt. Ltd.
3. Gove, Wolter R (ed) (1980) *The Labelling of Deviance* (2nd ed.) London : Sage Publications.
4. Reid Sue Titus (1976) *Crime and Criminology* Illionois: The Dryden Press.
5. Wolfgand, Marvin and E. Franco Ferrachtti (1982) *The Sub-Culture of Violence.* Beverly Hills: Sage Publications.

SOC O 934: SOCIOLOGY OF CRIME

Objective

This course is designed to acquaint the students with concepts and perspectives used to explain the criminal behaviour. Students will be introduced to the eruption of different forms of crime and the significant advances made towards its control and prevention and correctional measures.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concepts and Perspectives:

Deviance, Juvenile delinquency and Crime

Legal, Behavioral and Sociological Definitions of Crime
Classical and Positive Schools of Criminology

Biological, Psychological and Sociological Approaches (Conflict, Structural-Functional and Symbolic-Interactionist)

Unit-II

Major Forms of Crime:

Violent Crime: Homicide and Aggravated Assault

Property Offences: Economic and Property Crimes

Public Order Offenses: Crime against Moral and Political Order Crimes
involving Abuse of Power: White Collar and Corporate Crime

Unit-III

Punishment in Relation to Crime:

Theories of Punishment: Retributive, Deterrent and Reformative
Penology in India and Indian Penal Code

Types of Punishment: Capital punishment, transportation, imprisonment, forfeiture of property, fine, whipping

Unit-IV

Correctional Programmes:

Significance and Forms of Correctional Programmes: Prison based, Community based.
Prison based Correction: New Delhi Model of Correction.

Community based Correction: Probation, Parole, After-care and Rehabilitation.

Suggested Readings

1. Agarwal, Rajendra Saran & Sarvesh Kumar (eds.) (1986) *Crimes & Punishment in New Perspective*, Delhi: Mittal Publication.
2. Ahuja, Ram (2000) *Criminology*, Jaipur: Rawat Publications.
3. Bhatnagar, R.R. (1990) *Crimes in India: Problems and Policy*, New Delhi: Ashish Publications.
4. Crow, Iain (2001) *Treatment and Rehabilitation of Offenders,* London: Sage Publications.
5. Lilly, J.Robert., Cullen, Francis .T and Ball, Richard A. (2007). *Criminological Theory: Context and Consequences*, Sage Publications, Thousand Oaks.
6. Prasad, R.S.(2004). Cyber Crime and Introduction, ICFAI Univ, Hederabad.
7. Sharma, Ram Nath (1993) *Crime and Penology: Social Disorganization and Social Problems*, Delhi, Surjeet Publications.
8. Singha, Radhika (1999) *Despotism in Law: Crime and Justice in Early Colonial India*, New Delhi, O.U.P.
9. Sutherland, Edwin H & Donald R. Cressey (1968) *Principles of Criminology,* Bombay, The Times of India Press.
10. Weisburd, Dand & Kip Schlegal (1990) *White-Collar Crime Reconsidered*, Boston: Northeastern University Press.

Additional Readings

1. Devasia, V.V. (1993) *Criminology, Victimology and Corrections*, Delhi: Ashish Publications.
2. Doongaji, Damayanti (1986) *Crime and Punishment in Ancient Hindu Society*, Delhi, Ajanta Publications.
   Dutta, N.K.(1989) *Origin and Development of Criminal Justice in India*, New Delhi: Deep and Deep Publications.
3. Gill, S.S. (1998*) The Pathology of Corruption*, New Delhi: Harper Collins Publishers.
4. Gilsinan, James F. (1989) *Criminology and Public Policy: An Introduction*, Englewood Cliffs, Prentice Hall.
5. Mathur, Krishan Mohan (1996) *Crime, Human Rights and National Security*, New Delhi: Gyan Publication House.
6. Meier, Robert F. (1988) *Crime and Society*, Boston, Allyn & Bacon.
7. Ministry of Home Affairs (1998) *Crime in India*, New Delhi, Government of India.

SOC O 935/945: DISSERTATION (3rd and 4th Semesters)

SOC O 936: ADVANCED SOCIAL STATISTICS

Objective

The course is aimed at introducing the students with advanced statistical techniques for multivariate analysis of sociological data. In the first two units the students are familiarized with various aspects of simple and multiple regression analysis including coefficient of determination, correction-ratio, point-biserial correction, partial correlation etc. The last two units include discussion on Path analysis and various parametric and non- parametric tests of significance.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** (Theory Portion only) and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units on Numerical Questions only. Each unit shall have **two** Numerical questions and the candidates shall be given internal choice of attempting one numerical question from each Unit – 4 in all. Each numerical question will carry 15 marks.

Note: Use of Non-programmable electronic calculators and Statistical Tables is permitted for the examination.

Course outline

Unit-I

Linear Regression, Least Squares Method, Estimating the Intercept and Slope of the Linear Regression Model

Standard Error of the Estimate and its Uses, Zero-Order Correlation by Least Squares Method

Coefficient of Determination, Correlation and Causation, Ecological Fallacy of Correlation, Correlation-Ratio, Point Biserial Correlation.

Unit-II

Multiple Regression, Multiple Regression Equations, Multiple Collinearity, Interpretation of Regression Coefficient, Confidence Interval for the Estimate of Multiple Regression, Multiple Correlation, Properties of Multiple Correlation Coefficient, Coefficient of Multiple Determination, First order Partial Correlation.

Unit-III

Path Analysis, Formulation of Recursive, Fully Recursive Path Models, Estimation of Path Coefficients (No numerical questions to be set in the question paper on path analysis)

Parametric tests-One way analysis of variance for means, t-test for means (related samples), z-test for proportions (One Sample and Two Independent Samples)

Unit-IV

Non-Parametric Tests of Significance

Distinction between Parametric and Non-Parametric Tests, Kruskal Wallis One Way Analysis of Variance, Friedman Two–Way Analysis of Variance, Kolmogorov Smirnov Test (Two Independent Samples), Mann-Whitney-U Test, Wilcoxon Matched-Pairs-signed-Ranks Test.

Suggested Readings

1. Alexander Von Eye, Chrisof Schustee (1998) *Regression Analysis for Social Sciences,*USA, Academic Press.
2. Blalock, H.M. (1979) *Social Statistics,*New York, McGraw Hill Book Company.
3. Joseph F. Hair, Rolph E. Anderson Ronald L. Tatham (1987), *Multivariate Data Analysis with Readings*, New York, Macmillan Publishing Company.
4. Kothari C.R. (1984) *Quantitative Techniques*, New Delhi, Vikas Publishing House, Pvt. Ltd.
5. Morris Hamburg (1983) *Statistical Analysis for Decision Making*. San Diego, Harcourt Brace Jovanovich Pubs.
6. Muller John and Karl, F. Schuseller and Herbert, L. Costner (1977), *Statistical Reasoning in Sociology*, Boston, Houghton Miffin Co.
7. Norman, R. Kurtz (1985) *Introduction to Social Statistics*, London, McGraw Hill Book Company.

Additional Readings

1. Marl Sirkin, R. (1995), *Statistics for the Social Science;* London, Sage Publications.
2. Jane, J., Fielding & G. Nigel Gilbet (2000), *Understanding Social Statistics*, London, Sage Publications.

SOC O 937: Sociology of Education

Objective

The course provides (a) an introduction to an important branch of Sociology that deals with education and Society. (b) Students will get acquainted with the approaches and contributions in the sociology of education (c) familiarizes the student with the Growth and Expansion of Education in India; and (d) Role of Education in the Development Process and (e) Emerging educational scenario under the process of Globalisation

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.
The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit - I
The Concept of Education; Education and Society; Socialization and Education; Cultural and Social Reproduction

Theoretical Approaches: **Gandhian, Functional**, **Conflict and** Post **Modern**

Unit - II

1.Role of Education in Social and Human Development -- Emerging Perspectives

2.Role of Education for Empowerment of the Marginalized- SCs, S.Ts, (and Women)

3.Education and the Policy of Positive Discrimination and Affirmative Action

Unit - III.

Education: Expansion and Growth

Constitutional Provisions and Educational Policies in India

Universalization of Elementarv Education, Crises in lndian Higher Education, Expansion of Professional Education and Private Sector

Unit - IV

Education and Social Stratification:

Caste and Education

Gender and Education

Class and Education

Education and Social Mobility **/** (Mobility and Equality of Educational opportunities.)

Suggested Readings:

1. A.H. Halseye et. al. (eds.). 2002. Education. Culture, Economy, Society. Oxford: Oxford University Press (Selected chapters).
2. Apple, M. W. 1982. Cultural and Economic Reproduction in Education: Essays on class. ideology and the state. London: RKP. (Chapters 1, 9).
3. Benei, Veronique. 2009. Schooling India. Hindus, Muslims and the Forging of Citizens. New Delhi, Orient Blackswan.
4. Beteille, A. 1985. Equality of Opportunity and the Equal Distribution of Benefits. Pune: Orient Longman (Gokhale Institute of Politics and Economics).
5. Beteille, A. 2009. Institutions and Networks. Current Science. 97, 2:148-156.
6. Boren. M.E. 2001. Student Resistance. A History of the Unruly Subject. New York. London: Routledge.
7. Coleman. J. S. 1968. "The Concept of Equality of Educational Opportunity". Harvard Educational Review, 38(1): 7-22.
8. Dewey, J. (1916). Democracy and Education. An Introduction to the Philosophy of Education. New York: Free Press.
9. Froerer, Peggy. 2007. Disciplining the Saffron Way: Moral Education and the Hindu Rashtra, Modern Asian Studies. 41,5: 1033-1071.
10. Gandhi, M.K. 1977. Basic Education, in The Collected Works. Ahmadabad: Navajivan.
11. Giddens, Anthony. 2002. Sociology. Cambridge: Polity press.
12. Haralambos and Holborn 2008. Sociology: Themes and Perspectives. London: Collins
13. Jeffrey, Craig, Roger Jeffery and Patricia Jeffrey. 2008. School and madrasah education: gender and the strategies of Muslim young men in rural north India. Compare. A Journal of Comparative and International Education. 38, 5: 581-593.
14. Kumar. K. 2002. Prejudice and Pride. New Delhi: Viking. 23
15. McLaren, P. 1986. Schooling as a Ritual Performance: Towards a Political Economy of Educational Symbols and Gestures. New York: Routledge.
16. Saigol, R. 2000. Symbolic Violence, Curriculum, Pedagogy and Society. Lahore: Sahe. (Chapters 5, 6, and 7).
17. Thapan, M. 2006 (1991). Life at School. An Ethnographic Study. New Delhi: Oxford University Press. 13. Willis, P. E. 1977. Learning to Labour: How Working Class Kids Gets Working Class Jobs. Surrey, England: Saxon House.
18. Wazir, Rekha (ed.) 2000. The Gender Gap in Basic Education. New Delhi, Sage Publications (selected chapters).
19. Mehta, Rani (2004), Crisis in Higher Education. Role Analysis of Teachers in a University System, New Delhi, Kalpaz Publications.

SEMESTER –IV

SOC R 440: PERSPECTIVES ON INDIAN SOCIETY

Objective

This paper aims to acquaint the students with some of the sociological perspectives which have been developed to study the Indian Society. The course aims at giving a chronological view on studies of Indian society. Introducing the students to important Indian Sociologists and their monographs; It further hopes to help the students formulate a link between their theoretical background and examples from the field and to sensitize students about important Indian Social Institutions: Family, Village and Caste, etc.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Emergence of Indian Sociological Thought

Indological: G.S. Ghurye, P.N. Prabhu.

Structuralist: Dumont, Louis, Mckim Marriot.

Unit-II

Structural Functionalist: M.N. Srinivas, S.C. Dube, Yogendra Singh.

Unit-III

Conflict and Subaltern: B.R. Ambedkar, D.P. Mukherji, A.R. Desai.

Unit-IV

Current Issues in Indian Sociology: Indianization/Indegenization, Contextualization

Suggested Readings

1. Ahmad, Imtiaz (1972) 'For a Sociology of India', *Contributions to Indian Sociology*, 6:172-8.
2. Ambedkar, B.R. (1948) *The Untouchables: Who Were They and Why They Became Untouchable*s, Delhi, Amrit Book Company.
3. Atal, Yogesh (2003). *Indian Sociology from Where to Where: Footnotes to the History of the Discipline.* Jaipur, Rawat Publications.
4. Atal, Yogesh (1993). *Understanding Indian Society: Festschrift in Honour of Professor S.C.Dube.* New Delhi, Har-Anand Publications.
5. Bailey, F.G. (1959) 'For a Sociology of India', *Contributions to Indian Sociology,* 3, 88-101.
6. Beteille, Andre (1974) 'Sociology and Ethnosociology', *International Social Science Journal,* 24(4) 703-4.
7. Burghart, R (1983) 'For a Sociology of India: An Intracultural Approach to the Study of Hindu Society', Contributions to Indian Sociology, 17 (2): 275-93.
8. Das, Veena (ed.) (2004). *Handbook of Indian Sociology.* New Delhi, Oxford University Press.
9. Desai, A.R. (1976*) Social Background of Indian Nationalism*, Bombay, Popular Prakashan.
10. Dhanagare, D.N. (1993) *Themes and Perspectives in Indian Sociology.* Jaipur, Rawat Publications.
11. Dube, S.C. (1959) *Indian Villages,* London, Routledge & Kegan Paul Ltd.
12. Dumont, Louis and Pocock, D. (eds.) (1960). *Contibutions to Indian Sociology.* Paris, Monton.
13. Dumont, L. & Pocock (1960) 'For a Sociology of India: A Rejoinder To Dr. Bailey', Contributions to Indian Sociology, 4:82-9.
14. Dumont, Louis (1970) *Home-Hierarchicus: Caste System and its Implications,* Delhi: Vikas Publications.
15. Ghurye, G.S. (1957*) Caste and Class in India*, Bombay, Popular Book Depot.
16. Gill, Rajesh.(2007). Let Sociology be Sociology**,** in *Sociological Bulletin*, Vol. 56, No. 3, Sept.-Dec. 2007, pp. 430-34.
17. Jodhka S.S. (1998) 'From Book View' to 'Field View': Social Anthropological Constructions of the Indian Village', *Oxford Development Studies*, Vol.26 No.3, 1998.
18. Marriot, Mackim (1994) *India Through Hindu Categories*, Delhi: Sage Publication.
19. Mukerjee, Ramakrishna (1979) *Sociology of Indian Sociology,* Bombay, Allied.
20. Mukherji, D.P. (1958) *Diversities*, Delhi Peoples Publishing House.
21. Mukherji, D.P. (1979). *Sociology of Indian Culture.* Jaipur, Rawat Publications.
22. Omvedt, Gail (1994) *Dalits and the Democratic Revolution*. New Delhi, Sage Publications.
23. Oommen, T.K. (1986) *Indian Sociology: Reflections and Interpretations.* Bombay, Popular Prakashan.
24. Patel Sujata (1998), 'The Nostalgia for the Village: M.N. Srinivas and the Making of Indian Social Anthropology', *South Asia,* Vol.XXI, No.1, pp-49-61.
25. Prabhu, P.N. (1954) *Hindu Social Organization*, Bombay, Popular Book Depot.
26. Pramanick, S.N. (1994) *Sociology of G.S. Ghurye: Concerns*, New Delhi, Vistaar Publication.
27. Ram, Nandu (1999), *Beyond Ambedkar*, New Delhi, Har Anand Publishers.

28. Singh, Yogendra (1973) *Modernization of Indian Tradition*, Jaipur, Rawat Publications.
29. Singh, Yogendra (1986) *Indian Sociology: Social Conditioning and Emerging Concerns*, New Delhi, Vistaar Publications.
30. Singh, Yogendra (1984). *Image of Man: Ideology and Theory in Indian Sociology.* Delhi, Chanakya.
31. Srinivas, M.N. (1952*) Religion and Society Among the Coorgs of South India*, London, Asia.
32. Srinivas, M.N. (1970) 'Sociology and Sociologists in India Today', *Sociological Bulletin* 19(1): 1-10.
33. Unnithan, T.K.N., Deva, Indra and Singh, Yogendra (eds.) (1965). *Towards a Sociology of Culture in India: Essays in Honour of Professor D.P.Mukherji.* New Delhi, Prentice Hall.

Additional Readings

1. Madan, T.N. (1977) 'The Dialectic of Tradition and Modernity in the Sociology of D.P. Mukerji', *Sociological Bulletin*, Vol.26 (2) 155-76.
2. Marriot, Mckim (1955) *Village India: Studies in the Little Community*, Chicago, The University of Chicago Press.
3. Oommen, T.K. (2007) *Knowledge and Society: Situating Sociology and Social Anthropology.* New Delhi, Oxford University Press.
4. Srinivas, M.N. (1970) *Social Change in Modern India*, Barkeley, California University Press.
5. Unnithan, T.K. N., Singh, Y. Singhi Narendra and Indra Deva (eds.) (1967) *Sociology for India,* New Delhi, Prentice Hall
6. Srinivas, M.N. (1976) *The Remembered Village*, Delhi, Oxford University Press.
7. Srinivas, M.N. (1980) *Social Structure*, Delhi, Hindustan Publishing Corporation.

SOC O 543: DETERMINANTS AND CONSEQUENCES OF POPULATION GROWTH

Objective

The course mainly focuses to sensitize students about a) the effect of population growth on development processes; b) Differential mortality and fertility patterns in the developed and the developing countries; c) Population distribution patterns in India; and d) the various programmes implemented for regulating population in India.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question is **compulsory** and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain **4** units. Each unit shall have **two** long questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Relationship between Population, Development, Environment and Society in the context of Population Size, Composition and Distribution of Population

Factors affecting Age, Structure and Sex Compositions; Demographic, Social and Economic implications

Unit-II

Mortality Patterns in Developed and Developing Countries:

General Mortality, Infant and Child Mortality, Morality Differentials, Determinants of Mortality and Cause of deaths. Consequences of Declining Mortality for demographic and social structures

Unit-III

Fertility Patterns and Trends in Developed and Developing Countries, Crude Birth Rates and Total Fertility Rates, Net Reproduction Rate, Theoretical Understanding of the Biosocial, Socio-cultural, Social-psychological and Socio-demographic factors affecting Fertility. Fertility Differentials, Consequences of Fertility Decline for Demographic and Social Structures

Unit-IV

Population Distribution Patterns in India- Regional Level, Rural-Urban, Socio-economic and demographic factors associated with population distribution.

Consequences of Population Redistribution on Demographic and Social Structures.

Regulating Population in India: National Family Welfare Programme,
Jnani Suraksha Yojana, Beti Bachao, Beti Padhao

Reproductive and Child Health Programme

Strategies for Implementation and Overall Impact

MTP and PNDT Act- Correcting the Gender Bias.

Suggested Readings

1. Bhende, Asha and Tara Kanitkar (1999), *Principles of Population Studies*, Mumbai, Himalayan Publications.
2. Bogue, D.J. (1969) *Principles of Demography*, N.Y,John Wiley.
3. Bose, A. (1991) *Demographic Diversity in India.* Delhi, B.R. Publications.
4. Cassen, D. (1978), *India, Population Economy and Society*, London, MacMillan.

5. Ersheng GAO (2003), *Reproductive Health , Gender and Development*, Delhi, B.R.Publishing Corporation.
6. Jain, A.K. and Visaria (eds.) (1988), *Infant Mortality in India. Differentials and Determinants,* Sage Publications.
7. Kaistha, K.C. and Satish Sharma (1998), *Population, Environment and Spatial Mobility,* New Delhi, Gyan Publications.
8. Mahadevan, K. (1989*) Fertility Policies from Asian Countries*, Delhi, Sage.
9. Matras, Juda (1977) *Introduction to Population*, New Jersey, Prentice Hall, Inc.
10. Mitra, Ashok (1978) *India's Population, Aspects of Quality Control*, 2 Vols.
11. MOHFW, GOI, *Cause of Death Statistics* (Annual Issues).
12. *National Family Health Survey, India* (1994) (2000) Bombay, IIPS.
13. *PNDT Act* (1996) GOI.
14. Prasad, Narendra (2001), *Population Growth and Child Labour*, New Delhi, Kanishka Publishers.
15. Premi, M.K. (1991), *India's Population: Heading towards a Billion,* Delhi, B.R. Publications.
16. Retherford, Robert D. & T.K. Roy (2003) *Factors Affecting Sex Selective Abortions in India and 17 Major States*, NFHS Report No.21, Mumbai, IIPS.
17. Sen, Amartya (1982) *Choice, Welfare and Measurement*, Oxford Univ.Press.
18. Sen, Amartya & Jean Dreze (1996) *Indian Development*, Oxford Univ.Press.
19. Srinivas, M.N. (1977) *Culture and Human Fertility in India,* Delhi, Oxford Univ. Press.
20. Singh, K.P. (1986) *Correlates of Fertility Behaviour: A Study of Rural Communities in Punjab and Haryana*, New Delhi, Concept Publishing House, 205p.
21. Sinha, P. N (2001), *Population Growth and Global Stability*, New Delhi, Author's Press.
22. Tandon, Usha (2003). *Population Law: An Instrument for Population Stabilization*, New Delhi, Deep and Deep Publications Pvt. Ltd.
23. U.N. (1987) *Fertility Behaviour in the Context of Development* (P.S. No. 100).
24. United Nations (1987) *World Population Policies*, Monitoring Report Vol. II

Additional Readings

1. Dyson, T. and Crook, N. (eds.) (1984), *India's Demography: Essays on the Contemporary Population*, New Delhi, South Asian Publishers Pvt. Ltd.
2. D'Souza, V.S. (1984), *Economic Development, Social Structure and Population Growth,* New Delhi, Sage Publications.
3. Finkle, L. Jason and C. Anson McIntesh, (1994), (eds.), *The New Politics of Population: Conflict and Consequences in Family Planning*, New York, The Population Council.
4. Mc Nicoll, Geoffrey and Mead Cain, (1990), *Rural Development and Population: Institutions and Policy*, New York, Oxford University Press (The Population Council, New York).
5. Mehta, S.R. (1997), (ed.), *Poverty, Population and Sustainable Development*, Jaipur, Rawat Publications.
6. Mehta, Rani (2014) Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications, pp 29-168.

SOC O 544/744: SOCIOLOGY OF HUMAN MIGRATION

Objective

The aim of this course is to explore how migration as a social demographic process has a bearing on the processes of urbanization and social integration. It attempts to discuss the need to address the problems associated with large influx of immigrants into cities, within the country and trans-nationally, leading to crises of physical infrastructure and conflict situations. Also, it aims to appreciate the positive consequences of migration in terms of its capacity to enrich various cultures.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each. Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept of Migration	:	Conventional View and Changing Conception
Migration Data	:	Sources and Problems relating to Measurement.

Unit-II

Major Typologies	:	Spatial, Temporal, Purposive and Stream Criteria.
Broad Trends and Patterns	:	At Global Level with special reference to India.

Unit-III

Theoretical Formulations:	Classical, Socio-economic & Developmental (Contributions of Revenstein, Stouffer, Everett Lee, Lewis, Harris and Todaro, Zelinski, Davis and Push-Pull Factor theory).
Determinants of Migration:	Ecological, Demographic, Social, Economic and Political

Unit-IV

Consequences of Migration: International context – Brain-Drain and Critique:
Internal context- Social, Economic and Political

Migration Policy: Need and Challenges

Suggested Readings

1. Balan, Jorge (ed.), 1981), *Why People Move*, Paris, Unesco Press.
2. Chaudhuri, I.R., (1993), *Migration and Remittances: Inter-Urban and Rural-Urban Linkages*, New Delhi, Sage Publications.
3. Connel, John & Others, (1970), *Migration from Rural Areas: Evidence from Village Studies,* Oxford University Press, Delhi.
4. Dutoit, B.M. and H.I. Safa, (1975), *Migration and Urbanization Models and Adaptive Strategies*, The Hague, Mouton.
5. Findley, Sally, (1982), *Migration Surveys, Methodologies*, A Review of Designs, IUSSP, No.2
6. Hugo, H., (1982), 'Circular Migration in Indonesia', *Population and Development Review*, Vol 8, No. 1, March, pp-59-83.
7. Kaistha, K.C., (1987), 'Migration Patterns in Development Transition of Rural Areas', *Population Geography* (1 & 2), June-December.
8. Kosinski, L.A. & K.K. Mandood Elahi, (1985), *Population Redistribution and Development in South Asia,* Boston, D. Reidel Pub. Co.
9. Kosinski L. and Prothero R. (1974) *People on the Move: Studies on Internal Migration,* London, Methuen.
10. Oberoi, A. S. & H. K.M. Singh, (1982), *Causes and Consequences of Internal Migration: Studies from Indian Punjab*, Delhi, OUP.
11. Oberoi, A.S. & Others, (1989), *Determinants and Consequences of Internal Migration in India: Studies in Bihar, Kerala and Uttar Pradesh*, Delhi, OUP.
12. Bogue, D.J., (1969), Principles of Demography, New York, John Wiley & Sons.
13. Prother, R.M. & Chapman Murray (eds.), 1985, *Circulation in Third World Countries,* London, Routledge & Kegan Paul.
14. Rao, M.S.A., (1986), *Studies in Migration*, Delhi, Manohar.
15. UN (1984) *Population Distribution, Migration and Development. Proceedings of* the Expert Group on Population Distribution Migration and Development, Hammamat (Tunisia) March 21-25, 1983.
16. U.N. (1994) *Population Distribution and Migration* (Particularly Papers by Castals, S. 'Process of Integration of Migrant Communities' and Rogge, I.R. 'Changing Solutions to Refugee Movement'.
17. Weiner, Myron, (1978), *Sons of Soil: Migration and Ethnic Conflict in India*, New Jersey, Princeton University Press.

Additional Readings

1. Brettel, Caroline & James Hollifield, (2000), *Migration Theory: Talking Across Disciplines,*New York, Routledge.
2. Hazari, Bharat R. & Pasquale M., (2001*), Migration, Unemployment and Trade*, Boston, Kluwer Academic Publishers.
3. Indra, Doreen (ed.), (1998*), Engendering Forced Migration: Theory and Practice,* New York, Berghahn Books.

4. Lucassen, Jan & Lucassen, Leo, (1997), *Migration, Migration History, History: Old Paradigms and New Perspectives,* University of Bern Publications, Bern.
5. Manning, Patrick, (2005), *Migration in World History*, London, Cambridge University Press.
6. Sharpe, Pamela, (2001), *Women, Gender and Labour Migration: Historical and Global Perspectives,* New York, Routledge.

SOC O 644: ENVIRONMENTAL CRISIS AND SUSTAINABLE DEVELOPMENT

Objective

The course focuses on the discussion of the environment–society interface keeping the following objectives in view (a) to familiarize the student with the crisis of environmental degradation both at the global and national levels; (b) to focus on the environmental problems in India; (c) to highlight the role of environmental movements in ecological protection; and (d) to discuss some of the measures necessary for environmental preservation.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Development and Environmental Degradation:
Meaning of Environment; Environment and Society;
Problems and Environmental Consequences

Unit-II

Environment Situation in India:
Environmental Problems in India – Extent, Causes and Solutions; Environmental Policy in India.

Unit-III

Environmental Movements:
Role of voluntary organizations and popular participation in environmental protection and preservation; The Chipko Movement, Movements against Narmada Valley and Tehri

Dam projects, Sukhomajri Experiment, Protest against Mining in Doon Valley; Eco-feminism; Public Interest Litigation (PIL) and Judicial Activism.

Unit-IV

Sustainable Development: Towards a Sound Environmental Policy;

Environmental Education; Social Forestry and Afforestation Program; Biogas and Renewable Energy Program; Efficient Water Management Programs; Use of Appropriate Technology.

Suggested Readings

1. Deoria, R.S. et al. (1990) *Man, Development and Environment*. N. Delhi: Ashish Publications.
2. Katyal, J and M. Satake (1989) *Environmental Pollution*. New Delhi: Anmol Pub.
3. Khoshoo, T.N. (1986) *Environmental Priorities in India and Sustainable Development*. New Delhi: Indian Science Congress Association.
4. Mahesh, K and B. Bhattacharya (eds.), (1999) *Judging the Judges*. N. Delhi: Gyan Publications.
5. Mehta, Rani (2014), Sociology and Environmental Sustainability: A Study of Fragile Ecology, Health Risks and Population Pangs, Jaipur, Rawat Publications.
6. Raza, Mehdi (ed.), (1992) *Development and Ecology*. Jaipur: Rawat.
7. Rasure, K.A. (2007) , *Environment and Sustainable Developmen*t , New Delhi, Serial Publications, VOL. I,II,III.
8. Spaargaren G. et al (2000) (ed.), *Environment and Global Modernity*, New Delhi, Sage Publications India Pvt. Ltd.
9. Singh,R.B. (2002) (ed.) *Human Dimensions of Sustainable Development*, New Delhi, Rawat Publications.
10. Sharma, S.L. (1993) "Managing Environmental Crisis – Regulatory vis-à-vis Participatory Approach" in J.L. Rastogi and Bidhi Chand (eds.) *Management and Business Education*. Jaipur: Rawat Publications.
11. Shiva, Vandana, (1988) *Staying Alive – Women, Ecology and Survival in India*. New Delhi: Kali for Women.
12. Singh, Gian (1991) Environmental Deterioration in India – Causes and Control. New Delhi: Agricole.
13. Tewari, K.M. (1989) *Social Forestry in India*. Dehradun: Natraj Publishers.
14. Wilson, D. (ed.) (1984) *The Environmental Crisis*, London: Hinemann.

Additional Readings

1. Bandhu, Desh (ed.), (1981) *Environmental Management*, Dehradun, Natraj Publishers.
2. Bandhu, Desh and N.L. Ramanathan (eds.) (1982) *Education For Environmental Planning and Conservation*, Dehradun, Natraj Publishers.
3. Bharadwaj, H.R. (1997) *Lawyers and Judges*, New Delhi, Konark Pub.
4. Chaudhary, Jayasri R.(2001). *An Introduction to Development and Regional Planning,* New Delhi, Orient Longman.
5. Ehrlich, P. R. et al., (1973) *Human Ecology- Problems and Solutions*, San Francisco, W.H. Freeman and Co.

6. Kothari, Ashish et al. (eds.), (1998) *Communities and Conservation*, New Delhi, Sage Publications.
7. Mehta, Rani (2011) "Sustainable Development in Mauritius: Issues and Implications," New Delhi, Contributions to Indian Social Science, IASSI, Vol. 30, No. 2, April-June.
8. Pawar, S.N. and R.B. Patil (eds.) (1998) *Sociology of Environment*, Jaipur, Rawat
9. Sheth, Pravin (1997) *Environmentalism – Politics, Ecology and Development*, Jaipur, Rawat Publications.

SOC O 645: ENTREPRENEURSHIP AND DEVELOPMENT

Objective

This course is acquainting the students with various theoretical developments in the area of entrepreneurship and their implication for action programs. Accordingly, first two units deal with various theories and development of entrepreneurship in different communities and groups. The other two units deal with the implication of theories for action programs and development of Entrepreneurship Development Program (EDPs) and interaction of entrepreneurs with business environment.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Entrepreneur and Entrepreneurship:
Concept, Functions: Growth of Entrepreneurship with special reference to India
Theories of Entrepreneurship: Max Weber, David McClelland, E. E. Hagen, B. E. Hoselitz and Schumpeter

Unit-II

Entrepreneurship among Social Groups
Business Communities: Samurai Community in Japan, Filipino and Chinese in Philippines; Parsees, Marwaris, Ramgarhias, Ravidasias and Business Communities in South India; Social Groups: Women, Tribals, Scheduled Castes

Unit-III

Development of an Entrepreneur
Implication of Theories for Action Program and Development of Entrepreneurs through Training and Entrepreneurship Development Program (EDPs).

Unit-IV

Entrepreneurship and Environment:
General Environment, Typology of Environment, Role of Business Associations in Controlling the Environment.

Suggested Readings

1. Akhouri, M. M. P. *et al.* (1987) *Trainers' Manual on Developing Entrepreneurial Motivation*, New Delhi: National Institute for Entrepreneurship and Small Business Development.
2. Bansal, C. L. (1993) *Entrepreneurship and Small Business Management*, Delhi, Har Anand Publications.
3. Bhatia, B. S. and Batra, G. S. (2001) *Entrepreneurship and Small Business Management*, New Delhi: Deep and Deep Publications, Pvt. Ltd.
4. Bisht, N. S. *et al.* (1989) *Entrepreneurship: Reflections and Investigations*, Allahabad: Chugh Pub.
5. Guha, A. (1984) "More about Parsi-Seths, their roots, Entrepreneurship and Compradoe Role", *Economic and Political Weekly*, Vol. IX, No.3, June, pp 1660-18.
6. Hagen, E. E. (1962) *On the Theory of Social Change*, Bombay: Vakils, Feff and Simpson.
7. Hoselitz, B. F. (1952) "Entrepreneurship and Economic Growth" *American Journal of Economics and Sociology*, Vol.12 (1).
8. Hoselitz, B. F. (1960) *Sociological Aspects of Economic Growth*, London: Collier-McMillan.
9. Kaur, K. P. (1992) *Professional Management in Industrial Organizations*, New Delhi: Deep & Deep Publications.
10. Kaur, K. P. (1995) "Role of Trade Associations in Entrepreneurial Development", *SEDME*, Vol. XXII, No.3.
11. Kelbagh, Chetana (ed.), (1991) *Women and Development, Women in Enterprise and Profession*, Vol. III, New Delhi: Discovery Publishing House.
12. Kilby, P. (1971) *Entrepreneurship and Economic Development*, N.Y.: Free, Free Press.
13. Kirchhoff B. A. *et al.* (eds.) (1988) *Frontiers of Entrepreneurship Research*, Wellesley: Babson College.
14. Leibenstein, H. (1968) "Entrepreneurship and Development", *American Economic Review*, LVIII (2), May.
15. McClelland, D. C. (1961) *The Achieving Society*, N.Y.: Van Nostrand Co.

16. Pruthi, S. P. S. (1972) *Economic and Managerial Environment in India*, Bombay: Progressive Corp.
17. Sabbarwal, S. (1990) *Organizational Approach to Environment Control*, N. Delhi: Ashish Publications.
18. Sabherwal, Satish (1976) *Mobile Man*, New Delhi: Vikas Publishing House. Pvt. Ltd.
19. Schumpeter, J. A. (1959) *The Theory of Economic Development*, Cambridge: Harvard Univ. Press.
20. Sharma, K. L. & H. Singh (1980) *Entrepreneurial Growth and Development: Programmes in Northern India*, New Delhi: Abhinay Publications.
21. Sharma, K. L. (1981) *Voluntary Business Associations*, Chandigarh: Panjab University.
22. Sharma, K. L. (1988) "Community and Entrepreneurship", *Eastern Anthropologist*, 42 (3).
23. Tandon, B. C. (1975) *Environment and Entrepreneurs*, Allahabad: Chugh Pub.
24. Weber, Max (1947) *Theory of Social and Economic Organization*: tr. by A. R. Henderson and Talcott Parsons (ed.), Oxford: Oxford University Press.

Additional Readings

1. Rathore, B. S. and J. S. Saini (eds.) (2007) *A Handbook of Entrepreneurship*, Panchkula: Aapaga.
2. Hagen, E. E. (1980) *The Economics of Development*, Illinois: Irwin, Inc., Homewood.
3. Schumpeter, J. A. (1939) *Business Cycles: A Theoretical, Historical and Statistical Analysis of Capitalist Process*, London: McGraw Hill.
4. Weber, Max (1965) *The Protest and Ethic and the Spirit of Capitalism*, Tr. by Talcott Parsons, London: Union.
5. Weber, Max (1968) *Economy and Society*, New York: Bedminster Press.

SOC O 743: CITIES, URBAN PLANNING AND DEVELOPMENT

Objective

This is the third course in the specialization of Urban Sociology offered to MA students from second through fourth semesters. It is presumed that by now the students has the basic understanding of the conceptual and theoretical formulations in urban sociology, with specific relation to India's experience as compared to the Western. In this course the student shall be apprised with the contemporary and emerging conceptual and empirical developments in the area of urban planning and development, especially with an emphasis upon the shift from mere town and physical planning to social planning, decentralization etc. manifested both at global and national agenda.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Urban Planning

Physical and Town Planning, Zoning, Master Plan;
Critique of Conventional Urban Planning;
Concept of Social Planning and its Implications on Urban Planning;
People's Participation in Urban Planning and Development; Decentralization and Democratization in Urban Planning.

Unit-II

Cities and Urban Development

U.N. Conventions on Human Settlements and Global Agenda;
Urban Renewal and Urban Redevelopment;
Sustainable, Humane, Child-Friendly, Eco-Friendly Cities;
From Urban Development to Sustainable Urban Development and its Features;

Unit-III

Urban Planning in India

Critical Appraisal of Slum Rehabilitation Schemes

Critical Appraisal of Urban Poverty Alleviation Programs.
Critical Appraisal of 74th Constitutional Amendment Act and its Salient Features

Unit-IV

Cities and Culture

Cities and Cultural Change (with reference to Georg Simmel, Louis Wirth and C. Fischer)

Cities and Consumerism

Cities and Ethnicity

Suggested Readings

1. Ali, Sabir, (1990), *Slums Within Slums- A Study of Resettlement Colonies in Delhi*, New Delhi, HarAnand and Vikas.
2. Breese, Gerald and Whiteman, Dorothy E, (eds.), (1953), *An Approach to Urban Planning*, Princeton, Princeton University Press.
3. Castells, Manuel, (1977). *The Urban Question*, London, Edward Arnold Publishers Ltd.
4. Castells, Manuel, (1975), 1968, Is there an Urban Sociology? Reprinted in Urban *Sociology: Critical Essays* (ed.) by C. Pickvance, New York, St. Martin's Press. Pp. 33-59.
5. Flanagan, William, (1993), Contemporary Urban Sociology, Cambridge, Cambridge University Press.
6. Gill, Rajesh, (2009). *The Contemporary Indian Urban Society -Ethnicity, Gender and Governance.* New Delhi, Bookwell Publishers.
7. Gill, Rajesh, (2003)'. Planning Urban Settlements for People: A Social Agenda', in *Urban India,* Vol. XXIII, No. I, Jan.-June 2003.
8. Harvey, D. (1999), "The City in a Globalizing World" (ed.) by Charles Lemerit (2004), *Social Theory: Multicultural and Classical Readings*, U.S.A., Westview Press.
9. Jo Beall (ed.), (1997), *A City for All- Valuing Difference and Working with Diversity*, London, Zed Books Ltd.
10. Lo, Fu Chen and Yeung, Yue-man (eds.),(1998), *Globalization and the World of Large Cities,* Tokyo, United Nations University Press.
11. Miles, S. and Miles, M., (2004). *Consuming Cities.* New York, MacMillan.
12. Report of National Commission on Urbanization, (1988), Vols. 1&2.
13. Sassen, S. (1991). *The Global City*, Princeton, Princeton University Press.
14. Satterthwaite, D. (2007), "When People Live Mostly in the Cities" *The Hindu*, January 18.
15. Simmel, Georg, (1990). 2nd Edition. *The Philosophy of Money,* trans. by T. Bottomore and D. Frisby (ed.) D. Frisby. London, Routledge.
16. Simmel, Georg, (1964). "The Metropolis and Mental Life" in K. Wolff (ed.), *The Sociology of Georg Simmel,* New York, Free Press. (Org. 1905).
17. Uner, Kirdar (ed.), (1997), *Cities Fit For People*, New York, United Nations.
18. Weber, Max, (1958), *The City*, Chicago, Free Press.

Additional Readings

1. Chandoke, Neera, (1991). "The Post Colonial City", *Economic and Political Weekly,* Mumbai, December 14, pp. 2868-2873.
2. Fagence, Michael, (1977), *Citizen Participation in Planning,* Oxford, Pergamon Press.
3. Gill, Rajesh, (1991), *Slums as Urban Villages- A Comparative Study in Two Cities*, Jaipur, Rawat Publications.
4. Mumford, Lewis, (1961). *The City in History.* New York, Harcourt, Brace and World.
5. Sarin, Madhu, 1975, *Planning and the Urban Poor: The Chandigarh Experience*, London, School of Environmental Studies.
6. Saunders, P. 1981, *Social Theory and the Urban Question*, London, Hutchison & Co. Ltd.
7. Short, J.R., 1996, *The Urban Order- An Introduction to Cities, Culture and Power*, Blackwell Publishers.
8. Southall, Adian, 1998, *The City in Time and Space,* Cambridge, Cambridge University Press.

SOC O 843: FAMILY DYNAMICS IN CONTEMPORARY INDIA

Objective

In this course students will be enabled to have a grasp of the changing marriage and family patterns in India. The course will be addressing to the impact of technological and economic factors on family and how family has responded to these by undergoing changes in its Form, Structure and Functions, which in turn influence the values and role-relations within the family. Students will be further acquainted with the family's failure in coping with the pressures of modern life.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marriage Patterns

Traditional and Contemporary Patterns from Vedic times to Modern times

- Changing Patterns of Marriage Alliances
- Child Marriage; Increasing Age at Marriage, its Socio-economic and Cultural Determinants, Regional Variations and Demographic Consequences.

Unit-II

Trends in Family Type

- Regional Variation in Family Type and its Socio-cultural Correlates.
- Joint Family: Its Structural & Functional Aspects, Changing forms of Joint family – Nuclearization.
- Changing Status and Role of the Women and the Aged.

Unit-III

Family Values and Role-Relations

- Familial Values : Familism vs. Individualism.
- Dyadic Relations : Changing Filial (Parent and Child), Fraternal (Siblings-Brother and Sister, Brother and Brother, Sister and Sister),

Unit-IV

Family Disintegration

Marital Maladjustment.

- Factors Responsible for Disintegration of Joint and Nuclear family.
- Desertion and Divorce: their Extent, Causes and Consequences.

Suggested Readings

1. Apte, Usha M. (1978) *The Sacrament of Marriage in Hindu Society*, Delhi : Ajanta Publications.
2. Chakrabortty, Krishna (2002) *Family in India,* New Delhi : Rawat Publications.
3. Kolenda, Pauline (1987*) Regional Differences in Family Structure in India*, Jaipur Rawat Publications.
4. Lal, A.K. (1990*) The Urban Family, A Study of Hindu Social System*, New Delhi: Concept Publishing Company.
5. Madan, T.N. (1989) *Family and Kinship* (2nd Edition), Delhi: Oxford University Press.
6. Mandelbaum, David G. (1970) *Society in India: Continuity and Change* (Vol.1), Bombay: Popular Parkashan.
7. Pandey, Rajendra (1994) *Social Problems of Contemporary India*, (Chapter-12), New Delhi: Ashish Publishing House.
8. Pernau,Maragrit, Ahmed, Imtiaz and Helmut, Redfield (2003) *Family and Gender:Changing Values in Germany and India*, New Delhi: Sage Publications.
9. Pothen S. (1980) *Divorce: Its Causes and Consequences in Hindu Society,* Delhi: Shakti Books.
10. Reddy, M.M. Krishna (1998) *Marriage, Population and Society*, New Delhi: Kanishka Publishers.
11. Shah, A.M. (1998) *The Family in India: Critical Essays*, New Delhi: Orient Longman.
12. Singh, J.P. (2003) 'Nuclearisation of Household and Family in Urban India', *Sociological Bulletin*, Vol.52, No.1, PP: 53-70.
13. Sinha, Raghvir (1993) *Dynamics of Change in the Modern Family*, New Delhi: Concept Publishing Company.

Additional Readings

1. Audinarayana N. & R. Rajasree (1995) 'Cultural Determinants of Age at Marriage', *The Journal of Family Welfare*, Vol. 4, No.1, pp.8-14.
2. Augustin, John S. (1982) *The Indian Family in Transition*, New Delhi: Vikas Publishing House.
3. Basu, Monmayee (2003) *Hindu Women and Marriage Law from Sacrament to Contract,* New Delhi: O.U.P.
4. Chauhan, Abha (2003) 'Kinship Principles and the Patterns of Marriage Alliance: The Meos of Mewat', *Sociological Bulletin*, Vol.52, No.1, pp: 71-90.

5. Goode, William J.(1970) *World Revolution & Family Patterns*, New York: Free Press.
6. Kapoor, Promila (1974) *The Changing Status of Working Women in India*, New Delhi: Vikas Publishing House.
7. Madan, T.N. (1993) 'The Hindu Family and Development', in P. Uberoi (ed.), *Family, Kinship and Marriage*, Delhi: Oxford University Press.
8. Sharma, Bela Rani (1997) *Women: Marriage, Family and Divorce*, Jaipur: Mangal Deep Publication.
9. Sinha, Durganand, Henry and S.R. Rao (1988) *Social Values & Development: Asian Perspective*, New Delhi: Sage Publications.
10. Vatuk, Sylvia (1972) *Kinship and Urbanization: White Collar Migration in North India,* London: University of California Press.

SOC O 844: GENDER AND DEVELOPMENT

Objective

This paper largely focuses on India attempts to establish a link between Development and Gender. It will particularly focus on different perspectives and schemes adopted for promoting Gender and Development. Secondly, it will highlight the biases inherent in most developmental policies which have been detrimental to women. Thirdly, it will look at changes taking place in gender relations particularly in the area of work. The focus will be on women and work; differentials and role conflict in family due to changing equations. Lastly, it will take an overview of indicators of issues related to Discrimination, Exploitation and Oppression.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit I

Women in Development , Women and Development, Gender and Development (WID , WAD, GAD)
Gender Equality and Inequality in Productivity and work

Family compulsions and other factors affecting gender related choices or priorities of work, Role conflict among Women
Indicators of Low status of Women

Unit-II

Perspectives on Gender and Development

- Welfarist, Developmentalist and Empowerment.
- Empowerment: Paradigms and Paradoxes.
- Changing status of Women in India, Precolonial, Colonial and Post-Colonial.
- Measures to uplift women's status.

Unit III

Measures to Improve Gender Relations

- Special Schemes and Strategies for Women's Development in India
- Voluntary sector and Women's Development.
- Women in Sectoral Development: Education, Health, Agriculture and Industry.

Unit-IV

- Globalisation and Women's Development
- Development Policies- Liberalization and Globalization: their Impact on Women.
- Environment, Development and Gender: Deforestation, Environmental Degradation and Feminization of Poverty.
- Women in Panchayati Raj Institutions and Urban Local Bodies: 73rd and 74th Constitutional Amendments.

Suggested Readings

1. Arya, Sadhna (2000) *Women, Gender Equality and the State*, Delhi: New Deep and Deep Publication.
2. Forbes, Geraldine (1998) *Women in Modern India*, Cambridge University Press.
3. Ghadially, Rehana (1988) *Women in Indian Society*, New Delhi; Sage.
4. Laxmi Devi (1998*) Women and Development*, New Delhi. Anmol Publications.
5. Manchanda, Rita (2001) *Women, War and Peace in South Asia: From Victimhood to Agency,* New Delhi: Sage Publication.
6. Seth, Mira (2001) *Women and Development*, New Delhi: Sage Publications.
7. Suchitra, Anant, Ramani Rao and Kabita Kappor, *Women at Work in India*, Ministry of Labour, GOI.

Additional Readings

1. Aggarwal, Bina (1988) *Structures of Patriarchy: State, Community and Household in Modernizing Asia*, New Delhi: Kali for Women.
2. Ahooja, Patel, Krishna (1995) *Women and Development*, New Delhi: Ashish Publishing House.

3. Chafeltz, Saltrman, Janet (1999) *Gender Equity–An Integrated Theory of Stability and Change,* New Delhi: Sage Publications.
4. Gulati, Leela (1982) *Profiles in Poverty*. New Delhi, Hindustan Publishing Corporation.
5. Heyser, Noeleen and Sen, Gita (1994) *Gender, Economic Growth and Poverty*, New Delhi: Kali for Women.
6. Krishnaraj Maitraeyi (1988) *Women and Development: The Indian Experience,* New Delhi: Subheda Publications.
7. Kumari, Abhilesha and Sabina Kidwai (1997) *Crossing the Sacred Line, Womens' Search for Political Power,* New Delhi: Orient Longman.
8. Maheshwari, S.R. (2002) *Local Government in India*, (New Delhi: Uppal Book Store).
9. Mazumdar, Vina (1979) *Symbols of Power: Studies on the Political Status of Women in India*, New Delhi: Allied.
10. Myers, Kristen Anderson (1998) *Feminist Foundations–Towards Transforming Sociology*, New Delhi: Sage.
11. Powell, Gang N. (1995) *Handbook of Gender and Work*, New Delhi: Sage Publications.
12. Rajput, Pam and Swarup, Hemlata (1994) *Women and Globalization*, New Delhi: Ashish Publishers.
13. Sangari Kumkum and Uma, Chakravarty (ed.) (1998), *From Myths to Markets,* Shimla, IIAS.
14. Shiva,Vandana (1988) *Staying Alive*, New Delhi: Kali for Women.
15. Staggenborg, Suzanne (1998) *Gender, Family and Social Movements,* New Delhi: Forge Press.
16. Vaid S,K Sangpari (1989) *Recasting Women: Essays in Colonial History*, New Delhi: Kali for Women.
17. Venkatashwara, Sandhya, (1995) *Environment, Development and the Gender Gap*, New Delhi: Sage Publications.

SOC O 941: FUNDAMENTALS OF INDUSTRIAL SOCIOLOGY

Objective

This paper aims to familiarize the students to the nature of industrial sociology highlighting (a) the theories relating to industry, organization and trade unionism; (b) industrialization and its impact on social institutions; (c) the issues related to industrial conflict with special emphasis on the role of trade unions; and (d) to assess the impact of globalization on industry.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit- I

Industrial Sociology: Nature and scope
Theories– Marx (Alienation), Taylor (Scientific Management), Mayo (Human Relations), Marcuse (One Dimensional Man)
Types of Productive Systems– Cottage, Guild, Domestic, Factory
Industrial Roles – Worker, Foreman, Line and Staff, Specialist.

Unit- II

Industrialization and Social Institutions:
Impact on Family, Education and Stratification; Work and Leisure

Unit- III

Industrial Conflict and Employee Participation:
Trade Unions: Managerial and Conflict Theories; Strike as a Bargaining Tool

Unit- IV

Globalization and Industry:
Fordism vs. Flexible Specialization
Globalization and Industrial Relations
Emergence of Multi National Companies (MNCs)
Technological Revolution and Impact on Industry and Society

Suggested Readings

1. Bain, G. S. (ed.) (1984) *Industrial Relations in Britain*. London: Basil Blackwell.
2. Dosi, G. (1984) *Technological Change and Industrial Transformation*. N.Y.: St. Martins Press.
3. Eldridge, John *et al.* (1991) *Industrial Sociology and Economic Crisis*. N.Y.: Harvester Wheatsheaf.
4. Jorgenson, D. W. and K. J. Stroh (1999) "Information Technology and Growth", American Economic Review, 89 (109-115).
5. Kalleberg, A. L. and I. Berg (1987) *Work and Industry,* N.Y. Plennum.
6. Moses, J. A. (1990) *Trade Union Theory from Marx to Walesa*, N.Y.: Berg.
7. Parker, Stanley (1976) *The Sociology of Leisure*. London: George Affer & Union Ud.
8. Pojek, Chris (1985) *Capitalism and Leisure Theory*, London: Tavistock.

9. Schnieder, E. V. (1972) *Industrial Sociology*, London: Harper and Row.
10. Southall R. (ed.) (1988) *Trade Unions and the New Industrialization of the Third World*, London: Zed Books.
11. Watson, K. T. (1995) *Sociology, Work and Industry*. London: Routledge and Kegan Paul.

Additional Readings

1. Burns, Tom (Ed) (1969) *Industrial Man*, Harmondsworth: Penguin Books.
2. Caplow, Theodore (1965) *The Sociology of Work*, N. Y.: McGraw Hill Book Co., Chapter 6.
3. Faunce, William, A. (ed) (1967) *Readings in Industrial Sociology*, Appleton: Century, Crof & Gisbel.
4. Miller, D. and W. H. Form (1964) *Industrial Sociology*, Second Ed. London: Harper and Row.
5. Parker, S. R. *et al.* (1977) *The Sociology of Industry*, London: George Allen and Unwin.
6. Pascual, Gisbert (1972) *Fundamentals of Industrial Sociology*, New Delhi: Tata McGraw Hill.
7. Ramaswamy E. A. & Uma Ramaswamy (1981) *Industry and Labour: An Introduction*, Delhi: Oxford University Press .

SOC O 942: SOCIAL PROBLEMS

Objective

Over the years, India's social problems have become difficult, intricate and hydra-headed, pervading the entire social, economic, cultural and demographic structure. Keeping this in view, this paper aims at introducing the students to the concept and various perspectives on social problems. It also aims at providing detailed knowledge about specific social problems ranging from socio-cultural problems to socio-demographic problems.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Concept and Sociological Perspectives:

- Definition
- How and When an Issue becomes a Social Problem
- Subjective Definition and Objective Condition
- Stages in its Development
- Assumptions of Social Problems.

Perspectives on Social Problems**:**
Functional Perspective
Conflict Perspective
Symbolic Interactionist Perspective

Unit-II

Socio-Cultural Problems:
- Corruption
- Sex-Deviation
- Dowry

Unit-III

Socio-Economic and Structural Problems
- Poverty
- Unemployment
- Drug-addiction

Unit-IV

Socio-Demographic Problems:
- Child Labour and Child Abuse
- Problems of the Elderly
- Differently abled

Suggested Readings

1. Aziz, Abdul (1994) Poverty, *Alleviation in India: Policies and Programes,* New Delhi: Ashish Publication.
2. Bajpai, P.K. (1992) *Youth, Education and Unemployment*, New Delhi: Ashish Pub.House.
3. Ghosh S.K. (1996) *The World of Prostitutes*, A.P.H. Publication Corporation.
4. Julian Joseph (1989) *Social Problems (6th edition)* New Jersey: Prentice Hall.
5. Kapoor.T. (1985) *Drug Epidemic among Indian Youth*, New Delhi: Mittal Pub.
6. Mani, D. Ram, (1988) *The Physically-Handicapped in India,* New Delhi: Shilpa Publications.
7. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.

8. Murickan J. (ed.) (1989) *Poverty in India: Challenges & Responses*, Bangalore: Xavier Board Publication.
9. *Sharma, Vijay (1994) Protection* to Women in Matrimonial Home, New Delhi: Deep and Deep Publication.
10. Singh, Amarnath (1990) *Child Labour in India*, New Delhi: Shipra Publication.
11. Singhvi L.M (1977) *Unemployment Problems in India*, New Delhi: National Publishing House.
12. Srivastava C.P. (2001) *Corruption: India's Enemy within*, Delhi: MacMillan.
13. Teja M. K. (1993) Dowry: *A Study in Attitudes and Practices,* New Delhi: Inter India Publication.

Additional Readings

1. Sharma, R.K. (1998), *Social Problems and Welfare*, Atlantic Publishers: New Delhi.
2. Ahuja, Ram (2003), *Social Problems in India,* Rawat Publications: Jaipur.
3. Wilson, Gial (2000), Understanding Old Age: Critical and Global Perspective: New Delhi: Sage Publications.

SOC O 943: POLITICAL SOCIOLOGY

Objective

The course expects to familiarize the students with the relationship between the state and social structure. How power is central to any social institution is another important focus of the course. After the theoretical introduction, the course would finally focus on the Indian state and civil society including the various institutions. What role did the social movements play in the democratization of the Indian society would also be the part of the discussion.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.

(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Meaning and Scope of Political Sociology;
Concepts of State, Civil Society, Power, Caste, Varna, Structure and Nation.

Unit-II

Socio-economic Conditions and the Nature of Political Institutions:
Authoritarian State, Theocratic State, Military State, Democratic State

Unit-III

Sociology of Power, Nature and Form of Power; Power and Authority
Theories of Political Power; Elite, Structural-Functional and Marxist

Unit-IV

Thematic Concerns in Indian Political Sociology:
Village Panchayats
State and Civil Society, State and Social Structure, State and Nation-building
Movements of Resistance.

Suggested Readings

1. Barrington Moore, Jr. (1966) *Social Bases of Dictatorship and Democracy,* Boston: Beacon Press.
2. Bottomore, T. (1979) *Political Sociology*, Ambika, Bombay: B.I.
3. Chakraborty, Salyabrata (Eds.). (2005*). Political Sociology*, Macmillan, New Delhi.
4. Kothari, R. (1970*) Caste in Indian Politics*, New Delhi: Orient Longman.
5. Lukes, Steven (1974*) Power: A Radical View*, Hong Kong, Macmillan.
6. Motwani, K., Saksena, RD. (Eds.) (2009). Sociology of Politics: Theoretical Perspectives, New Delhi, Cosmo.
7. Phadnis, U. and Ganguly, R. (2001) *Ethnicity and Nation Building in South Asia*, New Delhi: Sage.
8. Pizzorni, A. (ed) (1971) *Political Sociology*: Penguin
9. Rathod, P.B., (2005). *Fundamentals of Political Sociology,* Jaipur, ABD Publication.
10. Verma, R.P., (2001). *Dynamics of Political Sociology*, New Delhi, Rajat.

Additional Readings

1. Quigley, D. (1999) *Interpretation of Caste*, Delhi: Oxford.
2. Martin, Roderick (1977*) The Sociology of Power*, New Delhi, London, Routledge and Kegan Paul.
3. Munek, R. (2002) *Globalization and Labour*, Delhi: Madhyam Brs.

SOC O 944: SOCIOLOGY OF MARGINALIZED COMMUNITIES

Objective

The course aims at sensitizing the students to the significance of the sociological study of Dalits, tribals and other sub-alteran groups. The focus would be on communities/groups suffering poverty, deprivation and discrimination.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks.

Course Outline

Unit-I

Marginalization and its Socio-economic Indices:
Poverty, Relative Isolation, Deprivation, Exploitation, Discrimination, Educational Backwardness; Inequality
A Critical View of the Caste System
Untouchability: Historical and Social Roots.

Unit-II

The Social Structure and Culture of marginalized communities:
The Status of SCs, STs, Nomadic Castes and Tribes and De-Notified Tribes; Problems; Social Mobility; Development; Identity Formation.

Unit-III

Perspectives on Marginalization:
Role of Ideology in Marginalization
The views of Jotirao Phule, Periyar, Babasaheb Ambedkar, Ram Manohar Lohiya.

Unit-IV

(a) Social Movements among Marginalized Communities: Nature and Dynamics; Perspectives on Social Movements: Protest, Reform: Role of Christian Missionaries in Social Reform Movements; Role of NGOs.
(b) Marginalization and Affirmative Action: Constitutional Provisions; Implementation; Impact on Marginalized Communities; Limitations; Critical Review.

Suggested Readings

1. Beteille, Andre (1981) *Backward Classes and the New Social Order*, Delhi: Oxford University Press.
2. Beteille, Andre (1992) *The Backward Classes in Contemporary India,* Delhi: Oxford University Press.
3. Charsley, S.R. and G.K. Karanth (1998) (eds.) *Challenging Untouchability*, Delhi: Sage Publications.
4. Chako, M. Priyaram. (2005). *Tribal Communities and Social Change*, New Delhi: Sage Publications.
5. Chaudhuri, S.N. (1988) *Changing Status of Depressed Castes in Contemporary India*, Delhi: Daya Publishing House.
6. Gupta, Dipankar (1991) *Social Stratification,* New Delhi: Oxford University Press.
7. Jogdand, P.G. (2000) *New Economic Policy and Dalits*, Jaipur: Rawat Publications.
8. Narayan, Badri. (2006). *Women Heroes and Dalit Asssertion In North India: Cultural Identity and Politics,* New Delhi: Sage Publications.
9. Singha, Roy (2004), (ed.), *Social Development and the Empowerment of Marginalized Groups. Perspectives and Strategies* New Delhi: Sage Publications.
10. Srikrishna, S., Samudrala and Anil Kumar. (Eds.). (2007). *Dalits and Human Rights*, New Delhi: Serial Publication.

Additional Readings

1. Gore, M.S. (1993) *The Social Context of an Ideology: The Social and Political Thoughts of Babasaheb Ambedkar*, New Delhi : Sage.
2. Jogdand P.C. (1991) *Dalit Movement in Maharastra*, New Delhi: Kanak Publications, 1991.
3. Mahajan, Gurpreet (1998) *Democracy, Difference and Social Justice*, New Delhi: Oxford University Press.
4. Mehta, Rani (2011), "Globalization and Human Rights of the Marginalised Groups: A Sociological Perspective," Amritsar, Guru Nanak Journal of Sociology, GNDU, Vol. 32, Nos. 1&2.
5. Omvedt, Gail (1995): *Dalit Visions: The Anti-Caste Movement and the Construction of an Indian Identity,* New Delhi: Orient Longman.
6. Omvedt, Gail (1999) *Dalits and the Democratic Revolution*, New Delhi: Sage.
7. Oommen, T.K. (1990*) Protest and Change: Studies in Social Movements*, Delhi: Sage Publications.
8. Robb, Peter (1993) (eds*.) Dalit Movements and the Meeting of labour in India*, Delhi: Sage Publications.
9. Shah, Ghansham (1990) *Social Movements in India: a Review of Literature*, Delhi: Sage Publications.
10. Shah, Ghansham (2002*), Dalit Identity and Politics*, New Delhi: Sage.

11. Singh, K.S. (1988) *The Scheduled Castes,* Delhi: Anthropological Survey of India.
12. Singh K.S. (1995) *The Scheduled Tribes*, Delhi: Oxford University Press.
13. Zelliot, Eleanor (1995) *From Untouchable to Dalit: Essays on the Ambedkar Movement,* New Delhi: Manohar

SOC O 945/935: DISSERTATION (IIIrd and IVth Semesters)

SOC O 946: MEDIA AND CULTURE

Objective

This course has been designed to provide a sociological perspective on the role of popular culture and mass media in modern society. It focuses on the phenomena of communication, mass media, popular culture, especially in the Indian context, and their relationship with the globalization process since all these together play a major role in shaping the society.

INSTRUCTIONS FOR THE PAPER-SETTERS AND FOR CANDIDATES

(i) The theory question paper will be of 80 marks and 20 marks will be for internal assessment. Duration of the paper will be 3 hours.
(ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

The syllabus will be divided into four units.

There will be 9 questions in all. The first question is compulsory and shall be short answer type containing 10 short questions spread over the whole syllabus to be answered in about 30 to 35 words each, carrying 20 marks i.e. 2 marks each . Rest of the paper shall contain 4 units. Each unit shall have two long questions and the candidates shall be given internal choice of attempting one question from each Unit-4 in all. Each question will carry 15 marks

Course Outline

Unit-I

Communication: Definition, Process, Functions and Types

Approaches to Communication

Factors influencing Communication

Mass Media – Print and Electronic

Unit-II

Culture: Popular Culture, Mass Culture, Folk Culture, Elite Culture; Mass Media and Culture; Theoretical Perspectives on Popular Culture and the Media.

Unit-III

Globalization, Mass Media and Culture – Diffusion of global culture through the mass media and its impact on society – social values, youth, family, consumerism, food, clothes, entertainment; Dissemination of awareness by media on social issues – violence, stereotypes, gender issues.

Unit-IV

Media and the Indian society – Satellite television and its impact; Impact of Social Media

Suggested Readings

1. Axford, B. and R. Huggins (2001) *New Media and Politics*, London, Sage Publications.
2. Curren, J. and M. Gurevitch (1991) (eds.), *Mass Media and Society*, London, Edward Arnold.
3. Dwyer, R. and C. Pinney (2001) (eds*.), Pleasure and the Nation: The History, Politics and Consumption of Public Culture in India,* New Delhi, Oxford University Press.
4. French, D. and Michael Richard (2000) (eds.), *Television in Contemporary Asia*, London, Sage.
5. Garnham, Nicholas, (2000*) Emancipation: the Media and Modernity,* New Delhi, Oxford University Press.
6. Gunaratne, S. (2000) (ed.), *Handbook of the Media in Asia*, London, Sage.
7. Mitra, A. (1993) *Television and Popular Culture in India,* New Delhi, Sage Publications.
8. Page, D and W. Crawley (2001) *Satellites over South Asia*, London, Sage Publications.
9. Preston, P. (2001) *Reshaping Communications,* Cambridge, Cambridge University Press.
10. Real, M.R. (1996) Exploring Media Culture: A Guide, New Delhi, Sage.
11. Singhal, A. and E.M. Rogers (2000) *India's Communication Revolution*, New Delhi, Sage Publications.

Additional Readings

1. Chakravarty, Sunita S. (2000) *National Identity in Indian Popular Cinema 1947-87*, New Delhi, Oxford University Press.
2. Croteau, David and W. Hoynes (1997) *Media/Society: Industries, Images and Audiences*, London, Pine Forge Press.
3. Johnson, K. (2000) *Television and Social Change in Rural India*, London, Sage.
4. Mankekar, P. (2000) *Screening Culture, Viewing Politics: Television, Womanhood and Nation in Modern India*, New Delhi, Oxford University Press.
5. Gupta, Nilanjana (1998) *Switching Channels: Ideologies of Television in India,* New Delhi, Oxford University Press.
6. Melkote, S.R. and H.L. Steeves (2001) *Communication for Development in the Third World: Theory and Practice for Empowerment*, London, Sage Publications.

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PANJABUNIVERSITY CHANDIGARH- 160 014 (INDIA)

(Estted. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI FOR

POSTGRADUATE DIPLOMA

IN

COMPUTER APPLICATIONS

FOR

EXAMINATIONS 2020-21
(SEMESTER SYSTEM)

--:O:-

Outline of the Syllabi and Courses for Post Graduate Diploma in Computer Applications for Examination (Semester System).

FIRST YEAR (SEMESTER –I)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/Weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-1101	Computer Fundamentals	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1102	Computer Programming using C	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1103	DataBase Management System	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-1104	Data Communications and Networks	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-1105	Lab1 (Based on PGD-1101 & PGD-1102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-1106	Lab2 (Based on PGD-1103)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
TOTAL PERIODS =42						**TOTAL MARKS = 450**		

FIRST YEAR (SEMESTER –II)

Paper Code	Paper Name	Lecture	Tutorial	Practicals/weeks	Exam. Marks	Int.Ass. Marks	Total Marks	Exam Hours
PGD-2101	Object Oriented Concepts Using JAVA	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2102	Web Technologies	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2103	Software Engineering	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-2104	Computer Based Accounting	**5**	**1**	**0**	**60**	**15**	**75**	**3**
PGD-PR-2105	Lab3 (Practical based on PGD-2101)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-PR-2106	Lab4 (Practical based on PGD-2102)	**0**	**0**	**9**	**60**	**15**	**75**	**3**
PGD-2107	**Project Work :** Project will involve Development of Business Application / Web Site	**0**	**0**	**6**	**0**	**--**	**100**	**--**
TOTAL PERIODS =48						**TOTAL MARKS = 550**		

Note: Pass Marks 40% marks in Theory, Internal Assessment, and Practical separately.
50% marks for Project Work.
50% marks in Aggregate to qualify the examinations.

SEMESTER –I

Paper Title : Computer Fundamentals PGD -
Paper Code : 1101 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to familiarize students with basic concepts related to Computers, DOS, Windows, Linux and application software's like Word-processing, Spreadsheet Software and Presentation Software.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Basics of Computers: C**haracteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer.

2. **Representation of information:** BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time.
   ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation Input/Output devices.

UNIT - II

3. **Disk Operating System:** Booting sequence; Warm and Cold Booting;Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE,FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

4. **Windows:** GUI, Icons, Toolbar, Control panel, Files and folder management under windows , Accessories, Network Neighborhood, System Tools, Recycle Bin

5. **LINUX**: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp. Comparison of main features of DOS, LINUX and Windows Operating Systems.

UNIT - III

6. Word Processing Software:

Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars.

Editing Text: Copy, Paste, Delete, Move etc., Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus

Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns

Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables

Clipart: Using clip art, Creating Word Art

Mail merge: Creating merged envelops, creating merged mailing labels

UNIT - IV

7. Spreadsheet Software:

Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range

Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking

Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions

Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts

8. Presentation Software:

Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.

References :

1.	Basandra, S.K	Computers Todays by Galgotia Publications, N.Delhi
2.	Taxali, R.K	PC Software made simple by. - Tata McGraw Hill –New Delhi.
3.	Sinha, P.K,	Computer Fundamentals by. BPB Pubs, New Delhi
4.	Sanders, Donald M,	Computers Today by McGraw Hill, New York
5.	Rajaraman, V.	Fundamentals of Computers, PHI, New Delhi,
6.	Curtin	Information Technology TMH, New Delhi.
7.	Mansfield, Ron,	Compact Guide to Windows, Word and Excel BPB Publishers New Delhi
8.	Norton, P.	Complete guide to LINUX, Techmedia

Paper Title : Computer Programming Using C
Paper Code : PGD - 1102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with programming concepts of 'C' including functions, Arrays, strings etc.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Problem Solving**: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution.
2. **C Language Fundamentals**: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Control constructs(Sequencing, alteration and iteration)
3. **Header files**: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h
4. **Storage classes**: automatic, external, static, register
5. **Preprocessor**: #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)

UNIT - II

6. **Functions**: library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion
7. **Arrays**: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions
8. **Pointer**s: Definition, Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers, array of pointers

UNIT - III

9. **Strings:** Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings
10. **Structure:** Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures
11. **Unions**: Declaring a Union, Accessing elements of a type union.

UNIT - IV

12. **Console Input/Output:** Console I/O Functions, Formatted Console I/O Functions, sprintf( ) and sscanf( ) Functions, Unformatted Console I/O Functions, gets(), puts()
13. **File Input/Output**: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File.

References:

1.	Kanetkar, Yashavant	Let us C, BPB Publications, New Delhi
2.	Gottfried, B.	Theory and problems of Programming in C, Schaum Series.N.D. TMH
3.	Sinha, P.K.	Computer Fundamentals, BPB Publications,
4.	Salaria, R. S.	Application Programming in C; Khanna Book Publishing Co. (P) Ltd., New Delhi.

Paper Title : Data Base Management System
Paper Code : PGD - 1103 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Database concepts and SQL.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Data Base Concept:** Data Base Vs File Oriented Approach, Basic DBMS terminology, Data Independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantages and Disadvantages of DBMS. Distributed Databases, Structure and Design of Distributed Databases.

2. **Data Base Design:** Introduction to Data Models, Entity Relationship Model, Entities, Attributes, E-R Diagrams, Conceptual Design of a relational data base model.

UNIT - II

3. **Relational Model:** Storage organization for Relations, Relational Algebra, Relational Calculus, Functional dependencies, multivalued dependencies, Candidate Key and Primary Key in a Relation, Foreign Keys, Normalization - Introduction, 1NF, Partial Dependencies, 2N, data Anomalies in 2NF Relations, Transitive Dependencies 3NF

3. **Database Security:** Database Security and Integrity: Data security risks, Password-related threats, Protecting the data within the database- database privileges, system privileges and object privileges, granting and revoking privileges and Roles. Concurrency: locking techniques for concurrency control.

   Recovery: Causes of failures, recovery from failures, Log based recovery, checkpoints

UNIT - III

4. **Understanding SQL-1:** Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Functions: Character Functions, Date Functions, Group Functions, Ordering the result of a Query Aggregate Functions, Grouping the Result of a Query.

UNIT - IV

5. **Understanding SQL-II:** Definition and Advantages of Views, Creating and Altering Views, Using Views, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries, Define Transaction, COMMIT and ROLLBACK,

References:		
1.	Desai, B.C.	An Introduction to Database Systems, Galgotia Pub. New Delhi
2.	Date, C. J.	Database Systems Vol. I & II, Narosa Publ., New Delhi (Indian student ed.)
3.	Henry F. Korth, Abraham,	Database System Concepts, McGraw Hill Inc., New York International ed
4.	Mukhi, Vijay	Mastering Oracle, BPB Publication, NewDelhi
5.	James T. Perry	Understanding ORACLE, BPB Publications
6.	O'Reilly	Oracle PL/SQL Programming, Shroff Publications Mumbai
7.	Rowski, Bob	Oracle Client server Computing, BPB publications

Paper Title : Data Communications and Networks
Paper Code : PGD - 1104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : The objective of the course is to make the students understand Layered structure of Networks and working of different Layered.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to Computer networks and applications:** Network Structure and Architecture, Network Hardware and Software (protocol hierarchies, design issues for layers, interfaces and services: connection oriented and connection less), Network structure and architecture-point to point, multicast, broadcast, Classification of networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) , LAN topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). Network Connecting Devices: Repeaters, Hubs, Bridges, Routers, Gateways and Switches, Network Reference models: OSI model, TCP / IP model. Comparison between OSI and TCP/IP.

UNIT - II

2. **Introduction to Data Communication**: Analog Signal, Digital Signal, Analog vs Digital Communication; Band Width Limitation, Data rate of a channel; Physical Layer: Transmission media: Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, Telephone system, modems. Modulation techniques: AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM

UNIT - III

3. **The Data Link Layer:** Design Issues, Error Detection and Correction: Nature of errors, Parity Check, CRC, Hamming Code, Elementary Data Link Protocols: Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sliding windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.

UNIT - IV

4. **The Network Layer:** Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast, Hierarchical Routing), Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket); Internetworking: tunneling, Internet Routing, fragmentation.

References :		
1.	Tanenbaum, Andrew S.	Computer Networks, PHI.
2.	Behrouz A. Forouzan	Data Communication & Networking, TMH
3.	Stalling William Maxwell	Data and Computer Communication, Macmillan International edition.
4.	McGoven, Tom	Data Communication Concepts& Applications", (Prentice Hall)

Title : Lab1(Based on PGD - 1101 and PGD - 1102)

Paper Code : PGD-PR-1105 \

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1101 and PGD- 1102

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title : Lab2(Based on PGD -1103)

Paper Code : PGD-PR-1106

Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD- 1103.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

SEMESTER -II

Paper Title : Object Oriented Concepts Using JAVA
Paper Code : PGD - 2101 Time : 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : The objective of the course is to familiarize students with Object Oriented concepts including inheritance, visibility control etc. using JAVA programming language.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **OOPs concepts**: Basic Concepts of Object-Oriented Programming (Objects and Classes, Data abstraction and encapsulation, Inheritance, Polymorphism, Dynamic binding, Message communication), difference between procedure oriented and object oriented approach, Benefits of OOP's; Applications of OOP's, Object-Oriented languages.

2. **Object oriented programming with JAVA**: Byte code, Java virtual machine, Java Development Kit, java tokens, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, method overloading, static members

UNIT - II

3. **Inheritance:** Defining a subclass, subclass constructor, multilevel inheritance, Hirerchical inheritance.Overriding methods, Final variables, methods, and classes, Abstract Methods and Classes.
4. **Visibility Control**: Public access, friendly access, protected access, private access, private protected access.
5. **Arrays:** One dimensional array, declaration, creation and initialization of arrays, Array length, Two dimensional array

6. **Strings**: String arrays, String methods, StringBuffer class
7. **Interfaces:** Defining interfaces, Extending Interfaces, Implementing Interfaces.Accessing Interface variables
8. **Packages:** Java API packages, Defining a package, Creating and Accessing packages, Adding class to a package, Hiding Classes.

9. **Multithreaded Programming**: Creating Thread, Extending the Thread class, Stopping and Blocking a Thread, Life cycle of a Thread.

UNIT - IV

10. **Errors and Exception Handling**: Fundamentals, error types, exception types, using Try and catch, finally statement, Built–in exceptions.
11. **Applet Programming**: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets

References:		
1.	Balaguruswamy, E.	Fundamentals of Java
2.	Daniel Dang	An Introduction to Java Programming, PHI, New Delhi
3.	Deitel & Dietel	JAVA, How to Program, Pearson Education Asia
4.	Liang	An Introduction to Java Programming PHI

Paper Title : Web Technologies
Paper Code : PGD - 2102 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures of one hour each.

Objective : This course familiarizes students with concepts of HTML, CSS, JAVA Scripts and PHP.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Introduction to HTML/DHTML:** Brief history of HTML, Building blocks of HTML, lists, links, images, image map, tables, frames, forms
2. **Introduction to cascading style sheets (CSS):** Introduction to Style Sheets, Types of style Sheets-Inline, embedded and external style sheets.

UNIT - II

3. **Fundamentals of Javascript:** Features, tokens, data types, variables, operations, control constructs, strings, arrays, functions, Document Object Model, event handling. Applications related to client side form validation.
4. **Javascript Objects**: Core language objects, The String Object, The Math Object, and The Date Object; User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects

UNIT - III

5. **Introduction to PHP:** Embedding PHP code in a Web Page, Basic Syntax, Defining variable and constant, PHP Data types, Operators and Expressions
6. **Control Structures:** Making Decisions, Doing Repetitive task with looping, File inclusion statements.
7. **Functions**: Defining a function, Call by value and Call by reference, recursive function, Library functions
8. **String**s: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function.

UNIT - IV

9. **Arrays:** Anatomy of an Array, Creating index based and Associative array, Accessing array Element, Looping with associative array using each() and foreach(), Some useful Library function: current(), next(), prev(), reset(), end(). **Working with Forms:** Super global variables, super global array, Importing and accessing user input, Combine HTML and PHP code.

10. **Working with files and Directories**: Opening, closing, Coping, renaming and deleting a file, working with directories, File Uploading & Downloading

References:		
1.	Phillips	Using HTML, PHI
2.	Bayross, Ivan	HTMLl,DHTML, Javascript by BPB
3.	Wanger & Wyke	Java Script Unleased, Techmedia, New Delhi.
4.	Steve Suehring	PHP6 and MYSQL Bible, Wiley India edition
5.	Steven Holzner	PHP:The complete Reference, Tata McGraw Hill
6	Kelvin Tetroi	Programming PHP

Paper Title : Software Engineering PGD -2103
Paper Code : Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration: 60 Lectures

Objective : This course make students understand concepts related to Software Engineering including process model, project management, design and testing.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

1. **Software Engineering Fundamentals**: Characteristics, Components, Applications, principles of software engineering, skills of software engineer.
2. **Software Process Models**: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, win Win Spiral Model
3. **Software Project Management**: Software Project management Plan(SPMP), Project scheduling Techniques- Work Breakdown Structure(WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM)
4. **Software Project Estimation and risk Management**: Problem-based estimation, Process based estimation, Cost Estimation Model- COCOMO Model, Software Risks, software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS
5. **Software Design**: Software Design Process, Design Failures and Remedies
6. **Structured Analysis and Design tools:** Structured Analysis and Structured Design (SASD)-Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary(DD), Entity-Relationship diagram(ERD)
7. **Software Testing**: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing
8. **Software Quality and Maintenance**: Software quality attributes, Factors affecting Software Quality, Aims of Software Maintenance, Types of Software Maintenance, Software Maintenance Costs.

References:		
1.	Fairley	Software Engineering Concepts, McGraw Hill
2.	Lewis, T.G.	Software Engineering, McGraw Hill.
3.	Meyers, G.	The Art of Software Testing, Wiley-Inter-Science
4.	Hibbard, P.G	ConstructingQualitySoftware,NorthHolland Publication
5.	Shere, Kenneth	Software Engineering & Management, Prentice Hall
6	Deutsch, Willis	Software Quality Engineering : A Total Technical and Management Approach, Prentice Hall.
7.	Doug Bell, Ian Murrey and John Pugh	Software Engineering: A Programming Approach, Prentice Hall
8.	Pressman:	Software Engineering, Tata McGraw Hill
9.	Ghazzi, Carlo	Fundamentals of Software Engineering, PHI

Paper Title : Computer Based Accounting
Paper Code : PGD - 2104 Time : 3 Hrs.

Max. Marks : 75
External : 60
Internal : 15

Course Duration : 60 Lectures of one hour each.

Objective : This course make students understand accounting principle and computerized accounting.

Note:

i. The Question Paper will consist of Four units.
ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
iii. The students are required to attempt ONE question from each unit and the Compulsory question.
iv. All questions carry equal marks unless specified.

UNIT - I

Accounting: Principles, concepts and conventions, double entry system of accounting, introduction of basic books of accounts of sole proprietary concern, control accounts for debtors and creditors, closing of books of accounts and preparation of trial balance.

Final Accounts: Trading, profit and loss accounts and balance sheet of sole proprietary concern with normal closing entries.

UNIT - II

Introduction to Manufacturing Account, final accounts of partnership firms, limited company.

Introduction to Computerized Financial Accounting, coding logic and codes rquired,master files, Transaction files, Introduction to documents used data collection, processing of different files, outputs obtained

UNIT - III

Introduction to Computerized Inventory Control, types of inventory and associated documents, Inventory reports-nature and types, Inventory Control : ABC and Ageing analysis, Methods of Stock validation : LIFO, FIFO, actual bases, Interfacing Inventory with Financial Accounting, Purchasing Sub-Systems, Sales Order processing.

UNIT - IV

Introduction to Computerized Payroll & Invoicing Applications, Exposure to Structure, Processing and Reports, Interfacing these applications to financial Accounting.

Use of Accounting package Tally: Introduction to Tally, Groups, Ledgers, Vouchers, Orders, Cost Centers and Categories, Stock, Reports in Tally

References:	
Kellock, J., 1972	Elements of Accounting, Heinemann 1st ed., London
Rockley, L.E., 1970	Finance for the Non-Accountant 2nd. Edition, London : Business Book.
Levy and Sarnat, 1991	Principle of Financial Management, Prentice-Hall, International, PHI.
Arnold, 1984	Financial Accounting, Prentice-Hall, International (Paperback Edition).
Horngren and Sundem, 2010	Introduction to FinancialAccounting, Prentice-Hall International (Paperback Ediion) N.D: PHI
Murthy, U.S.	Management Finance, 2nd. Edition, Vakils Fefers & Simons Ltd
Van Home, James, C., 2004	Financial Management & Policy, Prentice Inc
Pandey, I.M., 1979	Financial Management, Vikas Publication, 6th Rev. ed., N. Delhi

Paper Title: Lab3 (Based on PGD- 2101)

Paper Code: PGD-PR-2105

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on PGD -2101.

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Lab4 (Based on PGD- 2102)

Paper Code: PGD-PR-2106

Time: 3 Hrs.
Max. Marks : 75
External : 60
Internal : 15

This laboratory course will be based on **PGD- 2102**

Note: Paper will be set at the time of examination. Due weightage may be given to the practical note-book and Assignments in evaluation.

Paper Title: Project Work.

Paper Code: PGD-2107 **Max. Marks: 100**

Major Project on any database application using any database development tool is to be developed/ Development of a Web Site using Database connectivity

SYLLABUS
PG DIPLOMA IN CYBER CRIME
(Semester System)

Detail Marks

i) 1st Semester = 400
ii) 2nd Semester = 400
Grand Total = 800

SCHEME OF THE COURSE

1st Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–101	General Forensic Science-I	80	20	100
PGDCR–102	Computer Basics	80	20	100
PGDCR–103	Intellectual Property Rights & International Treaties	80	20	100
PGDCR–104 (Practical)	Basic Computer Skills	80	20	100

Total = 400

2nd Semester

Paper No.	Paper Title	Theory	Internal	Total Marks
PGDCR–201	Computer Forensics	80	20	100
PGDCR–202	Cyber Crime and Information Technology Act	80	20	100
PGDCR–203	Computer Forensics Analysis	80	20	100
PGDCR–204	Project/Dissertation	Project : 80	Viva: 20	100

Total = 400

FIRST SEMESTER

PGDCR-101: GENERAL FORENSIC SCINECE-I

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Nature, Need (social changes, anonymity, technical knowledge, wide field, better evidence, Alternatives), Functions & Development of Forensic Science, Laws and Principles governing Forensic Science, Forensic Science set-up in India, Forensic Science Institutions.

Problem of Proofs (General, Scientific Evidence & Proof, Investigative Problems, Scientific Aspects, Legal Problems)

Unit-II

Expert testimony (The expert, Report, Illustrations, language, The Prosecution counsel, Defence Counsel, The court (Fallacies about expert evidence), Time element

Unit-III

Indian legal systems: The Indian Evidence Act, Indian Constitution, **Cr PC and their relevant sections pertaining to admissibility of Evidence**, Expert evidence, Examination of expert etc., Reports admissible, The evidence, Insufficient evidence, **Case Law pertaining to digital Evidence in various courts of Law.**

Unit-IV

Scene of occurrence, Importance, The problems, Location, Evaluation (Protection, Photography, Sketching, Search), Scene management, Documentation. **Systematic examination of scene of occurrence and recovery of hardware (special mention of digital crime form remote where law of the land may not be applicable).**

Text/ References:

1. Sharma, B.R 1990, Forensic Science in Criminal Investigation and Trial. Central Law Agency, Allahabad.
2. Saferstein, R., 1976, Criminalistics : An Introduction to Forensic Science
3. Saferstein, R., 1982, Forensic Science Hand Book I & II, Printice Hall : N. Jersey
4. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
5. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London
6. Kirk, P.I, 1953, Crime in Investigation. Interscience Publishers : New York

PGDCR–102: COMPUTER BASICS

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Computers and Law, Principles of Computer: Memory and processor address and data buses, stored program concept, Motherboards, Word processing and graphic file formats. Boot sequence, Operating system, **Windows, Linux, internet, working and issues related to security of network, layers of network, firewalls, antivirus and other malwares.**

Input/Output (I/O): Standard (I/O) devices, unformatted (character and string) and formatted (scan and print) (I/O) functions, **Memory hierarchy and cache memory.**

Unit-II

Computer Languages: Brief history and general structure, stages of development of a program, Basic building blocks of computer language. Overview of C language

Data types: Constant and variable, declaring variables, storage classes, different types of expressions and their evaluation, **Database management system (DBMS).**

Unit-III

Data files: Introduction to data files, different ways of file processing (standard I/O and system I/O), Description of various library function for file handling, updating files, programming examples to illustrate the processing of files

Methods of storing data: number systems, character codes, record structures, file formats and file signatures.

Unit-IV

Biometrics: Fingerprint and Hand Geometry, Facial and Voice Recognition, Eye Biometrics: Iris and Retina Scanning, Biometric crimes**, Concept and working of Aadhaar.**

Text/ References:

1. Rajaraman V., Fundamentals of computers, 4th edition, Prentice hall of India Pvt. Ltd, 2007
2. Kanetker Y., Let us C, BPB Publishers 8th edition 2007
3. Fitzgerald, M.J., 1952, Hand book of criminal investigation, New York
4. Lundguist, F., 1962, Methods of Forensic Science, Vol. I & II. London

PGDCR–103: INTELLECTUAL PROPERTY RIGHTS & INTERNATIONAL TREATIES

Lectures: 4 Hrs. / Week **M.Marks: 80**

Unit-I

Introduction to Intellectual Property Rights, WIPO, WTO, GATT, TRIPS, Berne convention, Universal Copyright Convention, Copyright Treaty (WCT), Copyright Act 1957, Trades Marks Act, Plagiarism

Unit-II

Principles of Data Security/Protection, Jurisdictional issues, Retention of electronic-data, Transactional Data Flow

Unit-III

International Treaties: PCT, PLT, SPLT, Washington Treaty

Unit-IV

Indian Patent Act, Definition, violation and antidote, Application of Patents to IT e.g. Patents for computer softwares, Patents for electronic trade, Patent Search on internet Patent websites of US and other countries, Distinctions in claims, Vetting of patents, IT related patents in India

Text/ References:

1. Handbook of Cyber and E–Commerce Laws – Bakshi P.M. & Suri R.K.
2. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a
3. Networked World, Wiley Publishing, 2002.
4. Textbook of Intellectual Property Rights, Prixit Bansal

PGDCR–104: PRACTICALS

Lectures: 4 Hrs. / Week **Practical: 80 Marks**

1. **Working of Widows environment and Linux,**
2. **Internal and external Commands of DOS.**
3. **Network commands like ping**
4. **Tracing of an email.**
5. **Reading of source code.**
6. **Trial versions of various tools**
7. **Photoshop image processing**
8. **Retrieval of deleted data.**
9. Working with internet like browsing, chatting, and social networking sites etc.

SECOND SEMESTER

PGDCR-201: COMPUTER FORENSICS

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit-I

Computer Crimes (Nature, Motives, Characteristics, Investigative Impediments), Traditional computer crime, recognizing and defining computer crime, Phreakers, Evolution in hacking community, Theft of Intellectual Property

Unit-II

Classification (Information Piracy and vandalism, Theft of information services, organised crime, Infringement of copy right, Theft, wire tapping, data destruction, virus, spy software, money laundering, electronic fund transfer, electronic personation, hackers, software piracy

Unit-III

Contemporary computer crime, Neo-Traditional crime, Web based criminal activity, Terrorism & organised crime: Introduction, Terror online, Terrorism & crime, organised crime, **image processing, morphing**.

Unit-IV

Computer Criminals (Employees, Computer Experts, other computer criminals, handling, Laws, legislation), **preventative measure**.

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
3. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
4. Hand book of computer crime investigation, Eoghan Casey, Elsevier.
5. Digital evidence and computer crime-Forensic science, computers and the internet, Casey, Academic press.
6. Ashbourn, J.: Practical Biometrics – From Aspiration to Implementation, Springer Verlag, 2004.
7. Bolle, R.M., Connell, J.H., Pankanti, S., Ratha, N.K., Senior, AW.: Guide to Biometrics, Springer Verlag, 2004.
8. Nanavati, S., Thieme, M., Nanavati, R: Biometrics–Identity Verification in a Networked World, Wiley Publishing, 2002.
9. M. Erbschloe, J. R. Vacca: Information Warfare: How to Survive Cyber Attacks (McGraw-Hili Prof. 2001.)

PGDCR-202: CYBER CRIME AND INFORMATION TECHNOLOGY ACT

Lectures: 4 Hrs. / Week **M. Marks: 80**

Unit I

Internet: Evolution, Advantages and Disadvantages of Internet Technology, Netizens and Cyber Space, Cyber Law and its components, Cyber crimes and classification

Unit II

Information Technology Act 2000 Amended by the Information Technology (Amendment) Act, 2008

Need, Aims, Objectives and Applications (Section 1)

Definitions

- Computer [Section 2(i)]
- Computer Network [Section 2(j)]
- Computer Resource [Section 2(k)]
- Computer System [Section 2(i)]
- E-record [Section 2(t)]
- Information [Section 2(v)]
- Asymmetric crypto system [Section 2(f)]

Digital Signature, Electronic Signature [Section 3 & 3A]

Attribution, Acknowledgement and Dispatch of e-record [Sections 11 – 13] The controller of Certifying Authorities (CCA) [Sections 17 – 29]

Unit III

Certifying Authority [Sections 30 – 34]

Cyber Crime: (i) Cyber contraventions and penalty [Sections 43 – 45] (ii) Offences [Sections 65 – 77]
Extra-territorial jurisdiction, Cognizable and Bailable offences [Sections 75, 77 – 77B]

Unit IV

Investigation and procedure of search and seizure [Sections 78 & 80], Intermediary and its liability [Section 2(1)(w) and 279), Examiner of Evidence [Section 79A], Grey areas of IT Act 2000, Jurisdiction: National and International Cases

Text/References:

1. Cyber laws- Singh Y., 5th edition (2012) Universal Law Publishing Company
2. Cyber Crime- Bansal S.K., (2011) APH Publishing Corporation
3. Forensic Science in Criminal Investigation and Trial- Sharma B.R., 4th edition (2009)
4. Cyber Laws, E-commerce & M-Commerce- Ahmed T., (2012) APH Publishing Corporation
5. Handbook of Cyber and E-Commerce Laws- Bakshi P.M., Suri R.K., (2002) Bharat's Publishing House
6. Taxman's Law of Information Technology (Cyber Law)- Mittal D.P., (2000) New Taxman Allied Services Pvt. Ltd., New Delhi

PGDCR–203: **COMPUTER FORENSICS TOOLS**

Lectures: 4 Hrs/ Week **M.Marks: 80**

Unit-I

Electronic evidence, Discovery of electronic evidence, documentation, chain of custody, authorization, evidence collection, packaging and transportation, storage of evidence

Unit-II

Cyber forensic tools & utility: Coroner's Toolkit, EnCase Forensic, Forensic toolkit, i2 Analyst's Notebook, LogLogic LX2000, ProDiscover Incident Response.

Unit-III

Internet investigations (e-mail, IRC, chatting sites, social networking sites etc.); IP addresses and domain names; Investigative methods, Digital Evidence

Unit-IV

Prevention: The basics, access (password cards, biometrics), Secrecy, Integrity, computer data backups, Risk Management, **cryptography, stegnography.**

Text/ References:

1. Computer Forensics: Computer Crime, Scene Investigation, Second Edition John R. Vacca Charles River Media, INC. Boston, Massachusetts.
2. Computer evidence-Collection and preservation, Christopher L.T. Brown, FireWall Media, New Delhi.
3. Computer Forensics & Cyber Crime, An introduction, Marjie T. Britz, Second edition, 2012, Pearson Education Inc.
4. Cyber forensics-A field manual for collecting, examining and preserving of computer crimes, A.J. Marcella, Robert S. Greenfield, Auerbach publications.
5. Cyber crime, Doughless Thomas and Brian D.Loader.
6. A practical guide to LINUX, Sober.
7. Computer forensics-Incident response essentials, Warren G.Kruse IIand Jay G.Heiser., Addison Wesley.
8. Cyber crime investigation field guide, Bruce Middleton, Auerbach publications.
9. A. Blyth and G. L. Kovacich, "Information Assurance", Springer, 2005.

PGDCR–204: PROJECT/DISSERTATION
Lectures: 4 Hrs/ Week **Marks: 100 Marks**

Project Based on Computer forensic, Network Security, information Security, cyber crime etc., Case Studies related to IPR Cyber world and Electronic Commerce.

Instruction for Examiners

1. **For the theory examination a total of 9 questions will be set, two from each unit I, II, III, IV. There will be one compulsory question of eight to ten short answer type questions covering the whole syllabus. There will be no choice in compulsory question.**
2. **Students will be required to attempt five questions choosing one question from each of the unit I, II, III, IV and the compulsory question.**
3. **All question will carry equal marks**

PANJAB UNIVERSITY CHANDIGARH-160 014 (INDIA)

(Estted. Under the Panjab University Act VII of 1947 enacted by the Govt. Of India)

FACULTY OF SCIENCE

SYLLABI

FOR

PG Diploma in Chemical Analysis of Food

(Semester System)

EXAMINATIONS 2020-21

PANJAB UNIVERSITY, CHANDIGARH

OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR POSTGRADUATE DIPLOMA IN CHEMICAL ANALYSIS OF FOOD FOR THE EXMINATIONS OF 2020-21

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Outline of Tests

There will be two semesters in a year. Examination will be held at the end of each semester.

Total Marks: 300

There will be two theory papers and one practical paper in each semester.

1st Semester

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Semester I

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Foods: As source of Energy, energy value of foods, uses of foods in the body, digestion, absorption and transport. [10]

Unit-II

Chemistry of Fats and Oils: Composition-saturated and unsaturated fatty acids. Functions and storage in the body and Physio-chemical properties. An idea about soaps, detergents, emulsions and emulsifiers. [10]

Unit-III

Carbohydrates I: Composition and classification, storage in the body, biological functions of some monosaccharides and disaccharides (glucose, fructose, Sucrose, Maltose and lactose). [10]

Unit-IV

Carbohydrates II: Biological functions of some polysaccharides (starch and cellulose). Important chemical and biological reactions, Other sweetening agents: Saccharin, Aspartame. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. *Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.*

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Adulterants I: Food Colours

-Food colors and Additives.
- Kinds of colors used.
-Water soluble food colors. **[10]**

Unit-II

Food Adulterants II: Dyes and preservatives

-Dyes: Permitted and non-permitted dyes.
-Identification of Dyes by Spot Test.
-Preservatives, Organic preservatives-Dyes-Percentage-Definition and classification. **[10]**

Unit-III

Milk and Milk Products:
Composition, Classification, Processing, Natural Aspects of mild, curd, paneer, khoa, cheese, ice-cream and various kinds of processed milk. **[10]**

Unit-IV

Beverages:
Tea, coffee, chocolate, cocoa powder, processing (in brief), chemical constituents, Good and Bad effects of alcoholic and non-alcoholic beverages. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearson *Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. *Handbook of Analysis and Quality Control for fruit and vegetable products*
6. *The Preservation of Food Adulteration Act, 1954*, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Simple physical and chemical tests to determine quality and detect adulterants in the following:

(i) Milk and Milk products
(ii) Oils and fats
(iii) Spices and condiments
(iv) Food grains
(v) Flours
(vi) Canned Foods
(vii) Cane Sugar, Saccharin and Vegetable
(viii) Beverages Alcoholic, Non-Alcoholic

(40)

II. Principles and Techniques of separation methods, chromatography (TLC)

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

Semester II

		M. Marks	Int. Ass.	Total Marks
Paper-I	Chemistry of Foods	40 Marks	10 Marks	50
Paper-II	Food Adulterants/ Additives and Testing Of Foods	40 Marks	10 Marks	50
Papers-III	Practical			50

The Theory Examination will be of 3 hours duration. Annual Practical Examination will be of 4 hours .

Paper I: Chemistry of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Amino Acids and Proteins: Composition, sources, functions and deficiency symptoms, Physio-Chemical properties. Denaturation of proteins during processing, Chemical Analysis of proteins. **[10]**

Unit-II

Cereals and Pulses: Brief introduction to cereals and pulses, composition and nutritional aspects. **[10]**

Unit-III

Some Important Vitamins I: Fat soluble-Vitamins (A, D, E and K). Sources, structures and biological importance. **[10]**

Unit-IV

Some Important Vitamins II: Water soluble vitamin (Ascorbic Acid, thiamin, Riboflavin, B-Complex as B_6, Folic Acid). Sources, structures and biological importance. **[10]**

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*
4. *The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours*

Recommended Books

1. Finar, I.L. *Organic Chemistry*, Vol. II
2. Boyd, Morrison *Organic Chemistry*
3. Swaminathan, S. *Advanced test Book of Foods Nutrition*, Vol. I, II
4. Megar, Lillian Hoagland *Food Chemistry*
5. Food analysis, theory & practice (3rd ed.) Y. Pomeranz & C. E. Meloun CBS publishers 2004.

Paper II: Food Adulterants/Additives and Testing of Foods

Total marks: 50
Internal assessment: 10
Theory paper: 40
No. of lectures: 40

(4 Hrs. /Week)
Time: 3 hours

OBJECTIVE OF THE COURSE

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to Postgraduate Diploma in Chemical Analysis of Food in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the

academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

Unit-I

Food Analysis I: Sampling Technique**,** Preparation of Sample**,** General Physical methods of analysis of Foods (i) Bactometaric(ii) Refractometry (iii) Polarimetery and Polarography (iv) Chromatography (v) UV-Visible. [10]

Unit-II

Food Analysis II: General chemical Methods:

-Proximate Principle
-Specific Gravity method
-Ash and Types
-Total protein and Non-Protein N
-Total Fat and different kinds of Lipids
-Total carbohydrate, starch, mono/disaccharides. [10]

Unit-III

Canned Foods: Chemical composition and quality criterian of canned foods.

Spices and Condiments: Composition and Nature **[10]**

Unit-IV

Legal Aspects of food Adulteration and Prevention

- Standards of food quality.
- Permissible limits of food preservatives in, milk, spices, beverages and canned foods.
- Procuring and analysis of food items for confirming adulteration.
- Power and duties of Public Analyst and food Inspectors.

-Prevention of food adulteration. [10]

Instructions for Paper setters and Candidates:

1. *Examiner will set a total of NINE questions. TWO questions from each unit and ONE compulsory question of short answer type covering the whole syllabi.*
2. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
3. *All questions carry equal marks.*

4. The Theory Examination shall be of 3 hours duration and practical examination shall of 4 hours

Suggested Books/ Reading

1. *Prevention of Food Adulteration Act*, 1988
2. Pearso*n Chemical Analysis of Food*
3. Jacob, Morria B *Chemical Analysis of Foods and Food Products*, 3rd Ed.
4. Joslyn *Methods in Food Analysis*
5. Handbook of Analysis and Quality Control for fruit and vegetable products
6. The Preservation of Food Adulteration Act, 1954, Chemical Law Publishers India Pvt. Ltd., 2001.

Paper III: Practical **60 hrs.**

I. Determination of Acid value, iodine Value and Saponification Value.

(20)

II. (a) Visit to chemical/Food laboratories of Industry related to get students acquainted with various aspects of Chemical analysis of Foods.

(b) To prepare and submit a report on the said visit (200-300 words).

(c) Periodical Examination of students by asking viva-voce.

(20)

III. Continuous assessment based on Regularity, House Tests and Attendance.

(20)

Suggested Books

1. Pearson *Chemical Analysis of Foods*
2. Jacob *Chemical Analysis of Food*, ISI Publications
3. *Manual of food quality Control Additions Contaminants techniques*, 1989
4. Mahindra, S.N. *Food Additives*

Infrastructural Requirements

(a) Institutions/Colleges having a good laboratory for the conduct of Chemistry Practicals at the level of B.Sc. final year with quality apparatus, instruments and reagents.
(b) Additionally the institutions should have an easy to food analysis laboratories.
(c) Instrumentation facilities for practicals.

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PANJAB UNIVERSITY, CHANDIGARH

SYLLABI

FOR

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING
(Semester System)

Examinations 2020-2021

POST GRADUATE DIPLOMA IN GUIDANCE AND COUNSELLING
SESSION 2020-2021

OUTLINES OF TESTS, SYLLABI AND COURSES
ONE YEAR DIPLOMA COURSE SEMESTER SYSTEM

General Objectives

To prepare students as Counsellors, Guidance workers and Researchers for various institutions engaged in Teaching, Educational Research and organizational Planning.

The Post Graduate diploma aims to create a supportive and collaborative learning environment for students from diverse backgrounds and cultures to acquire knowledge, attitudes, and skills essential in the practice of guidance and counseling- The course will also help the students to become exemplary in applying essential guidance and counseling knowledge and skills in a variety of settings with individuals from diverse backgrounds.

Aims and Objectives

Post graduate diploma in guidance and counseling will enable the students to:

1. Have the knowledge, personal attitudes and skills to provide effective guidance counseling and developmental services to clients diverse in age, gender and socioeconomic status

2. Have a strong Identity as professional counselors with a commitment to future development and possession of effective networking skills.

3. Have the ability to go beyond providing individual services and have skills to lead teams of teaching professionals developing and providing a comprehensive set of services as needed by the client population.

4. Have skills to advocate For student client issues and to foster productive organizational change.

5. Have a vision of career planning as a developmental process and to provide individual guidance and counseling and skills training to facilitate decision-making and to work with developmental life transitions.

6. Have the knowledge and skills to use, technology resources in professional practice and in research and to understand the application of ethical practice to use of assessment and information management tools.

Course Details

Duration of the Course

The duration of the course will be in one year in two semesters.

Theory

The course consists of core components in theory of guidance and counseling processes and procedures and psychological assessments.

EVALUATION FOR CONTINUOUS ASSESSMENT

1. The twenty marks for internal evaluation shall be awarded by following criteria.
2. The following are the guidelines, mode of testing and evaluation for Continuous Internal Assessment of students. It may include written assignment, snap tests, participation in discussion in the class, term papers, attendance etc.
3. In order to incorporate an element of Continuous Internal Assessment of students, the Department will conduct one written test and one snap test and other activities as quantified below:

1. House Test	50 marks
2. Practicum	15 marks
3. ClassroomInteraction	10 marks
4. Assignments	15 marks
5. Attendance	10 marks
Total : 100 (reduced to 25)	

Duration of Semester end examination for each course / paper will be of three hours.

Practical work

The course includes intensive training in practical / field work integrated with theory components.

Internship

The course has an input of two weeks' internship programme.

Details

Total no of papers is 6(100 marks each)

Total Marks 600 (100 X 6)

Semester I						
Sr. No.	Paper	Course code	Course Title	Evaluation		
				Internal	External	Total
1	I	PGDGC-I	Introduction to Guidance	25	75	100
2	II	PGDGC-II	Introduction To Counselling	25	75	100
3	III	PGDGC-III	Educational And Psychological Appraisal	25	75	100
Semester II						
4	IV	PGDGC-IV	Counseling Children And Adolescents With Different Abilities	25	75	100
5	V	PGDGC-V	Career Education	25	75	100
6	VI	PGDGC-VI	1nternship/ Work Based Learning	75	25	100

Note: For Evaluation

1. A total of 5 questions are to be attempted in each paper. There will be 4 questions (One from each unit) and one question of short notes.

2. Each question will carry 15 marks

3. There will be internal choice in first 4 questions

4. Questions of Short notes will be spread over 4 Units. There will be no choice in fifth question related to short notes

5. There will be house test, assignments, sessional and practicum in each of the first five papers carrying 25 marks each by way of internal assessment

6. There will be Viva voce (external) test in Paper VI carrying 25 marks. The internal assessment of Paper VI will be based on supervised practical work carrying 75 marks in which division of marks is as following:

a. Case study (one):25
b. Observation report :20
c. Career conference/career talk:15
d. career exhibition : 15

Semester-I

PAPER- I

COURSE CODE: PGDGC 0I

COURSE TITLE: INTRODUCTION TO GUIDANCE

Total marks=100
External =75
Internal = 25

OBJECTIVES:

The course contents in this paper will enable the students:

- To understand the meaning, principles, needs and types of guidance
- To have a detailed knowledge about various guidance services
- To organize guidance programme in elementary and secondary schools
- To develop skills in using technology for guidance purpose

COURSE CONTENTS

Unit I MEANING, TYPES & EMERGING TRENDS OF GUIDANCE

1. Guidance; Meaning, aims, principles and needs of Guidance services.
2. Types of guidance: Personal, Social, Educational, Career, Leisure time, Health and guidance for children with different abilities.
3. Emerging trends of Guidance.

Unit II COMPONENTS AND ORGANISATION OF GUIDANCE SERVICES

1. Individual Inventory service
2. Information service
3. Counseling service
4. Placement & Follow-up service

Unit III ORGANIZATION OF GUIDANCE PROGRAM

1. Essential requisites of Guidance Programme
2. Organization of guidance programme for elementary schools
3. Organization of guidance programme for secondary schools
4. Role of teachers, guidance personnel in organization of the guidance programs.

Unit IV INFORMATION TECHNOLOGY AND GUIDANCE

1. Skill of using Information Technology and Internet
2. Use of online testing for education and career information
3. Resource sharing: Human, Financial and Infrastructural, Management of resources in guidance programme.

PRACTICUM/ WORK BASED LEARNING Marks:15

I. Plan, organize and disseminate information using any one service using different mediums and methods e.g. Posters, pamphlets, multimedia presentation, interactive sessions, talks, workshops etc.

Suggested Readings:

Chadra Ramesh, (2002). *Guidance and counseling*. Delhi: Kalpaz Publications.

Dash, Nibedita (2004). *Secondary School organization, Guidance and Educational Technology,*New Delhi: Dominat Publishers and Distributors.

Dressel, P.L. (1976). *A Handbook of Academic Evaluation*. London. Jossey-Bass Publishers

Jones, Arthur j, (1970). *Principles of Guidance Sixth Edition.* New Delhi: Tata McGraw Publishing Company Ltd.

Knapp, Robert H. (1953). *Practical Guidance Methods for Counselors, Teahers and Administrators*. New York: McGraw-Hill Book Company, Inc

Kochhar, S.K. (1996). *Guidance and counselling in colleges and universities.* New Delhi: Sterling Publishers Pvt. Ltd.

Lytton, Hugh & Craft Maurice, Ed. (1974). *Guidance and counselling in British schools- A discussion of current issues.* London: Edward Arnold, Publishers Ltd.

Qureshi, Hasnain (2004) *Educational Counselling.* New Dehli: Anmol Publications Pvt. Ltd.

Sharma, Ram Nath& Sharma, Rachana (2004). *Guidance and Counselling in India*. New Delhi: Atlantic Publishers and Distributors.

Sharma, Tara Chand(2002).*Modern Methods of Guidance and Counselling*. New Delhi: Sarup& Sons

Sharam, YogendraK. (2004). *Principles of educational and vocational guidance.* New Delhi: Kanishka Publishers, Distributors.

Sertzer, Bruce & Stone Shelly C (1996). *Fundamentals of Guidance.*Third Ed. London: Houghton Mifflin Company Boston.

PAPER- II

COURSE CODE: PGDGC 02
COURSE TITLE: INTRODUCTION TO COUNSELLING

Total marks=100
External =75
Internal = 25

OBJECTIVES:

The contents in this paper will help the students:

- To understand the meaning, types and techniques of counseling
- To learn about theories of counseling
- To develop counseling skills in conducting counselingsessions
- To learn about new emerging areas of counselling
- To make the tudnets aware of maladjustment and concept of adjustment.

COURSE CONTENTS

Unit I THEORETICAL FOUNDATION OF COUNSELLING

1. Meaning, historical development and Importance of counselling
2. Types: Individual and Group counseling.
3. Approaches of counselling: Directive, Non directive. Eclectic counseling.
4. Techniques in counseling: Testing and Non Testing techniques
5. The counselor-Qualities of effective counselor, self renewal: preventive burnout, ethical standards and legal considerations in counselling

Unit II THEORIES OF COUNSELLING

The theoretical beginnings, goals and therapeutic process of following theories of counselling:

1. Psychoanalytical theory (Sigmund Freud)
2. Self concept/actualization theory (Maslow)
3. Rational emotive theory (Albert Ellis)
4. Indian therapeutic approach (Yoga and meditation)
5. Behavioristictheory (Aarna Beck)

Unit III ADJUSTMENT AND MENTAL HEALTH

1. Meaning and process of adjustment, adjustment mechanisms, adjustment problems of children and adolescents.
2. Causes of maladjustment, physical, emotional, mental and social.
3. Differences between adjusted and maladjusted adolescents, criteria of good mental health, role of counselor in developing good mental health
4. Techniques of stress management, conflict resolution and mediation and violence prevention programs

Unit IV COUNSELLING SKILLS

I. Building Trust: Listening, attending, building rapport, demonstrating empathy, observing
II. Interview: types of Interview, procedure of conducting interview: preparation, process, interpretation, recording, termination

III. Special concerns in counseling: Substance abuse, Drug addition, HIV AIDS, Child abuse ,Cyber-bullying, Counseling for aging population

IV. Preparation for family life (parenting and child rearing) ,Emerging trends and areas in counselling

PRACTICUM/ WORK BASED LEARNING Marks:15

1. Prepare a plan for Peer counselling on Hypothetical problem and conduct under supervision and submit a report

Suggested Readings:

Arbuckale, D.S. (1965).*Counseling: Philosophy, theory and practice.* Boston Allyn and Bacon

Carroll, Michael & Walton Michael, Ed.(1997). *Handbook of counseling in organizations.* New Delhi: SAGE Publications. India Pvt. Ltd.

Chandra Ramesh, (2002). *Guidance and counselling.* Delhi: Kalpaz Publications.

Geldard, Kathryn &Geldard, David (1997). *Counselling children- A practical Introduction.* New Delhi: Sega Publications.

Gibson, R.L. & Mitchell M.H.(2008*). Introduction to Counselling and Guidance*. New Delhi: Pearson Publications.

Gladding, S.T. (2004) *Counselling- A Comprehensive Profession*. New Delhi: Pearson Publications.

Gregory, R.J. (2004). *Psychological Testing: History Principles and Application*. N.Y. Pearson Education Group.

Knapp, Robert H. (1953). *Practical Guidance Methods for Counselors, Teachers and Administrators.* New York: McGraw- Hill Book Company, Inc

Kochhar, S.K. (1996). Guidance and counselling in colleges and universities. New Delhi: Sterling Publishers Pvt. Ltd.

Lapworth, Phil, Sills Charlotte & Fish Sue, (2001*). Integration in counselling & Psychotherapy- Developing a Personal approach.* London: SAGE Publications.

Lazarus, R. (1969).*Patterns of Adjustment and human Effectiveness*. N.Y., McGraw hill.

Palmer, Stephen, Dainow Sheila and Milner Pat, (1996). *Counselling:The BACT counselling reader.* New Delhi: Sega Publications.

Patterson, C.H. (1973).*Theories of Counseling and Psychotherapy.* N.Y. Harper and Raw

Shaffer, L.F. &Shoben, E.J. (1970).*The Psychology of Adjustment*. Boston: Houghton Mifflin

Sharma, A.S. (2000). *Counseling Psychology*. New Delhi: Commonwealth Publisher.

Shertzer, Bruce & Stone Shelly C (1974). *Fundamentals of Counselling*. London: Houghton Mifflin Company Boston.

PAPER- III

COURSE CODE: PGDGC 03

COURSE TITLE: EDUCATIONAL AND PSYCHOLOGICAL APPRAISAL

Total marks=100
External =75
Internal = 25

OBJECTIVES:

After going through the contents in this paper the students will be able:

- To understand the concept of psychological appraisal
- To know the criteria of selection of a test and characteristics of a good test
- To learn to administer and interpret psychological tests to know the Individual abilities and personality aspects
- To make appropriate use of achievement and diagnostic test in locating learning difficulties
- To know elementary statistics related to testing.

COURSE CONTENTS

Unit I PSYCHOLOGICAL TESTING

1. History of Psychological Testing
2. The nature and uses of psychological tests
3. Test standardization: procedure, reliability and validity
4. Interpretation test scores: Qualitative and Quantitative
5. Ethical and social issues in testing

Unit II ADMINISTRATION AND INTERPRETATION OF STANDARDIZED PSYCHOLOGICAL TEST

1. Intelligence: Verbal, Non-Verbal & Performance tests
2. Personality: Self report inventories, projective tests, scales, situational test.
3. Aptitudes: Differential & Specific abilities (DAT, Music, Art, Science. Maths, Teaching).
4. Interests: Educational and Vocational
5. Adjustment

Unit III ACHIEVEMENT AND DIAGNOSTIC TESTS

1. Achievement test: Use of teacher made and standardized subject specifictests
2. Diagnostic test: Learning difficulties; Behaviour problems
3. Administration and interpretation of achievement and diagnostic tests.

Unit IV USING TESTS AND NORMS

1. Descriptive statistics: measurers of central tendency, percentiles, measures of variability
2. Norms: concept and purpose

3. Types of Norms: grade, age, gender, stanines, mean, S.D., deciles and percentiles.

PRACTICUM/ WORK BASED LEARNING Marks:15

Administration of any two tests out of following:
Intelligence, Personality, Aptitude, Interest and Adjustment.

Suggested Readings:

Garret, H.E. (1981) *Statistics in education and Psychology*. Bombay:VakilsFeffer and Simons LTD

Noll et al (1979). *Introduction to Education and Measurement.* Boston Houghton Mifflin Co.

Shah. R.K. (2002). *Educational Testing and Measurement* . Jaipur. INDIA, Pointer Publishers.

Semester-II

PAPER- IV
COURSE CODE: PGDGC 04
COURSE TITLE: COUNSELING CHILDREN AND ADOLESCENTSWITH DIFFERENT ABILITIES

Total marks=100
External =75
Internal = 25

OBJECTIVES:

The contents of this course will enable the students to master the techniques of:

- Understanding the needs and problems of children and adolescents with exceptional abilities
- Identification of academic, social, emotional and vocational problems of students
- Conducting individual and group counselling
- Preparing case history, doing case analysis and preparing profile of the case.

COURSE CONTENTS

Unit- I TYPES, NEEDS AND PROBLEMS OF SPECIAL CHILDREN

1. Concept of different abilities & their classification
2. Needs & Problems of children and adolescents with different abilities
3. Importance of counseling of students with different abilities,their parents, family and peers

Unit II IDENTIFICATION AND DIAGNOSIS OF PROBLEM AREAS

1. Identification of personal, social,emotional and academic problems of children
2. Identification of academic, social & vocational needs & problems of adolescents
3. Case study: concept,importance and procedure.
4. Stress:Meaning, types and its causes

Unit III INTERVENTION PROGRAMMES-I

1. Individual and group counseling for children for emotional, social, behavioural and academic problems
2. Individual & group counseling the adolescents for emotional, social, academic & vocational problems

Unit IV INTERVENTION PROGRAMMES-II

1. Relaxation strategies, yoga & meditation therapies for children and adolescents for reducing stress and problems

2. Parental conselling and crisis counselling
3. Family therapy

PRACTICUM/ WORK BASED LEARNING Marks:15

Preparation of a case profile of a student with different abilities/ Case conference.

Suggested Readings:

Chandra Ramesh, (2002). *Guidance and counselling*. Delhi: Kalpaz Publications.

Cruickshank, W.M. (1963). *Psychology of Exceptional Children and Youth*. N.Y. Prentice Hall.

Geldard, Kathryn &Geldard, David (1997). *Counselling Children-A practical Introduction.* New Delhi: Sega publications.

Gladding, S.T. (2004) *Counselling- A Comprehensive Profession*. New Delhi: Pearson Publications.

Panda, K.C. (2004) *Education of the Exceptional Children*. New Delhi:Vikas Publishing House Pvt. Ltd.

PAPER- V

COURSE CODE: PGDGC 05

COURSE TITLE: CAREER EDUCATION

Total marks=100
External =75
Internal = 25

OBJECTIVES:

The contents of this course will enable the students:

- To get a comprehensive introduction to career education through historical background
- To develop an understanding of the current trends and issues in career education
- To study decision-making and how the process applies to career planning.
- To study the relationships among work, family, and leisure. To identify career issues related to special students.
- To be able to use the Internet and online guidance services
- To overview methods of disseminating and using career information, including computer-based delivery systems (Internet).

COURSE CONTENTS

Unit-I CAREER DEVELOPMENT

1. Meaning and historical development of career development
2. Stages of career development
3. Career development and human conditions
4. Identifying and analyzing life career themes and career talents
5. Emerging world of work careers and need for career education

Unit II THEORIES OF CAREER DEVELOPMENT THEIR RELATIONSHIP TO CAREER PLANNING

1. Super's theory of vocational development
2. Tiedman and O'hara's theory of career development
3. Ginzberg and Associates theory of occupational development
4. Roe's theory of career choice

Unit-III EMERGENCE OF CAREER GUIDANCE AND CAREER EDUCATION

1. Changing economic conditions of society & the impact of labour market
2. Psycho-social conditions of the individuals
3. Use of Advancement in technology
4. Problems pertaining to work, family, education, and leisure

Unit IV CAREER CHOICE AND DECISION MAKING

1. Career maturity: concept: and factors
2. Strategies for empowering students in career decision making

3. Matching career talents with career decision making
4. Guidance for developing life goals & choices

PRACTICUM/ WORK BASED LEARNING Marks:15

1. A visit to an educational/vocational career center
2. Preparation of a report of any one emerging career.

The project may include the following information:

- The Profession
- Work Environment
- Main Areas
- Training Required Skills and attitude
- Entry
- Education Required
- Eligibility
- Institutes
- Job Prospects
- Remuneration
- Pressures
- Future Prospects "Related Careers" Any Other

Suggested Readings:

Gladding S.T. (2004). *Counselling- A Comprehensive Profession.* New Delhi: Pearson Publications.

Sharma, Shashi Prabha (2004) . *Career Guidance and Counseling.* New Delhi : Kanishks Publishes, Distributors.

Sharma, Yogendra K. (2004).*Principles of educational and vocational guidance*.New Delhi: Kanishka Publishers, Distributors.

Shertzer, Bruce & Stone Shelly C (1974). *Fundamentals of Counselling.*London: Houghton Mifflin Company Boston.

Sinha, Neelam (1996). *Strategies,Issues and Concepts in Vocational Education.* New Delhi: Common Wealth Publishers.

PAPER- VI

COURSE CODE: PGDGC 06

COURSE TITLE: SUPERVISED PRACTICUM / INTERNSHIP/ WORK BASED LEARNING

Total marks=100
Internal =75
External = 25

OBJECTIVES:

The supervised practical work will train and enhance the student's skills:

- In identifying the problems of an individual with the help of selecting, administering appropriate test, interpreting the data, preparing the complete history and profile of the case
- To interpret/ diagnose the case problem and select an appropriate intervention for helping the case in adjustment/ development of relevant life goals and making appropriate choices
- To be attached to a school /an institution or an agency with an onsite counsellor.

COURSE CONTENTS

1. Case Study

   Field work: Identification of one case out of the following areas through testing and referrals: (collection of data)

   - ✓ Academic Problems (Learning difficulties, choice of subjects)
   - ✓ Class room problems (Discipline/ behaviour)
   - ✓ Giftedness (Gifted underachiever, academically gifted at least in one subject)
   - ✓ Slow learner/ educationally backward child
   - ✓ Emotional/social problem (Adjustment)
   - ✓ Attention deficit hyperactive (ADH) problems
   - ✓ Problem of Decision making (Choice of a career)
   - ✓ Visual/auditory/Speech challenged
   - ✓ Orthopedically challenged
   - ✓ Mentally challenged
   - ✓ Learning disabled

2. Observation: Observation of behaviour which humps learning of self and others of any one child

3. Career Conference/career talk and career exhibition: The students will plan and organize career talk and career exhibition

INTERNSHIP

The course has an input of two weeks' internship programme. Trainees are required to have an attachment with a school or an institution or an agency

under an experienced onsite counsellor for the stipulated period. During the period of internship, the trainees would plan and undertake work related to planning and execution of guidance and counselling activities including counselling casework. They will prepare a project report of the apprenticeship work done by them and with the reviewed learning outcomes by the onsite counselor and the supervisor and submit the same for evaluation.

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PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF LANGUAGES

Outlines of tests, syllabi and courses of reading for

P.G. Diploma in Translation (English to Hindi)

For the Examination 2020-21

PANJAB UNIVERSITY, CHANDIGAH

P.G. DIPLOMA COURSE IN TRANSLATION (English -Hindi)

Outlines of tests, syllabi and courses of reading for P.G. Diploma in Translation (English - Hindi) for the Examination 2020-21

PAPER-I (Written)

Marks 100

Principal and Problems of Translation :

1. Meaning of Translation, Définition of translation, Process of Translation
2. Importance of Translation & History of Translation
3. Translation : An Art or Science.
4. Théories of Translation.
5. Types of Translation.

   Literal / Literary/free Translation
6. Translation as Cultural Bridge.
7. Problems of langage in Translation.
8. Problems of Reader in Translation.
9. Translation from. Computer.

The Books Suggested for Reading are as Under :

1. Anuvad Vigyan by Bhola Nath Tiwari.
2. Hindi Anuvad Sidhant Aur Prayog by Vasudev Nanda Prasad.
3. Art of Translation By Dr. Piar Singh.
4. Anuvad Sidhant Aur Kala by Dr. Gargi Gupta.
5. Anuvad Kala Sidhant Aur Prayog by Dr. Kailash Chander Bhatia.
6. Anuvad Sidhant Aur Prayog by Dr. Gopinathan.
7. Anuvad Bhashayein Samsayein by N.E. Vishvanath Ayyar.

PAPER-I1 **Marks 100**

Problèmes of Technical Terminology and Vocabulary.

1. Vocabulary of Creative Literature.
2. Vocabulary of Scientific Literature
3. Vocabulary of Humanities.
4. Vocabulary of Folk Literature
5. Vocabulary for Administrative Purpose.
6. Evolution of Technical Terminology

I) a)Technical Term : Définition, Characteristics & Type.
b) Evolution of Technical Terminology in India.

i) Historical Perspective.

ii) Underlying Concepts & Principles.

iii) Different Schools regarding Technical Terminology in India

2). Technical Terminology in Modern Indian Langauges.

a) Technical Terminology Commission.
b) Fundamental Principles Evolved.
c) Sources of Terminology : Classical and Modern.
d) Problems of Technical Terminology

3. Problems of Commission Terminology for Modern Indian Langauges

4. Problems of Technical Terminology in Hindi with reference to the International Terminology

Books Suggested :-

i) Technical Terminology Evolved by Govt. of India.
ii) Technical Terminology Evolved by the Punjabi Language Department (Hindi & Punjabi).
iii) Technical Terminology Evolved by Nagiri Pracharni Sabha Kashi.
iv) Scientific and Technical Translation, UNESCO.
v) Paribhashik Shaabdavali Kuchh Samesayein By Dr. Bhola Nath Tiwari & Mahendra Chaturvedi.

Practical Translation Paper-111 **100 Marks.**

1 Drafting & Translation (10) Marks

Drafting Official lettres. Office Memorandum, Circular, Sanction Lettre, Office order, Demi-official Letter, Reminder, Endorsement, Un-official Letter, Notification, Resolution, Press-Communique, Press Note, Telegrams, Express Letter, Savingram, Notice, Proclamation Order, Acknowledgement.

2. Notes writing and Translation (10) Marks

a) Objectives of Notes Writng

b) Principles of Notes Writng

c) Types of Notes Writng

3 Importance of Syntax in Translation (10) Marks

a) Parts of Sentence, Words, Phrasal Units and Complex Clauses.
b) Forms of Sentences -Simple, Compound and Complex.
c) Analysis and Synthesis of Sentences.
d) Peculiarities of English and Hindi Sentences

4. Translation of Proverbs and Idioms of commonly used English Administrative Phraseology, Computer Terminology. (20 Marks)

5. Hindi Synonyms of at least twenty technical termes in English related to Administrative, Social Sciences, Humanities or Physical Sciences (20 Marks)

6. Practical Translation and Problems. (20 Marks)

Translation of continuous English passage not less than 250 words in Hindi dealing with a subject (Humanities or Social Sciences or Natural Sciences)

7. Proof Reading and Translation (10 Marks)

a) Principles, Kinds and Symbols of Proof –Reading.

b) Qualities, Qualification and Responsibilities of a Proof Reader,

c) Technical Terms for Proof Reading.

Books Suggested :-

i) Hindi Mein Vyavaharik Anuvad by Dr. Alok Kumar Rastogi.
ii) Tippen : Prarupan : Evam Proof Pathan By Om Prakash Singhal and Umapati Rai Chandel.
iii) Family English Speaking Coures by Upkar Chopra.
iv) The Teaching of Strectural Words and sentence Pattern (stage one & two) by A.S. Hamey.
v) A Practical English Grammar by A. J. Thomas & A. Hartinet.
vi) Grammar by Frauk Palmn.
vii) Idioms and Phrases by Eric Welson.
viii) The Teacher's Book Shelf, Oxford University Press

PAPER-IV **100 Marks**

Translation from. English into Hindi of standard work of about 50 continuous pages or chapters of such length. A viva voce examination will be compulsory for the candidates awarded 60% or more by the Internal Examiner. A Vica-voce examination will be conducted by the Academic Committee of the Department.